



Full wwPDB EM Validation Report ⓘ

Mar 17, 2026 – 03:02 PM UTC

PDB ID : 7PH9 / pdb_00007ph9
EMDB ID : EMD-13410
Title : 70S ribosome with P-site tRNA in chloramphenicol-treated Mycoplasma pneumoniae cells
Authors : Xue, L.; Lenz, S.; Rappsilber, J.; Mahamid, J.
Deposited on : 2021-08-16
Resolution : 8.70 Å (reported)
Based on initial models : 7OOD, 4V7C, 7OOC

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

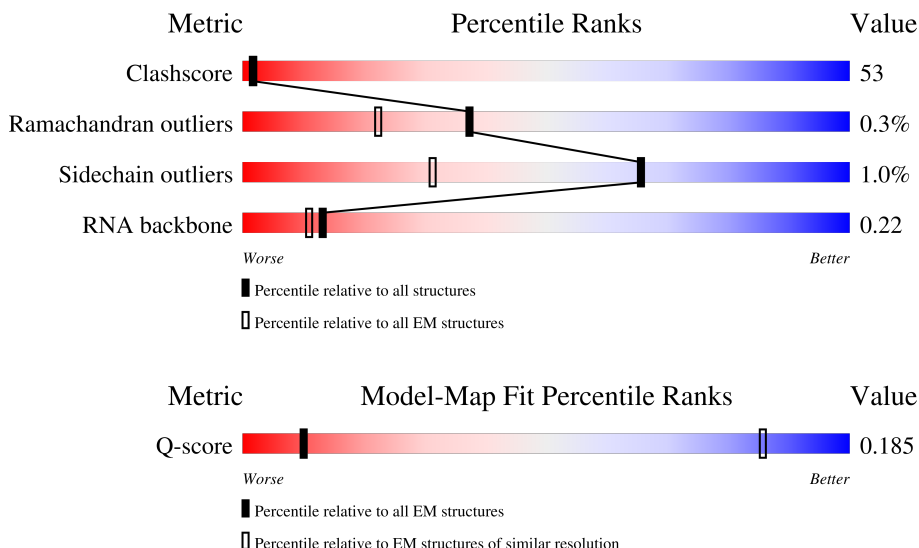
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 8.70 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	282 (8.20 - 9.20)

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	6% 23% 75% .
2	1	59	7% 25% 75%
3	2	37	8% 27% 68% 5%

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Mol	Chain	Length	Quality of chain
4	A	294	
5	B	273	
6	C	205	
7	D	219	
8	E	215	
9	F	155	
10	G	142	
11	H	132	
12	I	108	
13	J	121	
14	K	139	
15	L	124	
16	M	61	
17	N	86	
18	O	94	
19	P	85	
20	Q	104	
21	R	87	
22	S	87	
23	T	60	
24	a	287	
25	b	287	
26	c	212	
27	d	180	
28	e	184	

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Mol	Chain	Length	Quality of chain
29	f	149	
30	g	161	
31	h	137	
32	i	146	
33	j	122	
34	k	151	
35	l	139	
36	m	124	
37	n	116	
38	o	119	
39	p	127	
40	q	100	
41	r	159	
42	s	237	
43	t	111	
44	u	104	
45	v	65	
46	w	111	
47	x	97	
48	y	57	
49	z	53	
50	3	2907	
51	4	108	
52	5	1520	
53	7	76	

2 Entry composition

There are 53 unique types of molecules in this entry. The entry contains 144524 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
1	0	47	Total	C	N	O	S	0	0
			380	236	81	61	2		

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

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

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

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

- Molecule 4 is a protein called 30S ribosomal protein S2.

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

- Molecule 5 is a protein called 30S ribosomal protein S3.

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

- Molecule 6 is a protein called 30S ribosomal protein S4.

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

- Molecule 7 is a protein called 30S ribosomal protein S5.

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

- Molecule 8 is a protein called 30S ribosomal protein S6.

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

- Molecule 9 is a protein called 30S ribosomal protein S7.

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

- Molecule 10 is a protein called 30S ribosomal protein S8.

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

- Molecule 11 is a protein called 30S ribosomal protein S9.

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

- Molecule 12 is a protein called 30S ribosomal protein S10.

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

- Molecule 13 is a protein called 30S ribosomal protein S11.

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

- Molecule 14 is a protein called 30S ribosomal protein S12.

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

- Molecule 15 is a protein called 30S ribosomal protein S13.

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

- Molecule 16 is a protein called 30S ribosomal protein S14 type Z.

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

- Molecule 17 is a protein called 30S ribosomal protein S15.

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

- Molecule 18 is a protein called 30S ribosomal protein S16.

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

- Molecule 19 is a protein called 30S ribosomal protein S17.

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

- Molecule 20 is a protein called 30S ribosomal protein S18.

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

- Molecule 21 is a protein called 30S ribosomal protein S19.

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

- Molecule 22 is a protein called 30S ribosomal protein S20.

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

- Molecule 23 is a protein called 30S ribosomal protein S21.

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

- Molecule 24 is a protein called 50S ribosomal protein L2.

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

- Molecule 25 is a protein called 50S ribosomal protein L3.

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

- Molecule 26 is a protein called 50S ribosomal protein L4.

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

- Molecule 27 is a protein called 50S ribosomal protein L5.

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

- Molecule 28 is a protein called 50S ribosomal protein L6.

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

- Molecule 29 is a protein called 50S ribosomal protein L9.

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

- Molecule 30 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms				AltConf	Trace
30	g	126	Total	C	N	O	S	0
			960	612	167	178	3	0

- Molecule 31 is a protein called 50S ribosomal protein L11.

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

- Molecule 32 is a protein called 50S ribosomal protein L13.

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

- Molecule 33 is a protein called 50S ribosomal protein L14.

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

- Molecule 34 is a protein called 50S ribosomal protein L15.

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

- Molecule 35 is a protein called 50S ribosomal protein L16.

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

- Molecule 36 is a protein called 50S ribosomal protein L17.

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

- Molecule 37 is a protein called 50S ribosomal protein L18.

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

- Molecule 38 is a protein called 50S ribosomal protein L19.

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

- Molecule 39 is a protein called 50S ribosomal protein L20.

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

- Molecule 40 is a protein called 50S ribosomal protein L21.

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

- Molecule 41 is a protein called 50S ribosomal protein L22.

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

- Molecule 42 is a protein called 50S ribosomal protein L23.

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

- Molecule 43 is a protein called 50S ribosomal protein L24.

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

- Molecule 44 is a protein called 50S ribosomal protein L27.

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

- Molecule 45 is a protein called 50S ribosomal protein L28.

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

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

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

- Molecule 47 is a protein called 50S ribosomal protein L31.

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

- Molecule 48 is a protein called 50S ribosomal protein L32.

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

- Molecule 49 is a protein called 50S ribosomal protein L33 1.

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

- Molecule 50 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	3	2878	Total	C	N	O	P	0	0
			61664	27558	11236	19995	2875		

- Molecule 51 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	4	105	Total	C	N	O	P	0	0
			2239	1003	409	724	103		

- Molecule 52 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	5	1493	Total	C	N	O	P	0	0
			31943	14279	5792	10382	1490		

- Molecule 53 is a RNA chain called tRNA-Phe.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	7	76	Total	C	N	O	P	0	0
			1618	723	289	531	75		

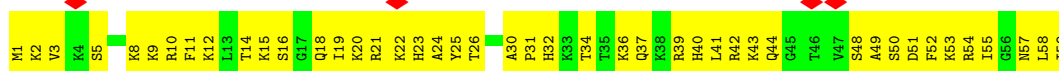
3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and 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



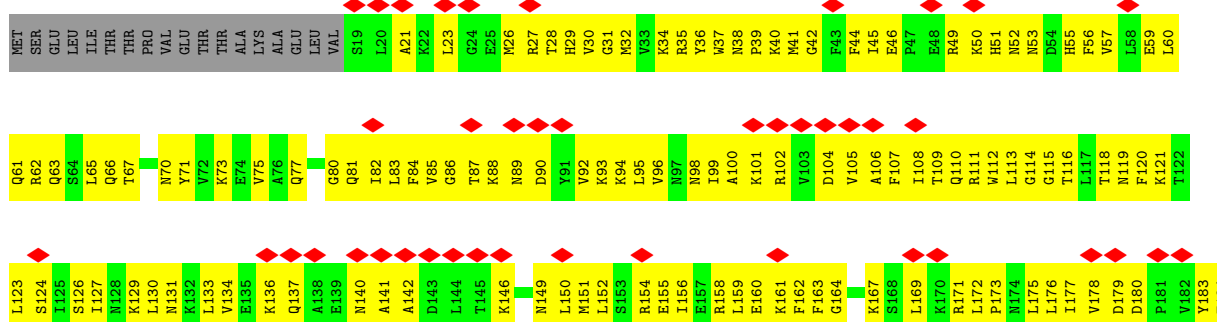
- Molecule 2: 50S ribosomal protein L35

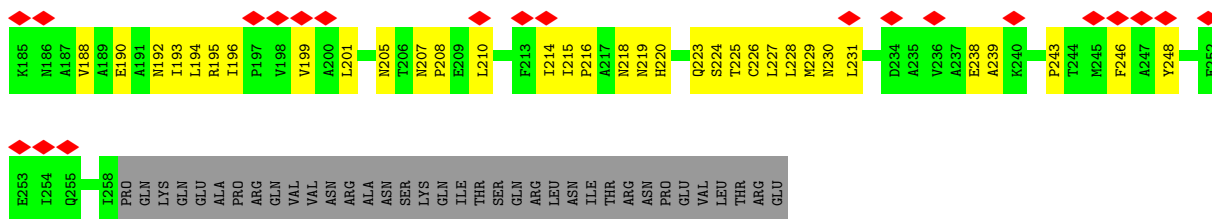


- Molecule 3: 50S ribosomal protein L36

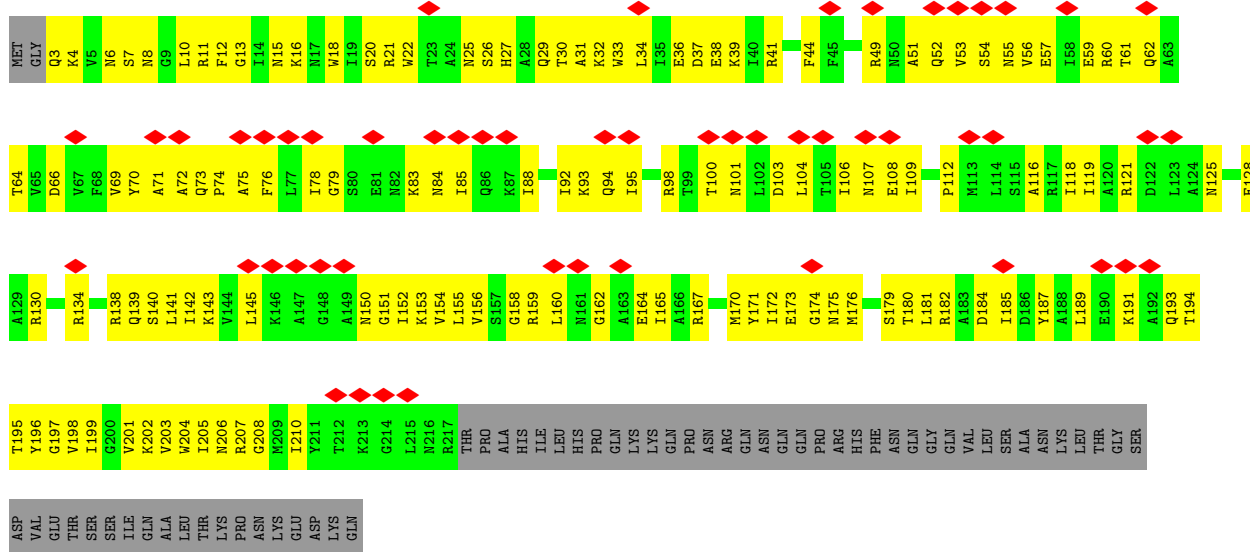


- Molecule 4: 30S ribosomal protein S2

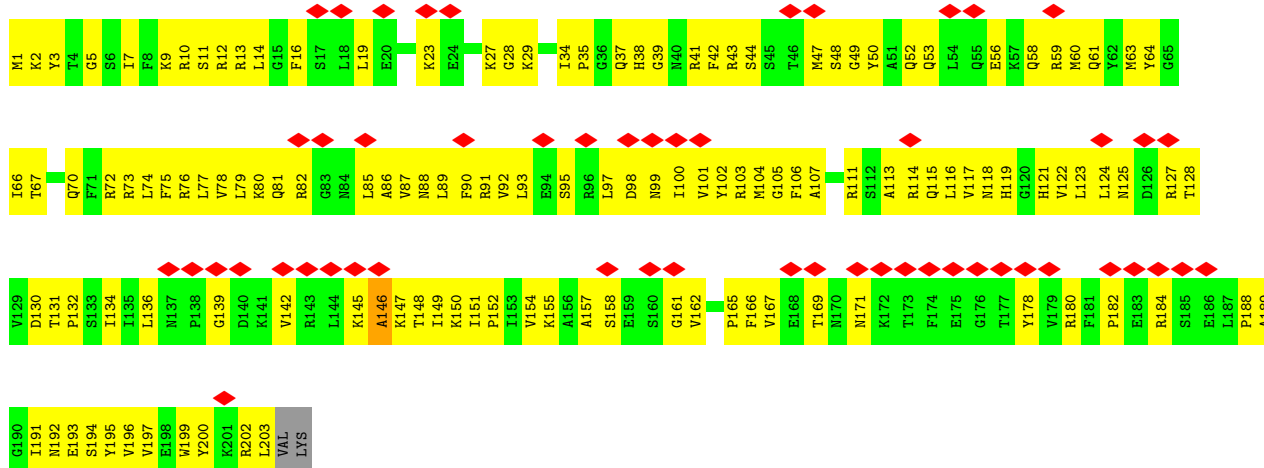




• Molecule 5: 30S ribosomal protein S3

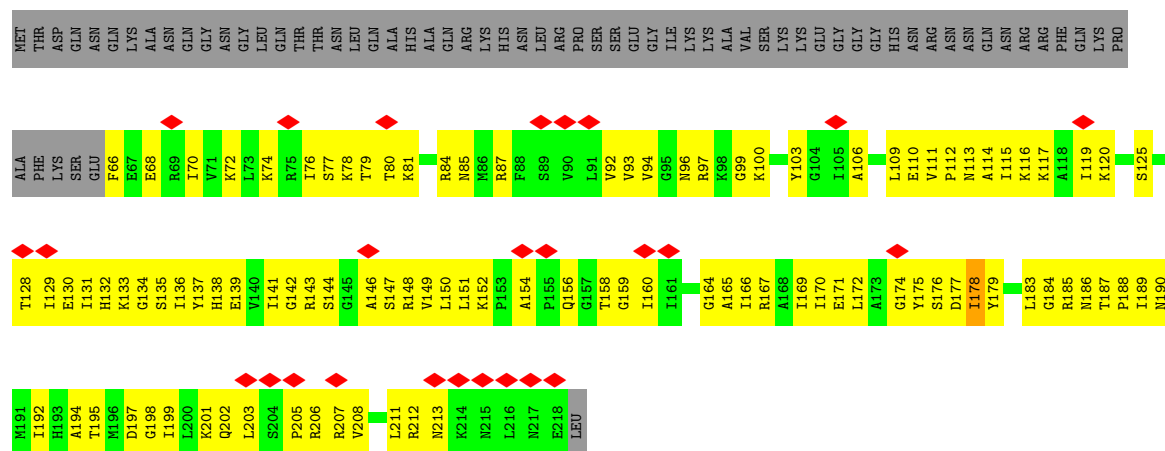


• Molecule 6: 30S ribosomal protein S4

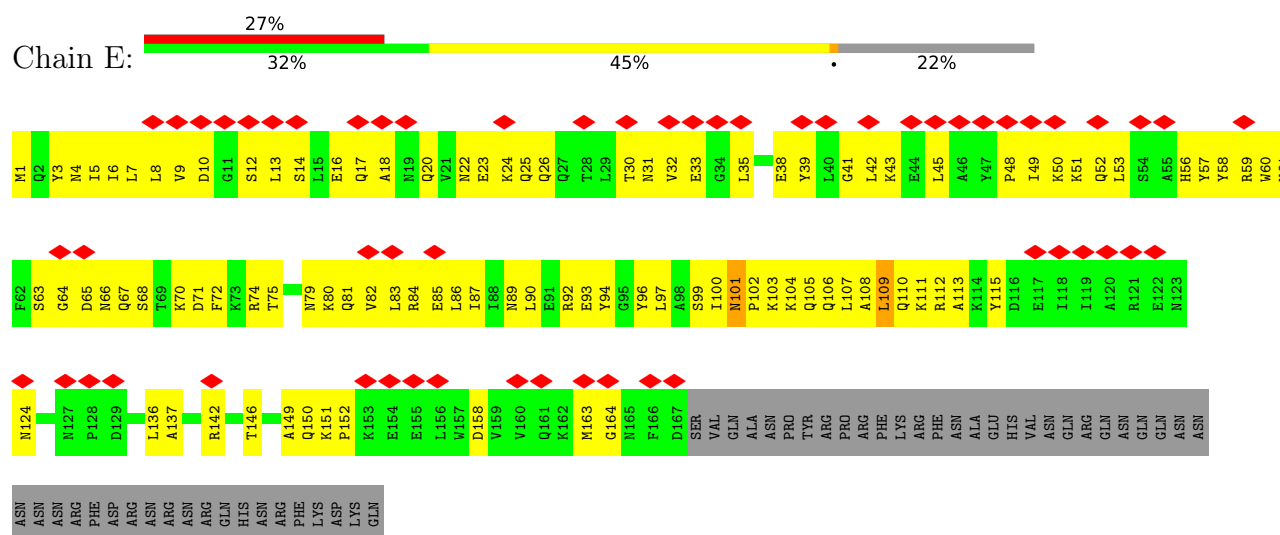


• Molecule 7: 30S ribosomal protein S5

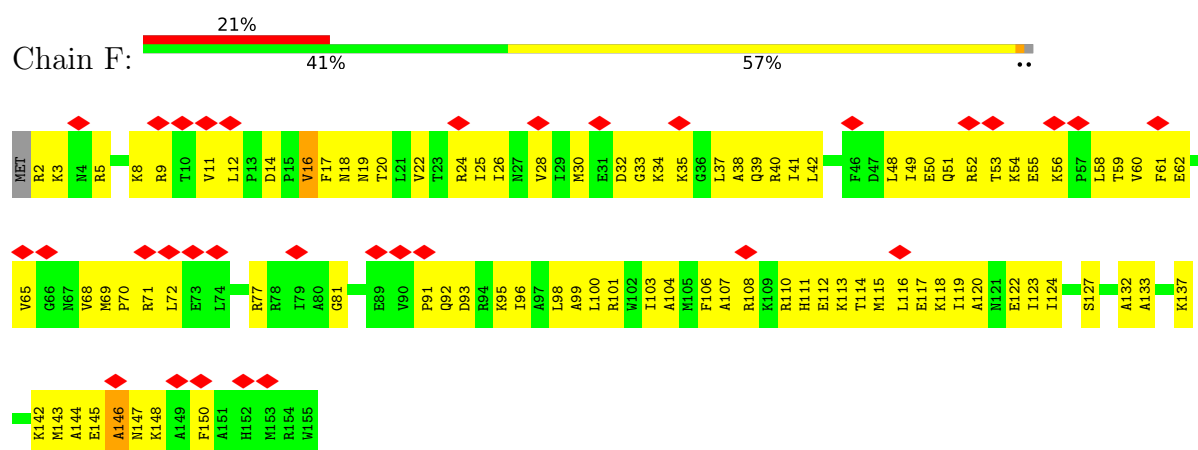




• Molecule 8: 30S ribosomal protein S6

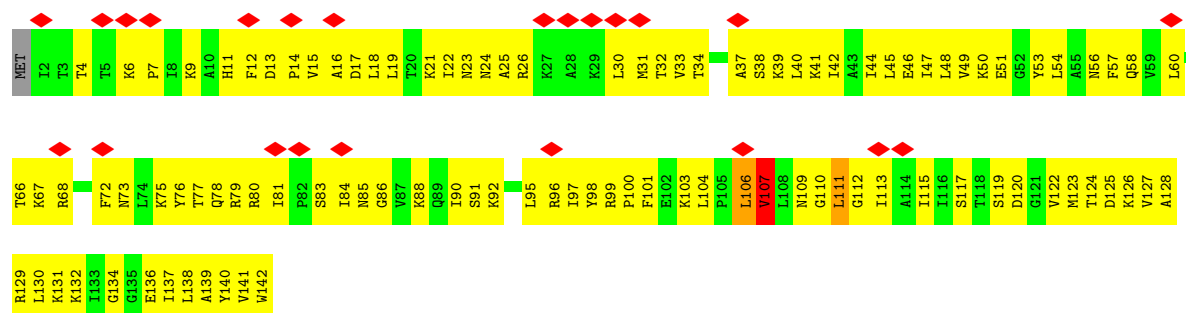


• Molecule 9: 30S ribosomal protein S7

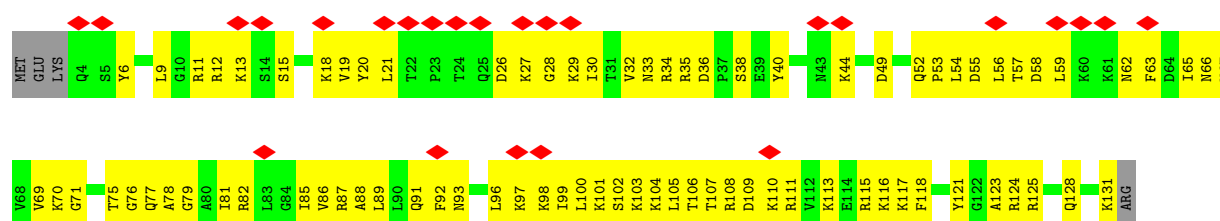


• Molecule 10: 30S ribosomal protein S8





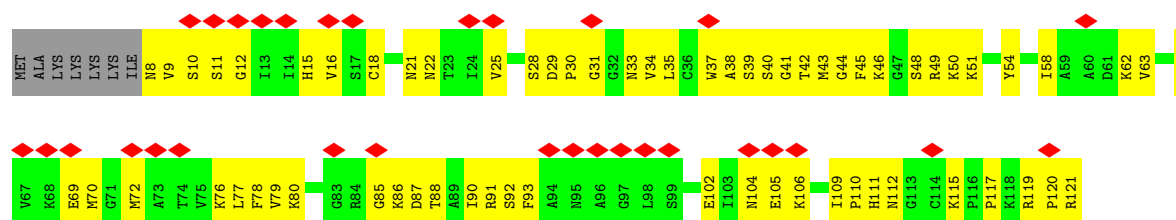
• Molecule 11: 30S ribosomal protein S9



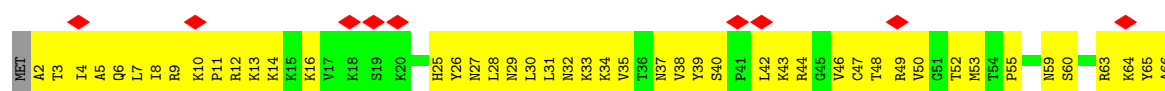
• Molecule 12: 30S ribosomal protein S10

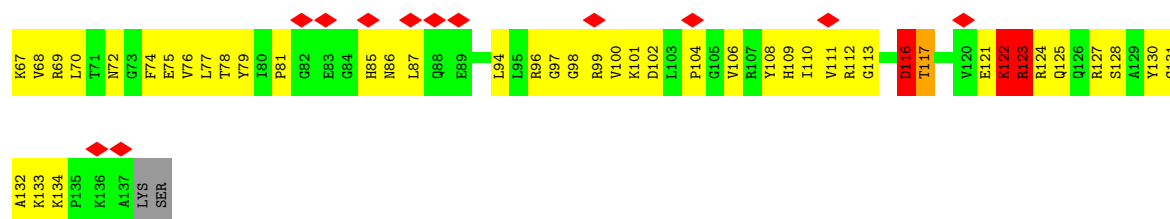


• Molecule 13: 30S ribosomal protein S11

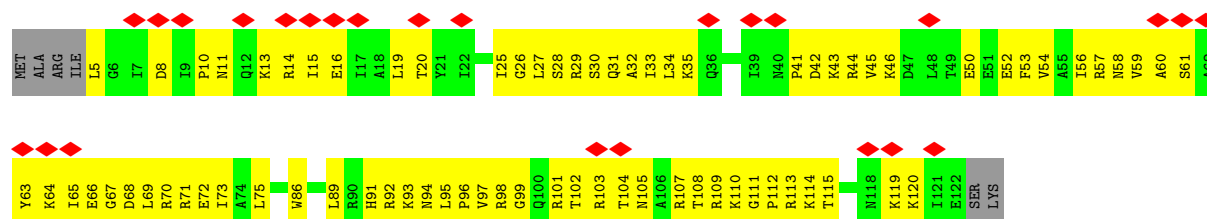


• Molecule 14: 30S ribosomal protein S12

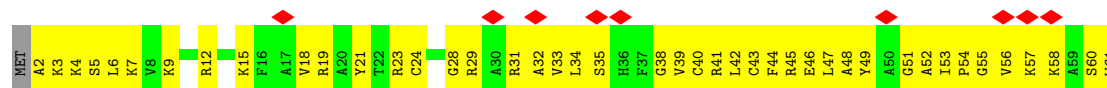




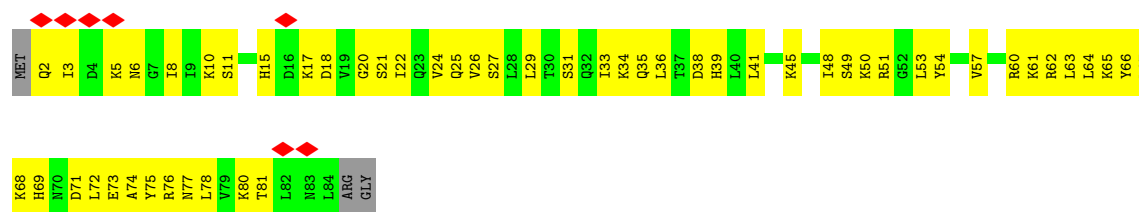
- Molecule 15: 30S ribosomal protein S13



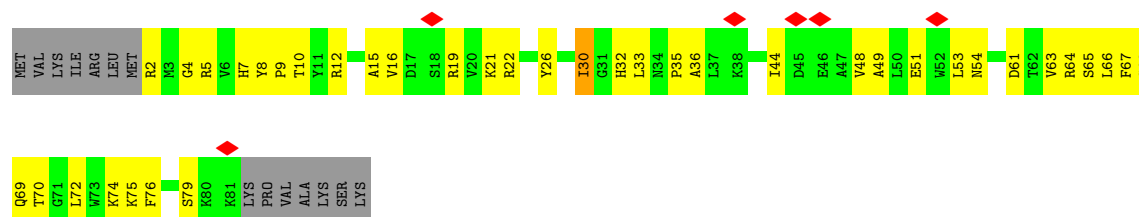
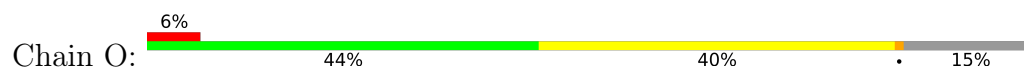
- Molecule 16: 30S ribosomal protein S14 type Z



- Molecule 17: 30S ribosomal protein S15



- Molecule 18: 30S ribosomal protein S16



- Molecule 19: 30S ribosomal protein S17

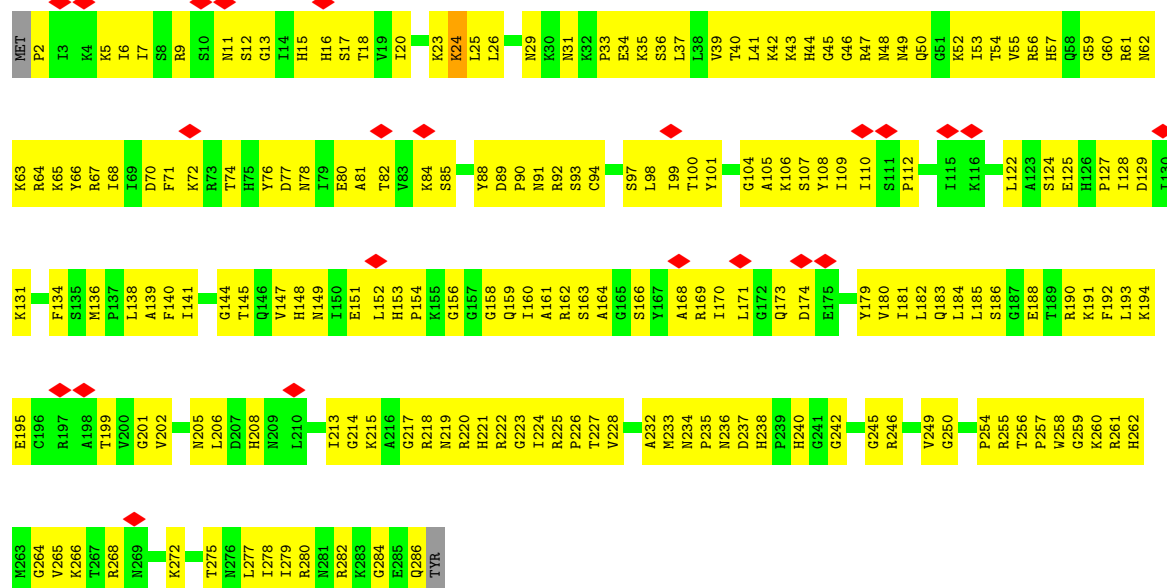
- Molecule 20: 30S ribosomal protein S18

- Molecule 21: 30S ribosomal protein S19

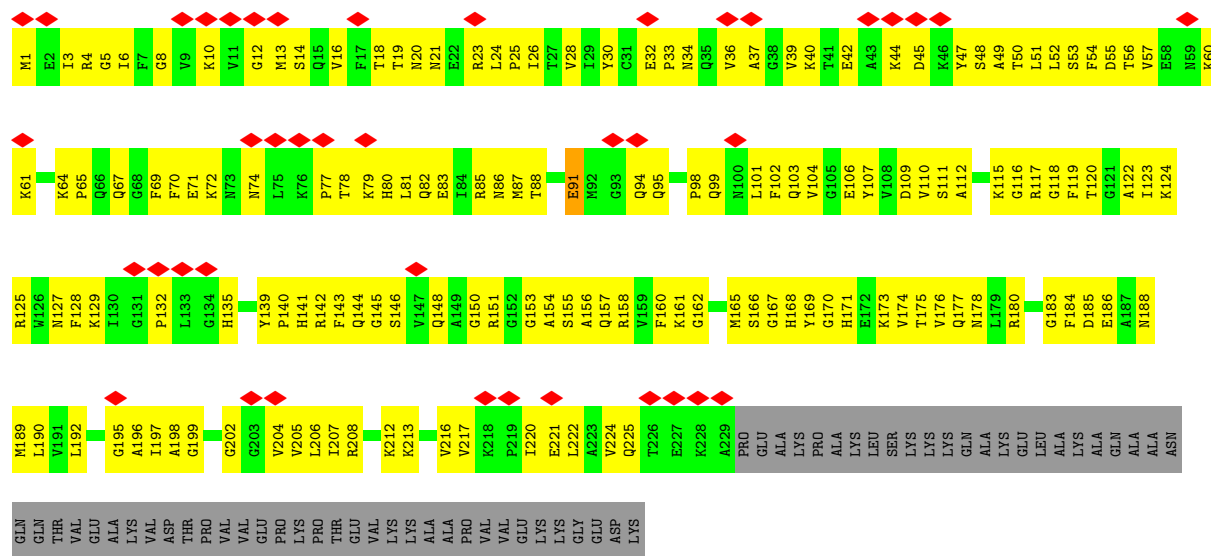
- Molecule 22: 30S ribosomal protein S20

- Molecule 23: 30S ribosomal protein S21

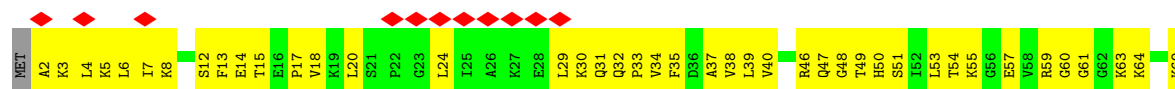
- Molecule 24: 50S ribosomal protein L2

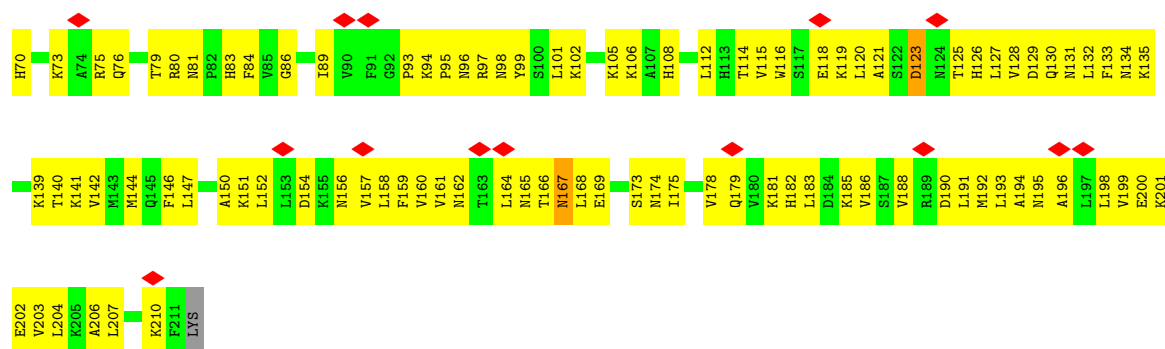


• Molecule 25: 50S ribosomal protein L3

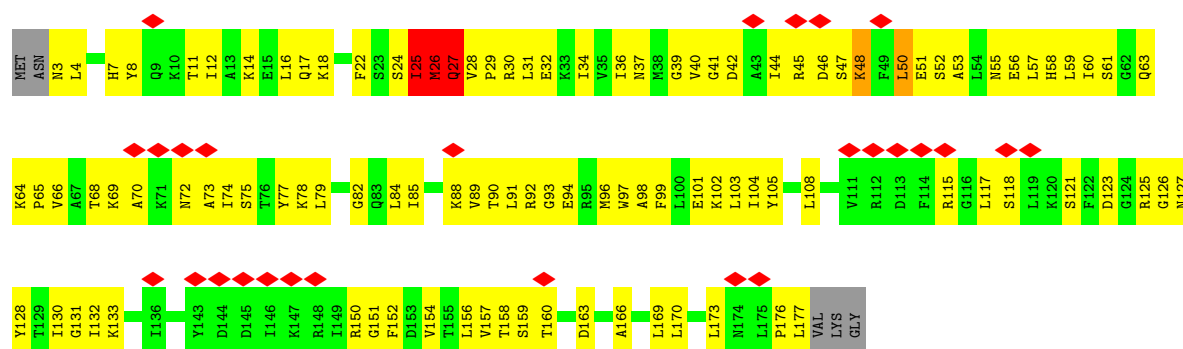


• Molecule 26: 50S ribosomal protein L4

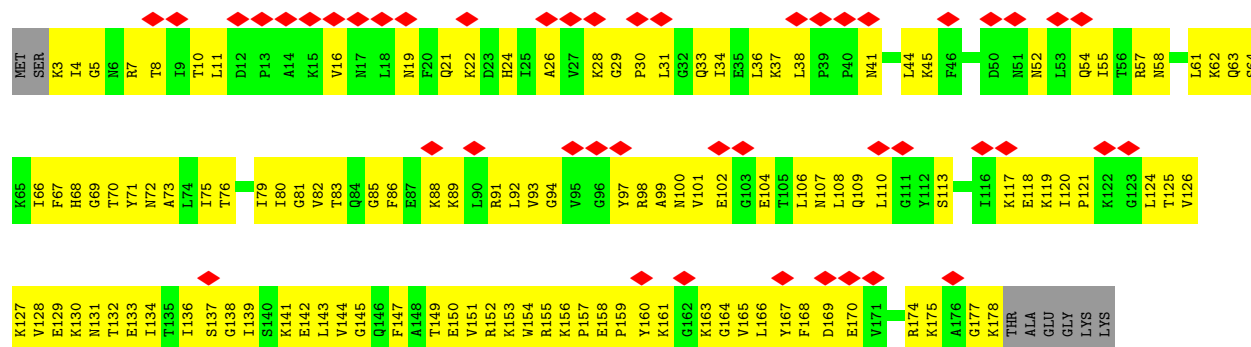




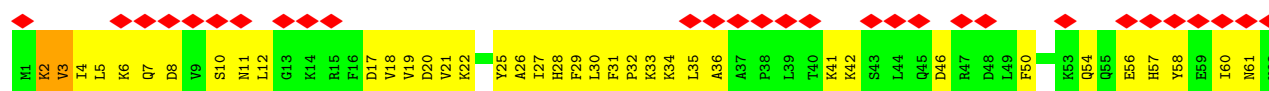
• Molecule 27: 50S ribosomal protein L5

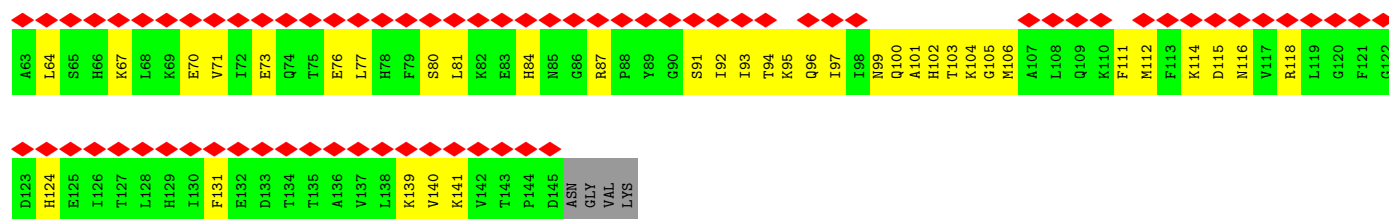


• Molecule 28: 50S ribosomal protein L6

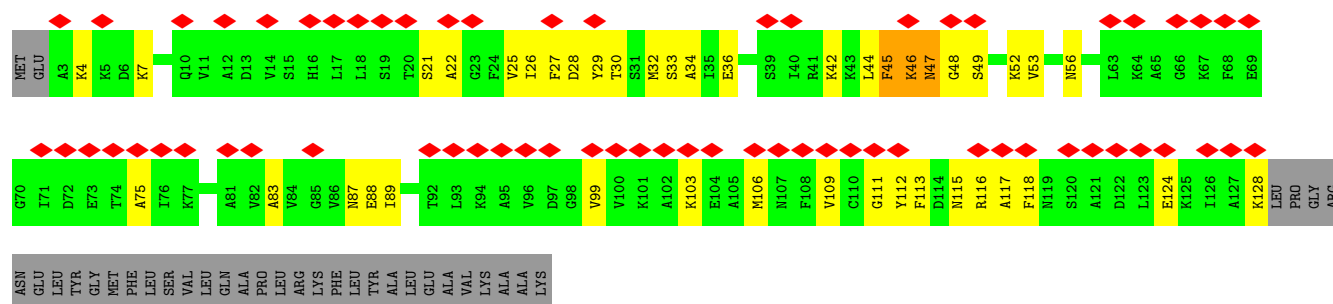
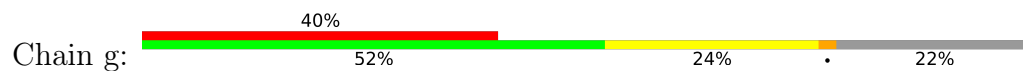


• Molecule 29: 50S ribosomal protein L9





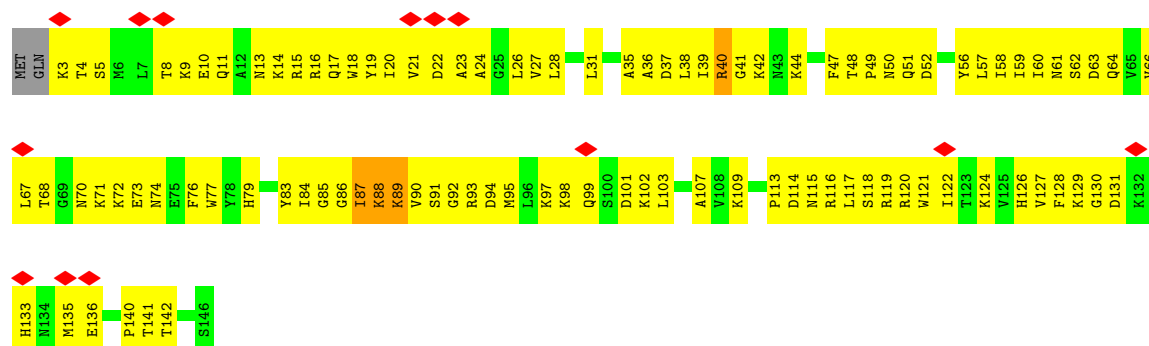
• Molecule 30: 50S ribosomal protein L10



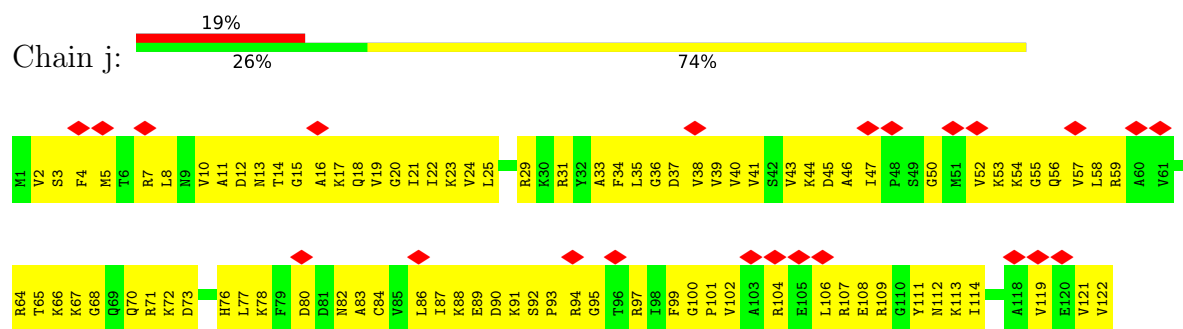
• Molecule 31: 50S ribosomal protein L11



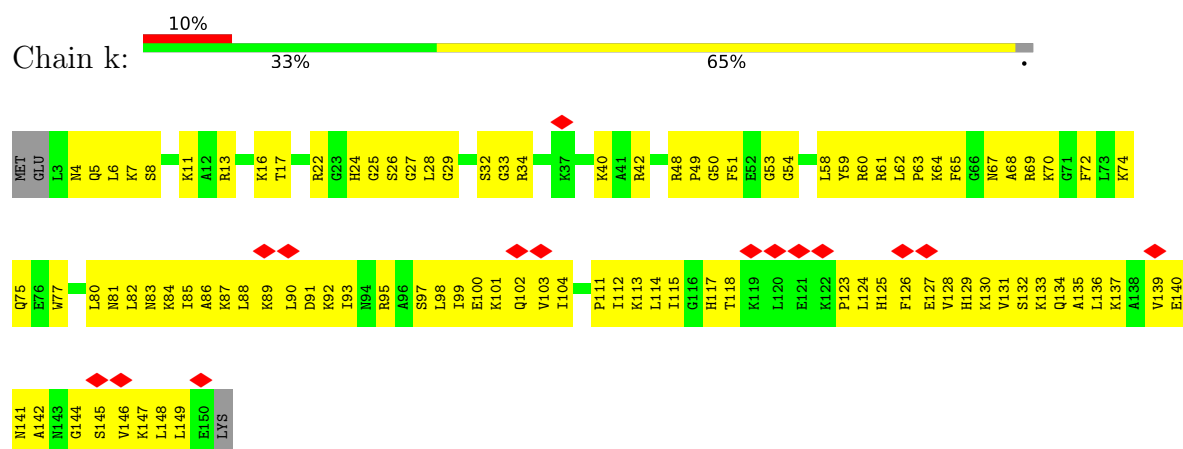
• Molecule 32: 50S ribosomal protein L13



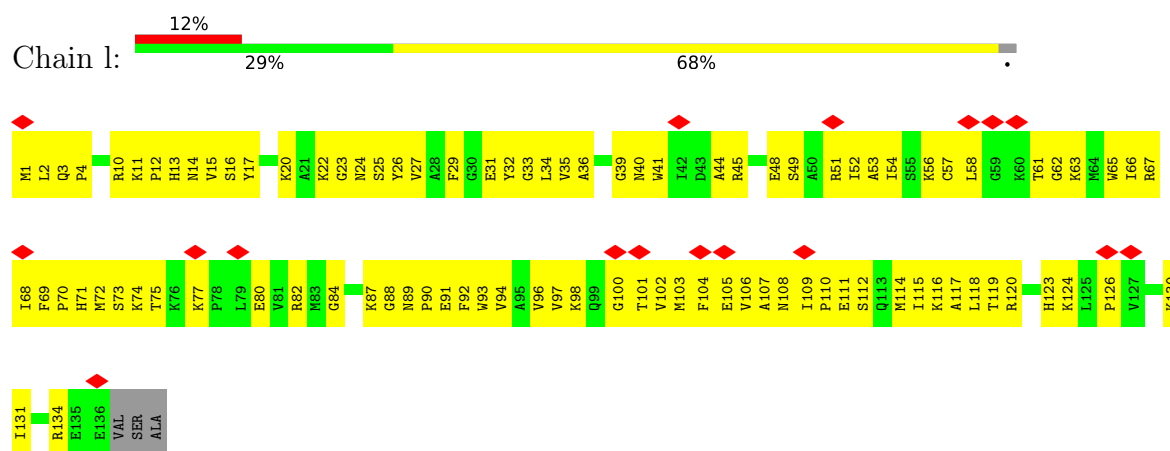
- Molecule 33: 50S ribosomal protein L14



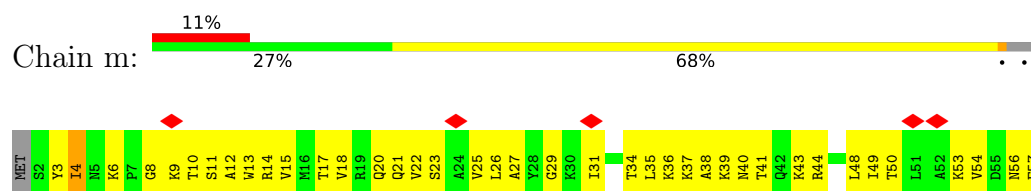
- Molecule 34: 50S ribosomal protein L15



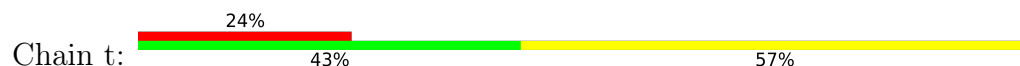
- Molecule 35: 50S ribosomal protein L16



- Molecule 36: 50S ribosomal protein L17

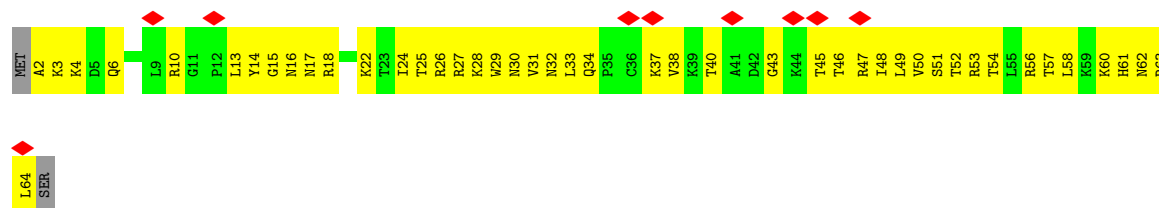


Chain r: 26% 58% 13%

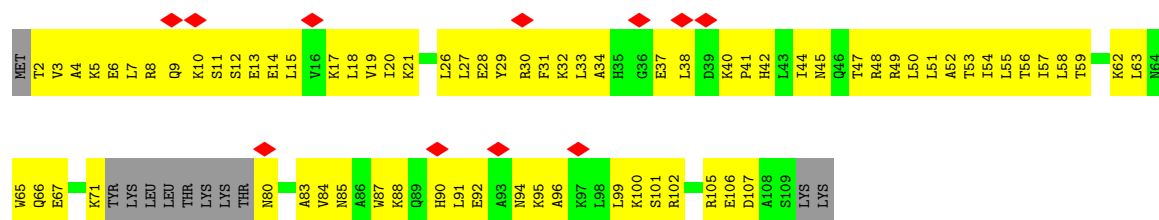




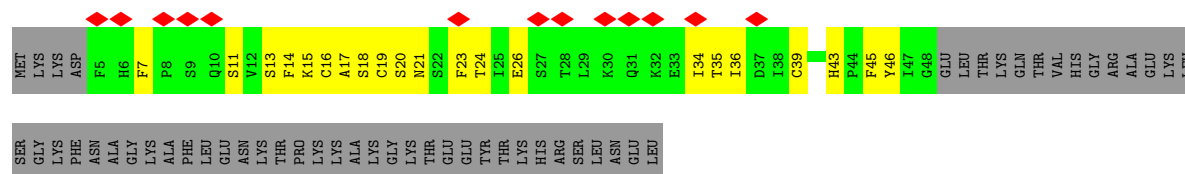
• Molecule 45: 50S ribosomal protein L28



• Molecule 46: 50S ribosomal protein L29



• Molecule 47: 50S ribosomal protein L31



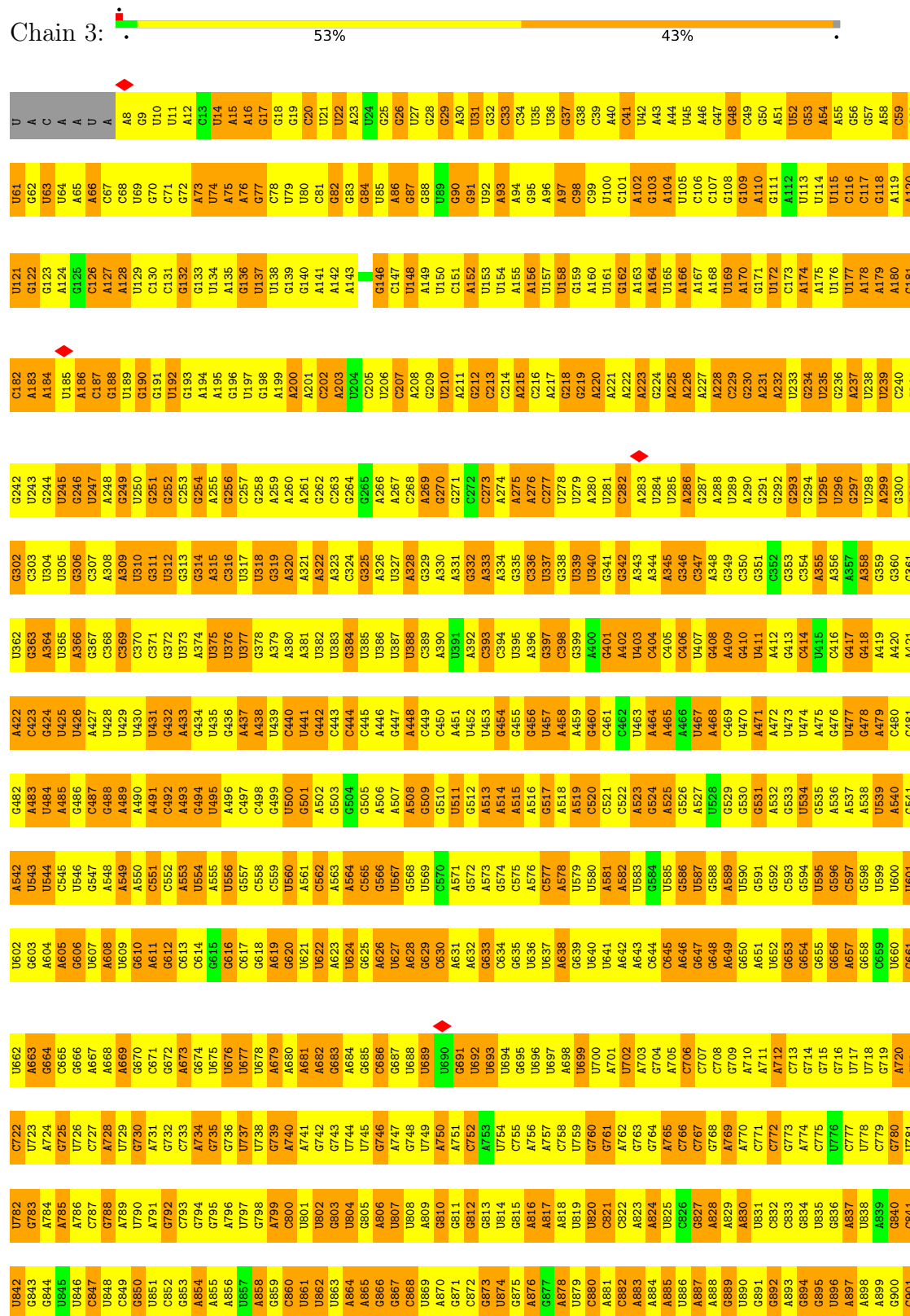
• Molecule 48: 50S ribosomal protein L32



• Molecule 49: 50S ribosomal protein L33 1

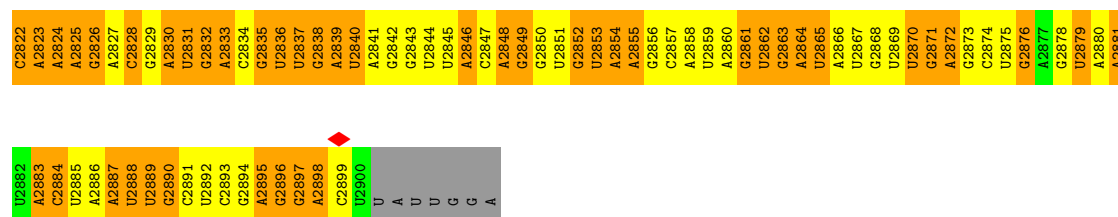


● Molecule 50: 23S ribosomal RNA



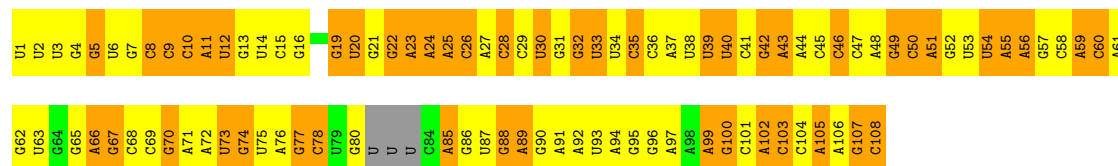
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U2812	C2753	G2693	A2573	G2573	U2513	G2453	C2393	G2333	U2273	U2213	C2150	U2092	G2032	C1972	C1912
A2813	U2754	A2694	C2634	A2574	U2514	G2454	A2394	U2334	A2274	A2214	G2151	U2093	G2033	C1973	G1913
G2814	G2755	U2695	G2635	G2575	C2515	G2455	A2395	A2335	A2275	C2215	C2152	A2094	U2034	U1974	G1914
A2815	A2756	G2696	U2636	A2576	G2516	A2456	A2396	A2336	A2276	U2216	U2153	U2095	U2035	G1975	C1915
G2816	U2757	C2697	G2637	G2577	A2517	U2457	G2397	U2337	A2277	G2217	A2154	G2096	G2036	A1976	C1916
A2817	A2758	U2698	G2638	A2578	C2518	A2458	U2398	G2338	G2278	G2218	G2155	U2098	A2037	U1977	G1917
G2818	G2759	C2699	G2639	U2579	U2519	A2459	G2399	G2339	G2279	U2219	G2156	U2099	G2038	U1978	U1918
U2819	C2760	U2700	A2640	A2580	C2520	G2460	A2400	U2340	U2280	A2220	C2157	G2100	G2039	G1979	A1919
G2820	A2761	A2701	A2521	C2581	A2521	A2461	U2401	G2341	A2281	U2221	U2159	A2101	C2041	U1981	C1921
											U2160				
											G2161				



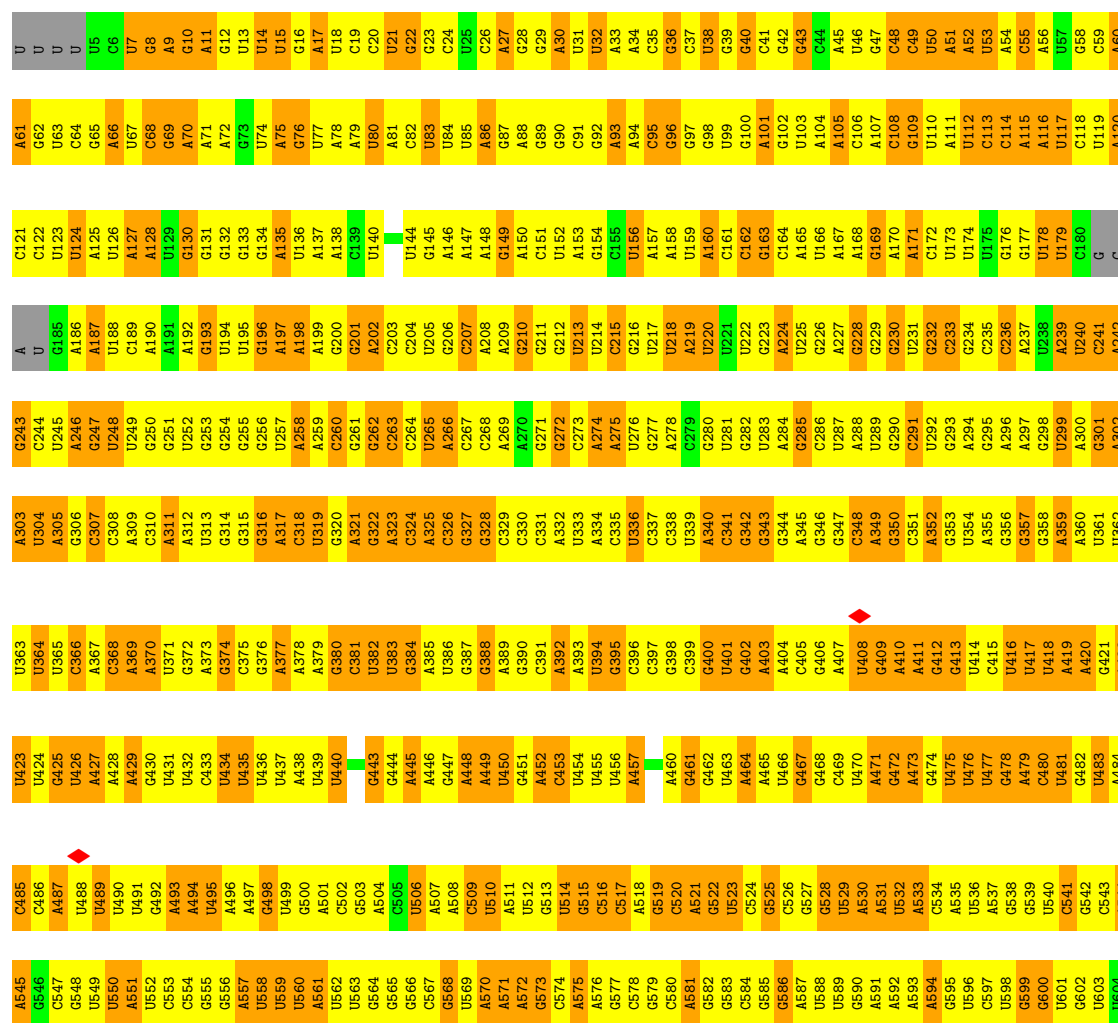
• Molecule 51: 5S ribosomal RNA

Chain 4: 6% 47% 44%



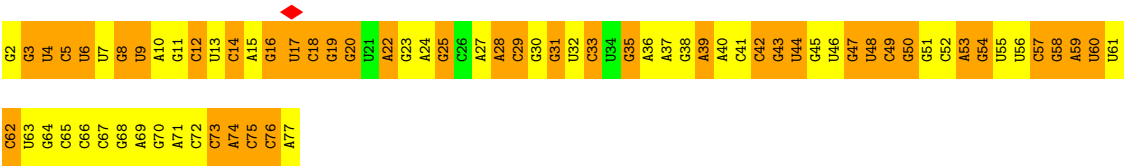
• Molecule 52: 16S ribosomal RNA

Chain 5: 55% 39%



A1509	G1449	A1388	G1327	U1207	U1147	C1087	A	C967	C906	G846	U785	A725	G665	A605
C	C1450	U1389	C1328	G1208	U1148	C1088	C1028	G968	A907	G847	U786	A726	U666	A606
C	A1451	G1390	G1329	C1209	G1149	C1089	C1029	A969	A908	U848	A787	G727	U667	A607
U	C1452	A1391	A1330	U1210	G1150	C1090	G1030	A970	A909	U849	G788	G728	U668	G608
C	C1453	A1392	A1331	A1211	A1151	C1091	A1031	A971	G910	G850	U789	C729	U669	G609
C	G1454	A1393	U1332	C1212	G1152	A1092	G1032	A972	G911	U851	G790	G730	G670	C610
U	G1455	G1394	C1333	A1213	G1153	A1093	U1033	A973	G912	G852	A791	A731	G671	A611
U	U1456	C1395	A1334	U1214	A1154	C1094	G1034	C974	A913	A853	C792	A732	A672	C612
U	A1457	U1396	U1337	U1215	A1155	G1095	A1035	C975	U916	A854	G793	A733	A673	C613
U	A1458	G1397	U1397	G1216	G1156	A1096	C1036	U976	U917	G855	C794	A734	U674	U614
C	A1459	G1398	C1277	G1217	G1157	G1097	A1037	U977	G917	U856	G795	C735	U675	G615
U	A1460	U1399	G1278	C1218	A1158	C1098	G1038	A978	A918	U857	U796	U736	U676	C616
U	G1461	G1340	G1279	C1219	U1159	G1099	U1039	C979	C919	A858	U797	U737	C677	U617
U	G1462	A1401	A1280	A1220	G1160	C1100	U1040	C980	G920	A859	A798	A738	A678	U618
U	A1463	A1402	U1281	A1221	G1161	A1101	U1041	C981	G921	C860	G799	A739	U679	A619
U	G1464	A1403	U1282	U1222	G1162	A1102	G1042	A982	G922	A861	U801	G740	G680	A620
U	U1465	U1404	G1283	C1223	U1163	C1103	U1043	A983	G923	C862	C802	C741	U681	C621
U	U1466	A1405	A1284	A1224	U1164	C1104	G1044	A984	A924	A863	C803	C742	G682	A622
U	A1467	U1406	G1285	A1225	G1165	C1105	C1045	C985	C925	U864	A804	A743	G683	G623
U	A1468	A1407	G1286	A1226	A1166	U1106	A1046	U986	C926	U865	C805	U744	A684	U624
U	G1469	G1408	G1287	A1227	C1167	U1107	U1047	U987	C927	A866	A806	U745	G685	U625
U	U1470	A1409	C1288	C1228	G1168	A1108	G1048	A988	G928	A867	C807	A746	C686	G626
U	C1471	A1410	U1289	A1229	U1169	U1109	G1049	A989	C929	G868	C808	C747	G687	U627
U	G1472	A1411	G1290	U1230	C1170	C1110	U1050	C990	A930	U869	G809	U748	G688	A628
U	U1473	C1412	U1291	U1231	A1171	G1111	U1051	A991	C931	A870	U810	G749	U689	U629
U	A1474	G1413	A1292	C1232	A1172	U1112	G1052	U992	A932	U871	A811	A750	G690	G630
U	U1475	U1414	A1293	G1233	A1173	U1113	U1053	C993	A933	C872	A812	C751	A691	C631
U	C1476	G1415	U1294	C1234	U1174	A1114	C1054	C994	G934	U873	A813	G752	A692	A632
U	A1477	U1416	U1295	U1235	C1175	G1115	C1055	U995	U935	C874	C814	C753	A693	U633
U	A1478	U1417	C1296	A1236	A1176	U1116	U1056	U996	G936	G875	G815	U754	U694	U634
U	G1479	G1418	G1297	U1237	U1177	U1117	C1057	G997	G937	C876	A816	U755	G695	G635
U	G1480	U1421	U1298	C1238	C1178	A1118	U1058	G998	U938	U877	U817	A756	G696	G636
U	U1481	A1422	C1299	U1239	A1179	C1119	G1059	C999	G939	U878	A818	G757	G697	A637
U	A1482	C1423	G1300	U1240	U1180	A1120	C1060	G1000	G940	G879	G819	G758	U698	A638
U	C1483	A1424	U1301	G1241	C1181	U1121	U1061	A1001	A941	G880	A820	C759	A699	A639
U	C1484	C1425	C1302	U1242	C1182	U1122	C1062	A1002	G942	G881	U821	U760	G700	C640
U	C1485	A1426	A1303	A1243	C1183	G1123	G1063	G1003	C943	U882	A822	U761	A701	U641
U	C1486	U1427	U1304	A1244	C1184	U1124	U1064	U1004	A944	A883	C823	G762	U702	A642
U	U1487	U1428	G1305	A1245	C1185	C1125	G1065	U1005	U945	G884	U824	A763	A703	U643
U	A1488	A1429	A1306	A1246	U1186	U1126	U1066	A1006	G946	U885	A825	A764	U704	U644
U	G1489	G1430	A1307	G1247	U1187	A1127	C1067	U1007	U947	A886	C826	A765	A705	A645
U	A1491	A1431	G1308	U1248	A1188	G1128	G1068	G1008	U948	C887	C827	G766	U706	A646
U	G1492	G1432	C1370	G1249	U1189	C1129	U1069	G1009	G949	A888	U828	G767	G707	U647
U	A1493	G1433	A1371	A1250	G1190	G1130	G1070	A1010	C950	U889	G829	G768	A708	C648
U	A1494	C1434	C1372	G1251	U1191	A1131	A1071	U951	U951	U890	U830	U769	A709	U649
U	C1495	G1435	A1373	C1252	C1192	G1132	G1072	A1012	U952	C891	G831	G770	G710	A650
U	G1496	C1436	C1374	A1253	U1193	A1133	C1073	C1013	A953	G892	G832	G771	G711	G651
U	U1497	U1437	U1315	A1254	A1194	C1134	U1074	A1014	A954	C893	G833	G772	A712	A652
U	G1498	A1438	G1316	A1255	G1195	U1135	G1075	U1015	U955	A894	G834	G773	A713	G653
U	G1499	G1439	C1377	U1256	G1196	U1136	U1076	A1016	U956	A895	G835	A774	C714	U654
U	G1500	U1440	C1378	C1257	U1197	C1137	U1077	A1017	C957	G896	C836	G775	A715	G655
U	G1501	C1441	C1379	U1258	U1198	U1138	G1078	U1018	G958	A897	C837	G776	C716	U656
U	G1502	A1442	U1381	G1259	U1199	A1139	G1079	A959	A959	A898	U838	A777	C717	G657
U	U1503	A1443	G1321	A1261	G1200	A1140	U1080	C960	C960	U899	U839	A778	A718	G658
U	G1504	G1444	C1322	U1262	A1202	U1141	U1081	A	G961	G900	C840	U779	G719	U659
U	G1505	U1445	A1323	A1263	A1203	C1142	U1082	G	G962	A901	C841	A781	G721	A660
U	A1506	A1446	C1324	G1264	A1204	C1143	A1083	G	U963	A902	C842	G782	G722	G661
U	U1507	U1447	U1325	U1265	C1205	A1144	A1084	U	A964	A903	C843	G783	G723	G662
U	C1508	U1448	C1326	U1266	G1206	A1146	U1086	A	A966	U905	C845	A784	G724	A664

● Molecule 53: tRNA-Phe



4 Experimental information

Property	Value	Source
EM reconstruction method	SUBTOMOGRAM AVERAGING	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of subtomograms used	2218	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	1.451	Depositor
Minimum map value	-0.444	Depositor
Average map value	0.024	Depositor
Map value standard deviation	0.116	Depositor
Recommended contour level	0.45	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

5.1 Standard geometry

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	0.63	0/504
2	1	0.24	0/484	0.65	0/637
3	2	0.28	0/306	0.81	2/401 (0.5%)
4	A	0.28	0/1954	0.61	0/2642
5	B	0.28	0/1721	0.62	0/2323
6	C	0.22	0/1691	0.60	0/2267
7	D	0.30	0/1188	0.67	0/1593
8	E	0.26	0/1384	0.64	0/1867
9	F	0.26	0/1266	0.62	3/1700 (0.2%)
10	G	0.32	0/1126	0.67	1/1517 (0.1%)
11	H	0.25	0/1044	0.66	3/1395 (0.2%)
12	I	0.25	0/820	0.72	1/1103 (0.1%)
13	J	0.23	0/844	0.56	0/1136
14	K	0.36	0/1094	0.78	2/1468 (0.1%)
15	L	0.23	0/962	0.59	0/1289
16	M	0.26	0/483	0.58	0/643
17	N	0.26	0/679	0.59	0/907
18	O	0.28	0/659	0.66	1/885 (0.1%)
19	P	0.29	0/684	0.66	0/913
20	Q	0.34	0/545	0.69	0/730
21	R	0.28	0/698	0.71	0/936
22	S	0.23	0/631	0.54	0/838
23	T	0.23	0/475	0.61	0/621
24	a	0.27	0/2267	0.62	1/3044 (0.0%)
25	b	0.29	0/1795	0.64	2/2412 (0.1%)
26	c	0.28	0/1671	0.64	0/2246
27	d	0.30	0/1409	0.71	4/1894 (0.2%)
28	e	0.31	0/1420	0.66	1/1912 (0.1%)
29	f	0.27	0/1205	0.64	0/1616
30	g	0.48	0/969	0.92	1/1295 (0.1%)
31	h	0.24	0/968	0.63	0/1298
32	i	0.28	0/1186	0.65	1/1592 (0.1%)
33	j	0.24	0/953	0.61	1/1275 (0.1%)
34	k	0.27	0/1170	0.65	0/1559

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
35	l	0.27	0/1104	0.61	0/1481
36	m	0.32	0/973	0.65	0/1309
37	n	0.26	0/897	0.62	1/1198 (0.1%)
38	o	0.27	0/948	0.63	0/1262
39	p	0.28	0/961	0.59	0/1278
40	q	0.32	0/828	0.75	1/1111 (0.1%)
41	r	0.30	0/1077	0.69	0/1441
42	s	0.28	0/732	0.62	0/988
43	t	0.25	0/879	0.62	0/1165
44	u	0.27	0/665	0.69	0/884
45	v	0.27	0/519	0.77	0/695
46	w	0.24	0/826	0.63	1/1104 (0.1%)
47	x	0.23	0/353	0.63	0/474
48	y	0.37	0/457	0.81	0/601
49	z	0.26	0/412	0.67	0/547
50	3	0.25	0/69073	0.44	0/107710
51	4	0.26	0/2505	0.49	0/3902
52	5	0.25	0/35768	0.43	0/55764
53	7	0.22	0/1808	0.44	0/2817
All	All	0.26	0/156919	0.51	27/234189 (0.0%)

There are no bond length outliers.

All (27) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	i	86	GLY	N-CA-C	-10.95	101.73	115.31
40	q	25	LEU	N-CA-C	-8.10	103.30	113.02
9	F	16	VAL	N-CA-C	-7.88	106.22	113.71
14	K	116	ASP	N-CA-C	-7.53	103.06	111.71
27	d	27	GLN	N-CA-C	-6.83	104.05	112.38
24	a	24	LYS	N-CA-C	-6.70	105.40	113.97
27	d	25	ILE	N-CA-C	-6.66	104.65	112.98
11	H	27	LYS	N-CA-C	-6.39	105.50	113.55
37	n	48	GLN	N-CA-C	-6.19	104.95	113.18
27	d	48	LYS	N-CA-C	-6.16	104.64	111.36
25	b	154	ALA	CA-C-N	-6.15	115.13	122.44
25	b	154	ALA	C-N-CA	-6.15	115.13	122.44
27	d	26	MET	N-CA-C	-6.04	106.07	113.50
12	I	96	ILE	N-CA-C	-5.81	107.62	113.20
30	g	89	ILE	N-CA-C	-5.72	107.41	112.90
9	F	132	ALA	N-CA-C	-5.71	108.11	114.62
3	2	7	VAL	CA-C-N	5.61	131.23	122.26

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	2	7	VAL	C-N-CA	5.61	131.23	122.26
11	H	40	TYR	CA-C-N	-5.59	104.19	120.69
11	H	40	TYR	C-N-CA	-5.59	104.19	120.69
14	K	123	ARG	CB-CG-CD	-5.53	98.57	111.30
46	w	38	LEU	N-CA-C	-5.52	107.55	114.56
9	F	146	ALA	N-CA-C	-5.42	106.60	113.43
28	e	113	SER	N-CA-C	-5.41	105.38	111.28
33	j	14	THR	N-CA-C	-5.29	107.84	114.56
18	O	30	ILE	N-CA-C	-5.11	107.83	112.12
10	G	79	ARG	N-CA-C	-5.07	105.82	112.41

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	63	0
2	1	477	0	530	60	0
3	2	304	0	350	41	0
4	A	1921	0	1973	171	0
5	B	1698	0	1768	143	0
6	C	1660	0	1719	142	0
7	D	1173	0	1267	106	0
8	E	1362	0	1377	115	0
9	F	1246	0	1308	109	0
10	G	1110	0	1226	112	0
11	H	1028	0	1094	94	0
12	I	809	0	894	90	0
13	J	829	0	855	76	0
14	K	1076	0	1170	115	0
15	L	951	0	1014	89	0
16	M	474	0	509	67	0
17	N	673	0	730	56	0
18	O	646	0	677	44	0
19	P	675	0	728	80	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
20	Q	535	0	562	63	0
21	R	682	0	691	66	0
22	S	629	0	681	67	0
23	T	471	0	522	31	0
24	a	2225	0	2301	234	0
25	b	1762	0	1808	180	0
26	c	1644	0	1731	175	0
27	d	1388	0	1469	113	0
28	e	1396	0	1481	134	0
29	f	1182	0	1228	110	0
30	g	960	0	1014	26	0
31	h	959	0	1039	28	0
32	i	1164	0	1192	109	0
33	j	944	0	1019	95	0
34	k	1153	0	1256	136	0
35	l	1079	0	1134	124	0
36	m	958	0	1011	98	0
37	n	889	0	952	101	0
38	o	938	0	1008	86	0
39	p	947	0	1028	109	0
40	q	811	0	858	86	0
41	r	1068	0	1150	109	0
42	s	720	0	803	76	0
43	t	872	0	972	77	0
44	u	657	0	695	79	0
45	v	513	0	560	67	0
46	w	818	0	870	71	0
47	x	344	0	333	19	0
48	y	452	0	472	54	0
49	z	408	0	440	47	0
50	3	61664	0	30953	5546	0
51	4	2239	0	1137	217	0
52	5	31943	0	16056	2826	0
53	7	1618	0	821	141	0
All	All	144524	0	98865	11957	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 53.

All (11957) 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)
50:3:2360:A:N7	50:3:2373:G:N2	1.69	1.35
50:3:1785:U:C2	50:3:1792:A:N6	1.96	1.34
50:3:2126:A:C2	50:3:2176:G:N2	1.99	1.29
50:3:2175:U:N3	50:3:2179:A:C8	1.97	1.29
50:3:47:G:N2	50:3:184:A:H61	1.28	1.28
52:5:242:A:C8	52:5:277:G:N2	1.99	1.27
29:f:2:LYS:NZ	29:f:42:LYS:HZ3	1.32	1.25
50:3:2316:G:N1	50:3:2319:A:C8	2.01	1.25
50:3:2664:U:N3	50:3:2673:A:C8	2.11	1.19
29:f:5:LEU:HB2	29:f:20:ASP:OD1	1.41	1.17
50:3:47:G:H21	50:3:184:A:N6	1.43	1.17
50:3:2126:A:H2	50:3:2176:G:N2	1.34	1.14
50:3:535:G:N3	50:3:540:A:N6	1.95	1.13
50:3:2175:U:C2	50:3:2179:A:N7	2.17	1.12
52:5:334:A:C2	52:5:347:G:N1	2.17	1.12
50:3:2646:G:N3	50:3:2786:A:N6	2.01	1.07
21:R:3:ARG:N	52:5:1293:A:HO2'	1.52	1.07
50:3:2360:A:C8	50:3:2373:G:N2	2.23	1.06
52:5:1136:G:H1	52:5:1151:A:N6	1.51	1.05
50:3:1807:C:H42	50:3:1824:G:N2	1.53	1.04
29:f:2:LYS:NZ	29:f:42:LYS:NZ	2.04	1.04
50:3:1310:U:O2	50:3:1314:A:N6	1.90	1.04
52:5:1323:A:N6	52:5:1348:G:N3	2.05	1.04
52:5:1282:U:H2'	52:5:1283:G:H8	1.21	1.04
52:5:671:G:N1	52:5:713:A:C2	2.25	1.03
52:5:334:A:H2	52:5:347:G:N1	1.55	1.03
50:3:1858:U:H3	50:3:1898:G:H1	1.06	1.03
52:5:1132:G:N2	52:5:1154:A:C2	2.26	1.03
50:3:2098:U:H3	50:3:2236:G:H1	1.07	1.02
52:5:778:A:C8	52:5:798:U:N3	2.28	1.02
50:3:2360:A:N7	50:3:2373:G:C2	2.28	1.01
52:5:1136:G:N7	52:5:1157:G:N1	2.08	1.01
51:4:31:G:N2	51:4:34:U:O4	1.92	1.01
50:3:2536:U:H3	50:3:2543:G:H1	1.04	1.01
52:5:1388:A:N6	52:5:1462:G:H1	1.59	1.00
29:f:2:LYS:HZ2	29:f:42:LYS:HB3	1.26	1.00
50:3:895:G:HO2'	50:3:953:G:H1	1.01	1.00
50:3:1807:C:N4	50:3:1824:G:H22	1.57	1.00
52:5:1136:G:H8	52:5:1157:G:H22	1.08	0.99
50:3:534:U:H3	50:3:538:A:N6	1.59	0.99
53:7:9:U:H3	53:7:15:A:H8	1.03	0.99
21:R:27:LYS:HG3	21:R:29:ARG:HH22	1.27	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:137:U:H3	50:3:146:G:H1	1.05	0.98
52:5:582:G:H1	52:5:754:U:H3	1.02	0.98
52:5:1112:U:H3	52:5:1128:G:H1	1.07	0.98
52:5:1405:U:H3	52:5:1445:G:H1	1.08	0.98
52:5:671:G:H1	52:5:713:A:H2	1.10	0.97
50:3:1067:A:H2	50:3:1157:G:H1	0.99	0.97
28:e:16:VAL:HA	28:e:28:LYS:O	1.65	0.97
50:3:2756:A:C8	50:3:2762:U:N3	2.31	0.97
52:5:829:G:H1	52:5:848:U:H3	1.07	0.97
52:5:1046:A:N6	52:5:1175:C:N4	2.13	0.97
8:E:1:MET:HG3	8:E:90:LEU:HB2	1.46	0.97
52:5:671:G:N1	52:5:713:A:H2	1.62	0.97
52:5:1413:G:H1	52:5:1438:U:H3	0.99	0.97
52:5:1138:U:H3	52:5:1149:G:H1	1.04	0.96
28:e:93:VAL:O	28:e:163:LYS:HA	1.65	0.96
52:5:631:C:H2'	52:5:632:A:H8	1.27	0.96
53:7:9:U:N3	53:7:15:A:C8	2.32	0.96
50:3:2664:U:C2	50:3:2673:A:N7	2.34	0.96
38:o:35:ILE:HB	38:o:46:GLN:O	1.64	0.96
50:3:162:G:N2	50:3:170:A:N7	2.13	0.96
50:3:1940:G:H1	50:3:1974:U:H3	0.98	0.96
52:5:1321:G:HO2'	52:5:1348:G:H1	1.07	0.96
5:B:193:GLN:NE2	5:B:194:THR:O	1.99	0.96
50:3:2058:G:H22	50:3:2625:U:H3	1.14	0.96
35:l:56:LYS:HE2	50:3:2477:A:H4'	1.48	0.96
37:n:4:ARG:HG3	51:4:44:A:H5''	1.47	0.96
9:F:110:ARG:HB3	9:F:118:LYS:HB2	1.44	0.95
52:5:778:A:N7	52:5:798:U:N3	2.14	0.95
52:5:946:G:HO2'	52:5:965:C:HO2'	1.15	0.95
29:f:2:LYS:HZ1	29:f:42:LYS:NZ	1.62	0.95
50:3:1844:C:H2'	50:3:1846:A:H62	1.30	0.95
52:5:580:C:O2	52:5:756:A:N6	2.00	0.95
50:3:1495:A:N6	50:3:1548:A:N7	2.14	0.95
50:3:2480:G:H21	50:3:2486:A:H62	1.15	0.95
50:3:596:G:N1	50:3:611:A:N6	2.13	0.95
50:3:2460:C:N3	50:3:2512:U:N3	2.14	0.95
15:L:103:ARG:HH11	52:5:948:U:H5	1.15	0.95
52:5:245:U:H3	52:5:271:G:H1	1.14	0.94
50:3:2257:U:O2	50:3:2283:C:N4	2.01	0.94
52:5:1320:A:N6	52:5:1350:A:N7	2.15	0.94
50:3:2175:U:O2	50:3:2179:A:N7	2.00	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2756:A:N7	50:3:2762:U:O2	2.00	0.94
52:5:1136:G:C8	52:5:1157:G:N2	2.33	0.94
53:7:19:G:H1	53:7:56:U:H4'	1.30	0.94
44:u:52:TYR:HE1	44:u:54:GLN:HB3	1.31	0.94
50:3:1027:U:H3	50:3:1198:G:H1	1.14	0.94
50:3:1871:U:H3	50:3:1885:G:H1	1.16	0.94
52:5:144:U:O2	52:5:149:G:C2	2.21	0.94
50:3:1558:A:OP2	50:3:1571:G:N2	2.01	0.94
50:3:2851:U:H3	50:3:2873:G:H1	1.04	0.94
52:5:242:A:H8	52:5:277:G:N2	1.51	0.94
50:3:517:G:H1	50:3:544:U:H3	1.16	0.94
50:3:2175:U:N3	50:3:2179:A:H8	1.63	0.94
50:3:2297:G:H1	50:3:2351:U:H3	0.95	0.93
50:3:2316:G:N1	50:3:2319:A:H8	1.59	0.93
52:5:334:A:N1	52:5:347:G:O6	2.01	0.93
51:4:76:A:N7	51:4:88:G:N2	2.17	0.93
52:5:1215:U:H3'	52:5:1216:G:H8	1.33	0.93
50:3:2756:A:H8	50:3:2762:U:H3	1.08	0.93
52:5:883:A:N6	52:5:902:A:N7	2.15	0.93
50:3:897:A:N6	50:3:953:G:N3	2.16	0.93
50:3:2088:U:H3	50:3:2247:G:H1	1.06	0.93
50:3:47:G:N2	50:3:184:A:N6	2.09	0.93
50:3:193:G:N3	50:3:211:A:N6	2.17	0.92
50:3:332:G:N3	50:3:374:A:N6	2.17	0.92
50:3:1777:G:H1	50:3:1989:U:H3	1.16	0.92
52:5:599:G:H1	52:5:634:U:H3	1.16	0.92
25:b:125:ARG:HD3	25:b:166:SER:HA	1.50	0.92
38:o:57:GLY:HA2	38:o:62:GLU:HG2	1.50	0.92
50:3:1093:U:H3	50:3:1115:G:H1	1.12	0.92
50:3:1876:G:N2	50:3:1879:A:N7	2.17	0.92
50:3:2515:C:O2	50:3:2591:G:N2	2.02	0.92
52:5:242:A:N7	52:5:277:G:C2	2.37	0.92
50:3:534:U:H3	50:3:538:A:H62	0.95	0.92
50:3:2175:U:N3	50:3:2179:A:N7	2.15	0.92
7:D:160:ILE:HD12	7:D:178:ILE:HG21	1.51	0.92
50:3:1067:A:C2	50:3:1157:G:N1	2.38	0.92
50:3:2291:U:O2	50:3:2333:G:O6	1.88	0.92
50:3:2098:U:O2	50:3:2236:G:N2	2.02	0.92
52:5:1038:G:H21	52:5:1190:G:H5'	1.35	0.92
30:g:25:VAL:O	30:g:83:ALA:HB3	1.70	0.92
18:O:65:SER:HB2	52:5:451:G:H5'	1.52	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:237:A:N6	50:3:465:A:N1	2.18	0.91
50:3:410:G:N2	50:3:411:U:O4	2.02	0.91
50:3:573:A:N7	50:3:588:G:N2	2.18	0.91
52:5:253:G:H1	52:5:265:U:H3	1.17	0.91
50:3:1807:C:N3	50:3:1824:G:N1	2.18	0.91
16:M:31:ARG:HB3	52:5:969:A:H5'	1.52	0.91
50:3:986:G:H1	50:3:1003:U:H3	0.92	0.91
50:3:2756:A:N7	50:3:2762:U:C2	2.39	0.91
52:5:1043:U:O2	52:5:1181:G:O6	1.87	0.91
52:5:1138:U:O2	52:5:1149:G:N2	2.04	0.91
50:3:629:G:H1	50:3:696:U:H3	0.96	0.91
50:3:1071:G:N2	50:3:1154:U:O2	2.04	0.91
50:3:1091:G:H2'	50:3:1138:A:H61	1.35	0.91
50:3:1296:G:N2	50:3:1297:U:O4	2.03	0.91
50:3:2480:G:N2	50:3:2486:A:H62	1.69	0.91
44:u:57:THR:H	50:3:2338:G:H21	1.15	0.91
50:3:247:U:O2	50:3:259:A:N7	2.03	0.91
50:3:2736:U:HO2'	50:3:2737:G:H8	0.94	0.91
11:H:13:LYS:HB2	11:H:76:GLY:HA3	1.53	0.90
50:3:192:U:O2	50:3:212:G:N2	2.03	0.90
50:3:2480:G:N3	50:3:2486:A:N6	2.19	0.90
52:5:1106:U:H3	52:5:1160:G:H1	0.94	0.90
50:3:218:G:H21	50:3:220:A:H1'	1.35	0.90
50:3:231:A:N6	50:3:446:A:N3	2.19	0.90
50:3:493:A:H61	50:3:506:A:H3'	1.35	0.90
50:3:2547:C:H2'	50:3:2548:G:H8	1.34	0.90
52:5:982:A:N1	52:5:1193:U:N3	2.19	0.90
36:m:106:ARG:HH11	36:m:109:ASP:HB2	1.36	0.90
45:v:32:ASN:HB2	50:3:433:A:H5''	1.50	0.90
50:3:225:A:H62	50:3:463:U:H3	1.14	0.90
50:3:1746:U:H3	50:3:1753:G:H1	1.16	0.90
52:5:483:U:H2'	52:5:484:A:H8	1.34	0.90
50:3:162:G:H22	50:3:169:U:H3'	1.36	0.90
52:5:242:A:N7	52:5:277:G:N2	2.19	0.90
50:3:720:A:H5'	50:3:809:A:H61	1.36	0.89
52:5:885:U:N3	52:5:901:A:N7	2.19	0.89
10:G:54:LEU:HA	10:G:75:LYS:H	1.36	0.89
52:5:334:A:H2	52:5:347:G:H1	0.90	0.89
50:3:80:U:O2	50:3:109:G:N2	2.05	0.89
50:3:2360:A:C5	50:3:2373:G:N2	2.39	0.89
50:3:2400:A:N7	50:3:2432:C:N3	2.19	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:601:U:O2	50:3:2037:A:N6	2.05	0.89
50:3:1011:A:N7	50:3:1025:G:N2	2.20	0.89
50:3:986:G:N2	50:3:1003:U:O2	2.05	0.89
52:5:61:A:N6	52:5:95:C:O2	2.05	0.89
52:5:144:U:C2	52:5:149:G:N1	2.41	0.89
41:r:7:GLN:HB3	41:r:103:LEU:HB2	1.54	0.89
53:7:16:G:N1	53:7:49:C:N3	2.19	0.89
50:3:1619:A:H2'	50:3:1620:A:C8	2.07	0.89
52:5:884:G:N2	52:5:885:U:O4	2.06	0.89
52:5:1406:U:H3	52:5:1444:G:H1	0.92	0.88
50:3:247:U:C2	50:3:259:A:N7	2.41	0.88
50:3:2023:U:H5''	50:3:2065:A:H5'	1.53	0.88
50:3:2316:G:C2	50:3:2319:A:H8	1.91	0.88
52:5:1230:G:H3'	52:5:1254:A:H61	1.36	0.88
50:3:1702:A:N6	50:3:1998:U:C2	2.41	0.88
50:3:989:G:H1	50:3:1000:U:H3	1.16	0.88
50:3:2089:A:H3'	50:3:2090:G:H8	1.38	0.88
24:a:26:LEU:HD13	24:a:88:TYR:H	1.39	0.88
50:3:1746:U:O2	50:3:1753:G:N2	2.07	0.88
50:3:1785:U:N3	50:3:1792:A:N6	2.21	0.88
52:5:1106:U:O2	52:5:1160:G:N2	2.06	0.88
52:5:1261:A:H2'	52:5:1262:A:C8	2.09	0.88
38:o:53:LEU:HB2	38:o:65:ILE:HB	1.54	0.88
52:5:1282:U:H2'	52:5:1283:G:C8	2.09	0.88
5:B:36:GLU:OE2	5:B:60:ARG:NH2	2.07	0.88
50:3:950:U:O2	50:3:951:C:N4	2.06	0.88
50:3:904:C:N4	50:3:949:C:O2	2.06	0.87
11:H:113:LYS:NZ	52:5:1345:G:N7	2.22	0.87
50:3:499:G:N2	50:3:502:A:OP2	2.07	0.87
29:f:2:LYS:NZ	29:f:42:LYS:HB3	1.88	0.87
50:3:63:U:H3	50:3:97:A:H1'	1.39	0.87
50:3:1200:U:H2'	50:3:1201:A:H8	1.40	0.87
50:3:2270:U:H1'	50:3:2336:A:H1'	1.56	0.87
50:3:2145:A:N6	50:3:2161:G:O6	2.08	0.87
50:3:2098:U:H3'	50:3:2099:U:H2'	1.55	0.87
51:4:22:G:O2'	51:4:25:A:N1	2.05	0.87
52:5:693:A:N3	52:5:783:G:O2'	2.07	0.87
53:7:38:G:H3'	53:7:39:A:H8	1.38	0.87
10:G:99:ARG:HE	10:G:103:LYS:HB3	1.40	0.87
50:3:535:G:C2	50:3:540:A:N6	2.43	0.87
50:3:1906:G:H22	50:3:1909:C:H41	1.21	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2534:G:N2	50:3:2545:U:O2	2.07	0.87
52:5:1046:A:N6	52:5:1175:C:C4	2.43	0.87
52:5:1388:A:H61	52:5:1462:G:H1	0.89	0.87
50:3:442:G:O6	50:3:457:U:C4	2.28	0.86
14:K:4:ILE:HA	14:K:7:LEU:HB2	1.55	0.86
26:c:160:VAL:HG12	26:c:186:VAL:HG11	1.57	0.86
50:3:305:U:H3	50:3:399:G:H1	0.91	0.86
52:5:680:G:O6	52:5:704:U:O2	1.94	0.86
40:q:39:LEU:HA	40:q:50:LEU:HB2	1.58	0.86
50:3:596:G:H1	50:3:611:A:N6	1.72	0.86
52:5:1260:U:H3	52:5:1262:A:H5'	1.39	0.86
52:5:1304:U:H3'	52:5:1305:G:H8	1.40	0.86
53:7:16:G:H22	53:7:49:C:N4	1.74	0.86
25:b:4:ARG:NH1	25:b:87:MET:SD	2.49	0.86
25:b:8:GLY:O	25:b:204:VAL:HA	1.76	0.86
50:3:782:U:H3	50:3:2021:A:H1'	1.40	0.86
52:5:1388:A:N1	52:5:1462:G:N2	2.23	0.86
47:x:18:SER:HB3	47:x:39:CYS:H	1.40	0.86
52:5:492:G:N2	52:5:495:U:O4	2.08	0.86
39:p:91:ARG:HB3	39:p:94:LEU:HB2	1.57	0.86
50:3:133:G:H1	50:3:150:U:H3	0.88	0.86
52:5:334:A:N1	52:5:347:G:C6	2.44	0.86
52:5:945:U:H3	52:5:1206:G:H1	1.24	0.85
50:3:1472:C:N3	50:3:1580:G:N1	2.24	0.85
52:5:671:G:O6	52:5:713:A:N1	2.08	0.85
52:5:920:G:H1	52:5:1366:U:H3	1.20	0.85
52:5:1046:A:C6	52:5:1175:C:N4	2.44	0.85
52:5:1212:C:H4'	52:5:1274:G:H22	1.38	0.85
15:L:115:THR:HB	52:5:1204:A:H5'	1.58	0.85
50:3:420:A:N7	50:3:425:U:O4	2.10	0.85
52:5:41:C:N3	52:5:398:G:N1	2.23	0.85
52:5:996:U:O2	52:5:1030:G:N1	2.08	0.85
52:5:1321:G:N2	52:5:1322:U:O4	2.08	0.85
50:3:193:G:H21	50:3:211:A:H62	1.25	0.85
50:3:1070:U:O2	50:3:1155:G:N2	2.10	0.85
50:3:1797:C:H3'	50:3:1835:G:H22	1.40	0.85
50:3:2664:U:O2	50:3:2673:A:N7	2.09	0.85
50:3:2703:U:O2	50:3:2722:G:O6	1.94	0.85
52:5:288:A:O2'	52:5:606:A:N6	2.09	0.85
52:5:412:G:N2	52:5:424:U:O2	2.09	0.85
1:0:8:SER:H	50:3:721:G:H21	1.25	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:133:G:H21	52:5:1422:A:H1'	1.41	0.85
50:3:1061:A:H2'	50:3:1062:A:H8	1.41	0.85
50:3:2316:G:C6	50:3:2319:A:N7	2.44	0.85
50:3:173:C:H2'	50:3:174:A:H8	1.38	0.85
50:3:680:A:H2'	50:3:682:A:H8	1.41	0.85
52:5:13:U:O2	52:5:23:G:O6	1.94	0.85
25:b:117:ARG:HB2	25:b:169:TYR:HB3	1.57	0.85
50:3:1296:G:HO2'	50:3:2019:G:H1	1.24	0.85
51:4:42:G:H1'	51:4:45:C:H42	1.42	0.85
52:5:247:G:O6	52:5:267:C:N4	2.10	0.85
52:5:440:U:N3	52:5:489:U:O2	2.09	0.85
50:3:622:U:H2'	50:3:623:A:H8	1.41	0.85
50:3:1446:G:O2'	50:3:1613:A:N6	2.10	0.85
50:3:1701:G:N2	50:3:2000:U:O4	2.09	0.85
50:3:2536:U:O2	50:3:2543:G:N2	2.10	0.85
50:3:2670:A:H3'	50:3:2671:G:H8	1.41	0.85
52:5:778:A:N7	52:5:798:U:C2	2.45	0.85
52:5:1244:A:O2'	52:5:1299:C:O2	1.94	0.85
45:v:18:ARG:NH2	50:3:205:C:OP1	2.11	0.84
50:3:1027:U:O4	50:3:1198:G:O6	1.95	0.84
50:3:1932:C:H42	50:3:1936:G:H22	1.20	0.84
21:R:36:ARG:HH22	21:R:75:SER:HB2	1.41	0.84
42:s:13:THR:H	42:s:16:VAL:HB	1.42	0.84
27:d:24:SER:HB3	27:d:27:GLN:HB2	1.60	0.84
50:3:569:U:H3	50:3:592:G:H1	0.88	0.84
50:3:1494:U:N3	50:3:1550:G:N1	2.25	0.84
8:E:158:ASP:HA	10:G:78:GLN:HB3	1.59	0.84
32:i:4:THR:HA	50:3:1031:U:H2'	1.58	0.84
35:l:24:ASN:ND2	50:3:944:U:O2'	2.11	0.84
50:3:1067:A:H2	50:3:1157:G:N1	1.75	0.84
52:5:1136:G:H1	52:5:1151:A:H61	0.87	0.84
50:3:11:U:O2	50:3:2898:A:N6	2.11	0.84
50:3:47:G:H21	50:3:184:A:H61	0.86	0.84
50:3:1020:G:N2	50:3:1020:G:OP2	2.10	0.84
50:3:2231:A:H3'	50:3:2232:G:H8	1.41	0.84
50:3:2409:U:H3	50:3:2423:G:H1	0.87	0.84
50:3:14:U:O4	50:3:561:A:N7	2.10	0.84
50:3:355:A:O2'	50:3:374:A:N3	2.10	0.84
50:3:947:A:N3	50:3:2272:C:O2'	2.11	0.84
50:3:2477:A:H3'	50:3:2478:G:H8	1.41	0.84
22:S:10:ARG:NH2	52:5:92:G:N7	2.26	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1474:C:H42	50:3:1491:G:H1	1.26	0.84
50:3:278:U:O2	50:3:291:G:O6	1.96	0.84
50:3:409:A:N6	50:3:438:A:OP2	2.10	0.84
9:F:14:ASP:O	9:F:18:ASN:N	2.11	0.84
28:e:155:ARG:HG3	28:e:164:GLY:HA2	1.60	0.84
50:3:250:U:O2	50:3:256:G:N2	2.08	0.84
50:3:759:U:H3'	50:3:760:G:H8	1.43	0.84
53:7:16:G:N1	53:7:49:C:C2	2.45	0.84
50:3:162:G:N2	50:3:170:A:C8	2.45	0.83
52:5:398:G:H4'	52:5:618:U:H3	1.40	0.83
9:F:70:PRO:HG3	9:F:98:LEU:HB2	1.57	0.83
17:N:62:ARG:HH12	52:5:753:C:H5	1.24	0.83
40:q:64:LEU:HB3	40:q:86:ARG:HE	1.42	0.83
52:5:1430:G:H3'	52:5:1431:A:H8	1.43	0.83
29:f:5:LEU:CB	29:f:20:ASP:OD1	2.25	0.83
50:3:219:G:H1'	50:3:220:A:H4'	1.60	0.83
50:3:250:U:H3	50:3:256:G:H1	0.84	0.83
50:3:513:A:N6	50:3:536:A:OP1	2.11	0.83
50:3:774:A:N3	50:3:775:C:N4	2.26	0.83
52:5:651:G:O6	52:5:749:G:N2	2.10	0.83
29:f:4:ILE:O	29:f:20:ASP:OD2	1.96	0.83
46:w:85:ASN:HA	46:w:88:LYS:HE2	1.59	0.83
49:z:31:LYS:HE2	49:z:48:LYS:HE3	1.60	0.83
50:3:697:U:H2'	50:3:698:A:H8	1.43	0.83
50:3:742:G:H1	50:3:759:U:H3	0.86	0.83
50:3:990:G:N2	50:3:999:U:O2	2.11	0.83
50:3:1387:A:N7	50:3:1400:U:O2	2.12	0.83
50:3:1785:U:C2	50:3:1792:A:C6	2.65	0.83
50:3:1785:U:N3	50:3:1792:A:C6	2.46	0.83
50:3:2259:G:H1	53:7:76:C:H4'	1.43	0.83
52:5:655:G:O6	52:5:744:U:O2	1.95	0.83
50:3:200:A:OP1	50:3:202:C:N4	2.11	0.83
50:3:596:G:C6	50:3:611:A:N6	2.47	0.83
50:3:874:U:H2'	50:3:875:G:H8	1.42	0.83
52:5:499:U:H2'	52:5:500:G:H8	1.44	0.83
23:T:43:ARG:NH2	52:5:1503:U:OP2	2.11	0.83
32:i:98:LYS:O	32:i:129:LYS:NZ	2.12	0.83
50:3:2036:G:N1	50:3:2040:A:OP2	2.11	0.83
50:3:739:G:H1	50:3:761:G:HO2'	1.22	0.83
52:5:36:G:N2	52:5:547:C:O2	2.10	0.83
50:3:61:U:H3	50:3:70:G:H1	0.85	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1244:A:H3'	50:3:1245:G:H8	1.40	0.83
50:3:1710:A:H3'	50:3:1711:A:H8	1.42	0.83
50:3:2332:U:H3	50:3:2340:U:H3	1.22	0.83
4:A:31:GLY:H	4:A:55:HIS:HA	1.43	0.83
40:q:40:MET:HA	40:q:45:ILE:HG12	1.61	0.83
50:3:2072:C:HO2'	50:3:2457:U:H3	1.25	0.83
13:J:33:ASN:HA	52:5:680:G:H21	1.43	0.82
20:Q:88:LYS:HB3	20:Q:92:ARG:HH22	1.43	0.82
24:a:226:PRO:HB3	50:3:1797:C:H5'	1.59	0.82
43:t:100:LYS:NZ	50:3:330:A:OP1	2.12	0.82
50:3:1449:G:N1	50:3:1611:C:N3	2.25	0.82
50:3:1496:A:OP2	50:3:1497:A:N6	2.11	0.82
52:5:1000:A:H3'	52:5:1019:G:H1	1.44	0.82
53:7:9:U:O2'	53:7:22:A:N1	2.12	0.82
42:s:45:GLU:O	42:s:49:GLY:N	2.08	0.82
50:3:1261:U:H2'	50:3:1262:G:H8	1.44	0.82
50:3:2481:U:OP1	50:3:2537:G:N2	2.12	0.82
50:3:2530:U:H3	50:3:2551:G:H1	0.86	0.82
52:5:1401:A:N1	52:5:1449:G:N2	2.27	0.82
50:3:325:G:O6	50:3:383:U:O2	1.97	0.82
50:3:1093:U:O2	50:3:1115:G:N2	2.12	0.82
9:F:37:LEU:HA	9:F:40:ARG:HD3	1.61	0.82
14:K:96:ARG:HH11	14:K:109:HIS:HB3	1.44	0.82
35:l:31:GLU:HG3	35:l:107:ALA:HA	1.62	0.82
52:5:368:C:O2	52:5:370:A:N6	2.12	0.82
50:3:840:G:N2	50:3:864:A:OP1	2.12	0.82
4:A:23:LEU:HD21	4:A:62:ARG:HB3	1.61	0.82
32:i:71:LYS:NZ	50:3:1176:U:OP2	2.11	0.82
50:3:1504:G:N2	50:3:1539:U:O2	2.13	0.82
8:E:66:ASN:ND2	52:5:735:C:O3'	2.11	0.82
48:y:29:VAL:HA	48:y:36:LYS:HD2	1.61	0.82
50:3:47:G:H5''	50:3:48:G:H5'	1.61	0.82
50:3:1524:C:H2'	50:3:1525:G:H8	1.44	0.82
50:3:1777:G:N2	50:3:1793:A:N7	2.27	0.82
52:5:134:G:H1	52:5:160:A:H61	1.27	0.82
25:b:91:GLU:H	25:b:91:GLU:CD	1.88	0.82
50:3:193:G:N2	50:3:211:A:H62	1.76	0.82
50:3:764:G:H5'	50:3:765:A:H5''	1.60	0.82
52:5:107:A:H61	52:5:235:C:H42	1.24	0.82
50:3:874:U:H2'	50:3:875:G:C8	2.13	0.82
4:A:53:ASN:O	4:A:55:HIS:ND1	2.12	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:r:28:LYS:NZ	41:r:67:ASP:O	2.13	0.81
50:3:2058:G:H2'	50:3:2622:A:H61	1.45	0.81
50:3:1803:U:H3	50:3:1830:G:H1	0.83	0.81
50:3:2062:C:N4	50:3:2508:U:O2'	2.13	0.81
2:1:12:LYS:O	2:1:19:ILE:HA	1.80	0.81
4:A:50:LYS:O	4:A:52:ASN:ND2	2.14	0.81
12:I:75:ARG:HH22	12:I:77:LYS:HB3	1.44	0.81
24:a:12:SER:OG	50:3:764:G:N2	2.13	0.81
50:3:80:U:H3	50:3:109:G:H1	0.82	0.81
50:3:638:A:N6	50:3:661:G:O6	2.12	0.81
50:3:729:U:H3	50:3:803:G:H1	1.29	0.81
50:3:777:C:H42	50:3:790:U:H3	1.24	0.81
50:3:788:G:H2'	50:3:789:A:H8	1.45	0.81
50:3:1406:A:O2'	50:3:1408:G:N7	2.13	0.81
50:3:2400:A:N6	50:3:2432:C:O2	2.13	0.81
50:3:2486:A:O2'	50:3:2538:A:OP1	1.98	0.81
50:3:2513:G:H2'	50:3:2584:G:H1	1.42	0.81
52:5:1390:G:H1	52:5:1460:U:H3	1.29	0.81
3:2:2:LYS:HB2	3:2:34:GLN:HG3	1.61	0.81
44:u:84:GLN:HE21	44:u:94:ARG:HB3	1.46	0.81
50:3:1313:G:H1	50:3:1357:U:H5'	1.45	0.81
50:3:1455:A:N6	50:3:1605:A:OP2	2.12	0.81
50:3:2872:A:H2'	50:3:2873:G:C8	2.15	0.81
26:c:73:LYS:NZ	50:3:1288:C:OP2	2.14	0.81
52:5:1001:A:OP2	52:5:1019:G:N2	2.14	0.81
27:d:150:ARG:NH2	50:3:2315:G:O6	2.13	0.81
52:5:242:A:N7	52:5:277:G:N3	2.29	0.81
52:5:265:U:H2'	52:5:266:A:H8	1.45	0.81
26:c:115:VAL:HG21	26:c:188:VAL:HG13	1.63	0.81
50:3:2021:A:H2'	50:3:2022:A:C4	2.16	0.81
52:5:144:U:O2	52:5:149:G:N2	2.13	0.81
2:1:15:LYS:HE3	50:3:664:G:H5'	1.63	0.81
19:P:2:LYS:HG3	19:P:3:ARG:H	1.46	0.81
21:R:5:ALA:HB3	52:5:1288:C:H5	1.45	0.81
27:d:92:ARG:NH2	51:4:41:C:O2	2.13	0.81
50:3:224:G:N2	50:3:464:A:OP2	2.14	0.81
50:3:784:A:H5'	50:3:1301:G:H1'	1.63	0.81
50:3:1777:G:N2	50:3:1989:U:O2	2.12	0.81
52:5:662:G:O6	52:5:721:G:O6	1.99	0.81
7:D:97:ARG:HG2	7:D:172:LEU:HA	1.61	0.81
32:i:94:ASP:HA	32:i:97:LYS:HE2	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2057:C:H42	50:3:2626:A:H61	1.29	0.81
50:3:2847:C:H2'	50:3:2848:A:H8	1.46	0.81
51:4:16:G:O6	51:4:63:U:O2	1.97	0.81
27:d:169:LEU:O	27:d:173:LEU:N	2.14	0.81
50:3:1764:U:C2	50:3:1769:A:N6	2.49	0.81
52:5:80:U:H2'	52:5:81:A:C8	2.17	0.81
52:5:855:G:H21	52:5:868:G:H5'	1.46	0.81
52:5:1322:U:O2	52:5:1349:A:N7	2.13	0.81
50:3:522:C:H2'	50:3:523:A:C8	2.15	0.80
50:3:566:G:O6	50:3:2025:C:N4	2.13	0.80
52:5:451:G:H3'	52:5:452:A:H8	1.46	0.80
30:g:34:ALA:HB1	50:3:1121:A:H62	1.46	0.80
37:n:30:LEU:HD11	37:n:41:VAL:HB	1.62	0.80
50:3:1688:A:H61	50:3:2012:A:H2'	1.43	0.80
14:K:123:ARG:HD3	14:K:130:TYR:HE2	1.46	0.80
50:3:321:A:H2'	50:3:322:A:H8	1.47	0.80
50:3:1244:A:H62	50:3:1265:G:N2	1.79	0.80
52:5:833:G:N2	52:5:844:U:O2	2.13	0.80
9:F:52:ARG:HH11	9:F:120:ALA:HB3	1.44	0.80
50:3:2006:C:HO2'	50:3:2695:U:HO2'	1.27	0.80
52:5:320:G:N1	52:5:323:A:OP2	2.15	0.80
52:5:1432:A:H2'	52:5:1433:G:H8	1.45	0.80
36:m:18:VAL:HG13	36:m:41:THR:HG22	1.62	0.80
40:q:6:VAL:HG22	40:q:11:GLN:HB3	1.63	0.80
50:3:1501:U:O2	50:3:1542:G:N2	2.14	0.80
50:3:2058:G:N2	50:3:2059:G:O6	2.14	0.80
50:3:2089:A:N7	50:3:2245:G:N3	2.28	0.80
50:3:2862:U:H2'	50:3:2863:G:C4	2.16	0.80
39:p:15:LYS:O	39:p:19:GLN:NE2	2.14	0.80
50:3:2125:U:O4	50:3:2155:G:N2	2.14	0.80
52:5:446:A:H3'	52:5:447:G:H8	1.47	0.80
50:3:563:A:H62	50:3:2049:A:H3'	1.47	0.80
50:3:678:U:OP1	50:3:2410:C:N4	2.14	0.80
52:5:616:C:O2	52:5:620:A:N6	2.15	0.80
18:O:74:LYS:NZ	52:5:469:C:O2	2.14	0.80
24:a:219:ASN:HD21	24:a:224:ILE:HB	1.46	0.80
41:r:36:LEU:HD21	41:r:48:ALA:HA	1.64	0.80
50:3:1450:G:N1	50:3:1610:U:O2	2.13	0.80
50:3:2126:A:N1	50:3:2176:G:N3	2.30	0.80
51:4:29:C:O2	51:4:51:A:N6	2.14	0.80
50:3:2307:G:N2	50:3:2325:U:O2	2.15	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:q:73:HIS:HA	40:q:79:HIS:HB3	1.64	0.80
50:3:2071:C:H5'	53:7:77:A:H5''	1.63	0.80
52:5:631:C:H2'	52:5:632:A:C8	2.15	0.80
52:5:980:C:N4	52:5:1195:G:O6	2.13	0.80
36:m:36:LYS:NZ	50:3:1685:G:O2'	2.15	0.79
50:3:71:C:O2	50:3:75:A:O2'	1.99	0.79
50:3:450:C:N3	50:3:2417:G:N1	2.30	0.79
50:3:1228:G:N2	50:3:1279:U:O2	2.12	0.79
50:3:2291:U:O4	50:3:2292:A:N6	2.15	0.79
52:5:231:U:H2'	52:5:232:G:H8	1.46	0.79
9:F:69:MET:O	9:F:71:ARG:NH2	2.16	0.79
20:Q:101:PHE:O	52:5:715:A:N6	2.15	0.79
28:e:57:ARG:NH1	28:e:64:SER:OG	2.15	0.79
32:i:26:LEU:HD23	32:i:31:LEU:HB3	1.65	0.79
50:3:2331:G:O6	50:3:2341:G:N2	2.14	0.79
52:5:784:A:H2	52:5:792:C:H41	1.30	0.79
12:I:78:ARG:HH22	52:5:1127:A:H4'	1.47	0.79
17:N:45:LYS:HB2	52:5:665:G:H4'	1.64	0.79
33:j:66:LYS:HE2	50:3:1699:A:H5''	1.63	0.79
50:3:855:A:H1'	50:3:979:U:H1'	1.63	0.79
50:3:2594:C:N4	50:3:2617:U:OP2	2.14	0.79
52:5:434:U:H3	52:5:493:A:H62	1.27	0.79
52:5:1237:G:N2	52:5:1248:U:O2	2.14	0.79
19:P:68:PRO:HA	19:P:74:ARG:HG3	1.64	0.79
29:f:20:ASP:OD2	29:f:34:LYS:HG3	1.83	0.79
37:n:80:LYS:O	37:n:83:LYS:HB2	1.83	0.79
50:3:535:G:N2	50:3:540:A:H62	1.80	0.79
50:3:739:G:N3	50:3:762:A:N7	2.31	0.79
50:3:1331:G:H5'	50:3:1676:G:H21	1.47	0.79
50:3:1470:C:N3	50:3:1582:G:N1	2.30	0.79
50:3:389:C:H2'	50:3:390:A:C8	2.18	0.79
50:3:622:U:H2'	50:3:623:A:C8	2.18	0.79
52:5:927:C:O2	52:5:1360:G:N2	2.12	0.79
52:5:1136:G:N2	52:5:1151:A:N1	2.29	0.79
39:p:30:SER:O	39:p:34:ALA:N	2.15	0.79
50:3:739:G:N2	50:3:762:A:C8	2.48	0.79
50:3:1338:G:OP2	50:3:1339:U:N3	2.15	0.79
50:3:1549:U:H3'	50:3:1550:G:H8	1.48	0.79
52:5:287:U:H3'	52:5:301:G:H22	1.47	0.79
50:3:980:C:H5''	50:3:981:A:H2'	1.65	0.79
50:3:1065:G:O6	50:3:1160:G:N2	2.14	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:240:U:O4	52:5:887:C:N3	2.16	0.79
50:3:83:G:H3'	50:3:84:G:H8	1.47	0.79
50:3:1125:U:O4	50:3:1136:U:N3	2.16	0.79
50:3:1849:G:O6	50:3:1905:U:O2	2.01	0.79
52:5:1396:U:O2	52:5:1454:G:N1	2.15	0.79
5:B:154:VAL:HB	5:B:171:TYR:HB2	1.64	0.79
39:p:80:ASN:ND2	50:3:1186:A:O2'	2.14	0.79
24:a:246:ARG:NH1	50:3:1979:G:OP2	2.16	0.79
37:n:27:ARG:HB2	37:n:90:VAL:HG13	1.64	0.79
44:u:27:GLY:HA2	50:3:2285:G:N7	1.98	0.79
50:3:680:A:H2'	50:3:682:A:C8	2.18	0.79
50:3:1370:A:N6	50:3:1636:U:O2	2.16	0.79
50:3:1512:A:H2'	50:3:1513:A:C8	2.18	0.79
33:j:21:ILE:HA	33:j:41:VAL:HG12	1.65	0.78
50:3:853:G:H3'	50:3:1218:G:H1	1.48	0.78
50:3:1453:U:O2	50:3:1607:G:N1	2.14	0.78
50:3:1803:U:O2	50:3:1830:G:N2	2.15	0.78
50:3:2143:G:N2	50:3:2162:U:O2	2.16	0.78
51:4:32:G:O2'	51:4:42:G:N7	2.14	0.78
52:5:416:U:O2	52:5:420:A:N6	2.15	0.78
17:N:20:GLY:O	17:N:25:GLN:NE2	2.16	0.78
50:3:1787:A:H3'	50:3:1788:A:H2'	1.66	0.78
50:3:2254:G:H2'	50:3:2255:A:H8	1.46	0.78
50:3:2506:C:O2'	50:3:2507:C:O5'	2.01	0.78
52:5:625:U:H2'	52:5:626:G:H8	1.47	0.78
52:5:1072:G:H2'	52:5:1073:A:C8	2.18	0.78
52:5:1135:U:H4'	52:5:1136:G:H5'	1.63	0.78
52:5:1217:G:N2	52:5:1269:U:O2	2.16	0.78
25:b:19:THR:HB	25:b:220:ILE:HB	1.65	0.78
27:d:28:VAL:O	27:d:30:ARG:NH2	2.16	0.78
29:f:4:ILE:HD12	29:f:35:LEU:O	1.83	0.78
37:n:101:ARG:HH21	51:4:47:C:H3'	1.48	0.78
50:3:199:A:H61	50:3:202:C:H3'	1.47	0.78
7:D:68:GLU:HA	7:D:94:VAL:HA	1.66	0.78
34:k:92:LYS:HA	34:k:125:HIS:HB2	1.65	0.78
47:x:11:SER:HA	47:x:26:GLU:HA	1.64	0.78
8:E:112:ARG:NH1	8:E:112:ARG:O	2.15	0.78
35:l:61:THR:O	35:l:63:LYS:NZ	2.17	0.78
50:3:296:U:H1'	50:3:300:G:H1'	1.65	0.78
50:3:2254:G:H2'	50:3:2255:A:C8	2.19	0.78
52:5:683:G:H1	52:5:700:G:HO2'	1.32	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:p:54:ARG:HH22	50:3:1191:A:H8	1.32	0.78
42:s:3:VAL:HG13	42:s:5:ASN:H	1.49	0.78
50:3:612:G:N2	50:3:1291:C:O2	2.12	0.78
52:5:68:C:H2'	52:5:69:G:C8	2.19	0.78
52:5:528:G:N2	52:5:528:G:OP2	2.14	0.78
52:5:1113:U:H2'	52:5:1114:A:C8	2.18	0.78
52:5:1402:U:H2'	52:5:1403:A:H8	1.48	0.78
8:E:51:LYS:NZ	52:5:708:A:OP1	2.17	0.78
50:3:612:G:N1	50:3:1291:C:N3	2.27	0.78
50:3:1472:C:O2	50:3:1580:G:N2	2.12	0.78
50:3:1699:A:H2'	50:3:1700:G:C8	2.19	0.78
50:3:2123:A:OP1	50:3:2174:G:N2	2.17	0.78
52:5:413:G:O6	52:5:423:U:O2	2.01	0.78
2:1:25:TYR:HA	50:3:2400:A:H5''	1.64	0.78
29:f:57:HIS:HA	29:f:60:ILE:HG12	1.65	0.78
50:3:827:G:N3	50:3:2079:G:O2'	2.16	0.78
50:3:1200:U:H2'	50:3:1201:A:C8	2.19	0.78
23:T:37:ARG:NH1	52:5:1502:G:N7	2.31	0.78
50:3:518:A:O2'	50:3:532:A:N1	2.16	0.78
50:3:1301:G:O2'	50:3:1652:A:N7	2.16	0.78
52:5:207:C:H3'	52:5:208:A:H8	1.47	0.78
52:5:358:G:N1	52:5:361:U:OP2	2.17	0.78
52:5:778:A:N7	52:5:798:U:O2	2.17	0.78
11:H:6:TYR:HB2	11:H:21:LEU:HB2	1.66	0.78
14:K:85:HIS:HB2	14:K:87:LEU:HD13	1.65	0.78
16:M:58:LYS:NZ	52:5:1163:A:N3	2.32	0.78
21:R:37:ARG:NH2	52:5:1292:A:N3	2.32	0.78
27:d:128:TYR:HB3	27:d:156:LEU:HB2	1.64	0.78
50:3:675:U:N3	50:3:685:G:N1	2.28	0.78
50:3:1471:A:N6	50:3:1581:U:O4	2.13	0.78
50:3:2175:U:C4	50:3:2179:A:H8	2.02	0.78
52:5:110:U:O2	52:5:232:G:N1	2.16	0.78
9:F:98:LEU:HD23	9:F:101:ARG:HD2	1.66	0.77
50:3:173:C:H2'	50:3:174:A:C8	2.19	0.77
52:5:394:U:H2'	52:5:395:G:H8	1.46	0.77
12:I:41:LYS:HB3	12:I:83:VAL:HB	1.66	0.77
27:d:44:ILE:HG23	27:d:77:TYR:HA	1.64	0.77
43:t:1:MET:HG2	43:t:100:LYS:HD3	1.66	0.77
50:3:224:G:O2'	50:3:237:A:N3	2.15	0.77
50:3:470:U:O2	50:3:471:A:N6	2.15	0.77
50:3:764:G:H1'	50:3:799:A:H5'	1.64	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:865:A:N6	50:3:2454:G:O2'	2.17	0.77
50:3:2700:C:H2'	50:3:2701:A:H8	1.48	0.77
52:5:1406:U:O2	52:5:1444:G:N2	2.15	0.77
18:O:19:ARG:NH1	52:5:225:U:O2'	2.16	0.77
22:S:3:ASN:HB2	52:5:327:G:H21	1.48	0.77
27:d:70:ALA:N	27:d:82:GLY:O	2.15	0.77
37:n:8:ARG:NH2	37:n:34:LYS:O	2.17	0.77
50:3:788:G:H2'	50:3:789:A:C8	2.19	0.77
50:3:534:U:O4	50:3:538:A:N7	2.18	0.77
50:3:1269:C:H2'	50:3:1270:C:H6	1.49	0.77
52:5:754:U:O2'	52:5:873:U:O2	2.03	0.77
5:B:11:ARG:NH1	5:B:180:THR:O	2.16	0.77
37:n:8:ARG:NH1	51:4:27:A:OP1	2.18	0.77
43:t:90:LYS:N	43:t:103:VAL:O	2.14	0.77
45:v:17:ASN:HB3	45:v:25:THR:HB	1.67	0.77
50:3:666:G:N2	50:3:669:A:OP2	2.17	0.77
50:3:1906:G:H22	50:3:1909:C:N4	1.83	0.77
52:5:376:G:N2	52:5:379:A:OP2	2.17	0.77
52:5:671:G:C6	52:5:713:A:N1	2.53	0.77
13:J:48:SER:HA	13:J:51:LYS:HZ2	1.48	0.77
50:3:534:U:N3	50:3:538:A:N6	2.25	0.77
50:3:847:C:N3	50:3:1226:G:N1	2.32	0.77
50:3:1747:G:H2'	50:3:1752:A:H61	1.48	0.77
12:I:8:LYS:O	12:I:87:GLN:NE2	2.18	0.77
26:c:127:LEU:HD12	26:c:199:VAL:HG13	1.65	0.77
50:3:247:U:H2'	50:3:248:A:C8	2.20	0.77
50:3:1400:U:H2'	50:3:1401:A:C8	2.20	0.77
50:3:1589:A:H2'	50:3:1590:U:C6	2.19	0.77
50:3:2684:G:H2'	50:3:2685:A:H8	1.50	0.77
50:3:2840:U:H2'	50:3:2841:A:C8	2.20	0.77
25:b:20:ASN:O	33:j:72:LYS:NZ	2.18	0.77
26:c:175:ILE:HB	26:c:178:VAL:HG22	1.67	0.77
43:t:2:GLN:NE2	50:3:87:G:OP1	2.18	0.77
50:3:2255:A:H2'	50:3:2256:C:C6	2.20	0.77
50:3:2534:G:H1	50:3:2545:U:H3	0.80	0.77
50:3:2655:U:O2	50:3:2681:G:O6	2.01	0.77
51:4:39:U:H5'	51:4:40:U:H5	1.48	0.77
8:E:3:TYR:HE1	8:E:89:ASN:HD22	1.30	0.77
50:3:17:G:N2	50:3:560:U:O2	2.18	0.77
50:3:2589:G:N2	50:3:2589:G:OP2	2.18	0.77
45:v:2:ALA:N	50:3:1392:G:N7	2.33	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:247:U:O2	50:3:259:A:C5	2.38	0.76
50:3:1961:A:O2'	50:3:1963:U:O4	2.02	0.76
1:0:34:ARG:NH1	50:3:503:G:OP2	2.18	0.76
42:s:9:LYS:NZ	42:s:10:PRO:O	2.17	0.76
50:3:1363:C:H2'	50:3:1364:A:C8	2.21	0.76
50:3:2663:G:N2	50:3:2664:U:O4	2.18	0.76
50:3:2828:C:OP2	50:3:2829:G:N2	2.18	0.76
52:5:365:U:N3	52:5:388:G:O6	2.19	0.76
52:5:621:C:H2'	52:5:622:A:C8	2.21	0.76
26:c:102:LYS:NZ	50:3:693:U:O2'	2.17	0.76
37:n:31:MET:SD	37:n:42:GLN:NE2	2.58	0.76
44:u:89:LYS:HD2	51:4:11:A:H5''	1.67	0.76
50:3:50:G:N2	50:3:180:A:N7	2.33	0.76
50:3:534:U:H3'	50:3:535:G:H8	1.50	0.76
52:5:70:A:H2'	52:5:71:A:C8	2.19	0.76
52:5:100:G:H21	52:5:102:G:H1	1.32	0.76
52:5:926:C:O2	52:5:1361:G:N2	2.12	0.76
31:h:130:GLN:O	50:3:1097:G:N2	2.18	0.76
50:3:1070:U:H3	50:3:1155:G:H1	1.25	0.76
35:l:4:PRO:HB3	50:3:907:A:H4'	1.68	0.76
41:r:127:LYS:HG3	50:3:1262:G:H4'	1.67	0.76
44:u:28:ARG:O	50:3:2271:C:N4	2.18	0.76
50:3:641:U:O2	50:3:657:A:N7	2.17	0.76
50:3:879:U:O2	50:3:969:A:N6	2.18	0.76
50:3:892:G:N1	50:3:958:C:N3	2.30	0.76
50:3:2155:G:H2'	50:3:2156:G:C8	2.21	0.76
52:5:612:G:H1	52:5:624:U:H3	0.79	0.76
18:O:21:LYS:HA	52:5:96:G:H5''	1.65	0.76
29:f:2:LYS:HZ1	29:f:42:LYS:HZ3	0.77	0.76
51:4:21:G:H2'	51:4:22:G:C8	2.21	0.76
53:7:16:G:C6	53:7:49:C:O2	2.38	0.76
37:n:99:HIS:NE2	51:4:35:C:O2	2.17	0.76
45:v:53:ARG:HH12	50:3:431:U:H3'	1.50	0.76
48:y:17:ARG:NE	50:3:1296:G:OP2	2.19	0.76
50:3:1461:A:N6	50:3:1594:G:O6	2.17	0.76
50:3:2006:C:O2'	50:3:2695:U:O2'	2.02	0.76
50:3:2374:A:H3'	50:3:2375:A:H8	1.50	0.76
50:3:2530:U:O2	50:3:2551:G:N2	2.15	0.76
50:3:2821:U:O2'	50:3:2840:U:O2	2.03	0.76
52:5:144:U:O2	52:5:149:G:N1	2.18	0.76
52:5:172:C:N3	52:5:193:G:N1	2.29	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1413:G:N2	52:5:1438:U:O2	2.18	0.76
1:0:38:GLN:NE2	50:3:488:G:O6	2.19	0.76
32:i:59:ILE:HB	32:i:127:VAL:HA	1.67	0.76
50:3:137:U:O2	50:3:146:G:N2	2.18	0.76
50:3:2141:A:N6	50:3:2163:U:O2'	2.19	0.76
51:4:28:C:H3'	51:4:29:C:H6	1.51	0.76
52:5:126:U:H2'	52:5:127:A:H8	1.49	0.76
52:5:1112:U:O4	52:5:1128:G:O6	2.03	0.76
33:j:37:ASP:OD1	33:j:109:ARG:NH1	2.19	0.76
50:3:421:A:N6	50:3:423:C:H2'	2.01	0.76
50:3:1470:C:N4	50:3:1582:G:O6	2.17	0.76
50:3:2661:U:O2	50:3:2676:G:N1	2.19	0.76
52:5:26:C:H41	52:5:557:A:H61	1.34	0.76
8:E:86:LEU:HB2	20:Q:96:LEU:HD21	1.68	0.76
28:e:19:ASN:ND2	28:e:21:GLN:OE1	2.19	0.76
32:i:121:TRP:HA	32:i:124:LYS:HE2	1.68	0.76
50:3:50:G:N2	50:3:179:A:O2'	2.17	0.76
50:3:513:A:OP1	50:3:536:A:N6	2.19	0.76
50:3:1834:U:H4'	50:3:1979:G:H5''	1.68	0.76
52:5:22:G:H2'	52:5:23:G:C8	2.21	0.76
52:5:1039:G:N2	52:5:1189:U:O2	2.18	0.76
4:A:66:GLN:HE21	4:A:70:ASN:HD22	1.34	0.75
8:E:66:ASN:ND2	8:E:67:GLN:OE1	2.19	0.75
47:x:18:SER:HB3	47:x:39:CYS:N	2.00	0.75
50:3:29:G:H1	50:3:547:G:HO2'	1.33	0.75
50:3:514:A:N6	50:3:535:G:O2'	2.18	0.75
50:3:1641:A:N6	50:3:1657:G:OP2	2.20	0.75
50:3:2149:U:H5''	50:3:2190:G:H21	1.49	0.75
52:5:173:U:O4	52:5:192:A:N6	2.17	0.75
6:C:114:ARG:NH1	52:5:399:C:OP1	2.18	0.75
50:3:642:A:OP2	50:3:655:G:N1	2.20	0.75
50:3:1494:U:O2	50:3:1550:G:N2	2.18	0.75
50:3:2353:G:O6	50:3:2379:G:N2	2.18	0.75
50:3:2736:U:O2'	50:3:2737:G:H8	1.70	0.75
52:5:761:U:H3'	52:5:762:G:H8	1.49	0.75
52:5:833:G:H1	52:5:844:U:H3	0.77	0.75
40:q:55:VAL:HG23	40:q:97:PHE:HB3	1.68	0.75
50:3:688:U:H5''	50:3:689:U:H4'	1.66	0.75
50:3:959:C:H2'	50:3:960:A:C8	2.21	0.75
50:3:1420:A:H2'	50:3:1421:A:C4	2.21	0.75
50:3:1555:G:N2	50:3:1575:C:O2	2.14	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1919:A:OP2	50:3:1925:A:N6	2.15	0.75
50:3:2645:U:O2	50:3:2784:A:N7	2.19	0.75
8:E:112:ARG:NH1	8:E:115:TYR:O	2.20	0.75
37:n:76:ASP:O	37:n:79:ASP:HB2	1.86	0.75
50:3:566:G:N1	50:3:2025:C:N3	2.34	0.75
50:3:614:C:N4	50:3:1289:G:O6	2.19	0.75
50:3:1176:U:O2	50:3:1177:A:N6	2.18	0.75
50:3:1512:A:H2'	50:3:1513:A:H8	1.50	0.75
52:5:1068:G:N2	52:5:1071:A:OP2	2.18	0.75
16:M:45:ARG:HH12	52:5:1050:U:H5''	1.51	0.75
37:n:14:ARG:NH1	50:3:2342:U:O2	2.19	0.75
50:3:1077:G:O6	50:3:1148:U:C4	2.39	0.75
50:3:2748:A:OP2	50:3:2771:G:N1	2.18	0.75
52:5:778:A:H8	52:5:798:U:H3	1.24	0.75
52:5:928:G:O2'	52:5:930:A:OP1	2.04	0.75
6:C:9:LYS:NZ	52:5:540:U:OP1	2.16	0.75
6:C:56:GLU:HG3	6:C:195:TYR:HD2	1.52	0.75
28:e:142:GLU:OE1	50:3:2767:G:N2	2.16	0.75
29:f:5:LEU:H	29:f:18:VAL:HA	1.51	0.75
29:f:20:ASP:OD2	29:f:34:LYS:CG	2.35	0.75
35:l:48:GLU:OE1	35:l:51:ARG:NH2	2.19	0.75
50:3:299:A:H2'	50:3:300:G:C8	2.21	0.75
50:3:2104:A:N6	50:3:2200:U:O4	2.15	0.75
52:5:39:G:H22	52:5:393:A:H5'	1.50	0.75
52:5:988:G:O6	52:5:1036:C:N4	2.19	0.75
34:k:128:VAL:O	34:k:149:LEU:N	2.20	0.75
50:3:243:U:O2	50:3:262:G:N2	2.17	0.75
50:3:2329:G:N2	50:3:2330:A:O4'	2.20	0.75
52:5:26:C:H5'	52:5:522:G:H1'	1.69	0.75
52:5:1222:U:O2	52:5:1264:G:N2	2.19	0.75
26:c:115:VAL:HG11	26:c:188:VAL:HG22	1.67	0.75
38:o:19:LYS:NZ	38:o:86:ILE:O	2.19	0.75
50:3:2059:G:H3'	50:3:2060:G:H8	1.51	0.75
50:3:2516:G:H1'	50:3:2590:G:H22	1.52	0.75
52:5:302:A:H3'	52:5:303:A:H8	1.52	0.75
24:a:151:GLU:HA	24:a:158:GLY:HA2	1.69	0.75
40:q:93:LYS:NZ	40:q:94:VAL:O	2.20	0.75
50:3:892:G:O6	50:3:958:C:N4	2.15	0.75
52:5:1086:U:OP1	52:5:1099:G:N2	2.20	0.75
11:H:116:LYS:HA	11:H:123:ALA:HB2	1.68	0.74
38:o:54:ARG:NH2	50:3:2693:U:OP1	2.19	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:194:A:OP2	50:3:209:G:N1	2.18	0.74
50:3:411:U:N3	50:3:437:A:C8	2.52	0.74
50:3:522:C:H2'	50:3:523:A:H8	1.49	0.74
50:3:1508:G:O2'	50:3:1535:A:N1	2.18	0.74
50:3:1675:A:H3'	50:3:1676:G:H8	1.52	0.74
50:3:2048:U:H2'	50:3:2049:A:C8	2.22	0.74
50:3:2126:A:H61	50:3:2176:G:H1'	1.52	0.74
50:3:2376:C:H2'	50:3:2377:A:H8	1.51	0.74
51:4:54:U:O2	51:4:56:A:N6	2.18	0.74
52:5:290:G:N2	52:5:299:U:O2	2.19	0.74
6:C:34:ILE:HD11	6:C:39:GLY:HA2	1.69	0.74
19:P:18:ASN:HB2	19:P:21:THR:HB	1.67	0.74
24:a:61:ARG:NH2	24:a:62:ASN:O	2.19	0.74
29:f:2:LYS:HZ3	29:f:42:LYS:NZ	1.84	0.74
31:h:38:GLN:O	31:h:42:LYS:HB2	1.87	0.74
45:v:30:ASN:O	50:3:432:G:O2'	2.05	0.74
53:7:50:G:H2'	53:7:51:G:H8	1.52	0.74
11:H:12:ARG:HD3	11:H:79:GLY:HA3	1.67	0.74
29:f:19:VAL:O	29:f:19:VAL:HG12	1.84	0.74
40:q:6:VAL:N	40:q:37:LYS:O	2.21	0.74
43:t:49:ASP:HB2	43:t:59:SER:HA	1.68	0.74
50:3:410:G:N1	50:3:437:A:OP2	2.19	0.74
50:3:1869:G:N2	50:3:1887:U:O2	2.20	0.74
50:3:2066:A:N6	50:3:2511:A:O2'	2.19	0.74
52:5:598:U:O2	52:5:635:G:N2	2.20	0.74
11:H:117:LYS:HD2	16:M:61:TRP:HE1	1.50	0.74
15:L:101:ARG:NH1	52:5:946:G:N7	2.35	0.74
19:P:66:THR:HG23	19:P:69:LEU:HD21	1.68	0.74
36:m:70:THR:OG1	36:m:73:PHE:N	2.20	0.74
37:n:81:LEU:HD13	37:n:84:LEU:HD12	1.69	0.74
41:r:56:ALA:O	41:r:60:ASN:HB3	1.88	0.74
50:3:1501:U:H3	50:3:1542:G:H1	1.35	0.74
50:3:1807:C:N4	50:3:1824:G:N2	2.21	0.74
32:i:62:SER:HB2	32:i:129:LYS:HG2	1.68	0.74
36:m:34:THR:HB	36:m:37:LYS:HG2	1.68	0.74
50:3:1815:U:O2'	50:3:1816:A:O4'	2.06	0.74
50:3:1872:U:O2	50:3:1884:A:N6	2.20	0.74
50:3:2060:G:H2'	50:3:2061:A:C8	2.22	0.74
22:S:34:ASN:HA	22:S:37:LYS:HD2	1.70	0.74
24:a:39:VAL:HG23	24:a:68:ILE:HD11	1.69	0.74
25:b:55:ASP:OD2	25:b:80:HIS:ND1	2.21	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1114:C:H2'	50:3:1115:G:H8	1.51	0.74
50:3:2150:C:O2'	50:3:2155:G:N2	2.19	0.74
50:3:2308:U:H2'	50:3:2309:A:C8	2.22	0.74
50:3:2667:G:N2	50:3:2670:A:OP2	2.20	0.74
52:5:176:G:N2	52:5:189:C:O2	2.16	0.74
52:5:373:A:H2'	52:5:374:G:C8	2.23	0.74
52:5:499:U:H3	52:5:542:G:H1	0.78	0.74
52:5:603:U:O2	52:5:630:G:N2	2.20	0.74
3:2:2:LYS:H	3:2:34:GLN:HA	1.53	0.74
9:F:24:ARG:NH1	52:5:1351:U:OP1	2.20	0.74
24:a:129:ASP:HB3	24:a:131:LYS:HE2	1.70	0.74
27:d:125:ARG:NH2	50:3:2323:U:O2	2.20	0.74
50:3:580:U:OP1	50:3:1249:A:O2'	2.06	0.74
50:3:2757:A:H3'	50:3:2758:A:H2'	1.70	0.74
50:3:2861:G:N2	50:3:2864:A:OP2	2.19	0.74
52:5:42:G:N1	52:5:397:C:N3	2.34	0.74
52:5:1153:G:N1	52:5:1156:G:OP2	2.17	0.74
52:5:1460:U:H2'	52:5:1461:G:H8	1.52	0.74
53:7:12:C:N3	53:7:25:G:N1	2.32	0.74
44:u:52:TYR:OH	44:u:58:ARG:NH2	2.21	0.74
50:3:437:A:H61	50:3:458:A:H61	1.34	0.74
50:3:1414:C:H4'	50:3:1496:A:H1'	1.70	0.74
50:3:1446:G:N2	50:3:1613:A:OP2	2.20	0.74
50:3:1849:G:C6	50:3:1905:U:O2	2.41	0.74
52:5:240:U:N3	52:5:887:C:O2	2.21	0.74
52:5:737:U:H2'	52:5:738:A:C8	2.22	0.74
52:5:1390:G:N2	52:5:1460:U:O2	2.18	0.74
4:A:118:THR:HG21	52:5:1092:A:H61	1.53	0.74
35:l:70:PRO:HB2	35:l:93:TRP:HB3	1.68	0.74
50:3:501:G:H2'	50:3:502:A:C4	2.23	0.74
50:3:1104:A:H4'	50:3:1105:A:H2'	1.69	0.74
50:3:1323:A:H2'	50:3:1324:A:C4	2.22	0.74
50:3:2446:U:O2'	50:3:2448:C:OP1	2.06	0.74
50:3:2855:A:N6	50:3:2870:U:O4	2.16	0.74
50:3:2880:A:H2'	50:3:2881:A:C8	2.23	0.74
52:5:37:C:O2'	52:5:499:U:OP1	2.05	0.74
52:5:978:A:N1	52:5:1197:G:N2	2.35	0.74
52:5:1008:G:O6	52:5:1014:A:N6	2.21	0.74
52:5:1089:C:O2'	52:5:1143:C:N4	2.21	0.74
3:2:31:LYS:HG2	50:3:2536:U:H5''	1.70	0.74
6:C:67:THR:HG23	6:C:70:GLN:H	1.53	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:135:SER:HB3	7:D:156:GLN:HB2	1.70	0.74
14:K:122:LYS:HA	14:K:132:ALA:HB1	1.70	0.74
17:N:6:ASN:OD1	17:N:10:LYS:NZ	2.20	0.74
27:d:99:PHE:HA	27:d:102:LYS:HE2	1.70	0.74
41:r:121:GLN:NE2	50:3:23:A:O2'	2.18	0.74
50:3:373:U:H2'	50:3:374:A:H8	1.52	0.74
50:3:1260:U:H2'	50:3:1261:U:C6	2.23	0.74
50:3:1449:G:O6	50:3:1611:C:N4	2.16	0.74
50:3:1672:C:O2	50:3:2706:U:O2'	2.06	0.74
50:3:2828:C:H3'	50:3:2829:G:H21	1.53	0.74
52:5:48:C:H5''	52:5:361:U:H2'	1.70	0.74
52:5:394:U:H2'	52:5:395:G:C8	2.22	0.74
5:B:152:ILE:H	5:B:173:GLU:HB2	1.52	0.73
24:a:188:GLU:HG2	24:a:282:ARG:HG2	1.69	0.73
26:c:75:ARG:HH12	50:3:842:U:H3	1.36	0.73
37:n:37:ASN:HD22	51:4:25:A:H5''	1.53	0.73
50:3:192:U:H3	50:3:212:G:H1	1.32	0.73
50:3:255:A:C5	50:3:256:G:H1'	2.22	0.73
50:3:1294:G:N2	50:3:2023:U:O4	2.21	0.73
50:3:2716:U:H2'	50:3:2717:G:H8	1.53	0.73
12:I:52:LYS:HB2	12:I:74:ASN:HD22	1.54	0.73
50:3:251:G:N2	50:3:255:A:OP2	2.19	0.73
50:3:445:C:H2'	50:3:446:A:C8	2.23	0.73
50:3:1288:C:H2'	50:3:1289:G:C8	2.23	0.73
52:5:1018:U:H3'	52:5:1019:G:H8	1.52	0.73
52:5:1059:G:N7	52:5:1085:G:O2'	2.18	0.73
6:C:14:LEU:HD13	6:C:59:ARG:HG3	1.70	0.73
46:w:80:ASN:HB3	46:w:84:VAL:HG23	1.69	0.73
50:3:73:A:N6	50:3:115:U:O4'	2.19	0.73
50:3:260:A:H2'	50:3:261:A:H8	1.54	0.73
51:4:95:G:H2'	51:4:96:G:C8	2.23	0.73
10:G:128:ALA:O	10:G:132:LYS:N	2.19	0.73
34:k:60:ARG:NH1	50:3:253:C:OP1	2.21	0.73
50:3:515:A:H1'	50:3:517:G:H5''	1.70	0.73
50:3:2653:G:OP2	50:3:2653:G:N2	2.21	0.73
52:5:554:C:H2'	52:5:555:G:H8	1.54	0.73
52:5:941:A:O2'	52:5:1307:A:N3	2.21	0.73
52:5:1115:G:HO2'	52:5:1116:U:H6	1.33	0.73
52:5:1322:U:N3	52:5:1349:A:C8	2.48	0.73
5:B:152:ILE:O	5:B:173:GLU:N	2.19	0.73
10:G:98:TYR:OH	52:5:640:C:O2	2.05	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:I:18:SER:O	12:I:76:HIS:N	2.22	0.73
15:L:15:ILE:HG12	15:L:46:LYS:HA	1.71	0.73
27:d:74:ILE:HG22	27:d:77:TYR:H	1.53	0.73
35:l:31:GLU:N	35:l:106:VAL:O	2.19	0.73
50:3:329:G:H1	50:3:377:U:H3	0.78	0.73
50:3:1071:G:O6	50:3:1154:U:O4	2.07	0.73
50:3:1348:C:O2	50:3:1359:C:N4	2.15	0.73
50:3:2400:A:N6	50:3:2432:C:C2	2.56	0.73
50:3:2506:C:H2'	50:3:2507:C:C2	2.23	0.73
52:5:798:U:H2'	52:5:799:A:C8	2.23	0.73
36:m:25:VAL:O	36:m:29:GLY:N	2.20	0.73
38:o:31:VAL:HG12	38:o:90:LEU:HA	1.71	0.73
43:t:103:VAL:HA	43:t:110:THR:HA	1.70	0.73
50:3:450:C:H2'	50:3:451:A:H8	1.51	0.73
50:3:1180:U:H2'	50:3:1181:A:H8	1.54	0.73
50:3:2610:A:OP1	53:7:77:A:N6	2.22	0.73
50:3:2706:U:H2'	50:3:2707:A:C8	2.23	0.73
50:3:2800:U:OP2	50:3:2810:A:N6	2.20	0.73
52:5:710:G:N2	52:5:774:A:O2'	2.22	0.73
52:5:1322:U:C2	52:5:1349:A:N7	2.56	0.73
6:C:105:GLY:N	6:C:162:VAL:O	2.21	0.73
19:P:20:LYS:HA	19:P:49:ASN:HB2	1.69	0.73
48:y:39:PHE:O	48:y:41:ARG:NH1	2.21	0.73
50:3:313:G:N2	50:3:394:C:O2	2.15	0.73
50:3:1599:C:O2'	50:3:1601:A:N7	2.21	0.73
50:3:1764:U:N3	50:3:1769:A:N6	2.35	0.73
5:B:27:HIS:N	5:B:30:THR:OG1	2.21	0.73
6:C:184:ARG:NH1	6:C:191:ILE:O	2.21	0.73
26:c:40:VAL:HG23	26:c:101:LEU:HB2	1.70	0.73
36:m:106:ARG:NH1	36:m:111:THR:OG1	2.22	0.73
50:3:207:C:H3'	50:3:208:A:H8	1.53	0.73
50:3:604:A:N6	50:3:2508:U:OP1	2.22	0.73
50:3:834:G:H3'	50:3:835:U:H2'	1.69	0.73
50:3:1220:A:H3'	50:3:1221:G:H8	1.53	0.73
50:3:1244:A:H3'	50:3:1245:G:C8	2.22	0.73
8:E:79:ASN:OD1	8:E:81:GLN:NE2	2.22	0.73
14:K:12:ARG:NE	52:5:562:U:OP2	2.22	0.73
44:u:28:ARG:NH1	50:3:2288:G:O6	2.22	0.73
50:3:610:G:H2'	50:3:611:A:C8	2.23	0.73
50:3:1363:C:H2'	50:3:1364:A:H8	1.53	0.73
50:3:1368:U:H1'	50:3:1637:A:H5'	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1494:U:C2	50:3:1550:G:N1	2.57	0.73
50:3:2482:U:OP2	50:3:2483:C:N4	2.21	0.73
52:5:53:U:O4	52:5:355:A:N6	2.17	0.73
52:5:630:G:H2'	52:5:631:C:C6	2.24	0.73
52:5:655:G:O6	52:5:744:U:C2	2.42	0.73
52:5:1402:U:H2'	52:5:1403:A:C8	2.24	0.73
52:5:1432:A:H2'	52:5:1433:G:C8	2.23	0.73
7:D:143:ARG:NH1	52:5:858:A:OP2	2.21	0.73
9:F:9:ARG:NH1	52:5:1350:A:OP2	2.22	0.73
9:F:106:PHE:HB3	9:F:110:ARG:HH11	1.51	0.73
34:k:6:LEU:N	50:3:1234:U:O2'	2.21	0.73
36:m:61:ARG:HG3	50:3:1482:U:H3	1.53	0.73
44:u:35:LEU:HD12	44:u:54:GLN:HA	1.70	0.73
46:w:10:LYS:NZ	46:w:12:SER:OG	2.19	0.73
50:3:494:G:N2	50:3:506:A:O5'	2.21	0.73
50:3:2589:G:H1'	50:3:2590:G:N7	2.04	0.73
52:5:146:A:N6	52:5:339:U:O2'	2.22	0.73
52:5:499:U:H2'	52:5:500:G:C8	2.23	0.73
14:K:43:LYS:HA	52:5:359:A:OP1	1.89	0.72
17:N:29:LEU:HB3	17:N:60:ARG:HD3	1.71	0.72
24:a:225:ARG:NH2	50:3:726:U:OP1	2.21	0.72
33:j:76:HIS:HB3	38:o:78:ASN:HB3	1.70	0.72
35:l:126:PRO:HB3	50:3:2494:C:H5'	1.71	0.72
42:s:48:TYR:HB3	42:s:50:ILE:HG12	1.71	0.72
50:3:603:G:H1	50:3:2507:C:P	2.11	0.72
50:3:1037:A:H3'	50:3:1038:G:H8	1.54	0.72
50:3:1760:G:N2	50:3:1763:G:O5'	2.21	0.72
50:3:2048:U:H2'	50:3:2049:A:H8	1.54	0.72
50:3:2206:A:O2'	50:3:2232:G:N2	2.19	0.72
51:4:104:C:H2'	51:4:105:A:C8	2.24	0.72
52:5:305:A:H2'	52:5:306:G:H8	1.53	0.72
52:5:780:U:H2'	52:5:781:A:C8	2.25	0.72
52:5:1215:U:H3'	52:5:1216:G:C8	2.22	0.72
53:7:3:G:N2	53:7:73:C:O2	2.23	0.72
37:n:45:ASP:O	37:n:49:ASN:N	2.21	0.72
46:w:27:LEU:HA	46:w:30:ARG:HD2	1.69	0.72
50:3:488:G:N2	50:3:493:A:O2'	2.22	0.72
50:3:899:A:N1	50:3:951:C:N4	2.37	0.72
50:3:1440:U:H2'	50:3:1441:A:C8	2.24	0.72
50:3:2460:C:N3	50:3:2512:U:C4	2.56	0.72
50:3:2682:A:H3'	50:3:2683:G:H8	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:16:G:N2	52:5:1071:A:O2'	2.21	0.72
52:5:780:U:H2'	52:5:781:A:H8	1.55	0.72
8:E:9:VAL:HG22	8:E:56:HIS:H	1.53	0.72
33:j:29:ARG:O	33:j:31:ARG:NH1	2.23	0.72
50:3:443:C:H2'	50:3:444:C:C6	2.24	0.72
50:3:535:G:N2	50:3:540:A:N6	2.38	0.72
50:3:1914:G:N2	50:3:1930:U:O2	2.22	0.72
50:3:1937:G:N1	50:3:1976:A:OP2	2.21	0.72
50:3:2321:C:H2'	50:3:2322:G:H8	1.54	0.72
52:5:32:U:OP1	52:5:49:C:N4	2.21	0.72
4:A:192:ASN:O	4:A:195:ARG:NH1	2.21	0.72
14:K:43:LYS:NZ	52:5:359:A:N7	2.35	0.72
36:m:94:PRO:O	50:3:2843:G:N2	2.13	0.72
50:3:1461:A:H2'	50:3:1462:A:C8	2.24	0.72
50:3:2433:A:H4'	50:3:2434:A:H5''	1.71	0.72
50:3:2599:C:H2'	50:3:2600:G:C8	2.24	0.72
52:5:833:G:O6	52:5:844:U:O4	2.07	0.72
52:5:1405:U:O2	52:5:1445:G:N2	2.18	0.72
27:d:69:LYS:HA	27:d:84:LEU:HA	1.69	0.72
42:s:24:THR:OG1	42:s:85:LEU:O	2.07	0.72
44:u:57:THR:N	50:3:2338:G:H21	1.87	0.72
50:3:1509:U:H1'	50:3:1535:A:H2	1.54	0.72
50:3:1809:A:OP2	50:3:1822:A:N6	2.16	0.72
52:5:223:G:H3'	52:5:224:A:H8	1.55	0.72
52:5:253:G:O6	52:5:265:U:O4	2.07	0.72
52:5:763:A:N7	52:5:810:U:O2	2.22	0.72
52:5:839:U:OP2	52:5:840:C:N4	2.16	0.72
1:0:8:SER:H	50:3:721:G:N2	1.86	0.72
26:c:64:LYS:NZ	50:3:710:A:OP1	2.22	0.72
50:3:250:U:O4	50:3:256:G:O6	2.06	0.72
50:3:1275:C:H2'	50:3:1276:A:C8	2.24	0.72
50:3:2304:U:O2'	50:3:2342:U:OP2	2.06	0.72
50:3:2419:A:H2'	50:3:2420:A:C8	2.25	0.72
52:5:42:G:O6	52:5:397:C:N4	2.19	0.72
52:5:1136:G:N7	52:5:1157:G:C2	2.58	0.72
7:D:206:ARG:NH2	7:D:207:ARG:HH22	1.87	0.72
23:T:38:LYS:NZ	52:5:1500:G:OP1	2.22	0.72
25:b:40:LYS:O	25:b:48:SER:HA	1.89	0.72
26:c:46:ARG:NH2	50:3:480:C:OP1	2.23	0.72
41:r:6:LYS:HG2	41:r:104:VAL:HB	1.70	0.72
50:3:230:G:H22	50:3:454:G:H21	1.37	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:534:U:H3'	50:3:535:G:C8	2.25	0.72
50:3:1547:G:H3'	50:3:1548:A:H8	1.52	0.72
52:5:59:C:N3	52:5:350:G:N1	2.34	0.72
52:5:137:A:N7	52:5:156:U:O4	2.23	0.72
52:5:499:U:O2	52:5:542:G:N2	2.17	0.72
52:5:578:C:H3'	52:5:579:G:H8	1.54	0.72
52:5:649:U:O4	52:5:749:G:O2'	2.06	0.72
25:b:1:MET:N	25:b:86:ASN:O	2.21	0.72
33:j:102:VAL:O	33:j:122:VAL:N	2.21	0.72
35:l:120:ARG:NE	50:3:2475:C:O2'	2.22	0.72
42:s:24:THR:HA	42:s:87:LYS:HA	1.69	0.72
42:s:25:LYS:HG3	42:s:90:ALA:HB2	1.72	0.72
50:3:314:G:O6	50:3:393:C:N4	2.15	0.72
50:3:703:A:N6	50:3:705:A:O2'	2.23	0.72
50:3:2068:G:H1'	50:3:2069:A:H3'	1.72	0.72
52:5:962:G:H3'	52:5:963:U:H2'	1.71	0.72
53:7:4:U:H2'	53:7:5:C:C6	2.24	0.72
4:A:113:LEU:HD22	52:5:1093:A:H4'	1.69	0.72
6:C:38:HIS:NE2	52:5:509:C:O2	2.23	0.72
9:F:11:VAL:HG12	9:F:12:LEU:H	1.54	0.72
13:J:33:ASN:HB2	52:5:681:U:H1'	1.70	0.72
24:a:47:ARG:NH2	50:3:725:G:O2'	2.22	0.72
33:j:35:LEU:O	33:j:109:ARG:NH2	2.23	0.72
50:3:274:A:OP2	50:3:294:G:N1	2.17	0.72
50:3:518:A:OP2	50:3:542:A:N6	2.22	0.72
50:3:1674:A:H2'	50:3:1675:A:C8	2.24	0.72
52:5:109:G:N2	52:5:233:C:O2	2.18	0.72
52:5:590:G:N2	52:5:644:U:O2	2.22	0.72
52:5:1261:A:H2	52:5:1345:G:H21	1.37	0.72
53:7:9:U:O2	53:7:15:A:N7	2.21	0.72
5:B:185:ILE:HG12	5:B:206:ASN:HA	1.70	0.72
24:a:262:HIS:CE1	50:3:1831:G:H21	2.08	0.72
26:c:97:ARG:HA	50:3:623:A:H5'	1.69	0.72
28:e:94:GLY:HA2	28:e:163:LYS:HG2	1.71	0.72
32:i:115:ASN:HB3	32:i:118:SER:H	1.55	0.72
42:s:54:LYS:NZ	50:3:1426:C:OP1	2.23	0.72
50:3:314:G:O3'	50:3:315:A:H3'	1.90	0.72
50:3:629:G:O6	50:3:696:U:O4	2.07	0.72
50:3:697:U:H2'	50:3:698:A:C8	2.23	0.72
50:3:1709:C:H3'	50:3:1710:A:H8	1.54	0.72
50:3:1797:C:H3'	50:3:1835:G:N2	2.05	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1867:G:H2'	50:3:1868:A:C8	2.25	0.72
50:3:2151:G:H4'	50:3:2152:C:H2'	1.72	0.72
50:3:2316:G:O6	50:3:2319:A:N7	2.22	0.72
52:5:612:G:N2	52:5:624:U:O2	2.17	0.72
5:B:3:GLN:NE2	52:5:1053:U:O4	2.23	0.71
27:d:152:PHE:HB3	27:d:154:VAL:HG13	1.71	0.71
50:3:218:G:N3	50:3:220:A:O2'	2.21	0.71
50:3:334:A:H2'	50:3:368:C:H1'	1.72	0.71
50:3:2355:C:H5''	50:3:2390:G:H4'	1.72	0.71
52:5:63:U:OP1	52:5:381:C:O2'	2.08	0.71
52:5:600:G:H1	52:5:633:U:H3	1.38	0.71
53:7:29:C:N3	53:7:43:G:N1	2.33	0.71
5:B:125:ASN:ND2	5:B:128:GLU:OE2	2.19	0.71
5:B:195:THR:O	52:5:1181:G:O2'	2.07	0.71
25:b:26:ILE:HD12	25:b:192:LEU:HD13	1.71	0.71
25:b:111:SER:HB2	25:b:173:LYS:HD2	1.71	0.71
35:l:40:ASN:H	35:l:97:VAL:HB	1.55	0.71
42:s:66:ARG:NH2	42:s:71:PHE:O	2.20	0.71
50:3:70:G:N2	50:3:76:A:OP2	2.23	0.71
50:3:329:G:N2	50:3:377:U:O2	2.19	0.71
50:3:539:U:N3	50:3:547:G:OP2	2.24	0.71
50:3:990:G:H1	50:3:999:U:H3	0.76	0.71
50:3:1478:U:O2	50:3:1487:U:N3	2.19	0.71
50:3:1702:A:H1'	50:3:1704:C:N4	2.06	0.71
50:3:2190:G:H2'	50:3:2191:G:C8	2.25	0.71
52:5:1384:A:H2'	52:5:1385:A:C8	2.26	0.71
52:5:1444:G:H2'	52:5:1445:G:H8	1.54	0.71
2:1:48:SER:O	2:1:52:PHE:N	2.22	0.71
4:A:110:GLN:HG2	4:A:111:ARG:H	1.54	0.71
24:a:70:ASP:N	24:a:108:TYR:O	2.20	0.71
26:c:182:HIS:HB3	26:c:185:LYS:HG2	1.72	0.71
28:e:57:ARG:HH11	28:e:64:SER:HG	1.39	0.71
41:r:47:ILE:HG23	41:r:50:LEU:HD23	1.72	0.71
45:v:56:ARG:NH2	50:3:436:G:N7	2.38	0.71
50:3:1541:A:H3'	50:3:1542:G:H8	1.55	0.71
50:3:1897:A:H3'	50:3:1898:G:H8	1.56	0.71
50:3:2328:A:O2'	50:3:2330:A:N7	2.23	0.71
50:3:2500:U:H2'	50:3:2501:U:C6	2.26	0.71
52:5:201:G:N2	52:5:214:U:O2	2.17	0.71
52:5:874:C:H2'	52:5:875:G:C8	2.26	0.71
52:5:1136:G:O6	52:5:1157:G:O6	2.08	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:i:109:LYS:NZ	50:3:2047:U:OP1	2.22	0.71
33:j:39:VAL:HA	33:j:59:ARG:HH11	1.55	0.71
43:t:10:VAL:HG22	43:t:76:LEU:HA	1.70	0.71
50:3:203:A:N6	50:3:2442:A:OP2	2.24	0.71
50:3:450:C:O2	50:3:1871:U:O2'	2.06	0.71
50:3:675:U:O2	50:3:685:G:N2	2.24	0.71
50:3:1055:A:N6	50:3:1176:U:O2'	2.18	0.71
50:3:1446:G:H22	50:3:1612:U:H3'	1.54	0.71
50:3:2103:C:H2'	50:3:2104:A:C8	2.25	0.71
50:3:2217:G:H3'	50:3:2218:U:H2'	1.72	0.71
50:3:2676:G:H2'	50:3:2677:A:H8	1.56	0.71
52:5:1075:G:H1'	52:5:1094:C:H41	1.55	0.71
52:5:1450:C:H2'	52:5:1451:A:H8	1.55	0.71
5:B:32:LYS:HD3	5:B:33:TRP:HD1	1.56	0.71
21:R:36:ARG:HB3	52:5:1294:U:H3	1.55	0.71
23:T:26:ARG:HG2	23:T:30:GLN:HE21	1.54	0.71
24:a:220:ARG:NH1	50:3:799:A:N3	2.36	0.71
26:c:133:PHE:O	26:c:167:ASN:ND2	2.23	0.71
50:3:296:U:O2	50:3:300:G:O2'	2.08	0.71
50:3:613:C:H2'	50:3:614:C:C6	2.26	0.71
50:3:678:U:N3	50:3:681:A:OP2	2.23	0.71
50:3:1114:C:H2'	50:3:1115:G:C8	2.25	0.71
50:3:1809:A:H2'	50:3:1810:A:C8	2.24	0.71
50:3:2053:G:O6	50:3:2630:U:O2	2.08	0.71
52:5:780:U:OP1	52:5:1490:G:O2'	2.09	0.71
52:5:1110:C:H2'	52:5:1111:G:C8	2.25	0.71
6:C:111:ARG:NH1	52:5:403:A:OP1	2.24	0.71
33:j:31:ARG:NH2	50:3:2684:G:OP1	2.23	0.71
50:3:161:U:H3	50:3:171:G:H1	1.38	0.71
50:3:180:A:H3'	50:3:181:G:H8	1.54	0.71
50:3:1725:G:O6	50:3:1731:G:N2	2.23	0.71
50:3:2190:G:H2'	50:3:2191:G:H8	1.55	0.71
51:4:36:C:H2'	51:4:37:A:H8	1.55	0.71
51:4:85:A:H2'	51:4:86:G:C8	2.25	0.71
51:4:85:A:H2'	51:4:86:G:H8	1.56	0.71
52:5:50:U:O4	52:5:358:G:N2	2.24	0.71
52:5:1454:G:H2'	52:5:1455:G:C8	2.25	0.71
5:B:194:THR:HG23	5:B:196:TYR:H	1.54	0.71
7:D:156:GLN:O	7:D:176:SER:OG	2.08	0.71
50:3:50:G:O3'	50:3:53:G:H5'	1.91	0.71
50:3:866:G:H2'	50:3:867:G:C8	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1702:A:O2'	50:3:1708:G:N7	2.23	0.71
50:3:2011:G:H3'	50:3:2012:A:H8	1.56	0.71
50:3:2147:G:N1	50:3:2159:U:O4	2.23	0.71
50:3:2663:G:N2	50:3:2673:A:O5'	2.23	0.71
52:5:66:A:O2'	52:5:377:A:N7	2.24	0.71
52:5:550:U:H2'	52:5:551:A:H8	1.54	0.71
2:1:37:GLN:NE2	50:3:2371:U:OP1	2.24	0.71
10:G:49:VAL:HA	10:G:54:LEU:HD21	1.73	0.71
26:c:6:LEU:HB3	26:c:14:GLU:HB3	1.72	0.71
26:c:76:GLN:OE1	50:3:708:C:O2'	2.07	0.71
32:i:76:PHE:HA	32:i:90:VAL:O	1.91	0.71
43:t:90:LYS:NZ	43:t:104:PHE:O	2.23	0.71
50:3:787:C:OP2	50:3:1788:A:N6	2.24	0.71
50:3:1067:A:N1	50:3:1157:G:O6	2.23	0.71
50:3:1735:A:H4'	50:3:1773:A:H5''	1.72	0.71
50:3:2126:A:N1	50:3:2176:G:C2	2.59	0.71
52:5:399:C:H2'	52:5:400:G:C8	2.26	0.71
52:5:709:A:H2'	52:5:710:G:C8	2.24	0.71
52:5:1009:G:H21	52:5:1012:A:H2	1.39	0.71
22:S:12:ARG:O	22:S:16:LYS:NZ	2.19	0.71
26:c:48:GLY:N	50:3:479:A:OP1	2.24	0.71
35:l:24:ASN:HB3	35:l:67:ARG:HB3	1.71	0.71
44:u:64:ASN:HB2	44:u:97:VAL:HG11	1.73	0.71
52:5:304:U:H2'	52:5:305:A:H8	1.55	0.71
52:5:582:G:O6	52:5:754:U:O4	2.06	0.71
52:5:702:U:H3'	52:5:703:A:H8	1.53	0.71
1:0:21:ARG:NH1	1:0:42:LEU:O	2.24	0.71
7:D:185:ARG:NH1	52:5:22:G:N7	2.37	0.71
44:u:22:GLY:HA3	53:7:3:G:H4'	1.72	0.71
46:w:55:LEU:HA	46:w:58:LEU:HB3	1.73	0.71
50:3:18:G:H2'	50:3:19:G:C8	2.26	0.71
50:3:1723:A:OP2	50:3:1732:A:N6	2.21	0.71
50:3:1778:G:H2'	50:3:1779:G:C8	2.26	0.71
50:3:2752:G:N1	50:3:2768:U:N3	2.39	0.71
52:5:62:G:N2	52:5:92:G:H1'	2.06	0.71
52:5:1154:A:H2'	52:5:1155:A:C8	2.25	0.71
52:5:1338:A:O2'	52:5:1340:G:N7	2.19	0.71
8:E:1:MET:SD	8:E:89:ASN:ND2	2.64	0.70
13:J:51:LYS:NZ	52:5:689:U:O4	2.24	0.70
17:N:51:ARG:NE	52:5:577:G:O2'	2.22	0.70
24:a:246:ARG:HB3	50:3:1978:U:H1'	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:f:54:GLN:O	29:f:58:TYR:HB3	1.90	0.70
50:3:14:U:H3	50:3:561:A:H62	1.39	0.70
50:3:55:A:H61	50:3:118:G:H1'	1.55	0.70
50:3:2405:G:N2	50:3:2427:U:O2	2.24	0.70
50:3:2458:A:H62	50:3:2509:C:H42	1.37	0.70
52:5:354:U:H2'	52:5:355:A:H8	1.53	0.70
52:5:1136:G:N1	52:5:1151:A:N6	2.19	0.70
9:F:34:LYS:NZ	52:5:1265:U:OP1	2.24	0.70
50:3:28:G:N1	50:3:548:A:OP2	2.23	0.70
50:3:849:C:O2	50:3:1224:G:N1	2.22	0.70
52:5:1430:G:H3'	52:5:1431:A:C8	2.24	0.70
6:C:89:LEU:O	6:C:93:LEU:N	2.20	0.70
34:k:84:LYS:NZ	50:3:662:U:O2'	2.17	0.70
50:3:2575:G:H2'	50:3:2576:A:H8	1.57	0.70
52:5:98:G:H2'	52:5:99:U:C6	2.26	0.70
52:5:304:U:H2'	52:5:305:A:C8	2.26	0.70
52:5:1401:A:H61	52:5:1449:G:H1	1.39	0.70
2:1:54:ARG:HA	2:1:57:ASN:HD21	1.57	0.70
11:H:33:ASN:ND2	11:H:67:VAL:O	2.24	0.70
14:K:99:ARG:HH12	14:K:104:PRO:HA	1.55	0.70
15:L:109:ARG:NH2	52:5:1281:U:O2'	2.24	0.70
24:a:190:ARG:HG2	24:a:191:LYS:H	1.56	0.70
25:b:57:VAL:HG21	25:b:79:LYS:HG3	1.73	0.70
45:v:34:GLN:N	45:v:50:VAL:O	2.24	0.70
50:3:35:U:O4	50:3:482:G:O2'	2.09	0.70
50:3:1270:C:H2'	50:3:1271:A:H8	1.57	0.70
50:3:1296:G:N1	50:3:2020:A:OP2	2.25	0.70
50:3:1374:U:O4	50:3:1634:A:N6	2.18	0.70
50:3:2067:A:O2'	50:3:2453:G:OP2	2.09	0.70
50:3:2303:U:O2	50:3:2345:G:N2	2.16	0.70
52:5:1322:U:H3	52:5:1349:A:H8	1.35	0.70
53:7:9:U:N3	53:7:15:A:H8	1.77	0.70
8:E:124:ASN:O	52:5:838:A:N6	2.21	0.70
17:N:5:LYS:NZ	52:5:655:G:OP1	2.24	0.70
28:e:92:LEU:HB3	28:e:132:THR:HA	1.73	0.70
50:3:299:A:N7	50:3:440:C:O2'	2.24	0.70
50:3:1137:C:H2'	50:3:1138:A:C8	2.26	0.70
50:3:1460:G:N1	50:3:1595:C:N3	2.29	0.70
50:3:1829:U:H2'	50:3:1830:G:C8	2.25	0.70
50:3:2111:U:H5''	50:3:2112:A:H8	1.57	0.70
50:3:2664:U:N3	50:3:2673:A:H8	1.88	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:231:U:H2'	52:5:232:G:C8	2.25	0.70
52:5:354:U:H2'	52:5:355:A:C8	2.27	0.70
52:5:892:G:O2'	52:5:894:A:N6	2.23	0.70
24:a:93:SER:O	24:a:205:ASN:ND2	2.22	0.70
26:c:134:ASN:OD1	26:c:165:ASN:ND2	2.24	0.70
29:f:4:ILE:HG21	29:f:35:LEU:HB3	1.72	0.70
40:q:39:LEU:HG	40:q:40:MET:HG3	1.72	0.70
50:3:189:U:H2'	50:3:190:G:H8	1.56	0.70
50:3:379:A:O2'	50:3:381:A:N6	2.24	0.70
50:3:511:U:H1'	50:3:544:U:C2	2.27	0.70
50:3:1458:A:N6	50:3:1597:U:O4	2.15	0.70
50:3:1942:G:H3'	50:3:1969:C:H42	1.56	0.70
52:5:19:C:H2'	52:5:20:C:C6	2.25	0.70
5:B:73:GLN:HE21	5:B:75:ALA:H	1.37	0.70
6:C:92:VAL:HA	6:C:95:SER:HB3	1.72	0.70
10:G:98:TYR:OH	52:5:595:G:N2	2.25	0.70
11:H:87:ARG:HH12	52:5:1110:C:H5''	1.55	0.70
12:I:52:LYS:HA	12:I:74:ASN:HA	1.72	0.70
24:a:43:LYS:HE3	24:a:61:ARG:HG3	1.73	0.70
31:h:88:ASN:HA	50:3:1112:A:H4'	1.72	0.70
50:3:790:U:H2'	50:3:791:A:C8	2.26	0.70
50:3:804:U:H2'	50:3:805:G:C8	2.27	0.70
50:3:1037:A:H3'	50:3:1038:G:C8	2.27	0.70
50:3:1454:G:H3'	50:3:1455:A:H2'	1.73	0.70
50:3:1807:C:O2	50:3:1824:G:O6	2.09	0.70
52:5:962:G:OP2	52:5:963:U:O2'	2.09	0.70
52:5:1133:A:C2	52:5:1153:G:N2	2.59	0.70
22:S:61:SER:O	22:S:65:ALA:N	2.22	0.70
25:b:56:THR:HA	25:b:78:THR:HA	1.74	0.70
32:i:5:SER:N	50:3:1031:U:O2'	2.21	0.70
50:3:1474:C:H2'	50:3:1475:C:H6	1.56	0.70
50:3:2249:A:H2'	50:3:2250:G:C8	2.26	0.70
53:7:27:A:OP2	53:7:28:A:N6	2.25	0.70
4:A:81:GLN:HG3	4:A:169:LEU:HD21	1.73	0.70
19:P:17:LYS:NZ	52:5:271:G:O5'	2.25	0.70
23:T:23:LEU:HG	23:T:27:ARG:HH22	1.57	0.70
28:e:67:PHE:HA	28:e:70:THR:HG22	1.72	0.70
39:p:48:ASP:HB3	39:p:52:LYS:HD3	1.74	0.70
50:3:952:U:O2'	50:3:953:G:OP1	2.10	0.70
50:3:1305:G:H2'	50:3:1306:G:C8	2.26	0.70
50:3:1447:A:O2'	50:3:1449:G:N7	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1710:A:H3'	50:3:1711:A:C8	2.25	0.70
50:3:2851:U:O4	50:3:2873:G:O6	2.10	0.70
51:4:8:C:O2'	51:4:9:C:O5'	2.09	0.70
52:5:346:G:H2'	52:5:347:G:C8	2.27	0.70
52:5:1304:U:H3'	52:5:1305:G:C8	2.26	0.70
8:E:66:ASN:O	8:E:70:LYS:NZ	2.25	0.70
14:K:26:TYR:HB2	14:K:74:PHE:HE2	1.57	0.70
14:K:102:ASP:OD2	52:5:520:C:N4	2.25	0.70
18:O:64:ARG:O	18:O:67:PHE:HB2	1.92	0.70
28:e:129:GLU:HG3	28:e:133:GLU:HG3	1.73	0.70
41:r:81:SER:OG	41:r:98:LYS:O	2.10	0.70
43:t:87:GLY:H	43:t:104:PHE:HE1	1.38	0.70
44:u:33:LYS:NZ	50:3:2395:U:O2'	2.24	0.70
50:3:62:G:H1'	50:3:64:U:C4	2.26	0.70
50:3:1107:C:H2'	50:3:1128:G:H1	1.56	0.70
50:3:1351:G:H3'	50:3:1352:G:H8	1.57	0.70
50:3:1714:U:O2'	50:3:1770:A:N7	2.21	0.70
50:3:2106:G:H22	50:3:2198:G:H1	1.38	0.70
50:3:2713:A:O2'	50:3:2856:G:OP1	2.09	0.70
52:5:399:C:H2'	52:5:400:G:H8	1.57	0.70
22:S:4:ILE:HG12	52:5:327:G:H2'	1.74	0.69
38:o:59:GLY:H	38:o:62:GLU:HG3	1.56	0.69
50:3:123:G:H2'	50:3:124:A:C8	2.26	0.69
50:3:675:U:H2'	50:3:676:U:H6	1.56	0.69
50:3:895:G:N2	50:3:896:U:O4	2.24	0.69
50:3:2388:C:H2'	50:3:2389:A:C8	2.27	0.69
50:3:2670:A:H3'	50:3:2671:G:C8	2.26	0.69
51:4:29:C:O2'	51:4:51:A:N1	2.20	0.69
52:5:40:G:N1	52:5:399:C:N3	2.29	0.69
52:5:172:C:O2	52:5:193:G:N2	2.20	0.69
7:D:87:ARG:NH2	52:5:1062:C:OP1	2.25	0.69
24:a:34:GLU:HB3	24:a:108:TYR:HE2	1.55	0.69
35:l:66:ILE:HG22	35:l:68:ILE:H	1.57	0.69
35:l:67:ARG:NH1	50:3:944:U:OP1	2.25	0.69
50:3:1702:A:H1'	50:3:1704:C:H41	1.55	0.69
52:5:411:A:N6	52:5:425:G:O6	2.20	0.69
52:5:625:U:H2'	52:5:626:G:C8	2.26	0.69
52:5:779:A:H62	52:5:797:G:H21	1.39	0.69
52:5:1245:A:H2'	52:5:1246:A:C8	2.27	0.69
52:5:1321:G:N2	52:5:1349:A:O5'	2.25	0.69
3:2:30:GLN:HE21	50:3:2535:C:H5"	1.56	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:218:ASN:O	4:A:224:SER:OG	2.09	0.69
18:O:70:THR:O	18:O:75:LYS:NZ	2.25	0.69
21:R:37:ARG:HA	21:R:70:LYS:HB3	1.73	0.69
21:R:81:LYS:HA	52:5:951:U:H1'	1.74	0.69
27:d:31:LEU:HA	27:d:158:THR:HA	1.74	0.69
33:j:77:LEU:HA	38:o:77:LYS:HG3	1.75	0.69
50:3:161:U:O4	50:3:171:G:O6	2.10	0.69
50:3:1868:A:H2'	50:3:1869:G:H8	1.56	0.69
50:3:2814:A:N1	50:3:2894:G:O2'	2.22	0.69
52:5:305:A:H2'	52:5:306:G:C8	2.27	0.69
52:5:976:U:H2'	52:5:977:U:C5	2.27	0.69
53:7:5:C:N3	53:7:70:G:N1	2.40	0.69
10:G:33:VAL:HB	10:G:72:PHE:CE2	2.28	0.69
11:H:124:ARG:HE	52:5:1322:U:H4'	1.57	0.69
24:a:162:ARG:NH1	50:3:1825:U:OP2	2.25	0.69
41:r:99:ARG:NH2	50:3:2020:A:OP2	2.26	0.69
44:u:38:LYS:N	44:u:51:ILE:O	2.25	0.69
50:3:26:G:H2'	50:3:27:U:C6	2.27	0.69
50:3:1296:G:H22	50:3:2019:G:H2'	1.57	0.69
50:3:1460:G:N2	50:3:1595:C:O2	2.15	0.69
50:3:1557:G:H3'	50:3:1571:G:H1	1.57	0.69
50:3:1989:U:H2'	50:3:1990:C:C6	2.27	0.69
50:3:2096:U:H2'	50:3:2097:A:H8	1.58	0.69
50:3:2476:A:P	50:3:2484:A:H61	2.14	0.69
50:3:2647:A:H1'	50:3:2788:U:H3	1.57	0.69
52:5:397:C:O2'	52:5:619:A:N3	2.24	0.69
52:5:1213:A:N6	52:5:1275:U:O2	2.18	0.69
52:5:1331:A:H2'	52:5:1332:U:C5	2.27	0.69
5:B:179:SER:HB2	52:5:1102:A:H61	1.56	0.69
25:b:111:SER:HA	25:b:175:THR:HA	1.74	0.69
25:b:116:GLY:HA2	25:b:171:HIS:HB2	1.74	0.69
39:p:25:GLY:H	50:3:20:C:H5''	1.58	0.69
50:3:455:G:H3'	50:3:456:G:H8	1.57	0.69
50:3:2572:A:N1	50:3:2654:U:O2'	2.25	0.69
52:5:345:A:H2'	52:5:346:G:C8	2.27	0.69
52:5:412:G:H1	52:5:424:U:H3	1.40	0.69
52:5:874:C:H2'	52:5:875:G:H8	1.57	0.69
52:5:1088:C:H1'	52:5:1145:A:H1'	1.74	0.69
2:1:5:SER:HA	2:1:8:LYS:HG2	1.73	0.69
5:B:55:ASN:ND2	5:B:57:GLU:OE2	2.26	0.69
12:I:20:ASP:HB3	12:I:23:LEU:HB2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:P:23:THR:HB	19:P:44:LYS:HE2	1.74	0.69
35:l:3:GLN:NE2	35:l:4:PRO:O	2.25	0.69
45:v:27:ARG:NH1	45:v:28:LYS:O	2.25	0.69
50:3:535:G:O2'	50:3:540:A:N1	2.23	0.69
50:3:1327:G:O2'	50:3:1674:A:N6	2.24	0.69
50:3:1465:U:H4'	50:3:1541:A:H2	1.56	0.69
50:3:1870:G:H2'	50:3:1871:U:C6	2.27	0.69
50:3:2151:G:O4'	50:3:2154:A:N6	2.25	0.69
50:3:2547:C:H2'	50:3:2548:G:C8	2.23	0.69
52:5:1497:U:H2'	52:5:1498:G:H8	1.56	0.69
12:I:43:LYS:NZ	12:I:44:GLY:O	2.26	0.69
33:j:64:ARG:NH2	33:j:101:PRO:O	2.25	0.69
34:k:145:SER:OG	34:k:147:LYS:NZ	2.26	0.69
50:3:305:U:O2	50:3:399:G:N2	2.21	0.69
50:3:1140:U:H2'	50:3:1141:U:H6	1.55	0.69
52:5:677:C:H2'	52:5:678:A:H8	1.58	0.69
52:5:1200:G:O2'	52:5:1201:C:O5'	2.11	0.69
5:B:134:ARG:NH1	7:D:113:ASN:OD1	2.26	0.69
13:J:87:ASP:O	13:J:91:ARG:N	2.18	0.69
16:M:28:GLY:N	52:5:1177:U:O2'	2.25	0.69
22:S:21:ASN:HB3	22:S:25:LYS:HZ2	1.54	0.69
24:a:26:LEU:HD22	24:a:88:TYR:HB3	1.74	0.69
25:b:85:ARG:HH11	50:3:2645:U:H5''	1.58	0.69
33:j:66:LYS:NZ	50:3:1700:G:OP1	2.19	0.69
34:k:69:ARG:HE	50:3:669:A:H5''	1.56	0.69
37:n:110:ARG:NH2	50:3:2384:A:N3	2.39	0.69
44:u:39:LYS:HB2	44:u:51:ILE:HG23	1.74	0.69
50:3:189:U:H2'	50:3:190:G:C8	2.28	0.69
50:3:820:U:H2'	50:3:821:C:C6	2.28	0.69
50:3:1244:A:H62	50:3:1265:G:H21	1.39	0.69
50:3:1503:A:N6	50:3:1540:G:O2'	2.26	0.69
50:3:2102:U:H2'	50:3:2103:C:C6	2.28	0.69
50:3:2376:C:H2'	50:3:2377:A:C8	2.28	0.69
50:3:2880:A:H2'	50:3:2881:A:H8	1.58	0.69
51:4:56:A:H2'	51:4:57:G:H8	1.58	0.69
52:5:144:U:N3	52:5:149:G:N1	2.40	0.69
52:5:201:G:H1	52:5:214:U:H3	0.78	0.69
52:5:892:G:N2	52:5:895:A:OP2	2.24	0.69
52:5:1090:G:H2'	52:5:1091:C:O4'	1.91	0.69
52:5:1222:U:N3	52:5:1264:G:N1	2.40	0.69
52:5:1231:U:H2'	52:5:1253:A:C5	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1389:U:H2'	52:5:1390:G:H8	1.57	0.69
53:7:15:A:H3'	53:7:16:G:H8	1.57	0.69
19:P:70:SER:O	19:P:74:ARG:NH2	2.25	0.69
22:S:71:ARG:NH1	52:5:255:G:O5'	2.17	0.69
24:a:47:ARG:HG2	24:a:53:ILE:HA	1.75	0.69
34:k:26:SER:N	50:3:848:U:OP2	2.25	0.69
42:s:2:ASP:N	50:3:146:G:O3'	2.25	0.69
50:3:202:C:H4'	50:3:2251:U:H4'	1.74	0.69
50:3:220:A:C8	50:3:468:A:C5	2.81	0.69
50:3:454:G:H2'	50:3:455:G:C8	2.28	0.69
50:3:606:G:O6	50:3:2036:G:O2'	2.07	0.69
50:3:1543:U:H2'	50:3:1544:G:C8	2.28	0.69
50:3:1785:U:O2	50:3:1792:A:N6	2.25	0.69
52:5:743:A:O2'	52:5:745:U:O4	2.11	0.69
52:5:997:G:O6	52:5:1029:C:N4	2.26	0.69
52:5:1448:A:H2'	52:5:1449:G:C8	2.28	0.69
1:0:12:ARG:HG3	50:3:721:G:H1	1.57	0.69
26:c:75:ARG:NH2	50:3:708:C:O2	2.26	0.69
34:k:81:ASN:HD22	34:k:84:LYS:HD3	1.57	0.69
34:k:84:LYS:NZ	50:3:636:U:O2	2.23	0.69
46:w:40:LYS:NZ	50:3:98:C:O5'	2.26	0.69
50:3:2177:G:H2'	50:3:2178:A:C4	2.28	0.69
50:3:2684:G:H2'	50:3:2685:A:C8	2.28	0.69
50:3:2840:U:H2'	50:3:2841:A:H8	1.55	0.69
51:4:31:G:H2'	51:4:32:G:C8	2.28	0.69
7:D:143:ARG:HG2	7:D:146:ALA:H	1.58	0.68
21:R:23:ASN:HD22	21:R:27:LYS:HE2	1.57	0.68
39:p:2:ARG:HE	50:3:482:G:H5'	1.57	0.68
43:t:33:GLN:HB3	43:t:68:PRO:HB3	1.74	0.68
50:3:389:C:H2'	50:3:390:A:H8	1.58	0.68
50:3:411:U:O2	50:3:437:A:N7	2.26	0.68
50:3:652:U:H2'	50:3:653:G:H8	1.56	0.68
50:3:739:G:O2'	50:3:761:G:N2	2.26	0.68
50:3:1323:A:H2'	50:3:1324:A:C5	2.27	0.68
50:3:1709:C:OP2	50:3:1711:A:N6	2.26	0.68
50:3:1836:A:H3'	50:3:1837:C:C6	2.28	0.68
50:3:2660:C:H2'	50:3:2661:U:O4'	1.93	0.68
52:5:172:C:N4	52:5:193:G:O6	2.24	0.68
52:5:1454:G:H2'	52:5:1455:G:H8	1.58	0.68
5:B:49:ARG:HD2	5:B:121:ARG:HD3	1.75	0.68
15:L:107:ARG:NE	15:L:111:GLY:O	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:b:5:GLY:HA2	25:b:207:ILE:O	1.93	0.68
29:f:94:THR:OG1	50:3:2227:U:O3'	2.10	0.68
34:k:48:ARG:HH21	34:k:51:PHE:HB2	1.56	0.68
37:n:32:VAL:HG12	37:n:41:VAL:HG12	1.74	0.68
39:p:106:ASN:HA	39:p:109:VAL:HG12	1.76	0.68
41:r:75:VAL:HG22	41:r:104:VAL:H	1.58	0.68
43:t:6:LYS:HA	43:t:24:VAL:HG13	1.76	0.68
50:3:275:A:N3	50:3:406:C:O2'	2.24	0.68
50:3:1080:A:H5''	50:3:1082:A:O4'	1.92	0.68
50:3:1177:A:O2'	50:3:1179:G:OP2	2.07	0.68
50:3:1273:U:H2'	50:3:1274:A:C8	2.28	0.68
50:3:1866:G:N2	50:3:1867:G:N3	2.40	0.68
50:3:2035:U:O2	50:3:2040:A:N7	2.26	0.68
50:3:2603:G:N2	50:3:2606:A:OP2	2.22	0.68
50:3:2716:U:H2'	50:3:2717:G:C8	2.27	0.68
6:C:61:GLN:O	6:C:66:ILE:N	2.26	0.68
13:J:22:ASN:OD1	13:J:40:SER:OG	2.12	0.68
20:Q:94:ARG:NH1	52:5:716:C:N3	2.41	0.68
24:a:215:LYS:HG3	24:a:217:GLY:H	1.56	0.68
31:h:113:ASN:HB3	50:3:1117:U:H1'	1.75	0.68
50:3:264:G:O2'	50:3:642:A:N6	2.24	0.68
50:3:1866:G:N1	50:3:1891:A:N7	2.40	0.68
50:3:1932:C:N4	50:3:1936:G:H22	1.90	0.68
50:3:2227:U:H2'	50:3:2228:U:H6	1.57	0.68
52:5:229:G:H2'	52:5:230:G:C8	2.27	0.68
52:5:486:C:H2'	52:5:487:A:C8	2.29	0.68
52:5:1110:C:H2'	52:5:1111:G:H8	1.56	0.68
52:5:1138:U:H2'	52:5:1139:A:C8	2.29	0.68
52:5:1261:A:H2'	52:5:1262:A:H8	1.57	0.68
52:5:1392:A:H2'	52:5:1457:G:N2	2.08	0.68
14:K:67:LYS:HG3	14:K:75:GLU:HG2	1.76	0.68
27:d:115:ARG:HB3	47:x:45:PHE:HB2	1.76	0.68
29:f:2:LYS:C	29:f:4:ILE:H	2.00	0.68
33:j:119:VAL:O	52:5:341:C:O2'	2.08	0.68
35:l:2:LEU:HD12	35:l:70:PRO:HD2	1.74	0.68
39:p:12:ARG:HH21	39:p:16:TRP:HE1	1.38	0.68
40:q:74:ILE:HB	40:q:77:LYS:HB2	1.75	0.68
43:t:41:LYS:HB3	43:t:64:GLN:HE21	1.59	0.68
50:3:66:A:H2'	50:3:67:C:C6	2.28	0.68
50:3:225:A:N7	50:3:463:U:O4	2.26	0.68
50:3:883:A:H61	50:3:967:U:H3	1.40	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1049:U:H2'	50:3:1050:A:C8	2.28	0.68
50:3:1198:G:H2'	50:3:1199:A:C8	2.28	0.68
50:3:2089:A:H3'	50:3:2090:G:C8	2.26	0.68
50:3:2321:C:H2'	50:3:2322:G:C8	2.29	0.68
51:4:70:G:O2'	51:4:94:A:N6	2.26	0.68
52:5:945:U:H2'	52:5:946:G:H8	1.58	0.68
14:K:123:ARG:HD3	14:K:130:TYR:CE2	2.27	0.68
24:a:67:ARG:NH1	24:a:88:TYR:OH	2.24	0.68
25:b:120:THR:HB	25:b:169:TYR:HB2	1.75	0.68
30:g:56:ASN:N	50:3:1142:G:OP1	2.26	0.68
35:l:27:VAL:HG23	35:l:105:GLU:HB2	1.76	0.68
42:s:6:VAL:HA	42:s:32:ASN:HB2	1.74	0.68
50:3:882:C:OP2	50:3:883:A:N6	2.22	0.68
50:3:891:G:O6	50:3:959:C:N4	2.20	0.68
50:3:1392:G:O2'	50:3:1815:U:O4	2.12	0.68
50:3:1819:G:H2'	50:3:1820:U:C6	2.29	0.68
50:3:2100:G:N7	50:3:2233:A:H2'	2.09	0.68
52:5:351:C:O2'	52:5:384:G:N3	2.19	0.68
52:5:446:A:H3'	52:5:447:G:C8	2.28	0.68
14:K:55:PRO:HD3	14:K:63:ARG:HG3	1.74	0.68
21:R:32:LYS:HA	21:R:50:ALA:HB3	1.76	0.68
46:w:55:LEU:HD12	50:3:74:U:H5'	1.76	0.68
50:3:305:U:O4	50:3:399:G:O6	2.10	0.68
50:3:1127:C:H3'	50:3:1128:G:H8	1.59	0.68
50:3:1700:G:H3'	50:3:1701:G:H8	1.57	0.68
50:3:2813:A:OP2	50:3:2894:G:N2	2.26	0.68
52:5:331:C:H2'	52:5:332:A:C8	2.28	0.68
52:5:671:G:H2'	52:5:672:A:C8	2.29	0.68
3:2:30:GLN:HE22	3:2:33:LYS:HD3	1.58	0.68
10:G:56:ASN:O	10:G:73:ASN:N	2.26	0.68
14:K:60:SER:HB2	52:5:1467:A:H62	1.58	0.68
28:e:28:LYS:HD2	28:e:33:GLN:HB2	1.74	0.68
28:e:121:PRO:HB2	28:e:124:LEU:HD13	1.75	0.68
35:l:36:ALA:O	35:l:100:GLY:N	2.27	0.68
35:l:41:TRP:HD1	35:l:96:VAL:HA	1.57	0.68
38:o:36:LYS:HE2	38:o:85:ASN:HA	1.75	0.68
41:r:4:PHE:O	50:3:529:G:O2'	2.12	0.68
42:s:64:THR:OG1	50:3:1340:U:OP1	2.10	0.68
43:t:9:LYS:HD3	43:t:79:GLN:HE22	1.58	0.68
50:3:450:C:N4	50:3:2417:G:O6	2.16	0.68
50:3:2082:U:H3'	50:3:2246:G:N2	2.08	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2094:A:H2'	50:3:2095:A:C8	2.29	0.68
52:5:517:C:N4	52:5:527:G:O2'	2.27	0.68
52:5:811:A:O2'	52:5:1485:C:O2	2.11	0.68
52:5:1443:A:H3'	52:5:1444:G:H8	1.58	0.68
13:J:115:LYS:O	52:5:775:G:O2'	2.11	0.68
17:N:26:VAL:HA	17:N:29:LEU:HD12	1.76	0.68
24:a:183:GLN:NE2	24:a:184:LEU:O	2.27	0.68
25:b:34:ASN:HB3	25:b:52:LEU:HD21	1.76	0.68
32:i:3:LYS:N	50:3:1030:U:HO2'	1.90	0.68
49:z:2:ALA:N	50:3:2291:U:OP1	2.27	0.68
50:3:179:A:O2'	50:3:180:A:N7	2.27	0.68
50:3:411:U:C2	50:3:437:A:N7	2.62	0.68
50:3:437:A:H2'	50:3:438:A:C8	2.28	0.68
50:3:1934:A:H2'	50:3:1935:A:C8	2.28	0.68
50:3:2508:U:O2'	50:3:2512:U:OP2	2.10	0.68
50:3:2700:C:H2'	50:3:2701:A:C8	2.28	0.68
50:3:2781:C:H2'	50:3:2782:A:C8	2.28	0.68
52:5:692:A:H61	52:5:783:G:H21	1.42	0.68
4:A:207:ASN:HB3	4:A:210:LEU:HD13	1.76	0.68
24:a:233:MET:SD	50:3:817:A:O2'	2.46	0.68
26:c:47:GLN:N	50:3:479:A:OP1	2.25	0.68
34:k:128:VAL:HG23	34:k:148:LEU:HD12	1.76	0.68
39:p:12:ARG:HA	39:p:15:LYS:HE3	1.76	0.68
50:3:556:U:H2'	50:3:557:G:C8	2.28	0.68
50:3:1772:G:O6	50:3:1994:U:O2	2.12	0.68
50:3:1959:A:H61	50:3:2557:G:H1'	1.58	0.68
50:3:2041:C:H2'	50:3:2042:A:C8	2.29	0.68
51:4:106:A:N7	51:4:108:C:N4	2.41	0.68
52:5:1142:G:N2	52:5:1145:A:OP2	2.16	0.68
53:7:22:A:N7	53:7:47:G:O2'	2.27	0.68
1:0:3:ARG:O	1:0:6:GLN:NE2	2.27	0.68
4:A:49:ARG:HG3	4:A:52:ASN:H	1.58	0.68
13:J:88:THR:O	13:J:92:SER:N	2.25	0.68
29:f:77:LEU:HB2	29:f:140:VAL:HG22	1.75	0.68
34:k:26:SER:HA	50:3:849:C:H41	1.58	0.68
41:r:57:ASN:OD1	50:3:529:G:N2	2.20	0.68
50:3:321:A:H2'	50:3:322:A:C8	2.28	0.68
50:3:1160:G:H3'	50:3:1161:A:H8	1.59	0.68
50:3:1504:G:H1	50:3:1539:U:H3	1.41	0.68
52:5:416:U:O2	52:5:421:G:C2	2.47	0.68
52:5:1112:U:H2'	52:5:1113:U:C6	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1293:A:N6	52:5:1334:A:N1	2.42	0.68
53:7:12:C:O2	53:7:25:G:N2	2.19	0.68
4:A:99:ILE:HG23	4:A:105:VAL:HG21	1.76	0.67
10:G:90:ILE:HG13	10:G:137:ILE:HG22	1.75	0.67
12:I:11:GLU:H	12:I:84:ASP:HA	1.58	0.67
36:m:100:VAL:HG22	36:m:116:LEU:HD13	1.75	0.67
46:w:2:THR:HG23	46:w:3:VAL:H	1.59	0.67
50:3:442:G:N1	50:3:457:U:N3	2.42	0.67
50:3:590:U:H2'	50:3:591:G:H8	1.59	0.67
50:3:748:G:H22	50:3:752:C:H5''	1.59	0.67
50:3:1099:C:N4	50:3:1105:A:OP1	2.27	0.67
50:3:1116:U:H2'	50:3:1117:U:C6	2.30	0.67
50:3:1495:A:H61	50:3:1547:G:H2'	1.59	0.67
52:5:126:U:H2'	52:5:127:A:C8	2.29	0.67
52:5:170:A:H3'	52:5:171:A:H8	1.59	0.67
52:5:882:U:H2'	52:5:902:A:H61	1.59	0.67
52:5:928:G:H8	52:5:928:G:OP2	1.77	0.67
52:5:1354:G:H2'	52:5:1355:U:C6	2.30	0.67
9:F:32:ASP:OD2	52:5:1325:U:O2'	2.11	0.67
33:j:24:VAL:HG12	33:j:39:VAL:HG11	1.76	0.67
33:j:80:ASP:HB2	38:o:74:PRO:HG2	1.75	0.67
50:3:15:A:N6	50:3:561:A:OP2	2.26	0.67
50:3:276:A:H3'	50:3:277:C:H6	1.59	0.67
50:3:478:G:H3'	50:3:479:A:H5''	1.75	0.67
50:3:562:C:N4	50:3:2787:U:OP2	2.27	0.67
50:3:569:U:O4	50:3:592:G:O6	2.12	0.67
50:3:1798:A:OP2	50:3:1835:G:N2	2.28	0.67
50:3:2649:G:H2'	50:3:2650:A:C8	2.28	0.67
52:5:169:G:N2	52:5:219:A:O2'	2.21	0.67
52:5:1096:A:H2'	52:5:1097:G:C8	2.29	0.67
7:D:138:HIS:CE1	7:D:202:GLN:HG3	2.30	0.67
13:J:110:PRO:HA	52:5:673:A:H1'	1.77	0.67
34:k:80:LEU:HB3	34:k:85:ILE:HD11	1.76	0.67
36:m:61:ARG:NH2	50:3:2713:A:N3	2.42	0.67
50:3:195:A:H1'	50:3:714:G:H1'	1.76	0.67
50:3:196:G:H21	50:3:837:A:H4'	1.59	0.67
50:3:634:C:H2'	50:3:635:G:O4'	1.94	0.67
50:3:1324:A:O2'	50:3:1325:C:O4'	2.10	0.67
50:3:1453:U:H2'	50:3:1454:G:C8	2.29	0.67
50:3:2037:A:N3	50:3:2507:C:H5''	2.09	0.67
50:3:2116:U:O2	50:3:2189:U:N3	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2524:U:H2'	50:3:2525:C:C6	2.28	0.67
51:4:21:G:H2'	51:4:22:G:H8	1.57	0.67
52:5:80:U:H2'	52:5:81:A:H8	1.59	0.67
52:5:227:A:H2'	52:5:228:G:H8	1.57	0.67
52:5:1382:C:H2'	52:5:1383:A:H8	1.60	0.67
52:5:1425:A:O2'	52:5:1428:A:N6	2.26	0.67
3:2:19:ARG:NE	50:3:2764:U:OP2	2.23	0.67
4:A:158:ARG:NH1	52:5:1089:C:OP2	2.28	0.67
27:d:101:GLU:HA	27:d:104:ILE:HG12	1.76	0.67
28:e:98:ARG:HB3	28:e:109:GLN:HE21	1.60	0.67
29:f:115:ASP:OD2	29:f:118:ARG:NH2	2.27	0.67
43:t:5:LYS:HE2	50:3:86:A:H5''	1.77	0.67
50:3:243:U:H3	50:3:262:G:H1	0.78	0.67
50:3:410:G:N2	50:3:436:G:H2'	2.10	0.67
50:3:1208:A:H2'	50:3:1209:U:H4'	1.76	0.67
50:3:1666:A:H2'	50:3:1667:G:C8	2.28	0.67
52:5:205:U:O2	52:5:210:G:N2	2.19	0.67
52:5:711:G:H2'	52:5:712:A:C8	2.30	0.67
52:5:1444:G:H2'	52:5:1445:G:C8	2.30	0.67
4:A:115:GLY:HA2	4:A:118:THR:HG22	1.74	0.67
18:O:7:HIS:N	52:5:388:G:OP1	2.20	0.67
19:P:16:THR:H	19:P:56:LYS:HD2	1.59	0.67
34:k:4:ASN:O	34:k:7:LYS:N	2.22	0.67
50:3:15:A:O2'	50:3:17:G:N7	2.24	0.67
50:3:205:C:O2'	50:3:424:G:O6	2.11	0.67
50:3:440:C:H5'	50:3:441:U:C4	2.29	0.67
50:3:742:G:O6	50:3:759:U:O4	2.12	0.67
50:3:772:C:H2'	50:3:773:G:H8	1.59	0.67
50:3:1151:U:H2'	50:3:1152:U:C6	2.30	0.67
50:3:1298:A:H3'	50:3:1299:A:H8	1.58	0.67
50:3:1313:G:H21	50:3:1356:G:H5''	1.58	0.67
50:3:1858:U:O2	50:3:1898:G:N2	2.24	0.67
50:3:1930:U:H2'	50:3:1931:C:C6	2.30	0.67
52:5:1472:G:H2'	52:5:1473:U:O4'	1.94	0.67
8:E:50:LYS:HZ3	8:E:84:ARG:HH22	1.41	0.67
10:G:24:ASN:ND2	52:5:823:C:O2	2.26	0.67
24:a:255:ARG:NH2	24:a:259:GLY:O	2.26	0.67
48:y:27:LEU:HA	48:y:38:LEU:HA	1.76	0.67
50:3:454:G:H2'	50:3:455:G:H8	1.60	0.67
50:3:1054:U:H4'	50:3:1055:A:OP1	1.94	0.67
50:3:2054:C:H2'	50:3:2055:A:C8	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2143:G:H1	50:3:2162:U:H3	1.42	0.67
52:5:229:G:H2'	52:5:230:G:H8	1.60	0.67
52:5:265:U:H2'	52:5:266:A:C8	2.28	0.67
52:5:1250:A:N1	52:5:1257:C:O2'	2.28	0.67
4:A:34:LYS:HG2	4:A:53:ASN:HA	1.76	0.67
5:B:150:ASN:HB2	5:B:208:GLY:HA2	1.77	0.67
7:D:158:THR:HB	7:D:177:ASP:HA	1.76	0.67
10:G:124:THR:HG23	10:G:127:VAL:H	1.58	0.67
27:d:118:SER:HB3	27:d:177:LEU:HD22	1.76	0.67
28:e:102:GLU:OE1	28:e:107:ASN:ND2	2.26	0.67
35:l:49:SER:OG	50:3:2491:C:O2	2.13	0.67
50:3:17:G:H2'	50:3:18:G:C8	2.29	0.67
50:3:456:G:O2'	50:3:457:U:O5'	2.11	0.67
50:3:635:G:HO2'	50:3:638:A:HO2'	1.39	0.67
50:3:1077:G:N1	50:3:1148:U:C2	2.63	0.67
50:3:1596:U:H2'	50:3:1597:U:C6	2.30	0.67
50:3:1688:A:N6	50:3:2012:A:H2'	2.10	0.67
52:5:205:U:H3	52:5:210:G:H1	0.75	0.67
52:5:290:G:H2'	52:5:291:C:C6	2.30	0.67
52:5:598:U:H3	52:5:635:G:H1	1.43	0.67
52:5:1068:G:O2'	52:5:1070:G:O6	2.12	0.67
5:B:7:SER:OG	5:B:11:ARG:NH2	2.28	0.67
11:H:101:LYS:NZ	52:5:1153:G:OP2	2.22	0.67
16:M:34:LEU:O	16:M:38:GLY:N	2.27	0.67
32:i:71:LYS:HA	32:i:74:ASN:HB3	1.76	0.67
50:3:631:A:H2'	50:3:632:A:C8	2.30	0.67
50:3:1387:A:OP2	50:3:1399:G:N2	2.28	0.67
50:3:2423:G:H2'	50:3:2424:C:C6	2.30	0.67
50:3:2743:U:H2'	50:3:2744:A:C8	2.30	0.67
52:5:516:C:H2'	52:5:528:G:C4	2.30	0.67
1:0:29:LYS:O	1:0:32:LYS:HG2	1.95	0.67
8:E:146:THR:HA	10:G:60:LEU:HG	1.77	0.67
14:K:47:CYS:HA	14:K:68:VAL:HA	1.77	0.67
24:a:98:LEU:HB2	24:a:108:TYR:CZ	2.30	0.67
33:j:5:MET:HE2	50:3:1702:A:H5''	1.77	0.67
50:3:563:A:O2'	50:3:565:C:N4	2.28	0.67
50:3:587:U:H2'	50:3:588:G:C8	2.29	0.67
50:3:1077:G:H2'	50:3:1078:C:C6	2.30	0.67
50:3:1171:G:N2	50:3:2046:G:OP1	2.27	0.67
50:3:1320:C:H2'	50:3:1321:C:C6	2.29	0.67
50:3:2288:G:H2'	50:3:2289:C:O4'	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2587:U:H2'	50:3:2588:U:C6	2.30	0.67
52:5:525:G:O2'	52:5:533:A:N1	2.19	0.67
52:5:710:G:H2'	52:5:711:G:C8	2.30	0.67
53:7:59:A:H2	53:7:61:U:H2'	1.60	0.67
20:Q:95:TYR:OH	52:5:669:U:O2	2.10	0.67
28:e:8:THR:HG23	28:e:54:GLN:HG2	1.77	0.67
43:t:90:LYS:HE3	43:t:93:MET:HE2	1.76	0.67
50:3:281:U:H2'	50:3:282:C:C6	2.30	0.67
50:3:450:C:H1'	50:3:1871:U:H1'	1.77	0.67
50:3:802:U:O2'	50:3:803:G:O5'	2.13	0.67
50:3:854:A:OP2	50:3:1218:G:N2	2.28	0.67
50:3:1764:U:O4	50:3:1769:A:N7	2.27	0.67
50:3:1907:A:H1'	50:3:1977:A:H2'	1.76	0.67
50:3:1932:C:O2	50:3:1936:G:O6	2.12	0.67
50:3:2268:C:H2'	50:3:2269:C:C6	2.30	0.67
52:5:733:A:H3'	52:5:734:A:H8	1.60	0.67
52:5:1046:A:C5	52:5:1175:C:N4	2.63	0.67
53:7:37:A:H2'	53:7:38:G:C8	2.30	0.67
24:a:218:ARG:NH2	50:3:1600:A:OP2	2.27	0.66
26:c:30:LYS:H	26:c:114:THR:HG21	1.60	0.66
50:3:569:U:O2	50:3:592:G:N2	2.26	0.66
50:3:1059:G:O2'	50:3:1179:G:O2'	2.11	0.66
50:3:1803:U:O4	50:3:1830:G:O6	2.13	0.66
50:3:1863:G:H3'	50:3:1864:A:H8	1.60	0.66
50:3:1919:A:O2'	52:5:1469:G:N3	2.27	0.66
50:3:2587:U:H2'	50:3:2588:U:H6	1.58	0.66
6:C:74:LEU:HD13	6:C:93:LEU:HD21	1.76	0.66
20:Q:43:PHE:HA	20:Q:46:ILE:HG22	1.77	0.66
24:a:179:TYR:O	24:a:191:LYS:NZ	2.20	0.66
33:j:8:LEU:HD11	33:j:84:CYS:HB3	1.76	0.66
50:3:1036:A:H2'	50:3:1037:A:C8	2.30	0.66
50:3:1503:A:N6	50:3:1591:C:O2'	2.28	0.66
50:3:1613:A:H3'	50:3:1614:G:H8	1.60	0.66
50:3:1637:A:H2'	50:3:1638:C:O4'	1.96	0.66
50:3:1705:U:H2'	50:3:1706:C:H3'	1.77	0.66
52:5:234:G:H2'	52:5:235:C:C6	2.30	0.66
52:5:346:G:H2'	52:5:347:G:H8	1.58	0.66
52:5:556:G:OP2	52:5:557:A:O2'	2.13	0.66
52:5:579:G:N2	52:5:756:A:OP2	2.28	0.66
52:5:688:G:H22	52:5:692:A:H3'	1.60	0.66
52:5:857:U:O2'	52:5:859:A:N7	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:j:46:ALA:H	33:j:54:LYS:HE3	1.60	0.66
37:n:77:ILE:O	37:n:81:LEU:N	2.27	0.66
45:v:6:GLN:HE22	45:v:49:LEU:HB2	1.59	0.66
50:3:333:A:H2'	50:3:334:A:C8	2.30	0.66
50:3:1036:A:OP2	50:3:1189:G:N1	2.21	0.66
50:3:1061:A:H2'	50:3:1062:A:C8	2.28	0.66
50:3:1163:G:N3	50:3:2524:U:O2'	2.22	0.66
50:3:1337:G:H2'	50:3:1338:G:C8	2.31	0.66
52:5:434:U:O4	52:5:493:A:N7	2.28	0.66
52:5:930:A:N6	52:5:1355:U:O4	2.29	0.66
52:5:980:C:N3	52:5:1195:G:N1	2.37	0.66
52:5:1043:U:C2	52:5:1181:G:O6	2.49	0.66
4:A:83:LEU:HD11	4:A:108:ILE:HG13	1.76	0.66
4:A:120:PHE:HD1	4:A:123:LEU:HD12	1.60	0.66
7:D:78:LYS:HZ2	52:5:916:U:H4'	1.58	0.66
9:F:9:ARG:NH1	52:5:1320:A:N7	2.42	0.66
9:F:70:PRO:O	9:F:95:LYS:NZ	2.28	0.66
25:b:3:ILE:HD13	25:b:208:ARG:HH11	1.60	0.66
26:c:165:ASN:HB3	26:c:168:LEU:HG	1.77	0.66
32:i:24:ALA:HA	32:i:64:GLN:HB2	1.76	0.66
33:j:88:LYS:NZ	33:j:93:PRO:O	2.28	0.66
39:p:1:MET:N	50:3:1278:G:OP1	2.28	0.66
43:t:38:GLY:HA2	43:t:41:LYS:NZ	2.11	0.66
48:y:2:ALA:N	50:3:2585:A:N3	2.43	0.66
48:y:28:SER:OG	48:y:37:LYS:NZ	2.24	0.66
50:3:675:U:O4	50:3:685:G:O6	2.12	0.66
50:3:1786:U:OP2	50:3:1791:A:N6	2.21	0.66
50:3:2097:A:H2'	50:3:2098:U:C6	2.30	0.66
50:3:2159:U:H2'	50:3:2160:U:C6	2.31	0.66
52:5:23:G:O2'	52:5:907:A:N1	2.24	0.66
52:5:51:A:N6	52:5:357:G:O4'	2.29	0.66
52:5:1389:U:H3	52:5:1461:G:H1	1.42	0.66
53:7:16:G:N2	53:7:49:C:H42	1.93	0.66
2:1:12:LYS:HB2	2:1:20:LYS:HB3	1.77	0.66
9:F:3:LYS:H	52:5:930:A:H62	1.43	0.66
11:H:12:ARG:HH22	11:H:75:THR:HG22	1.59	0.66
21:R:23:ASN:HD21	21:R:44:PHE:HA	1.60	0.66
25:b:139:TYR:O	50:3:1691:U:H5''	1.95	0.66
32:i:58:ILE:HG12	32:i:126:HIS:HB2	1.77	0.66
50:3:1447:A:OP2	50:3:1611:C:N4	2.28	0.66
50:3:2726:G:H3'	50:3:2727:G:H8	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:483:U:H2'	52:5:484:A:C8	2.25	0.66
52:5:510:U:H2'	52:5:511:A:C8	2.31	0.66
52:5:1241:G:N2	52:5:1244:A:OP2	2.28	0.66
13:J:33:ASN:HA	52:5:680:G:N2	2.11	0.66
16:M:19:ARG:NH2	52:5:1291:C:H42	1.94	0.66
26:c:179:GLN:NE2	26:c:190:ASP:OD1	2.26	0.66
28:e:21:GLN:NE2	28:e:24:HIS:O	2.29	0.66
29:f:46:ASP:O	29:f:50:PHE:HB2	1.95	0.66
41:r:1:MET:HG3	41:r:108:SER:HA	1.76	0.66
44:u:39:LYS:NZ	44:u:50:ILE:O	2.21	0.66
50:3:488:G:N2	50:3:494:G:O4'	2.28	0.66
50:3:608:A:H5'	50:3:2508:U:H4'	1.78	0.66
50:3:868:C:H2'	50:3:869:U:C6	2.30	0.66
50:3:1460:G:H2'	50:3:1461:A:C8	2.30	0.66
50:3:1778:G:H2'	50:3:1779:G:H8	1.60	0.66
50:3:2388:C:H2'	50:3:2389:A:H8	1.59	0.66
50:3:2538:A:O2'	50:3:2542:A:N6	2.23	0.66
52:5:68:C:H2'	52:5:69:G:H8	1.61	0.66
52:5:917:G:H21	52:5:1373:A:H8	1.41	0.66
52:5:1043:U:O2	52:5:1181:G:C6	2.47	0.66
52:5:1049:G:O6	52:5:1174:U:O2	2.14	0.66
15:L:99:GLY:O	52:5:1199:U:O2'	2.13	0.66
17:N:31:SER:HA	17:N:34:LYS:HD2	1.77	0.66
26:c:141:LYS:HB2	50:3:354:C:OP2	1.96	0.66
32:i:93:ARG:NH2	32:i:94:ASP:OD2	2.28	0.66
50:3:1306:G:H2'	50:3:1307:G:H8	1.61	0.66
50:3:1394:A:H3'	50:3:1395:A:C8	2.30	0.66
50:3:2134:G:H2'	50:3:2135:C:C6	2.31	0.66
52:5:664:A:OP1	52:5:729:C:O2'	2.12	0.66
52:5:762:G:H3'	52:5:809:G:H22	1.59	0.66
52:5:1046:A:H62	52:5:1175:C:N4	1.86	0.66
52:5:1273:A:O2'	52:5:1275:U:O4'	2.12	0.66
11:H:108:ARG:NH2	11:H:109:ASP:OD1	2.28	0.66
28:e:57:ARG:NH1	28:e:64:SER:HG	1.93	0.66
43:t:23:ILE:O	43:t:37:GLU:HB3	1.96	0.66
50:3:260:A:H2'	50:3:261:A:C8	2.30	0.66
50:3:914:G:H22	50:3:936:G:H2'	1.61	0.66
50:3:1159:C:H3'	50:3:1160:G:C8	2.29	0.66
50:3:1488:U:H5'	50:3:2710:G:H21	1.61	0.66
50:3:2007:U:H2'	50:3:2008:A:H8	1.61	0.66
50:3:2603:G:H3'	50:3:2604:U:H5''	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1298:U:H2'	52:5:1299:C:C6	2.29	0.66
7:D:78:LYS:NZ	52:5:1073:A:OP1	2.29	0.66
11:H:11:ARG:NH2	52:5:1125:C:OP1	2.29	0.66
12:I:13:LYS:HG3	12:I:81:ILE:HG12	1.77	0.66
12:I:19:TYR:HA	12:I:75:ARG:HA	1.78	0.66
15:L:28:SER:N	52:5:1303:A:OP1	2.28	0.66
18:O:63:VAL:O	18:O:67:PHE:N	2.27	0.66
21:R:18:LYS:NZ	52:5:1009:G:OP1	2.27	0.66
24:a:127:PRO:HA	24:a:140:PHE:HB3	1.78	0.66
25:b:198:ALA:N	50:3:2687:A:O2'	2.29	0.66
26:c:94:LYS:O	26:c:99:TYR:OH	2.08	0.66
27:d:125:ARG:NH2	50:3:2310:C:O2	2.24	0.66
28:e:92:LEU:N	28:e:132:THR:O	2.28	0.66
32:i:37:ASP:HA	32:i:42:LYS:HB3	1.78	0.66
39:p:60:TRP:CD2	39:p:93:VAL:HB	2.31	0.66
50:3:71:C:H4'	50:3:77:G:C5	2.30	0.66
50:3:509:G:H2'	50:3:510:G:C8	2.31	0.66
50:3:563:A:H2'	50:3:2049:A:N1	2.11	0.66
50:3:633:G:N2	50:3:692:U:O2	2.28	0.66
50:3:1476:C:H2'	50:3:1477:A:C8	2.31	0.66
50:3:1915:C:O2'	53:7:13:U:OP1	2.13	0.66
50:3:2075:U:H3	50:3:2438:A:H62	1.43	0.66
50:3:2782:A:H2'	50:3:2783:A:C8	2.30	0.66
50:3:2826:G:O2'	50:3:2828:C:OP2	2.13	0.66
51:4:40:U:HO2'	51:4:41:C:H6	1.44	0.66
52:5:18:U:H2'	52:5:19:C:C6	2.31	0.66
52:5:1034:G:H2'	52:5:1035:A:C8	2.30	0.66
52:5:1133:A:N6	52:5:1153:G:H1'	2.11	0.66
52:5:1235:C:O2'	52:5:1250:A:N6	2.28	0.66
52:5:1393:A:H3'	52:5:1394:G:H8	1.61	0.66
6:C:117:VAL:HG22	6:C:122:VAL:HG21	1.78	0.66
50:3:31:U:H2'	50:3:32:G:H8	1.60	0.66
50:3:138:U:H2'	50:3:139:G:C8	2.31	0.66
50:3:524:G:N2	50:3:527:A:OP2	2.22	0.66
50:3:639:G:N2	50:3:693:U:OP1	2.29	0.66
50:3:713:C:H2'	50:3:714:G:H8	1.61	0.66
50:3:739:G:N1	50:3:761:G:O2'	2.23	0.66
50:3:895:G:H1'	50:3:896:U:H5	1.60	0.66
50:3:1734:A:N6	52:5:1450:C:OP1	2.28	0.66
50:3:2083:U:O5'	50:3:2246:G:N2	2.29	0.66
50:3:2099:U:N3	50:3:2234:C:OP2	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2158:C:H2'	50:3:2159:U:C6	2.31	0.66
50:3:2760:C:H3'	50:3:2761:A:H8	1.61	0.66
50:3:2857:C:H2'	50:3:2858:A:C8	2.30	0.66
52:5:59:C:N4	52:5:350:G:O6	2.28	0.66
52:5:91:C:H2'	52:5:92:G:O4'	1.95	0.66
52:5:100:G:O2'	52:5:102:G:O6	2.13	0.66
52:5:165:A:N6	52:5:198:A:OP2	2.28	0.66
52:5:1127:A:HO2'	52:5:1128:G:H8	1.43	0.66
53:7:16:G:N2	53:7:49:C:N4	2.43	0.66
5:B:94:GLN:HE22	5:B:98:ARG:HH11	1.42	0.65
8:E:35:LEU:HD13	8:E:60:TRP:CD1	2.31	0.65
24:a:46:GLY:O	24:a:55:VAL:N	2.26	0.65
25:b:56:THR:O	38:o:3:LYS:NZ	2.29	0.65
34:k:124:LEU:H	34:k:144:GLY:HA2	1.61	0.65
38:o:53:LEU:HD11	38:o:67:ARG:HB2	1.78	0.65
49:z:24:ASN:ND2	50:3:2293:C:OP1	2.29	0.65
50:3:27:U:H3'	50:3:28:G:H8	1.61	0.65
50:3:1052:A:H2'	50:3:1053:C:C6	2.31	0.65
50:3:1114:C:H41	50:3:1123:A:P	2.19	0.65
50:3:1273:U:H2'	50:3:1274:A:H8	1.59	0.65
50:3:1310:U:C2	50:3:1314:A:N6	2.64	0.65
50:3:1381:A:OP2	50:3:1405:G:N1	2.24	0.65
50:3:2433:A:H4'	50:3:2434:A:C5'	2.26	0.65
52:5:7:U:O2'	52:5:294:A:O4'	2.15	0.65
52:5:579:G:H22	52:5:756:A:P	2.19	0.65
52:5:1063:G:H2'	52:5:1064:U:C6	2.31	0.65
1:0:46:SER:OG	50:3:127:A:N6	2.29	0.65
32:i:14:LYS:HB2	32:i:16:ARG:NH2	2.11	0.65
39:p:65:ASN:ND2	50:3:1046:A:OP1	2.27	0.65
50:3:1959:A:H3'	50:3:1960:A:C8	2.31	0.65
50:3:2797:C:O2'	50:3:2895:A:O2'	2.09	0.65
52:5:1051:U:H2'	52:5:1052:G:H8	1.62	0.65
52:5:1138:U:H2'	52:5:1139:A:H8	1.61	0.65
52:5:1212:C:HO2'	52:5:1274:G:H1	1.44	0.65
4:A:85:VAL:HA	4:A:108:ILE:HB	1.79	0.65
21:R:40:ILE:HG13	21:R:67:VAL:HA	1.79	0.65
24:a:250:GLY:O	50:3:1909:C:O2'	2.15	0.65
33:j:10:VAL:N	33:j:17:LYS:O	2.28	0.65
50:3:962:U:H2'	50:3:963:U:C6	2.32	0.65
50:3:1508:G:N3	50:3:1534:A:N1	2.44	0.65
50:3:2072:C:O2'	50:3:2457:U:N3	2.23	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2823:A:O2'	50:3:2824:A:O5'	2.14	0.65
52:5:13:U:O2	52:5:23:G:C6	2.49	0.65
52:5:760:U:H2'	52:5:761:U:H6	1.61	0.65
52:5:961:G:H2'	52:5:962:G:C8	2.31	0.65
52:5:1112:U:H2'	52:5:1113:U:H6	1.60	0.65
1:0:45:SER:OG	50:3:127:A:N7	2.30	0.65
19:P:72:THR:OG1	52:5:250:G:OP1	2.15	0.65
25:b:195:GLY:HA2	50:3:2737:G:O2'	1.96	0.65
35:l:11:LYS:HD3	35:l:87:LYS:HD3	1.78	0.65
50:3:626:A:H2'	50:3:627:U:C6	2.32	0.65
50:3:1077:G:N1	50:3:1148:U:N3	2.44	0.65
50:3:1243:A:N6	50:3:1266:G:H1'	2.12	0.65
50:3:1271:A:H2'	50:3:1272:A:C8	2.31	0.65
50:3:1730:C:H2'	50:3:1731:G:O4'	1.97	0.65
50:3:1986:C:H2'	50:3:1987:C:C6	2.32	0.65
50:3:2015:C:H2'	50:3:2016:G:C8	2.31	0.65
50:3:2098:U:O2	50:3:2236:G:C2	2.50	0.65
50:3:2176:G:H1	50:3:2179:A:H2'	1.62	0.65
51:4:46:C:H2'	51:4:47:C:C6	2.31	0.65
52:5:402:G:H2'	52:5:403:A:C8	2.32	0.65
52:5:1225:A:N6	52:5:1261:A:O4'	2.30	0.65
52:5:1384:A:H2'	52:5:1385:A:H8	1.59	0.65
53:7:50:G:H2'	53:7:51:G:C8	2.31	0.65
24:a:264:GLY:N	50:3:1803:U:O2'	2.28	0.65
43:t:36:VAL:HG12	43:t:67:ALA:H	1.62	0.65
50:3:992:G:N2	50:3:995:A:H3'	2.11	0.65
50:3:1700:G:H2'	50:3:1701:G:O4'	1.97	0.65
50:3:2422:G:C2	50:3:2423:G:C8	2.85	0.65
51:4:11:A:N6	51:4:67:G:O2'	2.28	0.65
51:4:76:A:H1'	51:4:89:A:N1	2.11	0.65
52:5:413:G:O6	52:5:423:U:C2	2.50	0.65
52:5:612:G:O6	52:5:624:U:O4	2.15	0.65
52:5:638:A:N3	52:5:639:A:N6	2.44	0.65
10:G:117:SER:HB2	52:5:639:A:H1'	1.78	0.65
12:I:48:LEU:HB3	12:I:77:LYS:HE2	1.78	0.65
21:R:34:TRP:CB	21:R:52:HIS:H	2.08	0.65
33:j:43:VAL:O	33:j:55:GLY:N	2.30	0.65
34:k:81:ASN:O	34:k:85:ILE:N	2.24	0.65
43:t:42:VAL:HG13	43:t:65:GLN:HB2	1.78	0.65
50:3:480:C:H2'	50:3:481:C:C5	2.31	0.65
50:3:682:A:H3'	50:3:683:G:H8	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:983:A:H2'	50:3:984:C:C6	2.31	0.65
50:3:1445:U:H2'	50:3:1446:G:O4'	1.97	0.65
50:3:1659:C:H3'	50:3:1660:A:H8	1.61	0.65
52:5:40:G:H2'	52:5:41:C:C6	2.31	0.65
52:5:570:A:N7	52:5:571:A:N6	2.44	0.65
52:5:765:A:H1'	52:5:1487:U:H1'	1.78	0.65
15:L:91:HIS:ND1	15:L:95:LEU:O	2.29	0.65
20:Q:72:PRO:HB2	20:Q:74:ARG:HE	1.62	0.65
25:b:6:ILE:HG13	25:b:207:ILE:HB	1.79	0.65
32:i:116:ARG:HA	32:i:119:ARG:HH11	1.61	0.65
45:v:18:ARG:CZ	45:v:24:ILE:HB	2.26	0.65
50:3:534:U:C2	50:3:538:A:N6	2.65	0.65
50:3:853:G:H2'	50:3:1220:A:H61	1.60	0.65
50:3:894:G:O2'	50:3:2276:A:N3	2.27	0.65
50:3:1163:G:O4'	50:3:2524:U:O2'	2.15	0.65
50:3:1493:A:H2'	50:3:1494:U:C6	2.31	0.65
50:3:2196:G:H2'	50:3:2197:U:C6	2.31	0.65
50:3:2231:A:H3'	50:3:2232:G:C8	2.29	0.65
50:3:2360:A:H3'	50:3:2361:G:H8	1.61	0.65
52:5:288:A:H3'	52:5:289:U:H6	1.62	0.65
52:5:594:A:H2'	52:5:595:G:C8	2.32	0.65
52:5:1167:C:H3'	52:5:1168:G:H8	1.61	0.65
13:J:9:VAL:H	13:J:70:MET:HE3	1.62	0.65
22:S:10:ARG:HG3	52:5:92:G:O6	1.96	0.65
28:e:159:PRO:O	28:e:174:ARG:NH2	2.30	0.65
44:u:72:THR:HG22	44:u:74:PHE:HB3	1.79	0.65
50:3:14:U:H3	50:3:561:A:N6	1.94	0.65
50:3:674:G:H2'	50:3:675:U:C6	2.31	0.65
50:3:767:C:H3'	50:3:768:G:H8	1.62	0.65
50:3:1115:G:H2'	50:3:1116:U:H6	1.61	0.65
50:3:1414:C:H2'	50:3:1415:A:C8	2.32	0.65
50:3:1440:U:H2'	50:3:1441:A:H8	1.61	0.65
50:3:1702:A:N3	50:3:1704:C:N4	2.45	0.65
50:3:1773:A:H2'	50:3:1774:G:C8	2.32	0.65
50:3:1860:A:N3	50:3:2241:A:O2'	2.27	0.65
50:3:2081:U:H2'	50:3:2082:U:C6	2.31	0.65
52:5:515:G:H1	52:5:530:A:H4'	1.61	0.65
52:5:659:U:H2'	52:5:660:A:C8	2.32	0.65
52:5:975:C:H3'	52:5:976:U:C5	2.32	0.65
52:5:1295:U:H3'	52:5:1296:C:H2'	1.78	0.65
2:1:37:GLN:O	2:1:41:LEU:N	2.15	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:212:ARG:NH2	10:G:51:GLU:OE2	2.30	0.65
9:F:2:ARG:HH22	52:5:926:C:H5''	1.61	0.65
15:L:29:ARG:NH1	52:5:1302:C:O2'	2.23	0.65
19:P:68:PRO:O	52:5:260:C:O2'	2.10	0.65
31:h:10:ALA:HA	50:3:1133:A:H4'	1.79	0.65
49:z:35:ASN:HA	49:z:45:VAL:O	1.97	0.65
50:3:435:U:H2'	50:3:436:G:C8	2.31	0.65
50:3:451:A:H61	50:3:2416:U:H3	1.44	0.65
50:3:720:A:OP2	50:3:809:A:N6	2.29	0.65
50:3:1489:G:H2'	50:3:1490:G:C8	2.32	0.65
50:3:2031:C:H2'	50:3:2032:G:C8	2.32	0.65
50:3:2693:U:O2'	50:3:2734:C:N4	2.29	0.65
52:5:212:G:H2'	52:5:213:U:H6	1.61	0.65
52:5:1002:A:N6	52:5:1019:G:H1'	2.12	0.65
4:A:80:GLY:HA2	4:A:171:ARG:HH22	1.61	0.65
5:B:191:LYS:NZ	52:5:1048:G:N3	2.44	0.65
7:D:80:THR:HG22	7:D:81:LYS:H	1.62	0.65
15:L:15:ILE:HD12	15:L:41:PRO:HA	1.79	0.65
22:S:3:ASN:N	52:5:327:G:N3	2.44	0.65
24:a:144:GLY:H	24:a:170:ILE:HB	1.62	0.65
28:e:89:LYS:HB3	28:e:168:PHE:CG	2.32	0.65
34:k:82:LEU:O	34:k:86:ALA:N	2.28	0.65
38:o:96:VAL:HG21	38:o:101:ILE:HD13	1.79	0.65
43:t:4:ILE:HD12	43:t:76:LEU:HG	1.79	0.65
50:3:297:G:N2	50:3:440:C:O2'	2.30	0.65
50:3:863:U:H2'	50:3:864:A:C5	2.32	0.65
50:3:1464:G:H1	50:3:1590:U:H3	1.44	0.65
52:5:34:A:H4'	52:5:360:A:H1'	1.77	0.65
52:5:105:A:H1'	52:5:107:A:C8	2.32	0.65
52:5:333:U:H3'	52:5:334:A:H8	1.61	0.65
52:5:1109:U:H2'	52:5:1110:C:H6	1.62	0.65
52:5:1498:G:H2'	52:5:1499:G:H8	1.62	0.65
5:B:154:VAL:N	5:B:171:TYR:O	2.25	0.64
6:C:121:HIS:HA	6:C:145:LYS:HD3	1.78	0.64
14:K:50:VAL:HG22	14:K:66:ALA:HA	1.79	0.64
14:K:79:TYR:H	14:K:109:HIS:HA	1.61	0.64
16:M:42:LEU:HA	16:M:45:ARG:HB3	1.78	0.64
35:l:82:ARG:NH1	50:3:2504:C:OP2	2.23	0.64
41:r:47:ILE:HG22	41:r:51:LEU:HD23	1.78	0.64
50:3:344:A:H1'	50:3:346:G:N7	2.12	0.64
50:3:480:C:H2'	50:3:481:C:C6	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:549:A:N3	50:3:614:C:O2'	2.25	0.64
50:3:1861:A:OP2	50:3:1895:G:N2	2.30	0.64
50:3:2032:G:H2'	50:3:2033:G:C8	2.32	0.64
50:3:2259:G:O2'	50:3:2457:U:O2	2.16	0.64
50:3:2575:G:H2'	50:3:2576:A:C8	2.30	0.64
52:5:90:G:H2'	52:5:91:C:C6	2.32	0.64
52:5:955:U:H1'	52:5:1197:G:O2'	1.97	0.64
52:5:1295:U:H2'	52:5:1296:C:C5	2.31	0.64
22:S:53:ARG:NH2	52:5:196:G:OP1	2.29	0.64
24:a:159:GLN:HA	24:a:162:ARG:HE	1.62	0.64
24:a:262:HIS:NE2	50:3:1831:G:N3	2.45	0.64
29:f:11:ASN:ND2	29:f:27:ILE:HD11	2.12	0.64
32:i:118:SER:HA	32:i:121:TRP:CD2	2.33	0.64
36:m:21:GLN:NE2	50:3:1305:G:O2'	2.30	0.64
50:3:450:C:H2'	50:3:451:A:C8	2.31	0.64
50:3:490:A:OP1	50:3:491:A:N6	2.29	0.64
50:3:618:G:H3'	50:3:1281:A:H61	1.60	0.64
50:3:963:U:H2'	50:3:964:A:H8	1.61	0.64
50:3:1388:G:N7	50:3:1399:G:N2	2.46	0.64
50:3:2067:A:O2'	50:3:2068:G:OP2	2.13	0.64
50:3:2290:G:H21	50:3:2398:U:H3	1.46	0.64
50:3:2633:C:H2'	50:3:2634:C:C6	2.32	0.64
52:5:290:G:H1	52:5:299:U:H3	1.42	0.64
5:B:66:ASP:HA	5:B:103:ASP:HB3	1.78	0.64
5:B:125:ASN:O	5:B:128:GLU:HG2	1.96	0.64
16:M:21:TYR:OH	16:M:23:ARG:NH1	2.31	0.64
24:a:138:LEU:HB2	24:a:194:LYS:HA	1.79	0.64
24:a:153:HIS:HB2	24:a:156:GLY:HA3	1.80	0.64
32:i:15:ARG:O	32:i:15:ARG:NH1	2.27	0.64
50:3:159:G:H2'	50:3:160:A:C8	2.32	0.64
50:3:329:G:O6	50:3:377:U:O4	2.14	0.64
50:3:656:G:N2	50:3:656:G:OP2	2.30	0.64
50:3:867:G:H2'	50:3:868:C:C6	2.33	0.64
50:3:1737:G:H2'	50:3:1738:G:H8	1.61	0.64
50:3:2237:U:H2'	50:3:2238:G:H8	1.63	0.64
50:3:2602:C:H2'	50:3:2603:G:C8	2.32	0.64
50:3:2705:G:H2'	50:3:2706:U:C6	2.32	0.64
52:5:754:U:O2	52:5:873:U:O2'	2.16	0.64
52:5:1117:U:C6	52:5:1255:A:H2'	2.31	0.64
52:5:1278:G:H8	52:5:1279:G:H21	1.42	0.64
24:a:159:GLN:HB3	50:3:1825:U:N3	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:r:88:ARG:NH2	50:3:782:U:O2	2.21	0.64
42:s:9:LYS:HE2	46:w:34:ALA:HA	1.78	0.64
50:3:65:A:H3'	50:3:66:A:H8	1.62	0.64
50:3:346:G:O4'	50:3:365:U:O2'	2.16	0.64
50:3:606:G:O2'	50:3:608:A:OP1	2.14	0.64
50:3:910:G:H2'	50:3:911:U:C6	2.33	0.64
50:3:939:U:H2'	50:3:940:A:C8	2.33	0.64
50:3:1675:A:H3'	50:3:1676:G:C8	2.31	0.64
50:3:1851:U:H2'	50:3:1852:G:C8	2.33	0.64
50:3:1919:A:H1'	52:5:1469:G:H21	1.62	0.64
50:3:2088:U:O4	50:3:2247:G:O6	2.14	0.64
50:3:2141:A:N7	50:3:2164:G:H1'	2.12	0.64
50:3:2835:G:O2'	50:3:2888:U:OP1	2.10	0.64
51:4:66:A:H3'	51:4:67:G:H8	1.62	0.64
52:5:40:G:N2	52:5:399:C:O2	2.19	0.64
52:5:603:U:H3	52:5:630:G:H1	1.30	0.64
52:5:659:U:H4'	52:5:833:G:H4'	1.80	0.64
52:5:751:C:H5'	52:5:752:G:H8	1.61	0.64
52:5:1132:G:C2	52:5:1154:A:N1	2.65	0.64
52:5:1323:A:H1'	52:5:1349:A:C6	2.32	0.64
2:1:50:SER:O	2:1:53:LYS:HG2	1.97	0.64
4:A:112:TRP:HD1	4:A:114:GLY:H	1.44	0.64
9:F:19:ASN:HB2	9:F:22:VAL:HG22	1.79	0.64
23:T:28:LEU:HA	23:T:31:ARG:HH12	1.62	0.64
24:a:215:LYS:HD2	50:3:764:G:C4	2.31	0.64
25:b:39:VAL:HB	25:b:88:THR:HG23	1.79	0.64
25:b:64:LYS:HA	25:b:67:GLN:HG2	1.80	0.64
29:f:61:ASN:HD22	29:f:64:LEU:HD21	1.62	0.64
32:i:135:MET:SD	50:3:8:A:O2'	2.55	0.64
42:s:6:VAL:HG11	42:s:39:ARG:HH12	1.63	0.64
44:u:31:HIS:NE2	50:3:2268:C:OP1	2.31	0.64
46:w:53:THR:HG22	50:3:79:U:H5'	1.78	0.64
50:3:122:G:H4'	50:3:152:A:H5'	1.79	0.64
50:3:341:G:N2	50:3:344:A:O5'	2.28	0.64
50:3:345:A:N6	50:3:363:G:OP1	2.29	0.64
50:3:535:G:H21	50:3:540:A:N6	1.96	0.64
50:3:1930:U:H2'	50:3:1931:C:H6	1.63	0.64
50:3:2287:G:N2	50:3:2335:A:N3	2.46	0.64
50:3:2297:G:O6	50:3:2351:U:O4	2.16	0.64
50:3:2338:G:H2'	50:3:2339:G:C8	2.33	0.64
52:5:563:U:H3'	52:5:564:G:H2'	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:693:A:H2'	52:5:694:U:C6	2.32	0.64
52:5:724:G:N1	52:5:727:G:OP2	2.28	0.64
52:5:944:A:H2'	52:5:945:U:C6	2.33	0.64
8:E:18:ALA:O	8:E:22:ASN:ND2	2.30	0.64
16:M:39:VAL:HG11	16:M:44:PHE:CD1	2.33	0.64
26:c:193:LEU:HD22	34:k:5:GLN:HE22	1.63	0.64
35:l:13:HIS:CE1	50:3:2273:U:H4'	2.33	0.64
44:u:87:GLY:N	51:4:10:C:OP1	2.22	0.64
46:w:10:LYS:HE3	46:w:14:GLU:H	1.63	0.64
50:3:152:A:H2'	50:3:153:U:O4'	1.97	0.64
50:3:1227:C:H1'	50:3:1256:A:H2'	1.79	0.64
50:3:1369:U:OP1	50:3:1425:U:N3	2.31	0.64
50:3:1737:G:H2'	50:3:1738:G:C8	2.31	0.64
50:3:1786:U:H3	50:3:1791:A:H62	1.46	0.64
52:5:561:A:O2'	52:5:564:G:O3'	2.14	0.64
52:5:779:A:OP1	52:5:1496:G:N2	2.31	0.64
52:5:1096:A:H2'	52:5:1097:G:H8	1.63	0.64
52:5:1393:A:OP2	52:5:1457:G:N1	2.29	0.64
53:7:16:G:N2	53:7:60:U:O4	2.31	0.64
10:G:14:PRO:HB3	10:G:41:LYS:HG3	1.79	0.64
12:I:59:ARG:NH2	52:5:1052:G:OP1	2.30	0.64
12:I:71:PHE:HD1	16:M:58:LYS:HA	1.62	0.64
18:O:22:ARG:NH1	52:5:371:U:O2	2.30	0.64
26:c:47:GLN:H	50:3:479:A:P	2.19	0.64
31:h:76:LEU:O	31:h:80:ALA:HB3	1.97	0.64
44:u:89:LYS:O	44:u:90:GLN:HG2	1.96	0.64
49:z:12:ASN:HD21	49:z:46:VAL:HG12	1.61	0.64
50:3:54:A:OP2	50:3:120:A:N6	2.30	0.64
50:3:66:A:H2'	50:3:67:C:H6	1.61	0.64
50:3:433:A:H2'	50:3:434:G:C8	2.32	0.64
50:3:1494:U:N3	50:3:1550:G:C6	2.65	0.64
50:3:2264:G:H2'	50:3:2265:U:C6	2.33	0.64
52:5:199:A:N1	52:5:216:G:O2'	2.27	0.64
52:5:461:G:H2'	52:5:462:G:C4	2.33	0.64
52:5:1324:A:H2'	52:5:1325:U:C6	2.33	0.64
19:P:29:ARG:NE	52:5:595:G:H4'	2.13	0.64
25:b:51:LEU:HA	25:b:83:GLU:HA	1.80	0.64
26:c:2:ALA:HA	26:c:24:LEU:HD21	1.80	0.64
32:i:14:LYS:HB2	32:i:16:ARG:HH21	1.63	0.64
44:u:28:ARG:NH2	50:3:2287:G:N7	2.43	0.64
50:3:457:U:H4'	50:3:458:A:H5''	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:589:A:H2'	50:3:590:U:O4'	1.98	0.64
50:3:832:C:H2'	50:3:833:C:C6	2.33	0.64
50:3:1138:A:OP2	50:3:1139:C:N4	2.29	0.64
50:3:1394:A:H3'	50:3:1395:A:H8	1.61	0.64
50:3:1875:C:C2	50:3:1876:G:H1'	2.33	0.64
50:3:1942:G:N2	50:3:1971:G:O5'	2.31	0.64
50:3:2448:C:H2'	50:3:2449:U:H4'	1.80	0.64
50:3:2628:U:H2'	50:3:2629:G:C8	2.32	0.64
52:5:427:A:H2'	52:5:428:A:H5'	1.80	0.64
52:5:929:C:O2'	52:5:1318:C:OP2	2.13	0.64
53:7:22:A:N6	53:7:47:G:H1'	2.13	0.64
35:l:67:ARG:HB2	35:l:103:MET:HA	1.78	0.64
39:p:78:PHE:HA	39:p:81:LEU:HB2	1.80	0.64
50:3:1355:C:O2	50:3:1681:G:N2	2.31	0.64
50:3:1437:A:H2'	50:3:1438:G:H8	1.62	0.64
50:3:2093:U:H2'	50:3:2094:A:C8	2.33	0.64
50:3:2541:C:H2'	50:3:2542:A:O4'	1.97	0.64
50:3:2619:C:H2'	50:3:2620:C:C6	2.32	0.64
52:5:83:U:H2'	52:5:84:U:C6	2.32	0.64
52:5:597:C:H2'	52:5:598:U:C6	2.33	0.64
52:5:1289:U:O2'	52:5:1334:A:N3	2.28	0.64
5:B:59:GLU:HB3	12:I:100:VAL:HG21	1.79	0.64
18:O:2:ARG:NH1	18:O:8:TYR:O	2.31	0.64
25:b:37:ALA:HB2	25:b:53:SER:HB3	1.79	0.64
25:b:180:ARG:NH2	50:3:2738:U:OP1	2.22	0.64
26:c:161:VAL:O	26:c:183:LEU:N	2.29	0.64
33:j:35:LEU:HD21	33:j:65:THR:HG23	1.79	0.64
50:3:320:A:H2'	50:3:321:A:C8	2.33	0.64
50:3:959:C:H2'	50:3:960:A:H8	1.61	0.64
50:3:1037:A:OP2	50:3:1189:G:N2	2.30	0.64
50:3:2309:A:H2'	50:3:2310:C:C6	2.32	0.64
50:3:2480:G:N2	50:3:2485:U:OP1	2.24	0.64
52:5:137:A:H3'	52:5:138:A:H8	1.63	0.64
52:5:376:G:O2'	52:5:379:A:N6	2.30	0.64
52:5:916:U:H5'	52:5:1072:G:H4'	1.80	0.64
52:5:1228:C:H2'	52:5:1229:A:C8	2.33	0.64
6:C:1:MET:HB2	52:5:544:A:C6	2.33	0.63
6:C:9:LYS:HD3	52:5:425:G:H3'	1.80	0.63
8:E:110:GLN:HA	8:E:113:ALA:HB3	1.80	0.63
26:c:29:LEU:HB3	26:c:31:GLN:HE21	1.64	0.63
28:e:101:VAL:HA	28:e:106:LEU:HA	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:i:71:LYS:NZ	50:3:1057:G:O6	2.30	0.63
50:3:59:C:H2'	50:3:60:G:C8	2.33	0.63
50:3:720:A:N6	50:3:813:G:H1'	2.13	0.63
50:3:1043:C:OP2	50:3:1044:C:O2'	2.15	0.63
50:3:1437:A:H2'	50:3:1438:G:C8	2.32	0.63
50:3:1700:G:H3'	50:3:1701:G:C8	2.33	0.63
50:3:1706:C:H5''	50:3:1707:U:OP2	1.98	0.63
50:3:1747:G:H2'	50:3:1752:A:N6	2.14	0.63
50:3:2072:C:H2'	50:3:2073:C:H6	1.63	0.63
50:3:2695:U:H3	50:3:2730:G:H1	1.44	0.63
50:3:2706:U:H2'	50:3:2707:A:H8	1.60	0.63
52:5:41:C:O2	52:5:398:G:N2	2.17	0.63
52:5:65:G:N2	52:5:69:G:OP2	2.31	0.63
52:5:358:G:H2'	52:5:360:A:N7	2.13	0.63
52:5:648:C:N4	52:5:750:A:OP2	2.29	0.63
52:5:1321:G:H1'	52:5:1322:U:H5	1.62	0.63
52:5:1490:G:H2'	52:5:1491:A:C8	2.33	0.63
53:7:22:A:C6	53:7:47:G:H1'	2.33	0.63
21:R:66:MET:SD	21:R:68:GLY:N	2.71	0.63
26:c:59:ARG:NE	50:3:494:G:O6	2.28	0.63
32:i:9:LYS:HZ3	50:3:572:G:H5'	1.61	0.63
50:3:230:G:H4'	50:3:232:A:N6	2.13	0.63
50:3:739:G:C2	50:3:762:A:N7	2.66	0.63
50:3:1322:A:H3'	50:3:1323:A:H8	1.62	0.63
50:3:1855:A:H61	50:3:1901:C:H1'	1.62	0.63
50:3:2227:U:H2'	50:3:2228:U:C6	2.33	0.63
50:3:2476:A:H2'	50:3:2484:A:N1	2.14	0.63
51:4:76:A:H3'	51:4:77:G:H8	1.63	0.63
52:5:224:A:H2'	52:5:225:U:O4'	1.97	0.63
52:5:661:G:O6	52:5:738:A:N1	2.31	0.63
1:0:36:LYS:NZ	50:3:184:A:OP1	2.31	0.63
7:D:92:VAL:HG21	7:D:119:ILE:HD13	1.79	0.63
9:F:110:ARG:NE	9:F:122:GLU:OE1	2.27	0.63
11:H:30:ILE:HD12	11:H:65:ILE:HG21	1.79	0.63
17:N:20:GLY:O	52:5:653:G:N2	2.31	0.63
22:S:34:ASN:OD1	22:S:37:LYS:NZ	2.31	0.63
25:b:123:ILE:HA	25:b:128:PHE:H	1.63	0.63
28:e:175:LYS:NZ	50:3:2538:A:N7	2.45	0.63
35:l:74:LYS:O	35:l:91:GLU:N	2.30	0.63
40:q:24:LYS:HG3	40:q:88:PRO:HB2	1.80	0.63
50:3:34:C:H2'	50:3:35:U:C6	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:84:G:N2	50:3:104:A:OP2	2.31	0.63
50:3:342:G:H2'	50:3:343:A:O4'	1.97	0.63
50:3:673:A:H1'	50:3:687:G:H21	1.63	0.63
52:5:295:G:H2'	52:5:296:A:C4	2.33	0.63
52:5:978:A:O2'	52:5:1176:A:N6	2.30	0.63
52:5:1306:A:H2'	52:5:1307:A:C8	2.34	0.63
4:A:73:LYS:HA	4:A:239:ALA:HB2	1.80	0.63
6:C:1:MET:HB2	52:5:544:A:C5	2.33	0.63
12:I:48:LEU:H	12:I:78:ARG:HH11	1.46	0.63
18:O:48:VAL:HA	18:O:51:GLU:HG2	1.81	0.63
24:a:180:VAL:N	24:a:192:PHE:O	2.31	0.63
33:j:34:PHE:N	33:j:37:ASP:OD2	2.31	0.63
33:j:107:ARG:HG3	33:j:112:ASN:HD21	1.62	0.63
34:k:99:ILE:O	34:k:102:GLN:NE2	2.32	0.63
41:r:26:GLY:N	41:r:71:VAL:O	2.20	0.63
50:3:998:C:H2'	50:3:999:U:C6	2.33	0.63
50:3:1179:G:H2'	50:3:1180:U:C6	2.33	0.63
50:3:1448:U:HO2'	50:3:1449:G:H8	1.46	0.63
50:3:2584:G:OP1	50:3:2584:G:N2	2.31	0.63
50:3:2699:C:H5'	50:3:2876:G:C8	2.33	0.63
52:5:491:U:H2'	52:5:492:G:O4'	1.98	0.63
52:5:1083:A:N7	52:5:1084:A:N6	2.45	0.63
52:5:1109:U:H2'	52:5:1110:C:C6	2.33	0.63
1:0:10:LEU:HD21	50:3:126:C:H42	1.64	0.63
10:G:134:GLY:H	52:5:598:U:H5'	1.64	0.63
24:a:219:ASN:HA	24:a:222:ARG:HB3	1.81	0.63
25:b:85:ARG:NH1	50:3:2645:U:H5''	2.14	0.63
41:r:77:ASN:ND2	50:3:25:G:H21	1.96	0.63
48:y:5:GLN:NE2	50:3:2063:G:O2'	2.31	0.63
50:3:246:G:O2'	50:3:258:G:O6	2.17	0.63
50:3:998:C:H2'	50:3:999:U:H6	1.64	0.63
50:3:1313:G:N2	50:3:1356:G:O3'	2.30	0.63
50:3:2416:U:H2'	50:3:2417:G:H8	1.63	0.63
50:3:2860:A:H2'	50:3:2861:G:C8	2.33	0.63
52:5:318:C:H2'	52:5:319:U:C6	2.33	0.63
52:5:1266:U:H2'	52:5:1267:G:C8	2.34	0.63
52:5:1290:G:H2'	52:5:1292:A:N7	2.14	0.63
53:7:16:G:C2	53:7:49:C:N3	2.66	0.63
4:A:130:LEU:O	4:A:134:VAL:HG23	1.99	0.63
4:A:179:ASP:OD1	4:A:180:ASP:N	2.32	0.63
7:D:141:ILE:HD12	7:D:150:LEU:HB2	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:H:121:TYR:HB2	11:H:125:ARG:HH21	1.63	0.63
21:R:34:TRP:HB2	21:R:52:HIS:H	1.63	0.63
22:S:24:GLN:HB3	22:S:54:LEU:HD21	1.80	0.63
24:a:159:GLN:NE2	50:3:1825:U:O4	2.31	0.63
27:d:132:ILE:O	27:d:151:GLY:CA	2.47	0.63
30:g:25:VAL:HA	30:g:111:GLY:HA3	1.80	0.63
38:o:62:GLU:HB3	38:o:81:ILE:HB	1.81	0.63
39:p:28:HIS:NE2	50:3:21:U:OP1	2.31	0.63
40:q:74:ILE:HG12	40:q:79:HIS:HB2	1.81	0.63
42:s:10:PRO:HA	42:s:29:PHE:HA	1.78	0.63
48:y:38:LEU:HG	48:y:41:ARG:HG3	1.79	0.63
50:3:314:G:H3'	50:3:316:C:C4	2.33	0.63
50:3:442:G:H2'	50:3:443:C:C6	2.34	0.63
50:3:801:U:H2'	50:3:802:U:O4'	1.98	0.63
50:3:1023:C:O2'	50:3:1036:A:N3	2.30	0.63
50:3:1200:U:O2	50:3:1215:G:O6	2.16	0.63
50:3:1408:G:O2'	50:3:1603:A:N6	2.31	0.63
50:3:1446:G:N2	50:3:1612:U:H3'	2.13	0.63
50:3:1546:U:H3'	50:3:1547:G:C8	2.34	0.63
50:3:1716:A:H2'	50:3:1717:C:H6	1.63	0.63
52:5:662:G:N7	52:5:721:G:N1	2.44	0.63
52:5:695:G:H2'	52:5:696:C:C6	2.33	0.63
52:5:899:U:H3'	52:5:900:G:H8	1.63	0.63
12:I:56:THR:HG23	12:I:70:GLN:HG2	1.80	0.63
13:J:28:SER:HA	13:J:35:LEU:HG	1.80	0.63
39:p:104:LYS:HA	39:p:107:LEU:HB3	1.81	0.63
46:w:17:LYS:O	46:w:21:LYS:HG2	1.99	0.63
50:3:248:A:N6	50:3:258:G:O2'	2.30	0.63
50:3:931:G:H2'	50:3:932:U:O4'	1.99	0.63
50:3:1702:A:N7	50:3:1998:U:C4	2.66	0.63
50:3:1951:A:N6	50:3:2565:G:O2'	2.31	0.63
50:3:2200:U:H3'	50:3:2201:G:H8	1.62	0.63
50:3:2379:G:H2'	50:3:2380:U:O4'	1.98	0.63
50:3:2536:U:OP2	50:3:2538:A:N6	2.32	0.63
52:5:988:G:O2'	52:5:989:A:N7	2.25	0.63
18:O:66:LEU:HA	18:O:69:GLN:HG2	1.79	0.63
25:b:188:ASN:HD22	25:b:190:LEU:HB2	1.64	0.63
28:e:3:LYS:N	50:3:2759:G:O4'	2.31	0.63
28:e:82:VAL:HA	28:e:139:ILE:HD11	1.79	0.63
28:e:88:LYS:HZ2	28:e:168:PHE:HD2	1.45	0.63
34:k:77:TRP:CD2	34:k:111:PRO:HB2	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:l:13:HIS:HE1	50:3:2273:U:H4'	1.64	0.63
35:l:69:PHE:HB3	35:l:71:HIS:CE1	2.34	0.63
36:m:53:LYS:HG2	36:m:87:ALA:HB1	1.80	0.63
46:w:50:LEU:O	46:w:53:THR:OG1	2.15	0.63
50:3:500:U:O2'	50:3:501:G:OP1	2.17	0.63
50:3:598:G:H1	50:3:609:U:H3	1.46	0.63
50:3:1381:A:H2'	50:3:1382:A:C8	2.34	0.63
50:3:1860:A:H2'	50:3:1861:A:C8	2.33	0.63
50:3:2100:G:C8	50:3:2233:A:H2'	2.34	0.63
52:5:247:G:O6	52:5:268:C:N4	2.32	0.63
52:5:742:C:O5'	52:5:845:C:O2'	2.11	0.63
52:5:1134:C:C5	52:5:1136:G:H1'	2.34	0.63
2:1:32:HIS:ND1	50:3:2399:G:OP2	2.29	0.63
3:2:1:MET:H1	3:2:33:LYS:HE3	1.64	0.63
6:C:91:ARG:HG2	6:C:182:PRO:HG2	1.81	0.63
6:C:139:GLY:N	6:C:178:TYR:O	2.29	0.63
7:D:129:ILE:HD11	7:D:199:ILE:HG12	1.81	0.63
14:K:55:PRO:HG2	14:K:60:SER:HA	1.81	0.63
15:L:16:GLU:HG3	15:L:30:SER:HB2	1.81	0.63
29:f:42:LYS:HD2	29:f:46:ASP:HB3	1.80	0.63
38:o:54:ARG:HD3	38:o:100:TYR:CE1	2.34	0.63
50:3:55:A:H3'	50:3:56:G:H8	1.64	0.63
50:3:371:C:H3'	50:3:372:G:H8	1.63	0.63
50:3:745:U:H2'	50:3:746:G:C8	2.34	0.63
50:3:1851:U:H2'	50:3:1852:G:H8	1.62	0.63
50:3:1861:A:H3'	50:3:1862:A:H8	1.64	0.63
50:3:2567:C:H2'	50:3:2568:G:C8	2.32	0.63
50:3:2754:U:N3	50:3:2764:U:O4	2.16	0.63
50:3:2803:G:O6	50:3:2806:A:O2'	2.14	0.63
50:3:2853:U:N3	50:3:2871:G:O4'	2.32	0.63
52:5:55:C:H3'	52:5:348:C:C5	2.34	0.63
52:5:189:C:H2'	52:5:190:A:H8	1.64	0.63
52:5:339:U:O2'	52:5:342:G:O6	2.15	0.63
52:5:812:A:N3	52:5:1502:G:O2'	2.27	0.63
52:5:1312:G:H2'	52:5:1313:A:C8	2.33	0.63
52:5:1322:U:OP2	52:5:1348:G:N2	2.28	0.63
6:C:103:ARG:HH21	6:C:162:VAL:HG11	1.63	0.62
7:D:132:HIS:N	7:D:175:TYR:OH	2.29	0.62
10:G:119:SER:O	52:5:637:A:O2'	2.16	0.62
15:L:50:GLU:HA	15:L:53:PHE:CD2	2.34	0.62
16:M:35:SER:OG	52:5:1332:U:OP1	2.16	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:M:58:LYS:HZ2	16:M:60:SER:HB2	1.63	0.62
18:O:16:VAL:HG23	18:O:26:TYR:HA	1.81	0.62
33:j:15:GLY:HA3	33:j:50:GLY:HA3	1.81	0.62
33:j:22:ILE:HG13	33:j:40:VAL:HG13	1.81	0.62
40:q:24:LYS:HA	40:q:90:THR:HG23	1.81	0.62
48:y:7:ARG:HB2	50:3:1293:U:H1'	1.81	0.62
50:3:61:U:O4	50:3:70:G:O6	2.16	0.62
50:3:312:U:H2'	50:3:313:G:O4'	1.98	0.62
50:3:312:U:O4	50:3:395:U:N3	2.17	0.62
50:3:2409:U:O4	50:3:2423:G:O6	2.16	0.62
50:3:2497:U:H3'	50:3:2498:G:C8	2.34	0.62
52:5:76:G:N2	52:5:79:A:OP2	2.30	0.62
52:5:362:U:O2'	52:5:390:G:N2	2.32	0.62
52:5:412:G:H2'	52:5:413:G:H8	1.64	0.62
5:B:88:ILE:O	5:B:92:ILE:HG12	1.99	0.62
10:G:40:LEU:HD11	52:5:640:C:H5''	1.79	0.62
12:I:21:SER:O	12:I:25:ASP:N	2.32	0.62
12:I:78:ARG:NH2	52:5:1127:A:H4'	2.12	0.62
15:L:25:ILE:HA	15:L:29:ARG:HD2	1.80	0.62
21:R:29:ARG:HE	21:R:47:ASN:HA	1.64	0.62
21:R:52:HIS:HA	21:R:57:PHE:HA	1.81	0.62
24:a:181:ILE:HG13	24:a:191:LYS:HG2	1.80	0.62
24:a:218:ARG:HG3	50:3:1600:A:H8	1.64	0.62
41:r:35:ILE:HA	41:r:38:ASN:HB2	1.81	0.62
44:u:28:ARG:N	50:3:2286:A:N7	2.45	0.62
50:3:154:U:H2'	50:3:155:A:H8	1.62	0.62
50:3:442:G:O6	50:3:457:U:O4	2.18	0.62
50:3:665:C:OP1	50:3:686:C:O2'	2.16	0.62
50:3:1054:U:H2'	50:3:1055:A:C8	2.34	0.62
50:3:1059:G:HO2'	50:3:1179:G:HO2'	1.47	0.62
50:3:1412:A:H1'	50:3:1433:U:H1'	1.79	0.62
52:5:22:G:H2'	52:5:23:G:H8	1.62	0.62
52:5:403:A:H2'	52:5:404:A:C8	2.35	0.62
52:5:554:C:H2'	52:5:555:G:C8	2.33	0.62
10:G:134:GLY:O	52:5:597:C:O2'	2.17	0.62
19:P:3:ARG:O	19:P:5:GLN:HG3	1.99	0.62
27:d:11:THR:HA	27:d:14:LYS:HE3	1.80	0.62
34:k:113:LYS:HD3	34:k:130:LYS:HD2	1.81	0.62
39:p:65:ASN:HA	39:p:68:LEU:HD12	1.80	0.62
50:3:437:A:N6	50:3:458:A:H61	1.96	0.62
50:3:1476:C:H2'	50:3:1477:A:H8	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1534:A:H1'	50:3:1535:A:C8	2.34	0.62
50:3:1674:A:H2'	50:3:1675:A:H8	1.63	0.62
50:3:2695:U:O2	50:3:2730:G:N2	2.31	0.62
52:5:760:U:H2'	52:5:761:U:C6	2.33	0.62
52:5:902:A:H2'	52:5:903:A:C8	2.34	0.62
52:5:1087:C:H2'	52:5:1088:C:H6	1.63	0.62
52:5:1410:A:H2'	52:5:1411:A:C8	2.35	0.62
53:7:38:G:H3'	53:7:39:A:C8	2.28	0.62
8:E:93:GLU:OE1	20:Q:85:HIS:NE2	2.32	0.62
9:F:22:VAL:O	9:F:26:ILE:HG13	1.99	0.62
15:L:113:ARG:NH1	52:5:1204:A:OP2	2.32	0.62
20:Q:100:PRO:HG3	20:Q:103:LYS:HE2	1.80	0.62
38:o:100:TYR:HE1	38:o:105:ARG:HH22	1.47	0.62
50:3:47:G:C2	50:3:184:A:N6	2.60	0.62
50:3:675:U:H2'	50:3:676:U:C6	2.34	0.62
50:3:937:A:H3'	50:3:938:A:H8	1.63	0.62
50:3:980:C:H5''	50:3:981:A:C8	2.34	0.62
50:3:1358:C:H2'	50:3:1359:C:C6	2.33	0.62
50:3:2304:U:H2'	50:3:2342:U:C4	2.34	0.62
50:3:2594:C:H41	50:3:2616:G:H2'	1.63	0.62
50:3:2697:C:P	50:3:2876:G:H22	2.22	0.62
52:5:763:A:N7	52:5:810:U:C2	2.68	0.62
52:5:1423:C:H2'	52:5:1424:C:H6	1.64	0.62
6:C:9:LYS:NZ	52:5:425:G:OP2	2.30	0.62
6:C:95:SER:O	6:C:136:LEU:N	2.29	0.62
24:a:171:LEU:HG	24:a:183:GLN:N	2.14	0.62
24:a:173:GLN:HA	24:a:180:VAL:HG13	1.82	0.62
25:b:36:VAL:HA	25:b:52:LEU:HA	1.81	0.62
25:b:122:ALA:O	25:b:127:ASN:N	2.31	0.62
25:b:168:HIS:NE2	50:3:2826:G:OP1	2.32	0.62
32:i:38:LEU:HD23	32:i:57:LEU:HD22	1.81	0.62
33:j:35:LEU:HB3	33:j:106:LEU:HD11	1.81	0.62
50:3:337:U:H2'	50:3:338:G:C8	2.35	0.62
50:3:2315:G:N2	50:3:2319:A:O2'	2.33	0.62
50:3:2643:A:H2'	50:3:2644:U:O4'	2.00	0.62
50:3:2647:A:H3'	50:3:2648:A:H8	1.63	0.62
52:5:18:U:H1'	52:5:1071:A:N3	2.14	0.62
52:5:434:U:H3	52:5:493:A:N6	1.96	0.62
52:5:580:C:H41	52:5:755:U:H2'	1.64	0.62
52:5:870:A:H2'	52:5:871:U:C6	2.34	0.62
52:5:1132:G:N3	52:5:1154:A:N1	2.48	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1497:U:H2'	52:5:1498:G:C8	2.34	0.62
52:5:1498:G:H2'	52:5:1499:G:C8	2.34	0.62
1:0:3:ARG:CZ	50:3:1646:G:H21	2.11	0.62
10:G:120:ASP:HA	52:5:638:A:H4'	1.80	0.62
13:J:50:LYS:NZ	52:5:688:G:N7	2.47	0.62
16:M:15:LYS:HG2	16:M:19:ARG:HG3	1.80	0.62
24:a:215:LYS:NZ	50:3:764:G:O4'	2.31	0.62
26:c:98:ASN:ND2	50:3:624:U:OP1	2.32	0.62
35:l:123:HIS:ND1	50:3:2475:C:O2'	2.32	0.62
36:m:20:GLN:NE2	50:3:1322:A:O2'	2.32	0.62
45:v:2:ALA:HB1	45:v:4:LYS:NZ	2.15	0.62
50:3:29:G:H1'	50:3:30:A:C8	2.34	0.62
50:3:247:U:H2'	50:3:248:A:H8	1.64	0.62
50:3:335:G:C6	50:3:351:G:C5	2.87	0.62
50:3:612:G:O6	50:3:1291:C:N4	2.27	0.62
50:3:713:C:H2'	50:3:714:G:C8	2.33	0.62
50:3:844:G:H1'	50:3:1284:A:H1'	1.80	0.62
50:3:1166:G:H22	50:3:2046:G:H21	1.48	0.62
50:3:1322:A:H3'	50:3:1323:A:C8	2.34	0.62
50:3:2584:G:O2'	50:3:2587:U:OP2	2.12	0.62
50:3:2654:U:OP2	50:3:2773:A:O2'	2.16	0.62
50:3:2846:A:H2'	50:3:2847:C:C6	2.35	0.62
51:4:72:A:H2'	51:4:73:U:C6	2.33	0.62
52:5:169:G:N2	52:5:220:U:O4'	2.32	0.62
52:5:262:G:H1	52:5:267:C:N4	1.98	0.62
52:5:313:U:H2'	52:5:314:G:C8	2.35	0.62
52:5:670:G:H2'	52:5:671:G:C8	2.35	0.62
52:5:1124:U:H2'	52:5:1125:C:H5'	1.81	0.62
7:D:99:GLY:HA2	7:D:129:ILE:HG22	1.81	0.62
7:D:106:ALA:HB1	7:D:117:LYS:HE3	1.81	0.62
8:E:43:LYS:HB2	8:E:57:TYR:CE1	2.35	0.62
8:E:49:ILE:HG12	8:E:83:LEU:HB3	1.82	0.62
15:L:57:ARG:O	15:L:61:SER:N	2.31	0.62
18:O:12:ARG:NH1	52:5:623:G:O5'	2.32	0.62
41:r:2:ILE:H	41:r:64:MET:HE1	1.65	0.62
41:r:90:LYS:HA	50:3:786:A:H5'	1.80	0.62
50:3:164:A:OP2	50:3:165:U:H2'	1.99	0.62
50:3:223:A:N6	50:3:464:A:OP1	2.32	0.62
50:3:593:C:H2'	50:3:594:G:C8	2.34	0.62
50:3:740:A:N6	50:3:760:G:O2'	2.33	0.62
50:3:1302:C:H3'	50:3:1680:A:H2'	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1337:G:H2'	50:3:1338:G:H8	1.63	0.62
50:3:1343:C:O2'	50:3:1420:A:N3	2.31	0.62
50:3:1503:A:H3'	50:3:1504:G:H8	1.64	0.62
50:3:2373:G:H2'	50:3:2374:A:H8	1.63	0.62
50:3:2655:U:C2	50:3:2681:G:O6	2.52	0.62
52:5:172:C:H2'	52:5:173:U:C6	2.35	0.62
52:5:435:U:O2'	52:5:437:U:O4	2.15	0.62
52:5:688:G:H2'	52:5:689:U:C6	2.34	0.62
52:5:966:A:H61	52:5:1338:A:H4'	1.65	0.62
52:5:1245:A:H2'	52:5:1246:A:H8	1.62	0.62
52:5:1365:U:H2'	52:5:1366:U:C6	2.34	0.62
4:A:84:PHE:O	4:A:108:ILE:N	2.24	0.62
4:A:130:LEU:HD13	4:A:167:LYS:HE3	1.82	0.62
14:K:4:ILE:HG22	14:K:8:ILE:HG13	1.81	0.62
14:K:78:THR:HA	14:K:108:TYR:O	1.99	0.62
19:P:16:THR:HG22	19:P:56:LYS:HA	1.82	0.62
19:P:32:HIS:HB3	19:P:36:HIS:N	2.14	0.62
24:a:159:GLN:NE2	50:3:1807:C:O2'	2.33	0.62
25:b:51:LEU:HD12	25:b:83:GLU:HB3	1.81	0.62
26:c:69:LYS:HG2	26:c:70:HIS:H	1.65	0.62
29:f:31:PHE:HB3	29:f:33:LYS:HE2	1.80	0.62
48:y:3:VAL:HG22	50:3:2063:G:H21	1.63	0.62
50:3:133:G:O6	50:3:150:U:O4	2.18	0.62
50:3:1546:U:H3'	50:3:1547:G:H8	1.63	0.62
50:3:1930:U:H5'	53:7:25:G:H21	1.65	0.62
50:3:1932:C:H42	50:3:1936:G:N2	1.95	0.62
50:3:2872:A:H2'	50:3:2873:G:H8	1.64	0.62
52:5:1051:U:H2'	52:5:1052:G:C8	2.35	0.62
52:5:1055:G:N3	52:5:1057:C:N4	2.48	0.62
23:T:33:GLU:OE1	23:T:33:GLU:N	2.27	0.62
24:a:144:GLY:N	24:a:170:ILE:HB	2.15	0.62
43:t:28:MET:HB2	43:t:33:GLN:HB2	1.81	0.62
50:3:106:C:H2'	50:3:107:C:C6	2.35	0.62
50:3:638:A:H3'	50:3:639:G:H8	1.65	0.62
50:3:1797:C:N3	50:3:1835:G:O2'	2.32	0.62
50:3:2031:C:H2'	50:3:2032:G:H8	1.64	0.62
50:3:2107:A:H2'	50:3:2108:C:C6	2.34	0.62
50:3:2701:A:H2'	50:3:2702:G:C8	2.35	0.62
52:5:23:G:N2	52:5:907:A:O2'	2.33	0.62
52:5:676:U:H2'	52:5:677:C:C6	2.34	0.62
52:5:1266:U:H2'	52:5:1267:G:H8	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:48:LEU:HD23	9:F:51:GLN:HE21	1.63	0.62
11:H:117:LYS:HD2	16:M:61:TRP:NE1	2.13	0.62
15:L:89:LEU:HA	15:L:92:ARG:NE	2.15	0.62
16:M:41:ARG:NH2	52:5:1177:U:O4'	2.33	0.62
24:a:11:ASN:ND2	50:3:765:A:O2'	2.32	0.62
27:d:123:ASP:HB3	50:3:2311:G:H1'	1.81	0.62
28:e:153:LYS:HA	28:e:156:LYS:HE3	1.82	0.62
36:m:103:LEU:HD22	48:y:54:LYS:HD3	1.81	0.62
37:n:36:LEU:HD12	51:4:27:A:C8	2.35	0.62
50:3:133:G:N2	50:3:150:U:O2	2.25	0.62
50:3:668:A:H2'	50:3:669:A:H8	1.64	0.62
50:3:1026:A:H5'	50:3:1026:A:H8	1.64	0.62
50:3:1330:U:O2'	50:3:1676:G:N2	2.32	0.62
50:3:1553:G:OP2	50:3:1576:G:N1	2.24	0.62
50:3:1836:A:H3'	50:3:1837:C:H6	1.63	0.62
50:3:1848:U:C2	50:3:1849:G:C8	2.87	0.62
50:3:2645:U:C2	50:3:2784:A:N7	2.68	0.62
52:5:117:U:O2'	52:5:258:A:O2'	2.15	0.62
52:5:518:A:N1	52:5:534:C:H1'	2.14	0.62
52:5:737:U:H2'	52:5:738:A:H8	1.65	0.62
52:5:767:U:H2'	52:5:768:G:C8	2.35	0.62
24:a:57:HIS:O	24:a:224:ILE:HA	2.00	0.61
34:k:68:ALA:HB2	50:3:667:A:N3	2.14	0.61
36:m:60:ARG:NH2	50:3:1482:U:OP1	2.33	0.61
37:n:104:ALA:O	37:n:107:GLU:HG2	2.00	0.61
50:3:596:G:N1	50:3:611:A:C6	2.60	0.61
50:3:800:C:H2'	50:3:801:U:C6	2.35	0.61
50:3:895:G:H22	50:3:953:G:H2'	1.65	0.61
50:3:1046:A:N3	50:3:1188:C:H1'	2.15	0.61
50:3:1256:A:H5''	50:3:1257:G:H5''	1.82	0.61
50:3:2023:U:H2'	50:3:2024:C:O4'	2.00	0.61
50:3:2189:U:H2'	50:3:2190:G:C8	2.35	0.61
50:3:2423:G:H2'	50:3:2424:C:H6	1.65	0.61
50:3:2480:G:H21	50:3:2486:A:N6	1.92	0.61
50:3:2645:U:H3'	50:3:2646:G:C8	2.35	0.61
52:5:1196:G:OP1	52:5:1296:C:N4	2.29	0.61
52:5:1224:C:N3	52:5:1263:A:N6	2.48	0.61
1:0:11:LYS:HG3	50:3:806:A:OP1	1.99	0.61
5:B:75:ALA:O	5:B:79:GLY:N	2.32	0.61
10:G:127:VAL:O	10:G:131:LYS:N	2.31	0.61
12:I:58:ILE:HD11	16:M:41:ARG:HG3	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:O:64:ARG:HA	18:O:67:PHE:HD2	1.65	0.61
20:Q:94:ARG:NH1	52:5:715:A:N1	2.48	0.61
34:k:61:ARG:HG2	50:3:2400:A:C2	2.35	0.61
39:p:12:ARG:O	39:p:15:LYS:HG2	2.00	0.61
39:p:48:ASP:OD2	50:3:569:U:O2'	2.16	0.61
50:3:130:C:H2'	50:3:131:C:C6	2.35	0.61
50:3:231:A:H62	50:3:446:A:H1'	1.65	0.61
50:3:662:U:H4'	50:3:689:U:N3	2.15	0.61
50:3:757:A:H2'	50:3:758:C:C6	2.34	0.61
50:3:1343:C:H2'	50:3:1344:U:C6	2.35	0.61
50:3:1380:U:O2'	50:3:1604:A:N3	2.33	0.61
50:3:1547:G:H3'	50:3:1548:A:C8	2.35	0.61
50:3:2035:U:H2'	50:3:2036:G:C8	2.34	0.61
50:3:2123:A:H3'	50:3:2124:A:C8	2.35	0.61
52:5:165:A:H2'	52:5:166:U:O4'	2.00	0.61
52:5:245:U:O2	52:5:271:G:N2	2.28	0.61
52:5:1387:U:H2'	52:5:1388:A:C8	2.36	0.61
53:7:16:G:O6	53:7:49:C:O2	2.18	0.61
1:0:34:ARG:NH1	50:3:502:A:O5'	2.34	0.61
2:1:24:ALA:HA	34:k:63:PRO:HD3	1.82	0.61
10:G:17:ASP:O	10:G:21:LYS:HG2	2.00	0.61
14:K:77:LEU:HG	14:K:106:VAL:HG22	1.82	0.61
15:L:98:ARG:HG2	52:5:1282:U:OP1	1.99	0.61
24:a:33:PRO:O	24:a:35:LYS:NZ	2.33	0.61
24:a:152:LEU:HD11	24:a:160:ILE:HG12	1.81	0.61
26:c:80:ARG:HA	26:c:86:GLY:HA3	1.83	0.61
28:e:57:ARG:NH1	28:e:61:LEU:H	1.97	0.61
50:3:699:U:O2'	50:3:976:C:OP1	2.18	0.61
50:3:1021:C:H2'	50:3:1022:C:H6	1.65	0.61
50:3:1254:U:H2'	50:3:1255:G:C5	2.36	0.61
50:3:2693:U:H3'	50:3:2694:A:H8	1.65	0.61
50:3:2835:G:H1'	50:3:2887:A:H2'	1.81	0.61
52:5:137:A:H62	52:5:156:U:H3	1.47	0.61
52:5:413:G:N2	52:5:538:G:O2'	2.30	0.61
52:5:561:A:O2'	52:5:563:U:OP2	2.18	0.61
53:7:9:U:C2	53:7:15:A:N7	2.67	0.61
1:0:12:ARG:HB2	50:3:721:G:H22	1.66	0.61
2:1:9:LYS:HB2	2:1:10:ARG:HE	1.65	0.61
5:B:7:SER:HA	5:B:10:LEU:HD12	1.81	0.61
6:C:81:GLN:O	6:C:82:ARG:NH2	2.33	0.61
11:H:100:LEU:O	11:H:104:LYS:N	2.32	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:N:60:ARG:O	17:N:64:LEU:HG	1.99	0.61
28:e:66:ILE:HG12	50:3:2757:A:H1'	1.83	0.61
28:e:118:GLU:OE2	28:e:154:TRP:NE1	2.27	0.61
32:i:47:PHE:O	39:p:63:ARG:NH1	2.33	0.61
35:l:54:ILE:O	35:l:58:LEU:N	2.33	0.61
45:v:16:ASN:O	45:v:27:ARG:NE	2.31	0.61
50:3:31:U:H2'	50:3:32:G:C8	2.35	0.61
50:3:385:U:H2'	50:3:386:U:C6	2.36	0.61
50:3:739:G:C2	50:3:761:G:H1'	2.35	0.61
50:3:742:G:H2'	50:3:743:G:C8	2.35	0.61
50:3:790:U:H2'	50:3:791:A:H8	1.63	0.61
50:3:1049:U:H2'	50:3:1050:A:H8	1.65	0.61
50:3:2683:G:H1	50:3:2740:U:H3	1.49	0.61
52:5:599:G:O6	52:5:634:U:O4	2.18	0.61
52:5:862:C:H3'	52:5:863:A:H8	1.65	0.61
52:5:1072:G:H2'	52:5:1073:A:H8	1.62	0.61
52:5:1236:A:O4'	52:5:1258:U:H4'	2.00	0.61
52:5:1274:G:N2	52:5:1275:U:O4	2.33	0.61
53:7:16:G:C6	53:7:49:C:C2	2.88	0.61
6:C:29:LYS:N	52:5:409:G:O6	2.34	0.61
7:D:160:ILE:HG12	7:D:167:ARG:HA	1.81	0.61
9:F:25:ILE:HA	9:F:28:VAL:HG12	1.83	0.61
11:H:36:ASP:OD2	11:H:38:SER:OG	2.17	0.61
14:K:86:ASN:HD22	14:K:117:THR:HA	1.66	0.61
15:L:5:LEU:HD22	15:L:57:ARG:HG3	1.82	0.61
24:a:208:HIS:HB3	50:3:1827:U:O2	2.00	0.61
26:c:5:LYS:HE2	26:c:13:PHE:HB3	1.83	0.61
27:d:36:ILE:O	27:d:88:LYS:HA	1.99	0.61
27:d:66:VAL:HB	51:4:40:U:H5'	1.81	0.61
39:p:13:ARG:HD3	39:p:31:TYR:CE1	2.35	0.61
39:p:22:GLY:HA2	50:3:21:U:H5'	1.83	0.61
45:v:37:LYS:NZ	45:v:45:THR:OG1	2.34	0.61
50:3:107:C:O2	50:3:328:A:O2'	2.16	0.61
50:3:195:A:OP2	50:3:208:A:N6	2.34	0.61
50:3:276:A:H3'	50:3:277:C:C6	2.35	0.61
50:3:412:A:H1'	50:3:437:A:N6	2.16	0.61
50:3:572:G:N2	50:3:588:G:O2'	2.32	0.61
50:3:760:G:H2'	50:3:761:G:C4	2.36	0.61
50:3:849:C:H2'	50:3:850:G:H8	1.63	0.61
50:3:894:G:N3	50:3:2276:A:H2'	2.16	0.61
50:3:901:C:N4	50:3:946:A:N7	2.47	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:990:G:O6	50:3:999:U:O4	2.19	0.61
50:3:1027:U:C4	50:3:1198:G:O6	2.54	0.61
50:3:1436:C:H2'	50:3:1437:A:C8	2.36	0.61
50:3:1884:A:H2'	50:3:1885:G:C8	2.35	0.61
50:3:2133:A:N3	50:3:2171:A:O2'	2.31	0.61
50:3:2516:G:H1'	50:3:2590:G:N2	2.15	0.61
50:3:2641:A:H2'	50:3:2642:G:C8	2.36	0.61
50:3:2764:U:C2	50:3:2765:A:C8	2.88	0.61
51:4:20:U:H2'	51:4:21:G:C8	2.34	0.61
52:5:104:A:P	52:5:284:A:H61	2.23	0.61
52:5:787:A:C8	53:7:39:A:H5''	2.35	0.61
52:5:818:A:H2'	52:5:819:G:H8	1.64	0.61
9:F:33:GLY:HA3	52:5:1324:A:C2	2.36	0.61
11:H:20:TYR:HB2	11:H:66:ASN:HB3	1.82	0.61
19:P:41:ARG:HD2	19:P:43:LYS:HD3	1.82	0.61
22:S:49:SER:OG	22:S:53:ARG:NH2	2.33	0.61
24:a:154:PRO:O	50:3:2212:U:O2'	2.13	0.61
24:a:217:GLY:O	24:a:221:HIS:ND1	2.33	0.61
36:m:15:VAL:HB	50:3:2698:U:C4	2.35	0.61
41:r:6:LYS:H	50:3:529:G:H4'	1.66	0.61
50:3:536:A:H3'	50:3:537:A:H8	1.65	0.61
50:3:905:U:H2'	50:3:906:G:C8	2.35	0.61
50:3:1193:U:H2'	50:3:1194:U:C6	2.35	0.61
50:3:1306:G:H2'	50:3:1307:G:C8	2.36	0.61
50:3:1309:G:H2'	50:3:1310:U:C6	2.34	0.61
50:3:1649:C:OP2	50:3:1651:C:N4	2.27	0.61
50:3:1896:A:N3	50:3:2093:U:O2'	2.33	0.61
50:3:1942:G:H22	50:3:1971:G:P	2.23	0.61
50:3:1948:C:H3'	50:3:1949:C:C6	2.36	0.61
50:3:2081:U:H2'	50:3:2082:U:H6	1.64	0.61
50:3:2240:U:H2'	50:3:2241:A:H8	1.64	0.61
50:3:2306:A:N6	50:3:2326:G:O2'	2.32	0.61
50:3:2469:A:H2'	50:3:2470:C:C6	2.34	0.61
50:3:2502:G:C4	50:3:2503:G:C8	2.89	0.61
50:3:2527:U:O2'	50:3:2528:C:OP2	2.19	0.61
50:3:2636:U:H5''	50:3:2637:A:C8	2.36	0.61
52:5:189:C:H2'	52:5:190:A:C8	2.35	0.61
52:5:348:C:H42	52:5:353:G:N2	1.99	0.61
52:5:401:U:H4'	52:5:496:A:N7	2.15	0.61
52:5:497:A:H4'	52:5:498:G:H5'	1.83	0.61
52:5:595:G:H3'	52:5:596:U:H6	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:847:G:H2'	52:5:848:U:C6	2.35	0.61
52:5:1009:G:N2	52:5:1012:A:OP2	2.34	0.61
52:5:1389:U:O2	52:5:1461:G:N2	2.30	0.61
3:2:11:CYS:HB2	3:2:27:CYS:HA	1.83	0.61
13:J:119:ARG:NH1	13:J:120:PRO:O	2.34	0.61
22:S:62:THR:O	22:S:66:ARG:N	2.20	0.61
24:a:67:ARG:H	24:a:91:ASN:ND2	1.99	0.61
25:b:129:LYS:HE3	50:3:2003:C:H3'	1.81	0.61
25:b:224:VAL:HA	38:o:17:GLN:HG2	1.82	0.61
34:k:95:ARG:HA	34:k:98:LEU:HG	1.83	0.61
35:l:25:SER:H	35:l:67:ARG:HH11	1.46	0.61
41:r:135:ALA:O	41:r:139:ARG:NE	2.32	0.61
50:3:341:G:H22	50:3:344:A:P	2.24	0.61
50:3:431:U:H1'	50:3:432:G:N7	2.16	0.61
50:3:662:U:H4'	50:3:689:U:C4	2.35	0.61
50:3:738:U:O2	50:3:763:G:N2	2.33	0.61
50:3:1672:C:H1'	50:3:2706:U:H1'	1.82	0.61
50:3:1773:A:H2'	50:3:1774:G:H8	1.64	0.61
50:3:2103:C:H2'	50:3:2104:A:H8	1.63	0.61
50:3:2663:G:H4'	50:3:2664:U:H5'	1.82	0.61
50:3:2861:G:H2'	50:3:2862:U:H3'	1.81	0.61
52:5:715:A:H3'	52:5:716:C:H6	1.65	0.61
52:5:842:C:H2'	52:5:843:C:H6	1.65	0.61
53:7:18:C:O3'	53:7:61:U:O2'	2.17	0.61
1:0:30:VAL:HG11	50:3:502:A:H5''	1.83	0.61
2:1:51:ASP:OD1	2:1:54:ARG:NH1	2.34	0.61
8:E:25:GLN:HE22	8:E:75:THR:HB	1.65	0.61
9:F:37:LEU:O	9:F:41:ILE:HG12	2.00	0.61
12:I:60:SER:N	12:I:64:ASP:OD2	2.30	0.61
12:I:71:PHE:CD1	16:M:58:LYS:HA	2.36	0.61
22:S:35:PHE:HD1	22:S:43:ASN:HB3	1.66	0.61
38:o:103:TYR:HB2	38:o:107:ARG:HD2	1.82	0.61
44:u:39:LYS:HG2	44:u:51:ILE:HA	1.82	0.61
49:z:42:ARG:NH2	50:3:679:A:O5'	2.33	0.61
50:3:21:U:H2'	50:3:22:U:C6	2.35	0.61
50:3:138:U:H2'	50:3:139:G:H8	1.64	0.61
50:3:591:G:H2'	50:3:592:G:C8	2.36	0.61
50:3:618:G:O5'	50:3:1281:A:N6	2.33	0.61
50:3:1188:C:H3'	50:3:1189:G:H8	1.65	0.61
50:3:1387:A:C5	50:3:1400:U:O2	2.54	0.61
50:3:2056:A:H61	50:3:2627:U:H3	1.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2224:A:H2'	50:3:2225:G:C8	2.36	0.61
50:3:2259:G:N1	53:7:76:C:H4'	2.16	0.61
50:3:2797:C:HO2'	50:3:2895:A:HO2'	1.47	0.61
51:4:31:G:C6	51:4:48:A:C6	2.89	0.61
52:5:90:G:H21	52:5:376:G:H5'	1.66	0.61
52:5:410:A:OP2	52:5:425:G:N1	2.34	0.61
52:5:627:U:H2'	52:5:628:A:N3	2.16	0.61
52:5:937:G:H1	52:5:1315:U:H3	1.48	0.61
52:5:1101:A:H3'	52:5:1102:A:C8	2.36	0.61
9:F:100:LEU:HA	9:F:103:ILE:HD12	1.81	0.61
14:K:12:ARG:HB3	52:5:560:U:H1'	1.83	0.61
28:e:155:ARG:HB3	28:e:165:VAL:HG23	1.82	0.61
29:f:70:GLU:HA	29:f:73:GLU:HG3	1.82	0.61
32:i:120:ARG:NH1	50:3:562:C:O2'	2.34	0.61
34:k:53:GLY:HA3	50:3:867:G:H1'	1.82	0.61
34:k:82:LEU:HA	34:k:85:ILE:HB	1.83	0.61
36:m:98:SER:OG	36:m:99:ARG:N	2.33	0.61
43:t:2:GLN:O	43:t:91:TYR:OH	2.16	0.61
50:3:370:C:H2'	50:3:371:C:C6	2.36	0.61
50:3:376:U:H2'	50:3:377:U:H6	1.66	0.61
50:3:573:A:H61	50:3:588:G:H1'	1.66	0.61
50:3:771:C:H2'	50:3:772:C:C6	2.35	0.61
50:3:928:G:H2'	50:3:929:G:C8	2.35	0.61
50:3:989:G:O2'	50:3:2274:A:OP2	2.17	0.61
50:3:1727:U:H3'	50:3:1728:A:C8	2.36	0.61
50:3:2068:G:C4	50:3:2070:C:H5	2.19	0.61
50:3:2522:U:H2'	50:3:2523:C:C6	2.35	0.61
50:3:2824:A:H3'	50:3:2825:A:H8	1.66	0.61
51:4:72:A:N6	51:4:93:U:C2	2.69	0.61
52:5:206:G:N2	52:5:209:A:OP2	2.30	0.61
52:5:242:A:N1	52:5:274:A:O2'	2.28	0.61
52:5:664:A:H2'	52:5:665:G:C8	2.35	0.61
52:5:1048:G:H2'	52:5:1049:G:O4'	2.00	0.61
52:5:1389:U:H2'	52:5:1390:G:C8	2.35	0.61
52:5:1467:A:H5''	52:5:1468:A:N7	2.16	0.61
2:1:16:SER:OG	50:3:687:G:OP1	2.15	0.61
5:B:4:LYS:NZ	52:5:1167:C:OP1	2.28	0.61
24:a:213:ILE:HD12	50:3:1798:A:H5''	1.82	0.61
25:b:148:GLN:NE2	50:3:2060:G:OP1	2.33	0.61
26:c:96:ASN:HD21	50:3:622:U:H1'	1.66	0.61
29:f:21:VAL:HG12	29:f:22:LYS:N	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:j:109:ARG:HB2	33:j:111:TYR:HE2	1.66	0.61
40:q:87:GLN:OE1	50:3:1197:G:N2	2.29	0.61
45:v:10:ARG:NH1	50:3:432:G:OP2	2.34	0.61
50:3:246:G:N2	50:3:247:U:O4	2.31	0.61
50:3:358:A:N6	50:3:373:U:O4'	2.33	0.61
50:3:416:C:N4	50:3:417:G:O6	2.34	0.61
50:3:529:G:H2'	50:3:530:G:C8	2.36	0.61
50:3:1264:U:H3'	50:3:1265:G:H8	1.65	0.61
50:3:1443:A:O2'	50:3:1445:U:OP2	2.11	0.61
50:3:2057:C:H2'	50:3:2058:G:C8	2.36	0.61
50:3:2058:G:N2	50:3:2625:U:H3	1.93	0.61
50:3:2382:A:H3'	50:3:2383:G:H8	1.65	0.61
50:3:2580:A:OP2	50:3:2580:A:H8	1.84	0.61
50:3:2662:A:H62	50:3:2675:C:H41	1.49	0.61
51:4:90:G:H2'	51:4:91:A:C8	2.35	0.61
52:5:59:C:H1'	52:5:384:G:N7	2.15	0.61
52:5:919:C:H2'	52:5:920:G:C8	2.36	0.61
52:5:1127:A:O2'	52:5:1128:G:H5''	2.00	0.61
52:5:1325:U:O2	52:5:1346:G:N2	2.34	0.61
52:5:1424:C:H3'	52:5:1425:A:H8	1.65	0.61
53:7:12:C:N4	53:7:25:G:O6	2.31	0.61
10:G:14:PRO:O	10:G:41:LYS:NZ	2.34	0.60
24:a:179:TYR:H	24:a:193:LEU:HA	1.66	0.60
25:b:177:GLN:HE21	50:3:2739:C:H4'	1.66	0.60
40:q:83:TYR:OH	40:q:85:HIS:ND1	2.28	0.60
50:3:847:C:O2	50:3:1226:G:N2	2.19	0.60
50:3:853:G:N1	50:3:1219:U:OP2	2.25	0.60
50:3:1965:C:H2'	50:3:1966:G:C8	2.36	0.60
50:3:2240:U:H2'	50:3:2241:A:C8	2.36	0.60
50:3:2299:U:H2'	50:3:2300:A:C8	2.36	0.60
50:3:2540:G:O2'	50:3:2665:A:N1	2.33	0.60
52:5:20:C:H2'	52:5:21:U:C6	2.36	0.60
52:5:38:U:H2'	52:5:39:G:H8	1.65	0.60
52:5:209:A:C5	52:5:210:G:H1'	2.36	0.60
52:5:550:U:H2'	52:5:551:A:C8	2.34	0.60
52:5:1299:C:H2'	52:5:1300:C:H6	1.66	0.60
6:C:90:PHE:HA	6:C:93:LEU:HB2	1.82	0.60
6:C:147:LYS:HG2	6:C:150:LYS:HE3	1.82	0.60
14:K:2:ALA:N	52:5:566:G:O6	2.34	0.60
22:S:22:LYS:HE3	52:5:1433:G:H5''	1.83	0.60
26:c:7:ILE:HA	26:c:14:GLU:H	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:c:146:PHE:O	26:c:150:ALA:N	2.28	0.60
42:s:65:ILE:HG22	42:s:74:LEU:HD13	1.83	0.60
45:v:29:TRP:HD1	50:3:2239:U:H5''	1.66	0.60
46:w:11:SER:HA	46:w:15:LEU:HG	1.83	0.60
50:3:142:A:H2'	50:3:143:A:C8	2.36	0.60
50:3:313:G:N1	50:3:394:C:N3	2.38	0.60
50:3:727:C:H2'	50:3:728:A:C8	2.36	0.60
50:3:1080:A:OP1	50:3:1081:A:O2'	2.18	0.60
50:3:1082:A:C5	50:3:1145:G:H2'	2.36	0.60
50:3:1475:C:H1'	50:3:1578:A:H1'	1.83	0.60
51:4:32:G:N2	51:4:47:C:O2	2.34	0.60
51:4:71:A:H2'	51:4:72:A:O4'	2.01	0.60
52:5:593:A:H61	52:5:638:A:H2'	1.65	0.60
52:5:1059:G:H5''	52:5:1085:G:C8	2.36	0.60
52:5:1086:U:H2'	52:5:1087:C:C6	2.36	0.60
52:5:1181:G:H2'	52:5:1182:C:O4'	2.01	0.60
52:5:1344:C:H2'	52:5:1345:G:C8	2.35	0.60
25:b:157:GLN:O	50:3:2059:G:N2	2.28	0.60
40:q:56:VAL:O	40:q:95:VAL:N	2.29	0.60
50:3:601:U:H3	50:3:603:G:H3'	1.65	0.60
50:3:906:G:N2	50:3:945:U:O2	2.33	0.60
50:3:1063:A:H2'	50:3:1064:A:H8	1.67	0.60
52:5:368:C:O2	52:5:385:A:N6	2.34	0.60
52:5:381:C:H2'	52:5:382:U:C6	2.36	0.60
52:5:421:G:H2'	52:5:422:A:C8	2.36	0.60
52:5:605:A:H2'	52:5:606:A:O4'	2.01	0.60
52:5:1229:A:H2'	52:5:1230:G:C8	2.36	0.60
52:5:1350:A:H2'	52:5:1351:U:O4'	2.02	0.60
1:0:3:ARG:NE	50:3:1646:G:H21	2.00	0.60
2:1:26:THR:N	50:3:2401:U:OP1	2.32	0.60
4:A:96:VAL:HB	4:A:107:PHE:HB2	1.84	0.60
15:L:16:GLU:HB2	15:L:34:LEU:HD11	1.84	0.60
17:N:20:GLY:HA3	52:5:654:U:O2	2.01	0.60
21:R:70:LYS:HE2	52:5:1293:A:H5''	1.83	0.60
34:k:132:SER:O	34:k:136:LEU:N	2.26	0.60
37:n:14:ARG:HA	37:n:17:LYS:HE2	1.83	0.60
43:t:32:GLN:O	43:t:33:GLN:NE2	2.33	0.60
43:t:90:LYS:HB2	43:t:103:VAL:HG13	1.83	0.60
50:3:107:C:H2'	50:3:108:G:H8	1.66	0.60
50:3:450:C:O2'	50:3:1871:U:O2	2.19	0.60
50:3:1082:A:N6	50:3:1145:G:O5'	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1765:G:OP2	50:3:1767:A:N6	2.35	0.60
52:5:516:C:H5'	52:5:528:G:O4'	2.01	0.60
52:5:1056:U:OP2	52:5:1165:G:N2	2.34	0.60
52:5:1081:U:O3'	52:5:1146:A:O2'	2.19	0.60
5:B:154:VAL:HA	5:B:203:VAL:HG22	1.83	0.60
7:D:136:ILE:HG21	7:D:151:LEU:HD21	1.83	0.60
9:F:56:LYS:HE2	9:F:58:LEU:HB3	1.82	0.60
24:a:34:GLU:OE2	24:a:36:SER:OG	2.19	0.60
26:c:84:PHE:HB3	26:c:86:GLY:H	1.67	0.60
34:k:24:HIS:CD2	34:k:29:GLY:HA2	2.36	0.60
40:q:57:CYS:HA	40:q:94:VAL:HA	1.83	0.60
50:3:2529:C:O2'	50:3:2572:A:H1'	2.01	0.60
50:3:2745:G:H2'	50:3:2746:A:H8	1.65	0.60
52:5:61:A:H61	52:5:93:A:P	2.25	0.60
52:5:454:U:H2'	52:5:455:U:H6	1.67	0.60
52:5:549:U:H2'	52:5:550:U:C6	2.36	0.60
52:5:778:A:OP2	52:5:797:G:N1	2.33	0.60
52:5:828:U:H2'	52:5:829:G:O4'	2.01	0.60
52:5:1178:C:C2	52:5:1179:A:C8	2.90	0.60
4:A:67:THR:HA	4:A:70:ASN:HD21	1.66	0.60
4:A:121:LYS:O	4:A:124:SER:OG	2.15	0.60
8:E:136:LEU:N	52:5:835:G:H21	2.00	0.60
10:G:49:VAL:HG12	10:G:54:LEU:HD11	1.82	0.60
16:M:42:LEU:HG	16:M:45:ARG:HD3	1.83	0.60
19:P:69:LEU:HB2	19:P:73:LYS:HG2	1.83	0.60
27:d:133:LYS:HA	50:3:2313:U:O2	2.00	0.60
28:e:81:GLY:O	28:e:85:GLY:N	2.34	0.60
35:l:109:ILE:HG12	35:l:110:PRO:HD2	1.82	0.60
50:3:209:G:N2	50:3:210:U:O4	2.25	0.60
50:3:353:G:H2'	50:3:354:C:O4'	2.01	0.60
50:3:1449:G:N2	50:3:1611:C:O2	2.24	0.60
50:3:1510:A:C6	50:3:1530:G:C6	2.90	0.60
50:3:1785:U:N3	50:3:1792:A:C5	2.69	0.60
50:3:2215:C:H2'	50:3:2216:U:C6	2.37	0.60
50:3:2288:G:O2'	50:3:2335:A:O4'	2.19	0.60
50:3:2416:U:H2'	50:3:2417:G:C8	2.37	0.60
50:3:2794:U:H2'	50:3:2795:C:C6	2.36	0.60
52:5:10:G:H2'	52:5:11:A:C8	2.37	0.60
52:5:639:A:H2'	52:5:640:C:H6	1.66	0.60
52:5:961:G:C6	52:5:962:G:C6	2.90	0.60
52:5:1262:A:H2'	52:5:1263:A:O4'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:7:62:C:H2'	53:7:63:U:C6	2.36	0.60
3:2:2:LYS:HB3	3:2:4:ARG:HH22	1.67	0.60
10:G:100:PRO:HB2	10:G:103:LYS:HE2	1.82	0.60
10:G:120:ASP:OD1	52:5:637:A:O2'	2.16	0.60
13:J:34:VAL:O	52:5:681:U:O2'	2.18	0.60
15:L:108:THR:HG23	15:L:109:ARG:HG3	1.82	0.60
17:N:62:ARG:NH1	52:5:752:G:OP2	2.35	0.60
22:S:33:LYS:HG2	22:S:37:LYS:HE3	1.83	0.60
34:k:58:LEU:HD12	34:k:61:ARG:HB2	1.84	0.60
45:v:27:ARG:HG2	45:v:28:LYS:H	1.65	0.60
50:3:710:A:N3	50:3:2451:C:O2'	2.33	0.60
50:3:1160:G:OP2	50:3:1161:A:O2'	2.19	0.60
50:3:1296:G:N2	50:3:2019:G:H2'	2.16	0.60
50:3:1866:G:O6	50:3:1891:A:N6	2.23	0.60
50:3:1868:A:H2'	50:3:1869:G:C8	2.36	0.60
50:3:1871:U:O3'	50:3:2417:G:N2	2.34	0.60
50:3:2129:U:H2'	50:3:2130:A:O4'	2.01	0.60
50:3:2181:A:OP2	50:3:2182:C:N4	2.32	0.60
51:4:28:C:H3'	51:4:29:C:C6	2.36	0.60
52:5:205:U:O4	52:5:210:G:O6	2.20	0.60
52:5:332:A:H2'	52:5:333:U:C6	2.36	0.60
52:5:582:G:H2'	52:5:583:G:C8	2.36	0.60
52:5:902:A:H2'	52:5:903:A:H8	1.66	0.60
53:7:2:G:H3'	53:7:3:G:C8	2.37	0.60
53:7:75:C:H5'	53:7:76:C:H5	1.67	0.60
2:1:55:ILE:O	2:1:59:ILE:N	2.31	0.60
4:A:226:CYS:O	4:A:230:ASN:ND2	2.35	0.60
15:L:66:GLU:HA	15:L:69:LEU:HD23	1.82	0.60
19:P:27:GLU:HG3	19:P:40:VAL:HB	1.83	0.60
22:S:49:SER:HG	22:S:53:ARG:NH2	2.00	0.60
22:S:62:THR:HA	22:S:65:ALA:HB3	1.83	0.60
26:c:32:GLN:HG2	50:3:632:A:H4'	1.83	0.60
33:j:53:LYS:HG3	33:j:56:GLN:HG3	1.83	0.60
35:l:80:GLU:HA	50:3:2502:G:O3'	2.01	0.60
37:n:87:THR:O	37:n:115:ASN:N	2.34	0.60
50:3:332:G:O2'	50:3:356:A:N1	2.26	0.60
50:3:534:U:H2'	50:3:535:G:O4'	2.02	0.60
50:3:711:A:N6	50:3:838:U:O2	2.35	0.60
50:3:765:A:OP2	50:3:1782:U:O2'	2.20	0.60
50:3:1287:C:H2'	50:3:1288:C:C6	2.36	0.60
50:3:1494:U:O4	50:3:1550:G:O6	2.20	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1653:C:H2'	50:3:1654:G:C8	2.37	0.60
50:3:2145:A:H2'	50:3:2146:A:H8	1.67	0.60
50:3:2477:A:H3'	50:3:2478:G:C8	2.31	0.60
50:3:2662:A:N1	50:3:2673:A:H5''	2.16	0.60
52:5:597:C:H2'	52:5:598:U:H6	1.66	0.60
52:5:664:A:H2'	52:5:665:G:H8	1.65	0.60
1:0:18:PHE:CE2	50:3:118:G:H5''	2.36	0.60
6:C:165:PRO:HB2	6:C:180:ARG:HH11	1.67	0.60
10:G:11:HIS:NE2	52:5:821:U:O2	2.32	0.60
11:H:115:ARG:O	11:H:117:LYS:NZ	2.25	0.60
18:O:5:ARG:HH12	52:5:615:G:N2	1.99	0.60
19:P:25:GLN:HB2	19:P:42:HIS:CE1	2.36	0.60
26:c:30:LYS:HD2	26:c:33:PRO:HG2	1.82	0.60
33:j:12:ASP:HB2	33:j:95:GLY:HA3	1.83	0.60
35:l:10:ARG:H	35:l:10:ARG:HD3	1.66	0.60
39:p:25:GLY:N	50:3:20:C:H5''	2.16	0.60
39:p:68:LEU:HD13	39:p:75:TYR:HA	1.84	0.60
50:3:521:C:H2'	50:3:522:C:H6	1.67	0.60
50:3:679:A:N1	50:3:2377:A:O2'	2.27	0.60
50:3:847:C:OP1	50:3:1280:G:O2'	2.19	0.60
50:3:1011:A:H1'	50:3:1026:A:C2	2.37	0.60
50:3:1045:A:O2'	50:3:1046:A:O4'	2.16	0.60
50:3:1932:C:N3	50:3:1936:G:N1	2.43	0.60
50:3:2055:A:H2'	50:3:2056:A:O4'	2.01	0.60
50:3:2123:A:OP1	50:3:2124:A:N6	2.33	0.60
50:3:2319:A:H3'	50:3:2320:U:C6	2.36	0.60
52:5:787:A:H8	53:7:39:A:H5''	1.66	0.60
52:5:853:A:H2'	52:5:854:A:C8	2.36	0.60
52:5:1413:G:C6	52:5:1439:G:C6	2.90	0.60
52:5:1480:G:H5'	52:5:1481:U:H2'	1.82	0.60
53:7:67:C:H2'	53:7:68:G:H8	1.65	0.60
4:A:35:ARG:HE	4:A:37:TRP:NE1	2.00	0.60
5:B:153:LYS:HZ1	5:B:155:LEU:HB3	1.66	0.60
11:H:12:ARG:O	11:H:15:SER:OG	2.16	0.60
16:M:6:LEU:HA	16:M:9:LYS:HD3	1.83	0.60
19:P:26:VAL:O	19:P:43:LYS:NZ	2.34	0.60
27:d:132:ILE:O	27:d:151:GLY:N	2.35	0.60
32:i:89:LYS:O	32:i:89:LYS:NZ	2.34	0.60
35:l:53:ALA:HB1	35:l:120:ARG:HG3	1.82	0.60
50:3:716:G:H1	50:3:831:U:H3	1.50	0.60
50:3:779:C:H2'	50:3:780:G:C8	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:815:G:H21	50:3:818:A:H61	1.50	0.60
50:3:1297:U:H2'	50:3:1298:A:C8	2.37	0.60
50:3:1814:G:N2	50:3:1816:A:H3'	2.17	0.60
50:3:1897:A:H3'	50:3:1898:G:C8	2.36	0.60
50:3:2145:A:H2'	50:3:2146:A:C8	2.37	0.60
50:3:2635:G:O2'	50:3:2789:A:N1	2.31	0.60
50:3:2821:U:O4'	50:3:2887:A:H1'	2.01	0.60
51:4:95:G:H2'	51:4:96:G:H8	1.64	0.60
52:5:136:U:O2	52:5:158:A:N6	2.35	0.60
52:5:218:U:H2'	52:5:219:A:C8	2.37	0.60
52:5:513:G:H2'	52:5:514:U:C6	2.37	0.60
52:5:1281:U:H2'	52:5:1282:U:O4'	2.02	0.60
52:5:1460:U:H2'	52:5:1461:G:C8	2.35	0.60
3:2:2:LYS:N	3:2:34:GLN:HA	2.17	0.59
7:D:115:ILE:O	7:D:119:ILE:HG12	2.01	0.59
19:P:31:LYS:HA	19:P:38:SER:HA	1.84	0.59
19:P:56:LYS:H	19:P:83:ARG:HH11	1.50	0.59
25:b:139:TYR:OH	50:3:780:G:OP2	2.17	0.59
27:d:104:ILE:HA	27:d:108:LEU:HD13	1.82	0.59
40:q:72:LYS:HD3	40:q:79:HIS:CE1	2.37	0.59
43:t:45:HIS:HB3	50:3:518:A:H5''	1.84	0.59
50:3:308:A:H3'	50:3:309:A:H8	1.66	0.59
50:3:590:U:H2'	50:3:591:G:C8	2.37	0.59
50:3:772:C:H2'	50:3:773:G:C8	2.35	0.59
50:3:899:A:H61	50:3:950:U:H3	1.49	0.59
50:3:979:U:H2'	50:3:980:C:C2	2.37	0.59
50:3:1115:G:H2'	50:3:1116:U:C6	2.37	0.59
50:3:1137:C:H2'	50:3:1138:A:H8	1.66	0.59
50:3:2403:C:H2'	50:3:2404:G:C8	2.37	0.59
50:3:2812:U:O2'	50:3:2894:G:N2	2.35	0.59
52:5:243:G:H2'	52:5:244:C:H6	1.67	0.59
52:5:1225:A:H2	52:5:1345:G:H1'	1.66	0.59
52:5:1376:G:O6	52:5:1479:G:N2	2.35	0.59
52:5:1487:U:H3	52:5:1498:G:H1	1.50	0.59
6:C:151:ILE:O	6:C:155:LYS:HG3	2.03	0.59
11:H:111:ARG:HH21	52:5:1320:A:H8	1.48	0.59
26:c:49:THR:OG1	50:3:478:G:N3	2.30	0.59
26:c:147:LEU:HA	26:c:150:ALA:HB3	1.83	0.59
34:k:90:LEU:HD23	34:k:93:ILE:HG23	1.83	0.59
35:l:2:LEU:H	35:l:70:PRO:HG2	1.66	0.59
44:u:47:THR:N	44:u:78:ASP:OD1	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:u:54:GLN:NE2	44:u:58:ARG:H	2.00	0.59
50:3:205:C:O2'	50:3:255:A:N1	2.35	0.59
50:3:539:U:H4'	50:3:540:A:H5''	1.84	0.59
50:3:704:G:H3'	50:3:705:A:H8	1.66	0.59
50:3:768:G:N2	50:3:769:A:N7	2.49	0.59
50:3:782:U:N3	50:3:2021:A:H1'	2.13	0.59
50:3:852:C:H3'	50:3:853:G:H8	1.66	0.59
50:3:891:G:H2'	50:3:892:G:C8	2.38	0.59
50:3:1024:A:H2'	50:3:1025:G:O4'	2.02	0.59
50:3:1058:U:H3'	50:3:1059:G:C8	2.37	0.59
50:3:1083:A:OP2	50:3:1145:G:N1	2.35	0.59
50:3:1444:C:O2'	50:3:1445:U:O5'	2.18	0.59
50:3:1738:G:H2'	50:3:1739:G:H8	1.67	0.59
50:3:1784:U:H2'	50:3:1785:U:H6	1.67	0.59
50:3:1871:U:H2'	50:3:1872:U:O4'	2.02	0.59
50:3:1996:A:H2'	50:3:1997:C:O4'	2.01	0.59
50:3:2059:G:O6	50:3:2625:U:O2	2.19	0.59
50:3:2096:U:H2'	50:3:2097:A:C8	2.36	0.59
50:3:2133:A:N6	50:3:2180:U:OP2	2.35	0.59
50:3:2561:G:C2	50:3:2562:U:H1'	2.37	0.59
50:3:2599:C:H2'	50:3:2600:G:H8	1.66	0.59
50:3:2752:G:N2	50:3:2768:U:O2	2.35	0.59
52:5:1115:G:O2'	52:5:1116:U:H6	1.84	0.59
52:5:1116:U:O2'	52:5:1117:U:O5'	2.19	0.59
52:5:1237:G:H2'	52:5:1238:C:H6	1.67	0.59
52:5:1366:U:H2'	52:5:1367:G:C8	2.37	0.59
53:7:3:G:H2'	53:7:4:U:C5	2.37	0.59
1:0:22:MET:O	1:0:28:ARG:NE	2.35	0.59
4:A:146:LYS:O	4:A:150:LEU:HG	2.01	0.59
7:D:66:PHE:HA	7:D:96:ASN:HA	1.84	0.59
32:i:113:PRO:HG2	32:i:115:ASN:HB2	1.84	0.59
34:k:74:LYS:NZ	50:3:666:G:O6	2.33	0.59
41:r:84:ARG:HH12	41:r:98:LYS:HB2	1.66	0.59
41:r:116:GLU:HA	41:r:119:LYS:HD2	1.85	0.59
41:r:116:GLU:N	41:r:116:GLU:OE1	2.35	0.59
50:3:650:G:H2'	50:3:651:A:C8	2.38	0.59
50:3:897:A:N3	51:4:77:G:O2'	2.35	0.59
50:3:1036:A:N6	50:3:1189:G:O2'	2.34	0.59
50:3:2460:C:N3	50:3:2512:U:O4	2.36	0.59
50:3:2609:C:H2'	50:3:2611:G:C8	2.37	0.59
50:3:2654:U:H2'	50:3:2655:U:O4'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2764:U:H1'	50:3:2765:A:H5''	1.85	0.59
50:3:2793:U:H2'	50:3:2794:U:H6	1.67	0.59
50:3:2806:A:OP2	50:3:2898:A:O2'	2.18	0.59
50:3:2848:A:H3'	50:3:2849:G:H8	1.66	0.59
52:5:55:C:H3'	52:5:348:C:H5	1.67	0.59
52:5:223:G:H3'	52:5:224:A:C8	2.36	0.59
52:5:661:G:N1	52:5:738:A:C2	2.67	0.59
52:5:1413:G:H2'	52:5:1414:U:C6	2.37	0.59
4:A:160:GLU:HA	4:A:164:GLY:HA2	1.82	0.59
15:L:50:GLU:HA	15:L:53:PHE:HD2	1.66	0.59
16:M:60:SER:OG	52:5:1162:G:N2	2.35	0.59
17:N:71:ASP:HB3	17:N:74:ALA:HB2	1.83	0.59
19:P:14:LYS:N	19:P:23:THR:O	2.35	0.59
25:b:198:ALA:HB2	50:3:2687:A:H4'	1.84	0.59
34:k:84:LYS:NZ	50:3:689:U:O4	2.27	0.59
36:m:82:LEU:HD13	36:m:86:VAL:HG21	1.84	0.59
43:t:91:TYR:HB3	50:3:331:A:H5''	1.82	0.59
44:u:56:GLY:N	44:u:71:ASP:OD2	2.36	0.59
50:3:107:C:H2'	50:3:108:G:C8	2.36	0.59
50:3:385:U:H2'	50:3:386:U:H6	1.67	0.59
50:3:867:G:H2'	50:3:868:C:H6	1.66	0.59
50:3:1248:A:H2'	50:3:1249:A:C8	2.37	0.59
50:3:1603:A:H2'	50:3:1604:A:C8	2.37	0.59
50:3:1620:A:H2'	50:3:1621:U:O4'	2.02	0.59
50:3:2170:A:OP2	50:3:2174:G:N2	2.35	0.59
50:3:2364:A:H2'	50:3:2365:U:C6	2.37	0.59
50:3:2548:G:O2'	50:3:2748:A:N3	2.35	0.59
50:3:2847:C:H2'	50:3:2848:A:C8	2.32	0.59
50:3:2856:G:H2'	50:3:2857:C:C6	2.37	0.59
52:5:211:G:H2'	52:5:212:G:O4'	2.01	0.59
52:5:352:A:N3	52:5:364:U:O2'	2.35	0.59
52:5:576:A:O2'	52:5:725:A:N3	2.29	0.59
52:5:630:G:H2'	52:5:631:C:H6	1.66	0.59
52:5:680:G:C6	52:5:704:U:O2	2.55	0.59
52:5:763:A:H2'	52:5:764:A:O4'	2.03	0.59
52:5:957:C:H2'	52:5:958:G:C8	2.37	0.59
15:L:14:ARG:HG2	15:L:43:LYS:HA	1.84	0.59
20:Q:51:ILE:HG21	20:Q:86:VAL:HA	1.85	0.59
24:a:56:ARG:NH2	24:a:227:THR:OG1	2.36	0.59
26:c:31:GLN:HA	26:c:34:VAL:HB	1.82	0.59
27:d:63:GLN:NE2	51:4:40:U:O2	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:j:11:ALA:HB2	33:j:83:ALA:HB1	1.85	0.59
44:u:26:ASN:ND2	50:3:2287:G:OP2	2.35	0.59
50:3:137:U:O4	50:3:146:G:O6	2.21	0.59
50:3:194:A:O5'	50:3:209:G:N2	2.29	0.59
50:3:241:C:H2'	50:3:242:G:C8	2.37	0.59
50:3:442:G:C6	50:3:457:U:C4	2.91	0.59
50:3:513:A:H2'	50:3:514:A:C8	2.38	0.59
50:3:660:U:N3	50:3:661:G:O6	2.35	0.59
50:3:770:A:H2'	50:3:771:C:O4'	2.02	0.59
50:3:906:G:C2	50:3:907:A:C8	2.91	0.59
50:3:1495:A:OP2	50:3:1548:A:N6	2.36	0.59
50:3:1507:G:O2'	50:3:1508:G:OP1	2.19	0.59
50:3:1604:A:H2'	50:3:1605:A:C8	2.37	0.59
50:3:2173:G:H2'	50:3:2174:G:C8	2.37	0.59
50:3:2556:C:H2'	50:3:2557:G:C8	2.38	0.59
52:5:611:A:N6	52:5:626:G:O6	2.36	0.59
52:5:1079:G:H2'	52:5:1080:G:C8	2.38	0.59
53:7:44:U:OP1	53:7:44:U:H4'	2.03	0.59
3:2:24:ARG:HG2	3:2:35:ARG:HG3	1.84	0.59
4:A:111:ARG:NH2	4:A:184:GLU:OE1	2.35	0.59
9:F:70:PRO:HD2	9:F:95:LYS:O	2.03	0.59
14:K:6:GLN:O	14:K:10:LYS:N	2.34	0.59
26:c:130:GLN:HE22	26:c:165:ASN:HD22	1.49	0.59
27:d:42:ASP:CG	27:d:47:SER:HB2	2.28	0.59
32:i:107:ALA:O	50:3:1173:G:O2'	2.21	0.59
34:k:17:THR:HG22	50:3:697:U:H5''	1.84	0.59
34:k:93:ILE:N	34:k:125:HIS:O	2.35	0.59
50:3:25:G:H2'	50:3:26:G:H8	1.68	0.59
50:3:188:G:H2'	50:3:189:U:C6	2.38	0.59
50:3:277:C:H2'	50:3:278:U:O4'	2.02	0.59
50:3:359:G:H2'	50:3:360:G:H8	1.67	0.59
50:3:603:G:N1	50:3:2507:C:OP1	2.34	0.59
50:3:1429:G:H2'	50:3:1430:U:C6	2.37	0.59
50:3:1595:C:H2'	50:3:1596:U:C6	2.37	0.59
50:3:1623:U:H2'	50:3:1624:A:C8	2.38	0.59
50:3:2393:C:H2'	50:3:2394:A:H8	1.67	0.59
52:5:67:U:H4'	52:5:201:G:H4'	1.84	0.59
52:5:305:A:O2'	52:5:605:A:N1	2.34	0.59
52:5:773:G:O2'	52:5:775:G:O6	2.17	0.59
52:5:830:U:H2'	52:5:831:C:H6	1.66	0.59
52:5:1490:G:H2'	52:5:1491:A:H8	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:94:LYS:HE3	4:A:98:ASN:HD21	1.68	0.59
5:B:32:LYS:HZ3	5:B:33:TRP:CD1	2.20	0.59
19:P:32:HIS:HB3	19:P:36:HIS:H	1.68	0.59
25:b:104:VAL:HG23	25:b:183:GLY:HA2	1.83	0.59
26:c:32:GLN:HB3	26:c:33:PRO:HD3	1.83	0.59
26:c:61:GLY:O	26:c:63:LYS:NZ	2.28	0.59
33:j:38:VAL:O	33:j:59:ARG:NH1	2.35	0.59
39:p:65:ASN:HB2	39:p:75:TYR:HB2	1.84	0.59
42:s:71:PHE:O	50:3:66:A:O2'	2.21	0.59
48:y:42:VAL:HG12	48:y:48:TYR:HB2	1.85	0.59
50:3:108:G:N2	50:3:380:A:N1	2.50	0.59
50:3:448:A:N7	50:3:2419:A:H2	1.99	0.59
50:3:495:U:H2'	50:3:496:A:C8	2.38	0.59
50:3:904:C:N3	50:3:949:C:O2'	2.32	0.59
50:3:1164:A:H4'	50:3:2524:U:H5'	1.83	0.59
50:3:1606:A:H3'	50:3:1607:G:H8	1.68	0.59
50:3:1764:U:C4	50:3:1769:A:N7	2.71	0.59
50:3:1885:G:C5	50:3:1886:C:N4	2.70	0.59
50:3:2007:U:H2'	50:3:2008:A:C8	2.37	0.59
50:3:2007:U:O2'	50:3:2697:C:O2	2.17	0.59
50:3:2647:A:H3'	50:3:2648:A:C8	2.38	0.59
50:3:2655:U:H2'	50:3:2656:G:C8	2.38	0.59
50:3:2755:G:H1	50:3:2762:U:H2'	1.68	0.59
50:3:2893:C:H2'	50:3:2894:G:O4'	2.03	0.59
52:5:683:G:N1	52:5:700:G:O2'	2.30	0.59
52:5:788:G:O6	52:5:789:A:N6	2.35	0.59
52:5:971:A:OP2	52:5:1332:U:O2'	2.19	0.59
52:5:980:C:H2'	52:5:981:U:C6	2.38	0.59
52:5:1018:U:H3'	52:5:1019:G:C8	2.36	0.59
12:I:75:ARG:NH2	12:I:76:HIS:O	2.35	0.59
13:J:86:LYS:O	13:J:90:ILE:HG12	2.02	0.59
24:a:232:ALA:O	50:3:817:A:O2'	2.21	0.59
25:b:1:MET:H1	25:b:86:ASN:HB3	1.67	0.59
26:c:207:LEU:HD12	26:c:210:LYS:HE3	1.84	0.59
28:e:10:THR:HA	28:e:52:ASN:HA	1.83	0.59
29:f:99:ASN:O	29:f:102:HIS:HB2	2.02	0.59
30:g:112:TYR:HB3	30:g:117:ALA:HA	1.84	0.59
48:y:5:GLN:HE21	50:3:2064:G:H5'	1.68	0.59
50:3:207:C:H3'	50:3:208:A:C8	2.37	0.59
50:3:616:G:H2'	50:3:617:C:O4'	2.02	0.59
50:3:1107:C:H5''	50:3:1132:C:OP1	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1297:U:H2'	50:3:1298:A:H8	1.68	0.59
50:3:1373:C:H2'	50:3:1374:U:C6	2.38	0.59
50:3:1662:G:H2'	50:3:1663:G:H8	1.67	0.59
50:3:1716:A:H2'	50:3:1717:C:C6	2.38	0.59
50:3:1887:U:H2'	50:3:1888:U:C5	2.38	0.59
50:3:2172:A:H3'	50:3:2173:G:H8	1.67	0.59
50:3:2700:C:H1'	50:3:2851:U:H1'	1.84	0.59
52:5:727:G:O2'	52:5:811:A:N6	2.35	0.59
52:5:1101:A:OP2	52:5:1102:A:N6	2.36	0.59
52:5:1378:C:O2'	52:5:1474:A:N1	2.35	0.59
7:D:79:THR:OG1	52:5:916:U:O2	2.21	0.59
11:H:19:VAL:HG11	11:H:85:ILE:HG12	1.85	0.59
14:K:2:ALA:HB2	52:5:567:C:N4	2.17	0.59
14:K:78:THR:HB	14:K:110:ILE:HG13	1.84	0.59
14:K:127:ARG:HA	14:K:132:ALA:HB3	1.85	0.59
33:j:23:LYS:NZ	50:3:2556:C:O2	2.20	0.59
33:j:36:GLY:O	33:j:111:TYR:OH	2.21	0.59
34:k:24:HIS:CG	34:k:29:GLY:HA2	2.38	0.59
34:k:98:LEU:O	34:k:103:VAL:N	2.25	0.59
35:l:73:SER:HA	35:l:92:PHE:O	2.03	0.59
49:z:24:ASN:HB3	49:z:28:ASN:OD1	2.03	0.59
50:3:161:U:C4	50:3:171:G:O6	2.56	0.59
50:3:513:A:O2'	50:3:514:A:OP1	2.19	0.59
50:3:1163:G:O2'	50:3:1164:A:H5''	2.03	0.59
50:3:1221:G:H2'	50:3:1222:A:C8	2.38	0.59
50:3:1398:C:H2'	50:3:1399:G:O4'	2.02	0.59
50:3:1420:A:H2'	50:3:1421:A:C5	2.37	0.59
50:3:1529:U:H2'	50:3:1530:G:H8	1.67	0.59
50:3:1548:A:H4'	50:3:1549:U:H5''	1.85	0.59
50:3:1588:A:H2'	50:3:1589:A:C8	2.38	0.59
50:3:1701:G:N1	50:3:1999:G:OP2	2.31	0.59
50:3:1798:A:N6	50:3:1835:G:H1'	2.18	0.59
50:3:1946:U:OP2	50:3:2612:G:O2'	2.20	0.59
50:3:2011:G:H3'	50:3:2012:A:C8	2.38	0.59
50:3:2560:U:H2'	50:3:2562:U:OP2	2.02	0.59
50:3:2685:A:H2'	50:3:2686:C:C5	2.37	0.59
50:3:2861:G:H3'	50:3:2862:U:H5''	1.84	0.59
52:5:23:G:H2'	52:5:24:C:C6	2.37	0.59
52:5:403:A:H2'	52:5:404:A:H8	1.66	0.59
52:5:859:A:H2'	52:5:860:C:O4'	2.03	0.59
52:5:976:U:H3'	52:5:977:U:H2'	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1278:G:O2'	52:5:1307:A:N6	2.24	0.59
4:A:30:VAL:HA	4:A:56:PHE:HD2	1.68	0.59
6:C:48:SER:O	6:C:52:GLN:N	2.28	0.59
12:I:31:ILE:HA	12:I:34:VAL:HG22	1.85	0.59
23:T:37:ARG:NH1	23:T:40:MET:SD	2.76	0.59
29:f:4:ILE:C	29:f:20:ASP:OD2	2.46	0.59
50:3:26:G:H2'	50:3:27:U:H6	1.68	0.59
50:3:274:A:N1	50:3:407:U:H4'	2.18	0.59
50:3:1036:A:H3'	50:3:1189:G:H22	1.68	0.59
50:3:1744:U:H2'	50:3:1745:A:C8	2.37	0.59
50:3:1957:G:N2	50:3:1961:A:O2'	2.34	0.59
50:3:2391:G:H2'	50:3:2392:U:C6	2.38	0.59
50:3:2737:G:H2'	50:3:2738:U:C6	2.37	0.59
50:3:2799:U:H2'	50:3:2810:A:N1	2.18	0.59
51:4:104:C:H2'	51:4:105:A:H8	1.66	0.59
52:5:69:G:O6	52:5:86:A:N1	2.36	0.59
52:5:98:G:H21	52:5:349:A:H2'	1.67	0.59
52:5:352:A:H2'	52:5:364:U:O2'	2.03	0.59
52:5:377:A:H3'	52:5:378:A:C8	2.38	0.59
52:5:594:A:H2'	52:5:595:G:H8	1.67	0.59
53:7:10:A:H2	53:7:45:G:H1	1.49	0.59
8:E:137:ALA:HB3	52:5:834:G:H21	1.68	0.58
27:d:39:GLY:HA3	50:3:2315:G:H1	1.67	0.58
50:3:668:A:H2'	50:3:669:A:C8	2.37	0.58
50:3:1468:U:H3	50:3:1586:U:H3	1.49	0.58
50:3:1698:A:H61	50:3:2003:C:H42	1.50	0.58
50:3:1810:A:H2'	50:3:1811:A:O4'	2.03	0.58
50:3:1842:G:N7	50:3:1976:A:H5''	2.18	0.58
50:3:2106:G:H22	50:3:2198:G:H22	1.51	0.58
50:3:2316:G:H3'	50:3:2318:A:OP2	2.03	0.58
50:3:2387:U:H2'	50:3:2388:C:C6	2.38	0.58
50:3:2513:G:H2'	50:3:2584:G:N1	2.16	0.58
52:5:884:G:N2	52:5:900:G:H2'	2.17	0.58
52:5:887:C:H2'	52:5:888:A:C8	2.38	0.58
52:5:1243:A:N3	52:5:1300:C:O2'	2.31	0.58
3:2:19:ARG:HD3	50:3:2763:C:H2'	1.84	0.58
6:C:192:ASN:HB3	6:C:195:TYR:CE2	2.37	0.58
7:D:154:ALA:HB3	7:D:177:ASP:HB2	1.86	0.58
19:P:73:LYS:O	19:P:74:ARG:NH2	2.34	0.58
25:b:32:GLU:HA	25:b:189:MET:HB3	1.84	0.58
25:b:150:GLY:HA3	25:b:156:ALA:H	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:c:181:LYS:HB2	26:c:186:VAL:HG12	1.84	0.58
27:d:117:LEU:O	27:d:128:TYR:OH	2.16	0.58
32:i:26:LEU:HB3	32:i:31:LEU:HD23	1.83	0.58
36:m:57:PHE:HA	36:m:60:ARG:HG3	1.84	0.58
50:3:60:G:H2'	50:3:61:U:C6	2.38	0.58
50:3:596:G:N2	50:3:611:A:N1	2.50	0.58
50:3:2303:U:O4	50:3:2345:G:O6	2.21	0.58
51:4:35:C:H2'	51:4:36:C:O4'	2.04	0.58
52:5:351:C:H2'	52:5:352:A:O4'	2.02	0.58
52:5:661:G:C6	52:5:738:A:N1	2.70	0.58
52:5:731:A:H2'	52:5:732:A:C8	2.39	0.58
52:5:747:C:H2'	52:5:748:U:C6	2.38	0.58
52:5:832:G:H2'	52:5:833:G:H8	1.68	0.58
52:5:1212:C:H4'	52:5:1274:G:N2	2.14	0.58
4:A:23:LEU:HD11	4:A:62:ARG:HG2	1.84	0.58
4:A:137:GLN:HA	4:A:140:ASN:HB3	1.85	0.58
5:B:164:GLU:HB3	5:B:167:ARG:HG2	1.84	0.58
9:F:3:LYS:H	52:5:930:A:N6	2.01	0.58
10:G:23:ASN:OD1	10:G:26:ARG:NH1	2.36	0.58
14:K:96:ARG:NH1	14:K:110:ILE:O	2.36	0.58
15:L:53:PHE:O	15:L:57:ARG:N	2.24	0.58
16:M:2:ALA:HA	52:5:1039:G:H5''	1.86	0.58
25:b:71:GLU:O	25:b:74:ASN:ND2	2.36	0.58
25:b:151:ARG:NH2	50:3:2514:U:OP2	2.37	0.58
34:k:54:GLY:HA3	50:3:866:G:N2	2.17	0.58
35:l:45:ARG:HB3	50:3:2492:G:O5'	2.02	0.58
36:m:103:LEU:HD23	48:y:42:VAL:HG11	1.85	0.58
43:t:26:LYS:NZ	50:3:87:G:N7	2.51	0.58
50:3:469:C:H2'	50:3:470:U:C6	2.38	0.58
50:3:495:U:H2'	50:3:496:A:H8	1.67	0.58
50:3:625:G:N2	50:3:700:U:O2	2.34	0.58
50:3:728:A:O2'	50:3:1381:A:N3	2.36	0.58
50:3:1388:G:H3'	50:3:1389:G:H8	1.67	0.58
50:3:2558:G:H2'	50:3:2559:C:C6	2.38	0.58
50:3:2812:U:H1'	50:3:2813:A:H2'	1.85	0.58
51:4:59:A:O2'	51:4:60:C:OP1	2.21	0.58
52:5:662:G:N3	52:5:729:C:H2'	2.18	0.58
52:5:715:A:H3'	52:5:716:C:C6	2.38	0.58
52:5:941:A:H2	52:5:1210:U:H3	1.52	0.58
52:5:1214:A:H1'	52:5:1216:G:C5	2.39	0.58
6:C:64:TYR:CE2	6:C:93:LEU:HB3	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:C:100:ILE:HG21	6:C:136:LEU:HG	1.84	0.58
21:R:36:ARG:CZ	21:R:72:GLY:HA2	2.33	0.58
22:S:15:ILE:O	22:S:19:LEU:HG	2.03	0.58
24:a:43:LYS:HD2	50:3:727:C:H5'	1.86	0.58
24:a:184:LEU:HD12	24:a:185:LEU:H	1.67	0.58
32:i:115:ASN:HD21	50:3:591:G:H5''	1.67	0.58
36:m:35:LEU:O	36:m:39:LYS:HG3	2.03	0.58
37:n:36:LEU:HD11	51:4:28:C:H5''	1.85	0.58
50:3:445:C:H2'	50:3:446:A:H8	1.67	0.58
50:3:523:A:H2'	50:3:524:G:C8	2.39	0.58
50:3:720:A:H5'	50:3:809:A:N6	2.14	0.58
50:3:740:A:H2'	50:3:741:A:C8	2.37	0.58
50:3:1866:G:C6	50:3:1891:A:N7	2.72	0.58
50:3:2101:A:H1'	50:3:2206:A:H61	1.68	0.58
50:3:2694:A:H2'	50:3:2695:U:H6	1.69	0.58
50:3:2694:A:H2'	50:3:2695:U:C6	2.38	0.58
50:3:2862:U:O2'	50:3:2863:G:OP1	2.21	0.58
52:5:293:G:N1	52:5:296:A:OP2	2.36	0.58
52:5:672:A:H2'	52:5:673:A:O4'	2.02	0.58
52:5:972:A:H2'	52:5:973:A:H5''	1.85	0.58
52:5:1417:U:H2'	52:5:1418:G:H8	1.68	0.58
10:G:84:ILE:HG22	10:G:86:GLY:H	1.67	0.58
14:K:63:ARG:NH1	52:5:519:G:O6	2.36	0.58
19:P:28:SER:HB3	19:P:41:ARG:HG2	1.85	0.58
25:b:144:GLN:NE2	50:3:2057:C:O2'	2.35	0.58
26:c:156:ASN:H	26:c:195:ASN:HB3	1.67	0.58
37:n:64:ASN:HA	37:n:70:ALA:N	2.18	0.58
50:3:86:A:N6	50:3:100:U:O2'	2.36	0.58
50:3:92:U:H3'	50:3:93:A:C8	2.38	0.58
50:3:117:C:C2'	50:3:118:G:H5'	2.33	0.58
50:3:347:C:H2'	50:3:348:A:C8	2.37	0.58
50:3:380:A:H3'	50:3:381:A:C8	2.38	0.58
50:3:1309:G:N1	50:3:1314:A:N7	2.52	0.58
50:3:1705:U:N3	50:3:1708:G:OP2	2.36	0.58
50:3:2460:C:C2	50:3:2512:U:N3	2.70	0.58
50:3:2824:A:H3'	50:3:2825:A:C8	2.38	0.58
52:5:1423:C:H2'	52:5:1424:C:C6	2.39	0.58
53:7:18:C:O2'	53:7:62:C:OP1	2.18	0.58
6:C:116:LEU:HG	6:C:121:HIS:HB2	1.86	0.58
7:D:186:ASN:ND2	52:5:12:G:OP2	2.37	0.58
9:F:41:ILE:HD12	9:F:116:LEU:HD21	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:67:LYS:NZ	52:5:650:A:OP1	2.22	0.58
14:K:53:MET:HB3	14:K:65:TYR:HE2	1.67	0.58
26:c:139:LYS:HA	50:3:355:A:OP1	2.04	0.58
28:e:91:ARG:HB3	28:e:93:VAL:HG13	1.85	0.58
35:l:31:GLU:O	35:l:134:ARG:N	2.29	0.58
36:m:4:ILE:HG13	36:m:4:ILE:O	2.02	0.58
42:s:56:ASN:OD1	50:3:1369:U:O2'	2.21	0.58
50:3:641:U:H3'	50:3:655:G:H1	1.68	0.58
50:3:731:A:H2'	50:3:732:G:O4'	2.03	0.58
50:3:1187:C:H2'	50:3:1188:C:H6	1.69	0.58
50:3:1914:G:O6	50:3:1931:C:N4	2.36	0.58
50:3:1922:U:H3'	50:3:1923:A:H8	1.69	0.58
50:3:1949:C:H2'	50:3:1950:U:C5	2.39	0.58
50:3:2060:G:H2'	50:3:2061:A:H8	1.67	0.58
50:3:2134:G:H2'	50:3:2135:C:H6	1.68	0.58
50:3:2413:G:N2	50:3:2420:A:OP2	2.33	0.58
50:3:2476:A:H2'	50:3:2484:A:C2	2.38	0.58
52:5:798:U:H2'	52:5:799:A:H8	1.67	0.58
52:5:849:A:OP2	52:5:865:U:N3	2.36	0.58
52:5:1332:U:OP2	52:5:1333:C:N4	2.32	0.58
53:7:19:G:N1	53:7:56:U:H4'	2.12	0.58
10:G:90:ILE:HG12	10:G:139:ALA:HA	1.86	0.58
11:H:26:ASP:O	11:H:62:ASN:HA	2.04	0.58
14:K:101:LYS:NZ	52:5:524:C:OP1	2.32	0.58
25:b:150:GLY:HA3	25:b:157:GLN:H	1.68	0.58
30:g:42:LYS:HA	30:g:45:PHE:HB3	1.86	0.58
32:i:11:GLN:HE22	50:3:573:A:H5''	1.69	0.58
37:n:101:ARG:NE	51:4:47:C:H5''	2.19	0.58
50:3:198:G:H2'	50:3:199:A:C8	2.38	0.58
50:3:293:G:O2'	50:3:302:G:H5''	2.03	0.58
50:3:855:A:H61	50:3:1008:A:H2'	1.69	0.58
50:3:1889:U:O2'	50:3:1890:U:O4'	2.21	0.58
50:3:2625:U:H2'	50:3:2626:A:H8	1.68	0.58
52:5:359:A:H2'	52:5:360:A:C8	2.38	0.58
52:5:556:G:H2'	52:5:557:A:C2	2.38	0.58
52:5:830:U:H2'	52:5:831:C:C6	2.38	0.58
52:5:1179:A:H2'	52:5:1180:U:O4'	2.03	0.58
52:5:1262:A:H2'	52:5:1263:A:C8	2.39	0.58
52:5:1277:C:OP2	52:5:1279:G:N1	2.29	0.58
4:A:226:CYS:O	4:A:229:MET:HE3	2.04	0.58
5:B:153:LYS:HD2	5:B:171:TYR:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:12:SER:HA	8:E:42:LEU:HD11	1.86	0.58
10:G:57:PHE:HA	10:G:72:PHE:HA	1.84	0.58
10:G:77:THR:HG1	10:G:81:ILE:H	1.52	0.58
12:I:41:LYS:O	12:I:41:LYS:HD3	2.04	0.58
15:L:31:GLN:NE2	15:L:31:GLN:O	2.37	0.58
17:N:51:ARG:HH11	52:5:577:G:H4'	1.68	0.58
24:a:104:GLY:HA3	50:3:1525:G:H21	1.69	0.58
25:b:32:GLU:HG3	25:b:189:MET:HG2	1.84	0.58
38:o:62:GLU:O	38:o:81:ILE:N	2.35	0.58
42:s:9:LYS:O	42:s:30:VAL:N	2.26	0.58
48:y:12:ARG:HA	48:y:15:LYS:HD2	1.86	0.58
50:3:344:A:O2'	50:3:346:G:O6	2.22	0.58
50:3:809:A:H1'	50:3:810:G:H8	1.69	0.58
50:3:1041:C:N3	50:3:1042:C:N4	2.52	0.58
50:3:1067:A:N1	50:3:1157:G:C6	2.72	0.58
50:3:1201:A:H2'	50:3:1202:A:C8	2.38	0.58
50:3:1495:A:H2'	50:3:1496:A:H8	1.67	0.58
50:3:1643:A:O2'	50:3:1644:A:O5'	2.22	0.58
50:3:1722:U:H1'	50:3:1735:A:C5	2.39	0.58
50:3:1787:A:O2'	50:3:1788:A:OP1	2.20	0.58
50:3:1861:A:H3'	50:3:1862:A:C8	2.39	0.58
50:3:2436:G:O2'	50:3:2437:G:N7	2.37	0.58
50:3:2640:A:O3'	50:3:2815:G:O2'	2.22	0.58
52:5:861:A:H2'	52:5:862:C:C6	2.39	0.58
52:5:1252:C:H1'	52:5:1257:C:O2	2.03	0.58
3:2:21:GLN:NE2	50:3:2765:A:OP2	2.31	0.58
4:A:36:TYR:HB3	4:A:205:ASN:HD21	1.69	0.58
5:B:6:ASN:OD1	5:B:204:TRP:NE1	2.30	0.58
5:B:179:SER:OG	52:5:1102:A:N1	2.27	0.58
24:a:72:LYS:HG2	24:a:74:THR:HG23	1.86	0.58
30:g:33:SER:HB3	30:g:36:GLU:HB2	1.86	0.58
32:i:116:ARG:NH1	50:3:565:C:N3	2.52	0.58
34:k:16:LYS:O	50:3:697:U:O2'	2.19	0.58
39:p:91:ARG:HH22	40:q:10:LYS:HA	1.68	0.58
41:r:115:GLN:CD	41:r:115:GLN:H	2.12	0.58
42:s:54:LYS:N	42:s:84:THR:OG1	2.37	0.58
50:3:474:U:H2'	50:3:475:A:C8	2.39	0.58
50:3:595:U:H3	50:3:2040:A:H2	1.51	0.58
50:3:1058:U:H3'	50:3:1059:G:H8	1.69	0.58
50:3:1511:C:H2'	50:3:1512:A:C8	2.39	0.58
50:3:1798:A:H3'	50:3:1799:A:H8	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1873:A:H2'	50:3:1874:G:O4'	2.04	0.58
50:3:2035:U:C2	50:3:2040:A:N7	2.71	0.58
50:3:2167:G:H2'	50:3:2168:C:C6	2.39	0.58
50:3:2469:A:H2'	50:3:2470:C:H6	1.69	0.58
50:3:2581:C:O5'	50:3:2582:G:H5''	2.04	0.58
52:5:34:A:O2'	52:5:359:A:N3	2.30	0.58
52:5:803:C:H2'	52:5:804:A:C8	2.38	0.58
52:5:822:A:H2'	52:5:823:C:C6	2.38	0.58
6:C:124:LEU:O	6:C:127:ARG:HG2	2.04	0.58
6:C:131:THR:HB	52:5:617:U:H3	1.69	0.58
24:a:206:LEU:O	50:3:1827:U:N3	2.37	0.58
26:c:8:LYS:N	26:c:12:SER:O	2.35	0.58
32:i:20:ILE:HB	32:i:142:THR:HA	1.86	0.58
39:p:96:GLU:O	39:p:100:LYS:NZ	2.35	0.58
50:3:222:A:H3'	50:3:223:A:C8	2.38	0.58
50:3:878:A:N6	50:3:969:A:OP2	2.37	0.58
50:3:1082:A:C6	50:3:1145:G:H2'	2.38	0.58
50:3:1362:C:H2'	50:3:1363:C:H6	1.67	0.58
50:3:1906:G:N2	50:3:1909:C:H41	1.97	0.58
50:3:2624:C:H2'	50:3:2625:U:C6	2.39	0.58
52:5:91:C:O2	52:5:375:C:H4'	2.03	0.58
52:5:413:G:C6	52:5:423:U:O2	2.57	0.58
52:5:968:G:H3'	52:5:969:A:H2'	1.86	0.58
52:5:1127:A:O2'	52:5:1128:G:H8	1.87	0.58
52:5:1207:U:H2'	52:5:1208:G:C8	2.39	0.58
52:5:1212:C:O2'	52:5:1274:G:N1	2.24	0.58
52:5:1237:G:C2	52:5:1248:U:O2	2.57	0.58
52:5:1321:G:N1	52:5:1349:A:OP2	2.34	0.58
52:5:1347:U:H2'	52:5:1348:G:O4'	2.04	0.58
52:5:1370:C:N4	52:5:1371:A:H62	2.01	0.58
52:5:1472:G:N2	52:5:1494:A:N3	2.47	0.58
19:P:28:SER:O	19:P:40:VAL:HA	2.03	0.57
36:m:14:ARG:O	36:m:18:VAL:HG23	2.04	0.57
50:3:654:G:H2'	50:3:655:G:C8	2.38	0.57
50:3:2093:U:H2'	50:3:2094:A:H8	1.69	0.57
50:3:2374:A:H3'	50:3:2375:A:C8	2.36	0.57
50:3:2424:C:H2'	50:3:2425:C:C6	2.39	0.57
50:3:2646:G:H1'	50:3:2786:A:H61	1.69	0.57
50:3:2821:U:H2'	50:3:2822:C:O4'	2.05	0.57
51:4:99:A:H2'	51:4:100:G:O4'	2.03	0.57
52:5:273:C:H2'	52:5:274:A:H8	1.67	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:655:G:C6	52:5:744:U:O2	2.56	0.57
52:5:918:A:H2'	52:5:919:C:C6	2.38	0.57
52:5:943:C:H42	52:5:1208:G:H1	1.51	0.57
52:5:1240:U:H2'	52:5:1241:G:C8	2.39	0.57
52:5:1501:G:H2'	52:5:1502:G:C8	2.39	0.57
4:A:133:LEU:HA	4:A:136:LYS:HD2	1.85	0.57
12:I:50:THR:HB	12:I:76:HIS:HA	1.86	0.57
15:L:56:ILE:O	15:L:60:ALA:N	2.32	0.57
20:Q:43:PHE:O	20:Q:47:GLY:N	2.28	0.57
21:R:72:GLY:HA3	52:5:1294:U:O2	2.04	0.57
25:b:155:SER:OG	50:3:2039:G:N2	2.37	0.57
27:d:11:THR:O	27:d:14:LYS:HG2	2.04	0.57
34:k:125:HIS:HA	34:k:145:SER:O	2.03	0.57
50:3:92:U:H3'	50:3:93:A:H8	1.68	0.57
50:3:227:A:H2'	50:3:456:G:H21	1.70	0.57
50:3:652:U:H2'	50:3:653:G:C8	2.37	0.57
50:3:1000:U:O2'	50:3:2281:A:N3	2.22	0.57
50:3:1367:G:N2	50:3:1368:U:O4	2.37	0.57
50:3:1385:U:H2'	50:3:1386:G:O4'	2.04	0.57
50:3:1751:A:H2'	50:3:1752:A:C8	2.39	0.57
50:3:2473:C:H2'	50:3:2474:C:C6	2.39	0.57
51:4:73:U:C4	51:4:74:G:C6	2.92	0.57
52:5:77:U:H2'	52:5:78:A:O4'	2.04	0.57
52:5:124:U:H2'	52:5:125:A:C8	2.39	0.57
52:5:1132:G:N2	52:5:1154:A:H2	1.93	0.57
52:5:1290:G:N1	52:5:1293:A:OP2	2.18	0.57
52:5:1364:C:H2'	52:5:1365:U:H6	1.68	0.57
7:D:160:ILE:CD1	7:D:178:ILE:HG21	2.30	0.57
9:F:26:ILE:HG12	9:F:42:LEU:HD11	1.86	0.57
10:G:19:LEU:HA	10:G:22:ILE:HD12	1.86	0.57
12:I:28:THR:HG21	12:I:45:PRO:HB3	1.86	0.57
13:J:121:ARG:NE	52:5:1497:U:OP1	2.35	0.57
17:N:77:ASN:HA	17:N:80:LYS:HE2	1.86	0.57
19:P:69:LEU:C	52:5:261:G:H4'	2.29	0.57
25:b:28:VAL:HG22	25:b:192:LEU:HD21	1.87	0.57
29:f:31:PHE:HB2	29:f:34:LYS:NZ	2.19	0.57
30:g:33:SER:HA	50:3:1090:G:O3'	2.04	0.57
35:l:35:VAL:HB	35:l:130:LYS:HB3	1.86	0.57
35:l:57:CYS:SG	35:l:117:ALA:HA	2.44	0.57
37:n:25:ASP:OD2	37:n:27:ARG:NE	2.31	0.57
39:p:54:ARG:NH2	50:3:1191:A:H8	2.00	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:y:19:HIS:HB2	50:3:2052:C:O2'	2.04	0.57
50:3:404:C:H2'	50:3:405:C:C6	2.39	0.57
50:3:493:A:N1	50:3:506:A:H5''	2.20	0.57
50:3:601:U:OP2	50:3:981:A:N6	2.37	0.57
50:3:757:A:H2'	50:3:758:C:H6	1.67	0.57
50:3:816:A:H2'	50:3:1784:U:H1'	1.87	0.57
50:3:840:G:P	50:3:841:C:H41	2.27	0.57
50:3:1494:U:C4	50:3:1550:G:O6	2.56	0.57
50:3:1642:G:O2'	50:3:1645:C:N4	2.37	0.57
50:3:1775:G:C6	50:3:1992:C:C4	2.92	0.57
50:3:1921:C:H41	52:5:1385:A:H4'	1.68	0.57
50:3:1928:G:H2'	50:3:1929:G:C8	2.39	0.57
50:3:1938:U:H2'	50:3:1939:A:C8	2.39	0.57
52:5:28:G:C6	52:5:555:G:C6	2.92	0.57
52:5:243:G:H2'	52:5:244:C:C6	2.39	0.57
52:5:333:U:H3'	52:5:334:A:C8	2.39	0.57
52:5:1341:U:H2'	52:5:1342:C:C6	2.39	0.57
4:A:71:TYR:O	4:A:75:VAL:HG23	2.04	0.57
7:D:164:GLY:HA2	7:D:167:ARG:HD3	1.86	0.57
12:I:19:TYR:CE1	16:M:54:PRO:HB3	2.39	0.57
14:K:29:ASN:HD21	14:K:34:LYS:HE3	1.69	0.57
15:L:56:ILE:HA	15:L:59:VAL:HG12	1.86	0.57
19:P:56:LYS:HG3	19:P:57:ASP:H	1.70	0.57
24:a:7:ILE:HG22	24:a:9:ARG:H	1.69	0.57
25:b:64:LYS:N	50:3:2815:G:OP1	2.22	0.57
25:b:109:ASP:HA	25:b:177:GLN:HA	1.86	0.57
27:d:92:ARG:NE	51:4:43:A:O4'	2.36	0.57
27:d:94:GLU:HA	27:d:97:TRP:HB2	1.86	0.57
34:k:81:ASN:HB2	34:k:84:LYS:HB2	1.87	0.57
35:l:20:LYS:HD2	51:4:76:A:H5''	1.84	0.57
45:v:17:ASN:O	45:v:24:ILE:HA	2.05	0.57
50:3:484:U:N3	50:3:616:G:N3	2.53	0.57
50:3:1021:C:H2'	50:3:1022:C:C6	2.40	0.57
50:3:1502:A:H3'	50:3:1540:G:H1	1.69	0.57
50:3:1884:A:C6	50:3:1885:G:C6	2.92	0.57
50:3:2309:A:H2'	50:3:2310:C:H6	1.69	0.57
50:3:2546:U:H2'	50:3:2547:C:C6	2.39	0.57
50:3:2692:U:H2'	50:3:2693:U:C6	2.40	0.57
51:4:19:G:C6	51:4:61:A:C6	2.92	0.57
52:5:316:G:H4'	52:5:1409:A:H2	1.68	0.57
52:5:551:A:H2'	52:5:552:U:H6	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:762:G:N1	52:5:809:G:O2'	2.26	0.57
52:5:926:C:N3	52:5:1361:G:N1	2.42	0.57
52:5:1097:G:H2'	52:5:1098:C:C6	2.40	0.57
52:5:1208:G:H2'	52:5:1209:C:C6	2.39	0.57
52:5:1424:C:H3'	52:5:1425:A:C8	2.40	0.57
5:B:187:TYR:HB2	5:B:204:TRP:CD1	2.40	0.57
10:G:9:LYS:HE2	52:5:822:A:H5''	1.86	0.57
11:H:118:PHE:HB3	52:5:1342:C:H5''	1.86	0.57
13:J:85:GLY:O	13:J:88:THR:HB	2.05	0.57
15:L:54:VAL:O	15:L:58:ASN:N	2.31	0.57
15:L:66:GLU:O	15:L:70:ARG:NH2	2.32	0.57
17:N:3:ILE:HD12	17:N:35:GLN:HG2	1.85	0.57
24:a:67:ARG:NH1	24:a:88:TYR:HH	1.99	0.57
26:c:3:LYS:HB3	26:c:17:PRO:HB2	1.86	0.57
30:g:99:VAL:O	30:g:103:LYS:N	2.36	0.57
32:i:11:GLN:HB2	32:i:13:ASN:HD21	1.68	0.57
43:t:11:VAL:HG13	43:t:77:PHE:HB2	1.86	0.57
48:y:6:ARG:NH2	50:3:2026:A:O5'	2.37	0.57
50:3:338:G:C2	50:3:348:A:C2	2.92	0.57
50:3:755:C:H2'	50:3:756:A:H8	1.70	0.57
50:3:1128:G:H2'	50:3:1133:A:H61	1.69	0.57
50:3:1444:C:H4'	50:3:1620:A:H61	1.69	0.57
50:3:1690:C:H2'	50:3:1691:U:C6	2.40	0.57
50:3:1841:U:H5''	50:3:1842:G:H5'	1.86	0.57
50:3:2229:C:H2'	50:3:2230:A:C8	2.39	0.57
50:3:2252:U:H2'	50:3:2253:U:C6	2.40	0.57
50:3:2360:A:H3'	50:3:2361:G:C8	2.40	0.57
50:3:2730:G:H2'	50:3:2731:U:C6	2.38	0.57
51:4:24:A:OP2	51:4:25:A:N6	2.38	0.57
52:5:972:A:N6	52:5:1199:U:OP1	2.37	0.57
52:5:997:G:H1'	52:5:1030:G:N1	2.20	0.57
16:M:18:VAL:HB	52:5:1291:C:H41	1.68	0.57
16:M:51:GLY:HA2	16:M:56:VAL:HG21	1.85	0.57
19:P:13:VAL:HA	19:P:24:VAL:HA	1.86	0.57
19:P:60:LYS:O	19:P:79:LYS:NZ	2.33	0.57
24:a:112:PRO:HG3	24:a:148:HIS:CE1	2.40	0.57
26:c:165:ASN:OD1	26:c:166:THR:N	2.37	0.57
27:d:150:ARG:HA	50:3:2313:U:O2	2.05	0.57
28:e:7:ARG:HD3	50:3:2759:G:C8	2.38	0.57
45:v:13:LEU:HB3	45:v:29:TRP:HB2	1.86	0.57
50:3:161:U:H3'	50:3:162:G:H8	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:392:A:H3'	50:3:393:C:C6	2.40	0.57
50:3:494:G:H1'	50:3:495:U:H5	1.69	0.57
50:3:498:C:H2'	50:3:499:G:C8	2.38	0.57
50:3:597:C:N3	50:3:611:A:N6	2.52	0.57
50:3:633:G:H2'	50:3:634:C:C6	2.39	0.57
50:3:984:C:H2'	50:3:985:A:C8	2.40	0.57
50:3:1128:G:N2	50:3:1133:A:H62	2.01	0.57
50:3:2121:A:H3'	50:3:2122:G:H8	1.69	0.57
50:3:2307:G:C2	50:3:2325:U:O2	2.58	0.57
50:3:2353:G:H4'	50:3:2354:A:H3'	1.86	0.57
50:3:2764:U:H4'	50:3:2765:A:OP1	2.04	0.57
50:3:2813:A:H3'	50:3:2814:A:H8	1.69	0.57
50:3:2845:U:H2'	50:3:2846:A:C8	2.38	0.57
50:3:2854:A:OP2	50:3:2870:U:N3	2.34	0.57
52:5:127:A:O2'	52:5:168:A:OP1	2.20	0.57
52:5:168:A:H2'	52:5:169:G:O4'	2.04	0.57
52:5:373:A:H2'	52:5:374:G:H8	1.66	0.57
52:5:1479:G:OP2	52:5:1482:A:O2'	2.20	0.57
53:7:37:A:O2'	53:7:38:G:O4'	2.21	0.57
10:G:115:ILE:HD11	10:G:122:VAL:HB	1.85	0.57
11:H:128:GLN:NE2	52:5:1208:G:OP2	2.37	0.57
12:I:59:ARG:HB3	52:5:1051:U:H4'	1.86	0.57
16:M:9:LYS:NZ	52:5:1192:C:O5'	2.34	0.57
25:b:91:GLU:CD	25:b:91:GLU:N	2.57	0.57
25:b:106:GLU:HB3	25:b:217:VAL:HG22	1.86	0.57
39:p:60:TRP:HZ2	50:3:1031:U:H1'	1.70	0.57
42:s:70:ARG:NH2	50:3:492:C:O2'	2.33	0.57
43:t:14:THR:OG1	50:3:344:A:OP1	2.16	0.57
50:3:86:A:N7	50:3:101:C:H1'	2.18	0.57
50:3:736:G:H2'	50:3:737:U:O4'	2.04	0.57
50:3:1151:U:H2'	50:3:1152:U:H6	1.70	0.57
50:3:1298:A:H3'	50:3:1299:A:C8	2.37	0.57
50:3:1335:A:OP2	50:3:1640:G:N2	2.28	0.57
50:3:1749:A:H2'	50:3:1750:A:H8	1.70	0.57
50:3:2089:A:OP2	50:3:2245:G:N1	2.37	0.57
50:3:2307:G:H2'	50:3:2308:U:C6	2.39	0.57
50:3:2789:A:H5''	50:3:2790:A:H5'	1.87	0.57
51:4:74:G:H1	51:4:91:A:H61	1.53	0.57
52:5:59:C:H2'	52:5:60:A:O4'	2.04	0.57
52:5:106:C:H41	52:5:231:U:H3'	1.68	0.57
52:5:212:G:H2'	52:5:213:U:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:288:A:OP2	52:5:301:G:N1	2.38	0.57
52:5:639:A:H2'	52:5:640:C:C6	2.39	0.57
52:5:1133:A:N1	52:5:1153:G:C2	2.72	0.57
52:5:1214:A:H62	52:5:1273:A:H62	1.53	0.57
53:7:16:G:H2'	53:7:16:G:N3	2.20	0.57
4:A:194:LEU:HB2	4:A:196:ILE:HG12	1.86	0.57
7:D:166:ILE:O	7:D:169:ILE:HG12	2.04	0.57
8:E:104:LYS:O	8:E:107:LEU:HB2	2.04	0.57
14:K:124:ARG:O	14:K:127:ARG:NH1	2.38	0.57
22:S:63:ASN:HB2	52:5:258:A:H5''	1.85	0.57
26:c:203:VAL:HB	26:c:207:LEU:HD13	1.86	0.57
27:d:41:GLY:HA2	50:3:2319:A:N1	2.20	0.57
29:f:19:VAL:O	29:f:19:VAL:CG1	2.52	0.57
31:h:26:ALA:HB2	31:h:32:MET:H	1.69	0.57
36:m:6:LYS:HG3	50:3:2010:A:H4'	1.85	0.57
37:n:46:PHE:C	37:n:48:GLN:H	2.13	0.57
41:r:84:ARG:NH1	41:r:98:LYS:HB2	2.18	0.57
42:s:12:LEU:HA	42:s:16:VAL:HG11	1.85	0.57
43:t:105:LYS:NZ	50:3:333:A:O5'	2.37	0.57
50:3:166:A:H2'	50:3:167:A:O4'	2.05	0.57
50:3:241:C:H2'	50:3:242:G:H8	1.69	0.57
50:3:638:A:H3'	50:3:639:G:C8	2.39	0.57
50:3:977:A:C5	50:3:978:G:C5	2.92	0.57
50:3:978:G:C5	50:3:979:U:C4	2.92	0.57
50:3:1456:C:C5	50:3:1603:A:H5''	2.40	0.57
50:3:1863:G:H3'	50:3:1864:A:C8	2.40	0.57
50:3:1989:U:H2'	50:3:1990:C:H6	1.69	0.57
50:3:2666:C:H3'	50:3:2667:G:H8	1.70	0.57
50:3:2779:C:H2'	50:3:2780:U:H6	1.69	0.57
52:5:20:C:H2'	52:5:21:U:H6	1.68	0.57
52:5:454:U:O2	52:5:474:G:N2	2.37	0.57
52:5:775:G:H2'	52:5:776:C:C6	2.40	0.57
53:7:5:C:O2	53:7:70:G:N2	2.29	0.57
10:G:41:LYS:HA	10:G:44:ILE:HG12	1.86	0.57
11:H:124:ARG:NH2	52:5:1320:A:OP1	2.38	0.57
14:K:79:TYR:HB2	14:K:109:HIS:ND1	2.19	0.57
27:d:75:SER:HB2	53:7:57:C:H2'	1.86	0.57
33:j:67:LYS:HZ1	50:3:1698:A:H2	1.53	0.57
39:p:80:ASN:HA	39:p:83:LYS:HB3	1.87	0.57
45:v:56:ARG:NH1	50:3:436:G:N7	2.52	0.57
50:3:370:C:H2'	50:3:371:C:H6	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:438:A:H2'	50:3:439:U:C6	2.40	0.57
50:3:1139:C:H2'	50:3:1140:U:C6	2.39	0.57
50:3:1475:C:O2'	50:3:1577:A:N3	2.32	0.57
50:3:1626:C:H2'	50:3:1627:U:C6	2.40	0.57
50:3:1666:A:H2'	50:3:1667:G:N9	2.19	0.57
50:3:2310:C:H2'	50:3:2311:G:O4'	2.04	0.57
50:3:2687:A:H2'	50:3:2688:C:C6	2.39	0.57
51:4:77:G:H3'	51:4:78:C:O2	2.04	0.57
52:5:132:G:H2'	52:5:133:G:C8	2.39	0.57
52:5:251:G:H2'	52:5:252:U:C6	2.40	0.57
52:5:589:U:H2'	52:5:590:G:H8	1.69	0.57
5:B:8:ASN:HB2	5:B:187:TYR:HB3	1.87	0.57
6:C:202:ARG:NH1	52:5:29:G:OP1	2.37	0.57
10:G:75:LYS:HD2	10:G:83:SER:HB2	1.87	0.57
14:K:47:CYS:SG	14:K:50:VAL:HG23	2.45	0.57
25:b:196:ALA:HB1	50:3:2688:C:H1'	1.87	0.57
36:m:63:VAL:HA	36:m:66:TRP:CD1	2.39	0.57
44:u:19:LYS:HB3	53:7:2:G:H1'	1.87	0.57
46:w:4:ALA:O	46:w:8:ARG:NH1	2.38	0.57
49:z:14:CYS:O	49:z:40:ARG:NH1	2.38	0.57
50:3:199:A:H2'	50:3:202:C:N4	2.20	0.57
50:3:651:A:H3'	50:3:652:U:H6	1.69	0.57
50:3:1275:C:H2'	50:3:1276:A:H8	1.68	0.57
50:3:1494:U:O2	50:3:1550:G:C2	2.57	0.57
50:3:1867:G:H2'	50:3:1868:A:H8	1.66	0.57
52:5:462:G:O2'	52:5:463:U:O4'	2.15	0.57
52:5:470:U:H2'	52:5:471:A:C8	2.40	0.57
52:5:547:C:H2'	52:5:548:G:C8	2.39	0.57
52:5:621:C:H2'	52:5:622:A:H8	1.70	0.57
52:5:762:G:H3'	52:5:809:G:N2	2.19	0.57
4:A:42:GLY:HA2	4:A:45:ILE:HB	1.86	0.56
4:A:102:ARG:NH2	4:A:243:PRO:O	2.38	0.56
4:A:106:ALA:HB2	4:A:169:LEU:HD13	1.86	0.56
4:A:127:ILE:HA	4:A:130:LEU:HD12	1.87	0.56
17:N:54:TYR:OH	50:3:750:A:N6	2.38	0.56
24:a:186:SER:OG	50:3:1806:G:O6	2.19	0.56
26:c:35:PHE:O	26:c:39:LEU:HG	2.05	0.56
36:m:67:LEU:HB2	36:m:75:VAL:HG12	1.86	0.56
36:m:71:ASN:ND2	50:3:1320:C:O2	2.31	0.56
37:n:101:ARG:N	51:4:47:C:OP1	2.36	0.56
42:s:33:PRO:HA	42:s:79:LYS:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:s:60:ARG:NH1	50:3:1367:G:O5'	2.38	0.56
46:w:28:GLU:HG3	46:w:32:LYS:HE3	1.86	0.56
50:3:63:U:N3	50:3:97:A:H1'	2.14	0.56
50:3:437:A:H61	50:3:458:A:N6	2.01	0.56
50:3:507:A:H3'	50:3:508:A:C8	2.39	0.56
50:3:1026:A:H2'	50:3:1217:G:H5'	1.87	0.56
50:3:1610:U:H2'	50:3:1611:C:C6	2.40	0.56
50:3:2294:A:H8	50:3:2352:U:C2	2.22	0.56
50:3:2343:A:N6	50:3:2345:G:N3	2.53	0.56
50:3:2514:U:OP1	50:3:2580:A:O2'	2.22	0.56
50:3:2647:A:H2'	50:3:2648:A:O4'	2.05	0.56
52:5:35:C:H2'	52:5:36:G:C8	2.40	0.56
52:5:37:C:H2'	52:5:38:U:O4'	2.05	0.56
52:5:567:C:H2'	52:5:573:G:C8	2.39	0.56
52:5:581:A:H2'	52:5:582:G:O4'	2.05	0.56
52:5:994:C:H2'	52:5:995:U:H6	1.70	0.56
52:5:1465:U:H2'	52:5:1466:U:C6	2.40	0.56
1:0:8:SER:N	50:3:721:G:H21	2.00	0.56
6:C:11:SER:HA	6:C:16:PHE:HB3	1.87	0.56
7:D:185:ARG:NH1	52:5:21:U:OP2	2.28	0.56
8:E:38:GLU:O	8:E:58:TYR:HA	2.05	0.56
8:E:50:LYS:NZ	8:E:84:ARG:HH22	2.02	0.56
9:F:40:ARG:HG3	11:H:44:LYS:NZ	2.18	0.56
29:f:2:LYS:C	29:f:4:ILE:N	2.62	0.56
32:i:85:GLY:C	32:i:87:ILE:H	2.11	0.56
35:l:14:ASN:ND2	50:3:991:G:OP2	2.38	0.56
43:t:100:LYS:NZ	50:3:85:U:OP1	2.33	0.56
44:u:86:PHE:O	44:u:91:GLY:N	2.38	0.56
45:v:26:ARG:NH2	50:3:209:G:O6	2.38	0.56
50:3:177:U:H2'	50:3:178:A:C8	2.39	0.56
50:3:644:C:H2'	50:3:645:C:C6	2.40	0.56
50:3:965:U:H2'	50:3:966:U:C6	2.39	0.56
50:3:1398:C:H3'	50:3:1399:G:H8	1.69	0.56
50:3:1588:A:O2'	50:3:1589:A:OP1	2.19	0.56
50:3:2224:A:H2'	50:3:2225:G:H8	1.70	0.56
50:3:2403:C:H2'	50:3:2404:G:H8	1.70	0.56
51:4:101:C:H2'	51:4:102:A:C8	2.39	0.56
52:5:622:A:H2'	52:5:623:G:C8	2.40	0.56
52:5:682:G:H8	52:5:682:G:OP2	1.88	0.56
52:5:776:C:H2'	52:5:777:A:C8	2.40	0.56
52:5:1060:C:H1'	52:5:1166:A:N1	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:16:HIS:NE2	50:3:500:U:O2	2.27	0.56
1:0:16:HIS:O	1:0:21:ARG:NE	2.35	0.56
6:C:28:GLY:HA3	52:5:407:A:O2'	2.05	0.56
7:D:96:ASN:HD21	7:D:100:LYS:HB2	1.69	0.56
11:H:69:VAL:O	11:H:70:LYS:NZ	2.36	0.56
11:H:128:GLN:HE21	52:5:1207:U:H3'	1.69	0.56
12:I:51:LYS:N	12:I:75:ARG:O	2.38	0.56
14:K:123:ARG:HE	14:K:125:GLN:HB2	1.69	0.56
21:R:27:LYS:HG3	21:R:29:ARG:NH2	2.10	0.56
29:f:29:PHE:HZ	45:v:64:LEU:HA	1.70	0.56
33:j:100:GLY:HA3	38:o:73:ILE:HG13	1.86	0.56
34:k:53:GLY:O	50:3:866:G:N2	2.33	0.56
36:m:98:SER:OG	36:m:117:GLN:O	2.15	0.56
37:n:100:GLY:O	37:n:104:ALA:N	2.33	0.56
44:u:50:ILE:HA	44:u:74:PHE:HB2	1.86	0.56
44:u:86:PHE:HA	44:u:90:GLN:OE1	2.05	0.56
46:w:62:LYS:HZ2	46:w:66:GLN:HG3	1.70	0.56
50:3:225:A:H5''	50:3:226:A:C4	2.41	0.56
50:3:401:G:H2'	50:3:402:A:C4	2.40	0.56
50:3:417:G:N1	50:3:432:G:O6	2.38	0.56
50:3:534:U:N3	50:3:541:G:O6	2.38	0.56
50:3:855:A:N6	50:3:1008:A:H2'	2.20	0.56
50:3:1026:A:H5''	50:3:1192:U:H5''	1.87	0.56
50:3:1084:C:H2'	50:3:1085:A:H8	1.71	0.56
50:3:1159:C:H2'	50:3:1160:G:O4'	2.05	0.56
50:3:1311:G:N2	50:3:1314:A:O5'	2.38	0.56
50:3:1328:A:OP2	50:3:1661:A:N6	2.39	0.56
50:3:1474:C:H2'	50:3:1475:C:C6	2.38	0.56
50:3:1691:U:H2'	50:3:1692:A:H8	1.70	0.56
50:3:1721:G:H2'	50:3:1722:U:C6	2.41	0.56
50:3:1721:G:C2	50:3:1736:G:C6	2.94	0.56
50:3:2339:G:H2'	50:3:2340:U:C6	2.41	0.56
50:3:2469:A:N1	50:3:2498:G:N2	2.53	0.56
50:3:2604:U:O2'	50:3:2605:G:OP1	2.22	0.56
50:3:2638:G:C4	50:3:2897:G:C2	2.93	0.56
50:3:2722:G:H2'	50:3:2723:C:H6	1.69	0.56
50:3:2729:A:H2'	50:3:2730:G:O4'	2.04	0.56
50:3:2831:U:H2'	50:3:2832:G:C8	2.41	0.56
51:4:56:A:H2'	51:4:57:G:C8	2.40	0.56
52:5:169:G:N2	52:5:220:U:OP1	2.38	0.56
52:5:611:A:C6	52:5:626:G:C6	2.92	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:663:G:O6	52:5:737:U:O2	2.24	0.56
52:5:879:G:H2'	52:5:880:G:H8	1.70	0.56
52:5:931:C:H2'	52:5:932:A:O4'	2.05	0.56
52:5:946:G:O2'	52:5:965:C:O2'	2.06	0.56
52:5:1186:U:O2'	52:5:1187:U:H5''	2.06	0.56
52:5:1271:U:O2	52:5:1272:C:N4	2.31	0.56
6:C:79:LEU:O	6:C:82:ARG:NH2	2.33	0.56
6:C:157:ALA:O	6:C:161:GLY:N	2.38	0.56
25:b:144:GLN:NE2	50:3:2058:G:O5'	2.39	0.56
38:o:55:ARG:HG2	38:o:81:ILE:HD11	1.87	0.56
39:p:91:ARG:NE	50:3:1032:A:H4'	2.21	0.56
50:3:158:U:H2'	50:3:159:G:C8	2.40	0.56
50:3:866:G:H2'	50:3:867:G:H8	1.69	0.56
50:3:1010:G:N2	50:3:1025:G:O2'	2.39	0.56
50:3:2291:U:H1'	50:3:2397:G:C2	2.40	0.56
50:3:2525:C:O2'	50:3:2527:U:OP2	2.20	0.56
51:4:4:G:H2'	51:4:5:G:C8	2.40	0.56
52:5:39:G:H2'	52:5:40:G:H5''	1.88	0.56
52:5:882:U:H3'	52:5:883:A:H8	1.70	0.56
52:5:891:C:H2'	52:5:892:G:O4'	2.04	0.56
52:5:974:C:O2'	52:5:1195:G:OP1	2.23	0.56
26:c:108:HIS:CE1	50:3:652:U:H4'	2.40	0.56
28:e:7:ARG:HD3	50:3:2759:G:H8	1.71	0.56
32:i:76:PHE:HB3	32:i:89:LYS:HG2	1.87	0.56
33:j:91:LYS:HG3	33:j:113:LYS:HD3	1.87	0.56
34:k:69:ARG:HH21	50:3:669:A:H4'	1.69	0.56
35:l:33:GLY:HA2	35:l:104:PHE:O	2.05	0.56
36:m:10:THR:O	36:m:14:ARG:HG3	2.05	0.56
38:o:77:LYS:HG2	38:o:79:PHE:CE1	2.40	0.56
39:p:60:TRP:CE2	39:p:93:VAL:HB	2.40	0.56
50:3:193:G:N1	50:3:209:G:O2'	2.32	0.56
50:3:264:G:H4'	50:3:657:A:H5''	1.86	0.56
50:3:341:G:N1	50:3:344:A:OP2	2.37	0.56
50:3:542:A:H1'	50:3:544:U:C4	2.41	0.56
50:3:556:U:H2'	50:3:557:G:H8	1.71	0.56
50:3:573:A:H2'	50:3:574:G:O4'	2.06	0.56
50:3:686:C:H2'	50:3:687:G:C8	2.39	0.56
50:3:749:U:N3	50:3:752:C:O5'	2.39	0.56
50:3:874:U:H5''	50:3:1221:G:H21	1.70	0.56
50:3:875:G:H2'	50:3:876:A:C8	2.39	0.56
50:3:1464:G:H2'	50:3:1465:U:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2289:C:H2'	50:3:2290:G:H5'	1.86	0.56
50:3:2316:G:N3	50:3:2316:G:H2'	2.20	0.56
50:3:2781:C:H2'	50:3:2782:A:H8	1.70	0.56
50:3:2798:A:N3	50:3:2896:G:H4'	2.20	0.56
52:5:210:G:H2'	52:5:211:G:C8	2.40	0.56
52:5:230:G:H2'	52:5:231:U:C6	2.40	0.56
52:5:649:U:H1'	52:5:650:A:C8	2.40	0.56
52:5:693:A:O2'	52:5:694:U:O5'	2.19	0.56
52:5:774:A:H3'	52:5:775:G:C8	2.40	0.56
52:5:1131:A:C2'	52:5:1132:G:H5'	2.35	0.56
52:5:1162:G:H2'	52:5:1163:A:C8	2.40	0.56
52:5:1257:C:H2'	52:5:1258:U:C6	2.41	0.56
52:5:1379:C:H2'	52:5:1380:G:C8	2.41	0.56
52:5:1393:A:H3'	52:5:1394:G:C8	2.40	0.56
5:B:54:SER:OG	5:B:70:TYR:O	2.12	0.56
6:C:97:LEU:O	6:C:101:VAL:HG23	2.05	0.56
9:F:2:ARG:HG3	52:5:927:C:C5	2.40	0.56
17:N:61:LYS:O	17:N:65:LYS:HG3	2.06	0.56
26:c:3:LYS:HA	26:c:18:VAL:O	2.05	0.56
26:c:75:ARG:HB2	50:3:709:G:H4'	1.88	0.56
26:c:162:ASN:OD1	26:c:182:HIS:NE2	2.35	0.56
28:e:157:PRO:HA	28:e:164:GLY:HA3	1.86	0.56
34:k:93:ILE:HB	34:k:126:PHE:HA	1.88	0.56
35:l:10:ARG:HD3	35:l:10:ARG:N	2.20	0.56
41:r:43:ALA:HA	41:r:46:LEU:HB2	1.86	0.56
48:y:32:LYS:HD2	48:y:50:ASP:HA	1.88	0.56
50:3:29:G:H1'	50:3:30:A:N7	2.20	0.56
50:3:119:A:H2'	50:3:121:U:O4	2.04	0.56
50:3:176:U:H2'	50:3:177:U:C6	2.40	0.56
50:3:1012:G:C2	50:3:1013:G:N7	2.74	0.56
50:3:1187:C:H2'	50:3:1188:C:C6	2.40	0.56
50:3:1315:A:H2'	50:3:1316:U:O4'	2.06	0.56
50:3:1446:G:HO2'	50:3:1613:A:H62	1.48	0.56
50:3:1527:U:H2'	50:3:1528:G:C8	2.41	0.56
50:3:1831:G:H2'	50:3:1832:G:H8	1.71	0.56
50:3:1925:A:O2'	50:3:1927:C:N4	2.38	0.56
50:3:2104:A:H2'	50:3:2105:G:C8	2.39	0.56
50:3:2123:A:N6	50:3:2169:G:OP2	2.39	0.56
50:3:2279:G:H2'	50:3:2280:U:C6	2.40	0.56
50:3:2400:A:N7	50:3:2432:C:C4	2.74	0.56
50:3:2484:A:O2'	50:3:2488:C:N4	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:353:G:C2	52:5:354:U:C5	2.93	0.56
52:5:460:A:H2'	52:5:461:G:N7	2.21	0.56
52:5:799:A:H3'	52:5:800:G:C8	2.41	0.56
52:5:958:G:H2'	52:5:959:A:H8	1.70	0.56
52:5:1116:U:O2'	52:5:1117:U:H2'	2.04	0.56
4:A:90:ASP:O	4:A:94:LYS:N	2.30	0.56
8:E:49:ILE:HG23	8:E:50:LYS:H	1.70	0.56
9:F:91:PRO:O	9:F:95:LYS:N	2.33	0.56
11:H:32:VAL:N	11:H:35:ARG:O	2.36	0.56
12:I:64:ASP:OD1	12:I:67:SER:OG	2.23	0.56
13:J:39:SER:O	13:J:42:THR:OG1	2.21	0.56
15:L:91:HIS:CE1	15:L:109:ARG:HH12	2.24	0.56
22:S:71:ARG:HH11	52:5:255:G:P	2.29	0.56
33:j:3:SER:OG	33:j:31:ARG:O	2.19	0.56
35:l:67:ARG:N	35:l:103:MET:O	2.30	0.56
36:m:103:LEU:HD11	36:m:115:ILE:HB	1.88	0.56
39:p:10:ARG:NH2	50:3:548:A:O2'	2.36	0.56
41:r:18:ARG:HA	41:r:21:CYS:HB2	1.87	0.56
42:s:58:LEU:HD11	42:s:80:LEU:HD12	1.88	0.56
50:3:70:G:H2'	50:3:71:C:O4'	2.05	0.56
50:3:974:C:H2'	50:3:975:G:C8	2.41	0.56
50:3:1410:A:H2'	50:3:1411:C:C6	2.41	0.56
50:3:1502:A:O2'	50:3:1541:A:N6	2.39	0.56
50:3:1514:U:H3	50:3:1525:G:H1	1.54	0.56
50:3:1577:A:H2'	50:3:1578:A:O4'	2.05	0.56
50:3:1688:A:N6	50:3:2013:C:O4'	2.39	0.56
50:3:1747:G:C2	50:3:1753:G:C6	2.94	0.56
50:3:1862:A:H2'	50:3:1863:G:C8	2.39	0.56
50:3:2174:G:H2'	50:3:2175:U:C6	2.40	0.56
50:3:2206:A:N3	50:3:2233:A:N6	2.53	0.56
50:3:2316:G:C2	50:3:2319:A:C8	2.73	0.56
50:3:2363:C:H3'	50:3:2364:A:C8	2.40	0.56
50:3:2373:G:H2'	50:3:2374:A:C8	2.41	0.56
50:3:2565:G:H2'	50:3:2566:C:C6	2.41	0.56
52:5:36:G:C6	52:5:548:G:C6	2.93	0.56
52:5:752:G:H2'	52:5:753:C:C6	2.41	0.56
52:5:1132:G:O3'	52:5:1133:A:H8	1.88	0.56
4:A:131:ASN:ND2	4:A:167:LYS:O	2.31	0.56
10:G:12:PHE:HZ	52:5:584:C:HO2'	1.52	0.56
11:H:33:ASN:HD22	52:5:1121:U:H5	1.53	0.56
11:H:107:THR:HA	52:5:1154:A:H4'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:133:LYS:HA	52:5:37:C:H5''	1.88	0.56
16:M:2:ALA:N	52:5:1039:G:O3'	2.39	0.56
16:M:5:SER:HB2	52:5:1191:U:OP1	2.04	0.56
25:b:135:HIS:HE1	50:3:1705:U:O4'	1.89	0.56
28:e:99:ALA:O	28:e:131:ASN:ND2	2.30	0.56
29:f:105:GLY:HA2	50:3:166:A:H1'	1.86	0.56
37:n:77:ILE:O	37:n:80:LYS:HB3	2.05	0.56
40:q:41:LEU:HD21	40:q:99:HIS:ND1	2.21	0.56
41:r:33:GLN:OE1	41:r:33:GLN:N	2.37	0.56
41:r:89:ALA:HB1	50:3:783:G:C8	2.41	0.56
42:s:70:ARG:HH21	50:3:492:C:HO2'	1.50	0.56
45:v:34:GLN:HE21	45:v:52:THR:HG22	1.69	0.56
50:3:79:U:H2'	50:3:80:U:H6	1.71	0.56
50:3:704:G:H3'	50:3:705:A:C8	2.40	0.56
50:3:894:G:H22	50:3:956:U:H3	1.53	0.56
50:3:1358:C:H2'	50:3:1359:C:H6	1.69	0.56
50:3:1790:U:H1'	50:3:2595:A:N6	2.21	0.56
50:3:2106:G:H2'	50:3:2106:G:N3	2.20	0.56
50:3:2141:A:N3	50:3:2166:U:O2'	2.34	0.56
50:3:2213:A:H2'	50:3:2214:A:C8	2.41	0.56
50:3:2297:G:H2'	50:3:2298:G:O4'	2.05	0.56
50:3:2413:G:H1'	50:3:2419:A:H62	1.70	0.56
52:5:56:A:H62	52:5:353:G:H21	1.53	0.56
52:5:101:A:H2'	52:5:102:G:O4'	2.05	0.56
52:5:524:C:C4	52:5:525:G:H1'	2.41	0.56
52:5:736:U:H2'	52:5:737:U:O4'	2.06	0.56
52:5:1078:G:C6	52:5:1090:G:C2	2.93	0.56
52:5:1245:A:OP1	52:5:1287:G:N2	2.23	0.56
52:5:1278:G:H8	52:5:1279:G:N2	2.04	0.56
52:5:1331:A:H2'	52:5:1332:U:C6	2.40	0.56
1:0:13:ALA:O	1:0:17:GLY:N	2.39	0.56
7:D:77:SER:OG	7:D:84:ARG:HG2	2.06	0.56
9:F:2:ARG:N	52:5:928:G:N7	2.54	0.56
10:G:88:LYS:HB2	10:G:142:TRP:HH2	1.70	0.56
11:H:104:LYS:NZ	52:5:1155:A:OP1	2.36	0.56
14:K:69:ARG:HA	14:K:75:GLU:HA	1.87	0.56
18:O:5:ARG:H	18:O:8:TYR:HB3	1.70	0.56
22:S:49:SER:O	22:S:53:ARG:HG2	2.05	0.56
24:a:71:PHE:CE2	24:a:110:ILE:HD11	2.41	0.56
26:c:150:ALA:O	26:c:151:LYS:HG3	2.06	0.56
27:d:132:ILE:O	27:d:151:GLY:HA3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:e:141:LYS:HA	28:e:144:VAL:HG22	1.88	0.56
32:i:11:GLN:HA	50:3:573:A:H4'	1.88	0.56
33:j:17:LYS:NZ	33:j:47:ILE:HG23	2.21	0.56
35:l:16:SER:HA	35:l:41:TRP:HZ2	1.70	0.56
50:3:369:C:H2'	50:3:370:C:C6	2.41	0.56
50:3:1042:C:H2'	50:3:1043:C:C6	2.41	0.56
50:3:1128:G:H21	50:3:1133:A:H62	1.53	0.56
50:3:1421:A:H5''	50:3:1422:U:OP1	2.06	0.56
50:3:1696:C:O2'	50:3:2695:U:OP1	2.23	0.56
50:3:2794:U:H2'	50:3:2795:C:H6	1.70	0.56
51:4:16:G:O6	51:4:63:U:C2	2.58	0.56
52:5:115:A:H4'	52:5:116:A:H5''	1.87	0.56
52:5:378:A:H2'	52:5:379:A:C8	2.41	0.56
52:5:607:A:H3'	52:5:608:G:H8	1.70	0.56
52:5:1065:G:H2'	52:5:1066:U:H6	1.71	0.56
53:7:44:U:H2'	53:7:45:G:O4'	2.05	0.56
6:C:12:ARG:NH1	52:5:426:U:OP2	2.38	0.56
24:a:218:ARG:HG3	50:3:1600:A:C8	2.40	0.56
25:b:13:MET:SD	50:3:2688:C:O2'	2.62	0.56
28:e:61:LEU:N	28:e:64:SER:OG	2.38	0.56
28:e:147:PHE:O	28:e:151:VAL:HG23	2.04	0.56
29:f:6:LYS:NZ	29:f:54:GLN:HB2	2.21	0.56
36:m:6:LYS:NZ	50:3:2011:G:OP1	2.39	0.56
50:3:198:G:H2'	50:3:199:A:H8	1.70	0.56
50:3:213:C:H2'	50:3:214:C:C6	2.40	0.56
50:3:227:A:C2'	50:3:456:G:H21	2.19	0.56
50:3:251:G:N2	50:3:254:G:H3'	2.21	0.56
50:3:1098:G:H2'	50:3:1098:G:N3	2.21	0.56
50:3:1293:U:H3'	50:3:1294:G:C8	2.40	0.56
50:3:1474:C:N4	50:3:1491:G:H1	1.99	0.56
50:3:1595:C:H2'	50:3:1596:U:H6	1.69	0.56
50:3:2176:G:N1	50:3:2179:A:H2'	2.21	0.56
50:3:2385:A:H2'	50:3:2386:A:C8	2.40	0.56
50:3:2551:G:H2'	50:3:2552:G:O4'	2.06	0.56
50:3:2561:G:C2	50:3:2591:G:N2	2.74	0.56
50:3:2760:C:H3'	50:3:2761:A:C8	2.41	0.56
50:3:2856:G:H2'	50:3:2857:C:H6	1.71	0.56
52:5:214:U:H2'	52:5:215:C:C6	2.41	0.56
52:5:236:C:H2'	52:5:237:A:C8	2.41	0.56
52:5:1119:C:H3'	52:5:1120:A:H8	1.71	0.56
52:5:1135:U:H4'	52:5:1136:G:C5'	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1277:C:H3'	52:5:1279:G:N2	2.21	0.56
52:5:1411:A:H2'	52:5:1412:C:O4'	2.06	0.56
53:7:76:C:H2'	53:7:77:A:O4'	2.06	0.56
4:A:63:GLN:O	4:A:67:THR:HG23	2.07	0.55
8:E:5:ILE:HG12	8:E:87:ILE:HD12	1.88	0.55
11:H:19:VAL:HG21	11:H:85:ILE:HA	1.88	0.55
12:I:27:THR:O	12:I:31:ILE:HG12	2.06	0.55
15:L:93:LYS:HG3	15:L:95:LEU:HG	1.89	0.55
17:N:8:ILE:HA	17:N:11:SER:HB2	1.88	0.55
20:Q:95:TYR:HE1	52:5:731:A:H2	1.54	0.55
22:S:11:LEU:O	22:S:15:ILE:HG13	2.06	0.55
32:i:72:LYS:O	32:i:91:SER:OG	2.24	0.55
34:k:75:GLN:HE22	50:3:669:A:P	2.28	0.55
35:l:118:LEU:HD22	35:l:131:ILE:HG23	1.88	0.55
37:n:77:ILE:HG12	37:n:81:LEU:HD23	1.88	0.55
50:3:373:U:H2'	50:3:374:A:C8	2.38	0.55
50:3:464:A:OP2	50:3:465:A:N6	2.38	0.55
50:3:605:A:O2'	50:3:606:G:OP1	2.22	0.55
50:3:1059:G:C6	50:3:1060:G:C6	2.94	0.55
50:3:1080:A:O4'	50:3:1146:A:N6	2.39	0.55
50:3:1607:G:H2'	50:3:1608:C:C6	2.40	0.55
50:3:1608:C:H2'	50:3:1609:U:C6	2.41	0.55
50:3:1738:G:H2'	50:3:1739:G:C8	2.41	0.55
50:3:2075:U:H3	50:3:2438:A:N6	2.03	0.55
50:3:2114:C:N4	50:3:2191:G:O6	2.38	0.55
50:3:2122:G:O2'	50:3:2175:U:O2	2.23	0.55
50:3:2306:A:H1'	50:3:2330:A:O4'	2.06	0.55
50:3:2455:G:N7	50:3:2508:U:H2'	2.21	0.55
50:3:2682:A:H3'	50:3:2683:G:C8	2.39	0.55
51:4:22:G:N1	51:4:57:G:O6	2.39	0.55
52:5:179:U:O4	52:5:186:A:N6	2.38	0.55
52:5:259:A:H2'	52:5:260:C:C6	2.42	0.55
52:5:302:A:C6	52:5:303:A:H1'	2.41	0.55
52:5:673:A:H2'	52:5:674:U:H6	1.71	0.55
52:5:754:U:H1'	52:5:873:U:H1'	1.88	0.55
52:5:768:G:C6	52:5:806:A:C6	2.94	0.55
52:5:1230:G:O2'	52:5:1233:G:N3	2.29	0.55
52:5:1287:G:H1	52:5:1298:U:H3	1.54	0.55
3:2:1:MET:HB3	3:2:35:ARG:HB2	1.87	0.55
5:B:150:ASN:HD21	5:B:175:ASN:HB2	1.69	0.55
6:C:78:VAL:HG13	6:C:81:GLN:HE21	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:58:TYR:HB3	8:E:60:TRP:CH2	2.41	0.55
11:H:57:THR:OG1	11:H:58:ASP:N	2.39	0.55
14:K:98:GLY:O	14:K:109:HIS:NE2	2.38	0.55
15:L:101:ARG:NH2	52:5:946:G:OP2	2.39	0.55
19:P:14:LYS:O	19:P:15:SER:OG	2.22	0.55
25:b:39:VAL:C	25:b:40:LYS:HD3	2.31	0.55
25:b:185:ASP:O	25:b:189:MET:N	2.39	0.55
27:d:176:PRO:HB3	47:x:45:PHE:HB3	1.89	0.55
28:e:7:ARG:CZ	50:3:2759:G:H1'	2.36	0.55
29:f:7:GLN:HE21	29:f:58:TYR:HB2	1.71	0.55
33:j:107:ARG:HG3	33:j:112:ASN:ND2	2.20	0.55
37:n:42:GLN:CD	37:n:44:TRP:HE1	2.13	0.55
39:p:10:ARG:NH2	50:3:549:A:O4'	2.21	0.55
39:p:67:ALA:HA	39:p:70:GLU:HB2	1.88	0.55
40:q:35:LEU:O	40:q:55:VAL:HG12	2.06	0.55
43:t:28:MET:O	43:t:32:GLN:N	2.39	0.55
43:t:89:ILE:HD13	43:t:104:PHE:HA	1.87	0.55
44:u:52:TYR:HB3	44:u:73:LEU:HB2	1.86	0.55
46:w:49:ARG:HG3	50:3:78:C:H5''	1.88	0.55
48:y:26:ALA:HB3	48:y:38:LEU:HB2	1.88	0.55
50:3:199:A:N6	50:3:202:C:H3'	2.21	0.55
50:3:276:A:H2	50:3:301:G:H21	1.54	0.55
50:3:282:C:N3	50:3:288:A:C2	2.74	0.55
50:3:787:C:H42	50:3:1789:C:H5'	1.71	0.55
50:3:905:U:N3	50:3:949:C:H1'	2.20	0.55
50:3:1231:G:H2'	50:3:1232:U:C6	2.40	0.55
50:3:1541:A:H4'	50:3:1590:U:O2'	2.06	0.55
50:3:2484:A:H2'	50:3:2485:U:C2	2.41	0.55
50:3:2566:C:H2'	50:3:2567:C:O4'	2.06	0.55
50:3:2825:A:H2	50:3:2830:A:H61	1.54	0.55
51:4:36:C:H2'	51:4:37:A:C8	2.40	0.55
52:5:51:A:H1'	52:5:53:U:C6	2.41	0.55
52:5:135:A:H2'	52:5:136:U:O4'	2.07	0.55
52:5:227:A:H2'	52:5:228:G:C8	2.41	0.55
52:5:680:G:C6	52:5:705:A:C5	2.95	0.55
52:5:725:A:H2'	52:5:726:A:O4'	2.06	0.55
52:5:972:A:O2'	52:5:976:U:N3	2.33	0.55
52:5:1004:U:O2	52:5:1018:U:O2'	2.19	0.55
52:5:1093:A:H2'	52:5:1094:C:C6	2.42	0.55
52:5:1136:G:C5	52:5:1156:G:C6	2.94	0.55
52:5:1321:G:N2	52:5:1348:G:H2'	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:27:ARG:NH2	4:A:227:LEU:HD12	2.21	0.55
9:F:40:ARG:NH2	52:5:1266:U:OP2	2.39	0.55
15:L:31:GLN:HA	15:L:34:LEU:HD12	1.87	0.55
24:a:171:LEU:HG	24:a:183:GLN:H	1.72	0.55
25:b:129:LYS:NZ	50:3:2003:C:O5'	2.40	0.55
28:e:26:ALA:HB1	28:e:33:GLN:HE21	1.72	0.55
32:i:120:ARG:NH2	50:3:2788:U:OP2	2.39	0.55
33:j:76:HIS:N	38:o:78:ASN:O	2.40	0.55
35:l:41:TRP:CD1	35:l:96:VAL:HG13	2.41	0.55
39:p:12:ARG:HG2	39:p:16:TRP:NE1	2.21	0.55
45:v:54:THR:O	45:v:58:LEU:HG	2.06	0.55
46:w:102:ARG:HA	46:w:105:ARG:HB2	1.89	0.55
50:3:110:A:H2'	50:3:111:G:H8	1.71	0.55
50:3:154:U:H2'	50:3:155:A:C8	2.41	0.55
50:3:539:U:O2'	50:3:1265:G:OP1	2.23	0.55
50:3:628:A:H2'	50:3:629:G:C8	2.40	0.55
50:3:895:G:O2'	50:3:953:G:N1	2.13	0.55
50:3:1011:A:C4	50:3:1012:G:C8	2.95	0.55
50:3:1105:A:O2'	50:3:1131:A:O3'	2.22	0.55
50:3:1106:G:H1'	50:3:1124:G:C8	2.40	0.55
50:3:1312:A:H2'	50:3:1313:G:C8	2.41	0.55
50:3:1582:G:H2'	50:3:1583:G:C8	2.41	0.55
50:3:1753:G:H2'	50:3:1754:U:C6	2.42	0.55
50:3:1801:U:H2'	50:3:1802:C:C6	2.42	0.55
50:3:1802:C:H2'	50:3:1803:U:C6	2.41	0.55
50:3:1953:U:H2'	50:3:1954:C:C6	2.41	0.55
50:3:2838:G:H2'	50:3:2883:A:N6	2.21	0.55
51:4:7:G:O2'	51:4:8:C:O5'	2.14	0.55
51:4:42:G:N2	51:4:45:C:O2	2.38	0.55
51:4:93:U:H2'	51:4:94:A:H8	1.71	0.55
52:5:148:A:H3'	52:5:149:G:H4'	1.88	0.55
52:5:558:U:N3	52:5:564:G:O4'	2.39	0.55
52:5:950:C:H2'	52:5:951:U:C6	2.42	0.55
52:5:1028:C:H2'	52:5:1029:C:C6	2.40	0.55
52:5:1322:U:C2	52:5:1323:A:C8	2.95	0.55
6:C:41:ARG:NH1	6:C:44:SER:OG	2.31	0.55
6:C:113:ALA:O	6:C:117:VAL:HG23	2.05	0.55
6:C:147:LYS:HZ1	52:5:434:U:H5''	1.70	0.55
9:F:56:LYS:HG3	9:F:59:THR:HG22	1.87	0.55
19:P:67:ARG:N	52:5:116:A:OP2	2.37	0.55
21:R:53:ASN:OD1	21:R:56:THR:N	2.30	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:a:279:ILE:HA	24:a:286:GLN:HE21	1.71	0.55
31:h:122:LYS:HB3	50:3:1115:G:O2'	2.06	0.55
33:j:18:GLN:H	33:j:45:ASP:HB3	1.70	0.55
34:k:22:ARG:HD2	50:3:1280:G:H2'	1.87	0.55
34:k:126:PHE:HB2	34:k:146:VAL:HG23	1.87	0.55
37:n:64:ASN:HA	37:n:70:ALA:H	1.72	0.55
38:o:37:LEU:HD11	38:o:46:GLN:HB2	1.88	0.55
39:p:88:GLU:OE1	39:p:111:LYS:NZ	2.39	0.55
39:p:107:LEU:O	39:p:111:LYS:HB2	2.06	0.55
41:r:7:GLN:N	41:r:103:LEU:O	2.38	0.55
50:3:162:G:O2'	50:3:170:A:N6	2.39	0.55
50:3:464:A:H2'	50:3:464:A:N3	2.21	0.55
50:3:1422:U:H4'	50:3:1637:A:H4'	1.87	0.55
50:3:1765:G:H3'	50:3:1766:A:C8	2.41	0.55
50:3:1822:A:P	50:3:1824:G:H1'	2.47	0.55
50:3:2515:C:H5''	50:3:2581:C:C4	2.42	0.55
50:3:2551:G:H5'	50:3:2775:C:OP1	2.06	0.55
50:3:2646:G:N2	50:3:2786:A:H62	2.05	0.55
50:3:2865:U:H2'	50:3:2866:A:C8	2.41	0.55
50:3:2873:G:H2'	50:3:2874:C:O4'	2.07	0.55
51:4:19:G:O6	51:4:61:A:N6	2.40	0.55
52:5:332:A:H2'	52:5:333:U:H6	1.72	0.55
52:5:947:U:H2'	52:5:948:U:H6	1.71	0.55
52:5:967:C:H2'	52:5:968:G:C8	2.40	0.55
52:5:975:C:O2'	52:5:976:U:OP1	2.22	0.55
4:A:227:LEU:O	4:A:231:LEU:HG	2.06	0.55
5:B:93:LYS:NZ	5:B:100:THR:O	2.36	0.55
20:Q:42:ARG:O	20:Q:46:ILE:N	2.37	0.55
20:Q:73:ARG:NH1	20:Q:83:GLN:HB2	2.21	0.55
20:Q:73:ARG:HG3	20:Q:77:GLY:HA2	1.88	0.55
24:a:15:HIS:CE1	24:a:215:LYS:HB3	2.42	0.55
27:d:46:ASP:N	27:d:46:ASP:OD1	2.36	0.55
28:e:4:ILE:HG12	28:e:7:ARG:HH11	1.71	0.55
28:e:91:ARG:HB2	28:e:166:LEU:HB2	1.88	0.55
29:f:33:LYS:NZ	29:f:112:MET:SD	2.72	0.55
29:f:116:ASN:ND2	50:3:2229:C:OP1	2.40	0.55
32:i:76:PHE:CE2	32:i:91:SER:HB2	2.42	0.55
33:j:93:PRO:HG3	33:j:114:ILE:HG13	1.88	0.55
34:k:117:HIS:ND1	34:k:134:GLN:HB3	2.21	0.55
46:w:45:ASN:HA	46:w:48:ARG:HE	1.71	0.55
46:w:92:GLU:HA	46:w:95:LYS:HG2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:42:U:H2'	50:3:43:A:H8	1.71	0.55
50:3:328:A:N6	50:3:379:A:O4'	2.39	0.55
50:3:420:A:H62	50:3:425:U:H3	1.53	0.55
50:3:628:A:H2'	50:3:629:G:H8	1.70	0.55
50:3:663:A:N6	50:3:673:A:O5'	2.29	0.55
50:3:1162:A:H2'	50:3:2526:A:C2	2.41	0.55
50:3:1305:G:C6	50:3:1322:A:C6	2.94	0.55
50:3:1747:G:H5'	50:3:1748:U:O5'	2.07	0.55
50:3:1798:A:H62	50:3:1835:G:H1'	1.72	0.55
51:4:90:G:H2'	51:4:91:A:H8	1.71	0.55
52:5:23:G:H2'	52:5:24:C:H6	1.72	0.55
52:5:622:A:H2'	52:5:623:G:H8	1.71	0.55
52:5:1044:G:N2	52:5:1048:G:OP2	2.38	0.55
52:5:1214:A:H1'	52:5:1216:G:C4	2.42	0.55
52:5:1214:A:H2'	52:5:1272:C:C5	2.42	0.55
52:5:1218:C:H2'	52:5:1219:C:C6	2.41	0.55
52:5:1503:U:O3'	52:5:1504:G:H3'	2.06	0.55
1:0:10:LEU:HD23	1:0:14:LYS:HZ3	1.71	0.55
8:E:80:LYS:HE3	8:E:81:GLN:OE1	2.07	0.55
15:L:70:ARG:HA	15:L:73:ILE:HD12	1.88	0.55
15:L:96:PRO:HG3	15:L:109:ARG:HD3	1.89	0.55
26:c:119:LYS:HG3	26:c:191:LEU:HD23	1.88	0.55
27:d:64:LYS:HB3	51:4:40:U:H4'	1.89	0.55
27:d:125:ARG:HH12	50:3:2310:C:H1'	1.70	0.55
33:j:68:GLY:HA3	33:j:78:LYS:HA	1.89	0.55
34:k:134:GLN:HA	34:k:137:LYS:HE2	1.88	0.55
44:u:63:VAL:HG13	44:u:97:VAL:HG12	1.88	0.55
49:z:43:LYS:HZ3	49:z:44:VAL:HB	1.71	0.55
50:3:1456:C:N4	50:3:1604:A:OP2	2.32	0.55
50:3:1723:A:H2'	50:3:1724:A:C8	2.41	0.55
50:3:2646:G:N2	50:3:2783:A:H2'	2.21	0.55
52:5:133:G:H3'	52:5:134:G:H8	1.72	0.55
52:5:210:G:H2'	52:5:211:G:H8	1.72	0.55
52:5:567:C:H2'	52:5:573:G:H8	1.71	0.55
52:5:776:C:H2'	52:5:777:A:H8	1.70	0.55
52:5:1490:G:C6	52:5:1496:G:C6	2.95	0.55
1:0:29:LYS:O	1:0:33:LEU:HG	2.07	0.55
2:1:12:LYS:HE2	34:k:65:PHE:CD2	2.41	0.55
5:B:153:LYS:HA	5:B:172:ILE:HA	1.89	0.55
6:C:13:ARG:NH1	6:C:35:PRO:HG2	2.21	0.55
7:D:177:ASP:N	7:D:177:ASP:OD1	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:13:LEU:HG	8:E:14:SER:H	1.71	0.55
11:H:111:ARG:NH2	52:5:1320:A:H8	2.05	0.55
17:N:22:ILE:O	17:N:26:VAL:HG22	2.07	0.55
21:R:37:ARG:HB3	52:5:1294:U:O4	2.06	0.55
24:a:43:LYS:CE	24:a:61:ARG:HG3	2.37	0.55
27:d:58:HIS:CE1	47:x:7:PHE:HB3	2.42	0.55
28:e:57:ARG:NH1	28:e:61:LEU:O	2.40	0.55
29:f:102:HIS:HB3	50:3:166:A:N7	2.21	0.55
32:i:11:GLN:NE2	50:3:573:A:H5''	2.22	0.55
41:r:73:GLU:HB2	41:r:106:LYS:HB2	1.89	0.55
44:u:52:TYR:CE1	44:u:54:GLN:HB3	2.24	0.55
45:v:33:LEU:HA	45:v:51:SER:HA	1.88	0.55
50:3:86:A:C8	50:3:103:G:N2	2.75	0.55
50:3:205:C:H4'	50:3:424:G:C6	2.42	0.55
50:3:270:G:H2'	50:3:271:G:O4'	2.07	0.55
50:3:371:C:H2'	50:3:372:G:O4'	2.07	0.55
50:3:408:G:O2'	50:3:459:A:H3'	2.07	0.55
50:3:548:A:H2'	50:3:549:A:C8	2.41	0.55
50:3:567:U:OP1	50:3:594:G:N2	2.40	0.55
50:3:726:U:H2'	50:3:727:C:H6	1.71	0.55
50:3:1012:G:N2	50:3:1013:G:N7	2.53	0.55
50:3:1176:U:H1'	50:3:1177:A:C5	2.41	0.55
50:3:1468:U:H2'	50:3:1469:C:O4'	2.06	0.55
50:3:1672:C:O2'	50:3:2706:U:O2	2.25	0.55
50:3:1960:A:N1	50:3:2557:G:O2'	2.34	0.55
50:3:2304:U:P	50:3:2342:U:H3	2.30	0.55
50:3:2316:G:N2	50:3:2319:A:H8	2.05	0.55
50:3:2417:G:C6	50:3:2418:G:C5	2.95	0.55
50:3:2588:U:H2'	50:3:2589:G:O4'	2.06	0.55
51:4:24:A:H3'	51:4:25:A:C8	2.41	0.55
51:4:33:U:O2'	51:4:34:U:O4'	2.23	0.55
52:5:20:C:C2	52:5:912:G:C2	2.94	0.55
52:5:176:G:C6	52:5:190:A:C6	2.95	0.55
52:5:206:G:O2'	52:5:208:A:N6	2.39	0.55
52:5:1056:U:N3	52:5:1165:G:O4'	2.32	0.55
52:5:1390:G:C6	52:5:1461:G:C6	2.95	0.55
3:2:34:GLN:HG2	3:2:35:ARG:H	1.72	0.55
5:B:12:PHE:HZ	5:B:18:TRP:HA	1.71	0.55
7:D:165:ALA:O	7:D:169:ILE:HG23	2.07	0.55
11:H:125:ARG:HE	52:5:1324:A:P	2.30	0.55
15:L:107:ARG:HA	15:L:110:LYS:HB2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:c:7:ILE:HA	26:c:13:PHE:HA	1.89	0.55
26:c:18:VAL:HG21	26:c:127:LEU:HD22	1.89	0.55
28:e:44:LEU:HD13	28:e:57:ARG:N	2.22	0.55
28:e:158:GLU:N	28:e:163:LYS:O	2.39	0.55
38:o:100:TYR:HB3	50:3:2726:G:H4'	1.88	0.55
45:v:31:VAL:HG12	50:3:432:G:H5''	1.87	0.55
50:3:228:A:H2'	50:3:229:C:C6	2.42	0.55
50:3:707:C:N3	50:3:844:G:N1	2.54	0.55
50:3:779:C:H2'	50:3:780:G:H8	1.71	0.55
50:3:831:U:H2'	50:3:832:C:C6	2.42	0.55
50:3:1072:A:H2'	50:3:1073:A:C8	2.42	0.55
50:3:1199:A:H2'	50:3:1200:U:O4'	2.07	0.55
50:3:1414:C:OP1	50:3:1496:A:O2'	2.25	0.55
50:3:1619:A:H2'	50:3:1620:A:H8	1.68	0.55
50:3:1785:U:O4	50:3:1792:A:N7	2.39	0.55
51:4:54:U:H4'	51:4:55:A:O5'	2.07	0.55
51:4:96:G:H3'	51:4:97:A:H8	1.72	0.55
52:5:13:U:C2	52:5:23:G:O6	2.59	0.55
52:5:42:G:H2'	52:5:43:G:C8	2.42	0.55
52:5:195:U:O2'	52:5:196:G:O4'	2.24	0.55
52:5:899:U:H3'	52:5:900:G:C8	2.41	0.55
52:5:948:U:C2	52:5:949:G:C8	2.95	0.55
52:5:1113:U:H2'	52:5:1114:A:H8	1.67	0.55
52:5:1134:C:C4	52:5:1136:G:H1'	2.41	0.55
52:5:1361:G:H2'	52:5:1362:G:C8	2.42	0.55
52:5:1497:U:C2	52:5:1498:G:C8	2.95	0.55
1:0:18:PHE:HB2	1:0:43:THR:HG21	1.88	0.55
2:1:30:ALA:N	2:1:31:PRO:HD3	2.21	0.55
4:A:90:ASP:HA	4:A:93:LYS:HB2	1.88	0.55
12:I:56:THR:HG22	12:I:68:ARG:HE	1.72	0.55
13:J:43:MET:N	13:J:43:MET:SD	2.80	0.55
15:L:91:HIS:HE1	15:L:109:ARG:HH22	1.54	0.55
17:N:6:ASN:O	17:N:10:LYS:HG2	2.07	0.55
17:N:54:TYR:HH	50:3:750:A:N6	2.04	0.55
18:O:64:ARG:HE	18:O:67:PHE:HE2	1.53	0.55
25:b:19:THR:N	25:b:221:GLU:O	2.40	0.55
27:d:130:ILE:HB	27:d:154:VAL:HG23	1.89	0.55
28:e:45:LYS:HE3	28:e:58:ASN:HB3	1.88	0.55
30:g:53:VAL:HB	50:3:1119:A:C4	2.40	0.55
32:i:114:ASP:OD1	32:i:119:ARG:NH2	2.39	0.55
35:l:123:HIS:HB3	50:3:2475:C:H1'	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:o:37:LEU:HD21	38:o:46:GLN:HB3	1.89	0.55
39:p:82:LEU:O	39:p:87:ILE:HA	2.07	0.55
40:q:98:VAL:HG22	40:q:99:HIS:H	1.71	0.55
45:v:13:LEU:O	45:v:28:LYS:HA	2.07	0.55
45:v:17:ASN:HB2	45:v:27:ARG:HD3	1.88	0.55
50:3:86:A:C5	50:3:101:C:H1'	2.42	0.55
50:3:155:A:H2'	50:3:156:A:C8	2.42	0.55
50:3:192:U:H2'	50:3:193:G:O4'	2.07	0.55
50:3:293:G:H2'	50:3:294:G:C4	2.41	0.55
50:3:639:G:H1'	50:3:692:U:O2'	2.07	0.55
50:3:685:G:H2'	50:3:686:C:C6	2.41	0.55
50:3:1147:G:H2'	50:3:1148:U:O4'	2.06	0.55
50:3:1328:A:N7	50:3:1668:G:H5''	2.22	0.55
50:3:1498:U:H2'	50:3:1499:C:C6	2.42	0.55
50:3:1903:A:H2'	50:3:1904:G:C8	2.41	0.55
50:3:2130:A:H2'	50:3:2131:G:C8	2.42	0.55
50:3:2175:U:H2'	50:3:2176:G:C8	2.42	0.55
50:3:2274:A:H1'	50:3:2280:U:O4	2.06	0.55
50:3:2359:G:O2'	50:3:2374:A:N6	2.39	0.55
50:3:2451:C:H2'	50:3:2452:G:C8	2.42	0.55
50:3:2538:A:OP2	50:3:2543:G:N2	2.40	0.55
50:3:2686:C:H2'	50:3:2687:A:O4'	2.06	0.55
52:5:297:A:H2'	52:5:298:G:C8	2.41	0.55
52:5:317:A:N1	52:5:328:G:O6	2.40	0.55
52:5:429:A:H3'	52:5:430:G:H8	1.71	0.55
52:5:661:G:N2	52:5:723:C:O3'	2.33	0.55
52:5:889:U:H2'	52:5:890:U:C6	2.41	0.55
52:5:1133:A:C2	52:5:1156:G:C6	2.95	0.55
6:C:13:ARG:NE	52:5:541:C:OP1	2.39	0.55
8:E:136:LEU:H	52:5:835:G:H21	1.54	0.55
16:M:9:LYS:HA	16:M:12:ARG:HE	1.72	0.55
21:R:3:ARG:N	52:5:1293:A:O2'	2.30	0.55
27:d:57:LEU:HD23	27:d:65:PRO:HB3	1.88	0.55
27:d:131:GLY:HA2	27:d:152:PHE:O	2.06	0.55
28:e:98:ARG:O	28:e:109:GLN:NE2	2.40	0.55
29:f:11:ASN:HD21	29:f:27:ILE:HD11	1.72	0.55
29:f:31:PHE:CD1	29:f:111:PHE:HB3	2.42	0.55
31:h:105:ALA:HA	31:h:108:LYS:HB3	1.89	0.55
36:m:44:ARG:HH12	50:3:2876:G:H5''	1.71	0.55
36:m:54:VAL:HB	36:m:59:ASN:HD21	1.72	0.55
36:m:73:PHE:HD1	36:m:77:GLN:HB2	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:m:106:ARG:NH1	36:m:109:ASP:HB2	2.15	0.55
43:t:9:LYS:HD3	43:t:79:GLN:NE2	2.22	0.55
43:t:105:LYS:HZ1	50:3:333:A:P	2.30	0.55
50:3:57:G:H2'	50:3:58:A:C8	2.42	0.55
50:3:60:G:H2'	50:3:61:U:H6	1.71	0.55
50:3:335:G:H5'	50:3:368:C:H2'	1.89	0.55
50:3:397:G:H2'	50:3:398:C:O4'	2.06	0.55
50:3:812:G:H2'	50:3:813:G:C8	2.41	0.55
50:3:858:A:N6	50:3:870:A:C6	2.75	0.55
50:3:1010:G:C1'	50:3:1026:A:H61	2.19	0.55
50:3:2274:A:H1'	50:3:2280:U:C4	2.42	0.55
52:5:233:C:H2'	52:5:234:G:C8	2.42	0.55
52:5:246:A:N1	52:5:271:G:N1	2.55	0.55
52:5:494:A:H2'	52:5:495:U:C5	2.42	0.55
52:5:853:A:H2'	52:5:854:A:H8	1.69	0.55
4:A:214:ILE:HG22	4:A:216:PRO:HD3	1.89	0.54
12:I:73:LYS:NZ	12:I:75:ARG:HB2	2.22	0.54
13:J:62:LYS:O	13:J:66:THR:HG23	2.07	0.54
13:J:112:ASN:O	52:5:713:A:O2'	2.12	0.54
15:L:13:LYS:HA	15:L:44:ARG:HA	1.90	0.54
15:L:91:HIS:CE1	15:L:109:ARG:HH22	2.25	0.54
26:c:130:GLN:HE22	26:c:165:ASN:HB2	1.70	0.54
29:f:26:ALA:O	29:f:30:LEU:N	2.40	0.54
33:j:7:ARG:HG3	33:j:20:GLY:HA3	1.89	0.54
34:k:100:GLU:O	34:k:102:GLN:NE2	2.39	0.54
39:p:57:ARG:HA	39:p:60:TRP:CE3	2.42	0.54
42:s:65:ILE:HG13	42:s:66:ARG:H	1.72	0.54
43:t:16:LYS:HZ1	50:3:536:A:P	2.29	0.54
49:z:11:CYS:HB3	49:z:14:CYS:SG	2.47	0.54
50:3:205:C:H4'	50:3:424:G:C5	2.43	0.54
50:3:221:A:H2'	50:3:222:A:C8	2.42	0.54
50:3:224:G:N3	50:3:238:U:O2'	2.40	0.54
50:3:297:G:H2'	50:3:457:U:OP2	2.06	0.54
50:3:412:A:C2	50:3:413:G:H1'	2.42	0.54
50:3:498:C:H2'	50:3:499:G:H8	1.72	0.54
50:3:728:A:H1'	50:3:1382:A:N3	2.22	0.54
50:3:842:U:O2'	50:3:2067:A:N1	2.40	0.54
50:3:852:C:H2'	50:3:853:G:O4'	2.06	0.54
50:3:958:C:H2'	50:3:959:C:C6	2.41	0.54
50:3:1247:C:H2'	50:3:1248:A:C8	2.42	0.54
50:3:1409:G:C6	50:3:1410:A:C6	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1473:C:H2'	50:3:1474:C:C6	2.41	0.54
50:3:2018:U:H3'	50:3:2019:G:H8	1.72	0.54
50:3:2275:A:H3'	50:3:2275:A:N3	2.21	0.54
50:3:2530:U:O4	50:3:2551:G:O6	2.25	0.54
52:5:359:A:OP1	52:5:359:A:H8	1.89	0.54
52:5:879:G:H2'	52:5:880:G:C8	2.42	0.54
1:0:10:LEU:HD23	1:0:14:LYS:NZ	2.22	0.54
2:1:2:LYS:HG2	50:3:246:G:C5	2.42	0.54
9:F:77:ARG:HA	52:5:1356:U:O2	2.07	0.54
11:H:106:THR:HG22	52:5:1154:A:H5''	1.88	0.54
16:M:58:LYS:HD3	52:5:1163:A:O2'	2.07	0.54
26:c:116:TRP:O	26:c:120:LEU:N	2.31	0.54
34:k:13:ARG:HG2	50:3:695:G:H21	1.72	0.54
39:p:13:ARG:HA	39:p:16:TRP:CD1	2.41	0.54
41:r:85:THR:HB	41:r:95:MET:SD	2.47	0.54
44:u:28:ARG:CB	50:3:2286:A:H62	2.21	0.54
46:w:7:LEU:HD21	46:w:57:ILE:HG12	1.89	0.54
50:3:67:C:O2'	50:3:492:C:N3	2.32	0.54
50:3:244:G:H2'	50:3:260:A:H61	1.73	0.54
50:3:428:U:H2'	50:3:429:U:C6	2.41	0.54
50:3:526:G:H2'	50:3:527:A:C8	2.42	0.54
50:3:535:G:N2	50:3:538:A:OP2	2.35	0.54
50:3:671:C:O2'	50:3:675:U:H5''	2.06	0.54
50:3:745:U:H2'	50:3:746:G:H8	1.70	0.54
50:3:863:U:O2'	50:3:866:G:O6	2.25	0.54
50:3:956:U:H2'	50:3:957:G:O4'	2.07	0.54
50:3:1760:G:N1	50:3:1763:G:OP2	2.29	0.54
50:3:1843:C:H2'	50:3:1844:C:C6	2.43	0.54
50:3:1965:C:H2'	50:3:1966:G:H8	1.71	0.54
50:3:2244:U:H2'	50:3:2245:G:H8	1.72	0.54
50:3:2348:U:H5'	51:4:39:U:O4	2.07	0.54
50:3:2745:G:H2'	50:3:2746:A:C8	2.42	0.54
50:3:2796:C:O2'	50:3:2812:U:O2	2.24	0.54
50:3:2825:A:H2'	50:3:2826:G:O4'	2.07	0.54
52:5:663:G:H2'	52:5:664:A:C8	2.42	0.54
52:5:863:A:H5'	52:5:866:A:O4'	2.08	0.54
52:5:888:A:H2'	52:5:889:U:O4'	2.06	0.54
52:5:961:G:C6	53:7:35:G:H4'	2.41	0.54
52:5:979:C:H2'	52:5:980:C:C5	2.43	0.54
52:5:1268:G:H2'	52:5:1269:U:O4'	2.07	0.54
4:A:37:TRP:CD1	4:A:37:TRP:H	2.24	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:41:ARG:HA	5:B:44:PHE:HD2	1.71	0.54
9:F:39:GLN:HA	9:F:42:LEU:HD12	1.88	0.54
14:K:106:VAL:HG12	14:K:109:HIS:CE1	2.42	0.54
28:e:107:ASN:OD1	28:e:107:ASN:N	2.40	0.54
34:k:75:GLN:NE2	50:3:669:A:OP1	2.39	0.54
37:n:58:LEU:HD21	51:4:25:A:H5'	1.88	0.54
37:n:99:HIS:CD2	51:4:46:C:H4'	2.42	0.54
45:v:29:TRP:NE1	50:3:2240:U:OP1	2.37	0.54
46:w:53:THR:O	46:w:56:THR:HB	2.07	0.54
50:3:381:A:H2'	50:3:382:U:C6	2.43	0.54
50:3:605:A:H61	50:3:2036:G:H21	1.55	0.54
50:3:641:U:O2	50:3:657:A:C5	2.61	0.54
50:3:1017:A:C5	50:3:2035:U:H4'	2.43	0.54
50:3:1180:U:H2'	50:3:1181:A:C8	2.37	0.54
50:3:1530:G:C6	50:3:1531:C:C4	2.96	0.54
50:3:1785:U:C4	50:3:1792:A:N7	2.75	0.54
50:3:2070:C:OP2	50:3:2071:C:N4	2.28	0.54
50:3:2157:A:H2'	50:3:2158:C:C6	2.42	0.54
50:3:2353:G:H21	50:3:2389:A:H3'	1.71	0.54
50:3:2703:U:O2	50:3:2722:G:C6	2.59	0.54
50:3:2817:G:H2'	50:3:2818:C:H6	1.71	0.54
50:3:2831:U:C2	50:3:2832:G:C8	2.96	0.54
52:5:62:G:H2'	52:5:63:U:O4'	2.08	0.54
52:5:446:A:H2'	52:5:447:G:O4'	2.07	0.54
52:5:644:U:H2'	52:5:645:A:H8	1.72	0.54
52:5:763:A:C2	52:5:764:A:H1'	2.43	0.54
52:5:842:C:H2'	52:5:843:C:C6	2.41	0.54
52:5:884:G:HO2'	52:5:900:G:H1	1.55	0.54
3:2:4:ARG:HH21	3:2:34:GLN:NE2	2.06	0.54
4:A:39:PRO:HB3	52:5:826:G:H4'	1.90	0.54
15:L:109:ARG:NH2	52:5:1281:U:HO2'	2.04	0.54
24:a:258:TRP:CZ2	50:3:1812:C:H4'	2.42	0.54
28:e:129:GLU:HG3	28:e:133:GLU:CG	2.38	0.54
29:f:101:ALA:HA	29:f:104:LYS:HD2	1.89	0.54
38:o:92:ARG:HB3	38:o:115:LYS:HD2	1.89	0.54
39:p:69:ARG:NH2	50:3:1047:A:O5'	2.41	0.54
44:u:86:PHE:HB2	51:4:10:C:OP2	2.08	0.54
50:3:471:A:H2'	50:3:472:A:O4'	2.07	0.54
50:3:486:G:N1	50:3:490:A:OP2	2.25	0.54
50:3:996:A:H4'	50:3:2465:U:H4'	1.89	0.54
50:3:1096:U:H1'	50:3:1105:A:H1'	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1269:C:H2'	50:3:1270:C:C6	2.37	0.54
50:3:1277:A:H2'	50:3:1279:U:H6	1.71	0.54
50:3:1313:G:N1	50:3:1357:U:H5'	2.21	0.54
50:3:1450:G:H21	50:3:1523:C:H1'	1.72	0.54
50:3:1685:G:H2'	50:3:1686:U:C6	2.43	0.54
50:3:2073:C:H2'	50:3:2074:G:C8	2.43	0.54
50:3:2111:U:H5'	50:3:2112:A:H5''	1.89	0.54
50:3:2403:C:N3	50:3:2430:C:N4	2.54	0.54
50:3:2539:A:N3	50:3:2667:G:H1'	2.22	0.54
50:3:2664:U:C2	50:3:2665:A:C8	2.95	0.54
50:3:2664:U:O2	50:3:2673:A:C5	2.60	0.54
50:3:2897:G:O2'	50:3:2898:A:O5'	2.20	0.54
52:5:132:G:N2	52:5:1423:C:OP1	2.40	0.54
52:5:310:C:H2'	52:5:311:A:O4'	2.07	0.54
52:5:582:G:H2'	52:5:583:G:H8	1.73	0.54
52:5:779:A:H62	52:5:797:G:N2	2.04	0.54
52:5:1043:U:H2'	52:5:1175:C:N4	2.23	0.54
52:5:1087:C:H2'	52:5:1088:C:C6	2.42	0.54
52:5:1219:C:N3	52:5:1268:G:N1	2.55	0.54
5:B:152:ILE:N	5:B:173:GLU:HB2	2.21	0.54
8:E:8:LEU:HB2	8:E:84:ARG:H	1.73	0.54
9:F:124:ILE:O	9:F:127:SER:OG	2.25	0.54
12:I:43:LYS:HE2	12:I:46:LEU:HD22	1.87	0.54
15:L:20:THR:HA	15:L:25:ILE:O	2.08	0.54
15:L:104:THR:OG1	52:5:1205:C:N4	2.40	0.54
19:P:73:LYS:C	19:P:74:ARG:HD2	2.32	0.54
23:T:50:GLN:O	23:T:54:ARG:HB2	2.07	0.54
24:a:2:PRO:HB2	24:a:25:LEU:HD21	1.89	0.54
24:a:160:ILE:HG23	50:3:1806:G:N3	2.22	0.54
25:b:65:PRO:HG3	50:3:2795:C:H1'	1.90	0.54
31:h:104:ILE:O	31:h:108:LYS:N	2.41	0.54
33:j:89:GLU:OE1	33:j:94:ARG:NH2	2.41	0.54
35:l:126:PRO:HD3	50:3:2493:G:H4'	1.90	0.54
38:o:96:VAL:HG22	38:o:98:ARG:H	1.71	0.54
45:v:52:THR:OG1	50:3:434:G:OP1	2.21	0.54
50:3:55:A:H3'	50:3:56:G:C8	2.42	0.54
50:3:222:A:C5	50:3:223:A:C5	2.96	0.54
50:3:275:A:H62	50:3:294:G:N2	2.06	0.54
50:3:960:A:H2'	50:3:961:U:O4'	2.06	0.54
50:3:1058:U:O5'	50:3:1060:G:O2'	2.26	0.54
50:3:1296:G:O2'	50:3:2019:G:N1	2.28	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1418:U:H3	50:3:1423:A:H62	1.56	0.54
50:3:2225:G:H2'	50:3:2226:U:H6	1.72	0.54
50:3:2251:U:O2'	50:3:2442:A:N1	2.32	0.54
50:3:2474:C:C2	50:3:2475:C:H5	2.26	0.54
50:3:2664:U:C4	50:3:2673:A:C8	2.93	0.54
50:3:2854:A:N7	50:3:2872:A:O2'	2.40	0.54
52:5:26:C:H41	52:5:557:A:N6	2.03	0.54
52:5:36:G:C6	52:5:37:C:C4	2.96	0.54
52:5:42:G:N2	52:5:397:C:O2	2.39	0.54
52:5:446:A:H5''	52:5:449:A:N6	2.23	0.54
52:5:500:G:C6	52:5:542:G:C6	2.95	0.54
52:5:767:U:H2'	52:5:768:G:H8	1.72	0.54
52:5:996:U:H2'	52:5:997:G:O4'	2.08	0.54
52:5:1089:C:C2	52:5:1090:G:C8	2.95	0.54
52:5:1240:U:H2'	52:5:1241:G:H8	1.72	0.54
7:D:93:VAL:HG13	7:D:103:TYR:HB3	1.89	0.54
9:F:14:ASP:H	9:F:19:ASN:H	1.55	0.54
13:J:21:ASN:OD1	13:J:50:LYS:NZ	2.39	0.54
14:K:38:VAL:HG23	14:K:40:SER:HA	1.88	0.54
23:T:28:LEU:HA	23:T:31:ARG:NH1	2.21	0.54
24:a:43:LYS:HE2	24:a:60:GLY:N	2.22	0.54
25:b:23:ARG:HH12	50:3:2736:U:H4'	1.72	0.54
27:d:36:ILE:HA	27:d:154:VAL:HG12	1.88	0.54
27:d:37:ASN:OD1	27:d:88:LYS:HE3	2.08	0.54
28:e:170:GLU:OE1	28:e:170:GLU:N	2.40	0.54
34:k:64:LYS:HE3	50:3:2402:C:H5''	1.89	0.54
34:k:84:LYS:HA	34:k:87:LYS:HG3	1.88	0.54
39:p:88:GLU:OE2	40:q:45:ILE:HG22	2.08	0.54
45:v:2:ALA:HB1	45:v:4:LYS:HZ3	1.71	0.54
50:3:17:G:H2'	50:3:18:G:H8	1.73	0.54
50:3:406:C:H2'	50:3:407:U:C6	2.42	0.54
50:3:495:U:O2	50:3:507:A:N6	2.41	0.54
50:3:523:A:C6	50:3:524:G:C6	2.96	0.54
50:3:523:A:N6	50:3:529:G:O6	2.41	0.54
50:3:716:G:N2	50:3:831:U:O2	2.36	0.54
50:3:901:C:O2'	50:3:902:U:O5'	2.23	0.54
50:3:992:G:H22	50:3:995:A:H3'	1.73	0.54
50:3:1314:A:O2'	50:3:1316:U:OP1	2.23	0.54
50:3:1387:A:N7	50:3:1400:U:C2	2.74	0.54
50:3:1543:U:H2'	50:3:1544:G:H8	1.69	0.54
50:3:1717:C:H2'	50:3:1718:C:C6	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1939:A:H3'	50:3:1940:G:H8	1.72	0.54
50:3:2017:G:H2'	50:3:2018:U:C6	2.43	0.54
50:3:2035:U:H2'	50:3:2036:G:H8	1.73	0.54
50:3:2036:G:N2	50:3:2040:A:O4'	2.41	0.54
50:3:2780:U:H2'	50:3:2781:C:C6	2.43	0.54
50:3:2842:G:H2'	50:3:2843:G:C8	2.43	0.54
52:5:573:G:H4'	52:5:573:G:OP1	2.07	0.54
52:5:858:A:H8	52:5:858:A:OP1	1.91	0.54
52:5:934:G:O2'	52:5:1350:A:N3	2.27	0.54
52:5:1299:C:H2'	52:5:1300:C:C6	2.42	0.54
52:5:1390:G:H2'	52:5:1391:A:C8	2.43	0.54
53:7:48:U:N3	53:7:51:G:H5''	2.22	0.54
2:1:24:ALA:HB2	34:k:62:LEU:HD23	1.89	0.54
3:2:31:LYS:NZ	50:3:2536:U:O3'	2.41	0.54
7:D:148:ARG:HB2	7:D:183:LEU:HB2	1.88	0.54
7:D:152:LYS:O	7:D:178:ILE:HA	2.08	0.54
9:F:107:ALA:HB1	9:F:119:ILE:HG13	1.90	0.54
14:K:127:ARG:N	52:5:500:G:OP1	2.23	0.54
20:Q:88:LYS:HB3	20:Q:92:ARG:NH2	2.20	0.54
21:R:78:ARG:NH1	52:5:1295:U:O2'	2.41	0.54
26:c:105:LYS:HA	26:c:108:HIS:HB3	1.89	0.54
31:h:88:ASN:HA	50:3:1112:A:C4'	2.37	0.54
35:l:12:PRO:HA	50:3:948:A:N6	2.22	0.54
35:l:24:ASN:O	35:l:101:THR:OG1	2.26	0.54
37:n:98:TYR:OH	37:n:110:ARG:NH1	2.41	0.54
38:o:64:PHE:CE1	38:o:79:PHE:HB2	2.42	0.54
41:r:8:PHE:HA	41:r:102:ASN:HA	1.89	0.54
45:v:30:ASN:N	50:3:2239:U:OP1	2.32	0.54
45:v:40:THR:HB	45:v:45:THR:HA	1.89	0.54
50:3:334:A:H1'	50:3:353:G:H1'	1.89	0.54
50:3:614:C:N3	50:3:1289:G:N1	2.42	0.54
50:3:773:G:H2'	50:3:774:A:C8	2.43	0.54
50:3:847:C:H5''	50:3:1280:G:O2'	2.08	0.54
50:3:848:U:C2	50:3:1226:G:C2	2.96	0.54
50:3:891:G:N1	50:3:959:C:N3	2.44	0.54
50:3:1111:C:H2'	50:3:1112:A:O4'	2.07	0.54
50:3:1127:C:H3'	50:3:1128:G:C8	2.42	0.54
50:3:1383:G:H2'	50:3:1384:C:H6	1.72	0.54
50:3:1467:U:H2'	50:3:1468:U:C6	2.43	0.54
50:3:1552:C:H42	50:3:1579:G:H1	1.55	0.54
50:3:1741:G:O2'	50:3:1765:G:N1	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2250:G:H2'	50:3:2251:U:C6	2.43	0.54
50:3:2291:U:O2	50:3:2333:G:C6	2.59	0.54
50:3:2418:G:H3'	50:3:2419:A:H8	1.73	0.54
50:3:2502:G:H3'	50:3:2503:G:H8	1.71	0.54
50:3:2527:U:O2	50:3:2529:C:N4	2.41	0.54
50:3:2595:A:H2'	50:3:2596:A:H5'	1.89	0.54
50:3:2703:U:C2	50:3:2722:G:O6	2.60	0.54
50:3:2712:C:H3'	50:3:2713:A:H8	1.73	0.54
52:5:100:G:H1'	52:5:101:A:N7	2.23	0.54
52:5:402:G:H2'	52:5:403:A:H8	1.73	0.54
52:5:677:C:H2'	52:5:678:A:C8	2.39	0.54
52:5:947:U:OP1	52:5:967:C:N4	2.40	0.54
52:5:1109:U:H1'	52:5:1154:A:C5	2.42	0.54
52:5:1145:A:H3'	52:5:1146:A:H8	1.73	0.54
52:5:1359:C:H2'	52:5:1360:G:C8	2.42	0.54
52:5:1395:C:H2'	52:5:1396:U:O4'	2.07	0.54
53:7:41:C:H2'	53:7:42:C:C6	2.42	0.54
4:A:21:ALA:HB2	4:A:65:LEU:HD22	1.90	0.54
7:D:148:ARG:O	7:D:183:LEU:N	2.28	0.54
9:F:3:LYS:HE3	52:5:930:A:N7	2.23	0.54
11:H:124:ARG:NE	52:5:1322:U:H4'	2.22	0.54
17:N:29:LEU:O	17:N:33:ILE:HG12	2.07	0.54
18:O:4:GLY:HA2	52:5:622:A:H4'	1.89	0.54
21:R:79:ASN:HB2	52:5:952:U:O2'	2.08	0.54
24:a:162:ARG:HG3	50:3:1825:U:H2'	1.89	0.54
29:f:93:ILE:HD11	29:f:95:LYS:HE3	1.90	0.54
42:s:58:LEU:HD13	50:3:1368:U:P	2.48	0.54
50:3:83:G:H3'	50:3:84:G:C8	2.35	0.54
50:3:500:U:H3'	50:3:501:G:N7	2.23	0.54
50:3:550:A:H1'	50:3:614:C:H1'	1.89	0.54
50:3:599:U:H4'	50:3:844:G:OP1	2.08	0.54
50:3:720:A:H61	50:3:812:G:H21	1.56	0.54
50:3:847:C:N4	50:3:1226:G:O6	2.40	0.54
50:3:1081:A:O2'	50:3:1082:A:H5'	2.08	0.54
50:3:1103:G:O2'	50:3:1131:A:O4'	2.17	0.54
50:3:1206:U:O2	50:3:1208:A:N6	2.33	0.54
50:3:1230:U:H2'	50:3:1231:G:H8	1.73	0.54
50:3:1511:C:H2'	50:3:1512:A:H8	1.73	0.54
50:3:1855:A:H1'	52:5:699:A:C8	2.43	0.54
50:3:1922:U:H3'	50:3:1923:A:C8	2.43	0.54
50:3:1959:A:H3'	50:3:1960:A:H8	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2428:C:H2'	50:3:2429:G:C8	2.43	0.54
50:3:2726:G:H3'	50:3:2727:G:C8	2.42	0.54
52:5:55:C:H5	52:5:348:C:H3'	1.71	0.54
52:5:114:C:O2'	52:5:116:A:OP1	2.24	0.54
52:5:137:A:N6	52:5:156:U:H3	2.05	0.54
52:5:222:U:H2'	52:5:223:G:O4'	2.08	0.54
52:5:369:A:H3'	52:5:370:A:H8	1.72	0.54
52:5:649:U:O2	52:5:650:A:H8	1.91	0.54
52:5:716:C:OP2	52:5:717:C:N4	2.40	0.54
52:5:804:A:H2'	52:5:805:C:O4'	2.08	0.54
52:5:1006:A:C6	52:5:1016:A:C2	2.96	0.54
52:5:1145:A:H3'	52:5:1146:A:C8	2.43	0.54
52:5:1381:U:H2'	52:5:1382:C:O4'	2.07	0.54
1:0:10:LEU:HD21	50:3:126:C:N4	2.23	0.54
1:0:21:ARG:CZ	1:0:43:THR:HA	2.37	0.54
2:1:26:THR:OG1	34:k:63:PRO:HG2	2.08	0.54
5:B:134:ARG:NH1	7:D:110:GLU:OE2	2.39	0.54
8:E:92:ARG:HH22	20:Q:85:HIS:CD2	2.26	0.54
14:K:55:PRO:HB3	14:K:102:ASP:O	2.08	0.54
19:P:46:GLN:NE2	52:5:250:G:OP1	2.41	0.54
26:c:81:ASN:H	26:c:84:PHE:HB2	1.71	0.54
34:k:124:LEU:HB2	34:k:126:PHE:CZ	2.43	0.54
37:n:88:ASN:HB3	37:n:115:ASN:HB3	1.90	0.54
39:p:50:ARG:O	39:p:54:ARG:NE	2.35	0.54
50:3:487:C:H41	50:3:490:A:H5'	1.72	0.54
50:3:525:A:C2	50:3:1312:A:C5	2.96	0.54
50:3:623:A:H2'	50:3:624:U:C6	2.43	0.54
50:3:636:U:O4	50:3:661:G:O2'	2.18	0.54
50:3:759:U:H2'	50:3:760:G:O4'	2.08	0.54
50:3:871:G:H2'	50:3:872:C:C6	2.42	0.54
50:3:893:A:H2	50:3:957:G:H22	1.54	0.54
50:3:947:A:H2'	50:3:948:A:C8	2.43	0.54
50:3:1119:A:N6	50:3:1120:A:N1	2.56	0.54
50:3:1160:G:H3'	50:3:1161:A:C8	2.42	0.54
50:3:1394:A:H2'	50:3:1395:A:O4'	2.08	0.54
50:3:1607:G:H2'	50:3:1608:C:H6	1.73	0.54
50:3:1748:U:H2'	50:3:1750:A:OP2	2.08	0.54
50:3:1837:C:H2'	50:3:1838:A:H8	1.72	0.54
50:3:2078:A:H2'	50:3:2079:G:C8	2.42	0.54
50:3:2287:G:H2'	50:3:2288:G:O4'	2.08	0.54
50:3:2384:A:H2'	50:3:2385:A:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2557:G:N1	50:3:2568:G:C6	2.76	0.54
50:3:2676:G:H2'	50:3:2677:A:C8	2.39	0.54
50:3:2812:U:H4'	50:3:2813:A:C5	2.43	0.54
51:4:93:U:C2	51:4:94:A:C8	2.95	0.54
52:5:133:G:H2'	52:5:134:G:O4'	2.08	0.54
52:5:333:U:O4	52:5:334:A:N6	2.41	0.54
52:5:386:U:H2'	52:5:387:G:C8	2.42	0.54
52:5:412:G:H2'	52:5:413:G:C8	2.42	0.54
52:5:416:U:C2	52:5:421:G:N1	2.75	0.54
52:5:484:A:H3'	52:5:485:C:H6	1.73	0.54
5:B:27:HIS:N	5:B:30:THR:HG1	2.05	0.54
7:D:198:GLY:HA2	7:D:201:LYS:HG2	1.89	0.54
8:E:16:GLU:O	8:E:20:GLN:NE2	2.34	0.54
9:F:5:ARG:NH2	52:5:1354:G:OP2	2.40	0.54
9:F:77:ARG:NH2	52:5:1356:U:O4'	2.41	0.54
13:J:33:ASN:HD22	52:5:681:U:H4'	1.73	0.54
19:P:50:GLU:N	19:P:50:GLU:OE2	2.41	0.54
22:S:64:ARG:HD3	22:S:67:ARG:NH2	2.23	0.54
24:a:228:VAL:HA	50:3:1796:A:H5''	1.88	0.54
28:e:91:ARG:NE	28:e:133:GLU:HB3	2.23	0.54
38:o:12:LEU:O	38:o:16:LYS:NZ	2.41	0.54
45:v:37:LYS:HA	45:v:47:ARG:HA	1.90	0.54
49:z:36:LYS:HZ1	50:3:2355:C:H4'	1.72	0.54
50:3:42:U:H2'	50:3:43:A:C8	2.43	0.54
50:3:218:G:H2'	50:3:219:G:C8	2.42	0.54
50:3:774:A:H1'	50:3:775:C:H5	1.72	0.54
50:3:1035:U:H2'	50:3:1036:A:H5'	1.90	0.54
50:3:1050:A:C6	50:3:1183:A:C6	2.96	0.54
50:3:1219:U:H2'	50:3:1220:A:O4'	2.07	0.54
50:3:1524:C:C2	50:3:1525:G:C8	2.97	0.54
50:3:1591:C:OP2	50:3:1592:A:O2'	2.18	0.54
50:3:1871:U:O2	50:3:1885:G:N2	2.30	0.54
50:3:2119:A:H2'	50:3:2120:G:H8	1.73	0.54
50:3:2162:U:H2'	50:3:2163:U:C6	2.43	0.54
50:3:2355:C:H5''	50:3:2390:G:C4'	2.38	0.54
50:3:2623:U:H2'	50:3:2624:C:O4'	2.08	0.54
52:5:17:A:O2'	52:5:1071:A:H4'	2.08	0.54
52:5:352:A:C5	52:5:353:G:C8	2.95	0.54
52:5:425:G:H5'	52:5:427:A:H1'	1.90	0.54
52:5:590:G:C6	52:5:645:A:C6	2.96	0.54
52:5:676:U:H2'	52:5:677:C:H6	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:949:G:H21	52:5:1202:A:H62	1.56	0.54
52:5:949:G:N2	52:5:1202:A:H62	2.06	0.54
52:5:1014:A:H3'	52:5:1015:U:C6	2.43	0.54
53:7:8:G:O2'	53:7:50:G:O4'	2.25	0.54
5:B:118:ILE:HG13	5:B:119:ILE:N	2.23	0.53
6:C:86:ALA:HB1	6:C:193:GLU:HB2	1.90	0.53
9:F:49:ILE:HG23	9:F:124:ILE:HD11	1.90	0.53
14:K:52:THR:HG1	14:K:63:ARG:C	2.15	0.53
14:K:63:ARG:HH22	52:5:520:C:H41	1.56	0.53
15:L:103:ARG:HG3	52:5:1201:C:C5	2.43	0.53
18:O:12:ARG:NH1	52:5:624:U:OP2	2.41	0.53
22:S:6:SER:OG	52:5:62:G:O6	2.22	0.53
22:S:9:LYS:HG2	22:S:12:ARG:NH1	2.22	0.53
22:S:31:ASN:HB3	22:S:47:VAL:HG12	1.89	0.53
31:h:89:ALA:H	50:3:1112:A:H4'	1.71	0.53
32:i:68:THR:HB	50:3:1176:U:H2'	1.90	0.53
33:j:2:VAL:HB	33:j:33:ALA:HB3	1.90	0.53
33:j:2:VAL:O	33:j:33:ALA:N	2.41	0.53
42:s:44:PHE:CZ	42:s:50:ILE:HB	2.42	0.53
44:u:82:LYS:HA	44:u:82:LYS:HE2	1.90	0.53
45:v:18:ARG:NH1	45:v:22:LYS:O	2.41	0.53
50:3:39:C:H2'	50:3:40:A:C8	2.43	0.53
50:3:90:G:H2'	50:3:91:G:C8	2.43	0.53
50:3:250:U:N3	50:3:256:G:N1	2.18	0.53
50:3:273:C:H3'	50:3:295:U:O4	2.08	0.53
50:3:411:U:H1'	50:3:459:A:N3	2.22	0.53
50:3:495:U:OP2	50:3:505:G:N2	2.40	0.53
50:3:930:C:H2'	50:3:931:G:C8	2.43	0.53
50:3:1033:A:H2'	50:3:1034:A:C8	2.43	0.53
50:3:1036:A:H3'	50:3:1189:G:N2	2.23	0.53
50:3:1344:U:H2'	50:3:1345:G:C8	2.43	0.53
50:3:1673:U:O2'	50:3:2707:A:H4'	2.08	0.53
50:3:1686:U:H2'	50:3:1687:G:C8	2.43	0.53
50:3:2244:U:H2'	50:3:2245:G:C8	2.43	0.53
50:3:2588:U:H3'	50:3:2589:G:C2	2.43	0.53
50:3:2603:G:H2'	50:3:2605:G:N7	2.22	0.53
50:3:2842:G:H2'	50:3:2843:G:H8	1.72	0.53
52:5:319:U:H2'	52:5:320:G:N9	2.23	0.53
52:5:512:U:H2'	52:5:513:G:C8	2.43	0.53
52:5:685:G:C6	52:5:697:G:C2	2.96	0.53
52:5:744:U:H4'	52:5:745:U:C5	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:774:A:H3'	52:5:775:G:H8	1.70	0.53
52:5:890:U:H2'	52:5:891:C:C6	2.43	0.53
52:5:955:U:H6	52:5:1197:G:O3'	1.91	0.53
52:5:1479:G:N3	52:5:1480:G:N1	2.56	0.53
4:A:85:VAL:HB	4:A:178:VAL:HA	1.90	0.53
12:I:10:PRO:HA	12:I:84:ASP:HA	1.90	0.53
19:P:79:LYS:HD3	19:P:81:ILE:HG12	1.90	0.53
24:a:47:ARG:HA	24:a:54:THR:H	1.73	0.53
26:c:30:LYS:HB3	26:c:33:PRO:HB2	1.89	0.53
26:c:130:GLN:NE2	26:c:133:PHE:HB2	2.23	0.53
26:c:200:GLU:HB3	26:c:203:VAL:HG22	1.90	0.53
32:i:70:ASN:ND2	32:i:73:GLU:OE1	2.41	0.53
33:j:91:LYS:HE3	33:j:112:ASN:H	1.73	0.53
34:k:24:HIS:NE2	50:3:846:U:OP2	2.41	0.53
41:r:6:LYS:HB2	50:3:529:G:H5'	1.90	0.53
50:3:411:U:H3	50:3:437:A:H8	1.41	0.53
50:3:939:U:H2'	50:3:940:A:H8	1.73	0.53
50:3:1237:G:H2'	50:3:1238:A:H8	1.73	0.53
50:3:1240:U:O4'	50:3:1267:A:N6	2.42	0.53
50:3:1455:A:H5''	50:3:1593:U:O4	2.09	0.53
50:3:1557:G:H1	50:3:1571:G:HO2'	1.55	0.53
50:3:1590:U:H2'	50:3:1591:C:C6	2.42	0.53
50:3:1699:A:H2'	50:3:1700:G:H8	1.71	0.53
50:3:1883:A:C6	50:3:1884:A:C6	2.97	0.53
50:3:2044:C:H2'	50:3:2045:C:C6	2.43	0.53
50:3:2111:U:H3	50:3:2193:U:H3	1.55	0.53
50:3:2829:G:C8	50:3:2830:A:H1'	2.43	0.53
51:4:22:G:O3'	51:4:25:A:N6	2.37	0.53
51:4:58:C:H2'	51:4:59:A:C8	2.44	0.53
52:5:109:G:H2'	52:5:110:U:O4'	2.08	0.53
52:5:218:U:H2'	52:5:219:A:H8	1.72	0.53
52:5:256:G:H2'	52:5:257:U:C6	2.43	0.53
52:5:503:G:H5'	52:5:532:U:H2'	1.90	0.53
52:5:689:U:N3	52:5:692:A:OP2	2.41	0.53
52:5:848:U:H2'	52:5:849:A:O4'	2.07	0.53
52:5:912:G:H2'	52:5:913:A:C8	2.43	0.53
52:5:1499:G:H2'	52:5:1500:G:C8	2.43	0.53
53:7:16:G:O2'	53:7:17:U:OP1	2.22	0.53
2:1:2:LYS:HE2	50:3:246:G:C6	2.43	0.53
3:2:19:ARG:O	3:2:22:ILE:HB	2.09	0.53
4:A:36:TYR:HB3	4:A:205:ASN:ND2	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:68:VAL:HG13	9:F:99:ALA:HB1	1.89	0.53
17:N:29:LEU:HD22	17:N:60:ARG:HB2	1.90	0.53
19:P:20:LYS:O	19:P:73:LYS:NZ	2.39	0.53
21:R:48:THR:HG22	21:R:61:TYR:HA	1.90	0.53
23:T:39:GLY:N	52:5:1501:G:OP1	2.35	0.53
25:b:49:ALA:HB2	25:b:85:ARG:HD2	1.90	0.53
27:d:25:ILE:H	51:4:53:U:H4'	1.72	0.53
39:p:49:ARG:HA	39:p:52:LYS:HE2	1.90	0.53
40:q:3:ALA:HB2	40:q:41:LEU:HD13	1.90	0.53
48:y:28:SER:HB3	48:y:39:PHE:CD1	2.43	0.53
50:3:178:A:H2'	50:3:179:A:C8	2.43	0.53
50:3:314:G:N1	50:3:393:C:N3	2.34	0.53
50:3:487:C:H2'	50:3:489:A:N7	2.23	0.53
50:3:512:G:C2	50:3:514:A:H3'	2.43	0.53
50:3:574:G:H2'	50:3:575:C:C6	2.44	0.53
50:3:616:G:N1	50:3:1288:C:O2	2.41	0.53
50:3:1050:A:C6	50:3:1051:U:C4	2.96	0.53
50:3:1940:G:N2	50:3:1974:U:O2	2.28	0.53
50:3:2151:G:H5''	50:3:2152:C:C4	2.44	0.53
50:3:2421:U:H2'	50:3:2422:G:C8	2.43	0.53
51:4:7:G:C4	51:4:8:C:N3	2.77	0.53
52:5:215:C:H2'	52:5:216:G:O4'	2.07	0.53
52:5:275:A:H5'	52:5:277:G:H5'	1.89	0.53
52:5:351:C:C4	52:5:352:A:N7	2.76	0.53
52:5:428:A:H3'	52:5:429:A:H8	1.74	0.53
52:5:666:U:H2'	52:5:667:U:C6	2.43	0.53
52:5:706:U:H2'	52:5:707:G:C8	2.43	0.53
52:5:772:G:H2'	52:5:773:G:O4'	2.08	0.53
52:5:884:G:N2	52:5:901:A:O5'	2.42	0.53
52:5:943:C:H2'	52:5:944:A:C8	2.42	0.53
52:5:1280:A:H1'	52:5:1306:A:C8	2.43	0.53
52:5:1482:A:H2'	52:5:1483:C:C6	2.43	0.53
53:7:20:G:O4'	53:7:58:G:N2	2.42	0.53
2:1:32:HIS:HD1	50:3:2398:U:H3'	1.72	0.53
2:1:54:ARG:CZ	50:3:869:U:H4'	2.38	0.53
7:D:166:ILE:H	7:D:166:ILE:HD12	1.73	0.53
7:D:189:ILE:HD12	7:D:192:ILE:HB	1.90	0.53
14:K:14:LYS:HB2	14:K:16:LYS:HD2	1.91	0.53
19:P:48:HIS:N	19:P:75:PHE:O	2.41	0.53
22:S:33:LYS:NZ	52:5:1414:U:OP1	2.31	0.53
27:d:85:ILE:HD11	50:3:2320:U:H4'	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:e:30:PRO:HD2	28:e:83:THR:HA	1.91	0.53
32:i:60:ILE:HG12	32:i:131:ASP:HA	1.90	0.53
38:o:26:SER:H	38:o:29:ASP:HB2	1.73	0.53
41:r:59:THR:HA	41:r:64:MET:H	1.74	0.53
48:y:7:ARG:HG3	50:3:1292:A:H2	1.72	0.53
48:y:10:LYS:NZ	50:3:552:C:OP2	2.34	0.53
50:3:54:A:P	50:3:120:A:H61	2.32	0.53
50:3:101:C:H5''	50:3:102:A:O5'	2.08	0.53
50:3:521:C:H2'	50:3:522:C:C6	2.43	0.53
50:3:559:C:O2'	50:3:589:A:OP1	2.26	0.53
50:3:1180:U:C2	50:3:1181:A:C8	2.97	0.53
50:3:1495:A:P	50:3:1548:A:H61	2.32	0.53
50:3:1621:U:H2'	50:3:1622:C:C5	2.43	0.53
50:3:2072:C:H2'	50:3:2073:C:C6	2.41	0.53
50:3:2151:G:HO2'	50:3:2152:C:P	2.31	0.53
50:3:2779:C:H2'	50:3:2780:U:C6	2.44	0.53
52:5:7:U:O2'	52:5:8:G:O5'	2.20	0.53
52:5:38:U:O2'	52:5:545:A:N1	2.39	0.53
6:C:9:LYS:HA	6:C:12:ARG:HD2	1.91	0.53
6:C:78:VAL:HG21	6:C:89:LEU:HB2	1.89	0.53
10:G:33:VAL:HG12	10:G:34:THR:H	1.73	0.53
15:L:102:THR:O	15:L:110:LYS:NZ	2.29	0.53
21:R:34:TRP:HZ2	52:5:1010:A:C5	2.26	0.53
25:b:125:ARG:HA	25:b:169:TYR:CE1	2.43	0.53
26:c:132:LEU:HA	26:c:135:LYS:HG3	1.90	0.53
29:f:2:LYS:HZ3	29:f:42:LYS:HZ2	1.54	0.53
33:j:108:GLU:N	33:j:108:GLU:OE2	2.42	0.53
39:p:65:ASN:HD21	39:p:69:ARG:NH1	2.07	0.53
39:p:98:ALA:O	39:p:105:PHE:HB2	2.09	0.53
40:q:82:LYS:NZ	50:3:1255:G:H4'	2.23	0.53
48:y:27:LEU:HD11	48:y:36:LYS:HE3	1.90	0.53
50:3:182:C:H3'	50:3:183:A:H8	1.74	0.53
50:3:572:G:H21	50:3:589:A:H62	1.54	0.53
50:3:861:U:H5''	50:3:2436:G:H2'	1.90	0.53
50:3:977:A:H3'	50:3:978:G:C8	2.44	0.53
50:3:1166:G:N2	50:3:2046:G:H21	2.07	0.53
50:3:1317:C:C2	50:3:1318:U:C5	2.96	0.53
50:3:1807:C:C2	50:3:1824:G:N1	2.73	0.53
50:3:1926:A:H3'	50:3:1927:C:C6	2.43	0.53
50:3:2217:G:OP2	50:3:2218:U:O2'	2.23	0.53
50:3:2312:G:N1	50:3:2320:U:O4	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2353:G:N3	50:3:2389:A:H2'	2.24	0.53
50:3:2539:A:C2	50:3:2667:G:H1'	2.44	0.53
52:5:7:U:H4'	52:5:294:A:H4'	1.90	0.53
52:5:97:G:N2	52:5:350:G:O5'	2.41	0.53
52:5:370:A:H2'	52:5:371:U:C6	2.44	0.53
52:5:698:U:O2	52:5:700:G:N1	2.41	0.53
52:5:1294:U:H2'	52:5:1295:U:C6	2.44	0.53
52:5:1321:G:O2'	52:5:1348:G:N1	2.17	0.53
52:5:1439:G:H2'	52:5:1440:U:C6	2.44	0.53
8:E:59:ARG:HH21	8:E:61:LYS:HD3	1.74	0.53
13:J:43:MET:O	13:J:46:LYS:NZ	2.41	0.53
21:R:19:VAL:HG21	21:R:44:PHE:HB3	1.91	0.53
22:S:56:ARG:HH22	52:5:219:A:H5'	1.74	0.53
22:S:67:ARG:O	22:S:70:SER:OG	2.24	0.53
25:b:10:LYS:NZ	25:b:199:GLY:O	2.34	0.53
26:c:204:LEU:HA	26:c:207:LEU:HB2	1.91	0.53
34:k:64:LYS:NZ	50:3:2402:C:O3'	2.39	0.53
34:k:112:ILE:H	34:k:129:HIS:HB2	1.73	0.53
35:l:17:TYR:CZ	35:l:39:GLY:HA3	2.44	0.53
41:r:3:ALA:HA	50:3:530:G:H4'	1.91	0.53
41:r:11:ARG:HD3	41:r:98:LYS:HD2	1.89	0.53
43:t:16:LYS:HB2	50:3:363:G:H1	1.74	0.53
43:t:88:LYS:HB2	43:t:105:LYS:HB2	1.89	0.53
44:u:46:ARG:NH1	50:3:2362:A:OP1	2.40	0.53
50:3:325:G:C5	50:3:384:G:C6	2.97	0.53
50:3:549:A:H2'	50:3:550:A:C8	2.43	0.53
50:3:702:U:H2'	50:3:703:A:C8	2.43	0.53
50:3:995:A:N3	50:3:2465:U:O2'	2.37	0.53
50:3:1541:A:H3'	50:3:1542:G:C8	2.39	0.53
50:3:1749:A:H2'	50:3:1750:A:C8	2.43	0.53
50:3:1942:G:H1'	50:3:1971:G:N2	2.23	0.53
50:3:2006:C:C2	50:3:2007:U:C5	2.97	0.53
50:3:2503:G:C6	50:3:2504:C:N4	2.77	0.53
50:3:2556:C:H2'	50:3:2557:G:H8	1.72	0.53
50:3:2852:G:HO2'	50:3:2871:G:H1	0.62	0.53
52:5:108:C:OP1	52:5:307:C:O2'	2.24	0.53
52:5:193:G:H2'	52:5:194:U:O4'	2.09	0.53
52:5:236:C:H2'	52:5:237:A:H8	1.73	0.53
52:5:242:A:C2	52:5:278:A:C4	2.96	0.53
52:5:317:A:N6	52:5:324:C:O2'	2.34	0.53
52:5:542:G:H2'	52:5:543:C:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:777:A:C2	52:5:798:U:C5	2.97	0.53
52:5:1065:G:H2'	52:5:1066:U:C6	2.43	0.53
52:5:1127:A:OP2	52:5:1127:A:H2'	2.09	0.53
1:0:9:LYS:NZ	50:3:1338:G:OP2	2.36	0.53
4:A:46:GLU:OE2	4:A:49:ARG:NE	2.27	0.53
4:A:98:ASN:HA	4:A:101:LYS:HG2	1.91	0.53
4:A:171:ARG:NH1	4:A:172:LEU:O	2.40	0.53
5:B:153:LYS:HB2	5:B:172:ILE:HD13	1.90	0.53
5:B:179:SER:O	52:5:1103:C:N4	2.41	0.53
6:C:150:LYS:HZ2	6:C:151:ILE:HD11	1.74	0.53
15:L:27:LEU:HD12	15:L:28:SER:N	2.23	0.53
28:e:55:ILE:HG13	28:e:68:HIS:CD2	2.44	0.53
29:f:61:ASN:HA	29:f:64:LEU:HG	1.90	0.53
31:h:76:LEU:O	31:h:80:ALA:CB	2.55	0.53
43:t:70:PHE:CE2	50:3:362:U:H4'	2.44	0.53
48:y:6:ARG:NH2	50:3:2026:A:H3'	2.24	0.53
50:3:368:C:H5''	50:3:370:C:OP2	2.09	0.53
50:3:1064:A:H3'	50:3:1065:G:H8	1.72	0.53
50:3:1295:A:H4'	50:3:1296:G:H4'	1.91	0.53
50:3:1389:G:H2'	50:3:1390:C:C6	2.44	0.53
50:3:1868:A:N1	50:3:1888:U:C4	2.76	0.53
50:3:1920:A:H61	52:5:1468:A:H2'	1.74	0.53
50:3:2017:G:H2'	50:3:2018:U:H6	1.73	0.53
50:3:2137:A:O2'	50:3:2165:A:N6	2.41	0.53
50:3:2176:G:O2'	50:3:2178:A:N6	2.31	0.53
50:3:2179:A:H1'	50:3:2180:U:C5	2.43	0.53
50:3:2289:C:O3'	50:3:2397:G:N2	2.25	0.53
50:3:2339:G:H21	50:3:2344:A:H2	1.57	0.53
50:3:2479:A:H3'	50:3:2480:G:H8	1.74	0.53
50:3:2646:G:N1	50:3:2784:A:OP2	2.40	0.53
50:3:2831:U:H2'	50:3:2832:G:H8	1.73	0.53
51:4:75:U:H2'	51:4:76:A:H8	1.73	0.53
52:5:637:A:H2'	52:5:638:A:C8	2.44	0.53
52:5:698:U:H5'	52:5:700:G:O4'	2.07	0.53
52:5:1000:A:H3'	52:5:1019:G:N1	2.18	0.53
52:5:1441:C:H3'	52:5:1442:A:C8	2.44	0.53
4:A:136:LYS:O	4:A:140:ASN:N	2.27	0.53
7:D:77:SER:HA	7:D:85:ASN:O	2.09	0.53
16:M:41:ARG:HG2	16:M:42:LEU:N	2.24	0.53
17:N:50:LYS:HG2	17:N:54:TYR:CE2	2.44	0.53
28:e:159:PRO:O	28:e:175:LYS:N	2.36	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:e:167:TYR:N	28:e:170:GLU:OE2	2.35	0.53
30:g:21:SER:CB	30:g:87:ASN:H	2.22	0.53
33:j:16:ALA:HB2	33:j:52:VAL:HG11	1.91	0.53
41:r:34:ASN:OD1	41:r:35:ILE:N	2.39	0.53
50:3:116:C:H2'	50:3:117:C:H6	1.73	0.53
50:3:301:G:C4	50:3:302:G:C8	2.96	0.53
50:3:1446:G:H22	50:3:1613:A:P	2.31	0.53
50:3:1597:U:H2'	50:3:1598:U:O4'	2.08	0.53
50:3:2188:U:H2'	50:3:2189:U:C6	2.44	0.53
50:3:2338:G:C6	50:3:2339:G:C6	2.96	0.53
50:3:2465:U:H3'	50:3:2466:G:H8	1.74	0.53
50:3:2656:G:C2	50:3:2681:G:C4	2.97	0.53
50:3:2895:A:H2'	50:3:2896:G:H8	1.72	0.53
51:4:22:G:H22	51:4:57:G:H1	1.54	0.53
51:4:105:A:H2'	51:4:106:A:O4'	2.09	0.53
52:5:133:G:N2	52:5:1422:A:H1'	2.20	0.53
52:5:294:A:H2'	52:5:295:G:C8	2.44	0.53
52:5:334:A:H2	52:5:347:G:C2	2.24	0.53
52:5:1062:C:H2'	52:5:1063:G:C8	2.43	0.53
8:E:94:TYR:HB3	20:Q:50:ARG:HD3	1.90	0.53
12:I:62:HIS:CE1	52:5:1174:U:H4'	2.44	0.53
25:b:141:HIS:HE2	50:3:1692:A:P	2.30	0.53
33:j:109:ARG:HB2	33:j:111:TYR:CE2	2.43	0.53
35:l:4:PRO:HD2	35:l:93:TRP:CZ2	2.44	0.53
36:m:74:ASP:HB2	36:m:77:GLN:HG3	1.91	0.53
44:u:68:GLY:HA3	50:3:2372:C:O2'	2.08	0.53
50:3:101:C:H4'	50:3:103:G:C4	2.43	0.53
50:3:148:U:H2'	50:3:149:A:C8	2.44	0.53
50:3:325:G:O6	50:3:383:U:C2	2.62	0.53
50:3:663:A:O3'	50:3:664:G:H8	1.91	0.53
50:3:937:A:H3'	50:3:938:A:C8	2.43	0.53
50:3:1063:A:H2'	50:3:1064:A:C8	2.43	0.53
50:3:1201:A:C5	50:3:1215:G:C6	2.96	0.53
50:3:1315:A:H3'	50:3:1316:U:O2	2.09	0.53
50:3:1519:A:H8	50:3:1520:A:C8	2.27	0.53
50:3:2056:A:H2'	50:3:2057:C:C6	2.43	0.53
50:3:2106:G:H22	50:3:2198:G:N2	2.06	0.53
50:3:2292:A:H2'	50:3:2293:C:C6	2.43	0.53
50:3:2738:U:H2'	50:3:2739:C:C6	2.44	0.53
50:3:2743:U:H2'	50:3:2744:A:H8	1.74	0.53
50:3:2815:G:O6	50:3:2894:G:N2	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2850:G:H2'	50:3:2851:U:C6	2.43	0.53
52:5:499:U:O4	52:5:542:G:O6	2.27	0.53
52:5:535:A:H2'	52:5:536:U:C6	2.43	0.53
52:5:555:G:O6	52:5:556:G:N1	2.42	0.53
52:5:694:U:OP2	52:5:694:U:H6	1.92	0.53
52:5:799:A:H3'	52:5:800:G:H8	1.72	0.53
52:5:1206:G:H2'	52:5:1207:U:O4'	2.09	0.53
5:B:55:ASN:OD1	5:B:70:TYR:HB2	2.09	0.53
6:C:47:MET:SD	6:C:52:GLN:HB3	2.48	0.53
6:C:78:VAL:HG12	6:C:85:LEU:HB3	1.91	0.53
7:D:111:VAL:HB	7:D:112:PRO:HD3	1.90	0.53
8:E:42:LEU:HB2	8:E:56:HIS:CE1	2.43	0.53
10:G:127:VAL:HA	10:G:130:LEU:HB3	1.91	0.53
24:a:145:THR:HA	24:a:169:ARG:HH11	1.73	0.53
25:b:16:VAL:O	25:b:24:LEU:N	2.36	0.53
26:c:81:ASN:HB2	26:c:84:PHE:CD2	2.44	0.53
27:d:29:PRO:HB3	27:d:160:THR:HG23	1.91	0.53
28:e:110:LEU:HD12	28:e:155:ARG:HE	1.74	0.53
39:p:91:ARG:CZ	40:q:11:GLN:H	2.22	0.53
40:q:44:LYS:HE3	40:q:53:ALA:HB2	1.90	0.53
42:s:59:ILE:HG22	42:s:79:LYS:HA	1.90	0.53
45:v:53:ARG:NH2	50:3:433:A:N7	2.57	0.53
50:3:454:G:C2	50:3:455:G:C5	2.97	0.53
50:3:848:U:H2'	50:3:849:C:H6	1.74	0.53
50:3:1108:A:H2'	50:3:1109:G:O4'	2.09	0.53
50:3:1284:A:H5''	50:3:1285:U:H5''	1.91	0.53
50:3:1489:G:C2	50:3:1490:G:C4	2.97	0.53
50:3:1895:G:O3'	50:3:1896:A:H8	1.92	0.53
50:3:1924:U:H2'	50:3:1925:A:C8	2.43	0.53
50:3:2680:C:H2'	50:3:2681:G:O4'	2.09	0.53
52:5:248:U:O4	52:5:269:A:N6	2.42	0.53
52:5:538:G:H2'	52:5:539:G:O4'	2.08	0.53
52:5:611:A:H2'	52:5:612:G:O4'	2.09	0.53
52:5:633:U:H2'	52:5:634:U:H6	1.74	0.53
52:5:897:A:H2'	52:5:898:A:O4'	2.09	0.53
52:5:977:U:H1'	52:5:979:C:C4	2.43	0.53
52:5:1231:U:OP2	52:5:1254:A:N6	2.42	0.53
8:E:101:ASN:OD1	8:E:101:ASN:N	2.42	0.52
17:N:36:LEU:HD11	17:N:49:SER:HB3	1.91	0.52
18:O:67:PHE:HD1	18:O:72:LEU:HD12	1.73	0.52
25:b:42:GLU:CD	25:b:47:TYR:HA	2.34	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:c:70:HIS:CD2	50:3:2066:A:H4'	2.45	0.52
26:c:158:LEU:HA	26:c:179:GLN:HG3	1.90	0.52
41:r:90:LYS:NZ	50:3:783:G:O5'	2.42	0.52
45:v:53:ARG:NH1	50:3:431:U:H3'	2.22	0.52
46:w:47:THR:HA	46:w:50:LEU:HB3	1.89	0.52
50:3:164:A:OP2	50:3:164:A:H8	1.92	0.52
50:3:279:U:H3'	50:3:280:A:H8	1.74	0.52
50:3:511:U:H2'	50:3:512:G:O4'	2.09	0.52
50:3:520:C:H2'	50:3:521:C:C6	2.44	0.52
50:3:1053:C:H2'	50:3:1054:U:O4'	2.08	0.52
50:3:1228:G:H1'	50:3:1257:G:OP1	2.08	0.52
50:3:1310:U:C4	50:3:1314:A:N7	2.77	0.52
50:3:1649:C:O2'	50:3:1651:C:H5''	2.09	0.52
50:3:1814:G:H22	50:3:1816:A:H3'	1.74	0.52
50:3:2188:U:O2'	50:3:2189:U:O4'	2.24	0.52
50:3:2225:G:H2'	50:3:2226:U:C6	2.44	0.52
50:3:2295:A:C5	50:3:2297:G:C8	2.97	0.52
51:4:96:G:H2'	51:4:97:A:O4'	2.09	0.52
52:5:763:A:H3'	52:5:764:A:H8	1.74	0.52
52:5:901:A:H2'	52:5:902:A:O4'	2.09	0.52
52:5:944:A:H4'	52:5:1339:U:O4	2.10	0.52
52:5:1065:G:O2'	52:5:1092:A:N6	2.42	0.52
52:5:1279:G:H1'	52:5:1306:A:N6	2.24	0.52
52:5:1289:U:H2'	52:5:1290:G:C8	2.44	0.52
53:7:19:G:H21	53:7:58:G:H2'	1.73	0.52
1:0:24:THR:O	1:0:28:ARG:HG3	2.09	0.52
4:A:51:HIS:CE1	4:A:53:ASN:HD22	2.28	0.52
4:A:151:MET:SD	4:A:154:ARG:NE	2.81	0.52
14:K:99:ARG:NH1	14:K:104:PRO:HA	2.24	0.52
16:M:45:ARG:NH1	52:5:1050:U:H5''	2.23	0.52
21:R:81:LYS:H	52:5:1200:G:H21	1.56	0.52
25:b:30:TYR:HA	25:b:190:LEU:HD12	1.90	0.52
27:d:93:GLY:C	27:d:97:TRP:HD1	2.16	0.52
28:e:4:ILE:HD11	50:3:2756:A:O5'	2.08	0.52
29:f:99:ASN:HB3	50:3:165:U:H5'	1.91	0.52
34:k:64:LYS:NZ	50:3:253:C:O2'	2.40	0.52
38:o:12:LEU:O	38:o:15:GLN:NE2	2.43	0.52
38:o:30:GLU:HB3	38:o:92:ARG:O	2.10	0.52
42:s:10:PRO:HD2	46:w:31:PHE:CD1	2.43	0.52
50:3:17:G:C2	50:3:560:U:O2	2.62	0.52
50:3:317:U:H2'	50:3:318:U:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:349:G:H2'	50:3:350:C:C6	2.43	0.52
50:3:418:G:N1	50:3:430:U:N3	2.55	0.52
50:3:514:A:H62	50:3:537:A:H62	1.58	0.52
50:3:1127:C:H2'	50:3:1128:G:O4'	2.08	0.52
50:3:1339:U:H4'	50:3:1341:U:H5	1.74	0.52
50:3:1536:C:H2'	50:3:1537:A:C8	2.45	0.52
50:3:1896:A:H2'	50:3:1897:A:C8	2.44	0.52
50:3:1920:A:N6	52:5:1468:A:H2'	2.23	0.52
50:3:2088:U:H3'	50:3:2245:G:H1	1.74	0.52
50:3:2371:U:H2'	50:3:2372:C:H6	1.74	0.52
50:3:2695:U:H2'	50:3:2696:G:O4'	2.09	0.52
50:3:2708:G:H2'	50:3:2709:C:O4'	2.09	0.52
52:5:152:U:H2'	52:5:153:A:C8	2.44	0.52
52:5:628:A:H5''	52:5:629:U:C4	2.45	0.52
52:5:685:G:N2	52:5:697:G:H1'	2.25	0.52
52:5:717:C:H5	52:5:718:A:C4	2.27	0.52
52:5:978:A:H2	52:5:979:C:N1	2.08	0.52
52:5:1136:G:H8	52:5:1157:G:N2	1.87	0.52
52:5:1217:G:N1	52:5:1269:U:N3	2.56	0.52
8:E:9:VAL:HG21	8:E:56:HIS:HD2	1.74	0.52
12:I:46:LEU:HD21	52:5:1116:U:C6	2.44	0.52
13:J:44:GLY:O	13:J:49:ARG:NH1	2.41	0.52
15:L:68:ASP:N	15:L:71:ARG:HH11	2.08	0.52
19:P:29:ARG:HE	52:5:595:G:H4'	1.75	0.52
20:Q:67:TYR:HA	20:Q:103:LYS:O	2.08	0.52
24:a:70:ASP:HB3	24:a:109:ILE:HG22	1.90	0.52
24:a:127:PRO:CA	24:a:140:PHE:HB3	2.39	0.52
25:b:23:ARG:NH1	50:3:2736:U:H4'	2.24	0.52
25:b:24:LEU:HD12	25:b:25:PRO:HD2	1.91	0.52
27:d:37:ASN:HA	27:d:88:LYS:HD3	1.92	0.52
27:d:57:LEU:O	27:d:61:SER:OG	2.24	0.52
28:e:142:GLU:OE2	50:3:2768:U:H1'	2.09	0.52
34:k:93:ILE:HD11	34:k:124:LEU:HB3	1.91	0.52
35:l:120:ARG:CZ	50:3:2476:A:H5'	2.39	0.52
36:m:73:PHE:CG	36:m:78:LEU:HG	2.44	0.52
40:q:14:VAL:HG13	40:q:18:ASP:HB2	1.91	0.52
42:s:60:ARG:NH1	50:3:1367:G:H3'	2.24	0.52
44:u:69:SER:N	50:3:2372:C:O3'	2.33	0.52
48:y:30:CYS:SG	48:y:37:LYS:N	2.79	0.52
50:3:225:A:H5'	50:3:237:A:O2'	2.09	0.52
50:3:227:A:N1	50:3:443:C:O2'	2.36	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:542:A:H5''	50:3:543:U:H3'	1.91	0.52
50:3:944:U:H2'	50:3:945:U:H6	1.75	0.52
50:3:967:U:H2'	50:3:968:U:C2	2.44	0.52
50:3:1409:G:H2'	50:3:1410:A:C8	2.44	0.52
50:3:1942:G:N2	50:3:1971:G:O4'	2.43	0.52
50:3:2039:G:O6	50:3:2461:A:O2'	2.27	0.52
50:3:2207:A:H61	50:3:2232:G:H1'	1.74	0.52
50:3:2504:C:O2'	50:3:2505:A:OP1	2.25	0.52
50:3:2892:U:H2'	50:3:2893:C:C6	2.44	0.52
50:3:2895:A:H2'	50:3:2896:G:C8	2.43	0.52
52:5:36:G:C6	52:5:548:G:N1	2.77	0.52
52:5:293:G:H22	52:5:295:G:H3'	1.73	0.52
52:5:411:A:H3'	52:5:412:G:H8	1.74	0.52
52:5:713:A:H2'	52:5:714:C:C6	2.44	0.52
52:5:854:A:H2'	52:5:855:G:O4'	2.10	0.52
52:5:947:U:H2'	52:5:948:U:C6	2.44	0.52
52:5:973:A:C8	52:5:974:C:H5	2.28	0.52
52:5:997:G:N2	52:5:998:G:O4'	2.42	0.52
52:5:1204:A:H4'	53:7:31:G:OP1	2.10	0.52
52:5:1445:G:H2'	52:5:1446:A:C8	2.44	0.52
52:5:1487:U:H3	52:5:1498:G:H22	1.58	0.52
5:B:74:PRO:HB3	5:B:106:ILE:HB	1.90	0.52
5:B:152:ILE:O	5:B:172:ILE:HD12	2.10	0.52
9:F:142:LYS:HB2	9:F:143:MET:HE2	1.91	0.52
11:H:115:ARG:HD3	16:M:61:TRP:CE3	2.45	0.52
15:L:119:LYS:NZ	15:L:120:LYS:O	2.37	0.52
24:a:218:ARG:HA	50:3:1600:A:C8	2.44	0.52
29:f:21:VAL:CG1	29:f:22:LYS:N	2.72	0.52
29:f:100:GLN:O	29:f:104:LYS:HG3	2.09	0.52
35:l:116:LYS:O	35:l:119:THR:OG1	2.26	0.52
36:m:109:ASP:OD2	50:3:1683:G:O2'	2.26	0.52
38:o:34:ALA:HB1	38:o:45:ILE:HD12	1.91	0.52
39:p:85:HIS:CE1	39:p:114:SER:HA	2.44	0.52
44:u:57:THR:H	50:3:2338:G:N2	1.98	0.52
50:3:223:A:N3	50:3:238:U:O2'	2.36	0.52
50:3:620:G:H4'	50:3:621:U:C6	2.45	0.52
50:3:869:U:H2'	50:3:870:A:H8	1.74	0.52
50:3:1104:A:O2'	50:3:1108:A:OP1	2.27	0.52
50:3:1310:U:H2'	50:3:1311:G:O4'	2.09	0.52
50:3:1525:G:H3'	50:3:1526:U:H6	1.73	0.52
50:3:1553:G:N1	50:3:1577:A:OP2	2.31	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1761:C:H2'	50:3:1762:A:C8	2.45	0.52
50:3:1837:C:H2'	50:3:1838:A:C8	2.45	0.52
50:3:2213:A:C2	50:3:2228:U:C2	2.97	0.52
50:3:2605:G:H2'	50:3:2606:A:C8	2.44	0.52
50:3:2829:G:H3'	50:3:2830:A:H8	1.74	0.52
51:4:23:A:H3'	51:4:24:A:H8	1.74	0.52
52:5:352:A:C2	52:5:353:G:H1'	2.45	0.52
52:5:358:G:O2'	52:5:360:A:N6	2.24	0.52
52:5:369:A:H1'	52:5:478:G:N3	2.24	0.52
52:5:437:U:O4	52:5:438:A:N6	2.42	0.52
52:5:558:U:H5'	52:5:564:G:H21	1.75	0.52
52:5:633:U:H2'	52:5:634:U:C6	2.45	0.52
52:5:1225:A:N3	52:5:1345:G:O2'	2.37	0.52
52:5:1323:A:H61	52:5:1348:G:C2'	2.22	0.52
2:1:2:LYS:HA	50:3:246:G:H2'	1.91	0.52
5:B:29:GLN:OE1	5:B:29:GLN:N	2.41	0.52
5:B:185:ILE:N	5:B:207:ARG:HH11	2.08	0.52
6:C:148:THR:HA	6:C:151:ILE:HG12	1.92	0.52
10:G:41:LYS:O	10:G:45:LEU:HG	2.09	0.52
11:H:124:ARG:HB2	52:5:1323:A:OP1	2.09	0.52
16:M:4:LYS:NZ	52:5:1038:G:OP1	2.42	0.52
25:b:143:PHE:HD1	25:b:145:GLY:H	1.57	0.52
26:c:8:LYS:HB2	26:c:12:SER:OG	2.09	0.52
27:d:99:PHE:CZ	27:d:103:LEU:HD11	2.44	0.52
29:f:77:LEU:HD13	29:f:97:ILE:HG22	1.92	0.52
37:n:9:ARG:O	37:n:13:LYS:HG3	2.09	0.52
38:o:62:GLU:HB3	38:o:81:ILE:HD12	1.90	0.52
38:o:97:ARG:HH22	50:3:2853:U:H2'	1.73	0.52
42:s:6:VAL:HG12	42:s:32:ASN:HD22	1.74	0.52
42:s:38:THR:O	42:s:41:LYS:HG2	2.09	0.52
42:s:58:LEU:HG	42:s:80:LEU:HB2	1.91	0.52
43:t:34:ALA:O	43:t:68:PRO:HA	2.09	0.52
45:v:30:ASN:HB2	50:3:2238:G:H5''	1.91	0.52
46:w:95:LYS:O	46:w:99:LEU:HG	2.09	0.52
50:3:35:U:O2'	50:3:482:G:N2	2.43	0.52
50:3:110:A:H2'	50:3:111:G:C8	2.45	0.52
50:3:341:G:N2	50:3:343:A:H3'	2.25	0.52
50:3:371:C:H3'	50:3:372:G:C8	2.43	0.52
50:3:420:A:N7	50:3:425:U:C4	2.77	0.52
50:3:471:A:P	50:3:471:A:H8	2.32	0.52
50:3:608:A:H2'	50:3:609:U:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:710:A:H2'	50:3:711:A:C8	2.45	0.52
50:3:873:G:H1'	50:3:977:A:N6	2.25	0.52
50:3:896:U:OP2	50:3:953:G:N2	2.36	0.52
50:3:941:C:H2'	50:3:942:A:C8	2.44	0.52
50:3:1234:U:H2'	50:3:1235:U:C2	2.45	0.52
50:3:1253:G:N1	50:3:1256:A:OP2	2.28	0.52
50:3:1728:A:H1'	50:3:1729:G:C6	2.44	0.52
50:3:1939:A:H2'	50:3:1940:G:O4'	2.10	0.52
50:3:2099:U:OP2	50:3:2207:A:O2'	2.19	0.52
50:3:2702:G:H3'	50:3:2703:U:H6	1.75	0.52
52:5:110:U:H2'	52:5:111:A:C8	2.44	0.52
52:5:144:U:N3	52:5:149:G:C6	2.76	0.52
52:5:462:G:H2'	52:5:463:U:C2	2.45	0.52
52:5:689:U:O2'	52:5:691:A:N7	2.36	0.52
52:5:863:A:H4'	52:5:866:A:C4	2.44	0.52
52:5:1001:A:H1'	52:5:1029:C:H4'	1.90	0.52
52:5:1213:A:OP1	52:5:1309:U:O2'	2.28	0.52
52:5:1305:G:H1'	52:5:1306:A:H2	1.74	0.52
52:5:1363:U:H2'	52:5:1364:C:C6	2.45	0.52
53:7:19:G:N7	53:7:59:A:N6	2.58	0.52
8:E:70:LYS:O	8:E:74:ARG:HG2	2.09	0.52
8:E:97:LEU:HG	8:E:99:SER:H	1.74	0.52
10:G:18:LEU:HB2	10:G:41:LYS:HZ2	1.75	0.52
10:G:67:LYS:HG2	52:5:650:A:C5	2.45	0.52
14:K:131:GLY:HA2	52:5:36:G:H4'	1.91	0.52
22:S:49:SER:HG	22:S:53:ARG:HH21	1.50	0.52
22:S:64:ARG:HD3	22:S:67:ARG:HH21	1.74	0.52
24:a:44:HIS:NE2	50:3:1820:U:H5''	2.24	0.52
24:a:78:ASN:OD1	29:f:87:ARG:NH2	2.43	0.52
25:b:83:GLU:CD	50:3:2644:U:H4'	2.34	0.52
26:c:183:LEU:HD11	26:c:207:LEU:HD11	1.92	0.52
27:d:42:ASP:OD1	27:d:42:ASP:N	2.39	0.52
28:e:99:ALA:H	28:e:131:ASN:HB3	1.75	0.52
28:e:126:VAL:HG12	28:e:136:ILE:HA	1.90	0.52
29:f:76:GLU:HB3	29:f:139:LYS:NZ	2.24	0.52
44:u:53:ARG:NH1	44:u:72:THR:OG1	2.43	0.52
50:3:227:A:OP2	50:3:458:A:H4'	2.09	0.52
50:3:230:G:H1	50:3:454:G:N2	2.08	0.52
50:3:573:A:H3'	50:3:574:G:H8	1.74	0.52
50:3:601:U:H5'	50:3:981:A:N6	2.25	0.52
50:3:1245:G:H2'	50:3:1246:U:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1455:A:N6	50:3:1604:A:H3'	2.25	0.52
50:3:1618:U:H4'	50:3:1619:A:OP2	2.08	0.52
50:3:1838:A:N6	50:3:1982:G:O6	2.42	0.52
50:3:1870:G:H2'	50:3:1871:U:H6	1.71	0.52
50:3:1948:C:H2'	50:3:1949:C:O4'	2.10	0.52
50:3:2272:C:H2'	50:3:2273:U:O4'	2.09	0.52
50:3:2303:U:H3	50:3:2345:G:H1	0.69	0.52
50:3:2597:A:N6	50:3:2614:U:O4	2.42	0.52
50:3:2855:A:C5	50:3:2856:G:C5	2.97	0.52
52:5:56:A:H62	52:5:353:G:N2	2.08	0.52
52:5:298:G:O2'	52:5:554:C:OP1	2.19	0.52
52:5:303:A:H3'	52:5:304:U:C6	2.45	0.52
52:5:555:G:C6	52:5:556:G:C2	2.97	0.52
52:5:673:A:H2'	52:5:674:U:C6	2.44	0.52
52:5:786:U:H3'	52:5:788:G:OP2	2.10	0.52
52:5:1156:G:H1'	52:5:1157:G:C5	2.44	0.52
52:5:1160:G:H2'	52:5:1161:G:H8	1.74	0.52
52:5:1392:A:H2	52:5:1458:A:N7	2.08	0.52
2:1:20:LYS:HD2	2:1:44:GLN:HE21	1.74	0.52
4:A:112:TRP:HA	4:A:163:PHE:HZ	1.73	0.52
6:C:131:THR:HG23	52:5:399:C:H5'	1.91	0.52
7:D:116:LYS:O	7:D:120:LYS:HG3	2.10	0.52
7:D:205:PRO:HB2	10:G:111:LEU:HG	1.92	0.52
8:E:105:GLN:NE2	52:5:837:G:O6	2.42	0.52
9:F:92:GLN:HA	9:F:95:LYS:HD3	1.92	0.52
13:J:43:MET:SD	13:J:62:LYS:NZ	2.71	0.52
19:P:56:LYS:HG3	19:P:57:ASP:N	2.24	0.52
28:e:3:LYS:HD2	28:e:4:ILE:H	1.74	0.52
32:i:15:ARG:N	32:i:52:ASP:OD2	2.37	0.52
48:y:30:CYS:HB2	48:y:35:LYS:H	1.75	0.52
49:z:9:LEU:HD21	49:z:47:HIS:HB3	1.92	0.52
50:3:301:G:N2	50:3:406:C:C2	2.77	0.52
50:3:1128:G:C2'	50:3:1133:A:H61	2.23	0.52
50:3:1220:A:H3'	50:3:1221:G:C8	2.40	0.52
50:3:1379:C:H2'	50:3:1380:U:C6	2.45	0.52
50:3:1654:G:H8	50:3:1654:G:O5'	1.92	0.52
50:3:1785:U:O2	50:3:1792:A:C6	2.62	0.52
50:3:2459:A:C5	50:3:2460:C:N4	2.78	0.52
50:3:2523:C:H2'	50:3:2524:U:C5	2.45	0.52
50:3:2540:G:H3'	50:3:2541:C:H6	1.74	0.52
50:3:2770:U:H2'	50:3:2771:G:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:48:C:C5	52:5:361:U:H3'	2.44	0.52
52:5:291:C:H2'	52:5:292:U:C6	2.44	0.52
52:5:601:U:H2'	52:5:602:G:C8	2.43	0.52
52:5:662:G:N2	52:5:730:G:OP2	2.41	0.52
52:5:818:A:H2'	52:5:819:G:C8	2.45	0.52
52:5:852:G:H1	52:5:864:U:P	2.32	0.52
52:5:1078:G:H2'	52:5:1079:G:H8	1.74	0.52
52:5:1125:C:H2'	52:5:1126:U:C2	2.45	0.52
52:5:1241:G:N1	52:5:1244:A:OP2	2.42	0.52
52:5:1351:U:H2'	52:5:1352:A:C8	2.45	0.52
52:5:1396:U:H1'	52:5:1455:G:N2	2.25	0.52
52:5:1462:G:H2'	52:5:1463:A:C8	2.44	0.52
1:0:8:SER:OG	1:0:11:LYS:HB3	2.10	0.52
1:0:16:HIS:HB3	1:0:21:ARG:HH21	1.75	0.52
1:0:30:VAL:HA	1:0:33:LEU:HD12	1.92	0.52
6:C:97:LEU:N	6:C:134:ILE:O	2.43	0.52
7:D:166:ILE:O	7:D:170:ILE:HG12	2.10	0.52
14:K:127:ARG:HG2	52:5:500:G:P	2.49	0.52
16:M:58:LYS:NZ	16:M:60:SER:HB2	2.25	0.52
19:P:32:HIS:CE1	19:P:35:TYR:H	2.27	0.52
22:S:55:ALA:HA	22:S:60:ILE:HB	1.92	0.52
25:b:165:MET:SD	50:3:2628:U:H1'	2.49	0.52
29:f:19:VAL:O	29:f:21:VAL:HG23	2.10	0.52
35:l:1:MET:HE3	35:l:48:GLU:HB2	1.92	0.52
42:s:27:TYR:OH	42:s:90:ALA:HB1	2.10	0.52
46:w:52:ALA:O	46:w:56:THR:OG1	2.23	0.52
48:y:13:ARG:NH1	48:y:14:ASP:OD1	2.43	0.52
50:3:140:G:O2'	50:3:142:A:N6	2.35	0.52
50:3:161:U:H3'	50:3:162:G:C8	2.44	0.52
50:3:210:U:H2'	50:3:211:A:O4'	2.10	0.52
50:3:359:G:H2'	50:3:360:G:C8	2.44	0.52
50:3:405:C:H2'	50:3:406:C:C6	2.44	0.52
50:3:499:G:N2	50:3:501:G:H3'	2.25	0.52
50:3:612:G:C5	50:3:1292:A:C6	2.98	0.52
50:3:654:G:H2'	50:3:655:G:H8	1.75	0.52
50:3:746:G:C6	50:3:756:A:C6	2.98	0.52
50:3:766:C:H2'	50:3:767:C:H6	1.75	0.52
50:3:786:A:H2'	50:3:1788:A:N1	2.25	0.52
50:3:1166:G:C2	50:3:2032:G:H1'	2.44	0.52
50:3:1311:G:H1'	50:3:1357:U:O2	2.10	0.52
50:3:1314:A:HO2'	50:3:1316:U:P	2.33	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1383:G:H2'	50:3:1384:C:C6	2.45	0.52
50:3:2890:G:H2'	50:3:2891:C:C6	2.44	0.52
51:4:16:G:C6	51:4:63:U:O2	2.63	0.52
52:5:288:A:H3'	52:5:289:U:C6	2.42	0.52
52:5:655:G:C5	52:5:746:A:C6	2.98	0.52
52:5:849:A:H8	52:5:865:U:O4	1.93	0.52
52:5:892:G:H2'	52:5:894:A:N7	2.24	0.52
52:5:1321:G:H22	52:5:1349:A:P	2.31	0.52
52:5:1364:C:H2'	52:5:1365:U:C6	2.45	0.52
52:5:1383:A:N6	52:5:1469:G:O6	2.43	0.52
52:5:1393:A:C4	52:5:1394:G:H1'	2.45	0.52
53:7:36:A:N1	53:7:37:A:N6	2.57	0.52
6:C:53:GLN:HG2	6:C:195:TYR:HB3	1.92	0.52
8:E:5:ILE:O	8:E:59:ARG:HA	2.10	0.52
8:E:84:ARG:HB3	20:Q:96:LEU:HD22	1.91	0.52
9:F:104:ALA:O	9:F:108:ARG:HG2	2.10	0.52
14:K:28:LEU:HD13	14:K:33:LYS:HA	1.91	0.52
21:R:37:ARG:HH21	52:5:1292:A:H1'	1.74	0.52
25:b:148:GLN:OE1	25:b:150:GLY:N	2.41	0.52
29:f:94:THR:HA	29:f:97:ILE:HG12	1.90	0.52
31:h:9:ILE:N	31:h:57:ALA:HB2	2.25	0.52
35:l:111:GLU:HA	35:l:114:MET:HE3	1.91	0.52
50:3:25:G:H2'	50:3:26:G:C8	2.45	0.52
50:3:122:G:C4	50:3:132:G:C2	2.97	0.52
50:3:150:U:H2'	50:3:151:C:C6	2.45	0.52
50:3:332:G:H1'	50:3:374:A:H61	1.74	0.52
50:3:638:A:N6	50:3:639:G:C6	2.78	0.52
50:3:677:U:H2'	50:3:678:U:O4'	2.10	0.52
50:3:767:C:H2'	50:3:768:G:O4'	2.10	0.52
50:3:1138:A:H3'	50:3:1139:C:C5	2.45	0.52
50:3:1210:A:H8	50:3:1210:A:OP1	1.92	0.52
50:3:1261:U:H2'	50:3:1262:G:C8	2.34	0.52
50:3:1478:U:H2'	50:3:1479:A:C8	2.45	0.52
50:3:1974:U:H3'	50:3:1975:G:H8	1.74	0.52
50:3:2172:A:H3'	50:3:2173:G:C8	2.45	0.52
50:3:2307:G:C2	50:3:2326:G:H1'	2.44	0.52
50:3:2734:C:O2'	50:3:2735:G:H8	1.92	0.52
50:3:2748:A:H2'	50:3:2749:A:O4'	2.09	0.52
50:3:2755:G:N2	50:3:2756:A:N7	2.58	0.52
52:5:453:C:H2'	52:5:454:U:C6	2.44	0.52
52:5:944:A:H1'	52:5:1339:U:H3	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:112:TRP:CD1	4:A:116:THR:HG1	2.28	0.52
18:O:7:HIS:HE1	52:5:388:G:O3'	1.92	0.52
24:a:215:LYS:HE3	24:a:217:GLY:HA3	1.92	0.52
24:a:226:PRO:CB	50:3:1797:C:H5'	2.37	0.52
25:b:42:GLU:N	25:b:48:SER:OG	2.43	0.52
33:j:71:ARG:HH22	33:j:72:LYS:HE3	1.74	0.52
34:k:83:ASN:HB3	34:k:118:THR:OG1	2.09	0.52
35:l:2:LEU:HB2	35:l:70:PRO:HG2	1.92	0.52
35:l:71:HIS:N	35:l:94:VAL:O	2.42	0.52
44:u:28:ARG:HB2	50:3:2286:A:H62	1.74	0.52
48:y:7:ARG:HD3	48:y:7:ARG:H	1.75	0.52
50:3:300:G:H2'	50:3:301:G:O4'	2.10	0.52
50:3:525:A:N1	50:3:1312:A:C4	2.77	0.52
50:3:653:G:H2'	50:3:654:G:O4'	2.09	0.52
50:3:728:A:O2'	50:3:1381:A:H1'	2.09	0.52
50:3:778:U:H2'	50:3:779:C:C6	2.45	0.52
50:3:1077:G:C6	50:3:1148:U:N3	2.78	0.52
50:3:1083:A:H1'	50:3:1147:G:N2	2.25	0.52
50:3:1205:U:H3'	50:3:1206:U:C6	2.45	0.52
50:3:1277:A:H2'	50:3:1279:U:C6	2.45	0.52
50:3:1489:G:H2'	50:3:1490:G:H8	1.73	0.52
50:3:1775:G:C6	50:3:1776:G:C6	2.98	0.52
50:3:1792:A:H2'	50:3:1794:A:C8	2.44	0.52
50:3:1877:C:H3'	50:3:1878:A:N3	2.25	0.52
50:3:1885:G:H2'	50:3:1886:C:C6	2.45	0.52
50:3:2372:C:C2	50:3:2373:G:C8	2.98	0.52
50:3:2594:C:O2'	50:3:2595:A:O4'	2.13	0.52
50:3:2692:U:H2'	50:3:2693:U:H6	1.73	0.52
50:3:2793:U:H2'	50:3:2794:U:C6	2.45	0.52
52:5:41:C:N4	52:5:42:G:O6	2.43	0.52
52:5:67:U:H2'	52:5:68:C:C6	2.45	0.52
52:5:451:G:H3'	52:5:452:A:C8	2.36	0.52
52:5:661:G:N3	52:5:723:C:H4'	2.25	0.52
52:5:997:G:H2'	52:5:997:G:N3	2.25	0.52
7:D:79:THR:O	52:5:916:U:O2'	2.28	0.51
7:D:110:GLU:HG3	7:D:112:PRO:HD2	1.92	0.51
18:O:2:ARG:NH1	18:O:5:ARG:O	2.43	0.51
25:b:146:SER:O	50:3:2520:C:H1'	2.10	0.51
25:b:151:ARG:O	50:3:2039:G:N2	2.42	0.51
26:c:139:LYS:HB3	26:c:141:LYS:HB3	1.91	0.51
27:d:50:LEU:O	27:d:51:GLU:C	2.52	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:j:23:LYS:HE3	50:3:2569:A:N3	2.25	0.51
35:l:82:ARG:NE	50:3:2259:G:OP2	2.42	0.51
39:p:45:ALA:HA	39:p:48:ASP:OD2	2.11	0.51
39:p:103:SER:O	39:p:107:LEU:N	2.26	0.51
50:3:28:G:H3'	50:3:29:G:C8	2.45	0.51
50:3:225:A:C8	50:3:237:A:H1'	2.45	0.51
50:3:273:C:N4	50:3:295:U:O2'	2.26	0.51
50:3:418:G:N2	50:3:430:U:O2	2.43	0.51
50:3:520:C:H2'	50:3:521:C:H6	1.75	0.51
50:3:552:C:H2'	50:3:553:A:C8	2.45	0.51
50:3:804:U:H2'	50:3:805:G:H8	1.73	0.51
50:3:812:G:H2'	50:3:813:G:H8	1.75	0.51
50:3:986:G:H2'	50:3:987:U:O4'	2.10	0.51
50:3:1146:A:H2	50:3:1147:G:C2	2.27	0.51
50:3:1333:C:H2'	50:3:1334:U:O4'	2.09	0.51
50:3:1497:A:H2'	50:3:1498:U:C6	2.46	0.51
50:3:1512:A:H61	50:3:1527:U:H3	1.57	0.51
50:3:1521:A:H2'	50:3:1523:C:C4	2.45	0.51
50:3:1743:U:H1'	50:3:2864:A:N3	2.25	0.51
50:3:1931:C:H2'	50:3:1932:C:H6	1.75	0.51
50:3:2180:U:H3'	50:3:2181:A:H8	1.75	0.51
50:3:2200:U:H3'	50:3:2201:G:C8	2.45	0.51
50:3:2662:A:C2	50:3:2673:A:H5''	2.45	0.51
52:5:38:U:C2	52:5:39:G:C8	2.98	0.51
52:5:169:G:H1	52:5:196:G:H22	1.58	0.51
52:5:558:U:H5'	52:5:564:G:N2	2.25	0.51
52:5:599:G:C6	52:5:635:G:C6	2.98	0.51
52:5:772:G:N2	52:5:802:C:N3	2.58	0.51
52:5:930:A:H1'	52:5:1359:C:N3	2.25	0.51
52:5:1222:U:C2	52:5:1264:G:N1	2.70	0.51
52:5:1246:A:H2'	52:5:1247:G:H8	1.75	0.51
52:5:1261:A:H61	52:5:1346:G:H5'	1.76	0.51
52:5:1407:A:C2	52:5:1442:A:H2'	2.45	0.51
52:5:1407:A:H2	52:5:1442:A:H2'	1.75	0.51
4:A:49:ARG:HG3	4:A:52:ASN:N	2.25	0.51
4:A:180:ASP:HB3	4:A:183:TYR:HB3	1.92	0.51
5:B:69:VAL:HB	5:B:106:ILE:HD13	1.92	0.51
5:B:189:LEU:HD13	5:B:202:LYS:HE3	1.92	0.51
6:C:145:LYS:O	6:C:147:LYS:N	2.43	0.51
8:E:10:ASP:OD2	8:E:81:GLN:HA	2.09	0.51
8:E:108:ALA:HA	8:E:111:LYS:HG2	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:144:ALA:C	9:F:146:ALA:H	2.16	0.51
10:G:49:VAL:HG11	10:G:57:PHE:CD1	2.45	0.51
13:J:88:THR:O	13:J:91:ARG:HB3	2.10	0.51
14:K:50:VAL:HG21	14:K:87:LEU:HD23	1.92	0.51
14:K:127:ARG:HB2	14:K:132:ALA:O	2.09	0.51
16:M:18:VAL:HG23	52:5:1291:C:H5	1.75	0.51
17:N:8:ILE:HD12	17:N:11:SER:HB2	1.91	0.51
17:N:38:ASP:O	17:N:41:LEU:HG	2.10	0.51
24:a:164:ALA:HB1	24:a:205:ASN:HB3	1.91	0.51
25:b:60:LYS:HE2	25:b:61:LYS:HZ1	1.74	0.51
28:e:125:THR:O	28:e:137:SER:OG	2.24	0.51
33:j:66:LYS:N	33:j:82:ASN:OD1	2.43	0.51
34:k:54:GLY:HA3	50:3:866:G:H21	1.75	0.51
35:l:112:SER:HA	35:l:115:ILE:HD12	1.92	0.51
38:o:33:VAL:HG12	38:o:88:ILE:HA	1.92	0.51
50:3:339:U:H2'	50:3:340:U:C2	2.45	0.51
50:3:522:C:C2	50:3:523:A:N7	2.78	0.51
50:3:1264:U:C2	50:3:1265:G:C8	2.97	0.51
50:3:1510:A:C6	50:3:1530:G:C5	2.98	0.51
50:3:1765:G:H3'	50:3:1766:A:N7	2.25	0.51
50:3:1772:G:C2'	50:3:1773:A:H5'	2.41	0.51
50:3:2377:A:H2'	50:3:2378:G:C8	2.46	0.51
50:3:2515:C:H5''	50:3:2581:C:N3	2.25	0.51
50:3:2733:A:O2'	50:3:2735:G:N7	2.42	0.51
50:3:2756:A:C2	50:3:2765:A:C8	2.98	0.51
52:5:675:U:H2'	52:5:676:U:C6	2.45	0.51
52:5:761:U:H3'	52:5:762:G:C8	2.38	0.51
52:5:1481:U:O5'	52:5:1481:U:H6	1.93	0.51
2:1:3:VAL:HG12	2:1:8:LYS:HD3	1.92	0.51
6:C:114:ARG:HG3	6:C:132:PRO:HG2	1.91	0.51
9:F:38:ALA:O	9:F:42:LEU:HG	2.11	0.51
14:K:85:HIS:CG	14:K:87:LEU:HB2	2.46	0.51
19:P:21:THR:HG21	52:5:250:G:H5''	1.90	0.51
24:a:124:SER:HB3	24:a:128:ILE:HD13	1.91	0.51
25:b:98:PRO:O	25:b:102:PHE:N	2.43	0.51
25:b:118:GLY:O	25:b:169:TYR:N	2.33	0.51
25:b:142:ARG:HB3	50:3:1691:U:OP1	2.11	0.51
28:e:106:LEU:O	28:e:117:LYS:HA	2.10	0.51
30:g:56:ASN:HB2	30:g:75:ALA:HA	1.93	0.51
31:h:73:SER:H	31:h:76:LEU:HB2	1.74	0.51
34:k:68:ALA:HB3	50:3:668:A:H1'	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:q:72:LYS:HD2	40:q:81:LYS:HB2	1.93	0.51
41:r:34:ASN:O	41:r:38:ASN:N	2.34	0.51
42:s:9:LYS:HA	46:w:31:PHE:CE1	2.44	0.51
46:w:10:LYS:HE3	46:w:14:GLU:N	2.23	0.51
50:3:227:A:C4	50:3:458:A:C8	2.99	0.51
50:3:275:A:H62	50:3:294:G:H21	1.58	0.51
50:3:392:A:H3'	50:3:393:C:C5	2.44	0.51
50:3:420:A:N6	50:3:425:U:H3	2.08	0.51
50:3:451:A:N6	50:3:2416:U:H3	2.09	0.51
50:3:514:A:N6	50:3:537:A:H62	2.07	0.51
50:3:601:U:N3	50:3:604:A:OP2	2.43	0.51
50:3:1152:U:H2'	50:3:1153:U:O4'	2.11	0.51
50:3:1454:G:H1'	50:3:1606:A:N6	2.25	0.51
50:3:1659:C:H3'	50:3:1660:A:C8	2.43	0.51
50:3:1849:G:O6	50:3:1905:U:C2	2.62	0.51
50:3:1852:G:O6	50:3:1903:A:N6	2.43	0.51
50:3:1947:U:O3'	50:3:1949:C:N4	2.43	0.51
50:3:2267:G:H2'	50:3:2268:C:H6	1.75	0.51
50:3:2271:C:H2'	50:3:2272:C:C6	2.45	0.51
50:3:2488:C:H2'	50:3:2489:G:O4'	2.11	0.51
50:3:2625:U:H2'	50:3:2626:A:C8	2.45	0.51
50:3:2859:U:H2'	50:3:2860:A:C8	2.45	0.51
51:4:39:U:O2'	51:4:40:U:OP1	2.26	0.51
52:5:20:C:O2'	52:5:570:A:N1	2.40	0.51
52:5:106:C:N3	52:5:233:C:N4	2.58	0.51
52:5:226:G:H2'	52:5:227:A:C8	2.46	0.51
52:5:448:A:O3'	52:5:449:A:H3'	2.11	0.51
52:5:551:A:H2'	52:5:552:U:C6	2.46	0.51
52:5:568:G:H2'	52:5:569:U:C5	2.45	0.51
52:5:918:A:OP2	52:5:918:A:H8	1.92	0.51
52:5:973:A:N6	52:5:1292:A:N7	2.58	0.51
52:5:1045:C:H4'	52:5:1046:A:H5''	1.92	0.51
52:5:1052:G:C6	52:5:1172:A:C6	2.98	0.51
52:5:1146:A:H2'	52:5:1147:U:C6	2.44	0.51
52:5:1242:U:H3	52:5:1301:U:HO2'	1.56	0.51
52:5:1408:A:H3'	52:5:1409:A:H8	1.75	0.51
2:1:20:LYS:HD3	2:1:21:ARG:H	1.75	0.51
6:C:7:ILE:HD12	6:C:10:ARG:HB3	1.91	0.51
8:E:48:PRO:HA	8:E:52:GLN:O	2.11	0.51
8:E:65:ASP:OD1	8:E:66:ASN:N	2.43	0.51
8:E:113:ALA:HB1	52:5:838:A:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:96:ARG:HH11	52:5:641:U:H5''	1.75	0.51
12:I:48:LEU:HD13	12:I:77:LYS:HE2	1.93	0.51
15:L:28:SER:OG	15:L:29:ARG:N	2.43	0.51
19:P:73:LYS:NZ	52:5:251:G:OP1	2.40	0.51
21:R:5:ALA:HB3	52:5:1288:C:C5	2.35	0.51
26:c:116:TRP:O	26:c:119:LYS:N	2.43	0.51
26:c:185:LYS:HB3	50:3:648:G:H22	1.75	0.51
37:n:20:ARG:HH21	51:4:7:G:H4'	1.75	0.51
43:t:95:PRO:HG2	43:t:98:ASN:HB3	1.92	0.51
50:3:164:A:OP2	50:3:164:A:H3'	2.11	0.51
50:3:618:G:H3'	50:3:1281:A:N6	2.25	0.51
50:3:683:G:H2'	50:3:684:A:O4'	2.10	0.51
50:3:853:G:N2	50:3:1220:A:H62	2.08	0.51
50:3:853:G:H21	50:3:1220:A:H62	1.57	0.51
50:3:999:U:C2	50:3:1000:U:C5	2.98	0.51
50:3:1002:A:H4'	50:3:2279:G:N2	2.25	0.51
50:3:1383:G:N2	50:3:1405:G:H1'	2.26	0.51
50:3:1549:U:O2'	50:3:1550:G:H5'	2.10	0.51
50:3:1703:A:H5''	50:3:2558:G:OP1	2.10	0.51
50:3:1798:A:C8	50:3:1835:G:N2	2.76	0.51
50:3:1807:C:O2	50:3:1824:G:C6	2.63	0.51
50:3:1852:G:C6	50:3:1903:A:C6	2.98	0.51
50:3:1973:U:N3	50:3:2601:U:H4'	2.25	0.51
50:3:2089:A:N6	50:3:2245:G:O2'	2.44	0.51
50:3:2270:U:H2'	50:3:2271:C:H6	1.76	0.51
50:3:2540:G:H3'	50:3:2541:C:C6	2.46	0.51
51:4:72:A:C5	51:4:73:U:C4	2.98	0.51
52:5:145:G:N2	52:5:148:A:OP2	2.44	0.51
52:5:172:C:H2'	52:5:173:U:H6	1.75	0.51
52:5:199:A:C6	52:5:217:U:H4'	2.45	0.51
52:5:249:U:N3	52:5:250:G:N7	2.59	0.51
52:5:376:G:O2'	52:5:378:A:N6	2.42	0.51
52:5:718:A:N6	52:5:730:G:N3	2.59	0.51
52:5:884:G:H22	52:5:900:G:H2'	1.75	0.51
5:B:11:ARG:HH11	5:B:181:LEU:HD23	1.75	0.51
5:B:125:ASN:HA	5:B:128:GLU:CD	2.35	0.51
8:E:17:GLN:HA	8:E:20:GLN:HG2	1.93	0.51
8:E:32:VAL:HB	8:E:64:GLY:HA3	1.92	0.51
17:N:78:LEU:HD12	17:N:81:THR:HB	1.91	0.51
18:O:65:SER:O	18:O:68:SER:HB2	2.10	0.51
20:Q:78:ASN:HB2	20:Q:82:HIS:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:c:37:ALA:HA	26:c:40:VAL:HG12	1.93	0.51
26:c:59:ARG:O	26:c:80:ARG:NE	2.38	0.51
26:c:83:HIS:HE2	50:3:1287:C:H5'	1.76	0.51
28:e:55:ILE:HG13	28:e:68:HIS:HD2	1.74	0.51
36:m:38:ALA:HB1	36:m:116:LEU:HB2	1.93	0.51
37:n:101:ARG:HE	51:4:47:C:H5''	1.73	0.51
39:p:93:VAL:HG13	39:p:94:LEU:HD12	1.92	0.51
40:q:47:ALA:N	40:q:51:GLU:OE2	2.26	0.51
50:3:190:G:C6	50:3:215:A:C6	2.99	0.51
50:3:291:G:C6	50:3:292:G:C5	2.99	0.51
50:3:346:G:H3'	50:3:347:C:H6	1.75	0.51
50:3:410:G:H4'	50:3:411:U:O5'	2.10	0.51
50:3:420:A:H2'	50:3:421:A:O4'	2.10	0.51
50:3:558:C:H2'	50:3:559:C:C6	2.46	0.51
50:3:645:C:H2'	50:3:646:A:C8	2.46	0.51
50:3:741:A:H2'	50:3:742:G:O4'	2.11	0.51
50:3:762:A:H3'	50:3:763:G:C8	2.45	0.51
50:3:892:G:C6	50:3:893:A:C6	2.98	0.51
50:3:1488:U:O3'	50:3:2710:G:O2'	2.26	0.51
50:3:1554:A:OP2	50:3:1576:G:N2	2.43	0.51
50:3:2043:C:H2'	50:3:2044:C:C6	2.44	0.51
50:3:2106:G:N2	50:3:2198:G:H1	2.07	0.51
50:3:2664:U:C4	50:3:2673:A:H8	2.27	0.51
50:3:2841:A:H2'	50:3:2842:G:O4'	2.10	0.51
51:4:13:G:H4'	51:4:99:A:H5''	1.93	0.51
51:4:27:A:H3'	51:4:28:C:H5''	1.93	0.51
52:5:304:U:C2	52:5:305:A:N7	2.79	0.51
52:5:412:G:C2	52:5:424:U:O2	2.63	0.51
52:5:490:U:H2'	52:5:491:U:C6	2.45	0.51
52:5:539:G:H2'	52:5:540:U:O4'	2.11	0.51
52:5:1079:G:H2'	52:5:1080:G:H8	1.73	0.51
4:A:80:GLY:HA2	4:A:171:ARG:NH2	2.25	0.51
4:A:175:LEU:HD11	4:A:199:VAL:HG13	1.93	0.51
5:B:179:SER:HB2	52:5:1102:A:N6	2.23	0.51
11:H:19:VAL:HG12	11:H:67:VAL:HG12	1.92	0.51
11:H:21:LEU:HD21	11:H:85:ILE:HD13	1.93	0.51
11:H:111:ARG:HA	52:5:1321:G:O5'	2.10	0.51
14:K:42:LEU:O	14:K:43:LYS:HD3	2.11	0.51
18:O:64:ARG:HA	18:O:67:PHE:CD2	2.44	0.51
20:Q:73:ARG:CZ	20:Q:83:GLN:HB2	2.40	0.51
24:a:163:SER:N	50:3:1826:A:OP1	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:c:115:VAL:HA	26:c:118:GLU:HG2	1.92	0.51
28:e:76:THR:O	28:e:80:ILE:HG12	2.10	0.51
30:g:4:LYS:N	50:3:1079:U:OP1	2.43	0.51
36:m:27:ALA:HA	36:m:78:LEU:HD21	1.92	0.51
38:o:62:GLU:CB	38:o:81:ILE:HB	2.41	0.51
43:t:44:ARG:NH2	50:3:515:A:O2'	2.44	0.51
48:y:40:HIS:H	50:3:2888:U:H5	1.58	0.51
50:3:90:G:C2	50:3:91:G:C5	2.98	0.51
50:3:104:A:H2'	50:3:105:U:O4'	2.10	0.51
50:3:326:A:H2'	50:3:327:U:C6	2.46	0.51
50:3:474:U:H2'	50:3:475:A:H8	1.74	0.51
50:3:1024:A:H4'	50:3:1190:A:H2	1.76	0.51
50:3:1065:G:H2'	50:3:1066:G:C8	2.46	0.51
50:3:1237:G:H2'	50:3:1238:A:C8	2.46	0.51
50:3:1244:A:H4'	50:3:1269:C:H4'	1.92	0.51
50:3:1344:U:H2'	50:3:1345:G:H8	1.75	0.51
50:3:1558:A:P	50:3:1571:G:H22	2.32	0.51
50:3:1697:C:H4'	50:3:2694:A:H4'	1.92	0.51
50:3:1992:C:H2'	50:3:1993:U:C6	2.45	0.51
50:3:2347:G:H2'	50:3:2348:U:C6	2.46	0.51
50:3:2353:G:O6	50:3:2380:U:N3	2.44	0.51
50:3:2393:C:C2	50:3:2394:A:C8	2.99	0.51
50:3:2682:A:H2'	50:3:2683:G:O4'	2.11	0.51
50:3:2885:U:H2'	50:3:2886:A:C8	2.45	0.51
52:5:146:A:C8	52:5:340:A:C4	2.99	0.51
52:5:331:C:H2'	52:5:332:A:H8	1.72	0.51
52:5:839:U:H3'	52:5:840:C:C6	2.46	0.51
52:5:917:G:C6	52:5:918:A:C6	2.98	0.51
52:5:1226:A:H2'	52:5:1227:A:O4'	2.11	0.51
52:5:1337:U:P	52:5:1338:A:H5''	2.50	0.51
3:2:15:LYS:HB2	3:2:26:ILE:HG13	1.92	0.51
4:A:142:ALA:HA	4:A:149:ASN:HB2	1.93	0.51
9:F:50:GLU:O	9:F:54:LYS:HA	2.11	0.51
10:G:22:ILE:O	10:G:26:ARG:HG3	2.11	0.51
11:H:29:LYS:HB3	11:H:65:ILE:H	1.75	0.51
11:H:71:GLY:O	11:H:77:GLN:NE2	2.43	0.51
20:Q:43:PHE:HB3	20:Q:82:HIS:ND1	2.25	0.51
24:a:45:GLY:O	24:a:47:ARG:NH1	2.44	0.51
25:b:107:TYR:CE2	25:b:213:LYS:HD3	2.45	0.51
28:e:55:ILE:O	28:e:68:HIS:NE2	2.42	0.51
29:f:91:SER:OG	29:f:92:ILE:N	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:f:92:ILE:HB	29:f:118:ARG:HB3	1.91	0.51
32:i:68:THR:OG1	50:3:1176:U:H6	1.94	0.51
39:p:69:ARG:HG2	39:p:74:THR:HG22	1.92	0.51
39:p:91:ARG:CZ	50:3:1032:A:H4'	2.41	0.51
41:r:11:ARG:HG3	41:r:11:ARG:O	2.11	0.51
48:y:19:HIS:CD2	50:3:2052:C:H1'	2.46	0.51
50:3:79:U:H2'	50:3:80:U:C6	2.45	0.51
50:3:133:G:H2'	50:3:134:U:O4'	2.11	0.51
50:3:322:A:C2	50:3:387:U:C2	2.99	0.51
50:3:323:A:H2'	50:3:324:C:C6	2.45	0.51
50:3:567:U:H1'	50:3:2028:G:C6	2.46	0.51
50:3:818:A:H3'	50:3:818:A:N3	2.25	0.51
50:3:900:G:H2'	50:3:901:C:C6	2.46	0.51
50:3:911:U:H2'	50:3:912:A:C8	2.46	0.51
50:3:914:G:N2	50:3:937:A:OP2	2.43	0.51
50:3:1325:C:N4	50:3:1677:G:H22	2.09	0.51
50:3:1352:G:H3'	50:3:1353:G:H4'	1.91	0.51
50:3:1549:U:H3'	50:3:1550:G:C8	2.36	0.51
50:3:1646:G:C2	50:3:1654:G:N1	2.79	0.51
50:3:1687:G:H21	50:3:2012:A:H62	1.57	0.51
50:3:1911:G:H2'	50:3:1912:C:O4'	2.10	0.51
50:3:2744:A:H2'	50:3:2745:G:H8	1.76	0.51
50:3:2755:G:N2	50:3:2764:U:OP1	2.30	0.51
51:4:66:A:H2'	51:4:67:G:O4'	2.10	0.51
52:5:166:U:H2'	52:5:167:A:O4'	2.10	0.51
52:5:171:A:H2'	52:5:172:C:C6	2.45	0.51
52:5:201:G:O6	52:5:214:U:O4	2.28	0.51
52:5:692:A:H2'	52:5:693:A:O4'	2.11	0.51
52:5:887:C:H2'	52:5:888:A:H8	1.75	0.51
52:5:932:A:H1'	52:5:1354:G:H22	1.76	0.51
53:7:8:G:HO2'	53:7:50:G:H8	1.58	0.51
53:7:23:G:N7	53:7:47:G:C6	2.79	0.51
8:E:8:LEU:HD23	8:E:84:ARG:HB2	1.91	0.51
12:I:18:SER:OG	12:I:20:ASP:O	2.29	0.51
14:K:76:VAL:HB	14:K:108:TYR:CD2	2.45	0.51
24:a:48:ASN:HD22	24:a:50:GLN:HG3	1.75	0.51
24:a:57:HIS:NE2	50:3:1830:G:OP1	2.44	0.51
24:a:161:ALA:H	50:3:1806:G:N2	2.08	0.51
25:b:69:PHE:CD1	50:3:2794:U:H4'	2.45	0.51
34:k:8:SER:N	50:3:1273:U:O2'	2.44	0.51
36:m:22:VAL:O	36:m:26:LEU:HG	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:n:10:LEU:HA	37:n:13:LYS:HD2	1.92	0.51
39:p:106:ASN:O	39:p:110:GLN:HG2	2.10	0.51
40:q:39:LEU:HD12	40:q:50:LEU:HD13	1.93	0.51
40:q:51:GLU:N	40:q:51:GLU:OE1	2.44	0.51
41:r:66:GLY:HA2	41:r:69:LEU:HD12	1.93	0.51
45:v:28:LYS:HE2	45:v:30:ASN:OD1	2.10	0.51
50:3:602:U:H1'	50:3:983:A:O4'	2.09	0.51
50:3:695:G:H2'	50:3:696:U:H6	1.76	0.51
50:3:760:G:H3'	50:3:761:G:C8	2.45	0.51
50:3:874:U:H5''	50:3:1221:G:N2	2.26	0.51
50:3:1019:A:H2'	50:3:1020:G:C4	2.45	0.51
50:3:1294:G:O5'	50:3:1295:A:H2'	2.11	0.51
50:3:1666:A:H2'	50:3:1667:G:C4	2.45	0.51
50:3:1807:C:N3	50:3:1824:G:C2	2.77	0.51
50:3:2038:A:O2'	50:3:2462:G:N2	2.40	0.51
50:3:2246:G:H2'	50:3:2246:G:N3	2.25	0.51
52:5:146:A:H3'	52:5:147:A:C8	2.46	0.51
52:5:320:G:H2'	52:5:321:A:H3'	1.92	0.51
52:5:430:G:H2'	52:5:431:U:C6	2.46	0.51
52:5:655:G:C6	52:5:746:A:C6	2.98	0.51
52:5:1237:G:H2'	52:5:1238:C:C6	2.45	0.51
52:5:1360:G:H2'	52:5:1361:G:C8	2.46	0.51
53:7:7:U:H3	53:7:68:G:H1	1.58	0.51
2:1:53:LYS:O	2:1:57:ASN:ND2	2.44	0.51
12:I:51:LYS:O	12:I:75:ARG:N	2.42	0.51
14:K:69:ARG:HA	14:K:74:PHE:O	2.11	0.51
16:M:29:ARG:NE	16:M:31:ARG:HH11	2.09	0.51
17:N:54:TYR:O	17:N:57:VAL:HG12	2.11	0.51
23:T:23:LEU:HG	23:T:27:ARG:NH2	2.25	0.51
24:a:81:ALA:HB1	24:a:99:ILE:HG21	1.92	0.51
41:r:5:ALA:HA	50:3:529:G:H4'	1.93	0.51
50:3:250:U:C4	50:3:256:G:O6	2.63	0.51
50:3:494:G:O2'	50:3:505:G:O6	2.28	0.51
50:3:809:A:H1'	50:3:810:G:C8	2.45	0.51
50:3:821:C:H4'	50:3:1787:A:N7	2.26	0.51
50:3:1077:G:H2'	50:3:1078:C:H6	1.74	0.51
50:3:1638:C:H2'	50:3:1639:C:O4'	2.10	0.51
50:3:1772:G:C5	50:3:1995:G:C6	2.99	0.51
50:3:1865:A:N6	50:3:1891:A:H2'	2.25	0.51
50:3:1876:G:N3	50:3:1876:G:H2'	2.25	0.51
50:3:1899:C:H2'	50:3:1900:C:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2839:A:H1'	50:3:2840:U:H5	1.76	0.51
51:4:75:U:H2'	51:4:76:A:C8	2.45	0.51
52:5:52:A:H8	52:5:99:U:HO2'	1.59	0.51
52:5:408:U:H4'	52:5:409:G:C8	2.46	0.51
52:5:444:G:O3'	52:5:445:A:H4'	2.11	0.51
52:5:764:A:C4	52:5:765:A:C8	2.98	0.51
52:5:775:G:H2'	52:5:776:C:H6	1.76	0.51
52:5:1325:U:H2'	52:5:1326:C:C6	2.46	0.51
53:7:23:G:N3	53:7:24:A:C8	2.79	0.51
4:A:46:GLU:OE1	4:A:46:GLU:N	2.36	0.51
4:A:86:GLY:HA2	4:A:92:VAL:HG12	1.92	0.51
14:K:30:LEU:HD13	52:5:357:G:H4'	1.93	0.51
24:a:215:LYS:HB2	50:3:764:G:C6	2.46	0.51
24:a:268:ARG:NH1	50:3:1806:G:OP2	2.44	0.51
26:c:2:ALA:O	26:c:20:LEU:N	2.41	0.51
32:i:118:SER:O	32:i:122:ILE:HG13	2.11	0.51
33:j:70:GLN:OE1	33:j:71:ARG:N	2.44	0.51
34:k:69:ARG:NH2	50:3:2412:A:H5''	2.26	0.51
35:l:41:TRP:HH2	50:3:994:U:C2	2.29	0.51
39:p:12:ARG:NH1	50:3:1282:G:OP2	2.44	0.51
39:p:32:LYS:HD2	50:3:1282:G:H21	1.76	0.51
44:u:54:GLN:HE22	44:u:58:ARG:H	1.57	0.51
48:y:7:ARG:NH2	50:3:2026:A:H5''	2.26	0.51
50:3:197:U:H5'	50:3:837:A:O2'	2.11	0.51
50:3:206:U:H2'	50:3:207:C:O4'	2.10	0.51
50:3:275:A:N6	50:3:294:G:H21	2.09	0.51
50:3:610:G:H2'	50:3:611:A:H8	1.75	0.51
50:3:875:G:C6	50:3:975:G:C6	2.98	0.51
50:3:1057:G:H1'	50:3:1059:G:C6	2.46	0.51
50:3:1129:U:H3	50:3:1132:C:H5''	1.75	0.51
50:3:1362:C:H2'	50:3:1363:C:C6	2.45	0.51
50:3:1446:G:H1	50:3:1612:U:H5''	1.75	0.51
50:3:1612:U:OP2	50:3:1612:U:H6	1.93	0.51
50:3:1822:A:H4'	50:3:1823:U:H5'	1.92	0.51
50:3:1868:A:N1	50:3:1888:U:N3	2.59	0.51
50:3:1884:A:C5	50:3:1885:G:C5	2.99	0.51
50:3:2078:A:H2'	50:3:2079:G:H8	1.76	0.51
50:3:2165:A:H4'	50:3:2166:U:H5'	1.93	0.51
50:3:2713:A:H3'	50:3:2714:G:H8	1.75	0.51
51:4:96:G:H3'	51:4:97:A:C8	2.46	0.51
52:5:350:G:C6	52:5:351:C:C4	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:733:A:C3'	52:5:734:A:H8	2.24	0.51
52:5:921:G:O6	52:5:1477:A:N6	2.33	0.51
52:5:945:U:C2	52:5:946:G:C8	2.99	0.51
52:5:1298:U:H2'	52:5:1299:C:H6	1.73	0.51
52:5:1341:U:H2'	52:5:1342:C:H6	1.75	0.51
52:5:1482:A:C2	52:5:1505:G:H1'	2.46	0.51
7:D:176:SER:OG	7:D:177:ASP:N	2.43	0.50
12:I:75:ARG:HH12	12:I:77:LYS:HD2	1.76	0.50
14:K:101:LYS:HZ2	52:5:523:U:H5''	1.76	0.50
22:S:66:ARG:HD3	22:S:69:LYS:NZ	2.26	0.50
24:a:101:TYR:N	24:a:105:ALA:O	2.41	0.50
25:b:107:TYR:CZ	25:b:180:ARG:HD2	2.46	0.50
25:b:140:PRO:CG	50:3:2587:U:H5'	2.41	0.50
26:c:46:ARG:HH21	26:c:48:GLY:HA2	1.76	0.50
28:e:63:GLN:OE1	50:3:2765:A:H1'	2.10	0.50
29:f:4:ILE:HD13	29:f:35:LEU:HD22	1.91	0.50
29:f:6:LYS:HZ2	29:f:54:GLN:HB2	1.76	0.50
32:i:10:GLU:HB3	32:i:51:GLN:HB2	1.93	0.50
33:j:17:LYS:HZ2	33:j:47:ILE:HG23	1.76	0.50
34:k:58:LEU:HG	34:k:62:LEU:HD11	1.93	0.50
35:l:22:LYS:HG3	50:3:899:A:O5'	2.12	0.50
35:l:75:THR:HA	35:l:90:PRO:HA	1.93	0.50
36:m:37:LYS:NZ	50:3:1685:G:H5'	2.26	0.50
37:n:106:ALA:HB1	37:n:110:ARG:HH12	1.74	0.50
39:p:105:PHE:HA	39:p:108:ILE:HD12	1.92	0.50
44:u:70:ASP:HB2	50:3:2372:C:H5'	1.93	0.50
50:3:180:A:H3'	50:3:181:G:C8	2.40	0.50
50:3:411:U:O2'	50:3:459:A:H1'	2.11	0.50
50:3:1112:A:H3'	50:3:1113:U:C6	2.46	0.50
50:3:1215:G:H2'	50:3:1216:U:C6	2.46	0.50
50:3:1439:U:H2'	50:3:1440:U:H6	1.76	0.50
50:3:1463:G:N3	50:3:1463:G:H2'	2.26	0.50
50:3:1612:U:H2'	50:3:1613:A:H8	1.76	0.50
50:3:1942:G:C2	50:3:1971:G:C4	2.99	0.50
50:3:2119:A:H2'	50:3:2120:G:C8	2.45	0.50
50:3:2278:G:H2'	50:3:2279:G:O4'	2.11	0.50
50:3:2480:G:N1	50:3:2484:A:H4'	2.26	0.50
52:5:69:G:C6	52:5:87:G:C2	2.99	0.50
52:5:513:G:H2'	52:5:514:U:H6	1.76	0.50
52:5:923:G:H2'	52:5:924:A:H8	1.75	0.50
52:5:1133:A:N1	52:5:1153:G:N3	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1323:A:H1'	52:5:1349:A:N6	2.25	0.50
52:5:1436:C:H2'	52:5:1437:A:C8	2.46	0.50
2:1:9:LYS:HE3	2:1:10:ARG:HE	1.76	0.50
4:A:112:TRP:CE2	4:A:116:THR:HB	2.46	0.50
5:B:12:PHE:CZ	5:B:18:TRP:HA	2.46	0.50
5:B:184:ASP:CG	5:B:210:ILE:HB	2.37	0.50
7:D:132:HIS:O	7:D:133:LYS:HG2	2.11	0.50
8:E:13:LEU:O	8:E:56:HIS:NE2	2.33	0.50
10:G:67:LYS:HG2	52:5:650:A:C4	2.46	0.50
13:J:90:ILE:O	13:J:93:PHE:HB2	2.11	0.50
15:L:113:ARG:NH2	52:5:1204:A:O5'	2.44	0.50
16:M:29:ARG:HH11	52:5:1177:U:H5'	1.75	0.50
19:P:2:LYS:HG3	19:P:3:ARG:N	2.22	0.50
24:a:43:LYS:NZ	50:3:727:C:OP1	2.35	0.50
24:a:278:ILE:O	24:a:286:GLN:HG3	2.11	0.50
25:b:83:GLU:HG2	50:3:2644:U:P	2.52	0.50
27:d:98:ALA:HB2	47:x:26:GLU:HB3	1.92	0.50
28:e:76:THR:HA	28:e:79:ILE:HD12	1.92	0.50
31:h:12:ILE:O	31:h:53:CYS:HB2	2.12	0.50
32:i:83:TYR:OH	50:3:2649:G:O2'	1.97	0.50
33:j:19:VAL:HG22	33:j:41:VAL:HB	1.93	0.50
34:k:25:GLY:N	40:q:80:LEU:HD22	2.27	0.50
35:l:23:GLY:HA3	50:3:945:U:P	2.51	0.50
48:y:14:ASP:O	48:y:18:SER:N	2.44	0.50
50:3:202:C:H5''	50:3:2251:U:H5'	1.94	0.50
50:3:319:G:C6	50:3:390:A:C6	2.99	0.50
50:3:548:A:H2'	50:3:549:A:H8	1.76	0.50
50:3:591:G:C2	50:3:592:G:C5	2.99	0.50
50:3:739:G:N2	50:3:761:G:H1'	2.27	0.50
50:3:840:G:OP2	50:3:841:C:N4	2.38	0.50
50:3:841:C:H2'	50:3:842:U:H5''	1.94	0.50
50:3:843:G:H2'	50:3:844:G:C8	2.46	0.50
50:3:883:A:H2'	50:3:884:A:O4'	2.11	0.50
50:3:894:G:H1'	50:3:2276:A:H2'	1.93	0.50
50:3:986:G:O6	50:3:1003:U:O4	2.29	0.50
50:3:1027:U:H1'	50:3:1216:U:C2	2.46	0.50
50:3:1037:A:N6	50:3:1189:G:O2'	2.45	0.50
50:3:1057:G:H1	50:3:1175:C:H2'	1.76	0.50
50:3:1091:G:H2'	50:3:1138:A:N6	2.16	0.50
50:3:1352:G:N1	50:3:1359:C:N3	2.59	0.50
50:3:1838:A:C6	50:3:1982:G:C6	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2342:U:H4'	50:3:2343:A:C8	2.46	0.50
50:3:2536:U:O2'	50:3:2538:A:OP1	2.30	0.50
50:3:2550:A:H4'	50:3:2551:G:N7	2.26	0.50
50:3:2588:U:H3'	50:3:2589:G:N3	2.25	0.50
52:5:32:U:N3	52:5:302:A:O2'	2.41	0.50
52:5:502:C:O2'	52:5:508:A:H2'	2.12	0.50
52:5:884:G:N1	52:5:901:A:OP2	2.44	0.50
52:5:983:G:C6	52:5:984:A:C5	2.99	0.50
52:5:1006:A:N6	52:5:1016:A:N1	2.58	0.50
52:5:1462:G:H2'	52:5:1463:A:H8	1.75	0.50
6:C:75:PHE:CE2	6:C:79:LEU:HD11	2.47	0.50
24:a:161:ALA:N	50:3:1825:U:O2'	2.44	0.50
32:i:4:THR:HA	50:3:1031:U:C2'	2.38	0.50
32:i:77:TRP:CD1	32:i:103:LEU:HD11	2.46	0.50
33:j:104:ARG:NH2	33:j:121:VAL:O	2.45	0.50
37:n:36:LEU:HD11	51:4:27:A:H3'	1.93	0.50
38:o:8:ALA:O	38:o:12:LEU:HG	2.10	0.50
38:o:58:LYS:NZ	50:3:2690:U:H5''	2.27	0.50
41:r:28:LYS:HG3	41:r:29:THR:H	1.76	0.50
43:t:91:TYR:CB	50:3:331:A:H5''	2.41	0.50
50:3:27:U:H2'	50:3:28:G:O4'	2.11	0.50
50:3:86:A:N7	50:3:103:G:C2	2.79	0.50
50:3:159:G:C6	50:3:174:A:C6	2.99	0.50
50:3:193:G:H21	50:3:211:A:N6	2.02	0.50
50:3:194:A:H2'	50:3:195:A:O4'	2.11	0.50
50:3:209:G:H1'	50:3:210:U:H5	1.76	0.50
50:3:279:U:C4	50:3:291:G:C6	3.00	0.50
50:3:897:A:H2'	50:3:898:A:O4'	2.11	0.50
50:3:1242:G:N3	50:3:1266:G:C2	2.80	0.50
50:3:1243:A:C8	50:3:1267:A:C5	2.99	0.50
50:3:1873:A:C6	50:3:1883:A:C8	2.99	0.50
50:3:2267:G:H2'	50:3:2268:C:C6	2.46	0.50
50:3:2305:C:N4	50:3:2327:U:O4'	2.45	0.50
50:3:2455:G:H1	50:3:2459:A:H62	1.60	0.50
50:3:2506:C:H4'	50:3:2507:C:OP1	2.10	0.50
50:3:2655:U:H2'	50:3:2656:G:H8	1.76	0.50
51:4:50:C:O2	51:4:51:A:N6	2.43	0.50
52:5:91:C:O2'	52:5:375:C:H5''	2.11	0.50
52:5:197:A:O2'	52:5:198:A:O4'	2.29	0.50
52:5:273:C:H2'	52:5:274:A:C8	2.46	0.50
52:5:321:A:H2'	52:5:322:G:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:393:A:N7	52:5:545:A:O2'	2.45	0.50
52:5:1070:G:O2'	52:5:1071:A:O4'	2.23	0.50
52:5:1226:A:H2'	52:5:1227:A:C8	2.46	0.50
52:5:1353:C:N4	52:5:1354:G:C2	2.79	0.50
53:7:14:C:N3	53:7:24:A:N6	2.60	0.50
53:7:59:A:H1'	53:7:61:U:OP1	2.11	0.50
4:A:29:HIS:CE1	4:A:56:PHE:HB2	2.47	0.50
6:C:73:ARG:NH2	52:5:398:G:OP1	2.44	0.50
12:I:9:TYR:O	12:I:85:VAL:HG22	2.12	0.50
17:N:18:ASP:HB2	17:N:21:SER:OG	2.11	0.50
19:P:7:LYS:N	19:P:64:VAL:HG12	2.26	0.50
20:Q:53:LEU:HD11	20:Q:93:ALA:HB2	1.93	0.50
26:c:102:LYS:HZ1	50:3:693:U:HO2'	1.56	0.50
26:c:130:GLN:HE22	26:c:165:ASN:ND2	2.09	0.50
27:d:77:TYR:OH	50:3:2316:G:O6	2.30	0.50
31:h:71:PRO:HA	50:3:1095:U:OP2	2.11	0.50
33:j:101:PRO:HG2	33:j:122:VAL:HB	1.93	0.50
34:k:49:PRO:HG3	50:3:701:A:H4'	1.93	0.50
43:t:2:GLN:NE2	43:t:4:ILE:O	2.45	0.50
44:u:85:LYS:HE3	44:u:93:THR:OG1	2.10	0.50
49:z:38:CYS:O	49:z:42:ARG:N	2.44	0.50
50:3:155:A:H2'	50:3:156:A:H8	1.76	0.50
50:3:278:U:O2	50:3:291:G:C6	2.65	0.50
50:3:293:G:H2'	50:3:294:G:N9	2.27	0.50
50:3:914:G:N2	50:3:936:G:H2'	2.25	0.50
50:3:1071:G:H1	50:3:1154:U:H3	0.60	0.50
50:3:1346:G:H2'	50:3:1347:A:H8	1.76	0.50
50:3:1521:A:H1'	50:3:1612:U:H1'	1.93	0.50
50:3:1720:C:N4	50:3:1737:G:O6	2.45	0.50
50:3:1941:C:H2'	50:3:1942:G:O4'	2.10	0.50
50:3:2155:G:H8	50:3:2155:G:O5'	1.94	0.50
50:3:2207:A:H3'	50:3:2208:U:C6	2.47	0.50
50:3:2444:G:H2'	50:3:2445:C:C6	2.46	0.50
50:3:2665:A:N1	50:3:2673:A:H1'	2.27	0.50
50:3:2748:A:H2'	50:3:2749:A:C8	2.47	0.50
51:4:29:C:H2'	51:4:51:A:H61	1.77	0.50
52:5:100:G:C6	52:5:309:A:C5	3.00	0.50
52:5:170:A:O2'	52:5:220:U:H4'	2.11	0.50
52:5:177:G:H2'	52:5:178:U:O4'	2.11	0.50
52:5:212:G:O2'	52:5:465:A:N6	2.45	0.50
52:5:376:G:N2	52:5:378:A:H3'	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:743:A:H2'	52:5:744:U:O4'	2.10	0.50
52:5:821:U:H2'	52:5:822:A:H8	1.76	0.50
52:5:1014:A:H3'	52:5:1015:U:H6	1.77	0.50
52:5:1044:G:C5	52:5:1174:U:H2'	2.47	0.50
52:5:1059:G:H5''	52:5:1085:G:H8	1.74	0.50
52:5:1246:A:H2'	52:5:1247:G:C8	2.46	0.50
5:B:6:ASN:HD21	5:B:8:ASN:HB3	1.77	0.50
7:D:159:GLY:HA2	7:D:176:SER:HB2	1.91	0.50
10:G:12:PHE:HE1	52:5:585:G:H5'	1.75	0.50
13:J:34:VAL:HG22	52:5:681:U:O2	2.12	0.50
13:J:120:PRO:HB2	52:5:793:C:H5''	1.93	0.50
15:L:42:ASP:HB2	15:L:45:VAL:O	2.11	0.50
15:L:89:LEU:HA	15:L:92:ARG:HE	1.76	0.50
20:Q:94:ARG:HA	20:Q:99:VAL:O	2.12	0.50
21:R:34:TRP:HB3	21:R:52:HIS:H	1.76	0.50
24:a:255:ARG:NE	24:a:261:ARG:HE	2.09	0.50
26:c:159:PHE:CE1	26:c:198:LEU:HB2	2.46	0.50
28:e:127:LYS:HE3	28:e:129:GLU:HA	1.93	0.50
28:e:142:GLU:O	50:3:2753:C:O2'	2.29	0.50
41:r:60:ASN:HD21	50:3:522:C:H1'	1.76	0.50
44:u:77:SER:HB2	44:u:99:LYS:HE3	1.93	0.50
50:3:30:A:H2'	50:3:31:U:C6	2.47	0.50
50:3:105:U:H2'	50:3:106:C:O4'	2.11	0.50
50:3:410:G:H22	50:3:436:G:H2'	1.75	0.50
50:3:619:A:O2'	50:3:706:C:O2	2.18	0.50
50:3:755:C:H2'	50:3:756:A:C8	2.46	0.50
50:3:774:A:H1'	50:3:775:C:C5	2.46	0.50
50:3:1012:G:H2'	50:3:1012:G:N3	2.26	0.50
50:3:1419:U:O2	50:3:1421:A:H8	1.94	0.50
50:3:1521:A:H2'	50:3:1523:C:N4	2.26	0.50
50:3:1648:A:P	50:3:1651:C:H42	2.35	0.50
50:3:1729:G:H3'	50:3:1729:G:N3	2.27	0.50
50:3:1937:G:H22	50:3:1976:A:P	2.34	0.50
50:3:2032:G:C6	50:3:2033:G:C6	2.99	0.50
50:3:2306:A:O2'	50:3:2330:A:H4'	2.12	0.50
50:3:2399:G:H1'	50:3:2432:C:N4	2.27	0.50
50:3:2549:A:O2'	50:3:2773:A:N1	2.43	0.50
50:3:2687:A:N1	50:3:2737:G:C6	2.80	0.50
50:3:2749:A:H3'	50:3:2750:A:H8	1.77	0.50
50:3:2842:G:C4	50:3:2843:G:C8	2.99	0.50
50:3:2863:G:H2'	50:3:2864:A:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:67:U:H2'	52:5:68:C:H6	1.76	0.50
52:5:307:C:H2'	52:5:308:C:C6	2.47	0.50
52:5:386:U:H2'	52:5:387:G:H8	1.77	0.50
52:5:635:G:C6	52:5:636:G:C5	2.99	0.50
52:5:988:G:N2	52:5:1037:A:H1'	2.27	0.50
52:5:1225:A:C5	52:5:1261:A:C8	2.99	0.50
1:0:34:ARG:HA	1:0:37:LYS:HB2	1.92	0.50
4:A:44:PHE:O	4:A:57:VAL:HG13	2.10	0.50
4:A:142:ALA:H	4:A:149:ASN:ND2	2.09	0.50
7:D:170:ILE:HG22	7:D:175:TYR:O	2.11	0.50
11:H:66:ASN:HA	52:5:1121:U:H3	1.77	0.50
11:H:107:THR:OG1	52:5:1154:A:O3'	2.30	0.50
13:J:117:PRO:O	23:T:35:HIS:N	2.42	0.50
25:b:115:LYS:O	25:b:170:GLY:HA3	2.12	0.50
26:c:76:GLN:HB3	26:c:84:PHE:HE2	1.76	0.50
28:e:11:LEU:HB3	28:e:52:ASN:N	2.27	0.50
32:i:84:ILE:HA	50:3:1166:G:OP1	2.12	0.50
33:j:87:ILE:HG22	33:j:93:PRO:HA	1.94	0.50
43:t:38:GLY:HA2	43:t:41:LYS:HZ1	1.75	0.50
48:y:26:ALA:HB2	50:3:2819:C:H4'	1.92	0.50
50:3:39:C:H2'	50:3:40:A:H8	1.77	0.50
50:3:612:G:C6	50:3:613:C:C4	2.99	0.50
50:3:625:G:H2'	50:3:626:A:C8	2.47	0.50
50:3:1082:A:H1'	50:3:1146:A:N6	2.26	0.50
50:3:1094:G:H2'	50:3:1095:U:C5	2.47	0.50
50:3:1104:A:H5'	50:3:1105:A:C5	2.47	0.50
50:3:1335:A:H2'	50:3:1336:A:O4'	2.11	0.50
50:3:1390:C:H2'	50:3:1391:U:H6	1.76	0.50
50:3:1393:A:H3'	50:3:1394:A:C8	2.47	0.50
50:3:1413:A:C6	50:3:1431:A:C5	2.99	0.50
50:3:1426:C:C2	50:3:1427:C:C5	3.00	0.50
50:3:1711:A:H2'	50:3:1712:A:C8	2.46	0.50
50:3:1765:G:P	50:3:1767:A:H62	2.35	0.50
50:3:2110:U:N3	50:3:2194:G:O6	2.44	0.50
50:3:2147:G:H2'	50:3:2148:U:H5	1.77	0.50
50:3:2205:U:HO2'	50:3:2232:G:H1	1.59	0.50
50:3:2208:U:H2'	50:3:2209:U:C6	2.47	0.50
50:3:2300:A:C6	50:3:2349:G:C6	2.99	0.50
50:3:2300:A:C6	50:3:2301:C:C4	3.00	0.50
50:3:2662:A:H62	50:3:2675:C:N4	2.09	0.50
52:5:50:U:O2	52:5:358:G:H1'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:239:A:C2	52:5:241:C:H2'	2.47	0.50
52:5:268:C:N3	52:5:269:A:C8	2.80	0.50
52:5:395:G:H2'	52:5:396:C:H6	1.77	0.50
52:5:547:C:H2'	52:5:548:G:H8	1.75	0.50
52:5:692:A:H2'	52:5:693:A:C8	2.47	0.50
52:5:829:G:H2'	52:5:830:U:O4'	2.12	0.50
52:5:845:C:H2'	52:5:846:G:C8	2.47	0.50
52:5:951:U:H2'	52:5:952:U:O4'	2.11	0.50
52:5:1080:G:C2	52:5:1088:C:C2	2.99	0.50
52:5:1091:C:O2'	52:5:1093:A:OP1	2.29	0.50
52:5:1244:A:H1'	52:5:1286:G:H21	1.77	0.50
52:5:1325:U:H2'	52:5:1326:C:H6	1.77	0.50
7:D:141:ILE:HD11	7:D:148:ARG:HB3	1.93	0.50
12:I:73:LYS:HG2	16:M:55:GLY:HA3	1.94	0.50
13:J:48:SER:OG	52:5:692:A:OP2	2.16	0.50
21:R:41:PHE:HB2	21:R:44:PHE:CD2	2.47	0.50
22:S:52:ASP:OD2	52:5:195:U:O2'	2.22	0.50
23:T:37:ARG:NE	52:5:1501:G:N7	2.58	0.50
24:a:163:SER:O	24:a:166:SER:HB2	2.11	0.50
24:a:246:ARG:HB2	50:3:2599:C:OP1	2.12	0.50
25:b:51:LEU:HG	25:b:82:GLN:C	2.37	0.50
28:e:61:LEU:H	28:e:64:SER:HG	1.59	0.50
36:m:63:VAL:HA	36:m:66:TRP:HD1	1.77	0.50
38:o:16:LYS:HD2	38:o:16:LYS:N	2.27	0.50
39:p:31:TYR:OH	50:3:1282:G:O5'	2.29	0.50
46:w:101:SER:HA	50:3:1431:A:OP1	2.12	0.50
50:3:19:G:H2'	50:3:20:C:C6	2.47	0.50
50:3:249:G:N2	50:3:258:G:H1'	2.27	0.50
50:3:383:U:H2'	50:3:384:G:C8	2.47	0.50
50:3:755:C:C2	50:3:756:A:C8	3.00	0.50
50:3:1077:G:H22	50:3:1148:U:H2'	1.76	0.50
50:3:1158:C:H2'	50:3:1159:C:C6	2.47	0.50
50:3:1187:C:C2	50:3:1188:C:C5	2.99	0.50
50:3:1340:U:H1'	50:3:1342:C:C5	2.47	0.50
50:3:1572:U:C2	50:3:1573:A:C8	2.99	0.50
50:3:1654:G:H2'	50:3:1655:U:O4'	2.12	0.50
50:3:1760:G:H22	50:3:1763:G:P	2.33	0.50
50:3:1849:G:H2'	50:3:1850:C:C6	2.46	0.50
50:3:1954:C:H2'	50:3:1955:G:C8	2.47	0.50
50:3:2163:U:H2'	50:3:2164:G:C4	2.46	0.50
50:3:2515:C:H2'	50:3:2516:G:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2539:A:C4	50:3:2540:G:C8	3.00	0.50
50:3:2862:U:H2'	50:3:2863:G:C5	2.46	0.50
51:4:5:G:H2'	51:4:6:U:O4'	2.12	0.50
51:4:54:U:H1'	51:4:55:A:OP2	2.12	0.50
52:5:616:C:H5'	52:5:617:U:H5''	1.94	0.50
52:5:777:A:C2	52:5:800:G:C6	3.00	0.50
52:5:820:A:H2'	52:5:821:U:H6	1.76	0.50
52:5:886:A:H2'	52:5:887:C:O4'	2.11	0.50
52:5:1007:U:H2'	52:5:1008:G:C8	2.47	0.50
52:5:1100:C:H3'	52:5:1101:A:C8	2.46	0.50
52:5:1128:G:H2'	52:5:1129:C:O4'	2.12	0.50
52:5:1137:C:N3	52:5:1151:A:N6	2.59	0.50
52:5:1320:A:H4'	52:5:1321:G:H4'	1.94	0.50
4:A:57:VAL:HG23	4:A:61:GLN:HG2	1.94	0.50
7:D:78:LYS:O	7:D:84:ARG:HG3	2.11	0.50
14:K:70:LEU:HG	14:K:74:PHE:O	2.12	0.50
25:b:106:GLU:HB3	25:b:217:VAL:HG13	1.94	0.50
42:s:53:LEU:HB3	42:s:84:THR:OG1	2.12	0.50
44:u:60:TYR:HH	50:3:2339:G:HO2'	1.56	0.50
46:w:47:THR:O	46:w:50:LEU:HB3	2.12	0.50
50:3:62:G:H1'	50:3:64:U:N3	2.27	0.50
50:3:275:A:H1'	50:3:407:U:H5'	1.94	0.50
50:3:720:A:H2	50:3:822:C:H1'	1.76	0.50
50:3:738:U:N3	50:3:763:G:N1	2.58	0.50
50:3:964:A:C6	50:3:965:U:C4	3.00	0.50
50:3:1047:A:C6	50:3:1186:A:C5	3.00	0.50
50:3:1435:A:H61	50:3:1629:U:H3	1.60	0.50
50:3:1626:C:H2'	50:3:1627:U:H6	1.76	0.50
50:3:1708:G:H21	50:3:1711:A:H2	1.59	0.50
50:3:1860:A:H61	50:3:2094:A:H1'	1.75	0.50
50:3:1861:A:H2'	50:3:1862:A:H5'	1.93	0.50
50:3:2822:C:O2'	50:3:2841:A:H5'	2.12	0.50
51:4:10:C:H1'	51:4:11:A:OP1	2.12	0.50
52:5:60:A:N7	52:5:327:G:N2	2.60	0.50
52:5:210:G:C2	52:5:211:G:C5	2.99	0.50
52:5:250:G:H2'	52:5:251:G:H8	1.77	0.50
52:5:337:C:H2'	52:5:338:C:H6	1.77	0.50
52:5:365:U:OP2	52:5:384:G:N1	2.36	0.50
52:5:854:A:N6	52:5:863:A:O2'	2.44	0.50
52:5:920:G:H4'	52:5:921:G:N7	2.26	0.50
52:5:961:G:C5	53:7:35:G:H4'	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:997:G:H1'	52:5:1030:G:C2	2.46	0.50
52:5:1340:G:H2'	52:5:1341:U:H6	1.77	0.50
53:7:53:A:C6	53:7:64:G:N1	2.79	0.50
1:0:18:PHE:HE2	50:3:118:G:H5''	1.75	0.50
4:A:56:PHE:CD1	4:A:216:PRO:HB2	2.46	0.50
4:A:82:ILE:O	4:A:106:ALA:HB3	2.12	0.50
12:I:58:ILE:HA	12:I:68:ARG:HB3	1.93	0.50
15:L:68:ASP:HA	15:L:71:ARG:NE	2.27	0.50
21:R:10:PHE:CE2	21:R:37:ARG:HB2	2.47	0.50
24:a:37:LEU:HA	24:a:68:ILE:HD12	1.93	0.50
24:a:94:CYS:HB3	24:a:164:ALA:HA	1.94	0.50
25:b:55:ASP:O	25:b:57:VAL:HG13	2.12	0.50
25:b:225:GLN:HB3	38:o:19:LYS:HG2	1.94	0.50
26:c:84:PHE:CD1	50:3:1287:C:H4'	2.47	0.50
33:j:90:ASP:OD1	33:j:92:SER:OG	2.30	0.50
35:l:31:GLU:OE2	35:l:108:ASN:N	2.43	0.50
36:m:106:ARG:N	36:m:111:THR:O	2.44	0.50
38:o:32:ASN:HB3	38:o:89:GLU:OE2	2.11	0.50
42:s:2:ASP:OD1	42:s:39:ARG:NH1	2.45	0.50
48:y:16:ARG:NH2	50:3:1295:A:H3'	2.27	0.50
50:3:471:A:C4	50:3:472:A:C8	3.00	0.50
50:3:535:G:H22	50:3:538:A:P	2.33	0.50
50:3:651:A:H3'	50:3:652:U:C6	2.46	0.50
50:3:915:A:H61	50:3:936:G:H1'	1.77	0.50
50:3:1035:U:O4	50:3:1190:A:N7	2.45	0.50
50:3:1128:G:H1'	50:3:1134:G:N2	2.27	0.50
50:3:1196:U:H2'	50:3:1197:G:C8	2.47	0.50
50:3:1233:A:N6	50:3:1274:A:N6	2.59	0.50
50:3:1794:A:H2'	50:3:1795:C:O4'	2.12	0.50
50:3:1844:C:H2'	50:3:1846:A:N6	2.13	0.50
50:3:1868:A:C2	50:3:1888:U:C2	3.00	0.50
50:3:2008:A:H1'	50:3:2697:C:C4	2.47	0.50
50:3:2216:U:H3'	50:3:2217:G:H8	1.77	0.50
50:3:2307:G:C6	50:3:2326:G:C2	3.00	0.50
51:4:4:G:C6	51:4:105:A:C6	3.00	0.50
52:5:8:G:C6	52:5:294:A:C2	3.00	0.50
52:5:137:A:C5	52:5:157:A:N6	2.80	0.50
52:5:535:A:H2'	52:5:536:U:H6	1.77	0.50
52:5:936:G:O4'	52:5:1324:A:H5''	2.12	0.50
53:7:68:G:H2'	53:7:69:A:O4'	2.12	0.50
6:C:49:GLY:HA2	6:C:52:GLN:NE2	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:39:TYR:HB3	8:E:58:TYR:CD2	2.47	0.49
9:F:5:ARG:HD3	52:5:1353:C:H5'	1.93	0.49
20:Q:73:ARG:NH1	20:Q:78:ASN:OD1	2.45	0.49
28:e:104:GLU:CD	28:e:119:LYS:HG3	2.36	0.49
34:k:8:SER:OG	50:3:1274:A:O4'	2.30	0.49
36:m:11:SER:HB2	50:3:2698:U:H5	1.76	0.49
36:m:53:LYS:NZ	36:m:91:GLU:HA	2.27	0.49
38:o:26:SER:H	38:o:29:ASP:CG	2.20	0.49
38:o:103:TYR:O	38:o:107:ARG:HG3	2.12	0.49
41:r:83:LYS:C	41:r:84:ARG:HD2	2.37	0.49
44:u:34:ARG:N	44:u:34:ARG:HD2	2.27	0.49
45:v:29:TRP:HB3	50:3:432:G:H1'	1.93	0.49
46:w:67:GLU:HA	46:w:71:LYS:H	1.77	0.49
48:y:46:GLY:HA2	48:y:54:LYS:HB3	1.94	0.49
48:y:48:TYR:O	48:y:48:TYR:HD1	1.95	0.49
50:3:65:A:H3'	50:3:66:A:C8	2.45	0.49
50:3:340:U:H2'	50:3:341:G:O4'	2.12	0.49
50:3:353:G:C4	50:3:367:G:N2	2.80	0.49
50:3:647:G:N1	50:3:652:U:O4	2.45	0.49
50:3:712:A:O2'	50:3:2078:A:H5'	2.12	0.49
50:3:909:U:H2'	50:3:910:G:C8	2.47	0.49
50:3:1382:A:OP2	50:3:1405:G:N2	2.36	0.49
50:3:1662:G:O6	50:3:1673:U:N3	2.45	0.49
50:3:2228:U:C2	50:3:2229:C:C5	2.99	0.49
50:3:2815:G:N2	50:3:2894:G:H1'	2.27	0.49
52:5:398:G:C6	52:5:399:C:C4	3.00	0.49
52:5:524:C:C5	52:5:525:G:H1'	2.47	0.49
52:5:530:A:H62	52:5:1181:G:H21	1.60	0.49
52:5:542:G:H2'	52:5:543:C:H6	1.78	0.49
52:5:572:A:N3	52:5:877:C:H1'	2.27	0.49
52:5:834:G:H2'	52:5:835:G:C8	2.46	0.49
52:5:1077:U:H3	52:5:1090:G:H22	1.58	0.49
52:5:1117:U:O3'	52:5:1256:U:H5'	2.12	0.49
52:5:1216:G:H2'	52:5:1217:G:C8	2.47	0.49
52:5:1287:G:H2'	52:5:1288:C:C6	2.47	0.49
52:5:1434:C:H2'	52:5:1435:G:H8	1.76	0.49
52:5:1474:A:O2'	52:5:1495:C:OP1	2.25	0.49
3:2:25:VAL:HG22	3:2:34:GLN:HB3	1.94	0.49
4:A:28:THR:HG21	4:A:223:GLN:HB2	1.95	0.49
6:C:41:ARG:HG2	6:C:43:ARG:HG2	1.94	0.49
6:C:192:ASN:HB3	6:C:195:TYR:CZ	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:L:70:ARG:HA	15:L:73:ILE:HB	1.95	0.49
21:R:10:PHE:HE2	21:R:37:ARG:HB2	1.77	0.49
24:a:190:ARG:NH2	50:3:1806:G:O2'	2.40	0.49
25:b:178:ASN:HD21	25:b:212:LYS:HG3	1.78	0.49
27:d:126:GLY:HA2	27:d:163:ASP:HB3	1.93	0.49
28:e:22:LYS:HZ3	28:e:41:ASN:N	2.10	0.49
33:j:17:LYS:HE2	33:j:45:ASP:CG	2.38	0.49
36:m:44:ARG:O	36:m:48:LEU:HG	2.11	0.49
46:w:67:GLU:HA	46:w:71:LYS:HB2	1.94	0.49
49:z:36:LYS:NZ	50:3:2355:C:H4'	2.27	0.49
50:3:45:U:H3'	50:3:46:A:C8	2.46	0.49
50:3:54:A:P	50:3:118:G:N1	2.85	0.49
50:3:63:U:H3	50:3:97:A:C1'	2.19	0.49
50:3:119:A:C8	50:3:120:A:C8	3.01	0.49
50:3:433:A:H2'	50:3:434:G:H8	1.77	0.49
50:3:618:G:H1	50:3:1283:A:P	2.35	0.49
50:3:620:G:H4'	50:3:621:U:H6	1.77	0.49
50:3:774:A:H1'	50:3:775:C:H41	1.77	0.49
50:3:992:G:N2	50:3:996:A:OP2	2.39	0.49
50:3:1198:G:H2'	50:3:1199:A:H8	1.76	0.49
50:3:1332:A:C2	50:3:1659:C:C2	2.99	0.49
50:3:1336:A:H2'	50:3:1337:G:O4'	2.12	0.49
50:3:1389:G:H2'	50:3:1390:C:H6	1.77	0.49
50:3:1467:U:C4	50:3:1588:A:C6	3.00	0.49
50:3:1667:G:N7	50:3:1669:A:N6	2.60	0.49
50:3:1724:A:H2'	50:3:1725:G:C8	2.47	0.49
50:3:1804:A:H2'	50:3:1805:U:C6	2.47	0.49
50:3:1881:C:H2'	50:3:1882:G:O4'	2.12	0.49
50:3:1883:A:C5	50:3:1884:A:C5	3.01	0.49
52:5:265:U:C2	52:5:266:A:C8	3.00	0.49
52:5:651:G:H21	52:5:752:G:H5'	1.77	0.49
52:5:853:A:N6	52:5:863:A:O2'	2.45	0.49
52:5:1090:G:C6	52:5:1091:C:C2	2.99	0.49
52:5:1160:G:H2'	52:5:1161:G:C8	2.47	0.49
52:5:1227:A:H2'	52:5:1228:C:O4'	2.12	0.49
52:5:1323:A:C2'	52:5:1324:A:H5'	2.42	0.49
3:2:19:ARG:HA	50:3:2764:U:H5''	1.94	0.49
4:A:46:GLU:OE2	4:A:55:HIS:HB2	2.12	0.49
5:B:13:GLY:HA2	5:B:18:TRP:CH2	2.47	0.49
10:G:38:SER:O	10:G:42:ILE:HG12	2.12	0.49
11:H:6:TYR:HA	11:H:91:GLN:NE2	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:H:52:GLN:HG3	11:H:53:PRO:HD3	1.93	0.49
22:S:56:ARG:HH12	52:5:218:U:H4'	1.78	0.49
25:b:171:HIS:CE1	50:3:2825:A:H5''	2.47	0.49
26:c:34:VAL:O	26:c:38:VAL:HG23	2.13	0.49
32:i:67:LEU:HD11	32:i:72:LYS:HG3	1.92	0.49
32:i:85:GLY:C	32:i:87:ILE:N	2.66	0.49
36:m:105:PRO:HA	36:m:112:GLU:HA	1.94	0.49
37:n:27:ARG:HH22	50:3:2386:A:H4'	1.76	0.49
43:t:9:LYS:HG2	43:t:23:ILE:HD11	1.94	0.49
43:t:28:MET:N	43:t:33:GLN:O	2.25	0.49
50:3:493:A:O2'	50:3:494:G:OP2	2.25	0.49
50:3:642:A:H1'	50:3:657:A:N1	2.27	0.49
50:3:855:A:C8	50:3:1009:A:N6	2.81	0.49
50:3:1045:A:H2'	50:3:1046:A:C4	2.47	0.49
50:3:1203:G:C2	50:3:1204:A:C5	3.00	0.49
50:3:1703:A:O2'	50:3:2557:G:OP1	2.28	0.49
50:3:2090:G:H2'	50:3:2091:C:O4'	2.12	0.49
50:3:2274:A:H4'	50:3:2275:A:N3	2.27	0.49
50:3:2313:U:H2'	50:3:2314:U:C6	2.46	0.49
50:3:2345:G:C2	50:3:2346:G:C5	3.00	0.49
50:3:2725:G:H2'	50:3:2726:G:O4'	2.11	0.49
50:3:2752:G:O6	50:3:2768:U:C4	2.64	0.49
52:5:28:G:H2'	52:5:29:G:H8	1.77	0.49
52:5:98:G:N3	52:5:349:A:O2'	2.45	0.49
52:5:485:C:H2'	52:5:486:C:C6	2.48	0.49
52:5:624:U:H2'	52:5:625:U:C6	2.47	0.49
52:5:739:G:C4	52:5:740:G:C8	3.00	0.49
52:5:741:C:C2	52:5:742:C:C5	3.00	0.49
52:5:849:A:H5''	52:5:865:U:O4	2.12	0.49
52:5:1086:U:H2'	52:5:1087:C:H6	1.78	0.49
52:5:1128:G:H2'	52:5:1129:C:C6	2.47	0.49
52:5:1144:A:C8	52:5:1145:A:C8	3.00	0.49
52:5:1197:G:OP2	52:5:1296:C:N4	2.43	0.49
52:5:1236:A:C4	52:5:1237:G:C8	2.99	0.49
53:7:23:G:H2'	53:7:24:A:H8	1.76	0.49
4:A:118:THR:HB	4:A:190:GLU:HG2	1.95	0.49
9:F:103:ILE:O	9:F:107:ALA:CB	2.60	0.49
10:G:13:ASP:OD1	10:G:16:ALA:HB3	2.13	0.49
10:G:45:LEU:O	10:G:49:VAL:HG13	2.12	0.49
10:G:46:GLU:HA	10:G:49:VAL:HG22	1.94	0.49
11:H:97:LYS:HD2	11:H:98:LYS:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:29:ASN:HD22	52:5:51:A:P	2.36	0.49
15:L:26:GLY:HA3	52:5:1303:A:H5''	1.94	0.49
18:O:2:ARG:HE	18:O:10:THR:H	1.60	0.49
19:P:20:LYS:NZ	52:5:251:G:H5''	2.27	0.49
31:h:72:VAL:N	50:3:1095:U:OP1	2.30	0.49
37:n:17:LYS:HE3	37:n:18:LYS:HD3	1.94	0.49
41:r:18:ARG:O	41:r:22:GLN:HG2	2.11	0.49
50:3:51:A:C6	50:3:180:A:C5	3.00	0.49
50:3:86:A:N6	50:3:101:C:O4'	2.45	0.49
50:3:303:C:C2	50:3:304:U:C5	3.00	0.49
50:3:388:U:H2'	50:3:389:C:H6	1.76	0.49
50:3:695:G:H2'	50:3:696:U:C6	2.47	0.49
50:3:848:U:H1'	50:3:1256:A:N3	2.27	0.49
50:3:1027:U:C6	50:3:1216:U:C4	3.00	0.49
50:3:1283:A:H4'	50:3:1284:A:OP2	2.13	0.49
50:3:1670:U:H2'	50:3:1671:C:C6	2.47	0.49
50:3:1731:G:O5'	50:3:1731:G:H8	1.95	0.49
50:3:1772:G:N1	50:3:1995:G:N7	2.60	0.49
50:3:1956:G:H2'	50:3:1957:G:O4'	2.12	0.49
50:3:2221:U:O2'	50:3:2222:C:H5'	2.12	0.49
50:3:2492:G:H2'	50:3:2493:G:C8	2.48	0.49
50:3:2632:C:H2'	50:3:2633:C:C6	2.47	0.49
50:3:2800:U:H3'	50:3:2801:U:C5	2.48	0.49
50:3:2879:U:O4	50:3:2880:A:N6	2.45	0.49
52:5:391:C:H2'	52:5:392:A:C8	2.47	0.49
52:5:667:U:C2	52:5:734:A:C2	3.01	0.49
52:5:751:C:H5'	52:5:752:G:C8	2.44	0.49
52:5:1042:G:N1	52:5:1183:C:N3	2.60	0.49
52:5:1136:G:C5	52:5:1137:C:C5	3.00	0.49
52:5:1241:G:C6	52:5:1245:A:C6	3.00	0.49
52:5:1263:A:H3'	52:5:1264:G:C8	2.48	0.49
52:5:1329:G:H2'	52:5:1330:A:O4'	2.12	0.49
52:5:1331:A:H2	52:5:1340:G:H22	1.61	0.49
52:5:1484:C:H2'	52:5:1485:C:C5	2.48	0.49
3:2:7:VAL:HG22	3:2:37:GLY:HA3	1.94	0.49
6:C:103:ARG:O	6:C:167:VAL:HG21	2.13	0.49
9:F:5:ARG:HG3	52:5:1353:C:OP1	2.12	0.49
9:F:52:ARG:HH12	9:F:117:GLU:HA	1.77	0.49
9:F:54:LYS:O	9:F:55:GLU:HG2	2.11	0.49
13:J:22:ASN:ND2	52:5:686:C:H5''	2.28	0.49
13:J:45:PHE:HB3	13:J:50:LYS:HA	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:L:52:GLU:O	15:L:56:ILE:HG12	2.11	0.49
20:Q:84:ARG:HD2	52:5:661:G:OP1	2.12	0.49
24:a:238:HIS:CD2	24:a:257:PRO:HA	2.48	0.49
25:b:107:TYR:HB2	25:b:213:LYS:O	2.13	0.49
28:e:124:LEU:HA	28:e:137:SER:O	2.13	0.49
29:f:73:GLU:O	29:f:139:LYS:NZ	2.34	0.49
34:k:72:PHE:CE2	50:3:2413:G:H5''	2.48	0.49
36:m:3:TYR:OH	50:3:784:A:N6	2.44	0.49
36:m:106:ARG:HG2	36:m:108:GLY:N	2.28	0.49
37:n:27:ARG:HH22	37:n:116:PHE:HA	1.77	0.49
39:p:35:LYS:O	39:p:39:ILE:HG12	2.12	0.49
41:r:75:VAL:HG21	41:r:104:VAL:HG12	1.94	0.49
42:s:66:ARG:HG3	42:s:73:GLY:H	1.77	0.49
43:t:47:LYS:HB3	43:t:50:GLN:HB2	1.95	0.49
48:y:6:ARG:HH22	50:3:2026:A:H8	1.60	0.49
50:3:286:A:C8	50:3:288:A:C5	3.01	0.49
50:3:360:G:N1	50:3:371:C:N3	2.60	0.49
50:3:452:U:H2'	50:3:453:U:C6	2.48	0.49
50:3:592:G:H2'	50:3:593:C:C6	2.47	0.49
50:3:601:U:H2'	50:3:603:G:N7	2.28	0.49
50:3:748:G:N2	50:3:752:C:H5''	2.28	0.49
50:3:799:A:N7	50:3:1783:G:H1'	2.28	0.49
50:3:945:U:H2'	50:3:946:A:C8	2.47	0.49
50:3:1168:A:N6	50:3:2032:G:O2'	2.45	0.49
50:3:1176:U:H4'	50:3:1177:A:O4'	2.12	0.49
50:3:1217:G:H2'	50:3:1218:G:O4'	2.11	0.49
50:3:1227:C:H3'	50:3:1228:G:H8	1.77	0.49
50:3:1246:U:H2'	50:3:1247:C:C4	2.48	0.49
50:3:1300:C:O2'	50:3:1353:G:H2'	2.13	0.49
50:3:1313:G:H22	50:3:1357:U:P	2.34	0.49
50:3:1314:A:C6	50:3:1317:C:C2	3.01	0.49
50:3:1475:C:H2'	50:3:1476:C:C6	2.47	0.49
50:3:1506:U:H2'	50:3:1507:G:C8	2.47	0.49
50:3:1614:G:C6	50:3:1615:G:C5	3.01	0.49
50:3:1835:G:O2'	50:3:1836:A:OP2	2.30	0.49
50:3:1928:G:H2'	50:3:1929:G:H8	1.76	0.49
50:3:2098:U:H2'	50:3:2099:U:C5	2.47	0.49
50:3:2357:G:C6	50:3:2377:A:C6	3.00	0.49
50:3:2367:C:H2'	50:3:2368:A:N9	2.27	0.49
52:5:21:U:H2'	52:5:22:G:O4'	2.11	0.49
52:5:209:A:C4	52:5:210:G:H1'	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:303:A:H3'	52:5:304:U:H6	1.78	0.49
52:5:319:U:H2'	52:5:320:G:C4	2.46	0.49
52:5:371:U:O2	52:5:386:U:O2'	2.26	0.49
52:5:396:C:O2	52:5:620:A:O2'	2.25	0.49
52:5:402:G:N7	52:5:493:A:O2'	2.41	0.49
52:5:645:A:C6	52:5:646:A:C5	3.00	0.49
52:5:754:U:H2'	52:5:755:U:O4'	2.11	0.49
52:5:886:A:C2	52:5:901:A:C4	2.99	0.49
52:5:1110:C:C2	52:5:1111:G:C8	3.00	0.49
52:5:1119:C:H3'	52:5:1120:A:C8	2.47	0.49
52:5:1134:C:H3'	52:5:1134:C:O2	2.13	0.49
53:7:46:U:N3	53:7:47:G:N7	2.60	0.49
53:7:66:C:H2'	53:7:67:C:C6	2.47	0.49
2:1:32:HIS:HB3	50:3:2398:U:H5'	1.94	0.49
4:A:87:THR:HG23	4:A:110:GLN:HA	1.95	0.49
8:E:49:ILE:HG21	8:E:83:LEU:HG	1.94	0.49
14:K:46:VAL:C	14:K:68:VAL:HG23	2.38	0.49
17:N:21:SER:OG	52:5:747:C:O2'	2.31	0.49
18:O:61:ASP:N	18:O:61:ASP:OD1	2.46	0.49
19:P:68:PRO:HB3	19:P:74:ARG:CZ	2.42	0.49
20:Q:73:ARG:NH2	20:Q:80:GLN:HA	2.27	0.49
24:a:128:ILE:HD12	24:a:134:PHE:HD2	1.77	0.49
24:a:159:GLN:HB3	50:3:1825:U:C4	2.47	0.49
25:b:4:ARG:HD3	25:b:101:LEU:HA	1.93	0.49
27:d:99:PHE:O	27:d:102:LYS:HB3	2.13	0.49
32:i:118:SER:HA	32:i:121:TRP:CE3	2.48	0.49
35:l:84:GLY:HA3	50:3:2258:G:N2	2.27	0.49
36:m:49:ILE:O	36:m:53:LYS:HE2	2.13	0.49
36:m:56:ASN:OD1	36:m:59:ASN:N	2.36	0.49
37:n:33:ILE:HD11	37:n:42:GLN:HG2	1.93	0.49
39:p:44:TYR:HB3	50:3:569:U:O2'	2.13	0.49
47:x:13:SER:HA	47:x:24:THR:HB	1.95	0.49
50:3:84:G:H5''	50:3:329:G:O3'	2.12	0.49
50:3:195:A:H2'	50:3:196:G:C8	2.48	0.49
50:3:244:G:H1'	50:3:262:G:N2	2.28	0.49
50:3:412:A:H1'	50:3:437:A:C6	2.47	0.49
50:3:651:A:C2	50:3:652:U:H1'	2.48	0.49
50:3:698:A:C6	50:3:699:U:C4	3.01	0.49
50:3:769:A:H3'	50:3:770:A:H8	1.78	0.49
50:3:895:G:H1'	50:3:896:U:C5	2.44	0.49
50:3:1086:G:H2'	50:3:1087:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1106:G:N2	50:3:1124:G:N3	2.60	0.49
50:3:1298:A:H61	50:3:2019:G:H2'	1.77	0.49
50:3:1338:G:N7	50:3:1339:U:C4	2.80	0.49
50:3:1429:G:C2	50:3:1430:U:C2	3.00	0.49
50:3:1447:A:H1'	50:3:1448:U:C5	2.47	0.49
50:3:1501:U:N3	50:3:1502:A:H1'	2.27	0.49
50:3:1535:A:H2'	50:3:1536:C:O4'	2.13	0.49
50:3:1821:G:OP2	50:3:1822:A:H3'	2.12	0.49
50:3:1854:A:H1'	52:5:699:A:C2	2.48	0.49
50:3:1913:G:C5	50:3:1936:G:C2	3.00	0.49
50:3:1930:U:C5'	53:7:25:G:H21	2.25	0.49
50:3:2205:U:H1'	50:3:2206:A:C8	2.48	0.49
50:3:2278:G:H3'	50:3:2279:G:H8	1.76	0.49
50:3:2598:C:H2'	50:3:2599:C:C6	2.47	0.49
50:3:2691:C:C4	50:3:2692:U:C4	3.00	0.49
51:4:1:U:H2'	51:4:2:U:C6	2.47	0.49
51:4:55:A:H2'	51:4:56:A:C8	2.47	0.49
52:5:39:G:H2'	52:5:39:G:N3	2.27	0.49
52:5:89:G:H2'	52:5:90:G:H5'	1.94	0.49
52:5:590:G:H2'	52:5:591:A:C8	2.48	0.49
52:5:653:G:N2	52:5:748:U:O2	2.46	0.49
52:5:1242:U:C2	52:5:1301:U:H4'	2.47	0.49
52:5:1477:A:C8	52:5:1480:G:N2	2.77	0.49
8:E:30:THR:OG1	8:E:31:ASN:N	2.44	0.49
9:F:106:PHE:HB3	9:F:110:ARG:NH1	2.25	0.49
13:J:78:PHE:O	13:J:80:LYS:NZ	2.46	0.49
16:M:32:ALA:HB2	52:5:969:A:H5''	1.93	0.49
16:M:46:GLU:HA	16:M:49:TYR:HD2	1.76	0.49
25:b:212:LYS:NZ	50:3:2740:U:OP1	2.45	0.49
29:f:5:LEU:HB3	29:f:17:ASP:O	2.12	0.49
32:i:68:THR:O	32:i:71:LYS:HG3	2.13	0.49
35:l:17:TYR:CD2	35:l:98:LYS:HA	2.47	0.49
40:q:22:VAL:HG13	40:q:92:LEU:HD21	1.95	0.49
41:r:38:ASN:HB3	48:y:25:GLN:HG3	1.94	0.49
46:w:26:LEU:HD12	46:w:29:TYR:HD2	1.77	0.49
50:3:25:G:C6	50:3:553:A:C6	3.00	0.49
50:3:106:C:H2'	50:3:107:C:H6	1.78	0.49
50:3:393:C:H2'	50:3:394:C:C6	2.47	0.49
50:3:573:A:N6	50:3:588:G:H1'	2.26	0.49
50:3:726:U:H2'	50:3:727:C:C6	2.48	0.49
50:3:940:A:H2'	50:3:941:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:983:A:N3	50:3:1020:G:H8	2.10	0.49
50:3:1244:A:N6	50:3:1265:G:H21	2.07	0.49
50:3:1433:U:H2'	50:3:1434:U:C6	2.47	0.49
50:3:1491:G:H4'	50:3:1554:A:H4'	1.94	0.49
50:3:1528:G:H2'	50:3:1529:U:O4'	2.13	0.49
50:3:1709:C:H3'	50:3:1710:A:C8	2.42	0.49
50:3:1977:A:C4	50:3:1979:G:C8	3.01	0.49
50:3:2094:A:H2'	50:3:2095:A:H8	1.77	0.49
50:3:2191:G:H2'	50:3:2192:U:O4'	2.12	0.49
50:3:2304:U:N3	50:3:2342:U:O4'	2.46	0.49
50:3:2308:U:H2'	50:3:2309:A:H8	1.76	0.49
50:3:2337:U:H2'	50:3:2338:G:C8	2.48	0.49
50:3:2760:C:H2'	50:3:2761:A:O4'	2.13	0.49
50:3:2835:G:H5''	50:3:2836:U:H5'	1.95	0.49
51:4:60:C:H2'	51:4:61:A:C8	2.47	0.49
52:5:7:U:O2'	52:5:8:G:H8	1.95	0.49
52:5:177:G:C2	52:5:189:C:C2	3.01	0.49
52:5:225:U:H2'	52:5:226:G:C8	2.48	0.49
52:5:1073:A:H2'	52:5:1074:U:C6	2.47	0.49
52:5:1089:C:H2'	52:5:1090:G:C8	2.47	0.49
52:5:1194:A:H2'	52:5:1195:G:C8	2.48	0.49
52:5:1250:A:H3'	52:5:1251:G:C8	2.47	0.49
52:5:1362:G:H2'	52:5:1363:U:C6	2.48	0.49
52:5:1390:G:C2	52:5:1461:G:C4	3.01	0.49
4:A:82:ILE:HA	4:A:175:LEU:O	2.13	0.49
4:A:93:LYS:HE2	4:A:109:THR:O	2.12	0.49
5:B:20:SER:O	5:B:20:SER:OG	2.31	0.49
15:L:115:THR:HA	52:5:1203:A:H4'	1.95	0.49
24:a:74:THR:HA	24:a:77:ASP:OD2	2.12	0.49
24:a:82:THR:HG23	24:a:84:LYS:HE3	1.95	0.49
24:a:159:GLN:HG2	24:a:162:ARG:HH21	1.78	0.49
24:a:280:ARG:HG3	24:a:284:GLY:O	2.11	0.49
28:e:24:HIS:ND1	28:e:37:LYS:HA	2.27	0.49
28:e:130:LYS:HB2	28:e:133:GLU:HG2	1.95	0.49
30:g:52:LYS:HA	50:3:1119:A:OP1	2.11	0.49
34:k:29:GLY:O	34:k:32:SER:N	2.46	0.49
34:k:133:LYS:HA	34:k:136:LEU:HB3	1.95	0.49
39:p:32:LYS:NZ	50:3:611:A:N3	2.60	0.49
40:q:34:GLN:HA	40:q:55:VAL:O	2.13	0.49
41:r:55:ILE:O	41:r:59:THR:HG22	2.12	0.49
47:x:14:PHE:N	47:x:23:PHE:O	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:60:G:C2	50:3:72:G:C2	3.00	0.49
50:3:220:A:C5	50:3:221:A:C5	3.01	0.49
50:3:529:G:H2'	50:3:530:G:H8	1.76	0.49
50:3:571:A:H3'	50:3:572:G:H8	1.77	0.49
50:3:860:C:H2'	50:3:861:U:C6	2.47	0.49
50:3:1172:G:H1'	50:3:2046:G:OP1	2.13	0.49
50:3:1253:G:N1	50:3:1255:G:H3'	2.27	0.49
50:3:1580:G:H2'	50:3:1581:U:C6	2.48	0.49
50:3:1667:G:C5	50:3:1669:A:C5	3.01	0.49
50:3:1741:G:C5	50:3:1763:G:C6	3.00	0.49
50:3:1849:G:H2'	50:3:1850:C:H6	1.78	0.49
50:3:1897:A:N1	50:3:2242:G:O2'	2.38	0.49
50:3:2260:G:N2	53:7:76:C:H5''	2.28	0.49
50:3:2299:U:H5''	50:3:2388:C:H1'	1.93	0.49
50:3:2383:G:N2	50:3:2385:A:H3'	2.27	0.49
50:3:2440:A:H2'	50:3:2441:A:C8	2.48	0.49
50:3:2548:G:H3'	50:3:2549:A:H8	1.77	0.49
50:3:2586:G:H2'	50:3:2587:U:C6	2.48	0.49
50:3:2629:G:H2'	50:3:2630:U:O4'	2.12	0.49
50:3:2693:U:HO2'	50:3:2734:C:N4	2.11	0.49
50:3:2722:G:H2'	50:3:2723:C:C6	2.47	0.49
51:4:38:U:N3	51:4:42:G:OP2	2.37	0.49
51:4:76:A:C2	51:4:77:G:H1'	2.47	0.49
52:5:92:G:N3	52:5:92:G:H2'	2.28	0.49
52:5:245:U:H2'	52:5:246:A:H2	1.77	0.49
52:5:367:A:H4'	52:5:479:A:OP1	2.13	0.49
52:5:777:A:N6	52:5:798:U:OP2	2.46	0.49
52:5:994:C:H2'	52:5:995:U:C6	2.48	0.49
52:5:1214:A:H62	52:5:1273:A:N6	2.09	0.49
52:5:1231:U:H1'	52:5:1233:G:C6	2.46	0.49
5:B:103:ASP:OD1	5:B:104:LEU:N	2.41	0.49
6:C:146:ALA:O	6:C:149:ILE:HG22	2.13	0.49
10:G:115:ILE:HG23	10:G:138:LEU:HB2	1.94	0.49
12:I:83:VAL:HG13	12:I:84:ASP:N	2.28	0.49
14:K:27:ASN:HA	14:K:72:ASN:ND2	2.28	0.49
14:K:27:ASN:ND2	14:K:40:SER:OG	2.46	0.49
14:K:81:PRO:O	14:K:112:ARG:NH1	2.31	0.49
15:L:97:VAL:N	52:5:1282:U:OP1	2.46	0.49
17:N:64:LEU:HB3	17:N:68:LYS:NZ	2.27	0.49
20:Q:48:GLN:HG3	20:Q:51:ILE:HD11	1.95	0.49
22:S:74:ALA:O	22:S:77:ASN:HB2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:i:20:ILE:HG12	32:i:140:PRO:HB2	1.95	0.49
34:k:22:ARG:HA	50:3:846:U:H2'	1.95	0.49
35:l:82:ARG:HD2	50:3:2504:C:OP1	2.13	0.49
36:m:60:ARG:HD2	36:m:83:PHE:HE2	1.78	0.49
38:o:58:LYS:HE2	38:o:61:SER:HB2	1.95	0.49
40:q:24:LYS:HB2	40:q:88:PRO:C	2.38	0.49
40:q:44:LYS:HG2	40:q:50:LEU:HD21	1.94	0.49
50:3:246:G:H1'	50:3:247:U:H5	1.77	0.49
50:3:248:A:C4	50:3:249:G:H1'	2.47	0.49
50:3:300:G:N2	50:3:407:U:O2	2.46	0.49
50:3:410:G:H1'	50:3:436:G:N1	2.28	0.49
50:3:524:G:O2'	50:3:526:G:O6	2.27	0.49
50:3:858:A:H8	50:3:858:A:O5'	1.96	0.49
50:3:1251:G:H2'	50:3:1252:C:O4'	2.13	0.49
50:3:1316:U:H5	50:3:1354:U:H3	1.61	0.49
50:3:1331:G:H2'	50:3:1332:A:O4'	2.13	0.49
50:3:1625:G:C6	50:3:1626:C:C4	3.01	0.49
50:3:1764:U:H3	50:3:1769:A:N6	2.10	0.49
50:3:1806:G:H1	50:3:1826:A:H2'	1.77	0.49
50:3:2033:G:C4	50:3:2034:G:C8	3.01	0.49
50:3:2064:G:H3'	50:3:2065:A:C8	2.48	0.49
50:3:2380:U:H2'	50:3:2381:G:C8	2.47	0.49
50:3:2474:C:H2'	50:3:2475:C:H6	1.77	0.49
50:3:2782:A:H2'	50:3:2783:A:H8	1.74	0.49
50:3:2873:G:H2'	50:3:2874:C:C6	2.47	0.49
51:4:23:A:H2'	51:4:24:A:O4'	2.12	0.49
52:5:26:C:O2'	52:5:506:U:O4	2.29	0.49
52:5:197:A:O2'	52:5:198:A:O5'	2.27	0.49
52:5:205:U:H2'	52:5:206:G:O4'	2.13	0.49
52:5:264:C:H2'	52:5:265:U:C6	2.48	0.49
52:5:350:G:H21	52:5:384:G:C2'	2.26	0.49
52:5:661:G:O2'	52:5:723:C:O4'	2.30	0.49
52:5:693:A:N1	52:5:794:C:H1'	2.28	0.49
52:5:825:A:H2'	52:5:826:G:O4'	2.13	0.49
52:5:858:A:H2'	52:5:859:A:C8	2.48	0.49
52:5:1119:C:H2'	52:5:1120:A:O4'	2.13	0.49
52:5:1260:U:N3	52:5:1262:A:H5'	2.17	0.49
52:5:1293:A:O2'	52:5:1297:G:N7	2.46	0.49
52:5:1398:G:C2	52:5:1453:C:C2	3.01	0.49
4:A:27:ARG:HD3	4:A:27:ARG:H	1.77	0.49
4:A:81:GLN:HB2	4:A:173:PRO:HA	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:C:79:LEU:C	6:C:82:ARG:HH22	2.18	0.49
6:C:104:MET:HG2	6:C:167:VAL:HB	1.95	0.49
8:E:101:ASN:OD1	8:E:102:PRO:HD3	2.12	0.49
9:F:56:LYS:HZ3	9:F:59:THR:N	2.10	0.49
14:K:68:VAL:O	14:K:75:GLU:HA	2.13	0.49
24:a:93:SER:HG	24:a:164:ALA:H	1.61	0.49
25:b:123:ILE:O	25:b:127:ASN:HA	2.13	0.49
26:c:32:GLN:OE1	34:k:11:LYS:HB2	2.13	0.49
32:i:115:ASN:ND2	50:3:591:G:H5''	2.28	0.49
34:k:137:LYS:O	34:k:141:ASN:ND2	2.46	0.49
39:p:94:LEU:HD22	40:q:11:GLN:HG3	1.94	0.49
41:r:128:ARG:NH2	50:3:1249:A:H1'	2.28	0.49
44:u:51:ILE:H	44:u:74:PHE:HA	1.78	0.49
46:w:41:PRO:HG2	50:3:97:A:O2'	2.13	0.49
46:w:105:ARG:NH1	50:3:1431:A:O3'	2.46	0.49
50:3:51:A:C5	50:3:119:A:N7	2.81	0.49
50:3:82:G:C6	50:3:108:G:C6	3.01	0.49
50:3:117:C:C4	50:3:118:G:C5	3.01	0.49
50:3:201:A:H3'	50:3:202:C:H6	1.77	0.49
50:3:251:G:OP2	50:3:253:C:N4	2.34	0.49
50:3:278:U:H2'	50:3:279:U:C5	2.48	0.49
50:3:310:U:H4'	50:3:311:G:O4'	2.12	0.49
50:3:502:A:C8	50:3:503:G:C8	3.00	0.49
50:3:860:C:H4'	50:3:2436:G:C5	2.48	0.49
50:3:1071:G:N1	50:3:1154:U:N3	2.17	0.49
50:3:1307:G:H2'	50:3:1308:A:H8	1.78	0.49
50:3:1350:A:N6	50:3:1361:U:O2	2.42	0.49
50:3:1384:C:H2'	50:3:1385:U:C6	2.48	0.49
50:3:1702:A:C6	50:3:1998:U:C2	3.00	0.49
50:3:1754:U:H2'	50:3:1755:A:C8	2.47	0.49
50:3:2032:G:C6	50:3:2046:G:C6	3.01	0.49
50:3:2203:U:H2'	50:3:2204:C:C6	2.47	0.49
50:3:2220:A:H4'	50:3:2221:U:OP2	2.10	0.49
50:3:2571:U:H2'	50:3:2573:A:OP2	2.13	0.49
52:5:84:U:H2'	52:5:85:U:O4'	2.13	0.49
52:5:253:G:C6	52:5:266:A:C6	3.01	0.49
52:5:282:G:H2'	52:5:283:U:O4'	2.13	0.49
52:5:337:C:H2'	52:5:338:C:C6	2.48	0.49
52:5:372:G:H2'	52:5:373:A:C8	2.48	0.49
52:5:515:G:O2'	52:5:529:U:O5'	2.30	0.49
52:5:871:U:H2'	52:5:872:C:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:140:TYR:HB2	10:G:142:TRP:HZ3	1.78	0.48
19:P:64:VAL:CG1	19:P:78:ALA:HB2	2.43	0.48
22:S:18:ASN:HD21	52:5:318:C:H4'	1.78	0.48
24:a:153:HIS:CG	50:3:2212:U:H4'	2.48	0.48
24:a:219:ASN:O	24:a:223:GLY:N	2.46	0.48
25:b:26:ILE:HG23	25:b:192:LEU:HD22	1.94	0.48
26:c:106:LYS:HD3	50:3:634:C:H4'	1.94	0.48
27:d:121:SER:HA	50:3:2311:G:O3'	2.12	0.48
28:e:26:ALA:HB1	28:e:33:GLN:NE2	2.28	0.48
31:h:125:LEU:HA	31:h:135:VAL:HB	1.95	0.48
33:j:31:ARG:HH22	50:3:2684:G:P	2.35	0.48
33:j:104:ARG:HH21	33:j:121:VAL:HB	1.77	0.48
37:n:18:LYS:O	37:n:22:THR:HG22	2.12	0.48
37:n:110:ARG:HG2	37:n:116:PHE:CZ	2.48	0.48
41:r:11:ARG:HH12	50:3:2018:U:H5''	1.78	0.48
44:u:67:LEU:HD11	44:u:71:ASP:HA	1.95	0.48
45:v:31:VAL:HG23	45:v:33:LEU:HG	1.94	0.48
48:y:14:ASP:HA	48:y:17:ARG:HB2	1.95	0.48
50:3:90:G:H2'	50:3:91:G:H8	1.77	0.48
50:3:161:U:N3	50:3:171:G:C6	2.76	0.48
50:3:472:A:N3	50:3:472:A:H2'	2.28	0.48
50:3:770:A:O4'	50:3:1668:G:N2	2.46	0.48
50:3:784:A:N1	50:3:788:G:H1'	2.28	0.48
50:3:861:U:H2'	50:3:863:U:O4'	2.13	0.48
50:3:1026:A:C5'	50:3:1192:U:H5''	2.43	0.48
50:3:1056:A:H8	50:3:1157:G:H4'	1.78	0.48
50:3:1097:G:H3'	50:3:1098:G:H8	1.76	0.48
50:3:1349:C:H2'	50:3:1350:A:H5'	1.94	0.48
50:3:1376:G:C6	50:3:1377:A:C5	3.01	0.48
50:3:1471:A:C6	50:3:1582:G:C6	3.01	0.48
50:3:1504:G:C2	50:3:1539:U:O2	2.66	0.48
50:3:1518:C:H2'	50:3:1519:A:H5'	1.95	0.48
50:3:1747:G:H4'	50:3:1748:U:OP2	2.11	0.48
50:3:1819:G:H2'	50:3:1820:U:H6	1.78	0.48
50:3:1822:A:H8	50:3:1822:A:O5'	1.95	0.48
50:3:1859:U:N3	50:3:1896:A:OP2	2.46	0.48
50:3:2068:G:H4'	50:3:2069:A:H5'	1.95	0.48
51:4:41:C:H2'	51:4:43:A:N7	2.28	0.48
52:5:355:A:C4	52:5:356:G:C8	3.01	0.48
52:5:512:U:H2'	52:5:513:G:H8	1.78	0.48
52:5:635:G:H2'	52:5:636:G:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:689:U:O2	52:5:692:A:H8	1.96	0.48
52:5:822:A:H2'	52:5:823:C:H6	1.78	0.48
52:5:1479:G:P	52:5:1482:A:HO2'	2.36	0.48
5:B:92:ILE:O	5:B:95:ILE:HG22	2.13	0.48
8:E:96:TYR:HA	8:E:100:ILE:HG12	1.95	0.48
8:E:102:PRO:HG2	8:E:103:LYS:HE2	1.94	0.48
9:F:62:GLU:HA	9:F:65:VAL:HG22	1.95	0.48
9:F:106:PHE:O	9:F:110:ARG:HB2	2.13	0.48
12:I:53:GLU:HG2	12:I:73:LYS:O	2.12	0.48
15:L:31:GLN:O	15:L:35:LYS:HE3	2.13	0.48
15:L:65:ILE:HG13	15:L:68:ASP:H	1.78	0.48
17:N:22:ILE:HD13	17:N:67:LEU:HD13	1.93	0.48
22:S:44:LEU:HA	22:S:47:VAL:HG22	1.95	0.48
24:a:46:GLY:O	24:a:54:THR:N	2.44	0.48
24:a:76:TYR:HB2	24:a:101:TYR:CE2	2.47	0.48
40:q:6:VAL:HB	40:q:37:LYS:HB3	1.94	0.48
44:u:80:LEU:HB2	44:u:98:VAL:HG23	1.93	0.48
50:3:35:U:HO2'	50:3:490:A:H2	1.59	0.48
50:3:211:A:C4	50:3:212:G:C8	3.01	0.48
50:3:345:A:H62	50:3:363:G:H5''	1.77	0.48
50:3:635:G:C2	50:3:691:G:C6	3.01	0.48
50:3:896:U:C2	50:3:2276:A:C8	3.01	0.48
50:3:944:U:H2'	50:3:945:U:C6	2.48	0.48
50:3:1041:C:C2	50:3:1042:C:C5	3.02	0.48
50:3:1245:G:N1	50:3:1265:G:C2	2.81	0.48
50:3:1270:C:O2	50:3:1271:A:C8	2.66	0.48
50:3:1298:A:C4	50:3:1299:A:C8	3.00	0.48
50:3:1364:A:H3'	50:3:1365:G:H8	1.77	0.48
50:3:1747:G:H3'	50:3:1748:U:C5	2.48	0.48
50:3:2267:G:C8	50:3:2435:C:C4	3.01	0.48
50:3:2330:A:N1	50:3:2343:A:H2	2.11	0.48
52:5:81:A:C6	52:5:82:C:C4	3.01	0.48
52:5:112:U:OP1	52:5:632:A:H1'	2.12	0.48
52:5:130:G:H2'	52:5:131:G:H8	1.78	0.48
52:5:150:A:C6	52:5:151:C:C4	3.01	0.48
52:5:168:A:N6	52:5:219:A:N3	2.61	0.48
52:5:578:C:H2'	52:5:579:G:O4'	2.13	0.48
52:5:880:G:H2'	52:5:881:G:O4'	2.13	0.48
52:5:1092:A:H4'	52:5:1093:A:O5'	2.12	0.48
52:5:1229:A:H2'	52:5:1230:G:H8	1.77	0.48
52:5:1231:U:H5	52:5:1253:A:H5''	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1406:U:C4	52:5:1407:A:N7	2.81	0.48
52:5:1414:U:H2'	52:5:1415:G:C8	2.48	0.48
2:1:54:ARG:NE	50:3:869:U:H4'	2.27	0.48
8:E:149:ALA:HA	10:G:58:GLN:HG3	1.96	0.48
9:F:133:ALA:O	9:F:137:LYS:N	2.44	0.48
15:L:68:ASP:HA	15:L:71:ARG:HE	1.77	0.48
16:M:58:LYS:NZ	52:5:1163:A:HI'	2.28	0.48
18:O:9:PRO:HD2	18:O:36:ALA:HB2	1.95	0.48
24:a:92:ARG:HE	50:3:1824:G:H5''	1.77	0.48
24:a:228:VAL:HG11	50:3:817:A:H2'	1.95	0.48
25:b:16:VAL:HG12	25:b:24:LEU:HB3	1.94	0.48
25:b:125:ARG:HH21	25:b:167:GLY:N	2.12	0.48
26:c:98:ASN:H	50:3:623:A:H5''	1.77	0.48
29:f:32:PRO:HD3	29:f:111:PHE:HB2	1.94	0.48
32:i:62:SER:H	32:i:129:LYS:HA	1.78	0.48
34:k:83:ASN:OD1	34:k:84:LYS:N	2.42	0.48
37:n:43:ALA:HB3	37:n:52:LEU:HB2	1.95	0.48
39:p:2:ARG:HB2	50:3:1278:G:C5	2.48	0.48
41:r:2:ILE:HG22	50:3:531:G:OP1	2.13	0.48
44:u:64:ASN:HB2	44:u:97:VAL:CG1	2.43	0.48
48:y:46:GLY:O	48:y:54:LYS:N	2.46	0.48
50:3:26:G:C2	50:3:552:C:C2	3.00	0.48
50:3:270:G:C5	50:3:271:G:C8	3.01	0.48
50:3:380:A:H3'	50:3:381:A:H8	1.78	0.48
50:3:394:C:H2'	50:3:395:U:C6	2.48	0.48
50:3:810:G:C2	50:3:829:A:H8	2.31	0.48
50:3:849:C:H2'	50:3:850:G:C8	2.46	0.48
50:3:1413:A:C4	50:3:1414:C:C5	3.01	0.48
50:3:1571:G:N2	50:3:1572:U:O4	2.24	0.48
50:3:1702:A:H5'	50:3:1703:A:C8	2.48	0.48
50:3:1747:G:H3'	50:3:1748:U:C6	2.49	0.48
50:3:1783:G:C2	50:3:1784:U:C4	3.01	0.48
50:3:1846:A:H2'	50:3:1846:A:N3	2.27	0.48
50:3:2124:A:H61	50:3:2174:G:H22	1.61	0.48
50:3:2205:U:O3'	50:3:2206:A:H8	1.95	0.48
50:3:2285:G:H3'	50:3:2286:A:H5''	1.94	0.48
50:3:2399:G:O6	50:3:2433:A:H5''	2.14	0.48
50:3:2567:C:H2'	50:3:2568:G:H8	1.78	0.48
50:3:2594:C:H2'	50:3:2595:A:C8	2.48	0.48
50:3:2728:U:H4'	50:3:2849:G:O2'	2.13	0.48
50:3:2731:U:H3'	50:3:2732:A:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2764:U:C4	50:3:2767:G:O6	2.66	0.48
52:5:17:A:C2	52:5:1071:A:H1'	2.47	0.48
52:5:18:U:H4'	52:5:1070:G:O2'	2.13	0.48
52:5:137:A:H3'	52:5:138:A:C8	2.44	0.48
52:5:651:G:N2	52:5:752:G:H5'	2.28	0.48
52:5:823:C:H2'	52:5:824:U:H6	1.77	0.48
52:5:1496:G:C6	52:5:1497:U:C4	3.01	0.48
53:7:16:G:N2	53:7:60:U:C4	2.81	0.48
2:1:49:ALA:HA	2:1:52:PHE:HB3	1.94	0.48
4:A:66:GLN:O	4:A:70:ASN:ND2	2.46	0.48
6:C:61:GLN:HB2	6:C:66:ILE:HB	1.94	0.48
6:C:184:ARG:HH22	6:C:188:PRO:C	2.20	0.48
7:D:147:SER:HA	7:D:184:GLY:HA3	1.95	0.48
8:E:35:LEU:HD13	8:E:60:TRP:HD1	1.77	0.48
10:G:98:TYR:HB3	52:5:597:C:H5'	1.94	0.48
10:G:126:LYS:O	10:G:130:LEU:HB2	2.14	0.48
15:L:8:ASP:OD1	15:L:11:ASN:ND2	2.46	0.48
19:P:30:PHE:HE1	19:P:41:ARG:N	2.10	0.48
24:a:88:TYR:CZ	50:3:1601:A:C4	3.01	0.48
25:b:85:ARG:HH12	50:3:2646:G:P	2.37	0.48
34:k:58:LEU:O	34:k:62:LEU:HG	2.13	0.48
35:l:67:ARG:NH2	50:3:943:A:H4'	2.29	0.48
38:o:97:ARG:NH2	50:3:2853:U:H5''	2.29	0.48
39:p:13:ARG:HA	39:p:16:TRP:HD1	1.78	0.48
40:q:56:VAL:H	40:q:97:PHE:HA	1.76	0.48
41:r:134:LYS:HA	41:r:137:MET:HE2	1.94	0.48
42:s:4:THR:O	42:s:4:THR:HG22	2.13	0.48
42:s:65:ILE:HG23	42:s:66:ARG:HG2	1.96	0.48
50:3:15:A:H4'	50:3:16:A:H5'	1.96	0.48
50:3:51:A:H3'	50:3:52:U:C5	2.48	0.48
50:3:188:G:H2'	50:3:189:U:H6	1.78	0.48
50:3:417:G:C2	50:3:432:G:C6	3.02	0.48
50:3:558:C:H5''	50:3:575:C:HO2'	1.78	0.48
50:3:563:A:N6	50:3:2050:G:OP2	2.46	0.48
50:3:1013:G:H5'	50:3:1190:A:H4'	1.96	0.48
50:3:1033:A:H2'	50:3:1034:A:H8	1.77	0.48
50:3:1053:C:C4	50:3:1054:U:C4	3.01	0.48
50:3:1202:A:C6	50:3:1203:G:C6	3.01	0.48
50:3:1448:U:O2'	50:3:1449:G:H8	1.94	0.48
50:3:1457:A:H2'	50:3:1458:A:C8	2.48	0.48
50:3:1503:A:OP2	50:3:1540:G:N2	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1605:A:H2'	50:3:1606:A:H8	1.78	0.48
50:3:1646:G:C2	50:3:1654:G:C6	3.00	0.48
50:3:1803:U:C2	50:3:1831:G:N2	2.82	0.48
50:3:2034:G:H2'	50:3:2035:U:O4'	2.13	0.48
50:3:2081:U:C2	50:3:2444:G:C2	3.01	0.48
50:3:2106:G:N2	50:3:2198:G:H22	2.09	0.48
50:3:2118:U:O4'	50:3:2125:U:H5'	2.13	0.48
50:3:2123:A:P	50:3:2174:G:H21	2.36	0.48
50:3:2288:G:O2'	50:3:2396:A:N1	2.45	0.48
50:3:2307:G:H2'	50:3:2308:U:H6	1.79	0.48
50:3:2506:C:HO2'	50:3:2507:C:P	2.32	0.48
52:5:161:C:H2'	52:5:162:C:C6	2.47	0.48
52:5:169:G:H22	52:5:219:A:HO2'	1.54	0.48
52:5:226:G:H2'	52:5:227:A:H8	1.77	0.48
52:5:408:U:H4'	52:5:409:G:H8	1.78	0.48
52:5:542:G:C6	52:5:543:C:C4	3.02	0.48
52:5:609:G:C4	52:5:628:A:N6	2.81	0.48
52:5:958:G:H2'	52:5:959:A:C8	2.47	0.48
52:5:1100:C:H3'	52:5:1101:A:H8	1.78	0.48
52:5:1339:U:O2'	52:5:1340:G:H5'	2.14	0.48
52:5:1450:C:H2'	52:5:1451:A:C8	2.42	0.48
53:7:38:G:C8	53:7:39:A:C8	3.02	0.48
6:C:97:LEU:HD23	6:C:132:PRO:HA	1.95	0.48
8:E:112:ARG:O	8:E:115:TYR:N	2.46	0.48
9:F:65:VAL:HA	9:F:68:VAL:HG12	1.96	0.48
10:G:117:SER:H	10:G:138:LEU:HD23	1.77	0.48
19:P:21:THR:OG1	19:P:73:LYS:NZ	2.27	0.48
20:Q:51:ILE:HG22	20:Q:89:ALA:HB2	1.94	0.48
24:a:13:GLY:HA3	50:3:1781:C:H1'	1.94	0.48
24:a:85:SER:O	24:a:97:SER:HA	2.13	0.48
25:b:32:GLU:N	25:b:32:GLU:OE1	2.47	0.48
25:b:165:MET:HE1	50:3:2056:A:N3	2.28	0.48
26:c:3:LYS:CB	26:c:17:PRO:HB2	2.43	0.48
32:i:77:TRP:O	32:i:89:LYS:HA	2.13	0.48
34:k:113:LYS:HE3	34:k:115:ILE:HD13	1.94	0.48
37:n:30:LEU:HD23	37:n:91:PHE:CE1	2.49	0.48
39:p:91:ARG:HH12	40:q:10:LYS:HA	1.78	0.48
47:x:43:HIS:HB3	47:x:46:TYR:HB3	1.94	0.48
49:z:5:ARG:HE	49:z:26:LYS:HD3	1.79	0.48
50:3:92:U:P	50:3:93:A:H2'	2.52	0.48
50:3:229:C:O2'	50:3:261:A:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:250:U:N3	50:3:256:G:C6	2.70	0.48
50:3:252:G:O5'	50:3:253:C:H5''	2.13	0.48
50:3:412:A:H5'	50:3:458:A:H2	1.79	0.48
50:3:418:G:H2'	50:3:419:A:H8	1.79	0.48
50:3:500:U:C4	50:3:501:G:C2	3.02	0.48
50:3:641:U:H3'	50:3:655:G:N1	2.28	0.48
50:3:1303:U:O4	50:3:1679:U:H1'	2.14	0.48
50:3:1457:A:H2'	50:3:1458:A:O4'	2.13	0.48
50:3:1745:A:C6	50:3:1746:U:C4	3.02	0.48
50:3:1967:U:H2'	50:3:1968:C:C6	2.48	0.48
50:3:2015:C:H2'	50:3:2016:G:H8	1.76	0.48
50:3:2264:G:O2'	50:3:2265:U:H5'	2.14	0.48
50:3:2600:G:C6	50:3:2611:G:N1	2.82	0.48
51:4:22:G:N2	51:4:57:G:H1	2.12	0.48
52:5:69:G:C2	52:5:137:A:N1	2.81	0.48
52:5:118:C:H1'	52:5:258:A:N3	2.29	0.48
52:5:146:A:N7	52:5:340:A:O2'	2.36	0.48
52:5:170:A:H3'	52:5:171:A:C8	2.46	0.48
52:5:705:A:C6	52:5:706:U:C4	3.01	0.48
52:5:755:U:H4'	52:5:874:C:H4'	1.95	0.48
52:5:832:G:C2	52:5:833:G:N7	2.81	0.48
52:5:931:C:H3'	52:5:932:A:H8	1.79	0.48
52:5:971:A:N6	52:5:1338:A:H61	2.11	0.48
52:5:1291:C:H2'	52:5:1292:A:N9	2.29	0.48
53:7:40:A:H2'	53:7:41:C:C6	2.48	0.48
1:0:19:LEU:N	50:3:127:A:OP2	2.30	0.48
3:2:9:PRO:HB3	3:2:14:CYS:HB3	1.94	0.48
5:B:154:VAL:O	5:B:171:TYR:N	2.36	0.48
6:C:89:LEU:HA	6:C:92:VAL:HB	1.95	0.48
6:C:166:PHE:CE1	6:C:182:PRO:HB3	2.48	0.48
8:E:1:MET:O	8:E:63:SER:HA	2.13	0.48
8:E:84:ARG:NE	20:Q:95:TYR:O	2.43	0.48
10:G:125:ASP:HA	10:G:128:ALA:HB3	1.95	0.48
16:M:43:CYS:O	16:M:47:LEU:HG	2.13	0.48
24:a:66:TYR:CE2	24:a:68:ILE:HA	2.49	0.48
26:c:173:SER:OG	50:3:356:A:OP2	2.30	0.48
29:f:4:ILE:HD13	29:f:50:PHE:CZ	2.48	0.48
32:i:115:ASN:O	32:i:119:ARG:HG2	2.13	0.48
34:k:7:LYS:HA	50:3:1273:U:H1'	1.94	0.48
36:m:39:LYS:HD2	36:m:40:ASN:N	2.28	0.48
39:p:32:LYS:HD2	50:3:1282:G:N2	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:q:39:LEU:HD22	40:q:48:PRO:O	2.13	0.48
41:r:24:ILE:HA	41:r:27:LYS:HD2	1.94	0.48
42:s:7:LEU:HD13	42:s:31:VAL:HG12	1.96	0.48
43:t:38:GLY:HA2	43:t:41:LYS:HZ3	1.78	0.48
50:3:33:C:H2'	50:3:34:C:C6	2.48	0.48
50:3:346:G:H3'	50:3:347:C:C6	2.48	0.48
50:3:377:U:C2	50:3:378:G:C8	3.02	0.48
50:3:464:A:C6	50:3:465:A:C2	3.02	0.48
50:3:555:A:H2'	50:3:556:U:H6	1.79	0.48
50:3:682:A:H3'	50:3:683:G:C8	2.44	0.48
50:3:1104:A:O2'	50:3:1109:G:N7	2.46	0.48
50:3:1125:U:C4	50:3:1137:C:C2	3.01	0.48
50:3:1288:C:H2'	50:3:1289:G:H8	1.78	0.48
50:3:1419:U:H3	50:3:1421:A:H3'	1.77	0.48
50:3:1496:A:P	50:3:1497:A:H62	2.36	0.48
50:3:1512:A:C2	50:3:1513:A:C5	3.01	0.48
50:3:1687:G:H21	50:3:2012:A:N6	2.11	0.48
50:3:1863:G:C6	50:3:1864:A:C6	3.01	0.48
50:3:2287:G:H21	50:3:2335:A:H1'	1.78	0.48
50:3:2371:U:H2'	50:3:2372:C:C6	2.48	0.48
50:3:2471:U:H2'	50:3:2472:G:O4'	2.13	0.48
50:3:2663:G:H22	50:3:2673:A:P	2.37	0.48
52:5:55:C:O2	52:5:354:U:N3	2.46	0.48
52:5:75:A:C6	52:5:81:A:N1	2.82	0.48
52:5:110:U:H2'	52:5:111:A:H8	1.77	0.48
52:5:568:G:O2'	52:5:816:A:H2'	2.12	0.48
52:5:595:G:H3'	52:5:596:U:C6	2.47	0.48
52:5:711:G:H2'	52:5:712:A:H8	1.73	0.48
52:5:713:A:OP1	52:5:802:C:H4'	2.12	0.48
52:5:743:A:C6	52:5:744:U:C2	3.01	0.48
52:5:1002:A:H61	52:5:1019:G:H1'	1.79	0.48
52:5:1142:G:H1'	52:5:1145:A:H62	1.78	0.48
52:5:1223:A:C6	52:5:1264:G:C5	3.01	0.48
52:5:1279:G:H1'	52:5:1306:A:H61	1.79	0.48
52:5:1467:A:H2'	52:5:1468:A:C5	2.48	0.48
52:5:1483:C:H2'	52:5:1484:C:O4'	2.14	0.48
52:5:1495:C:H2'	52:5:1496:G:H8	1.78	0.48
4:A:112:TRP:CD1	4:A:114:GLY:H	2.30	0.48
8:E:14:SER:C	8:E:17:GLN:HE22	2.20	0.48
9:F:37:LEU:HG	52:5:1265:U:OP1	2.13	0.48
9:F:61:PHE:O	9:F:65:VAL:HG13	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:71:ARG:C	9:F:72:LEU:HD22	2.39	0.48
10:G:11:HIS:CG	10:G:12:PHE:H	2.31	0.48
10:G:68:ARG:CZ	52:5:588:U:H4'	2.43	0.48
18:O:8:TYR:CE2	52:5:622:A:H1'	2.48	0.48
20:Q:92:ARG:HE	52:5:733:A:P	2.36	0.48
26:c:97:ARG:HG2	50:3:622:U:H4'	1.96	0.48
26:c:130:GLN:NE2	26:c:165:ASN:HB2	2.29	0.48
26:c:182:HIS:HB3	26:c:185:LYS:CG	2.42	0.48
28:e:110:LEU:HD11	28:e:155:ARG:HB2	1.95	0.48
29:f:139:LYS:HD2	29:f:141:LYS:HZ1	1.79	0.48
36:m:38:ALA:O	36:m:41:THR:OG1	2.30	0.48
37:n:20:ARG:NH2	51:4:7:G:O2'	2.45	0.48
40:q:87:GLN:NE2	50:3:1197:G:N3	2.45	0.48
41:r:124:LEU:O	41:r:127:LYS:HG2	2.14	0.48
41:r:133:GLN:HG2	41:r:137:MET:HE1	1.95	0.48
41:r:136:LYS:HA	41:r:139:ARG:CZ	2.44	0.48
42:s:86:PRO:HB2	42:s:89:ILE:HB	1.95	0.48
43:t:3:ARG:NH1	43:t:71:LEU:O	2.47	0.48
47:x:15:LYS:N	47:x:34:ILE:O	2.47	0.48
50:3:223:A:H2'	50:3:224:G:C4	2.49	0.48
50:3:269:A:H2'	50:3:464:A:N6	2.29	0.48
50:3:397:G:C6	50:3:398:C:C4	3.01	0.48
50:3:525:A:P	50:3:525:A:H8	2.37	0.48
50:3:604:A:H1'	50:3:606:G:C8	2.48	0.48
50:3:664:G:C6	50:3:672:G:C2	3.02	0.48
50:3:720:A:H61	50:3:813:G:H1'	1.77	0.48
50:3:1065:G:H2'	50:3:1066:G:H8	1.79	0.48
50:3:1077:G:C6	50:3:1148:U:C4	3.01	0.48
50:3:1326:C:H2'	50:3:1327:G:O4'	2.14	0.48
50:3:1483:G:H1'	50:3:2856:G:H4'	1.95	0.48
50:3:1508:G:C2	50:3:1534:A:N1	2.81	0.48
50:3:1615:G:C2	50:3:1616:G:C8	3.01	0.48
50:3:1741:G:H2'	50:3:1742:C:H6	1.77	0.48
50:3:1841:U:C2	50:3:1979:G:C2	3.01	0.48
50:3:1845:C:H5''	50:3:1846:A:N7	2.29	0.48
50:3:1968:C:H5'	52:5:1459:U:O2'	2.14	0.48
50:3:2020:A:C6	50:3:2021:A:C2	3.02	0.48
50:3:2462:G:C4	50:3:2463:G:C8	3.02	0.48
50:3:2502:G:H3'	50:3:2503:G:C8	2.49	0.48
50:3:2752:G:O6	50:3:2768:U:O4	2.31	0.48
51:4:16:G:C5	51:4:65:G:C6	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:123:U:C2	52:5:223:G:C4	3.01	0.48
52:5:149:G:C6	52:5:150:A:C6	3.01	0.48
52:5:571:A:H2'	52:5:572:A:C8	2.48	0.48
52:5:753:C:H2'	52:5:754:U:C6	2.49	0.48
52:5:762:G:C6	52:5:809:G:C4	3.01	0.48
52:5:885:U:C2	52:5:886:A:C8	3.02	0.48
52:5:895:A:C5	52:5:896:G:H1'	2.48	0.48
52:5:1170:C:O3'	52:5:1172:A:H5'	2.13	0.48
52:5:1263:A:C8	52:5:1264:G:C8	3.02	0.48
52:5:1406:U:O4	52:5:1444:G:O6	2.31	0.48
52:5:1487:U:H2'	52:5:1488:A:H8	1.79	0.48
7:D:68:GLU:OE1	7:D:94:VAL:HB	2.14	0.48
7:D:133:LYS:NZ	7:D:135:SER:O	2.40	0.48
10:G:129:ARG:O	10:G:132:LYS:NZ	2.40	0.48
11:H:34:ARG:HH12	52:5:1121:U:H5''	1.79	0.48
15:L:101:ARG:HG3	15:L:105:ASN:HB2	1.95	0.48
17:N:15:HIS:HB2	17:N:18:ASP:OD1	2.14	0.48
19:P:12:ILE:HD13	19:P:60:LYS:HA	1.96	0.48
25:b:14:SER:HA	50:3:2690:U:O4'	2.12	0.48
28:e:155:ARG:HA	28:e:155:ARG:CZ	2.44	0.48
30:g:26:ILE:O	30:g:109:VAL:HB	2.14	0.48
30:g:32:MET:O	50:3:1090:G:O2'	2.32	0.48
30:g:124:GLU:O	30:g:128:LYS:N	2.44	0.48
33:j:87:ILE:HA	33:j:93:PRO:HA	1.96	0.48
35:l:12:PRO:HA	50:3:947:A:H62	1.78	0.48
35:l:24:ASN:ND2	35:l:67:ARG:O	2.47	0.48
35:l:124:LYS:HB3	50:3:2492:G:O2'	2.14	0.48
39:p:75:TYR:CE1	50:3:1188:C:H5'	2.48	0.48
39:p:91:ARG:HD2	39:p:94:LEU:HD13	1.96	0.48
40:q:24:LYS:NZ	50:3:1198:G:OP1	2.47	0.48
41:r:57:ASN:ND2	50:3:529:G:O2'	2.47	0.48
42:s:7:LEU:HG	46:w:31:PHE:CZ	2.48	0.48
45:v:53:ARG:HH12	50:3:431:U:C3'	2.24	0.48
50:3:109:G:H2'	50:3:110:A:C8	2.49	0.48
50:3:132:G:C2	50:3:133:G:C8	3.02	0.48
50:3:625:G:C6	50:3:701:A:N6	2.82	0.48
50:3:638:A:N6	50:3:660:U:H3	2.11	0.48
50:3:714:G:C2	50:3:834:G:C2	3.02	0.48
50:3:738:U:O2	50:3:763:G:C2	2.67	0.48
50:3:891:G:H2'	50:3:892:G:H8	1.77	0.48
50:3:1243:A:H1'	50:3:1268:U:H1'	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1613:A:H3'	50:3:1614:G:C8	2.47	0.48
50:3:1897:A:C8	50:3:1898:G:C8	3.01	0.48
50:3:2005:G:H2'	50:3:2006:C:H6	1.79	0.48
50:3:2064:G:H3'	50:3:2065:A:H8	1.79	0.48
50:3:2088:U:H2'	50:3:2245:G:H22	1.78	0.48
50:3:2154:A:H2'	50:3:2155:G:C8	2.49	0.48
50:3:2550:A:H4'	50:3:2551:G:C8	2.48	0.48
50:3:2636:U:H5''	50:3:2637:A:N7	2.29	0.48
50:3:2681:G:C4	50:3:2682:A:C8	3.02	0.48
50:3:2713:A:H3'	50:3:2714:G:C8	2.49	0.48
50:3:2719:A:C6	50:3:2722:G:C8	3.01	0.48
50:3:2758:A:O2'	50:3:2760:C:N4	2.46	0.48
51:4:38:U:H1'	51:4:41:C:C5	2.49	0.48
52:5:167:A:H2	52:5:197:A:H5'	1.79	0.48
52:5:293:G:N2	52:5:296:A:OP2	2.46	0.48
52:5:320:G:N3	52:5:322:G:C8	2.82	0.48
52:5:338:C:H2'	52:5:339:U:O4'	2.14	0.48
52:5:374:G:H2'	52:5:375:C:C6	2.48	0.48
52:5:992:U:H3'	52:5:993:C:H6	1.79	0.48
52:5:1114:A:N6	52:5:1127:A:H61	2.11	0.48
52:5:1356:U:H2'	52:5:1357:C:O4'	2.13	0.48
6:C:37:GLN:HE22	52:5:539:G:C4'	2.26	0.48
8:E:137:ALA:CB	52:5:834:G:H21	2.26	0.48
24:a:52:LYS:NZ	50:3:1813:C:O3'	2.40	0.48
24:a:238:HIS:HE1	24:a:240:HIS:CE1	2.31	0.48
25:b:202:GLY:HA3	50:3:2824:A:N6	2.28	0.48
26:c:112:LEU:O	26:c:115:VAL:HG12	2.14	0.48
28:e:3:LYS:O	28:e:7:ARG:NE	2.46	0.48
34:k:24:HIS:C	34:k:27:GLY:H	2.22	0.48
36:m:60:ARG:HD2	36:m:83:PHE:CE2	2.47	0.48
36:m:61:ARG:HH12	50:3:2856:G:P	2.36	0.48
38:o:32:ASN:HA	38:o:49:THR:HA	1.96	0.48
41:r:9:ARG:HG2	41:r:100:SER:HB2	1.96	0.48
41:r:128:ARG:HH22	50:3:1249:A:H1'	1.79	0.48
49:z:18:ASN:HB3	49:z:19:TYR:CD2	2.49	0.48
50:3:101:C:H4'	50:3:103:G:N9	2.28	0.48
50:3:122:G:C6	50:3:132:G:C5	3.01	0.48
50:3:259:A:H1'	50:3:422:A:C8	2.48	0.48
50:3:266:A:H2'	50:3:267:A:O4'	2.14	0.48
50:3:308:A:C6	50:3:397:G:C6	3.02	0.48
50:3:471:A:H3'	50:3:472:A:H8	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:993:A:H1'	50:3:995:A:OP1	2.13	0.48
50:3:1052:A:C6	50:3:1181:A:C6	3.01	0.48
50:3:1106:G:H1'	50:3:1124:G:N7	2.29	0.48
50:3:1173:G:C4	50:3:1174:G:H1'	2.49	0.48
50:3:1305:G:C6	50:3:1306:G:C6	3.02	0.48
50:3:1461:A:O2'	50:3:1462:A:H5'	2.13	0.48
50:3:1616:G:N3	50:3:1619:A:H2	2.12	0.48
50:3:1724:A:H62	50:3:1731:G:N2	2.12	0.48
50:3:1957:G:H22	50:3:1961:A:HO2'	1.62	0.48
50:3:1987:C:C2	50:3:1989:U:C5	3.02	0.48
50:3:2006:C:H2'	50:3:2007:U:H6	1.79	0.48
50:3:2021:A:H2'	50:3:2022:A:N9	2.28	0.48
50:3:2034:G:H2'	50:3:2035:U:C6	2.48	0.48
50:3:2126:A:O2'	50:3:2127:G:H5''	2.13	0.48
50:3:2519:U:H2'	50:3:2520:C:C6	2.49	0.48
50:3:2601:U:H2'	50:3:2602:C:C6	2.49	0.48
50:3:2631:G:H4'	50:3:2829:G:H2'	1.95	0.48
50:3:2666:C:H3'	50:3:2667:G:C8	2.49	0.48
50:3:2796:C:O2'	50:3:2797:C:H5'	2.14	0.48
51:4:30:U:C2	51:4:49:G:C2	3.02	0.48
52:5:74:U:H2'	52:5:75:A:C8	2.49	0.48
52:5:171:A:H2'	52:5:172:C:H6	1.79	0.48
52:5:204:C:H2'	52:5:205:U:H6	1.77	0.48
52:5:287:U:H3'	52:5:301:G:N2	2.23	0.48
52:5:501:A:H2'	52:5:502:C:C6	2.49	0.48
52:5:1076:U:H3'	52:5:1077:U:C5	2.49	0.48
52:5:1080:G:H2'	52:5:1081:U:O4'	2.14	0.48
52:5:1280:A:H2'	52:5:1281:U:C6	2.49	0.48
53:7:75:C:P	53:7:77:A:H62	2.35	0.48
4:A:37:TRP:H	4:A:37:TRP:HD1	1.61	0.48
11:H:89:LEU:O	11:H:92:PHE:HB3	2.14	0.48
12:I:43:LYS:NZ	12:I:46:LEU:HB2	2.29	0.48
14:K:113:GLY:HA3	14:K:131:GLY:HA3	1.96	0.48
17:N:39:HIS:CE1	52:5:736:U:H1'	2.49	0.48
20:Q:73:ARG:NE	20:Q:78:ASN:O	2.47	0.48
26:c:186:VAL:O	50:3:650:G:N2	2.46	0.48
32:i:99:GLN:NE2	32:i:101:ASP:OD1	2.47	0.48
33:j:41:VAL:O	33:j:57:VAL:HA	2.13	0.48
36:m:23:SER:OG	36:m:67:LEU:HA	2.13	0.48
39:p:88:GLU:HG3	40:q:48:PRO:HA	1.95	0.48
39:p:91:ARG:HH12	40:q:10:LYS:HB3	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:u:49:GLN:HG2	50:3:2362:A:O4'	2.14	0.48
45:v:16:ASN:HD21	45:v:26:ARG:NE	2.12	0.48
45:v:16:ASN:C	45:v:27:ARG:HE	2.17	0.48
50:3:442:G:N1	50:3:457:U:C2	2.81	0.48
50:3:602:U:O2'	50:3:1019:A:N1	2.43	0.48
50:3:700:U:H2'	50:3:701:A:C8	2.48	0.48
50:3:832:C:H2'	50:3:833:C:H6	1.79	0.48
50:3:1164:A:N6	50:3:2499:U:OP1	2.47	0.48
50:3:1215:G:C5	50:3:1216:U:C4	3.02	0.48
50:3:1455:A:H8	50:3:1455:A:O5'	1.96	0.48
50:3:1510:A:N6	50:3:1530:G:C6	2.82	0.48
50:3:1753:G:H2'	50:3:1754:U:H6	1.78	0.48
50:3:1955:G:C6	50:3:1966:G:C6	3.02	0.48
50:3:2006:C:H2'	50:3:2007:U:C6	2.49	0.48
50:3:2330:A:H2'	50:3:2331:G:C8	2.49	0.48
50:3:2534:G:H2'	50:3:2535:C:C6	2.48	0.48
52:5:71:A:H2'	52:5:72:A:C8	2.48	0.48
52:5:137:A:N7	52:5:157:A:N6	2.62	0.48
52:5:201:G:H2'	52:5:202:A:C8	2.49	0.48
52:5:446:A:H4'	52:5:449:A:N1	2.29	0.48
52:5:586:G:C6	52:5:750:A:C8	3.02	0.48
52:5:586:G:N7	52:5:750:A:O2'	2.35	0.48
52:5:663:G:H2'	52:5:664:A:H8	1.77	0.48
52:5:945:U:H2'	52:5:946:G:C8	2.44	0.48
52:5:1089:C:H2'	52:5:1090:G:H8	1.78	0.48
52:5:1090:G:C2	52:5:1091:C:H1'	2.49	0.48
52:5:1220:A:C6	52:5:1267:G:C6	3.02	0.48
52:5:1463:A:H2'	52:5:1464:G:C8	2.49	0.48
1:0:38:GLN:HG3	50:3:494:G:H5''	1.96	0.47
2:1:42:ARG:NH2	50:3:2425:C:O2'	2.43	0.47
4:A:96:VAL:HA	4:A:99:ILE:HG22	1.95	0.47
5:B:25:ASN:HB2	5:B:29:GLN:OE1	2.14	0.47
9:F:145:GLU:HA	9:F:148:LYS:HB2	1.96	0.47
15:L:30:SER:O	15:L:34:LEU:HG	2.13	0.47
16:M:58:LYS:HZ1	52:5:1162:G:N2	2.12	0.47
24:a:99:ILE:HD13	24:a:109:ILE:HG12	1.96	0.47
25:b:54:PHE:HE2	25:b:204:VAL:HG11	1.79	0.47
26:c:130:GLN:HE21	26:c:134:ASN:CG	2.21	0.47
32:i:10:GLU:H	32:i:48:THR:HG21	1.78	0.47
41:r:3:ALA:HB2	41:r:62:HIS:CE1	2.49	0.47
46:w:63:LEU:HD13	46:w:65:TRP:HD1	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:27:U:H3	50:3:550:A:N6	2.12	0.47
50:3:996:A:OP2	50:3:998:C:N4	2.47	0.47
50:3:1078:C:H2'	50:3:1079:U:C6	2.49	0.47
50:3:1210:A:H2'	50:3:1211:U:C6	2.48	0.47
50:3:1341:U:OP2	50:3:1342:C:N4	2.47	0.47
50:3:1368:U:O4'	50:3:1422:U:H1'	2.13	0.47
50:3:1736:G:C6	50:3:1737:G:N7	2.81	0.47
50:3:1803:U:N3	50:3:1830:G:N1	2.23	0.47
50:3:1853:G:C2	50:3:1854:A:C2	3.02	0.47
50:3:2032:G:H2'	50:3:2033:G:H8	1.79	0.47
50:3:2095:A:H2'	50:3:2096:U:O4'	2.13	0.47
50:3:2363:C:H3'	50:3:2364:A:N7	2.29	0.47
50:3:2423:G:C4	50:3:2424:C:C5	3.01	0.47
50:3:2646:G:H22	50:3:2783:A:H2'	1.79	0.47
52:5:81:A:C5	52:5:82:C:C5	3.01	0.47
52:5:269:A:N3	52:5:269:A:H2'	2.29	0.47
52:5:336:U:H2'	52:5:337:C:H6	1.79	0.47
52:5:583:G:H2'	52:5:584:C:O4'	2.14	0.47
52:5:657:G:C6	52:5:743:A:N1	2.82	0.47
52:5:787:A:N1	52:5:1472:G:H5'	2.28	0.47
52:5:857:U:H1'	52:5:860:C:H41	1.78	0.47
52:5:1050:U:H2'	52:5:1051:U:C6	2.48	0.47
52:5:1170:C:H4'	52:5:1171:A:OP2	2.13	0.47
52:5:1216:G:H2'	52:5:1217:G:H8	1.79	0.47
52:5:1294:U:H2'	52:5:1295:U:C5	2.49	0.47
52:5:1482:A:N1	52:5:1505:G:H1'	2.29	0.47
4:A:61:GLN:HE22	4:A:216:PRO:HD2	1.78	0.47
4:A:111:ARG:HA	4:A:111:ARG:HD2	1.67	0.47
7:D:152:LYS:HD3	7:D:179:TYR:HB2	1.96	0.47
7:D:213:ASN:HB3	10:G:51:GLU:C	2.39	0.47
8:E:106:GLN:HA	8:E:109:LEU:HB2	1.95	0.47
9:F:30:MET:SD	52:5:1348:G:O2'	2.69	0.47
10:G:50:LYS:HE2	10:G:50:LYS:HA	1.95	0.47
20:Q:92:ARG:HD3	52:5:733:A:H5'	1.95	0.47
21:R:18:LYS:HB3	21:R:31:ILE:HG21	1.95	0.47
25:b:225:GLN:HE22	38:o:83:ASN:C	2.22	0.47
26:c:156:ASN:HD22	26:c:195:ASN:HB2	1.78	0.47
32:i:18:TRP:O	32:i:141:THR:HG23	2.15	0.47
32:i:27:VAL:HA	32:i:66:VAL:O	2.14	0.47
34:k:88:LEU:HD21	34:k:101:LYS:HZ2	1.79	0.47
35:l:63:LYS:HB3	35:l:65:TRP:CZ2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:t:23:ILE:O	43:t:37:GLU:CB	2.62	0.47
49:z:31:LYS:HE3	49:z:49:GLU:H	1.80	0.47
50:3:54:A:P	50:3:54:A:H8	2.37	0.47
50:3:88:G:C2	50:3:99:C:C2	3.02	0.47
50:3:597:C:H2'	50:3:598:G:O4'	2.14	0.47
50:3:641:U:C5	50:3:656:G:C4	3.03	0.47
50:3:864:A:H5'	50:3:866:G:N7	2.29	0.47
50:3:995:A:H2'	50:3:996:A:O4'	2.14	0.47
50:3:1077:G:C5	50:3:1149:G:C6	3.02	0.47
50:3:1312:A:H8	50:3:1312:A:OP1	1.97	0.47
50:3:1379:C:O2'	50:3:1605:A:N3	2.43	0.47
50:3:1454:G:H2'	50:3:1455:A:C8	2.49	0.47
50:3:1557:G:N2	50:3:1573:A:H62	2.12	0.47
50:3:1718:C:H2'	50:3:1719:C:O4'	2.14	0.47
50:3:1742:C:C2	50:3:1743:U:C5	3.02	0.47
50:3:1865:A:O5'	50:3:1865:A:H8	1.98	0.47
50:3:1872:U:P	50:3:2417:G:H21	2.38	0.47
50:3:1878:A:H3'	50:3:1879:A:C8	2.49	0.47
50:3:1917:G:H2'	50:3:1918:U:O4'	2.14	0.47
50:3:1938:U:H2'	50:3:1939:A:O4'	2.14	0.47
50:3:2059:G:O6	50:3:2625:U:C2	2.68	0.47
50:3:2070:C:H42	50:3:2458:A:H61	1.62	0.47
50:3:2070:C:P	50:3:2071:C:H41	2.35	0.47
50:3:2215:C:H2'	50:3:2216:U:H6	1.77	0.47
50:3:2603:G:H1	50:3:2606:A:P	2.38	0.47
50:3:2813:A:H3'	50:3:2814:A:C8	2.49	0.47
51:4:16:G:C6	51:4:65:G:C6	3.02	0.47
52:5:31:U:N3	52:5:551:A:N1	2.61	0.47
52:5:109:G:N1	52:5:233:C:N3	2.49	0.47
52:5:266:A:C6	52:5:267:C:C4	3.02	0.47
52:5:585:G:H1'	52:5:752:G:N2	2.29	0.47
52:5:602:G:H2'	52:5:603:U:O4'	2.14	0.47
52:5:657:G:C6	52:5:743:A:C6	3.01	0.47
52:5:680:G:C6	52:5:681:U:C4	3.01	0.47
52:5:832:G:H2'	52:5:833:G:C8	2.48	0.47
52:5:1208:G:C2	52:5:1209:C:C4	3.02	0.47
52:5:1217:G:N1	52:5:1269:U:C2	2.79	0.47
53:7:43:G:H2'	53:7:44:U:H4'	1.96	0.47
3:2:30:GLN:NE2	50:3:2535:C:H5''	2.25	0.47
3:2:31:LYS:HG2	50:3:2536:U:C5'	2.41	0.47
5:B:109:ILE:H	5:B:112:PRO:HG3	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:171:GLU:O	7:D:174:GLY:N	2.43	0.47
8:E:97:LEU:N	8:E:100:ILE:HB	2.30	0.47
8:E:152:PRO:HA	10:G:56:ASN:OD1	2.14	0.47
9:F:20:THR:O	9:F:24:ARG:HG3	2.13	0.47
11:H:111:ARG:HH21	52:5:1320:A:H1'	1.79	0.47
17:N:2:GLN:NE2	52:5:737:U:O5'	2.47	0.47
23:T:51:LYS:HA	52:5:1509:A:H62	1.78	0.47
24:a:234:ASN:H	24:a:237:ASP:HB2	1.77	0.47
26:c:97:ARG:CZ	50:3:622:U:H5''	2.44	0.47
28:e:55:ILE:HD11	28:e:68:HIS:O	2.14	0.47
28:e:161:LYS:HA	28:e:174:ARG:HH12	1.79	0.47
36:m:31:ILE:HD12	50:3:1306:G:H4'	1.96	0.47
37:n:1:MET:O	37:n:2:LYS:HE2	2.15	0.47
37:n:75:GLN:O	37:n:79:ASP:N	2.31	0.47
38:o:37:LEU:HB2	38:o:44:ARG:HB2	1.96	0.47
39:p:91:ARG:NH2	40:q:11:GLN:HG2	2.29	0.47
49:z:16:GLU:OE1	49:z:18:ASN:ND2	2.45	0.47
50:3:137:U:H2'	50:3:138:U:C6	2.50	0.47
50:3:166:A:C6	50:3:167:A:C5	3.02	0.47
50:3:215:A:H2'	50:3:216:C:O4'	2.15	0.47
50:3:239:U:H2'	50:3:240:C:H6	1.78	0.47
50:3:250:U:C2	50:3:256:G:N1	2.69	0.47
50:3:256:G:H2'	50:3:257:C:O4'	2.14	0.47
50:3:307:C:C2	50:3:308:A:C8	3.02	0.47
50:3:338:G:C2	50:3:339:U:C2	3.01	0.47
50:3:571:A:H2'	50:3:572:G:O4'	2.15	0.47
50:3:626:A:H2'	50:3:627:U:H6	1.78	0.47
50:3:676:U:H2'	50:3:677:U:C6	2.49	0.47
50:3:724:A:O2'	50:3:725:G:H5'	2.14	0.47
50:3:741:A:H3'	50:3:742:G:H8	1.79	0.47
50:3:749:U:N3	50:3:751:A:O5'	2.48	0.47
50:3:887:A:C6	50:3:964:A:N6	2.82	0.47
50:3:901:C:N3	50:3:946:A:N6	2.63	0.47
50:3:1024:A:H4'	50:3:1190:A:C2	2.48	0.47
50:3:1117:U:H2'	50:3:1118:U:O4'	2.14	0.47
50:3:1415:A:H2'	50:3:1416:G:H8	1.80	0.47
50:3:1503:A:P	50:3:1540:G:H22	2.36	0.47
50:3:1507:G:H1'	50:3:1508:G:OP2	2.14	0.47
50:3:1516:G:H2'	50:3:1517:G:O4'	2.14	0.47
50:3:1698:A:O4'	50:3:2694:A:H5'	2.15	0.47
50:3:1698:A:H5'	50:3:2694:A:H5''	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1731:G:C8	50:3:1732:A:H2'	2.49	0.47
50:3:1799:A:H2'	50:3:1800:C:C6	2.49	0.47
50:3:1820:U:O2'	50:3:1821:G:OP1	2.25	0.47
50:3:2196:G:H8	50:3:2196:G:OP2	1.97	0.47
50:3:2348:U:H2'	50:3:2349:G:C8	2.49	0.47
50:3:2405:G:H2'	50:3:2406:U:C6	2.49	0.47
50:3:2476:A:H2'	50:3:2484:A:C6	2.49	0.47
50:3:2478:G:H2'	50:3:2479:A:H8	1.79	0.47
50:3:2651:G:N2	50:3:2780:U:C2	2.82	0.47
50:3:2661:U:H3'	50:3:2662:A:H8	1.79	0.47
52:5:60:A:H1'	52:5:350:G:C2	2.49	0.47
52:5:95:C:H2'	52:5:96:G:H8	1.78	0.47
52:5:317:A:H2'	52:5:318:C:C6	2.50	0.47
52:5:397:C:H4'	52:5:619:A:O2'	2.13	0.47
52:5:463:U:O3'	52:5:464:A:H3'	2.14	0.47
52:5:578:C:H3'	52:5:579:G:C8	2.43	0.47
52:5:671:G:H2'	52:5:672:A:H8	1.79	0.47
52:5:821:U:H2'	52:5:822:A:C8	2.49	0.47
52:5:941:A:H2'	52:5:942:G:C8	2.49	0.47
52:5:972:A:HO2'	52:5:976:U:H3	1.58	0.47
52:5:1056:U:H1'	52:5:1057:C:H5	1.79	0.47
52:5:1217:G:H2'	52:5:1218:C:C6	2.49	0.47
52:5:1268:G:C6	52:5:1269:U:C4	3.02	0.47
52:5:1278:G:C2	52:5:1306:A:C6	3.02	0.47
52:5:1476:C:OP2	52:5:1479:G:H2'	2.14	0.47
53:7:68:G:C6	53:7:69:A:C5	3.02	0.47
3:2:2:LYS:HG3	3:2:33:LYS:O	2.14	0.47
7:D:110:GLU:CG	7:D:112:PRO:HD2	2.44	0.47
8:E:109:LEU:O	8:E:113:ALA:N	2.20	0.47
9:F:3:LYS:HE3	9:F:3:LYS:HB2	1.62	0.47
14:K:96:ARG:O	14:K:109:HIS:HB2	2.14	0.47
15:L:34:LEU:HD13	15:L:41:PRO:HG3	1.96	0.47
15:L:97:VAL:HG22	52:5:1282:U:H5''	1.96	0.47
23:T:26:ARG:HG2	23:T:30:GLN:NE2	2.27	0.47
24:a:33:PRO:HD2	24:a:35:LYS:HE3	1.95	0.47
24:a:193:LEU:HB2	24:a:195:GLU:HG2	1.97	0.47
25:b:117:ARG:HG3	25:b:169:TYR:CD2	2.50	0.47
26:c:139:LYS:HB2	26:c:142:VAL:HG22	1.95	0.47
27:d:91:LEU:HD12	27:d:96:MET:HA	1.96	0.47
33:j:4:PHE:CE2	33:j:5:MET:HB2	2.49	0.47
35:l:120:ARG:NH1	50:3:2476:A:H5'	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:n:2:LYS:HG3	37:n:7:GLN:NE2	2.29	0.47
38:o:103:TYR:CZ	50:3:1761:C:H5'	2.50	0.47
44:u:74:PHE:CZ	50:3:2373:G:H4'	2.49	0.47
48:y:7:ARG:HH12	50:3:2027:G:P	2.38	0.47
50:3:230:G:H4'	50:3:232:A:H62	1.76	0.47
50:3:302:G:C5	50:3:303:C:C5	3.02	0.47
50:3:555:A:O2'	50:3:556:U:H5'	2.15	0.47
50:3:671:C:C2	50:3:672:G:C8	3.01	0.47
50:3:739:G:O4'	50:3:762:A:N6	2.48	0.47
50:3:846:U:C2	50:3:1281:A:C5	3.03	0.47
50:3:943:A:H2'	50:3:944:U:O4'	2.14	0.47
50:3:954:A:H2'	50:3:955:A:O4'	2.15	0.47
50:3:994:U:H4'	50:3:994:U:OP2	2.14	0.47
50:3:1077:G:O6	50:3:1148:U:O4	2.30	0.47
50:3:1144:C:H2'	50:3:1145:G:O4'	2.13	0.47
50:3:1472:C:H2'	50:3:1473:C:H6	1.78	0.47
50:3:1704:C:H2'	50:3:1705:U:C6	2.50	0.47
50:3:2127:G:C6	50:3:2187:C:C2	3.02	0.47
50:3:2262:C:H2'	50:3:2263:G:O4'	2.14	0.47
50:3:2292:A:O2'	50:3:2296:A:N1	2.38	0.47
50:3:2353:G:H1'	50:3:2389:A:H2'	1.97	0.47
50:3:2436:G:H4'	50:3:2437:G:C4	2.49	0.47
50:3:2750:A:H2'	50:3:2751:C:C6	2.48	0.47
50:3:2791:U:H2'	50:3:2792:C:C6	2.49	0.47
51:4:69:C:H3'	51:4:70:G:H8	1.78	0.47
52:5:323:A:C5	52:5:325:A:C5	3.01	0.47
52:5:777:A:H2	52:5:799:A:N7	2.12	0.47
52:5:1059:G:C8	52:5:1085:G:C8	3.02	0.47
52:5:1084:A:O2'	52:5:1086:U:OP1	2.25	0.47
52:5:1212:C:HO2'	52:5:1309:U:C1'	2.26	0.47
53:7:15:A:C2	53:7:16:G:H1'	2.49	0.47
4:A:112:TRP:NE1	4:A:116:THR:H	2.12	0.47
4:A:201:LEU:HA	4:A:215:ILE:O	2.15	0.47
5:B:29:GLN:O	5:B:33:TRP:N	2.25	0.47
5:B:176:MET:SD	5:B:206:ASN:HB2	2.54	0.47
6:C:200:TYR:CD1	6:C:203:LEU:HB2	2.49	0.47
7:D:72:LYS:HZ2	7:D:74:LYS:HB3	1.79	0.47
8:E:59:ARG:HG2	8:E:60:TRP:N	2.29	0.47
13:J:8:ASN:ND2	13:J:69:GLU:O	2.48	0.47
18:O:67:PHE:HA	18:O:72:LEU:HD12	1.97	0.47
25:b:51:LEU:HD21	25:b:81:LEU:HB3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:c:6:LEU:HG	26:c:7:ILE:H	1.79	0.47
26:c:83:HIS:NE2	50:3:1287:C:H5'	2.29	0.47
27:d:34:ILE:HB	27:d:91:LEU:HD21	1.96	0.47
28:e:97:TYR:HE2	28:e:164:GLY:N	2.13	0.47
28:e:98:ARG:O	28:e:108:LEU:HD13	2.13	0.47
28:e:149:THR:HA	28:e:152:ARG:HG2	1.96	0.47
28:e:150:GLU:O	28:e:153:LYS:HG2	2.14	0.47
28:e:178:LYS:HB3	50:3:2539:A:C8	2.50	0.47
32:i:22:ASP:OD1	32:i:23:ALA:N	2.47	0.47
32:i:60:ILE:HA	32:i:130:GLY:O	2.14	0.47
34:k:24:HIS:C	40:q:80:LEU:HD22	2.40	0.47
36:m:106:ARG:O	36:m:110:ALA:HA	2.15	0.47
37:n:27:ARG:NH2	37:n:116:PHE:HA	2.30	0.47
41:r:70:TYR:CZ	41:r:108:SER:HB2	2.50	0.47
41:r:89:ALA:HB3	50:3:783:G:OP2	2.14	0.47
50:3:300:G:H2'	50:3:301:G:C8	2.49	0.47
50:3:330:A:H2'	50:3:331:A:C8	2.50	0.47
50:3:673:A:N1	50:3:687:G:O2'	2.42	0.47
50:3:682:A:C4	50:3:683:G:C8	3.02	0.47
50:3:740:A:N3	50:3:762:A:H1'	2.30	0.47
50:3:865:A:H61	50:3:2454:G:H4'	1.79	0.47
50:3:1202:A:H2'	50:3:1203:G:C8	2.49	0.47
50:3:1351:G:C5	50:3:1361:U:H1'	2.49	0.47
50:3:1389:G:N2	50:3:1399:G:H1'	2.29	0.47
50:3:1426:C:H2'	50:3:1427:C:C6	2.50	0.47
50:3:1455:A:H61	50:3:1604:A:H3'	1.80	0.47
50:3:1700:G:C6	50:3:1701:G:C2	3.03	0.47
50:3:2018:U:H2'	50:3:2019:G:O4'	2.15	0.47
50:3:2062:C:H6	50:3:2062:C:H5''	1.80	0.47
50:3:2106:G:H1	50:3:2198:G:H1	1.61	0.47
50:3:2137:A:H5''	50:3:2139:C:C4	2.49	0.47
50:3:2245:G:H2'	50:3:2247:G:O6	2.14	0.47
50:3:2414:U:OP2	50:3:2419:A:N6	2.48	0.47
50:3:2582:G:H3'	50:3:2583:U:C6	2.50	0.47
50:3:2635:G:H2'	50:3:2636:U:O4'	2.13	0.47
50:3:2702:G:C6	50:3:2703:U:C2	3.01	0.47
50:3:2755:G:H1'	50:3:2766:A:N6	2.29	0.47
50:3:2826:G:H4'	50:3:2829:G:O6	2.15	0.47
52:5:85:U:O2	52:5:86:A:N6	2.47	0.47
52:5:148:A:H2	52:5:343:G:O2'	1.98	0.47
52:5:216:G:H2'	52:5:217:U:O4'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:580:C:C2	52:5:581:A:C8	3.02	0.47
52:5:602:G:C6	52:5:632:A:C6	3.03	0.47
52:5:779:A:OP1	52:5:1497:U:H1'	2.13	0.47
52:5:785:U:H2'	52:5:786:U:C6	2.49	0.47
52:5:1358:U:H2'	52:5:1359:C:C6	2.50	0.47
52:5:1490:G:C2	52:5:1496:G:C4	3.02	0.47
1:0:29:LYS:HA	1:0:32:LYS:HE3	1.97	0.47
5:B:41:ARG:HA	5:B:44:PHE:CD2	2.49	0.47
5:B:182:ARG:HB3	5:B:210:ILE:O	2.15	0.47
11:H:12:ARG:HA	11:H:108:ARG:NH1	2.30	0.47
21:R:81:LYS:HD2	52:5:950:C:H1'	1.97	0.47
22:S:59:ILE:HG22	22:S:60:ILE:HG12	1.95	0.47
24:a:37:LEU:HD12	24:a:108:TYR:HD2	1.79	0.47
28:e:72:ASN:O	28:e:76:THR:HG23	2.15	0.47
28:e:88:LYS:NZ	28:e:168:PHE:HB3	2.29	0.47
28:e:160:TYR:HA	28:e:175:LYS:HB2	1.96	0.47
29:f:80:SER:OG	29:f:81:LEU:N	2.48	0.47
32:i:22:ASP:OD1	32:i:61:ASN:HB2	2.14	0.47
34:k:123:PRO:O	34:k:124:LEU:HD23	2.15	0.47
36:m:81:HIS:O	36:m:84:SER:OG	2.26	0.47
37:n:36:LEU:HD13	51:4:28:C:H6	1.79	0.47
43:t:93:MET:HG2	43:t:103:VAL:HG11	1.97	0.47
44:u:88:PRO:HA	51:4:10:C:H3'	1.96	0.47
45:v:26:ARG:NH1	50:3:193:G:OP1	2.48	0.47
49:z:38:CYS:HB2	49:z:47:HIS:CE1	2.49	0.47
50:3:40:A:H2'	50:3:41:C:C6	2.50	0.47
50:3:67:C:H2'	50:3:68:C:C6	2.50	0.47
50:3:104:A:C2	50:3:105:U:H1'	2.48	0.47
50:3:117:C:C4	50:3:118:G:C6	3.03	0.47
50:3:674:G:C6	50:3:687:G:N1	2.83	0.47
50:3:884:A:H2'	50:3:885:A:C8	2.49	0.47
50:3:985:A:C6	50:3:1005:G:C6	3.03	0.47
50:3:1235:U:H5	50:3:1272:A:N6	2.12	0.47
50:3:1328:A:P	50:3:1661:A:H62	2.38	0.47
50:3:1423:A:C6	50:3:1426:C:C2	3.03	0.47
50:3:1585:A:H4'	50:3:1586:U:OP1	2.15	0.47
50:3:1691:U:H2'	50:3:1692:A:C8	2.48	0.47
50:3:1861:A:C2'	50:3:1862:A:H5'	2.44	0.47
50:3:1917:G:C6	50:3:1928:G:C6	3.02	0.47
50:3:2228:U:H2'	50:3:2229:C:C6	2.49	0.47
50:3:2333:G:C5	50:3:2334:U:C4	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2404:G:N1	50:3:2429:G:C6	2.83	0.47
50:3:2413:G:N2	50:3:2419:A:H3'	2.29	0.47
50:3:2480:G:H22	50:3:2485:U:P	2.36	0.47
50:3:2530:U:N3	50:3:2773:A:N7	2.62	0.47
50:3:2603:G:C2	50:3:2605:G:C8	3.03	0.47
51:4:1:U:O4	51:4:106:A:N6	2.47	0.47
51:4:72:A:C6	51:4:73:U:C4	3.02	0.47
52:5:237:A:N1	52:5:282:G:C6	2.83	0.47
52:5:254:G:H2'	52:5:255:G:O4'	2.14	0.47
52:5:573:G:O2'	52:5:818:A:H5'	2.14	0.47
52:5:765:A:C4	52:5:766:G:C8	3.01	0.47
52:5:1132:G:H1'	52:5:1154:A:H61	1.79	0.47
4:A:81:GLN:O	4:A:82:ILE:HD13	2.15	0.47
4:A:152:LEU:O	4:A:156:ILE:HG12	2.15	0.47
5:B:3:GLN:N	52:5:1051:U:O5'	2.48	0.47
5:B:138:ARG:HH22	7:D:113:ASN:HD21	1.63	0.47
6:C:42:PHE:H	6:C:43:ARG:NH1	2.13	0.47
6:C:50:TYR:CE2	52:5:506:U:H4'	2.50	0.47
6:C:154:VAL:O	6:C:158:SER:OG	2.30	0.47
6:C:196:VAL:O	6:C:199:TRP:HB3	2.14	0.47
7:D:160:ILE:CG1	7:D:167:ARG:HA	2.45	0.47
10:G:90:ILE:N	10:G:138:LEU:O	2.44	0.47
10:G:109:ASN:HB3	10:G:110:GLY:H	1.55	0.47
11:H:18:LYS:HD3	52:5:1124:U:O4'	2.13	0.47
12:I:31:ILE:O	12:I:35:VAL:HG13	2.15	0.47
13:J:25:VAL:HG11	13:J:63:VAL:HG21	1.96	0.47
14:K:25:HIS:HB3	14:K:39:TYR:HA	1.96	0.47
14:K:101:LYS:HG3	52:5:523:U:OP1	2.15	0.47
17:N:18:ASP:HB2	17:N:21:SER:HG	1.80	0.47
17:N:66:TYR:HA	17:N:69:HIS:HB3	1.95	0.47
24:a:37:LEU:HB3	24:a:68:ILE:HB	1.97	0.47
24:a:185:LEU:O	24:a:186:SER:OG	2.33	0.47
25:b:158:ARG:HH21	50:3:1165:U:H1'	1.79	0.47
26:c:119:LYS:C	26:c:121:ALA:N	2.70	0.47
26:c:154:ASP:OD1	26:c:154:ASP:N	2.47	0.47
28:e:98:ARG:HH22	28:e:100:ASN:ND2	2.12	0.47
28:e:145:GLY:C	50:3:2753:C:H4'	2.39	0.47
29:f:99:ASN:CB	50:3:165:U:H5'	2.44	0.47
32:i:41:GLY:O	32:i:44:LYS:HG2	2.14	0.47
32:i:63:ASP:HB3	32:i:129:LYS:CE	2.44	0.47
32:i:87:ILE:HD11	50:3:1167:U:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:j:65:THR:O	33:j:68:GLY:N	2.44	0.47
34:k:84:LYS:HB3	50:3:637:U:O4	2.14	0.47
36:m:81:HIS:CE1	36:m:85:LYS:HD2	2.49	0.47
37:n:31:MET:HE1	51:4:6:U:H4'	1.97	0.47
37:n:97:LYS:HZ2	37:n:98:TYR:HB3	1.79	0.47
39:p:9:THR:HG23	39:p:12:ARG:NH1	2.30	0.47
39:p:76:SER:O	39:p:80:ASN:ND2	2.48	0.47
41:r:60:ASN:ND2	50:3:522:C:H1'	2.29	0.47
44:u:87:GLY:O	44:u:90:GLN:NE2	2.48	0.47
45:v:46:THR:HG22	50:3:2225:G:H5''	1.96	0.47
47:x:19:CYS:N	47:x:39:CYS:HB2	2.30	0.47
50:3:19:G:C4	50:3:20:C:C5	3.03	0.47
50:3:101:C:H4'	50:3:103:G:C8	2.50	0.47
50:3:199:A:N6	50:3:202:C:O5'	2.47	0.47
50:3:201:A:H3'	50:3:202:C:C6	2.49	0.47
50:3:202:C:O2'	50:3:203:A:H5'	2.15	0.47
50:3:360:G:H2'	50:3:361:G:C8	2.50	0.47
50:3:468:A:H2'	50:3:469:C:O4'	2.15	0.47
50:3:635:G:H1'	50:3:691:G:H22	1.80	0.47
50:3:777:C:H2'	50:3:778:U:H6	1.79	0.47
50:3:928:G:C2	50:3:929:G:C5	3.03	0.47
50:3:953:G:H8	50:3:953:G:O5'	1.98	0.47
50:3:988:G:C6	50:3:989:G:N7	2.82	0.47
50:3:989:G:C2	50:3:990:G:C8	3.03	0.47
50:3:1014:G:H2'	50:3:1015:G:O4'	2.14	0.47
50:3:1055:A:H5''	50:3:1056:A:C8	2.50	0.47
50:3:1238:A:H2'	50:3:1239:G:O4'	2.15	0.47
50:3:1283:A:H5'	50:3:1284:A:C8	2.50	0.47
50:3:1309:G:N2	50:3:1314:A:H62	2.13	0.47
50:3:1312:A:C5	50:3:1313:G:C5	3.02	0.47
50:3:1341:U:H5''	50:3:1342:C:C5	2.50	0.47
50:3:1384:C:H2'	50:3:1385:U:H6	1.80	0.47
50:3:1389:G:H22	50:3:1399:G:H1'	1.80	0.47
50:3:1408:G:P	50:3:1408:G:H8	2.37	0.47
50:3:1457:A:H2'	50:3:1458:A:H8	1.79	0.47
50:3:1471:A:N6	50:3:1582:G:C6	2.83	0.47
50:3:1495:A:OP2	50:3:1547:G:N2	2.48	0.47
50:3:1509:U:H3	50:3:1530:G:H1	1.61	0.47
50:3:1723:A:N6	50:3:1732:A:OP1	2.46	0.47
50:3:1762:A:H8	50:3:1762:A:OP2	1.98	0.47
50:3:1873:A:C4	50:3:1883:A:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1873:A:N6	50:3:1882:G:O2'	2.48	0.47
50:3:2062:C:H42	50:3:2508:U:H1'	1.79	0.47
50:3:2157:A:H2'	50:3:2158:C:N1	2.29	0.47
50:3:2171:A:H5''	50:3:2180:U:H2'	1.95	0.47
50:3:2259:G:H2'	50:3:2260:G:O4'	2.15	0.47
50:3:2264:G:C5	50:3:2265:U:C4	3.02	0.47
50:3:2381:G:H2'	50:3:2382:A:C8	2.49	0.47
50:3:2405:G:C2	50:3:2427:U:O2	2.67	0.47
50:3:2647:A:C8	50:3:2786:A:C6	3.02	0.47
50:3:2667:G:H2'	50:3:2668:A:C2'	2.45	0.47
50:3:2712:C:H2'	50:3:2713:A:O4'	2.15	0.47
50:3:2744:A:H2'	50:3:2745:G:C8	2.49	0.47
50:3:2766:A:H2'	50:3:2767:G:H8	1.79	0.47
50:3:2789:A:O3'	50:3:2790:A:C8	2.67	0.47
51:4:5:G:H2'	51:4:6:U:C6	2.50	0.47
51:4:12:U:O2	51:4:13:G:N2	2.47	0.47
51:4:30:U:C2	51:4:49:G:N2	2.83	0.47
51:4:75:U:N3	51:4:90:G:O6	2.44	0.47
52:5:10:G:H2'	52:5:11:A:H8	1.77	0.47
52:5:46:U:H2'	52:5:47:G:C8	2.49	0.47
52:5:197:A:O4'	52:5:218:U:O2'	2.32	0.47
52:5:295:G:H2'	52:5:296:A:C8	2.49	0.47
52:5:443:G:H3'	52:5:444:G:H8	1.78	0.47
52:5:548:G:C6	52:5:549:U:N3	2.83	0.47
52:5:831:C:H3'	52:5:832:G:H8	1.79	0.47
52:5:932:A:H2'	52:5:933:A:O4'	2.14	0.47
52:5:953:A:H2'	52:5:954:A:O4'	2.15	0.47
52:5:968:G:C6	52:5:969:A:C6	3.03	0.47
52:5:972:A:H4'	52:5:976:U:O2	2.13	0.47
52:5:1034:G:H2'	52:5:1035:A:H8	1.79	0.47
52:5:1223:A:N6	52:5:1263:A:OP2	2.48	0.47
52:5:1331:A:OP2	52:5:1331:A:H8	1.98	0.47
52:5:1346:G:H2'	52:5:1347:U:O4'	2.14	0.47
52:5:1391:A:H2'	52:5:1392:A:O4'	2.15	0.47
52:5:1433:G:C6	52:5:1434:C:C4	3.02	0.47
4:A:100:ALA:HA	4:A:105:VAL:HG22	1.97	0.47
5:B:193:GLN:HA	5:B:198:VAL:HA	1.96	0.47
6:C:41:ARG:HA	6:C:43:ARG:CZ	2.44	0.47
10:G:15:VAL:O	10:G:19:LEU:HG	2.15	0.47
12:I:21:SER:HB2	52:5:1128:G:OP1	2.15	0.47
12:I:87:GLN:HA	12:I:90:ILE:HG22	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:P:18:ASN:HB3	52:5:250:G:H4'	1.97	0.47
24:a:64:ARG:NH1	24:a:90:PRO:O	2.48	0.47
28:e:98:ARG:HB3	28:e:109:GLN:HB2	1.97	0.47
34:k:61:ARG:HG2	50:3:2400:A:H2	1.76	0.47
35:l:27:VAL:HG13	35:l:134:ARG:HA	1.97	0.47
46:w:84:VAL:O	46:w:88:LYS:HG3	2.14	0.47
50:3:127:A:O2'	50:3:128:A:O4'	2.28	0.47
50:3:246:G:H22	50:3:258:G:H3'	1.80	0.47
50:3:376:U:H2'	50:3:377:U:C6	2.46	0.47
50:3:603:G:H2'	50:3:2037:A:N7	2.30	0.47
50:3:851:U:H2'	50:3:852:C:C6	2.50	0.47
50:3:1048:A:O2'	50:3:1049:U:OP1	2.32	0.47
50:3:1507:G:O2'	50:3:1508:G:P	2.72	0.47
50:3:1687:G:N2	50:3:2012:A:H62	2.11	0.47
50:3:1717:C:H2'	50:3:1718:C:H6	1.80	0.47
50:3:1911:G:N3	50:3:1935:A:H2	2.12	0.47
50:3:2197:U:H2'	50:3:2198:G:C8	2.50	0.47
50:3:2325:U:H3'	50:3:2326:G:H8	1.80	0.47
50:3:2351:U:H2'	50:3:2352:U:C6	2.49	0.47
50:3:2377:A:H2'	50:3:2378:G:H8	1.80	0.47
50:3:2413:G:H1'	50:3:2419:A:N6	2.30	0.47
50:3:2425:C:H2'	50:3:2426:A:O4'	2.15	0.47
50:3:2480:G:H1	50:3:2484:A:H4'	1.80	0.47
50:3:2720:C:O2'	50:3:2721:C:H2'	2.15	0.47
51:4:42:G:N2	51:4:46:C:O2	2.48	0.47
52:5:28:G:O6	52:5:555:G:C6	2.68	0.47
52:5:87:G:O2'	52:5:137:A:N3	2.39	0.47
52:5:250:G:H2'	52:5:251:G:C8	2.49	0.47
52:5:256:G:N2	52:5:260:C:OP2	2.40	0.47
52:5:369:A:O2'	52:5:448:A:N7	2.36	0.47
52:5:435:U:H1'	52:5:436:U:H5	1.80	0.47
52:5:835:G:N1	52:5:843:C:C2	2.83	0.47
52:5:927:C:H6	52:5:927:C:OP2	1.97	0.47
52:5:990:C:N3	52:5:1037:A:O2'	2.40	0.47
52:5:1338:A:O2'	52:5:1339:U:O5'	2.33	0.47
52:5:1370:C:H42	52:5:1371:A:H62	1.63	0.47
52:5:1442:A:O3'	52:5:1443:A:H8	1.98	0.47
52:5:1467:A:H2'	52:5:1468:A:C6	2.50	0.47
4:A:82:ILE:CD1	4:A:175:LEU:HB3	2.44	0.47
4:A:175:LEU:HG	4:A:176:LEU:N	2.29	0.47
5:B:31:ALA:O	5:B:34:LEU:HG	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:C:13:ARG:CZ	6:C:35:PRO:HG2	2.45	0.47
10:G:98:TYR:CD1	10:G:136:GLU:HB2	2.49	0.47
14:K:125:GLN:N	14:K:125:GLN:OE1	2.46	0.47
18:O:30:ILE:HG22	18:O:44:ILE:HG23	1.96	0.47
19:P:61:VAL:HB	19:P:77:ILE:HD11	1.97	0.47
23:T:38:LYS:O	23:T:41:ARG:HB3	2.15	0.47
25:b:120:THR:HG21	25:b:125:ARG:HB2	1.97	0.47
26:c:147:LEU:O	26:c:151:LYS:N	2.47	0.47
26:c:188:VAL:HA	26:c:191:LEU:HB2	1.96	0.47
29:f:2:LYS:HB3	29:f:2:LYS:HE2	1.62	0.47
32:i:133:HIS:CE1	32:i:136:GLU:HG3	2.50	0.47
34:k:114:LEU:HB3	34:k:131:VAL:HG12	1.96	0.47
35:l:34:LEU:O	35:l:102:VAL:HA	2.15	0.47
36:m:23:SER:OG	36:m:66:TRP:O	2.32	0.47
36:m:82:LEU:O	36:m:86:VAL:HG22	2.14	0.47
37:n:17:LYS:HG2	37:n:18:LYS:HD2	1.96	0.47
38:o:100:TYR:HE1	38:o:105:ARG:NH2	2.09	0.47
39:p:2:ARG:HD2	50:3:1278:G:C2	2.50	0.47
45:v:15:GLY:HA3	45:v:29:TRP:CZ3	2.50	0.47
50:3:50:G:C2	50:3:181:G:C6	3.03	0.47
50:3:109:G:O2'	50:3:110:A:H5'	2.15	0.47
50:3:418:G:O6	50:3:430:U:C4	2.68	0.47
50:3:861:U:N3	50:3:863:U:O2'	2.43	0.47
50:3:898:A:H3'	50:3:899:A:H8	1.80	0.47
50:3:918:G:C2	50:3:934:C:C2	3.03	0.47
50:3:976:C:H2'	50:3:977:A:O4'	2.15	0.47
50:3:1210:A:H2'	50:3:1211:U:H6	1.80	0.47
50:3:1255:G:H2'	50:3:1256:A:C8	2.49	0.47
50:3:1544:G:C2	50:3:1545:A:C8	3.03	0.47
50:3:1917:G:C6	50:3:1928:G:C5	3.03	0.47
50:3:2267:G:O4'	50:3:2435:C:H2'	2.14	0.47
50:3:2300:A:H4'	50:3:2383:G:O2'	2.14	0.47
50:3:2459:A:N7	50:3:2460:C:N4	2.58	0.47
50:3:2470:C:H2'	50:3:2471:U:C6	2.49	0.47
51:4:38:U:O2'	51:4:40:U:H2'	2.14	0.47
52:5:9:A:O2'	52:5:10:G:O4'	2.32	0.47
52:5:163:G:H1'	52:5:1423:C:H5''	1.96	0.47
52:5:187:A:C8	52:5:188:U:C4	3.03	0.47
52:5:284:A:O2'	52:5:285:G:O3'	2.32	0.47
52:5:295:G:H2'	52:5:296:A:N9	2.30	0.47
52:5:683:G:O2'	52:5:700:G:N1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:791:A:H2'	52:5:792:C:C6	2.50	0.47
52:5:939:G:H3'	52:5:940:G:C8	2.49	0.47
52:5:1006:A:C6	52:5:1007:U:C4	3.03	0.47
52:5:1056:U:H5''	52:5:1165:G:N2	2.30	0.47
52:5:1118:A:H5'	52:5:1255:A:O2'	2.15	0.47
52:5:1227:A:H2'	52:5:1228:C:C6	2.50	0.47
52:5:1374:C:C2	52:5:1376:G:C5	3.03	0.47
53:7:9:U:H4'	53:7:49:C:H4'	1.97	0.47
4:A:51:HIS:ND1	4:A:53:ASN:HB2	2.30	0.47
4:A:104:ASP:OD1	4:A:104:ASP:N	2.45	0.47
6:C:202:ARG:HD3	52:5:28:G:O3'	2.15	0.47
9:F:92:GLN:HA	9:F:95:LYS:HB2	1.97	0.47
10:G:120:ASP:O	52:5:639:A:H5'	2.15	0.47
12:I:23:LEU:O	12:I:27:THR:OG1	2.17	0.47
14:K:127:ARG:NH2	52:5:500:G:OP2	2.48	0.47
21:R:40:ILE:O	21:R:67:VAL:HA	2.15	0.47
21:R:81:LYS:N	52:5:1200:G:H21	2.13	0.47
22:S:64:ARG:NH2	52:5:257:U:OP2	2.47	0.47
24:a:152:LEU:HD22	50:3:1807:C:H3'	1.96	0.47
24:a:268:ARG:HG3	50:3:1805:U:H5''	1.96	0.47
25:b:129:LYS:NZ	50:3:2002:U:H5''	2.30	0.47
26:c:158:LEU:HD11	26:c:186:VAL:HG12	1.97	0.47
26:c:192:MET:HE2	26:c:192:MET:HB3	1.77	0.47
27:d:45:ARG:HD3	27:d:78:LYS:HB3	1.96	0.47
28:e:31:LEU:HD12	28:e:81:GLY:O	2.15	0.47
36:m:88:PRO:O	36:m:92:LYS:NZ	2.40	0.47
40:q:79:HIS:CE1	50:3:1218:G:H5''	2.50	0.47
43:t:1:MET:H3	43:t:100:LYS:HD3	1.79	0.47
46:w:91:LEU:O	46:w:95:LYS:HG2	2.15	0.47
50:3:29:G:N2	50:3:547:G:H1'	2.30	0.47
50:3:82:G:C4	50:3:83:G:C8	3.03	0.47
50:3:188:G:C2	50:3:217:A:C5	3.03	0.47
50:3:334:A:H1'	50:3:353:G:C1'	2.45	0.47
50:3:441:U:O2	50:3:441:U:H2'	2.14	0.47
50:3:742:G:H2'	50:3:743:G:H8	1.80	0.47
50:3:770:A:H61	50:3:796:A:H1'	1.80	0.47
50:3:936:G:O2'	50:3:937:A:O5'	2.26	0.47
50:3:954:A:H3'	50:3:955:A:H8	1.79	0.47
50:3:955:A:H3'	50:3:956:U:H6	1.80	0.47
50:3:1048:A:H2'	50:3:1049:U:C6	2.50	0.47
50:3:1077:G:N2	50:3:1148:U:O2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1090:G:H3'	50:3:1091:G:H8	1.79	0.47
50:3:1104:A:O4'	50:3:1131:A:H4'	2.15	0.47
50:3:1303:U:OP2	50:3:1680:A:H8	1.97	0.47
50:3:1366:G:H2'	50:3:1366:G:N3	2.30	0.47
50:3:1638:C:H2'	50:3:1639:C:C6	2.50	0.47
50:3:1664:A:H3'	50:3:1665:G:H8	1.80	0.47
50:3:1953:U:H2'	50:3:1954:C:H6	1.76	0.47
50:3:2205:U:O2'	50:3:2206:A:H2'	2.15	0.47
50:3:2261:G:H3'	50:3:2262:C:C6	2.50	0.47
50:3:2413:G:H4'	50:3:2414:U:H3	1.80	0.47
50:3:2720:C:OP1	50:3:2722:G:O2'	2.20	0.47
51:4:70:G:C2	51:4:95:G:C6	3.03	0.47
52:5:298:G:H2'	52:5:299:U:O4'	2.15	0.47
52:5:376:G:HO2'	52:5:378:A:N6	2.13	0.47
52:5:510:U:H2'	52:5:511:A:H8	1.76	0.47
52:5:835:G:C6	52:5:836:C:C4	3.02	0.47
52:5:987:U:H4'	52:5:988:G:C4	2.50	0.47
52:5:1233:G:P	52:5:1233:G:H8	2.38	0.47
52:5:1252:C:H1'	52:5:1257:C:C2	2.49	0.47
52:5:1278:G:H2'	52:5:1306:A:H62	1.79	0.47
52:5:1278:G:H2'	52:5:1306:A:N6	2.30	0.47
52:5:1396:U:H2'	52:5:1397:G:C8	2.50	0.47
52:5:1403:A:H2'	52:5:1404:U:C6	2.50	0.47
52:5:1493:A:H2'	52:5:1494:A:C8	2.49	0.47
53:7:75:C:O2	53:7:75:C:H2'	2.13	0.47
1:0:6:GLN:HG2	50:3:722:C:O5'	2.15	0.46
1:0:16:HIS:C	1:0:21:ARG:HE	2.23	0.46
2:1:2:LYS:NZ	50:3:257:C:H3'	2.30	0.46
4:A:89:ASN:OD1	4:A:90:ASP:N	2.43	0.46
6:C:119:HIS:HA	52:5:436:U:C6	2.50	0.46
7:D:138:HIS:HE1	7:D:203:LEU:H	1.62	0.46
13:J:9:VAL:HG13	13:J:72:MET:HG2	1.97	0.46
14:K:32:ASN:HB3	14:K:34:LYS:HE2	1.96	0.46
19:P:56:LYS:H	19:P:83:ARG:NH1	2.12	0.46
19:P:67:ARG:HB3	52:5:116:A:O5'	2.15	0.46
24:a:67:ARG:HD3	24:a:90:PRO:HD2	1.96	0.46
29:f:31:PHE:HB2	29:f:34:LYS:HZ1	1.78	0.46
32:i:79:HIS:O	32:i:87:ILE:HA	2.14	0.46
34:k:34:ARG:NH1	50:3:620:G:H1	2.13	0.46
35:l:16:SER:HA	35:l:41:TRP:CZ2	2.49	0.46
39:p:88:GLU:HG2	40:q:39:LEU:HD21	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:r:77:ASN:CG	50:3:25:G:H21	2.23	0.46
41:r:131:GLY:HA2	41:r:134:LYS:HE2	1.96	0.46
43:t:9:LYS:HG2	43:t:23:ILE:CD1	2.45	0.46
49:z:33:ALA:HA	49:z:48:LYS:HG2	1.97	0.46
50:3:289:U:H2'	50:3:290:A:C8	2.50	0.46
50:3:411:U:H1'	50:3:459:A:C2	2.50	0.46
50:3:446:A:C2	50:3:2415:A:C5	3.03	0.46
50:3:591:G:H2'	50:3:592:G:H8	1.80	0.46
50:3:732:G:H2'	50:3:733:C:C6	2.50	0.46
50:3:795:G:H3'	50:3:796:A:H8	1.77	0.46
50:3:863:U:H2'	50:3:864:A:C4	2.48	0.46
50:3:873:G:H1'	50:3:977:A:C6	2.49	0.46
50:3:1033:A:C2	50:3:1194:U:C2	3.03	0.46
50:3:1063:A:N6	50:3:1160:G:H2'	2.31	0.46
50:3:1251:G:C2	50:3:1252:C:C2	3.03	0.46
50:3:1390:C:H2'	50:3:1391:U:C6	2.49	0.46
50:3:1570:A:H2'	50:3:1571:G:H4'	1.97	0.46
50:3:1596:U:H2'	50:3:1597:U:H6	1.78	0.46
50:3:1632:C:H2'	50:3:1633:C:C6	2.51	0.46
50:3:1649:C:H2'	50:3:1651:C:C6	2.50	0.46
50:3:1685:G:C2	50:3:1686:U:C2	3.03	0.46
50:3:1803:U:H3'	50:3:1804:A:H8	1.80	0.46
50:3:1818:G:H2'	50:3:1819:G:C8	2.49	0.46
50:3:1853:G:N2	50:3:1902:C:C2	2.83	0.46
50:3:2324:A:H2'	50:3:2325:U:O4'	2.16	0.46
50:3:2409:U:O2	50:3:2423:G:N2	2.34	0.46
50:3:2565:G:H2'	50:3:2566:C:H6	1.80	0.46
50:3:2739:C:H2'	50:3:2740:U:C6	2.51	0.46
51:4:61:A:H2'	51:4:62:G:C8	2.50	0.46
52:5:40:G:H2'	52:5:41:C:H6	1.78	0.46
52:5:219:A:HO2'	52:5:220:U:P	2.37	0.46
52:5:406:G:H2'	52:5:426:U:C4	2.50	0.46
52:5:456:U:O4	52:5:457:A:N6	2.48	0.46
52:5:569:U:H4'	52:5:816:A:C6	2.50	0.46
52:5:744:U:H4'	52:5:745:U:C4	2.50	0.46
52:5:973:A:O2'	52:5:1296:C:N3	2.47	0.46
52:5:1096:A:C2	52:5:1097:G:C5	3.03	0.46
52:5:1273:A:O2'	52:5:1274:G:H4'	2.13	0.46
52:5:1278:G:C8	52:5:1279:G:N2	2.83	0.46
52:5:1379:C:H3'	52:5:1380:G:H8	1.81	0.46
52:5:1385:A:H2'	52:5:1386:C:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1492:G:H2'	52:5:1493:A:C8	2.50	0.46
53:7:19:G:H1'	53:7:58:G:C2	2.49	0.46
5:B:33:TRP:O	5:B:60:ARG:NH1	2.46	0.46
6:C:95:SER:O	6:C:95:SER:OG	2.32	0.46
7:D:132:HIS:HB2	7:D:137:TYR:CD1	2.51	0.46
8:E:22:ASN:O	8:E:26:GLN:HG2	2.16	0.46
9:F:3:LYS:CB	52:5:930:A:H62	2.28	0.46
10:G:97:ILE:O	10:G:136:GLU:HA	2.16	0.46
11:H:6:TYR:N	11:H:21:LEU:O	2.39	0.46
12:I:9:TYR:HE2	12:I:12:LEU:HB2	1.79	0.46
14:K:65:TYR:HB2	14:K:77:LEU:HD11	1.98	0.46
14:K:134:LYS:H	52:5:38:U:P	2.38	0.46
17:N:33:ILE:HD12	17:N:53:LEU:HD12	1.97	0.46
24:a:191:LYS:HD2	24:a:279:ILE:HD11	1.96	0.46
25:b:111:SER:OG	25:b:206:LEU:HB3	2.14	0.46
25:b:124:LYS:O	25:b:127:ASN:ND2	2.49	0.46
34:k:142:ALA:C	34:k:144:GLY:H	2.23	0.46
44:u:57:THR:HG21	50:3:2344:A:N6	2.31	0.46
45:v:34:GLN:HG2	45:v:52:THR:HG22	1.97	0.46
47:x:16:CYS:C	47:x:20:SER:HA	2.41	0.46
50:3:73:A:H5''	50:3:74:U:H3'	1.96	0.46
50:3:269:A:N1	50:3:463:U:H1'	2.31	0.46
50:3:311:G:O2'	50:3:312:U:OP1	2.29	0.46
50:3:762:A:H3'	50:3:763:G:N7	2.31	0.46
50:3:853:G:H2'	50:3:1218:G:H22	1.79	0.46
50:3:898:A:O3'	51:4:76:A:O2'	2.26	0.46
50:3:1013:G:H8	50:3:1013:G:O5'	1.98	0.46
50:3:1181:A:H2'	50:3:1182:U:C6	2.50	0.46
50:3:1470:C:N4	50:3:1583:G:O6	2.48	0.46
50:3:1519:A:H2'	50:3:1520:A:O4'	2.15	0.46
50:3:1555:G:N1	50:3:1575:C:N3	2.46	0.46
50:3:1638:C:O2'	50:3:1644:A:N6	2.47	0.46
50:3:1654:G:C2	50:3:1655:U:C2	3.03	0.46
50:3:2007:U:C2	50:3:2008:A:C8	3.04	0.46
50:3:2260:G:H2'	50:3:2261:G:C8	2.51	0.46
50:3:2434:A:H5'	50:3:2435:C:C6	2.50	0.46
50:3:2502:G:C5	50:3:2503:G:N7	2.83	0.46
50:3:2515:C:C2	50:3:2516:G:C8	3.04	0.46
50:3:2635:G:C4	50:3:2785:G:C2	3.03	0.46
50:3:2714:G:H2'	50:3:2715:C:C6	2.50	0.46
50:3:2817:G:H2'	50:3:2818:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:4:62:G:H2'	51:4:63:U:O4'	2.15	0.46
52:5:39:G:C2'	52:5:40:G:H5''	2.44	0.46
52:5:69:G:H2'	52:5:70:A:O4'	2.15	0.46
52:5:304:U:C2	52:5:305:A:C8	3.02	0.46
52:5:336:U:H2'	52:5:337:C:C6	2.50	0.46
52:5:385:A:C6	52:5:386:U:H1'	2.50	0.46
52:5:507:A:N7	52:5:508:A:C5	2.83	0.46
52:5:724:G:C6	52:5:728:G:C6	3.03	0.46
52:5:943:C:H2'	52:5:944:A:H8	1.80	0.46
52:5:995:U:C2	52:5:1032:G:C2	3.03	0.46
52:5:1042:G:H2'	52:5:1043:U:O4'	2.14	0.46
52:5:1393:A:N7	52:5:1394:G:C4	2.84	0.46
52:5:1458:A:H3'	52:5:1459:U:H6	1.80	0.46
52:5:1477:A:H2'	52:5:1479:G:C8	2.50	0.46
52:5:1491:A:H2'	52:5:1493:A:OP2	2.14	0.46
3:2:24:ARG:NH1	50:3:2750:A:OP1	2.48	0.46
3:2:31:LYS:HA	50:3:2536:U:H5'	1.96	0.46
5:B:83:LYS:HG3	5:B:84:ASN:OD1	2.16	0.46
6:C:63:MET:HE3	6:C:64:TYR:CZ	2.50	0.46
6:C:75:PHE:CE1	6:C:79:LEU:HD21	2.51	0.46
7:D:188:PRO:O	7:D:192:ILE:HG12	2.16	0.46
8:E:38:GLU:HG2	8:E:59:ARG:O	2.16	0.46
9:F:14:ASP:H	9:F:19:ASN:N	2.14	0.46
9:F:59:THR:HA	9:F:62:GLU:HG3	1.96	0.46
11:H:56:LEU:HD23	11:H:56:LEU:H	1.81	0.46
15:L:97:VAL:HG13	52:5:1282:U:H5''	1.97	0.46
17:N:2:GLN:NE2	52:5:737:U:H3'	2.30	0.46
17:N:68:LYS:HG2	17:N:75:TYR:CE1	2.50	0.46
24:a:246:ARG:HD2	50:3:1978:U:O2'	2.15	0.46
25:b:1:MET:N	25:b:86:ASN:HB3	2.29	0.46
28:e:70:THR:HG21	50:3:2765:A:H2	1.80	0.46
32:i:36:ALA:HB1	32:i:40:ARG:HD2	1.96	0.46
34:k:17:THR:HA	50:3:697:U:O3'	2.16	0.46
34:k:81:ASN:ND2	34:k:84:LYS:HD3	2.29	0.46
35:l:115:ILE:O	35:l:119:THR:HG23	2.14	0.46
36:m:64:LYS:HZ2	50:3:2714:G:H21	1.62	0.46
43:t:90:LYS:HE2	43:t:103:VAL:HG13	1.98	0.46
49:z:24:ASN:OD1	49:z:26:LYS:HG2	2.15	0.46
50:3:270:G:C6	50:3:271:G:C5	3.04	0.46
50:3:308:A:C5	50:3:309:A:C5	3.03	0.46
50:3:559:C:H2'	50:3:560:U:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:604:A:C8	50:3:608:A:C6	3.04	0.46
50:3:616:G:C2	50:3:617:C:H1'	2.50	0.46
50:3:662:U:H5''	50:3:663:A:H5''	1.97	0.46
50:3:724:A:H2'	50:3:725:G:H8	1.80	0.46
50:3:748:G:H22	50:3:752:C:C5'	2.27	0.46
50:3:913:U:H3	50:3:938:A:H61	1.64	0.46
50:3:928:G:H2'	50:3:929:G:H8	1.80	0.46
50:3:1059:G:OP1	50:3:1061:A:H5''	2.16	0.46
50:3:1194:U:H2'	50:3:1195:A:H8	1.80	0.46
50:3:1409:G:H1'	50:3:1605:A:N1	2.30	0.46
50:3:1423:A:O2'	50:3:1425:U:OP2	2.26	0.46
50:3:1440:U:C4	50:3:1625:G:C6	3.02	0.46
50:3:1706:C:H2'	50:3:1707:U:O2	2.15	0.46
50:3:1873:A:C5	50:3:1883:A:N7	2.84	0.46
50:3:1921:C:H2'	50:3:1922:U:C2	2.50	0.46
50:3:2026:A:H2'	50:3:2027:G:O4'	2.15	0.46
50:3:2360:A:N7	50:3:2361:G:C4	2.83	0.46
50:3:2399:G:N1	50:3:2433:A:OP1	2.39	0.46
50:3:2408:G:N1	50:3:2425:C:N3	2.63	0.46
50:3:2705:G:H2'	50:3:2706:U:H6	1.76	0.46
52:5:30:A:H61	52:5:553:C:N4	2.13	0.46
52:5:69:G:C6	52:5:86:A:N1	2.83	0.46
52:5:416:U:H5''	52:5:417:U:O4'	2.16	0.46
52:5:616:C:N4	52:5:619:A:O5'	2.48	0.46
52:5:926:C:H2'	52:5:927:C:C6	2.50	0.46
2:1:9:LYS:HE3	2:1:10:ARG:HH21	1.80	0.46
4:A:173:PRO:HB2	4:A:175:LEU:O	2.16	0.46
8:E:146:THR:HA	10:G:60:LEU:HA	1.97	0.46
9:F:81:GLY:HA3	52:5:690:G:N3	2.30	0.46
9:F:113:LYS:HD2	52:5:1272:C:H2'	1.98	0.46
16:M:60:SER:CB	52:5:1162:G:H21	2.27	0.46
20:Q:45:ALA:HB2	52:5:839:U:H1'	1.98	0.46
20:Q:94:ARG:NH2	52:5:715:A:H61	2.14	0.46
21:R:34:TRP:HA	21:R:51:VAL:HA	1.96	0.46
21:R:81:LYS:HZ1	21:R:83:HIS:C	2.23	0.46
24:a:40:THR:HA	24:a:65:LYS:HA	1.96	0.46
24:a:190:ARG:CG	24:a:191:LYS:H	2.28	0.46
24:a:206:LEU:HA	50:3:1827:U:H3	1.80	0.46
26:c:128:VAL:O	26:c:201:LYS:N	2.48	0.46
28:e:86:PHE:N	28:e:138:GLY:O	2.46	0.46
35:l:77:LYS:HG3	35:l:88:GLY:HA2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:s:2:ASP:HA	42:s:39:ARG:HH11	1.80	0.46
45:v:14:TYR:CE1	50:3:192:U:H5''	2.51	0.46
45:v:25:THR:HG22	45:v:26:ARG:O	2.15	0.46
50:3:17:G:N1	50:3:560:U:C2	2.78	0.46
50:3:170:A:H3'	50:3:171:G:H8	1.81	0.46
50:3:579:U:O2'	50:3:581:A:OP2	2.31	0.46
50:3:1177:A:C4	50:3:1179:G:N7	2.83	0.46
50:3:1265:G:C2	50:3:1266:G:C2	3.03	0.46
50:3:1296:G:H1	50:3:2019:G:H3'	1.81	0.46
50:3:1355:C:N3	50:3:1356:G:N2	2.64	0.46
50:3:1496:A:H3'	50:3:1497:A:C8	2.51	0.46
50:3:1697:C:O2'	50:3:2694:A:H4'	2.14	0.46
50:3:1702:A:H1'	50:3:1704:C:C4	2.50	0.46
50:3:1828:A:H2'	50:3:1829:U:C6	2.51	0.46
50:3:1933:U:N3	50:3:1936:G:C2	2.83	0.46
50:3:2034:G:H2'	50:3:2035:U:H6	1.79	0.46
50:3:2141:A:H1'	50:3:2166:U:H1'	1.98	0.46
50:3:2207:A:H3'	50:3:2208:U:H6	1.80	0.46
50:3:2475:C:H3'	50:3:2476:A:C8	2.51	0.46
52:5:15:U:O2'	52:5:18:U:O4	2.30	0.46
52:5:90:G:N2	52:5:376:G:H5'	2.30	0.46
52:5:471:A:H2'	52:5:472:G:H8	1.79	0.46
52:5:484:A:H3'	52:5:485:C:C6	2.50	0.46
52:5:777:A:H1'	52:5:800:G:N2	2.31	0.46
52:5:1046:A:N6	52:5:1175:C:H42	2.03	0.46
52:5:1506:A:N7	52:5:1508:C:C4	2.83	0.46
4:A:130:LEU:HD13	4:A:167:LYS:HB3	1.98	0.46
8:E:45:LEU:HD13	8:E:49:ILE:HB	1.98	0.46
9:F:25:ILE:HD11	9:F:100:LEU:HG	1.98	0.46
14:K:3:THR:O	14:K:6:GLN:HG2	2.15	0.46
14:K:26:TYR:CD1	14:K:37:ASN:HB3	2.50	0.46
19:P:70:SER:HA	52:5:261:G:O3'	2.15	0.46
20:Q:84:ARG:O	20:Q:88:LYS:HG3	2.15	0.46
21:R:49:PHE:O	21:R:59:ASN:HA	2.15	0.46
24:a:55:VAL:HG12	24:a:56:ARG:O	2.16	0.46
25:b:18:THR:HG22	25:b:222:LEU:HD13	1.97	0.46
26:c:6:LEU:O	26:c:14:GLU:N	2.49	0.46
26:c:76:GLN:HB3	26:c:84:PHE:CE2	2.51	0.46
29:f:36:ALA:HB1	45:v:62:ASN:OD1	2.15	0.46
37:n:33:ILE:HD11	37:n:42:GLN:HE21	1.81	0.46
38:o:67:ARG:HA	38:o:75:ILE:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:193:G:N2	50:3:209:G:O2'	2.48	0.46
50:3:243:U:H2'	50:3:244:G:O4'	2.16	0.46
50:3:427:A:O2'	50:3:446:A:OP1	2.29	0.46
50:3:443:C:H2'	50:3:444:C:H6	1.75	0.46
50:3:451:A:C6	50:3:2417:G:C6	3.04	0.46
50:3:512:G:N1	50:3:514:A:H3'	2.29	0.46
50:3:558:C:H5''	50:3:575:C:O2'	2.15	0.46
50:3:1387:A:C6	50:3:1400:U:O2	2.69	0.46
50:3:1741:G:H2'	50:3:1742:C:C6	2.50	0.46
50:3:2088:U:O2	50:3:2247:G:N2	2.40	0.46
50:3:2261:G:H3'	50:3:2262:C:H6	1.79	0.46
50:3:2331:G:N1	50:3:2340:U:C2	2.82	0.46
50:3:2516:G:H5''	50:3:2563:U:O2	2.15	0.46
52:5:118:C:H2'	52:5:119:U:O4'	2.15	0.46
52:5:370:A:H5'	52:5:448:A:C8	2.50	0.46
52:5:1039:G:H1'	52:5:1190:G:H5''	1.97	0.46
52:5:1133:A:OP1	52:5:1134:C:C5	2.68	0.46
52:5:1313:A:N3	53:7:42:C:H1'	2.31	0.46
53:7:75:C:OP2	53:7:77:A:N6	2.45	0.46
4:A:158:ARG:O	4:A:161:LYS:HB3	2.16	0.46
4:A:160:GLU:HA	4:A:164:GLY:CA	2.46	0.46
5:B:56:VAL:HG12	5:B:69:VAL:HG22	1.98	0.46
6:C:5:GLY:HA2	6:C:111:ARG:HH12	1.80	0.46
6:C:11:SER:HB3	6:C:16:PHE:O	2.15	0.46
6:C:91:ARG:O	6:C:95:SER:N	2.48	0.46
11:H:99:ILE:O	11:H:102:SER:OG	2.22	0.46
12:I:73:LYS:HA	16:M:55:GLY:O	2.15	0.46
18:O:51:GLU:HA	18:O:54:ASN:ND2	2.31	0.46
22:S:4:ILE:HD11	52:5:328:G:OP1	2.15	0.46
22:S:15:ILE:HB	22:S:16:LYS:HZ2	1.80	0.46
24:a:107:SER:OG	24:a:108:TYR:N	2.49	0.46
28:e:5:GLY:HA3	28:e:68:HIS:CD2	2.51	0.46
29:f:95:LYS:HB2	50:3:2227:U:O2'	2.14	0.46
32:i:17:GLN:O	32:i:56:TYR:HB2	2.15	0.46
32:i:35:ALA:O	32:i:39:ILE:HG12	2.16	0.46
34:k:33:GLY:HA2	50:3:1221:G:H5''	1.96	0.46
34:k:134:GLN:HE22	50:3:674:G:H4'	1.81	0.46
36:m:6:LYS:NZ	50:3:2010:A:H5''	2.31	0.46
36:m:37:LYS:HZ1	50:3:1685:G:H5'	1.78	0.46
39:p:60:TRP:CZ2	50:3:1031:U:H1'	2.50	0.46
40:q:7:CYS:HA	40:q:37:LYS:NZ	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:r:126:LYS:HA	41:r:129:VAL:HG22	1.98	0.46
42:s:9:LYS:HG2	42:s:10:PRO:O	2.15	0.46
42:s:44:PHE:CE1	42:s:48:TYR:HD2	2.33	0.46
50:3:95:G:H2'	50:3:96:A:O4'	2.15	0.46
50:3:179:A:O2'	50:3:180:A:C8	2.65	0.46
50:3:375:U:H2'	50:3:376:U:C6	2.50	0.46
50:3:429:U:H2'	50:3:430:U:C6	2.51	0.46
50:3:627:U:H2'	50:3:628:A:C8	2.50	0.46
50:3:632:A:H2'	50:3:633:G:C8	2.50	0.46
50:3:638:A:C8	50:3:692:U:H4'	2.50	0.46
50:3:638:A:H8	50:3:692:U:H4'	1.80	0.46
50:3:766:C:H2'	50:3:767:C:C6	2.50	0.46
50:3:862:U:H4'	50:3:863:U:C5	2.51	0.46
50:3:936:G:HO2'	50:3:937:A:C5'	2.28	0.46
50:3:1203:G:H2'	50:3:1204:A:C8	2.51	0.46
50:3:1232:U:H2'	50:3:1233:A:C8	2.50	0.46
50:3:1345:G:C4	50:3:1346:G:C8	3.03	0.46
50:3:1351:G:C6	50:3:1361:U:H1'	2.50	0.46
50:3:1404:C:H2'	50:3:1405:G:O4'	2.16	0.46
50:3:1453:U:H2'	50:3:1454:G:H8	1.76	0.46
50:3:1587:U:H2'	50:3:1588:A:C8	2.49	0.46
50:3:1673:U:O2'	50:3:1674:A:H5'	2.16	0.46
50:3:1698:A:H1'	50:3:2693:U:O2'	2.15	0.46
50:3:1806:G:O6	50:3:1826:A:O2'	2.25	0.46
50:3:1838:A:H2'	50:3:1839:C:C6	2.50	0.46
50:3:1931:C:H2'	50:3:1932:C:C6	2.50	0.46
50:3:1979:G:C2	50:3:1980:G:N7	2.84	0.46
50:3:2062:C:H5'	50:3:2063:G:H5''	1.96	0.46
50:3:2071:C:C2	50:3:2072:C:C5	3.04	0.46
50:3:2148:U:OP2	50:3:2150:C:N4	2.48	0.46
50:3:2236:G:H2'	50:3:2237:U:C6	2.51	0.46
50:3:2355:C:N3	50:3:2379:G:N2	2.64	0.46
50:3:2467:A:H3'	50:3:2468:U:H6	1.81	0.46
50:3:2483:C:H2'	50:3:2484:A:H5'	1.97	0.46
50:3:2685:A:H2'	50:3:2686:C:C6	2.50	0.46
50:3:2699:C:C6	50:3:2876:G:C6	3.03	0.46
50:3:2701:A:C6	50:3:2725:G:C6	3.04	0.46
50:3:2789:A:C5'	50:3:2790:A:H5'	2.45	0.46
50:3:2880:A:C2	50:3:2881:A:C5	3.04	0.46
52:5:130:G:C4	52:5:131:G:C8	3.04	0.46
52:5:473:A:H2'	52:5:474:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:599:G:C5	52:5:635:G:C6	3.03	0.46
52:5:705:A:H2'	52:5:706:U:O4'	2.15	0.46
52:5:851:U:H2'	52:5:852:G:O4'	2.16	0.46
52:5:917:G:N2	52:5:1370:C:N3	2.58	0.46
52:5:1064:U:H2'	52:5:1065:G:C8	2.51	0.46
52:5:1111:G:H2'	52:5:1112:U:H6	1.81	0.46
52:5:1225:A:C2	52:5:1345:G:H1'	2.50	0.46
52:5:1244:A:H1'	52:5:1286:G:N2	2.30	0.46
52:5:1303:A:H2'	52:5:1304:U:C6	2.51	0.46
52:5:1316:C:H2'	52:5:1317:A:N7	2.31	0.46
52:5:1371:A:H4'	52:5:1372:C:H3'	1.97	0.46
6:C:53:GLN:NE2	6:C:195:TYR:O	2.49	0.46
6:C:53:GLN:HE22	7:D:167:ARG:HH12	1.63	0.46
6:C:56:GLU:HB3	6:C:60:MET:HE2	1.98	0.46
6:C:72:ARG:HH12	6:C:202:ARG:HD2	1.80	0.46
6:C:88:ASN:OD1	6:C:91:ARG:NH1	2.48	0.46
7:D:211:LEU:HB2	10:G:75:LYS:NZ	2.31	0.46
9:F:103:ILE:O	9:F:107:ALA:HB3	2.15	0.46
11:H:82:ARG:O	11:H:86:VAL:HG13	2.15	0.46
11:H:131:LYS:HB2	52:5:965:C:N4	2.31	0.46
21:R:11:VAL:HG11	21:R:16:LEU:HD22	1.98	0.46
21:R:35:SER:H	21:R:71:LEU:HD23	1.81	0.46
24:a:282:ARG:NH2	50:3:1804:A:H3'	2.31	0.46
26:c:190:ASP:O	26:c:194:ALA:N	2.44	0.46
27:d:48:LYS:HE2	27:d:51:GLU:HB2	1.98	0.46
28:e:44:LEU:HD11	28:e:68:HIS:CD2	2.51	0.46
32:i:71:LYS:HD3	50:3:1176:U:H5	1.81	0.46
32:i:116:ARG:HA	32:i:119:ARG:HD2	1.97	0.46
32:i:117:LEU:O	32:i:121:TRP:N	2.48	0.46
34:k:112:ILE:HB	34:k:128:VAL:HA	1.98	0.46
35:l:2:LEU:HB3	35:l:69:PHE:CE1	2.50	0.46
35:l:40:ASN:N	35:l:97:VAL:HB	2.28	0.46
35:l:75:THR:HG22	35:l:90:PRO:HG3	1.98	0.46
42:s:36:SER:H	42:s:39:ARG:HB2	1.80	0.46
45:v:29:TRP:CD1	50:3:432:G:H1'	2.50	0.46
50:3:82:G:O2'	50:3:328:A:N1	2.39	0.46
50:3:302:G:C4	50:3:303:C:C6	3.04	0.46
50:3:312:U:H3'	50:3:313:G:H8	1.80	0.46
50:3:442:G:C6	50:3:457:U:N3	2.83	0.46
50:3:717:U:H2'	50:3:718:U:C6	2.50	0.46
50:3:935:U:H2'	50:3:936:G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:984:C:H2'	50:3:985:A:H8	1.80	0.46
50:3:1043:C:O5'	50:3:1044:C:H2'	2.15	0.46
50:3:1086:G:H2'	50:3:1087:C:H6	1.81	0.46
50:3:1108:A:H3'	50:3:1109:G:H8	1.80	0.46
50:3:1168:A:C2	50:3:2033:G:H1'	2.51	0.46
50:3:1201:A:C6	50:3:1215:G:C6	3.04	0.46
50:3:1295:A:H61	50:3:2020:A:C5'	2.29	0.46
50:3:1418:U:C2	50:3:1423:A:N6	2.83	0.46
50:3:1446:G:N3	50:3:1614:G:C6	2.84	0.46
50:3:1532:A:H2'	50:3:1533:U:N3	2.31	0.46
50:3:1621:U:H2'	50:3:1622:C:C6	2.50	0.46
50:3:2378:G:C6	50:3:2379:G:C6	3.04	0.46
50:3:2481:U:C4	50:3:2482:U:C4	3.04	0.46
50:3:2598:C:H2'	50:3:2599:C:H6	1.81	0.46
50:3:2604:U:O5'	50:3:2604:U:H6	1.98	0.46
50:3:2677:A:H2'	50:3:2678:A:C8	2.50	0.46
50:3:2828:C:H3'	50:3:2829:G:N2	2.25	0.46
51:4:25:A:O2'	51:4:26:C:H5'	2.15	0.46
52:5:114:C:C2	52:5:229:G:C2	3.04	0.46
52:5:543:C:C2	52:5:544:A:C8	3.04	0.46
52:5:670:G:H2'	52:5:671:G:H8	1.77	0.46
52:5:727:G:H21	52:5:763:A:H5''	1.79	0.46
52:5:882:U:H3'	52:5:883:A:C8	2.49	0.46
52:5:932:A:H1'	52:5:1354:G:N2	2.30	0.46
52:5:1191:U:H2'	52:5:1192:C:C6	2.50	0.46
52:5:1456:U:C2	52:5:1457:G:C8	3.04	0.46
52:5:1472:G:N2	52:5:1494:A:H1'	2.30	0.46
53:7:28:A:H2'	53:7:29:C:C4	2.51	0.46
2:1:40:HIS:HA	2:1:43:LYS:HG2	1.96	0.46
5:B:18:TRP:O	5:B:21:ARG:HG3	2.15	0.46
5:B:20:SER:OG	16:M:52:ALA:O	2.33	0.46
5:B:56:VAL:HG12	5:B:69:VAL:HG13	1.97	0.46
6:C:104:MET:SD	6:C:142:VAL:HG11	2.56	0.46
12:I:18:SER:HB3	12:I:102:VAL:HG22	1.97	0.46
15:L:32:ALA:O	15:L:35:LYS:HG2	2.15	0.46
21:R:31:ILE:HD12	21:R:33:THR:HG21	1.97	0.46
24:a:191:LYS:HB2	24:a:277:LEU:HB3	1.97	0.46
25:b:65:PRO:HD3	50:3:2814:A:O3'	2.16	0.46
26:c:129:ASP:HB3	26:c:201:LYS:HD3	1.97	0.46
33:j:21:ILE:HD12	33:j:39:VAL:HG21	1.97	0.46
34:k:61:ARG:O	50:3:2400:A:O2'	2.19	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:l:22:LYS:NZ	50:3:900:G:N7	2.61	0.46
35:l:27:VAL:CG1	35:l:134:ARG:HA	2.45	0.46
39:p:91:ARG:HH12	40:q:10:LYS:CA	2.29	0.46
40:q:59:VAL:HG11	40:q:62:HIS:CE1	2.50	0.46
43:t:9:LYS:HE2	43:t:9:LYS:HB3	1.78	0.46
45:v:3:LYS:HB3	50:3:1393:A:OP1	2.16	0.46
50:3:86:A:C2	50:3:104:A:C4	3.04	0.46
50:3:269:A:H2	50:3:270:G:H21	1.61	0.46
50:3:306:G:C6	50:3:399:G:C5	3.03	0.46
50:3:428:U:C2	50:3:429:U:C5	3.04	0.46
50:3:496:A:H1'	50:3:506:A:N6	2.31	0.46
50:3:556:U:C2	50:3:557:G:C8	3.04	0.46
50:3:612:G:C5	50:3:1292:A:C5	3.04	0.46
50:3:629:G:H2'	50:3:630:C:O4'	2.15	0.46
50:3:785:A:OP1	50:3:1649:C:N4	2.49	0.46
50:3:798:G:C2	50:3:800:C:C2	3.04	0.46
50:3:855:A:H4'	50:3:871:G:N2	2.31	0.46
50:3:856:A:O2'	50:3:980:C:H4'	2.14	0.46
50:3:1039:G:H2'	50:3:1040:U:C6	2.51	0.46
50:3:1194:U:C2	50:3:1195:A:C8	3.04	0.46
50:3:1219:U:H2'	50:3:1220:A:C8	2.51	0.46
50:3:1521:A:H2'	50:3:1523:C:C5	2.50	0.46
50:3:1673:U:P	50:3:2717:G:H21	2.39	0.46
50:3:1682:C:H5'	50:3:1683:G:OP2	2.15	0.46
50:3:2193:U:O2	50:3:2193:U:H2'	2.14	0.46
50:3:2265:U:O2'	50:3:2266:C:H5'	2.16	0.46
50:3:2851:U:O2	50:3:2873:G:N2	2.43	0.46
51:4:22:G:H5''	51:4:23:A:OP1	2.16	0.46
51:4:38:U:O2	51:4:41:C:H3'	2.16	0.46
51:4:93:U:H2'	51:4:94:A:C8	2.50	0.46
52:5:109:G:C2	52:5:234:G:C2	3.04	0.46
52:5:204:C:H2'	52:5:205:U:C6	2.51	0.46
52:5:287:U:O5'	52:5:301:G:N1	2.48	0.46
52:5:293:G:N2	52:5:295:G:H3'	2.30	0.46
52:5:402:G:C2	52:5:403:A:C4	3.03	0.46
52:5:409:G:O3'	52:5:425:G:N2	2.48	0.46
52:5:410:A:H3'	52:5:411:A:H8	1.81	0.46
52:5:607:A:H3'	52:5:608:G:C8	2.51	0.46
52:5:692:A:N6	52:5:783:G:H21	2.09	0.46
52:5:775:G:H2'	52:5:776:C:O4'	2.15	0.46
52:5:797:G:N2	52:5:798:U:O4	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:942:G:H5'	52:5:1307:A:H1'	1.97	0.46
52:5:944:A:C1'	52:5:1339:U:H3	2.28	0.46
52:5:1100:C:H2'	52:5:1101:A:O4'	2.15	0.46
52:5:1170:C:H5''	52:5:1171:A:H4'	1.98	0.46
52:5:1225:A:H3'	52:5:1226:A:C8	2.51	0.46
52:5:1286:G:C2	52:5:1300:C:C2	3.04	0.46
53:7:59:A:H1'	53:7:61:U:P	2.56	0.46
1:0:3:ARG:HD3	1:0:3:ARG:HA	1.60	0.46
3:2:5:ALA:HB1	50:3:1064:A:H61	1.80	0.46
4:A:71:TYR:HE2	4:A:175:LEU:HD13	1.81	0.46
4:A:113:LEU:HB3	52:5:1093:A:O2'	2.16	0.46
5:B:11:ARG:HH11	5:B:181:LEU:HA	1.80	0.46
8:E:109:LEU:HD13	52:5:838:A:H5''	1.97	0.46
10:G:32:THR:HB	10:G:73:ASN:ND2	2.30	0.46
14:K:97:GLY:N	52:5:550:U:H4'	2.31	0.46
25:b:70:PHE:CZ	25:b:81:LEU:HD21	2.51	0.46
27:d:74:ILE:HB	27:d:79:LEU:HB3	1.98	0.46
28:e:160:TYR:HA	28:e:175:LYS:C	2.41	0.46
28:e:178:LYS:H	50:3:2667:G:H4'	1.81	0.46
34:k:48:ARG:HG2	34:k:50:GLY:H	1.81	0.46
35:l:12:PRO:C	50:3:947:A:H62	2.24	0.46
37:n:4:ARG:HA	37:n:7:GLN:HB3	1.98	0.46
38:o:14:GLU:O	38:o:18:LEU:HG	2.16	0.46
40:q:7:CYS:HA	40:q:37:LYS:HZ1	1.80	0.46
40:q:20:PHE:O	40:q:92:LEU:HD23	2.16	0.46
42:s:16:VAL:HG13	42:s:28:VAL:HG21	1.96	0.46
44:u:85:LYS:HA	44:u:92:LYS:O	2.16	0.46
49:z:39:SER:C	49:z:42:ARG:H	2.24	0.46
50:3:29:G:N2	50:3:548:A:C8	2.84	0.46
50:3:161:U:N3	50:3:171:G:N1	2.46	0.46
50:3:174:A:H2'	50:3:175:A:C8	2.51	0.46
50:3:420:A:C6	50:3:421:A:C4	3.04	0.46
50:3:900:G:H1'	50:3:903:A:N6	2.30	0.46
50:3:1045:A:H2'	50:3:1046:A:C8	2.51	0.46
50:3:1298:A:H62	50:3:2019:G:H21	1.63	0.46
50:3:1370:A:O2'	50:3:1372:U:OP1	2.28	0.46
50:3:1385:U:H3'	50:3:1386:G:H8	1.81	0.46
50:3:1462:A:H8	50:3:1462:A:OP2	1.99	0.46
50:3:1627:U:H2'	50:3:1628:G:C8	2.51	0.46
50:3:1748:U:N3	50:3:1751:A:N7	2.64	0.46
50:3:1856:G:H2'	50:3:1857:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1938:U:H2'	50:3:1939:A:H8	1.81	0.46
50:3:2263:G:C5	50:3:2264:G:C5	3.04	0.46
50:3:2447:A:H2'	50:3:2447:A:N3	2.31	0.46
50:3:2465:U:C2	50:3:2502:G:O6	2.68	0.46
50:3:2551:G:H2'	50:3:2552:G:C8	2.51	0.46
50:3:2628:U:H2'	50:3:2629:G:H8	1.77	0.46
50:3:2738:U:H2'	50:3:2739:C:O4'	2.16	0.46
50:3:2739:C:C4	50:3:2740:U:O4	2.68	0.46
51:4:107:G:C5	51:4:108:C:H1'	2.51	0.46
52:5:167:A:O2'	52:5:169:G:O6	2.31	0.46
52:5:317:A:N1	52:5:328:G:C6	2.84	0.46
52:5:369:A:H61	52:5:387:G:H1'	1.81	0.46
52:5:952:U:H2'	52:5:953:A:H8	1.81	0.46
52:5:1040:U:H4'	52:5:1041:G:H5'	1.98	0.46
52:5:1068:G:N2	52:5:1070:G:H8	2.13	0.46
52:5:1166:A:H2'	52:5:1167:C:C6	2.50	0.46
52:5:1222:U:N3	52:5:1264:G:C6	2.81	0.46
52:5:1264:G:H3'	52:5:1265:U:C6	2.51	0.46
2:1:55:ILE:HA	2:1:58:LEU:HB3	1.98	0.46
4:A:84:PHE:HB2	4:A:107:PHE:HA	1.98	0.46
6:C:165:PRO:HB2	6:C:180:ARG:NH1	2.30	0.46
9:F:49:ILE:HD11	9:F:123:ILE:HG21	1.97	0.46
10:G:107:VAL:HB	10:G:112:GLY:HA3	1.97	0.46
11:H:101:LYS:HE3	11:H:104:LYS:HZ1	1.81	0.46
14:K:121:GLU:O	14:K:122:LYS:C	2.59	0.46
19:P:32:HIS:O	19:P:36:HIS:HA	2.15	0.46
24:a:214:GLY:N	50:3:1798:A:O2'	2.49	0.46
26:c:51:SER:OG	26:c:95:PRO:HG3	2.16	0.46
27:d:17:GLN:HE22	27:d:25:ILE:HG22	1.80	0.46
32:i:68:THR:O	32:i:71:LYS:HE2	2.16	0.46
36:m:36:LYS:HA	36:m:39:LYS:HE3	1.97	0.46
37:n:110:ARG:HA	37:n:116:PHE:HZ	1.81	0.46
39:p:61:ILE:HG22	50:3:1045:A:H4'	1.96	0.46
41:r:115:GLN:HB2	41:r:119:LYS:NZ	2.31	0.46
42:s:51:LYS:HB3	46:w:87:TRP:NE1	2.31	0.46
43:t:11:VAL:HG12	43:t:21:SER:HB2	1.98	0.46
50:3:61:U:O2	50:3:70:G:N2	2.41	0.46
50:3:69:U:C2	50:3:70:G:C8	3.04	0.46
50:3:455:G:H3'	50:3:456:G:C8	2.44	0.46
50:3:541:G:O3'	50:3:542:A:H8	1.98	0.46
50:3:571:A:C2	50:3:591:G:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:660:U:H2'	50:3:661:G:C8	2.50	0.46
50:3:827:G:H4'	50:3:828:A:C4	2.51	0.46
50:3:856:A:N7	50:3:1008:A:H2	2.13	0.46
50:3:1071:G:C6	50:3:1155:G:O6	2.69	0.46
50:3:2088:U:C4	50:3:2247:G:O6	2.69	0.46
50:3:2117:G:N3	50:3:2127:G:C8	2.84	0.46
50:3:2465:U:H3'	50:3:2466:G:C8	2.50	0.46
50:3:2700:C:O2	50:3:2851:U:O2'	2.28	0.46
50:3:2702:G:H3'	50:3:2703:U:C6	2.51	0.46
50:3:2756:A:H61	50:3:2764:U:H5'	1.81	0.46
50:3:2756:A:N1	50:3:2765:A:C8	2.83	0.46
50:3:2848:A:H3'	50:3:2849:G:C8	2.49	0.46
50:3:2852:G:O2'	50:3:2871:G:N1	2.19	0.46
50:3:2878:G:H2'	50:3:2879:U:C6	2.51	0.46
51:4:31:G:O2'	51:4:32:G:H5'	2.16	0.46
51:4:56:A:C5	51:4:57:G:N7	2.83	0.46
52:5:92:G:O2'	52:5:374:G:O2'	2.34	0.46
52:5:169:G:C2	52:5:170:A:H1'	2.50	0.46
52:5:263:C:C2	52:5:264:C:C5	3.04	0.46
52:5:429:A:C4	52:5:430:G:C8	3.04	0.46
52:5:568:G:H2'	52:5:569:U:C6	2.50	0.46
52:5:642:A:H2'	52:5:643:U:O4'	2.16	0.46
52:5:917:G:C2	52:5:1371:A:C6	3.04	0.46
52:5:964:A:H2'	52:5:965:C:O4'	2.16	0.46
52:5:1005:U:H3	52:5:1016:A:H2	1.64	0.46
52:5:1111:G:C6	52:5:1130:G:C6	3.04	0.46
52:5:1217:G:C2	52:5:1269:U:O2	2.68	0.46
52:5:1270:C:O2'	52:5:1276:U:N3	2.46	0.46
52:5:1279:G:HO2'	52:5:1280:A:H8	1.59	0.46
52:5:1297:G:C5	52:5:1298:U:C4	3.04	0.46
52:5:1298:U:H5''	52:5:1337:U:H5''	1.98	0.46
5:B:153:LYS:HZ3	5:B:154:VAL:C	2.23	0.45
5:B:155:LEU:HA	5:B:170:MET:HA	1.98	0.45
6:C:19:LEU:H	6:C:23:LYS:HB2	1.81	0.45
6:C:47:MET:SD	6:C:48:SER:N	2.88	0.45
6:C:199:TRP:HA	52:5:9:A:H61	1.81	0.45
7:D:130:GLU:O	7:D:131:ILE:HD13	2.16	0.45
8:E:59:ARG:HD3	8:E:61:LYS:HD3	1.98	0.45
11:H:100:LEU:HD11	11:H:105:LEU:HB2	1.96	0.45
12:I:48:LEU:H	12:I:78:ARG:NH1	2.13	0.45
14:K:128:SER:O	52:5:36:G:H1'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Q:81:MET:O	20:Q:84:ARG:HG2	2.16	0.45
23:T:17:LYS:O	23:T:20:ARG:HG2	2.16	0.45
26:c:119:LYS:NZ	26:c:192:MET:HA	2.31	0.45
28:e:45:LYS:HE3	28:e:58:ASN:HD22	1.80	0.45
28:e:128:VAL:HA	28:e:134:ILE:HG13	1.97	0.45
29:f:105:GLY:HA2	50:3:166:A:N3	2.31	0.45
33:j:88:LYS:HA	33:j:94:ARG:CZ	2.46	0.45
35:l:12:PRO:HA	50:3:948:A:H61	1.80	0.45
37:n:22:THR:HG23	37:n:23:ASN:H	1.81	0.45
47:x:15:LYS:O	47:x:36:ILE:N	2.43	0.45
50:3:72:G:H5''	50:3:113:U:O2	2.16	0.45
50:3:525:A:C2	50:3:526:G:C2	3.04	0.45
50:3:536:A:H3'	50:3:537:A:C8	2.49	0.45
50:3:990:G:H2'	50:3:991:G:O4'	2.16	0.45
50:3:1001:C:C2	50:3:1002:A:N7	2.84	0.45
50:3:1073:A:H2'	50:3:1074:A:C8	2.51	0.45
50:3:1228:G:C2	50:3:1229:U:C4	3.04	0.45
50:3:1314:A:C5	50:3:1317:C:N3	2.85	0.45
50:3:1658:U:H2'	50:3:1659:C:C6	2.51	0.45
50:3:1764:U:N3	50:3:1769:A:C6	2.83	0.45
50:3:1834:U:H5''	50:3:1978:U:H4'	1.98	0.45
50:3:2038:A:C5	50:3:2506:C:H1'	2.51	0.45
50:3:2071:C:H2'	50:3:2072:C:C6	2.52	0.45
50:3:2082:U:H2'	50:3:2084:A:OP2	2.16	0.45
50:3:2145:A:C6	50:3:2161:G:O6	2.69	0.45
50:3:2393:C:H2'	50:3:2394:A:C8	2.49	0.45
50:3:2492:G:H2'	50:3:2493:G:H8	1.81	0.45
50:3:2572:A:C2	50:3:2655:U:H4'	2.51	0.45
50:3:2683:G:H2'	50:3:2684:G:O4'	2.15	0.45
50:3:2756:A:H5'	50:3:2761:A:H62	1.80	0.45
50:3:2858:A:H61	50:3:2867:U:H3	1.64	0.45
52:5:136:U:H2'	52:5:137:A:C8	2.52	0.45
52:5:262:G:H8	52:5:264:C:H3'	1.81	0.45
52:5:450:U:C6	52:5:451:G:C8	3.04	0.45
52:5:671:G:C2	52:5:713:A:H2	2.29	0.45
52:5:714:C:O2'	52:5:731:A:O4'	2.24	0.45
52:5:731:A:H2'	52:5:732:A:H8	1.80	0.45
52:5:866:A:H1'	52:5:867:A:H2'	1.97	0.45
52:5:992:U:H3'	52:5:993:C:C6	2.51	0.45
52:5:1159:A:H2'	52:5:1160:G:H8	1.81	0.45
52:5:1177:U:H2'	52:5:1178:C:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1188:A:C4	52:5:1190:G:C8	3.04	0.45
52:5:1216:G:C2	52:5:1217:G:C5	3.04	0.45
2:1:34:THR:OG1	2:1:37:GLN:HG3	2.16	0.45
2:1:54:ARG:NH2	50:3:869:U:O2'	2.49	0.45
4:A:179:ASP:OD1	4:A:183:TYR:HD2	1.99	0.45
4:A:225:THR:O	4:A:228:LEU:HG	2.16	0.45
5:B:138:ARG:O	5:B:142:ILE:HG12	2.17	0.45
8:E:96:TYR:HB3	20:Q:49:LEU:HD21	1.98	0.45
12:I:12:LEU:HG	12:I:14:ILE:HB	1.96	0.45
13:J:54:TYR:O	13:J:58:ILE:HG12	2.17	0.45
15:L:29:ARG:NE	52:5:1303:A:H5'	2.31	0.45
15:L:105:ASN:O	15:L:110:LYS:NZ	2.45	0.45
22:S:23:GLY:O	22:S:27:LYS:HG2	2.16	0.45
25:b:110:VAL:N	25:b:176:VAL:O	2.41	0.45
26:c:101:LEU:HD22	50:3:695:G:H5''	1.97	0.45
29:f:28:HIS:HA	29:f:34:LYS:HE3	1.99	0.45
32:i:19:TYR:CE2	32:i:38:LEU:HD11	2.51	0.45
33:j:106:LEU:HB3	33:j:111:TYR:CD2	2.51	0.45
33:j:114:ILE:H	33:j:114:ILE:HD12	1.80	0.45
35:l:91:GLU:HB2	35:l:92:PHE:CD2	2.51	0.45
37:n:99:HIS:C	37:n:103:ALA:H	2.25	0.45
38:o:105:ARG:HB2	38:o:106:GLU:OE1	2.16	0.45
42:s:70:ARG:NH2	50:3:492:C:HO2'	2.12	0.45
43:t:14:THR:OG1	43:t:15:GLY:N	2.48	0.45
43:t:28:MET:HG2	43:t:31:ARG:HH11	1.80	0.45
50:3:57:G:H2'	50:3:58:A:H8	1.81	0.45
50:3:203:A:N1	50:3:2441:A:H2'	2.31	0.45
50:3:250:U:O2	50:3:256:G:C2	2.68	0.45
50:3:251:G:N7	50:3:253:C:C2	2.84	0.45
50:3:720:A:N6	50:3:812:G:H21	2.14	0.45
50:3:778:U:H2'	50:3:779:C:H6	1.80	0.45
50:3:866:G:P	50:3:866:G:H8	2.39	0.45
50:3:888:A:H2'	50:3:889:G:H8	1.81	0.45
50:3:1042:C:O5'	50:3:1042:C:H6	1.99	0.45
50:3:1233:A:C5	50:3:1234:U:C4	3.04	0.45
50:3:1325:C:H2'	50:3:1326:C:C5	2.51	0.45
50:3:1341:U:P	50:3:1342:C:H41	2.39	0.45
50:3:1345:G:N1	50:3:1364:A:C6	2.85	0.45
50:3:1688:A:H2'	50:3:1689:A:H8	1.81	0.45
50:3:1877:C:H3'	50:3:1878:A:C2	2.51	0.45
50:3:1878:A:H3'	50:3:1879:A:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1883:A:C6	50:3:1884:A:C5	3.03	0.45
50:3:1955:G:N1	50:3:1966:G:C6	2.84	0.45
50:3:2084:A:OP1	50:3:2246:G:N1	2.34	0.45
50:3:2203:U:H2'	50:3:2204:C:H6	1.81	0.45
50:3:2294:A:H5''	50:3:2354:A:H62	1.81	0.45
50:3:2433:A:OP2	50:3:2437:G:H4'	2.15	0.45
50:3:2491:C:H3'	50:3:2492:G:H5''	1.99	0.45
50:3:2752:G:N1	50:3:2768:U:C2	2.81	0.45
50:3:2795:C:H2'	50:3:2796:C:O4'	2.16	0.45
50:3:2852:G:N3	50:3:2871:G:N1	2.64	0.45
50:3:2897:G:HO2'	50:3:2898:A:P	2.37	0.45
51:4:32:G:N2	51:4:35:C:H41	2.14	0.45
51:4:66:A:H3'	51:4:67:G:C8	2.47	0.45
52:5:34:A:H2'	52:5:35:C:O4'	2.16	0.45
52:5:195:U:H2'	52:5:196:G:C8	2.51	0.45
52:5:227:A:C4	52:5:228:G:C8	3.04	0.45
52:5:448:A:C5	52:5:477:U:H2'	2.51	0.45
52:5:646:A:C6	52:5:647:U:C4	3.04	0.45
52:5:863:A:H4'	52:5:866:A:C5	2.51	0.45
52:5:937:G:N2	52:5:1315:U:O2	2.41	0.45
52:5:989:A:H2'	52:5:990:C:O4'	2.15	0.45
52:5:1006:A:H2'	52:5:1007:U:C6	2.51	0.45
52:5:1013:C:N4	52:5:1014:A:H62	2.14	0.45
52:5:1202:A:H2'	52:5:1203:A:O4'	2.16	0.45
52:5:1374:C:O2	52:5:1477:A:N6	2.49	0.45
52:5:1428:A:H3'	52:5:1428:A:N3	2.31	0.45
5:B:33:TRP:O	5:B:36:GLU:HG2	2.15	0.45
5:B:141:LEU:HD13	5:B:173:GLU:HG2	1.98	0.45
6:C:184:ARG:NH1	6:C:188:PRO:O	2.46	0.45
13:J:42:THR:OG1	13:J:43:MET:SD	2.74	0.45
15:L:15:ILE:HG13	15:L:42:ASP:H	1.81	0.45
15:L:98:ARG:NH2	52:5:1282:U:OP2	2.49	0.45
16:M:29:ARG:CZ	16:M:31:ARG:HH11	2.29	0.45
23:T:40:MET:HA	23:T:43:ARG:HB3	1.98	0.45
24:a:6:ILE:O	24:a:17:SER:OG	2.23	0.45
24:a:50:GLN:NE2	50:3:1813:C:O2	2.50	0.45
24:a:171:LEU:HD11	24:a:183:GLN:HB2	1.98	0.45
24:a:235:PRO:HD3	24:a:242:GLY:N	2.31	0.45
26:c:131:ASN:O	26:c:135:LYS:HG3	2.17	0.45
27:d:91:LEU:H	27:d:91:LEU:HD23	1.81	0.45
35:l:41:TRP:CD1	35:l:96:VAL:HA	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:m:81:HIS:NE2	36:m:85:LYS:HD2	2.32	0.45
37:n:2:LYS:HB3	37:n:7:GLN:N	2.30	0.45
40:q:81:LYS:HD3	40:q:81:LYS:HA	1.59	0.45
42:s:26:LYS:HA	42:s:84:THR:HA	1.98	0.45
44:u:34:ARG:NH1	50:3:2279:G:O3'	2.47	0.45
46:w:26:LEU:HA	46:w:29:TYR:CD2	2.51	0.45
50:3:14:U:C4	50:3:561:A:N7	2.81	0.45
50:3:27:U:H3	50:3:550:A:H61	1.64	0.45
50:3:122:G:C2	50:3:123:G:C5	3.04	0.45
50:3:329:G:C6	50:3:330:A:C5	3.04	0.45
50:3:334:A:N3	50:3:353:G:H1'	2.31	0.45
50:3:848:U:C4	50:3:1226:G:C6	3.05	0.45
50:3:863:U:H4'	50:3:866:G:N1	2.31	0.45
50:3:875:G:H2'	50:3:876:A:H8	1.77	0.45
50:3:884:A:O2'	50:3:970:U:N3	2.49	0.45
50:3:887:A:C6	50:3:964:A:C6	3.05	0.45
50:3:1006:U:H2'	50:3:1007:C:C6	2.51	0.45
50:3:1056:A:H3'	50:3:1056:A:N3	2.32	0.45
50:3:1155:G:C6	50:3:1156:C:C4	3.04	0.45
50:3:1218:G:N2	50:3:1219:U:O4	2.43	0.45
50:3:1462:A:O2'	50:3:1463:G:H8	1.99	0.45
50:3:1508:G:H1'	50:3:1534:A:N6	2.31	0.45
50:3:1525:G:H3'	50:3:1526:U:C6	2.50	0.45
50:3:1582:G:H2'	50:3:1583:G:H8	1.81	0.45
50:3:1608:C:H2'	50:3:1609:U:H6	1.80	0.45
50:3:1797:C:H42	50:3:1835:G:H2'	1.81	0.45
50:3:1906:G:H1'	50:3:1908:A:H5''	1.99	0.45
50:3:2258:G:H21	50:3:2258:G:P	2.40	0.45
50:3:2733:A:O2'	50:3:2735:G:OP2	2.34	0.45
50:3:2889:U:H4'	50:3:2889:U:OP1	2.16	0.45
52:5:140:U:C2	52:5:154:G:C2	3.04	0.45
52:5:169:G:H21	52:5:220:U:C1'	2.30	0.45
52:5:352:A:C6	52:5:353:G:C4	3.04	0.45
52:5:417:U:H4'	52:5:418:U:OP2	2.16	0.45
52:5:569:U:H4'	52:5:816:A:C5	2.52	0.45
52:5:682:G:N2	52:5:703:A:C6	2.83	0.45
52:5:854:A:N6	52:5:866:A:H62	2.14	0.45
52:5:1038:G:N2	52:5:1188:A:H2	2.13	0.45
52:5:1111:G:C6	52:5:1130:G:N1	2.84	0.45
53:7:54:G:C6	53:7:55:U:C4	3.04	0.45
53:7:55:U:N3	53:7:59:A:C8	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:31:LEU:HG	1:0:35:ARG:HE	1.81	0.45
5:B:18:TRP:HZ2	16:M:56:VAL:N	2.15	0.45
9:F:48:LEU:HD23	9:F:51:GLN:NE2	2.30	0.45
10:G:13:ASP:OD1	10:G:13:ASP:N	2.47	0.45
10:G:48:LEU:HG	10:G:54:LEU:HD22	1.99	0.45
12:I:73:LYS:O	12:I:73:LYS:HD3	2.15	0.45
25:b:125:ARG:HA	25:b:169:TYR:CZ	2.51	0.45
25:b:140:PRO:HG3	50:3:2587:U:H5'	1.99	0.45
27:d:26:MET:HG3	51:4:53:U:H1'	1.98	0.45
27:d:96:MET:O	27:d:99:PHE:HB3	2.16	0.45
27:d:158:THR:OG1	27:d:159:SER:N	2.48	0.45
29:f:32:PRO:HD2	29:f:33:LYS:NZ	2.30	0.45
33:j:59:ARG:O	33:j:86:LEU:HD12	2.16	0.45
34:k:22:ARG:HE	50:3:1280:G:P	2.39	0.45
34:k:34:ARG:HD2	34:k:40:LYS:O	2.16	0.45
41:r:41:LYS:HZ1	50:3:2016:G:H5''	1.81	0.45
42:s:71:PHE:HE2	50:3:66:A:H2	1.63	0.45
49:z:23:LYS:HB3	49:z:23:LYS:HE2	1.62	0.45
50:3:450:C:OP1	50:3:1886:C:O2'	2.35	0.45
50:3:468:A:C6	50:3:469:C:C4	3.05	0.45
50:3:893:A:N6	50:3:894:G:O6	2.49	0.45
50:3:1091:G:H4'	50:3:1121:A:C8	2.51	0.45
50:3:1145:G:O2'	50:3:1146:A:N7	2.43	0.45
50:3:1336:A:H62	50:3:1640:G:N2	2.14	0.45
50:3:1510:A:C6	50:3:1511:C:C4	3.05	0.45
50:3:1521:A:H4'	50:3:1612:U:H4'	1.98	0.45
50:3:1528:G:C2	50:3:1529:U:C2	3.05	0.45
50:3:1798:A:C8	50:3:1799:A:C8	3.05	0.45
50:3:1833:G:H2'	50:3:1833:G:N3	2.30	0.45
50:3:2100:G:H2'	50:3:2101:A:H8	1.82	0.45
50:3:2126:A:N6	50:3:2176:G:H1'	2.27	0.45
50:3:2150:C:H1'	50:3:2156:G:H22	1.80	0.45
50:3:2270:U:H2'	50:3:2271:C:C6	2.51	0.45
50:3:2299:U:O4	50:3:2300:A:N6	2.49	0.45
50:3:2305:C:H2'	50:3:2306:A:H8	1.81	0.45
50:3:2316:G:O2'	50:3:2317:A:OP1	2.30	0.45
50:3:2624:C:C4	50:3:2625:U:C4	3.05	0.45
50:3:2781:C:O2'	50:3:2782:A:H5'	2.16	0.45
52:5:58:G:H2'	52:5:59:C:N1	2.31	0.45
52:5:58:G:N1	52:5:352:A:C2	2.84	0.45
52:5:121:C:H2'	52:5:122:C:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:166:U:H3	52:5:197:A:H8	1.64	0.45
52:5:555:G:C6	52:5:556:G:N1	2.85	0.45
52:5:641:U:C2	52:5:642:A:C8	3.04	0.45
52:5:675:U:H2'	52:5:676:U:H6	1.82	0.45
52:5:715:A:C6	52:5:716:C:C2	3.05	0.45
52:5:1130:G:H2'	52:5:1131:A:C8	2.52	0.45
52:5:1133:A:C5	52:5:1155:A:N6	2.84	0.45
52:5:1209:C:H2'	52:5:1210:U:C6	2.52	0.45
52:5:1285:G:H2'	52:5:1286:G:C8	2.51	0.45
52:5:1339:U:H3'	52:5:1340:G:C8	2.52	0.45
52:5:1408:A:H3'	52:5:1409:A:C8	2.51	0.45
1:0:35:ARG:NH1	50:3:183:A:OP1	2.49	0.45
4:A:176:LEU:O	4:A:199:VAL:HG22	2.16	0.45
5:B:92:ILE:HA	5:B:95:ILE:HG22	1.98	0.45
10:G:67:LYS:HD3	52:5:650:A:H5'	1.99	0.45
12:I:65:LYS:HD3	52:5:967:C:O5'	2.16	0.45
16:M:23:ARG:C	16:M:33:VAL:HG21	2.41	0.45
16:M:41:ARG:HG2	16:M:42:LEU:H	1.81	0.45
18:O:22:ARG:NH1	52:5:385:A:H2	2.15	0.45
25:b:123:ILE:HG23	25:b:128:PHE:O	2.17	0.45
28:e:29:GLY:HA3	28:e:82:VAL:HG13	1.98	0.45
28:e:63:GLN:O	28:e:63:GLN:NE2	2.49	0.45
29:f:32:PRO:HD3	29:f:111:PHE:CD2	2.51	0.45
29:f:76:GLU:HB3	29:f:139:LYS:HZ3	1.79	0.45
38:o:63:THR:HG22	38:o:80:GLN:HA	1.98	0.45
39:p:67:ALA:O	39:p:71:GLN:N	2.48	0.45
41:r:57:ASN:HA	41:r:61:ASN:HD22	1.81	0.45
43:t:16:LYS:HA	50:3:343:A:H5'	1.99	0.45
50:3:86:A:N6	50:3:103:G:H1'	2.31	0.45
50:3:156:A:C6	50:3:157:U:C4	3.05	0.45
50:3:194:A:N6	50:3:211:A:H1'	2.32	0.45
50:3:251:G:H22	50:3:254:G:H3'	1.81	0.45
50:3:274:A:C5	50:3:408:G:C6	3.04	0.45
50:3:296:U:H4'	50:3:297:G:OP2	2.15	0.45
50:3:319:G:N1	50:3:390:A:C6	2.84	0.45
50:3:346:G:H5'	50:3:366:A:H5'	1.98	0.45
50:3:674:G:H2'	50:3:675:U:H6	1.79	0.45
50:3:746:G:C4	50:3:747:A:C8	3.05	0.45
50:3:860:C:H4'	50:3:2436:G:C6	2.51	0.45
50:3:874:U:H1'	50:3:1222:A:H1'	1.98	0.45
50:3:891:G:C2	50:3:892:G:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1234:U:H2'	50:3:1235:U:N1	2.32	0.45
50:3:1434:U:H2'	50:3:1435:A:O4'	2.16	0.45
50:3:1663:G:H2'	50:3:1664:A:C8	2.52	0.45
50:3:1708:G:H8	50:3:1708:G:OP1	2.00	0.45
50:3:1848:U:N3	50:3:1849:G:N7	2.64	0.45
50:3:2022:A:C8	50:3:2023:U:C5	3.04	0.45
50:3:2056:A:H2'	50:3:2057:C:H6	1.81	0.45
50:3:2084:A:H2'	50:3:2085:C:C6	2.51	0.45
50:3:2181:A:H3'	50:3:2182:C:C5	2.52	0.45
50:3:2339:G:C2	50:3:2340:U:C2	3.04	0.45
50:3:2646:G:H21	50:3:2786:A:H62	1.64	0.45
50:3:2799:U:H2'	50:3:2810:A:C6	2.51	0.45
51:4:71:A:C5	51:4:72:A:C5	3.04	0.45
52:5:53:U:H2'	52:5:54:A:O4'	2.17	0.45
52:5:314:G:C6	52:5:332:A:N1	2.85	0.45
52:5:320:G:N3	52:5:322:G:H8	2.14	0.45
52:5:325:A:C5	52:5:328:G:C5	3.03	0.45
52:5:437:U:C4	52:5:438:A:N7	2.84	0.45
52:5:568:G:O3'	52:5:816:A:O2'	2.29	0.45
52:5:764:A:H2'	52:5:765:A:O4'	2.16	0.45
52:5:1043:U:C4	52:5:1175:C:C2	3.05	0.45
52:5:1218:C:H2'	52:5:1219:C:H6	1.79	0.45
52:5:1317:A:H2'	52:5:1318:C:O4'	2.17	0.45
52:5:1470:U:H2'	52:5:1471:C:C6	2.51	0.45
53:7:5:C:H2'	53:7:6:U:C6	2.52	0.45
4:A:38:ASN:O	4:A:41:MET:HG3	2.17	0.45
4:A:115:GLY:O	4:A:119:ASN:ND2	2.50	0.45
5:B:191:LYS:HD2	52:5:1048:G:HI'	1.99	0.45
6:C:75:PHE:CZ	6:C:79:LEU:HD11	2.52	0.45
8:E:20:GLN:HA	8:E:23:GLU:OE2	2.16	0.45
11:H:75:THR:OG1	52:5:1347:U:H5''	2.17	0.45
11:H:111:ARG:NH2	52:5:1321:G:C4	2.85	0.45
12:I:30:LYS:O	12:I:34:VAL:HG13	2.17	0.45
13:J:111:HIS:CG	52:5:672:A:H1'	2.52	0.45
14:K:81:PRO:HG2	14:K:112:ARG:HB2	1.99	0.45
17:N:2:GLN:HE22	52:5:737:U:H3'	1.80	0.45
28:e:4:ILE:HD13	28:e:73:ALA:HB2	1.99	0.45
30:g:22:ALA:O	30:g:113:PHE:HA	2.16	0.45
31:h:119:ALA:HB1	50:3:1116:U:H4'	1.97	0.45
32:i:95:MET:HA	32:i:98:LYS:HB2	1.98	0.45
34:k:74:LYS:HE3	50:3:669:A:OP1	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:k:92:LYS:HD3	34:k:125:HIS:ND1	2.31	0.45
34:k:133:LYS:O	34:k:137:LYS:HG3	2.17	0.45
35:l:130:LYS:HB3	35:l:130:LYS:HE2	1.76	0.45
37:n:32:VAL:HB	37:n:39:ILE:HD11	1.98	0.45
37:n:102:ILE:H	37:n:102:ILE:HD12	1.82	0.45
40:q:6:VAL:HA	40:q:11:GLN:HA	1.98	0.45
45:v:57:THR:HG23	50:3:410:G:H5'	1.99	0.45
50:3:25:G:O6	50:3:553:A:N6	2.48	0.45
50:3:74:U:C2	50:3:113:U:H1'	2.52	0.45
50:3:157:U:H2'	50:3:158:U:C6	2.52	0.45
50:3:421:A:C6	50:3:423:C:H2'	2.52	0.45
50:3:572:G:N2	50:3:588:G:N3	2.64	0.45
50:3:660:U:H2'	50:3:661:G:N7	2.31	0.45
50:3:955:A:H2'	50:3:956:U:O4'	2.17	0.45
50:3:1010:G:O3'	50:3:1011:A:H8	2.00	0.45
50:3:1059:G:C6	50:3:1060:G:C5	3.04	0.45
50:3:1070:U:O2	50:3:1155:G:C2	2.69	0.45
50:3:1160:G:O5'	50:3:1161:A:H2'	2.16	0.45
50:3:1380:U:O2	50:3:1408:G:N2	2.49	0.45
50:3:1495:A:N6	50:3:1547:G:H2'	2.30	0.45
50:3:1525:G:C5	50:3:1526:U:C5	3.05	0.45
50:3:1841:U:H1'	50:3:1976:A:H2'	1.98	0.45
50:3:1985:A:H2'	50:3:1986:C:O4'	2.17	0.45
50:3:2089:A:C8	50:3:2090:G:C8	3.05	0.45
50:3:2126:A:N6	50:3:2178:A:N7	2.65	0.45
50:3:2476:A:O2'	50:3:2489:G:N2	2.29	0.45
50:3:2646:G:H21	50:3:2786:A:N6	2.15	0.45
50:3:2814:A:C6	50:3:2815:G:C4	3.04	0.45
50:3:2868:G:H2'	50:3:2869:U:O4'	2.16	0.45
51:4:8:C:H2'	51:4:9:C:C5	2.51	0.45
52:5:18:U:O2'	52:5:1070:G:H1'	2.16	0.45
52:5:438:A:C6	52:5:439:U:C2	3.05	0.45
52:5:478:G:O3'	52:5:479:A:C8	2.70	0.45
52:5:579:G:H1	52:5:755:U:H3'	1.81	0.45
52:5:612:G:H2'	52:5:613:C:C6	2.51	0.45
52:5:688:G:N2	52:5:692:A:H3'	2.31	0.45
52:5:692:A:C6	52:5:693:A:C2	3.05	0.45
52:5:757:G:H3'	52:5:758:G:H8	1.81	0.45
52:5:966:A:OP1	52:5:967:C:H5''	2.16	0.45
52:5:1112:U:C2	52:5:1113:U:C5	3.04	0.45
52:5:1116:U:OP2	52:5:1118:A:N6	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1231:U:H5''	52:5:1254:A:N1	2.31	0.45
52:5:1261:A:H61	52:5:1346:G:C5'	2.29	0.45
53:7:53:A:C6	53:7:64:G:C6	3.05	0.45
1:0:17:GLY:O	1:0:21:ARG:HG3	2.17	0.45
2:1:14:THR:OG1	2:1:18:GLN:HB2	2.17	0.45
2:1:50:SER:O	2:1:54:ARG:HG3	2.16	0.45
6:C:169:THR:HG23	6:C:171:ASN:HD22	1.82	0.45
11:H:131:LYS:HB2	52:5:965:C:H41	1.80	0.45
13:J:15:HIS:CE1	13:J:78:PHE:HD2	2.34	0.45
18:O:76:PHE:O	18:O:79:SER:OG	2.26	0.45
19:P:63:ILE:CG2	19:P:75:PHE:HB3	2.46	0.45
24:a:29:ASN:O	50:3:1599:C:N4	2.49	0.45
24:a:174:ASP:HB2	24:a:180:VAL:HA	1.98	0.45
27:d:17:GLN:HG3	27:d:22:PHE:HB2	1.97	0.45
27:d:121:SER:HB3	27:d:128:TYR:CZ	2.51	0.45
32:i:58:ILE:HG23	32:i:128:PHE:CE2	2.52	0.45
34:k:34:ARG:NH2	50:3:620:G:H22	2.15	0.45
34:k:67:ASN:HA	50:3:667:A:O2'	2.16	0.45
34:k:88:LEU:HG	34:k:89:LYS:H	1.81	0.45
37:n:11:ARG:NH2	51:4:46:C:OP1	2.44	0.45
40:q:65:GLN:HG3	40:q:87:GLN:O	2.17	0.45
40:q:75:SER:O	40:q:77:LYS:HG3	2.17	0.45
44:u:37:ALA:HA	44:u:52:TYR:HA	1.98	0.45
45:v:18:ARG:NH1	45:v:22:LYS:HB3	2.32	0.45
50:3:18:G:C2	50:3:560:U:O2	2.70	0.45
50:3:27:U:H3'	50:3:28:G:C8	2.47	0.45
50:3:47:G:N2	50:3:470:U:C2	2.84	0.45
50:3:119:A:P	50:3:120:A:H2'	2.57	0.45
50:3:167:A:C5	50:3:168:A:C8	3.04	0.45
50:3:205:C:H1'	50:3:254:G:O6	2.17	0.45
50:3:387:U:H2'	50:3:388:U:C6	2.52	0.45
50:3:719:G:O6	50:3:809:A:H1'	2.17	0.45
50:3:730:G:C2	50:3:803:G:C5	3.04	0.45
50:3:815:G:H21	50:3:818:A:N6	2.15	0.45
50:3:824:A:C8	50:3:1788:A:N1	2.85	0.45
50:3:1210:A:H8	50:3:1210:A:P	2.39	0.45
50:3:1292:A:H2'	50:3:1293:U:O4'	2.16	0.45
50:3:1303:U:OP1	50:3:1680:A:H2'	2.17	0.45
50:3:1313:G:N2	50:3:1356:G:H5''	2.28	0.45
50:3:1366:G:C2	50:3:1367:G:N7	2.85	0.45
50:3:1441:A:H2'	50:3:1442:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1500:A:N1	50:3:1544:G:C6	2.85	0.45
50:3:1704:C:H2'	50:3:1705:U:N1	2.32	0.45
50:3:1815:U:O2'	50:3:1816:A:O5'	2.23	0.45
50:3:2227:U:C2	50:3:2228:U:C5	3.05	0.45
50:3:2319:A:H3'	50:3:2320:U:C5	2.52	0.45
50:3:2702:G:C2	50:3:2703:U:H1'	2.51	0.45
50:3:2755:G:C2'	50:3:2765:A:H61	2.30	0.45
51:4:71:A:N7	51:4:94:A:C4	2.85	0.45
51:4:91:A:C4	51:4:92:A:C8	3.04	0.45
52:5:132:G:H2'	52:5:133:G:H8	1.78	0.45
52:5:240:U:C4	52:5:888:A:C5	3.05	0.45
52:5:380:G:H2'	52:5:381:C:C6	2.51	0.45
52:5:710:G:C6	52:5:711:G:C6	3.05	0.45
52:5:754:U:O2'	52:5:873:U:H1'	2.17	0.45
52:5:1080:G:N1	52:5:1088:C:N3	2.64	0.45
52:5:1093:A:H2'	52:5:1094:C:O4'	2.16	0.45
52:5:1246:A:C4	52:5:1247:G:C8	3.05	0.45
52:5:1380:G:H2'	52:5:1381:U:H5''	1.98	0.45
52:5:1502:G:C2	52:5:1503:U:C4	3.05	0.45
1:0:38:GLN:NE2	50:3:488:G:C6	2.83	0.45
6:C:53:GLN:NE2	7:D:167:ARG:HH12	2.14	0.45
8:E:39:TYR:HB3	8:E:58:TYR:HA	1.99	0.45
10:G:101:PHE:HA	10:G:104:LEU:HG	1.99	0.45
14:K:63:ARG:HH12	52:5:520:C:N4	2.15	0.45
17:N:17:LYS:HE3	52:5:746:A:O3'	2.17	0.45
18:O:21:LYS:HB2	52:5:97:G:P	2.57	0.45
21:R:20:ILE:O	21:R:24:LYS:HD3	2.17	0.45
24:a:31:ASN:ND2	50:3:1601:A:N3	2.64	0.45
28:e:149:THR:HG23	28:e:152:ARG:NH1	2.32	0.45
28:e:161:LYS:HA	28:e:174:ARG:NH1	2.32	0.45
36:m:78:LEU:O	36:m:82:LEU:HD23	2.17	0.45
37:n:16:VAL:HG12	37:n:92:ASP:OD2	2.17	0.45
38:o:15:GLN:HA	38:o:18:LEU:HD12	1.98	0.45
38:o:99:ALA:H	50:3:2852:G:P	2.39	0.45
41:r:83:LYS:HE2	41:r:95:MET:HB3	1.99	0.45
42:s:37:LYS:HA	42:s:40:VAL:HG22	1.99	0.45
42:s:61:LYS:HA	42:s:77:LEU:HD13	1.98	0.45
48:y:30:CYS:HB2	48:y:35:LYS:C	2.42	0.45
50:3:119:A:N3	50:3:181:G:H1'	2.32	0.45
50:3:207:C:P	50:3:208:A:H2'	2.57	0.45
50:3:274:A:C6	50:3:408:G:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:491:A:C6	50:3:508:A:H3'	2.51	0.45
50:3:501:G:N2	50:3:719:G:O2'	2.50	0.45
50:3:508:A:H4'	50:3:509:G:OP1	2.17	0.45
50:3:763:G:O2'	50:3:765:A:O4'	2.28	0.45
50:3:937:A:H2'	50:3:938:A:O4'	2.17	0.45
50:3:1006:U:H2'	50:3:1007:C:H6	1.82	0.45
50:3:1326:C:C2	50:3:1330:U:H2'	2.51	0.45
50:3:1462:A:C4	50:3:1463:G:C8	3.04	0.45
50:3:1485:A:N3	50:3:1485:A:H2'	2.31	0.45
50:3:1710:A:H2'	50:3:1711:A:O4'	2.17	0.45
50:3:1772:G:C6	50:3:1773:A:C5	3.04	0.45
50:3:1829:U:H2'	50:3:1830:G:H8	1.77	0.45
50:3:1914:G:H1	50:3:1930:U:H3	1.62	0.45
50:3:2025:C:C4	50:3:2026:A:N7	2.85	0.45
50:3:2126:A:C6	50:3:2178:A:N7	2.85	0.45
50:3:2317:A:N3	50:3:2317:A:H2'	2.32	0.45
50:3:2468:U:H2'	50:3:2469:A:H8	1.81	0.45
50:3:2602:C:H2'	50:3:2603:G:H8	1.78	0.45
50:3:2844:U:H2'	50:3:2845:U:O4'	2.17	0.45
51:4:68:C:H2'	51:4:69:C:O4'	2.17	0.45
51:4:71:A:C8	51:4:94:A:C2	3.05	0.45
52:5:287:U:H2'	52:5:288:A:H8	1.81	0.45
52:5:379:A:C8	52:5:380:G:C8	3.05	0.45
52:5:598:U:O2	52:5:635:G:C2	2.69	0.45
52:5:739:G:H2'	52:5:740:G:H8	1.82	0.45
52:5:778:A:H8	52:5:798:U:C4	2.34	0.45
52:5:1044:G:N7	52:5:1174:U:H2'	2.32	0.45
52:5:1138:U:C2	52:5:1150:G:C2	3.04	0.45
52:5:1230:G:H3'	52:5:1254:A:N6	2.17	0.45
53:7:13:U:H3	53:7:24:A:H61	1.65	0.45
1:0:33:LEU:O	1:0:37:LYS:HB2	2.17	0.45
2:1:36:LYS:O	2:1:39:ARG:HG2	2.17	0.45
6:C:98:ASP:OD1	6:C:99:ASN:N	2.50	0.45
8:E:20:GLN:O	8:E:24:LYS:HD3	2.17	0.45
10:G:31:MET:HA	10:G:76:TYR:HE2	1.81	0.45
12:I:19:TYR:CD1	16:M:54:PRO:HB3	2.52	0.45
12:I:85:VAL:HG23	12:I:87:GLN:HE22	1.81	0.45
13:J:39:SER:O	13:J:42:THR:N	2.50	0.45
14:K:85:HIS:ND1	14:K:87:LEU:HB2	2.32	0.45
19:P:9:LEU:O	19:P:62:GLN:HA	2.17	0.45
26:c:115:VAL:O	26:c:119:LYS:HG2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:d:72:ASN:HB2	50:3:2320:U:OP1	2.17	0.45
27:d:73:ALA:HA	27:d:79:LEU:O	2.17	0.45
29:f:25:TYR:HD1	29:f:29:PHE:HD2	1.64	0.45
29:f:56:GLU:O	29:f:60:ILE:HG23	2.17	0.45
33:j:17:LYS:HE2	33:j:17:LYS:HB2	1.77	0.45
34:k:98:LEU:HB3	34:k:103:VAL:HB	1.98	0.45
34:k:113:LYS:HE2	50:3:672:G:C6	2.52	0.45
35:l:32:TYR:O	35:l:105:GLU:HA	2.17	0.45
36:m:8:GLY:HA3	50:3:2010:A:OP1	2.17	0.45
41:r:42:LYS:HG3	41:r:46:LEU:HD13	1.98	0.45
42:s:21:MET:HA	42:s:25:LYS:NZ	2.31	0.45
46:w:29:TYR:HA	46:w:32:LYS:HD2	1.97	0.45
50:3:8:A:H2'	50:3:8:A:N3	2.32	0.45
50:3:130:C:H2'	50:3:131:C:H6	1.81	0.45
50:3:230:G:N2	50:3:455:G:H1'	2.31	0.45
50:3:245:U:H1'	50:3:246:G:H4'	1.98	0.45
50:3:408:G:H2'	50:3:408:G:OP2	2.16	0.45
50:3:456:G:H2'	50:3:457:U:C6	2.52	0.45
50:3:513:A:HO2'	50:3:514:A:P	2.38	0.45
50:3:810:G:C4	50:3:829:A:C8	3.05	0.45
50:3:848:U:H2'	50:3:849:C:C6	2.52	0.45
50:3:1056:A:C8	50:3:1058:U:H1'	2.52	0.45
50:3:1078:C:N4	50:3:1148:U:H3	2.15	0.45
50:3:1347:A:H2'	50:3:1348:C:O4'	2.16	0.45
50:3:1395:A:H3'	50:3:1396:A:H8	1.82	0.45
50:3:1484:G:C2	50:3:1485:A:C4	3.04	0.45
50:3:1554:A:C2	50:3:1555:G:H1'	2.52	0.45
50:3:1755:A:H2'	50:3:1756:A:H8	1.82	0.45
50:3:1828:A:H2'	50:3:1829:U:O4'	2.17	0.45
50:3:1944:A:C6	50:3:1947:U:H5	2.34	0.45
50:3:2132:G:H8	50:3:2132:G:O5'	2.00	0.45
50:3:2290:G:N2	50:3:2398:U:H3	2.12	0.45
50:3:2307:G:H1	50:3:2325:U:H3	1.62	0.45
51:4:103:C:H2'	51:4:104:C:C6	2.52	0.45
52:5:56:A:H2'	52:5:56:A:N3	2.32	0.45
52:5:262:G:C8	52:5:264:C:H3'	2.52	0.45
52:5:480:C:H3'	52:5:481:U:C6	2.51	0.45
52:5:501:A:H2'	52:5:502:C:H6	1.81	0.45
52:5:580:C:OP2	52:5:755:U:N3	2.36	0.45
52:5:762:G:N2	52:5:810:U:OP2	2.41	0.45
52:5:788:G:N1	52:5:1472:G:H4'	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:825:A:C6	52:5:826:G:C4	3.05	0.45
52:5:917:G:H2'	52:5:918:A:C8	2.52	0.45
52:5:1188:A:C8	52:5:1190:G:N7	2.85	0.45
52:5:1260:U:C5	52:5:1328:C:H5''	2.52	0.45
52:5:1386:C:H2'	52:5:1387:U:C6	2.52	0.45
52:5:1415:G:C2	52:5:1416:U:C4	3.05	0.45
4:A:110:GLN:HB3	4:A:162:PHE:HA	1.99	0.45
5:B:22:TRP:HB3	5:B:60:ARG:H	1.82	0.45
6:C:2:LYS:HE2	52:5:545:A:OP1	2.16	0.45
6:C:93:LEU:HA	6:C:93:LEU:HD23	1.74	0.45
6:C:114:ARG:HG3	6:C:132:PRO:CG	2.47	0.45
8:E:14:SER:O	8:E:17:GLN:NE2	2.48	0.45
12:I:53:GLU:HG3	12:I:55:ILE:HD11	1.99	0.45
14:K:25:HIS:HA	14:K:40:SER:N	2.33	0.45
14:K:55:PRO:HG2	14:K:59:ASN:O	2.16	0.45
20:Q:56:ASP:O	20:Q:60:LEU:HG	2.17	0.45
22:S:10:ARG:HD2	22:S:13:GLN:NE2	2.32	0.45
24:a:92:ARG:NE	50:3:1824:G:H5''	2.31	0.45
24:a:147:VAL:HA	24:a:201:GLY:H	1.81	0.45
25:b:112:ALA:HB3	25:b:197:ILE:HD11	1.99	0.45
26:c:140:THR:O	26:c:144:MET:CB	2.65	0.45
27:d:66:VAL:O	27:d:88:LYS:N	2.49	0.45
28:e:174:ARG:NH2	28:e:174:ARG:HA	2.31	0.45
30:g:25:VAL:O	30:g:83:ALA:CB	2.54	0.45
38:o:36:LYS:HD2	38:o:85:ASN:HD22	1.82	0.45
42:s:58:LEU:HD13	50:3:1368:U:OP2	2.17	0.45
42:s:66:ARG:NE	50:3:66:A:H4'	2.32	0.45
44:u:20:GLY:O	53:7:2:G:O2'	2.35	0.45
44:u:33:LYS:NZ	50:3:2269:C:H5''	2.32	0.45
50:3:29:G:H8	50:3:29:G:OP2	2.00	0.45
50:3:39:C:H4'	50:3:487:C:OP1	2.17	0.45
50:3:119:A:OP2	50:3:120:A:H2'	2.17	0.45
50:3:134:U:H2'	50:3:135:A:C8	2.52	0.45
50:3:404:C:H2'	50:3:405:C:H6	1.82	0.45
50:3:506:A:C6	50:3:507:A:C5	3.05	0.45
50:3:650:G:C2	50:3:651:A:C4	3.05	0.45
50:3:653:G:C6	50:3:654:G:C5	3.05	0.45
50:3:692:U:H2'	50:3:693:U:C6	2.52	0.45
50:3:1027:U:C2	50:3:1028:C:C5	3.05	0.45
50:3:1262:G:C4	50:3:1263:G:C8	3.05	0.45
50:3:1265:G:H2'	50:3:1266:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1315:A:N6	50:3:1682:C:O2'	2.49	0.45
50:3:1379:C:H4'	50:3:1606:A:H4'	1.99	0.45
50:3:1383:G:C6	50:3:1405:G:C2	3.05	0.45
50:3:1415:A:H2'	50:3:1416:G:C8	2.51	0.45
50:3:1722:U:O2	50:3:1734:A:H5''	2.17	0.45
50:3:1725:G:H2'	50:3:1726:U:O4'	2.16	0.45
50:3:1741:G:C8	50:3:1763:G:C5	3.05	0.45
50:3:1778:G:H1'	50:3:1793:A:C4	2.52	0.45
50:3:1802:C:N3	50:3:1832:G:C6	2.84	0.45
50:3:1957:G:N7	50:3:1958:U:C4	2.85	0.45
50:3:2175:U:O2	50:3:2179:A:C5	2.70	0.45
50:3:2339:G:N2	50:3:2393:C:C2	2.84	0.45
50:3:2367:C:H2'	50:3:2368:A:C8	2.52	0.45
50:3:2610:A:H4'	50:3:2611:G:H5'	1.98	0.45
50:3:2834:C:H2'	50:3:2835:G:H8	1.82	0.45
52:5:144:U:H2'	52:5:145:G:C8	2.52	0.45
52:5:317:A:H2'	52:5:318:C:H6	1.81	0.45
52:5:323:A:O3'	52:5:325:A:H5''	2.17	0.45
52:5:359:A:H8	52:5:359:A:P	2.40	0.45
52:5:426:U:C4'	52:5:427:A:H5''	2.47	0.45
52:5:503:G:H4'	52:5:532:U:C2	2.52	0.45
52:5:561:A:H5'	52:5:564:G:C2	2.52	0.45
52:5:958:G:C2	52:5:968:G:C2	3.05	0.45
52:5:1014:A:N3	52:5:1014:A:H2'	2.32	0.45
52:5:1055:G:C4	52:5:1057:C:N3	2.85	0.45
52:5:1139:A:N6	52:5:1149:G:C6	2.85	0.45
52:5:1443:A:C2	52:5:1444:G:H1'	2.52	0.45
52:5:1506:A:N7	52:5:1508:C:N4	2.65	0.45
53:7:11:G:H2'	53:7:12:C:H6	1.82	0.45
1:0:21:ARG:HH12	1:0:41:GLN:HE22	1.64	0.44
1:0:30:VAL:O	1:0:34:ARG:HG3	2.17	0.44
4:A:95:LEU:HB3	4:A:229:MET:HG3	1.99	0.44
5:B:25:ASN:H	5:B:29:GLN:CD	2.24	0.44
5:B:116:ALA:HB2	5:B:205:ILE:HG22	1.99	0.44
9:F:114:THR:O	9:F:118:LYS:HG2	2.16	0.44
11:H:6:TYR:HB3	11:H:88:ALA:O	2.16	0.44
12:I:36:LYS:HE2	12:I:40:VAL:HA	1.99	0.44
12:I:75:ARG:NH2	12:I:77:LYS:HB3	2.24	0.44
12:I:87:GLN:O	12:I:90:ILE:HG22	2.17	0.44
14:K:86:ASN:ND2	14:K:116:ASP:O	2.50	0.44
17:N:48:ILE:HD12	52:5:664:A:H1'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Q:43:PHE:O	20:Q:46:ILE:HG22	2.17	0.44
21:R:23:ASN:ND2	21:R:27:LYS:HE2	2.29	0.44
24:a:124:SER:OG	24:a:125:GLU:N	2.50	0.44
24:a:185:LEU:HG	50:3:1826:A:O2'	2.17	0.44
24:a:228:VAL:HA	50:3:1796:A:C5'	2.46	0.44
25:b:118:GLY:N	50:3:2826:G:OP1	2.42	0.44
26:c:129:ASP:O	26:c:132:LEU:HG	2.17	0.44
29:f:2:LYS:O	29:f:4:ILE:N	2.51	0.44
32:i:39:ILE:HD11	32:i:57:LEU:HB2	1.99	0.44
33:j:7:ARG:HG3	33:j:20:GLY:CA	2.47	0.44
40:q:60:GLU:OE1	40:q:92:LEU:N	2.51	0.44
41:r:118:ILE:O	41:r:122:LYS:HG3	2.17	0.44
50:3:494:G:H22	50:3:506:A:P	2.38	0.44
50:3:535:G:H21	50:3:540:A:H62	1.49	0.44
50:3:586:G:C2'	50:3:587:U:H5'	2.47	0.44
50:3:621:U:C2	50:3:622:U:C5	3.06	0.44
50:3:648:G:O2'	50:3:649:A:H5'	2.16	0.44
50:3:694:U:H2'	50:3:695:G:C8	2.52	0.44
50:3:756:A:C6	50:3:757:A:C5	3.05	0.44
50:3:889:G:C6	50:3:890:U:C4	3.05	0.44
50:3:895:G:N2	50:3:953:G:H2'	2.30	0.44
50:3:1016:A:N3	50:3:2044:C:O2'	2.34	0.44
50:3:1047:A:C6	50:3:1186:A:C6	3.05	0.44
50:3:1253:G:C6	50:3:1257:G:C5	3.05	0.44
50:3:1329:U:H5	50:3:1675:A:H61	1.66	0.44
50:3:1530:G:C5	50:3:1531:C:C4	3.06	0.44
50:3:1702:A:H4'	50:3:1703:A:O5'	2.17	0.44
50:3:1869:G:C2	50:3:1870:G:C4	3.05	0.44
50:3:1939:A:C2	50:3:1940:G:H1'	2.52	0.44
50:3:2176:G:N2	50:3:2179:A:O5'	2.27	0.44
50:3:2225:G:C4	50:3:2226:U:C5	3.04	0.44
50:3:2290:G:C4	50:3:2433:A:N6	2.85	0.44
50:3:2317:A:H3'	50:3:2318:A:H8	1.82	0.44
50:3:2333:G:H2'	50:3:2334:U:C6	2.52	0.44
50:3:2400:A:H3'	50:3:2401:U:H6	1.82	0.44
50:3:2474:C:C2	50:3:2493:G:C2	3.04	0.44
50:3:2536:U:H2'	50:3:2538:A:C8	2.52	0.44
50:3:2609:C:H2'	50:3:2611:G:H8	1.80	0.44
50:3:2708:G:C6	50:3:2709:C:C4	3.05	0.44
50:3:2810:A:N7	50:3:2811:G:N2	2.65	0.44
51:4:74:G:N2	51:4:91:A:N1	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:199:A:N6	52:5:217:U:H4'	2.32	0.44
52:5:382:U:H2'	52:5:383:U:C6	2.51	0.44
52:5:397:C:H2'	52:5:398:G:O4'	2.17	0.44
52:5:475:U:H2'	52:5:476:U:O4'	2.16	0.44
52:5:501:A:C2	52:5:541:C:C2	3.05	0.44
52:5:587:A:H2'	52:5:588:U:C6	2.52	0.44
52:5:923:G:C2	52:5:1365:U:C2	3.05	0.44
52:5:1063:G:H2'	52:5:1064:U:H6	1.77	0.44
52:5:1104:C:C2	52:5:1105:C:C5	3.05	0.44
52:5:1108:A:C6	52:5:1132:G:N1	2.84	0.44
52:5:1295:U:H2'	52:5:1296:C:C6	2.52	0.44
52:5:1424:C:N4	52:5:1430:G:C6	2.85	0.44
53:7:5:C:N4	53:7:70:G:O6	2.49	0.44
5:B:210:ILE:HD12	5:B:210:ILE:HA	1.83	0.44
7:D:128:THR:OG1	7:D:129:ILE:N	2.50	0.44
10:G:37:ALA:HB3	10:G:68:ARG:HB2	2.00	0.44
12:I:30:LYS:NZ	12:I:96:ILE:O	2.37	0.44
17:N:73:GLU:HA	17:N:76:ARG:HG2	1.99	0.44
24:a:78:ASN:HB3	29:f:84:HIS:CD2	2.52	0.44
25:b:21:ASN:O	33:j:73:ASP:HA	2.16	0.44
25:b:99:GLN:NE2	25:b:186:GLU:HB2	2.32	0.44
26:c:152:LEU:HD21	26:c:157:VAL:HG21	1.98	0.44
27:d:29:PRO:C	27:d:30:ARG:HD3	2.41	0.44
30:g:27:PHE:HA	30:g:109:VAL:HB	1.98	0.44
34:k:70:LYS:HE3	50:3:2423:G:H5'	2.00	0.44
35:l:48:GLU:O	35:l:52:ILE:HG12	2.16	0.44
36:m:57:PHE:HB2	50:3:1482:U:H1'	1.98	0.44
38:o:26:SER:H	38:o:29:ASP:CB	2.30	0.44
38:o:98:ARG:HG3	50:3:2852:G:OP1	2.17	0.44
39:p:91:ARG:CZ	40:q:11:GLN:HG2	2.46	0.44
39:p:99:ILE:HB	39:p:100:LYS:NZ	2.33	0.44
40:q:29:VAL:HG22	40:q:61:LYS:HA	1.99	0.44
43:t:78:ASP:HB2	43:t:104:PHE:CZ	2.52	0.44
44:u:66:GLY:HA3	44:u:76:LEU:HD21	1.98	0.44
45:v:43:GLY:HA3	50:3:168:A:N3	2.33	0.44
46:w:2:THR:HG22	46:w:5:LYS:HG2	1.99	0.44
49:z:12:ASN:HD22	49:z:48:LYS:HG3	1.82	0.44
49:z:43:LYS:HE2	50:3:2379:G:H4'	1.99	0.44
50:3:127:A:H2'	50:3:128:A:C8	2.53	0.44
50:3:160:A:H2'	50:3:161:U:C6	2.52	0.44
50:3:308:A:C6	50:3:309:A:C4	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:388:U:H2'	50:3:389:C:C6	2.52	0.44
50:3:468:A:C5	50:3:469:C:C5	3.06	0.44
50:3:480:C:H2'	50:3:481:C:H6	1.81	0.44
50:3:520:C:C2	50:3:521:C:C5	3.05	0.44
50:3:929:G:H2'	50:3:930:C:C6	2.52	0.44
50:3:1379:C:N3	50:3:1409:G:C6	2.86	0.44
50:3:1503:A:H3'	50:3:1504:G:C8	2.50	0.44
50:3:1505:G:N2	50:3:1538:U:O2	2.50	0.44
50:3:1623:U:H2'	50:3:1624:A:H8	1.82	0.44
50:3:1717:C:C2	50:3:1718:C:C5	3.05	0.44
50:3:1869:G:C2	50:3:1888:U:N3	2.85	0.44
50:3:1879:A:C2	50:3:1880:G:H1'	2.52	0.44
50:3:1886:C:C4	50:3:1887:U:O4	2.70	0.44
50:3:2232:G:H4'	50:3:2234:C:H1'	1.99	0.44
50:3:2360:A:C8	50:3:2361:G:C8	3.05	0.44
50:3:2635:G:C6	50:3:2785:G:C6	3.05	0.44
50:3:2861:G:C2	50:3:2863:G:H8	2.36	0.44
52:5:24:C:OP2	52:5:559:U:N3	2.50	0.44
52:5:28:G:N1	52:5:29:G:C5	2.85	0.44
52:5:149:G:H2'	52:5:150:A:C8	2.52	0.44
52:5:264:C:H2'	52:5:265:U:H6	1.81	0.44
52:5:320:G:N2	52:5:323:A:C5	2.86	0.44
52:5:348:C:O2'	52:5:349:A:O5'	2.33	0.44
52:5:483:U:H3'	52:5:483:U:OP2	2.17	0.44
52:5:765:A:H2'	52:5:766:G:H8	1.83	0.44
52:5:835:G:N1	52:5:843:C:N3	2.65	0.44
52:5:1001:A:H4'	52:5:1030:G:OP1	2.18	0.44
52:5:1190:G:H2'	52:5:1191:U:O4'	2.17	0.44
52:5:1285:G:H2'	52:5:1286:G:H8	1.82	0.44
52:5:1487:U:H2'	52:5:1488:A:C8	2.52	0.44
2:1:15:LYS:NZ	50:3:689:U:O2'	2.47	0.44
2:1:21:ARG:HH12	2:1:23:HIS:CD2	2.35	0.44
4:A:73:LYS:HD2	4:A:238:GLU:OE1	2.17	0.44
5:B:195:THR:HA	52:5:1181:G:H4'	1.98	0.44
12:I:73:LYS:HZ1	12:I:75:ARG:HB2	1.80	0.44
15:L:67:GLY:C	15:L:71:ARG:HE	2.25	0.44
19:P:15:SER:HA	19:P:56:LYS:HZ3	1.83	0.44
22:S:15:ILE:HG22	22:S:16:LYS:HD3	1.99	0.44
24:a:266:LYS:NZ	50:3:1805:U:OP1	2.27	0.44
25:b:4:ARG:HA	25:b:4:ARG:NE	2.32	0.44
25:b:28:VAL:HG12	25:b:190:LEU:HD11	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:d:3:ASN:O	27:d:7:HIS:ND1	2.49	0.44
27:d:57:LEU:HD21	27:d:89:VAL:HG23	1.98	0.44
28:e:92:LEU:HG	28:e:97:TYR:HB3	1.99	0.44
28:e:177:GLY:HA3	50:3:2667:G:H5'	2.00	0.44
31:h:15:LEU:HA	31:h:50:MET:HA	1.98	0.44
33:j:40:VAL:HA	33:j:58:LEU:O	2.18	0.44
33:j:71:ARG:NH1	33:j:72:LYS:H	2.16	0.44
35:l:65:TRP:NE1	50:3:910:G:H4'	2.33	0.44
37:n:76:ASP:N	37:n:76:ASP:OD1	2.48	0.44
40:q:56:VAL:HG23	40:q:97:PHE:HA	1.99	0.44
41:r:16:LYS:HA	41:r:19:LEU:HG	2.00	0.44
49:z:22:PHE:HB2	50:3:2354:A:H2	1.81	0.44
50:3:232:A:O2'	50:3:234:G:O5'	2.36	0.44
50:3:247:U:N3	50:3:259:A:C8	2.85	0.44
50:3:889:G:H2'	50:3:890:U:C6	2.52	0.44
50:3:1322:A:H2'	50:3:1322:A:N3	2.31	0.44
50:3:1338:G:N7	50:3:1339:U:N3	2.66	0.44
50:3:1373:C:H2'	50:3:1374:U:H6	1.83	0.44
50:3:1582:G:C2	50:3:1583:G:C5	3.05	0.44
50:3:1663:G:H3'	50:3:1664:A:H8	1.82	0.44
50:3:1678:U:H2'	50:3:1679:U:C6	2.52	0.44
50:3:1903:A:H2'	50:3:1904:G:H8	1.82	0.44
50:3:1939:A:C2	50:3:1976:A:C4	3.05	0.44
50:3:1956:G:H3'	50:3:1957:G:H8	1.82	0.44
50:3:2067:A:C6	50:3:2510:G:C6	3.05	0.44
50:3:2068:G:O2'	50:3:2454:G:O6	2.33	0.44
50:3:2121:A:H2'	50:3:2122:G:O4'	2.17	0.44
50:3:2132:G:H2'	50:3:2133:A:C5	2.52	0.44
50:3:2331:G:N1	50:3:2340:U:O2	2.50	0.44
50:3:2349:G:C6	50:3:2350:C:N4	2.86	0.44
50:3:2520:C:C2	50:3:2521:A:H1'	2.53	0.44
50:3:2645:U:O2	50:3:2784:A:C5	2.70	0.44
50:3:2687:A:C6	50:3:2737:G:C6	3.06	0.44
50:3:2696:G:H21	50:3:2729:A:H62	1.65	0.44
50:3:2829:G:N2	50:3:2829:G:OP2	2.50	0.44
50:3:2847:C:C2	50:3:2848:A:C8	3.05	0.44
51:4:39:U:H5'	51:4:40:U:C5	2.39	0.44
52:5:285:G:C6	52:5:286:C:C4	3.06	0.44
52:5:530:A:H62	52:5:1181:G:N2	2.15	0.44
52:5:765:A:H2'	52:5:766:G:C8	2.52	0.44
52:5:766:G:H4'	52:5:1488:A:H4'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:823:C:H2'	52:5:824:U:C6	2.52	0.44
52:5:858:A:H2	52:5:913:A:H1'	1.83	0.44
52:5:1066:U:H5'	52:5:1092:A:N6	2.33	0.44
52:5:1075:G:H1'	52:5:1094:C:N4	2.29	0.44
52:5:1287:G:C2	52:5:1299:C:C2	3.05	0.44
52:5:1340:G:H2'	52:5:1341:U:C6	2.53	0.44
52:5:1377:C:H2'	52:5:1378:C:O4'	2.17	0.44
52:5:1397:G:C2	52:5:1454:G:C4	3.06	0.44
52:5:1444:G:C4	52:5:1445:G:C8	3.05	0.44
53:7:59:A:C2	53:7:61:U:H2'	2.48	0.44
3:2:29:THR:HB	3:2:32:HIS:HB2	2.00	0.44
4:A:35:ARG:HD3	52:5:827:C:H5''	1.99	0.44
4:A:112:TRP:HE1	4:A:116:THR:H	1.65	0.44
4:A:133:LEU:HB3	4:A:156:ILE:HD11	1.98	0.44
4:A:158:ARG:HH21	52:5:1091:C:H41	1.64	0.44
5:B:139:GLN:O	5:B:143:LYS:HG2	2.17	0.44
6:C:118:ASN:ND2	52:5:400:G:O5'	2.51	0.44
6:C:147:LYS:HD3	6:C:148:THR:N	2.32	0.44
9:F:114:THR:C	9:F:118:LYS:HZ2	2.25	0.44
13:J:104:ASN:HA	23:T:5:GLU:O	2.16	0.44
13:J:119:ARG:HH22	13:J:121:ARG:HB3	1.82	0.44
19:P:7:LYS:HD3	19:P:7:LYS:HA	1.66	0.44
20:Q:91:LYS:CD	52:5:732:A:H5'	2.47	0.44
22:S:56:ARG:NH2	52:5:197:A:H4'	2.32	0.44
24:a:213:ILE:HB	50:3:1798:A:H4'	1.99	0.44
25:b:158:ARG:NH2	50:3:1165:U:O2	2.51	0.44
26:c:140:THR:O	26:c:144:MET:HB2	2.17	0.44
27:d:37:ASN:OD1	50:3:2320:U:O2'	2.23	0.44
28:e:159:PRO:HG2	28:e:160:TYR:CD1	2.53	0.44
29:f:6:LYS:HB3	29:f:7:GLN:OE1	2.17	0.44
34:k:22:ARG:HH11	50:3:1280:G:P	2.40	0.44
34:k:42:ARG:NH2	50:3:842:U:OP2	2.51	0.44
34:k:48:ARG:HH21	34:k:51:PHE:CB	2.24	0.44
35:l:11:LYS:HD2	50:3:2286:A:P	2.58	0.44
35:l:62:GLY:HA2	35:l:107:ALA:O	2.17	0.44
38:o:55:ARG:HH12	38:o:57:GLY:HA3	1.82	0.44
38:o:103:TYR:CD2	38:o:104:MET:HG2	2.52	0.44
39:p:1:MET:O	50:3:1278:G:H2'	2.17	0.44
44:u:60:TYR:O	44:u:94:ARG:HA	2.18	0.44
50:3:292:G:C5	50:3:293:G:C5	3.05	0.44
50:3:302:G:H2'	50:3:303:C:H6	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:452:U:H2'	50:3:453:U:H6	1.82	0.44
50:3:892:G:N2	50:3:958:C:O2	2.32	0.44
50:3:1184:U:H2'	50:3:1185:U:C6	2.53	0.44
50:3:1512:A:C6	50:3:1528:G:C6	3.06	0.44
50:3:1535:A:N7	50:3:1536:C:C4	2.86	0.44
50:3:1728:A:H8	50:3:1728:A:OP2	2.00	0.44
50:3:1833:G:O2'	50:3:1978:U:OP2	2.25	0.44
50:3:2150:C:C4	50:3:2151:G:N1	2.85	0.44
50:3:2254:G:C6	50:3:2434:A:C6	3.06	0.44
50:3:2269:C:C2	50:3:2270:U:H5	2.35	0.44
50:3:2420:A:H3'	50:3:2421:U:H6	1.82	0.44
50:3:2480:G:N2	50:3:2486:A:N6	2.53	0.44
50:3:2552:G:H2'	50:3:2553:G:O4'	2.18	0.44
50:3:2737:G:C5	50:3:2738:U:C4	3.06	0.44
50:3:2859:U:H2'	50:3:2860:A:H8	1.81	0.44
52:5:45:A:C6	52:5:395:G:C6	3.06	0.44
52:5:100:G:N2	52:5:102:G:H1	2.07	0.44
52:5:321:A:O2'	52:5:322:G:O4'	2.17	0.44
52:5:462:G:H22	52:5:467:G:H1	1.66	0.44
52:5:534:C:C2	52:5:535:A:C8	3.05	0.44
52:5:610:C:H2'	52:5:611:A:H8	1.83	0.44
52:5:617:U:OP1	52:5:619:A:N6	2.51	0.44
52:5:638:A:H1'	52:5:639:A:N7	2.32	0.44
52:5:778:A:H3'	52:5:779:A:H8	1.82	0.44
52:5:899:U:H2'	52:5:900:G:O4'	2.17	0.44
52:5:989:A:H61	52:5:1037:A:H2'	1.82	0.44
52:5:1009:G:O2'	52:5:1012:A:N6	2.48	0.44
52:5:1213:A:H2'	52:5:1214:A:H8	1.82	0.44
52:5:1261:A:H2	52:5:1345:G:N2	2.10	0.44
52:5:1319:U:O2	52:5:1350:A:N6	2.50	0.44
52:5:1329:G:C6	52:5:1343:G:C2	3.05	0.44
52:5:1417:U:O4	52:5:1435:G:N1	2.50	0.44
52:5:1501:G:H2'	52:5:1502:G:H8	1.81	0.44
1:0:5:TYR:HB2	50:3:823:A:H2	1.81	0.44
1:0:39:ARG:NE	50:3:505:G:O6	2.51	0.44
5:B:52:GLN:HB2	5:B:72:ALA:HB3	1.98	0.44
5:B:85:ILE:HD11	5:B:104:LEU:HD12	1.98	0.44
5:B:121:ARG:HH11	5:B:125:ASN:ND2	2.16	0.44
5:B:125:ASN:HA	5:B:128:GLU:HG2	2.00	0.44
6:C:49:GLY:HA2	6:C:52:GLN:HG2	1.99	0.44
6:C:105:GLY:HA2	6:C:161:GLY:C	2.43	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:C:115:GLN:HE22	52:5:434:U:H1'	1.83	0.44
10:G:91:SER:OG	10:G:136:GLU:OE2	2.24	0.44
11:H:6:TYR:HA	11:H:91:GLN:CD	2.42	0.44
18:O:49:ALA:O	18:O:53:LEU:HG	2.17	0.44
21:R:28:LYS:HD2	21:R:29:ARG:H	1.82	0.44
24:a:149:ASN:HB3	24:a:199:THR:HB	2.00	0.44
24:a:282:ARG:NH2	50:3:1804:A:O5'	2.51	0.44
26:c:75:ARG:NH1	50:3:842:U:H3	2.11	0.44
26:c:166:THR:O	26:c:169:GLU:HG2	2.18	0.44
29:f:2:LYS:HB2	29:f:35:LEU:O	2.17	0.44
29:f:57:HIS:CE1	29:f:61:ASN:HD21	2.35	0.44
35:l:25:SER:N	35:l:67:ARG:HH11	2.15	0.44
36:m:99:ARG:HG3	50:3:2886:A:H5'	1.99	0.44
38:o:29:ASP:OD1	38:o:94:GLY:N	2.49	0.44
44:u:30:SER:HB2	50:3:2270:U:OP2	2.17	0.44
48:y:47:MET:HA	48:y:52:ARG:HA	1.98	0.44
50:3:413:G:C4	50:3:414:C:C5	3.05	0.44
50:3:531:G:C4	50:3:532:A:C8	3.06	0.44
50:3:858:A:H2'	50:3:859:G:O4'	2.17	0.44
50:3:873:G:C2	50:3:977:A:C8	3.06	0.44
50:3:873:G:H2'	50:3:874:U:C6	2.53	0.44
50:3:983:A:N3	50:3:1020:G:C8	2.85	0.44
50:3:991:G:H3'	50:3:992:G:H8	1.82	0.44
50:3:999:U:H2'	50:3:1000:U:C6	2.52	0.44
50:3:1010:G:O4'	50:3:1026:A:N6	2.42	0.44
50:3:1045:A:H3'	50:3:1045:A:OP2	2.17	0.44
50:3:1075:G:N1	50:3:1151:U:C4	2.85	0.44
50:3:1079:U:C2	50:3:1147:G:N1	2.86	0.44
50:3:1085:A:H2'	50:3:1086:G:O4'	2.17	0.44
50:3:1277:A:O2'	50:3:1279:U:H5'	2.17	0.44
50:3:1343:C:C4	50:3:1366:G:C6	3.06	0.44
50:3:1365:G:C2	50:3:1366:G:C8	3.06	0.44
50:3:1399:G:H2'	50:3:1400:U:C5	2.53	0.44
50:3:1445:U:C4	50:3:1446:G:C5	3.06	0.44
50:3:1448:U:C2'	50:3:1449:G:H8	2.30	0.44
50:3:1450:G:C5	50:3:1451:A:N7	2.86	0.44
50:3:1456:C:H41	50:3:1603:A:H3'	1.82	0.44
50:3:1484:G:C2	50:3:2712:C:C2	3.06	0.44
50:3:1832:G:C4	50:3:1833:G:C8	3.06	0.44
50:3:1948:C:C5	50:3:1972:C:C5	3.05	0.44
50:3:1987:C:O2'	50:3:1989:U:OP1	2.29	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2122:G:O2'	50:3:2175:U:H1'	2.17	0.44
50:3:2169:G:H4'	50:3:2170:A:H3'	2.00	0.44
50:3:2207:A:N6	50:3:2231:A:N1	2.65	0.44
50:3:2305:C:H2'	50:3:2306:A:C8	2.52	0.44
50:3:2387:U:H2'	50:3:2388:C:H6	1.78	0.44
50:3:2396:A:H4'	50:3:2396:A:OP1	2.18	0.44
50:3:2513:G:C4	50:3:2584:G:C6	3.06	0.44
50:3:2633:C:H2'	50:3:2634:C:O4'	2.18	0.44
52:5:60:A:H5''	52:5:383:U:H4'	2.00	0.44
52:5:169:G:N2	52:5:170:A:H1'	2.33	0.44
52:5:358:G:N2	52:5:361:U:H3	2.15	0.44
52:5:419:A:H4'	52:5:420:A:O5'	2.16	0.44
52:5:472:G:H2'	52:5:473:A:C8	2.53	0.44
52:5:498:G:H2'	52:5:499:U:C6	2.53	0.44
52:5:630:G:P	52:5:630:G:H8	2.41	0.44
52:5:647:U:H2'	52:5:648:C:C6	2.52	0.44
52:5:822:A:N6	52:5:870:A:C6	2.86	0.44
52:5:948:U:H2'	52:5:949:G:O4'	2.17	0.44
52:5:962:G:H2'	52:5:963:U:C5	2.53	0.44
52:5:1156:G:O2'	52:5:1157:G:N7	2.51	0.44
52:5:1221:A:C6	52:5:1222:U:C4	3.06	0.44
52:5:1394:G:H3'	52:5:1395:C:H6	1.82	0.44
1:0:8:SER:O	1:0:12:ARG:N	2.35	0.44
3:2:11:CYS:N	3:2:14:CYS:HB2	2.32	0.44
5:B:153:LYS:O	5:B:203:VAL:HA	2.18	0.44
8:E:6:ILE:O	8:E:85:GLU:HA	2.17	0.44
11:H:99:ILE:O	11:H:103:LYS:HG2	2.17	0.44
11:H:110:LYS:NZ	52:5:1107:U:O2	2.48	0.44
14:K:127:ARG:O	52:5:36:G:O2'	2.32	0.44
15:L:16:GLU:HA	15:L:19:LEU:HB3	1.99	0.44
16:M:60:SER:OG	16:M:60:SER:O	2.35	0.44
20:Q:95:TYR:CD1	52:5:732:A:H1'	2.53	0.44
24:a:44:HIS:CE1	50:3:1820:U:H5''	2.53	0.44
24:a:60:GLY:N	50:3:726:U:H5''	2.32	0.44
25:b:103:GLN:C	25:b:184:PHE:HZ	2.25	0.44
25:b:115:LYS:O	25:b:117:ARG:HG2	2.17	0.44
25:b:146:SER:HA	50:3:2586:G:N7	2.32	0.44
26:c:50:HIS:HB2	26:c:93:PRO:HB2	1.99	0.44
26:c:158:LEU:HD11	26:c:181:LYS:HB2	1.99	0.44
27:d:56:GLU:O	27:d:60:ILE:HG22	2.17	0.44
35:l:11:LYS:HD2	50:3:2285:G:O3'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:m:75:VAL:O	36:m:79:MET:HB3	2.18	0.44
37:n:64:ASN:HA	37:n:69:ASN:HA	2.00	0.44
38:o:12:LEU:HA	38:o:15:GLN:CD	2.43	0.44
41:r:90:LYS:NZ	50:3:783:G:O4'	2.51	0.44
42:s:71:PHE:N	42:s:72:PRO:HD3	2.32	0.44
46:w:5:LYS:O	46:w:9:GLN:NE2	2.45	0.44
50:3:10:U:H3'	50:3:11:U:C6	2.53	0.44
50:3:196:G:O2'	50:3:837:A:H1'	2.17	0.44
50:3:314:G:H3'	50:3:316:C:C5	2.52	0.44
50:3:549:A:H2'	50:3:550:A:O4'	2.18	0.44
50:3:666:G:N2	50:3:668:A:H3'	2.33	0.44
50:3:758:C:H2'	50:3:759:U:H6	1.83	0.44
50:3:810:G:C2	50:3:829:A:C8	3.06	0.44
50:3:893:A:H2'	50:3:894:G:C8	2.53	0.44
50:3:1048:A:O2'	50:3:1049:U:P	2.76	0.44
50:3:1654:G:C6	50:3:1655:U:C4	3.06	0.44
50:3:1662:G:N2	50:3:2707:A:H5'	2.33	0.44
50:3:1713:U:H2'	50:3:1714:U:H5'	1.98	0.44
50:3:1787:A:H3'	50:3:1788:A:C2'	2.42	0.44
50:3:1803:U:H2'	50:3:1804:A:C8	2.53	0.44
50:3:1844:C:C2	50:3:1911:G:N2	2.85	0.44
50:3:1864:A:C2	50:3:1891:A:H2	2.36	0.44
50:3:1956:G:C4	50:3:1957:G:C8	3.06	0.44
50:3:2093:U:C2	50:3:2242:G:C2	3.06	0.44
50:3:2335:A:C8	50:3:2396:A:C6	3.05	0.44
50:3:2615:G:H2'	50:3:2616:G:C8	2.52	0.44
50:3:2787:U:H5''	50:3:2788:U:H2'	1.99	0.44
50:3:2840:U:C4	50:3:2887:A:C6	3.06	0.44
50:3:2854:A:H3'	50:3:2855:A:H8	1.82	0.44
51:4:102:A:O2'	51:4:103:C:H5'	2.18	0.44
52:5:39:G:H22	52:5:393:A:C5'	2.27	0.44
52:5:295:G:H2'	52:5:296:A:C5	2.52	0.44
52:5:322:G:C8	52:5:322:G:OP2	2.71	0.44
52:5:329:C:H2'	52:5:330:C:H6	1.83	0.44
52:5:388:G:C4	52:5:389:A:C8	3.05	0.44
52:5:436:U:OP2	52:5:437:U:H5	2.00	0.44
52:5:487:A:C5	52:5:489:U:C4	3.05	0.44
52:5:514:U:H3'	52:5:515:G:C8	2.52	0.44
52:5:640:C:H2'	52:5:641:U:C6	2.52	0.44
52:5:904:C:H2'	52:5:905:U:C6	2.53	0.44
52:5:962:G:H2'	52:5:963:U:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:977:U:H5'	52:5:978:A:C8	2.53	0.44
52:5:1001:A:H4'	52:5:1030:G:P	2.57	0.44
52:5:1005:U:C2	52:5:1017:A:H2	2.36	0.44
52:5:1041:G:N1	52:5:1184:C:C2	2.86	0.44
52:5:1142:G:N2	52:5:1144:A:H3'	2.33	0.44
52:5:1152:G:H2'	52:5:1153:G:C8	2.52	0.44
52:5:1239:U:C4	52:5:1247:G:N1	2.86	0.44
52:5:1359:C:H2'	52:5:1360:G:H8	1.82	0.44
4:A:59:GLU:O	4:A:62:ARG:HG3	2.17	0.44
4:A:82:ILE:HD12	4:A:175:LEU:HB3	1.99	0.44
5:B:184:ASP:OD1	5:B:210:ILE:HB	2.18	0.44
6:C:122:VAL:O	6:C:128:THR:HA	2.18	0.44
7:D:142:GLY:O	7:D:148:ARG:HA	2.17	0.44
9:F:14:ASP:O	9:F:16:VAL:N	2.51	0.44
10:G:23:ASN:HA	10:G:26:ARG:HE	1.83	0.44
10:G:92:LYS:HB2	10:G:95:LEU:HB2	2.00	0.44
11:H:116:LYS:C	11:H:117:LYS:HD3	2.42	0.44
12:I:50:THR:HG21	12:I:76:HIS:CD2	2.52	0.44
13:J:9:VAL:HG12	13:J:70:MET:HE3	1.99	0.44
15:L:14:ARG:HG3	52:5:1276:U:O4	2.16	0.44
15:L:28:SER:HG	52:5:1303:A:P	2.39	0.44
18:O:53:LEU:HD11	18:O:67:PHE:CE1	2.53	0.44
24:a:9:ARG:NH2	50:3:762:A:N1	2.66	0.44
24:a:163:SER:HB3	50:3:1826:A:O5'	2.18	0.44
25:b:40:LYS:HG3	25:b:44:LYS:HD2	2.00	0.44
26:c:4:LEU:O	26:c:18:VAL:HG22	2.18	0.44
26:c:116:TRP:CH2	26:c:191:LEU:HD11	2.52	0.44
26:c:130:GLN:HA	26:c:133:PHE:CD2	2.53	0.44
27:d:169:LEU:HG	27:d:173:LEU:HG	1.99	0.44
36:m:6:LYS:NZ	50:3:2010:A:OP1	2.50	0.44
37:n:116:PHE:C	50:3:2386:A:H5'	2.43	0.44
38:o:98:ARG:HD3	50:3:2725:G:O2'	2.18	0.44
41:r:82:MET:HB2	41:r:84:ARG:HH12	1.83	0.44
41:r:115:GLN:O	41:r:119:LYS:HD2	2.18	0.44
49:z:11:CYS:HB2	49:z:47:HIS:CE1	2.52	0.44
50:3:108:G:C2	50:3:109:G:N7	2.86	0.44
50:3:142:A:H2	50:3:1436:C:O2	1.99	0.44
50:3:224:G:C2	50:3:464:A:OP2	2.70	0.44
50:3:230:G:N2	50:3:454:G:H21	2.08	0.44
50:3:294:G:O2'	50:3:296:U:O4	2.33	0.44
50:3:300:G:C4	50:3:301:G:C8	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:480:C:C2	50:3:481:C:C5	3.06	0.44
50:3:488:G:H2'	50:3:489:A:C8	2.53	0.44
50:3:604:A:N3	50:3:606:G:O2'	2.51	0.44
50:3:639:G:H2'	50:3:640:U:O4'	2.18	0.44
50:3:810:G:N1	50:3:829:A:O4'	2.50	0.44
50:3:887:A:C5	50:3:964:A:C6	3.06	0.44
50:3:975:G:C5	50:3:976:C:C4	3.06	0.44
50:3:1204:A:C6	50:3:1205:U:C4	3.05	0.44
50:3:1212:C:C2	50:3:1213:U:C5	3.05	0.44
50:3:1270:C:H2'	50:3:1271:A:C8	2.45	0.44
50:3:1298:A:H61	50:3:2019:G:C2'	2.30	0.44
50:3:1343:C:H1'	50:3:1421:A:C2	2.52	0.44
50:3:1493:A:N7	50:3:1579:G:H2'	2.33	0.44
50:3:1505:G:N3	50:3:1505:G:H2'	2.33	0.44
50:3:1557:G:C2'	50:3:1573:A:H61	2.31	0.44
50:3:1689:A:N7	50:3:2012:A:H2	2.16	0.44
50:3:1690:C:H2'	50:3:1691:U:H6	1.81	0.44
50:3:1713:U:C2	50:3:1996:A:H2	2.35	0.44
50:3:2269:C:N3	50:3:2270:U:H5	2.16	0.44
50:3:2316:G:N2	50:3:2319:A:O4'	2.46	0.44
50:3:2381:G:C6	50:3:2389:A:C6	3.06	0.44
50:3:2717:G:C5	50:3:2718:C:C4	3.04	0.44
50:3:2752:G:H2'	50:3:2753:C:H6	1.83	0.44
50:3:2799:U:C4	50:3:2810:A:C8	3.05	0.44
52:5:62:G:C2	52:5:92:G:H1'	2.52	0.44
52:5:68:C:C2	52:5:88:A:C2	3.06	0.44
52:5:98:G:N2	52:5:311:A:C4	2.86	0.44
52:5:108:C:H5''	52:5:307:C:O2	2.18	0.44
52:5:145:G:H2'	52:5:147:A:OP2	2.18	0.44
52:5:177:G:N1	52:5:189:C:N3	2.66	0.44
52:5:202:A:O2'	52:5:203:C:H5'	2.18	0.44
52:5:253:G:H2'	52:5:254:G:C8	2.53	0.44
52:5:262:G:H1	52:5:267:C:H41	1.64	0.44
52:5:368:C:N4	52:5:384:G:H5'	2.33	0.44
52:5:492:G:O2'	52:5:494:A:H1'	2.18	0.44
52:5:1088:C:C1'	52:5:1145:A:H1'	2.46	0.44
52:5:1130:G:C2	52:5:1131:A:C4	3.05	0.44
52:5:1270:C:H3'	52:5:1271:U:C6	2.53	0.44
52:5:1397:G:C2	52:5:1398:G:C5	3.05	0.44
52:5:1485:C:H2'	52:5:1486:C:C6	2.52	0.44
53:7:3:G:H2'	53:7:4:U:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:151:GLY:HA3	5:B:174:GLY:HA3	2.00	0.44
5:B:194:THR:C	5:B:196:TYR:H	2.26	0.44
7:D:87:ARG:HG2	7:D:109:LEU:CD2	2.48	0.44
14:K:81:PRO:CG	14:K:112:ARG:HB2	2.48	0.44
22:S:53:ARG:O	22:S:56:ARG:HB3	2.18	0.44
24:a:89:ASP:OD2	24:a:92:ARG:N	2.51	0.44
24:a:131:LYS:HB2	24:a:134:PHE:CE1	2.53	0.44
24:a:184:LEU:HD12	24:a:185:LEU:N	2.31	0.44
24:a:208:HIS:CD2	50:3:1827:U:H1'	2.52	0.44
24:a:265:VAL:O	50:3:1804:A:H4'	2.18	0.44
26:c:207:LEU:HD12	26:c:210:LYS:CE	2.48	0.44
27:d:93:GLY:O	27:d:97:TRP:HD1	2.01	0.44
29:f:8:ASP:OD1	29:f:8:ASP:N	2.51	0.44
30:g:47:ASN:C	30:g:49:SER:H	2.26	0.44
32:i:8:THR:OG1	32:i:9:LYS:N	2.51	0.44
37:n:46:PHE:CZ	51:4:7:G:H4'	2.53	0.44
48:y:48:TYR:O	48:y:48:TYR:CD1	2.71	0.44
49:z:9:LEU:HG	49:z:48:LYS:O	2.18	0.44
50:3:14:U:O2	50:3:14:U:H2'	2.17	0.44
50:3:16:A:N1	50:3:2051:G:O2'	2.47	0.44
50:3:26:G:C4	50:3:27:U:C5	3.06	0.44
50:3:71:C:O2'	50:3:75:A:H4'	2.17	0.44
50:3:170:A:C2	50:3:171:G:H1'	2.52	0.44
50:3:219:G:OP2	50:3:219:G:H8	1.99	0.44
50:3:221:A:H2'	50:3:222:A:H8	1.81	0.44
50:3:335:G:C5	50:3:351:G:C6	3.06	0.44
50:3:479:A:H1'	50:3:1231:G:O2'	2.17	0.44
50:3:521:C:C2	50:3:522:C:C5	3.05	0.44
50:3:529:G:C2	50:3:530:G:C4	3.06	0.44
50:3:642:A:H1'	50:3:657:A:C2	2.52	0.44
50:3:720:A:H61	50:3:812:G:N2	2.16	0.44
50:3:887:A:H3'	50:3:888:A:H8	1.81	0.44
50:3:989:G:O6	50:3:1001:C:N4	2.51	0.44
50:3:1071:G:C6	50:3:1155:G:C6	3.06	0.44
50:3:1106:G:H21	50:3:1124:G:H2'	1.83	0.44
50:3:1125:U:H2'	50:3:1126:G:C1'	2.48	0.44
50:3:1177:A:C8	50:3:1179:G:C8	3.06	0.44
50:3:1251:G:C4	50:3:1259:A:C6	3.06	0.44
50:3:1446:G:N1	50:3:1612:U:H5''	2.32	0.44
50:3:1532:A:H3'	50:3:1533:U:H2'	2.00	0.44
50:3:1598:U:H2'	50:3:1599:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2045:C:C4	50:3:2046:G:N7	2.86	0.44
50:3:2082:U:H3'	50:3:2246:G:H22	1.80	0.44
50:3:2154:A:C6	50:3:2155:G:C2	3.06	0.44
50:3:2237:U:O2'	50:3:2238:G:H5'	2.18	0.44
50:3:2270:U:H5'	50:3:2395:U:O2	2.18	0.44
50:3:2362:A:N1	50:3:2372:C:C4	2.86	0.44
50:3:2403:C:C2	50:3:2404:G:C8	3.06	0.44
50:3:2440:A:H2'	50:3:2441:A:H8	1.81	0.44
50:3:2452:G:H2'	50:3:2453:G:O4'	2.18	0.44
50:3:2603:G:N1	50:3:2607:G:C6	2.86	0.44
51:4:23:A:C4	51:4:24:A:C8	3.06	0.44
51:4:29:C:H2'	51:4:30:U:H6	1.83	0.44
52:5:19:C:H2'	52:5:20:C:H6	1.77	0.44
52:5:83:U:H2'	52:5:84:U:H6	1.80	0.44
52:5:177:G:N1	52:5:189:C:C4	2.86	0.44
52:5:189:C:C2	52:5:190:A:C8	3.06	0.44
52:5:335:C:H2'	52:5:336:U:C6	2.53	0.44
52:5:359:A:H2'	52:5:360:A:O4'	2.17	0.44
52:5:507:A:H2'	52:5:508:A:H5'	1.99	0.44
52:5:516:C:H6	52:5:527:G:H3'	1.83	0.44
52:5:609:G:H2'	52:5:610:C:C6	2.53	0.44
52:5:653:G:H1	52:5:748:U:H3	1.66	0.44
52:5:895:A:N6	52:5:896:G:N3	2.66	0.44
52:5:1251:G:H2'	52:5:1252:C:O4'	2.18	0.44
52:5:1444:G:N3	52:5:1445:G:C8	2.85	0.44
52:5:1505:G:H2'	52:5:1506:A:C5	2.53	0.44
53:7:51:G:C6	53:7:52:C:C4	3.06	0.44
4:A:66:GLN:NE2	4:A:70:ASN:HD22	2.10	0.44
4:A:190:GLU:HA	4:A:193:ILE:HD12	2.00	0.44
6:C:87:VAL:HG23	6:C:193:GLU:OE2	2.18	0.44
6:C:102:TYR:HE2	6:C:103:ARG:CZ	2.30	0.44
7:D:97:ARG:HH11	7:D:171:GLU:CB	2.30	0.44
7:D:116:LYS:HE3	7:D:116:LYS:HB3	1.74	0.44
10:G:90:ILE:HG21	10:G:137:ILE:HB	1.99	0.44
14:K:66:ALA:HB3	14:K:110:ILE:HD11	2.00	0.44
14:K:102:ASP:N	52:5:521:A:N1	2.44	0.44
19:P:2:LYS:CG	19:P:3:ARG:H	2.25	0.44
24:a:48:ASN:ND2	24:a:49:ASN:OD1	2.51	0.44
24:a:80:GLU:HA	24:a:122:LEU:HD13	1.99	0.44
24:a:112:PRO:HA	24:a:202:VAL:O	2.18	0.44
24:a:169:ARG:HA	24:a:169:ARG:HD2	1.75	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:a:227:THR:O	50:3:1796:A:H5''	2.18	0.44
25:b:143:PHE:HE1	50:3:2586:G:N3	2.16	0.44
25:b:162:GLY:N	50:3:2628:U:OP1	2.47	0.44
26:c:129:ASP:OD1	26:c:129:ASP:N	2.46	0.44
27:d:17:GLN:HA	27:d:22:PHE:CD2	2.53	0.44
27:d:104:ILE:HA	27:d:108:LEU:HD22	2.00	0.44
29:f:3:VAL:HA	29:f:20:ASP:HB2	2.00	0.44
30:g:4:LYS:O	30:g:7:LYS:HB3	2.18	0.44
33:j:2:VAL:H	33:j:33:ALA:H	1.65	0.44
34:k:137:LYS:O	34:k:140:GLU:HG2	2.17	0.44
36:m:22:VAL:HA	36:m:25:VAL:HG12	2.00	0.44
39:p:104:LYS:O	39:p:108:ILE:HG13	2.18	0.44
42:s:6:VAL:O	42:s:32:ASN:N	2.28	0.44
46:w:42:HIS:ND1	50:3:98:C:H4'	2.32	0.44
46:w:49:ARG:O	46:w:53:THR:HG23	2.17	0.44
49:z:26:LYS:HE2	50:3:2293:C:OP1	2.18	0.44
50:3:523:A:N6	50:3:529:G:C6	2.86	0.44
50:3:609:U:H3'	50:3:610:G:H5''	2.00	0.44
50:3:865:A:OP2	50:3:981:A:H5'	2.17	0.44
50:3:936:G:HO2'	50:3:937:A:P	2.39	0.44
50:3:969:A:C5	50:3:971:U:C4	3.05	0.44
50:3:1244:A:N6	50:3:1245:G:C2	2.86	0.44
50:3:1368:U:C2	50:3:1637:A:O4'	2.71	0.44
50:3:1507:G:O6	50:3:1537:A:N6	2.51	0.44
50:3:1525:G:C4	50:3:1526:U:C6	3.06	0.44
50:3:1682:C:H2'	50:3:1683:G:C8	2.53	0.44
50:3:1685:G:C5	50:3:1686:U:C4	3.06	0.44
50:3:1703:A:C2	50:3:2001:C:H1'	2.53	0.44
50:3:1726:U:O2'	50:3:1727:U:H2'	2.18	0.44
50:3:1775:G:H2'	50:3:1776:G:C8	2.53	0.44
50:3:1783:G:N2	50:3:1796:A:H1'	2.33	0.44
50:3:1794:A:H8	50:3:1794:A:O5'	2.01	0.44
50:3:1814:G:N1	50:3:1816:A:H5''	2.33	0.44
50:3:1866:G:C2	50:3:1867:G:C4	3.05	0.44
50:3:1953:U:C2	50:3:1954:C:C5	3.06	0.44
50:3:1985:A:C5	50:3:1986:C:C4	3.06	0.44
50:3:2113:U:H2'	50:3:2114:C:C6	2.53	0.44
50:3:2117:G:O2'	50:3:2127:G:OP2	2.29	0.44
50:3:2269:C:H1'	50:3:2396:A:H1'	2.00	0.44
50:3:2538:A:H1'	50:3:2543:G:C6	2.53	0.44
50:3:2562:U:H2'	50:3:2563:U:C5	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2635:G:N2	50:3:2785:G:O5'	2.36	0.44
50:3:2696:G:H1'	50:3:2729:A:H61	1.83	0.44
50:3:2789:A:O3'	50:3:2790:A:H8	1.99	0.44
51:4:91:A:H2'	51:4:92:A:H8	1.83	0.44
52:5:60:A:O2'	52:5:385:A:OP1	2.35	0.44
52:5:112:U:H2'	52:5:113:C:C6	2.53	0.44
52:5:262:G:O2'	52:5:264:C:OP2	2.30	0.44
52:5:267:C:H2'	52:5:268:C:H6	1.82	0.44
52:5:293:G:C6	52:5:297:A:C6	3.06	0.44
52:5:329:C:C2	52:5:330:C:C5	3.05	0.44
52:5:552:U:H2'	52:5:553:C:C6	2.53	0.44
52:5:603:U:O4	52:5:630:G:O6	2.36	0.44
52:5:968:G:OP2	52:5:969:A:O2'	2.28	0.44
52:5:970:A:O3'	52:5:1332:U:H1'	2.17	0.44
52:5:1073:A:C5	52:5:1074:U:C4	3.06	0.44
52:5:1138:U:O2	52:5:1149:G:C2	2.71	0.44
52:5:1153:G:H2'	52:5:1155:A:N7	2.33	0.44
52:5:1351:U:H2'	52:5:1352:A:H8	1.82	0.44
52:5:1443:A:H3'	52:5:1444:G:C8	2.46	0.44
4:A:57:VAL:HG21	4:A:60:LEU:HB2	1.99	0.43
4:A:84:PHE:CD1	4:A:177:ILE:HG12	2.53	0.43
4:A:133:LEU:HD23	4:A:136:LYS:HD2	2.00	0.43
5:B:25:ASN:H	5:B:29:GLN:NE2	2.15	0.43
6:C:102:TYR:HA	6:C:107:ALA:HB3	2.00	0.43
9:F:60:VAL:HG13	9:F:127:SER:HB3	1.99	0.43
11:H:101:LYS:NZ	52:5:1152:G:H3'	2.33	0.43
12:I:17:GLU:HG2	12:I:103:THR:HG23	2.00	0.43
16:M:29:ARG:HD2	52:5:969:A:OP1	2.17	0.43
24:a:275:THR:HA	24:a:278:ILE:HG12	2.00	0.43
26:c:30:LYS:HD2	50:3:633:G:H5''	2.00	0.43
26:c:61:GLY:H	50:3:505:G:P	2.40	0.43
28:e:124:LEU:HD11	28:e:143:LEU:HD22	2.00	0.43
33:j:13:ASN:OD1	33:j:97:ARG:N	2.41	0.43
34:k:127:GLU:HB3	34:k:149:LEU:HG	2.00	0.43
36:m:56:ASN:H	36:m:59:ASN:ND2	2.15	0.43
36:m:98:SER:C	36:m:99:ARG:HD3	2.42	0.43
39:p:78:PHE:HA	39:p:81:LEU:HD12	2.00	0.43
41:r:10:VAL:O	41:r:12:ILE:N	2.50	0.43
41:r:57:ASN:HA	41:r:61:ASN:ND2	2.32	0.43
41:r:58:ALA:O	41:r:64:MET:HG3	2.18	0.43
45:v:56:ARG:CZ	50:3:436:G:N7	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:z:24:ASN:ND2	49:z:27:LYS:HG2	2.32	0.43
50:3:231:A:N6	50:3:446:A:H1'	2.32	0.43
50:3:343:A:H2'	50:3:364:A:C2	2.52	0.43
50:3:442:G:H2'	50:3:443:C:O4'	2.17	0.43
50:3:444:C:H2'	50:3:445:C:O4'	2.17	0.43
50:3:603:G:H1'	50:3:1019:A:H62	1.82	0.43
50:3:784:A:O2'	50:3:1651:C:H1'	2.18	0.43
50:3:833:C:H2'	50:3:834:G:C8	2.53	0.43
50:3:873:G:C2'	50:3:874:U:H5'	2.48	0.43
50:3:873:G:O2'	50:3:874:U:H5'	2.18	0.43
50:3:887:A:C6	50:3:888:A:C5	3.06	0.43
50:3:888:A:N6	50:3:889:G:O6	2.51	0.43
50:3:996:A:C6	50:3:998:C:C2	3.05	0.43
50:3:1070:U:H2'	50:3:1071:G:C8	2.53	0.43
50:3:1135:C:H2'	50:3:1136:U:O4'	2.18	0.43
50:3:1417:G:H2'	50:3:1418:U:C6	2.53	0.43
50:3:1448:U:H2'	50:3:1449:G:H8	1.82	0.43
50:3:1606:A:C2	50:3:1607:G:H1'	2.53	0.43
50:3:1753:G:C6	50:3:1754:U:C4	3.06	0.43
50:3:1792:A:C6	50:3:1794:A:N3	2.86	0.43
50:3:1989:U:C2	50:3:1990:C:C5	3.06	0.43
50:3:2097:A:C5	50:3:2098:U:C4	3.06	0.43
50:3:2100:G:H2'	50:3:2101:A:C8	2.52	0.43
50:3:2111:U:H5'	50:3:2112:A:C5'	2.47	0.43
50:3:2302:C:N3	50:3:2347:G:N1	2.65	0.43
50:3:2339:G:N2	50:3:2393:C:C4	2.86	0.43
50:3:2423:G:C6	50:3:2424:C:N4	2.86	0.43
50:3:2536:U:H3'	50:3:2538:A:N7	2.33	0.43
50:3:2575:G:C2	50:3:2576:A:C5	3.06	0.43
50:3:2635:G:H2'	50:3:2636:U:C6	2.53	0.43
50:3:2785:G:H1'	50:3:2787:U:H5	1.83	0.43
51:4:32:G:H21	51:4:35:C:H41	1.65	0.43
52:5:86:A:H8	52:5:86:A:O5'	2.01	0.43
52:5:575:A:H2'	52:5:576:A:O4'	2.17	0.43
52:5:975:C:HO2'	52:5:976:U:P	2.40	0.43
52:5:1222:U:O2	52:5:1264:G:C2	2.71	0.43
52:5:1405:U:H2'	52:5:1406:U:C6	2.52	0.43
1:0:21:ARG:HD2	1:0:43:THR:HG22	2.00	0.43
4:A:88:LYS:O	4:A:93:LYS:HG3	2.19	0.43
5:B:18:TRP:CD1	16:M:54:PRO:HA	2.53	0.43
6:C:166:PHE:HB3	6:C:180:ARG:CZ	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:192:ILE:O	7:D:195:THR:OG1	2.33	0.43
13:J:86:LYS:O	13:J:90:ILE:N	2.37	0.43
13:J:121:ARG:NH1	52:5:792:C:OP1	2.51	0.43
14:K:48:THR:HB	14:K:75:GLU:OE2	2.18	0.43
16:M:24:CYS:N	16:M:33:VAL:HG21	2.33	0.43
18:O:5:ARG:NH1	52:5:621:C:O2	2.51	0.43
24:a:41:LEU:HD11	50:3:1823:U:C6	2.52	0.43
26:c:69:LYS:HG2	26:c:70:HIS:N	2.33	0.43
27:d:24:SER:HA	51:4:53:U:H4'	2.00	0.43
28:e:91:ARG:HE	28:e:133:GLU:HB3	1.83	0.43
37:n:33:ILE:O	37:n:39:ILE:HA	2.18	0.43
37:n:86:LEU:HD12	37:n:88:ASN:H	1.84	0.43
40:q:19:THR:HG22	40:q:93:LYS:HB3	2.00	0.43
44:u:43:GLN:O	44:u:80:LEU:HD23	2.17	0.43
46:w:55:LEU:O	46:w:59:THR:OG1	2.35	0.43
50:3:168:A:H2'	50:3:169:U:O4'	2.18	0.43
50:3:223:A:H2'	50:3:224:G:N9	2.31	0.43
50:3:338:G:N1	50:3:348:A:C6	2.86	0.43
50:3:435:U:H2'	50:3:436:G:H8	1.82	0.43
50:3:716:G:C2	50:3:832:C:C2	3.06	0.43
50:3:728:A:C6	50:3:805:G:N1	2.86	0.43
50:3:746:G:C6	50:3:747:A:C5	3.06	0.43
50:3:782:U:OP1	50:3:2620:C:H5'	2.18	0.43
50:3:1056:A:C8	50:3:1157:G:H4'	2.53	0.43
50:3:1080:A:H4'	50:3:1081:A:OP2	2.18	0.43
50:3:1191:A:H3'	50:3:1191:A:OP2	2.18	0.43
50:3:1204:A:C4	50:3:1205:U:C5	3.06	0.43
50:3:1231:G:H2'	50:3:1232:U:H6	1.83	0.43
50:3:1392:G:C2	50:3:1396:A:C6	3.06	0.43
50:3:1397:G:H2'	50:3:1398:C:C6	2.52	0.43
50:3:1507:G:C6	50:3:1537:A:C6	3.06	0.43
50:3:1639:C:C2	50:3:1640:G:H1'	2.53	0.43
50:3:1661:A:C2	50:3:1662:G:N7	2.86	0.43
50:3:1798:A:C2	50:3:1836:A:H4'	2.54	0.43
50:3:2482:U:C5	50:3:2483:C:C4	3.06	0.43
50:3:2850:G:H2'	50:3:2851:U:H6	1.82	0.43
52:5:130:G:N7	52:5:198:A:C8	2.86	0.43
52:5:257:U:H2'	52:5:259:A:OP2	2.18	0.43
52:5:277:G:O3'	52:5:278:A:H8	2.01	0.43
52:5:367:A:C2	52:5:387:G:C2	3.06	0.43
52:5:405:C:H2'	52:5:406:G:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:413:G:H2'	52:5:414:U:O4'	2.16	0.43
52:5:615:G:N1	52:5:622:A:C6	2.86	0.43
52:5:701:A:H2'	52:5:702:U:C6	2.53	0.43
52:5:834:G:N1	52:5:844:U:C4	2.86	0.43
52:5:854:A:H3'	52:5:855:G:H8	1.82	0.43
52:5:1100:C:C4	52:5:1101:A:C5	3.06	0.43
52:5:1166:A:H2'	52:5:1167:C:H6	1.83	0.43
52:5:1242:U:O2	52:5:1301:U:H4'	2.18	0.43
4:A:32:MET:SD	4:A:220:HIS:HB2	2.58	0.43
4:A:40:LYS:HG3	4:A:208:PRO:HG2	2.00	0.43
4:A:57:VAL:HG11	4:A:60:LEU:HD12	2.00	0.43
5:B:4:LYS:HB3	52:5:1166:A:OP1	2.18	0.43
6:C:97:LEU:HB2	6:C:134:ILE:HB	2.01	0.43
6:C:202:ARG:NH2	52:5:28:G:H5''	2.32	0.43
8:E:84:ARG:HD2	20:Q:96:LEU:HD23	1.98	0.43
9:F:26:ILE:HG22	9:F:35:LYS:HB3	1.99	0.43
9:F:48:LEU:O	9:F:52:ARG:HG2	2.17	0.43
9:F:52:ARG:NH1	9:F:120:ALA:HB3	2.22	0.43
13:J:77:LEU:H	13:J:102:GLU:HB3	1.83	0.43
13:J:119:ARG:HB2	23:T:34:TYR:CD2	2.54	0.43
14:K:40:SER:HB3	14:K:43:LYS:HE2	2.00	0.43
15:L:112:PRO:HB3	52:5:942:G:OP1	2.18	0.43
20:Q:68:ALA:HB3	20:Q:103:LYS:N	2.32	0.43
21:R:45:VAL:HG23	21:R:63:THR:HA	1.99	0.43
21:R:47:ASN:O	21:R:62:VAL:HG22	2.18	0.43
21:R:48:THR:HB	21:R:59:ASN:OD1	2.18	0.43
23:T:36:LEU:HG	23:T:41:ARG:HE	1.83	0.43
23:T:37:ARG:HD2	52:5:1501:G:OP2	2.19	0.43
26:c:133:PHE:HB3	26:c:168:LEU:HD21	2.00	0.43
27:d:63:GLN:CD	27:d:89:VAL:HG13	2.43	0.43
28:e:141:LYS:HD3	50:3:2755:G:P	2.58	0.43
29:f:30:LEU:HG	29:f:111:PHE:CD1	2.54	0.43
32:i:58:ILE:HD13	32:i:133:HIS:CE1	2.53	0.43
34:k:22:ARG:CZ	50:3:846:U:N3	2.81	0.43
34:k:67:ASN:O	50:3:2423:G:H4'	2.18	0.43
35:l:20:LYS:NZ	51:4:76:A:OP1	2.49	0.43
35:l:54:ILE:HA	35:l:57:CYS:SG	2.58	0.43
37:n:97:LYS:NZ	37:n:98:TYR:HB3	2.33	0.43
41:r:69:LEU:HD23	41:r:108:SER:C	2.43	0.43
46:w:53:THR:O	46:w:57:ILE:HD12	2.18	0.43
48:y:38:LEU:CG	48:y:41:ARG:HG3	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:93:A:O2'	50:3:94:A:OP2	2.35	0.43
50:3:450:C:O2	50:3:2417:G:N2	2.30	0.43
50:3:603:G:H22	50:3:2507:C:C5'	2.30	0.43
50:3:612:G:C6	50:3:1292:A:N7	2.86	0.43
50:3:777:C:H2'	50:3:778:U:C6	2.53	0.43
50:3:906:G:H1	50:3:945:U:H3	1.64	0.43
50:3:988:G:H2'	50:3:989:G:O4'	2.18	0.43
50:3:998:C:C2	50:3:999:U:C5	3.06	0.43
50:3:1097:G:C4	50:3:1098:G:C8	3.05	0.43
50:3:1284:A:OP2	50:3:1286:G:H8	2.00	0.43
50:3:1305:G:H2'	50:3:1306:G:H8	1.81	0.43
50:3:1510:A:N1	50:3:1529:U:C2	2.86	0.43
50:3:1738:G:C2	50:3:1739:G:C5	3.06	0.43
50:3:1782:U:C5	50:3:1783:G:C8	3.06	0.43
50:3:1846:A:C2	50:3:1847:G:N7	2.87	0.43
50:3:1858:U:C2'	50:3:1859:U:H5'	2.48	0.43
50:3:1923:A:N6	52:5:1383:A:O2'	2.51	0.43
50:3:1932:C:O2	50:3:1936:G:C6	2.72	0.43
50:3:2193:U:N3	50:3:2194:G:N7	2.66	0.43
50:3:2315:G:H4'	50:3:2316:G:C4	2.53	0.43
50:3:2404:G:H2'	50:3:2405:G:C8	2.53	0.43
51:4:90:G:C6	51:4:91:A:C6	3.06	0.43
52:5:20:C:N3	52:5:912:G:C6	2.87	0.43
52:5:23:G:O5'	52:5:559:U:N3	2.51	0.43
52:5:38:U:O2'	52:5:498:G:H4'	2.18	0.43
52:5:39:G:N2	52:5:393:A:O4'	2.51	0.43
52:5:123:U:H2'	52:5:124:U:H6	1.81	0.43
52:5:201:G:C2	52:5:215:C:C2	3.07	0.43
52:5:246:A:O4'	52:5:248:U:C6	2.71	0.43
52:5:261:G:H3'	52:5:263:C:H5	1.82	0.43
52:5:356:G:C4	52:5:357:G:C8	3.06	0.43
52:5:611:A:C6	52:5:612:G:C5	3.07	0.43
52:5:628:A:H3'	52:5:629:U:C6	2.52	0.43
52:5:689:U:H2'	52:5:691:A:OP2	2.18	0.43
52:5:984:A:H2'	52:5:984:A:N3	2.31	0.43
52:5:1136:G:C6	52:5:1151:A:N6	2.79	0.43
52:5:1249:G:N2	52:5:1250:A:N7	2.66	0.43
52:5:1262:A:C6	52:5:1263:A:C6	3.07	0.43
52:5:1280:A:C5	52:5:1281:U:C4	3.06	0.43
52:5:1323:A:H62	52:5:1348:G:N2	2.16	0.43
52:5:1454:G:C2	52:5:1455:G:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:16:HIS:HB3	1:0:21:ARG:NH2	2.34	0.43
1:0:40:ALA:N	50:3:495:U:OP1	2.27	0.43
4:A:35:ARG:NE	4:A:35:ARG:HA	2.34	0.43
4:A:37:TRP:HE1	52:5:827:C:C5'	2.32	0.43
6:C:194:SER:HA	6:C:197:VAL:HG12	2.01	0.43
7:D:110:GLU:HG2	7:D:113:ASN:H	1.82	0.43
7:D:208:VAL:HG11	10:G:85:ASN:HD21	1.83	0.43
8:E:142:ARG:O	10:G:4:THR:OG1	2.34	0.43
9:F:69:MET:HB3	9:F:95:LYS:NZ	2.34	0.43
11:H:104:LYS:HD2	11:H:107:THR:OG1	2.19	0.43
11:H:115:ARG:NH2	52:5:1106:U:O2'	2.52	0.43
12:I:78:ARG:HH12	52:5:1127:A:H5'	1.82	0.43
14:K:30:LEU:O	14:K:31:LEU:HG	2.17	0.43
14:K:122:LYS:HB3	14:K:133:LYS:O	2.17	0.43
16:M:32:ALA:CB	52:5:969:A:H5''	2.48	0.43
16:M:46:GLU:HA	16:M:49:TYR:HB2	2.00	0.43
18:O:12:ARG:HA	18:O:32:HIS:HA	2.00	0.43
18:O:33:LEU:HG	18:O:35:PRO:HD3	2.00	0.43
19:P:66:THR:HG21	19:P:76:ARG:HG3	2.00	0.43
22:S:56:ARG:HD2	52:5:197:A:OP1	2.18	0.43
24:a:136:MET:HG3	24:a:140:PHE:HB2	2.00	0.43
25:b:47:TYR:CE2	50:3:2645:U:H4'	2.54	0.43
27:d:8:TYR:HA	27:d:12:ILE:HG12	2.01	0.43
29:f:2:LYS:HB2	29:f:36:ALA:HA	1.99	0.43
29:f:41:LYS:HB2	29:f:46:ASP:HB2	2.00	0.43
34:k:77:TRP:CE2	34:k:111:PRO:HB2	2.53	0.43
34:k:97:SER:HA	34:k:100:GLU:CD	2.43	0.43
36:m:50:THR:OG1	50:3:2844:U:H5''	2.18	0.43
38:o:29:ASP:HA	38:o:94:GLY:H	1.83	0.43
40:q:29:VAL:HG13	40:q:60:GLU:O	2.19	0.43
44:u:41:ASP:OD1	44:u:81:VAL:HG13	2.19	0.43
44:u:43:GLN:NE2	50:3:960:A:H4'	2.34	0.43
44:u:69:SER:H	50:3:2373:G:P	2.41	0.43
50:3:119:A:OP2	50:3:120:A:C8	2.72	0.43
50:3:133:G:C2	50:3:151:C:C2	3.07	0.43
50:3:181:G:C2	50:3:182:C:C6	3.06	0.43
50:3:254:G:H2'	50:3:255:A:O4'	2.18	0.43
50:3:374:A:H3'	50:3:375:U:H6	1.83	0.43
50:3:633:G:H1	50:3:692:U:H3	1.65	0.43
50:3:748:G:H2'	50:3:749:U:H6	1.83	0.43
50:3:840:G:H3'	50:3:841:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:862:U:H4'	50:3:863:U:C6	2.53	0.43
50:3:1056:A:H2'	50:3:1058:U:O4'	2.18	0.43
50:3:1071:G:N1	50:3:1155:G:C6	2.87	0.43
50:3:1388:G:C5	50:3:1389:G:C8	3.07	0.43
50:3:1519:A:H3'	50:3:1520:A:C8	2.54	0.43
50:3:1672:C:H4'	50:3:2718:C:O2	2.18	0.43
50:3:1723:A:C5	50:3:1734:A:C5	3.06	0.43
50:3:1755:A:H2'	50:3:1756:A:C8	2.54	0.43
50:3:1821:G:H3'	50:3:1822:A:H8	1.84	0.43
50:3:1920:A:H4'	50:3:1921:C:O5'	2.18	0.43
50:3:1942:G:C2	50:3:1969:C:C2	3.06	0.43
50:3:2005:G:H2'	50:3:2006:C:C6	2.54	0.43
50:3:2054:C:H2'	50:3:2055:A:H8	1.81	0.43
50:3:2086:U:H2'	50:3:2087:G:O4'	2.18	0.43
50:3:2089:A:H2'	50:3:2090:G:H5'	1.99	0.43
50:3:2101:A:N1	50:3:2204:C:C4	2.86	0.43
50:3:2472:G:H2'	50:3:2473:C:C6	2.53	0.43
50:3:2472:G:C6	50:3:2495:A:N6	2.87	0.43
50:3:2530:U:C2	50:3:2773:A:C8	3.07	0.43
50:3:2728:U:C4	50:3:2876:G:O6	2.71	0.43
50:3:2770:U:H2'	50:3:2771:G:H8	1.82	0.43
50:3:2799:U:OP1	50:3:2896:G:N2	2.51	0.43
50:3:2886:A:C6	50:3:2887:A:N7	2.86	0.43
52:5:107:A:H8	52:5:107:A:OP1	2.01	0.43
52:5:148:A:H2	52:5:343:G:HO2'	1.64	0.43
52:5:350:G:C2	52:5:351:C:C2	3.06	0.43
52:5:397:C:H2'	52:5:398:G:C8	2.53	0.43
52:5:448:A:N6	52:5:478:G:C4	2.87	0.43
52:5:560:U:OP2	52:5:560:U:H6	2.00	0.43
52:5:695:G:H2'	52:5:696:C:H6	1.82	0.43
52:5:940:G:C4	52:5:941:A:N7	2.87	0.43
52:5:1226:A:C6	52:5:1227:A:C6	3.07	0.43
52:5:1461:G:C6	52:5:1462:G:C6	3.06	0.43
4:A:45:ILE:HG22	4:A:46:GLU:O	2.18	0.43
4:A:95:LEU:HD13	4:A:229:MET:HG3	2.00	0.43
4:A:219:ASN:OD1	4:A:219:ASN:N	2.51	0.43
5:B:160:LEU:C	5:B:162:GLY:H	2.25	0.43
6:C:27:LYS:HB3	52:5:409:G:N1	2.33	0.43
8:E:150:GLN:O	10:G:58:GLN:NE2	2.51	0.43
9:F:111:HIS:O	9:F:118:LYS:HB3	2.17	0.43
12:I:58:ILE:HB	12:I:64:ASP:HB2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:M:40:CYS:HB3	16:M:43:CYS:CB	2.48	0.43
21:R:18:LYS:O	21:R:22:MET:HG2	2.18	0.43
22:S:14:ASN:HB2	22:S:17:ARG:HB2	2.01	0.43
22:S:66:ARG:O	22:S:69:LYS:HG2	2.18	0.43
25:b:67:GLN:HA	25:b:70:PHE:HD2	1.82	0.43
25:b:72:LYS:HD3	50:3:2794:U:H5''	1.99	0.43
26:c:203:VAL:O	26:c:207:LEU:HD13	2.19	0.43
27:d:101:GLU:HB2	27:d:105:TYR:CD2	2.53	0.43
28:e:106:LEU:HD11	28:e:118:GLU:HB3	2.00	0.43
32:i:10:GLU:HG2	32:i:13:ASN:H	1.82	0.43
32:i:58:ILE:HA	32:i:126:HIS:O	2.18	0.43
33:j:71:ARG:HH22	33:j:72:LYS:HB3	1.83	0.43
34:k:72:PHE:CD2	50:3:2413:G:H5''	2.54	0.43
36:m:9:LYS:O	50:3:2009:U:H4'	2.19	0.43
36:m:12:ALA:HA	36:m:15:VAL:HG12	2.01	0.43
36:m:36:LYS:NZ	50:3:1686:U:H5'	2.34	0.43
40:q:22:VAL:HG22	40:q:92:LEU:HD22	1.98	0.43
41:r:28:LYS:HG3	41:r:29:THR:N	2.33	0.43
50:3:121:U:H5''	50:3:123:G:OP2	2.18	0.43
50:3:338:G:N1	50:3:348:A:N1	2.66	0.43
50:3:446:A:C6	50:3:454:G:N1	2.86	0.43
50:3:455:G:C6	50:3:456:G:C6	3.06	0.43
50:3:463:U:O2'	50:3:464:A:H8	2.02	0.43
50:3:514:A:C5	50:3:516:A:C5	3.05	0.43
50:3:515:A:H4'	50:3:516:A:H5'	1.99	0.43
50:3:791:A:C6	50:3:792:G:C5	3.07	0.43
50:3:993:A:C5	50:3:995:A:C8	3.06	0.43
50:3:1013:G:H2'	50:3:1014:G:O4'	2.19	0.43
50:3:1195:A:H2'	50:3:1196:U:C6	2.53	0.43
50:3:1370:A:H3'	50:3:1371:G:H5''	2.01	0.43
50:3:1422:U:C4'	50:3:1637:A:H4'	2.48	0.43
50:3:1455:A:N6	50:3:1605:A:C8	2.87	0.43
50:3:1550:G:H2'	50:3:1551:U:C6	2.54	0.43
50:3:1613:A:C6	50:3:1614:G:H1'	2.53	0.43
50:3:1628:G:H2'	50:3:1629:U:C6	2.54	0.43
50:3:1867:G:H22	50:3:1889:U:H1'	1.83	0.43
50:3:1883:A:H2'	50:3:1884:A:C8	2.53	0.43
50:3:1900:C:O2	50:3:1900:C:H2'	2.19	0.43
50:3:2134:G:C2	50:3:2171:A:C8	3.07	0.43
50:3:2212:U:C2	50:3:2229:C:C2	3.07	0.43
50:3:2213:A:H2'	50:3:2214:A:H8	1.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2356:U:H2'	50:3:2357:G:C8	2.54	0.43
50:3:2363:C:C4	50:3:2364:A:N1	2.87	0.43
50:3:2469:A:H2	50:3:2499:U:H3	1.67	0.43
50:3:2480:G:C2	50:3:2486:A:N6	2.72	0.43
50:3:2801:U:H2'	50:3:2808:A:N1	2.34	0.43
50:3:2887:A:H5'	50:3:2888:U:H5'	2.00	0.43
51:4:51:A:H2'	51:4:52:G:C8	2.54	0.43
52:5:334:A:H2'	52:5:335:C:H6	1.84	0.43
52:5:378:A:H8	52:5:378:A:O5'	2.01	0.43
52:5:547:C:N4	52:5:548:G:O6	2.52	0.43
52:5:972:A:O2'	52:5:974:C:OP2	2.23	0.43
52:5:1130:G:C4	52:5:1131:A:C8	3.07	0.43
52:5:1151:A:H2'	52:5:1152:G:O4'	2.18	0.43
52:5:1212:C:C4'	52:5:1274:G:H22	2.20	0.43
52:5:1263:A:H2'	52:5:1264:G:H5'	1.99	0.43
52:5:1424:C:N4	52:5:1430:G:O6	2.51	0.43
52:5:1430:G:H2'	52:5:1431:A:O4'	2.18	0.43
52:5:1473:U:H1'	52:5:1474:A:N7	2.32	0.43
3:2:13:ASP:O	3:2:28:LYS:HD3	2.18	0.43
4:A:83:LEU:H	4:A:176:LEU:HA	1.84	0.43
4:A:246:PHE:C	4:A:248:TYR:H	2.27	0.43
7:D:72:LYS:NZ	7:D:74:LYS:HB3	2.33	0.43
7:D:133:LYS:HZ1	7:D:137:TYR:HB3	1.83	0.43
8:E:8:LEU:O	8:E:82:VAL:HA	2.19	0.43
9:F:3:LYS:HB2	52:5:930:A:N7	2.33	0.43
10:G:106:LEU:H	10:G:106:LEU:CD2	2.31	0.43
11:H:21:LEU:HB3	11:H:63:PHE:CD1	2.54	0.43
12:I:15:LYS:HB3	12:I:105:ARG:HB3	2.00	0.43
14:K:134:LYS:N	52:5:37:C:O3'	2.49	0.43
16:M:40:CYS:HB3	16:M:43:CYS:HB3	2.00	0.43
17:N:54:TYR:HA	17:N:57:VAL:HG12	1.99	0.43
19:P:58:GLY:O	19:P:83:ARG:HA	2.19	0.43
25:b:33:PRO:O	25:b:95:GLN:NE2	2.50	0.43
27:d:14:LYS:O	27:d:18:LYS:HG2	2.19	0.43
28:e:4:ILE:HB	28:e:69:GLY:HA2	1.99	0.43
34:k:124:LEU:H	34:k:144:GLY:CA	2.30	0.43
34:k:133:LYS:HG3	50:3:672:G:OP1	2.19	0.43
41:r:51:LEU:HD21	41:r:105:VAL:HG11	2.01	0.43
45:v:30:ASN:ND2	50:3:2239:U:OP1	2.39	0.43
46:w:49:ARG:NH2	50:3:77:G:O3'	2.51	0.43
49:z:33:ALA:HB2	49:z:48:LYS:HZ3	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:122:G:C5	50:3:132:G:C6	3.06	0.43
50:3:291:G:C4	50:3:292:G:C8	3.07	0.43
50:3:291:G:H2'	50:3:292:G:O4'	2.19	0.43
50:3:465:A:H3'	50:3:465:A:OP2	2.19	0.43
50:3:519:A:C6	50:3:520:C:H1'	2.54	0.43
50:3:612:G:C4	50:3:1292:A:C6	3.06	0.43
50:3:1242:G:H1'	50:3:1267:A:N6	2.34	0.43
50:3:1330:U:C2	50:3:1678:U:H1'	2.54	0.43
50:3:1375:G:C6	50:3:1376:G:N7	2.87	0.43
50:3:1379:C:O3'	50:3:1605:A:O2'	2.35	0.43
50:3:1472:C:N4	50:3:1580:G:O6	2.24	0.43
50:3:1494:U:C2	50:3:1550:G:C2	3.07	0.43
50:3:1500:A:C6	50:3:1544:G:C6	3.07	0.43
50:3:1608:C:C2	50:3:1609:U:C5	3.06	0.43
50:3:1741:G:H2'	50:3:1742:C:O4'	2.18	0.43
50:3:1963:U:H2'	50:3:1964:C:O4'	2.19	0.43
50:3:2057:C:N4	50:3:2058:G:O6	2.52	0.43
50:3:2067:A:HO2'	50:3:2068:G:P	2.36	0.43
50:3:2070:C:C2	50:3:2071:C:C5	3.07	0.43
50:3:2071:C:H5'	53:7:77:A:C5'	2.40	0.43
50:3:2120:G:C4	50:3:2121:A:C8	3.06	0.43
50:3:2217:G:C6	50:3:2224:A:N1	2.87	0.43
50:3:2406:U:H2'	50:3:2407:G:C8	2.54	0.43
50:3:2586:G:C2	50:3:2587:U:C4	3.07	0.43
50:3:2591:G:H2'	50:3:2592:U:N1	2.34	0.43
50:3:2806:A:H62	50:3:2807:G:H21	1.66	0.43
50:3:2879:U:H2'	50:3:2880:A:C8	2.54	0.43
51:4:7:G:N7	51:4:8:C:N4	2.67	0.43
51:4:14:U:H2'	51:4:15:C:H6	1.84	0.43
51:4:65:G:C2	51:4:66:A:C4	3.06	0.43
52:5:32:U:C6	52:5:302:A:H1'	2.53	0.43
52:5:77:U:H3'	52:5:78:A:H8	1.83	0.43
52:5:378:A:H2'	52:5:379:A:N9	2.33	0.43
52:5:429:A:H2'	52:5:430:G:O4'	2.19	0.43
52:5:434:U:C4	52:5:493:A:N7	2.87	0.43
52:5:536:U:H3'	52:5:537:A:H8	1.83	0.43
52:5:594:A:H2'	52:5:595:G:O4'	2.19	0.43
52:5:923:G:H2'	52:5:924:A:C8	2.53	0.43
52:5:1054:C:H5	52:5:1055:G:HO2'	1.62	0.43
52:5:1055:G:H4'	52:5:1056:U:H4'	2.01	0.43
52:5:1139:A:C6	52:5:1149:G:C6	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1267:G:C2	52:5:1268:G:C5	3.06	0.43
52:5:1416:U:N3	52:5:1436:C:O2	2.52	0.43
53:7:11:G:N2	53:7:27:A:H1'	2.34	0.43
53:7:16:G:N2	53:7:49:C:C4	2.82	0.43
2:1:1:MET:C	50:3:246:G:C8	2.97	0.43
4:A:140:ASN:OD1	4:A:141:ALA:N	2.52	0.43
5:B:11:ARG:O	5:B:15:ASN:N	2.51	0.43
5:B:107:ASN:CG	5:B:108:GLU:H	2.26	0.43
6:C:118:ASN:HA	6:C:130:ASP:O	2.18	0.43
8:E:71:ASP:OD1	8:E:72:PHE:N	2.48	0.43
8:E:151:LYS:N	8:E:152:PRO:HD3	2.33	0.43
9:F:3:LYS:HA	52:5:928:G:OP2	2.18	0.43
12:I:105:ARG:NE	12:I:105:ARG:HA	2.32	0.43
24:a:78:ASN:CG	29:f:87:ARG:HD3	2.43	0.43
24:a:185:LEU:HD21	50:3:1827:U:OP1	2.18	0.43
26:c:70:HIS:N	50:3:2067:A:OP1	2.51	0.43
26:c:93:PRO:HB3	39:p:1:MET:H2	1.83	0.43
27:d:16:LEU:HD23	27:d:16:LEU:HA	1.79	0.43
37:n:34:LYS:HZ2	37:n:101:ARG:HD2	1.84	0.43
39:p:50:ARG:HD2	50:3:1191:A:C8	2.54	0.43
41:r:130:GLU:HB3	41:r:134:LYS:HZ3	1.84	0.43
42:s:34:LYS:HE2	50:3:130:C:P	2.59	0.43
46:w:51:LEU:HA	46:w:54:ILE:HB	1.99	0.43
49:z:16:GLU:OE2	49:z:40:ARG:HD2	2.19	0.43
50:3:15:A:C2	50:3:17:G:C2	3.07	0.43
50:3:33:C:H2'	50:3:34:C:H6	1.83	0.43
50:3:40:A:N1	50:3:478:G:C6	2.86	0.43
50:3:123:G:H8	50:3:123:G:O5'	2.02	0.43
50:3:143:A:H8	50:3:143:A:O5'	2.02	0.43
50:3:161:U:H2'	50:3:162:G:O4'	2.19	0.43
50:3:177:U:H2'	50:3:178:A:H8	1.84	0.43
50:3:244:G:N2	50:3:262:G:C6	2.86	0.43
50:3:263:C:H2'	50:3:264:G:O4'	2.19	0.43
50:3:618:G:P	50:3:618:G:H8	2.42	0.43
50:3:632:A:H2'	50:3:633:G:H8	1.83	0.43
50:3:674:G:C6	50:3:687:G:C6	3.06	0.43
50:3:734:A:H2'	50:3:735:G:O4'	2.19	0.43
50:3:797:U:C2	50:3:798:G:C6	3.07	0.43
50:3:1002:A:O4'	50:3:2275:A:N6	2.51	0.43
50:3:1113:U:H4'	50:3:1114:C:C6	2.54	0.43
50:3:1172:G:H1'	50:3:2046:G:P	2.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1231:G:C6	50:3:1276:A:C6	3.07	0.43
50:3:1251:G:C2	50:3:1259:A:C4	3.07	0.43
50:3:1251:G:C6	50:3:1252:C:C4	3.06	0.43
50:3:1297:U:O2'	50:3:1298:A:OP1	2.28	0.43
50:3:1370:A:C6	50:3:1373:C:C2	3.06	0.43
50:3:1617:U:H5'	50:3:1619:A:H1'	1.99	0.43
50:3:1779:G:H2'	50:3:1780:A:H4'	1.99	0.43
50:3:1841:U:O2'	50:3:1976:A:H3'	2.19	0.43
50:3:1845:C:H1'	50:3:1905:U:C4	2.54	0.43
50:3:1886:C:C4	50:3:1887:U:C4	3.07	0.43
50:3:1910:G:H2'	50:3:1911:G:C8	2.53	0.43
50:3:2068:G:H3'	50:3:2453:G:N7	2.33	0.43
50:3:2077:A:C2	50:3:2450:C:C2	3.07	0.43
50:3:2124:A:N6	50:3:2174:G:H22	2.16	0.43
50:3:2273:U:O5'	50:3:2273:U:H6	2.00	0.43
50:3:2474:C:H2'	50:3:2475:C:C6	2.53	0.43
50:3:2530:U:H1'	50:3:2655:U:H5'	1.99	0.43
50:3:2580:A:O5'	50:3:2582:G:H4'	2.19	0.43
50:3:2649:G:C6	50:3:2782:A:N1	2.86	0.43
50:3:2666:C:H2'	50:3:2667:G:O4'	2.18	0.43
50:3:2668:A:C6	50:3:2669:G:C2	3.07	0.43
50:3:2679:G:H2'	50:3:2680:C:C6	2.53	0.43
50:3:2752:G:H2'	50:3:2753:C:C6	2.53	0.43
50:3:2812:U:O2'	50:3:2813:A:H5''	2.19	0.43
51:4:31:G:C6	51:4:48:A:N6	2.86	0.43
52:5:102:G:N2	52:5:309:A:O2'	2.51	0.43
52:5:150:A:C5	52:5:151:C:C5	3.07	0.43
52:5:471:A:H2'	52:5:472:G:C8	2.54	0.43
52:5:826:G:C2	52:5:852:G:H1'	2.54	0.43
52:5:960:C:H1'	52:5:964:A:C8	2.54	0.43
52:5:1046:A:C2	52:5:1181:G:C4	3.06	0.43
52:5:1068:G:H2'	52:5:1070:G:OP2	2.19	0.43
52:5:1154:A:C6	52:5:1155:A:C6	3.06	0.43
52:5:1232:C:H5''	52:5:1233:G:N7	2.34	0.43
52:5:1367:G:H2'	52:5:1368:U:N1	2.33	0.43
52:5:1390:G:H2'	52:5:1391:A:H8	1.82	0.43
5:B:37:ASP:OD1	5:B:38:GLU:N	2.51	0.43
9:F:17:PHE:CZ	9:F:58:LEU:HB2	2.53	0.43
14:K:27:ASN:HA	14:K:72:ASN:HD22	1.84	0.43
17:N:5:LYS:O	17:N:8:ILE:HG22	2.18	0.43
19:P:11:GLY:O	19:P:61:VAL:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:a:47:ARG:HH12	24:a:59:GLY:HA3	1.84	0.43
24:a:163:SER:HB2	50:3:1825:U:H5''	2.01	0.43
24:a:163:SER:OG	24:a:164:ALA:N	2.52	0.43
24:a:260:LYS:NZ	50:3:1811:A:O3'	2.50	0.43
24:a:272:LYS:HB3	24:a:272:LYS:HE2	1.75	0.43
25:b:117:ARG:NH2	50:3:2732:A:OP1	2.52	0.43
26:c:60:GLY:HA3	26:c:80:ARG:CZ	2.48	0.43
27:d:52:SER:HA	27:d:55:ASN:ND2	2.34	0.43
27:d:130:ILE:HD12	27:d:156:LEU:HD11	1.99	0.43
28:e:62:LYS:NZ	50:3:2758:A:OP1	2.52	0.43
37:n:30:LEU:HD23	37:n:91:PHE:HE1	1.83	0.43
43:t:10:VAL:HG13	43:t:75:ALA:O	2.18	0.43
46:w:15:LEU:O	46:w:19:VAL:HG23	2.18	0.43
47:x:17:ALA:N	47:x:36:ILE:O	2.52	0.43
48:y:51:LEU:O	48:y:51:LEU:HG	2.19	0.43
50:3:71:C:H4'	50:3:77:G:N7	2.33	0.43
50:3:117:C:O2'	50:3:127:A:H1'	2.18	0.43
50:3:210:U:C2	50:3:211:A:C8	3.07	0.43
50:3:226:A:N6	50:3:237:A:O5'	2.52	0.43
50:3:231:A:H2'	50:3:2415:A:H4'	2.01	0.43
50:3:411:U:H4'	50:3:459:A:O2'	2.18	0.43
50:3:477:U:H2'	50:3:478:G:C8	2.54	0.43
50:3:572:G:C2'	50:3:589:A:H61	2.32	0.43
50:3:601:U:H5'	50:3:981:A:C6	2.53	0.43
50:3:612:G:H2'	50:3:613:C:O4'	2.18	0.43
50:3:978:G:H2'	50:3:979:U:C6	2.54	0.43
50:3:1110:C:C2	50:3:1111:C:C5	3.06	0.43
50:3:1311:G:H1'	50:3:1357:U:C2	2.54	0.43
50:3:1413:A:O2'	50:3:1414:C:H5''	2.19	0.43
50:3:1609:U:H2'	50:3:1610:U:O4'	2.18	0.43
50:3:1749:A:C4	50:3:1750:A:C8	3.07	0.43
50:3:1876:G:H2'	50:3:1879:A:N6	2.33	0.43
50:3:2600:G:C6	50:3:2611:G:C6	3.07	0.43
51:4:7:G:C8	51:4:8:C:N4	2.86	0.43
52:5:173:U:H2'	52:5:174:U:H6	1.84	0.43
52:5:313:U:H2'	52:5:314:G:H8	1.84	0.43
52:5:401:U:OP2	52:5:401:U:H6	2.02	0.43
52:5:416:U:H3'	52:5:417:U:O4'	2.18	0.43
52:5:500:G:C2	52:5:501:A:C4	3.07	0.43
52:5:648:C:N4	52:5:749:G:O2'	2.52	0.43
52:5:972:A:H1'	52:5:977:U:O4	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1009:G:N2	52:5:1012:A:H2	2.11	0.43
52:5:1111:G:C2	52:5:1130:G:C2	3.06	0.43
52:5:1119:C:H6	52:5:1122:U:O2	2.02	0.43
52:5:1220:A:C2	52:5:1221:A:C5	3.07	0.43
52:5:1254:A:O2'	52:5:1257:C:N4	2.52	0.43
52:5:1271:U:H1'	52:5:1272:C:N3	2.33	0.43
52:5:1330:A:C6	52:5:1331:A:C6	3.06	0.43
53:7:41:C:H2'	53:7:42:C:C5	2.54	0.43
2:1:5:SER:C	2:1:9:LYS:HE2	2.44	0.43
2:1:22:LYS:HD2	34:k:65:PHE:HA	2.00	0.43
4:A:50:LYS:HD2	4:A:50:LYS:HA	1.76	0.43
6:C:75:PHE:O	6:C:79:LEU:HG	2.19	0.43
9:F:69:MET:HA	9:F:99:ALA:HB2	2.01	0.43
11:H:111:ARG:HG2	52:5:1321:G:P	2.59	0.43
14:K:5:ALA:O	14:K:9:ARG:HG3	2.19	0.43
14:K:134:LYS:NZ	52:5:498:G:H5''	2.34	0.43
20:Q:43:PHE:CD2	20:Q:78:ASN:HB3	2.54	0.43
24:a:256:THR:HB	24:a:257:PRO:HD2	2.01	0.43
25:b:54:PHE:C	25:b:78:THR:HB	2.44	0.43
26:c:128:VAL:HB	26:c:198:LEU:HB3	2.01	0.43
27:d:84:LEU:HD12	27:d:84:LEU:O	2.19	0.43
27:d:123:ASP:OD2	27:d:127:ASN:HB2	2.18	0.43
30:g:34:ALA:HA	50:3:1120:A:H62	1.83	0.43
37:n:44:TRP:CZ2	51:4:6:U:H1'	2.54	0.43
38:o:32:ASN:HB2	38:o:91:LYS:NZ	2.33	0.43
38:o:35:ILE:CB	38:o:46:GLN:O	2.51	0.43
38:o:57:GLY:CA	38:o:62:GLU:HG2	2.33	0.43
42:s:2:ASP:CG	42:s:39:ARG:HH11	2.27	0.43
42:s:6:VAL:HG11	42:s:39:ARG:NH1	2.31	0.43
43:t:5:LYS:CE	50:3:86:A:H5''	2.47	0.43
43:t:28:MET:HG2	43:t:31:ARG:HE	1.84	0.43
46:w:27:LEU:O	46:w:30:ARG:HB2	2.19	0.43
49:z:12:ASN:ND2	49:z:46:VAL:HG12	2.31	0.43
50:3:83:G:C2'	50:3:84:G:H5'	2.49	0.43
50:3:300:G:H2'	50:3:301:G:H8	1.84	0.43
50:3:325:G:C6	50:3:384:G:C5	3.07	0.43
50:3:335:G:C2	50:3:336:C:C2	3.07	0.43
50:3:483:A:H4'	50:3:485:A:C8	2.54	0.43
50:3:532:A:H2'	50:3:533:G:O4'	2.19	0.43
50:3:662:U:H5''	50:3:663:A:C5'	2.49	0.43
50:3:706:C:H2'	50:3:707:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:773:G:C6	50:3:774:A:C6	3.07	0.43
50:3:980:C:H5''	50:3:981:A:H8	1.82	0.43
50:3:1211:U:C2	50:3:1212:C:C6	3.06	0.43
50:3:1244:A:C4'	50:3:1269:C:H4'	2.49	0.43
50:3:1277:A:H8	50:3:1277:A:OP2	2.01	0.43
50:3:1292:A:C5	50:3:1293:U:C4	3.07	0.43
50:3:1439:U:H2'	50:3:1440:U:C6	2.53	0.43
50:3:1450:G:C6	50:3:1611:C:N3	2.86	0.43
50:3:1512:A:C6	50:3:1528:G:N1	2.86	0.43
50:3:1522:U:O2'	50:3:1611:C:H5''	2.19	0.43
50:3:1688:A:H2'	50:3:1689:A:C8	2.53	0.43
50:3:1715:A:C2	50:3:1769:A:H3'	2.54	0.43
50:3:2254:G:C6	50:3:2434:A:C5	3.07	0.43
50:3:2396:A:N7	50:3:2397:G:N1	2.66	0.43
50:3:2486:A:N7	50:3:2537:G:C6	2.87	0.43
50:3:2603:G:N1	50:3:2605:G:H3'	2.34	0.43
50:3:2746:A:H2'	50:3:2747:U:O4'	2.19	0.43
50:3:2780:U:C2	50:3:2781:C:C5	3.07	0.43
50:3:2810:A:H5'	50:3:2811:G:OP2	2.19	0.43
50:3:2846:A:C6	50:3:2880:A:N1	2.87	0.43
51:4:75:U:C4	51:4:89:A:N7	2.87	0.43
52:5:64:C:C4	52:5:90:G:C6	3.06	0.43
52:5:107:A:H61	52:5:235:C:N4	2.04	0.43
52:5:133:G:H21	52:5:1422:A:C1'	2.21	0.43
52:5:568:G:C5	52:5:867:A:C5	3.07	0.43
52:5:628:A:H5''	52:5:629:U:C5	2.53	0.43
52:5:661:G:H1	52:5:738:A:H2	1.54	0.43
52:5:663:G:C6	52:5:738:A:C5	3.07	0.43
52:5:672:A:H8	52:5:672:A:O5'	2.01	0.43
52:5:742:C:H5''	52:5:845:C:O2	2.19	0.43
52:5:1011:A:H1'	52:5:1193:U:O2'	2.19	0.43
52:5:1097:G:H2'	52:5:1098:C:H6	1.83	0.43
52:5:1146:A:H2'	52:5:1147:U:H6	1.83	0.43
52:5:1220:A:N1	52:5:1267:G:C6	2.86	0.43
52:5:1358:U:H2'	52:5:1359:C:H6	1.83	0.43
3:2:4:ARG:HG3	50:3:2474:C:OP1	2.19	0.43
3:2:7:VAL:HG12	3:2:34:GLN:NE2	2.34	0.43
4:A:84:PHE:HB2	4:A:107:PHE:CB	2.49	0.43
7:D:144:SER:OG	7:D:194:ALA:HA	2.19	0.43
8:E:7:LEU:HB3	8:E:58:TYR:HB2	1.99	0.43
8:E:49:ILE:HG22	8:E:52:GLN:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:39:GLN:NE2	11:H:44:LYS:HB3	2.34	0.43
9:F:115:MET:O	9:F:119:ILE:HG22	2.19	0.43
10:G:111:LEU:HD13	10:G:111:LEU:HA	1.87	0.43
11:H:9:LEU:HD21	11:H:11:ARG:NH1	2.34	0.43
13:J:37:TRP:HZ2	52:5:683:G:H4'	1.84	0.43
16:M:48:ALA:HA	16:M:53:ILE:HD12	2.00	0.43
17:N:72:LEU:HA	17:N:75:TYR:CE1	2.54	0.43
19:P:4:ASN:HB3	52:5:115:A:H2'	2.00	0.43
20:Q:72:PRO:HG2	20:Q:75:ILE:HG13	2.00	0.43
24:a:5:LYS:HA	24:a:18:THR:HG22	2.00	0.43
24:a:258:TRP:C	24:a:260:LYS:H	2.25	0.43
25:b:119:PHE:HA	25:b:167:GLY:O	2.19	0.43
29:f:25:TYR:CD1	29:f:29:PHE:HD2	2.37	0.43
29:f:114:LYS:HD3	50:3:2205:U:H4'	2.01	0.43
30:g:115:ASN:C	30:g:116:ARG:HG3	2.44	0.43
34:k:11:LYS:HD2	34:k:11:LYS:N	2.34	0.43
35:l:62:GLY:C	35:l:63:LYS:HD3	2.44	0.43
36:m:13:TRP:NE1	50:3:1304:U:O2'	2.50	0.43
37:n:3:THR:O	37:n:4:ARG:HB3	2.19	0.43
37:n:12:HIS:O	37:n:16:VAL:HG13	2.19	0.43
39:p:94:LEU:HD23	40:q:4:ILE:HD13	2.01	0.43
41:r:61:ASN:OD1	50:3:531:G:H1'	2.19	0.43
44:u:20:GLY:N	53:7:2:G:N3	2.58	0.43
46:w:63:LEU:HB3	46:w:65:TRP:CD1	2.54	0.43
48:y:32:LYS:HA	48:y:32:LYS:HD3	1.79	0.43
50:3:193:G:H2'	50:3:209:G:C2	2.54	0.43
50:3:254:G:C6	50:3:255:A:C5	3.07	0.43
50:3:269:A:N7	50:3:464:A:C8	2.87	0.43
50:3:494:G:N2	50:3:495:U:O4	2.39	0.43
50:3:828:A:N3	50:3:828:A:H2'	2.34	0.43
50:3:885:A:N3	50:3:885:A:H2'	2.34	0.43
50:3:985:A:N1	50:3:1005:G:C6	2.87	0.43
50:3:1107:C:H2'	50:3:1128:G:N1	2.30	0.43
50:3:1233:A:C6	50:3:1234:U:C4	3.06	0.43
50:3:1364:A:H3'	50:3:1365:G:C8	2.54	0.43
50:3:1388:G:C4	50:3:1389:G:C8	3.06	0.43
50:3:1400:U:H2'	50:3:1401:A:H8	1.79	0.43
50:3:1557:G:H21	50:3:1573:A:H62	1.67	0.43
50:3:1737:G:C2	50:3:1738:G:C5	3.07	0.43
50:3:1790:U:H1'	50:3:2595:A:C6	2.54	0.43
50:3:1792:A:C5	50:3:1794:A:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2023:U:C5'	50:3:2065:A:H5'	2.35	0.43
50:3:2054:C:C2	50:3:2055:A:N7	2.87	0.43
50:3:2066:A:H2'	50:3:2511:A:N6	2.34	0.43
50:3:2133:A:C4	50:3:2171:A:O2'	2.72	0.43
50:3:2137:A:OP1	50:3:2139:C:N4	2.52	0.43
50:3:2256:C:H2'	50:3:2257:U:C2	2.53	0.43
50:3:2504:C:H2'	50:3:2505:A:C8	2.54	0.43
50:3:2516:G:H1	50:3:2588:U:H3	1.67	0.43
50:3:2623:U:H6	50:3:2623:U:O5'	2.02	0.43
51:4:5:G:C5	51:4:6:U:C4	3.07	0.43
51:4:43:A:C4	51:4:44:A:C8	3.06	0.43
52:5:28:G:H2'	52:5:29:G:C8	2.54	0.43
52:5:294:A:C2	52:5:295:G:C2	3.07	0.43
52:5:322:G:O2'	52:5:323:A:H5'	2.18	0.43
52:5:350:G:N2	52:5:384:G:O2'	2.46	0.43
52:5:592:A:H2'	52:5:593:A:O4'	2.19	0.43
52:5:612:G:C6	52:5:613:C:C4	3.07	0.43
52:5:702:U:C6	52:5:703:A:C8	3.06	0.43
52:5:710:G:H2'	52:5:711:G:O4'	2.18	0.43
52:5:851:U:H2'	52:5:852:G:C8	2.54	0.43
52:5:971:A:N7	52:5:1332:U:H2'	2.34	0.43
52:5:996:U:C2	52:5:1031:A:N1	2.87	0.43
52:5:1005:U:N3	52:5:1006:A:N7	2.67	0.43
52:5:1127:A:C4	52:5:1128:G:C8	3.07	0.43
52:5:1231:U:C5	52:5:1253:A:H5''	2.54	0.43
52:5:1463:A:C2	52:5:1464:G:C5	3.07	0.43
53:7:43:G:C2	53:7:44:U:H1'	2.53	0.43
5:B:193:GLN:HE22	5:B:197:GLY:N	2.17	0.42
8:E:16:GLU:HG2	8:E:17:GLN:N	2.34	0.42
8:E:31:ASN:C	8:E:33:GLU:HG2	2.44	0.42
8:E:35:LEU:H	8:E:35:LEU:HG	1.71	0.42
8:E:92:ARG:HH22	20:Q:85:HIS:HD2	1.64	0.42
8:E:103:LYS:NZ	52:5:837:G:O6	2.30	0.42
9:F:22:VAL:HA	9:F:25:ILE:HB	2.01	0.42
9:F:25:ILE:HA	9:F:25:ILE:HD13	1.89	0.42
10:G:11:HIS:NE2	52:5:871:U:O2	2.52	0.42
11:H:28:GLY:O	11:H:65:ILE:HG12	2.17	0.42
11:H:78:ALA:HA	11:H:81:ILE:HG12	2.00	0.42
12:I:50:THR:HA	12:I:75:ARG:NH1	2.34	0.42
14:K:27:ASN:O	14:K:35:VAL:HA	2.19	0.42
15:L:119:LYS:C	15:L:120:LYS:HD3	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:P:46:GLN:OE1	52:5:272:G:H4'	2.18	0.42
22:S:21:ASN:ND2	52:5:319:U:O5'	2.52	0.42
22:S:25:LYS:NZ	52:5:319:U:OP1	2.52	0.42
22:S:33:LYS:O	22:S:37:LYS:HG3	2.18	0.42
26:c:30:LYS:O	26:c:34:VAL:HG23	2.18	0.42
26:c:89:ILE:H	26:c:89:ILE:HD12	1.84	0.42
26:c:188:VAL:O	26:c:192:MET:HG2	2.18	0.42
28:e:149:THR:HG23	28:e:152:ARG:HH11	1.84	0.42
33:j:80:ASP:CG	38:o:76:GLU:HG3	2.44	0.42
35:l:26:TYR:CE1	50:3:943:A:H5'	2.53	0.42
36:m:103:LEU:HB2	36:m:113:MET:O	2.19	0.42
39:p:91:ARG:CD	50:3:1032:A:H4'	2.49	0.42
39:p:91:ARG:HD3	50:3:1032:A:H4'	2.01	0.42
40:q:69:ASN:HD21	50:3:1255:G:H5'	1.83	0.42
43:t:14:THR:HA	43:t:18:LYS:HG3	2.00	0.42
48:y:36:LYS:HE3	48:y:36:LYS:HB3	1.69	0.42
49:z:8:ARG:HA	49:z:19:TYR:O	2.18	0.42
49:z:43:LYS:HE2	49:z:43:LYS:HB2	1.83	0.42
50:3:30:A:C6	50:3:31:U:C4	3.07	0.42
50:3:140:G:N2	50:3:142:A:H3'	2.33	0.42
50:3:234:G:H2'	50:3:235:U:C6	2.54	0.42
50:3:483:A:C5	50:3:490:A:C5	3.07	0.42
50:3:558:C:OP1	50:3:575:C:O2'	2.34	0.42
50:3:563:A:N6	50:3:2049:A:O5'	2.51	0.42
50:3:619:A:N1	50:3:844:G:O2'	2.46	0.42
50:3:738:U:H2'	50:3:762:A:H61	1.84	0.42
50:3:829:A:H3'	50:3:830:A:H8	1.84	0.42
50:3:887:A:C6	50:3:888:A:C6	3.07	0.42
50:3:986:G:C2	50:3:1004:U:C2	3.07	0.42
50:3:1426:C:H2'	50:3:1427:C:H6	1.84	0.42
50:3:1553:G:H2'	50:3:1577:A:H62	1.84	0.42
50:3:1585:A:C6	50:3:1749:A:C4	3.07	0.42
50:3:1596:U:C2	50:3:1597:U:C5	3.07	0.42
50:3:1818:G:H2'	50:3:1819:G:H8	1.83	0.42
50:3:1852:G:C2	50:3:1853:G:C4	3.07	0.42
50:3:2055:A:C6	50:3:2056:A:N7	2.87	0.42
50:3:2101:A:H2'	50:3:2102:U:O4'	2.19	0.42
50:3:2228:U:H2'	50:3:2229:C:H6	1.82	0.42
50:3:2231:A:OP2	50:3:2231:A:H8	2.02	0.42
50:3:2616:G:H8	50:3:2616:G:O5'	2.02	0.42
50:3:2736:U:O2'	50:3:2737:G:H5''	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2755:G:N2	50:3:2764:U:C5	2.87	0.42
50:3:2862:U:H2'	50:3:2863:G:N9	2.33	0.42
50:3:2884:C:H2'	50:3:2885:U:C6	2.54	0.42
52:5:79:A:C4	52:5:80:U:H1'	2.53	0.42
52:5:95:C:H2'	52:5:96:G:C8	2.54	0.42
52:5:146:A:H3'	52:5:147:A:H8	1.84	0.42
52:5:292:U:O2'	52:5:554:C:H1'	2.18	0.42
52:5:328:G:C5	52:5:329:C:C5	3.07	0.42
52:5:412:G:O2'	52:5:413:G:H5'	2.18	0.42
52:5:444:G:N2	52:5:485:C:N4	2.67	0.42
52:5:497:A:N1	52:5:544:A:H2'	2.33	0.42
52:5:544:A:H1'	52:5:547:C:H5'	2.01	0.42
52:5:834:G:C2	52:5:835:G:C5	3.07	0.42
52:5:926:C:C4	52:5:1362:G:N1	2.87	0.42
52:5:1030:G:H2'	52:5:1030:G:N3	2.34	0.42
52:5:1133:A:C5	52:5:1155:A:C6	3.07	0.42
52:5:1217:G:O2'	52:5:1277:C:OP1	2.34	0.42
52:5:1323:A:H2'	52:5:1324:A:H5'	2.00	0.42
52:5:1391:A:C4	52:5:1392:A:C8	3.07	0.42
52:5:1475:A:H5''	52:5:1483:C:H5''	2.00	0.42
53:7:64:G:C2	53:7:65:C:C5	3.07	0.42
5:B:12:PHE:CD2	5:B:16:LYS:HB2	2.54	0.42
6:C:73:ARG:N	6:C:76:ARG:HH11	2.17	0.42
8:E:71:ASP:OD1	8:E:71:ASP:N	2.52	0.42
9:F:8:LYS:NZ	52:5:1351:U:OP2	2.30	0.42
11:H:93:ASN:HB3	11:H:96:LEU:HG	2.01	0.42
12:I:95:ARG:NH2	12:I:97:LYS:HA	2.34	0.42
15:L:86:TRP:CD1	21:R:76:PRO:HG3	2.54	0.42
22:S:9:LYS:HA	22:S:12:ARG:NH1	2.34	0.42
25:b:157:GLN:HG2	50:3:2060:G:H4'	2.01	0.42
26:c:108:HIS:CD2	50:3:652:U:H5'	2.53	0.42
27:d:40:VAL:HG21	27:d:50:LEU:HD12	2.01	0.42
29:f:4:ILE:HD11	29:f:42:LYS:HG3	2.01	0.42
33:j:13:ASN:HB3	33:j:99:PHE:HZ	1.84	0.42
33:j:25:LEU:HD22	33:j:59:ARG:CZ	2.49	0.42
35:l:103:MET:HG2	35:l:104:PHE:CD1	2.54	0.42
36:m:18:VAL:O	36:m:22:VAL:HG13	2.19	0.42
39:p:68:LEU:O	39:p:73:MET:HG2	2.19	0.42
39:p:107:LEU:O	39:p:111:LYS:CB	2.67	0.42
40:q:41:LEU:HD23	40:q:44:LYS:HD3	2.00	0.42
41:r:14:PRO:O	41:r:18:ARG:HG3	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:w:88:LYS:O	46:w:92:GLU:HG2	2.19	0.42
49:z:24:ASN:ND2	50:3:2293:C:P	2.92	0.42
50:3:19:G:H2'	50:3:20:C:H6	1.84	0.42
50:3:191:G:C2'	50:3:192:U:H5'	2.49	0.42
50:3:243:U:H3'	50:3:244:G:C8	2.54	0.42
50:3:301:G:H2'	50:3:302:G:O4'	2.19	0.42
50:3:337:U:C2	50:3:349:G:C2	3.07	0.42
50:3:343:A:C6	50:3:364:A:C5	3.06	0.42
50:3:354:C:O2'	50:3:356:A:H2'	2.19	0.42
50:3:399:G:H2'	50:3:399:G:N3	2.34	0.42
50:3:410:G:N2	50:3:437:A:OP2	2.52	0.42
50:3:426:U:O2	50:3:426:U:H2'	2.19	0.42
50:3:545:C:H2'	50:3:546:U:O4'	2.19	0.42
50:3:764:G:C8	50:3:799:A:C8	3.07	0.42
50:3:895:G:O4'	50:3:2276:A:H1'	2.20	0.42
50:3:1047:A:O2'	50:3:1048:A:H5''	2.19	0.42
50:3:1446:G:H1'	50:3:1614:G:N1	2.34	0.42
50:3:1507:G:N1	50:3:1537:A:C6	2.87	0.42
50:3:1739:G:C6	50:3:1740:U:C4	3.07	0.42
50:3:1838:A:C6	50:3:1839:C:N4	2.87	0.42
50:3:1856:G:C4	50:3:1857:G:C8	3.07	0.42
50:3:1959:A:N6	50:3:2557:G:H1'	2.29	0.42
50:3:1964:C:H2'	50:3:1965:C:C6	2.54	0.42
50:3:2046:G:C6	50:3:2047:U:C5	3.07	0.42
50:3:2153:U:H4'	50:3:2154:A:C8	2.54	0.42
50:3:2173:G:C6	50:3:2174:G:C6	3.07	0.42
50:3:2269:C:O2'	50:3:2395:U:O2	2.34	0.42
50:3:2455:G:C8	50:3:2508:U:C6	3.06	0.42
50:3:2472:G:H2'	50:3:2473:C:H6	1.84	0.42
50:3:2658:U:C2	50:3:2679:G:N2	2.87	0.42
50:3:2820:G:H2'	50:3:2821:U:C6	2.54	0.42
52:5:410:A:N6	52:5:428:A:H1'	2.34	0.42
52:5:503:G:C2	52:5:504:A:C4	3.07	0.42
52:5:555:G:C6	52:5:556:G:C6	3.07	0.42
52:5:761:U:H2'	52:5:762:G:O4'	2.20	0.42
52:5:852:G:N1	52:5:864:U:OP1	2.50	0.42
52:5:858:A:C2	52:5:913:A:H1'	2.55	0.42
52:5:986:U:O2	52:5:988:G:H8	2.02	0.42
52:5:1013:C:H3'	52:5:1014:A:H8	1.84	0.42
52:5:1196:G:H5''	52:5:1295:U:O2	2.19	0.42
52:5:1422:A:O2'	52:5:1423:C:H5'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:7:13:U:H2'	53:7:14:C:O4'	2.18	0.42
53:7:44:U:H3'	53:7:45:G:H8	1.84	0.42
53:7:62:C:H2'	53:7:63:U:H6	1.82	0.42
1:0:28:ARG:HG3	1:0:28:ARG:H	1.63	0.42
2:1:40:HIS:HE1	50:3:2358:U:H5'	1.84	0.42
4:A:41:MET:O	4:A:45:ILE:N	2.52	0.42
4:A:112:TRP:NE1	4:A:190:GLU:OE2	2.51	0.42
9:F:147:ASN:O	9:F:150:PHE:HB2	2.19	0.42
10:G:25:ALA:HA	10:G:30:LEU:HG	2.01	0.42
10:G:47:ILE:HG12	10:G:115:ILE:HD11	2.00	0.42
11:H:124:ARG:NH1	52:5:1319:U:H5''	2.34	0.42
12:I:83:VAL:HG13	12:I:84:ASP:H	1.85	0.42
24:a:249:VAL:HG21	24:a:254:PRO:HG3	1.99	0.42
25:b:213:LYS:HB3	25:b:216:VAL:HB	2.00	0.42
26:c:18:VAL:O	26:c:18:VAL:HG23	2.19	0.42
28:e:71:TYR:O	28:e:75:ILE:HG12	2.19	0.42
31:h:11:LYS:O	50:3:1132:C:H2'	2.20	0.42
33:j:4:PHE:HA	33:j:21:ILE:HB	2.01	0.42
35:l:17:TYR:HB2	35:l:98:LYS:HG3	2.02	0.42
36:m:44:ARG:NH1	50:3:2876:G:H5''	2.34	0.42
37:n:46:PHE:HZ	51:4:7:G:H4'	1.85	0.42
38:o:15:GLN:HE21	38:o:15:GLN:HB2	1.57	0.42
39:p:9:THR:O	39:p:13:ARG:HG3	2.20	0.42
40:q:73:HIS:CA	40:q:79:HIS:HB3	2.43	0.42
42:s:22:GLY:O	42:s:25:LYS:HD2	2.19	0.42
42:s:27:TYR:CZ	42:s:91:ILE:HG12	2.54	0.42
43:t:70:PHE:HB2	43:t:73:LYS:HE2	2.00	0.42
43:t:89:ILE:HA	43:t:104:PHE:HA	2.02	0.42
44:u:55:ARG:HA	44:u:71:ASP:HB2	2.00	0.42
46:w:27:LEU:HG	46:w:30:ARG:HD2	2.01	0.42
49:z:17:ILE:HG12	50:3:2407:G:H1'	2.00	0.42
49:z:31:LYS:CE	49:z:48:LYS:HB3	2.50	0.42
50:3:10:U:C4	50:3:11:U:C4	3.07	0.42
50:3:292:G:N3	50:3:292:G:H2'	2.34	0.42
50:3:392:A:H3'	50:3:393:C:H6	1.83	0.42
50:3:448:A:C8	50:3:449:C:C5	3.07	0.42
50:3:500:U:HO2'	50:3:501:G:P	2.40	0.42
50:3:502:A:N3	50:3:718:U:O2'	2.50	0.42
50:3:550:A:H2'	50:3:551:C:O4'	2.20	0.42
50:3:586:G:C6	50:3:587:U:C4	3.07	0.42
50:3:617:C:H2'	50:3:618:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:631:A:C2	50:3:695:G:C6	3.07	0.42
50:3:682:A:C3'	50:3:683:G:H8	2.31	0.42
50:3:1297:U:C2	50:3:1298:A:C8	3.08	0.42
50:3:1496:A:H3'	50:3:1497:A:H8	1.82	0.42
50:3:1698:A:C5	50:3:1699:A:C5	3.07	0.42
50:3:2074:G:C2	50:3:2452:G:C2	3.07	0.42
50:3:2259:G:O2'	50:3:2457:U:H1'	2.20	0.42
50:3:2467:A:H3'	50:3:2468:U:C6	2.54	0.42
50:3:2468:U:H2'	50:3:2469:A:C8	2.54	0.42
50:3:2645:U:C2	50:3:2790:A:N1	2.87	0.42
50:3:2688:C:H2'	50:3:2689:C:C6	2.54	0.42
51:4:60:C:H2'	51:4:61:A:H8	1.84	0.42
52:5:87:G:H2'	52:5:88:A:C8	2.54	0.42
52:5:150:A:H2'	52:5:151:C:H6	1.84	0.42
52:5:156:U:N3	52:5:157:A:N7	2.68	0.42
52:5:168:A:H3'	52:5:169:G:C8	2.54	0.42
52:5:169:G:H22	52:5:219:A:C2'	2.28	0.42
52:5:176:G:O6	52:5:190:A:N6	2.52	0.42
52:5:266:A:C5	52:5:267:C:C5	3.08	0.42
52:5:416:U:C2	52:5:421:G:C2	3.07	0.42
52:5:425:G:H4'	52:5:426:U:OP1	2.19	0.42
52:5:474:G:H2'	52:5:475:U:C6	2.53	0.42
52:5:586:G:C2	52:5:587:A:C4	3.07	0.42
52:5:587:A:H2'	52:5:588:U:H6	1.85	0.42
52:5:724:G:H1	52:5:727:G:P	2.41	0.42
52:5:767:U:C2	52:5:768:G:C8	3.06	0.42
52:5:770:G:C6	52:5:804:A:N1	2.87	0.42
52:5:786:U:O2'	52:5:788:G:N7	2.47	0.42
52:5:880:G:H4'	52:5:909:A:H1'	2.01	0.42
52:5:949:G:H1'	52:5:1203:A:C2	2.54	0.42
52:5:1052:G:H2'	52:5:1053:U:C6	2.55	0.42
52:5:1063:G:C6	52:5:1095:G:N1	2.88	0.42
52:5:1136:G:C6	52:5:1137:C:C4	3.08	0.42
52:5:1168:G:H2'	52:5:1168:G:N3	2.34	0.42
52:5:1270:C:H4'	52:5:1276:U:O4	2.19	0.42
53:7:9:U:C4	53:7:15:A:H8	2.37	0.42
2:1:49:ALA:O	2:1:53:LYS:N	2.48	0.42
3:2:29:THR:HG22	3:2:31:LYS:H	1.84	0.42
4:A:73:LYS:O	4:A:77:GLN:HG2	2.20	0.42
4:A:129:LYS:NZ	52:5:1095:G:H4'	2.35	0.42
5:B:184:ASP:O	5:B:207:ARG:N	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:193:GLN:NE2	52:5:1181:G:H5'	2.35	0.42
7:D:70:ILE:HG22	7:D:92:VAL:HG12	2.01	0.42
7:D:138:HIS:CE1	7:D:203:LEU:HD23	2.55	0.42
8:E:92:ARG:NH2	20:Q:88:LYS:HD2	2.35	0.42
10:G:68:ARG:NH1	52:5:588:U:H4'	2.34	0.42
11:H:49:ASP:O	11:H:52:GLN:HG3	2.19	0.42
13:J:16:VAL:HG23	13:J:16:VAL:O	2.19	0.42
14:K:81:PRO:HD3	14:K:110:ILE:HB	2.02	0.42
15:L:26:GLY:O	15:L:30:SER:OG	2.26	0.42
19:P:81:ILE:HD13	19:P:81:ILE:HA	1.91	0.42
20:Q:54:ILE:HD12	20:Q:54:ILE:H	1.84	0.42
20:Q:69:LYS:HE3	20:Q:69:LYS:HB2	1.67	0.42
21:R:28:LYS:HE3	21:R:30:PRO:HD3	2.01	0.42
22:S:8:GLU:OE2	22:S:8:GLU:N	2.50	0.42
22:S:29:LYS:HE2	52:5:1413:G:OP1	2.20	0.42
24:a:245:GLY:HA2	50:3:2598:C:OP1	2.17	0.42
26:c:33:PRO:HG2	50:3:633:G:H5''	2.01	0.42
26:c:46:ARG:HE	50:3:479:A:P	2.42	0.42
29:f:93:ILE:H	29:f:96:GLN:NE2	2.18	0.42
29:f:99:ASN:O	29:f:103:THR:HG23	2.19	0.42
31:h:114:ALA:HB1	31:h:119:ALA:HB3	2.01	0.42
35:l:15:VAL:HG13	35:l:41:TRP:CZ2	2.54	0.42
35:l:120:ARG:HA	35:l:123:HIS:ND1	2.34	0.42
36:m:95:GLY:O	50:3:2884:C:H1'	2.19	0.42
40:q:21:PHE:HA	40:q:91:LYS:HA	2.00	0.42
41:r:6:LYS:HE3	41:r:6:LYS:HB3	1.91	0.42
45:v:33:LEU:HD13	45:v:49:LEU:HD13	2.01	0.42
50:3:103:G:P	50:3:103:G:H8	2.42	0.42
50:3:221:A:C4	50:3:222:A:C8	3.06	0.42
50:3:268:C:H4'	50:3:465:A:C2	2.54	0.42
50:3:525:A:N1	50:3:1312:A:C5	2.87	0.42
50:3:538:A:H5'	50:3:540:A:OP1	2.19	0.42
50:3:562:C:C4	50:3:2787:U:H2'	2.55	0.42
50:3:693:U:H2'	50:3:694:U:O4'	2.20	0.42
50:3:759:U:H3'	50:3:760:G:C8	2.35	0.42
50:3:795:G:C2	50:3:796:A:H1'	2.54	0.42
50:3:848:U:C2	50:3:849:C:C6	3.07	0.42
50:3:861:U:O2	50:3:866:G:N2	2.43	0.42
50:3:1000:U:N3	50:3:1001:C:C5	2.87	0.42
50:3:1056:A:N9	50:3:1058:U:H1'	2.34	0.42
50:3:1219:U:C2	50:3:1220:A:C8	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1274:A:C6	50:3:1275:C:N4	2.87	0.42
50:3:1312:A:C6	50:3:1313:G:C2	3.07	0.42
50:3:1346:G:H2'	50:3:1347:A:C8	2.53	0.42
50:3:1369:U:O2	50:3:1426:C:H5'	2.20	0.42
50:3:1389:G:C6	50:3:1399:G:C2	3.08	0.42
50:3:1392:G:N2	50:3:1394:A:O5'	2.52	0.42
50:3:1646:G:H2'	50:3:1647:A:C8	2.55	0.42
50:3:1883:A:N6	50:3:1884:A:C6	2.87	0.42
50:3:1906:G:N2	50:3:1909:C:C5	2.87	0.42
50:3:2069:A:O2'	50:3:2070:C:O5'	2.36	0.42
50:3:2075:U:O4	50:3:2438:A:N7	2.53	0.42
50:3:2305:C:C2	50:3:2328:A:C4	3.07	0.42
50:3:2707:A:C6	50:3:2708:G:N7	2.88	0.42
51:4:31:G:O6	51:4:48:A:N6	2.53	0.42
51:4:59:A:HO2'	51:4:60:C:P	2.42	0.42
52:5:34:A:H61	52:5:549:U:H3	1.67	0.42
52:5:36:G:C6	52:5:37:C:N4	2.88	0.42
52:5:127:A:H5''	52:5:128:A:OP2	2.20	0.42
52:5:188:U:O2'	52:5:189:C:O4'	2.30	0.42
52:5:334:A:H2'	52:5:335:C:C6	2.54	0.42
52:5:548:G:C2	52:5:549:U:C2	3.08	0.42
52:5:555:G:H3'	52:5:556:G:C8	2.55	0.42
52:5:586:G:C4	52:5:587:A:C8	3.08	0.42
52:5:598:U:H2'	52:5:599:G:H8	1.84	0.42
52:5:644:U:H2'	52:5:645:A:C8	2.51	0.42
52:5:651:G:C5	52:5:750:A:C5	3.08	0.42
52:5:721:G:H2'	52:5:722:G:C8	2.54	0.42
52:5:768:G:H2'	52:5:769:U:C6	2.55	0.42
52:5:825:A:H61	52:5:852:G:C2'	2.32	0.42
52:5:896:G:H2'	52:5:897:A:H8	1.85	0.42
52:5:917:G:N2	52:5:1373:A:H8	2.12	0.42
52:5:1008:G:C4	52:5:1009:G:C8	3.07	0.42
52:5:1086:U:H6	52:5:1086:U:O5'	2.02	0.42
52:5:1196:G:P	52:5:1296:C:H42	2.41	0.42
52:5:1291:C:H2'	52:5:1292:A:C8	2.55	0.42
53:7:48:U:H3	53:7:51:G:H5''	1.83	0.42
1:0:37:LYS:C	1:0:38:GLN:HG2	2.44	0.42
2:1:20:LYS:HD3	2:1:21:ARG:N	2.34	0.42
4:A:83:LEU:HB3	4:A:176:LEU:CB	2.50	0.42
4:A:86:GLY:HA2	4:A:92:VAL:CG1	2.49	0.42
4:A:161:LYS:HG2	4:A:162:PHE:CD1	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:18:TRP:NE1	16:M:54:PRO:HA	2.34	0.42
6:C:10:ARG:NH2	6:C:58:GLN:HE21	2.18	0.42
7:D:106:ALA:HB3	7:D:114:ALA:O	2.18	0.42
9:F:50:GLU:OE1	9:F:54:LYS:HG2	2.19	0.42
10:G:123:MET:HE3	10:G:123:MET:HB2	1.80	0.42
13:J:41:GLY:C	52:5:685:G:H5'	2.44	0.42
19:P:31:LYS:HE2	19:P:36:HIS:HB3	2.01	0.42
21:R:48:THR:HA	21:R:60:VAL:O	2.19	0.42
24:a:236:ASN:ND2	50:3:2080:C:H5''	2.34	0.42
25:b:91:GLU:O	25:b:94:GLN:HB2	2.18	0.42
26:c:4:LEU:C	26:c:17:PRO:HA	2.45	0.42
26:c:76:GLN:HE21	26:c:81:ASN:ND2	2.17	0.42
27:d:64:LYS:H	51:4:41:C:P	2.41	0.42
27:d:90:THR:O	27:d:92:ARG:NH2	2.52	0.42
27:d:127:ASN:HD22	27:d:157:VAL:HG12	1.84	0.42
35:l:4:PRO:HG3	35:l:69:PHE:CE2	2.55	0.42
38:o:100:TYR:CD1	38:o:100:TYR:C	2.98	0.42
43:t:28:MET:HE1	43:t:35:ILE:HG12	2.01	0.42
50:3:82:G:H21	50:3:328:A:H1'	1.85	0.42
50:3:514:A:H62	50:3:537:A:N6	2.18	0.42
50:3:533:G:H2'	50:3:534:U:C6	2.55	0.42
50:3:612:G:C6	50:3:1292:A:C5	3.08	0.42
50:3:673:A:H1'	50:3:687:G:N2	2.33	0.42
50:3:714:G:C6	50:3:715:G:C5	3.08	0.42
50:3:728:A:N1	50:3:805:G:C6	2.87	0.42
50:3:767:C:H3'	50:3:768:G:C8	2.49	0.42
50:3:803:G:C6	50:3:804:U:C4	3.08	0.42
50:3:805:G:N1	50:3:806:A:C5	2.88	0.42
50:3:850:G:C6	50:3:1224:G:C6	3.08	0.42
50:3:986:G:N1	50:3:1003:U:N3	2.29	0.42
50:3:1604:A:H2'	50:3:1605:A:H8	1.81	0.42
50:3:1643:A:H1'	50:3:1650:A:O4'	2.20	0.42
50:3:1649:C:H2'	50:3:1651:C:C5	2.55	0.42
50:3:1702:A:H5'	50:3:1703:A:N9	2.34	0.42
50:3:1760:G:N2	50:3:1762:A:H3'	2.34	0.42
50:3:1821:G:C8	50:3:1822:A:H2'	2.54	0.42
50:3:2011:G:H8	50:3:2011:G:OP2	2.02	0.42
50:3:2038:A:C6	50:3:2506:C:H1'	2.55	0.42
50:3:2214:A:H2'	50:3:2215:C:C6	2.55	0.42
50:3:2278:G:H3'	50:3:2279:G:C8	2.55	0.42
50:3:2298:G:C2'	50:3:2299:U:H5'	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2427:U:H2'	50:3:2428:C:C6	2.55	0.42
50:3:2516:G:H1'	50:3:2561:G:H21	1.83	0.42
50:3:2516:G:C2	50:3:2590:G:C6	3.06	0.42
50:3:2649:G:H2'	50:3:2650:A:H8	1.82	0.42
50:3:2667:G:H2'	50:3:2668:A:H2'	2.01	0.42
50:3:2699:C:H5''	50:3:2876:G:OP1	2.19	0.42
50:3:2738:U:C4	50:3:2739:C:C4	3.07	0.42
52:5:21:U:H1'	52:5:570:A:C4	2.54	0.42
52:5:84:U:H2'	52:5:85:U:C6	2.55	0.42
52:5:135:A:H2'	52:5:136:U:C6	2.55	0.42
52:5:254:G:C4	52:5:255:G:C8	3.07	0.42
52:5:306:G:C6	52:5:307:C:N4	2.87	0.42
52:5:593:A:N6	52:5:638:A:H2'	2.33	0.42
52:5:724:G:N2	52:5:727:G:OP2	2.51	0.42
52:5:770:G:C6	52:5:804:A:C6	3.06	0.42
52:5:821:U:O2'	52:5:822:A:H5'	2.19	0.42
52:5:839:U:H3'	52:5:840:C:H6	1.84	0.42
52:5:1102:A:H2'	52:5:1103:C:C4	2.54	0.42
52:5:1180:U:O3'	52:5:1181:G:H8	2.02	0.42
52:5:1375:C:O4'	53:7:35:G:N1	2.52	0.42
52:5:1439:G:C2	52:5:1440:U:C4	3.07	0.42
53:7:40:A:H2'	53:7:41:C:H6	1.82	0.42
4:A:118:THR:N	4:A:190:GLU:OE1	2.41	0.42
5:B:159:ARG:H	5:B:199:ILE:HD12	1.84	0.42
7:D:187:THR:HB	7:D:190:ASN:HD22	1.84	0.42
8:E:104:LYS:HA	8:E:104:LYS:HD2	1.88	0.42
9:F:48:LEU:HA	9:F:51:GLN:NE2	2.34	0.42
10:G:113:ILE:N	10:G:141:VAL:O	2.39	0.42
11:H:30:ILE:HA	11:H:65:ILE:HB	2.01	0.42
13:J:21:ASN:ND2	52:5:688:G:C8	2.88	0.42
13:J:38:ALA:HB1	13:J:43:MET:HE1	2.01	0.42
16:M:3:LYS:HD2	16:M:7:LYS:HE3	2.01	0.42
21:R:54:GLY:O	52:5:1195:G:N2	2.52	0.42
22:S:35:PHE:CZ	22:S:44:LEU:HD13	2.54	0.42
23:T:37:ARG:NH2	52:5:1502:G:OP2	2.46	0.42
24:a:41:LEU:O	24:a:63:LYS:HG2	2.19	0.42
24:a:98:LEU:HD13	24:a:108:TYR:CE2	2.54	0.42
24:a:104:GLY:CA	50:3:1525:G:H21	2.32	0.42
24:a:264:GLY:HA2	50:3:1803:U:H4'	2.01	0.42
25:b:107:TYR:CG	25:b:213:LYS:HB2	2.55	0.42
26:c:119:LYS:C	26:c:121:ALA:H	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:c:202:GLU:OE1	26:c:202:GLU:N	2.52	0.42
27:d:93:GLY:O	27:d:96:MET:N	2.53	0.42
28:e:120:ILE:HG13	28:e:147:PHE:HZ	1.85	0.42
29:f:25:TYR:N	50:3:2100:G:OP1	2.51	0.42
29:f:104:LYS:HB2	29:f:106:MET:HG2	2.00	0.42
32:i:9:LYS:HE2	32:i:50:ASN:ND2	2.35	0.42
32:i:68:THR:CB	50:3:1176:U:H2'	2.49	0.42
33:j:102:VAL:O	33:j:121:VAL:HG13	2.20	0.42
35:l:1:MET:HG2	35:l:44:ALA:O	2.19	0.42
35:l:10:ARG:HH21	50:3:2286:A:H4'	1.85	0.42
35:l:34:LEU:HB3	35:l:103:MET:SD	2.59	0.42
35:l:82:ARG:HH11	50:3:2504:C:P	2.38	0.42
37:n:76:ASP:OD1	37:n:77:ILE:N	2.51	0.42
37:n:97:LYS:HG2	37:n:98:TYR:H	1.84	0.42
38:o:54:ARG:HE	38:o:65:ILE:HG13	1.84	0.42
39:p:31:TYR:CE1	39:p:35:LYS:HE2	2.54	0.42
39:p:49:ARG:NE	50:3:1029:A:OP1	2.46	0.42
39:p:102:PRO:O	39:p:104:LYS:HE3	2.20	0.42
42:s:41:LYS:HE3	42:s:52:PRO:HG2	2.01	0.42
42:s:70:ARG:C	42:s:72:PRO:HD3	2.44	0.42
45:v:34:GLN:O	45:v:50:VAL:N	2.53	0.42
50:3:25:G:N1	50:3:553:A:C6	2.88	0.42
50:3:453:U:H2'	50:3:454:G:O4'	2.20	0.42
50:3:502:A:H8	50:3:503:G:C8	2.37	0.42
50:3:521:C:C4	50:3:531:G:N1	2.88	0.42
50:3:794:G:H2'	50:3:795:G:O4'	2.20	0.42
50:3:814:U:H2'	50:3:815:G:O4'	2.20	0.42
50:3:983:A:H2'	50:3:984:C:H6	1.78	0.42
50:3:988:G:C6	50:3:1002:A:C6	3.07	0.42
50:3:1316:U:H1'	50:3:1681:G:N2	2.34	0.42
50:3:1338:G:H3'	50:3:1339:U:O2	2.18	0.42
50:3:1356:G:H2'	50:3:1358:C:C5	2.55	0.42
50:3:1374:U:C4	50:3:1375:G:C8	3.08	0.42
50:3:1449:G:C2	50:3:1450:G:C8	3.07	0.42
50:3:1455:A:H4'	50:3:1456:C:O4'	2.20	0.42
50:3:1550:G:C8	50:3:1550:G:OP2	2.72	0.42
50:3:1701:G:N2	50:3:1999:G:OP2	2.52	0.42
50:3:1760:G:C6	50:3:1762:A:H5''	2.55	0.42
50:3:2050:G:H2'	50:3:2050:G:N3	2.33	0.42
50:3:2432:C:O2	50:3:2437:G:H1'	2.20	0.42
50:3:2496:G:C6	50:3:2497:U:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2699:C:H2'	50:3:2700:C:C6	2.55	0.42
50:3:2713:A:C5	50:3:2714:G:C5	3.08	0.42
52:5:17:A:N3	52:5:1071:A:H1'	2.35	0.42
52:5:300:A:H2'	52:5:301:G:O4'	2.19	0.42
52:5:320:G:C2	52:5:322:G:H8	2.38	0.42
52:5:657:G:C6	52:5:658:G:C5	3.08	0.42
52:5:721:G:C2	52:5:722:G:C5	3.07	0.42
52:5:778:A:H8	52:5:798:U:N3	1.93	0.42
52:5:977:U:H4'	52:5:978:A:O5'	2.19	0.42
52:5:1080:G:N3	52:5:1145:A:H2	2.17	0.42
52:5:1116:U:C4	52:5:1118:A:C5	3.07	0.42
52:5:1219:C:H2'	52:5:1220:A:C8	2.55	0.42
52:5:1435:G:H2'	52:5:1435:G:N3	2.34	0.42
52:5:1455:G:H2'	52:5:1456:U:C6	2.55	0.42
52:5:1501:G:C2	52:5:1502:G:C5	3.07	0.42
53:7:57:C:H6	53:7:58:G:C8	2.37	0.42
4:A:188:VAL:O	4:A:192:ASN:ND2	2.52	0.42
5:B:154:VAL:O	5:B:170:MET:HG2	2.20	0.42
5:B:155:LEU:HD11	5:B:202:LYS:HG3	2.02	0.42
6:C:56:GLU:HG3	6:C:195:TYR:CD2	2.42	0.42
8:E:17:GLN:N	8:E:17:GLN:OE1	2.46	0.42
9:F:101:ARG:NH1	52:5:934:G:O5'	2.52	0.42
10:G:40:LEU:HD11	52:5:640:C:C5'	2.47	0.42
12:I:96:ILE:O	12:I:97:LYS:HG2	2.19	0.42
21:R:58:ILE:HD11	21:R:75:SER:HB3	2.01	0.42
22:S:15:ILE:HB	22:S:16:LYS:NZ	2.35	0.42
24:a:97:SER:O	24:a:108:TYR:HA	2.20	0.42
24:a:138:LEU:C	24:a:140:PHE:H	2.27	0.42
24:a:139:ALA:HB2	24:a:194:LYS:HB3	2.02	0.42
26:c:5:LYS:HE3	26:c:15:THR:HA	2.01	0.42
26:c:55:LYS:HB3	50:3:836:G:C4	2.55	0.42
26:c:194:ALA:C	26:c:196:ALA:H	2.28	0.42
26:c:206:ALA:O	26:c:210:LYS:HG3	2.19	0.42
27:d:30:ARG:HB2	27:d:32:GLU:OE2	2.20	0.42
29:f:26:ALA:O	29:f:30:LEU:HB2	2.20	0.42
32:i:88:LYS:HA	32:i:88:LYS:HD2	1.78	0.42
33:j:91:LYS:HE3	33:j:112:ASN:N	2.35	0.42
34:k:82:LEU:HB2	34:k:114:LEU:HD11	2.02	0.42
36:m:64:LYS:HZ2	50:3:2714:G:N2	2.17	0.42
37:n:86:LEU:HD12	37:n:87:THR:N	2.34	0.42
37:n:101:ARG:NH2	51:4:48:A:OP2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:p:69:ARG:NH2	50:3:1048:A:OP2	2.53	0.42
42:s:45:GLU:O	42:s:48:TYR:N	2.50	0.42
42:s:73:GLY:C	42:s:74:LEU:HD22	2.45	0.42
49:z:34:LEU:O	49:z:46:VAL:HA	2.20	0.42
50:3:142:A:H8	50:3:142:A:O5'	2.02	0.42
50:3:193:G:H2'	50:3:209:G:N2	2.34	0.42
50:3:360:G:C2	50:3:371:C:C2	3.07	0.42
50:3:479:A:N3	50:3:479:A:H2'	2.35	0.42
50:3:574:G:H2'	50:3:575:C:H6	1.82	0.42
50:3:618:G:H1'	50:3:1284:A:H61	1.85	0.42
50:3:642:A:C4	50:3:643:A:C8	3.07	0.42
50:3:855:A:N3	50:3:979:U:O2'	2.42	0.42
50:3:863:U:H2'	50:3:864:A:C6	2.55	0.42
50:3:870:A:N1	50:3:871:G:C5	2.88	0.42
50:3:1048:A:C5	50:3:1049:U:C4	3.08	0.42
50:3:1197:G:C2	50:3:1198:G:C8	3.08	0.42
50:3:1402:G:C6	50:3:1403:G:C5	3.08	0.42
50:3:1490:G:C4	50:3:1491:G:C8	3.08	0.42
50:3:1494:U:H2'	50:3:1550:G:H22	1.85	0.42
50:3:1504:G:N2	50:3:1540:G:H1'	2.34	0.42
50:3:1504:G:C6	50:3:1540:G:C2	3.07	0.42
50:3:1534:A:H1'	50:3:1535:A:N9	2.35	0.42
50:3:1535:A:OP2	50:3:1535:A:H8	2.02	0.42
50:3:1706:C:H2'	50:3:1707:U:C2	2.55	0.42
50:3:1800:C:C4	50:3:1801:U:C4	3.07	0.42
50:3:1881:C:H3'	50:3:1882:G:H8	1.85	0.42
50:3:1892:A:H3'	50:3:1893:C:C6	2.54	0.42
50:3:1995:G:H2'	50:3:1996:A:C8	2.55	0.42
50:3:2079:G:H2'	50:3:2080:C:C6	2.54	0.42
50:3:2111:U:H5''	50:3:2112:A:C8	2.47	0.42
50:3:2122:G:C6	50:3:2124:A:H2'	2.54	0.42
50:3:2148:U:OP2	50:3:2150:C:C4	2.73	0.42
50:3:2184:A:H5'	50:3:2185:C:OP2	2.18	0.42
50:3:2369:G:H3'	50:3:2370:G:H8	1.84	0.42
50:3:2444:G:H2'	50:3:2445:C:H6	1.84	0.42
50:3:2470:C:H2'	50:3:2471:U:H6	1.83	0.42
50:3:2478:G:H2'	50:3:2479:A:C8	2.55	0.42
50:3:2516:G:N3	50:3:2590:G:N1	2.68	0.42
50:3:2578:A:H2'	50:3:2579:U:C6	2.54	0.42
50:3:2708:G:C6	50:3:2716:U:C4	3.07	0.42
50:3:2793:U:O2'	50:3:2794:U:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:4:5:G:C6	51:4:6:U:N3	2.88	0.42
51:4:8:C:O2'	51:4:9:C:O4'	2.37	0.42
52:5:120:A:H2'	52:5:121:C:O4'	2.20	0.42
52:5:203:C:H2'	52:5:204:C:C6	2.55	0.42
52:5:307:C:H2'	52:5:308:C:H6	1.84	0.42
52:5:316:G:H2'	52:5:317:A:C8	2.54	0.42
52:5:674:U:H2'	52:5:675:U:C6	2.54	0.42
52:5:684:A:C5	52:5:701:A:N6	2.87	0.42
52:5:920:G:C6	52:5:1367:G:N1	2.88	0.42
52:5:1042:G:C2	52:5:1183:C:C2	3.08	0.42
52:5:1214:A:C4	52:5:1216:G:C2	3.08	0.42
52:5:1262:A:N3	52:5:1326:C:O2'	2.52	0.42
52:5:1323:A:H61	52:5:1348:G:H2'	1.83	0.42
52:5:1398:G:H2'	52:5:1399:U:C6	2.55	0.42
4:A:156:ILE:HG22	4:A:160:GLU:OE2	2.20	0.42
5:B:140:SER:HA	5:B:143:LYS:HG2	2.01	0.42
11:H:52:GLN:HA	11:H:55:ASP:OD2	2.19	0.42
13:J:48:SER:HA	13:J:51:LYS:NZ	2.27	0.42
14:K:64:LYS:NZ	52:5:518:A:OP1	2.41	0.42
21:R:35:SER:OG	21:R:36:ARG:N	2.52	0.42
24:a:20:ILE:HG23	24:a:25:LEU:HD22	2.00	0.42
24:a:218:ARG:CD	24:a:222:ARG:HH12	2.33	0.42
25:b:151:ARG:NH2	50:3:2583:U:OP1	2.53	0.42
26:c:116:TRP:HA	26:c:116:TRP:CE3	2.55	0.42
27:d:69:LYS:HA	27:d:84:LEU:CA	2.46	0.42
29:f:5:LEU:HB2	29:f:20:ASP:CG	2.34	0.42
30:g:115:ASN:O	30:g:116:ARG:HG3	2.20	0.42
31:h:24:ALA:HB2	50:3:1132:C:N3	2.35	0.42
31:h:87:LYS:O	31:h:132:GLY:N	2.53	0.42
32:i:57:LEU:HD12	32:i:58:ILE:H	1.84	0.42
34:k:135:ALA:O	34:k:139:VAL:HG12	2.19	0.42
38:o:9:LEU:O	38:o:13:VAL:HG22	2.20	0.42
40:q:38:VAL:HG13	40:q:50:LEU:HB3	2.01	0.42
40:q:87:GLN:CD	50:3:1197:G:H21	2.23	0.42
43:t:28:MET:HE2	43:t:33:GLN:C	2.45	0.42
46:w:17:LYS:O	46:w:20:ILE:HG12	2.20	0.42
50:3:108:G:H1'	50:3:328:A:H1'	2.02	0.42
50:3:174:A:H2'	50:3:175:A:H8	1.84	0.42
50:3:417:G:H5'	50:3:2241:A:OP1	2.19	0.42
50:3:423:C:H6	50:3:423:C:O5'	2.03	0.42
50:3:485:A:H61	50:3:490:A:H8	1.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:573:A:C2	50:3:574:G:H1'	2.54	0.42
50:3:611:A:C8	50:3:2025:C:H5''	2.55	0.42
50:3:634:C:O2	50:3:635:G:H1'	2.20	0.42
50:3:772:C:C2	50:3:773:G:C8	3.06	0.42
50:3:804:U:C2	50:3:805:G:C8	3.08	0.42
50:3:806:A:C5	50:3:807:U:C4	3.07	0.42
50:3:810:G:C8	50:3:812:G:C2	3.08	0.42
50:3:848:U:H1'	50:3:1256:A:H1'	2.02	0.42
50:3:896:U:C2	50:3:897:A:C8	3.07	0.42
50:3:935:U:C4	50:3:936:G:C6	3.08	0.42
50:3:1441:A:C6	50:3:1442:G:C5	3.08	0.42
50:3:1458:A:H3'	50:3:1459:A:H8	1.84	0.42
50:3:1464:G:N3	50:3:1503:A:H2	2.18	0.42
50:3:1481:U:H1'	50:3:1482:U:H5''	2.01	0.42
50:3:1507:G:C6	50:3:1537:A:N6	2.87	0.42
50:3:1574:G:H2'	50:3:1575:C:O4'	2.19	0.42
50:3:1640:G:O2'	50:3:1642:G:N1	2.53	0.42
50:3:1741:G:H1'	50:3:1765:G:C6	2.54	0.42
50:3:1751:A:O2'	50:3:1752:A:O4'	2.31	0.42
50:3:1757:G:C6	50:3:1758:C:C4	3.08	0.42
50:3:1786:U:H3	50:3:1791:A:N6	2.14	0.42
50:3:1865:A:C8	50:3:1892:A:C6	3.08	0.42
50:3:1873:A:N6	50:3:1874:G:C2	2.88	0.42
50:3:1919:A:H2'	50:3:1921:C:OP1	2.19	0.42
50:3:2126:A:N1	50:3:2178:A:C8	2.87	0.42
50:3:2670:A:C8	50:3:2671:G:C8	3.07	0.42
50:3:2701:A:C2	50:3:2702:G:C5	3.08	0.42
50:3:2819:C:C2	50:3:2820:G:C8	3.07	0.42
52:5:14:U:O2	52:5:908:A:H3'	2.20	0.42
52:5:98:G:N2	52:5:350:G:OP2	2.53	0.42
52:5:426:U:H4'	52:5:427:A:H5''	2.01	0.42
52:5:497:A:O3'	52:5:498:G:H8	2.03	0.42
52:5:553:C:C2	52:5:554:C:C5	3.08	0.42
52:5:554:C:C2	52:5:555:G:C8	3.07	0.42
52:5:609:G:N3	52:5:628:A:N6	2.67	0.42
52:5:754:U:H4'	52:5:819:G:H21	1.85	0.42
52:5:884:G:H1'	52:5:885:U:H5	1.85	0.42
52:5:926:C:N3	52:5:927:C:C4	2.88	0.42
52:5:957:C:H2'	52:5:958:G:H8	1.83	0.42
52:5:973:A:C6	52:5:1292:A:C5	3.08	0.42
52:5:1099:G:H2'	52:5:1100:C:H5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1382:C:C2	52:5:1383:A:C8	3.08	0.42
52:5:1497:U:N3	52:5:1498:G:N7	2.68	0.42
53:7:31:G:C6	53:7:32:U:C4	3.07	0.42
2:1:21:ARG:O	2:1:44:GLN:NE2	2.53	0.42
3:2:11:CYS:H	3:2:14:CYS:HB2	1.85	0.42
5:B:202:LYS:HZ2	52:5:1049:G:H5''	1.84	0.42
6:C:184:ARG:NH1	6:C:189:ALA:HA	2.35	0.42
8:E:112:ARG:HA	8:E:115:TYR:HB3	2.01	0.42
11:H:131:LYS:C	52:5:965:C:H41	2.28	0.42
12:I:40:VAL:O	12:I:83:VAL:HG12	2.19	0.42
13:J:77:LEU:N	13:J:102:GLU:OE1	2.52	0.42
13:J:111:HIS:CE1	52:5:672:A:H1'	2.55	0.42
14:K:11:PRO:O	14:K:13:LYS:HG3	2.19	0.42
14:K:44:ARG:HD3	52:5:359:A:OP2	2.20	0.42
14:K:49:ARG:HG2	14:K:67:LYS:HB3	2.02	0.42
18:O:15:ALA:HB2	18:O:30:ILE:HD11	2.01	0.42
22:S:36:HIS:HE1	22:S:72:ASN:HD22	1.68	0.42
23:T:27:ARG:HA	23:T:30:GLN:OE1	2.19	0.42
24:a:184:LEU:HD21	50:3:1806:G:C8	2.55	0.42
25:b:222:LEU:HB3	38:o:17:GLN:NE2	2.35	0.42
26:c:130:GLN:HE21	26:c:134:ASN:ND2	2.17	0.42
27:d:68:THR:CG2	27:d:88:LYS:HE2	2.49	0.42
27:d:96:MET:HE3	27:d:97:TRP:NE1	2.35	0.42
32:i:19:TYR:O	32:i:58:ILE:HB	2.20	0.42
32:i:58:ILE:HG23	32:i:128:PHE:HE2	1.84	0.42
35:l:124:LYS:HA	35:l:124:LYS:HD3	1.71	0.42
37:n:78:ALA:O	37:n:82:VAL:HG22	2.19	0.42
38:o:25:PHE:CD1	38:o:52:VAL:HG21	2.55	0.42
40:q:6:VAL:O	40:q:35:LEU:HD21	2.20	0.42
42:s:13:THR:HG21	50:3:1367:G:OP1	2.20	0.42
44:u:89:LYS:NZ	51:4:12:U:OP2	2.51	0.42
45:v:62:ASN:HB2	45:v:63:ARG:HH11	1.83	0.42
46:w:107:ASP:OD2	50:3:1546:U:H4'	2.19	0.42
50:3:243:U:O4	50:3:262:G:O6	2.37	0.42
50:3:476:G:C2	50:3:477:U:C2	3.07	0.42
50:3:525:A:H2'	50:3:526:G:C4	2.55	0.42
50:3:554:U:H2'	50:3:555:A:C8	2.55	0.42
50:3:763:G:C4	50:3:765:A:C8	3.08	0.42
50:3:891:G:C6	50:3:960:A:C6	3.07	0.42
50:3:922:C:H1'	50:3:929:G:H22	1.85	0.42
50:3:1298:A:H62	50:3:2019:G:N2	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1392:G:N2	50:3:1395:A:OP2	2.34	0.42
50:3:1419:U:O2	50:3:1421:A:C8	2.73	0.42
50:3:1419:U:N3	50:3:1421:A:H3'	2.34	0.42
50:3:1444:C:O2'	50:3:1445:U:H6	2.03	0.42
50:3:1490:G:C6	50:3:1491:G:C5	3.08	0.42
50:3:1530:G:H2'	50:3:1531:C:O4'	2.20	0.42
50:3:1646:G:N1	50:3:1654:G:C6	2.88	0.42
50:3:1758:C:H1'	50:3:2864:A:H2'	2.01	0.42
50:3:1832:G:H2'	50:3:1833:G:C8	2.55	0.42
50:3:1918:U:H2'	50:3:1925:A:N1	2.34	0.42
50:3:1929:G:C4	50:3:1930:U:C5	3.08	0.42
50:3:1966:G:C6	50:3:1967:U:C5	3.08	0.42
50:3:2012:A:C8	50:3:2013:C:C5	3.08	0.42
50:3:2104:A:H2'	50:3:2105:G:H8	1.81	0.42
50:3:2115:A:N1	50:3:2190:G:C6	2.88	0.42
50:3:2480:G:H2'	50:3:2486:A:H61	1.85	0.42
50:3:2497:U:H2'	50:3:2498:G:C4	2.55	0.42
50:3:2619:C:H2'	50:3:2620:C:H6	1.81	0.42
50:3:2700:C:C2	50:3:2701:A:C8	3.08	0.42
50:3:2701:A:H2'	50:3:2702:G:H8	1.82	0.42
50:3:2766:A:H2'	50:3:2767:G:C8	2.54	0.42
50:3:2854:A:C5	50:3:2872:A:O2'	2.72	0.42
51:4:33:U:H2'	51:4:34:U:C6	2.55	0.42
52:5:7:U:O5'	52:5:7:U:H6	2.03	0.42
52:5:47:G:H2'	52:5:362:U:C5	2.55	0.42
52:5:229:G:C2	52:5:230:G:C5	3.08	0.42
52:5:454:U:H2'	52:5:455:U:C6	2.50	0.42
52:5:626:G:C6	52:5:627:U:C4	3.07	0.42
52:5:1145:A:H2'	52:5:1146:A:O4'	2.19	0.42
52:5:1212:C:H3'	52:5:1310:C:N4	2.35	0.42
52:5:1294:U:N3	52:5:1295:U:O4	2.53	0.42
52:5:1312:G:O2'	52:5:1313:A:O4'	2.20	0.42
52:5:1424:C:C4	52:5:1425:A:C4	3.08	0.42
53:7:19:G:H5''	53:7:61:U:C6	2.55	0.42
53:7:56:U:O2'	53:7:57:C:H5'	2.20	0.42
4:A:130:LEU:HD22	4:A:167:LYS:HE3	2.02	0.42
7:D:81:LYS:NZ	52:5:1060:C:H5''	2.35	0.42
7:D:154:ALA:HB2	7:D:179:TYR:CE1	2.54	0.42
8:E:30:THR:HG23	8:E:68:SER:HB3	2.02	0.42
9:F:69:MET:HE3	9:F:69:MET:HB2	1.89	0.42
10:G:53:TYR:HD1	10:G:84:ILE:HD13	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:I:50:THR:HG22	12:I:77:LYS:H	1.84	0.42
13:J:106:LYS:HA	13:J:106:LYS:HD3	1.97	0.42
13:J:109:ILE:HG12	13:J:111:HIS:CD2	2.55	0.42
13:J:115:LYS:HE3	13:J:115:LYS:HB3	1.83	0.42
15:L:63:TYR:C	15:L:64:LYS:HD2	2.45	0.42
25:b:153:GLY:HA2	25:b:157:GLN:OE1	2.20	0.42
25:b:160:PHE:O	50:3:2627:U:H4'	2.20	0.42
26:c:54:THR:H	26:c:57:GLU:HB2	1.85	0.42
26:c:79:THR:OG1	26:c:80:ARG:HD2	2.20	0.42
26:c:140:THR:HG21	26:c:174:ASN:HB2	2.02	0.42
28:e:120:ILE:HG22	28:e:121:PRO:O	2.20	0.42
29:f:95:LYS:HE2	50:3:2227:U:H1'	2.01	0.42
32:i:72:LYS:O	32:i:92:GLY:N	2.49	0.42
33:j:71:ARG:NH2	33:j:72:LYS:HB3	2.34	0.42
35:l:11:LYS:HB3	35:l:87:LYS:HZ3	1.85	0.42
35:l:15:VAL:HG22	35:l:41:TRP:NE1	2.35	0.42
36:m:14:ARG:O	36:m:17:THR:OG1	2.33	0.42
37:n:34:LYS:NZ	37:n:101:ARG:HD2	2.35	0.42
37:n:36:LEU:HD13	51:4:28:C:C6	2.54	0.42
39:p:12:ARG:HG2	39:p:16:TRP:HE1	1.84	0.42
39:p:60:TRP:O	39:p:61:ILE:C	2.63	0.42
40:q:19:THR:HB	40:q:91:LYS:NZ	2.35	0.42
40:q:31:LYS:HZ1	40:q:33:ILE:HB	1.84	0.42
43:t:93:MET:HB2	43:t:101:THR:OG1	2.19	0.42
44:u:47:THR:OG1	44:u:48:GLY:N	2.52	0.42
44:u:84:GLN:HG2	44:u:94:ARG:O	2.20	0.42
48:y:6:ARG:HH21	50:3:2026:A:H3'	1.85	0.42
50:3:49:C:C2	50:3:50:G:C8	3.08	0.42
50:3:91:G:H8	50:3:91:G:O5'	2.03	0.42
50:3:171:G:C5	50:3:172:U:C4	3.08	0.42
50:3:247:U:OP2	50:3:258:G:N1	2.43	0.42
50:3:269:A:H2	50:3:270:G:N3	2.18	0.42
50:3:374:A:H3'	50:3:375:U:C6	2.54	0.42
50:3:444:C:C2	50:3:456:G:N2	2.87	0.42
50:3:448:A:C6	50:3:2420:A:H1'	2.55	0.42
50:3:695:G:C4	50:3:696:U:C5	3.08	0.42
50:3:769:A:H3'	50:3:770:A:C8	2.54	0.42
50:3:787:C:C4	50:3:1788:A:H1'	2.54	0.42
50:3:853:G:C2'	50:3:1220:A:H61	2.30	0.42
50:3:913:U:H3	50:3:938:A:N6	2.18	0.42
50:3:966:U:H2'	50:3:967:U:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1008:A:C6	50:3:1009:A:C6	3.07	0.42
50:3:1198:G:H2'	50:3:1199:A:O4'	2.20	0.42
50:3:1215:G:C6	50:3:1216:U:C4	3.07	0.42
50:3:1254:U:N3	50:3:1255:G:O6	2.53	0.42
50:3:1310:U:C4	50:3:1311:G:C6	3.08	0.42
50:3:1452:G:H3'	50:3:1453:U:H6	1.84	0.42
50:3:1471:A:C6	50:3:1472:C:C4	3.08	0.42
50:3:1929:G:C6	50:3:1930:U:C4	3.07	0.42
50:3:2058:G:H2'	50:3:2622:A:N6	2.24	0.42
50:3:2098:U:C2	50:3:2236:G:N1	2.74	0.42
50:3:2156:G:H2'	50:3:2157:A:N9	2.35	0.42
50:3:2171:A:H2'	50:3:2172:A:O4'	2.20	0.42
50:3:2242:G:H2'	50:3:2243:G:H8	1.85	0.42
50:3:2644:U:H2'	50:3:2645:U:O4'	2.20	0.42
50:3:2691:C:N4	50:3:2735:G:C2	2.88	0.42
50:3:2721:C:H2'	50:3:2721:C:H6	1.59	0.42
50:3:2803:G:H3'	50:3:2805:A:OP1	2.19	0.42
50:3:2835:G:H5'	50:3:2838:G:O4'	2.19	0.42
50:3:2841:A:C4	50:3:2842:G:C8	3.08	0.42
50:3:2858:A:C6	50:3:2868:G:N1	2.88	0.42
51:4:40:U:O2'	51:4:41:C:H6	2.00	0.42
52:5:40:G:O6	52:5:399:C:N4	2.26	0.42
52:5:98:G:N2	52:5:311:A:N3	2.67	0.42
52:5:153:A:H2'	52:5:154:G:C8	2.54	0.42
52:5:368:C:H41	52:5:384:G:P	2.43	0.42
52:5:388:G:H2'	52:5:389:A:C8	2.55	0.42
52:5:414:U:N3	52:5:423:U:O2	2.53	0.42
52:5:514:U:C2	52:5:531:A:N7	2.88	0.42
52:5:515:G:H8	52:5:515:G:OP2	2.03	0.42
52:5:555:G:C5	52:5:556:G:C5	3.08	0.42
52:5:568:G:C2	52:5:569:U:C4	3.08	0.42
52:5:602:G:N1	52:5:632:A:C6	2.88	0.42
52:5:680:G:C4	52:5:681:U:C5	3.08	0.42
52:5:732:A:C3'	52:5:733:A:H8	2.33	0.42
52:5:789:A:H1'	52:5:791:A:C8	2.54	0.42
52:5:803:C:H2'	52:5:804:A:H8	1.81	0.42
52:5:903:A:H3'	52:5:904:C:H6	1.84	0.42
52:5:1054:C:H3'	52:5:1055:G:H8	1.85	0.42
52:5:1286:G:C2	52:5:1287:G:C8	3.08	0.42
52:5:1409:A:H61	52:5:1442:A:H1'	1.84	0.42
52:5:1437:A:H2'	52:5:1438:U:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1484:C:H2'	52:5:1485:C:C6	2.55	0.42
53:7:7:U:H2'	53:7:8:G:C8	2.55	0.42
2:1:9:LYS:CE	2:1:10:ARG:HH21	2.33	0.41
10:G:99:ARG:NE	10:G:103:LYS:O	2.53	0.41
12:I:18:SER:CB	12:I:102:VAL:HG22	2.50	0.41
14:K:5:ALA:O	14:K:9:ARG:NE	2.53	0.41
15:L:30:SER:HA	15:L:33:ILE:HD12	2.01	0.41
19:P:55:ALA:HA	19:P:83:ARG:NH1	2.34	0.41
21:R:40:ILE:CD1	21:R:69:HIS:HB2	2.50	0.41
24:a:100:THR:HA	24:a:106:LYS:HG2	2.01	0.41
25:b:161:LYS:HA	50:3:2627:U:H5''	2.02	0.41
26:c:97:ARG:NE	50:3:622:U:O3'	2.52	0.41
29:f:31:PHE:HB3	29:f:33:LYS:CE	2.48	0.41
32:i:28:LEU:HB2	50:3:1175:C:OP1	2.20	0.41
33:j:58:LEU:HB3	33:j:94:ARG:HH12	1.86	0.41
37:n:96:SER:OG	37:n:97:LYS:N	2.53	0.41
38:o:12:LEU:HA	38:o:15:GLN:OE1	2.20	0.41
38:o:98:ARG:NH1	50:3:2725:G:N3	2.66	0.41
41:r:87:PRO:HA	41:r:93:SER:OG	2.20	0.41
43:t:29:PRO:HA	43:t:32:GLN:HA	2.02	0.41
44:u:56:GLY:H	50:3:2394:A:H1'	1.85	0.41
45:v:38:VAL:HB	45:v:48:ILE:HG12	2.01	0.41
46:w:10:LYS:HE3	46:w:13:GLU:H	1.85	0.41
46:w:83:ALA:O	46:w:87:TRP:HB2	2.20	0.41
49:z:11:CYS:HA	49:z:47:HIS:CG	2.55	0.41
50:3:37:G:H1'	50:3:490:A:C4	2.54	0.41
50:3:42:U:C2	50:3:476:G:N2	2.87	0.41
50:3:178:A:C6	50:3:179:A:N6	2.88	0.41
50:3:252:G:H5'	50:3:254:G:N7	2.35	0.41
50:3:483:A:H2	50:3:491:A:N1	2.17	0.41
50:3:525:A:H2'	50:3:526:G:C8	2.55	0.41
50:3:725:G:H2'	50:3:726:U:C6	2.55	0.41
50:3:782:U:O2'	50:3:783:G:OP2	2.36	0.41
50:3:793:C:H2'	50:3:794:G:C8	2.55	0.41
50:3:812:G:C2	50:3:813:G:C4	3.08	0.41
50:3:886:U:H2'	50:3:887:A:O4'	2.20	0.41
50:3:906:G:C2	50:3:907:A:N7	2.87	0.41
50:3:1063:A:H61	50:3:1160:G:H2'	1.85	0.41
50:3:1071:G:C6	50:3:1072:A:C5	3.08	0.41
50:3:1122:G:C8	50:3:1124:G:H1'	2.55	0.41
50:3:1245:G:C6	50:3:1265:G:C2	3.07	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1263:G:C5	50:3:1264:U:C5	3.07	0.41
50:3:1375:G:C5	50:3:1634:A:C6	3.07	0.41
50:3:1432:C:H2'	50:3:1433:U:O4'	2.19	0.41
50:3:1460:G:C2	50:3:1596:U:C2	3.08	0.41
50:3:1495:A:H2'	50:3:1495:A:N3	2.35	0.41
50:3:1531:C:C5	50:3:1532:A:C5	3.08	0.41
50:3:1556:U:H2'	50:3:1557:G:O4'	2.20	0.41
50:3:1796:A:H3'	50:3:1797:C:H6	1.85	0.41
50:3:1834:U:C5'	50:3:1978:U:H4'	2.50	0.41
50:3:1907:A:C6	50:3:1977:A:C6	3.08	0.41
50:3:1974:U:C4	50:3:1975:G:C5	3.08	0.41
50:3:1991:U:H2'	50:3:1992:C:C6	2.54	0.41
50:3:2012:A:OP2	50:3:2013:C:N4	2.35	0.41
50:3:2260:G:N2	53:7:76:C:OP1	2.53	0.41
50:3:2300:A:H5'	50:3:2386:A:H61	1.84	0.41
50:3:2348:U:H2'	50:3:2349:G:H8	1.84	0.41
50:3:2420:A:H2'	50:3:2421:U:O4'	2.20	0.41
50:3:2615:G:H2'	50:3:2616:G:O4'	2.20	0.41
50:3:2658:U:C2	50:3:2679:G:C2	3.08	0.41
50:3:2707:A:H2'	50:3:2708:G:H5''	2.02	0.41
50:3:2809:A:H5''	50:3:2811:G:O6	2.20	0.41
51:4:91:A:H2'	51:4:92:A:C8	2.55	0.41
52:5:26:C:H2'	52:5:27:A:H8	1.85	0.41
52:5:540:U:H2'	52:5:541:C:C6	2.54	0.41
52:5:636:G:C6	52:5:637:A:C6	3.08	0.41
52:5:674:U:H2'	52:5:675:U:H6	1.85	0.41
52:5:812:A:O2'	52:5:1501:G:N3	2.53	0.41
52:5:843:C:H2'	52:5:844:U:H6	1.85	0.41
52:5:1080:G:C6	52:5:1081:U:C2	3.08	0.41
52:5:1100:C:C2	52:5:1101:A:C8	3.08	0.41
52:5:1101:A:C6	52:5:1102:A:C2	3.08	0.41
52:5:1225:A:C4	52:5:1261:A:C5	3.08	0.41
52:5:1397:G:H2'	52:5:1398:G:C8	2.55	0.41
4:A:23:LEU:HA	4:A:26:MET:HE1	2.02	0.41
4:A:81:GLN:NE2	4:A:169:LEU:HD11	2.35	0.41
5:B:130:ARG:NH1	5:B:195:THR:HG22	2.35	0.41
5:B:142:ILE:O	5:B:145:LEU:HG	2.19	0.41
6:C:101:VAL:HG12	6:C:106:PHE:HB2	2.02	0.41
9:F:53:THR:O	9:F:53:THR:OG1	2.35	0.41
10:G:117:SER:HA	10:G:122:VAL:HA	2.02	0.41
13:J:22:ASN:HB2	52:5:687:G:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:J:111:HIS:HE2	52:5:672:A:HO2'	1.65	0.41
14:K:100:VAL:HG22	14:K:109:HIS:HE1	1.84	0.41
20:Q:57:LEU:O	20:Q:61:LYS:HG3	2.19	0.41
26:c:133:PHE:O	26:c:165:ASN:ND2	2.53	0.41
28:e:36:LEU:O	28:e:38:LEU:HD12	2.21	0.41
31:h:88:ASN:N	50:3:1111:C:O2'	2.53	0.41
35:l:103:MET:HG2	35:l:104:PHE:CE1	2.54	0.41
37:n:106:ALA:HB1	37:n:110:ARG:NH1	2.35	0.41
39:p:9:THR:HG23	39:p:13:ARG:HE	1.84	0.41
39:p:30:SER:OG	39:p:33:VAL:HB	2.20	0.41
39:p:88:GLU:OE2	40:q:39:LEU:HD11	2.19	0.41
40:q:1:MET:HE2	40:q:15:HIS:CE1	2.55	0.41
41:r:5:ALA:O	41:r:104:VAL:HG23	2.20	0.41
41:r:23:LEU:O	41:r:27:LYS:HE2	2.20	0.41
50:3:60:G:N2	50:3:75:A:O2'	2.53	0.41
50:3:113:U:H3'	50:3:114:U:C6	2.55	0.41
50:3:225:A:C5	50:3:270:G:N7	2.88	0.41
50:3:333:A:N7	50:3:356:A:C2	2.88	0.41
50:3:446:A:C2	50:3:454:G:C2	3.09	0.41
50:3:480:C:OP2	50:3:480:C:H4'	2.20	0.41
50:3:518:A:N1	50:3:541:G:O2'	2.35	0.41
50:3:564:A:C5	50:3:2030:A:C5	3.08	0.41
50:3:734:A:H3'	50:3:735:G:H8	1.85	0.41
50:3:748:G:C2	50:3:754:U:C4	3.07	0.41
50:3:759:U:C4	50:3:760:G:C5	3.08	0.41
50:3:852:C:C4	50:3:853:G:C5	3.08	0.41
50:3:904:C:C2	50:3:950:U:H5'	2.56	0.41
50:3:910:G:O2'	50:3:911:U:H5'	2.19	0.41
50:3:991:G:H2'	50:3:992:G:O4'	2.21	0.41
50:3:1054:U:O2'	50:3:1055:A:H5'	2.20	0.41
50:3:1199:A:H2'	50:3:1200:U:C6	2.55	0.41
50:3:1297:U:HO2'	50:3:1298:A:P	2.43	0.41
50:3:1435:A:C6	50:3:1630:A:C6	3.07	0.41
50:3:1510:A:H2'	50:3:1511:C:C6	2.56	0.41
50:3:1767:A:C6	50:3:1768:G:N1	2.88	0.41
50:3:1781:C:O2	50:3:1781:C:H2'	2.20	0.41
50:3:1986:C:O2'	50:3:1987:C:H5'	2.21	0.41
50:3:2047:U:H2'	50:3:2048:U:C6	2.55	0.41
50:3:2169:G:H5''	50:3:2170:A:H3'	2.02	0.41
50:3:2190:G:C4	50:3:2191:G:N7	2.88	0.41
50:3:2501:U:H3'	50:3:2502:G:H5''	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2622:A:C4'	50:3:2623:U:H5	2.33	0.41
50:3:2744:A:C6	50:3:2777:A:C2	3.08	0.41
50:3:2752:G:C6	50:3:2768:U:N3	2.87	0.41
50:3:2792:C:H2'	50:3:2793:U:O4'	2.20	0.41
50:3:2873:G:C5	50:3:2874:C:C4	3.08	0.41
51:4:19:G:C6	51:4:61:A:N1	2.88	0.41
51:4:28:C:O2	51:4:53:U:N3	2.53	0.41
52:5:263:C:H2'	52:5:264:C:H6	1.84	0.41
52:5:290:G:H2'	52:5:291:C:H6	1.84	0.41
52:5:425:G:C4	52:5:427:A:C6	3.07	0.41
52:5:433:C:H2'	52:5:434:U:C5	2.55	0.41
52:5:590:G:C6	52:5:591:A:C6	3.08	0.41
52:5:652:A:H1'	52:5:752:G:H5'	2.01	0.41
52:5:733:A:H3'	52:5:734:A:C8	2.48	0.41
52:5:988:G:H2'	52:5:990:C:N4	2.35	0.41
52:5:1031:A:H2'	52:5:1032:G:C8	2.54	0.41
52:5:1038:G:H2'	52:5:1039:G:C8	2.55	0.41
52:5:1114:A:H2'	52:5:1115:G:C1'	2.50	0.41
52:5:1123:G:N2	52:5:1124:U:O4	2.46	0.41
52:5:1243:A:O2'	52:5:1300:C:H4'	2.20	0.41
52:5:1391:A:C6	52:5:1392:A:C5	3.08	0.41
52:5:1401:A:H2'	52:5:1402:U:H6	1.85	0.41
53:7:23:G:C2	53:7:24:A:C8	3.09	0.41
3:2:10:ILE:HD11	3:2:34:GLN:OE1	2.19	0.41
4:A:158:ARG:NH1	52:5:1089:C:H5''	2.36	0.41
5:B:78:ILE:HD13	5:B:85:ILE:HB	2.02	0.41
6:C:72:ARG:NH1	6:C:202:ARG:HD2	2.36	0.41
7:D:76:ILE:HD12	52:5:1072:G:OP2	2.19	0.41
13:J:18:CYS:HB3	13:J:86:LYS:HE2	2.01	0.41
14:K:55:PRO:CD	14:K:63:ARG:HG3	2.46	0.41
24:a:154:PRO:HG3	24:a:195:GLU:OE2	2.20	0.41
27:d:26:MET:CG	51:4:53:U:H1'	2.50	0.41
28:e:19:ASN:OD1	28:e:26:ALA:HB3	2.21	0.41
28:e:127:LYS:HA	28:e:127:LYS:HD2	1.91	0.41
29:f:114:LYS:HG3	50:3:2206:A:OP1	2.20	0.41
29:f:114:LYS:HZ2	50:3:2205:U:H4'	1.85	0.41
34:k:48:ARG:C	34:k:50:GLY:H	2.28	0.41
35:l:93:TRP:CE3	35:l:93:TRP:HA	2.55	0.41
37:n:3:THR:OG1	37:n:5:THR:HG22	2.21	0.41
37:n:34:LYS:HD2	37:n:101:ARG:HH11	1.85	0.41
43:t:32:GLN:C	43:t:71:LEU:HG	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:t:103:VAL:HG23	43:t:109:ASN:C	2.46	0.41
45:v:18:ARG:HD2	45:v:22:LYS:NZ	2.35	0.41
45:v:51:SER:HB3	45:v:54:THR:HG23	2.02	0.41
46:w:18:LEU:HD12	46:w:18:LEU:HA	1.83	0.41
47:x:16:CYS:HB3	47:x:21:ASN:H	1.86	0.41
50:3:18:G:H2'	50:3:19:G:H8	1.83	0.41
50:3:55:A:OP2	50:3:118:G:N2	2.54	0.41
50:3:235:U:H2'	50:3:236:G:O4'	2.20	0.41
50:3:262:G:C6	50:3:263:C:C4	3.09	0.41
50:3:310:U:H4'	50:3:311:G:H5'	2.02	0.41
50:3:367:G:H2'	50:3:367:G:N3	2.35	0.41
50:3:480:C:H2'	50:3:481:C:H5	1.83	0.41
50:3:576:A:C6	50:3:586:G:C6	3.08	0.41
50:3:638:A:C6	50:3:639:G:C6	3.08	0.41
50:3:714:G:C2	50:3:715:G:C4	3.08	0.41
50:3:977:A:H2'	50:3:977:A:N3	2.35	0.41
50:3:988:G:N1	50:3:1002:A:C6	2.88	0.41
50:3:992:G:H3'	50:3:993:A:H2'	2.01	0.41
50:3:1077:G:C6	50:3:1149:G:C5	3.08	0.41
50:3:1775:G:C6	50:3:1776:G:C5	3.09	0.41
50:3:1836:A:C2	50:3:1837:C:H1'	2.55	0.41
50:3:2339:G:C5	50:3:2340:U:C4	3.09	0.41
50:3:2361:G:C6	50:3:2362:A:C5	3.09	0.41
50:3:2413:G:H4'	50:3:2414:U:N3	2.34	0.41
50:3:2479:A:C4	50:3:2480:G:C8	3.08	0.41
50:3:2503:G:H2'	50:3:2504:C:C6	2.55	0.41
50:3:2611:G:C2	50:3:2612:G:C4	3.09	0.41
50:3:2632:C:C2	50:3:2633:C:C5	3.08	0.41
50:3:2755:G:H1'	50:3:2766:A:H61	1.85	0.41
50:3:2794:U:C2	50:3:2795:C:C5	3.08	0.41
50:3:2816:A:C2	50:3:2893:C:C2	3.07	0.41
51:4:90:G:C4	51:4:91:A:C8	3.09	0.41
52:5:14:U:H5	52:5:21:U:O4	2.04	0.41
52:5:45:A:C2	52:5:46:U:C2	3.08	0.41
52:5:105:A:H1'	52:5:107:A:N7	2.35	0.41
52:5:148:A:H3'	52:5:149:G:C4'	2.49	0.41
52:5:168:A:H3'	52:5:169:G:H8	1.86	0.41
52:5:356:G:H2'	52:5:357:G:C8	2.55	0.41
52:5:366:C:C4	52:5:388:G:C6	3.09	0.41
52:5:684:A:H2'	52:5:684:A:OP2	2.20	0.41
52:5:809:G:O2'	52:5:810:U:OP2	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1059:G:C2	52:5:1099:G:H1'	2.56	0.41
52:5:1068:G:C6	52:5:1072:G:C6	3.09	0.41
52:5:1098:C:C2	52:5:1099:G:C8	3.08	0.41
52:5:1236:A:H61	52:5:1249:G:H1'	1.84	0.41
52:5:1248:U:H2'	52:5:1249:G:O4'	2.21	0.41
52:5:1445:G:C6	52:5:1446:A:N6	2.88	0.41
52:5:1455:G:H2'	52:5:1456:U:H6	1.84	0.41
53:7:24:A:H3'	53:7:25:G:C8	2.56	0.41
53:7:74:A:H4'	53:7:75:C:OP1	2.19	0.41
1:0:5:TYR:HA	50:3:722:C:H5''	2.02	0.41
6:C:123:LEU:HD11	6:C:145:LYS:HA	2.02	0.41
7:D:141:ILE:HG13	7:D:149:VAL:O	2.20	0.41
8:E:6:ILE:HG22	8:E:86:LEU:O	2.20	0.41
12:I:96:ILE:C	12:I:97:LYS:HG2	2.45	0.41
14:K:25:HIS:CB	14:K:39:TYR:HA	2.50	0.41
14:K:94:LEU:O	14:K:111:VAL:HG22	2.21	0.41
16:M:29:ARG:HD2	16:M:31:ARG:HE	1.85	0.41
23:T:27:ARG:HA	23:T:30:GLN:CD	2.46	0.41
24:a:93:SER:C	24:a:164:ALA:HB2	2.46	0.41
26:c:53:LEU:HD22	26:c:57:GLU:HB3	2.02	0.41
30:g:103:LYS:HB3	30:g:106:MET:HB2	2.03	0.41
32:i:21:VAL:HG12	32:i:58:ILE:O	2.21	0.41
32:i:60:ILE:HG23	32:i:131:ASP:HB3	2.03	0.41
41:r:82:MET:HB2	41:r:84:ARG:NH1	2.35	0.41
41:r:94:ASN:ND2	50:3:2021:A:H5'	2.35	0.41
42:s:7:LEU:HD11	42:s:29:PHE:HB3	2.03	0.41
42:s:14:GLU:HG3	42:s:15:LYS:H	1.86	0.41
46:w:6:GLU:HA	46:w:9:GLN:NE2	2.35	0.41
50:3:94:A:H8	50:3:95:G:C8	2.36	0.41
50:3:186:A:H2'	50:3:187:C:O4'	2.20	0.41
50:3:408:G:C6	50:3:460:G:N7	2.88	0.41
50:3:417:G:N1	50:3:432:G:C6	2.89	0.41
50:3:576:A:H2'	50:3:577:C:O4'	2.19	0.41
50:3:601:U:N3	50:3:603:G:O5'	2.54	0.41
50:3:756:A:C4	50:3:757:A:C8	3.08	0.41
50:3:958:C:H2'	50:3:959:C:H6	1.85	0.41
50:3:978:G:C6	50:3:979:U:C4	3.08	0.41
50:3:1003:U:H2'	50:3:1004:U:C6	2.55	0.41
50:3:1059:G:C5	50:3:1060:G:C5	3.08	0.41
50:3:1121:A:H5''	50:3:1122:G:OP1	2.20	0.41
50:3:1149:G:O2'	50:3:1150:U:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1270:C:O2'	50:3:1271:A:H5'	2.21	0.41
50:3:1295:A:H4'	50:3:1296:G:OP1	2.20	0.41
50:3:1387:A:H3'	50:3:1388:G:H8	1.85	0.41
50:3:1464:G:C2	50:3:1465:U:C2	3.09	0.41
50:3:1470:C:H2'	50:3:1471:A:C8	2.56	0.41
50:3:1493:A:H2'	50:3:1494:U:H6	1.82	0.41
50:3:1508:G:OP2	50:3:1508:G:H4'	2.21	0.41
50:3:1635:G:H2'	50:3:1636:U:C6	2.55	0.41
50:3:1647:A:C2	50:3:1651:C:H2'	2.55	0.41
50:3:1662:G:H2'	50:3:1663:G:C8	2.51	0.41
50:3:1867:G:N2	50:3:1890:U:O2	2.54	0.41
50:3:1889:U:H2'	50:3:1890:U:C2	2.55	0.41
50:3:1904:G:C6	50:3:1905:U:C2	3.08	0.41
50:3:1979:G:H2'	50:3:1980:G:H8	1.85	0.41
50:3:1999:G:N2	50:3:2004:G:C5	2.88	0.41
50:3:2036:G:C6	50:3:2040:A:C8	3.08	0.41
50:3:2079:G:C6	50:3:2080:C:C4	3.08	0.41
50:3:2092:U:H2'	50:3:2093:U:C6	2.56	0.41
50:3:2287:G:N1	50:3:2288:G:C2	2.87	0.41
50:3:2338:G:H2'	50:3:2339:G:O4'	2.20	0.41
50:3:2400:A:H3'	50:3:2401:U:C6	2.55	0.41
50:3:2412:A:C6	50:3:2422:G:C6	3.09	0.41
50:3:2418:G:C6	50:3:2419:A:C4	3.09	0.41
50:3:2515:C:H2'	50:3:2516:G:H8	1.85	0.41
51:4:38:U:C2	51:4:41:C:H5''	2.55	0.41
51:4:89:A:H3'	51:4:90:G:C8	2.55	0.41
52:5:200:G:H2'	52:5:201:G:H8	1.85	0.41
52:5:214:U:H2'	52:5:215:C:H6	1.82	0.41
52:5:429:A:H3'	52:5:430:G:C8	2.54	0.41
52:5:499:U:C2	52:5:500:G:C8	3.08	0.41
52:5:622:A:C2	52:5:623:G:C5	3.08	0.41
52:5:926:C:N3	52:5:1362:G:N1	2.69	0.41
52:5:966:A:N3	52:5:1340:G:H1'	2.36	0.41
52:5:1262:A:H1'	52:5:1327:G:H4'	2.01	0.41
52:5:1285:G:C2	52:5:1301:U:C2	3.09	0.41
52:5:1301:U:C2	52:5:1302:C:C5	3.08	0.41
52:5:1327:G:C2	52:5:1345:G:C2	3.08	0.41
52:5:1408:A:C5	52:5:1409:A:C5	3.08	0.41
52:5:1409:A:H2'	52:5:1410:A:C8	2.55	0.41
52:5:1415:G:C2	52:5:1437:A:C2	3.08	0.41
53:7:30:G:C4	53:7:31:G:C8	3.07	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:3:ARG:HH21	50:3:1654:G:C1'	2.33	0.41
3:2:5:ALA:O	50:3:1064:A:N6	2.50	0.41
3:2:15:LYS:HG3	3:2:28:LYS:NZ	2.35	0.41
5:B:156:VAL:HG22	5:B:201:VAL:HG23	2.03	0.41
5:B:202:LYS:NZ	52:5:1049:G:H5''	2.35	0.41
8:E:39:TYR:HA	8:E:57:TYR:O	2.20	0.41
11:H:79:GLY:HA2	11:H:82:ARG:HH11	1.85	0.41
12:I:42:ILE:HA	12:I:81:ILE:O	2.20	0.41
21:R:15:LEU:HD23	21:R:33:THR:HA	2.03	0.41
24:a:160:ILE:HG23	50:3:1806:G:C2	2.54	0.41
24:a:170:ILE:O	24:a:171:LEU:HD23	2.20	0.41
25:b:129:LYS:CE	50:3:2003:C:H3'	2.48	0.41
25:b:129:LYS:HD2	50:3:2004:G:OP1	2.20	0.41
28:e:34:ILE:HD11	28:e:139:ILE:HD13	2.03	0.41
39:p:9:THR:HG23	39:p:12:ARG:HH11	1.86	0.41
40:q:82:LYS:HZ2	50:3:1255:G:H4'	1.83	0.41
41:r:130:GLU:HB3	41:r:134:LYS:NZ	2.36	0.41
46:w:33:LEU:HD12	46:w:33:LEU:HA	1.80	0.41
47:x:15:LYS:O	47:x:35:THR:HA	2.20	0.41
48:y:4:GLN:HE22	50:3:1294:G:H1'	1.86	0.41
50:3:61:U:H1'	50:3:75:A:H2'	2.03	0.41
50:3:85:U:O4	50:3:103:G:O2'	2.26	0.41
50:3:119:A:H1'	50:3:181:G:C1'	2.51	0.41
50:3:165:U:H1'	50:3:166:A:N7	2.35	0.41
50:3:254:G:H2'	50:3:255:A:C8	2.55	0.41
50:3:353:G:C2	50:3:367:G:N3	2.88	0.41
50:3:586:G:C5	50:3:587:U:C4	3.08	0.41
50:3:683:G:H2'	50:3:684:A:C8	2.54	0.41
50:3:768:G:OP2	50:3:796:A:N6	2.54	0.41
50:3:866:G:H2'	50:3:867:G:O4'	2.21	0.41
50:3:1047:A:O2'	50:3:1048:A:H8	2.03	0.41
50:3:1422:U:H3'	50:3:1423:A:H5''	2.02	0.41
50:3:1479:A:H4'	50:3:1480:A:C8	2.56	0.41
50:3:1489:G:C6	50:3:1490:G:C6	3.09	0.41
50:3:1548:A:O4'	50:3:1550:G:C5	2.74	0.41
50:3:1609:U:H2'	50:3:1610:U:C6	2.55	0.41
50:3:1661:A:C2	50:3:1674:A:C8	3.08	0.41
50:3:1746:U:H2'	50:3:1747:G:C1'	2.51	0.41
50:3:1772:G:C6	50:3:1994:U:O2	2.73	0.41
50:3:1853:G:H2'	50:3:1854:A:C4	2.56	0.41
50:3:1854:A:O2'	50:3:1855:A:H8	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1860:A:N1	50:3:2094:A:H1'	2.36	0.41
50:3:1868:A:H2	50:3:1888:U:C2	2.38	0.41
50:3:2235:A:H3'	50:3:2236:G:C8	2.55	0.41
50:3:2268:C:H2'	50:3:2269:C:C5	2.55	0.41
50:3:2270:U:O2'	50:3:2271:C:H5'	2.20	0.41
50:3:2353:G:C6	50:3:2355:C:C4	3.08	0.41
50:3:2424:C:H2'	50:3:2425:C:H6	1.86	0.41
50:3:2461:A:O2'	50:3:2580:A:C4	2.74	0.41
50:3:2502:G:C6	50:3:2503:G:C5	3.09	0.41
50:3:2590:G:N2	50:3:2591:G:N2	2.69	0.41
50:3:2707:A:C6	50:3:2708:G:C8	3.07	0.41
52:5:36:G:C5	52:5:37:C:C4	3.09	0.41
52:5:112:U:H3	52:5:230:G:H1	1.68	0.41
52:5:262:G:C5	52:5:265:U:C5	3.09	0.41
52:5:406:G:C2'	52:5:429:A:H61	2.34	0.41
52:5:972:A:O3'	52:5:975:C:N4	2.54	0.41
52:5:991:A:C2	52:5:1037:A:H4'	2.55	0.41
52:5:1016:A:H8	52:5:1016:A:OP2	2.03	0.41
52:5:1115:G:O2'	52:5:1116:U:O5'	2.33	0.41
52:5:1279:G:C1'	52:5:1305:G:H22	2.32	0.41
52:5:1321:G:C4	52:5:1348:G:C6	3.08	0.41
52:5:1322:U:H2'	52:5:1323:A:H8	1.86	0.41
52:5:1465:U:OP2	52:5:1465:U:H6	2.03	0.41
52:5:1503:U:O2'	52:5:1505:G:H5''	2.21	0.41
53:7:31:G:C2	53:7:42:C:N3	2.89	0.41
7:D:208:VAL:HA	7:D:211:LEU:HG	2.03	0.41
8:E:57:TYR:CD1	8:E:57:TYR:N	2.88	0.41
9:F:33:GLY:HA3	52:5:1324:A:H2	1.82	0.41
11:H:128:GLN:NE2	52:5:1207:U:H3'	2.34	0.41
13:J:88:THR:HA	13:J:91:ARG:HB3	2.02	0.41
14:K:44:ARG:NH1	52:5:358:G:OP1	2.54	0.41
16:M:19:ARG:HH21	52:5:1291:C:H42	1.67	0.41
18:O:7:HIS:CE1	52:5:388:G:H4'	2.56	0.41
19:P:9:LEU:H	19:P:62:GLN:HG3	1.84	0.41
19:P:13:VAL:O	19:P:57:ASP:HA	2.20	0.41
20:Q:86:VAL:O	20:Q:90:LEU:HG	2.21	0.41
20:Q:91:LYS:HD2	52:5:732:A:H5'	2.03	0.41
24:a:89:ASP:C	24:a:91:ASN:H	2.29	0.41
25:b:4:ARG:O	25:b:208:ARG:HA	2.20	0.41
25:b:44:LYS:NZ	25:b:45:ASP:OD2	2.37	0.41
25:b:64:LYS:HD3	50:3:2814:A:O5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:b:104:VAL:CG2	25:b:183:GLY:HA2	2.51	0.41
27:d:170:LEU:HA	27:d:173:LEU:HB2	2.03	0.41
32:i:42:LYS:HE2	50:3:1042:C:H5''	2.02	0.41
32:i:131:ASP:OD1	32:i:131:ASP:N	2.53	0.41
34:k:28:LEU:HD22	34:k:32:SER:C	2.45	0.41
34:k:88:LEU:HD13	50:3:637:U:C5	2.55	0.41
37:n:22:THR:HG23	37:n:23:ASN:N	2.35	0.41
37:n:36:LEU:HD23	37:n:36:LEU:HA	1.92	0.41
37:n:57:SER:O	37:n:57:SER:OG	2.36	0.41
40:q:66:ARG:HH12	50:3:585:U:P	2.44	0.41
41:r:110:ASN:OD1	41:r:110:ASN:N	2.52	0.41
46:w:28:GLU:HG3	46:w:32:LYS:CE	2.49	0.41
48:y:7:ARG:HB3	50:3:2024:C:O2	2.21	0.41
50:3:20:C:C4	50:3:21:U:C4	3.08	0.41
50:3:60:G:O2'	50:3:75:A:N1	2.47	0.41
50:3:117:C:N4	50:3:118:G:C6	2.88	0.41
50:3:197:U:H4'	50:3:838:U:H5'	2.01	0.41
50:3:252:G:N7	50:3:254:G:H1'	2.36	0.41
50:3:269:A:H2'	50:3:464:A:N7	2.36	0.41
50:3:269:A:C8	50:3:464:A:C8	3.09	0.41
50:3:278:U:H2'	50:3:279:U:C6	2.56	0.41
50:3:301:G:C2	50:3:406:C:N3	2.89	0.41
50:3:381:A:H2'	50:3:382:U:H6	1.85	0.41
50:3:481:C:H2'	50:3:482:G:O4'	2.20	0.41
50:3:691:G:C5	50:3:692:U:C4	3.08	0.41
50:3:736:G:C2	50:3:767:C:C2	3.08	0.41
50:3:782:U:HO2'	50:3:783:G:P	2.43	0.41
50:3:787:C:C2	50:3:1788:A:O4'	2.74	0.41
50:3:855:A:O4'	50:3:978:G:N2	2.53	0.41
50:3:896:U:H2'	50:3:897:A:O4'	2.19	0.41
50:3:956:U:C2	50:3:957:G:C8	3.08	0.41
50:3:973:U:H2'	50:3:974:C:C6	2.56	0.41
50:3:1057:G:O2'	50:3:1059:G:O6	2.30	0.41
50:3:1061:A:OP1	50:3:1169:A:O2'	2.34	0.41
50:3:1082:A:O2'	50:3:1083:A:H8	2.03	0.41
50:3:1138:A:H3'	50:3:1139:C:H5	1.86	0.41
50:3:1174:G:H8	50:3:1174:G:OP2	2.03	0.41
50:3:1213:U:H2'	50:3:1214:U:O4'	2.21	0.41
50:3:1260:U:O2'	50:3:1261:U:O4'	2.38	0.41
50:3:1292:A:C6	50:3:1293:U:N3	2.89	0.41
50:3:1557:G:H2'	50:3:1573:A:H61	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1662:G:C6	50:3:1673:U:N3	2.89	0.41
50:3:1702:A:C6	50:3:1998:U:N3	2.88	0.41
50:3:1795:C:H2'	50:3:1796:A:O4'	2.21	0.41
50:3:1825:U:H6	50:3:1825:U:O5'	2.03	0.41
50:3:1867:G:N1	50:3:1889:U:C2	2.87	0.41
50:3:1884:A:C6	50:3:1885:G:C5	3.08	0.41
50:3:1992:C:H2'	50:3:1993:U:H6	1.84	0.41
50:3:1996:A:H3'	50:3:1997:C:C6	2.56	0.41
50:3:2056:A:C4	50:3:2057:C:C5	3.08	0.41
50:3:2070:C:O2	50:3:2070:C:H2'	2.21	0.41
50:3:2169:G:H1'	50:3:2173:G:C2	2.56	0.41
50:3:2472:G:N1	50:3:2495:A:C6	2.87	0.41
50:3:2522:U:H2'	50:3:2523:C:H6	1.83	0.41
50:3:2661:U:O2	50:3:2676:G:C6	2.73	0.41
50:3:2693:U:HO2'	50:3:2734:C:H42	1.59	0.41
50:3:2897:G:HO2'	50:3:2898:A:C5'	2.31	0.41
52:5:32:U:OP1	52:5:32:U:H2'	2.20	0.41
52:5:263:C:H2'	52:5:264:C:C6	2.56	0.41
52:5:288:A:C5	52:5:289:U:H1'	2.56	0.41
52:5:342:G:H3'	52:5:343:G:O4'	2.19	0.41
52:5:580:C:N3	52:5:756:A:N7	2.68	0.41
52:5:693:A:O2'	52:5:783:G:O3'	2.37	0.41
52:5:818:A:C4	52:5:819:G:C8	3.09	0.41
52:5:832:G:C2	52:5:833:G:C5	3.08	0.41
52:5:894:A:H2'	52:5:895:A:O4'	2.21	0.41
52:5:918:A:O2'	52:5:1374:C:OP1	2.39	0.41
52:5:934:G:N3	52:5:1350:A:H2	2.18	0.41
52:5:986:U:C4	52:5:1187:U:H1'	2.56	0.41
52:5:1072:G:C2	52:5:1073:A:C5	3.08	0.41
52:5:1099:G:H2'	52:5:1099:G:N3	2.35	0.41
52:5:1205:C:H2'	52:5:1206:G:C8	2.56	0.41
52:5:1236:A:H3'	52:5:1237:G:H8	1.85	0.41
52:5:1317:A:H8	52:5:1317:A:O5'	2.04	0.41
53:7:10:A:N6	53:7:24:A:C8	2.87	0.41
4:A:66:GLN:O	4:A:66:GLN:NE2	2.51	0.41
4:A:85:VAL:HG11	4:A:184:GLU:HG3	2.02	0.41
4:A:229:MET:HE3	4:A:229:MET:HB3	1.95	0.41
6:C:3:TYR:CE1	52:5:400:G:H5''	2.55	0.41
8:E:16:GLU:OE1	8:E:16:GLU:N	2.33	0.41
9:F:93:ASP:O	9:F:96:ILE:HG12	2.20	0.41
10:G:23:ASN:CG	10:G:26:ARG:HH11	2.28	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:39:LYS:N	52:5:588:U:OP1	2.49	0.41
19:P:79:LYS:HE3	19:P:79:LYS:HB3	1.87	0.41
23:T:33:GLU:HG2	23:T:34:TYR:N	2.35	0.41
23:T:40:MET:HG3	52:5:1502:G:OP2	2.19	0.41
24:a:9:ARG:HD2	50:3:1729:G:H4'	2.03	0.41
24:a:23:LYS:HB3	24:a:24:LYS:NZ	2.36	0.41
24:a:168:ALA:O	24:a:169:ARG:HD2	2.20	0.41
24:a:180:VAL:O	24:a:192:PHE:N	2.46	0.41
24:a:222:ARG:O	24:a:222:ARG:HG2	2.20	0.41
25:b:33:PRO:HB2	25:b:95:GLN:OE1	2.20	0.41
25:b:192:LEU:HD23	25:b:192:LEU:HA	1.77	0.41
28:e:70:THR:HG21	50:3:2765:A:C2	2.55	0.41
28:e:92:LEU:HD23	28:e:131:ASN:O	2.21	0.41
29:f:10:SER:C	29:f:12:LEU:H	2.29	0.41
33:j:44:LYS:HA	33:j:54:LYS:HB3	2.03	0.41
35:l:29:PHE:HB2	35:l:105:GLU:HG3	2.03	0.41
36:m:40:ASN:HA	36:m:43:LYS:NZ	2.36	0.41
38:o:3:LYS:HB3	38:o:4:ILE:H	1.71	0.41
38:o:55:ARG:HH12	38:o:57:GLY:CA	2.33	0.41
39:p:65:ASN:ND2	39:p:69:ARG:HD2	2.36	0.41
41:r:20:VAL:HA	41:r:23:LEU:HG	2.01	0.41
41:r:40:PRO:O	41:r:41:LYS:NZ	2.47	0.41
43:t:33:GLN:HB3	43:t:68:PRO:CB	2.46	0.41
44:u:99:LYS:HB3	44:u:99:LYS:HE2	1.86	0.41
48:y:11:HIS:O	48:y:15:LYS:HG3	2.21	0.41
49:z:9:LEU:HD21	49:z:47:HIS:CB	2.51	0.41
50:3:40:A:C6	50:3:478:G:C6	3.09	0.41
50:3:67:C:H2'	50:3:68:C:H6	1.86	0.41
50:3:68:C:N3	50:3:91:G:N1	2.69	0.41
50:3:109:G:H2'	50:3:110:A:H8	1.84	0.41
50:3:141:A:N7	50:3:142:A:C6	2.88	0.41
50:3:162:G:C2	50:3:171:G:O6	2.74	0.41
50:3:251:G:C5	50:3:256:G:C6	3.08	0.41
50:3:495:U:C2	50:3:496:A:C8	3.08	0.41
50:3:498:C:C2	50:3:499:G:N7	2.88	0.41
50:3:604:A:C6	50:3:2037:A:C2	3.09	0.41
50:3:761:G:C8	50:3:761:G:OP2	2.74	0.41
50:3:880:C:H5''	50:3:882:C:H41	1.85	0.41
50:3:907:A:C5	50:3:908:A:C5	3.08	0.41
50:3:918:G:C6	50:3:919:C:C4	3.09	0.41
50:3:1056:A:H1'	50:3:1157:G:O3'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:1072:A:C2	50:3:1154:U:C2	3.09	0.41
50:3:1119:A:H2	50:3:1141:U:O4'	2.03	0.41
50:3:1166:G:O2'	50:3:2032:G:O3'	2.36	0.41
50:3:1243:A:H2'	50:3:1244:A:C8	2.56	0.41
50:3:1243:A:H62	50:3:1266:G:H1'	1.84	0.41
50:3:1311:G:N3	50:3:1357:U:N3	2.59	0.41
50:3:1443:A:H2	50:3:1621:U:H3	1.65	0.41
50:3:1467:U:C4	50:3:1468:U:C4	3.08	0.41
50:3:1494:U:H3	50:3:1551:U:H3	1.68	0.41
50:3:1499:C:H2'	50:3:1500:A:C8	2.56	0.41
50:3:1688:A:O4'	50:3:2827:A:H5'	2.20	0.41
50:3:1820:U:C4	50:3:1821:G:C5	3.09	0.41
50:3:1926:A:H3'	50:3:1927:C:H6	1.83	0.41
50:3:1964:C:H2'	50:3:1965:C:H6	1.86	0.41
50:3:2063:G:C6	50:3:2064:G:C6	3.08	0.41
50:3:2241:A:C2	50:3:2242:G:C8	3.09	0.41
50:3:2331:G:H2'	50:3:2332:U:C6	2.56	0.41
50:3:2422:G:C6	50:3:2423:G:N7	2.89	0.41
50:3:2553:G:H2'	50:3:2554:U:C6	2.56	0.41
50:3:2584:G:H4'	50:3:2586:G:H3'	2.03	0.41
50:3:2587:U:C2	50:3:2588:U:C5	3.09	0.41
50:3:2740:U:H5''	50:3:2741:A:O4'	2.20	0.41
51:4:28:C:H2'	51:4:29:C:O4'	2.20	0.41
52:5:16:G:H3'	52:5:17:A:H8	1.85	0.41
52:5:127:A:H4'	52:5:168:A:C8	2.55	0.41
52:5:210:G:C2	52:5:211:G:N7	2.89	0.41
52:5:293:G:H2'	52:5:295:G:OP2	2.20	0.41
52:5:311:A:O2'	52:5:326:C:H1'	2.20	0.41
52:5:329:C:H2'	52:5:330:C:C6	2.56	0.41
52:5:370:A:H2'	52:5:371:U:H6	1.84	0.41
52:5:476:U:H5'	52:5:477:U:OP1	2.20	0.41
52:5:658:G:N2	52:5:742:C:C2	2.88	0.41
52:5:852:G:OP2	52:5:863:A:N6	2.53	0.41
52:5:921:G:C6	52:5:1480:G:C2	3.08	0.41
52:5:1136:G:C2	52:5:1137:C:C6	3.09	0.41
52:5:1149:G:N1	52:5:1150:G:C5	2.89	0.41
52:5:1187:U:H4'	52:5:1188:A:N7	2.36	0.41
52:5:1376:G:H2'	52:5:1377:C:O4'	2.20	0.41
1:0:1:MET:HA	50:3:1654:G:H4'	2.03	0.41
3:2:10:ILE:HB	3:2:27:CYS:HB2	2.01	0.41
6:C:80:LYS:HD3	6:C:80:LYS:HA	1.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:100:ILE:HD12	8:E:100:ILE:HA	1.91	0.41
13:J:121:ARG:NH1	52:5:792:C:H5''	2.36	0.41
15:L:72:GLU:HA	15:L:75:LEU:HB3	2.03	0.41
17:N:18:ASP:HA	52:5:747:C:H4'	2.02	0.41
19:P:10:ILE:O	19:P:10:ILE:HG13	2.21	0.41
20:Q:91:LYS:HD3	52:5:731:A:O3'	2.20	0.41
20:Q:92:ARG:NH1	52:5:733:A:OP1	2.41	0.41
24:a:138:LEU:HA	24:a:141:ILE:HD12	2.03	0.41
25:b:57:VAL:O	25:b:77:PRO:HG2	2.20	0.41
27:d:45:ARG:HB2	27:d:78:LYS:HB3	2.03	0.41
27:d:63:GLN:HE22	27:d:90:THR:H	1.67	0.41
29:f:54:GLN:O	29:f:58:TYR:CB	2.63	0.41
29:f:124:HIS:NE2	29:f:140:VAL:HB	2.36	0.41
34:k:99:ILE:N	34:k:104:ILE:HG22	2.36	0.41
36:m:90:TYR:HE1	36:m:120:ASP:HA	1.85	0.41
39:p:75:TYR:O	39:p:79:ILE:HG12	2.21	0.41
46:w:102:ARG:O	46:w:106:GLU:HG2	2.21	0.41
47:x:16:CYS:HB3	47:x:21:ASN:N	2.35	0.41
49:z:15:ARG:N	49:z:15:ARG:HD2	2.35	0.41
50:3:94:A:H8	50:3:95:G:N7	2.19	0.41
50:3:171:G:C6	50:3:172:U:C4	3.09	0.41
50:3:266:A:H3'	50:3:267:A:H8	1.85	0.41
50:3:581:A:C8	50:3:582:A:C5	3.09	0.41
50:3:663:A:O3'	50:3:664:G:C8	2.73	0.41
50:3:691:G:C2	50:3:692:U:C2	3.09	0.41
50:3:768:G:O6	50:3:796:A:H3'	2.21	0.41
50:3:802:U:HO2'	50:3:803:G:P	2.44	0.41
50:3:1006:U:O2	50:3:1020:G:H1'	2.21	0.41
50:3:1047:A:H4'	50:3:1047:A:OP1	2.20	0.41
50:3:1048:A:C6	50:3:1049:U:C4	3.08	0.41
50:3:1083:A:C6	50:3:1146:A:C4	3.08	0.41
50:3:1128:G:H1'	50:3:1134:G:H22	1.85	0.41
50:3:1232:U:N3	50:3:1233:A:N7	2.69	0.41
50:3:1450:G:C6	50:3:1451:A:C5	3.09	0.41
50:3:1691:U:C2	50:3:1692:A:C8	3.08	0.41
50:3:1698:A:H61	50:3:2003:C:N4	2.18	0.41
50:3:1777:G:C2	50:3:1778:G:C5	3.08	0.41
50:3:2010:A:H8	50:3:2010:A:O5'	2.04	0.41
50:3:2058:G:H5''	50:3:2586:G:OP2	2.20	0.41
50:3:2216:U:H3'	50:3:2217:G:C8	2.55	0.41
50:3:2640:A:C2	50:3:2795:C:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:4:61:A:C2	51:4:62:G:C5	3.09	0.41
52:5:75:A:C6	52:5:81:A:C6	3.09	0.41
52:5:100:G:H2'	52:5:285:G:H8	1.86	0.41
52:5:163:G:H2'	52:5:164:C:O4'	2.21	0.41
52:5:280:G:H2'	52:5:281:U:C6	2.55	0.41
52:5:287:U:H2'	52:5:288:A:C8	2.55	0.41
52:5:315:G:C6	52:5:316:G:C5	3.09	0.41
52:5:373:A:O2'	52:5:374:G:H5'	2.20	0.41
52:5:420:A:H2'	52:5:421:G:O4'	2.21	0.41
52:5:575:A:C8	52:5:813:A:C6	3.09	0.41
52:5:988:G:C8	52:5:1188:A:N6	2.88	0.41
52:5:1008:G:C6	52:5:1014:A:N6	2.87	0.41
52:5:1264:G:C4	52:5:1265:U:C5	3.09	0.41
52:5:1324:A:H2'	52:5:1325:U:H6	1.84	0.41
52:5:1400:A:C6	52:5:1401:A:C5	3.08	0.41
52:5:1429:G:H2'	52:5:1430:G:O4'	2.21	0.41
52:5:1431:A:H3'	52:5:1432:A:C8	2.56	0.41
52:5:1464:G:H2'	52:5:1465:U:C6	2.55	0.41
52:5:1505:G:H2'	52:5:1506:A:C6	2.56	0.41
2:1:15:LYS:HB2	50:3:664:G:H4'	2.03	0.41
3:2:34:GLN:CG	3:2:35:ARG:H	2.32	0.41
4:A:83:LEU:HB3	4:A:176:LEU:HB2	2.02	0.41
4:A:164:GLY:O	4:A:167:LYS:NZ	2.46	0.41
5:B:51:ALA:HA	5:B:76:PHE:CD1	2.55	0.41
5:B:64:THR:HA	5:B:101:ASN:HD21	1.85	0.41
7:D:70:ILE:HA	7:D:92:VAL:HA	2.03	0.41
7:D:125:SER:O	7:D:125:SER:OG	2.34	0.41
8:E:4:ASN:HA	8:E:60:TRP:O	2.20	0.41
8:E:48:PRO:HG3	8:E:53:LEU:HD21	2.02	0.41
9:F:2:ARG:HG3	52:5:927:C:H5	1.84	0.41
10:G:84:ILE:HG22	10:G:86:GLY:N	2.35	0.41
11:H:54:LEU:HB3	11:H:59:LEU:HA	2.03	0.41
11:H:113:LYS:NZ	52:5:1345:G:C5	2.85	0.41
11:H:118:PHE:HA	52:5:1342:C:OP1	2.20	0.41
12:I:27:THR:O	12:I:30:LYS:HB3	2.21	0.41
12:I:51:LYS:HB3	12:I:75:ARG:HE	1.86	0.41
12:I:77:LYS:O	12:I:78:ARG:NE	2.53	0.41
13:J:10:SER:C	13:J:72:MET:HA	2.45	0.41
13:J:25:VAL:CG1	13:J:38:ALA:HB3	2.51	0.41
15:L:10:PRO:HB2	15:L:13:LYS:HE2	2.02	0.41
16:M:57:LYS:HA	16:M:57:LYS:HD2	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Q:57:LEU:O	20:Q:61:LYS:N	2.50	0.41
20:Q:81:MET:HA	20:Q:84:ARG:HE	1.85	0.41
21:R:80:PHE:HD1	21:R:82:GLN:H	1.68	0.41
22:S:26:THR:HG22	52:5:1432:A:H5''	2.02	0.41
22:S:56:ARG:HG3	52:5:219:A:OP1	2.21	0.41
23:T:48:ILE:O	23:T:52:LYS:HG2	2.21	0.41
24:a:42:LYS:HE3	50:3:1382:A:H4'	2.03	0.41
24:a:43:LYS:HD3	24:a:59:GLY:HA2	2.03	0.41
25:b:4:ARG:HD3	25:b:101:LEU:CA	2.51	0.41
25:b:26:ILE:HD13	25:b:26:ILE:HA	1.89	0.41
25:b:132:PRO:HA	50:3:2001:C:OP1	2.21	0.41
26:c:6:LEU:HD12	26:c:127:LEU:HB3	2.03	0.41
27:d:50:LEU:O	27:d:53:ALA:N	2.54	0.41
27:d:53:ALA:HA	27:d:56:GLU:HG3	2.03	0.41
27:d:55:ASN:O	27:d:59:LEU:HG	2.20	0.41
28:e:4:ILE:O	28:e:7:ARG:HB2	2.20	0.41
29:f:4:ILE:HD13	29:f:50:PHE:HZ	1.86	0.41
31:h:130:GLN:HA	50:3:1112:A:N3	2.36	0.41
32:i:47:PHE:CZ	32:i:49:PRO:HB3	2.56	0.41
32:i:102:LYS:NZ	50:3:2647:A:O2'	2.30	0.41
33:j:23:LYS:HD3	33:j:23:LYS:HA	1.90	0.41
34:k:91:ASP:HB3	34:k:92:LYS:NZ	2.36	0.41
35:l:12:PRO:HG3	35:l:72:MET:SD	2.61	0.41
37:n:62:LEU:HB2	37:n:70:ALA:HB2	2.02	0.41
37:n:75:GLN:O	37:n:78:ALA:HB3	2.20	0.41
41:r:88:ARG:HG2	41:r:93:SER:HA	2.03	0.41
43:t:88:LYS:HE2	50:3:370:C:OP1	2.21	0.41
45:v:13:LEU:HD22	50:3:432:G:O4'	2.21	0.41
46:w:90:HIS:O	46:w:94:ASN:ND2	2.54	0.41
48:y:47:MET:HG2	48:y:52:ARG:HG3	2.03	0.41
49:z:6:SER:OG	49:z:21:THR:O	2.33	0.41
49:z:10:GLY:HA2	49:z:18:ASN:HB2	2.02	0.41
49:z:31:LYS:CE	49:z:49:GLU:HG2	2.51	0.41
50:3:29:G:H22	50:3:548:A:P	2.44	0.41
50:3:136:G:N3	50:3:136:G:H2'	2.36	0.41
50:3:156:A:C5	50:3:157:U:C5	3.09	0.41
50:3:274:A:C8	50:3:295:U:N3	2.85	0.41
50:3:319:G:C6	50:3:390:A:N6	2.89	0.41
50:3:335:G:C4	50:3:336:C:C6	3.08	0.41
50:3:406:C:H2'	50:3:407:U:O4'	2.20	0.41
50:3:524:G:C4	50:3:526:G:OP2	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:578:A:H1'	50:3:579:U:H5	1.86	0.41
50:3:663:A:H1'	50:3:664:G:C1'	2.51	0.41
50:3:699:U:C4	50:3:700:U:C4	3.09	0.41
50:3:738:U:C2	50:3:763:G:N1	2.70	0.41
50:3:748:G:H2'	50:3:749:U:C6	2.56	0.41
50:3:846:U:N3	50:3:1281:A:C6	2.89	0.41
50:3:897:A:C4	50:3:898:A:C8	3.09	0.41
50:3:911:U:H2'	50:3:912:A:H8	1.86	0.41
50:3:912:A:H2'	50:3:913:U:C6	2.56	0.41
50:3:955:A:H3'	50:3:956:U:C6	2.55	0.41
50:3:985:A:N6	50:3:1005:G:O6	2.54	0.41
50:3:1008:A:OP2	50:3:1009:A:O2'	2.35	0.41
50:3:1026:A:H5'	50:3:1026:A:C8	2.51	0.41
50:3:1044:C:O3'	50:3:1045:A:C8	2.74	0.41
50:3:1045:A:H1'	50:3:1188:C:O2'	2.21	0.41
50:3:1215:G:C2	50:3:1216:U:C2	3.09	0.41
50:3:1327:G:N2	50:3:1674:A:C8	2.89	0.41
50:3:1366:G:C2	50:3:1367:G:C8	3.08	0.41
50:3:1448:U:H2'	50:3:1449:G:C8	2.55	0.41
50:3:1451:A:H2'	50:3:1452:G:C8	2.56	0.41
50:3:1504:G:N3	50:3:1505:G:C8	2.89	0.41
50:3:1519:A:H3'	50:3:1520:A:H8	1.86	0.41
50:3:1581:U:H2'	50:3:1582:G:O4'	2.20	0.41
50:3:1642:G:C4	50:3:1645:C:C5	3.09	0.41
50:3:1702:A:H1'	50:3:1704:C:C5	2.56	0.41
50:3:1747:G:H1'	50:3:1753:G:N2	2.36	0.41
50:3:1807:C:C4	50:3:1824:G:N2	2.81	0.41
50:3:1847:G:C4	50:3:1848:U:C6	3.09	0.41
50:3:1880:G:H2'	50:3:1881:C:H6	1.85	0.41
50:3:1902:C:C2	50:3:1903:A:C8	3.09	0.41
50:3:1952:G:C5	50:3:1953:U:C5	3.09	0.41
50:3:1962:U:O5'	50:3:2559:C:O2'	2.36	0.41
50:3:2068:G:C5	50:3:2070:C:H5	2.38	0.41
50:3:2089:A:C2'	50:3:2090:G:H5'	2.51	0.41
50:3:2109:A:C6	50:3:2110:U:N3	2.89	0.41
50:3:2229:C:H2'	50:3:2230:A:O4'	2.21	0.41
50:3:2242:G:C4	50:3:2243:G:C8	3.09	0.41
50:3:2300:A:C6	50:3:2349:G:O6	2.74	0.41
50:3:2320:U:H2'	50:3:2321:C:C6	2.56	0.41
50:3:2329:G:H21	50:3:2330:A:H5'	1.86	0.41
50:3:2359:G:N2	50:3:2375:A:N6	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2423:G:C6	50:3:2424:C:C4	3.09	0.41
50:3:2552:G:H2'	50:3:2553:G:C8	2.55	0.41
50:3:2583:U:H5''	50:3:2584:G:OP1	2.21	0.41
50:3:2596:A:N6	50:3:2615:G:O6	2.54	0.41
50:3:2614:U:H2'	50:3:2615:G:C8	2.56	0.41
50:3:2665:A:C6	50:3:2673:A:H1'	2.56	0.41
50:3:2697:C:C2	50:3:2721:C:N4	2.89	0.41
50:3:2764:U:C2	50:3:2765:A:N7	2.89	0.41
50:3:2789:A:C3'	50:3:2790:A:H5'	2.51	0.41
50:3:2795:C:H2'	50:3:2796:C:C6	2.56	0.41
50:3:2819:C:H2'	50:3:2820:G:O4'	2.20	0.41
50:3:2832:G:H2'	50:3:2833:A:H8	1.85	0.41
51:4:2:U:H2'	51:4:3:U:C6	2.56	0.41
51:4:38:U:C3'	51:4:39:U:H4'	2.51	0.41
51:4:105:A:C6	51:4:106:A:C5	3.09	0.41
52:5:61:A:C2	52:5:92:G:H2'	2.56	0.41
52:5:87:G:H2'	52:5:88:A:H8	1.85	0.41
52:5:116:A:N6	52:5:229:G:O2'	2.46	0.41
52:5:120:A:C4	52:5:321:A:C6	3.08	0.41
52:5:170:A:C3'	52:5:171:A:H8	2.31	0.41
52:5:213:U:H2'	52:5:214:U:C6	2.56	0.41
52:5:219:A:O2'	52:5:220:U:OP1	2.34	0.41
52:5:246:A:N6	52:5:271:G:C6	2.86	0.41
52:5:354:U:C2	52:5:355:A:C8	3.09	0.41
52:5:357:G:C6	52:5:358:G:C6	3.09	0.41
52:5:428:A:C4	52:5:429:A:C8	3.09	0.41
52:5:573:G:C6	52:5:818:A:N7	2.89	0.41
52:5:580:C:N4	52:5:755:U:H2'	2.33	0.41
52:5:634:U:O2	52:5:634:U:H2'	2.20	0.41
52:5:651:G:C6	52:5:750:A:C8	3.09	0.41
52:5:656:U:H2'	52:5:657:G:C8	2.56	0.41
52:5:809:G:HO2'	52:5:810:U:P	2.41	0.41
52:5:833:G:O6	52:5:844:U:C4	2.73	0.41
52:5:883:A:C4	52:5:885:U:C5	3.08	0.41
52:5:974:C:O2	52:5:974:C:H2'	2.20	0.41
52:5:1003:G:H22	52:5:1018:U:H2'	1.85	0.41
52:5:1048:G:C5	52:5:1179:A:C2	3.09	0.41
52:5:1062:C:C2	52:5:1096:A:C2	3.08	0.41
52:5:1135:U:O4'	52:5:1157:G:N2	2.53	0.41
52:5:1137:C:N3	52:5:1138:U:C5	2.89	0.41
52:5:1145:A:C8	52:5:1146:A:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1156:G:H1'	52:5:1157:G:C4	2.56	0.41
52:5:1179:A:C6	52:5:1180:U:C2	3.08	0.41
52:5:1267:G:N1	52:5:1268:G:C5	2.88	0.41
52:5:1281:U:H2'	52:5:1282:U:C6	2.55	0.41
52:5:1321:G:H1'	52:5:1322:U:C5	2.49	0.41
52:5:1406:U:N3	52:5:1445:G:C6	2.89	0.41
52:5:1449:G:C6	52:5:1450:C:N4	2.89	0.41
53:7:30:G:C8	53:7:43:G:N2	2.89	0.41
2:1:43:LYS:HD2	50:3:2359:G:OP2	2.21	0.41
4:A:53:ASN:O	4:A:55:HIS:N	2.54	0.41
4:A:155:GLU:O	4:A:159:LEU:HG	2.21	0.41
5:B:39:LYS:HA	5:B:39:LYS:HD3	1.98	0.41
5:B:151:GLY:HA3	5:B:173:GLU:O	2.21	0.41
5:B:202:LYS:NZ	52:5:1050:U:OP1	2.54	0.41
6:C:125:ASN:HB2	6:C:127:ARG:NH2	2.36	0.41
7:D:139:GLU:OE2	7:D:150:LEU:HD11	2.20	0.41
7:D:199:ILE:HA	7:D:202:GLN:HB3	2.02	0.41
10:G:117:SER:HB2	52:5:639:A:O2'	2.20	0.41
12:I:20:ASP:O	12:I:24:LEU:HB2	2.21	0.41
13:J:9:VAL:HG22	13:J:11:SER:H	1.86	0.41
13:J:76:LYS:HB3	13:J:102:GLU:OE1	2.20	0.41
13:J:79:VAL:O	13:J:106:LYS:HB2	2.21	0.41
17:N:3:ILE:HG23	17:N:35:GLN:HG2	2.03	0.41
17:N:51:ARG:CZ	52:5:725:A:C8	3.04	0.41
18:O:5:ARG:HH12	52:5:615:G:H21	1.69	0.41
20:Q:42:ARG:O	20:Q:45:ALA:HB3	2.21	0.41
20:Q:62:ARG:C	20:Q:64:LEU:H	2.29	0.41
20:Q:73:ARG:HE	20:Q:78:ASN:C	2.28	0.41
21:R:5:ALA:HB1	52:5:1287:G:O5'	2.20	0.41
22:S:56:ARG:NH2	52:5:219:A:H5'	2.34	0.41
22:S:72:ASN:O	22:S:75:VAL:HG22	2.20	0.41
24:a:5:LYS:HE3	24:a:16:HIS:HB3	2.03	0.41
25:b:151:ARG:HD3	50:3:2580:A:O2'	2.21	0.41
26:c:161:VAL:HG22	26:c:164:LEU:HD22	2.03	0.41
26:c:173:SER:HG	50:3:356:A:P	2.44	0.41
28:e:147:PHE:HA	28:e:150:GLU:HG3	2.03	0.41
29:f:67:LYS:O	29:f:71:VAL:HG23	2.21	0.41
31:h:80:ALA:HB1	31:h:96:ILE:HB	2.02	0.41
33:j:72:LYS:HD2	33:j:72:LYS:C	2.46	0.41
35:l:11:LYS:NZ	35:l:87:LYS:HB3	2.36	0.41
36:m:11:SER:HB2	50:3:2698:U:C5	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:q:18:ASP:O	40:q:93:LYS:HA	2.20	0.41
45:v:61:HIS:O	45:v:63:ARG:NE	2.38	0.41
46:w:96:ALA:O	46:w:100:LYS:HG2	2.21	0.41
47:x:16:CYS:O	47:x:20:SER:HA	2.21	0.41
50:3:27:U:C4	50:3:28:G:C5	3.09	0.41
50:3:56:G:C6	50:3:118:G:N2	2.88	0.41
50:3:184:A:C2	50:3:186:A:C4	3.09	0.41
50:3:223:A:C5	50:3:224:G:C6	3.08	0.41
50:3:250:U:H3'	50:3:253:C:N4	2.36	0.41
50:3:268:C:C3'	50:3:464:A:H61	2.33	0.41
50:3:343:A:C5	50:3:364:A:C6	3.09	0.41
50:3:402:A:O2'	50:3:403:U:N3	2.50	0.41
50:3:432:G:C2'	50:3:433:A:H5'	2.51	0.41
50:3:512:G:N2	50:3:514:A:H3'	2.35	0.41
50:3:712:A:H2'	50:3:712:A:N3	2.36	0.41
50:3:782:U:O2'	50:3:783:G:P	2.79	0.41
50:3:1013:G:H1'	50:3:1036:A:N1	2.35	0.41
50:3:1057:G:H1'	50:3:1058:U:H5	1.86	0.41
50:3:1101:U:H3	50:3:1104:A:H5''	1.86	0.41
50:3:1119:A:N3	50:3:1140:U:O2'	2.29	0.41
50:3:1136:U:H2'	50:3:1137:C:O4'	2.20	0.41
50:3:1179:G:H2'	50:3:1180:U:O4'	2.21	0.41
50:3:1194:U:C2'	50:3:1195:A:H5'	2.51	0.41
50:3:1265:G:H2'	50:3:1266:G:N9	2.36	0.41
50:3:1275:C:C2	50:3:1276:A:C8	3.09	0.41
50:3:1376:G:H2'	50:3:1377:A:O4'	2.20	0.41
50:3:1391:U:H2'	50:3:1392:G:C8	2.55	0.41
50:3:1437:A:C6	50:3:1628:G:N1	2.89	0.41
50:3:1446:G:H1'	50:3:1614:G:C2	2.56	0.41
50:3:1480:A:C8	50:3:2710:G:C5	3.09	0.41
50:3:1519:A:C8	50:3:1520:A:C8	3.06	0.41
50:3:1535:A:C6	50:3:1536:C:C2	3.09	0.41
50:3:1552:C:C2	50:3:1553:G:C8	3.09	0.41
50:3:1607:G:C4	50:3:1608:C:C5	3.09	0.41
50:3:1725:G:O2'	50:3:1726:U:H5'	2.21	0.41
50:3:1846:A:C6	50:3:1934:A:C2	3.09	0.41
50:3:1941:C:C2	50:3:1942:G:C8	3.09	0.41
50:3:2366:A:H2'	50:3:2367:C:O4'	2.20	0.41
50:3:2491:C:O2'	50:3:2492:G:OP1	2.36	0.41
50:3:2646:G:H22	50:3:2784:A:P	2.43	0.41
50:3:2683:G:H3'	50:3:2684:G:H8	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2696:G:C1'	50:3:2729:A:H61	2.34	0.41
50:3:2710:G:C2	50:3:2711:C:C6	3.09	0.41
50:3:2829:G:N7	50:3:2830:A:H1'	2.36	0.41
50:3:2853:U:N3	50:3:2871:G:OP2	2.54	0.41
50:3:2889:U:H5'	50:3:2890:G:OP2	2.21	0.41
51:4:4:G:H2'	51:4:5:G:H8	1.85	0.41
52:5:81:A:C4	52:5:82:C:C6	3.09	0.41
52:5:130:G:H2'	52:5:131:G:C8	2.55	0.41
52:5:169:G:H2'	52:5:170:A:O4'	2.20	0.41
52:5:348:C:N3	52:5:353:G:N1	2.68	0.41
52:5:418:U:H1'	52:5:419:A:H2	1.86	0.41
52:5:449:A:OP2	52:5:450:U:H5''	2.21	0.41
52:5:681:U:H2'	52:5:682:G:C8	2.56	0.41
52:5:773:G:H4'	52:5:774:A:C8	2.55	0.41
52:5:1006:A:C5	52:5:1016:A:C2	3.09	0.41
52:5:1011:A:N3	52:5:1193:U:H1'	2.36	0.41
52:5:1110:C:C2	52:5:1131:A:C2	3.09	0.41
52:5:1133:A:H8	52:5:1133:A:P	2.44	0.41
52:5:1159:A:C2'	52:5:1160:G:H5'	2.51	0.41
52:5:1199:U:H6	52:5:1199:U:H2'	1.64	0.41
52:5:1230:G:C8	52:5:1254:A:N6	2.89	0.41
2:1:32:HIS:ND1	50:3:2398:U:H3'	2.36	0.40
4:A:89:ASN:CG	4:A:90:ASP:H	2.26	0.40
5:B:54:SER:OG	5:B:55:ASN:OD1	2.39	0.40
6:C:152:PRO:HA	6:C:155:LYS:HG3	2.02	0.40
7:D:159:GLY:HA2	7:D:176:SER:CB	2.51	0.40
10:G:66:THR:O	10:G:67:LYS:HG3	2.21	0.40
14:K:67:LYS:HD2	14:K:76:VAL:C	2.46	0.40
15:L:94:ASN:O	15:L:95:LEU:HD23	2.20	0.40
17:N:24:VAL:HA	17:N:27:SER:OG	2.20	0.40
21:R:34:TRP:CE2	21:R:57:PHE:HE2	2.38	0.40
21:R:40:ILE:HD11	21:R:66:MET:SD	2.61	0.40
25:b:110:VAL:HG13	25:b:207:ILE:HG13	2.04	0.40
26:c:7:ILE:HD11	26:c:126:HIS:HB3	2.03	0.40
26:c:130:GLN:OE1	26:c:165:ASN:HB2	2.21	0.40
27:d:163:ASP:HA	27:d:166:ALA:HB3	2.04	0.40
34:k:90:LEU:HD21	34:k:93:ILE:HA	2.02	0.40
35:l:11:LYS:HZ1	35:l:87:LYS:HB3	1.85	0.40
36:m:81:HIS:O	36:m:85:LYS:HG2	2.21	0.40
37:n:35:SER:HB2	51:4:26:C:O5'	2.21	0.40
39:p:84:LYS:H	39:p:84:LYS:HG2	1.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:r:127:LYS:HA	41:r:130:GLU:OE2	2.21	0.40
42:s:7:LEU:HD12	42:s:30:VAL:O	2.21	0.40
42:s:59:ILE:HD11	50:3:1635:G:P	2.61	0.40
43:t:45:HIS:CB	50:3:518:A:H5''	2.49	0.40
44:u:90:GLN:NE2	51:4:10:C:OP1	2.48	0.40
46:w:44:ILE:HG22	46:w:48:ARG:NE	2.35	0.40
50:3:54:A:OP2	50:3:118:G:C6	2.74	0.40
50:3:55:A:N6	50:3:118:G:H1'	2.29	0.40
50:3:70:G:C2	50:3:71:C:C2	3.09	0.40
50:3:170:A:H2'	50:3:171:G:O4'	2.21	0.40
50:3:192:U:O2	50:3:212:G:C2	2.71	0.40
50:3:419:A:H3'	50:3:425:U:O4	2.22	0.40
50:3:478:G:C6	50:3:480:C:C4	3.09	0.40
50:3:576:A:C2	50:3:586:G:C5	3.09	0.40
50:3:589:A:C6	50:3:590:U:C2	3.09	0.40
50:3:935:U:H2'	50:3:936:G:C8	2.57	0.40
50:3:1092:A:C6	50:3:1121:A:C2	3.09	0.40
50:3:1106:G:O2'	50:3:1124:G:H5''	2.21	0.40
50:3:1253:G:C2	50:3:1255:G:C8	3.10	0.40
50:3:1310:U:H2'	50:3:1311:G:C8	2.56	0.40
50:3:1367:G:HO2'	50:3:1368:U:P	2.44	0.40
50:3:1446:G:C2	50:3:1612:U:H3'	2.56	0.40
50:3:1532:A:H5''	50:3:1533:U:C6	2.56	0.40
50:3:1583:G:O2'	50:3:1584:U:OP1	2.35	0.40
50:3:1716:A:C4	50:3:1717:C:C5	3.10	0.40
50:3:1772:G:C6	50:3:1995:G:N7	2.88	0.40
50:3:1775:G:C6	50:3:1992:C:N4	2.89	0.40
50:3:1971:G:C4	50:3:1974:U:C5	3.09	0.40
50:3:2104:A:C2	50:3:2201:G:C2	3.09	0.40
50:3:2335:A:H2'	50:3:2336:A:O4'	2.21	0.40
50:3:2718:C:C4	50:3:2719:A:C6	3.09	0.40
50:3:2727:G:N2	50:3:2728:U:O4	2.54	0.40
51:4:48:A:C6	51:4:49:G:C5	3.09	0.40
52:5:45:A:C2	52:5:395:G:C4	3.10	0.40
52:5:70:A:C2	52:5:86:A:N6	2.89	0.40
52:5:109:G:C2	52:5:110:U:C2	3.09	0.40
52:5:303:A:C5	52:5:304:U:C4	3.09	0.40
52:5:515:G:H4'	52:5:516:C:OP1	2.21	0.40
52:5:939:G:OP2	52:5:941:A:N6	2.54	0.40
52:5:982:A:C5	52:5:1194:A:C6	3.09	0.40
52:5:1052:G:C6	52:5:1053:U:C4	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:1118:A:H3'	52:5:1119:C:O2	2.20	0.40
52:5:1154:A:P	52:5:1154:A:H8	2.44	0.40
52:5:1233:G:H2'	52:5:1234:C:C6	2.56	0.40
52:5:1277:C:H3'	52:5:1279:G:H21	1.85	0.40
52:5:1326:C:H2'	52:5:1327:G:C8	2.55	0.40
52:5:1343:G:N3	52:5:1343:G:H2'	2.37	0.40
52:5:1377:C:H3'	52:5:1378:C:C6	2.56	0.40
52:5:1427:U:H1'	52:5:1428:A:N1	2.36	0.40
53:7:9:U:H1'	53:7:49:C:O2	2.20	0.40
53:7:49:C:O2'	53:7:60:U:H1'	2.21	0.40
1:0:34:ARG:HA	1:0:37:LYS:HE3	2.03	0.40
4:A:57:VAL:HG21	4:A:60:LEU:HD12	2.02	0.40
7:D:97:ARG:HA	7:D:172:LEU:O	2.21	0.40
7:D:132:HIS:O	7:D:134:GLY:N	2.54	0.40
10:G:9:LYS:HG3	52:5:822:A:H5''	2.03	0.40
13:J:29:ASP:C	13:J:31:GLY:H	2.28	0.40
13:J:105:GLU:HB2	23:T:5:GLU:N	2.36	0.40
14:K:39:TYR:O	14:K:40:SER:C	2.64	0.40
15:L:111:GLY:HA3	15:L:114:LYS:NZ	2.36	0.40
17:N:57:VAL:HA	17:N:60:ARG:NH1	2.37	0.40
19:P:29:ARG:HH21	19:P:29:ARG:HG2	1.86	0.40
24:a:89:ASP:OD2	24:a:91:ASN:HB2	2.22	0.40
25:b:12:GLY:HA3	38:o:10:ILE:HD11	2.03	0.40
25:b:112:ALA:HB2	25:b:205:VAL:HG13	2.03	0.40
29:f:61:ASN:ND2	29:f:64:LEU:HD21	2.32	0.40
29:f:96:GLN:O	29:f:100:GLN:HG2	2.21	0.40
34:k:67:ASN:O	34:k:70:LYS:HE2	2.21	0.40
35:l:24:ASN:CB	35:l:67:ARG:HB3	2.46	0.40
36:m:53:LYS:HZ2	36:m:91:GLU:HA	1.85	0.40
36:m:68:LEU:HB3	36:m:69:ASN:H	1.71	0.40
37:n:6:GLU:HA	37:n:9:ARG:CZ	2.50	0.40
38:o:59:GLY:O	38:o:62:GLU:HG3	2.22	0.40
39:p:27:ARG:NH1	50:3:2027:G:O2'	2.54	0.40
39:p:99:ILE:H	39:p:99:ILE:HG13	1.62	0.40
40:q:35:LEU:HD12	40:q:36:ASP:H	1.86	0.40
40:q:67:LYS:HA	40:q:86:ARG:HG2	2.03	0.40
40:q:98:VAL:HG22	40:q:99:HIS:N	2.33	0.40
41:r:118:ILE:HG22	41:r:122:LYS:HE3	2.03	0.40
44:u:54:GLN:OE1	44:u:58:ARG:HB2	2.21	0.40
45:v:57:THR:HA	45:v:60:LYS:HG2	2.04	0.40
46:w:37:GLU:OE1	46:w:37:GLU:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:70:G:C2	50:3:76:A:C4	3.09	0.40
50:3:80:U:H2'	50:3:81:C:C6	2.56	0.40
50:3:119:A:OP1	50:3:120:A:H5''	2.20	0.40
50:3:269:A:H2'	50:3:464:A:H62	1.86	0.40
50:3:305:U:C4	50:3:399:G:O6	2.73	0.40
50:3:335:G:O2'	50:3:336:C:O5'	2.34	0.40
50:3:401:G:N7	50:3:402:A:N6	2.69	0.40
50:3:467:U:H2'	50:3:468:A:H5'	2.02	0.40
50:3:471:A:C5	50:3:472:A:C8	3.09	0.40
50:3:629:G:H2'	50:3:630:C:C6	2.55	0.40
50:3:633:G:H2'	50:3:634:C:H6	1.84	0.40
50:3:807:U:H2'	50:3:808:U:C5	2.57	0.40
50:3:888:A:H2'	50:3:889:G:C8	2.56	0.40
50:3:915:A:C6	50:3:937:A:C8	3.09	0.40
50:3:1001:C:H2'	50:3:1002:A:C8	2.56	0.40
50:3:1037:A:C8	50:3:1038:G:C8	3.09	0.40
50:3:1083:A:N6	50:3:1146:A:O4'	2.54	0.40
50:3:1381:A:C5	50:3:1382:A:C6	3.09	0.40
50:3:1437:A:C2	50:3:1438:G:C5	3.09	0.40
50:3:1477:A:H2'	50:3:1478:U:O4'	2.21	0.40
50:3:1508:G:C2	50:3:1509:U:C2	3.09	0.40
50:3:1528:G:H2'	50:3:1529:U:C6	2.55	0.40
50:3:1667:G:C6	50:3:1669:A:C6	3.10	0.40
50:3:1695:G:H2'	50:3:1696:C:O4'	2.21	0.40
50:3:1749:A:C6	50:3:1750:A:C5	3.09	0.40
50:3:1918:U:H3	50:3:1925:A:H2'	1.85	0.40
50:3:1948:C:H3'	50:3:1949:C:C5	2.56	0.40
50:3:1955:G:N1	50:3:1956:G:C5	2.90	0.40
50:3:2071:C:H2'	50:3:2072:C:H6	1.86	0.40
50:3:2087:G:H2'	50:3:2088:U:C6	2.56	0.40
50:3:2329:G:H3'	50:3:2330:A:C5'	2.51	0.40
50:3:2369:G:C4	50:3:2370:G:C8	3.08	0.40
50:3:2462:G:N2	50:3:2507:C:O2	2.54	0.40
50:3:2481:U:C2	50:3:2482:U:C6	3.09	0.40
50:3:2563:U:H3'	50:3:2564:C:C6	2.57	0.40
50:3:2835:G:O2'	50:3:2836:U:C5	2.75	0.40
51:4:7:G:H8	51:4:7:G:P	2.44	0.40
51:4:9:C:H5''	51:4:10:C:OP2	2.21	0.40
51:4:43:A:C6	51:4:44:A:C5	3.09	0.40
52:5:32:U:H2'	52:5:49:C:H41	1.86	0.40
52:5:357:G:H3'	52:5:358:G:H8	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:5:388:G:C6	52:5:389:A:C5	3.09	0.40
52:5:428:A:H2'	52:5:429:A:O4'	2.20	0.40
52:5:437:U:N3	52:5:438:A:N7	2.69	0.40
52:5:552:U:C2	52:5:553:C:C5	3.09	0.40
52:5:573:G:N1	52:5:818:A:C5	2.90	0.40
52:5:768:G:C6	52:5:806:A:N1	2.89	0.40
52:5:912:G:C2	52:5:913:A:C5	3.09	0.40
52:5:940:G:C6	52:5:1311:G:C5	3.10	0.40
52:5:998:G:H4'	52:5:999:C:H5'	2.03	0.40
52:5:1000:A:H2'	52:5:1019:G:H22	1.86	0.40
52:5:1110:C:C2	52:5:1111:G:N7	2.90	0.40
52:5:1111:G:C4	52:5:1112:U:C5	3.10	0.40
52:5:1127:A:OP2	52:5:1127:A:H8	2.04	0.40
52:5:1133:A:H61	52:5:1153:G:H1'	1.81	0.40
52:5:1208:G:H2'	52:5:1209:C:H6	1.83	0.40
52:5:1262:A:C5	52:5:1263:A:C5	3.09	0.40
52:5:1264:G:H3'	52:5:1265:U:H6	1.86	0.40
52:5:1272:C:H4'	52:5:1273:A:C4	2.56	0.40
52:5:1488:A:C6	52:5:1498:G:C6	3.09	0.40
52:5:1497:U:C2	52:5:1498:G:N7	2.89	0.40
53:7:32:U:C4	53:7:33:C:N4	2.89	0.40
4:A:81:GLN:H	4:A:171:ARG:NH1	2.19	0.40
5:B:12:PHE:HA	5:B:16:LYS:HB2	2.02	0.40
5:B:53:VAL:HG23	5:B:71:ALA:HB2	2.02	0.40
5:B:155:LEU:HG	5:B:202:LYS:O	2.22	0.40
5:B:158:GLY:HA2	5:B:165:ILE:O	2.21	0.40
6:C:12:ARG:HB3	6:C:35:PRO:HD3	2.04	0.40
9:F:30:MET:HG3	9:F:34:LYS:H	1.85	0.40
10:G:6:LYS:HA	10:G:7:PRO:HD3	1.89	0.40
12:I:36:LYS:HZ1	12:I:40:VAL:HG12	1.86	0.40
17:N:22:ILE:HG13	17:N:63:LEU:HD12	2.02	0.40
19:P:20:LYS:CE	52:5:251:G:H5''	2.52	0.40
19:P:63:ILE:HG23	19:P:75:PHE:HB3	2.02	0.40
24:a:282:ARG:NH2	50:3:1805:U:OP2	2.54	0.40
25:b:28:VAL:HA	25:b:192:LEU:HD23	2.03	0.40
25:b:50:THR:OG1	25:b:88:THR:HA	2.20	0.40
25:b:112:ALA:N	25:b:174:VAL:O	2.51	0.40
34:k:6:LEU:HD12	34:k:7:LYS:HB3	2.03	0.40
35:l:24:ASN:HA	35:l:67:ARG:HH11	1.87	0.40
35:l:75:THR:HA	35:l:89:ASN:O	2.21	0.40
36:m:21:GLN:NE2	50:3:1306:G:H5'	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:n:5:THR:HA	37:n:8:ARG:HB3	2.02	0.40
38:o:70:THR:O	38:o:73:ILE:HB	2.21	0.40
41:r:28:LYS:CG	41:r:29:THR:H	2.34	0.40
41:r:99:ARG:NE	50:3:1296:G:O6	2.53	0.40
41:r:115:GLN:N	41:r:116:GLU:OE1	2.54	0.40
46:w:40:LYS:HD2	46:w:40:LYS:HA	1.90	0.40
46:w:62:LYS:NZ	46:w:66:GLN:HG3	2.35	0.40
49:z:33:ALA:HB2	49:z:48:LYS:NZ	2.36	0.40
50:3:20:C:O2	50:3:587:U:H5''	2.21	0.40
50:3:80:U:C2	50:3:110:A:C2	3.09	0.40
50:3:215:A:C6	50:3:216:C:C4	3.09	0.40
50:3:269:A:C5	50:3:464:A:C8	3.09	0.40
50:3:384:G:C6	50:3:385:U:C4	3.09	0.40
50:3:499:G:H2'	50:3:501:G:N7	2.36	0.40
50:3:535:G:N2	50:3:537:A:H3'	2.36	0.40
50:3:629:G:C5	50:3:630:C:C4	3.08	0.40
50:3:669:A:H1'	50:3:2411:C:O3'	2.21	0.40
50:3:746:G:H2'	50:3:747:A:H8	1.86	0.40
50:3:818:A:H1'	50:3:1786:U:C6	2.56	0.40
50:3:895:G:C4	50:3:953:G:C6	3.10	0.40
50:3:1061:A:C5	50:3:1169:A:C5	3.09	0.40
50:3:1080:A:C6	50:3:1146:A:C4	3.09	0.40
50:3:1094:G:H3'	50:3:1095:U:C6	2.56	0.40
50:3:1234:U:H5'	50:3:1235:U:OP2	2.22	0.40
50:3:1318:U:H2'	50:3:1319:C:C6	2.56	0.40
50:3:1350:A:H2'	50:3:1351:G:C8	2.55	0.40
50:3:1357:U:O2'	50:3:1358:C:H5'	2.22	0.40
50:3:1397:G:H2'	50:3:1398:C:O4'	2.22	0.40
50:3:1471:A:C5	50:3:1472:C:C5	3.09	0.40
50:3:1507:G:C6	50:3:1537:A:N1	2.89	0.40
50:3:1666:A:C5	50:3:1667:G:C6	3.08	0.40
50:3:1775:G:C2	50:3:1776:G:C4	3.09	0.40
50:3:1783:G:N3	50:3:1784:U:C5	2.89	0.40
50:3:1916:C:N3	50:3:1929:G:N1	2.69	0.40
50:3:2002:U:H3'	50:3:2003:C:H2'	2.02	0.40
50:3:2073:C:C2	50:3:2453:G:N2	2.89	0.40
50:3:2175:U:C4	50:3:2179:A:C8	2.79	0.40
50:3:2298:G:H2'	50:3:2299:U:C6	2.56	0.40
50:3:2582:G:C6	50:3:2583:U:C2	3.09	0.40
50:3:2658:U:N3	50:3:2679:G:C2	2.90	0.40
50:3:2675:C:H2'	50:3:2676:G:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2756:A:H5''	50:3:2762:U:O4	2.21	0.40
50:3:2841:A:C6	50:3:2842:G:C5	3.09	0.40
51:4:14:U:H2'	51:4:15:C:C6	2.56	0.40
51:4:76:A:H1'	51:4:89:A:C2	2.56	0.40
52:5:67:U:C4	52:5:89:G:C2	3.10	0.40
52:5:201:G:H2'	52:5:202:A:H8	1.86	0.40
52:5:320:G:C4	52:5:322:G:OP2	2.73	0.40
52:5:515:G:N1	52:5:531:A:OP2	2.54	0.40
52:5:602:G:O6	52:5:632:A:N6	2.54	0.40
52:5:606:A:H2'	52:5:607:A:O4'	2.22	0.40
52:5:793:C:H2'	52:5:794:C:H6	1.86	0.40
52:5:880:G:O2'	52:5:909:A:O3'	2.40	0.40
52:5:882:U:OP2	52:5:883:A:H2'	2.22	0.40
52:5:940:G:N3	52:5:940:G:H2'	2.36	0.40
52:5:1039:G:C1'	52:5:1190:G:H5''	2.51	0.40
52:5:1226:A:C5	52:5:1227:A:C5	3.09	0.40
52:5:1239:U:N3	52:5:1247:G:C2	2.90	0.40
52:5:1265:U:H2'	52:5:1266:U:C6	2.56	0.40
52:5:1283:G:C6	52:5:1303:A:C6	3.09	0.40
53:7:23:G:C2	53:7:24:A:N7	2.89	0.40
1:0:9:LYS:HE3	50:3:1337:G:H5''	2.03	0.40
5:B:6:ASN:O	5:B:10:LEU:HG	2.21	0.40
5:B:26:SER:C	5:B:27:HIS:CG	3.00	0.40
5:B:158:GLY:HA3	5:B:199:ILE:HD12	2.03	0.40
6:C:80:LYS:HD2	52:5:611:A:OP1	2.22	0.40
6:C:97:LEU:HD21	6:C:122:VAL:HG11	2.03	0.40
7:D:197:ASP:C	7:D:201:LYS:HZ2	2.29	0.40
8:E:39:TYR:CE2	8:E:41:GLY:HA2	2.57	0.40
8:E:97:LEU:HD13	52:5:658:G:H5''	2.03	0.40
9:F:112:GLU:HB3	9:F:117:GLU:OE1	2.22	0.40
10:G:76:TYR:HB3	10:G:80:ARG:HH22	1.87	0.40
12:I:51:LYS:CB	12:I:75:ARG:HE	2.34	0.40
13:J:12:GLY:HA2	13:J:30:PRO:HD3	2.02	0.40
13:J:25:VAL:CG1	13:J:63:VAL:HG21	2.51	0.40
14:K:132:ALA:O	52:5:37:C:H4'	2.21	0.40
15:L:28:SER:OG	52:5:1302:C:O3'	2.27	0.40
15:L:101:ARG:HA	52:5:1199:U:O3'	2.22	0.40
15:L:107:ARG:NH1	52:5:1203:A:OP1	2.55	0.40
16:M:21:TYR:CZ	52:5:976:U:H4'	2.57	0.40
20:Q:46:ILE:HG21	20:Q:48:GLN:HE21	1.86	0.40
23:T:30:GLN:O	23:T:34:TYR:HE1	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:a:44:HIS:HB3	24:a:47:ARG:O	2.21	0.40
24:a:67:ARG:NH2	24:a:90:PRO:HD3	2.36	0.40
24:a:181:ILE:C	24:a:182:LEU:HD12	2.46	0.40
24:a:215:LYS:HG3	24:a:217:GLY:N	2.30	0.40
38:o:25:PHE:CE1	38:o:55:ARG:HG3	2.56	0.40
40:q:5:VAL:HA	40:q:38:VAL:HA	2.03	0.40
40:q:52:LYS:HE2	40:q:52:LYS:HB2	1.98	0.40
49:z:10:GLY:HA2	49:z:18:ASN:HD22	1.86	0.40
50:3:135:A:N1	50:3:149:A:C6	2.89	0.40
50:3:155:A:C6	50:3:178:A:C6	3.09	0.40
50:3:177:U:O2'	50:3:178:A:O5'	2.32	0.40
50:3:261:A:C6	50:3:262:G:C4	3.10	0.40
50:3:392:A:N3	50:3:392:A:H2'	2.36	0.40
50:3:432:G:O2'	50:3:2239:U:H5'	2.21	0.40
50:3:734:A:C8	50:3:769:A:C4	3.09	0.40
50:3:810:G:O2'	50:3:829:A:OP2	2.38	0.40
50:3:850:G:C6	50:3:1224:G:C5	3.10	0.40
50:3:875:G:C4	50:3:876:A:C8	3.09	0.40
50:3:1011:A:C2	50:3:1012:G:H1'	2.56	0.40
50:3:1017:A:C4	50:3:2035:U:H4'	2.56	0.40
50:3:1028:C:H2'	50:3:1029:A:H8	1.86	0.40
50:3:1091:G:N2	50:3:1139:C:N4	2.69	0.40
50:3:1091:G:H22	50:3:1137:C:H3'	1.85	0.40
50:3:1370:A:C6	50:3:1425:U:C4	3.09	0.40
50:3:1375:G:C6	50:3:1634:A:N6	2.89	0.40
50:3:1599:C:C4	50:3:1601:A:C2	3.10	0.40
50:3:1701:G:H1	50:3:1998:U:H3'	1.85	0.40
50:3:1821:G:H3'	50:3:1822:A:C8	2.56	0.40
50:3:1853:G:C2	50:3:1902:C:C2	3.09	0.40
50:3:1969:C:H6	50:3:1969:C:H2'	1.75	0.40
50:3:2158:C:O2'	50:3:2159:U:H5'	2.21	0.40
50:3:2174:G:O6	50:3:2180:U:H5	2.05	0.40
50:3:2255:A:C5	50:3:2256:C:N4	2.89	0.40
50:3:2300:A:N1	50:3:2349:G:C6	2.90	0.40
50:3:2318:A:OP2	50:3:2318:A:C8	2.74	0.40
50:3:2360:A:OP2	50:3:2360:A:H8	2.04	0.40
50:3:2496:G:H2'	50:3:2497:U:O4'	2.21	0.40
50:3:2532:G:H2'	50:3:2533:A:O4'	2.22	0.40
50:3:2622:A:O4'	50:3:2623:U:H5	2.04	0.40
50:3:2696:G:N2	50:3:2729:A:H62	2.19	0.40
50:3:2737:G:C6	50:3:2738:U:C4	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2756:A:H8	50:3:2762:U:N3	1.89	0.40
51:4:4:G:H5''	51:4:26:C:H1'	2.04	0.40
51:4:70:G:H1'	51:4:95:G:N2	2.36	0.40
52:5:51:A:N3	52:5:53:U:C2	2.90	0.40
52:5:71:A:H3'	52:5:72:A:H8	1.86	0.40
52:5:104:A:C8	52:5:236:C:N4	2.89	0.40
52:5:120:A:C5	52:5:321:A:C2	3.10	0.40
52:5:223:G:C2	52:5:224:A:H1'	2.57	0.40
52:5:305:A:C2	52:5:306:G:C5	3.09	0.40
52:5:392:A:H3'	52:5:393:A:H5''	2.03	0.40
52:5:410:A:N3	52:5:410:A:H2'	2.36	0.40
52:5:600:G:H2'	52:5:601:U:C6	2.56	0.40
52:5:1075:G:C8	52:5:1076:U:H2'	2.56	0.40
52:5:1119:C:H6	52:5:1122:U:C2	2.39	0.40
52:5:1185:C:H2'	52:5:1186:U:O4'	2.21	0.40
52:5:1225:A:C6	52:5:1226:A:C6	3.08	0.40
52:5:1277:C:P	52:5:1279:G:H22	2.44	0.40
52:5:1464:G:C2	52:5:1465:U:C2	3.10	0.40
2:1:2:LYS:HZ1	50:3:257:C:H3'	1.85	0.40
2:1:11:PHE:HZ	34:k:59:TYR:HB3	1.85	0.40
2:1:57:ASN:OD1	2:1:58:LEU:N	2.54	0.40
4:A:126:SER:HA	4:A:129:LYS:HE3	2.04	0.40
6:C:74:LEU:O	6:C:77:LEU:HG	2.21	0.40
7:D:78:LYS:NZ	52:5:916:U:H4'	2.32	0.40
7:D:97:ARG:HH11	7:D:171:GLU:HB3	1.86	0.40
11:H:71:GLY:HA2	52:5:1225:A:H4'	2.04	0.40
11:H:124:ARG:HG3	52:5:1322:U:O3'	2.22	0.40
14:K:2:ALA:HB2	52:5:567:C:H42	1.82	0.40
18:O:21:LYS:HG2	52:5:306:G:OP1	2.22	0.40
19:P:8:VAL:HA	19:P:62:GLN:NE2	2.37	0.40
19:P:30:PHE:HE1	19:P:41:ARG:H	1.70	0.40
22:S:56:ARG:NH1	52:5:218:U:H4'	2.36	0.40
25:b:221:GLU:HG2	25:b:222:LEU:N	2.36	0.40
27:d:26:MET:HE1	51:4:29:C:H4'	2.02	0.40
28:e:67:PHE:HB3	28:e:71:TYR:CE2	2.55	0.40
29:f:112:MET:HG2	29:f:131:PHE:CE1	2.56	0.40
32:i:70:ASN:ND2	32:i:70:ASN:O	2.55	0.40
32:i:94:ASP:O	32:i:98:LYS:N	2.54	0.40
33:j:13:ASN:OD1	33:j:13:ASN:N	2.55	0.40
34:k:98:LEU:HB2	34:k:104:ILE:HG22	2.03	0.40
35:l:24:ASN:HB3	35:l:67:ARG:HE	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:r:77:ASN:HD21	50:3:25:G:H21	1.69	0.40
41:r:83:LYS:HE2	41:r:95:MET:C	2.47	0.40
41:r:90:LYS:HE3	50:3:783:G:C4	2.56	0.40
43:t:7:GLY:H	43:t:24:VAL:HG13	1.85	0.40
48:y:40:HIS:HE1	50:3:2835:G:H21	1.69	0.40
50:3:104:A:C8	50:3:105:U:C5	3.09	0.40
50:3:116:C:O2'	50:3:128:A:H4'	2.21	0.40
50:3:140:G:H2'	50:3:142:A:N7	2.36	0.40
50:3:178:A:H8	50:3:178:A:OP2	2.03	0.40
50:3:230:G:H1	50:3:454:G:H21	1.68	0.40
50:3:274:A:N7	50:3:295:U:C2	2.90	0.40
50:3:276:A:N3	50:3:406:C:H1'	2.37	0.40
50:3:296:U:H6	50:3:296:U:H2'	1.70	0.40
50:3:353:G:C2	50:3:367:G:C2	3.09	0.40
50:3:714:G:H2'	50:3:715:G:O4'	2.21	0.40
50:3:743:G:C5	50:3:744:U:C5	3.09	0.40
50:3:756:A:H2'	50:3:757:A:C8	2.57	0.40
50:3:854:A:H2'	50:3:855:A:H8	1.86	0.40
50:3:1071:G:C4	50:3:1072:A:C8	3.10	0.40
50:3:1211:U:H2'	50:3:1212:C:O4'	2.21	0.40
50:3:1337:G:C6	50:3:1338:G:C6	3.09	0.40
50:3:1385:U:C2	50:3:1403:G:C2	3.09	0.40
50:3:1417:G:C2	50:3:1427:C:C2	3.10	0.40
50:3:1484:G:C6	50:3:2712:C:C4	3.09	0.40
50:3:1503:A:C5	50:3:1504:G:H1'	2.57	0.40
50:3:1543:U:C2	50:3:1544:G:C8	3.09	0.40
50:3:1557:G:H2'	50:3:1571:G:N2	2.37	0.40
50:3:1609:U:H2'	50:3:1610:U:H6	1.87	0.40
50:3:1615:G:N3	50:3:1615:G:H2'	2.36	0.40
50:3:1647:A:H2	50:3:1651:C:H2'	1.85	0.40
50:3:1675:A:H2'	50:3:1676:G:O4'	2.22	0.40
50:3:1685:G:C6	50:3:1686:U:C4	3.09	0.40
50:3:1760:G:H2'	50:3:1762:A:OP2	2.22	0.40
50:3:1960:A:H2	50:3:2557:G:N3	2.19	0.40
50:3:2068:G:H8	50:3:2509:C:H2'	1.87	0.40
50:3:2220:A:H2'	50:3:2220:A:OP2	2.22	0.40
50:3:2247:G:H2'	50:3:2248:C:O4'	2.21	0.40
50:3:2274:A:N6	50:3:2281:A:OP2	2.41	0.40
50:3:2289:C:H4'	50:3:2396:A:C6	2.56	0.40
50:3:2292:A:N3	50:3:2296:A:H2	2.19	0.40
50:3:2408:G:H2'	50:3:2409:U:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:2683:G:C4	50:3:2684:G:C8	3.10	0.40
50:3:2696:G:H2'	50:3:2728:U:O4	2.21	0.40
50:3:2828:C:H2'	50:3:2829:G:O4'	2.22	0.40
50:3:2837:U:P	50:3:2837:U:H3'	2.61	0.40
51:4:19:G:N1	51:4:61:A:C6	2.89	0.40
51:4:54:U:C4'	51:4:55:A:H8	2.34	0.40
52:5:51:A:C4	52:5:356:G:N2	2.89	0.40
52:5:200:G:N2	52:5:216:G:H1'	2.36	0.40
52:5:259:A:H2'	52:5:260:C:C5	2.57	0.40
52:5:325:A:C4	52:5:328:G:C8	3.09	0.40
52:5:445:A:C4	52:5:446:A:C8	3.09	0.40
52:5:595:G:C8	52:5:596:U:C5	3.09	0.40
52:5:707:G:C4	52:5:708:A:C8	3.09	0.40
52:5:734:A:C4	52:5:735:C:C5	3.08	0.40
52:5:739:G:H2'	52:5:740:G:C8	2.56	0.40
52:5:779:A:P	52:5:1497:U:H1'	2.61	0.40
52:5:829:G:C5	52:5:830:U:C4	3.09	0.40
52:5:853:A:H61	52:5:864:U:H5	1.70	0.40
52:5:940:G:N3	52:5:941:A:C8	2.90	0.40
52:5:951:U:H2'	52:5:952:U:C6	2.56	0.40
52:5:1015:U:H2'	52:5:1016:A:C8	2.55	0.40
52:5:1051:U:O2'	52:5:1052:G:H5'	2.22	0.40
52:5:1100:C:C3'	52:5:1101:A:H8	2.33	0.40
52:5:1196:G:N2	52:5:1197:G:H1'	2.36	0.40
52:5:1507:U:H2'	52:5:1508:C:H5'	2.04	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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%)	39 (87%)	6 (13%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	1	57/59 (97%)	48 (84%)	9 (16%)	0	100	100
3	2	35/37 (95%)	33 (94%)	2 (6%)	0	100	100
4	A	238/294 (81%)	204 (86%)	34 (14%)	0	100	100
5	B	213/273 (78%)	183 (86%)	29 (14%)	1 (0%)	24	63
6	C	201/205 (98%)	177 (88%)	23 (11%)	1 (0%)	24	63
7	D	151/219 (69%)	132 (87%)	19 (13%)	0	100	100
8	E	165/215 (77%)	126 (76%)	37 (22%)	2 (1%)	10	44
9	F	152/155 (98%)	132 (87%)	20 (13%)	0	100	100
10	G	139/142 (98%)	110 (79%)	28 (20%)	1 (1%)	18	56
11	H	126/132 (96%)	109 (86%)	17 (14%)	0	100	100
12	I	99/108 (92%)	82 (83%)	17 (17%)	0	100	100
13	J	112/121 (93%)	99 (88%)	13 (12%)	0	100	100
14	K	134/139 (96%)	110 (82%)	23 (17%)	1 (1%)	18	56
15	L	116/124 (94%)	99 (85%)	17 (15%)	0	100	100
16	M	58/61 (95%)	47 (81%)	11 (19%)	0	100	100
17	N	81/86 (94%)	74 (91%)	7 (9%)	0	100	100
18	O	78/94 (83%)	73 (94%)	5 (6%)	0	100	100
19	P	81/85 (95%)	67 (83%)	14 (17%)	0	100	100
20	Q	63/104 (61%)	52 (82%)	9 (14%)	2 (3%)	3	21
21	R	82/87 (94%)	74 (90%)	8 (10%)	0	100	100
22	S	75/87 (86%)	72 (96%)	3 (4%)	0	100	100
23	T	51/60 (85%)	43 (84%)	8 (16%)	0	100	100
24	a	283/287 (99%)	242 (86%)	41 (14%)	0	100	100
25	b	227/287 (79%)	195 (86%)	32 (14%)	0	100	100
26	c	208/212 (98%)	180 (86%)	27 (13%)	1 (0%)	24	63
27	d	173/180 (96%)	144 (83%)	29 (17%)	0	100	100
28	e	174/184 (95%)	155 (89%)	18 (10%)	1 (1%)	21	59
29	f	143/149 (96%)	121 (85%)	21 (15%)	1 (1%)	18	56
30	g	124/161 (77%)	103 (83%)	19 (15%)	2 (2%)	7	38
31	h	126/137 (92%)	108 (86%)	18 (14%)	0	100	100
32	i	142/146 (97%)	124 (87%)	18 (13%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
33	j	120/122 (98%)	111 (92%)	9 (8%)	0	100	100
34	k	146/151 (97%)	123 (84%)	23 (16%)	0	100	100
35	l	134/139 (96%)	117 (87%)	17 (13%)	0	100	100
36	m	117/124 (94%)	103 (88%)	14 (12%)	0	100	100
37	n	108/116 (93%)	91 (84%)	17 (16%)	0	100	100
38	o	113/119 (95%)	96 (85%)	17 (15%)	0	100	100
39	p	112/127 (88%)	95 (85%)	17 (15%)	0	100	100
40	q	97/100 (97%)	82 (84%)	14 (14%)	1 (1%)	12	49
41	r	137/159 (86%)	122 (89%)	14 (10%)	1 (1%)	18	56
42	s	90/237 (38%)	77 (86%)	13 (14%)	0	100	100
43	t	109/111 (98%)	94 (86%)	15 (14%)	0	100	100
44	u	84/104 (81%)	78 (93%)	6 (7%)	0	100	100
45	v	61/65 (94%)	55 (90%)	6 (10%)	0	100	100
46	w	96/111 (86%)	87 (91%)	9 (9%)	0	100	100
47	x	42/97 (43%)	33 (79%)	9 (21%)	0	100	100
48	y	54/57 (95%)	44 (82%)	10 (18%)	0	100	100
49	z	48/53 (91%)	42 (88%)	6 (12%)	0	100	100
All	All	5820/6670 (87%)	5007 (86%)	798 (14%)	15 (0%)	37	72

All (15) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
5	B	62	GLN
14	K	122	LYS
20	Q	55	ASP
26	c	123	ASP
6	C	146	ALA
8	E	163	MET
30	g	46	LYS
41	r	11	ARG
40	q	28	PRO
28	e	169	ASP
29	f	3	VAL
20	Q	54	ILE
30	g	48	GLY
8	E	164	GLY

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Mol	Chain	Res	Type
10	G	107	VAL

5.3.2 Protein sidechains ⓘ

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	A	212/262 (81%)	212 (100%)	0	100	100
5	B	180/232 (78%)	179 (99%)	1 (1%)	78	83
6	C	181/183 (99%)	181 (100%)	0	100	100
7	D	123/178 (69%)	122 (99%)	1 (1%)	73	80
8	E	150/196 (76%)	148 (99%)	2 (1%)	61	74
9	F	131/132 (99%)	131 (100%)	0	100	100
10	G	123/124 (99%)	120 (98%)	3 (2%)	43	64
11	H	111/115 (96%)	111 (100%)	0	100	100
12	I	95/99 (96%)	95 (100%)	0	100	100
13	J	91/97 (94%)	91 (100%)	0	100	100
14	K	117/120 (98%)	113 (97%)	4 (3%)	32	54
15	L	100/105 (95%)	100 (100%)	0	100	100
16	M	47/48 (98%)	47 (100%)	0	100	100
17	N	76/78 (97%)	76 (100%)	0	100	100
18	O	69/82 (84%)	69 (100%)	0	100	100
19	P	73/75 (97%)	73 (100%)	0	100	100
20	Q	56/94 (60%)	53 (95%)	3 (5%)	20	41
21	R	74/77 (96%)	74 (100%)	0	100	100
22	S	70/77 (91%)	70 (100%)	0	100	100
23	T	49/56 (88%)	49 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
24	a	241/243 (99%)	241 (100%)	0	100	100
25	b	186/233 (80%)	185 (100%)	1 (0%)	81	83
26	c	182/184 (99%)	179 (98%)	3 (2%)	55	70
27	d	150/154 (97%)	145 (97%)	5 (3%)	33	55
28	e	153/159 (96%)	153 (100%)	0	100	100
29	f	131/134 (98%)	130 (99%)	1 (1%)	73	80
30	g	101/129 (78%)	92 (91%)	9 (9%)	9	28
31	h	102/110 (93%)	102 (100%)	0	100	100
32	i	126/128 (98%)	122 (97%)	4 (3%)	34	56
33	j	103/103 (100%)	103 (100%)	0	100	100
34	k	123/126 (98%)	123 (100%)	0	100	100
35	l	113/115 (98%)	113 (100%)	0	100	100
36	m	105/109 (96%)	104 (99%)	1 (1%)	68	78
37	n	96/99 (97%)	96 (100%)	0	100	100
38	o	101/105 (96%)	100 (99%)	1 (1%)	68	78
39	p	100/108 (93%)	100 (100%)	0	100	100
40	q	90/91 (99%)	88 (98%)	2 (2%)	45	64
41	r	116/132 (88%)	112 (97%)	4 (3%)	32	54
42	s	82/208 (39%)	82 (100%)	0	100	100
43	t	96/96 (100%)	96 (100%)	0	100	100
44	u	69/85 (81%)	69 (100%)	0	100	100
45	v	58/60 (97%)	58 (100%)	0	100	100
46	w	87/98 (89%)	87 (100%)	0	100	100
47	x	41/86 (48%)	41 (100%)	0	100	100
48	y	48/49 (98%)	45 (94%)	3 (6%)	16	37
49	z	47/50 (94%)	47 (100%)	0	100	100
All	All	5101/5751 (89%)	5052 (99%)	49 (1%)	65	78

All (49) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	2	4	ARG
5	B	61	THR

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Mol	Chain	Res	Type
7	D	178	ILE
8	E	101	ASN
8	E	109	LEU
10	G	106	LEU
10	G	107	VAL
10	G	111	LEU
14	K	116	ASP
14	K	117	THR
14	K	122	LYS
14	K	123	ARG
20	Q	53	LEU
20	Q	55	ASP
20	Q	56	ASP
25	b	91	GLU
26	c	123	ASP
26	c	125	THR
26	c	167	ASN
27	d	4	LEU
27	d	25	ILE
27	d	26	MET
27	d	27	GLN
27	d	50	LEU
29	f	2	LYS
30	g	28	ASP
30	g	29	TYR
30	g	30	THR
30	g	44	LEU
30	g	45	PHE
30	g	46	LYS
30	g	47	ASN
30	g	88	GLU
30	g	118	PHE
32	i	40	ARG
32	i	87	ILE
32	i	88	LYS
32	i	89	LYS
36	m	4	ILE
38	o	65	ILE
40	q	25	LEU
40	q	26	GLU
41	r	9	ARG
41	r	10	VAL

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Mol	Chain	Res	Type
41	r	11	ARG
41	r	75	VAL
48	y	47	MET
48	y	48	TYR
48	y	51	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (164) such sidechains are listed below:

Mol	Chain	Res	Type
1	0	41	GLN
3	2	30	GLN
4	A	52	ASN
4	A	53	ASN
4	A	70	ASN
4	A	79	ASN
4	A	81	GLN
4	A	97	ASN
4	A	149	ASN
4	A	174	ASN
4	A	192	ASN
4	A	220	HIS
4	A	223	GLN
4	A	230	ASN
5	B	25	ASN
5	B	73	GLN
5	B	82	ASN
5	B	91	GLN
5	B	94	GLN
5	B	139	GLN
5	B	161	ASN
6	C	53	GLN
6	C	58	GLN
6	C	81	GLN
6	C	118	ASN
6	C	171	ASN
7	D	138	HIS
7	D	190	ASN
7	D	193	HIS
8	E	2	GLN
8	E	22	ASN
8	E	25	GLN
8	E	26	GLN

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Mol	Chain	Res	Type
8	E	52	GLN
9	F	51	GLN
9	F	67	ASN
9	F	129	ASN
9	F	141	HIS
10	G	73	ASN
10	G	89	GLN
11	H	33	ASN
11	H	128	GLN
12	I	70	GLN
12	I	74	ASN
12	I	87	GLN
13	J	15	HIS
13	J	33	ASN
14	K	25	HIS
14	K	27	ASN
14	K	37	ASN
14	K	86	ASN
15	L	12	GLN
15	L	31	GLN
15	L	58	ASN
16	M	25	GLN
17	N	2	GLN
17	N	39	HIS
17	N	83	ASN
18	O	7	HIS
18	O	69	GLN
19	P	36	HIS
19	P	46	GLN
21	R	14	HIS
21	R	23	ASN
22	S	18	ASN
22	S	21	ASN
22	S	24	GLN
22	S	36	HIS
22	S	50	GLN
22	S	63	ASN
24	a	11	ASN
24	a	15	HIS
24	a	31	ASN
24	a	75	HIS
24	a	91	ASN

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Mol	Chain	Res	Type
24	a	148	HIS
24	a	149	ASN
24	a	159	GLN
24	a	208	HIS
24	a	219	ASN
24	a	234	ASN
24	a	238	HIS
24	a	276	ASN
24	a	286	GLN
25	b	15	GLN
25	b	21	ASN
25	b	34	ASN
25	b	66	GLN
25	b	67	GLN
25	b	74	ASN
25	b	86	ASN
25	b	94	GLN
25	b	103	GLN
25	b	127	ASN
25	b	135	HIS
25	b	144	GLN
25	b	177	GLN
25	b	188	ASN
26	c	31	GLN
26	c	50	HIS
26	c	81	ASN
26	c	113	HIS
26	c	124	ASN
26	c	130	GLN
26	c	156	ASN
26	c	167	ASN
27	d	55	ASN
27	d	63	GLN
28	e	19	ASN
28	e	21	GLN
28	e	33	GLN
28	e	63	GLN
28	e	109	GLN
29	f	28	HIS
29	f	61	ASN
29	f	85	ASN
29	f	96	GLN

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Mol	Chain	Res	Type
32	i	11	GLN
32	i	50	ASN
32	i	64	GLN
32	i	70	ASN
32	i	99	GLN
32	i	133	HIS
34	k	5	GLN
34	k	39	GLN
34	k	81	ASN
34	k	117	HIS
34	k	134	GLN
34	k	141	ASN
35	l	24	ASN
35	l	71	HIS
35	l	108	ASN
36	m	21	GLN
37	n	7	GLN
37	n	37	ASN
37	n	38	HIS
37	n	49	ASN
38	o	15	GLN
38	o	17	GLN
38	o	82	HIS
39	p	86	ASN
40	q	79	HIS
41	r	22	GLN
41	r	38	ASN
41	r	52	ASN
41	r	60	ASN
41	r	121	GLN
43	t	2	GLN
43	t	64	GLN
43	t	79	GLN
44	u	64	ASN
44	u	84	GLN
45	v	6	GLN
45	v	16	ASN
45	v	34	GLN
46	w	35	HIS
46	w	46	GLN
46	w	66	GLN
46	w	90	HIS

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Mol	Chain	Res	Type
46	w	94	ASN
48	y	5	GLN
49	z	12	ASN
49	z	18	ASN
49	z	47	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
50	3	2875/2907 (98%)	1322 (45%)	52 (1%)
51	4	103/108 (95%)	48 (46%)	4 (3%)
52	5	1490/1520 (98%)	634 (42%)	18 (1%)
53	7	75/76 (98%)	40 (53%)	2 (2%)
All	All	4543/4611 (98%)	2044 (44%)	76 (1%)

All (2044) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
50	3	9	G
50	3	12	A
50	3	14	U
50	3	15	A
50	3	16	A
50	3	17	G
50	3	20	C
50	3	22	U
50	3	26	G
50	3	29	G
50	3	31	U
50	3	33	C
50	3	36	U
50	3	37	G
50	3	38	G
50	3	41	C
50	3	44	A
50	3	48	G
50	3	52	U
50	3	53	G
50	3	54	A
50	3	59	C
50	3	61	U

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Mol	Chain	Res	Type
50	3	63	U
50	3	66	A
50	3	73	A
50	3	74	U
50	3	75	A
50	3	76	A
50	3	77	G
50	3	82	G
50	3	84	G
50	3	86	A
50	3	87	G
50	3	90	G
50	3	91	G
50	3	93	A
50	3	97	A
50	3	98	C
50	3	102	A
50	3	103	G
50	3	104	A
50	3	109	G
50	3	110	A
50	3	115	U
50	3	116	C
50	3	117	C
50	3	118	G
50	3	120	A
50	3	121	U
50	3	122	G
50	3	126	C
50	3	127	A
50	3	128	A
50	3	129	U
50	3	132	G
50	3	136	G
50	3	137	U
50	3	146	G
50	3	147	C
50	3	148	U
50	3	152	A
50	3	156	A
50	3	158	U
50	3	162	G

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Mol	Chain	Res	Type
50	3	163	A
50	3	164	A
50	3	166	A
50	3	169	U
50	3	170	A
50	3	172	U
50	3	174	A
50	3	177	U
50	3	178	A
50	3	179	A
50	3	180	A
50	3	181	G
50	3	182	C
50	3	183	A
50	3	184	A
50	3	185	U
50	3	186	A
50	3	187	C
50	3	188	G
50	3	190	G
50	3	192	U
50	3	200	A
50	3	202	C
50	3	203	A
50	3	207	C
50	3	210	U
50	3	212	G
50	3	213	C
50	3	215	A
50	3	218	G
50	3	219	G
50	3	220	A
50	3	223	A
50	3	225	A
50	3	226	A
50	3	228	A
50	3	229	C
50	3	230	G
50	3	231	A
50	3	232	A
50	3	233	U
50	3	234	G

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Mol	Chain	Res	Type
50	3	235	U
50	3	237	A
50	3	239	U
50	3	245	U
50	3	246	G
50	3	247	U
50	3	249	G
50	3	251	G
50	3	252	G
50	3	254	G
50	3	256	G
50	3	269	A
50	3	270	G
50	3	273	C
50	3	275	A
50	3	276	A
50	3	277	C
50	3	282	C
50	3	283	A
50	3	284	U
50	3	285	U
50	3	286	A
50	3	287	G
50	3	293	G
50	3	295	U
50	3	296	U
50	3	297	G
50	3	298	U
50	3	299	A
50	3	301	G
50	3	302	G
50	3	306	G
50	3	309	A
50	3	310	U
50	3	312	U
50	3	314	G
50	3	315	A
50	3	316	C
50	3	318	U
50	3	319	G
50	3	320	A
50	3	322	A

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Mol	Chain	Res	Type
50	3	325	G
50	3	328	A
50	3	332	G
50	3	333	A
50	3	336	C
50	3	337	U
50	3	339	U
50	3	340	U
50	3	342	G
50	3	345	A
50	3	346	G
50	3	347	C
50	3	355	A
50	3	358	A
50	3	363	G
50	3	364	A
50	3	366	A
50	3	369	C
50	3	375	U
50	3	376	U
50	3	377	U
50	3	384	G
50	3	388	U
50	3	393	C
50	3	396	A
50	3	397	G
50	3	398	C
50	3	401	G
50	3	402	A
50	3	403	U
50	3	404	C
50	3	406	C
50	3	408	G
50	3	409	A
50	3	410	G
50	3	411	U
50	3	414	C
50	3	417	G
50	3	418	G
50	3	422	A
50	3	423	C
50	3	424	G

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Mol	Chain	Res	Type
50	3	425	U
50	3	426	U
50	3	431	U
50	3	432	G
50	3	433	A
50	3	437	A
50	3	438	A
50	3	440	C
50	3	441	U
50	3	442	G
50	3	444	C
50	3	447	G
50	3	448	A
50	3	454	G
50	3	456	G
50	3	457	U
50	3	458	A
50	3	460	G
50	3	461	C
50	3	464	A
50	3	465	A
50	3	467	U
50	3	468	A
50	3	471	A
50	3	473	U
50	3	477	U
50	3	478	G
50	3	479	A
50	3	483	A
50	3	484	U
50	3	485	A
50	3	487	C
50	3	488	G
50	3	489	A
50	3	491	A
50	3	492	C
50	3	493	A
50	3	494	G
50	3	495	U
50	3	497	C
50	3	501	G
50	3	509	G

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Mol	Chain	Res	Type
50	3	511	U
50	3	513	A
50	3	514	A
50	3	515	A
50	3	517	G
50	3	519	A
50	3	520	C
50	3	523	A
50	3	524	G
50	3	525	A
50	3	531	G
50	3	534	U
50	3	539	U
50	3	540	A
50	3	542	A
50	3	543	U
50	3	544	U
50	3	549	A
50	3	551	C
50	3	553	A
50	3	554	U
50	3	556	U
50	3	560	U
50	3	562	C
50	3	564	A
50	3	565	C
50	3	566	G
50	3	567	U
50	3	568	G
50	3	577	C
50	3	578	A
50	3	581	A
50	3	582	A
50	3	583	U
50	3	586	G
50	3	587	U
50	3	589	A
50	3	595	U
50	3	596	G
50	3	597	C
50	3	600	U
50	3	601	U

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Mol	Chain	Res	Type
50	3	605	A
50	3	606	G
50	3	607	U
50	3	608	A
50	3	610	G
50	3	612	G
50	3	616	G
50	3	619	A
50	3	620	G
50	3	622	U
50	3	624	U
50	3	626	A
50	3	627	U
50	3	628	A
50	3	629	G
50	3	630	C
50	3	633	G
50	3	638	A
50	3	645	C
50	3	646	A
50	3	647	G
50	3	648	G
50	3	649	A
50	3	653	G
50	3	654	G
50	3	656	G
50	3	657	A
50	3	658	G
50	3	661	G
50	3	663	A
50	3	664	G
50	3	669	A
50	3	670	G
50	3	673	A
50	3	676	U
50	3	677	U
50	3	679	A
50	3	681	A
50	3	682	A
50	3	683	G
50	3	686	C
50	3	689	U

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Mol	Chain	Res	Type
50	3	691	G
50	3	692	U
50	3	693	U
50	3	699	U
50	3	702	U
50	3	706	C
50	3	712	A
50	3	720	A
50	3	721	G
50	3	722	C
50	3	723	U
50	3	725	G
50	3	728	A
50	3	730	G
50	3	734	A
50	3	735	G
50	3	737	U
50	3	739	G
50	3	740	A
50	3	746	G
50	3	750	A
50	3	752	C
50	3	760	G
50	3	761	G
50	3	765	A
50	3	766	C
50	3	767	C
50	3	769	A
50	3	772	C
50	3	780	G
50	3	781	U
50	3	782	U
50	3	783	G
50	3	785	A
50	3	788	G
50	3	792	G
50	3	799	A
50	3	800	C
50	3	803	G
50	3	804	U
50	3	806	A
50	3	807	U

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Mol	Chain	Res	Type
50	3	810	G
50	3	811	G
50	3	812	G
50	3	816	A
50	3	817	A
50	3	819	U
50	3	820	U
50	3	821	C
50	3	824	A
50	3	825	U
50	3	827	G
50	3	828	A
50	3	830	A
50	3	837	A
50	3	840	G
50	3	841	C
50	3	842	U
50	3	847	C
50	3	850	G
50	3	854	A
50	3	858	A
50	3	860	C
50	3	861	U
50	3	862	U
50	3	864	A
50	3	865	A
50	3	866	G
50	3	867	G
50	3	868	C
50	3	873	G
50	3	874	U
50	3	876	A
50	3	878	A
50	3	880	C
50	3	882	C
50	3	883	A
50	3	885	A
50	3	887	A
50	3	889	G
50	3	892	G
50	3	894	G
50	3	895	G

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Mol	Chain	Res	Type
50	3	896	U
50	3	897	A
50	3	902	U
50	3	903	A
50	3	904	C
50	3	905	U
50	3	907	A
50	3	909	U
50	3	911	U
50	3	912	A
50	3	913	U
50	3	914	G
50	3	917	G
50	3	930	C
50	3	932	U
50	3	933	A
50	3	935	U
50	3	936	G
50	3	937	A
50	3	941	C
50	3	943	A
50	3	944	U
50	3	947	A
50	3	949	C
50	3	950	U
50	3	951	C
50	3	952	U
50	3	953	G
50	3	956	U
50	3	958	C
50	3	968	U
50	3	970	U
50	3	977	A
50	3	980	C
50	3	981	A
50	3	982	G
50	3	983	A
50	3	986	G
50	3	989	G
50	3	993	A
50	3	994	U
50	3	995	A

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Mol	Chain	Res	Type
50	3	997	G
50	3	1001	C
50	3	1002	A
50	3	1005	G
50	3	1006	U
50	3	1008	A
50	3	1009	A
50	3	1010	G
50	3	1013	G
50	3	1015	G
50	3	1016	A
50	3	1017	A
50	3	1019	A
50	3	1021	C
50	3	1023	C
50	3	1024	A
50	3	1025	G
50	3	1026	A
50	3	1027	U
50	3	1028	C
50	3	1031	U
50	3	1032	A
50	3	1036	A
50	3	1045	A
50	3	1046	A
50	3	1047	A
50	3	1048	A
50	3	1049	U
50	3	1053	C
50	3	1055	A
50	3	1057	G
50	3	1061	A
50	3	1065	G
50	3	1066	G
50	3	1068	U
50	3	1070	U
50	3	1072	A
50	3	1074	A
50	3	1075	G
50	3	1080	A
50	3	1081	A
50	3	1082	A

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Mol	Chain	Res	Type
50	3	1085	A
50	3	1088	A
50	3	1089	A
50	3	1095	U
50	3	1096	U
50	3	1097	G
50	3	1102	A
50	3	1104	A
50	3	1105	A
50	3	1106	G
50	3	1107	C
50	3	1112	A
50	3	1113	U
50	3	1115	G
50	3	1119	A
50	3	1123	A
50	3	1124	G
50	3	1125	U
50	3	1126	G
50	3	1129	U
50	3	1130	A
50	3	1132	C
50	3	1133	A
50	3	1141	U
50	3	1144	C
50	3	1145	G
50	3	1147	G
50	3	1149	G
50	3	1151	U
50	3	1154	U
50	3	1159	C
50	3	1163	G
50	3	1164	A
50	3	1165	U
50	3	1166	G
50	3	1167	U
50	3	1168	A
50	3	1170	C
50	3	1171	G
50	3	1174	G
50	3	1177	A
50	3	1179	G

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Mol	Chain	Res	Type
50	3	1180	U
50	3	1182	U
50	3	1183	A
50	3	1184	U
50	3	1186	A
50	3	1191	A
50	3	1193	U
50	3	1195	A
50	3	1200	U
50	3	1201	A
50	3	1203	G
50	3	1204	A
50	3	1208	A
50	3	1209	U
50	3	1210	A
50	3	1212	C
50	3	1215	G
50	3	1216	U
50	3	1217	G
50	3	1221	G
50	3	1227	C
50	3	1234	U
50	3	1235	U
50	3	1236	G
50	3	1237	G
50	3	1240	U
50	3	1241	U
50	3	1242	G
50	3	1243	A
50	3	1245	G
50	3	1247	C
50	3	1248	A
50	3	1250	A
50	3	1251	G
50	3	1253	G
50	3	1257	G
50	3	1259	A
50	3	1260	U
50	3	1262	G
50	3	1263	G
50	3	1265	G
50	3	1266	G

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Mol	Chain	Res	Type
50	3	1267	A
50	3	1268	U
50	3	1271	A
50	3	1272	A
50	3	1274	A
50	3	1276	A
50	3	1277	A
50	3	1278	G
50	3	1279	U
50	3	1281	A
50	3	1282	G
50	3	1283	A
50	3	1285	U
50	3	1286	G
50	3	1287	C
50	3	1292	A
50	3	1296	G
50	3	1297	U
50	3	1298	A
50	3	1300	C
50	3	1301	G
50	3	1302	C
50	3	1303	U
50	3	1304	U
50	3	1312	A
50	3	1314	A
50	3	1315	A
50	3	1320	C
50	3	1321	C
50	3	1323	A
50	3	1324	A
50	3	1326	C
50	3	1327	G
50	3	1328	A
50	3	1329	U
50	3	1330	U
50	3	1332	A
50	3	1334	U
50	3	1342	C
50	3	1347	A
50	3	1348	C
50	3	1349	C

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Mol	Chain	Res	Type
50	3	1350	A
50	3	1352	G
50	3	1353	G
50	3	1356	G
50	3	1357	U
50	3	1358	C
50	3	1360	U
50	3	1368	U
50	3	1369	U
50	3	1370	A
50	3	1371	G
50	3	1373	C
50	3	1375	G
50	3	1380	U
50	3	1387	A
50	3	1388	G
50	3	1389	G
50	3	1393	A
50	3	1402	G
50	3	1403	G
50	3	1404	C
50	3	1405	G
50	3	1406	A
50	3	1407	U
50	3	1408	G
50	3	1410	A
50	3	1411	C
50	3	1412	A
50	3	1413	A
50	3	1414	C
50	3	1419	U
50	3	1421	A
50	3	1422	U
50	3	1423	A
50	3	1424	U
50	3	1425	U
50	3	1426	C
50	3	1431	A
50	3	1434	U
50	3	1435	A
50	3	1436	C
50	3	1438	G

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Mol	Chain	Res	Type
50	3	1439	U
50	3	1441	A
50	3	1444	C
50	3	1445	U
50	3	1447	A
50	3	1451	A
50	3	1453	U
50	3	1455	A
50	3	1456	C
50	3	1457	A
50	3	1462	A
50	3	1463	G
50	3	1466	U
50	3	1467	U
50	3	1475	C
50	3	1479	A
50	3	1480	A
50	3	1481	U
50	3	1482	U
50	3	1483	G
50	3	1487	U
50	3	1489	G
50	3	1495	A
50	3	1497	A
50	3	1502	A
50	3	1506	U
50	3	1507	G
50	3	1508	G
50	3	1509	U
50	3	1513	A
50	3	1515	A
50	3	1518	C
50	3	1521	A
50	3	1523	C
50	3	1526	U
50	3	1527	U
50	3	1528	G
50	3	1530	G
50	3	1533	U
50	3	1534	A
50	3	1535	A
50	3	1541	A

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Mol	Chain	Res	Type
50	3	1542	G
50	3	1546	U
50	3	1549	U
50	3	1550	G
50	3	1554	A
50	3	1555	G
50	3	1556	U
50	3	1557	G
50	3	1559	A
50	3	1571	G
50	3	1572	U
50	3	1579	G
50	3	1580	G
50	3	1582	G
50	3	1584	U
50	3	1585	A
50	3	1586	U
50	3	1587	U
50	3	1588	A
50	3	1589	A
50	3	1592	A
50	3	1593	U
50	3	1594	G
50	3	1599	C
50	3	1600	A
50	3	1603	A
50	3	1605	A
50	3	1608	C
50	3	1609	U
50	3	1611	C
50	3	1612	U
50	3	1615	G
50	3	1616	G
50	3	1618	U
50	3	1619	A
50	3	1629	U
50	3	1631	A
50	3	1633	C
50	3	1637	A
50	3	1640	G
50	3	1641	A
50	3	1642	G

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Mol	Chain	Res	Type
50	3	1643	A
50	3	1644	A
50	3	1650	A
50	3	1651	C
50	3	1663	G
50	3	1664	A
50	3	1665	G
50	3	1668	G
50	3	1669	A
50	3	1672	C
50	3	1678	U
50	3	1680	A
50	3	1681	G
50	3	1682	C
50	3	1683	G
50	3	1685	G
50	3	1686	U
50	3	1688	A
50	3	1689	A
50	3	1694	A
50	3	1695	G
50	3	1698	A
50	3	1699	A
50	3	1701	G
50	3	1702	A
50	3	1704	C
50	3	1706	C
50	3	1707	U
50	3	1708	G
50	3	1711	A
50	3	1716	A
50	3	1717	C
50	3	1718	C
50	3	1726	U
50	3	1727	U
50	3	1728	A
50	3	1729	G
50	3	1732	A
50	3	1733	G
50	3	1734	A
50	3	1735	A
50	3	1739	G

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Mol	Chain	Res	Type
50	3	1740	U
50	3	1743	U
50	3	1745	A
50	3	1747	G
50	3	1748	U
50	3	1749	A
50	3	1752	A
50	3	1759	C
50	3	1761	C
50	3	1762	A
50	3	1763	G
50	3	1764	U
50	3	1765	G
50	3	1766	A
50	3	1767	A
50	3	1769	A
50	3	1770	A
50	3	1771	C
50	3	1773	A
50	3	1777	G
50	3	1780	A
50	3	1784	U
50	3	1785	U
50	3	1786	U
50	3	1787	A
50	3	1788	A
50	3	1789	C
50	3	1791	A
50	3	1793	A
50	3	1807	C
50	3	1808	C
50	3	1809	A
50	3	1810	A
50	3	1815	U
50	3	1816	A
50	3	1820	U
50	3	1821	G
50	3	1822	A
50	3	1823	U
50	3	1824	G
50	3	1826	A
50	3	1828	A

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Mol	Chain	Res	Type
50	3	1831	G
50	3	1836	A
50	3	1839	C
50	3	1842	G
50	3	1843	C
50	3	1846	A
50	3	1849	G
50	3	1850	C
50	3	1851	U
50	3	1852	G
50	3	1853	G
50	3	1854	A
50	3	1856	G
50	3	1858	U
50	3	1859	U
50	3	1862	A
50	3	1864	A
50	3	1865	A
50	3	1868	A
50	3	1869	G
50	3	1871	U
50	3	1872	U
50	3	1873	A
50	3	1874	G
50	3	1875	C
50	3	1876	G
50	3	1877	C
50	3	1878	A
50	3	1883	A
50	3	1888	U
50	3	1889	U
50	3	1890	U
50	3	1891	A
50	3	1892	A
50	3	1895	G
50	3	1896	A
50	3	1899	C
50	3	1906	G
50	3	1907	A
50	3	1908	A
50	3	1910	G
50	3	1912	C

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Mol	Chain	Res	Type
50	3	1913	G
50	3	1917	G
50	3	1920	A
50	3	1921	C
50	3	1930	U
50	3	1934	A
50	3	1936	G
50	3	1938	U
50	3	1944	A
50	3	1945	A
50	3	1946	U
50	3	1950	U
50	3	1952	G
50	3	1953	U
50	3	1954	C
50	3	1956	G
50	3	1957	G
50	3	1959	A
50	3	1962	U
50	3	1963	U
50	3	1965	C
50	3	1969	C
50	3	1970	C
50	3	1971	G
50	3	1972	C
50	3	1973	U
50	3	1974	U
50	3	1977	A
50	3	1978	U
50	3	1979	G
50	3	1981	U
50	3	1984	A
50	3	1988	A
50	3	1990	C
50	3	1993	U
50	3	1998	U
50	3	2000	U
50	3	2009	U
50	3	2011	G
50	3	2016	G
50	3	2020	A
50	3	2021	A

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Mol	Chain	Res	Type
50	3	2023	U
50	3	2025	C
50	3	2028	G
50	3	2030	A
50	3	2032	G
50	3	2036	G
50	3	2037	A
50	3	2038	A
50	3	2040	A
50	3	2041	C
50	3	2043	C
50	3	2050	G
50	3	2053	G
50	3	2055	A
50	3	2056	A
50	3	2057	C
50	3	2060	G
50	3	2061	A
50	3	2062	C
50	3	2063	G
50	3	2066	A
50	3	2067	A
50	3	2068	G
50	3	2069	A
50	3	2070	C
50	3	2071	C
50	3	2072	C
50	3	2074	G
50	3	2076	G
50	3	2080	C
50	3	2083	U
50	3	2087	G
50	3	2090	G
50	3	2095	A
50	3	2097	A
50	3	2099	U
50	3	2100	G
50	3	2101	A
50	3	2103	C
50	3	2106	G
50	3	2107	A
50	3	2108	C

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Mol	Chain	Res	Type
50	3	2109	A
50	3	2110	U
50	3	2111	U
50	3	2112	A
50	3	2114	C
50	3	2115	A
50	3	2117	G
50	3	2118	U
50	3	2119	A
50	3	2123	A
50	3	2124	A
50	3	2126	A
50	3	2127	G
50	3	2128	G
50	3	2131	G
50	3	2133	A
50	3	2136	A
50	3	2138	U
50	3	2139	C
50	3	2140	G
50	3	2141	A
50	3	2145	A
50	3	2147	G
50	3	2149	U
50	3	2151	G
50	3	2152	C
50	3	2153	U
50	3	2156	G
50	3	2159	U
50	3	2162	U
50	3	2165	A
50	3	2166	U
50	3	2171	A
50	3	2173	G
50	3	2175	U
50	3	2178	A
50	3	2180	U
50	3	2181	A
50	3	2185	C
50	3	2187	C
50	3	2191	G
50	3	2193	U

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Mol	Chain	Res	Type
50	3	2195	U
50	3	2196	G
50	3	2198	G
50	3	2200	U
50	3	2201	G
50	3	2202	U
50	3	2203	U
50	3	2205	U
50	3	2206	A
50	3	2208	U
50	3	2211	G
50	3	2212	U
50	3	2218	U
50	3	2219	U
50	3	2220	A
50	3	2221	U
50	3	2222	C
50	3	2225	G
50	3	2230	A
50	3	2231	A
50	3	2232	G
50	3	2233	A
50	3	2246	G
50	3	2247	G
50	3	2248	C
50	3	2251	U
50	3	2252	U
50	3	2254	G
50	3	2257	U
50	3	2258	G
50	3	2259	G
50	3	2262	C
50	3	2263	G
50	3	2265	U
50	3	2267	G
50	3	2271	C
50	3	2272	C
50	3	2274	A
50	3	2275	A
50	3	2276	A
50	3	2277	A
50	3	2281	A

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Mol	Chain	Res	Type
50	3	2286	A
50	3	2290	G
50	3	2291	U
50	3	2294	A
50	3	2295	A
50	3	2296	A
50	3	2298	G
50	3	2299	U
50	3	2301	C
50	3	2307	G
50	3	2310	C
50	3	2312	G
50	3	2313	U
50	3	2315	G
50	3	2316	G
50	3	2317	A
50	3	2318	A
50	3	2320	U
50	3	2322	G
50	3	2329	G
50	3	2330	A
50	3	2332	U
50	3	2333	G
50	3	2335	A
50	3	2338	G
50	3	2340	U
50	3	2341	G
50	3	2342	U
50	3	2343	A
50	3	2344	A
50	3	2350	C
50	3	2352	U
50	3	2353	G
50	3	2355	C
50	3	2356	U
50	3	2358	U
50	3	2359	G
50	3	2362	A
50	3	2363	C
50	3	2365	U
50	3	2367	C
50	3	2369	G

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Mol	Chain	Res	Type
50	3	2370	G
50	3	2371	U
50	3	2375	A
50	3	2377	A
50	3	2378	G
50	3	2380	U
50	3	2382	A
50	3	2383	G
50	3	2391	G
50	3	2393	C
50	3	2395	U
50	3	2396	A
50	3	2403	C
50	3	2406	U
50	3	2410	C
50	3	2411	C
50	3	2414	U
50	3	2415	A
50	3	2416	U
50	3	2418	G
50	3	2424	C
50	3	2425	C
50	3	2427	U
50	3	2430	C
50	3	2431	U
50	3	2433	A
50	3	2434	A
50	3	2435	C
50	3	2436	G
50	3	2437	G
50	3	2438	A
50	3	2439	U
50	3	2440	A
50	3	2442	A
50	3	2443	A
50	3	2447	A
50	3	2448	C
50	3	2449	U
50	3	2452	G
50	3	2453	G
50	3	2455	G
50	3	2456	A

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Mol	Chain	Res	Type
50	3	2457	U
50	3	2458	A
50	3	2459	A
50	3	2460	C
50	3	2461	A
50	3	2462	G
50	3	2463	G
50	3	2469	A
50	3	2471	U
50	3	2473	C
50	3	2475	C
50	3	2478	G
50	3	2484	A
50	3	2485	U
50	3	2486	A
50	3	2488	C
50	3	2490	A
50	3	2491	C
50	3	2492	G
50	3	2495	A
50	3	2497	U
50	3	2498	G
50	3	2499	U
50	3	2500	U
50	3	2502	G
50	3	2503	G
50	3	2505	A
50	3	2506	C
50	3	2507	C
50	3	2509	C
50	3	2511	A
50	3	2512	U
50	3	2513	G
50	3	2518	C
50	3	2520	C
50	3	2521	A
50	3	2524	U
50	3	2526	A
50	3	2527	U
50	3	2529	C
50	3	2534	G
50	3	2538	A

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Mol	Chain	Res	Type
50	3	2539	A
50	3	2541	C
50	3	2543	G
50	3	2544	G
50	3	2545	U
50	3	2551	G
50	3	2553	G
50	3	2557	G
50	3	2561	G
50	3	2564	C
50	3	2566	C
50	3	2568	G
50	3	2570	U
50	3	2572	A
50	3	2573	A
50	3	2574	A
50	3	2575	G
50	3	2578	A
50	3	2581	C
50	3	2585	A
50	3	2586	G
50	3	2587	U
50	3	2590	G
50	3	2593	U
50	3	2594	C
50	3	2596	A
50	3	2602	C
50	3	2603	G
50	3	2604	U
50	3	2605	G
50	3	2606	A
50	3	2607	G
50	3	2610	A
50	3	2614	U
50	3	2615	G
50	3	2617	U
50	3	2618	C
50	3	2619	C
50	3	2621	U
50	3	2623	U
50	3	2627	U
50	3	2629	G

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Mol	Chain	Res	Type
50	3	2631	G
50	3	2633	C
50	3	2637	A
50	3	2638	G
50	3	2642	G
50	3	2643	A
50	3	2644	U
50	3	2646	G
50	3	2649	G
50	3	2650	A
50	3	2654	U
50	3	2655	U
50	3	2662	A
50	3	2663	G
50	3	2664	U
50	3	2668	A
50	3	2669	G
50	3	2680	C
50	3	2681	G
50	3	2684	G
50	3	2686	C
50	3	2689	C
50	3	2690	U
50	3	2692	U
50	3	2693	U
50	3	2694	A
50	3	2697	C
50	3	2698	U
50	3	2699	C
50	3	2703	U
50	3	2704	U
50	3	2708	G
50	3	2710	G
50	3	2711	C
50	3	2714	G
50	3	2715	C
50	3	2718	C
50	3	2721	C
50	3	2722	G
50	3	2725	G
50	3	2726	G
50	3	2727	G

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Mol	Chain	Res	Type
50	3	2729	A
50	3	2734	C
50	3	2735	G
50	3	2739	C
50	3	2740	U
50	3	2741	A
50	3	2747	U
50	3	2752	G
50	3	2753	C
50	3	2756	A
50	3	2765	A
50	3	2766	A
50	3	2774	A
50	3	2782	A
50	3	2785	G
50	3	2786	A
50	3	2788	U
50	3	2789	A
50	3	2790	A
50	3	2791	U
50	3	2792	C
50	3	2794	U
50	3	2796	C
50	3	2797	C
50	3	2801	U
50	3	2803	G
50	3	2804	C
50	3	2805	A
50	3	2807	G
50	3	2808	A
50	3	2810	A
50	3	2811	G
50	3	2812	U
50	3	2813	A
50	3	2814	A
50	3	2815	G
50	3	2818	C
50	3	2821	U
50	3	2822	C
50	3	2824	A
50	3	2825	A
50	3	2826	G

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Mol	Chain	Res	Type
50	3	2828	C
50	3	2830	A
50	3	2831	U
50	3	2832	G
50	3	2833	A
50	3	2835	G
50	3	2836	U
50	3	2837	U
50	3	2838	G
50	3	2839	A
50	3	2840	U
50	3	2846	A
50	3	2848	A
50	3	2849	G
50	3	2852	G
50	3	2853	U
50	3	2854	A
50	3	2855	A
50	3	2861	G
50	3	2863	G
50	3	2864	A
50	3	2865	U
50	3	2870	U
50	3	2871	G
50	3	2872	A
50	3	2876	G
50	3	2879	U
50	3	2881	A
50	3	2883	A
50	3	2884	C
50	3	2887	A
50	3	2888	U
50	3	2889	U
50	3	2890	G
50	3	2895	A
50	3	2896	G
50	3	2897	G
50	3	2898	A
50	3	2899	C
51	4	5	G
51	4	8	C
51	4	9	C

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Mol	Chain	Res	Type
51	4	10	C
51	4	11	A
51	4	12	U
51	4	19	G
51	4	20	U
51	4	22	G
51	4	23	A
51	4	24	A
51	4	25	A
51	4	26	C
51	4	28	C
51	4	30	U
51	4	32	G
51	4	33	U
51	4	35	C
51	4	39	U
51	4	40	U
51	4	42	G
51	4	43	A
51	4	46	C
51	4	49	G
51	4	50	C
51	4	51	A
51	4	55	A
51	4	56	A
51	4	60	C
51	4	66	A
51	4	67	G
51	4	70	G
51	4	73	U
51	4	74	G
51	4	77	G
51	4	78	C
51	4	80	G
51	4	85	A
51	4	87	U
51	4	88	G
51	4	89	A
51	4	99	A
51	4	100	G
51	4	102	A
51	4	103	C

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Mol	Chain	Res	Type
51	4	105	A
51	4	107	G
51	4	108	C
52	5	7	U
52	5	8	G
52	5	9	A
52	5	10	G
52	5	11	A
52	5	14	U
52	5	15	U
52	5	17	A
52	5	21	U
52	5	22	G
52	5	27	A
52	5	30	A
52	5	32	U
52	5	33	A
52	5	36	G
52	5	38	U
52	5	40	G
52	5	43	G
52	5	48	C
52	5	49	C
52	5	50	U
52	5	51	A
52	5	52	A
52	5	53	U
52	5	55	C
52	5	60	A
52	5	61	A
52	5	66	A
52	5	68	C
52	5	69	G
52	5	70	A
52	5	75	A
52	5	76	G
52	5	80	U
52	5	83	U
52	5	86	A
52	5	93	A
52	5	94	A
52	5	95	C

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Mol	Chain	Res	Type
52	5	96	G
52	5	101	A
52	5	103	U
52	5	105	A
52	5	108	C
52	5	109	G
52	5	112	U
52	5	113	C
52	5	114	C
52	5	115	A
52	5	116	A
52	5	117	U
52	5	120	A
52	5	124	U
52	5	127	A
52	5	128	A
52	5	130	G
52	5	135	A
52	5	149	G
52	5	156	U
52	5	159	U
52	5	160	A
52	5	162	C
52	5	163	G
52	5	169	G
52	5	171	A
52	5	178	U
52	5	179	U
52	5	187	A
52	5	193	G
52	5	196	G
52	5	197	A
52	5	198	A
52	5	201	G
52	5	202	A
52	5	207	C
52	5	210	G
52	5	213	U
52	5	215	C
52	5	218	U
52	5	220	U
52	5	224	A

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Mol	Chain	Res	Type
52	5	228	G
52	5	230	G
52	5	232	G
52	5	233	C
52	5	236	C
52	5	239	A
52	5	240	U
52	5	241	C
52	5	242	A
52	5	243	G
52	5	247	G
52	5	248	U
52	5	258	A
52	5	260	C
52	5	262	G
52	5	263	C
52	5	265	U
52	5	266	A
52	5	272	G
52	5	274	A
52	5	275	A
52	5	276	U
52	5	285	G
52	5	291	C
52	5	299	U
52	5	301	G
52	5	302	A
52	5	303	A
52	5	304	U
52	5	305	A
52	5	307	C
52	5	311	A
52	5	312	A
52	5	316	G
52	5	317	A
52	5	318	C
52	5	319	U
52	5	321	A
52	5	322	G
52	5	323	A
52	5	324	C
52	5	325	A

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Mol	Chain	Res	Type
52	5	326	C
52	5	327	G
52	5	328	G
52	5	336	U
52	5	340	A
52	5	341	C
52	5	342	G
52	5	343	G
52	5	344	G
52	5	348	C
52	5	349	A
52	5	350	G
52	5	352	A
52	5	357	G
52	5	359	A
52	5	363	U
52	5	364	U
52	5	366	C
52	5	368	C
52	5	369	A
52	5	370	A
52	5	374	G
52	5	377	A
52	5	380	G
52	5	381	C
52	5	382	U
52	5	383	U
52	5	384	G
52	5	388	G
52	5	392	A
52	5	394	U
52	5	395	G
52	5	400	G
52	5	401	U
52	5	402	G
52	5	403	A
52	5	408	U
52	5	409	G
52	5	410	A
52	5	411	A
52	5	412	G
52	5	413	G

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Mol	Chain	Res	Type
52	5	415	C
52	5	416	U
52	5	417	U
52	5	418	U
52	5	419	A
52	5	420	A
52	5	422	A
52	5	423	U
52	5	425	G
52	5	426	U
52	5	427	A
52	5	429	A
52	5	432	U
52	5	434	U
52	5	435	U
52	5	440	U
52	5	443	G
52	5	445	A
52	5	448	A
52	5	449	A
52	5	450	U
52	5	452	A
52	5	453	C
52	5	457	A
52	5	461	G
52	5	464	A
52	5	466	U
52	5	467	G
52	5	468	G
52	5	471	A
52	5	472	G
52	5	473	A
52	5	475	U
52	5	476	U
52	5	477	U
52	5	478	G
52	5	479	A
52	5	480	C
52	5	481	U
52	5	482	G
52	5	483	U
52	5	485	C

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Mol	Chain	Res	Type
52	5	487	A
52	5	488	U
52	5	489	U
52	5	493	A
52	5	494	A
52	5	495	U
52	5	498	G
52	5	506	U
52	5	509	C
52	5	510	U
52	5	514	U
52	5	515	G
52	5	516	C
52	5	517	C
52	5	519	G
52	5	520	C
52	5	521	A
52	5	522	G
52	5	523	U
52	5	525	G
52	5	526	C
52	5	528	G
52	5	529	U
52	5	530	A
52	5	531	A
52	5	532	U
52	5	533	A
52	5	541	C
52	5	544	A
52	5	545	A
52	5	550	U
52	5	551	A
52	5	557	A
52	5	558	U
52	5	559	U
52	5	560	U
52	5	561	A
52	5	565	G
52	5	568	G
52	5	570	A
52	5	571	A
52	5	572	A

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Mol	Chain	Res	Type
52	5	573	G
52	5	574	C
52	5	575	A
52	5	581	A
52	5	586	G
52	5	594	A
52	5	599	G
52	5	600	G
52	5	605	A
52	5	608	G
52	5	609	G
52	5	610	C
52	5	615	G
52	5	619	A
52	5	623	G
52	5	626	G
52	5	628	A
52	5	629	U
52	5	630	G
52	5	637	A
52	5	638	A
52	5	639	A
52	5	641	U
52	5	644	U
52	5	646	A
52	5	648	C
52	5	649	U
52	5	650	A
52	5	651	G
52	5	652	A
52	5	653	G
52	5	662	G
52	5	667	U
52	5	668	U
52	5	669	U
52	5	672	A
52	5	674	U
52	5	681	U
52	5	682	G
52	5	684	A
52	5	689	U
52	5	694	U

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Mol	Chain	Res	Type
52	5	696	C
52	5	698	U
52	5	699	A
52	5	700	G
52	5	701	A
52	5	703	A
52	5	710	G
52	5	712	A
52	5	715	A
52	5	717	C
52	5	719	G
52	5	721	G
52	5	724	G
52	5	725	A
52	5	726	A
52	5	731	A
52	5	733	A
52	5	735	C
52	5	736	U
52	5	738	A
52	5	740	G
52	5	742	C
52	5	745	U
52	5	746	A
52	5	748	U
52	5	749	G
52	5	750	A
52	5	752	G
52	5	754	U
52	5	755	U
52	5	756	A
52	5	765	A
52	5	766	G
52	5	768	G
52	5	769	U
52	5	774	A
52	5	779	A
52	5	780	U
52	5	784	A
52	5	785	U
52	5	787	A
52	5	790	U

Continued on next page...

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Mol	Chain	Res	Type
52	5	791	A
52	5	797	G
52	5	801	U
52	5	802	C
52	5	806	A
52	5	808	C
52	5	810	U
52	5	812	A
52	5	813	A
52	5	814	C
52	5	815	G
52	5	816	A
52	5	817	U
52	5	818	A
52	5	820	A
52	5	822	A
52	5	825	A
52	5	829	G
52	5	837	G
52	5	838	A
52	5	845	C
52	5	846	G
52	5	849	A
52	5	850	G
52	5	854	A
52	5	856	U
52	5	858	A
52	5	859	A
52	5	861	A
52	5	864	U
52	5	865	U
52	5	867	A
52	5	878	U
52	5	879	G
52	5	880	G
52	5	881	G
52	5	882	U
52	5	883	A
52	5	885	U
52	5	888	A
52	5	891	C
52	5	896	G

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Mol	Chain	Res	Type
52	5	908	A
52	5	910	C
52	5	911	G
52	5	912	G
52	5	918	A
52	5	919	C
52	5	921	G
52	5	922	G
52	5	926	C
52	5	927	C
52	5	928	G
52	5	929	C
52	5	930	A
52	5	931	C
52	5	937	G
52	5	938	U
52	5	939	G
52	5	940	G
52	5	941	A
52	5	942	G
52	5	953	A
52	5	954	A
52	5	955	U
52	5	956	U
52	5	961	G
52	5	963	U
52	5	964	A
52	5	965	C
52	5	966	A
52	5	967	C
52	5	968	G
52	5	970	A
52	5	971	A
52	5	972	A
52	5	976	U
52	5	977	U
52	5	983	G
52	5	984	A
52	5	985	C
52	5	987	U
52	5	988	G
52	5	1000	A

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Mol	Chain	Res	Type
52	5	1001	A
52	5	1002	A
52	5	1003	G
52	5	1013	C
52	5	1014	A
52	5	1015	U
52	5	1016	A
52	5	1019	G
52	5	1029	C
52	5	1030	G
52	5	1033	U
52	5	1039	G
52	5	1041	G
52	5	1044	G
52	5	1045	C
52	5	1047	U
52	5	1048	G
52	5	1050	U
52	5	1052	G
52	5	1056	U
52	5	1058	A
52	5	1061	U
52	5	1065	G
52	5	1073	A
52	5	1075	G
52	5	1081	U
52	5	1082	U
52	5	1085	G
52	5	1086	U
52	5	1090	G
52	5	1092	A
52	5	1095	G
52	5	1096	A
52	5	1097	G
52	5	1103	C
52	5	1109	U
52	5	1111	G
52	5	1113	U
52	5	1116	U
52	5	1121	U
52	5	1122	U
52	5	1123	G

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Mol	Chain	Res	Type
52	5	1124	U
52	5	1125	C
52	5	1127	A
52	5	1128	G
52	5	1130	G
52	5	1131	A
52	5	1132	G
52	5	1133	A
52	5	1134	C
52	5	1135	U
52	5	1136	G
52	5	1139	A
52	5	1141	U
52	5	1142	G
52	5	1144	A
52	5	1154	A
52	5	1159	A
52	5	1160	G
52	5	1162	G
52	5	1163	A
52	5	1164	U
52	5	1165	G
52	5	1166	A
52	5	1167	C
52	5	1168	G
52	5	1169	U
52	5	1171	A
52	5	1173	A
52	5	1174	U
52	5	1176	A
52	5	1177	U
52	5	1179	A
52	5	1185	C
52	5	1187	U
52	5	1188	A
52	5	1189	U
52	5	1192	C
52	5	1198	C
52	5	1199	U
52	5	1200	G
52	5	1201	C
52	5	1203	A

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Mol	Chain	Res	Type
52	5	1207	U
52	5	1208	G
52	5	1211	A
52	5	1213	A
52	5	1214	A
52	5	1215	U
52	5	1216	G
52	5	1217	G
52	5	1223	A
52	5	1227	A
52	5	1229	A
52	5	1230	G
52	5	1231	U
52	5	1232	C
52	5	1233	G
52	5	1235	C
52	5	1244	A
52	5	1245	A
52	5	1246	A
52	5	1251	G
52	5	1254	A
52	5	1255	A
52	5	1256	U
52	5	1257	C
52	5	1260	U
52	5	1261	A
52	5	1265	U
52	5	1268	G
52	5	1270	C
52	5	1272	C
52	5	1275	U
52	5	1276	U
52	5	1279	G
52	5	1280	A
52	5	1281	U
52	5	1284	A
52	5	1289	U
52	5	1291	C
52	5	1296	C
52	5	1297	G
52	5	1299	C
52	5	1302	C

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Mol	Chain	Res	Type
52	5	1305	G
52	5	1306	A
52	5	1310	C
52	5	1312	G
52	5	1313	A
52	5	1315	U
52	5	1316	C
52	5	1319	U
52	5	1320	A
52	5	1321	G
52	5	1322	U
52	5	1324	A
52	5	1327	G
52	5	1330	A
52	5	1331	A
52	5	1334	A
52	5	1337	U
52	5	1338	A
52	5	1339	U
52	5	1340	G
52	5	1342	C
52	5	1343	G
52	5	1344	C
52	5	1352	A
52	5	1354	G
52	5	1360	G
52	5	1362	G
52	5	1363	U
52	5	1364	C
52	5	1372	C
52	5	1373	A
52	5	1375	C
52	5	1381	U
52	5	1383	A
52	5	1384	A
52	5	1385	A
52	5	1387	U
52	5	1391	A
52	5	1394	G
52	5	1395	C
52	5	1397	G
52	5	1399	U

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Mol	Chain	Res	Type
52	5	1400	A
52	5	1403	A
52	5	1404	U
52	5	1405	U
52	5	1408	A
52	5	1409	A
52	5	1411	A
52	5	1412	C
52	5	1413	G
52	5	1414	U
52	5	1417	U
52	5	1421	A
52	5	1423	C
52	5	1426	U
52	5	1429	G
52	5	1430	G
52	5	1431	A
52	5	1436	C
52	5	1443	A
52	5	1445	G
52	5	1446	A
52	5	1447	U
52	5	1448	A
52	5	1449	G
52	5	1450	C
52	5	1457	G
52	5	1462	G
52	5	1463	A
52	5	1465	U
52	5	1467	A
52	5	1468	A
52	5	1472	G
52	5	1473	U
52	5	1474	A
52	5	1475	A
52	5	1477	A
52	5	1480	G
52	5	1481	U
52	5	1482	A
52	5	1483	C
52	5	1484	C
52	5	1485	C

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Mol	Chain	Res	Type
52	5	1492	G
52	5	1497	U
52	5	1499	G
52	5	1500	G
52	5	1503	U
52	5	1504	G
52	5	1505	G
53	7	3	G
53	7	4	U
53	7	5	C
53	7	6	U
53	7	8	G
53	7	9	U
53	7	12	C
53	7	14	C
53	7	16	G
53	7	17	U
53	7	18	C
53	7	19	G
53	7	20	G
53	7	22	A
53	7	25	G
53	7	28	A
53	7	29	C
53	7	31	G
53	7	33	C
53	7	35	G
53	7	39	A
53	7	42	C
53	7	43	G
53	7	44	U
53	7	48	U
53	7	49	C
53	7	50	G
53	7	53	A
53	7	54	G
53	7	57	C
53	7	58	G
53	7	59	A
53	7	60	U
53	7	62	C
53	7	71	A

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Mol	Chain	Res	Type
53	7	72	C
53	7	73	C
53	7	74	A
53	7	75	C
53	7	76	C

All (76) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
50	3	184	A
50	3	296	U
50	3	311	G
50	3	314	G
50	3	315	A
50	3	410	G
50	3	425	U
50	3	456	G
50	3	500	U
50	3	508	A
50	3	513	A
50	3	605	A
50	3	611	A
50	3	782	U
50	3	802	U
50	3	881	A
50	3	901	C
50	3	903	A
50	3	936	G
50	3	952	U
50	3	1048	A
50	3	1054	U
50	3	1209	U
50	3	1211	U
50	3	1216	U
50	3	1234	U
50	3	1297	U
50	3	1314	A
50	3	1486	U
50	3	1507	G
50	3	1583	G
50	3	1585	A
50	3	1587	U

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Mol	Chain	Res	Type
50	3	1588	A
50	3	1618	U
50	3	1747	G
50	3	1820	U
50	3	1978	U
50	3	2116	U
50	3	2125	U
50	3	2151	G
50	3	2220	A
50	3	2491	C
50	3	2504	C
50	3	2506	C
50	3	2604	U
50	3	2668	A
50	3	2764	U
50	3	2823	A
50	3	2862	U
50	3	2875	U
50	3	2897	G
51	4	8	C
51	4	10	C
51	4	54	U
51	4	59	A
52	5	197	A
52	5	219	A
52	5	246	A
52	5	348	C
52	5	417	U
52	5	419	A
52	5	425	G
52	5	448	A
52	5	529	U
52	5	975	C
52	5	1044	G
52	5	1074	U
52	5	1115	G
52	5	1123	G
52	5	1133	A
52	5	1170	C
52	5	1338	A
52	5	1466	U
53	7	16	G

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Mol	Chain	Res	Type
53	7	47	G

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.

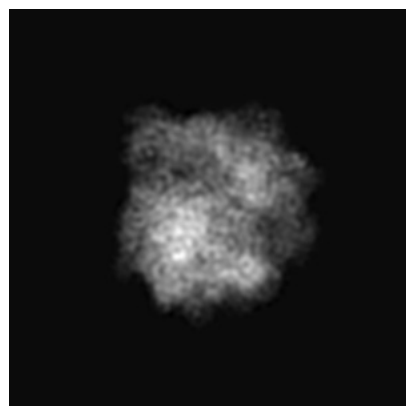
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-13410. These allow visual inspection of the internal detail of the map and identification of artifacts.

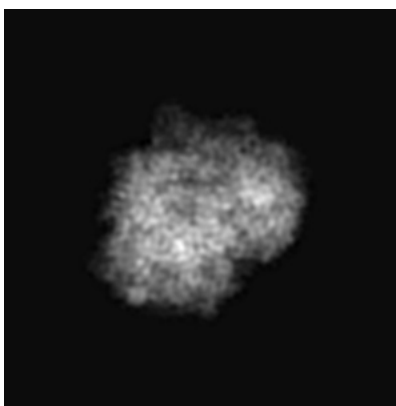
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

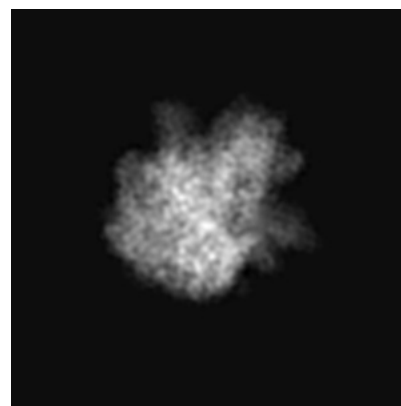
6.1.1 Primary map



X

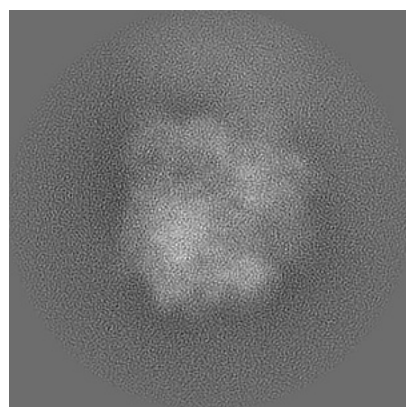


Y

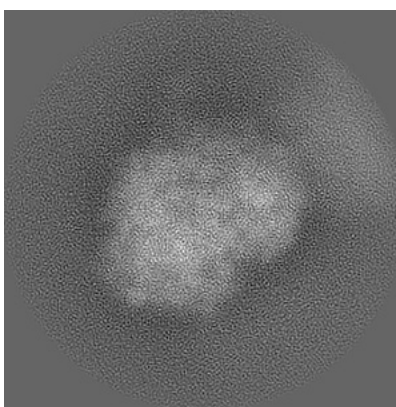


Z

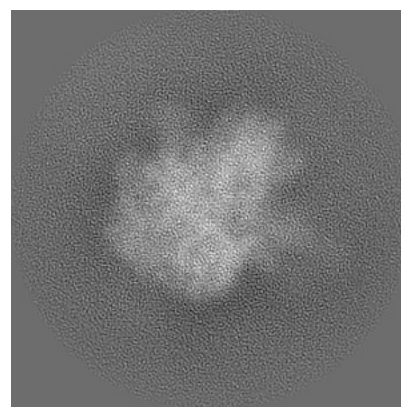
6.1.2 Raw map



X



Y

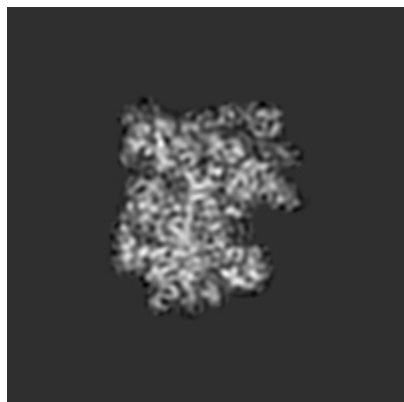


Z

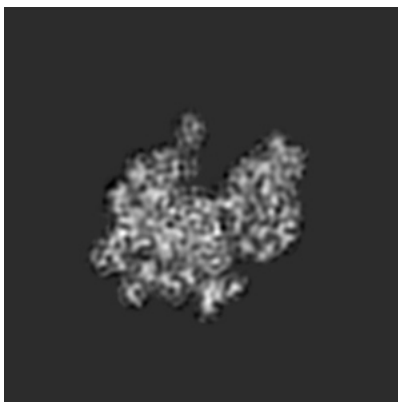
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

6.2.1 Primary map



X Index: 128

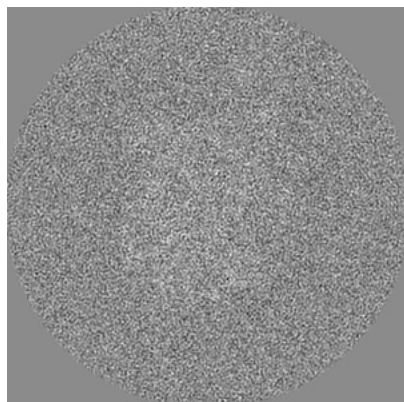


Y Index: 128

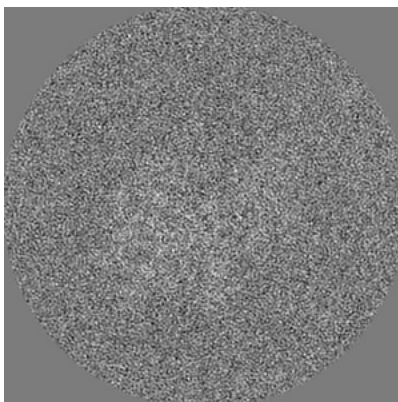


Z Index: 128

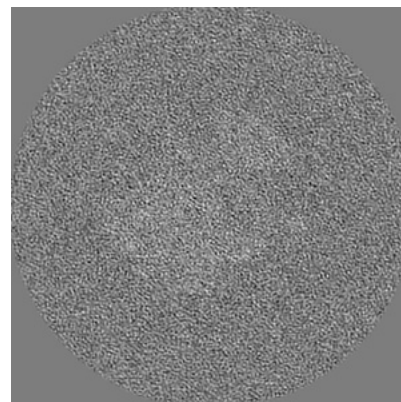
6.2.2 Raw map



X Index: 128



Y Index: 128

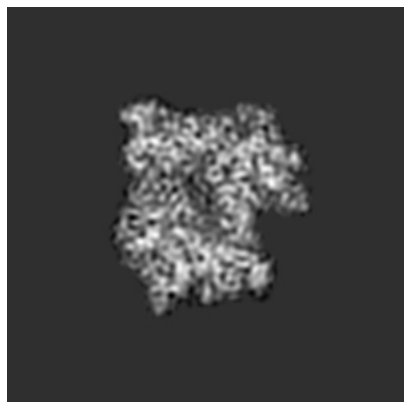


Z Index: 128

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

6.3 Largest variance slices [i](#)

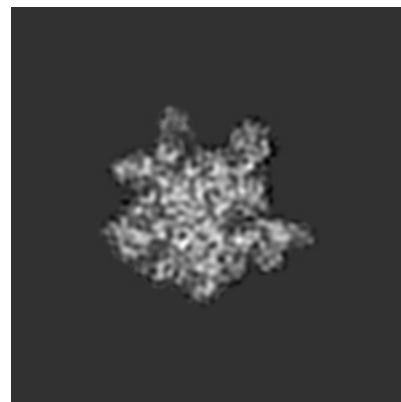
6.3.1 Primary map



X Index: 135

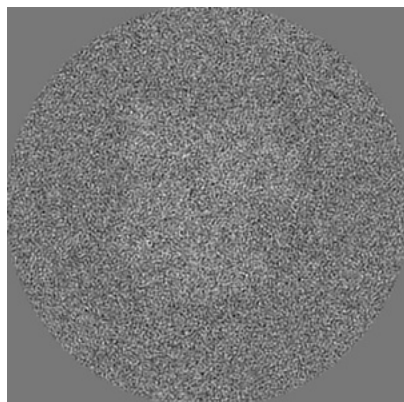


Y Index: 116

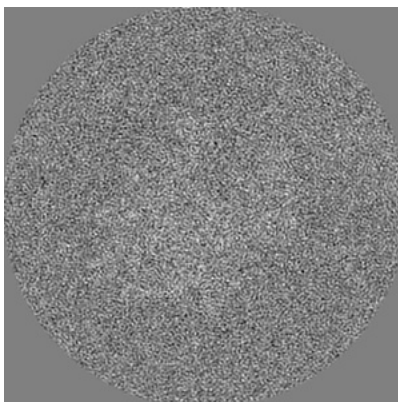


Z Index: 97

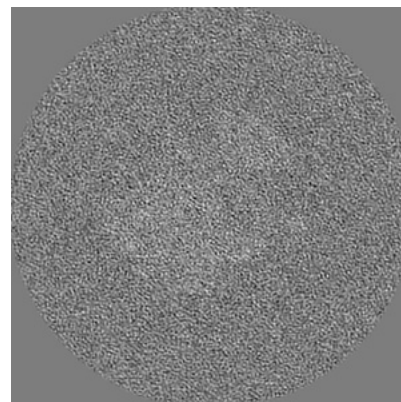
6.3.2 Raw map



X Index: 133



Y Index: 120

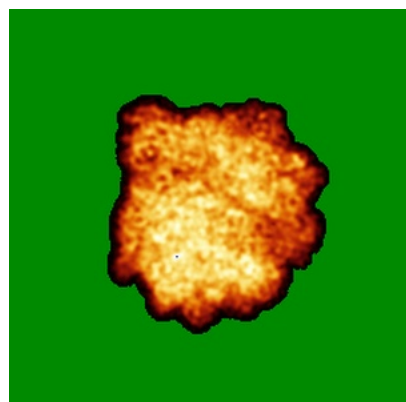


Z Index: 128

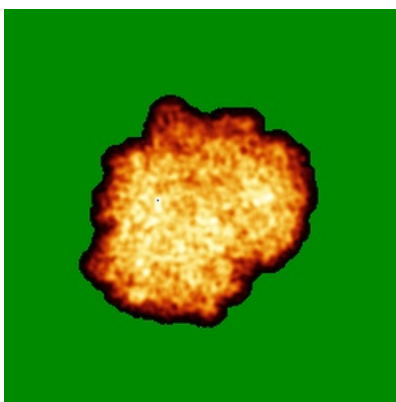
The images above show the largest variance slices of the map in three orthogonal directions.

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

6.4.1 Primary map



X

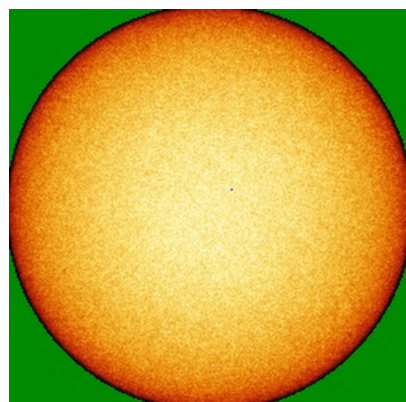


Y

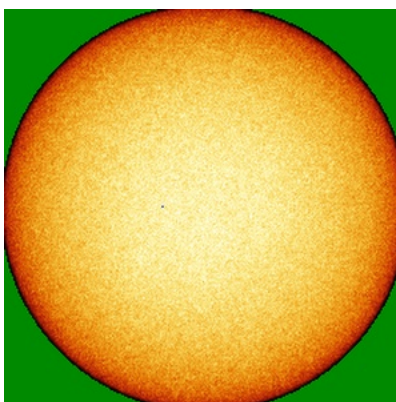


Z

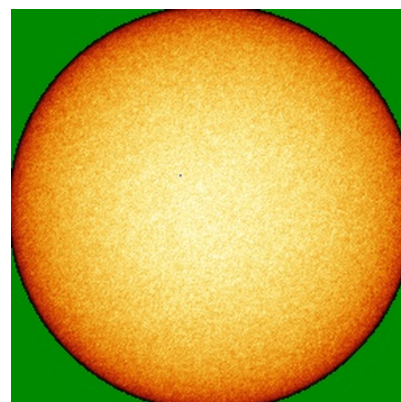
6.4.2 Raw map



X



Y

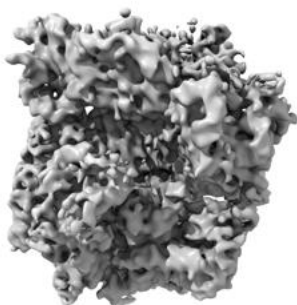


Z

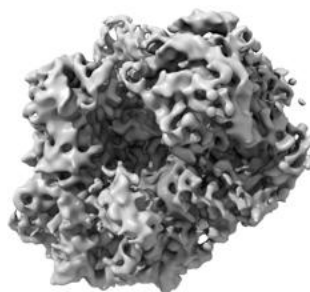
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

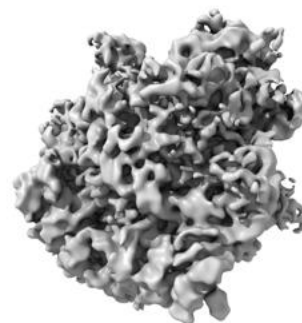
6.5.1 Primary map



X



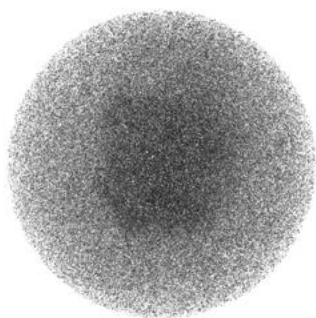
Y



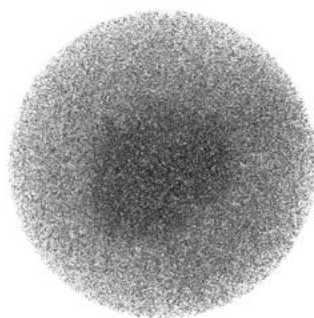
Z

The images above show the 3D surface view of the map at the recommended contour level 0.45. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

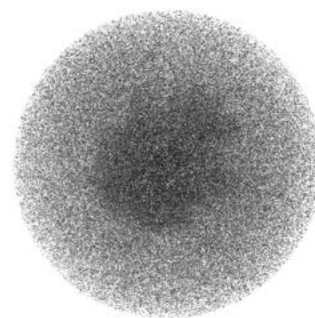
6.5.2 Raw map



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.

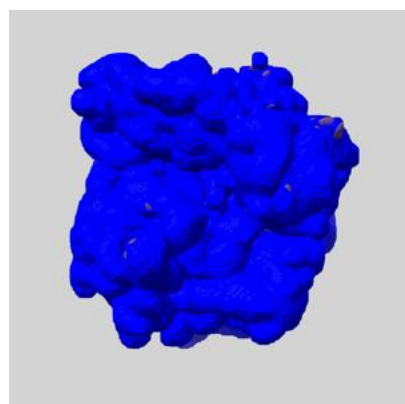
6.6 Mask visualisation [i](#)

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

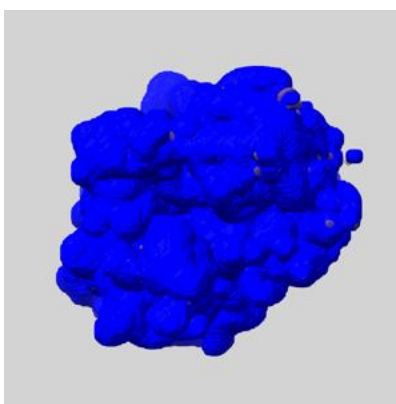
A mask typically either:

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

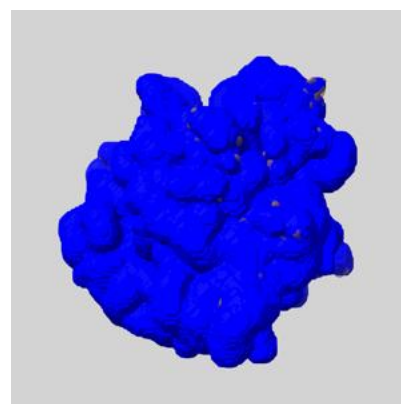
6.6.1 emd_13410_msk_1.map [i](#)



X



Y

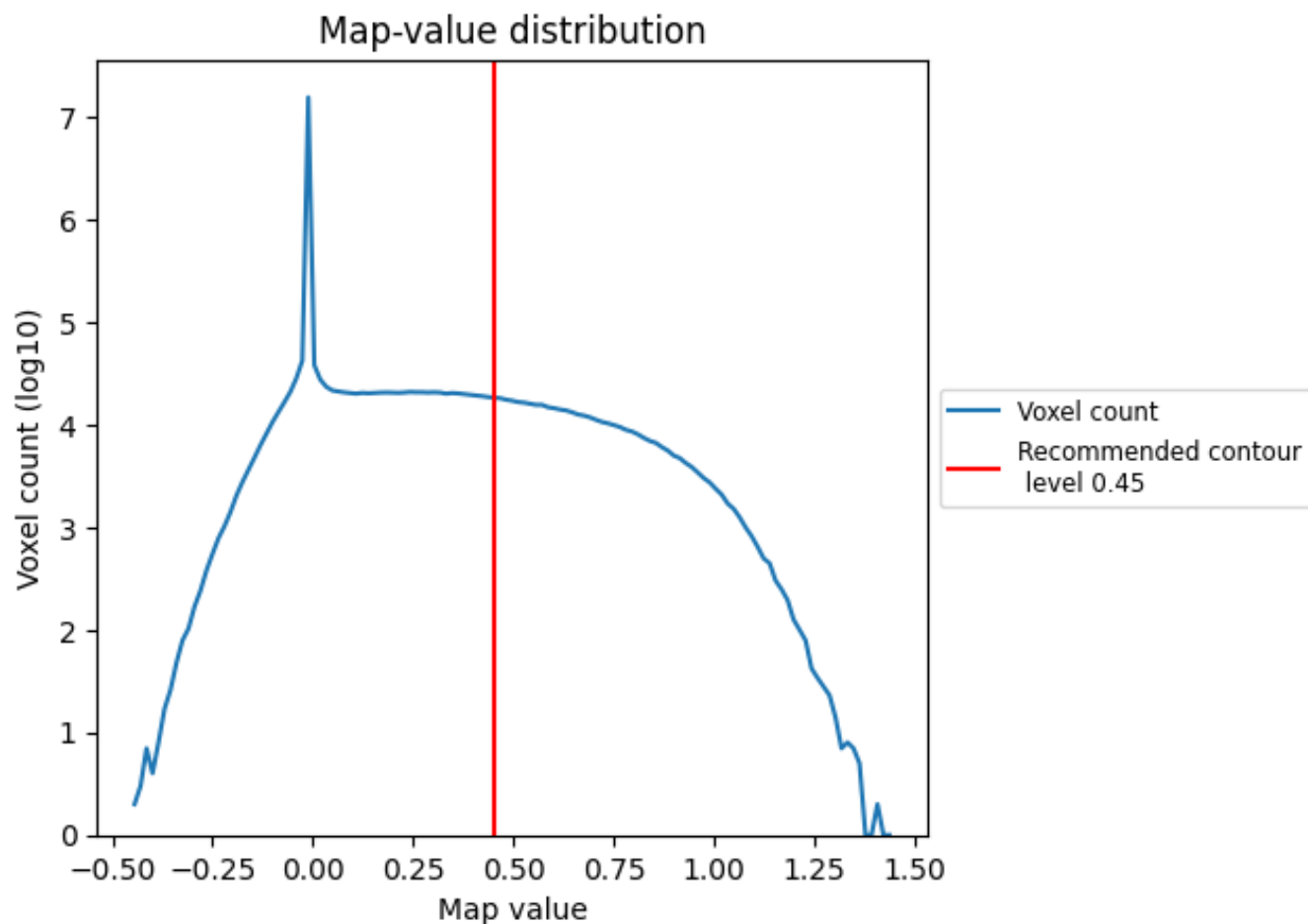


Z

7 Map analysis [i](#)

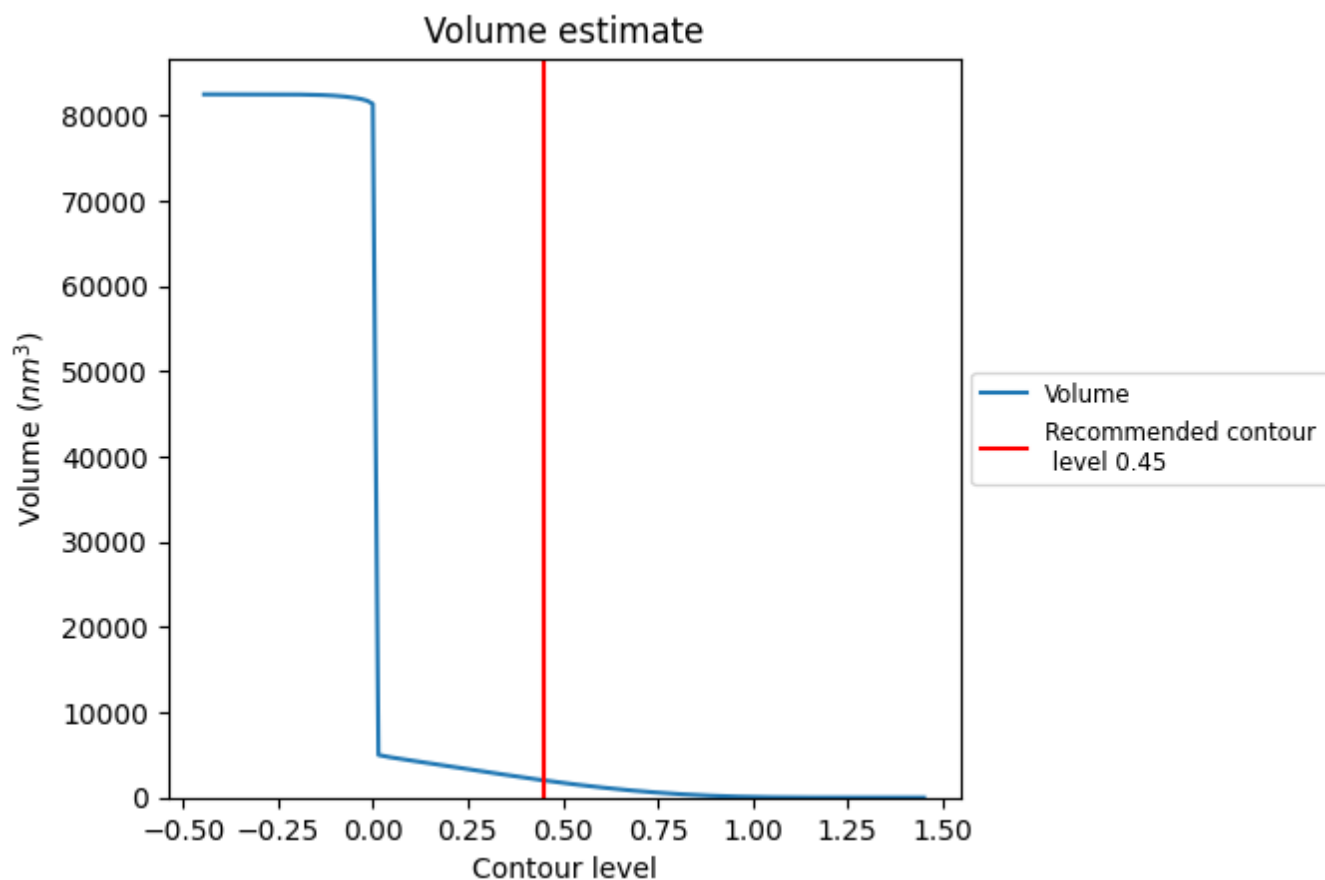
This section contains the results of statistical analysis of the map.

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.

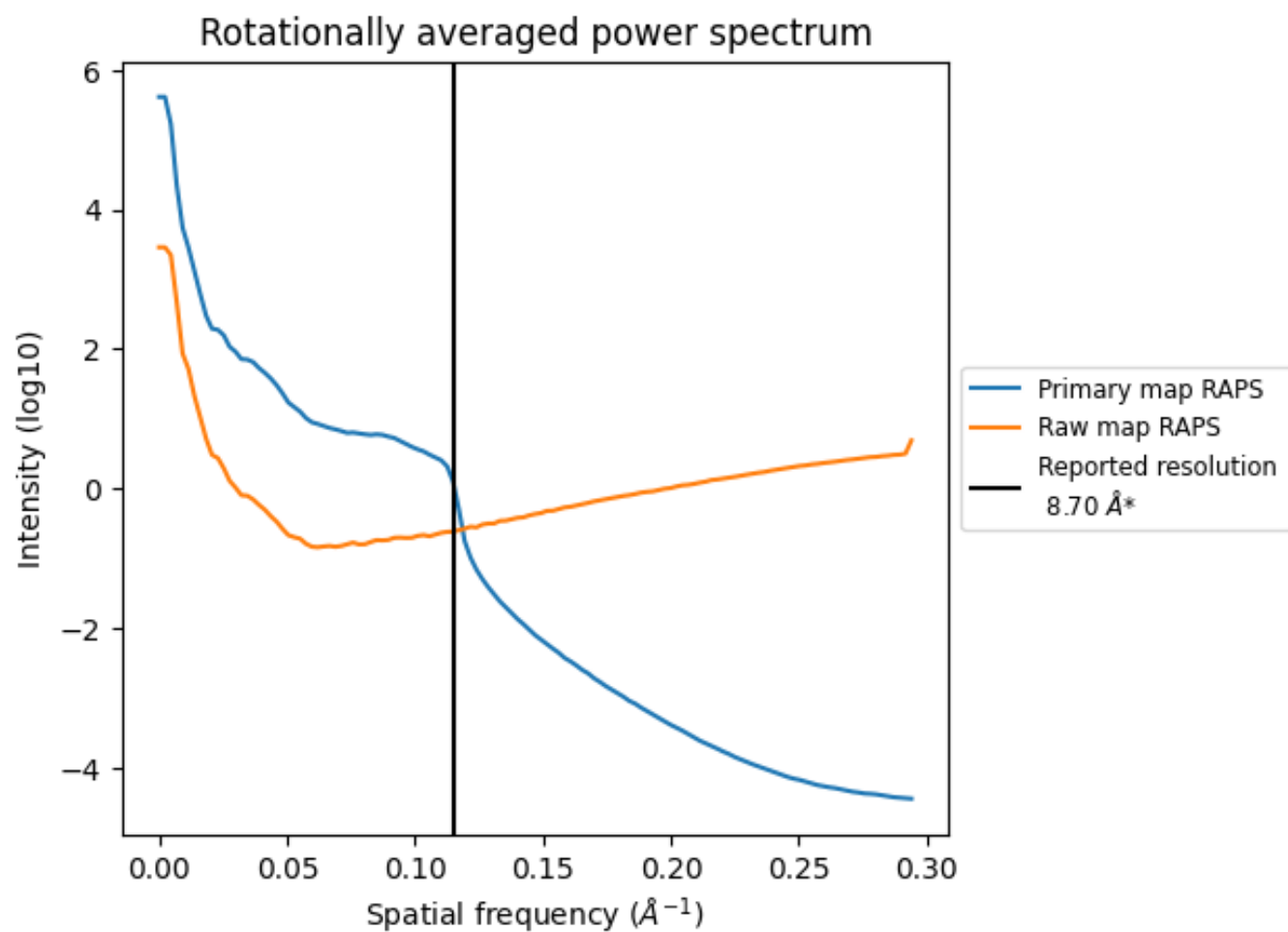
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2019 nm^3 ; this corresponds to an approximate mass of 1824 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 ⓘ

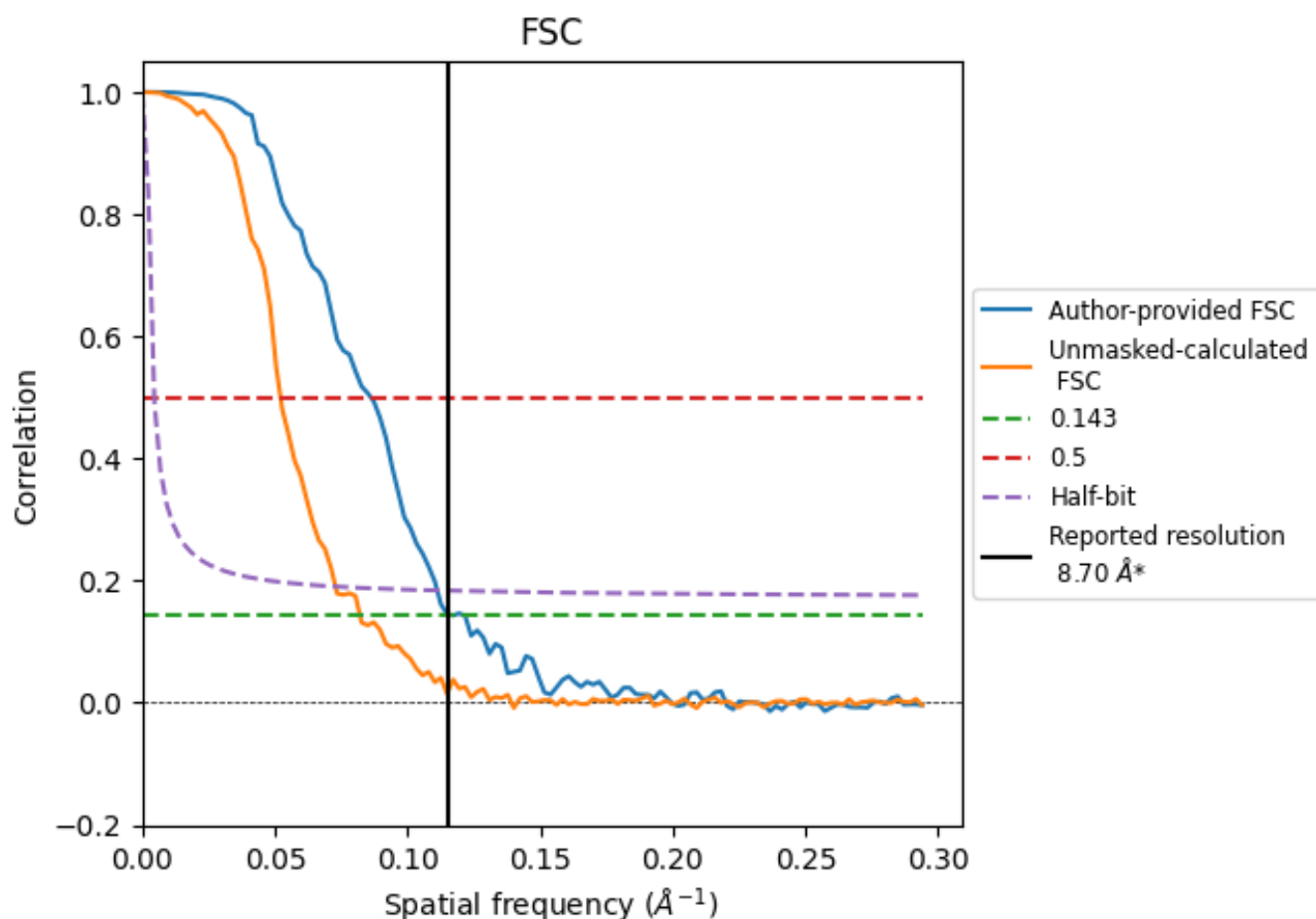


*Reported resolution corresponds to spatial frequency of 0.115 $\text{\AA}^{-1}$

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 0.115 Å⁻¹

8.2 Resolution estimates [i](#)

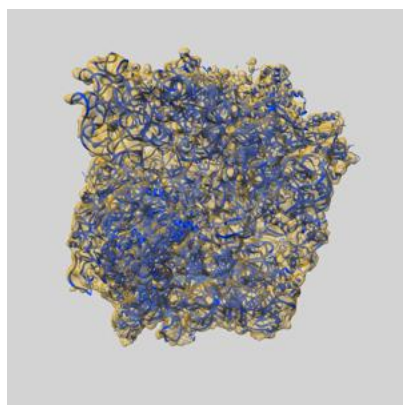
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	8.70	-	-
Author-provided FSC curve	8.55	11.60	8.99
Unmasked-calculated*	12.18	19.16	13.72

*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 12.18 differs from the reported value 8.7 by more than 10 %

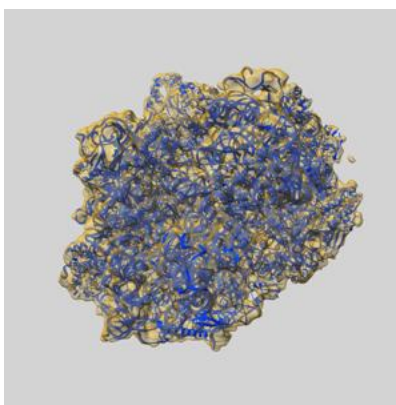
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-13410 and PDB model 7PH9. Per-residue inclusion information can be found in section [3](#) on page [13](#).

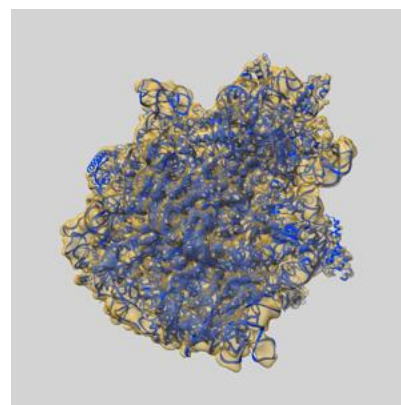
9.1 Map-model overlay [i](#)



X



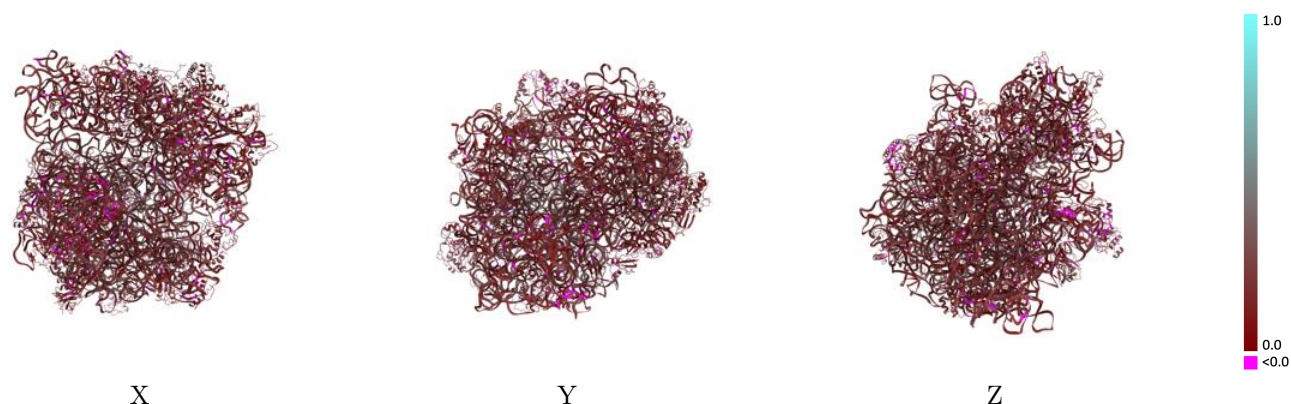
Y



Z

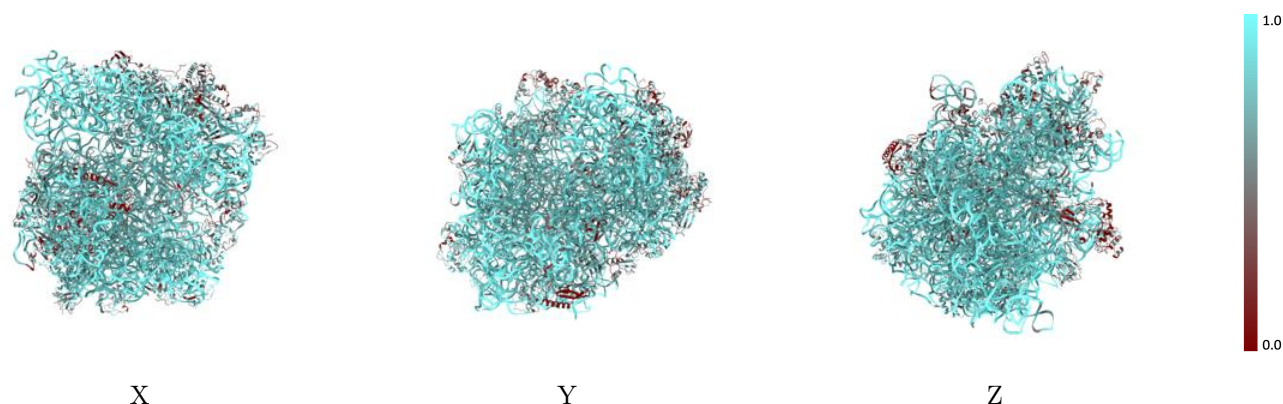
The images above show the 3D surface view of the map at the recommended contour level 0.45 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



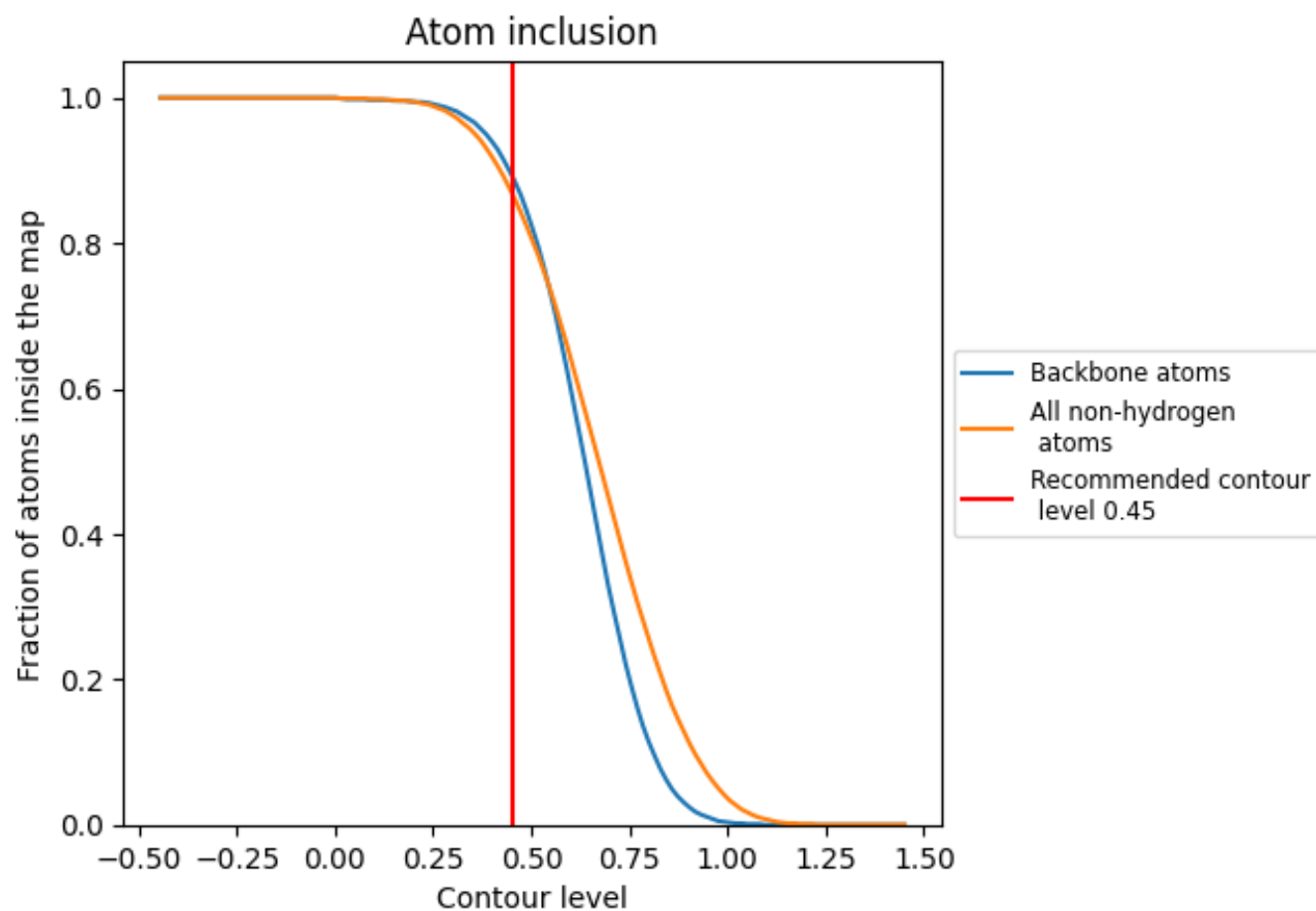
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.45).

9.4 Atom inclusion [i](#)



At the recommended contour level, 89% of all backbone atoms, 87% 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 (0.45) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8700	 0.1850
0	 0.8770	 0.1650
1	 0.7980	 0.1470
2	 0.7870	 0.1410
3	 0.9660	 0.1970
4	 0.9750	 0.1960
5	 0.9660	 0.1930
7	 0.9410	 0.1970
A	 0.5760	 0.1900
B	 0.6120	 0.1820
C	 0.5990	 0.1570
D	 0.6760	 0.1710
E	 0.5490	 0.1860
F	 0.6270	 0.1670
G	 0.6480	 0.1710
H	 0.6360	 0.1500
I	 0.5740	 0.1700
J	 0.6070	 0.1580
K	 0.6960	 0.1550
L	 0.6370	 0.1760
M	 0.7230	 0.1370
N	 0.6890	 0.1820
O	 0.7870	 0.1680
P	 0.6560	 0.1560
Q	 0.7210	 0.1670
R	 0.6990	 0.1370
S	 0.8230	 0.1840
T	 0.7430	 0.2190
a	 0.7920	 0.1520
b	 0.6980	 0.1390
c	 0.7590	 0.1810
d	 0.6600	 0.1690
e	 0.5970	 0.1770
f	 0.2590	 0.1090
g	 0.4200	 0.1510



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Chain	Atom inclusion	Q-score
h	 0.2740	 0.1120
i	 0.7750	 0.1700
j	 0.6400	 0.1580
k	 0.7740	 0.1540
l	 0.7800	 0.1570
m	 0.7510	 0.1570
n	 0.7220	 0.1800
o	 0.6720	 0.1770
p	 0.7930	 0.1670
q	 0.6860	 0.1580
r	 0.8260	 0.1720
s	 0.7390	 0.1790
t	 0.6410	 0.1740
u	 0.7780	 0.1430
v	 0.7580	 0.1460
w	 0.7180	 0.1980
x	 0.5360	 0.1720
y	 0.7880	 0.1470
z	 0.7680	 0.1700