



Full wwPDB EM Validation Report ⓘ

Mar 10, 2026 – 07:17 AM UTC

PDB ID : 5UQ7 / pdb_00005uq7
EMDB ID : EMD-8596
Title : 70S ribosome complex with dnaX mRNA stemloop and E-site tRNA ("in" conformation)
Authors : Zhang, Y.; Hong, S.; Skiniotis, G.; Dunham, C.M.
Deposited on : 2017-02-07
Resolution : 3.50 Å(reported)

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:

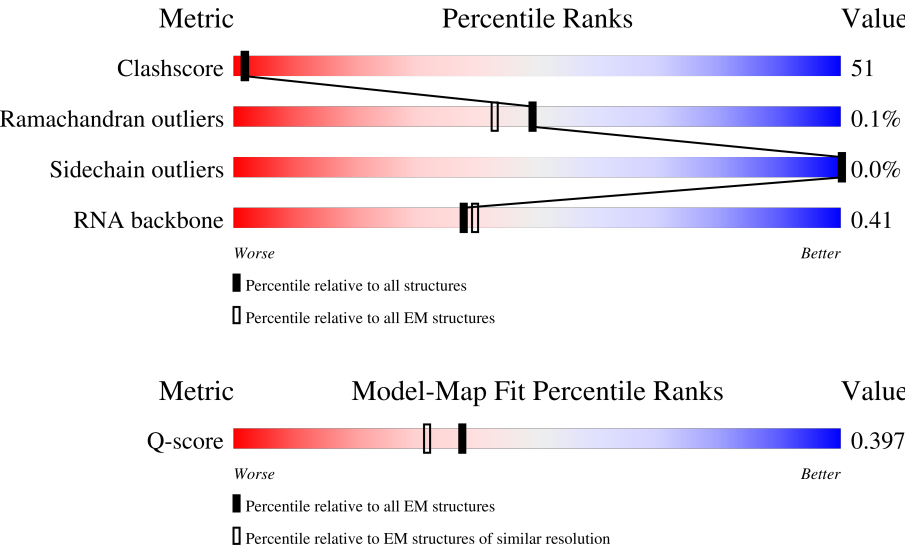
EMDB validation analysis : 0.0.1.dev132
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.50 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	13950 (3.00 - 4.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	2915	15% 8% 70% 21% .
2	B	120	17% 8% 72% 19%
3	D	275	49% 32% 68%

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Mol	Chain	Length	Quality of chain
4	E	204	
5	F	203	
6	G	181	
7	H	173	
8	I	146	
9	N	140	
10	O	122	
11	P	149	
12	Q	141	
13	R	118	
14	S	110	
15	T	131	
16	U	116	
17	V	101	
18	W	112	
19	X	95	
20	Y	107	
21	Z	187	
22	0	77	
23	1	97	
24	2	70	
25	3	59	
26	4	69	
27	5	59	
28	6	53	

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Mol	Chain	Length	Quality of chain
29	7	48	
30	8	64	
31	9	37	
32	a	1521	
33	b	231	
34	c	206	
35	d	208	
36	e	148	
37	f	100	
38	g	155	
39	h	137	
40	i	126	
41	j	96	
42	k	114	
43	l	122	
44	m	114	
45	n	60	
46	o	88	
47	p	82	
48	q	99	
49	r	68	
50	s	83	
51	t	98	
52	u	23	
53	y	77	

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Mol	Chain	Length	Quality of chain
54	C	226	
55	z	76	
56	x	55	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
32	MA6	a	1518	-	-	X	-
32	MA6	a	1519	-	-	X	-
58	SF4	d	301	-	-	X	-

2 Entry composition

There are 58 unique types of molecules in this entry. The entry contains 148590 atoms, of which 4 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 RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	2867	Total	C	N	O	P	0	0
			61758	27491	11552	19850	2865		

- Molecule 2 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	120	Total	C	N	O	P	0	0
			2573	1146	476	832	119		

- Molecule 3 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	D	275	Total	C	N	O	S	0	0
			2136	1349	423	361	3		

- Molecule 4 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	E	204	Total	C	N	O	S	0	0
			1559	985	298	270	6		

- Molecule 5 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	F	203	Total	C	N	O	S	0	1
			1580	1007	297	274	2		

- Molecule 6 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	G	181	Total	C	N	O	S	0	0
			1424	912	259	249	4		

- Molecule 7 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	H	173	Total	C	N	O	S	0	0
			1324	842	247	234	1		

- Molecule 8 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	I	146	Total	C	N	O	S	0	0
			1076	687	186	202	1		

- Molecule 9 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	N	140	Total	C	N	O	S	0	0
			1117	719	207	187	4		

- Molecule 10 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	O	122	Total	C	N	O	S	0	0
			933	588	171	170	4		

- Molecule 11 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	P	149	Total	C	N	O	S	0	0
			1135	706	230	196	3		

- Molecule 12 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	Q	141	Total	C	N	O	S	0	0
			1122	715	212	188	7		

- Molecule 13 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	R	118	Total	C	N	O	S	0	0
			968	604	203	160	1		

- Molecule 14 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				AltConf	Trace
14	S	110	Total	C	N	O		
			870	549	173	148	0	0

- Molecule 15 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms				AltConf	Trace
15	T	131	Total	C	N	O	S	
			1083	675	224	183	1	0

- Molecule 16 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				AltConf	Trace
16	U	116	Total	C	N	O	S	
			959	608	201	149	1	0

- Molecule 17 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms				AltConf	Trace
17	V	101	Total	C	N	O	S	
			771	495	140	135	1	0

- Molecule 18 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms				AltConf	Trace
18	W	112	Total	C	N	O	S	
			886	557	174	153	2	0

- Molecule 19 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms				AltConf	Trace
19	X	95	Total	C	N	O	S	
			750	488	135	126	1	0

- Molecule 20 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				AltConf	Trace
20	Y	107	Total	C	N	O	S	
			810	519	153	132	6	0

- Molecule 21 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	Z	187	Total	C	N	O	S	0	0
			1459	932	257	268	2		

- Molecule 22 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	0	77	Total	C	N	O	S	0	0
			608	375	129	103	1		

- Molecule 23 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	1	97	Total	C	N	O	S	0	0
			759	478	149	131	1		

- Molecule 24 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	2	70	Total	C	N	O	S	0	0
			592	368	119	103	2		

- Molecule 25 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				AltConf	Trace
25	3	59	Total	C	N	O	0	0
			464	296	90	78		

- Molecule 26 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	4	69	Total	C	N	O	S	0	0
			536	342	98	91	5		

- Molecule 27 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	5	59	Total	C	N	O	S	0	0
			455	285	89	76	5		

- Molecule 28 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	6	53	Total	C	N	O	S	0	0
			449	279	91	75	4		

- Molecule 29 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	7	48	Total	C	N	O	S	0	0
			418	257	104	55	2		

- Molecule 30 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	8	64	Total	C	N	O	S	0	0
			517	331	102	82	2		

- Molecule 31 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	9	37	Total	C	N	O	S	0	0
			307	188	68	47	4		

- Molecule 32 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	a	1513	Total	C	N	O	P	0	0
			32532	14488	6021	10510	1513		

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
a	1542	G	-	insertion	GB 55771382
a	1543	C	-	insertion	GB 55771382
a	1544	U	-	insertion	GB 55771382

- Molecule 33 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	b	231	Total	C	N	O	S	0	0
			1825	1167	326	327	5		

- Molecule 34 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	c	206	Total	C	N	O	S	0	0
			1542	968	300	273	1		

- Molecule 35 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	d	208	Total	C	N	O	S	0	0
			1668	1047	330	284	7		

- Molecule 36 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	e	148	Total	C	N	O	S	0	0
			1133	716	214	199	4		

- Molecule 37 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	f	100	Total	C	N	O	S	0	0
			816	516	146	151	3		

- Molecule 38 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	g	155	Total	C	N	O	S	0	0
			1229	766	241	216	6		

- Molecule 39 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	h	137	Total	C	N	O	S	0	0
			1088	689	206	191	2		

- Molecule 40 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	i	126	Total	C	N	O		0	0
			966	613	186	167			

- Molecule 41 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms				AltConf	Trace
41	j	96	Total	C	N	O	0	0
			710	442	137	131		

- Molecule 42 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	k	114	Total	C	N	O	S	0	0
			833	519	156	155	3		

- Molecule 43 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	l	122	Total	C	N	O	S	0	0
			932	586	185	159	2		

- Molecule 44 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	m	114	Total	C	N	O	S	0	0
			895	550	186	157	2		

- Molecule 45 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	n	60	Total	C	N	O	S	0	0
			492	312	104	72	4		

- Molecule 46 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	o	88	Total	C	N	O	S	0	0
			728	456	144	126	2		

- Molecule 47 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	p	82	Total	C	N	O	S	0	0
			677	430	133	113	1		

- Molecule 48 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	q	99	Total	C	N	O	S	0	0
			823	528	151	142	2		

- Molecule 49 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	r	68	Total	C	N	O		0	0
			555	355	108	92			

- Molecule 50 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	s	83	Total	C	N	O	S	0	0
			645	410	118	115	2		

- Molecule 51 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	t	98	Total	C	N	O	S	0	0
			733	451	154	126	2		

- Molecule 52 is a protein called 30S ribosomal protein Thx.

Mol	Chain	Residues	Atoms				AltConf	Trace
52	u	23	Total	C	N	O		0
			199	122	48	29		0

- Molecule 53 is a RNA chain called P-site tRNA fMet.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	y	77	Total	C	N	O	P	0	0
			1640	732	298	534	76		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
y	17B	C	U	conflict	GB 1126835761

- Molecule 54 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	C	225	Total	C	N	O	S	0	0
			1718	1085	315	316	2		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	?	-	MET	deletion	UNP Q5SLP7

- Molecule 55 is a RNA chain called E-site tRNA Phe.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	z	76	Total	C	N	O	P	0	0
			1619	723	290	531	75		

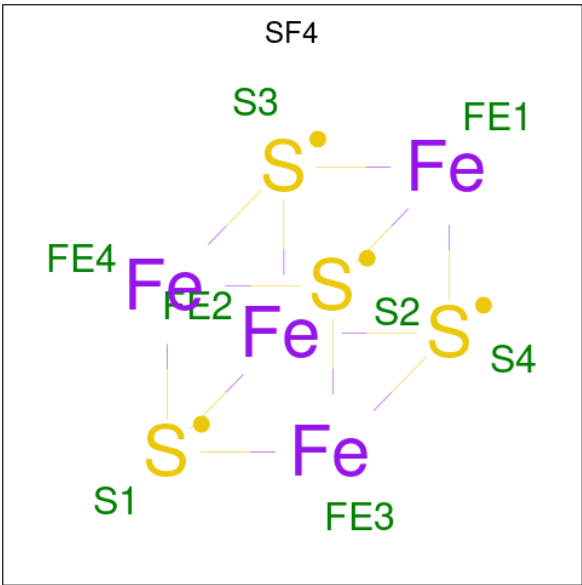
- Molecule 56 is a RNA chain called messenger RNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
56	x	55	Total	C	H	N	O	P	0	0
			1180	527	4	219	376	54		

- Molecule 57 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
57	Y	1	Total	Zn	0
			1	1	
57	4	1	Total	Zn	0
			1	1	
57	5	1	Total	Zn	0
			1	1	
57	6	1	Total	Zn	0
			1	1	
57	9	1	Total	Zn	0
			1	1	
57	n	1	Total	Zn	0
			1	1	

- Molecule 58 is IRON/SULFUR CLUSTER (CCD ID: SF4) (formula: Fe₄S₄).

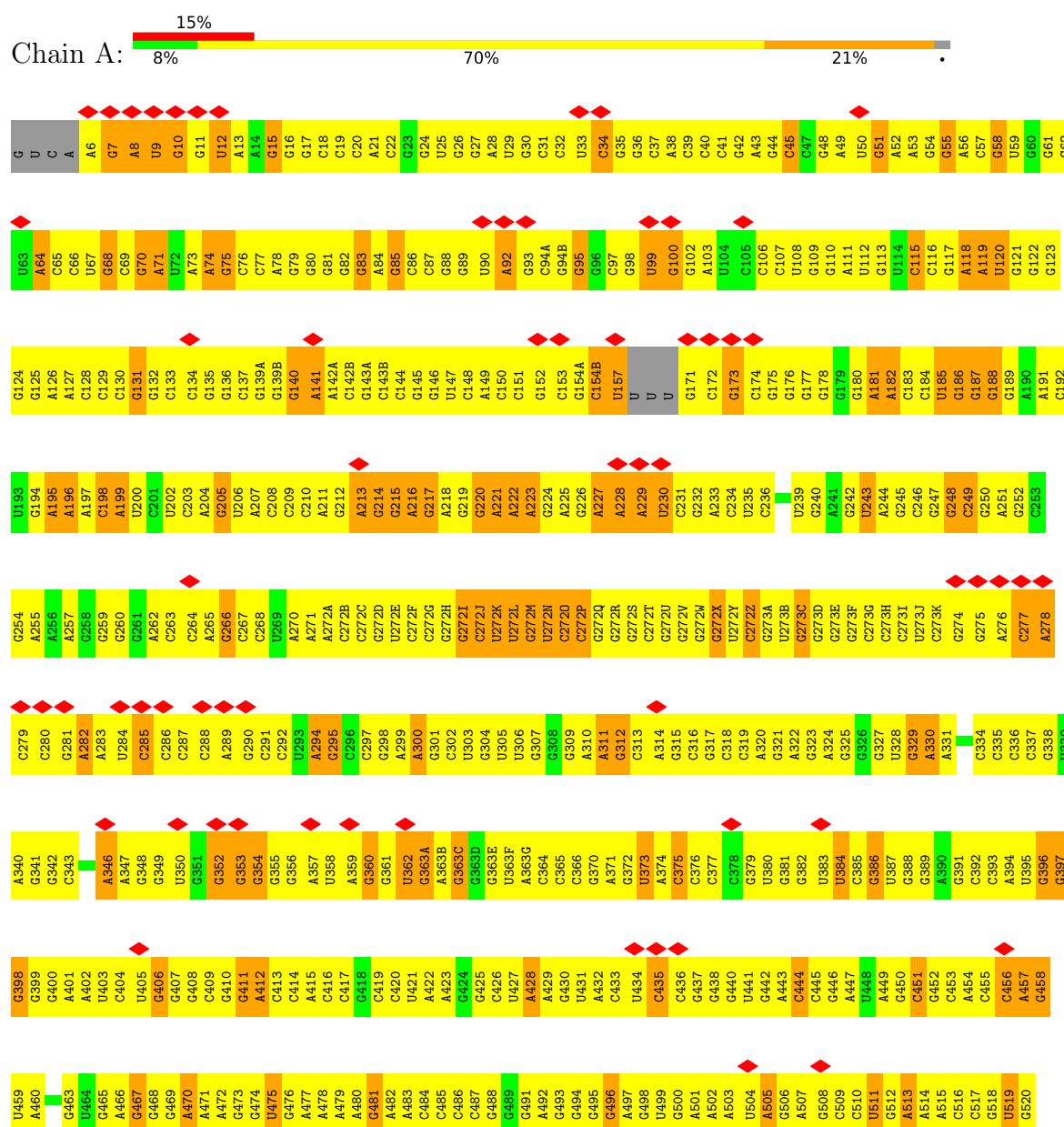


Mol	Chain	Residues	Atoms			AltConf
58	d	1	Total	Fe	S	0
			8	4	4	

3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

• Molecule 1: 23S rRNA

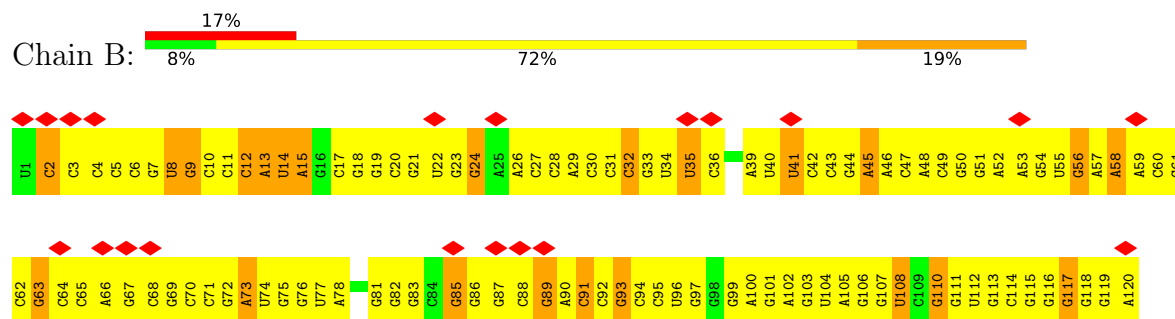




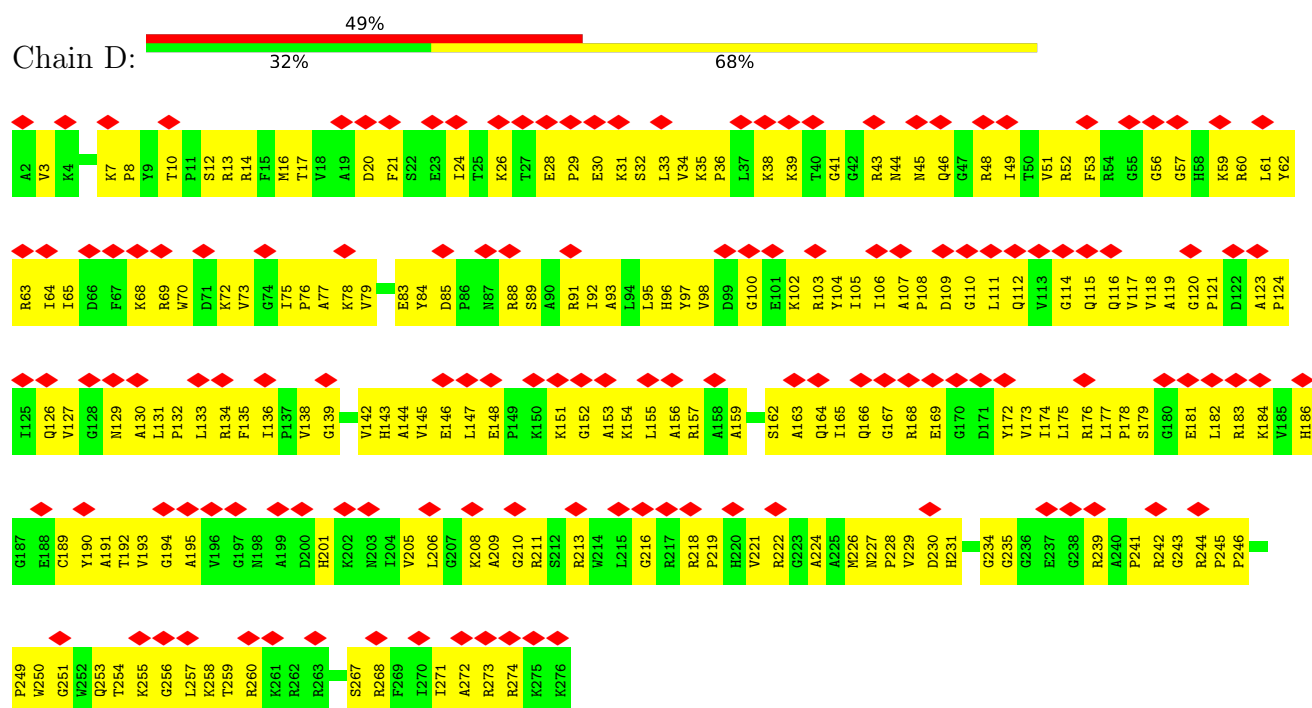
C2044	C2045	C1983	U1923	A1853	A1791	C1711	G1651	C1588	G1527	G1466	U1406	G1346	A1286
G2046	G2047	G1984	C1924	A1854	G1792	C1712	A1652	C1589	A1528A	C1467	C1407	G1347	A1287
G2048	G2049	G1985	C1925	G1855	C1793	U1713	G1653	U1590	A1528B	C1468	C1408	G1348	U1288
G2050	G2051	G1986	U1926	G1856	U1794	G1714	A1654	C1592	C1529	A1469	C1409	A1349	C1289
A2051	G2052	G1987	U1927	G1857	C1795	G1715	A1655	G1593	C1530	A1470	C1410	C1350	C1290
G2053	G2054	G1988	A1928	G1858	C1797	G1716	A1656	G1594	C1531	A1471	C1411	C1351	C1291
G2055	G2056	G1989	G1929	A1859	C1799	G1718	C1658	G1595	C1532	A1472	A1412	U1352	U1292
G2057	G2058	G1990	G1930	G1860	U1799	G1719	U1659	G1596	G1533	G1473	G1413	A1353	C1293
G2059	G2060	G1991	U1931	G1861	C1800	U1720	C1660	A1597	U	C1474	G1414	A1354	U1294
G2061	G2062	G1992	A1932	G1862	G1801	A1722	G1661	C1598	A	G1475	U1415	G1355	C1295
G2063	G2064	G1993	G1933	G1863	C1802	U1739	C1662	C1599	C1536	A1476	G1416	G1356	C1296
G2065	G2066	G1994	C1934	G1864	A1803	G1740	C1663	G1600	G1537	A1477	C1417	G1357	C1297
G2067	G2068	G1995	G1935	G1865	C1804	G1741	A1664	G1601	G1538	G1478	C1418	U1358	C1298
G2069	G2070	G1996	U1943	C1866	U1805	G1742	A1665	C1604	G1539	G1479	U1300	A1359	G1299
G2071	G2072	G2006	A1944	A1876	G1806	G1743	G1666	C1605	U1540	U1481	U1420	A1360	U1301
G2073	G2074	G2007	U1945	A1877	C1807	C1744	G1667	G1606	U1541	U1482	G1421	A1361	A1302
G2075	G2076	G2008	U1946	G1878	U1808	G1745A	A1668	C1607	A1542	G1484	G1422	C1362	G1303
G2077	G2078	G2009	G1947	C1879	A1810	C1745B	A1669	A1608	C1543	G1485	G1423	C1363	C1304
G2079	G2080	G2010	C1941	C1880	G1811	G1746	C1670	A1609	U1544	A1486	G1424	A1364	C1305
G2081	G2082	G2011	C1942	C1881	U1812	G1747	U1672	A1610	C1545	A1487	G1425	A1365	C1306
G2083	G2084	G2012	U1943	G1882	G1813	G1748	G1673	C1611	C1546	G1488	G1426	A1366	C1307
G2085	G2086	G2013	U1944	C1883	A1814	G1749	C1674	C1612	C1547	U1489	C1427	G1368	A1308
G2087	G2088	G2014	U1945	A1884	G1815	G1750	A1676	G1613	C1548	U1490	C1428	C1369	A1309
G2089	G2090	G2015	U1946	C1885	G1816	C1751	A1677	G1614	C1549	G1491	G1429	C1370	G1310
G2091	G2092	G2016	U1947	C1886	U1817	G1752	G1678	G1615	C1550	G1492	C1430	C1371	G1311
G2093	G2094	G2017	G1948	C1887	G1818	G1753	U1679	A1618	C1551	C1493	U1431	U1372	U1312
G2095	G2096	G2018	G1949	C1888	G1819	C1754	C1680	G1619	C1552	A1494	U1432	A1373	C1313
G2097	G2098	G2019	U1950	C1889	U1820	U1755	G1681	C1620	C1553	A1495	U1433	C1374	C1314
G2099	G2100	G2020	A1952	G1890	G1821	G1756	G1682	U1621	A1554	A1496	G1436	C1375	C1315
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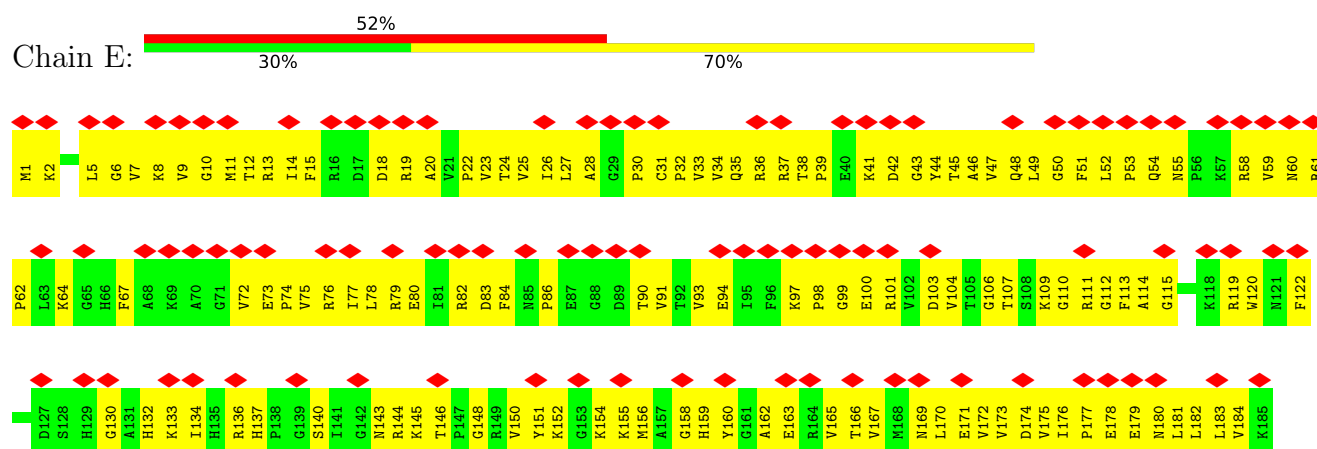
- Molecule 2: 5S rRNA



- Molecule 3: 50S ribosomal protein L2

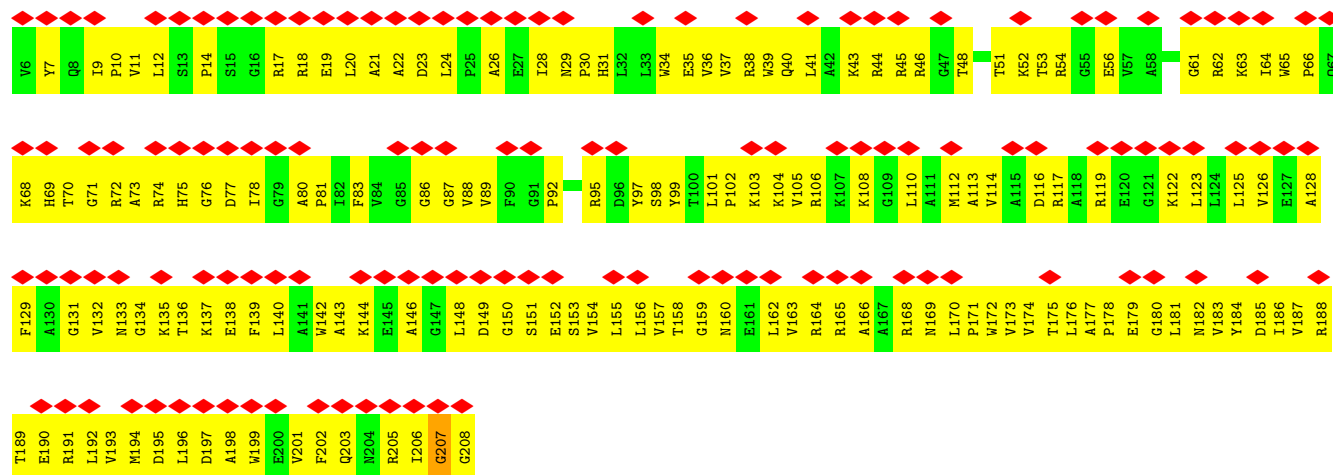


- Molecule 4: 50S ribosomal protein L3





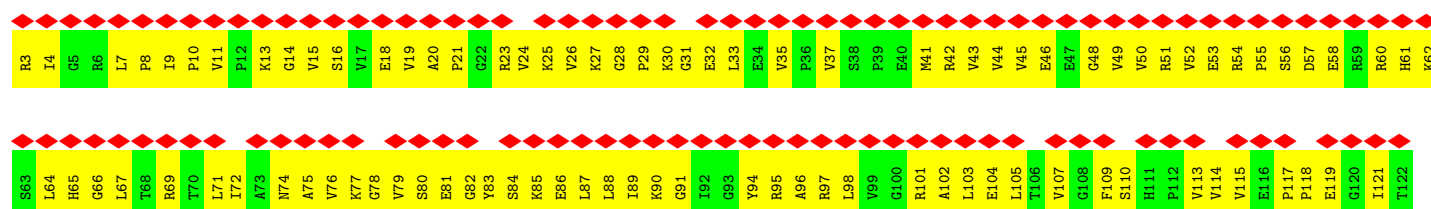
• Molecule 5: 50S ribosomal protein L4



• Molecule 6: 50S ribosomal protein L5

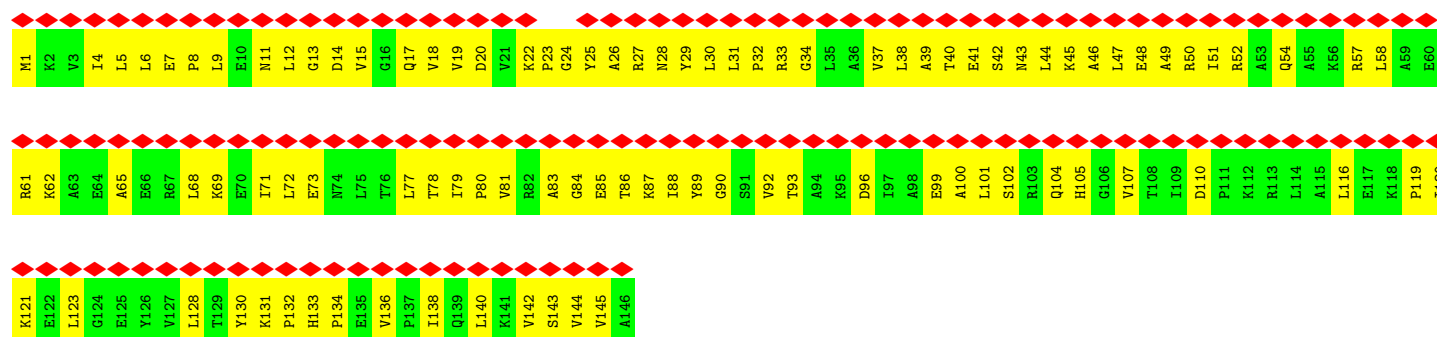


• Molecule 7: 50S ribosomal protein L6

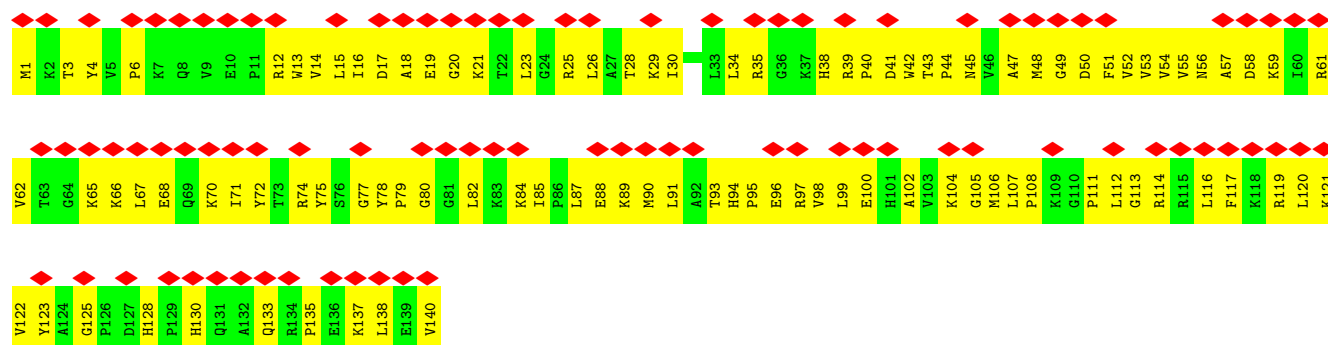




• Molecule 8: 50S ribosomal protein L9



• Molecule 9: 50S ribosomal protein L13

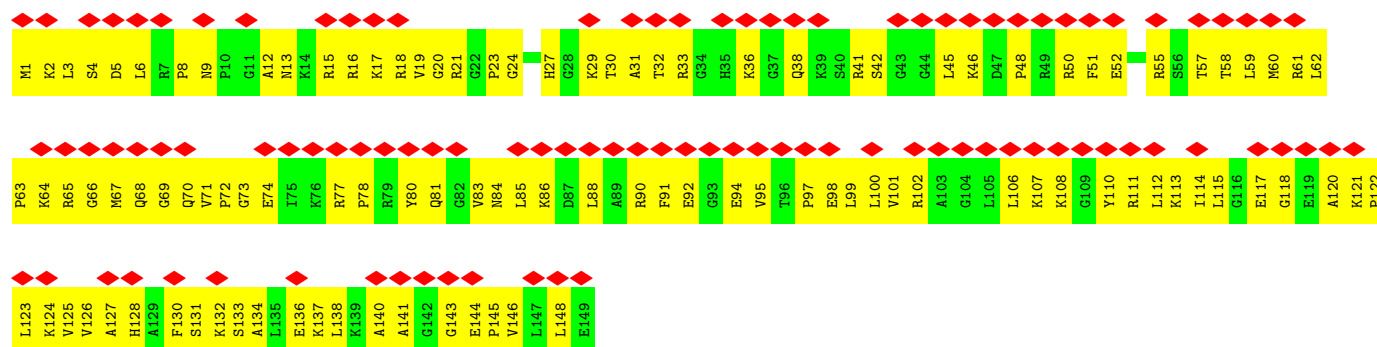


• Molecule 10: 50S ribosomal protein L14

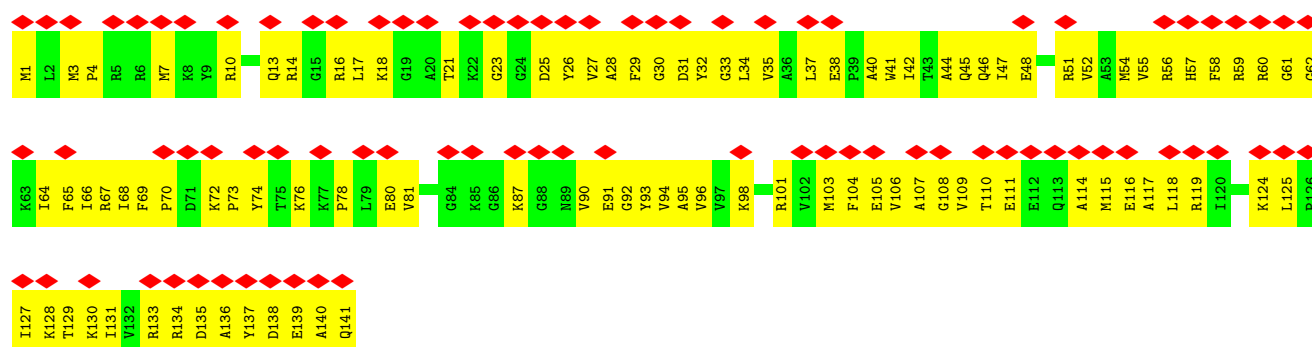


• Molecule 11: 50S ribosomal protein L15

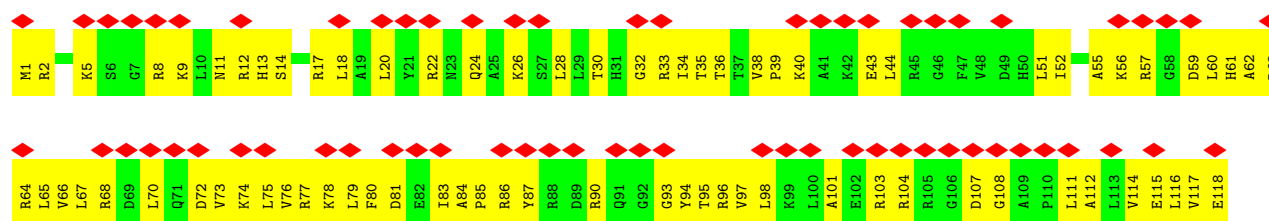




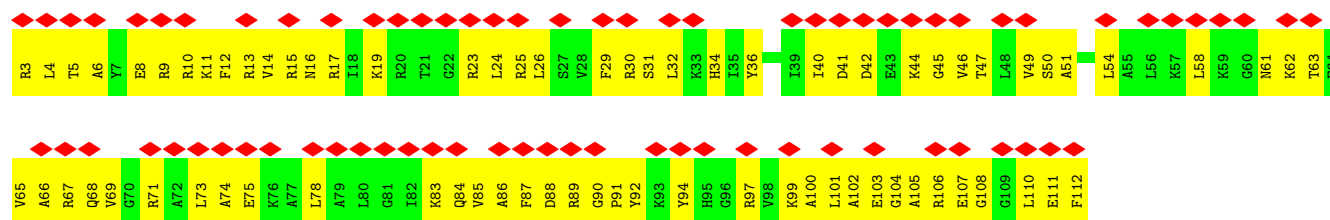
• Molecule 12: 50S ribosomal protein L16



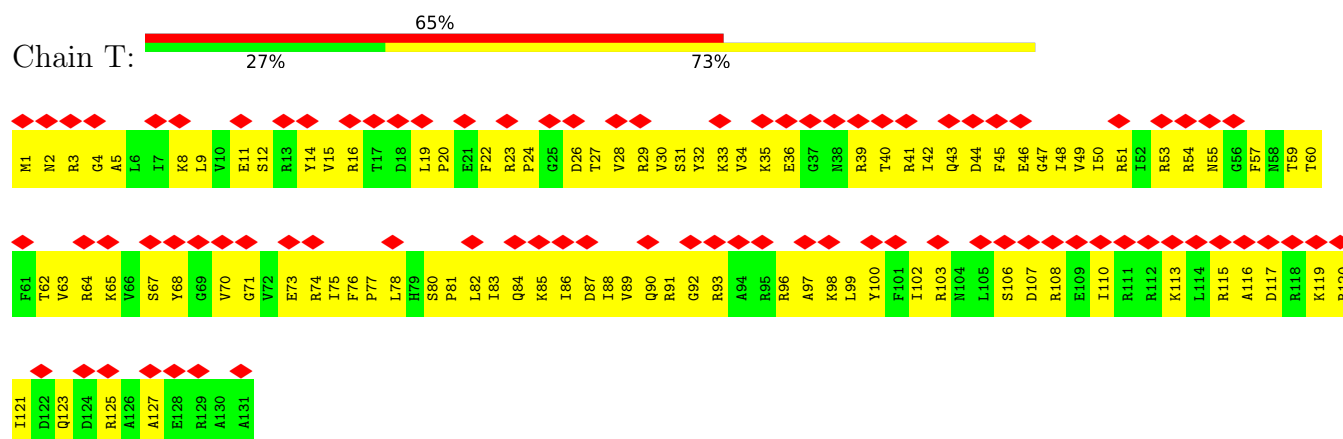
• Molecule 13: 50S ribosomal protein L17



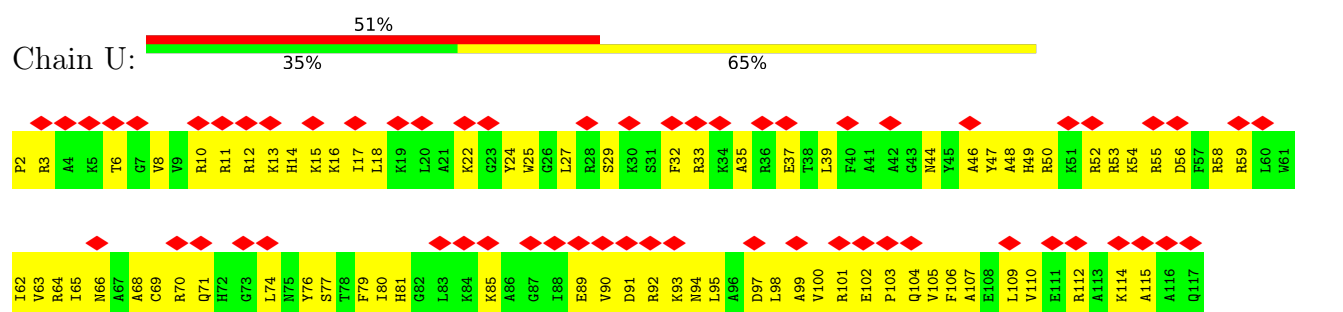
• Molecule 14: 50S ribosomal protein L18



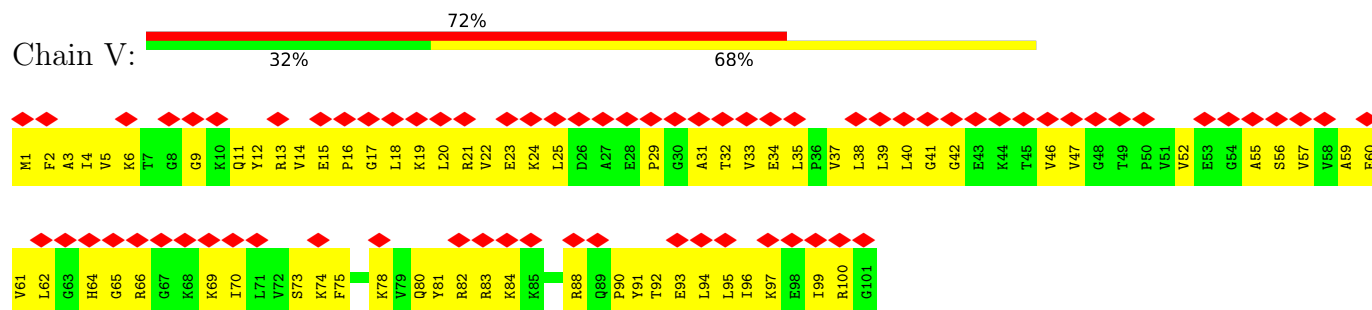
• Molecule 15: 50S ribosomal protein L19



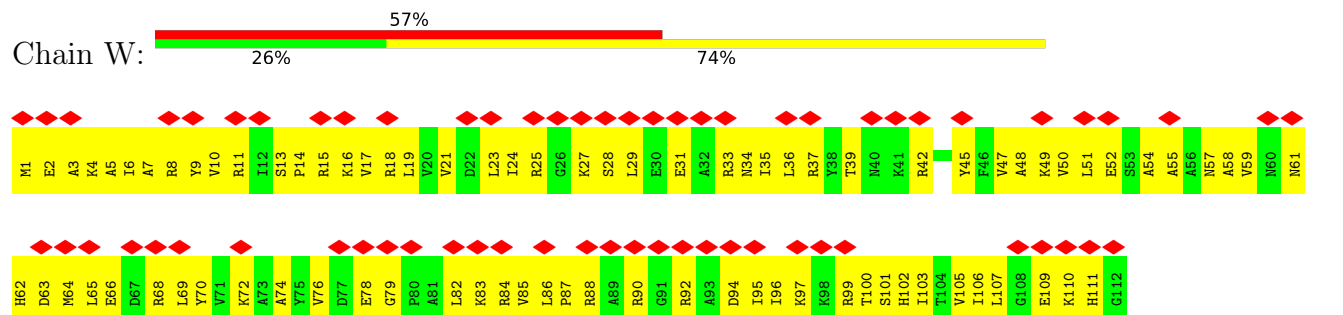
• Molecule 16: 50S ribosomal protein L20



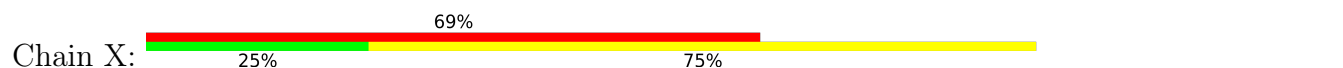
• Molecule 17: 50S ribosomal protein L21

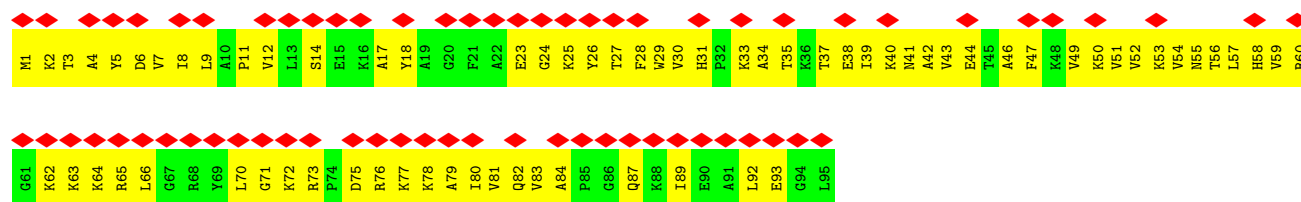


• Molecule 18: 50S ribosomal protein L22

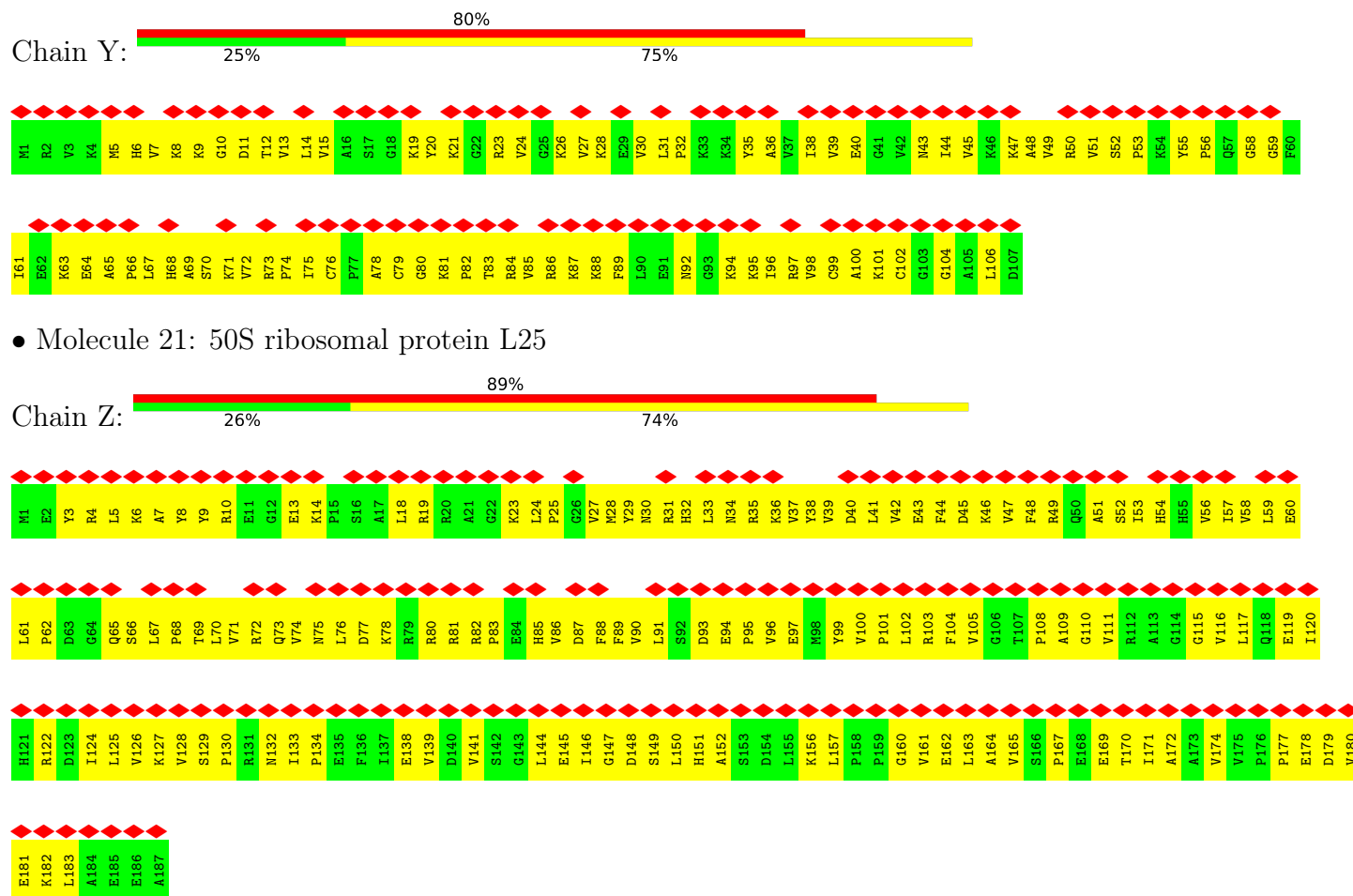


• Molecule 19: 50S ribosomal protein L23

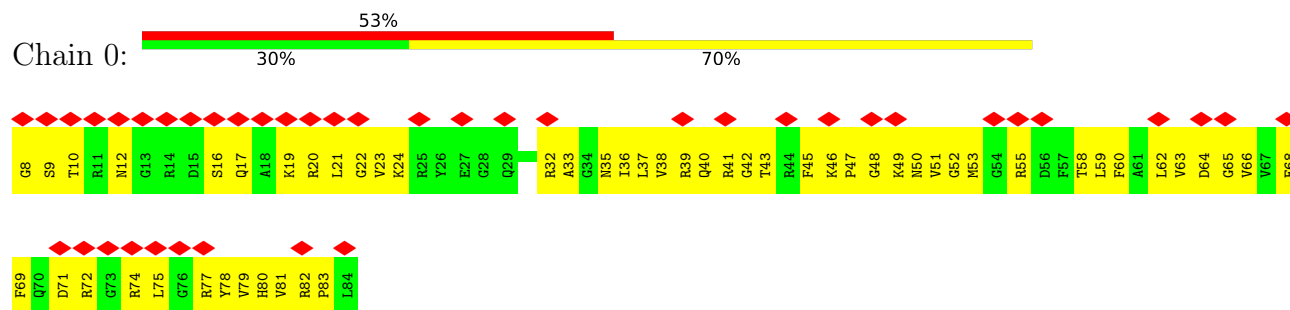




• Molecule 21: 50S ribosomal protein L25

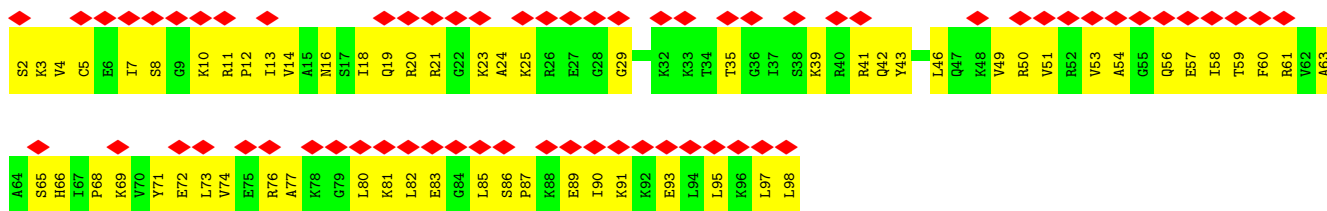


• Molecule 22: 50S ribosomal protein L27

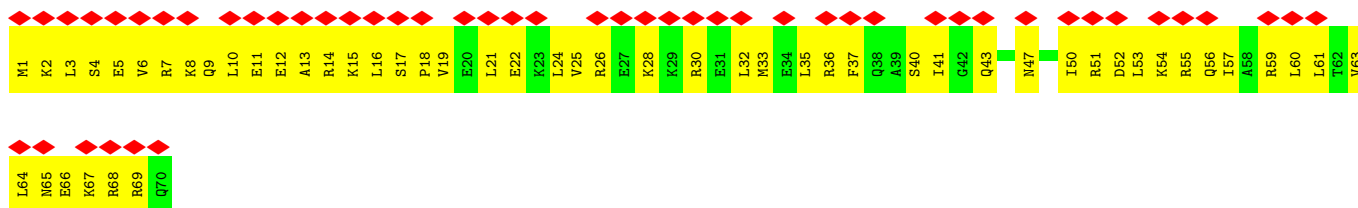
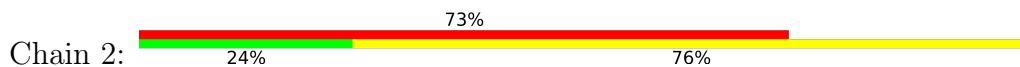


• Molecule 23: 50S ribosomal protein L28

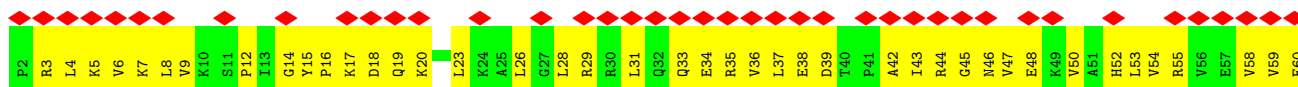




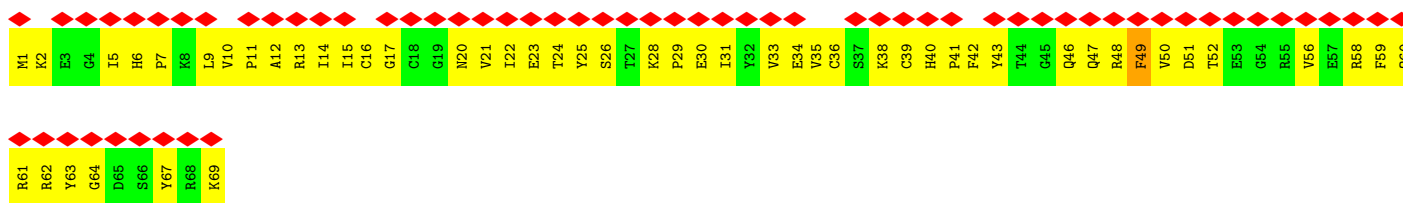
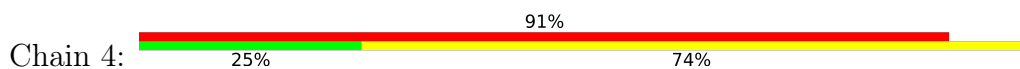
• Molecule 24: 50S ribosomal protein L29



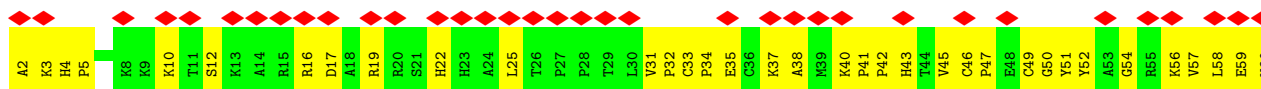
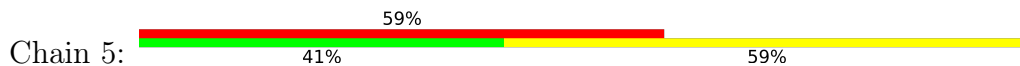
• Molecule 25: 50S ribosomal protein L30



• Molecule 26: 50S ribosomal protein L31



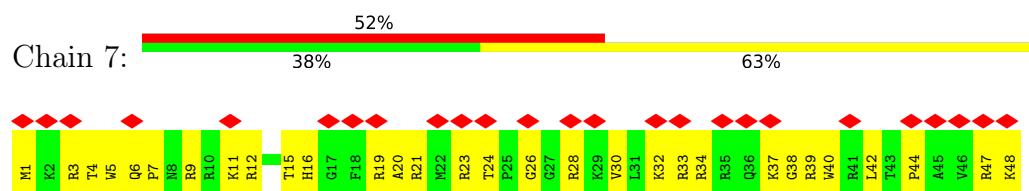
• Molecule 27: 50S ribosomal protein L32



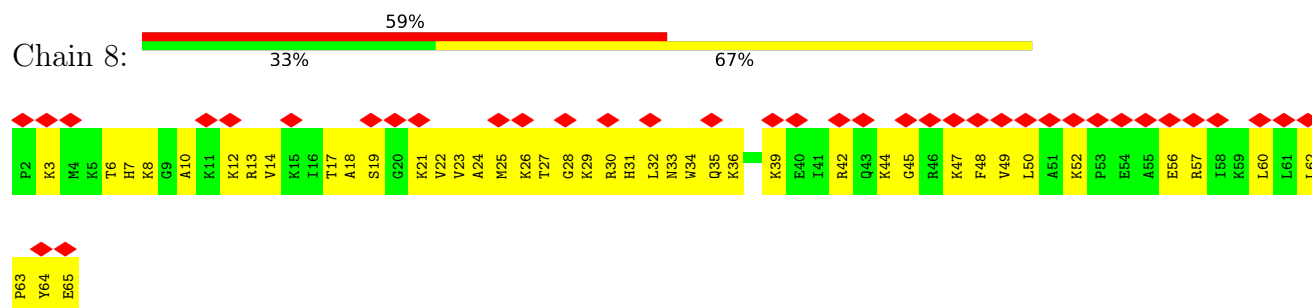
• Molecule 28: 50S ribosomal protein L33



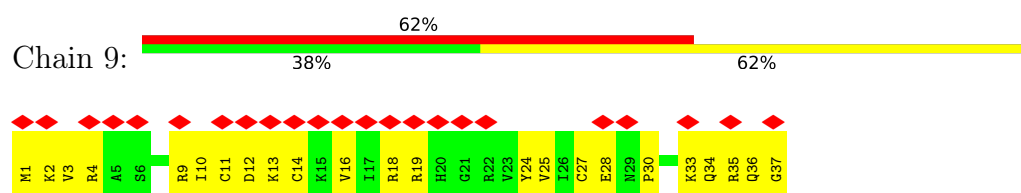
- Molecule 29: 50S ribosomal protein L34



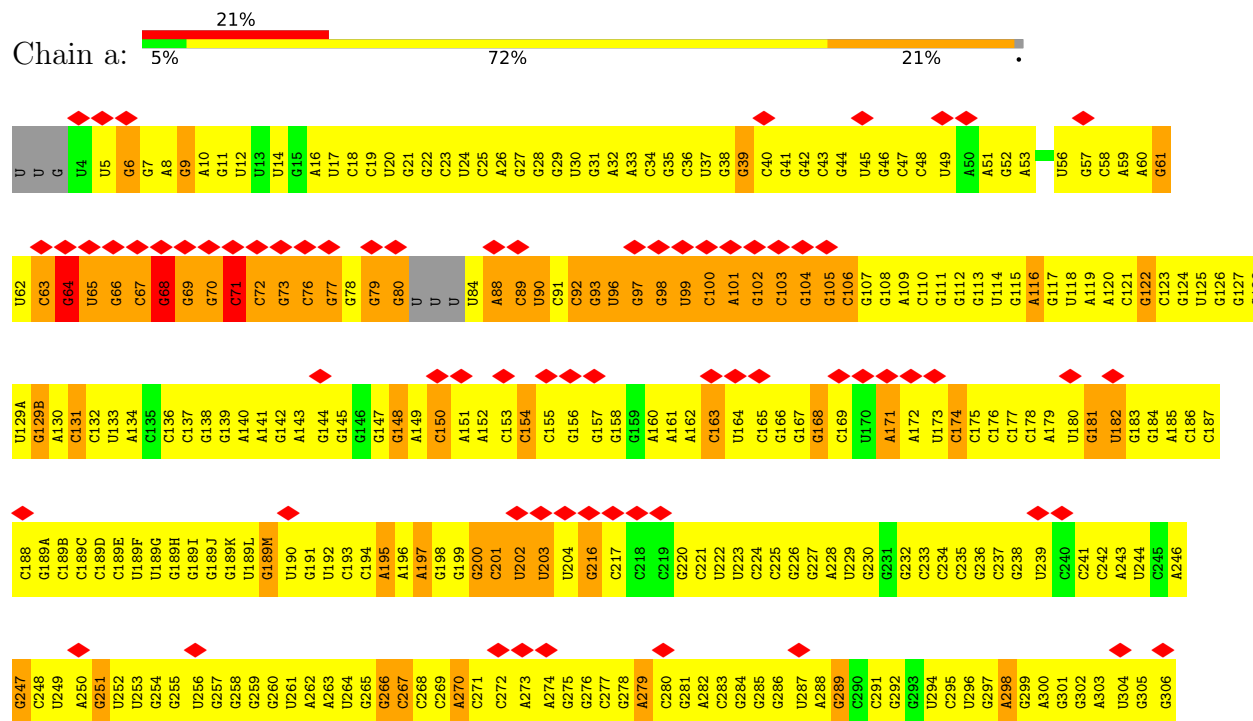
- Molecule 30: 50S ribosomal protein L35

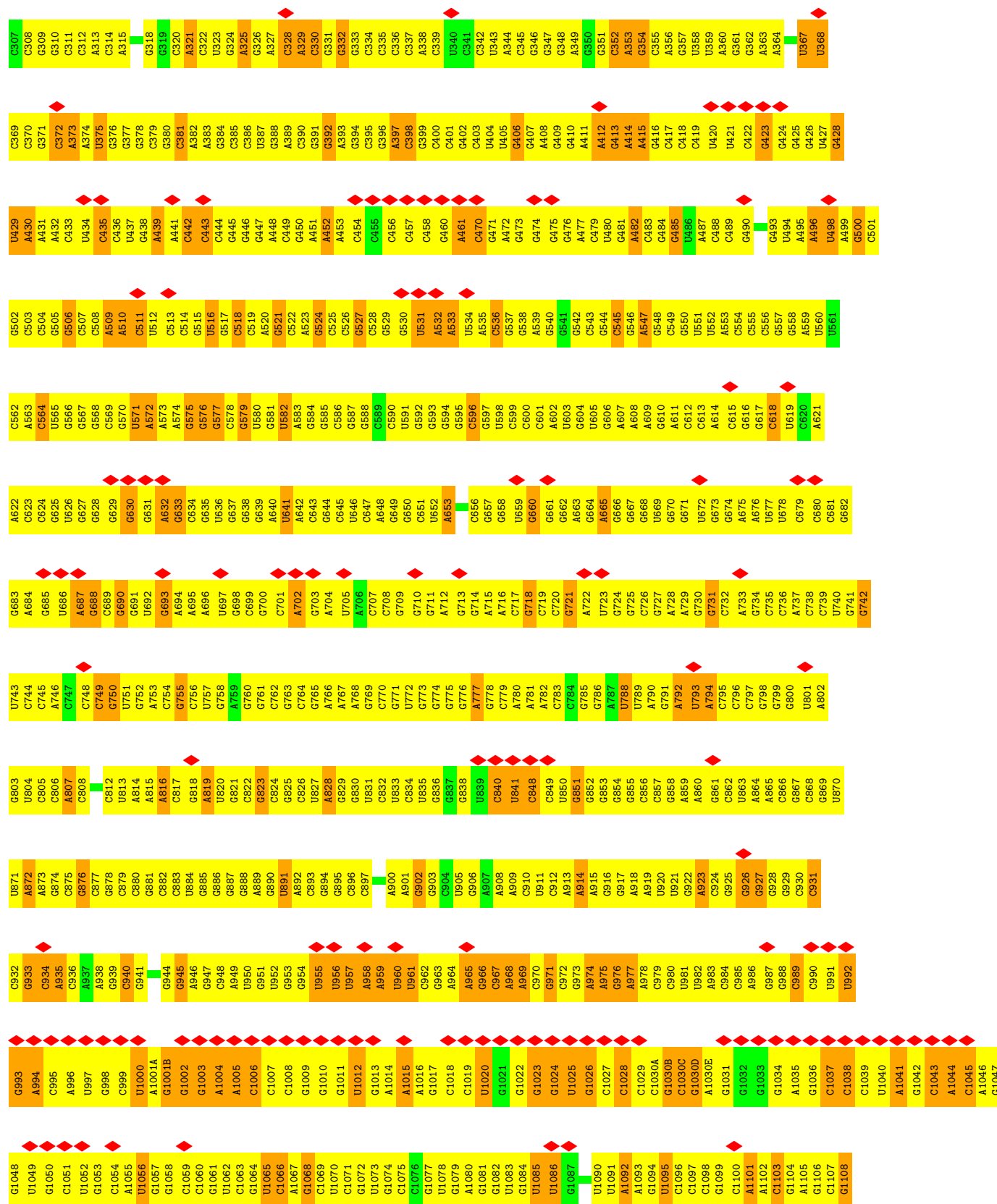


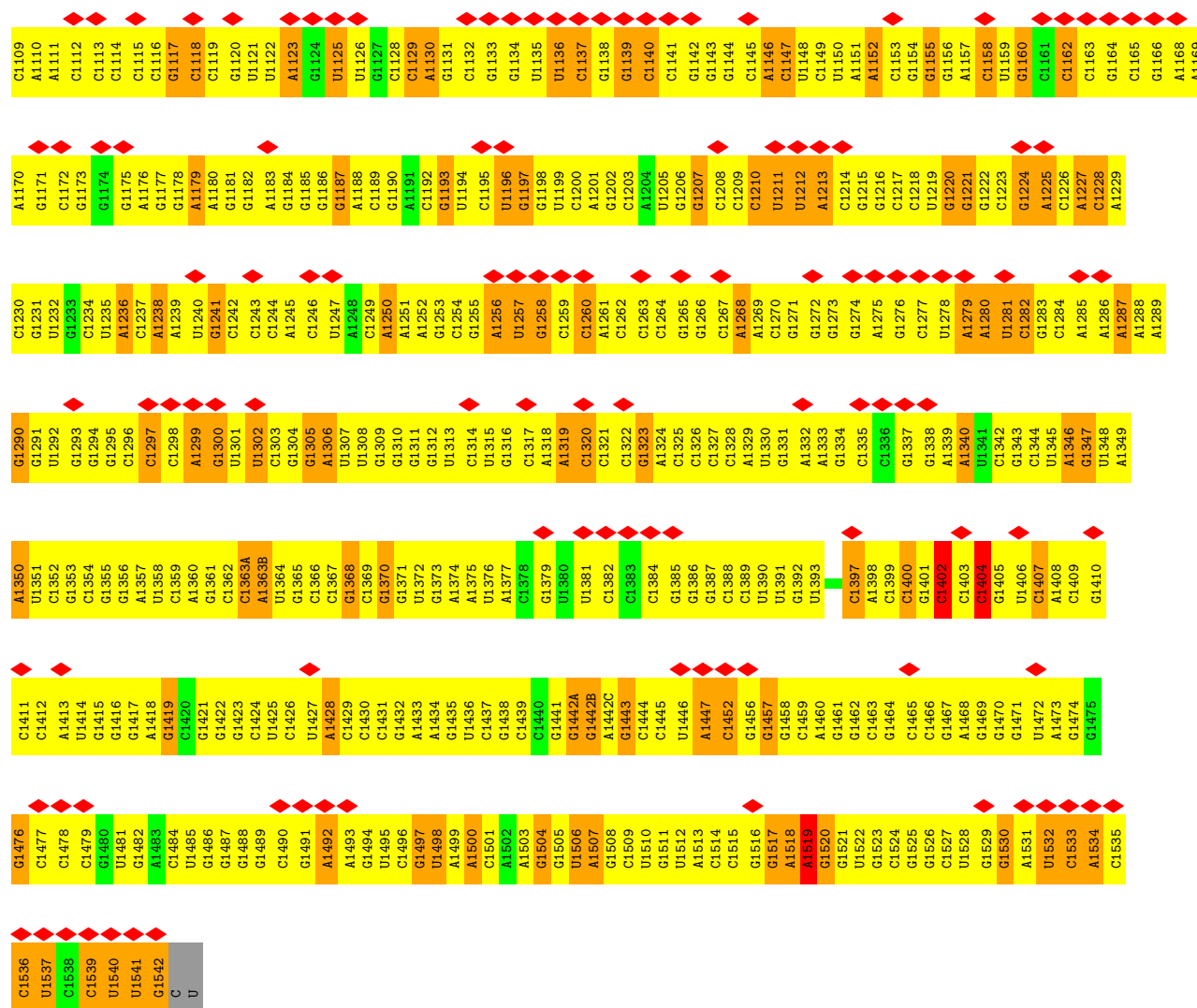
- Molecule 31: 50S ribosomal protein L36



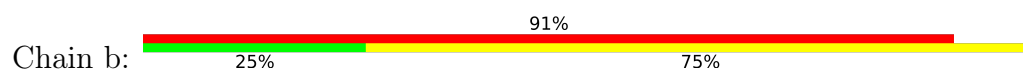
- Molecule 32: 16S rRNA



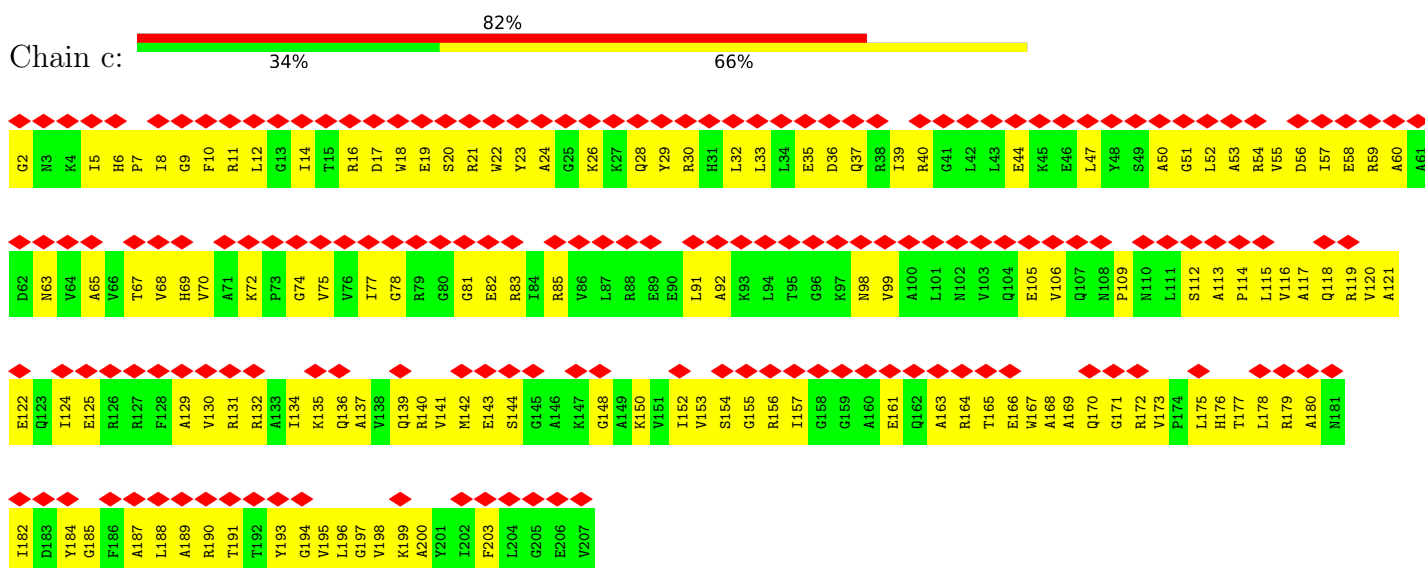




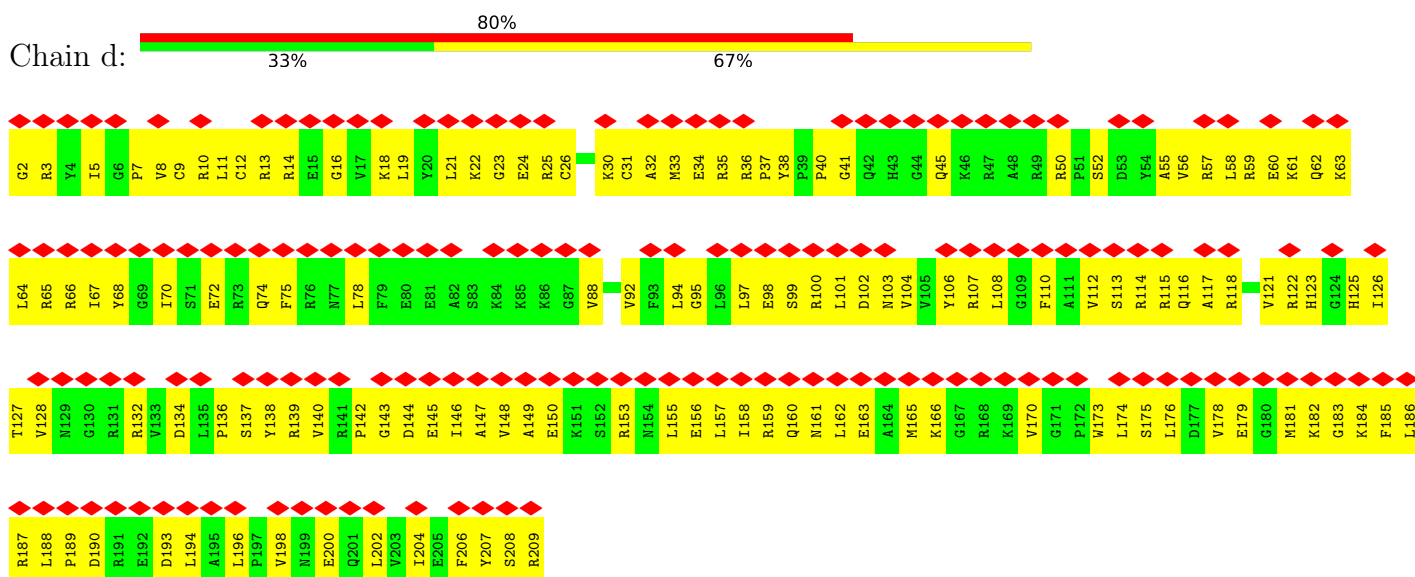
• Molecule 33: 30S ribosomal protein S2



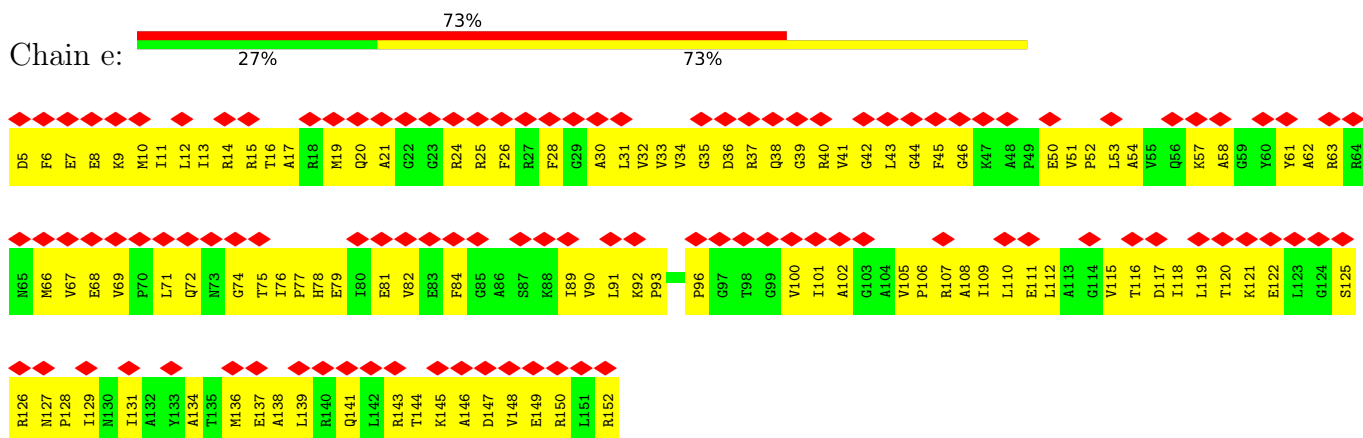
• Molecule 34: 30S ribosomal protein S3



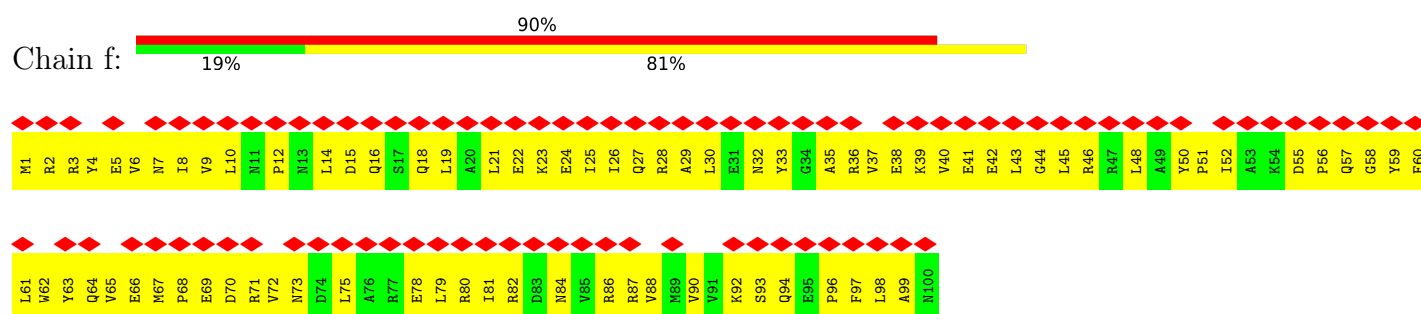
• Molecule 35: 30S ribosomal protein S4



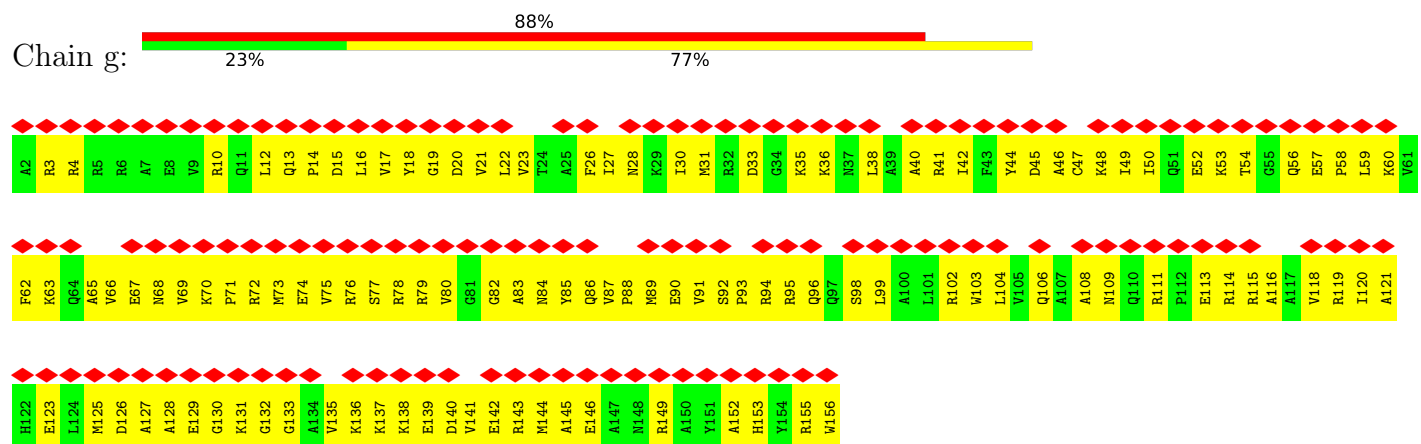
• Molecule 36: 30S ribosomal protein S5



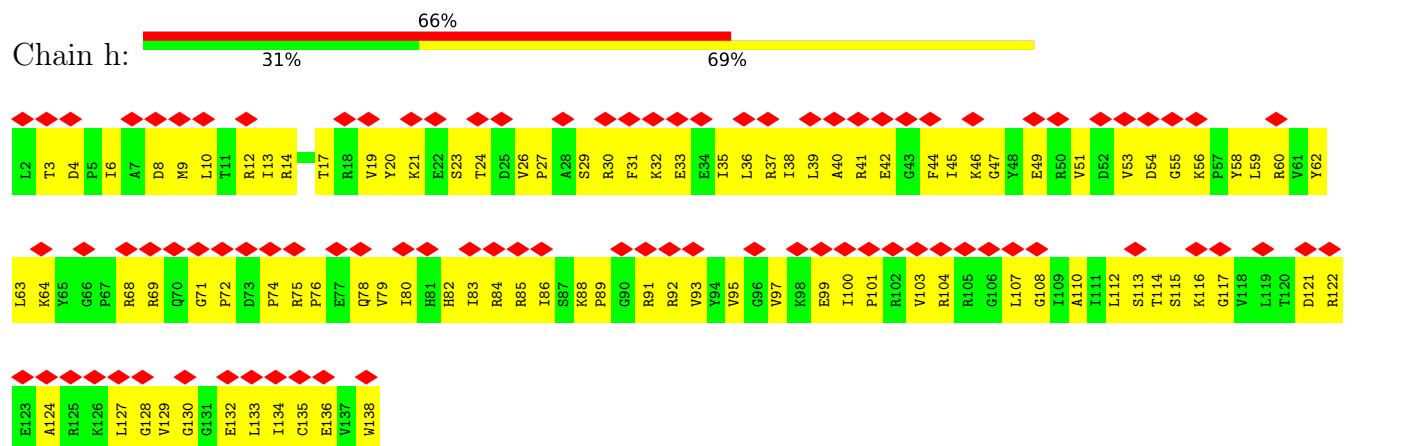
• Molecule 37: 30S ribosomal protein S6



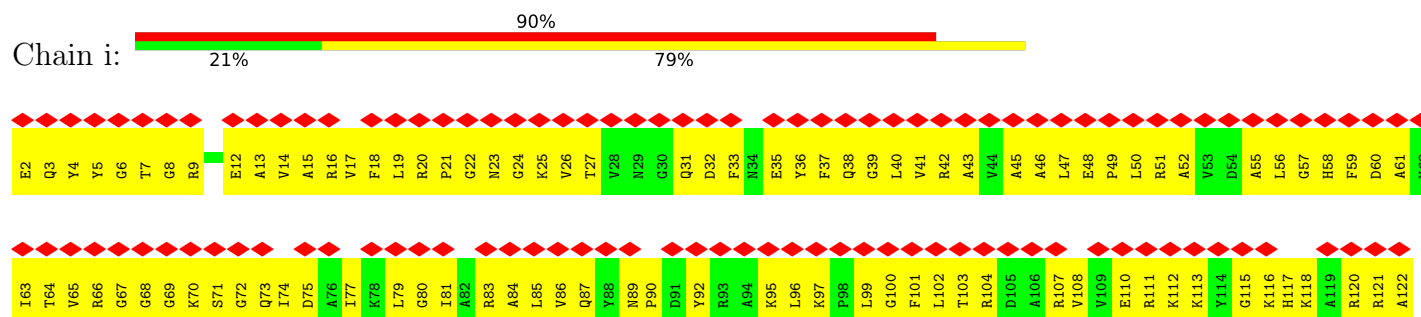
- Molecule 38: 30S ribosomal protein S7

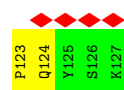


- Molecule 39: 30S ribosomal protein S8

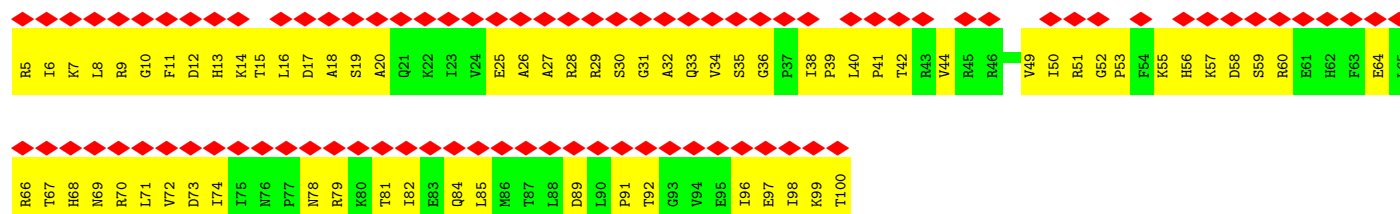
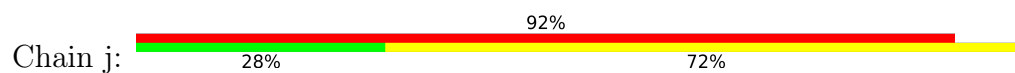


- Molecule 40: 30S ribosomal protein S9

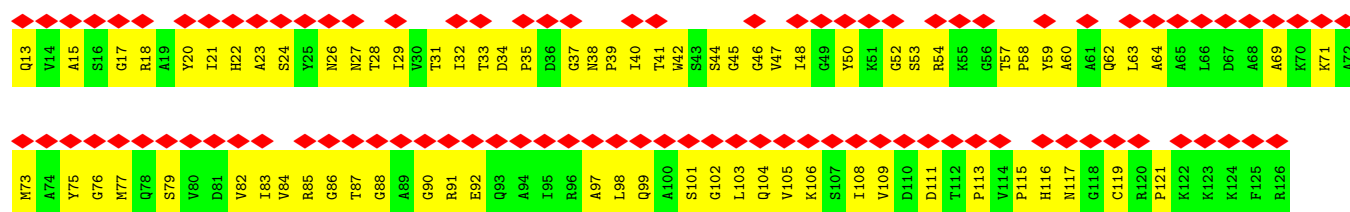
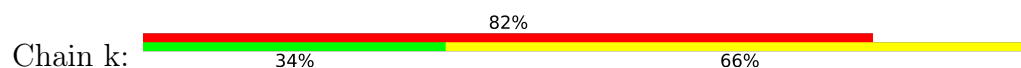




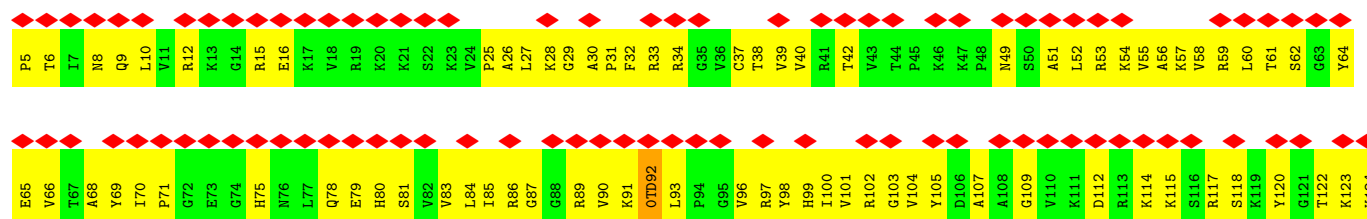
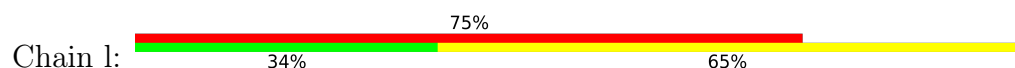
• Molecule 41: 30S ribosomal protein S10



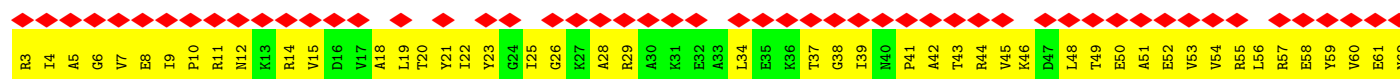
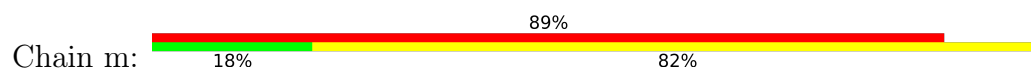
• Molecule 42: 30S ribosomal protein S11



• Molecule 43: 30S ribosomal protein S12

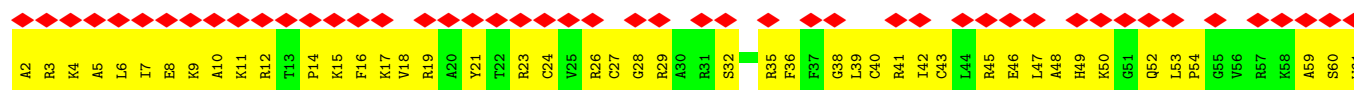
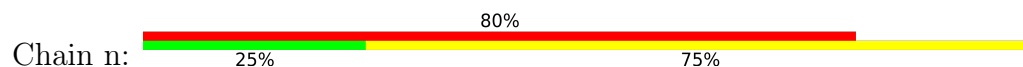


• Molecule 44: 30S ribosomal protein S13

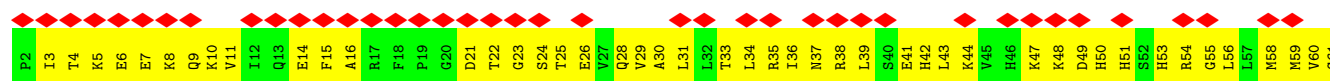




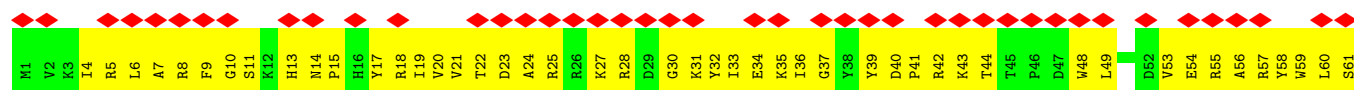
- Molecule 45: 30S ribosomal protein S14 type Z



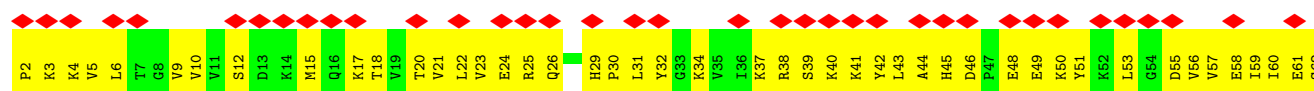
- Molecule 46: 30S ribosomal protein S15



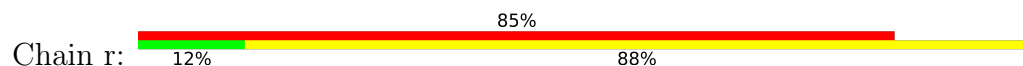
- Molecule 47: 30S ribosomal protein S16

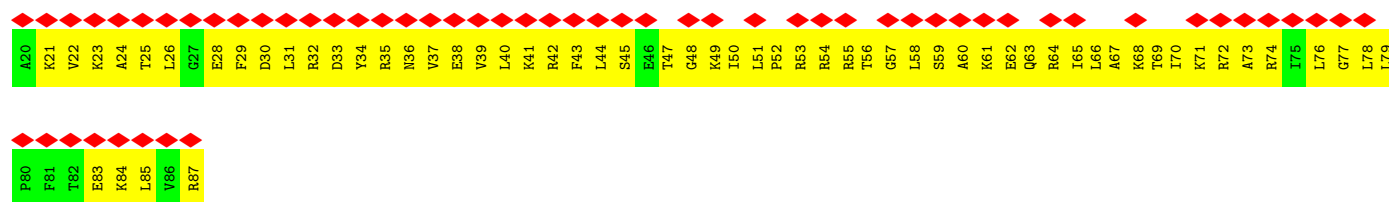


- Molecule 48: 30S ribosomal protein S17

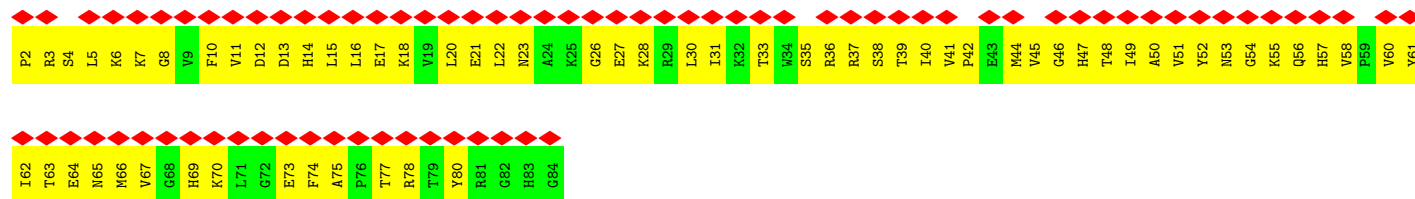


- Molecule 49: 30S ribosomal protein S18

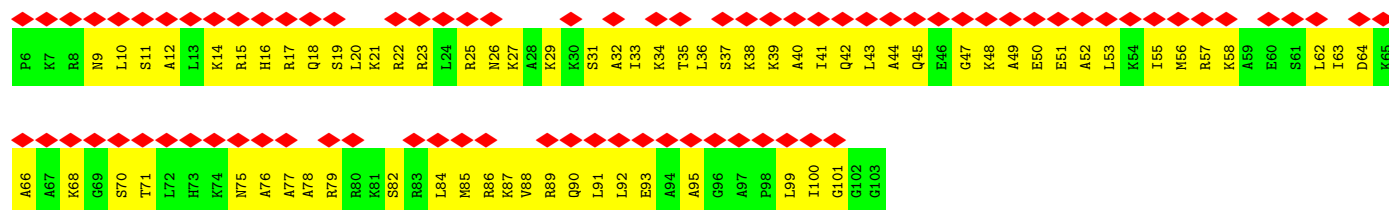
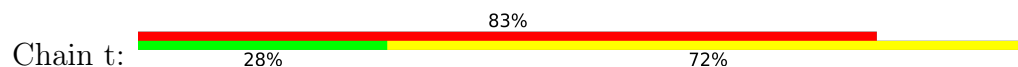




• Molecule 50: 30S ribosomal protein S19



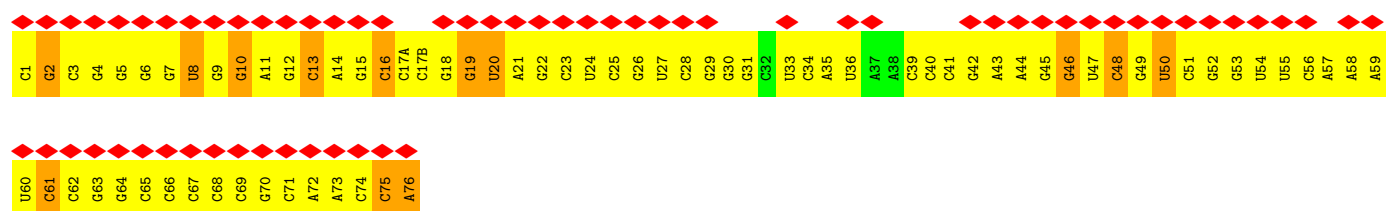
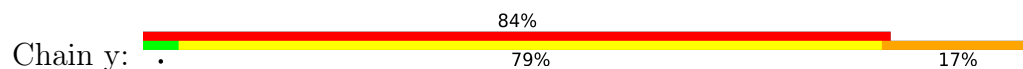
• Molecule 51: 30S ribosomal protein S20



• Molecule 52: 30S ribosomal protein Thx



• Molecule 53: P-site tRNA fMet

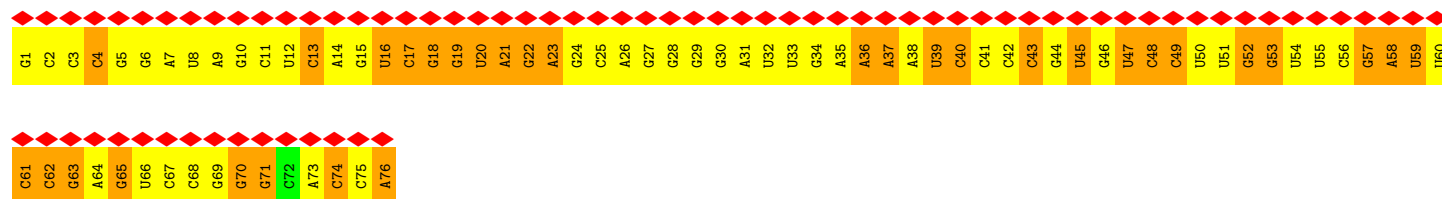


• Molecule 54: 50S ribosomal protein L1

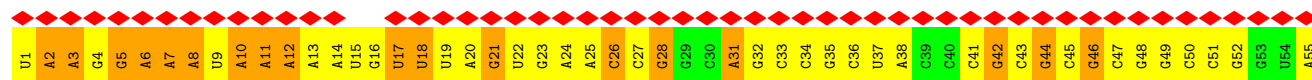
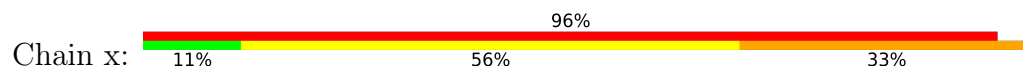




- Molecule 55: E-site tRNA Phe



- Molecule 56: messenger RNA



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	Not provided	
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 ($e^-/\text{\AA}^2$)	30	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.112	Depositor
Minimum map value	-0.043	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.006	Depositor
Recommended contour level	0.03	Depositor
Map size (Å)	384.0, 384.0, 384.0	wwPDB
Map dimensions	384, 384, 384	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.0, 1.0, 1.0	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: 5MC, SF4, 0TD, 2MU, PSU, 7MG, 2MA, 5MU, UR3, M2G, ZN, OMG, 4OC, MA6, 2MG

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	A	0.36	0/68899	0.35	4/107536 (0.0%)
2	B	0.32	0/2878	0.31	0/4490
3	D	0.34	0/2186	0.47	0/2944
4	E	0.33	0/1592	0.47	0/2149
5	F	0.30	0/1615	0.43	0/2188
6	G	0.27	0/1449	0.45	0/1957
7	H	0.26	0/1347	0.40	0/1817
8	I	0.18	0/1091	0.37	0/1490
9	N	0.31	0/1144	0.43	0/1543
10	O	0.35	0/943	0.43	0/1269
11	P	0.30	0/1152	0.45	0/1533
12	Q	0.33	0/1143	0.42	0/1527
13	R	0.31	0/982	0.50	0/1312
14	S	0.26	0/880	0.44	0/1172
15	T	0.33	0/1097	0.52	0/1468
16	U	0.32	0/977	0.47	0/1301
17	V	0.30	0/782	0.42	0/1049
18	W	0.33	0/897	0.45	0/1205
19	X	0.29	0/764	0.41	0/1025
20	Y	0.26	0/823	0.39	0/1100
21	Z	0.25	0/1491	0.43	0/2029
22	0	0.33	0/616	0.51	0/821
23	1	0.32	0/766	0.41	0/1018
24	2	0.28	0/594	0.45	0/785
25	3	0.30	0/469	0.44	0/630
26	4	0.25	0/549	0.63	0/741
27	5	0.30	0/469	0.40	0/635
28	6	0.34	0/456	0.54	0/608
29	7	0.34	0/426	0.50	0/561
30	8	0.32	0/525	0.40	0/691
31	9	0.30	0/310	0.42	0/407
32	a	0.66	8/36110 (0.0%)	0.39	4/56345 (0.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	b	0.24	0/1860	0.43	0/2518
34	c	0.28	0/1566	0.41	0/2119
35	d	0.27	0/1698	0.40	0/2277
36	e	0.31	0/1149	0.46	0/1548
37	f	0.26	0/829	0.43	0/1123
38	g	0.24	0/1248	0.39	0/1676
39	h	0.32	0/1108	0.47	0/1494
40	i	0.24	0/985	0.39	0/1329
41	j	0.25	0/723	0.49	0/984
42	k	0.27	0/848	0.39	0/1149
43	l	0.30	0/937	0.46	0/1260
44	m	0.26	0/905	0.47	0/1217
45	n	0.30	0/501	0.46	0/664
46	o	0.29	0/739	0.44	0/985
47	p	0.30	0/693	0.43	0/935
48	q	0.32	0/836	0.44	0/1117
49	r	0.25	0/560	0.41	0/746
50	s	0.25	0/660	0.46	0/893
51	t	0.30	0/736	0.50	0/976
52	u	0.30	0/203	0.47	0/266
53	y	0.27	0/1832	0.35	0/2855
54	C	0.17	0/1748	0.43	0/2354
55	z	0.22	0/1809	0.34	0/2819
56	x	0.16	0/1315	0.35	0/2046
All	All	0.43	8/160910 (0.0%)	0.39	8/240696 (0.0%)

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	a	71	C	N1-C2	41.95	2.24	1.40
32	a	71	C	N1-C6	41.03	2.19	1.37
32	a	71	C	C2-N3	40.40	2.16	1.35
32	a	71	C	N3-C4	40.29	2.14	1.33
32	a	64	G	O3'-P	38.61	2.19	1.61
32	a	71	C	C5-C6	37.72	2.09	1.34
32	a	71	C	C4-C5	37.34	2.17	1.43
32	a	64	G	C3'-O3'	16.19	1.67	1.43

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	a	64	G	P-O3'-C3'	28.57	163.05	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	2224	G	OP1-P-O3'	-10.45	76.64	108.00
1	A	2883	A	OP2-P-O3'	-8.75	81.74	108.00
1	A	2883	A	OP1-P-O3'	-8.38	82.87	108.00
1	A	2224	G	OP2-P-O3'	-7.20	86.39	108.00
32	a	64	G	C2'-C3'-O3'	6.03	118.54	109.50
32	a	68	G	P-O3'-C3'	5.91	129.06	120.20
32	a	64	G	O3'-P-O5'	5.57	112.35	104.00

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	61758	0	31154	4351	0
2	B	2573	0	1306	193	0
3	D	2136	0	2218	258	0
4	E	1559	0	1618	210	0
5	F	1580	0	1619	218	0
6	G	1424	0	1441	209	0
7	H	1324	0	1399	201	0
8	I	1076	0	1094	157	0
9	N	1117	0	1184	130	0
10	O	933	0	996	118	0
11	P	1135	0	1212	160	0
12	Q	1122	0	1179	158	0
13	R	968	0	1033	100	0
14	S	870	0	923	101	0
15	T	1083	0	1136	128	0
16	U	959	0	1019	111	0
17	V	771	0	830	105	0
18	W	886	0	940	111	0
19	X	750	0	814	87	0
20	Y	810	0	887	131	0
21	Z	1459	0	1457	218	0
22	0	608	0	622	77	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
23	1	759	0	837	98	0
24	2	592	0	654	64	0
25	3	464	0	514	49	0
26	4	536	0	515	103	0
27	5	455	0	465	46	0
28	6	449	0	469	66	0
29	7	418	0	467	44	0
30	8	517	0	582	61	0
31	9	307	0	335	26	0
32	a	32532	0	16451	2750	0
33	b	1825	0	1828	242	0
34	c	1542	0	1517	177	0
35	d	1668	0	1707	231	0
36	e	1133	0	1191	162	0
37	f	816	0	808	148	0
38	g	1229	0	1238	161	0
39	h	1088	0	1126	121	0
40	i	966	0	953	159	0
41	j	710	0	661	103	0
42	k	833	0	836	104	0
43	l	932	0	981	117	0
44	m	895	0	920	154	0
45	n	492	0	529	87	0
46	o	728	0	760	93	0
47	p	677	0	686	84	0
48	q	823	0	891	111	0
49	r	555	0	618	107	0
50	s	645	0	635	102	0
51	t	733	0	795	128	0
52	u	199	0	208	36	0
53	y	1640	0	838	121	0
54	C	1718	0	1767	344	0
55	z	1619	0	822	169	0
56	x	1176	4	596	69	0
57	4	1	0	0	0	0
57	5	1	0	0	0	0
57	6	1	0	0	0	0
57	9	1	0	0	0	0
57	Y	1	0	0	0	0
57	n	1	0	0	0	0
58	d	8	0	0	2	0
All	All	148586	4	100281	12488	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 51.

All (12488) 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)
32:a:64:G:C3'	32:a:64:G:O3'	1.67	1.41
32:a:71:C:C5	32:a:71:C:C6	2.09	1.38
32:a:71:C:C5	32:a:71:C:C4	2.17	1.31
8:I:65:ALA:O	8:I:69:LYS:HB2	1.43	1.19
32:a:71:C:C4	32:a:71:C:N3	2.14	1.16
32:a:71:C:N3	32:a:71:C:C2	2.16	1.14
32:a:71:C:C6	32:a:71:C:N1	2.19	1.10
54:C:91:ALA:HB2	54:C:153:ILE:HD13	1.34	1.09
4:E:11:MET:HG2	4:E:24:THR:HG22	1.36	1.08
32:a:67:C:H1'	32:a:172:A:H1'	1.36	1.07
12:Q:51:ARG:HD3	12:Q:66:ILE:HD11	1.38	1.06
32:a:71:C:C2	32:a:71:C:N1	2.24	1.06
32:a:741:G:H5'	46:o:39:LEU:HD21	1.39	1.05
1:A:2711:A:H5''	1:A:2712(A):U:H5''	1.38	1.04
1:A:1075:C:H2'	1:A:1076:C:H3'	1.39	1.04
1:A:1664:A:H61	1:A:1996:C:N4	1.55	1.03
7:H:124:GLU:HB2	7:H:132:ARG:HB3	1.39	1.02
32:a:1138:G:H2'	32:a:1140:C:H5'	1.39	1.01
32:a:64:G:O3'	32:a:65:U:P	2.19	1.01
32:a:1286:A:H2'	32:a:1287:A:H4'	1.41	1.01
37:f:37:VAL:HA	37:f:65:VAL:HG12	1.37	1.01
1:A:1270:C:H5''	1:A:1271:G:H5'	1.40	1.01
41:j:5:ARG:HA	41:j:73:ASP:HA	1.42	1.01
36:e:50:GLU:HG3	36:e:52:PRO:HD2	1.43	1.00
50:s:41:VAL:HG12	50:s:44:MET:HG3	1.41	1.00
54:C:61:THR:HG23	54:C:142:ALA:HB1	1.40	1.00
43:l:59:ARG:HA	43:l:65:GLU:HA	1.43	0.99
1:A:2305:A:H5''	6:G:134:GLY:HA3	1.43	0.99
1:A:1215:G:H1	1:A:1234:U:H3	1.01	0.99
1:A:2808:U:N3	1:A:2892:A:C8	2.29	0.99
39:h:9:MET:HG3	39:h:26:VAL:HG11	1.42	0.99
1:A:2141:G:H1	1:A:2150:U:H3	1.05	0.99
41:j:50:ILE:HD11	41:j:57:LYS:HD2	1.41	0.99
41:j:38:ILE:HD11	41:j:71:LEU:HD22	1.46	0.98
5:F:179:GLU:HA	5:F:205:ARG:HH22	1.26	0.97
1:A:1664:A:N6	1:A:1996:C:H42	1.61	0.97
1:A:2808:U:C2	1:A:2892:A:N7	2.32	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:68:G:H1	32:a:171:A:N6	1.62	0.97
7:H:142:GLY:O	7:H:146:ALA:HB2	1.65	0.97
32:a:611:A:N6	32:a:629:G:H1	1.63	0.97
6:G:38:VAL:HB	6:G:158:ALA:HB3	1.46	0.97
1:A:539:G:H1	1:A:554:U:H3	0.98	0.96
12:Q:37:LEU:HD11	12:Q:130:LYS:HB2	1.44	0.96
21:Z:53:ILE:HD13	21:Z:99:TYR:HB2	1.47	0.96
25:3:6:VAL:O	25:3:34:GLU:HA	1.65	0.96
32:a:321:A:N6	32:a:332:G:H1	1.62	0.96
54:C:73:ARG:H	54:C:111:ASP:HB2	1.25	0.96
42:k:33:THR:HG22	42:k:39:PRO:HA	1.48	0.96
49:r:47:THR:HA	49:r:83:GLU:HB2	1.46	0.96
35:d:175:SER:HB3	35:d:186:LEU:HD11	1.48	0.96
9:N:42:TRP:HA	9:N:48:MET:HE2	1.45	0.95
11:P:60:MET:HA	30:8:13:ARG:HH12	1.30	0.95
23:1:50:ARG:HG2	23:1:59:THR:HG22	1.47	0.95
1:A:764:A:H5'	3:D:210:GLY:HA2	1.48	0.95
32:a:1123:A:H4'	41:j:36:GLY:HA3	1.44	0.95
8:I:9:LEU:HG	8:I:12:LEU:HD12	1.49	0.95
14:S:40:ILE:HG12	14:S:47:THR:HA	1.45	0.94
1:A:1354:A:H5''	3:D:38:LYS:HE2	1.47	0.94
1:A:2393:A:H62	1:A:2422:A:H61	1.01	0.94
11:P:86:LYS:HB3	11:P:118:GLY:HA3	1.48	0.94
6:G:61:ALA:HB1	26:4:7:PRO:HG2	1.49	0.93
54:C:133:PRO:HB3	55:z:56:C:H5'	1.49	0.93
36:e:91:LEU:HG	36:e:120:THR:HG22	1.47	0.93
54:C:75:LEU:HB3	54:C:113:VAL:HG22	1.50	0.93
52:u:10:ARG:HA	52:u:13:ILE:HD12	1.48	0.93
36:e:33:VAL:HG13	36:e:112:LEU:HD12	1.48	0.93
1:A:2291:U:H3	1:A:2341:G:H1	1.17	0.93
8:I:69:LYS:HG3	8:I:138:ILE:HG12	1.51	0.93
12:Q:55:VAL:HG22	21:Z:183:LEU:HD11	1.51	0.93
31:9:25:VAL:HB	31:9:34:GLN:HB2	1.50	0.93
1:A:2751:G:H4'	7:H:4:ILE:HD11	1.50	0.93
32:a:765:G:H1	32:a:812:C:HO2'	1.01	0.93
32:a:64:G:O3'	32:a:71:C:C4	2.22	0.93
34:c:140:ARG:HA	34:c:143:GLU:HB2	1.48	0.92
6:G:32:PRO:HB2	6:G:172:LEU:HD22	1.51	0.92
8:I:8:PRO:HA	8:I:14:ASP:HA	1.48	0.92
1:A:2357:U:H5'	22:0:20:ARG:HH12	1.34	0.92
32:a:64:G:O3'	32:a:71:C:C6	2.21	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:593:G:H1	32:a:646:U:H3	0.93	0.92
33:b:166:ASP:HB3	33:b:169:LYS:HB3	1.51	0.92
48:q:45:HIS:HB3	48:q:72:ARG:HG2	1.50	0.92
26:4:48:ARG:HG3	26:4:52:THR:HG23	1.52	0.92
23:1:4:VAL:HG12	23:1:11:ARG:HG2	1.49	0.91
7:H:29:PRO:HD2	7:H:80:SER:HA	1.50	0.91
16:U:24:TYR:HB2	16:U:29:SER:HB3	1.51	0.91
1:A:1359:A:H2'	1:A:1360:A:H5'	1.53	0.91
13:R:79:LEU:HA	13:R:83:ILE:HD12	1.53	0.91
33:b:48:MET:HA	33:b:51:LEU:HD12	1.53	0.91
1:A:2102:U:H3	1:A:2187:G:H1	1.17	0.91
1:A:2098:U:H3	1:A:2191:G:H1	1.19	0.91
40:i:50:LEU:HG	40:i:81:ILE:HD11	1.52	0.91
41:j:35:SER:HB3	41:j:73:ASP:H	1.34	0.91
3:D:79:VAL:HG21	3:D:111:LEU:HD11	1.52	0.91
32:a:1414:U:H3	32:a:1486:G:H1	1.13	0.91
1:A:1713:U:H3	1:A:1746:G:H1	1.08	0.91
12:Q:59:ARG:HA	21:Z:180:VAL:HG23	1.49	0.91
1:A:1796:U:H3	1:A:1823:G:H1	1.16	0.91
1:A:2393:A:H62	1:A:2422:A:N6	1.68	0.90
32:a:1371:G:H5''	40:i:68:GLY:HA2	1.51	0.90
3:D:169:GLU:HG2	3:D:184:LYS:HE2	1.50	0.90
37:f:99:ALA:HB2	49:r:31:LEU:HD21	1.52	0.90
49:r:26:LEU:HD21	49:r:42:ARG:HD3	1.53	0.90
39:h:10:LEU:HD22	39:h:83:ILE:HD11	1.53	0.90
32:a:64:G:O3'	32:a:71:C:C5	2.23	0.90
38:g:79:ARG:HA	38:g:84:ASN:HA	1.52	0.90
1:A:2526:G:H1	1:A:2537:U:H3	1.20	0.90
7:H:27:LYS:HE2	7:H:32:GLU:HB2	1.54	0.90
1:A:1462:C:H4'	1:A:2703:C:H5'	1.51	0.90
32:a:922:G:H4'	36:e:20:GLN:HA	1.50	0.90
32:a:611:A:H61	32:a:629:G:H1	0.91	0.90
15:T:107:ASP:HA	15:T:110:ILE:HD12	1.51	0.90
1:A:1920:4OC:HM22	1:A:1921:G:H5'	1.53	0.89
1:A:2121:G:H1'	54:C:167:LYS:HD3	1.52	0.89
37:f:3:ARG:HB3	37:f:93:SER:HB2	1.53	0.89
10:O:48:PRO:HB3	32:a:1422:G:H5''	1.54	0.89
1:A:272(J):C:H1'	1:A:272(K):U:H2'	1.55	0.89
30:8:14:VAL:HG11	30:8:22:VAL:HG13	1.55	0.89
16:U:74:LEU:HD23	16:U:114:LYS:HE3	1.54	0.89
23:1:77:ALA:HA	23:1:80:LEU:HD13	1.53	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:d:9:CYS:HB3	35:d:32:ALA:HB2	1.55	0.89
35:d:108:LEU:HD11	35:d:176:LEU:HB2	1.55	0.89
44:m:11:ARG:HA	44:m:45:VAL:HB	1.53	0.89
4:E:179:GLU:HB3	4:E:181:LEU:HD23	1.53	0.89
54:C:123:VAL:HG11	54:C:138:PRO:HG2	1.54	0.89
7:H:8:PRO:HA	7:H:51:ARG:HG2	1.52	0.89
53:y:8:U:N3	53:y:14:A:C8	2.40	0.89
21:Z:6:LYS:HA	21:Z:60:GLU:HB2	1.54	0.89
54:C:83:ILE:HG23	54:C:94:VAL:HG12	1.52	0.89
14:S:29:PHE:HB3	14:S:36:TYR:HB2	1.53	0.88
52:u:18:TYR:HB2	52:u:24:ARG:HH21	1.38	0.88
21:Z:102:LEU:HD21	21:Z:124:ILE:HB	1.52	0.88
32:a:376:G:H5''	47:p:5:ARG:HB2	1.55	0.88
35:d:11:LEU:HD23	35:d:66:ARG:HD3	1.53	0.88
8:I:79:ILE:HB	8:I:144:VAL:HA	1.55	0.88
55:z:31:A:H2'	55:z:32:U:H5'	1.55	0.88
8:I:77:LEU:HD22	8:I:142:VAL:HG13	1.55	0.88
12:Q:76:LYS:HB3	12:Q:91:GLU:HG3	1.55	0.88
21:Z:126:VAL:HG11	21:Z:161:VAL:HG13	1.56	0.88
41:j:7:LYS:HB2	41:j:97:GLU:HB2	1.53	0.88
12:Q:55:VAL:HG23	21:Z:178:GLU:HG3	1.53	0.88
26:4:50:VAL:HG11	44:m:65:LYS:HB3	1.53	0.88
32:a:66:G:N7	32:a:97:G:N1	2.21	0.88
8:I:8:PRO:HG2	8:I:134:PRO:HG2	1.55	0.88
49:r:58:LEU:HD12	49:r:62:GLU:HB3	1.54	0.88
18:W:84:ARG:O	18:W:95:ILE:HA	1.74	0.87
7:H:33:LEU:HD11	7:H:75:ALA:HB1	1.54	0.87
48:q:10:VAL:HG12	48:q:53:LEU:HD12	1.56	0.87
54:C:74:VAL:HG11	54:C:153:ILE:HG12	1.54	0.87
42:k:33:THR:HA	42:k:40:ILE:H	1.36	0.87
33:b:75:LYS:HA	33:b:78:GLN:HB2	1.56	0.87
1:A:1300:U:H4'	1:A:1301:A:H5''	1.55	0.87
32:a:143:A:H2	32:a:220:G:H1	0.97	0.87
39:h:40:ALA:HB2	39:h:45:ILE:HD11	1.54	0.87
43:l:83:VAL:HG11	43:l:100:ILE:HG23	1.57	0.87
17:V:40:LEU:HB2	17:V:46:VAL:HG12	1.56	0.86
32:a:321:A:H61	32:a:332:G:H1	0.89	0.86
32:a:666:G:H5'	32:a:726:C:H1'	1.56	0.86
11:P:121:LYS:HD3	11:P:123:LEU:HD11	1.57	0.86
32:a:72:C:H2'	32:a:73:G:H5'	1.55	0.86
32:a:181:G:H4'	32:a:182:U:H5'	1.55	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:y:1:C:H4'	53:y:2:G:H5'	1.54	0.86
32:a:101:A:O2'	32:a:152:A:OP1	1.91	0.86
1:A:121:G:H4'	1:A:149:A:H5'	1.57	0.86
41:j:44:VAL:HG22	41:j:66:ARG:HG2	1.54	0.86
1:A:9:U:H2'	1:A:2629:A:H61	1.40	0.86
32:a:66:G:C6	32:a:97:G:N2	2.43	0.86
32:a:975:A:H4'	32:a:976:G:H5''	1.55	0.86
32:a:1003:G:H2'	32:a:1004:A:H4'	1.54	0.86
19:X:89:ILE:HG21	19:X:92:LEU:HD13	1.57	0.86
21:Z:150:LEU:HB2	21:Z:171:ILE:HD11	1.58	0.86
1:A:1422:G:H1	1:A:1576:U:H3	1.22	0.86
8:I:6:LEU:HD11	8:I:37:VAL:HG23	1.57	0.86
15:T:64:ARG:HH12	15:T:103:ARG:HA	1.39	0.86
21:Z:54:HIS:HB3	21:Z:101:PRO:HD3	1.58	0.85
33:b:84:GLU:HG3	33:b:215:LEU:HB3	1.58	0.85
36:e:148:VAL:HG13	36:e:152:ARG:HH11	1.39	0.85
1:A:1148:A:H2'	1:A:1149:G:H5''	1.57	0.85
48:q:24:GLU:HA	48:q:39:SER:HA	1.57	0.85
32:a:986:A:H1'	50:s:55:LYS:HA	1.58	0.85
1:A:358:U:H2'	1:A:359:A:H8	1.40	0.85
3:D:73:VAL:HG13	3:D:120:GLY:HA3	1.57	0.85
32:a:66:G:O6	32:a:97:G:N2	2.09	0.85
36:e:92:LYS:HB3	36:e:119:LEU:HB2	1.58	0.85
17:V:62:LEU:HD21	17:V:95:LEU:HB2	1.57	0.85
32:a:64:G:O3'	32:a:71:C:C2	2.29	0.85
55:z:16:U:H3'	55:z:17:C:H5'	1.56	0.85
32:a:1106:G:H5''	34:c:172:ARG:HG2	1.59	0.85
11:P:59:LEU:HD21	30:8:10:ALA:HA	1.56	0.85
37:f:10:LEU:HB2	37:f:59:TYR:HB3	1.56	0.85
54:C:61:THR:HB	54:C:160:ARG:HD3	1.57	0.85
8:I:78:THR:HB	8:I:104:GLN:HE22	1.41	0.85
10:O:87:ILE:HD12	10:O:91:LEU:HA	1.56	0.85
32:a:684:A:H1'	42:k:39:PRO:HD2	1.56	0.85
26:4:9:LEU:HD22	26:4:26:SER:HA	1.59	0.84
32:a:64:G:O3'	32:a:71:C:N3	2.10	0.84
54:C:29:VAL:HG21	54:C:41:VAL:HG13	1.59	0.84
32:a:93:G:H4'	32:a:100:C:H2'	1.60	0.84
33:b:132:LYS:HA	33:b:135:GLN:HB2	1.59	0.84
7:H:164:TYR:HB2	7:H:167:GLU:HB2	1.58	0.84
38:g:144:MET:HE1	55:z:40:C:H1'	1.58	0.84
43:l:42:THR:HG22	43:l:54:LYS:HA	1.59	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1372:U:H5''	40:i:71:SER:HB3	1.59	0.84
36:e:71:LEU:HD11	36:e:115:VAL:HG22	1.57	0.84
1:A:1155:A:H5''	16:U:55:ARG:HH11	1.42	0.84
2:B:40:U:H2'	26:4:2:LYS:HE3	1.58	0.84
5:F:28:ILE:HD12	5:F:119:ARG:HH21	1.42	0.84
15:T:39:ARG:HH12	15:T:41:ARG:HD3	1.43	0.84
7:H:87:LEU:HD23	7:H:164:TYR:HA	1.60	0.84
20:Y:81:LYS:HB3	20:Y:101:LYS:HZ2	1.42	0.84
34:c:187:ALA:HB3	34:c:198:VAL:HB	1.59	0.84
53:y:8:U:C2	53:y:14:A:N7	2.46	0.84
37:f:38:GLU:H	37:f:65:VAL:HA	1.40	0.84
32:a:64:G:O3'	32:a:71:C:N1	2.10	0.83
32:a:68:G:N1	32:a:171:A:C6	2.45	0.83
1:A:2312:U:H5'	6:G:88:ILE:HD11	1.60	0.83
13:R:98:LEU:HD22	27:5:57:VAL:HG11	1.60	0.83
33:b:137:ARG:HA	33:b:140:HIS:HB3	1.60	0.83
1:A:2010:G:H5''	18:W:42:ARG:HB2	1.59	0.83
2:B:33:G:H4'	6:G:2:PRO:HD3	1.61	0.83
7:H:26:VAL:HG11	7:H:76:VAL:HG22	1.59	0.83
32:a:703:G:H4'	32:a:704:A:H5'	1.61	0.83
38:g:40:ALA:HB1	40:i:41:VAL:HG11	1.58	0.83
38:g:78:ARG:HG3	38:g:80:VAL:HG23	1.58	0.83
43:l:117:ARG:HG3	43:l:122:THR:HB	1.59	0.83
24:2:13:ALA:HA	24:2:16:LEU:HD12	1.60	0.83
38:g:50:ILE:HD11	38:g:58:PRO:HB3	1.60	0.83
54:C:74:VAL:HG21	54:C:153:ILE:HG23	1.59	0.83
1:A:652(C):A:H2'	1:A:652(D):G:H8	1.44	0.83
12:Q:136:ALA:HA	12:Q:139:GLU:HB2	1.60	0.83
32:a:103:C:H2'	32:a:104:G:H5''	1.58	0.83
32:a:143:A:H2	32:a:220:G:N1	1.76	0.83
37:f:25:ILE:HA	37:f:28:ARG:HD2	1.58	0.83
41:j:82:ILE:HA	41:j:85:LEU:HD12	1.58	0.83
1:A:301:G:H5'	1:A:334:C:H2'	1.58	0.83
55:z:51:U:H3	55:z:63:G:H1	0.84	0.83
1:A:1064:C:H3'	1:A:1065:U:H5''	1.58	0.83
32:a:66:G:O6	32:a:97:G:C2	2.31	0.83
1:A:2124:G:H4'	54:C:40:THR:HG21	1.60	0.83
3:D:127:VAL:HA	3:D:193:VAL:HG23	1.59	0.83
7:H:8:PRO:HB3	7:H:51:ARG:HD3	1.60	0.83
20:Y:87:LYS:HG3	20:Y:95:LYS:HD2	1.61	0.83
46:o:16:ALA:HB1	46:o:21:ASP:HB3	1.61	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:839:U:H3	1:A:939:G:H1	1.22	0.83
15:T:16:ARG:HH21	15:T:81:PRO:HA	1.42	0.83
34:c:132:ARG:HD2	56:x:25:A:H4'	1.61	0.83
5:F:143:ALA:HA	5:F:146:ALA:HB3	1.60	0.83
32:a:404:U:H2'	32:a:405:U:H6	1.41	0.83
14:S:66:ALA:HB1	14:S:101:LEU:HB2	1.61	0.82
35:d:127:THR:HG22	35:d:132:ARG:HA	1.61	0.82
55:z:14:A:H3'	55:z:15:G:H8	1.44	0.82
1:A:34:C:H41	1:A:447:A:H61	1.24	0.82
1:A:2206:G:H5''	1:A:2208:A:H61	1.43	0.82
32:a:96:U:H3'	32:a:97:G:C5'	2.09	0.82
32:a:376:G:H4'	47:p:5:ARG:HD2	1.60	0.82
9:N:67:LEU:HA	9:N:87:LEU:HD22	1.59	0.82
1:A:1070:A:OP2	1:A:1073:A:N6	2.12	0.82
7:H:96:ALA:HB2	7:H:105:LEU:HD13	1.60	0.82
8:I:68:LEU:HD11	8:I:72:LEU:HD12	1.62	0.82
28:6:40:CYS:HB3	28:6:43:CYS:HB2	1.61	0.82
32:a:64:G:H3'	32:a:71:C:C2	2.13	0.82
20:Y:28:LYS:HB2	20:Y:38:ILE:O	1.79	0.82
32:a:1160:G:H1	32:a:1176:A:H2	1.16	0.82
34:c:152:ILE:HD11	34:c:199:LYS:HD2	1.61	0.82
1:A:2317:C:H3'	1:A:2318:G:H21	1.44	0.82
13:R:104:ARG:HB2	13:R:111:LEU:HD21	1.61	0.82
32:a:954:G:H21	32:a:1227:A:H62	1.27	0.82
36:e:51:VAL:HG21	56:x:24:A:H5'	1.58	0.82
40:i:55:ALA:HB1	40:i:58:HIS:HB2	1.61	0.82
44:m:99:ARG:HB2	44:m:101:GLN:HE22	1.44	0.82
46:o:75:PRO:HA	46:o:78:TYR:HB3	1.62	0.82
21:Z:97:GLU:HA	21:Z:127:LYS:HA	1.62	0.82
4:E:53:PRO:HA	4:E:75:VAL:HA	1.60	0.82
4:E:172:VAL:HG13	4:E:182:LEU:HD11	1.61	0.82
7:H:26:VAL:HG12	7:H:79:VAL:HG21	1.61	0.82
21:Z:69:THR:HA	21:Z:91:LEU:H	1.44	0.82
21:Z:151:HIS:HA	21:Z:170:THR:HA	1.62	0.82
32:a:668:G:H4'	46:o:48:LYS:HB2	1.61	0.82
37:f:16:GLN:HA	37:f:19:LEU:HB3	1.62	0.82
41:j:49:VAL:HG23	45:n:41:ARG:HB2	1.60	0.82
1:A:2176:A:H4'	54:C:221:SER:HB3	1.61	0.81
11:P:126:VAL:HG12	11:P:148:LEU:HD22	1.61	0.81
28:6:10:LEU:HG	28:6:54:ILE:HA	1.61	0.81
47:p:53:VAL:HG13	47:p:79:VAL:HG22	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:q:6:LEU:HD23	48:q:23:VAL:HG11	1.62	0.81
2:B:15:A:OP2	2:B:69:G:N2	2.13	0.81
20:Y:28:LYS:HD3	20:Y:38:ILE:HG22	1.62	0.81
28:6:11:LEU:HB2	28:6:21:TYR:HB2	1.61	0.81
54:C:46:LYS:HG2	54:C:210:ARG:HH11	1.44	0.81
8:I:65:ALA:HB1	8:I:136:VAL:HG11	1.63	0.81
25:3:8:LEU:HD12	25:3:31:LEU:HA	1.62	0.81
32:a:618:C:H5'	32:a:619:U:H5''	1.61	0.81
1:A:707:G:H1	1:A:724:U:H3	0.86	0.81
13:R:33:ARG:HH22	27:5:58:LEU:HA	1.46	0.81
19:X:65:ARG:HB3	19:X:70:LEU:HD23	1.61	0.81
34:c:36:ASP:HB2	34:c:59:ARG:HH21	1.45	0.81
48:q:56:VAL:HG12	48:q:77:VAL:HB	1.63	0.81
55:z:10:G:O6	55:z:44:G:N2	2.12	0.81
1:A:2113:U:O4	1:A:2170:A:N6	2.14	0.81
32:a:96:U:OP2	51:t:17:ARG:NH2	2.14	0.81
40:i:111:ARG:HG3	45:n:61:TRP:HE1	1.45	0.81
2:B:8:U:H3	2:B:113:G:H1	0.85	0.81
21:Z:180:VAL:HG22	21:Z:183:LEU:HD12	1.60	0.81
32:a:1058:G:H1	32:a:1199:U:H3	1.29	0.81
16:U:74:LEU:HD21	16:U:110:VAL:HG13	1.61	0.81
44:m:5:ALA:HB2	44:m:61:GLU:HG2	1.63	0.81
1:A:2099:U:H3	1:A:2190:G:H1	1.25	0.81
17:V:52:VAL:HG21	17:V:55:ALA:HB3	1.62	0.81
54:C:119:VAL:HB	54:C:123:VAL:HG23	1.61	0.81
1:A:2756:U:H1'	1:A:2757:A:H5''	1.61	0.81
32:a:656:C:O2'	46:o:28:GLN:NE2	2.14	0.81
5:F:129:PHE:HB3	5:F:132:VAL:HG22	1.61	0.81
22:0:68:GLU:HB3	22:0:80:HIS:HB2	1.63	0.81
20:Y:13:VAL:HG12	20:Y:74:PRO:HA	1.63	0.80
40:i:21:PRO:HA	40:i:59:PHE:HA	1.60	0.80
32:a:552:U:H2'	32:a:553:A:H8	1.45	0.80
35:d:155:LEU:HD21	35:d:157:LEU:HB3	1.61	0.80
1:A:1045:A:H5''	1:A:1046:A:H5'	1.63	0.80
19:X:4:ALA:HB1	19:X:42:ALA:HA	1.63	0.80
32:a:143:A:C2	32:a:220:G:N1	2.47	0.80
32:a:1458:G:OP1	51:t:35:THR:OG1	2.00	0.80
5:F:187:VAL:HG12	11:P:3:LEU:HD12	1.61	0.80
9:N:85:ILE:HG21	9:N:90:MET:HE2	1.63	0.80
44:m:4:ILE:HD11	44:m:60:VAL:HG11	1.63	0.80
1:A:75:G:H1	1:A:111:A:H2	1.30	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:21:ALA:HB3	5:F:22:ALA:HA	1.62	0.80
32:a:838:G:H3'	32:a:840:C:H41	1.45	0.80
44:m:102:ARG:HE	44:m:104:ARG:HB3	1.46	0.80
2:B:74:U:H1'	21:Z:34:ASN:HD21	1.45	0.80
21:Z:75:ASN:HD22	21:Z:85:HIS:HB3	1.44	0.80
54:C:47:LEU:HD11	54:C:171:ILE:HB	1.62	0.80
1:A:1773:A:H2'	1:A:1774:C:H5'	1.64	0.80
32:a:1086:U:H3	32:a:1099:G:H22	1.29	0.80
50:s:45:VAL:HA	50:s:62:ILE:HG22	1.64	0.80
3:D:165:ILE:HA	3:D:175:LEU:HD23	1.63	0.79
7:H:11:VAL:HG21	7:H:50:VAL:HG23	1.63	0.79
34:c:20:SER:HB2	34:c:40:ARG:HH21	1.47	0.79
38:g:76:ARG:HD2	38:g:89:MET:HG3	1.61	0.79
53:y:50:U:H3	53:y:64:G:H1	0.84	0.79
1:A:2320:A:H4'	1:A:2321:G:H5'	1.64	0.79
32:a:103:C:HO2'	32:a:174:C:HO2'	1.14	0.79
51:t:53:LEU:HD13	51:t:100:ILE:H	1.47	0.79
1:A:305:U:H3	1:A:312:G:H1	1.30	0.79
30:8:14:VAL:HG22	30:8:24:ALA:HB2	1.65	0.79
32:a:1327:C:H5''	52:u:20:LYS:HB2	1.63	0.79
39:h:38:ILE:HD12	39:h:41:ARG:HH21	1.47	0.79
50:s:20:LEU:HA	50:s:23:ASN:HD22	1.48	0.79
1:A:2393:A:N6	1:A:2422:A:H61	1.77	0.79
2:B:43:C:OP1	26:4:2:LYS:N	2.15	0.79
8:I:5:LEU:HD11	8:I:19:VAL:HG22	1.65	0.79
32:a:101:A:H2'	32:a:152:A:H5''	1.63	0.79
1:A:297:C:H5''	20:Y:87:LYS:HG2	1.63	0.79
5:F:178:PRO:HB2	5:F:201:VAL:HG21	1.63	0.79
8:I:9:LEU:HB2	8:I:12:LEU:HB2	1.62	0.79
37:f:5:GLU:HB3	37:f:62:TRP:HE1	1.48	0.79
42:k:21:ILE:HB	42:k:84:VAL:HG22	1.64	0.79
56:x:26:C:O2'	56:x:27:C:O4'	1.99	0.79
1:A:1277:G:O2'	13:R:24:GLN:OE1	2.00	0.79
54:C:212:VAL:HG21	54:C:226:PRO:HB3	1.64	0.79
32:a:102:G:O4'	32:a:151:A:O2'	2.00	0.79
36:e:33:VAL:HG21	36:e:109:ILE:HA	1.62	0.79
1:A:1322:A:N1	1:A:1333:C:O2'	2.16	0.79
1:A:1528(B):A:H61	1:A:1541:G:H1'	1.48	0.79
7:H:101:ARG:HG2	7:H:117:PRO:HD2	1.65	0.79
32:a:66:G:OP1	32:a:198:G:N2	2.15	0.79
32:a:96:U:H3'	32:a:97:G:H5'	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:g:57:GLU:HG3	38:g:60:LYS:H	1.47	0.79
32:a:1060:C:H2'	32:a:1061:G:H8	1.48	0.79
1:A:2883:A:H5''	1:A:2884:U:H5'	1.66	0.78
32:a:104:G:H2'	32:a:105:G:H4'	1.65	0.78
39:h:19:VAL:HG23	39:h:21:LYS:HD3	1.65	0.78
1:A:2197:U:O4	1:A:2224:G:O2'	2.01	0.78
4:E:47:VAL:HG11	4:E:86:PRO:HD2	1.65	0.78
32:a:93:G:O2'	32:a:102:G:OP2	2.01	0.78
6:G:64:THR:HB	6:G:94:LEU:HD21	1.64	0.78
6:G:69:ALA:N	6:G:91:ARG:O	2.14	0.78
9:N:51:PHE:HD1	9:N:119:ARG:HG3	1.49	0.78
12:Q:59:ARG:HG2	21:Z:180:VAL:HB	1.64	0.78
24:2:9:GLN:HE22	24:2:56:GLN:HB3	1.47	0.78
1:A:2169:A:H4'	54:C:129:ARG:HH12	1.49	0.78
6:G:19:LEU:HD13	6:G:32:PRO:HD2	1.64	0.78
23:1:86:SER:OG	23:1:89:GLU:OE1	2.02	0.78
32:a:1291:G:H4'	40:i:39:GLY:HA3	1.65	0.78
53:y:8:U:O2	53:y:14:A:N7	2.16	0.78
1:A:1087:G:H1'	1:A:1089:G:H4'	1.66	0.78
1:A:1860:G:H5''	54:C:205:LYS:HA	1.63	0.78
17:V:2:PHE:N	17:V:41:GLY:O	2.14	0.78
32:a:65:U:P	32:a:71:C:C2	2.77	0.78
32:a:407:G:H5''	35:d:115:ARG:HG2	1.66	0.78
39:h:51:VAL:HG21	39:h:60:ARG:HG3	1.64	0.78
54:C:68:LEU:HG	54:C:159:GLY:HA2	1.66	0.78
32:a:67:C:N4	32:a:103:C:N3	2.32	0.78
32:a:967:5MC:H3'	32:a:968:A:H2'	1.65	0.78
32:a:1260:C:O2	32:a:1275:A:N6	2.16	0.78
1:A:1507:A:O2'	1:A:1508:A:O5'	2.00	0.78
1:A:2134:A:N6	1:A:2156:G:O2'	2.17	0.78
4:E:134:ILE:HA	4:E:137:HIS:HD2	1.46	0.78
23:1:73:LEU:HD11	23:1:98:LEU:HD21	1.66	0.78
32:a:68:G:N1	32:a:171:A:N6	2.32	0.78
32:a:981:U:OP2	32:a:982:U:O2'	2.01	0.78
33:b:58:ILE:HG22	33:b:221:LEU:HD12	1.65	0.78
20:Y:5:MET:HE1	20:Y:35:TYR:HA	1.65	0.78
32:a:995:C:H1'	45:n:4:LYS:HE2	1.66	0.78
51:t:41:ILE:HG23	51:t:91:LEU:HD11	1.66	0.78
1:A:885:C:O2	1:A:890:A:N6	2.16	0.77
1:A:1509(B):A:H3'	1:A:1509(C):A:H8	1.48	0.77
1:A:2124:G:H5''	54:C:70:LYS:HE3	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:0:47:PRO:HB3	22:0:59:LEU:HD22	1.64	0.77
1:A:2134:A:O4'	1:A:2157:G:O2'	2.03	0.77
1:A:2865:U:OP2	15:T:119:LYS:NZ	2.16	0.77
1:A:2474:C:OP2	1:A:2475:C:N4	2.17	0.77
9:N:34:LEU:HD23	9:N:107:LEU:HD21	1.65	0.77
17:V:57:VAL:HG12	17:V:99:ILE:HG12	1.65	0.77
18:W:7:ALA:HB3	18:W:103:ILE:HB	1.65	0.77
32:a:66:G:OP2	32:a:199:G:O2'	1.99	0.77
32:a:928:G:O2'	32:a:1534:A:OP2	2.03	0.77
54:C:10:LEU:HB3	54:C:220:PRO:HD3	1.66	0.77
9:N:19:GLU:HG3	9:N:59:LYS:HB3	1.66	0.77
1:A:80:G:H5'	1:A:346:A:H1'	1.66	0.77
1:A:603:A:H4'	1:A:604:G:H5'	1.64	0.77
1:A:1940:U:O2	1:A:1942:5MC:N4	2.17	0.77
22:0:8:GLY:HA2	53:y:2:G:H5''	1.67	0.77
32:a:246:A:N1	32:a:278:G:O2'	2.17	0.77
32:a:453:A:N6	32:a:479:C:O2	2.18	0.77
1:A:2316:C:O2'	6:G:128:ARG:NH2	2.15	0.77
33:b:36:ARG:H	33:b:41:ILE:HG12	1.49	0.77
34:c:47:LEU:HD13	34:c:68:VAL:HG11	1.67	0.77
1:A:699:A:N3	1:A:1633:G:O2'	2.17	0.77
1:A:1651:G:H5'	13:R:39:PRO:HG2	1.67	0.77
6:G:126:ASP:HB3	6:G:130:ASN:HB2	1.65	0.77
32:a:738:C:H5''	37:f:69:GLU:HB2	1.66	0.77
34:c:152:ILE:HG22	34:c:167:TRP:HB2	1.66	0.77
49:r:45:SER:N	49:r:49:LYS:O	2.17	0.77
55:z:8:U:O2'	55:z:21:A:N1	2.16	0.77
32:a:413:G:H1'	32:a:428:G:H21	1.48	0.77
32:a:1505:G:H4'	32:a:1506:U:H5''	1.67	0.77
51:t:19:SER:O	51:t:23:ARG:N	2.18	0.77
54:C:32:LEU:HD13	54:C:220:PRO:HG2	1.67	0.77
55:z:51:U:O2	55:z:63:G:N2	2.16	0.77
1:A:411:G:OP2	1:A:2406:U:O2'	2.03	0.77
21:Z:47:VAL:O	21:Z:51:ALA:N	2.18	0.77
32:a:1005:A:O3'	32:a:1037:C:O2'	2.02	0.77
32:a:1321:C:OP2	32:a:1322:C:O2'	2.01	0.77
46:o:44:LYS:O	46:o:47:LYS:NZ	2.17	0.77
5:F:101:LEU:O	5:F:106:ARG:NH1	2.17	0.77
11:P:2:LYS:NZ	11:P:4:SER:OG	2.18	0.77
40:i:86:VAL:HG13	40:i:90:PRO:HA	1.65	0.77
43:l:60:LEU:HD11	43:l:85:ILE:HD11	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:z:18:G:O2'	55:z:57:G:O6	2.03	0.77
1:A:1063:G:N2	1:A:1076:C:O2'	2.18	0.76
1:A:2416:C:H5''	11:P:65:ARG:HE	1.49	0.76
33:b:118:LEU:HD12	33:b:142:LEU:HB2	1.65	0.76
38:g:73:MET:HE1	38:g:90:GLU:HG3	1.66	0.76
54:C:185:LEU:HA	54:C:188:ASN:HB2	1.65	0.76
1:A:788:A:OP1	1:A:791:C:N4	2.18	0.76
1:A:2124:G:O2'	54:C:217:THR:OG1	2.03	0.76
2:B:92:C:H2'	2:B:93:G:H8	1.50	0.76
15:T:76:PHE:HB3	15:T:83:ILE:HD11	1.66	0.76
32:a:406:G:O3'	35:d:3:ARG:NH2	2.17	0.76
1:A:380:U:H5'	23:1:18:ILE:HD12	1.66	0.76
1:A:1557:C:OP2	1:A:1558:A:O2'	2.03	0.76
1:A:2100:G:H1	1:A:2189:U:H3	0.83	0.76
1:A:2656:U:O2	1:A:2665:A:N7	2.18	0.76
8:I:12:LEU:HD11	8:I:25:TYR:HE2	1.50	0.76
32:a:1315:U:O2'	32:a:1360:A:N3	2.18	0.76
36:e:40:ARG:HE	36:e:68:GLU:HB3	1.49	0.76
37:f:48:LEU:N	37:f:56:PRO:O	2.19	0.76
39:h:116:LYS:HD3	39:h:127:LEU:HD23	1.67	0.76
40:i:8:GLY:HA3	40:i:15:ALA:HB3	1.65	0.76
32:a:1250:A:H4'	40:i:67:GLY:HA2	1.67	0.76
35:d:159:ARG:O	35:d:163:GLU:N	2.18	0.76
1:A:1365:A:O2'	23:1:11:ARG:NH2	2.19	0.76
21:Z:146:ILE:HA	21:Z:174:VAL:HG12	1.66	0.76
32:a:1338:G:N3	53:y:41:C:O2'	2.18	0.76
33:b:34:ALA:O	33:b:41:ILE:N	2.17	0.76
48:q:66:SER:O	48:q:70:ARG:NH1	2.16	0.76
1:A:1600:C:OP1	19:X:58:HIS:NE2	2.18	0.76
1:A:1818:U:OP2	3:D:157:ARG:NE	2.18	0.76
39:h:103:VAL:HG21	39:h:110:ALA:HB2	1.68	0.76
1:A:651:G:OP1	30:8:19:SER:N	2.17	0.76
3:D:21:PHE:HB3	3:D:24:ILE:HD12	1.66	0.76
32:a:356:A:N3	32:a:368:U:O2'	2.19	0.76
32:a:708:C:H2'	32:a:709:G:H8	1.51	0.76
1:A:397:G:O2'	1:A:2230:G:N2	2.18	0.76
1:A:793:A:OP2	1:A:2071:A:O2'	2.03	0.76
1:A:1791:A:H5'	3:D:206:LEU:HD12	1.68	0.76
13:R:38:VAL:HG22	13:R:112:ALA:HB2	1.67	0.76
14:S:104:GLY:HA2	14:S:107:GLU:HB2	1.67	0.76
32:a:152:A:OP2	32:a:153:C:N4	2.19	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:b:47:THR:HG22	33:b:51:LEU:HD11	1.66	0.76
10:O:107:ARG:HG3	10:O:115:VAL:HG21	1.67	0.76
32:a:501:C:OP1	43:l:117:ARG:NH2	2.18	0.76
32:a:542:G:O3'	35:d:14:ARG:NH2	2.18	0.76
44:m:3:ARG:HG3	44:m:8:GLU:HG3	1.67	0.76
1:A:1000:A:OP2	1:A:1154:G:N1	2.17	0.76
5:F:64:ILE:HD11	5:F:75:HIS:HB2	1.67	0.76
6:G:98:ARG:NH1	26:4:1:MET:SD	2.59	0.76
43:l:102:ARG:HD2	43:l:107:ALA:HB1	1.66	0.76
16:U:102:GLU:HB3	16:U:105:VAL:HB	1.68	0.75
32:a:216:G:H2'	32:a:217:C:C6	2.21	0.75
32:a:1187:G:OP1	40:i:113:LYS:NZ	2.19	0.75
33:b:69:LEU:HB3	33:b:162:ILE:HG22	1.67	0.75
35:d:22:LYS:N	35:d:26:CYS:SG	2.55	0.75
1:A:483:A:O2'	20:Y:49:VAL:O	2.02	0.75
1:A:2121:G:N2	54:C:168:THR:OG1	2.19	0.75
1:A:2203:U:N3	1:A:2220:G:O6	2.16	0.75
17:V:32:THR:HG22	17:V:60:GLU:HB2	1.66	0.75
24:2:10:LEU:HD21	24:2:59:ARG:HD2	1.68	0.75
33:b:137:ARG:O	33:b:141:GLU:N	2.17	0.75
37:f:8:ILE:HD13	37:f:26:ILE:HD13	1.66	0.75
54:C:173:ALA:HB3	54:C:192:PHE:HE1	1.50	0.75
1:A:1057:A:N6	1:A:1087:G:OP1	2.18	0.75
1:A:1507:A:O2'	1:A:1508:A:O4'	2.04	0.75
7:H:9:ILE:HD11	7:H:69:ARG:HG2	1.69	0.75
12:Q:30:GLY:HA2	12:Q:107:ALA:HB2	1.68	0.75
21:Z:40:ASP:HB3	21:Z:43:GLU:HB2	1.68	0.75
41:j:7:LYS:HG2	41:j:71:LEU:HD12	1.66	0.75
29:7:34:ARG:HG3	29:7:39:ARG:HG3	1.68	0.75
54:C:26:ALA:HB1	54:C:182:PRO:HA	1.68	0.75
1:A:511:U:H4'	1:A:1235:G:H4'	1.68	0.75
1:A:776:G:H4'	1:A:777:A:H5''	1.69	0.75
1:A:1667:G:O2'	1:A:1991:U:O4	2.02	0.75
32:a:107:G:OP1	32:a:325:A:N6	2.19	0.75
33:b:87:ARG:HD2	33:b:234:PRO:HD2	1.68	0.75
54:C:22:ILE:HG21	54:C:190:ARG:HG3	1.69	0.75
1:A:2334:G:H5'	14:S:9:ARG:HG2	1.69	0.75
2:B:31:C:O2	2:B:53:A:N6	2.19	0.75
32:a:62:U:H3	32:a:98:G:HO2'	1.32	0.75
34:c:7:PRO:HG2	34:c:184:TYR:HB2	1.67	0.75
1:A:272(K):U:O2	1:A:272(M):G:N2	2.18	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2808:U:O2	1:A:2892:A:C5	2.40	0.75
28:6:14:THR:O	28:6:17:LYS:NZ	2.16	0.75
32:a:404:U:N3	32:a:498:U:O4	2.19	0.75
1:A:641:C:O2'	1:A:2350:C:OP1	2.05	0.75
1:A:881:G:N2	1:A:895:U:O2	2.19	0.75
1:A:1042:G:H1	1:A:1113:U:H3	1.31	0.75
6:G:5:VAL:HG23	6:G:8:LYS:HB3	1.68	0.75
32:a:1160:G:N1	32:a:1176:A:C2	2.50	0.75
32:a:1295:G:O2'	44:m:14:ARG:NH1	2.20	0.75
32:a:1402:4OC:HM22	32:a:1403:C:H5'	1.69	0.75
1:A:494:G:H4'	18:W:6:ILE:HB	1.68	0.75
1:A:1451:C:H3'	1:A:1452:A:H5'	1.68	0.75
1:A:2576:G:O2'	1:A:2579:C:OP2	2.05	0.75
5:F:154:VAL:HG22	5:F:191:ARG:HB3	1.69	0.75
9:N:40:PRO:HD3	16:U:71:GLN:HE22	1.51	0.75
16:U:17:ILE:HG23	16:U:39:LEU:HD12	1.68	0.75
32:a:430:A:H5''	35:d:7:PRO:HB3	1.69	0.75
32:a:977:A:N6	32:a:1224:G:OP1	2.18	0.75
46:o:54:ARG:HG2	46:o:58:MET:HE2	1.68	0.75
53:y:54:U:O2	53:y:58:A:N7	2.20	0.75
1:A:1153:C:H5'	16:U:76:TYR:HE2	1.52	0.74
1:A:1470:G:N2	1:A:1520:G:OP2	2.20	0.74
1:A:2178:C:O2'	54:C:46:LYS:NZ	2.20	0.74
1:A:2552:2MU:H6'3	1:A:2554:U:H5''	1.66	0.74
1:A:2816:C:O2	1:A:2883:A:O2'	2.05	0.74
32:a:489:C:H2'	32:a:490:G:H8	1.52	0.74
32:a:1228:C:OP2	44:m:108:ARG:NH2	2.20	0.74
32:a:1305:G:O2'	32:a:1331:G:N2	2.19	0.74
33:b:185:ILE:HG13	33:b:199:TYR:HB2	1.67	0.74
32:a:68:G:H5''	32:a:68:G:C4	2.23	0.74
47:p:54:GLU:O	47:p:58:TYR:N	2.19	0.74
51:t:50:GLU:HB2	51:t:99:LEU:HD22	1.68	0.74
53:y:21:A:H61	53:y:46:G:H2'	1.50	0.74
1:A:1607:C:N4	1:A:1622:G:OP2	2.20	0.74
2:B:91:C:OP1	12:Q:17:LEU:N	2.20	0.74
17:V:33:VAL:HG23	17:V:35:LEU:HD11	1.69	0.74
32:a:426:G:OP1	35:d:38:TYR:OH	2.05	0.74
1:A:1479:G:H1	1:A:1512:U:H3	1.34	0.74
2:B:55:U:O2'	6:G:27:ASN:ND2	2.20	0.74
2:B:75:G:H5'	21:Z:36:LYS:HD3	1.69	0.74
3:D:143:HIS:ND1	3:D:194:GLY:O	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:I:1:MET:HE3	8:I:38:LEU:HD12	1.69	0.74
10:O:104:ARG:N	10:O:122:LEU:O	2.20	0.74
32:a:195:A:H4'	51:t:68:LYS:HE3	1.69	0.74
32:a:701:C:OP1	32:a:702:A:O2'	2.05	0.74
32:a:1063:C:OP2	32:a:1064:G:O2'	2.06	0.74
35:d:18:LYS:NZ	35:d:31:CYS:SG	2.61	0.74
44:m:73:GLU:HA	44:m:76:ALA:HB3	1.68	0.74
1:A:524:U:O2'	1:A:556:G:OP1	2.06	0.74
1:A:1153:C:OP1	16:U:92:ARG:NH2	2.20	0.74
13:R:95:THR:HG22	13:R:116:LEU:HD23	1.68	0.74
25:3:15:TYR:O	25:3:20:LYS:NZ	2.21	0.74
1:A:1326:U:HO2'	1:A:2010:G:HO2'	1.33	0.74
1:A:2168:G:N2	1:A:2171:A:O5'	2.20	0.74
4:E:13:ARG:HA	4:E:22:PRO:HA	1.70	0.74
41:j:50:ILE:HD12	45:n:41:ARG:HH12	1.52	0.74
1:A:1860:G:H5'	54:C:205:LYS:HG3	1.69	0.74
1:A:2102:U:O2	1:A:2187:G:N2	2.17	0.74
1:A:2483:C:N3	12:Q:124:LYS:NZ	2.36	0.74
1:A:2748:A:H5''	7:H:4:ILE:HD12	1.70	0.74
8:I:88:ILE:HG22	8:I:90:GLY:H	1.52	0.74
9:N:111:PRO:HA	9:N:114:ARG:HE	1.51	0.74
32:a:278:G:OP2	48:q:92:ARG:NH2	2.19	0.74
32:a:673:G:H2'	32:a:674:G:C8	2.22	0.74
32:a:1291:G:O2'	40:i:38:GLN:OE1	2.06	0.74
1:A:589:C:H2'	1:A:590:A:H8	1.52	0.74
1:A:598:G:O2'	11:P:9:ASN:ND2	2.17	0.74
1:A:1664:A:H61	1:A:1996:C:H42	0.80	0.74
7:H:13:LYS:HB2	7:H:14:GLY:HA2	1.70	0.74
10:O:34:THR:N	10:O:37:ASP:OD2	2.19	0.74
10:O:115:VAL:HG13	10:O:121:VAL:HG21	1.68	0.74
33:b:164:VAL:HB	33:b:186:ALA:HB2	1.70	0.74
35:d:194:LEU:HB3	35:d:196:LEU:HD13	1.69	0.74
52:u:17:THR:O	52:u:22:ARG:NH1	2.19	0.74
1:A:1125:G:OP2	1:A:1126:A:O2'	2.06	0.74
1:A:1385:G:O2'	1:A:1396:U:O2	2.05	0.74
1:A:2371:G:O2'	28:6:46:HIS:ND1	2.19	0.74
12:Q:108:GLY:HA3	21:Z:116:VAL:HG13	1.70	0.74
32:a:28:G:O2'	32:a:296:U:OP1	2.06	0.74
32:a:622:A:H2'	32:a:623:C:H5'	1.70	0.74
51:t:17:ARG:HG2	51:t:20:LEU:HD12	1.69	0.74
54:C:28:LEU:HA	54:C:31:GLU:HG2	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:C:75:LEU:N	54:C:112:ALA:O	2.15	0.74
1:A:2145:C:O2'	1:A:2147:G:N2	2.20	0.74
1:A:2646:C:OP2	1:A:2732:G:O2'	2.05	0.74
9:N:128:HIS:HE1	9:N:135:PRO:HG2	1.51	0.74
11:P:19:VAL:HB	11:P:31:ALA:HA	1.70	0.74
32:a:642:A:N3	39:h:113:SER:OG	2.20	0.74
32:a:1073:U:O2	33:b:104:ASN:ND2	2.20	0.74
47:p:40:ASP:HB3	47:p:48:TRP:HB2	1.70	0.74
54:C:153:ILE:HA	54:C:156:ILE:HD12	1.68	0.74
54:C:185:LEU:HD23	54:C:188:ASN:HD22	1.52	0.74
1:A:1266:G:O5'	18:W:15:ARG:NH2	2.20	0.73
32:a:34:C:H2'	32:a:35:G:H8	1.51	0.73
32:a:68:G:H5'	32:a:76:C:C2	2.22	0.73
32:a:93:G:H1'	32:a:101:A:C2	2.22	0.73
32:a:1130:A:H2'	32:a:1131:G:H8	1.52	0.73
39:h:26:VAL:HG22	39:h:59:LEU:HB2	1.70	0.73
56:x:12:A:O2'	56:x:13:A:O4'	2.04	0.73
1:A:1084:A:H2'	1:A:1105:U:H4'	1.70	0.73
2:B:75:G:O2'	21:Z:10:ARG:NH2	2.21	0.73
3:D:85:ASP:OD2	3:D:88:ARG:NH1	2.21	0.73
7:H:24:VAL:HG22	7:H:35:VAL:HB	1.69	0.73
35:d:31:CYS:HB3	35:d:34:GLU:HG2	1.69	0.73
1:A:2029:G:N1	1:A:2033:A:OP2	2.19	0.73
1:A:2749:A:OP1	7:H:3:ARG:NH2	2.21	0.73
21:Z:95:PRO:HB3	21:Z:129:SER:HA	1.70	0.73
21:Z:120:ILE:HG12	21:Z:172:ALA:HA	1.70	0.73
32:a:953:G:N7	44:m:104:ARG:NH2	2.36	0.73
32:a:976:G:OP2	32:a:1358:U:O2'	2.06	0.73
36:e:81:GLU:HG2	36:e:90:VAL:HG13	1.69	0.73
41:j:42:THR:HG23	41:j:68:HIS:HA	1.68	0.73
48:q:20:THR:HA	48:q:43:LEU:HD23	1.71	0.73
54:C:175:VAL:HB	54:C:188:ASN:HB3	1.69	0.73
1:A:301:G:OP2	20:Y:84:ARG:NH2	2.20	0.73
1:A:414:C:O2	1:A:1864:U:O2'	2.05	0.73
1:A:2168:G:H2'	1:A:2169:A:H3'	1.69	0.73
1:A:2468:G:O2'	1:A:2481:G:N2	2.21	0.73
1:A:2667:C:H1'	7:H:109:PHE:HD1	1.52	0.73
4:E:37:ARG:N	4:E:46:ALA:O	2.21	0.73
20:Y:76:CYS:HB2	20:Y:83:THR:HG21	1.69	0.73
32:a:64:G:H4'	32:a:71:C:C4	2.22	0.73
32:a:100:C:O2'	32:a:102:G:OP1	2.07	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:t:15:ARG:NH1	51:t:18:GLN:OE1	2.20	0.73
1:A:2313:C:O4'	6:G:40:ASN:ND2	2.20	0.73
32:a:66:G:H5''	32:a:73:G:C8	2.23	0.73
32:a:961:U:OP2	32:a:1223:C:O2'	2.06	0.73
36:e:7:GLU:OE1	36:e:37:ARG:NE	2.20	0.73
39:h:51:VAL:O	39:h:58:TYR:N	2.18	0.73
53:y:15:G:C6	53:y:48:C:O2	2.42	0.73
1:A:807:U:OP2	11:P:41:ARG:NH2	2.21	0.73
32:a:72:C:O2	32:a:200:G:H5''	1.89	0.73
32:a:102:G:H1'	32:a:151:A:H1'	1.69	0.73
32:a:737:A:H2'	32:a:738:C:H6	1.52	0.73
32:a:947:G:O3'	44:m:109:THR:OG1	2.06	0.73
33:b:33:TYR:HB2	33:b:43:ASP:HA	1.70	0.73
41:j:39:PRO:HA	41:j:70:ARG:HD3	1.69	0.73
54:C:41:VAL:HG23	54:C:178:ALA:HA	1.70	0.73
1:A:2473:U:OP1	1:A:2475:C:N4	2.21	0.73
7:H:107:VAL:HG21	7:H:152:ARG:HB2	1.70	0.73
11:P:138:LEU:HD23	11:P:145:PRO:HB3	1.70	0.73
12:Q:70:PRO:HA	12:Q:95:ALA:HB2	1.69	0.73
20:Y:9:LYS:NZ	20:Y:28:LYS:O	2.21	0.73
32:a:662:G:H1	32:a:743:U:H3	1.36	0.73
41:j:29:ARG:HB2	41:j:84:GLN:HE22	1.52	0.73
49:r:45:SER:OG	49:r:49:LYS:N	2.21	0.73
54:C:40:THR:HA	54:C:177:LYS:HA	1.69	0.73
10:O:97:ARG:NH1	32:a:339:C:OP2	2.22	0.73
54:C:116:THR:HG22	54:C:147:PHE:HA	1.71	0.73
1:A:1827:C:H2'	1:A:1828:G:O4'	1.89	0.73
1:A:1865:G:N2	1:A:1877:A:OP2	2.21	0.73
1:A:2231:C:OP1	23:1:43:TYR:N	2.21	0.73
15:T:125:ARG:NH1	32:a:1442(C):A:O3'	2.22	0.73
32:a:593:G:N2	32:a:646:U:O2	2.20	0.73
32:a:957:U:H2'	32:a:958:A:H5''	1.71	0.73
32:a:1372:U:OP1	40:i:72:GLY:N	2.20	0.73
54:C:22:ILE:HD13	54:C:190:ARG:HG2	1.69	0.73
1:A:2251:OMG:HM22	1:A:2252:G:H5'	1.71	0.73
1:A:2467:C:O2	12:Q:124:LYS:NZ	2.22	0.73
8:I:27:ARG:HA	8:I:31:LEU:HD13	1.69	0.73
12:Q:27:VAL:HG11	12:Q:134:ARG:HB2	1.70	0.73
13:R:55:ALA:HB1	13:R:84:ALA:HB2	1.70	0.73
31:9:1:MET:HE2	31:9:33:LYS:HE3	1.71	0.73
32:a:148:G:H2'	32:a:149:A:C8	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:890:G:O2'	32:a:906:G:O6	2.04	0.73
51:t:38:LYS:O	51:t:42:GLN:N	2.22	0.73
1:A:177:G:OP2	1:A:177:G:N2	2.20	0.72
1:A:249:C:O2	30:8:12:LYS:NZ	2.21	0.72
1:A:605:C:OP1	5:F:104:LYS:NZ	2.22	0.72
1:A:652(A):C:O2'	1:A:652(B):A:O4'	2.05	0.72
1:A:784:A:O4'	3:D:227:ASN:ND2	2.22	0.72
1:A:1530:C:O2'	1:A:1531:C:O5'	2.06	0.72
1:A:2347:C:O2'	28:6:21:TYR:OH	2.07	0.72
21:Z:7:ALA:HB3	21:Z:61:LEU:HD13	1.70	0.72
24:2:10:LEU:HD21	24:2:59:ARG:HB3	1.71	0.72
32:a:93:G:C5'	32:a:100:C:H2'	2.19	0.72
32:a:352:C:O2'	32:a:354:G:OP1	2.04	0.72
40:i:16:ARG:HB2	40:i:64:THR:HG22	1.70	0.72
1:A:850:C:O2'	25:3:46:ASN:OD1	2.06	0.72
1:A:2223:G:OP1	3:D:172:TYR:OH	2.07	0.72
2:B:77:U:OP1	21:Z:19:ARG:NH2	2.23	0.72
22:0:33:ALA:N	22:0:64:ASP:OD1	2.19	0.72
37:f:98:LEU:HD23	49:r:30:ASP:HA	1.71	0.72
55:z:21:A:O4'	55:z:48:C:N4	2.21	0.72
1:A:574:C:N3	4:E:145:LYS:NZ	2.36	0.72
1:A:2021:C:OP1	27:5:12:SER:OG	2.06	0.72
1:A:2130:U:H5''	54:C:5:LYS:HD3	1.69	0.72
1:A:2141:G:N2	1:A:2150:U:O2	2.19	0.72
1:A:2731:G:OP1	4:E:169:ASN:ND2	2.22	0.72
1:A:2848:G:O2'	1:A:2867:G:N2	2.22	0.72
2:B:8:U:O4	2:B:113:G:O6	2.07	0.72
7:H:152:ARG:H	7:H:162:ILE:HD12	1.52	0.72
32:a:97:G:H5''	32:a:103:C:C5	2.24	0.72
32:a:99:U:H3'	51:t:14:LYS:C	2.14	0.72
32:a:143:A:N1	32:a:220:G:O6	2.22	0.72
32:a:509:A:O2'	32:a:510:A:O4'	2.07	0.72
34:c:58:GLU:HB2	34:c:65:ALA:HB3	1.70	0.72
54:C:25:ALA:O	54:C:29:VAL:N	2.22	0.72
1:A:956:G:OP2	12:Q:87:LYS:NZ	2.23	0.72
10:O:68:GLU:HB3	10:O:78:ARG:HH11	1.54	0.72
15:T:54:ARG:HA	15:T:59:THR:HG23	1.69	0.72
21:Z:30:ASN:OD1	21:Z:33:LEU:N	2.21	0.72
32:a:674:G:O6	32:a:716:A:N1	2.22	0.72
32:a:1189:C:H5''	34:c:5:ILE:HD12	1.71	0.72
54:C:171:ILE:HD13	54:C:196:LEU:HD22	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:10:G:O2'	1:A:2801(B):A:N6	2.22	0.72
1:A:1652:A:N6	13:R:11:ASN:OD1	2.23	0.72
1:A:2033:A:O2'	1:A:2035:G:OP2	2.04	0.72
1:A:2788:C:OP1	4:E:61:ARG:NH2	2.23	0.72
32:a:945:G:O6	32:a:1236:A:N1	2.22	0.72
35:d:23:GLY:N	35:d:26:CYS:SG	2.61	0.72
35:d:108:LEU:HD21	35:d:176:LEU:HD13	1.72	0.72
38:g:113:GLU:HG3	38:g:118:VAL:HG12	1.72	0.72
54:C:4:GLY:O	54:C:8:ARG:N	2.21	0.72
1:A:706:A:H61	1:A:725:G:H1'	1.54	0.72
1:A:1010:A:OP1	16:U:66:ASN:ND2	2.20	0.72
18:W:35:ILE:O	18:W:39:THR:OG1	2.06	0.72
32:a:452:A:OP1	47:p:43:LYS:NZ	2.21	0.72
1:A:715:G:OP1	46:o:64:ARG:NH2	2.23	0.72
36:e:10:MET:HB3	36:e:13:ILE:HD11	1.72	0.72
37:f:27:GLN:HA	37:f:30:LEU:HD12	1.70	0.72
55:z:9:A:H1'	55:z:45:U:O2	1.89	0.72
1:A:478:A:N6	1:A:500:G:O2'	2.21	0.72
1:A:729:G:O2'	1:A:763:G:H4'	1.90	0.72
1:A:1212:G:N2	1:A:1236:G:O2'	2.22	0.72
1:A:1428:C:N4	1:A:1570:A:OP2	2.20	0.72
1:A:2327:A:H2'	1:A:2328:A:C8	2.23	0.72
1:A:2394:C:N3	55:z:76:A:O2'	2.22	0.72
5:F:133:ASN:N	5:F:138:GLU:OE1	2.20	0.72
5:F:162:LEU:O	5:F:166:ALA:CB	2.37	0.72
12:Q:26:TYR:O	12:Q:67:ARG:NH1	2.17	0.72
32:a:320:C:O2'	32:a:1435:G:O2'	2.07	0.72
32:a:737:A:H2'	32:a:738:C:C6	2.24	0.72
32:a:1540:U:O2'	49:r:54:ARG:NH1	2.23	0.72
47:p:19:ILE:N	47:p:37:GLY:O	2.23	0.72
51:t:11:SER:HA	51:t:14:LYS:HB3	1.72	0.72
1:A:1496:A:O2'	1:A:1577:C:O2'	2.07	0.72
1:A:2166:G:O6	1:A:2171:A:O2'	2.08	0.72
2:B:115:G:O2'	14:S:50:SER:OG	2.06	0.72
14:S:74:ALA:HB2	14:S:105:ALA:HA	1.72	0.72
15:T:27:THR:HB	15:T:90:GLN:HB3	1.72	0.72
15:T:28:VAL:HG22	15:T:88:ILE:HD13	1.70	0.72
32:a:266:G:H3'	48:q:67:LYS:HB2	1.71	0.72
32:a:662:G:H2'	32:a:663:A:C8	2.24	0.72
32:a:1287:A:H2	32:a:1353:G:H1'	1.55	0.72
1:A:467:G:OP2	29:7:34:ARG:NH2	2.23	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2667:C:N3	7:H:110:SER:OG	2.22	0.72
23:1:80:LEU:HB3	23:1:82:LEU:HD21	1.71	0.72
32:a:1259:C:O2'	32:a:1283:G:N3	2.23	0.72
7:H:137:ASP:OD1	7:H:138:LYS:N	2.23	0.71
17:V:12:TYR:HE2	17:V:22:VAL:HG12	1.55	0.71
32:a:258:G:H2'	32:a:259:G:H8	1.55	0.71
32:a:429:U:H4'	32:a:430:A:H5'	1.70	0.71
35:d:143:GLY:N	35:d:185:PHE:O	2.19	0.71
37:f:36:ARG:NH2	37:f:66:GLU:OE1	2.23	0.71
43:l:103:GLY:N	43:l:107:ALA:O	2.23	0.71
45:n:5:ALA:O	45:n:9:LYS:N	2.23	0.71
1:A:694:U:OP1	3:D:59:LYS:NZ	2.23	0.71
3:D:26:LYS:NZ	3:D:28:GLU:O	2.21	0.71
7:H:86:GLU:OE2	7:H:132:ARG:NH2	2.23	0.71
19:X:14:SER:H	19:X:17:ALA:HB3	1.54	0.71
32:a:254:G:OP1	48:q:68:ARG:N	2.22	0.71
32:a:603:U:H2'	32:a:604:G:C8	2.25	0.71
34:c:129:ALA:HB3	34:c:132:ARG:HB2	1.70	0.71
55:z:18:G:H21	55:z:57:G:H3'	1.55	0.71
55:z:34:G:O6	56:x:12:A:N1	2.22	0.71
55:z:52:G:N1	55:z:62:C:N3	2.32	0.71
55:z:58:A:O2'	55:z:61:C:N4	2.23	0.71
1:A:814:C:O2'	1:A:1225:G:N2	2.22	0.71
1:A:1426:G:OP2	1:A:1427:A:O2'	2.06	0.71
1:A:1768:U:O2	1:A:1984:G:O6	2.09	0.71
1:A:2178:C:OP1	54:C:210:ARG:NH1	2.23	0.71
1:A:2781:A:H5''	1:A:2782:G:H5'	1.72	0.71
2:B:8:U:O5'	14:S:15:ARG:NH1	2.23	0.71
3:D:95:LEU:HD11	3:D:105:ILE:HD13	1.73	0.71
9:N:71:ILE:HG21	9:N:84:LYS:HB3	1.72	0.71
10:O:64:ARG:HH12	15:T:70:VAL:HG21	1.55	0.71
12:Q:67:ARG:NH1	12:Q:105:GLU:OE2	2.23	0.71
32:a:69:G:N2	32:a:96:U:O4	2.19	0.71
32:a:130:A:O2'	32:a:131:C:O5'	2.07	0.71
32:a:411:A:OP1	35:d:30:LYS:NZ	2.23	0.71
32:a:1005:A:OP2	32:a:1024:G:N2	2.24	0.71
35:d:156:GLU:O	35:d:160:GLN:N	2.22	0.71
38:g:72:ARG:N	38:g:142:GLU:OE2	2.21	0.71
39:h:4:ASP:OD2	39:h:85:ARG:NH1	2.23	0.71
47:p:59:TRP:HA	47:p:62:VAL:HG12	1.72	0.71
54:C:191:ALA:HA	54:C:194:ARG:HG2	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:181:A:H1'	1:A:435:C:H5''	1.72	0.71
1:A:2031:A:N3	1:A:2455:G:O2'	2.22	0.71
1:A:2685:G:OP2	15:T:51:ARG:NH1	2.23	0.71
8:I:65:ALA:O	8:I:69:LYS:CB	2.32	0.71
21:Z:31:ARG:NE	21:Z:94:GLU:OE2	2.23	0.71
32:a:677:U:H3	32:a:713:G:H22	1.36	0.71
32:a:1542:G:N2	56:x:1:U:O5'	2.23	0.71
35:d:10:ARG:HG3	35:d:11:LEU:HD12	1.70	0.71
38:g:16:LEU:HD11	40:i:45:ALA:HB2	1.73	0.71
41:j:64:GLU:HB3	45:n:59:ALA:HB2	1.72	0.71
7:H:101:ARG:NH2	7:H:118:PRO:O	2.22	0.71
17:V:1:MET:HE1	17:V:40:LEU:HB3	1.72	0.71
32:a:67:C:H1'	32:a:172:A:C1'	2.18	0.71
32:a:1025:U:H3	32:a:1036:G:H1	1.38	0.71
33:b:178:ARG:HG3	33:b:196:LEU:HD11	1.71	0.71
34:c:58:GLU:O	34:c:65:ALA:N	2.24	0.71
47:p:14:ASN:OD1	47:p:42:ARG:NH2	2.24	0.71
1:A:307:G:N1	1:A:310:A:OP2	2.20	0.71
1:A:1192:G:OP2	11:P:17:LYS:NZ	2.23	0.71
1:A:1286:A:N1	1:A:1329:U:O2'	2.21	0.71
1:A:2061:G:OP1	5:F:68:LYS:NZ	2.22	0.71
1:A:2111:C:N3	1:A:2145:C:O2'	2.21	0.71
6:G:4:ASP:OD1	6:G:9:ARG:NH2	2.23	0.71
7:H:82:GLY:HA2	7:H:136:ILE:HA	1.73	0.71
34:c:190:ARG:HA	34:c:195:VAL:HA	1.71	0.71
51:t:56:MET:HG3	51:t:84:LEU:HD21	1.72	0.71
1:A:1971:A:OP2	3:D:242:ARG:NH2	2.23	0.71
5:F:132:VAL:HA	5:F:138:GLU:HB3	1.70	0.71
32:a:105:G:N2	32:a:379:C:O3'	2.23	0.71
32:a:122:G:O6	32:a:239:U:O2	2.09	0.71
38:g:74:GLU:O	38:g:89:MET:N	2.21	0.71
38:g:146:GLU:OE2	38:g:149:ARG:NE	2.24	0.71
54:C:33:ALA:HB2	54:C:178:ALA:HB1	1.72	0.71
1:A:840:C:OP2	1:A:932:G:N2	2.17	0.71
1:A:1478:G:O2'	1:A:1558:A:N7	2.22	0.71
1:A:2416:C:OP1	11:P:66:GLY:N	2.20	0.71
1:A:2784:C:H2'	1:A:2785:C:H6	1.56	0.71
4:E:111:ARG:HD2	4:E:160:TYR:HD2	1.55	0.71
12:Q:59:ARG:HH12	21:Z:181:GLU:HG2	1.56	0.71
32:a:98:G:H3'	51:t:14:LYS:CG	2.21	0.71
32:a:261:U:OP2	51:t:79:ARG:NH2	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:368:U:H5'	32:a:369:C:H5'	1.72	0.71
32:a:1178:G:N2	32:a:1181:G:OP2	2.24	0.71
38:g:111:ARG:HH21	38:g:123:GLU:HA	1.56	0.71
40:i:20:ARG:O	40:i:60:ASP:N	2.22	0.71
51:t:100:ILE:HG22	51:t:101:GLY:H	1.55	0.71
1:A:83:G:O2'	1:A:102:G:N2	2.24	0.71
1:A:111:A:O2'	24:2:65:ASN:ND2	2.22	0.71
1:A:1098:A:H3'	1:A:1099:G:H8	1.55	0.71
1:A:1791:A:H3'	1:A:1792:G:H8	1.54	0.71
1:A:2125:G:OP1	54:C:177:LYS:NZ	2.23	0.71
5:F:53:THR:HG22	5:F:56:GLU:HG3	1.71	0.71
8:I:84:GLY:N	8:I:87:LYS:O	2.19	0.71
32:a:93:G:H21	32:a:152:A:H1'	1.55	0.71
32:a:96:U:H2'	32:a:103:C:C2	2.26	0.71
32:a:677:U:O2	32:a:777:A:O2'	2.07	0.71
32:a:714:G:H2'	32:a:715:A:C8	2.26	0.71
32:a:993:G:H2'	32:a:995:C:H41	1.56	0.71
32:a:1125:U:O2'	32:a:1126:U:O5'	2.08	0.71
43:l:102:ARG:HA	43:l:107:ALA:HB1	1.72	0.71
44:m:102:ARG:HD3	44:m:105:THR:H	1.56	0.71
1:A:458:G:N2	1:A:470:A:OP2	2.24	0.71
1:A:918:A:OP2	1:A:2268:A:N6	2.23	0.71
1:A:969:U:H5'	25:3:16:PRO:HA	1.72	0.71
1:A:2182:G:H2'	1:A:2183:C:C6	2.25	0.71
10:O:76:ALA:HB3	15:T:75:ILE:HB	1.73	0.71
44:m:23:TYR:N	44:m:67:GLU:OE2	2.23	0.71
53:y:17(A):C:OP2	53:y:17(B):C:O2'	2.07	0.71
1:A:1084:A:H8	1:A:1085:A:H4'	1.55	0.70
1:A:1266:G:O6	18:W:13:SER:OG	2.07	0.70
1:A:2285:C:N4	28:6:24:GLU:OE2	2.24	0.70
1:A:2824:C:H2'	1:A:2825:C:O4'	1.90	0.70
2:B:31:C:O2'	2:B:53:A:N1	2.21	0.70
32:a:125:U:H3	32:a:236:G:H1	1.39	0.70
49:r:48:GLY:O	49:r:74:ARG:NH2	2.24	0.70
49:r:56:THR:HB	49:r:58:LEU:HD23	1.72	0.70
1:A:1278:A:H2'	1:A:1279:G:H8	1.56	0.70
1:A:1397:U:OP2	1:A:1398:C:N4	2.23	0.70
1:A:1826:G:OP1	3:D:224:ALA:N	2.23	0.70
5:F:40:GLN:HE22	5:F:182:ASN:HB2	1.56	0.70
20:Y:38:ILE:HD11	20:Y:66:PRO:HG3	1.72	0.70
32:a:373:A:N1	32:a:391:G:O2'	2.23	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:b:136:VAL:O	33:b:140:HIS:N	2.22	0.70
39:h:104:ARG:HG3	39:h:107:LEU:HB2	1.71	0.70
44:m:25:ILE:HG13	44:m:66:LEU:HD22	1.73	0.70
1:A:898:C:H2'	1:A:899:A:O4'	1.91	0.70
9:N:56:ASN:N	9:N:125:GLY:O	2.22	0.70
32:a:374:A:N1	32:a:390:C:O2'	2.20	0.70
35:d:166:LYS:NZ	35:d:179:GLU:OE2	2.24	0.70
42:k:48:ILE:HD11	42:k:64:ALA:HA	1.72	0.70
1:A:141:A:O2'	1:A:142(A):A:O4'	2.05	0.70
8:I:43:ASN:O	8:I:47:LEU:N	2.23	0.70
12:Q:56:ARG:HD2	21:Z:183:LEU:HD13	1.72	0.70
17:V:32:THR:HA	17:V:60:GLU:HA	1.73	0.70
32:a:152:A:H3'	32:a:153:C:C5	2.25	0.70
32:a:1074:G:O2'	32:a:1101:A:N1	2.22	0.70
33:b:25:ASN:H	33:b:191:ASP:HA	1.54	0.70
35:d:63:LYS:HD2	35:d:198:VAL:HG22	1.73	0.70
40:i:17:VAL:HA	40:i:63:ILE:HG12	1.73	0.70
41:j:81:THR:O	41:j:85:LEU:N	2.22	0.70
1:A:1165:U:O2	1:A:1184:G:N2	2.24	0.70
1:A:2162:G:O3'	1:A:2172:U:O2'	2.09	0.70
1:A:2683:C:OP1	15:T:53:ARG:NH2	2.22	0.70
1:A:2771:C:H2'	1:A:2772:C:H6	1.57	0.70
8:I:79:ILE:HD12	8:I:144:VAL:HG22	1.72	0.70
10:O:11:ALA:O	10:O:99:PHE:N	2.24	0.70
10:O:23:ARG:NH2	10:O:28:SER:O	2.24	0.70
12:Q:21:THR:HG21	12:Q:101:ARG:HA	1.73	0.70
24:2:25:VAL:HG11	24:2:61:LEU:HD21	1.71	0.70
26:4:58:ARG:HH21	50:s:65:ASN:HA	1.55	0.70
32:a:674:G:H2'	32:a:675:A:H8	1.57	0.70
32:a:1308:U:OP1	44:m:98:VAL:N	2.22	0.70
34:c:35:GLU:HG3	34:c:59:ARG:HH22	1.57	0.70
1:A:483:A:O2'	20:Y:59:GLY:N	2.23	0.70
1:A:1779:U:OP2	1:A:1784:A:N6	2.22	0.70
1:A:1783:A:O2'	1:A:2607:G:O2'	2.10	0.70
1:A:2065:C:H4'	1:A:2251:OMG:HM23	1.73	0.70
1:A:2689:U:H4'	1:A:2690:C:H5'	1.72	0.70
7:H:105:LEU:N	7:H:113:VAL:O	2.22	0.70
32:a:544:G:OP1	35:d:59:ARG:NH2	2.25	0.70
32:a:580:U:H2'	32:a:581:G:O4'	1.90	0.70
32:a:1030(C):C:H2'	32:a:1030(D):G:H5'	1.74	0.70
1:A:1428:C:O2'	1:A:1569:A:OP2	2.07	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2469:A:O3'	12:Q:56:ARG:NH2	2.25	0.70
23:1:51:VAL:HG12	23:1:53:VAL:HG23	1.72	0.70
32:a:297:G:N2	32:a:300:A:OP2	2.23	0.70
32:a:1095:U:OP1	32:a:1108:G:N1	2.20	0.70
32:a:1386:G:H2'	32:a:1387:G:H8	1.54	0.70
42:k:62:GLN:HG3	42:k:97:ALA:HB2	1.72	0.70
1:A:1028:A:OP2	1:A:1126:A:N6	2.23	0.70
18:W:1:MET:HE2	18:W:62:HIS:HB3	1.72	0.70
19:X:34:ALA:O	19:X:77:LYS:NZ	2.24	0.70
26:4:16:CYS:HB3	26:4:20:ASN:H	1.56	0.70
28:6:6:ARG:HA	28:6:26:ASN:HA	1.73	0.70
32:a:1328:C:OP1	52:u:21:TYR:OH	2.07	0.70
35:d:65:ARG:NH1	35:d:72:GLU:OE1	2.24	0.70
41:j:53:PRO:O	45:n:41:ARG:NH2	2.25	0.70
42:k:34:ASP:OD1	42:k:38:ASN:N	2.25	0.70
48:q:6:LEU:HB2	48:q:59:ILE:HD11	1.74	0.70
50:s:53:ASN:OD1	50:s:56:GLN:N	2.22	0.70
55:z:38:A:H3'	55:z:39:U:H5''	1.73	0.70
1:A:406:G:N2	1:A:421:U:O2	2.22	0.70
1:A:602:G:O2'	1:A:655:A:N6	2.24	0.70
1:A:1227:G:OP2	16:U:16:LYS:NZ	2.24	0.70
1:A:1754:C:OP2	15:T:113:LYS:NZ	2.24	0.70
5:F:132:VAL:HG21	5:F:163:VAL:HG22	1.73	0.70
6:G:106:LEU:HD12	6:G:110:ALA:HB3	1.73	0.70
15:T:19:LEU:HB3	15:T:86:ILE:HD12	1.74	0.70
15:T:31:SER:O	15:T:84:GLN:N	2.25	0.70
21:Z:29:TYR:HA	21:Z:33:LEU:HD12	1.73	0.70
32:a:430:A:H4'	35:d:7:PRO:HG3	1.74	0.70
49:r:32:ARG:HA	49:r:69:THR:HG21	1.73	0.70
1:A:52:A:OP2	1:A:117:G:N1	2.23	0.70
1:A:282:A:N7	1:A:358:U:O2	2.25	0.70
1:A:309:G:N3	1:A:329:G:O2'	2.25	0.70
1:A:1438:U:H2'	1:A:1439:A:H8	1.57	0.70
1:A:2636:U:O4	1:A:2782:G:O6	2.09	0.70
2:B:81:G:O6	2:B:96:U:O2	2.09	0.70
22:0:23:VAL:HG22	22:0:38:VAL:HG22	1.74	0.70
26:4:59:PHE:HA	26:4:60:GLN:HB2	1.73	0.70
32:a:545:C:OP1	35:d:61:LYS:NZ	2.25	0.70
32:a:686:U:O4	32:a:703:G:O2'	2.07	0.70
32:a:718:G:N2	49:r:49:LYS:HG2	2.07	0.70
39:h:82:HIS:NE2	39:h:136:GLU:OE2	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1149:G:H2'	1:A:1150:C:C6	2.27	0.69
1:A:1772:G:N2	1:A:1774:C:H5''	2.07	0.69
1:A:2206:G:O3'	1:A:2208:A:N6	2.25	0.69
32:a:78:G:H2'	32:a:79:G:H5'	1.72	0.69
32:a:1192:C:O2	36:e:25:ARG:NH2	2.25	0.69
32:a:1250:A:N3	32:a:1370:G:O2'	2.23	0.69
32:a:1414:U:H2'	32:a:1415:G:H8	1.57	0.69
41:j:17:ASP:OD1	41:j:70:ARG:NH1	2.24	0.69
43:l:58:VAL:N	43:l:66:VAL:O	2.24	0.69
54:C:72:VAL:O	54:C:157:LYS:NZ	2.22	0.69
1:A:820:A:H4'	1:A:836:G:H22	1.56	0.69
1:A:994:C:OP1	16:U:53:ARG:NH2	2.25	0.69
1:A:1203:G:OP2	1:A:1204:A:O2'	2.08	0.69
1:A:1791:A:N6	1:A:1828:G:O2'	2.25	0.69
1:A:2389:G:H5''	1:A:2390:U:O4'	1.93	0.69
1:A:2813:A:H2'	1:A:2814:C:H6	1.57	0.69
32:a:543:C:OP1	35:d:14:ARG:NE	2.25	0.69
32:a:1175:G:H2'	32:a:1176:A:H8	1.57	0.69
54:C:19:VAL:HG22	54:C:223:ARG:HE	1.56	0.69
1:A:18:C:O2'	1:A:554:U:OP1	2.10	0.69
1:A:319:C:OP1	5:F:137:LYS:NZ	2.23	0.69
1:A:1098:A:H3'	1:A:1099:G:C8	2.26	0.69
3:D:164:GLN:OE1	3:D:176:ARG:NH2	2.24	0.69
6:G:41:GLN:HE21	6:G:155:MET:HE2	1.58	0.69
7:H:142:GLY:O	7:H:146:ALA:CB	2.40	0.69
12:Q:74:TYR:N	12:Q:92:GLY:O	2.25	0.69
20:Y:92:ASN:HB3	20:Y:94:LYS:HG2	1.74	0.69
23:1:54:ALA:HB1	23:1:83:GLU:HG3	1.74	0.69
26:4:12:ALA:N	26:4:24:THR:O	2.15	0.69
28:6:8:LYS:HB3	28:6:54:ILE:HD13	1.74	0.69
32:a:736:C:H2'	32:a:737:A:C8	2.28	0.69
1:A:627:A:O4'	1:A:637:A:N6	2.25	0.69
1:A:1528(A):A:OP2	1:A:1542:A:N6	2.25	0.69
1:A:2356:C:O3'	22:0:20:ARG:NH1	2.26	0.69
14:S:103:GLU:O	14:S:107:GLU:N	2.15	0.69
31:9:27:CYS:SG	31:9:28:GLU:N	2.65	0.69
32:a:97:G:O3'	32:a:98:G:H4'	1.91	0.69
32:a:189(E):C:H2'	32:a:189(F):U:O4'	1.91	0.69
32:a:1298:C:C4	38:g:114:ARG:HD3	2.28	0.69
35:d:114:ARG:HA	35:d:117:ALA:HB3	1.75	0.69
36:e:9:LYS:HG3	36:e:112:LEU:HD11	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:i:32:ASP:HB3	40:i:35:GLU:HB2	1.73	0.69
1:A:476:G:N1	1:A:479:A:OP2	2.26	0.69
1:A:1338:G:N7	19:X:62:LYS:NZ	2.37	0.69
1:A:1638:C:OP1	1:A:2710:C:O2'	2.09	0.69
1:A:2092:U:O2	1:A:2225:A:O2'	2.10	0.69
1:A:2365:G:N7	30:8:39:LYS:NZ	2.37	0.69
7:H:85:LYS:HD3	7:H:141:VAL:HG12	1.73	0.69
20:Y:97:ARG:HB3	20:Y:106:LEU:HD12	1.75	0.69
32:a:165:C:H2'	32:a:166:G:H8	1.56	0.69
32:a:1327:C:H5''	52:u:20:LYS:CB	2.21	0.69
32:a:1356:G:H2'	32:a:1357:A:C8	2.27	0.69
35:d:18:LYS:HZ2	35:d:34:GLU:HG2	1.56	0.69
37:f:45:LEU:HD12	37:f:59:TYR:HD1	1.57	0.69
1:A:252:G:OP1	11:P:50:ARG:NH1	2.21	0.69
2:B:106:G:OP1	21:Z:31:ARG:NH2	2.25	0.69
3:D:13:ARG:NH1	3:D:16:MET:SD	2.65	0.69
6:G:145:THR:HG22	6:G:148:MET:HG2	1.74	0.69
7:H:80:SER:OG	7:H:81:GLU:OE1	2.10	0.69
16:U:112:ARG:HD2	17:V:47:VAL:HG21	1.74	0.69
21:Z:152:ALA:HB1	21:Z:163:LEU:HD21	1.73	0.69
32:a:104:G:OP2	51:t:25:ARG:NH2	2.25	0.69
32:a:652:U:O4	32:a:752:G:O2'	2.11	0.69
32:a:986:A:N3	50:s:52:TYR:OH	2.24	0.69
32:a:1009:G:O6	32:a:1020:U:O4	2.10	0.69
32:a:1223:C:OP2	50:s:78:ARG:NH2	2.26	0.69
33:b:195:ASP:O	39:h:68:ARG:NH2	2.22	0.69
37:f:71:ARG:O	37:f:75:LEU:N	2.19	0.69
48:q:58:GLU:O	48:q:74:LEU:N	2.24	0.69
54:C:79:LYS:HD3	54:C:97:GLU:HB2	1.75	0.69
1:A:627:A:H4'	1:A:628:G:H5'	1.73	0.69
1:A:1069:A:O2'	1:A:1072:C:OP2	2.06	0.69
1:A:2198:A:OP1	8:I:33:ARG:NH2	2.25	0.69
1:A:2302:G:N2	6:G:126:ASP:OD1	2.25	0.69
7:H:4:ILE:HA	7:H:7:LEU:HD23	1.73	0.69
12:Q:16:ARG:HG3	12:Q:18:LYS:H	1.57	0.69
20:Y:28:LYS:HD2	20:Y:40:GLU:HA	1.74	0.69
27:5:33:CYS:N	27:5:38:ALA:O	2.25	0.69
32:a:376:G:OP1	47:p:67:THR:OG1	2.10	0.69
32:a:886:G:H1	32:a:911:U:H3	1.39	0.69
32:a:1359:C:H3'	45:n:35:ARG:NH2	2.07	0.69
34:c:152:ILE:HG13	34:c:199:LYS:HB2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:116:C:O2'	1:A:126:A:N3	2.25	0.69
1:A:994:C:OP2	16:U:54:LYS:NZ	2.22	0.69
1:A:1030:G:OP2	12:Q:128:LYS:NZ	2.24	0.69
1:A:1215:G:N2	1:A:1234:U:O2	2.20	0.69
1:A:1890:A:H3'	1:A:1891:G:H8	1.58	0.69
1:A:1957:C:O2'	1:A:1984:G:N2	2.25	0.69
1:A:2659:G:N2	1:A:2662:A:OP2	2.26	0.69
2:B:48:A:H2'	2:B:49:C:C6	2.28	0.69
5:F:63:LYS:NZ	5:F:75:HIS:O	2.26	0.69
9:N:90:MET:HG3	9:N:98:VAL:HG22	1.73	0.69
11:P:95:VAL:HA	11:P:99:LEU:HD13	1.74	0.69
13:R:96:ARG:NH1	13:R:115:GLU:OE2	2.24	0.69
15:T:123:GLN:O	15:T:127:ALA:N	2.24	0.69
26:4:41:PRO:HG3	26:4:49:PHE:CE2	2.28	0.69
32:a:62:U:N3	32:a:98:G:O2'	2.24	0.69
32:a:73:G:HO2'	32:a:76:C:HO2'	1.38	0.69
32:a:97:G:OP1	32:a:103:C:H3'	1.93	0.69
32:a:266:G:OP2	32:a:267:C:N4	2.26	0.69
32:a:664:G:H22	32:a:741:G:H1	1.38	0.69
32:a:708:C:OP1	42:k:85:ARG:NH2	2.25	0.69
32:a:1160:G:O6	32:a:1176:A:N1	2.26	0.69
35:d:163:GLU:HA	35:d:166:LYS:HG2	1.74	0.69
1:A:1226:A:OP1	17:V:84:LYS:NZ	2.24	0.69
1:A:1252:G:N2	16:U:33:ARG:HB3	2.08	0.69
1:A:2100:G:O6	1:A:2189:U:O4	2.10	0.69
1:A:2686:G:H2'	1:A:2687:U:C6	2.27	0.69
1:A:2751:G:H3'	1:A:2752:C:H6	1.58	0.69
3:D:123:ALA:HB3	3:D:131:LEU:HD11	1.74	0.69
8:I:24:GLY:O	8:I:28:ASN:HB2	1.93	0.69
8:I:133:HIS:HB3	8:I:136:VAL:HG21	1.74	0.69
13:R:51:LEU:HD22	13:R:66:VAL:HG13	1.74	0.69
18:W:7:ALA:HB1	18:W:10:VAL:HG21	1.74	0.69
30:8:28:GLY:O	30:8:36:LYS:NZ	2.26	0.69
32:a:98:G:H5'	51:t:14:LYS:HG3	1.74	0.69
32:a:474:G:H2'	32:a:475:G:H8	1.58	0.69
32:a:1135:U:O2'	32:a:1138:G:O6	2.11	0.69
32:a:1276:G:H2'	32:a:1277:C:O4'	1.92	0.69
1:A:273(A):G:N7	1:A:421:U:H2'	2.08	0.69
1:A:1721:G:N2	1:A:1739:U:OP2	2.26	0.69
1:A:1782:C:O2	1:A:2608:G:O2'	2.10	0.69
1:A:2135:A:H2'	1:A:2136:C:H5'	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2679:A:OP2	4:E:160:TYR:OH	2.08	0.69
1:A:2680:C:O2'	4:E:11:MET:SD	2.51	0.69
1:A:2696:U:H2'	1:A:2697:G:H8	1.57	0.69
1:A:2808:U:O2	1:A:2892:A:N7	2.25	0.69
5:F:152:GLU:OE1	5:F:191:ARG:NE	2.23	0.69
32:a:52:G:H1	32:a:359:U:H3	1.40	0.69
32:a:713:G:H2'	32:a:714:G:C8	2.27	0.69
35:d:98:GLU:HB3	35:d:189:PRO:HG2	1.75	0.69
51:t:52:ALA:O	51:t:56:MET:N	2.26	0.69
54:C:19:VAL:HA	54:C:223:ARG:HG3	1.73	0.69
32:a:1225:A:O5'	44:m:103:THR:OG1	2.08	0.68
32:a:1270:C:H2'	32:a:1271:G:H8	1.56	0.68
32:a:1333:A:H2'	32:a:1334:G:O4'	1.93	0.68
35:d:99:SER:HB3	35:d:139:ARG:HG3	1.74	0.68
38:g:53:LYS:HE3	38:g:125:MET:HE1	1.73	0.68
1:A:1019:U:H2'	1:A:1020:A:H8	1.57	0.68
1:A:1570:A:H2'	1:A:1571:A:C8	2.29	0.68
1:A:1799:G:N7	3:D:179:SER:OG	2.24	0.68
1:A:2469:A:O2'	12:Q:56:ARG:NH1	2.16	0.68
1:A:2698:U:H2'	1:A:2699:C:C6	2.28	0.68
9:N:38:HIS:O	16:U:71:GLN:NE2	2.27	0.68
21:Z:3:TYR:HB3	21:Z:47:VAL:HG13	1.75	0.68
32:a:405:U:H3'	32:a:406:G:H5'	1.75	0.68
32:a:1328:C:OP2	52:u:7:ARG:NH1	2.27	0.68
34:c:72:LYS:NZ	56:x:31:A:OP1	2.26	0.68
1:A:585:G:H2'	1:A:1251:C:H42	1.57	0.68
1:A:1143:A:H62	9:N:25:ARG:HD3	1.58	0.68
1:A:1680:U:N3	1:A:1764:G:OP2	2.26	0.68
1:A:2159:G:O2'	1:A:2160:G:O4'	2.06	0.68
3:D:218:ARG:HB3	3:D:219:PRO:HD2	1.76	0.68
16:U:69:CYS:HB3	16:U:74:LEU:HD12	1.74	0.68
16:U:74:LEU:HD13	16:U:79:PHE:HB2	1.76	0.68
32:a:191:G:O2'	51:t:101:GLY:HA2	1.93	0.68
32:a:789:U:O2'	32:a:791:G:N7	2.21	0.68
33:b:208:ILE:O	33:b:212:GLN:N	2.26	0.68
38:g:46:ALA:HA	38:g:49:ILE:HD12	1.74	0.68
38:g:143:ARG:NH2	55:z:41:C:O2'	2.20	0.68
40:i:37:PHE:HA	40:i:40:LEU:HD12	1.73	0.68
52:u:12:LYS:O	52:u:16:GLY:N	2.27	0.68
1:A:143(A):G:H2'	1:A:143(B):C:H6	1.58	0.68
1:A:1567:A:OP2	3:D:84:TYR:OH	2.06	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1859:A:H2'	1:A:1860:G:O4'	1.93	0.68
5:F:17:ARG:NH1	5:F:19:GLU:OE2	2.25	0.68
32:a:62:U:O2	32:a:105:G:O6	2.12	0.68
32:a:396:G:O2'	32:a:398:C:OP1	2.09	0.68
32:a:524:G:H2'	32:a:525:C:C6	2.29	0.68
32:a:1326:C:OP1	52:u:12:LYS:NZ	2.25	0.68
1:A:245:G:O6	30:8:8:LYS:NZ	2.27	0.68
1:A:305:U:H2'	1:A:306:U:C6	2.29	0.68
1:A:352:G:O2'	1:A:353:G:O5'	2.09	0.68
1:A:1165:U:H3	1:A:1184:G:H1	1.42	0.68
1:A:1353:A:OP2	1:A:1377:G:N1	2.23	0.68
1:A:1580:A:H3'	1:A:1581:G:H8	1.56	0.68
1:A:2284:C:OP2	28:6:2:ALA:N	2.26	0.68
3:D:78:LYS:HA	3:D:116:GLN:HA	1.75	0.68
3:D:166:GLN:HG3	3:D:182:LEU:HD21	1.76	0.68
20:Y:15:VAL:HG12	20:Y:21:LYS:HA	1.75	0.68
21:Z:77:ASP:N	21:Z:82:ARG:O	2.26	0.68
32:a:9:G:OP2	36:e:121:LYS:NZ	2.22	0.68
32:a:1256:A:N6	32:a:1278:U:O2'	2.26	0.68
32:a:1312:G:H5'	50:s:5:LEU:HD23	1.76	0.68
43:l:38:THR:OG1	43:l:57:LYS:O	2.10	0.68
45:n:50:LYS:HG3	45:n:52:GLN:HG3	1.73	0.68
1:A:180:G:N2	1:A:215:G:O6	2.26	0.68
2:B:11:C:OP2	2:B:12:C:N4	2.25	0.68
20:Y:31:LEU:HD12	20:Y:66:PRO:HB3	1.75	0.68
24:2:8:LYS:NZ	24:2:12:GLU:OE2	2.27	0.68
32:a:64:G:C3'	32:a:71:C:C2	2.76	0.68
32:a:97:G:O2'	32:a:98:G:O3'	2.11	0.68
32:a:1298:C:OP2	38:g:114:ARG:NH2	2.26	0.68
32:a:1359:C:OP2	45:n:35:ARG:NE	2.27	0.68
38:g:78:ARG:O	38:g:85:TYR:N	2.19	0.68
40:i:22:GLY:N	40:i:58:HIS:O	2.23	0.68
43:l:102:ARG:HB2	43:l:120:TYR:HA	1.76	0.68
1:A:615:G:OP2	5:F:43:LYS:NZ	2.21	0.68
1:A:1148:A:C2'	1:A:1149:G:H5''	2.24	0.68
11:P:63:PRO:HD3	30:8:27:THR:HG22	1.75	0.68
28:6:39:TYR:HA	28:6:46:HIS:HA	1.76	0.68
32:a:130:A:N3	32:a:263:A:O2'	2.22	0.68
32:a:190:U:H2'	32:a:191:G:H8	1.58	0.68
32:a:806:C:H2'	32:a:807:A:H8	1.58	0.68
32:a:1096:C:H2'	32:a:1097:C:H6	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:f:42:GLU:OE2	37:f:59:TYR:OH	2.06	0.68
40:i:121:ARG:NH1	40:i:122:ALA:O	2.26	0.68
55:z:14:A:H3'	55:z:15:G:C8	2.28	0.68
55:z:42:C:H2'	55:z:43:C:C6	2.29	0.68
1:A:10:G:H4'	1:A:2801(B):A:H61	1.57	0.68
1:A:321:G:N3	5:F:165:ARG:HD2	2.08	0.68
1:A:2167:U:H2'	1:A:2168:G:C5	2.28	0.68
6:G:11:TYR:OH	6:G:32:PRO:O	2.11	0.68
11:P:59:LEU:O	30:8:13:ARG:NH1	2.27	0.68
12:Q:13:GLN:O	12:Q:72:LYS:NZ	2.19	0.68
17:V:25:LEU:O	17:V:64:HIS:NE2	2.23	0.68
32:a:427:U:OP2	35:d:36:ARG:NH1	2.25	0.68
32:a:608:A:H2'	32:a:609:A:O4'	1.94	0.68
1:A:587:C:H3'	1:A:588:U:H5'	1.74	0.68
1:A:2199:A:OP1	23:1:50:ARG:NH2	2.20	0.68
1:A:2444:G:H2'	1:A:2445:G:H5''	1.76	0.68
5:F:110:LEU:HA	5:F:183:VAL:HG12	1.76	0.68
7:H:31:GLY:HA3	7:H:136:ILE:HD11	1.74	0.68
12:Q:52:VAL:O	12:Q:56:ARG:HG2	1.93	0.68
21:Z:24:LEU:N	21:Z:39:VAL:O	2.26	0.68
32:a:542:G:H5'	35:d:41:GLY:HA3	1.76	0.68
34:c:40:ARG:HE	34:c:57:ILE:HD12	1.59	0.68
44:m:116:THR:HG21	53:y:29:G:H4'	1.75	0.68
45:n:4:LYS:HA	45:n:7:ILE:HG12	1.76	0.68
55:z:18:G:H22	55:z:57:G:H5'	1.59	0.68
1:A:347:A:H2'	1:A:348:G:H8	1.59	0.68
1:A:714:U:O2'	1:A:716:A:N7	2.26	0.68
1:A:2888:C:H2'	1:A:2889:C:H6	1.59	0.68
3:D:136:ILE:O	3:D:168:ARG:NH2	2.27	0.68
11:P:81:GLN:OE1	11:P:107:LYS:N	2.22	0.68
21:Z:125:LEU:HG	21:Z:164:ALA:HB3	1.75	0.68
23:1:73:LEU:HD21	23:1:98:LEU:HD23	1.75	0.68
28:6:8:LYS:HB2	28:6:54:ILE:HG21	1.76	0.68
47:p:73:LEU:O	47:p:77:ALA:N	2.26	0.68
53:y:15:G:O6	53:y:48:C:O2	2.11	0.68
53:y:50:U:O2	53:y:64:G:N2	2.22	0.68
1:A:157:U:O3'	1:A:171:G:N2	2.26	0.67
1:A:704:G:O2'	1:A:726:G:N2	2.25	0.67
1:A:1309:G:O2'	1:A:1611:C:O2'	2.12	0.67
13:R:55:ALA:HB2	13:R:79:LEU:HD11	1.76	0.67
14:S:104:GLY:O	14:S:108:GLY:N	2.26	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:2:36:ARG:O	24:2:40:SER:OG	2.07	0.67
32:a:66:G:C4	32:a:173:U:H2'	2.29	0.67
32:a:110:C:H2'	32:a:111:G:O4'	1.95	0.67
32:a:126:G:OP1	32:a:605:U:O2'	2.06	0.67
37:f:99:ALA:O	49:r:28:GLU:HA	1.93	0.67
51:t:11:SER:HA	51:t:14:LYS:HD2	1.75	0.67
1:A:290:G:H1	1:A:350:U:H3	1.43	0.67
1:A:532:A:OP1	1:A:561:G:N2	2.27	0.67
1:A:922:U:H2'	1:A:923:C:C6	2.29	0.67
1:A:1009:A:O2'	1:A:1010:A:O4'	2.06	0.67
1:A:1842:G:H2'	1:A:1843:C:H6	1.59	0.67
1:A:2128:C:H5'	1:A:2129:C:OP2	1.94	0.67
1:A:2133:G:H21	1:A:2157:G:H3'	1.59	0.67
3:D:77:ALA:N	3:D:117:VAL:O	2.27	0.67
6:G:46:ALA:HA	6:G:49:ASP:O	1.94	0.67
7:H:8:PRO:HB2	7:H:49:VAL:HG21	1.75	0.67
32:a:447:G:O6	32:a:485:G:O2'	2.09	0.67
32:a:1095:U:H2'	32:a:1096:C:C6	2.29	0.67
36:e:147:ASP:OD1	36:e:150:ARG:NH2	2.27	0.67
41:j:9:ARG:HG2	41:j:69:ASN:HD22	1.58	0.67
44:m:3:ARG:HG3	44:m:8:GLU:CG	2.25	0.67
48:q:45:HIS:HA	48:q:69:LYS:HZ1	1.58	0.67
1:A:129:C:H2'	1:A:130:C:C6	2.30	0.67
1:A:1859:A:N6	1:A:1883:G:O2'	2.27	0.67
1:A:2134:A:OP2	1:A:2156:G:N1	2.27	0.67
1:A:2246:G:H2'	1:A:2247:A:H8	1.59	0.67
3:D:168:ARG:HG2	3:D:173:VAL:HG12	1.74	0.67
8:I:6:LEU:O	8:I:57:ARG:NH2	2.27	0.67
15:T:24:PRO:HA	15:T:49:VAL:HG13	1.77	0.67
15:T:28:VAL:HG11	15:T:86:ILE:HG23	1.76	0.67
18:W:7:ALA:HB2	18:W:50:VAL:HG21	1.77	0.67
28:6:11:LEU:HD23	28:6:51:GLU:HA	1.76	0.67
32:a:552:U:H4'	43:l:87:GLY:HA2	1.76	0.67
54:C:3:HIS:O	54:C:8:ARG:NH1	2.26	0.67
1:A:499:U:H2'	1:A:500:G:O4'	1.94	0.67
1:A:517:C:O2'	18:W:18:ARG:NH2	2.19	0.67
1:A:2292:C:OP1	14:S:17:ARG:NH2	2.28	0.67
1:A:2555:U:H2'	1:A:2556:C:H5'	1.77	0.67
1:A:2882:A:O2'	1:A:2883:A:O5'	2.12	0.67
6:G:39:ILE:HB	6:G:92:VAL:HG12	1.76	0.67
16:U:94:ASN:HB3	17:V:4:ILE:HD13	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:4:16:CYS:SG	26:4:17:GLY:N	2.67	0.67
32:a:106:C:O2'	32:a:379:C:OP1	2.13	0.67
32:a:279:A:N6	48:q:98:LEU:O	2.26	0.67
32:a:1314:C:H2'	32:a:1315:U:C6	2.29	0.67
44:m:65:LYS:HD2	44:m:69:GLU:HG2	1.75	0.67
47:p:8:ARG:HB3	47:p:28:ARG:HH12	1.59	0.67
54:C:77:ILE:HG12	54:C:99:ILE:HD11	1.76	0.67
1:A:82:G:N2	1:A:103:A:OP2	2.26	0.67
1:A:220:G:O2'	1:A:233:A:N3	2.28	0.67
1:A:673:C:OP1	5:F:54:ARG:NH1	2.26	0.67
1:A:1106:G:H2'	1:A:1107:G:C8	2.29	0.67
1:A:1229:G:C2'	1:A:1230:C:H5'	2.25	0.67
1:A:1969:A:O2'	1:A:1972:A:N3	2.23	0.67
1:A:2130:U:H5'	54:C:5:LYS:HB2	1.74	0.67
1:A:2286:A:H4'	1:A:2287:A:O4'	1.95	0.67
32:a:413:G:O3'	32:a:428:G:N2	2.26	0.67
32:a:458:C:H2'	32:a:460:G:O4'	1.95	0.67
32:a:505:G:O2'	32:a:506:G:H5'	1.94	0.67
32:a:974:A:H4'	32:a:975:A:H5'	1.76	0.67
32:a:1178:G:O2'	32:a:1180:A:N7	2.24	0.67
32:a:1312:G:H5'	50:s:5:LEU:CD2	2.25	0.67
36:e:15:ARG:NH2	56:x:22:U:O2'	2.27	0.67
36:e:37:ARG:NH1	36:e:111:GLU:O	2.28	0.67
42:k:13:GLN:HA	42:k:75:TYR:HB3	1.76	0.67
1:A:684:G:OP1	29:7:21:ARG:NH1	2.26	0.67
1:A:1043:C:H2'	1:A:1044:G:O4'	1.95	0.67
1:A:2113:U:H2'	1:A:2114:A:O4'	1.94	0.67
4:E:103:ASP:OD1	4:E:169:ASN:N	2.17	0.67
32:a:62:U:O4	32:a:98:G:H2'	1.95	0.67
32:a:72:C:H2'	32:a:73:G:C5'	2.24	0.67
32:a:410:G:OP1	35:d:30:LYS:NZ	2.21	0.67
32:a:436:C:H2'	32:a:437:U:H6	1.59	0.67
32:a:1355:G:H2'	32:a:1356:G:H8	1.59	0.67
1:A:1245:G:OP1	11:P:13:ASN:ND2	2.28	0.67
1:A:2024:G:H2'	1:A:2025:C:C6	2.30	0.67
1:A:2532:G:N2	1:A:2663:G:O2'	2.28	0.67
1:A:2731:G:H2'	1:A:2732:G:C8	2.29	0.67
7:H:56:SER:OG	7:H:61:HIS:ND1	2.23	0.67
32:a:404:U:H5'	35:d:122:ARG:HD3	1.75	0.67
32:a:581:G:O2'	32:a:582:U:H5'	1.95	0.67
32:a:1055:A:O2'	34:c:161:GLU:O	2.10	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1119:C:H2'	32:a:1120:G:H8	1.58	0.67
35:d:64:LEU:HA	35:d:67:ILE:HD12	1.77	0.67
40:i:26:VAL:HG11	40:i:33:PHE:HB2	1.76	0.67
43:l:60:LEU:N	43:l:64:TYR:O	2.25	0.67
1:A:272(K):U:H1'	1:A:272(M):G:H22	1.60	0.67
1:A:856:C:H2'	1:A:857:C:C6	2.29	0.67
1:A:992:C:OP1	17:V:74:LYS:NZ	2.25	0.67
1:A:1518:U:H2'	1:A:1519:G:O4'	1.95	0.67
1:A:2314:C:H2'	1:A:2315:G:C8	2.30	0.67
7:H:54:ARG:NE	7:H:57:ASP:OD1	2.26	0.67
12:Q:65:PHE:HB2	12:Q:105:GLU:HB2	1.76	0.67
16:U:102:GLU:OE1	16:U:104:GLN:NE2	2.28	0.67
22:O:36:ILE:HD12	22:O:58:THR:HG21	1.75	0.67
32:a:65:U:P	32:a:71:C:N1	2.68	0.67
32:a:476:G:H2'	32:a:477:A:C8	2.30	0.67
32:a:611:A:N1	32:a:629:G:N2	2.40	0.67
32:a:1426:C:H2'	32:a:1427:U:C6	2.29	0.67
33:b:114:ARG:HH12	33:b:118:LEU:HD23	1.60	0.67
41:j:78:ASN:O	41:j:81:THR:N	2.26	0.67
54:C:47:LEU:CD1	54:C:171:ILE:HB	2.25	0.67
1:A:433:C:H2'	1:A:434:U:C6	2.30	0.67
1:A:1351:C:H2'	1:A:1352:U:C6	2.30	0.67
1:A:1362:C:HO2'	1:A:1810:A:HO2'	1.43	0.67
1:A:1583:A:H4'	1:A:1586:A:C8	2.30	0.67
1:A:2100:G:N2	1:A:2189:U:O2	2.22	0.67
1:A:2125:G:H22	1:A:2172:U:H3'	1.59	0.67
1:A:2133:G:N2	1:A:2158:A:OP1	2.23	0.67
12:Q:74:TYR:HB2	12:Q:94:VAL:HG13	1.76	0.67
32:a:390:C:H4'	47:p:28:ARG:HE	1.60	0.67
32:a:978:A:H61	32:a:1316:G:H1'	1.60	0.67
32:a:1004:A:N6	32:a:1037:C:OP2	2.28	0.67
32:a:1053:G:H4'	32:a:1054:C:H5''	1.75	0.67
34:c:11:ARG:NH2	34:c:175:LEU:O	2.27	0.67
50:s:77:THR:HG23	50:s:78:ARG:HG3	1.77	0.67
1:A:272(E):U:H2'	1:A:272(F):C:C6	2.29	0.67
1:A:1042:G:H2'	1:A:1043:C:C6	2.29	0.67
1:A:1087:G:C1'	1:A:1089:G:H4'	2.25	0.67
1:A:1299:G:N1	1:A:1640:C:OP2	2.17	0.67
1:A:1792:G:H5'	3:D:205:VAL:HG13	1.77	0.67
1:A:2000:G:OP1	13:R:5:LYS:NZ	2.28	0.67
1:A:2175:C:O2'	54:C:219:GLY:O	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2564:A:C2	1:A:2647:U:H4'	2.29	0.67
1:A:2655:G:H1'	1:A:2656:U:H5	1.60	0.67
1:A:2838:G:H2'	1:A:2839:G:H5''	1.76	0.67
5:F:157:VAL:HB	5:F:194:MET:HG2	1.77	0.67
19:X:50:LYS:N	19:X:87:GLN:OE1	2.27	0.67
28:6:34:LEU:N	28:6:51:GLU:OE1	2.22	0.67
32:a:436:C:H2'	32:a:437:U:C6	2.30	0.67
32:a:715:A:H2'	32:a:716:A:C8	2.29	0.67
32:a:751:U:H2'	32:a:752:G:O4'	1.95	0.67
36:e:78:HIS:HE1	36:e:143:ARG:H	1.41	0.67
47:p:8:ARG:HH22	47:p:15:PRO:HG3	1.60	0.67
48:q:61:GLU:HA	48:q:71:PHE:CD1	2.30	0.67
53:y:6:G:H2'	53:y:7:G:H8	1.60	0.67
54:C:76:ALA:HB2	54:C:153:ILE:HD11	1.77	0.67
1:A:1183:G:O2'	25:3:29:ARG:NH1	2.28	0.66
1:A:1435:G:H2'	1:A:1436:G:C8	2.31	0.66
1:A:2223:G:O2'	1:A:2224:G:O5'	2.13	0.66
1:A:2818:G:OP1	1:A:2837:G:O2'	2.05	0.66
28:6:16:CYS:HB2	28:6:18:ARG:HH21	1.60	0.66
32:a:64:G:H5'	32:a:70:G:O5'	1.95	0.66
32:a:99:U:H2'	51:t:18:GLN:CG	2.24	0.66
32:a:264:U:O2'	48:q:64:PRO:O	2.09	0.66
32:a:1305:G:OP2	52:u:2:GLY:N	2.28	0.66
32:a:1360:A:OP2	45:n:35:ARG:NH2	2.28	0.66
32:a:1435:G:H2'	32:a:1436:U:C6	2.30	0.66
47:p:58:TYR:O	47:p:61:SER:OG	2.07	0.66
1:A:306:U:H2'	1:A:307:G:O4'	1.95	0.66
1:A:1007:C:H5''	9:N:35:ARG:NH1	2.10	0.66
1:A:1571:A:H2'	1:A:1572:A:C8	2.30	0.66
1:A:2148:G:H2'	1:A:2149:G:C8	2.30	0.66
1:A:2200:C:OP2	23:1:50:ARG:NE	2.28	0.66
1:A:2306:C:OP2	1:A:2307:G:O2'	2.10	0.66
1:A:2786:U:O2'	4:E:62:PRO:O	2.12	0.66
4:E:1:MET:N	4:E:83:ASP:O	2.25	0.66
6:G:32:PRO:HB3	6:G:163:ALA:HB2	1.76	0.66
6:G:107:LEU:HD23	6:G:111:LEU:HD12	1.77	0.66
9:N:12:ARG:HH22	9:N:138:LEU:HD11	1.59	0.66
32:a:21:G:H2'	32:a:22:G:H8	1.59	0.66
32:a:65:U:P	32:a:71:C:C6	2.88	0.66
32:a:66:G:H3'	32:a:73:G:N3	2.10	0.66
32:a:630:G:H3'	32:a:631:G:H8	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:662:G:O2'	32:a:836:G:OP1	2.13	0.66
32:a:743:U:H2'	32:a:744:C:H6	1.60	0.66
32:a:925:G:H1	32:a:1391:U:H3	1.43	0.66
32:a:1024:G:O2'	32:a:1025:U:H4'	1.94	0.66
32:a:1030(A):C:H3'	32:a:1030(B):G:C8	2.30	0.66
32:a:1347:G:N2	32:a:1374:A:O5'	2.25	0.66
1:A:373:U:H2'	1:A:374:A:H8	1.60	0.66
1:A:537:C:H1'	9:N:45:ASN:HD21	1.59	0.66
1:A:864:G:H2'	1:A:865:C:C6	2.29	0.66
1:A:2246:G:H2'	1:A:2247:A:C8	2.30	0.66
1:A:2386:C:H2'	1:A:2387:U:C6	2.31	0.66
7:H:28:GLY:H	7:H:79:VAL:HB	1.59	0.66
8:I:25:TYR:O	8:I:29:TYR:HB3	1.95	0.66
13:R:56:LYS:NZ	13:R:90:ARG:O	2.24	0.66
14:S:71:ARG:O	14:S:75:GLU:HG2	1.95	0.66
25:3:26:LEU:O	25:3:35:ARG:NE	2.28	0.66
26:4:58:ARG:HH22	44:m:80:ARG:HH21	1.43	0.66
32:a:938:A:H1'	32:a:1376:U:O2'	1.96	0.66
32:a:968:A:C8	32:a:1062:U:H4'	2.29	0.66
32:a:1510:U:H2'	32:a:1511:G:C8	2.30	0.66
55:z:56:C:H2'	55:z:57:G:O4'	1.94	0.66
1:A:372:G:H1'	1:A:373:U:H5	1.61	0.66
1:A:450:G:N1	1:A:454:A:OP2	2.27	0.66
1:A:518:G:O5'	18:W:18:ARG:NH1	2.28	0.66
1:A:1020:A:N1	1:A:1141:U:O2'	2.22	0.66
1:A:2515:C:H2'	1:A:2516:G:H8	1.59	0.66
1:A:2640:G:O3'	9:N:74:ARG:NH1	2.28	0.66
20:Y:31:LEU:N	20:Y:36:ALA:O	2.26	0.66
32:a:99:U:H2'	51:t:18:GLN:HG2	1.77	0.66
32:a:397:A:N7	32:a:547:A:O2'	2.28	0.66
32:a:1466:C:H2'	32:a:1467:G:O4'	1.96	0.66
33:b:97:TRP:HZ3	33:b:172:ILE:HG22	1.60	0.66
41:j:49:VAL:CG2	45:n:41:ARG:HB2	2.26	0.66
53:y:16:C:OP1	53:y:17(A):C:N4	2.28	0.66
55:z:52:G:N2	55:z:62:C:O2	2.19	0.66
1:A:1415:U:O2'	1:A:1417:C:OP1	2.14	0.66
3:D:36:PRO:HA	3:D:61:LEU:HD13	1.78	0.66
6:G:120:LEU:N	6:G:179:PRO:O	2.27	0.66
6:G:138:GLN:OE1	6:G:153:ARG:N	2.24	0.66
6:G:145:THR:HG23	6:G:148:MET:H	1.60	0.66
17:V:21:ARG:HG2	17:V:93:GLU:HB2	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:Z:152:ALA:HB3	21:Z:167:PRO:HA	1.75	0.66
23:1:5:CYS:SG	23:1:63:ALA:N	2.66	0.66
28:6:13:CYS:HB3	28:6:16:CYS:SG	2.36	0.66
32:a:68:G:H1'	32:a:77:G:C4	2.30	0.66
32:a:312:C:H2'	32:a:313:A:H8	1.60	0.66
32:a:377:G:H2'	32:a:378:G:H8	1.60	0.66
32:a:580:U:H3	32:a:761:G:H1	1.44	0.66
32:a:769:G:H4'	32:a:1513:A:H4'	1.76	0.66
32:a:789:U:N3	32:a:792:A:OP2	2.25	0.66
32:a:836:G:H1	32:a:850:U:H3	1.40	0.66
33:b:223:ILE:HD13	33:b:229:VAL:HA	1.77	0.66
43:l:32:PHE:HB3	43:l:84:LEU:HD21	1.77	0.66
49:r:59:SER:H	49:r:62:GLU:HB2	1.59	0.66
53:y:23:C:H2'	53:y:24:U:C6	2.30	0.66
1:A:251:A:OP1	30:8:7:HIS:NE2	2.23	0.66
1:A:1422:G:N2	1:A:1576:U:O2	2.24	0.66
1:A:1435:G:H2'	1:A:1436:G:H8	1.60	0.66
1:A:2001:A:OP1	13:R:9:LYS:NZ	2.28	0.66
1:A:2236:C:H2'	1:A:2237:G:O4'	1.96	0.66
1:A:2784:C:H2'	1:A:2785:C:C6	2.31	0.66
11:P:83:VAL:O	11:P:115:LEU:N	2.24	0.66
32:a:66:G:N3	32:a:173:U:H2'	2.09	0.66
32:a:545:C:O2'	32:a:549:C:OP1	2.13	0.66
38:g:141:VAL:O	38:g:145:ALA:N	2.21	0.66
42:k:24:SER:OG	42:k:27:ASN:O	2.10	0.66
44:m:9:ILE:CB	44:m:18:ALA:HB1	2.26	0.66
54:C:53:ARG:NH2	55:z:62:C:O3'	2.27	0.66
1:A:305:U:O4	1:A:312:G:O6	2.12	0.66
1:A:659:C:H2'	1:A:660:G:H8	1.61	0.66
1:A:885:C:O2'	1:A:890:A:N1	2.27	0.66
1:A:1444:G:H2'	1:A:1445(B):C:C5	2.31	0.66
1:A:1703:G:H2'	1:A:1704:G:H8	1.60	0.66
1:A:2328:A:H2'	1:A:2329:G:C8	2.30	0.66
1:A:2547:U:H2'	1:A:2548:G:H8	1.60	0.66
4:E:9:VAL:HG22	4:E:25:VAL:O	1.96	0.66
8:I:47:LEU:HD13	8:I:51:ILE:HD11	1.77	0.66
18:W:64:MET:HE2	18:W:109:GLU:HG3	1.76	0.66
32:a:68:G:H5'	32:a:76:C:H2'	1.77	0.66
32:a:216:G:H2'	32:a:217:C:H6	1.60	0.66
32:a:868:C:H2'	32:a:869:G:O4'	1.96	0.66
32:a:1067:A:O2'	32:a:1093:A:O2'	2.08	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1230:C:H5'	53:y:30:G:H5''	1.77	0.66
34:c:22:TRP:HB2	34:c:59:ARG:HB2	1.77	0.66
34:c:117:ALA:HB1	34:c:187:ALA:HB2	1.76	0.66
40:i:6:GLY:HA3	40:i:83:ARG:HB2	1.77	0.66
44:m:65:LYS:HB2	44:m:69:GLU:HB3	1.76	0.66
56:x:47:C:H2'	56:x:48:G:H8	1.61	0.66
1:A:639:U:H3	1:A:649:G:H1	1.41	0.66
1:A:1131:G:OP1	9:N:80:GLY:N	2.24	0.66
1:A:1954:G:O2'	1:A:1956:U:O4	2.09	0.66
1:A:2096:U:O4	1:A:2193:G:O6	2.13	0.66
1:A:2359:C:H2'	1:A:2360:A:O4'	1.96	0.66
1:A:2394:C:OP1	30:8:30:ARG:NH2	2.28	0.66
2:B:14:U:H1'	2:B:108:U:H1'	1.78	0.66
6:G:131:TYR:HE2	6:G:133:LEU:HD23	1.61	0.66
17:V:21:ARG:HA	17:V:93:GLU:HA	1.77	0.66
32:a:73:G:O2'	32:a:76:C:O2'	2.06	0.66
32:a:860:A:H2'	32:a:861:G:O4'	1.96	0.66
32:a:945:G:H21	32:a:1334:G:H4'	1.61	0.66
34:c:28:GLN:HB3	34:c:32:LEU:HD23	1.78	0.66
35:d:128:VAL:HG22	35:d:146:ILE:HG12	1.77	0.66
36:e:34:VAL:O	36:e:42:GLY:N	2.29	0.66
40:i:47:LEU:HD22	40:i:50:LEU:HD12	1.77	0.66
47:p:19:ILE:HG22	47:p:36:ILE:HG13	1.77	0.66
48:q:6:LEU:HD22	48:q:42:TYR:HE2	1.60	0.66
55:z:34:G:O6	56:x:12:A:C6	2.49	0.66
1:A:221:A:H1'	1:A:233:A:H1'	1.76	0.66
1:A:515:A:H1'	1:A:581:C:H1'	1.76	0.66
1:A:1935:G:N2	1:A:1964:G:OP2	2.25	0.66
2:B:22:U:O2	2:B:61:G:N2	2.25	0.66
17:V:69:LYS:HA	17:V:88:ARG:HG2	1.78	0.66
32:a:99:U:C2	51:t:18:GLN:HG2	2.31	0.66
32:a:521:G:OP2	43:l:54:LYS:NZ	2.22	0.66
32:a:1060:C:OP1	45:n:45:ARG:NH2	2.28	0.66
32:a:1266:G:N2	32:a:1269:A:OP2	2.16	0.66
32:a:1348:U:OP1	40:i:110:GLU:N	2.24	0.66
33:b:84:GLU:OE1	33:b:87:ARG:NH1	2.28	0.66
40:i:51:ARG:HG2	40:i:56:LEU:HD11	1.78	0.66
54:C:63:SER:HA	54:C:160:ARG:HA	1.78	0.66
54:C:163:PHE:HB2	54:C:171:ILE:HD11	1.77	0.66
54:C:175:VAL:HG23	54:C:185:LEU:HD22	1.77	0.66
1:A:703:U:H2'	1:A:704:G:O4'	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:707:G:O6	1:A:724:U:O4	2.13	0.66
1:A:969:U:H2'	1:A:970:C:C6	2.30	0.66
1:A:1028:A:N3	1:A:2486:G:O2'	2.28	0.66
1:A:1739:U:O2'	1:A:1740:G:H5'	1.96	0.66
1:A:2469:A:H2'	1:A:2470:G:O4'	1.96	0.66
5:F:142:TRP:O	5:F:146:ALA:N	2.29	0.66
11:P:91:PHE:O	11:P:121:LYS:NZ	2.25	0.66
13:R:98:LEU:HD21	27:5:57:VAL:HG21	1.77	0.66
28:6:38:LYS:HB2	28:6:49:HIS:ND1	2.10	0.66
32:a:116:A:H61	32:a:313:A:H1'	1.61	0.66
32:a:736:C:H2'	32:a:737:A:H8	1.61	0.66
32:a:1299:A:H2'	32:a:1301:U:C6	2.30	0.66
33:b:68:ILE:N	33:b:90:MET:SD	2.63	0.66
34:c:132:ARG:NH1	56:x:25:A:O2'	2.29	0.66
1:A:154(B):C:H2'	1:A:157:U:H4'	1.76	0.65
1:A:1042:G:N2	1:A:1113:U:O2	2.27	0.65
1:A:2118:U:OP1	1:A:2148:G:O2'	2.10	0.65
1:A:2627:G:N2	1:A:2777:G:OP2	2.29	0.65
4:E:179:GLU:CB	4:E:181:LEU:HD23	2.25	0.65
5:F:181:LEU:HD11	5:F:186:ILE:HD11	1.78	0.65
32:a:101:A:C2'	32:a:152:A:H5''	2.25	0.65
32:a:828:A:H2'	32:a:829:G:O4'	1.95	0.65
32:a:973:G:H3'	32:a:974:A:H5''	1.78	0.65
32:a:1498:UR3:OP2	56:x:14:A:O2'	2.14	0.65
36:e:81:GLU:HG2	36:e:90:VAL:HG22	1.77	0.65
39:h:49:GLU:HG3	39:h:51:VAL:HG13	1.77	0.65
1:A:652(C):A:N1	1:A:654:A:O2'	2.26	0.65
1:A:728:G:H4'	3:D:13:ARG:HE	1.61	0.65
1:A:1080:C:N4	1:A:1088:A:OP1	2.29	0.65
1:A:1188:U:H2'	1:A:1189:A:H8	1.60	0.65
1:A:2032:G:H1'	4:E:145:LYS:HE3	1.77	0.65
2:B:49:C:H2'	2:B:50:G:H8	1.61	0.65
4:E:52:LEU:O	4:E:76:ARG:N	2.25	0.65
4:E:98:PRO:HA	4:E:172:VAL:HG12	1.77	0.65
4:E:167:VAL:HG22	4:E:170:LEU:HD11	1.77	0.65
8:I:83:ALA:HA	8:I:89:TYR:H	1.61	0.65
19:X:53:LYS:HE3	19:X:55:ASN:HD21	1.61	0.65
32:a:520:A:H61	32:a:529:G:H1'	1.61	0.65
32:a:651:C:H2'	32:a:652:U:C6	2.32	0.65
32:a:708:C:H2'	32:a:709:G:C8	2.30	0.65
32:a:1289:A:H2'	32:a:1290:G:H5'	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:b:85:ALA:O	33:b:89:GLY:N	2.29	0.65
35:d:23:GLY:HA3	35:d:112:VAL:HB	1.78	0.65
1:A:297:C:OP1	20:Y:87:LYS:NZ	2.23	0.65
1:A:637:A:C6	1:A:652(A):C:H5'	2.31	0.65
5:F:40:GLN:NE2	5:F:182:ASN:HB2	2.11	0.65
6:G:11:TYR:HE1	6:G:172:LEU:HD11	1.61	0.65
12:Q:32:TYR:HE2	12:Q:111:GLU:HA	1.61	0.65
32:a:279:A:OP2	48:q:95:TYR:OH	2.12	0.65
32:a:685:G:N2	32:a:704:A:OP2	2.25	0.65
32:a:946:A:H2'	32:a:947:G:C8	2.31	0.65
32:a:1039:C:H2'	32:a:1040:U:H6	1.62	0.65
34:c:185:GLY:O	34:c:200:ALA:N	2.27	0.65
36:e:76:ILE:HG13	36:e:93:PRO:HG3	1.78	0.65
39:h:95:VAL:HB	39:h:99:GLU:HG3	1.77	0.65
46:o:10:LYS:O	46:o:14:GLU:HG2	1.95	0.65
48:q:58:GLU:HG3	48:q:77:VAL:CG2	2.25	0.65
1:A:8:A:H2'	1:A:9:U:C6	2.31	0.65
1:A:29:U:H2'	1:A:30:G:C8	2.32	0.65
1:A:108:U:H2'	1:A:109:G:C8	2.31	0.65
1:A:406:G:H1	1:A:421:U:H3	1.42	0.65
1:A:1452:A:O3'	13:R:77:ARG:NH2	2.30	0.65
1:A:1773:A:C2'	1:A:1774:C:H5'	2.26	0.65
1:A:2392:A:O2'	11:P:61:ARG:O	2.13	0.65
1:A:2403:C:H2'	1:A:2404:C:H6	1.62	0.65
1:A:2749:A:H4'	7:H:62:LYS:HB3	1.78	0.65
2:B:43:C:H5''	26:4:1:MET:HA	1.78	0.65
15:T:41:ARG:HH12	15:T:43:GLN:HB3	1.61	0.65
19:X:29:TRP:CE3	19:X:78:LYS:HB3	2.31	0.65
21:Z:33:LEU:HD11	21:Z:90:VAL:HG21	1.77	0.65
21:Z:70:LEU:O	21:Z:89:PHE:N	2.30	0.65
26:4:56:VAL:HG23	26:4:60:GLN:HG3	1.78	0.65
32:a:91:C:H2'	32:a:92:C:C6	2.32	0.65
32:a:99:U:O4	51:t:22:ARG:HG3	1.95	0.65
32:a:572:A:HO2'	32:a:916:G:HO2'	1.34	0.65
32:a:996:A:H2'	32:a:997:U:C6	2.31	0.65
32:a:1026:G:H3'	32:a:1026:G:OP2	1.97	0.65
32:a:1244:C:H2'	32:a:1245:A:H8	1.61	0.65
36:e:152:ARG:NH2	39:h:79:VAL:O	2.29	0.65
1:A:692:C:OP1	3:D:56:GLY:N	2.27	0.65
1:A:955:C:OP1	12:Q:87:LYS:NZ	2.23	0.65
1:A:1936:A:OP2	1:A:1962:5MC:N4	2.21	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:50:GLY:HA3	4:E:75:VAL:HG11	1.79	0.65
12:Q:1:MET:HE2	12:Q:45:GLN:HG3	1.79	0.65
32:a:410:G:N1	32:a:431:A:OP2	2.30	0.65
32:a:952:U:H2'	32:a:953:G:C8	2.32	0.65
34:c:24:ALA:HB3	34:c:29:TYR:HD1	1.61	0.65
1:A:463:G:N2	1:A:466:A:OP2	2.25	0.65
1:A:959:A:H2'	1:A:960:A:C8	2.30	0.65
1:A:2227:A:H3'	1:A:2228:G:H8	1.60	0.65
1:A:2527:C:H5''	31:9:30:PRO:HB3	1.78	0.65
1:A:2567:G:H2'	1:A:2568:C:C6	2.32	0.65
1:A:2618:G:H21	4:E:150:VAL:HG21	1.61	0.65
7:H:61:HIS:O	7:H:65:HIS:HB2	1.97	0.65
10:O:2:ILE:N	10:O:33:ALA:O	2.24	0.65
11:P:48:PRO:O	30:8:57:ARG:NH2	2.29	0.65
32:a:93:G:C4'	32:a:100:C:H2'	2.27	0.65
32:a:99:U:N3	51:t:18:GLN:HA	2.10	0.65
32:a:113:G:N3	32:a:353:A:O2'	2.29	0.65
32:a:1049:U:H4'	32:a:1050:G:H5''	1.77	0.65
32:a:1309:G:O2'	44:m:77:ASN:ND2	2.30	0.65
32:a:1358:U:OP2	32:a:1359:C:N4	2.25	0.65
39:h:86:ILE:N	39:h:134:ILE:O	2.23	0.65
44:m:25:ILE:HD11	44:m:66:LEU:HD13	1.79	0.65
49:r:47:THR:HG23	49:r:49:LYS:HG3	1.78	0.65
54:C:215:THR:OG1	54:C:219:GLY:O	2.15	0.65
55:z:67:C:H2'	55:z:68:C:O4'	1.97	0.65
1:A:577:G:O2'	1:A:1254:A:OP1	2.14	0.65
1:A:1097:U:H2'	1:A:1098:A:C4'	2.26	0.65
1:A:1783:A:HO2'	1:A:2607:G:HO2'	1.45	0.65
3:D:76:PRO:HB2	3:D:116:GLN:HE21	1.61	0.65
7:H:44:VAL:N	7:H:51:ARG:O	2.22	0.65
8:I:123:LEU:HD13	8:I:144:VAL:HG12	1.79	0.65
16:U:89:GLU:O	17:V:11:GLN:NE2	2.26	0.65
32:a:84:U:H4'	32:a:89:C:N4	2.11	0.65
32:a:96:U:OP2	32:a:100:C:H3'	1.96	0.65
32:a:195:A:O2'	32:a:196:A:O4'	2.07	0.65
32:a:322:C:H2'	32:a:323:U:C6	2.32	0.65
32:a:399:G:H2'	32:a:400:C:C6	2.31	0.65
32:a:1431:C:H2'	32:a:1432:G:O4'	1.97	0.65
37:f:1:MET:HE2	37:f:68:PRO:HD3	1.78	0.65
40:i:4:TYR:HB2	40:i:19:LEU:HB2	1.77	0.65
1:A:637:A:OP1	11:P:133:SER:OG	2.13	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1796:U:H2'	1:A:1797:C:C6	2.32	0.65
1:A:1903:G:OP1	3:D:243:GLY:N	2.27	0.65
1:A:2166:G:H1	1:A:2172:U:H5	1.45	0.65
1:A:2392:A:N6	1:A:2424:C:O2	2.30	0.65
1:A:2602:A:C5'	53:y:74:C:H5''	2.27	0.65
3:D:142:VAL:N	3:D:163:ALA:O	2.29	0.65
5:F:24:LEU:HD21	5:F:114:VAL:HG12	1.78	0.65
7:H:124:GLU:N	7:H:132:ARG:O	2.30	0.65
14:S:67:ARG:HD3	14:S:100:ALA:HB1	1.78	0.65
32:a:269:C:H2'	32:a:270:A:C8	2.31	0.65
32:a:296:U:O2'	32:a:556:C:O2	2.14	0.65
32:a:452:A:N3	47:p:72:ARG:NH1	2.45	0.65
32:a:1160:G:O6	32:a:1182:G:O6	2.15	0.65
32:a:1376:U:OP1	38:g:98:SER:OG	2.12	0.65
34:c:29:TYR:HE1	45:n:54:PRO:HG2	1.62	0.65
38:g:23:VAL:O	38:g:27:ILE:HG12	1.97	0.65
47:p:18:ARG:HD3	47:p:35:LYS:HD2	1.77	0.65
56:x:35:G:H2'	56:x:36:C:C6	2.32	0.65
1:A:679:C:H2'	1:A:680:G:H8	1.62	0.65
1:A:774:A:OP1	3:D:48:ARG:NH2	2.30	0.65
1:A:2001:A:H2'	1:A:2002:G:H8	1.62	0.65
1:A:2073:C:H5''	3:D:229:VAL:HG12	1.79	0.65
1:A:2688:U:OP1	1:A:2713:A:N6	2.29	0.65
1:A:2732:G:OP1	1:A:2733:A:H1'	1.97	0.65
6:G:33:ARG:N	6:G:162:THR:OG1	2.30	0.65
6:G:173:LEU:HB3	6:G:178:PHE:CD2	2.32	0.65
12:Q:56:ARG:HA	21:Z:180:VAL:HG22	1.78	0.65
24:2:12:GLU:O	24:2:16:LEU:HG	1.97	0.65
31:9:4:ARG:O	31:9:37:GLY:N	2.24	0.65
32:a:52:G:N2	32:a:359:U:O2	2.27	0.65
32:a:1359:C:O2'	32:a:1362:C:N4	2.30	0.65
32:a:1445:C:H2'	32:a:1446:U:O4'	1.96	0.65
33:b:187:LEU:HD12	33:b:205:ASP:HA	1.79	0.65
37:f:41:GLU:OE1	49:r:35:ARG:NH1	2.29	0.65
1:A:512:G:OP1	1:A:1234:U:O2'	2.09	0.65
1:A:680:G:H2'	1:A:681:G:C8	2.32	0.65
1:A:2024:G:H2'	1:A:2025:C:H6	1.62	0.65
2:B:61:G:H2'	2:B:62:C:C6	2.32	0.65
3:D:69:ARG:HD2	3:D:119:ALA:HB2	1.79	0.65
3:D:172:TYR:CD1	3:D:186:HIS:HA	2.32	0.65
4:E:51:PHE:O	4:E:77:ILE:HB	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:31:HIS:NE2	5:F:35:GLU:OE2	2.30	0.65
5:F:158:THR:O	5:F:164:ARG:NH1	2.30	0.65
9:N:4:TYR:CD2	16:U:100:VAL:HG11	2.31	0.65
12:Q:48:GLU:OE2	12:Q:51:ARG:NH2	2.26	0.65
12:Q:56:ARG:HD2	21:Z:183:LEU:CD1	2.26	0.65
32:a:174:C:H2'	32:a:175:C:C6	2.32	0.65
32:a:714:G:N2	42:k:119:CYS:SG	2.70	0.65
32:a:1046:A:H2'	32:a:1047:G:H5'	1.77	0.65
32:a:1052:U:O2	32:a:1206:G:O6	2.14	0.65
32:a:1403:C:N4	56:x:16:G:OP1	2.28	0.65
33:b:119:GLU:OE2	33:b:146:GLN:NE2	2.28	0.65
39:h:13:ILE:O	39:h:17:THR:HG23	1.96	0.65
1:A:186:G:H2'	1:A:187:G:H8	1.61	0.64
1:A:576:U:H2'	1:A:577:G:C8	2.32	0.64
1:A:2130:U:OP1	54:C:5:LYS:HB3	1.97	0.64
1:A:2261:C:OP1	22:0:19:LYS:NZ	2.25	0.64
1:A:2845:G:H2'	1:A:2846:G:C8	2.32	0.64
6:G:16:ARG:HB2	6:G:17:PRO:HD3	1.79	0.64
18:W:36:LEU:HD13	18:W:48:ALA:HA	1.78	0.64
20:Y:83:THR:HG1	20:Y:100:ALA:H	1.45	0.64
23:1:50:ARG:NH1	23:1:57:GLU:OE2	2.24	0.64
32:a:482:A:H2'	32:a:483:C:O4'	1.97	0.64
32:a:633:G:H2'	32:a:634:C:C6	2.32	0.64
32:a:979:C:O2	45:n:19:ARG:NE	2.28	0.64
32:a:1005:A:H5''	32:a:1006:C:H5	1.62	0.64
32:a:1038:C:H2'	32:a:1039:C:C6	2.32	0.64
32:a:1157:A:H5'	32:a:1158:C:C6	2.32	0.64
32:a:1314:C:OP2	50:s:4:SER:OG	2.07	0.64
34:c:39:ILE:HG23	34:c:91:LEU:HD11	1.79	0.64
43:l:37:CYS:O	43:l:80:HIS:N	2.27	0.64
48:q:26:GLN:HE21	48:q:37:LYS:HE3	1.61	0.64
1:A:608:A:OP2	1:A:619:G:N1	2.26	0.64
1:A:698:C:O2'	1:A:734:A:N6	2.30	0.64
1:A:833:U:H2'	1:A:834:C:C6	2.32	0.64
1:A:2590:A:H2'	1:A:2591:C:H6	1.62	0.64
1:A:2751:G:H4'	7:H:4:ILE:CD1	2.27	0.64
2:B:40:U:O4	26:4:1:MET:N	2.31	0.64
5:F:11:VAL:HG23	5:F:19:GLU:HA	1.79	0.64
6:G:15:VAL:HA	6:G:175:LEU:HD23	1.80	0.64
6:G:126:ASP:CB	6:G:130:ASN:HB2	2.27	0.64
22:0:65:GLY:HA3	22:0:83:PRO:HA	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:62:U:OP1	32:a:385:C:O2'	2.14	0.64
32:a:149:A:H2'	32:a:150:C:C6	2.31	0.64
32:a:164:U:H2'	32:a:165:C:C6	2.33	0.64
32:a:471:G:H2'	32:a:472:A:H8	1.61	0.64
32:a:1244:C:H2'	32:a:1245:A:C8	2.32	0.64
32:a:1347:G:H1'	32:a:1348:U:H5	1.62	0.64
47:p:34:GLU:OE1	47:p:59:TRP:NE1	2.28	0.64
1:A:221:A:C1'	1:A:233:A:H1'	2.27	0.64
1:A:983:A:H2'	1:A:984:A:C8	2.33	0.64
1:A:1019:U:O2'	1:A:1021:A:N7	2.27	0.64
1:A:1523:U:H2'	1:A:1524:G:C8	2.33	0.64
6:G:37:VAL:HG23	6:G:99:MET:HG3	1.79	0.64
8:I:110:ASP:N	8:I:130:TYR:OH	2.21	0.64
11:P:123:LEU:O	11:P:144:GLU:N	2.19	0.64
13:R:63:ARG:HG2	13:R:80:PHE:CE2	2.33	0.64
13:R:87:TYR:OH	13:R:117:VAL:O	2.07	0.64
14:S:30:ARG:HB3	14:S:92:TYR:CE1	2.32	0.64
18:W:7:ALA:HB2	18:W:50:VAL:CG2	2.27	0.64
22:O:50:ASN:HB3	22:O:63:VAL:HG22	1.80	0.64
32:a:21:G:H2'	32:a:22:G:C8	2.32	0.64
32:a:1376:U:H2'	32:a:1377:A:C8	2.32	0.64
32:a:1427:U:H2'	32:a:1428:A:C8	2.32	0.64
39:h:46:LYS:N	39:h:62:TYR:O	2.28	0.64
43:l:32:PHE:CG	43:l:84:LEU:HD11	2.33	0.64
1:A:33:U:O4	1:A:446:G:O2'	2.12	0.64
1:A:43:A:H2'	1:A:44:G:C8	2.32	0.64
1:A:90:U:H4'	1:A:92:A:H5'	1.79	0.64
1:A:210:C:H2'	1:A:211:A:H8	1.61	0.64
1:A:383:U:H2'	1:A:385:C:H5	1.61	0.64
1:A:1048:A:OP2	1:A:1110:G:N2	2.27	0.64
1:A:1123:C:H2'	1:A:1124:C:H6	1.62	0.64
1:A:1586:A:H2'	1:A:1587:A:O4'	1.98	0.64
1:A:1842:G:H2'	1:A:1843:C:C6	2.31	0.64
1:A:2667:C:H1'	7:H:109:PHE:CD1	2.32	0.64
1:A:2712(A):U:OP1	1:A:2714:G:H4'	1.96	0.64
4:E:52:LEU:HB3	4:E:53:PRO:HD2	1.79	0.64
6:G:114:ILE:HB	6:G:117:PHE:HB2	1.79	0.64
7:H:159:GLU:HG2	7:H:169:VAL:HG11	1.78	0.64
17:V:5:VAL:O	17:V:11:GLN:HA	1.97	0.64
17:V:37:VAL:HG23	17:V:56:SER:HA	1.78	0.64
21:Z:108:PRO:HB2	21:Z:111:VAL:HG23	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:501:C:O2	32:a:549:C:O2'	2.15	0.64
32:a:944:G:N1	32:a:1338:G:OP2	2.30	0.64
34:c:157:ILE:HD12	34:c:164:ARG:HE	1.63	0.64
53:y:62:C:H2'	53:y:63:G:C8	2.32	0.64
55:z:31:A:C2'	55:z:32:U:H5'	2.27	0.64
1:A:634:C:H2'	1:A:635:C:C6	2.32	0.64
1:A:643:A:N1	1:A:2369:A:O2'	2.29	0.64
1:A:848:G:O6	1:A:928:G:H2'	1.97	0.64
1:A:1079:C:H2'	1:A:1080:C:C6	2.32	0.64
3:D:184:LYS:HG3	3:D:271:ILE:HD11	1.78	0.64
4:E:178:GLU:HG2	4:E:179:GLU:HG2	1.80	0.64
5:F:116:ASP:OD2	5:F:117:ARG:NH1	2.31	0.64
26:4:42:PHE:HA	26:4:46:GLN:OE1	1.97	0.64
32:a:61:G:H2'	32:a:62:U:C6	2.33	0.64
32:a:976:G:N2	32:a:1363(A):C:OP2	2.30	0.64
32:a:1526:G:H2'	32:a:1527:C:C6	2.33	0.64
39:h:82:HIS:N	39:h:138:TRP:O	2.30	0.64
1:A:706:A:N6	1:A:725:G:H1'	2.12	0.64
1:A:797:C:P	5:F:62:ARG:HB2	2.38	0.64
1:A:1334:G:O3'	19:X:65:ARG:NH1	2.30	0.64
1:A:1760:A:H2'	1:A:1761:C:C6	2.32	0.64
1:A:1842:G:H1	1:A:1898:U:H3	1.45	0.64
1:A:1885:A:H2'	1:A:1886:C:O4'	1.98	0.64
1:A:1960:A:HO2'	32:a:1484:C:HO2'	1.43	0.64
5:F:150:GLY:HA2	5:F:172:TRP:CD2	2.33	0.64
22:0:38:VAL:HG12	22:0:40:GLN:HB3	1.80	0.64
26:4:63:TYR:CE1	50:s:5:LEU:HD13	2.33	0.64
32:a:97:G:H1'	32:a:104:G:O6	1.97	0.64
32:a:737:A:H1'	37:f:73:ASN:ND2	2.13	0.64
33:b:28:PHE:CD2	33:b:190:THR:HA	2.32	0.64
34:c:63:ASN:HB3	34:c:98:ASN:HB2	1.79	0.64
38:g:133:GLY:O	38:g:137:LYS:N	2.26	0.64
41:j:57:LYS:HG3	41:j:60:ARG:HH21	1.62	0.64
44:m:4:ILE:HG12	44:m:5:ALA:H	1.63	0.64
53:y:10:G:H3'	53:y:10:G:OP2	1.97	0.64
3:D:75:ILE:HG23	3:D:98:VAL:HG22	1.78	0.64
4:E:25:VAL:HG12	4:E:181:LEU:HD12	1.78	0.64
7:H:164:TYR:N	7:H:167:GLU:OE1	2.21	0.64
10:O:120:GLU:OE1	15:T:67:SER:OG	2.14	0.64
11:P:90:ARG:HG3	11:P:91:PHE:CD1	2.33	0.64
32:a:555:C:H2'	32:a:556:C:C6	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:738:C:OP1	37:f:92:LYS:NZ	2.30	0.64
37:f:48:LEU:HD13	37:f:52:ILE:HD12	1.79	0.64
44:m:23:TYR:CE2	44:m:70:LEU:HD22	2.32	0.64
50:s:62:ILE:HA	50:s:66:MET:SD	2.38	0.64
1:A:680:G:H2'	1:A:681:G:H8	1.62	0.64
1:A:851:U:O2'	25:3:42:ALA:O	2.15	0.64
1:A:897:C:H2'	1:A:898:C:C6	2.32	0.64
1:A:1278:A:H2'	1:A:1279:G:C8	2.32	0.64
1:A:1529:G:N2	1:A:1540:U:O2	2.30	0.64
1:A:1645:G:H5''	1:A:1646:C:H5'	1.79	0.64
1:A:1932:A:H2'	1:A:1933:G:O4'	1.98	0.64
2:B:13:A:O2'	2:B:14:U:H3'	1.97	0.64
4:E:178:GLU:OE1	4:E:178:GLU:N	2.31	0.64
8:I:85:GLU:CG	37:f:21:LEU:HD23	2.28	0.64
10:O:49:ARG:NH1	32:a:1422:G:O3'	2.30	0.64
12:Q:116:GLU:OE2	12:Q:119:ARG:NH2	2.26	0.64
17:V:17:GLY:N	17:V:96:ILE:O	2.29	0.64
32:a:674:G:H1	32:a:716:A:H2	1.45	0.64
32:a:1060:C:C5	34:c:2:GLY:HA2	2.33	0.64
32:a:1106:G:H2'	32:a:1107:C:C6	2.33	0.64
32:a:1286:A:H2'	32:a:1287:A:C4'	2.24	0.64
35:d:18:LYS:HA	35:d:33:MET:HG3	1.78	0.64
41:j:32:ALA:HB1	41:j:33:GLN:HA	1.79	0.64
1:A:371:A:N6	1:A:402:A:OP2	2.30	0.64
1:A:1076:C:H4'	1:A:1077:A:H5'	1.79	0.64
1:A:1105:U:H2'	1:A:1106:G:C8	2.33	0.64
1:A:2094:G:H5'	8:I:25:TYR:HB2	1.80	0.64
1:A:2360:A:O2'	11:P:61:ARG:NH1	2.29	0.64
1:A:2625:G:H2'	1:A:2626:C:C6	2.32	0.64
6:G:120:LEU:O	6:G:181:ARG:N	2.16	0.64
9:N:67:LEU:O	9:N:88:GLU:HG3	1.98	0.64
32:a:544:G:OP2	35:d:66:ARG:NH2	2.25	0.64
32:a:584:G:H2'	32:a:585:G:C8	2.32	0.64
32:a:766:A:H2'	32:a:767:A:O4'	1.98	0.64
32:a:928:G:H4'	32:a:1533:C:H2'	1.79	0.64
32:a:1130:A:H2'	32:a:1131:G:C8	2.32	0.64
32:a:1391:U:H2'	32:a:1392:G:C8	2.33	0.64
35:d:11:LEU:CD2	35:d:66:ARG:HD3	2.28	0.64
1:A:1709:U:H2'	1:A:1710:C:C6	2.33	0.64
1:A:1791:A:H4'	3:D:206:LEU:HB2	1.79	0.64
1:A:2174:C:H1'	54:C:218:MET:HG3	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2377:A:O2'	14:S:112:PHE:O	2.10	0.64
1:A:2718:G:O2'	1:A:2847:U:OP1	2.14	0.64
8:I:50:ARG:O	8:I:54:GLN:HG2	1.98	0.64
16:U:8:VAL:HG12	16:U:12:ARG:HG3	1.80	0.64
19:X:1:MET:HE3	19:X:3:THR:HG21	1.80	0.64
32:a:875:C:H2'	32:a:876:G:H5''	1.80	0.64
35:d:68:TYR:CE2	35:d:97:LEU:HB3	2.33	0.64
37:f:29:ALA:HA	37:f:32:ASN:HD22	1.62	0.64
47:p:43:LYS:HG3	47:p:48:TRP:CD2	2.32	0.64
1:A:214:G:O2'	1:A:215:G:O5'	2.16	0.63
1:A:278:A:H2'	1:A:279:C:C6	2.33	0.63
1:A:652(C):A:H61	1:A:654:A:H1'	1.63	0.63
1:A:910:A:O2'	1:A:911:A:O5'	2.14	0.63
1:A:1675:C:H2'	1:A:1676:A:O4'	1.98	0.63
1:A:2183:C:H2'	1:A:2184:G:C8	2.33	0.63
1:A:2199:A:O2'	1:A:2200:C:OP1	2.14	0.63
4:E:37:ARG:HB2	4:E:46:ALA:HB3	1.79	0.63
17:V:6:LYS:HB2	17:V:38:LEU:HD21	1.77	0.63
17:V:25:LEU:N	17:V:92:THR:OG1	2.30	0.63
32:a:104:G:H2'	32:a:105:G:C4'	2.28	0.63
32:a:528:C:N4	43:l:49:ASN:OD1	2.20	0.63
32:a:1012:U:O2	32:a:1017:G:O6	2.15	0.63
32:a:1270:C:H2'	32:a:1271:G:C8	2.33	0.63
33:b:158:LEU:HD12	33:b:159:PRO:HD2	1.79	0.63
34:c:6:HIS:CD2	45:n:49:HIS:HB3	2.32	0.63
37:f:33:TYR:HD2	37:f:75:LEU:HD23	1.62	0.63
46:o:79:ARG:HA	46:o:82:ILE:CD1	2.28	0.63
51:t:43:LEU:HD13	51:t:51:GLU:HB3	1.80	0.63
54:C:182:PRO:O	54:C:186:ALA:N	2.31	0.63
1:A:77:C:H2'	1:A:78:A:H8	1.62	0.63
1:A:83:G:N1	1:A:102:G:O2'	2.28	0.63
1:A:622:G:OP2	11:P:108:LYS:NZ	2.19	0.63
1:A:1281:G:H2'	1:A:1282:U:C6	2.33	0.63
1:A:1690:A:H2'	1:A:1691:C:O4'	1.98	0.63
1:A:2099:U:H2'	1:A:2100:G:C8	2.32	0.63
2:B:49:C:OP2	14:S:30:ARG:NH1	2.31	0.63
5:F:164:ARG:O	5:F:168:ARG:HG3	1.98	0.63
21:Z:144:LEU:HD21	21:Z:150:LEU:HD11	1.80	0.63
32:a:65:U:P	32:a:71:C:C4	2.91	0.63
32:a:547:A:OP2	35:d:2:GLY:N	2.31	0.63
32:a:590:C:OP1	39:h:30:ARG:N	2.25	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1013:G:N2	32:a:1016:A:OP2	2.20	0.63
32:a:1342:C:H2'	32:a:1343:G:C8	2.32	0.63
32:a:1513:A:H2'	32:a:1514:C:C6	2.34	0.63
33:b:164:VAL:HB	33:b:186:ALA:CB	2.29	0.63
37:f:94:GLN:HB3	49:r:32:ARG:HH11	1.61	0.63
40:i:26:VAL:CG1	40:i:33:PHE:HB2	2.29	0.63
41:j:25:GLU:O	41:j:29:ARG:HG2	1.98	0.63
43:l:109:GLY:HA2	43:l:120:TYR:O	1.99	0.63
51:t:17:ARG:O	51:t:20:LEU:N	2.32	0.63
52:u:12:LYS:HE3	52:u:19:GLY:HA3	1.80	0.63
53:y:62:C:H2'	53:y:63:G:H8	1.64	0.63
1:A:906:G:H2'	1:A:907:U:H5''	1.81	0.63
1:A:1053:C:O2'	1:A:1054:A:OP1	2.12	0.63
1:A:2241:A:H2'	1:A:2242:G:C8	2.33	0.63
1:A:2805:G:H2'	1:A:2807:G:C8	2.34	0.63
1:A:2859:G:H2'	1:A:2860:A:C8	2.33	0.63
2:B:49:C:OP1	14:S:97:ARG:N	2.19	0.63
6:G:119:GLY:HA3	6:G:181:ARG:HA	1.80	0.63
7:H:76:VAL:O	7:H:80:SER:OG	2.16	0.63
8:I:47:LEU:O	8:I:51:ILE:HG13	1.98	0.63
20:Y:76:CYS:SG	20:Y:99:CYS:HB2	2.38	0.63
32:a:63:C:H4'	32:a:380:G:O2'	1.98	0.63
32:a:102:G:C1'	32:a:151:A:H1'	2.29	0.63
32:a:314:C:O2'	32:a:315:A:H5'	1.99	0.63
32:a:332:G:H4'	51:t:12:ALA:HB1	1.81	0.63
32:a:449:C:N4	32:a:484:G:O6	2.19	0.63
32:a:600:C:H5''	39:h:97:VAL:HG23	1.80	0.63
32:a:687:A:H4'	42:k:47:VAL:HG22	1.80	0.63
34:c:17:ASP:OD2	34:c:21:ARG:NH1	2.31	0.63
34:c:150:LYS:HG3	34:c:169:ALA:HB2	1.78	0.63
36:e:96:PRO:HA	36:e:117:ASP:OD2	1.99	0.63
46:o:6:GLU:O	46:o:10:LYS:N	2.31	0.63
46:o:79:ARG:HA	46:o:82:ILE:HD11	1.80	0.63
48:q:23:VAL:O	48:q:40:LYS:N	2.31	0.63
1:A:482:A:O2'	1:A:497:A:N1	2.27	0.63
1:A:629:G:N3	1:A:639:U:O2'	2.31	0.63
1:A:1753:G:N2	1:A:1756:G:O5'	2.31	0.63
1:A:2148:G:H2'	1:A:2149:G:H8	1.63	0.63
1:A:2757:A:N1	7:H:67:LEU:HD22	2.14	0.63
6:G:73:ALA:HB2	6:G:86:MET:HB3	1.80	0.63
9:N:51:PHE:CD1	9:N:119:ARG:HG3	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:Z:91:LEU:HD11	21:Z:130:PRO:HB3	1.80	0.63
21:Z:108:PRO:HG2	21:Z:117:LEU:HD13	1.81	0.63
22:0:46:LYS:N	22:0:77:ARG:O	2.30	0.63
29:7:20:ALA:HA	29:7:23:ARG:HH21	1.63	0.63
32:a:171:A:H2'	32:a:172:A:O4'	1.98	0.63
32:a:413:G:H4'	32:a:414:A:H5'	1.80	0.63
32:a:579:G:O2'	46:o:54:ARG:NE	2.30	0.63
32:a:900:A:H2'	32:a:901:A:C8	2.32	0.63
32:a:1096:C:H2'	32:a:1097:C:C6	2.33	0.63
32:a:1130:A:H5'	40:i:18:PHE:CE2	2.33	0.63
32:a:1366:C:H2'	32:a:1367:C:C6	2.32	0.63
32:a:1417:G:H2'	32:a:1482:G:N2	2.14	0.63
40:i:9:ARG:H	40:i:79:LEU:HD23	1.62	0.63
41:j:33:GLN:O	41:j:74:ILE:HA	1.98	0.63
1:A:794:G:H2'	1:A:795:C:C6	2.33	0.63
1:A:1123:C:H2'	1:A:1124:C:C6	2.34	0.63
1:A:1286:A:H1'	1:A:1288:U:OP2	1.99	0.63
1:A:2113:U:H3	1:A:2168:G:H5''	1.63	0.63
1:A:2169:A:H5''	54:C:130:ILE:HD11	1.80	0.63
1:A:2836:U:H2'	1:A:2837:G:C8	2.34	0.63
20:Y:14:LEU:HD12	20:Y:23:ARG:O	1.99	0.63
25:3:8:LEU:HD13	25:3:31:LEU:HD13	1.80	0.63
26:4:12:ALA:HB3	26:4:24:THR:HG23	1.80	0.63
32:a:407:G:H5''	35:d:115:ARG:CG	2.29	0.63
32:a:663:A:H5'	32:a:836:G:OP1	1.99	0.63
32:a:1062:U:H2'	32:a:1063:C:C6	2.34	0.63
32:a:1403:C:O2'	32:a:1499:A:N1	2.28	0.63
33:b:28:PHE:HA	33:b:194:PRO:HG2	1.80	0.63
33:b:61:LEU:HD11	33:b:66:GLY:HA3	1.81	0.63
42:k:40:ILE:HG23	42:k:75:TYR:HD2	1.63	0.63
46:o:82:ILE:HD12	46:o:88:ARG:HH12	1.61	0.63
50:s:22:LEU:HD12	50:s:31:ILE:HD11	1.80	0.63
55:z:54:U:O2	55:z:58:A:N7	2.30	0.63
55:z:66:U:H2'	55:z:67:C:C6	2.33	0.63
1:A:603:A:H4'	1:A:604:G:C5'	2.28	0.63
1:A:1394:U:H3'	1:A:1395:A:H5''	1.80	0.63
1:A:1409:C:H2'	1:A:1410:G:C8	2.34	0.63
1:A:1529:G:O6	1:A:1541:G:N2	2.32	0.63
1:A:1605:C:H2'	1:A:1606:G:O4'	1.97	0.63
1:A:1790:C:OP2	1:A:1828:G:N1	2.28	0.63
1:A:2379:G:H2'	1:A:2380:C:C6	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2636:U:H3	1:A:2782:G:H1	1.47	0.63
2:B:62:C:H2'	2:B:63:G:C8	2.34	0.63
5:F:132:VAL:HG12	5:F:139:PHE:HA	1.81	0.63
7:H:37:VAL:HG21	7:H:72:ILE:HD11	1.78	0.63
14:S:94:TYR:CZ	14:S:99:LYS:HG3	2.33	0.63
16:U:48:ALA:O	16:U:52:ARG:HB2	1.99	0.63
21:Z:180:VAL:HA	21:Z:183:LEU:HD12	1.79	0.63
32:a:147:G:H2'	32:a:148:G:C8	2.34	0.63
32:a:401:C:O2'	32:a:621:A:N3	2.28	0.63
32:a:551:U:H2'	32:a:552:U:C6	2.33	0.63
32:a:743:U:H2'	32:a:744:C:C6	2.34	0.63
32:a:932:C:H2'	32:a:933:G:C8	2.34	0.63
32:a:952:U:H2'	32:a:953:G:H8	1.63	0.63
32:a:996:A:H2'	32:a:997:U:H6	1.64	0.63
32:a:1047:G:H5''	45:n:4:LYS:HD3	1.80	0.63
32:a:1148:U:O2'	40:i:66:ARG:NH1	2.32	0.63
33:b:62:ALA:HB2	33:b:222:ILE:HG22	1.81	0.63
35:d:65:ARG:HH12	35:d:72:GLU:HB2	1.62	0.63
42:k:92:GLU:OE1	49:r:87:ARG:NH1	2.31	0.63
44:m:59:TYR:O	44:m:63:THR:HG23	1.99	0.63
46:o:43:LEU:HD12	46:o:56:LEU:HD22	1.81	0.63
49:r:30:ASP:HB3	49:r:33:ASP:HB2	1.81	0.63
1:A:38:A:H2'	1:A:39:C:C6	2.33	0.63
1:A:699:A:H2'	1:A:700:G:O4'	1.98	0.63
1:A:1028:A:H2'	1:A:1029:A:C8	2.34	0.63
1:A:1112:G:O2'	1:A:1113:U:H5'	1.98	0.63
1:A:2166:G:H3'	1:A:2167:U:C6	2.34	0.63
1:A:2531:A:C8	7:H:175:LYS:HB2	2.33	0.63
1:A:2656:U:H3	1:A:2665:A:H8	1.39	0.63
1:A:2819:G:H2'	1:A:2821:A:N7	2.13	0.63
1:A:2820:A:O2'	1:A:2821:A:OP1	2.15	0.63
2:B:115:G:O4'	14:S:47:THR:HB	1.99	0.63
3:D:138:VAL:HG23	3:D:167:GLY:HA2	1.81	0.63
5:F:29:ASN:H	5:F:112:MET:HE2	1.63	0.63
6:G:161:THR:HG22	6:G:163:ALA:H	1.63	0.63
21:Z:145:GLU:N	21:Z:148:ASP:OD2	2.22	0.63
32:a:66:G:H4'	32:a:198:G:O2'	1.99	0.63
32:a:559:A:H4'	32:a:560:U:H3'	1.81	0.63
32:a:744:C:H2'	32:a:745:C:H6	1.64	0.63
32:a:794:A:H2'	32:a:795:C:C6	2.33	0.63
32:a:1227:A:OP1	50:s:80:TYR:OH	2.10	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1428:A:H2'	32:a:1429:C:C6	2.33	0.63
34:c:190:ARG:HB2	34:c:195:VAL:HG22	1.80	0.63
50:s:41:VAL:HG22	50:s:42:PRO:HD2	1.81	0.63
1:A:630:G:N2	1:A:633:A:OP2	2.24	0.63
1:A:637:A:H5''	11:P:117:GLU:OE2	1.99	0.63
1:A:1039:G:O2'	1:A:1040:C:H5'	1.99	0.63
1:A:1107:G:H2'	1:A:1108:U:C6	2.34	0.63
1:A:2683:C:OP1	15:T:55:ASN:ND2	2.29	0.63
2:B:5:C:OP1	2:B:61:G:O2'	2.17	0.63
4:E:48:GLN:HG2	4:E:78:LEU:HD11	1.80	0.63
6:G:151:ALA:O	6:G:153:ARG:NH1	2.32	0.63
7:H:24:VAL:CG2	7:H:35:VAL:HB	2.28	0.63
9:N:21:LYS:NZ	9:N:140:VAL:OXT	2.30	0.63
17:V:29:PRO:HA	17:V:61:VAL:HG23	1.81	0.63
18:W:45:TYR:CZ	18:W:49:LYS:HD2	2.33	0.63
32:a:38:G:H22	32:a:397:A:H5''	1.64	0.63
32:a:96:U:H5''	32:a:97:G:O5'	1.99	0.63
32:a:872:A:O2'	32:a:873:A:H3'	1.98	0.63
32:a:877:C:OP1	39:h:88:LYS:NZ	2.22	0.63
32:a:1240:U:OP1	38:g:119:ARG:NH2	2.22	0.63
32:a:1371:G:H2'	32:a:1372:U:C6	2.33	0.63
32:a:1412:C:H2'	32:a:1413:A:C8	2.34	0.63
34:c:77:ILE:O	34:c:83:ARG:N	2.32	0.63
39:h:69:ARG:HG3	39:h:76:PRO:HA	1.80	0.63
39:h:103:VAL:CG2	39:h:110:ALA:HB2	2.28	0.63
46:o:4:THR:HG23	46:o:7:GLU:H	1.64	0.63
1:A:250:G:H2'	1:A:251:A:C8	2.34	0.63
1:A:495:G:H2'	1:A:496:G:H5''	1.80	0.63
1:A:845:G:OP2	1:A:845:G:N2	2.21	0.63
1:A:1323:U:OP1	18:W:84:ARG:NE	2.32	0.63
1:A:1862:G:H2'	1:A:1863:G:C8	2.34	0.63
1:A:2530:A:N7	7:H:172:LYS:NZ	2.39	0.63
16:U:49:HIS:HA	16:U:52:ARG:HB3	1.81	0.63
20:Y:44:ILE:HD13	20:Y:64:GLU:HG3	1.81	0.63
32:a:98:G:O2'	32:a:105:G:O6	2.17	0.63
32:a:392:G:O2'	32:a:483:C:O2'	2.15	0.63
32:a:1080:A:H4'	36:e:16:THR:HG21	1.79	0.63
33:b:122:PHE:CZ	33:b:139:LYS:HD3	2.34	0.63
35:d:10:ARG:O	35:d:14:ARG:N	2.28	0.63
40:i:118:LYS:H	40:i:121:ARG:HB3	1.64	0.63
55:z:74:C:H2'	55:z:75:C:C6	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:84:A:OP2	20:Y:8:LYS:NZ	2.24	0.62
1:A:139(A):G:O2'	19:X:41:ASN:OD1	2.15	0.62
1:A:347:A:H2'	1:A:348:G:C8	2.32	0.62
1:A:729:G:H5'	1:A:730:C:H5''	1.81	0.62
1:A:796:C:H2'	1:A:797:C:C6	2.34	0.62
1:A:1470:G:O2'	1:A:1520:G:O6	2.15	0.62
1:A:1666:G:N3	10:O:3:GLN:NE2	2.47	0.62
1:A:2317:C:H3'	1:A:2318:G:N2	2.14	0.62
1:A:2881:C:C2'	1:A:2882:A:H5'	2.29	0.62
1:A:2888:C:H2'	1:A:2889:C:C6	2.34	0.62
7:H:96:ALA:HB2	7:H:105:LEU:CD1	2.29	0.62
8:I:110:ASP:H	8:I:130:TYR:HH	1.47	0.62
9:N:40:PRO:HD3	16:U:71:GLN:NE2	2.13	0.62
15:T:33:LYS:HA	15:T:42:ILE:HG13	1.79	0.62
23:l:24:ALA:O	23:l:29:GLY:N	2.32	0.62
32:a:106:C:H2'	32:a:107:G:O4'	1.99	0.62
32:a:498:U:O2	32:a:547:A:N7	2.31	0.62
32:a:553:A:O4'	43:l:31:PRO:HA	1.99	0.62
32:a:1284:C:OP2	32:a:1285:A:O2'	2.17	0.62
35:d:68:TYR:OH	35:d:98:GLU:OE2	2.13	0.62
38:g:15:ASP:OD1	38:g:20:ASP:N	2.30	0.62
39:h:124:ALA:O	39:h:128:GLY:N	2.31	0.62
1:A:948:G:N2	1:A:985:C:OP1	2.25	0.62
1:A:1057:A:O2'	1:A:1058:G:OP1	2.17	0.62
1:A:1418:G:O2'	1:A:1580:A:N6	2.31	0.62
1:A:1529:G:O2'	1:A:1530:C:H5'	1.98	0.62
1:A:2129:C:P	54:C:6:ARG:HB3	2.39	0.62
1:A:2750:A:OP2	7:H:62:LYS:NZ	2.21	0.62
3:D:183:ARG:HG2	3:D:184:LYS:O	1.99	0.62
6:G:131:TYR:HB3	6:G:159:VAL:CG1	2.29	0.62
6:G:173:LEU:HD22	6:G:178:PHE:CE2	2.34	0.62
10:O:16:ALA:HA	10:O:46:ALA:HA	1.82	0.62
10:O:64:ARG:NH1	15:T:70:VAL:HG21	2.14	0.62
32:a:64:G:N3	32:a:69:G:H4'	2.13	0.62
32:a:105:G:C2'	32:a:106:C:H5'	2.29	0.62
32:a:128:G:H4'	48:q:3:LYS:HG2	1.81	0.62
32:a:288:A:H2'	32:a:289:G:H4'	1.81	0.62
32:a:288:A:O2'	32:a:289:G:O3'	2.16	0.62
32:a:338:A:H2'	32:a:339:C:C6	2.34	0.62
32:a:375:U:O2'	47:p:6:LEU:O	2.17	0.62
32:a:407:G:H5''	35:d:115:ARG:CD	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:471:G:H2'	32:a:472:A:C8	2.35	0.62
32:a:1071:C:H2'	32:a:1072:G:H8	1.64	0.62
32:a:1292:U:H2'	32:a:1293:G:C8	2.33	0.62
34:c:20:SER:OG	34:c:57:ILE:O	2.09	0.62
46:o:5:LYS:O	46:o:9:GLN:N	2.16	0.62
54:C:50:ASP:N	54:C:56:GLN:OE1	2.29	0.62
54:C:113:VAL:HG12	54:C:138:PRO:HG3	1.81	0.62
1:A:143(A):G:H2'	1:A:143(B):C:C6	2.34	0.62
1:A:284:U:H2'	1:A:285:C:C6	2.34	0.62
1:A:297:C:H2'	1:A:298:G:O4'	1.98	0.62
1:A:607:U:H5''	5:F:103:LYS:HE3	1.80	0.62
1:A:642:G:HO2'	1:A:2349:G:HO2'	1.43	0.62
1:A:1019:U:O2'	1:A:1020:A:H5'	1.98	0.62
1:A:1059:G:OP2	1:A:1060:U:O2'	2.12	0.62
1:A:1223:G:N2	1:A:1226:A:OP2	2.26	0.62
1:A:1905:C:O2'	1:A:1929:G:H1'	1.98	0.62
1:A:2176:A:H5'	54:C:221:SER:HB3	1.82	0.62
1:A:2539:C:O2'	31:9:35:ARG:NH2	2.32	0.62
1:A:2877:G:H2'	1:A:2878:U:C6	2.34	0.62
8:I:77:LEU:O	8:I:143:SER:N	2.31	0.62
8:I:92:VAL:CG2	8:I:120:ILE:HB	2.28	0.62
12:Q:55:VAL:HG21	21:Z:183:LEU:HD21	1.80	0.62
13:R:55:ALA:HA	13:R:80:PHE:CE1	2.33	0.62
32:a:99:U:OP1	51:t:14:LYS:HG2	1.98	0.62
32:a:189(M):G:H2'	32:a:190:U:C6	2.34	0.62
32:a:595:G:H1'	32:a:596:C:H5	1.63	0.62
32:a:1491:G:O2'	32:a:1492:A:OP1	2.15	0.62
32:a:1520:G:H2'	32:a:1521:G:H8	1.64	0.62
35:d:68:TYR:HE2	35:d:97:LEU:HB3	1.64	0.62
55:z:26:A:H2'	55:z:27:G:H5'	1.80	0.62
55:z:62:C:H2'	55:z:63:G:C8	2.35	0.62
1:A:363(F):U:H3'	1:A:363(G):A:C8	2.34	0.62
1:A:383:U:H2'	1:A:385:C:C5	2.33	0.62
1:A:557:U:H2'	1:A:558:G:C8	2.34	0.62
1:A:557:U:H2'	1:A:558:G:H8	1.65	0.62
1:A:910:A:H2'	1:A:911:A:C8	2.35	0.62
1:A:1587:A:H2'	1:A:1588:C:C6	2.34	0.62
1:A:2074:U:H2'	1:A:2075:U:C6	2.35	0.62
1:A:2308:G:O2'	1:A:2310:A:N7	2.20	0.62
1:A:2803:C:H2'	1:A:2804:C:C6	2.34	0.62
4:E:32:PRO:HA	4:E:90:THR:HA	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:107:LEU:HD23	6:G:111:LEU:CD1	2.30	0.62
20:Y:87:LYS:CG	20:Y:95:LYS:HD2	2.29	0.62
22:O:8:GLY:CA	53:y:2:G:H5''	2.29	0.62
32:a:284:G:H2'	32:a:285:G:H8	1.63	0.62
32:a:327:A:H1'	32:a:329:A:O4'	1.99	0.62
32:a:539:A:H2'	32:a:540:G:C8	2.34	0.62
32:a:619:U:N3	35:d:134:ASP:OD1	2.22	0.62
32:a:858:G:O6	32:a:869:G:H3'	1.99	0.62
32:a:1228:C:H4'	44:m:115:LYS:O	1.99	0.62
32:a:1536:C:H2'	32:a:1537:U:C6	2.34	0.62
1:A:272(A):A:HO2'	1:A:364:C:HO2'	1.48	0.62
1:A:2052:G:H4'	4:E:143:ASN:O	2.00	0.62
1:A:2133:G:H3'	1:A:2157:G:H21	1.64	0.62
1:A:2285:C:OP2	28:6:6:ARG:HD2	1.99	0.62
1:A:2526:G:N2	1:A:2537:U:O2	2.24	0.62
1:A:2543:G:H5'	1:A:2767:C:OP1	1.99	0.62
1:A:2666:C:H2'	1:A:2667:C:O4'	1.98	0.62
1:A:2680:C:H5'	4:E:189:PRO:HA	1.82	0.62
6:G:115:ARG:HB2	6:G:136:ARG:HH21	1.63	0.62
15:T:36:GLU:OE2	15:T:41:ARG:NH2	2.33	0.62
21:Z:4:ARG:HH21	21:Z:60:GLU:HG2	1.65	0.62
32:a:222:U:H2'	32:a:223:U:C6	2.34	0.62
32:a:324:G:OP1	51:t:22:ARG:NH2	2.31	0.62
32:a:441:A:H3'	32:a:442:C:H6	1.63	0.62
32:a:886:G:N2	32:a:911:U:O2	2.28	0.62
32:a:932:C:H4'	38:g:4:ARG:NH2	2.15	0.62
32:a:1030(B):G:H2'	32:a:1030(D):G:OP2	1.99	0.62
32:a:1355:G:H2'	32:a:1356:G:C8	2.34	0.62
32:a:1481:U:H2'	32:a:1482:G:C8	2.35	0.62
35:d:31:CYS:HB3	35:d:34:GLU:CG	2.29	0.62
35:d:173:TRP:CZ3	35:d:193:ASP:HB3	2.34	0.62
36:e:57:LYS:HG2	36:e:61:TYR:HE2	1.65	0.62
43:l:37:CYS:HB2	43:l:81:SER:HB2	1.80	0.62
44:m:82:MET:HB3	44:m:93:ARG:HD3	1.79	0.62
51:t:92:LEU:HA	51:t:95:ALA:HB3	1.80	0.62
53:y:59:A:H2'	53:y:60:U:O4'	1.99	0.62
54:C:185:LEU:O	54:C:189:ILE:N	2.22	0.62
1:A:571:A:O2'	17:V:78:LYS:HE2	1.99	0.62
1:A:671:C:OP2	11:P:33:ARG:NH2	2.32	0.62
1:A:879:G:H2'	1:A:880:G:C8	2.34	0.62
1:A:970:C:H2'	1:A:971:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:984:A:OP1	1:A:985:C:N4	2.22	0.62
1:A:1013:C:O2'	1:A:1014:U:H5'	2.00	0.62
1:A:1709:U:H2'	1:A:1710:C:H6	1.65	0.62
1:A:2156:G:H3'	1:A:2157:G:C8	2.34	0.62
1:A:2687:U:H2'	1:A:2688:U:O4'	1.98	0.62
5:F:184:TYR:CE2	5:F:188:ARG:HD2	2.34	0.62
7:H:41:MET:HE3	7:H:64:LEU:HB2	1.80	0.62
19:X:65:ARG:CB	19:X:70:LEU:HD23	2.30	0.62
32:a:19:C:OP1	36:e:125:SER:OG	2.09	0.62
32:a:99:U:C4	51:t:18:GLN:HA	2.35	0.62
32:a:1175:G:H2'	32:a:1176:A:C8	2.34	0.62
32:a:1241:G:H2'	32:a:1242:C:C6	2.35	0.62
32:a:1403:C:H2'	32:a:1499:A:H61	1.64	0.62
54:C:86:ALA:O	54:C:91:ALA:HB3	1.98	0.62
1:A:189:G:OP2	23:1:14:VAL:HG11	2.00	0.62
1:A:636:G:OP2	11:P:113:LYS:NZ	2.23	0.62
1:A:831:G:O2'	11:P:38:GLN:OE1	2.16	0.62
1:A:1260:G:O2'	1:A:1261:C:H5'	2.00	0.62
1:A:2734:A:H2'	1:A:2735:G:O4'	2.00	0.62
1:A:2810:A:H4'	4:E:61:ARG:HD3	1.81	0.62
6:G:73:ALA:H	6:G:86:MET:H	1.46	0.62
7:H:46:GLU:HB2	7:H:49:VAL:O	1.99	0.62
24:2:19:VAL:HA	24:2:22:GLU:CD	2.24	0.62
32:a:134:A:H1'	32:a:325:A:C5	2.35	0.62
32:a:439:A:C5	32:a:441:A:H1'	2.35	0.62
32:a:966:M2G:H2'	32:a:967:5MC:C6	2.34	0.62
32:a:1034:G:H2'	32:a:1035:A:C8	2.34	0.62
34:c:20:SER:HB2	34:c:40:ARG:NH2	2.15	0.62
43:l:26:ALA:HA	43:l:64:TYR:HD2	1.62	0.62
55:z:20:U:OP2	55:z:57:G:N2	2.33	0.62
1:A:644:A:H2'	1:A:646:A:C8	2.35	0.62
1:A:1198:U:H2'	1:A:1199:U:C6	2.35	0.62
1:A:2405:G:O2'	1:A:2411:A:N6	2.32	0.62
1:A:2503:2MA:O2'	1:A:2505:G:OP2	2.09	0.62
2:B:62:C:H2'	2:B:63:G:H8	1.65	0.62
2:B:68:C:H2'	2:B:69:G:O4'	2.00	0.62
3:D:30:GLU:HG3	3:D:32:SER:H	1.63	0.62
3:D:78:LYS:NZ	3:D:114:GLY:HA2	2.15	0.62
5:F:162:LEU:O	5:F:166:ALA:HB2	1.99	0.62
7:H:105:LEU:O	7:H:113:VAL:N	2.32	0.62
20:Y:31:LEU:O	20:Y:35:TYR:N	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:488:C:H2'	32:a:489:C:C6	2.35	0.62
32:a:1256:A:H5'	32:a:1258:G:N9	2.15	0.62
35:d:50:ARG:HH12	36:e:10:MET:HB2	1.65	0.62
35:d:98:GLU:CB	35:d:189:PRO:HG2	2.29	0.62
45:n:48:ALA:HA	45:n:53:LEU:HD12	1.80	0.62
53:y:35:A:H2'	53:y:36:U:O2	2.00	0.62
1:A:503:A:H4'	1:A:505:A:H5''	1.81	0.62
1:A:1816:G:H3'	3:D:62:TYR:CE1	2.34	0.62
1:A:2572:A:H5''	1:A:2574:G:H4'	1.82	0.62
3:D:77:ALA:HB2	3:D:97:TYR:CD1	2.35	0.62
8:I:83:ALA:CB	8:I:88:ILE:HA	2.29	0.62
15:T:31:SER:HA	15:T:44:ASP:OD1	2.00	0.62
26:4:16:CYS:HA	26:4:33:VAL:CG2	2.30	0.62
32:a:444:C:H2'	32:a:445:G:H8	1.65	0.62
32:a:483:C:OP2	32:a:484:G:O2'	2.10	0.62
32:a:688:G:H2'	32:a:689:C:C6	2.35	0.62
32:a:1304:G:O2'	32:a:1333:A:N6	2.33	0.62
32:a:1318:A:H4'	50:s:10:PHE:CG	2.35	0.62
32:a:1443:G:H2'	32:a:1444:C:C6	2.35	0.62
38:g:83:ALA:HA	55:z:37:A:N1	2.15	0.62
1:A:277:C:H4'	1:A:278:A:O5'	2.00	0.62
1:A:594:U:H2'	1:A:595:C:C6	2.34	0.62
1:A:1747(B):G:H2'	1:A:1748:G:H8	1.65	0.62
1:A:1831:G:H2'	1:A:1832:C:C6	2.35	0.62
1:A:2133:G:N2	1:A:2157:G:H3'	2.14	0.62
1:A:2298:A:H2'	1:A:2299:G:O4'	1.98	0.62
1:A:2549:G:H2'	1:A:2550:G:H8	1.65	0.62
1:A:2592:G:H2'	1:A:2593:U:O4'	2.00	0.62
1:A:2849:U:O4	15:T:23:ARG:NH1	2.24	0.62
2:B:12:C:O2	22:0:74:ARG:NE	2.28	0.62
11:P:80:TYR:CD1	11:P:111:ARG:HB2	2.34	0.62
12:Q:68:ILE:HG22	12:Q:101:ARG:HE	1.65	0.62
19:X:8:ILE:O	24:2:36:ARG:NH2	2.33	0.62
21:Z:28:MET:HE1	21:Z:61:LEU:HD11	1.82	0.62
21:Z:119:GLU:OE1	21:Z:122:ARG:NH1	2.33	0.62
25:3:8:LEU:HA	25:3:54:VAL:HG23	1.82	0.62
26:4:13:ARG:N	26:4:29:PRO:O	2.24	0.62
32:a:7:G:H5'	32:a:298:A:O4'	2.00	0.62
32:a:14:U:N3	32:a:17:U:OP2	2.31	0.62
32:a:96:U:C5	32:a:97:G:H3'	2.35	0.62
32:a:322:C:O2'	51:t:19:SER:HB2	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:600:C:H2'	32:a:601:C:C6	2.35	0.62
32:a:1008:C:H2'	32:a:1009:G:H8	1.64	0.62
32:a:1534:A:H2'	32:a:1535:C:C6	2.35	0.62
35:d:162:LEU:HD11	35:d:181:MET:HG2	1.82	0.62
41:j:74:ILE:O	41:j:100:THR:OG1	2.18	0.62
46:o:87:ILE:HG22	46:o:88:ARG:H	1.64	0.62
1:A:265:A:N1	1:A:427:U:O2'	2.28	0.61
1:A:272(I):G:H2'	1:A:272(J):C:C6	2.35	0.61
1:A:449:A:H2'	1:A:450:G:O4'	2.00	0.61
1:A:500:G:N1	1:A:503:A:OP2	2.22	0.61
1:A:652(A):C:H2'	1:A:652(B):A:C4	2.34	0.61
1:A:1700:A:H2'	1:A:1701:A:H5'	1.80	0.61
1:A:2093:G:N7	1:A:2225:A:H2'	2.15	0.61
1:A:2235:G:H2'	1:A:2236:C:C6	2.35	0.61
1:A:2300:G:H2'	1:A:2301:C:H6	1.64	0.61
1:A:2419:U:H2'	1:A:2420:C:C6	2.35	0.61
1:A:2537:U:H2'	1:A:2538:C:C6	2.35	0.61
5:F:129:PHE:HB3	5:F:132:VAL:CG2	2.30	0.61
6:G:95:ARG:O	6:G:99:MET:N	2.23	0.61
7:H:147:ASN:O	7:H:151:ILE:HG13	2.00	0.61
11:P:50:ARG:HD3	30:8:7:HIS:CD2	2.35	0.61
32:a:312:C:H2'	32:a:313:A:C8	2.35	0.61
32:a:1249:C:O4'	40:i:70:LYS:HE3	1.99	0.61
32:a:1426:C:H2'	32:a:1427:U:H6	1.65	0.61
32:a:1516:G:H2'	32:a:1518:MA6:OP2	1.99	0.61
35:d:101:LEU:N	35:d:138:TYR:O	2.33	0.61
36:e:127:ASN:O	36:e:131:ILE:HG12	2.00	0.61
37:f:33:TYR:HE2	37:f:78:GLU:HG3	1.65	0.61
39:h:14:ARG:O	39:h:17:THR:OG1	2.18	0.61
48:q:56:VAL:N	48:q:78:GLU:O	2.33	0.61
1:A:77:C:O3'	24:2:14:ARG:NH2	2.32	0.61
1:A:142(A):A:OP2	1:A:142(B):C:N4	2.30	0.61
1:A:632:A:H2'	1:A:633:A:C8	2.35	0.61
1:A:972:G:OP2	1:A:973:A:O2'	2.18	0.61
1:A:1509(A):C:OP1	1:A:1509(A):C:H2'	2.00	0.61
1:A:2202:C:O2'	1:A:2203:U:O4'	2.13	0.61
1:A:2845:G:H2'	1:A:2846:G:H8	1.64	0.61
5:F:152:GLU:O	5:F:154:VAL:HG23	2.01	0.61
6:G:142:PRO:HB2	26:4:31:ILE:HG21	1.81	0.61
21:Z:180:VAL:HA	21:Z:183:LEU:CD1	2.30	0.61
22:0:46:LYS:HB2	22:0:78:TYR:CE1	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:1:49:VAL:O	23:1:59:THR:HA	2.00	0.61
32:a:174:C:H2'	32:a:175:C:H6	1.65	0.61
32:a:510:A:N3	32:a:543:C:H1'	2.16	0.61
32:a:520:A:OP1	43:l:52:LEU:HB2	2.00	0.61
32:a:823:G:H2'	32:a:824:C:C6	2.35	0.61
32:a:1239:A:H62	32:a:1299:A:H62	1.49	0.61
32:a:1329:A:N7	52:u:7:ARG:NH2	2.48	0.61
41:j:25:GLU:O	41:j:29:ARG:N	2.32	0.61
43:l:102:ARG:HA	43:l:107:ALA:CB	2.29	0.61
44:m:85:GLY:HA2	44:m:93:ARG:NH2	2.15	0.61
48:q:10:VAL:CG1	48:q:53:LEU:HA	2.30	0.61
49:r:26:LEU:HD11	49:r:42:ARG:CZ	2.30	0.61
55:z:33:U:H2'	55:z:35:A:OP2	1.99	0.61
1:A:290:G:N2	1:A:350:U:O2	2.31	0.61
1:A:721:C:H2'	1:A:722:A:C8	2.35	0.61
1:A:747:U:H2'	18:W:88:ARG:NH2	2.15	0.61
1:A:892:G:H2'	1:A:893:C:C6	2.34	0.61
1:A:1166:C:H2'	1:A:1167:U:C6	2.35	0.61
1:A:1341:U:OP1	1:A:1397:U:N3	2.23	0.61
1:A:1373:A:H2'	1:A:1374:G:O4'	2.00	0.61
1:A:1417:C:H2'	1:A:1418:G:O4'	2.00	0.61
1:A:1796:U:H2'	1:A:1797:C:H6	1.65	0.61
1:A:2180:U:O3'	55:z:17:C:N4	2.32	0.61
1:A:2181:G:H2'	1:A:2182:G:H8	1.65	0.61
2:B:31:C:H4'	6:G:29:TRP:CH2	2.35	0.61
10:O:13:ASN:HD21	10:O:96:THR:HG1	1.48	0.61
10:O:17:ARG:HB2	10:O:45:GLU:HG2	1.83	0.61
11:P:94:GLU:HA	11:P:124:LYS:O	2.00	0.61
12:Q:23:GLY:O	12:Q:101:ARG:NH1	2.33	0.61
26:4:15:ILE:CD1	26:4:21:VAL:HG22	2.30	0.61
32:a:580:U:H5''	46:o:58:MET:HG2	1.82	0.61
32:a:643:C:H2'	32:a:644:G:C8	2.35	0.61
32:a:1202:G:O4'	45:n:29:ARG:NH1	2.33	0.61
32:a:1221:G:OP1	50:s:36:ARG:HD3	2.00	0.61
32:a:1236:A:H2'	32:a:1237:C:C6	2.35	0.61
34:c:6:HIS:HD2	34:c:9:GLY:H	1.48	0.61
38:g:40:ALA:HB3	40:i:41:VAL:HG21	1.81	0.61
1:A:221:A:N1	1:A:265:A:O2'	2.30	0.61
1:A:519:U:H2'	1:A:520:G:C8	2.35	0.61
1:A:570:G:H2'	1:A:2030:A:C5	2.35	0.61
1:A:875:G:H4'	21:Z:151:HIS:HE1	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1187:G:H5'	17:V:81:TYR:CE1	2.36	0.61
1:A:1232:G:H2'	1:A:1233:C:C6	2.35	0.61
1:A:1418:G:N1	1:A:1579:A:OP2	2.33	0.61
1:A:1577:C:H2'	1:A:1578:U:C6	2.35	0.61
1:A:1900:A:H5'	1:A:1970:A:H5'	1.82	0.61
5:F:52:LYS:HA	5:F:56:GLU:OE1	2.00	0.61
7:H:16:SER:OG	7:H:27:LYS:HB2	1.99	0.61
12:Q:134:ARG:HA	12:Q:138:ASP:OD2	2.00	0.61
15:T:93:ARG:N	15:T:115:ARG:O	2.23	0.61
32:a:92:C:O2'	32:a:93:G:O4'	2.17	0.61
32:a:99:U:H3'	51:t:14:LYS:HA	1.82	0.61
32:a:118:U:O4	32:a:288:A:H2'	2.00	0.61
32:a:165:C:H2'	32:a:166:G:C8	2.34	0.61
32:a:286:G:H2'	32:a:287:U:O4'	2.01	0.61
32:a:328:C:H4'	32:a:329:A:H5'	1.83	0.61
32:a:429:U:H3'	35:d:9:CYS:SG	2.41	0.61
53:y:50:U:O4	53:y:64:G:O6	2.17	0.61
54:C:115:ALA:HB1	54:C:119:VAL:HG23	1.82	0.61
55:z:16:U:H3'	55:z:17:C:C5'	2.29	0.61
1:A:414:C:H2'	1:A:415:A:C8	2.35	0.61
1:A:500:G:N2	1:A:503:A:O5'	2.24	0.61
1:A:901:A:H2'	1:A:902:C:C6	2.35	0.61
1:A:1090:U:H2'	1:A:1091:G:C8	2.35	0.61
1:A:1142(B):A:O2'	1:A:1143:A:H3'	1.99	0.61
1:A:1341:U:OP2	1:A:1394:U:O2'	2.13	0.61
1:A:1468:C:H2'	1:A:1469:A:C8	2.35	0.61
1:A:1510:G:H2'	1:A:1511:C:C6	2.36	0.61
1:A:2006:C:O2'	1:A:2823:A:N3	2.34	0.61
1:A:2696:U:H2'	1:A:2697:G:C8	2.35	0.61
4:E:144:ARG:HG2	4:E:145:LYS:H	1.64	0.61
7:H:98:LEU:H	7:H:125:VAL:HG21	1.65	0.61
9:N:4:TYR:O	16:U:64:ARG:NH2	2.30	0.61
9:N:15:LEU:HD12	9:N:137:LYS:HD3	1.81	0.61
21:Z:99:TYR:HA	21:Z:124:ILE:O	2.01	0.61
32:a:692:U:H2'	32:a:694:A:OP2	2.01	0.61
32:a:920:U:H2'	32:a:921:U:C6	2.35	0.61
32:a:1129:C:H2'	32:a:1139:G:N7	2.16	0.61
32:a:1220:G:N2	50:s:54:GLY:O	2.33	0.61
35:d:155:LEU:HD22	35:d:158:ILE:HG12	1.81	0.61
48:q:56:VAL:HG23	48:q:81:ARG:HG3	1.82	0.61
51:t:11:SER:O	51:t:14:LYS:HB3	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:242:G:N2	1:A:243:U:O4	2.29	0.61
1:A:465:G:OP1	29:7:12:ARG:NH2	2.32	0.61
1:A:560:C:H2'	1:A:561:G:C8	2.35	0.61
1:A:844:C:H3'	1:A:845:G:N2	2.16	0.61
1:A:1026:U:O2'	1:A:1027:A:O5'	2.17	0.61
1:A:1558:A:H4'	1:A:1559:G:H2'	1.81	0.61
1:A:1689:A:OP2	1:A:1698:A:N6	2.30	0.61
1:A:1798:U:H5'	3:D:259:THR:HG22	1.82	0.61
1:A:2123:G:O2'	54:C:172:HIS:HB3	2.01	0.61
1:A:2679:A:H2'	1:A:2680:C:C6	2.34	0.61
2:B:11:C:OP2	22:0:72:ARG:NE	2.33	0.61
6:G:28:VAL:O	6:G:31:VAL:HG22	1.99	0.61
6:G:110:ALA:HA	6:G:140:ILE:HG22	1.82	0.61
10:O:49:ARG:HH12	32:a:1423:G:H5'	1.65	0.61
15:T:62:THR:OG1	15:T:75:ILE:HG12	2.01	0.61
32:a:45:U:H2'	32:a:46:G:C8	2.35	0.61
32:a:461:A:O2'	32:a:470:C:H5'	2.00	0.61
32:a:626:U:OP1	47:p:35:LYS:NZ	2.22	0.61
32:a:718:G:H21	49:r:49:LYS:HG2	1.64	0.61
32:a:745:C:H2'	32:a:746:A:C8	2.35	0.61
32:a:825:G:H2'	32:a:826:C:C6	2.35	0.61
32:a:1287:A:C2	32:a:1353:G:H1'	2.36	0.61
32:a:1413:A:H2	32:a:1487:G:H22	1.47	0.61
32:a:1414:U:O2	32:a:1486:G:N2	2.25	0.61
35:d:9:CYS:HB3	35:d:32:ALA:CB	2.30	0.61
38:g:78:ARG:HB2	38:g:156:TRP:CH2	2.36	0.61
48:q:12:SER:HB3	48:q:20:THR:HB	1.83	0.61
1:A:94(A):C:H2'	1:A:94(B):G:O4'	2.01	0.61
1:A:482:A:OP2	1:A:507:A:N6	2.27	0.61
1:A:536:A:H2'	1:A:537:C:C6	2.35	0.61
1:A:588:U:H2'	1:A:589:C:C6	2.35	0.61
1:A:848:G:OP2	1:A:928:G:N1	2.22	0.61
1:A:957:A:OP1	12:Q:76:LYS:HG3	2.01	0.61
1:A:1467:C:C5	1:A:1546:C:H2'	2.36	0.61
1:A:1877:A:H3'	1:A:1878:G:O4'	2.00	0.61
6:G:74:LYS:O	6:G:84:LYS:HE2	2.01	0.61
15:T:35:LYS:HA	15:T:40:THR:HG22	1.82	0.61
18:W:68:ARG:HB3	18:W:110:LYS:N	2.16	0.61
32:a:49:U:O2	32:a:362:G:H1'	2.00	0.61
32:a:67:C:C1'	32:a:172:A:H1'	2.22	0.61
32:a:363:A:OP1	43:l:33:ARG:HD3	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:474:G:H2'	32:a:475:G:C8	2.34	0.61
32:a:489:C:H2'	32:a:490:G:C8	2.34	0.61
32:a:1307:U:H2'	32:a:1308:U:C6	2.35	0.61
32:a:1316:G:H5''	45:n:17:LYS:NZ	2.16	0.61
33:b:50:GLU:OE1	33:b:53:ARG:HD3	2.01	0.61
38:g:115:ARG:H	38:g:115:ARG:HD2	1.65	0.61
51:t:56:MET:HE3	51:t:85:MET:HA	1.83	0.61
1:A:1047:G:H2'	1:A:1110:G:N2	2.15	0.61
1:A:2076:U:OP2	1:A:2238:G:N2	2.23	0.61
1:A:2315:G:H2'	1:A:2316:C:C6	2.35	0.61
1:A:2656:U:N3	1:A:2665:A:C8	2.60	0.61
1:A:2785:C:H2'	1:A:2786:U:C6	2.36	0.61
8:I:83:ALA:HB1	8:I:123:LEU:HD21	1.82	0.61
10:O:15:GLY:O	10:O:47:ILE:N	2.28	0.61
21:Z:61:LEU:HB2	21:Z:65:GLN:HB2	1.82	0.61
21:Z:115:GLY:HA3	21:Z:146:ILE:HG12	1.82	0.61
32:a:256:U:H2'	32:a:257:G:C8	2.36	0.61
32:a:407:G:H5''	35:d:115:ARG:HD3	1.83	0.61
32:a:513:C:H2'	32:a:514:C:C6	2.35	0.61
32:a:600:C:H2'	32:a:601:C:H6	1.65	0.61
32:a:764:C:H2'	32:a:765:G:O4'	2.01	0.61
32:a:1273:G:H3'	32:a:1274:G:H8	1.65	0.61
34:c:152:ILE:HD11	34:c:199:LYS:CD	2.31	0.61
40:i:19:LEU:HD12	40:i:84:ALA:HB3	1.81	0.61
42:k:18:ARG:HB2	42:k:33:THR:OG1	2.00	0.61
44:m:88:ARG:HG3	44:m:98:VAL:CG1	2.31	0.61
54:C:20:TYR:O	54:C:225:ASN:N	2.21	0.61
54:C:58:VAL:CG2	54:C:201:PRO:HD3	2.30	0.61
54:C:64:LEU:HD12	54:C:68:LEU:HD21	1.83	0.61
1:A:116:C:O2'	1:A:126:A:H1'	2.00	0.61
1:A:740:U:H2'	1:A:741:G:C8	2.35	0.61
1:A:1139:G:OP2	9:N:70:LYS:NZ	2.23	0.61
1:A:1268:A:H2'	1:A:1269:A:O4'	2.00	0.61
1:A:2489:G:O2'	1:A:2490:G:H5'	2.01	0.61
1:A:2492:U:H2'	1:A:2493:U:C6	2.36	0.61
1:A:2648:C:H2'	1:A:2649:U:C6	2.36	0.61
1:A:2674:G:H4'	10:O:30:ALA:HB2	1.83	0.61
1:A:2679:A:H2'	1:A:2680:C:H6	1.66	0.61
1:A:2747:G:O6	1:A:2755:C:H5''	2.00	0.61
1:A:2887:U:H2'	1:A:2888:C:C6	2.35	0.61
2:B:9:G:H2'	2:B:10:C:C6	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:49:C:H2'	2:B:50:G:C8	2.35	0.61
23:1:56:GLN:HE21	23:1:87:PRO:HG3	1.66	0.61
32:a:152:A:H3'	32:a:153:C:H5	1.64	0.61
32:a:1109:C:H2'	32:a:1110:A:O4'	1.99	0.61
37:f:12:PRO:HG3	37:f:57:GLN:C	2.26	0.61
41:j:9:ARG:HG2	41:j:69:ASN:ND2	2.16	0.61
41:j:27:ALA:HB3	41:j:34:VAL:HG12	1.81	0.61
42:k:18:ARG:HD2	42:k:37:GLY:HA2	1.82	0.61
53:y:8:U:O4'	53:y:48:C:O2'	2.11	0.61
53:y:11:A:H2'	53:y:12:G:C8	2.36	0.61
54:C:33:ALA:HA	54:C:39:GLU:OE1	2.00	0.61
1:A:58:G:H2'	1:A:59:U:C6	2.35	0.61
1:A:183:C:H1'	1:A:432:A:C2	2.36	0.61
1:A:340:A:H2'	1:A:341:G:O4'	2.00	0.61
1:A:813:U:H1'	1:A:1226:A:H1'	1.83	0.61
1:A:820:A:H4'	1:A:836:G:N2	2.15	0.61
1:A:981:A:N1	1:A:2027:G:O2'	2.30	0.61
1:A:1064:C:H3'	1:A:1065:U:C5'	2.30	0.61
1:A:1639:U:O2'	1:A:1640:C:H5'	2.00	0.61
1:A:2078:C:H2'	1:A:2079:U:C6	2.36	0.61
1:A:2155:G:H3'	1:A:2156:G:H8	1.66	0.61
1:A:2290:G:H2'	1:A:2291:U:C6	2.36	0.61
1:A:2418:A:OP2	30:8:29:LYS:NZ	2.33	0.61
1:A:2566:A:N6	10:O:28:SER:HB2	2.15	0.61
1:A:2857:G:N2	1:A:2860:A:OP2	2.22	0.61
6:G:113:ARG:HD2	6:G:140:ILE:O	2.00	0.61
15:T:50:ILE:HG22	15:T:102:ILE:HD11	1.81	0.61
18:W:13:SER:HB3	18:W:16:LYS:HD2	1.83	0.61
19:X:44:GLU:HG3	19:X:51:VAL:HG23	1.82	0.61
27:5:31:VAL:N	27:5:40:LYS:O	2.29	0.61
32:a:67:C:H3'	32:a:76:C:O2	2.01	0.61
32:a:93:G:H4'	32:a:100:C:C2'	2.29	0.61
32:a:105:G:H2'	32:a:106:C:O4'	2.01	0.61
32:a:552:U:H2'	32:a:553:A:C8	2.34	0.61
32:a:614:A:H2'	32:a:615:C:C6	2.35	0.61
32:a:927:G:H1	32:a:1390:U:H3	1.49	0.61
32:a:967:5MC:OP2	32:a:968:A:O2'	2.15	0.61
32:a:1001(B):G:O2'	32:a:1002:G:OP1	2.15	0.61
32:a:1009:G:H1	32:a:1020:U:H3	0.73	0.61
32:a:1226:C:OP2	44:m:91:ARG:NH1	2.31	0.61
32:a:1251:A:N3	32:a:1369:C:O2'	2.27	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1254:C:H2'	32:a:1255:G:C8	2.36	0.61
32:a:1259:C:H3'	32:a:1260:C:H5''	1.82	0.61
32:a:1298:C:H4'	32:a:1299:A:O4'	2.01	0.61
32:a:1356:G:H2'	32:a:1357:A:H8	1.66	0.61
46:o:82:ILE:HB	46:o:88:ARG:HH22	1.64	0.61
56:x:9:U:H5''	56:x:10:A:OP2	2.01	0.61
56:x:34:C:H2'	56:x:35:G:C8	2.36	0.61
1:A:82:G:O2'	1:A:83:G:H5'	2.01	0.60
1:A:126:A:O2'	1:A:127:A:O4'	2.09	0.60
1:A:299:A:N3	1:A:319:C:O2'	2.27	0.60
1:A:471:A:H2'	1:A:472:A:O4'	2.01	0.60
1:A:1100:C:H2'	1:A:1101:U:O4'	2.01	0.60
1:A:1500:G:H21	3:D:100:GLY:HA3	1.65	0.60
1:A:2443:C:OP1	5:F:68:LYS:HD3	2.01	0.60
1:A:2600:A:H2'	1:A:2601:C:C6	2.36	0.60
1:A:2716:U:H2'	1:A:2717:G:H8	1.64	0.60
1:A:2771:C:H2'	1:A:2772:C:C6	2.35	0.60
4:E:54:GLN:HB2	4:E:76:ARG:HA	1.83	0.60
8:I:93:THR:HG22	8:I:119:PRO:HB3	1.83	0.60
11:P:84:ASN:HB3	11:P:117:GLU:HB2	1.83	0.60
16:U:46:ALA:O	16:U:50:ARG:HG3	2.01	0.60
32:a:35:G:O2'	43:l:118:SER:O	2.11	0.60
32:a:745:C:H2'	32:a:746:A:H8	1.66	0.60
32:a:1270:C:HO2'	32:a:1314:C:H5'	1.64	0.60
37:f:94:GLN:HB3	49:r:32:ARG:NH1	2.16	0.60
54:C:39:GLU:O	54:C:178:ALA:N	2.23	0.60
1:A:93:G:H2'	1:A:94(A):C:C6	2.36	0.60
1:A:195:A:H2'	1:A:198:C:N4	2.16	0.60
1:A:324:A:H2'	1:A:325:G:O4'	2.01	0.60
1:A:358:U:H2'	1:A:359:A:C8	2.29	0.60
1:A:577:G:H2'	1:A:578:A:C8	2.36	0.60
1:A:707:G:H2'	1:A:708:C:C6	2.35	0.60
1:A:921:G:H2'	1:A:922:U:C6	2.36	0.60
1:A:956:G:OP2	12:Q:14:ARG:NH2	2.33	0.60
1:A:2661:G:H2'	1:A:2662:A:O4'	2.01	0.60
1:A:2809:A:H2'	1:A:2810:A:C8	2.37	0.60
6:G:109:VAL:HG11	6:G:142:PRO:HD3	1.81	0.60
8:I:130:TYR:HD2	8:I:132:PRO:HD3	1.65	0.60
12:Q:31:ASP:HA	12:Q:134:ARG:NH1	2.16	0.60
15:T:20:PRO:HD2	15:T:86:ILE:HB	1.83	0.60
19:X:26:TYR:CG	19:X:89:ILE:HD12	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:X:64:LYS:HE3	19:X:73:ARG:NH2	2.16	0.60
20:Y:86:ARG:HB2	20:Y:98:VAL:HG23	1.83	0.60
21:Z:28:MET:HA	21:Z:88:PHE:HB2	1.82	0.60
26:4:36:CYS:N	26:4:39:CYS:SG	2.63	0.60
32:a:41:G:H2'	32:a:42:G:H8	1.66	0.60
32:a:62:U:O2'	32:a:63:C:O5'	2.20	0.60
32:a:150:C:H2'	32:a:151:A:C1'	2.31	0.60
32:a:196:A:O3'	32:a:197:A:H2'	2.01	0.60
32:a:266:G:C3'	48:q:67:LYS:HB2	2.31	0.60
32:a:1241:G:OP1	38:g:35:LYS:NZ	2.35	0.60
38:g:17:VAL:HG12	38:g:18:TYR:CD1	2.36	0.60
54:C:3:HIS:HB3	54:C:7:TYR:HD2	1.66	0.60
54:C:216:THR:OG1	54:C:219:GLY:HA3	2.01	0.60
55:z:43:C:H2'	55:z:44:G:H5'	1.83	0.60
1:A:638:G:H2'	1:A:639:U:C6	2.36	0.60
1:A:749:C:N3	1:A:753:C:O2'	2.30	0.60
1:A:1019:U:H2'	1:A:1020:A:C8	2.35	0.60
1:A:1425:G:H2'	1:A:1426:G:C8	2.36	0.60
1:A:1851:U:H4'	55:z:71:G:O2'	2.02	0.60
1:A:2300:G:H2'	1:A:2301:C:C6	2.36	0.60
2:B:76:G:H5''	21:Z:10:ARG:HH12	1.66	0.60
3:D:146:GLU:HG2	3:D:152:GLY:C	2.27	0.60
7:H:148:ILE:HA	7:H:151:ILE:HD12	1.84	0.60
32:a:92:C:O4'	32:a:100:C:N4	2.34	0.60
32:a:717:C:H4'	42:k:117:ASN:ND2	2.15	0.60
32:a:799:G:H2'	32:a:800:G:O4'	2.01	0.60
32:a:883:C:O2'	32:a:884:U:H5'	2.01	0.60
32:a:1351:U:O2	32:a:1371:G:N2	2.29	0.60
37:f:30:LEU:CA	37:f:35:ALA:HB3	2.30	0.60
39:h:12:ARG:HD2	39:h:26:VAL:HG12	1.84	0.60
40:i:49:PRO:HG2	40:i:81:ILE:CG2	2.32	0.60
1:A:203:C:OP2	1:A:204:A:O2'	2.12	0.60
1:A:272(P):C:H4'	8:I:42:SER:OG	2.01	0.60
1:A:413:C:H2'	1:A:414:C:C6	2.36	0.60
1:A:487:C:H2'	1:A:488:G:O4'	2.02	0.60
1:A:534:U:H2'	1:A:535:C:C6	2.37	0.60
1:A:589:C:H2'	1:A:590:A:C8	2.36	0.60
1:A:1130:U:C2	1:A:2025:C:H5''	2.36	0.60
1:A:1135:C:N4	1:A:1138:G:OP2	2.28	0.60
1:A:1153:C:H2'	1:A:1154:G:O4'	2.01	0.60
1:A:1754:C:P	15:T:96:ARG:HH12	2.25	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2025:C:H2'	1:A:2026:C:C6	2.36	0.60
1:A:2397:G:O6	1:A:2419:U:O2	2.18	0.60
1:A:2527:C:O3'	31:9:30:PRO:HB2	2.01	0.60
1:A:2878:U:H2'	1:A:2879:C:H5'	1.84	0.60
8:I:26:ALA:HA	8:I:30:LEU:HD12	1.82	0.60
26:4:13:ARG:HB2	26:4:30:GLU:HA	1.82	0.60
32:a:409:G:OP2	35:d:22:LYS:HB3	2.01	0.60
32:a:720:C:OP2	32:a:721:G:O2'	2.12	0.60
32:a:884:U:H4'	32:a:885:G:H5''	1.83	0.60
32:a:1044:A:H3'	32:a:1045:C:H5''	1.84	0.60
32:a:1371:G:H2'	32:a:1372:U:H6	1.67	0.60
35:d:173:TRP:CD1	35:d:189:PRO:HG3	2.37	0.60
39:h:114:THR:OG1	39:h:117:GLY:O	2.13	0.60
43:l:58:VAL:O	43:l:66:VAL:N	2.32	0.60
44:m:82:MET:HE2	44:m:92:HIS:HB3	1.83	0.60
46:o:61:GLY:O	46:o:65:ARG:NE	2.34	0.60
48:q:86:GLU:O	48:q:90:ILE:HG12	2.01	0.60
49:r:59:SER:N	49:r:62:GLU:HB2	2.17	0.60
1:A:147:U:H2'	1:A:148:C:C6	2.36	0.60
1:A:443:A:H1'	1:A:1201:C:O4'	2.00	0.60
1:A:479:A:O2'	1:A:481:G:H5'	2.02	0.60
1:A:614(A):U:H2'	1:A:614(B):U:O4'	2.01	0.60
1:A:652(V):G:H2'	1:A:652(W):C:O4'	2.00	0.60
1:A:706:A:H2'	1:A:707:G:O4'	2.02	0.60
1:A:975(B):G:H1'	1:A:990:A:C2	2.36	0.60
1:A:1216:G:H2'	1:A:1217:C:H6	1.66	0.60
1:A:1333:C:H2'	1:A:1334:G:C8	2.37	0.60
1:A:1547:C:H2'	1:A:1548:C:H6	1.66	0.60
1:A:1851:U:H2'	1:A:1852:C:O4'	2.02	0.60
1:A:2129:C:H5'	54:C:6:ARG:H	1.65	0.60
1:A:2202:C:H2'	1:A:2203:U:C6	2.36	0.60
1:A:2283:C:C5'	28:6:2:ALA:HB3	2.32	0.60
1:A:2331:G:O4'	22:0:42:GLY:HA3	2.01	0.60
1:A:2376:A:H2'	1:A:2377:A:O4'	2.01	0.60
1:A:2656:U:C2	1:A:2665:A:N7	2.69	0.60
1:A:2853:C:H2'	1:A:2854:G:H8	1.66	0.60
3:D:95:LEU:HD11	3:D:105:ILE:CD1	2.31	0.60
6:G:170:ARG:HG3	6:G:180:PHE:CZ	2.37	0.60
8:I:72:LEU:HD21	8:I:107:VAL:CB	2.32	0.60
12:Q:73:PRO:HA	12:Q:93:TYR:HD1	1.66	0.60
24:2:35:LEU:HD12	24:2:53:LEU:HD12	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:72:C:C4	32:a:73:G:H3'	2.36	0.60
32:a:321:A:N1	32:a:332:G:N2	2.43	0.60
32:a:398:C:H2'	32:a:399:G:H8	1.64	0.60
32:a:1008:C:H2'	32:a:1009:G:C8	2.36	0.60
32:a:1034:G:O2'	32:a:1035:A:O4'	2.08	0.60
32:a:1177:G:H3'	32:a:1178:G:H8	1.66	0.60
37:f:30:LEU:HA	37:f:35:ALA:HB3	1.83	0.60
49:r:53:ARG:O	49:r:57:GLY:N	2.24	0.60
54:C:185:LEU:HA	54:C:188:ASN:HD22	1.66	0.60
1:A:154(A):G:H2'	1:A:154(B):C:C6	2.36	0.60
1:A:262:A:N3	1:A:430:G:O2'	2.32	0.60
1:A:398:G:H2'	1:A:399:G:H8	1.66	0.60
1:A:748:G:H5''	1:A:2612:C:H41	1.65	0.60
1:A:855:G:H2'	1:A:856:C:C6	2.37	0.60
1:A:1653:G:O6	13:R:11:ASN:N	2.33	0.60
1:A:2319:G:N1	14:S:3:ARG:HA	2.15	0.60
1:A:2328:A:H2'	1:A:2329:G:H8	1.63	0.60
1:A:2756:U:C1'	1:A:2757:A:H5''	2.31	0.60
1:A:2876:G:O5'	15:T:2:ASN:HA	2.01	0.60
4:E:59:VAL:O	4:E:64:LYS:HE3	2.02	0.60
7:H:3:ARG:O	7:H:4:ILE:N	2.34	0.60
7:H:84:SER:OG	7:H:132:ARG:NH1	2.26	0.60
17:V:39:LEU:HG	17:V:46:VAL:O	2.01	0.60
20:Y:12:THR:OG1	20:Y:26:LYS:NZ	2.24	0.60
22:O:21:LEU:HD13	22:O:41:ARG:HG2	1.83	0.60
23:1:53:VAL:N	23:1:56:GLN:O	2.32	0.60
26:4:16:CYS:HA	26:4:33:VAL:HG23	1.83	0.60
32:a:68:G:H3'	32:a:76:C:C2	2.36	0.60
32:a:258:G:H2'	32:a:259:G:C8	2.34	0.60
32:a:450:G:H5''	32:a:451:A:H3'	1.84	0.60
32:a:1065:U:H4'	32:a:1066:C:O5'	2.00	0.60
32:a:1433:A:OP2	32:a:1467:G:N1	2.29	0.60
33:b:118:LEU:CD1	33:b:142:LEU:HB2	2.31	0.60
35:d:150:GLU:HA	35:d:153:ARG:HD2	1.82	0.60
45:n:40:CYS:SG	45:n:43:CYS:N	2.63	0.60
49:r:72:ARG:O	49:r:76:LEU:N	2.33	0.60
1:A:272(K):U:H1'	1:A:272(M):G:N2	2.17	0.60
1:A:478:A:H61	1:A:500:G:HO2'	1.46	0.60
1:A:924:C:H2'	1:A:925:C:C6	2.36	0.60
1:A:1547:C:H2'	1:A:1548:C:C6	2.36	0.60
1:A:1549:C:H2'	1:A:1550:C:C6	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1549:C:H2'	1:A:1550:C:H6	1.66	0.60
1:A:1942:5MC:OP2	1:A:1943:U:O2'	2.08	0.60
1:A:2316:C:HO2'	6:G:128:ARG:HH21	1.48	0.60
1:A:2416:C:H2'	1:A:2417:C:C6	2.36	0.60
1:A:2580:U:O2'	1:A:2581:G:H5'	2.02	0.60
1:A:2741:A:H2'	1:A:2742:C:O4'	2.02	0.60
1:A:2841:C:H2'	1:A:2842:G:C8	2.36	0.60
2:B:50:G:OP2	14:S:62:LYS:HB2	2.01	0.60
7:H:55:PRO:HG2	7:H:61:HIS:CE1	2.36	0.60
10:O:2:ILE:O	10:O:33:ALA:N	2.34	0.60
17:V:2:PHE:CE2	17:V:41:GLY:HA3	2.37	0.60
22:O:72:ARG:HH11	22:O:78:TYR:HE2	1.49	0.60
32:a:78:G:C2'	32:a:79:G:H5'	2.31	0.60
32:a:509:A:H2'	32:a:510:A:C8	2.36	0.60
32:a:911:U:H2'	32:a:912:C:C6	2.36	0.60
32:a:1319:A:H61	32:a:1361:G:H1'	1.67	0.60
32:a:1446:U:H2'	32:a:1452:C:C6	2.37	0.60
38:g:87:VAL:HG11	38:g:155:ARG:HA	1.84	0.60
42:k:44:SER:O	42:k:48:ILE:HG12	2.02	0.60
44:m:78:ILE:HG22	44:m:82:MET:HE3	1.83	0.60
51:t:89:ARG:O	51:t:93:GLU:N	2.34	0.60
54:C:29:VAL:HG22	54:C:41:VAL:HG22	1.83	0.60
1:A:185:U:O2'	1:A:186:G:O4'	2.20	0.60
1:A:191:A:H2'	1:A:192:C:H6	1.66	0.60
1:A:272(A):A:O2'	1:A:364:C:O2'	2.18	0.60
1:A:581:C:H2'	1:A:582:G:H8	1.66	0.60
1:A:772:C:H2'	1:A:773:U:H6	1.66	0.60
1:A:1045:A:C5'	1:A:1046:A:H5'	2.29	0.60
1:A:1389:G:H2'	1:A:1390:U:C6	2.36	0.60
1:A:2023:G:H5'	1:A:2617:C:H4'	1.83	0.60
1:A:2512:C:H2'	1:A:2513:G:O4'	2.02	0.60
1:A:2834:G:H4'	4:E:58:ARG:HH21	1.66	0.60
1:A:2850:A:N7	1:A:2868:A:O2'	2.22	0.60
3:D:106:ILE:HD11	3:D:143:HIS:HD2	1.65	0.60
8:I:26:ALA:HA	8:I:30:LEU:HB2	1.84	0.60
9:N:96:GLU:N	9:N:96:GLU:OE1	2.31	0.60
10:O:17:ARG:N	10:O:45:GLU:O	2.20	0.60
10:O:53:LYS:HD3	10:O:56:ASP:OD2	2.02	0.60
12:Q:41:TRP:NE1	12:Q:96:VAL:HG22	2.16	0.60
19:X:54:VAL:HA	19:X:80:ILE:O	2.00	0.60
32:a:65:U:P	32:a:71:C:N3	2.74	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:500:G:H2'	32:a:501:C:C6	2.36	0.60
32:a:797:C:O2'	32:a:798:G:H5'	2.02	0.60
32:a:957:U:H2'	32:a:958:A:H3'	1.84	0.60
33:b:87:ARG:HH12	33:b:219:VAL:HB	1.66	0.60
38:g:142:GLU:HA	38:g:145:ALA:HB3	1.83	0.60
40:i:16:ARG:HB2	40:i:64:THR:CG2	2.31	0.60
42:k:79:SER:CB	42:k:104:GLN:HB3	2.32	0.60
54:C:104:LEU:HD23	54:C:107:TRP:HB2	1.82	0.60
55:z:11:C:H2'	55:z:12:U:C6	2.37	0.60
1:A:760:G:H2'	1:A:761:A:O4'	2.02	0.60
1:A:818:G:N1	1:A:1188:U:OP2	2.27	0.60
1:A:878:A:H5''	1:A:879:G:N7	2.17	0.60
1:A:1014:U:H2'	1:A:1015:G:H8	1.66	0.60
1:A:1283:G:H1'	1:A:1329:U:O2	2.02	0.60
1:A:1657:C:OP1	4:E:136:ARG:N	2.35	0.60
1:A:1742:G:O2'	1:A:1743:C:H5'	2.01	0.60
1:A:2064:C:H2'	1:A:2065:C:C6	2.37	0.60
1:A:2188:C:H3'	1:A:2189:U:H5''	1.83	0.60
1:A:2314:C:OP1	6:G:91:ARG:NH1	2.35	0.60
1:A:2700:C:O2'	1:A:2701:C:H5'	2.02	0.60
2:B:106:G:H5''	21:Z:31:ARG:HB3	1.82	0.60
5:F:162:LEU:O	5:F:166:ALA:HB3	2.02	0.60
6:G:37:VAL:HG21	6:G:103:LEU:HD21	1.83	0.60
6:G:114:ILE:HG23	6:G:136:ARG:HH12	1.67	0.60
7:H:20:ALA:HB1	7:H:21:PRO:HD2	1.84	0.60
7:H:117:PRO:HG3	7:H:123:PHE:CD2	2.36	0.60
9:N:94:HIS:CG	9:N:97:ARG:HD3	2.37	0.60
15:T:88:ILE:HG21	15:T:91:ARG:CZ	2.32	0.60
15:T:91:ARG:HD2	15:T:120:ARG:NH1	2.16	0.60
21:Z:59:LEU:O	21:Z:66:SER:HA	2.01	0.60
32:a:373:A:H61	32:a:391:G:H1'	1.66	0.60
32:a:735:C:H5'	49:r:71:LYS:HD2	1.84	0.60
32:a:908:A:H2'	32:a:909:A:C8	2.36	0.60
32:a:987:G:H2'	32:a:988:G:C8	2.36	0.60
32:a:992:U:H4'	32:a:993:G:O5'	2.00	0.60
32:a:1074:G:H2'	32:a:1075:C:H6	1.67	0.60
32:a:1121:U:H2'	32:a:1122:U:C6	2.36	0.60
32:a:1345:U:OP1	40:i:120:ARG:NH1	2.34	0.60
32:a:1486:G:H2'	32:a:1487:G:C8	2.37	0.60
33:b:145:LEU:HD12	33:b:149:LEU:CD1	2.32	0.60
34:c:132:ARG:HD2	56:x:25:A:C4'	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:d:173:TRP:NE1	35:d:189:PRO:HG3	2.17	0.60
41:j:16:LEU:O	41:j:20:ALA:N	2.23	0.60
41:j:81:THR:O	41:j:85:LEU:HG	2.01	0.60
42:k:46:GLY:HA2	42:k:50:TYR:O	2.02	0.60
44:m:15:VAL:HG12	44:m:48:LEU:HD11	1.84	0.60
44:m:39:ILE:CD1	44:m:56:LEU:HB2	2.31	0.60
44:m:108:ARG:O	44:m:112:GLY:N	2.31	0.60
53:y:21:A:N6	53:y:46:G:H2'	2.17	0.60
55:z:2:C:H2'	55:z:3:C:C6	2.37	0.60
55:z:56:C:H3'	55:z:57:G:H5''	1.82	0.60
56:x:42:G:H2'	56:x:43:C:C6	2.36	0.60
1:A:273(F):G:H2'	1:A:273(G):C:H6	1.66	0.60
1:A:642:G:N2	1:A:644:A:H3'	2.17	0.60
1:A:1408:C:H2'	1:A:1409:C:H6	1.66	0.60
1:A:1513:C:H2'	1:A:1514:U:C6	2.36	0.60
1:A:2130:U:O2	1:A:2134:A:H4'	2.02	0.60
1:A:2171:A:H4'	1:A:2172:U:OP1	2.01	0.60
1:A:2266:A:N6	1:A:2273:A:OP2	2.34	0.60
1:A:2488:A:H2'	1:A:2489:G:C8	2.37	0.60
1:A:2526:G:H2'	1:A:2527:C:C6	2.37	0.60
1:A:2557:G:H2'	1:A:2558:C:C6	2.35	0.60
1:A:2813:A:H2'	1:A:2814:C:C6	2.36	0.60
2:B:44:G:OP1	26:4:1:MET:HG3	2.02	0.60
5:F:29:ASN:HB3	5:F:112:MET:HE1	1.83	0.60
7:H:85:LYS:HE2	7:H:142:GLY:HA2	1.84	0.60
10:O:48:PRO:HB3	32:a:1422:G:C5'	2.31	0.60
17:V:1:MET:HE3	17:V:2:PHE:O	2.02	0.60
32:a:184:G:O2'	32:a:185:A:H5'	2.02	0.60
32:a:189(B):C:H2'	32:a:189(C):C:C6	2.37	0.60
32:a:939:G:H4'	38:g:102:ARG:NH2	2.16	0.60
32:a:1488:G:H2'	32:a:1489:G:C8	2.37	0.60
36:e:8:GLU:HG3	36:e:34:VAL:HG22	1.84	0.60
38:g:89:MET:SD	38:g:155:ARG:HB2	2.41	0.60
46:o:55:GLY:O	46:o:59:MET:HG3	2.02	0.60
54:C:58:VAL:HG22	54:C:201:PRO:HD3	1.84	0.60
55:z:53:G:H2'	55:z:54:U:C6	2.37	0.60
55:z:64:A:O2'	55:z:65:G:H5'	2.02	0.60
55:z:70:G:H3'	55:z:71:G:H8	1.67	0.60
1:A:721:C:H2'	1:A:722:A:H8	1.66	0.59
1:A:732:C:H2'	1:A:733:G:O4'	2.02	0.59
1:A:752:A:OP1	29:7:3:ARG:NH2	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:997:G:OP1	16:U:92:ARG:HD3	2.02	0.59
1:A:1190:G:H5''	11:P:32:THR:O	2.00	0.59
1:A:1223:G:OP2	17:V:66:ARG:NH1	2.22	0.59
1:A:1315:C:O2'	1:A:1392:A:N3	2.23	0.59
1:A:2206:G:H3'	1:A:2207:G:N7	2.17	0.59
1:A:2277:G:H3'	22:O:12:ASN:ND2	2.16	0.59
1:A:2529:G:H5''	1:A:2530:A:H5''	1.84	0.59
1:A:2619:C:H4'	4:E:151:TYR:O	2.01	0.59
1:A:2758:A:H2'	1:A:2759:G:H5'	1.83	0.59
2:B:22:U:H3	2:B:61:G:H1	1.50	0.59
2:B:116:G:O2'	2:B:117:G:H5'	2.01	0.59
5:F:7:TYR:CE2	5:F:119:ARG:HB2	2.36	0.59
5:F:108:LYS:O	5:F:112:MET:HG3	2.02	0.59
10:O:104:ARG:HG3	10:O:107:ARG:HD3	1.82	0.59
13:R:8:ARG:N	13:R:43:GLU:OE2	2.28	0.59
15:T:116:ALA:HB1	15:T:121:ILE:CD1	2.32	0.59
18:W:76:VAL:HG22	18:W:103:ILE:HG12	1.84	0.59
21:Z:47:VAL:HG12	21:Z:51:ALA:CB	2.32	0.59
22:O:24:LYS:N	22:O:37:LEU:O	2.27	0.59
32:a:1027:C:H3'	32:a:1028:C:H5''	1.84	0.59
32:a:1074:G:H2'	32:a:1075:C:C6	2.37	0.59
32:a:1222:G:OP1	50:s:78:ARG:NE	2.22	0.59
32:a:1411:C:H2'	32:a:1412:C:C6	2.36	0.59
32:a:1459:C:OP1	51:t:31:SER:OG	2.20	0.59
35:d:57:ARG:NH2	36:e:107:ARG:HD3	2.17	0.59
37:f:50:TYR:CE1	49:r:77:GLY:HA2	2.37	0.59
52:u:5:ASP:O	52:u:11:GLY:HA3	2.01	0.59
1:A:99:U:O4	20:Y:8:LYS:NZ	2.26	0.59
1:A:177:G:H3'	1:A:178:G:C8	2.37	0.59
1:A:245:G:OP1	11:P:69:GLY:HA3	2.02	0.59
1:A:356:G:H2'	1:A:357:A:H8	1.67	0.59
1:A:435:C:H2'	1:A:436:C:H5'	1.84	0.59
1:A:524:U:H2'	1:A:525:U:C6	2.38	0.59
1:A:608:A:H2'	1:A:609:A:C8	2.37	0.59
1:A:657:U:H2'	1:A:658:C:C6	2.37	0.59
1:A:729:G:C5	3:D:208:LYS:HB2	2.37	0.59
1:A:828:U:H4'	1:A:831:G:N1	2.16	0.59
1:A:981:A:OP2	1:A:982:C:N4	2.25	0.59
1:A:1466:G:O2'	1:A:1546:C:O2'	2.08	0.59
1:A:1501:C:H2'	1:A:1502:C:H6	1.67	0.59
1:A:1669:A:H5''	1:A:2550:G:OP1	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2126:A:N6	1:A:2163:C:O4'	2.35	0.59
1:A:2540:C:H2'	1:A:2541:A:O4'	2.02	0.59
1:A:2737:G:H2'	1:A:2738:A:C8	2.37	0.59
1:A:2848:G:O2'	1:A:2849:U:OP2	2.17	0.59
4:E:6:GLY:HA2	4:E:28:ALA:HA	1.82	0.59
6:G:146:TYR:HA	6:G:149:VAL:HG12	1.84	0.59
17:V:24:LYS:HB2	17:V:90:PRO:HB2	1.82	0.59
22:O:68:GLU:N	22:O:80:HIS:O	2.35	0.59
24:2:18:PRO:O	24:2:22:GLU:HG3	2.03	0.59
30:8:26:LYS:HB3	30:8:44:LYS:O	2.02	0.59
32:a:107:G:C2	32:a:108:G:H1'	2.37	0.59
32:a:428:G:O2'	35:d:36:ARG:NH2	2.35	0.59
32:a:599:C:O2'	32:a:600:C:H5'	2.01	0.59
32:a:1267:C:O2	32:a:1327:C:H4'	2.01	0.59
32:a:1465:C:H2'	32:a:1466:C:C6	2.37	0.59
32:a:1497:G:H1'	32:a:1518:MA6:H2	1.82	0.59
36:e:40:ARG:HA	36:e:67:VAL:O	2.02	0.59
43:l:34:ARG:O	43:l:61:THR:HG23	2.02	0.59
51:t:57:ARG:HD3	51:t:101:GLY:HA3	1.84	0.59
1:A:706:A:OP1	3:D:7:LYS:NZ	2.26	0.59
1:A:709:U:H2'	1:A:710:G:C8	2.37	0.59
1:A:1028:A:H2'	1:A:1029:A:H8	1.68	0.59
1:A:1216:G:H2'	1:A:1217:C:C6	2.37	0.59
1:A:1501:C:O4'	3:D:100:GLY:HA2	2.03	0.59
1:A:1512:U:H2'	1:A:1513:C:C6	2.37	0.59
1:A:2089:U:H5'	1:A:2090:G:OP2	2.01	0.59
1:A:2437:U:H2'	1:A:2438:U:C6	2.37	0.59
1:A:2579:C:H4'	4:E:134:ILE:HG12	1.84	0.59
1:A:2590:A:H2'	1:A:2591:C:C6	2.37	0.59
7:H:78:GLY:C	7:H:136:ILE:HG23	2.26	0.59
7:H:78:GLY:O	7:H:82:GLY:N	2.31	0.59
32:a:406:G:H5'	35:d:5:ILE:HD11	1.83	0.59
32:a:522:C:H41	43:l:53:ARG:HH21	1.49	0.59
32:a:562:C:O2	43:l:16:GLU:N	2.25	0.59
32:a:563:A:H2'	32:a:567:G:C8	2.37	0.59
32:a:584:G:H2'	32:a:585:G:H8	1.66	0.59
32:a:791:G:N2	32:a:1497:G:O3'	2.32	0.59
38:g:59:LEU:HD11	38:g:63:LYS:HE2	1.83	0.59
50:s:3:ARG:NE	50:s:8:GLY:O	2.22	0.59
54:C:137:LEU:HD22	54:C:138:PRO:HD2	1.84	0.59
55:z:30:G:H2'	55:z:31:A:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:x:47:C:H2'	56:x:48:G:C8	2.36	0.59
1:A:77:C:H2'	1:A:78:A:C8	2.37	0.59
1:A:264:C:H4'	1:A:428:A:H2	1.66	0.59
1:A:748:G:H5''	1:A:2612:C:N4	2.17	0.59
1:A:1080:C:H2'	1:A:1081:U:C6	2.37	0.59
1:A:1497:U:H5''	1:A:1498:C:C5	2.37	0.59
1:A:1513:C:H2'	1:A:1514:U:H6	1.66	0.59
1:A:1710:C:O2'	1:A:2858:C:N3	2.36	0.59
1:A:1890:A:H1'	1:A:2086:U:O2'	2.01	0.59
1:A:2231:C:H2'	1:A:2232:U:H6	1.67	0.59
2:B:50:G:OP1	14:S:62:LYS:N	2.35	0.59
3:D:61:LEU:O	3:D:63:ARG:NH1	2.32	0.59
4:E:36:ARG:HG2	4:E:47:VAL:HG12	1.82	0.59
4:E:54:GLN:NE2	4:E:76:ARG:HG2	2.18	0.59
5:F:155:LEU:HD22	5:F:186:ILE:HA	1.84	0.59
14:S:24:LEU:O	14:S:86:ALA:N	2.24	0.59
21:Z:132:ASN:O	21:Z:134:PRO:HD3	2.02	0.59
23:1:12:PRO:HB3	23:1:43:TYR:HD1	1.67	0.59
28:6:12:GLU:OE1	28:6:52:VAL:HG21	2.02	0.59
32:a:236:G:H2'	32:a:237:C:O4'	2.03	0.59
32:a:578:C:O2'	32:a:728:A:N3	2.33	0.59
32:a:1147:C:H2'	32:a:1148:U:C6	2.36	0.59
33:b:33:TYR:HB2	33:b:43:ASP:CA	2.32	0.59
36:e:39:GLY:HA2	36:e:69:VAL:HG12	1.84	0.59
43:l:33:ARG:NH1	43:l:62:SER:HB3	2.17	0.59
1:A:321:G:C2	1:A:341:G:H4'	2.36	0.59
1:A:445:C:H2'	1:A:446:G:O4'	2.01	0.59
1:A:641:C:H2'	1:A:642:G:O4'	2.03	0.59
1:A:897:C:H2'	1:A:898:C:H6	1.68	0.59
1:A:1060:U:H3	1:A:1088:A:H8	1.48	0.59
1:A:1210:A:H5''	1:A:1212:G:O4'	2.03	0.59
1:A:1297:C:OP1	1:A:2710:C:H4'	2.02	0.59
1:A:1802:A:H2'	1:A:1803:A:C8	2.37	0.59
1:A:1923:U:H2'	1:A:1924:C:C6	2.37	0.59
1:A:2012:G:O3'	18:W:96:ILE:HG23	2.02	0.59
1:A:2184:G:H2'	1:A:2185:C:C6	2.38	0.59
1:A:2627:G:O2'	1:A:2781:A:N1	2.30	0.59
2:B:39:A:H2'	2:B:40:U:C6	2.38	0.59
8:I:80:PRO:HA	8:I:145:VAL:HG23	1.84	0.59
9:N:52:VAL:HB	9:N:120:LEU:HD23	1.85	0.59
17:V:24:LYS:HD3	17:V:90:PRO:CB	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:2:12:GLU:HA	24:2:15:LYS:HZ2	1.68	0.59
26:4:58:ARG:HD2	50:s:67:VAL:HB	1.84	0.59
32:a:107:G:N7	51:t:15:ARG:NH2	2.50	0.59
32:a:147:G:H2'	32:a:148:G:H8	1.66	0.59
32:a:328:C:H4'	32:a:329:A:C5'	2.32	0.59
32:a:454:C:H4'	47:p:68:ASP:OD2	2.02	0.59
32:a:507:C:OP2	32:a:508:C:O2'	2.11	0.59
32:a:673:G:H5''	37:f:87:ARG:NH1	2.18	0.59
32:a:1011:G:C2'	32:a:1012:U:H5'	2.32	0.59
32:a:1287:A:N6	32:a:1371:G:O4'	2.33	0.59
32:a:1301:U:H3'	32:a:1302:U:H5''	1.83	0.59
32:a:1372:U:H2'	32:a:1373:G:O4'	2.03	0.59
32:a:1527:C:H2'	32:a:1528:U:C6	2.37	0.59
33:b:71:VAL:HA	33:b:93:VAL:HG22	1.83	0.59
33:b:208:ILE:HA	33:b:211:ILE:HB	1.83	0.59
38:g:14:PRO:HG3	38:g:21:VAL:HG13	1.84	0.59
38:g:73:MET:CE	38:g:90:GLU:HG3	2.33	0.59
39:h:4:ASP:HB2	39:h:89:PRO:HG2	1.84	0.59
54:C:181:PRO:HD2	54:C:184:LYS:HD2	1.83	0.59
1:A:69:C:O2'	1:A:70:G:H5'	2.03	0.59
1:A:107:C:H1'	1:A:294:A:H1'	1.83	0.59
1:A:228:A:C8	1:A:229:A:H5'	2.38	0.59
1:A:881:G:H1	1:A:895:U:H3	1.51	0.59
1:A:1462:C:H4'	1:A:2703:C:C5'	2.30	0.59
1:A:1641:A:H2'	1:A:1642:G:O4'	2.03	0.59
1:A:1792:G:O2'	1:A:1830:C:OP1	2.19	0.59
1:A:2080:G:H2'	1:A:2081:C:H6	1.68	0.59
1:A:2093:G:H2'	1:A:2094:G:C8	2.37	0.59
1:A:2098:U:O2	1:A:2191:G:N2	2.31	0.59
1:A:2175:C:OP1	54:C:3:HIS:ND1	2.35	0.59
1:A:2727:G:H2'	1:A:2728:U:C6	2.38	0.59
1:A:2762:G:H2'	1:A:2763:G:O4'	2.02	0.59
3:D:24:ILE:CD1	3:D:84:TYR:HB2	2.32	0.59
4:E:112:GLY:O	4:E:159:HIS:HA	2.02	0.59
26:4:50:VAL:CG2	44:m:64:TRP:HA	2.32	0.59
32:a:35:G:H2'	32:a:36:C:C6	2.38	0.59
32:a:73:G:O3'	32:a:76:C:H4'	2.01	0.59
32:a:115:G:H4'	32:a:116:A:O5'	2.03	0.59
32:a:538:G:H3'	43:l:115:LYS:NZ	2.18	0.59
32:a:757:U:H2'	32:a:758:G:O4'	2.02	0.59
33:b:74:LYS:HD3	33:b:76:GLN:NE2	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:j:57:LYS:O	41:j:60:ARG:NE	2.28	0.59
46:o:25:THR:O	46:o:29:VAL:HG23	2.03	0.59
51:t:89:ARG:O	51:t:93:GLU:HG2	2.02	0.59
1:A:209:C:H2'	1:A:210:C:C6	2.37	0.59
1:A:902:C:H2'	1:A:903:C:C6	2.37	0.59
1:A:1094:U:O3'	1:A:1096:A:H5''	2.03	0.59
1:A:2176:A:C5'	54:C:221:SER:HB3	2.32	0.59
1:A:2232:U:C2'	1:A:2233:U:H5'	2.32	0.59
1:A:2262:U:OP2	22:0:16:SER:OG	2.11	0.59
1:A:2516:G:O2'	1:A:2517:C:H5'	2.02	0.59
1:A:2851:A:C2'	1:A:2852:G:H5'	2.33	0.59
1:A:2853:C:H2'	1:A:2854:G:C8	2.38	0.59
3:D:120:GLY:O	3:D:131:LEU:HG	2.02	0.59
8:I:83:ALA:CB	8:I:123:LEU:HD21	2.32	0.59
11:P:83:VAL:HG23	11:P:114:ILE:HD13	1.83	0.59
14:S:67:ARG:HB3	14:S:71:ARG:HH12	1.67	0.59
16:U:112:ARG:HA	16:U:115:ALA:HB3	1.85	0.59
21:Z:69:THR:CG2	21:Z:90:VAL:HA	2.33	0.59
32:a:100:C:OP2	51:t:14:LYS:HA	2.03	0.59
32:a:390:C:O3'	47:p:28:ARG:NH2	2.35	0.59
32:a:429:U:H4'	32:a:430:A:C5'	2.33	0.59
32:a:444:C:H2'	32:a:445:G:C8	2.38	0.59
32:a:522:C:OP2	43:l:69:TYR:OH	2.09	0.59
32:a:618:C:C5'	32:a:619:U:H5''	2.30	0.59
32:a:1005:A:N6	32:a:1024:G:O2'	2.36	0.59
32:a:1030(B):G:H4'	32:a:1030(D):G:C2	2.38	0.59
32:a:1060:C:H5''	41:j:51:ARG:HB3	1.84	0.59
32:a:1227:A:H3'	32:a:1228:C:H5''	1.85	0.59
32:a:1417:G:N2	32:a:1482:G:H2'	2.17	0.59
33:b:96:ARG:HE	33:b:98:LEU:HD23	1.67	0.59
33:b:98:LEU:HB2	33:b:101:MET:CG	2.33	0.59
33:b:145:LEU:HD12	33:b:149:LEU:HD11	1.85	0.59
34:c:121:ALA:O	34:c:125:GLU:N	2.28	0.59
36:e:31:LEU:HD11	36:e:129:ILE:HA	1.85	0.59
44:m:73:GLU:HG2	44:m:77:ASN:ND2	2.17	0.59
54:C:191:ALA:HA	54:C:194:ARG:CD	2.32	0.59
55:z:10:G:C6	55:z:44:G:N2	2.70	0.59
1:A:272(H):G:H2'	1:A:272(I):G:C8	2.38	0.59
1:A:307:G:N2	1:A:309:G:H3'	2.17	0.59
1:A:356:G:H2'	1:A:357:A:C8	2.37	0.59
1:A:373:U:H2'	1:A:374:A:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:995:C:O2	9:N:3:THR:OG1	2.18	0.59
1:A:1047:G:H2'	1:A:1110:G:H22	1.67	0.59
1:A:1252:G:N3	16:U:33:ARG:NE	2.39	0.59
1:A:1362:C:O2'	1:A:1810:A:O2'	2.14	0.59
1:A:1514:U:H2'	1:A:1515:G:C8	2.37	0.59
1:A:1628:G:H2'	1:A:1629:U:H6	1.67	0.59
1:A:1709:U:O2'	1:A:2859:G:H1'	2.03	0.59
1:A:2365:G:H4'	22:O:60:PHE:CZ	2.38	0.59
2:B:51:G:H2'	2:B:52:A:C8	2.37	0.59
4:E:173:VAL:N	4:E:183:LEU:O	2.36	0.59
7:H:27:LYS:HG3	7:H:32:GLU:HB3	1.84	0.59
7:H:101:ARG:CZ	7:H:117:PRO:HB2	2.33	0.59
9:N:128:HIS:CE1	9:N:135:PRO:HG2	2.35	0.59
11:P:1:MET:HG3	11:P:5:ASP:HB2	1.83	0.59
15:T:31:SER:HB3	15:T:84:GLN:HB3	1.84	0.59
20:Y:5:MET:CE	20:Y:35:TYR:HA	2.33	0.59
32:a:247:G:OP2	48:q:100:LYS:HG2	2.02	0.59
32:a:277:C:H5'	48:q:68:ARG:HH12	1.67	0.59
32:a:426:G:H4'	35:d:41:GLY:O	2.03	0.59
32:a:563:A:O2'	32:a:566:G:O3'	2.20	0.59
32:a:673:G:H2'	32:a:674:G:H8	1.66	0.59
32:a:805:C:O2'	32:a:806:C:H5'	2.02	0.59
32:a:1163:C:H2'	32:a:1164:G:C8	2.38	0.59
32:a:1297:C:H1'	32:a:1298:C:H5	1.66	0.59
33:b:54:THR:O	33:b:58:ILE:N	2.28	0.59
33:b:76:GLN:O	33:b:208:ILE:HG12	2.02	0.59
35:d:26:CYS:HA	58:d:301:SF4:S1	2.43	0.59
47:p:5:ARG:HE	47:p:22:THR:HG21	1.68	0.59
1:A:228:A:H2'	1:A:229:A:H5'	1.85	0.59
1:A:231:C:H2'	1:A:232:G:O4'	2.02	0.59
1:A:895:U:O3'	1:A:896:A:H3'	2.02	0.59
1:A:1184:G:H2'	1:A:1185:C:C6	2.38	0.59
1:A:2134:A:C4	1:A:2157:G:H4'	2.37	0.59
1:A:2156:G:H3'	1:A:2157:G:H8	1.65	0.59
1:A:2385:C:H2'	1:A:2386:C:C6	2.38	0.59
1:A:2511:U:H2'	1:A:2512:C:C6	2.38	0.59
1:A:2749:A:H4'	7:H:62:LYS:CB	2.32	0.59
2:B:30:C:OP2	14:S:32:LEU:HD11	2.03	0.59
5:F:51:THR:HG21	5:F:92:PRO:HD2	1.83	0.59
14:S:29:PHE:O	14:S:36:TYR:N	2.27	0.59
17:V:32:THR:HG22	17:V:60:GLU:CB	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:6:9:LEU:HD11	28:6:23:THR:HG23	1.85	0.59
32:a:176:C:O2'	32:a:177:C:H5'	2.03	0.59
32:a:358:U:H2'	32:a:359:U:H6	1.68	0.59
32:a:532:A:H5''	34:c:161:GLU:OE2	2.02	0.59
32:a:1055:A:H3'	32:a:1056:U:H5''	1.84	0.59
32:a:1250:A:H2'	32:a:1251:A:C8	2.37	0.59
32:a:1314:C:H2'	32:a:1315:U:H6	1.67	0.59
32:a:1351:U:H3	32:a:1371:G:H1	1.50	0.59
34:c:134:ILE:HG22	34:c:168:ALA:HB3	1.85	0.59
37:f:24:GLU:O	37:f:28:ARG:N	2.27	0.59
53:y:6:G:H2'	53:y:7:G:C8	2.35	0.59
53:y:27:U:H2'	53:y:28:C:C6	2.38	0.59
54:C:217:THR:HG22	54:C:218:MET:SD	2.43	0.59
55:z:43:C:C2'	55:z:44:G:H5'	2.33	0.59
1:A:125:G:N3	29:7:48:LYS:HE3	2.17	0.59
1:A:141:A:H1'	1:A:1408:C:O2'	2.03	0.59
1:A:303:U:H2'	1:A:304:G:C8	2.38	0.59
1:A:530:G:C2	1:A:2022:U:H4'	2.38	0.59
1:A:755:C:H2'	1:A:756:C:C6	2.38	0.59
1:A:794:G:H2'	1:A:795:C:H6	1.68	0.59
1:A:1448:G:O2'	1:A:1528(A):A:N6	2.26	0.59
1:A:1671:U:N3	1:A:1674:G:OP2	2.27	0.59
1:A:1862:G:H2'	1:A:1863:G:H8	1.68	0.59
1:A:1889:A:O2'	1:A:1890:A:OP1	2.20	0.59
1:A:2283:C:H5'	28:6:2:ALA:HB3	1.85	0.59
1:A:2329:G:H2'	1:A:2330:G:C8	2.38	0.59
1:A:2637:U:H2'	1:A:2638:G:O4'	2.03	0.59
1:A:2785:C:OP1	4:E:41:LYS:NZ	2.24	0.59
3:D:132:PRO:HG3	3:D:190:TYR:HE1	1.68	0.59
5:F:160:ASN:ND2	5:F:163:VAL:HG23	2.18	0.59
6:G:115:ARG:NH1	44:m:6:GLY:O	2.36	0.59
12:Q:58:PHE:CE1	12:Q:109:VAL:HG11	2.38	0.59
17:V:37:VAL:HB	17:V:52:VAL:CG2	2.33	0.59
21:Z:100:VAL:HB	21:Z:124:ILE:CG2	2.33	0.59
32:a:676:A:H5''	42:k:113:PRO:HB2	1.84	0.59
32:a:781:A:OP2	32:a:800:G:N1	2.25	0.59
32:a:935:A:H2'	32:a:936:C:H6	1.68	0.59
33:b:71:VAL:CG2	33:b:164:VAL:HA	2.33	0.59
35:d:12:CYS:SG	35:d:19:LEU:HB2	2.43	0.59
40:i:22:GLY:HA3	40:i:60:ASP:OD2	2.02	0.59
44:m:34:LEU:O	44:m:39:ILE:N	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:y:60:U:H5''	53:y:61:C:OP2	2.02	0.59
54:C:58:VAL:O	54:C:164:ARG:HA	2.03	0.59
56:x:24:A:H1'	56:x:25:A:C8	2.38	0.59
1:A:75:G:O6	1:A:111:A:N1	2.36	0.58
1:A:649:G:H2'	1:A:650:C:C6	2.37	0.58
1:A:678:C:H2'	1:A:679:C:H6	1.68	0.58
1:A:1474:C:H2'	1:A:1475:G:C8	2.38	0.58
1:A:1740:G:H2'	1:A:1741:A:C8	2.38	0.58
1:A:1769:G:O2'	1:A:1958:C:OP1	2.18	0.58
1:A:1796:U:O2	1:A:1823:G:N2	2.26	0.58
1:A:2028:U:H2'	1:A:2029:G:C8	2.37	0.58
1:A:2130:U:O2'	1:A:2133:G:H4'	2.03	0.58
1:A:2147:G:H2'	1:A:2148:G:O4'	2.02	0.58
1:A:2345:G:N3	1:A:2381:C:H2'	2.18	0.58
1:A:2657:A:O3'	7:H:160:LYS:NZ	2.36	0.58
4:E:25:VAL:CG1	4:E:181:LEU:HD12	2.33	0.58
6:G:33:ARG:HB2	6:G:162:THR:HG21	1.85	0.58
11:P:122:PRO:HA	11:P:143:GLY:HA2	1.85	0.58
15:T:28:VAL:O	15:T:46:GLU:HA	2.02	0.58
16:U:47:TYR:HA	16:U:50:ARG:HH21	1.68	0.58
17:V:61:VAL:HA	17:V:94:LEU:HD23	1.85	0.58
19:X:52:VAL:HG21	19:X:84:ALA:HA	1.84	0.58
32:a:38:G:O2'	32:a:39:G:H5''	2.03	0.58
32:a:262:A:H5''	51:t:76:ALA:HB2	1.85	0.58
32:a:616:G:H2'	32:a:617:G:C8	2.38	0.58
32:a:677:U:H2'	32:a:678:U:C6	2.38	0.58
32:a:932:C:H2'	32:a:933:G:H8	1.68	0.58
32:a:1245:A:H2'	32:a:1246:C:C6	2.37	0.58
32:a:1255:G:O2'	32:a:1258:G:O2'	2.18	0.58
38:g:126:ASP:HA	38:g:129:GLU:HB2	1.85	0.58
38:g:132:GLY:O	38:g:136:LYS:HG2	2.02	0.58
41:j:30:SER:OG	41:j:81:THR:HG22	2.03	0.58
44:m:99:ARG:HB2	44:m:101:GLN:NE2	2.18	0.58
49:r:21:LYS:HD2	49:r:57:GLY:N	2.18	0.58
49:r:47:THR:CA	49:r:83:GLU:HB2	2.28	0.58
53:y:18:G:O2'	53:y:60:U:N3	2.36	0.58
1:A:181:A:H1'	1:A:435:C:C5'	2.33	0.58
1:A:213:A:C2'	1:A:214:G:H5'	2.33	0.58
1:A:406:G:H3'	1:A:406:G:OP2	2.03	0.58
1:A:468:G:N7	29:7:39:ARG:NH2	2.41	0.58
1:A:580:C:H2'	1:A:581:C:C6	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:581:C:H2'	1:A:582:G:C8	2.38	0.58
1:A:652(C):A:N6	1:A:654:A:H1'	2.18	0.58
1:A:1022:G:O2'	1:A:1024:G:O6	2.21	0.58
1:A:1067:A:C2	1:A:1095:A:H1'	2.38	0.58
1:A:1655:A:H4'	4:E:115:GLY:N	2.19	0.58
1:A:1747(B):G:H2'	1:A:1748:G:C8	2.39	0.58
1:A:2001:A:H2'	1:A:2002:G:C8	2.38	0.58
1:A:2135:A:C5	1:A:2159:G:H4'	2.38	0.58
1:A:2591:C:H2'	1:A:2592:G:C8	2.38	0.58
1:A:2694:G:H2'	1:A:2695:C:C6	2.38	0.58
1:A:2781:A:C5'	1:A:2782:G:H5'	2.33	0.58
1:A:2805:G:H2'	1:A:2807:G:N9	2.18	0.58
1:A:2852:G:H2'	1:A:2853:C:C6	2.38	0.58
5:F:61:GLY:HA2	5:F:77:ASP:OD2	2.03	0.58
5:F:148:LEU:HD21	5:F:191:ARG:HD2	1.86	0.58
5:F:203:GLN:O	5:F:207:GLY:N	2.36	0.58
7:H:90:LYS:HD2	7:H:163:TYR:CE2	2.37	0.58
15:T:50:ILE:CG2	15:T:102:ILE:HD11	2.32	0.58
31:9:14:CYS:HA	31:9:27:CYS:HB2	1.85	0.58
32:a:124:G:O2'	32:a:125:U:H5'	2.03	0.58
32:a:371:G:H2'	32:a:372:C:O4'	2.02	0.58
32:a:526:C:P	43:l:91:LYS:HE3	2.43	0.58
32:a:621:A:H2'	32:a:622:A:C8	2.38	0.58
32:a:908:A:H2'	32:a:909:A:H8	1.68	0.58
32:a:1405:G:H1'	32:a:1519:MA6:H1'	1.85	0.58
32:a:1473:A:H2'	32:a:1474:G:C8	2.38	0.58
32:a:1531:A:O2'	32:a:1533:C:N4	2.36	0.58
32:a:1540:U:H3'	32:a:1541:U:H5''	1.85	0.58
34:c:122:GLU:HA	34:c:125:GLU:HB2	1.85	0.58
39:h:92:ARG:HD2	39:h:132:GLU:OE2	2.02	0.58
41:j:35:SER:HB3	41:j:73:ASP:N	2.13	0.58
51:t:27:LYS:O	51:t:31:SER:OG	2.16	0.58
54:C:27:ARG:HD3	54:C:182:PRO:HG3	1.85	0.58
54:C:46:LYS:NZ	54:C:168:THR:O	2.35	0.58
54:C:56:GLN:HA	54:C:201:PRO:CB	2.33	0.58
54:C:152:ILE:O	54:C:156:ILE:HG13	2.02	0.58
55:z:8:U:O2	55:z:14:A:N7	2.36	0.58
1:A:112:U:H2'	1:A:113:G:O4'	2.02	0.58
1:A:229:A:H5''	1:A:230:U:H5'	1.85	0.58
1:A:336:C:H4'	20:Y:6:HIS:CD2	2.38	0.58
1:A:631:A:N3	1:A:2415:G:O2'	2.35	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:936:C:O2'	1:A:937:U:H5'	2.03	0.58
1:A:963:U:H1'	1:A:2250:G:O6	2.03	0.58
2:B:59:A:H2'	2:B:60:C:O4'	2.02	0.58
2:B:76:G:H2'	2:B:77:U:C6	2.38	0.58
3:D:108:PRO:HB3	3:D:143:HIS:CE1	2.37	0.58
4:E:13:ARG:HD2	4:E:20:ALA:HB1	1.85	0.58
6:G:179:PRO:HB3	26:4:43:TYR:HE1	1.69	0.58
7:H:67:LEU:O	7:H:71:LEU:HB2	2.04	0.58
8:I:72:LEU:HD21	8:I:107:VAL:HB	1.85	0.58
17:V:16:PRO:HA	17:V:96:ILE:HG22	1.83	0.58
19:X:89:ILE:O	19:X:93:GLU:HG2	2.04	0.58
22:0:46:LYS:HB2	22:0:78:TYR:CD1	2.38	0.58
26:4:50:VAL:HG11	44:m:65:LYS:CB	2.31	0.58
32:a:93:G:N2	32:a:152:A:H1'	2.17	0.58
32:a:313:A:H2'	32:a:314:C:C6	2.37	0.58
32:a:506:G:H2'	32:a:507:C:C6	2.38	0.58
32:a:664:G:H2'	32:a:666:G:OP1	2.03	0.58
32:a:806:C:H2'	32:a:807:A:C8	2.36	0.58
32:a:993:G:O2'	32:a:994:A:N7	2.36	0.58
32:a:1206:G:H2'	32:a:1207:2MG:O4'	2.03	0.58
32:a:1401:G:H2'	32:a:1402:4OC:O4'	2.03	0.58
32:a:1541:U:H2'	32:a:1542:G:H5''	1.85	0.58
35:d:176:LEU:HD12	35:d:182:LYS:O	2.03	0.58
38:g:113:GLU:OE2	38:g:119:ARG:HA	2.04	0.58
40:i:17:VAL:HG23	40:i:63:ILE:HG12	1.85	0.58
44:m:73:GLU:O	44:m:77:ASN:N	2.27	0.58
56:x:2:A:H4'	56:x:3:A:C5'	2.33	0.58
56:x:34:C:H2'	56:x:35:G:H8	1.68	0.58
1:A:75:G:N1	1:A:111:A:C2	2.57	0.58
1:A:473:G:O2'	1:A:474:G:H5'	2.03	0.58
1:A:601:C:OP1	5:F:108:LYS:NZ	2.37	0.58
1:A:784:A:O2'	1:A:785:G:O5'	2.21	0.58
1:A:1132:A:H2'	1:A:1133:U:C6	2.38	0.58
1:A:1239:G:H2'	1:A:1240:U:C6	2.39	0.58
1:A:2291:U:H2'	1:A:2292:C:C6	2.38	0.58
1:A:2596:U:O2'	1:A:2597:G:H5'	2.03	0.58
3:D:156:ALA:HB2	3:D:178:PRO:HD3	1.84	0.58
7:H:30:LYS:HG3	7:H:81:GLU:CA	2.33	0.58
9:N:21:LYS:CD	9:N:26:LEU:HD13	2.33	0.58
11:P:77:ARG:HB2	11:P:78:PRO:HD2	1.85	0.58
11:P:83:VAL:HG22	11:P:112:LEU:HD21	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:R:18:LEU:HD11	13:R:22:ARG:CZ	2.34	0.58
19:X:53:LYS:HB3	19:X:82:GLN:HB3	1.85	0.58
32:a:177:C:H2'	32:a:178:C:C6	2.38	0.58
32:a:325:A:H2'	32:a:326:G:O4'	2.04	0.58
32:a:337:C:H2'	32:a:338:A:H8	1.67	0.58
32:a:582:U:H2'	32:a:583:A:C8	2.38	0.58
32:a:625:G:H2'	32:a:626:U:C6	2.38	0.58
32:a:768:A:N3	32:a:1512:U:O2'	2.36	0.58
32:a:1151:A:O4'	41:j:39:PRO:HB2	2.03	0.58
32:a:1160:G:N1	32:a:1176:A:H2	1.95	0.58
32:a:1326:C:O2'	32:a:1327:C:H5'	2.03	0.58
33:b:187:LEU:HD22	33:b:201:ILE:O	2.03	0.58
40:i:17:VAL:HG11	40:i:80:GLY:C	2.28	0.58
41:j:6:ILE:HD13	41:j:98:ILE:HA	1.85	0.58
43:l:39:VAL:HB	43:l:57:LYS:HB3	1.85	0.58
43:l:53:ARG:HG3	43:l:93:LEU:HD21	1.85	0.58
43:l:117:ARG:HD2	43:l:122:THR:HG22	1.86	0.58
47:p:21:VAL:HG12	47:p:34:GLU:HB3	1.84	0.58
54:C:116:THR:CG2	54:C:147:PHE:HA	2.33	0.58
54:C:175:VAL:HG11	54:C:189:ILE:HD13	1.85	0.58
1:A:912:C:O2'	1:A:913:U:H5'	2.03	0.58
1:A:1051:G:H2'	1:A:1052:C:O4'	2.03	0.58
1:A:1915:5MU:H2'	1:A:1916:A:O4'	2.03	0.58
1:A:2134:A:C2	1:A:2159:G:H5'	2.39	0.58
1:A:2670:A:H2'	1:A:2671:A:H8	1.67	0.58
1:A:2694:G:O2'	1:A:2695:C:H5'	2.04	0.58
1:A:2820:A:OP1	13:R:2:ARG:NH1	2.36	0.58
2:B:74:U:H2'	2:B:75:G:O4'	2.04	0.58
3:D:166:GLN:CG	3:D:176:ARG:HG3	2.34	0.58
6:G:16:ARG:NE	6:G:31:VAL:HG21	2.18	0.58
32:a:113:G:H2'	32:a:114:U:H6	1.67	0.58
32:a:422:C:H4'	32:a:423:G:O4'	2.03	0.58
32:a:524:G:H2'	32:a:525:C:C5	2.38	0.58
32:a:658:G:O2'	32:a:659:U:H5'	2.03	0.58
32:a:675:A:H1'	42:k:116:HIS:ND1	2.19	0.58
32:a:715:A:H2'	32:a:716:A:H8	1.68	0.58
32:a:1324:A:H2'	32:a:1325:C:H6	1.67	0.58
32:a:1452:C:O2'	32:a:1456:G:H5''	2.04	0.58
32:a:1534:A:H2'	32:a:1535:C:H6	1.68	0.58
33:b:97:TRP:CZ3	33:b:172:ILE:HG22	2.38	0.58
33:b:200:ILE:HG22	33:b:202:PRO:HD3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:f:29:ALA:HA	37:f:32:ASN:ND2	2.17	0.58
44:m:3:ARG:HH22	44:m:45:VAL:HG13	1.69	0.58
44:m:86:CYS:SG	44:m:89:GLY:N	2.69	0.58
45:n:7:ILE:HG22	45:n:23:ARG:HD3	1.85	0.58
55:z:6:G:H2'	55:z:7:A:C8	2.39	0.58
1:A:589:C:OP1	11:P:16:ARG:NH2	2.27	0.58
1:A:713:G:C2'	1:A:714:U:H5'	2.33	0.58
1:A:879:G:H2'	1:A:880:G:H8	1.67	0.58
1:A:1001:A:H2'	1:A:1002:G:O4'	2.04	0.58
1:A:1084:A:H2'	1:A:1105:U:C4'	2.34	0.58
1:A:1248:G:C5	16:U:3:ARG:HB2	2.39	0.58
1:A:1301:A:O2'	1:A:1302:A:H3'	2.04	0.58
1:A:1375:C:H2'	1:A:1376:C:H6	1.68	0.58
1:A:1472:A:H2'	1:A:1473:G:O4'	2.03	0.58
1:A:1914:C:H2'	1:A:1915:5MU:O4'	2.02	0.58
1:A:1965:C:OP1	1:A:1966:A:O2'	2.19	0.58
1:A:2111:C:H5'	1:A:2120:G:OP2	2.04	0.58
1:A:2785:C:H2'	1:A:2786:U:H6	1.69	0.58
1:A:2833:G:O2'	1:A:2834:G:H5'	2.04	0.58
4:E:119:ARG:HD3	4:E:156:MET:O	2.03	0.58
7:H:20:ALA:HB3	7:H:23:ARG:HG3	1.85	0.58
21:Z:96:VAL:HG22	21:Z:97:GLU:H	1.67	0.58
28:6:5:VAL:HG22	28:6:26:ASN:OD1	2.02	0.58
32:a:147:G:O2'	32:a:148:G:H5'	2.03	0.58
32:a:256:U:OP1	48:q:17:LYS:NZ	2.37	0.58
32:a:509:A:H5''	35:d:55:ALA:HB2	1.85	0.58
32:a:539:A:OP2	43:l:115:LYS:NZ	2.29	0.58
32:a:711:G:H2'	32:a:712:A:H8	1.69	0.58
32:a:744:C:H2'	32:a:745:C:C6	2.38	0.58
32:a:887:G:H2'	32:a:888:G:O4'	2.04	0.58
32:a:1155:G:H2'	32:a:1156:G:O4'	2.04	0.58
33:b:130:ARG:O	33:b:135:GLN:NE2	2.36	0.58
33:b:187:LEU:HA	33:b:201:ILE:HB	1.85	0.58
34:c:148:GLY:O	34:c:203:PHE:N	2.36	0.58
38:g:44:TYR:O	38:g:47:CYS:HB2	2.03	0.58
40:i:25:LYS:HE2	40:i:25:LYS:HA	1.84	0.58
40:i:43:ALA:HB2	40:i:74:ILE:HD11	1.85	0.58
44:m:11:ARG:HB3	44:m:46:LYS:CB	2.34	0.58
54:C:61:THR:CB	54:C:160:ARG:HD3	2.33	0.58
55:z:22:G:H2'	55:z:23:A:C8	2.38	0.58
1:A:186:G:H2'	1:A:187:G:C8	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:583:G:OP2	16:U:10:ARG:HD2	2.03	0.58
1:A:743:G:OP1	4:E:130:GLY:HA2	2.03	0.58
1:A:784:A:N6	3:D:229:VAL:HG11	2.18	0.58
1:A:872:A:O2'	1:A:873:G:H5'	2.03	0.58
1:A:1078:U:H1'	1:A:1088:A:N1	2.19	0.58
1:A:1218:C:O2'	1:A:1219:G:H5'	2.03	0.58
1:A:1292:U:H2'	1:A:1293:C:H6	1.68	0.58
1:A:1721:G:H8	1:A:1741:A:H62	1.52	0.58
1:A:2098:U:H2'	1:A:2099:U:C6	2.39	0.58
1:A:2110:G:H5'	1:A:2111:C:C5	2.39	0.58
1:A:2178:C:O2'	54:C:168:THR:HB	2.03	0.58
1:A:2301:C:H2'	1:A:2302:G:C8	2.38	0.58
1:A:2396:G:O2'	1:A:2397:G:H5'	2.04	0.58
1:A:2488:A:H2'	1:A:2489:G:H8	1.67	0.58
1:A:2808:U:C4	1:A:2892:A:C8	2.92	0.58
1:A:2823:A:OP1	4:E:113:PHE:HB2	2.04	0.58
11:P:52:GLU:O	11:P:55:ARG:HG2	2.03	0.58
19:X:24:GLY:O	19:X:83:VAL:HG22	2.04	0.58
21:Z:95:PRO:CB	21:Z:129:SER:HA	2.33	0.58
26:4:11:PRO:HA	26:4:25:TYR:HD1	1.69	0.58
32:a:284:G:H2'	32:a:285:G:C8	2.39	0.58
32:a:425:G:H4'	35:d:45:GLN:HE22	1.68	0.58
32:a:737:A:H1'	37:f:73:ASN:HD21	1.69	0.58
32:a:1309:G:N7	44:m:99:ARG:NH2	2.50	0.58
32:a:1343:G:H2'	32:a:1344:C:C6	2.39	0.58
35:d:63:LYS:O	35:d:67:ILE:HG13	2.03	0.58
38:g:80:VAL:HB	38:g:85:TYR:CE2	2.38	0.58
39:h:17:THR:HB	39:h:78:GLN:OE1	2.03	0.58
40:i:23:ASN:O	40:i:57:GLY:HA2	2.04	0.58
51:t:66:ALA:O	51:t:71:THR:HB	2.03	0.58
54:C:114:VAL:HG23	54:C:149:ILE:HD11	1.84	0.58
1:A:361:G:H2'	1:A:362:U:C6	2.39	0.58
1:A:665:C:O2'	1:A:666:G:H5'	2.04	0.58
1:A:722:A:H2'	1:A:723:G:H8	1.69	0.58
1:A:1257:C:H4'	5:F:83:PHE:CD1	2.38	0.58
1:A:1558:A:C4'	1:A:1559:G:H2'	2.33	0.58
1:A:1817:G:OP1	3:D:88:ARG:NH2	2.36	0.58
1:A:1853:A:N3	1:A:2233:U:O2'	2.27	0.58
1:A:1973:G:H2'	1:A:1974:C:C6	2.38	0.58
1:A:2124:G:H1'	54:C:42:GLU:OE2	2.03	0.58
1:A:2331:G:O2'	22:0:43:THR:HG22	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2559:C:O2'	1:A:2560:C:H5'	2.04	0.58
1:A:2697:G:H2'	1:A:2698:U:C6	2.39	0.58
1:A:2877:G:H2'	1:A:2878:U:H6	1.66	0.58
5:F:199:TRP:O	5:F:203:GLN:HG2	2.04	0.58
6:G:77:ILE:HG22	6:G:80:PHE:H	1.67	0.58
7:H:13:LYS:HA	7:H:15:VAL:N	2.18	0.58
10:O:61:VAL:CG1	10:O:85:VAL:HB	2.34	0.58
11:P:100:LEU:HD12	11:P:112:LEU:HG	1.85	0.58
13:R:61:HIS:O	13:R:65:LEU:HD23	2.03	0.58
15:T:88:ILE:HG21	15:T:91:ARG:NE	2.18	0.58
16:U:18:LEU:HD21	16:U:32:PHE:HA	1.86	0.58
21:Z:13:GLU:HB2	21:Z:18:LEU:HD11	1.86	0.58
21:Z:109:ALA:N	21:Z:144:LEU:O	2.37	0.58
23:1:3:LYS:O	23:1:46:LEU:HD11	2.04	0.58
26:4:48:ARG:HG3	26:4:52:THR:CG2	2.31	0.58
32:a:98:G:H3'	51:t:14:LYS:CD	2.34	0.58
32:a:130:A:OP2	48:q:63:ARG:NE	2.35	0.58
32:a:694:A:H2'	32:a:695:A:O4'	2.03	0.58
32:a:826:C:H2'	32:a:827:U:C6	2.39	0.58
32:a:1027:C:H5''	32:a:1028:C:C5	2.38	0.58
32:a:1404:5MC:H2'	32:a:1405:G:C8	2.39	0.58
33:b:139:LYS:NZ	33:b:143:GLU:OE2	2.37	0.58
37:f:2:ARG:HB2	37:f:4:TYR:CE2	2.37	0.58
37:f:3:ARG:CB	37:f:93:SER:HB2	2.31	0.58
39:h:29:SER:O	39:h:33:GLU:HG3	2.04	0.58
51:t:56:MET:HE2	51:t:85:MET:HG2	1.84	0.58
54:C:25:ALA:HB2	54:C:222:VAL:HG11	1.86	0.58
56:x:36:C:H2'	56:x:37:U:O4'	2.04	0.58
1:A:191:A:H2'	1:A:192:C:C6	2.39	0.58
1:A:228:A:H8	1:A:229:A:H5'	1.67	0.58
1:A:483:A:O3'	20:Y:50:ARG:HA	2.03	0.58
1:A:672:C:O2'	1:A:673:C:H5'	2.04	0.58
1:A:722:A:H2'	1:A:723:G:C8	2.38	0.58
1:A:1084:A:C8	1:A:1085:A:H4'	2.39	0.58
1:A:1181:C:H2'	1:A:1182:A:H8	1.69	0.58
1:A:1277:G:H2'	1:A:1278:A:H8	1.67	0.58
1:A:1277:G:H2'	1:A:1278:A:C8	2.39	0.58
1:A:1366:A:H2'	1:A:1367:A:O4'	2.04	0.58
1:A:1406:U:H2'	1:A:1407:C:C6	2.38	0.58
1:A:1408:C:H2'	1:A:1409:C:C6	2.39	0.58
1:A:2377:A:H2'	1:A:2378:A:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2616:C:H2'	1:A:2617:C:C6	2.38	0.58
1:A:2705:A:H2'	1:A:2706:G:O4'	2.04	0.58
1:A:2769:C:H2'	1:A:2770:G:O4'	2.04	0.58
6:G:40:ASN:O	6:G:155:MET:HB2	2.02	0.58
13:R:33:ARG:NH1	27:5:57:VAL:O	2.36	0.58
20:Y:6:HIS:HD1	20:Y:7:VAL:HG23	1.68	0.58
22:O:32:ARG:HB2	22:O:35:ASN:HD21	1.69	0.58
24:2:66:GLU:HG2	24:2:69:ARG:HH22	1.68	0.58
26:4:2:LYS:HB2	26:4:5:ILE:CD1	2.32	0.58
32:a:97:G:OP2	32:a:103:C:H5''	2.04	0.58
32:a:297:G:N2	32:a:301:G:N7	2.51	0.58
32:a:357:G:O2'	32:a:358:U:H5'	2.04	0.58
32:a:472:A:H2'	32:a:473:G:O4'	2.03	0.58
32:a:1012:U:H2'	32:a:1013:G:C8	2.39	0.58
32:a:1258:G:H2'	32:a:1259:C:C6	2.38	0.58
32:a:1361:G:H2'	32:a:1362:C:N1	2.19	0.58
32:a:1367:C:OP1	40:i:115:GLY:N	2.20	0.58
33:b:47:THR:O	33:b:51:LEU:HG	2.03	0.58
33:b:132:LYS:O	33:b:136:VAL:HG23	2.03	0.58
33:b:221:LEU:HD22	33:b:224:GLN:HE21	1.69	0.58
35:d:101:LEU:HA	35:d:140:VAL:HG23	1.84	0.58
37:f:30:LEU:O	37:f:35:ALA:N	2.30	0.58
40:i:14:VAL:CG2	40:i:66:ARG:HB2	2.34	0.58
40:i:116:LYS:HB3	40:i:118:LYS:O	2.04	0.58
41:j:5:ARG:O	41:j:99:LYS:N	2.37	0.58
54:C:191:ALA:HA	54:C:194:ARG:CG	2.34	0.58
1:A:195:A:OP1	11:P:46:LYS:NZ	2.26	0.58
1:A:1042:G:N1	1:A:1113:U:N3	2.43	0.58
1:A:1750:G:O2'	1:A:1751:C:H5'	2.03	0.58
1:A:1853:A:H2'	1:A:1854:A:C8	2.37	0.58
1:A:2312:U:C5'	6:G:88:ILE:HD11	2.32	0.58
1:A:2366:A:H2'	1:A:2367:G:O4'	2.04	0.58
1:A:2765:A:H3'	1:A:2766:G:H5'	1.86	0.58
2:B:43:C:H4'	6:G:98:ARG:NH2	2.18	0.58
4:E:32:PRO:HD2	4:E:50:GLY:O	2.04	0.58
5:F:184:TYR:O	5:F:188:ARG:HG3	2.04	0.58
8:I:90:GLY:O	8:I:121:LYS:NZ	2.23	0.58
14:S:10:ARG:HG3	14:S:13:ARG:NH2	2.19	0.58
18:W:8:ARG:HG2	18:W:9:TYR:CD2	2.39	0.58
18:W:66:GLU:HA	18:W:69:LEU:CD1	2.34	0.58
32:a:34:C:H1'	43:l:32:PHE:HE2	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:166:G:H2'	32:a:167:G:H8	1.67	0.58
32:a:192:U:H4'	51:t:101:GLY:HA3	1.85	0.58
32:a:266:G:H1'	32:a:268:C:OP2	2.04	0.58
32:a:382:A:H2'	32:a:383:A:C8	2.38	0.58
32:a:397:A:H5'	32:a:398:C:OP1	2.03	0.58
32:a:499:A:H4'	32:a:500:G:H5'	1.85	0.58
32:a:603:U:H2'	32:a:604:G:H8	1.66	0.58
32:a:617:G:H2'	32:a:618:C:O4'	2.03	0.58
32:a:684:A:H2'	32:a:685:G:O4'	2.03	0.58
32:a:1003:G:C5	32:a:1004:A:H1'	2.38	0.58
32:a:1005:A:H1'	32:a:1025:U:O2	2.03	0.58
32:a:1147:C:H4'	40:i:5:TYR:CZ	2.38	0.58
32:a:1357:A:H2'	32:a:1358:U:C6	2.38	0.58
32:a:1361:G:H2'	32:a:1362:C:C2	2.39	0.58
32:a:1399:C:H4'	32:a:1400:5MC:H5''	1.86	0.58
33:b:50:GLU:HA	33:b:53:ARG:HB3	1.86	0.58
33:b:71:VAL:HG21	33:b:164:VAL:HG22	1.86	0.58
33:b:74:LYS:NZ	33:b:205:ASP:O	2.36	0.58
34:c:19:GLU:O	34:c:56:ASP:HA	2.04	0.58
34:c:122:GLU:HA	34:c:125:GLU:OE1	2.04	0.58
40:i:95:LYS:O	40:i:99:LEU:HD13	2.03	0.58
40:i:97:LYS:CB	40:i:102:LEU:HD21	2.34	0.58
41:j:12:ASP:HB3	41:j:15:THR:OG1	2.03	0.58
56:x:17:U:H2'	56:x:18:U:H5'	1.86	0.58
1:A:458:G:O2'	1:A:469:G:O6	2.22	0.57
1:A:528:A:N7	1:A:2042:A:H2'	2.19	0.57
1:A:568:U:N3	1:A:571:A:OP2	2.23	0.57
1:A:569:U:H2'	1:A:570:G:O4'	2.04	0.57
1:A:624:C:O2'	1:A:657:U:OP1	2.22	0.57
1:A:1466:G:H2'	1:A:1547:C:N4	2.19	0.57
1:A:1652:A:H2'	1:A:1653:G:O4'	2.04	0.57
1:A:1703:G:H2'	1:A:1704:G:C8	2.38	0.57
1:A:1790:C:O2'	3:D:209:ALA:HB2	2.05	0.57
1:A:2073:C:O2'	1:A:2074:U:H5'	2.04	0.57
1:A:2155:G:H3'	1:A:2156:G:C8	2.38	0.57
1:A:2875:C:OP1	15:T:3:ARG:NH1	2.31	0.57
3:D:77:ALA:O	3:D:117:VAL:N	2.25	0.57
3:D:118:VAL:HG13	3:D:123:ALA:HB2	1.86	0.57
3:D:139:GLY:O	3:D:164:GLN:NE2	2.37	0.57
6:G:50:ALA:O	6:G:53:LEU:HG	2.03	0.57
12:Q:56:ARG:HA	21:Z:180:VAL:CG2	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Q:137:TYR:O	12:Q:141:GLN:HG2	2.04	0.57
15:T:29:ARG:NH2	15:T:46:GLU:OE1	2.37	0.57
32:a:195:A:H1'	32:a:222:U:O2'	2.04	0.57
32:a:224:C:O2'	32:a:225:C:H5'	2.04	0.57
32:a:825:G:H2'	32:a:826:C:H6	1.69	0.57
32:a:1499:A:C2'	32:a:1500:A:H5'	2.33	0.57
36:e:32:VAL:HG12	36:e:34:VAL:HG23	1.84	0.57
44:m:14:ARG:HE	44:m:42:ALA:HA	1.69	0.57
46:o:30:ALA:O	46:o:34:LEU:N	2.34	0.57
49:r:73:ALA:HA	49:r:76:LEU:HB3	1.85	0.57
52:u:18:TYR:HB2	52:u:24:ARG:NH2	2.15	0.57
54:C:10:LEU:HB3	54:C:220:PRO:CD	2.32	0.57
54:C:110:PHE:CE2	54:C:136:LEU:HD13	2.39	0.57
1:A:143(A):G:H1'	19:X:37:THR:HG21	1.85	0.57
1:A:207:A:H2'	1:A:208:C:O4'	2.04	0.57
1:A:519:U:H2'	1:A:520:G:H8	1.69	0.57
1:A:705:A:H2'	1:A:706:A:O4'	2.04	0.57
1:A:1109:C:H5'	1:A:1110:G:OP2	2.04	0.57
1:A:1181:C:H2'	1:A:1182:A:C8	2.38	0.57
1:A:1527:G:H22	1:A:1544:A:H5''	1.69	0.57
1:A:1657:C:H2'	1:A:1658:C:C6	2.40	0.57
1:A:2014:A:H2'	1:A:2015:A:C8	2.39	0.57
1:A:2135:A:C2'	1:A:2136:C:H5'	2.34	0.57
1:A:2206:G:H3'	1:A:2207:G:C8	2.39	0.57
1:A:2286:A:N6	28:6:23:THR:OG1	2.37	0.57
1:A:2412:A:H2'	1:A:2413:G:O4'	2.03	0.57
1:A:2543:G:H2'	1:A:2544:G:C8	2.39	0.57
3:D:124:PRO:O	3:D:129:ASN:ND2	2.36	0.57
17:V:34:GLU:HA	17:V:57:VAL:O	2.04	0.57
32:a:139:G:O2'	32:a:140:A:H5'	2.03	0.57
32:a:304:U:O2'	32:a:305:G:H5'	2.04	0.57
32:a:335:C:H2'	32:a:336:C:H6	1.69	0.57
32:a:449:C:H3'	32:a:450:G:C8	2.38	0.57
32:a:980:C:H2'	32:a:981:U:O4'	2.04	0.57
32:a:1028:C:H2'	32:a:1029:C:H6	1.68	0.57
33:b:25:ASN:N	33:b:191:ASP:HA	2.19	0.57
33:b:53:ARG:HA	33:b:56:ARG:HH21	1.69	0.57
33:b:54:THR:O	33:b:58:ILE:HG12	2.04	0.57
38:g:76:ARG:CD	38:g:89:MET:HG3	2.32	0.57
38:g:106:GLN:HA	38:g:109:ASN:HD22	1.68	0.57
44:m:82:MET:HG2	44:m:93:ARG:HG3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:q:22:LEU:HD12	48:q:40:LYS:O	2.04	0.57
50:s:36:ARG:NH2	50:s:75:ALA:O	2.30	0.57
50:s:53:ASN:N	50:s:56:GLN:O	2.35	0.57
54:C:104:LEU:N	54:C:105:ASP:HA	2.19	0.57
1:A:394:A:O2'	1:A:395:U:H5'	2.05	0.57
1:A:678:C:H2'	1:A:679:C:C6	2.40	0.57
1:A:997:G:O2'	1:A:998:C:H5'	2.04	0.57
1:A:1118:C:H2'	1:A:1119:C:C6	2.40	0.57
1:A:1291:C:O2'	1:A:1292:U:H5'	2.05	0.57
1:A:1354:A:H5''	3:D:38:LYS:CE	2.28	0.57
1:A:1926:U:O2'	1:A:1928:A:N7	2.31	0.57
1:A:2198:A:O2'	1:A:2199:A:O5'	2.20	0.57
1:A:2247:A:H2'	1:A:2248:C:C6	2.40	0.57
1:A:2261:C:O2'	1:A:2262:U:H5'	2.04	0.57
3:D:246:PRO:O	3:D:254:THR:HG22	2.04	0.57
8:I:4:ILE:N	8:I:37:VAL:O	2.28	0.57
10:O:13:ASN:ND2	10:O:97:ARG:HG2	2.19	0.57
17:V:52:VAL:CG2	17:V:55:ALA:HB3	2.31	0.57
18:W:34:ASN:OD1	18:W:37:ARG:NH1	2.33	0.57
32:a:73:G:N3	32:a:76:C:H1'	2.19	0.57
32:a:407:G:OP1	35:d:115:ARG:HD3	2.04	0.57
32:a:735:C:H5'	49:r:71:LYS:CD	2.33	0.57
32:a:801:U:H2'	32:a:802:A:C8	2.39	0.57
32:a:922:G:C4'	36:e:20:GLN:HA	2.28	0.57
32:a:946:A:H2'	32:a:947:G:H8	1.67	0.57
32:a:972:C:O2'	32:a:973:G:H5'	2.04	0.57
32:a:977:A:H1'	32:a:982:U:O4	2.04	0.57
32:a:1025:U:O2'	32:a:1026:G:N7	2.34	0.57
32:a:1160:G:C6	32:a:1176:A:N1	2.73	0.57
32:a:1263:C:H2'	32:a:1264:C:C6	2.39	0.57
32:a:1518:MA6:H93	32:a:1519:MA6:H102	1.85	0.57
33:b:61:LEU:HD21	33:b:160:ASP:HB2	1.84	0.57
35:d:148:VAL:HG21	35:d:158:ILE:HG21	1.87	0.57
38:g:113:GLU:HG2	38:g:119:ARG:HG2	1.86	0.57
39:h:95:VAL:HA	39:h:99:GLU:OE2	2.04	0.57
43:l:6:THR:OG1	43:l:9:GLN:N	2.31	0.57
43:l:83:VAL:CG1	43:l:100:ILE:HG23	2.32	0.57
49:r:73:ALA:HB3	49:r:79:LEU:HD12	1.85	0.57
50:s:49:ILE:O	50:s:60:VAL:N	2.34	0.57
51:t:56:MET:CE	51:t:85:MET:HG2	2.34	0.57
54:C:28:LEU:HA	54:C:31:GLU:CG	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:z:6:G:N2	55:z:68:C:H1'	2.19	0.57
1:A:6:A:O2'	9:N:130:HIS:ND1	2.38	0.57
1:A:84:A:N1	1:A:98:G:O2'	2.34	0.57
1:A:263:C:H2'	1:A:264:C:C6	2.39	0.57
1:A:272(B):C:O2'	1:A:272(C):C:H5'	2.04	0.57
1:A:290:G:H2'	1:A:291:C:C6	2.39	0.57
1:A:414:C:H2'	1:A:415:A:H8	1.69	0.57
1:A:533:G:H5'	16:U:24:TYR:CE1	2.39	0.57
1:A:640:C:H2'	1:A:641:C:C6	2.38	0.57
1:A:1255:U:H3'	5:F:73:ALA:HB2	1.86	0.57
1:A:1375:C:H2'	1:A:1376:C:C6	2.39	0.57
1:A:1528(B):A:H2'	1:A:1529:G:O4'	2.04	0.57
1:A:1903:G:OP1	3:D:241:PRO:HB2	2.04	0.57
1:A:2036:C:H2'	1:A:2037:G:H8	1.70	0.57
1:A:2319:G:H1	14:S:3:ARG:HA	1.70	0.57
1:A:2513:G:O2'	4:E:154:LYS:NZ	2.38	0.57
1:A:2759:G:H2'	1:A:2760:C:C6	2.40	0.57
1:A:2818:G:O2'	1:A:2819:G:H5'	2.05	0.57
7:H:58:GLU:OE2	7:H:60:ARG:HB3	2.04	0.57
8:I:49:ALA:HA	8:I:52:ARG:NH2	2.18	0.57
11:P:88:LEU:HD21	11:P:100:LEU:HD21	1.84	0.57
12:Q:42:ILE:HG22	12:Q:47:ILE:HG13	1.87	0.57
20:Y:39:VAL:CG2	20:Y:67:LEU:HD12	2.34	0.57
23:1:85:LEU:HD23	23:1:89:GLU:HB3	1.85	0.57
32:a:68:G:H5'	32:a:76:C:O2	2.04	0.57
32:a:232:G:H1'	32:a:262:A:N1	2.19	0.57
32:a:376:G:O2'	32:a:377:G:H5'	2.03	0.57
32:a:377:G:O2'	32:a:378:G:H5'	2.04	0.57
32:a:414:A:H2'	32:a:415:A:O4'	2.04	0.57
32:a:438:G:N1	32:a:495:A:OP2	2.26	0.57
32:a:608:A:H4'	47:p:32:TYR:OH	2.04	0.57
32:a:978:A:OP2	32:a:1363(A):C:N4	2.35	0.57
32:a:1315:U:H2'	32:a:1316:G:O4'	2.04	0.57
33:b:19:HIS:CD2	33:b:39:ILE:HG21	2.40	0.57
33:b:178:ARG:NH1	33:b:198:ASP:OD1	2.37	0.57
38:g:15:ASP:OD1	38:g:19:GLY:N	2.37	0.57
44:m:92:HIS:HA	44:m:110:ARG:NH2	2.19	0.57
48:q:12:SER:HB3	48:q:20:THR:CB	2.34	0.57
51:t:43:LEU:HD12	51:t:55:ILE:HG13	1.87	0.57
52:u:5:ASP:OD2	52:u:8:THR:HG23	2.05	0.57
1:A:247:G:H4'	1:A:386:G:C2	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:498:G:O2'	1:A:499:U:H5'	2.04	0.57
1:A:890:A:H2'	1:A:892:G:C8	2.39	0.57
1:A:1090:U:H2'	1:A:1091:G:H8	1.68	0.57
1:A:1292:U:H2'	1:A:1293:C:C6	2.39	0.57
1:A:1501:C:H2'	1:A:1502:C:C6	2.38	0.57
1:A:1587:A:H2'	1:A:1588:C:H6	1.69	0.57
1:A:1695:G:H1'	3:D:8:PRO:O	2.05	0.57
1:A:1803:A:O2'	3:D:259:THR:HG21	2.04	0.57
1:A:1823:G:H2'	1:A:1824:G:H8	1.70	0.57
1:A:1924:C:H2'	1:A:1925:C:C6	2.40	0.57
1:A:2031:A:O2'	1:A:2032:G:OP1	2.17	0.57
1:A:2191:G:H2'	1:A:2192:G:C8	2.39	0.57
1:A:2543:G:H2'	1:A:2544:G:H8	1.69	0.57
1:A:2788:C:H2'	1:A:2789:C:C6	2.40	0.57
1:A:2850:A:H3'	1:A:2851:A:H8	1.70	0.57
4:E:37:ARG:NE	4:E:80:GLU:OE2	2.36	0.57
5:F:135:LYS:O	5:F:138:GLU:HB2	2.04	0.57
5:F:157:VAL:HA	5:F:176:LEU:O	2.05	0.57
7:H:10:PRO:HA	7:H:49:VAL:HA	1.87	0.57
11:P:111:ARG:HB3	11:P:128:HIS:CG	2.39	0.57
19:X:40:LYS:HG3	19:X:51:VAL:HB	1.85	0.57
21:Z:48:PHE:CE1	21:Z:52:SER:HA	2.39	0.57
24:2:1:MET:HG3	24:2:5:GLU:OE1	2.05	0.57
32:a:64:G:OP2	32:a:70:G:H3'	2.05	0.57
32:a:66:G:H3'	32:a:73:G:C4	2.39	0.57
32:a:73:G:H2'	32:a:76:C:O4'	2.04	0.57
32:a:79:G:O6	32:a:90:U:O2	2.22	0.57
32:a:105:G:O2'	32:a:106:C:H5'	2.05	0.57
32:a:323:U:C4'	51:t:19:SER:HA	2.35	0.57
32:a:337:C:H2'	32:a:338:A:C8	2.39	0.57
32:a:558:G:H2'	32:a:559:A:H2	1.70	0.57
32:a:605:U:H2'	32:a:606:G:O4'	2.04	0.57
32:a:612:C:O2'	32:a:613:C:H5'	2.04	0.57
32:a:671:G:H2'	32:a:672:U:O4'	2.04	0.57
32:a:714:G:H2'	32:a:715:A:H8	1.68	0.57
32:a:794:A:H2'	32:a:795:C:H6	1.68	0.57
32:a:1090:U:H2'	32:a:1091:U:C6	2.39	0.57
32:a:1320:C:H2'	32:a:1321:C:C6	2.40	0.57
32:a:1347:G:H5'	40:i:108:VAL:H	1.70	0.57
32:a:1500:A:O2'	32:a:1501:C:H5'	2.05	0.57
35:d:149:ALA:O	35:d:153:ARG:HG3	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:g:78:ARG:N	38:g:85:TYR:O	2.37	0.57
39:h:24:THR:O	39:h:60:ARG:HA	2.03	0.57
40:i:37:PHE:CA	40:i:40:LEU:HD12	2.34	0.57
54:C:47:LEU:HD23	54:C:209:LEU:HD23	1.86	0.57
54:C:70:LYS:HG2	54:C:177:LYS:HE2	1.86	0.57
1:A:97:C:O3'	24:2:2:LYS:HA	2.04	0.57
1:A:604:G:O2'	1:A:605:C:H5'	2.05	0.57
1:A:640:C:H2'	1:A:641:C:H6	1.69	0.57
1:A:1475:G:H2'	1:A:1476:C:C6	2.39	0.57
1:A:1676:A:H2'	1:A:1677:A:O4'	2.04	0.57
1:A:2095:C:H5''	8:I:11:ASN:ND2	2.19	0.57
1:A:2198:A:HO2'	1:A:2199:A:P	2.27	0.57
1:A:2444:G:OP2	5:F:68:LYS:HD2	2.04	0.57
6:G:39:ILE:O	6:G:91:ARG:HA	2.04	0.57
18:W:19:LEU:HB3	27:5:25:LEU:CD1	2.33	0.57
18:W:64:MET:CE	18:W:109:GLU:HG3	2.34	0.57
20:Y:12:THR:HG1	20:Y:26:LYS:HZ3	1.45	0.57
32:a:189(C):C:H2'	32:a:189(D):C:C6	2.40	0.57
32:a:691:G:OP2	42:k:26:ASN:HB2	2.04	0.57
32:a:893:C:H2'	32:a:894:G:C8	2.39	0.57
33:b:102:LEU:HB3	33:b:180:LEU:CD1	2.34	0.57
34:c:156:ARG:NH1	34:c:193:TYR:O	2.38	0.57
36:e:78:HIS:HB2	39:h:104:ARG:HD3	1.87	0.57
44:m:45:VAL:HA	44:m:48:LEU:CD1	2.35	0.57
49:r:43:PHE:HA	49:r:51:LEU:HD12	1.86	0.57
53:y:23:C:H2'	53:y:24:U:H6	1.70	0.57
1:A:36:G:H4'	1:A:451:C:C2	2.40	0.57
1:A:64:A:C5	19:X:66:LEU:HD13	2.40	0.57
1:A:183:C:H1'	1:A:432:A:H2	1.70	0.57
1:A:921:G:H2'	1:A:922:U:H6	1.70	0.57
1:A:1135:C:N4	1:A:1137:G:H3'	2.20	0.57
1:A:1221(A):C:H2'	1:A:1221(B):C:C6	2.39	0.57
1:A:1333:C:H2'	1:A:1334:G:H8	1.69	0.57
1:A:1431:U:H2'	1:A:1432:C:C6	2.39	0.57
1:A:1551:C:H2'	1:A:1552:G:O4'	2.05	0.57
1:A:2091:U:OP2	1:A:2092:U:O2'	2.10	0.57
1:A:2884:U:O4	27:5:40:LYS:NZ	2.38	0.57
2:B:116:G:H2'	2:B:117:G:H8	1.70	0.57
6:G:118:ARG:O	6:G:181:ARG:HA	2.05	0.57
15:T:31:SER:HB2	15:T:85:LYS:HG2	1.86	0.57
15:T:41:ARG:NH1	15:T:43:GLN:HB3	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:Z:51:ALA:O	21:Z:57:ILE:HD11	2.04	0.57
23:1:13:ILE:HD11	23:1:42:GLN:OE1	2.05	0.57
23:1:91:LYS:O	23:1:95:LEU:HD23	2.05	0.57
28:6:5:VAL:HA	28:6:27:LYS:HE2	1.86	0.57
32:a:228:A:H4'	47:p:62:VAL:HG21	1.86	0.57
32:a:368:U:C5'	32:a:369:C:H5'	2.34	0.57
32:a:707:C:H4'	42:k:20:TYR:CG	2.39	0.57
32:a:1006:C:H2'	32:a:1007:C:C6	2.40	0.57
32:a:1060:C:H2'	32:a:1061:G:C8	2.36	0.57
32:a:1318:A:H4'	50:s:10:PHE:CD2	2.40	0.57
32:a:1324:A:H2'	32:a:1325:C:C6	2.39	0.57
32:a:1375:A:H5'	38:g:28:ASN:HB3	1.87	0.57
32:a:1402:4OC:H2'	32:a:1403:C:O4'	2.05	0.57
32:a:1468:A:H2'	32:a:1469:G:O4'	2.04	0.57
32:a:1536:C:H2'	32:a:1537:U:C5	2.39	0.57
36:e:74:GLY:HA3	36:e:116:THR:HG22	1.85	0.57
42:k:15:ALA:HA	42:k:76:GLY:O	2.05	0.57
42:k:73:MET:HE2	42:k:103:LEU:HD11	1.86	0.57
47:p:53:VAL:HG13	47:p:79:VAL:HA	1.86	0.57
52:u:12:LYS:HA	52:u:15:ARG:HB3	1.86	0.57
56:x:26:C:H2'	56:x:27:C:C6	2.39	0.57
1:A:147:U:H2'	1:A:148:C:H6	1.70	0.57
1:A:225:A:O2'	1:A:226:G:H5'	2.05	0.57
1:A:286:C:H2'	1:A:287:C:C6	2.40	0.57
1:A:327:G:H2'	1:A:328:U:C6	2.40	0.57
1:A:590:A:H2'	1:A:591:C:C6	2.40	0.57
1:A:817:C:O2'	1:A:839:U:H5''	2.04	0.57
1:A:1439:A:H2'	1:A:1440:G:O4'	2.05	0.57
1:A:1446:C:H2'	1:A:1447:G:C8	2.39	0.57
1:A:1537:G:H2'	1:A:1538:G:H8	1.70	0.57
1:A:1680:U:H2'	1:A:1681:G:O4'	2.05	0.57
1:A:2114:A:O2'	1:A:2168:G:OP1	2.22	0.57
1:A:2638:G:N2	1:A:2775:A:H2'	2.19	0.57
1:A:2736:G:O2'	1:A:2737:G:H5'	2.05	0.57
2:B:115:G:H2'	2:B:116:G:H8	1.70	0.57
7:H:157:TYR:C	7:H:171:LEU:HD12	2.30	0.57
9:N:47:ALA:HB2	9:N:112:LEU:HD11	1.86	0.57
11:P:120:ALA:HB2	11:P:137:LYS:HB3	1.87	0.57
15:T:51:ARG:HD2	15:T:100:TYR:OH	2.04	0.57
17:V:12:TYR:CE2	17:V:22:VAL:HG12	2.37	0.57
25:3:16:PRO:HB2	25:3:18:ASP:OD1	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:22:G:H2'	32:a:23:C:C6	2.39	0.57
32:a:72:C:N4	32:a:76:C:O4'	2.37	0.57
32:a:273:A:O2'	32:a:274:A:H5'	2.04	0.57
32:a:399:G:H2'	32:a:400:C:H6	1.68	0.57
32:a:640:A:H2'	32:a:641:U:C6	2.40	0.57
32:a:678:U:H2'	32:a:679:C:C6	2.39	0.57
32:a:1358:U:H3'	32:a:1359:C:C6	2.39	0.57
33:b:71:VAL:O	33:b:165:VAL:HG23	2.04	0.57
36:e:19:MET:SD	36:e:24:ARG:HB3	2.44	0.57
37:f:3:ARG:HG3	37:f:38:GLU:OE1	2.05	0.57
40:i:25:LYS:O	40:i:61:ALA:N	2.26	0.57
41:j:11:PHE:HE1	41:j:67:THR:HG22	1.69	0.57
50:s:11:VAL:HG11	50:s:16:LEU:HD12	1.86	0.57
53:y:66:C:H2'	53:y:67:C:C6	2.39	0.57
55:z:65:G:H2'	55:z:66:U:C6	2.40	0.57
56:x:10:A:H4'	56:x:10:A:OP1	2.03	0.57
1:A:24:G:H2'	1:A:25:U:C6	2.40	0.57
1:A:65:C:H2'	1:A:66:C:H6	1.70	0.57
1:A:690:G:H2'	1:A:691:C:C6	2.38	0.57
1:A:1000:A:H2'	1:A:1001:A:C8	2.40	0.57
1:A:1266:G:O2'	1:A:2012:G:O6	2.14	0.57
1:A:1364:G:OP1	23:1:61:ARG:NH1	2.37	0.57
1:A:1529:G:H1	1:A:1540:U:H3	1.52	0.57
1:A:1568:G:OP1	3:D:63:ARG:NH1	2.35	0.57
1:A:1887:C:H2'	1:A:1888:G:O4'	2.05	0.57
1:A:2282:G:H4'	1:A:2389:G:O2'	2.05	0.57
1:A:2304:G:O2'	6:G:133:LEU:O	2.22	0.57
1:A:2439:A:N6	1:A:2585:U:H5'	2.20	0.57
1:A:2547:U:H2'	1:A:2548:G:C8	2.39	0.57
1:A:2867:G:O6	15:T:23:ARG:HD2	2.04	0.57
4:E:110:GLY:CA	4:E:162:ALA:HB2	2.34	0.57
6:G:144:ILE:HA	6:G:148:MET:SD	2.45	0.57
20:Y:35:TYR:CE2	20:Y:69:ALA:HB3	2.40	0.57
29:7:26:GLY:O	29:7:30:VAL:HG23	2.04	0.57
32:a:99:U:O2	51:t:18:GLN:HG2	2.05	0.57
32:a:142:G:H2'	32:a:143:A:C8	2.40	0.57
32:a:167:G:H2'	32:a:168:G:C8	2.39	0.57
32:a:663:A:H2'	32:a:664:G:C8	2.39	0.57
32:a:880:C:OP1	43:l:12:ARG:NE	2.38	0.57
32:a:881:G:H2'	32:a:882:C:O4'	2.05	0.57
32:a:1044:A:C6	32:a:1045:C:H1'	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1268:A:H1'	32:a:1326:C:O2'	2.05	0.57
35:d:142:PRO:HA	35:d:185:PHE:HD2	1.68	0.57
35:d:185:PHE:CZ	35:d:189:PRO:HD3	2.40	0.57
36:e:137:GLU:OE2	36:e:141:GLN:NE2	2.37	0.57
39:h:69:ARG:O	39:h:74:PRO:HA	2.05	0.57
44:m:78:ILE:CG2	44:m:82:MET:HE3	2.35	0.57
49:r:66:LEU:O	49:r:69:THR:OG1	2.21	0.57
54:C:46:LYS:HG2	54:C:210:ARG:NH1	2.19	0.57
54:C:182:PRO:HG2	54:C:183:GLU:OE1	2.05	0.57
1:A:277:C:H5'	1:A:278:A:C8	2.40	0.57
1:A:687:C:C4'	29:7:4:THR:HA	2.34	0.57
1:A:1050:A:H2'	1:A:1051:G:C8	2.40	0.57
1:A:1216:G:OP1	16:U:11:ARG:NH2	2.23	0.57
1:A:1308:A:H2'	1:A:1309:G:O4'	2.05	0.57
1:A:1756:G:O2'	1:A:1757:U:H5''	2.05	0.57
1:A:2110:G:C2	1:A:2180:U:H1'	2.39	0.57
1:A:2127:G:O2'	54:C:218:MET:HE3	2.05	0.57
1:A:2169:A:H5''	54:C:130:ILE:CD1	2.34	0.57
1:A:2188:C:H2'	1:A:2189:U:O4'	2.05	0.57
1:A:2803:C:H2'	1:A:2804:C:H6	1.69	0.57
1:A:2870:C:H2'	1:A:2871:C:O4'	2.04	0.57
2:B:107:G:H2'	2:B:108:U:C6	2.39	0.57
3:D:41:GLY:O	3:D:43:ARG:NH1	2.34	0.57
4:E:107:THR:HA	4:E:163:GLU:O	2.04	0.57
5:F:152:GLU:HA	5:F:190:GLU:OE1	2.05	0.57
12:Q:135:ASP:O	12:Q:139:GLU:N	2.35	0.57
20:Y:86:ARG:HB2	20:Y:98:VAL:CG2	2.35	0.57
25:3:7:LYS:O	25:3:9:VAL:HG13	2.05	0.57
32:a:41:G:H2'	32:a:42:G:C8	2.40	0.57
32:a:56:U:H2'	32:a:57:G:C8	2.40	0.57
32:a:266:G:O2'	32:a:267:C:OP2	2.14	0.57
32:a:416:G:H2'	32:a:417:C:C6	2.39	0.57
32:a:646:U:H2'	32:a:647:C:H6	1.70	0.57
32:a:1014:A:H2'	32:a:1015:A:O4'	2.05	0.57
33:b:221:LEU:HD22	33:b:224:GLN:NE2	2.20	0.57
35:d:150:GLU:HA	35:d:153:ARG:CD	2.35	0.57
37:f:26:ILE:O	37:f:30:LEU:HG	2.05	0.57
37:f:62:TRP:CH2	37:f:64:GLN:HB2	2.40	0.57
46:o:4:THR:OG1	46:o:6:GLU:OE1	2.13	0.57
1:A:48:G:N1	1:A:177:G:OP2	2.37	0.56
1:A:272(F):C:H2'	1:A:272(G):C:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:419:C:O2'	1:A:420:C:H5'	2.04	0.56
1:A:887:A:O2'	1:A:888:C:H3'	2.04	0.56
1:A:904:C:H2'	1:A:905:U:C6	2.40	0.56
1:A:1186:G:H2'	1:A:1187:G:O4'	2.05	0.56
1:A:1563:G:O2'	1:A:1564:C:H5'	2.04	0.56
1:A:1693:U:H1'	3:D:14:ARG:NH1	2.20	0.56
3:D:108:PRO:HG2	3:D:111:LEU:HB2	1.87	0.56
7:H:91:GLY:CA	7:H:160:LYS:HG3	2.35	0.56
11:P:84:ASN:CG	11:P:117:GLU:HB2	2.30	0.56
11:P:106:LEU:HD13	11:P:107:LYS:O	2.05	0.56
19:X:11:PRO:HD3	24:2:37:PHE:CD1	2.40	0.56
24:2:64:LEU:O	24:2:68:ARG:HG2	2.05	0.56
32:a:342:C:O2'	32:a:343:U:H5'	2.05	0.56
32:a:717:C:O2'	32:a:734:G:O4'	2.22	0.56
32:a:825:G:H1'	39:h:8:ASP:OD1	2.05	0.56
32:a:1249:C:O2'	40:i:68:GLY:O	2.19	0.56
32:a:1408:A:O2'	32:a:1409:C:H5'	2.05	0.56
35:d:208:SER:CB	36:e:101:ILE:HD12	2.35	0.56
36:e:82:VAL:HB	36:e:89:ILE:HG22	1.86	0.56
37:f:2:ARG:N	37:f:66:GLU:HG3	2.20	0.56
39:h:12:ARG:CD	39:h:26:VAL:HG12	2.35	0.56
46:o:62:GLN:HA	46:o:65:ARG:HH21	1.69	0.56
55:z:2:C:H2'	55:z:3:C:H6	1.70	0.56
55:z:16:U:C5	55:z:18:G:H3'	2.40	0.56
56:x:17:U:C2'	56:x:18:U:H5'	2.34	0.56
1:A:1911:PSU:H2'	1:A:1918:A:C2	2.41	0.56
1:A:1975:G:H2'	1:A:1976:U:C6	2.40	0.56
1:A:2389:G:C5'	1:A:2390:U:H5'	2.35	0.56
1:A:2471:C:H2'	1:A:2472:G:O4'	2.05	0.56
1:A:2611:U:H3'	1:A:2611:U:OP2	2.05	0.56
1:A:2722:G:O2'	1:A:2723:C:H5'	2.04	0.56
1:A:2767:C:O2'	1:A:2768:C:H5'	2.05	0.56
1:A:2808:U:N3	1:A:2809:A:N7	2.53	0.56
2:B:13:A:O2'	2:B:15:A:H2'	2.05	0.56
2:B:22:U:H2'	2:B:23:G:C8	2.40	0.56
7:H:95:ARG:HB2	7:H:128:PRO:CB	2.35	0.56
15:T:55:ASN:N	15:T:59:THR:OG1	2.38	0.56
32:a:22:G:H2'	32:a:23:C:H6	1.70	0.56
32:a:384:G:H2'	32:a:385:C:C6	2.39	0.56
32:a:1047:G:OP1	45:n:4:LYS:NZ	2.29	0.56
35:d:18:LYS:CA	35:d:33:MET:HG3	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:i:49:PRO:HB2	40:i:81:ILE:HG12	1.87	0.56
44:m:96:LEU:C	44:m:110:ARG:HG2	2.30	0.56
1:A:25:U:O2'	1:A:26:G:H5'	2.06	0.56
1:A:26:G:H1'	1:A:514:A:N6	2.19	0.56
1:A:281:G:O2'	1:A:359:A:N6	2.36	0.56
1:A:337:C:H2'	1:A:338:G:O4'	2.05	0.56
1:A:371:A:H61	1:A:401:A:H3'	1.70	0.56
1:A:578:A:OP1	1:A:1255:U:O2'	2.19	0.56
1:A:605:C:H2'	1:A:606:U:O4'	2.06	0.56
1:A:716:A:H2'	1:A:717:G:O4'	2.06	0.56
1:A:747:U:H1'	18:W:92:ARG:HH22	1.69	0.56
1:A:851:U:H2'	1:A:852:G:C8	2.40	0.56
1:A:917:A:H2'	1:A:918:A:O4'	2.04	0.56
1:A:920:G:O2'	1:A:921:G:H5'	2.06	0.56
1:A:1057:A:H2'	1:A:1058:G:C8	2.41	0.56
1:A:1290:C:H2'	1:A:1291:C:H6	1.69	0.56
1:A:1362:C:H2'	1:A:1363:C:O4'	2.05	0.56
1:A:1413:G:H2'	1:A:1414:G:C8	2.41	0.56
1:A:1487:G:H2'	1:A:1488:G:C8	2.40	0.56
1:A:1540:U:O2'	1:A:1541:G:H5'	2.05	0.56
1:A:1578:U:O2'	1:A:1579:A:H5'	2.06	0.56
1:A:1710:C:H2'	1:A:1711:C:C6	2.40	0.56
1:A:1719:G:H2'	1:A:1720:U:C6	2.40	0.56
1:A:1759:A:C2'	1:A:1760:A:H5'	2.35	0.56
1:A:1801:G:O2'	1:A:1802:A:H5''	2.05	0.56
1:A:1957:C:O2'	1:A:1958:C:H5'	2.05	0.56
1:A:2180:U:H5''	1:A:2181:G:P	2.46	0.56
1:A:2181:G:H2'	1:A:2182:G:C8	2.40	0.56
1:A:2272:U:H5''	1:A:2273:A:OP1	2.05	0.56
1:A:2341:G:H2'	1:A:2342:C:C6	2.40	0.56
1:A:2344:U:H3'	28:6:37:ARG:O	2.06	0.56
1:A:2396:G:H5'	23:1:25:LYS:HZ3	1.68	0.56
1:A:2636:U:OP1	4:E:80:GLU:N	2.39	0.56
1:A:2716:U:O2'	1:A:2717:G:H5'	2.04	0.56
2:B:9:G:H2'	2:B:10:C:H6	1.71	0.56
2:B:53:A:H2'	2:B:54:G:O4'	2.06	0.56
2:B:94:C:H2'	2:B:95:C:C6	2.41	0.56
2:B:116:G:H2'	2:B:117:G:C8	2.40	0.56
3:D:60:ARG:O	3:D:61:LEU:HD22	2.06	0.56
4:E:5:LEU:HB2	4:E:31:CYS:SG	2.45	0.56
5:F:153:SER:O	5:F:189:THR:HB	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:H:95:ARG:O	7:H:105:LEU:HD12	2.06	0.56
7:H:154:PRO:HA	7:H:163:TYR:HE1	1.71	0.56
8:I:132:PRO:CD	8:I:138:ILE:HD12	2.36	0.56
11:P:81:GLN:HB3	11:P:106:LEU:CD2	2.36	0.56
12:Q:25:ASP:OD2	21:Z:78:LYS:NZ	2.25	0.56
13:R:55:ALA:HA	13:R:80:PHE:HE1	1.71	0.56
19:X:12:VAL:HG22	19:X:29:TRP:CE2	2.39	0.56
20:Y:51:VAL:HG22	20:Y:58:GLY:HA3	1.87	0.56
23:1:51:VAL:HG11	23:1:74:VAL:HG21	1.87	0.56
26:4:12:ALA:HB2	26:4:26:SER:N	2.20	0.56
30:8:52:LYS:O	30:8:56:GLU:HG3	2.05	0.56
32:a:66:G:C5	32:a:97:G:N1	2.70	0.56
32:a:68:G:H3'	32:a:76:C:C4	2.40	0.56
32:a:358:U:H2'	32:a:359:U:C6	2.40	0.56
32:a:438:G:H4'	35:d:123:HIS:CD2	2.40	0.56
32:a:451:A:N6	32:a:480:U:H2'	2.20	0.56
32:a:460:G:N1	32:a:471:G:OP2	2.19	0.56
32:a:502:G:H2'	32:a:503:C:C6	2.41	0.56
32:a:564:C:OP2	43:l:15:ARG:NH2	2.34	0.56
32:a:646:U:H2'	32:a:647:C:C6	2.40	0.56
32:a:665:A:N3	32:a:732:C:H2'	2.20	0.56
32:a:992:U:H3	32:a:1044:A:H62	1.52	0.56
32:a:1166:G:N2	32:a:1170:A:OP2	2.26	0.56
32:a:1270:C:O2'	32:a:1313:U:O2'	2.14	0.56
33:b:16:HIS:HB2	33:b:210:SER:HB3	1.87	0.56
35:d:113:SER:O	35:d:117:ALA:N	2.35	0.56
35:d:134:ASP:O	35:d:136:PRO:HD3	2.05	0.56
36:e:10:MET:HE3	56:x:25:A:N1	2.20	0.56
36:e:100:VAL:HG13	36:e:118:ILE:CG2	2.36	0.56
41:j:5:ARG:N	41:j:74:ILE:HG22	2.20	0.56
41:j:12:ASP:OD2	41:j:15:THR:HG23	2.05	0.56
43:l:38:THR:HA	43:l:79:GLU:HG3	1.87	0.56
43:l:60:LEU:HD11	43:l:85:ILE:CD1	2.34	0.56
44:m:50:GLU:O	44:m:54:VAL:HG22	2.05	0.56
44:m:52:GLU:HA	44:m:55:ARG:NH1	2.20	0.56
48:q:97:SER:C	48:q:98:LEU:HD12	2.30	0.56
53:y:16:C:H3'	53:y:17(A):C:C6	2.41	0.56
53:y:67:C:O2'	53:y:68:C:H5'	2.04	0.56
54:C:7:TYR:HD1	54:C:10:LEU:HD12	1.70	0.56
56:x:28:G:N1	56:x:52:G:O6	2.39	0.56
1:A:153:C:H2'	1:A:154(A):G:C8	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:195:A:H5''	1:A:196:A:O5'	2.05	0.56
1:A:303:U:H2'	1:A:304:G:H8	1.71	0.56
1:A:614(C):G:O2'	1:A:614(D):A:H5''	2.05	0.56
1:A:729:G:OP1	3:D:12:SER:HB2	2.05	0.56
1:A:813:U:H2'	1:A:814:C:C6	2.39	0.56
1:A:878:A:H5'	1:A:879:G:OP2	2.06	0.56
1:A:1049:C:H1'	1:A:1113:U:O2'	2.06	0.56
1:A:2000:G:O2'	1:A:2001:A:H5'	2.04	0.56
1:A:2202:C:H2'	1:A:2203:U:H6	1.70	0.56
1:A:2526:G:H2'	1:A:2527:C:H6	1.69	0.56
1:A:2735:G:H2'	1:A:2736:G:H8	1.70	0.56
4:E:33:VAL:HG23	4:E:47:VAL:HB	1.88	0.56
4:E:47:VAL:O	4:E:80:GLU:HA	2.04	0.56
13:R:63:ARG:HA	13:R:80:PHE:HE2	1.71	0.56
21:Z:68:PRO:O	21:Z:91:LEU:HB3	2.06	0.56
32:a:34:C:H2'	32:a:35:G:C8	2.37	0.56
32:a:93:G:O5'	32:a:100:C:H2'	2.05	0.56
32:a:323:U:H4'	51:t:19:SER:HA	1.86	0.56
32:a:487:A:H2'	32:a:488:C:O4'	2.06	0.56
32:a:803:G:H2'	32:a:804:U:O4'	2.06	0.56
32:a:1039:C:H2'	32:a:1040:U:C6	2.40	0.56
32:a:1052:U:O2'	32:a:1055:A:OP2	2.13	0.56
32:a:1267:C:O2	52:u:20:LYS:HD2	2.06	0.56
32:a:1488:G:H2'	32:a:1489:G:H8	1.71	0.56
33:b:120:ALA:O	33:b:123:ALA:HB3	2.04	0.56
35:d:30:LYS:HG2	35:d:35:ARG:CZ	2.35	0.56
37:f:62:TRP:CZ2	37:f:64:GLN:HB2	2.40	0.56
51:t:31:SER:O	51:t:35:THR:OG1	2.24	0.56
54:C:14:VAL:HG12	54:C:28:LEU:HD21	1.87	0.56
55:z:9:A:N6	55:z:23:A:OP2	2.38	0.56
1:A:32:C:O2'	1:A:33:U:H5'	2.06	0.56
1:A:264:C:O2'	1:A:265:A:H2'	2.04	0.56
1:A:566:U:H5''	11:P:29:LYS:HD2	1.88	0.56
1:A:857:C:O2'	1:A:858:U:H5'	2.06	0.56
1:A:1060:U:O2	1:A:1070:A:H1'	2.06	0.56
1:A:1138:G:O2'	9:N:102:ALA:O	2.23	0.56
1:A:1710:C:H2'	1:A:1711:C:H6	1.70	0.56
1:A:2071:A:H2'	1:A:2072:G:H8	1.71	0.56
1:A:2097:C:H2'	1:A:2098:U:C6	2.40	0.56
1:A:2316:C:H2'	1:A:2317:C:C6	2.41	0.56
1:A:2748:A:H2'	1:A:2749:A:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:206:LEU:HD23	3:D:211:ARG:HE	1.71	0.56
4:E:23:VAL:HG12	4:E:173:VAL:HG21	1.87	0.56
4:E:34:VAL:HG22	4:E:48:GLN:O	2.05	0.56
5:F:103:LYS:HG2	5:F:106:ARG:NH2	2.20	0.56
8:I:85:GLU:HG3	37:f:21:LEU:HD23	1.88	0.56
10:O:115:VAL:CG1	10:O:121:VAL:HG21	2.36	0.56
12:Q:59:ARG:HD3	12:Q:60:ARG:HG2	1.87	0.56
13:R:55:ALA:HB2	13:R:79:LEU:CD1	2.35	0.56
14:S:87:PHE:CE1	14:S:102:ALA:HB2	2.40	0.56
18:W:86:LEU:HD12	18:W:87:PRO:HD2	1.87	0.56
20:Y:5:MET:CE	20:Y:32:PRO:HA	2.36	0.56
25:3:50:VAL:O	25:3:54:VAL:HG12	2.06	0.56
32:a:65:U:P	32:a:71:C:C5	2.99	0.56
32:a:112:G:H21	32:a:354:G:H5'	1.71	0.56
32:a:642:A:N7	39:h:115:SER:HA	2.20	0.56
32:a:695:A:H2'	32:a:696:A:C8	2.41	0.56
32:a:934:C:H5	32:a:1344:C:H2'	1.70	0.56
32:a:939:G:C2'	32:a:940:C:H5'	2.35	0.56
32:a:1218:C:H2'	32:a:1219:U:C6	2.41	0.56
32:a:1286:A:O2'	32:a:1288:A:OP1	2.22	0.56
32:a:1350:A:H2'	32:a:1351:U:C6	2.39	0.56
35:d:159:ARG:O	35:d:163:GLU:HG3	2.05	0.56
36:e:9:LYS:HB2	36:e:33:VAL:CG1	2.36	0.56
38:g:48:LYS:O	38:g:52:GLU:HG2	2.05	0.56
38:g:86:GLN:CD	55:z:32:U:H4'	2.30	0.56
38:g:86:GLN:NE2	55:z:32:U:H4'	2.21	0.56
46:o:82:ILE:HD12	46:o:88:ARG:NH1	2.21	0.56
47:p:36:ILE:HD12	47:p:56:ALA:HB2	1.87	0.56
50:s:36:ARG:NH1	50:s:53:ASN:HA	2.19	0.56
54:C:39:GLU:HB2	54:C:178:ALA:CB	2.35	0.56
54:C:72:VAL:HG13	54:C:157:LYS:HD3	1.88	0.56
54:C:74:VAL:HG11	54:C:153:ILE:CG1	2.34	0.56
1:A:44:G:H5''	1:A:45:C:OP1	2.06	0.56
1:A:243:U:H2'	1:A:244:A:H8	1.71	0.56
1:A:299:A:H2'	1:A:300:A:C8	2.41	0.56
1:A:310:A:O3'	1:A:311:A:H2'	2.05	0.56
1:A:359:A:H3'	1:A:360:G:H8	1.70	0.56
1:A:375:C:H5''	1:A:408:G:H5''	1.88	0.56
1:A:854:G:H2'	1:A:855:G:H8	1.70	0.56
1:A:859:G:H1'	1:A:860:U:H5	1.71	0.56
1:A:1404:C:H2'	1:A:1405:U:H6	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1474:C:H2'	1:A:1475:G:H8	1.69	0.56
1:A:1721:G:H2'	1:A:1740:G:O6	2.06	0.56
1:A:2143:C:H2'	1:A:2144:U:O4'	2.06	0.56
1:A:2176:A:C4'	54:C:221:SER:HB3	2.33	0.56
1:A:2180:U:H3'	1:A:2181:G:C8	2.40	0.56
1:A:2227:A:H3'	1:A:2228:G:C8	2.40	0.56
2:B:42:C:O2	6:G:93:THR:N	2.35	0.56
3:D:43:ARG:HA	3:D:48:ARG:O	2.06	0.56
6:G:3:LEU:HD13	26:4:25:TYR:CD2	2.41	0.56
9:N:90:MET:HG3	9:N:98:VAL:CG2	2.35	0.56
10:O:45:GLU:HA	10:O:54:GLU:OE2	2.05	0.56
12:Q:32:TYR:CE2	12:Q:111:GLU:HA	2.41	0.56
16:U:90:VAL:HG12	16:U:95:LEU:HD12	1.87	0.56
21:Z:7:ALA:O	21:Z:62:PRO:HD3	2.06	0.56
23:1:12:PRO:HB3	23:1:43:TYR:CD1	2.40	0.56
23:1:21:ARG:CD	23:1:35:THR:HB	2.35	0.56
26:4:50:VAL:HG21	44:m:65:LYS:H	1.70	0.56
32:a:64:G:H3'	32:a:64:G:OP1	2.06	0.56
32:a:93:G:H5'	32:a:100:C:OP1	2.06	0.56
32:a:600:C:H5''	39:h:97:VAL:CG2	2.36	0.56
32:a:767:A:H2'	32:a:768:A:O4'	2.05	0.56
32:a:954:G:H2'	32:a:955:U:O4'	2.05	0.56
32:a:1364:U:O2'	32:a:1365:G:H5'	2.05	0.56
32:a:1419:G:O6	32:a:1481:U:O2	2.24	0.56
32:a:1506:U:O2'	32:a:1507:A:H5'	2.06	0.56
35:d:190:ASP:H	35:d:193:ASP:HB2	1.70	0.56
37:f:10:LEU:CB	37:f:59:TYR:HB3	2.33	0.56
38:g:80:VAL:HB	38:g:85:TYR:HE2	1.70	0.56
40:i:86:VAL:HA	40:i:89:ASN:O	2.05	0.56
45:n:39:LEU:HD13	45:n:47:LEU:HD12	1.87	0.56
48:q:56:VAL:HB	48:q:78:GLU:HB3	1.87	0.56
50:s:11:VAL:HG12	50:s:16:LEU:HB2	1.87	0.56
54:C:41:VAL:CG2	54:C:178:ALA:HA	2.36	0.56
54:C:46:LYS:CG	54:C:210:ARG:HD3	2.35	0.56
1:A:12:U:O2	1:A:2626:C:H4'	2.06	0.56
1:A:210:C:H2'	1:A:211:A:C8	2.41	0.56
1:A:220:G:H22	1:A:427:U:H2'	1.71	0.56
1:A:586:A:N1	1:A:809:G:O2'	2.35	0.56
1:A:665:C:H2'	1:A:666:G:H8	1.70	0.56
1:A:807:U:O2'	1:A:2060:A:N1	2.37	0.56
1:A:971:C:OP1	1:A:989:G:N1	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1188:U:O2'	1:A:1189:A:H5'	2.05	0.56
1:A:1214:A:H61	1:A:1235:G:H1'	1.71	0.56
1:A:1217:C:OP1	16:U:15:LYS:HD2	2.06	0.56
1:A:1657:C:H2'	1:A:1658:C:H6	1.70	0.56
1:A:2055:C:H5'	1:A:2056:G:O5'	2.06	0.56
1:A:2285:C:OP1	28:6:29:ASN:ND2	2.30	0.56
1:A:2432:A:H4'	55:z:76:A:OP2	2.06	0.56
1:A:2466:C:O2'	1:A:2467:C:H5'	2.06	0.56
3:D:123:ALA:O	3:D:131:LEU:HD21	2.05	0.56
3:D:246:PRO:HG2	3:D:255:LYS:HG3	1.88	0.56
9:N:116:LEU:O	9:N:119:ARG:HB3	2.05	0.56
14:S:23:ARG:HD3	14:S:85:VAL:N	2.21	0.56
21:Z:72:ARG:HB2	21:Z:89:PHE:HB2	1.88	0.56
21:Z:100:VAL:HB	21:Z:124:ILE:HG22	1.87	0.56
26:4:41:PRO:HG3	26:4:49:PHE:HE2	1.69	0.56
32:a:144:G:O2'	32:a:145:G:H5'	2.06	0.56
32:a:190:U:H2'	32:a:191:G:C8	2.40	0.56
32:a:439:A:OP2	32:a:493:G:N2	2.38	0.56
32:a:443:C:H2'	32:a:444:C:C6	2.41	0.56
32:a:449:C:H2'	32:a:450:G:O4'	2.05	0.56
32:a:673:G:OP1	37:f:87:ARG:NH1	2.39	0.56
32:a:910:C:O2'	32:a:911:U:H5'	2.06	0.56
32:a:1234:C:O2'	32:a:1235:U:H5'	2.05	0.56
32:a:1307:U:H2'	32:a:1308:U:H6	1.71	0.56
33:b:35:GLU:HG3	33:b:39:ILE:C	2.30	0.56
36:e:41:VAL:HG23	36:e:136:MET:HE1	1.87	0.56
37:f:24:GLU:HG3	37:f:28:ARG:NE	2.21	0.56
38:g:95:ARG:NH2	38:g:99:LEU:HD21	2.21	0.56
50:s:15:LEU:HD22	50:s:35:SER:HB2	1.87	0.56
1:A:353:G:O2'	1:A:354:G:H5'	2.06	0.56
1:A:634:C:H2'	1:A:635:C:H6	1.69	0.56
1:A:1080:C:H2'	1:A:1081:U:H6	1.71	0.56
1:A:1398:C:OP1	19:X:53:LYS:NZ	2.23	0.56
1:A:1476:C:O2'	1:A:1477:A:H5'	2.06	0.56
1:A:1485:G:O2'	1:A:1486:A:H5'	2.06	0.56
1:A:1561:G:H2'	1:A:1562:A:H8	1.71	0.56
1:A:1825:A:H2'	1:A:1826:G:H8	1.71	0.56
1:A:2066:C:O2'	1:A:2067:G:H5'	2.06	0.56
1:A:2241:A:H2'	1:A:2242:G:H8	1.70	0.56
1:A:2408:U:H2'	1:A:2409:G:C8	2.40	0.56
1:A:2552:2MU:H2'	1:A:2554:U:OP2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2557:G:H2'	1:A:2558:C:H6	1.70	0.56
1:A:2704:C:H2'	1:A:2705:A:O4'	2.05	0.56
1:A:2847:U:H2'	1:A:2848:G:O4'	2.05	0.56
3:D:174:ILE:HG12	3:D:271:ILE:CD1	2.36	0.56
5:F:24:LEU:HD11	5:F:199:TRP:HH2	1.70	0.56
9:N:67:LEU:O	9:N:87:LEU:HB3	2.05	0.56
15:T:28:VAL:CG1	15:T:86:ILE:HG23	2.36	0.56
21:Z:30:ASN:OD1	21:Z:33:LEU:HG	2.06	0.56
26:4:61:ARG:HE	50:s:42:PRO:HD3	1.70	0.56
32:a:297:G:O2'	32:a:299:G:N7	2.29	0.56
32:a:501:C:H2'	32:a:502:G:C8	2.41	0.56
32:a:701:C:H4'	32:a:703:G:C8	2.40	0.56
32:a:934:C:O2'	32:a:1344:C:OP2	2.17	0.56
32:a:1030(E):A:O3'	32:a:1031:G:H5'	2.04	0.56
32:a:1323:G:H2'	32:a:1324:A:C8	2.40	0.56
32:a:1347:G:H5''	40:i:107:ARG:HB3	1.86	0.56
33:b:82:ARG:HG3	33:b:92:TYR:OH	2.05	0.56
37:f:98:LEU:HA	49:r:29:PHE:O	2.06	0.56
38:g:84:ASN:H	55:z:37:A:H61	1.53	0.56
40:i:79:LEU:HD11	40:i:83:ARG:HH21	1.71	0.56
43:l:86:ARG:HD2	43:l:87:GLY:CA	2.35	0.56
48:q:46:ASP:OD2	48:q:49:GLU:HA	2.06	0.56
48:q:58:GLU:OE1	48:q:74:LEU:HD12	2.05	0.56
53:y:27:U:H2'	53:y:28:C:H6	1.71	0.56
54:C:140:PRO:CA	54:C:145:VAL:HB	2.36	0.56
1:A:270:A:O2'	1:A:271:A:H5'	2.05	0.56
1:A:298:G:P	20:Y:87:LYS:HB2	2.46	0.56
1:A:321:G:N3	1:A:341:G:H4'	2.21	0.56
1:A:444:C:O2'	1:A:445:C:H5'	2.05	0.56
1:A:600:G:H2'	1:A:601:C:C6	2.41	0.56
1:A:983:A:O2'	1:A:984:A:O4'	2.09	0.56
1:A:1036:G:O2'	1:A:1037:G:H5'	2.05	0.56
1:A:1281:G:H2'	1:A:1282:U:H6	1.70	0.56
1:A:1447:G:H2'	1:A:1448:G:C8	2.40	0.56
1:A:1497:U:H5''	1:A:1498:C:H5	1.69	0.56
1:A:1527:G:N2	1:A:1544:A:H5''	2.19	0.56
1:A:1531:C:H2'	1:A:1532:C:C6	2.41	0.56
1:A:1831:G:O2'	1:A:1832:C:H5'	2.06	0.56
1:A:2122:U:H1'	54:C:166:ASP:OD2	2.06	0.56
1:A:2519:U:O4'	1:A:2542:A:N6	2.39	0.56
6:G:111:LEU:HB2	6:G:112:PRO:HD3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:H:8:PRO:HB2	7:H:49:VAL:CG2	2.36	0.56
7:H:58:GLU:OE2	7:H:60:ARG:NE	2.38	0.56
11:P:125:VAL:HG22	11:P:138:LEU:HD21	1.87	0.56
15:T:119:LYS:O	15:T:123:GLN:HG3	2.05	0.56
32:a:16:A:O2'	32:a:17:U:H5'	2.05	0.56
32:a:224:C:H2'	32:a:225:C:H6	1.70	0.56
32:a:302:G:H2'	32:a:303:A:H8	1.70	0.56
32:a:419:C:H2'	32:a:420:U:O4'	2.05	0.56
32:a:1460:A:H2'	32:a:1461:G:O4'	2.05	0.56
33:b:63:MET:HG3	33:b:225:ALA:HB1	1.88	0.56
34:c:78:GLY:HA3	34:c:83:ARG:H	1.71	0.56
35:d:52:SER:O	35:d:56:VAL:HG23	2.06	0.56
36:e:44:GLY:N	36:e:62:ALA:HB2	2.21	0.56
41:j:12:ASP:OD1	41:j:13:HIS:N	2.39	0.56
53:y:34:C:H2'	53:y:35:A:C8	2.41	0.56
53:y:54:U:C2	53:y:58:A:N7	2.73	0.56
54:C:79:LYS:CD	54:C:97:GLU:HB2	2.36	0.56
55:z:39:U:C2'	55:z:40:C:H5'	2.35	0.56
1:A:20:C:O2'	1:A:21:A:H5'	2.06	0.56
1:A:288:C:H2'	1:A:289:A:H8	1.71	0.56
1:A:527:C:H4'	1:A:528:A:C5'	2.36	0.56
1:A:693:C:OP1	3:D:39:LYS:HD3	2.05	0.56
1:A:1012:U:O5'	1:A:1013:C:H5''	2.06	0.56
1:A:1533:G:H2'	1:A:1536:C:N3	2.21	0.56
1:A:1571:A:H2'	1:A:1572:A:H8	1.70	0.56
1:A:1835:G:H2'	1:A:1836:C:C6	2.41	0.56
1:A:2208:A:N3	1:A:2219:G:N1	2.53	0.56
1:A:2574:G:H2'	1:A:2575:C:O4'	2.05	0.56
1:A:2751:G:H3'	1:A:2752:C:C6	2.38	0.56
2:B:102:A:H2'	2:B:103:G:O4'	2.06	0.56
4:E:93:VAL:HB	4:E:175:VAL:HG23	1.88	0.56
6:G:110:ALA:O	6:G:114:ILE:HG13	2.06	0.56
7:H:27:LYS:HG3	7:H:32:GLU:CB	2.36	0.56
11:P:80:TYR:CE1	11:P:111:ARG:HB2	2.41	0.56
12:Q:111:GLU:O	12:Q:115:MET:HG2	2.05	0.56
19:X:53:LYS:HB3	19:X:82:GLN:CB	2.36	0.56
21:Z:41:LEU:HD21	21:Z:83:PRO:HG2	1.88	0.56
32:a:302:G:H2'	32:a:303:A:C8	2.41	0.56
32:a:354:G:O2'	32:a:355:C:H5'	2.06	0.56
32:a:391:G:H3'	32:a:392:G:H5''	1.88	0.56
32:a:432:A:H2'	32:a:433:C:O4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:578:C:H2'	32:a:579:G:H8	1.71	0.56
32:a:587:G:H4'	39:h:3:THR:O	2.06	0.56
32:a:688:G:H2'	32:a:689:C:H6	1.70	0.56
32:a:848:C:H2'	32:a:849:C:C6	2.41	0.56
32:a:926:G:N2	32:a:1505:G:H2'	2.21	0.56
32:a:1314:C:O2'	32:a:1315:U:H5'	2.06	0.56
35:d:175:SER:OG	35:d:184:LYS:HB2	2.05	0.56
38:g:58:PRO:O	38:g:62:PHE:N	2.37	0.56
47:p:20:VAL:HG21	47:p:32:TYR:CG	2.41	0.56
50:s:40:ILE:HA	50:s:44:MET:SD	2.45	0.56
51:t:11:SER:HA	51:t:14:LYS:CB	2.35	0.56
55:z:45:U:O2'	55:z:46:G:H5'	2.06	0.56
55:z:59:U:H2'	55:z:60:U:O4'	2.05	0.56
55:z:64:A:H2'	55:z:65:G:C8	2.41	0.56
1:A:19:C:H2'	1:A:20:C:C6	2.40	0.55
1:A:130:C:H2'	1:A:131:G:H5''	1.88	0.55
1:A:139(B):G:O6	19:X:40:LYS:NZ	2.23	0.55
1:A:359:A:C2'	1:A:360:G:H5'	2.36	0.55
1:A:589:C:O2'	1:A:590:A:H5'	2.05	0.55
1:A:1051:G:H3'	1:A:1052:C:H5''	1.87	0.55
1:A:1179:C:H2'	1:A:1180:C:H6	1.70	0.55
1:A:1269:A:H2'	1:A:1270:C:C6	2.41	0.55
1:A:1653:G:C6	13:R:9:LYS:HB2	2.42	0.55
1:A:1843:C:O2'	1:A:1844:C:H5'	2.06	0.55
1:A:1907:G:H2'	1:A:1908:C:H6	1.71	0.55
1:A:2740:A:OP2	1:A:2763:G:N1	2.33	0.55
1:A:2752:C:H2'	1:A:2753:A:O4'	2.06	0.55
1:A:2822:G:O2'	1:A:2824:C:OP2	2.10	0.55
6:G:107:LEU:HD21	6:G:178:PHE:CD1	2.40	0.55
8:I:13:GLY:HA3	8:I:17:GLN:OE1	2.06	0.55
9:N:39:ARG:HB3	9:N:41:ASP:OD1	2.06	0.55
11:P:126:VAL:HA	11:P:146:VAL:O	2.05	0.55
12:Q:51:ARG:HA	12:Q:54:MET:CE	2.36	0.55
17:V:24:LYS:HG3	17:V:64:HIS:HD2	1.70	0.55
20:Y:5:MET:HE2	20:Y:32:PRO:HA	1.89	0.55
21:Z:120:ILE:H	21:Z:172:ALA:HA	1.70	0.55
32:a:24:U:H2'	32:a:25:C:C6	2.42	0.55
32:a:113:G:H2'	32:a:114:U:C6	2.41	0.55
32:a:235:C:H2'	32:a:236:G:C8	2.39	0.55
32:a:323:U:H2'	32:a:324:G:O4'	2.06	0.55
32:a:329:A:H2'	32:a:332:G:O6	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:408:A:H2'	32:a:409:G:C8	2.41	0.55
32:a:525:C:H2'	32:a:526:C:C6	2.41	0.55
32:a:632:A:C2'	32:a:633:G:H5'	2.36	0.55
32:a:648:A:O2'	32:a:649:G:H5'	2.06	0.55
32:a:684:A:C1'	42:k:39:PRO:HD2	2.34	0.55
32:a:729:A:H2'	32:a:730:G:C8	2.41	0.55
32:a:779:C:O2'	32:a:780:A:H5'	2.06	0.55
32:a:820:U:H4'	32:a:821:G:OP2	2.07	0.55
32:a:863:U:H2'	32:a:865:A:OP2	2.06	0.55
32:a:865:A:H2'	32:a:866:C:C6	2.41	0.55
32:a:950:U:H2'	32:a:951:G:H8	1.70	0.55
32:a:975:A:H4'	32:a:976:G:C5'	2.32	0.55
32:a:986:A:H2'	32:a:987:G:C8	2.42	0.55
32:a:1142:G:H2'	32:a:1143:G:O4'	2.06	0.55
32:a:1201:A:H4'	32:a:1202:G:H5''	1.88	0.55
47:p:7:ALA:O	47:p:17:TYR:HA	2.05	0.55
56:x:24:A:H1'	56:x:25:A:N7	2.21	0.55
1:A:74:A:H4'	1:A:75:G:C5'	2.35	0.55
1:A:492:A:H2'	1:A:493:G:O4'	2.07	0.55
1:A:676:A:H1'	1:A:2443:C:H1'	1.88	0.55
1:A:1353:A:H2'	1:A:1354:A:C8	2.42	0.55
1:A:1405:U:H2'	1:A:1406:U:C6	2.41	0.55
1:A:1540:U:H2'	1:A:1541:G:O4'	2.05	0.55
1:A:1805:U:O2'	1:A:1806:C:H5'	2.05	0.55
1:A:2080:G:OP1	23:1:35:THR:HG21	2.06	0.55
1:A:2159:G:H2'	1:A:2160:G:C8	2.42	0.55
1:A:2194:G:O2'	1:A:2195:C:H5'	2.07	0.55
1:A:2294:C:OP2	14:S:13:ARG:NH2	2.39	0.55
1:A:2380:C:O2'	1:A:2381:C:H5'	2.05	0.55
1:A:2808:U:H5'	1:A:2891:G:O6	2.05	0.55
2:B:33:G:C4'	6:G:2:PRO:HD3	2.35	0.55
2:B:42:C:C6	6:G:69:ALA:HB2	2.40	0.55
2:B:61:G:H2'	2:B:62:C:H6	1.70	0.55
5:F:202:PHE:O	5:F:206:ILE:HG12	2.06	0.55
7:H:20:ALA:HB3	7:H:23:ARG:CG	2.36	0.55
11:P:80:TYR:HE1	11:P:111:ARG:HD2	1.70	0.55
14:S:29:PHE:HE2	14:S:31:SER:HB3	1.69	0.55
16:U:74:LEU:HD23	16:U:114:LYS:CE	2.34	0.55
16:U:94:ASN:HB3	17:V:4:ILE:CD1	2.36	0.55
21:Z:28:MET:HA	21:Z:88:PHE:O	2.07	0.55
23:1:58:ILE:CD1	23:1:87:PRO:HB3	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:4:58:ARG:HG3	26:4:59:PHE:HD1	1.71	0.55
32:a:108:G:H22	51:t:15:ARG:HG2	1.70	0.55
32:a:680:C:O2'	32:a:681:C:H5'	2.07	0.55
32:a:695:A:OP2	42:k:53:SER:N	2.40	0.55
32:a:827:U:H2'	32:a:870:U:O4	2.06	0.55
32:a:976:G:OP1	45:n:32:SER:N	2.34	0.55
32:a:1003:G:C2'	32:a:1004:A:H4'	2.32	0.55
32:a:1079:G:O2'	36:e:14:ARG:NH2	2.39	0.55
32:a:1179:A:H2'	32:a:1180:A:O4'	2.06	0.55
32:a:1520:G:H2'	32:a:1521:G:C8	2.41	0.55
35:d:98:GLU:HA	35:d:103:ASN:ND2	2.21	0.55
37:f:78:GLU:O	37:f:81:ILE:HG22	2.06	0.55
44:m:56:LEU:O	44:m:60:VAL:HG12	2.05	0.55
48:q:50:LYS:HE3	48:q:51:TYR:CE2	2.42	0.55
49:r:52:PRO:HB2	49:r:54:ARG:HG2	1.87	0.55
50:s:18:LYS:HA	50:s:21:GLU:OE1	2.06	0.55
54:C:41:VAL:N	54:C:176:GLY:O	2.39	0.55
55:z:27:G:H2'	55:z:28:G:C8	2.41	0.55
1:A:243:U:OP1	30:8:6:THR:OG1	2.10	0.55
1:A:436:C:H2'	1:A:437:G:H8	1.70	0.55
1:A:479:A:H1'	1:A:481:G:H5''	1.87	0.55
1:A:693:C:P	3:D:39:LYS:HD3	2.46	0.55
1:A:755:C:H2'	1:A:756:C:H6	1.71	0.55
1:A:762:U:N3	1:A:1431:U:OP1	2.29	0.55
1:A:828:U:H4'	1:A:831:G:C2	2.41	0.55
1:A:1108:U:H2'	1:A:1109:C:C1'	2.36	0.55
1:A:1295:C:H2'	1:A:1296:G:H8	1.71	0.55
1:A:1319:G:H2'	1:A:1320:C:C6	2.41	0.55
1:A:1722:A:O2'	1:A:1739:U:H2'	2.05	0.55
1:A:2693:A:H2'	1:A:2694:G:H8	1.70	0.55
1:A:2807:G:C2	1:A:2808:U:H1'	2.40	0.55
1:A:2846:G:P	15:T:54:ARG:HB2	2.47	0.55
4:E:111:ARG:HD2	4:E:160:TYR:CD2	2.40	0.55
5:F:7:TYR:CZ	5:F:119:ARG:HB2	2.41	0.55
6:G:25:TYR:CD2	6:G:31:VAL:HG12	2.41	0.55
6:G:145:THR:HG22	6:G:148:MET:HE3	1.87	0.55
7:H:9:ILE:C	7:H:49:VAL:HG23	2.32	0.55
7:H:9:ILE:CD1	7:H:69:ARG:HG2	2.36	0.55
8:I:26:ALA:HA	8:I:30:LEU:CG	2.35	0.55
8:I:69:LYS:O	8:I:73:GLU:HG3	2.06	0.55
9:N:21:LYS:HD2	9:N:26:LEU:HD13	1.86	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:Q:3:MET:HB2	12:Q:93:TYR:HD2	1.71	0.55
19:X:40:LYS:HG3	19:X:51:VAL:CB	2.36	0.55
21:Z:147:GLY:N	21:Z:174:VAL:O	2.24	0.55
26:4:59:PHE:HB2	26:4:61:ARG:HB2	1.87	0.55
27:5:33:CYS:O	27:5:37:LYS:N	2.38	0.55
32:a:335:C:H2'	32:a:336:C:C6	2.41	0.55
32:a:377:G:H2'	32:a:378:G:C8	2.41	0.55
32:a:604:G:H2'	32:a:605:U:O4'	2.07	0.55
32:a:711:G:H2'	32:a:712:A:C8	2.42	0.55
32:a:929:G:H5'	32:a:1534:A:OP2	2.05	0.55
32:a:1028:C:H2'	32:a:1029:C:C6	2.40	0.55
32:a:1068:G:O2'	32:a:1069:C:H5'	2.07	0.55
32:a:1095:U:H2'	32:a:1096:C:H6	1.71	0.55
32:a:1097:C:H5''	33:b:140:HIS:CE1	2.41	0.55
32:a:1132:C:H2'	32:a:1133:G:C8	2.42	0.55
32:a:1134:G:H2'	32:a:1135:U:H5'	1.88	0.55
32:a:1423:G:H2'	32:a:1424:C:C6	2.42	0.55
32:a:1492:A:H1'	32:a:1493:A:C2	2.41	0.55
43:l:84:LEU:HB2	43:l:104:VAL:HG11	1.88	0.55
48:q:55:ASP:O	48:q:57:VAL:HG13	2.06	0.55
54:C:153:ILE:HA	54:C:156:ILE:CD1	2.36	0.55
1:A:93:G:H2'	1:A:94(A):C:H6	1.70	0.55
1:A:272(K):U:H5'	8:I:50:ARG:HE	1.71	0.55
1:A:272(S):G:O2'	1:A:272(T):C:H5'	2.06	0.55
1:A:652(A):C:H3'	1:A:652(A):C:OP2	2.07	0.55
1:A:679:C:H2'	1:A:680:G:C8	2.39	0.55
1:A:910:A:C6	12:Q:13:GLN:HG3	2.41	0.55
1:A:925:C:H2'	1:A:926:A:H8	1.71	0.55
1:A:1488:G:H2'	1:A:1489:U:O4'	2.06	0.55
1:A:1920:4OC:CM2	1:A:1921:G:H5'	2.32	0.55
1:A:1999:C:O2'	1:A:2000:G:H5'	2.07	0.55
1:A:2391:G:N2	1:A:2429:G:O4'	2.39	0.55
1:A:2652:C:H2'	1:A:2653:U:O4'	2.06	0.55
1:A:2670:A:H2'	1:A:2671:A:C8	2.42	0.55
2:B:103:G:O2'	2:B:104:U:H5'	2.06	0.55
5:F:7:TYR:O	5:F:9:ILE:HG13	2.06	0.55
5:F:123:LEU:CD1	5:F:192:LEU:HD22	2.36	0.55
9:N:96:GLU:HA	9:N:122:VAL:HG11	1.87	0.55
11:P:136:GLU:O	11:P:140:ALA:CB	2.55	0.55
15:T:54:ARG:HA	15:T:59:THR:CG2	2.36	0.55
15:T:117:ASP:OD2	15:T:120:ARG:NE	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:39:VAL:HG21	20:Y:67:LEU:HD12	1.89	0.55
21:Z:10:ARG:NH1	21:Z:25:PRO:HB3	2.22	0.55
21:Z:71:VAL:HG13	21:Z:86:VAL:HG13	1.87	0.55
21:Z:180:VAL:HA	21:Z:183:LEU:CG	2.36	0.55
21:Z:180:VAL:HA	21:Z:183:LEU:HG	1.87	0.55
25:3:39:ASP:OD1	25:3:44:ARG:HD2	2.05	0.55
27:5:56:LYS:NZ	27:5:58:LEU:O	2.24	0.55
32:a:390:C:H2'	32:a:391:G:C8	2.41	0.55
32:a:625:G:OP1	47:p:9:PHE:HB3	2.07	0.55
32:a:918:A:H2'	32:a:919:A:C8	2.41	0.55
32:a:945:G:N2	32:a:1334:G:H4'	2.22	0.55
32:a:971:G:H1'	32:a:1365:G:O2'	2.07	0.55
32:a:990:C:O2'	32:a:991:U:H5'	2.05	0.55
32:a:1135:U:H4'	32:a:1136:U:C4	2.41	0.55
32:a:1146:A:H5'	32:a:1147:C:OP2	2.06	0.55
32:a:1230:C:O2'	32:a:1231:G:H5'	2.07	0.55
33:b:181:PHE:CD1	39:h:71:GLY:HA2	2.41	0.55
34:c:131:ARG:NH1	34:c:166:GLU:OE2	2.39	0.55
34:c:157:ILE:HG21	34:c:164:ARG:HH21	1.71	0.55
35:d:144:ASP:O	35:d:184:LYS:HA	2.05	0.55
36:e:44:GLY:O	36:e:58:ALA:HB1	2.07	0.55
36:e:79:GLU:OE1	36:e:79:GLU:N	2.34	0.55
37:f:38:GLU:N	37:f:64:GLN:O	2.39	0.55
37:f:79:LEU:HB2	37:f:88:VAL:HG11	1.87	0.55
38:g:113:GLU:HG3	38:g:118:VAL:CG1	2.36	0.55
39:h:30:ARG:HA	39:h:33:GLU:OE1	2.06	0.55
49:r:66:LEU:HG	49:r:70:ILE:CD1	2.37	0.55
50:s:13:ASP:O	50:s:17:GLU:N	2.29	0.55
51:t:86:ARG:O	51:t:90:GLN:HG3	2.07	0.55
53:y:75:C:H5''	53:y:76:A:OP2	2.04	0.55
54:C:77:ILE:O	54:C:115:ALA:HA	2.06	0.55
54:C:185:LEU:HD23	54:C:188:ASN:ND2	2.21	0.55
55:z:58:A:O2'	55:z:60:U:OP2	2.16	0.55
1:A:40:C:H2'	1:A:41:C:C6	2.41	0.55
1:A:297:C:OP1	20:Y:95:LYS:HE3	2.06	0.55
1:A:481:G:O2'	1:A:507:A:N1	2.36	0.55
1:A:652(B):A:H3'	1:A:652(C):A:H5''	1.89	0.55
1:A:666:G:H2'	1:A:667:U:C6	2.42	0.55
1:A:944:G:H5''	1:A:945:A:O5'	2.07	0.55
1:A:971:C:H2'	1:A:972:G:O4'	2.06	0.55
1:A:1151:G:H4'	16:U:81:HIS:ND1	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1284:A:H2'	1:A:1285:G:O4'	2.07	0.55
1:A:1312:U:H5''	1:A:1313:U:C6	2.41	0.55
1:A:1612:C:H5'	29:7:7:PRO:HG3	1.89	0.55
1:A:1941:C:N4	1:A:1965:C:O4'	2.40	0.55
1:A:1951:U:H2'	1:A:1953:A:OP2	2.06	0.55
1:A:2093:G:H2'	1:A:2094:G:H8	1.70	0.55
1:A:2168:G:C2'	1:A:2169:A:H3'	2.36	0.55
1:A:2533:A:H2'	1:A:2534:A:O4'	2.06	0.55
1:A:2619:C:O2'	1:A:2620:C:H5'	2.07	0.55
1:A:2680:C:OP2	4:E:111:ARG:NH2	2.24	0.55
2:B:87:G:N2	2:B:90:A:OP2	2.20	0.55
3:D:72:LYS:HD3	3:D:97:TYR:CE2	2.42	0.55
3:D:89:SER:C	3:D:159:ALA:HB2	2.31	0.55
3:D:138:VAL:CG2	3:D:167:GLY:HA2	2.35	0.55
5:F:183:VAL:O	5:F:187:VAL:HG23	2.07	0.55
6:G:33:ARG:HB2	6:G:162:THR:CG2	2.37	0.55
7:H:118:PRO:O	7:H:121:ILE:HB	2.06	0.55
8:I:47:LEU:CD1	8:I:51:ILE:HD11	2.36	0.55
8:I:77:LEU:HA	8:I:105:HIS:HE1	1.71	0.55
9:N:14:VAL:CG1	9:N:138:LEU:HD12	2.37	0.55
12:Q:57:HIS:HD2	12:Q:117:ALA:HB2	1.71	0.55
15:T:11:GLU:O	15:T:15:VAL:HG23	2.06	0.55
18:W:34:ASN:HA	18:W:37:ARG:NH1	2.21	0.55
26:4:14:ILE:O	26:4:21:VAL:HA	2.07	0.55
28:6:8:LYS:CB	28:6:54:ILE:HG21	2.36	0.55
32:a:430:A:OP2	35:d:8:VAL:HG12	2.06	0.55
32:a:502:G:H2'	32:a:503:C:H6	1.70	0.55
32:a:618:C:N4	32:a:621:A:OP2	2.31	0.55
40:i:112:LYS:HE2	40:i:116:LYS:O	2.07	0.55
44:m:108:ARG:NH1	44:m:114:ARG:HA	2.22	0.55
54:C:59:ARG:HA	54:C:163:PHE:O	2.06	0.55
1:A:68:G:H2'	1:A:69:C:O4'	2.07	0.55
1:A:272(H):G:H5'	23:1:81:LYS:CE	2.36	0.55
1:A:273(F):G:H2'	1:A:273(G):C:C6	2.42	0.55
1:A:321:G:OP2	5:F:135:LYS:HD3	2.07	0.55
1:A:614(D):A:H4'	5:F:182:ASN:HD21	1.71	0.55
1:A:687:C:H5'	29:7:4:THR:O	2.07	0.55
1:A:1124:C:H2'	1:A:1125:G:O4'	2.07	0.55
1:A:1291:C:H2'	1:A:1292:U:C6	2.42	0.55
1:A:1496:A:H5''	1:A:1497:U:OP1	2.07	0.55
1:A:2128:C:OP1	54:C:36:LYS:HG3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2180:U:H5'	55:z:17:C:N3	2.22	0.55
1:A:2357:U:H5'	22:0:20:ARG:NH1	2.15	0.55
1:A:2643:G:O2'	1:A:2644:G:H5'	2.07	0.55
1:A:2644:G:O2'	1:A:2645:G:H5'	2.07	0.55
1:A:2774:C:H2'	1:A:2775:A:O4'	2.07	0.55
3:D:121:PRO:HG2	8:I:89:TYR:O	2.07	0.55
4:E:5:LEU:HD21	4:E:79:ARG:HB2	1.89	0.55
5:F:150:GLY:HA2	5:F:172:TRP:CE2	2.42	0.55
7:H:159:GLU:HA	7:H:163:TYR:OH	2.07	0.55
9:N:120:LEU:HD22	9:N:121:LYS:H	1.70	0.55
10:O:66:LYS:N	10:O:82:ASN:OD1	2.30	0.55
13:R:97:VAL:C	13:R:98:LEU:HD12	2.32	0.55
18:W:25:ARG:NH2	18:W:74:ALA:O	2.29	0.55
19:X:14:SER:O	19:X:18:TYR:N	2.39	0.55
19:X:47:PHE:O	19:X:49:VAL:HG13	2.07	0.55
21:Z:23:LYS:HE2	21:Z:23:LYS:HA	1.87	0.55
21:Z:125:LEU:HB3	21:Z:165:VAL:HG13	1.88	0.55
26:4:56:VAL:CG2	26:4:60:GLN:HG3	2.37	0.55
32:a:37:U:O2'	32:a:500:G:H4'	2.07	0.55
32:a:140:A:H2'	32:a:141:A:C8	2.42	0.55
32:a:160:A:H2'	32:a:161:A:O4'	2.06	0.55
32:a:226:G:O2'	32:a:227:G:H5'	2.05	0.55
32:a:254:G:O2'	32:a:255:G:H5'	2.07	0.55
32:a:259:G:H2'	32:a:260:G:H8	1.70	0.55
32:a:558:G:H2'	32:a:559:A:C2	2.41	0.55
32:a:590:C:O2'	32:a:591:U:H5'	2.05	0.55
32:a:625:G:O2'	32:a:626:U:H5'	2.06	0.55
32:a:1009:G:N2	32:a:1020:U:O2	2.28	0.55
32:a:1029:C:H3'	32:a:1030(A):C:H6	1.71	0.55
32:a:1265:G:H2'	32:a:1266:G:O4'	2.06	0.55
32:a:1525:G:O2'	32:a:1526:G:H5'	2.07	0.55
33:b:80:ILE:HD13	33:b:212:GLN:HA	1.87	0.55
34:c:155:GLY:HA3	34:c:196:LEU:HD13	1.87	0.55
37:f:38:GLU:OE2	37:f:66:GLU:HB2	2.06	0.55
37:f:99:ALA:CB	49:r:31:LEU:HD21	2.32	0.55
39:h:51:VAL:HG11	39:h:60:ARG:HD3	1.89	0.55
39:h:116:LYS:HE3	39:h:129:VAL:HG11	1.88	0.55
41:j:57:LYS:HE3	41:j:60:ARG:NH2	2.21	0.55
42:k:23:ALA:O	42:k:87:THR:N	2.40	0.55
42:k:59:TYR:CE2	42:k:63:LEU:HD11	2.41	0.55
54:C:22:ILE:HG23	54:C:189:ILE:CG2	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:184:C:H2'	1:A:185:U:C6	2.42	0.55
1:A:229:A:H4'	1:A:230:U:C6	2.42	0.55
1:A:239:U:H2'	1:A:240:G:O4'	2.06	0.55
1:A:392:C:H2'	1:A:393:C:C6	2.40	0.55
1:A:668:G:H2'	1:A:670:A:H62	1.71	0.55
1:A:1022:G:OP2	9:N:65:LYS:NZ	2.39	0.55
1:A:1500:G:O2'	3:D:102:LYS:HE3	2.07	0.55
1:A:1695:G:H2'	1:A:1696:G:O4'	2.07	0.55
1:A:2163:C:H2'	1:A:2164:C:H5'	1.88	0.55
1:A:2266:A:H4'	1:A:2267:A:N3	2.21	0.55
1:A:2280:G:C2'	1:A:2281:C:H5'	2.37	0.55
1:A:2528:U:O2'	1:A:2529:G:H3'	2.07	0.55
1:A:2651:C:H2'	1:A:2652:C:C6	2.42	0.55
1:A:2760:C:O2'	1:A:2761:G:H5'	2.06	0.55
1:A:2830:G:H5''	4:E:58:ARG:NH1	2.21	0.55
2:B:92:C:H2'	2:B:93:G:C8	2.37	0.55
3:D:145:VAL:O	3:D:154:LYS:N	2.29	0.55
3:D:175:LEU:O	3:D:182:LEU:HA	2.07	0.55
5:F:134:GLY:HA2	5:F:166:ALA:HB2	1.89	0.55
13:R:86:ARG:HG3	13:R:87:TYR:CD2	2.42	0.55
25:3:6:VAL:CG1	25:3:28:LEU:HD11	2.36	0.55
32:a:151:A:O2'	32:a:152:A:H5'	2.06	0.55
32:a:443:C:H2'	32:a:444:C:H6	1.71	0.55
32:a:770:C:O2'	32:a:771:G:H5'	2.05	0.55
32:a:822:C:H2'	32:a:823:G:C8	2.42	0.55
32:a:865:A:H5'	32:a:1078:U:O4	2.07	0.55
32:a:960:U:H4'	32:a:961:U:H5''	1.89	0.55
32:a:977:A:O2'	32:a:979:C:OP2	2.13	0.55
32:a:985:C:H2'	32:a:986:A:C8	2.41	0.55
32:a:1152:A:O2'	32:a:1153:C:H5'	2.07	0.55
32:a:1154:G:O2'	32:a:1155:G:H5'	2.07	0.55
32:a:1409:C:H2'	32:a:1410:G:C8	2.42	0.55
32:a:1462:G:H2'	32:a:1463:C:C6	2.41	0.55
33:b:91:PRO:HB3	33:b:154:LEU:HB2	1.87	0.55
35:d:143:GLY:O	35:d:184:LYS:NZ	2.32	0.55
40:i:25:LYS:HB2	40:i:60:ASP:HB3	1.89	0.55
43:l:33:ARG:HH11	43:l:62:SER:HB3	1.70	0.55
44:m:23:TYR:HB3	44:m:67:GLU:OE1	2.07	0.55
47:p:8:ARG:HA	47:p:17:TYR:CD1	2.42	0.55
53:y:66:C:H2'	53:y:67:C:H6	1.70	0.55
54:C:47:LEU:HD23	54:C:209:LEU:CD2	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:z:28:G:H2'	55:z:29:G:C8	2.42	0.55
1:A:69:C:H4'	1:A:75:G:N7	2.21	0.55
1:A:336:C:O2'	1:A:337:C:H5'	2.06	0.55
1:A:536:A:O2'	1:A:537:C:H5'	2.07	0.55
1:A:646:A:H2'	1:A:647:G:C8	2.42	0.55
1:A:651:G:H4'	30:8:18:ALA:HB3	1.89	0.55
1:A:959:A:H1'	1:A:2457:U:O2'	2.07	0.55
1:A:1006:C:O2'	1:A:1007:C:H5'	2.06	0.55
1:A:1025:G:N2	1:A:1139:G:O6	2.38	0.55
1:A:1113:U:O2'	1:A:1114:G:H5'	2.07	0.55
1:A:1117:G:O2'	1:A:1118:C:H5'	2.06	0.55
1:A:1438:U:H2'	1:A:1439:A:C8	2.38	0.55
1:A:1816:G:H3'	3:D:62:TYR:HE1	1.69	0.55
1:A:1824:G:O2'	1:A:1825:A:H5'	2.06	0.55
1:A:2031:A:N7	1:A:2498:C:H1'	2.22	0.55
1:A:2134:A:H2	1:A:2159:G:H5'	1.71	0.55
1:A:2247:A:H2'	1:A:2248:C:H6	1.70	0.55
1:A:2321:G:O2'	1:A:2322:A:OP1	2.22	0.55
1:A:2470:G:O2'	1:A:2471:C:H5'	2.07	0.55
1:A:2643:G:H2'	1:A:2644:G:C8	2.42	0.55
1:A:2865:U:OP2	1:A:2866:U:O2'	2.18	0.55
2:B:107:G:H2'	2:B:108:U:H6	1.72	0.55
3:D:93:ALA:HB2	3:D:107:ALA:HB2	1.87	0.55
3:D:130:ALA:C	3:D:131:LEU:HD12	2.32	0.55
4:E:76:ARG:HB2	4:E:77:ILE:HD12	1.89	0.55
5:F:101:LEU:HD23	5:F:106:ARG:HG2	1.89	0.55
7:H:105:LEU:HG	7:H:107:VAL:HG13	1.89	0.55
8:I:44:LEU:HA	8:I:47:LEU:HB2	1.89	0.55
8:I:88:ILE:HG22	8:I:90:GLY:N	2.21	0.55
8:I:92:VAL:HG23	8:I:120:ILE:HB	1.87	0.55
9:N:26:LEU:HG	9:N:30:ILE:HD11	1.88	0.55
10:O:87:ILE:CD1	10:O:91:LEU:HD23	2.37	0.55
11:P:59:LEU:HD21	30:8:10:ALA:CA	2.35	0.55
13:R:98:LEU:CD2	27:5:57:VAL:HG21	2.37	0.55
21:Z:3:TYR:HB3	21:Z:47:VAL:CG1	2.37	0.55
32:a:101:A:N3	32:a:152:A:H4'	2.22	0.55
32:a:343:U:O2'	32:a:344:A:H2'	2.07	0.55
32:a:505:G:H2'	32:a:506:G:C8	2.42	0.55
32:a:735:C:O2'	32:a:736:C:H5'	2.07	0.55
32:a:841:U:H5''	32:a:848:C:C6	2.41	0.55
32:a:1309:G:OP1	44:m:88:ARG:HD3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:e:69:VAL:HG21	36:e:139:LEU:HD22	1.86	0.55
54:C:8:ARG:O	54:C:12:GLU:HG2	2.06	0.55
54:C:200:LYS:HG3	54:C:208:PHE:CD1	2.42	0.55
55:z:9:A:H61	55:z:22:G:H3'	1.70	0.55
1:A:19:C:H2'	1:A:20:C:H6	1.72	0.55
1:A:58:G:O2'	1:A:59:U:H5'	2.06	0.55
1:A:353:G:C2'	1:A:354:G:H5'	2.37	0.55
1:A:582:G:H2'	1:A:583:G:C8	2.42	0.55
1:A:601:C:O2'	5:F:104:LYS:NZ	2.40	0.55
1:A:644:A:H5''	1:A:645:C:OP1	2.07	0.55
1:A:828:U:H2'	1:A:829:A:C8	2.42	0.55
1:A:1473:G:H2'	1:A:1474:C:C6	2.42	0.55
1:A:1654:A:O4'	1:A:2823:A:H5'	2.07	0.55
1:A:2110:G:H5''	1:A:2111:C:H5	1.71	0.55
1:A:2115:G:H4'	1:A:2167:U:O4'	2.06	0.55
5:F:53:THR:HG22	5:F:56:GLU:CG	2.37	0.55
7:H:137:ASP:OD1	7:H:139:GLN:N	2.39	0.55
8:I:48:GLU:OE1	8:I:51:ILE:HD12	2.07	0.55
12:Q:73:PRO:HA	12:Q:93:TYR:CD1	2.42	0.55
12:Q:76:LYS:HB3	12:Q:91:GLU:CG	2.34	0.55
19:X:1:MET:HE1	24:2:26:ARG:HB2	1.88	0.55
21:Z:103:ARG:O	21:Z:139:VAL:N	2.40	0.55
32:a:73:G:C8	32:a:199:G:H4'	2.42	0.55
32:a:100:C:O2'	32:a:101:A:O5'	2.24	0.55
32:a:643:C:H2'	32:a:644:G:H8	1.70	0.55
32:a:1118:C:H2'	32:a:1119:C:C6	2.42	0.55
32:a:1476:G:H2'	32:a:1477:C:C6	2.42	0.55
33:b:74:LYS:O	33:b:78:GLN:N	2.40	0.55
40:i:79:LEU:HD21	40:i:83:ARG:NH2	2.22	0.55
44:m:11:ARG:O	44:m:44:ARG:HB3	2.07	0.55
44:m:65:LYS:NZ	44:m:73:GLU:OE1	2.19	0.55
49:r:45:SER:HG	49:r:49:LYS:H	1.54	0.55
50:s:37:ARG:O	50:s:70:LYS:HD2	2.07	0.55
50:s:52:TYR:HB2	50:s:57:HIS:CE1	2.42	0.55
51:t:14:LYS:HZ2	51:t:14:LYS:HB2	1.71	0.55
54:C:64:LEU:N	54:C:159:GLY:O	2.33	0.55
54:C:128:GLY:N	54:C:131:LEU:HB3	2.22	0.55
1:A:243:U:C2	1:A:255:A:N7	2.75	0.55
1:A:356:G:O2'	1:A:357:A:H5'	2.07	0.55
1:A:565:C:OP2	17:V:78:LYS:N	2.38	0.55
1:A:844:C:O2'	1:A:845:G:H5'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:864:G:H2'	1:A:865:C:H6	1.72	0.55
1:A:888:C:C6	44:m:93:ARG:HD2	2.41	0.55
1:A:1138:G:N3	9:N:106:MET:HE2	2.22	0.55
1:A:1160:G:O2'	1:A:1161:C:H5'	2.07	0.55
1:A:1316:U:H2'	1:A:1317:A:H8	1.71	0.55
1:A:1495:A:H2	1:A:1578:U:H1'	1.72	0.55
1:A:1742:G:C2'	1:A:1743:C:H5'	2.37	0.55
1:A:1962:5MC:O3'	1:A:1963:U:H3'	2.06	0.55
1:A:2080:G:H2'	1:A:2081:C:C6	2.43	0.55
1:A:2118:U:OP2	1:A:2147:G:H1'	2.07	0.55
1:A:2133:G:H2'	1:A:2157:G:H2'	1.88	0.55
1:A:2601:C:H4'	1:A:2602:A:OP2	2.07	0.55
1:A:2637:U:O2'	1:A:2638:G:H5'	2.07	0.55
1:A:2708:G:O2'	1:A:2709:G:H5'	2.07	0.55
1:A:2712(A):U:O2'	1:A:2713:A:H5'	2.06	0.55
1:A:2845:G:H5''	15:T:54:ARG:O	2.06	0.55
1:A:2850:A:OP2	1:A:2866:U:N3	2.26	0.55
1:A:2882:A:C5'	13:R:96:ARG:HG3	2.37	0.55
3:D:69:ARG:HG2	3:D:130:ALA:HB3	1.89	0.55
3:D:78:LYS:HE2	3:D:114:GLY:O	2.07	0.55
3:D:111:LEU:HD13	3:D:112:GLN:N	2.21	0.55
4:E:36:ARG:NH1	4:E:86:PRO:O	2.38	0.55
5:F:132:VAL:HG11	5:F:139:PHE:HD1	1.72	0.55
11:P:81:GLN:HB2	11:P:110:TYR:CD2	2.42	0.55
12:Q:35:VAL:HG12	12:Q:130:LYS:O	2.07	0.55
13:R:103:ARG:HD3	13:R:108:GLY:O	2.07	0.55
18:W:10:VAL:O	18:W:101:SER:N	2.33	0.55
20:Y:89:PHE:HE1	20:Y:95:LYS:HB2	1.72	0.55
21:Z:6:LYS:HE3	21:Z:43:GLU:OE2	2.06	0.55
22:0:40:GLN:NE2	22:0:43:THR:HA	2.22	0.55
27:5:35:GLU:HG3	27:5:51:TYR:HB2	1.89	0.55
28:6:9:LEU:C	28:6:54:ILE:HB	2.32	0.55
28:6:13:CYS:HB2	28:6:49:HIS:NE2	2.21	0.55
32:a:66:G:H2'	32:a:67:C:H5''	1.89	0.55
32:a:537:G:H2'	32:a:538:G:H8	1.72	0.55
32:a:582:U:H2'	32:a:583:A:H8	1.71	0.55
32:a:593:G:H2'	32:a:594:G:H8	1.72	0.55
32:a:1070:U:H2'	32:a:1071:C:C6	2.42	0.55
32:a:1077:G:N2	32:a:1080:A:OP2	2.27	0.55
32:a:1427:U:H2'	32:a:1428:A:H8	1.72	0.55
32:a:1478:C:H2'	32:a:1479:C:H6	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:c:112:SER:HB3	34:c:115:LEU:HB2	1.88	0.55
35:d:170:VAL:HG12	35:d:174:LEU:HB2	1.89	0.55
36:e:31:LEU:HD23	36:e:45:PHE:HB2	1.88	0.55
38:g:152:ALA:O	38:g:155:ARG:HD2	2.07	0.55
39:h:6:ILE:HB	39:h:85:ARG:NH1	2.22	0.55
39:h:39:LEU:HB3	39:h:44:PHE:HB2	1.89	0.55
42:k:40:ILE:HG23	42:k:75:TYR:CD2	2.42	0.55
43:l:42:THR:HG22	43:l:54:LYS:HG3	1.88	0.55
50:s:22:LEU:HD13	50:s:28:LYS:O	2.07	0.55
54:C:225:ASN:O	54:C:228:SER:OG	2.24	0.55
1:A:465:G:H2'	1:A:466:A:C8	2.42	0.54
1:A:658:C:H2'	1:A:659:C:C6	2.42	0.54
1:A:939:G:H2'	1:A:940:G:C8	2.42	0.54
1:A:1087:G:H2'	1:A:1088:A:H5'	1.88	0.54
1:A:1564:C:H2'	1:A:1565:C:C6	2.42	0.54
1:A:1710:C:O2'	1:A:1711:C:H5'	2.07	0.54
1:A:2007:C:H2'	1:A:2008:C:H6	1.72	0.54
1:A:2114:A:H1'	1:A:2168:G:C5'	2.37	0.54
1:A:2232:U:H2'	1:A:2233:U:H5'	1.89	0.54
1:A:2241:A:O2'	1:A:2242:G:H5'	2.06	0.54
1:A:2488:A:O2'	1:A:2489:G:H5'	2.07	0.54
1:A:2659:G:N2	1:A:2661:G:H3'	2.22	0.54
1:A:2807:G:H3'	1:A:2808:U:H5''	1.88	0.54
1:A:2818:G:C2'	1:A:2819:G:H5'	2.37	0.54
2:B:82:G:O2'	2:B:83:G:H5'	2.06	0.54
3:D:133:LEU:HG	3:D:189:CYS:O	2.07	0.54
13:R:35:THR:HG22	13:R:111:LEU:HD12	1.89	0.54
14:S:26:LEU:N	14:S:86:ALA:O	2.39	0.54
18:W:7:ALA:HB1	18:W:10:VAL:CG2	2.38	0.54
21:Z:128:VAL:HG23	21:Z:160:GLY:O	2.06	0.54
32:a:434:U:H2'	32:a:435:C:C6	2.42	0.54
32:a:521:G:N7	43:l:53:ARG:NH1	2.51	0.54
32:a:751:U:O4'	46:o:24:SER:HA	2.07	0.54
32:a:961:U:H2'	32:a:962:C:H5'	1.88	0.54
33:b:164:VAL:N	33:b:185:ILE:O	2.33	0.54
39:h:55:GLY:O	39:h:56:LYS:HD3	2.07	0.54
40:i:42:ARG:NH1	40:i:75:ASP:OD1	2.40	0.54
49:r:26:LEU:CD2	49:r:42:ARG:HD3	2.30	0.54
51:t:33:ILE:HD11	51:t:66:ALA:HB2	1.90	0.54
55:z:29:G:H2'	55:z:30:G:H8	1.72	0.54
1:A:176:G:O2'	1:A:177:G:H5'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1015:G:O2'	1:A:1016:G:H5'	2.08	0.54
1:A:1290:C:H2'	1:A:1291:C:C6	2.42	0.54
1:A:1370:C:H2'	1:A:1371:G:O4'	2.08	0.54
1:A:1434:A:H2'	1:A:1435:G:C8	2.43	0.54
1:A:1497:U:C3'	1:A:1498:C:H5'	2.37	0.54
1:A:1651:G:C5'	13:R:39:PRO:HG2	2.37	0.54
1:A:2098:U:H2'	1:A:2099:U:H6	1.71	0.54
1:A:2375:G:N2	1:A:2377:A:H3'	2.21	0.54
1:A:2783:G:H2'	1:A:2784:C:C6	2.42	0.54
3:D:91:ARG:O	3:D:107:ALA:N	2.37	0.54
4:E:18:ASP:HB3	15:T:82:LEU:HD11	1.89	0.54
20:Y:9:LYS:HA	20:Y:27:VAL:CG1	2.37	0.54
32:a:222:U:O2'	32:a:223:U:H5'	2.07	0.54
32:a:417:C:H2'	32:a:418:C:C6	2.41	0.54
32:a:430:A:H2'	32:a:431:A:O4'	2.06	0.54
32:a:513:C:H2'	32:a:514:C:H6	1.70	0.54
32:a:714:G:H1'	32:a:777:A:C8	2.43	0.54
32:a:1330:U:H4'	44:m:23:TYR:CE1	2.41	0.54
32:a:1499:A:O2'	32:a:1500:A:H5'	2.07	0.54
33:b:98:LEU:N	33:b:101:MET:SD	2.79	0.54
34:c:22:TRP:HA	41:j:92:THR:O	2.08	0.54
34:c:60:ALA:HB3	34:c:63:ASN:OD1	2.07	0.54
38:g:113:GLU:HG2	38:g:119:ARG:CG	2.37	0.54
40:i:9:ARG:HA	40:i:13:ALA:O	2.08	0.54
43:l:32:PHE:HB3	43:l:84:LEU:HD11	1.88	0.54
44:m:22:ILE:HB	44:m:25:ILE:HD12	1.88	0.54
51:t:15:ARG:HD3	51:t:18:GLN:CD	2.32	0.54
52:u:17:THR:O	52:u:22:ARG:HD3	2.07	0.54
54:C:35:ALA:N	54:C:39:GLU:OE2	2.30	0.54
54:C:94:VAL:HG13	54:C:95:GLY:HA3	1.89	0.54
55:z:60:U:C3'	55:z:61:C:H5'	2.37	0.54
1:A:374:A:H1'	1:A:401:A:N6	2.23	0.54
1:A:470:A:H2'	1:A:471:A:O4'	2.07	0.54
1:A:693:C:H2'	1:A:694:U:C6	2.42	0.54
1:A:747:U:O2'	18:W:92:ARG:NH2	2.39	0.54
1:A:1057:A:H2'	1:A:1058:G:H8	1.73	0.54
1:A:1111:A:H2'	1:A:1111:A:OP2	2.06	0.54
1:A:1315:C:O2'	1:A:1316:U:H5'	2.07	0.54
1:A:1409:C:H2'	1:A:1410:G:H8	1.72	0.54
1:A:1512:U:H2'	1:A:1513:C:H6	1.72	0.54
1:A:1750:G:O2'	1:A:2860:A:N1	2.35	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1829:A:H3'	1:A:1830:C:H6	1.71	0.54
1:A:1831:G:H2'	1:A:1832:C:H6	1.73	0.54
1:A:1848:A:H3'	1:A:1848:A:OP2	2.07	0.54
1:A:2038:G:H2'	1:A:2039:C:C6	2.41	0.54
1:A:2168:G:H1'	1:A:2170:A:N7	2.22	0.54
1:A:2203:U:O4'	3:D:151:LYS:HE2	2.07	0.54
1:A:2322:A:H2'	1:A:2323:G:O4'	2.06	0.54
1:A:2356:C:H2'	1:A:2357:U:O4'	2.08	0.54
1:A:2362:G:OP1	30:8:44:LYS:NZ	2.27	0.54
1:A:2416:C:H2'	1:A:2417:C:H6	1.73	0.54
1:A:2884:U:H2'	1:A:2885:C:O4'	2.07	0.54
3:D:134:ARG:HH12	8:I:121:LYS:HG3	1.71	0.54
4:E:163:GLU:O	4:E:165:VAL:HG23	2.06	0.54
6:G:46:ALA:HB2	6:G:53:LEU:HG	1.89	0.54
8:I:78:THR:HA	8:I:143:SER:OG	2.07	0.54
12:Q:4:PRO:HG3	12:Q:69:PHE:HE2	1.72	0.54
17:V:2:PHE:O	17:V:41:GLY:N	2.40	0.54
20:Y:86:ARG:NH1	20:Y:100:ALA:HA	2.22	0.54
32:a:67:C:H5'	32:a:76:C:O2	2.07	0.54
32:a:72:C:N3	32:a:73:G:H3'	2.23	0.54
32:a:128:G:H4'	48:q:3:LYS:CG	2.37	0.54
32:a:355:C:H1'	32:a:388:G:H1'	1.89	0.54
32:a:606:G:O5'	32:a:607:A:H5'	2.06	0.54
32:a:613:C:H2'	32:a:614:A:C8	2.42	0.54
32:a:1101:A:H4'	32:a:1102:A:O5'	2.06	0.54
32:a:1422:G:H2'	32:a:1423:G:H8	1.73	0.54
35:d:100:ARG:O	35:d:104:VAL:HG23	2.07	0.54
37:f:6:VAL:N	37:f:63:TYR:O	2.40	0.54
37:f:33:TYR:CD2	37:f:75:LEU:HD23	2.42	0.54
38:g:87:VAL:HG11	38:g:155:ARG:CA	2.37	0.54
40:i:17:VAL:HG23	40:i:63:ILE:CD1	2.38	0.54
41:j:7:LYS:HB2	41:j:97:GLU:CB	2.32	0.54
41:j:31:GLY:HA3	41:j:81:THR:HG21	1.89	0.54
42:k:41:THR:HG21	42:k:71:LYS:HB3	1.89	0.54
44:m:3:ARG:O	44:m:57:ARG:NE	2.25	0.54
46:o:55:GLY:HA2	46:o:58:MET:HE3	1.89	0.54
54:C:42:GLU:O	54:C:214:VAL:HA	2.07	0.54
54:C:76:ALA:HB3	54:C:94:VAL:CG2	2.38	0.54
55:z:56:C:C3'	55:z:57:G:H5''	2.37	0.54
1:A:272(O):C:H2'	1:A:272(P):C:C6	2.42	0.54
1:A:840:C:O2'	1:A:841:A:H5'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:858:U:O2	1:A:2268:A:H2'	2.07	0.54
1:A:1357:U:H2'	1:A:1358:G:O4'	2.06	0.54
1:A:1359:A:C2'	1:A:1360:A:H5'	2.33	0.54
1:A:1411:C:H2'	1:A:1412:A:C8	2.43	0.54
1:A:1453:U:O2	13:R:60:LEU:HD21	2.07	0.54
1:A:1525:G:H2'	1:A:1526:G:C8	2.43	0.54
1:A:1754:C:H2'	1:A:1755:A:C8	2.42	0.54
1:A:1916:A:H2'	1:A:1917:PSU:O4'	2.07	0.54
1:A:1980:G:O2'	1:A:1982:C:OP2	2.20	0.54
1:A:2788:C:H1'	1:A:2809:A:N3	2.22	0.54
12:Q:58:PHE:CE2	12:Q:109:VAL:HG21	2.42	0.54
12:Q:135:ASP:O	12:Q:139:GLU:HG3	2.08	0.54
18:W:24:ILE:HA	18:W:27:LYS:HG3	1.90	0.54
19:X:9:LEU:HD11	19:X:31:HIS:HA	1.90	0.54
21:Z:48:PHE:HA	21:Z:51:ALA:HB3	1.89	0.54
24:2:24:LEU:HD11	24:2:28:LYS:HE2	1.90	0.54
24:2:35:LEU:CD1	24:2:53:LEU:HD12	2.37	0.54
26:4:16:CYS:HB3	26:4:20:ASN:N	2.22	0.54
32:a:66:G:C6	32:a:97:G:C2	2.93	0.54
32:a:91:C:H2'	32:a:92:C:C5	2.43	0.54
32:a:125:U:H2'	32:a:126:G:C8	2.42	0.54
32:a:130:A:H1'	32:a:263:A:O2'	2.07	0.54
32:a:180:U:H3	32:a:195:A:H62	1.55	0.54
32:a:406:G:H2'	32:a:407:G:C8	2.42	0.54
32:a:406:G:H2'	32:a:407:G:H8	1.73	0.54
32:a:410:G:H3'	35:d:25:ARG:NH2	2.22	0.54
32:a:674:G:H2'	32:a:675:A:C8	2.40	0.54
32:a:760:G:H2'	32:a:761:G:H5'	1.89	0.54
32:a:939:G:O2'	32:a:940:C:H5'	2.07	0.54
32:a:979:C:N4	45:n:18:VAL:HG12	2.23	0.54
32:a:1114:C:H2'	32:a:1115:C:H6	1.71	0.54
32:a:1411:C:H2'	32:a:1412:C:H6	1.72	0.54
32:a:1478:C:H2'	32:a:1479:C:C6	2.42	0.54
34:c:173:VAL:HG12	34:c:175:LEU:CD1	2.37	0.54
49:r:31:LEU:O	49:r:69:THR:HG21	2.08	0.54
1:A:197:A:H62	1:A:2430:A:H2'	1.73	0.54
1:A:327:G:N2	20:Y:70:SER:OG	2.41	0.54
1:A:409:C:H2'	1:A:410:G:C8	2.42	0.54
1:A:535:C:H2'	1:A:536:A:H8	1.72	0.54
1:A:691:C:H2'	1:A:692:C:H6	1.72	0.54
1:A:692:C:H5''	3:D:39:LYS:HE2	1.87	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:795:C:O2'	1:A:796:C:H5'	2.08	0.54
1:A:1085:A:H5'	1:A:1086:A:OP2	2.07	0.54
1:A:1152:C:H2'	1:A:1153:C:H6	1.71	0.54
1:A:1431:U:H2'	1:A:1432:C:H6	1.73	0.54
1:A:1636:C:H2'	1:A:1637:A:C8	2.42	0.54
1:A:2016:U:H2'	1:A:2017:U:C6	2.42	0.54
1:A:2074:U:O2'	1:A:2075:U:H5'	2.08	0.54
1:A:2284:C:OP1	28:6:3:SER:OG	2.23	0.54
1:A:2319:G:OP1	1:A:2319:G:H3'	2.08	0.54
1:A:2360:A:H2'	1:A:2361:A:O4'	2.08	0.54
1:A:2513:G:H2'	1:A:2514:U:C6	2.43	0.54
1:A:2648:C:H2'	1:A:2649:U:H6	1.72	0.54
1:A:2784:C:O3'	4:E:41:LYS:HE3	2.08	0.54
2:B:91:C:O2'	2:B:92:C:H5'	2.07	0.54
4:E:174:ASP:O	4:E:183:LEU:N	2.37	0.54
5:F:170:LEU:HD12	5:F:172:TRP:NE1	2.22	0.54
6:G:170:ARG:O	6:G:174:GLU:HB2	2.08	0.54
12:Q:41:TRP:CD1	12:Q:96:VAL:HG22	2.42	0.54
19:X:56:THR:C	19:X:57:LEU:HD12	2.32	0.54
32:a:64:G:O2'	32:a:71:C:O5'	2.25	0.54
32:a:421:U:OP2	32:a:422:C:N4	2.40	0.54
32:a:520:A:OP2	43:l:51:ALA:HB1	2.06	0.54
32:a:823:G:H2'	32:a:824:C:H6	1.70	0.54
32:a:832:C:O2'	32:a:833:U:H5'	2.08	0.54
32:a:947:G:H2'	32:a:948:C:C6	2.41	0.54
32:a:1111:A:H2'	32:a:1112:C:C6	2.43	0.54
32:a:1125:U:O2'	32:a:1126:U:H2'	2.07	0.54
32:a:1201:A:H4'	32:a:1202:G:C5'	2.37	0.54
32:a:1226:C:H4'	32:a:1227:A:OP1	2.07	0.54
32:a:1386:G:H2'	32:a:1387:G:C8	2.39	0.54
33:b:44:LEU:O	33:b:47:THR:HB	2.08	0.54
34:c:70:VAL:HG22	34:c:72:LYS:H	1.71	0.54
34:c:188:LEU:HD11	34:c:195:VAL:HG11	1.89	0.54
38:g:95:ARG:CZ	38:g:99:LEU:HD21	2.38	0.54
39:h:27:PRO:HA	39:h:58:TYR:CD1	2.41	0.54
40:i:70:LYS:O	40:i:74:ILE:HG13	2.08	0.54
43:l:26:ALA:HA	43:l:64:TYR:CD2	2.40	0.54
43:l:27:LEU:HD23	43:l:30:ALA:O	2.07	0.54
43:l:86:ARG:HD2	43:l:87:GLY:HA3	1.89	0.54
48:q:45:HIS:HA	48:q:69:LYS:NZ	2.22	0.54
48:q:85:VAL:O	48:q:89:LEU:HG	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:s:69:HIS:HB3	50:s:73:GLU:OE1	2.08	0.54
53:y:40:C:O2'	53:y:41:C:H5'	2.08	0.54
55:z:37:A:H3'	55:z:38:A:H8	1.73	0.54
1:A:412:A:H2'	1:A:413:C:H5'	1.90	0.54
1:A:495:G:N3	18:W:61:ASN:ND2	2.54	0.54
1:A:576:U:O2'	1:A:577:G:H5'	2.07	0.54
1:A:746:A:H5''	1:A:748:G:O4'	2.08	0.54
1:A:1248:G:N2	5:F:88:VAL:HG11	2.23	0.54
1:A:1607:C:H5''	1:A:1608:A:H5'	1.89	0.54
1:A:1654:A:H2'	1:A:1655:A:H8	1.73	0.54
1:A:2111:C:H4'	1:A:2119:A:OP1	2.08	0.54
1:A:2161:C:H2'	1:A:2162:G:H5'	1.89	0.54
1:A:2292:C:O2'	1:A:2293:C:H5'	2.08	0.54
1:A:2455:G:H2'	1:A:2456:C:C6	2.43	0.54
1:A:2467:C:H2'	1:A:2468:G:O4'	2.07	0.54
1:A:2849:U:H4'	1:A:2868:A:C2	2.42	0.54
1:A:2862:G:O2'	1:A:2863:C:H5'	2.07	0.54
2:B:52:A:H61	14:S:32:LEU:HB3	1.73	0.54
2:B:77:U:H2'	2:B:78:A:H8	1.72	0.54
2:B:105:A:H2'	2:B:106:G:O4'	2.08	0.54
2:B:114:C:O2'	14:S:47:THR:N	2.41	0.54
4:E:26:ILE:HD11	4:E:188:VAL:HG21	1.90	0.54
7:H:11:VAL:N	7:H:48:GLY:O	2.25	0.54
7:H:119:GLU:O	7:H:121:ILE:HG12	2.08	0.54
8:I:6:LEU:HB3	8:I:57:ARG:NH2	2.23	0.54
8:I:116:LEU:HD11	8:I:119:PRO:HA	1.89	0.54
21:Z:67:LEU:O	21:Z:69:THR:HG23	2.07	0.54
32:a:66:G:H21	32:a:172:A:H2'	1.71	0.54
32:a:116:A:H2'	32:a:117:G:O4'	2.06	0.54
32:a:711:G:O2'	32:a:712:A:H5'	2.08	0.54
32:a:769:G:O2'	32:a:770:C:H5'	2.06	0.54
32:a:771:G:O2'	32:a:772:U:H5'	2.08	0.54
32:a:996:A:O2'	32:a:997:U:H5'	2.08	0.54
32:a:1051:C:H2'	32:a:1052:U:C6	2.42	0.54
32:a:1521:G:H2'	32:a:1522:U:C6	2.42	0.54
33:b:19:HIS:NE2	33:b:39:ILE:HD13	2.23	0.54
33:b:170:GLU:O	33:b:174:VAL:HG23	2.08	0.54
35:d:194:LEU:HB3	35:d:196:LEU:CD1	2.36	0.54
36:e:9:LYS:NZ	36:e:108:ALA:HA	2.23	0.54
37:f:45:LEU:HD12	37:f:59:TYR:CD1	2.40	0.54
38:g:129:GLU:HB3	38:g:131:LYS:HE2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:i:111:ARG:HG3	45:n:61:TRP:NE1	2.21	0.54
44:m:64:TRP:O	44:m:66:LEU:HG	2.08	0.54
46:o:76:GLU:O	46:o:80:ALA:N	2.34	0.54
53:y:19:G:H4'	53:y:20:U:OP2	2.04	0.54
53:y:50:U:H2'	53:y:51:C:C6	2.42	0.54
54:C:70:LYS:CG	54:C:177:LYS:HE2	2.37	0.54
54:C:103:ILE:HD13	54:C:107:TRP:HE3	1.72	0.54
55:z:68:C:H2'	55:z:69:G:C8	2.43	0.54
1:A:214:G:H2'	1:A:215:G:C8	2.43	0.54
1:A:272(K):U:O2	1:A:272(O):C:H1'	2.08	0.54
1:A:354:G:H2'	1:A:355:G:H8	1.73	0.54
1:A:374:A:C2'	1:A:375:C:H5'	2.37	0.54
1:A:624:C:HO2'	1:A:625:G:H5'	1.73	0.54
1:A:627:A:N6	1:A:637:A:O5'	2.33	0.54
1:A:718:A:H2'	1:A:719:C:O4'	2.08	0.54
1:A:969:U:H4'	25:3:14:GLY:O	2.07	0.54
1:A:1557:C:H2'	1:A:1558:A:N7	2.22	0.54
1:A:1589:C:O2'	1:A:1590:U:H5'	2.08	0.54
1:A:1656:C:H2'	1:A:1657:C:H6	1.73	0.54
1:A:2154:G:H2'	1:A:2155:G:C8	2.42	0.54
1:A:2156:G:H2'	1:A:2157:G:O4'	2.07	0.54
1:A:2195:C:H2'	1:A:2196:C:C6	2.42	0.54
5:F:23:ASP:O	5:F:24:LEU:HD12	2.08	0.54
5:F:64:ILE:HD12	5:F:65:TRP:CZ3	2.43	0.54
6:G:99:MET:O	6:G:103:LEU:HG	2.08	0.54
7:H:83:TYR:N	7:H:135:GLY:O	2.36	0.54
8:I:92:VAL:HA	8:I:96:ASP:OD2	2.07	0.54
18:W:23:LEU:HD13	27:5:25:LEU:O	2.08	0.54
19:X:59:VAL:HB	19:X:76:ARG:HG3	1.90	0.54
19:X:89:ILE:HG22	19:X:92:LEU:H	1.72	0.54
21:Z:110:GLY:N	21:Z:145:GLU:HA	2.23	0.54
32:a:17:U:O2'	32:a:1079:G:H1'	2.08	0.54
32:a:99:U:H3'	51:t:14:LYS:CA	2.37	0.54
32:a:821:G:O2'	32:a:822:C:H5'	2.07	0.54
32:a:964:A:C2	32:a:969:A:H1'	2.43	0.54
32:a:970:C:H5''	32:a:971:G:OP1	2.07	0.54
32:a:1243:C:O2'	32:a:1244:C:H5'	2.08	0.54
32:a:1298:C:N4	38:g:114:ARG:HD3	2.23	0.54
32:a:1305:G:H5'	52:u:4:GLY:CA	2.37	0.54
33:b:28:PHE:HB2	33:b:192:SER:O	2.08	0.54
33:b:101:MET:HA	33:b:108:ILE:HG13	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:d:8:VAL:HG22	35:d:21:LEU:HD13	1.88	0.54
35:d:108:LEU:CD2	35:d:176:LEU:HD13	2.38	0.54
37:f:9:VAL:O	37:f:86:ARG:N	2.37	0.54
38:g:66:VAL:HG12	38:g:70:LYS:HG3	1.88	0.54
40:i:50:LEU:HG	40:i:81:ILE:CD1	2.32	0.54
45:n:4:LYS:O	45:n:8:GLU:N	2.36	0.54
54:C:124:GLY:HA2	54:C:137:LEU:HD21	1.87	0.54
55:z:39:U:O2'	55:z:40:C:H5'	2.07	0.54
1:A:659:C:O2'	1:A:660:G:H5'	2.08	0.54
1:A:751:A:O4'	18:W:90:ARG:HA	2.08	0.54
1:A:767:U:O2'	1:A:768:G:H5'	2.07	0.54
1:A:814:C:O2'	1:A:815:C:H5'	2.08	0.54
1:A:848:G:H2'	1:A:849:A:C8	2.43	0.54
1:A:855:G:H1	1:A:922:U:H3	1.55	0.54
1:A:1179:C:H2'	1:A:1180:C:C6	2.42	0.54
1:A:1766:U:O2'	1:A:1767:C:H5'	2.08	0.54
1:A:1829:A:H3'	1:A:1830:C:C6	2.43	0.54
1:A:2047:U:H2'	1:A:2048:G:H8	1.73	0.54
1:A:2075:U:H4'	1:A:2596:U:O2	2.07	0.54
1:A:2128:C:O5'	54:C:6:ARG:NH2	2.33	0.54
1:A:2139:C:O2'	1:A:2140:C:H5'	2.08	0.54
1:A:2472:G:O6	1:A:2475:C:H2'	2.07	0.54
1:A:2759:G:H2'	1:A:2760:C:H6	1.73	0.54
1:A:2830:G:C2'	1:A:2831:G:H5'	2.37	0.54
1:A:2846:G:H2'	1:A:2847:U:C6	2.43	0.54
2:B:18:G:H2'	2:B:19:G:C8	2.43	0.54
6:G:16:ARG:HE	6:G:31:VAL:HG21	1.71	0.54
15:T:39:ARG:NH2	32:a:345:C:OP2	2.41	0.54
17:V:1:MET:CE	17:V:40:LEU:HB3	2.38	0.54
18:W:85:VAL:HA	18:W:94:ASP:O	2.08	0.54
20:Y:75:ILE:HD13	20:Y:82:PRO:HA	1.89	0.54
21:Z:148:ASP:O	21:Z:174:VAL:N	2.32	0.54
30:8:31:HIS:ND1	30:8:32:LEU:HD13	2.23	0.54
32:a:64:G:C3'	32:a:64:G:HO3'	2.10	0.54
32:a:638:G:H2'	32:a:639:G:H8	1.72	0.54
32:a:653:A:O4'	39:h:56:LYS:HE2	2.08	0.54
32:a:965:A:H4'	32:a:966:M2G:O5'	2.08	0.54
32:a:987:G:H2'	32:a:988:G:H8	1.73	0.54
32:a:1005:A:H3'	32:a:1006:C:C6	2.43	0.54
32:a:1040:U:H2'	32:a:1041:A:C1'	2.37	0.54
32:a:1162:C:O2'	32:a:1163:C:H5'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1177:G:H2'	32:a:1178:G:O4'	2.07	0.54
32:a:1288:A:H2'	32:a:1289:A:C8	2.43	0.54
32:a:1329:A:P	44:m:28:ALA:HB3	2.48	0.54
32:a:1392:G:O2'	32:a:1393:U:H5'	2.08	0.54
34:c:190:ARG:CB	34:c:195:VAL:HG22	2.38	0.54
35:d:21:LEU:N	35:d:26:CYS:SG	2.81	0.54
39:h:10:LEU:CD2	39:h:83:ILE:HD11	2.33	0.54
44:m:39:ILE:HD11	44:m:56:LEU:HB2	1.90	0.54
46:o:4:THR:HG22	46:o:7:GLU:HG3	1.90	0.54
54:C:39:GLU:HB2	54:C:178:ALA:HB3	1.90	0.54
1:A:37:C:H2'	1:A:38:A:H8	1.73	0.54
1:A:61:G:O2'	1:A:62:C:H5'	2.08	0.54
1:A:329:G:OP2	20:Y:71:LYS:HD2	2.08	0.54
1:A:529:A:H62	1:A:2041:U:H3	1.54	0.54
1:A:638:G:H2'	1:A:639:U:H6	1.73	0.54
1:A:696:G:O2'	1:A:697:C:H5'	2.08	0.54
1:A:859:G:N2	1:A:860:U:O4	2.25	0.54
1:A:1049:C:H3'	1:A:1050:A:H8	1.72	0.54
1:A:1114:G:H2'	1:A:1115:G:C8	2.43	0.54
1:A:1561:G:H2'	1:A:1562:A:C8	2.43	0.54
1:A:1744:C:O2'	1:A:1745(A):C:H5'	2.08	0.54
1:A:2006:C:H5'	1:A:2049:G:OP1	2.08	0.54
1:A:2082:A:H2'	1:A:2083:G:O4'	2.07	0.54
1:A:2163:C:H3'	1:A:2164:C:C6	2.42	0.54
1:A:2167:U:H2'	1:A:2168:G:C4	2.42	0.54
1:A:2222:G:O2'	1:A:2223:G:H5'	2.07	0.54
1:A:2369:A:O2'	1:A:2370:G:H5'	2.08	0.54
2:B:28:C:H2'	2:B:29:A:C8	2.43	0.54
3:D:148:GLU:HB2	3:D:151:LYS:HD2	1.90	0.54
3:D:166:GLN:HG3	3:D:182:LEU:CD2	2.37	0.54
3:D:184:LYS:CG	3:D:271:ILE:HD11	2.37	0.54
4:E:98:PRO:HG3	4:E:175:VAL:H	1.73	0.54
6:G:66:GLN:HG3	26:4:6:HIS:CE1	2.42	0.54
6:G:107:LEU:HD11	6:G:178:PHE:CD1	2.43	0.54
10:O:13:ASN:ND2	10:O:96:THR:OG1	2.31	0.54
12:Q:34:LEU:HD11	12:Q:129:THR:OG1	2.08	0.54
12:Q:70:PRO:O	12:Q:93:TYR:HB3	2.08	0.54
13:R:64:ARG:O	13:R:68:ARG:HG3	2.08	0.54
15:T:4:GLY:O	15:T:8:LYS:HG2	2.06	0.54
21:Z:77:ASP:O	21:Z:81:ARG:N	2.41	0.54
29:7:30:VAL:HA	29:7:33:ARG:HH21	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:294:U:H2'	32:a:295:C:C6	2.43	0.54
32:a:449:C:H3'	32:a:450:G:H8	1.73	0.54
32:a:692:U:O2	32:a:694:A:H3'	2.08	0.54
32:a:701:C:H5''	32:a:703:G:O4'	2.08	0.54
32:a:921:U:O2	36:e:19:MET:HB2	2.08	0.54
33:b:58:ILE:CG2	33:b:221:LEU:HD12	2.36	0.54
35:d:101:LEU:HA	35:d:140:VAL:CG2	2.38	0.54
40:i:17:VAL:HG23	40:i:63:ILE:HD11	1.90	0.54
41:j:6:ILE:O	41:j:71:LEU:HG	2.08	0.54
43:l:86:ARG:HD2	43:l:87:GLY:N	2.22	0.54
54:C:8:ARG:HA	54:C:11:LEU:HD12	1.90	0.54
54:C:63:SER:OG	54:C:158:ALA:O	2.23	0.54
56:x:12:A:H2'	56:x:13:A:C8	2.43	0.54
1:A:144:C:C5'	19:X:2:LYS:HD3	2.37	0.54
1:A:181:A:H3'	1:A:182:A:H8	1.73	0.54
1:A:243:U:H2'	1:A:244:A:C8	2.43	0.54
1:A:335:C:H4'	20:Y:73:ARG:HH11	1.73	0.54
1:A:522:G:H2'	1:A:523:C:C6	2.43	0.54
1:A:573:G:O2'	1:A:574:C:H3'	2.08	0.54
1:A:603:A:OP2	1:A:654:A:N6	2.38	0.54
1:A:1387:C:H2'	1:A:1388:G:C8	2.43	0.54
1:A:1528(A):A:H2'	1:A:1528(B):A:C8	2.43	0.54
1:A:1722:A:H1'	1:A:1739:U:C6	2.43	0.54
1:A:2009:G:H1'	13:R:107:ASP:O	2.08	0.54
1:A:2182:G:H2'	1:A:2183:C:H6	1.71	0.54
1:A:2228:G:H2'	1:A:2229:C:O4'	2.07	0.54
1:A:2334:G:O6	22:0:74:ARG:NH1	2.36	0.54
1:A:2550:G:O2'	1:A:2551:C:H5'	2.08	0.54
1:A:2553:G:C2	1:A:2554:U:H1'	2.43	0.54
1:A:2712(A):U:H1'	1:A:2712(B):A:C8	2.43	0.54
3:D:97:TYR:HE2	3:D:103:ARG:HE	1.56	0.54
3:D:126:GLN:H	3:D:129:ASN:HD22	1.55	0.54
4:E:14:ILE:HB	15:T:14:TYR:CE2	2.42	0.54
4:E:38:THR:O	4:E:42:ASP:N	2.36	0.54
4:E:101:ARG:NH1	4:E:171:GLU:HB2	2.23	0.54
6:G:127:GLY:HA2	6:G:166:ASP:OD2	2.08	0.54
7:H:41:MET:SD	7:H:54:ARG:HA	2.48	0.54
12:Q:103:MET:SD	12:Q:127:ILE:HD11	2.48	0.54
21:Z:8:TYR:HB2	21:Z:38:TYR:O	2.08	0.54
21:Z:53:ILE:HD12	21:Z:54:HIS:N	2.23	0.54
21:Z:104:PHE:HD1	21:Z:141:VAL:HG11	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:35:G:H21	43:l:118:SER:HB2	1.73	0.54
32:a:66:G:N2	32:a:172:A:H2'	2.22	0.54
32:a:100:C:H1'	32:a:101:A:H5'	1.90	0.54
32:a:110:C:O2'	47:p:25:ARG:O	2.20	0.54
32:a:313:A:H2'	32:a:314:C:H6	1.73	0.54
32:a:437:U:H4'	35:d:125:HIS:HE1	1.72	0.54
32:a:1053:G:H4'	32:a:1054:C:C5'	2.37	0.54
32:a:1441:G:H4'	32:a:1442(A):G:C4	2.43	0.54
33:b:212:GLN:HG3	33:b:235:SER:HB3	1.90	0.54
36:e:9:LYS:HB2	36:e:33:VAL:HG12	1.89	0.54
36:e:17:ALA:HB2	36:e:26:PHE:CD1	2.43	0.54
37:f:40:VAL:HG23	37:f:63:TYR:CE1	2.43	0.54
41:j:58:ASP:O	41:j:60:ARG:HG2	2.08	0.54
44:m:60:VAL:HG22	44:m:66:LEU:HD11	1.90	0.54
51:t:53:LEU:HB3	51:t:57:ARG:HH12	1.73	0.54
54:C:128:GLY:N	54:C:137:LEU:HD23	2.23	0.54
54:C:185:LEU:O	54:C:189:ILE:HG12	2.08	0.54
1:A:7:G:H2'	1:A:8:A:C8	2.44	0.53
1:A:149:A:H2'	1:A:150:C:C6	2.43	0.53
1:A:440:G:H2'	1:A:441:U:C6	2.43	0.53
1:A:640:C:O2'	1:A:641:C:H5'	2.08	0.53
1:A:728:G:C5'	3:D:13:ARG:HH21	2.20	0.53
1:A:916:G:O2'	1:A:917:A:O4'	2.22	0.53
1:A:1684:C:H2'	1:A:1685:C:C6	2.43	0.53
1:A:2231:C:H2'	1:A:2232:U:C6	2.42	0.53
1:A:2349:G:H2'	1:A:2350:C:O4'	2.06	0.53
4:E:31:CYS:O	4:E:91:VAL:N	2.41	0.53
5:F:126:VAL:O	5:F:195:ASP:HA	2.08	0.53
8:I:5:LEU:O	8:I:15:VAL:HA	2.09	0.53
11:P:83:VAL:CG2	11:P:112:LEU:HD21	2.38	0.53
15:T:42:ILE:HG21	15:T:84:GLN:OE1	2.07	0.53
20:Y:6:HIS:ND1	20:Y:7:VAL:HG23	2.22	0.53
21:Z:54:HIS:HB3	21:Z:101:PRO:CD	2.35	0.53
23:1:60:PHE:CD1	23:1:91:LYS:HE3	2.42	0.53
32:a:103:C:OP2	51:t:21:LYS:HD2	2.08	0.53
32:a:129(A):U:H5'	48:q:3:LYS:HE2	1.90	0.53
32:a:410:G:H2'	32:a:429:U:C4	2.43	0.53
32:a:564:C:C4	48:q:31:LEU:HD11	2.42	0.53
32:a:792:A:H1'	32:a:794:A:N7	2.23	0.53
32:a:1135:U:H4'	32:a:1136:U:C5	2.42	0.53
32:a:1145:C:H4'	32:a:1146:A:H5''	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1487:G:O2'	32:a:1488:G:H5'	2.08	0.53
32:a:1532:U:OP2	32:a:1532:U:H4'	2.08	0.53
34:c:53:ALA:N	34:c:69:HIS:O	2.30	0.53
36:e:9:LYS:HZ2	36:e:108:ALA:HA	1.73	0.53
36:e:57:LYS:HG2	36:e:61:TYR:CE2	2.43	0.53
38:g:65:ALA:HB1	38:g:127:ALA:HB3	1.89	0.53
38:g:68:ASN:HD22	38:g:128:ALA:HA	1.73	0.53
39:h:44:PHE:HD1	39:h:80:ILE:HG12	1.72	0.53
1:A:90:U:H1'	1:A:92:A:C8	2.43	0.53
1:A:214:G:H3'	1:A:214:G:OP2	2.07	0.53
1:A:229:A:H5''	1:A:230:U:C5'	2.38	0.53
1:A:286:C:H2'	1:A:287:C:H6	1.72	0.53
1:A:300:A:H2'	1:A:334:C:H1'	1.88	0.53
1:A:328:U:H4'	20:Y:68:HIS:CD2	2.43	0.53
1:A:355:G:O2'	1:A:356:G:H5'	2.07	0.53
1:A:429:A:H2'	1:A:430:G:N9	2.23	0.53
1:A:482:A:H1'	1:A:498:G:N2	2.22	0.53
1:A:503:A:H4'	1:A:504:U:H5''	1.88	0.53
1:A:579:G:O2'	1:A:2019:A:OP1	2.25	0.53
1:A:701:G:O2'	1:A:702:G:H5'	2.09	0.53
1:A:839:U:H1'	1:A:1191:G:H1'	1.91	0.53
1:A:875:G:H5''	21:Z:149:SER:OG	2.09	0.53
1:A:902:C:O2'	1:A:903:C:H5'	2.08	0.53
1:A:1023:U:H2'	1:A:1024:G:O4'	2.06	0.53
1:A:1138:G:C2	9:N:106:MET:HE2	2.43	0.53
1:A:1713:U:O4	1:A:1746:G:O6	2.25	0.53
1:A:1924:C:H2'	1:A:1925:C:H6	1.72	0.53
1:A:2144:U:O2'	1:A:2147:G:N1	2.32	0.53
1:A:2316:C:H2'	1:A:2317:C:H6	1.73	0.53
1:A:2393:A:O3'	11:P:63:PRO:HA	2.07	0.53
1:A:2681:C:H5'	4:E:11:MET:SD	2.48	0.53
1:A:2821:A:H2'	1:A:2822:G:H8	1.72	0.53
4:E:84:PHE:CD2	4:E:86:PRO:HD3	2.44	0.53
14:S:19:LYS:HE2	14:S:42:ASP:CG	2.33	0.53
17:V:4:ILE:HA	17:V:12:TYR:O	2.08	0.53
20:Y:15:VAL:CG2	20:Y:23:ARG:HB2	2.38	0.53
21:Z:5:LEU:HD21	21:Z:43:GLU:HB3	1.89	0.53
21:Z:69:THR:HG22	21:Z:90:VAL:HA	1.89	0.53
32:a:61:G:H2'	32:a:62:U:O4'	2.08	0.53
32:a:193:C:O2'	32:a:194:C:H5'	2.08	0.53
32:a:295:C:H2'	32:a:296:U:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:712:A:H2'	32:a:713:G:C8	2.43	0.53
32:a:779:C:H4'	42:k:121:PRO:O	2.08	0.53
32:a:923:A:O2'	32:a:1399:C:OP2	2.25	0.53
32:a:935:A:H2'	32:a:936:C:C6	2.43	0.53
32:a:992:U:OP1	32:a:992:U:H2'	2.08	0.53
32:a:1151:A:O2'	32:a:1152:A:O5'	2.25	0.53
32:a:1413:A:O2'	32:a:1414:U:H5'	2.08	0.53
33:b:103:THR:HG23	33:b:176:GLU:HG2	1.90	0.53
36:e:5:ASP:CB	56:x:55:A:H5''	2.38	0.53
36:e:72:GLN:O	36:e:75:THR:HG22	2.08	0.53
37:f:69:GLU:O	37:f:72:VAL:HG22	2.08	0.53
38:g:78:ARG:HB3	38:g:85:TYR:HB2	1.90	0.53
41:j:82:ILE:HA	41:j:85:LEU:CD1	2.36	0.53
44:m:87:TYR:HA	44:m:90:LEU:HD12	1.91	0.53
47:p:21:VAL:HG13	47:p:33:ILE:HB	1.91	0.53
49:r:40:LEU:HB3	49:r:79:LEU:HD11	1.89	0.53
1:A:81:G:O2'	1:A:82:G:H5'	2.08	0.53
1:A:117:G:OP2	1:A:119:A:O2'	2.15	0.53
1:A:122:G:O2'	1:A:123:G:H5'	2.08	0.53
1:A:214:G:H1'	1:A:216:A:O2'	2.08	0.53
1:A:219:G:N3	1:A:234:C:O2'	2.40	0.53
1:A:407:G:H2'	1:A:408:G:C8	2.44	0.53
1:A:445:C:OP1	16:U:2:PRO:HA	2.09	0.53
1:A:580:C:H2'	1:A:581:C:H6	1.73	0.53
1:A:626:U:O4	11:P:107:LYS:HE2	2.08	0.53
1:A:796:C:H2'	1:A:797:C:H6	1.73	0.53
1:A:823:G:H2'	1:A:824:A:H8	1.73	0.53
1:A:1146:C:O2'	1:A:1147:C:H5'	2.08	0.53
1:A:1151:G:H4'	16:U:81:HIS:CG	2.43	0.53
1:A:1590:U:H2'	1:A:1591:G:C8	2.44	0.53
1:A:1754:C:H5''	15:T:113:LYS:CE	2.38	0.53
1:A:1761:C:H3'	1:A:1762:A:H5''	1.89	0.53
1:A:2101:G:N2	1:A:2189:U:H1'	2.23	0.53
1:A:2169:A:O2'	1:A:2170:A:H5'	2.08	0.53
1:A:2385:C:O2'	1:A:2386:C:H5'	2.08	0.53
1:A:2431:U:H2'	1:A:2433:A:OP2	2.08	0.53
1:A:2817:G:H2'	1:A:2818:G:O4'	2.07	0.53
5:F:125:LEU:HD22	5:F:199:TRP:HB2	1.90	0.53
5:F:192:LEU:HD21	5:F:194:MET:HG3	1.91	0.53
6:G:75:LYS:HA	6:G:84:LYS:CG	2.38	0.53
7:H:13:LYS:HA	7:H:15:VAL:H	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:I:6:LEU:HD11	8:I:37:VAL:CG2	2.34	0.53
11:P:83:VAL:CG2	11:P:114:ILE:HD13	2.38	0.53
12:Q:55:VAL:CG2	21:Z:183:LEU:HD11	2.33	0.53
16:U:98:LEU:O	16:U:102:GLU:N	2.35	0.53
20:Y:11:ASP:HB2	20:Y:27:VAL:HG21	1.91	0.53
20:Y:45:VAL:HG22	20:Y:63:LYS:O	2.08	0.53
32:a:70:G:H4'	32:a:71:C:OP2	2.08	0.53
32:a:1126:U:O2	32:a:1280:A:H2'	2.08	0.53
32:a:1327:C:O2'	32:a:1328:C:H5'	2.08	0.53
32:a:1360:A:N7	45:n:18:VAL:HG13	2.23	0.53
32:a:1391:U:H2'	32:a:1392:G:H8	1.70	0.53
33:b:71:VAL:HA	33:b:93:VAL:CG2	2.38	0.53
34:c:22:TRP:CE3	34:c:59:ARG:HD2	2.43	0.53
38:g:84:ASN:CB	55:z:33:U:H4'	2.39	0.53
43:l:49:ASN:HB2	43:l:92:OTD:SB	2.48	0.53
43:l:117:ARG:CG	43:l:122:THR:HB	2.32	0.53
51:t:11:SER:CA	51:t:14:LYS:HB3	2.38	0.53
55:z:18:G:N2	55:z:57:G:H3'	2.23	0.53
1:A:597:U:H2'	1:A:598:G:C8	2.43	0.53
1:A:843:G:O2'	1:A:844:C:H5'	2.08	0.53
1:A:882:G:H2'	1:A:883:G:C8	2.43	0.53
1:A:1011:G:OP2	16:U:76:TYR:HB3	2.09	0.53
1:A:1152:C:H2'	1:A:1153:C:C6	2.43	0.53
1:A:1668:A:O2'	1:A:1674:G:N7	2.40	0.53
1:A:1817:G:OP2	3:D:157:ARG:NH2	2.41	0.53
1:A:1876:A:H2'	1:A:1877:A:C1'	2.39	0.53
1:A:2240:C:O2'	1:A:2241:A:H5'	2.09	0.53
1:A:2280:G:H2'	1:A:2281:C:H5'	1.89	0.53
1:A:2313:C:H2'	1:A:2314:C:C6	2.43	0.53
1:A:2406:U:C2	11:P:72:PRO:HG2	2.43	0.53
1:A:2438:U:O2'	1:A:2440:C:OP1	2.21	0.53
1:A:2554:U:H2'	1:A:2555:U:C6	2.44	0.53
1:A:2674:G:H2'	1:A:2675:A:C8	2.43	0.53
3:D:3:VAL:HG22	3:D:17:THR:HB	1.90	0.53
4:E:18:ASP:CB	15:T:82:LEU:HD11	2.38	0.53
5:F:10:PRO:HB3	5:F:17:ARG:NE	2.24	0.53
6:G:106:LEU:HD12	6:G:110:ALA:CB	2.39	0.53
7:H:44:VAL:HB	7:H:51:ARG:HB2	1.89	0.53
7:H:95:ARG:HB2	7:H:128:PRO:HB2	1.88	0.53
9:N:14:VAL:HG13	9:N:138:LEU:HD12	1.90	0.53
11:P:80:TYR:HA	11:P:111:ARG:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:223:U:H2'	32:a:224:C:C6	2.44	0.53
32:a:453:A:N7	32:a:479:C:N3	2.55	0.53
32:a:477:A:O2'	32:a:479:C:H5'	2.08	0.53
32:a:659:U:C2'	32:a:660:G:H5'	2.39	0.53
32:a:676:A:O2'	32:a:677:U:H5'	2.07	0.53
32:a:683:G:H2'	32:a:684:A:C8	2.43	0.53
32:a:730:G:C5	32:a:731:G:H1'	2.44	0.53
32:a:822:C:H2'	32:a:823:G:H8	1.73	0.53
32:a:880:C:O2'	32:a:881:G:H5'	2.08	0.53
32:a:978:A:N6	32:a:1316:G:H1'	2.23	0.53
32:a:1316:G:H5''	45:n:17:LYS:HZ3	1.73	0.53
32:a:1360:A:H2'	32:a:1361:G:C8	2.44	0.53
33:b:122:PHE:HD1	33:b:127:ILE:HD13	1.72	0.53
36:e:6:PHE:CE1	36:e:66:MET:HE2	2.43	0.53
38:g:14:PRO:HB3	38:g:19:GLY:O	2.08	0.53
38:g:45:ASP:O	38:g:49:ILE:HG13	2.07	0.53
40:i:65:VAL:HG21	40:i:73:GLN:HB3	1.90	0.53
40:i:77:ILE:O	40:i:81:ILE:HG22	2.08	0.53
43:l:117:ARG:CZ	43:l:124:LYS:HA	2.38	0.53
54:C:183:GLU:HA	54:C:186:ALA:CB	2.38	0.53
55:z:16:U:H5'	55:z:17:C:OP2	2.08	0.53
1:A:108:U:H2'	1:A:109:G:H8	1.72	0.53
1:A:210:C:O2'	1:A:211:A:H5'	2.09	0.53
1:A:535:C:H2'	1:A:536:A:C8	2.44	0.53
1:A:610:G:H2'	1:A:611:C:C6	2.42	0.53
1:A:611:C:H2'	1:A:612:C:C6	2.44	0.53
1:A:953:A:O2'	1:A:954:G:H5'	2.08	0.53
1:A:1471:A:OP2	1:A:1519:G:N1	2.30	0.53
1:A:1556:C:H2'	1:A:1557:C:C6	2.44	0.53
1:A:1569:A:O4'	3:D:59:LYS:NZ	2.37	0.53
1:A:1722:A:O2'	1:A:1739:U:O5'	2.25	0.53
1:A:1860:G:C5'	54:C:205:LYS:HG3	2.38	0.53
1:A:2064:C:H2'	1:A:2065:C:H6	1.73	0.53
2:B:4:C:H2'	2:B:5:C:H6	1.73	0.53
4:E:39:PRO:HA	4:E:44:TYR:N	2.23	0.53
6:G:145:THR:CG2	6:G:148:MET:H	2.21	0.53
11:P:52:GLU:OE1	11:P:57:THR:HA	2.08	0.53
13:R:79:LEU:HD22	13:R:83:ILE:HB	1.90	0.53
14:S:4:LEU:HA	14:S:8:GLU:OE1	2.08	0.53
15:T:53:ARG:HH22	15:T:55:ASN:HD22	1.56	0.53
23:1:19:GLN:O	23:1:35:THR:HG22	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:174:C:H3'	32:a:174:C:OP2	2.09	0.53
32:a:185:A:H2'	32:a:186:C:C6	2.43	0.53
32:a:410:G:H2'	32:a:429:U:C5	2.44	0.53
32:a:606:G:C5'	32:a:607:A:H5'	2.39	0.53
32:a:629:G:N3	32:a:630:G:H1'	2.23	0.53
32:a:663:A:H2'	32:a:664:G:H8	1.74	0.53
32:a:1058:G:OP1	34:c:199:LYS:HE3	2.08	0.53
32:a:1118:C:H2'	32:a:1119:C:H6	1.73	0.53
32:a:1169:A:H2'	32:a:1170:A:C8	2.44	0.53
32:a:1255:G:O2'	32:a:1258:G:H1'	2.09	0.53
32:a:1255:G:HO2'	32:a:1258:G:HO2'	1.54	0.53
32:a:1471:G:O2'	32:a:1472:U:H5'	2.09	0.53
32:a:1477:C:O2'	32:a:1478:C:H5'	2.09	0.53
33:b:71:VAL:HG23	33:b:164:VAL:HA	1.91	0.53
33:b:97:TRP:CZ2	33:b:173:ALA:HA	2.43	0.53
33:b:141:GLU:HG2	33:b:145:LEU:HD23	1.90	0.53
34:c:142:MET:HG3	34:c:170:GLN:HB3	1.91	0.53
38:g:66:VAL:O	38:g:70:LYS:HG3	2.08	0.53
39:h:101:PRO:HG3	39:h:133:LEU:HD11	1.89	0.53
46:o:79:ARG:HA	46:o:82:ILE:HG12	1.90	0.53
47:p:19:ILE:HG22	47:p:36:ILE:CG1	2.38	0.53
47:p:27:LYS:HG3	47:p:30:GLY:N	2.23	0.53
52:u:9:ARG:NH1	52:u:13:ILE:HD11	2.23	0.53
54:C:113:VAL:CG1	54:C:138:PRO:HG3	2.39	0.53
1:A:31:C:O2'	1:A:32:C:H5'	2.08	0.53
1:A:554:U:O2'	1:A:555:U:H5'	2.08	0.53
1:A:659:C:H2'	1:A:660:G:C8	2.43	0.53
1:A:853:G:O2'	1:A:854:G:H5'	2.08	0.53
1:A:906:G:H5''	12:Q:26:TYR:OH	2.08	0.53
1:A:1255:U:N3	5:F:72:ARG:O	2.41	0.53
1:A:1298:C:H2'	1:A:1299:G:O4'	2.09	0.53
1:A:1656:C:H2'	1:A:1657:C:C6	2.44	0.53
1:A:1754:C:N3	1:A:2716:U:O2'	2.41	0.53
1:A:1879:C:H2'	1:A:1880:C:C6	2.44	0.53
1:A:2290:G:H2'	1:A:2291:U:H6	1.73	0.53
1:A:2295:C:OP1	14:S:10:ARG:NH1	2.42	0.53
1:A:2372:G:O2'	1:A:2373:G:H5'	2.09	0.53
1:A:2375:G:N2	1:A:2378:A:OP2	2.26	0.53
1:A:2463:C:O2'	1:A:2464:C:H5'	2.08	0.53
1:A:2563:U:H4'	10:O:28:SER:HB3	1.90	0.53
1:A:2663:G:H2'	1:A:2664:G:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2684:U:OP1	15:T:53:ARG:HD3	2.09	0.53
3:D:77:ALA:HB2	3:D:97:TYR:HD1	1.73	0.53
4:E:5:LEU:HD13	4:E:51:PHE:HB3	1.90	0.53
4:E:101:ARG:HD2	4:E:169:ASN:OD1	2.09	0.53
5:F:40:GLN:NE2	5:F:183:VAL:HG22	2.23	0.53
6:G:76:SER:N	6:G:84:LYS:HB2	2.24	0.53
7:H:152:ARG:HG3	7:H:161:GLY:HA2	1.91	0.53
8:I:100:ALA:O	8:I:104:GLN:HB3	2.09	0.53
11:P:20:GLY:O	11:P:21:ARG:NE	2.41	0.53
15:T:30:VAL:O	15:T:44:ASP:HA	2.09	0.53
15:T:85:LYS:NZ	15:T:87:ASP:OD2	2.42	0.53
17:V:2:PHE:CD2	17:V:41:GLY:HA3	2.44	0.53
19:X:29:TRP:CZ3	19:X:78:LYS:HB3	2.43	0.53
22:0:49:LYS:HZ2	22:0:82:ARG:HA	1.74	0.53
23:1:16:ASN:O	23:1:18:ILE:HG13	2.08	0.53
30:8:14:VAL:HG13	30:8:23:VAL:O	2.09	0.53
32:a:102:G:H1'	32:a:151:A:N3	2.23	0.53
32:a:108:G:N2	51:t:15:ARG:HG2	2.24	0.53
32:a:118:U:H2'	32:a:119:A:H5'	1.91	0.53
32:a:201:C:O3'	32:a:202:U:H2'	2.07	0.53
32:a:270:A:H2'	32:a:271:C:C6	2.44	0.53
32:a:966:M2G:C2	53:y:34:C:H5'	2.44	0.53
32:a:1154:G:C2'	32:a:1155:G:H5'	2.39	0.53
32:a:1224:G:C4	32:a:1322:C:H5'	2.43	0.53
32:a:1438:G:H2'	32:a:1439:C:C6	2.43	0.53
33:b:31:TYR:HE2	33:b:200:ILE:HG21	1.73	0.53
33:b:93:VAL:CG1	33:b:101:MET:HE1	2.39	0.53
34:c:190:ARG:H	34:c:190:ARG:HD3	1.74	0.53
35:d:94:LEU:HD22	35:d:196:LEU:HD22	1.91	0.53
37:f:99:ALA:HB1	49:r:23:LYS:HD2	1.91	0.53
39:h:6:ILE:O	39:h:10:LEU:HG	2.08	0.53
40:i:36:TYR:CZ	40:i:70:LYS:HE2	2.43	0.53
49:r:26:LEU:HD11	49:r:42:ARG:NE	2.24	0.53
51:t:45:GLN:N	51:t:91:LEU:HD13	2.24	0.53
55:z:54:U:C2	55:z:58:A:N7	2.76	0.53
1:A:621:A:H5'	11:P:108:LYS:NZ	2.23	0.53
1:A:622:G:O2'	1:A:623:G:H5'	2.09	0.53
1:A:662:G:H2'	1:A:663:G:H8	1.74	0.53
1:A:689:A:H2'	1:A:690:G:C8	2.43	0.53
1:A:851:U:H2'	1:A:852:G:H8	1.73	0.53
1:A:890:A:H2'	1:A:892:G:H8	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1143:A:N6	9:N:25:ARG:HD3	2.24	0.53
1:A:1509(C):A:H2'	1:A:1510:G:O4'	2.08	0.53
1:A:1581:G:H2'	1:A:1582:C:O4'	2.09	0.53
1:A:1825:A:H2'	1:A:1826:G:C8	2.43	0.53
1:A:1902:C:H2'	1:A:1903:G:O4'	2.08	0.53
1:A:1917:PSU:H2'	1:A:1918:A:C8	2.44	0.53
1:A:2044:C:O2'	1:A:2045:C:H5'	2.09	0.53
1:A:2314:C:H5''	6:G:38:VAL:HG21	1.90	0.53
1:A:2693:A:O2'	1:A:2694:G:H5'	2.09	0.53
1:A:2715:C:O2'	1:A:2716:U:H5'	2.08	0.53
1:A:2751:G:OP2	7:H:3:ARG:NE	2.42	0.53
3:D:134:ARG:NH2	8:I:87:LYS:HE3	2.24	0.53
5:F:39:TRP:CD1	5:F:101:LEU:HB2	2.44	0.53
6:G:111:LEU:HA	6:G:114:ILE:HD12	1.90	0.53
8:I:8:PRO:CA	8:I:14:ASP:HA	2.30	0.53
8:I:14:ASP:OD1	8:I:15:VAL:N	2.39	0.53
9:N:94:HIS:HB3	9:N:97:ARG:HD3	1.91	0.53
14:S:24:LEU:HB2	14:S:85:VAL:HG23	1.91	0.53
15:T:119:LYS:HB2	32:a:1442(B):G:H22	1.73	0.53
21:Z:75:ASN:ND2	21:Z:85:HIS:HB3	2.21	0.53
32:a:277:C:H5''	48:q:68:ARG:HH22	1.74	0.53
32:a:473:G:O2'	32:a:474:G:H5'	2.09	0.53
32:a:614:A:H2'	32:a:615:C:H6	1.74	0.53
32:a:807:A:H2'	32:a:808:C:C6	2.43	0.53
32:a:865:A:H1'	32:a:918:A:O2'	2.09	0.53
32:a:914:A:H2'	32:a:915:A:O4'	2.09	0.53
32:a:969:A:H2'	32:a:970:C:O4'	2.09	0.53
32:a:983:A:OP1	45:n:6:LEU:HD21	2.09	0.53
32:a:1046:A:C2'	32:a:1047:G:H5'	2.39	0.53
32:a:1111:A:H2'	32:a:1112:C:H6	1.73	0.53
32:a:1216:G:O2'	32:a:1217:C:H5'	2.08	0.53
32:a:1250:A:H4'	40:i:68:GLY:H	1.73	0.53
32:a:1381:U:H2'	32:a:1382:C:O4'	2.08	0.53
32:a:1392:G:H2'	32:a:1393:U:C6	2.44	0.53
32:a:1493:A:OP1	56:x:18:U:H4'	2.09	0.53
33:b:80:ILE:CD1	33:b:212:GLN:HA	2.38	0.53
36:e:53:LEU:O	36:e:57:LYS:N	2.33	0.53
39:h:44:PHE:HB3	39:h:80:ILE:HD11	1.90	0.53
44:m:15:VAL:HG22	44:m:41:PRO:O	2.09	0.53
44:m:29:ARG:HD3	44:m:64:TRP:CE3	2.44	0.53
44:m:84:ILE:HG13	44:m:86:CYS:H	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:y:68:C:O2'	53:y:69:C:H5'	2.09	0.53
54:C:19:VAL:HG12	54:C:225:ASN:HB2	1.91	0.53
54:C:83:ILE:HG12	54:C:96:GLY:HA3	1.90	0.53
55:z:18:G:H4'	55:z:60:U:C5	2.44	0.53
56:x:43:C:H2'	56:x:44:G:H1'	1.89	0.53
1:A:10:G:H2'	1:A:11:G:C8	2.44	0.53
1:A:121:G:C4'	1:A:149:A:H5'	2.35	0.53
1:A:243:U:O2	1:A:255:A:N7	2.42	0.53
1:A:272(P):C:H2'	1:A:272(Q):G:C8	2.43	0.53
1:A:380:U:H5'	23:1:18:ILE:CD1	2.39	0.53
1:A:399:G:H3'	1:A:400:G:H8	1.72	0.53
1:A:639:U:O2'	1:A:640:C:H5'	2.07	0.53
1:A:680:G:O2'	1:A:681:G:H5'	2.09	0.53
1:A:962:G:H2'	1:A:963:U:H6	1.73	0.53
1:A:1230:C:H2'	1:A:1231:G:C8	2.44	0.53
1:A:1252:G:O2'	1:A:1253:A:H5''	2.07	0.53
1:A:1287:A:O4'	13:R:104:ARG:HD3	2.09	0.53
1:A:1399:C:H2'	1:A:1400:G:C8	2.44	0.53
1:A:1427:A:N6	1:A:1571:A:OP2	2.30	0.53
1:A:1581:G:H2'	1:A:1582:C:C6	2.43	0.53
1:A:1818:U:H2'	3:D:157:ARG:HG3	1.89	0.53
1:A:1907:G:H2'	1:A:1908:C:C6	2.43	0.53
1:A:2104:G:H2'	1:A:2105:C:C1'	2.38	0.53
1:A:2128:C:OP1	54:C:36:LYS:N	2.42	0.53
1:A:2235:G:H2'	1:A:2236:C:H6	1.73	0.53
1:A:2265:U:OP2	1:A:2266:A:O2'	2.17	0.53
1:A:2550:G:C2'	1:A:2551:C:H5'	2.39	0.53
2:B:42:C:H2'	2:B:43:C:O4'	2.08	0.53
8:I:68:LEU:HD13	8:I:68:LEU:O	2.08	0.53
9:N:42:TRP:O	16:U:64:ARG:NE	2.33	0.53
11:P:94:GLU:HG3	11:P:124:LYS:HD3	1.90	0.53
21:Z:40:ASP:OD2	21:Z:43:GLU:HG3	2.09	0.53
24:2:51:ARG:HD3	24:2:55:ARG:CZ	2.38	0.53
27:5:45:VAL:HG22	27:5:52:TYR:HB2	1.90	0.53
28:6:9:LEU:CA	28:6:54:ILE:HB	2.39	0.53
32:a:157:G:O2'	32:a:158:G:H5'	2.08	0.53
32:a:401:C:H1'	32:a:622:A:H1'	1.91	0.53
32:a:407:G:H2'	32:a:408:A:C8	2.44	0.53
32:a:448:A:O5'	32:a:485:G:N2	2.42	0.53
32:a:997:U:H2'	32:a:998:G:C8	2.44	0.53
32:a:1112:C:N3	34:c:178:LEU:HD23	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1112:C:O2'	34:c:179:ARG:HD3	2.09	0.53
32:a:1245:A:H2'	32:a:1246:C:H6	1.73	0.53
32:a:1250:A:H2'	32:a:1251:A:H8	1.74	0.53
32:a:1329:A:O2'	32:a:1330:U:H5'	2.08	0.53
32:a:1442(A):G:N3	32:a:1442(A):G:H2'	2.23	0.53
34:c:47:LEU:CD1	34:c:68:VAL:HG11	2.39	0.53
35:d:160:GLN:O	35:d:163:GLU:HB2	2.09	0.53
36:e:146:ALA:HA	36:e:149:GLU:HB2	1.90	0.53
38:g:13:GLN:OE1	38:g:14:PRO:HD2	2.09	0.53
40:i:117:HIS:NE2	40:i:123:PRO:HB3	2.23	0.53
46:o:3:ILE:HG23	46:o:7:GLU:HB2	1.91	0.53
51:t:11:SER:C	51:t:14:LYS:HB3	2.34	0.53
54:C:115:ALA:O	54:C:145:VAL:HG13	2.08	0.53
1:A:151:C:H2'	1:A:152:G:C8	2.44	0.53
1:A:191:A:O2'	1:A:192:C:H5'	2.09	0.53
1:A:272(H):G:O2'	1:A:272(I):G:H5'	2.09	0.53
1:A:274:G:H2'	1:A:275:G:O4'	2.09	0.53
1:A:479:A:H1'	1:A:481:G:C5'	2.39	0.53
1:A:889:C:O2'	1:A:890:A:O5'	2.25	0.53
1:A:958:U:H3	12:Q:17:LEU:HG	1.74	0.53
1:A:1537:G:H2'	1:A:1538:G:C8	2.43	0.53
1:A:1579:A:H3'	1:A:1580:A:H8	1.74	0.53
1:A:2522:U:H3	1:A:2543:G:H1	1.56	0.53
1:A:2545:G:H2'	1:A:2546:U:O4'	2.09	0.53
1:A:2772:C:H2'	1:A:2773:C:C6	2.44	0.53
1:A:2822:G:O6	13:R:2:ARG:NH2	2.42	0.53
3:D:165:ILE:HA	3:D:175:LEU:CD2	2.37	0.53
6:G:73:ALA:HB3	6:G:85:GLY:N	2.23	0.53
7:H:149:ARG:HG2	7:H:162:ILE:O	2.08	0.53
8:I:4:ILE:HA	8:I:18:VAL:HG22	1.90	0.53
10:O:17:ARG:HB2	10:O:45:GLU:CG	2.39	0.53
14:S:19:LYS:HE2	14:S:42:ASP:OD2	2.08	0.53
15:T:31:SER:CB	15:T:84:GLN:HB3	2.38	0.53
16:U:76:TYR:O	16:U:80:ILE:HG12	2.09	0.53
16:U:104:GLN:OE1	16:U:104:GLN:N	2.30	0.53
19:X:4:ALA:CB	19:X:42:ALA:HA	2.36	0.53
20:Y:83:THR:OG1	20:Y:100:ALA:N	2.20	0.53
21:Z:179:ASP:O	21:Z:182:LYS:HG2	2.09	0.53
26:4:67:TYR:CE2	26:4:69:LYS:HB2	2.44	0.53
30:8:48:PHE:CE2	30:8:50:LEU:HD23	2.44	0.53
32:a:68:G:N2	32:a:171:A:N1	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:114:U:O2'	32:a:115:G:H5'	2.09	0.53
32:a:227:G:H2'	32:a:228:A:C8	2.44	0.53
32:a:291:C:O2'	32:a:292:G:H5'	2.09	0.53
32:a:716:A:H2'	32:a:717:C:C6	2.43	0.53
32:a:861:G:O2'	32:a:862:C:H5'	2.08	0.53
32:a:985:C:H2'	32:a:986:A:H8	1.74	0.53
32:a:1016:A:H2'	32:a:1017:G:O4'	2.09	0.53
32:a:1064:G:H1'	32:a:1190:G:H21	1.74	0.53
32:a:1254:C:H2'	32:a:1255:G:H8	1.74	0.53
32:a:1256:A:OP2	32:a:1279:A:N6	2.41	0.53
32:a:1370:G:H5''	40:i:12:GLU:HG3	1.90	0.53
32:a:1397:C:N4	56:x:20:A:H2'	2.24	0.53
33:b:102:LEU:HB2	33:b:176:GLU:OE1	2.09	0.53
35:d:148:VAL:HG21	35:d:158:ILE:CG2	2.39	0.53
35:d:150:GLU:HA	35:d:153:ARG:CG	2.39	0.53
43:l:59:ARG:HB2	43:l:65:GLU:HG3	1.90	0.53
43:l:84:LEU:CB	43:l:104:VAL:HG11	2.39	0.53
54:C:23:ASP:O	54:C:27:ARG:NE	2.42	0.53
54:C:163:PHE:CD2	54:C:171:ILE:HD11	2.43	0.53
54:C:215:THR:HB	54:C:221:SER:HA	1.91	0.53
55:z:33:U:O2'	55:z:36:A:N6	2.41	0.53
1:A:232:G:H22	1:A:420:C:H5''	1.74	0.53
1:A:516:C:O2'	1:A:517:C:H5'	2.09	0.53
1:A:568:U:OP1	1:A:945:A:N6	2.32	0.53
1:A:708:C:O2'	1:A:709:U:H5'	2.09	0.53
1:A:819:A:N6	1:A:1189:A:H1'	2.24	0.53
1:A:858:U:O3'	1:A:2268:A:O2'	2.27	0.53
1:A:1071:G:H1'	1:A:1089:G:C8	2.44	0.53
1:A:1245:G:O2'	1:A:1246:A:H5'	2.08	0.53
1:A:1337:G:OP2	19:X:73:ARG:NH2	2.31	0.53
1:A:1788:C:H2'	1:A:1789:A:O4'	2.09	0.53
1:A:1948:G:O2'	1:A:1949:G:H5'	2.09	0.53
1:A:2074:U:O2'	1:A:2597:G:H1'	2.08	0.53
1:A:2262:U:O2'	1:A:2263:C:H5'	2.09	0.53
1:A:2286:A:OP2	28:6:29:ASN:ND2	2.42	0.53
1:A:2313:C:O2'	1:A:2314:C:H5'	2.09	0.53
1:A:2546:U:H5''	1:A:2547:U:H5'	1.91	0.53
3:D:206:LEU:HD22	3:D:211:ARG:HB3	1.91	0.53
3:D:257:LEU:HD13	3:D:258:LYS:O	2.09	0.53
4:E:132:HIS:O	4:E:134:ILE:HG23	2.09	0.53
4:E:170:LEU:HB3	4:E:184:VAL:CG1	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:135:LEU:O	6:G:154:GLY:HA3	2.09	0.53
7:H:35:VAL:HG11	7:H:72:ILE:HG12	1.91	0.53
7:H:155:SER:HB3	7:H:158:HIS:O	2.09	0.53
8:I:79:ILE:CD1	8:I:144:VAL:HG22	2.38	0.53
10:O:2:ILE:HG23	10:O:6:THR:HG21	1.91	0.53
10:O:98:VAL:CG2	10:O:118:ALA:HA	2.39	0.53
12:Q:33:GLY:HA2	12:Q:104:PHE:O	2.09	0.53
12:Q:57:HIS:CD2	12:Q:117:ALA:HB2	2.44	0.53
14:S:51:ALA:CB	14:S:73:LEU:HB2	2.38	0.53
20:Y:88:LYS:HB3	20:Y:96:ILE:HG13	1.90	0.53
32:a:99:U:C2	51:t:18:GLN:HA	2.43	0.53
32:a:154:C:O2'	32:a:155:C:H5'	2.09	0.53
32:a:250:A:H1'	32:a:252:U:C4	2.43	0.53
32:a:438:G:O2'	32:a:494:U:O4	2.26	0.53
32:a:516:PSU:H2'	32:a:517:G:C8	2.44	0.53
32:a:522:C:H41	43:l:53:ARG:NH2	2.07	0.53
32:a:575:G:O2'	32:a:821:G:H5'	2.09	0.53
32:a:616:G:H2'	32:a:617:G:H8	1.72	0.53
32:a:640:A:O2'	32:a:641:U:H5'	2.08	0.53
32:a:829:G:O2'	32:a:830:G:H5'	2.08	0.53
32:a:878:G:O2'	32:a:879:C:H5'	2.09	0.53
32:a:1172:C:H2'	32:a:1173:G:C8	2.44	0.53
32:a:1352:C:H2'	32:a:1353:G:C8	2.44	0.53
36:e:82:VAL:HB	36:e:89:ILE:CG2	2.39	0.53
37:f:44:GLY:O	37:f:60:PHE:N	2.42	0.53
42:k:115:PRO:HB2	42:k:117:ASN:C	2.34	0.53
45:n:7:ILE:O	45:n:11:LYS:HG3	2.09	0.53
49:r:22:VAL:O	49:r:26:LEU:HD23	2.09	0.53
54:C:140:PRO:CB	54:C:145:VAL:HB	2.39	0.53
55:z:6:G:O2'	55:z:7:A:H5'	2.08	0.53
1:A:216:A:H2'	1:A:217:G:C8	2.44	0.52
1:A:272(M):G:H2'	1:A:272(M):G:OP2	2.09	0.52
1:A:359:A:H2'	1:A:360:G:O4'	2.09	0.52
1:A:610:G:O2'	1:A:611:C:H5'	2.09	0.52
1:A:783:A:N7	1:A:785:G:H1'	2.24	0.52
1:A:939:G:H2'	1:A:940:G:H8	1.74	0.52
1:A:1270:C:H5''	1:A:1271:G:C5'	2.28	0.52
1:A:1850:G:O2'	1:A:1851:U:H5'	2.09	0.52
1:A:1935:G:O2'	1:A:1936:A:O5'	2.24	0.52
1:A:2007:C:H2'	1:A:2008:C:C6	2.44	0.52
1:A:2047:U:H2'	1:A:2048:G:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2056:G:N2	27:5:4:HIS:O	2.43	0.52
1:A:2071:A:O2'	1:A:2072:G:H5'	2.09	0.52
1:A:2265:U:H5''	1:A:2266:A:OP2	2.09	0.52
1:A:2307:G:H4'	1:A:2308:G:O5'	2.09	0.52
1:A:2529:G:H5''	1:A:2530:A:C5'	2.38	0.52
1:A:2705:A:O2'	1:A:2852:G:OP1	2.26	0.52
3:D:92:ILE:HD12	3:D:104:TYR:CD1	2.43	0.52
4:E:67:PHE:CZ	4:E:75:VAL:HG12	2.44	0.52
5:F:12:LEU:HB3	5:F:126:VAL:HG12	1.90	0.52
7:H:98:LEU:N	7:H:125:VAL:HG21	2.23	0.52
8:I:79:ILE:HG22	8:I:81:VAL:HG13	1.91	0.52
9:N:94:HIS:CB	9:N:97:ARG:HD3	2.40	0.52
9:N:112:LEU:O	9:N:116:LEU:HG	2.09	0.52
13:R:63:ARG:HA	13:R:80:PHE:CE2	2.44	0.52
16:U:97:ASP:OD2	16:U:101:ARG:HD2	2.09	0.52
30:8:26:LYS:HG2	30:8:44:LYS:HA	1.90	0.52
32:a:63:C:N4	32:a:98:G:N3	2.57	0.52
32:a:278:G:N2	48:q:95:TYR:HB3	2.24	0.52
32:a:1157:A:H4'	32:a:1158:C:O5'	2.08	0.52
32:a:1363(A):C:O5'	32:a:1363(B):A:H2'	2.08	0.52
33:b:122:PHE:HA	33:b:127:ILE:HD13	1.91	0.52
34:c:29:TYR:CE1	45:n:54:PRO:HG2	2.44	0.52
35:d:125:HIS:O	35:d:126:ILE:HD13	2.09	0.52
37:f:41:GLU:HB2	37:f:62:TRP:HE3	1.73	0.52
38:g:31:MET:SD	38:g:36:LYS:HB2	2.48	0.52
40:i:32:ASP:HB3	40:i:35:GLU:CB	2.37	0.52
51:t:22:ARG:HG2	51:t:25:ARG:NH2	2.24	0.52
1:A:132:G:H2'	1:A:133:C:C6	2.45	0.52
1:A:403:U:H4'	1:A:404:C:H5'	1.92	0.52
1:A:414:C:H1'	1:A:1864:U:H1'	1.92	0.52
1:A:534:U:H1'	16:U:49:HIS:CE1	2.44	0.52
1:A:555:U:O2'	1:A:556:G:N7	2.34	0.52
1:A:1024:G:HO2'	1:A:1144:G:HO2'	1.54	0.52
1:A:1303:G:H1'	1:A:1641:A:N1	2.25	0.52
1:A:1568:G:H5''	3:D:61:LEU:HD23	1.91	0.52
1:A:1620:G:O2'	1:A:1621:U:H5'	2.09	0.52
1:A:1805:U:H4'	3:D:250:TRP:CZ2	2.44	0.52
1:A:1835:G:H2'	1:A:1836:C:H6	1.75	0.52
1:A:1973:G:H2'	1:A:1974:C:H6	1.73	0.52
1:A:2222:G:H5''	3:D:186:HIS:NE2	2.24	0.52
1:A:2257:U:O2'	1:A:2258:C:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2329:G:H2'	1:A:2330:G:H8	1.72	0.52
1:A:2821:A:H2'	1:A:2822:G:C8	2.45	0.52
1:A:2887:U:H2'	1:A:2888:C:H6	1.73	0.52
2:B:24:G:N7	2:B:56:G:H2'	2.24	0.52
2:B:35:U:H2'	2:B:36:C:C6	2.45	0.52
4:E:106:GLY:O	4:E:165:VAL:N	2.33	0.52
5:F:153:SER:OG	5:F:189:THR:HA	2.09	0.52
6:G:128:ARG:HB2	6:G:130:ASN:ND2	2.25	0.52
6:G:129:GLY:HA2	6:G:169:ALA:HB2	1.92	0.52
11:P:121:LYS:HE2	11:P:123:LEU:HD21	1.91	0.52
32:a:84:U:O2'	32:a:88:A:O5'	2.22	0.52
32:a:246:A:O4'	32:a:282:A:N6	2.42	0.52
32:a:400:C:H2'	32:a:401:C:C6	2.45	0.52
32:a:542:G:H2'	32:a:543:C:H6	1.74	0.52
32:a:579:G:H2'	32:a:580:U:C6	2.45	0.52
32:a:729:A:H2'	32:a:730:G:H8	1.75	0.52
32:a:960:U:H2'	32:a:1225:A:H62	1.72	0.52
32:a:1263:C:H2'	32:a:1264:C:H6	1.73	0.52
33:b:158:LEU:HD12	33:b:159:PRO:CD	2.39	0.52
35:d:52:SER:O	35:d:56:VAL:N	2.37	0.52
38:g:92:SER:O	38:g:96:GLN:HG3	2.09	0.52
44:m:15:VAL:HG13	44:m:43:THR:O	2.08	0.52
44:m:87:TYR:CZ	44:m:91:ARG:HD3	2.44	0.52
54:C:86:ALA:HB1	54:C:94:VAL:HG21	1.92	0.52
1:A:143(A):G:H4'	19:X:35:THR:HG21	1.91	0.52
1:A:265:A:O2'	1:A:428:A:N6	2.40	0.52
1:A:354:G:H2'	1:A:355:G:C8	2.44	0.52
1:A:539:G:H2'	1:A:540:C:C6	2.44	0.52
1:A:539:G:N2	1:A:554:U:O2	2.41	0.52
1:A:821:A:H5''	1:A:822:U:O5'	2.08	0.52
1:A:996:A:OP2	16:U:93:LYS:NZ	2.41	0.52
1:A:1364:G:C8	23:1:3:LYS:HD2	2.44	0.52
1:A:1661:G:O2'	1:A:1662:C:H5'	2.09	0.52
1:A:1678:G:H3'	1:A:1679:U:H6	1.75	0.52
1:A:1689:A:H61	1:A:1697:G:H2'	1.75	0.52
1:A:1702:G:O2'	1:A:1703:G:H5'	2.09	0.52
1:A:1779:U:C2'	1:A:1783:A:H62	2.23	0.52
1:A:2060:A:OP1	5:F:69:HIS:N	2.34	0.52
1:A:2112:G:H2'	1:A:2113:U:C6	2.43	0.52
1:A:2649:U:O2'	1:A:2650:U:H5'	2.09	0.52
1:A:2757:A:H2'	1:A:2758:A:H5'	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2889:C:H2'	1:A:2891:G:O4'	2.08	0.52
2:B:119:G:O2'	2:B:120:A:H5'	2.09	0.52
3:D:73:VAL:HG13	3:D:120:GLY:CA	2.36	0.52
4:E:24:THR:HG23	4:E:186:GLY:O	2.08	0.52
13:R:87:TYR:HE1	13:R:117:VAL:HB	1.74	0.52
21:Z:95:PRO:CA	21:Z:130:PRO:HD3	2.39	0.52
21:Z:126:VAL:HG13	21:Z:162:GLU:O	2.09	0.52
23:1:80:LEU:HD21	23:1:97:LEU:HD21	1.89	0.52
23:1:89:GLU:O	23:1:93:GLU:HG2	2.10	0.52
31:9:11:CYS:SG	31:9:13:LYS:HB2	2.49	0.52
32:a:174:C:O2'	32:a:175:C:H5'	2.10	0.52
32:a:394:G:O2'	32:a:395:C:H5'	2.10	0.52
32:a:498:U:O2'	32:a:499:A:H5'	2.09	0.52
32:a:658:G:H5''	46:o:8:LYS:HE2	1.91	0.52
32:a:721:G:H4'	32:a:722:A:C5'	2.38	0.52
32:a:794:A:H4'	32:a:1521:G:O2'	2.08	0.52
32:a:920:U:O2'	32:a:921:U:H5'	2.09	0.52
32:a:1151:A:C5'	41:j:41:PRO:HA	2.39	0.52
32:a:1292:U:H5''	40:i:38:GLN:HE22	1.74	0.52
32:a:1427:U:O2'	32:a:1428:A:H5'	2.09	0.52
32:a:1524:C:H2'	32:a:1525:G:C8	2.44	0.52
35:d:116:GLN:NE2	35:d:157:LEU:HD21	2.24	0.52
35:d:160:GLN:HA	35:d:163:GLU:CD	2.35	0.52
38:g:69:VAL:O	38:g:138:LYS:HG3	2.09	0.52
39:h:53:VAL:HB	39:h:58:TYR:CD2	2.45	0.52
40:i:46:ALA:HB1	40:i:77:ILE:CG2	2.40	0.52
48:q:48:GLU:OE1	48:q:50:LYS:HD3	2.10	0.52
51:t:87:LYS:HA	51:t:90:GLN:OE1	2.09	0.52
1:A:71:A:OP1	1:A:112:U:O2'	2.20	0.52
1:A:273(H):C:O2'	1:A:273(I):C:H5'	2.09	0.52
1:A:494:G:O2'	18:W:5:ALA:HA	2.10	0.52
1:A:815:C:H2'	1:A:816:C:H6	1.75	0.52
1:A:927:G:H3'	1:A:928:G:H8	1.74	0.52
1:A:935:C:O2'	1:A:936:C:H5'	2.09	0.52
1:A:946:G:O6	1:A:972:G:N2	2.42	0.52
1:A:970:C:H2'	1:A:971:C:H6	1.74	0.52
1:A:1820:U:O2'	3:D:159:ALA:O	2.25	0.52
1:A:1866:C:H2'	1:A:1876:A:C8	2.44	0.52
1:A:1946:U:O2'	1:A:1947:C:H5'	2.10	0.52
1:A:2178:C:H5'	54:C:210:ARG:HH12	1.74	0.52
1:A:2190:G:O2'	1:A:2191:G:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2477:C:H1'	1:A:2481:G:O6	2.09	0.52
3:D:260:ARG:HH12	3:D:267:SER:HG	1.55	0.52
4:E:19:ARG:HA	10:O:72:PRO:O	2.10	0.52
5:F:132:VAL:HG12	5:F:139:PHE:CA	2.38	0.52
7:H:9:ILE:O	7:H:50:VAL:N	2.39	0.52
8:I:38:LEU:HD23	8:I:39:ALA:N	2.23	0.52
8:I:77:LEU:HA	8:I:105:HIS:CE1	2.44	0.52
10:O:88:ASN:ND2	10:O:92:GLU:HB2	2.25	0.52
11:P:144:GLU:HG2	11:P:146:VAL:HG23	1.90	0.52
14:S:58:LEU:HD13	14:S:68:GLN:CB	2.40	0.52
15:T:119:LYS:HG2	15:T:123:GLN:NE2	2.24	0.52
16:U:68:ALA:CB	16:U:99:ALA:HB1	2.39	0.52
29:7:30:VAL:HG22	29:7:33:ARG:HH21	1.73	0.52
32:a:173:U:O2	32:a:173:U:O2'	2.24	0.52
32:a:446:G:H2'	32:a:447:G:O4'	2.08	0.52
32:a:601:C:H2'	32:a:602:A:C8	2.45	0.52
32:a:663:A:OP1	49:r:61:LYS:NZ	2.42	0.52
32:a:689:C:OP2	42:k:46:GLY:HA3	2.09	0.52
32:a:1194:U:H2'	32:a:1195:C:C6	2.45	0.52
33:b:11:LEU:O	33:b:15:VAL:HG22	2.09	0.52
34:c:148:GLY:HA3	34:c:172:ARG:O	2.10	0.52
36:e:40:ARG:NE	36:e:68:GLU:HB3	2.23	0.52
37:f:23:LYS:HG2	37:f:61:LEU:HD21	1.90	0.52
43:l:89:ARG:HG3	43:l:96:VAL:O	2.10	0.52
48:q:51:TYR:HE1	48:q:76:LEU:HB2	1.73	0.52
53:y:24:U:H2'	53:y:25:C:O4'	2.09	0.52
1:A:24:G:H2'	1:A:25:U:H6	1.75	0.52
1:A:132:G:H1	1:A:147:U:H3	1.56	0.52
1:A:328:U:H4'	20:Y:68:HIS:CG	2.44	0.52
1:A:440:G:H2'	1:A:441:U:H6	1.74	0.52
1:A:692:C:O2'	1:A:693:C:H5'	2.09	0.52
1:A:772:C:H2'	1:A:773:U:C6	2.43	0.52
1:A:776:G:N1	1:A:2072:G:OP1	2.37	0.52
1:A:1581:G:O2'	1:A:1582:C:H5'	2.09	0.52
1:A:1958:C:O2'	1:A:1959:G:H5'	2.09	0.52
1:A:2037:G:O2'	1:A:2038:G:H5'	2.09	0.52
1:A:2078:C:H2'	1:A:2079:U:H6	1.72	0.52
1:A:2292:C:H2'	1:A:2293:C:C6	2.44	0.52
1:A:2357:U:H2'	1:A:2359:C:OP2	2.09	0.52
1:A:2537:U:H2'	1:A:2538:C:H6	1.73	0.52
1:A:2579:C:O2'	1:A:2580:U:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2815:C:O2'	27:5:42:PRO:HG2	2.09	0.52
6:G:125:PHE:CZ	6:G:170:ARG:HB2	2.44	0.52
7:H:91:GLY:HA3	7:H:160:LYS:HG3	1.90	0.52
16:U:24:TYR:CB	16:U:29:SER:HB3	2.34	0.52
17:V:24:LYS:HD3	17:V:90:PRO:HB2	1.90	0.52
21:Z:25:PRO:O	21:Z:85:HIS:HA	2.09	0.52
25:3:8:LEU:CD1	25:3:31:LEU:HA	2.38	0.52
32:a:65:U:H4'	32:a:73:G:N7	2.24	0.52
32:a:357:G:OP1	32:a:367:U:H5''	2.09	0.52
32:a:360:A:H2'	32:a:361:G:C8	2.45	0.52
32:a:594:G:H2'	32:a:595:G:O4'	2.10	0.52
32:a:649:G:H2'	32:a:650:G:O4'	2.10	0.52
32:a:691:G:H1'	32:a:696:A:N6	2.24	0.52
32:a:727:G:N2	32:a:730:G:OP2	2.33	0.52
32:a:782:A:H2'	32:a:783:C:O4'	2.09	0.52
32:a:806:C:O2'	32:a:807:A:H5'	2.09	0.52
32:a:1054:C:H4'	32:a:1055:A:O5'	2.09	0.52
32:a:1092:A:H2'	32:a:1093:A:C8	2.44	0.52
32:a:1278:U:H5''	32:a:1279:A:H5'	1.91	0.52
32:a:1495:U:H2'	32:a:1496:C:C6	2.44	0.52
33:b:55:PHE:O	33:b:59:GLU:N	2.28	0.52
34:c:47:LEU:HB2	34:c:52:LEU:HD12	1.91	0.52
36:e:35:GLY:HA2	36:e:66:MET:HE1	1.91	0.52
41:j:5:ARG:N	41:j:100:THR:HA	2.25	0.52
44:m:102:ARG:NE	44:m:104:ARG:HB3	2.21	0.52
53:y:22:G:N7	53:y:46:G:N2	2.57	0.52
54:C:66:HIS:ND1	54:C:184:LYS:HG3	2.24	0.52
55:z:1:G:H2'	55:z:2:C:C6	2.44	0.52
55:z:61:C:H2'	55:z:62:C:C6	2.44	0.52
1:A:375:C:H2'	1:A:376:C:H6	1.73	0.52
1:A:656:G:O2'	1:A:657:U:H5'	2.10	0.52
1:A:852:G:O2'	1:A:853:G:H5'	2.09	0.52
1:A:934:G:H2'	1:A:935:C:H6	1.74	0.52
1:A:1144:G:H2'	1:A:1145:C:C6	2.44	0.52
1:A:1166:C:H2'	1:A:1167:U:H6	1.73	0.52
1:A:1490:A:O2'	1:A:1491:G:O5'	2.21	0.52
1:A:1710:C:H4'	1:A:2858:C:O2	2.09	0.52
1:A:2099:U:H2'	1:A:2100:G:H8	1.74	0.52
1:A:2163:C:C2'	1:A:2164:C:H5'	2.39	0.52
1:A:2476:A:O2'	1:A:2480:C:N4	2.42	0.52
1:A:2671:A:O2'	1:A:2672:G:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2747:G:H1	1:A:2754:U:H2'	1.75	0.52
2:B:28:C:H2'	2:B:29:A:H8	1.74	0.52
2:B:61:G:O2'	2:B:62:C:H5'	2.10	0.52
4:E:54:GLN:HB2	4:E:76:ARG:CA	2.40	0.52
5:F:7:TYR:OH	5:F:119:ARG:HD3	2.10	0.52
5:F:62:ARG:HD2	5:F:63:LYS:O	2.09	0.52
6:G:8:LYS:HD2	6:G:100:TRP:CD1	2.45	0.52
10:O:68:GLU:O	10:O:69:ILE:HD13	2.09	0.52
20:Y:73:ARG:HE	20:Y:82:PRO:HB2	1.75	0.52
21:Z:95:PRO:HG3	21:Z:130:PRO:HD3	1.92	0.52
32:a:17:U:O2'	32:a:18:C:H5'	2.09	0.52
32:a:99:U:H5'	51:t:18:GLN:HE21	1.74	0.52
32:a:152:A:H3'	32:a:153:C:C6	2.45	0.52
32:a:500:G:H2'	32:a:501:C:H6	1.73	0.52
32:a:574:A:H5''	32:a:575:G:OP2	2.09	0.52
32:a:646:U:O2'	32:a:647:C:H5'	2.09	0.52
32:a:674:G:C6	32:a:716:A:N1	2.78	0.52
32:a:994:A:O2'	32:a:995:C:H5'	2.09	0.52
32:a:1073:U:O2'	33:b:104:ASN:OD1	2.13	0.52
32:a:1106:G:H2'	32:a:1107:C:H6	1.75	0.52
32:a:1305:G:OP1	52:u:2:GLY:HA3	2.10	0.52
32:a:1410:G:O2'	32:a:1411:C:H5'	2.09	0.52
32:a:1523:G:O2'	32:a:1524:C:H5'	2.10	0.52
36:e:43:LEU:HB2	36:e:136:MET:HG3	1.91	0.52
37:f:21:LEU:HD11	37:f:28:ARG:HH22	1.75	0.52
38:g:26:PHE:CE2	38:g:30:ILE:HD11	2.45	0.52
41:j:74:ILE:HG23	41:j:100:THR:OG1	2.09	0.52
43:l:33:ARG:HG3	43:l:60:LEU:HD12	1.91	0.52
47:p:53:VAL:HA	47:p:79:VAL:HG22	1.92	0.52
54:C:61:THR:HG23	54:C:142:ALA:CB	2.29	0.52
54:C:195:ALA:O	54:C:199:HIS:ND1	2.26	0.52
1:A:111:A:O3'	24:2:65:ASN:ND2	2.41	0.52
1:A:144:C:H5''	19:X:2:LYS:HD3	1.92	0.52
1:A:475:U:H2'	1:A:476:G:O4'	2.09	0.52
1:A:585:G:H1'	1:A:1254:A:N6	2.25	0.52
1:A:741:G:O2'	1:A:742:G:H5'	2.10	0.52
1:A:793:A:OP2	1:A:2072:G:H5'	2.10	0.52
1:A:1163:G:H5'	17:V:24:LYS:HE2	1.92	0.52
1:A:1660:C:H2'	1:A:1661:G:H8	1.74	0.52
1:A:1879:C:O2'	1:A:1880:C:H5'	2.10	0.52
1:A:2082:A:N6	1:A:2237:G:O2'	2.37	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2112:G:H2'	1:A:2113:U:H6	1.75	0.52
1:A:2114:A:H1'	1:A:2168:G:H5'	1.92	0.52
1:A:2801(B):A:H5'	1:A:2802:G:C8	2.44	0.52
2:B:5:C:O2'	2:B:6:C:H5'	2.10	0.52
2:B:91:C:H5'	12:Q:18:LYS:HB3	1.92	0.52
5:F:192:LEU:CD2	5:F:194:MET:HG3	2.40	0.52
10:O:73:ASP:OD2	15:T:32:TYR:OH	2.26	0.52
12:Q:4:PRO:HD2	12:Q:93:TYR:CD2	2.44	0.52
21:Z:61:LEU:CB	21:Z:65:GLN:HB2	2.40	0.52
21:Z:120:ILE:HB	21:Z:171:ILE:C	2.34	0.52
32:a:123:C:H2'	32:a:124:G:C8	2.45	0.52
32:a:332:G:OP2	51:t:12:ALA:HB2	2.09	0.52
32:a:1115:C:O2'	32:a:1116:C:H5'	2.10	0.52
32:a:1201:A:H4'	32:a:1202:G:O5'	2.10	0.52
32:a:1418:A:H3'	32:a:1419:G:O4'	2.08	0.52
32:a:1471:G:H2'	32:a:1472:U:C6	2.44	0.52
32:a:1515:C:H2'	32:a:1516:G:C8	2.45	0.52
34:c:56:ASP:HB2	34:c:67:THR:HB	1.91	0.52
34:c:139:GLN:HG3	34:c:143:GLU:CD	2.34	0.52
35:d:155:LEU:HD23	35:d:158:ILE:H	1.75	0.52
36:e:145:LYS:HA	39:h:107:LEU:CD2	2.40	0.52
39:h:10:LEU:HD12	39:h:85:ARG:HB2	1.92	0.52
44:m:10:PRO:HG2	44:m:21:TYR:CE2	2.44	0.52
50:s:14:HIS:O	50:s:18:LYS:HG3	2.10	0.52
54:C:25:ALA:CB	54:C:222:VAL:HG11	2.40	0.52
54:C:76:ALA:HB3	54:C:94:VAL:HG21	1.92	0.52
1:A:19:C:O2'	1:A:20:C:H5'	2.10	0.52
1:A:322:A:H5'	1:A:340:A:H1'	1.92	0.52
1:A:353:G:OP2	1:A:353:G:H3'	2.09	0.52
1:A:357:A:H2'	1:A:358:U:O4'	2.10	0.52
1:A:428:A:H2'	1:A:429:A:C8	2.44	0.52
1:A:539:G:H2'	1:A:540:C:H6	1.74	0.52
1:A:610:G:H2'	1:A:611:C:H6	1.74	0.52
1:A:681:G:H2'	1:A:682:G:O4'	2.10	0.52
1:A:823:G:O2'	1:A:824:A:H5'	2.09	0.52
1:A:854:G:O2'	1:A:855:G:H5'	2.08	0.52
1:A:858:U:P	22:O:77:ARG:HH12	2.32	0.52
1:A:1265:A:H61	1:A:2013:A:H5''	1.74	0.52
1:A:1348:G:O2'	1:A:1349:A:H5'	2.10	0.52
1:A:1441:G:O2'	1:A:1442:G:H5'	2.10	0.52
1:A:1662:C:O2'	1:A:1663:C:H5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2049:G:O2'	1:A:2050:C:H5'	2.09	0.52
1:A:2110:G:N1	1:A:2180:U:H1'	2.24	0.52
1:A:2408:U:H2'	1:A:2409:G:H8	1.75	0.52
1:A:2552:2MU:O5'	1:A:2552:2MU:H6	2.10	0.52
1:A:2647:U:H2'	1:A:2648:C:H6	1.75	0.52
21:Z:23:LYS:HB3	21:Z:38:TYR:CD2	2.45	0.52
21:Z:128:VAL:HG22	21:Z:129:SER:H	1.75	0.52
22:O:72:ARG:HD3	22:O:78:TYR:CE2	2.45	0.52
22:O:72:ARG:HB2	22:O:75:LEU:HB2	1.92	0.52
23:1:50:ARG:HD2	23:1:57:GLU:OE2	2.09	0.52
26:4:48:ARG:HG3	26:4:52:THR:HA	1.91	0.52
30:8:17:THR:OG1	30:8:21:LYS:HB2	2.10	0.52
32:a:79:G:H2'	32:a:80:G:O4'	2.09	0.52
32:a:416:G:O2'	32:a:417:C:H5'	2.10	0.52
32:a:501:C:H2'	32:a:502:G:H8	1.74	0.52
32:a:529:G:O6	43:l:49:ASN:HA	2.10	0.52
32:a:1216:G:H5''	45:n:5:ALA:HB3	1.92	0.52
32:a:1323:G:H2'	32:a:1324:A:H8	1.75	0.52
32:a:1435:G:H2'	32:a:1436:U:H6	1.75	0.52
33:b:17:PHE:HB2	33:b:44:LEU:HD21	1.90	0.52
33:b:35:GLU:HA	33:b:40:HIS:HA	1.91	0.52
33:b:87:ARG:HD2	33:b:234:PRO:CD	2.37	0.52
33:b:102:LEU:HB3	33:b:180:LEU:HD12	1.90	0.52
34:c:120:VAL:O	34:c:124:ILE:HG12	2.10	0.52
35:d:128:VAL:HG22	35:d:146:ILE:CG1	2.39	0.52
37:f:99:ALA:C	49:r:23:LYS:HE3	2.35	0.52
38:g:65:ALA:HA	38:g:128:ALA:HA	1.91	0.52
39:h:19:VAL:CG2	39:h:21:LYS:HD3	2.39	0.52
43:l:89:ARG:HA	43:l:97:ARG:HA	1.92	0.52
44:m:77:ASN:O	44:m:81:LEU:HG	2.10	0.52
50:s:17:GLU:O	50:s:21:GLU:HG3	2.09	0.52
53:y:43:A:H2'	53:y:44:A:C8	2.45	0.52
53:y:65:C:O2'	53:y:66:C:H5'	2.10	0.52
1:A:69:C:O2	1:A:73:A:O2'	2.20	0.52
1:A:86:C:O2'	1:A:87:C:H5'	2.10	0.52
1:A:116:C:H2'	1:A:117:G:O4'	2.10	0.52
1:A:285:C:O2'	1:A:286:C:H5'	2.09	0.52
1:A:298:G:OP2	20:Y:87:LYS:HD3	2.10	0.52
1:A:300:A:O2'	1:A:318:C:O2	2.27	0.52
1:A:666:G:O2'	1:A:667:U:H5'	2.10	0.52
1:A:671:C:H2'	1:A:672:C:H6	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:689:A:H2'	1:A:690:G:H8	1.74	0.52
1:A:745:G:H2'	1:A:746:A:H5'	1.90	0.52
1:A:901:A:H2'	1:A:902:C:H6	1.74	0.52
1:A:909:A:H2'	1:A:912:C:H5	1.73	0.52
1:A:1316:U:H2'	1:A:1317:A:C8	2.45	0.52
1:A:1347:G:O2'	1:A:1348:G:H5'	2.10	0.52
1:A:1682:G:H5'	1:A:1762:A:O2'	2.10	0.52
1:A:1684:C:H2'	1:A:1685:C:H6	1.74	0.52
1:A:1925:C:O2'	1:A:1926:U:H5'	2.10	0.52
1:A:2097:C:H2'	1:A:2098:U:H6	1.74	0.52
1:A:2167:U:H5''	1:A:2168:G:OP1	2.09	0.52
1:A:2186:G:H3'	1:A:2187:G:H8	1.75	0.52
1:A:2317:C:H2'	1:A:2318:G:H5'	1.92	0.52
1:A:2726:U:O2'	1:A:2727:G:O5'	2.27	0.52
1:A:2817:G:O2'	1:A:2837:G:H1'	2.10	0.52
1:A:2821:A:O2'	1:A:2826:A:N1	2.35	0.52
1:A:2835:A:H62	1:A:2878:U:H3'	1.75	0.52
2:B:83:G:H4'	25:3:52:HIS:CG	2.45	0.52
3:D:165:ILE:HG12	3:D:175:LEU:HD21	1.90	0.52
6:G:11:TYR:CE2	6:G:16:ARG:HD3	2.44	0.52
9:N:47:ALA:HB2	9:N:112:LEU:CD1	2.39	0.52
13:R:84:ALA:HB3	13:R:85:PRO:HD3	1.91	0.52
18:W:55:ALA:HA	18:W:107:LEU:HD22	1.92	0.52
32:a:17:U:H2'	32:a:18:C:H6	1.75	0.52
32:a:108:G:H1	51:t:15:ARG:HG2	1.75	0.52
32:a:152:A:N6	32:a:169:C:H2'	2.25	0.52
32:a:550:G:O2'	32:a:551:U:H5'	2.10	0.52
32:a:695:A:H2'	32:a:696:A:H8	1.75	0.52
32:a:701:C:O2	32:a:703:G:N1	2.43	0.52
32:a:801:U:H2'	32:a:802:A:H8	1.74	0.52
32:a:892:A:H2'	32:a:893:C:O4'	2.10	0.52
32:a:1015:A:N3	32:a:1218:C:O2'	2.32	0.52
32:a:1305:G:H5'	52:u:4:GLY:HA3	1.92	0.52
32:a:1470:G:O2'	32:a:1471:G:H5'	2.10	0.52
33:b:28:PHE:HA	33:b:194:PRO:CG	2.39	0.52
33:b:181:PHE:HE1	39:h:72:PRO:HD3	1.75	0.52
35:d:155:LEU:CD2	35:d:157:LEU:HB3	2.37	0.52
36:e:39:GLY:O	36:e:69:VAL:HG12	2.09	0.52
36:e:102:ALA:HB1	36:e:106:PRO:HG2	1.92	0.52
44:m:11:ARG:CA	44:m:45:VAL:HB	2.33	0.52
46:o:78:TYR:O	46:o:82:ILE:HG12	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:r:38:GLU:O	49:r:41:LYS:HB3	2.10	0.52
55:z:19:G:H4'	55:z:20:U:OP2	2.09	0.52
1:A:40:C:H2'	1:A:41:C:H6	1.74	0.52
1:A:52:A:H2'	1:A:53:A:C8	2.46	0.52
1:A:247:G:H4'	1:A:386:G:C4	2.45	0.52
1:A:375:C:H2'	1:A:376:C:C6	2.44	0.52
1:A:458:G:H5'	29:7:38:GLY:O	2.10	0.52
1:A:492:A:H3'	1:A:493:G:H8	1.75	0.52
1:A:1265:A:H61	1:A:2013:A:H3'	1.75	0.52
1:A:1410:G:O2'	1:A:1411:C:H5'	2.10	0.52
1:A:1614:A:N1	18:W:87:PRO:HA	2.25	0.52
1:A:1829:A:H2'	1:A:1830:C:O4'	2.10	0.52
1:A:1922:G:H2'	1:A:1923:U:O4'	2.10	0.52
1:A:1935:G:N1	1:A:1962:5MC:O2'	2.37	0.52
1:A:2081:C:O2'	1:A:2082:A:H5'	2.09	0.52
1:A:2331:G:H4'	22:0:43:THR:N	2.25	0.52
1:A:2489:G:N2	1:A:2491:U:O4	2.41	0.52
1:A:2822:G:H2'	1:A:2823:A:H5''	1.91	0.52
2:B:76:G:H2'	2:B:77:U:H6	1.75	0.52
2:B:104:U:O2'	2:B:105:A:H5'	2.10	0.52
8:I:28:ASN:O	8:I:32:PRO:HG3	2.10	0.52
12:Q:21:THR:O	21:Z:78:LYS:HD3	2.09	0.52
13:R:20:LEU:O	13:R:24:GLN:HG2	2.09	0.52
18:W:7:ALA:CB	18:W:103:ILE:HB	2.37	0.52
20:Y:15:VAL:N	20:Y:23:ARG:O	2.35	0.52
21:Z:53:ILE:HG22	21:Z:71:VAL:O	2.10	0.52
26:4:50:VAL:HG23	44:m:64:TRP:HA	1.91	0.52
32:a:128:G:O2'	48:q:3:LYS:HE2	2.09	0.52
32:a:260:G:O2'	32:a:261:U:H5'	2.10	0.52
32:a:687:A:H4'	32:a:688:G:O5'	2.10	0.52
32:a:1217:C:H2'	32:a:1218:C:C6	2.45	0.52
32:a:1346:A:H2'	38:g:10:ARG:HH22	1.75	0.52
32:a:1385:G:O2'	32:a:1386:G:H5'	2.09	0.52
35:d:59:ARG:O	35:d:63:LYS:N	2.41	0.52
35:d:108:LEU:CD1	35:d:176:LEU:HB2	2.33	0.52
37:f:24:GLU:O	37:f:28:ARG:HG3	2.10	0.52
40:i:48:GLU:OE1	40:i:51:ARG:HD2	2.10	0.52
42:k:79:SER:HB2	42:k:104:GLN:HB3	1.91	0.52
44:m:25:ILE:HD11	44:m:66:LEU:CD1	2.39	0.52
54:C:146:GLY:HA3	54:C:152:ILE:HD11	1.92	0.52
54:C:161:ILE:HG21	54:C:174:PRO:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:26:G:H1'	1:A:514:A:H61	1.75	0.51
1:A:136:G:H2'	1:A:137:C:C6	2.45	0.51
1:A:488:G:N2	1:A:492:A:OP2	2.40	0.51
1:A:827:U:H4'	1:A:828:U:C5	2.46	0.51
1:A:1506:C:H2'	1:A:1507:A:C8	2.44	0.51
1:A:1582:C:O2'	1:A:1586:A:H1'	2.09	0.51
1:A:1756:G:H4'	1:A:1758:G:O4'	2.09	0.51
1:A:1843:C:H2'	1:A:1844:C:C6	2.45	0.51
1:A:1858:G:H1'	1:A:1884:A:N6	2.24	0.51
1:A:2045:C:O2	27:5:22:HIS:NE2	2.40	0.51
1:A:2110:G:O2'	1:A:2120:G:O4'	2.28	0.51
1:A:2121:G:N2	54:C:166:ASP:OD2	2.41	0.51
1:A:2258:C:O2'	1:A:2427:C:OP2	2.26	0.51
1:A:2368:C:H2'	1:A:2369:A:C8	2.45	0.51
1:A:2804:C:O2'	1:A:2805:G:H5'	2.10	0.51
3:D:134:ARG:NH1	8:I:121:LYS:HG3	2.25	0.51
5:F:95:ARG:HD3	5:F:97:TYR:CZ	2.46	0.51
8:I:4:ILE:HG12	8:I:18:VAL:HG22	1.92	0.51
8:I:27:ARG:CA	8:I:31:LEU:HD13	2.40	0.51
9:N:68:GLU:OE1	9:N:68:GLU:N	2.43	0.51
10:O:7:TYR:HA	10:O:19:ILE:O	2.09	0.51
17:V:37:VAL:HB	17:V:52:VAL:HG21	1.92	0.51
18:W:2:GLU:OE2	18:W:72:LYS:NZ	2.35	0.51
20:Y:89:PHE:CE1	20:Y:95:LYS:HB2	2.45	0.51
21:Z:13:GLU:CB	21:Z:18:LEU:HD11	2.40	0.51
25:3:52:HIS:CD2	25:3:53:LEU:HG	2.44	0.51
26:4:48:ARG:HB3	26:4:51:ASP:O	2.10	0.51
26:4:59:PHE:HB2	26:4:61:ARG:N	2.25	0.51
30:8:25:MET:HE1	30:8:45:GLY:O	2.10	0.51
32:a:19:C:H2'	32:a:20:U:C6	2.45	0.51
32:a:359:U:H2'	32:a:360:A:C8	2.46	0.51
32:a:437:U:H2'	32:a:438:G:O4'	2.09	0.51
32:a:644:G:H2'	32:a:645:C:H5'	1.92	0.51
32:a:1001(B):G:H2'	32:a:1002:G:N9	2.25	0.51
32:a:1223:C:OP2	32:a:1224:G:H2'	2.10	0.51
32:a:1295:G:O2'	32:a:1302:U:O4	2.24	0.51
32:a:1513:A:H2'	32:a:1514:C:H6	1.74	0.51
34:c:157:ILE:HD13	34:c:166:GLU:HB2	1.90	0.51
35:d:153:ARG:NH1	35:d:181:MET:HB2	2.25	0.51
36:e:71:LEU:HD21	36:e:115:VAL:HG22	1.91	0.51
40:i:21:PRO:HA	40:i:59:PHE:HD1	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:k:17:GLY:HA2	42:k:35:PRO:CD	2.40	0.51
44:m:76:ALA:O	44:m:80:ARG:HG2	2.10	0.51
48:q:90:ILE:HG22	48:q:94:ASN:ND2	2.25	0.51
50:s:39:THR:HA	50:s:70:LYS:HA	1.91	0.51
54:C:191:ALA:HA	54:C:194:ARG:HD3	1.91	0.51
1:A:36:G:O2'	1:A:37:C:H5'	2.11	0.51
1:A:56:A:H2'	1:A:57:C:O4'	2.10	0.51
1:A:229:A:H4'	1:A:230:U:H6	1.75	0.51
1:A:273(K):C:H2'	1:A:274:G:C8	2.45	0.51
1:A:607:U:OP1	5:F:103:LYS:N	2.28	0.51
1:A:652(C):A:H2'	1:A:652(D):G:C8	2.34	0.51
1:A:963:U:O2'	1:A:964:C:H5'	2.10	0.51
1:A:1823:G:H2'	1:A:1824:G:C8	2.45	0.51
1:A:1861:G:O2'	1:A:1862:G:H5'	2.11	0.51
1:A:1889:A:H2'	1:A:1890:A:C8	2.46	0.51
1:A:2162:G:O4'	1:A:2173:A:H1'	2.11	0.51
3:D:68:LYS:HD3	3:D:70:TRP:CZ2	2.46	0.51
4:E:2:LYS:HA	4:E:84:PHE:CE1	2.45	0.51
4:E:76:ARG:CB	4:E:77:ILE:HD12	2.40	0.51
6:G:112:PRO:HA	26:4:40:HIS:CD2	2.46	0.51
6:G:124:SER:HB3	6:G:131:TYR:CE1	2.45	0.51
10:O:107:ARG:CG	10:O:115:VAL:HG21	2.37	0.51
11:P:126:VAL:CG1	11:P:148:LEU:HD22	2.38	0.51
15:T:53:ARG:O	15:T:59:THR:HG23	2.10	0.51
17:V:62:LEU:CD2	17:V:95:LEU:HB2	2.36	0.51
19:X:2:LYS:HA	19:X:6:ASP:OD2	2.10	0.51
22:O:66:VAL:O	22:O:81:VAL:HA	2.10	0.51
32:a:179:A:H2'	32:a:180:U:C6	2.45	0.51
32:a:362:G:N2	32:a:364:A:H3'	2.26	0.51
32:a:542:G:H2'	32:a:543:C:C6	2.45	0.51
32:a:575:G:N2	32:a:576:G:N7	2.53	0.51
32:a:757:U:H5''	32:a:822:C:O2'	2.11	0.51
32:a:1030(D):G:O2'	32:a:1030(E):A:O4'	2.14	0.51
32:a:1123:A:H3'	32:a:1123:A:OP2	2.09	0.51
32:a:1203:C:OP1	45:n:3:ARG:NE	2.44	0.51
32:a:1302:U:OP2	44:m:21:TYR:OH	2.27	0.51
32:a:1342:C:H2'	32:a:1343:G:H8	1.73	0.51
32:a:1504:G:OP1	32:a:1507:A:H4'	2.10	0.51
33:b:116:GLU:O	33:b:119:GLU:HB2	2.10	0.51
34:c:17:ASP:OD1	34:c:18:TRP:N	2.44	0.51
34:c:173:VAL:HG12	34:c:175:LEU:HD12	1.90	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:d:102:ASP:OD2	35:d:118:ARG:HG2	2.10	0.51
38:g:88:PRO:HG3	38:g:149:ARG:HA	1.92	0.51
43:l:25:PRO:O	43:l:28:LYS:HB2	2.09	0.51
53:y:12:G:H2'	53:y:13:C:O4'	2.09	0.51
54:C:46:LYS:HG2	54:C:210:ARG:HD3	1.90	0.51
54:C:140:PRO:HB3	54:C:145:VAL:HB	1.91	0.51
1:A:65:C:H2'	1:A:66:C:C6	2.45	0.51
1:A:85:G:O5'	20:Y:30:VAL:HB	2.10	0.51
1:A:230:U:H2'	1:A:231:C:H6	1.75	0.51
1:A:272(G):C:H2'	1:A:272(H):G:C8	2.45	0.51
1:A:272(O):C:O2'	1:A:272(P):C:H5'	2.10	0.51
1:A:416:C:O2'	1:A:417:C:H5'	2.10	0.51
1:A:422:A:H2'	1:A:423:A:O4'	2.11	0.51
1:A:629:G:H5''	1:A:650:C:O2'	2.10	0.51
1:A:718:A:H3'	1:A:719:C:C6	2.46	0.51
1:A:812:C:O2'	1:A:813:U:H5'	2.10	0.51
1:A:947:G:H2'	1:A:948:G:H8	1.75	0.51
1:A:1010:A:H5''	1:A:1011:G:OP2	2.10	0.51
1:A:1291:C:H2'	1:A:1292:U:H6	1.74	0.51
1:A:1350:C:O2'	1:A:1351:C:H5'	2.10	0.51
1:A:1384:A:N3	1:A:1405:U:H1'	2.25	0.51
1:A:1505:C:O2'	1:A:1506:C:H5'	2.09	0.51
1:A:1509(A):C:H3'	1:A:1509(B):A:C5'	2.40	0.51
1:A:1677:A:H3'	1:A:1678:G:H21	1.74	0.51
1:A:1742:G:H2'	1:A:1743:C:C6	2.45	0.51
1:A:1908:C:H2'	1:A:1909:C:C6	2.46	0.51
1:A:2207:G:O2'	1:A:2208:A:OP1	2.24	0.51
1:A:2271:G:H2'	1:A:2272:U:O4'	2.09	0.51
1:A:2636:U:O2'	1:A:2637:U:H5'	2.10	0.51
1:A:2647:U:H2'	1:A:2648:C:C6	2.44	0.51
1:A:2658:C:H2'	1:A:2659:G:O4'	2.10	0.51
1:A:2801(B):A:H3'	1:A:2802:G:C5'	2.39	0.51
4:E:179:GLU:HG3	15:T:9:LEU:HD23	1.93	0.51
5:F:30:PRO:HB3	11:P:1:MET:HE1	1.92	0.51
5:F:197:ASP:OD1	5:F:198:ALA:N	2.42	0.51
7:H:13:LYS:HA	7:H:15:VAL:HG22	1.91	0.51
9:N:120:LEU:HD13	9:N:121:LYS:N	2.25	0.51
11:P:86:LYS:HB3	11:P:118:GLY:CA	2.32	0.51
15:T:108:ARG:NE	32:a:1464:G:OP1	2.32	0.51
18:W:68:ARG:HB2	18:W:109:GLU:HB3	1.91	0.51
19:X:43:VAL:HG21	19:X:81:VAL:HG11	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:14:LEU:HB2	20:Y:75:ILE:HD11	1.92	0.51
26:4:11:PRO:HA	26:4:25:TYR:CD1	2.46	0.51
26:4:16:CYS:HB2	26:4:36:CYS:HB3	1.92	0.51
27:5:45:VAL:HG13	27:5:51:TYR:O	2.10	0.51
32:a:180:U:H2'	32:a:181:G:H5'	1.92	0.51
32:a:376:G:C4'	47:p:5:ARG:HD2	2.36	0.51
32:a:392:G:H2'	32:a:393:A:C8	2.44	0.51
32:a:416:G:H2'	32:a:417:C:H6	1.74	0.51
32:a:552:U:O2'	32:a:553:A:H5'	2.10	0.51
32:a:707:C:H2'	32:a:708:C:C6	2.45	0.51
32:a:974:A:C4'	32:a:975:A:H5'	2.40	0.51
32:a:1003:G:H3'	32:a:1003:G:N3	2.25	0.51
32:a:1005:A:N9	32:a:1025:U:H1'	2.25	0.51
32:a:1060:C:O2'	32:a:1061:G:H5'	2.10	0.51
32:a:1359:C:O2'	32:a:1361:G:N7	2.42	0.51
32:a:1388:C:O2'	32:a:1389:C:H5'	2.10	0.51
34:c:12:LEU:O	34:c:14:ILE:HD12	2.09	0.51
39:h:53:VAL:HB	39:h:58:TYR:CE2	2.44	0.51
40:i:17:VAL:HG23	40:i:63:ILE:CG1	2.40	0.51
40:i:17:VAL:HG11	40:i:80:GLY:O	2.10	0.51
42:k:41:THR:HG21	42:k:71:LYS:CB	2.40	0.51
42:k:58:PRO:HA	42:k:90:GLY:CA	2.41	0.51
44:m:92:HIS:HA	44:m:110:ARG:HH21	1.75	0.51
45:n:14:PRO:HG2	45:n:16:PHE:O	2.10	0.51
46:o:36:ILE:HG23	46:o:56:LEU:HD11	1.92	0.51
46:o:50:HIS:HA	46:o:53:HIS:HB3	1.93	0.51
50:s:12:ASP:OD2	50:s:35:SER:HB3	2.10	0.51
54:C:10:LEU:HD21	54:C:34:THR:CG2	2.41	0.51
55:z:7:A:H3'	55:z:8:U:H5'	1.91	0.51
55:z:27:G:H2'	55:z:28:G:H8	1.74	0.51
56:x:5:G:O2'	56:x:6:A:OP1	2.21	0.51
1:A:154(B):C:C2'	1:A:157:U:H4'	2.40	0.51
1:A:212:G:H2'	1:A:213:A:C1'	2.40	0.51
1:A:320:A:H5''	1:A:321:G:OP1	2.11	0.51
1:A:381:G:O2'	1:A:382:G:H5'	2.10	0.51
1:A:1149:G:H2'	1:A:1150:C:H6	1.75	0.51
1:A:1195:G:O2'	1:A:1196:C:H5'	2.10	0.51
1:A:1657:C:O2'	1:A:1658:C:H5'	2.10	0.51
1:A:1882:C:C2'	1:A:1883:G:H5'	2.41	0.51
1:A:2422:A:O4'	55:z:76:A:N6	2.43	0.51
1:A:2485:G:O2'	1:A:2486:G:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2508:G:HO2'	1:A:2554:U:HO2'	1.59	0.51
1:A:2512:C:H5''	4:E:122:PHE:CD1	2.45	0.51
1:A:2675:A:H2'	1:A:2676:C:H6	1.75	0.51
2:B:113:G:O2'	2:B:114:C:H5'	2.10	0.51
3:D:132:PRO:HB2	3:D:135:PHE:HD2	1.75	0.51
4:E:10:GLY:HA2	4:E:192:ASN:OD1	2.10	0.51
4:E:103:ASP:CG	4:E:201:THR:HA	2.36	0.51
5:F:7:TYR:OH	5:F:26:ALA:HA	2.10	0.51
15:T:45:PHE:CZ	15:T:65:LYS:HG2	2.45	0.51
21:Z:54:HIS:HA	21:Z:99:TYR:O	2.11	0.51
22:O:63:VAL:HG23	22:O:64:ASP:O	2.09	0.51
32:a:555:C:H2'	32:a:556:C:H6	1.73	0.51
32:a:688:G:H5'	42:k:46:GLY:C	2.36	0.51
32:a:779:C:H2'	32:a:780:A:O4'	2.10	0.51
32:a:894:G:H2'	32:a:895:G:C8	2.46	0.51
32:a:1256:A:H5''	32:a:1257:U:OP1	2.10	0.51
32:a:1526:G:H2'	32:a:1527:C:H6	1.76	0.51
33:b:122:PHE:HA	33:b:127:ILE:CD1	2.41	0.51
34:c:150:LYS:HA	34:c:169:ALA:HA	1.92	0.51
38:g:91:VAL:HG12	38:g:96:GLN:HG3	1.91	0.51
39:h:86:ILE:HG21	39:h:133:LEU:HD22	1.93	0.51
43:l:52:LEU:O	43:l:54:LYS:HD2	2.11	0.51
54:C:73:ARG:O	54:C:112:ALA:N	2.41	0.51
54:C:143:GLY:HA3	54:C:160:ARG:NH1	2.25	0.51
55:z:52:G:O6	55:z:62:C:N4	2.27	0.51
1:A:51:G:H1'	1:A:118:A:N6	2.26	0.51
1:A:273(D):G:H2'	1:A:273(E):G:O4'	2.10	0.51
1:A:451:C:N4	1:A:453:C:H3'	2.26	0.51
1:A:637:A:H2'	11:P:117:GLU:OE2	2.11	0.51
1:A:676:A:H1'	1:A:2443:C:C1'	2.41	0.51
1:A:718:A:H3'	1:A:719:C:H6	1.75	0.51
1:A:1118:C:O2'	1:A:1119:C:H5'	2.11	0.51
1:A:1227:G:C2'	1:A:1228:G:H5'	2.40	0.51
1:A:1429:G:H2'	1:A:1430:C:C6	2.45	0.51
1:A:1479:G:O2'	1:A:1480:G:H5'	2.11	0.51
1:A:1508:A:H4'	1:A:1509(B):A:C4	2.46	0.51
1:A:1515:G:H2'	1:A:1516:C:C6	2.45	0.51
1:A:1717:G:H2'	1:A:1718:G:H8	1.76	0.51
1:A:1745(A):C:O2'	1:A:1745(B):C:H5'	2.11	0.51
1:A:1863:G:H2'	1:A:1864:U:C6	2.46	0.51
1:A:1864:U:OP1	1:A:2410:G:O2'	2.18	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2487:G:H2'	1:A:2488:A:C8	2.45	0.51
1:A:2646:C:O2'	1:A:2647:U:H5'	2.11	0.51
1:A:2772:C:H2'	1:A:2773:C:H6	1.75	0.51
1:A:2812:G:O2'	1:A:2813:A:H5'	2.10	0.51
2:B:32:C:H5'	2:B:53:A:C2	2.46	0.51
2:B:115:G:H2'	2:B:116:G:C8	2.45	0.51
4:E:6:GLY:O	4:E:195:LEU:HD12	2.10	0.51
4:E:48:GLN:HG2	4:E:78:LEU:CD1	2.39	0.51
6:G:6:ALA:O	6:G:9:ARG:HB3	2.10	0.51
9:N:71:ILE:CG2	9:N:84:LYS:HB3	2.40	0.51
16:U:59:ARG:O	16:U:63:VAL:HG23	2.10	0.51
17:V:20:LEU:O	17:V:94:LEU:N	2.38	0.51
19:X:5:TYR:CD1	24:2:30:ARG:HA	2.46	0.51
20:Y:76:CYS:SG	20:Y:104:GLY:HA3	2.50	0.51
21:Z:95:PRO:HA	21:Z:130:PRO:HD3	1.91	0.51
22:0:71:ASP:OD1	22:0:72:ARG:N	2.44	0.51
23:1:77:ALA:O	23:1:80:LEU:HB2	2.11	0.51
24:2:66:GLU:HG2	24:2:69:ARG:NH2	2.24	0.51
31:9:24:TYR:CE1	31:9:35:ARG:HG2	2.45	0.51
32:a:61:G:O2'	32:a:62:U:H5'	2.11	0.51
32:a:425:G:O2'	32:a:426:G:H5'	2.11	0.51
32:a:476:G:H2'	32:a:477:A:H8	1.75	0.51
32:a:1392:G:H2'	32:a:1393:U:H6	1.74	0.51
32:a:1423:G:H2'	32:a:1424:C:H6	1.76	0.51
32:a:1446:U:H4'	32:a:1447:A:C6	2.46	0.51
34:c:150:LYS:CG	34:c:169:ALA:HB2	2.41	0.51
38:g:65:ALA:HB1	38:g:127:ALA:CB	2.40	0.51
39:h:4:ASP:HB2	39:h:89:PRO:CG	2.40	0.51
39:h:20:TYR:OH	39:h:75:ARG:HB3	2.10	0.51
39:h:49:GLU:OE2	39:h:62:TYR:OH	2.19	0.51
45:n:21:TYR:OH	45:n:23:ARG:NH2	2.43	0.51
49:r:44:LEU:HD22	49:r:48:GLY:O	2.10	0.51
51:t:56:MET:SD	51:t:88:VAL:HG11	2.50	0.51
51:t:63:ILE:HG22	51:t:77:ALA:HB1	1.93	0.51
53:y:23:C:O2'	53:y:24:U:H5'	2.11	0.51
54:C:181:PRO:HD2	54:C:184:LYS:CD	2.41	0.51
1:A:189:G:H2'	1:A:205:G:N2	2.25	0.51
1:A:652(F):G:H22	1:A:652(U):C:C2'	2.23	0.51
1:A:904:C:O2'	21:Z:169:GLU:OE2	2.18	0.51
1:A:1196:C:HO2'	1:A:1227:G:HO2'	1.51	0.51
1:A:1224:C:H2'	1:A:1225:G:C4	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1612:C:H4'	29:7:7:PRO:HD3	1.93	0.51
1:A:1792:G:C5'	3:D:205:VAL:HG13	2.40	0.51
1:A:1975:G:H2'	1:A:1976:U:H6	1.76	0.51
1:A:2173:A:H3'	1:A:2174:C:H6	1.73	0.51
1:A:2616:C:H2'	1:A:2617:C:H6	1.75	0.51
1:A:2627:G:H2'	1:A:2628:C:C6	2.46	0.51
1:A:2801(B):A:H3'	1:A:2802:G:H5'	1.91	0.51
1:A:2841:C:H2'	1:A:2842:G:H8	1.75	0.51
2:B:29:A:H2'	2:B:30:C:C6	2.45	0.51
2:B:33:G:O2'	2:B:34:U:H5'	2.11	0.51
5:F:144:LYS:HA	5:F:148:LEU:O	2.10	0.51
10:O:91:LEU:HB3	10:O:111:PHE:HE1	1.75	0.51
10:O:103:ALA:HB1	10:O:105:GLU:OE1	2.11	0.51
14:S:40:ILE:HG12	14:S:47:THR:CA	2.30	0.51
18:W:13:SER:HB3	18:W:16:LYS:CD	2.41	0.51
18:W:27:LYS:HD2	18:W:31:GLU:OE2	2.10	0.51
26:4:2:LYS:O	26:4:5:ILE:HG12	2.10	0.51
32:a:33:A:H2'	32:a:34:C:C6	2.45	0.51
32:a:44:G:H2'	32:a:45:U:O4'	2.10	0.51
32:a:277:C:C2'	32:a:278:G:H5'	2.41	0.51
32:a:725:G:O2'	32:a:726:C:H5'	2.10	0.51
32:a:1313:U:O4	50:s:2:PRO:HD2	2.10	0.51
32:a:1325:C:O2'	32:a:1326:C:H5'	2.10	0.51
33:b:18:GLY:HA2	33:b:42:ILE:HD12	1.91	0.51
34:c:30:ARG:HD2	45:n:35:ARG:O	2.09	0.51
36:e:7:GLU:N	36:e:35:GLY:O	2.44	0.51
37:f:5:GLU:HG3	37:f:93:SER:OG	2.10	0.51
43:l:26:ALA:HB3	43:l:98:TYR:CZ	2.46	0.51
44:m:14:ARG:NE	44:m:42:ALA:HA	2.25	0.51
1:A:36:G:N3	1:A:450:G:O2'	2.43	0.51
1:A:267:C:O2'	1:A:268:C:H5'	2.10	0.51
1:A:272(W):G:O2'	1:A:272(X):G:H5'	2.11	0.51
1:A:381:G:H5''	23:1:16:ASN:ND2	2.26	0.51
1:A:483:A:H3'	1:A:484:C:C6	2.46	0.51
1:A:535:C:O2'	1:A:536:A:H5'	2.11	0.51
1:A:582:G:OP1	16:U:14:HIS:ND1	2.36	0.51
1:A:827:U:H4'	1:A:828:U:C6	2.46	0.51
1:A:1014:U:H2'	1:A:1015:G:C8	2.45	0.51
1:A:1098:A:H5''	1:A:1099:G:OP2	2.10	0.51
1:A:1448:G:H2'	1:A:1449:A:C8	2.45	0.51
1:A:1525:G:H2'	1:A:1526:G:H8	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1805:U:H5'	3:D:250:TRP:CD2	2.46	0.51
1:A:2075:U:OP1	3:D:244:ARG:NH2	2.44	0.51
1:A:2095:C:H2'	1:A:2096:U:O4'	2.10	0.51
1:A:2114:A:H2'	1:A:2115:G:O4'	2.11	0.51
1:A:2242:G:H2'	1:A:2243:U:O4'	2.11	0.51
1:A:2609:U:O2'	1:A:2610:C:H5'	2.11	0.51
1:A:2677:G:O2'	1:A:2678:C:H5'	2.10	0.51
1:A:2732:G:H3'	1:A:2733:A:H4'	1.91	0.51
2:B:35:U:O2'	2:B:36:C:H5'	2.11	0.51
4:E:34:VAL:CG2	4:E:78:LEU:HD11	2.39	0.51
4:E:82:ARG:HG3	4:E:83:ASP:CG	2.35	0.51
9:N:15:LEU:HD22	9:N:16:ILE:H	1.75	0.51
18:W:1:MET:HE3	18:W:2:GLU:O	2.09	0.51
18:W:88:ARG:HG3	18:W:94:ASP:OD2	2.10	0.51
19:X:72:LYS:NZ	19:X:75:ASP:OD1	2.41	0.51
20:Y:43:ASN:CG	20:Y:65:ALA:HB3	2.36	0.51
25:3:4:LEU:HD23	25:3:58:VAL:HA	1.92	0.51
25:3:6:VAL:HG12	25:3:28:LEU:HD11	1.91	0.51
26:4:59:PHE:CD2	26:4:61:ARG:HB2	2.45	0.51
29:7:34:ARG:HG3	29:7:39:ARG:CG	2.40	0.51
32:a:66:G:H4'	32:a:198:G:HO2'	1.75	0.51
32:a:69:G:N1	32:a:93:G:N7	2.59	0.51
32:a:189(J):G:O2'	32:a:189(K):G:H5'	2.10	0.51
32:a:424:G:O2'	32:a:425:G:H5'	2.10	0.51
32:a:624:C:O2'	32:a:625:G:H5'	2.10	0.51
32:a:857:C:H2'	32:a:858:G:O4'	2.10	0.51
32:a:953:G:O2'	32:a:954:G:H5'	2.10	0.51
32:a:967:5MC:H2'	32:a:968:A:C8	2.45	0.51
32:a:1072:G:H2'	32:a:1073:U:C6	2.46	0.51
32:a:1231:G:O2'	32:a:1232:U:H5'	2.11	0.51
32:a:1268:A:O2'	52:u:19:GLY:HA2	2.11	0.51
32:a:1399:C:H4'	32:a:1400:5MC:C5'	2.41	0.51
32:a:1458:G:H2'	32:a:1459:C:C6	2.46	0.51
33:b:144:ARG:O	33:b:147:LYS:HB3	2.10	0.51
33:b:150:SER:O	33:b:153:ARG:HG2	2.11	0.51
36:e:152:ARG:HA	39:h:64:LYS:NZ	2.26	0.51
39:h:110:ALA:HB3	39:h:121:ASP:HB3	1.92	0.51
40:i:24:GLY:N	40:i:60:ASP:OD1	2.41	0.51
40:i:49:PRO:HG2	40:i:81:ILE:HG23	1.92	0.51
44:m:9:ILE:O	44:m:45:VAL:HG11	2.11	0.51
53:y:8:U:H4'	53:y:48:C:H4'	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:y:15:G:N1	53:y:48:C:C2	2.79	0.51
53:y:44:A:H2'	53:y:45:G:O4'	2.11	0.51
53:y:66:C:O2'	53:y:67:C:H5'	2.10	0.51
53:y:70:G:H2'	53:y:71:C:C6	2.45	0.51
1:A:53:A:H2'	1:A:54:G:H5'	1.93	0.51
1:A:149:A:H2'	1:A:150:C:O4'	2.10	0.51
1:A:282:A:H3'	1:A:284:U:O4	2.11	0.51
1:A:611:C:H2'	1:A:612:C:H6	1.75	0.51
1:A:623:G:H2'	1:A:624:C:C6	2.45	0.51
1:A:660:G:O2'	1:A:661:C:H5'	2.11	0.51
1:A:859:G:O2'	1:A:916:G:O6	2.29	0.51
1:A:1049:C:H3'	1:A:1050:A:C8	2.46	0.51
1:A:1210:A:H4'	1:A:1211:U:O5'	2.09	0.51
1:A:1219:G:OP1	16:U:22:LYS:HE3	2.11	0.51
1:A:1655:A:H1'	4:E:113:PHE:CE2	2.46	0.51
1:A:2024:G:O2'	1:A:2025:C:H5'	2.10	0.51
1:A:2059:A:H5''	5:F:71:GLY:HA2	1.93	0.51
1:A:2292:C:H2'	1:A:2293:C:H6	1.75	0.51
1:A:2570:G:H2'	1:A:2571:C:O4'	2.11	0.51
1:A:2579:C:H5'	4:E:134:ILE:HG21	1.92	0.51
1:A:2784:C:H1'	4:E:37:ARG:HH12	1.75	0.51
5:F:81:PRO:CB	5:F:89:VAL:HG23	2.40	0.51
7:H:44:VAL:CG2	7:H:53:GLU:HG3	2.40	0.51
9:N:18:ALA:HB3	9:N:56:ASN:C	2.36	0.51
11:P:8:PRO:HB2	11:P:12:ALA:HB3	1.91	0.51
11:P:122:PRO:HA	11:P:143:GLY:CA	2.39	0.51
11:P:124:LYS:HA	11:P:144:GLU:HB3	1.91	0.51
15:T:108:ARG:HH22	32:a:1465:C:P	2.33	0.51
16:U:94:ASN:O	16:U:98:LEU:HG	2.11	0.51
18:W:14:PRO:O	18:W:18:ARG:HG3	2.11	0.51
18:W:57:ASN:OD1	18:W:61:ASN:ND2	2.43	0.51
20:Y:53:PRO:O	20:Y:56:PRO:HD3	2.10	0.51
28:6:40:CYS:SG	28:6:43:CYS:N	2.68	0.51
32:a:17:U:O3'	36:e:14:ARG:NH1	2.40	0.51
32:a:93:G:OP1	32:a:100:C:H5'	2.11	0.51
32:a:134:A:H1'	32:a:325:A:C8	2.45	0.51
32:a:241:C:O2'	32:a:242:C:H5'	2.11	0.51
32:a:403:C:OP1	35:d:137:SER:OG	2.23	0.51
32:a:473:G:OP1	47:p:75:ARG:HG3	2.11	0.51
32:a:532:A:H5''	34:c:161:GLU:CD	2.36	0.51
32:a:613:C:H2'	32:a:614:A:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:622:A:C2'	32:a:623:C:H5'	2.38	0.51
32:a:1273:G:H3'	32:a:1274:G:C8	2.45	0.51
32:a:1292:U:H5'	40:i:38:GLN:OE1	2.10	0.51
32:a:1349:A:C2'	32:a:1350:A:H5'	2.41	0.51
32:a:1376:U:OP2	38:g:94:ARG:NH2	2.44	0.51
32:a:1418:A:H5''	32:a:1419:G:OP2	2.11	0.51
32:a:1444:C:H2'	32:a:1445:C:C6	2.46	0.51
33:b:74:LYS:NZ	33:b:166:ASP:HB2	2.26	0.51
34:c:106:VAL:HG12	34:c:109:PRO:HA	1.91	0.51
35:d:185:PHE:HZ	35:d:188:LEU:HD13	1.75	0.51
46:o:3:ILE:HG22	46:o:4:THR:O	2.11	0.51
46:o:35:ARG:NH2	46:o:59:MET:HE2	2.25	0.51
49:r:43:PHE:HB3	49:r:66:LEU:HD21	1.93	0.51
53:y:10:G:C2	53:y:26:G:H1'	2.46	0.51
1:A:69:C:H4'	1:A:75:G:C8	2.45	0.51
1:A:149:A:H2'	1:A:150:C:H6	1.76	0.51
1:A:323:G:H5'	5:F:169:ASN:HD21	1.76	0.51
1:A:397:G:HO2'	1:A:2230:G:H21	1.55	0.51
1:A:491:G:O6	18:W:49:LYS:HE2	2.10	0.51
1:A:500:G:N2	1:A:502:A:H3'	2.25	0.51
1:A:564:C:H1'	16:U:37:GLU:OE2	2.10	0.51
1:A:637:A:N6	1:A:652(A):C:H5'	2.25	0.51
1:A:1059:G:H3'	1:A:1060:U:H2'	1.93	0.51
1:A:1139:G:O2'	1:A:1140:C:H5'	2.10	0.51
1:A:1529:G:H2'	1:A:1530:C:C6	2.46	0.51
1:A:1647:G:H4'	1:A:1648:C:O5'	2.11	0.51
1:A:1818:U:O4	3:D:154:LYS:HD2	2.11	0.51
1:A:1827:C:OP2	3:D:222:ARG:HD2	2.10	0.51
1:A:1843:C:H2'	1:A:1844:C:H6	1.76	0.51
1:A:2031:A:N6	1:A:2498:C:O4'	2.44	0.51
1:A:2207:G:H2'	1:A:2208:A:C2	2.46	0.51
1:A:2370:G:O2'	1:A:2371:G:H5'	2.10	0.51
1:A:2472:G:H2'	1:A:2529:G:N2	2.26	0.51
1:A:2615:U:H2'	1:A:2616:C:H6	1.76	0.51
2:B:4:C:H2'	2:B:5:C:C6	2.46	0.51
3:D:3:VAL:CG2	3:D:17:THR:HB	2.41	0.51
6:G:76:SER:CB	6:G:83:ARG:HA	2.41	0.51
9:N:94:HIS:HB3	9:N:97:ARG:HB2	1.93	0.51
11:P:57:THR:OG1	11:P:60:MET:HG2	2.11	0.51
14:S:31:SER:N	14:S:34:HIS:O	2.43	0.51
18:W:33:ARG:HB3	18:W:37:ARG:NH2	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:X:26:TYR:HB2	19:X:81:VAL:CG2	2.40	0.51
21:Z:110:GLY:CA	21:Z:145:GLU:HA	2.40	0.51
25:3:18:ASP:OD1	25:3:19:GLN:N	2.44	0.51
32:a:68:G:C5'	32:a:76:C:H2'	2.41	0.51
32:a:100:C:H1'	32:a:101:A:C5'	2.40	0.51
32:a:256:U:P	48:q:17:LYS:HZ2	2.33	0.51
32:a:567:G:O6	43:l:5:PRO:HD3	2.11	0.51
32:a:644:G:C2'	32:a:645:C:H5'	2.41	0.51
32:a:674:G:N2	42:k:116:HIS:O	2.43	0.51
32:a:835:U:H3	32:a:851:G:H1	1.57	0.51
32:a:1212:U:OP1	32:a:1212:U:H3'	2.11	0.51
32:a:1317:C:H2'	32:a:1318:A:O4'	2.11	0.51
36:e:8:GLU:HG3	36:e:34:VAL:CG2	2.40	0.51
37:f:99:ALA:HB3	49:r:29:PHE:CE1	2.46	0.51
41:j:71:LEU:HD23	41:j:72:VAL:N	2.26	0.51
45:n:8:GLU:OE1	45:n:11:LYS:HD2	2.11	0.51
46:o:16:ALA:CB	46:o:21:ASP:HB3	2.38	0.51
46:o:28:GLN:HG2	46:o:66:LEU:HD21	1.93	0.51
51:t:40:ALA:HB2	51:t:55:ILE:HG22	1.92	0.51
51:t:99:LEU:HB3	51:t:100:ILE:HG13	1.93	0.51
54:C:10:LEU:HD22	54:C:32:LEU:HA	1.93	0.51
55:z:65:G:H2'	55:z:66:U:H6	1.76	0.51
1:A:28:A:H1'	1:A:513:A:C2	2.45	0.51
1:A:126:A:H2'	1:A:127:A:C8	2.45	0.51
1:A:136:G:O2'	1:A:137:C:H5'	2.11	0.51
1:A:376:C:O2'	1:A:377:C:H5'	2.11	0.51
1:A:398:G:H2'	1:A:399:G:C8	2.44	0.51
1:A:402:A:O2'	1:A:403:U:H5'	2.11	0.51
1:A:584:C:OP2	16:U:6:THR:OG1	2.16	0.51
1:A:727:A:OP1	1:A:1431:U:O2'	2.26	0.51
1:A:813:U:C1'	1:A:1226:A:H1'	2.41	0.51
1:A:1062:G:O6	1:A:1070:A:O2'	2.21	0.51
1:A:1158:C:O2'	1:A:1159:U:H5'	2.11	0.51
1:A:1193:G:O2'	1:A:1194:A:H5'	2.10	0.51
1:A:1297:C:O2'	1:A:1298:C:H5'	2.11	0.51
1:A:1356:G:O2'	1:A:1357:U:H5'	2.11	0.51
1:A:1389:G:H2'	1:A:1390:U:H6	1.73	0.51
1:A:1394:U:H2'	1:A:1395:A:O4'	2.11	0.51
1:A:1526:G:H2'	1:A:1527:G:O4'	2.11	0.51
1:A:1751:C:O2'	1:A:1752:C:H5'	2.10	0.51
1:A:1837:C:H2'	1:A:1838:C:H5'	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1947:C:H2'	1:A:1948:G:C8	2.46	0.51
1:A:2031:A:C5	1:A:2498:C:H1'	2.46	0.51
1:A:2072:G:H2'	1:A:2073:C:C6	2.46	0.51
1:A:2072:G:H2'	1:A:2073:C:H6	1.76	0.51
1:A:2444:G:C2'	1:A:2445:G:H5''	2.41	0.51
1:A:2606:C:O2'	1:A:2607:G:H5'	2.11	0.51
1:A:2653:U:O5'	1:A:2654:A:H2'	2.11	0.51
1:A:2691:C:O2'	1:A:2692:C:H5'	2.10	0.51
1:A:2761:G:O2'	1:A:2762:G:H5'	2.11	0.51
1:A:2869:G:H2'	1:A:2870:C:C6	2.46	0.51
10:O:6:THR:O	10:O:20:MET:HA	2.09	0.51
11:P:92:GLU:OE2	11:P:121:LYS:NZ	2.33	0.51
15:T:39:ARG:NH1	15:T:41:ARG:HB3	2.26	0.51
22:O:21:LEU:CD2	22:O:39:ARG:HG3	2.41	0.51
23:1:7:ILE:CD1	23:1:98:LEU:HD11	2.41	0.51
23:1:8:SER:HB3	23:1:66:HIS:CE1	2.45	0.51
32:a:17:U:H2'	32:a:18:C:C6	2.46	0.51
32:a:394:G:H2'	32:a:395:C:C6	2.46	0.51
32:a:520:A:N6	32:a:529:G:H1'	2.25	0.51
32:a:539:A:H2'	32:a:540:G:H8	1.76	0.51
32:a:693:G:H5'	56:x:10:A:P	2.51	0.51
32:a:1080:A:C5'	36:e:16:THR:HG21	2.41	0.51
32:a:1212:U:H4'	32:a:1213:A:C8	2.46	0.51
32:a:1313:U:OP2	50:s:5:LEU:HG	2.11	0.51
32:a:1514:C:O2'	32:a:1515:C:H5'	2.11	0.51
33:b:80:ILE:HG21	33:b:211:ILE:HG22	1.93	0.51
37:f:33:TYR:CE2	37:f:75:LEU:HA	2.46	0.51
38:g:44:TYR:HA	38:g:47:CYS:SG	2.51	0.51
44:m:22:ILE:HG21	44:m:66:LEU:HD13	1.92	0.51
46:o:39:LEU:HB2	46:o:56:LEU:HD13	1.93	0.51
51:t:44:ALA:HB3	51:t:91:LEU:HD12	1.92	0.51
55:z:35:A:H2'	55:z:36:A:O4'	2.10	0.51
1:A:183:C:O2'	1:A:432:A:N3	2.31	0.50
1:A:220:G:N2	1:A:427:U:H2'	2.25	0.50
1:A:391:G:O2'	1:A:410:G:OP1	2.27	0.50
1:A:593:G:H2'	1:A:594:U:C6	2.46	0.50
1:A:1028:A:O2'	1:A:1029:A:H5'	2.11	0.50
1:A:1257:C:H2'	1:A:1258:C:C6	2.45	0.50
1:A:1260:G:C2'	1:A:1261:C:H5'	2.42	0.50
1:A:1450(B):C:O2'	1:A:1451:C:H5'	2.10	0.50
1:A:1921:G:O2'	1:A:1922:G:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2144:U:H1'	1:A:2148:G:N2	2.26	0.50
1:A:2165:G:H2'	1:A:2166:G:O4'	2.11	0.50
1:A:2389:G:O5'	1:A:2390:U:H5'	2.11	0.50
1:A:2603:G:O2'	1:A:2604:U:H5'	2.11	0.50
1:A:2881:C:H2'	1:A:2882:A:H5'	1.93	0.50
8:I:26:ALA:O	8:I:30:LEU:N	2.45	0.50
10:O:43:VAL:HG12	10:O:54:GLU:HA	1.93	0.50
10:O:53:LYS:HD3	10:O:53:LYS:H	1.75	0.50
12:Q:52:VAL:HA	12:Q:55:VAL:HG12	1.92	0.50
18:W:97:LYS:O	18:W:99:ARG:HG3	2.11	0.50
23:1:51:VAL:O	23:1:57:GLU:HA	2.11	0.50
30:8:19:SER:OG	30:8:21:LYS:HG3	2.11	0.50
32:a:24:U:O2'	32:a:25:C:H5'	2.11	0.50
32:a:189(K):G:H2'	32:a:189(L):U:O4'	2.11	0.50
32:a:259:G:H2'	32:a:260:G:C8	2.45	0.50
32:a:519:C:H2'	32:a:520:A:C8	2.46	0.50
32:a:543:C:O2'	32:a:544:G:H5'	2.10	0.50
32:a:813:U:O5'	32:a:816:A:N6	2.44	0.50
32:a:831:U:H2'	32:a:832:C:H6	1.75	0.50
32:a:838:G:H3'	32:a:840:C:N4	2.19	0.50
32:a:1152:A:P	41:j:70:ARG:HH21	2.35	0.50
32:a:1176:A:H2'	32:a:1177:G:C8	2.46	0.50
32:a:1278:U:H5''	32:a:1279:A:O4'	2.11	0.50
33:b:71:VAL:HG12	33:b:93:VAL:HG22	1.92	0.50
33:b:74:LYS:HG3	33:b:77:ALA:H	1.76	0.50
34:c:30:ARG:NH1	45:n:35:ARG:O	2.44	0.50
35:d:127:THR:HG22	35:d:132:ARG:CA	2.36	0.50
40:i:69:GLY:O	40:i:73:GLN:HG3	2.11	0.50
47:p:6:LEU:HD23	47:p:17:TYR:CB	2.42	0.50
51:t:36:LEU:HD12	51:t:62:LEU:HD12	1.93	0.50
52:u:9:ARG:O	52:u:13:ILE:HG13	2.11	0.50
54:C:42:GLU:OE1	54:C:44:HIS:NE2	2.24	0.50
55:z:61:C:H2'	55:z:62:C:H6	1.77	0.50
1:A:180:G:OP1	29:7:32:LYS:HE3	2.11	0.50
1:A:282:A:N7	1:A:358:U:C2	2.79	0.50
1:A:336:C:OP1	20:Y:84:ARG:HG2	2.11	0.50
1:A:653:A:H2'	1:A:654:A:H5'	1.93	0.50
1:A:694:U:H2'	1:A:695:G:H5''	1.93	0.50
1:A:879:G:N2	1:A:899:A:H1'	2.26	0.50
1:A:1190:G:OP1	11:P:30:THR:OG1	2.23	0.50
1:A:1427:A:H4'	1:A:1428:C:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1666:G:C2'	1:A:1667:G:H5'	2.42	0.50
1:A:1720:U:H2'	1:A:1721:G:O4'	2.11	0.50
1:A:1964:G:O2'	1:A:1967:C:OP2	2.12	0.50
1:A:2201:C:N4	1:A:2223:G:O6	2.44	0.50
1:A:2281:C:O2'	1:A:2282:G:H5'	2.10	0.50
1:A:2314:C:H5'	6:G:38:VAL:HG11	1.91	0.50
1:A:2638:G:H22	1:A:2775:A:H2'	1.76	0.50
1:A:2882:A:H5''	13:R:96:ARG:HG3	1.92	0.50
2:B:27:C:H2'	2:B:28:C:O4'	2.11	0.50
2:B:35:U:H2'	2:B:36:C:H6	1.76	0.50
2:B:96:U:OP2	21:Z:14:LYS:HE3	2.12	0.50
3:D:134:ARG:HH21	8:I:87:LYS:HE3	1.75	0.50
3:D:167:GLY:O	3:D:174:ILE:N	2.39	0.50
4:E:23:VAL:CG1	4:E:173:VAL:HG21	2.42	0.50
5:F:43:LYS:HA	5:F:98:SER:HA	1.93	0.50
5:F:149:ASP:OD1	5:F:150:GLY:N	2.44	0.50
6:G:113:ARG:HG3	26:4:34:GLU:OE2	2.11	0.50
7:H:30:LYS:HG3	7:H:81:GLU:C	2.37	0.50
7:H:44:VAL:O	7:H:50:VAL:HG13	2.11	0.50
10:O:38:VAL:HG21	10:O:91:LEU:HD21	1.93	0.50
11:P:144:GLU:HG2	11:P:146:VAL:CG2	2.41	0.50
12:Q:127:ILE:O	12:Q:129:THR:HG23	2.11	0.50
20:Y:38:ILE:HD13	20:Y:66:PRO:HA	1.92	0.50
20:Y:97:ARG:HB2	20:Y:106:LEU:HB2	1.92	0.50
21:Z:5:LEU:HD13	21:Z:6:LYS:O	2.11	0.50
21:Z:116:VAL:CG2	21:Z:177:PRO:HA	2.41	0.50
24:2:51:ARG:HD3	24:2:55:ARG:NH1	2.26	0.50
28:6:38:LYS:O	28:6:47:THR:N	2.41	0.50
32:a:18:C:H5''	36:e:127:ASN:HD21	1.76	0.50
32:a:64:G:HO3'	32:a:65:U:P	2.31	0.50
32:a:66:G:H1'	32:a:173:U:H2'	1.91	0.50
32:a:79:G:H2'	32:a:80:G:C4'	2.42	0.50
32:a:164:U:H2'	32:a:165:C:H6	1.76	0.50
32:a:180:U:O4	32:a:195:A:N7	2.44	0.50
32:a:407:G:H2'	32:a:408:A:H8	1.76	0.50
32:a:417:C:H2'	32:a:418:C:H6	1.77	0.50
32:a:472:A:H4'	47:p:80:PHE:O	2.11	0.50
32:a:578:C:H2'	32:a:579:G:C8	2.46	0.50
32:a:1065:U:H1'	32:a:1066:C:OP2	2.12	0.50
32:a:1141:C:H2'	32:a:1142:G:C8	2.46	0.50
32:a:1148:U:O2'	32:a:1149:C:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1253:G:H2'	32:a:1254:C:H6	1.75	0.50
32:a:1288:A:N1	32:a:1371:G:H1'	2.25	0.50
32:a:1438:G:H2'	32:a:1439:C:H6	1.75	0.50
32:a:1495:U:O2'	32:a:1496:C:H5'	2.11	0.50
33:b:72:GLY:O	33:b:94:ASN:HA	2.11	0.50
34:c:121:ALA:O	34:c:125:GLU:HG3	2.11	0.50
35:d:74:GLN:O	35:d:78:LEU:HG	2.11	0.50
38:g:111:ARG:NH2	38:g:126:ASP:OD2	2.43	0.50
39:h:51:VAL:HG11	39:h:60:ARG:CD	2.41	0.50
49:r:39:VAL:HA	49:r:42:ARG:HD2	1.94	0.50
54:C:91:ALA:N	54:C:153:ILE:HG21	2.26	0.50
55:z:51:U:H2'	55:z:52:G:C1'	2.41	0.50
1:A:406:G:H2'	1:A:407:G:O4'	2.11	0.50
1:A:749:C:O2	1:A:1618:A:H2'	2.11	0.50
1:A:1323:U:O2'	1:A:1324:G:H5'	2.10	0.50
1:A:1407:C:O2'	1:A:1408:C:H5'	2.11	0.50
1:A:1791:A:H3'	1:A:1792:G:C8	2.40	0.50
1:A:1889:A:H2'	1:A:1890:A:O4'	2.11	0.50
1:A:1997:G:O2'	1:A:1998:G:H5'	2.11	0.50
1:A:2181:G:H5'	55:z:17:C:N4	2.26	0.50
1:A:2296:U:OP2	14:S:9:ARG:NH2	2.32	0.50
1:A:2714:G:H2'	1:A:2715:C:C6	2.46	0.50
1:A:2864:G:H2'	1:A:2865:U:O4'	2.12	0.50
2:B:76:G:O2'	2:B:77:U:H5'	2.11	0.50
3:D:134:ARG:CZ	8:I:121:LYS:HE2	2.41	0.50
4:E:174:ASP:O	4:E:182:LEU:HD12	2.11	0.50
6:G:145:THR:HG22	6:G:148:MET:CE	2.41	0.50
8:I:85:GLU:OE2	37:f:21:LEU:HB3	2.11	0.50
9:N:6:PRO:HG3	9:N:41:ASP:HB2	1.93	0.50
13:R:8:ARG:HB2	13:R:43:GLU:HG3	1.93	0.50
13:R:101:ALA:CB	27:5:47:PRO:HD3	2.42	0.50
14:S:11:LYS:HE2	14:S:91:PRO:HD3	1.92	0.50
21:Z:91:LEU:CD1	21:Z:130:PRO:HB3	2.40	0.50
27:5:46:CYS:O	27:5:50:GLY:N	2.35	0.50
28:6:9:LEU:HD13	28:6:51:GLU:HG3	1.92	0.50
32:a:66:G:H5'	32:a:199:G:O4'	2.11	0.50
32:a:123:C:H2'	32:a:124:G:H8	1.75	0.50
32:a:257:G:O2'	32:a:258:G:H5'	2.11	0.50
32:a:409:G:P	35:d:22:LYS:HB3	2.51	0.50
32:a:633:G:H2'	32:a:634:C:H6	1.74	0.50
32:a:1105:A:O2'	32:a:1106:G:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1305:G:H5'	52:u:4:GLY:C	2.35	0.50
32:a:1310:G:O2'	32:a:1311:G:H5'	2.12	0.50
32:a:1316:G:O2'	45:n:18:VAL:HG21	2.10	0.50
32:a:1462:G:H2'	32:a:1463:C:H6	1.75	0.50
33:b:20:GLU:HB2	33:b:190:THR:CG2	2.40	0.50
37:f:7:ASN:O	37:f:88:VAL:HA	2.12	0.50
37:f:12:PRO:CB	37:f:45:LEU:HG	2.40	0.50
41:j:6:ILE:HG23	41:j:97:GLU:O	2.11	0.50
42:k:34:ASP:OD2	42:k:38:ASN:HB2	2.11	0.50
49:r:34:TYR:HA	49:r:40:LEU:HD11	1.93	0.50
54:C:186:ALA:HB1	54:C:190:ARG:HH12	1.75	0.50
1:A:459:U:H2'	1:A:460:A:C8	2.46	0.50
1:A:528:A:H2'	1:A:2042:A:C2	2.46	0.50
1:A:536:A:H2'	1:A:537:C:H6	1.76	0.50
1:A:844:C:H3'	1:A:845:G:C2	2.46	0.50
1:A:856:C:H2'	1:A:857:C:H6	1.73	0.50
1:A:962:G:O2'	1:A:963:U:H5'	2.12	0.50
1:A:966:G:O2'	1:A:967:C:H5'	2.11	0.50
1:A:1101:U:H2'	1:A:1102:C:C6	2.46	0.50
1:A:1468:C:H2'	1:A:1469:A:H8	1.74	0.50
1:A:2065:C:H1'	1:A:2449:U:H3	1.77	0.50
1:A:2195:C:H2'	1:A:2196:C:H6	1.74	0.50
1:A:2373:G:H2'	1:A:2374:C:O4'	2.11	0.50
1:A:2660:A:H2'	1:A:2661:G:O4'	2.12	0.50
1:A:2883:A:C5'	1:A:2884:U:H5'	2.41	0.50
13:R:14:SER:HA	13:R:17:ARG:HE	1.76	0.50
13:R:30:THR:HA	13:R:78:LYS:NZ	2.27	0.50
14:S:85:VAL:HG11	14:S:110:LEU:HD21	1.94	0.50
22:0:68:GLU:O	22:0:80:HIS:N	2.41	0.50
32:a:45:U:H2'	32:a:46:G:H8	1.75	0.50
32:a:223:U:O2'	32:a:224:C:H5'	2.12	0.50
32:a:244:U:O4	32:a:906:G:H1'	2.12	0.50
32:a:348:G:O2'	32:a:349:A:H5'	2.11	0.50
32:a:361:G:H2'	32:a:362:G:O4'	2.11	0.50
32:a:509:A:H4'	32:a:510:A:OP1	2.11	0.50
32:a:581:G:H2'	32:a:582:U:C5	2.46	0.50
32:a:624:C:H4'	47:p:10:GLY:C	2.37	0.50
32:a:717:C:H4'	42:k:117:ASN:HD21	1.76	0.50
32:a:1011:G:H2'	32:a:1012:U:O4'	2.11	0.50
32:a:1304:G:N1	32:a:1332:A:OP2	2.40	0.50
33:b:116:GLU:HG2	33:b:153:ARG:NH2	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:d:63:LYS:CD	35:d:198:VAL:HG22	2.41	0.50
36:e:145:LYS:HA	39:h:107:LEU:HD21	1.93	0.50
37:f:60:PHE:C	37:f:61:LEU:HD12	2.37	0.50
40:i:49:PRO:HG3	40:i:101:PHE:CD2	2.45	0.50
42:k:21:ILE:HD11	42:k:98:LEU:CD1	2.42	0.50
42:k:69:ALA:HB1	42:k:103:LEU:HD13	1.93	0.50
43:l:89:ARG:HG2	43:l:90:VAL:O	2.12	0.50
47:p:21:VAL:CG1	47:p:34:GLU:HB3	2.42	0.50
54:C:26:ALA:HA	54:C:29:VAL:HG12	1.94	0.50
54:C:26:ALA:O	54:C:29:VAL:HG12	2.11	0.50
56:x:2:A:H4'	56:x:3:A:O5'	2.11	0.50
1:A:75:G:N1	1:A:111:A:H2	2.05	0.50
1:A:445:C:O2'	1:A:446:G:H5'	2.11	0.50
1:A:730:C:O2'	1:A:731:C:H5'	2.11	0.50
1:A:1105:U:H2'	1:A:1106:G:H8	1.76	0.50
1:A:1118:C:H2'	1:A:1119:C:H6	1.75	0.50
1:A:1292:U:O2'	1:A:1293:C:H5'	2.11	0.50
1:A:1578:U:C2'	1:A:1579:A:H5'	2.41	0.50
1:A:1854:A:H2'	1:A:1855:G:O4'	2.12	0.50
1:A:1995:U:H2'	1:A:1996:C:C5	2.45	0.50
1:A:2019:A:H2'	1:A:2020:A:H5''	1.92	0.50
1:A:2239:G:H5'	3:D:251:GLY:CA	2.42	0.50
1:A:2391:G:C6	1:A:2427:C:H1'	2.46	0.50
1:A:2496:C:O2'	1:A:2497:A:H5'	2.12	0.50
1:A:2852:G:H2'	1:A:2853:C:H6	1.75	0.50
4:E:67:PHE:CE1	4:E:75:VAL:HG12	2.47	0.50
4:E:110:GLY:HA2	4:E:162:ALA:HB2	1.93	0.50
5:F:23:ASP:C	5:F:24:LEU:HD12	2.36	0.50
6:G:3:LEU:HD13	26:4:25:TYR:CE2	2.47	0.50
7:H:11:VAL:HG21	7:H:50:VAL:CG2	2.37	0.50
10:O:61:VAL:HG12	10:O:85:VAL:HB	1.94	0.50
11:P:68:GLN:OE1	30:8:12:LYS:HG2	2.10	0.50
12:Q:51:ARG:HG3	12:Q:64:ILE:HG21	1.92	0.50
15:T:108:ARG:HH21	32:a:1464:G:H5''	1.76	0.50
16:U:90:VAL:HB	16:U:95:LEU:HD11	1.94	0.50
21:Z:9:TYR:CZ	21:Z:61:LEU:HD12	2.47	0.50
23:1:2:SER:HB3	23:1:61:ARG:NH1	2.25	0.50
32:a:42:G:H2'	32:a:43:C:C6	2.46	0.50
32:a:166:G:H2'	32:a:167:G:C8	2.45	0.50
32:a:285:G:O2'	32:a:286:G:H5'	2.11	0.50
32:a:392:G:H2'	32:a:393:A:H8	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:623:C:O2'	32:a:624:C:H5'	2.11	0.50
32:a:788:U:H2'	32:a:789:U:O4'	2.10	0.50
32:a:886:G:H2'	32:a:887:G:O4'	2.12	0.50
32:a:1430:C:O2'	32:a:1431:C:H5'	2.11	0.50
33:b:131:PRO:O	33:b:135:GLN:N	2.35	0.50
34:c:8:ILE:HD11	34:c:184:TYR:H	1.76	0.50
34:c:51:GLY:C	34:c:70:VAL:HG23	2.35	0.50
34:c:112:SER:OG	34:c:115:LEU:HD13	2.11	0.50
35:d:95:GLY:O	35:d:99:SER:N	2.45	0.50
42:k:23:ALA:HB1	42:k:91:ARG:HB2	1.93	0.50
50:s:64:GLU:HA	50:s:67:VAL:HG23	1.94	0.50
51:t:87:LYS:HA	51:t:90:GLN:CD	2.37	0.50
54:C:66:HIS:CD2	54:C:187:ASP:HB2	2.47	0.50
54:C:186:ALA:HB1	54:C:190:ARG:NH1	2.27	0.50
1:A:556:G:H2'	1:A:557:U:C6	2.46	0.50
1:A:570:G:H2'	1:A:2030:A:C6	2.47	0.50
1:A:628:G:O2'	1:A:629:G:H5'	2.11	0.50
1:A:629:G:H4'	1:A:650:C:O2	2.12	0.50
1:A:675:A:N3	1:A:2443:C:O2'	2.34	0.50
1:A:776:G:C4'	1:A:777:A:H5''	2.40	0.50
1:A:1009:A:H3'	1:A:1009:A:OP2	2.11	0.50
1:A:1217:C:O2'	1:A:1218:C:H5'	2.11	0.50
1:A:1614:A:N6	18:W:92:ARG:O	2.45	0.50
1:A:1628:G:H2'	1:A:1629:U:C6	2.46	0.50
1:A:1705:G:H2'	1:A:1706:U:C6	2.47	0.50
1:A:1745(B):C:H2'	1:A:1746:G:O4'	2.11	0.50
1:A:2123:G:H1'	54:C:172:HIS:HB3	1.93	0.50
1:A:2224:G:H3'	1:A:2226:C:C5	2.47	0.50
1:A:2811:G:O2'	1:A:2812:G:H5'	2.11	0.50
4:E:2:LYS:HA	4:E:84:PHE:CD1	2.46	0.50
5:F:155:LEU:HD11	5:F:176:LEU:HD12	1.94	0.50
6:G:171:ALA:O	6:G:175:LEU:HD13	2.12	0.50
9:N:91:LEU:O	9:N:95:PRO:HD3	2.11	0.50
14:S:44:LYS:O	14:S:46:VAL:HG23	2.12	0.50
15:T:31:SER:CB	15:T:85:LYS:HG2	2.42	0.50
16:U:81:HIS:NE2	16:U:85:LYS:HD2	2.26	0.50
21:Z:23:LYS:HB3	21:Z:38:TYR:HD2	1.76	0.50
22:O:49:LYS:NZ	22:O:82:ARG:HA	2.26	0.50
22:O:53:MET:HA	22:O:58:THR:O	2.11	0.50
24:2:10:LEU:CD2	24:2:59:ARG:HB3	2.41	0.50
28:6:6:ARG:HH11	28:6:26:ASN:HB2	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:93:G:H4'	32:a:100:C:O2'	2.10	0.50
32:a:187:C:H2'	32:a:188:C:O4'	2.12	0.50
32:a:193:C:O2'	51:t:64:ASP:OD2	2.26	0.50
32:a:276:G:H5'	48:q:15:MET:SD	2.52	0.50
32:a:363:A:H2'	32:a:364:A:C8	2.47	0.50
32:a:411:A:H2'	32:a:412:A:H4'	1.93	0.50
32:a:647:C:O2'	32:a:648:A:H5'	2.11	0.50
32:a:902:G:H2'	32:a:903:G:C8	2.47	0.50
32:a:974:A:C3'	32:a:975:A:H5'	2.42	0.50
32:a:975:A:N3	32:a:1357:A:H1'	2.27	0.50
32:a:1039:C:O2'	32:a:1040:U:H5'	2.12	0.50
32:a:1114:C:H2'	32:a:1115:C:C6	2.45	0.50
32:a:1157:A:H5'	32:a:1158:C:C5	2.47	0.50
32:a:1166:G:N2	32:a:1169:A:H3'	2.26	0.50
32:a:1223:C:P	32:a:1224:G:H2'	2.51	0.50
32:a:1367:C:H2'	32:a:1368:G:O4'	2.11	0.50
33:b:93:VAL:HG11	33:b:101:MET:HE1	1.94	0.50
35:d:60:GLU:OE1	35:d:198:VAL:HG13	2.11	0.50
42:k:32:ILE:N	42:k:41:THR:O	2.33	0.50
44:m:84:ILE:HD12	50:s:74:PHE:CZ	2.47	0.50
48:q:24:GLU:OE2	48:q:37:LYS:HB3	2.11	0.50
50:s:5:LEU:HD12	50:s:6:LYS:N	2.27	0.50
51:t:84:LEU:O	51:t:88:VAL:HG23	2.11	0.50
54:C:64:LEU:HD11	54:C:161:ILE:HD13	1.94	0.50
55:z:15:G:C2'	55:z:59:U:H3	2.25	0.50
56:x:7:A:H2'	56:x:8:A:C8	2.46	0.50
1:A:83:G:C2	1:A:102:G:H1'	2.47	0.50
1:A:110:G:H2'	1:A:111:A:H8	1.75	0.50
1:A:646:A:O2'	1:A:647:G:H5'	2.12	0.50
1:A:754:C:H2'	1:A:755:C:C6	2.47	0.50
1:A:875:G:H2'	1:A:876:C:O4'	2.12	0.50
1:A:1352:U:O2'	1:A:1353:A:H5'	2.11	0.50
1:A:1722:A:H1'	1:A:1739:U:C5	2.47	0.50
1:A:2124:G:C5'	54:C:174:PRO:HG3	2.41	0.50
1:A:2175:C:H5''	54:C:7:TYR:CZ	2.46	0.50
1:A:2177:C:H1'	54:C:172:HIS:CE1	2.46	0.50
1:A:2873:A:O2'	1:A:2874:C:H5'	2.11	0.50
4:E:47:VAL:HG23	4:E:49:LEU:HD11	1.93	0.50
6:G:124:SER:OG	6:G:132:ASN:O	2.20	0.50
13:R:2:ARG:HD2	13:R:2:ARG:O	2.12	0.50
13:R:101:ALA:HB2	27:5:47:PRO:HD3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:T:9:LEU:O	15:T:12:SER:OG	2.17	0.50
20:Y:52:SER:HB2	20:Y:53:PRO:HD2	1.94	0.50
32:a:59:A:H3'	32:a:60:A:C5'	2.42	0.50
32:a:64:G:C3'	32:a:71:C:N3	2.74	0.50
32:a:147:G:C2'	32:a:148:G:H5'	2.41	0.50
32:a:247:G:OP2	48:q:100:LYS:N	2.45	0.50
32:a:268:C:O2'	32:a:269:C:H5'	2.12	0.50
32:a:298:A:H3'	32:a:299:G:H8	1.77	0.50
32:a:321:A:H5''	32:a:328:C:C4	2.46	0.50
32:a:325:A:OP2	51:t:70:SER:OG	2.17	0.50
32:a:538:G:H2'	32:a:539:A:H8	1.76	0.50
32:a:602:A:O2'	32:a:603:U:H5'	2.12	0.50
32:a:644:G:H4'	39:h:92:ARG:NH2	2.26	0.50
32:a:833:U:H2'	32:a:834:C:H6	1.76	0.50
32:a:929:G:H2'	32:a:930:C:O4'	2.12	0.50
32:a:950:U:H2'	32:a:951:G:C8	2.47	0.50
32:a:1027:C:H3'	32:a:1028:C:C5'	2.41	0.50
32:a:1099:G:H2'	32:a:1100:C:O4'	2.12	0.50
32:a:1130:A:O3'	40:i:20:ARG:NH2	2.44	0.50
32:a:1135:U:H3'	32:a:1137:C:N4	2.27	0.50
32:a:1232:U:H5''	40:i:124:GLN:O	2.12	0.50
32:a:1250:A:H4'	40:i:68:GLY:N	2.25	0.50
32:a:1333:A:H3'	32:a:1334:G:H8	1.77	0.50
32:a:1359:C:H3'	45:n:35:ARG:HH21	1.73	0.50
32:a:1423:G:O2'	32:a:1424:C:H5'	2.12	0.50
32:a:1446:U:H4'	32:a:1447:A:C5	2.47	0.50
35:d:116:GLN:HE21	35:d:157:LEU:HD21	1.75	0.50
38:g:75:VAL:HA	38:g:87:VAL:O	2.11	0.50
40:i:8:GLY:O	40:i:14:VAL:HA	2.12	0.50
40:i:27:THR:HA	40:i:31:GLN:O	2.12	0.50
48:q:45:HIS:HA	48:q:69:LYS:CE	2.42	0.50
48:q:90:ILE:O	48:q:94:ASN:N	2.37	0.50
54:C:33:ALA:HA	54:C:39:GLU:CD	2.36	0.50
54:C:82:LYS:HD3	54:C:85:GLU:OE2	2.11	0.50
1:A:74:A:H4'	1:A:75:G:H5''	1.93	0.50
1:A:132:G:H2'	1:A:133:C:H6	1.77	0.50
1:A:187:G:H3'	1:A:188:G:H5''	1.94	0.50
1:A:310:A:OP1	20:Y:21:LYS:HD2	2.12	0.50
1:A:363(F):U:H3'	1:A:363(G):A:H8	1.74	0.50
1:A:774:A:OP1	1:A:774:A:H3'	2.12	0.50
1:A:817:C:H2'	1:A:818:G:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1020:A:N6	1:A:1142(A):U:OP2	2.44	0.50
1:A:1086:A:H5'	1:A:1104:C:O2'	2.11	0.50
1:A:1265:A:N1	1:A:2013:A:H5''	2.27	0.50
1:A:1303:G:H1'	1:A:1641:A:C2	2.47	0.50
1:A:1637:A:H4'	1:A:2711:A:O2'	2.11	0.50
1:A:1645:G:H5''	1:A:1646:C:C5'	2.42	0.50
1:A:1853:A:H2'	1:A:1854:A:H8	1.75	0.50
1:A:1927:A:H2'	1:A:1928:A:C8	2.47	0.50
1:A:2830:G:H2'	1:A:2831:G:H5'	1.93	0.50
4:E:60:ASN:CG	4:E:62:PRO:HD2	2.37	0.50
5:F:18:ARG:HG2	5:F:19:GLU:H	1.77	0.50
6:G:66:GLN:OE1	6:G:98:ARG:NE	2.42	0.50
7:H:52:VAL:O	7:H:65:HIS:NE2	2.43	0.50
8:I:1:MET:CE	8:I:38:LEU:HD12	2.39	0.50
8:I:25:TYR:CE2	8:I:30:LEU:HD11	2.46	0.50
16:U:102:GLU:HG3	17:V:2:PHE:CZ	2.47	0.50
21:Z:27:VAL:HA	21:Z:37:VAL:HG22	1.93	0.50
32:a:10:A:OP2	36:e:126:ARG:HD3	2.11	0.50
32:a:112:G:N2	32:a:354:G:H5'	2.27	0.50
32:a:186:C:O2'	32:a:187:C:H5'	2.11	0.50
32:a:324:G:N1	32:a:327:A:OP2	2.45	0.50
32:a:400:C:H2'	32:a:401:C:H6	1.76	0.50
32:a:411:A:P	35:d:30:LYS:HZ2	2.35	0.50
32:a:627:G:O2'	32:a:628:G:H5'	2.12	0.50
32:a:818:G:N2	32:a:873:A:OP1	2.31	0.50
32:a:921:U:O2'	36:e:19:MET:O	2.09	0.50
32:a:923:A:H2'	32:a:924:C:C6	2.47	0.50
32:a:1084:G:H5''	32:a:1085:U:OP2	2.12	0.50
32:a:1149:C:O2'	32:a:1150:U:H5'	2.12	0.50
32:a:1373:G:H4'	38:g:31:MET:SD	2.51	0.50
33:b:22:LYS:HA	33:b:40:HIS:HE1	1.76	0.50
40:i:32:ASP:N	40:i:35:GLU:OE1	2.37	0.50
43:l:117:ARG:HD2	43:l:123:LYS:O	2.11	0.50
49:r:32:ARG:HA	49:r:69:THR:CG2	2.42	0.50
50:s:20:LEU:HA	50:s:23:ASN:ND2	2.21	0.50
1:A:37:C:H2'	1:A:38:A:C8	2.47	0.50
1:A:64:A:O3'	19:X:71:GLY:HA3	2.12	0.50
1:A:115:C:O2'	1:A:116:C:H5'	2.12	0.50
1:A:133:C:O2'	1:A:134:C:H5'	2.12	0.50
1:A:182:A:H61	1:A:215:G:H1	1.59	0.50
1:A:202:U:H2'	1:A:203:C:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:223:A:O2'	1:A:420:C:O2	2.26	0.50
1:A:236:C:O2'	1:A:431:U:H4'	2.11	0.50
1:A:459:U:OP1	29:7:39:ARG:HA	2.12	0.50
1:A:609:A:H2'	1:A:610:G:O4'	2.12	0.50
1:A:744:G:H2'	1:A:745:G:O4'	2.12	0.50
1:A:745:G:OP2	4:E:133:LYS:HD2	2.12	0.50
1:A:859:G:N2	1:A:916:G:H2'	2.26	0.50
1:A:882:G:H2'	1:A:883:G:H8	1.77	0.50
1:A:1049:C:H2'	1:A:1050:A:H5'	1.93	0.50
1:A:1264:G:O3'	1:A:2615:U:H5'	2.11	0.50
1:A:1362:C:H2'	1:A:1363:C:H5''	1.92	0.50
1:A:1378:A:O2'	1:A:1380:G:N7	2.39	0.50
1:A:1954:G:O6	1:A:1986:A:H5''	2.12	0.50
1:A:2128:C:C5'	54:C:6:ARG:HH21	2.24	0.50
1:A:2159:G:O2'	1:A:2160:G:O5'	2.30	0.50
1:A:2295:C:OP2	14:S:10:ARG:HD3	2.11	0.50
1:A:2305:A:H2'	1:A:2306:C:O4'	2.12	0.50
1:A:2309:A:O2'	1:A:2310:A:H5'	2.12	0.50
1:A:2524:G:H2'	1:A:2525:G:O4'	2.12	0.50
1:A:2727:G:H2'	1:A:2728:U:H6	1.77	0.50
1:A:2821:A:O2'	1:A:2822:G:H5'	2.12	0.50
2:B:28:C:OP1	14:S:34:HIS:HB2	2.12	0.50
3:D:157:ARG:O	3:D:157:ARG:HD2	2.12	0.50
6:G:7:LEU:O	6:G:10:LYS:HB3	2.12	0.50
8:I:62:LYS:HG2	8:I:133:HIS:CD2	2.47	0.50
12:Q:51:ARG:HA	12:Q:54:MET:HE3	1.94	0.50
18:W:27:LYS:HD2	18:W:31:GLU:CD	2.37	0.50
26:4:58:ARG:HG2	50:s:67:VAL:CG2	2.42	0.50
32:a:9:G:H2'	32:a:10:A:H8	1.77	0.50
32:a:201:C:H3'	32:a:203:U:C5	2.47	0.50
32:a:310:G:C5'	47:p:31:LYS:HB2	2.42	0.50
32:a:408:A:H2'	32:a:409:G:H8	1.77	0.50
32:a:408:A:H4'	35:d:112:VAL:HG21	1.93	0.50
32:a:1019:C:H2'	32:a:1020:U:O4'	2.11	0.50
32:a:1030(C):C:C2'	32:a:1030(D):G:H5'	2.42	0.50
35:d:185:PHE:CZ	35:d:188:LEU:HA	2.47	0.50
35:d:208:SER:HB2	36:e:101:ILE:HD12	1.94	0.50
38:g:115:ARG:HD3	38:g:118:VAL:HG21	1.93	0.50
40:i:46:ALA:HB1	40:i:77:ILE:HG21	1.92	0.50
46:o:66:LEU:O	46:o:70:LEU:N	2.27	0.50
46:o:79:ARG:HA	46:o:82:ILE:CG1	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:z:58:A:OP1	55:z:58:A:H3'	2.11	0.50
55:z:61:C:O2'	55:z:62:C:H5'	2.12	0.50
1:A:180:G:P	29:7:32:LYS:HE3	2.52	0.49
1:A:272(R):G:O2'	1:A:272(S):G:H5'	2.12	0.49
1:A:381:G:H5''	23:1:16:ASN:HD22	1.76	0.49
1:A:523:C:H5''	1:A:540:C:O2'	2.11	0.49
1:A:595:C:O2'	1:A:596:G:H5'	2.12	0.49
1:A:769:G:O2'	1:A:770:G:H5'	2.12	0.49
1:A:815:C:H2'	1:A:816:C:C6	2.47	0.49
1:A:1073:A:O2'	1:A:1074:G:H5''	2.12	0.49
1:A:1182:A:H2'	1:A:1183:G:C8	2.47	0.49
1:A:1331:A:H2'	1:A:1333:C:C5	2.47	0.49
1:A:1475:G:H2'	1:A:1476:C:H6	1.77	0.49
1:A:1823:G:O2'	1:A:1824:G:H5'	2.12	0.49
1:A:1922:G:O2'	1:A:1923:U:H5'	2.12	0.49
1:A:1949:G:H2'	1:A:1950:G:C8	2.47	0.49
1:A:2019:A:O3'	16:U:27:LEU:HD12	2.12	0.49
1:A:2142:C:H2'	1:A:2143:C:O4'	2.12	0.49
1:A:2331:G:H4'	22:O:43:THR:H	1.76	0.49
1:A:2361:A:OP2	30:8:26:LYS:NZ	2.27	0.49
1:A:2393:A:H4'	11:P:62:LEU:O	2.12	0.49
1:A:2636:U:C4	1:A:2782:G:O6	2.64	0.49
1:A:2694:G:H2'	1:A:2695:C:H6	1.77	0.49
1:A:2867:G:C6	15:T:23:ARG:HD2	2.47	0.49
3:D:33:LEU:HB2	3:D:104:TYR:HE2	1.77	0.49
4:E:134:ILE:HA	4:E:137:HIS:CD2	2.36	0.49
5:F:160:ASN:OD1	5:F:162:LEU:HB2	2.11	0.49
8:I:41:GLU:O	8:I:45:LYS:HG3	2.12	0.49
8:I:83:ALA:HB1	8:I:88:ILE:HA	1.92	0.49
9:N:18:ALA:HB2	9:N:54:VAL:CG1	2.41	0.49
10:O:8:LEU:HB2	10:O:19:ILE:CG1	2.42	0.49
11:P:84:ASN:CB	11:P:117:GLU:HB2	2.42	0.49
11:P:90:ARG:HG3	11:P:91:PHE:CE1	2.46	0.49
14:S:3:ARG:HE	14:S:4:LEU:H	1.59	0.49
14:S:23:ARG:HG2	14:S:85:VAL:HA	1.93	0.49
14:S:83:LYS:HB3	14:S:111:GLU:CD	2.37	0.49
18:W:11:ARG:O	18:W:11:ARG:HD3	2.12	0.49
32:a:66:G:H1	32:a:172:A:H2	1.60	0.49
32:a:99:U:H2'	51:t:18:GLN:HG3	1.91	0.49
32:a:119:A:H4'	32:a:120:A:C4	2.47	0.49
32:a:367:U:O2'	32:a:368:U:H4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:426:G:OP1	35:d:36:ARG:HD2	2.11	0.49
32:a:628:G:H2'	32:a:629:G:C8	2.47	0.49
32:a:742:G:H2'	32:a:743:U:O4'	2.12	0.49
32:a:1082:G:O2'	32:a:1083:U:H5'	2.12	0.49
32:a:1253:G:H2'	32:a:1254:C:C6	2.47	0.49
32:a:1362:C:C2'	32:a:1363(A):C:H5''	2.42	0.49
32:a:1384:C:H2'	32:a:1385:G:O4'	2.12	0.49
32:a:1414:U:H2'	32:a:1415:G:C8	2.44	0.49
34:c:157:ILE:HD12	34:c:164:ARG:HB3	1.94	0.49
35:d:163:GLU:CA	35:d:166:LYS:HG2	2.40	0.49
39:h:27:PRO:HA	39:h:58:TYR:HD1	1.76	0.49
39:h:30:ARG:HA	39:h:33:GLU:CD	2.37	0.49
41:j:40:LEU:HB2	41:j:69:ASN:CB	2.42	0.49
44:m:49:THR:O	44:m:53:VAL:HG23	2.12	0.49
48:q:29:HIS:N	48:q:34:LYS:O	2.43	0.49
49:r:66:LEU:HG	49:r:70:ILE:HD11	1.93	0.49
54:C:29:VAL:CG2	54:C:41:VAL:HG22	2.41	0.49
1:A:9:U:O2'	1:A:10:G:OP1	2.24	0.49
1:A:80:G:O2'	1:A:81:G:H5'	2.12	0.49
1:A:129:C:H2'	1:A:130:C:H6	1.75	0.49
1:A:442:G:O4'	5:F:46:ARG:HG3	2.12	0.49
1:A:494:G:H2'	1:A:495:G:C8	2.47	0.49
1:A:618:C:H2'	1:A:619:G:O4'	2.11	0.49
1:A:690:G:H2'	1:A:691:C:H6	1.76	0.49
1:A:691:C:H2'	1:A:692:C:C6	2.46	0.49
1:A:797:C:OP1	5:F:62:ARG:HB2	2.11	0.49
1:A:875:G:H2'	1:A:876:C:C6	2.47	0.49
1:A:1402:C:C3'	1:A:1403:C:H5''	2.41	0.49
1:A:1502:C:O2'	1:A:1503:U:H5'	2.13	0.49
1:A:1662:C:O2'	1:A:2687:U:OP1	2.30	0.49
1:A:1747(B):G:O2'	1:A:1748:G:H5'	2.12	0.49
1:A:2013:A:H2	18:W:88:ARG:HH22	1.59	0.49
1:A:2285:C:OP2	28:6:6:ARG:NH1	2.46	0.49
1:A:2418:A:H2'	1:A:2419:U:O4'	2.12	0.49
1:A:2552:2MU:H6'2	1:A:2553:G:O5'	2.13	0.49
1:A:2843:G:H2'	1:A:2844:G:H8	1.77	0.49
3:D:146:GLU:HA	3:D:152:GLY:O	2.11	0.49
4:E:19:ARG:NH1	10:O:72:PRO:HB3	2.27	0.49
6:G:73:ALA:N	6:G:86:MET:O	2.45	0.49
6:G:107:LEU:HD11	6:G:178:PHE:CE1	2.47	0.49
8:I:77:LEU:O	8:I:143:SER:OG	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:S:74:ALA:O	14:S:78:LEU:HG	2.12	0.49
15:T:106:SER:O	15:T:110:ILE:HG13	2.12	0.49
19:X:1:MET:CE	24:2:26:ARG:HB2	2.42	0.49
20:Y:73:ARG:HH12	20:Y:84:ARG:HG3	1.77	0.49
23:1:50:ARG:HG2	23:1:59:THR:CG2	2.30	0.49
32:a:100:C:H3'	51:t:17:ARG:NH2	2.26	0.49
32:a:189(K):G:H2'	32:a:189(L):U:C6	2.47	0.49
32:a:401:C:O2'	32:a:402:G:H5'	2.13	0.49
32:a:418:C:O2'	32:a:419:C:H5'	2.12	0.49
32:a:660:G:OP1	46:o:5:LYS:HG2	2.11	0.49
32:a:663:A:H5''	49:r:61:LYS:HZ2	1.77	0.49
32:a:665:A:H1'	32:a:733:A:H5'	1.94	0.49
32:a:678:U:H2'	32:a:679:C:H6	1.77	0.49
32:a:992:U:O4	32:a:1044:A:N7	2.45	0.49
32:a:1148:U:H2'	32:a:1149:C:O4'	2.11	0.49
32:a:1251:A:H2'	32:a:1252:A:C8	2.46	0.49
32:a:1532:U:OP2	32:a:1533:C:H5'	2.12	0.49
34:c:116:VAL:O	34:c:120:VAL:HG23	2.12	0.49
36:e:5:ASP:HB2	56:x:55:A:H5''	1.93	0.49
37:f:86:ARG:O	37:f:87:ARG:HD3	2.12	0.49
38:g:75:VAL:HB	38:g:86:GLN:HB3	1.94	0.49
41:j:11:PHE:CE1	41:j:67:THR:HG22	2.47	0.49
42:k:17:GLY:HA2	42:k:35:PRO:HG3	1.94	0.49
42:k:82:VAL:O	42:k:109:VAL:HG12	2.12	0.49
48:q:5:VAL:HG22	48:q:60:ILE:HG13	1.93	0.49
50:s:50:ALA:HA	50:s:58:VAL:O	2.13	0.49
54:C:86:ALA:HB3	54:C:94:VAL:HG11	1.94	0.49
1:A:70:G:O4'	1:A:73:A:H1'	2.12	0.49
1:A:143(A):G:H1'	19:X:37:THR:CG2	2.43	0.49
1:A:528:A:O2'	1:A:529:A:H5'	2.12	0.49
1:A:565:C:O2'	1:A:566:U:H5'	2.12	0.49
1:A:623:G:O2'	1:A:624:C:H5'	2.12	0.49
1:A:686:G:H1	29:7:16:HIS:CD2	2.30	0.49
1:A:740:U:H5''	1:A:1784:A:H3'	1.94	0.49
1:A:842:G:O2'	1:A:843:G:H5'	2.12	0.49
1:A:921:G:O2'	1:A:922:U:H5'	2.12	0.49
1:A:1008:C:H4'	16:U:59:ARG:NH2	2.27	0.49
1:A:1144:G:H2'	1:A:1145:C:H6	1.76	0.49
1:A:1184:G:O2'	1:A:1185:C:H5'	2.11	0.49
1:A:1421:G:O2'	1:A:1422:G:H5'	2.13	0.49
1:A:1591:G:O2'	1:A:1592:C:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1705:G:O2'	1:A:1706:U:H5'	2.12	0.49
1:A:2399:G:H2'	1:A:2400:G:C8	2.47	0.49
1:A:2675:A:O2'	1:A:2676:C:H5'	2.11	0.49
1:A:2751:G:C5	7:H:3:ARG:HB2	2.47	0.49
2:B:73:A:H2'	2:B:74:U:H5'	1.94	0.49
3:D:245:PRO:HB3	3:D:253:GLN:NE2	2.27	0.49
5:F:39:TRP:NE1	5:F:99:TYR:O	2.39	0.49
5:F:125:LEU:HD21	5:F:199:TRP:CE3	2.47	0.49
6:G:47:LYS:HB2	6:G:86:MET:SD	2.52	0.49
7:H:33:LEU:HD23	7:H:136:ILE:CG2	2.42	0.49
10:O:61:VAL:HG11	10:O:114:ILE:CD1	2.42	0.49
10:O:105:GLU:HG3	10:O:108:GLU:OE1	2.12	0.49
11:P:101:VAL:HG22	11:P:106:LEU:O	2.12	0.49
14:S:62:LYS:HB3	14:S:97:ARG:NE	2.27	0.49
32:a:189(C):C:H2'	32:a:189(D):C:H6	1.76	0.49
32:a:284:G:O2'	32:a:285:G:H5'	2.12	0.49
32:a:502:G:OP1	43:l:118:SER:OG	2.27	0.49
32:a:517:G:N2	32:a:531:U:H5'	2.27	0.49
32:a:1014:A:H8	32:a:1219:U:H4'	1.77	0.49
32:a:1119:C:O2'	32:a:1120:G:H5'	2.12	0.49
32:a:1240:U:OP2	38:g:116:ALA:N	2.35	0.49
32:a:1372:U:H5''	40:i:71:SER:CB	2.39	0.49
33:b:55:PHE:HA	33:b:58:ILE:HB	1.93	0.49
33:b:84:GLU:HB3	33:b:219:VAL:HG21	1.93	0.49
33:b:167:PRO:O	33:b:171:ALA:N	2.45	0.49
34:c:70:VAL:O	34:c:105:GLU:HA	2.12	0.49
34:c:114:PRO:O	34:c:118:GLN:HG3	2.12	0.49
37:f:51:PRO:HA	37:f:55:ASP:O	2.12	0.49
37:f:60:PHE:O	37:f:61:LEU:HD12	2.11	0.49
39:h:121:ASP:OD1	39:h:122:ARG:N	2.45	0.49
40:i:24:GLY:HA2	40:i:59:PHE:O	2.11	0.49
40:i:49:PRO:HG2	40:i:81:ILE:HG21	1.93	0.49
43:l:42:THR:CG2	43:l:54:LYS:HG3	2.42	0.49
43:l:53:ARG:HB3	43:l:93:LEU:HD11	1.94	0.49
49:r:59:SER:OG	49:r:62:GLU:N	2.30	0.49
51:t:16:HIS:CE1	51:t:20:LEU:HD11	2.47	0.49
54:C:156:ILE:HG12	54:C:160:ARG:NH2	2.27	0.49
55:z:62:C:H2'	55:z:63:G:H8	1.73	0.49
1:A:116:C:H1'	1:A:127:A:H1'	1.93	0.49
1:A:363(A):G:O2'	1:A:363(B):A:H5'	2.13	0.49
1:A:372:G:N2	1:A:400:G:H2'	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:401:A:H2'	1:A:402:A:C8	2.47	0.49
1:A:1034:G:O2'	1:A:1035:U:H5'	2.12	0.49
1:A:1035:U:H2'	1:A:1036:G:C8	2.46	0.49
1:A:1263:U:O4'	27:5:10:LYS:HE3	2.11	0.49
1:A:1297:C:H2'	1:A:1298:C:H6	1.77	0.49
1:A:1824:G:O3'	3:D:249:PRO:HD3	2.11	0.49
1:A:2544:G:O2'	1:A:2545:G:H5'	2.11	0.49
1:A:2649:U:H2'	1:A:2650:U:H6	1.78	0.49
3:D:70:TRP:HB3	3:D:190:TYR:CE2	2.47	0.49
5:F:34:TRP:CZ3	11:P:8:PRO:HB3	2.47	0.49
5:F:133:ASN:O	5:F:162:LEU:HD12	2.12	0.49
5:F:156:LEU:N	5:F:174:VAL:O	2.26	0.49
6:G:111:LEU:HD23	6:G:114:ILE:HD11	1.94	0.49
11:P:95:VAL:HG22	11:P:125:VAL:HG12	1.94	0.49
11:P:121:LYS:HG3	11:P:122:PRO:HD2	1.93	0.49
14:S:61:ASN:O	14:S:65:VAL:HG23	2.12	0.49
14:S:66:ALA:O	14:S:101:LEU:HA	2.12	0.49
17:V:25:LEU:HB2	17:V:92:THR:HG21	1.95	0.49
23:1:57:GLU:O	23:1:58:ILE:HD13	2.11	0.49
32:a:23:C:O2'	32:a:24:U:H5'	2.13	0.49
32:a:42:G:H2'	32:a:43:C:H6	1.77	0.49
32:a:381:C:H2'	32:a:382:A:O4'	2.12	0.49
32:a:875:C:O2'	39:h:14:ARG:HD2	2.11	0.49
32:a:885:G:O2'	32:a:886:G:H5'	2.12	0.49
32:a:1053:G:O5'	32:a:1054:C:H3'	2.13	0.49
32:a:1079:G:H2'	32:a:1080:A:C8	2.48	0.49
32:a:1508:G:H2'	32:a:1509:C:C6	2.47	0.49
32:a:1540:U:H5''	32:a:1541:U:H5''	1.95	0.49
35:d:108:LEU:CG	35:d:176:LEU:HD13	2.42	0.49
36:e:82:VAL:HG21	36:e:138:ALA:CA	2.42	0.49
37:f:67:MET:SD	37:f:72:VAL:HG12	2.52	0.49
38:g:16:LEU:HD11	40:i:45:ALA:CB	2.41	0.49
38:g:111:ARG:NH2	38:g:123:GLU:HA	2.23	0.49
41:j:79:ARG:HA	41:j:82:ILE:CB	2.42	0.49
44:m:15:VAL:HG11	44:m:48:LEU:HD21	1.94	0.49
44:m:65:LYS:CD	44:m:69:GLU:HG2	2.42	0.49
47:p:22:THR:HA	47:p:33:ILE:HD12	1.95	0.49
49:r:25:THR:O	49:r:26:LEU:HD22	2.12	0.49
53:y:50:U:H2'	53:y:51:C:H6	1.76	0.49
56:x:4:G:H2'	56:x:5:G:C1'	2.43	0.49
1:A:112:U:H5'	24:2:65:ASN:ND2	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:323:G:H2'	5:F:169:ASN:ND2	2.27	0.49
1:A:558:G:O2'	1:A:559:G:H5'	2.12	0.49
1:A:652(E):C:H2'	1:A:652(F):G:C8	2.48	0.49
1:A:972:G:OP2	1:A:974:G:H2'	2.12	0.49
1:A:1130:U:O2	1:A:2025:C:H5''	2.12	0.49
1:A:1218:C:OP2	16:U:15:LYS:NZ	2.44	0.49
1:A:1429:G:H1'	1:A:1568:G:H1'	1.95	0.49
1:A:1539:G:H2'	1:A:1540:U:O4'	2.12	0.49
1:A:1637:A:H2'	1:A:1638:C:C6	2.47	0.49
1:A:1995:U:OP2	1:A:1996:C:O2'	2.26	0.49
1:A:2020:A:H4'	16:U:25:TRP:HZ3	1.76	0.49
1:A:2112:G:H3'	1:A:2112:G:OP1	2.12	0.49
1:A:2119:A:OP1	1:A:2119:A:H2'	2.13	0.49
1:A:2125:G:N2	1:A:2172:U:H3'	2.25	0.49
1:A:2163:C:H3'	1:A:2164:C:H6	1.76	0.49
1:A:2194:G:C2'	1:A:2195:C:H5'	2.43	0.49
1:A:2508:G:H1	1:A:2580:U:H3	1.61	0.49
4:E:77:ILE:HG21	4:E:195:LEU:CD2	2.43	0.49
4:E:151:TYR:CD1	9:N:79:PRO:HG3	2.47	0.49
5:F:14:PRO:HD3	5:F:128:ALA:HB3	1.94	0.49
5:F:125:LEU:HD11	5:F:199:TRP:CD2	2.48	0.49
6:G:66:GLN:HG3	26:4:6:HIS:ND1	2.28	0.49
7:H:30:LYS:HG3	7:H:81:GLU:HA	1.94	0.49
9:N:20:GLY:O	9:N:61:ARG:NH2	2.25	0.49
10:O:8:LEU:HB2	10:O:19:ILE:HG13	1.94	0.49
15:T:19:LEU:HD13	15:T:86:ILE:CD1	2.43	0.49
17:V:1:MET:O	17:V:15:GLU:HG2	2.13	0.49
18:W:6:ILE:HA	18:W:103:ILE:O	2.11	0.49
18:W:59:VAL:O	18:W:63:ASP:HA	2.13	0.49
20:Y:99:CYS:HB3	20:Y:104:GLY:N	2.27	0.49
22:O:8:GLY:N	53:y:2:G:H5''	2.27	0.49
32:a:68:G:H5'	32:a:76:C:C2'	2.42	0.49
32:a:600:C:O2'	32:a:601:C:H5'	2.13	0.49
32:a:785:G:O2'	32:a:786:G:H5'	2.12	0.49
32:a:790:A:H2'	32:a:791:G:C8	2.47	0.49
32:a:793:U:H5'	32:a:794:A:H5''	1.95	0.49
32:a:933:G:N7	38:g:3:ARG:NE	2.61	0.49
32:a:1256:A:H61	32:a:1278:U:H4'	1.76	0.49
32:a:1401:G:O6	32:a:1504:G:N2	2.45	0.49
32:a:1530:G:H2'	32:a:1531:A:C8	2.48	0.49
33:b:9:GLU:HG3	33:b:11:LEU:HD23	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:b:12:GLU:HA	33:b:15:VAL:O	2.12	0.49
35:d:156:GLU:O	35:d:160:GLN:HG3	2.13	0.49
36:e:75:THR:HB	36:e:117:ASP:HB2	1.93	0.49
37:f:22:GLU:HA	37:f:25:ILE:HD12	1.93	0.49
38:g:20:ASP:OD1	38:g:21:VAL:N	2.45	0.49
38:g:57:GLU:HB3	38:g:60:LYS:CB	2.42	0.49
39:h:26:VAL:CG2	39:h:59:LEU:HB2	2.42	0.49
39:h:112:LEU:HB2	39:h:133:LEU:HA	1.94	0.49
42:k:22:HIS:HA	42:k:85:ARG:O	2.13	0.49
44:m:15:VAL:CG2	44:m:41:PRO:HA	2.42	0.49
48:q:12:SER:HB3	48:q:20:THR:OG1	2.11	0.49
53:y:22:G:O2'	53:y:23:C:H5'	2.12	0.49
53:y:58:A:O2'	53:y:61:C:N4	2.44	0.49
54:C:50:ASP:OD2	54:C:53:ARG:HG2	2.11	0.49
54:C:66:HIS:CE1	54:C:184:LYS:HA	2.48	0.49
55:z:19:G:H4'	55:z:57:G:H22	1.78	0.49
55:z:23:A:H2'	55:z:24:G:C8	2.48	0.49
1:A:196:A:O4'	11:P:46:LYS:HD2	2.13	0.49
1:A:409:C:H2'	1:A:410:G:H8	1.78	0.49
1:A:725:G:H2'	1:A:726:G:C8	2.47	0.49
1:A:735:A:H2'	1:A:736:C:H5'	1.94	0.49
1:A:813:U:H2'	1:A:814:C:H6	1.77	0.49
1:A:902:C:H2'	1:A:903:C:H6	1.78	0.49
1:A:1044:G:H5'	1:A:1045:A:OP1	2.13	0.49
1:A:1241:A:O2'	1:A:1242:A:H5'	2.13	0.49
1:A:1408:C:O2'	1:A:1409:C:H5'	2.12	0.49
1:A:1495:A:C2	1:A:1578:U:H1'	2.47	0.49
1:A:1747(A):G:O2'	1:A:1747(B):G:H5'	2.12	0.49
1:A:1748:G:O2'	1:A:1749:A:H5'	2.13	0.49
1:A:1947:C:H2'	1:A:1948:G:H8	1.75	0.49
1:A:1999:C:H2'	1:A:2000:G:C8	2.48	0.49
1:A:2197:U:H1'	1:A:2198:A:C2	2.48	0.49
1:A:2474:C:H3'	1:A:2475:C:C5	2.47	0.49
1:A:2543:G:O2'	1:A:2544:G:H5'	2.13	0.49
1:A:2765:A:H5'	1:A:2766:G:OP2	2.12	0.49
1:A:2810:A:C4'	4:E:61:ARG:HD3	2.43	0.49
2:B:60:C:H2'	2:B:61:G:H8	1.77	0.49
4:E:9:VAL:HG22	4:E:25:VAL:C	2.37	0.49
4:E:73:GLU:CD	4:E:74:PRO:HD2	2.37	0.49
7:H:149:ARG:HD3	7:H:154:PRO:HD3	1.94	0.49
10:O:64:ARG:HE	10:O:83:ALA:HB3	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:P:124:LYS:O	11:P:124:LYS:HD3	2.13	0.49
14:S:14:VAL:HG21	14:S:90:GLY:O	2.11	0.49
17:V:4:ILE:O	17:V:38:LEU:N	2.39	0.49
18:W:36:LEU:HD13	18:W:48:ALA:CA	2.41	0.49
20:Y:19:LYS:HE3	20:Y:20:TYR:CE1	2.47	0.49
23:1:80:LEU:HB3	23:1:82:LEU:CD2	2.40	0.49
24:2:65:ASN:O	24:2:69:ARG:HG3	2.13	0.49
32:a:90:U:H2'	32:a:91:C:C6	2.47	0.49
32:a:338:A:H2'	32:a:339:C:H6	1.75	0.49
32:a:575:G:OP1	32:a:575:G:H4'	2.12	0.49
32:a:691:G:P	42:k:26:ASN:HD22	2.36	0.49
32:a:697:U:H4'	32:a:786:G:H4'	1.93	0.49
32:a:1004:A:H3'	32:a:1005:A:O4'	2.12	0.49
32:a:1140:C:H2'	32:a:1141:C:H6	1.76	0.49
32:a:1179:A:H4'	40:i:103:THR:HA	1.95	0.49
32:a:1494:G:O2'	32:a:1495:U:H5'	2.12	0.49
33:b:78:GLN:O	33:b:94:ASN:ND2	2.45	0.49
35:d:67:ILE:HG22	35:d:68:TYR:CD1	2.47	0.49
36:e:71:LEU:HD13	36:e:75:THR:O	2.11	0.49
36:e:91:LEU:HD21	36:e:110:LEU:HD11	1.94	0.49
37:f:12:PRO:HA	37:f:59:TYR:HB2	1.94	0.49
38:g:20:ASP:OD1	38:g:22:LEU:N	2.43	0.49
44:m:10:PRO:HG2	44:m:21:TYR:HE2	1.77	0.49
48:q:43:LEU:HD12	48:q:68:ARG:HG2	1.95	0.49
53:y:2:G:H2'	53:y:3:C:C6	2.47	0.49
54:C:22:ILE:HG21	54:C:190:ARG:CG	2.41	0.49
54:C:59:ARG:O	54:C:141:LYS:HE3	2.12	0.49
54:C:85:GLU:O	54:C:150:GLY:HA3	2.11	0.49
55:z:11:C:H2'	55:z:12:U:H6	1.76	0.49
1:A:195:A:H4'	1:A:196:A:OP2	2.12	0.49
1:A:227:A:C2	1:A:2407:G:H1'	2.48	0.49
1:A:273(F):G:O2'	1:A:273(G):C:H5'	2.13	0.49
1:A:297:C:O3'	20:Y:87:LYS:HB2	2.12	0.49
1:A:573:G:OP2	17:V:78:LYS:NZ	2.27	0.49
1:A:600:G:H2'	1:A:601:C:H6	1.77	0.49
1:A:666:G:H2'	1:A:667:U:H6	1.78	0.49
1:A:923:C:O2'	1:A:924:C:H5'	2.11	0.49
1:A:958:U:O4	12:Q:17:LEU:HD11	2.13	0.49
1:A:1063:G:N2	1:A:1076:C:O3'	2.45	0.49
1:A:1250:G:OP2	11:P:18:ARG:NH2	2.45	0.49
1:A:1466:G:H2'	1:A:1547:C:H41	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1654:A:N6	1:A:2006:C:O4'	2.46	0.49
1:A:1666:G:O2'	1:A:1667:G:H5'	2.12	0.49
1:A:1672:C:H5''	1:A:2554:U:OP1	2.12	0.49
1:A:1685:C:H2'	1:A:1686:C:H6	1.77	0.49
1:A:1792:G:O2'	1:A:1793:C:H5'	2.12	0.49
1:A:1794:U:H2'	1:A:1795:C:H6	1.77	0.49
1:A:1949:G:O2'	1:A:1950:G:H5'	2.12	0.49
1:A:2052:G:O2'	1:A:2053:G:H5'	2.12	0.49
1:A:2181:G:OP1	55:z:17:C:N4	2.46	0.49
1:A:2773:C:O2'	1:A:2774:C:H5'	2.13	0.49
4:E:110:GLY:HA3	4:E:162:ALA:HB2	1.95	0.49
7:H:123:PHE:CD1	7:H:133:VAL:HG22	2.47	0.49
12:Q:3:MET:HB2	12:Q:93:TYR:CD2	2.47	0.49
12:Q:109:VAL:HG12	12:Q:110:THR:O	2.13	0.49
15:T:60:THR:HG22	15:T:77:PRO:HA	1.93	0.49
16:U:112:ARG:HA	16:U:115:ALA:CB	2.42	0.49
17:V:1:MET:SD	17:V:42:GLY:HA3	2.53	0.49
17:V:34:GLU:C	17:V:35:LEU:HD12	2.38	0.49
17:V:61:VAL:HG12	17:V:94:LEU:CD2	2.42	0.49
22:O:74:ARG:NH1	22:O:75:LEU:HD21	2.28	0.49
23:1:82:LEU:C	23:1:85:LEU:HD13	2.37	0.49
25:3:7:LYS:HB3	25:3:55:ARG:HB3	1.94	0.49
26:4:63:TYR:CD1	50:s:5:LEU:HB2	2.48	0.49
32:a:22:G:H4'	32:a:885:G:C8	2.48	0.49
32:a:100:C:H3'	51:t:17:ARG:HH22	1.78	0.49
32:a:101:A:C2	32:a:152:A:H4'	2.47	0.49
32:a:224:C:H2'	32:a:225:C:C6	2.47	0.49
32:a:429:U:C4'	32:a:430:A:H5'	2.39	0.49
32:a:568:G:O2'	32:a:574:A:N1	2.41	0.49
32:a:749:C:H2'	32:a:750:G:H8	1.77	0.49
32:a:830:G:H2'	32:a:831:U:O4'	2.12	0.49
32:a:884:U:H4'	32:a:885:G:C5'	2.43	0.49
32:a:978:A:C2'	32:a:979:C:H5'	2.43	0.49
32:a:1000:U:O3'	32:a:1001(A):A:H5'	2.13	0.49
32:a:1023:G:H2'	32:a:1023:G:N3	2.28	0.49
32:a:1297:C:OP1	44:m:44:ARG:NH1	2.46	0.49
32:a:1332:A:H2'	32:a:1333:A:C8	2.47	0.49
32:a:1362:C:H2'	32:a:1363(A):C:H5''	1.95	0.49
34:c:82:GLU:HA	34:c:85:ARG:NH2	2.27	0.49
39:h:26:VAL:O	39:h:58:TYR:HA	2.13	0.49
39:h:32:LYS:O	39:h:36:LEU:HG	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:i:9:ARG:N	40:i:79:LEU:HD23	2.28	0.49
46:o:4:THR:HG22	46:o:7:GLU:CG	2.42	0.49
50:s:36:ARG:HH11	50:s:53:ASN:HA	1.76	0.49
54:C:10:LEU:HD11	54:C:34:THR:OG1	2.13	0.49
54:C:46:LYS:O	54:C:210:ARG:N	2.45	0.49
54:C:52:ARG:HH22	55:z:61:C:H4'	1.77	0.49
55:z:41:C:O2'	55:z:42:C:H5'	2.12	0.49
1:A:26:G:H2'	1:A:27:G:O4'	2.11	0.49
1:A:50:U:H3'	1:A:51:G:H5'	1.95	0.49
1:A:151:C:H2'	1:A:152:G:H8	1.78	0.49
1:A:248:G:N3	1:A:2431:U:H4'	2.28	0.49
1:A:251:A:C5	1:A:252:G:H1'	2.47	0.49
1:A:252:G:P	11:P:50:ARG:HH22	2.36	0.49
1:A:272(A):A:H62	1:A:272(W):G:H21	1.61	0.49
1:A:650:C:H4'	30:8:17:THR:HG21	1.93	0.49
1:A:711:G:O2'	1:A:712:G:H5'	2.13	0.49
1:A:848:G:H1'	1:A:934:G:O4'	2.12	0.49
1:A:933:A:C2'	1:A:934:G:H5'	2.42	0.49
1:A:996:A:H4'	16:U:91:ASP:OD2	2.12	0.49
1:A:1114:G:H2'	1:A:1115:G:H8	1.78	0.49
1:A:1164:G:H2'	1:A:1165:U:C6	2.47	0.49
1:A:1233:C:H2'	1:A:1234:U:H6	1.77	0.49
1:A:1260:G:H2'	1:A:1261:C:C6	2.48	0.49
1:A:1387:C:H2'	1:A:1388:G:H8	1.77	0.49
1:A:1419:A:H1'	1:A:1420:U:H5	1.77	0.49
1:A:1988:C:H2'	1:A:1989:G:H8	1.77	0.49
1:A:2025:C:H2'	1:A:2026:C:H6	1.74	0.49
1:A:2124:G:H5'	54:C:174:PRO:HG3	1.95	0.49
1:A:2142:C:H2'	1:A:2143:C:C6	2.48	0.49
1:A:2202:C:N4	1:A:2222:G:O6	2.45	0.49
1:A:2313:C:H2'	1:A:2314:C:H6	1.78	0.49
1:A:2403:C:O2'	1:A:2404:C:H5'	2.13	0.49
1:A:2591:C:P	3:D:239:ARG:HB2	2.52	0.49
1:A:2674:G:O3'	10:O:30:ALA:HA	2.13	0.49
1:A:2737:G:O2'	1:A:2738:A:H5'	2.12	0.49
2:B:104:U:O2'	21:Z:72:ARG:HG2	2.12	0.49
4:E:84:PHE:CZ	4:E:86:PRO:HB3	2.48	0.49
4:E:172:VAL:CG1	4:E:182:LEU:HD11	2.39	0.49
5:F:134:GLY:HA3	5:F:162:LEU:HD12	1.95	0.49
5:F:195:ASP:OD1	5:F:196:LEU:N	2.43	0.49
7:H:54:ARG:HB3	7:H:65:HIS:HB2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:H:124:GLU:OE1	7:H:132:ARG:HD2	2.12	0.49
10:O:97:ARG:HD3	32:a:339:C:OP1	2.13	0.49
12:Q:119:ARG:N	12:Q:131:ILE:HD11	2.27	0.49
32:a:52:G:H2'	32:a:53:A:C8	2.47	0.49
32:a:432:A:H3'	32:a:433:C:C6	2.47	0.49
32:a:1224:G:O2'	50:s:78:ARG:NH1	2.43	0.49
32:a:1282:C:H2'	32:a:1283:G:O4'	2.13	0.49
32:a:1457:G:O3'	51:t:35:THR:HG21	2.13	0.49
34:c:58:GLU:HB3	41:j:92:THR:HG21	1.94	0.49
40:i:70:LYS:O	40:i:74:ILE:N	2.42	0.49
41:j:7:LYS:HD3	41:j:97:GLU:HG3	1.95	0.49
41:j:38:ILE:HG13	41:j:71:LEU:HB3	1.94	0.49
48:q:61:GLU:HA	48:q:71:PHE:HD1	1.75	0.49
54:C:46:LYS:CG	54:C:210:ARG:HB2	2.43	0.49
1:A:246:C:H2'	1:A:247:G:H5'	1.95	0.49
1:A:272(D):G:O2'	1:A:272(E):U:H5'	2.13	0.49
1:A:273(I):C:H2'	1:A:273(J):U:H6	1.78	0.49
1:A:511:U:H2'	1:A:512:G:O4'	2.13	0.49
1:A:521:G:H2'	1:A:522:G:C8	2.48	0.49
1:A:537:C:H1'	9:N:45:ASN:ND2	2.25	0.49
1:A:689:A:O2'	1:A:690:G:H5'	2.12	0.49
1:A:690:G:O2'	3:D:43:ARG:NH2	2.41	0.49
1:A:865:C:H4'	1:A:866:A:OP1	2.13	0.49
1:A:932:G:H4'	1:A:933:A:O5'	2.13	0.49
1:A:1048:A:H2'	1:A:1049:C:C6	2.48	0.49
1:A:1052:C:H2'	1:A:1053:C:C1'	2.42	0.49
1:A:1067:A:H4'	1:A:1068:G:OP2	2.08	0.49
1:A:1081:U:H2'	1:A:1082:U:H5''	1.95	0.49
1:A:1257:C:O2'	1:A:1258:C:H5'	2.12	0.49
1:A:1266:G:OP2	27:5:19:ARG:HD2	2.13	0.49
1:A:1670:C:H3'	1:A:1671:U:C6	2.47	0.49
1:A:1947:C:O2'	1:A:1948:G:H5'	2.13	0.49
1:A:2085:C:H2'	1:A:2086:U:O4'	2.13	0.49
1:A:2308:G:H3'	1:A:2309:A:H3'	1.94	0.49
1:A:2507:C:C2'	1:A:2508:G:H5'	2.43	0.49
1:A:2520:C:O2'	1:A:2521:C:H5'	2.13	0.49
1:A:2832:U:H1'	1:A:2833:G:OP2	2.13	0.49
6:G:46:ALA:HB2	6:G:53:LEU:CD1	2.42	0.49
6:G:67:LYS:HD2	6:G:68:PRO:O	2.13	0.49
9:N:66:LYS:O	9:N:87:LEU:HD13	2.13	0.49
10:O:49:ARG:HH22	32:a:1423:G:H5''	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:O:106:LEU:HB3	10:O:111:PHE:HB2	1.95	0.49
12:Q:67:ARG:O	12:Q:101:ARG:NH2	2.44	0.49
14:S:74:ALA:HB3	14:S:108:GLY:HA3	1.93	0.49
17:V:33:VAL:HG22	17:V:59:ALA:O	2.13	0.49
17:V:66:ARG:NH2	17:V:88:ARG:HD3	2.27	0.49
20:Y:11:ASP:O	20:Y:27:VAL:HG23	2.13	0.49
20:Y:47:LYS:HD3	20:Y:48:ALA:O	2.12	0.49
26:4:10:VAL:O	26:4:25:TYR:HA	2.12	0.49
26:4:41:PRO:O	26:4:46:GLN:HA	2.13	0.49
30:8:32:LEU:O	30:8:36:LYS:HE3	2.12	0.49
32:a:237:C:H2'	32:a:238:G:C8	2.48	0.49
32:a:441:A:H3'	32:a:442:C:C6	2.45	0.49
32:a:696:A:O2'	32:a:697:U:H5'	2.13	0.49
32:a:813:U:C2'	32:a:814:A:H5'	2.43	0.49
32:a:902:G:H2'	32:a:903:G:H8	1.77	0.49
32:a:1006:C:H2'	32:a:1007:C:H6	1.77	0.49
32:a:1011:G:O2'	32:a:1012:U:H5'	2.13	0.49
32:a:1347:G:H5''	40:i:107:ARG:CB	2.43	0.49
32:a:1429:C:O2'	32:a:1430:C:H5'	2.12	0.49
33:b:155:LEU:CD2	33:b:159:PRO:HG3	2.42	0.49
36:e:128:PRO:O	36:e:131:ILE:HB	2.13	0.49
51:t:44:ALA:O	51:t:91:LEU:HB3	2.13	0.49
53:y:4:G:O2'	53:y:5:G:H5'	2.12	0.49
53:y:69:C:H2'	53:y:70:G:C8	2.48	0.49
53:y:76:A:OP1	53:y:76:A:H4'	2.12	0.49
56:x:2:A:H4'	56:x:3:A:H5'	1.94	0.49
1:A:458:G:N2	1:A:469:G:H2'	2.28	0.49
1:A:563:G:H22	1:A:578:A:H2	1.60	0.49
1:A:717:G:H2'	1:A:718:A:O4'	2.13	0.49
1:A:807:U:OP1	11:P:36:LYS:HD3	2.12	0.49
1:A:910:A:N6	12:Q:13:GLN:HG3	2.28	0.49
1:A:1163:G:O2'	1:A:1164:G:H5'	2.13	0.49
1:A:1191:G:H2'	1:A:1192:G:O4'	2.12	0.49
1:A:1214:A:N6	1:A:1235:G:H1'	2.28	0.49
1:A:1283:G:O2'	1:A:1285:G:N7	2.39	0.49
1:A:1300:U:H4'	1:A:1301:A:C5'	2.35	0.49
1:A:1364:G:OP2	23:1:3:LYS:HG3	2.13	0.49
1:A:1913:A:N1	32:a:1492:A:N6	2.60	0.49
1:A:2303:G:H2'	1:A:2304:G:O4'	2.13	0.49
1:A:2422:A:O5'	55:z:76:A:N6	2.45	0.49
1:A:2602:A:OP2	53:y:74:C:H4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:46:ALA:HB2	6:G:53:LEU:HD12	1.95	0.49
6:G:91:ARG:HD2	6:G:92:VAL:N	2.27	0.49
10:O:78:ARG:NH2	15:T:73:GLU:OE1	2.39	0.49
11:P:98:GLU:O	11:P:102:ARG:HG3	2.13	0.49
13:R:18:LEU:HD11	13:R:22:ARG:NE	2.28	0.49
15:T:2:ASN:HB3	15:T:5:ALA:HB3	1.93	0.49
16:U:52:ARG:HG3	16:U:56:ASP:OD2	2.12	0.49
25:3:8:LEU:CD1	25:3:31:LEU:HD13	2.43	0.49
32:a:98:G:H3'	51:t:14:LYS:HG3	1.93	0.49
32:a:114:U:H1'	32:a:353:A:H1'	1.95	0.49
32:a:138:G:O2'	32:a:139:G:H5'	2.12	0.49
32:a:300:A:H1'	32:a:565:U:O2	2.12	0.49
32:a:403:C:H4'	35:d:122:ARG:NH1	2.27	0.49
32:a:542:G:OP1	35:d:10:ARG:NH2	2.46	0.49
32:a:551:U:O2'	32:a:552:U:H5'	2.12	0.49
32:a:597:G:H2'	32:a:598:U:H5'	1.95	0.49
32:a:629:G:C2	32:a:630:G:H1'	2.48	0.49
32:a:1289:A:OP1	52:u:10:ARG:NH2	2.39	0.49
32:a:1350:A:O2'	38:g:33:ASP:OD1	2.23	0.49
33:b:160:ASP:O	33:b:183:PRO:HD2	2.13	0.49
34:c:40:ARG:O	34:c:44:GLU:HB2	2.13	0.49
35:d:23:GLY:O	35:d:26:CYS:HB2	2.12	0.49
39:h:54:ASP:O	39:h:56:LYS:HG2	2.12	0.49
46:o:85:LEU:CB	46:o:87:ILE:HD11	2.43	0.49
47:p:20:VAL:HG23	47:p:34:GLU:O	2.13	0.49
49:r:21:LYS:HB2	49:r:24:ALA:HB2	1.95	0.49
54:C:90:GLY:HA3	54:C:153:ILE:HG22	1.95	0.49
54:C:115:ALA:HB1	54:C:119:VAL:CG2	2.43	0.49
55:z:20:U:H2'	55:z:21:A:H4'	1.95	0.49
55:z:29:G:H2'	55:z:30:G:C8	2.46	0.49
55:z:69:G:H2'	55:z:70:G:C8	2.48	0.49
1:A:111:A:O2'	1:A:112:U:H5'	2.13	0.48
1:A:152:G:O2'	1:A:153:C:H5'	2.12	0.48
1:A:153:C:N4	1:A:154(A):G:O6	2.45	0.48
1:A:240:G:H1'	1:A:257:A:H61	1.78	0.48
1:A:272(L):U:C3'	1:A:272(M):G:H5'	2.42	0.48
1:A:319:C:O2'	1:A:320:A:H5'	2.13	0.48
1:A:360:G:O2'	1:A:361:G:H5'	2.13	0.48
1:A:482:A:N6	1:A:506:G:O2'	2.46	0.48
1:A:602:G:N2	1:A:655:A:OP2	2.43	0.48
1:A:715:G:O2'	1:A:716:A:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:964:C:O2'	1:A:2273:A:H1'	2.12	0.48
1:A:987:G:H2'	1:A:988:A:O4'	2.13	0.48
1:A:1030:G:O2'	1:A:1031:G:H5'	2.12	0.48
1:A:1491:G:O2'	1:A:1492:G:H5'	2.13	0.48
1:A:1642:G:H2'	1:A:1643:G:O4'	2.12	0.48
1:A:1794:U:O2'	1:A:1795:C:H5'	2.13	0.48
1:A:1880:C:O2'	1:A:1881:C:H5'	2.13	0.48
1:A:2097:C:O2'	1:A:2098:U:H5'	2.13	0.48
1:A:2277:G:OP2	22:0:12:ASN:HB2	2.13	0.48
1:A:2295:C:O2'	1:A:2296:U:H5'	2.12	0.48
1:A:2363:C:H2'	1:A:2364:C:H6	1.77	0.48
1:A:2396:G:H5'	23:1:25:LYS:NZ	2.28	0.48
1:A:2514:U:O2'	1:A:2515:C:H5'	2.12	0.48
1:A:2602:A:H4'	1:A:2603:G:O5'	2.13	0.48
1:A:2680:C:H1'	4:E:187:ALA:CB	2.42	0.48
2:B:8:U:OP1	14:S:15:ARG:NH2	2.31	0.48
2:B:60:C:O2'	2:B:61:G:H5'	2.13	0.48
3:D:44:ASN:OD1	3:D:46:GLN:HB2	2.12	0.48
4:E:97:LYS:HB2	4:E:100:GLU:OE2	2.13	0.48
5:F:125:LEU:CD2	5:F:199:TRP:HB2	2.44	0.48
7:H:26:VAL:C	7:H:27:LYS:HD2	2.38	0.48
8:I:5:LEU:HD11	8:I:19:VAL:CG2	2.39	0.48
9:N:29:LYS:HD3	9:N:140:VAL:HB	1.94	0.48
9:N:34:LEU:O	9:N:49:GLY:HA3	2.12	0.48
16:U:14:HIS:HA	16:U:32:PHE:CD1	2.48	0.48
16:U:91:ASP:N	17:V:11:GLN:OE1	2.42	0.48
18:W:29:LEU:HD11	18:W:51:LEU:HD11	1.93	0.48
19:X:28:PHE:O	19:X:78:LYS:HA	2.12	0.48
21:Z:6:LYS:CA	21:Z:60:GLU:HB2	2.34	0.48
22:0:47:PRO:HB3	22:0:51:VAL:HG12	1.94	0.48
32:a:9:G:OP1	36:e:122:GLU:N	2.44	0.48
32:a:33:A:O2'	32:a:34:C:H5'	2.12	0.48
32:a:92:C:H6	32:a:92:C:H5''	1.78	0.48
32:a:161:A:H2'	32:a:162:A:C8	2.48	0.48
32:a:322:C:H2'	32:a:323:U:H6	1.78	0.48
32:a:336:C:H2'	32:a:337:C:C6	2.48	0.48
32:a:604:G:O2'	32:a:605:U:H5'	2.13	0.48
32:a:741:G:O2'	32:a:742:G:H5'	2.13	0.48
32:a:1015:A:H4'	45:n:15:LYS:HZ1	1.78	0.48
32:a:1318:A:OP1	50:s:7:LYS:NZ	2.42	0.48
32:a:1342:C:O2'	32:a:1343:G:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1518:MA6:H2'	32:a:1519:MA6:N9	2.28	0.48
33:b:19:HIS:O	33:b:20:GLU:HG2	2.13	0.48
34:c:140:ARG:O	34:c:144:SER:N	2.45	0.48
35:d:12:CYS:O	35:d:16:GLY:N	2.45	0.48
37:f:48:LEU:HD12	37:f:55:ASP:O	2.12	0.48
41:j:64:GLU:CB	45:n:59:ALA:HB2	2.40	0.48
42:k:85:ARG:HG2	42:k:111:ASP:O	2.12	0.48
44:m:11:ARG:HA	44:m:45:VAL:CB	2.34	0.48
44:m:73:GLU:HG2	44:m:77:ASN:HD21	1.78	0.48
50:s:22:LEU:O	50:s:26:GLY:N	2.46	0.48
54:C:68:LEU:HG	54:C:159:GLY:CA	2.41	0.48
54:C:74:VAL:CG1	54:C:114:VAL:HG22	2.43	0.48
1:A:185:U:H2'	1:A:186:G:H8	1.76	0.48
1:A:187:G:C3'	1:A:188:G:H5''	2.42	0.48
1:A:286:C:O2'	1:A:287:C:H5'	2.13	0.48
1:A:608:A:H2'	1:A:609:A:H8	1.75	0.48
1:A:625:G:N7	11:P:107:LYS:NZ	2.60	0.48
1:A:809:G:H2'	1:A:810:U:C6	2.48	0.48
1:A:863:A:O3'	2:B:101:G:N2	2.45	0.48
1:A:925:C:H2'	1:A:926:A:C8	2.48	0.48
1:A:1402:C:H2'	1:A:1403:C:H5''	1.94	0.48
1:A:1941:C:H2'	1:A:1942:5MC:O4'	2.14	0.48
1:A:1956:U:H2'	1:A:1957:C:H5'	1.95	0.48
1:A:2135:A:H3'	1:A:2136:C:C6	2.48	0.48
1:A:2168:G:H22	1:A:2171:A:H2'	1.78	0.48
1:A:2176:A:H1'	54:C:44:HIS:CD2	2.47	0.48
1:A:2195:C:O2'	1:A:2196:C:H5'	2.13	0.48
1:A:2370:G:H2'	1:A:2371:G:O4'	2.13	0.48
1:A:2450:A:OP1	1:A:2497:A:O2'	2.30	0.48
1:A:2684:U:H2'	1:A:2685:G:O4'	2.12	0.48
1:A:2756:U:OP2	31:9:19:ARG:NH2	2.45	0.48
1:A:2776:A:C6	1:A:2782:G:H1'	2.48	0.48
1:A:2809:A:H2'	1:A:2810:A:O4'	2.13	0.48
2:B:34:U:P	6:G:2:PRO:HG3	2.52	0.48
10:O:91:LEU:HB3	10:O:111:PHE:CE1	2.48	0.48
11:P:38:GLN:HG2	11:P:45:LEU:HD23	1.94	0.48
15:T:108:ARG:NH2	32:a:1465:C:OP2	2.44	0.48
20:Y:89:PHE:HA	20:Y:94:LYS:O	2.13	0.48
21:Z:27:VAL:HG23	21:Z:35:ARG:O	2.12	0.48
23:1:69:LYS:HD2	23:1:72:GLU:OE1	2.13	0.48
23:1:76:ARG:HH22	23:1:97:LEU:HB3	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:2:17:SER:O	24:2:21:LEU:HG	2.13	0.48
32:a:68:G:H3'	32:a:76:C:C5	2.48	0.48
32:a:162:A:H3'	32:a:163:C:O4'	2.12	0.48
32:a:753:A:H4'	32:a:754:C:O4'	2.13	0.48
32:a:1017:G:H2'	32:a:1018:C:O4'	2.13	0.48
32:a:1118:C:OP1	40:i:104:ARG:NH1	2.47	0.48
32:a:1397:C:H42	56:x:20:A:H2'	1.78	0.48
32:a:1443:G:H2'	32:a:1444:C:H6	1.76	0.48
34:c:56:ASP:O	34:c:67:THR:N	2.45	0.48
37:f:9:VAL:CG2	37:f:87:ARG:HB2	2.43	0.48
38:g:140:ASP:OD1	38:g:143:ARG:NH2	2.31	0.48
42:k:59:TYR:O	42:k:63:LEU:HG	2.13	0.48
45:n:3:ARG:NH2	45:n:7:ILE:HD13	2.28	0.48
54:C:78:ALA:HB2	54:C:116:THR:HG23	1.95	0.48
55:z:16:U:C5	55:z:17:C:H3'	2.48	0.48
55:z:54:U:H2'	55:z:55:U:N1	2.28	0.48
55:z:65:G:O2'	55:z:66:U:H5'	2.14	0.48
1:A:513:A:H5''	1:A:1216:G:O2'	2.14	0.48
1:A:552:G:H2'	1:A:553:G:H8	1.77	0.48
1:A:572:A:H5''	1:A:573:G:OP2	2.12	0.48
1:A:637:A:H1'	1:A:651:G:N2	2.29	0.48
1:A:657:U:H2'	1:A:658:C:C5	2.48	0.48
1:A:777:A:O2'	1:A:778:G:H5'	2.13	0.48
1:A:962:G:H2'	1:A:963:U:C6	2.48	0.48
1:A:1087:G:C2'	1:A:1088:A:H5'	2.43	0.48
1:A:1151:G:O2'	1:A:1152:C:H5'	2.13	0.48
1:A:1295:C:H2'	1:A:1296:G:C8	2.49	0.48
1:A:1382:G:H2'	1:A:1383:C:O4'	2.14	0.48
1:A:1496:A:H2'	1:A:1498:C:C5	2.49	0.48
1:A:1523:U:H2'	1:A:1524:G:H8	1.75	0.48
1:A:1568:G:C5'	3:D:61:LEU:HD23	2.43	0.48
1:A:1711:C:H2'	1:A:1712:C:H6	1.79	0.48
1:A:1802:A:H2'	1:A:1803:A:H8	1.78	0.48
1:A:2160:G:H2'	1:A:2161:C:O4'	2.12	0.48
1:A:2174:C:O2'	1:A:2175:C:H5'	2.14	0.48
1:A:2342:C:O2'	1:A:2374:C:H5''	2.13	0.48
1:A:2729:G:O2'	4:E:186:GLY:HA3	2.13	0.48
3:D:24:ILE:HD11	3:D:84:TYR:HB2	1.93	0.48
7:H:42:ARG:O	7:H:52:VAL:HA	2.12	0.48
8:I:128:LEU:N	8:I:140:LEU:O	2.39	0.48
8:I:131:LYS:HA	8:I:136:VAL:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:N:6:PRO:HG3	9:N:41:ASP:O	2.13	0.48
13:R:38:VAL:HG22	13:R:112:ALA:CB	2.40	0.48
14:S:29:PHE:CE2	14:S:31:SER:HB3	2.48	0.48
15:T:29:ARG:CG	15:T:44:ASP:HB3	2.43	0.48
21:Z:95:PRO:HG3	21:Z:129:SER:HA	1.94	0.48
25:3:29:ARG:N	25:3:33:GLN:OE1	2.24	0.48
30:8:32:LEU:HG	30:8:34:TRP:HZ3	1.79	0.48
32:a:33:A:H2'	32:a:34:C:H6	1.79	0.48
32:a:363:A:H2'	32:a:364:A:O4'	2.14	0.48
32:a:373:A:O2'	32:a:451:A:N7	2.45	0.48
32:a:518:C:O2'	32:a:530:G:N2	2.42	0.48
32:a:552:U:H4'	43:l:87:GLY:CA	2.42	0.48
32:a:628:G:H2'	32:a:629:G:O4'	2.13	0.48
32:a:645:C:O2'	32:a:646:U:H5'	2.13	0.48
32:a:851:G:O2'	32:a:852:G:H5'	2.13	0.48
32:a:947:G:H2'	32:a:948:C:H6	1.78	0.48
33:b:97:TRP:CH2	33:b:173:ALA:HA	2.48	0.48
35:d:114:ARG:HA	35:d:117:ALA:CB	2.43	0.48
35:d:121:VAL:HG11	35:d:136:PRO:HA	1.95	0.48
35:d:166:LYS:HD2	35:d:178:VAL:HG11	1.94	0.48
37:f:8:ILE:HG22	37:f:10:LEU:HD22	1.95	0.48
50:s:50:ALA:HA	50:s:58:VAL:C	2.38	0.48
54:C:76:ALA:HB1	54:C:149:ILE:CD1	2.43	0.48
54:C:116:THR:OG1	54:C:118:ASP:OD1	2.22	0.48
55:z:60:U:O2'	55:z:61:C:H5'	2.13	0.48
56:x:31:A:H2	56:x:48:G:H22	1.60	0.48
1:A:48:G:H1	1:A:177:G:P	2.35	0.48
1:A:50:U:H3'	1:A:51:G:C5'	2.42	0.48
1:A:144:C:H2'	1:A:145:G:C8	2.47	0.48
1:A:172:C:N4	1:A:173:G:O6	2.47	0.48
1:A:232:G:N2	1:A:420:C:H5''	2.28	0.48
1:A:310:A:H1'	1:A:311:A:O2'	2.13	0.48
1:A:477:A:H2'	1:A:478:A:O4'	2.13	0.48
1:A:539:G:O6	1:A:554:U:O4	2.30	0.48
1:A:598:G:H2'	1:A:599:G:O4'	2.13	0.48
1:A:644:A:N6	1:A:2349:G:H1'	2.27	0.48
1:A:652(B):A:H3'	1:A:652(C):A:C5'	2.43	0.48
1:A:727:A:H2'	1:A:728:G:C8	2.48	0.48
1:A:765:G:O2'	1:A:766:C:H5'	2.13	0.48
1:A:776:G:N7	1:A:793:A:O2'	2.45	0.48
1:A:884:C:H3'	1:A:885:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:934:G:O2'	1:A:935:C:H5'	2.13	0.48
1:A:969:U:O2'	25:3:14:GLY:HA2	2.14	0.48
1:A:1107:G:H2'	1:A:1108:U:C5	2.48	0.48
1:A:1154:G:P	16:U:58:ARG:HE	2.36	0.48
1:A:1638:C:H2'	1:A:1639:U:C6	2.48	0.48
1:A:1666:G:OP1	10:O:66:LYS:HD3	2.13	0.48
1:A:1678:G:H1'	1:A:1991:U:O2'	2.13	0.48
1:A:1694:C:OP1	3:D:8:PRO:HG3	2.14	0.48
1:A:2309:A:H2'	1:A:2310:A:O4'	2.14	0.48
1:A:2323:G:H2'	1:A:2324:C:O4'	2.14	0.48
1:A:2403:C:H2'	1:A:2404:C:C6	2.47	0.48
1:A:2536:G:O2'	1:A:2537:U:H5'	2.13	0.48
1:A:2728:U:H2'	1:A:2729:G:H8	1.78	0.48
1:A:2776:A:H4'	1:A:2777:G:C5'	2.43	0.48
2:B:13:A:H4'	2:B:15:A:C8	2.48	0.48
4:E:13:ARG:CA	4:E:22:PRO:HA	2.42	0.48
4:E:49:LEU:O	4:E:78:LEU:HD12	2.14	0.48
5:F:203:GLN:HA	5:F:206:ILE:HG12	1.96	0.48
6:G:122:PRO:HG3	6:G:182:LYS:CB	2.43	0.48
21:Z:4:ARG:NH2	21:Z:60:GLU:HG2	2.28	0.48
21:Z:44:PHE:O	21:Z:48:PHE:HB3	2.13	0.48
32:a:9:G:H2'	32:a:10:A:C8	2.48	0.48
32:a:76:C:H5'	32:a:77:G:OP2	2.13	0.48
32:a:330:C:H2'	32:a:331:G:H5'	1.94	0.48
32:a:600:C:OP1	39:h:97:VAL:N	2.41	0.48
32:a:719:C:O2'	49:r:49:LYS:HB3	2.13	0.48
32:a:875:C:C2'	32:a:876:G:H5''	2.43	0.48
32:a:1071:C:H2'	32:a:1072:G:C8	2.47	0.48
32:a:1253:G:O2'	32:a:1254:C:H5'	2.13	0.48
32:a:1340:A:HO2'	53:y:31:G:HO2'	1.53	0.48
32:a:1347:G:H3'	40:i:108:VAL:O	2.12	0.48
32:a:1407:5MC:O2'	32:a:1408:A:H5'	2.13	0.48
32:a:1515:C:H2'	32:a:1516:G:H8	1.77	0.48
33:b:8:LYS:H	33:b:8:LYS:HD2	1.79	0.48
34:c:58:GLU:N	34:c:65:ALA:O	2.38	0.48
35:d:149:ALA:O	35:d:153:ARG:N	2.46	0.48
38:g:137:LYS:O	38:g:141:VAL:HG23	2.14	0.48
39:h:86:ILE:HG12	39:h:135:CYS:HA	1.95	0.48
44:m:102:ARG:CD	44:m:105:THR:H	2.26	0.48
48:q:90:ILE:HA	48:q:93:GLN:HB3	1.95	0.48
50:s:31:ILE:HB	50:s:49:ILE:HG13	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:s:50:ALA:O	50:s:57:HIS:HB3	2.14	0.48
50:s:52:TYR:HA	50:s:56:GLN:O	2.13	0.48
53:y:16:C:H3'	53:y:17(A):C:C5	2.48	0.48
55:z:57:G:H2'	55:z:58:A:H5''	1.95	0.48
56:x:43:C:H2'	56:x:44:G:C1'	2.43	0.48
1:A:272(T):C:O2'	1:A:272(U):G:H5'	2.13	0.48
1:A:630:G:OP1	30:8:47:LYS:NZ	2.45	0.48
1:A:909:A:H2'	1:A:912:C:C5	2.48	0.48
1:A:1503:U:H2'	1:A:1504:C:H6	1.78	0.48
1:A:1682:G:H2'	1:A:1683:C:O4'	2.13	0.48
1:A:1709:U:O2'	1:A:1710:C:H5'	2.13	0.48
1:A:1799:G:C4	3:D:177:LEU:HD13	2.47	0.48
1:A:2036:C:H2'	1:A:2037:G:C8	2.49	0.48
1:A:2294:C:H2'	1:A:2295:C:H6	1.77	0.48
1:A:2344:U:O2'	28:6:36:LEU:HD13	2.14	0.48
1:A:2355:C:O2'	22:0:24:LYS:HE3	2.14	0.48
1:A:2364:C:O2'	1:A:2365:G:H5'	2.13	0.48
1:A:2690:C:N4	1:A:2713:A:H1'	2.28	0.48
1:A:2740:A:H2'	1:A:2741:A:C8	2.48	0.48
1:A:2783:G:H2'	1:A:2784:C:H6	1.78	0.48
1:A:2812:G:H2'	1:A:2813:A:H8	1.79	0.48
3:D:133:LEU:HB3	3:D:173:VAL:HG21	1.96	0.48
7:H:7:LEU:HB3	7:H:69:ARG:NH2	2.28	0.48
7:H:115:VAL:HG11	7:H:148:ILE:HD11	1.95	0.48
8:I:86:THR:HG22	37:f:18:GLN:NE2	2.29	0.48
11:P:100:LEU:CD1	11:P:112:LEU:HG	2.44	0.48
14:S:31:SER:OG	14:S:34:HIS:N	2.46	0.48
14:S:40:ILE:HG23	14:S:46:VAL:O	2.12	0.48
17:V:65:GLY:HA3	17:V:91:TYR:CZ	2.48	0.48
18:W:58:ALA:O	18:W:63:ASP:N	2.46	0.48
19:X:9:LEU:HB2	19:X:29:TRP:O	2.12	0.48
19:X:65:ARG:HD3	19:X:70:LEU:CD2	2.43	0.48
26:4:12:ALA:HB3	26:4:24:THR:CG2	2.43	0.48
26:4:15:ILE:O	26:4:33:VAL:HG22	2.13	0.48
26:4:58:ARG:NE	50:s:64:GLU:O	2.43	0.48
29:7:3:ARG:O	29:7:6:GLN:NE2	2.30	0.48
32:a:251:G:N2	32:a:253:U:O4	2.46	0.48
32:a:263:A:H2'	32:a:264:U:C5	2.49	0.48
32:a:301:G:H2'	32:a:302:G:H8	1.77	0.48
32:a:430:A:C5'	35:d:7:PRO:HB3	2.41	0.48
32:a:537:G:H2'	32:a:538:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:690:G:H2'	32:a:691:G:O4'	2.14	0.48
32:a:724:G:H2'	32:a:725:G:H8	1.78	0.48
32:a:796:C:O2'	32:a:797:C:H5'	2.13	0.48
32:a:855:G:O2'	32:a:856:C:H5'	2.14	0.48
32:a:865:A:O2'	32:a:866:C:H5'	2.14	0.48
32:a:1070:U:OP1	36:e:20:GLN:NE2	2.43	0.48
32:a:1121:U:H2'	32:a:1122:U:H6	1.77	0.48
32:a:1130:A:H3'	32:a:1130:A:OP2	2.13	0.48
32:a:1164:G:H2'	32:a:1165:C:H6	1.78	0.48
32:a:1186:G:N2	45:n:61:TRP:O	2.47	0.48
32:a:1328:C:H2'	32:a:1329:A:O4'	2.14	0.48
32:a:1536:C:O2'	32:a:1537:U:O5'	2.28	0.48
35:d:33:MET:O	35:d:37:PRO:HB3	2.12	0.48
35:d:166:LYS:HD2	35:d:178:VAL:CG1	2.43	0.48
37:f:35:ALA:CB	37:f:67:MET:HE2	2.43	0.48
39:h:84:ARG:HB3	39:h:136:GLU:HG2	1.95	0.48
39:h:86:ILE:HG13	39:h:133:LEU:CD2	2.43	0.48
40:i:74:ILE:HA	40:i:77:ILE:HD12	1.95	0.48
42:k:69:ALA:CB	42:k:101:SER:HB2	2.43	0.48
47:p:27:LYS:HG3	47:p:30:GLY:H	1.78	0.48
51:t:82:SER:O	51:t:86:ARG:HG3	2.14	0.48
54:C:66:HIS:HB3	54:C:184:LYS:CG	2.44	0.48
54:C:110:PHE:HE2	54:C:136:LEU:HD13	1.77	0.48
54:C:163:PHE:HB2	54:C:171:ILE:CD1	2.43	0.48
54:C:175:VAL:CG2	54:C:185:LEU:HD22	2.43	0.48
55:z:6:G:H2'	55:z:7:A:H8	1.76	0.48
1:A:10:G:O2'	1:A:11:G:H5'	2.14	0.48
1:A:98:G:OP2	24:2:2:LYS:HG2	2.13	0.48
1:A:304:G:H2'	1:A:305:U:C6	2.48	0.48
1:A:662:G:H4'	11:P:15:ARG:O	2.13	0.48
1:A:685:A:H5'	1:A:774:A:H61	1.79	0.48
1:A:966:G:C1'	1:A:2267:A:H62	2.27	0.48
1:A:1094:U:H4'	1:A:1096:A:N7	2.29	0.48
1:A:1280:G:O2'	1:A:1281:G:H5'	2.12	0.48
1:A:1759:A:H4'	1:A:2715:C:O4'	2.13	0.48
1:A:1789:A:H2'	1:A:1790:C:O4'	2.14	0.48
1:A:1924:C:O2'	1:A:1925:C:H5'	2.14	0.48
1:A:2180:U:N3	1:A:2181:G:O6	2.46	0.48
1:A:2344:U:OP1	28:6:37:ARG:HD3	2.14	0.48
1:A:2393:A:H4'	11:P:62:LEU:C	2.38	0.48
1:A:2528:U:H2'	1:A:2530:A:O5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2838:G:C2'	1:A:2839:G:H5''	2.44	0.48
4:E:55:ASN:HB3	4:E:58:ARG:HD2	1.95	0.48
4:E:176:ILE:HB	4:E:181:LEU:HB2	1.96	0.48
5:F:136:THR:HA	5:F:166:ALA:O	2.14	0.48
7:H:137:ASP:CG	7:H:140:LYS:H	2.22	0.48
8:I:65:ALA:CB	8:I:132:PRO:HG2	2.44	0.48
9:N:39:ARG:HB2	9:N:48:MET:HE1	1.94	0.48
9:N:70:LYS:HE3	9:N:72:TYR:CZ	2.48	0.48
12:Q:69:PHE:CD1	12:Q:70:PRO:HD2	2.49	0.48
23:1:65:SER:O	23:1:68:PRO:HD2	2.14	0.48
32:a:64:G:C3'	32:a:71:C:N1	2.77	0.48
32:a:148:G:O2'	32:a:149:A:O4'	2.17	0.48
32:a:185:A:O2'	32:a:186:C:H5'	2.13	0.48
32:a:403:C:OP2	35:d:74:GLN:NE2	2.30	0.48
32:a:664:G:H22	32:a:741:G:H22	1.61	0.48
32:a:743:U:O2'	32:a:744:C:H5'	2.14	0.48
32:a:755:G:O2'	32:a:756:C:H5'	2.13	0.48
32:a:974:A:P	45:n:29:ARG:HH21	2.36	0.48
32:a:1208:C:H2'	32:a:1209:C:O4'	2.14	0.48
32:a:1457:G:O2'	32:a:1458:G:H5'	2.14	0.48
33:b:24:TRP:CZ3	33:b:26:PRO:HA	2.48	0.48
33:b:161:ALA:HA	33:b:182:ILE:CG2	2.43	0.48
34:c:152:ILE:CG1	34:c:199:LYS:HB2	2.41	0.48
34:c:191:THR:N	34:c:194:GLY:O	2.43	0.48
35:d:58:LEU:CD1	35:d:59:ARG:HH21	2.27	0.48
40:i:8:GLY:N	40:i:15:ALA:O	2.47	0.48
41:j:8:LEU:HD23	41:j:96:ILE:HG13	1.94	0.48
44:m:88:ARG:HG3	44:m:98:VAL:HG11	1.95	0.48
45:n:39:LEU:CD1	45:n:47:LEU:HD12	2.43	0.48
46:o:48:LYS:O	46:o:50:HIS:N	2.46	0.48
46:o:85:LEU:HB2	46:o:87:ILE:HD11	1.95	0.48
49:r:45:SER:HB3	49:r:49:LYS:HB2	1.95	0.48
54:C:75:LEU:HD22	54:C:110:PHE:CD1	2.48	0.48
54:C:191:ALA:CA	54:C:194:ARG:HG2	2.42	0.48
1:A:39:C:O2	5:F:46:ARG:NH2	2.47	0.48
1:A:144:C:H2'	1:A:145:G:H8	1.78	0.48
1:A:198:C:O2'	1:A:199:A:H5'	2.13	0.48
1:A:298:G:H1'	1:A:340:A:H61	1.77	0.48
1:A:485:C:H2'	1:A:486:C:H6	1.79	0.48
1:A:1316:U:O2'	1:A:1317:A:H5'	2.14	0.48
1:A:1675:C:C2'	1:A:1676:A:H5'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1853:A:O2'	1:A:1854:A:H5'	2.14	0.48
1:A:2079:U:O3'	23:1:35:THR:OG1	2.17	0.48
1:A:2137:C:H2'	1:A:2138:C:C6	2.49	0.48
1:A:2176:A:H2'	1:A:2177:C:C6	2.48	0.48
1:A:2384:G:H2'	1:A:2386:C:OP1	2.13	0.48
1:A:2399:G:H2'	1:A:2400:G:H8	1.78	0.48
1:A:2414:G:N2	11:P:67:MET:SD	2.83	0.48
1:A:2462:U:H2'	1:A:2463:C:C6	2.49	0.48
1:A:2827:C:O2'	1:A:2828:C:H5'	2.14	0.48
2:B:8:U:H3'	2:B:9:G:H5''	1.96	0.48
2:B:18:G:H2'	2:B:19:G:H8	1.78	0.48
2:B:106:G:H5''	21:Z:31:ARG:NH1	2.29	0.48
3:D:126:GLN:HB2	3:D:129:ASN:ND2	2.29	0.48
8:I:30:LEU:O	8:I:34:GLY:N	2.46	0.48
9:N:55:VAL:HA	9:N:123:TYR:O	2.13	0.48
10:O:63:VAL:HG11	10:O:85:VAL:HG23	1.96	0.48
11:P:95:VAL:CG2	11:P:125:VAL:HG12	2.44	0.48
12:Q:32:TYR:CE1	12:Q:133:ARG:HG3	2.49	0.48
14:S:36:TYR:OH	14:S:54:LEU:HD22	2.14	0.48
15:T:45:PHE:CE1	15:T:65:LYS:HG2	2.49	0.48
16:U:69:CYS:HB3	16:U:74:LEU:CD1	2.43	0.48
17:V:31:ALA:O	17:V:61:VAL:HG22	2.14	0.48
17:V:73:SER:HA	17:V:83:ARG:O	2.14	0.48
18:W:68:ARG:HD3	18:W:110:LYS:O	2.13	0.48
21:Z:28:MET:CA	21:Z:88:PHE:HB2	2.43	0.48
21:Z:73:GLN:HB3	21:Z:87:ASP:OD2	2.12	0.48
21:Z:105:VAL:O	21:Z:141:VAL:HG22	2.14	0.48
21:Z:110:GLY:HA3	21:Z:146:ILE:N	2.29	0.48
26:4:48:ARG:CG	26:4:52:THR:HA	2.44	0.48
30:8:3:LYS:HB2	30:8:64:TYR:OH	2.12	0.48
30:8:23:VAL:CG1	30:8:47:LYS:HB3	2.43	0.48
32:a:64:G:H2'	32:a:70:G:H5''	1.94	0.48
32:a:68:G:H1'	32:a:77:G:C5	2.48	0.48
32:a:134:A:H1'	32:a:325:A:N7	2.28	0.48
32:a:279:A:H5''	32:a:281:G:H5'	1.96	0.48
32:a:559:A:OP2	36:e:126:ARG:NH2	2.36	0.48
32:a:585:G:H2'	32:a:586:C:O4'	2.13	0.48
32:a:664:G:N2	32:a:741:G:H1	2.10	0.48
32:a:739:C:O2'	32:a:740:U:H5'	2.14	0.48
32:a:748:C:H1'	32:a:749:C:OP2	2.14	0.48
32:a:761:G:H2'	32:a:762:C:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1056:U:H2'	32:a:1057:G:H8	1.79	0.48
32:a:1251:A:O2'	32:a:1252:A:H5'	2.14	0.48
32:a:1261:A:H3'	32:a:1262:C:C6	2.48	0.48
32:a:1305:G:N2	32:a:1331:G:H1'	2.29	0.48
32:a:1327:C:OP1	52:u:20:LYS:N	2.47	0.48
33:b:61:LEU:CD1	33:b:66:GLY:HA3	2.42	0.48
34:c:135:LYS:NZ	36:e:50:GLU:HG2	2.29	0.48
36:e:39:GLY:HA2	36:e:69:VAL:CG1	2.43	0.48
37:f:8:ILE:HG22	37:f:10:LEU:CD2	2.44	0.48
41:j:40:LEU:HB2	41:j:69:ASN:HB2	1.96	0.48
48:q:58:GLU:OE2	48:q:75:ARG:NH2	2.47	0.48
50:s:33:THR:HG22	50:s:51:VAL:HA	1.94	0.48
54:C:117:PRO:HD2	54:C:147:PHE:CG	2.48	0.48
54:C:185:LEU:HA	54:C:188:ASN:ND2	2.27	0.48
1:A:11:G:H2'	1:A:12:U:H6	1.78	0.48
1:A:83:G:H22	1:A:103:A:P	2.36	0.48
1:A:111:A:H2'	1:A:112:U:C6	2.49	0.48
1:A:442:G:C4'	5:F:46:ARG:HG3	2.44	0.48
1:A:629:G:OP1	1:A:650:C:O2'	2.31	0.48
1:A:877:U:O2'	1:A:878:A:O4'	2.18	0.48
1:A:980:A:O2'	1:A:981:A:H5'	2.14	0.48
1:A:1028:A:N6	1:A:1125:G:H2'	2.28	0.48
1:A:1053:C:H3'	1:A:1054:A:H8	1.78	0.48
1:A:1227:G:OP1	16:U:13:LYS:HE2	2.13	0.48
1:A:1229:G:O2'	1:A:1230:C:H5'	2.14	0.48
1:A:1282:U:H2'	1:A:1283:G:O4'	2.14	0.48
1:A:1327:C:H2'	1:A:1328:G:C8	2.49	0.48
1:A:1515:G:H2'	1:A:1516:C:H6	1.78	0.48
1:A:2040:C:H2'	1:A:2041:U:O4'	2.14	0.48
1:A:2185:C:H2'	1:A:2186:G:C8	2.49	0.48
1:A:2379:G:H2'	1:A:2380:C:H6	1.79	0.48
1:A:2467:C:O2'	1:A:2468:G:H5'	2.13	0.48
1:A:2577:A:H5'	27:5:3:LYS:NZ	2.27	0.48
1:A:2635:C:HO2'	4:E:37:ARG:HH21	1.61	0.48
1:A:2738:A:H2'	1:A:2739:U:O4'	2.14	0.48
1:A:2834:G:H4'	4:E:58:ARG:NH2	2.28	0.48
1:A:2843:G:O2'	1:A:2844:G:H5'	2.14	0.48
3:D:96:HIS:CD2	3:D:102:LYS:HG2	2.49	0.48
4:E:176:ILE:CG2	4:E:179:GLU:HB2	2.43	0.48
6:G:107:LEU:HD21	6:G:178:PHE:HA	1.95	0.48
6:G:111:LEU:HA	6:G:114:ILE:CD1	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:135:LEU:N	6:G:155:MET:O	2.41	0.48
12:Q:40:ALA:HB3	12:Q:127:ILE:HG21	1.96	0.48
16:U:65:ILE:HD11	16:U:92:ARG:O	2.14	0.48
19:X:42:ALA:O	19:X:46:ALA:CB	2.62	0.48
22:O:38:VAL:CG1	22:O:40:GLN:HB3	2.44	0.48
26:4:9:LEU:HD22	26:4:26:SER:CA	2.37	0.48
32:a:19:C:O2'	32:a:20:U:H5'	2.13	0.48
32:a:256:U:H2'	32:a:257:G:H8	1.78	0.48
32:a:264:U:H2'	32:a:265:G:O4'	2.13	0.48
32:a:451:A:H2'	32:a:481:G:O6	2.14	0.48
32:a:555:C:O2'	32:a:556:C:H5'	2.13	0.48
32:a:948:C:O2'	32:a:949:A:H5'	2.14	0.48
32:a:1111:A:N1	34:c:177:THR:HA	2.28	0.48
32:a:1169:A:H2'	32:a:1170:A:O4'	2.14	0.48
32:a:1219:U:H2'	32:a:1220:G:C8	2.49	0.48
32:a:1225:A:H2'	32:a:1226:C:C6	2.48	0.48
32:a:1259:C:H3'	32:a:1260:C:C5'	2.44	0.48
32:a:1347:G:N2	32:a:1373:G:H2'	2.28	0.48
33:b:115:LEU:HD23	33:b:145:LEU:HB2	1.96	0.48
33:b:151:GLY:HA2	33:b:154:LEU:HD23	1.94	0.48
34:c:130:VAL:O	34:c:134:ILE:HG13	2.14	0.48
36:e:46:GLY:H	36:e:58:ALA:CB	2.27	0.48
37:f:39:LYS:N	37:f:64:GLN:O	2.44	0.48
39:h:8:ASP:OD2	39:h:12:ARG:NE	2.41	0.48
40:i:50:LEU:HB3	40:i:56:LEU:HD23	1.94	0.48
42:k:108:ILE:CG2	49:r:87:ARG:HB2	2.44	0.48
46:o:4:THR:CG2	46:o:7:GLU:H	2.25	0.48
46:o:77:ARG:HA	46:o:80:ALA:HB3	1.94	0.48
49:r:47:THR:O	49:r:83:GLU:N	2.42	0.48
51:t:25:ARG:O	51:t:29:LYS:HG3	2.13	0.48
51:t:57:ARG:NH1	51:t:100:ILE:HB	2.28	0.48
53:y:34:C:H2'	53:y:35:A:H8	1.78	0.48
54:C:47:LEU:HD13	54:C:49:ILE:HD11	1.96	0.48
1:A:53:A:C2'	1:A:54:G:H5'	2.44	0.48
1:A:142(B):C:O2'	1:A:143(A):G:H5'	2.14	0.48
1:A:205:G:O6	23:1:39:LYS:NZ	2.29	0.48
1:A:275:G:H2'	1:A:276:A:C8	2.49	0.48
1:A:314:A:O2'	1:A:315:G:H5'	2.14	0.48
1:A:468:G:H2'	1:A:469:G:O4'	2.14	0.48
1:A:476:G:H1'	1:A:480:A:N6	2.28	0.48
1:A:481:G:H1'	1:A:506:G:H21	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:565:C:H2'	1:A:566:U:C6	2.48	0.48
1:A:607:U:C5'	5:F:103:LYS:HE3	2.44	0.48
1:A:742:G:H2'	1:A:743:G:H8	1.79	0.48
1:A:747:U:H1'	18:W:92:ARG:NH2	2.29	0.48
1:A:993:G:O2'	1:A:994:C:H5'	2.14	0.48
1:A:1135:C:H5''	1:A:1137:G:OP1	2.14	0.48
1:A:1213:A:H2'	1:A:1214:A:O4'	2.14	0.48
1:A:1663:C:O2'	1:A:2686:G:H4'	2.14	0.48
1:A:1678:G:O2'	1:A:1991:U:H4'	2.14	0.48
1:A:1819:A:H2'	3:D:178:PRO:HB2	1.94	0.48
1:A:1850:G:H2'	1:A:1851:U:C6	2.48	0.48
1:A:2461:C:H2'	1:A:2462:U:C6	2.49	0.48
1:A:2720:U:H2'	1:A:2721:A:O4'	2.13	0.48
9:N:13:TRP:CE2	9:N:133:GLN:HB3	2.49	0.48
10:O:10:VAL:HG11	10:O:86:ILE:HD11	1.96	0.48
16:U:44:ASN:HD21	17:V:75:PHE:HB3	1.79	0.48
20:Y:9:LYS:HA	20:Y:27:VAL:HG12	1.95	0.48
28:6:43:CYS:HB3	28:6:45:LYS:HG2	1.95	0.48
32:a:136:C:O2'	32:a:137:C:H5'	2.13	0.48
32:a:324:G:N2	32:a:326:G:H3'	2.29	0.48
32:a:512:U:H2'	32:a:513:C:C6	2.49	0.48
32:a:564:C:C5	48:q:31:LEU:HD21	2.48	0.48
32:a:687:A:H1'	32:a:688:G:OP2	2.13	0.48
32:a:773:G:O2'	32:a:774:G:H5'	2.13	0.48
32:a:831:U:H2'	32:a:832:C:C6	2.49	0.48
32:a:1322:C:OP1	50:s:78:ARG:NH2	2.47	0.48
32:a:1425:U:O2'	32:a:1426:C:H5'	2.13	0.48
32:a:1436:U:H2'	32:a:1437:C:O4'	2.13	0.48
32:a:1517:G:H2'	32:a:1518:MA6:C8	2.44	0.48
33:b:28:PHE:HD1	33:b:194:PRO:HG3	1.79	0.48
33:b:32:ILE:HD13	33:b:40:HIS:CD2	2.49	0.48
34:c:177:THR:HB	34:c:180:ALA:HB2	1.95	0.48
39:h:104:ARG:HB3	39:h:108:GLY:H	1.79	0.48
42:k:69:ALA:HB1	42:k:103:LEU:CD1	2.44	0.48
43:l:8:ASN:O	43:l:12:ARG:HG3	2.14	0.48
49:r:25:THR:C	49:r:26:LEU:HD22	2.38	0.48
51:t:87:LYS:O	51:t:90:GLN:HB2	2.14	0.48
54:C:41:VAL:HG21	54:C:185:LEU:HD11	1.96	0.48
1:A:75:G:C6	1:A:111:A:N1	2.82	0.48
1:A:80:G:H1'	1:A:294:A:H2	1.79	0.48
1:A:436:C:H2'	1:A:437:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:620:G:N3	1:A:620:G:H5'	2.28	0.48
1:A:703:U:O2'	1:A:704:G:H5'	2.14	0.48
1:A:839:U:O2'	1:A:1191:G:N3	2.46	0.48
1:A:968:G:H2'	1:A:969:U:C6	2.48	0.48
1:A:1227:G:H2'	1:A:1228:G:H5'	1.96	0.48
1:A:1327:C:H2'	1:A:1328:G:O4'	2.14	0.48
1:A:1487:G:H2'	1:A:1488:G:H8	1.77	0.48
1:A:1575:C:O2'	1:A:1576:U:H5'	2.14	0.48
1:A:1579:A:H2'	1:A:1580:A:C1'	2.44	0.48
1:A:1910:G:H2'	1:A:1911:PSU:O4'	2.14	0.48
1:A:1971:A:P	3:D:242:ARG:HH22	2.37	0.48
1:A:2258:C:O2'	1:A:2426:A:H4'	2.14	0.48
1:A:2315:G:H2'	1:A:2316:C:H6	1.77	0.48
1:A:2366:A:H3'	1:A:2367:G:H8	1.79	0.48
1:A:2602:A:H5'	53:y:74:C:H5''	1.96	0.48
1:A:2745:C:O2'	7:H:139:GLN:O	2.31	0.48
1:A:2748:A:H4'	7:H:66:GLY:HA3	1.95	0.48
1:A:2758:A:C2'	1:A:2759:G:H5'	2.43	0.48
2:B:19:G:O2'	2:B:20:C:H5'	2.13	0.48
3:D:63:ARG:O	3:D:65:ILE:HG12	2.13	0.48
4:E:94:GLU:OE2	4:E:177:PRO:HB3	2.13	0.48
4:E:99:GLY:N	4:E:172:VAL:O	2.29	0.48
4:E:120:TRP:CG	4:E:155:LYS:HB3	2.49	0.48
6:G:115:ARG:HB2	6:G:136:ARG:NH2	2.28	0.48
8:I:68:LEU:HD21	8:I:107:VAL:CG1	2.43	0.48
8:I:130:TYR:CD2	8:I:132:PRO:HD3	2.47	0.48
11:P:1:MET:HG3	11:P:5:ASP:CB	2.44	0.48
11:P:106:LEU:HD23	11:P:112:LEU:HD23	1.95	0.48
12:Q:59:ARG:CA	21:Z:180:VAL:HG23	2.33	0.48
16:U:79:PHE:HE1	16:U:110:VAL:HA	1.79	0.48
21:Z:180:VAL:HG22	21:Z:183:LEU:CD1	2.40	0.48
22:0:49:LYS:HD3	22:0:82:ARG:HG2	1.95	0.48
25:3:7:LYS:HG2	25:3:9:VAL:CG1	2.44	0.48
26:4:17:GLY:N	26:4:33:VAL:O	2.46	0.48
32:a:294:U:H2'	32:a:295:C:H6	1.78	0.48
32:a:310:G:O2'	32:a:311:C:H5'	2.14	0.48
32:a:626:U:H2'	32:a:627:G:C8	2.49	0.48
32:a:673:G:O3'	37:f:87:ARG:NH2	2.47	0.48
32:a:939:G:P	38:g:95:ARG:HH22	2.36	0.48
32:a:1313:U:O2'	32:a:1314:C:H5'	2.14	0.48
32:a:1409:C:H2'	32:a:1410:G:H8	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1508:G:H2'	32:a:1509:C:H6	1.79	0.48
33:b:131:PRO:O	33:b:135:GLN:HG3	2.12	0.48
33:b:164:VAL:O	33:b:186:ALA:HA	2.14	0.48
34:c:119:ARG:HD3	34:c:140:ARG:HH21	1.79	0.48
36:e:5:ASP:HB3	56:x:55:A:O3'	2.14	0.48
36:e:91:LEU:HB3	36:e:118:ILE:HD11	1.96	0.48
43:l:28:LYS:N	43:l:29:GLY:HA2	2.29	0.48
43:l:117:ARG:HG2	43:l:122:THR:O	2.14	0.48
43:l:122:THR:HG22	43:l:123:LYS:O	2.14	0.48
46:o:42:HIS:NE2	46:o:49:ASP:OD2	2.37	0.48
50:s:50:ALA:HB1	50:s:57:HIS:HB3	1.96	0.48
54:C:7:TYR:O	54:C:10:LEU:HB2	2.14	0.48
54:C:131:LEU:O	54:C:131:LEU:HD13	2.14	0.48
54:C:163:PHE:HD2	54:C:171:ILE:HD11	1.79	0.48
54:C:212:VAL:HG12	54:C:224:ILE:HD11	1.95	0.48
1:A:220:G:O4'	1:A:234:C:H4'	2.14	0.47
1:A:272(N):U:O2'	1:A:272(O):C:H5''	2.14	0.47
1:A:335:C:O2'	1:A:336:C:H5'	2.14	0.47
1:A:396:G:H1'	23:1:42:GLN:OE1	2.14	0.47
1:A:483:A:H5''	20:Y:50:ARG:CD	2.43	0.47
1:A:642:G:H22	1:A:644:A:H3'	1.79	0.47
1:A:702:G:O2'	1:A:703:U:H5'	2.13	0.47
1:A:876:C:H2'	1:A:877:U:C6	2.49	0.47
1:A:959:A:O2'	1:A:960:A:H5'	2.13	0.47
1:A:1338:G:H2'	1:A:1339:G:O4'	2.14	0.47
1:A:1388:G:O2'	1:A:1389:G:H5'	2.13	0.47
1:A:1438:U:O2'	1:A:1439:A:H5'	2.14	0.47
1:A:1473:G:H2'	1:A:1474:C:H6	1.77	0.47
1:A:1539:G:O2'	1:A:1540:U:H5'	2.13	0.47
1:A:1562:A:H2'	1:A:1563:G:C8	2.49	0.47
1:A:1582:C:H2'	1:A:1583:A:C8	2.49	0.47
1:A:1829:A:C2'	1:A:1830:C:H5'	2.43	0.47
1:A:1975:G:H2'	1:A:1976:U:O4'	2.14	0.47
1:A:1992:G:H1'	1:A:1993:U:OP2	2.14	0.47
1:A:2096:U:C4	1:A:2193:G:O6	2.67	0.47
1:A:2118:U:C4	1:A:2149:G:H1'	2.48	0.47
1:A:2199:A:H2'	1:A:2200:C:O4'	2.13	0.47
1:A:2453:A:O2'	1:A:2572:A:H1'	2.14	0.47
1:A:2475:C:C2'	1:A:2476:A:H5'	2.44	0.47
1:A:2567:G:O2'	1:A:2568:C:H5'	2.14	0.47
1:A:2829:C:H2'	1:A:2830:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:81:G:O6	2:B:96:U:C2	2.67	0.47
5:F:154:VAL:HA	5:F:191:ARG:O	2.14	0.47
6:G:75:LYS:HA	6:G:84:LYS:HD2	1.96	0.47
14:S:12:PHE:O	14:S:16:ASN:ND2	2.47	0.47
15:T:35:LYS:CB	15:T:40:THR:HG22	2.43	0.47
16:U:112:ARG:CD	17:V:47:VAL:HG21	2.43	0.47
17:V:69:LYS:CA	17:V:88:ARG:HG2	2.44	0.47
20:Y:43:ASN:O	20:Y:64:GLU:HA	2.14	0.47
21:Z:75:ASN:C	21:Z:76:LEU:HD12	2.38	0.47
23:1:69:LYS:O	23:1:72:GLU:HB3	2.14	0.47
24:2:57:ILE:O	24:2:61:LEU:HG	2.13	0.47
25:3:3:ARG:HD3	25:3:60:GLU:C	2.39	0.47
25:3:4:LEU:CD2	25:3:58:VAL:HG22	2.44	0.47
27:5:33:CYS:SG	27:5:35:GLU:HB2	2.54	0.47
32:a:34:C:C1'	43:l:32:PHE:HE2	2.27	0.47
32:a:99:U:H5'	51:t:18:GLN:NE2	2.28	0.47
32:a:177:C:H2'	32:a:178:C:H6	1.79	0.47
32:a:243:A:H4'	32:a:244:U:C5'	2.44	0.47
32:a:301:G:H2'	32:a:302:G:C8	2.49	0.47
32:a:830:G:O2'	32:a:831:U:H5'	2.14	0.47
32:a:1005:A:N3	32:a:1005:A:H2'	2.29	0.47
32:a:1061:G:H1'	41:j:56:HIS:CE1	2.49	0.47
32:a:1202:G:C2'	32:a:1203:C:H5'	2.44	0.47
32:a:1508:G:O2'	32:a:1509:C:H5'	2.14	0.47
32:a:1539:C:H2'	32:a:1540:U:C1'	2.44	0.47
33:b:20:GLU:H	33:b:39:ILE:HG23	1.77	0.47
33:b:221:LEU:O	33:b:224:GLN:HG3	2.13	0.47
34:c:70:VAL:C	34:c:106:VAL:HG23	2.39	0.47
38:g:66:VAL:HG12	38:g:70:LYS:HE3	1.95	0.47
40:i:85:LEU:O	40:i:89:ASN:N	2.35	0.47
48:q:6:LEU:HB2	48:q:59:ILE:CD1	2.44	0.47
52:u:6:ARG:HE	52:u:15:ARG:HH12	1.62	0.47
52:u:18:TYR:CD1	52:u:22:ARG:HG2	2.49	0.47
54:C:117:PRO:HD2	54:C:147:PHE:CD2	2.49	0.47
54:C:192:PHE:CZ	54:C:196:LEU:HD11	2.49	0.47
1:A:272(C):C:H2'	1:A:272(D):G:H8	1.79	0.47
1:A:371:A:N6	1:A:401:A:H3'	2.29	0.47
1:A:543:C:H2'	1:A:545:G:O4'	2.14	0.47
1:A:764:A:O4'	3:D:213:ARG:HG3	2.14	0.47
1:A:930:U:H4'	1:A:931:G:O5'	2.14	0.47
1:A:1160:G:H2'	1:A:1161:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1312:U:H4'	1:A:1313:U:O5'	2.14	0.47
1:A:1426:G:N7	3:D:31:LYS:NZ	2.37	0.47
1:A:1658:C:O2'	1:A:1659:U:H5'	2.15	0.47
1:A:1741:A:H3'	1:A:1742:G:H8	1.80	0.47
1:A:1794:U:H1'	1:A:1900:A:N3	2.30	0.47
1:A:1986:A:O2'	1:A:1987:G:H5'	2.14	0.47
1:A:2030:A:H5''	1:A:2031:A:O5'	2.14	0.47
2:B:106:G:O2'	2:B:107:G:H5'	2.13	0.47
5:F:66:PRO:HD2	5:F:70:THR:HG21	1.96	0.47
5:F:135:LYS:HB3	5:F:138:GLU:CD	2.40	0.47
8:I:26:ALA:HA	8:I:30:LEU:CD1	2.43	0.47
13:R:14:SER:HA	13:R:17:ARG:HH21	1.78	0.47
13:R:70:LEU:HD12	13:R:76:VAL:HG22	1.96	0.47
14:S:3:ARG:HE	14:S:4:LEU:N	2.12	0.47
20:Y:76:CYS:HB2	20:Y:83:THR:CG2	2.41	0.47
20:Y:99:CYS:HB3	20:Y:104:GLY:H	1.79	0.47
23:1:23:LYS:HB3	23:1:29:GLY:HA3	1.95	0.47
26:4:62:ARG:NE	26:4:62:ARG:HA	2.29	0.47
28:6:35:GLU:OE2	28:6:50:ARG:NH1	2.47	0.47
32:a:189(A):G:O2'	32:a:189(B):C:H5'	2.14	0.47
32:a:309:G:O2'	32:a:310:G:H5'	2.14	0.47
32:a:516:PSU:O2'	32:a:517:G:H5'	2.13	0.47
32:a:542:G:P	35:d:10:ARG:HH22	2.37	0.47
32:a:556:C:O2'	32:a:557:G:H5'	2.13	0.47
32:a:696:A:H2'	32:a:697:U:H6	1.78	0.47
32:a:1246:C:H2'	32:a:1247:U:C6	2.49	0.47
32:a:1293:G:O2'	32:a:1294:G:H5'	2.14	0.47
32:a:1339:A:H1'	53:y:41:C:H1'	1.95	0.47
32:a:1359:C:H1'	32:a:1362:C:H41	1.79	0.47
32:a:1469:G:H2'	32:a:1470:G:H8	1.79	0.47
33:b:33:TYR:N	33:b:41:ILE:O	2.48	0.47
38:g:26:PHE:CD2	38:g:30:ILE:HD11	2.49	0.47
40:i:73:GLN:O	40:i:77:ILE:HG13	2.14	0.47
43:l:49:ASN:HD22	43:l:92:OTD:CB	2.27	0.47
55:z:19:G:H3'	55:z:20:U:H5'	1.96	0.47
1:A:225:A:C2'	1:A:226:G:H5'	2.44	0.47
1:A:272(V):G:O2'	1:A:272(W):G:H5'	2.14	0.47
1:A:285:C:H2'	1:A:286:C:H6	1.79	0.47
1:A:315:G:H2'	1:A:316:C:C6	2.49	0.47
1:A:455:C:C2	1:A:472:A:H2'	2.49	0.47
1:A:458:G:OP1	29:7:40:TRP:NE1	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:465:G:P	29:7:12:ARG:HH22	2.37	0.47
1:A:631:A:O2'	1:A:632:A:H5'	2.13	0.47
1:A:631:A:H2'	1:A:632:A:O4'	2.14	0.47
1:A:978:G:O4'	1:A:1001:A:H2	1.98	0.47
1:A:1112:G:C2'	1:A:1113:U:H5'	2.44	0.47
1:A:1481:U:H3	1:A:1510:G:H1	1.63	0.47
1:A:1512:U:O2'	1:A:1513:C:H5'	2.13	0.47
1:A:2354:G:OP1	22:0:32:ARG:HD3	2.13	0.47
1:A:2503:2MA:H4'	1:A:2504:U:OP1	2.13	0.47
1:A:2589:A:O2'	1:A:2590:A:H5'	2.14	0.47
1:A:2646:C:H2'	1:A:2647:U:C6	2.49	0.47
1:A:2840:C:O2'	1:A:2841:C:H5'	2.15	0.47
6:G:13:GLU:O	6:G:17:PRO:HG2	2.14	0.47
6:G:58:GLN:O	6:G:62:LEU:HG	2.13	0.47
6:G:134:GLY:O	6:G:135:LEU:HD22	2.14	0.47
7:H:41:MET:HE1	7:H:61:HIS:HA	1.96	0.47
8:I:26:ALA:HA	8:I:30:LEU:CB	2.44	0.47
11:P:114:ILE:HB	11:P:130:PHE:CD1	2.49	0.47
11:P:136:GLU:O	11:P:140:ALA:HB3	2.15	0.47
12:Q:40:ALA:HB3	12:Q:127:ILE:CG2	2.44	0.47
14:S:15:ARG:O	14:S:19:LYS:HD3	2.14	0.47
17:V:21:ARG:HG2	17:V:93:GLU:CB	2.44	0.47
18:W:70:TYR:CE2	18:W:72:LYS:HA	2.50	0.47
26:4:28:LYS:CB	26:4:31:ILE:HD11	2.44	0.47
32:a:99:U:C5	51:t:21:LYS:HB2	2.49	0.47
32:a:125:U:O2'	32:a:126:G:H5'	2.13	0.47
32:a:187:C:H2'	32:a:188:C:C6	2.49	0.47
32:a:251:G:H4'	32:a:252:U:O5'	2.15	0.47
32:a:255:G:O2'	32:a:256:U:H5'	2.13	0.47
32:a:298:A:H3'	32:a:299:G:C8	2.49	0.47
32:a:360:A:O2'	32:a:361:G:H5'	2.14	0.47
32:a:375:U:O2'	32:a:376:G:H5'	2.14	0.47
32:a:741:G:C2'	32:a:742:G:H5'	2.44	0.47
32:a:834:C:O2'	32:a:835:U:H5'	2.14	0.47
32:a:1004:A:OP2	32:a:1025:U:H5'	2.15	0.47
32:a:1064:G:H1'	32:a:1190:G:N2	2.30	0.47
32:a:1097:C:O2'	32:a:1098:C:H5'	2.13	0.47
32:a:1104:G:O2'	32:a:1105:A:H5'	2.14	0.47
32:a:1130:A:O2'	40:i:3:GLN:NE2	2.38	0.47
32:a:1181:G:H1'	32:a:1182:G:C5	2.49	0.47
33:b:28:PHE:CD1	33:b:194:PRO:HG3	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:b:44:LEU:HA	33:b:47:THR:OG1	2.14	0.47
33:b:70:PHE:CD1	33:b:163:PHE:HB3	2.50	0.47
33:b:124:SER:HB2	33:b:125:PRO:HD3	1.96	0.47
36:e:54:ALA:O	36:e:58:ALA:N	2.38	0.47
36:e:63:ARG:O	36:e:66:MET:HG2	2.14	0.47
42:k:33:THR:HB	42:k:38:ASN:O	2.14	0.47
49:r:37:VAL:HG21	49:r:78:LEU:HB3	1.95	0.47
53:y:16:C:O3'	53:y:60:U:O2'	2.29	0.47
54:C:116:THR:HB	54:C:147:PHE:CD1	2.49	0.47
54:C:149:ILE:HA	54:C:152:ILE:HD12	1.96	0.47
1:A:10:G:C4'	1:A:2801(B):A:H61	2.27	0.47
1:A:111:A:H2'	1:A:112:U:H6	1.80	0.47
1:A:213:A:O2'	1:A:214:G:H5'	2.13	0.47
1:A:290:G:H2'	1:A:291:C:H6	1.77	0.47
1:A:340:A:H3'	1:A:341:G:H8	1.79	0.47
1:A:455:C:O2	1:A:473:G:H5'	2.14	0.47
1:A:521:G:H2'	1:A:522:G:H8	1.79	0.47
1:A:687:C:H1'	29:7:4:THR:HG22	1.97	0.47
1:A:754:C:O2'	1:A:755:C:H5'	2.15	0.47
1:A:1034:G:H2'	1:A:1035:U:C6	2.49	0.47
1:A:2128:C:P	54:C:36:LYS:H	2.37	0.47
1:A:2168:G:O2'	1:A:2170:A:N7	2.45	0.47
1:A:2169:A:H1'	55:z:56:C:O4'	2.14	0.47
1:A:2353:G:O2'	22:0:33:ALA:O	2.31	0.47
1:A:2479:G:H3'	1:A:2480:C:H5''	1.95	0.47
1:A:2650:U:O2'	1:A:2651:C:H5'	2.14	0.47
4:E:77:ILE:HG21	4:E:195:LEU:HD22	1.96	0.47
6:G:32:PRO:CB	6:G:163:ALA:HB2	2.44	0.47
9:N:16:ILE:HB	9:N:54:VAL:HG22	1.96	0.47
10:O:4:PRO:HA	10:O:21:CYS:O	2.14	0.47
12:Q:76:LYS:CB	12:Q:91:GLU:HG3	2.37	0.47
19:X:12:VAL:HG22	19:X:29:TRP:NE1	2.30	0.47
31:9:10:ILE:HD11	31:9:34:GLN:NE2	2.29	0.47
32:a:42:G:O2'	32:a:43:C:H5'	2.13	0.47
32:a:141:A:O2'	32:a:182:U:H1'	2.15	0.47
32:a:225:C:O2'	32:a:226:G:H5'	2.15	0.47
32:a:262:A:H2'	32:a:263:A:C8	2.49	0.47
32:a:405:U:H5''	32:a:406:G:O4'	2.14	0.47
32:a:475:G:O2'	32:a:476:G:H5'	2.14	0.47
32:a:724:G:O2'	32:a:725:G:H5'	2.14	0.47
32:a:737:A:H1'	37:f:73:ASN:CG	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:750:G:H1'	46:o:22:THR:OG1	2.14	0.47
32:a:827:U:O2'	39:h:19:VAL:HG11	2.14	0.47
32:a:865:A:H2'	32:a:866:C:H6	1.79	0.47
32:a:926:G:H3'	32:a:1505:G:H21	1.78	0.47
32:a:1187:G:P	40:i:113:LYS:HZ1	2.37	0.47
32:a:1477:C:H2'	32:a:1478:C:H6	1.79	0.47
35:d:148:VAL:HG12	35:d:149:ALA:O	2.14	0.47
36:e:77:PRO:HG2	36:e:78:HIS:ND1	2.30	0.47
40:i:4:TYR:HB3	40:i:84:ALA:HB1	1.95	0.47
41:j:30:SER:OG	41:j:84:GLN:OE1	2.23	0.47
43:l:40:VAL:HG21	43:l:78:GLN:CA	2.45	0.47
49:r:76:LEU:HD23	49:r:78:LEU:HD12	1.94	0.47
50:s:3:ARG:NH1	50:s:7:LYS:HB3	2.30	0.47
50:s:50:ALA:CB	50:s:57:HIS:HB3	2.45	0.47
55:z:20:U:H2'	55:z:21:A:C5'	2.44	0.47
55:z:26:A:C2'	55:z:27:G:H5'	2.44	0.47
1:A:29:U:H2'	1:A:30:G:H8	1.74	0.47
1:A:218:A:C2	1:A:235:U:H4'	2.50	0.47
1:A:304:G:O2'	1:A:305:U:H5'	2.13	0.47
1:A:354:G:O2'	1:A:355:G:H5'	2.14	0.47
1:A:357:A:O2'	1:A:358:U:H5'	2.15	0.47
1:A:479:A:H4'	1:A:480:A:H5'	1.96	0.47
1:A:554:U:H2'	1:A:555:U:C6	2.49	0.47
1:A:559:G:O2'	1:A:560:C:H5'	2.15	0.47
1:A:815:C:O2'	1:A:816:C:H5'	2.14	0.47
1:A:1056:G:O2'	1:A:1086:A:H1'	2.14	0.47
1:A:1069:A:H2'	1:A:1073:A:N7	2.30	0.47
1:A:1112:G:H2'	1:A:1113:U:O4'	2.14	0.47
1:A:1199:U:H2'	1:A:1200:C:C6	2.49	0.47
1:A:1221(A):C:H2'	1:A:1221(B):C:H6	1.79	0.47
1:A:1432:C:O2'	1:A:1433:U:H5'	2.14	0.47
1:A:1857:G:H1'	1:A:1885:A:H61	1.79	0.47
1:A:1946:U:H2'	1:A:1947:C:H6	1.78	0.47
1:A:1998:G:O2'	1:A:1999:C:H5'	2.13	0.47
1:A:2051:A:H5'	1:A:2578:G:O4'	2.14	0.47
1:A:2293:C:H2'	1:A:2294:C:C6	2.49	0.47
1:A:2320:A:C4'	1:A:2321:G:H5'	2.40	0.47
1:A:2420:C:P	30:8:33:ASN:H	2.37	0.47
1:A:2516:G:H2'	1:A:2517:C:C6	2.50	0.47
1:A:2638:G:H1'	1:A:2778:A:N6	2.29	0.47
1:A:2766:G:N3	1:A:2766:G:H2'	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2852:G:O2'	1:A:2853:C:H5'	2.14	0.47
2:B:13:A:O2'	2:B:15:A:O5'	2.32	0.47
6:G:109:VAL:C	6:G:112:PRO:HD2	2.39	0.47
7:H:146:ALA:HA	7:H:164:TYR:OH	2.14	0.47
8:I:133:HIS:O	8:I:136:VAL:HB	2.15	0.47
9:N:1:MET:HE1	16:U:94:ASN:HD22	1.78	0.47
12:Q:25:ASP:OD2	21:Z:78:LYS:HG2	2.14	0.47
15:T:45:PHE:CE1	15:T:65:LYS:HE2	2.49	0.47
16:U:101:ARG:C	16:U:103:PRO:HD3	2.40	0.47
18:W:76:VAL:HA	18:W:102:HIS:O	2.13	0.47
21:Z:126:VAL:HG13	21:Z:162:GLU:H	1.79	0.47
22:O:47:PRO:HB2	22:O:51:VAL:O	2.15	0.47
24:2:7:ARG:O	24:2:11:GLU:HG3	2.14	0.47
24:2:10:LEU:HD11	24:2:59:ARG:HD2	1.96	0.47
30:8:22:VAL:CG1	30:8:50:LEU:HD12	2.45	0.47
32:a:11:G:H2'	32:a:12:U:O4'	2.15	0.47
32:a:68:G:H4'	32:a:76:C:H3'	1.96	0.47
32:a:243:A:H4'	32:a:244:U:H5''	1.97	0.47
32:a:386:C:O2'	32:a:387:U:H5'	2.13	0.47
32:a:609:A:H2'	32:a:610:G:H5'	1.95	0.47
32:a:991:U:H1'	32:a:992:U:OP2	2.14	0.47
32:a:1100:C:N4	32:a:1103:C:OP1	2.47	0.47
32:a:1463:C:H2'	32:a:1464:G:H8	1.78	0.47
33:b:118:LEU:O	33:b:118:LEU:HD13	2.14	0.47
35:d:108:LEU:HD21	35:d:183:GLY:HA3	1.97	0.47
36:e:91:LEU:HG	36:e:120:THR:CG2	2.33	0.47
37:f:30:LEU:CB	37:f:35:ALA:HB3	2.45	0.47
39:h:85:ARG:HD2	39:h:134:ILE:O	2.14	0.47
42:k:17:GLY:HA2	42:k:35:PRO:N	2.29	0.47
45:n:26:ARG:NH1	45:n:46:GLU:OE1	2.45	0.47
49:r:21:LYS:HA	49:r:55:ARG:O	2.14	0.47
51:t:9:ASN:ND2	51:t:11:SER:OG	2.48	0.47
53:y:36:U:H5	56:x:14:A:N1	2.13	0.47
54:C:114:VAL:HG21	54:C:153:ILE:HD11	1.95	0.47
55:z:25:C:H2'	55:z:26:A:O4'	2.14	0.47
56:x:35:G:H2'	56:x:36:C:H6	1.77	0.47
1:A:25:U:H5'	18:W:78:GLU:O	2.14	0.47
1:A:116:C:C1'	1:A:127:A:H1'	2.44	0.47
1:A:406:G:H3'	1:A:406:G:P	2.55	0.47
1:A:585:G:H1'	1:A:1254:A:H61	1.78	0.47
1:A:629:G:H1'	1:A:639:U:H1'	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:671:C:H2'	1:A:672:C:C6	2.49	0.47
1:A:673:C:O2'	1:A:674:G:H5'	2.14	0.47
1:A:774:A:H1'	1:A:775:G:C8	2.49	0.47
1:A:811:U:H2'	11:P:21:ARG:HA	1.96	0.47
1:A:1120:G:H2'	1:A:1121:C:C6	2.50	0.47
1:A:1297:C:H2'	1:A:1298:C:C6	2.50	0.47
1:A:1557:C:H3'	1:A:1558:A:H2'	1.95	0.47
1:A:1743:C:O2'	1:A:1744:C:H5'	2.14	0.47
1:A:1860:G:O2'	1:A:1861:G:H5'	2.14	0.47
1:A:1966:A:N3	1:A:2592:G:O2'	2.29	0.47
1:A:2126:A:N6	1:A:2162:G:O2'	2.47	0.47
1:A:2462:U:H2'	1:A:2463:C:H6	1.79	0.47
1:A:2636:U:H4'	4:E:80:GLU:OE1	2.14	0.47
1:A:2639:A:H61	1:A:2775:A:H1'	1.79	0.47
1:A:2693:A:H2'	1:A:2694:G:C8	2.49	0.47
1:A:2848:G:H1'	1:A:2868:A:N6	2.29	0.47
2:B:2:C:H2'	2:B:3:C:C6	2.49	0.47
2:B:54:G:O2'	2:B:55:U:H5'	2.14	0.47
3:D:20:ASP:OD1	3:D:21:PHE:N	2.48	0.47
6:G:111:LEU:HD13	6:G:179:PRO:CG	2.45	0.47
10:O:25:LEU:HD12	10:O:38:VAL:HG12	1.96	0.47
12:Q:27:VAL:CG1	12:Q:134:ARG:HB2	2.43	0.47
12:Q:59:ARG:HD3	12:Q:59:ARG:O	2.15	0.47
18:W:68:ARG:NH1	18:W:111:HIS:HA	2.29	0.47
20:Y:76:CYS:O	20:Y:80:GLY:N	2.47	0.47
21:Z:6:LYS:HE3	21:Z:43:GLU:CD	2.39	0.47
21:Z:152:ALA:HB1	21:Z:163:LEU:CD2	2.44	0.47
27:5:49:CYS:SG	27:5:51:TYR:N	2.74	0.47
32:a:333:G:O2'	32:a:334:C:H5'	2.15	0.47
32:a:363:A:C6	43:l:31:PRO:HD2	2.50	0.47
32:a:383:A:H2'	32:a:384:G:O4'	2.15	0.47
32:a:460:G:H2'	32:a:471:G:O6	2.15	0.47
32:a:1163:C:H2'	32:a:1164:G:H8	1.79	0.47
32:a:1363(A):C:H5'	32:a:1363(B):A:OP1	2.15	0.47
32:a:1422:G:O2'	32:a:1423:G:H5'	2.15	0.47
34:c:22:TRP:CB	34:c:59:ARG:HB2	2.44	0.47
35:d:112:VAL:HG22	35:d:116:GLN:OE1	2.14	0.47
35:d:185:PHE:CE1	35:d:189:PRO:HD3	2.50	0.47
36:e:92:LYS:O	36:e:118:ILE:HD12	2.13	0.47
40:i:8:GLY:HA2	40:i:79:LEU:HD23	1.95	0.47
41:j:38:ILE:HG13	41:j:38:ILE:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:k:21:ILE:HD12	42:k:84:VAL:HG22	1.97	0.47
47:p:13:HIS:C	47:p:15:PRO:HD3	2.40	0.47
48:q:10:VAL:HG11	48:q:53:LEU:HA	1.97	0.47
48:q:75:ARG:NH1	48:q:76:LEU:O	2.48	0.47
49:r:60:ALA:O	49:r:64:ARG:HG3	2.15	0.47
52:u:6:ARG:NE	52:u:15:ARG:HH12	2.12	0.47
54:C:52:ARG:NH2	55:z:61:C:O2'	2.47	0.47
55:z:66:U:H2'	55:z:67:C:H6	1.77	0.47
1:A:83:G:OP1	20:Y:95:LYS:NZ	2.48	0.47
1:A:99:U:H5''	1:A:102:G:O4'	2.14	0.47
1:A:123:G:H2'	1:A:124:G:C8	2.49	0.47
1:A:363(B):A:H2'	1:A:363(C):G:H8	1.80	0.47
1:A:495:G:C2'	1:A:496:G:H5''	2.45	0.47
1:A:500:G:H22	1:A:503:A:P	2.37	0.47
1:A:511:U:C2'	1:A:512:G:H5'	2.44	0.47
1:A:549:G:H2'	1:A:551:G:O4'	2.15	0.47
1:A:647:G:H2'	1:A:648:G:C8	2.49	0.47
1:A:650:C:O3'	30:8:17:THR:HB	2.15	0.47
1:A:1045:A:H5'	1:A:1047:G:OP1	2.13	0.47
1:A:1058:G:H5''	1:A:1059:G:OP2	2.15	0.47
1:A:1149:G:O2'	1:A:1150:C:H5'	2.14	0.47
1:A:1184:G:H2'	1:A:1185:C:H6	1.78	0.47
1:A:1296:G:O2'	1:A:1297:C:H5'	2.14	0.47
1:A:1313:U:H2'	1:A:1610:A:C2	2.50	0.47
1:A:1360:A:N6	1:A:1371:G:O2'	2.46	0.47
1:A:1419:A:O2'	1:A:1421:G:N7	2.32	0.47
1:A:1448:G:H5''	1:A:1542:A:OP1	2.15	0.47
1:A:1473:G:H2'	1:A:1474:C:O4'	2.15	0.47
1:A:1513:C:O2'	1:A:1514:U:H5'	2.15	0.47
1:A:1913:A:O2'	1:A:1914:C:OP2	2.32	0.47
1:A:1930:G:O2'	1:A:1968:G:O6	2.22	0.47
1:A:1958:C:H2'	1:A:1959:G:H8	1.79	0.47
1:A:2065:C:H2'	1:A:2066:C:H6	1.80	0.47
1:A:2094:G:OP1	8:I:22:LYS:NZ	2.40	0.47
1:A:2294:C:P	14:S:89:ARG:HH22	2.37	0.47
1:A:2390:U:O2'	1:A:2391:G:H5'	2.14	0.47
1:A:2477:C:H5''	1:A:2478:A:OP1	2.15	0.47
1:A:2630:G:O2'	1:A:2631:G:H5'	2.14	0.47
1:A:2697:G:O2'	1:A:2698:U:H5'	2.14	0.47
1:A:2756:U:H4'	1:A:2757:A:OP1	2.15	0.47
1:A:2765:A:H3'	1:A:2766:G:C5'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2783:G:O2'	1:A:2784:C:H5'	2.14	0.47
1:A:2787:C:O2'	1:A:2788:C:H5'	2.14	0.47
1:A:2895:U:H2'	1:A:2896:C:H6	1.79	0.47
3:D:78:LYS:HZ3	3:D:114:GLY:HA2	1.79	0.47
3:D:227:ASN:C	3:D:234:GLY:HA3	2.39	0.47
4:E:174:ASP:OD1	4:E:175:VAL:N	2.48	0.47
5:F:34:TRP:CH2	11:P:8:PRO:HB3	2.50	0.47
5:F:51:THR:CG2	5:F:92:PRO:HD2	2.45	0.47
5:F:123:LEU:HD13	5:F:192:LEU:HD22	1.97	0.47
6:G:25:TYR:HB3	6:G:30:GLU:HB2	1.95	0.47
6:G:50:ALA:HB1	6:G:53:LEU:HD21	1.96	0.47
6:G:83:ARG:H	6:G:86:MET:HE1	1.80	0.47
7:H:103:LEU:O	7:H:114:VAL:HA	2.14	0.47
7:H:171:LEU:HD23	7:H:171:LEU:H	1.79	0.47
9:N:25:ARG:O	9:N:28:THR:HB	2.15	0.47
9:N:74:ARG:O	9:N:82:LEU:HD12	2.14	0.47
16:U:14:HIS:HA	16:U:32:PHE:CE1	2.50	0.47
19:X:35:THR:O	19:X:39:ILE:HG13	2.14	0.47
20:Y:45:VAL:N	20:Y:63:LYS:O	2.47	0.47
20:Y:85:VAL:HG12	20:Y:106:LEU:CD1	2.45	0.47
21:Z:115:GLY:CA	21:Z:146:ILE:HG12	2.45	0.47
23:1:25:LYS:HA	23:1:29:GLY:O	2.14	0.47
31:9:25:VAL:HG21	31:9:34:GLN:OE1	2.15	0.47
32:a:68:G:H3'	32:a:76:C:C6	2.49	0.47
32:a:96:U:H2'	32:a:103:C:N3	2.29	0.47
32:a:378:G:H2'	32:a:379:C:C6	2.49	0.47
32:a:448:A:OP2	32:a:485:G:N1	2.33	0.47
32:a:451:A:N6	32:a:481:G:O5'	2.44	0.47
32:a:553:A:H2'	32:a:554:C:C6	2.50	0.47
32:a:687:A:N1	32:a:700:G:O2'	2.43	0.47
32:a:693:G:H5'	56:x:10:A:OP1	2.14	0.47
32:a:707:C:O2'	32:a:708:C:H5'	2.14	0.47
32:a:993:G:C2'	32:a:995:C:H41	2.25	0.47
32:a:1004:A:C8	32:a:1037:C:H2'	2.49	0.47
32:a:1048:G:OP1	45:n:4:LYS:HB2	2.14	0.47
32:a:1071:C:O2'	32:a:1072:G:H5'	2.14	0.47
32:a:1131:G:O2'	32:a:1132:C:H5'	2.14	0.47
32:a:1314:C:OP1	50:s:6:LYS:NZ	2.37	0.47
32:a:1507:A:O2'	32:a:1508:G:H5'	2.15	0.47
33:b:151:GLY:O	33:b:154:LEU:HB2	2.14	0.47
34:c:11:ARG:NH2	34:c:182:ILE:HD12	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:d:57:ARG:HB3	35:d:206:PHE:HB2	1.97	0.47
35:d:155:LEU:CD2	35:d:158:ILE:H	2.28	0.47
36:e:92:LYS:N	36:e:119:LEU:O	2.48	0.47
36:e:145:LYS:O	36:e:149:GLU:HG3	2.15	0.47
38:g:76:ARG:O	38:g:86:GLN:HA	2.15	0.47
38:g:133:GLY:HA2	38:g:136:LYS:HB2	1.97	0.47
40:i:2:GLU:O	40:i:21:PRO:HD3	2.15	0.47
42:k:21:ILE:HD11	42:k:98:LEU:HD12	1.96	0.47
47:p:54:GLU:HA	47:p:57:ARG:HB3	1.96	0.47
48:q:82:MET:O	48:q:85:VAL:HB	2.15	0.47
49:r:21:LYS:HB2	49:r:24:ALA:CB	2.45	0.47
49:r:53:ARG:HG2	49:r:63:GLN:OE1	2.14	0.47
51:t:36:LEU:HD12	51:t:62:LEU:CD1	2.44	0.47
54:C:214:VAL:HG21	54:C:224:ILE:HD13	1.97	0.47
1:A:126:A:OP2	29:7:19:ARG:N	2.37	0.47
1:A:218:A:H2	1:A:235:U:H4'	1.80	0.47
1:A:298:G:H5''	1:A:299:A:OP1	2.15	0.47
1:A:482:A:P	20:Y:50:ARG:HH22	2.38	0.47
1:A:600:G:H2'	1:A:601:C:O4'	2.15	0.47
1:A:604:G:HO2'	1:A:605:C:H5'	1.79	0.47
1:A:715:G:H2'	1:A:716:A:O4'	2.15	0.47
1:A:851:U:O2'	25:3:45:GLY:HA3	2.15	0.47
1:A:877:U:HO2'	1:A:878:A:C1'	2.25	0.47
1:A:924:C:H2'	1:A:925:C:H6	1.78	0.47
1:A:1069:A:C5	1:A:1095:A:H5'	2.49	0.47
1:A:1076:C:C4'	1:A:1077:A:H5'	2.45	0.47
1:A:1138:G:H2'	1:A:1139:G:O4'	2.15	0.47
1:A:1252:G:C2	16:U:33:ARG:HB3	2.50	0.47
1:A:1296:G:OP1	1:A:2709:G:O2'	2.26	0.47
1:A:1416:G:O2'	1:A:1417:C:OP2	2.27	0.47
1:A:1612:C:O2'	29:7:5:TRP:O	2.28	0.47
1:A:1625:C:H2'	1:A:1626:G:O4'	2.14	0.47
1:A:1893:C:H2'	1:A:1894:C:H5'	1.96	0.47
1:A:1900:A:H5'	1:A:1970:A:C5'	2.43	0.47
1:A:1907:G:O2'	1:A:1908:C:H5'	2.15	0.47
1:A:2150:U:H2'	1:A:2151:G:C8	2.50	0.47
1:A:2181:G:O2'	1:A:2182:G:H5'	2.14	0.47
1:A:2759:G:O2'	1:A:2760:C:H5'	2.14	0.47
2:B:26:A:H2'	2:B:27:C:C6	2.50	0.47
2:B:95:C:O2'	2:B:96:U:H5'	2.13	0.47
5:F:11:VAL:N	5:F:18:ARG:O	2.37	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:80:ALA:O	5:F:86:GLY:HA3	2.14	0.47
7:H:9:ILE:HB	7:H:50:VAL:O	2.14	0.47
8:I:9:LEU:CB	8:I:12:LEU:HB2	2.39	0.47
8:I:72:LEU:HD13	8:I:101:LEU:HD13	1.97	0.47
9:N:95:PRO:HA	9:N:98:VAL:HG23	1.97	0.47
10:O:49:ARG:NH1	32:a:1423:G:H5'	2.29	0.47
11:P:121:LYS:HD3	11:P:123:LEU:CD1	2.38	0.47
12:Q:66:ILE:HG22	12:Q:68:ILE:O	2.14	0.47
13:R:70:LEU:HD13	13:R:75:LEU:CD1	2.45	0.47
13:R:87:TYR:OH	13:R:116:LEU:HB3	2.14	0.47
15:T:77:PRO:HB2	15:T:80:SER:HB2	1.97	0.47
20:Y:14:LEU:O	20:Y:72:VAL:HG13	2.15	0.47
20:Y:75:ILE:HA	20:Y:81:LYS:O	2.14	0.47
28:6:18:ARG:NH2	28:6:42:TRP:HB3	2.29	0.47
28:6:40:CYS:SG	28:6:42:TRP:HB2	2.55	0.47
31:9:1:MET:SD	31:9:33:LYS:HG2	2.55	0.47
32:a:9:G:O2'	32:a:10:A:H5'	2.15	0.47
32:a:35:G:H2'	32:a:36:C:H6	1.79	0.47
32:a:73:G:H2'	32:a:76:C:C1'	2.45	0.47
32:a:91:C:N3	32:a:92:C:N4	2.62	0.47
32:a:129(B):G:O2'	32:a:189(G):U:H2'	2.14	0.47
32:a:143:A:N1	32:a:220:G:C6	2.82	0.47
32:a:332:G:O2'	32:a:333:G:H5'	2.14	0.47
32:a:679:C:H2'	32:a:680:C:H6	1.79	0.47
32:a:881:G:P	43:l:12:ARG:HH22	2.38	0.47
32:a:1112:C:N4	34:c:178:LEU:HD23	2.29	0.47
32:a:1256:A:O3'	32:a:1257:U:H4'	2.15	0.47
32:a:1422:G:H2'	32:a:1423:G:C8	2.50	0.47
32:a:1477:C:H2'	32:a:1478:C:C6	2.49	0.47
33:b:96:ARG:HB3	33:b:148:TYR:HE1	1.80	0.47
34:c:152:ILE:HG22	34:c:167:TRP:CB	2.39	0.47
35:d:173:TRP:CD1	35:d:174:LEU:HG	2.50	0.47
38:g:115:ARG:HD3	38:g:118:VAL:CG2	2.45	0.47
38:g:125:MET:O	38:g:129:GLU:HG3	2.15	0.47
41:j:38:ILE:HG12	41:j:71:LEU:O	2.14	0.47
53:y:8:U:H4'	53:y:48:C:C4'	2.45	0.47
1:A:49:A:N6	1:A:177:G:O2'	2.42	0.47
1:A:194:G:H2'	1:A:195:A:O4'	2.15	0.47
1:A:220:G:N2	1:A:428:A:OP2	2.46	0.47
1:A:285:C:H2'	1:A:286:C:C6	2.50	0.47
1:A:410:G:OP1	1:A:411:G:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:614(A):U:H3'	1:A:614(B):U:C6	2.50	0.47
1:A:771:G:O2'	1:A:772:C:H5'	2.14	0.47
1:A:889:C:H1'	1:A:890:A:O4'	2.15	0.47
1:A:1035:U:H2'	1:A:1036:G:H8	1.80	0.47
1:A:1357:U:O2'	1:A:1358:G:H5'	2.15	0.47
1:A:1787:A:H5'	1:A:2589:A:O2'	2.15	0.47
1:A:2250:G:O2'	1:A:2496:C:OP1	2.31	0.47
1:A:2392:A:H2'	1:A:2393:A:O4'	2.14	0.47
1:A:2512:C:H2'	1:A:2513:G:C1'	2.45	0.47
1:A:2532:G:H2'	1:A:2533:A:C8	2.49	0.47
1:A:2635:C:H2'	1:A:2636:U:O4'	2.14	0.47
1:A:2716:U:H2'	1:A:2717:G:C8	2.45	0.47
1:A:2801(B):A:H3'	1:A:2802:G:O4'	2.15	0.47
5:F:152:GLU:HG2	5:F:190:GLU:OE1	2.14	0.47
7:H:149:ARG:HD2	7:H:149:ARG:O	2.15	0.47
8:I:54:GLN:O	8:I:57:ARG:HG3	2.15	0.47
8:I:123:LEU:CD1	8:I:144:VAL:HG12	2.45	0.47
10:O:34:THR:HG22	10:O:37:ASP:OD2	2.15	0.47
12:Q:59:ARG:NH1	12:Q:60:ARG:HE	2.13	0.47
13:R:52:ILE:O	13:R:55:ALA:HB3	2.14	0.47
14:S:32:LEU:O	14:S:62:LYS:NZ	2.31	0.47
19:X:12:VAL:HG21	19:X:27:THR:HG22	1.96	0.47
20:Y:88:LYS:O	20:Y:95:LYS:HA	2.14	0.47
23:1:12:PRO:HB2	23:1:41:ARG:HH21	1.80	0.47
25:3:15:TYR:CE2	25:3:53:LEU:HD21	2.50	0.47
26:4:15:ILE:HD13	26:4:21:VAL:HG22	1.97	0.47
31:9:9:ARG:HE	31:9:16:VAL:HG23	1.80	0.47
32:a:161:A:H2'	32:a:162:A:O4'	2.15	0.47
32:a:381:C:H2'	32:a:382:A:C8	2.50	0.47
32:a:404:U:O2'	32:a:405:U:H5'	2.15	0.47
32:a:594:G:H3'	32:a:595:G:H8	1.79	0.47
32:a:856:C:O2'	32:a:857:C:H5'	2.14	0.47
32:a:1225:A:H3'	44:m:103:THR:OG1	2.13	0.47
32:a:1271:G:H5'	32:a:1314:C:H5''	1.97	0.47
33:b:53:ARG:CA	33:b:56:ARG:HH21	2.27	0.47
43:l:10:LEU:HD13	48:q:32:TYR:CE1	2.49	0.47
44:m:5:ALA:CB	44:m:61:GLU:HG2	2.38	0.47
44:m:12:ASN:O	44:m:44:ARG:HD2	2.15	0.47
48:q:9:VAL:O	48:q:21:VAL:HA	2.15	0.47
49:r:34:TYR:HD2	49:r:76:LEU:HD22	1.80	0.47
54:C:76:ALA:HA	54:C:114:VAL:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:C:118:ASP:O	54:C:121:GLY:HA3	2.15	0.47
1:A:175:G:O2'	1:A:176:G:H5'	2.14	0.47
1:A:195:A:O5'	1:A:196:A:H4'	2.15	0.47
1:A:234:C:H2'	1:A:235:U:C6	2.50	0.47
1:A:246:C:O2'	1:A:385:C:H4'	2.15	0.47
1:A:272(C):C:H2'	1:A:272(D):G:C8	2.50	0.47
1:A:948:G:O2'	1:A:949:C:H5'	2.15	0.47
1:A:954:G:O2'	1:A:955:C:H5'	2.14	0.47
1:A:1244:G:O2'	1:A:1245:G:H5'	2.14	0.47
1:A:1412:A:H2'	1:A:1413:G:C8	2.49	0.47
1:A:1424:G:H2'	1:A:1425:G:C8	2.50	0.47
1:A:1480:G:H2'	1:A:1481:U:O4'	2.15	0.47
1:A:1497:U:O2'	1:A:1498:C:H5'	2.15	0.47
1:A:1515:G:O2'	1:A:1516:C:H5'	2.15	0.47
1:A:1569:A:H2'	1:A:1570:A:C8	2.50	0.47
1:A:1711:C:H2'	1:A:1712:C:C6	2.50	0.47
1:A:1718:G:H2'	1:A:1719:G:H8	1.79	0.47
1:A:1996:C:H4'	1:A:1997:G:H5'	1.97	0.47
1:A:2038:G:H2'	1:A:2039:C:H6	1.80	0.47
1:A:2040:C:O2'	1:A:2041:U:H5'	2.15	0.47
1:A:2116:G:OP2	1:A:2165:G:N2	2.47	0.47
1:A:2266:A:H4'	1:A:2267:A:O5'	2.15	0.47
1:A:2557:G:O2'	1:A:2558:C:H5'	2.15	0.47
1:A:2730:C:O2'	1:A:2731:G:H5'	2.15	0.47
3:D:70:TRP:HA	3:D:190:TYR:HE2	1.79	0.47
3:D:79:VAL:HG11	3:D:111:LEU:HD11	1.97	0.47
5:F:10:PRO:HB3	5:F:17:ARG:NH2	2.30	0.47
6:G:145:THR:HG22	6:G:148:MET:CG	2.43	0.47
7:H:42:ARG:O	7:H:52:VAL:HG13	2.15	0.47
7:H:95:ARG:HD3	7:H:128:PRO:CB	2.45	0.47
12:Q:58:PHE:CE1	12:Q:114:ALA:HA	2.49	0.47
15:T:26:ASP:HA	15:T:92:GLY:H	1.79	0.47
19:X:2:LYS:HE2	19:X:38:GLU:OE2	2.15	0.47
21:Z:24:LEU:HD12	21:Z:25:PRO:HD2	1.97	0.47
21:Z:103:ARG:O	21:Z:138:GLU:HA	2.15	0.47
24:2:41:ILE:HD12	24:2:43:GLN:CD	2.40	0.47
30:8:22:VAL:O	30:8:49:VAL:HA	2.15	0.47
31:9:11:CYS:N	31:9:14:CYS:SG	2.86	0.47
32:a:77:G:H2'	32:a:78:G:O4'	2.15	0.47
32:a:105:G:H2'	32:a:106:C:C6	2.50	0.47
32:a:150:C:H3'	32:a:151:A:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:183:G:H2'	32:a:184:G:O4'	2.15	0.47
32:a:363:A:OP1	43:l:34:ARG:N	2.24	0.47
32:a:410:G:H3'	35:d:25:ARG:HH22	1.80	0.47
32:a:411:A:C2'	32:a:412:A:H4'	2.45	0.47
32:a:983:A:H5'	32:a:984:C:OP2	2.15	0.47
32:a:1030(B):G:H2'	32:a:1030(D):G:P	2.55	0.47
32:a:1130:A:H5'	40:i:18:PHE:CZ	2.50	0.47
32:a:1149:C:H2'	32:a:1150:U:C6	2.50	0.47
32:a:1298:C:H1'	32:a:1299:A:C2	2.49	0.47
33:b:15:VAL:HG23	33:b:16:HIS:CD2	2.50	0.47
33:b:90:MET:HB3	33:b:91:PRO:HD2	1.97	0.47
39:h:49:GLU:OE2	39:h:60:ARG:HD3	2.14	0.47
40:i:23:ASN:OD1	40:i:25:LYS:HE3	2.15	0.47
40:i:26:VAL:HA	40:i:61:ALA:O	2.15	0.47
43:l:32:PHE:CD2	43:l:84:LEU:HD11	2.50	0.47
43:l:69:TYR:CE2	43:l:71:PRO:HA	2.49	0.47
44:m:70:LEU:O	44:m:74:VAL:HG23	2.15	0.47
54:C:19:VAL:HG22	54:C:223:ARG:CG	2.45	0.47
54:C:153:ILE:HA	54:C:156:ILE:CG1	2.45	0.47
54:C:217:THR:HG22	54:C:218:MET:CE	2.45	0.47
1:A:171:G:H2'	1:A:172:C:H6	1.80	0.46
1:A:214:G:O2'	1:A:215:G:O4'	2.29	0.46
1:A:630:G:N2	1:A:632:A:H3'	2.29	0.46
1:A:812:C:H5''	1:A:1250:G:O2'	2.14	0.46
1:A:937:U:H2'	1:A:938:G:H8	1.79	0.46
1:A:1075:C:C2'	1:A:1076:C:H5'	2.45	0.46
1:A:1266:G:P	18:W:15:ARG:HH22	2.38	0.46
1:A:1306:C:H2'	1:A:1307:A:O4'	2.15	0.46
1:A:1510:G:H2'	1:A:1511:C:H6	1.80	0.46
1:A:1633:G:H2'	1:A:1635:G:C8	2.50	0.46
1:A:1789:A:OP2	3:D:222:ARG:NH2	2.40	0.46
1:A:1983:C:C3'	1:A:1984:G:H5''	2.45	0.46
1:A:2013:A:H2'	1:A:2014:A:O4'	2.15	0.46
1:A:2096:U:H3	1:A:2193:G:H1	1.62	0.46
3:D:106:ILE:HG13	3:D:106:ILE:O	2.15	0.46
3:D:155:LEU:HD23	3:D:177:LEU:CD2	2.45	0.46
4:E:15:PHE:HA	4:E:19:ARG:O	2.15	0.46
4:E:109:LYS:HE2	4:E:191:PRO:HB3	1.96	0.46
6:G:41:GLN:NE2	6:G:60:LEU:HD21	2.29	0.46
7:H:89:ILE:H	7:H:89:ILE:HD12	1.80	0.46
7:H:144:VAL:O	7:H:148:ILE:HG12	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:I:8:PRO:C	8:I:9:LEU:HD22	2.40	0.46
12:Q:7:MET:N	12:Q:7:MET:SD	2.88	0.46
12:Q:136:ALA:O	12:Q:140:ALA:N	2.42	0.46
13:R:32:GLY:O	13:R:115:GLU:HA	2.14	0.46
13:R:72:ASP:OD1	13:R:73:VAL:N	2.48	0.46
28:6:15:GLU:OE1	28:6:45:LYS:HE3	2.15	0.46
32:a:8:A:N6	35:d:209:ARG:HB2	2.30	0.46
32:a:237:C:H2'	32:a:238:G:H8	1.81	0.46
32:a:238:G:OP1	48:q:25:ARG:NH2	2.43	0.46
32:a:546:G:H4'	32:a:548:G:H4'	1.96	0.46
32:a:1009:G:H2'	32:a:1010:G:C8	2.50	0.46
32:a:1221:G:H5'	32:a:1321:C:O2	2.14	0.46
32:a:1249:C:H4'	40:i:73:GLN:HE22	1.80	0.46
32:a:1277:C:H1'	32:a:1282:C:H1'	1.96	0.46
32:a:1317:C:H2'	32:a:1318:A:C8	2.49	0.46
33:b:18:GLY:CA	33:b:42:ILE:HD12	2.45	0.46
34:c:187:ALA:HB3	34:c:198:VAL:CB	2.37	0.46
35:d:60:GLU:HG3	35:d:202:LEU:CD1	2.45	0.46
36:e:69:VAL:HG13	36:e:71:LEU:CD2	2.45	0.46
38:g:77:SER:HA	38:g:85:TYR:O	2.15	0.46
38:g:95:ARG:HG2	38:g:99:LEU:CD1	2.45	0.46
42:k:17:GLY:HA2	42:k:35:PRO:CG	2.46	0.46
44:m:37:THR:HG21	44:m:56:LEU:HA	1.97	0.46
44:m:84:ILE:HD12	50:s:74:PHE:CE1	2.51	0.46
48:q:83:ASP:OD1	48:q:84:LEU:N	2.45	0.46
1:A:327:G:H2'	1:A:328:U:H6	1.80	0.46
1:A:451:C:H41	1:A:453:C:H3'	1.80	0.46
1:A:797:C:OP2	5:F:62:ARG:HB2	2.14	0.46
1:A:839:U:O2'	1:A:840:C:H5'	2.15	0.46
1:A:885:C:H3'	1:A:886:C:H5''	1.98	0.46
1:A:968:G:H2'	1:A:969:U:H6	1.81	0.46
1:A:1138:G:N2	9:N:106:MET:HE2	2.30	0.46
1:A:1263:U:H2'	1:A:1264:G:C8	2.50	0.46
1:A:1987:G:H2'	1:A:1988:C:C6	2.50	0.46
1:A:2114:A:C2	1:A:2115:G:H1'	2.50	0.46
1:A:2368:C:H2'	1:A:2369:A:H8	1.80	0.46
1:A:2443:C:O2'	1:A:2444:G:H5'	2.16	0.46
1:A:2554:U:H2'	1:A:2555:U:H6	1.80	0.46
1:A:2572:A:OP2	4:E:146:THR:N	2.41	0.46
2:B:44:G:OP2	26:4:1:MET:N	2.34	0.46
2:B:118:G:H2'	2:B:119:G:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:148:GLU:OE1	3:D:151:LYS:NZ	2.37	0.46
6:G:19:LEU:HD11	6:G:172:LEU:HD13	1.98	0.46
8:I:12:LEU:HD11	8:I:25:TYR:CE2	2.41	0.46
9:N:70:LYS:HD3	9:N:87:LEU:HD12	1.98	0.46
13:R:9:LYS:O	13:R:17:ARG:HD3	2.15	0.46
16:U:102:GLU:HB3	16:U:105:VAL:CB	2.42	0.46
17:V:3:ALA:O	17:V:14:VAL:HG22	2.16	0.46
20:Y:8:LYS:HG2	20:Y:11:ASP:OD2	2.16	0.46
26:4:58:ARG:HH22	44:m:80:ARG:NH2	2.11	0.46
27:5:31:VAL:O	27:5:40:LYS:N	2.48	0.46
31:9:24:TYR:HE1	31:9:35:ARG:HG2	1.80	0.46
32:a:27:G:O2'	32:a:28:G:H5'	2.15	0.46
32:a:65:U:H4'	32:a:73:G:O6	2.15	0.46
32:a:108:G:N1	51:t:15:ARG:HG2	2.29	0.46
32:a:266:G:O2'	48:q:67:LYS:HD2	2.15	0.46
32:a:626:U:OP1	47:p:18:ARG:NE	2.47	0.46
32:a:656:C:H2'	32:a:657:G:O4'	2.15	0.46
32:a:731:G:O2'	32:a:732:C:H5'	2.14	0.46
32:a:920:U:HO2'	32:a:1081:G:HO2'	1.62	0.46
32:a:1164:G:H2'	32:a:1165:C:C6	2.50	0.46
32:a:1188:A:O4'	45:n:60:SER:OG	2.15	0.46
32:a:1319:A:N6	32:a:1361:G:H1'	2.30	0.46
32:a:1351:U:H2'	32:a:1352:C:C6	2.51	0.46
32:a:1402:4OC:HM43	32:a:1403:C:O2	2.15	0.46
32:a:1411:C:O2'	32:a:1412:C:H5'	2.14	0.46
36:e:40:ARG:HB3	36:e:66:MET:CE	2.45	0.46
36:e:44:GLY:HA3	36:e:58:ALA:O	2.15	0.46
37:f:10:LEU:CD2	37:f:61:LEU:HD13	2.45	0.46
39:h:14:ARG:NH2	39:h:83:ILE:HG23	2.29	0.46
40:i:51:ARG:HG3	40:i:56:LEU:HD21	1.97	0.46
42:k:31:THR:HG22	42:k:33:THR:HG23	1.97	0.46
47:p:55:ARG:O	47:p:58:TYR:HB3	2.16	0.46
48:q:29:HIS:CG	48:q:30:PRO:HD2	2.51	0.46
49:r:21:LYS:HB3	49:r:56:THR:O	2.16	0.46
49:r:31:LEU:HB3	49:r:65:ILE:HG22	1.97	0.46
54:C:35:ALA:HB3	54:C:39:GLU:HG2	1.97	0.46
54:C:56:GLN:O	54:C:165:ASN:ND2	2.48	0.46
54:C:77:ILE:HG22	54:C:119:VAL:HG21	1.97	0.46
54:C:105:ASP:OD1	54:C:106:GLY:N	2.47	0.46
54:C:114:VAL:HG11	54:C:156:ILE:HD11	1.97	0.46
54:C:183:GLU:HA	54:C:186:ALA:HB3	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:26:G:O2'	1:A:27:G:H5'	2.16	0.46
1:A:123:G:H2'	1:A:124:G:O4'	2.14	0.46
1:A:235:U:H2'	1:A:236:C:C6	2.51	0.46
1:A:260:G:H1'	1:A:621:A:H1'	1.96	0.46
1:A:284:U:H2'	1:A:285:C:H6	1.81	0.46
1:A:357:A:H2'	1:A:358:U:C6	2.51	0.46
1:A:428:A:O2'	1:A:429:A:H5'	2.15	0.46
1:A:652(F):G:N2	1:A:652(U):C:O2'	2.49	0.46
1:A:713:G:O2'	1:A:714:U:H5'	2.15	0.46
1:A:735:A:C2'	1:A:736:C:H5'	2.45	0.46
1:A:837:C:N3	1:A:941:A:N6	2.63	0.46
1:A:904:C:O2'	1:A:905:U:H5'	2.16	0.46
1:A:1528(B):A:N6	1:A:1541:G:H1'	2.23	0.46
1:A:1613:G:O2'	29:7:3:ARG:NE	2.49	0.46
1:A:1814:G:O4'	3:D:51:VAL:HG21	2.15	0.46
1:A:2134:A:N9	1:A:2157:G:H4'	2.29	0.46
1:A:2302:G:O2'	1:A:2303:G:H5'	2.14	0.46
1:A:2344:U:OP1	28:6:37:ARG:HB2	2.15	0.46
1:A:2437:U:O2'	1:A:2438:U:H5'	2.16	0.46
1:A:2496:C:H2'	1:A:2497:A:O4'	2.15	0.46
1:A:2566:A:H61	10:O:28:SER:HB2	1.79	0.46
1:A:2697:G:H2'	1:A:2698:U:H6	1.81	0.46
1:A:2727:G:O2'	1:A:2728:U:H5'	2.15	0.46
1:A:2751:G:N7	7:H:3:ARG:HB2	2.30	0.46
2:B:48:A:H2'	2:B:49:C:H6	1.79	0.46
2:B:51:G:OP2	14:S:62:LYS:HG3	2.16	0.46
2:B:75:G:N2	21:Z:75:ASN:HD21	2.13	0.46
3:D:89:SER:HB2	3:D:201:HIS:CD2	2.50	0.46
4:E:1:MET:O	4:E:84:PHE:HB2	2.15	0.46
4:E:49:LEU:O	4:E:78:LEU:HA	2.15	0.46
5:F:11:VAL:HB	5:F:18:ARG:C	2.40	0.46
5:F:41:LEU:O	5:F:44:ARG:HG3	2.15	0.46
6:G:146:TYR:HA	6:G:149:VAL:CG1	2.46	0.46
9:N:17:ASP:HB2	9:N:137:LYS:HZ1	1.80	0.46
9:N:18:ALA:CB	9:N:57:ALA:HA	2.45	0.46
12:Q:21:THR:OG1	12:Q:101:ARG:N	2.49	0.46
12:Q:61:GLY:HA2	21:Z:177:PRO:CB	2.45	0.46
16:U:70:ARG:HA	16:U:74:LEU:O	2.15	0.46
16:U:102:GLU:CB	16:U:105:VAL:HB	2.41	0.46
17:V:35:LEU:HB2	17:V:57:VAL:HG22	1.96	0.46
20:Y:11:ASP:HB2	20:Y:27:VAL:CG2	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:Z:108:PRO:HB3	21:Z:144:LEU:HB2	1.97	0.46
31:9:9:ARG:HE	31:9:16:VAL:CG2	2.29	0.46
32:a:181:G:O2'	32:a:183:G:O6	2.23	0.46
32:a:196:A:N3	32:a:222:U:H1'	2.30	0.46
32:a:358:U:O2'	32:a:359:U:H5'	2.15	0.46
32:a:430:A:OP2	35:d:22:LYS:NZ	2.28	0.46
32:a:487:A:H3'	32:a:488:C:H6	1.80	0.46
32:a:503:C:H2'	32:a:504:C:H6	1.80	0.46
32:a:601:C:H2'	32:a:602:A:H8	1.79	0.46
32:a:639:G:O2'	32:a:640:A:H5'	2.15	0.46
32:a:763:G:H2'	32:a:764:C:H6	1.80	0.46
32:a:775:G:O2'	32:a:776:G:H5'	2.16	0.46
32:a:778:G:O2'	32:a:779:C:H5'	2.16	0.46
32:a:779:C:H2'	32:a:780:A:C8	2.50	0.46
32:a:1429:C:H2'	32:a:1430:C:C6	2.50	0.46
32:a:1441:G:H4'	32:a:1442(A):G:C2	2.50	0.46
34:c:77:ILE:HB	34:c:81:GLY:HA2	1.97	0.46
35:d:160:GLN:HA	35:d:163:GLU:OE1	2.15	0.46
37:f:3:ARG:HG2	37:f:64:GLN:HE21	1.79	0.46
38:g:27:ILE:HA	38:g:30:ILE:HD12	1.96	0.46
38:g:73:MET:HA	38:g:89:MET:O	2.14	0.46
38:g:153:HIS:CE1	42:k:58:PRO:HD2	2.51	0.46
39:h:38:ILE:O	39:h:42:GLU:N	2.48	0.46
45:n:3:ARG:O	45:n:7:ILE:HG12	2.15	0.46
51:t:50:GLU:HB2	51:t:99:LEU:CD2	2.42	0.46
55:z:34:G:H2'	55:z:35:A:H8	1.81	0.46
1:A:39:C:H2'	1:A:40:C:C6	2.50	0.46
1:A:106:C:H2'	1:A:107:C:C6	2.51	0.46
1:A:217:G:H3'	1:A:218:A:H8	1.80	0.46
1:A:228:A:H2'	1:A:229:A:C5'	2.45	0.46
1:A:302:C:O2'	1:A:303:U:H5'	2.15	0.46
1:A:322:A:OP2	5:F:169:ASN:HB2	2.15	0.46
1:A:556:G:O2'	1:A:557:U:H5'	2.15	0.46
1:A:780:G:H2'	1:A:782:A:N7	2.30	0.46
1:A:823:G:H2'	1:A:824:A:C8	2.49	0.46
1:A:950:G:H2'	1:A:951:C:C6	2.50	0.46
1:A:1266:G:N7	18:W:15:ARG:HD3	2.31	0.46
1:A:1288:U:OP1	1:A:1289:C:N4	2.48	0.46
1:A:1448:G:O2'	1:A:1541:G:O2'	2.18	0.46
1:A:1467:C:H5	1:A:1546:C:H2'	1.78	0.46
1:A:1526:G:H2'	1:A:1527:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1599:C:O2'	1:A:1600:C:H5'	2.14	0.46
1:A:1796:U:O2'	3:D:256:GLY:N	2.44	0.46
1:A:2118:U:O4	1:A:2149:G:H1'	2.15	0.46
1:A:2134:A:N3	1:A:2158:A:H4'	2.29	0.46
1:A:2149:G:H2'	1:A:2150:U:H5'	1.96	0.46
1:A:2315:G:O2'	6:G:128:ARG:HG3	2.14	0.46
1:A:2641:G:H2'	1:A:2642:G:C8	2.50	0.46
1:A:2643:G:H2'	1:A:2644:G:O4'	2.16	0.46
1:A:2649:U:H2'	1:A:2650:U:C6	2.50	0.46
1:A:2684:U:P	15:T:53:ARG:HD3	2.55	0.46
2:B:117:G:H2'	2:B:118:G:H8	1.80	0.46
3:D:69:ARG:HG2	3:D:130:ALA:CB	2.45	0.46
4:E:120:TRP:CD1	4:E:155:LYS:HB3	2.51	0.46
5:F:149:ASP:OD2	5:F:151:SER:OG	2.17	0.46
5:F:158:THR:O	5:F:178:PRO:HD3	2.15	0.46
7:H:137:ASP:C	7:H:141:VAL:HG23	2.39	0.46
8:I:69:LYS:NZ	8:I:136:VAL:HG13	2.30	0.46
9:N:108:PRO:O	9:N:113:GLY:HA3	2.15	0.46
9:N:120:LEU:CD1	9:N:122:VAL:HG23	2.46	0.46
14:S:26:LEU:HB3	14:S:87:PHE:HA	1.96	0.46
17:V:61:VAL:HG12	17:V:94:LEU:HD21	1.98	0.46
17:V:81:TYR:C	17:V:82:ARG:HD2	2.40	0.46
18:W:17:VAL:O	18:W:21:VAL:HG23	2.15	0.46
22:O:46:LYS:O	22:O:78:TYR:HA	2.16	0.46
25:3:3:ARG:HB3	25:3:36:VAL:HG12	1.97	0.46
30:8:62:LEU:HB3	30:8:65:GLU:HB2	1.96	0.46
32:a:66:G:O3'	32:a:73:G:H1'	2.16	0.46
32:a:102:G:O3'	51:t:21:LYS:NZ	2.48	0.46
32:a:411:A:OP2	35:d:30:LYS:HD2	2.15	0.46
32:a:452:A:H62	32:a:480:U:H3	1.63	0.46
32:a:542:G:O2'	32:a:543:C:H5'	2.16	0.46
32:a:577:G:O2'	32:a:578:C:H5'	2.15	0.46
32:a:614:A:O2'	32:a:615:C:H5'	2.15	0.46
32:a:642:A:H2'	32:a:643:C:C6	2.51	0.46
32:a:807:A:H2'	32:a:808:C:H6	1.80	0.46
32:a:1220:G:H4'	32:a:1221:G:OP1	2.14	0.46
32:a:1283:G:O2'	32:a:1284:C:H5'	2.16	0.46
32:a:1291:G:O2'	32:a:1292:U:H5'	2.16	0.46
32:a:1434:A:H3'	32:a:1435:G:H8	1.79	0.46
32:a:1509:C:O2'	32:a:1510:U:H5'	2.14	0.46
33:b:95:GLN:HG2	33:b:147:LYS:HG3	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:b:103:THR:HG23	33:b:176:GLU:CG	2.45	0.46
33:b:134:GLU:O	33:b:138:LEU:HG	2.16	0.46
34:c:22:TRP:CD2	34:c:59:ARG:HD2	2.50	0.46
36:e:20:GLN:HG3	36:e:21:ALA:O	2.14	0.46
36:e:33:VAL:HG13	36:e:112:LEU:CD1	2.34	0.46
36:e:43:LEU:CB	36:e:136:MET:HG3	2.45	0.46
36:e:84:PHE:HB3	36:e:134:ALA:HB2	1.98	0.46
36:e:148:VAL:HG13	36:e:152:ARG:NH1	2.19	0.46
36:e:152:ARG:HA	39:h:64:LYS:HZ2	1.78	0.46
37:f:24:GLU:HG3	37:f:28:ARG:HE	1.79	0.46
38:g:16:LEU:HD11	40:i:45:ALA:CA	2.46	0.46
43:l:86:ARG:HG2	43:l:101:VAL:CG2	2.45	0.46
46:o:11:VAL:HG13	46:o:15:PHE:CE2	2.50	0.46
49:r:56:THR:CB	49:r:58:LEU:HD23	2.42	0.46
53:y:49:G:C2'	53:y:50:U:H5'	2.45	0.46
54:C:26:ALA:HA	54:C:29:VAL:CG1	2.45	0.46
54:C:66:HIS:HB3	54:C:184:LYS:HG3	1.96	0.46
54:C:77:ILE:N	54:C:114:VAL:O	2.48	0.46
54:C:192:PHE:O	54:C:196:LEU:HG	2.16	0.46
54:C:211:SER:HB2	54:C:223:ARG:HH12	1.80	0.46
1:A:95:G:H1'	24:2:47:ASN:OD1	2.16	0.46
1:A:128:C:O2'	1:A:129:C:H5'	2.15	0.46
1:A:386:G:H4'	1:A:387:U:OP2	2.14	0.46
1:A:407:G:H2'	1:A:408:G:H8	1.80	0.46
1:A:483:A:OP1	20:Y:50:ARG:NH2	2.48	0.46
1:A:554:U:H2'	1:A:555:U:O4'	2.16	0.46
1:A:638:G:O2'	1:A:639:U:H5'	2.16	0.46
1:A:723:G:H2'	1:A:724:U:O4'	2.15	0.46
1:A:825:C:H2'	1:A:826:U:O4'	2.16	0.46
1:A:1072:C:N3	1:A:1092:C:N4	2.56	0.46
1:A:1102:C:H2'	1:A:1103:A:C8	2.50	0.46
1:A:1108:U:H2'	1:A:1109:C:H1'	1.98	0.46
1:A:1239:G:H2'	1:A:1240:U:H6	1.78	0.46
1:A:1319:G:H2'	1:A:1320:C:H6	1.80	0.46
1:A:1638:C:H2'	1:A:1639:U:O4'	2.16	0.46
1:A:1881:C:H2'	1:A:1882:C:C6	2.49	0.46
1:A:1917:PSU:O2'	1:A:1918:A:H5'	2.16	0.46
1:A:2293:C:H2'	1:A:2294:C:H6	1.79	0.46
1:A:2356:C:O2'	22:0:20:ARG:NH1	2.49	0.46
1:A:2389:G:H5''	1:A:2390:U:H5'	1.98	0.46
1:A:2405:G:H1'	1:A:2412:A:N6	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2683:C:O2	10:O:70:LYS:NZ	2.48	0.46
1:A:2747:G:H1'	1:A:2757:A:N6	2.30	0.46
2:B:85:G:C2'	2:B:86:G:H5'	2.46	0.46
2:B:113:G:H2'	2:B:114:C:C6	2.50	0.46
4:E:48:GLN:HG2	4:E:78:LEU:CG	2.45	0.46
4:E:50:GLY:C	4:E:75:VAL:HG21	2.40	0.46
6:G:12:TYR:O	6:G:17:PRO:HD3	2.15	0.46
10:O:107:ARG:HD2	10:O:115:VAL:HG11	1.98	0.46
12:Q:42:ILE:CG2	12:Q:47:ILE:HG13	2.45	0.46
18:W:84:ARG:O	18:W:95:ILE:CA	2.56	0.46
21:Z:47:VAL:HG12	21:Z:51:ALA:HB2	1.97	0.46
21:Z:144:LEU:HD11	21:Z:150:LEU:HD11	1.98	0.46
32:a:62:U:O4	51:t:14:LYS:HE2	2.16	0.46
32:a:323:U:H5''	51:t:26:ASN:HD22	1.81	0.46
32:a:359:U:H2'	32:a:360:A:H8	1.80	0.46
32:a:607:A:H2'	32:a:608:A:H5'	1.97	0.46
32:a:624:C:O2'	47:p:10:GLY:HA2	2.15	0.46
32:a:833:U:H2'	32:a:834:C:C6	2.50	0.46
32:a:882:C:O2'	32:a:883:C:H5'	2.15	0.46
32:a:922:G:H2'	32:a:923:A:C8	2.50	0.46
32:a:1027:C:H2'	32:a:1028:C:C6	2.50	0.46
32:a:1056:U:O5'	34:c:163:ALA:HB2	2.16	0.46
32:a:1081:G:O2'	32:a:1082:G:H5'	2.16	0.46
32:a:1275:A:H2'	32:a:1276:G:O4'	2.16	0.46
32:a:1281:U:H5''	32:a:1282:C:C5	2.50	0.46
32:a:1442(A):G:O3'	32:a:1442(B):G:H3'	2.16	0.46
35:d:106:TYR:HB3	35:d:114:ARG:HG2	1.97	0.46
36:e:89:ILE:HG22	36:e:134:ALA:HB1	1.97	0.46
36:e:144:THR:N	36:e:147:ASP:OD2	2.49	0.46
38:g:78:ARG:HB2	38:g:156:TRP:CZ3	2.50	0.46
38:g:135:VAL:O	38:g:139:GLU:HG3	2.15	0.46
39:h:20:TYR:CE1	39:h:76:PRO:HG2	2.51	0.46
41:j:5:ARG:N	41:j:99:LYS:O	2.48	0.46
41:j:6:ILE:CD1	41:j:98:ILE:HA	2.44	0.46
43:l:70:ILE:HG21	43:l:75:HIS:CD2	2.50	0.46
47:p:19:ILE:H	47:p:19:ILE:HD12	1.81	0.46
49:r:67:ALA:O	49:r:71:LYS:N	2.37	0.46
50:s:63:THR:O	50:s:66:MET:HG2	2.15	0.46
53:y:1:C:C4'	53:y:2:G:H5'	2.37	0.46
54:C:74:VAL:CG2	54:C:156:ILE:HG21	2.46	0.46
54:C:126:LYS:O	54:C:128:GLY:HA3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:17:G:H2'	1:A:18:C:C6	2.51	0.46
1:A:43:A:O2'	1:A:44:G:H5'	2.15	0.46
1:A:116:C:O2'	1:A:117:G:H5'	2.15	0.46
1:A:143(A):G:O2'	1:A:143(B):C:H5'	2.15	0.46
1:A:157:U:H1'	1:A:171:G:N2	2.30	0.46
1:A:234:C:H2'	1:A:235:U:H6	1.80	0.46
1:A:807:U:H2'	1:A:808:G:H8	1.81	0.46
1:A:813:U:O2'	1:A:814:C:H5'	2.16	0.46
1:A:844:C:C2'	1:A:845:G:H5'	2.46	0.46
1:A:848:G:H2'	1:A:849:A:H8	1.81	0.46
1:A:1713:U:O2'	1:A:1714:G:H5'	2.16	0.46
1:A:2002:G:H4'	13:R:13:HIS:HB3	1.98	0.46
1:A:2095:C:H5''	8:I:11:ASN:HD22	1.80	0.46
1:A:2154:G:H2'	1:A:2155:G:H8	1.80	0.46
1:A:2248:C:C2'	1:A:2249:U:H5'	2.46	0.46
1:A:2319:G:O6	14:S:4:LEU:HG	2.15	0.46
1:A:2409:G:H2'	1:A:2410:G:O4'	2.16	0.46
1:A:2886:G:H2'	1:A:2887:U:C6	2.50	0.46
2:B:17:C:C2'	2:B:18:G:H5'	2.45	0.46
4:E:14:ILE:HB	15:T:14:TYR:CD2	2.50	0.46
4:E:34:VAL:N	4:E:48:GLN:O	2.46	0.46
4:E:55:ASN:HB3	4:E:58:ARG:HB2	1.98	0.46
7:H:11:VAL:HG12	7:H:15:VAL:HG23	1.98	0.46
7:H:74:ASN:O	7:H:83:TYR:OH	2.21	0.46
7:H:143:GLN:O	7:H:146:ALA:HB3	2.15	0.46
9:N:39:ARG:NH2	9:N:41:ASP:OD2	2.46	0.46
10:O:87:ILE:CD1	10:O:91:LEU:HA	2.38	0.46
15:T:1:MET:HE2	15:T:3:ARG:CG	2.46	0.46
17:V:37:VAL:HB	17:V:52:VAL:HG22	1.97	0.46
17:V:65:GLY:O	17:V:90:PRO:HA	2.14	0.46
18:W:8:ARG:HA	18:W:102:HIS:ND1	2.31	0.46
18:W:76:VAL:HG13	18:W:102:HIS:O	2.14	0.46
20:Y:15:VAL:HG21	20:Y:23:ARG:HB2	1.96	0.46
21:Z:6:LYS:HD2	21:Z:8:TYR:OH	2.16	0.46
26:4:46:GLN:C	26:4:48:ARG:H	2.23	0.46
31:9:1:MET:SD	31:9:35:ARG:HB2	2.55	0.46
32:a:5:U:H4'	32:a:6:G:C4	2.51	0.46
32:a:31:G:N2	32:a:47:C:H4'	2.30	0.46
32:a:435:C:H2'	32:a:436:C:C6	2.50	0.46
32:a:679:C:H2'	32:a:680:C:C6	2.50	0.46
32:a:1426:C:O2'	32:a:1427:U:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1458:G:O2'	32:a:1459:C:H5'	2.15	0.46
33:b:62:ALA:HB1	33:b:222:ILE:HA	1.97	0.46
34:c:54:ARG:O	34:c:68:VAL:HA	2.16	0.46
34:c:136:GLN:O	34:c:140:ARG:NH1	2.49	0.46
40:i:32:ASP:O	40:i:35:GLU:HB3	2.15	0.46
40:i:50:LEU:CB	40:i:56:LEU:HD23	2.46	0.46
43:l:6:THR:OG1	43:l:9:GLN:HG3	2.16	0.46
48:q:5:VAL:HG13	48:q:59:ILE:O	2.15	0.46
48:q:26:GLN:HG2	48:q:37:LYS:HG2	1.98	0.46
50:s:53:ASN:HD21	50:s:56:GLN:HB2	1.81	0.46
53:y:68:C:H2'	53:y:69:C:C6	2.50	0.46
54:C:83:ILE:HG23	54:C:94:VAL:CG1	2.36	0.46
1:A:208:C:O2'	1:A:209:C:H5'	2.15	0.46
1:A:414:C:H5''	1:A:1879:C:O2'	2.14	0.46
1:A:799:G:H2'	1:A:800:A:C8	2.51	0.46
1:A:1655:A:O2'	4:E:115:GLY:HA2	2.16	0.46
1:A:1707:G:H1'	1:A:1756:G:N3	2.31	0.46
1:A:2040:C:H2'	1:A:2041:U:C6	2.51	0.46
1:A:2123:G:C1'	54:C:172:HIS:HB3	2.45	0.46
1:A:2206:G:C5'	1:A:2208:A:H61	2.22	0.46
1:A:2312:U:C2'	1:A:2313:C:H5'	2.46	0.46
1:A:2314:C:H2'	1:A:2315:G:H8	1.81	0.46
1:A:2808:U:O2	1:A:2892:A:C6	2.68	0.46
1:A:2809:A:H2'	1:A:2810:A:H8	1.81	0.46
2:B:89:G:H2'	2:B:90:A:C8	2.50	0.46
3:D:227:ASN:HA	3:D:235:GLY:H	1.79	0.46
7:H:26:VAL:O	7:H:79:VAL:HG11	2.16	0.46
7:H:33:LEU:CD2	7:H:79:VAL:HG13	2.46	0.46
8:I:8:PRO:CG	8:I:134:PRO:HG2	2.37	0.46
8:I:23:PRO:O	8:I:27:ARG:HB3	2.16	0.46
9:N:12:ARG:O	9:N:50:ASP:HB3	2.16	0.46
11:P:120:ALA:HB3	11:P:141:ALA:CB	2.46	0.46
16:U:44:ASN:ND2	17:V:75:PHE:HB3	2.30	0.46
17:V:39:LEU:HD23	17:V:40:LEU:C	2.40	0.46
19:X:44:GLU:CG	19:X:51:VAL:HG23	2.46	0.46
22:O:48:GLY:H	22:O:51:VAL:HB	1.80	0.46
25:3:12:PRO:HB2	25:3:20:LYS:HG2	1.97	0.46
26:4:12:ALA:O	26:4:23:GLU:HA	2.16	0.46
28:6:9:LEU:HG	28:6:23:THR:O	2.16	0.46
28:6:33:LYS:HD2	28:6:51:GLU:O	2.16	0.46
32:a:64:G:C8	32:a:70:G:H5''	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:203:U:H3'	32:a:203:U:OP2	2.16	0.46
32:a:229:U:O2'	32:a:230:G:H5'	2.16	0.46
32:a:864:A:O2'	32:a:1078:U:O4	2.28	0.46
32:a:940:C:O2'	32:a:941:G:H5'	2.16	0.46
32:a:988:G:H3'	32:a:989:C:H5''	1.98	0.46
32:a:1139:G:H4'	32:a:1140:C:O5'	2.16	0.46
32:a:1194:U:H2'	32:a:1195:C:O4'	2.16	0.46
32:a:1255:G:H2'	32:a:1279:A:N6	2.30	0.46
32:a:1278:U:H5''	32:a:1279:A:C5'	2.46	0.46
32:a:1443:G:O2'	32:a:1444:C:H5'	2.15	0.46
32:a:1539:C:O2'	49:r:54:ARG:NH2	2.41	0.46
35:d:13:ARG:HH12	35:d:40:PRO:HB3	1.81	0.46
36:e:7:GLU:HB3	36:e:112:LEU:HD22	1.97	0.46
36:e:71:LEU:CD1	36:e:115:VAL:HG22	2.38	0.46
36:e:102:ALA:HA	36:e:120:THR:OG1	2.15	0.46
37:f:16:GLN:HA	37:f:19:LEU:CB	2.38	0.46
45:n:2:ALA:C	45:n:6:LEU:HD13	2.41	0.46
49:r:21:LYS:O	49:r:25:THR:HG23	2.16	0.46
50:s:31:ILE:O	50:s:49:ILE:HG23	2.15	0.46
51:t:22:ARG:HG2	51:t:25:ARG:HH21	1.78	0.46
1:A:323:G:HO2'	1:A:1205:U:H3	1.63	0.46
1:A:323:G:O2'	1:A:1205:U:N3	2.49	0.46
1:A:336:C:O2'	20:Y:35:TYR:OH	2.33	0.46
1:A:1152:C:H4'	16:U:77:SER:HA	1.97	0.46
1:A:1337:G:O2'	1:A:1338:G:H5'	2.15	0.46
1:A:1431:U:O2'	1:A:1432:C:H5'	2.16	0.46
1:A:1507:A:C2	1:A:1508:A:H1'	2.51	0.46
1:A:1607:C:H4'	1:A:1608:A:O5'	2.16	0.46
1:A:1678:G:H2'	1:A:1990:C:O2'	2.16	0.46
1:A:2074:U:H2'	1:A:2075:U:H6	1.77	0.46
1:A:2363:C:H2'	1:A:2364:C:C6	2.51	0.46
1:A:2416:C:O2'	1:A:2417:C:H5'	2.15	0.46
1:A:2684:U:O2'	10:O:68:GLU:HG3	2.16	0.46
1:A:2689:U:C4'	1:A:2690:C:H5'	2.43	0.46
1:A:2735:G:H2'	1:A:2736:G:C8	2.50	0.46
1:A:2848:G:N7	15:T:97:ALA:HB2	2.30	0.46
1:A:2883:A:H3'	1:A:2884:U:H5'	1.98	0.46
5:F:34:TRP:CE2	11:P:8:PRO:HD3	2.51	0.46
8:I:104:GLN:HG2	8:I:105:HIS:CD2	2.50	0.46
9:N:104:LYS:HE3	9:N:117:PHE:CE1	2.51	0.46
13:R:33:ARG:HG2	13:R:115:GLU:HB3	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:R:57:ARG:HH21	13:R:62:ALA:CA	2.29	0.46
22:0:63:VAL:HG21	22:0:83:PRO:HG3	1.97	0.46
23:1:8:SER:OG	23:1:10:LYS:HG3	2.15	0.46
23:1:10:LYS:HE3	23:1:66:HIS:HE1	1.81	0.46
24:2:52:ASP:O	24:2:56:GLN:HG3	2.15	0.46
30:8:22:VAL:HG11	30:8:50:LEU:HD12	1.97	0.46
32:a:98:G:H3'	51:t:14:LYS:HD3	1.98	0.46
32:a:301:G:O2'	32:a:302:G:H5'	2.16	0.46
32:a:397:A:H3'	32:a:397:A:N3	2.31	0.46
32:a:514:C:H2'	32:a:515:G:H8	1.81	0.46
32:a:671:G:H3'	32:a:672:U:H6	1.81	0.46
32:a:698:G:H2'	32:a:699:C:C6	2.51	0.46
32:a:749:C:O2'	32:a:750:G:H5'	2.16	0.46
32:a:803:G:O2'	32:a:804:U:H5'	2.15	0.46
32:a:966:M2G:H2'	32:a:967:5MC:C5	2.51	0.46
32:a:1264:C:H2'	32:a:1265:G:C8	2.50	0.46
32:a:1296:C:H3'	32:a:1297:C:C6	2.51	0.46
32:a:1318:A:H5''	50:s:3:ARG:NH2	2.31	0.46
32:a:1539:C:H2'	32:a:1540:U:O4'	2.16	0.46
34:c:5:ILE:HD13	34:c:10:PHE:CD1	2.50	0.46
34:c:40:ARG:NH1	45:n:52:GLN:HG2	2.31	0.46
40:i:50:LEU:O	40:i:56:LEU:HG	2.15	0.46
41:j:44:VAL:CG2	41:j:66:ARG:HG2	2.37	0.46
41:j:50:ILE:HD12	45:n:41:ARG:NH1	2.27	0.46
47:p:20:VAL:HG23	47:p:34:GLU:C	2.40	0.46
54:C:19:VAL:HG22	54:C:223:ARG:NE	2.27	0.46
54:C:22:ILE:HD12	54:C:228:SER:O	2.16	0.46
55:z:8:U:C2	55:z:14:A:N7	2.83	0.46
55:z:15:G:HO2'	55:z:59:U:H3	1.63	0.46
1:A:126:A:H5'	29:7:19:ARG:CD	2.45	0.46
1:A:264:C:H4'	1:A:428:A:C2	2.49	0.46
1:A:451:C:C5'	5:F:52:LYS:HZ3	2.29	0.46
1:A:664:C:O2'	1:A:665:C:H5'	2.15	0.46
1:A:841:A:H2'	1:A:842:G:C8	2.51	0.46
1:A:893:C:H2'	1:A:894:C:H6	1.81	0.46
1:A:1192:G:O2'	1:A:1193:G:H5'	2.15	0.46
1:A:1413:G:H2'	1:A:1414:G:H8	1.80	0.46
1:A:1490:A:C2	3:D:75:ILE:HG12	2.50	0.46
1:A:1897:G:H2'	1:A:1898:U:O4'	2.16	0.46
1:A:1919:A:OP2	1:A:1920:4OC:H5	2.16	0.46
1:A:1987:G:O2'	1:A:1988:C:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2130:U:C5'	54:C:5:LYS:HD3	2.43	0.46
1:A:2164:C:OP1	1:A:2171:A:O2'	2.34	0.46
1:A:2226:C:H42	3:D:268:ARG:HD3	1.80	0.46
1:A:2572:A:C8	4:E:144:ARG:HD3	2.51	0.46
1:A:2635:C:O3'	4:E:80:GLU:HG3	2.16	0.46
1:A:2751:G:N7	7:H:3:ARG:HD2	2.31	0.46
1:A:2776:A:H4'	1:A:2777:G:O5'	2.15	0.46
1:A:2820:A:HO2'	1:A:2821:A:P	2.35	0.46
1:A:2829:C:H2'	1:A:2830:G:C8	2.51	0.46
2:B:77:U:H2'	2:B:78:A:C8	2.50	0.46
4:E:59:VAL:HG12	4:E:64:LYS:HG3	1.98	0.46
7:H:58:GLU:HG3	7:H:61:HIS:H	1.81	0.46
11:P:64:LYS:CG	30:8:13:ARG:HE	2.29	0.46
11:P:71:VAL:HG23	11:P:72:PRO:HA	1.98	0.46
12:Q:31:ASP:HA	12:Q:134:ARG:HH12	1.79	0.46
12:Q:56:ARG:O	12:Q:59:ARG:HB2	2.16	0.46
12:Q:104:PHE:CE2	12:Q:125:LEU:HD11	2.51	0.46
13:R:38:VAL:HB	13:R:39:PRO:HD3	1.97	0.46
19:X:26:TYR:HB2	19:X:81:VAL:HG23	1.97	0.46
24:2:1:MET:CE	24:2:6:VAL:HG22	2.46	0.46
26:4:14:ILE:HB	26:4:22:ILE:O	2.15	0.46
30:8:39:LYS:HA	30:8:42:ARG:NH1	2.31	0.46
31:9:12:ASP:OD1	31:9:13:LYS:N	2.49	0.46
32:a:451:A:H61	32:a:480:U:H2'	1.81	0.46
32:a:677:U:H3	32:a:713:G:N2	2.11	0.46
32:a:995:C:O2	45:n:4:LYS:NZ	2.29	0.46
33:b:96:ARG:NE	33:b:98:LEU:HD23	2.30	0.46
33:b:197:VAL:CG1	33:b:200:ILE:HG13	2.46	0.46
35:d:13:ARG:HB3	35:d:38:TYR:O	2.16	0.46
35:d:150:GLU:HA	35:d:153:ARG:HG3	1.98	0.46
35:d:153:ARG:HH12	35:d:181:MET:HB2	1.80	0.46
35:d:175:SER:HB3	35:d:186:LEU:CD1	2.31	0.46
38:g:14:PRO:HA	38:g:20:ASP:O	2.15	0.46
38:g:121:ALA:O	38:g:125:MET:HG3	2.16	0.46
42:k:73:MET:HG2	42:k:77:MET:O	2.16	0.46
42:k:83:ILE:HA	42:k:109:VAL:HG13	1.98	0.46
47:p:19:ILE:HD11	47:p:39:TYR:HB2	1.96	0.46
47:p:53:VAL:HG13	47:p:79:VAL:CG2	2.39	0.46
53:y:11:A:H2'	53:y:12:G:H8	1.80	0.46
54:C:20:TYR:H	54:C:224:ILE:HA	1.80	0.46
54:C:131:LEU:O	54:C:136:LEU:HB2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:z:42:C:H2'	55:z:43:C:H6	1.78	0.46
1:A:134:C:H2'	1:A:135:G:C8	2.51	0.46
1:A:270:A:OP2	1:A:272(X):G:N2	2.47	0.46
1:A:272(O):C:H2'	1:A:272(P):C:H6	1.81	0.46
1:A:455:C:O2	1:A:472:A:H2'	2.16	0.46
1:A:478:A:N6	1:A:500:G:HO2'	2.10	0.46
1:A:758:C:O2'	1:A:759:G:H5'	2.16	0.46
1:A:893:C:H2'	1:A:894:C:C6	2.51	0.46
1:A:937:U:H2'	1:A:938:G:C8	2.50	0.46
1:A:950:G:H2'	1:A:951:C:H6	1.81	0.46
1:A:1290:C:O2'	1:A:1291:C:H5'	2.16	0.46
1:A:1421:G:N2	1:A:1578:U:O2	2.49	0.46
1:A:1437:C:H2'	1:A:1438:U:C6	2.51	0.46
1:A:1685:C:H2'	1:A:1686:C:C6	2.51	0.46
1:A:1782:C:H1'	1:A:2609:U:H5''	1.97	0.46
1:A:1826:G:H4'	3:D:242:ARG:HD2	1.98	0.46
1:A:1834:U:H5''	1:A:1835:G:C5'	2.46	0.46
1:A:2050:C:H2'	1:A:2051:A:O4'	2.16	0.46
1:A:2345:G:H4'	1:A:2346:A:H5''	1.98	0.46
1:A:2458:G:H1'	1:A:2460:U:O4	2.15	0.46
1:A:2659:G:O3'	7:H:175:LYS:HD3	2.15	0.46
1:A:2849:U:H1'	1:A:2866:U:O2	2.15	0.46
2:B:57:A:C2'	2:B:58:A:H5'	2.46	0.46
2:B:69:G:H2'	2:B:70:C:C6	2.51	0.46
4:E:103:ASP:OD2	4:E:201:THR:HA	2.15	0.46
6:G:117:PHE:HZ	6:G:179:PRO:HG2	1.80	0.46
10:O:12:ASP:CG	10:O:14:THR:HG23	2.41	0.46
10:O:88:ASN:CG	10:O:92:GLU:HB2	2.41	0.46
11:P:112:LEU:HD12	11:P:127:ALA:HB2	1.98	0.46
14:S:11:LYS:HG3	14:S:91:PRO:HD3	1.97	0.46
18:W:4:LYS:HA	18:W:105:VAL:O	2.16	0.46
19:X:1:MET:HE1	24:2:26:ARG:CZ	2.45	0.46
21:Z:103:ARG:CB	21:Z:138:GLU:HG2	2.46	0.46
23:1:7:ILE:HD12	23:1:98:LEU:HD11	1.98	0.46
32:a:129(B):G:N2	32:a:189(H):G:OP2	2.29	0.46
32:a:180:U:H2'	32:a:181:G:C5'	2.46	0.46
32:a:376:G:H5''	47:p:5:ARG:CB	2.38	0.46
32:a:413:G:N2	32:a:428:G:O3'	2.47	0.46
32:a:433:C:H2'	32:a:434:U:C6	2.51	0.46
32:a:597:G:C2'	32:a:598:U:H5'	2.45	0.46
32:a:627:G:H2'	32:a:628:G:H8	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:688:G:H4'	42:k:47:VAL:CG2	2.46	0.46
32:a:736:C:O2'	32:a:737:A:H5'	2.16	0.46
32:a:757:U:O2'	32:a:879:C:O2	2.33	0.46
32:a:864:A:H2'	32:a:865:A:C8	2.51	0.46
32:a:881:G:OP2	43:l:12:ARG:NH2	2.43	0.46
32:a:888:G:OP2	32:a:889:A:O2'	2.19	0.46
32:a:1059:C:O2'	32:a:1060:C:H5'	2.16	0.46
32:a:1207:2MG:H2'	32:a:1208:C:C6	2.50	0.46
32:a:1405:G:O2'	32:a:1406:U:H5'	2.16	0.46
32:a:1416:G:O2'	32:a:1417:G:H5'	2.15	0.46
32:a:1421:G:O2'	32:a:1422:G:H5'	2.15	0.46
32:a:1489:G:O2'	32:a:1490:C:H5'	2.16	0.46
34:c:137:ALA:O	34:c:141:VAL:HG23	2.16	0.46
37:f:12:PRO:O	37:f:45:LEU:HD21	2.16	0.46
37:f:38:GLU:HB2	37:f:64:GLN:HG2	1.97	0.46
38:g:26:PHE:O	38:g:30:ILE:HG13	2.15	0.46
38:g:92:SER:O	38:g:96:GLN:N	2.41	0.46
39:h:51:VAL:HG23	39:h:58:TYR:HB2	1.98	0.46
45:n:26:ARG:HD2	45:n:47:LEU:HD11	1.98	0.46
53:y:9:G:C1'	53:y:46:G:H1'	2.46	0.46
53:y:72:A:H2'	53:y:73:A:O4'	2.16	0.46
54:C:114:VAL:CG2	54:C:153:ILE:HD11	2.46	0.46
1:A:197:A:H3'	1:A:198:C:H6	1.80	0.45
1:A:273(I):C:H2'	1:A:273(J):U:C6	2.51	0.45
1:A:305:U:O2'	1:A:306:U:H5'	2.17	0.45
1:A:330:A:N7	1:A:1210:A:O2'	2.46	0.45
1:A:495:G:H1'	18:W:57:ASN:OD1	2.16	0.45
1:A:715:G:H2'	1:A:716:A:C8	2.50	0.45
1:A:754:C:H2'	1:A:755:C:H6	1.81	0.45
1:A:783:A:C8	1:A:785:G:H1'	2.51	0.45
1:A:888:C:O5'	44:m:93:ARG:HB3	2.15	0.45
1:A:939:G:O2'	1:A:940:G:H5'	2.16	0.45
1:A:1010:A:H1'	1:A:1153:C:H1'	1.97	0.45
1:A:1029:A:H5''	12:Q:128:LYS:HE2	1.97	0.45
1:A:1052:C:H3'	1:A:1053:C:C6	2.51	0.45
1:A:1084:A:H3'	1:A:1085:A:H4'	1.97	0.45
1:A:1137:G:O2'	1:A:1138:G:H5'	2.17	0.45
1:A:1150:C:O2'	1:A:1151:G:H5'	2.16	0.45
1:A:1274:A:N1	1:A:1644:C:O2'	2.38	0.45
1:A:1529:G:C2'	1:A:1530:C:H5'	2.46	0.45
1:A:1580:A:H3'	1:A:1581:G:C8	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1909:C:O2'	1:A:1910:G:H5'	2.16	0.45
1:A:1949:G:H2'	1:A:1950:G:O4'	2.16	0.45
1:A:2104:G:H5'	1:A:2104:G:N3	2.31	0.45
1:A:2128:C:OP1	54:C:35:ALA:HA	2.16	0.45
1:A:2340:G:O2'	1:A:2341:G:H5'	2.16	0.45
1:A:2358:G:C2'	1:A:2359:C:H5'	2.46	0.45
1:A:2526:G:O2'	1:A:2527:C:H5'	2.16	0.45
1:A:2612:C:OP2	27:5:2:ALA:HB3	2.17	0.45
2:B:26:A:O2'	2:B:27:C:H5'	2.16	0.45
2:B:33:G:H5'	6:G:2:PRO:CG	2.46	0.45
4:E:53:PRO:HA	4:E:75:VAL:HG23	1.98	0.45
6:G:11:TYR:O	6:G:16:ARG:HG2	2.16	0.45
7:H:137:ASP:O	7:H:138:LYS:HA	2.15	0.45
10:O:76:ALA:O	15:T:74:ARG:HD2	2.16	0.45
12:Q:106:VAL:HG22	12:Q:118:LEU:HD11	1.97	0.45
15:T:78:LEU:O	15:T:78:LEU:HD13	2.16	0.45
19:X:7:VAL:HG21	19:X:38:GLU:HG2	1.97	0.45
21:Z:23:LYS:O	21:Z:25:PRO:HD3	2.16	0.45
21:Z:69:THR:HB	21:Z:90:VAL:HA	1.97	0.45
24:2:4:SER:HA	24:2:7:ARG:NH1	2.31	0.45
32:a:99:U:H5	51:t:21:LYS:HB2	1.80	0.45
32:a:456:C:O2'	32:a:457:C:H5'	2.15	0.45
32:a:659:U:OP2	46:o:8:LYS:NZ	2.26	0.45
32:a:669:U:H2'	32:a:670:G:C8	2.51	0.45
32:a:688:G:H4'	42:k:47:VAL:HG23	1.97	0.45
32:a:708:C:O2'	32:a:709:G:H5'	2.16	0.45
32:a:741:G:H5''	46:o:59:MET:HE1	1.98	0.45
32:a:742:G:OP1	46:o:35:ARG:NH2	2.46	0.45
32:a:975:A:C2	32:a:1357:A:H1'	2.51	0.45
32:a:981:U:OP1	45:n:9:LYS:NZ	2.48	0.45
32:a:1228:C:H2'	32:a:1229:A:H8	1.81	0.45
32:a:1464:G:O2'	32:a:1465:C:H5'	2.15	0.45
32:a:1507:A:H2'	32:a:1508:G:C8	2.50	0.45
32:a:1524:C:H2'	32:a:1525:G:H8	1.82	0.45
34:c:7:PRO:CG	34:c:184:TYR:HB2	2.43	0.45
35:d:31:CYS:SG	35:d:33:MET:HB2	2.57	0.45
35:d:162:LEU:HA	35:d:165:MET:HB2	1.97	0.45
36:e:7:GLU:O	36:e:34:VAL:HG13	2.16	0.45
36:e:33:VAL:CG1	36:e:112:LEU:HD12	2.34	0.45
37:f:97:PHE:O	49:r:31:LEU:N	2.32	0.45
39:h:8:ASP:O	39:h:12:ARG:HG3	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:h:31:PHE:CE2	39:h:35:ILE:HD11	2.51	0.45
41:j:26:ALA:O	41:j:84:GLN:NE2	2.49	0.45
45:n:24:CYS:SG	45:n:27:CYS:N	2.75	0.45
46:o:3:ILE:HG13	46:o:38:ARG:HH21	1.80	0.45
46:o:87:ILE:HG22	46:o:88:ARG:N	2.31	0.45
48:q:26:GLN:NE2	48:q:37:LYS:HE3	2.28	0.45
53:y:35:A:O2'	53:y:36:U:H5'	2.17	0.45
54:C:61:THR:HB	54:C:160:ARG:CD	2.38	0.45
54:C:76:ALA:HB2	54:C:153:ILE:CD1	2.44	0.45
55:z:9:A:C2'	55:z:11:C:H41	2.29	0.45
1:A:56:A:H2'	1:A:57:C:C6	2.52	0.45
1:A:320:A:H4'	1:A:322:A:C8	2.51	0.45
1:A:452:G:N2	1:A:457:A:O2'	2.50	0.45
1:A:614(D):A:O3'	5:F:182:ASN:ND2	2.49	0.45
1:A:686:G:H22	29:7:15:THR:HG21	1.81	0.45
1:A:824:A:H2'	1:A:825:C:C6	2.51	0.45
1:A:839:U:H2'	1:A:840:C:C6	2.51	0.45
1:A:1024:G:OP1	1:A:1026:U:H4'	2.16	0.45
1:A:1092:C:H6	1:A:1092:C:P	2.39	0.45
1:A:1288:U:H1'	1:A:1647:G:N2	2.31	0.45
1:A:1638:C:H1'	1:A:2698:U:H1'	1.98	0.45
1:A:1752:C:O2'	1:A:1753:G:H5'	2.15	0.45
1:A:1858:G:O2'	1:A:1883:G:N2	2.39	0.45
1:A:1908:C:H2'	1:A:1909:C:H6	1.80	0.45
1:A:1995:U:H3'	1:A:1996:C:H2'	1.99	0.45
1:A:2041:U:O2'	1:A:2042:A:H5'	2.16	0.45
2:B:11:C:H3'	2:B:12:C:C6	2.51	0.45
2:B:91:C:OP1	12:Q:16:ARG:HD3	2.16	0.45
3:D:35:LYS:HB2	3:D:36:PRO:HD2	1.98	0.45
4:E:104:VAL:O	4:E:166:THR:HA	2.15	0.45
4:E:114:ALA:N	4:E:158:GLY:O	2.48	0.45
4:E:170:LEU:HD23	4:E:184:VAL:CG1	2.47	0.45
5:F:156:LEU:HB3	5:F:175:THR:HA	1.97	0.45
8:I:15:VAL:HG11	8:I:58:LEU:HD22	1.97	0.45
9:N:15:LEU:HD13	9:N:16:ILE:N	2.31	0.45
9:N:26:LEU:HG	9:N:30:ILE:CD1	2.46	0.45
10:O:64:ARG:HD3	10:O:101:PRO:O	2.16	0.45
11:P:101:VAL:HA	11:P:106:LEU:O	2.16	0.45
14:S:83:LYS:HA	14:S:110:LEU:CD1	2.46	0.45
17:V:19:LYS:HA	17:V:94:LEU:O	2.15	0.45
17:V:56:SER:O	17:V:100:ARG:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:W:7:ALA:HB3	18:W:103:ILE:CB	2.42	0.45
23:1:18:ILE:HG22	23:1:20:ARG:HG3	1.99	0.45
23:1:23:LYS:HB2	55:z:74:C:H5'	1.99	0.45
23:1:77:ALA:CA	23:1:80:LEU:HD13	2.36	0.45
24:2:1:MET:HE3	24:2:6:VAL:HG22	1.98	0.45
27:5:43:HIS:HA	27:5:52:TYR:OH	2.15	0.45
32:a:67:C:O4'	32:a:172:A:O2'	2.32	0.45
32:a:356:A:O3'	32:a:367:U:H2'	2.16	0.45
32:a:404:U:P	35:d:118:ARG:HH21	2.39	0.45
32:a:452:A:N7	32:a:480:U:O4	2.49	0.45
32:a:505:G:H2'	32:a:506:G:H8	1.80	0.45
32:a:957:U:C2'	32:a:958:A:H3'	2.47	0.45
32:a:1052:U:O4	32:a:1200:C:O2'	2.25	0.45
32:a:1271:G:O2'	32:a:1272:G:H5'	2.16	0.45
32:a:1287:A:H2'	32:a:1288:A:C8	2.51	0.45
32:a:1471:G:H2'	32:a:1472:U:H6	1.81	0.45
34:c:6:HIS:NE2	34:c:8:ILE:HB	2.31	0.45
34:c:26:LYS:HA	45:n:36:PHE:HE1	1.81	0.45
36:e:78:HIS:CD2	39:h:104:ARG:HD2	2.52	0.45
37:f:4:TYR:O	37:f:64:GLN:HA	2.17	0.45
38:g:40:ALA:CB	40:i:41:VAL:HG11	2.38	0.45
40:i:81:ILE:O	40:i:85:LEU:HG	2.17	0.45
41:j:6:ILE:N	41:j:72:VAL:O	2.33	0.45
44:m:15:VAL:O	44:m:19:LEU:HD23	2.16	0.45
44:m:20:THR:HG22	44:m:26:GLY:C	2.40	0.45
48:q:56:VAL:CG2	48:q:81:ARG:HG3	2.45	0.45
54:C:48:GLY:H	54:C:208:PHE:C	2.23	0.45
1:A:80:G:H2'	1:A:81:G:H8	1.81	0.45
1:A:144:C:O2'	1:A:145:G:H5'	2.16	0.45
1:A:265:A:H4'	1:A:266:G:O5'	2.16	0.45
1:A:272(K):U:H4'	1:A:272(L):U:OP1	2.16	0.45
1:A:388:G:H5'	1:A:389:G:OP2	2.16	0.45
1:A:746:A:O2'	1:A:2611:U:O2'	2.31	0.45
1:A:779:U:H2'	1:A:780:G:C8	2.51	0.45
1:A:806:C:O2'	1:A:807:U:H5'	2.16	0.45
1:A:843:G:H2'	1:A:844:C:H6	1.81	0.45
1:A:1045:A:H5''	1:A:1046:A:OP1	2.15	0.45
1:A:1153:C:H5'	16:U:76:TYR:CE2	2.42	0.45
1:A:1425:G:O2'	1:A:1426:G:H5'	2.16	0.45
1:A:1531:C:H2'	1:A:1532:C:H6	1.79	0.45
1:A:1651:G:H2'	1:A:1652:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1666:G:H1'	10:O:3:GLN:NE2	2.31	0.45
1:A:1721:G:O6	1:A:1739:U:H5''	2.16	0.45
1:A:1999:C:H1'	1:A:2687:U:H1'	1.97	0.45
1:A:2000:G:H2'	1:A:2001:A:H8	1.81	0.45
1:A:2511:U:O2'	1:A:2512:C:H5'	2.16	0.45
1:A:2514:U:H3	1:A:2570:G:H1	1.65	0.45
1:A:2549:G:H2'	1:A:2550:G:C8	2.46	0.45
1:A:2646:C:H2'	1:A:2647:U:O4'	2.17	0.45
1:A:2788:C:P	4:E:61:ARG:HH21	2.39	0.45
1:A:2809:A:O2'	1:A:2810:A:H5'	2.16	0.45
1:A:2895:U:H2'	1:A:2896:C:C6	2.52	0.45
4:E:35:GLN:HB3	4:E:48:GLN:OE1	2.16	0.45
4:E:109:LYS:HE2	4:E:191:PRO:HA	1.98	0.45
5:F:153:SER:O	5:F:190:GLU:N	2.49	0.45
8:I:5:LEU:HD21	8:I:12:LEU:HB3	1.98	0.45
9:N:47:ALA:HB1	9:N:116:LEU:HD21	1.98	0.45
13:R:14:SER:CA	13:R:17:ARG:HH21	2.30	0.45
13:R:26:LYS:HE2	13:R:70:LEU:O	2.16	0.45
13:R:56:LYS:HD2	13:R:94:TYR:CE1	2.51	0.45
14:S:67:ARG:HB3	14:S:71:ARG:NH1	2.30	0.45
21:Z:74:VAL:HG13	21:Z:76:LEU:HD11	1.98	0.45
32:a:108:G:P	32:a:326:G:H22	2.40	0.45
32:a:189(A):G:H2'	32:a:189(B):C:C6	2.52	0.45
32:a:533:A:O2'	32:a:534:U:H5''	2.16	0.45
32:a:624:C:H4'	47:p:10:GLY:O	2.16	0.45
32:a:893:C:H2'	32:a:894:G:H8	1.81	0.45
32:a:1015:A:H2'	32:a:1016:A:C8	2.52	0.45
32:a:1210:C:H5''	32:a:1211:U:OP2	2.16	0.45
33:b:11:LEU:O	33:b:14:GLY:N	2.49	0.45
33:b:194:PRO:O	33:b:200:ILE:HD11	2.16	0.45
37:f:3:ARG:O	37:f:93:SER:N	2.40	0.45
37:f:46:ARG:HD2	37:f:60:PHE:HE2	1.81	0.45
39:h:23:SER:HA	39:h:63:LEU:HD13	1.97	0.45
39:h:51:VAL:CG2	39:h:60:ARG:HG3	2.39	0.45
42:k:57:THR:O	42:k:60:ALA:HB3	2.16	0.45
45:n:2:ALA:O	45:n:6:LEU:HD22	2.16	0.45
47:p:56:ALA:O	47:p:60:LEU:HD23	2.16	0.45
47:p:57:ARG:HB2	47:p:79:VAL:HG13	1.98	0.45
50:s:12:ASP:N	50:s:38:SER:OG	2.26	0.45
51:t:15:ARG:O	51:t:18:GLN:HG3	2.16	0.45
51:t:56:MET:CE	51:t:85:MET:HA	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:y:30:G:O2'	53:y:31:G:H5'	2.17	0.45
1:A:110:G:H2'	1:A:111:A:C8	2.52	0.45
1:A:272(C):C:O2'	1:A:272(D):G:H5'	2.16	0.45
1:A:280:C:H2'	1:A:281:G:O4'	2.16	0.45
1:A:374:A:H3'	1:A:375:C:C6	2.52	0.45
1:A:803:U:C2'	1:A:804:A:H5'	2.46	0.45
1:A:923:C:H2'	1:A:924:C:C6	2.50	0.45
1:A:1022:G:N7	9:N:66:LYS:HE2	2.31	0.45
1:A:1123:C:H1'	31:9:18:ARG:HH22	1.82	0.45
1:A:1282:U:H3'	1:A:1283:G:C8	2.50	0.45
1:A:1434:A:O2'	1:A:1435:G:H5'	2.16	0.45
1:A:1588:C:H2'	1:A:1589:C:C6	2.50	0.45
1:A:1688:U:O2'	1:A:1700:A:N7	2.50	0.45
1:A:1790:C:H2'	1:A:1791:A:C8	2.51	0.45
1:A:1836:C:O2'	1:A:1837:C:H5'	2.16	0.45
1:A:1933:G:H2'	1:A:1934:C:O4'	2.17	0.45
1:A:2273:A:O2'	1:A:2274:A:H5'	2.16	0.45
1:A:2422:A:OP1	1:A:2422:A:H4'	2.17	0.45
1:A:2586:C:H2'	1:A:2587:A:O4'	2.17	0.45
1:A:2893:G:H4'	1:A:2894:G:O5'	2.16	0.45
2:B:28:C:O2'	2:B:29:A:H5'	2.16	0.45
3:D:123:ALA:HB3	3:D:131:LEU:CD1	2.44	0.45
7:H:117:PRO:HG3	7:H:123:PHE:CE2	2.52	0.45
9:N:21:LYS:HD3	9:N:26:LEU:HD13	1.98	0.45
10:O:35:VAL:HG11	10:O:103:ALA:HB3	1.98	0.45
10:O:80:ASP:OD2	15:T:71:GLY:HA3	2.16	0.45
11:P:121:LYS:HG2	11:P:123:LEU:HG	1.99	0.45
14:S:34:HIS:CE1	14:S:54:LEU:HA	2.51	0.45
14:S:49:VAL:HG12	14:S:73:LEU:HD12	1.97	0.45
19:X:23:GLU:OE2	19:X:25:LYS:HD2	2.17	0.45
19:X:57:LEU:O	19:X:77:LYS:HA	2.17	0.45
20:Y:7:VAL:HG12	20:Y:27:VAL:HG21	1.98	0.45
21:Z:40:ASP:HB3	21:Z:43:GLU:CB	2.43	0.45
27:5:35:GLU:OE2	27:5:54:GLY:HA2	2.17	0.45
29:7:12:ARG:HH21	29:7:44:PRO:HB3	1.81	0.45
30:8:8:LYS:O	30:8:12:LYS:HG3	2.17	0.45
30:8:14:VAL:CG1	30:8:22:VAL:HG13	2.36	0.45
32:a:113:G:H1'	32:a:354:G:C5'	2.46	0.45
32:a:413:G:H1'	32:a:428:G:N2	2.26	0.45
32:a:693:G:H5'	56:x:10:A:OP2	2.17	0.45
32:a:721:G:H4'	32:a:722:A:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1010:G:H2'	32:a:1011:G:H8	1.81	0.45
32:a:1308:U:H2'	32:a:1309:G:C8	2.52	0.45
32:a:1387:G:H2'	32:a:1388:C:C6	2.51	0.45
32:a:1496:C:H2'	32:a:1497:G:C8	2.51	0.45
33:b:71:VAL:HG12	33:b:93:VAL:CG2	2.47	0.45
37:f:9:VAL:HB	37:f:87:ARG:HB2	1.97	0.45
40:i:19:LEU:HD12	40:i:84:ALA:CB	2.46	0.45
41:j:28:ARG:N	41:j:34:VAL:HG11	2.31	0.45
42:k:116:HIS:N	42:k:117:ASN:HA	2.32	0.45
44:m:4:ILE:CG2	44:m:22:ILE:HD11	2.46	0.45
45:n:24:CYS:HA	45:n:38:GLY:O	2.15	0.45
47:p:6:LEU:HD23	47:p:17:TYR:HB3	1.98	0.45
47:p:23:ASP:OD1	47:p:24:ALA:N	2.50	0.45
50:s:40:ILE:HG23	50:s:44:MET:HB2	1.97	0.45
54:C:46:LYS:HE2	54:C:210:ARG:HH11	1.82	0.45
54:C:47:LEU:HB3	54:C:49:ILE:HG12	1.98	0.45
55:z:15:G:O3'	55:z:16:U:H4'	2.16	0.45
1:A:21:A:O2'	1:A:22:C:H5'	2.16	0.45
1:A:216:A:H2'	1:A:217:G:H8	1.80	0.45
1:A:273(C):G:O2'	1:A:273(D):G:H5'	2.16	0.45
1:A:580:C:O2'	1:A:581:C:H5'	2.17	0.45
1:A:752:A:H3'	29:7:1:MET:SD	2.56	0.45
1:A:1071:G:H2'	1:A:1072:C:C5	2.52	0.45
1:A:1421:G:H2'	1:A:1422:G:H8	1.81	0.45
1:A:1435:G:O2'	1:A:1436:G:H5'	2.16	0.45
1:A:1479:G:H5''	1:A:1560:G:H4'	1.98	0.45
1:A:1595:G:O2'	1:A:1596:A:H5'	2.17	0.45
1:A:1600:C:O2'	1:A:1601:G:H5'	2.16	0.45
1:A:1798:U:H5''	3:D:260:ARG:HB2	1.99	0.45
1:A:1820:U:H4'	1:A:1821:A:OP2	2.16	0.45
1:A:1842:G:O2'	3:D:253:GLN:NE2	2.40	0.45
1:A:2166:G:N1	1:A:2172:U:H5	2.14	0.45
1:A:2334:G:H4'	1:A:2335:A:OP2	2.15	0.45
1:A:2345:G:H1'	1:A:2382:G:H5'	1.98	0.45
1:A:2416:C:OP1	11:P:65:ARG:HD2	2.16	0.45
1:A:2617:C:C2'	1:A:2618:G:H5'	2.47	0.45
1:A:2662:A:H2'	1:A:2663:G:O4'	2.16	0.45
1:A:2844:G:C2'	1:A:2845:G:H5'	2.46	0.45
2:B:40:U:O2'	2:B:43:C:OP2	2.29	0.45
2:B:118:G:H2'	2:B:119:G:C8	2.52	0.45
3:D:111:LEU:HD22	3:D:112:GLN:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:130:ALA:HB2	3:D:192:THR:OG1	2.16	0.45
5:F:9:ILE:HD13	5:F:123:LEU:HD23	1.98	0.45
5:F:148:LEU:HD21	5:F:191:ARG:CD	2.46	0.45
6:G:41:GLN:HG2	6:G:155:MET:HB3	1.99	0.45
13:R:81:ASP:O	13:R:85:PRO:HG2	2.16	0.45
15:T:22:PHE:HE2	15:T:49:VAL:HG21	1.81	0.45
15:T:51:ARG:HG3	15:T:98:LYS:CD	2.47	0.45
17:V:22:VAL:HG22	17:V:92:THR:O	2.17	0.45
18:W:19:LEU:HB3	27:5:25:LEU:HD11	1.98	0.45
21:Z:4:ARG:NH1	21:Z:58:VAL:HG11	2.32	0.45
25:3:4:LEU:O	25:3:36:VAL:HA	2.17	0.45
27:5:56:LYS:HE3	27:5:59:GLU:OE2	2.16	0.45
32:a:90:U:H2'	32:a:91:C:C5	2.52	0.45
32:a:142:G:H2'	32:a:143:A:H8	1.81	0.45
32:a:412:A:OP2	35:d:35:ARG:NH1	2.44	0.45
32:a:426:G:O2'	32:a:427:U:H5'	2.17	0.45
32:a:949:A:H2'	32:a:950:U:C6	2.52	0.45
32:a:1250:A:C4'	40:i:67:GLY:HA2	2.44	0.45
32:a:1476:G:H2'	32:a:1477:C:H6	1.79	0.45
33:b:118:LEU:HD12	33:b:142:LEU:HD12	1.99	0.45
33:b:222:ILE:O	33:b:226:ARG:HG2	2.17	0.45
37:f:14:LEU:HD11	37:f:84:ASN:HB3	1.98	0.45
38:g:54:THR:CB	38:g:56:GLN:HE22	2.29	0.45
40:i:48:GLU:O	40:i:52:ALA:N	2.50	0.45
42:k:33:THR:C	42:k:40:ILE:HG12	2.41	0.45
44:m:22:ILE:CB	44:m:25:ILE:HD12	2.46	0.45
45:n:5:ALA:HA	45:n:8:GLU:HB3	1.98	0.45
50:s:51:VAL:O	50:s:58:VAL:N	2.37	0.45
1:A:10:G:H2'	1:A:11:G:O4'	2.17	0.45
1:A:209:C:O2'	1:A:210:C:H5'	2.15	0.45
1:A:273(I):C:O2'	1:A:273(J):U:H5'	2.17	0.45
1:A:319:C:H2'	1:A:320:A:O4'	2.16	0.45
1:A:389:G:O6	11:P:70:GLN:HG3	2.16	0.45
1:A:483:A:H3'	1:A:484:C:H6	1.81	0.45
1:A:761:A:H5''	1:A:762:U:OP1	2.16	0.45
1:A:862:G:H2'	1:A:863:A:O4'	2.17	0.45
1:A:864:G:H21	1:A:866:A:N6	2.15	0.45
1:A:1042:G:H2'	1:A:1043:C:H6	1.80	0.45
1:A:1087:G:C2'	1:A:1089:G:H4'	2.46	0.45
1:A:1287:A:O2'	1:A:1288:U:H5'	2.17	0.45
1:A:1558:A:H4'	1:A:1559:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1824:G:P	3:D:52:ARG:HH21	2.39	0.45
1:A:2117:A:O3'	1:A:2147:G:O2'	2.33	0.45
1:A:2137:C:H2'	1:A:2138:C:H6	1.82	0.45
1:A:2173:A:H3'	1:A:2174:C:C6	2.50	0.45
1:A:2521:C:O2'	1:A:2522:U:H5'	2.17	0.45
2:B:4:C:O2'	2:B:5:C:H5'	2.16	0.45
2:B:115:G:C1'	14:S:47:THR:HB	2.46	0.45
3:D:130:ALA:HA	3:D:192:THR:HA	1.98	0.45
5:F:10:PRO:HB3	5:F:17:ARG:CZ	2.47	0.45
5:F:29:ASN:CB	5:F:112:MET:HE1	2.46	0.45
5:F:185:ASP:HA	5:F:188:ARG:HD3	1.99	0.45
6:G:34:LEU:HD12	6:G:100:TRP:CH2	2.51	0.45
6:G:117:PHE:CZ	6:G:179:PRO:HG2	2.52	0.45
8:I:5:LEU:CD1	8:I:19:VAL:HG22	2.40	0.45
8:I:58:LEU:O	8:I:61:ARG:HB2	2.17	0.45
10:O:10:VAL:HG21	10:O:16:ALA:HB3	1.98	0.45
10:O:66:LYS:N	10:O:81:ASP:O	2.49	0.45
11:P:81:GLN:OE1	11:P:106:LEU:HD22	2.16	0.45
12:Q:35:VAL:HA	12:Q:101:ARG:O	2.17	0.45
12:Q:106:VAL:HG21	12:Q:114:ALA:HB1	1.97	0.45
22:O:21:LEU:HD23	22:O:39:ARG:HG3	1.99	0.45
23:1:51:VAL:O	23:1:58:ILE:N	2.50	0.45
24:2:63:VAL:O	24:2:66:GLU:HB2	2.16	0.45
25:3:43:ILE:O	25:3:47:VAL:HG23	2.16	0.45
28:6:5:VAL:O	28:6:27:LYS:HG2	2.16	0.45
32:a:173:U:P	32:a:197:A:H5'	2.56	0.45
32:a:403:C:O2'	32:a:404:U:H5'	2.16	0.45
32:a:535:A:OP1	32:a:535:A:H3'	2.17	0.45
32:a:538:G:H3'	43:l:115:LYS:HZ3	1.82	0.45
32:a:627:G:H2'	32:a:628:G:C8	2.52	0.45
32:a:867:G:O2'	32:a:868:C:H5'	2.17	0.45
32:a:1058:G:H2'	32:a:1059:C:O4'	2.17	0.45
32:a:1168:A:H2'	32:a:1169:A:O4'	2.17	0.45
32:a:1176:A:H2'	32:a:1177:G:O4'	2.16	0.45
32:a:1405:G:H1'	32:a:1519:MA6:C1'	2.46	0.45
33:b:115:LEU:HD23	33:b:145:LEU:CB	2.46	0.45
34:c:157:ILE:CG2	34:c:164:ARG:HH21	2.29	0.45
39:h:84:ARG:HD2	39:h:85:ARG:O	2.17	0.45
40:i:19:LEU:CD1	40:i:84:ALA:HB3	2.47	0.45
43:l:89:ARG:CA	43:l:97:ARG:HA	2.47	0.45
50:s:11:VAL:CG1	50:s:16:LEU:HB2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:y:27:U:O2'	53:y:28:C:H5'	2.17	0.45
53:y:40:C:H2'	53:y:41:C:C6	2.51	0.45
54:C:59:ARG:HD2	54:C:164:ARG:HD2	1.98	0.45
55:z:40:C:H2'	55:z:41:C:C6	2.51	0.45
1:A:459:U:H2'	1:A:460:A:H8	1.82	0.45
1:A:484:C:O2'	1:A:485:C:H5'	2.17	0.45
1:A:626:U:O4	11:P:81:GLN:NE2	2.50	0.45
1:A:643:A:H2'	1:A:644:A:O4'	2.16	0.45
1:A:990:A:H5'	1:A:1157:G:OP1	2.17	0.45
1:A:994:C:H3'	16:U:54:LYS:HE3	1.99	0.45
1:A:1057:A:H62	1:A:1087:G:P	2.40	0.45
1:A:1166:C:O2'	1:A:1167:U:H5'	2.16	0.45
1:A:1273:U:H4'	1:A:1275:A:OP1	2.17	0.45
1:A:1340:U:H4'	1:A:1341:U:OP2	2.17	0.45
1:A:1384:A:H1'	1:A:1405:U:H1'	1.99	0.45
1:A:1461:G:H2'	1:A:1462:C:H6	1.82	0.45
1:A:1524:G:O2'	1:A:1525:G:H5'	2.17	0.45
1:A:1562:A:H2'	1:A:1563:G:H8	1.81	0.45
1:A:1580:A:H5'	1:A:1581:G:OP2	2.16	0.45
1:A:1797:C:O5'	3:D:274:ARG:NH2	2.49	0.45
1:A:1881:C:H2'	1:A:1882:C:H6	1.80	0.45
1:A:2112:G:H2'	1:A:2113:U:O4'	2.17	0.45
1:A:2218:U:OP1	1:A:2218:U:H2'	2.17	0.45
1:A:2729:G:O2'	1:A:2730:C:H5'	2.16	0.45
2:B:21:G:H2'	2:B:22:U:C6	2.52	0.45
4:E:34:VAL:HG21	4:E:78:LEU:HD11	1.98	0.45
6:G:142:PRO:HB2	26:4:31:ILE:CG2	2.47	0.45
8:I:26:ALA:CA	8:I:30:LEU:HD12	2.47	0.45
10:O:91:LEU:HD13	10:O:111:PHE:HE1	1.82	0.45
16:U:90:VAL:HA	17:V:11:GLN:OE1	2.17	0.45
18:W:83:LYS:HB3	18:W:95:ILE:CG2	2.47	0.45
21:Z:51:ALA:HB1	21:Z:57:ILE:HG12	1.98	0.45
21:Z:120:ILE:HG12	21:Z:172:ALA:CA	2.42	0.45
26:4:5:ILE:HG13	26:4:6:HIS:N	2.31	0.45
26:4:59:PHE:HA	26:4:60:GLN:CB	2.41	0.45
32:a:67:C:O3'	32:a:76:C:H2'	2.17	0.45
32:a:199:G:C2'	32:a:200:G:H5'	2.46	0.45
32:a:562:C:H1'	43:l:15:ARG:HD2	1.98	0.45
32:a:603:U:O2	32:a:635:G:O6	2.34	0.45
32:a:660:G:P	46:o:5:LYS:HG2	2.56	0.45
32:a:848:C:H2'	32:a:849:C:H6	1.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:913:A:H1'	32:a:914:A:OP2	2.16	0.45
32:a:938:A:H2'	32:a:939:G:O4'	2.17	0.45
32:a:1060:C:H5	34:c:2:GLY:HA2	1.78	0.45
32:a:1217:C:H2'	32:a:1218:C:H6	1.81	0.45
32:a:1240:U:C4'	38:g:38:LEU:HD21	2.47	0.45
32:a:1412:C:H2'	32:a:1413:A:H8	1.82	0.45
33:b:98:LEU:O	33:b:101:MET:HG3	2.17	0.45
40:i:48:GLU:CD	40:i:51:ARG:HB2	2.42	0.45
41:j:50:ILE:HD11	41:j:57:LYS:CD	2.30	0.45
42:k:99:GLN:HG2	42:k:105:VAL:HG21	1.98	0.45
45:n:10:ALA:HB2	45:n:23:ARG:HE	1.80	0.45
45:n:40:CYS:SG	45:n:42:ILE:HB	2.56	0.45
46:o:31:LEU:O	46:o:35:ARG:N	2.41	0.45
46:o:36:ILE:HD13	46:o:60:VAL:HG22	1.99	0.45
47:p:8:ARG:HA	47:p:17:TYR:HD1	1.80	0.45
48:q:46:ASP:CG	48:q:49:GLU:HA	2.42	0.45
54:C:115:ALA:HA	54:C:149:ILE:HD12	1.99	0.45
54:C:212:VAL:CG1	54:C:224:ILE:HD11	2.47	0.45
55:z:44:G:H3'	55:z:45:U:C6	2.51	0.45
1:A:42:G:O2'	1:A:43:A:H5'	2.17	0.45
1:A:209:C:H2'	1:A:210:C:H6	1.81	0.45
1:A:380:U:OP1	23:1:18:ILE:HB	2.17	0.45
1:A:480:A:H3'	1:A:481:G:H5''	1.98	0.45
1:A:483:A:H1'	20:Y:59:GLY:O	2.17	0.45
1:A:527:C:H4'	1:A:528:A:O5'	2.17	0.45
1:A:537:C:O2'	1:A:538:G:H5'	2.17	0.45
1:A:593:G:O2'	1:A:594:U:H5'	2.17	0.45
1:A:1284:A:O2'	1:A:1285:G:H5'	2.17	0.45
1:A:1358:G:N1	1:A:1372:U:OP2	2.23	0.45
1:A:1514:U:H2'	1:A:1515:G:H8	1.76	0.45
1:A:1528(A):A:OP2	1:A:1541:G:N1	2.50	0.45
1:A:1549:C:O2'	1:A:1550:C:H5'	2.17	0.45
1:A:1781:C:H5	29:7:1:MET:HE1	1.82	0.45
1:A:2075:U:OP2	1:A:2238:G:O2'	2.12	0.45
1:A:2239:G:H5'	3:D:251:GLY:HA3	1.99	0.45
1:A:2356:C:H5'	22:0:24:LYS:HZ1	1.82	0.45
1:A:2827:C:H2'	1:A:2828:C:C6	2.52	0.45
3:D:111:LEU:HD22	3:D:115:GLN:OE1	2.17	0.45
6:G:11:TYR:HA	6:G:15:VAL:CG2	2.46	0.45
8:I:40:THR:O	8:I:44:LEU:HD23	2.17	0.45
12:Q:70:PRO:HB2	12:Q:93:TYR:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:R:13:HIS:O	13:R:17:ARG:HG3	2.17	0.45
13:R:36:THR:HG22	13:R:40:LYS:HB2	1.97	0.45
32:a:41:G:O2'	32:a:42:G:H5'	2.17	0.45
32:a:322:C:O2'	32:a:323:U:H5'	2.17	0.45
32:a:441:A:N6	32:a:493:G:O2'	2.48	0.45
32:a:517:G:H2'	32:a:531:U:C5	2.52	0.45
32:a:519:C:H2'	32:a:520:A:O4'	2.17	0.45
32:a:522:C:H2'	32:a:523:A:C8	2.51	0.45
32:a:668:G:HO2'	32:a:669:U:H5'	1.81	0.45
32:a:689:C:O2'	32:a:705:U:O2'	2.20	0.45
32:a:691:G:C6	42:k:52:GLY:HA2	2.52	0.45
32:a:905:U:H2'	32:a:906:G:H5'	1.98	0.45
32:a:1061:G:O2'	32:a:1062:U:H5'	2.17	0.45
32:a:1229:A:O2'	53:y:30:G:OP1	2.34	0.45
32:a:1436:U:H2'	32:a:1437:C:C6	2.52	0.45
32:a:1458:G:H2'	32:a:1459:C:O4'	2.16	0.45
32:a:1458:G:H5''	51:t:31:SER:HB3	1.99	0.45
33:b:16:HIS:CB	33:b:210:SER:HB3	2.47	0.45
33:b:84:GLU:HG3	33:b:215:LEU:CB	2.38	0.45
34:c:58:GLU:CB	34:c:65:ALA:HB3	2.45	0.45
35:d:99:SER:O	35:d:140:VAL:N	2.40	0.45
37:f:3:ARG:HA	37:f:38:GLU:OE2	2.17	0.45
37:f:30:LEU:HB3	37:f:35:ALA:HB3	1.97	0.45
44:m:45:VAL:HA	44:m:48:LEU:HD11	1.97	0.45
45:n:29:ARG:HD3	45:n:40:CYS:HB2	1.99	0.45
51:t:33:ILE:O	51:t:37:SER:OG	2.14	0.45
55:z:17:C:O2'	55:z:18:G:OP1	2.29	0.45
55:z:36:A:H3'	55:z:37:A:H5''	1.99	0.45
55:z:39:U:H2'	55:z:40:C:C6	2.51	0.45
1:A:123:G:O2'	1:A:124:G:H5'	2.17	0.45
1:A:150:C:O2'	1:A:151:C:H5'	2.17	0.45
1:A:239:U:H2'	1:A:240:G:C8	2.52	0.45
1:A:455:C:H3'	1:A:456:C:H5''	1.98	0.45
1:A:528:A:OP2	9:N:111:PRO:HB3	2.16	0.45
1:A:558:G:P	9:N:111:PRO:HD2	2.57	0.45
1:A:712:G:H2'	1:A:713:G:O4'	2.17	0.45
1:A:782:A:C2	3:D:226:MET:HG2	2.52	0.45
1:A:854:G:H2'	1:A:855:G:C8	2.49	0.45
1:A:901:A:O2'	1:A:902:C:H5'	2.16	0.45
1:A:906:G:H2'	1:A:907:U:O4'	2.17	0.45
1:A:1143:A:N7	9:N:25:ARG:NE	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1410:G:H2'	1:A:1411:C:C6	2.52	0.45
1:A:1421:G:H3'	1:A:1421:G:OP2	2.17	0.45
1:A:1668:A:H4'	1:A:1669:A:O5'	2.16	0.45
1:A:1806:C:O2	3:D:46:GLN:NE2	2.50	0.45
1:A:2080:G:H5'	23:1:35:THR:HG23	1.99	0.45
1:A:2120:G:H2'	1:A:2121:G:C8	2.52	0.45
1:A:2129:C:H4'	54:C:4:GLY:HA2	1.99	0.45
1:A:2591:C:OP1	3:D:239:ARG:HB2	2.17	0.45
1:A:2629:A:O2'	1:A:2630:G:OP2	2.26	0.45
1:A:2813:A:O2'	1:A:2814:C:H5'	2.17	0.45
3:D:29:PRO:HG3	3:D:63:ARG:NH2	2.31	0.45
3:D:77:ALA:C	3:D:116:GLN:HG3	2.42	0.45
3:D:79:VAL:CG2	3:D:111:LEU:HD11	2.37	0.45
5:F:36:VAL:HG12	5:F:183:VAL:HG21	1.98	0.45
7:H:97:ARG:NE	7:H:104:GLU:OE1	2.49	0.45
11:P:71:VAL:CG2	11:P:72:PRO:HA	2.47	0.45
11:P:84:ASN:OD1	11:P:115:LEU:HB2	2.17	0.45
12:Q:29:PHE:N	12:Q:105:GLU:OE1	2.41	0.45
12:Q:35:VAL:CG1	12:Q:130:LYS:HB3	2.47	0.45
13:R:28:LEU:HD23	13:R:34:ILE:HG12	1.98	0.45
15:T:48:ILE:O	15:T:63:VAL:HA	2.17	0.45
20:Y:10:GLY:N	20:Y:27:VAL:HB	2.32	0.45
22:O:45:PHE:O	22:O:59:LEU:HD11	2.17	0.45
24:2:24:LEU:O	24:2:28:LYS:HG2	2.17	0.45
31:9:3:VAL:HA	31:9:35:ARG:O	2.17	0.45
32:a:29:G:O2'	32:a:30:U:H5'	2.17	0.45
32:a:44:G:OP1	47:p:11:SER:HB2	2.16	0.45
32:a:66:G:C6	32:a:97:G:N1	2.85	0.45
32:a:66:G:H5''	32:a:73:G:C4	2.52	0.45
32:a:227:G:H2'	32:a:228:A:H8	1.81	0.45
32:a:255:G:O3'	48:q:17:LYS:HD2	2.17	0.45
32:a:308:C:O2'	32:a:309:G:H5'	2.17	0.45
32:a:405:U:OP1	32:a:406:G:H4'	2.16	0.45
32:a:923:A:H2'	32:a:924:C:H6	1.81	0.45
32:a:1112:C:C4	34:c:178:LEU:HD23	2.52	0.45
32:a:1134:G:C2'	32:a:1135:U:H5'	2.47	0.45
32:a:1146:A:H2'	32:a:1146:A:N3	2.32	0.45
32:a:1205:U:H4'	34:c:195:VAL:HG21	1.98	0.45
32:a:1227:A:O3'	44:m:115:LYS:HB2	2.17	0.45
32:a:1313:U:P	50:s:5:LEU:HG	2.57	0.45
32:a:1434:A:H2'	32:a:1435:G:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1438:G:OP2	51:t:34:LYS:NZ	2.45	0.45
32:a:1505:G:H5''	32:a:1506:U:O5'	2.16	0.45
33:b:74:LYS:HB2	33:b:76:GLN:CD	2.41	0.45
33:b:103:THR:CG2	33:b:176:GLU:HG2	2.46	0.45
34:c:106:VAL:CG1	34:c:109:PRO:HA	2.46	0.45
34:c:142:MET:CE	34:c:171:GLY:HA3	2.46	0.45
35:d:70:ILE:HG23	35:d:75:PHE:HB2	1.98	0.45
36:e:81:GLU:CG	36:e:90:VAL:HG22	2.43	0.45
37:f:99:ALA:HB1	49:r:23:LYS:CE	2.47	0.45
38:g:20:ASP:OD2	38:g:22:LEU:HB3	2.16	0.45
45:n:7:ILE:HA	45:n:23:ARG:CD	2.46	0.45
51:t:15:ARG:HA	51:t:18:GLN:HG3	1.98	0.45
53:y:69:C:H2'	53:y:70:G:H8	1.81	0.45
55:z:3:C:H2'	55:z:4:C:C1'	2.46	0.45
1:A:80:G:H1'	1:A:294:A:C2	2.53	0.45
1:A:171:G:H2'	1:A:172:C:C6	2.52	0.45
1:A:246:C:C2'	1:A:247:G:H5'	2.47	0.45
1:A:342:G:O2'	1:A:343:C:H5'	2.17	0.45
1:A:379:G:H2'	1:A:380:U:O4'	2.17	0.45
1:A:392:C:H2'	1:A:393:C:H6	1.82	0.45
1:A:443:A:OP1	5:F:46:ARG:N	2.47	0.45
1:A:495:G:N2	18:W:61:ASN:OD1	2.46	0.45
1:A:774:A:N3	1:A:774:A:H2'	2.32	0.45
1:A:1051:G:C3'	1:A:1052:C:H5''	2.47	0.45
1:A:1060:U:H1'	1:A:1070:A:C8	2.51	0.45
1:A:1212:G:H1'	1:A:1237:A:N6	2.32	0.45
1:A:1410:G:H2'	1:A:1411:C:H6	1.82	0.45
1:A:1531:C:H2'	1:A:1532:C:O4'	2.16	0.45
1:A:1570:A:H2'	1:A:1571:A:H8	1.80	0.45
1:A:1689:A:N6	1:A:1697:G:H2'	2.31	0.45
1:A:1850:G:H2'	1:A:1851:U:H6	1.82	0.45
1:A:1954:G:N1	1:A:1986:A:OP1	2.39	0.45
1:A:2105:C:H2'	1:A:2106:G:C8	2.52	0.45
1:A:2153:G:H2'	1:A:2154:G:H8	1.81	0.45
1:A:2426:A:H4'	1:A:2427:C:OP2	2.17	0.45
1:A:2585:U:H4'	1:A:2586:C:O5'	2.17	0.45
1:A:2617:C:H2'	1:A:2618:G:H5'	1.97	0.45
1:A:2706:G:O2'	13:R:64:ARG:HD3	2.17	0.45
1:A:2807:G:H2'	1:A:2808:U:C4'	2.47	0.45
1:A:2881:C:O2'	1:A:2882:A:H5'	2.17	0.45
3:D:26:LYS:HD3	3:D:83:GLU:OE2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:111:ARG:HG2	13:R:1:MET:SD	2.57	0.45
6:G:76:SER:H	6:G:84:LYS:HB2	1.82	0.45
8:I:50:ARG:O	8:I:54:GLN:N	2.40	0.45
10:O:14:THR:OG1	10:O:86:ILE:HD12	2.17	0.45
12:Q:1:MET:HG2	12:Q:44:ALA:HB1	1.99	0.45
12:Q:30:GLY:CA	12:Q:107:ALA:HB2	2.44	0.45
12:Q:58:PHE:CZ	12:Q:114:ALA:HA	2.52	0.45
12:Q:74:TYR:CD2	12:Q:91:GLU:HB2	2.51	0.45
12:Q:136:ALA:CB	21:Z:52:SER:HB2	2.47	0.45
15:T:5:ALA:O	15:T:8:LYS:HB2	2.16	0.45
18:W:10:VAL:C	18:W:100:THR:HG23	2.41	0.45
21:Z:157:LEU:HD13	21:Z:161:VAL:HG12	1.99	0.45
22:O:69:PHE:CD1	22:O:79:VAL:HG22	2.52	0.45
24:2:16:LEU:O	24:2:67:LYS:NZ	2.50	0.45
25:3:44:ARG:O	25:3:48:GLU:HG3	2.17	0.45
32:a:165:C:O2'	32:a:166:G:H5'	2.17	0.45
32:a:175:C:O2'	32:a:176:C:H5'	2.16	0.45
32:a:261:U:N3	32:a:264:U:OP2	2.43	0.45
32:a:515:G:H2'	32:a:516:PSU:H6	1.82	0.45
32:a:642:A:O2'	32:a:643:C:H5'	2.16	0.45
32:a:674:G:P	37:f:87:ARG:HH22	2.39	0.45
32:a:763:G:H2'	32:a:764:C:C6	2.52	0.45
32:a:1179:A:O2'	32:a:1180:A:H5'	2.17	0.45
32:a:1300:G:HO2'	32:a:1301:U:P	2.40	0.45
32:a:1349:A:H1'	32:a:1374:A:N6	2.31	0.45
32:a:1469:G:H2'	32:a:1470:G:C8	2.52	0.45
33:b:121:LEU:O	33:b:127:ILE:HB	2.17	0.45
35:d:108:LEU:HD11	35:d:176:LEU:CB	2.39	0.45
36:e:9:LYS:O	36:e:32:VAL:HA	2.17	0.45
37:f:1:MET:CE	37:f:68:PRO:HD3	2.46	0.45
38:g:118:VAL:HA	38:g:121:ALA:HB3	1.98	0.45
40:i:96:LEU:O	40:i:100:GLY:N	2.50	0.45
49:r:44:LEU:HD11	49:r:79:LEU:HD22	1.97	0.45
50:s:40:ILE:HB	50:s:67:VAL:O	2.17	0.45
54:C:211:SER:HB2	54:C:223:ARG:NH1	2.32	0.45
55:z:18:G:N2	55:z:57:G:H5'	2.29	0.45
55:z:21:A:HO2'	55:z:22:G:P	2.40	0.45
55:z:21:A:H5'	55:z:48:C:H41	1.82	0.45
55:z:64:A:H2'	55:z:65:G:H8	1.79	0.45
1:A:38:A:H2'	1:A:39:C:H6	1.77	0.44
1:A:61:G:OP1	24:2:51:ARG:NH2	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:110:G:O2'	1:A:111:A:H5'	2.17	0.44
1:A:200:U:O4	1:A:250:G:N2	2.48	0.44
1:A:320:A:OP2	5:F:137:LYS:HE3	2.17	0.44
1:A:477:A:OP1	1:A:501:A:N6	2.50	0.44
1:A:602:G:H4'	1:A:604:G:H4'	1.98	0.44
1:A:708:C:H2'	1:A:709:U:C6	2.53	0.44
1:A:781:A:OP1	3:D:218:ARG:NH2	2.45	0.44
1:A:1258:C:O2'	1:A:1259:G:H5'	2.17	0.44
1:A:1414:G:H2'	1:A:1415:U:C6	2.51	0.44
1:A:1509(A):C:O2'	1:A:1509(B):A:H4'	2.16	0.44
1:A:1607:C:H4'	1:A:1608:A:C5'	2.46	0.44
1:A:1844:C:H2'	1:A:1845:G:C8	2.52	0.44
1:A:2112:G:H5'	55:z:19:G:N7	2.31	0.44
1:A:2355:C:H1'	22:0:39:ARG:HH21	1.81	0.44
1:A:2675:A:H2'	1:A:2676:C:C6	2.51	0.44
2:B:43:C:O2	6:G:95:ARG:NE	2.43	0.44
2:B:76:G:H2'	2:B:77:U:O4'	2.17	0.44
5:F:155:LEU:HB2	5:F:189:THR:OG1	2.16	0.44
7:H:77:LYS:HB3	7:H:83:TYR:OH	2.17	0.44
7:H:98:LEU:HD12	7:H:102:ALA:O	2.17	0.44
8:I:48:GLU:OE2	8:I:52:ARG:NH1	2.50	0.44
12:Q:48:GLU:O	12:Q:52:VAL:HG23	2.17	0.44
12:Q:55:VAL:HG13	21:Z:183:LEU:CD1	2.46	0.44
15:T:46:GLU:OE2	15:T:89:VAL:HG21	2.16	0.44
19:X:72:LYS:HG2	19:X:73:ARG:O	2.17	0.44
21:Z:45:ASP:O	21:Z:49:ARG:HG3	2.17	0.44
28:6:11:LEU:N	28:6:21:TYR:O	2.37	0.44
32:a:99:U:H4'	32:a:100:C:OP1	2.17	0.44
32:a:178:C:C2'	32:a:179:A:H5'	2.46	0.44
32:a:277:C:H5'	48:q:68:ARG:NH1	2.29	0.44
32:a:320:C:H2'	32:a:321:A:C1'	2.47	0.44
32:a:369:C:OP2	32:a:388:G:N1	2.41	0.44
32:a:394:G:H2'	32:a:395:C:H6	1.81	0.44
32:a:892:A:C2'	32:a:893:C:H5'	2.47	0.44
32:a:1114:C:O2'	32:a:1115:C:H5'	2.16	0.44
32:a:1207:2MG:H2'	32:a:1208:C:H6	1.82	0.44
32:a:1514:C:H2'	32:a:1515:C:C6	2.51	0.44
35:d:163:GLU:HA	35:d:166:LYS:CG	2.45	0.44
37:f:38:GLU:OE1	37:f:64:GLN:HG2	2.17	0.44
37:f:96:PRO:HB3	49:r:30:ASP:OD2	2.17	0.44
38:g:108:ALA:CB	38:g:120:ILE:HD13	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:j:71:LEU:HD21	41:j:73:ASP:OD1	2.17	0.44
48:q:57:VAL:HB	48:q:73:VAL:HG13	1.98	0.44
50:s:45:VAL:HA	50:s:62:ILE:CG2	2.43	0.44
54:C:40:THR:O	54:C:216:THR:HA	2.17	0.44
54:C:151:GLU:HG3	54:C:154:ARG:NH1	2.32	0.44
56:x:5:G:H2'	56:x:6:A:H8	1.82	0.44
1:A:116:C:H5''	1:A:128:C:H41	1.82	0.44
1:A:197:A:H3'	1:A:198:C:C6	2.52	0.44
1:A:222:A:N6	1:A:232:G:H1'	2.33	0.44
1:A:307:G:H22	1:A:310:A:P	2.40	0.44
1:A:322:A:H5'	1:A:340:A:C1'	2.46	0.44
1:A:493:G:H5''	18:W:8:ARG:HH21	1.83	0.44
1:A:571:A:C5'	1:A:2030:A:H62	2.31	0.44
1:A:607:U:O2'	1:A:608:A:H5'	2.18	0.44
1:A:623:G:H2'	1:A:624:C:H6	1.83	0.44
1:A:635:C:O2'	1:A:636:G:H5'	2.17	0.44
1:A:729:G:OP1	3:D:10:THR:OG1	2.23	0.44
1:A:922:U:H2'	1:A:923:C:H6	1.80	0.44
1:A:1222:C:OP2	17:V:88:ARG:NH1	2.46	0.44
1:A:1449:A:C4	1:A:1528(B):A:H2	2.35	0.44
1:A:2099:U:O2	1:A:2190:G:N2	2.36	0.44
1:A:2115:G:H3'	1:A:2116:G:C5'	2.47	0.44
1:A:2227:A:H2'	1:A:2227:A:N3	2.32	0.44
1:A:2527:C:O2'	1:A:2528:U:H5'	2.17	0.44
1:A:2581:G:OP2	1:A:2581:G:N2	2.43	0.44
1:A:2586:C:OP2	1:A:2608:G:N2	2.50	0.44
1:A:2689:U:H5'	1:A:2689:U:O2	2.17	0.44
3:D:30:GLU:HG3	3:D:32:SER:N	2.29	0.44
3:D:34:VAL:HG12	3:D:63:ARG:HG3	2.00	0.44
4:E:49:LEU:C	4:E:78:LEU:HD12	2.42	0.44
5:F:63:LYS:HE3	5:F:65:TRP:O	2.17	0.44
5:F:114:VAL:HG21	5:F:202:PHE:CE1	2.51	0.44
6:G:18:GLU:OE2	6:G:21:ARG:NH2	2.49	0.44
7:H:87:LEU:CD2	7:H:164:TYR:HA	2.40	0.44
8:I:93:THR:CG2	8:I:119:PRO:HB3	2.47	0.44
10:O:76:ALA:HB3	15:T:75:ILE:HD12	1.99	0.44
15:T:34:VAL:HG21	15:T:43:GLN:HG2	1.98	0.44
20:Y:51:VAL:HA	20:Y:58:GLY:CA	2.47	0.44
21:Z:23:LYS:HE2	21:Z:40:ASP:HA	1.99	0.44
21:Z:47:VAL:HG12	21:Z:51:ALA:HB3	1.98	0.44
21:Z:53:ILE:CD1	21:Z:99:TYR:HB2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:0:52:GLY:N	22:0:62:LEU:HG	2.32	0.44
23:1:56:GLN:HE21	23:1:87:PRO:CG	2.30	0.44
23:1:80:LEU:HB2	23:1:82:LEU:HD11	1.98	0.44
30:8:26:LYS:HG2	30:8:44:LYS:HG2	1.98	0.44
32:a:20:U:O2'	32:a:21:G:H5'	2.16	0.44
32:a:189(H):G:H4'	32:a:189(I):G:OP2	2.18	0.44
32:a:234:C:O2'	32:a:235:C:H5'	2.16	0.44
32:a:235:C:H2'	32:a:236:G:H8	1.82	0.44
32:a:265:G:H5'	48:q:64:PRO:O	2.17	0.44
32:a:310:G:H5''	47:p:31:LYS:HB2	1.99	0.44
32:a:729:A:H2'	32:a:730:G:O4'	2.17	0.44
32:a:876:G:O2'	32:a:877:C:H5'	2.17	0.44
32:a:901:A:O2'	32:a:1513:A:OP1	2.17	0.44
32:a:1090:U:H2'	32:a:1091:U:H6	1.83	0.44
32:a:1135:U:H2'	32:a:1137:C:C4	2.52	0.44
32:a:1250:A:H4'	40:i:67:GLY:CA	2.44	0.44
32:a:1260:C:P	32:a:1284:C:H4'	2.57	0.44
32:a:1419:G:C6	32:a:1481:U:O2	2.70	0.44
33:b:155:LEU:HD21	33:b:159:PRO:HG3	2.00	0.44
33:b:223:ILE:CD1	33:b:229:VAL:HA	2.47	0.44
34:c:58:GLU:HB3	41:j:92:THR:HB	2.00	0.44
36:e:11:ILE:HD11	36:e:33:VAL:CG1	2.47	0.44
36:e:71:LEU:HD21	36:e:115:VAL:CG2	2.47	0.44
38:g:63:LYS:O	38:g:67:GLU:HG2	2.17	0.44
40:i:4:TYR:O	40:i:19:LEU:N	2.38	0.44
44:m:15:VAL:HG23	44:m:34:LEU:HD11	1.98	0.44
46:o:50:HIS:O	46:o:53:HIS:HB3	2.18	0.44
46:o:75:PRO:CA	46:o:78:TYR:HB3	2.42	0.44
49:r:68:LYS:O	49:r:72:ARG:HG3	2.17	0.44
53:y:39:C:O2'	53:y:40:C:H5'	2.17	0.44
53:y:58:A:O2'	53:y:60:U:OP2	2.25	0.44
53:y:68:C:H2'	53:y:69:C:H6	1.81	0.44
55:z:16:U:H5	55:z:17:C:H3'	1.82	0.44
55:z:16:U:N3	55:z:19:G:OP2	2.51	0.44
1:A:225:A:H2'	1:A:226:G:O4'	2.17	0.44
1:A:272(I):G:O2'	1:A:272(J):C:H5'	2.18	0.44
1:A:307:G:H2'	1:A:309:G:N7	2.31	0.44
1:A:679:C:O2'	1:A:680:G:H5'	2.17	0.44
1:A:729:G:C8	3:D:208:LYS:HD2	2.52	0.44
1:A:747:U:H5''	1:A:748:G:H5'	1.98	0.44
1:A:820:A:N3	1:A:943:U:O2'	2.41	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:934:G:H2'	1:A:935:C:C6	2.52	0.44
1:A:1024:G:H3'	1:A:1025:G:H8	1.82	0.44
1:A:1089:G:O2'	1:A:1090:U:O5'	2.28	0.44
1:A:1211:U:H3'	1:A:1212:G:C5'	2.47	0.44
1:A:1224:C:O2'	1:A:1225:G:H5'	2.17	0.44
1:A:1419:A:H1'	1:A:1420:U:C5	2.52	0.44
1:A:1452:A:H62	1:A:2703:C:H41	1.65	0.44
1:A:1794:U:H2'	1:A:1795:C:C6	2.52	0.44
1:A:1817:G:P	3:D:88:ARG:HH21	2.40	0.44
1:A:1934:C:O2'	1:A:1935:G:H5'	2.18	0.44
1:A:2037:G:H2'	1:A:2038:G:C8	2.53	0.44
1:A:2187:G:H2'	1:A:2187:G:N3	2.33	0.44
1:A:2553:G:N1	1:A:2554:U:O2	2.50	0.44
2:B:33:G:H2'	2:B:34:U:O4'	2.17	0.44
2:B:43:C:OP1	26:4:6:HIS:NE2	2.40	0.44
2:B:91:C:H5'	12:Q:18:LYS:CA	2.47	0.44
3:D:134:ARG:NH1	8:I:121:LYS:HE2	2.32	0.44
3:D:144:ALA:C	3:D:153:ALA:HB1	2.43	0.44
3:D:181:GLU:HG3	3:D:272:ALA:O	2.17	0.44
5:F:78:ILE:HA	5:F:83:PHE:CD2	2.53	0.44
5:F:134:GLY:CA	5:F:166:ALA:HB2	2.46	0.44
12:Q:136:ALA:HA	12:Q:139:GLU:CB	2.39	0.44
20:Y:28:LYS:CD	20:Y:40:GLU:HA	2.45	0.44
26:4:15:ILE:O	26:4:33:VAL:N	2.45	0.44
27:5:58:LEU:HD23	27:5:59:GLU:N	2.32	0.44
28:6:12:GLU:HB3	28:6:52:VAL:HG21	1.99	0.44
29:7:11:LYS:O	29:7:15:THR:HB	2.18	0.44
32:a:26:A:N6	32:a:558:G:H1'	2.31	0.44
32:a:65:U:O5'	32:a:71:C:N3	2.50	0.44
32:a:109:A:H2'	32:a:326:G:N2	2.31	0.44
32:a:241:C:H2'	32:a:242:C:C6	2.53	0.44
32:a:334:C:O2'	32:a:335:C:H5'	2.17	0.44
32:a:439:A:H2'	32:a:441:A:O4'	2.18	0.44
32:a:577:G:H1'	32:a:816:A:H2'	2.00	0.44
32:a:668:G:O2'	32:a:669:U:H5'	2.16	0.44
32:a:891:U:O2'	32:a:892:A:H5'	2.17	0.44
32:a:960:U:H4'	32:a:960:U:OP1	2.17	0.44
32:a:1012:U:H2'	32:a:1013:G:O4'	2.18	0.44
32:a:1189:C:OP1	41:j:51:ARG:NH2	2.50	0.44
32:a:1219:U:OP1	45:n:19:ARG:NH2	2.49	0.44
32:a:1309:G:H2'	32:a:1310:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1369:C:H2'	32:a:1370:G:O4'	2.18	0.44
32:a:1461:G:O2'	32:a:1462:G:H5'	2.16	0.44
32:a:1497:G:O2'	32:a:1518:MA6:N1	2.49	0.44
33:b:95:GLN:HG2	33:b:147:LYS:HD2	1.99	0.44
33:b:183:PRO:HA	33:b:198:ASP:OD2	2.17	0.44
34:c:132:ARG:NE	56:x:26:C:H5'	2.31	0.44
35:d:60:GLU:HG3	35:d:202:LEU:HD13	1.98	0.44
35:d:121:VAL:O	35:d:134:ASP:HA	2.16	0.44
35:d:147:ALA:HB2	35:d:182:LYS:CB	2.47	0.44
36:e:89:ILE:HG13	36:e:91:LEU:CD1	2.48	0.44
36:e:89:ILE:HD13	36:e:122:GLU:HG2	1.99	0.44
38:g:114:ARG:O	38:g:119:ARG:NH1	2.48	0.44
39:h:114:THR:HG22	39:h:130:GLY:O	2.17	0.44
40:i:40:LEU:HB2	40:i:43:ALA:HB3	1.99	0.44
41:j:38:ILE:CG1	41:j:71:LEU:HB3	2.47	0.44
44:m:58:GLU:O	44:m:62:ASN:ND2	2.50	0.44
46:o:43:LEU:CD1	46:o:56:LEU:HD22	2.47	0.44
53:y:61:C:O2'	53:y:62:C:H5'	2.17	0.44
55:z:7:A:O2'	55:z:49:C:H5'	2.16	0.44
1:A:67:U:O2'	1:A:68:G:H5'	2.17	0.44
1:A:99:U:OP1	1:A:100:G:O2'	2.28	0.44
1:A:149:A:O2'	1:A:150:C:H5'	2.18	0.44
1:A:603:A:C2'	11:P:90:ARG:HH22	2.30	0.44
1:A:686:G:C2	29:7:11:LYS:HE3	2.52	0.44
1:A:704:G:O2'	1:A:705:A:OP2	2.32	0.44
1:A:805:G:H22	1:A:828:U:H5''	1.82	0.44
1:A:881:G:C2	1:A:895:U:O2	2.71	0.44
1:A:991:C:O2'	1:A:992:C:H5'	2.16	0.44
1:A:1135:C:H3'	1:A:1137:G:OP2	2.18	0.44
1:A:1533:G:H2'	1:A:1533:G:N3	2.32	0.44
1:A:1753:G:H2'	1:A:1755:A:OP2	2.17	0.44
1:A:1819:A:OP1	3:D:157:ARG:N	2.51	0.44
1:A:1842:G:O2'	1:A:1843:C:H5'	2.18	0.44
1:A:1884:A:O2'	1:A:1885:A:H5'	2.18	0.44
1:A:1899:G:N3	1:A:1899:G:H2'	2.32	0.44
1:A:1988:C:O2'	1:A:1989:G:H5'	2.17	0.44
1:A:2019:A:H2'	1:A:2020:A:O4'	2.18	0.44
1:A:2124:G:O2'	54:C:40:THR:HB	2.18	0.44
1:A:2283:C:H5'	28:6:2:ALA:O	2.17	0.44
1:A:2331:G:O2'	1:A:2332:U:H5'	2.17	0.44
1:A:2343:C:H2'	1:A:2344:U:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2478:A:H2'	1:A:2479:G:O4'	2.17	0.44
1:A:2792:G:H3'	1:A:2792:G:OP1	2.17	0.44
2:B:41:U:O3'	26:4:2:LYS:NZ	2.50	0.44
5:F:10:PRO:HB3	5:F:17:ARG:HE	1.82	0.44
5:F:192:LEU:HD23	5:F:193:VAL:N	2.32	0.44
6:G:55:LYS:HZ2	6:G:153:ARG:HH12	1.64	0.44
6:G:107:LEU:HA	6:G:111:LEU:HD12	1.99	0.44
13:R:93:GLY:O	13:R:117:VAL:HG21	2.18	0.44
14:S:65:VAL:O	14:S:68:GLN:HB2	2.17	0.44
18:W:83:LYS:HB3	18:W:95:ILE:HG21	1.99	0.44
19:X:1:MET:HG3	19:X:3:THR:HG23	1.99	0.44
24:2:19:VAL:O	24:2:22:GLU:HB2	2.17	0.44
28:6:8:LYS:HB3	28:6:54:ILE:CD1	2.46	0.44
30:8:23:VAL:HA	30:8:48:PHE:O	2.17	0.44
32:a:39:G:O2'	32:a:40:C:H5'	2.17	0.44
32:a:52:G:O2'	32:a:53:A:H5'	2.18	0.44
32:a:129(B):G:O2'	32:a:189(G):U:OP1	2.34	0.44
32:a:189(K):G:O2'	32:a:189(L):U:H5'	2.18	0.44
32:a:201:C:H3'	32:a:203:U:H5	1.82	0.44
32:a:222:U:H2'	32:a:223:U:H6	1.79	0.44
32:a:427:U:H3'	32:a:428:G:C8	2.52	0.44
32:a:448:A:P	32:a:485:G:H22	2.39	0.44
32:a:682:G:O2'	32:a:683:G:H5'	2.17	0.44
32:a:686:U:O2	32:a:704:A:N7	2.51	0.44
32:a:720:C:H5''	49:r:52:PRO:HA	2.00	0.44
32:a:728:A:O2'	32:a:729:A:H5'	2.18	0.44
32:a:1014:A:C8	32:a:1219:U:H4'	2.52	0.44
32:a:1325:C:OP1	52:u:15:ARG:NH1	2.50	0.44
32:a:1425:U:H2'	32:a:1426:C:H6	1.83	0.44
32:a:1472:U:H2'	32:a:1473:A:C8	2.52	0.44
32:a:1473:A:O2'	32:a:1474:G:H5'	2.17	0.44
32:a:1519:MA6:H3'	32:a:1520:G:C5'	2.47	0.44
32:a:1520:G:O2'	32:a:1521:G:H5'	2.17	0.44
34:c:51:GLY:O	34:c:70:VAL:HG23	2.18	0.44
35:d:8:VAL:HG22	35:d:21:LEU:CD1	2.48	0.44
35:d:190:ASP:O	35:d:194:LEU:HG	2.17	0.44
36:e:76:ILE:HB	36:e:77:PRO:HD2	2.00	0.44
36:e:90:VAL:O	36:e:120:THR:HA	2.18	0.44
38:g:103:TRP:CZ3	38:g:138:LYS:HA	2.53	0.44
40:i:5:TYR:OH	40:i:7:THR:HG22	2.16	0.44
40:i:23:ASN:OD1	40:i:25:LYS:HG2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:k:48:ILE:HG21	42:k:63:LEU:CB	2.47	0.44
47:p:57:ARG:HH21	47:p:79:VAL:C	2.26	0.44
48:q:59:ILE:HD12	48:q:71:PHE:CD2	2.53	0.44
54:C:68:LEU:CG	54:C:159:GLY:HA2	2.42	0.44
54:C:166:ASP:OD1	54:C:170:ALA:N	2.37	0.44
1:A:136:G:H2'	1:A:137:C:H6	1.83	0.44
1:A:192:C:O2'	1:A:802:A:N3	2.40	0.44
1:A:195:A:P	1:A:196:A:H4'	2.58	0.44
1:A:243:U:H3'	1:A:243:U:OP2	2.18	0.44
1:A:272(P):C:OP1	8:I:45:LYS:NZ	2.31	0.44
1:A:494:G:C4'	18:W:6:ILE:HB	2.43	0.44
1:A:579:G:H2'	1:A:580:C:C6	2.53	0.44
1:A:637:A:H4'	1:A:638:G:O5'	2.17	0.44
1:A:707:G:H2'	1:A:708:C:H6	1.81	0.44
1:A:808:G:O2'	1:A:809:G:H5'	2.17	0.44
1:A:836:G:H2'	1:A:837:C:C6	2.52	0.44
1:A:933:A:H2'	1:A:934:G:H5'	2.00	0.44
1:A:1084:A:N6	1:A:1086:A:H62	2.16	0.44
1:A:1135:C:H41	1:A:1137:G:H3'	1.82	0.44
1:A:1517:G:O2'	1:A:1518:U:H5'	2.17	0.44
1:A:1638:C:H5''	1:A:2710:C:O2'	2.17	0.44
1:A:1864:U:H5''	1:A:2410:G:O2'	2.17	0.44
1:A:2224:G:P	1:A:2226:C:H41	2.41	0.44
1:A:2532:G:H2'	1:A:2533:A:H8	1.82	0.44
1:A:2699:C:O2'	1:A:2700:C:H5'	2.18	0.44
1:A:2740:A:H2'	1:A:2741:A:H8	1.82	0.44
2:B:64:C:H2'	2:B:65:C:C6	2.52	0.44
6:G:18:GLU:CG	6:G:175:LEU:HD21	2.47	0.44
6:G:19:LEU:HG	6:G:175:LEU:CD2	2.48	0.44
7:H:8:PRO:O	7:H:69:ARG:NH2	2.46	0.44
7:H:14:GLY:O	7:H:28:GLY:HA2	2.18	0.44
8:I:101:LEU:HA	8:I:105:HIS:HB2	1.97	0.44
10:O:24:VAL:O	10:O:24:VAL:HG13	2.18	0.44
11:P:52:GLU:HG2	30:8:57:ARG:HH12	1.83	0.44
13:R:57:ARG:HE	13:R:62:ALA:HB2	1.83	0.44
17:V:57:VAL:HA	17:V:99:ILE:HA	1.98	0.44
18:W:82:LEU:HB3	18:W:84:ARG:NH1	2.32	0.44
25:3:3:ARG:HB3	25:3:36:VAL:CG1	2.48	0.44
28:6:8:LYS:CB	28:6:54:ILE:HD13	2.43	0.44
28:6:39:TYR:OH	28:6:44:ARG:HA	2.17	0.44
32:a:122:G:H2'	32:a:123:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:127:G:H4'	48:q:2:PRO:HD2	1.99	0.44
32:a:132:C:H2'	32:a:133:U:O4'	2.17	0.44
32:a:261:U:H2'	32:a:263:A:OP2	2.17	0.44
32:a:502:G:O2'	32:a:503:C:H5'	2.17	0.44
32:a:531:U:OP2	32:a:531:U:H2'	2.17	0.44
32:a:719:C:OP2	32:a:720:C:N4	2.40	0.44
32:a:1022:G:H3'	32:a:1023:G:H8	1.83	0.44
32:a:1184:G:H2'	32:a:1185:G:H8	1.82	0.44
32:a:1242:C:H2'	32:a:1243:C:C6	2.53	0.44
32:a:1299:A:C8	32:a:1301:U:H1'	2.53	0.44
32:a:1513:A:O2'	32:a:1514:C:H5'	2.17	0.44
33:b:73:THR:HG22	33:b:94:ASN:O	2.18	0.44
36:e:148:VAL:O	36:e:152:ARG:HG2	2.17	0.44
37:f:25:ILE:HA	37:f:28:ARG:HB2	1.99	0.44
38:g:41:ARG:O	38:g:45:ASP:N	2.34	0.44
38:g:50:ILE:HG22	38:g:125:MET:HG3	1.99	0.44
40:i:5:TYR:C	40:i:84:ALA:HB2	2.42	0.44
43:l:55:VAL:HG13	43:l:68:ALA:O	2.17	0.44
44:m:34:LEU:HD13	44:m:41:PRO:HB3	1.99	0.44
47:p:73:LEU:HA	47:p:76:GLN:HB3	1.99	0.44
52:u:5:ASP:CG	52:u:8:THR:HG23	2.43	0.44
54:C:10:LEU:HD21	54:C:34:THR:HG23	1.98	0.44
1:A:146:G:O2'	1:A:147:U:H5'	2.17	0.44
1:A:391:G:C2'	1:A:392:C:H5'	2.48	0.44
1:A:469:G:N7	29:7:37:LYS:NZ	2.50	0.44
1:A:852:G:H5'	25:3:45:GLY:HA3	2.00	0.44
1:A:888:C:C2'	1:A:889:C:H5'	2.47	0.44
1:A:1029:A:O5'	12:Q:128:LYS:NZ	2.36	0.44
1:A:1214:A:H2'	1:A:1215:G:O4'	2.17	0.44
1:A:1248:G:OP1	16:U:2:PRO:HD2	2.18	0.44
1:A:2023:G:O2'	1:A:2024:G:H5'	2.18	0.44
1:A:2056:G:N2	27:5:5:PRO:HA	2.32	0.44
1:A:2173:A:N3	1:A:2173:A:H2'	2.32	0.44
1:A:2356:C:H5'	22:0:24:LYS:NZ	2.31	0.44
4:E:176:ILE:HG22	4:E:179:GLU:HB2	1.98	0.44
5:F:181:LEU:CD1	5:F:186:ILE:HD11	2.45	0.44
9:N:34:LEU:HD23	9:N:107:LEU:CD2	2.42	0.44
10:O:15:GLY:O	10:O:47:ILE:HG13	2.18	0.44
10:O:43:VAL:CG1	10:O:54:GLU:HA	2.46	0.44
10:O:53:LYS:N	10:O:56:ASP:OD2	2.50	0.44
10:O:73:ASP:OD1	10:O:74:GLY:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:P:63:PRO:HB2	30:8:30:ARG:HH21	1.82	0.44
11:P:112:LEU:HD11	11:P:114:ILE:CD1	2.48	0.44
12:Q:62:GLY:HA2	12:Q:107:ALA:O	2.18	0.44
17:V:4:ILE:CG2	17:V:11:GLN:HB3	2.47	0.44
17:V:29:PRO:HA	17:V:61:VAL:CG2	2.46	0.44
20:Y:47:LYS:N	20:Y:61:ILE:O	2.51	0.44
21:Z:28:MET:HB2	21:Z:90:VAL:CG2	2.48	0.44
24:2:1:MET:HE3	24:2:6:VAL:HA	2.00	0.44
32:a:100:C:H1'	32:a:101:A:OP1	2.18	0.44
32:a:191:G:H2'	32:a:192:U:O4'	2.18	0.44
32:a:251:G:O6	32:a:271:C:N4	2.42	0.44
32:a:406:G:C5'	35:d:5:ILE:HD11	2.46	0.44
32:a:415:A:H2'	32:a:416:G:C8	2.52	0.44
32:a:557:G:O2'	32:a:558:G:H5'	2.17	0.44
32:a:629:G:H2'	32:a:630:G:O4'	2.17	0.44
32:a:693:G:O2'	32:a:694:A:H5'	2.17	0.44
32:a:722:A:H3'	32:a:722:A:N3	2.33	0.44
32:a:891:U:H2'	32:a:892:A:H8	1.81	0.44
32:a:927:G:O2'	32:a:928:G:H5'	2.18	0.44
32:a:1061:G:H5''	41:j:59:SER:HB2	2.00	0.44
32:a:1281:U:H5''	32:a:1282:C:OP2	2.18	0.44
32:a:1360:A:H62	45:n:18:VAL:HG11	1.82	0.44
32:a:1517:G:H2'	32:a:1518:MA6:O4'	2.18	0.44
33:b:50:GLU:O	33:b:54:THR:N	2.33	0.44
33:b:123:ALA:HB3	33:b:125:PRO:HD2	1.99	0.44
34:c:113:ALA:C	34:c:185:GLY:HA3	2.43	0.44
34:c:189:ALA:O	34:c:196:LEU:N	2.42	0.44
36:e:15:ARG:HH21	56:x:22:U:H1'	1.82	0.44
38:g:16:LEU:HD11	40:i:45:ALA:N	2.32	0.44
38:g:73:MET:SD	38:g:90:GLU:HG3	2.57	0.44
40:i:50:LEU:H	40:i:81:ILE:HD11	1.83	0.44
41:j:26:ALA:O	41:j:29:ARG:HB2	2.18	0.44
43:l:32:PHE:CB	43:l:84:LEU:HD11	2.47	0.44
43:l:79:GLU:HG2	43:l:80:HIS:CD2	2.52	0.44
43:l:117:ARG:NE	43:l:124:LYS:HA	2.32	0.44
45:n:7:ILE:HA	45:n:23:ARG:NE	2.33	0.44
53:y:33:U:H2'	53:y:35:A:OP2	2.17	0.44
55:z:10:G:C5	55:z:44:G:N2	2.86	0.44
55:z:28:G:H2'	55:z:29:G:H8	1.81	0.44
1:A:142(A):A:H5''	1:A:142(B):C:OP2	2.17	0.44
1:A:197:A:O4'	1:A:2068:U:N3	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:275:G:H2'	1:A:276:A:N9	2.33	0.44
1:A:537:C:H2'	1:A:538:G:O4'	2.18	0.44
1:A:758:C:H2'	1:A:759:G:H8	1.81	0.44
1:A:784:A:HO2'	1:A:785:G:P	2.40	0.44
1:A:1031:G:H2'	1:A:1032:A:C8	2.53	0.44
1:A:1275:A:N1	1:A:1295:C:O2'	2.49	0.44
1:A:1311:G:O2'	19:X:63:LYS:NZ	2.51	0.44
1:A:1415:U:H5''	1:A:1416:G:OP1	2.17	0.44
1:A:1441:G:H2'	1:A:1442:G:H8	1.83	0.44
1:A:1593:G:H2'	1:A:1594:G:C8	2.52	0.44
1:A:2020:A:P	16:U:27:LEU:HD12	2.57	0.44
1:A:2157:G:H5''	1:A:2158:A:H5'	2.00	0.44
1:A:2458:G:HO2'	1:A:2490:G:H1	1.64	0.44
1:A:2587:A:N6	1:A:2608:G:H1'	2.32	0.44
1:A:2659:G:H2'	1:A:2661:G:OP2	2.18	0.44
1:A:2880:C:O2'	13:R:90:ARG:HD3	2.17	0.44
2:B:14:U:O4'	2:B:107:G:N2	2.50	0.44
3:D:109:ASP:OD1	3:D:110:GLY:N	2.51	0.44
3:D:162:SER:HB3	3:D:195:ALA:CB	2.47	0.44
4:E:45:THR:O	4:E:83:ASP:N	2.40	0.44
4:E:104:VAL:HG11	4:E:188:VAL:HG13	1.99	0.44
5:F:202:PHE:CE2	5:F:206:ILE:HD13	2.53	0.44
6:G:93:THR:HG21	6:G:95:ARG:NH2	2.33	0.44
7:H:14:GLY:O	7:H:29:PRO:HD3	2.18	0.44
7:H:41:MET:CE	7:H:61:HIS:HA	2.48	0.44
7:H:89:ILE:HB	7:H:129:THR:O	2.17	0.44
7:H:91:GLY:HA2	7:H:160:LYS:HG3	1.99	0.44
7:H:152:ARG:HB3	7:H:162:ILE:HG13	2.00	0.44
14:S:26:LEU:O	14:S:88:ASP:HB3	2.18	0.44
15:T:27:THR:O	15:T:89:VAL:HG22	2.18	0.44
20:Y:11:ASP:O	20:Y:27:VAL:N	2.48	0.44
21:Z:91:LEU:HD21	21:Z:130:PRO:O	2.18	0.44
21:Z:110:GLY:HA3	21:Z:145:GLU:HA	1.98	0.44
23:1:76:ARG:NH2	23:1:97:LEU:HB3	2.33	0.44
27:5:58:LEU:HD23	27:5:59:GLU:C	2.42	0.44
28:6:10:LEU:CG	28:6:54:ILE:HA	2.42	0.44
32:a:64:G:P	32:a:70:G:H3'	2.58	0.44
32:a:414:A:P	32:a:428:G:H22	2.41	0.44
32:a:522:C:O4'	32:a:536:C:H4'	2.17	0.44
32:a:744:C:O2'	32:a:745:C:H5'	2.18	0.44
32:a:921:U:H2'	32:a:922:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1142:G:H3'	32:a:1143:G:H8	1.83	0.44
32:a:1238:A:N7	32:a:1303:C:H1'	2.33	0.44
32:a:1256:A:H5'	32:a:1258:G:C1'	2.48	0.44
32:a:1288:A:H2'	32:a:1289:A:H8	1.82	0.44
32:a:1295:G:H2'	32:a:1296:C:C6	2.53	0.44
32:a:1316:G:N2	32:a:1318:A:H3'	2.33	0.44
32:a:1452:C:P	32:a:1452:C:H3'	2.57	0.44
33:b:20:GLU:HG3	33:b:190:THR:H	1.81	0.44
34:c:180:ALA:O	34:c:182:ILE:HG13	2.17	0.44
37:f:10:LEU:HD21	37:f:61:LEU:HD13	2.00	0.44
38:g:50:ILE:HD11	38:g:58:PRO:CB	2.38	0.44
42:k:109:VAL:HA	49:r:85:LEU:O	2.17	0.44
48:q:56:VAL:HG12	48:q:77:VAL:CB	2.42	0.44
54:C:132:GLY:HA2	54:C:137:LEU:HB2	2.00	0.44
54:C:189:ILE:O	54:C:193:ILE:HD12	2.18	0.44
1:A:9:U:C2'	1:A:2629:A:H61	2.22	0.44
1:A:54:G:H2'	1:A:55:G:O4'	2.18	0.44
1:A:121:G:C5'	1:A:149:A:H5'	2.48	0.44
1:A:196:A:C2	11:P:51:PHE:HZ	2.36	0.44
1:A:202:U:O2'	1:A:203:C:H5'	2.18	0.44
1:A:272(T):C:H2'	1:A:272(U):G:C8	2.53	0.44
1:A:301:G:H5'	1:A:334:C:C2'	2.39	0.44
1:A:348:G:O2'	1:A:349:G:H5'	2.17	0.44
1:A:389:G:C6	11:P:70:GLN:HG3	2.53	0.44
1:A:438:G:H2'	1:A:440:G:H8	1.82	0.44
1:A:558:G:H2'	1:A:559:G:H8	1.83	0.44
1:A:596:G:H2'	1:A:597:U:O4'	2.17	0.44
1:A:923:C:H2'	1:A:924:C:H6	1.82	0.44
1:A:1252:G:N1	16:U:37:GLU:OE2	2.51	0.44
1:A:1343:G:H2'	1:A:1343:G:N3	2.33	0.44
1:A:1359:A:OP2	1:A:1371:G:N1	2.47	0.44
1:A:1517:G:H2'	1:A:1518:U:O4'	2.18	0.44
1:A:1599:C:H2'	1:A:1600:C:C6	2.52	0.44
1:A:1664:A:H3'	1:A:1665:A:H8	1.83	0.44
1:A:1879:C:H2'	1:A:1880:C:H6	1.82	0.44
1:A:2130:U:H2'	1:A:2158:A:C2	2.52	0.44
1:A:2153:G:H2'	1:A:2154:G:C8	2.53	0.44
1:A:2452:C:O2'	1:A:2453:A:H5'	2.18	0.44
1:A:2465:C:C2'	1:A:2466:C:H5'	2.48	0.44
1:A:2538:C:H2'	1:A:2539:C:H6	1.83	0.44
1:A:2698:U:H2'	1:A:2699:C:H6	1.79	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2872:G:O2'	1:A:2873:A:O4'	2.18	0.44
2:B:104:U:C2'	2:B:105:A:H5'	2.47	0.44
3:D:57:GLY:N	3:D:216:GLY:HA2	2.32	0.44
5:F:177:ALA:HB1	5:F:178:PRO:HD2	2.00	0.44
13:R:70:LEU:HD13	13:R:75:LEU:HD12	1.99	0.44
13:R:74:LYS:O	13:R:77:ARG:HB2	2.18	0.44
14:S:58:LEU:HD13	14:S:68:GLN:HB2	2.00	0.44
15:T:41:ARG:NH2	32:a:346:G:OP1	2.51	0.44
16:U:104:GLN:O	16:U:107:ALA:HB3	2.17	0.44
21:Z:29:TYR:N	21:Z:90:VAL:HG23	2.32	0.44
23:1:12:PRO:HB2	23:1:41:ARG:NH2	2.33	0.44
25:3:7:LYS:HG2	25:3:9:VAL:HG13	1.99	0.44
28:6:16:CYS:HB2	28:6:18:ARG:NH2	2.30	0.44
28:6:38:LYS:HB2	28:6:49:HIS:CE1	2.52	0.44
32:a:72:C:HO2'	32:a:200:G:P	2.40	0.44
32:a:128:G:O2'	32:a:129(A):U:H5'	2.17	0.44
32:a:139:G:H2'	32:a:140:A:H8	1.83	0.44
32:a:189(G):U:O4	48:q:62:SER:HA	2.18	0.44
32:a:198:G:N2	32:a:220:G:H1'	2.32	0.44
32:a:248:C:H2'	32:a:249:U:O4'	2.18	0.44
32:a:270:A:O2'	32:a:271:C:H5'	2.17	0.44
32:a:338:A:H2'	32:a:339:C:O4'	2.18	0.44
32:a:594:G:H3'	32:a:595:G:C8	2.53	0.44
32:a:753:A:H5''	46:o:69:TYR:CE1	2.53	0.44
32:a:1205:U:H4'	34:c:195:VAL:CG2	2.48	0.44
32:a:1296:C:H4'	32:a:1302:U:C5	2.51	0.44
33:b:96:ARG:HB3	33:b:148:TYR:CE1	2.53	0.44
37:f:22:GLU:OE1	37:f:25:ILE:HD12	2.18	0.44
38:g:103:TRP:CG	38:g:137:LYS:HG2	2.53	0.44
44:m:22:ILE:CG2	44:m:25:ILE:HD12	2.48	0.44
46:o:21:ASP:OD2	46:o:24:SER:OG	2.24	0.44
49:r:45:SER:CB	49:r:49:LYS:HB2	2.48	0.44
53:y:57:A:H2'	53:y:58:A:H5'	2.00	0.44
55:z:19:G:O4'	55:z:57:G:N1	2.51	0.44
1:A:128:C:H2'	1:A:129:C:C6	2.53	0.44
1:A:198:C:C2'	1:A:199:A:H5'	2.48	0.44
1:A:272(F):C:H2'	1:A:272(G):C:H6	1.78	0.44
1:A:329:G:P	20:Y:71:LYS:HD2	2.57	0.44
1:A:443:A:C6	5:F:45:ARG:HD2	2.53	0.44
1:A:660:G:O2'	5:F:38:ARG:NH1	2.51	0.44
1:A:863:A:H2'	1:A:864:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:969:U:OP1	25:3:17:LYS:HB3	2.18	0.44
1:A:1042:G:O2'	1:A:1043:C:H5'	2.18	0.44
1:A:1093:G:H1'	1:A:1098:A:N7	2.33	0.44
1:A:1106:G:H2'	1:A:1107:G:O4'	2.18	0.44
1:A:1120:G:O2'	1:A:1121:C:H5'	2.17	0.44
1:A:1400:G:H2'	1:A:1401:G:C8	2.53	0.44
1:A:1718:G:H2'	1:A:1719:G:C8	2.53	0.44
1:A:1804:C:O2'	1:A:1805:U:H5'	2.17	0.44
1:A:1914:C:H3'	1:A:1914:C:OP1	2.18	0.44
1:A:2052:G:O2'	4:E:148:GLY:HA2	2.18	0.44
1:A:2133:G:O2'	1:A:2134:A:O5'	2.34	0.44
1:A:2611:U:C4	27:5:3:LYS:HG2	2.53	0.44
1:A:2764:A:H2'	1:A:2766:G:C8	2.53	0.44
1:A:2810:A:H5''	4:E:61:ARG:HD3	2.00	0.44
1:A:2819:G:O2'	1:A:2820:A:H5'	2.18	0.44
2:B:10:C:O2'	2:B:11:C:H5'	2.17	0.44
2:B:55:U:O3'	6:G:27:ASN:ND2	2.51	0.44
8:I:1:MET:N	8:I:20:ASP:OD1	2.23	0.44
8:I:6:LEU:HD12	8:I:34:GLY:O	2.17	0.44
10:O:15:GLY:HA2	10:O:47:ILE:CG1	2.48	0.44
10:O:34:THR:O	10:O:62:VAL:HB	2.18	0.44
14:S:5:THR:OG1	14:S:8:GLU:HG3	2.17	0.44
14:S:66:ALA:HA	14:S:69:VAL:HG12	2.00	0.44
15:T:99:LEU:O	15:T:102:ILE:HG12	2.18	0.44
17:V:33:VAL:HG23	17:V:35:LEU:CD1	2.45	0.44
17:V:35:LEU:HB2	17:V:57:VAL:CG2	2.48	0.44
20:Y:99:CYS:SG	20:Y:100:ALA:N	2.90	0.44
21:Z:72:ARG:NH1	21:Z:97:GLU:O	2.48	0.44
21:Z:73:GLN:HB3	21:Z:87:ASP:HB2	1.99	0.44
22:O:52:GLY:HA3	22:O:62:LEU:HD21	2.00	0.44
27:5:50:GLY:HA3	27:5:60:VAL:HG23	1.99	0.44
30:8:63:PRO:HG2	30:8:64:TYR:CD2	2.53	0.44
32:a:110:C:O2'	47:p:25:ARG:HB2	2.18	0.44
32:a:408:A:H5''	35:d:22:LYS:O	2.18	0.44
32:a:607:A:C2'	32:a:608:A:H5'	2.48	0.44
32:a:632:A:H2'	32:a:633:G:O4'	2.18	0.44
32:a:718:G:H5'	42:k:117:ASN:HD22	1.83	0.44
32:a:855:G:OP2	32:a:871:U:N3	2.23	0.44
32:a:859:A:OP2	32:a:869:G:N1	2.28	0.44
32:a:865:A:H2'	32:a:866:C:O4'	2.18	0.44
32:a:1024:G:H2'	32:a:1025:U:H5''	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1080:A:H4'	36:e:16:THR:CG2	2.46	0.44
32:a:1196:U:H3'	32:a:1197:G:C5'	2.47	0.44
32:a:1249:C:N4	32:a:1287:A:H5''	2.32	0.44
32:a:1516:G:N1	32:a:1519:MA6:OP2	2.51	0.44
32:a:1517:G:H2'	32:a:1518:MA6:H8	1.99	0.44
33:b:192:SER:O	33:b:194:PRO:HD3	2.18	0.44
36:e:82:VAL:HG21	36:e:138:ALA:HA	2.00	0.44
37:f:12:PRO:HG3	37:f:57:GLN:O	2.18	0.44
37:f:40:VAL:HG23	37:f:63:TYR:CD1	2.52	0.44
42:k:79:SER:C	42:k:106:LYS:HE2	2.43	0.44
45:n:10:ALA:HB2	45:n:21:TYR:CZ	2.53	0.44
46:o:80:ALA:HA	46:o:83:GLU:OE2	2.18	0.44
49:r:76:LEU:CD2	49:r:78:LEU:HD12	2.48	0.44
50:s:48:THR:HG1	50:s:61:TYR:HD1	1.65	0.44
53:y:8:U:O4	53:y:13:C:H3'	2.18	0.44
55:z:7:A:H3'	55:z:8:U:C5'	2.48	0.44
55:z:49:C:H2'	55:z:50:U:C6	2.52	0.44
56:x:28:G:N2	56:x:51:C:H42	2.16	0.44
1:A:56:A:O2'	1:A:57:C:H5'	2.18	0.43
1:A:224:G:O6	1:A:419:C:O2'	2.34	0.43
1:A:227:A:H5'	1:A:228:A:C2	2.53	0.43
1:A:239:U:O2'	1:A:622:G:H4'	2.18	0.43
1:A:363(E):G:H2'	1:A:363(F):U:C6	2.53	0.43
1:A:1326:U:H4'	1:A:2011:U:O4'	2.18	0.43
1:A:1331:A:H2'	1:A:1333:C:H5	1.82	0.43
1:A:1446:C:H2'	1:A:1447:G:H8	1.78	0.43
1:A:1759:A:O2'	1:A:1760:A:H5'	2.18	0.43
1:A:1858:G:N2	1:A:1883:G:H2'	2.32	0.43
1:A:1960:A:O2'	32:a:1484:C:O2'	2.16	0.43
1:A:2000:G:C2'	1:A:2001:A:H5'	2.48	0.43
1:A:2059:A:O3'	5:F:69:HIS:HA	2.18	0.43
1:A:2360:A:C2	1:A:2361:A:H1'	2.53	0.43
1:A:2361:A:OP1	30:8:26:LYS:HD2	2.18	0.43
1:A:2651:C:H2'	1:A:2652:C:H6	1.80	0.43
1:A:2655:G:HO2'	1:A:2664:G:H1	1.66	0.43
1:A:2708:G:H2'	1:A:2709:G:H8	1.82	0.43
1:A:2812:G:H2'	1:A:2813:A:C8	2.53	0.43
3:D:85:ASP:HB2	3:D:92:ILE:HG23	2.00	0.43
3:D:166:GLN:N	3:D:174:ILE:O	2.51	0.43
4:E:11:MET:CG	4:E:24:THR:HG22	2.27	0.43
4:E:30:PRO:HD3	4:E:180:ASN:ND2	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:122:LYS:HB3	5:F:191:ARG:HA	2.00	0.43
6:G:119:GLY:C	6:G:181:ARG:HB2	2.43	0.43
7:H:77:LYS:HA	7:H:80:SER:OG	2.18	0.43
9:N:56:ASN:HB3	9:N:59:LYS:HB2	1.99	0.43
14:S:41:ASP:O	14:S:45:GLY:N	2.51	0.43
21:Z:54:HIS:CG	21:Z:101:PRO:HG3	2.52	0.43
21:Z:80:ARG:CD	21:Z:82:ARG:HD3	2.48	0.43
21:Z:80:ARG:HD3	21:Z:82:ARG:HD3	1.98	0.43
28:6:9:LEU:HD11	28:6:23:THR:CG2	2.46	0.43
32:a:236:G:H5''	48:q:42:TYR:OH	2.18	0.43
32:a:279:A:N7	48:q:98:LEU:HD23	2.33	0.43
32:a:280:C:O2	48:q:38:ARG:HA	2.17	0.43
32:a:297:G:H2'	32:a:299:G:OP2	2.18	0.43
32:a:611:A:N6	32:a:629:G:N1	2.37	0.43
32:a:719:C:H2'	49:r:50:ILE:HB	2.00	0.43
32:a:875:C:C3'	32:a:876:G:H5''	2.48	0.43
32:a:890:G:N2	32:a:891:U:O4	2.47	0.43
32:a:956:U:O2	32:a:956:U:H2'	2.18	0.43
32:a:1298:C:C5	38:g:114:ARG:HD3	2.53	0.43
32:a:1333:A:C2	32:a:1334:G:H1'	2.53	0.43
32:a:1376:U:H2'	32:a:1377:A:H8	1.80	0.43
34:c:177:THR:HG22	34:c:180:ALA:H	1.82	0.43
36:e:15:ARG:HD2	36:e:26:PHE:CG	2.53	0.43
37:f:33:TYR:HD1	37:f:71:ARG:HD3	1.83	0.43
39:h:39:LEU:HD22	39:h:44:PHE:CB	2.48	0.43
40:i:118:LYS:N	40:i:121:ARG:HB3	2.29	0.43
42:k:22:HIS:HB3	42:k:29:ILE:HB	2.00	0.43
44:m:4:ILE:HD11	44:m:60:VAL:CG1	2.42	0.43
44:m:15:VAL:CG1	44:m:48:LEU:HD21	2.48	0.43
44:m:60:VAL:HA	44:m:63:THR:OG1	2.18	0.43
46:o:50:HIS:O	46:o:53:HIS:N	2.51	0.43
46:o:82:ILE:CB	46:o:88:ARG:HH22	2.28	0.43
53:y:15:G:C2	53:y:21:A:H1'	2.53	0.43
54:C:173:ALA:HB3	54:C:192:PHE:CE1	2.40	0.43
1:A:118:A:OP2	1:A:119:A:H5''	2.18	0.43
1:A:230:U:H2'	1:A:231:C:C6	2.52	0.43
1:A:531:C:O2'	1:A:563:G:H5''	2.18	0.43
1:A:565:C:H2'	1:A:566:U:O4'	2.18	0.43
1:A:593:G:H2'	1:A:594:U:H6	1.83	0.43
1:A:633:A:H2'	1:A:634:C:H5'	2.00	0.43
1:A:656:G:H2'	1:A:657:U:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:685:A:C2	1:A:787:U:H1'	2.53	0.43
1:A:685:A:N1	1:A:787:U:H1'	2.33	0.43
1:A:1264:G:N1	1:A:2014:A:OP2	2.51	0.43
1:A:1265:A:N6	1:A:2013:A:H5''	2.33	0.43
1:A:2176:A:O4'	54:C:215:THR:HG21	2.18	0.43
1:A:2327:A:O2'	1:A:2328:A:H5'	2.18	0.43
1:A:2390:U:OP2	30:8:35:GLN:NE2	2.43	0.43
1:A:2626:C:O2'	1:A:2627:G:H5'	2.17	0.43
1:A:2650:U:H2'	1:A:2651:C:H6	1.83	0.43
1:A:2662:A:H3'	1:A:2663:G:C8	2.53	0.43
1:A:2671:A:H2'	1:A:2672:G:H8	1.82	0.43
1:A:2689:U:H4'	1:A:2690:C:C5'	2.45	0.43
1:A:2709:G:O2'	1:A:2710:C:H5'	2.17	0.43
1:A:2864:G:O2'	1:A:2865:U:H5'	2.18	0.43
2:B:40:U:H2'	26:4:2:LYS:CE	2.39	0.43
2:B:73:A:C2'	2:B:74:U:H5'	2.48	0.43
3:D:156:ALA:HA	3:D:178:PRO:HG2	1.99	0.43
5:F:34:TRP:N	11:P:6:LEU:HD22	2.33	0.43
5:F:64:ILE:HG13	5:F:65:TRP:N	2.33	0.43
6:G:19:LEU:HG	6:G:175:LEU:HD22	2.00	0.43
6:G:120:LEU:HD12	6:G:178:PHE:HB3	2.01	0.43
7:H:126:PRO:HD2	7:H:130:ARG:O	2.18	0.43
8:I:99:GLU:HA	8:I:102:SER:OG	2.17	0.43
12:Q:16:ARG:HG2	12:Q:18:LYS:HG2	2.00	0.43
15:T:49:VAL:HG13	15:T:49:VAL:O	2.19	0.43
18:W:68:ARG:HD3	18:W:110:LYS:C	2.43	0.43
21:Z:95:PRO:CG	21:Z:130:PRO:HD3	2.48	0.43
29:7:24:THR:O	29:7:28:ARG:HG3	2.19	0.43
32:a:24:U:H2'	32:a:25:C:H6	1.83	0.43
32:a:113:G:O4'	32:a:354:G:H4'	2.18	0.43
32:a:151:A:N7	32:a:169:C:N4	2.66	0.43
32:a:227:G:H2'	32:a:228:A:O4'	2.18	0.43
32:a:382:A:H2'	32:a:383:A:O4'	2.18	0.43
32:a:432:A:H3'	32:a:433:C:H6	1.82	0.43
32:a:642:A:C8	39:h:115:SER:HA	2.52	0.43
32:a:709:G:O2'	32:a:710:G:H5'	2.17	0.43
32:a:750:G:N3	46:o:23:GLY:HA3	2.33	0.43
32:a:986:A:H2'	32:a:987:G:H8	1.82	0.43
32:a:1005:A:N6	32:a:1024:G:HO2'	2.15	0.43
32:a:1042:G:C2	32:a:1043:C:H1'	2.53	0.43
32:a:1070:U:H2'	32:a:1071:C:H6	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:1207:2MG:O2'	32:a:1208:C:H5'	2.18	0.43
33:b:17:PHE:HE2	33:b:41:ILE:HD12	1.83	0.43
33:b:73:THR:HA	33:b:94:ASN:O	2.18	0.43
33:b:87:ARG:CZ	33:b:233:SER:HB3	2.48	0.43
33:b:155:LEU:HD13	33:b:157:ARG:H	1.82	0.43
34:c:58:GLU:HB3	41:j:92:THR:CG2	2.48	0.43
34:c:135:LYS:HZ1	36:e:50:GLU:HG2	1.82	0.43
35:d:30:LYS:HG2	35:d:35:ARG:NH2	2.32	0.43
35:d:107:ARG:HG3	35:d:174:LEU:CD1	2.49	0.43
36:e:24:ARG:NH1	56:x:21:G:O6	2.51	0.43
37:f:19:LEU:O	37:f:23:LYS:HG3	2.19	0.43
37:f:33:TYR:CE2	37:f:78:GLU:HG3	2.50	0.43
38:g:10:ARG:O	38:g:12:LEU:HD12	2.18	0.43
39:h:100:ILE:CG2	39:h:121:ASP:HB2	2.48	0.43
42:k:20:TYR:HA	42:k:83:ILE:O	2.19	0.43
42:k:108:ILE:HG22	49:r:87:ARG:HB2	2.00	0.43
43:l:112:ASP:HA	43:l:114:LYS:NZ	2.33	0.43
44:m:59:TYR:CE2	44:m:63:THR:HG21	2.53	0.43
45:n:40:CYS:SG	45:n:42:ILE:N	2.90	0.43
48:q:41:LYS:HD3	48:q:88:TYR:CZ	2.53	0.43
49:r:47:THR:OG1	49:r:83:GLU:O	2.35	0.43
53:y:10:G:N2	53:y:26:G:H1'	2.32	0.43
54:C:51:PRO:HG3	54:C:166:ASP:O	2.18	0.43
56:x:42:G:O2'	56:x:43:C:H5'	2.18	0.43
1:A:16:G:H2'	1:A:17:G:H8	1.83	0.43
1:A:24:G:O2'	1:A:25:U:H5'	2.17	0.43
1:A:244:A:H2'	1:A:245:G:O4'	2.18	0.43
1:A:514:A:H2'	1:A:515:A:C8	2.53	0.43
1:A:652(B):A:H2'	1:A:652(B):A:N3	2.33	0.43
1:A:786:C:H4'	1:A:1780:A:N7	2.33	0.43
1:A:799:G:H3'	1:A:800:A:H2'	1.99	0.43
1:A:858:U:H1'	1:A:2268:A:H2'	2.00	0.43
1:A:922:U:O2'	1:A:923:C:H5'	2.18	0.43
1:A:968:G:O2'	1:A:969:U:H5'	2.19	0.43
1:A:1025:G:C4	1:A:1135:C:H1'	2.53	0.43
1:A:1265:A:N6	1:A:2013:A:H3'	2.33	0.43
1:A:1310:G:O4'	1:A:1611:C:H4'	2.18	0.43
1:A:1503:U:H2'	1:A:1504:C:C6	2.53	0.43
1:A:1509(B):A:H3'	1:A:1509(C):A:C8	2.38	0.43
1:A:1655:A:H1'	4:E:113:PHE:HE2	1.83	0.43
1:A:1665:A:H2'	1:A:1666:G:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2129:C:C5'	54:C:6:ARG:H	2.28	0.43
1:A:2776:A:H4'	1:A:2777:G:H5''	1.99	0.43
1:A:2865:U:H2'	1:A:2866:U:C5	2.53	0.43
4:E:2:LYS:CG	4:E:200:GLU:HB2	2.48	0.43
5:F:37:VAL:HG13	5:F:184:TYR:HD1	1.83	0.43
6:G:78:SER:HB3	53:y:56:C:H2'	2.00	0.43
9:N:49:GLY:O	9:N:119:ARG:NH1	2.51	0.43
11:P:17:LYS:HE3	11:P:27:HIS:CE1	2.54	0.43
11:P:114:ILE:HB	11:P:130:PHE:HD1	1.82	0.43
12:Q:55:VAL:CG2	21:Z:183:LEU:HD21	2.47	0.43
12:Q:78:PRO:O	12:Q:81:VAL:HG22	2.18	0.43
14:S:11:LYS:CE	14:S:91:PRO:HG3	2.48	0.43
18:W:79:GLY:N	18:W:100:THR:O	2.42	0.43
21:Z:171:ILE:HD12	21:Z:172:ALA:N	2.32	0.43
32:a:185:A:H2'	32:a:186:C:H6	1.80	0.43
32:a:199:G:H2'	32:a:199:G:N3	2.33	0.43
32:a:376:G:C5'	47:p:5:ARG:HB2	2.38	0.43
32:a:737:A:H5'	37:f:90:VAL:O	2.18	0.43
32:a:905:U:C2'	32:a:906:G:H5'	2.48	0.43
32:a:1142:G:C2	32:a:1143:G:H1'	2.54	0.43
32:a:1246:C:O2'	32:a:1247:U:H5'	2.19	0.43
32:a:1305:G:H1'	32:a:1332:A:N6	2.34	0.43
32:a:1354:C:H2'	32:a:1355:G:H8	1.82	0.43
32:a:1456:G:O2'	51:t:39:LYS:HE3	2.19	0.43
32:a:1473:A:H2'	32:a:1474:G:H8	1.79	0.43
32:a:1488:G:O2'	32:a:1489:G:H5'	2.17	0.43
32:a:1530:G:H2'	32:a:1531:A:O4'	2.18	0.43
34:c:177:THR:HG22	34:c:180:ALA:N	2.32	0.43
35:d:158:ILE:O	35:d:162:LEU:HG	2.18	0.43
37:f:99:ALA:HB1	49:r:23:LYS:CD	2.47	0.43
46:o:26:GLU:OE2	46:o:77:ARG:NE	2.51	0.43
47:p:8:ARG:NH2	47:p:15:PRO:HG3	2.28	0.43
49:r:22:VAL:H	49:r:56:THR:HA	1.83	0.43
49:r:53:ARG:NH2	49:r:59:SER:HA	2.33	0.43
49:r:66:LEU:O	49:r:70:ILE:HG13	2.18	0.43
50:s:40:ILE:HD12	50:s:69:HIS:O	2.17	0.43
54:C:76:ALA:O	54:C:94:VAL:HG22	2.17	0.43
55:z:24:G:O2'	55:z:25:C:H5'	2.18	0.43
56:x:10:A:H5'	56:x:11:A:OP2	2.18	0.43
56:x:17:U:C3'	56:x:18:U:H5'	2.47	0.43
1:A:16:G:OP1	27:5:17:ASP:HB3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:107:C:C1'	1:A:294:A:H1'	2.48	0.43
1:A:130:C:H2'	1:A:131:G:C5'	2.48	0.43
1:A:213:A:H2'	1:A:214:G:H5'	1.99	0.43
1:A:214:G:H21	1:A:216:A:H1'	1.82	0.43
1:A:299:A:O2'	1:A:300:A:H5'	2.18	0.43
1:A:494:G:H2'	1:A:495:G:H8	1.82	0.43
1:A:500:G:C2	1:A:502:A:H3'	2.53	0.43
1:A:716:A:OP1	46:o:89:GLY:HA3	2.17	0.43
1:A:857:C:OP2	22:0:77:ARG:NH2	2.52	0.43
1:A:900:A:O2'	1:A:901:A:OP1	2.32	0.43
1:A:1124:C:O2	31:9:36:GLN:NE2	2.52	0.43
1:A:1185:C:H5''	1:A:1186:G:OP1	2.18	0.43
1:A:1213:A:OP2	1:A:1236:G:N2	2.50	0.43
1:A:1229:G:H2'	1:A:1230:C:H5'	2.00	0.43
1:A:1247:A:OP1	5:F:95:ARG:NH1	2.48	0.43
1:A:1269:A:H2'	1:A:1270:C:H6	1.84	0.43
1:A:1360:A:H2'	1:A:1361:G:O4'	2.18	0.43
1:A:1596:A:O2'	1:A:1597:A:H5'	2.18	0.43
1:A:1604:C:H2'	1:A:1605:C:H6	1.83	0.43
1:A:1640:C:O2'	1:A:1641:A:H5'	2.18	0.43
1:A:1812:A:O4'	3:D:45:ASN:ND2	2.52	0.43
1:A:2243:U:H2'	1:A:2244:U:C6	2.53	0.43
1:A:2378:A:H4'	14:S:23:ARG:NH1	2.33	0.43
1:A:2509:G:OP1	1:A:2555:U:H4'	2.18	0.43
1:A:2596:U:C2'	1:A:2597:G:H5'	2.48	0.43
1:A:2600:A:O2'	1:A:2601:C:H5'	2.18	0.43
1:A:2607:G:H2'	1:A:2608:G:O4'	2.17	0.43
1:A:2638:G:H1'	1:A:2778:A:H61	1.84	0.43
1:A:2639:A:H2'	1:A:2640:G:O4'	2.19	0.43
1:A:2768:C:H2'	1:A:2769:C:O4'	2.19	0.43
1:A:2825:C:C2'	1:A:2826:A:H5'	2.49	0.43
1:A:2827:C:H2'	1:A:2828:C:H6	1.83	0.43
1:A:2885:C:O2'	27:5:34:PRO:HG3	2.19	0.43
1:A:2895:U:OP1	1:A:2895:U:H3'	2.18	0.43
5:F:53:THR:HG23	5:F:56:GLU:H	1.83	0.43
7:H:26:VAL:CG1	7:H:76:VAL:HG22	2.40	0.43
10:O:96:THR:O	10:O:117:LEU:HD13	2.19	0.43
13:R:44:LEU:O	13:R:44:LEU:HD13	2.18	0.43
15:T:64:ARG:NH1	15:T:103:ARG:HA	2.19	0.43
15:T:125:ARG:NH1	32:a:1443:G:H5'	2.33	0.43
19:X:53:LYS:HE3	19:X:55:ASN:ND2	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:X:84:ALA:HB3	19:X:87:GLN:CD	2.43	0.43
23:1:50:ARG:HA	23:1:58:ILE:O	2.18	0.43
25:3:36:VAL:O	25:3:37:LEU:HD23	2.17	0.43
26:4:40:HIS:CD2	26:4:41:PRO:HD2	2.53	0.43
32:a:301:G:H4'	32:a:564:C:N4	2.33	0.43
32:a:378:G:H2'	32:a:379:C:H6	1.81	0.43
32:a:450:G:C5'	32:a:451:A:H3'	2.47	0.43
32:a:460:G:O6	32:a:470:C:H4'	2.19	0.43
32:a:488:C:H2'	32:a:489:C:H6	1.83	0.43
32:a:552:U:H1'	43:l:32:PHE:CE1	2.52	0.43
32:a:663:A:H5''	49:r:61:LYS:NZ	2.34	0.43
32:a:751:U:O2'	32:a:752:G:H5'	2.18	0.43
32:a:949:A:N7	44:m:106:ASN:ND2	2.66	0.43
32:a:1114:C:H1'	45:n:60:SER:O	2.18	0.43
32:a:1130:A:O2'	32:a:1131:G:H5'	2.17	0.43
32:a:1305:G:O2'	32:a:1306:A:OP2	2.35	0.43
32:a:1424:C:O2'	32:a:1425:U:H5'	2.18	0.43
32:a:1486:G:H2'	32:a:1487:G:O4'	2.19	0.43
33:b:132:LYS:O	33:b:136:VAL:N	2.51	0.43
33:b:220:ASP:HA	33:b:223:ILE:CG1	2.49	0.43
38:g:50:ILE:HG22	38:g:125:MET:CG	2.48	0.43
38:g:93:PRO:HA	38:g:96:GLN:HB2	2.00	0.43
38:g:103:TRP:CD1	38:g:137:LYS:HG2	2.53	0.43
42:k:86:GLY:O	42:k:91:ARG:NH1	2.43	0.43
44:m:3:ARG:HH22	44:m:45:VAL:CG1	2.31	0.43
44:m:23:TYR:HB3	44:m:67:GLU:CD	2.43	0.43
44:m:65:LYS:O	44:m:70:LEU:HD12	2.19	0.43
48:q:18:THR:HG23	48:q:69:LYS:HE3	1.99	0.43
54:C:149:ILE:O	54:C:153:ILE:HG13	2.19	0.43
54:C:161:ILE:HD13	54:C:174:PRO:O	2.18	0.43
56:x:49:G:O2'	56:x:50:C:H5'	2.18	0.43
1:A:20:C:H2'	1:A:21:A:H8	1.83	0.43
1:A:458:G:OP1	1:A:458:G:H4'	2.17	0.43
1:A:483:A:H5''	20:Y:50:ARG:NE	2.33	0.43
1:A:587:C:C3'	1:A:588:U:H5'	2.46	0.43
1:A:622:G:HO2'	1:A:623:G:H5'	1.83	0.43
1:A:684:G:OP1	29:7:16:HIS:ND1	2.51	0.43
1:A:707:G:N2	1:A:724:U:O2	2.33	0.43
1:A:813:U:OP2	11:P:24:GLY:N	2.48	0.43
1:A:814:C:HO2'	1:A:1225:G:H21	1.59	0.43
1:A:1389:G:O2'	1:A:1390:U:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1761:C:C3'	1:A:1762:A:H5''	2.48	0.43
1:A:1946:U:H2'	1:A:1947:C:C6	2.53	0.43
1:A:2117:A:O2'	1:A:2148:G:OP1	2.36	0.43
1:A:2663:G:H3'	1:A:2664:G:H8	1.83	0.43
1:A:2792:G:N7	1:A:2893:G:O2'	2.31	0.43
2:B:116:G:C2'	2:B:117:G:H5'	2.49	0.43
3:D:16:MET:HG3	3:D:206:LEU:O	2.19	0.43
3:D:64:ILE:O	3:D:65:ILE:HD13	2.18	0.43
4:E:53:PRO:O	4:E:76:ARG:HG3	2.18	0.43
5:F:170:LEU:HB2	5:F:173:VAL:HB	1.99	0.43
8:I:72:LEU:HD21	8:I:107:VAL:HG11	2.01	0.43
9:N:90:MET:CG	9:N:98:VAL:HG22	2.45	0.43
10:O:25:LEU:HG	10:O:40:VAL:HG23	2.01	0.43
12:Q:1:MET:CE	12:Q:45:GLN:HG3	2.46	0.43
15:T:27:THR:HA	15:T:47:GLY:O	2.18	0.43
18:W:74:ALA:HB2	18:W:105:VAL:HA	2.00	0.43
23:1:83:GLU:HA	23:1:85:LEU:H	1.83	0.43
24:2:64:LEU:HD11	24:2:68:ARG:HE	1.83	0.43
32:a:11:G:O2'	32:a:12:U:H5'	2.19	0.43
32:a:52:G:H2'	32:a:53:A:H8	1.84	0.43
32:a:109:A:C8	32:a:326:G:H2'	2.53	0.43
32:a:193:C:H2'	32:a:194:C:C6	2.54	0.43
32:a:196:A:H5''	32:a:197:A:OP1	2.17	0.43
32:a:275:G:H2'	32:a:275:G:N3	2.32	0.43
32:a:406:G:OP1	35:d:5:ILE:HD11	2.18	0.43
32:a:658:G:H5''	46:o:8:LYS:CE	2.49	0.43
32:a:756:C:H2'	32:a:757:U:C6	2.53	0.43
32:a:1057:G:H5'	34:c:155:GLY:CA	2.48	0.43
32:a:1246:C:H2'	32:a:1247:U:H6	1.83	0.43
32:a:1298:C:H1'	32:a:1299:A:N1	2.33	0.43
33:b:91:PRO:HG3	33:b:155:LEU:HD23	2.00	0.43
33:b:178:ARG:HB3	39:h:72:PRO:HA	1.99	0.43
35:d:50:ARG:NH1	36:e:10:MET:HB2	2.30	0.43
35:d:112:VAL:HG13	35:d:161:ASN:HD21	1.83	0.43
36:e:71:LEU:HD11	36:e:115:VAL:CG2	2.41	0.43
36:e:79:GLU:OE2	39:h:104:ARG:HA	2.18	0.43
36:e:105:VAL:HB	36:e:106:PRO:HD3	2.01	0.43
41:j:8:LEU:N	41:j:70:ARG:O	2.46	0.43
42:k:111:ASP:OD2	49:r:84:LYS:HE2	2.19	0.43
44:m:44:ARG:O	44:m:48:LEU:HG	2.18	0.43
48:q:18:THR:OG1	48:q:69:LYS:NZ	2.25	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:r:22:VAL:CG2	49:r:56:THR:HG22	2.49	0.43
51:t:56:MET:HG3	51:t:84:LEU:CD2	2.46	0.43
54:C:165:ASN:HA	54:C:170:ALA:O	2.18	0.43
55:z:21:A:H2'	55:z:46:G:O6	2.18	0.43
55:z:64:A:C2'	55:z:65:G:H5'	2.49	0.43
1:A:21:A:H2'	1:A:22:C:O4'	2.19	0.43
1:A:271:A:O2'	1:A:272(A):A:O4'	2.37	0.43
1:A:272(P):C:H5''	8:I:45:LYS:HD2	1.99	0.43
1:A:313:C:H2'	1:A:314:A:C8	2.53	0.43
1:A:458:G:H22	1:A:469:G:H2'	1.83	0.43
1:A:515:A:H1'	1:A:581:C:C1'	2.44	0.43
1:A:614(C):G:C2'	1:A:614(D):A:H5''	2.48	0.43
1:A:635:C:O2'	1:A:639:U:OP1	2.35	0.43
1:A:840:C:H2'	1:A:841:A:H8	1.83	0.43
1:A:956:G:P	12:Q:87:LYS:HG3	2.59	0.43
1:A:1273:U:O2	1:A:2002:G:O2'	2.32	0.43
1:A:1405:U:H2'	1:A:1406:U:H6	1.82	0.43
1:A:1500:G:N2	3:D:100:GLY:HA3	2.33	0.43
1:A:1588:C:H2'	1:A:1589:C:H6	1.84	0.43
1:A:1958:C:H2'	1:A:1959:G:C8	2.53	0.43
1:A:2134:A:H1'	1:A:2158:A:O4'	2.19	0.43
1:A:2149:G:C2'	1:A:2150:U:H5'	2.48	0.43
1:A:2312:U:H2'	1:A:2313:C:H5'	2.00	0.43
1:A:2366:A:C2'	1:A:2367:G:H5'	2.49	0.43
1:A:2560:C:C2'	1:A:2561:A:H5'	2.49	0.43
1:A:2699:C:H2'	1:A:2700:C:C6	2.54	0.43
1:A:2699:C:H2'	1:A:2700:C:H6	1.83	0.43
1:A:2714:G:H2'	1:A:2715:C:H6	1.83	0.43
1:A:2808:U:C2	1:A:2892:A:C8	2.84	0.43
3:D:268:ARG:O	3:D:268:ARG:HG3	2.17	0.43
4:E:47:VAL:HG23	4:E:49:LEU:CD1	2.49	0.43
7:H:35:VAL:HG12	7:H:37:VAL:CG2	2.48	0.43
8:I:8:PRO:HB3	8:I:14:ASP:CG	2.43	0.43
11:P:122:PRO:HA	11:P:143:GLY:N	2.33	0.43
12:Q:38:GLU:OE2	12:Q:127:ILE:HA	2.19	0.43
13:R:96:ARG:HD2	13:R:115:GLU:OE2	2.19	0.43
17:V:60:GLU:HB3	17:V:97:LYS:HE2	2.01	0.43
21:Z:69:THR:HG22	21:Z:90:VAL:HG13	2.01	0.43
21:Z:95:PRO:CG	21:Z:129:SER:HA	2.48	0.43
26:4:48:ARG:HD3	26:4:51:ASP:O	2.18	0.43
29:7:34:ARG:HD2	29:7:42:LEU:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:22:G:O2'	32:a:23:C:H5'	2.19	0.43
32:a:402:G:OP1	35:d:74:GLN:HG2	2.19	0.43
32:a:660:G:H2'	32:a:661:G:O4'	2.18	0.43
32:a:756:C:O2'	32:a:757:U:H5'	2.19	0.43
32:a:822:C:O2'	32:a:823:G:H5'	2.18	0.43
32:a:962:C:H2'	32:a:963:G:O4'	2.19	0.43
32:a:1102:A:H2'	32:a:1103:C:C6	2.53	0.43
32:a:1144:G:N2	32:a:1146:A:H62	2.15	0.43
32:a:1320:C:O2'	32:a:1321:C:H5'	2.18	0.43
32:a:1329:A:C2'	32:a:1330:U:H5'	2.49	0.43
32:a:1465:C:H2'	32:a:1466:C:O4'	2.19	0.43
32:a:1492:A:H1'	32:a:1493:A:C4	2.53	0.43
32:a:1511:G:H2'	32:a:1512:U:C6	2.53	0.43
32:a:1515:C:O2'	32:a:1516:G:H5'	2.18	0.43
33:b:167:PRO:HG2	33:b:192:SER:HB3	2.01	0.43
33:b:197:VAL:HB	33:b:200:ILE:HG13	2.00	0.43
33:b:223:ILE:HD12	33:b:224:GLN:N	2.34	0.43
37:f:61:LEU:HD23	37:f:63:TYR:CZ	2.54	0.43
40:i:117:HIS:N	40:i:121:ARG:O	2.46	0.43
44:m:39:ILE:HD12	44:m:56:LEU:HD13	2.00	0.43
53:y:18:G:H21	53:y:58:A:C5'	2.31	0.43
54:C:14:VAL:CG1	54:C:32:LEU:HD11	2.48	0.43
54:C:22:ILE:HG23	54:C:189:ILE:HG21	2.00	0.43
54:C:118:ASP:OD1	54:C:119:VAL:N	2.51	0.43
1:A:171:G:O2'	1:A:172:C:H5'	2.19	0.43
1:A:204:A:O3'	1:A:205:G:H4'	2.19	0.43
1:A:250:G:O2'	1:A:251:A:H5'	2.18	0.43
1:A:254:G:H4'	1:A:384:U:H5'	2.01	0.43
1:A:365:C:H2'	1:A:366:C:O4'	2.17	0.43
1:A:572:A:H2'	1:A:573:G:O4'	2.18	0.43
1:A:614(D):A:C4	5:F:180:GLY:HA2	2.54	0.43
1:A:624:C:O2'	1:A:625:G:H5'	2.19	0.43
1:A:848:G:O2'	1:A:934:G:H4'	2.19	0.43
1:A:868:U:H2'	1:A:869:G:O4'	2.19	0.43
1:A:878:A:H3'	1:A:879:G:H8	1.82	0.43
1:A:1001:A:H3'	1:A:1002:G:H8	1.83	0.43
1:A:1007:C:H3'	1:A:1008:C:H2'	2.01	0.43
1:A:1062:G:N3	1:A:1062:G:H2'	2.33	0.43
1:A:1067:A:H2	1:A:1095:A:H1'	1.81	0.43
1:A:1500:G:N3	3:D:100:GLY:HA3	2.32	0.43
1:A:1684:C:O2'	1:A:1685:C:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2058:A:H2'	1:A:2059:A:C8	2.54	0.43
1:A:2270:G:O2'	1:A:2271:G:H5'	2.18	0.43
1:A:2296:U:OP2	14:S:6:ALA:HB2	2.17	0.43
1:A:2395:C:H2'	1:A:2396:G:O4'	2.19	0.43
1:A:2491:U:O2'	1:A:2570:G:OP1	2.28	0.43
1:A:2563:U:C4'	10:O:28:SER:HB3	2.48	0.43
1:A:2570:G:O2'	1:A:2571:C:H5'	2.19	0.43
1:A:2688:U:H1'	1:A:2721:A:N6	2.33	0.43
1:A:2808:U:C2	1:A:2892:A:C5	2.98	0.43
2:B:46:A:H2'	2:B:47:C:O4'	2.18	0.43
3:D:16:MET:HE1	3:D:208:LYS:HE2	2.01	0.43
4:E:7:VAL:CG1	4:E:27:LEU:HB3	2.49	0.43
4:E:47:VAL:HG11	4:E:86:PRO:CD	2.43	0.43
5:F:24:LEU:HD11	5:F:199:TRP:CH2	2.51	0.43
6:G:110:ALA:HB2	6:G:141:PHE:CE1	2.53	0.43
7:H:91:GLY:HA3	7:H:94:TYR:CD2	2.53	0.43
8:I:69:LYS:HE2	8:I:138:ILE:CG1	2.48	0.43
10:O:71:ARG:HB2	10:O:73:ASP:OD1	2.19	0.43
11:P:58:THR:O	11:P:62:LEU:HG	2.18	0.43
12:Q:57:HIS:NE2	12:Q:116:GLU:HB3	2.33	0.43
13:R:86:ARG:NH2	13:R:118:GLU:O	2.51	0.43
16:U:35:ALA:O	16:U:39:LEU:HG	2.19	0.43
17:V:18:LEU:O	17:V:95:LEU:HD22	2.19	0.43
20:Y:79:CYS:HB3	20:Y:102:CYS:SG	2.58	0.43
21:Z:34:ASN:O	21:Z:35:ARG:HD2	2.18	0.43
21:Z:61:LEU:HB2	21:Z:65:GLN:O	2.19	0.43
23:1:60:PHE:CE1	23:1:91:LYS:HE3	2.54	0.43
23:1:60:PHE:CE1	23:1:91:LYS:HG3	2.53	0.43
32:a:189(B):C:H2'	32:a:189(C):C:H6	1.79	0.43
32:a:471:G:O2'	32:a:472:A:H5'	2.19	0.43
32:a:545:C:H2'	32:a:546:G:O4'	2.18	0.43
32:a:691:G:O5'	42:k:26:ASN:ND2	2.52	0.43
32:a:710:G:O2'	32:a:711:G:H5'	2.19	0.43
32:a:736:C:O2'	37:f:90:VAL:O	2.36	0.43
32:a:926:G:H1	56:x:14:A:P	2.42	0.43
32:a:1030(B):G:H4'	32:a:1030(D):G:N1	2.34	0.43
32:a:1149:C:P	40:i:9:ARG:HH21	2.40	0.43
32:a:1158:C:H2'	32:a:1160:G:H5''	2.01	0.43
32:a:1229:A:H5'	44:m:116:THR:HG23	1.99	0.43
33:b:98:LEU:HB2	33:b:101:MET:HG3	2.00	0.43
34:c:148:GLY:HA2	34:c:171:GLY:HA3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:g:65:ALA:HA	38:g:128:ALA:CA	2.47	0.43
38:g:102:ARG:O	38:g:106:GLN:HG3	2.18	0.43
42:k:58:PRO:HA	42:k:90:GLY:HA2	2.00	0.43
51:t:55:ILE:O	51:t:58:LYS:HB3	2.18	0.43
54:C:184:LYS:O	54:C:188:ASN:ND2	2.51	0.43
55:z:51:U:O4	55:z:63:G:O6	2.36	0.43
56:x:6:A:H3'	56:x:7:A:H8	1.84	0.43
56:x:24:A:O2'	56:x:25:A:OP2	2.30	0.43
1:A:71:A:H5''	1:A:73:A:N9	2.33	0.43
1:A:272(R):G:OP1	23:1:76:ARG:NH1	2.47	0.43
1:A:272(V):G:H2'	1:A:272(W):G:C8	2.54	0.43
1:A:635:C:H2'	1:A:636:G:C8	2.53	0.43
1:A:651:G:OP2	30:8:19:SER:OG	2.23	0.43
1:A:786:C:H2'	1:A:787:U:O4'	2.19	0.43
1:A:828:U:H3'	1:A:828:U:OP2	2.18	0.43
1:A:902:C:HO2'	1:A:903:C:H5'	1.82	0.43
1:A:904:C:H2'	1:A:905:U:H6	1.84	0.43
1:A:1092:C:H6	1:A:1092:C:OP2	2.02	0.43
1:A:1101:U:H2'	1:A:1102:C:H6	1.84	0.43
1:A:1508:A:H5'	1:A:1509(B):A:C8	2.54	0.43
1:A:1654:A:H2'	1:A:1655:A:C8	2.53	0.43
1:A:1660:C:H2'	1:A:1661:G:C8	2.54	0.43
1:A:1768:U:C2	1:A:1984:G:O6	2.72	0.43
1:A:1905:C:H3'	1:A:1930:G:C8	2.54	0.43
1:A:2002:G:O2'	1:A:2003:G:H5'	2.18	0.43
1:A:2116:G:H2'	1:A:2117:A:N3	2.33	0.43
1:A:2331:G:H2'	1:A:2332:U:C6	2.54	0.43
1:A:2558:C:H2'	1:A:2559:C:O4'	2.19	0.43
1:A:2671:A:H2'	1:A:2672:G:C8	2.54	0.43
1:A:2691:C:H5'	1:A:2872:G:H5'	2.01	0.43
2:B:95:C:H2'	2:B:96:U:C6	2.54	0.43
3:D:33:LEU:HB2	3:D:104:TYR:CE2	2.54	0.43
4:E:167:VAL:CG2	4:E:170:LEU:HD11	2.44	0.43
5:F:136:THR:HG22	5:F:140:LEU:HD23	2.01	0.43
7:H:137:ASP:HB3	7:H:140:LYS:HB3	2.00	0.43
9:N:75:TYR:CE2	9:N:77:GLY:HA2	2.54	0.43
9:N:89:LYS:O	9:N:93:THR:HG23	2.18	0.43
10:O:64:ARG:HG2	10:O:79:PHE:CE2	2.54	0.43
11:P:1:MET:CG	11:P:5:ASP:HB2	2.47	0.43
18:W:1:MET:HE2	18:W:62:HIS:CB	2.46	0.43
18:W:68:ARG:O	18:W:109:GLU:HA	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:X:11:PRO:HD3	24:2:37:PHE:CE1	2.54	0.43
19:X:52:VAL:HB	19:X:82:GLN:O	2.18	0.43
19:X:60:ARG:HH22	29:7:47:ARG:HD3	1.84	0.43
21:Z:95:PRO:HA	21:Z:130:PRO:HG3	2.00	0.43
24:2:56:GLN:O	24:2:60:LEU:HG	2.19	0.43
27:5:16:ARG:O	27:5:19:ARG:HG2	2.18	0.43
32:a:122:G:H2'	32:a:123:C:H6	1.83	0.43
32:a:282:A:H3'	32:a:283:C:C6	2.54	0.43
32:a:693:G:N3	38:g:82:GLY:HA3	2.34	0.43
32:a:721:G:H4'	32:a:722:A:O5'	2.19	0.43
32:a:726:C:O2'	32:a:727:G:H5'	2.19	0.43
32:a:1294:G:H2'	32:a:1295:G:C8	2.54	0.43
32:a:1316:G:H1	32:a:1319:A:P	2.41	0.43
32:a:1347:G:O2'	32:a:1348:U:OP2	2.37	0.43
32:a:1408:A:H2'	32:a:1409:C:H6	1.84	0.43
32:a:1495:U:H2'	32:a:1496:C:H6	1.82	0.43
33:b:24:TRP:CE3	33:b:26:PRO:HA	2.54	0.43
33:b:80:ILE:HD11	33:b:212:GLN:HG2	2.01	0.43
35:d:13:ARG:HD2	35:d:32:ALA:HB1	2.01	0.43
36:e:12:LEU:HD23	36:e:13:ILE:N	2.34	0.43
36:e:69:VAL:HG13	36:e:71:LEU:HD23	2.00	0.43
40:i:79:LEU:O	40:i:83:ARG:HG2	2.19	0.43
42:k:102:GLY:C	42:k:103:LEU:HD12	2.44	0.43
43:l:60:LEU:HB3	43:l:62:SER:H	1.84	0.43
44:m:15:VAL:HA	44:m:18:ALA:HB3	2.01	0.43
44:m:91:ARG:O	44:m:95:GLY:N	2.51	0.43
45:n:2:ALA:O	45:n:6:LEU:HD13	2.19	0.43
47:p:8:ARG:HB3	47:p:28:ARG:NH1	2.30	0.43
50:s:30:LEU:HD13	50:s:48:THR:HB	1.99	0.43
50:s:50:ALA:HB1	50:s:57:HIS:O	2.19	0.43
54:C:5:LYS:HB2	54:C:8:ARG:NH2	2.32	0.43
54:C:10:LEU:HD13	54:C:219:GLY:HA2	2.00	0.43
54:C:72:VAL:HG21	54:C:156:ILE:HG22	2.01	0.43
54:C:75:LEU:HA	54:C:93:TYR:HB2	2.00	0.43
55:z:14:A:H1'	55:z:22:G:N2	2.34	0.43
55:z:52:G:H2'	55:z:52:G:N3	2.33	0.43
1:A:229:A:H5''	1:A:230:U:O5'	2.19	0.43
1:A:485:C:H2'	1:A:486:C:C6	2.53	0.43
1:A:524:U:H2'	1:A:525:U:H6	1.84	0.43
1:A:736:C:O2'	1:A:737:C:H5'	2.18	0.43
1:A:842:G:H2'	1:A:843:G:H8	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:906:G:C2'	1:A:907:U:H5''	2.48	0.43
1:A:1195:G:C2'	1:A:1196:C:H5'	2.49	0.43
1:A:1442:G:O2'	1:A:1443:G:H5'	2.19	0.43
1:A:1556:C:O2'	1:A:1557:C:H5'	2.18	0.43
1:A:1717:G:H2'	1:A:1718:G:C8	2.54	0.43
1:A:1816:G:O6	3:D:35:LYS:NZ	2.31	0.43
1:A:2125:G:H4'	54:C:217:THR:HG21	2.00	0.43
1:A:2244:U:H2'	1:A:2245:U:O4'	2.19	0.43
1:A:2254:C:H2'	1:A:2255:G:O4'	2.19	0.43
1:A:2469:A:H2'	1:A:2470:G:C8	2.54	0.43
1:A:2478:A:OP2	31:9:2:LYS:NZ	2.28	0.43
1:A:2677:G:H2'	1:A:2678:C:C6	2.54	0.43
1:A:2680:C:H4'	4:E:8:LYS:NZ	2.34	0.43
4:E:176:ILE:N	4:E:181:LEU:O	2.48	0.43
5:F:51:THR:HB	5:F:88:VAL:HG21	2.00	0.43
5:F:125:LEU:HD11	5:F:199:TRP:CE3	2.54	0.43
6:G:111:LEU:HD23	6:G:114:ILE:CD1	2.49	0.43
6:G:112:PRO:C	26:4:35:VAL:HG11	2.44	0.43
6:G:113:ARG:NH2	26:4:33:VAL:HG12	2.33	0.43
7:H:27:LYS:CE	7:H:32:GLU:HB2	2.36	0.43
9:N:13:TRP:NE1	9:N:133:GLN:HB3	2.32	0.43
9:N:23:LEU:HB2	9:N:62:VAL:HG22	2.00	0.43
9:N:104:LYS:HE3	9:N:117:PHE:CZ	2.53	0.43
11:P:101:VAL:CG2	11:P:106:LEU:HD12	2.49	0.43
13:R:63:ARG:O	13:R:67:LEU:HB2	2.18	0.43
15:T:11:GLU:CD	15:T:57:PHE:HB3	2.44	0.43
17:V:24:LYS:HA	17:V:92:THR:OG1	2.19	0.43
21:Z:116:VAL:HG21	21:Z:177:PRO:HA	2.00	0.43
21:Z:152:ALA:HB3	21:Z:167:PRO:CA	2.44	0.43
32:a:102:G:H2'	32:a:103:C:OP1	2.19	0.43
32:a:109:A:H4'	32:a:110:C:OP2	2.18	0.43
32:a:160:A:H2'	32:a:161:A:C8	2.53	0.43
32:a:188:C:C2'	32:a:189(A):G:H5'	2.49	0.43
32:a:189(K):G:H2'	32:a:189(L):U:H6	1.84	0.43
32:a:288:A:C2'	32:a:289:G:H4'	2.48	0.43
32:a:503:C:H2'	32:a:504:C:C6	2.54	0.43
32:a:538:G:O2'	32:a:539:A:H5'	2.18	0.43
32:a:568:G:H2'	32:a:569:C:C6	2.54	0.43
32:a:675:A:O2'	32:a:676:A:H5'	2.19	0.43
32:a:685:G:H22	32:a:704:A:P	2.41	0.43
32:a:714:G:N3	32:a:777:A:H1'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:886:G:O2'	32:a:887:G:H5'	2.19	0.43
32:a:1197:G:C2'	32:a:1198:G:H5'	2.49	0.43
32:a:1241:G:H2'	32:a:1242:C:H6	1.84	0.43
32:a:1510:U:H3	32:a:1525:G:H1	1.66	0.43
34:c:6:HIS:CD2	34:c:8:ILE:HB	2.54	0.43
34:c:32:LEU:HD12	34:c:59:ARG:NH1	2.33	0.43
34:c:72:LYS:HB3	34:c:75:VAL:CB	2.49	0.43
35:d:88:VAL:O	35:d:92:VAL:HG23	2.19	0.43
35:d:108:LEU:HD23	35:d:110:PHE:CE2	2.53	0.43
35:d:200:GLU:O	35:d:204:ILE:HG12	2.18	0.43
37:f:25:ILE:HG12	37:f:28:ARG:HH11	1.82	0.43
38:g:46:ALA:O	38:g:50:ILE:HG12	2.19	0.43
43:l:39:VAL:O	43:l:56:ALA:HA	2.19	0.43
44:m:14:ARG:HG2	44:m:42:ALA:O	2.19	0.43
46:o:3:ILE:HD11	46:o:38:ARG:HE	1.83	0.43
46:o:28:GLN:CD	46:o:66:LEU:HD21	2.44	0.43
49:r:37:VAL:CG2	49:r:78:LEU:HB3	2.49	0.43
53:y:1:C:O2'	53:y:2:G:O5'	2.36	0.43
54:C:38:ASP:OD1	54:C:177:LYS:HB3	2.19	0.43
54:C:119:VAL:HA	54:C:121:GLY:HA3	1.65	0.43
1:A:205:G:O2'	1:A:206:U:OP2	2.37	0.43
1:A:222:A:H5''	1:A:421:U:OP1	2.19	0.43
1:A:251:A:H5''	11:P:50:ARG:NH2	2.34	0.43
1:A:300:A:OP2	20:Y:84:ARG:NH1	2.42	0.43
1:A:494:G:C5'	18:W:6:ILE:HB	2.49	0.43
1:A:560:C:H2'	1:A:561:G:H8	1.80	0.43
1:A:744:G:O2'	1:A:745:G:H5'	2.18	0.43
1:A:752:A:H1'	1:A:753:C:OP2	2.19	0.43
1:A:795:C:H2'	1:A:796:C:C6	2.54	0.43
1:A:870:A:C2'	1:A:871:U:H5'	2.49	0.43
1:A:1097:U:H2'	1:A:1098:A:H4'	1.99	0.43
1:A:1160:G:H2'	1:A:1161:C:H6	1.83	0.43
1:A:1275:A:H4'	1:A:1276:A:O5'	2.18	0.43
1:A:1317:A:O2'	1:A:1318:C:H5'	2.18	0.43
1:A:1443:G:O2'	1:A:1444:G:H5'	2.19	0.43
1:A:1471:A:H2'	1:A:1471:A:N3	2.34	0.43
1:A:1660:C:O2'	1:A:1661:G:H5'	2.17	0.43
1:A:1713:U:O2	1:A:1746:G:N2	2.43	0.43
1:A:1742:G:H2'	1:A:1743:C:H6	1.83	0.43
1:A:1795:C:O2'	1:A:1796:U:H5'	2.19	0.43
1:A:2007:C:O2'	1:A:2008:C:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2345:G:OP2	28:6:38:LYS:HD2	2.19	0.43
1:A:2362:G:O2'	1:A:2363:C:H5'	2.18	0.43
1:A:2441:C:H2'	1:A:2442:C:H6	1.83	0.43
1:A:2640:G:P	9:N:97:ARG:HH12	2.42	0.43
1:A:2709:G:H2'	1:A:2710:C:C6	2.53	0.43
1:A:2884:U:OP2	27:5:43:HIS:NE2	2.49	0.43
2:B:33:G:O3'	6:G:2:PRO:HG3	2.19	0.43
2:B:67:G:O2'	2:B:68:C:H5'	2.19	0.43
2:B:99:G:O2'	2:B:100:A:O4'	2.17	0.43
6:G:137:GLU:HB3	6:G:152:LEU:HD23	2.00	0.43
8:I:69:LYS:HE2	8:I:138:ILE:HG12	2.00	0.43
11:P:70:GLN:O	11:P:73:GLY:N	2.45	0.43
11:P:124:LYS:HE3	11:P:146:VAL:HG21	2.00	0.43
12:Q:51:ARG:HA	12:Q:54:MET:HE2	2.00	0.43
14:S:23:ARG:HD3	14:S:84:GLN:C	2.44	0.43
16:U:50:ARG:HH11	17:V:70:ILE:HG23	1.84	0.43
20:Y:30:VAL:HG12	20:Y:32:PRO:HD3	2.01	0.43
20:Y:52:SER:OG	20:Y:55:TYR:N	2.49	0.43
21:Z:42:VAL:O	21:Z:46:LYS:HG2	2.19	0.43
26:4:61:ARG:HG3	26:4:64:GLY:HA3	2.01	0.43
27:5:58:LEU:HD23	27:5:60:VAL:N	2.34	0.43
32:a:7:G:N7	36:e:92:LYS:NZ	2.56	0.43
32:a:127:G:O2'	32:a:128:G:H5'	2.19	0.43
32:a:274:A:H1'	32:a:275:G:C1'	2.49	0.43
32:a:409:G:H5''	35:d:24:GLU:CB	2.48	0.43
32:a:428:G:C2'	35:d:36:ARG:HH22	2.32	0.43
32:a:792:A:H4'	32:a:793:U:OP1	2.15	0.43
32:a:849:C:H2'	32:a:850:U:C6	2.54	0.43
32:a:862:C:O2'	32:a:863:U:H5'	2.19	0.43
32:a:999:C:O2	32:a:999:C:H2'	2.18	0.43
32:a:1043:C:H3'	32:a:1044:A:H8	1.83	0.43
32:a:1104:G:H4'	33:b:111:ARG:CZ	2.48	0.43
32:a:1300:G:H1'	32:a:1303:C:N4	2.34	0.43
32:a:1347:G:OP2	40:i:107:ARG:HG2	2.18	0.43
33:b:20:GLU:HB2	33:b:190:THR:HG21	2.01	0.43
33:b:119:GLU:O	33:b:123:ALA:HB2	2.19	0.43
34:c:16:ARG:NH2	34:c:54:ARG:HH22	2.17	0.43
34:c:63:ASN:CB	34:c:98:ASN:HB2	2.47	0.43
35:d:58:LEU:O	35:d:62:GLN:HG2	2.18	0.43
35:d:200:GLU:OE1	35:d:200:GLU:N	2.41	0.43
36:e:41:VAL:O	36:e:67:VAL:HG12	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:f:68:PRO:HB2	37:f:70:ASP:OD1	2.19	0.43
39:h:116:LYS:CE	39:h:129:VAL:HG11	2.49	0.43
40:i:55:ALA:HA	40:i:58:HIS:ND1	2.33	0.43
40:i:84:ALA:HA	40:i:87:GLN:HB3	2.01	0.43
40:i:89:ASN:HB3	40:i:92:TYR:CD2	2.53	0.43
42:k:27:ASN:OD1	42:k:28:THR:N	2.52	0.43
43:l:114:LYS:HE3	43:l:125:PRO:HG2	2.01	0.43
46:o:78:TYR:O	46:o:82:ILE:HG23	2.18	0.43
46:o:82:ILE:HG13	46:o:83:GLU:N	2.34	0.43
47:p:39:TYR:HD1	47:p:49:LEU:HD13	1.84	0.43
50:s:11:VAL:CG1	50:s:16:LEU:HD12	2.49	0.43
54:C:46:LYS:HE2	54:C:210:ARG:NH1	2.34	0.43
54:C:117:PRO:HD3	54:C:146:GLY:C	2.43	0.43
55:z:6:G:N1	55:z:68:C:O2	2.52	0.43
1:A:244:A:O2'	11:P:74:GLU:N	2.43	0.42
1:A:260:G:C1'	1:A:621:A:H1'	2.48	0.42
1:A:305:U:C4	1:A:312:G:O6	2.72	0.42
1:A:742:G:H2'	1:A:743:G:C8	2.54	0.42
1:A:748:G:O6	1:A:751:A:H4'	2.19	0.42
1:A:816:C:O2'	1:A:817:C:H5'	2.18	0.42
1:A:1198:U:H2'	1:A:1199:U:C5	2.53	0.42
1:A:1268:A:N6	1:A:2012:G:H1'	2.34	0.42
1:A:1272:A:OP1	1:A:1272:A:H4'	2.17	0.42
1:A:1399:C:H2'	1:A:1400:G:H8	1.84	0.42
1:A:1527:G:N2	1:A:1544:A:H3'	2.33	0.42
1:A:1754:C:O2'	1:A:1755:A:H5'	2.19	0.42
1:A:1882:C:H2'	1:A:1883:G:O4'	2.18	0.42
1:A:2260:C:O2'	1:A:2261:C:H5'	2.19	0.42
1:A:2474:C:H3'	1:A:2475:C:C6	2.54	0.42
1:A:2556:C:H2'	1:A:2557:G:O4'	2.19	0.42
1:A:2747:G:H1'	1:A:2757:A:H61	1.83	0.42
1:A:2758:A:C4	7:H:67:LEU:HD21	2.54	0.42
1:A:2784:C:O2'	1:A:2785:C:H5'	2.19	0.42
3:D:147:LEU:HB2	3:D:155:LEU:CD1	2.49	0.42
3:D:206:LEU:O	3:D:211:ARG:HD3	2.18	0.42
7:H:103:LEU:O	7:H:115:VAL:N	2.42	0.42
13:R:33:ARG:HA	13:R:114:VAL:O	2.19	0.42
19:X:31:HIS:CD2	19:X:33:LYS:HB2	2.53	0.42
29:7:30:VAL:HG22	29:7:33:ARG:NH2	2.34	0.42
32:a:32:A:H2'	32:a:33:A:C8	2.53	0.42
32:a:398:C:O2'	32:a:399:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:437:U:H5'	35:d:155:LEU:CD1	2.49	0.42
32:a:472:A:C2'	32:a:473:G:H5'	2.49	0.42
32:a:570:G:H2'	32:a:571:U:C6	2.53	0.42
32:a:571:U:OP1	32:a:819:A:O2'	2.33	0.42
32:a:894:G:H2'	32:a:895:G:H8	1.85	0.42
32:a:917:G:H2'	32:a:918:A:C8	2.54	0.42
32:a:1036:G:H3'	32:a:1037:C:H6	1.83	0.42
32:a:1044:A:H3'	32:a:1045:C:C5'	2.48	0.42
32:a:1235:U:H2'	32:a:1236:A:O4'	2.19	0.42
32:a:1292:U:H2'	32:a:1293:G:H8	1.78	0.42
32:a:1312:G:H5'	50:s:5:LEU:HD21	2.00	0.42
32:a:1317:C:P	45:n:17:LYS:HE3	2.59	0.42
32:a:1424:C:H2'	32:a:1425:U:O4'	2.18	0.42
32:a:1518:MA6:H2'	32:a:1519:MA6:C1'	2.49	0.42
33:b:163:PHE:HA	33:b:185:ILE:O	2.18	0.42
37:f:97:PHE:O	49:r:30:ASP:HA	2.18	0.42
40:i:55:ALA:O	40:i:58:HIS:HB2	2.19	0.42
41:j:27:ALA:O	41:j:31:GLY:N	2.52	0.42
42:k:33:THR:CG2	42:k:39:PRO:HA	2.33	0.42
44:m:51:ALA:HA	44:m:54:VAL:HG22	2.01	0.42
44:m:79:LYS:NZ	44:m:83:ASP:OD1	2.48	0.42
46:o:28:GLN:CG	46:o:66:LEU:HD21	2.49	0.42
47:p:42:ARG:HE	47:p:44:THR:HG21	1.84	0.42
49:r:33:ASP:OD2	49:r:36:ASN:HB2	2.19	0.42
53:y:44:A:H2'	53:y:45:G:C8	2.54	0.42
53:y:64:G:O2'	53:y:65:C:H5'	2.19	0.42
54:C:35:ALA:HB3	54:C:39:GLU:CG	2.48	0.42
54:C:75:LEU:HD23	54:C:113:VAL:HG22	2.00	0.42
54:C:185:LEU:CA	54:C:188:ASN:HB2	2.44	0.42
1:A:34:C:N4	1:A:454:A:O2'	2.52	0.42
1:A:58:G:O2'	1:A:73:A:N1	2.42	0.42
1:A:154(A):G:H2'	1:A:154(B):C:H6	1.81	0.42
1:A:582:G:H2'	1:A:583:G:H8	1.83	0.42
1:A:658:C:H2'	1:A:659:C:H6	1.81	0.42
1:A:697:C:H2'	1:A:698:C:C6	2.54	0.42
1:A:740:U:H2'	1:A:741:G:H8	1.79	0.42
1:A:741:G:H2'	1:A:742:G:H8	1.84	0.42
1:A:963:U:H2'	1:A:964:C:C6	2.54	0.42
1:A:975(B):G:N2	1:A:1156:A:O2'	2.52	0.42
1:A:1135:C:H5'	1:A:1136:G:OP2	2.19	0.42
1:A:1188:U:H2'	1:A:1189:A:C8	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1604:C:H2'	1:A:1605:C:C6	2.54	0.42
1:A:2045:C:H2'	1:A:2046:G:O4'	2.18	0.42
1:A:2225:A:H4'	1:A:2226:C:O5'	2.18	0.42
1:A:2348:U:O2'	1:A:2349:G:H5'	2.19	0.42
1:A:2373:G:H2'	1:A:2374:C:C6	2.54	0.42
1:A:2507:C:H2'	1:A:2508:G:H5'	2.01	0.42
1:A:2531:A:C5	7:H:175:LYS:HD2	2.54	0.42
1:A:2563:U:O2'	10:O:28:SER:HB3	2.18	0.42
1:A:2591:C:H2'	1:A:2592:G:H8	1.84	0.42
2:B:20:C:H2'	2:B:21:G:C8	2.53	0.42
2:B:32:C:H3'	2:B:32:C:OP2	2.19	0.42
2:B:42:C:C2'	6:G:66:GLN:HE21	2.31	0.42
2:B:55:U:C2'	6:G:27:ASN:HD21	2.30	0.42
5:F:131:GLY:O	5:F:138:GLU:HB3	2.19	0.42
7:H:19:VAL:HG21	7:H:45:VAL:CG2	2.49	0.42
10:O:2:ILE:HD12	10:O:6:THR:HG21	2.01	0.42
10:O:87:ILE:HA	10:O:94:ARG:H	1.84	0.42
19:X:64:LYS:HE3	19:X:73:ARG:CZ	2.49	0.42
20:Y:13:VAL:O	20:Y:24:VAL:HA	2.20	0.42
20:Y:43:ASN:ND2	20:Y:65:ALA:HB3	2.34	0.42
23:1:13:ILE:CG1	23:1:42:GLN:HB2	2.49	0.42
32:a:33:A:H5''	32:a:364:A:H1'	2.02	0.42
32:a:60:A:H1'	32:a:61:G:OP2	2.19	0.42
32:a:68:G:C6	32:a:171:A:N6	2.87	0.42
32:a:137:C:H2'	32:a:138:G:H8	1.83	0.42
32:a:155:C:O2'	32:a:156:G:H5'	2.18	0.42
32:a:162:A:C5	32:a:163:C:H1'	2.54	0.42
32:a:187:C:O2'	32:a:188:C:H5'	2.19	0.42
32:a:256:U:H2'	32:a:257:G:O4'	2.19	0.42
32:a:403:C:H5''	35:d:136:PRO:HD2	2.01	0.42
32:a:429:U:H4'	32:a:430:A:OP1	2.19	0.42
32:a:593:G:H2'	32:a:594:G:C8	2.51	0.42
32:a:609:A:C2'	32:a:610:G:H5'	2.49	0.42
32:a:876:G:H2'	32:a:877:C:C6	2.54	0.42
32:a:978:A:O2'	32:a:1322:C:N3	2.45	0.42
32:a:1193:G:OP1	34:c:167:TRP:NE1	2.42	0.42
32:a:1283:G:H2'	32:a:1284:C:O4'	2.19	0.42
32:a:1291:G:H5''	38:g:41:ARG:NH2	2.34	0.42
33:b:108:ILE:O	33:b:111:ARG:HB2	2.19	0.42
33:b:166:ASP:CB	33:b:169:LYS:HB3	2.36	0.42
35:d:142:PRO:HA	35:d:185:PHE:CD2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:e:15:ARG:HD3	36:e:28:PHE:HE1	1.84	0.42
36:e:39:GLY:O	36:e:68:GLU:HA	2.20	0.42
36:e:82:VAL:HG21	36:e:138:ALA:HB2	2.01	0.42
40:i:22:GLY:HA3	40:i:60:ASP:CG	2.44	0.42
44:m:91:ARG:HB2	44:m:98:VAL:HG22	2.01	0.42
45:n:7:ILE:O	45:n:11:LYS:HE3	2.19	0.42
47:p:39:TYR:HE2	47:p:41:PRO:HB3	1.84	0.42
48:q:10:VAL:HG12	48:q:53:LEU:HA	1.99	0.42
52:u:5:ASP:O	52:u:8:THR:OG1	2.29	0.42
53:y:42:G:O2'	53:y:43:A:H5'	2.19	0.42
54:C:175:VAL:HG21	54:C:189:ILE:HD13	2.01	0.42
55:z:58:A:HO2'	55:z:61:C:H41	1.66	0.42
1:A:88:G:H2'	1:A:89:G:O4'	2.19	0.42
1:A:251:A:C4	1:A:252:G:H1'	2.53	0.42
1:A:372:G:HO2'	1:A:400:G:H1	1.67	0.42
1:A:495:G:H1'	18:W:57:ASN:CG	2.44	0.42
1:A:601:C:O2'	1:A:605:C:H5''	2.19	0.42
1:A:639:U:H2'	1:A:640:C:C6	2.55	0.42
1:A:725:G:H2'	1:A:726:G:N9	2.34	0.42
1:A:729:G:C6	3:D:208:LYS:HB2	2.53	0.42
1:A:781:A:C8	3:D:219:PRO:HG3	2.54	0.42
1:A:871:U:H2'	1:A:872:A:C8	2.54	0.42
1:A:872:A:H2'	1:A:873:G:C8	2.53	0.42
1:A:874:G:H2'	1:A:875:G:C8	2.55	0.42
1:A:1005:C:H2'	1:A:1006:C:C6	2.54	0.42
1:A:1007:C:H5''	9:N:35:ARG:HH11	1.84	0.42
1:A:1367:A:H5''	1:A:1368:G:OP2	2.18	0.42
1:A:1500:G:O2'	1:A:1501:C:H5'	2.19	0.42
1:A:1639:U:C2'	1:A:1640:C:H5'	2.49	0.42
1:A:1748:G:H2'	1:A:1749:A:C8	2.54	0.42
1:A:2162:G:H4'	1:A:2173:A:O4'	2.19	0.42
1:A:2167:U:H2'	1:A:2168:G:C8	2.54	0.42
1:A:2199:A:O3'	23:1:50:ARG:NH2	2.52	0.42
1:A:2199:A:H3'	1:A:2200:C:C6	2.54	0.42
1:A:2348:U:O4	1:A:2382:G:N1	2.53	0.42
1:A:2534:A:H2'	1:A:2535:G:H5''	2.01	0.42
1:A:2551:C:H2'	1:A:2552:2MU:C6	2.49	0.42
1:A:2634:G:H2'	1:A:2635:C:C6	2.55	0.42
1:A:2686:G:H2'	1:A:2687:U:C5	2.55	0.42
1:A:2746:U:H2'	1:A:2747:G:H5'	2.01	0.42
2:B:29:A:H2'	2:B:30:C:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:53:PHE:CZ	3:D:221:VAL:HG12	2.55	0.42
3:D:79:VAL:HG22	3:D:95:LEU:CD2	2.49	0.42
3:D:127:VAL:HG13	3:D:194:GLY:HA3	2.01	0.42
5:F:136:THR:HG22	5:F:140:LEU:CD2	2.50	0.42
6:G:125:PHE:HB3	6:G:166:ASP:CG	2.44	0.42
10:O:91:LEU:HD13	10:O:111:PHE:CE1	2.54	0.42
10:O:105:GLU:OE1	10:O:105:GLU:N	2.41	0.42
15:T:24:PRO:HA	15:T:49:VAL:O	2.18	0.42
18:W:36:LEU:HD11	18:W:47:VAL:HG12	2.00	0.42
28:6:33:LYS:HA	28:6:51:GLU:OE1	2.18	0.42
32:a:20:U:H2'	32:a:21:G:O4'	2.19	0.42
32:a:36:C:H2'	32:a:37:U:O4'	2.19	0.42
32:a:150:C:H2'	32:a:151:A:H1'	2.01	0.42
32:a:360:A:H2'	32:a:361:G:H8	1.82	0.42
32:a:525:C:H6	32:a:525:C:O5'	2.02	0.42
32:a:690:G:OP1	42:k:27:ASN:HB3	2.20	0.42
32:a:789:U:H2'	32:a:791:G:OP2	2.18	0.42
32:a:969:A:O2'	32:a:970:C:H5'	2.20	0.42
32:a:1249:C:H4'	40:i:36:TYR:OH	2.20	0.42
33:b:47:THR:HG22	33:b:51:LEU:CD1	2.43	0.42
33:b:210:SER:O	33:b:214:ILE:HG12	2.20	0.42
34:c:52:LEU:HD21	34:c:55:VAL:HG23	2.01	0.42
34:c:129:ALA:CB	34:c:132:ARG:HB2	2.45	0.42
36:e:77:PRO:HG2	36:e:78:HIS:HD1	1.85	0.42
37:f:1:MET:HE2	37:f:68:PRO:CD	2.46	0.42
37:f:2:ARG:O	37:f:66:GLU:HA	2.20	0.42
37:f:96:PRO:HB3	49:r:30:ASP:CG	2.43	0.42
47:p:20:VAL:HG21	47:p:32:TYR:CB	2.48	0.42
49:r:39:VAL:O	49:r:42:ARG:HB2	2.18	0.42
53:y:74:C:O2'	53:y:75:C:O5'	2.26	0.42
54:C:28:LEU:HA	54:C:31:GLU:OE2	2.19	0.42
55:z:8:U:O4	55:z:13:C:H3'	2.20	0.42
55:z:66:U:H2'	55:z:67:C:O4'	2.18	0.42
1:A:233:A:C2'	1:A:234:C:H5'	2.50	0.42
1:A:242:G:C8	30:8:3:LYS:HG3	2.55	0.42
1:A:301:G:H1'	1:A:302:C:C6	2.54	0.42
1:A:479:A:HO2'	1:A:481:G:H5'	1.84	0.42
1:A:483:A:H5''	20:Y:50:ARG:HD2	2.01	0.42
1:A:522:G:H2'	1:A:523:C:H6	1.84	0.42
1:A:551:G:H2'	1:A:552:G:C8	2.53	0.42
1:A:576:U:H2'	1:A:577:G:H8	1.80	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:773:U:O2'	3:D:48:ARG:HD3	2.19	0.42
1:A:841:A:H2'	1:A:842:G:H8	1.84	0.42
1:A:907:U:O2'	1:A:908:C:H5'	2.19	0.42
1:A:1080:C:H2'	1:A:1081:U:O4'	2.20	0.42
1:A:1424:G:H2'	1:A:1425:G:O4'	2.19	0.42
1:A:1480:G:O2'	1:A:1481:U:H5'	2.20	0.42
1:A:1582:C:H2'	1:A:1583:A:H8	1.83	0.42
1:A:1705:G:H2'	1:A:1706:U:H6	1.84	0.42
1:A:2101:G:H2'	1:A:2101:G:N3	2.34	0.42
1:A:2343:C:H4'	1:A:2373:G:O3'	2.18	0.42
1:A:2352:A:H2'	1:A:2353:G:O4'	2.20	0.42
1:A:2359:C:O2'	1:A:2360:A:H5'	2.18	0.42
1:A:2479:G:H2'	1:A:2480:C:O4'	2.19	0.42
1:A:2514:U:H2'	1:A:2515:C:H6	1.84	0.42
1:A:2518:A:N3	1:A:2518:A:H2'	2.34	0.42
1:A:2688:U:H1'	1:A:2721:A:H62	1.83	0.42
1:A:2746:U:C2'	1:A:2747:G:H5'	2.49	0.42
3:D:209:ALA:O	3:D:213:ARG:HG2	2.19	0.42
4:E:37:ARG:O	4:E:45:THR:HA	2.20	0.42
5:F:20:LEU:CB	5:F:22:ALA:HB2	2.49	0.42
5:F:159:GLY:HA2	5:F:164:ARG:HH12	1.84	0.42
6:G:150:ASP:OD1	6:G:151:ALA:N	2.52	0.42
8:I:68:LEU:HD22	8:I:71:ILE:CB	2.50	0.42
8:I:93:THR:HG22	8:I:119:PRO:CB	2.48	0.42
8:I:123:LEU:HD13	8:I:144:VAL:CG1	2.48	0.42
11:P:85:LEU:HB2	11:P:117:GLU:O	2.19	0.42
16:U:90:VAL:CG1	16:U:95:LEU:HD12	2.48	0.42
20:Y:30:VAL:C	20:Y:32:PRO:HD3	2.44	0.42
20:Y:76:CYS:SG	20:Y:78:ALA:HB3	2.59	0.42
21:Z:69:THR:CB	21:Z:90:VAL:HA	2.50	0.42
21:Z:95:PRO:HA	21:Z:130:PRO:CD	2.50	0.42
21:Z:139:VAL:HG12	21:Z:141:VAL:HG13	2.01	0.42
32:a:142:G:O2'	32:a:143:A:H5'	2.20	0.42
32:a:299:G:H2'	32:a:300:A:C8	2.54	0.42
32:a:309:G:H2'	32:a:310:G:H8	1.84	0.42
32:a:416:G:H2'	32:a:417:C:O4'	2.19	0.42
32:a:517:G:N2	32:a:530:G:OP1	2.22	0.42
32:a:595:G:H1'	32:a:596:C:C5	2.47	0.42
32:a:678:U:H2'	32:a:679:C:O4'	2.19	0.42
32:a:850:U:H2'	32:a:851:G:H5''	2.00	0.42
32:a:877:C:H2'	32:a:878:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:976:G:P	45:n:32:SER:H	2.39	0.42
32:a:1003:G:H2'	32:a:1004:A:C4'	2.38	0.42
32:a:1024:G:C2'	32:a:1025:U:H4'	2.49	0.42
32:a:1217:C:O2'	32:a:1218:C:H5'	2.20	0.42
32:a:1294:G:H2'	32:a:1295:G:H8	1.84	0.42
32:a:1518:MA6:C9	32:a:1519:MA6:H102	2.48	0.42
33:b:57:PHE:O	33:b:60:ASP:HB3	2.19	0.42
33:b:74:LYS:CG	33:b:77:ALA:HB3	2.49	0.42
33:b:141:GLU:O	33:b:144:ARG:HB3	2.19	0.42
35:d:23:GLY:CA	35:d:112:VAL:HB	2.47	0.42
35:d:145:GLU:HA	35:d:184:LYS:HG2	2.01	0.42
36:e:81:GLU:HG2	36:e:90:VAL:CG1	2.43	0.42
37:f:25:ILE:O	37:f:28:ARG:HB2	2.20	0.42
37:f:46:ARG:O	37:f:57:GLN:HA	2.20	0.42
41:j:6:ILE:HA	41:j:97:GLU:O	2.19	0.42
42:k:20:TYR:O	42:k:31:THR:N	2.43	0.42
42:k:38:ASN:HA	42:k:39:PRO:HD3	1.88	0.42
45:n:4:LYS:CA	45:n:7:ILE:HG12	2.48	0.42
46:o:30:ALA:HA	46:o:33:THR:HB	2.01	0.42
48:q:44:ALA:HA	48:q:71:PHE:O	2.19	0.42
50:s:64:GLU:O	50:s:67:VAL:HG23	2.19	0.42
53:y:9:G:O4'	53:y:46:G:H1'	2.19	0.42
53:y:15:G:N1	53:y:21:A:N3	2.68	0.42
53:y:19:G:H3'	53:y:20:U:C5	2.54	0.42
53:y:43:A:H2'	53:y:44:A:H8	1.84	0.42
56:x:15:U:H2'	56:x:16:G:O4'	2.19	0.42
1:A:272(J):C:H1'	1:A:272(K):U:C6	2.54	0.42
1:A:289:A:C2'	1:A:290:G:H5'	2.50	0.42
1:A:622:G:H2'	1:A:623:G:H8	1.85	0.42
1:A:792:G:O2'	1:A:2440:C:N3	2.43	0.42
1:A:1021:A:H3'	1:A:1021:A:N3	2.35	0.42
1:A:1430:C:H2'	1:A:1431:U:C6	2.54	0.42
1:A:1845:G:O2'	1:A:1846:G:H5'	2.19	0.42
1:A:1922:G:H2'	1:A:1923:U:C6	2.55	0.42
1:A:1935:G:HO2'	1:A:1936:A:P	2.39	0.42
1:A:1999:C:H2'	1:A:2000:G:H8	1.83	0.42
1:A:2097:C:H2'	1:A:2098:U:O4'	2.20	0.42
1:A:2133:G:H2'	1:A:2157:G:N3	2.34	0.42
1:A:2191:G:H2'	1:A:2192:G:H8	1.84	0.42
1:A:2355:C:H2'	1:A:2356:C:O4'	2.18	0.42
1:A:2514:U:H2'	1:A:2515:C:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2728:U:H5'	10:O:70:LYS:HZ2	1.84	0.42
2:B:29:A:O2'	2:B:58:A:N1	2.40	0.42
2:B:81:G:H2'	2:B:82:G:H5'	2.02	0.42
2:B:92:C:OP2	12:Q:18:LYS:HB2	2.19	0.42
2:B:101:G:H2'	2:B:102:A:H5'	2.00	0.42
2:B:111:G:H2'	2:B:112:U:O4'	2.19	0.42
3:D:168:ARG:HA	3:D:173:VAL:HG12	2.00	0.42
5:F:156:LEU:O	5:F:176:LEU:N	2.51	0.42
7:H:96:ALA:HB1	7:H:104:GLU:O	2.19	0.42
14:S:83:LYS:O	14:S:111:GLU:HB2	2.19	0.42
15:T:125:ARG:CZ	32:a:1443:G:H5'	2.50	0.42
23:1:50:ARG:HB3	23:1:57:GLU:OE2	2.20	0.42
26:4:59:PHE:HB2	26:4:61:ARG:CA	2.49	0.42
32:a:189(A):G:H2'	32:a:189(B):C:H6	1.84	0.42
32:a:253:U:H2'	32:a:254:G:C8	2.55	0.42
32:a:264:U:H1'	48:q:64:PRO:HD2	2.01	0.42
32:a:325:A:H2'	32:a:326:G:C8	2.54	0.42
32:a:412:A:C2	35:d:35:ARG:HB3	2.55	0.42
32:a:481:G:O2'	32:a:483:C:N4	2.53	0.42
32:a:529:G:H22	43:l:51:ALA:HB2	1.85	0.42
32:a:548:G:H2'	32:a:549:C:O4'	2.19	0.42
32:a:593:G:O2'	32:a:594:G:H5'	2.19	0.42
32:a:689:C:P	42:k:46:GLY:HA3	2.59	0.42
32:a:720:C:H5''	32:a:721:G:OP2	2.19	0.42
32:a:896:C:O2'	32:a:897:C:H5'	2.20	0.42
32:a:976:G:H5'	32:a:1358:U:O2'	2.18	0.42
32:a:1052:U:C2	32:a:1206:G:O6	2.72	0.42
32:a:1057:G:H2'	32:a:1058:G:C8	2.54	0.42
32:a:1169:A:O2'	32:a:1170:A:H5'	2.18	0.42
32:a:1198:G:H2'	32:a:1199:U:C6	2.54	0.42
32:a:1444:C:H2'	32:a:1445:C:H6	1.84	0.42
32:a:1539:C:H2'	32:a:1540:U:H1'	2.01	0.42
33:b:71:VAL:HG22	33:b:163:PHE:O	2.20	0.42
33:b:105:PHE:CE1	33:b:155:LEU:HD12	2.54	0.42
38:g:118:VAL:O	38:g:121:ALA:HB3	2.20	0.42
39:h:9:MET:O	39:h:13:ILE:HG13	2.19	0.42
41:j:34:VAL:HG23	41:j:34:VAL:O	2.19	0.42
43:l:104:VAL:HG12	43:l:105:TYR:CG	2.55	0.42
44:m:22:ILE:HG21	44:m:25:ILE:HD12	2.00	0.42
47:p:5:ARG:C	47:p:6:LEU:HD12	2.45	0.42
48:q:12:SER:O	48:q:20:THR:N	2.39	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:u:5:ASP:HB3	52:u:8:THR:OG1	2.20	0.42
53:y:55:U:O2'	53:y:57:A:N7	2.44	0.42
55:z:9:A:H5'	55:z:46:G:N3	2.35	0.42
1:A:30:G:H2'	1:A:31:C:C6	2.55	0.42
1:A:68:G:O2'	1:A:69:C:H5'	2.19	0.42
1:A:197:A:N6	1:A:2430:A:H2'	2.34	0.42
1:A:226:G:H21	1:A:228:A:H62	1.65	0.42
1:A:272(T):C:H2'	1:A:272(U):G:H8	1.83	0.42
1:A:289:A:H2'	1:A:290:G:H5'	2.02	0.42
1:A:476:G:H1'	1:A:480:A:H61	1.84	0.42
1:A:610:G:N2	1:A:619:G:H1'	2.35	0.42
1:A:704:G:H1'	1:A:727:A:N6	2.35	0.42
1:A:807:U:H2'	1:A:808:G:C8	2.54	0.42
1:A:947:G:H2'	1:A:948:G:C8	2.54	0.42
1:A:1034:G:H2'	1:A:1035:U:H6	1.84	0.42
1:A:1125:G:H3'	1:A:1126:A:H8	1.85	0.42
1:A:1508:A:H4'	1:A:1509(B):A:C5	2.54	0.42
1:A:1827:C:H2'	1:A:1828:G:C4'	2.50	0.42
1:A:1897:G:O2'	1:A:1898:U:H5'	2.19	0.42
1:A:1967:C:H2'	1:A:1968:G:O4'	2.19	0.42
1:A:2169:A:N6	55:z:19:G:H1	2.16	0.42
1:A:2305:A:O2'	1:A:2306:C:H5'	2.20	0.42
1:A:2384:G:P	22:0:55:ARG:HE	2.42	0.42
1:A:2439:A:H61	1:A:2585:U:H5'	1.82	0.42
1:A:2444:G:P	5:F:68:LYS:HD2	2.60	0.42
1:A:2648:C:O2'	1:A:2649:U:H5'	2.19	0.42
2:B:29:A:H2'	2:B:30:C:O4'	2.20	0.42
4:E:48:GLN:HG2	4:E:78:LEU:HG	2.02	0.42
5:F:63:LYS:HA	5:F:76:GLY:O	2.19	0.42
5:F:134:GLY:CA	5:F:162:LEU:HD12	2.50	0.42
6:G:116:ASP:OD2	44:m:68:GLY:HA3	2.20	0.42
6:G:170:ARG:O	6:G:174:GLU:CB	2.67	0.42
6:G:179:PRO:HG3	26:4:43:TYR:OH	2.19	0.42
7:H:67:LEU:O	7:H:71:LEU:CB	2.67	0.42
8:I:72:LEU:HD11	8:I:107:VAL:CG1	2.49	0.42
9:N:96:GLU:O	9:N:100:GLU:HG3	2.20	0.42
12:Q:26:TYR:HB2	12:Q:138:ASP:OD1	2.19	0.42
12:Q:34:LEU:HD11	12:Q:129:THR:CB	2.50	0.42
12:Q:106:VAL:CG2	12:Q:114:ALA:HB1	2.49	0.42
18:W:65:LEU:N	18:W:109:GLU:OE2	2.53	0.42
19:X:5:TYR:CE1	24:2:30:ARG:HA	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:32:PRO:C	20:Y:35:TYR:H	2.27	0.42
24:2:13:ALA:HB2	24:2:60:LEU:CD2	2.49	0.42
27:5:40:LYS:HD2	27:5:41:PRO:O	2.20	0.42
32:a:447:G:H2'	32:a:485:G:N2	2.35	0.42
32:a:517:G:N1	32:a:533:A:OP2	2.52	0.42
32:a:707:C:H2'	32:a:708:C:H6	1.84	0.42
32:a:853:G:C2'	32:a:854:G:H5'	2.49	0.42
32:a:919:A:O2'	32:a:920:U:H5'	2.19	0.42
32:a:973:G:C3'	32:a:974:A:H5''	2.46	0.42
32:a:1256:A:H5'	32:a:1258:G:C8	2.54	0.42
33:b:200:ILE:O	33:b:201:ILE:HD13	2.20	0.42
34:c:82:GLU:HG2	34:c:85:ARG:NH2	2.35	0.42
35:d:147:ALA:HB2	35:d:182:LYS:HB3	2.00	0.42
35:d:173:TRP:HB2	35:d:187:ARG:O	2.20	0.42
36:e:71:LEU:HD11	36:e:115:VAL:HA	2.01	0.42
37:f:25:ILE:HG12	37:f:28:ARG:NH1	2.35	0.42
40:i:14:VAL:O	40:i:65:VAL:HA	2.19	0.42
42:k:42:TRP:CH2	42:k:47:VAL:HG21	2.55	0.42
44:m:97:PRO:CB	44:m:101:GLN:HB2	2.50	0.42
46:o:62:GLN:HE21	46:o:66:LEU:HD11	1.84	0.42
51:t:10:LEU:O	51:t:14:LYS:HB2	2.19	0.42
1:A:15:G:C2'	1:A:16:G:H5'	2.50	0.42
1:A:68:G:N2	1:A:74:A:O5'	2.53	0.42
1:A:274:G:H2'	1:A:275:G:C8	2.55	0.42
1:A:282:A:H3'	1:A:284:U:C5	2.54	0.42
1:A:370:G:H4'	1:A:371:A:OP2	2.19	0.42
1:A:601:C:H2'	1:A:602:G:O4'	2.19	0.42
1:A:792:G:H5''	1:A:793:A:H5'	2.01	0.42
1:A:838:C:O2'	1:A:839:U:H5'	2.20	0.42
1:A:838:C:H2'	1:A:839:U:H6	1.83	0.42
1:A:839:U:H2'	1:A:840:C:H6	1.83	0.42
1:A:850:C:O2'	1:A:851:U:H5'	2.20	0.42
1:A:884:C:O2	1:A:884:C:H2'	2.20	0.42
1:A:1652:A:OP1	13:R:8:ARG:HG2	2.19	0.42
1:A:1789:A:H3'	1:A:1790:C:H6	1.84	0.42
1:A:2057:A:O2'	1:A:2058:A:H5'	2.20	0.42
1:A:2106:G:H2'	1:A:2107:C:C1'	2.50	0.42
1:A:2331:G:H2'	1:A:2332:U:H6	1.85	0.42
1:A:2415:G:H2'	1:A:2416:C:C6	2.55	0.42
1:A:2515:C:O2'	1:A:2516:G:H5'	2.19	0.42
1:A:2615:U:H2'	1:A:2616:C:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2709:G:H2'	1:A:2710:C:H6	1.84	0.42
2:B:91:C:O5'	12:Q:17:LEU:HB2	2.18	0.42
3:D:174:ILE:HG22	3:D:182:LEU:HD22	2.01	0.42
8:I:8:PRO:O	8:I:9:LEU:HD22	2.20	0.42
10:O:68:GLU:HB3	10:O:78:ARG:HD3	2.02	0.42
10:O:85:VAL:O	10:O:87:ILE:HG23	2.20	0.42
20:Y:79:CYS:SG	20:Y:81:LYS:HB2	2.60	0.42
22:O:47:PRO:HG3	22:O:53:MET:HB2	2.01	0.42
23:1:53:VAL:O	23:1:56:GLN:HB2	2.20	0.42
25:3:8:LEU:HD23	25:3:23:LEU:HD11	2.02	0.42
28:6:10:LEU:HG	28:6:54:ILE:CA	2.42	0.42
32:a:42:G:H2'	32:a:43:C:O4'	2.20	0.42
32:a:255:G:H2'	32:a:256:U:C6	2.54	0.42
32:a:303:A:H2'	32:a:304:U:O4'	2.19	0.42
32:a:382:A:O2'	32:a:383:A:H5'	2.20	0.42
32:a:453:A:H2'	32:a:454:C:C6	2.55	0.42
32:a:516:PSU:O2'	32:a:519:C:N3	2.48	0.42
32:a:973:G:OP1	41:j:57:LYS:NZ	2.46	0.42
32:a:1036:G:H2'	32:a:1037:C:O4'	2.19	0.42
32:a:1108:G:OP1	34:c:175:LEU:HB2	2.20	0.42
32:a:1222:G:O2'	32:a:1223:C:H5'	2.20	0.42
32:a:1264:C:H2'	32:a:1265:G:H8	1.84	0.42
32:a:1374:A:OP1	38:g:36:LYS:NZ	2.29	0.42
32:a:1511:G:H2'	32:a:1512:U:O4'	2.19	0.42
34:c:58:GLU:HB3	41:j:92:THR:CB	2.50	0.42
35:d:106:TYR:HB2	35:d:117:ALA:HB2	2.00	0.42
37:f:39:LYS:CB	37:f:64:GLN:HB3	2.50	0.42
37:f:67:MET:SD	37:f:75:LEU:HG	2.60	0.42
39:h:45:ILE:HG13	39:h:47:GLY:H	1.84	0.42
44:m:25:ILE:CG1	44:m:66:LEU:HD22	2.47	0.42
46:o:3:ILE:HG13	46:o:38:ARG:NH2	2.33	0.42
54:C:4:GLY:O	54:C:7:TYR:N	2.53	0.42
56:x:32:G:H2'	56:x:33:C:C6	2.55	0.42
1:A:17:G:H2'	1:A:18:C:H6	1.85	0.42
1:A:222:A:H8	1:A:420:C:H4'	1.85	0.42
1:A:291:C:O2'	1:A:292:C:H5'	2.20	0.42
1:A:361:G:O2'	1:A:362:U:H5'	2.19	0.42
1:A:425:G:O2'	1:A:426:C:H5'	2.20	0.42
1:A:586:A:H5''	1:A:587:C:OP1	2.20	0.42
1:A:614(B):U:O4'	1:A:614(C):G:H5''	2.20	0.42
1:A:805:G:H4'	11:P:38:GLN:HA	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1001:A:C2'	1:A:1002:G:H5'	2.50	0.42
1:A:1289:C:H2'	1:A:1290:C:C6	2.55	0.42
1:A:1466:G:O3'	1:A:1546:C:O2'	2.37	0.42
1:A:1504:C:O2'	1:A:1505:C:H5'	2.19	0.42
1:A:1509(A):C:H3'	1:A:1509(B):A:H5''	2.02	0.42
1:A:1670:C:H2'	1:A:1671:U:O4'	2.19	0.42
1:A:1822:G:O2'	1:A:1823:G:H5'	2.19	0.42
1:A:2159:G:H2'	1:A:2160:G:H8	1.84	0.42
1:A:2199:A:H3'	1:A:2200:C:C5	2.55	0.42
1:A:2349:G:H3'	1:A:2350:C:H5''	2.01	0.42
1:A:2462:U:O2'	1:A:2463:C:H5'	2.20	0.42
1:A:2463:C:C2'	1:A:2464:C:H5'	2.50	0.42
1:A:2521:C:H2'	1:A:2522:U:C6	2.54	0.42
1:A:2538:C:H2'	1:A:2539:C:C6	2.55	0.42
1:A:2650:U:H2'	1:A:2651:C:C6	2.54	0.42
2:B:41:U:P	2:B:43:C:H41	2.43	0.42
3:D:33:LEU:HD11	3:D:102:LYS:O	2.19	0.42
3:D:33:LEU:CD1	3:D:103:ARG:HA	2.49	0.42
3:D:175:LEU:O	3:D:182:LEU:HD23	2.19	0.42
4:E:72:VAL:HG12	4:E:73:GLU:O	2.19	0.42
5:F:81:PRO:HA	5:F:87:GLY:O	2.19	0.42
6:G:179:PRO:HB3	26:4:43:TYR:CE1	2.52	0.42
8:I:7:GLU:HB3	8:I:8:PRO:HD2	2.01	0.42
12:Q:106:VAL:HG13	12:Q:118:LEU:HD21	2.02	0.42
18:W:59:VAL:HG22	18:W:64:MET:O	2.20	0.42
20:Y:44:ILE:HA	20:Y:63:LYS:O	2.19	0.42
21:Z:6:LYS:HD2	21:Z:8:TYR:CZ	2.54	0.42
24:2:10:LEU:HD21	24:2:59:ARG:CD	2.42	0.42
25:3:4:LEU:HD11	25:3:39:ASP:CG	2.45	0.42
26:4:63:TYR:CE2	50:s:5:LEU:HD22	2.55	0.42
32:a:193:C:H2'	32:a:194:C:H6	1.84	0.42
32:a:538:G:OP1	43:l:114:LYS:N	2.33	0.42
32:a:587:G:O2'	32:a:588:G:H5'	2.20	0.42
32:a:600:C:OP1	39:h:97:VAL:HG23	2.19	0.42
32:a:687:A:H2'	32:a:687:A:OP2	2.20	0.42
32:a:1056:U:H2'	32:a:1057:G:C8	2.55	0.42
32:a:1387:G:H2'	32:a:1388:C:H6	1.85	0.42
32:a:1444:C:O2'	32:a:1445:C:H5'	2.20	0.42
33:b:128:GLU:HA	33:b:135:GLN:NE2	2.34	0.42
33:b:171:ALA:O	33:b:174:VAL:HB	2.20	0.42
33:b:223:ILE:HA	33:b:226:ARG:HG2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:c:117:ALA:CB	34:c:187:ALA:HB2	2.48	0.42
35:d:72:GLU:OE2	35:d:207:TYR:OH	2.38	0.42
35:d:174:LEU:HD23	35:d:185:PHE:HA	2.02	0.42
36:e:143:ARG:HB3	36:e:147:ASP:HB2	2.02	0.42
38:g:69:VAL:HG11	38:g:104:LEU:HD12	2.01	0.42
38:g:108:ALA:HB1	38:g:120:ILE:HD13	2.01	0.42
41:j:42:THR:HG23	41:j:68:HIS:CA	2.45	0.42
45:n:9:LYS:HD2	45:n:12:ARG:HH21	1.85	0.42
46:o:58:MET:O	46:o:62:GLN:N	2.39	0.42
49:r:21:LYS:HD2	49:r:56:THR:C	2.44	0.42
50:s:39:THR:HG23	50:s:69:HIS:O	2.20	0.42
54:C:6:ARG:HD3	54:C:34:THR:O	2.19	0.42
54:C:14:VAL:HG12	54:C:32:LEU:HD11	2.02	0.42
54:C:98:GLU:OE2	54:C:101:GLN:HB2	2.20	0.42
54:C:148:ASN:O	54:C:152:ILE:HG13	2.19	0.42
55:z:7:A:O2'	55:z:49:C:O4'	2.38	0.42
1:A:37:C:O2'	1:A:38:A:H5'	2.20	0.42
1:A:130:C:H4'	1:A:1349:A:O4'	2.20	0.42
1:A:139(B):G:H3'	1:A:140:G:H8	1.85	0.42
1:A:185:U:H2'	1:A:186:G:C8	2.54	0.42
1:A:259:G:O2'	1:A:260:G:H5'	2.19	0.42
1:A:279:C:H2'	1:A:280:C:C6	2.55	0.42
1:A:291:C:H2'	1:A:292:C:C6	2.54	0.42
1:A:370:G:H2'	1:A:423:A:N7	2.34	0.42
1:A:834:C:H2'	1:A:835:A:H8	1.84	0.42
1:A:900:A:H3'	1:A:901:A:H8	1.84	0.42
1:A:1199:U:H2'	1:A:1200:C:O4'	2.20	0.42
1:A:1313:U:H4'	1:A:1332:G:H4'	2.01	0.42
1:A:1406:U:H2'	1:A:1407:C:H6	1.80	0.42
1:A:1780:A:O2'	1:A:1781:C:H2'	2.19	0.42
1:A:1814:G:H2'	1:A:1815:A:C8	2.55	0.42
1:A:1906:G:O2'	1:A:1907:G:H5'	2.19	0.42
1:A:2015:A:H5''	1:A:2016:U:OP2	2.19	0.42
1:A:2173:A:O5'	1:A:2174:C:H5	2.03	0.42
1:A:2253:G:O2'	1:A:2254:C:H5'	2.20	0.42
1:A:2303:G:N3	6:G:132:ASN:ND2	2.68	0.42
1:A:2406:U:C4	11:P:72:PRO:HD2	2.55	0.42
1:A:2569:G:O2'	1:A:2570:G:H5'	2.20	0.42
1:A:2578:G:N7	4:E:140:SER:HB2	2.34	0.42
1:A:2871:C:H5''	1:A:2872:G:OP1	2.20	0.42
2:B:40:U:H1'	2:B:45:A:N6	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:H:41:MET:CE	7:H:64:LEU:HB2	2.48	0.42
9:N:15:LEU:HD12	9:N:137:LYS:CD	2.46	0.42
11:P:85:LEU:HD13	11:P:120:ALA:HB2	2.02	0.42
13:R:22:ARG:O	13:R:26:LYS:HG3	2.20	0.42
17:V:2:PHE:CD2	17:V:13:ARG:HG2	2.55	0.42
18:W:86:LEU:HD12	18:W:87:PRO:CD	2.48	0.42
19:X:57:LEU:O	19:X:77:LYS:HG3	2.20	0.42
20:Y:15:VAL:O	20:Y:21:LYS:HA	2.20	0.42
21:Z:4:ARG:HG2	21:Z:58:VAL:HB	2.02	0.42
21:Z:5:LEU:HD11	21:Z:39:VAL:HB	2.01	0.42
22:O:17:GLN:O	22:O:19:LYS:HE3	2.19	0.42
23:1:72:GLU:O	23:1:76:ARG:HG3	2.20	0.42
32:a:107:G:H2'	32:a:108:G:O4'	2.20	0.42
32:a:189(M):G:O2'	32:a:190:U:H5'	2.19	0.42
32:a:376:G:O2'	47:p:5:ARG:NH1	2.53	0.42
32:a:390:C:H2'	32:a:391:G:H8	1.84	0.42
32:a:638:G:H2'	32:a:639:G:C8	2.52	0.42
32:a:693:G:H1'	38:g:82:GLY:H	1.85	0.42
32:a:738:C:H4'	37:f:69:GLU:O	2.19	0.42
32:a:911:U:O2'	32:a:912:C:H5'	2.20	0.42
32:a:1175:G:O2'	32:a:1176:A:H5'	2.20	0.42
32:a:1189:C:H5''	34:c:5:ILE:CD1	2.46	0.42
32:a:1221:G:P	50:s:36:ARG:HD3	2.60	0.42
32:a:1321:C:H3'	32:a:1322:C:H2'	2.02	0.42
32:a:1354:C:O2'	32:a:1355:G:H5'	2.19	0.42
32:a:1381:U:H2'	32:a:1382:C:C6	2.54	0.42
32:a:1510:U:H2'	32:a:1511:G:H8	1.82	0.42
32:a:1535:C:O2'	32:a:1536:C:OP1	2.34	0.42
33:b:97:TRP:CD2	33:b:173:ALA:HB2	2.55	0.42
33:b:187:LEU:HD11	33:b:204:ASN:C	2.45	0.42
34:c:54:ARG:HB3	34:c:69:HIS:ND1	2.35	0.42
35:d:18:LYS:NZ	35:d:34:GLU:HG2	2.32	0.42
35:d:173:TRP:CE3	35:d:193:ASP:HB3	2.55	0.42
36:e:40:ARG:HA	36:e:40:ARG:HD3	1.91	0.42
36:e:40:ARG:HB3	36:e:66:MET:HE3	2.02	0.42
37:f:22:GLU:CD	37:f:82:ARG:HE	2.27	0.42
40:i:95:LYS:C	40:i:99:LEU:HD13	2.44	0.42
42:k:54:ARG:HA	42:k:57:THR:HG23	2.00	0.42
44:m:108:ARG:NH1	44:m:113:PRO:O	2.53	0.42
45:n:24:CYS:HB3	45:n:28:GLY:N	2.34	0.42
50:s:45:VAL:CG2	50:s:67:VAL:HG22	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:s:51:VAL:N	50:s:58:VAL:O	2.52	0.42
1:A:429:A:H2'	1:A:430:G:C4	2.55	0.42
1:A:541:C:O2'	1:A:542:C:H5'	2.19	0.42
1:A:557:U:O2	9:N:45:ASN:HB2	2.20	0.42
1:A:710:G:H2'	1:A:711:G:H8	1.85	0.42
1:A:950:G:O2'	1:A:951:C:H5'	2.20	0.42
1:A:974:G:H3'	1:A:975(A):C:C5'	2.50	0.42
1:A:1147:C:H2'	1:A:1148:A:O4'	2.20	0.42
1:A:1167:U:H2'	1:A:1168:G:C8	2.55	0.42
1:A:1182:A:H2'	1:A:1183:G:O4'	2.20	0.42
1:A:1223:G:H2'	1:A:1225:G:OP2	2.20	0.42
1:A:1543:C:O2'	1:A:1544:A:H4'	2.20	0.42
1:A:1651:G:OP1	13:R:40:LYS:NZ	2.47	0.42
1:A:1990:C:H2'	1:A:1991:U:O4'	2.20	0.42
1:A:2002:G:O4'	1:A:2712(B):A:O2'	2.37	0.42
1:A:2040:C:H2'	1:A:2041:U:H6	1.84	0.42
1:A:2065:C:O2'	1:A:2251:OMG:HM21	2.20	0.42
1:A:2485:G:H5''	12:Q:46:GLN:NE2	2.35	0.42
1:A:2504:U:O2'	4:E:144:ARG:NH2	2.53	0.42
1:A:2515:C:H2'	1:A:2516:G:C8	2.48	0.42
1:A:2653:U:H3'	1:A:2654:A:C8	2.54	0.42
2:B:110:G:O2'	2:B:111:G:H5'	2.19	0.42
3:D:30:GLU:O	3:D:34:VAL:HG22	2.20	0.42
4:E:12:THR:O	4:E:23:VAL:HG22	2.19	0.42
5:F:102:PRO:HB2	5:F:105:VAL:HG23	2.01	0.42
6:G:36:LYS:HB2	6:G:94:LEU:O	2.20	0.42
6:G:45:GLU:HA	6:G:47:LYS:NZ	2.34	0.42
6:G:134:GLY:C	6:G:135:LEU:HD22	2.45	0.42
7:H:35:VAL:HG11	7:H:72:ILE:CG1	2.50	0.42
9:N:58:ASP:OD1	9:N:59:LYS:N	2.53	0.42
10:O:8:LEU:O	10:O:18:LYS:HA	2.20	0.42
10:O:120:GLU:HB2	15:T:68:TYR:HE2	1.85	0.42
13:R:59:ASP:O	13:R:63:ARG:HG3	2.20	0.42
14:S:49:VAL:HG12	14:S:73:LEU:CD1	2.49	0.42
18:W:3:ALA:CB	18:W:58:ALA:HB2	2.49	0.42
19:X:50:LYS:H	19:X:87:GLN:CD	2.24	0.42
20:Y:88:LYS:HB3	20:Y:96:ILE:CG1	2.49	0.42
24:2:50:ILE:O	24:2:54:LYS:HG3	2.20	0.42
32:a:33:A:C5'	32:a:364:A:H1'	2.50	0.42
32:a:72:C:H4'	32:a:201:C:OP1	2.19	0.42
32:a:93:G:H2'	32:a:96:U:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:318:G:O2'	32:a:1468:A:O2'	2.27	0.42
32:a:330:C:C2'	32:a:331:G:H5'	2.50	0.42
32:a:557:G:H2'	32:a:558:G:O4'	2.20	0.42
32:a:612:C:H2'	32:a:613:C:C6	2.55	0.42
32:a:707:C:H4'	42:k:20:TYR:CD2	2.55	0.42
32:a:1128:C:O2'	32:a:1129:C:OP1	2.26	0.42
32:a:1240:U:OP2	38:g:115:ARG:HA	2.20	0.42
32:a:1275:A:O2'	32:a:1276:G:H5'	2.19	0.42
32:a:1278:U:H5'	32:a:1279:A:C8	2.55	0.42
32:a:1352:C:H2'	32:a:1353:G:O4'	2.20	0.42
32:a:1429:C:H2'	32:a:1430:C:H6	1.85	0.42
32:a:1484:C:O2'	32:a:1485:U:H5'	2.20	0.42
33:b:53:ARG:HA	33:b:56:ARG:NH2	2.35	0.42
33:b:220:ASP:O	33:b:223:ILE:HG13	2.20	0.42
34:c:132:ARG:NH2	56:x:26:C:O4'	2.53	0.42
35:d:21:LEU:HD12	58:d:301:SF4:S4	2.60	0.42
43:l:53:ARG:CB	43:l:93:LEU:HD21	2.50	0.42
44:m:108:ARG:HD3	44:m:112:GLY:O	2.19	0.42
50:s:36:ARG:HD2	50:s:52:TYR:O	2.20	0.42
53:y:5:G:O2'	53:y:6:G:H5'	2.20	0.42
54:C:137:LEU:HD22	54:C:138:PRO:CD	2.50	0.42
1:A:430:G:H5''	1:A:431:U:OP2	2.19	0.41
1:A:443:A:N7	5:F:45:ARG:HG2	2.35	0.41
1:A:503:A:H5'	1:A:505:A:H8	1.86	0.41
1:A:662:G:O2'	1:A:663:G:H5'	2.20	0.41
1:A:1024:G:OP2	1:A:1025:G:O2'	2.34	0.41
1:A:1398:C:O2'	1:A:1399:C:H5'	2.19	0.41
1:A:1682:G:H2'	1:A:1683:C:C6	2.55	0.41
1:A:1721:G:H5'	1:A:1722:A:O5'	2.20	0.41
1:A:2059:A:H5''	1:A:2060:A:OP2	2.20	0.41
1:A:2071:A:H2'	1:A:2072:G:C8	2.52	0.41
1:A:2133:G:C2'	1:A:2157:G:H2'	2.49	0.41
1:A:2644:G:H2'	1:A:2645:G:O4'	2.20	0.41
1:A:2670:A:O2'	1:A:2671:A:H5'	2.20	0.41
1:A:2712(A):U:HO2'	1:A:2713:A:H5'	1.83	0.41
2:B:12:C:N4	22:O:72:ARG:HH21	2.18	0.41
2:B:76:G:H5'	21:Z:10:ARG:HH22	1.85	0.41
2:B:113:G:H2'	2:B:114:C:H6	1.85	0.41
2:B:117:G:H2'	2:B:118:G:C8	2.55	0.41
3:D:155:LEU:HD23	3:D:177:LEU:HD22	2.02	0.41
3:D:172:TYR:CD2	3:D:184:LYS:HB3	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:226:MET:SD	3:D:231:HIS:HB2	2.60	0.41
5:F:34:TRP:NE1	11:P:8:PRO:HD3	2.35	0.41
5:F:122:LYS:O	5:F:191:ARG:HG3	2.20	0.41
6:G:40:ASN:OD1	6:G:41:GLN:N	2.53	0.41
6:G:59:GLU:O	6:G:63:ILE:HG13	2.20	0.41
7:H:159:GLU:CG	7:H:169:VAL:HG11	2.49	0.41
13:R:28:LEU:O	13:R:32:GLY:N	2.41	0.41
14:S:63:THR:O	14:S:66:ALA:HB3	2.20	0.41
14:S:106:ARG:NE	14:S:112:PHE:OXT	2.53	0.41
15:T:26:ASP:OD1	15:T:91:ARG:HA	2.20	0.41
15:T:39:ARG:HH12	15:T:41:ARG:HB3	1.84	0.41
16:U:53:ARG:HA	16:U:56:ASP:OD2	2.20	0.41
18:W:13:SER:HB3	18:W:16:LYS:CG	2.50	0.41
18:W:68:ARG:O	18:W:110:LYS:N	2.42	0.41
23:1:53:VAL:HG22	23:1:74:VAL:HG13	2.02	0.41
26:4:2:LYS:HB2	26:4:5:ILE:HD13	1.99	0.41
32:a:62:U:C4	32:a:98:G:H2'	2.55	0.41
32:a:538:G:H2'	32:a:539:A:C8	2.54	0.41
32:a:876:G:H2'	32:a:877:C:H6	1.85	0.41
32:a:1005:A:H5''	32:a:1006:C:C5	2.49	0.41
32:a:1030(B):G:O2'	32:a:1030(D):G:O4'	2.38	0.41
32:a:1057:G:O2'	32:a:1058:G:H5'	2.19	0.41
32:a:1060:C:P	45:n:45:ARG:HH22	2.43	0.41
32:a:1112:C:H42	34:c:178:LEU:HD23	1.84	0.41
33:b:69:LEU:HD12	33:b:91:PRO:O	2.20	0.41
35:d:185:PHE:HZ	35:d:188:LEU:HA	1.85	0.41
36:e:5:ASP:HB3	56:x:55:A:H5''	2.02	0.41
38:g:106:GLN:O	38:g:109:ASN:HB2	2.20	0.41
38:g:130:GLY:C	38:g:135:VAL:HG11	2.45	0.41
41:j:16:LEU:C	41:j:19:SER:HG	2.28	0.41
53:y:3:C:H2'	53:y:4:G:C8	2.54	0.41
53:y:51:C:H2'	53:y:52:G:C8	2.55	0.41
54:C:6:ARG:HD3	54:C:34:THR:HB	2.02	0.41
54:C:24:GLU:O	54:C:27:ARG:HG2	2.19	0.41
54:C:41:VAL:HG23	54:C:177:LYS:C	2.45	0.41
54:C:47:LEU:HD13	54:C:49:ILE:CD1	2.49	0.41
54:C:74:VAL:CG2	54:C:153:ILE:HG23	2.40	0.41
54:C:79:LYS:HD3	54:C:96:GLY:C	2.45	0.41
56:x:46:G:O2'	56:x:47:C:H5'	2.20	0.41
1:A:35:G:H1'	1:A:454:A:C4	2.55	0.41
1:A:39:C:H2'	1:A:40:C:H6	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:49:A:H5''	1:A:51:G:O4'	2.20	0.41
1:A:323:G:C8	5:F:171:PRO:HG3	2.55	0.41
1:A:365:C:O2'	1:A:366:C:H5'	2.20	0.41
1:A:493:G:O2'	1:A:494:G:H5'	2.19	0.41
1:A:590:A:H2'	1:A:591:C:O4'	2.19	0.41
1:A:614(A):U:H1'	1:A:614(D):A:N7	2.35	0.41
1:A:833:U:O2'	1:A:834:C:H5'	2.20	0.41
1:A:969:U:H4'	25:3:14:GLY:C	2.45	0.41
1:A:1007:C:H5''	9:N:35:ARG:HH12	1.83	0.41
1:A:1086:A:O2'	1:A:1103:A:N1	2.50	0.41
1:A:1248:G:H21	5:F:88:VAL:HG11	1.83	0.41
1:A:1284:A:H2'	1:A:1285:G:C8	2.55	0.41
1:A:1371:G:H2'	1:A:1372:U:H5	1.85	0.41
1:A:1400:G:H2'	1:A:1401:G:H8	1.85	0.41
1:A:1478:G:H2'	1:A:1479:G:H8	1.85	0.41
1:A:1511:C:C2'	1:A:1512:U:H5'	2.49	0.41
1:A:1670:C:H3'	1:A:1671:U:H6	1.85	0.41
1:A:1756:G:OP1	1:A:1756:G:H3'	2.20	0.41
1:A:1884:A:C2'	1:A:1885:A:H5'	2.50	0.41
1:A:2018:G:H2'	1:A:2019:A:H8	1.85	0.41
1:A:2065:C:H2'	1:A:2066:C:C6	2.55	0.41
1:A:2301:C:H2'	1:A:2302:G:H8	1.82	0.41
1:A:2494:G:O2'	12:Q:80:GLU:HA	2.19	0.41
1:A:2831:G:OP1	4:E:58:ARG:NE	2.50	0.41
1:A:2864:G:OP1	15:T:119:LYS:HE3	2.21	0.41
6:G:145:THR:H	6:G:148:MET:HE3	1.85	0.41
7:H:159:GLU:HG2	7:H:169:VAL:CG1	2.46	0.41
12:Q:34:LEU:HD13	12:Q:131:ILE:HG13	2.02	0.41
12:Q:52:VAL:HA	12:Q:55:VAL:CG1	2.51	0.41
12:Q:59:ARG:CZ	12:Q:60:ARG:HE	2.32	0.41
12:Q:59:ARG:NH2	21:Z:181:GLU:OE2	2.41	0.41
14:S:83:LYS:HA	14:S:110:LEU:HD12	2.01	0.41
16:U:47:TYR:CZ	17:V:74:LYS:HE2	2.55	0.41
19:X:42:ALA:O	19:X:46:ALA:HB2	2.20	0.41
21:Z:80:ARG:HB3	21:Z:82:ARG:HG3	2.02	0.41
23:1:65:SER:OG	23:1:66:HIS:ND1	2.51	0.41
25:3:3:ARG:HG2	25:3:38:GLU:OE1	2.20	0.41
26:4:61:ARG:HG3	26:4:61:ARG:O	2.20	0.41
32:a:96:U:H5	32:a:98:G:OP2	2.03	0.41
32:a:186:C:H5'	51:t:78:ALA:HB1	2.02	0.41
32:a:403:C:H4'	35:d:122:ARG:HH11	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:585:G:O3'	48:q:34:LYS:NZ	2.51	0.41
32:a:637:G:O2'	32:a:638:G:H5'	2.20	0.41
32:a:1061:G:C2'	32:a:1062:U:H5'	2.50	0.41
32:a:1220:G:H2'	32:a:1221:G:C8	2.55	0.41
32:a:1226:C:O2'	44:m:103:THR:O	2.20	0.41
32:a:1249:C:O2'	40:i:73:GLN:NE2	2.53	0.41
32:a:1292:U:O2'	32:a:1293:G:H5'	2.21	0.41
32:a:1403:C:H3'	32:a:1404:5MC:HM51	2.01	0.41
32:a:1441:G:O2'	32:a:1460:A:N6	2.49	0.41
32:a:1514:C:H2'	32:a:1515:C:H6	1.84	0.41
32:a:1518:MA6:H2'	32:a:1519:MA6:C8	2.50	0.41
32:a:1518:MA6:N7	32:a:1518:MA6:H102	2.35	0.41
33:b:9:GLU:CG	33:b:11:LEU:HD23	2.49	0.41
33:b:107:THR:O	33:b:110:GLN:HB3	2.20	0.41
35:d:104:VAL:HG21	35:d:140:VAL:HB	2.01	0.41
37:f:35:ALA:HA	37:f:67:MET:HB3	2.01	0.41
38:g:53:LYS:HD3	38:g:125:MET:SD	2.60	0.41
39:h:112:LEU:HA	39:h:134:ILE:HG12	2.01	0.41
40:i:65:VAL:HG21	40:i:73:GLN:CB	2.50	0.41
44:m:34:LEU:O	44:m:38:GLY:N	2.52	0.41
46:o:33:THR:CB	46:o:85:LEU:HD13	2.50	0.41
48:q:43:LEU:HD12	48:q:68:ARG:CG	2.50	0.41
51:t:49:ALA:HB3	51:t:99:LEU:HD13	2.02	0.41
53:y:29:G:O2'	53:y:30:G:H5'	2.19	0.41
53:y:29:G:H2'	53:y:30:G:O4'	2.20	0.41
55:z:50:U:H2'	55:z:51:U:C6	2.55	0.41
1:A:560:C:O2'	1:A:561:G:H5'	2.20	0.41
1:A:600:G:N2	1:A:605:C:O3'	2.53	0.41
1:A:658:C:O2'	1:A:659:C:H5'	2.21	0.41
1:A:804:A:H2'	1:A:806:C:C4	2.54	0.41
1:A:974:G:H3'	1:A:975(A):C:H5'	2.02	0.41
1:A:1131:G:OP2	1:A:2515:C:H4'	2.20	0.41
1:A:1164:G:H2'	1:A:1165:U:H6	1.85	0.41
1:A:1326:U:O2'	1:A:2010:G:O2'	2.11	0.41
1:A:1343:G:O2'	1:A:1384:A:N1	2.51	0.41
1:A:1443:G:H2'	1:A:1444:G:O4'	2.21	0.41
1:A:1461:G:H2'	1:A:1462:C:C6	2.55	0.41
1:A:1495:A:H2'	1:A:1496:A:C8	2.55	0.41
1:A:1847:A:H5''	1:A:1847:A:N3	2.34	0.41
1:A:2297:C:C2'	1:A:2298:A:H5'	2.50	0.41
1:A:2370:G:H4'	28:6:44:ARG:NH2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2663:G:C2	1:A:2664:G:H1'	2.55	0.41
1:A:2836:U:H6	1:A:2836:U:O5'	2.02	0.41
2:B:72:G:O2'	2:B:73:A:O4'	2.31	0.41
3:D:24:ILE:HD13	3:D:84:TYR:HB2	2.01	0.41
4:E:11:MET:HA	4:E:24:THR:HA	2.01	0.41
4:E:98:PRO:HB3	4:E:174:ASP:HA	2.01	0.41
4:E:152:LYS:HB3	9:N:78:TYR:CE1	2.55	0.41
6:G:75:LYS:HA	6:G:84:LYS:CD	2.50	0.41
7:H:85:LYS:CD	7:H:141:VAL:HG12	2.44	0.41
8:I:85:GLU:CB	37:f:21:LEU:HD23	2.49	0.41
8:I:85:GLU:HB2	37:f:21:LEU:HD23	2.02	0.41
9:N:34:LEU:CD2	9:N:107:LEU:HD11	2.50	0.41
10:O:105:GLU:O	10:O:108:GLU:HB2	2.20	0.41
11:P:46:LYS:O	11:P:48:PRO:HD3	2.21	0.41
11:P:59:LEU:O	11:P:59:LEU:HD22	2.20	0.41
14:S:44:LYS:HB3	14:S:46:VAL:HG23	2.02	0.41
20:Y:99:CYS:N	20:Y:104:GLY:O	2.41	0.41
21:Z:8:TYR:HB3	21:Z:38:TYR:CE1	2.55	0.41
21:Z:56:VAL:HA	21:Z:70:LEU:HD21	2.02	0.41
21:Z:95:PRO:HB3	21:Z:129:SER:CA	2.45	0.41
21:Z:97:GLU:HA	21:Z:126:VAL:O	2.21	0.41
21:Z:180:VAL:CG2	21:Z:183:LEU:HD12	2.41	0.41
22:0:32:ARG:H	22:0:35:ASN:ND2	2.19	0.41
22:0:47:PRO:HD3	22:0:59:LEU:HD21	2.02	0.41
26:4:58:ARG:CG	50:s:67:VAL:HB	2.51	0.41
27:5:31:VAL:HB	27:5:32:PRO:HD2	2.01	0.41
32:a:384:G:O2'	32:a:385:C:H5'	2.21	0.41
32:a:572:A:O2'	32:a:916:G:O2'	2.11	0.41
32:a:689:C:H2'	32:a:690:G:O4'	2.20	0.41
32:a:931:C:O2'	32:a:932:C:H5'	2.20	0.41
32:a:1105:A:H2'	32:a:1106:G:H8	1.85	0.41
32:a:1346:A:N1	32:a:1374:A:H5''	2.34	0.41
32:a:1351:U:H2'	32:a:1352:C:H6	1.85	0.41
33:b:16:HIS:CG	33:b:210:SER:HB3	2.54	0.41
34:c:117:ALA:HB1	34:c:187:ALA:CB	2.49	0.41
37:f:30:LEU:HD13	37:f:37:VAL:HG22	2.02	0.41
38:g:73:MET:SD	38:g:90:GLU:HA	2.60	0.41
39:h:91:ARG:HD3	48:q:32:TYR:O	2.21	0.41
41:j:32:ALA:CB	41:j:33:GLN:HA	2.43	0.41
44:m:95:GLY:O	44:m:110:ARG:HG3	2.20	0.41
46:o:5:LYS:O	46:o:9:GLN:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:o:37:ASN:O	46:o:41:GLU:HG2	2.20	0.41
48:q:58:GLU:HG3	48:q:77:VAL:HG22	2.02	0.41
53:y:8:U:O2	53:y:14:A:C5	2.72	0.41
54:C:18:LYS:O	54:C:223:ARG:HB3	2.20	0.41
1:A:202:U:H6	1:A:202:U:O5'	2.03	0.41
1:A:635:C:H2'	1:A:636:G:H8	1.85	0.41
1:A:646:A:H3'	1:A:646:A:OP2	2.21	0.41
1:A:1272:A:H3'	1:A:1273:U:H5''	2.03	0.41
1:A:1449:A:C2	1:A:1450(A):G:H1'	2.55	0.41
1:A:1502:C:H2'	1:A:1503:U:H6	1.85	0.41
1:A:1550:C:OP1	1:A:1720:U:O2'	2.34	0.41
1:A:1550:C:O2'	1:A:1551:C:H5'	2.20	0.41
1:A:1615:C:C2	18:W:87:PRO:HG2	2.56	0.41
1:A:1655:A:C2'	1:A:1656:C:H5'	2.50	0.41
1:A:1687:G:H2'	1:A:1688:U:C6	2.55	0.41
1:A:1771:C:H2'	1:A:1772:G:C8	2.56	0.41
1:A:2115:G:C2'	1:A:2171:A:H62	2.33	0.41
1:A:2270:G:H2'	1:A:2271:G:C8	2.56	0.41
1:A:2553:G:H2'	1:A:2554:U:O4'	2.20	0.41
1:A:2615:U:O2'	1:A:2616:C:H5'	2.21	0.41
1:A:2625:G:O2'	1:A:2626:C:H5'	2.20	0.41
1:A:2680:C:H1'	4:E:187:ALA:HB1	2.02	0.41
1:A:2695:C:O2'	1:A:2696:U:H5'	2.20	0.41
1:A:2728:U:O2'	1:A:2729:G:H5'	2.20	0.41
2:B:6:C:H2'	2:B:7:G:H8	1.85	0.41
3:D:260:ARG:NH1	3:D:267:SER:OG	2.38	0.41
4:E:48:GLN:HA	4:E:79:ARG:O	2.21	0.41
5:F:113:ALA:O	5:F:116:ASP:HB3	2.20	0.41
6:G:5:VAL:HG11	6:G:101:ILE:HG13	2.02	0.41
6:G:61:ALA:HB1	26:4:7:PRO:CG	2.35	0.41
7:H:86:GLU:HB2	7:H:165:ALA:HB2	2.02	0.41
7:H:95:ARG:HD3	7:H:128:PRO:HB2	2.02	0.41
12:Q:10:ARG:HG2	12:Q:90:VAL:HG21	2.02	0.41
12:Q:65:PHE:HB2	12:Q:105:GLU:O	2.20	0.41
13:R:12:ARG:HH12	13:R:40:LYS:HE3	1.85	0.41
14:S:11:LYS:HE2	14:S:91:PRO:HG3	2.02	0.41
14:S:40:ILE:HG23	14:S:46:VAL:C	2.45	0.41
22:0:43:THR:HG23	22:0:43:THR:O	2.21	0.41
24:2:32:LEU:O	24:2:36:ARG:HG3	2.19	0.41
32:a:67:C:H2'	32:a:68:G:OP1	2.20	0.41
32:a:76:C:H2'	32:a:76:C:O2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:96:U:O2'	32:a:102:G:H3'	2.19	0.41
32:a:188:C:O2'	32:a:189(A):G:H5'	2.21	0.41
32:a:263:A:OP1	51:t:79:ARG:NH1	2.49	0.41
32:a:267:C:P	48:q:67:LYS:HD2	2.61	0.41
32:a:325:A:O2'	32:a:326:G:H5'	2.21	0.41
32:a:413:G:H4'	32:a:414:A:C5'	2.49	0.41
32:a:538:G:OP2	43:l:115:LYS:HB2	2.19	0.41
32:a:577:G:C1'	32:a:816:A:H2'	2.50	0.41
32:a:697:U:C4'	32:a:786:G:H4'	2.50	0.41
32:a:770:C:H2'	32:a:771:G:H8	1.85	0.41
32:a:986:A:H2'	32:a:987:G:O4'	2.20	0.41
32:a:1160:G:N7	32:a:1182:G:N1	2.61	0.41
32:a:1437:C:H2'	32:a:1438:G:H8	1.84	0.41
33:b:163:PHE:CE2	33:b:215:LEU:HD21	2.56	0.41
34:c:23:TYR:CD1	41:j:10:GLY:HA2	2.54	0.41
34:c:92:ALA:HB2	34:c:99:VAL:CB	2.50	0.41
34:c:112:SER:O	34:c:116:VAL:HG23	2.21	0.41
35:d:101:LEU:HB2	35:d:138:TYR:HB3	2.02	0.41
35:d:161:ASN:O	35:d:165:MET:N	2.47	0.41
36:e:71:LEU:HD12	36:e:74:GLY:C	2.45	0.41
38:g:69:VAL:O	38:g:69:VAL:HG12	2.20	0.41
40:i:70:LYS:O	40:i:73:GLN:HB2	2.21	0.41
42:k:45:GLY:O	42:k:50:TYR:HB2	2.20	0.41
42:k:101:SER:OG	42:k:103:LEU:HD13	2.21	0.41
46:o:69:TYR:O	46:o:73:GLU:HG2	2.20	0.41
48:q:4:LYS:HG3	48:q:6:LEU:CD1	2.49	0.41
48:q:17:LYS:HA	48:q:46:ASP:O	2.19	0.41
49:r:30:ASP:HB3	49:r:33:ASP:CB	2.47	0.41
49:r:41:LYS:HB3	49:r:41:LYS:HE2	1.83	0.41
1:A:13:A:N1	1:A:525:U:H2'	2.35	0.41
1:A:68:G:H2'	1:A:69:C:C6	2.55	0.41
1:A:76:C:O2'	1:A:77:C:H5'	2.20	0.41
1:A:309:G:H1'	1:A:329:G:N3	2.35	0.41
1:A:530:G:C5	1:A:2022:U:H5''	2.55	0.41
1:A:654:A:O2'	1:A:655:A:H5'	2.20	0.41
1:A:720:C:O2'	1:A:721:C:H5'	2.20	0.41
1:A:766:C:H2'	1:A:767:U:C6	2.55	0.41
1:A:872:A:H2'	1:A:873:G:H8	1.85	0.41
1:A:1581:G:C2'	1:A:1582:C:H5'	2.51	0.41
1:A:1651:G:H5'	13:R:39:PRO:CG	2.45	0.41
1:A:1696:G:H2'	1:A:1697:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1802:A:H2'	1:A:1803:A:O4'	2.21	0.41
1:A:1876:A:H2'	1:A:1877:A:H1'	2.02	0.41
1:A:1907:G:O6	1:A:1924:C:N4	2.53	0.41
1:A:2198:A:H1'	1:A:2199:A:H5'	2.02	0.41
1:A:2312:U:O3'	6:G:71:THR:HB	2.20	0.41
1:A:2341:G:H2'	1:A:2342:C:O4'	2.20	0.41
1:A:2599:G:O2'	1:A:2600:A:H5'	2.21	0.41
1:A:2653:U:OP2	1:A:2654:A:O2'	2.38	0.41
1:A:2684:U:O2'	1:A:2685:G:H5'	2.20	0.41
2:B:28:C:H2'	2:B:29:A:O4'	2.20	0.41
4:E:2:LYS:HG3	4:E:200:GLU:HB2	2.03	0.41
4:E:34:VAL:HG22	4:E:78:LEU:HD11	2.02	0.41
6:G:8:LYS:O	6:G:11:TYR:HB3	2.20	0.41
6:G:75:LYS:HA	6:G:84:LYS:HG3	2.02	0.41
7:H:115:VAL:HG21	7:H:148:ILE:CD1	2.50	0.41
9:N:17:ASP:HB2	9:N:137:LYS:NZ	2.34	0.41
9:N:43:THR:HG23	9:N:44:PRO:HD2	2.02	0.41
11:P:132:LYS:O	11:P:136:GLU:HG3	2.20	0.41
13:R:30:THR:HA	13:R:78:LYS:HZ3	1.85	0.41
15:T:46:GLU:OE2	15:T:89:VAL:HG11	2.19	0.41
16:U:68:ALA:HB2	16:U:99:ALA:HB1	2.02	0.41
24:2:12:GLU:HA	24:2:15:LYS:NZ	2.33	0.41
24:2:33:MET:O	24:2:36:ARG:HB2	2.20	0.41
32:a:66:G:H5''	32:a:73:G:C5	2.56	0.41
32:a:136:C:O2'	47:p:65:GLN:NE2	2.53	0.41
32:a:200:G:H2'	32:a:201:C:O4'	2.20	0.41
32:a:510:A:H5''	32:a:511:C:P	2.60	0.41
32:a:525:C:H2'	32:a:526:C:H6	1.85	0.41
32:a:581:G:H2'	32:a:582:U:C6	2.56	0.41
32:a:697:U:O2	32:a:798:G:H1'	2.20	0.41
32:a:781:A:H5'	32:a:782:A:OP2	2.21	0.41
32:a:890:G:H1'	32:a:891:U:H5	1.84	0.41
32:a:992:U:H3	32:a:1044:A:N6	2.18	0.41
32:a:1012:U:O2	32:a:1017:G:C6	2.73	0.41
32:a:1060:C:H4'	41:j:52:GLY:N	2.35	0.41
32:a:1073:U:C2'	32:a:1074:G:H5'	2.49	0.41
32:a:1074:G:O2'	32:a:1075:C:H5'	2.19	0.41
32:a:1308:U:H2'	32:a:1309:G:H8	1.86	0.41
32:a:1351:U:O2'	32:a:1352:C:H5'	2.20	0.41
32:a:1507:A:H2'	32:a:1508:G:H8	1.85	0.41
33:b:53:ARG:HA	33:b:56:ARG:HE	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:e:74:GLY:CA	36:e:116:THR:HG22	2.50	0.41
41:j:82:ILE:O	41:j:85:LEU:HB2	2.20	0.41
44:m:78:ILE:O	44:m:82:MET:HG3	2.20	0.41
46:o:33:THR:HG21	46:o:85:LEU:HD13	2.02	0.41
47:p:4:ILE:O	47:p:66:PRO:HA	2.20	0.41
47:p:18:ARG:HG2	47:p:35:LYS:HE3	2.02	0.41
50:s:48:THR:C	50:s:49:ILE:HD12	2.45	0.41
53:y:53:G:O2'	53:y:54:U:H5'	2.21	0.41
54:C:149:ILE:O	54:C:152:ILE:HB	2.20	0.41
54:C:175:VAL:HG21	54:C:189:ILE:CD1	2.50	0.41
1:A:128:C:H2'	1:A:129:C:H6	1.86	0.41
1:A:280:C:C2'	1:A:281:G:H5'	2.51	0.41
1:A:455:C:N3	1:A:472:A:H2'	2.36	0.41
1:A:513:A:O2'	1:A:514:A:H5'	2.21	0.41
1:A:602:G:O2'	1:A:604:G:H4'	2.21	0.41
1:A:686:G:N2	29:7:15:THR:HG21	2.35	0.41
1:A:720:C:H2'	1:A:721:C:C6	2.56	0.41
1:A:742:G:O2'	1:A:743:G:H5'	2.20	0.41
1:A:780:G:H5''	1:A:781:A:OP1	2.21	0.41
1:A:863:A:H2'	1:A:864:G:H8	1.85	0.41
1:A:900:A:H3'	1:A:901:A:C8	2.54	0.41
1:A:918:A:O2'	2:B:97:G:N2	2.52	0.41
1:A:1321:A:H2'	1:A:1322:A:O4'	2.20	0.41
1:A:1463:C:H2'	1:A:1464:C:C6	2.56	0.41
1:A:1509(A):C:C2'	1:A:1509(B):A:H4'	2.50	0.41
1:A:1550:C:H2'	1:A:1551:C:H6	1.86	0.41
1:A:1908:C:O2'	1:A:1909:C:H5'	2.20	0.41
1:A:1912:A:OP2	1:A:1918:A:N6	2.45	0.41
1:A:2362:G:H2'	1:A:2363:C:O4'	2.21	0.41
1:A:2362:G:C2'	1:A:2363:C:H5'	2.51	0.41
1:A:2532:G:O2'	1:A:2533:A:H5'	2.21	0.41
1:A:2577:A:O4'	27:5:3:LYS:HB2	2.20	0.41
1:A:2626:C:H2'	1:A:2627:G:O4'	2.21	0.41
1:A:2851:A:H2'	1:A:2852:G:H5'	2.02	0.41
3:D:154:LYS:HB2	3:D:155:LEU:HD12	2.03	0.41
6:G:29:TRP:HA	6:G:33:ARG:HH12	1.85	0.41
6:G:46:ALA:HB2	6:G:53:LEU:CG	2.48	0.41
6:G:80:PHE:O	6:G:82:LEU:N	2.53	0.41
6:G:131:TYR:CE2	6:G:133:LEU:HD23	2.48	0.41
8:I:85:GLU:OE2	37:f:18:GLN:HA	2.20	0.41
9:N:26:LEU:O	9:N:30:ILE:HG13	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:N:95:PRO:O	9:N:98:VAL:HB	2.20	0.41
16:U:62:ILE:HG23	16:U:76:TYR:CZ	2.55	0.41
17:V:62:LEU:HD23	17:V:94:LEU:C	2.46	0.41
21:Z:27:VAL:HG12	21:Z:85:HIS:CE1	2.56	0.41
23:1:86:SER:O	23:1:90:ILE:HG13	2.20	0.41
25:3:4:LEU:O	25:3:6:VAL:HG23	2.20	0.41
30:8:56:GLU:O	30:8:60:LEU:HG	2.20	0.41
32:a:93:G:H2'	32:a:96:U:C1'	2.50	0.41
32:a:130:A:H4'	32:a:189(H):G:C4	2.56	0.41
32:a:151:A:H8	32:a:151:A:O5'	2.03	0.41
32:a:186:C:O2'	51:t:85:MET:SD	2.65	0.41
32:a:187:C:H2'	32:a:188:C:H6	1.85	0.41
32:a:229:U:H2'	32:a:230:G:C8	2.56	0.41
32:a:323:U:H5''	51:t:26:ASN:ND2	2.36	0.41
32:a:333:G:H4'	51:t:16:HIS:CD2	2.55	0.41
32:a:426:G:H2'	32:a:427:U:O4'	2.20	0.41
32:a:438:G:H4'	35:d:123:HIS:HD2	1.82	0.41
32:a:457:C:H2'	32:a:458:C:H6	1.84	0.41
32:a:949:A:O2'	32:a:950:U:H5'	2.21	0.41
32:a:963:G:H1'	32:a:973:G:N2	2.34	0.41
32:a:1030(B):G:H2'	32:a:1030(C):C:H3'	2.03	0.41
32:a:1057:G:H5'	34:c:155:GLY:HA2	2.02	0.41
32:a:1224:G:O2'	32:a:1225:A:H5'	2.20	0.41
32:a:1256:A:N6	32:a:1278:U:H4'	2.35	0.41
32:a:1304:G:H5''	32:a:1305:G:OP1	2.20	0.41
32:a:1313:U:H2'	32:a:1314:C:H6	1.85	0.41
34:c:33:LEU:HD11	34:c:37:GLN:HE21	1.85	0.41
35:d:31:CYS:SG	35:d:33:MET:N	2.94	0.41
35:d:99:SER:O	35:d:139:ARG:HA	2.19	0.41
39:h:86:ILE:HG13	39:h:133:LEU:HD22	2.03	0.41
40:i:20:ARG:HA	40:i:21:PRO:HD3	1.97	0.41
45:n:3:ARG:O	45:n:7:ILE:HG23	2.20	0.41
47:p:20:VAL:HG21	47:p:32:TYR:HB2	2.01	0.41
50:s:46:GLY:N	50:s:62:ILE:O	2.40	0.41
51:t:57:ARG:HH12	51:t:100:ILE:HB	1.85	0.41
54:C:104:LEU:HB2	54:C:105:ASP:C	2.46	0.41
54:C:117:PRO:HD3	54:C:146:GLY:CA	2.50	0.41
54:C:183:GLU:HA	54:C:186:ALA:HB2	2.03	0.41
55:z:18:G:H4'	55:z:60:U:C6	2.56	0.41
1:A:100:G:H4'	1:A:102:G:OP2	2.21	0.41
1:A:212:G:H2'	1:A:213:A:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:374:A:H2'	1:A:375:C:H5'	2.01	0.41
1:A:413:C:H2'	1:A:414:C:H6	1.85	0.41
1:A:541:C:H2'	1:A:542:C:H6	1.85	0.41
1:A:611:C:H2'	1:A:612:C:O4'	2.20	0.41
1:A:768:G:O2'	1:A:769:G:H5'	2.20	0.41
1:A:1131:G:H4'	9:N:82:LEU:HB2	2.02	0.41
1:A:1252:G:H1	16:U:37:GLU:CG	2.34	0.41
1:A:1299:G:H1'	1:A:1641:A:H61	1.86	0.41
1:A:1386:C:OP2	1:A:1396:U:N3	2.51	0.41
1:A:1582:C:HO2'	1:A:1586:A:H1'	1.85	0.41
1:A:1754:C:H2'	1:A:1755:A:O4'	2.21	0.41
1:A:1759:A:H2'	1:A:1760:A:H5'	2.02	0.41
1:A:1797:C:O2'	3:D:259:THR:HG22	2.21	0.41
1:A:2073:C:C5'	3:D:229:VAL:HG12	2.47	0.41
1:A:2445:G:P	5:F:74:ARG:HH22	2.43	0.41
1:A:2751:G:H4'	7:H:4:ILE:CG1	2.50	0.41
1:A:2840:C:C2'	1:A:2841:C:H5'	2.51	0.41
1:A:2852:G:H2'	1:A:2853:C:O4'	2.20	0.41
2:B:70:C:H2'	2:B:71:C:H6	1.86	0.41
3:D:75:ILE:CG2	3:D:98:VAL:HG22	2.47	0.41
4:E:36:ARG:HA	4:E:47:VAL:HA	2.03	0.41
4:E:170:LEU:HD23	4:E:184:VAL:HG12	2.02	0.41
5:F:9:ILE:O	5:F:19:GLU:HA	2.21	0.41
6:G:15:VAL:HG13	6:G:175:LEU:HD23	2.03	0.41
6:G:141:PHE:HB3	6:G:142:PRO:HD2	2.03	0.41
10:O:6:THR:HG22	10:O:8:LEU:HD22	2.02	0.41
12:Q:28:ALA:N	12:Q:105:GLU:OE2	2.36	0.41
12:Q:76:LYS:H	12:Q:91:GLU:HG2	1.85	0.41
14:S:24:LEU:CB	14:S:85:VAL:HG23	2.50	0.41
15:T:28:VAL:HA	15:T:87:ASP:O	2.21	0.41
16:U:104:GLN:HG2	16:U:105:VAL:N	2.36	0.41
19:X:64:LYS:HG3	19:X:73:ARG:NE	2.36	0.41
20:Y:39:VAL:HG23	20:Y:67:LEU:HD12	2.03	0.41
32:a:173:U:H1'	32:a:197:A:N7	2.36	0.41
32:a:192:U:H2'	32:a:193:C:C6	2.56	0.41
32:a:267:C:H2'	32:a:268:C:C6	2.55	0.41
32:a:280:C:C2	48:q:38:ARG:HD3	2.55	0.41
32:a:625:G:H2'	32:a:626:U:H6	1.81	0.41
32:a:636:U:C5'	48:q:2:PRO:HG3	2.50	0.41
32:a:679:C:O2'	32:a:680:C:H5'	2.21	0.41
32:a:691:G:H1'	32:a:696:A:H61	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:726:C:H2'	32:a:727:G:H8	1.85	0.41
32:a:1091:U:H2'	32:a:1093:A:OP2	2.19	0.41
32:a:1145:C:H4'	32:a:1146:A:C5'	2.50	0.41
32:a:1228:C:H2'	32:a:1229:A:C8	2.55	0.41
32:a:1281:U:H6	32:a:1281:U:H2'	1.74	0.41
32:a:1452:C:H4'	32:a:1457:G:N9	2.36	0.41
33:b:8:LYS:HD2	33:b:8:LYS:N	2.35	0.41
34:c:53:ALA:HA	34:c:115:LEU:CD1	2.51	0.41
34:c:74:GLY:HA2	34:c:77:ILE:HG12	2.03	0.41
34:c:153:VAL:HG13	34:c:197:GLY:O	2.20	0.41
37:f:12:PRO:HD3	37:f:58:GLY:HA2	2.03	0.41
38:g:131:LYS:N	38:g:135:VAL:HG21	2.36	0.41
40:i:4:TYR:O	40:i:18:PHE:HA	2.21	0.41
43:l:87:GLY:HA3	43:l:99:HIS:HD2	1.85	0.41
44:m:18:ALA:O	44:m:21:TYR:HB2	2.20	0.41
44:m:82:MET:CE	44:m:92:HIS:HB3	2.50	0.41
50:s:53:ASN:ND2	50:s:56:GLN:HB2	2.36	0.41
52:u:12:LYS:CE	52:u:19:GLY:HA3	2.50	0.41
54:C:32:LEU:CD1	54:C:220:PRO:HG2	2.45	0.41
55:z:50:U:H2'	55:z:51:U:H6	1.85	0.41
1:A:189:G:O6	1:A:205:G:O2'	2.30	0.41
1:A:195:A:H61	1:A:198:C:H3'	1.85	0.41
1:A:272(P):C:H2'	1:A:272(Q):G:H8	1.85	0.41
1:A:288:C:H2'	1:A:289:A:C8	2.54	0.41
1:A:438:G:H2'	1:A:440:G:C8	2.56	0.41
1:A:693:C:H2'	1:A:694:U:H6	1.83	0.41
1:A:1051:G:H4'	1:A:2752:C:H4'	2.03	0.41
1:A:1161:C:O2'	17:V:23:GLU:HG3	2.21	0.41
1:A:1214:A:C2'	1:A:1215:G:H5'	2.51	0.41
1:A:1381:G:H1'	1:A:1571:A:N1	2.36	0.41
1:A:1494:A:H2'	1:A:1495:A:C8	2.56	0.41
1:A:1528(B):A:H61	1:A:1541:G:C1'	2.26	0.41
1:A:1630:G:H2'	1:A:1631(A):C:C6	2.56	0.41
1:A:1633:G:H2'	1:A:1635:G:N7	2.35	0.41
1:A:1669:A:C2	1:A:1994:C:H1'	2.56	0.41
1:A:1829:A:H2'	1:A:1830:C:H5'	2.02	0.41
1:A:1930:G:N2	1:A:1968:G:H2'	2.36	0.41
1:A:1977:A:O2'	1:A:1978:A:H5'	2.21	0.41
1:A:2100:G:O6	1:A:2189:U:C4	2.73	0.41
1:A:2118:U:P	1:A:2147:G:HO2'	2.43	0.41
1:A:2133:G:N3	1:A:2157:G:H2'	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2461:C:H2'	1:A:2462:U:H6	1.86	0.41
1:A:2534:A:H3'	1:A:2535:G:H5''	2.03	0.41
1:A:2700:C:H2'	1:A:2701:C:H6	1.86	0.41
1:A:2848:G:OP1	15:T:96:ARG:HG2	2.20	0.41
5:F:24:LEU:CD2	5:F:114:VAL:HG12	2.47	0.41
5:F:28:ILE:CD1	5:F:116:ASP:HA	2.50	0.41
7:H:23:ARG:HA	7:H:35:VAL:O	2.20	0.41
7:H:172:LYS:HB2	7:H:173:PRO:HD2	2.03	0.41
9:N:18:ALA:HB3	9:N:56:ASN:O	2.20	0.41
10:O:63:VAL:HG11	10:O:85:VAL:CG2	2.49	0.41
10:O:98:VAL:HG21	10:O:118:ALA:HA	2.03	0.41
12:Q:32:TYR:CD2	12:Q:114:ALA:HB3	2.56	0.41
19:X:30:VAL:N	19:X:77:LYS:O	2.54	0.41
20:Y:14:LEU:HD12	20:Y:23:ARG:C	2.45	0.41
23:1:73:LEU:HD21	23:1:98:LEU:CD2	2.47	0.41
28:6:21:TYR:CE2	28:6:38:LYS:HB3	2.55	0.41
29:7:34:ARG:HG2	29:7:42:LEU:HD23	2.02	0.41
32:a:197:A:N6	32:a:221:C:H4'	2.35	0.41
32:a:344:A:H5''	32:a:345:C:C5	2.56	0.41
32:a:393:A:C2'	32:a:394:G:H5'	2.51	0.41
32:a:495:A:H4'	32:a:496:A:O5'	2.21	0.41
32:a:584:G:O2'	32:a:585:G:H5'	2.20	0.41
32:a:623:C:H2'	32:a:624:C:O4'	2.19	0.41
32:a:691:G:N7	42:k:26:ASN:HB3	2.36	0.41
32:a:813:U:P	32:a:816:A:H61	2.43	0.41
32:a:958:A:H2'	32:a:959:A:C8	2.55	0.41
32:a:961:U:H2'	32:a:962:C:C5'	2.50	0.41
32:a:1113:C:O2'	32:a:1114:C:H5'	2.21	0.41
32:a:1151:A:H5'	41:j:41:PRO:HA	2.01	0.41
32:a:1190:G:H5'	34:c:176:HIS:HE1	1.84	0.41
33:b:122:PHE:CD1	33:b:127:ILE:HD13	2.53	0.41
35:d:13:ARG:HH22	35:d:40:PRO:HA	1.86	0.41
35:d:156:GLU:OE1	35:d:156:GLU:N	2.54	0.41
36:e:36:ASP:CG	36:e:38:GLN:HB2	2.45	0.41
37:f:5:GLU:HG2	37:f:62:TRP:HZ2	1.86	0.41
41:j:14:LYS:O	41:j:18:ALA:N	2.25	0.41
42:k:20:TYR:HB2	42:k:31:THR:HB	2.03	0.41
53:y:3:C:H2'	53:y:4:G:H8	1.85	0.41
53:y:18:G:O2'	53:y:19:G:H5'	2.21	0.41
54:C:77:ILE:HG12	54:C:99:ILE:CD1	2.48	0.41
55:z:18:G:H4'	55:z:60:U:C4	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:52:A:H2'	1:A:53:A:H8	1.85	0.41
1:A:272(F):C:H2'	1:A:272(G):C:O4'	2.20	0.41
1:A:272(Q):G:O2'	23:1:76:ARG:O	2.39	0.41
1:A:300:A:H2'	1:A:334:C:O2'	2.21	0.41
1:A:479:A:H4'	1:A:480:A:OP1	2.21	0.41
1:A:494:G:H4'	18:W:6:ILE:CB	2.45	0.41
1:A:528:A:H3'	1:A:528:A:N3	2.36	0.41
1:A:566:U:O2'	1:A:809:G:OP2	2.32	0.41
1:A:566:U:P	17:V:80:GLN:HE21	2.44	0.41
1:A:585:G:O6	1:A:1251:C:O2'	2.36	0.41
1:A:714:U:N3	1:A:717:G:OP2	2.42	0.41
1:A:743:G:O2'	1:A:744:G:H5'	2.20	0.41
1:A:779:U:OP1	3:D:49:ILE:HG13	2.21	0.41
1:A:816:C:H2'	1:A:817:C:O4'	2.20	0.41
1:A:838:C:H2'	1:A:839:U:C6	2.56	0.41
1:A:852:G:H2'	1:A:853:G:H8	1.85	0.41
1:A:858:U:O2'	1:A:2268:A:H1'	2.21	0.41
1:A:996:A:H1'	17:V:9:GLY:O	2.19	0.41
1:A:1077:A:C2'	1:A:1078:U:H5'	2.51	0.41
1:A:1168:G:O2'	1:A:1169:G:H5'	2.20	0.41
1:A:1209:G:O2'	1:A:1237:A:N1	2.49	0.41
1:A:1239:G:O2'	1:A:1240:U:H5'	2.20	0.41
1:A:1265:A:N6	1:A:2014:A:OP2	2.54	0.41
1:A:1283:G:N2	1:A:1286:A:OP2	2.53	0.41
1:A:1371:G:H2'	1:A:1372:U:C5	2.56	0.41
1:A:1402:C:H3'	1:A:1403:C:H5''	2.02	0.41
1:A:1402:C:C2'	1:A:1403:C:H5''	2.50	0.41
1:A:1432:C:H2'	1:A:1433:U:C6	2.56	0.41
1:A:1509(C):A:H2'	1:A:1510:G:C8	2.56	0.41
1:A:1511:C:O2'	1:A:1512:U:H5'	2.21	0.41
1:A:1614:A:OP2	1:A:1614:A:H8	2.04	0.41
1:A:1806:C:O2'	3:D:46:GLN:OE1	2.13	0.41
1:A:1954:G:C2	1:A:2551:C:H5''	2.56	0.41
1:A:2051:A:OP2	1:A:2051:A:H8	2.04	0.41
1:A:2083:G:H2'	1:A:2084:C:O4'	2.20	0.41
1:A:2100:G:N1	1:A:2189:U:N3	2.29	0.41
1:A:2109:U:H3'	1:A:2110:G:C8	2.56	0.41
1:A:2186:G:N3	1:A:2186:G:H2'	2.36	0.41
1:A:2294:C:H2'	1:A:2295:C:C6	2.55	0.41
1:A:2380:C:H2'	1:A:2381:C:C6	2.56	0.41
1:A:2405:G:H1'	1:A:2412:A:H61	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2487:G:H2'	1:A:2488:A:H8	1.86	0.41
1:A:2561:A:H2'	1:A:2562:U:O4'	2.21	0.41
1:A:2619:C:H1'	4:E:150:VAL:HG11	2.03	0.41
1:A:2647:U:O2'	1:A:2648:C:H5'	2.21	0.41
1:A:2708:G:HO2'	1:A:2709:G:H5'	1.85	0.41
1:A:2830:G:O3'	4:E:58:ARG:NH2	2.54	0.41
1:A:2848:G:OP2	15:T:97:ALA:N	2.48	0.41
1:A:2884:U:C2'	1:A:2885:C:H5'	2.51	0.41
3:D:77:ALA:HB2	3:D:97:TYR:CE1	2.55	0.41
3:D:273:ARG:HG2	3:D:274:ARG:N	2.36	0.41
4:E:181:LEU:HD13	4:E:181:LEU:HA	1.93	0.41
5:F:95:ARG:HD3	5:F:97:TYR:CE1	2.56	0.41
5:F:187:VAL:HG13	11:P:1:MET:O	2.21	0.41
5:F:206:ILE:O	5:F:208:GLY:N	2.54	0.41
7:H:16:SER:O	7:H:26:VAL:HA	2.21	0.41
7:H:18:GLU:HB3	7:H:25:LYS:HB2	2.02	0.41
7:H:19:VAL:CG2	7:H:43:VAL:HG11	2.51	0.41
7:H:31:GLY:HA3	7:H:136:ILE:CD1	2.46	0.41
7:H:101:ARG:HG2	7:H:117:PRO:CD	2.40	0.41
8:I:4:ILE:HD13	8:I:47:LEU:HD23	2.02	0.41
8:I:133:HIS:HB3	8:I:136:VAL:CG2	2.45	0.41
11:P:59:LEU:HG	30:8:10:ALA:HB2	2.03	0.41
12:Q:70:PRO:CA	12:Q:95:ALA:HB2	2.44	0.41
16:U:17:ILE:CG2	16:U:39:LEU:HD12	2.46	0.41
18:W:17:VAL:CG2	18:W:76:VAL:HG11	2.51	0.41
18:W:54:ALA:HB1	18:W:107:LEU:HD13	2.02	0.41
18:W:84:ARG:O	18:W:95:ILE:HG23	2.21	0.41
19:X:12:VAL:CG2	19:X:27:THR:HG22	2.50	0.41
19:X:26:TYR:O	19:X:80:ILE:HA	2.20	0.41
20:Y:5:MET:HE1	20:Y:35:TYR:CA	2.43	0.41
20:Y:13:VAL:HB	20:Y:72:VAL:CG1	2.51	0.41
21:Z:31:ARG:HG3	21:Z:32:HIS:CE1	2.56	0.41
21:Z:91:LEU:HD21	21:Z:133:ILE:HD11	2.02	0.41
22:O:33:ALA:HB2	22:O:63:VAL:C	2.46	0.41
26:4:36:CYS:SG	26:4:38:LYS:HB2	2.60	0.41
26:4:48:ARG:O	26:4:50:VAL:N	2.46	0.41
28:6:26:ASN:HB3	28:6:29:ASN:ND2	2.36	0.41
30:8:57:ARG:O	30:8:60:LEU:HB2	2.21	0.41
32:a:32:A:N6	32:a:553:A:N6	2.68	0.41
32:a:65:U:H4'	32:a:73:G:C6	2.56	0.41
32:a:102:G:H1'	32:a:151:A:C1'	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:184:G:C4'	32:a:224:C:H4'	2.51	0.41
32:a:204:U:H4'	32:a:216:G:O4'	2.21	0.41
32:a:225:C:H2'	32:a:226:G:O4'	2.21	0.41
32:a:266:G:O3'	48:q:67:LYS:HB2	2.21	0.41
32:a:452:A:N3	32:a:453:A:H1'	2.35	0.41
32:a:456:C:H2'	32:a:457:C:C6	2.56	0.41
32:a:457:C:H2'	32:a:458:C:C6	2.56	0.41
32:a:630:G:H2'	32:a:630:G:N3	2.36	0.41
32:a:630:G:H5'	32:a:631:G:OP2	2.20	0.41
32:a:674:G:H21	42:k:116:HIS:HB2	1.86	0.41
32:a:684:A:N3	42:k:39:PRO:HG2	2.36	0.41
32:a:697:U:H2'	32:a:698:G:H5'	2.02	0.41
32:a:716:A:H2'	32:a:717:C:H6	1.85	0.41
32:a:719:C:H3'	32:a:720:C:C6	2.55	0.41
32:a:735:C:H5'	49:r:71:LYS:HD3	2.01	0.41
32:a:738:C:H2'	32:a:739:C:C6	2.55	0.41
32:a:979:C:O2	32:a:979:C:H2'	2.20	0.41
32:a:1004:A:O2'	32:a:1005:A:OP1	2.33	0.41
32:a:1117:G:H4'	40:i:104:ARG:NH1	2.36	0.41
32:a:1300:G:O2'	32:a:1303:C:N4	2.54	0.41
32:a:1309:G:H5'	44:m:78:ILE:HD11	2.02	0.41
32:a:1323:G:O2'	32:a:1324:A:H5'	2.21	0.41
32:a:1373:G:O3'	38:g:31:MET:HE1	2.20	0.41
32:a:1452:C:H4'	32:a:1457:G:C1'	2.51	0.41
32:a:1458:G:H2'	32:a:1459:C:H6	1.84	0.41
32:a:1490:C:H2'	32:a:1491:G:C8	2.56	0.41
32:a:1527:C:O2'	32:a:1528:U:H5'	2.21	0.41
33:b:160:ASP:O	33:b:182:ILE:HG23	2.21	0.41
33:b:178:ARG:NH2	39:h:74:PRO:HB3	2.36	0.41
34:c:35:GLU:OE2	34:c:59:ARG:NH1	2.52	0.41
36:e:17:ALA:HB2	36:e:26:PHE:HD1	1.85	0.41
38:g:69:VAL:O	38:g:71:PRO:HD3	2.21	0.41
41:j:81:THR:O	41:j:84:GLN:HB3	2.21	0.41
42:k:24:SER:O	42:k:88:GLY:HA3	2.21	0.41
42:k:34:ASP:N	42:k:40:ILE:HG12	2.35	0.41
42:k:62:GLN:HG3	42:k:97:ALA:CB	2.47	0.41
50:s:27:GLU:OE1	50:s:47:HIS:HA	2.21	0.41
50:s:48:THR:HA	50:s:60:VAL:O	2.21	0.41
50:s:66:MET:HB2	50:s:74:PHE:CE2	2.55	0.41
51:t:32:ALA:O	51:t:35:THR:HB	2.20	0.41
52:u:13:ILE:HG12	52:u:22:ARG:HE	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:C:50:ASP:CG	54:C:53:ARG:HG2	2.46	0.41
54:C:189:ILE:O	54:C:192:PHE:HB3	2.21	0.41
54:C:212:VAL:HB	54:C:226:PRO:HD3	2.03	0.41
1:A:98:G:H5'	24:2:3:LEU:HG	2.02	0.41
1:A:174:C:H2'	1:A:175:G:C8	2.56	0.41
1:A:310:A:H1'	1:A:311:A:C2'	2.51	0.41
1:A:441:U:H2'	1:A:442:G:C8	2.56	0.41
1:A:492:A:H3'	1:A:493:G:C8	2.54	0.41
1:A:533:G:H5'	16:U:24:TYR:CD1	2.55	0.41
1:A:646:A:H3'	1:A:646:A:P	2.61	0.41
1:A:741:G:H2'	1:A:742:G:C8	2.56	0.41
1:A:768:G:H2'	1:A:769:G:C8	2.56	0.41
1:A:780:G:H1	3:D:230:ASP:CG	2.29	0.41
1:A:1005:C:H2'	1:A:1006:C:C5	2.56	0.41
1:A:1138:G:H4'	9:N:105:GLY:HA3	2.01	0.41
1:A:1365:A:H2'	1:A:1366:A:C8	2.56	0.41
1:A:1433:U:H2'	1:A:1434:A:H8	1.86	0.41
1:A:1541:G:OP2	1:A:1542:A:O2'	2.39	0.41
1:A:2230:G:N3	1:A:2230:G:H2'	2.36	0.41
1:A:2370:G:H2'	1:A:2371:G:C8	2.55	0.41
1:A:2422:A:C5'	55:z:76:A:H61	2.34	0.41
1:A:2492:U:H2'	1:A:2493:U:H6	1.86	0.41
1:A:2539:C:H4'	31:9:35:ARG:HH21	1.86	0.41
1:A:2576:G:H21	1:A:2576:G:P	2.44	0.41
1:A:2618:G:H2'	1:A:2619:C:C6	2.56	0.41
4:E:31:CYS:C	4:E:90:THR:HG23	2.46	0.41
4:E:98:PRO:HA	4:E:172:VAL:CG1	2.50	0.41
5:F:9:ILE:HG23	5:F:10:PRO:HD2	2.02	0.41
5:F:18:ARG:HG2	5:F:19:GLU:N	2.36	0.41
5:F:202:PHE:CZ	5:F:206:ILE:HD13	2.56	0.41
6:G:32:PRO:HG3	6:G:163:ALA:HB2	2.02	0.41
6:G:69:ALA:O	6:G:91:ARG:N	2.54	0.41
7:H:37:VAL:CG2	7:H:72:ILE:HD11	2.47	0.41
7:H:149:ARG:HA	7:H:162:ILE:CG2	2.51	0.41
9:N:42:TRP:CH2	9:N:44:PRO:HB3	2.56	0.41
9:N:57:ALA:HB1	9:N:99:LEU:HD12	2.03	0.41
9:N:58:ASP:OD1	9:N:59:LYS:HG2	2.21	0.41
12:Q:21:THR:HG21	12:Q:101:ARG:CA	2.49	0.41
12:Q:61:GLY:O	21:Z:178:GLU:HB3	2.20	0.41
13:R:8:ARG:HB2	13:R:43:GLU:CG	2.50	0.41
14:S:5:THR:HG1	14:S:8:GLU:HG3	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:S:51:ALA:CB	14:S:73:LEU:HD13	2.50	0.41
15:T:91:ARG:O	15:T:116:ALA:HA	2.20	0.41
16:U:106:PHE:HA	16:U:109:LEU:HD12	2.03	0.41
17:V:18:LEU:HD23	17:V:19:LYS:C	2.45	0.41
23:1:95:LEU:HD13	23:1:98:LEU:HD12	2.03	0.41
24:2:1:MET:SD	24:2:56:GLN:NE2	2.94	0.41
26:4:10:VAL:HG22	26:4:26:SER:O	2.21	0.41
26:4:58:ARG:CD	50:s:67:VAL:HB	2.50	0.41
32:a:232:G:H2'	32:a:233:C:C6	2.56	0.41
32:a:273:A:C2'	32:a:274:A:H5'	2.51	0.41
32:a:333:G:H2'	32:a:334:C:C6	2.56	0.41
32:a:451:A:C6	32:a:480:U:H2'	2.56	0.41
32:a:482:A:O5'	32:a:482:A:H8	2.04	0.41
32:a:552:U:H1'	43:l:32:PHE:HE1	1.86	0.41
32:a:656:C:O2'	32:a:657:G:H5'	2.21	0.41
32:a:978:A:H62	32:a:1360:A:H61	1.68	0.41
32:a:1091:U:H2'	32:a:1092:A:H3'	2.03	0.41
32:a:1106:G:O2'	32:a:1107:C:H5'	2.21	0.41
32:a:1158:C:H2'	32:a:1160:G:C5'	2.51	0.41
32:a:1202:G:H2'	32:a:1203:C:H5'	2.02	0.41
32:a:1221:G:HO2'	50:s:77:THR:HG1	1.57	0.41
32:a:1284:C:H3'	32:a:1285:A:H8	1.86	0.41
32:a:1307:U:O2'	32:a:1308:U:H5'	2.20	0.41
32:a:1381:U:H2'	32:a:1382:C:H6	1.86	0.41
32:a:1492:A:H2'	32:a:1493:A:H5''	2.03	0.41
33:b:20:GLU:O	33:b:39:ILE:HA	2.21	0.41
33:b:155:LEU:HD13	33:b:157:ARG:N	2.36	0.41
36:e:46:GLY:H	36:e:58:ALA:HB2	1.86	0.41
39:h:37:ARG:HE	39:h:38:ILE:HD13	1.86	0.41
44:m:87:TYR:O	44:m:91:ARG:HG2	2.21	0.41
45:n:9:LYS:HG3	45:n:12:ARG:NH2	2.35	0.41
46:o:56:LEU:O	46:o:59:MET:HB2	2.21	0.41
48:q:24:GLU:HG3	48:q:39:SER:HB3	2.03	0.41
51:t:47:GLY:HA2	51:t:48:LYS:C	2.46	0.41
53:y:39:C:H2'	53:y:40:C:C6	2.56	0.41
53:y:63:G:H2'	53:y:64:G:H8	1.86	0.41
54:C:212:VAL:O	54:C:224:ILE:HG12	2.20	0.41
1:A:27:G:N2	1:A:512:G:O2'	2.40	0.40
1:A:272(A):A:H62	1:A:272(W):G:N2	2.19	0.40
1:A:305:U:H2'	1:A:306:U:H6	1.80	0.40
1:A:435:C:C2'	1:A:436:C:H5'	2.49	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:483:A:O4'	20:Y:48:ALA:HB1	2.21	0.40
1:A:527:C:H4'	1:A:528:A:H5'	2.02	0.40
1:A:572:A:OP2	17:V:78:LYS:NZ	2.46	0.40
1:A:760:G:C2	1:A:761:A:H1'	2.56	0.40
1:A:888:C:H6	44:m:93:ARG:HD2	1.86	0.40
1:A:974:G:OP1	1:A:1187:G:O2'	2.28	0.40
1:A:981:A:H5''	1:A:982:C:OP2	2.22	0.40
1:A:1754:C:H5''	15:T:113:LYS:HE2	2.02	0.40
1:A:1782:C:O2'	1:A:1783:A:H5'	2.21	0.40
1:A:1809:A:O2'	1:A:1810:A:H5'	2.21	0.40
1:A:2633:G:H5''	1:A:2811:G:O3'	2.21	0.40
1:A:2659:G:OP1	7:H:158:HIS:NE2	2.47	0.40
1:A:2667:C:H2'	1:A:2668:G:H5'	2.03	0.40
1:A:2809:A:OP2	1:A:2891:G:N1	2.32	0.40
4:E:39:PRO:HA	4:E:43:GLY:N	2.36	0.40
5:F:125:LEU:HD21	5:F:199:TRP:HE3	1.84	0.40
6:G:168:GLU:O	6:G:171:ALA:HB3	2.22	0.40
7:H:97:ARG:HD2	7:H:97:ARG:O	2.22	0.40
9:N:15:LEU:HD22	9:N:53:VAL:O	2.21	0.40
11:P:131:SER:O	11:P:134:ALA:HB3	2.21	0.40
12:Q:59:ARG:HG2	21:Z:180:VAL:CB	2.43	0.40
12:Q:136:ALA:HB2	21:Z:52:SER:HB2	2.03	0.40
18:W:28:SER:HA	18:W:70:TYR:HA	2.04	0.40
18:W:31:GLU:HG2	18:W:35:ILE:CD1	2.51	0.40
18:W:106:ILE:C	18:W:107:LEU:HD12	2.46	0.40
21:Z:110:GLY:N	21:Z:144:LEU:O	2.50	0.40
22:O:22:GLY:N	22:O:39:ARG:O	2.33	0.40
24:2:37:PHE:O	24:2:40:SER:HB2	2.20	0.40
25:3:3:ARG:O	25:3:4:LEU:HD23	2.21	0.40
32:a:65:U:H2'	32:a:381:C:OP1	2.21	0.40
32:a:66:G:H1'	32:a:173:U:C2'	2.51	0.40
32:a:345:C:H5'	32:a:346:G:C5	2.56	0.40
32:a:370:C:H2'	32:a:371:G:H8	1.86	0.40
32:a:487:A:C2'	32:a:488:C:H5'	2.51	0.40
32:a:1095:U:P	32:a:1108:G:H1	2.37	0.40
32:a:1250:A:O2'	32:a:1251:A:H5'	2.20	0.40
32:a:1337:G:H5''	32:a:1338:G:OP1	2.20	0.40
34:c:139:GLN:HG3	34:c:143:GLU:OE2	2.21	0.40
35:d:108:LEU:HD11	35:d:176:LEU:HD13	2.02	0.40
35:d:159:ARG:O	35:d:162:LEU:HB2	2.21	0.40
35:d:161:ASN:O	35:d:165:MET:HG2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:f:30:LEU:HD13	37:f:37:VAL:CG2	2.51	0.40
39:h:100:ILE:HG22	39:h:121:ASP:HB2	2.03	0.40
41:j:51:ARG:NE	41:j:60:ARG:O	2.54	0.40
42:k:82:VAL:HG12	42:k:84:VAL:HG23	2.04	0.40
43:l:123:LYS:O	43:l:125:PRO:HD3	2.21	0.40
47:p:59:TRP:O	47:p:62:VAL:HG12	2.21	0.40
54:C:7:TYR:CE2	54:C:11:LEU:HD21	2.56	0.40
54:C:75:LEU:CB	54:C:113:VAL:HG22	2.37	0.40
54:C:153:ILE:HG12	54:C:156:ILE:HD12	2.03	0.40
55:z:47:U:OP1	55:z:47:U:H3'	2.21	0.40
55:z:54:U:H2'	55:z:55:U:C2	2.56	0.40
1:A:129:C:O2'	1:A:130:C:H5'	2.22	0.40
1:A:272(P):C:H2'	1:A:272(Q):G:O4'	2.21	0.40
1:A:363(B):A:H2'	1:A:363(C):G:C8	2.57	0.40
1:A:597:U:O2'	1:A:598:G:O5'	2.32	0.40
1:A:674:G:H5''	5:F:76:GLY:N	2.37	0.40
1:A:777:A:H2'	1:A:778:G:H8	1.87	0.40
1:A:1010:A:H4'	16:U:76:TYR:HD2	1.85	0.40
1:A:1024:G:H5''	1:A:1025:G:OP2	2.21	0.40
1:A:1386:C:O2'	1:A:1387:C:H5'	2.20	0.40
1:A:1394:U:C3'	1:A:1395:A:H5''	2.48	0.40
1:A:1463:C:H2'	1:A:1464:C:H6	1.86	0.40
1:A:1569:A:O2'	1:A:1570:A:H5'	2.20	0.40
1:A:1592:C:H2'	1:A:1593:G:C8	2.55	0.40
1:A:1629:U:H2'	1:A:1630:G:C8	2.56	0.40
1:A:1721:G:O6	1:A:1739:U:H3'	2.21	0.40
1:A:1791:A:C2	1:A:1829:A:H4'	2.56	0.40
1:A:1844:C:H2'	1:A:1845:G:H8	1.85	0.40
1:A:2002:G:H5''	13:R:13:HIS:HA	2.02	0.40
1:A:2359:C:H2'	1:A:2360:A:C8	2.56	0.40
1:A:2396:G:P	23:1:25:LYS:HZ2	2.44	0.40
1:A:2462:U:H2'	1:A:2463:C:O4'	2.20	0.40
2:B:88:C:H2'	2:B:89:G:C8	2.57	0.40
2:B:88:C:H2'	2:B:89:G:O4'	2.22	0.40
4:E:73:GLU:OE2	4:E:74:PRO:HD2	2.20	0.40
5:F:186:ILE:HG23	5:F:192:LEU:HD12	2.03	0.40
7:H:45:VAL:HA	7:H:50:VAL:HG22	2.03	0.40
8:I:7:GLU:CG	8:I:57:ARG:HH12	2.35	0.40
8:I:8:PRO:HA	8:I:13:GLY:O	2.21	0.40
9:N:84:LYS:O	9:N:85:ILE:HD13	2.21	0.40
9:N:94:HIS:CB	9:N:97:ARG:HB2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:N:111:PRO:CA	9:N:114:ARG:HE	2.28	0.40
10:O:49:ARG:NH1	32:a:1422:G:O2'	2.55	0.40
12:Q:17:LEU:O	12:Q:98:LYS:HE2	2.20	0.40
13:R:96:ARG:CD	13:R:98:LEU:HD11	2.51	0.40
14:S:51:ALA:HB3	14:S:73:LEU:HB2	2.03	0.40
16:U:81:HIS:CE1	16:U:85:LYS:HD2	2.56	0.40
17:V:3:ALA:HB1	17:V:37:VAL:HG13	2.04	0.40
17:V:22:VAL:HG23	17:V:23:GLU:O	2.20	0.40
21:Z:24:LEU:HD21	21:Z:86:VAL:HG23	2.03	0.40
24:2:11:GLU:O	24:2:15:LYS:HG3	2.21	0.40
32:a:99:U:P	51:t:14:LYS:HG2	2.61	0.40
32:a:199:G:H2'	32:a:200:G:H5'	2.03	0.40
32:a:235:C:H1'	48:q:61:GLU:OE2	2.21	0.40
32:a:253:U:O2'	32:a:254:G:H5'	2.22	0.40
32:a:526:C:OP1	43:l:91:LYS:HE3	2.20	0.40
32:a:656:C:H1'	46:o:28:GLN:HE22	1.86	0.40
32:a:774:G:O2'	32:a:775:G:H5'	2.21	0.40
32:a:888:G:H3'	32:a:889:A:H2'	2.02	0.40
32:a:980:C:H3'	32:a:981:U:C6	2.56	0.40
32:a:988:G:H2'	32:a:989:C:O4'	2.21	0.40
32:a:1005:A:C4	32:a:1025:U:H1'	2.56	0.40
32:a:1058:G:O6	32:a:1199:U:O4	2.39	0.40
32:a:1149:C:H2'	32:a:1150:U:O4'	2.21	0.40
32:a:1166:G:H2'	32:a:1169:A:OP2	2.22	0.40
32:a:1181:G:O2'	32:a:1182:G:N7	2.46	0.40
32:a:1236:A:O2'	32:a:1304:G:H4'	2.21	0.40
32:a:1532:U:H4'	32:a:1533:C:H5'	2.02	0.40
33:b:115:LEU:O	33:b:119:GLU:HG2	2.22	0.40
36:e:39:GLY:CA	36:e:69:VAL:HG12	2.51	0.40
38:g:38:LEU:HG	38:g:42:ILE:HD11	2.02	0.40
40:i:71:SER:HA	40:i:74:ILE:HD12	2.02	0.40
42:k:58:PRO:HA	42:k:90:GLY:HA3	2.02	0.40
44:m:84:ILE:CD1	44:m:86:CYS:HB3	2.51	0.40
45:n:47:LEU:HA	45:n:50:LYS:HB3	2.03	0.40
56:x:28:G:H22	56:x:51:C:H42	1.69	0.40
1:A:272(R):G:H2'	1:A:272(S):G:H8	1.86	0.40
1:A:359:A:H2'	1:A:360:G:H5'	2.03	0.40
1:A:664:C:O4'	1:A:940:G:H5''	2.21	0.40
1:A:672:C:OP2	11:P:42:SER:OG	2.33	0.40
1:A:725:G:O2'	1:A:726:G:O4'	2.28	0.40
1:A:771:G:H2'	1:A:772:C:C6	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:876:C:H2'	1:A:877:U:H6	1.87	0.40
1:A:878:A:H2	1:A:899:A:C2	2.39	0.40
1:A:1050:A:H1'	1:A:2751:G:C6	2.56	0.40
1:A:1119:C:O2'	1:A:1120:G:H5'	2.21	0.40
1:A:1250:G:N7	11:P:18:ARG:NH1	2.69	0.40
1:A:1334:G:O2'	1:A:1335:U:H5'	2.20	0.40
1:A:1530:C:HO2'	1:A:1531:C:P	2.43	0.40
1:A:1538:G:H2'	1:A:1539:G:H8	1.86	0.40
1:A:1714:G:H2'	1:A:1717:G:O4'	2.21	0.40
1:A:1803:A:H2	1:A:1823:G:O4'	2.05	0.40
1:A:1911:PSU:O2	1:A:1918:A:H2'	2.21	0.40
1:A:2078:C:O2'	1:A:2079:U:H5'	2.22	0.40
1:A:2401:U:H2'	1:A:2402:C:C6	2.56	0.40
1:A:2423:U:H4'	1:A:2424:C:O5'	2.22	0.40
1:A:2655:G:N2	1:A:2665:A:O5'	2.54	0.40
1:A:2707:G:H2'	1:A:2708:G:H8	1.86	0.40
1:A:2752:C:OP2	7:H:4:ILE:HD11	2.22	0.40
1:A:2828:C:O2'	1:A:2829:C:H5'	2.21	0.40
2:B:59:A:H2'	2:B:60:C:C6	2.57	0.40
3:D:228:PRO:HD3	3:D:235:GLY:CA	2.51	0.40
4:E:171:GLU:O	4:E:184:VAL:HA	2.21	0.40
5:F:195:ASP:HB3	5:F:197:ASP:OD1	2.20	0.40
6:G:36:LYS:HA	6:G:99:MET:SD	2.60	0.40
7:H:15:VAL:HG23	7:H:15:VAL:O	2.21	0.40
8:I:38:LEU:HD22	8:I:40:THR:CG2	2.51	0.40
11:P:97:PRO:O	11:P:101:VAL:HG23	2.22	0.40
12:Q:18:LYS:O	12:Q:98:LYS:NZ	2.45	0.40
13:R:65:LEU:O	13:R:68:ARG:HB2	2.21	0.40
18:W:68:ARG:HD3	18:W:111:HIS:HA	2.02	0.40
19:X:55:ASN:O	19:X:79:ALA:HA	2.21	0.40
21:Z:116:VAL:HG23	21:Z:177:PRO:HA	2.02	0.40
21:Z:156:LYS:HD2	21:Z:156:LYS:O	2.21	0.40
22:O:9:SER:OG	22:O:10:THR:N	2.54	0.40
23:1:54:ALA:HA	23:1:83:GLU:OE2	2.21	0.40
25:3:5:LYS:H	25:3:59:VAL:HG22	1.85	0.40
30:8:26:LYS:HA	30:8:48:PHE:HE1	1.87	0.40
32:a:66:G:H5''	32:a:73:G:N9	2.35	0.40
32:a:93:G:H3'	32:a:98:G:OP1	2.21	0.40
32:a:132:C:H5''	51:t:75:ASN:HD22	1.86	0.40
32:a:192:U:H2'	32:a:193:C:H6	1.87	0.40
32:a:204:U:H4'	32:a:216:G:O5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:a:373:A:O2'	32:a:374:A:H5'	2.21	0.40
32:a:402:G:O2'	32:a:403:C:H5'	2.21	0.40
32:a:517:G:H2'	32:a:531:U:H5	1.86	0.40
32:a:667:G:H4'	46:o:51:HIS:ND1	2.37	0.40
32:a:849:C:O2'	32:a:850:U:H5'	2.21	0.40
32:a:935:A:H61	38:g:3:ARG:HG3	1.87	0.40
32:a:1026:G:H3'	32:a:1026:G:P	2.61	0.40
32:a:1190:G:OP1	34:c:5:ILE:N	2.54	0.40
32:a:1258:G:H2'	32:a:1259:C:H6	1.83	0.40
32:a:1326:C:C2'	32:a:1327:C:H5'	2.51	0.40
33:b:196:LEU:HA	39:h:74:PRO:HG3	2.04	0.40
34:c:58:GLU:N	34:c:58:GLU:OE1	2.55	0.40
34:c:152:ILE:HA	34:c:167:TRP:CB	2.51	0.40
35:d:8:VAL:CG2	35:d:21:LEU:HD13	2.50	0.40
36:e:12:LEU:O	36:e:30:ALA:HA	2.21	0.40
37:f:99:ALA:HB1	49:r:23:LYS:HE3	2.03	0.40
41:j:89:ASP:O	41:j:91:PRO:HD3	2.21	0.40
43:l:69:TYR:O	43:l:71:PRO:HD3	2.21	0.40
44:m:14:ARG:N	44:m:44:ARG:HH11	2.19	0.40
46:o:30:ALA:O	46:o:33:THR:HB	2.21	0.40
50:s:15:LEU:HD22	50:s:33:THR:OG1	2.22	0.40
54:C:21:THR:HA	54:C:228:SER:OG	2.21	0.40
54:C:41:VAL:HG23	54:C:177:LYS:O	2.22	0.40
54:C:82:LYS:HE2	54:C:82:LYS:HA	2.02	0.40
55:z:39:U:H2'	55:z:40:C:O4'	2.21	0.40
1:A:58:G:H2'	1:A:59:U:H6	1.82	0.40
1:A:79:G:H2'	1:A:80:G:H8	1.86	0.40
1:A:81:G:O2'	1:A:295:G:O2'	2.38	0.40
1:A:118:A:H2'	1:A:120:U:O4	2.21	0.40
1:A:177:G:H3'	1:A:178:G:H8	1.85	0.40
1:A:272(Y):U:H4'	1:A:272(Z):C:C6	2.57	0.40
1:A:541:C:H2'	1:A:542:C:C6	2.57	0.40
1:A:616:G:O2'	1:A:618:C:H5'	2.22	0.40
1:A:678:C:O2'	1:A:679:C:H5'	2.22	0.40
1:A:1135:C:H41	1:A:1138:G:P	2.41	0.40
1:A:1568:G:P	3:D:63:ARG:HH22	2.44	0.40
1:A:1598:C:O2'	1:A:1599:C:H5'	2.22	0.40
1:A:1743:C:H2'	1:A:1744:C:H6	1.86	0.40
1:A:1766:U:H2'	1:A:1767:C:H6	1.86	0.40
1:A:1803:A:H3'	1:A:1804:C:C6	2.57	0.40
1:A:1889:A:H2'	1:A:1890:A:H8	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1913:A:N6	32:a:1492:A:N7	2.69	0.40
1:A:1942:5MC:O5'	1:A:1943:U:H2'	2.21	0.40
1:A:2110:G:H3'	1:A:2111:C:C5'	2.50	0.40
1:A:2133:G:H3'	1:A:2157:G:N2	2.35	0.40
1:A:2133:G:O2'	1:A:2158:A:H2	2.04	0.40
1:A:2645:G:O2'	1:A:2646:C:H5'	2.21	0.40
1:A:2825:C:H2'	1:A:2826:A:H5'	2.02	0.40
1:A:2832:U:H4'	1:A:2833:G:O5'	2.22	0.40
3:D:142:VAL:HG22	3:D:191:ALA:HB1	2.03	0.40
4:E:33:VAL:CG2	4:E:47:VAL:HB	2.51	0.40
6:G:73:ALA:HB1	6:G:84:LYS:HA	2.04	0.40
6:G:112:PRO:HB3	26:4:40:HIS:HB2	2.03	0.40
7:H:88:LEU:N	7:H:163:TYR:O	2.53	0.40
8:I:46:ALA:HB1	8:I:50:ARG:CD	2.51	0.40
8:I:72:LEU:HD21	8:I:107:VAL:CG1	2.51	0.40
8:I:83:ALA:HA	8:I:88:ILE:HA	2.02	0.40
10:O:7:TYR:C	10:O:8:LEU:HD22	2.47	0.40
11:P:23:PRO:HG3	17:V:82:ARG:HD3	2.03	0.40
16:U:102:GLU:HG3	17:V:2:PHE:HZ	1.86	0.40
17:V:24:LYS:HG3	17:V:64:HIS:CD2	2.53	0.40
18:W:33:ARG:HG2	18:W:52:GLU:OE2	2.21	0.40
20:Y:92:ASN:O	20:Y:92:ASN:ND2	2.54	0.40
21:Z:6:LYS:HE3	21:Z:43:GLU:OE1	2.21	0.40
28:6:48:VAL:O	28:6:48:VAL:HG13	2.21	0.40
32:a:197:A:H4'	32:a:198:G:O5'	2.22	0.40
32:a:280:C:C2	48:q:38:ARG:HA	2.57	0.40
32:a:600:C:H5'	39:h:130:GLY:H	1.86	0.40
32:a:612:C:H2'	32:a:613:C:H6	1.87	0.40
32:a:690:G:H2'	32:a:691:G:C8	2.56	0.40
32:a:848:C:O2'	32:a:849:C:H5'	2.22	0.40
32:a:971:G:P	32:a:1231:G:H21	2.44	0.40
32:a:1523:G:H2'	32:a:1524:C:C6	2.56	0.40
32:a:1530:G:H2'	32:a:1531:A:H8	1.86	0.40
33:b:111:ARG:O	33:b:114:ARG:N	2.55	0.40
33:b:222:ILE:HG13	33:b:223:ILE:N	2.37	0.40
34:c:50:ALA:O	34:c:72:LYS:HB2	2.21	0.40
36:e:63:ARG:NH2	56:x:55:A:OP1	2.52	0.40
36:e:148:VAL:HG13	36:e:152:ARG:HD2	2.03	0.40
37:f:15:ASP:OD1	37:f:18:GLN:HB2	2.22	0.40
37:f:43:LEU:HB3	37:f:46:ARG:HH21	1.87	0.40
39:h:86:ILE:HG22	39:h:93:VAL:HG21	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:j:12:ASP:OD1	41:j:14:LYS:N	2.51	0.40
44:m:4:ILE:HG22	44:m:7:VAL:O	2.22	0.40
53:y:39:C:H2'	53:y:40:C:H6	1.87	0.40
1:A:139(B):G:H2'	1:A:140:G:C8	2.57	0.40
1:A:233:A:H2'	1:A:234:C:H5'	2.03	0.40
1:A:310:A:H1'	1:A:311:A:H2'	2.01	0.40
1:A:358:U:O2'	1:A:359:A:H5'	2.22	0.40
1:A:482:A:OP1	20:Y:50:ARG:NH1	2.48	0.40
1:A:557:U:O2'	1:A:558:G:H5'	2.22	0.40
1:A:642:G:H4'	1:A:2349:G:H4'	2.03	0.40
1:A:691:C:O4'	3:D:43:ARG:NH2	2.54	0.40
1:A:713:G:H2'	1:A:714:U:H5'	2.03	0.40
1:A:777:A:H2'	1:A:778:G:C8	2.56	0.40
1:A:875:G:H4'	21:Z:151:HIS:CE1	2.52	0.40
1:A:900:A:HO2'	1:A:901:A:P	2.45	0.40
1:A:990:A:O2'	1:A:992:C:OP1	2.40	0.40
1:A:1021:A:H1'	1:A:1123:C:OP1	2.20	0.40
1:A:1309:G:P	29:7:9:ARG:HH11	2.44	0.40
1:A:1364:G:N7	23:1:3:LYS:HD2	2.36	0.40
1:A:1392:A:H2'	1:A:1393:A:C8	2.56	0.40
1:A:1422:G:H2'	1:A:1423:G:C8	2.57	0.40
1:A:1428:C:C5	1:A:1569:A:H5''	2.56	0.40
1:A:1754:C:OP1	15:T:96:ARG:NH1	2.53	0.40
1:A:1764:G:H2'	1:A:1765:C:H6	1.86	0.40
1:A:1771:C:H2'	1:A:1772:G:O4'	2.21	0.40
1:A:1790:C:H2'	1:A:1791:A:N7	2.36	0.40
1:A:2177:C:H5''	54:C:213:TYR:CD2	2.57	0.40
1:A:2340:G:H2'	1:A:2341:G:H8	1.86	0.40
1:A:2666:C:H42	7:H:109:PHE:C	2.29	0.40
1:A:2722:G:H2'	1:A:2723:C:C6	2.56	0.40
2:B:8:U:O3'	14:S:25:ARG:NH1	2.54	0.40
5:F:46:ARG:HB3	5:F:48:THR:HG23	2.03	0.40
6:G:3:LEU:HD13	26:4:25:TYR:HD2	1.85	0.40
6:G:7:LEU:CD1	6:G:104:GLU:HA	2.52	0.40
8:I:27:ARG:HH11	23:1:71:TYR:HE2	1.69	0.40
9:N:62:VAL:HG12	9:N:66:LYS:HB2	2.04	0.40
10:O:67:LYS:HD2	10:O:68:GLU:OE1	2.21	0.40
11:P:60:MET:HA	30:8:13:ARG:NH1	2.14	0.40
16:U:8:VAL:HG12	16:U:8:VAL:O	2.20	0.40
18:W:33:ARG:O	18:W:37:ARG:HB2	2.21	0.40
19:X:52:VAL:HB	19:X:82:GLN:HG3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:Y:81:LYS:CB	20:Y:101:LYS:HD2	2.52	0.40
25:3:6:VAL:HG11	25:3:28:LEU:HD11	2.01	0.40
31:9:25:VAL:CB	31:9:34:GLN:HB2	2.36	0.40
32:a:57:G:H2'	32:a:58:C:C6	2.57	0.40
32:a:100:C:H1'	32:a:101:A:P	2.62	0.40
32:a:130:A:H3'	32:a:189(H):G:O2'	2.22	0.40
32:a:233:C:O2'	32:a:234:C:H5'	2.21	0.40
32:a:272:C:H2'	32:a:273:A:O4'	2.22	0.40
32:a:570:G:H1'	32:a:820:U:C4	2.56	0.40
32:a:722:A:H2'	32:a:724:G:C8	2.56	0.40
32:a:828:A:OP1	32:a:828:A:H4'	2.21	0.40
32:a:994:A:O2'	45:n:8:GLU:HG2	2.22	0.40
32:a:1001(B):G:H2'	32:a:1002:G:C8	2.56	0.40
32:a:1011:G:H2'	32:a:1012:U:C6	2.56	0.40
32:a:1063:C:H3'	32:a:1064:G:H2'	2.03	0.40
32:a:1179:A:H2'	32:a:1180:A:C8	2.56	0.40
32:a:1282:C:P	32:a:1282:C:H3'	2.62	0.40
32:a:1528:U:O2'	32:a:1530:G:H5''	2.22	0.40
33:b:84:GLU:O	33:b:87:ARG:HB2	2.21	0.40
34:c:131:ARG:NE	34:c:135:LYS:HE3	2.37	0.40
34:c:154:SER:HA	34:c:165:THR:HA	2.04	0.40
37:f:33:TYR:HB3	37:f:71:ARG:HD3	2.03	0.40
37:f:80:ARG:NH1	37:f:88:VAL:O	2.55	0.40
38:g:73:MET:O	38:g:142:GLU:HG2	2.20	0.40
41:j:64:GLU:HB3	45:n:59:ALA:CB	2.45	0.40
46:o:3:ILE:HA	46:o:7:GLU:OE1	2.21	0.40
49:r:60:ALA:HB1	49:r:64:ARG:NH1	2.37	0.40
54:C:140:PRO:N	54:C:145:VAL:HB	2.35	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	D	273/275 (99%)	252 (92%)	21 (8%)	0	100	100
4	E	202/204 (99%)	187 (93%)	15 (7%)	0	100	100
5	F	201/203 (99%)	192 (96%)	8 (4%)	1 (0%)	24	57
6	G	179/181 (99%)	164 (92%)	15 (8%)	0	100	100
7	H	166/173 (96%)	156 (94%)	10 (6%)	0	100	100
8	I	144/146 (99%)	135 (94%)	9 (6%)	0	100	100
9	N	138/140 (99%)	130 (94%)	8 (6%)	0	100	100
10	O	120/122 (98%)	113 (94%)	7 (6%)	0	100	100
11	P	147/149 (99%)	134 (91%)	13 (9%)	0	100	100
12	Q	139/141 (99%)	127 (91%)	12 (9%)	0	100	100
13	R	116/118 (98%)	107 (92%)	9 (8%)	0	100	100
14	S	108/110 (98%)	103 (95%)	5 (5%)	0	100	100
15	T	129/131 (98%)	124 (96%)	5 (4%)	0	100	100
16	U	114/116 (98%)	110 (96%)	4 (4%)	0	100	100
17	V	99/101 (98%)	85 (86%)	14 (14%)	0	100	100
18	W	110/112 (98%)	98 (89%)	12 (11%)	0	100	100
19	X	93/95 (98%)	84 (90%)	9 (10%)	0	100	100
20	Y	105/107 (98%)	96 (91%)	9 (9%)	0	100	100
21	Z	185/187 (99%)	163 (88%)	21 (11%)	1 (0%)	24	57
22	0	75/77 (97%)	70 (93%)	5 (7%)	0	100	100
23	1	95/97 (98%)	91 (96%)	4 (4%)	0	100	100
24	2	68/70 (97%)	64 (94%)	4 (6%)	0	100	100
25	3	57/59 (97%)	56 (98%)	1 (2%)	0	100	100
26	4	67/69 (97%)	54 (81%)	11 (16%)	2 (3%)	3	25
27	5	57/59 (97%)	52 (91%)	5 (9%)	0	100	100
28	6	51/53 (96%)	44 (86%)	7 (14%)	0	100	100
29	7	46/48 (96%)	42 (91%)	4 (9%)	0	100	100
30	8	62/64 (97%)	57 (92%)	5 (8%)	0	100	100
31	9	35/37 (95%)	33 (94%)	2 (6%)	0	100	100
33	b	229/231 (99%)	205 (90%)	24 (10%)	0	100	100
34	c	204/206 (99%)	190 (93%)	14 (7%)	0	100	100
35	d	206/208 (99%)	198 (96%)	8 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
36	e	146/148 (99%)	137 (94%)	9 (6%)	0	100	100
37	f	98/100 (98%)	89 (91%)	9 (9%)	0	100	100
38	g	153/155 (99%)	142 (93%)	11 (7%)	0	100	100
39	h	135/137 (98%)	124 (92%)	11 (8%)	0	100	100
40	i	124/126 (98%)	113 (91%)	11 (9%)	0	100	100
41	j	94/96 (98%)	82 (87%)	11 (12%)	1 (1%)	11	43
42	k	112/114 (98%)	106 (95%)	6 (5%)	0	100	100
43	l	119/122 (98%)	108 (91%)	11 (9%)	0	100	100
44	m	112/114 (98%)	99 (88%)	13 (12%)	0	100	100
45	n	58/60 (97%)	56 (97%)	2 (3%)	0	100	100
46	o	86/88 (98%)	80 (93%)	6 (7%)	0	100	100
47	p	80/82 (98%)	76 (95%)	4 (5%)	0	100	100
48	q	97/99 (98%)	92 (95%)	5 (5%)	0	100	100
49	r	66/68 (97%)	64 (97%)	2 (3%)	0	100	100
50	s	81/83 (98%)	75 (93%)	6 (7%)	0	100	100
51	t	96/98 (98%)	84 (88%)	12 (12%)	0	100	100
52	u	21/23 (91%)	20 (95%)	1 (5%)	0	100	100
54	C	221/226 (98%)	196 (89%)	25 (11%)	0	100	100
All	All	5919/6028 (98%)	5459 (92%)	455 (8%)	5 (0%)	49	79

All (5) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
26	4	49	PHE
26	4	47	GLN
41	j	55	LYS
21	Z	93	ASP
5	F	207	GLY

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	
3	D	215/217 (99%)	215 (100%)	0	100	100
4	E	164/165 (99%)	164 (100%)	0	100	100
5	F	159/161 (99%)	159 (100%)	0	100	100
6	G	142/155 (92%)	142 (100%)	0	100	100
7	H	143/144 (99%)	143 (100%)	0	100	100
8	I	108/122 (88%)	108 (100%)	0	100	100
9	N	118/119 (99%)	118 (100%)	0	100	100
10	O	100/100 (100%)	100 (100%)	0	100	100
11	P	115/116 (99%)	115 (100%)	0	100	100
12	Q	111/111 (100%)	111 (100%)	0	100	100
13	R	101/101 (100%)	101 (100%)	0	100	100
14	S	85/87 (98%)	85 (100%)	0	100	100
15	T	113/115 (98%)	113 (100%)	0	100	100
16	U	93/93 (100%)	93 (100%)	0	100	100
17	V	80/82 (98%)	80 (100%)	0	100	100
18	W	90/91 (99%)	90 (100%)	0	100	100
19	X	77/77 (100%)	77 (100%)	0	100	100
20	Y	86/88 (98%)	86 (100%)	0	100	100
21	Z	156/164 (95%)	156 (100%)	0	100	100
22	0	61/62 (98%)	61 (100%)	0	100	100
23	1	81/82 (99%)	81 (100%)	0	100	100
24	2	66/66 (100%)	66 (100%)	0	100	100
25	3	50/51 (98%)	50 (100%)	0	100	100
26	4	54/62 (87%)	54 (100%)	0	100	100
27	5	50/51 (98%)	50 (100%)	0	100	100
28	6	50/51 (98%)	50 (100%)	0	100	100
29	7	41/41 (100%)	41 (100%)	0	100	100
30	8	54/54 (100%)	54 (100%)	0	100	100
31	9	34/34 (100%)	34 (100%)	0	100	100
33	b	187/199 (94%)	187 (100%)	0	100	100
34	c	140/160 (88%)	140 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
35	d	172/180 (96%)	172 (100%)	0	100	100
36	e	114/114 (100%)	114 (100%)	0	100	100
37	f	85/90 (94%)	85 (100%)	0	100	100
38	g	119/126 (94%)	119 (100%)	0	100	100
39	h	114/118 (97%)	114 (100%)	0	100	100
40	i	88/97 (91%)	88 (100%)	0	100	100
41	j	68/86 (79%)	68 (100%)	0	100	100
42	k	83/86 (96%)	83 (100%)	0	100	100
43	l	96/102 (94%)	96 (100%)	0	100	100
44	m	87/93 (94%)	87 (100%)	0	100	100
45	n	49/49 (100%)	49 (100%)	0	100	100
46	o	78/79 (99%)	78 (100%)	0	100	100
47	p	68/71 (96%)	68 (100%)	0	100	100
48	q	94/94 (100%)	94 (100%)	0	100	100
49	r	59/59 (100%)	59 (100%)	0	100	100
50	s	67/72 (93%)	67 (100%)	0	100	100
51	t	70/76 (92%)	70 (100%)	0	100	100
52	u	18/18 (100%)	18 (100%)	0	100	100
54	C	177/178 (99%)	175 (99%)	2 (1%)	65	74
All	All	4830/5009 (96%)	4828 (100%)	2 (0%)	100	100

All (2) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
54	C	5	LYS
54	C	27	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (64) such sidechains are listed below:

Mol	Chain	Res	Type
3	D	116	GLN
3	D	129	ASN
3	D	201	HIS
4	E	85	ASN

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Mol	Chain	Res	Type
4	E	137	HIS
4	E	159	HIS
5	F	40	GLN
5	F	169	ASN
5	F	182	ASN
6	G	26	GLN
6	G	41	GLN
6	G	108	ASN
8	I	104	GLN
9	N	69	GLN
9	N	128	HIS
11	P	27	HIS
13	R	13	HIS
16	U	71	GLN
16	U	94	ASN
20	Y	92	ASN
21	Z	75	ASN
22	0	35	ASN
23	1	56	GLN
24	2	65	ASN
25	3	32	GLN
26	4	20	ASN
33	b	40	HIS
33	b	94	ASN
33	b	140	HIS
34	c	6	HIS
34	c	37	GLN
34	c	110	ASN
34	c	162	GLN
35	d	45	GLN
35	d	125	HIS
35	d	161	ASN
36	e	78	HIS
37	f	32	ASN
38	g	11	GLN
38	g	56	GLN
38	g	64	GLN
38	g	68	ASN
38	g	86	GLN
38	g	109	ASN
38	g	148	ASN
40	i	73	GLN

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Mol	Chain	Res	Type
41	j	21	GLN
41	j	69	ASN
42	k	22	HIS
42	k	93	GLN
43	l	80	HIS
44	m	77	ASN
46	o	28	GLN
46	o	37	ASN
46	o	50	HIS
46	o	62	GLN
47	p	65	GLN
48	q	26	GLN
50	s	23	ASN
50	s	47	HIS
50	s	83	HIS
51	t	9	ASN
51	t	16	HIS
54	C	188	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	2857/2915 (98%)	659 (23%)	41 (1%)
2	B	119/120 (99%)	24 (20%)	0
32	a	1508/1521 (99%)	347 (23%)	0
53	y	76/77 (98%)	14 (18%)	0
55	z	75/76 (98%)	34 (45%)	0
56	x	54/55 (98%)	23 (42%)	0
All	All	4689/4764 (98%)	1101 (23%)	41 (0%)

All (1101) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	7	G
1	A	8	A
1	A	10	G
1	A	12	U
1	A	15	G
1	A	34	C
1	A	45	C
1	A	51	G

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Mol	Chain	Res	Type
1	A	55	G
1	A	58	G
1	A	64	A
1	A	71	A
1	A	74	A
1	A	75	G
1	A	83	G
1	A	85	G
1	A	92	A
1	A	95	G
1	A	100	G
1	A	115	C
1	A	118	A
1	A	119	A
1	A	120	U
1	A	131	G
1	A	140	G
1	A	141	A
1	A	154(B)	C
1	A	157	U
1	A	173	G
1	A	181	A
1	A	182	A
1	A	185	U
1	A	186	G
1	A	187	G
1	A	188	G
1	A	196	A
1	A	198	C
1	A	199	A
1	A	205	G
1	A	213	A
1	A	214	G
1	A	215	G
1	A	216	A
1	A	217	G
1	A	220	G
1	A	221	A
1	A	222	A
1	A	223	A
1	A	227	A
1	A	228	A

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Mol	Chain	Res	Type
1	A	229	A
1	A	230	U
1	A	243	U
1	A	248	G
1	A	249	C
1	A	272(I)	G
1	A	272(J)	C
1	A	272(K)	U
1	A	272(L)	U
1	A	272(M)	G
1	A	272(N)	U
1	A	272(O)	C
1	A	272(P)	C
1	A	272(X)	G
1	A	272(Z)	C
1	A	273(B)	U
1	A	273(C)	G
1	A	277	C
1	A	278	A
1	A	282	A
1	A	283	A
1	A	285	C
1	A	294	A
1	A	295	G
1	A	300	A
1	A	311	A
1	A	312	G
1	A	317	G
1	A	329	G
1	A	330	A
1	A	331	A
1	A	346	A
1	A	352	G
1	A	353	G
1	A	354	G
1	A	360	G
1	A	362	U
1	A	363(A)	G
1	A	363(C)	G
1	A	373	U
1	A	375	C
1	A	384	U

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Mol	Chain	Res	Type
1	A	386	G
1	A	396	G
1	A	397	G
1	A	398	G
1	A	405	U
1	A	406	G
1	A	411	G
1	A	412	A
1	A	428	A
1	A	435	C
1	A	444	C
1	A	451	C
1	A	456	C
1	A	457	A
1	A	458	G
1	A	467	G
1	A	470	A
1	A	475	U
1	A	481	G
1	A	496	G
1	A	505	A
1	A	508	G
1	A	509	C
1	A	510	C
1	A	511	U
1	A	513	A
1	A	519	U
1	A	522	G
1	A	527	C
1	A	530	G
1	A	531	C
1	A	532	A
1	A	533	G
1	A	534	U
1	A	545	G
1	A	556	G
1	A	563	G
1	A	568	U
1	A	573	G
1	A	575	A
1	A	588	U
1	A	598	G

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Mol	Chain	Res	Type
1	A	603	A
1	A	604	G
1	A	607	U
1	A	613	G
1	A	614(C)	G
1	A	614(D)	A
1	A	615	G
1	A	627	A
1	A	628	G
1	A	637	A
1	A	645	C
1	A	646	A
1	A	651	G
1	A	652(A)	C
1	A	652(C)	A
1	A	652(V)	G
1	A	653	A
1	A	656	G
1	A	669	G
1	A	675	A
1	A	677	A
1	A	686	G
1	A	695	G
1	A	714	U
1	A	717	G
1	A	730	C
1	A	734	A
1	A	748	G
1	A	749	C
1	A	752	A
1	A	753	C
1	A	764	A
1	A	775	G
1	A	776	G
1	A	777	A
1	A	779	U
1	A	782	A
1	A	784	A
1	A	785	G
1	A	789	A
1	A	791	C
1	A	805	G

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Mol	Chain	Res	Type
1	A	806	C
1	A	812	C
1	A	827	U
1	A	828	U
1	A	830	G
1	A	831	G
1	A	847	U
1	A	857	C
1	A	859	G
1	A	860	U
1	A	869	G
1	A	872	A
1	A	875	G
1	A	878	A
1	A	880	G
1	A	883	G
1	A	884	C
1	A	886	C
1	A	887	A
1	A	888	C
1	A	889	C
1	A	890	A
1	A	893	C
1	A	896	A
1	A	897	C
1	A	900	A
1	A	901	A
1	A	907	U
1	A	910	A
1	A	911	A
1	A	914	C
1	A	917	A
1	A	932	G
1	A	939	G
1	A	941	A
1	A	945	A
1	A	946	G
1	A	959	A
1	A	961	C
1	A	973	A
1	A	974	G
1	A	975(A)	C

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Mol	Chain	Res	Type
1	A	983	A
1	A	985	C
1	A	996	A
1	A	1002	G
1	A	1005	C
1	A	1009	A
1	A	1011	G
1	A	1012	U
1	A	1013	C
1	A	1018	C
1	A	1020	A
1	A	1022	G
1	A	1023	U
1	A	1025	G
1	A	1026	U
1	A	1027	A
1	A	1029	A
1	A	1033	U
1	A	1039	G
1	A	1042	G
1	A	1044	G
1	A	1045	A
1	A	1046	A
1	A	1047	G
1	A	1052	C
1	A	1054	A
1	A	1057	A
1	A	1058	G
1	A	1059	G
1	A	1060	U
1	A	1063	G
1	A	1064	C
1	A	1065	U
1	A	1066	U
1	A	1067	A
1	A	1068	G
1	A	1069	A
1	A	1070	A
1	A	1071	G
1	A	1073	A
1	A	1076	C
1	A	1077	A

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Mol	Chain	Res	Type
1	A	1080	C
1	A	1082	U
1	A	1084	A
1	A	1085	A
1	A	1086	A
1	A	1087	G
1	A	1088	A
1	A	1089	G
1	A	1090	U
1	A	1091	G
1	A	1092	C
1	A	1093	G
1	A	1096	A
1	A	1098	A
1	A	1105	U
1	A	1108	U
1	A	1109	C
1	A	1111	A
1	A	1112	G
1	A	1113	U
1	A	1135	C
1	A	1136	G
1	A	1142(B)	A
1	A	1144	G
1	A	1149	G
1	A	1155	A
1	A	1171	G
1	A	1187	G
1	A	1206	G
1	A	1211	U
1	A	1212	G
1	A	1221(A)	C
1	A	1224	C
1	A	1225	G
1	A	1227	G
1	A	1230	C
1	A	1236	G
1	A	1241	A
1	A	1243	G
1	A	1253	A
1	A	1255	U
1	A	1256	G

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Mol	Chain	Res	Type
1	A	1260	G
1	A	1261	C
1	A	1265	A
1	A	1272	A
1	A	1273	U
1	A	1275	A
1	A	1284	A
1	A	1300	U
1	A	1301	A
1	A	1312	U
1	A	1313	U
1	A	1314	C
1	A	1329	U
1	A	1334	G
1	A	1345	C
1	A	1359	A
1	A	1360	A
1	A	1363	C
1	A	1365	A
1	A	1366	A
1	A	1368	G
1	A	1380	G
1	A	1384	A
1	A	1385	G
1	A	1392	A
1	A	1395	A
1	A	1396	U
1	A	1403	C
1	A	1416	G
1	A	1417	C
1	A	1420	U
1	A	1421	G
1	A	1428	C
1	A	1435	G
1	A	1450(A)	G
1	A	1450(B)	C
1	A	1453	U
1	A	1455	G
1	A	1459	G
1	A	1460	A
1	A	1465	G
1	A	1467	C

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Mol	Chain	Res	Type
1	A	1471	A
1	A	1482	G
1	A	1490	A
1	A	1491	G
1	A	1493	C
1	A	1494	A
1	A	1497	U
1	A	1498	C
1	A	1508	A
1	A	1509(A)	C
1	A	1509(B)	A
1	A	1530	C
1	A	1531	C
1	A	1533	G
1	A	1540	U
1	A	1542	A
1	A	1543	C
1	A	1547	C
1	A	1558	A
1	A	1559	G
1	A	1560	G
1	A	1561	G
1	A	1566	A
1	A	1569	A
1	A	1570	A
1	A	1580	A
1	A	1582	C
1	A	1584	C
1	A	1586	A
1	A	1608	A
1	A	1609	A
1	A	1622	G
1	A	1634	A
1	A	1648	C
1	A	1649	G
1	A	1652	A
1	A	1654	A
1	A	1672	C
1	A	1674	G
1	A	1676	A
1	A	1700	A
1	A	1701	A

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Mol	Chain	Res	Type
1	A	1721	G
1	A	1722	A
1	A	1740	G
1	A	1743	C
1	A	1756	G
1	A	1757	U
1	A	1760	A
1	A	1762	A
1	A	1763	G
1	A	1764	G
1	A	1773	A
1	A	1780	A
1	A	1782	C
1	A	1790	C
1	A	1791	A
1	A	1792	G
1	A	1800	C
1	A	1801	G
1	A	1802	A
1	A	1809	A
1	A	1816	G
1	A	1817	G
1	A	1828	G
1	A	1829	A
1	A	1835	G
1	A	1838	C
1	A	1847	A
1	A	1848	A
1	A	1849	G
1	A	1858	G
1	A	1859	A
1	A	1876	A
1	A	1877	A
1	A	1878	G
1	A	1882	C
1	A	1890	A
1	A	1900	A
1	A	1906	G
1	A	1913	A
1	A	1914	C
1	A	1929	G
1	A	1930	G

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Mol	Chain	Res	Type
1	A	1931	U
1	A	1936	A
1	A	1937	A
1	A	1938	A
1	A	1940	U
1	A	1955	U
1	A	1963	U
1	A	1964	G
1	A	1965	C
1	A	1967	C
1	A	1970	A
1	A	1971	A
1	A	1972	A
1	A	1984	G
1	A	1992	G
1	A	1993	U
1	A	1997	G
1	A	2020	A
1	A	2023	G
1	A	2031	A
1	A	2032	G
1	A	2033	A
1	A	2036	C
1	A	2039	C
1	A	2043	C
1	A	2055	C
1	A	2056	G
1	A	2060	A
1	A	2061	G
1	A	2062	A
1	A	2063	C
1	A	2069	G
1	A	2070	G
1	A	2087	G
1	A	2088	G
1	A	2089	U
1	A	2090	G
1	A	2092	U
1	A	2093	G
1	A	2096	U
1	A	2099	U
1	A	2103	C

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Mol	Chain	Res	Type
1	A	2104	G
1	A	2105	C
1	A	2106	G
1	A	2107	C
1	A	2108	C
1	A	2110	G
1	A	2111	C
1	A	2112	G
1	A	2116	G
1	A	2117	A
1	A	2119	A
1	A	2121	G
1	A	2123	G
1	A	2127	G
1	A	2129	C
1	A	2131	G
1	A	2132	U
1	A	2133	G
1	A	2134	A
1	A	2135	A
1	A	2137	C
1	A	2141	G
1	A	2143	C
1	A	2145	C
1	A	2146	C
1	A	2148	G
1	A	2151	G
1	A	2158	A
1	A	2161	C
1	A	2162	G
1	A	2165	G
1	A	2168	G
1	A	2169	A
1	A	2172	U
1	A	2173	A
1	A	2177	C
1	A	2178	C
1	A	2179	C
1	A	2180	U
1	A	2185	C
1	A	2186	G
1	A	2187	G

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Mol	Chain	Res	Type
1	A	2189	U
1	A	2193	G
1	A	2198	A
1	A	2199	A
1	A	2200	C
1	A	2201	C
1	A	2202	C
1	A	2203	U
1	A	2206	G
1	A	2207	G
1	A	2208	A
1	A	2218	U
1	A	2220	G
1	A	2221	G
1	A	2222	G
1	A	2224	G
1	A	2225	A
1	A	2226	C
1	A	2227	A
1	A	2238	G
1	A	2239	G
1	A	2251	OMG
1	A	2266	A
1	A	2269	A
1	A	2273	A
1	A	2275	C
1	A	2278	A
1	A	2279	G
1	A	2281	C
1	A	2283	C
1	A	2286	A
1	A	2287	A
1	A	2302	G
1	A	2305	A
1	A	2308	G
1	A	2309	A
1	A	2311	A
1	A	2319	G
1	A	2320	A
1	A	2321	G
1	A	2322	A
1	A	2325	G

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Mol	Chain	Res	Type
1	A	2334	G
1	A	2347	C
1	A	2350	C
1	A	2354	G
1	A	2383	G
1	A	2385	C
1	A	2406	U
1	A	2410	G
1	A	2422	A
1	A	2424	C
1	A	2425	A
1	A	2428	G
1	A	2429	G
1	A	2430	A
1	A	2431	U
1	A	2435	A
1	A	2439	A
1	A	2441	C
1	A	2445	G
1	A	2448	A
1	A	2469	A
1	A	2473	U
1	A	2474	C
1	A	2475	C
1	A	2476	A
1	A	2478	A
1	A	2480	C
1	A	2488	A
1	A	2491	U
1	A	2498	C
1	A	2502	G
1	A	2503	2MA
1	A	2505	G
1	A	2506	U
1	A	2518	A
1	A	2529	G
1	A	2535	G
1	A	2551	C
1	A	2554	U
1	A	2564	A
1	A	2566	A
1	A	2567	G

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Mol	Chain	Res	Type
1	A	2572	A
1	A	2573	C
1	A	2578	G
1	A	2585	U
1	A	2586	C
1	A	2597	G
1	A	2602	A
1	A	2603	G
1	A	2611	U
1	A	2612	C
1	A	2615	U
1	A	2629	A
1	A	2630	G
1	A	2633	G
1	A	2636	U
1	A	2646	C
1	A	2656	U
1	A	2689	U
1	A	2690	C
1	A	2691	C
1	A	2702	U
1	A	2703	C
1	A	2712(B)	A
1	A	2713	A
1	A	2714	G
1	A	2719	G
1	A	2720	U
1	A	2726	U
1	A	2727	G
1	A	2733	A
1	A	2739	U
1	A	2744	G
1	A	2748	A
1	A	2751	G
1	A	2752	C
1	A	2757	A
1	A	2758	A
1	A	2766	G
1	A	2778	A
1	A	2780	G
1	A	2794(A)	C
1	A	2802	G

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Mol	Chain	Res	Type
1	A	2808	U
1	A	2818	G
1	A	2820	A
1	A	2821	A
1	A	2823	A
1	A	2831	G
1	A	2833	G
1	A	2834	G
1	A	2835	A
1	A	2836	U
1	A	2839	G
1	A	2849	U
1	A	2852	G
1	A	2861	G
1	A	2872	G
1	A	2882	A
1	A	2883	A
1	A	2892	A
1	A	2893	G
1	A	2894	G
1	A	2895	U
2	B	2	C
2	B	8	U
2	B	9	G
2	B	12	C
2	B	13	A
2	B	14	U
2	B	15	A
2	B	24	G
2	B	32	C
2	B	35	U
2	B	41	U
2	B	45	A
2	B	56	G
2	B	58	A
2	B	63	G
2	B	66	A
2	B	73	A
2	B	85	G
2	B	89	G
2	B	91	C
2	B	93	G

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Mol	Chain	Res	Type
2	B	108	U
2	B	110	G
2	B	117	G
32	a	6	G
32	a	9	G
32	a	39	G
32	a	48	C
32	a	51	A
32	a	61	G
32	a	63	C
32	a	64	G
32	a	65	U
32	a	66	G
32	a	67	C
32	a	68	G
32	a	69	G
32	a	70	G
32	a	71	C
32	a	72	C
32	a	73	G
32	a	76	C
32	a	77	G
32	a	79	G
32	a	80	G
32	a	88	A
32	a	89	C
32	a	90	U
32	a	92	C
32	a	93	G
32	a	96	U
32	a	97	G
32	a	98	G
32	a	99	U
32	a	100	C
32	a	101	A
32	a	102	G
32	a	103	C
32	a	104	G
32	a	105	G
32	a	106	C
32	a	116	A
32	a	121	C

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Mol	Chain	Res	Type
32	a	122	G
32	a	129(B)	G
32	a	131	C
32	a	148	G
32	a	150	C
32	a	154	C
32	a	163	C
32	a	168	G
32	a	171	A
32	a	174	C
32	a	181	G
32	a	182	U
32	a	189(M)	G
32	a	195	A
32	a	197	A
32	a	200	G
32	a	201	C
32	a	202	U
32	a	203	U
32	a	216	G
32	a	247	G
32	a	251	G
32	a	266	G
32	a	267	C
32	a	270	A
32	a	279	A
32	a	289	G
32	a	298	A
32	a	306	G
32	a	321	A
32	a	325	A
32	a	328	C
32	a	329	A
32	a	330	C
32	a	332	G
32	a	347	G
32	a	351	G
32	a	352	C
32	a	353	A
32	a	354	G
32	a	367	U
32	a	368	U

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Mol	Chain	Res	Type
32	a	372	C
32	a	373	A
32	a	375	U
32	a	381	C
32	a	389	A
32	a	392	G
32	a	397	A
32	a	398	C
32	a	406	G
32	a	412	A
32	a	413	G
32	a	414	A
32	a	415	A
32	a	423	G
32	a	428	G
32	a	429	U
32	a	430	A
32	a	435	C
32	a	439	A
32	a	442	C
32	a	443	C
32	a	452	A
32	a	461	A
32	a	470	C
32	a	482	A
32	a	485	G
32	a	496	A
32	a	498	U
32	a	500	G
32	a	506	G
32	a	509	A
32	a	510	A
32	a	511	C
32	a	518	C
32	a	521	G
32	a	524	G
32	a	527	7MG
32	a	531	U
32	a	532	A
32	a	533	A
32	a	536	C
32	a	545	C

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Mol	Chain	Res	Type
32	a	547	A
32	a	564	C
32	a	571	U
32	a	572	A
32	a	573	A
32	a	575	G
32	a	576	G
32	a	577	G
32	a	579	G
32	a	582	U
32	a	592	G
32	a	596	C
32	a	618	C
32	a	630	G
32	a	632	A
32	a	633	G
32	a	641	U
32	a	653	A
32	a	660	G
32	a	665	A
32	a	687	A
32	a	688	G
32	a	690	G
32	a	693	G
32	a	702	A
32	a	718	G
32	a	721	G
32	a	723	U
32	a	731	G
32	a	742	G
32	a	749	C
32	a	750	G
32	a	755	G
32	a	777	A
32	a	788	U
32	a	792	A
32	a	793	U
32	a	794	A
32	a	807	A
32	a	815	A
32	a	816	A
32	a	817	C

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Mol	Chain	Res	Type
32	a	819	A
32	a	823	G
32	a	828	A
32	a	840	C
32	a	841	U
32	a	848	C
32	a	851	G
32	a	872	A
32	a	874	G
32	a	876	G
32	a	891	U
32	a	902	G
32	a	914	A
32	a	923	A
32	a	926	G
32	a	927	G
32	a	931	C
32	a	933	G
32	a	934	C
32	a	935	A
32	a	940	C
32	a	945	G
32	a	955	U
32	a	956	U
32	a	957	U
32	a	958	A
32	a	959	A
32	a	960	U
32	a	961	U
32	a	965	A
32	a	968	A
32	a	969	A
32	a	971	G
32	a	974	A
32	a	975	A
32	a	976	G
32	a	977	A
32	a	989	C
32	a	992	U
32	a	993	G
32	a	994	A
32	a	1000	U

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Mol	Chain	Res	Type
32	a	1001(B)	G
32	a	1002	G
32	a	1003	G
32	a	1004	A
32	a	1005	A
32	a	1006	C
32	a	1012	U
32	a	1015	A
32	a	1020	U
32	a	1023	G
32	a	1024	G
32	a	1025	U
32	a	1026	G
32	a	1028	C
32	a	1030(B)	G
32	a	1030(C)	C
32	a	1030(D)	G
32	a	1037	C
32	a	1038	C
32	a	1041	A
32	a	1043	C
32	a	1044	A
32	a	1045	C
32	a	1056	U
32	a	1065	U
32	a	1066	C
32	a	1068	G
32	a	1085	U
32	a	1086	U
32	a	1092	A
32	a	1094	G
32	a	1095	U
32	a	1101	A
32	a	1103	C
32	a	1108	G
32	a	1117	G
32	a	1118	C
32	a	1123	A
32	a	1125	U
32	a	1129	C
32	a	1130	A
32	a	1136	U

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Mol	Chain	Res	Type
32	a	1137	C
32	a	1139	G
32	a	1140	C
32	a	1146	A
32	a	1147	C
32	a	1152	A
32	a	1155	G
32	a	1158	C
32	a	1159	U
32	a	1160	G
32	a	1162	C
32	a	1171	G
32	a	1179	A
32	a	1183	A
32	a	1187	G
32	a	1193	G
32	a	1196	U
32	a	1197	G
32	a	1210	C
32	a	1211	U
32	a	1212	U
32	a	1213	A
32	a	1214	C
32	a	1215	G
32	a	1220	G
32	a	1221	G
32	a	1224	G
32	a	1225	A
32	a	1227	A
32	a	1228	C
32	a	1236	A
32	a	1238	A
32	a	1241	G
32	a	1250	A
32	a	1256	A
32	a	1257	U
32	a	1258	G
32	a	1260	C
32	a	1268	A
32	a	1279	A
32	a	1280	A
32	a	1281	U

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Mol	Chain	Res	Type
32	a	1282	C
32	a	1287	A
32	a	1290	G
32	a	1297	C
32	a	1299	A
32	a	1300	G
32	a	1302	U
32	a	1305	G
32	a	1306	A
32	a	1319	A
32	a	1320	C
32	a	1323	G
32	a	1335	C
32	a	1340	A
32	a	1346	A
32	a	1347	G
32	a	1350	A
32	a	1363(A)	C
32	a	1363(B)	A
32	a	1368	G
32	a	1370	G
32	a	1379	G
32	a	1397	C
32	a	1398	A
32	a	1402	4OC
32	a	1404	5MC
32	a	1419	G
32	a	1428	A
32	a	1442(A)	G
32	a	1442(B)	G
32	a	1443	G
32	a	1447	A
32	a	1452	C
32	a	1457	G
32	a	1476	G
32	a	1492	A
32	a	1497	G
32	a	1500	A
32	a	1503	A
32	a	1504	G
32	a	1506	U
32	a	1507	A

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Mol	Chain	Res	Type
32	a	1517	G
32	a	1519	MA6
32	a	1520	G
32	a	1529	G
32	a	1530	G
32	a	1532	U
32	a	1533	C
32	a	1534	A
32	a	1536	C
32	a	1537	U
32	a	1539	C
32	a	1540	U
32	a	1541	U
32	a	1542	G
53	y	2	G
53	y	8	U
53	y	10	G
53	y	13	C
53	y	16	C
53	y	19	G
53	y	20	U
53	y	46	G
53	y	47	U
53	y	48	C
53	y	50	U
53	y	61	C
53	y	75	C
53	y	76	A
55	z	4	C
55	z	5	G
55	z	13	C
55	z	16	U
55	z	17	C
55	z	18	G
55	z	19	G
55	z	20	U
55	z	21	A
55	z	22	G
55	z	23	A
55	z	36	A
55	z	37	A
55	z	39	U

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Mol	Chain	Res	Type
55	z	40	C
55	z	43	C
55	z	45	U
55	z	47	U
55	z	48	C
55	z	49	C
55	z	52	G
55	z	53	G
55	z	57	G
55	z	58	A
55	z	59	U
55	z	61	C
55	z	62	C
55	z	63	G
55	z	65	G
55	z	70	G
55	z	71	G
55	z	73	A
55	z	74	C
55	z	76	A
56	x	2	A
56	x	3	A
56	x	5	G
56	x	6	A
56	x	7	A
56	x	8	A
56	x	10	A
56	x	11	A
56	x	12	A
56	x	17	U
56	x	18	U
56	x	19	U
56	x	21	G
56	x	23	G
56	x	26	C
56	x	28	G
56	x	31	A
56	x	38	A
56	x	41	C
56	x	42	G
56	x	44	G
56	x	45	C

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Mol	Chain	Res	Type
56	x	46	G

All (41) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	9	U
1	A	68	G
1	A	70	G
1	A	99	U
1	A	195	A
1	A	214	G
1	A	266	G
1	A	272(M)	G
1	A	277	C
1	A	752	A
1	A	784	A
1	A	790	C
1	A	840	C
1	A	856	C
1	A	900	A
1	A	954	G
1	A	959	A
1	A	1053	C
1	A	1057	A
1	A	1065	U
1	A	1067	A
1	A	1210	A
1	A	1240	U
1	A	1379	A
1	A	1491	G
1	A	1889	A
1	A	1935	G
1	A	1992	G
1	A	2126	A
1	A	2171	A
1	A	2172	U
1	A	2199	A
1	A	2321	G
1	A	2428	G
1	A	2474	C
1	A	2601	C
1	A	2602	A

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Mol	Chain	Res	Type
1	A	2689	U
1	A	2719	G
1	A	2756	U
1	A	2832	U

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

24 non-standard protein/DNA/RNA residues are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z > 2$	Counts	RMSZ	# $ Z > 2$
32	5MC	a	1407	32	19,22,23	1.52	3 (15%)	26,32,35	1.26	2 (7%)
32	5MC	a	967	32	19,22,23	1.47	3 (15%)	26,32,35	1.15	2 (7%)
1	4OC	A	1920	1	19,22,24	0.80	1 (5%)	25,31,35	0.86	0
32	M2G	a	966	32	24,27,28	1.32	4 (16%)	33,40,43	1.90	5 (15%)
32	2MG	a	1207	32	23,26,27	1.27	4 (17%)	33,38,41	2.15	9 (27%)
32	7MG	a	527	32	23,26,27	1.38	4 (17%)	27,39,42	2.74	7 (25%)
1	PSU	A	1917	1	18,21,22	1.42	3 (16%)	21,30,33	2.17	5 (23%)
1	5MC	A	1942	1	19,22,23	1.44	3 (15%)	26,32,35	1.18	1 (3%)
43	0TD	l	92	43	8,9,10	2.41	2 (25%)	6,11,13	1.28	1 (16%)
32	5MC	a	1400	32	19,22,23	1.51	3 (15%)	26,32,35	1.18	2 (7%)
1	PSU	A	1911	1	18,21,22	1.39	3 (16%)	21,30,33	2.11	4 (19%)
1	2MU	A	2552	1	19,22,24	1.36	4 (21%)	25,31,36	2.19	6 (24%)
32	UR3	a	1498	32	19,22,23	0.94	1 (5%)	26,32,35	1.77	3 (11%)
32	MA6	a	1518	32	23,26,27	1.44	5 (21%)	33,38,41	2.36	15 (45%)
32	5MC	a	1404	32	19,22,23	1.54	3 (15%)	26,32,35	1.21	3 (11%)
1	5MC	A	1962	1	19,22,23	1.43	3 (15%)	26,32,35	1.23	3 (11%)
1	5MU	A	1915	1	19,22,23	1.46	5 (26%)	27,32,35	2.39	9 (33%)
1	OMG	A	2251	53,1	23,26,27	1.24	3 (13%)	32,38,41	2.01	5 (15%)
32	MA6	a	1519	32	23,26,27	1.40	5 (21%)	33,38,41	2.50	14 (42%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	PSU	A	2605	1	18,21,22	1.41	4 (22%)	21,30,33	2.24	4 (19%)
32	4OC	a	1402	32	20,23,24	0.78	1 (5%)	25,32,35	0.92	2 (8%)
1	5MU	A	1939	1	19,22,23	1.41	4 (21%)	27,32,35	2.14	6 (22%)
1	2MA	A	2503	1	22,25,26	1.48	5 (22%)	32,37,40	2.30	8 (25%)
32	PSU	a	516	32	18,21,22	1.38	4 (22%)	21,30,33	2.10	5 (23%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	5MC	a	1407	32	-	0/7/25/26	0/2/2/2
32	5MC	a	967	32	-	0/7/25/26	0/2/2/2
1	4OC	A	1920	1	-	0/9/27/30	0/2/2/2
32	M2G	a	966	32	-	0/11/29/30	0/3/3/3
32	2MG	a	1207	32	-	0/9/27/28	0/3/3/3
32	7MG	a	527	32	-	3/7/37/38	0/3/3/3
1	PSU	A	1917	1	-	0/7/25/26	0/2/2/2
1	5MC	A	1942	1	-	0/7/25/26	0/2/2/2
43	0TD	l	92	43	-	4/7/12/14	-
32	5MC	a	1400	32	-	2/7/25/26	0/2/2/2
1	PSU	A	1911	1	-	0/7/25/26	0/2/2/2
1	2MU	A	2552	1	-	0/9/27/28	0/2/2/2
32	UR3	a	1498	32	-	0/7/25/26	0/2/2/2
32	MA6	a	1518	32	-	1/11/29/30	0/3/3/3
32	5MC	a	1404	32	-	0/7/25/26	0/2/2/2
1	5MC	A	1962	1	-	2/7/25/26	0/2/2/2
1	5MU	A	1915	1	-	2/7/25/26	0/2/2/2
1	OMG	A	2251	53,1	-	2/9/27/28	0/3/3/3
32	MA6	a	1519	32	-	5/11/29/30	0/3/3/3
1	PSU	A	2605	1	-	0/7/25/26	0/2/2/2
32	4OC	a	1402	32	-	2/9/29/30	0/2/2/2
1	5MU	A	1939	1	-	0/7/25/26	0/2/2/2
1	2MA	A	2503	1	-	1/7/25/26	0/3/3/3
32	PSU	a	516	32	-	0/7/25/26	0/2/2/2

All (80) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
43	l	92	0TD	CB-CA	-5.60	1.52	1.54
32	a	1404	5MC	C5-C4	5.28	1.48	1.44
32	a	1400	5MC	C5-C4	5.23	1.48	1.44
32	a	1407	5MC	C5-C4	5.20	1.48	1.44
1	A	1942	5MC	C5-C4	4.98	1.47	1.44
32	a	967	5MC	C5-C4	4.98	1.47	1.44
1	A	1962	5MC	C5-C4	4.79	1.47	1.44
32	a	1519	MA6	C5-C4	4.22	1.46	1.39
32	a	1518	MA6	C5-C4	4.17	1.46	1.39
1	A	2503	2MA	C5-C4	4.10	1.46	1.39
32	a	527	7MG	C4-N9	-3.69	1.33	1.37
1	A	2605	PSU	C4-N3	-3.21	1.32	1.38
1	A	1939	5MU	C4-N3	-3.14	1.33	1.38
1	A	2552	2MU	C4-N3	-3.13	1.33	1.38
1	A	1911	PSU	C4-N3	-3.13	1.33	1.38
32	a	1407	5MC	C6-N1	-3.13	1.32	1.38
1	A	1917	PSU	C4-N3	-3.03	1.33	1.38
1	A	1915	5MU	C4-N3	-3.01	1.33	1.38
32	a	527	7MG	C5-C4	2.98	1.46	1.37
1	A	1962	5MC	C6-N1	-2.97	1.33	1.38
32	a	966	M2G	C5-C4	2.97	1.46	1.38
1	A	1939	5MU	C6-N1	-2.95	1.33	1.38
1	A	2251	OMG	C6-N1	-2.92	1.33	1.38
32	a	966	M2G	C6-N1	-2.90	1.33	1.38
1	A	2251	OMG	C5-C4	2.86	1.46	1.38
32	a	516	PSU	C4-N3	-2.85	1.33	1.38
1	A	1917	PSU	C6-C5	2.84	1.38	1.35
32	a	967	5MC	C6-N1	-2.84	1.33	1.38
32	a	1207	2MG	C5-C4	2.84	1.46	1.38
1	A	2503	2MA	C5-N7	-2.83	1.33	1.39
32	a	1207	2MG	C6-N1	-2.81	1.33	1.38
32	a	527	7MG	C6-N1	-2.79	1.33	1.38
32	a	1404	5MC	C6-N1	-2.79	1.33	1.38
1	A	1942	5MC	C6-N1	-2.68	1.33	1.38
1	A	1915	5MU	C2-N1	2.66	1.42	1.38
32	a	516	PSU	C6-C5	2.60	1.38	1.35
1	A	1911	PSU	C6-C5	2.58	1.38	1.35
32	a	1400	5MC	C6-C5	2.57	1.38	1.34
32	a	1400	5MC	C6-N1	-2.56	1.33	1.38
32	a	1518	MA6	C5-N7	-2.55	1.34	1.39
1	A	1939	5MU	C2-N3	-2.55	1.33	1.38
1	A	1915	5MU	C2-N3	-2.54	1.33	1.38
1	A	2552	2MU	C2-N3	-2.53	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	a	1518	MA6	C4-N9	-2.51	1.32	1.37
32	a	1519	MA6	C5-N7	-2.50	1.34	1.39
1	A	2605	PSU	C6-C5	2.48	1.38	1.35
32	a	1404	5MC	C6-C5	2.45	1.38	1.34
1	A	1915	5MU	C6-N1	-2.44	1.33	1.38
32	a	527	7MG	C5-N7	-2.40	1.32	1.35
32	a	967	5MC	C6-C5	2.39	1.38	1.34
1	A	2605	PSU	C2-N3	-2.38	1.33	1.37
32	a	966	M2G	C2-N2	2.37	1.39	1.35
1	A	1911	PSU	C2-N3	-2.34	1.33	1.37
1	A	2251	OMG	C5-N7	-2.34	1.34	1.39
32	a	966	M2G	C5-N7	-2.34	1.34	1.39
32	a	1518	MA6	C5-C6	2.33	1.47	1.41
32	a	1519	MA6	C5-C6	2.33	1.47	1.41
1	A	1915	5MU	C6-C5	2.33	1.38	1.34
32	a	1207	2MG	C4-N9	-2.31	1.32	1.38
1	A	2503	2MA	C4-N9	-2.29	1.32	1.37
32	a	1519	MA6	C4-N9	-2.27	1.33	1.37
1	A	1939	5MU	C6-C5	2.27	1.38	1.34
1	A	2503	2MA	C5-C6	2.24	1.47	1.41
32	a	1207	2MG	C5-N7	-2.23	1.34	1.39
1	A	1942	5MC	C6-C5	2.20	1.38	1.34
1	A	1917	PSU	C2-N3	-2.19	1.33	1.37
32	a	1519	MA6	C8-N7	2.19	1.35	1.31
1	A	2552	2MU	C5-C4	2.16	1.48	1.43
1	A	1962	5MC	C6-C5	2.15	1.38	1.34
32	a	1518	MA6	C8-N7	2.14	1.35	1.31
32	a	516	PSU	C2-N3	-2.12	1.34	1.37
32	a	1407	5MC	C6-C5	2.10	1.38	1.34
32	a	516	PSU	O4'-C1'	-2.09	1.41	1.43
43	l	92	0TD	CSB-SB	-2.08	1.75	1.79
1	A	2552	2MU	C6-N1	-2.07	1.33	1.38
1	A	2503	2MA	C8-N9	-2.05	1.34	1.37
32	a	1402	4OC	C6-N1	-2.04	1.33	1.38
32	a	1498	UR3	C5-C4	-2.03	1.38	1.43
1	A	1920	4OC	C6-N1	-2.01	1.33	1.38
1	A	2605	PSU	C2-N1	-2.00	1.34	1.36

All (121) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	a	527	7MG	N9-C4-N3	9.51	139.39	125.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	2503	2MA	C5-C4-N3	-8.11	118.63	127.18
32	a	1498	UR3	C4-N3-C2	-7.04	118.91	124.58
1	A	2605	PSU	N1-C2-N3	6.90	122.44	115.17
1	A	1917	PSU	N1-C2-N3	6.74	122.27	115.17
1	A	2503	2MA	N3-C4-N9	6.65	135.43	126.99
1	A	1911	PSU	N1-C2-N3	6.54	122.06	115.17
32	a	1207	2MG	C2-N3-C4	6.48	120.11	112.00
32	a	516	PSU	N1-C2-N3	6.41	121.93	115.17
1	A	2251	OMG	C5-C4-N3	-6.28	118.40	128.39
32	a	966	M2G	C5-C4-N3	-6.18	118.56	128.39
32	a	527	7MG	N9-C8-N7	-5.75	95.24	103.37
32	a	1207	2MG	C5-C4-N3	-5.57	119.52	128.39
32	a	527	7MG	C5-C4-N3	-5.53	117.75	128.13
32	a	1519	MA6	C5-C4-N3	-5.46	119.19	126.72
32	a	1519	MA6	C10-N6-C6	-5.24	107.20	120.52
1	A	2552	2MU	N3-C2-N1	5.21	121.68	114.89
1	A	2552	2MU	C4-N3-C2	-5.21	120.15	126.61
1	A	1939	5MU	C4-N3-C2	-5.20	120.52	127.34
32	a	1518	MA6	C5-C4-N3	-5.19	119.57	126.72
32	a	1519	MA6	C9-N6-C6	-5.17	107.37	120.52
32	a	1518	MA6	C9-N6-C6	-5.13	107.47	120.52
1	A	2251	OMG	C2-N3-C4	5.08	121.06	112.30
1	A	1915	5MU	C4-N3-C2	-4.98	120.81	127.34
1	A	1915	5MU	N3-C2-N1	4.87	121.22	114.89
1	A	1939	5MU	N3-C2-N1	4.84	121.19	114.89
1	A	2605	PSU	C4-N3-C2	-4.83	119.72	126.37
1	A	1915	5MU	C5-C4-N3	4.79	119.49	115.32
32	a	966	M2G	N9-C4-N3	4.68	135.30	125.95
1	A	2251	OMG	N9-C4-N3	4.66	135.27	125.95
1	A	2552	2MU	C2'-C1'-N1	-4.59	105.53	114.24
1	A	1917	PSU	C4-N3-C2	-4.50	120.18	126.37
1	A	1915	5MU	C1'-N1-C2	4.49	125.66	117.59
32	a	1519	MA6	N3-C4-N9	4.45	134.74	127.17
1	A	1911	PSU	C4-N3-C2	-4.42	120.28	126.37
1	A	1939	5MU	C5-C4-N3	4.42	119.17	115.32
32	a	516	PSU	C4-N3-C2	-4.32	120.42	126.37
32	a	966	M2G	C2-N3-C4	4.31	120.48	112.51
32	a	1407	5MC	C5-C6-N1	-4.29	118.65	123.31
1	A	1915	5MU	C1'-N1-C6	-4.27	114.11	121.15
1	A	1942	5MC	C5-C6-N1	-4.18	118.77	123.31
32	a	1404	5MC	C5-C6-N1	-4.16	118.80	123.31
32	a	527	7MG	C2-N3-C4	4.13	119.41	112.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1939	5MU	C5-C6-N1	-4.13	118.83	123.31
32	a	1518	MA6	C2-N1-C6	4.09	121.82	111.83
32	a	1518	MA6	N3-C4-N9	4.06	134.08	127.17
1	A	1939	5MU	O4-C4-C5	-4.06	120.28	124.92
32	a	1518	MA6	C10-N6-C6	-4.04	110.25	120.52
32	a	1519	MA6	C2-N1-C6	3.95	121.49	111.83
1	A	1917	PSU	O2-C2-N1	-3.84	118.83	122.79
1	A	1915	5MU	O4-C4-C5	-3.83	120.53	124.92
32	a	1207	2MG	N9-C4-N3	3.80	133.54	125.95
1	A	1962	5MC	C5-C6-N1	-3.73	119.26	123.31
32	a	1519	MA6	C2-N3-C4	3.64	120.71	111.83
32	a	1400	5MC	C5-C6-N1	-3.63	119.37	123.31
32	a	516	PSU	O2-C2-N1	-3.62	119.06	122.79
32	a	1518	MA6	C4-C5-N7	-3.52	106.56	110.58
1	A	2605	PSU	O2-C2-N1	-3.50	119.18	122.79
32	a	1207	2MG	C6-C5-N7	3.50	136.66	130.29
32	a	1518	MA6	C2-N3-C4	3.48	120.34	111.83
32	a	1519	MA6	N1-C2-N3	-3.41	123.42	128.58
1	A	1911	PSU	O2-C2-N1	-3.38	119.31	122.79
32	a	1498	UR3	C5-C4-N3	3.32	119.41	115.04
32	a	1518	MA6	N1-C2-N3	-3.27	123.64	128.58
1	A	2552	2MU	C5-C4-N3	3.26	119.37	114.80
32	a	1519	MA6	N1-C6-N6	3.23	120.79	116.86
32	a	967	5MC	C5-C6-N1	-3.17	119.87	123.31
1	A	2251	OMG	C6-C5-N7	3.10	135.92	130.29
1	A	2503	2MA	C4-C5-N7	-3.09	107.05	110.58
32	a	1518	MA6	C4-N9-C8	3.07	108.96	105.74
1	A	1915	5MU	C5-C6-N1	-3.06	119.99	123.31
32	a	1519	MA6	C4-C5-N7	-3.04	107.11	110.58
1	A	2552	2MU	O2-C2-N1	-3.02	118.86	122.80
32	a	966	M2G	C6-C5-N7	2.98	135.71	130.29
32	a	1519	MA6	C5-C6-N6	-2.96	120.64	125.33
1	A	2503	2MA	N6-C6-N1	2.94	121.00	117.03
32	a	1519	MA6	C4-N9-C8	2.93	108.82	105.74
1	A	1915	5MU	O2-C2-N3	-2.92	116.10	121.49
1	A	2503	2MA	C4-N9-C8	2.91	108.79	105.74
1	A	1939	5MU	O2-C2-N1	-2.83	119.11	122.80
32	a	1207	2MG	N2-C2-N3	-2.80	116.94	120.51
32	a	1400	5MC	C5-C4-N3	-2.79	118.89	121.75
32	a	1207	2MG	N1-C2-N2	2.78	119.40	116.56
32	a	1207	2MG	C4-C5-N7	-2.74	106.33	110.67
1	A	2605	PSU	C5-C6-N1	-2.72	118.36	122.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	a	527	7MG	C5-C4-N9	-2.72	102.85	106.33
1	A	2552	2MU	O4-C4-C5	-2.68	120.53	125.16
32	a	527	7MG	C5-C6-N1	2.65	115.60	110.94
32	a	1518	MA6	N1-C6-N6	2.64	120.07	116.86
32	a	967	5MC	C5-C4-N3	-2.63	119.06	121.75
1	A	1911	PSU	C5-C6-N1	-2.60	118.53	122.14
32	a	1519	MA6	C10-N6-C9	-2.59	107.85	116.18
1	A	2503	2MA	C2-N1-C6	2.54	122.00	118.10
32	a	1518	MA6	C5-N7-C8	2.51	107.40	103.45
1	A	2251	OMG	C4-C5-N7	-2.49	106.72	110.67
32	a	966	M2G	C4-C5-N7	-2.45	106.79	110.67
32	a	1207	2MG	CM2-N2-C2	-2.39	118.51	123.65
1	A	2503	2MA	C5-N7-C8	2.37	107.17	103.45
1	A	1962	5MC	C5-C4-N3	-2.36	119.34	121.75
32	a	1404	5MC	C5-C4-N3	-2.33	119.37	121.75
32	a	1407	5MC	C5-C4-N3	-2.31	119.38	121.75
32	a	516	PSU	O4'-C1'-C2'	2.31	108.35	105.15
32	a	1519	MA6	C5-N7-C8	2.30	107.07	103.45
1	A	1917	PSU	C5-C6-N1	-2.29	118.96	122.14
32	a	527	7MG	O6-C6-C5	-2.28	122.01	127.62
32	a	1518	MA6	N9-C8-N7	-2.26	110.73	113.94
1	A	1962	5MC	C1'-N1-C6	-2.23	117.48	121.15
32	a	1402	4OC	CM4-N4-C4	-2.20	118.16	122.45
32	a	1518	MA6	C10-N6-C9	-2.19	109.13	116.18
1	A	1915	5MU	C5M-C5-C4	2.17	121.10	118.78
32	a	516	PSU	C5-C6-N1	-2.16	119.15	122.14
32	a	1498	UR3	C1'-N1-C2	2.13	120.53	117.04
32	a	1519	MA6	N9-C8-N7	-2.12	110.92	113.94
1	A	1917	PSU	O4'-C1'-C2'	2.12	108.09	105.15
32	a	1518	MA6	C5-C6-N6	-2.11	122.00	125.33
32	a	1404	5MC	O2-C2-N3	-2.09	119.03	122.33
32	a	1518	MA6	C6-C5-N7	2.07	136.73	133.43
32	a	1207	2MG	C2-N1-C6	-2.04	122.08	124.55
1	A	2503	2MA	N9-C8-N7	-2.03	111.05	113.94
43	l	92	0TD	OD2-CG-CB	2.02	117.52	113.15
32	a	1402	4OC	C6-C5-C4	2.01	119.42	117.00

There are no chirality outliers.

All (24) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	A	1915	5MU	O4'-C1'-N1-C2

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Mol	Chain	Res	Type	Atoms
1	A	1915	5MU	O4'-C1'-N1-C6
32	a	1519	MA6	O4'-C4'-C5'-O5'
32	a	1519	MA6	C5-C6-N6-C9
43	l	92	0TD	O-C-CA-CB
32	a	527	7MG	C3'-C4'-C5'-O5'
32	a	1402	4OC	O4'-C4'-C5'-O5'
32	a	527	7MG	O4'-C4'-C5'-O5'
32	a	1519	MA6	N1-C6-N6-C9
32	a	1519	MA6	C3'-C4'-C5'-O5'
32	a	1402	4OC	C3'-C4'-C5'-O5'
32	a	1400	5MC	O4'-C4'-C5'-O5'
1	A	2251	OMG	O4'-C4'-C5'-O5'
32	a	527	7MG	C4'-C5'-O5'-P
1	A	2251	OMG	C3'-C4'-C5'-O5'
32	a	1518	MA6	C5-C6-N6-C10
43	l	92	0TD	CG-CB-SB-CSB
1	A	1962	5MC	C2'-C1'-N1-C6
43	l	92	0TD	SB-CB-CG-OD1
32	a	1519	MA6	C4'-C5'-O5'-P
1	A	1962	5MC	O4'-C1'-N1-C6
43	l	92	0TD	CA-CB-SB-CSB
1	A	2503	2MA	O4'-C4'-C5'-O5'
32	a	1400	5MC	C3'-C4'-C5'-O5'

There are no ring outliers.

21 monomers are involved in 71 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
32	a	1407	5MC	1	0
32	a	967	5MC	5	0
1	A	1920	4OC	3	0
32	a	966	M2G	4	0
32	a	1207	2MG	4	0
1	A	1917	PSU	3	0
1	A	1942	5MC	4	0
43	l	92	0TD	2	0
32	a	1400	5MC	2	0
1	A	1911	PSU	3	0
1	A	2552	2MU	5	0
32	a	1498	UR3	1	0
32	a	1518	MA6	12	0
32	a	1404	5MC	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	A	1962	5MC	3	0
1	A	1915	5MU	2	0
1	A	2251	OMG	3	0
32	a	1519	MA6	9	0
32	a	1402	4OC	4	0
1	A	2503	2MA	2	0
32	a	516	PSU	4	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 7 ligands modelled in this entry, 6 are monoatomic - leaving 1 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
58	SF4	d	301	35	0,12,12	-	-	-		

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
58	SF4	d	301	35	-	-	0/6/5/5

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
58	d	301	SF4	2	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
32	a	4
7	H	3
1	A	2

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	a	1029:C	O3'	1030(A):C	P	5.11
1	a	1000:U	O3'	1001(A):A	P	4.99
1	A	2180:U	O3'	2181:G	P	4.52
1	a	1030(E):A	O3'	1031:G	P	3.85
1	H	3:ARG	C	4:ILE	N	3.28
1	H	119:GLU	C	120:GLY	N	3.14
1	H	137:ASP	C	138:LYS	N	3.14
1	A	2103:C	O3'	2104:G	P	3.03
1	a	64:G	O3'	65:U	P	2.19

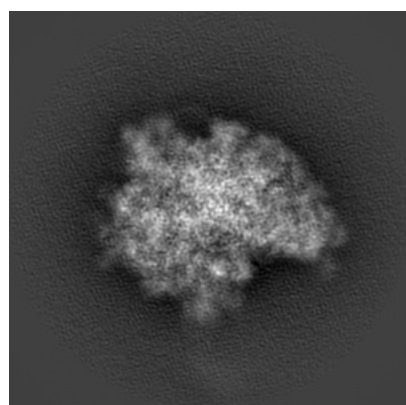
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-8596. These allow visual inspection of the internal detail of the map and identification of artifacts.

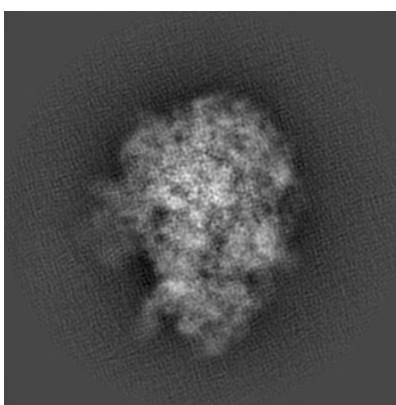
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

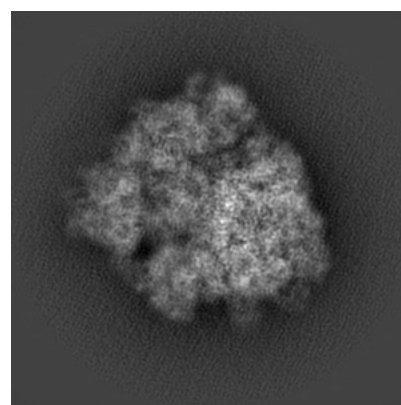
6.1.1 Primary map



X



Y

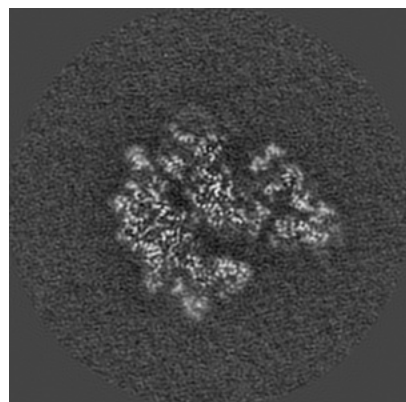


Z

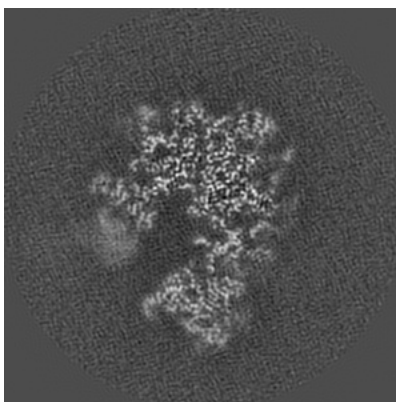
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

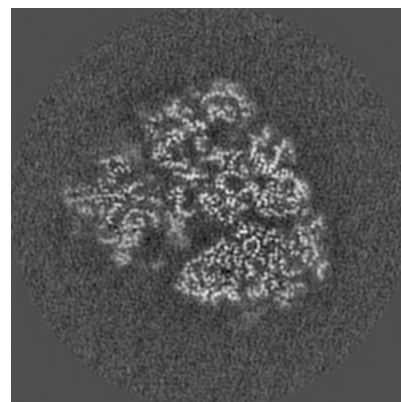
6.2.1 Primary map



X Index: 192



Y Index: 192

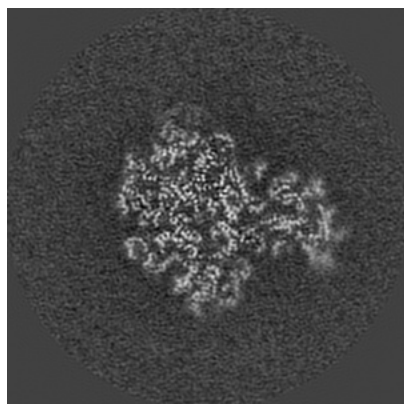


Z Index: 192

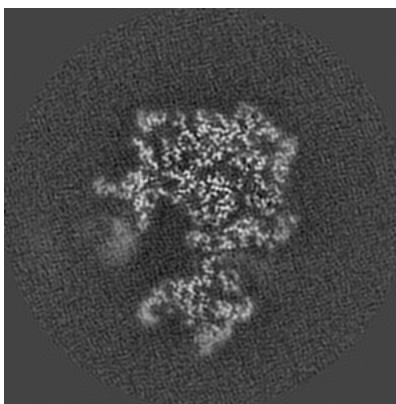
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

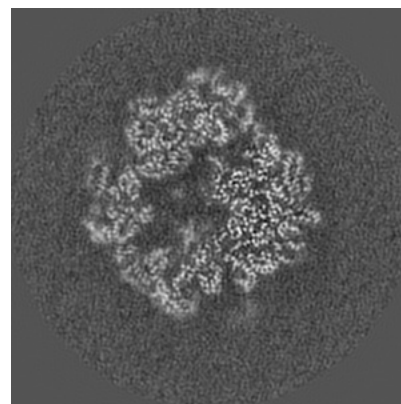
6.3.1 Primary map



X Index: 203



Y Index: 200

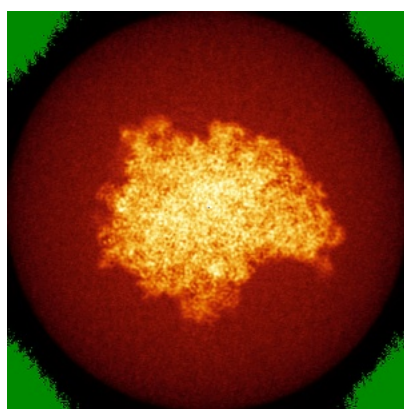


Z Index: 173

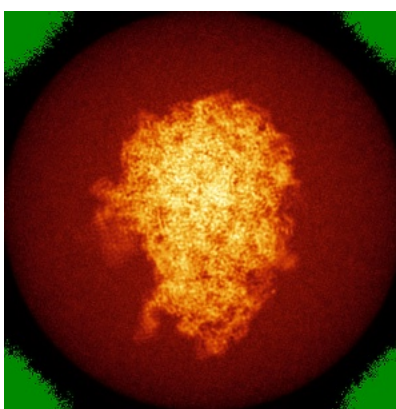
The images above show the largest variance slices of the map in three orthogonal directions.

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

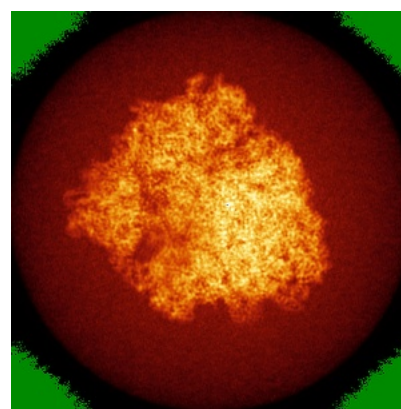
6.4.1 Primary map



X



Y



Z

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

This section was not generated.

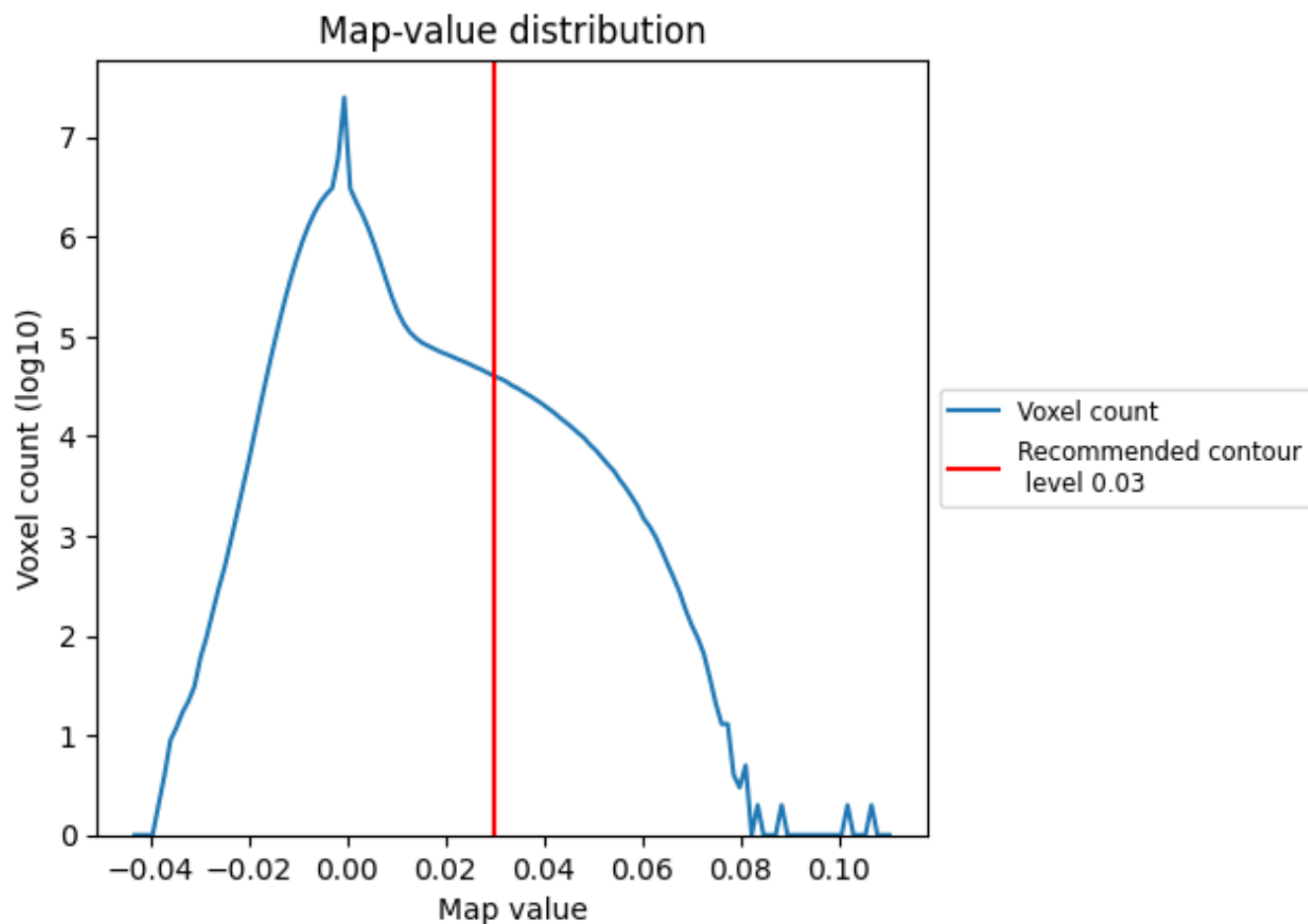
6.6 Mask visualisation

This section was not generated. No masks/segmentation were deposited.

7 Map analysis [i](#)

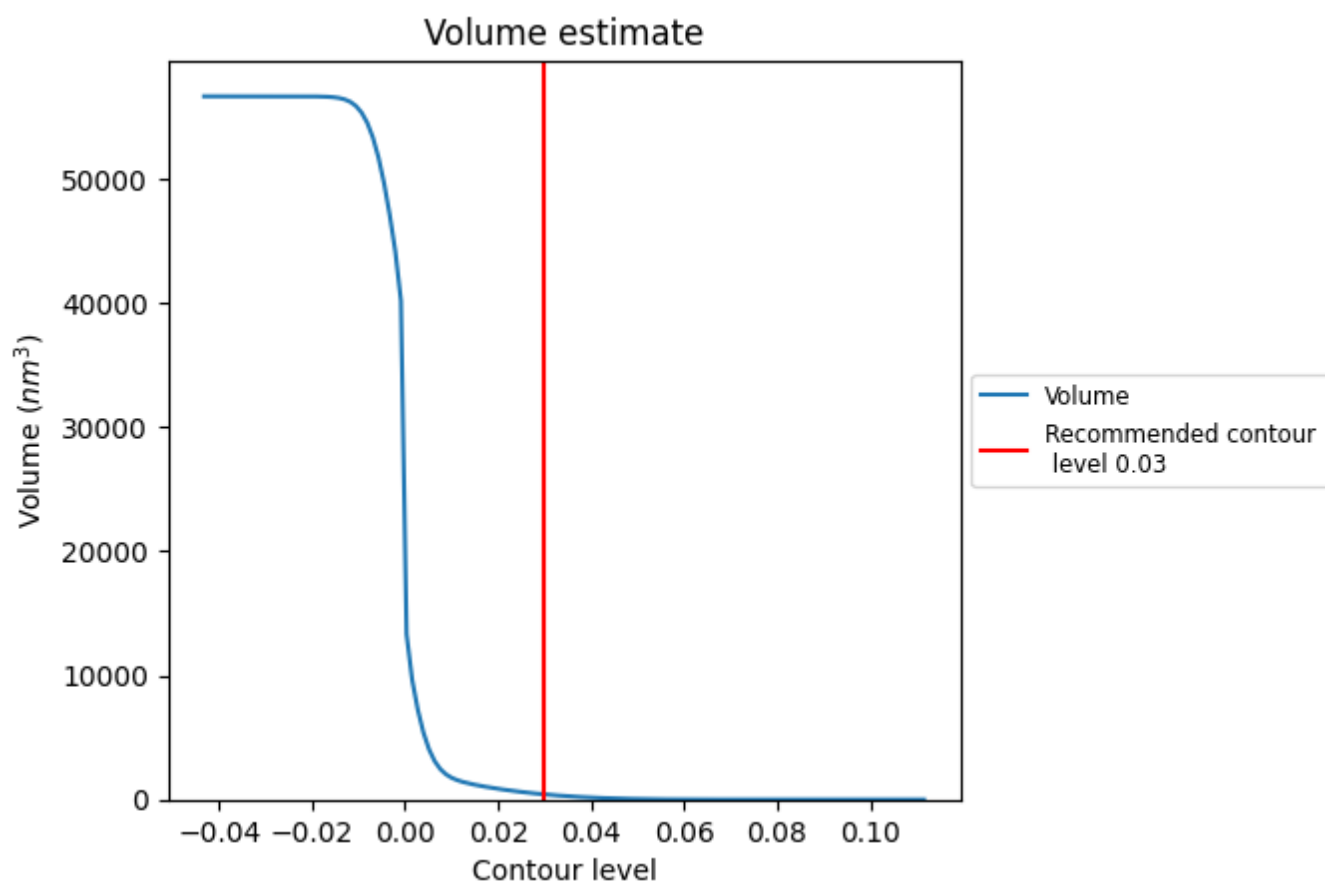
This section contains the results of statistical analysis of the map.

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.

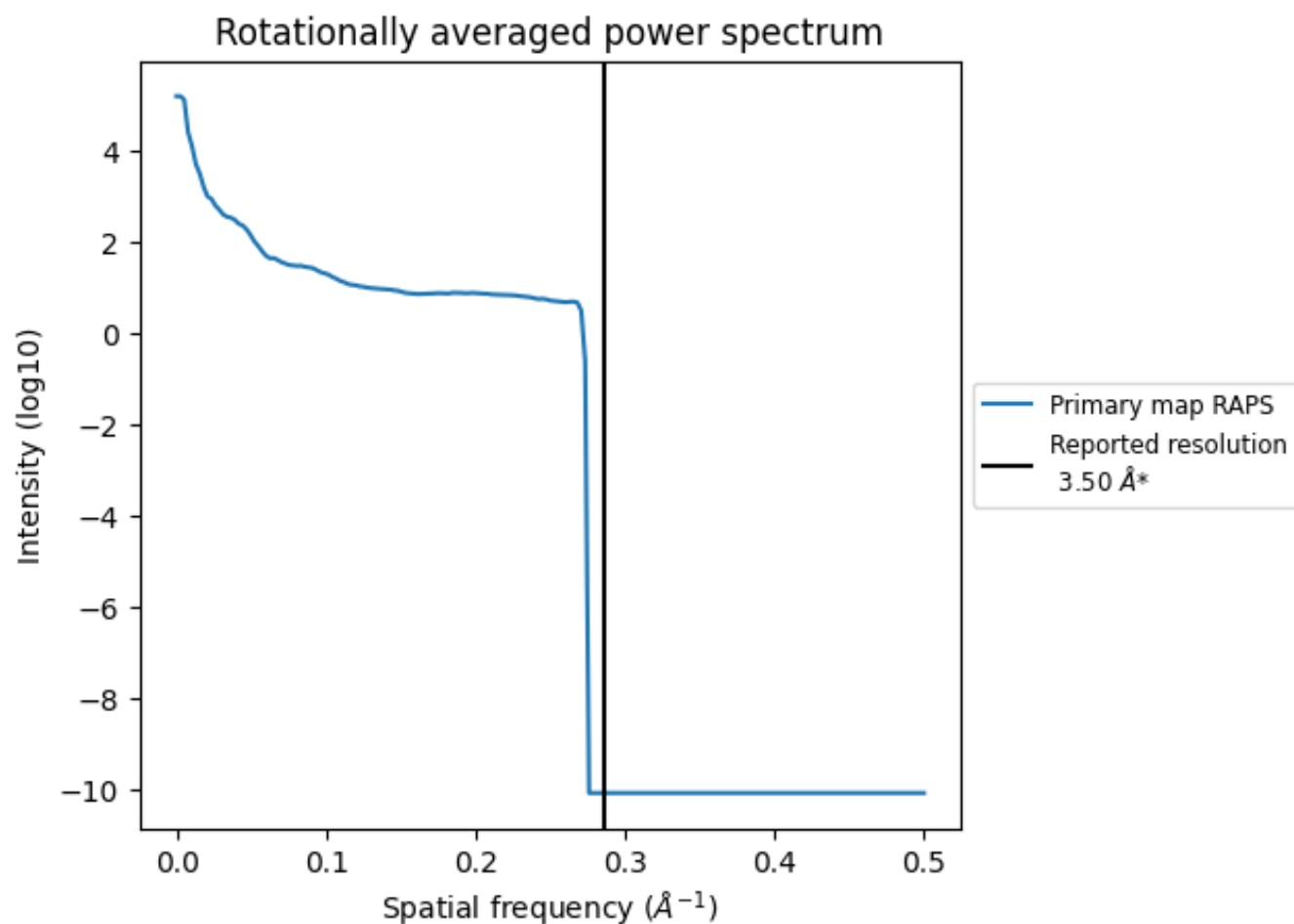
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 418 nm³; this corresponds to an approximate mass of 378 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 0.286 Å⁻¹

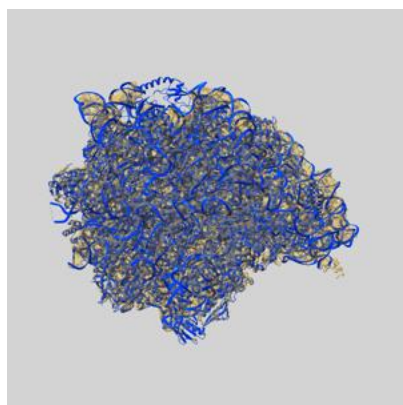
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

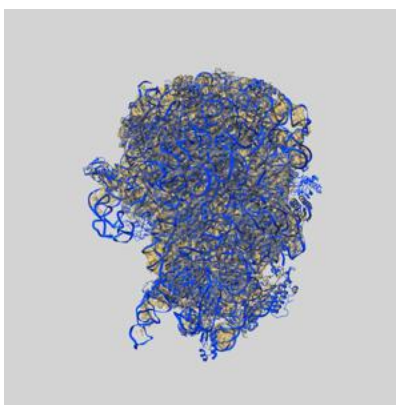
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-8596 and PDB model 5UQ7. Per-residue inclusion information can be found in [section 3](#) on [page 16](#).

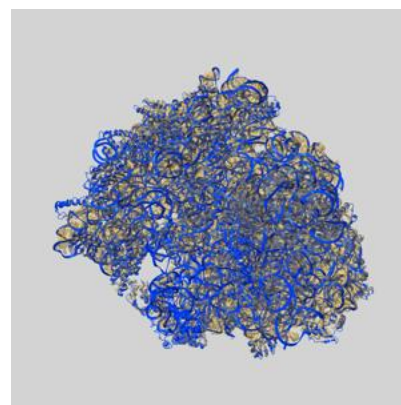
9.1 Map-model overlay [i](#)



X



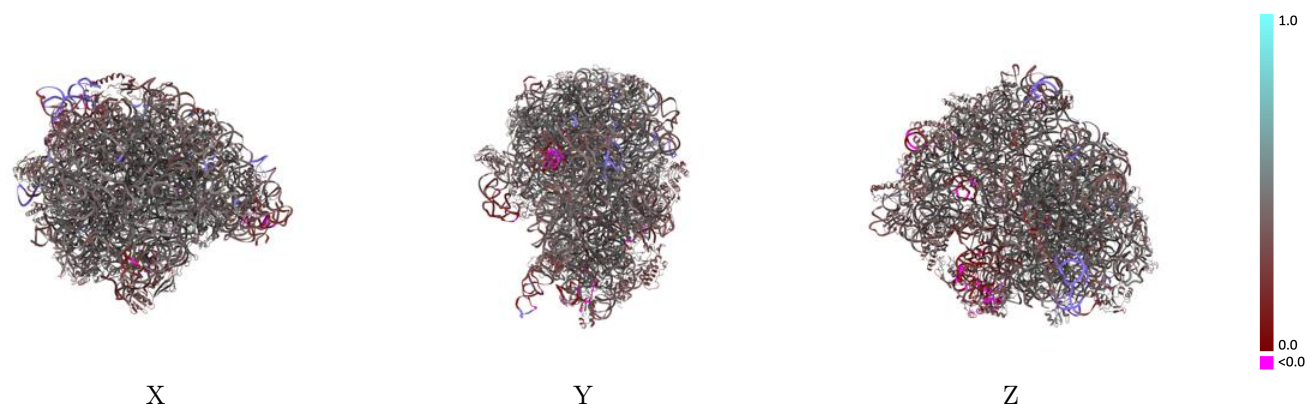
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.03 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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

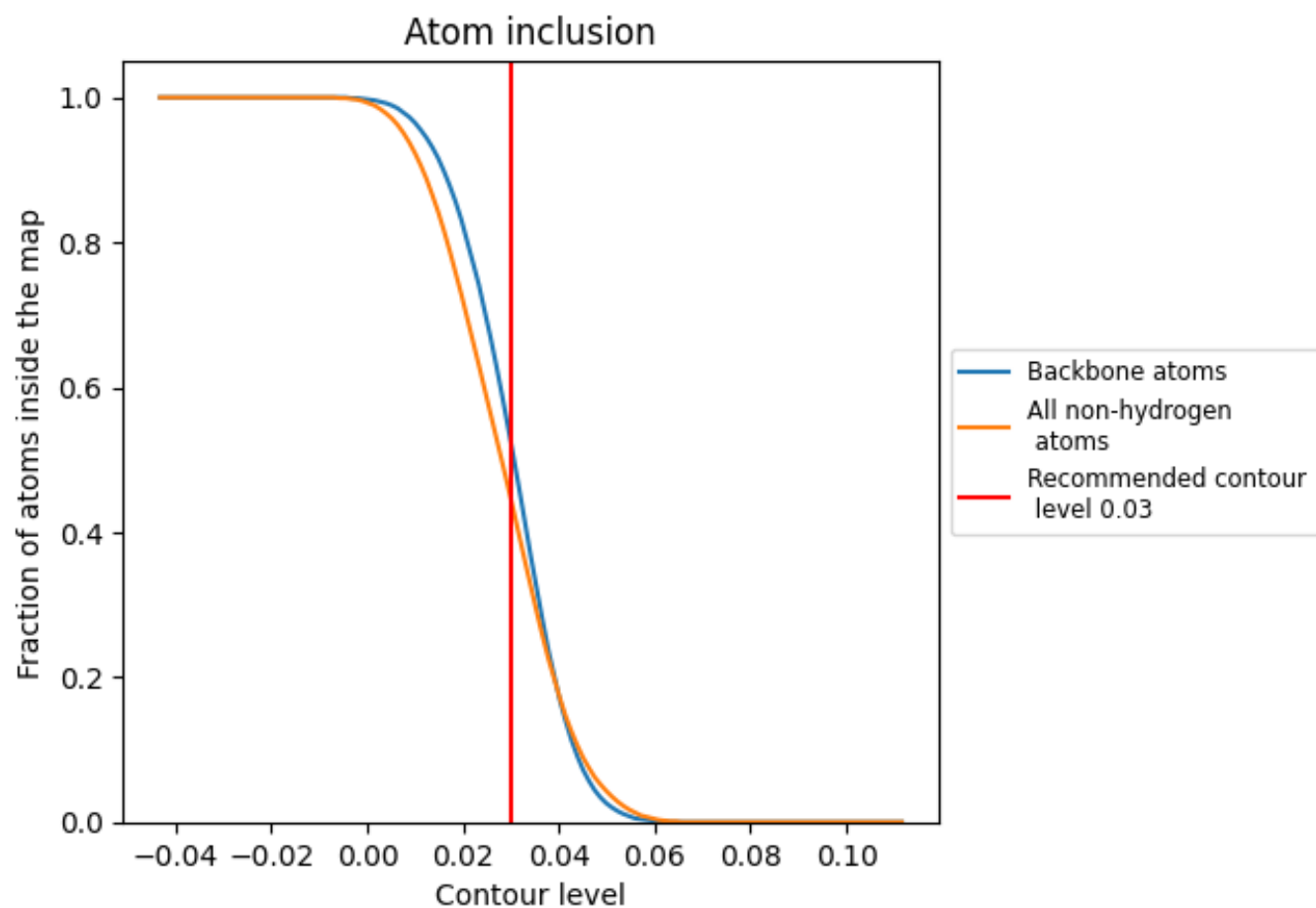


The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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

This section was not generated.

9.4 Atom inclusion [i](#)



At the recommended contour level, 52% of all backbone atoms, 45% 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 (0.03) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.4460	 0.3970
0	 0.3670	 0.4460
1	 0.3080	 0.4260
2	 0.3130	 0.3660
3	 0.3350	 0.4200
4	 0.0940	 0.2850
5	 0.3830	 0.4500
6	 0.3230	 0.3960
7	 0.4020	 0.4440
8	 0.3720	 0.4570
9	 0.3930	 0.4280
A	 0.5580	 0.4120
B	 0.5470	 0.4020
C	 0.0000	 0.1230
D	 0.3940	 0.4600
E	 0.3830	 0.4450
F	 0.3380	 0.4210
G	 0.1930	 0.3680
H	 0.1710	 0.3570
I	 0.0240	 0.2910
N	 0.3510	 0.4260
O	 0.3340	 0.4440
P	 0.3200	 0.4320
Q	 0.3470	 0.4350
R	 0.4130	 0.4390
S	 0.3050	 0.3890
T	 0.3450	 0.4270
U	 0.4250	 0.4270
V	 0.2900	 0.4280
W	 0.3800	 0.4360
X	 0.3100	 0.4220
Y	 0.2470	 0.4090
Z	 0.1520	 0.3560
a	 0.5200	 0.3980
b	 0.1730	 0.3540



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Chain	Atom inclusion	Q-score
c	 0.2350	 0.4020
d	 0.2780	 0.3860
e	 0.3150	 0.4250
f	 0.1700	 0.3470
g	 0.2100	 0.3680
h	 0.3460	 0.4180
i	 0.2030	 0.3810
j	 0.1460	 0.3620
k	 0.2480	 0.3960
l	 0.2760	 0.4370
m	 0.1970	 0.3540
n	 0.2820	 0.4080
o	 0.3200	 0.3800
p	 0.3480	 0.4210
q	 0.3210	 0.4260
r	 0.2040	 0.3680
s	 0.1510	 0.3660
t	 0.2810	 0.3750
u	 0.2530	 0.3660
x	 0.0260	 0.1470
y	 0.1760	 0.3590
z	 0.0290	 0.2070