



Full wwPDB EM Validation Report ⓘ

Mar 5, 2026 – 02:58 AM UTC

PDB ID : 4D67 / pdb_00004d67
EMDB ID : EMD-2813
Title : Cryo-EM structures of ribosomal 80S complexes with termination factors and cricket paralysis virus IRES reveal the IRES in the translocated state
Authors : Muhs, M.; Hilal, T.; Mielke, T.; Skabkin, M.A.; Sanbonmatsu, K.Y.; Pestova, T.V.; Spahn, C.M.T.
Deposited on : 2014-11-10
Resolution : 9.00 Å (reported)
Based on initial model : 4CXD

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

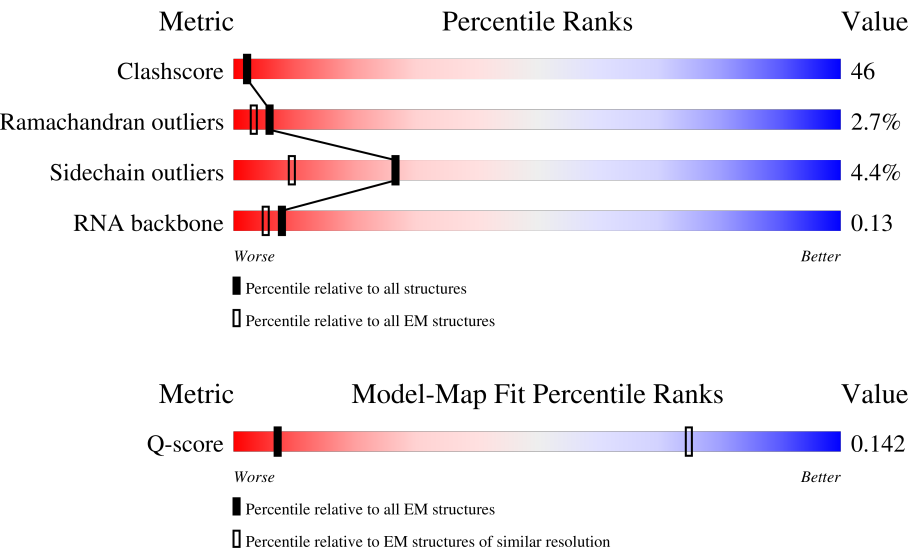
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh &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

1 Overall quality at a glance i

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

The reported resolution of this entry is 9.00 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	258 (8.40 - 9.40)

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	257	20% 54% 40% • •
2	B	403	13% 54% 38% 5% • •
3	C	427	11% 43% 35% 6% • 15%

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Mol	Chain	Length	Quality of chain
4	D	297	
5	E	288	
6	F	248	
7	G	266	
8	H	192	
9	I	214	
10	J	178	
11	L	211	
12	M	215	
13	N	204	
14	O	203	
15	P	184	
16	Q	188	
17	R	196	
18	S	176	
19	T	160	
20	U	128	
21	V	140	
22	W	157	
23	X	156	
24	Y	145	
25	Z	136	
26	a	148	
27	b	159	
28	c	115	

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Mol	Chain	Length	Quality of chain
29	d	125	
30	e	135	
31	f	110	
32	g	117	
33	h	123	
34	i	105	
35	j	97	
36	k	70	
37	l	51	
38	m	128	
39	n	25	
40	o	106	
41	p	92	
42	t	137	
43	u	210	
44	2	5025	
45	3	194	
46	4	121	

2 Entry composition

There are 46 unique types of molecules in this entry. The entry contains 136495 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called 60S RIBOSOMAL PROTEIN L8.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	247	Total	C	N	O	S	0	1
			1888	1183	388	311	6		

- Molecule 2 is a protein called 60S RIBOSOMAL PROTEIN L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	396	Total	C	N	O	S	0	1
			3190	2030	601	545	14		

- Molecule 3 is a protein called 60S RIBOSOMAL PROTEIN L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	C	364	Total	C	N	O	S	0	1
			2889	1817	578	480	14		

- Molecule 4 is a protein called 60S RIBOSOMAL PROTEIN L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	D	290	Total	C	N	O	S	0	0
			2361	1489	431	427	14		

- Molecule 5 is a protein called 60S RIBOSOMAL PROTEIN L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	E	158	Total	C	N	O		0	0
			1286	834	238	214			

- Molecule 6 is a protein called 60S RIBOSOMAL PROTEIN L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	F	234	Total	C	N	O	S	0	0
			1949	1252	376	312	9		

- Molecule 7 is a protein called 60S RIBOSOMAL PROTEIN L7A.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	235	Total	C	N	O	S	0	1
			1881	1197	363	317	4		

- Molecule 8 is a protein called 60S RIBOSOMAL PROTEIN L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	192	Total	C	N	O	S	0	0
			1535	965	286	278	6		

- Molecule 9 is a protein called 60S RIBOSOMAL PROTEIN L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	I	196	Total	C	N	O	S	0	0
			1604	1022	308	262	12		

- Molecule 10 is a protein called 60S RIBOSOMAL PROTEIN L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	J	170	Total	C	N	O	S	0	0
			1362	861	254	241	6		

- Molecule 11 is a protein called 60S RIBOSOMAL PROTEIN L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	L	200	Total	C	N	O	S	0	1
			1617	1013	335	265	4		

- Molecule 12 is a protein called 60S RIBOSOMAL PROTEIN L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	M	140	Total	C	N	O	S	0	1
			1139	730	219	183	7		

- Molecule 13 is a protein called 60S RIBOSOMAL PROTEIN L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	N	204	Total	C	N	O	S	0	0
			1708	1077	360	266	5		

- Molecule 14 is a protein called 60S RIBOSOMAL PROTEIN L13A.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	O	196	Total	C	N	O	S	0	1
			1607	1034	316	252	5		

- Molecule 15 is a protein called 60S RIBOSOMAL PROTEIN L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	P	153	Total	C	N	O	S	0	1
			1234	771	241	213	9		

- Molecule 16 is a protein called 60S RIBOSOMAL PROTEIN L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	Q	184	Total	C	N	O	S	0	0
			1493	933	311	244	5		

- Molecule 17 is a protein called 60S RIBOSOMAL PROTEIN L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	R	183	Total	C	N	O	S	0	1
			1526	943	331	242	10		

- Molecule 18 is a protein called 60S RIBOSOMAL PROTEIN L18A.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	S	173	Total	C	N	O	S	0	0
			1438	916	280	232	10		

- Molecule 19 is a protein called 60S RIBOSOMAL PROTEIN L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	T	159	Total	C	N	O	S	0	0
			1297	823	252	216	6		

- Molecule 20 is a protein called 60S RIBOSOMAL PROTEIN L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	U	102	Total	C	N	O	S	0	1
			827	529	146	150	2		

- Molecule 21 is a protein called 60S RIBOSOMAL PROTEIN L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	V	128	Total	C	N	O	S	0	0
			963	610	181	167	5		

- Molecule 22 is a protein called 60S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	W	64	Total	C	N	O	S	0	1
			529	337	104	85	3		

- Molecule 23 is a protein called 60S RIBOSOMAL PROTEIN L23A.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	X	119	Total	C	N	O	S	0	0
			975	624	183	167	1		

- Molecule 24 is a protein called 60S RIBOSOMAL PROTEIN L26.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	Y	128	Total	C	N	O	S	0	1
			1065	668	217	177	3		

- Molecule 25 is a protein called 60S RIBOSOMAL PROTEIN L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	Z	136	Total	C	N	O	S	0	0
			1114	719	209	182	4		

- Molecule 26 is a protein called 60S RIBOSOMAL PROTEIN L27A.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	a	147	Total	C	N	O	S	0	0
			1161	736	237	185	3		

- Molecule 27 is a protein called 60S RIBOSOMAL PROTEIN L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	b	69	Total	C	N	O	S	0	1
			560	344	123	90	3		

- Molecule 28 is a protein called 60S RIBOSOMAL PROTEIN L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	c	104	Total	C	N	O	S	0	1
			802	508	142	145	7		

- Molecule 29 is a protein called 60S RIBOSOMAL PROTEIN L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	d	109	Total	C	N	O	S	0	0
			904	570	174	158	2		

- Molecule 30 is a protein called 60S RIBOSOMAL PROTEIN L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	e	128	Total	C	N	O	S	0	1
			1053	664	219	165	5		

- Molecule 31 is a protein called 60S RIBOSOMAL PROTEIN L35A.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	f	107	Total	C	N	O	S	0	0
			865	550	172	140	3		

- Molecule 32 is a protein called 60S RIBOSOMAL PROTEIN L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	g	115	Total	C	N	O	S	0	1
			907	566	188	147	6		

- Molecule 33 is a protein called 60S RIBOSOMAL PROTEIN L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	h	122	Total	C	N	O	S	0	0
			1014	641	205	167	1		

- Molecule 34 is a protein called 60S RIBOSOMAL PROTEIN L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	i	97	Total	C	N	O	S	0	1
			783	488	168	122	5		

- Molecule 35 is a protein called 60S RIBOSOMAL PROTEIN L37.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	j	85	Total	C	N	O	S	0	1
			690	423	153	109	5		

- Molecule 36 is a protein called 60S RIBOSOMAL PROTEIN L38.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	k	69	Total	C	N	O	S	0	0
			568	366	103	98	1		

- Molecule 37 is a protein called 60S RIBOSOMAL PROTEIN L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	l	50	Total	C	N	O	S	0	0
			443	281	98	63	1		

- Molecule 38 is a protein called UBIQUITIN-60S RIBOSOMAL PROTEIN L40.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	m	52	Total	C	N	O	S	0	0
			428	266	90	66	6		

- Molecule 39 is a protein called 60S RIBOSOMAL PROTEIN L41.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	n	25	Total	C	N	O	S	0	0
			239	145	64	27	3		

- Molecule 40 is a protein called 60S RIBOSOMAL PROTEIN L36A.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	o	106	Total	C	N	O	S	0	0
			870	547	176	140	7		

- Molecule 41 is a protein called 60S RIBOSOMAL PROTEIN L37A.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	p	91	Total	C	N	O	S	0	0
			707	445	136	119	7		

- Molecule 42 is a protein called 60S RIBOSOMAL PROTEIN L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	t	130	Total	C	N	O	S	0	1
			1043	646	220	172	5		

- Molecule 43 is a protein called 60S RIBOSOMAL PROTEIN L10A.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	u	210	Total	C	N	O	S	0	0
			1621	990	278	347	6		

- Molecule 44 is a RNA chain called 28S RRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	2	3616	Total	C	N	O	P	0	0
			77488	34508	14153	25212	3615		

- Molecule 45 is a RNA chain called 5.8S RRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	3	157	Total	C	N	O	P	0	0
			3334	1489	587	1102	156		

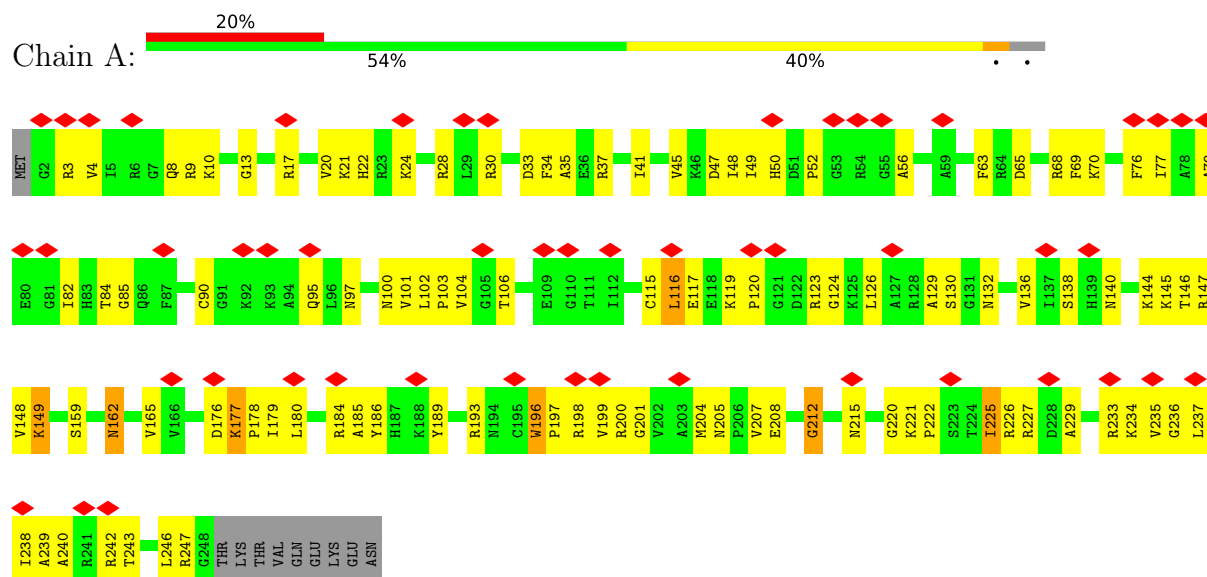
- Molecule 46 is a RNA chain called 5S RRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	4	119	Total	C	N	O	P	0	0
			2538	1132	454	834	118		

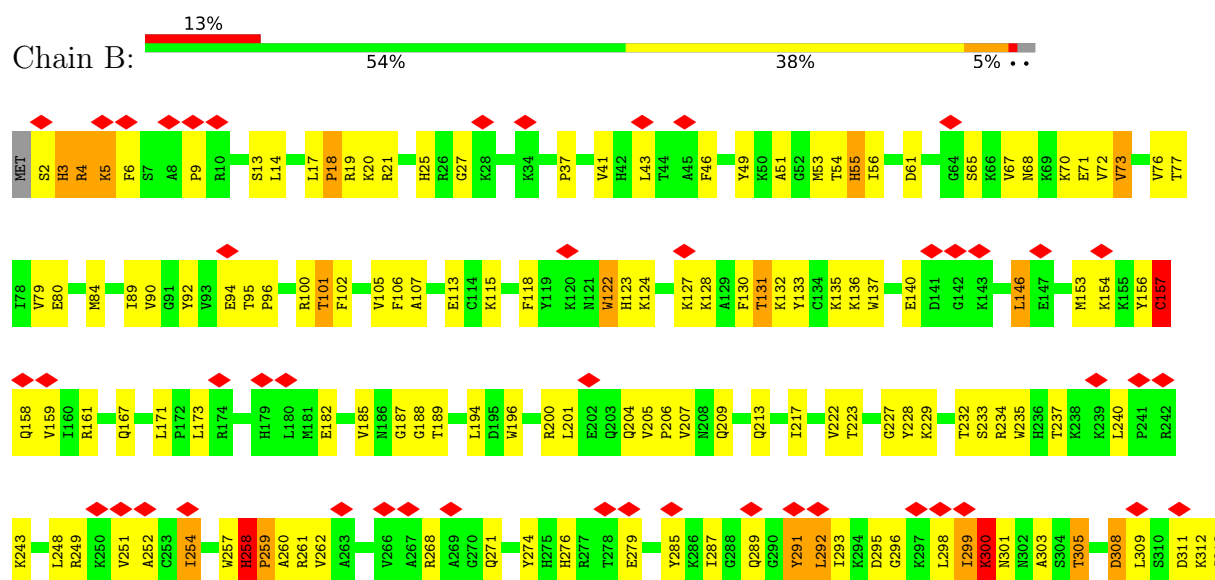
3 Residue-property plots

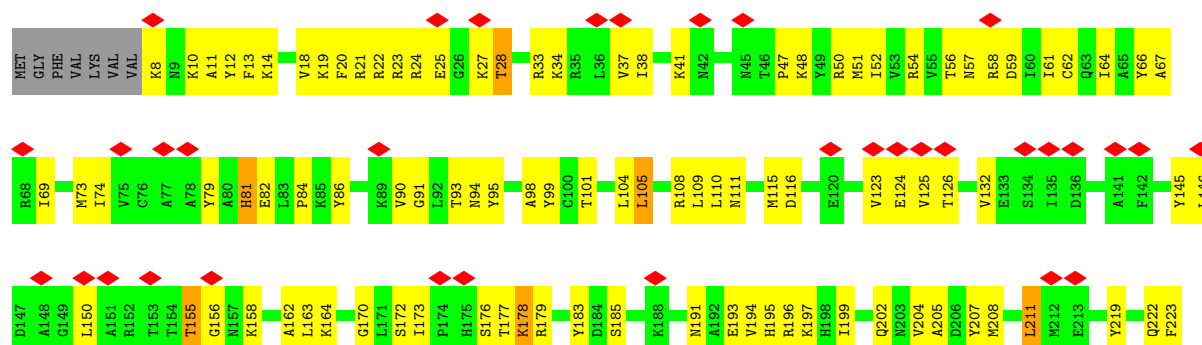
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

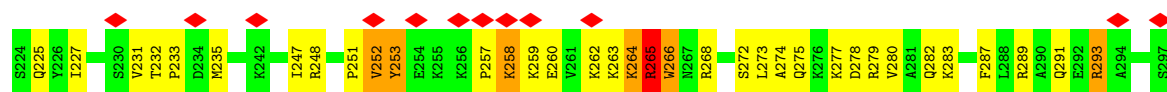
• Molecule 1: 60S RIBOSOMAL PROTEIN L8



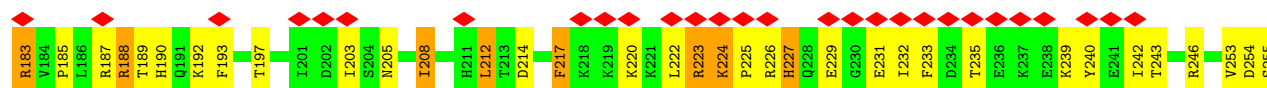
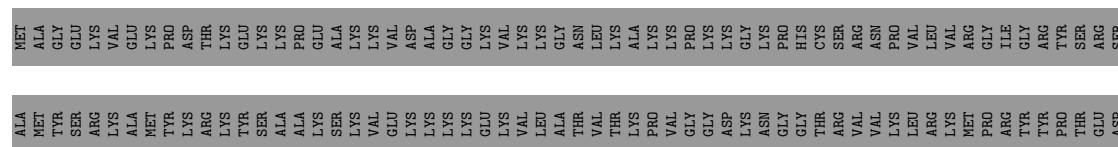
• Molecule 2: 60S RIBOSOMAL PROTEIN L3



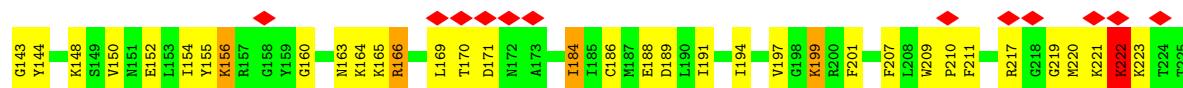
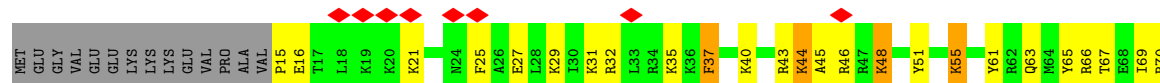




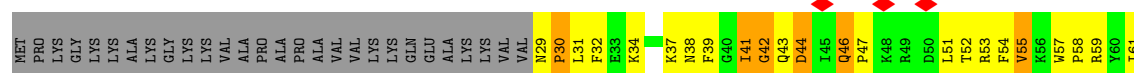
• Molecule 5: 60S RIBOSOMAL PROTEIN L6

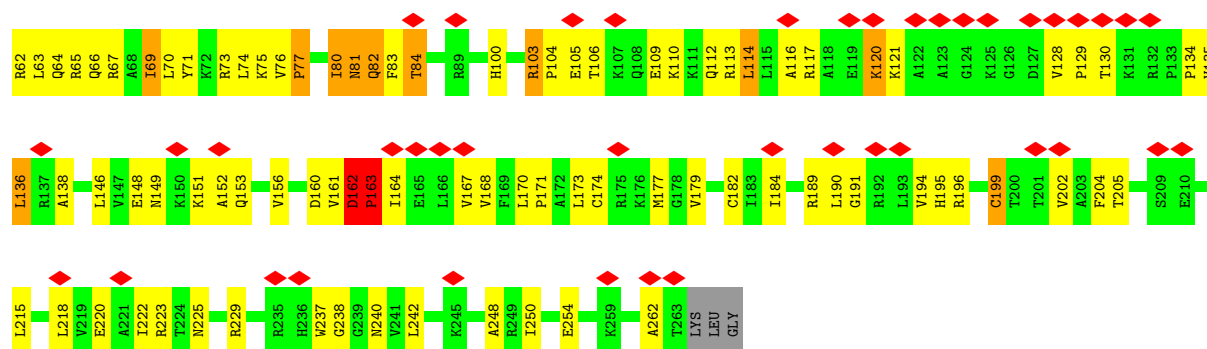


• Molecule 6: 60S RIBOSOMAL PROTEIN L7

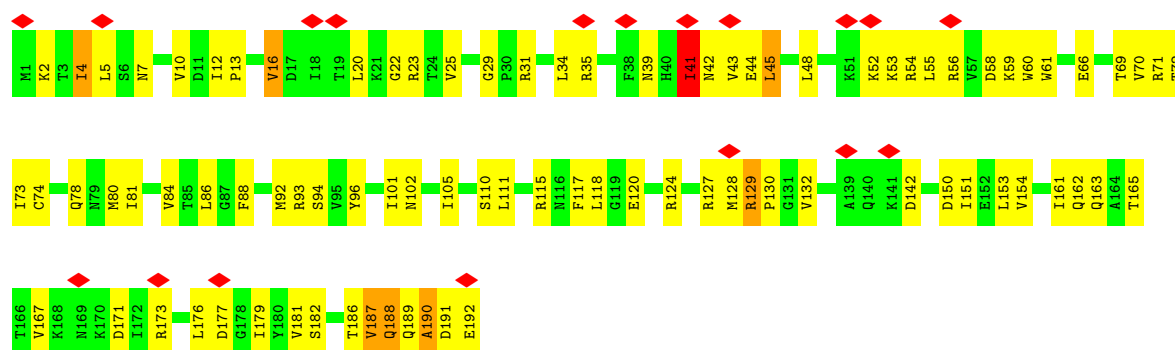


• Molecule 7: 60S RIBOSOMAL PROTEIN L7A

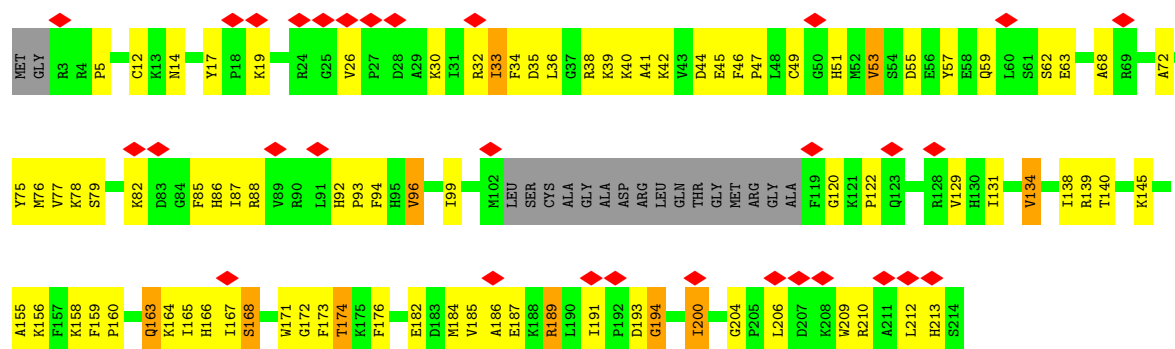




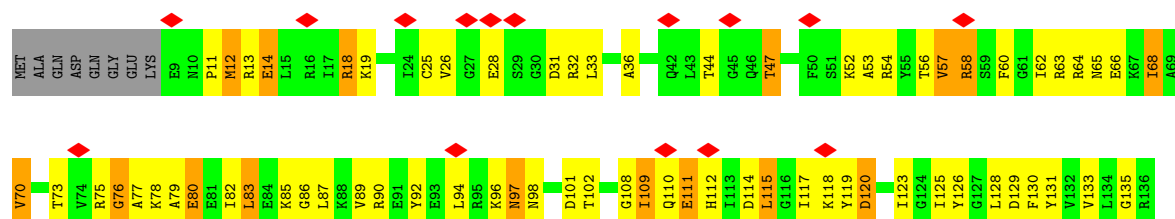
• Molecule 8: 60S RIBOSOMAL PROTEIN L9

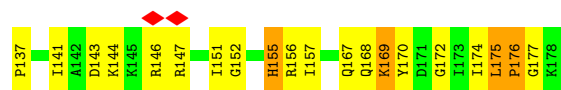


• Molecule 9: 60S RIBOSOMAL PROTEIN L10

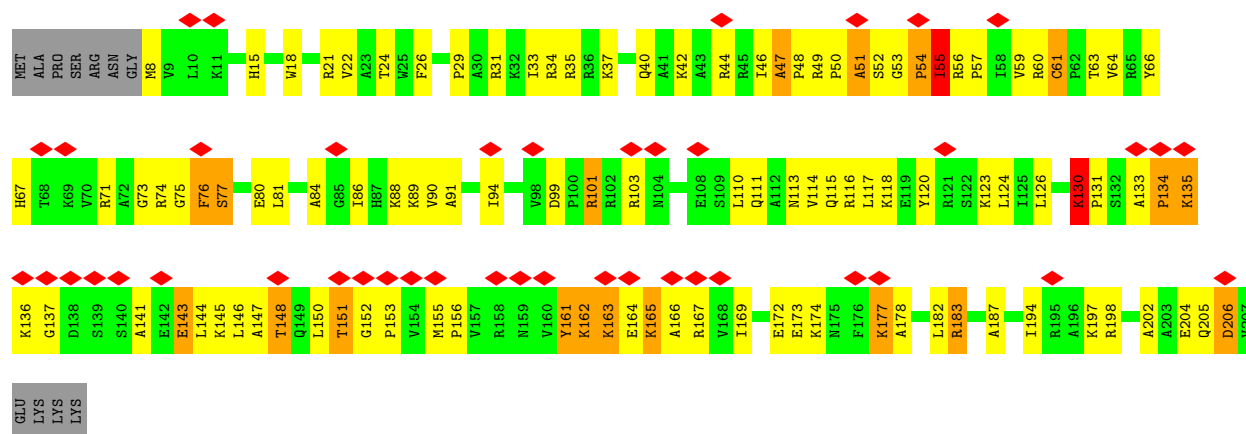
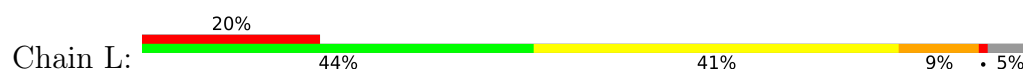


• Molecule 10: 60S RIBOSOMAL PROTEIN L11

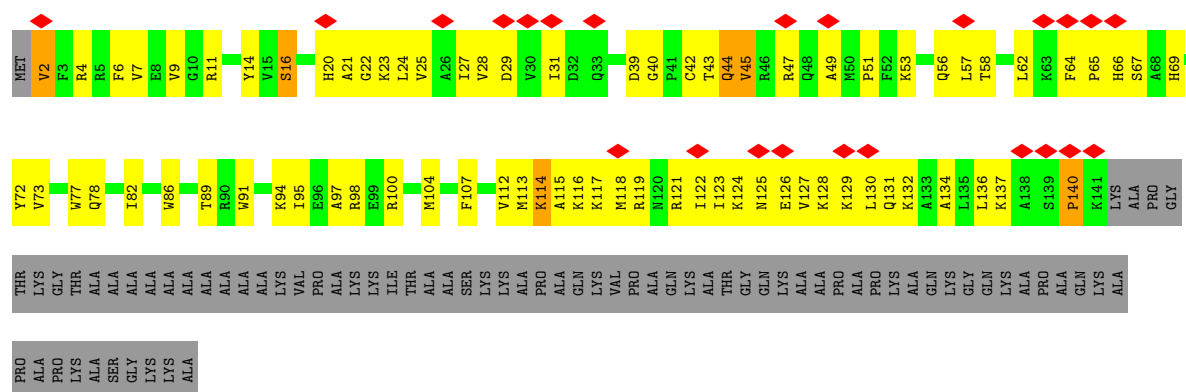




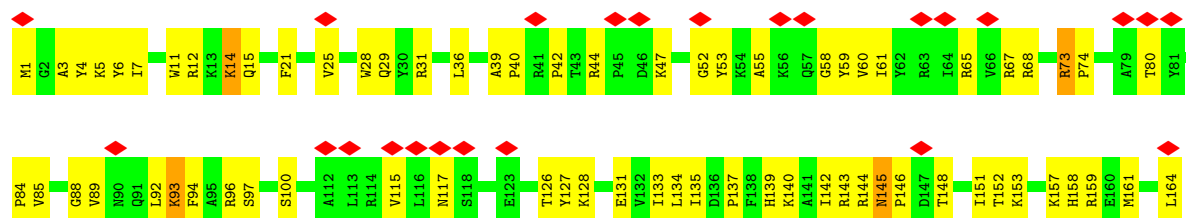
• Molecule 11: 60S RIBOSOMAL PROTEIN L13

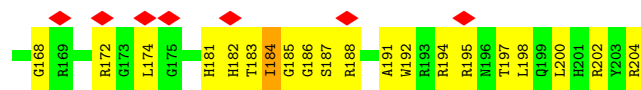


• Molecule 12: 60S RIBOSOMAL PROTEIN L14

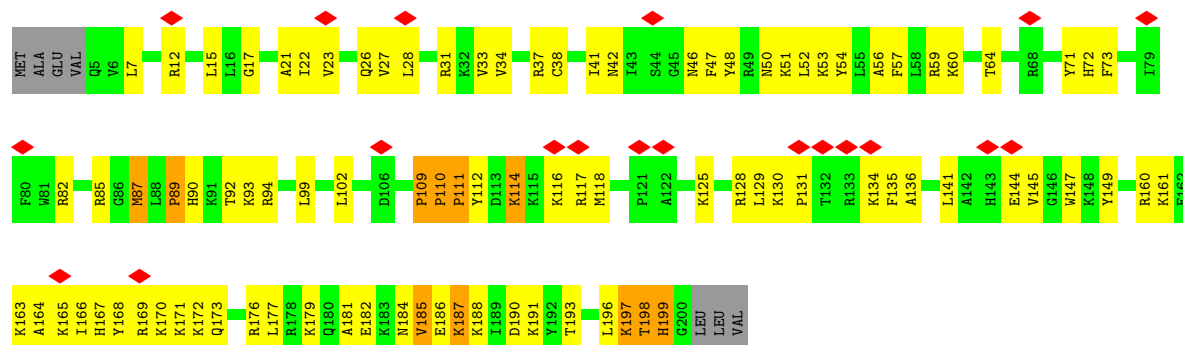


• Molecule 13: 60S RIBOSOMAL PROTEIN L15

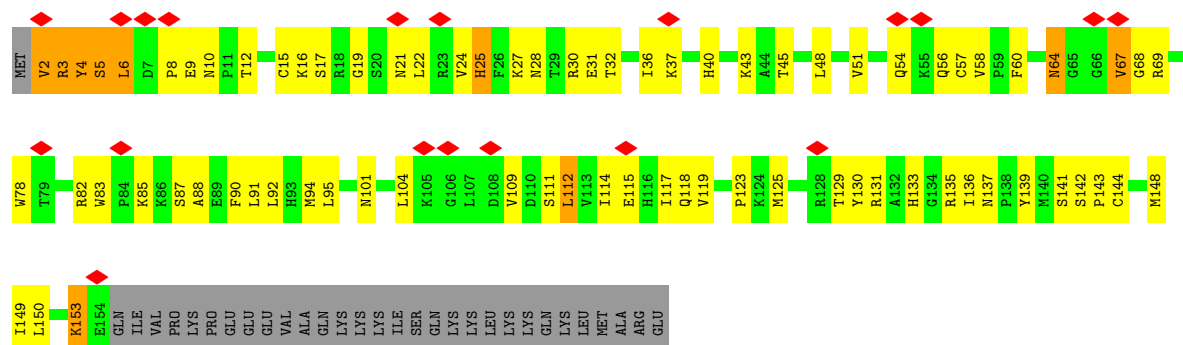




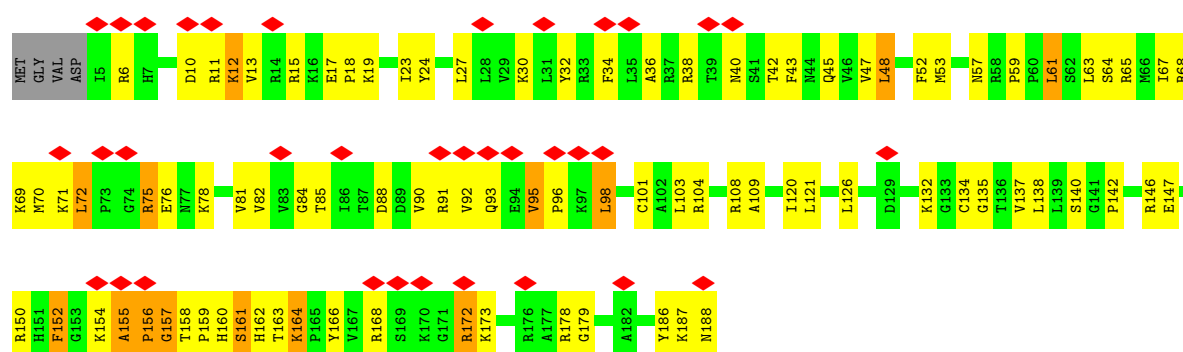
• Molecule 14: 60S RIBOSOMAL PROTEIN L13A



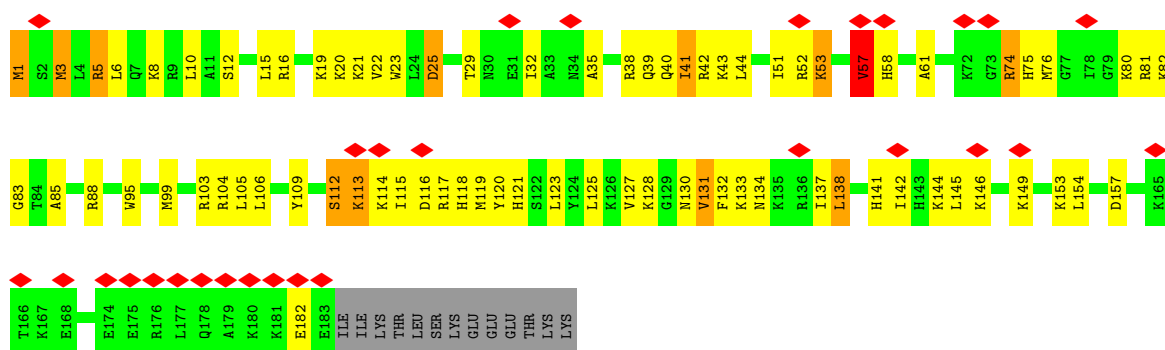
• Molecule 15: 60S RIBOSOMAL PROTEIN L17



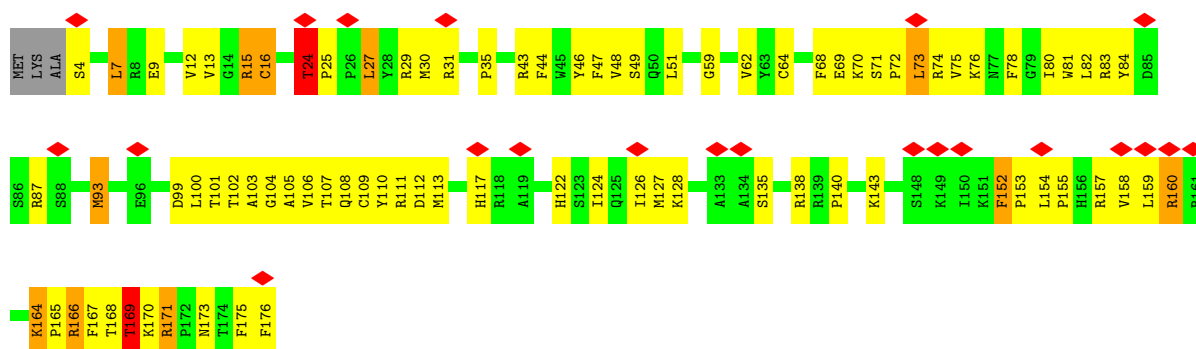
• Molecule 16: 60S RIBOSOMAL PROTEIN L18



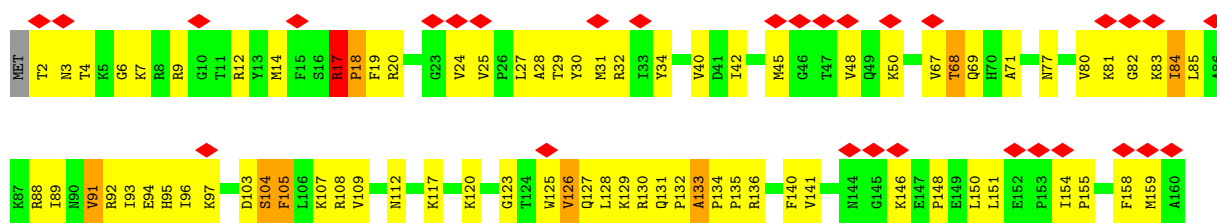
• Molecule 17: 60S RIBOSOMAL PROTEIN L19



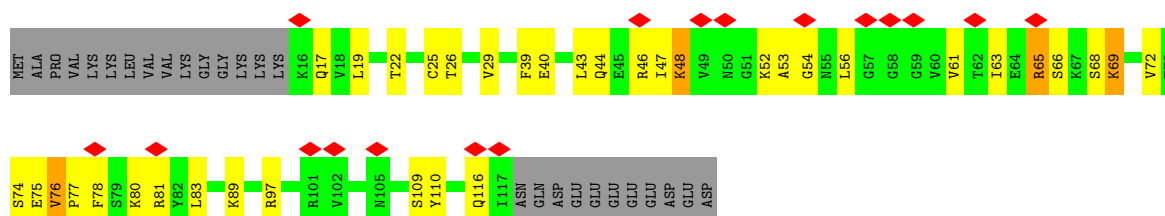
• Molecule 18: 60S RIBOSOMAL PROTEIN L18A



• Molecule 19: 60S RIBOSOMAL PROTEIN L21

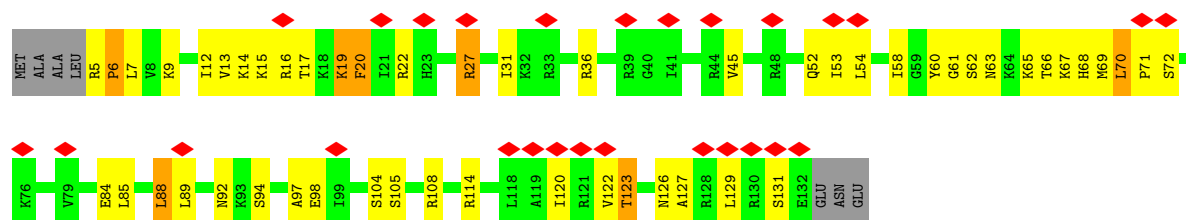


• Molecule 20: 60S RIBOSOMAL PROTEIN L22

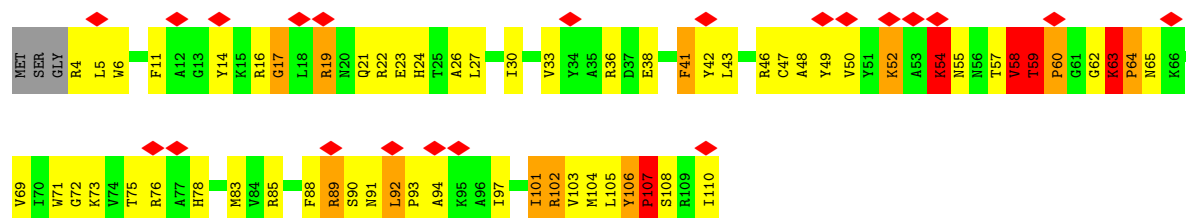




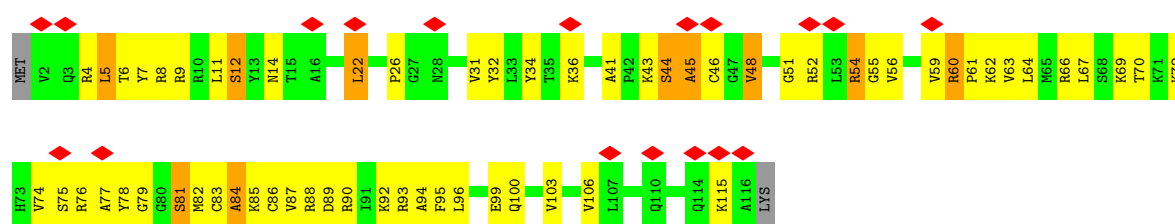
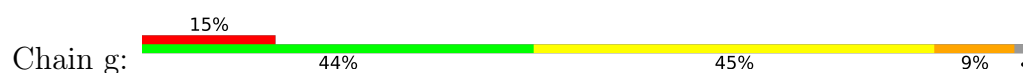
• Molecule 30: 60S RIBOSOMAL PROTEIN L32



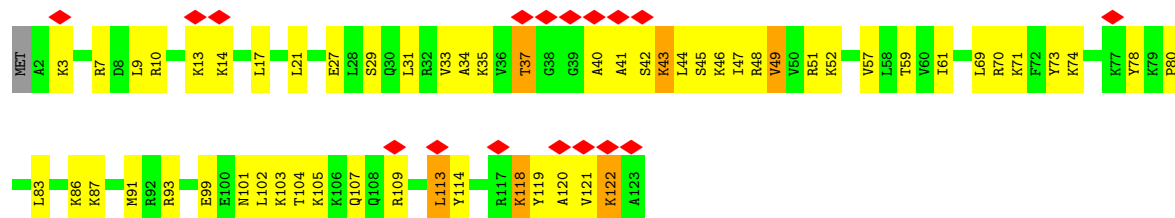
• Molecule 31: 60S RIBOSOMAL PROTEIN L35A



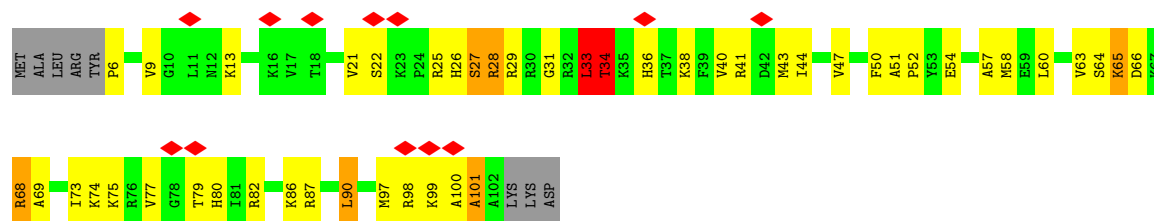
• Molecule 32: 60S RIBOSOMAL PROTEIN L34



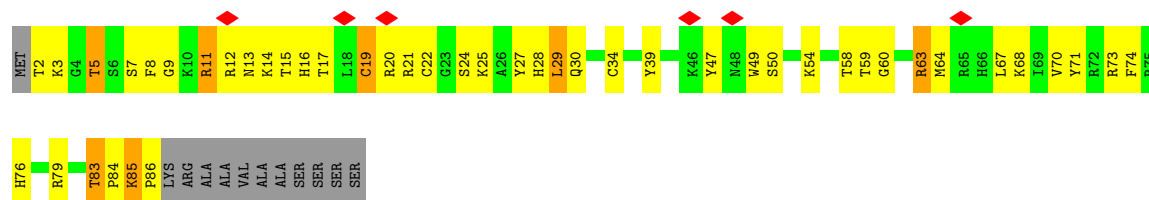
• Molecule 33: 60S RIBOSOMAL PROTEIN L35



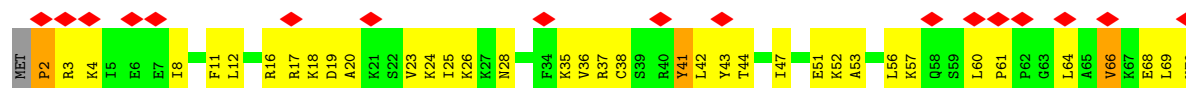
• Molecule 34: 60S RIBOSOMAL PROTEIN L36



• Molecule 35: 60S RIBOSOMAL PROTEIN L37



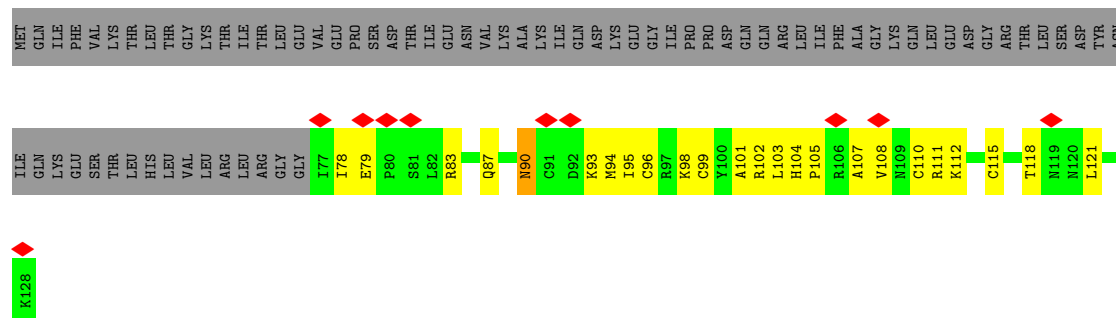
• Molecule 36: 60S RIBOSOMAL PROTEIN L38



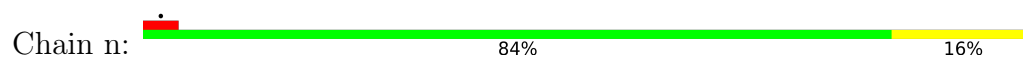
• Molecule 37: 60S RIBOSOMAL PROTEIN L39



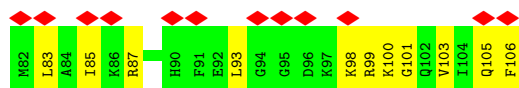
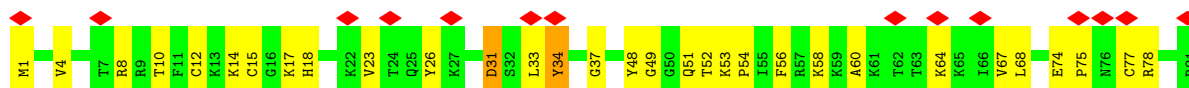
• Molecule 38: UBIQUITIN-60S RIBOSOMAL PROTEIN L40



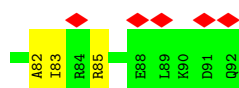
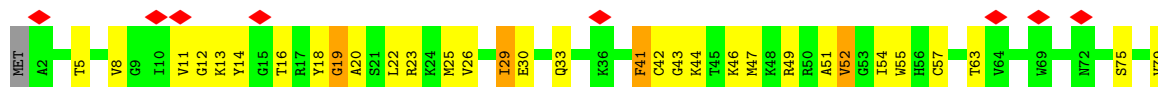
• Molecule 39: 60S RIBOSOMAL PROTEIN L41



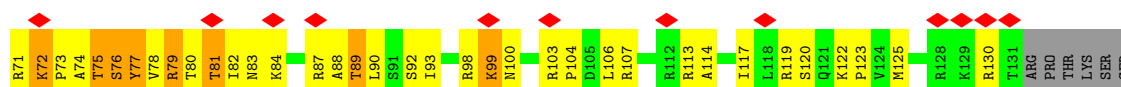
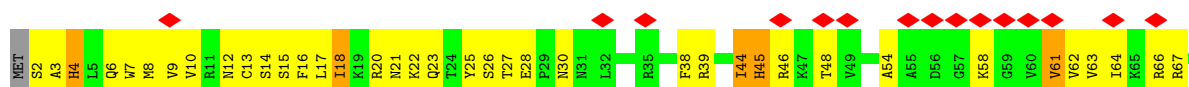
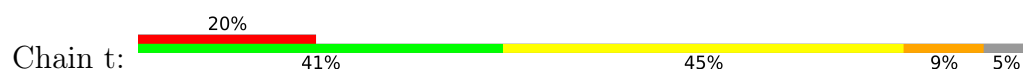
• Molecule 40: 60S RIBOSOMAL PROTEIN L36A



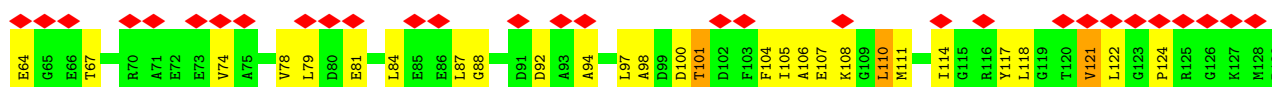
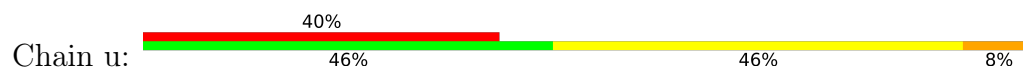
• Molecule 41: 60S RIBOSOMAL PROTEIN L37A

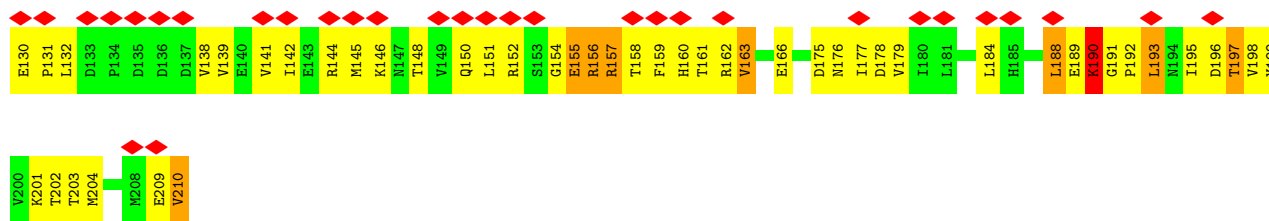


• Molecule 42: 60S RIBOSOMAL PROTEIN L28



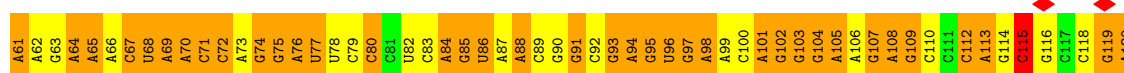
• Molecule 43: 60S RIBOSOMAL PROTEIN L10A





• Molecule 44: 28S rRNA

Chain 2: 7% 28% 36% 28%

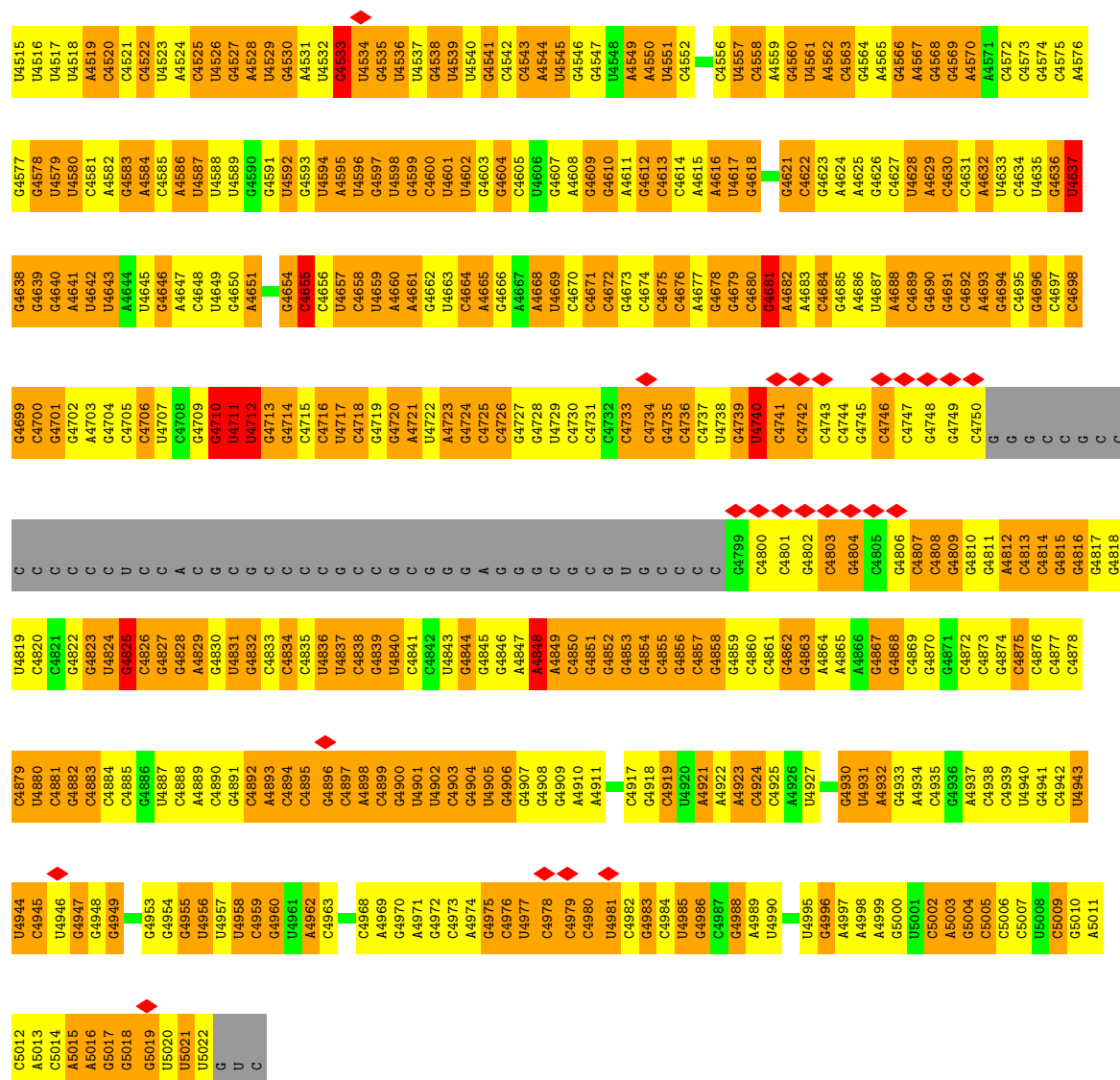




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C2439	G2379	G2256	C2317	U2016	C	G1894	U1830	U1770	U1707	C1647	C1586
G2440	A2380	U2257	C	C2017	C	A1895	G1831	U1771	A1708	A1648	G1587
C2441	G2381	A2258	G	A2018	C	U1896	G1832	A1772	U1709	G1649	U1588
G2442	A2382	G2259	C	A2019	C	G1897	G1833	A1773	C1710	U1650	C1589
G2443	G2383	G2260	C	A2020	G	C1898	C1834	A1774	C1711	U1651	U1590
U2444	U2384	A2261	U	A2021	G	C1899	C1835	U1775	G1712	U1652	G1591
U2445	U2385	A2262	C	U2022	A	C1899	A1836	G1776	G1713	C1653	A1592
C2446	U2386	G2263	C	G2023	C	G1900	C1837	G1777	G1714	C1654	C1593
G2447	C2387	G2264	C	G2024	G	A1901	U1838	G1778	A1715	C1655	C1594
G2448	C2388	C2265	C	A2025	C	C1902	U1839	U1779	A1716	U1656	U1595
A2449	A2389	C2266	C	U2026	U	G1903	U1840	A1780	A1717	C1657	U1596
A2450	U2390	G2267	C	G2027	G	C1904	U1841	A1781	G1718	G1658	G1597
G2451	G2391	C2268	C	G2028	G	U1905	U1842	G1782	C1719	U1659	U1598
G2452	U2392	U2269	A	C2029	C	A1906	A1844	A1783	G1720	G1660	U1599
G2453	G2393	U2270	C	G2030	A	C1907	A1845	G1784	A1721	A1661	A1600
A2454	A2394	C2271	G	G2031	U	U1908	A1846	G1785	U1722	U1662	G1603
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G2456	G2396	G2273	C	G2033	C	A1910	C1848	C1787	A1725	G1664	G1605
A2457	U2397	C2274	C	C2034	G	G1911	G1850	C1788	U1726	C1665	C1606
G2458	G2398	G2275	G	A2035	U	C1912	A1851	G1789	U1727	U1666	G1607
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G2463	U2401	C2278	C	G2038	A	C1915	U1854	U1792	A1730	G1669	G1610
G2464	U2402	C2279	C	U2039	G	C1916	G1855	C1793	G1731	G1670	A1611
C2465	G2403	U2280	C	G2040	G	A1917	G1856	G1794	G1732	C1671	C1612
G2466	A2343	U2281	C	C2041	A	C1918	C1857	C1795	U1733	U1672	A1613
U2467	A2405	A2282	C	G2042	G	A1919	G1858	U1796	G1734	C1673	C1614
C2468	A2406	A2283	C	G2043	U	A1920	C1859	G1797	U1735	U	U1615
C2469	G2407	A2284	C	C2044	G	A1921	C1860	G1798	U1736	C	A1616
G2470	U2348	G2285	C	C2045	U	A1922	U1861	C1799	G1737	C	A1617
U2471	U2349	C2286	C	G2046	G	G1923	C1862	G1800	G1738	A	U1618
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C2475	G2411	A2288	C	U2048	A	G1926	A1866	C1741	C1741	C	A1620
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G2478	A2415	G2291	C	C2051	A	G1929	G1869	C1806	A1744	C	C1623
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C2480	U2417	C2293	C	G2053	C	U1931	C1871	G1808	U1746	C	A1625
C2481	G2418	G2294	C	U2054	U	U1932	C1872	G1809	C1747	C	C1626
C2482	C2419	G2295	C	C2055	C	G1933	G1873	G1810	U1748	C	U1627
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A2484	U2421	G2297	C	U2057	C	U1935	A1875	U1812	A1750	C	A1629
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C2486	U2424	G2302	C	G2059	C	U1937	C1877	G1814	G1752	C	U1631
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G2495	A2372	C2311	C	A2068	C	G	A1886	U1823	U1760	C	C1640
G2496	G2373	G2312	C	G2069	C	A	C1889	G1824	U1761	C	C1641
U2497	U2374	C2313	C	U2010	A	C	G1890	C1825	C1762	C	U1642
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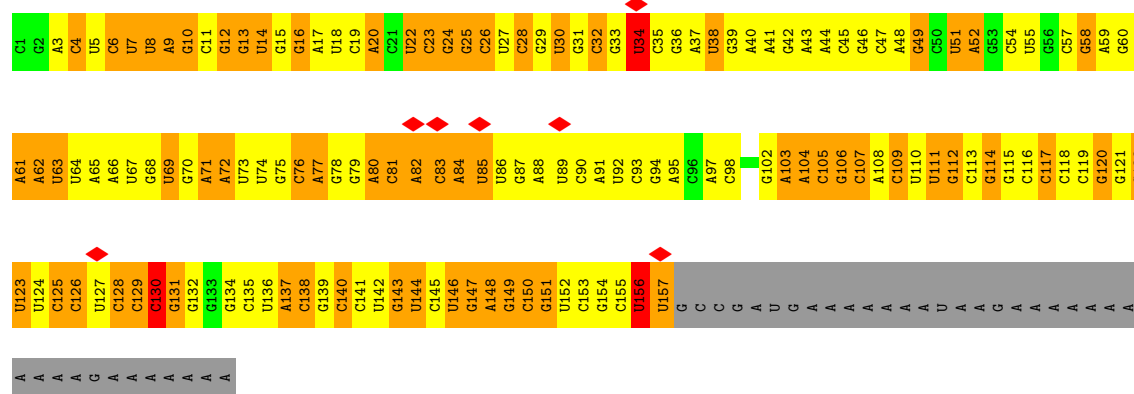


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G4459	U4399	G4339	A4217	C4090	C4090	G4029	G3907	A3782	G3722	U3659
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A4473	U4410	U4350	A4228	C4164	G4102	C4040	C3920	C3793	U3733	C3670
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G4475	U4412	C4352	C4230	C4166	C4104	C4042	C3922	C3796	A3735	C3672
G4476	G4353	C4293	A4231	C4167	C4105	U4043	A3923	A3797	C3736	U3673
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C4479	C4416	A4356	A4234	U4170	G4108	U4046	U3926	U3800	U3739	U3676
G4480	U4417	G4357	G4235	C4171	C4109	C4047	U3927	U3801	C3740	C3677
U4481	C4418	C4358	G4236	A4173	G4110	C4048	U3928	C3802	U3741	U3678
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U4500	A4437	C4377	U4256	U4192	A4130	G4067	C4007	U3884	C3760	A3697
G4501	G4438	G4378	G4257	A4193	C4131	C4068	C4008	C3885	G3761	U3698
U4502	A4439	U4379	A4258	A4194	A4132	C4069	C4009	A3886	U3762	U3699
G4503	U4440	U4380	U4259	G4195	G4133	C4070	G4010	G3887	C3763	C3700
C4504	U4441	C4381	U4260	G4196	U4134	G4071	G4011	C3888	A3764	A3701
U4505	U4442	A4382	U4261	C4197	G4135	A4072	C4012	U3889	U3765	A3702
A4506	C4443	U4383	U4262	C4198	C4136	G4073	C4013	U3890	C3766	U3703
C4507	G4444	A4384	C4263	A4199	C4137	U4074	A4014	A3891	U3767	G3704
A4508	C4445	C4385	A4264	G4200	A4138	G4075	A4015	C3892	A3768	A3705
G4509	C4446	A4386	G4265	C4201	G4139	U4076	A4016	C3893	A3769	A3706
U4510	U4447	G4387	U4266	U4140	G4140	C4077	C4017	U3894	U3770	C3707
U4511	A4448	G4388	C4267	U4141	U4141	U4078	C4018	A3895	U3771	C3708
U4512	C4449	C4389	C4268	G4142	G4142	U4079	C4019	U3896	A3772	C3709
C4513	G4450	U4390	G4269	G4143	G4143	U4080	C4020	A3897	G3773	G3713
U4452	U4451	G4391	A4270	G4144	C4081	U4081	G4021	C3898	U3774	U3714
G4514	U4452	C4392	A4271	A4146	G4145	C4082	C4022	U3899	G3775	A3715



• Molecule 45: 5.8S RRNA

Chain 3: 6% 39% 35% 19%



• Molecule 46: 5S RRNA

G65	G66	G67	G68	G69	G70	G71	G72	G73	G74	G75	G76	G77	G78	G79	G80	G81	G82	G83	G84	G85	G86	G87	G88	G89	G90	G91	G92	G93	G94	G95	G96	G97	G98	G99	G100	A101	A102	A103	A104	A105	A106	A107	A108	A109	A110	A111	A112	A113	A114	A115	A116	A117	A118	A119	U	U			
G1	G2	U3	U4	A5	C6	G7	G8	C9	C10	A11	U12	A13	C14	C15		C19	U20	G21	A22	A23	A24	G25	C26	G27	C28	C29	C30	G31	A32	U33	C34	U35	C36	G37	U38	C39	U40	G41	A42	A43		C46	G47	G48	A49	A50		U53	A54	A55	G56	C57	A58	G59	G60	G61	U62	C63	C64

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	64902	Depositor
Resolution determination method	Not provided	
CTF correction method	DEFOCUS GROUPS	Depositor
Microscope	FEI TECNAI F20	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	20	Depositor
Minimum defocus (nm)	2000	Depositor
Maximum defocus (nm)	5000	Depositor
Magnification	194805	Depositor
Image detector	TVIPS TEMCAM-F416 (4k x 4k)	Depositor
Maximum map value	12.165	Depositor
Minimum map value	-4.363	Depositor
Average map value	0.164	Depositor
Map value standard deviation	0.954	Depositor
Recommended contour level	3	Depositor
Map size ($\text{\AA}$)	467.99997, 467.99997, 467.99997	wwPDB
Map dimensions	300, 300, 300	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.56, 1.56, 1.56	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.68	1/1926 (0.1%)	1.09	3/2583 (0.1%)
2	B	0.72	2/3258 (0.1%)	1.12	10/4361 (0.2%)
3	C	0.76	1/2943 (0.0%)	1.16	16/3953 (0.4%)
4	D	0.78	6/2406 (0.2%)	1.12	12/3221 (0.4%)
5	E	0.82	1/1311 (0.1%)	1.17	8/1763 (0.5%)
6	F	0.68	0/1985	1.12	10/2644 (0.4%)
7	G	0.75	1/1914 (0.1%)	1.20	14/2578 (0.5%)
8	H	0.64	0/1554	1.10	4/2089 (0.2%)
9	I	0.68	0/1642	1.15	13/2194 (0.6%)
10	J	0.79	0/1385	1.18	9/1852 (0.5%)
11	L	0.82	6/1647 (0.4%)	1.18	14/2205 (0.6%)
12	M	0.79	1/1162 (0.1%)	1.12	1/1556 (0.1%)
13	N	0.69	0/1753	1.07	10/2348 (0.4%)
14	O	0.72	2/1639 (0.1%)	1.15	11/2193 (0.5%)
15	P	0.67	1/1260 (0.1%)	1.09	2/1691 (0.1%)
16	Q	0.71	0/1517	1.15	8/2026 (0.4%)
17	R	0.67	1/1542 (0.1%)	1.08	6/2037 (0.3%)
18	S	0.71	0/1478	1.19	14/1985 (0.7%)
19	T	0.74	0/1325	1.21	14/1770 (0.8%)
20	U	0.74	1/841 (0.1%)	1.16	8/1128 (0.7%)
21	V	0.69	1/977 (0.1%)	1.03	0/1312
22	W	0.64	1/542 (0.2%)	0.98	2/722 (0.3%)
23	X	0.65	0/992	1.12	3/1334 (0.2%)
24	Y	0.74	1/1082 (0.1%)	1.18	5/1441 (0.3%)
25	Z	0.74	0/1137	1.25	5/1517 (0.3%)
26	a	0.72	0/1190	1.11	4/1591 (0.3%)
27	b	0.72	1/570 (0.2%)	1.10	1/752 (0.1%)
28	c	0.71	1/813 (0.1%)	1.05	3/1091 (0.3%)
29	d	0.70	0/919	1.06	2/1238 (0.2%)
30	e	0.71	1/1071 (0.1%)	1.12	5/1428 (0.4%)
31	f	0.75	1/884 (0.1%)	1.22	10/1185 (0.8%)
32	g	0.74	1/917 (0.1%)	1.15	4/1222 (0.3%)
33	h	0.64	0/1022	1.03	1/1351 (0.1%)
34	i	0.70	1/793 (0.1%)	1.18	6/1048 (0.6%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
35	j	0.77	1/704 (0.1%)	1.16	4/931 (0.4%)
36	k	0.72	0/574	1.18	4/761 (0.5%)
37	l	0.65	0/453	1.04	2/599 (0.3%)
38	m	0.68	0/434	1.22	3/575 (0.5%)
39	n	0.62	0/240	0.86	0/305
40	o	0.70	0/884	1.14	4/1166 (0.3%)
41	p	0.64	0/717	0.97	1/953 (0.1%)
42	t	0.78	1/1058 (0.1%)	1.22	8/1416 (0.6%)
43	u	0.69	0/1638	1.12	6/2222 (0.3%)
44	2	0.34	12/86672 (0.0%)	0.66	30/135198 (0.0%)
45	3	0.30	0/3723	0.63	2/5800 (0.0%)
46	4	0.31	0/2836	0.67	1/4421 (0.0%)
All	All	0.51	47/147330 (0.0%)	0.85	303/217756 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
44	2	0	34
45	3	0	2
All	All	0	36

All (47) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
44	2	1701	C	O5'-C5'	16.69	1.67	1.42
44	2	1701	C	C5'-C4'	14.73	1.73	1.51
44	2	1673	C	C3'-O3'	13.64	1.63	1.43
44	2	1673	C	O3'-P	11.35	1.78	1.61
44	2	1673	C	O5'-C5'	10.39	1.58	1.42
4	D	264	LYS	N-CA	9.26	1.58	1.46
44	2	1673	C	C5'-C4'	9.06	1.65	1.51
44	2	1701	C	P-O5'	9.01	1.73	1.59
4	D	264	LYS	CA-C	8.16	1.63	1.52
44	2	1701	C	O3'-P	8.14	1.73	1.61
44	2	1701	C	C4'-C3'	7.90	1.64	1.52
4	D	265	ARG	N-CA	7.87	1.56	1.46
44	2	1673	C	C4'-C3'	7.23	1.64	1.53
44	2	1701	C	C3'-O3'	6.89	1.52	1.42
4	D	266	TRP	N-CA	6.72	1.53	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	D	264	LYS	C-N	6.49	1.42	1.33
28	c	109	PRO	C-N	-6.06	1.24	1.33
4	D	265	ARG	CA-C	5.99	1.60	1.52
11	L	130	LYS	C-N	5.94	1.40	1.34
21	V	84	GLN	CA-C	5.90	1.55	1.52
24	Y	127	GLN	C-N	-5.90	1.25	1.33
44	2	1673	C	P-O5'	5.89	1.68	1.59
3	C	365	SER	C-N	-5.85	1.25	1.33
31	f	63	LYS	C-O	-5.82	1.19	1.24
17	R	182	GLU	C-N	-5.76	1.25	1.33
1	A	247	ARG	C-N	-5.75	1.25	1.33
30	e	131	SER	C-N	-5.74	1.25	1.33
12	M	140	PRO	C-N	-5.74	1.25	1.33
2	B	396	ARG	C-N	-5.74	1.25	1.33
11	L	133	ALA	C-N	5.73	1.41	1.33
20	U	116	GLN	C-N	-5.71	1.25	1.33
35	j	85	LYS	C-N	-5.71	1.25	1.34
42	t	130	ARG	C-N	-5.71	1.25	1.33
15	P	153	LYS	C-N	-5.70	1.25	1.33
22	W	63	GLN	C-N	-5.66	1.25	1.33
32	g	115	LYS	C-N	-5.66	1.25	1.33
11	L	206	ASP	C-N	-5.64	1.25	1.33
7	G	262	ALA	C-N	-5.62	1.25	1.33
11	L	131	PRO	N-CD	5.61	1.55	1.47
27	b	69	ALA	C-N	-5.60	1.25	1.33
34	i	101	ALA	C-N	-5.57	1.25	1.33
14	O	199	HIS	C-N	-5.53	1.25	1.33
11	L	134	PRO	N-CD	5.48	1.55	1.47
2	B	300	LYS	CA-C	5.43	1.57	1.52
14	O	109	PRO	CA-C	5.26	1.57	1.52
5	E	224	LYS	C-N	5.08	1.41	1.33
11	L	173	GLU	N-CA	-5.00	1.40	1.46

All (303) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
44	2	1701	C	C2'-C3'-O3'	-18.40	86.10	113.70
44	2	1701	C	C4'-C3'-O3'	16.27	137.41	113.00
44	2	1701	C	O4'-C4'-C3'	-15.18	88.82	104.00
2	B	325	GLU	N-CA-C	12.18	124.63	111.36
44	2	1673	C	C4'-C3'-O3'	10.52	125.19	109.40
10	J	68	ILE	N-CA-C	10.38	121.21	110.62

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	213	GLU	N-CA-C	10.36	122.65	111.36
44	2	1673	C	O3'-P-O5'	9.08	117.62	104.00
35	j	63	ARG	N-CA-C	9.04	121.14	111.28
23	X	78	LYS	N-CA-C	9.02	121.04	111.03
8	H	41	ILE	N-CA-C	8.91	119.72	110.72
1	A	21	LYS	N-CA-C	8.59	120.64	111.28
2	B	258	HIS	C-N-CD	-8.57	89.84	125.00
44	2	1701	C	C5'-C4'-C3'	8.48	128.72	116.00
24	Y	51	LYS	N-CA-C	8.39	120.43	111.28
6	F	16	GLU	N-CA-C	8.39	120.04	111.07
10	J	119	TYR	N-CA-C	8.35	120.00	111.07
17	R	112	SER	N-CA-C	8.24	120.34	111.36
6	F	98	ILE	N-CA-C	8.06	118.84	110.62
42	t	12	ASN	N-CA-C	8.06	120.14	111.36
35	j	84	PRO	N-CA-C	8.04	124.50	113.65
3	C	147	VAL	N-CA-C	7.96	116.75	108.95
11	L	172	GLU	N-CA-C	-7.86	102.72	111.28
34	i	97	MET	N-CA-C	7.84	119.91	111.36
11	L	174	LYS	N-CA-C	-7.83	97.88	109.62
13	N	80	THR	N-CA-C	7.82	119.89	111.36
44	2	4017	U	C2'-C3'-O3'	7.82	121.23	109.50
1	A	212	GLY	N-CA-C	7.81	120.91	111.93
32	g	12	SER	N-CA-C	7.81	119.79	111.28
32	g	48	VAL	N-CA-C	7.60	117.72	110.42
18	S	166	ARG	N-CA-C	7.57	119.53	111.28
11	L	76	PHE	N-CA-C	7.53	119.57	111.36
38	m	108	VAL	N-CA-C	7.44	118.24	110.72
33	h	37	THR	N-CA-C	7.41	119.00	111.07
4	D	265	ARG	N-CA-C	7.35	126.45	110.80
13	N	126	THR	N-CA-C	7.34	119.37	111.36
31	f	58	VAL	N-CA-C	7.29	118.22	111.45
26	a	15	VAL	N-CA-C	7.28	117.40	110.42
14	O	185	VAL	N-CA-C	7.23	118.00	110.62
13	N	89	VAL	N-CA-C	7.21	118.00	110.72
44	2	4130	A	C2'-C3'-O3'	7.17	120.26	109.50
24	Y	126	ARG	N-CA-C	-7.13	103.51	111.28
7	G	215	LEU	N-CA-C	7.12	118.69	111.07
12	M	16	SER	N-CA-C	7.08	119.08	111.36
44	2	1673	C	C5'-C4'-C3'	7.01	125.72	115.20
4	D	124	GLU	N-CA-C	7.00	118.91	111.28
9	I	200	ILE	N-CA-C	6.96	114.79	107.76
2	B	205	VAL	N-CA-C	6.94	115.02	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	e	17	THR	N-CA-C	-6.89	104.35	112.89
2	B	358	ARG	N-CA-C	-6.87	103.79	111.28
18	S	169	THR	N-CA-C	6.87	118.85	111.36
44	2	4637	U	C2'-C3'-O3'	6.86	119.79	109.50
14	O	110	PRO	N-CA-C	6.84	119.05	110.70
9	I	159	PHE	N-CA-C	6.83	118.68	110.07
6	F	199	LYS	N-CA-C	6.82	118.71	111.28
18	S	108	GLN	N-CA-C	6.80	118.78	111.36
19	T	107	LYS	N-CA-C	-6.79	103.87	111.28
4	D	37	VAL	N-CA-C	6.75	117.54	110.72
5	E	156	ARG	N-CA-C	-6.75	103.92	111.28
44	2	2481	C	C2'-C3'-O3'	6.75	119.62	109.50
37	l	49	LEU	N-CA-C	6.73	118.27	111.07
3	C	304	ALA	N-CA-C	6.68	119.30	110.08
22	W	50	ASN	N-CA-C	6.66	118.54	111.28
25	Z	68	ILE	N-CA-C	6.62	117.37	108.11
6	F	233	ALA	N-CA-C	6.61	119.34	110.35
15	P	115	GLU	N-CA-C	6.61	118.56	111.36
2	B	378	ARG	N-CA-CB	-6.60	101.81	110.59
18	S	51	LEU	N-CA-C	6.60	118.55	111.36
29	d	80	VAL	N-CA-C	6.59	115.41	108.95
19	T	17	ARG	CA-C-N	6.58	128.07	119.84
19	T	17	ARG	C-N-CA	6.58	128.07	119.84
7	G	160	ASP	N-CA-C	6.57	118.44	111.28
14	O	128	ARG	N-CA-C	6.57	118.52	111.36
9	I	186	ALA	N-CA-C	-6.56	105.14	113.01
42	t	114	ALA	N-CA-C	6.54	118.48	111.36
11	L	133	ALA	CA-C-N	-6.53	113.23	119.76
11	L	133	ALA	C-N-CA	-6.53	113.23	119.76
2	B	308	ASP	N-CA-C	6.52	118.18	111.14
18	S	169	THR	CB-CA-C	-6.52	99.77	110.85
6	F	48	LYS	CB-CA-C	-6.51	100.65	110.88
9	I	200	ILE	CA-C-O	6.50	122.98	119.15
44	2	2718	U	C2'-C3'-O3'	6.49	119.24	109.50
28	c	31	TYR	N-CA-C	6.49	118.02	111.07
38	m	98	LYS	N-CA-C	6.47	118.41	111.36
40	o	23	VAL	N-CA-C	6.45	117.14	108.11
43	u	121	VAL	N-CA-C	6.43	117.22	110.72
34	i	29	ARG	N-CA-C	-6.43	105.19	113.16
44	2	14	C	O4'-C4'-C3'	-6.41	99.69	106.10
44	2	1673	C	C5'-C4'-O4'	-6.41	99.49	109.10
9	I	168	SER	N-CA-C	6.39	119.54	109.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	S	124	ILE	N-CA-C	6.38	117.11	108.17
19	T	134	PRO	N-CA-C	6.38	117.40	110.58
44	2	1701	C	O4'-C1'-N1	6.37	118.06	108.50
19	T	133	ALA	CA-C-N	6.32	124.21	119.66
19	T	133	ALA	C-N-CA	6.32	124.21	119.66
24	Y	126	ARG	CB-CA-C	-6.32	100.31	110.79
37	l	36	ARG	N-CA-C	6.31	118.24	111.36
36	k	51	GLU	N-CA-C	6.26	118.11	111.28
24	Y	55	VAL	N-CA-C	6.26	116.88	108.11
42	t	13	CYS	N-CA-C	6.26	120.20	111.56
2	B	200	ARG	N-CA-C	6.22	120.88	113.16
44	2	188	G	C2'-C3'-O3'	6.20	118.80	109.50
3	C	322	LEU	N-CA-C	6.20	118.04	111.28
11	L	165	LYS	N-CA-C	6.17	118.01	111.28
44	2	1673	C	C4'-C3'-C2'	-6.15	96.45	102.60
15	P	25	HIS	CA-CB-CG	-6.12	107.67	113.80
17	R	32	ILE	N-CA-C	6.11	116.85	110.62
42	t	72	LYS	CA-C-N	6.11	126.30	120.31
42	t	72	LYS	C-N-CA	6.11	126.30	120.31
42	t	100	ASN	N-CA-C	6.08	120.77	112.68
13	N	73	ARG	CA-C-N	6.08	125.76	119.56
13	N	73	ARG	C-N-CA	6.08	125.76	119.56
3	C	200	ARG	N-CA-C	6.06	117.89	111.28
11	L	130	LYS	CA-C-N	-6.06	113.56	119.87
11	L	130	LYS	C-N-CA	-6.06	113.56	119.87
20	U	69	LYS	N-CA-C	6.06	118.39	109.24
44	2	959	C	C2'-C3'-O3'	6.05	118.57	109.50
40	o	31	ASP	N-CA-C	6.04	117.53	111.07
14	O	89	PRO	N-CA-C	-6.03	104.35	112.48
14	O	114	LYS	N-CA-C	6.01	117.92	111.36
18	S	138	ARG	N-CA-C	6.00	117.82	111.28
38	m	90	ASN	N-CA-C	5.99	117.89	111.36
7	G	103	ARG	CA-C-N	5.99	125.89	119.85
7	G	103	ARG	C-N-CA	5.99	125.89	119.85
30	e	123	THR	N-CA-C	5.98	117.87	111.36
2	B	366	LYS	N-CA-C	5.97	117.87	111.36
4	D	185	SER	N-CA-C	5.96	117.78	111.28
8	H	187	VAL	N-CA-C	5.96	116.74	110.72
3	C	70	GLY	N-CA-C	5.93	121.01	113.24
31	f	89	ARG	N-CA-C	-5.92	104.82	111.28
43	u	78	VAL	N-CA-C	5.92	116.40	108.11
29	d	82	TYR	N-CA-C	5.91	117.72	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	i	22	SER	N-CA-C	5.89	118.31	110.53
31	f	54	LYS	N-CA-CB	-5.89	101.74	110.10
4	D	252	VAL	N-CA-C	5.88	118.40	111.05
19	T	105	PHE	N-CA-C	5.88	117.36	111.07
31	f	41	PHE	N-CA-C	5.87	117.68	111.28
44	2	3729	A	C2'-C3'-O3'	5.86	118.29	109.50
10	J	80	GLU	N-CA-C	5.86	117.75	111.36
17	R	61	ALA	N-CA-C	5.86	117.33	111.07
20	U	97	ARG	N-CA-C	5.86	117.66	111.28
4	D	264	LYS	N-CA-C	5.84	123.24	110.80
20	U	53	ALA	N-CA-C	5.82	117.70	111.36
25	Z	8	GLY	N-CA-C	5.82	119.71	112.73
31	f	17	GLY	N-CA-C	-5.81	105.82	112.79
26	a	22	ILE	N-CA-C	5.81	115.99	110.53
5	E	223	ARG	N-CA-C	5.81	118.22	108.23
11	L	55	ILE	N-CA-C	-5.80	97.27	109.34
4	D	178	LYS	N-CA-C	5.80	118.55	111.82
25	Z	61	LYS	N-CA-C	5.79	117.59	111.28
5	E	153	LEU	N-CA-C	5.79	117.67	111.36
43	u	157	ARG	N-CA-CB	-5.79	101.35	110.49
7	G	69	ILE	N-CA-C	5.78	116.56	110.72
5	E	257	ILE	N-CA-C	5.78	115.97	110.42
22	W	9	SER	N-CA-C	5.78	117.58	111.28
44	2	14	C	C2'-C3'-O3'	5.78	118.16	109.50
16	Q	161	SER	N-CA-C	5.77	117.57	111.28
3	C	304	ALA	CA-C-N	5.76	127.04	119.84
3	C	304	ALA	C-N-CA	5.76	127.04	119.84
7	G	114	LEU	N-CA-C	5.75	117.63	111.36
35	j	29	LEU	N-CA-C	5.74	117.21	111.07
2	B	122	TRP	N-CA-C	5.73	117.20	111.07
17	R	57	VAL	N-CA-C	5.71	116.33	107.99
41	p	41	PHE	N-CA-C	5.70	117.17	111.07
30	e	27	ARG	N-CA-C	5.68	117.56	111.36
17	R	144	LYS	N-CA-C	5.67	117.54	111.36
13	N	153	LYS	CA-C-N	5.67	125.51	119.28
13	N	153	LYS	C-N-CA	5.67	125.51	119.28
5	E	162	VAL	N-CA-C	5.64	116.84	108.65
7	G	80	ILE	N-CA-C	-5.64	101.68	109.46
32	g	56	VAL	N-CA-C	5.64	116.00	108.11
44	2	2548	C	O4'-C1'-C2'	-5.64	101.96	107.60
11	L	101	ARG	N-CA-C	5.62	117.48	111.36
16	Q	152	PHE	N-CA-C	5.62	118.42	110.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	e	94	SER	N-CA-C	5.61	118.59	111.69
20	U	54	GLY	N-CA-C	5.59	122.24	113.86
35	j	5	THR	N-CA-C	5.57	117.35	111.28
9	I	79	SER	N-CA-C	5.57	117.43	111.36
34	i	63	VAL	N-CA-C	5.56	116.41	111.90
17	R	29	THR	N-CA-C	5.56	117.34	111.28
44	2	1672	U	O4'-C1'-C2'	-5.56	102.04	107.60
31	f	59	THR	N-CA-C	5.55	122.08	109.81
16	Q	93	GLN	N-CA-C	5.54	117.40	111.36
11	L	146	LEU	N-CA-C	5.54	117.32	111.28
10	J	18	ARG	N-CA-C	5.54	116.99	111.07
8	H	16	VAL	N-CA-C	5.52	116.43	108.48
14	O	87	MET	N-CA-CB	-5.52	102.00	110.12
34	i	27	SER	N-CA-C	-5.52	100.99	109.76
14	O	168	TYR	N-CA-C	-5.52	105.17	111.07
18	S	152	PHE	CA-CB-CG	5.49	119.29	113.80
6	F	117	ILE	N-CA-C	5.48	117.21	108.87
11	L	61	CYS	CA-C-N	5.48	125.43	119.78
11	L	61	CYS	C-N-CA	5.48	125.43	119.78
14	O	93	LYS	N-CA-C	-5.48	105.31	111.28
36	k	2	PRO	N-CA-CB	5.47	109.01	103.00
24	Y	116	LYS	CB-CA-C	-5.47	102.30	110.88
19	T	91	VAL	N-CA-C	5.46	115.98	108.12
44	2	1703	G	O4'-C1'-C2'	-5.43	100.37	105.80
31	f	19	ARG	N-CA-C	5.42	120.03	113.41
19	T	103	ASP	N-CA-C	5.41	117.18	111.28
13	N	153	LYS	N-CA-C	5.41	116.51	109.64
7	G	163	PRO	CA-C-N	5.40	127.86	120.46
7	G	163	PRO	C-N-CA	5.40	127.86	120.46
44	2	4711	U	C3'-C2'-O2'	-5.40	106.50	114.60
44	2	1701	C	O5'-C5'-C4'	5.40	119.60	111.50
43	u	40	SER	N-CA-C	5.38	117.14	111.28
3	C	151	PRO	CA-N-CD	-5.38	104.47	112.00
6	F	156	LYS	N-CA-C	5.37	117.22	111.36
2	B	207	VAL	N-CA-C	5.37	117.81	111.09
46	4	108	G	O4'-C4'-C3'	-5.37	98.63	104.00
45	3	34	U	C3'-C2'-C1'	-5.37	95.93	101.30
9	I	14	ASN	N-CA-C	5.36	117.33	109.24
16	Q	76	GLU	N-CA-C	5.36	117.12	111.28
4	D	211	LEU	N-CA-C	5.35	117.11	111.28
43	u	62	PHE	CA-CB-CG	-5.34	108.45	113.80
3	C	136	LEU	N-CA-C	5.34	116.78	111.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	Q	95	VAL	CA-C-N	5.33	125.23	119.85
16	Q	95	VAL	C-N-CA	5.33	125.23	119.85
9	I	189	ARG	N-CA-C	5.32	122.14	110.80
3	C	323	ARG	N-CA-C	5.32	117.08	111.28
10	J	168	GLN	N-CA-C	5.32	117.08	111.28
7	G	120	LYS	N-CA-C	5.31	117.15	111.36
1	A	9	ARG	N-CA-C	5.31	117.07	111.28
10	J	47	THR	CA-C-N	5.30	125.20	119.85
10	J	47	THR	C-N-CA	5.30	125.20	119.85
4	D	268	ARG	CA-C-N	5.29	125.20	119.85
4	D	268	ARG	C-N-CA	5.29	125.20	119.85
16	Q	172	ARG	N-CA-C	-5.29	103.40	110.55
28	c	101	ASP	N-CA-C	-5.28	105.52	111.28
23	X	92	ASP	N-CA-C	5.28	117.11	111.36
20	U	65	ARG	CB-CA-C	-5.28	101.04	109.75
23	X	149	VAL	N-CA-C	5.28	116.05	110.72
19	T	154	ILE	CA-C-N	5.26	125.20	119.78
19	T	154	ILE	C-N-CA	5.26	125.20	119.78
6	F	99	ASN	N-CA-C	5.26	118.38	109.76
3	C	215	ASN	N-CA-C	5.25	117.46	110.53
14	O	170	LYS	N-CA-C	5.25	116.69	111.07
30	e	92	ASN	N-CA-C	5.25	117.00	111.28
43	u	155	GLU	N-CA-C	5.25	117.08	111.36
9	I	159	PHE	CA-C-N	5.24	125.15	119.85
9	I	159	PHE	C-N-CA	5.24	125.15	119.85
13	N	14	LYS	N-CA-C	5.24	117.00	111.28
10	J	57	VAL	N-CA-C	5.24	116.01	110.72
13	N	93	LYS	N-CA-C	5.23	119.79	113.41
44	2	4848	A	C2'-C3'-O3'	-5.22	105.86	113.70
5	E	175	VAL	N-CA-C	5.22	115.63	108.12
18	S	154	LEU	CA-C-N	5.22	125.19	120.03
18	S	154	LEU	C-N-CA	5.22	125.19	120.03
3	C	224	ILE	N-CA-C	5.21	114.06	108.95
7	G	77	PRO	CA-C-N	5.21	125.25	119.32
7	G	77	PRO	C-N-CA	5.21	125.25	119.32
5	E	254	ASP	N-CA-C	5.20	116.95	111.28
16	Q	98	LEU	N-CA-C	5.20	121.87	110.80
32	g	106	VAL	N-CA-C	5.20	115.41	110.53
36	k	66	VAL	N-CA-C	5.19	115.38	108.11
3	C	151	PRO	CB-CA-C	5.19	120.13	111.56
4	D	67	ALA	N-CA-C	5.19	118.20	109.95
34	i	6	PRO	N-CA-CB	5.19	108.70	103.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	S	93	MET	N-CA-C	5.18	117.68	109.50
3	C	306	ARG	N-CA-C	-5.18	105.64	111.28
31	f	92	LEU	CA-C-N	5.17	124.84	119.56
31	f	92	LEU	C-N-CA	5.17	124.84	119.56
6	F	15	PRO	N-CA-CB	5.17	108.69	103.00
20	U	76	VAL	N-CA-C	5.17	114.65	108.96
3	C	213	GLU	CB-CA-C	-5.16	102.08	110.85
25	Z	26	VAL	N-CA-C	5.16	116.62	111.00
9	I	17	TYR	CA-C-N	5.15	125.13	120.03
9	I	17	TYR	C-N-CA	5.15	125.13	120.03
36	k	41	TYR	N-CA-C	5.15	117.21	109.23
18	S	24	THR	CA-C-N	5.14	125.67	120.38
18	S	24	THR	C-N-CA	5.14	125.67	120.38
45	3	34	U	O4'-C1'-C2'	-5.14	102.46	107.60
7	G	153	GLN	N-CA-C	5.13	116.96	111.36
11	L	187	ALA	N-CA-C	5.13	116.96	111.36
42	t	75	THR	N-CA-C	5.13	115.31	108.38
26	a	2	PRO	N-CA-CB	5.13	108.64	103.00
4	D	28	THR	N-CA-C	5.13	117.26	108.90
5	E	154	THR	N-CA-C	5.13	120.17	112.94
7	G	82	GLN	N-CA-C	-5.13	105.69	111.28
28	c	47	ILE	N-CA-C	5.13	115.35	108.17
10	J	31	ASP	N-CA-C	5.12	116.86	111.28
44	2	2034	G	O4'-C4'-C3'	-5.12	100.98	106.10
18	S	15	ARG	N-CA-C	5.10	120.62	113.02
40	o	74	GLU	CA-C-N	5.10	124.89	119.28
40	o	74	GLU	C-N-CA	5.10	124.89	119.28
31	f	75	THR	N-CA-C	5.09	119.48	113.12
44	2	135	G	O4'-C1'-C2'	-5.08	102.52	107.60
6	F	227	PHE	N-CA-C	-5.08	105.87	111.71
26	a	128	PHE	N-CA-C	5.07	117.09	109.23
19	T	14	MET	N-CA-C	5.07	116.81	111.28
8	H	182	SER	N-CA-C	5.05	117.56	111.40
19	T	93	ILE	N-CA-C	5.04	115.76	110.62
44	2	1673	C	N1-C1'-C2'	5.04	121.56	114.00
19	T	104	SER	N-CA-C	-5.03	105.80	111.28
14	O	111	PRO	CA-C-N	5.03	127.01	120.28
14	O	111	PRO	C-N-CA	5.03	127.01	120.28
42	t	99	LYS	CB-CA-C	-5.03	110.80	116.63
9	I	134	VAL	N-CA-C	5.02	115.56	107.73
20	U	48	LYS	N-CA-C	5.02	117.15	109.07
25	Z	89	ILE	N-CA-C	5.02	119.72	108.88

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	b	20	GLY	N-CA-C	5.02	125.07	113.18
20	U	109	SER	N-CA-C	5.01	117.00	109.23
44	2	4825	G	C2'-C3'-O3'	-5.01	106.18	113.70

There are no chirality outliers.

All (36) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
44	2	1	C	Sidechain
44	2	115	C	Sidechain
44	2	121	A	Sidechain
44	2	1218	A	Sidechain
44	2	1248	G	Sidechain
44	2	1349	C	Sidechain
44	2	1481	G	Sidechain
44	2	149	U	Sidechain
44	2	1618	U	Sidechain
44	2	1673	C	Sidechain
44	2	2	G	Sidechain
44	2	2064	G	Sidechain
44	2	2246	G	Sidechain
44	2	2274	U	Sidechain
44	2	2294	G	Sidechain
44	2	2338	G	Sidechain
44	2	2354	C	Sidechain
44	2	2570	C	Sidechain
44	2	2581	C	Sidechain
44	2	2624	A	Sidechain
44	2	2795	C	Sidechain
44	2	426	A	Sidechain
44	2	4533	G	Sidechain
44	2	4637	U	Sidechain
44	2	4655	C	Sidechain
44	2	4681	G	Sidechain
44	2	4710	G	Sidechain
44	2	4712	U	Sidechain
44	2	4740	U	Sidechain
44	2	510	C	Sidechain
44	2	721	A	Sidechain
44	2	902	G	Sidechain
44	2	965	C	Sidechain
44	2	966	U	Sidechain

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Mol	Chain	Res	Type	Group
45	3	130	C	Sidechain
45	3	156	U	Sidechain

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	1888	0	1983	144	0
2	B	3190	0	3327	169	0
3	C	2889	0	3064	307	0
4	D	2361	0	2385	159	0
5	E	1286	0	1398	180	0
6	F	1949	0	2093	133	0
7	G	1881	0	2018	143	0
8	H	1535	0	1611	95	0
9	I	1604	0	1652	61	0
10	J	1362	0	1399	92	0
11	L	1617	0	1725	140	0
12	M	1139	0	1204	123	0
13	N	1708	0	1761	105	0
14	O	1607	0	1745	121	0
15	P	1234	0	1263	89	0
16	Q	1493	0	1612	127	0
17	R	1526	0	1682	80	0
18	S	1438	0	1472	86	0
19	T	1297	0	1366	125	0
20	U	827	0	852	22	0
21	V	963	0	1026	44	0
22	W	529	0	541	27	0
23	X	975	0	1053	68	0
24	Y	1065	0	1145	103	0
25	Z	1114	0	1194	89	0
26	a	1161	0	1213	92	0
27	b	560	0	590	45	0
28	c	802	0	845	65	0
29	d	904	0	947	29	0
30	e	1053	0	1144	50	0
31	f	865	0	904	104	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	g	907	0	1002	105	0
33	h	1014	0	1148	55	0
34	i	783	0	862	77	0
35	j	690	0	719	61	0
36	k	568	0	637	40	0
37	l	443	0	483	19	0
38	m	428	0	466	25	0
39	n	239	0	289	3	0
40	o	870	0	943	51	0
41	p	707	0	760	39	0
42	t	1043	0	1120	137	0
43	u	1621	0	1555	258	0
44	2	77488	0	39153	7886	0
45	3	3334	0	1693	326	0
46	4	2538	0	1286	274	0
All	All	136495	0	98330	10756	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 46.

All (10756) 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)
31:f:106:TYR:CD2	31:f:107:PRO:HD2	1.42	1.55
43:u:156:ARG:HG2	44:2:4023:U:C2	0.98	1.48
44:2:1673:C:O3'	44:2:1673:C:C3'	1.63	1.46
43:u:156:ARG:NE	44:2:3935:A:C2	1.72	1.44
34:i:100:ALA:CB	43:u:197:THR:OG1	1.69	1.39
44:2:1701:C:C5'	44:2:1701:C:O5'	1.67	1.39
44:2:3910:G:O2'	44:2:3911:A:H5'	1.22	1.34
43:u:158:THR:HB	44:2:4023:U:O4'	1.25	1.33
43:u:158:THR:OG1	44:2:4022:C:H2'	1.22	1.32
43:u:28:ALA:HB1	44:2:4022:C:O4'	1.22	1.30
43:u:158:THR:CG2	44:2:4022:C:O2	1.79	1.29
43:u:156:ARG:CD	44:2:4023:U:O2	1.79	1.27
1:A:196:TRP:HB3	1:A:197:PRO:CD	1.62	1.25
43:u:29:VAL:O	44:2:4022:C:O2'	1.56	1.23
43:u:157:ARG:O	44:2:4023:U:H4'	1.27	1.23
43:u:158:THR:OG1	44:2:4022:C:C2'	1.87	1.22
43:u:156:ARG:HB3	44:2:3936:G:C2	1.74	1.22
33:h:78:TYR:CE1	44:2:16:G:H4'	1.74	1.21

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:u:32:ARG:HA	44:2:4024:A:OP1	1.40	1.21
43:u:158:THR:OG1	44:2:4022:C:O2	1.56	1.21
44:2:1179:G:H2'	44:2:1180:G:C8	1.77	1.19
1:A:186:TYR:HB2	1:A:196:TRP:CZ2	1.76	1.19
43:u:29:VAL:C	44:2:4022:C:O2'	1.84	1.18
31:f:106:TYR:HD2	31:f:107:PRO:CD	1.55	1.17
44:2:4687:U:H3'	44:2:4688:A:H5''	1.27	1.17
2:B:258:HIS:CB	2:B:259:PRO:HD2	1.68	1.17
3:C:309:ILE:HD13	44:2:2063:G:H1'	1.26	1.16
34:i:100:ALA:HB2	43:u:197:THR:OG1	0.99	1.16
44:2:284:G:H4'	44:2:285:G:C8	1.81	1.15
43:u:158:THR:HB	44:2:4023:U:C1'	1.73	1.15
37:l:13:LEU:HD11	44:2:2384:G:H2'	1.18	1.15
44:2:462:A:H4'	44:2:463:C:H5''	1.23	1.14
43:u:156:ARG:CD	44:2:3935:A:N1	2.11	1.14
43:u:156:ARG:NE	44:2:3935:A:N1	1.95	1.14
43:u:157:ARG:O	44:2:4023:U:C4'	1.96	1.14
44:2:1647:A:H2'	44:2:1648:A:H5''	1.28	1.14
44:2:2040:C:H3'	44:2:2041:G:H5''	1.22	1.14
44:2:1648:A:H2'	44:2:1649:G:H5''	1.26	1.13
44:2:4709:G:H2'	44:2:4710:G:H5''	1.21	1.13
1:A:196:TRP:CB	1:A:197:PRO:HD3	1.79	1.13
44:2:719:G:H1'	44:2:720:A:H5''	1.22	1.13
43:u:156:ARG:HD2	44:2:3935:A:N1	1.62	1.12
44:2:284:G:H21	44:2:288:U:H4'	1.13	1.12
44:2:641:C:H2'	44:2:642:C:H5	1.10	1.12
44:2:3910:G:N3	44:2:3911:A:C8	2.17	1.12
10:J:53:ALA:HB2	10:J:68:ILE:HD12	1.32	1.12
44:2:656:G:H2'	44:2:657:C:H5'	1.31	1.12
44:2:1224:G:H3'	44:2:1225:C:H5''	1.31	1.12
7:G:189:ARG:NH2	45:3:154:G:H5'	1.64	1.12
44:2:3913:G:H2'	44:2:3914:A:H8	1.08	1.12
34:i:100:ALA:CB	43:u:197:THR:CG2	2.28	1.11
44:2:1258:C:H3'	44:2:1259:A:H5''	1.29	1.11
44:2:4655:C:H2'	44:2:4656:C:H5'	1.29	1.11
44:2:1191:G:H2'	44:2:1192:G:H8	1.10	1.11
44:2:4700:C:H2'	44:2:4701:G:H4'	1.28	1.11
14:O:21:ALA:HA	14:O:87:MET:HE1	1.22	1.11
23:X:56:ARG:HA	44:2:14:C:H5''	1.32	1.11
44:2:2348:U:H6	44:2:2348:U:H5''	1.16	1.11
44:2:178:C:H3'	44:2:179:G:H5''	1.22	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:u:156:ARG:HB3	44:2:3936:G:N3	1.66	1.10
44:2:457:A:H8	44:2:676:G:H5''	1.07	1.10
44:2:2370:C:H3'	44:2:2371:G:H5''	1.32	1.10
34:i:100:ALA:HB3	43:u:197:THR:HG23	1.23	1.09
44:2:1718:G:H5''	46:4:102:U:H1'	1.22	1.09
44:2:400:G:H22	44:2:2305:U:H5''	1.08	1.09
44:2:4665:A:H3'	44:2:4666:G:H8	1.17	1.09
44:2:1219:C:C2	44:2:1249:G:H4'	1.86	1.09
44:2:3586:G:H2'	44:2:3587:C:H5'	1.34	1.09
32:g:54:ARG:HG2	44:2:2629:G:H1	1.14	1.09
44:2:3910:G:C2'	44:2:3911:A:H5'	1.79	1.09
44:2:104:G:H1'	44:2:1340:G:H22	1.00	1.09
43:u:155:GLU:OE1	44:2:3936:G:C5'	2.02	1.08
44:2:229:G:H1'	44:2:374:A:H1'	1.35	1.08
25:Z:136:PHE:CA	44:2:4089:G:H21	1.66	1.08
44:2:441:G:H5'	44:2:441:G:H8	1.17	1.08
44:2:1791:C:H2'	44:2:1792:U:H6	1.18	1.08
6:F:69:ILE:HB	44:2:716:U:H4'	1.33	1.08
43:u:158:THR:CB	44:2:4022:C:O2	2.01	1.08
44:2:433:G:H2'	44:2:434:G:C8	1.88	1.08
44:2:4639:G:H2'	44:2:4640:G:H5''	1.31	1.08
44:2:957:G:H8	44:2:957:G:H5'	1.02	1.08
18:S:169:THR:HG23	44:2:4829:A:H1'	1.30	1.07
44:2:457:A:C8	44:2:676:G:H5''	1.89	1.07
44:2:4906:G:H2'	44:2:4907:G:C8	1.89	1.07
11:L:59:VAL:CG1	44:2:74:G:H5''	1.85	1.07
44:2:4695:C:H2'	44:2:4696:G:C8	1.90	1.07
43:u:155:GLU:N	44:2:3936:G:O2'	1.88	1.07
44:2:4825:G:H4'	44:2:4826:C:H4'	1.14	1.07
3:C:165:LYS:NZ	44:2:219:C:OP2	1.88	1.07
44:2:424:A:H1'	44:2:425:A:H5''	1.35	1.07
2:B:258:HIS:CG	2:B:259:PRO:HD2	1.88	1.06
23:X:66:PRO:HB3	45:3:134:G:H5'	1.35	1.06
44:2:709:G:H2'	44:2:710:G:H5'	1.29	1.06
3:C:346:ASN:CB	44:2:713:G:H4'	1.85	1.06
44:2:41:C:H2'	44:2:42:A:H5''	1.16	1.06
44:2:1058:A:H62	44:2:1205:U:H1'	1.06	1.06
25:Z:135:ARG:O	44:2:4089:G:N2	1.89	1.06
44:2:2449:A:H3'	44:2:2450:A:H5'	1.35	1.06
44:2:709:G:C2'	44:2:710:G:H5'	1.86	1.06
43:u:156:ARG:N	44:2:3936:G:H1'	1.71	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2311:C:H6	44:2:2311:C:H5'	1.20	1.06
44:2:510:C:H6	44:2:510:C:H5'	1.09	1.05
44:2:4595:A:H5'	44:2:4624:A:H61	1.19	1.05
44:2:893:A:H2'	44:2:894:G:H5''	1.33	1.05
34:i:100:ALA:HB3	43:u:197:THR:CG2	1.84	1.05
44:2:182:C:H3'	44:2:183:G:C8	1.92	1.05
44:2:2310:G:H4'	45:3:20:A:H4'	1.33	1.05
44:2:2637:A:H3'	44:2:2638:U:H5''	1.32	1.05
25:Z:136:PHE:HA	44:2:4089:G:H21	1.21	1.05
44:2:1166:U:H2'	44:2:1167:G:C8	1.91	1.05
32:g:93:ARG:HD3	44:2:4088:G:H5'	1.39	1.04
44:2:380:A:N3	44:2:380:A:H3'	1.71	1.04
44:2:4687:U:H3'	44:2:4688:A:C5'	1.87	1.04
44:2:1059:C:H3'	44:2:1060:C:C5	1.92	1.04
44:2:4700:C:H3'	44:2:4701:G:H5''	1.34	1.04
44:2:957:G:H5'	44:2:957:G:C8	1.92	1.04
44:2:1248:G:H3'	44:2:1249:G:C8	1.93	1.04
44:2:1191:G:H2'	44:2:1192:G:C8	1.93	1.03
44:2:1351:A:H3'	44:2:1352:A:H8	1.23	1.03
44:2:2532:G:H2'	44:2:2533:G:C8	1.93	1.03
44:2:3910:G:C2	44:2:3911:A:N7	2.25	1.03
44:2:4291:G:H3'	44:2:4292:C:H5'	1.05	1.03
44:2:1276:G:H3'	44:2:1277:U:H4'	1.35	1.03
3:C:164:THR:HG23	44:2:221:U:O2	1.56	1.03
7:G:189:ARG:HH21	45:3:154:G:H5'	1.13	1.03
43:u:156:ARG:CB	44:2:4023:U:O2	2.06	1.03
44:2:712:C:H2'	44:2:713:G:C8	1.93	1.03
31:f:106:TYR:CD2	31:f:107:PRO:CD	2.32	1.03
42:t:73:PRO:HG3	42:t:78:VAL:HG21	1.39	1.03
44:2:1057:C:H2'	44:2:1058:A:H5''	1.41	1.03
45:3:127:U:H3'	45:3:128:C:H5''	1.04	1.03
40:o:54:PRO:HA	44:2:4339:A:N7	1.73	1.03
44:2:2738:U:H1'	44:2:2739:G:C8	1.92	1.03
44:2:3910:G:C2	44:2:3911:A:C8	2.47	1.03
40:o:48:TYR:CE1	44:2:3895:C:H4'	1.93	1.02
44:2:178:C:H3'	44:2:179:G:C5'	1.88	1.02
44:2:1409:C:H2'	44:2:1410:C:C6	1.94	1.02
44:2:2305:U:H2'	44:2:2306:G:C8	1.94	1.02
44:2:462:A:H4'	44:2:463:C:C5'	1.89	1.02
44:2:2416:G:H2'	44:2:2495:G:H22	1.25	1.02
44:2:2311:C:H5'	44:2:2311:C:C6	1.95	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4037:U:C5	44:2:4038:U:C5	2.48	1.02
44:2:978:G:H2'	44:2:979:C:C6	1.94	1.01
43:u:158:THR:CB	44:2:4023:U:O4'	2.07	1.01
44:2:14:C:O4'	44:2:15:A:H5'	1.60	1.01
44:2:1178:G:H3'	44:2:1179:G:H5''	1.38	1.01
44:2:2416:G:H2'	44:2:2495:G:N2	1.75	1.01
44:2:2532:G:H2'	44:2:2533:G:H8	1.24	1.01
45:3:8:U:H2'	45:3:9:A:H8	1.23	1.01
44:2:1301:G:H4'	44:2:1869:A:H2	1.25	1.01
44:2:4830:G:H3'	44:2:4831:U:H4'	1.42	1.01
44:2:1718:G:C5'	46:4:102:U:H1'	1.90	1.01
44:2:3588:G:H5'	44:2:3589:G:H5''	1.39	1.01
44:2:4236:G:H5''	44:2:4236:G:C8	1.96	1.01
44:2:393:A:H5''	44:2:393:A:H8	1.23	1.01
44:2:2354:C:H2'	44:2:2355:G:H8	1.19	1.01
44:2:2750:G:H2'	44:2:2751:C:C6	1.95	1.01
44:2:165:C:H2'	44:2:166:G:H8	1.26	1.00
44:2:1061:C:H2'	44:2:1062:C:H6	1.26	1.00
44:2:1659:G:H5'	44:2:1659:G:H8	1.24	1.00
44:2:1061:C:H2'	44:2:1062:C:C6	1.96	1.00
44:2:1791:C:H2'	44:2:1792:U:C6	1.96	1.00
43:u:160:HIS:CD2	44:2:4021:A:C2	2.50	1.00
44:2:459:U:H4'	44:2:460:C:OP1	1.60	1.00
44:2:2308:A:H4'	44:2:2309:G:H5'	1.44	1.00
44:2:3769:A:C2	44:2:4456:A:H1'	1.96	1.00
12:M:123:ILE:HA	14:O:187:LYS:CE	1.91	0.99
44:2:1179:G:H2'	44:2:1180:G:H8	1.17	0.99
5:E:190:HIS:HB2	44:2:4897:C:H2'	1.45	0.99
44:2:943:G:H3'	44:2:1262:G:C4'	1.91	0.99
44:2:3781:C:H3'	44:2:3782:A:H5''	1.45	0.99
44:2:3858:G:H3'	44:2:4679:G:H22	1.23	0.99
44:2:1466:G:H2'	44:2:1467:G:H5''	1.43	0.99
44:2:2370:C:H3'	44:2:2371:G:C5'	1.91	0.99
44:2:4812:A:H2'	44:2:4813:C:C6	1.97	0.99
32:g:22:LEU:HD21	44:2:2589:G:H1'	1.43	0.99
44:2:1870:A:H5'	44:2:1871:C:H5	1.24	0.99
44:2:4712:U:H1'	44:2:4713:G:H8	1.21	0.99
7:G:54:PHE:CZ	44:2:4055:G:H5''	1.98	0.99
34:i:100:ALA:CB	43:u:197:THR:CB	2.40	0.99
44:2:3877:A:H2'	44:2:3878:C:H5'	1.44	0.99
43:u:156:ARG:NE	44:2:3935:A:H2	1.52	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:3943:G:H5'	44:2:3943:G:H8	1.28	0.98
44:2:104:G:C1'	44:2:1340:G:H22	1.75	0.98
43:u:157:ARG:NH2	44:2:4025:C:O5'	1.93	0.98
44:2:59:A:H2'	44:2:60:A:H5'	1.42	0.98
44:2:4825:G:C4'	44:2:4826:C:H4'	1.93	0.98
44:2:41:C:C2'	44:2:42:A:H5''	1.94	0.98
44:2:2526:G:H3'	44:2:2527:G:H5''	1.45	0.98
1:A:185:ALA:C	1:A:196:TRP:HE1	1.71	0.98
3:C:263:LEU:HD22	3:C:273:LEU:HD22	1.44	0.98
35:j:12:ARG:NH2	44:2:2778:U:H1'	1.77	0.98
44:2:2526:G:H3'	44:2:2527:G:C5'	1.92	0.97
44:2:3770:U:H4'	44:2:4456:A:H2	1.25	0.97
44:2:3914:A:H2'	44:2:3915:G:H8	1.28	0.97
44:2:1873:G:H5'	44:2:1873:G:H8	1.27	0.97
44:2:700:C:C3'	44:2:701:C:H5''	1.93	0.97
44:2:2310:G:C3'	44:2:2311:C:H5''	1.92	0.97
44:2:4291:G:H3'	44:2:4292:C:C5'	1.94	0.97
45:3:127:U:C3'	45:3:128:C:H5''	1.95	0.97
44:2:4900:G:H3'	44:2:4901:U:H5'	1.45	0.97
6:F:51:TYR:OH	44:2:1218:A:H3'	1.64	0.97
44:2:1355:C:H2'	44:2:1356:C:H5'	1.43	0.97
44:2:3914:A:H2'	44:2:3915:G:C8	1.98	0.97
1:A:186:TYR:HA	1:A:196:TRP:CE2	1.99	0.97
34:i:99:LYS:NZ	43:u:193:LEU:O	1.97	0.97
44:2:476:C:H6	44:2:476:C:H5''	1.30	0.97
44:2:122:U:H2'	44:2:123:C:C6	2.00	0.97
4:D:56:THR:HB	46:4:26:C:H5''	1.47	0.97
41:p:16:THR:HG22	44:2:2853:G:C8	2.00	0.96
44:2:326:A:H3'	44:2:327:A:H8	1.30	0.96
44:2:1258:C:H3'	44:2:1259:A:C5'	1.95	0.96
43:u:156:ARG:CG	44:2:4023:U:C2	1.79	0.96
3:C:346:ASN:HB3	44:2:713:G:H4'	1.48	0.96
44:2:2508:C:HO2'	44:2:2509:C:H6	0.98	0.96
44:2:4825:G:H4'	44:2:4826:C:C4'	1.95	0.96
44:2:1053:G:H2'	44:2:1054:G:H8	1.31	0.96
13:N:28:TRP:CD1	44:2:4045:A:H5''	2.01	0.96
44:2:1050:G:H2'	44:2:1051:C:H5'	1.47	0.96
43:u:28:ALA:HB1	44:2:4022:C:C4'	1.95	0.96
43:u:29:VAL:N	44:2:4022:C:O2'	1.97	0.96
44:2:1515:U:H2'	44:2:1516:A:H8	1.31	0.96
44:2:2701:G:H4'	44:2:2702:A:C2	2.00	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2047:A:H2'	44:2:2048:U:H3'	1.48	0.95
43:u:156:ARG:HD3	44:2:4024:A:N7	1.80	0.95
44:2:957:G:H2'	44:2:958:C:H5''	1.45	0.95
44:2:929:U:H2'	44:2:930:C:H5'	1.46	0.95
44:2:2551:G:H4'	44:2:2552:U:OP2	1.66	0.95
43:u:158:THR:HG21	44:2:4022:C:O2	1.66	0.95
43:u:152:ARG:HE	44:2:3937:U:H5''	1.28	0.95
44:2:510:C:H5'	44:2:510:C:C6	2.02	0.95
44:2:700:C:H3'	44:2:701:C:H5''	1.48	0.95
44:2:1218:A:H5'	44:2:1218:A:C8	2.02	0.95
44:2:1278:C:H2'	44:2:1279:G:C8	2.02	0.95
44:2:4661:A:H2'	44:2:4662:G:H5'	1.47	0.95
44:2:4665:A:H3'	44:2:4666:G:C8	2.01	0.95
3:C:185:ALA:HB3	44:2:2276:A:C8	2.02	0.95
44:2:924:C:H3'	44:2:925:C:H5''	1.49	0.95
44:2:3605:C:H5'	44:2:3605:C:H6	1.32	0.95
44:2:4308:A:H3'	44:2:4309:C:H5''	1.48	0.95
3:C:54:VAL:HG22	3:C:55:SER:H	1.27	0.95
43:u:158:THR:HG21	44:2:4022:C:C2	2.02	0.95
7:G:73:ARG:NH1	44:2:4044:G:OP2	1.99	0.94
29:d:39:LYS:HA	29:d:77:ILE:HD12	1.49	0.94
30:e:12:ILE:HD11	30:e:69:MET:HB3	1.48	0.94
44:2:288:U:H2'	44:2:289:G:C8	2.02	0.94
44:2:2549:C:H4'	44:2:2736:G:H2'	1.47	0.94
43:u:156:ARG:CG	44:2:4023:U:O2	0.64	0.94
24:Y:126:ARG:HD3	44:2:194:A:H4'	1.47	0.94
44:2:2661:C:H2'	44:2:2662:C:C6	2.03	0.94
44:2:4308:A:H3'	44:2:4309:C:C5'	1.98	0.94
5:E:172:LEU:HD11	44:2:4896:G:H5''	1.49	0.94
44:2:641:C:H2'	44:2:642:C:C5	2.02	0.94
44:2:3913:G:H2'	44:2:3914:A:C8	2.01	0.94
44:2:240:A:H2'	44:2:241:G:C8	2.02	0.94
44:2:441:G:H5'	44:2:441:G:C8	2.03	0.94
44:2:1081:C:H4'	44:2:1081:C:OP1	1.65	0.94
44:2:1465:C:C2'	44:2:1466:G:H5'	1.96	0.94
44:2:218:C:H2'	44:2:219:C:H6	1.33	0.94
44:2:3910:G:O2'	44:2:3911:A:C5'	2.15	0.94
44:2:4837:U:HO2'	44:2:4838:C:H6	0.94	0.94
44:2:286:A:C2	44:2:308:A:H8	1.85	0.94
44:2:2421:U:H5''	44:2:2422:C:H5	1.31	0.94
44:2:254:G:H3'	44:2:254:G:N3	1.83	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:3580:A:H2	44:2:4971:A:H8	1.08	0.93
4:D:280:VAL:HG13	9:I:206:LEU:HD11	1.48	0.93
5:E:190:HIS:CB	44:2:4897:C:H2'	1.97	0.93
45:3:127:U:H3'	45:3:128:C:C5'	1.98	0.93
11:L:156:PRO:HB3	44:2:1359:C:C5	2.03	0.93
11:L:169:ILE:HG12	26:a:98:ALA:HB2	1.47	0.93
43:u:158:THR:OG1	44:2:4022:C:C2	2.20	0.93
44:2:929:U:C2'	44:2:930:C:H5'	1.98	0.93
44:2:1503:A:H3'	44:2:1504:A:H5''	1.50	0.93
44:2:2750:G:H2'	44:2:2751:C:H6	1.28	0.93
1:A:186:TYR:CB	1:A:196:TRP:CZ2	2.52	0.93
40:o:48:TYR:HE1	44:2:3895:C:H4'	1.32	0.93
43:u:155:GLU:OE1	44:2:3936:G:O5'	1.87	0.93
23:X:56:ARG:HA	44:2:14:C:C5'	1.98	0.93
23:X:56:ARG:CA	44:2:14:C:H5''	1.99	0.93
44:2:2345:A:H5''	44:2:2804:G:H22	1.34	0.93
16:Q:155:ALA:HB1	16:Q:156:PRO:HD2	1.48	0.93
44:2:4253:U:H3'	44:2:4254:C:H5''	1.50	0.93
44:2:4593:G:H2'	44:2:4623:G:H1	1.33	0.93
44:2:2550:A:P	44:2:2736:G:H8	1.91	0.93
44:2:3834:A:H2'	44:2:3835:C:C6	2.02	0.93
44:2:4823:G:H4'	44:2:4824:U:OP1	1.69	0.93
44:2:104:G:H1'	44:2:1340:G:N2	1.83	0.93
44:2:386:A:H3'	44:2:387:A:H8	1.29	0.92
44:2:1079:C:H2'	44:2:1080:U:C4'	1.99	0.92
27:b:57:MET:HB3	44:2:1791:C:H4'	1.50	0.92
44:2:424:A:H1'	44:2:425:A:C5'	1.99	0.92
44:2:1146:G:H5''	44:2:1147:C:H5	1.32	0.92
44:2:937:C:H2'	44:2:938:C:C6	2.03	0.92
44:2:943:G:H3'	44:2:1262:G:H4'	1.47	0.92
44:2:977:G:H2'	44:2:978:G:O4'	1.69	0.92
44:2:1801:U:H2'	44:2:1802:G:O4'	1.70	0.92
44:2:1313:A:H3'	44:2:1314:A:C8	2.04	0.92
44:2:4561:U:H2'	44:2:4562:A:C8	2.03	0.92
44:2:1942:A:C4	44:2:4654:G:C8	2.57	0.92
11:L:59:VAL:HG13	44:2:74:G:OP1	1.70	0.92
44:2:4723:A:H1'	44:2:4724:G:OP1	1.70	0.92
38:m:103:LEU:HD21	38:m:110:CYS:HA	1.50	0.92
44:2:2549:C:H2'	44:2:2550:A:H5''	1.50	0.92
1:A:196:TRP:HB3	1:A:197:PRO:HD3	0.93	0.92
44:2:4803:C:C4	44:2:4804:G:H1'	2.05	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:20:VAL:HG13	44:2:3648:U:C5	2.05	0.91
44:2:2304:G:C2'	44:2:2305:U:H5'	2.00	0.91
44:2:3602:C:H2'	44:2:3603:G:C8	2.04	0.91
44:2:2309:G:H1'	44:2:2310:G:C8	2.04	0.91
3:C:346:ASN:HB2	44:2:713:G:H4'	1.51	0.91
33:h:78:TYR:CD1	44:2:16:G:H4'	2.04	0.91
44:2:725:C:H3'	44:2:726:C:C5	2.05	0.91
44:2:2310:G:C2'	44:2:2311:C:H5''	1.99	0.91
11:L:59:VAL:HG12	44:2:74:G:H5''	1.50	0.91
44:2:1:C:H6	44:2:1:C:HO5'	0.97	0.91
45:3:26:C:H2'	45:3:27:U:C6	2.05	0.91
44:2:700:C:H2'	44:2:701:C:O4'	1.71	0.91
1:A:186:TYR:HA	1:A:196:TRP:NE1	1.85	0.91
44:2:4689:C:O5'	44:2:4695:C:H4'	1.71	0.91
43:u:156:ARG:CB	44:2:3936:G:N3	2.33	0.91
44:2:1203:G:H2'	44:2:1204:G:H8	1.36	0.91
44:2:1301:G:H4'	44:2:1869:A:C2	2.06	0.91
44:2:1455:C:H2'	44:2:1456:C:C6	2.05	0.91
44:2:1894:G:H2'	44:2:1895:A:H5'	1.50	0.91
44:2:471:C:H5''	44:2:472:G:H5''	1.53	0.91
44:2:1058:A:N6	44:2:1205:U:H1'	1.84	0.91
44:2:1607:C:H2'	44:2:1608:G:H5'	1.53	0.91
44:2:4971:A:H2	44:2:4988:G:H21	1.17	0.91
3:C:13:GLU:HB2	3:C:170:LEU:HD11	1.53	0.91
44:2:1245:G:H2'	44:2:1246:G:H5''	1.51	0.91
44:2:1196:C:C5	44:2:1239:G:H5'	2.06	0.90
44:2:4909:G:H2'	44:2:4910:A:H8	1.35	0.90
3:C:139:SER:O	42:t:14:SER:HA	1.72	0.90
42:t:92:SER:HB2	44:2:668:C:H5''	1.54	0.90
44:2:1199:G:H2'	44:2:1200:G:C8	2.05	0.90
44:2:1797:G:H22	44:2:1799:C:H2'	1.37	0.90
44:2:2859:A:H2'	44:2:2860:G:H5'	1.53	0.90
45:3:37:A:H2	45:3:105:C:H42	1.14	0.90
44:2:4551:U:H3	44:2:4579:U:H3	1.18	0.90
44:2:481:C:H2'	44:2:482:G:H5''	1.54	0.90
44:2:719:G:H1'	44:2:720:A:C5'	2.00	0.90
44:2:2547:U:H2'	44:2:2548:C:H6	1.34	0.90
44:2:2564:A:H5'	44:2:2746:U:O2'	1.72	0.90
44:2:4098:G:H1	44:2:4113:C:H42	1.16	0.90
44:2:4806:G:H2'	44:2:4807:C:H4'	1.53	0.90
25:Z:83:THR:HG1	32:g:95:PHE:HZ	1.05	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1059:C:H3'	44:2:1060:C:H5	1.36	0.90
44:2:1352:A:C2	44:2:1353:A:C5	2.59	0.90
44:2:4637:U:H1'	44:2:4638:G:OP1	1.71	0.90
44:2:2348:U:H5''	44:2:2348:U:C6	2.07	0.90
3:C:54:VAL:HG21	44:2:2320:G:N7	1.86	0.90
7:G:61:ILE:HD12	45:3:149:G:H1'	1.51	0.90
44:2:728:G:H2'	44:2:729:C:H6	1.37	0.90
44:2:737:G:H22	44:2:901:A:H2	1.17	0.90
44:2:2656:G:H2'	44:2:2657:G:H8	1.34	0.90
44:2:4691:G:H5'	44:2:4694:G:H4'	1.53	0.90
44:2:4830:G:N7	44:2:4831:U:H1'	1.85	0.90
25:Z:136:PHE:HA	44:2:4089:G:N2	1.87	0.90
42:t:119:ARG:O	42:t:123:PRO:HD3	1.71	0.90
44:2:1716:A:H5'	46:4:78:C:H4'	1.54	0.90
44:2:2455:C:P	44:2:2456:G:H5''	2.11	0.90
44:2:1064:C:H2'	44:2:1065:C:C6	2.07	0.89
44:2:2355:G:N2	44:2:2357:G:H3'	1.88	0.89
44:2:4236:G:H5''	44:2:4236:G:H8	1.35	0.89
44:2:2742:A:H2'	44:2:2743:A:C8	2.07	0.89
44:2:457:A:H2'	44:2:458:U:C5'	2.03	0.89
45:3:109:C:H4'	45:3:110:U:C5	2.07	0.89
46:4:66:G:N3	46:4:66:G:H2'	1.86	0.89
44:2:1465:C:H2'	44:2:1466:G:H5'	1.54	0.89
44:2:4709:G:H2'	44:2:4710:G:C5'	2.01	0.89
44:2:2702:A:H4'	44:2:2703:G:H5''	1.54	0.89
43:u:155:GLU:CD	44:2:3936:G:O5'	2.16	0.89
44:2:1020:G:H22	44:2:1044:G:H22	1.15	0.89
44:2:1274:A:H8	44:2:1274:A:H5'	1.38	0.89
44:2:1525:C:H4'	44:2:1562:A:H2	1.37	0.89
44:2:3580:A:H2	44:2:4971:A:C8	1.89	0.89
10:J:26:VAL:O	10:J:68:ILE:HG23	1.72	0.89
34:i:99:LYS:HZ3	43:u:193:LEU:C	1.80	0.89
44:2:180:C:H4'	44:2:182:C:C6	2.06	0.89
3:C:336:ARG:HE	44:2:930:C:H4'	1.37	0.89
43:u:156:ARG:HB2	44:2:3935:A:C2	2.07	0.89
44:2:924:C:H2'	44:2:925:C:O4'	1.73	0.89
44:2:1403:U:H2'	44:2:1404:G:H8	1.36	0.89
44:2:469:G:C2'	44:2:470:G:H5'	2.03	0.89
44:2:2689:G:H2'	44:2:2690:C:H5'	1.54	0.89
44:2:3686:A:H2'	44:2:3687:A:C8	2.06	0.89
44:2:3910:G:C2	44:2:3911:A:C5	2.61	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:961:C:H4'	44:2:961:C:OP1	1.73	0.89
44:2:1443:C:H2'	44:2:1445:G:OP2	1.73	0.89
44:2:4204:A:H2	44:2:4227:G:H2'	1.37	0.89
44:2:4687:U:C3'	44:2:4688:A:H5''	2.02	0.89
44:2:180:C:H4'	44:2:182:C:H6	1.38	0.88
44:2:642:C:H2'	44:2:643:G:H4'	1.55	0.88
44:2:1711:C:H2'	44:2:1712:G:H5''	1.54	0.88
44:2:2398:G:P	44:2:2805:U:H1'	2.13	0.88
44:2:2625:G:H1'	44:2:2663:G:O6	1.72	0.88
45:3:129:C:H2'	45:3:130:C:C5	2.07	0.88
34:i:100:ALA:CB	43:u:197:THR:HG23	1.99	0.88
44:2:440:C:H2'	44:2:441:G:H5''	1.54	0.88
44:2:1193:G:H4'	44:2:1194:C:OP2	1.70	0.88
44:2:1554:A:C8	44:2:1554:A:H5''	2.07	0.88
25:Z:135:ARG:C	44:2:4089:G:N2	2.31	0.88
44:2:711:A:H2'	44:2:712:C:H1'	1.56	0.88
44:2:2486:C:H6	44:2:2486:C:H5''	1.35	0.88
8:H:132:VAL:HG12	8:H:154:VAL:HG22	1.55	0.88
44:2:4712:U:H1'	44:2:4713:G:C8	2.07	0.88
44:2:4735:G:H3'	44:2:4736:C:H5''	1.55	0.88
4:D:73:MET:SD	46:4:114:U:H4'	2.14	0.88
44:2:2469:C:H2'	44:2:2470:G:C8	2.08	0.88
32:g:43:LYS:HB2	32:g:51:GLY:O	1.73	0.88
34:i:25:ARG:HH22	44:2:318:U:H5	1.22	0.88
36:k:26:LYS:HG3	44:2:2672:A:H4'	1.55	0.88
44:2:1547:C:H2'	44:2:1548:U:C6	2.07	0.88
44:2:2624:A:C6	44:2:2665:G:C6	2.62	0.88
44:2:3750:C:C5'	44:2:3790:A:H4'	2.04	0.88
6:F:222:LYS:HB2	44:2:1885:A:H4'	1.52	0.88
43:u:155:GLU:C	44:2:3936:G:H1'	1.94	0.88
44:2:712:C:H2'	44:2:713:G:H8	1.36	0.88
44:2:3580:A:C2	44:2:4971:A:H8	1.91	0.88
44:2:2020:A:H2	44:2:4424:A:C6	1.91	0.88
6:F:245:ARG:HG2	44:2:927:A:H3'	1.56	0.87
44:2:381:C:C6	44:2:381:C:H5''	2.08	0.87
44:2:1053:G:H2'	44:2:1054:G:C8	2.09	0.87
44:2:1717:A:H4'	46:4:101:A:C2	2.08	0.87
44:2:2354:C:H2'	44:2:2355:G:C8	2.09	0.87
44:2:2572:C:H2'	44:2:2573:G:C8	2.10	0.87
44:2:4562:A:H2'	44:2:4563:C:C6	2.09	0.87
44:2:333:G:H2'	44:2:334:C:H5''	1.56	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4204:A:C2	44:2:4227:G:H2'	2.10	0.87
30:e:104:SER:HB3	44:2:2279:C:H4'	1.57	0.87
44:2:218:C:H2'	44:2:219:C:C6	2.09	0.87
44:2:437:C:H3'	44:2:438:C:C5	2.09	0.87
44:2:1065:C:H2'	44:2:1066:C:H5'	1.56	0.87
44:2:1380:G:H2'	44:2:1381:C:H6	1.40	0.87
44:2:2372:A:O2'	44:2:2783:A:H2'	1.74	0.87
3:C:330:PRO:HB2	6:F:51:TYR:CE1	2.09	0.87
31:f:106:TYR:CG	31:f:107:PRO:HD2	2.09	0.87
43:u:29:VAL:CA	44:2:4022:C:O2'	2.23	0.87
44:2:105:A:C2	44:2:327:A:H2	1.91	0.87
44:2:4637:U:O4	44:2:4674:C:H1'	1.74	0.87
16:Q:42:THR:CG2	44:2:1409:C:H5''	2.05	0.87
46:4:23:A:N3	46:4:119:U:H1'	1.89	0.87
1:A:196:TRP:CH2	44:2:1592:A:C2	2.63	0.87
43:u:152:ARG:HD3	44:2:3938:G:OP1	1.75	0.87
44:2:393:A:H5''	44:2:393:A:C8	2.10	0.87
44:2:4645:U:H2'	44:2:4646:G:H8	1.38	0.87
44:2:4735:G:H2'	44:2:4736:C:H4'	1.54	0.87
44:2:1020:G:N2	44:2:1044:G:H22	1.73	0.87
44:2:1403:U:H2'	44:2:1404:G:C8	2.09	0.87
44:2:2333:U:H6	44:2:2333:U:H5'	1.39	0.87
44:2:4688:A:O2'	44:2:4695:C:H1'	1.75	0.87
44:2:2393:G:H22	44:2:2397:A:H62	1.22	0.87
44:2:2705:U:H2'	44:2:2706:C:O4'	1.75	0.87
44:2:4211:A:H2'	44:2:4212:C:C6	2.09	0.87
44:2:417:A:H2'	44:2:418:A:H8	1.39	0.87
44:2:720:A:H4'	44:2:721:A:OP2	1.71	0.87
12:M:31:ILE:HD13	18:S:100:LEU:HD11	1.57	0.86
44:2:384:U:C3'	44:2:385:G:H4'	2.04	0.86
44:2:400:G:N2	44:2:2305:U:H5''	1.89	0.86
44:2:937:C:H2'	44:2:938:C:H6	1.40	0.86
44:2:2553:G:H5''	44:2:2553:G:H8	1.37	0.86
44:2:2735:G:O2'	44:2:2743:A:H1'	1.75	0.86
44:2:3913:G:O2'	44:2:3914:A:H5'	1.74	0.86
19:T:129:LYS:HB3	44:2:1815:A:H4'	1.54	0.86
44:2:326:A:H3'	44:2:327:A:C8	2.09	0.86
44:2:957:G:H2'	44:2:958:C:C5'	2.03	0.86
44:2:1377:A:H2'	44:2:1400:A:H61	1.40	0.86
44:2:4563:C:H2'	44:2:4564:G:H5'	1.55	0.86
44:2:4806:G:H2'	44:2:4807:C:C4'	2.04	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:237:THR:HG21	2:B:251:VAL:HG22	1.56	0.86
13:N:28:TRP:NE1	44:2:4045:A:H5''	1.90	0.86
25:Z:104:PRO:O	25:Z:108:ARG:HG2	1.75	0.86
44:2:1178:G:H2'	44:2:1179:G:H4'	1.56	0.86
2:B:258:HIS:HB3	2:B:259:PRO:HD2	1.54	0.86
42:t:73:PRO:CG	42:t:78:VAL:HG21	2.05	0.86
44:2:1397:C:H2'	44:2:1398:C:C6	2.10	0.86
44:2:2345:A:H3'	44:2:2804:G:H1	1.37	0.86
44:2:2738:U:H1'	44:2:2739:G:H8	1.37	0.86
44:2:4593:G:H22	44:2:4623:G:H2'	1.39	0.86
2:B:257:TRP:CD1	44:2:4478:A:N7	2.43	0.86
44:2:1224:G:H2'	44:2:1225:C:H4'	1.56	0.86
44:2:2310:G:H2'	44:2:2311:C:H5''	1.57	0.86
44:2:4837:U:H4'	44:2:4838:C:C5'	2.06	0.86
24:Y:1:MET:HG2	44:2:1347:C:C5	2.11	0.86
44:2:24:G:N1	44:2:333:G:C8	2.43	0.86
44:2:1203:G:H2'	44:2:1204:G:C8	2.11	0.86
44:2:1380:G:H2'	44:2:1381:C:C6	2.09	0.86
44:2:1547:C:H2'	44:2:1548:U:H6	1.38	0.86
44:2:482:G:H5'	44:2:482:G:H8	1.41	0.86
44:2:682:C:H2'	44:2:683:C:H6	1.40	0.86
44:2:719:G:C1'	44:2:720:A:H5''	2.05	0.86
44:2:1083:C:H3'	44:2:1084:C:H5''	1.57	0.86
44:2:2752:C:H2'	44:2:2753:G:C8	2.10	0.86
5:E:166:LYS:HD2	5:E:208:ILE:HG21	1.57	0.86
31:f:59:THR:HA	31:f:63:LYS:HA	1.55	0.86
5:E:175:VAL:HB	5:E:187:ARG:O	1.75	0.86
5:E:224:LYS:HA	5:E:227:HIS:O	1.76	0.86
15:P:19:GLY:HA3	15:P:22:LEU:HD11	1.58	0.86
44:2:2571:C:H1'	44:2:4092:C:N4	1.89	0.86
44:2:4655:C:C2'	44:2:4656:C:H5'	2.04	0.86
12:M:132:LYS:NZ	44:2:4849:A:H3'	1.91	0.86
44:2:4043:U:H1'	44:2:4044:G:H2'	1.58	0.86
27:b:50:ASN:OD1	44:2:1792:U:H1'	1.76	0.85
43:u:157:ARG:O	44:2:4023:U:O2'	1.90	0.85
44:2:1203:G:H5'	44:2:1210:U:C5	2.10	0.85
44:2:1351:A:H3'	44:2:1352:A:C8	2.11	0.85
44:2:696:G:H1'	44:2:4900:G:O2'	1.77	0.85
44:2:1662:U:H2'	44:2:1663:A:C8	2.11	0.85
44:2:4737:C:H2'	44:2:4738:U:C6	2.11	0.85
21:V:120:PRO:HD3	22:W:24:THR:O	1.76	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:a:131:ARG:NH1	44:2:1467:G:H4'	1.90	0.85
43:u:79:LEU:HD21	43:u:84:LEU:HB2	1.56	0.85
44:2:724:C:H3'	44:2:725:C:H5''	1.56	0.85
44:2:1541:G:H2'	44:2:1542:A:H5''	1.58	0.85
44:2:4616:A:H4'	44:2:4617:U:C5'	2.06	0.85
44:2:4955:G:H2'	44:2:4956:U:H5'	1.58	0.85
14:O:89:PRO:HD3	44:2:1892:C:H4'	1.56	0.85
26:a:62:HIS:CB	44:2:306:G:H8	1.89	0.85
34:i:100:ALA:HB1	43:u:197:THR:CG2	2.06	0.85
44:2:976:C:H4'	44:2:1222:G:H4'	1.58	0.85
44:2:1890:G:H1'	44:2:1897:G:C6	2.10	0.85
44:2:2394:A:H5''	44:2:2394:A:C8	2.10	0.85
3:C:165:LYS:HZ1	44:2:219:C:P	1.99	0.85
27:b:16:TRP:HB3	27:b:21:ILE:HD11	1.58	0.85
28:c:32:LYS:N	44:2:2652:G:O6	2.09	0.85
32:g:54:ARG:CG	44:2:2629:G:H1	1.88	0.85
44:2:381:C:H5''	44:2:381:C:H6	1.39	0.85
44:2:972:C:H1'	44:2:1218:A:OP2	1.76	0.85
44:2:1083:C:H3'	44:2:1084:C:C5'	2.06	0.85
44:2:2742:A:H2'	44:2:2743:A:N7	1.92	0.85
14:O:109:PRO:HB2	14:O:112:TYR:CD2	2.11	0.85
43:u:152:ARG:HD3	44:2:3938:G:P	2.16	0.85
44:2:964:U:OP2	44:2:967:C:H1'	1.76	0.85
44:2:1221:C:H2'	44:2:1222:G:H5'	1.57	0.85
7:G:130:THR:HB	44:2:120:A:H61	1.42	0.85
44:2:922:C:H2'	44:2:923:G:C8	2.11	0.85
44:2:949:G:H3'	44:2:950:A:H4'	1.57	0.85
44:2:2310:G:H4'	45:3:20:A:C4'	2.05	0.85
25:Z:11:VAL:HG12	25:Z:82:PRO:HA	1.58	0.85
44:2:346:A:H2'	44:2:347:G:H5'	1.59	0.85
44:2:477:C:H5''	44:2:479:G:OP1	1.77	0.85
44:2:1020:G:H1	44:2:1044:G:H1	1.20	0.85
3:C:270:ALA:HB1	3:C:276:ASN:HA	1.56	0.85
5:E:190:HIS:HA	44:2:4897:C:C6	2.12	0.85
18:S:165:PRO:HD3	44:2:4828:G:H1'	1.57	0.85
21:V:15:ARG:HB2	44:2:4578:G:H5'	1.55	0.85
32:g:54:ARG:HG2	44:2:2629:G:N1	1.91	0.85
44:2:1066:C:C2'	44:2:1067:A:H5'	2.07	0.85
44:2:1177:C:H4'	44:2:1178:G:OP1	1.75	0.85
44:2:1277:U:H2'	44:2:1278:C:O4'	1.76	0.85
44:2:284:G:N2	44:2:288:U:H4'	1.92	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:457:A:H2'	44:2:458:U:H5'	1.58	0.85
44:2:961:C:H1'	44:2:1254:A:H61	1.41	0.85
44:2:4086:C:H3'	44:2:4086:C:OP2	1.77	0.85
22:W:49:ILE:HA	44:2:3584:G:H21	1.42	0.84
32:g:48:VAL:HG21	32:g:86:CYS:HB3	1.58	0.84
44:2:286:A:C2	44:2:308:A:C8	2.65	0.84
44:2:1065:C:C2'	44:2:1066:C:H5'	2.07	0.84
44:2:1256:C:C2'	44:2:1257:G:H5'	2.07	0.84
44:2:1918:G:H5''	44:2:1918:G:C8	2.11	0.84
46:4:23:A:H2'	46:4:24:C:C6	2.12	0.84
40:o:54:PRO:HA	44:2:4339:A:C8	2.11	0.84
43:u:158:THR:HG23	44:2:4022:C:O2	1.74	0.84
44:2:924:C:H3'	44:2:925:C:C5'	2.06	0.84
44:2:4037:U:C6	44:2:4038:U:C5	2.65	0.84
44:2:4598:U:H2'	44:2:4599:G:C8	2.11	0.84
15:P:95:LEU:HG	15:P:148:MET:HE1	1.58	0.84
25:Z:68:ILE:HD12	25:Z:119:GLU:HG2	1.59	0.84
37:l:13:LEU:HD21	44:2:2384:G:C8	2.13	0.84
44:2:456:G:N2	44:2:679:U:H3	1.75	0.84
44:2:2304:G:H2'	44:2:2305:U:H5'	1.58	0.84
19:T:4:THR:HG21	44:2:4168:U:H5	1.40	0.84
44:2:1479:A:C3'	44:2:1480:C:H5''	2.07	0.84
44:2:1855:G:H5''	44:2:1855:G:H8	1.39	0.84
44:2:2561:G:C5'	44:2:2659:G:H4'	2.08	0.84
19:T:105:PHE:CE1	44:2:1781:A:H4'	2.13	0.84
44:2:4060:G:H2'	44:2:4061:G:H5'	1.59	0.84
44:2:4183:C:H2'	44:2:4184:A:H5'	1.58	0.84
44:2:4695:C:H2'	44:2:4696:G:H8	1.42	0.84
17:R:106:LEU:HG	17:R:120:TYR:CE2	2.13	0.84
44:2:1219:C:N3	44:2:1249:G:H4'	1.91	0.84
44:2:1349:C:H4'	44:2:1350:G:OP2	1.75	0.84
32:g:54:ARG:HD2	44:2:2659:G:H21	1.41	0.84
44:2:408:G:H1'	45:3:16:G:N2	1.92	0.84
44:2:1165:G:H2'	44:2:1166:U:H6	1.42	0.84
44:2:1647:A:C2'	44:2:1648:A:H5''	2.06	0.84
44:2:1659:G:H5'	44:2:1659:G:C8	2.12	0.84
44:2:1894:G:C2'	44:2:1895:A:H5'	2.06	0.84
44:2:2260:G:H5''	44:2:2260:G:H8	1.41	0.84
44:2:2564:A:H2'	44:2:2565:C:H5''	1.60	0.84
44:2:4691:G:C5'	44:2:4694:G:H4'	2.08	0.84
33:h:78:TYR:CZ	44:2:16:G:H4'	2.12	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1270:G:H4'	44:2:4898:A:H2	1.40	0.84
44:2:1748:G:H2'	44:2:1749:A:H5''	1.58	0.84
46:4:63:C:H1'	46:4:64:G:H5''	1.60	0.84
44:2:1157:U:H2'	44:2:1158:G:H8	1.42	0.84
44:2:3653:G:H2'	44:2:3654:C:C6	2.12	0.84
44:2:4005:C:H2'	44:2:4006:C:H6	1.41	0.84
44:2:2561:G:H5''	44:2:2659:G:H4'	1.60	0.84
1:A:240:ALA:HB2	44:2:3627:C:H4'	1.60	0.83
2:B:254:ILE:HG22	44:2:3867:G:H5'	1.60	0.83
44:2:2051:C:H3'	44:2:2051:C:H6	1.43	0.83
44:2:4414:G:H2'	44:2:4415:G:O4'	1.77	0.83
11:L:135:LYS:CE	11:L:135:LYS:H	1.90	0.83
44:2:1165:G:H2'	44:2:1166:U:C6	2.14	0.83
44:2:1285:C:H5''	44:2:2289:A:C5	2.13	0.83
44:2:1378:A:H2'	44:2:1379:G:C8	2.12	0.83
44:2:1651:U:H1'	44:2:4264:A:H62	1.40	0.83
44:2:1701:C:H4'	44:2:1821:A:O2'	1.78	0.83
44:2:2004:A:OP1	44:2:2004:A:H4'	1.77	0.83
44:2:3586:G:C2'	44:2:3587:C:H5'	2.08	0.83
45:3:105:C:H4'	45:3:106:G:O5'	1.79	0.83
26:a:62:HIS:HB2	44:2:306:G:H8	1.43	0.83
35:j:17:THR:HG23	35:j:29:LEU:HD11	1.59	0.83
44:2:700:C:C2'	44:2:701:C:H5''	2.08	0.83
44:2:2559:A:C2	44:2:2657:G:N2	2.47	0.83
44:2:3781:C:H2'	44:2:3782:A:C8	2.13	0.83
44:2:4645:U:H2'	44:2:4646:G:C8	2.12	0.83
19:T:7:LYS:HB2	44:2:4294:U:H4'	1.59	0.83
31:f:104:MET:HG2	31:f:106:TYR:HD1	1.43	0.83
43:u:160:HIS:CE1	44:2:4021:A:H2'	2.13	0.83
44:2:176:G:C2'	44:2:177:C:H5'	2.07	0.83
44:2:285:G:N7	44:2:287:A:H2'	1.94	0.83
44:2:1423:A:H8	44:2:1423:A:H5''	1.43	0.83
44:2:2559:A:H2	44:2:2657:G:N2	1.76	0.83
44:2:2581:C:O2'	44:2:2582:G:H5''	1.79	0.83
44:2:4855:C:H2'	44:2:4856:G:H4'	1.59	0.83
44:2:336:C:H2'	44:2:337:G:H8	1.44	0.83
44:2:1197:G:O2'	44:2:1198:G:H5'	1.79	0.83
44:2:4593:G:H2'	44:2:4623:G:N1	1.92	0.83
44:2:4595:A:H5'	44:2:4624:A:N6	1.92	0.83
44:2:4617:U:O2	44:2:4617:U:H2'	1.76	0.83
44:2:4639:G:C2'	44:2:4640:G:H5''	2.09	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:4:84:U:H4'	46:4:85:G:O5'	1.78	0.83
12:M:97:ALA:C	44:2:4826:C:H42	1.87	0.83
12:M:136:LEU:O	12:M:140:PRO:HD3	1.79	0.83
44:2:119:G:H4'	44:2:120:A:O4'	1.78	0.83
44:2:2637:A:C3'	44:2:2638:U:H5''	2.09	0.83
16:Q:65:ARG:N	44:2:1481:G:N2	2.26	0.83
24:Y:112:ASP:HB3	45:3:84:A:H61	1.44	0.83
44:2:50:C:H2'	44:2:51:A:H5'	1.60	0.83
44:2:893:A:C2'	44:2:894:G:H5''	2.08	0.83
44:2:978:G:H2'	44:2:979:C:H6	1.44	0.83
44:2:4906:G:H2'	44:2:4907:G:H8	1.41	0.83
46:4:23:A:C2	46:4:119:U:H1'	2.14	0.83
3:C:326:LEU:HB3	44:2:1218:A:H62	1.43	0.83
24:Y:8:THR:HB	44:2:337:G:H5''	1.61	0.83
44:2:1157:U:H2'	44:2:1158:G:C8	2.13	0.83
44:2:4017:U:H1'	44:2:4018:A:OP1	1.79	0.83
44:2:9:C:O2	44:2:9:C:H2'	1.78	0.82
44:2:726:C:H2'	44:2:727:G:H5''	1.60	0.82
44:2:942:G:H1'	44:2:2250:C:OP1	1.79	0.82
44:2:3877:A:C2'	44:2:3878:C:H5'	2.07	0.82
16:Q:64:SER:C	44:2:1481:G:N2	2.36	0.82
44:2:457:A:H62	44:2:675:C:H5	1.27	0.82
44:2:658:G:H5''	44:2:658:G:C8	2.14	0.82
44:2:1221:C:C2'	44:2:1222:G:H5'	2.09	0.82
44:2:1276:G:H3'	44:2:1277:U:C4'	2.09	0.82
44:2:1332:C:H3'	44:2:1333:G:C8	2.13	0.82
44:2:2421:U:H5''	44:2:2422:C:C5	2.13	0.82
44:2:2802:A:H8	44:2:2802:A:H5''	1.44	0.82
2:B:336:CYS:SG	44:2:4584:A:H2	2.02	0.82
8:H:23:ARG:HH11	44:2:4724:G:H5'	1.42	0.82
44:2:1477:G:H2'	44:2:1478:C:H5'	1.60	0.82
7:G:41:ILE:HG22	7:G:42:GLY:H	1.42	0.82
42:t:58:LYS:H	44:2:670:C:H5''	1.43	0.82
44:2:64:A:H3'	44:2:110:C:N4	1.94	0.82
44:2:3911:A:O2'	44:2:3912:A:H5'	1.80	0.82
3:C:148:PRO:HA	42:t:76:SER:HB2	1.62	0.82
8:H:29:GLY:HA3	8:H:84:VAL:CG1	2.08	0.82
44:2:1146:G:H5''	44:2:1147:C:C5	2.14	0.82
44:2:1436:G:H2'	44:2:1437:C:C6	2.14	0.82
44:2:2284:A:H1'	45:3:19:C:O2'	1.79	0.82
44:2:2536:G:H2'	44:2:2537:C:C6	2.15	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:3696:A:HO2'	44:2:3697:A:H8	1.26	0.82
44:2:962:G:H2'	44:2:963:C:H6	1.44	0.82
44:2:1649:G:H4'	44:2:1650:U:C6	2.13	0.82
44:2:2573:G:H2'	44:2:2574:G:H8	1.45	0.82
44:2:3913:G:C5	44:2:3914:A:N7	2.48	0.82
1:A:52:PRO:HB3	44:2:2718:U:H5'	1.60	0.82
44:2:924:C:H2'	44:2:925:C:C4'	2.10	0.82
44:2:939:G:H4'	44:2:940:A:OP1	1.79	0.82
44:2:1858:G:H3'	44:2:1859:C:H5'	1.60	0.82
44:2:3669:C:H3'	44:2:3715:A:H61	1.42	0.82
44:2:4063:G:H5'	44:2:4063:G:H8	1.44	0.82
44:2:4345:A:H4'	44:2:4346:C:O5'	1.80	0.82
44:2:5003:A:H5'	44:2:5004:G:H5''	1.60	0.82
44:2:641:C:C2'	44:2:642:C:H5	1.89	0.82
44:2:958:C:H42	44:2:1255:G:H1	1.28	0.82
44:2:1205:U:OP2	44:2:1212:G:H8	1.63	0.82
44:2:1248:G:H3'	44:2:1249:G:H8	1.44	0.82
1:A:207:VAL:HG12	44:2:3888:C:H4'	1.61	0.82
2:B:252:ALA:HB1	44:2:4484:G:C2	2.15	0.82
3:C:101:MET:HE1	3:C:105:THR:HG23	1.62	0.82
44:2:216:G:H4'	44:2:217:C:OP1	1.79	0.82
44:2:290:C:H2'	44:2:291:A:C8	2.15	0.82
44:2:1183:G:H2'	44:2:1184:C:C6	2.14	0.82
44:2:4697:C:H2'	44:2:4698:C:H6	1.44	0.82
45:3:111:U:H1'	45:3:112:G:OP2	1.78	0.82
46:4:53:U:O2	46:4:53:U:H2'	1.79	0.82
3:C:163:LYS:HA	44:2:221:U:N3	1.94	0.82
44:2:329:A:C2	44:2:330:C:C5	2.68	0.82
44:2:1648:A:H5'	44:2:1648:A:C8	2.14	0.82
44:2:2295:C:H2'	44:2:2296:G:C8	2.15	0.82
44:2:2752:C:H2'	44:2:2753:G:H8	1.45	0.82
2:B:72:VAL:HA	21:V:91:LYS:O	1.79	0.81
24:Y:44:VAL:HG23	24:Y:123:ALA:HB3	1.61	0.81
44:2:154:U:O3'	44:2:157:G:H4'	1.79	0.81
44:2:482:G:H4'	44:2:483:U:OP1	1.80	0.81
44:2:719:G:H4'	44:2:720:A:OP1	1.79	0.81
44:2:1357:G:H5'	44:2:1357:G:N3	1.95	0.81
44:2:4032:C:H2'	44:2:4033:G:H4'	1.62	0.81
44:2:4192:U:H4'	44:2:4193:A:C5'	2.10	0.81
45:3:126:C:H5'	45:3:128:C:H5	1.44	0.81
4:D:273:LEU:HD23	44:2:1086:A:C1'	2.09	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:L:42:LYS:O	11:L:46:ILE:HG12	1.80	0.81
31:f:48:ALA:O	31:f:102:ARG:HG2	1.79	0.81
44:2:3694:G:H5''	44:2:3694:G:H8	1.42	0.81
44:2:4240:A:H5''	44:2:4241:A:H5'	1.62	0.81
12:M:112:VAL:HA	14:O:197:LYS:NZ	1.95	0.81
13:N:85:VAL:HG12	40:o:49:GLY:HA3	1.62	0.81
44:2:193:C:H4'	44:2:194:A:OP2	1.80	0.81
44:2:379:A:H2'	44:2:393:A:H61	1.44	0.81
44:2:1219:C:H42	44:2:1250:A:P	2.02	0.81
44:2:1415:G:H2'	44:2:1416:C:H6	1.45	0.81
44:2:2638:U:H3'	44:2:2639:G:C5'	2.10	0.81
8:H:92:MET:HE2	8:H:179:ILE:HG22	1.63	0.81
20:U:63:ILE:HG12	20:U:72:VAL:HG12	1.61	0.81
43:u:156:ARG:HG2	44:2:4023:U:N3	1.92	0.81
44:2:135:G:H3'	44:2:135:G:H8	1.45	0.81
44:2:210:G:N3	44:2:211:G:H1'	1.95	0.81
44:2:1221:C:H42	44:2:1248:G:N2	1.79	0.81
44:2:1254:A:H3'	44:2:1255:G:H5''	1.62	0.81
44:2:1410:C:H2'	44:2:1411:C:C6	2.14	0.81
44:2:2609:U:H2'	44:2:2610:U:C5	2.15	0.81
5:E:155:GLY:O	5:E:158:ARG:HG3	1.79	0.81
5:E:183:ARG:HA	44:2:4892:C:H42	1.43	0.81
44:2:3661:A:H62	44:2:3792:G:H21	1.28	0.81
44:2:3779:C:H3'	44:2:3779:C:H6	1.45	0.81
44:2:4909:G:H2'	44:2:4910:A:C8	2.14	0.81
4:D:176:SER:OG	44:2:4283:A:H5''	1.79	0.81
43:u:28:ALA:CB	44:2:4022:C:O4'	2.18	0.81
44:2:735:A:H2'	44:2:736:G:H8	1.45	0.81
44:2:916:A:H1'	44:2:917:G:H5'	1.61	0.81
44:2:1082:U:C6	44:2:1083:C:H5	1.98	0.81
44:2:1224:G:C3'	44:2:1225:C:H5''	2.09	0.81
12:M:132:LYS:HG3	44:2:4849:A:C3'	2.11	0.81
44:2:481:C:C2'	44:2:482:G:H5''	2.11	0.81
44:2:957:G:H5''	44:2:1218:A:O4'	1.80	0.81
44:2:1200:G:P	44:2:1200:G:H8	2.04	0.81
44:2:1248:G:H5''	44:2:1249:G:N7	1.96	0.81
44:2:1813:G:H4'	44:2:1814:G:OP1	1.80	0.81
4:D:94:ASN:CB	46:4:47:G:H5'	2.10	0.81
27:b:42:ASN:ND2	44:2:1795:C:H1'	1.95	0.81
44:2:217:C:OP2	44:2:217:C:H4'	1.79	0.81
44:2:433:G:H2'	44:2:434:G:H8	1.44	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:962:G:H2'	44:2:963:C:C6	2.15	0.81
44:2:1281:C:H3'	44:2:1281:C:H6	1.45	0.81
44:2:2056:C:H2'	44:2:2057:G:C8	2.15	0.81
44:2:3845:A:H4'	44:2:3846:A:OP2	1.80	0.81
3:C:48:ASN:OD1	44:2:1352:A:H5'	1.81	0.81
4:D:132:VAL:HG21	4:D:170:GLY:HA2	1.60	0.81
44:2:953:C:H2'	44:2:954:G:C8	2.16	0.81
44:2:2509:C:H2'	44:2:2510:C:H5'	1.63	0.81
44:2:2827:A:H4'	44:2:4455:G:H4'	1.61	0.81
44:2:3587:C:H5''	44:2:3589:G:C8	2.15	0.81
44:2:4291:G:C3'	44:2:4292:C:H5'	2.00	0.81
44:2:1088:C:C6	44:2:1088:C:H3'	2.14	0.81
44:2:2430:A:H61	44:2:2484:A:H2	1.29	0.81
45:3:8:U:H2'	45:3:9:A:C8	2.14	0.81
11:L:59:VAL:CG1	44:2:74:G:C5'	2.59	0.80
18:S:165:PRO:CD	44:2:4828:G:H1'	2.10	0.80
44:2:4711:U:H4'	44:2:4711:U:OP1	1.81	0.80
46:4:89:G:H2'	46:4:90:A:H8	1.46	0.80
4:D:263:LYS:O	4:D:264:LYS:HB2	1.81	0.80
44:2:8:U:H2'	44:2:9:C:H5'	1.64	0.80
44:2:944:A:O4'	44:2:2249:G:H5'	1.80	0.80
44:2:1016:C:H2'	44:2:1017:C:C6	2.16	0.80
44:2:1919:A:C2	44:2:4394:C:H5''	2.16	0.80
44:2:2588:A:H2'	44:2:2589:G:C8	2.16	0.80
44:2:2683:G:H21	44:2:2686:C:H5'	1.47	0.80
44:2:3880:C:H2'	44:2:3881:U:C6	2.16	0.80
3:C:56:GLU:HG2	45:3:26:C:H1'	1.63	0.80
3:C:117:THR:HG23	44:2:1338:G:OP1	1.79	0.80
11:L:59:VAL:HG11	44:2:74:G:H5''	1.61	0.80
21:V:104:VAL:HG21	21:V:112:MET:HE1	1.62	0.80
34:i:100:ALA:HB1	43:u:197:THR:HG21	1.63	0.80
43:u:156:ARG:CD	44:2:3935:A:C2	2.55	0.80
43:u:156:ARG:HG3	44:2:4023:U:O2	0.99	0.80
44:2:977:G:H2'	44:2:978:G:C4'	2.12	0.80
44:2:1139:U:H2'	44:2:1140:C:C6	2.15	0.80
44:2:2369:C:H5''	44:2:2369:C:H6	1.43	0.80
44:2:4093:C:H3'	44:2:4094:A:C5'	2.10	0.80
44:2:4848:A:H5''	44:2:4849:A:OP1	1.81	0.80
31:f:104:MET:CG	31:f:106:TYR:HD1	1.93	0.80
44:2:1163:C:C2'	44:2:1164:A:H5'	2.12	0.80
44:2:4800:C:H2'	44:2:4801:C:C6	2.16	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:163:LYS:HA	44:2:221:U:C4	2.17	0.80
7:G:54:PHE:CE2	44:2:4055:G:H5''	2.15	0.80
35:j:20:ARG:HH21	45:3:109:C:H3'	1.46	0.80
43:u:156:ARG:CD	44:2:4023:U:C2	2.50	0.80
44:2:2348:U:H2'	44:2:2349:U:C6	2.16	0.80
44:2:2856:A:H4'	44:2:2857:U:OP1	1.80	0.80
44:2:3724:G:H1'	44:2:3725:A:OP1	1.81	0.80
44:2:4712:U:H4'	44:2:4713:G:OP1	1.79	0.80
43:u:156:ARG:HB2	44:2:3936:G:C4	2.17	0.80
44:2:1079:C:H2'	44:2:1080:U:O4'	1.81	0.80
44:2:1270:G:C4'	44:2:4898:A:H2	1.93	0.80
44:2:1797:G:N2	44:2:1799:C:H2'	1.96	0.80
2:B:336:CYS:HG	44:2:4584:A:H2	1.29	0.80
5:E:172:LEU:CD1	44:2:4896:G:H5''	2.12	0.80
17:R:57:VAL:HB	44:2:2611:C:H4'	1.63	0.80
43:u:45:GLU:HB2	43:u:151:LEU:HD23	1.61	0.80
44:2:2701:G:H4'	44:2:2702:A:N1	1.96	0.80
31:f:4:ARG:HG2	44:2:4711:U:H1'	1.63	0.80
43:u:5:ILE:HD13	43:u:177:ILE:HG21	1.62	0.80
44:2:1220:G:C2	44:2:1248:G:N1	2.49	0.80
44:2:1316:G:H2'	44:2:1317:A:C8	2.16	0.80
44:2:2040:C:C3'	44:2:2041:G:H5''	2.07	0.80
44:2:2260:G:H5''	44:2:2260:G:C8	2.15	0.80
44:2:41:C:H2'	44:2:42:A:C5'	2.07	0.80
44:2:1155:A:H2'	44:2:1156:C:C6	2.17	0.80
44:2:3745:G:H4'	44:2:3746:G:OP1	1.81	0.80
44:2:3769:A:O2'	44:2:3770:U:H5'	1.82	0.80
44:2:4177:G:HO2'	44:2:4263:C:H6	1.26	0.80
14:O:21:ALA:HA	14:O:87:MET:CE	2.09	0.80
44:2:8:U:O2	44:2:8:U:H3'	1.82	0.80
44:2:400:G:H22	44:2:2305:U:C5'	1.93	0.80
44:2:462:A:C4'	44:2:463:C:H5''	2.11	0.80
44:2:2330:U:H2'	44:2:2331:G:C8	2.17	0.80
44:2:2632:C:H2'	44:2:2633:U:C6	2.17	0.80
2:B:317:LEU:HG	44:2:4956:U:H4'	1.64	0.79
26:a:62:HIS:CG	44:2:306:G:C8	2.69	0.79
42:t:62:VAL:O	42:t:89:THR:HG21	1.81	0.79
44:2:326:A:C3'	44:2:327:A:H8	1.94	0.79
44:2:1420:U:H3'	44:2:1420:U:H6	1.46	0.79
44:2:4883:C:H2'	44:2:4884:C:H6	1.47	0.79
19:T:77:ASN:HB3	19:T:84:ILE:HD13	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:953:C:H2'	44:2:954:G:H8	1.47	0.79
44:2:2311:C:H6	44:2:2311:C:C5'	1.94	0.79
44:2:3913:G:C4	44:2:3914:A:N7	2.49	0.79
44:2:3943:G:H5'	44:2:3943:G:C8	2.17	0.79
45:3:129:C:H2'	45:3:130:C:C6	2.18	0.79
43:u:74:VAL:HG11	43:u:142:ILE:CG2	2.13	0.79
44:2:2308:A:C4'	44:2:2309:G:H5'	2.11	0.79
44:2:2549:C:H3'	44:2:2549:C:H6	1.46	0.79
43:u:60:VAL:HG13	43:u:101:THR:HG21	1.63	0.79
44:2:441:G:N3	44:2:1274:A:H4'	1.98	0.79
44:2:1479:A:H3'	44:2:1480:C:H5''	1.64	0.79
44:2:3858:G:H3'	44:2:4679:G:N2	1.98	0.79
36:k:20:ALA:HB2	36:k:36:VAL:HG23	1.63	0.79
44:2:386:A:H3'	44:2:387:A:C8	2.18	0.79
44:2:482:G:H2'	44:2:484:G:H8	1.48	0.79
44:2:1213:G:C2'	44:2:1214:G:H5'	2.12	0.79
44:2:2624:A:C6	44:2:2664:U:N3	2.51	0.79
44:2:3893:C:H2'	44:2:3894:U:H5'	1.65	0.79
44:2:4303:U:H2'	44:2:4304:U:H6	1.48	0.79
44:2:4837:U:H5'	44:2:4838:C:OP1	1.81	0.79
5:E:188:ARG:HH21	44:2:4897:C:H4'	1.47	0.79
16:Q:13:VAL:HG13	44:2:1670:G:N7	1.97	0.79
44:2:1435:G:H2'	44:2:1436:G:C8	2.17	0.79
44:2:2278:C:H2'	44:2:2279:C:C6	2.16	0.79
44:2:2804:G:H5''	44:2:2806:U:OP2	1.82	0.79
44:2:3910:G:HO2'	44:2:3911:A:H5'	1.46	0.79
44:2:4077:C:H2'	44:2:4078:U:C6	2.16	0.79
44:2:4673:G:H3'	44:2:4674:C:C6	2.18	0.79
44:2:4729:U:H2'	44:2:4730:C:C6	2.18	0.79
45:3:28:C:C6	45:3:28:C:H5''	2.18	0.79
28:c:53:PRO:HG2	44:2:2651:A:C2	2.18	0.79
43:u:159:PHE:CZ	43:u:161:THR:HB	2.17	0.79
44:2:1379:G:H2'	44:2:1380:G:H8	1.47	0.79
44:2:2624:A:C6	44:2:2665:G:C5	2.71	0.79
44:2:4098:G:H2'	44:2:4099:C:C6	2.18	0.79
2:B:156:TYR:O	2:B:157:CYS:HB3	1.83	0.79
6:F:69:ILE:CB	44:2:716:U:H4'	2.13	0.79
19:T:17:ARG:HH22	19:T:45:MET:HE3	1.46	0.79
35:j:20:ARG:NH2	45:3:109:C:H3'	1.98	0.79
44:2:1458:G:H4'	44:2:1459:C:OP1	1.82	0.79
3:C:141:GLY:HA2	42:t:15:SER:HB3	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:365:G:H2'	44:2:366:G:H5''	1.63	0.79
44:2:711:A:H2'	44:2:712:C:C1'	2.12	0.79
44:2:1918:G:H5''	44:2:1918:G:H8	1.46	0.79
44:2:2348:U:H6	44:2:2348:U:C5'	1.96	0.79
44:2:3722:G:H22	44:2:3741:U:H2'	1.46	0.79
45:3:121:G:H3'	45:3:122:G:H5''	1.64	0.79
24:Y:3:PHE:O	44:2:1347:C:H4'	1.82	0.79
44:2:1421:C:H6	44:2:1421:C:O5'	1.66	0.79
44:2:4440:A:H2'	44:2:4441:U:O4'	1.83	0.79
44:2:4689:C:P	44:2:4695:C:H4'	2.23	0.79
16:Q:65:ARG:NH2	44:2:1481:G:H2'	1.97	0.78
44:2:399:A:H4'	44:2:400:G:H5'	1.65	0.78
44:2:1775:U:H2'	44:2:1776:G:O4'	1.83	0.78
44:2:4898:A:H2'	44:2:4899:C:O4'	1.82	0.78
46:4:62:U:H3'	46:4:63:C:H5''	1.63	0.78
3:C:55:SER:HB2	44:2:347:G:C5'	2.13	0.78
44:2:71:C:H2'	44:2:72:C:H5'	1.66	0.78
44:2:87:A:C2	44:2:88:A:H1'	2.18	0.78
44:2:716:U:C3'	44:2:717:G:H5''	2.13	0.78
44:2:959:C:H1'	44:2:960:G:OP2	1.84	0.78
44:2:1166:U:H2'	44:2:1167:G:H8	1.44	0.78
44:2:3725:A:H2'	44:2:3726:G:H8	1.47	0.78
44:2:4060:G:C2	44:2:4118:C:N3	2.51	0.78
44:2:4193:A:H4'	44:2:4194:A:OP1	1.81	0.78
44:2:4527:G:H2'	44:2:4528:A:H5'	1.63	0.78
44:2:4617:U:H3'	44:2:4618:G:C5'	2.13	0.78
21:V:57:VAL:HG12	21:V:125:CYS:HB2	1.64	0.78
32:g:62:LYS:HE3	44:2:2724:U:O2'	1.82	0.78
44:2:135:G:H3'	44:2:135:G:C8	2.19	0.78
44:2:149:U:H1'	44:2:150:G:N2	1.98	0.78
44:2:1399:G:H2'	44:2:1400:A:H5''	1.65	0.78
44:2:2399:C:C2	44:2:2806:U:H1'	2.18	0.78
44:2:2840:G:H1'	44:2:3588:G:C8	2.19	0.78
44:2:4640:G:H2'	44:2:4641:A:O4'	1.83	0.78
44:2:329:A:H2	44:2:330:C:C4	2.00	0.78
44:2:346:A:C2	44:2:347:G:H1'	2.18	0.78
44:2:1046:G:H2'	44:2:1047:G:H8	1.48	0.78
44:2:1197:G:H4'	44:2:1198:G:OP1	1.83	0.78
44:2:1873:G:H5'	44:2:1873:G:C8	2.17	0.78
5:E:188:ARG:NH2	44:2:4897:C:H4'	1.98	0.78
23:X:125:ASN:HD22	44:2:2509:C:H5''	1.47	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:e:12:ILE:HG23	30:e:66:THR:HB	1.65	0.78
44:2:1267:G:C5	44:2:1268:G:H1'	2.18	0.78
44:2:1474:G:O2'	44:2:1475:G:H5'	1.84	0.78
44:2:1883:U:H6	44:2:1883:U:H5''	1.49	0.78
44:2:2656:G:H2'	44:2:2657:G:C8	2.17	0.78
44:2:4044:G:H4'	44:2:4045:A:OP1	1.82	0.78
44:2:4236:G:H3'	44:2:4237:G:H8	1.47	0.78
44:2:4251:G:H4'	44:2:4252:A:H5''	1.64	0.78
44:2:346:A:C2'	44:2:347:G:H5'	2.14	0.78
44:2:1256:C:H2'	44:2:1257:G:H5'	1.64	0.78
44:2:1885:A:C8	44:2:1885:A:H5'	2.18	0.78
44:2:2524:G:N2	44:2:2526:G:H1'	1.97	0.78
44:2:2629:G:C3'	44:2:2630:C:H4'	2.12	0.78
44:2:4263:C:H3'	44:2:4263:C:O2	1.83	0.78
44:2:4484:G:H2'	44:2:4485:C:C5	2.19	0.78
15:P:3:ARG:O	45:3:12:G:H4'	1.83	0.78
44:2:4032:C:H3'	44:2:4033:G:H5''	1.65	0.78
44:2:4869:C:H3'	44:2:4869:C:C6	2.18	0.78
16:Q:15:ARG:NH2	44:2:1328:U:H5''	1.98	0.78
44:2:89:C:H2'	44:2:90:G:H5'	1.65	0.78
44:2:457:A:N7	44:2:676:G:C8	2.52	0.78
44:2:1460:C:H3'	44:2:1460:C:H6	1.48	0.78
44:2:1525:C:H2'	44:2:1590:C:N4	1.98	0.78
44:2:3944:C:H2'	44:2:3945:C:C6	2.18	0.78
44:2:4305:C:H2'	44:2:4306:U:C6	2.19	0.78
44:2:4688:A:OP1	44:2:4694:G:H1'	1.84	0.78
6:F:95:ILE:HD12	6:F:221:LYS:HD2	1.64	0.78
13:N:40:PRO:CB	44:2:8:U:H5'	2.13	0.78
14:O:164:ALA:HA	44:2:4718:C:O2'	1.84	0.78
16:Q:85:THR:HG22	16:Q:104:ARG:HB3	1.65	0.78
46:4:34:C:N4	46:4:47:G:H1'	1.98	0.78
32:g:14:ASN:O	44:2:1523:G:H4'	1.84	0.78
44:2:670:C:H2'	44:2:671:C:C6	2.18	0.78
44:2:727:G:C5'	44:2:727:G:C8	2.67	0.78
44:2:1316:G:H2'	44:2:1317:A:N7	1.99	0.78
44:2:2449:A:H3'	44:2:2450:A:C5'	2.14	0.78
44:2:3676:U:H2'	44:2:3677:C:H5	1.49	0.78
44:2:4806:G:C2'	44:2:4807:C:H4'	2.14	0.78
42:t:79:ARG:H	44:2:473:G:N2	1.81	0.77
44:2:14:C:H1'	44:2:15:A:OP2	1.84	0.77
44:2:913:A:H1'	44:2:916:A:N6	1.98	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1057:C:H2'	44:2:1058:A:C5'	2.12	0.77
44:2:3727:U:H4'	44:2:3728:A:OP1	1.84	0.77
44:2:4880:U:O2'	44:2:4881:C:H4'	1.85	0.77
2:B:95:THR:HG22	44:2:4865:A:H4'	1.66	0.77
44:2:172:C:C2'	44:2:173:G:H5'	2.14	0.77
44:2:887:C:H2'	44:2:888:C:C6	2.19	0.77
44:2:1196:C:H5	44:2:1239:G:H5'	1.45	0.77
44:2:1204:G:OP1	44:2:1210:U:H2'	1.82	0.77
44:2:1720:G:H1'	44:2:1760:U:H5'	1.64	0.77
44:2:1855:G:H5''	44:2:1855:G:C8	2.18	0.77
44:2:2624:A:H3'	44:2:2625:G:H8	1.49	0.77
44:2:2838:C:H3'	44:2:2838:C:OP1	1.83	0.77
44:2:3686:A:H2'	44:2:3687:A:H8	1.50	0.77
44:2:4287:C:H2'	44:2:4288:G:H8	1.49	0.77
44:2:4837:U:H4'	44:2:4838:C:H5'	1.63	0.77
44:2:136:G:H5''	44:2:136:G:H8	1.48	0.77
44:2:1057:C:C2'	44:2:1058:A:H5''	2.15	0.77
44:2:1203:G:H5'	44:2:1210:U:H5	1.47	0.77
44:2:1357:G:H2'	44:2:1360:G:OP2	1.84	0.77
44:2:1401:G:H2'	44:2:1402:G:H5'	1.67	0.77
44:2:2423:C:H2'	44:2:2424:U:C6	2.18	0.77
44:2:2559:A:H2	44:2:2657:G:H21	1.32	0.77
44:2:2683:G:N2	44:2:2686:C:H5'	1.99	0.77
44:2:4530:G:H2'	44:2:4530:G:N3	1.97	0.77
9:I:63:GLU:OE1	44:2:4390:G:H5'	1.85	0.77
44:2:188:G:H1'	44:2:189:G:OP2	1.84	0.77
44:2:437:C:H3'	44:2:438:C:H5	1.46	0.77
44:2:700:C:H2'	44:2:701:C:H5''	1.64	0.77
44:2:939:G:H1'	44:2:940:A:H5''	1.65	0.77
44:2:1740:G:H2'	44:2:1741:C:C6	2.20	0.77
44:2:4690:G:H4'	44:2:4691:G:OP2	1.83	0.77
25:Z:14:LEU:HD11	32:g:88:ARG:HG3	1.67	0.77
44:2:1280:G:O5'	44:2:1280:G:H8	1.66	0.77
44:2:1530:C:H6	44:2:1530:C:H5''	1.49	0.77
44:2:2020:A:C2	44:2:4424:A:C6	2.71	0.77
44:2:4253:U:C3'	44:2:4254:C:H5''	2.13	0.77
2:B:258:HIS:CD2	2:B:259:PRO:CD	2.66	0.77
4:D:22:ARG:HG2	4:D:28:THR:OG1	1.85	0.77
12:M:123:ILE:HA	14:O:187:LYS:HE2	1.66	0.77
15:P:6:LEU:HB2	45:3:10:G:N2	2.00	0.77
44:2:4163:A:H3'	44:2:4163:A:N3	1.98	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:N:39:ALA:HB3	13:N:61:ILE:HG22	1.67	0.77
16:Q:15:ARG:HH22	44:2:1328:U:H5''	1.48	0.77
44:2:1046:G:H2'	44:2:1047:G:C8	2.19	0.77
44:2:2451:G:H2'	44:2:2452:G:O4'	1.85	0.77
44:2:2523:G:H2'	44:2:2524:G:C8	2.19	0.77
44:2:4803:C:H3'	44:2:4804:G:C5'	2.14	0.77
44:2:4895:C:H3'	44:2:4895:C:H6	1.49	0.77
8:H:118:LEU:HD11	8:H:167:VAL:HG22	1.67	0.77
11:L:31:ARG:HD2	44:2:328:U:H2'	1.67	0.77
15:P:67:VAL:HG11	15:P:82:ARG:HD2	1.65	0.77
34:i:99:LYS:HD3	43:u:196:ASP:HA	1.66	0.77
43:u:84:LEU:HD11	43:u:118:LEU:HD21	1.66	0.77
44:2:445:U:H3'	44:2:446:C:C5	2.20	0.77
44:2:951:C:H2'	44:2:952:C:C6	2.19	0.77
44:2:1067:A:H2'	44:2:1068:C:C6	2.20	0.77
44:2:1259:A:H2'	44:2:1260:C:H6	1.50	0.77
44:2:2547:U:H2'	44:2:2548:C:C6	2.20	0.77
44:2:2549:C:H5'	44:2:2737:G:H8	1.49	0.77
44:2:3910:G:C2'	44:2:3911:A:C5'	2.63	0.77
44:2:4251:G:H4'	44:2:4252:A:H3'	1.67	0.77
44:2:4313:U:H5'	44:2:4314:U:H5''	1.65	0.77
44:2:122:U:H2'	44:2:123:C:C5	2.19	0.77
44:2:384:U:C2'	44:2:385:G:H4'	2.14	0.77
44:2:1185:G:H2'	44:2:1186:C:C6	2.19	0.77
44:2:1196:C:H4'	44:2:1197:G:OP2	1.85	0.77
44:2:1259:A:H2'	44:2:1260:C:C6	2.20	0.77
44:2:2444:U:H4'	44:2:2445:U:C5	2.20	0.77
44:2:2624:A:N1	44:2:2665:G:C5	2.53	0.77
44:2:3770:U:H4'	44:2:4456:A:C2	2.17	0.77
44:2:4905:U:H6	44:2:4905:U:H5''	1.50	0.77
8:H:4:ILE:HG23	8:H:5:LEU:H	1.47	0.77
26:a:74:ASN:HB3	26:a:114:LYS:HB2	1.67	0.77
44:2:121:A:H4'	44:2:122:U:O4'	1.85	0.77
44:2:710:G:C2'	44:2:711:A:H5'	2.13	0.77
44:2:724:C:H2'	44:2:725:C:H4'	1.67	0.77
44:2:917:G:P	44:2:917:G:H3'	2.25	0.77
44:2:1877:G:C8	44:2:2254:G:C5	2.73	0.77
44:2:1942:A:C4	44:2:4654:G:H8	2.00	0.77
44:2:2721:A:H2'	44:2:2722:A:C8	2.19	0.77
44:2:4689:C:H3'	44:2:4690:G:N7	2.00	0.77
1:A:186:TYR:HB2	1:A:196:TRP:HZ2	1.46	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:182:ASN:HA	44:2:4837:U:H3	1.49	0.76
8:H:60:TRP:CH2	18:S:152:PHE:HB2	2.20	0.76
37:l:13:LEU:HD11	44:2:2384:G:C2'	2.08	0.76
44:2:64:A:H3'	44:2:110:C:H41	1.50	0.76
44:2:1299:U:H6	44:2:1299:U:H5''	1.50	0.76
44:2:1567:U:H2'	44:2:1568:C:C6	2.20	0.76
44:2:2332:G:H2'	44:2:2333:U:H5''	1.66	0.76
44:2:2741:A:H4'	44:2:2742:A:OP1	1.86	0.76
44:2:3942:G:H2'	44:2:3943:G:H5'	1.67	0.76
44:2:4861:C:H2'	44:2:4862:G:H8	1.50	0.76
5:E:227:HIS:ND1	44:2:1273:G:H2'	2.00	0.76
37:l:13:LEU:CD1	44:2:2384:G:H2'	2.10	0.76
44:2:944:A:H4'	44:2:945:G:OP2	1.86	0.76
44:2:1264:G:C2'	44:2:1265:U:H5'	2.15	0.76
44:2:2859:A:C2'	44:2:2860:G:H5'	2.15	0.76
44:2:4280:G:H3'	44:2:4281:U:C6	2.20	0.76
45:3:4:C:H2'	45:3:5:U:H5'	1.66	0.76
45:3:103:A:H5'	45:3:104:A:H8	1.50	0.76
45:3:131:G:H2'	45:3:132:G:C8	2.19	0.76
15:P:85:LYS:HG2	44:2:3825:A:H4'	1.66	0.76
31:f:27:LEU:HB3	31:f:83:MET:HE2	1.67	0.76
44:2:14:C:H1'	44:2:15:A:C8	2.20	0.76
44:2:469:G:H2'	44:2:470:G:H5'	1.67	0.76
44:2:1252:C:H2'	44:2:1253:G:C8	2.21	0.76
44:2:1441:A:H2'	44:2:1442:C:C6	2.20	0.76
44:2:2359:A:C2	44:2:2807:G:H4'	2.21	0.76
44:2:2386:U:H5''	44:2:2387:C:H5	1.49	0.76
46:4:34:C:H42	46:4:47:G:H1'	1.51	0.76
2:B:67:VAL:HG23	21:V:91:LYS:HD2	1.67	0.76
15:P:141:SER:O	15:P:143:PRO:HD3	1.85	0.76
16:Q:75:ARG:HD3	44:2:1435:G:H1'	1.67	0.76
43:u:158:THR:CG2	44:2:4022:C:C2	2.62	0.76
44:2:1391:C:H2'	44:2:1392:G:C8	2.21	0.76
44:2:4263:C:H5''	44:2:4264:A:C5'	2.15	0.76
44:2:4917:C:H2'	44:2:4918:G:H8	1.50	0.76
31:f:47:CYS:SG	31:f:103:VAL:HG22	2.25	0.76
32:g:100:GLN:HE22	44:2:4085:U:H3'	1.51	0.76
43:u:158:THR:HG21	44:2:4022:C:N3	2.00	0.76
44:2:71:C:C3'	44:2:72:C:H5'	2.14	0.76
44:2:419:G:H2'	44:2:420:A:C8	2.21	0.76
44:2:1185:G:H2'	44:2:1186:C:H6	1.49	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2359:A:H2	44:2:2807:G:H4'	1.51	0.76
44:2:2372:A:H1'	44:2:2783:A:C2	2.20	0.76
44:2:3661:A:H62	44:2:3792:G:N2	1.82	0.76
44:2:4145:G:H2'	44:2:4146:A:H8	1.50	0.76
3:C:333:LYS:CE	44:2:1217:C:H5'	2.16	0.76
44:2:510:C:H6	44:2:510:C:C5'	1.93	0.76
44:2:2034:G:H5'	44:2:2034:G:H8	1.50	0.76
44:2:2310:G:C4'	45:3:20:A:H4'	2.12	0.76
44:2:4037:U:H5	44:2:4038:U:C5	2.00	0.76
44:2:4374:A:H2'	44:2:4382:A:C2	2.21	0.76
44:2:4561:U:H2'	44:2:4562:A:H8	1.49	0.76
44:2:4671:C:H2'	44:2:4672:C:O4'	1.84	0.76
45:3:151:G:C2	45:3:152:U:H1'	2.21	0.76
4:D:146:LEU:CB	44:2:4283:A:H2	1.97	0.76
44:2:457:A:N7	44:2:676:G:H8	1.83	0.76
44:2:1198:G:C2'	44:2:1199:G:H5'	2.16	0.76
44:2:1804:A:H3'	44:2:1805:G:H8	1.51	0.76
44:2:2543:G:H2'	44:2:2544:G:C8	2.21	0.76
44:2:4806:G:C2	44:2:4807:C:H1'	2.20	0.76
45:3:71:A:H2'	45:3:82:A:C2	2.20	0.76
3:C:150:LEU:HB2	3:C:151:PRO:HD2	1.68	0.76
17:R:10:LEU:HD11	17:R:38:ARG:HG2	1.66	0.76
32:g:59:VAL:HG21	32:g:64:LEU:HD21	1.68	0.76
44:2:1388:G:N2	44:2:1389:C:H1'	2.01	0.76
44:2:2344:A:H61	44:2:2765:U:H3	1.33	0.76
44:2:2667:C:H2'	44:2:2668:U:C6	2.19	0.76
44:2:3623:G:C2'	44:2:3624:C:H5'	2.16	0.76
44:2:3769:A:H2	44:2:4456:A:H1'	1.51	0.76
44:2:182:C:H3'	44:2:183:G:H8	1.48	0.76
44:2:656:G:H2'	44:2:657:C:C5'	2.14	0.76
44:2:1332:C:H3'	44:2:1333:G:H8	1.49	0.76
44:2:1421:C:H4'	44:2:1422:C:OP1	1.86	0.76
44:2:1515:U:H2'	44:2:1516:A:C8	2.20	0.76
44:2:1812:U:H2'	44:2:1813:G:H5'	1.68	0.76
17:R:123:LEU:HD21	17:R:141:HIS:CD2	2.21	0.76
44:2:1219:C:N4	44:2:1250:A:P	2.59	0.76
44:2:1299:U:H5''	44:2:1299:U:C6	2.21	0.76
44:2:2543:G:H2'	44:2:2544:G:H8	1.49	0.76
44:2:4559:A:H4'	44:2:4560:G:OP1	1.86	0.76
44:2:4903:C:H2'	44:2:4904:G:H5'	1.68	0.76
2:B:92:TYR:CE2	2:B:101:THR:HB	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:234:LYS:HD3	44:2:1353:A:C2	2.21	0.75
43:u:30:ASN:O	43:u:195:ILE:HA	1.86	0.75
44:2:186:G:O6	44:2:221:U:H2'	1.86	0.75
44:2:334:C:C5'	44:2:334:C:H6	1.98	0.75
44:2:384:U:H2'	44:2:385:G:H4'	1.66	0.75
44:2:901:A:H2'	44:2:902:G:C8	2.21	0.75
44:2:1454:G:H2'	44:2:1455:C:H4'	1.66	0.75
44:2:1673:C:H1'	44:2:1821:A:C2	2.22	0.75
44:2:1727:U:H6	44:2:1727:U:H5''	1.51	0.75
44:2:4483:A:H2'	44:2:4519:A:H62	1.49	0.75
9:I:204:GLY:HA2	46:4:64:G:H4'	1.68	0.75
44:2:727:G:C8	44:2:727:G:H5'	2.20	0.75
44:2:1278:C:H2'	44:2:1279:G:H8	1.47	0.75
44:2:1716:A:N3	46:4:100:A:H2	1.84	0.75
44:2:4040:C:H2'	44:2:4041:A:H8	1.52	0.75
44:2:4899:C:H4'	44:2:4899:C:OP1	1.86	0.75
3:C:8:ILE:HD11	3:C:24:LEU:HD12	1.68	0.75
4:D:260:GLU:HG2	46:4:119:U:H3'	1.67	0.75
7:G:76:VAL:HG12	13:N:21:PHE:CZ	2.21	0.75
44:2:19:G:H4'	44:2:20:U:OP1	1.86	0.75
44:2:500:A:H2'	44:2:501:U:H6	1.51	0.75
44:2:918:C:OP2	44:2:918:C:H6	1.70	0.75
44:2:1441:A:H2'	44:2:1442:C:H6	1.50	0.75
44:2:4204:A:H1'	44:2:4228:A:O5'	1.85	0.75
44:2:4485:C:H2'	44:2:4486:U:C6	2.20	0.75
3:C:148:PRO:HA	42:t:76:SER:CB	2.17	0.75
15:P:85:LYS:CG	44:2:3825:A:H4'	2.17	0.75
44:2:6:C:O2	44:2:6:C:H3'	1.86	0.75
44:2:180:C:C2'	44:2:181:U:H5'	2.15	0.75
44:2:481:C:C3'	44:2:482:G:H5''	2.17	0.75
44:2:727:G:C5'	44:2:727:G:H8	1.97	0.75
44:2:1716:A:N3	46:4:100:A:C2	2.54	0.75
44:2:3697:A:H2'	44:2:3698:U:O4'	1.87	0.75
44:2:4640:G:H5'	44:2:4640:G:H8	1.49	0.75
45:3:17:A:H2'	45:3:18:U:C6	2.20	0.75
2:B:123:HIS:CE1	2:B:124:LYS:HG2	2.22	0.75
4:D:34:LYS:HE3	19:T:30:TYR:OH	1.86	0.75
7:G:162:ASP:HB3	7:G:163:PRO:CD	2.16	0.75
44:2:336:C:H2'	44:2:337:G:C8	2.21	0.75
44:2:699:A:C2	44:2:700:C:C5	2.74	0.75
44:2:1930:G:C5'	44:2:1930:G:H8	2.00	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2278:C:H2'	44:2:2279:C:H6	1.51	0.75
44:2:4483:A:C4	44:2:4519:A:N6	2.55	0.75
46:4:67:C:H2'	46:4:68:C:O4'	1.87	0.75
12:M:132:LYS:HG3	44:2:4849:A:H3'	1.67	0.75
33:h:99:GLU:HA	33:h:102:LEU:HD13	1.67	0.75
42:t:64:ILE:HD12	42:t:89:THR:HB	1.67	0.75
44:2:1090:C:H2'	44:2:1091:U:C6	2.21	0.75
44:2:1554:A:H5''	44:2:1554:A:H8	1.49	0.75
44:2:2549:C:C5'	44:2:2737:G:H8	1.98	0.75
44:2:3566:G:H3'	44:2:3566:G:N3	2.01	0.75
44:2:3676:U:H2'	44:2:3677:C:C5	2.21	0.75
44:2:4862:G:H4'	44:2:4863:G:OP1	1.86	0.75
3:C:326:LEU:CB	44:2:1218:A:H62	1.99	0.75
4:D:69:ILE:HA	19:T:31:MET:SD	2.26	0.75
7:G:58:PRO:HB3	44:2:2448:G:H1'	1.69	0.75
28:c:46:VAL:HB	28:c:71:VAL:HG22	1.67	0.75
43:u:155:GLU:OE1	44:2:3936:G:H5''	1.86	0.75
43:u:156:ARG:H	44:2:3936:G:H1'	1.51	0.75
44:2:385:G:H2'	44:2:387:A:O5'	1.86	0.75
44:2:705:U:H2'	44:2:706:C:C6	2.21	0.75
44:2:1020:G:H22	44:2:1044:G:N2	1.83	0.75
44:2:1388:G:H21	44:2:1389:C:H1'	1.52	0.75
44:2:2369:C:H6	44:2:2369:C:C5'	1.99	0.75
44:2:2489:A:H4'	44:2:2490:A:OP2	1.85	0.75
44:2:2551:G:H3'	44:2:2551:G:OP1	1.85	0.75
44:2:2568:A:H2'	44:2:2569:U:H5'	1.69	0.75
44:2:2747:C:H2'	44:2:2748:G:H8	1.49	0.75
44:2:3613:U:H2'	44:2:3614:U:H5'	1.69	0.75
44:2:3750:C:H5''	44:2:3790:A:H4'	1.66	0.75
44:2:4534:U:H3	44:2:4910:A:H4'	1.52	0.75
44:2:4807:C:O2'	44:2:4808:C:H5'	1.87	0.75
44:2:4838:C:H2'	44:2:4839:G:H5''	1.67	0.75
45:3:17:A:H2'	45:3:18:U:H6	1.51	0.75
46:4:67:C:O2	46:4:68:C:H1'	1.87	0.75
6:F:48:LYS:CD	44:2:1220:G:H5'	2.17	0.75
32:g:76:ARG:NH2	44:2:2559:A:C5'	2.50	0.75
35:j:12:ARG:HH22	44:2:2778:U:H1'	1.49	0.75
44:2:916:A:H1'	44:2:917:G:OP2	1.87	0.75
44:2:1804:A:H3'	44:2:1805:G:C8	2.21	0.75
44:2:2486:C:H5''	44:2:2486:C:C6	2.20	0.75
44:2:3877:A:N7	44:2:3878:C:H6	1.84	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:N:40:PRO:HB3	44:2:8:U:H5'	1.69	0.75
14:O:129:LEU:HD21	44:2:2032:U:H5''	1.68	0.75
25:Z:10:VAL:O	25:Z:83:THR:HG22	1.87	0.75
44:2:923:G:O2'	44:2:924:C:H5'	1.87	0.75
44:2:1267:G:C4	44:2:1268:G:H1'	2.22	0.75
46:4:32:A:C2	46:4:41:G:C5	2.75	0.75
1:A:186:TYR:CA	1:A:196:TRP:CE2	2.70	0.74
14:O:90:HIS:HB2	14:O:99:LEU:HD11	1.67	0.74
44:2:426:A:C8	44:2:427:C:C5	2.75	0.74
44:2:1070:G:H2'	44:2:1071:C:C6	2.22	0.74
44:2:1885:A:H5'	44:2:1885:A:H8	1.50	0.74
5:E:214:ASP:CG	44:2:4896:G:C4	2.65	0.74
16:Q:70:MET:SD	16:Q:96:PRO:HG3	2.27	0.74
44:2:1415:G:H2'	44:2:1416:C:C6	2.21	0.74
44:2:3944:C:H2'	44:2:3945:C:H6	1.52	0.74
3:C:326:LEU:CD2	3:C:332:ALA:HB3	2.16	0.74
4:D:146:LEU:HB3	44:2:4283:A:H2	1.50	0.74
16:Q:69:LYS:HB3	44:2:1436:G:H4'	1.68	0.74
35:j:86:PRO:N	45:3:67:U:H5''	2.03	0.74
44:2:960:G:H8	44:2:960:G:H5'	1.52	0.74
44:2:1635:U:H5''	44:2:1635:U:H6	1.52	0.74
44:2:2394:A:H3'	44:2:2395:A:H5''	1.68	0.74
44:2:4080:U:H2'	44:2:4081:C:O4'	1.87	0.74
44:2:4703:A:N1	44:2:4911:A:N1	2.35	0.74
44:2:4717:U:H4'	44:2:4718:C:OP1	1.87	0.74
44:2:4971:A:H2	44:2:4988:G:N2	1.85	0.74
3:C:234:LYS:HE2	44:2:1354:G:C2	2.22	0.74
24:Y:126:ARG:HD3	44:2:194:A:C4'	2.18	0.74
43:u:74:VAL:HG21	43:u:142:ILE:HB	1.70	0.74
44:2:351:A:C2	45:3:24:G:C4	2.75	0.74
44:2:2395:A:H2'	44:2:2396:C:H6	1.51	0.74
44:2:2608:U:OP1	44:2:2608:U:H3'	1.88	0.74
44:2:2650:G:H4'	44:2:2651:A:OP2	1.87	0.74
44:2:4189:U:H6	44:2:4189:U:H5''	1.53	0.74
44:2:4329:A:H8	44:2:4329:A:O5'	1.69	0.74
44:2:4688:A:H2'	44:2:4694:G:H21	1.52	0.74
44:2:4697:C:H2'	44:2:4698:C:C6	2.23	0.74
11:L:76:PHE:O	11:L:77:SER:HB3	1.85	0.74
12:M:114:LYS:HD3	12:M:115:ALA:N	2.02	0.74
44:2:333:G:C2'	44:2:334:C:H5''	2.18	0.74
44:2:1066:C:H2'	44:2:1067:A:H5'	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1420:U:H3'	44:2:1420:U:C6	2.22	0.74
44:2:1870:A:H5'	44:2:1871:C:C5	2.16	0.74
44:2:1388:G:H22	44:2:1390:U:H1'	1.52	0.74
44:2:1462:C:H3'	44:2:1463:G:C8	2.21	0.74
28:c:53:PRO:HG2	44:2:2651:A:N1	2.01	0.74
32:g:100:GLN:HE21	44:2:4086:C:N4	1.85	0.74
44:2:264:U:H2'	44:2:265:C:C6	2.22	0.74
44:2:1091:U:H2'	44:2:1092:C:C6	2.22	0.74
44:2:1284:C:H2'	44:2:1284:C:O2	1.86	0.74
44:2:1811:G:H2'	44:2:1812:U:O4'	1.88	0.74
44:2:2040:C:H3'	44:2:2041:G:C5'	2.12	0.74
44:2:4117:A:H1'	44:2:4118:C:P	2.27	0.74
44:2:4899:C:H2'	44:2:4900:G:O4'	1.87	0.74
1:A:196:TRP:CZ3	44:2:1592:A:C2	2.75	0.74
7:G:43:GLN:CD	44:2:4083:C:H42	1.96	0.74
24:Y:58:VAL:HG13	24:Y:59:ARG:HG2	1.68	0.74
44:2:1349:C:H5''	44:2:1350:G:C8	2.23	0.74
44:2:1457:C:H2'	44:2:1458:G:C8	2.22	0.74
44:2:2453:G:H2'	44:2:2454:A:O4'	1.87	0.74
44:2:2588:A:H2'	44:2:2589:G:H8	1.49	0.74
44:2:2737:G:H2'	44:2:2738:U:H5''	1.68	0.74
44:2:4827:G:O5'	44:2:4830:G:H4'	1.87	0.74
7:G:156:VAL:HG13	7:G:184:ILE:HD12	1.69	0.74
9:I:174:THR:HG23	9:I:176:PHE:H	1.53	0.74
12:M:100:ARG:HB3	14:O:198:THR:CG2	2.17	0.74
43:u:152:ARG:NE	44:2:3937:U:H5''	2.03	0.74
43:u:160:HIS:CG	44:2:4021:A:C2	2.76	0.74
44:2:1229:C:H2'	44:2:1230:C:C6	2.22	0.74
44:2:1461:G:H3'	44:2:1461:G:N3	2.03	0.74
44:2:2047:A:H5'	44:2:2047:A:H8	1.52	0.74
44:2:2665:G:C6	44:2:2666:C:C4	2.76	0.74
44:2:3574:C:H1'	44:2:3575:U:H5'	1.69	0.74
44:2:4838:C:H3'	44:2:4839:G:C5'	2.18	0.74
43:u:156:ARG:CB	44:2:3936:G:C4	2.71	0.74
43:u:160:HIS:CG	44:2:4021:A:N3	2.55	0.74
44:2:137:G:OP2	44:2:137:G:H8	1.71	0.74
44:2:1218:A:H5'	44:2:1218:A:H8	1.49	0.74
44:2:1422:C:H2'	44:2:1423:A:C8	2.23	0.74
44:2:1942:A:C5	44:2:4654:G:C8	2.76	0.74
44:2:2373:A:H4'	44:2:2374:G:OP2	1.85	0.74
44:2:2667:C:H2'	44:2:2668:U:H6	1.53	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:3910:G:H2'	44:2:3911:A:H8	1.50	0.74
44:2:4140:G:H2'	44:2:4141:U:O4'	1.86	0.74
44:2:4661:A:C2'	44:2:4662:G:H5'	2.17	0.74
3:C:54:VAL:HG21	44:2:2320:G:C5	2.23	0.73
26:a:62:HIS:CB	44:2:306:G:C8	2.71	0.73
31:f:33:VAL:HG13	31:f:38:GLU:HB2	1.70	0.73
44:2:1715:A:H1'	46:4:78:C:O2'	1.88	0.73
44:2:2450:A:H5''	44:2:2451:G:O5'	1.87	0.73
44:2:4883:C:O2'	44:2:4884:C:H5'	1.88	0.73
28:c:13:SER:O	28:c:17:ARG:HD2	1.87	0.73
44:2:48:G:C6	44:2:281:U:H4'	2.23	0.73
44:2:473:G:H4'	44:2:474:G:OP1	1.87	0.73
44:2:642:C:H6	44:2:642:C:H5'	1.52	0.73
44:2:2763:C:H4'	44:2:2764:A:C8	2.23	0.73
44:2:4526:U:H3'	44:2:4526:U:H6	1.52	0.73
44:2:4578:G:H2'	44:2:4579:U:H5'	1.69	0.73
44:2:4711:U:N3	44:2:4903:C:H5	1.85	0.73
3:C:146:GLU:HB3	3:C:175:LYS:HB3	1.70	0.73
12:M:132:LYS:HZ2	44:2:4849:A:H3'	1.51	0.73
44:2:489:C:H2'	44:2:490:G:C8	2.23	0.73
44:2:951:C:H2'	44:2:952:C:H6	1.52	0.73
44:2:1454:G:C4	44:2:1455:C:H1'	2.24	0.73
44:2:1464:C:H2'	44:2:1465:C:C1'	2.18	0.73
44:2:1590:C:H1'	44:2:1591:G:N7	2.03	0.73
44:2:2663:G:H3'	44:2:2664:U:C4'	2.18	0.73
44:2:4025:C:H3'	44:2:4025:C:C6	2.23	0.73
1:A:186:TYR:CA	1:A:196:TRP:CZ2	2.72	0.73
2:B:258:HIS:CG	2:B:259:PRO:CD	2.70	0.73
42:t:92:SER:HB2	44:2:668:C:C5'	2.18	0.73
44:2:15:A:OP2	44:2:15:A:H8	1.71	0.73
44:2:172:C:O2'	44:2:173:G:H5'	1.88	0.73
44:2:3592:C:H3'	44:2:3592:C:C6	2.24	0.73
44:2:4032:C:H3'	44:2:4033:G:C5'	2.19	0.73
44:2:4287:C:H2'	44:2:4288:G:C8	2.23	0.73
44:2:4803:C:N3	44:2:4804:G:H1'	2.03	0.73
2:B:261:ARG:HB3	14:O:64:THR:HG21	1.67	0.73
4:D:145:TYR:CE1	44:2:4285:A:H5'	2.23	0.73
5:E:170:SER:HB3	44:2:4896:G:H21	1.53	0.73
28:c:56:ARG:NH2	44:2:2651:A:O4'	2.22	0.73
44:2:216:G:H1'	44:2:217:C:O5'	1.86	0.73
44:2:219:C:H2'	44:2:220:G:C5'	2.19	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:958:C:OP2	44:2:971:C:H1'	1.88	0.73
44:2:1281:C:H3'	44:2:1281:C:C6	2.23	0.73
44:2:1460:C:H3'	44:2:1460:C:C6	2.23	0.73
44:2:4278:C:H2'	44:2:4279:C:O4'	1.88	0.73
46:4:26:C:H2'	46:4:27:G:O4'	1.88	0.73
44:2:170:C:H2'	44:2:171:C:C6	2.23	0.73
44:2:186:G:H8	44:2:186:G:P	2.12	0.73
44:2:1191:G:C2'	44:2:1192:G:H8	1.97	0.73
44:2:1633:G:H22	44:2:1656:U:H5''	1.54	0.73
44:2:2553:G:H5''	44:2:2553:G:C8	2.23	0.73
44:2:4303:U:H2'	44:2:4304:U:C6	2.23	0.73
44:2:4980:C:H2'	44:2:4983:G:H5'	1.71	0.73
46:4:89:G:H2'	46:4:90:A:C8	2.24	0.73
44:2:165:C:H2'	44:2:166:G:C8	2.18	0.73
44:2:1222:G:H2'	44:2:1223:C:C6	2.23	0.73
44:2:1355:C:C2'	44:2:1356:C:H5'	2.19	0.73
44:2:2375:U:H1'	44:2:2376:G:OP1	1.89	0.73
44:2:2469:C:H2'	44:2:2470:G:H8	1.53	0.73
44:2:2523:G:C4	44:2:2524:G:C8	2.77	0.73
44:2:2550:A:P	44:2:2736:G:C8	2.80	0.73
44:2:2638:U:H2'	44:2:2638:U:O2	1.86	0.73
44:2:4410:U:O2'	44:2:4411:G:H5'	1.88	0.73
13:N:195:ARG:HD2	44:2:98:A:C5'	2.18	0.73
24:Y:123:ALA:CA	24:Y:126:ARG:HB2	2.18	0.73
42:t:113:ARG:O	42:t:117:ILE:HG12	1.88	0.73
44:2:374:A:H62	44:2:397:C:H5	1.35	0.73
44:2:977:G:H2'	44:2:978:G:C5'	2.18	0.73
44:2:1244:C:H2'	44:2:1245:G:H8	1.54	0.73
44:2:2689:G:C2'	44:2:2690:C:H5'	2.18	0.73
44:2:2853:G:H3'	44:2:2853:G:N3	2.04	0.73
44:2:3604:A:H3'	44:2:3605:C:H5''	1.71	0.73
44:2:3836:A:H2'	44:2:3837:G:H5'	1.69	0.73
11:L:169:ILE:CG1	26:a:98:ALA:HB2	2.18	0.73
37:l:13:LEU:CD2	44:2:2384:G:C8	2.71	0.73
44:2:269:G:H2'	44:2:320:A:N6	2.04	0.73
44:2:919:A:H2'	44:2:920:C:H5''	1.70	0.73
44:2:1163:C:H2'	44:2:1164:A:H5'	1.70	0.73
44:2:2604:C:H42	44:2:4609:G:N2	1.86	0.73
44:2:3592:C:H3'	44:2:3592:C:H6	1.52	0.73
44:2:4825:G:P	44:2:4825:G:H3'	2.28	0.73
14:O:182:GLU:C	14:O:187:LYS:HD3	2.14	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:33:A:H4'	44:2:33:A:OP1	1.89	0.73
44:2:386:A:H8	44:2:386:A:O5'	1.71	0.73
44:2:977:G:H2'	44:2:978:G:H5''	1.70	0.73
44:2:3924:G:N2	44:2:4025:C:H42	1.87	0.73
44:2:4659:U:H4'	44:2:4660:A:OP1	1.88	0.73
13:N:40:PRO:HG3	44:2:8:U:H4'	1.71	0.72
44:2:737:G:N2	44:2:901:A:C2	2.54	0.72
44:2:1460:C:H42	44:2:1463:G:H22	1.36	0.72
44:2:3653:G:H2'	44:2:3654:C:C5	2.24	0.72
44:2:3836:A:C2'	44:2:3837:G:H5'	2.18	0.72
44:2:4374:A:H2'	44:2:4382:A:N1	2.04	0.72
44:2:4604:G:H1	44:2:4613:C:H42	1.34	0.72
44:2:4917:C:H2'	44:2:4918:G:C8	2.24	0.72
25:Z:97:ASN:O	25:Z:100:VAL:HG12	1.87	0.72
31:f:11:PHE:HE1	31:f:26:ALA:HB1	1.54	0.72
44:2:441:G:H1'	44:2:1274:A:C5'	2.18	0.72
44:2:924:C:C3'	44:2:925:C:H5''	2.19	0.72
44:2:1710:C:C6	44:2:1710:C:H5''	2.24	0.72
44:2:2591:C:O2'	44:2:2785:G:H5''	1.88	0.72
44:2:2658:G:H2'	44:2:2659:G:H8	1.53	0.72
5:E:188:ARG:H	5:E:188:ARG:HD3	1.55	0.72
44:2:700:C:H2'	44:2:701:C:C4'	2.18	0.72
44:2:1730:A:H61	44:2:1758:U:H3	1.36	0.72
44:2:2624:A:H3'	44:2:2625:G:C8	2.24	0.72
3:C:312:ARG:N	44:2:943:G:O6	2.22	0.72
11:L:130:LYS:N	11:L:130:LYS:HD2	2.05	0.72
17:R:80:LYS:HE2	44:2:2865:G:H4'	1.72	0.72
44:2:71:C:C2'	44:2:72:C:H5'	2.18	0.72
44:2:2393:G:H1	44:2:2397:A:H61	1.37	0.72
3:C:58:ALA:CB	44:2:348:U:H4'	2.18	0.72
44:2:1717:A:O2'	44:2:1718:G:H5'	1.89	0.72
44:2:2449:A:C3'	44:2:2450:A:H5'	2.14	0.72
44:2:2527:G:H3'	44:2:2528:A:C5'	2.19	0.72
44:2:3605:C:H5'	44:2:3605:C:C6	2.22	0.72
44:2:4510:G:H2'	44:2:4511:U:H5'	1.70	0.72
44:2:4867:G:H4'	44:2:4868:G:OP1	1.90	0.72
4:D:207:TYR:CE1	46:4:33:U:H1'	2.24	0.72
4:D:273:LEU:HD23	44:2:1086:A:H1'	1.69	0.72
10:J:33:LEU:HD22	10:J:70:VAL:HG22	1.71	0.72
10:J:175:LEU:HB3	10:J:176:PRO:HD2	1.70	0.72
15:P:16:LYS:O	44:2:391:A:H4'	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:u:124:PRO:O	44:2:4015:A:O2'	2.08	0.72
44:2:121:A:H4'	44:2:122:U:O5'	1.90	0.72
44:2:382:U:H2'	44:2:383:U:C6	2.24	0.72
44:2:2000:C:H3'	44:2:2001:C:C5	2.24	0.72
44:2:2595:G:C2'	44:2:2596:G:H5'	2.18	0.72
44:2:3724:G:OP2	44:2:3724:G:H2'	1.89	0.72
44:2:4549:A:H1'	44:2:4550:A:H1'	1.71	0.72
44:2:4729:U:H2'	44:2:4730:C:H6	1.52	0.72
5:E:135:GLN:HA	44:2:700:C:O2'	1.90	0.72
11:L:53:GLY:C	11:L:55:ILE:H	1.98	0.72
17:R:104:ARG:NH2	44:2:2875:G:H5''	2.05	0.72
31:f:43:LEU:HD22	31:f:76:ARG:HA	1.70	0.72
42:t:78:VAL:HA	44:2:473:G:N2	2.04	0.72
44:2:1086:A:H8	44:2:1086:A:O5'	1.73	0.72
44:2:1569:C:H4'	44:2:2833:C:O2'	1.90	0.72
44:2:2431:U:H2'	44:2:2432:G:H5''	1.72	0.72
44:2:2573:G:H2'	44:2:2574:G:C8	2.24	0.72
44:2:2771:C:H5'	44:2:2774:C:H42	1.55	0.72
44:2:3640:G:H2'	44:2:3641:G:C8	2.25	0.72
44:2:3696:A:O2'	44:2:3697:A:H8	1.72	0.72
44:2:3907:G:H1'	44:2:3908:G:OP2	1.90	0.72
44:2:4526:U:H2'	44:2:4527:G:O4'	1.90	0.72
3:C:149:GLU:HA	42:t:75:THR:HA	1.70	0.72
31:f:59:THR:HB	44:2:1279:G:C5'	2.19	0.72
32:g:54:ARG:CG	44:2:2629:G:N1	2.49	0.72
33:h:17:LEU:HD13	33:h:61:ILE:HG12	1.71	0.72
44:2:210:G:C2	44:2:211:G:H1'	2.25	0.72
44:2:1352:A:H2	44:2:1353:A:C5	2.07	0.72
44:2:1475:G:H4'	44:2:1476:A:OP1	1.90	0.72
44:2:1821:A:H8	44:2:1821:A:O5'	1.72	0.72
44:2:2266:C:H1'	44:2:2297:G:H2'	1.70	0.72
44:2:3770:U:C4'	44:2:4456:A:H2	2.01	0.72
44:2:4527:G:C2'	44:2:4528:A:H5'	2.19	0.72
46:4:86:G:H2'	46:4:87:G:H5'	1.72	0.72
44:2:1083:C:H2'	44:2:1083:C:O2	1.88	0.72
44:2:1580:A:H8	44:2:1580:A:H5''	1.55	0.72
44:2:1823:U:H2'	44:2:1824:G:C8	2.25	0.72
44:2:1942:A:H2'	44:2:1943:G:C8	2.24	0.72
44:2:3724:G:H2'	44:2:3724:G:P	2.30	0.72
44:2:4005:C:H2'	44:2:4006:C:C6	2.25	0.72
44:2:4358:C:H3'	44:2:4358:C:H6	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4373:C:H3'	44:2:4373:C:O2	1.90	0.72
44:2:4948:G:N2	44:2:5013:A:C2	2.58	0.72
26:a:131:ARG:HH12	44:2:1467:G:H4'	1.55	0.72
33:h:86:LYS:HE2	45:3:38:U:O2'	1.90	0.72
44:2:170:C:H2'	44:2:171:C:H6	1.55	0.72
44:2:949:G:N7	44:2:950:A:H1'	2.04	0.72
44:2:1517:U:C2'	44:2:1518:G:H5'	2.20	0.72
44:2:2305:U:C2'	44:2:2306:G:C8	2.72	0.72
44:2:2494:A:H2'	44:2:2495:G:C8	2.25	0.72
44:2:4617:U:H3'	44:2:4618:G:H5''	1.70	0.72
44:2:4624:A:H2'	44:2:4625:A:O4'	1.90	0.72
44:2:4655:C:H2'	44:2:4656:C:C5'	2.16	0.72
45:3:80:A:H2'	45:3:81:C:C5	2.25	0.72
3:C:51:PRO:HG3	45:3:28:C:H1'	1.70	0.71
3:C:56:GLU:HG2	45:3:26:C:C1'	2.20	0.71
6:F:245:ARG:CG	44:2:927:A:H3'	2.20	0.71
7:G:128:VAL:HB	44:2:119:G:H22	1.55	0.71
20:U:80:LYS:HB3	20:U:110:TYR:CE2	2.25	0.71
23:X:125:ASN:ND2	44:2:2509:C:H5''	2.05	0.71
34:i:80:HIS:CE1	44:2:3696:A:H5'	2.24	0.71
44:2:475:U:O3'	44:2:658:G:H4'	1.89	0.71
44:2:1059:C:C3'	44:2:1060:C:C5	2.73	0.71
44:2:1293:C:H5	44:2:3851:C:O4'	1.73	0.71
44:2:2294:G:H2'	44:2:2296:G:OP2	1.89	0.71
44:2:2549:C:O4'	44:2:2737:G:C8	2.43	0.71
44:2:3722:G:H2'	44:2:3723:G:C1'	2.20	0.71
44:2:3733:U:H2'	44:2:3734:G:N7	2.04	0.71
44:2:4004:G:H2'	44:2:4005:C:C6	2.25	0.71
44:2:4616:A:H4'	44:2:4617:U:H5'	1.71	0.71
2:B:305:THR:HG21	2:B:365:LEU:O	1.89	0.71
4:D:273:LEU:HD23	44:2:1086:A:O4'	1.89	0.71
11:L:167:ARG:O	26:a:97:ALA:HA	1.90	0.71
24:Y:123:ALA:N	24:Y:126:ARG:HB2	2.05	0.71
44:2:308:A:H61	44:2:4320:U:H3	1.35	0.71
44:2:327:A:H5''	44:2:329:A:OP1	1.90	0.71
44:2:1742:C:H3'	44:2:1743:G:H5''	1.70	0.71
44:2:1831:G:H8	44:2:1831:G:H3'	1.55	0.71
44:2:1862:C:H4'	44:2:2048:U:C5	2.25	0.71
44:2:2020:A:C8	44:2:2021:A:C2	2.78	0.71
44:2:2029:C:H5''	44:2:2030:G:C8	2.25	0.71
44:2:3758:C:H5	44:2:3759:U:C2	2.07	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4173:A:H5''	44:2:4174:A:H5'	1.71	0.71
44:2:4485:C:H2'	44:2:4486:U:H6	1.53	0.71
44:2:4660:A:H2'	44:2:4661:A:H5''	1.72	0.71
1:A:199:VAL:HA	44:2:3620:A:OP1	1.90	0.71
3:C:36:ILE:HG22	3:C:123:ALA:HB2	1.72	0.71
5:E:168:LEU:HD21	5:E:214:ASP:HA	1.72	0.71
6:F:227:PHE:HA	6:F:231:GLY:O	1.90	0.71
8:H:23:ARG:NE	8:H:39:ASN:HA	2.05	0.71
44:2:1220:G:C8	44:2:1221:C:C5	2.78	0.71
44:2:1492:U:H2'	44:2:1493:U:C6	2.26	0.71
44:2:1659:G:H8	44:2:1659:G:C5'	2.00	0.71
44:2:2505:G:H8	44:2:2506:A:H5''	1.54	0.71
44:2:4210:G:H5''	44:2:4211:A:OP2	1.89	0.71
44:2:4325:C:H2'	44:2:4326:A:C8	2.25	0.71
44:2:4709:G:C2'	44:2:4710:G:H5''	2.11	0.71
3:C:55:SER:HB2	44:2:347:G:H5'	1.71	0.71
3:C:346:ASN:HA	3:C:349:LEU:HB3	1.72	0.71
5:E:190:HIS:CD2	5:E:192:LYS:HB3	2.25	0.71
7:G:152:ALA:HA	7:G:205:THR:HG22	1.72	0.71
23:X:56:ARG:NH2	45:3:136:U:H5''	2.05	0.71
24:Y:1:MET:HG2	44:2:1347:C:H5	1.55	0.71
44:2:204:G:H1'	44:2:397:C:OP1	1.90	0.71
44:2:509:G:H2'	44:2:510:C:H5'	1.71	0.71
44:2:705:U:H2'	44:2:706:C:H6	1.54	0.71
44:2:1797:G:H21	44:2:1801:U:H5''	1.54	0.71
44:2:2369:C:C5'	44:2:2369:C:C6	2.73	0.71
44:2:3893:C:C2'	44:2:3894:U:H5'	2.20	0.71
44:2:4549:A:H1'	44:2:4550:A:C1'	2.21	0.71
44:2:4565:A:H2'	44:2:4566:G:C8	2.25	0.71
45:3:24:G:H5''	45:3:24:G:H8	1.55	0.71
25:Z:58:GLY:HA3	44:2:4109:C:P	2.31	0.71
44:2:50:C:C2'	44:2:51:A:H5'	2.20	0.71
44:2:929:U:H6	44:2:929:U:O5'	1.74	0.71
44:2:967:C:O2	44:2:967:C:H2'	1.90	0.71
44:2:1798:G:H2'	44:2:1799:C:C6	2.24	0.71
44:2:2051:C:H2'	44:2:2052:C:C6	2.25	0.71
44:2:2393:G:H22	44:2:2397:A:N6	1.89	0.71
44:2:2442:C:H2'	44:2:2443:G:C8	2.25	0.71
44:2:2482:C:H2'	44:2:2483:G:H5'	1.73	0.71
46:4:103:A:H2'	46:4:104:C:H5'	1.70	0.71
34:i:99:LYS:NZ	43:u:193:LEU:C	2.45	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:t:58:LYS:CB	44:2:670:C:H5''	2.20	0.71
43:u:156:ARG:CB	44:2:3936:G:C2	2.66	0.71
44:2:7:C:H2'	44:2:8:U:C6	2.24	0.71
44:2:63:G:O2'	44:2:76:A:H1'	1.91	0.71
44:2:180:C:H2'	44:2:181:U:H5'	1.73	0.71
44:2:677:C:O2	44:2:677:C:H2'	1.90	0.71
44:2:1050:G:C2'	44:2:1051:C:H5'	2.21	0.71
44:2:1407:A:H2'	44:2:1408:U:C6	2.25	0.71
44:2:1420:U:H2'	44:2:1421:C:C5	2.24	0.71
44:2:1458:G:H2'	44:2:1459:C:C5	2.26	0.71
44:2:1877:G:H1'	44:2:2254:G:C2	2.26	0.71
44:2:2568:A:C2'	44:2:2569:U:H5'	2.21	0.71
44:2:3910:G:H2'	44:2:3911:A:H5'	1.71	0.71
44:2:4063:G:H5'	44:2:4063:G:C8	2.26	0.71
4:D:25:GLU:O	10:J:147:ARG:HA	1.90	0.71
5:E:149:ILE:HG21	5:E:270:TYR:HE2	1.54	0.71
17:R:95:TRP:CE2	44:2:1551:U:H4'	2.26	0.71
30:e:58:ILE:HB	44:2:1643:U:H5''	1.73	0.71
33:h:59:THR:OG1	45:3:60:G:C2	2.43	0.71
43:u:59:ILE:HD11	43:u:146:LYS:N	2.06	0.71
44:2:389:A:H2'	44:2:390:G:O4'	1.90	0.71
44:2:1474:G:C2'	44:2:1475:G:H5'	2.21	0.71
44:2:4056:C:H2'	44:2:4057:G:C8	2.26	0.71
44:2:4249:U:O2'	44:2:4280:G:H4'	1.90	0.71
44:2:4367:G:H2'	44:2:4368:G:H8	1.55	0.71
44:2:4616:A:H1'	44:2:4617:U:OP2	1.90	0.71
44:2:4668:A:H5'	44:2:4669:U:H5	1.56	0.71
44:2:4883:C:H2'	44:2:4884:C:C6	2.26	0.71
5:E:217:PHE:HB3	5:E:246:ARG:NH2	2.06	0.71
12:M:62:LEU:HD21	12:M:82:ILE:HG13	1.72	0.71
27:b:54:LEU:O	27:b:59:ALA:HB2	1.89	0.71
43:u:29:VAL:O	44:2:4022:C:C2'	2.38	0.71
43:u:92:ASP:OD1	44:2:4010:G:OP1	2.08	0.71
44:2:1259:A:H4'	44:2:1259:A:OP1	1.91	0.71
44:2:2032:U:O2'	44:2:2033:G:H5'	1.91	0.71
44:2:2282:G:H1'	44:2:2307:G:N2	2.06	0.71
44:2:2455:C:OP2	44:2:2456:G:H8	1.74	0.71
44:2:2624:A:N6	44:2:2664:U:N3	2.39	0.71
44:2:2841:A:H2'	44:2:2842:U:C6	2.26	0.71
44:2:3689:G:H2'	44:2:3690:U:H6	1.56	0.71
44:2:3725:A:C2'	44:2:3726:G:H5'	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4030:A:H2'	44:2:4031:U:O4'	1.90	0.71
45:3:103:A:H5'	45:3:104:A:C8	2.25	0.71
5:E:243:THR:HG23	44:2:4893:A:N6	2.06	0.71
7:G:106:THR:H	7:G:109:GLU:HB2	1.56	0.71
16:Q:61:LEU:HD23	16:Q:82:VAL:HG13	1.73	0.71
17:R:132:PHE:CE1	17:R:138:LEU:HD23	2.26	0.71
26:a:34:ASN:OD1	44:2:94:A:H5''	1.91	0.71
44:2:2310:G:H4'	45:3:20:A:H5''	1.72	0.71
44:2:3735:A:N3	44:2:3735:A:H2'	2.04	0.71
44:2:4183:C:C2'	44:2:4184:A:H5'	2.19	0.71
44:2:62:A:H2'	44:2:63:G:C8	2.26	0.71
44:2:69:A:N3	44:2:70:A:H4'	2.06	0.71
44:2:204:G:H8	44:2:204:G:OP1	1.74	0.71
44:2:474:G:H5''	44:2:659:A:H4'	1.73	0.71
44:2:1178:G:C3'	44:2:1179:G:H5''	2.19	0.71
44:2:1479:A:H3'	44:2:1480:C:C5'	2.21	0.71
44:2:4327:G:H2'	44:2:4328:G:O4'	1.91	0.71
44:2:4399:U:C2'	44:2:4400:G:H5'	2.20	0.71
44:2:4813:C:C2'	44:2:4814:C:H5'	2.21	0.71
44:2:4895:C:H3'	44:2:4895:C:C6	2.25	0.71
44:2:24:G:C2	44:2:25:A:C4	2.78	0.70
44:2:1199:G:C2'	44:2:1200:G:C8	2.74	0.70
44:2:1214:G:O3'	44:2:1215:G:H4'	1.90	0.70
44:2:1410:C:H2'	44:2:1411:C:H6	1.55	0.70
44:2:1717:A:O3'	46:4:101:A:H2	1.74	0.70
44:2:2000:C:H4'	44:2:2001:C:OP1	1.91	0.70
44:2:2313:G:H2'	44:2:2314:C:C6	2.25	0.70
44:2:2442:C:OP2	44:2:2442:C:H6	1.74	0.70
44:2:4026:U:H2'	44:2:4027:C:C6	2.26	0.70
44:2:4192:U:H4'	44:2:4193:A:O5'	1.90	0.70
10:J:174:ILE:O	10:J:175:LEU:HB2	1.90	0.70
15:P:37:LYS:HD3	15:P:117:ILE:HG22	1.73	0.70
31:f:69:VAL:HB	44:2:4901:U:H1'	1.73	0.70
44:2:84:A:H61	44:2:98:A:H3'	1.56	0.70
44:2:329:A:C2	44:2:330:C:C4	2.79	0.70
44:2:887:C:H2'	44:2:888:C:H6	1.53	0.70
44:2:948:A:H3'	44:2:949:G:C8	2.25	0.70
44:2:2589:G:H1	44:2:2704:C:H42	1.39	0.70
44:2:2844:C:C6	44:2:2844:C:H5''	2.26	0.70
44:2:4438:G:H2'	44:2:4439:A:O4'	1.91	0.70
44:2:4840:U:H2'	44:2:4841:C:C6	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:333:LYS:HD2	44:2:1217:C:H5'	1.72	0.70
5:E:132:PRO:HB3	44:2:1265:U:H4'	1.73	0.70
7:G:74:LEU:HD23	44:2:4044:G:C6	2.27	0.70
44:2:59:A:H2'	44:2:60:A:C5'	2.20	0.70
44:2:175:C:H2'	44:2:176:G:C8	2.26	0.70
44:2:439:G:H2'	44:2:440:C:C6	2.26	0.70
44:2:443:A:H1'	44:2:444:G:C5	2.26	0.70
44:2:734:A:H61	44:2:904:C:H1'	1.56	0.70
44:2:1227:U:H2'	44:2:1228:C:C6	2.26	0.70
44:2:1454:G:C2'	44:2:1455:C:H4'	2.21	0.70
44:2:3699:U:O2'	44:2:3700:C:H5''	1.91	0.70
44:2:3743:A:C8	44:2:3743:A:H5''	2.26	0.70
2:B:258:HIS:CD2	2:B:259:PRO:HD3	2.26	0.70
3:C:136:LEU:HD22	42:t:9:VAL:CG1	2.21	0.70
5:E:272:ARG:HG2	44:2:4837:U:H5''	1.73	0.70
32:g:41:ALA:HB3	32:g:52:ARG:HD2	1.72	0.70
42:t:78:VAL:HA	44:2:473:G:H21	1.57	0.70
44:2:176:G:O2'	44:2:177:C:H5'	1.91	0.70
44:2:1056:C:N4	44:2:1204:G:H1	1.89	0.70
44:2:2282:G:H1'	44:2:2307:G:H22	1.56	0.70
44:2:2309:G:H4'	44:2:2310:G:O5'	1.91	0.70
44:2:3910:G:N2	44:2:3911:A:C4	2.59	0.70
44:2:3913:G:C2'	44:2:3914:A:H8	1.97	0.70
3:C:55:SER:O	44:2:347:G:H5''	1.91	0.70
5:E:172:LEU:HA	44:2:4897:C:C6	2.27	0.70
8:H:72:THR:HG21	44:2:4660:A:N1	2.05	0.70
11:L:47:ALA:HB1	11:L:48:PRO:HD2	1.72	0.70
16:Q:140:SER:H	44:2:1437:C:H4'	1.54	0.70
16:Q:142:PRO:HG3	44:2:1481:G:O3'	1.91	0.70
44:2:1424:G:C2'	44:2:1425:U:H5'	2.22	0.70
44:2:1805:G:C8	44:2:1805:G:H5''	2.26	0.70
44:2:3569:G:H2'	44:2:3570:C:C6	2.26	0.70
44:2:3908:G:OP2	44:2:3908:G:H8	1.72	0.70
44:2:4077:C:H2'	44:2:4078:U:H6	1.56	0.70
44:2:4830:G:C8	44:2:4831:U:H1'	2.26	0.70
46:4:36:C:O5'	46:4:36:C:H6	1.73	0.70
1:A:77:ILE:HD11	1:A:115:CYS:HB2	1.72	0.70
12:M:112:VAL:HA	14:O:197:LYS:HZ1	1.55	0.70
32:g:100:GLN:NE2	44:2:4086:C:N4	2.39	0.70
44:2:458:U:H4'	44:2:459:U:O5'	1.92	0.70
44:2:4537:U:H2'	44:2:4538:G:H8	1.57	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:3:138:C:H2'	45:3:139:G:C8	2.26	0.70
46:4:9:C:H3'	46:4:9:C:O2	1.92	0.70
3:C:12:SER:HB2	3:C:16:GLU:O	1.90	0.70
13:N:161:MET:SD	44:2:54:G:H1'	2.32	0.70
31:f:46:ARG:HD2	31:f:106:TYR:CE2	2.26	0.70
44:2:398:A:H4'	44:2:399:A:OP1	1.91	0.70
44:2:1858:G:H3'	44:2:1859:C:C5'	2.20	0.70
44:2:2527:G:OP1	44:2:2527:G:H4'	1.89	0.70
44:2:4308:A:H3'	44:2:4309:C:C4'	2.22	0.70
7:G:31:LEU:HD11	25:Z:122:TYR:O	1.91	0.70
7:G:116:ALA:O	7:G:120:LYS:HB3	1.91	0.70
10:J:167:GLN:NE2	10:J:174:ILE:HG13	2.05	0.70
11:L:88:LYS:NZ	44:2:156:C:C6	2.60	0.70
29:d:59:THR:HG21	29:d:104:THR:OG1	1.91	0.70
44:2:440:C:C2'	44:2:441:G:H5''	2.19	0.70
44:2:1274:A:H5'	44:2:1274:A:C8	2.23	0.70
44:2:1868:G:H8	44:2:1868:G:O5'	1.74	0.70
44:2:2587:G:O2'	44:2:2665:G:H5''	1.91	0.70
44:2:2588:A:P	44:2:2665:G:H4'	2.32	0.70
44:2:3641:G:C2	44:2:3643:G:H1'	2.27	0.70
44:2:4400:G:H2'	44:2:4401:A:C8	2.26	0.70
44:2:4684:C:H2'	44:2:4685:G:H8	1.57	0.70
44:2:4840:U:H2'	44:2:4841:C:H6	1.56	0.70
44:2:4977:U:H4'	44:2:4978:C:OP1	1.91	0.70
6:F:66:ARG:HA	6:F:69:ILE:HD11	1.73	0.70
16:Q:65:ARG:O	16:Q:69:LYS:HG2	1.92	0.70
17:R:134:ASN:CB	44:2:2873:G:H5''	2.22	0.70
44:2:500:A:H2'	44:2:501:U:C6	2.27	0.70
44:2:948:A:H2'	44:2:949:G:N9	2.07	0.70
44:2:1399:G:C2'	44:2:1400:A:H5''	2.22	0.70
44:2:1910:A:H5''	44:2:1910:A:H8	1.56	0.70
44:2:4703:A:H61	44:2:4911:A:H61	1.40	0.70
46:4:62:U:H3'	46:4:63:C:C5'	2.22	0.70
3:C:264:TYR:O	3:C:271:ALA:HB2	1.92	0.70
4:D:10:LYS:O	4:D:14:LYS:HG3	1.91	0.70
4:D:33:ARG:NE	46:4:7:G:H4'	2.07	0.70
4:D:111:ASN:HA	4:D:116:ASP:HB2	1.72	0.70
5:E:173:LEU:O	5:E:188:ARG:HA	1.92	0.70
7:G:61:ILE:O	7:G:64:GLN:HG2	1.92	0.70
17:R:3:MET:SD	44:2:2362:U:H5'	2.32	0.70
18:S:110:TYR:HE2	18:S:126:ILE:HD11	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:g:93:ARG:CD	44:2:4088:G:H5'	2.19	0.70
43:u:155:GLU:OE1	44:2:3936:G:C4'	2.40	0.70
44:2:179:G:H2'	44:2:180:C:H6	1.57	0.70
44:2:635:G:H2'	44:2:636:G:H8	1.56	0.70
44:2:708:G:H2'	44:2:709:G:H8	1.57	0.70
44:2:1051:C:H2'	44:2:1052:C:O4'	1.92	0.70
44:2:1082:U:H6	44:2:1083:C:H5	1.37	0.70
44:2:1160:C:H3'	44:2:1160:C:C6	2.26	0.70
44:2:1278:C:O2'	44:2:1279:G:H5'	1.91	0.70
44:2:1462:C:H2'	44:2:1462:C:O2	1.92	0.70
44:2:1807:C:H2'	44:2:1808:G:H8	1.57	0.70
44:2:1934:A:C2	44:2:2006:C:C2	2.79	0.70
44:2:2016:U:H2'	44:2:2017:G:O4'	1.91	0.70
44:2:2554:C:H6	44:2:2554:C:H5''	1.57	0.70
44:2:4072:A:H2'	44:2:4073:G:H8	1.54	0.70
44:2:4833:C:H2'	44:2:4834:C:C6	2.27	0.70
45:3:57:C:H4'	45:3:63:U:C4	2.27	0.70
26:a:62:HIS:CG	44:2:306:G:N7	2.60	0.69
31:f:101:ILE:C	31:f:102:ARG:HD3	2.17	0.69
44:2:65:A:H2	44:2:76:A:O3'	1.75	0.69
44:2:707:C:O2'	44:2:708:G:H5'	1.92	0.69
44:2:916:A:C1'	44:2:917:G:H5'	2.21	0.69
44:2:1229:C:H2'	44:2:1230:C:H6	1.55	0.69
44:2:1252:C:H2'	44:2:1253:G:H8	1.56	0.69
44:2:1411:C:H2'	44:2:1412:G:H8	1.56	0.69
44:2:1812:U:C5	44:2:1813:G:C8	2.80	0.69
44:2:2051:C:H3'	44:2:2051:C:C6	2.26	0.69
44:2:2310:G:P	44:2:2310:G:H8	2.15	0.69
44:2:2599:G:H2'	44:2:2600:A:C8	2.26	0.69
44:2:4616:A:H4'	44:2:4617:U:O5'	1.92	0.69
44:2:4900:G:N3	44:2:4900:G:H2'	2.05	0.69
23:X:74:TYR:HD2	33:h:29:SER:HG	1.39	0.69
27:b:30:GLU:HG2	27:b:31:SER:H	1.57	0.69
43:u:155:GLU:OE1	44:2:3936:G:P	2.49	0.69
43:u:155:GLU:OE2	44:2:3935:A:O3'	2.10	0.69
43:u:190:LYS:C	43:u:192:PRO:HD3	2.17	0.69
44:2:1096:C:H2'	44:2:1097:C:C6	2.27	0.69
44:2:1630:G:H3'	44:2:1631:U:C6	2.27	0.69
44:2:2294:G:H5''	44:2:2294:G:H8	1.57	0.69
44:2:3725:A:H2'	44:2:3726:G:C8	2.26	0.69
44:2:3920:G:H1	44:2:4029:G:H1	1.40	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4046:C:H2'	44:2:4047:C:O4'	1.92	0.69
44:2:4593:G:N2	44:2:4623:G:H2'	2.06	0.69
3:C:50:GLN:CB	3:C:51:PRO:HD3	2.22	0.69
9:I:36:LEU:HB2	9:I:87:ILE:HG23	1.74	0.69
11:L:135:LYS:H	11:L:135:LYS:HE3	1.57	0.69
15:P:6:LEU:HD22	44:2:416:U:H1'	1.74	0.69
18:S:70:LYS:HA	44:2:721:A:O2'	1.92	0.69
44:2:70:A:H5'	44:2:72:C:H42	1.57	0.69
44:2:219:C:H2'	44:2:220:G:H5'	1.74	0.69
44:2:1082:U:H1'	44:2:1083:C:OP1	1.92	0.69
44:2:1771:U:O2	46:4:101:A:H4'	1.91	0.69
44:2:2056:C:H2'	44:2:2057:G:H8	1.58	0.69
44:2:2340:A:H2'	44:2:2341:G:O4'	1.92	0.69
46:4:68:C:H3'	46:4:69:U:C6	2.27	0.69
28:c:52:CYS:HA	44:2:2651:A:H61	1.58	0.69
31:f:104:MET:HG2	31:f:106:TYR:CD1	2.27	0.69
43:u:62:PHE:CZ	43:u:110:LEU:HG	2.27	0.69
44:2:489:C:H2'	44:2:490:G:H8	1.55	0.69
44:2:923:G:C2'	44:2:924:C:H5'	2.22	0.69
44:2:1054:G:C2'	44:2:1055:G:H5'	2.22	0.69
44:2:1162:C:H2'	44:2:1163:C:C6	2.28	0.69
44:2:1276:G:H8	44:2:1276:G:O5'	1.75	0.69
44:2:1277:U:H2'	44:2:1278:C:C6	2.27	0.69
44:2:2004:A:O2'	44:2:2005:U:H5'	1.93	0.69
44:2:2248:C:H2'	44:2:2249:G:C8	2.26	0.69
44:2:2372:A:H1'	44:2:2783:A:N3	2.07	0.69
44:2:2670:G:OP2	44:2:2671:G:H3'	1.92	0.69
44:2:4044:G:H21	44:2:4130:A:H61	1.41	0.69
45:3:12:G:H2'	45:3:13:G:H5'	1.73	0.69
6:F:45:ALA:O	6:F:48:LYS:HB3	1.93	0.69
7:G:39:PHE:CE1	7:G:47:PRO:HD3	2.27	0.69
44:2:682:C:H2'	44:2:683:C:C6	2.26	0.69
44:2:1942:A:C5	44:2:4654:G:N7	2.60	0.69
44:2:4305:C:H2'	44:2:4306:U:H6	1.57	0.69
3:C:197:ARG:HH12	44:2:341:C:H3'	1.56	0.69
17:R:1:MET:HA	44:2:2354:C:H1'	1.74	0.69
33:h:46:LYS:O	33:h:49:VAL:HG22	1.93	0.69
44:2:99:A:C3'	44:2:100:C:H6	2.05	0.69
44:2:400:G:H21	44:2:2306:G:P	2.15	0.69
44:2:1444:G:H4'	44:2:1445:G:OP2	1.93	0.69
44:2:1457:C:H2'	44:2:1458:G:H8	1.56	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2310:G:H3'	44:2:2311:C:H5''	1.73	0.69
44:2:2417:U:H5'	44:2:2418:C:C5	2.28	0.69
44:2:3779:C:H3'	44:2:3779:C:C6	2.28	0.69
44:2:4090:C:H3'	44:2:4090:C:H6	1.56	0.69
44:2:4854:G:H1'	44:2:4855:C:OP1	1.92	0.69
45:3:24:G:C2'	45:3:25:G:H5'	2.22	0.69
3:C:252:TRP:CZ3	3:C:260:LEU:HD11	2.28	0.69
5:E:141:ARG:O	5:E:144:ILE:HG12	1.91	0.69
11:L:31:ARG:CD	44:2:328:U:H2'	2.23	0.69
11:L:88:LYS:NZ	44:2:156:C:N1	2.39	0.69
17:R:137:ILE:HD12	17:R:138:LEU:H	1.58	0.69
18:S:169:THR:CG2	44:2:4829:A:H1'	2.16	0.69
23:X:58:PRO:HA	44:2:15:A:O5'	1.93	0.69
27:b:43:MET:O	27:b:47:LYS:HG2	1.93	0.69
44:2:15:A:OP2	44:2:15:A:H3'	1.92	0.69
44:2:194:A:C2	44:2:222:G:N2	2.61	0.69
44:2:426:A:H2'	44:2:427:C:H6	1.58	0.69
44:2:965:C:H6	44:2:965:C:H5''	1.58	0.69
44:2:1088:C:H3'	44:2:1088:C:H6	1.57	0.69
44:2:1861:G:H5''	44:2:1861:G:H8	1.57	0.69
44:2:4060:G:C2'	44:2:4061:G:H5'	2.23	0.69
44:2:4062:G:O2'	44:2:4063:G:H2'	1.92	0.69
1:A:48:ILE:HD11	41:p:63:THR:HG22	1.73	0.69
8:H:41:ILE:HG13	8:H:73:ILE:HD11	1.74	0.69
10:J:25:CYS:SG	44:2:4212:C:N4	2.62	0.69
10:J:26:VAL:HG13	10:J:32:ARG:HH11	1.58	0.69
14:O:129:LEU:CD2	44:2:2032:U:H5''	2.22	0.69
24:Y:120:GLU:C	24:Y:125:SER:HB3	2.17	0.69
35:j:11:ARG:HB3	35:j:11:ARG:NH1	2.08	0.69
35:j:17:THR:CG2	35:j:29:LEU:HD11	2.22	0.69
41:p:19:GLY:HA2	44:2:3661:A:H2	1.56	0.69
42:t:80:THR:O	42:t:83:ASN:HA	1.93	0.69
44:2:477:C:H5'	44:2:477:C:O2	1.93	0.69
44:2:716:U:H3'	44:2:717:G:H5''	1.74	0.69
44:2:1059:C:C3'	44:2:1060:C:H5	2.05	0.69
44:2:1088:C:C6	44:2:1088:C:C3'	2.75	0.69
44:2:1159:U:O5'	44:2:1159:U:H6	1.76	0.69
44:2:1217:C:H4'	44:2:1218:A:OP1	1.91	0.69
44:2:1391:C:H2'	44:2:1392:G:H8	1.56	0.69
44:2:1515:U:H4'	44:2:3611:A:N1	2.08	0.69
44:2:1919:A:H2	44:2:4394:C:H5''	1.55	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2283:A:H2'	44:2:2283:A:N3	2.07	0.69
44:2:2450:A:H4'	44:2:2451:G:OP2	1.92	0.69
44:2:2526:G:H3'	44:2:2527:G:C4'	2.23	0.69
44:2:2748:G:H2'	44:2:2749:C:C6	2.26	0.69
44:2:3678:U:H2'	44:2:3679:G:H5'	1.74	0.69
44:2:4093:C:H3'	44:2:4094:A:H5''	1.75	0.69
44:2:4149:U:H1'	44:2:4340:A:C2	2.27	0.69
44:2:4905:U:C2'	44:2:4906:G:H5'	2.23	0.69
1:A:222:PRO:HG2	44:2:3674:G:H1'	1.74	0.69
12:M:29:ASP:OD2	18:S:75:VAL:HG21	1.93	0.69
12:M:42:CYS:HG	12:M:77:TRP:CD1	2.11	0.69
24:Y:80:ILE:HG12	24:Y:99:ILE:O	1.93	0.69
24:Y:123:ALA:HA	24:Y:126:ARG:HB2	1.74	0.69
31:f:57:THR:O	31:f:64:PRO:HA	1.92	0.69
43:u:152:ARG:CD	44:2:3938:G:OP1	2.41	0.69
44:2:59:A:C2'	44:2:60:A:H5'	2.21	0.69
44:2:927:A:H4'	44:2:928:A:OP2	1.90	0.69
44:2:942:G:H2'	44:2:942:G:N3	2.07	0.69
44:2:1466:G:H2'	44:2:1467:G:C5'	2.23	0.69
44:2:2355:G:H22	44:2:2357:G:H3'	1.55	0.69
44:2:2605:U:H3'	44:2:2605:U:H6	1.58	0.69
44:2:3618:A:C1'	44:2:4495:A:H4'	2.23	0.69
11:L:59:VAL:HG11	44:2:74:G:C5'	2.22	0.69
44:2:356:U:H2'	44:2:356:U:O2	1.91	0.69
44:2:1293:C:C5	44:2:3851:C:O4'	2.46	0.69
44:2:1360:G:H1'	44:2:1361:U:O5'	1.93	0.69
44:2:1652:U:H6	44:2:1652:U:O5'	1.76	0.69
44:2:2401:G:H2'	44:2:2403:U:C5	2.27	0.69
44:2:2417:U:H5'	44:2:2418:C:H5	1.57	0.69
44:2:4888:C:H2'	44:2:4889:A:H8	1.58	0.69
46:4:22:A:H2'	46:4:23:A:C8	2.28	0.69
11:L:150:LEU:HB2	44:2:1359:C:H42	1.58	0.68
21:V:16:ILE:HD11	21:V:57:VAL:H	1.57	0.68
22:W:46:PRO:HB2	22:W:54:LEU:HD23	1.74	0.68
36:k:42:LEU:HD22	44:2:2513:A:H5''	1.75	0.68
44:2:42:A:C6	44:2:4339:A:H2	2.10	0.68
44:2:181:U:H5''	44:2:182:C:O4'	1.93	0.68
44:2:212:C:H3'	44:2:212:C:OP2	1.92	0.68
44:2:488:G:N3	44:2:488:G:H2'	2.08	0.68
44:2:725:C:H3'	44:2:726:C:C6	2.28	0.68
44:2:4711:U:N3	44:2:4903:C:C5	2.60	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:57:ASN:ND2	46:4:27:G:H5''	2.09	0.68
16:Q:178:ARG:HD2	44:2:4300:U:H4'	1.75	0.68
35:j:60:GLY:N	35:j:64:MET:HE3	2.08	0.68
36:k:20:ALA:CB	36:k:36:VAL:HG23	2.24	0.68
43:u:156:ARG:CD	44:2:4024:A:N7	2.57	0.68
44:2:34:A:H1'	44:2:1506:A:O2'	1.93	0.68
44:2:1748:G:O5'	44:2:1748:G:H8	1.76	0.68
44:2:2527:G:H3'	44:2:2528:A:H5''	1.75	0.68
44:2:2642:U:H2'	44:2:2643:U:C6	2.28	0.68
44:2:4891:G:O2'	44:2:4892:C:H5'	1.93	0.68
46:4:105:C:H2'	46:4:106:G:O4'	1.93	0.68
5:E:138:ARG:HD2	44:2:699:A:H4'	1.74	0.68
13:N:58:GLY:HA3	13:N:142:ILE:HD11	1.74	0.68
14:O:167:HIS:HB3	44:2:4718:C:H2'	1.74	0.68
15:P:130:TYR:HB3	44:2:2772:A:N6	2.08	0.68
17:R:134:ASN:HB2	44:2:2873:G:H5''	1.73	0.68
18:S:164:LYS:CB	18:S:165:PRO:HD3	2.21	0.68
44:2:1088:C:H2'	44:2:1089:C:H5'	1.74	0.68
44:2:1189:U:H6	44:2:1189:U:H5'	1.57	0.68
44:2:1388:G:N2	44:2:1390:U:H1'	2.08	0.68
44:2:2311:C:H2'	44:2:2312:C:C6	2.28	0.68
44:2:2525:C:H3'	44:2:2526:G:C4'	2.23	0.68
44:2:2629:G:H3'	44:2:2630:C:C4'	2.23	0.68
44:2:2673:A:H5'	44:2:2674:A:C8	2.27	0.68
44:2:3868:G:H2'	44:2:3869:G:H5'	1.76	0.68
44:2:4645:U:O5'	44:2:4645:U:H6	1.76	0.68
44:2:4700:C:H3'	44:2:4701:G:C5'	2.20	0.68
3:C:326:LEU:HD21	3:C:332:ALA:HB3	1.74	0.68
5:E:270:TYR:CE1	12:M:107:PHE:HA	2.28	0.68
6:F:219:GLY:O	44:2:1884:U:H4'	1.94	0.68
14:O:21:ALA:CA	14:O:87:MET:HE1	2.12	0.68
24:Y:87:ARG:NH2	44:2:377:A:H5''	2.09	0.68
26:a:46:ASP:O	26:a:47:LYS:HB3	1.93	0.68
43:u:158:THR:OG1	44:2:4022:C:C1'	2.42	0.68
44:2:455:G:H3'	44:2:456:G:H8	1.59	0.68
44:2:1789:G:H1	44:2:1807:C:H42	1.41	0.68
44:2:2673:A:H4'	44:2:2674:A:H5''	1.76	0.68
44:2:3592:C:C4	44:2:3593:A:N1	2.62	0.68
44:2:3689:G:H2'	44:2:3690:U:C6	2.27	0.68
44:2:4522:C:H2'	44:2:4523:U:C6	2.28	0.68
5:E:190:HIS:CA	44:2:4897:C:H2'	2.23	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:O:48:TYR:CD2	14:O:51:LYS:HE2	2.29	0.68
14:O:48:TYR:O	14:O:51:LYS:HG2	1.92	0.68
32:g:93:ARG:HD3	44:2:4088:G:C5'	2.22	0.68
44:2:210:G:C4	44:2:211:G:H1'	2.29	0.68
44:2:425:A:H2'	44:2:426:A:O5'	1.94	0.68
44:2:951:C:H42	44:2:1263:G:H1	1.40	0.68
44:2:1409:C:H2'	44:2:1410:C:H6	1.56	0.68
44:2:1870:A:H4'	44:2:1871:C:OP2	1.93	0.68
44:2:2452:G:H2'	44:2:2453:G:C8	2.28	0.68
44:2:2549:C:H5'	44:2:2737:G:C8	2.28	0.68
44:2:2633:U:H5''	44:2:2634:G:OP2	1.93	0.68
44:2:2664:U:H2'	44:2:2665:G:C8	2.28	0.68
44:2:3782:A:H8	44:2:3782:A:OP1	1.77	0.68
44:2:3883:U:H3	44:2:4338:A:H61	1.40	0.68
44:2:4260:U:H2'	44:2:4261:U:H6	1.58	0.68
44:2:4849:A:H1'	44:2:4850:C:OP2	1.93	0.68
46:4:68:C:H5'	46:4:69:U:OP2	1.92	0.68
3:C:309:ILE:HD13	44:2:2063:G:C1'	2.16	0.68
3:C:333:LYS:CD	44:2:1217:C:H5'	2.23	0.68
25:Z:10:VAL:CG2	25:Z:87:VAL:HG23	2.24	0.68
44:2:441:G:H8	44:2:441:G:C5'	2.02	0.68
44:2:1284:C:H3'	44:2:1285:C:C5	2.28	0.68
44:2:1479:A:C2'	44:2:1480:C:H5''	2.24	0.68
44:2:1874:A:O2'	44:2:2047:A:H2	1.76	0.68
44:2:2632:C:H2'	44:2:2633:U:H6	1.59	0.68
44:2:4071:G:H2'	44:2:4072:A:O5'	1.94	0.68
4:D:91:GLY:CA	46:4:48:G:H5''	2.24	0.68
11:L:57:PRO:HG3	11:L:75:GLY:O	1.92	0.68
16:Q:42:THR:HG22	44:2:1409:C:H5''	1.72	0.68
44:2:463:C:C6	44:2:463:C:H5'	2.28	0.68
44:2:645:C:H2'	44:2:646:C:C6	2.29	0.68
44:2:700:C:H2'	44:2:701:C:C5'	2.23	0.68
44:2:1016:C:H2'	44:2:1017:C:H6	1.55	0.68
44:2:1147:C:C6	44:2:1147:C:H5''	2.29	0.68
44:2:1437:C:H2'	44:2:1438:A:C8	2.29	0.68
44:2:4632:A:H2'	44:2:4633:U:C6	2.28	0.68
44:2:4715:C:H2'	44:2:4716:C:C6	2.27	0.68
45:3:104:A:H4'	45:3:105:C:C5	2.29	0.68
2:B:4:ARG:O	2:B:5:LYS:HB2	1.94	0.68
3:C:165:LYS:NZ	44:2:219:C:P	2.63	0.68
5:E:227:HIS:NE2	44:2:442:C:O4'	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:95:ILE:HG23	6:F:221:LYS:HG2	1.76	0.68
8:H:173:ARG:HH11	38:m:127:VAL:HG13	1.58	0.68
44:2:482:G:H5'	44:2:482:G:C8	2.28	0.68
44:2:947:G:H2'	44:2:948:A:C5'	2.24	0.68
44:2:1651:U:H2'	44:2:1652:U:C6	2.29	0.68
44:2:2342:C:H6	44:2:2342:C:H5''	1.58	0.68
44:2:2549:C:C5'	44:2:2737:G:C8	2.76	0.68
44:2:4801:C:C2'	44:2:4802:G:H5'	2.22	0.68
3:C:319:LEU:HD21	6:F:152:GLU:HG3	1.76	0.68
16:Q:159:PRO:HG2	44:2:4267:A:OP2	1.93	0.68
19:T:84:ILE:CG1	27:b:24:PRO:HA	2.24	0.68
24:Y:112:ASP:HB3	45:3:84:A:N6	2.08	0.68
32:g:70:THR:HG22	44:2:2564:A:N7	2.09	0.68
44:2:443:A:H4'	44:2:444:G:OP1	1.93	0.68
44:2:897:U:O2'	44:2:898:U:H3'	1.93	0.68
44:2:1203:G:C2'	44:2:1204:G:H8	2.07	0.68
44:2:1358:C:H5''	44:2:1359:C:OP2	1.92	0.68
44:2:1397:C:H2'	44:2:1398:C:H6	1.56	0.68
44:2:2445:U:H3'	44:2:2445:U:H6	1.59	0.68
44:2:4128:G:C2	44:2:4129:G:H1'	2.28	0.68
44:2:4399:U:H2'	44:2:4400:G:H5'	1.75	0.68
44:2:4586:A:H62	44:2:4628:U:H3'	1.59	0.68
46:4:11:A:H2	46:4:66:G:N3	1.92	0.68
1:A:221:LYS:O	44:2:3718:C:H4'	1.94	0.68
3:C:149:GLU:CA	42:t:75:THR:HA	2.24	0.68
17:R:130:ASN:OD1	44:2:1550:G:H1'	1.94	0.68
25:Z:13:VAL:O	25:Z:19:SER:HA	1.93	0.68
44:2:174:G:N1	44:2:253:C:N4	2.42	0.68
44:2:181:U:H6	44:2:181:U:C5'	2.07	0.68
44:2:1393:C:O5'	44:2:1393:C:H6	1.77	0.68
44:2:1582:C:H4'	44:2:2775:A:C2	2.28	0.68
44:2:2624:A:C5	44:2:2665:G:C6	2.82	0.68
44:2:4156:G:H8	44:2:4156:G:OP1	1.76	0.68
44:2:4252:A:H4'	44:2:4253:U:OP2	1.94	0.68
44:2:4803:C:H3'	44:2:4804:G:C4'	2.24	0.68
11:L:134:PRO:HA	11:L:135:LYS:NZ	2.09	0.67
44:2:104:G:H2'	44:2:105:A:H5'	1.75	0.67
44:2:389:A:C8	44:2:389:A:H3'	2.29	0.67
44:2:477:C:H5''	44:2:479:G:P	2.34	0.67
44:2:717:G:C3'	44:2:718:G:H5'	2.25	0.67
44:2:920:C:H2'	44:2:921:U:H6	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:965:C:H6	44:2:965:C:C5'	2.06	0.67
44:2:1161:C:H3'	44:2:1161:C:C6	2.29	0.67
44:2:1171:C:H2'	44:2:1172:C:C6	2.30	0.67
44:2:1367:A:H4'	44:2:1368:A:OP1	1.94	0.67
44:2:1580:A:H5''	44:2:1580:A:C8	2.29	0.67
44:2:2284:A:H2'	44:2:2285:G:C8	2.28	0.67
44:2:2764:A:H2'	44:2:2764:A:N3	2.09	0.67
44:2:4955:G:C2'	44:2:4956:U:H5'	2.22	0.67
8:H:60:TRP:CZ3	18:S:152:PHE:HB2	2.28	0.67
44:2:58:G:O3'	44:2:59:A:H4'	1.93	0.67
44:2:99:A:H2'	44:2:100:C:C6	2.29	0.67
44:2:442:C:C2'	44:2:443:A:H5'	2.24	0.67
44:2:1454:G:H2'	44:2:1455:C:C4'	2.24	0.67
44:2:1648:A:C2'	44:2:1649:G:H5''	2.14	0.67
44:2:2020:A:H8	44:2:2021:A:C4	2.12	0.67
44:2:2396:C:H6	44:2:2396:C:H5''	1.59	0.67
44:2:2527:G:H22	44:2:2744:U:H3	1.42	0.67
44:2:4133:G:C2'	44:2:4134:U:H5'	2.24	0.67
44:2:4745:G:H2'	44:2:4746:C:C6	2.28	0.67
2:B:258:HIS:CD2	2:B:259:PRO:HD2	2.26	0.67
3:C:137:VAL:CG1	3:C:144:ILE:HD11	2.24	0.67
16:Q:186:TYR:CG	44:2:4267:A:H4'	2.28	0.67
24:Y:61:HIS:CE1	44:2:229:G:H1	2.12	0.67
31:f:59:THR:OG1	44:2:1278:C:H4'	1.93	0.67
44:2:707:C:H2'	44:2:708:G:H8	1.57	0.67
44:2:918:C:H4'	44:2:919:A:H5'	1.76	0.67
44:2:1082:U:H6	44:2:1083:C:C5	2.12	0.67
44:2:1161:C:H3'	44:2:1161:C:H6	1.58	0.67
44:2:1453:C:H4'	44:2:1454:G:OP1	1.94	0.67
44:2:1622:A:C2'	44:2:1623:C:H5'	2.25	0.67
44:2:1873:G:O2'	44:2:1885:A:H1'	1.93	0.67
44:2:1897:G:N2	44:2:2035:A:C8	2.61	0.67
44:2:2704:C:C2'	44:2:2705:U:H5'	2.24	0.67
44:2:4358:C:H3'	44:2:4358:C:C6	2.29	0.67
44:2:4373:C:H2'	44:2:4374:A:O4'	1.95	0.67
44:2:4900:G:C3'	44:2:4901:U:H5'	2.21	0.67
2:B:6:PHE:CE1	21:V:49:LEU:HD22	2.30	0.67
3:C:182:LYS:HA	44:2:2276:A:C8	2.30	0.67
4:D:13:PHE:CE1	46:4:15:C:H1'	2.29	0.67
19:T:130:ARG:O	44:2:1815:A:H1'	1.95	0.67
26:a:65:ARG:O	26:a:66:ASN:HB3	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:k:61:PRO:HG2	36:k:64:LEU:HD12	1.74	0.67
43:u:107:GLU:HB2	43:u:132:LEU:HD12	1.74	0.67
44:2:10:A:C2'	44:2:11:G:H5'	2.25	0.67
44:2:288:U:H2'	44:2:289:G:H8	1.55	0.67
44:2:958:C:P	44:2:971:C:H1'	2.33	0.67
44:2:1664:G:H2'	44:2:1665:C:C6	2.29	0.67
44:2:1943:G:H5'	44:2:4655:C:O2'	1.94	0.67
44:2:2034:G:H5'	44:2:2034:G:C8	2.28	0.67
44:2:2587:G:O3'	44:2:2665:G:H4'	1.94	0.67
44:2:4383:U:H3'	44:2:4383:U:H6	1.60	0.67
44:2:4411:G:O5'	44:2:4411:G:H8	1.75	0.67
44:2:4586:A:N6	44:2:4628:U:H3'	2.09	0.67
25:Z:17:ARG:CD	32:g:75:SER:HB3	2.25	0.67
31:f:104:MET:CG	31:f:106:TYR:CD1	2.78	0.67
33:h:34:ALA:HA	33:h:37:THR:OG1	1.94	0.67
41:p:47:MET:SD	41:p:57:CYS:HB2	2.35	0.67
43:u:156:ARG:HD3	44:2:4024:A:C8	2.30	0.67
44:2:382:U:H2'	44:2:383:U:C5	2.29	0.67
44:2:476:C:OP2	44:2:658:G:H5'	1.95	0.67
44:2:916:A:H1'	44:2:917:G:P	2.34	0.67
44:2:2060:G:H2'	44:2:2061:C:O2	1.94	0.67
44:2:2349:U:H2'	44:2:2350:C:C6	2.30	0.67
44:2:2867:C:H42	44:2:3580:A:H61	1.41	0.67
44:2:4081:C:H4'	44:2:4082:G:OP2	1.94	0.67
44:2:4085:U:H4'	44:2:4086:C:OP1	1.94	0.67
44:2:4236:G:H3'	44:2:4237:G:C8	2.29	0.67
44:2:4384:A:H2'	44:2:4384:A:N3	2.08	0.67
44:2:4536:U:H2'	44:2:4537:U:C6	2.30	0.67
44:2:4817:G:H2'	44:2:4818:G:C8	2.30	0.67
44:2:4861:C:H2'	44:2:4862:G:C8	2.29	0.67
3:C:193:LYS:HE2	44:2:343:G:N7	2.10	0.67
8:H:173:ARG:HD2	38:m:127:VAL:HG13	1.75	0.67
15:P:148:MET:HE2	15:P:150:LEU:HD11	1.77	0.67
17:R:137:ILE:HD12	17:R:138:LEU:N	2.10	0.67
27:b:49:HIS:CG	44:2:1793:C:H5'	2.30	0.67
37:l:40:LYS:NZ	44:2:357:A:H5''	2.09	0.67
42:t:58:LYS:HB3	44:2:670:C:O5'	1.95	0.67
44:2:467:G:H2'	44:2:468:C:C6	2.29	0.67
44:2:669:G:H5''	44:2:669:G:C8	2.29	0.67
44:2:708:G:O2'	44:2:709:G:H5'	1.95	0.67
44:2:941:G:H2'	44:2:941:G:N3	2.10	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1265:U:H2'	44:2:1266:C:O4'	1.93	0.67
44:2:1312:C:H2'	44:2:1313:A:C8	2.29	0.67
44:2:1390:U:H6	44:2:1390:U:H5''	1.59	0.67
44:2:1774:A:H4'	46:4:98:G:N3	2.09	0.67
44:2:3618:A:H1'	44:2:4495:A:H4'	1.77	0.67
44:2:3821:A:H5''	44:2:3822:U:H5	1.58	0.67
44:2:4233:A:H5''	44:2:4233:A:C8	2.30	0.67
46:4:14:C:O5'	46:4:14:C:H6	1.78	0.67
15:P:82:ARG:HH12	44:2:2338:G:H2'	1.60	0.67
19:T:88:ARG:O	44:2:4260:U:H5'	1.95	0.67
23:X:150:ALA:O	23:X:153:ILE:HG12	1.95	0.67
28:c:79:ILE:HA	28:c:90:ARG:HB3	1.77	0.67
32:g:7:TYR:CE2	44:2:2378:A:H2	2.12	0.67
32:g:7:TYR:HB2	32:g:34:TYR:OH	1.94	0.67
44:2:1:C:H6	44:2:1:C:O5'	1.74	0.67
44:2:128:C:H2'	44:2:129:C:C6	2.30	0.67
44:2:1343:C:H2'	44:2:1344:U:O4'	1.94	0.67
44:2:1411:C:H2'	44:2:1412:G:C8	2.29	0.67
44:2:2552:U:H3'	44:2:2552:U:H6	1.60	0.67
44:2:3661:A:N6	44:2:3792:G:H21	1.93	0.67
44:2:3793:A:O5'	44:2:3793:A:H8	1.76	0.67
44:2:4309:C:OP1	44:2:4309:C:H4'	1.91	0.67
44:2:4412:U:H2'	44:2:4412:U:O2	1.94	0.67
44:2:4851:G:H2'	44:2:4852:G:C8	2.30	0.67
3:C:234:LYS:NZ	44:2:1344:U:O2	2.28	0.67
17:R:119:MET:HB3	17:R:145:LEU:HD21	1.76	0.67
19:T:80:VAL:HA	44:2:4264:A:OP2	1.95	0.67
32:g:45:ALA:CB	32:g:82:MET:HA	2.24	0.67
44:2:932:C:H2'	44:2:933:G:H8	1.59	0.67
44:2:957:G:H8	44:2:957:G:C5'	1.94	0.67
44:2:1213:G:O2'	44:2:1214:G:H5'	1.95	0.67
44:2:1221:C:H2'	44:2:1222:G:C5'	2.23	0.67
44:2:2310:G:H4'	45:3:20:A:C5'	2.23	0.67
44:2:2330:U:H2'	44:2:2331:G:H8	1.60	0.67
44:2:2523:G:H2'	44:2:2524:G:H8	1.58	0.67
44:2:2686:C:H4'	44:2:2686:C:OP1	1.93	0.67
44:2:4204:A:C1'	44:2:4228:A:H4'	2.24	0.67
2:B:77:THR:CG2	2:B:336:CYS:HA	2.24	0.67
3:C:326:LEU:CB	44:2:1218:A:N6	2.58	0.67
4:D:146:LEU:HB2	44:2:4283:A:C2	2.30	0.67
6:F:156:LYS:HD3	6:F:248:ASN:OD1	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:L:111:GLN:CB	44:2:510:C:H4'	2.24	0.67
25:Z:83:THR:HA	28:c:62:TYR:OH	1.95	0.67
35:j:25:LYS:HE3	37:l:51:LEU:HD12	1.76	0.67
44:2:85:G:N2	44:2:97:G:H2'	2.09	0.67
44:2:725:C:H3'	44:2:726:C:H5	1.59	0.67
44:2:1148:G:O5'	44:2:1148:G:H8	1.78	0.67
44:2:1189:U:H6	44:2:1189:U:C5'	2.08	0.67
44:2:1608:G:H2'	44:2:1610:A:N7	2.09	0.67
44:2:1648:A:H5'	44:2:1648:A:H8	1.60	0.67
44:2:2510:C:OP2	44:2:2510:C:H2'	1.94	0.67
44:2:2871:A:H2'	44:2:2872:A:C8	2.30	0.67
44:2:3937:U:H2'	44:2:3938:G:C8	2.30	0.67
44:2:4483:A:H2'	44:2:4519:A:N6	2.09	0.67
44:2:4851:G:H21	44:2:4882:G:H1'	1.60	0.67
45:3:122:G:H4'	45:3:122:G:OP1	1.95	0.67
36:k:2:PRO:HG2	44:2:2619:A:C2	2.29	0.67
42:t:44:ILE:HG13	42:t:45:HIS:H	1.60	0.67
44:2:103:G:H5''	44:2:104:G:OP2	1.95	0.67
44:2:211:G:H2'	44:2:211:G:N3	2.09	0.67
44:2:301:G:H2'	44:2:302:G:O4'	1.95	0.67
44:2:670:C:H2'	44:2:671:C:H6	1.59	0.67
44:2:1058:A:C2	44:2:1206:U:H1'	2.30	0.67
44:2:1076:C:H2'	44:2:1077:C:C6	2.30	0.67
44:2:1285:C:H5''	44:2:2289:A:C6	2.29	0.67
44:2:1831:G:H3'	44:2:1831:G:C8	2.29	0.67
44:2:3887:G:H2'	44:2:3888:C:H6	1.60	0.67
44:2:4145:G:H2'	44:2:4146:A:C8	2.28	0.67
44:2:4597:G:O2'	44:2:5000:G:H1'	1.95	0.67
44:2:4807:C:H2'	44:2:4808:C:C6	2.29	0.67
4:D:155:THR:OG1	46:4:36:C:H5'	1.96	0.66
11:L:37:LYS:O	11:L:40:GLN:HG2	1.95	0.66
44:2:182:C:C3'	44:2:183:G:C8	2.75	0.66
44:2:196:G:H1'	44:2:197:U:OP1	1.95	0.66
44:2:411:A:H61	45:3:15:G:H1'	1.59	0.66
44:2:1301:G:H5''	44:2:1302:A:OP2	1.95	0.66
44:2:1423:A:H5''	44:2:1423:A:C8	2.30	0.66
44:2:2395:A:H2'	44:2:2396:C:H5''	1.75	0.66
44:2:2692:G:H3'	44:2:2693:C:C5	2.30	0.66
44:2:2837:C:H3'	44:2:2837:C:C6	2.30	0.66
44:2:3887:G:H2'	44:2:3888:C:O5'	1.95	0.66
44:2:4245:U:H2'	44:2:4246:C:H6	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4561:U:H4'	44:2:4562:A:OP1	1.95	0.66
44:2:4737:C:H2'	44:2:4738:U:H6	1.60	0.66
11:L:156:PRO:CB	44:2:1359:C:C5	2.77	0.66
31:f:106:TYR:HD2	31:f:107:PRO:HD2	0.89	0.66
35:j:76:HIS:O	35:j:79:ARG:HG2	1.95	0.66
44:2:380:A:N3	44:2:380:A:C3'	2.55	0.66
44:2:425:A:H3'	44:2:425:A:H8	1.58	0.66
44:2:924:C:C3'	44:2:925:C:C5'	2.73	0.66
44:2:1096:C:H2'	44:2:1097:C:H6	1.59	0.66
44:2:1270:G:H4'	44:2:4898:A:C2	2.28	0.66
44:2:1836:A:C8	44:2:1836:A:H5''	2.31	0.66
44:2:1943:G:O4'	44:2:4655:C:H4'	1.96	0.66
44:2:2672:A:H3'	44:2:2672:A:N3	2.09	0.66
44:2:4278:C:H6	44:2:4278:C:H3'	1.60	0.66
44:2:4567:A:H3'	44:2:4568:G:H5''	1.75	0.66
44:2:4692:C:H4'	44:2:4693:A:H4'	1.76	0.66
28:c:52:CYS:HB3	28:c:92:CYS:SG	2.36	0.66
31:f:46:ARG:HD2	31:f:106:TYR:HE2	1.61	0.66
44:2:1088:C:C2'	44:2:1089:C:H5'	2.25	0.66
44:2:2396:C:H5''	44:2:2396:C:C6	2.30	0.66
44:2:2432:G:H4'	44:2:2433:G:OP2	1.93	0.66
44:2:2510:C:OP2	44:2:2510:C:H6	1.78	0.66
44:2:2549:C:H3'	44:2:2549:C:C6	2.30	0.66
44:2:2711:U:H5''	44:2:2711:U:H6	1.59	0.66
44:2:4004:G:H2'	44:2:4005:C:H6	1.59	0.66
44:2:4898:A:H3'	44:2:4898:A:OP2	1.96	0.66
45:3:26:C:H2'	45:3:27:U:C5	2.29	0.66
1:A:180:LEU:HD11	41:p:26:VAL:HG21	1.78	0.66
2:B:14:LEU:O	2:B:17:LEU:HB2	1.95	0.66
26:a:62:HIS:HB2	44:2:306:G:C8	2.29	0.66
43:u:152:ARG:HG3	44:2:3937:U:H4'	1.77	0.66
44:2:179:G:H2'	44:2:180:C:C6	2.31	0.66
44:2:642:C:H3'	44:2:643:G:H5''	1.78	0.66
44:2:901:A:H2'	44:2:902:G:H8	1.59	0.66
44:2:961:C:O3'	44:2:962:G:H8	1.78	0.66
44:2:1165:G:O2'	44:2:1166:U:H5'	1.95	0.66
44:2:1717:A:H1'	46:4:101:A:H1'	1.78	0.66
44:2:1740:G:H2'	44:2:1741:C:H6	1.61	0.66
44:2:1807:C:H2'	44:2:1808:G:C8	2.30	0.66
44:2:2313:G:H2'	44:2:2314:C:H6	1.59	0.66
44:2:2516:C:H2'	44:2:2517:C:C6	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2549:C:H2'	44:2:2550:A:C5'	2.24	0.66
44:2:3826:G:C5	44:2:3827:C:H5	2.13	0.66
44:2:4726:C:O5'	44:2:4726:C:H6	1.78	0.66
44:2:4895:C:H2'	44:2:4896:G:OP1	1.95	0.66
46:4:32:A:C2	46:4:41:G:C6	2.83	0.66
1:A:186:TYR:CA	1:A:196:TRP:NE1	2.57	0.66
3:C:221:PHE:O	3:C:227:ILE:HG21	1.94	0.66
4:D:33:ARG:CZ	46:4:7:G:H4'	2.25	0.66
18:S:167:PHE:O	44:2:4829:A:H5''	1.95	0.66
43:u:74:VAL:HG11	43:u:142:ILE:HG22	1.76	0.66
44:2:384:U:H3'	44:2:385:G:H4'	1.78	0.66
44:2:460:C:O2	44:2:460:C:H2'	1.96	0.66
44:2:943:G:H1'	44:2:944:A:O5'	1.96	0.66
44:2:1377:A:H4'	44:2:1378:A:OP2	1.94	0.66
44:2:3945:C:H2'	44:2:3946:C:C6	2.30	0.66
44:2:4721:A:H3'	44:2:4721:A:N3	2.10	0.66
2:B:115:LYS:HA	2:B:118:PHE:CD2	2.31	0.66
23:X:56:ARG:HB3	44:2:14:C:OP1	1.95	0.66
26:a:32:ARG:HD2	44:2:37:U:H4'	1.76	0.66
35:j:70:VAL:HG22	35:j:73:ARG:HH21	1.60	0.66
43:u:155:GLU:CD	44:2:3936:G:C4'	2.68	0.66
44:2:100:C:O2	44:2:100:C:H2'	1.95	0.66
44:2:121:A:N1	44:2:147:U:C5	2.64	0.66
44:2:194:A:H2	44:2:222:G:N2	1.94	0.66
44:2:957:G:H4'	44:2:1218:A:H4'	1.78	0.66
44:2:1249:G:C8	44:2:1249:G:C5'	2.79	0.66
44:2:1481:G:OP1	44:2:1481:G:C4	2.48	0.66
44:2:1583:G:H2'	44:2:1584:G:C8	2.31	0.66
44:2:1610:A:P	44:2:1610:A:H8	2.18	0.66
44:2:2672:A:C3'	44:2:2673:A:H5''	2.26	0.66
44:2:2756:C:H2'	44:2:2757:C:C6	2.31	0.66
44:2:3913:G:C2'	44:2:3914:A:H5'	2.25	0.66
44:2:4253:U:H3'	44:2:4254:C:C5'	2.24	0.66
44:2:4628:U:H4'	44:2:4629:A:OP1	1.95	0.66
3:C:336:ARG:NE	44:2:930:C:H4'	2.08	0.66
7:G:29:ASN:N	7:G:30:PRO:HD2	2.11	0.66
34:i:68:ARG:NH1	44:2:3691:G:OP1	2.29	0.66
44:2:1352:A:C2	44:2:1353:A:C6	2.84	0.66
44:2:1479:A:H2'	44:2:1480:C:H5''	1.77	0.66
44:2:3732:A:C2	44:2:3733:U:H1'	2.31	0.66
44:2:3826:G:C5	44:2:3827:C:C5	2.84	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4545:U:H2'	44:2:4546:G:H8	1.60	0.66
45:3:107:C:H5'	45:3:107:C:H6	1.61	0.66
44:2:64:A:H4'	44:2:65:A:O5'	1.94	0.66
44:2:79:C:C1'	44:2:329:A:H5'	2.25	0.66
44:2:707:C:H2'	44:2:708:G:C8	2.31	0.66
44:2:969:C:H2'	44:2:970:C:C6	2.30	0.66
44:2:1019:C:H2'	44:2:1020:G:C8	2.31	0.66
44:2:1238:G:H2'	44:2:1239:G:H8	1.60	0.66
44:2:1420:U:C6	44:2:1420:U:C3'	2.77	0.66
44:2:1454:G:C3'	44:2:1455:C:H4'	2.25	0.66
44:2:1633:G:H22	44:2:1656:U:C5'	2.08	0.66
44:2:2550:A:O5'	44:2:2736:G:H8	1.78	0.66
44:2:3575:U:H2'	44:2:3576:U:C6	2.30	0.66
44:2:3910:G:C4	44:2:3911:A:C8	2.84	0.66
44:2:4085:U:O2	44:2:4085:U:H2'	1.95	0.66
1:A:186:TYR:N	1:A:196:TRP:HE1	1.92	0.66
2:B:285:TYR:CE1	2:B:334:LYS:HB2	2.31	0.66
14:O:114:LYS:O	44:2:4717:U:H5''	1.96	0.66
43:u:156:ARG:CB	44:2:3935:A:H2	2.09	0.66
44:2:434:G:H8	44:2:434:G:O5'	1.77	0.66
44:2:961:C:H2'	44:2:962:G:C8	2.30	0.66
44:2:1070:G:H2'	44:2:1071:C:H6	1.59	0.66
44:2:1257:G:N2	44:2:1258:C:H41	1.93	0.66
44:2:3703:U:H2'	44:2:3704:G:H5'	1.77	0.66
44:2:4237:G:H5''	44:2:4238:C:OP2	1.96	0.66
44:2:4817:G:H2'	44:2:4818:G:H8	1.61	0.66
45:3:109:C:H4'	45:3:110:U:C6	2.30	0.66
46:4:21:G:O5'	46:4:21:G:H8	1.78	0.66
9:I:55:ASP:HA	9:I:131:ILE:HG23	1.78	0.66
43:u:28:ALA:CB	44:2:4022:C:C4'	2.74	0.66
44:2:98:A:H1'	44:2:283:G:C6	2.31	0.66
44:2:424:A:H4'	44:2:425:A:OP1	1.96	0.66
44:2:957:G:OP1	44:2:1219:C:H5''	1.95	0.66
44:2:1216:C:H1'	44:2:1217:C:OP1	1.95	0.66
44:2:1900:G:H4'	44:2:1901:A:OP1	1.96	0.66
44:2:2638:U:H3'	44:2:2639:G:H4'	1.78	0.66
44:2:3587:C:H4'	44:2:3589:G:C4	2.30	0.66
5:E:160:LYS:NZ	5:E:183:ARG:HD3	2.10	0.65
32:g:45:ALA:HB2	32:g:82:MET:HA	1.78	0.65
42:t:44:ILE:HA	42:t:48:THR:HG21	1.78	0.65
44:2:292:G:H3'	44:2:293:C:C6	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:417:A:H2'	44:2:418:A:C8	2.28	0.65
44:2:471:C:C5'	44:2:472:G:H5''	2.25	0.65
44:2:976:C:H4'	44:2:1222:G:C4'	2.26	0.65
44:2:1019:C:H2'	44:2:1020:G:H8	1.61	0.65
44:2:1183:G:H2'	44:2:1184:C:H6	1.60	0.65
44:2:1267:G:C3'	44:2:1268:G:H4'	2.26	0.65
44:2:1283:A:OP2	44:2:1283:A:H4'	1.95	0.65
44:2:1445:G:H2'	44:2:1446:C:C6	2.31	0.65
44:2:2009:C:H2'	44:2:2010:U:H5'	1.76	0.65
44:2:2344:A:N6	44:2:2765:U:H3	1.93	0.65
44:2:3605:C:H6	44:2:3605:C:C5'	2.09	0.65
44:2:4268:C:C2'	44:2:4269:G:H5'	2.26	0.65
44:2:4483:A:C2'	44:2:4519:A:H62	2.09	0.65
44:2:4838:C:C2'	44:2:4839:G:H5''	2.26	0.65
46:4:63:C:H1'	46:4:64:G:C5'	2.25	0.65
5:E:274:VAL:CG1	44:2:4837:U:H6	2.09	0.65
6:F:69:ILE:HD12	44:2:716:U:H5'	1.77	0.65
11:L:56:ARG:HB3	11:L:73:GLY:O	1.97	0.65
13:N:140:LYS:HB2	44:2:125:C:H4'	1.78	0.65
44:2:723:G:N3	44:2:723:G:H2'	2.10	0.65
44:2:1391:C:O5'	44:2:1391:C:H6	1.79	0.65
44:2:1852:A:H5''	44:2:4178:U:O2	1.95	0.65
44:2:2028:G:O2'	44:2:3854:G:H4'	1.96	0.65
44:2:2549:C:H2'	44:2:2550:A:C8	2.30	0.65
44:2:2575:A:H2'	44:2:2576:G:O4'	1.95	0.65
44:2:2695:U:H5''	44:2:2696:C:O4'	1.96	0.65
44:2:2840:G:H5''	44:2:2841:A:OP2	1.96	0.65
44:2:4260:U:H2'	44:2:4261:U:C6	2.30	0.65
44:2:4685:G:H2'	44:2:4686:A:H8	1.61	0.65
8:H:92:MET:HE1	8:H:161:ILE:HB	1.78	0.65
25:Z:58:GLY:HA3	44:2:4109:C:OP1	1.97	0.65
44:2:99:A:H3'	44:2:100:C:C6	2.31	0.65
44:2:426:A:H2'	44:2:427:C:H5'	1.77	0.65
44:2:1377:A:H2'	44:2:1400:A:N6	2.10	0.65
44:2:1387:C:H3'	44:2:1388:G:N7	2.11	0.65
44:2:1758:U:H2'	44:2:1759:A:C8	2.31	0.65
44:2:2061:C:H41	44:2:2249:G:H1	1.43	0.65
44:2:2253:C:H2'	44:2:2254:G:H5'	1.78	0.65
44:2:3744:A:C3'	44:2:3745:G:H5''	2.26	0.65
44:2:3842:G:H2'	44:2:3843:G:C8	2.32	0.65
44:2:4033:G:H2'	44:2:4034:U:C6	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4695:C:C2'	44:2:4696:G:H8	2.09	0.65
6:F:117:ILE:HD11	6:F:222:LYS:NZ	2.11	0.65
8:H:96:TYR:HA	8:H:177:ASP:OD1	1.96	0.65
33:h:45:SER:O	33:h:48:ARG:HG2	1.97	0.65
44:2:386:A:O5'	44:2:386:A:C8	2.49	0.65
44:2:640:A:O2'	44:2:641:C:H5'	1.96	0.65
44:2:710:G:O2'	44:2:711:A:H5'	1.96	0.65
44:2:717:G:H3'	44:2:718:G:H5'	1.79	0.65
44:2:1264:G:H2'	44:2:1265:U:H5'	1.77	0.65
44:2:1422:C:H3'	44:2:1422:C:O2	1.97	0.65
44:2:1503:A:H3'	44:2:1504:A:C5'	2.26	0.65
44:2:2308:A:H4'	44:2:2309:G:C5'	2.23	0.65
44:2:2416:G:H1'	44:2:2754:G:C2	2.31	0.65
44:2:2526:G:H5''	44:2:2527:G:H5''	1.78	0.65
44:2:2661:C:H2'	44:2:2662:C:H6	1.57	0.65
44:2:3722:G:H2'	44:2:3723:G:H1'	1.77	0.65
44:2:4673:G:H3'	44:2:4674:C:H6	1.61	0.65
44:2:4700:C:C3'	44:2:4701:G:H5''	2.18	0.65
3:C:147:VAL:O	42:t:76:SER:HA	1.96	0.65
6:F:66:ARG:HA	6:F:69:ILE:CD1	2.26	0.65
23:X:76:ILE:O	23:X:100:VAL:HG13	1.96	0.65
25:Z:17:ARG:HD3	32:g:75:SER:HB3	1.79	0.65
32:g:76:ARG:HH21	44:2:2559:A:P	2.19	0.65
43:u:104:PHE:CE1	43:u:122:LEU:HD21	2.32	0.65
44:2:640:A:C2'	44:2:641:C:H5'	2.27	0.65
44:2:928:A:C2	44:2:931:C:N4	2.65	0.65
44:2:1161:C:C6	44:2:1161:C:H5''	2.32	0.65
44:2:1399:G:C3'	44:2:1400:A:H5''	2.27	0.65
44:2:2027:G:H8	44:2:2027:G:H5'	1.62	0.65
44:2:2371:G:H4'	44:2:2372:A:OP1	1.96	0.65
44:2:4687:U:C5'	44:2:4688:A:H5''	2.27	0.65
44:2:4736:C:H1'	44:2:4815:G:C2	2.31	0.65
44:2:4740:U:O2'	44:2:4741:C:H4'	1.96	0.65
44:2:4983:G:H2'	44:2:4984:C:C6	2.31	0.65
14:O:182:GLU:CA	14:O:187:LYS:HD3	2.27	0.65
19:T:4:THR:HG21	44:2:4168:U:C5	2.28	0.65
20:U:61:VAL:HG12	20:U:74:SER:HB2	1.79	0.65
44:2:33:A:H5''	44:2:33:A:H8	1.62	0.65
44:2:1351:A:C3'	44:2:1352:A:H8	2.03	0.65
44:2:2021:A:C4	44:2:4476:G:H1'	2.32	0.65
44:2:2838:C:O2'	44:2:2839:G:C8	2.47	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4524:A:H2'	44:2:4525:C:C6	2.32	0.65
44:2:4893:A:P	44:2:4893:A:H3'	2.37	0.65
44:2:4896:G:H4'	44:2:4897:C:O5'	1.97	0.65
46:4:68:C:O2	46:4:68:C:H2'	1.95	0.65
1:A:196:TRP:CH2	44:2:1592:A:N3	2.65	0.65
8:H:132:VAL:HG11	8:H:154:VAL:HA	1.78	0.65
14:O:109:PRO:O	14:O:112:TYR:HB2	1.96	0.65
27:b:61:ASN:HB2	44:2:1790:G:O2'	1.95	0.65
32:g:64:LEU:HD13	44:2:2726:C:H1'	1.78	0.65
42:t:87:ARG:HB2	44:2:670:C:P	2.37	0.65
43:u:114:ILE:HG13	43:u:118:LEU:HD23	1.77	0.65
43:u:198:VAL:HG13	43:u:210:VAL:HG22	1.78	0.65
44:2:192:C:O5'	44:2:192:C:H6	1.79	0.65
44:2:194:A:C2	44:2:240:A:C2	2.85	0.65
44:2:346:A:C2	44:2:347:G:C1'	2.79	0.65
44:2:1357:G:N7	44:2:1360:G:H2'	2.12	0.65
44:2:2305:U:H2'	44:2:2306:G:H8	1.58	0.65
44:2:2587:G:H1'	44:2:2663:G:H2'	1.79	0.65
44:2:3797:A:H5''	44:2:3798:G:OP2	1.97	0.65
44:2:4084:U:H1'	44:2:4085:U:OP1	1.97	0.65
44:2:4245:U:H2'	44:2:4246:C:C6	2.31	0.65
44:2:4397:U:C5	44:2:4475:G:H4'	2.31	0.65
44:2:4656:C:H2'	44:2:4657:U:C6	2.31	0.65
44:2:4743:C:H2'	44:2:4744:C:C5	2.31	0.65
44:2:4927:U:H3	44:2:4941:G:H1	1.45	0.65
45:3:40:A:H2'	45:3:41:A:H8	1.62	0.65
3:C:209:ILE:HD12	3:C:211:TYR:HE2	1.61	0.65
6:F:63:GLN:OE1	44:2:1191:G:H4'	1.97	0.65
12:M:62:LEU:CD2	12:M:82:ILE:HG13	2.27	0.65
35:j:3:LYS:HG2	44:2:3612:A:N7	2.12	0.65
44:2:663:G:H2'	44:2:664:C:H6	1.61	0.65
44:2:1086:A:OP1	44:2:1086:A:C8	2.50	0.65
44:2:1221:C:H3'	44:2:1221:C:H6	1.61	0.65
44:2:1388:G:H2'	44:2:1388:G:N3	2.12	0.65
44:2:1797:G:N2	44:2:1801:U:H5''	2.11	0.65
44:2:1869:A:N7	44:2:1870:A:C6	2.64	0.65
44:2:2392:U:H2'	44:2:2393:G:H8	1.61	0.65
44:2:2709:G:H2'	44:2:2710:C:C6	2.32	0.65
44:2:3930:G:H2'	44:2:3931:A:H5''	1.78	0.65
45:3:126:C:C5'	45:3:128:C:C5	2.80	0.65
1:A:196:TRP:CZ3	44:2:1592:A:H2	2.14	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:18:ARG:NE	10:J:135:GLY:HA3	2.11	0.65
11:L:47:ALA:HB1	11:L:48:PRO:CD	2.26	0.65
15:P:67:VAL:HG12	15:P:68:GLY:H	1.62	0.65
16:Q:75:ARG:NE	16:Q:78:LYS:HG3	2.12	0.65
23:X:56:ARG:CB	44:2:14:C:H4'	2.27	0.65
24:Y:121:ARG:HA	24:Y:125:SER:CB	2.27	0.65
36:k:35:LYS:NZ	44:2:2670:G:OP1	2.29	0.65
42:t:103:ARG:HB3	42:t:107:ARG:HB2	1.79	0.65
44:2:82:U:H3	44:2:101:A:H62	1.45	0.65
44:2:1388:G:C2	44:2:1389:C:H1'	2.32	0.65
44:2:1389:C:H3'	44:2:1389:C:O2	1.96	0.65
44:2:1877:G:C5	44:2:2254:G:C6	2.85	0.65
44:2:2333:U:H5'	44:2:2333:U:C6	2.28	0.65
44:2:2629:G:H3'	44:2:2630:C:H4'	1.76	0.65
44:2:3750:C:H5'	44:2:3790:A:H4'	1.78	0.65
44:2:3866:G:C2	44:2:4519:A:H2	2.15	0.65
44:2:5015:A:H5''	44:2:5016:A:OP1	1.97	0.65
12:M:129:LYS:O	12:M:132:LYS:HB3	1.97	0.65
33:h:78:TYR:CE1	44:2:16:G:C4'	2.67	0.65
43:u:156:ARG:CB	44:2:3935:A:C2	2.80	0.65
44:2:477:C:O2	44:2:477:C:H2'	1.95	0.65
44:2:1078:G:H2'	44:2:1079:C:H5'	1.79	0.65
44:2:1374:G:H2'	44:2:1375:U:C6	2.32	0.65
44:2:1742:C:H3'	44:2:1743:G:C5'	2.26	0.65
44:2:2305:U:C3'	44:2:2306:G:H8	2.10	0.65
44:2:4857:C:H2'	44:2:4858:G:H8	1.61	0.65
45:3:79:G:H8	45:3:79:G:O5'	1.79	0.65
2:B:252:ALA:HB3	44:2:4417:U:O2	1.96	0.64
3:C:183:VAL:HG11	3:C:206:GLY:HA2	1.78	0.64
31:f:4:ARG:HB3	44:2:4712:U:H5''	1.79	0.64
35:j:15:THR:HG23	44:2:1513:A:C2	2.32	0.64
41:p:29:ILE:HG13	41:p:30:GLU:N	2.12	0.64
44:2:183:G:C2'	44:2:184:U:H5'	2.27	0.64
44:2:735:A:H2'	44:2:736:G:C8	2.31	0.64
44:2:1517:U:H2'	44:2:1518:G:H5'	1.78	0.64
44:2:1648:A:N3	44:2:1830:U:H4'	2.11	0.64
44:2:1738:G:H1	44:2:1752:U:H3	1.45	0.64
44:2:2045:C:H2'	44:2:2046:C:C5	2.32	0.64
44:2:2357:G:N2	44:2:2401:G:H5''	2.11	0.64
44:2:3630:G:H4'	44:2:3631:A:H5''	1.77	0.64
44:2:3873:G:H2'	44:2:3873:G:P	2.36	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4746:C:H2'	44:2:4747:C:C6	2.33	0.64
3:C:330:PRO:HB2	6:F:51:TYR:CZ	2.31	0.64
7:G:189:ARG:NH2	45:3:154:G:C5'	2.54	0.64
10:J:57:VAL:HG11	10:J:60:PHE:CD2	2.33	0.64
12:M:97:ALA:CB	44:2:4826:C:H42	2.11	0.64
12:M:116:LYS:HD3	44:2:4835:C:H41	1.61	0.64
15:P:48:LEU:HD23	15:P:88:ALA:O	1.97	0.64
21:V:42:VAL:O	21:V:45:ILE:HG23	1.97	0.64
24:Y:44:VAL:HG23	24:Y:123:ALA:CB	2.26	0.64
28:c:62:TYR:CE2	28:c:66:LEU:HD11	2.31	0.64
30:e:58:ILE:HD11	44:2:2057:G:H4'	1.80	0.64
43:u:5:ILE:CD1	43:u:177:ILE:HG21	2.27	0.64
44:2:1056:C:H42	44:2:1204:G:N2	1.96	0.64
44:2:1085:C:OP2	44:2:1085:C:H4'	1.95	0.64
44:2:1369:U:H5''	44:2:1475:G:O2'	1.97	0.64
44:2:1717:A:O3'	46:4:101:A:C2	2.50	0.64
44:2:1743:G:C2'	44:2:1744:A:H5'	2.27	0.64
44:2:2556:G:H2'	44:2:2556:G:OP2	1.97	0.64
44:2:3729:A:H1'	44:2:3730:C:OP2	1.97	0.64
44:2:4343:U:H2'	44:2:4344:U:C6	2.32	0.64
44:2:4507:C:H3'	44:2:4508:A:H5''	1.78	0.64
44:2:4537:U:H2'	44:2:4538:G:C8	2.32	0.64
44:2:4869:C:H3'	44:2:4869:C:H6	1.62	0.64
2:B:56:ILE:HG21	2:B:365:LEU:HD22	1.78	0.64
25:Z:136:PHE:N	44:2:4089:G:H21	1.96	0.64
38:m:93:LYS:HB2	38:m:124:LYS:HE2	1.78	0.64
44:2:69:A:C2	44:2:70:A:H4'	2.33	0.64
44:2:154:U:H4'	44:2:157:G:O3'	1.97	0.64
44:2:425:A:H3'	44:2:425:A:C8	2.32	0.64
44:2:947:G:H2'	44:2:948:A:H5'	1.80	0.64
44:2:1539:A:C2'	44:2:1540:G:H5'	2.27	0.64
44:2:2301:C:C2'	44:2:2302:G:H5'	2.27	0.64
44:2:2549:C:C1'	44:2:2550:A:H8	2.11	0.64
44:2:3695:A:HO2'	44:2:3696:A:H8	1.42	0.64
44:2:4037:U:C6	44:2:4038:U:C6	2.85	0.64
44:2:4131:C:H3'	44:2:4132:A:H8	1.61	0.64
44:2:4568:G:H2'	44:2:4569:G:O4'	1.98	0.64
44:2:4803:C:H3'	44:2:4804:G:H5''	1.78	0.64
2:B:156:TYR:CE1	44:2:4864:A:H5'	2.32	0.64
6:F:55:LYS:NZ	44:2:973:U:H2'	2.12	0.64
12:M:23:LYS:HE3	12:M:43:THR:O	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:V:129:TRP:HB2	21:V:132:ILE:HD12	1.79	0.64
44:2:32:G:H21	44:2:50:C:H41	1.44	0.64
44:2:89:C:C2'	44:2:90:G:H5'	2.26	0.64
44:2:139:G:OP2	44:2:139:G:H8	1.81	0.64
44:2:441:G:H1'	44:2:1274:A:H4'	1.79	0.64
44:2:642:C:H3'	44:2:643:G:C5'	2.27	0.64
44:2:718:G:C8	44:2:719:G:C2	2.85	0.64
44:2:730:G:H8	44:2:730:G:O5'	1.81	0.64
44:2:1663:A:H5'	44:2:1664:G:OP2	1.98	0.64
44:2:2380:A:H3'	44:2:2381:A:H8	1.62	0.64
44:2:2451:G:H2'	44:2:2452:G:C1'	2.26	0.64
44:2:3725:A:O2'	44:2:3726:G:H5'	1.98	0.64
44:2:3913:G:C4	44:2:3914:A:C8	2.84	0.64
44:2:3936:G:H3'	44:2:3937:U:C5	2.33	0.64
44:2:4745:G:H2'	44:2:4746:C:H6	1.63	0.64
46:4:23:A:N3	46:4:119:U:C1'	2.58	0.64
3:C:54:VAL:CG2	44:2:2320:G:N7	2.60	0.64
5:E:188:ARG:H	5:E:188:ARG:CD	2.08	0.64
6:F:48:LYS:CB	44:2:1220:G:H5'	2.28	0.64
7:G:65:ARG:NH2	45:3:150:C:C4	2.64	0.64
15:P:45:THR:HG23	15:P:92:LEU:HD11	1.79	0.64
16:Q:23:ILE:HG23	42:t:8:MET:HG3	1.79	0.64
17:R:118:HIS:CE1	44:2:2638:U:H3	2.15	0.64
43:u:62:PHE:CE1	43:u:110:LEU:HG	2.32	0.64
44:2:175:C:H2'	44:2:176:G:H8	1.62	0.64
44:2:224:A:C2	44:2:225:C:H1'	2.32	0.64
44:2:965:C:N4	44:2:1249:G:C6	2.65	0.64
44:2:1198:G:O2'	44:2:1199:G:H5'	1.97	0.64
44:2:1217:C:O2'	44:2:1218:A:H5''	1.98	0.64
44:2:1667:G:O2'	44:2:1668:G:H5'	1.98	0.64
44:2:2059:C:O2'	44:2:2060:G:H5'	1.98	0.64
44:2:2747:C:H2'	44:2:2748:G:C8	2.33	0.64
44:2:3604:A:C3'	44:2:3605:C:H5''	2.26	0.64
44:2:4905:U:H2'	44:2:4906:G:H5'	1.80	0.64
45:3:37:A:H5''	45:3:39:G:O4'	1.97	0.64
46:4:7:G:O2'	46:4:8:G:H5'	1.97	0.64
3:C:139:SER:C	42:t:14:SER:HA	2.23	0.64
3:C:164:THR:HG22	3:C:220:ALA:O	1.97	0.64
10:J:13:ARG:HH21	46:4:54:A:H4'	1.61	0.64
31:f:59:THR:HB	44:2:1279:G:H5'	1.78	0.64
44:2:135:G:C8	44:2:135:G:C3'	2.77	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1197:G:O3'	44:2:1198:G:H8	1.81	0.64
44:2:1331:G:H2'	44:2:1332:C:O4'	1.97	0.64
44:2:1727:U:H6	44:2:1727:U:C5'	2.09	0.64
44:2:1823:U:H2'	44:2:1824:G:H8	1.62	0.64
44:2:1918:G:H8	44:2:1918:G:OP2	1.80	0.64
44:2:2348:U:P	44:2:2348:U:O4'	2.54	0.64
44:2:4028:U:H2'	44:2:4029:G:H8	1.62	0.64
44:2:4426:C:H2'	44:2:4427:A:H5'	1.79	0.64
2:B:41:VAL:HA	2:B:187:GLY:HA3	1.80	0.64
4:D:264:LYS:HG2	46:4:1:G:N7	2.13	0.64
7:G:117:ARG:O	7:G:121:LYS:HG2	1.96	0.64
11:L:156:PRO:HB3	44:2:1359:C:C4	2.32	0.64
12:M:2:VAL:HG22	44:2:4723:A:H2	1.63	0.64
16:Q:157:GLY:O	16:Q:161:SER:HB2	1.98	0.64
23:X:93:ASN:ND2	44:2:2510:C:H4'	2.13	0.64
26:a:70:CYS:HA	26:a:109:TYR:CB	2.28	0.64
26:a:70:CYS:HA	26:a:109:TYR:HB3	1.80	0.64
28:c:53:PRO:HD2	44:2:2651:A:N1	2.13	0.64
43:u:87:LEU:HB3	43:u:117:TYR:CZ	2.33	0.64
43:u:160:HIS:CD2	44:2:4021:A:H2	2.13	0.64
43:u:199:TYR:CE2	43:u:209:GLU:HB3	2.32	0.64
44:2:163:C:H2'	44:2:164:C:H6	1.62	0.64
44:2:438:C:H2'	44:2:439:G:C8	2.31	0.64
44:2:1274:A:H2'	44:2:1275:C:H6	1.63	0.64
44:2:1276:G:C3'	44:2:1277:U:H4'	2.18	0.64
44:2:1387:C:H6	44:2:1387:C:C5'	2.11	0.64
44:2:2321:U:H6	44:2:2321:U:H5'	1.61	0.64
44:2:2624:A:C2	44:2:2665:G:C4	2.86	0.64
44:2:3733:U:H3'	44:2:3734:G:C8	2.33	0.64
44:2:4285:A:C5	44:2:4286:G:H1'	2.33	0.64
44:2:4570:A:OP1	44:2:4570:A:H4'	1.96	0.64
46:4:74:A:H4'	46:4:75:G:O5'	1.98	0.64
1:A:20:VAL:HG13	44:2:3648:U:C4	2.33	0.64
2:B:95:THR:CG2	44:2:4865:A:H4'	2.28	0.64
26:a:74:ASN:HA	26:a:112:LEU:O	1.98	0.64
27:b:54:LEU:HA	27:b:58:GLN:HB2	1.79	0.64
36:k:25:ILE:HD12	36:k:66:VAL:HG13	1.79	0.64
43:u:43:VAL:HG11	43:u:151:LEU:HG	1.80	0.64
44:2:13:U:H4'	44:2:14:C:OP2	1.97	0.64
44:2:418:A:N6	45:3:7:U:H3	1.96	0.64
44:2:470:G:C2'	44:2:471:C:H5'	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2310:G:O5'	44:2:2310:G:H8	1.81	0.64
44:2:2848:A:H3'	44:2:2849:C:C6	2.32	0.64
44:2:3725:A:C2	44:2:3726:G:C5	2.85	0.64
44:2:4518:U:H2'	44:2:4519:A:H5'	1.78	0.64
44:2:4738:U:C2'	44:2:4739:G:H5'	2.28	0.64
46:4:22:A:H3'	46:4:22:A:OP2	1.98	0.64
12:M:57:LEU:HD12	18:S:176:PHE:HZ	1.63	0.64
20:U:61:VAL:HG12	20:U:74:SER:CB	2.28	0.64
29:d:57:MET:HB2	29:d:59:THR:HG22	1.78	0.64
34:i:99:LYS:HD3	43:u:195:ILE:O	1.98	0.64
43:u:160:HIS:ND1	44:2:4021:A:H2'	2.12	0.64
44:2:69:A:N3	44:2:69:A:H3'	2.12	0.64
44:2:1456:C:H6	44:2:1456:C:O5'	1.81	0.64
44:2:1480:C:OP1	44:2:1480:C:H3'	1.97	0.64
44:2:1743:G:H2'	44:2:1744:A:H5'	1.79	0.64
44:2:2514:A:H2'	44:2:2515:U:C6	2.32	0.64
44:2:2608:U:C2'	44:2:2609:U:H4'	2.28	0.64
44:2:3586:G:OP2	44:2:3586:G:C4	2.51	0.64
44:2:4625:A:H2'	44:2:4626:G:C8	2.32	0.64
44:2:4869:C:C6	44:2:4869:C:C3'	2.80	0.64
45:3:84:A:H4'	45:3:85:U:OP1	1.97	0.64
11:L:18:TRP:O	11:L:22:VAL:HG23	1.98	0.64
12:M:31:ILE:CD1	18:S:100:LEU:HD11	2.27	0.64
12:M:112:VAL:HA	14:O:197:LYS:CE	2.27	0.64
17:R:128:LYS:HB3	44:2:1536:C:O2'	1.97	0.64
44:2:133:C:H2'	44:2:135:G:N1	2.12	0.64
44:2:218:C:H6	44:2:218:C:O5'	1.81	0.64
44:2:277:U:O5'	44:2:277:U:H6	1.80	0.64
44:2:434:G:N1	44:2:1284:C:N4	2.45	0.64
44:2:917:G:H4'	44:2:918:C:O5'	1.98	0.64
44:2:1377:A:O4'	44:2:1447:C:H4'	1.98	0.64
44:2:1464:C:H2'	44:2:1465:C:O4'	1.97	0.64
44:2:3779:C:C6	44:2:3779:C:C3'	2.81	0.64
44:2:4507:C:C3'	44:2:4508:A:H5''	2.28	0.64
44:2:4668:A:H5'	44:2:4669:U:C5	2.33	0.64
44:2:4833:C:H2'	44:2:4834:C:H6	1.63	0.64
2:B:17:LEU:HB3	2:B:18:PRO:HD3	1.80	0.63
2:B:322:HIS:O	2:B:342:LYS:HE3	1.97	0.63
9:I:158:LYS:HE2	44:2:4389:C:H42	1.62	0.63
30:e:97:ALA:O	30:e:122:VAL:HA	1.99	0.63
34:i:33:LEU:O	34:i:34:THR:HB	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:98:A:H1'	44:2:283:G:O6	1.97	0.63
44:2:147:U:H4'	44:2:149:U:C6	2.32	0.63
44:2:1197:G:H2'	44:2:1198:G:C8	2.33	0.63
44:2:1710:C:H42	44:2:1777:G:H1	1.45	0.63
44:2:1801:U:H3'	44:2:1801:U:C6	2.33	0.63
44:2:2374:G:O2'	44:2:2375:U:H3'	1.98	0.63
44:2:2673:A:H4'	44:2:2674:A:C5'	2.28	0.63
44:2:2743:A:H2'	44:2:2744:U:C4	2.32	0.63
44:2:2836:G:H2'	44:2:2837:C:C6	2.33	0.63
44:2:3877:A:C3'	44:2:3878:C:H5'	2.27	0.63
44:2:4813:C:H4'	44:2:4814:C:OP1	1.98	0.63
44:2:4975:G:H2'	44:2:4976:C:C6	2.33	0.63
45:3:144:U:H2'	45:3:145:C:O4'	1.98	0.63
5:E:136:HIS:O	5:E:137:VAL:HB	1.96	0.63
6:F:148:LYS:HG3	44:2:926:G:H5''	1.80	0.63
8:H:117:PHE:HB3	8:H:124:ARG:HH21	1.63	0.63
9:I:32:ARG:HG3	9:I:33:ILE:HD13	1.80	0.63
13:N:55:ALA:O	44:2:146:A:H4'	1.97	0.63
32:g:26:PRO:HD2	44:2:2498:G:H4'	1.80	0.63
43:u:151:LEU:HA	43:u:159:PHE:CE1	2.34	0.63
44:2:83:C:H2'	44:2:100:C:H42	1.61	0.63
44:2:379:A:C2'	44:2:393:A:H61	2.11	0.63
44:2:913:A:H1'	44:2:916:A:H62	1.62	0.63
44:2:948:A:C3'	44:2:949:G:C8	2.81	0.63
44:2:1161:C:H6	44:2:1161:C:H5''	1.62	0.63
44:2:1249:G:C6	44:2:1250:A:C5	2.85	0.63
44:2:1256:C:H2'	44:2:1257:G:C5'	2.28	0.63
44:2:1710:C:H5''	44:2:1710:C:H6	1.63	0.63
44:2:2531:U:H2'	44:2:2532:G:H5'	1.79	0.63
44:2:2666:C:H2'	44:2:2667:C:C6	2.34	0.63
44:2:4120:C:H5''	44:2:4120:C:H6	1.63	0.63
44:2:4895:C:C6	44:2:4895:C:C3'	2.81	0.63
45:3:58:G:OP2	45:3:58:G:H8	1.80	0.63
45:3:126:C:C5'	45:3:128:C:H5	2.09	0.63
1:A:177:LYS:HD3	41:p:29:ILE:HD11	1.78	0.63
1:A:229:ALA:O	1:A:234:LYS:HE3	1.97	0.63
1:A:240:ALA:CB	44:2:3627:C:H4'	2.27	0.63
4:D:146:LEU:CB	44:2:4283:A:C2	2.81	0.63
11:L:169:ILE:HG12	26:a:98:ALA:CB	2.26	0.63
16:Q:23:ILE:O	16:Q:27:LEU:HG	1.97	0.63
20:U:22:THR:CG2	20:U:69:LYS:HE3	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Y:62:TYR:HB3	24:Y:65:GLN:CG	2.28	0.63
30:e:19:LYS:O	30:e:20:PHE:CG	2.52	0.63
31:f:59:THR:HB	44:2:1279:G:H5''	1.80	0.63
36:k:36:VAL:CG1	36:k:43:TYR:HB2	2.28	0.63
42:t:90:LEU:HA	42:t:93:ILE:HG22	1.80	0.63
44:2:155:A:OP1	44:2:157:G:H5'	1.97	0.63
44:2:269:G:H5''	44:2:269:G:H8	1.64	0.63
44:2:446:C:H2'	44:2:447:C:C6	2.34	0.63
44:2:727:G:H5''	44:2:727:G:H8	1.62	0.63
44:2:1160:C:C6	44:2:1160:C:C3'	2.81	0.63
44:2:1170:C:H2'	44:2:1171:C:C6	2.32	0.63
44:2:1245:G:C2'	44:2:1246:G:H5''	2.27	0.63
44:2:1336:U:H2'	44:2:1337:C:C6	2.32	0.63
44:2:1408:U:C2'	44:2:1409:C:H5'	2.28	0.63
44:2:2003:A:N3	44:2:2004:A:H1'	2.13	0.63
44:2:3592:C:C6	44:2:3592:C:C3'	2.81	0.63
44:2:3623:G:H2'	44:2:3624:C:H5'	1.79	0.63
44:2:4066:A:H2'	44:2:4067:G:C8	2.33	0.63
44:2:4161:G:H8	44:2:4161:G:O5'	1.81	0.63
44:2:4657:U:H2'	44:2:4658:C:H5'	1.80	0.63
44:2:4684:C:H2'	44:2:4685:G:C8	2.33	0.63
46:4:63:C:C1'	46:4:64:G:H5''	2.29	0.63
1:A:207:VAL:CG1	44:2:3888:C:H4'	2.26	0.63
5:E:170:SER:HB3	44:2:4896:G:N3	2.14	0.63
14:O:182:GLU:HA	14:O:187:LYS:HD3	1.80	0.63
22:W:3:VAL:HG11	22:W:12:LYS:HE2	1.80	0.63
24:Y:3:PHE:CE2	44:2:1347:C:H5'	2.33	0.63
27:b:58:GLN:CG	44:2:1791:C:H1'	2.28	0.63
30:e:36:ARG:HH12	44:2:2323:C:H4'	1.62	0.63
32:g:63:VAL:HG22	32:g:66:ARG:HH21	1.63	0.63
34:i:33:LEU:HD13	34:i:33:LEU:H	1.63	0.63
43:u:60:VAL:HG22	43:u:101:THR:HB	1.81	0.63
44:2:708:G:H2'	44:2:709:G:C8	2.33	0.63
44:2:3913:G:O5'	44:2:3913:G:H8	1.80	0.63
44:2:4189:U:H5''	44:2:4189:U:C6	2.33	0.63
44:2:4280:G:H3'	44:2:4281:U:H6	1.63	0.63
44:2:4624:A:H5'	44:2:4958:U:H5''	1.80	0.63
2:B:46:PHE:CD2	2:B:84:MET:HE3	2.33	0.63
3:C:86:ARG:HG3	3:C:89:GLN:OE1	1.97	0.63
4:D:86:TYR:CE1	4:D:247:ILE:HA	2.34	0.63
5:E:179:LEU:HD12	44:2:4892:C:H41	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:65:ARG:NH2	45:3:150:C:N4	2.47	0.63
44:2:38:A:H5'	44:2:39:A:H4'	1.78	0.63
44:2:350:A:H5''	44:2:351:A:OP2	1.99	0.63
44:2:381:C:C6	44:2:381:C:OP1	2.52	0.63
44:2:644:U:H2'	44:2:645:C:C6	2.34	0.63
44:2:698:G:H2'	44:2:699:A:C8	2.33	0.63
44:2:1569:C:H3'	44:2:1570:U:H4'	1.80	0.63
44:2:2305:U:C2'	44:2:2306:G:H8	2.10	0.63
44:2:2416:G:C2'	44:2:2495:G:H22	2.07	0.63
44:2:2531:U:C2'	44:2:2532:G:H5'	2.29	0.63
44:2:2625:G:C1'	44:2:2663:G:O6	2.46	0.63
44:2:3743:A:H5''	44:2:3743:A:H8	1.61	0.63
44:2:4723:A:H1'	44:2:4724:G:P	2.38	0.63
44:2:4736:C:H42	44:2:4811:G:H1	1.45	0.63
44:2:4819:U:H2'	44:2:4820:C:C6	2.34	0.63
44:2:4978:C:H4'	44:2:4979:C:OP1	1.99	0.63
3:C:308:LYS:NZ	44:2:2064:G:H4'	2.14	0.63
5:E:182:ASN:HD21	5:E:271:LEU:HB3	1.63	0.63
23:X:64:SER:HB3	33:h:69:LEU:HD13	1.81	0.63
31:f:23:GLU:OE1	44:2:430:G:H1'	1.98	0.63
44:2:215:A:H4'	44:2:216:G:OP1	1.98	0.63
44:2:502:C:H2'	44:2:503:U:C6	2.34	0.63
44:2:948:A:H2'	44:2:949:G:C4	2.33	0.63
44:2:1374:G:H22	44:2:1449:G:H4'	1.63	0.63
44:2:1460:C:C6	44:2:1460:C:C3'	2.80	0.63
44:2:1754:A:C5	44:2:1755:A:C8	2.86	0.63
44:2:1845:A:H2'	44:2:1846:A:H5'	1.80	0.63
44:2:2326:A:H5'	44:2:2327:U:H5''	1.81	0.63
44:2:4040:C:H2'	44:2:4041:A:C8	2.34	0.63
44:2:4539:U:H2'	44:2:4540:U:C6	2.33	0.63
44:2:4589:U:H3	44:2:4629:A:H61	1.47	0.63
44:2:4863:G:H2'	44:2:4864:A:H5''	1.81	0.63
44:2:4944:U:H4'	44:2:4945:C:O5'	1.98	0.63
44:2:4970:G:H21	44:2:4989:A:H2	1.45	0.63
45:3:126:C:H5	45:3:127:U:C2	2.17	0.63
2:B:73:VAL:HG22	21:V:93:GLY:CA	2.29	0.63
3:C:209:ILE:HD12	3:C:211:TYR:CE2	2.34	0.63
6:F:87:PRO:HG2	6:F:144:TYR:CZ	2.34	0.63
7:G:106:THR:HB	7:G:195:HIS:CG	2.33	0.63
9:I:12:CYS:SG	9:I:59:GLN:HG3	2.38	0.63
15:P:6:LEU:CD2	44:2:416:U:H1'	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:X:80:PRO:HG2	23:X:155:ILE:HD11	1.81	0.63
40:o:31:ASP:OD2	44:2:4303:U:H4'	1.99	0.63
44:2:476:C:H6	44:2:476:C:C5'	2.09	0.63
44:2:1161:C:C6	44:2:1161:C:C3'	2.82	0.63
44:2:1524:G:H5''	44:2:1525:C:OP2	1.98	0.63
44:2:1533:A:H2'	44:2:1533:A:N3	2.13	0.63
44:2:1856:G:H2'	44:2:1857:C:C6	2.33	0.63
44:2:1873:G:H2'	44:2:1874:A:O4'	1.98	0.63
44:2:2274:U:OP2	44:2:2274:U:H6	1.81	0.63
44:2:2693:C:H2'	44:2:2694:G:H8	1.64	0.63
44:2:4383:U:H3'	44:2:4383:U:C6	2.34	0.63
44:2:4740:U:H4'	44:2:4741:C:OP1	1.98	0.63
3:C:188:ARG:HH12	3:C:202:ILE:HD12	1.64	0.63
3:C:333:LYS:NZ	44:2:1217:C:H5'	2.13	0.63
5:E:168:LEU:HD21	5:E:214:ASP:CA	2.29	0.63
24:Y:49:ILE:HD13	24:Y:80:ILE:HG21	1.79	0.63
28:c:38:ILE:HD13	28:c:43:ALA:HB2	1.81	0.63
32:g:70:THR:CG2	44:2:2564:A:N7	2.62	0.63
42:t:30:ASN:O	42:t:48:THR:HB	1.99	0.63
44:2:1:C:C2	45:3:157:U:C2	2.86	0.63
44:2:77:U:H3	44:2:327:A:H61	1.45	0.63
44:2:96:U:C6	44:2:96:U:H5''	2.33	0.63
44:2:179:G:H2'	44:2:180:C:O4'	1.99	0.63
44:2:445:U:H3'	44:2:446:C:C6	2.34	0.63
44:2:928:A:H2	44:2:931:C:N4	1.95	0.63
44:2:943:G:H4'	44:2:943:G:OP1	1.97	0.63
44:2:976:C:O2'	44:2:977:G:H5'	1.98	0.63
44:2:1078:G:C2'	44:2:1079:C:H5'	2.29	0.63
44:2:1162:C:H2'	44:2:1163:C:C5	2.34	0.63
44:2:1483:G:H2'	44:2:1484:C:C6	2.33	0.63
44:2:2549:C:C4'	44:2:2736:G:H2'	2.25	0.63
44:2:2627:G:H5''	44:2:2627:G:H8	1.63	0.63
44:2:2702:A:H4'	44:2:2703:G:C5'	2.29	0.63
44:2:4656:C:H2'	44:2:4657:U:H6	1.63	0.63
44:2:4903:C:C2'	44:2:4904:G:H5'	2.29	0.63
45:3:105:C:H4'	45:3:106:G:C5'	2.29	0.63
2:B:20:LYS:HD3	44:2:4677:A:H4'	1.80	0.63
4:D:14:LYS:HA	46:4:66:G:O3'	1.99	0.63
4:D:272:SER:HB3	44:2:1167:G:H4'	1.81	0.63
9:I:182:GLU:HA	9:I:185:VAL:HG12	1.81	0.63
11:L:167:ARG:C	26:a:97:ALA:HA	2.23	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:N:139:HIS:HB3	13:N:142:ILE:HD13	1.81	0.63
15:P:22:LEU:HD13	15:P:90:PHE:CZ	2.34	0.63
16:Q:172:ARG:O	16:Q:173:LYS:HB3	1.98	0.63
34:i:40:VAL:O	34:i:44:ILE:HG12	1.99	0.63
43:u:158:THR:HB	44:2:4023:U:H1'	1.77	0.63
43:u:158:THR:CB	44:2:4023:U:C1'	2.65	0.63
44:2:15:A:C2	45:3:143:G:C2	2.87	0.63
44:2:99:A:H3'	44:2:100:C:H6	1.64	0.63
44:2:1203:G:C5'	44:2:1210:U:H5	2.11	0.63
44:2:1244:C:H2'	44:2:1245:G:C8	2.34	0.63
44:2:1281:C:C6	44:2:1281:C:C3'	2.80	0.63
44:2:1783:A:H5''	44:2:1785:G:C8	2.34	0.63
44:2:2028:G:H8	44:2:2028:G:O5'	1.80	0.63
44:2:2620:G:C2'	44:2:2621:G:H5'	2.29	0.63
44:2:2703:G:H1'	44:2:2704:C:OP1	1.99	0.63
44:2:2839:G:H4'	44:2:2840:G:OP2	1.97	0.63
44:2:2869:C:H4'	44:2:4973:C:H5'	1.79	0.63
44:2:4025:C:C6	44:2:4025:C:C3'	2.81	0.63
44:2:4051:U:H2'	44:2:4052:G:H5''	1.81	0.63
44:2:4233:A:H5''	44:2:4233:A:H8	1.64	0.63
44:2:4734:C:H2'	44:2:4735:G:H5'	1.80	0.63
44:2:4861:C:C2'	44:2:4862:G:H5'	2.28	0.63
46:4:63:C:H4'	46:4:64:G:O5'	1.99	0.63
3:C:209:ILE:HG22	3:C:251:ILE:HB	1.81	0.62
5:E:154:THR:HG22	44:2:4902:U:H3	1.64	0.62
5:E:274:VAL:HG12	44:2:4837:U:H6	1.63	0.62
10:J:36:ALA:HB3	10:J:70:VAL:HG21	1.79	0.62
14:O:163:LYS:O	14:O:166:ILE:HG12	1.99	0.62
23:X:56:ARG:NH2	45:3:136:U:C5'	2.62	0.62
28:c:17:ARG:O	28:c:21:VAL:HG23	1.99	0.62
35:j:54:LYS:O	35:j:58:THR:HG23	1.99	0.62
44:2:220:G:H4'	44:2:222:G:N7	2.14	0.62
44:2:244:G:H2'	44:2:245:C:C6	2.34	0.62
44:2:477:C:H1'	44:2:478:G:OP2	1.99	0.62
44:2:717:G:H5'	44:2:717:G:C8	2.34	0.62
44:2:1193:G:P	44:2:1193:G:H3'	2.38	0.62
44:2:1732:G:H3'	44:2:1733:U:H4'	1.80	0.62
44:2:2549:C:C2'	44:2:2550:A:H8	2.12	0.62
44:2:4510:G:C2'	44:2:4511:U:H5'	2.28	0.62
44:2:4526:U:H3'	44:2:4526:U:C6	2.32	0.62
44:2:5018:G:H8	44:2:5018:G:OP2	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:196:TRP:HH2	44:2:1592:A:N3	1.97	0.62
5:E:158:ARG:HD3	44:2:4902:U:O2	1.99	0.62
7:G:38:ASN:O	7:G:44:ASP:HB2	1.98	0.62
11:L:15:HIS:ND1	44:2:46:U:H5''	2.13	0.62
12:M:119:ARG:HA	14:O:190:ASP:HB3	1.81	0.62
32:g:76:ARG:NH2	44:2:2559:A:H5''	2.14	0.62
37:l:34:LYS:NZ	44:2:352:C:H4'	2.14	0.62
44:2:457:A:H2'	44:2:457:A:N3	2.13	0.62
44:2:1079:C:H3'	44:2:1080:U:H5''	1.80	0.62
44:2:1249:G:H8	44:2:1249:G:O5'	1.81	0.62
44:2:1377:A:H8	44:2:1377:A:O5'	1.82	0.62
44:2:2588:A:H5'	44:2:2665:G:H5''	1.82	0.62
44:2:4560:G:OP1	44:2:4560:G:H4'	2.00	0.62
44:2:4830:G:C3'	44:2:4831:U:H4'	2.26	0.62
3:C:141:GLY:CA	42:t:15:SER:HB3	2.30	0.62
14:O:167:HIS:CD2	14:O:171:LYS:HB2	2.34	0.62
44:2:131:C:H2'	44:2:138:C:H41	1.64	0.62
44:2:134:G:H5''	44:2:135:G:N1	2.14	0.62
44:2:476:C:P	44:2:658:G:H5'	2.39	0.62
44:2:4015:A:H5''	44:2:4016:A:OP2	1.99	0.62
44:2:4682:A:H2'	44:2:4683:A:C8	2.34	0.62
3:C:74:ALA:C	3:C:76:ILE:H	2.08	0.62
4:D:91:GLY:HA2	46:4:48:G:H5''	1.81	0.62
4:D:263:LYS:O	4:D:264:LYS:CB	2.48	0.62
5:E:188:ARG:HD3	5:E:188:ARG:N	2.12	0.62
6:F:44:LYS:HE3	44:2:956:C:H5''	1.82	0.62
43:u:31:LEU:O	44:2:4023:U:O3'	2.17	0.62
44:2:482:G:H8	44:2:482:G:C5'	2.10	0.62
44:2:700:C:C3'	44:2:701:C:C5'	2.73	0.62
44:2:959:C:H3'	44:2:1215:G:N2	2.14	0.62
44:2:1048:G:H5''	44:2:1215:G:C8	2.34	0.62
44:2:1218:A:C8	44:2:1218:A:C5'	2.79	0.62
44:2:1256:C:O2'	44:2:1257:G:H5'	1.99	0.62
44:2:1460:C:H42	44:2:1463:G:N2	1.97	0.62
44:2:2352:A:H3'	44:2:2353:A:H8	1.65	0.62
44:2:3888:C:H6	44:2:3888:C:O5'	1.82	0.62
44:2:4051:U:O2'	44:2:4052:G:H3'	2.00	0.62
44:2:4384:A:H5'	44:2:4385:G:OP2	1.99	0.62
44:2:4813:C:H2'	44:2:4814:C:H5'	1.79	0.62
45:3:19:C:O2'	45:3:20:A:H5'	1.98	0.62
1:A:136:VAL:HG22	1:A:148:VAL:HG12	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:O:172:LYS:HG2	14:O:176:ARG:NH1	2.14	0.62
16:Q:65:ARG:N	44:2:1481:G:C2	2.67	0.62
27:b:57:MET:CB	44:2:1791:C:H4'	2.28	0.62
31:f:4:ARG:HA	44:2:4711:U:O2	2.00	0.62
43:u:30:ASN:N	44:2:4022:C:O3'	2.32	0.62
44:2:219:C:C4	44:2:220:G:N7	2.68	0.62
44:2:1140:C:H2'	44:2:1141:G:C8	2.35	0.62
44:2:1424:G:O2'	44:2:1425:U:H5'	1.99	0.62
44:2:1454:G:C2	44:2:1455:C:H1'	2.34	0.62
44:2:1930:G:C5'	44:2:1930:G:C8	2.81	0.62
44:2:2319:G:O2'	44:2:2320:G:H5'	1.98	0.62
44:2:2333:U:H6	44:2:2333:U:C5'	2.11	0.62
44:2:2847:A:O2'	44:2:2848:A:H5'	2.00	0.62
44:2:4051:U:O2'	44:2:4053:A:H4'	1.99	0.62
44:2:4551:U:C6	44:2:4551:U:H5''	2.35	0.62
45:3:62:A:H4'	45:3:63:U:O5'	1.99	0.62
3:C:199:ARG:HH21	44:2:339:G:H3'	1.65	0.62
3:C:217:ILE:HD11	3:C:221:PHE:CE2	2.34	0.62
3:C:357:ALA:O	3:C:361:LEU:HG	1.99	0.62
4:D:8:LYS:HB3	4:D:13:PHE:CZ	2.35	0.62
5:E:183:ARG:HB2	44:2:4892:C:N3	2.14	0.62
11:L:86:ILE:HD11	11:L:90:VAL:HG11	1.81	0.62
11:L:156:PRO:HA	44:2:1359:C:H5	1.65	0.62
14:O:114:LYS:HA	44:2:4717:U:H6	1.63	0.62
15:P:30:ARG:HA	15:P:119:VAL:HG11	1.82	0.62
16:Q:88:ASP:OD2	16:Q:108:ARG:HB3	2.00	0.62
18:S:101:THR:HG23	18:S:104:GLY:H	1.63	0.62
27:b:15:LYS:HE3	44:2:1665:C:H1'	1.81	0.62
44:2:457:A:N3	44:2:458:U:H5'	2.14	0.62
44:2:904:C:H2'	44:2:905:C:C6	2.35	0.62
44:2:957:G:H4'	44:2:1218:A:C4'	2.30	0.62
44:2:1366:C:H6	44:2:1366:C:O5'	1.81	0.62
44:2:2524:G:H21	44:2:2526:G:H1'	1.63	0.62
44:2:2638:U:H3'	44:2:2639:G:H5'	1.81	0.62
44:2:2865:G:O4'	44:2:3587:C:H1'	2.00	0.62
44:2:3585:U:H1'	44:2:3586:G:P	2.39	0.62
44:2:3908:G:OP2	44:2:3908:G:C8	2.52	0.62
44:2:4688:A:C3'	44:2:4695:C:H1'	2.29	0.62
44:2:4825:G:H4'	44:2:4826:C:C5'	2.29	0.62
3:C:29:LYS:HD3	3:C:267:TRP:CH2	2.34	0.62
7:G:100:HIS:O	7:G:103:ARG:HG3	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:162:ASP:HB3	7:G:163:PRO:HD2	1.81	0.62
7:G:164:ILE:HG22	7:G:168:VAL:CG1	2.30	0.62
12:M:118:MET:HG3	44:2:4884:C:O2'	2.00	0.62
43:u:27:LEU:HB2	43:u:163:VAL:HG21	1.82	0.62
43:u:156:ARG:CZ	44:2:3935:A:C2	2.75	0.62
44:2:633:G:H2'	44:2:634:C:C6	2.35	0.62
44:2:1748:G:P	44:2:1748:G:C8	2.93	0.62
44:2:1912:A:H4'	44:2:2037:C:OP1	2.00	0.62
44:2:2441:C:O2'	44:2:2442:C:H5'	2.00	0.62
44:2:2595:G:H2'	44:2:2596:G:H5'	1.81	0.62
44:2:2610:U:H2'	44:2:2611:C:O4'	2.00	0.62
44:2:3647:G:H8	44:2:3647:G:OP1	1.83	0.62
44:2:4232:G:N2	44:2:4296:A:C2	2.67	0.62
44:2:4838:C:OP2	44:2:4839:G:H5'	2.00	0.62
46:4:32:A:H2	46:4:41:G:C6	2.16	0.62
1:A:226:ARG:HA	44:2:3676:U:OP1	1.99	0.62
2:B:262:VAL:HG11	2:B:268:ARG:HH11	1.64	0.62
3:C:330:PRO:HB3	44:2:1218:A:C8	2.33	0.62
10:J:19:LYS:HB3	10:J:133:VAL:CG1	2.30	0.62
32:g:43:LYS:O	32:g:44:SER:HB2	2.00	0.62
43:u:156:ARG:HB2	44:2:3935:A:H2	1.58	0.62
44:2:354:A:H4'	44:2:355:G:OP1	2.00	0.62
44:2:479:G:H2'	44:2:480:C:C6	2.35	0.62
44:2:1049:G:H2'	44:2:1050:G:OP1	1.97	0.62
44:2:1143:G:H2'	44:2:1144:G:C8	2.35	0.62
44:2:1274:A:H2'	44:2:1275:C:C6	2.34	0.62
44:2:1367:A:C4'	44:2:1368:A:H5'	2.29	0.62
44:2:1565:G:H3'	44:2:1566:G:C8	2.35	0.62
44:2:2311:C:C6	44:2:2311:C:C5'	2.76	0.62
44:2:4156:G:H8	44:2:4156:G:P	2.23	0.62
44:2:4230:C:H5'	44:2:4231:A:H5'	1.81	0.62
44:2:4358:C:C2'	44:2:4359:U:H5'	2.30	0.62
44:2:4545:U:H2'	44:2:4546:G:C8	2.35	0.62
44:2:4562:A:H2'	44:2:4563:C:C5	2.35	0.62
44:2:4565:A:H2'	44:2:4566:G:H8	1.63	0.62
44:2:4739:G:OP2	44:2:4740:U:H5''	2.00	0.62
46:4:28:C:H3'	46:4:29:C:O4'	2.00	0.62
5:E:276:ALA:HB1	44:2:4712:U:C4	2.35	0.62
6:F:103:PRO:HD3	44:2:1854:U:O3'	1.99	0.62
26:a:7:LYS:O	26:a:10:LYS:HB3	1.99	0.62
42:t:54:ALA:O	42:t:63:VAL:HB	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:t:58:LYS:CB	44:2:670:C:C5'	2.77	0.62
42:t:120:SER:O	42:t:123:PRO:HD2	2.00	0.62
44:2:663:G:H2'	44:2:664:C:C6	2.34	0.62
44:2:956:C:H2'	44:2:957:G:H5'	1.81	0.62
44:2:961:C:C3'	44:2:962:G:C8	2.83	0.62
44:2:1462:C:H5''	44:2:1463:G:N7	2.15	0.62
44:2:2549:C:O3'	44:2:2736:G:C8	2.53	0.62
44:2:2561:G:H1'	44:2:2562:C:O5'	2.00	0.62
44:2:2803:U:H2'	44:2:2803:U:O2	1.99	0.62
44:2:2839:G:H2'	44:2:3588:G:O6	2.00	0.62
44:2:3685:C:H2'	44:2:3704:G:C6	2.35	0.62
44:2:4507:C:H3'	44:2:4508:A:C5'	2.30	0.62
1:A:186:TYR:HB2	1:A:196:TRP:CH2	2.32	0.62
4:D:41:LYS:CE	19:T:34:TYR:HB2	2.30	0.62
4:D:74:ILE:HD12	46:4:115:A:H1'	1.82	0.62
7:G:61:ILE:CD1	45:3:149:G:H1'	2.27	0.62
7:G:191:GLY:HA2	7:G:199:CYS:SG	2.40	0.62
10:J:110:GLN:O	10:J:111:GLU:HB2	1.99	0.62
11:L:47:ALA:CB	11:L:48:PRO:HD2	2.30	0.62
12:M:119:ARG:HA	14:O:190:ASP:CB	2.30	0.62
14:O:87:MET:O	44:2:1892:C:H1'	1.99	0.62
28:c:51:ASN:O	41:p:42:CYS:HA	2.00	0.62
43:u:105:ILE:HD11	43:u:145:MET:HG2	1.82	0.62
44:2:35:U:H4'	44:2:1504:A:C2	2.35	0.62
44:2:106:A:H8	44:2:106:A:O5'	1.82	0.62
44:2:462:A:H2'	44:2:462:A:N3	2.15	0.62
44:2:728:G:H2'	44:2:729:C:C6	2.26	0.62
44:2:1284:C:H3'	44:2:1285:C:H5	1.62	0.62
44:2:1445:G:H2'	44:2:1446:C:H6	1.65	0.62
44:2:1732:G:H4'	44:2:1733:U:OP2	1.99	0.62
44:2:1748:G:H2'	44:2:1749:A:C5'	2.30	0.62
44:2:2401:G:H3'	44:2:2401:G:C8	2.35	0.62
44:2:2579:G:H2'	44:2:2580:C:C6	2.34	0.62
44:2:2625:G:N3	44:2:2663:G:O6	2.33	0.62
44:2:3911:A:C2'	44:2:3912:A:H5'	2.29	0.62
44:2:4387:G:H4'	44:2:4387:G:OP1	2.00	0.62
44:2:4400:G:H2'	44:2:4401:A:H8	1.64	0.62
44:2:4522:C:H2'	44:2:4523:U:H6	1.63	0.62
44:2:4855:C:H2'	44:2:4856:G:C4'	2.27	0.62
7:G:41:ILE:HG22	7:G:42:GLY:N	2.14	0.61
8:H:23:ARG:NH1	44:2:4724:G:H5'	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:M:123:ILE:HA	14:O:187:LYS:HE3	1.80	0.61
17:R:119:MET:HB3	17:R:145:LEU:CD2	2.29	0.61
31:f:63:LYS:HB2	31:f:64:PRO:HD3	1.82	0.61
44:2:166:G:H21	44:2:167:C:C1'	2.13	0.61
44:2:214:C:H3'	44:2:214:C:H6	1.63	0.61
44:2:681:U:H2'	44:2:682:C:C6	2.34	0.61
44:2:739:G:H22	44:2:898:U:H3	1.46	0.61
44:2:1254:A:H3'	44:2:1255:G:C5'	2.30	0.61
44:2:1402:G:H2'	44:2:1403:U:C6	2.34	0.61
44:2:1610:A:H8	44:2:1610:A:O5'	1.83	0.61
44:2:2295:C:H2'	44:2:2296:G:H8	1.61	0.61
44:2:2873:G:H8	44:2:2873:G:O5'	1.83	0.61
44:2:3859:A:H2'	44:2:3860:A:H5'	1.79	0.61
44:2:3912:A:H3'	44:2:3913:G:N7	2.15	0.61
44:2:4701:G:H5'	44:2:4701:G:H8	1.65	0.61
45:3:105:C:H1'	45:3:106:G:OP2	1.99	0.61
8:H:41:ILE:HG13	8:H:73:ILE:CD1	2.30	0.61
23:X:48:ARG:HA	44:2:2449:A:O2'	2.00	0.61
23:X:69:ASN:ND2	45:3:132:G:H4'	2.15	0.61
24:Y:3:PHE:CD2	44:2:1347:C:H5'	2.36	0.61
29:d:42:ALA:HB3	29:d:43:PRO:HD3	1.83	0.61
44:2:212:C:H1'	44:2:213:C:P	2.40	0.61
44:2:891:C:H2'	44:2:892:G:H8	1.65	0.61
44:2:957:G:C8	44:2:957:G:C5'	2.76	0.61
44:2:1090:C:H2'	44:2:1091:U:H6	1.65	0.61
44:2:2431:U:H2'	44:2:2431:U:O2	1.99	0.61
44:2:4437:A:C2	44:2:4438:G:C5	2.88	0.61
44:2:4456:A:N3	44:2:4456:A:H2'	2.15	0.61
44:2:4588:U:H2'	44:2:4589:U:C6	2.34	0.61
44:2:4675:C:H3'	44:2:4676:C:C6	2.35	0.61
44:2:4828:G:H3'	44:2:4830:G:OP1	1.99	0.61
3:C:211:TYR:HD1	3:C:253:THR:HG1	1.48	0.61
5:E:222:LEU:HB3	5:E:229:GLU:O	1.99	0.61
24:Y:2:LYS:HD3	24:Y:9:SER:OG	2.00	0.61
24:Y:113:LYS:H	45:3:84:A:N6	1.97	0.61
25:Z:10:VAL:HG21	25:Z:87:VAL:HG23	1.82	0.61
42:t:30:ASN:HB3	42:t:48:THR:HB	1.80	0.61
44:2:71:C:H5''	44:2:72:C:C5	2.35	0.61
44:2:1200:G:C8	44:2:1200:G:P	2.89	0.61
44:2:1423:A:HO2'	44:2:1424:G:H8	1.43	0.61
44:2:1484:C:H2'	44:2:1485:G:C8	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1649:G:H3'	44:2:1649:G:C8	2.36	0.61
44:2:1890:G:H1'	44:2:1897:G:N1	2.14	0.61
44:2:2331:G:H2'	44:2:2332:G:H8	1.65	0.61
44:2:2479:G:P	44:2:4052:G:H22	2.23	0.61
44:2:2706:C:H2'	44:2:2707:U:C6	2.35	0.61
44:2:3686:A:H1'	44:2:4139:G:H5'	1.80	0.61
44:2:3877:A:N7	44:2:3878:C:C6	2.69	0.61
44:2:4977:U:H2'	44:2:4978:C:H3'	1.83	0.61
7:G:64:GLN:O	7:G:67:ARG:HG2	2.00	0.61
11:L:88:LYS:NZ	44:2:156:C:H1'	2.16	0.61
13:N:187:SER:HB2	44:2:29:G:P	2.39	0.61
42:t:99:LYS:HB3	42:t:103:ARG:HH22	1.66	0.61
44:2:328:U:H4'	44:2:329:A:OP1	2.01	0.61
44:2:642:C:C2'	44:2:643:G:H4'	2.30	0.61
44:2:897:U:O2'	44:2:898:U:H5'	2.00	0.61
44:2:2253:C:C2'	44:2:2254:G:H5'	2.31	0.61
44:2:2310:G:C8	44:2:2310:G:C5'	2.82	0.61
44:2:3821:A:H5''	44:2:3822:U:C5	2.35	0.61
44:2:4435:G:OP2	44:2:4436:C:H6	1.84	0.61
2:B:217:ILE:HD11	2:B:333:LEU:HD21	1.82	0.61
2:B:289:GLN:HA	2:B:329:ASP:OD1	2.00	0.61
3:C:163:LYS:O	3:C:166:GLU:HG2	2.00	0.61
4:D:56:THR:OG1	4:D:59:ASP:HB3	2.00	0.61
4:D:225:GLN:HG3	46:4:49:A:OP1	2.00	0.61
10:J:83:LEU:O	10:J:87:LEU:HG	2.01	0.61
15:P:136:ILE:HD11	44:2:2771:C:C2	2.34	0.61
20:U:17:GLN:HG3	20:U:19:LEU:CD1	2.31	0.61
23:X:66:PRO:HB3	45:3:134:G:C5'	2.21	0.61
27:b:58:GLN:HG2	44:2:1791:C:H1'	1.82	0.61
31:f:41:PHE:HE1	31:f:110:ILE:HD11	1.66	0.61
40:o:56:PHE:CZ	44:2:4332:U:H4'	2.36	0.61
43:u:203:THR:HG22	43:u:204:MET:HE2	1.81	0.61
44:2:33:A:H5'	44:2:34:A:OP2	2.01	0.61
44:2:286:A:H2	44:2:308:A:H8	1.42	0.61
44:2:326:A:H2'	44:2:327:A:C8	2.36	0.61
44:2:409:A:C2	45:3:17:A:H1'	2.34	0.61
44:2:441:G:H1'	44:2:1274:A:H5''	1.81	0.61
44:2:1059:C:C6	44:2:1202:A:N6	2.68	0.61
44:2:1146:G:N3	44:2:1146:G:H2'	2.16	0.61
44:2:1390:U:H2'	44:2:1391:C:C6	2.36	0.61
44:2:2580:C:C4	44:2:2581:C:N4	2.68	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:3742:U:O2	44:2:3742:U:H2'	2.00	0.61
44:2:4814:C:H2'	44:2:4815:G:H5''	1.81	0.61
5:E:183:ARG:HA	44:2:4892:C:N4	2.16	0.61
5:E:227:HIS:CG	44:2:1273:G:H2'	2.35	0.61
10:J:52:LYS:HB3	10:J:65:ASN:HA	1.82	0.61
34:i:74:LYS:HD3	44:2:3697:A:OP1	2.00	0.61
44:2:45:U:H2'	44:2:46:U:H5'	1.83	0.61
44:2:64:A:H8	44:2:64:A:O5'	1.83	0.61
44:2:158:G:H2'	44:2:159:A:H8	1.65	0.61
44:2:1748:G:H8	44:2:1748:G:P	2.24	0.61
44:2:1912:A:C2	44:2:2026:U:N3	2.68	0.61
44:2:2310:G:H5'	45:3:20:A:O3'	2.01	0.61
44:2:4313:U:C5'	44:2:4314:U:H5''	2.30	0.61
44:2:4743:C:H2'	44:2:4744:C:C6	2.36	0.61
2:B:56:ILE:HD12	2:B:368:ILE:HG12	1.83	0.61
4:D:207:TYR:CD1	46:4:33:U:H1'	2.36	0.61
14:O:125:LYS:HE2	14:O:135:PHE:CG	2.35	0.61
16:Q:11:ARG:O	44:2:2060:G:H5''	2.01	0.61
18:S:9:GLU:OE2	18:S:31:ARG:HD2	2.01	0.61
23:X:57:GLN:O	44:2:15:A:H5''	2.01	0.61
23:X:59:LYS:HB3	44:2:16:G:OP1	2.00	0.61
30:e:22:ARG:HD2	30:e:31:ILE:HG23	1.82	0.61
42:t:58:LYS:HB2	44:2:670:C:H5''	1.82	0.61
44:2:224:A:H61	44:2:238:G:H2'	1.65	0.61
44:2:457:A:C2'	44:2:458:U:C5'	2.79	0.61
44:2:673:G:H2'	44:2:674:G:O4'	2.01	0.61
44:2:943:G:H1'	44:2:944:A:C5'	2.30	0.61
44:2:2272:G:C6	44:2:2316:G:C2	2.89	0.61
44:2:2498:G:H5'	44:2:2617:G:H1'	1.81	0.61
44:2:2663:G:C6	44:2:2664:U:O2	2.53	0.61
44:2:2802:A:H5''	44:2:2802:A:C8	2.31	0.61
44:2:3694:G:C2	44:2:3696:A:H2'	2.35	0.61
44:2:4030:A:C2'	44:2:4031:U:H5'	2.30	0.61
46:4:31:G:H2'	46:4:32:A:H8	1.66	0.61
2:B:77:THR:HG23	2:B:335:GLY:O	2.00	0.61
3:C:163:LYS:HA	44:2:221:U:H3	1.64	0.61
10:J:175:LEU:CB	10:J:176:PRO:HD2	2.31	0.61
34:i:34:THR:HG21	44:2:268:G:OP2	2.01	0.61
35:j:3:LYS:HD3	44:2:3611:A:C8	2.36	0.61
44:2:89:C:H2'	44:2:90:G:C5'	2.31	0.61
44:2:314:C:H2'	44:2:315:A:C8	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:715:C:H2'	44:2:716:U:H6	1.65	0.61
44:2:1285:C:C5'	44:2:1285:C:H6	2.14	0.61
44:2:1930:G:H8	44:2:1930:G:H5'	1.64	0.61
44:2:1942:A:H2	44:2:4654:G:HO2'	1.49	0.61
44:2:2006:C:H5'	44:2:2006:C:H6	1.66	0.61
44:2:2020:A:H8	44:2:2021:A:N3	1.99	0.61
44:2:2064:G:N2	44:2:2246:G:N1	2.48	0.61
44:2:2252:A:H2'	44:2:2253:C:C6	2.36	0.61
44:2:2523:G:H2'	44:2:2524:G:O4'	2.00	0.61
44:2:3648:U:H4'	44:2:3649:U:OP2	1.98	0.61
44:2:3741:U:H2'	44:2:3742:U:H5	1.66	0.61
44:2:3904:C:H2'	44:2:3905:A:H8	1.66	0.61
44:2:4254:C:C5'	44:2:4254:C:H6	2.13	0.61
44:2:4349:C:H2'	44:2:4350:A:C8	2.35	0.61
44:2:4622:C:H2'	44:2:4623:G:H5'	1.83	0.61
45:3:137:A:N3	45:3:137:A:H2'	2.16	0.61
2:B:336:CYS:SG	44:2:4584:A:C2	2.91	0.61
3:C:190:ARG:HG3	3:C:202:ILE:HD11	1.83	0.61
5:E:162:VAL:HG11	5:E:175:VAL:HG13	1.81	0.61
13:N:67:ARG:HH22	44:2:3641:G:H4'	1.65	0.61
44:2:1492:U:O5'	44:2:1492:U:H6	1.83	0.61
44:2:1507:U:H2'	44:2:1508:G:C8	2.36	0.61
44:2:2587:G:H1'	44:2:2663:G:C2'	2.31	0.61
44:2:2602:U:H2'	44:2:2602:U:O2	2.00	0.61
44:2:2771:C:H5'	44:2:2774:C:N4	2.15	0.61
44:2:4032:C:C2'	44:2:4033:G:H4'	2.31	0.61
44:2:4204:A:H1'	44:2:4228:A:H4'	1.81	0.61
1:A:126:LEU:CD2	44:2:3630:G:H21	2.14	0.61
3:C:136:LEU:HA	42:t:10:VAL:HG12	1.82	0.61
3:C:158:VAL:O	3:C:217:ILE:HD13	2.01	0.61
7:G:39:PHE:CD1	7:G:47:PRO:HD3	2.35	0.61
12:M:6:PHE:O	12:M:11:ARG:HD2	2.00	0.61
32:g:70:THR:HG22	44:2:2564:A:C8	2.36	0.61
40:o:48:TYR:OH	44:2:3895:C:O4'	2.19	0.61
44:2:176:G:H2'	44:2:177:C:H5'	1.79	0.61
44:2:254:G:N2	44:2:255:C:H5	1.98	0.61
44:2:280:C:H2'	44:2:281:U:H6	1.65	0.61
44:2:1143:G:H2'	44:2:1144:G:H8	1.65	0.61
44:2:1828:A:H3'	44:2:1829:G:C8	2.35	0.61
44:2:2624:A:C6	44:2:2664:U:C2	2.88	0.61
44:2:4497:C:H2'	44:2:4498:G:C8	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:196:TRP:CE3	1:A:197:PRO:HG3	2.36	0.60
2:B:77:THR:HG21	2:B:336:CYS:HA	1.82	0.60
3:C:141:GLY:HA2	42:t:15:SER:CB	2.31	0.60
3:C:147:VAL:HG11	3:C:249:PHE:HE2	1.66	0.60
4:D:41:LYS:HB3	19:T:68:THR:O	2.01	0.60
18:S:110:TYR:CE2	18:S:126:ILE:HD11	2.34	0.60
31:f:6:TRP:HB2	44:2:4711:U:H3'	1.83	0.60
43:u:157:ARG:O	44:2:4023:U:C2'	2.49	0.60
44:2:1:C:O2'	44:2:2:G:H5'	2.01	0.60
44:2:377:A:H2	44:2:395:U:O2	1.84	0.60
44:2:1139:U:H2'	44:2:1140:C:H6	1.64	0.60
44:2:1352:A:C2	44:2:1353:A:N7	2.69	0.60
44:2:2061:C:H41	44:2:2249:G:H22	1.47	0.60
44:2:2279:C:O2'	44:2:2282:G:H4'	2.01	0.60
44:2:2531:U:O2'	44:2:2532:G:H5'	2.01	0.60
44:2:2650:G:H3'	44:2:2650:G:OP1	2.01	0.60
44:2:2664:U:OP1	44:2:2664:U:H4'	2.01	0.60
44:2:3580:A:C2	44:2:4971:A:C8	2.76	0.60
44:2:4426:C:C2'	44:2:4427:A:H5'	2.29	0.60
44:2:4636:G:H4'	44:2:4637:U:OP1	2.01	0.60
45:3:60:G:H21	45:3:64:U:H1'	1.66	0.60
12:M:104:MET:HE2	14:O:198:THR:HB	1.83	0.60
20:U:56:LEU:HD12	20:U:61:VAL:HG21	1.82	0.60
42:t:58:LYS:HB2	44:2:670:C:C5'	2.31	0.60
43:u:55:GLN:HB3	43:u:162:ARG:HH22	1.65	0.60
43:u:111:MET:HA	43:u:114:ILE:HG22	1.81	0.60
44:2:182:C:H3'	44:2:183:G:N7	2.16	0.60
44:2:509:G:H2'	44:2:510:C:C6	2.35	0.60
44:2:1179:G:H5'	44:2:1179:G:H8	1.65	0.60
44:2:1191:G:O2'	44:2:1192:G:H5'	2.01	0.60
44:2:1340:G:H3'	44:2:1341:G:C8	2.36	0.60
44:2:1861:G:H5''	44:2:1861:G:C8	2.36	0.60
44:2:2665:G:H5'	44:2:2665:G:H8	1.67	0.60
44:2:4033:G:H4'	44:2:4033:G:OP1	2.00	0.60
44:2:4962:A:H5''	44:2:4997:A:H2	1.67	0.60
45:3:131:G:H2'	45:3:132:G:H8	1.64	0.60
45:3:151:G:H2'	45:3:152:U:O4'	2.01	0.60
3:C:234:LYS:HE2	44:2:1354:G:N2	2.16	0.60
6:F:44:LYS:HG2	44:2:1219:C:H3'	1.83	0.60
12:M:28:VAL:HG11	12:M:47:ARG:HH21	1.66	0.60
12:M:65:PRO:HG2	12:M:72:TYR:CE2	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:10:A:C2	45:3:147:G:C6	2.90	0.60
44:2:12:A:O3'	44:2:13:U:H3'	2.00	0.60
44:2:28:C:H4'	44:2:61:A:H4'	1.84	0.60
44:2:400:G:H4'	44:2:401:A:C5'	2.32	0.60
44:2:916:A:H1'	44:2:917:G:C5'	2.30	0.60
44:2:1440:C:H2'	44:2:1441:A:C8	2.35	0.60
44:2:1903:G:H2'	44:2:1904:C:H5'	1.82	0.60
44:2:2335:G:O5'	44:2:2335:G:H8	1.84	0.60
44:2:2396:C:C6	44:2:2396:C:C5'	2.84	0.60
44:2:2744:U:C5	44:2:2745:C:N4	2.69	0.60
44:2:3754:A:H1'	44:2:3755:U:OP1	2.01	0.60
1:A:196:TRP:HH2	44:2:1592:A:C2	2.14	0.60
4:D:266:TRP:HB2	46:4:22:A:C6	2.37	0.60
8:H:94:SER:HB3	8:H:142:ASP:HB3	1.83	0.60
10:J:85:LYS:HG2	10:J:115:LEU:HB2	1.83	0.60
15:P:60:PHE:HB3	15:P:64:ASN:HB3	1.83	0.60
17:R:82:LYS:HD3	44:2:2788:G:H4'	1.84	0.60
31:f:102:ARG:HD3	31:f:102:ARG:N	2.15	0.60
44:2:949:G:P	44:2:949:G:H8	2.23	0.60
44:2:1074:G:H2'	44:2:1075:A:H8	1.65	0.60
44:2:1505:G:H2'	44:2:1506:A:H8	1.65	0.60
44:2:1648:A:C8	44:2:1648:A:H3'	2.36	0.60
44:2:1833:G:H2'	44:2:1834:C:C6	2.35	0.60
44:2:2569:U:H2'	44:2:2570:C:O4'	2.02	0.60
44:2:2687:C:H2'	44:2:2688:G:O4'	2.01	0.60
44:2:2858:A:H2'	44:2:2859:A:H5'	1.83	0.60
44:2:4051:U:C2'	44:2:4052:G:H5''	2.31	0.60
45:3:13:G:H2'	45:3:14:U:H6	1.67	0.60
45:3:79:G:H2'	45:3:80:A:O4'	2.00	0.60
45:3:80:A:H2'	45:3:81:C:H5	1.65	0.60
1:A:129:ALA:HB3	1:A:132:ASN:HD22	1.66	0.60
2:B:73:VAL:HG22	21:V:93:GLY:HA2	1.83	0.60
10:J:169:LYS:HD3	10:J:170:TYR:CD2	2.36	0.60
34:i:64:SER:O	34:i:65:LYS:HB3	2.02	0.60
44:2:21:G:C4	44:2:22:G:C8	2.89	0.60
44:2:84:A:H4'	44:2:85:G:OP1	2.01	0.60
44:2:96:U:C6	44:2:96:U:C5'	2.84	0.60
44:2:154:U:O2	44:2:154:U:H2'	2.02	0.60
44:2:193:C:O3'	44:2:194:A:H8	1.85	0.60
44:2:269:G:H2'	44:2:320:A:C6	2.36	0.60
44:2:348:U:H6	44:2:348:U:H5''	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:481:C:H2'	44:2:482:G:C5'	2.31	0.60
44:2:1154:G:H1	44:2:1167:G:H1	1.48	0.60
44:2:1161:C:C6	44:2:1161:C:OP2	2.54	0.60
44:2:1284:C:O2'	44:2:2289:A:H1'	2.02	0.60
44:2:1407:A:H2'	44:2:1408:U:H6	1.66	0.60
44:2:2248:C:H2'	44:2:2249:G:H8	1.66	0.60
44:2:2340:A:H3'	44:2:2341:G:C8	2.35	0.60
44:2:2382:G:H8	44:2:2382:G:O5'	1.84	0.60
44:2:2549:C:O4'	44:2:2737:G:N7	2.34	0.60
44:2:4098:G:H2'	44:2:4099:C:H6	1.64	0.60
44:2:4256:U:H4'	44:2:4256:U:OP1	2.00	0.60
44:2:4287:C:O2'	44:2:4288:G:H5'	2.01	0.60
44:2:4394:C:H2'	44:2:4395:U:O4'	2.02	0.60
44:2:4479:C:H3'	44:2:4479:C:H6	1.66	0.60
44:2:4487:G:H2'	44:2:4487:G:N3	2.15	0.60
44:2:4533:G:H4'	44:2:4534:U:O5'	2.00	0.60
44:2:4557:U:H2'	44:2:4558:C:H5'	1.83	0.60
44:2:4851:G:H2'	44:2:4852:G:H8	1.65	0.60
44:2:4947:G:H2'	44:2:4948:G:C8	2.36	0.60
5:E:162:VAL:CG1	5:E:175:VAL:HG13	2.31	0.60
8:H:41:ILE:HG13	8:H:73:ILE:CG1	2.32	0.60
10:J:94:LEU:O	10:J:175:LEU:HB2	2.01	0.60
12:M:9:VAL:HG11	12:M:66:HIS:HA	1.82	0.60
12:M:9:VAL:HG21	12:M:66:HIS:ND1	2.16	0.60
26:a:134:GLU:HG2	26:a:144:CYS:SG	2.42	0.60
35:j:25:LYS:O	35:j:25:LYS:HG2	2.01	0.60
44:2:24:G:N2	44:2:25:A:C4	2.69	0.60
44:2:64:A:C3'	44:2:110:C:H41	2.13	0.60
44:2:236:C:H2'	44:2:237:G:C8	2.36	0.60
44:2:1079:C:H2'	44:2:1080:U:H4'	1.82	0.60
44:2:1207:C:O5'	44:2:1207:C:H6	1.84	0.60
44:2:1452:U:H2'	44:2:1453:C:O4'	2.01	0.60
44:2:1907:A:C8	44:2:1910:A:H1'	2.36	0.60
44:2:2250:C:O5'	44:2:2250:C:H6	1.83	0.60
44:2:2416:G:H1'	44:2:2754:G:N3	2.17	0.60
44:2:2668:U:H2'	44:2:2669:U:C6	2.37	0.60
44:2:4358:C:C6	44:2:4358:C:C3'	2.85	0.60
44:2:4837:U:C4'	44:2:4838:C:H5'	2.29	0.60
44:2:5018:G:OP2	44:2:5018:G:C8	2.55	0.60
5:E:168:LEU:HD23	5:E:172:LEU:CD1	2.32	0.60
8:H:12:ILE:HD11	8:H:55:LEU:HB2	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:L:8:MET:SD	16:Q:168:ARG:HB2	2.41	0.60
14:O:26:GLN:HG3	14:O:31:ARG:CZ	2.32	0.60
23:X:61:PRO:HG2	33:h:80:PRO:HG3	1.84	0.60
30:e:127:ALA:HB2	44:2:2302:G:H5''	1.83	0.60
34:i:100:ALA:HB1	43:u:197:THR:OG1	1.91	0.60
44:2:133:C:H2'	44:2:135:G:C2	2.36	0.60
44:2:261:U:H2'	44:2:262:C:C6	2.36	0.60
44:2:426:A:C2'	44:2:427:C:H5'	2.32	0.60
44:2:1082:U:H1'	44:2:1083:C:P	2.41	0.60
44:2:1221:C:N4	44:2:1248:G:N2	2.50	0.60
44:2:1338:G:H8	44:2:1338:G:O5'	1.84	0.60
44:2:1828:A:H3'	44:2:1829:G:H8	1.66	0.60
44:2:2464:G:C6	44:2:2466:C:H1'	2.37	0.60
44:2:2483:G:H2'	44:2:2483:G:OP2	2.00	0.60
44:2:4435:G:OP2	44:2:4436:C:C6	2.55	0.60
44:2:4441:U:O2	44:2:4441:U:H2'	2.01	0.60
44:2:4813:C:H3'	44:2:4814:C:C5	2.36	0.60
44:2:4869:C:H2'	44:2:4870:G:H8	1.65	0.60
13:N:195:ARG:HD2	44:2:98:A:H5''	1.84	0.60
14:O:172:LYS:HD2	44:2:4728:G:H5''	1.83	0.60
16:Q:163:THR:O	16:Q:164:LYS:HB3	1.99	0.60
19:T:80:VAL:HG12	44:2:4264:A:OP2	2.02	0.60
43:u:157:ARG:C	44:2:4023:U:C1'	2.74	0.60
44:2:266:C:H4'	44:2:267:C:OP1	2.02	0.60
44:2:1388:G:N3	44:2:1389:C:H1'	2.16	0.60
44:2:1396:G:H2'	44:2:1397:C:C6	2.36	0.60
44:2:1708:A:C2'	44:2:1709:U:H5'	2.32	0.60
44:2:1801:U:H3'	44:2:1801:U:H6	1.67	0.60
44:2:2497:C:H2'	44:2:2498:G:C8	2.37	0.60
44:2:2690:C:H2'	44:2:2691:G:H8	1.66	0.60
44:2:4043:U:C1'	44:2:4044:G:H2'	2.32	0.60
44:2:4900:G:H5'	44:2:4901:U:O3'	2.02	0.60
45:3:13:G:H2'	45:3:14:U:C6	2.36	0.60
45:3:40:A:O2'	45:3:41:A:H5'	2.01	0.60
1:A:22:HIS:HB3	1:A:52:PRO:HG2	1.84	0.60
1:A:41:ILE:HG23	1:A:90:CYS:SG	2.41	0.60
3:C:13:GLU:HA	3:C:174:LEU:HD11	1.82	0.60
3:C:50:GLN:HB3	3:C:51:PRO:HD3	1.84	0.60
3:C:54:VAL:C	3:C:56:GLU:H	2.09	0.60
6:F:132:MET:CE	44:2:1705:U:H1'	2.32	0.60
8:H:31:ARG:HH21	8:H:188:GLN:HB3	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:129:ARG:O	8:H:132:VAL:HG22	2.02	0.60
14:O:60:LYS:NZ	44:2:2024:G:H5'	2.17	0.60
28:c:51:ASN:HD22	41:p:43:GLY:HA3	1.66	0.60
32:g:63:VAL:HG22	32:g:66:ARG:NH2	2.16	0.60
33:h:35:LYS:HA	33:h:44:LEU:HD22	1.82	0.60
38:m:104:HIS:HB3	38:m:107:ALA:HB2	1.84	0.60
41:p:79:VAL:O	41:p:83:ILE:HG12	2.01	0.60
44:2:21:G:N2	44:2:22:G:H1'	2.17	0.60
44:2:482:G:H2'	44:2:484:G:C8	2.33	0.60
44:2:659:A:H2'	44:2:660:C:H6	1.67	0.60
44:2:700:C:C2'	44:2:701:C:C5'	2.80	0.60
44:2:937:C:O2'	44:2:938:C:H5'	2.02	0.60
44:2:1410:C:H6	44:2:1410:C:O5'	1.84	0.60
44:2:1481:G:H4'	44:2:1482:A:OP1	2.02	0.60
44:2:2310:G:H3'	44:2:2311:C:C5'	2.32	0.60
44:2:2444:U:H4'	44:2:2445:U:H5	1.67	0.60
44:2:2549:C:H2'	44:2:2550:A:H8	1.66	0.60
44:2:2789:A:H3'	44:2:2790:A:H8	1.67	0.60
44:2:4052:G:H8	44:2:4052:G:OP1	1.85	0.60
44:2:4321:U:O5'	44:2:4321:U:H6	1.85	0.60
44:2:4600:C:C2'	44:2:4601:U:H5'	2.32	0.60
45:3:40:A:H2'	45:3:41:A:C8	2.36	0.60
46:4:63:C:C4'	46:4:64:G:O5'	2.50	0.60
1:A:189:TYR:HB2	1:A:196:TRP:CD1	2.37	0.60
14:O:184:ASN:O	14:O:187:LYS:HG3	2.02	0.60
25:Z:54:THR:HG23	25:Z:56:ALA:HB3	1.84	0.60
25:Z:59:LYS:HA	44:2:4108:C:O2'	2.01	0.60
34:i:99:LYS:CE	43:u:193:LEU:O	2.49	0.60
43:u:87:LEU:HD13	43:u:97:LEU:HD11	1.84	0.60
44:2:99:A:C2'	44:2:100:C:H6	2.15	0.60
44:2:292:G:H3'	44:2:293:C:H6	1.65	0.60
44:2:673:G:H8	44:2:673:G:O5'	1.85	0.60
44:2:726:C:C2'	44:2:727:G:H5''	2.31	0.60
44:2:976:C:H2'	44:2:977:G:C8	2.36	0.60
44:2:1217:C:O2	44:2:1217:C:C2'	2.50	0.60
44:2:1299:U:H4'	44:2:1832:G:O6	2.02	0.60
44:2:1610:A:H4'	44:2:1611:A:H5'	1.83	0.60
44:2:1649:G:H3'	44:2:1649:G:H8	1.67	0.60
44:2:1666:U:O2	44:2:1666:U:H2'	2.02	0.60
44:2:2051:C:C6	44:2:2051:C:C3'	2.83	0.60
44:2:2306:G:H2'	44:2:2306:G:N3	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:3639:C:H2'	44:2:3640:G:C8	2.36	0.60
44:2:3910:G:N2	44:2:3911:A:C5	2.70	0.60
44:2:4118:C:P	44:2:4118:C:H6	2.23	0.60
44:2:4147:G:H2'	44:2:4148:U:C6	2.37	0.60
44:2:4734:C:C2'	44:2:4735:G:H5'	2.31	0.60
45:3:19:C:C2'	45:3:20:A:H5'	2.32	0.60
45:3:126:C:H5'	45:3:128:C:C5	2.32	0.60
46:4:58:A:H2'	46:4:59:G:C8	2.37	0.60
2:B:21:ARG:HH12	44:2:4933:G:H5'	1.67	0.59
2:B:27:GLY:HA3	2:B:276:HIS:CD2	2.37	0.59
3:C:48:ASN:HB2	3:C:49:ARG:NH2	2.17	0.59
7:G:76:VAL:HG22	7:G:238:GLY:C	2.27	0.59
9:I:92:HIS:HB2	9:I:94:PHE:CE2	2.37	0.59
14:O:167:HIS:NE2	14:O:171:LYS:HB2	2.17	0.59
32:g:54:ARG:HA	32:g:54:ARG:CZ	2.32	0.59
35:j:59:THR:HG22	45:3:41:A:O2'	2.02	0.59
37:l:2:SER:N	44:2:2382:G:OP2	2.34	0.59
44:2:379:A:H1'	44:2:394:G:N2	2.17	0.59
44:2:724:C:H2'	44:2:725:C:C4'	2.31	0.59
44:2:890:C:H2'	44:2:891:C:C6	2.37	0.59
44:2:1221:C:C5	44:2:1222:G:C8	2.90	0.59
44:2:1400:A:H2	44:2:1446:C:H1'	1.67	0.59
44:2:1423:A:O2'	44:2:1424:G:H8	1.84	0.59
44:2:1577:C:H1'	44:2:2775:A:C8	2.37	0.59
44:2:2310:G:C3'	44:2:2311:C:C5'	2.75	0.59
44:2:2310:G:H8	44:2:2310:G:C5'	2.16	0.59
44:2:2479:G:H2'	44:2:2481:C:OP1	2.02	0.59
44:2:2736:G:N3	44:2:2736:G:H5''	2.17	0.59
44:2:2742:A:C2'	44:2:2743:A:C8	2.82	0.59
44:2:3682:U:H3'	44:2:3682:U:H6	1.67	0.59
44:2:3770:U:O2	44:2:4457:U:H5''	2.02	0.59
44:2:3887:G:H2'	44:2:3888:C:C6	2.35	0.59
44:2:4139:G:H2'	44:2:4140:G:H8	1.66	0.59
44:2:4377:C:H3'	44:2:4378:G:H8	1.66	0.59
44:2:4699:G:H4'	44:2:4700:C:OP1	2.02	0.59
2:B:232:THR:HG23	2:B:237:THR:O	2.02	0.59
3:C:326:LEU:HD23	3:C:332:ALA:HB3	1.84	0.59
5:E:170:SER:HB3	44:2:4896:G:N2	2.17	0.59
5:E:243:THR:HG23	44:2:4893:A:H61	1.66	0.59
13:N:117:ASN:O	13:N:133:ILE:HG22	2.02	0.59
25:Z:83:THR:HA	28:c:62:TYR:HH	1.65	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:k:24:LYS:NZ	36:k:69:LEU:HD11	2.17	0.59
42:t:99:LYS:CB	42:t:103:ARG:HH22	2.14	0.59
43:u:203:THR:CG2	43:u:204:MET:HE2	2.31	0.59
44:2:284:G:C4'	44:2:285:G:C8	2.72	0.59
44:2:289:G:O2'	44:2:290:C:H5'	2.02	0.59
44:2:972:C:OP1	44:2:1219:C:H4'	2.02	0.59
44:2:1435:G:H2'	44:2:1436:G:H8	1.67	0.59
44:2:1595:U:C2'	44:2:1596:G:H5'	2.32	0.59
44:2:2597:G:H1	44:2:2613:U:H3	1.50	0.59
44:2:3589:G:C2	44:2:4602:U:H5''	2.38	0.59
44:2:3618:A:H2'	44:2:3618:A:N3	2.17	0.59
44:2:4084:U:H1'	44:2:4085:U:P	2.41	0.59
44:2:4089:G:N3	44:2:4089:G:H2'	2.17	0.59
44:2:4182:G:H4'	44:2:4182:G:OP2	2.02	0.59
44:2:4563:C:C2'	44:2:4564:G:H5'	2.30	0.59
3:C:137:VAL:HG11	3:C:144:ILE:HD11	1.84	0.59
3:C:296:PRO:O	3:C:300:ARG:HG3	2.01	0.59
4:D:50:ARG:HH22	46:4:6:C:H4'	1.67	0.59
4:D:207:TYR:CE1	46:4:33:U:C1'	2.86	0.59
4:D:289:ARG:HG2	4:D:293:ARG:HG3	1.83	0.59
5:E:227:HIS:CE1	44:2:442:C:C4'	2.85	0.59
15:P:25:HIS:CD2	44:2:2338:G:C6	2.89	0.59
15:P:60:PHE:CE1	15:P:82:ARG:HB2	2.38	0.59
16:Q:12:LYS:O	16:Q:13:VAL:HB	2.03	0.59
16:Q:142:PRO:HD3	44:2:1481:G:H2'	1.84	0.59
19:T:81:LYS:HD2	44:2:4264:A:C2	2.37	0.59
26:a:113:GLY:O	44:2:1377:A:H3'	2.02	0.59
32:g:54:ARG:NE	44:2:2629:G:O6	2.36	0.59
44:2:24:G:N1	44:2:25:A:C5	2.70	0.59
44:2:333:G:N1	45:3:33:G:N1	2.50	0.59
44:2:657:C:O5'	44:2:657:C:H6	1.85	0.59
44:2:1054:G:O2'	44:2:1055:G:H5'	2.02	0.59
44:2:1056:C:N4	44:2:1204:G:N1	2.49	0.59
44:2:1622:A:H8	44:2:1622:A:O5'	1.84	0.59
44:2:1747:C:H2'	44:2:1748:G:C5	2.37	0.59
44:2:1874:A:H3'	44:2:1875:A:H5''	1.84	0.59
44:2:1930:G:C8	44:2:1930:G:H5'	2.37	0.59
44:2:2005:U:C2	44:2:2006:C:C5	2.90	0.59
44:2:2062:C:C5	44:2:2249:G:N1	2.69	0.59
44:2:2654:G:C8	44:2:2654:G:OP2	2.55	0.59
44:2:4179:A:C2	44:2:4180:A:C6	2.90	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4257:G:H2'	44:2:4258:A:H8	1.67	0.59
44:2:4869:C:H2'	44:2:4870:G:C8	2.37	0.59
45:3:22:U:H4'	45:3:23:C:OP1	2.01	0.59
45:3:138:C:H2'	45:3:139:G:H8	1.66	0.59
45:3:155:C:H5'	45:3:156:U:OP2	2.03	0.59
1:A:193:ARG:NH2	44:2:3654:C:H5''	2.18	0.59
3:C:48:ASN:OD1	44:2:1352:A:C5'	2.49	0.59
8:H:41:ILE:CG2	8:H:43:VAL:HG22	2.32	0.59
10:J:63:ARG:NH1	40:o:103:VAL:HB	2.17	0.59
10:J:143:ASP:O	46:4:43:U:H4'	2.02	0.59
11:L:153:PRO:O	11:L:156:PRO:HD2	2.02	0.59
12:M:97:ALA:O	12:M:100:ARG:HB2	2.02	0.59
14:O:167:HIS:HB3	44:2:4718:C:C2'	2.32	0.59
17:R:58:HIS:CD2	44:2:4605:C:H5''	2.37	0.59
30:e:62:SER:O	44:2:2056:C:H5''	2.01	0.59
32:g:46:CYS:HA	44:2:2573:G:H4'	1.82	0.59
44:2:12:A:C2	44:2:14:C:N4	2.70	0.59
44:2:221:U:H4'	44:2:222:G:O5'	2.01	0.59
44:2:240:A:C2'	44:2:241:G:C8	2.81	0.59
44:2:299:G:H4'	44:2:301:G:H4'	1.82	0.59
44:2:445:U:H2'	44:2:446:C:C6	2.37	0.59
44:2:477:C:H4'	44:2:478:G:H5'	1.84	0.59
44:2:914:G:N2	44:2:915:C:C6	2.70	0.59
44:2:1250:A:C8	44:2:1250:A:O5'	2.54	0.59
44:2:2309:G:H3'	44:2:2309:G:P	2.43	0.59
44:2:2430:A:H2'	44:2:2431:U:H5'	1.84	0.59
44:2:2487:G:H8	44:2:2487:G:O5'	1.85	0.59
44:2:3592:C:C5	44:2:3592:C:OP2	2.55	0.59
44:2:3908:G:N7	44:2:4130:A:H2'	2.17	0.59
44:2:4283:A:H2'	44:2:4284:A:O4'	2.02	0.59
44:2:4838:C:C3'	44:2:4839:G:C5'	2.80	0.59
46:4:26:C:O5'	46:4:26:C:H6	1.84	0.59
3:C:55:SER:CB	44:2:347:G:C5'	2.79	0.59
4:D:94:ASN:HA	46:4:47:G:H5'	1.84	0.59
10:J:47:THR:CG2	46:4:39:C:H4'	2.32	0.59
14:O:34:VAL:HG11	14:O:112:TYR:HE1	1.67	0.59
17:R:39:GLN:O	17:R:43:LYS:HG2	2.02	0.59
28:c:28:VAL:HG23	28:c:95:ALA:HB3	1.83	0.59
44:2:38:A:C5'	44:2:39:A:H4'	2.33	0.59
44:2:155:A:N3	44:2:155:A:H2'	2.16	0.59
44:2:244:G:H2'	44:2:245:C:H6	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:437:C:H2'	44:2:438:C:C6	2.37	0.59
44:2:456:G:N2	44:2:679:U:N3	2.47	0.59
44:2:1213:G:O5'	44:2:1213:G:H8	1.86	0.59
44:2:1264:G:O2'	44:2:1265:U:H5'	2.02	0.59
44:2:1440:C:H2'	44:2:1441:A:H8	1.65	0.59
44:2:1607:C:C2'	44:2:1608:G:H5'	2.31	0.59
44:2:2635:G:C4	44:2:2652:G:N2	2.71	0.59
44:2:4342:G:H2'	44:2:4343:U:C6	2.37	0.59
44:2:4487:G:H8	44:2:4488:G:O6	1.86	0.59
44:2:4614:C:O5'	44:2:4614:C:H6	1.85	0.59
44:2:4800:C:H2'	44:2:4801:C:H6	1.67	0.59
44:2:4824:U:H4'	44:2:4825:G:OP1	2.00	0.59
44:2:4825:G:H4'	44:2:4826:C:OP1	2.02	0.59
46:4:31:G:H2'	46:4:32:A:C8	2.38	0.59
1:A:196:TRP:CG	1:A:197:PRO:HD3	2.37	0.59
3:C:150:LEU:HD23	3:C:150:LEU:H	1.67	0.59
5:E:272:ARG:O	44:2:4837:U:C2	2.55	0.59
12:M:62:LEU:HD22	12:M:64:PHE:CZ	2.37	0.59
12:M:113:MET:O	12:M:117:LYS:HG2	2.03	0.59
13:N:128:LYS:HE3	44:2:293:C:OP1	2.01	0.59
24:Y:57:VAL:HG22	24:Y:104:VAL:HG12	1.84	0.59
24:Y:118:ILE:HG21	45:3:70:G:OP1	2.02	0.59
31:f:22:ARG:HB3	31:f:24:HIS:CD2	2.37	0.59
42:t:79:ARG:HG3	44:2:472:G:H8	1.67	0.59
43:u:155:GLU:CD	44:2:3936:G:C5'	2.73	0.59
44:2:308:A:H2'	44:2:308:A:N3	2.17	0.59
44:2:357:A:C2	44:2:367:A:C5	2.91	0.59
44:2:445:U:C3'	44:2:446:C:C6	2.86	0.59
44:2:713:G:H1	44:2:925:C:H42	1.51	0.59
44:2:1352:A:H2	44:2:1353:A:C6	2.21	0.59
44:2:1367:A:C5	44:2:1377:A:N6	2.71	0.59
44:2:1394:C:H2'	44:2:1395:G:C8	2.37	0.59
44:2:1718:G:C5'	46:4:102:U:C1'	2.74	0.59
44:2:1737:G:H2'	44:2:1738:G:C8	2.38	0.59
44:2:1911:G:N2	44:2:2034:G:N2	2.51	0.59
44:2:2284:A:H2'	44:2:2285:G:H8	1.66	0.59
44:2:2744:U:O5'	44:2:2744:U:H6	1.84	0.59
44:2:2763:C:O5'	44:2:2763:C:H6	1.84	0.59
44:2:3592:C:H6	44:2:3592:C:O5'	1.86	0.59
44:2:3908:G:O6	44:2:4130:A:H5''	2.02	0.59
44:2:4060:G:N2	44:2:4118:C:N3	2.51	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4192:U:H4'	44:2:4193:A:H5'	1.83	0.59
44:2:4888:C:H2'	44:2:4889:A:C8	2.36	0.59
3:C:337:ARG:HE	44:2:1213:G:H4'	1.67	0.59
6:F:55:LYS:HB3	44:2:973:U:N3	2.16	0.59
7:G:73:ARG:HG3	7:G:73:ARG:HH11	1.67	0.59
16:Q:95:VAL:HG23	16:Q:96:PRO:HD2	1.85	0.59
24:Y:121:ARG:HA	24:Y:125:SER:HB3	1.84	0.59
38:m:93:LYS:HB2	38:m:124:LYS:CE	2.32	0.59
44:2:170:C:O5'	44:2:170:C:H6	1.85	0.59
44:2:457:A:H8	44:2:676:G:C5'	1.99	0.59
44:2:965:C:N4	44:2:1249:G:N1	2.49	0.59
44:2:974:C:O2	44:2:974:C:H2'	2.02	0.59
44:2:1221:C:H3'	44:2:1221:C:C6	2.36	0.59
44:2:2064:G:C2	44:2:2246:G:N1	2.69	0.59
44:2:2395:A:H2'	44:2:2396:C:C6	2.35	0.59
44:2:2510:C:OP2	44:2:2510:C:C6	2.55	0.59
44:2:2583:G:H21	44:2:2644:C:H42	1.50	0.59
44:2:2763:C:C4'	44:2:2764:A:C8	2.84	0.59
44:2:4204:A:O4'	44:2:4228:A:H4'	2.03	0.59
44:2:4372:C:H42	44:2:4390:G:H1	1.49	0.59
44:2:4700:C:H2'	44:2:4701:G:C4'	2.19	0.59
44:2:4739:G:H21	44:2:4744:C:H1'	1.68	0.59
44:2:4938:C:C2'	44:2:4939:C:H5'	2.32	0.59
44:2:5002:C:C6	44:2:5002:C:H5''	2.38	0.59
45:3:148:A:H8	45:3:148:A:H3'	1.68	0.59
1:A:180:LEU:HD21	41:p:26:VAL:HG21	1.84	0.59
3:C:308:LYS:HZ3	44:2:2064:G:H4'	1.66	0.59
3:C:309:ILE:HG21	44:2:2249:G:H1'	1.84	0.59
6:F:48:LYS:HD2	44:2:1220:G:H5'	1.85	0.59
6:F:97:GLY:HA3	44:2:1874:A:H5'	1.84	0.59
22:W:13:ILE:HG12	22:W:32:LEU:CB	2.33	0.59
25:Z:1:MET:HA	28:c:67:ALA:O	2.03	0.59
28:c:103:ASP:HB2	28:c:106:ARG:HB3	1.83	0.59
31:f:4:ARG:CZ	44:2:4904:G:H1	2.15	0.59
32:g:85:LYS:O	32:g:88:ARG:HB3	2.01	0.59
43:u:151:LEU:HD21	43:u:184:LEU:CD2	2.31	0.59
44:2:95:G:N2	44:2:96:U:H1'	2.18	0.59
44:2:166:G:C2'	44:2:167:C:H4'	2.33	0.59
44:2:506:C:H2'	44:2:507:C:C6	2.37	0.59
44:2:677:C:H3'	44:2:677:C:OP2	2.03	0.59
44:2:1219:C:O2	44:2:1219:C:H2'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1338:G:N2	44:2:1339:G:C5	2.71	0.59
44:2:1833:G:H2'	44:2:1834:C:H6	1.68	0.59
44:2:1870:A:C5'	44:2:1871:C:H5	2.08	0.59
44:2:2395:A:C2'	44:2:2396:C:H5''	2.33	0.59
44:2:2687:C:H3'	44:2:2688:G:C8	2.38	0.59
45:3:154:G:H8	45:3:154:G:O5'	1.86	0.59
2:B:107:ALA:HB2	2:B:201:LEU:HB3	1.84	0.59
3:C:54:VAL:HG22	3:C:55:SER:N	2.09	0.59
4:D:56:THR:CB	46:4:26:C:H5''	2.29	0.59
11:L:135:LYS:H	11:L:135:LYS:CD	2.11	0.59
30:e:85:LEU:HD13	30:e:85:LEU:C	2.28	0.59
34:i:43:MET:O	34:i:47:VAL:HG23	2.03	0.59
42:t:81:THR:OG1	44:2:472:G:N7	2.35	0.59
44:2:71:C:H3'	44:2:72:C:H5'	1.84	0.59
44:2:344:A:H4'	44:2:346:A:N7	2.18	0.59
44:2:357:A:C2	44:2:367:A:C4	2.91	0.59
44:2:942:G:H1'	44:2:2250:C:P	2.43	0.59
44:2:1203:G:C2'	44:2:1204:G:C8	2.84	0.59
44:2:1318:G:H8	44:2:1318:G:O5'	1.85	0.59
44:2:1424:G:H2'	44:2:1425:U:H5'	1.85	0.59
44:2:1624:C:O5'	44:2:1624:C:H6	1.86	0.59
44:2:1630:G:H2'	44:2:1630:G:N3	2.18	0.59
44:2:1877:G:C8	44:2:2254:G:C4	2.91	0.59
44:2:2549:C:C6	44:2:2549:C:C3'	2.86	0.59
44:2:3695:A:O2'	44:2:3696:A:H8	1.85	0.59
44:2:3781:C:C3'	44:2:3782:A:H5''	2.26	0.59
44:2:4094:A:H2'	44:2:4095:A:C8	2.37	0.59
44:2:4434:A:H2'	44:2:4436:C:H5''	1.85	0.59
44:2:4593:G:O2'	44:2:4594:U:H3'	2.03	0.59
44:2:4812:A:C2'	44:2:4813:C:C6	2.80	0.59
44:2:4867:G:H8	44:2:4867:G:H5''	1.68	0.59
44:2:4893:A:O2'	44:2:4894:C:H4'	2.03	0.59
46:4:23:A:O5'	46:4:23:A:H8	1.84	0.59
7:G:64:GLN:NE2	45:3:151:G:H5'	2.17	0.59
19:T:2:THR:HG22	44:2:4166:C:H41	1.68	0.59
19:T:84:ILE:HD11	27:b:24:PRO:HB3	1.85	0.59
42:t:30:ASN:HB3	42:t:48:THR:CB	2.33	0.59
44:2:400:G:H4'	44:2:401:A:H5'	1.84	0.59
44:2:442:C:O2'	44:2:443:A:H5'	2.03	0.59
44:2:467:G:H2'	44:2:468:C:H6	1.67	0.59
44:2:722:G:C3'	44:2:723:G:H4'	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1669:C:H2'	44:2:1670:G:O4'	2.03	0.59
44:2:1884:U:H2'	44:2:1885:A:H5'	1.84	0.59
44:2:2006:C:H2'	44:2:2007:A:O4'	2.02	0.59
44:2:2369:C:H2'	44:2:2370:C:C6	2.37	0.59
44:2:2624:A:N6	44:2:2664:U:C4	2.71	0.59
44:2:4272:U:H2'	44:2:4273:A:C8	2.37	0.59
44:2:4897:C:H3'	44:2:4897:C:O2	2.02	0.59
44:2:4980:C:H4'	44:2:4981:U:OP2	2.03	0.59
45:3:139:G:C6	45:3:140:C:C4	2.91	0.59
46:4:47:G:H8	46:4:47:G:O5'	1.85	0.59
2:B:206:PRO:HG2	2:B:209:GLN:OE1	2.02	0.58
3:C:101:MET:HE2	3:C:103:ALA:O	2.03	0.58
4:D:73:MET:SD	46:4:114:U:C4'	2.90	0.58
11:L:88:LYS:HZ1	44:2:156:C:C1'	2.16	0.58
11:L:89:LYS:HZ2	33:h:114:TYR:HD2	1.51	0.58
11:L:134:PRO:HA	11:L:135:LYS:HZ1	1.68	0.58
12:M:14:TYR:CZ	12:M:22:GLY:HA2	2.37	0.58
31:f:46:ARG:HB2	31:f:106:TYR:CZ	2.38	0.58
44:2:121:A:N6	44:2:147:U:C2	2.70	0.58
44:2:1061:C:O2'	44:2:1062:C:H5'	2.03	0.58
44:2:1185:G:O2'	44:2:1186:C:H5'	2.03	0.58
44:2:1186:C:H2'	44:2:1187:C:H6	1.68	0.58
44:2:1281:C:H6	44:2:1281:C:C3'	2.15	0.58
44:2:1874:A:C3'	44:2:1875:A:H5''	2.33	0.58
44:2:2471:U:O5'	44:2:2471:U:H6	1.86	0.58
44:2:2646:C:H2'	44:2:2647:C:O4'	2.03	0.58
44:2:3899:U:H2'	44:2:3900:C:C6	2.38	0.58
44:2:4265:G:N3	44:2:4265:G:H2'	2.18	0.58
44:2:4314:U:H4'	44:2:4315:G:H5'	1.84	0.58
44:2:4381:C:C2'	44:2:4382:A:H5'	2.33	0.58
44:2:4384:A:H3'	44:2:4385:G:H8	1.68	0.58
46:4:11:A:C2	46:4:66:G:N3	2.71	0.58
46:4:34:C:O2	46:4:34:C:H2'	2.01	0.58
1:A:227:ARG:HG2	1:A:239:ALA:HB2	1.85	0.58
4:D:94:ASN:CA	46:4:47:G:H5'	2.32	0.58
6:F:124:LYS:NZ	6:F:197:VAL:HG11	2.19	0.58
10:J:152:GLY:O	10:J:156:ARG:HG3	2.03	0.58
21:V:46:LYS:HD2	44:2:4579:U:O3'	2.04	0.58
23:X:69:ASN:CG	45:3:132:G:H4'	2.28	0.58
44:2:476:C:H5''	44:2:476:C:C6	2.23	0.58
44:2:1305:C:H5	44:2:3847:C:O3'	1.87	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1378:A:C2'	44:2:1379:G:C8	2.85	0.58
44:2:1541:G:C2'	44:2:1542:A:H5''	2.31	0.58
44:2:1720:G:C8	44:2:1760:U:H5'	2.39	0.58
44:2:1760:U:C2'	44:2:1761:U:H5'	2.32	0.58
44:2:2345:A:H3'	44:2:2804:G:N1	2.13	0.58
44:2:2512:G:H2'	44:2:2513:A:O4'	2.02	0.58
44:2:3836:A:C2	44:2:3849:G:C6	2.91	0.58
44:2:4544:A:H2	44:2:4680:C:OP2	1.86	0.58
44:2:4700:C:C2'	44:2:4701:G:H4'	2.19	0.58
45:3:4:C:C2'	45:3:5:U:H5'	2.32	0.58
7:G:168:VAL:O	7:G:171:PRO:HD2	2.03	0.58
11:L:53:GLY:O	11:L:55:ILE:HG22	2.03	0.58
14:O:87:MET:HA	44:2:2028:G:N2	2.17	0.58
23:X:56:ARG:HA	44:2:14:C:H4'	1.85	0.58
25:Z:5:MET:HE2	25:Z:77:TYR:CD2	2.38	0.58
34:i:60:LEU:HD22	34:i:64:SER:HB3	1.86	0.58
35:j:11:ARG:HB3	35:j:11:ARG:HH11	1.67	0.58
35:j:63:ARG:NH2	45:3:58:G:O6	2.36	0.58
35:j:63:ARG:O	35:j:68:LYS:HE2	2.03	0.58
41:p:16:THR:HG22	44:2:2853:G:N7	2.18	0.58
42:t:14:SER:HB3	42:t:17:LEU:HB2	1.85	0.58
43:u:157:ARG:C	44:2:4023:U:H1'	2.29	0.58
44:2:372:U:H5'	44:2:405:C:C5	2.37	0.58
44:2:460:C:O2	44:2:460:C:C2'	2.51	0.58
44:2:947:G:H2'	44:2:948:A:O5'	2.04	0.58
44:2:1204:G:H4'	44:2:1205:U:OP1	2.02	0.58
44:2:1302:A:H1'	44:2:1304:A:OP2	2.02	0.58
44:2:1783:A:H1'	44:2:1784:A:OP2	2.03	0.58
44:2:1783:A:H4'	44:2:1784:A:O5'	2.03	0.58
44:2:1885:A:H8	44:2:1885:A:C5'	2.15	0.58
44:2:2370:C:C3'	44:2:2371:G:H5''	2.22	0.58
44:2:2462:U:H6	44:2:2462:U:O5'	1.86	0.58
44:2:2608:U:O3'	44:2:2609:U:H4'	2.04	0.58
44:2:2839:G:N3	44:2:3593:A:C8	2.72	0.58
44:2:2848:A:H2'	44:2:2849:C:O4'	2.04	0.58
44:2:4370:G:H2'	44:2:4371:G:H5'	1.83	0.58
44:2:4832:G:H5'	44:2:4832:G:H8	1.69	0.58
46:4:3:C:O2	46:4:3:C:H3'	2.03	0.58
1:A:30:ARG:HD2	1:A:63:PHE:CD1	2.38	0.58
3:C:139:SER:OG	42:t:10:VAL:HB	2.04	0.58
20:U:22:THR:HG23	20:U:69:LYS:HE3	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:X:56:ARG:HH22	45:3:136:U:H5''	1.66	0.58
40:o:1:MET:N	44:2:4190:C:H5''	2.18	0.58
42:t:67:ARG:HA	42:t:83:ASN:CB	2.33	0.58
44:2:180:C:O2'	44:2:181:U:H5'	2.02	0.58
44:2:393:A:H8	44:2:393:A:C5'	2.09	0.58
44:2:422:G:N3	44:2:3857:G:H2'	2.19	0.58
44:2:932:C:H2'	44:2:933:G:C8	2.38	0.58
44:2:1161:C:H2'	44:2:1162:C:C1'	2.33	0.58
44:2:1293:C:H5	44:2:3851:C:C1'	2.16	0.58
44:2:1387:C:H3'	44:2:1388:G:C8	2.38	0.58
44:2:1477:G:C2'	44:2:1478:C:H5'	2.30	0.58
44:2:1539:A:H2'	44:2:1540:G:H5'	1.85	0.58
44:2:2537:C:O5'	44:2:2537:C:H6	1.86	0.58
46:4:50:A:H2'	46:4:50:A:N3	2.18	0.58
3:C:145:GLU:O	42:t:77:TYR:HB2	2.03	0.58
4:D:94:ASN:HB3	46:4:47:G:H5'	1.85	0.58
12:M:114:LYS:HE3	44:2:4885:C:H5''	1.86	0.58
13:N:93:LYS:HD2	44:2:292:G:H1'	1.83	0.58
14:O:182:GLU:HG2	14:O:191:LYS:HE2	1.86	0.58
30:e:12:ILE:HG23	30:e:66:THR:CB	2.32	0.58
33:h:105:LYS:HB2	44:2:152:C:OP1	2.04	0.58
35:j:15:THR:HG21	44:2:1512:A:OP1	2.03	0.58
37:l:24:PRO:O	37:l:27:ILE:HG22	2.04	0.58
43:u:156:ARG:HD2	44:2:4023:U:H3	1.68	0.58
44:2:469:G:O2'	44:2:470:G:H5'	2.04	0.58
44:2:925:C:OP1	44:2:925:C:H4'	2.01	0.58
44:2:1562:A:C8	44:2:1563:G:C8	2.92	0.58
44:2:2034:G:O2'	44:2:2035:A:H3'	2.03	0.58
44:2:2062:C:C6	44:2:2063:G:C8	2.91	0.58
44:2:2505:G:C8	44:2:2506:A:H5''	2.38	0.58
44:2:2593:C:O2	44:2:2593:C:H2'	2.03	0.58
44:2:3876:G:C8	44:2:4407:C:O2'	2.55	0.58
44:2:4196:G:H4'	44:2:4288:G:O2'	2.03	0.58
44:2:4254:C:C6	44:2:4254:C:H5'	2.38	0.58
44:2:4278:C:H3'	44:2:4278:C:C6	2.37	0.58
44:2:4850:C:O2'	44:2:4851:G:H5'	2.03	0.58
4:D:277:LYS:HZ2	44:2:1087:C:H5'	1.69	0.58
13:N:192:TRP:CE2	44:2:48:G:C5'	2.86	0.58
21:V:58:GLY:HA2	21:V:125:CYS:SG	2.43	0.58
26:a:119:LYS:O	26:a:140:VAL:HB	2.03	0.58
32:g:5:LEU:HB2	32:g:32:TYR:CE2	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:g:22:LEU:CD2	44:2:2589:G:H1'	2.26	0.58
32:g:93:ARG:HG2	44:2:4088:G:OP1	2.04	0.58
33:h:70:ARG:CG	33:h:83:LEU:HD22	2.33	0.58
44:2:2:G:C6	44:2:3:C:C4	2.91	0.58
44:2:134:G:H2'	44:2:134:G:N3	2.17	0.58
44:2:286:A:H5'	44:2:287:A:H8	1.69	0.58
44:2:650:G:O2'	44:2:651:G:H5'	2.04	0.58
44:2:699:A:C2	44:2:700:C:H5	2.21	0.58
44:2:708:G:C2'	44:2:709:G:H5'	2.33	0.58
44:2:1883:U:H5''	44:2:1883:U:C6	2.34	0.58
44:2:2279:C:O2	44:2:2279:C:H2'	2.01	0.58
44:2:2443:G:H8	44:2:2443:G:OP2	1.85	0.58
44:2:2526:G:C3'	44:2:2527:G:C5'	2.76	0.58
44:2:2560:C:O2	44:2:2560:C:H2'	2.02	0.58
44:2:2655:A:H2'	44:2:2656:G:C8	2.38	0.58
44:2:2657:G:H2'	44:2:2658:G:C8	2.38	0.58
44:2:2665:G:C2'	44:2:2666:C:H5'	2.33	0.58
44:2:3694:G:H5''	44:2:3694:G:C8	2.33	0.58
44:2:4437:A:H2'	44:2:4437:A:N3	2.19	0.58
44:2:4680:C:H4'	44:2:4681:G:OP2	2.04	0.58
44:2:4691:G:H5''	44:2:4694:G:H4'	1.85	0.58
1:A:52:PRO:CB	44:2:2718:U:H5'	2.30	0.58
3:C:69:THR:HG22	3:C:75:ARG:HE	1.68	0.58
6:F:160:GLY:HA3	6:F:207:PHE:CE2	2.37	0.58
43:u:105:ILE:HG21	43:u:132:LEU:HD23	1.86	0.58
44:2:121:A:OP1	44:2:121:A:H2'	2.03	0.58
44:2:426:A:C8	44:2:427:C:H5	2.18	0.58
44:2:974:C:H4'	44:2:974:C:OP1	2.01	0.58
44:2:1227:U:H2'	44:2:1228:C:H6	1.66	0.58
44:2:2417:U:O4'	44:2:2495:G:C2	2.56	0.58
44:2:2549:C:OP1	44:2:2741:A:C8	2.57	0.58
44:2:2634:G:H8	44:2:2634:G:O5'	1.86	0.58
44:2:2650:G:H21	44:2:2652:G:N2	2.01	0.58
44:2:3876:G:H2'	44:2:4407:C:O2'	2.04	0.58
44:2:4647:A:H61	44:2:4663:U:H3	1.51	0.58
45:3:54:C:O5'	45:3:54:C:H6	1.86	0.58
46:4:23:A:H2	46:4:119:U:O2	1.87	0.58
3:C:159:GLU:O	3:C:215:ASN:HB2	2.04	0.58
3:C:163:LYS:HB3	44:2:221:U:O4	2.04	0.58
6:F:55:LYS:HZ3	44:2:973:U:H2'	1.68	0.58
6:F:184:ILE:HA	6:F:189:ASP:OD2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:162:ASP:O	7:G:164:ILE:HG13	2.04	0.58
8:H:150:ASP:O	8:H:154:VAL:HG23	2.04	0.58
11:L:53:GLY:C	11:L:55:ILE:N	2.61	0.58
16:Q:67:ILE:O	16:Q:70:MET:HG2	2.04	0.58
23:X:56:ARG:CA	44:2:14:C:H4'	2.34	0.58
24:Y:24:HIS:ND1	45:3:90:C:O2'	2.36	0.58
44:2:85:G:H22	44:2:97:G:H3'	1.69	0.58
44:2:349:C:O5'	44:2:349:C:H6	1.87	0.58
44:2:1942:A:H2'	44:2:1943:G:H8	1.67	0.58
44:2:4505:G:H2'	44:2:4506:A:O5'	2.04	0.58
44:2:4735:G:C3'	44:2:4736:C:H5''	2.31	0.58
1:A:50:HIS:HB2	41:p:54:ILE:CD1	2.34	0.58
4:D:21:ARG:HG3	4:D:24:ARG:NH2	2.18	0.58
7:G:54:PHE:CZ	44:2:4055:G:C5'	2.83	0.58
8:H:7:ASN:HB3	8:H:58:ASP:OD2	2.04	0.58
11:L:103:ARG:HH21	34:i:25:ARG:HG2	1.68	0.58
19:T:81:LYS:HE3	44:2:1664:G:H5'	1.86	0.58
26:a:47:LYS:O	26:a:47:LYS:HG2	2.04	0.58
31:f:52:LYS:HE3	31:f:52:LYS:HA	1.86	0.58
34:i:41:ARG:CZ	44:2:299:G:C8	2.87	0.58
44:2:402:G:H5''	44:2:405:C:O2'	2.04	0.58
44:2:427:C:C6	44:2:427:C:O5'	2.57	0.58
44:2:701:C:H3'	44:2:702:G:C8	2.39	0.58
44:2:965:C:C5'	44:2:965:C:C6	2.86	0.58
44:2:976:C:H2'	44:2:977:G:H8	1.69	0.58
44:2:1064:C:H2'	44:2:1065:C:H6	1.65	0.58
44:2:2019:A:C2'	44:2:4424:A:H2	2.17	0.58
44:2:2046:C:O5'	44:2:2046:C:H6	1.87	0.58
44:2:2368:G:H2'	44:2:2369:C:H5''	1.85	0.58
44:2:3831:A:H2'	44:2:3832:C:O4'	2.03	0.58
44:2:4072:A:O2'	44:2:4073:G:H5'	2.04	0.58
44:2:4363:U:O2'	44:2:4364:U:H5'	2.03	0.58
44:2:4869:C:H6	44:2:4869:C:O5'	1.87	0.58
44:2:4937:A:H2'	44:2:4938:C:H5'	1.85	0.58
1:A:179:ILE:HB	44:2:3622:A:O3'	2.03	0.58
7:G:130:THR:HB	44:2:120:A:N6	2.18	0.58
13:N:191:ALA:HA	13:N:194:ARG:HE	1.68	0.58
13:N:192:TRP:CZ2	44:2:48:G:H5'	2.38	0.58
15:P:51:VAL:HA	15:P:56:GLN:O	2.04	0.58
24:Y:111:LEU:HB3	24:Y:116:LYS:HE2	1.84	0.58
43:u:56:GLU:OE1	43:u:146:LYS:HD3	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:32:G:N2	44:2:50:C:H5	2.01	0.58
44:2:173:G:H2'	44:2:174:G:C8	2.39	0.58
44:2:176:G:H2'	44:2:177:C:H6	1.69	0.58
44:2:314:C:H2'	44:2:315:A:H8	1.69	0.58
44:2:1164:A:C2'	44:2:1165:G:H5'	2.33	0.58
44:2:1205:U:O2	44:2:1205:U:H2'	2.03	0.58
44:2:1673:C:O2	44:2:1820:G:C2	2.57	0.58
44:2:1706:U:O5'	44:2:1706:U:H6	1.86	0.58
44:2:2455:C:O5'	44:2:2456:G:H5''	2.03	0.58
44:2:2485:U:H5''	44:2:2486:C:OP2	2.04	0.58
44:2:3578:G:C5'	44:2:3578:G:H8	2.17	0.58
44:2:4030:A:O2'	44:2:4031:U:H5'	2.04	0.58
44:2:4153:C:H2'	44:2:4154:U:H5'	1.85	0.58
44:2:4314:U:O2	44:2:4314:U:H2'	2.04	0.58
44:2:4962:A:H5''	44:2:4997:A:C2	2.39	0.58
45:3:34:U:O2	45:3:34:U:H2'	2.02	0.58
45:3:137:A:C2	45:3:138:C:C2	2.91	0.58
3:C:180:ILE:O	3:C:183:VAL:HG22	2.04	0.57
7:G:128:VAL:CB	44:2:119:G:H22	2.17	0.57
7:G:170:LEU:HD23	7:G:173:LEU:HD12	1.86	0.57
15:P:135:ARG:NH2	44:2:1575:U:H4'	2.19	0.57
34:i:99:LYS:CD	43:u:195:ILE:O	2.51	0.57
42:t:75:THR:HG23	42:t:78:VAL:HG22	1.84	0.57
43:u:84:LEU:HD23	43:u:110:LEU:CD1	2.34	0.57
43:u:145:MET:O	43:u:148:THR:HG22	2.04	0.57
44:2:2:G:N2	45:3:156:U:N3	2.51	0.57
44:2:42:A:N6	44:2:4339:A:H2	2.02	0.57
44:2:79:C:C2'	44:2:80:C:H5'	2.34	0.57
44:2:166:G:H2'	44:2:167:C:O4'	2.03	0.57
44:2:957:G:H4'	44:2:1218:A:C5'	2.33	0.57
44:2:1066:C:O2'	44:2:1067:A:H5'	2.04	0.57
44:2:1074:G:H2'	44:2:1075:A:C8	2.39	0.57
44:2:1641:C:H1'	44:2:2297:G:H1'	1.85	0.57
44:2:2276:A:H3'	44:2:2277:G:H5'	1.86	0.57
44:2:2309:G:H1'	44:2:2310:G:N9	2.18	0.57
44:2:2727:G:H2'	44:2:2728:G:C8	2.39	0.57
44:2:2737:G:H2'	44:2:2737:G:N3	2.19	0.57
44:2:2820:U:H2'	44:2:2821:A:O4'	2.03	0.57
44:2:3752:A:H5'	44:2:3752:A:H8	1.69	0.57
44:2:4133:G:H2'	44:2:4134:U:H5'	1.86	0.57
44:2:4179:A:C2	44:2:4180:A:C5	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4203:C:O2	44:2:4228:A:H1'	2.03	0.57
44:2:4837:U:O2'	44:2:4838:C:H5'	2.04	0.57
2:B:25:HIS:HD2	44:2:4939:C:H5''	1.68	0.57
2:B:303:ALA:HB2	2:B:314:ILE:HA	1.86	0.57
7:G:43:GLN:OE1	44:2:4083:C:N4	2.36	0.57
7:G:194:VAL:HG13	7:G:196:ARG:HG3	1.86	0.57
15:P:32:THR:HG22	15:P:58:VAL:HG21	1.86	0.57
16:Q:75:ARG:HE	16:Q:78:LYS:HG3	1.69	0.57
24:Y:122:LYS:HG2	44:2:194:A:OP2	2.03	0.57
43:u:64:GLU:HB2	43:u:107:GLU:HG2	1.85	0.57
44:2:102:G:N2	44:2:103:G:C4	2.73	0.57
44:2:183:G:H2'	44:2:184:U:H5'	1.86	0.57
44:2:249:C:H2'	44:2:250:G:C8	2.38	0.57
44:2:1254:A:H2'	44:2:1255:G:H4'	1.86	0.57
44:2:1305:C:C5	44:2:3848:G:O5'	2.57	0.57
44:2:1640:C:H2'	44:2:1641:C:H6	1.69	0.57
44:2:1872:C:H2'	44:2:1873:G:H5''	1.85	0.57
44:2:1894:G:C3'	44:2:1895:A:H5'	2.34	0.57
44:2:1907:A:H61	44:2:2032:U:H3	1.49	0.57
44:2:2048:U:H4'	44:2:2049:A:OP2	2.03	0.57
44:2:2386:U:H5''	44:2:2387:C:C5	2.36	0.57
44:2:2624:A:N6	44:2:2664:U:C2	2.72	0.57
44:2:3910:G:C4	44:2:3911:A:N7	2.72	0.57
44:2:4420:U:H2'	44:2:4421:C:H6	1.67	0.57
44:2:4704:G:N2	44:2:4910:A:C2	2.70	0.57
2:B:228:TYR:HE1	44:2:4934:A:C8	2.22	0.57
5:E:152:ILE:O	5:E:158:ARG:HA	2.03	0.57
12:M:121:ARG:HD2	44:2:4883:C:O2	2.05	0.57
18:S:173:ASN:O	44:2:4723:A:C8	2.57	0.57
19:T:28:ALA:O	19:T:32:ARG:HG3	2.04	0.57
22:W:33:ASN:OD1	22:W:35:LYS:HB3	2.04	0.57
23:X:48:ARG:HB2	44:2:2449:A:C2'	2.35	0.57
32:g:70:THR:HA	44:2:2564:A:N6	2.19	0.57
42:t:103:ARG:HG2	42:t:107:ARG:H	1.69	0.57
43:u:62:PHE:CE2	43:u:110:LEU:HB2	2.39	0.57
44:2:252:G:H8	44:2:252:G:O5'	1.87	0.57
44:2:381:C:H6	44:2:381:C:C5'	2.12	0.57
44:2:454:A:H2'	44:2:455:G:C8	2.38	0.57
44:2:1086:A:H2'	44:2:1087:C:H4'	1.87	0.57
44:2:1159:U:C4	44:2:1160:C:N4	2.73	0.57
44:2:1421:C:H2'	44:2:1422:C:O4'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1648:A:C8	44:2:1648:A:C3'	2.87	0.57
44:2:1934:A:N1	44:2:2006:C:C4	2.73	0.57
44:2:1936:A:H1'	44:2:2003:A:N1	2.19	0.57
44:2:2397:A:H3'	44:2:2398:G:C4'	2.33	0.57
44:2:2491:G:C2	44:2:2492:G:C8	2.92	0.57
44:2:2685:U:H3'	44:2:2685:U:H6	1.69	0.57
44:2:2839:G:C4	44:2:3593:A:C8	2.92	0.57
44:2:4625:A:H2'	44:2:4626:G:H8	1.68	0.57
44:2:4688:A:C2'	44:2:4695:C:H1'	2.33	0.57
45:3:121:G:H3'	45:3:122:G:C5'	2.31	0.57
7:G:110:LYS:HE2	7:G:114:LEU:HD12	1.85	0.57
14:O:182:GLU:HG2	14:O:191:LYS:CE	2.34	0.57
16:Q:42:THR:CB	44:2:1409:C:H5''	2.34	0.57
16:Q:53:MET:HE1	44:2:1672:U:OP1	2.04	0.57
33:h:80:PRO:HG2	33:h:83:LEU:HD12	1.86	0.57
44:2:99:A:H2'	44:2:100:C:H6	1.70	0.57
44:2:280:C:H2'	44:2:281:U:C6	2.40	0.57
44:2:673:G:H3'	44:2:674:G:H5''	1.85	0.57
44:2:676:G:HO2'	44:2:677:C:H5	1.53	0.57
44:2:692:C:H2'	44:2:693:G:O4'	2.05	0.57
44:2:1316:G:C2'	44:2:1317:A:C8	2.86	0.57
44:2:1724:G:H2'	44:2:1725:A:O4'	2.05	0.57
44:2:1811:G:H8	44:2:1811:G:H3'	1.68	0.57
44:2:2637:A:H3'	44:2:2638:U:C5'	2.21	0.57
44:2:2762:C:H3'	44:2:2763:C:C5	2.40	0.57
44:2:4806:G:H2'	44:2:4807:C:O4'	2.04	0.57
46:4:47:G:O5'	46:4:47:G:C8	2.57	0.57
1:A:220:GLY:HA2	44:2:3719:G:OP1	2.04	0.57
8:H:173:ARG:CD	38:m:127:VAL:HG22	2.35	0.57
10:J:109:ILE:HD13	10:J:109:ILE:H	1.69	0.57
28:c:56:ARG:NH1	28:c:56:ARG:HB2	2.20	0.57
42:t:6:GLN:O	42:t:10:VAL:HG22	2.05	0.57
44:2:32:G:H21	44:2:50:C:H5	1.51	0.57
44:2:152:C:H2'	44:2:153:G:C8	2.38	0.57
44:2:173:G:H2'	44:2:174:G:H8	1.69	0.57
44:2:174:G:H1	44:2:253:C:N4	2.03	0.57
44:2:445:U:H3'	44:2:446:C:H5	1.68	0.57
44:2:717:G:C8	44:2:717:G:C5'	2.88	0.57
44:2:929:U:C3'	44:2:930:C:H5'	2.33	0.57
44:2:1359:C:H5'	44:2:1360:G:OP2	2.04	0.57
44:2:1517:U:O5'	44:2:1517:U:H6	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1726:U:C6	44:2:1726:U:H5''	2.38	0.57
44:2:2309:G:H3'	44:2:2309:G:OP2	2.04	0.57
44:2:3703:U:O5'	44:2:3703:U:H6	1.85	0.57
44:2:4874:G:H2'	44:2:4875:C:H6	1.69	0.57
2:B:100:ARG:NH2	44:2:4682:A:H4'	2.20	0.57
4:D:13:PHE:HE1	46:4:15:C:H1'	1.69	0.57
6:F:107:LYS:HE3	44:2:1703:G:H2'	1.86	0.57
6:F:110:GLN:HG2	16:Q:6:ARG:NE	2.19	0.57
7:G:66:GLN:HB3	13:N:28:TRP:CH2	2.39	0.57
15:P:131:ARG:HH21	44:2:1575:U:H2'	1.69	0.57
18:S:72:PRO:O	18:S:100:LEU:HD23	2.05	0.57
19:T:81:LYS:CD	44:2:4264:A:H2	2.16	0.57
28:c:79:ILE:HA	28:c:90:ARG:CB	2.34	0.57
43:u:74:VAL:HG11	43:u:142:ILE:HG21	1.86	0.57
44:2:432:G:O6	44:2:1286:C:N3	2.38	0.57
44:2:926:G:O2'	44:2:929:U:C6	2.51	0.57
44:2:1197:G:C3'	44:2:1198:G:C8	2.88	0.57
44:2:1281:C:H2'	44:2:1282:U:OP1	2.04	0.57
44:2:1926:G:H2'	44:2:1927:U:O4'	2.05	0.57
44:2:2257:U:C2'	44:2:2258:A:H5'	2.34	0.57
44:2:2284:A:C8	44:2:2285:G:N7	2.72	0.57
44:2:2378:A:H3'	44:2:2379:G:H5''	1.87	0.57
44:2:2547:U:H4'	44:2:2739:G:C2	2.40	0.57
44:2:2683:G:H1'	44:2:2685:U:OP2	2.03	0.57
44:2:2848:A:H3'	44:2:2849:C:H6	1.69	0.57
44:2:3661:A:C2	44:2:3662:U:H1'	2.40	0.57
44:2:4157:G:O2'	44:2:4158:G:H5'	2.05	0.57
44:2:4352:G:O2'	44:2:4354:A:H2'	2.04	0.57
44:2:4689:C:H3'	44:2:4690:G:C8	2.39	0.57
44:2:4971:A:C2	44:2:4988:G:N2	2.64	0.57
45:3:49:G:H8	45:3:49:G:OP1	1.88	0.57
45:3:129:C:H2'	45:3:130:C:H5	1.61	0.57
1:A:193:ARG:NH2	44:2:3654:C:OP1	2.38	0.57
3:C:183:VAL:HG11	3:C:206:GLY:CA	2.35	0.57
5:E:145:THR:HB	5:E:148:THR:CG2	2.34	0.57
6:F:94:ARG:CZ	6:F:109:LEU:HD13	2.35	0.57
24:Y:46:SER:O	24:Y:122:LYS:HE3	2.04	0.57
25:Z:58:GLY:O	25:Z:61:LYS:HB2	2.05	0.57
26:a:137:ILE:O	26:a:140:VAL:HG22	2.05	0.57
27:b:65:MET:HG3	44:2:1789:G:H21	1.69	0.57
30:e:22:ARG:HD2	30:e:31:ILE:CG2	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:i:73:ILE:O	34:i:77:VAL:HG22	2.05	0.57
42:t:18:ILE:HD13	42:t:18:ILE:H	1.70	0.57
42:t:58:LYS:HB3	44:2:670:C:P	2.45	0.57
44:2:326:A:C3'	44:2:327:A:C8	2.80	0.57
44:2:428:G:H8	44:2:428:G:O5'	1.88	0.57
44:2:658:G:C8	44:2:658:G:C5'	2.85	0.57
44:2:1056:C:H42	44:2:1204:G:H22	1.52	0.57
44:2:1213:G:HO2'	44:2:1214:G:H5'	1.68	0.57
44:2:1465:C:C4	44:2:1466:G:N7	2.73	0.57
44:2:1484:C:O5'	44:2:1484:C:H6	1.88	0.57
44:2:1898:C:O2'	44:2:1900:G:H5''	2.04	0.57
44:2:2029:C:H3'	44:2:2030:G:O4'	2.05	0.57
44:2:2343:A:C2'	44:2:2344:A:H5''	2.34	0.57
44:2:2576:G:H5'	44:2:2577:A:O5'	2.04	0.57
44:2:2620:G:H2'	44:2:2621:G:H5'	1.87	0.57
44:2:4490:U:O5'	44:2:4490:U:H6	1.86	0.57
44:2:4545:U:O5'	44:2:4545:U:H6	1.86	0.57
44:2:4742:C:H3'	44:2:4742:C:H6	1.69	0.57
44:2:4838:C:H3'	44:2:4839:G:H5'	1.86	0.57
44:2:4872:C:H2'	44:2:4873:C:C6	2.40	0.57
2:B:90:VAL:HG11	2:B:182:GLU:OE2	2.05	0.57
3:C:48:ASN:HA	44:2:1352:A:OP1	2.03	0.57
3:C:196:MET:HE2	44:2:343:G:H1	1.68	0.57
5:E:172:LEU:HA	44:2:4897:C:N1	2.20	0.57
8:H:23:ARG:HH11	8:H:23:ARG:HG3	1.69	0.57
8:H:44:GLU:HB2	44:2:4724:G:C8	2.39	0.57
8:H:86:LEU:HD21	8:H:191:ASP:HB2	1.87	0.57
22:W:36:CYS:HG	22:W:51:TRP:HH2	1.52	0.57
24:Y:101:PRO:HA	24:Y:104:VAL:HG22	1.86	0.57
31:f:91:ASN:HB2	44:2:430:G:O2'	2.05	0.57
42:t:58:LYS:N	44:2:670:C:H5''	2.16	0.57
44:2:166:G:H2'	44:2:167:C:C4'	2.35	0.57
44:2:215:A:O4'	44:2:216:G:H5'	2.05	0.57
44:2:468:C:C2'	44:2:469:G:H5'	2.34	0.57
44:2:635:G:O2'	44:2:636:G:H5'	2.05	0.57
44:2:1163:C:O2'	44:2:1164:A:H5'	2.05	0.57
44:2:1174:G:H2'	44:2:1175:G:H8	1.70	0.57
44:2:1210:U:O2	44:2:1210:U:H3'	2.05	0.57
44:2:1390:U:H2'	44:2:1391:C:C5	2.40	0.57
44:2:1420:U:H6	44:2:1420:U:C3'	2.13	0.57
44:2:1539:A:O5'	44:2:1539:A:H8	1.88	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1718:G:H2'	44:2:1719:C:C6	2.40	0.57
44:2:2344:A:C2	44:2:2775:A:N3	2.73	0.57
44:2:2378:A:C3'	44:2:2379:G:H5''	2.35	0.57
44:2:2751:C:H6	44:2:2751:C:O5'	1.87	0.57
44:2:3838:C:C6	44:2:3838:C:OP1	2.57	0.57
44:2:4098:G:H1	44:2:4113:C:N4	1.96	0.57
44:2:4268:C:H2'	44:2:4269:G:C8	2.39	0.57
44:2:4824:U:O2	44:2:4824:U:H3'	2.05	0.57
44:2:4843:U:H2'	44:2:4844:G:H5'	1.87	0.57
44:2:5017:G:C2'	44:2:5018:G:H5'	2.35	0.57
2:B:92:TYR:CE1	2:B:161:ARG:HD2	2.39	0.57
4:D:207:TYR:CD1	46:4:33:U:C1'	2.88	0.57
5:E:214:ASP:CG	44:2:4896:G:N3	2.63	0.57
11:L:18:TRP:NE1	44:2:1495:G:O2'	2.38	0.57
11:L:59:VAL:HG13	44:2:74:G:P	2.45	0.57
11:L:61:CYS:SG	44:2:102:G:H5''	2.45	0.57
12:M:113:MET:SD	44:2:4836:U:C4	2.97	0.57
12:M:126:GLU:HB2	14:O:187:LYS:CE	2.34	0.57
19:T:81:LYS:HG3	44:2:4264:A:C2	2.40	0.57
24:Y:42:TYR:HB2	24:Y:44:VAL:HG12	1.86	0.57
43:u:160:HIS:CD2	44:2:4021:A:N3	2.73	0.57
44:2:186:G:C8	44:2:186:G:O5'	2.58	0.57
44:2:233:G:H2'	44:2:233:G:N3	2.19	0.57
44:2:426:A:H2'	44:2:427:C:C5'	2.35	0.57
44:2:502:C:H2'	44:2:503:U:H6	1.68	0.57
44:2:644:U:H2'	44:2:645:C:H6	1.68	0.57
44:2:959:C:C3'	44:2:1215:G:H21	2.18	0.57
44:2:1249:G:C8	44:2:1249:G:H5''	2.40	0.57
44:2:1299:U:H3'	44:2:1301:G:OP2	2.04	0.57
44:2:1505:G:H2'	44:2:1506:A:C8	2.39	0.57
44:2:1712:G:N3	44:2:4174:A:H2'	2.20	0.57
44:2:2000:C:H2'	44:2:2001:C:N1	2.20	0.57
44:2:2761:C:H2'	44:2:2762:C:O4'	2.05	0.57
44:2:3876:G:H4'	44:2:3877:A:OP1	2.03	0.57
44:2:4268:C:H2'	44:2:4269:G:H5'	1.86	0.57
44:2:4420:U:O5'	44:2:4420:U:H6	1.87	0.57
44:2:4456:A:H3'	44:2:4457:U:H5'	1.86	0.57
45:3:60:G:N2	45:3:64:U:H1'	2.20	0.57
10:J:89:VAL:HG22	10:J:114:ASP:HB3	1.87	0.57
12:M:137:LYS:O	12:M:140:PRO:HD2	2.05	0.57
19:T:68:THR:HG22	19:T:71:ALA:H	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Z:136:PHE:HA	44:2:4089:G:C2	2.39	0.57
26:a:34:ASN:CG	44:2:94:A:H5''	2.30	0.57
42:t:103:ARG:HD3	42:t:106:LEU:CB	2.35	0.57
44:2:166:G:O2'	44:2:167:C:H4'	2.04	0.57
44:2:213:C:OP1	44:2:217:C:H5''	2.05	0.57
44:2:218:C:O2'	44:2:219:C:H5'	2.04	0.57
44:2:303:G:H2'	44:2:304:U:O4'	2.04	0.57
44:2:690:U:O5'	44:2:690:U:H6	1.87	0.57
44:2:1079:C:C3'	44:2:1080:U:H5''	2.34	0.57
44:2:1174:G:H8	44:2:1174:G:O5'	1.87	0.57
44:2:1506:A:H2'	44:2:1506:A:N3	2.19	0.57
44:2:1606:G:H3'	44:2:1607:C:H6	1.70	0.57
44:2:1730:A:H2'	44:2:1730:A:N3	2.20	0.57
44:2:1894:G:H8	44:2:1894:G:H3'	1.70	0.57
44:2:4140:G:C2	44:2:4141:U:H1'	2.40	0.57
44:2:4303:U:O2'	44:2:4304:U:H5'	2.05	0.57
44:2:4417:U:H2'	44:2:4418:C:H5'	1.87	0.57
18:S:103:ALA:O	18:S:106:VAL:HG12	2.05	0.56
19:T:129:LYS:N	44:2:1814:G:H5''	2.19	0.56
24:Y:45:ARG:HB2	44:2:195:A:H5'	1.87	0.56
25:Z:89:ILE:O	25:Z:89:ILE:HG12	2.05	0.56
32:g:54:ARG:HB2	44:2:2629:G:C2	2.40	0.56
44:2:400:G:N2	44:2:2305:U:C5'	2.61	0.56
44:2:468:C:H2'	44:2:469:G:C8	2.40	0.56
44:2:959:C:C3'	44:2:1215:G:N2	2.68	0.56
44:2:1214:G:H1'	44:2:1216:C:H3'	1.87	0.56
44:2:1386:G:H21	44:2:1387:C:H41	1.52	0.56
44:2:1546:U:H2'	44:2:1547:C:C6	2.40	0.56
44:2:1844:U:O2	44:2:1844:U:H2'	2.05	0.56
44:2:2331:G:H2'	44:2:2332:G:C8	2.40	0.56
44:2:2346:U:C5	44:2:4616:A:C8	2.93	0.56
44:2:2682:G:N2	44:2:2688:G:H1	2.02	0.56
44:2:3787:U:OP2	44:2:3787:U:H4'	2.05	0.56
44:2:3910:G:N3	44:2:3911:A:N7	2.41	0.56
44:2:4090:C:H3'	44:2:4090:C:C6	2.38	0.56
44:2:4352:G:H8	44:2:4352:G:O5'	1.88	0.56
44:2:4809:G:H2'	44:2:4810:G:C8	2.40	0.56
45:3:60:G:N2	45:3:64:U:C2	2.72	0.56
45:3:71:A:H2'	45:3:82:A:N1	2.19	0.56
45:3:127:U:OP2	45:3:128:C:H5'	2.05	0.56
1:A:117:GLU:HG2	1:A:124:GLY:H	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:81:HIS:O	4:D:84:PRO:HD2	2.04	0.56
4:D:273:LEU:CD2	44:2:1086:A:H1'	2.35	0.56
11:L:130:LYS:HD2	11:L:130:LYS:H	1.69	0.56
14:O:116:LYS:HG2	44:2:4829:A:C2	2.40	0.56
17:R:118:HIS:HE1	44:2:2638:U:H3	1.53	0.56
22:W:9:SER:HB3	22:W:36:CYS:SG	2.45	0.56
24:Y:62:TYR:HB3	24:Y:65:GLN:HG2	1.86	0.56
25:Z:59:LYS:HE2	44:2:4109:C:H1'	1.88	0.56
31:f:106:TYR:HD2	31:f:107:PRO:HD3	1.63	0.56
40:o:1:MET:O	44:2:4191:C:OP1	2.22	0.56
43:u:124:PRO:HG3	44:2:4015:A:O5'	1.96	0.56
44:2:254:G:H2'	44:2:255:C:OP1	2.05	0.56
44:2:335:A:H2'	44:2:336:C:C6	2.39	0.56
44:2:893:A:C2	44:2:894:G:C8	2.93	0.56
44:2:1211:C:H1'	44:2:1212:G:O5'	2.05	0.56
44:2:1284:C:O2	44:2:1284:C:C2'	2.53	0.56
44:2:1846:A:H2'	44:2:1848:C:C6	2.41	0.56
44:2:1901:A:C6	44:2:1902:C:N4	2.74	0.56
44:2:2524:G:O2'	44:2:2525:C:H5'	2.05	0.56
44:2:2663:G:H3'	44:2:2664:U:H4'	1.87	0.56
44:2:2672:A:H3'	44:2:2673:A:H5''	1.87	0.56
44:2:4013:G:N2	44:2:4015:A:H3'	2.20	0.56
44:2:4236:G:C8	44:2:4236:G:C5'	2.82	0.56
44:2:4334:U:H3'	44:2:4335:C:H5'	1.87	0.56
44:2:4598:U:H2'	44:2:4599:G:H8	1.68	0.56
44:2:4801:C:O2'	44:2:4802:G:H5'	2.05	0.56
46:4:98:G:H3'	46:4:99:G:H8	1.69	0.56
2:B:167:GLN:HE22	2:B:204:GLN:HE21	1.53	0.56
3:C:46:LYS:O	3:C:49:ARG:HG2	2.05	0.56
3:C:102:PHE:CG	44:2:1317:A:H4'	2.40	0.56
3:C:161:TYR:CE2	3:C:170:LEU:HD22	2.40	0.56
4:D:79:TYR:O	4:D:82:GLU:HB2	2.04	0.56
5:E:224:LYS:N	5:E:225:PRO:CD	2.67	0.56
9:I:160:PRO:HD3	44:2:4391:U:H4'	1.88	0.56
9:I:204:GLY:CA	46:4:64:G:H4'	2.35	0.56
10:J:26:VAL:HG13	10:J:32:ARG:HD3	1.87	0.56
14:O:34:VAL:HG11	14:O:112:TYR:CE1	2.41	0.56
14:O:172:LYS:HE3	14:O:176:ARG:HH12	1.69	0.56
17:R:75:HIS:CE1	44:2:2866:G:OP1	2.57	0.56
18:S:167:PHE:O	44:2:4829:A:C5'	2.53	0.56
23:X:93:ASN:HD21	44:2:2510:C:H4'	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Y:118:ILE:CD1	45:3:70:G:OP2	2.53	0.56
24:Y:120:GLU:O	24:Y:125:SER:N	2.35	0.56
30:e:61:GLY:HA2	44:2:2295:C:H5'	1.87	0.56
32:g:7:TYR:CZ	44:2:2378:A:H2	2.22	0.56
36:k:36:VAL:O	36:k:42:LEU:HD12	2.04	0.56
43:u:84:LEU:HD12	43:u:87:LEU:HD12	1.87	0.56
43:u:151:LEU:HD21	43:u:184:LEU:HD21	1.87	0.56
44:2:99:A:C2'	44:2:100:C:C6	2.88	0.56
44:2:193:C:O3'	44:2:194:A:C8	2.57	0.56
44:2:403:G:N3	44:2:403:G:H5'	2.20	0.56
44:2:431:U:H2'	44:2:432:G:C8	2.40	0.56
44:2:482:G:O2'	44:2:484:G:H5''	2.05	0.56
44:2:488:G:O6	44:2:658:G:N3	2.38	0.56
44:2:714:G:H2'	44:2:715:C:C6	2.40	0.56
44:2:891:C:H2'	44:2:892:G:C8	2.40	0.56
44:2:1082:U:O4	44:2:1147:C:H5'	2.04	0.56
44:2:1191:G:C2'	44:2:1192:G:H5'	2.35	0.56
44:2:1220:G:H2'	44:2:1221:C:C6	2.40	0.56
44:2:1280:G:O5'	44:2:1280:G:C8	2.53	0.56
44:2:1337:C:H5''	44:2:1338:G:OP2	2.05	0.56
44:2:1340:G:H3'	44:2:1341:G:H8	1.70	0.56
44:2:1462:C:O2	44:2:1462:C:C2'	2.52	0.56
44:2:1523:G:H3'	44:2:1524:G:H8	1.71	0.56
44:2:1756:C:C6	44:2:1756:C:H5''	2.40	0.56
44:2:2313:G:C4	44:2:2314:C:C5	2.93	0.56
44:2:2327:U:H3'	44:2:2328:C:C5'	2.36	0.56
44:2:2453:G:O2'	44:2:2454:A:H5'	2.05	0.56
44:2:2605:U:H3'	44:2:2605:U:C6	2.40	0.56
44:2:2716:C:H1'	44:2:2717:U:OP1	2.06	0.56
44:2:3772:A:C5	44:2:3773:G:C8	2.92	0.56
44:2:3878:C:O2	44:2:3878:C:H2'	2.05	0.56
44:2:3923:A:H8	44:2:3923:A:O5'	1.88	0.56
44:2:4053:A:C2	44:2:4124:C:N4	2.73	0.56
44:2:4094:A:H2'	44:2:4095:A:H8	1.71	0.56
44:2:4117:A:C1'	44:2:4118:C:P	2.94	0.56
44:2:4314:U:O2	44:2:4314:U:H5'	2.04	0.56
44:2:4379:U:H2'	44:2:4379:U:O2	2.04	0.56
44:2:4533:G:N3	44:2:4533:G:H5''	2.19	0.56
44:2:4637:U:C4	44:2:4674:C:H1'	2.41	0.56
44:2:4657:U:H2'	44:2:4658:C:C5'	2.35	0.56
45:3:73:U:H2'	45:3:74:U:H5'	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:4:118:C:O2'	46:4:119:U:H5''	2.05	0.56
1:A:179:ILE:O	1:A:184:ARG:HD2	2.05	0.56
2:B:80:GLU:OE1	2:B:326:VAL:HG13	2.04	0.56
3:C:322:LEU:HD23	44:2:1217:C:H42	1.70	0.56
5:E:168:LEU:HD23	5:E:172:LEU:HD12	1.86	0.56
27:b:49:HIS:ND1	44:2:1793:C:H5'	2.21	0.56
40:o:75:PRO:HA	40:o:78:ARG:HE	1.68	0.56
42:t:87:ARG:H	44:2:669:G:H4'	1.70	0.56
44:2:239:U:H6	44:2:239:U:O5'	1.88	0.56
44:2:254:G:N3	44:2:254:G:C3'	2.63	0.56
44:2:645:C:H2'	44:2:646:C:H6	1.70	0.56
44:2:944:A:H2'	44:2:944:A:N3	2.20	0.56
44:2:1509:G:H2'	44:2:1510:U:C6	2.39	0.56
44:2:2283:A:H2	44:2:2284:A:O4'	1.89	0.56
44:2:4149:U:H2'	44:2:4150:U:O2	2.05	0.56
44:2:4261:U:O2	44:2:4261:U:H2'	2.05	0.56
44:2:4367:G:H2'	44:2:4368:G:C8	2.39	0.56
44:2:4738:U:H2'	44:2:4739:G:H5'	1.88	0.56
1:A:205:ASN:O	1:A:208:GLU:HG2	2.05	0.56
2:B:94:GLU:HB3	2:B:158:GLN:CD	2.31	0.56
3:C:69:THR:HB	44:2:3875:A:H8	1.69	0.56
8:H:41:ILE:HG13	8:H:73:ILE:HG13	1.88	0.56
8:H:44:GLU:HB2	44:2:4724:G:N7	2.20	0.56
9:I:51:HIS:HB2	9:I:134:VAL:HG13	1.86	0.56
10:J:33:LEU:CD2	10:J:70:VAL:HG22	2.35	0.56
23:X:56:ARG:HB2	44:2:14:C:H4'	1.87	0.56
24:Y:66:GLN:O	24:Y:67:ILE:HB	2.05	0.56
27:b:19:ASN:ND2	44:2:1665:C:H5''	2.20	0.56
28:c:32:LYS:HA	28:c:35:LEU:HD12	1.88	0.56
44:2:42:A:C6	44:2:4339:A:C2	2.92	0.56
44:2:647:C:H2'	44:2:648:C:C6	2.39	0.56
44:2:976:C:H6	44:2:976:C:O5'	1.89	0.56
44:2:1160:C:H3'	44:2:1160:C:H6	1.71	0.56
44:2:1267:G:H2'	44:2:1268:G:H4'	1.88	0.56
44:2:1480:C:H2'	44:2:1481:G:C5	2.41	0.56
44:2:2325:G:P	44:2:2328:C:H41	2.29	0.56
44:2:2421:U:H5'	44:2:2422:C:OP2	2.06	0.56
44:2:2526:G:N2	44:2:2746:U:C5	2.74	0.56
44:2:2579:G:C5	44:2:2580:C:C4	2.94	0.56
44:2:2608:U:H6	44:2:2608:U:P	2.28	0.56
44:2:2702:A:H4'	44:2:2703:G:OP2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:3669:C:H3'	44:2:3715:A:N6	2.18	0.56
44:2:3695:A:O2'	44:2:3696:A:C8	2.58	0.56
44:2:3914:A:O2'	44:2:3915:G:H5'	2.04	0.56
44:2:4264:A:H1'	44:2:4265:G:C8	2.41	0.56
44:2:4358:C:H2'	44:2:4359:U:H5'	1.86	0.56
44:2:4526:U:C6	44:2:4526:U:C3'	2.88	0.56
44:2:4985:U:H2'	44:2:4986:G:O4'	2.06	0.56
45:3:111:U:C1'	45:3:112:G:OP2	2.52	0.56
45:3:118:C:H2'	45:3:119:C:O4'	2.06	0.56
46:4:11:A:H2	46:4:66:G:H2'	1.71	0.56
1:A:227:ARG:NH2	44:2:3628:G:O3'	2.39	0.56
4:D:41:LYS:HE2	19:T:34:TYR:HB2	1.87	0.56
18:S:93:MET:HE1	18:S:117:HIS:CE1	2.39	0.56
30:e:58:ILE:HG23	44:2:2254:G:H21	1.71	0.56
33:h:78:TYR:CG	44:2:16:G:H5''	2.41	0.56
36:k:47:ILE:HG12	36:k:52:LYS:HB2	1.86	0.56
42:t:73:PRO:CB	42:t:78:VAL:HG21	2.35	0.56
44:2:201:U:H3	44:2:208:G:H1	1.53	0.56
44:2:451:C:H42	44:2:684:A:H61	1.54	0.56
44:2:1178:G:H3'	44:2:1179:G:C5'	2.24	0.56
44:2:1672:U:H2'	44:2:1672:U:O2	2.05	0.56
44:2:2447:C:N3	44:2:3642:C:C5	2.73	0.56
44:2:2629:G:C2'	44:2:2630:C:H4'	2.34	0.56
44:2:2743:A:H2'	44:2:2744:U:C2	2.41	0.56
44:2:2761:C:H3'	44:2:2761:C:C6	2.41	0.56
44:2:3825:A:H2'	44:2:3826:G:O4'	2.06	0.56
44:2:4354:A:H4'	44:2:4355:U:OP2	2.05	0.56
44:2:4406:U:O2	44:2:4406:U:H2'	2.05	0.56
44:2:4579:U:H5'	44:2:4579:U:H6	1.71	0.56
44:2:4599:G:H1'	44:2:4960:G:H5'	1.86	0.56
5:E:154:THR:HA	44:2:4902:U:O2	2.06	0.56
9:I:38:ARG:HE	9:I:40:LYS:HB2	1.71	0.56
11:L:143:GLU:HG2	11:L:144:LEU:N	2.19	0.56
11:L:147:ALA:O	11:L:151:THR:HB	2.06	0.56
12:M:123:ILE:HA	14:O:187:LYS:NZ	2.20	0.56
13:N:39:ALA:HB3	13:N:61:ILE:CG2	2.36	0.56
17:R:106:LEU:HG	17:R:120:TYR:CD2	2.41	0.56
18:S:167:PHE:C	44:2:4829:A:H5''	2.31	0.56
18:S:169:THR:N	44:2:4829:A:O4'	2.39	0.56
30:e:6:PRO:HG3	30:e:72:SER:O	2.06	0.56
32:g:100:GLN:HE22	44:2:4085:U:C3'	2.17	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:j:74:PHE:HZ	45:3:33:G:H4'	1.71	0.56
40:o:60:ALA:HB3	44:2:4333:G:C8	2.40	0.56
43:u:29:VAL:C	44:2:4022:C:C2'	2.79	0.56
43:u:43:VAL:CG1	43:u:151:LEU:HG	2.36	0.56
44:2:156:C:O2	44:2:156:C:H2'	2.04	0.56
44:2:224:A:N6	44:2:238:G:H2'	2.20	0.56
44:2:284:G:H5'	44:2:285:G:O4'	2.06	0.56
44:2:674:G:C5'	44:2:674:G:H8	2.19	0.56
44:2:917:G:H3'	44:2:917:G:OP2	2.04	0.56
44:2:1304:A:H4'	44:2:1305:C:OP1	2.06	0.56
44:2:1523:G:H5'	44:2:1524:G:OP2	2.05	0.56
44:2:1555:G:N2	44:2:1557:U:H1'	2.21	0.56
44:2:1587:G:H2'	44:2:1588:U:O4'	2.05	0.56
44:2:2031:C:H5''	44:2:2032:U:OP2	2.04	0.56
44:2:2284:A:C2	45:3:19:C:O2	2.59	0.56
44:2:2310:G:C8	44:2:2310:G:P	2.99	0.56
44:2:4396:U:H4'	44:2:4397:U:OP1	2.05	0.56
1:A:47:ASP:HA	1:A:84:THR:HG22	1.87	0.56
7:G:71:TYR:CE1	13:N:25:VAL:HG13	2.41	0.56
7:G:182:CYS:HB3	7:G:222:ILE:CG2	2.35	0.56
8:H:80:MET:O	8:H:84:VAL:HG23	2.06	0.56
17:R:105:LEU:HD12	17:R:138:LEU:CD1	2.36	0.56
24:Y:90:ALA:HB1	44:2:380:A:H62	1.71	0.56
24:Y:123:ALA:HA	24:Y:126:ARG:CB	2.36	0.56
28:c:87:LYS:HD2	28:c:89:TYR:CE2	2.41	0.56
28:c:108:MET:N	28:c:109:PRO:HD2	2.21	0.56
33:h:51:ARG:HH22	45:3:48:A:H4'	1.71	0.56
44:2:235:C:H6	44:2:235:C:H5'	1.71	0.56
44:2:309:A:C8	44:2:309:A:H3'	2.41	0.56
44:2:337:G:C4	45:3:29:G:N2	2.73	0.56
44:2:346:A:H2'	44:2:347:G:C5'	2.35	0.56
44:2:411:A:H8	44:2:411:A:OP2	1.89	0.56
44:2:439:G:H2'	44:2:440:C:H6	1.68	0.56
44:2:441:G:C8	44:2:441:G:C5'	2.85	0.56
44:2:642:C:H5'	44:2:642:C:C6	2.38	0.56
44:2:1048:G:H5''	44:2:1215:G:N7	2.21	0.56
44:2:1626:U:O5'	44:2:1626:U:H6	1.89	0.56
44:2:1742:C:C3'	44:2:1743:G:H5''	2.35	0.56
44:2:1774:A:H5''	46:4:98:G:O2'	2.05	0.56
44:2:1831:G:C8	44:2:1831:G:C3'	2.88	0.56
44:2:2062:C:C5	44:2:2249:G:C2	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2390:U:O2'	44:2:2391:G:H5'	2.06	0.56
44:2:2469:C:C2'	44:2:2470:G:H8	2.18	0.56
44:2:2631:C:H2'	44:2:2632:C:C6	2.41	0.56
44:2:2741:A:O3'	44:2:2742:A:C8	2.59	0.56
44:2:3825:A:O5'	44:2:3825:A:H8	1.88	0.56
45:3:91:A:H2'	45:3:92:U:O4'	2.06	0.56
4:D:252:VAL:O	4:D:253:TYR:HB3	2.04	0.56
5:E:153:LEU:C	5:E:158:ARG:HG2	2.31	0.56
5:E:258:LEU:HB2	5:E:259:PRO:HD3	1.88	0.56
10:J:83:LEU:HD22	10:J:87:LEU:HG	1.87	0.56
16:Q:10:ASP:CG	44:2:2060:G:H4'	2.30	0.56
19:T:20:ARG:NH1	46:4:67:C:H4'	2.20	0.56
24:Y:87:ARG:HG3	24:Y:97:VAL:HG22	1.88	0.56
26:a:70:CYS:CA	26:a:109:TYR:HB3	2.36	0.56
26:a:103:VAL:HG22	26:a:126:ALA:HB2	1.87	0.56
36:k:52:LYS:O	36:k:56:LEU:HD13	2.05	0.56
43:u:62:PHE:HE1	43:u:81:GLU:CA	2.18	0.56
44:2:163:C:H2'	44:2:164:C:C6	2.41	0.56
44:2:204:G:H2'	44:2:205:A:C8	2.41	0.56
44:2:309:A:C2'	44:2:310:A:H5'	2.35	0.56
44:2:1147:C:O2	44:2:1147:C:H2'	2.06	0.56
44:2:1229:C:O5'	44:2:1229:C:H6	1.87	0.56
44:2:1408:U:H2'	44:2:1409:C:H5'	1.86	0.56
44:2:1479:A:C3'	44:2:1480:C:C5'	2.82	0.56
44:2:1918:G:C8	44:2:1918:G:OP2	2.58	0.56
44:2:2469:C:C2	44:2:2470:G:N7	2.74	0.56
44:2:2524:G:N3	44:2:2524:G:H2'	2.20	0.56
44:2:2603:U:O5'	44:2:2603:U:H6	1.88	0.56
44:2:2729:G:H2'	44:2:2730:G:O4'	2.06	0.56
44:2:3772:A:H5'	44:2:4457:U:O2'	2.06	0.56
44:2:4167:C:H1'	44:2:4295:C:H1'	1.88	0.56
44:2:4234:A:H2'	44:2:4235:G:C8	2.41	0.56
45:3:16:G:C8	45:3:16:G:OP2	2.59	0.56
45:3:24:G:H5''	45:3:24:G:C8	2.38	0.56
46:4:25:G:H2'	46:4:26:C:C6	2.41	0.56
13:N:40:PRO:HB3	44:2:8:U:C5'	2.34	0.56
21:V:105:ILE:HG23	21:V:113:LYS:HB3	1.88	0.56
24:Y:122:LYS:HZ2	44:2:194:A:H5''	1.71	0.56
25:Z:6:LYS:HB3	25:Z:7:PRO:HD2	1.88	0.56
27:b:44:ARG:CZ	44:2:1471:G:H5''	2.36	0.56
36:k:53:ALA:O	36:k:57:LYS:HG2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:n:1:MET:HE1	39:n:9:ARG:HE	1.71	0.56
43:u:26:ASP:OD2	43:u:201:LYS:HE3	2.06	0.56
44:2:112:C:C2'	44:2:113:A:H5'	2.36	0.56
44:2:966:U:H3'	44:2:967:C:C5'	2.35	0.56
44:2:1313:A:H3'	44:2:1314:A:H8	1.66	0.56
44:2:1649:G:C8	44:2:1649:G:C3'	2.88	0.56
44:2:2020:A:N7	44:2:2021:A:C2	2.74	0.56
44:2:2523:G:H2'	44:2:2524:G:C1'	2.36	0.56
44:2:2627:G:H5''	44:2:2627:G:C8	2.41	0.56
44:2:3670:C:H4'	44:2:3671:A:N7	2.21	0.56
44:2:3767:U:H3	44:2:3769:A:H3'	1.69	0.56
44:2:3924:G:N2	44:2:4025:C:N4	2.54	0.56
45:3:156:U:O5'	45:3:156:U:H6	1.88	0.56
3:C:54:VAL:CG2	3:C:55:SER:H	2.05	0.55
5:E:170:SER:CB	44:2:4896:G:H21	2.19	0.55
27:b:45:PHE:HB2	44:2:1794:G:OP1	2.05	0.55
29:d:46:LEU:HD11	29:d:73:TRP:HE1	1.70	0.55
32:g:76:ARG:HH22	44:2:2559:A:H5''	1.71	0.55
32:g:83:CYS:HB3	32:g:86:CYS:SG	2.46	0.55
42:t:90:LEU:O	42:t:93:ILE:HG22	2.06	0.55
44:2:655:G:N3	44:2:655:G:H2'	2.21	0.55
44:2:1220:G:C4	44:2:1221:C:N4	2.74	0.55
44:2:1282:U:H1'	44:2:1283:A:O5'	2.06	0.55
44:2:1332:C:O2	44:2:1336:U:H5'	2.07	0.55
44:2:1648:A:H8	44:2:1648:A:H3'	1.71	0.55
44:2:1760:U:H2'	44:2:1761:U:H5'	1.88	0.55
44:2:1761:U:H2'	44:2:1762:C:H6	1.72	0.55
44:2:2526:G:N2	44:2:2746:U:C4	2.74	0.55
44:2:2701:G:C4'	44:2:2702:A:C2	2.85	0.55
44:2:3878:C:O2	44:2:3878:C:C2'	2.53	0.55
44:2:3938:G:H2'	44:2:3939:G:H8	1.70	0.55
44:2:4303:U:C2'	44:2:4304:U:H5'	2.36	0.55
44:2:4851:G:O2'	44:2:4852:G:H5'	2.06	0.55
44:2:4855:C:C2'	44:2:4856:G:H4'	2.33	0.55
45:3:148:A:H3'	45:3:148:A:C8	2.41	0.55
46:4:12:U:H4'	46:4:108:G:N2	2.21	0.55
1:A:56:ALA:HB2	1:A:130:SER:HB3	1.87	0.55
5:E:272:ARG:O	44:2:4837:U:N1	2.40	0.55
7:G:138:ALA:HB3	7:G:196:ARG:NH2	2.22	0.55
36:k:24:LYS:HB3	36:k:35:LYS:HB2	1.88	0.55
43:u:157:ARG:NH1	44:2:4025:C:OP2	2.16	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:14:C:Cl'	44:2:15:A:OP2	2.55	0.55
44:2:389:A:C8	44:2:389:A:C3'	2.89	0.55
44:2:423:U:H3'	44:2:423:U:H6	1.72	0.55
44:2:900:C:O2	44:2:901:A:C2	2.59	0.55
44:2:1067:A:H2'	44:2:1068:C:H6	1.70	0.55
44:2:1083:C:O2	44:2:1083:C:C2'	2.53	0.55
44:2:1193:G:P	44:2:1193:G:C3'	2.94	0.55
44:2:1199:G:C3'	44:2:1200:G:C8	2.89	0.55
44:2:1214:G:O2'	44:2:1216:C:H3'	2.06	0.55
44:2:1267:G:H3'	44:2:1268:G:H4'	1.87	0.55
44:2:1285:C:C6	44:2:1285:C:O5'	2.59	0.55
44:2:1742:C:O5'	44:2:1743:G:H5''	2.06	0.55
44:2:1931:U:H6	44:2:1931:U:O5'	1.89	0.55
44:2:2345:A:H5''	44:2:2804:G:N2	2.14	0.55
44:2:2398:G:H2'	44:2:2805:U:O2	2.06	0.55
44:2:2415:A:H1'	44:2:2416:G:OP1	2.06	0.55
44:2:3910:G:N1	44:2:3911:A:N7	2.53	0.55
44:2:4231:A:H5''	44:2:4232:G:OP2	2.06	0.55
44:2:4437:A:C2	44:2:4438:G:C8	2.93	0.55
44:2:4612:G:C2'	44:2:4613:C:H5'	2.35	0.55
46:4:7:G:H5''	46:4:7:G:H8	1.70	0.55
46:4:94:C:H2'	46:4:95:C:C6	2.41	0.55
1:A:196:TRP:CE3	1:A:197:PRO:HD3	2.41	0.55
3:C:188:ARG:C	3:C:188:ARG:HD3	2.32	0.55
7:G:128:VAL:CG1	44:2:119:G:H22	2.19	0.55
7:G:173:LEU:HD23	34:i:43:MET:SD	2.46	0.55
12:M:20:HIS:CA	12:M:23:LYS:HD3	2.36	0.55
12:M:132:LYS:HZ1	44:2:4849:A:H3'	1.68	0.55
14:O:118:MET:HE1	44:2:4829:A:N1	2.21	0.55
16:Q:75:ARG:CD	44:2:1435:G:H1'	2.36	0.55
24:Y:42:TYR:CG	24:Y:124:LYS:HE3	2.41	0.55
25:Z:135:ARG:C	44:2:4089:G:H22	2.13	0.55
43:u:2:ASP:C	43:u:4:GLU:H	2.14	0.55
44:2:24:G:C2	44:2:333:G:C8	2.95	0.55
44:2:38:A:C8	44:2:40:G:OP2	2.59	0.55
44:2:108:A:H4'	44:2:109:G:OP1	2.06	0.55
44:2:286:A:H5'	44:2:287:A:C8	2.42	0.55
44:2:438:C:C2'	44:2:439:G:H5'	2.36	0.55
44:2:1317:A:C2	44:2:2326:A:C2	2.95	0.55
44:2:1390:U:H6	44:2:1390:U:C5'	2.19	0.55
44:2:1464:C:C2'	44:2:1465:C:O4'	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1808:G:C2'	44:2:1809:G:H5'	2.37	0.55
44:2:2045:C:H2'	44:2:2046:C:C6	2.41	0.55
44:2:2420:G:O4'	44:2:2489:A:C2	2.59	0.55
44:2:2587:G:H8	44:2:2587:G:O5'	1.89	0.55
44:2:2749:C:H2'	44:2:2750:G:O5'	2.06	0.55
44:2:3604:A:H3'	44:2:3605:C:C5'	2.36	0.55
44:2:3618:A:O4'	44:2:4495:A:H4'	2.06	0.55
44:2:4420:U:H2'	44:2:4421:C:C6	2.40	0.55
44:2:4452:U:O2	44:2:4452:U:H2'	2.07	0.55
44:2:4839:G:H2'	44:2:4840:U:C6	2.42	0.55
44:2:4908:G:H2'	44:2:4909:G:H8	1.70	0.55
45:3:143:G:C2'	45:3:144:U:H5'	2.36	0.55
46:4:23:A:C2'	46:4:24:C:C6	2.85	0.55
1:A:85:GLY:HA3	44:2:4088:G:C5	2.41	0.55
3:C:333:LYS:HD2	44:2:1217:C:C5'	2.36	0.55
20:U:66:SER:OG	20:U:69:LYS:HB2	2.06	0.55
44:2:1231:C:H2'	44:2:1232:C:C6	2.41	0.55
44:2:4032:C:H3'	44:2:4033:G:C4'	2.37	0.55
44:2:4608:A:C5	44:2:4609:G:N7	2.74	0.55
3:C:53:ALA:HB1	3:C:105:THR:OG1	2.05	0.55
3:C:311:ARG:NH2	44:2:944:A:H61	2.04	0.55
10:J:96:LYS:HD3	10:J:177:GLY:C	2.31	0.55
11:L:156:PRO:CA	44:2:1359:C:C5	2.90	0.55
12:M:20:HIS:HA	12:M:23:LYS:HD3	1.89	0.55
15:P:85:LYS:HG3	44:2:3825:A:H4'	1.88	0.55
16:Q:27:LEU:HD22	42:t:4:HIS:CD2	2.41	0.55
17:R:132:PHE:HA	17:R:137:ILE:HD13	1.89	0.55
26:a:74:ASN:CB	26:a:114:LYS:HD3	2.37	0.55
44:2:125:C:O5'	44:2:125:C:H6	1.90	0.55
44:2:156:C:O2	44:2:156:C:C2'	2.54	0.55
44:2:372:U:H2'	44:2:373:G:O4'	2.07	0.55
44:2:441:G:H4'	44:2:442:C:OP1	2.07	0.55
44:2:1141:G:H8	44:2:1141:G:O5'	1.90	0.55
44:2:1386:G:N2	44:2:1387:C:H41	2.05	0.55
44:2:1553:G:H8	44:2:1553:G:O5'	1.90	0.55
44:2:1620:G:N7	44:2:4346:C:H1'	2.21	0.55
44:2:1777:G:H4'	44:2:4175:C:N4	2.20	0.55
44:2:2247:C:O5'	44:2:2247:C:H6	1.89	0.55
44:2:2509:C:C2'	44:2:2510:C:H5'	2.36	0.55
44:2:2542:A:H8	44:2:2542:A:O5'	1.89	0.55
44:2:2665:G:O6	44:2:2666:C:N4	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2746:U:C5	44:2:2746:U:OP1	2.60	0.55
44:2:2866:G:H21	44:2:4989:A:H8	1.55	0.55
44:2:4319:U:H5''	44:2:4319:U:H6	1.71	0.55
44:2:4437:A:C2	44:2:4438:G:N7	2.74	0.55
44:2:4531:A:H8	44:2:4531:A:O5'	1.88	0.55
44:2:4635:U:O5'	44:2:4635:U:H6	1.90	0.55
44:2:4743:C:O5'	44:2:4743:C:C6	2.60	0.55
44:2:4801:C:H2'	44:2:4802:G:H5'	1.87	0.55
44:2:4852:G:H2'	44:2:4853:G:H8	1.70	0.55
45:3:12:G:C2'	45:3:13:G:H5'	2.37	0.55
3:C:54:VAL:HG11	44:2:2320:G:N7	2.22	0.55
5:E:170:SER:OG	5:E:172:LEU:HG	2.06	0.55
5:E:278:THR:HB	5:E:281:ILE:HG12	1.88	0.55
11:L:88:LYS:HZ3	44:2:156:C:H1'	1.72	0.55
19:T:83:LYS:HE2	19:T:85:LEU:HD21	1.88	0.55
36:k:25:ILE:HG21	36:k:57:LYS:NZ	2.22	0.55
43:u:188:LEU:O	43:u:189:GLU:HG2	2.07	0.55
44:2:437:C:H2'	44:2:437:C:O2	2.04	0.55
44:2:438:C:H2'	44:2:439:G:H8	1.70	0.55
44:2:904:C:H2'	44:2:905:C:H6	1.71	0.55
44:2:914:G:H2'	44:2:914:G:N3	2.20	0.55
44:2:1082:U:C6	44:2:1083:C:C5	2.87	0.55
44:2:1389:C:H2'	44:2:1390:U:C6	2.42	0.55
44:2:1400:A:C2	44:2:1446:C:H1'	2.41	0.55
44:2:1877:G:H5'	44:2:2254:G:O2'	2.07	0.55
44:2:3590:A:H3'	44:2:3591:C:C5	2.42	0.55
44:2:3704:G:H8	44:2:3704:G:O5'	1.90	0.55
44:2:3718:C:H2'	44:2:3719:G:O4'	2.07	0.55
44:2:3910:G:N1	44:2:3911:A:C5	2.75	0.55
44:2:4262:U:H6	44:2:4262:U:H3'	1.71	0.55
44:2:4383:U:C6	44:2:4383:U:C3'	2.89	0.55
44:2:5002:C:H5''	44:2:5002:C:H6	1.71	0.55
45:3:26:C:H2'	45:3:27:U:H6	1.65	0.55
2:B:53:MET:HE2	2:B:77:THR:HG22	1.89	0.55
4:D:22:ARG:HD2	4:D:27:LYS:HB2	1.88	0.55
6:F:148:LYS:CG	44:2:926:G:H5''	2.36	0.55
12:M:4:ARG:CZ	18:S:155:PRO:HB3	2.36	0.55
12:M:122:ILE:HG21	14:O:187:LYS:N	2.22	0.55
24:Y:118:ILE:HD13	45:3:70:G:P	2.46	0.55
44:2:1199:G:O3'	44:2:1200:G:H8	1.88	0.55
44:2:1213:G:H2'	44:2:1214:G:H5'	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1622:A:H2'	44:2:1623:C:H5'	1.88	0.55
44:2:1804:A:C3'	44:2:1805:G:H8	2.17	0.55
44:2:1872:C:C2'	44:2:1873:G:H5''	2.37	0.55
44:2:2027:G:H2'	44:2:2028:G:O5'	2.07	0.55
44:2:2337:A:N1	44:2:3829:A:H5''	2.22	0.55
44:2:2842:U:H2'	44:2:2843:C:C6	2.41	0.55
44:2:2862:A:H8	44:2:2862:A:O5'	1.90	0.55
44:2:4025:C:H3'	44:2:4025:C:H6	1.72	0.55
44:2:4439:A:C2'	44:2:4440:A:H5'	2.37	0.55
44:2:4689:C:H3'	44:2:4690:G:C5	2.42	0.55
44:2:4857:C:H2'	44:2:4858:G:C8	2.42	0.55
3:C:139:SER:CA	42:t:14:SER:HA	2.36	0.55
4:D:274:ALA:HB2	44:2:1087:C:OP1	2.07	0.55
5:E:162:VAL:HG11	5:E:175:VAL:CG1	2.37	0.55
13:N:144:ARG:O	13:N:145:ASN:HB3	2.06	0.55
18:S:80:ILE:HG22	18:S:82:LEU:CD2	2.37	0.55
26:a:80:THR:HA	26:a:87:ARG:NH2	2.22	0.55
27:b:39:PHE:HA	27:b:42:ASN:HD21	1.72	0.55
40:o:98:LYS:HZ2	44:2:4191:C:H4'	1.72	0.55
42:t:67:ARG:HA	42:t:83:ASN:HB2	1.87	0.55
42:t:87:ARG:HB2	44:2:670:C:OP1	2.06	0.55
44:2:18:C:H2'	44:2:19:G:C8	2.42	0.55
44:2:105:A:H5''	44:2:1341:G:O2'	2.06	0.55
44:2:384:U:H2'	44:2:385:G:C4'	2.36	0.55
44:2:439:G:C2'	44:2:440:C:H5'	2.37	0.55
44:2:929:U:C4	44:2:930:C:C4	2.95	0.55
44:2:961:C:C2'	44:2:962:G:C8	2.90	0.55
44:2:977:G:C2'	44:2:978:G:O4'	2.50	0.55
44:2:1436:G:H2'	44:2:1437:C:H6	1.65	0.55
44:2:1727:U:C5'	44:2:1727:U:C6	2.90	0.55
44:2:1943:G:C4'	44:2:4655:C:H4'	2.37	0.55
44:2:2006:C:H5'	44:2:2006:C:C6	2.42	0.55
44:2:2014:C:H2'	44:2:2015:C:H5'	1.89	0.55
44:2:2280:U:C5	44:2:2308:A:C2	2.95	0.55
44:2:2524:G:N2	44:2:2525:C:C5	2.75	0.55
44:2:2663:G:H3'	44:2:2664:U:O4'	2.07	0.55
44:2:2672:A:N3	44:2:2672:A:H5''	2.22	0.55
44:2:3722:G:H8	44:2:3722:G:H5''	1.71	0.55
44:2:4005:C:O2'	44:2:4006:C:H5'	2.07	0.55
44:2:4349:C:H2'	44:2:4350:A:H8	1.72	0.55
44:2:4811:G:O2'	44:2:4812:A:C8	2.57	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4854:G:H4'	44:2:4855:C:OP2	2.06	0.55
3:C:326:LEU:HB3	44:2:1218:A:N6	2.16	0.55
11:L:156:PRO:HA	44:2:1359:C:C5	2.42	0.55
17:R:133:LYS:N	17:R:137:ILE:HD11	2.21	0.55
19:T:80:VAL:CG1	44:2:4264:A:H4'	2.37	0.55
26:a:78:LEU:HD22	26:a:81:LEU:HD12	1.88	0.55
31:f:5:LEU:N	44:2:4711:U:O2'	2.40	0.55
31:f:102:ARG:HD2	44:2:4711:U:P	2.47	0.55
32:g:75:SER:HB2	44:2:2560:C:N4	2.22	0.55
35:j:74:PHE:CZ	45:3:33:G:H4'	2.42	0.55
38:m:78:ILE:HG21	38:m:83:ARG:HE	1.70	0.55
43:u:158:THR:CB	44:2:4022:C:C2	2.83	0.55
44:2:193:C:H3'	44:2:193:C:O2	2.06	0.55
44:2:735:A:C4	44:2:736:G:C8	2.95	0.55
44:2:976:C:C4'	44:2:1222:G:H4'	2.34	0.55
44:2:1050:G:H2'	44:2:1051:C:C5'	2.31	0.55
44:2:1197:G:C3'	44:2:1198:G:H8	2.20	0.55
44:2:1209:C:O2	44:2:1209:C:C2'	2.55	0.55
44:2:1585:U:H2'	44:2:1586:C:O4'	2.07	0.55
44:2:1811:G:H3'	44:2:1811:G:C8	2.42	0.55
44:2:2395:A:H3'	44:2:2396:C:C5'	2.37	0.55
44:2:2456:G:H2'	44:2:2457:G:C8	2.41	0.55
44:2:2518:G:C3'	44:2:2519:G:H5''	2.37	0.55
44:2:2837:C:C6	44:2:2837:C:C3'	2.89	0.55
44:2:3887:G:C2'	44:2:3888:C:O5'	2.54	0.55
44:2:4254:C:C5'	44:2:4254:C:C6	2.89	0.55
44:2:4685:G:H2'	44:2:4686:A:C8	2.41	0.55
46:4:28:C:H2'	46:4:28:C:O2	2.06	0.55
46:4:107:G:H5''	46:4:108:G:OP2	2.07	0.55
2:B:113:GLU:OE2	2:B:167:GLN:HA	2.07	0.55
4:D:232:THR:HB	4:D:233:PRO:HD2	1.89	0.55
4:D:283:LYS:O	4:D:287:PHE:HD2	1.90	0.55
7:G:51:LEU:HD12	23:X:42:THR:O	2.07	0.55
7:G:74:LEU:CD2	44:2:4044:G:C6	2.89	0.55
8:H:132:VAL:CG1	8:H:154:VAL:HG22	2.33	0.55
10:J:97:ASN:O	10:J:98:ASN:HB2	2.07	0.55
12:M:69:HIS:CE1	12:M:72:TYR:HB2	2.42	0.55
23:X:96:LEU:HB3	23:X:98:PHE:CE2	2.42	0.55
36:k:37:ARG:NH1	44:2:2514:A:OP2	2.40	0.55
40:o:14:LYS:HG2	40:o:77:CYS:SG	2.47	0.55
42:t:64:ILE:H	42:t:89:THR:HG22	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:101:A:H2'	44:2:101:A:N3	2.22	0.55
44:2:256:C:O2	44:2:256:C:H3'	2.07	0.55
44:2:264:U:H2'	44:2:265:C:H6	1.71	0.55
44:2:284:G:H21	44:2:288:U:C4'	2.03	0.55
44:2:969:C:H5'	44:2:979:C:N4	2.22	0.55
44:2:1480:C:H2'	44:2:1481:G:N7	2.22	0.55
44:2:1900:G:H5'	44:2:1900:G:H8	1.71	0.55
44:2:2526:G:C3'	44:2:2527:G:H5''	2.28	0.55
44:2:2568:A:C6	44:2:2732:A:C1'	2.90	0.55
44:2:2615:G:H22	44:2:2674:A:H2	1.50	0.55
44:2:2707:U:O2'	44:2:2708:C:H5'	2.07	0.55
44:2:2760:A:H3'	44:2:2761:C:C5	2.42	0.55
44:2:3613:U:H2'	44:2:3614:U:C5'	2.36	0.55
44:2:3824:C:O2'	44:2:3825:A:H5'	2.07	0.55
44:2:4388:A:H3'	44:2:4389:C:O4'	2.07	0.55
44:2:4484:G:H2'	44:2:4485:C:C6	2.42	0.55
44:2:4863:G:H2'	44:2:4864:A:C4'	2.37	0.55
45:3:129:C:C2	45:3:130:C:H5	2.25	0.55
46:4:95:C:O5'	46:4:95:C:H6	1.90	0.55
3:C:56:GLU:OE2	44:2:347:G:H4'	2.07	0.54
26:a:27:LYS:HB2	44:2:1633:G:OP1	2.07	0.54
27:b:20:GLY:O	27:b:21:ILE:HB	2.08	0.54
30:e:85:LEU:CD1	30:e:114:ARG:HG3	2.37	0.54
32:g:70:THR:HB	44:2:2564:A:N7	2.21	0.54
35:j:13:ASN:O	44:2:1513:A:C4	2.60	0.54
44:2:79:C:H4'	44:2:329:A:H4'	1.90	0.54
44:2:458:U:H5''	44:2:459:U:OP1	2.07	0.54
44:2:476:C:P	44:2:658:G:H4'	2.47	0.54
44:2:690:U:H3'	44:2:691:G:H5''	1.89	0.54
44:2:722:G:H3'	44:2:723:G:C5'	2.36	0.54
44:2:1076:C:H2'	44:2:1077:C:H6	1.71	0.54
44:2:1300:U:H2'	44:2:1301:G:O4'	2.07	0.54
44:2:1322:A:H2'	44:2:1323:A:O4'	2.08	0.54
44:2:1325:A:O5'	44:2:1325:A:H8	1.90	0.54
44:2:1868:G:H4'	44:2:1869:A:OP1	2.08	0.54
44:2:1892:C:H5''	44:2:1893:C:H5''	1.89	0.54
44:2:2012:G:H2'	44:2:2013:C:C6	2.42	0.54
44:2:2629:G:H2'	44:2:2630:C:H4'	1.89	0.54
44:2:2743:A:H2'	44:2:2744:U:N3	2.23	0.54
44:2:2875:G:H2'	44:2:2876:C:H6	1.72	0.54
44:2:3763:C:O5'	44:2:3763:C:H6	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:3858:G:C3'	44:2:4679:G:H22	2.08	0.54
44:2:3865:C:H2'	44:2:3866:G:C4	2.43	0.54
44:2:3910:G:H2'	44:2:3911:A:C5'	2.34	0.54
44:2:4187:U:H5''	44:2:4188:G:OP2	2.06	0.54
44:2:4534:U:N3	44:2:4910:A:H4'	2.20	0.54
44:2:4567:A:H3'	44:2:4568:G:C5'	2.36	0.54
44:2:4803:C:H2'	44:2:4804:G:H4'	1.89	0.54
1:A:129:ALA:HB3	1:A:132:ASN:ND2	2.22	0.54
1:A:225:ILE:HD11	1:A:235:VAL:O	2.06	0.54
2:B:37:PRO:O	2:B:188:GLY:HA3	2.06	0.54
2:B:122:TRP:CZ2	2:B:127:LYS:HE3	2.43	0.54
3:C:51:PRO:HB3	45:3:27:U:O2	2.08	0.54
3:C:207:PRO:HB3	3:C:249:PHE:CD1	2.41	0.54
6:F:229:GLU:OE1	18:S:122:HIS:HE1	1.90	0.54
10:J:13:ARG:O	10:J:137:PRO:HD2	2.07	0.54
13:N:67:ARG:HH12	44:2:3641:G:H4'	1.73	0.54
14:O:23:VAL:O	14:O:27:VAL:HG23	2.07	0.54
32:g:54:ARG:CB	44:2:2629:G:N1	2.71	0.54
41:p:33:GLN:HG3	41:p:49:ARG:HD3	1.89	0.54
44:2:99:A:C8	44:2:100:C:C5	2.95	0.54
44:2:118:C:H4'	44:2:119:G:H3'	1.89	0.54
44:2:359:C:O5'	44:2:359:C:H6	1.90	0.54
44:2:1089:C:H2'	44:2:1090:C:C6	2.43	0.54
44:2:1933:G:C2	44:2:2007:A:C4	2.95	0.54
44:2:2445:U:H3'	44:2:2445:U:C6	2.42	0.54
44:2:2478:C:O5'	44:2:2478:C:C6	2.61	0.54
44:2:2520:A:C2	44:2:2750:G:N2	2.74	0.54
44:2:2567:G:H2'	44:2:2567:G:OP2	2.07	0.54
44:2:2604:C:N4	44:2:4609:G:N2	2.55	0.54
44:2:2635:G:C8	44:2:2636:A:H2	2.25	0.54
44:2:2688:G:N2	44:2:2689:G:H1'	2.22	0.54
44:2:4272:U:O5'	44:2:4272:U:H6	1.90	0.54
44:2:4617:U:O2	44:2:4617:U:C2'	2.48	0.54
44:2:4908:G:H2'	44:2:4909:G:C8	2.42	0.54
1:A:97:ASN:HB2	1:A:100:ASN:ND2	2.22	0.54
2:B:258:HIS:ND1	44:2:4477:A:H4'	2.23	0.54
3:C:223:ASN:ND2	44:2:222:G:OP2	2.40	0.54
5:E:277:LEU:O	44:2:4712:U:H2'	2.07	0.54
10:J:54:ARG:HB2	44:2:4218:C:OP1	2.06	0.54
11:L:53:GLY:O	11:L:55:ILE:N	2.40	0.54
12:M:116:LYS:HD3	44:2:4835:C:N4	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:P:69:ARG:NH1	44:2:4529:U:H1'	2.21	0.54
20:U:26:THR:OG1	20:U:68:SER:HB2	2.07	0.54
31:f:16:ARG:HB3	31:f:21:GLN:HG2	1.89	0.54
32:g:11:LEU:HG	32:g:11:LEU:O	2.07	0.54
32:g:54:ARG:NE	44:2:2629:G:C6	2.75	0.54
44:2:13:U:H1'	44:2:14:C:OP1	2.06	0.54
44:2:20:U:O2	44:2:20:U:H2'	2.07	0.54
44:2:160:A:H2'	44:2:161:G:C8	2.43	0.54
44:2:198:C:O2'	44:2:199:C:H5	1.91	0.54
44:2:282:U:O2	44:2:284:G:H2'	2.07	0.54
44:2:1204:G:H5''	44:2:1211:C:C4	2.42	0.54
44:2:1398:C:H6	44:2:1398:C:O5'	1.90	0.54
44:2:1596:G:N2	44:2:2490:A:C8	2.75	0.54
44:2:1665:C:C5	44:2:1665:C:OP2	2.60	0.54
44:2:2331:G:H8	44:2:2331:G:O5'	1.90	0.54
44:2:2343:A:H2'	44:2:2344:A:H5''	1.88	0.54
44:2:2520:A:H2	44:2:2750:G:N2	2.05	0.54
44:2:3684:U:C2'	44:2:3685:C:H5'	2.37	0.54
44:2:3759:U:C4	44:2:3761:G:H1'	2.43	0.54
44:2:4163:A:N3	44:2:4163:A:C3'	2.69	0.54
44:2:5009:C:C2'	44:2:5009:C:O2	2.55	0.54
45:3:122:G:C3'	45:3:123:U:H5'	2.37	0.54
46:4:13:A:OP1	46:4:109:U:H1'	2.07	0.54
3:C:58:ALA:HB3	44:2:348:U:H4'	1.89	0.54
4:D:99:TYR:CD1	4:D:199:ILE:HD12	2.43	0.54
4:D:232:THR:HB	4:D:233:PRO:CD	2.38	0.54
5:E:205:ASN:HB2	5:E:256:GLN:CB	2.38	0.54
6:F:194:ILE:HA	6:F:201:PHE:CE2	2.42	0.54
6:F:223:LYS:HB2	6:F:232:ASP:H	1.71	0.54
7:G:128:VAL:CG1	44:2:119:G:N2	2.71	0.54
9:I:76:MET:HE1	9:I:138:ILE:HG21	1.89	0.54
10:J:44:THR:O	10:J:78:LYS:HD3	2.08	0.54
19:T:12:ARG:HH21	44:2:4169:G:H4'	1.71	0.54
24:Y:112:ASP:O	24:Y:116:LYS:HB2	2.07	0.54
28:c:52:CYS:HA	44:2:2651:A:N6	2.20	0.54
31:f:59:THR:C	44:2:1279:G:H5''	2.32	0.54
42:t:44:ILE:HG13	42:t:45:HIS:N	2.23	0.54
42:t:62:VAL:O	42:t:64:ILE:HG13	2.07	0.54
44:2:42:A:N6	44:2:4339:A:C2	2.75	0.54
44:2:344:A:C2	44:2:351:A:C8	2.95	0.54
44:2:973:U:H1'	44:2:974:C:OP1	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1387:C:H2'	44:2:1388:G:H8	1.72	0.54
44:2:2395:A:C4	44:2:2396:C:C5	2.95	0.54
44:2:3592:C:C6	44:2:3592:C:O5'	2.61	0.54
44:2:3937:U:O5'	44:2:3937:U:H6	1.90	0.54
44:2:4007:G:H2'	44:2:4008:C:C6	2.43	0.54
44:2:4037:U:H3'	44:2:4037:U:H6	1.71	0.54
44:2:4438:G:H8	44:2:4438:G:O5'	1.90	0.54
44:2:4675:C:H3'	44:2:4676:C:H6	1.72	0.54
44:2:4687:U:H5''	44:2:4688:A:H5''	1.90	0.54
44:2:4874:G:C4	44:2:4875:C:C5	2.96	0.54
46:4:54:A:H2	46:4:55:A:C4	2.25	0.54
46:4:68:C:O2	46:4:68:C:C2'	2.56	0.54
2:B:70:LYS:HD3	21:V:91:LYS:HE3	1.90	0.54
3:C:214:ASP:OD1	44:2:185:G:C6	2.60	0.54
6:F:119:ASN:HA	6:F:211:PHE:O	2.07	0.54
11:L:74:ARG:NH2	44:2:76:A:OP2	2.40	0.54
23:X:67:ARG:HB3	45:3:134:G:OP1	2.07	0.54
24:Y:123:ALA:H	24:Y:126:ARG:HB2	1.72	0.54
27:b:28:ARG:C	27:b:30:GLU:H	2.15	0.54
33:h:14:LYS:HA	33:h:17:LEU:HD12	1.89	0.54
42:t:72:LYS:HB2	44:2:475:U:O4	2.07	0.54
43:u:108:LYS:HG3	43:u:108:LYS:O	2.07	0.54
44:2:71:C:H5''	44:2:72:C:H5	1.72	0.54
44:2:121:A:N1	44:2:147:U:C4	2.76	0.54
44:2:240:A:H8	44:2:240:A:O5'	1.90	0.54
44:2:957:G:O2'	44:2:1217:C:H4'	2.08	0.54
44:2:1280:G:H8	44:2:1280:G:P	2.30	0.54
44:2:1313:A:H5'	44:2:1314:A:OP2	2.08	0.54
44:2:1535:C:H2'	44:2:1536:C:C6	2.43	0.54
44:2:2395:A:H3'	44:2:2396:C:H5''	1.88	0.54
44:2:2398:G:OP1	44:2:2805:U:H1'	2.07	0.54
44:2:2588:A:H5'	44:2:2665:G:C5'	2.37	0.54
44:2:3873:G:C8	44:2:3873:G:OP2	2.61	0.54
44:2:4157:G:C2'	44:2:4158:G:H5'	2.36	0.54
44:2:4223:C:H2'	44:2:4224:G:O4'	2.08	0.54
44:2:4379:U:O2	44:2:4379:U:C2'	2.55	0.54
44:2:4479:C:H5''	44:2:4480:G:H5''	1.88	0.54
44:2:4481:U:H2'	44:2:4484:G:O6	2.07	0.54
2:B:222:VAL:O	2:B:339:GLY:HA2	2.07	0.54
5:E:154:THR:HG22	44:2:4902:U:N3	2.22	0.54
5:E:277:LEU:O	44:2:4712:U:C2	2.61	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:X:48:ARG:CA	44:2:2449:A:O2'	2.56	0.54
25:Z:48:ARG:NH1	25:Z:69:LYS:HB2	2.22	0.54
30:e:27:ARG:HH12	44:2:425:A:H2	1.56	0.54
40:o:75:PRO:HA	40:o:78:ARG:NE	2.22	0.54
43:u:30:ASN:N	43:u:30:ASN:ND2	2.56	0.54
44:2:667:C:O2'	44:2:668:C:H5'	2.08	0.54
44:2:916:A:C1'	44:2:917:G:P	2.96	0.54
44:2:921:U:H2'	44:2:922:C:C6	2.42	0.54
44:2:1282:U:C2'	44:2:1284:C:H6	2.20	0.54
44:2:1575:U:H3'	44:2:1575:U:H6	1.73	0.54
44:2:1872:C:H2'	44:2:1873:G:C5'	2.38	0.54
44:2:2409:U:O5'	44:2:2409:U:H6	1.91	0.54
44:2:3757:C:H2'	44:2:3758:C:O2	2.07	0.54
44:2:4266:U:H4'	44:2:4267:A:OP2	2.07	0.54
44:2:4551:U:O2	44:2:4551:U:H2'	2.08	0.54
44:2:4579:U:H2'	44:2:4580:U:C6	2.42	0.54
44:2:4717:U:C4'	44:2:4718:C:OP1	2.56	0.54
44:2:4917:C:O2'	44:2:4918:G:H5'	2.07	0.54
46:4:83:A:H61	46:4:93:G:H1	1.55	0.54
1:A:69:PHE:CZ	44:2:4092:C:H1'	2.43	0.54
1:A:126:LEU:HD22	44:2:3630:G:N2	2.23	0.54
3:C:311:ARG:CZ	44:2:944:A:H61	2.20	0.54
4:D:195:HIS:O	4:D:199:ILE:HG12	2.08	0.54
6:F:67:THR:HA	44:2:1190:C:H1'	1.90	0.54
8:H:93:ARG:O	8:H:179:ILE:HA	2.07	0.54
10:J:63:ARG:HH12	40:o:103:VAL:HB	1.72	0.54
10:J:175:LEU:HB3	10:J:176:PRO:CD	2.38	0.54
11:L:37:LYS:HD2	44:2:1349:C:C2	2.42	0.54
12:M:124:LYS:O	12:M:128:LYS:N	2.39	0.54
16:Q:65:ARG:CA	44:2:1481:G:C2	2.91	0.54
16:Q:91:ARG:HE	44:2:1479:A:H2	1.56	0.54
29:d:82:TYR:CD2	44:2:5000:G:H5''	2.42	0.54
42:t:92:SER:CB	44:2:668:C:H5''	2.32	0.54
44:2:132:G:H3'	44:2:133:C:O2	2.08	0.54
44:2:192:C:H2'	44:2:193:C:OP1	2.06	0.54
44:2:334:C:C5'	44:2:334:C:C6	2.87	0.54
44:2:334:C:H6	44:2:334:C:H5'	1.70	0.54
44:2:340:A:H3'	44:2:341:C:C5'	2.38	0.54
44:2:455:G:H3'	44:2:456:G:C8	2.41	0.54
44:2:473:G:C4'	44:2:474:G:OP1	2.56	0.54
44:2:974:C:H4'	44:2:975:C:OP1	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1142:G:H8	44:2:1142:G:O5'	1.90	0.54
44:2:2525:C:H3'	44:2:2526:G:H4'	1.88	0.54
44:2:2789:A:H3'	44:2:2790:A:C8	2.42	0.54
44:2:3578:G:C5'	44:2:3578:G:C8	2.91	0.54
44:2:3585:U:H1'	44:2:3586:G:OP2	2.08	0.54
44:2:3609:U:H3	44:2:3616:A:H62	1.54	0.54
44:2:4232:G:N2	44:2:4296:A:H2	2.05	0.54
44:2:4506:A:O5'	44:2:4506:A:H8	1.90	0.54
44:2:4537:U:O2'	44:2:4923:A:H4'	2.07	0.54
44:2:4624:A:H2'	44:2:4625:A:C8	2.42	0.54
44:2:4648:C:O5'	44:2:4648:C:C6	2.61	0.54
44:2:4709:G:H8	44:2:4709:G:O5'	1.91	0.54
1:A:226:ARG:HG3	44:2:3675:C:H5''	1.90	0.54
3:C:56:GLU:OE1	45:3:26:C:O4'	2.26	0.54
3:C:95:MET:HE2	44:2:2328:C:O2'	2.07	0.54
7:G:156:VAL:HG11	7:G:190:LEU:HD21	1.90	0.54
8:H:23:ARG:HB2	8:H:39:ASN:OD1	2.08	0.54
10:J:120:ASP:HB3	10:J:123:ILE:HD12	1.88	0.54
12:M:40:GLY:HA3	12:M:45:VAL:CG1	2.38	0.54
12:M:58:THR:HG22	12:M:91:TRP:HZ3	1.72	0.54
12:M:122:ILE:HG21	14:O:186:GLU:C	2.33	0.54
19:T:4:THR:CG2	44:2:4168:U:H5	2.18	0.54
30:e:19:LYS:O	30:e:20:PHE:CD2	2.61	0.54
31:f:6:TRP:CD1	44:2:4711:U:H2'	2.43	0.54
32:g:43:LYS:HB2	32:g:51:GLY:C	2.32	0.54
32:g:82:MET:HB2	32:g:87:VAL:HG22	1.89	0.54
41:p:19:GLY:HA2	44:2:3661:A:C2	2.41	0.54
42:t:30:ASN:HB2	42:t:44:ILE:HG22	1.89	0.54
43:u:105:ILE:HA	43:u:130:GLU:O	2.08	0.54
44:2:171:C:H2'	44:2:172:C:C6	2.43	0.54
44:2:210:G:C5	44:2:211:G:C8	2.96	0.54
44:2:393:A:OP1	44:2:393:A:H4'	2.08	0.54
44:2:966:U:H3'	44:2:967:C:H5'	1.90	0.54
44:2:973:U:H4'	44:2:974:C:OP2	2.07	0.54
44:2:1431:G:H2'	44:2:1432:A:H8	1.73	0.54
44:2:1756:C:C6	44:2:1756:C:C5'	2.91	0.54
44:2:2378:A:H2'	44:2:2379:G:H5''	1.90	0.54
44:2:2586:G:O2'	44:2:2663:G:C2	2.58	0.54
44:2:2624:A:N1	44:2:2664:U:O2	2.41	0.54
44:2:2658:G:H2'	44:2:2659:G:C8	2.40	0.54
44:2:2745:C:H1'	44:2:2746:U:P	2.47	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2828:G:C2	44:2:2829:U:H1'	2.42	0.54
44:2:4529:U:O4	44:2:4530:G:H8	1.91	0.54
2:B:65:SER:OG	44:2:4576:A:H4'	2.07	0.54
2:B:356:LYS:O	2:B:357:ARG:HB3	2.08	0.54
3:C:52:TYR:OH	44:2:2319:G:H4'	2.08	0.54
10:J:19:LYS:HE3	10:J:73:THR:HB	1.90	0.54
10:J:85:LYS:HE2	10:J:115:LEU:O	2.08	0.54
11:L:153:PRO:C	11:L:156:PRO:HD2	2.32	0.54
16:Q:158:THR:HB	16:Q:159:PRO:HD3	1.89	0.54
19:T:126:VAL:HB	19:T:128:LEU:CD1	2.38	0.54
23:X:56:ARG:HA	44:2:14:C:C4'	2.38	0.54
36:k:16:ARG:NH1	36:k:61:PRO:HG3	2.22	0.54
38:m:95:ILE:HD11	38:m:124:LYS:HZ3	1.73	0.54
40:o:34:TYR:OH	44:2:3698:U:H4'	2.08	0.54
44:2:372:U:H3'	44:2:372:U:H6	1.73	0.54
44:2:405:C:H5'	44:2:406:G:OP2	2.07	0.54
44:2:1587:G:H5'	44:2:3797:A:O4'	2.07	0.54
44:2:1633:G:H2'	44:2:3883:U:OP1	2.08	0.54
44:2:2006:C:H4'	44:2:2007:A:OP1	2.08	0.54
44:2:2310:G:C8	44:2:2310:G:H5''	2.42	0.54
44:2:2394:A:H5''	44:2:2394:A:H8	1.69	0.54
44:2:2639:G:H1	44:2:2649:C:H42	1.55	0.54
44:2:2652:G:OP2	44:2:2652:G:H8	1.90	0.54
44:2:2838:C:O5'	44:2:2838:C:H6	1.91	0.54
44:2:2860:G:H2'	44:2:2861:G:O4'	2.07	0.54
44:2:3801:U:H2'	44:2:3802:C:H5''	1.89	0.54
44:2:4167:C:C1'	44:2:4295:C:H1'	2.38	0.54
44:2:4583:G:H2'	44:2:4584:A:O4'	2.07	0.54
44:2:4828:G:C2'	44:2:4828:G:N3	2.70	0.54
44:2:4829:A:H2'	44:2:4830:G:N7	2.22	0.54
46:4:53:U:O2	46:4:53:U:C2'	2.53	0.54
46:4:54:A:H3'	46:4:54:A:OP2	2.07	0.54
1:A:180:LEU:HD11	41:p:26:VAL:HG11	1.88	0.54
3:C:161:TYR:HE2	3:C:170:LEU:HD22	1.73	0.54
5:E:227:HIS:CE1	44:2:1273:G:H2'	2.42	0.54
5:E:239:LYS:HG3	44:2:4894:C:C5	2.43	0.54
10:J:141:ILE:HD11	46:4:55:A:N3	2.23	0.54
19:T:77:ASN:CB	19:T:84:ILE:HD13	2.34	0.54
23:X:149:VAL:O	23:X:152:LYS:HB3	2.08	0.54
25:Z:48:ARG:H	25:Z:69:LYS:HB3	1.73	0.54
25:Z:58:GLY:CA	44:2:4109:C:OP1	2.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:a:34:ASN:ND2	44:2:94:A:H5''	2.23	0.54
27:b:44:ARG:NH1	44:2:1471:G:H5''	2.23	0.54
31:f:69:VAL:HB	44:2:4901:U:C1'	2.37	0.54
31:f:106:TYR:O	31:f:107:PRO:C	2.51	0.54
32:g:7:TYR:HD1	32:g:9:ARG:O	1.91	0.54
32:g:82:MET:HB2	32:g:87:VAL:CG2	2.37	0.54
33:h:70:ARG:HG3	33:h:83:LEU:HD22	1.90	0.54
43:u:60:VAL:HG21	43:u:104:PHE:CE2	2.43	0.54
43:u:105:ILE:HG22	43:u:132:LEU:HG	1.90	0.54
44:2:6:C:O2	44:2:6:C:C3'	2.54	0.54
44:2:381:C:H6	44:2:381:C:OP1	1.89	0.54
44:2:425:A:C8	44:2:425:A:C3'	2.90	0.54
44:2:1392:G:H2'	44:2:1393:C:C6	2.43	0.54
44:2:1639:U:H1'	44:2:1640:C:OP1	2.08	0.54
44:2:2296:G:N2	44:2:2297:G:C2	2.76	0.54
44:2:2516:C:H2'	44:2:2517:C:H6	1.69	0.54
44:2:2702:A:O5'	44:2:2703:G:H8	1.91	0.54
44:2:2711:U:H2'	44:2:2712:G:O4'	2.08	0.54
44:2:2810:A:C5	44:2:2811:C:N3	2.75	0.54
44:2:3758:C:H5	44:2:3759:U:N1	2.05	0.54
44:2:4156:G:C8	44:2:4156:G:O5'	2.61	0.54
44:2:4431:U:H3	44:2:4444:G:H22	1.54	0.54
44:2:4638:G:HO2'	44:2:4639:G:H8	1.55	0.54
44:2:4983:G:H2'	44:2:4984:C:H6	1.73	0.54
3:C:50:GLN:CB	3:C:51:PRO:CD	2.86	0.53
3:C:54:VAL:HG13	3:C:55:SER:N	2.22	0.53
5:E:155:GLY:N	5:E:158:ARG:HG3	2.23	0.53
6:F:48:LYS:HB2	44:2:1220:G:C5'	2.37	0.53
14:O:182:GLU:O	14:O:187:LYS:HD3	2.08	0.53
17:R:112:SER:O	17:R:113:LYS:HB2	2.08	0.53
19:T:68:THR:HG23	19:T:69:GLN:N	2.23	0.53
30:e:36:ARG:NH1	44:2:2323:C:H4'	2.23	0.53
32:g:54:ARG:HB2	44:2:2629:G:N1	2.23	0.53
34:i:99:LYS:HB3	43:u:196:ASP:HA	1.90	0.53
42:t:21:ASN:HB2	42:t:23:GLN:HE22	1.74	0.53
43:u:156:ARG:CD	44:2:4023:U:N3	2.69	0.53
44:2:1:C:O2	45:3:157:U:C2	2.60	0.53
44:2:24:G:N1	44:2:333:G:N7	2.55	0.53
44:2:27:C:O2'	44:2:60:A:H1'	2.08	0.53
44:2:289:G:C2'	44:2:290:C:H5'	2.39	0.53
44:2:383:U:H1'	44:2:390:G:N2	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:427:C:H42	44:2:1291:G:H1	1.56	0.53
44:2:501:U:H3	44:2:643:G:H1	1.56	0.53
44:2:1224:G:H3'	44:2:1225:C:C5'	2.22	0.53
44:2:1226:G:H2'	44:2:1227:U:C6	2.43	0.53
44:2:1560:G:O6	44:2:1589:C:H3'	2.08	0.53
44:2:1774:A:H5''	46:4:98:G:H2'	1.90	0.53
44:2:2258:A:H2'	44:2:2259:G:O4'	2.08	0.53
44:2:2665:G:C6	44:2:2666:C:N4	2.75	0.53
44:2:2869:C:H6	44:2:2869:C:H5''	1.73	0.53
44:2:3775:G:H8	44:2:3775:G:O5'	1.91	0.53
44:2:4052:G:H8	44:2:4052:G:P	2.31	0.53
44:2:4180:A:N6	44:2:4182:G:H1'	2.23	0.53
44:2:4263:C:O2	44:2:4263:C:C3'	2.52	0.53
44:2:4546:G:H2'	44:2:4547:G:C8	2.43	0.53
1:A:4:VAL:HG13	1:A:8:GLN:OE1	2.07	0.53
6:F:243:LEU:O	6:F:247:MET:HG3	2.08	0.53
8:H:12:ILE:O	8:H:53:LYS:HA	2.07	0.53
13:N:85:VAL:HG13	44:2:43:U:OP1	2.08	0.53
15:P:17:SER:HA	44:2:391:A:H5''	1.89	0.53
23:X:48:ARG:CB	44:2:2449:A:O2'	2.56	0.53
25:Z:14:LEU:HB3	25:Z:79:HIS:O	2.08	0.53
25:Z:14:LEU:CD1	32:g:88:ARG:HG3	2.37	0.53
28:c:53:PRO:CG	44:2:2651:A:N1	2.69	0.53
44:2:219:C:H2'	44:2:220:G:H5''	1.90	0.53
44:2:337:G:N2	44:2:338:A:H1'	2.23	0.53
44:2:443:A:O2'	44:2:444:G:H2'	2.07	0.53
44:2:920:C:H2'	44:2:921:U:C6	2.40	0.53
44:2:1045:G:H2'	44:2:1046:G:C8	2.43	0.53
44:2:1217:C:C4'	44:2:1218:A:OP1	2.55	0.53
44:2:1544:A:C2	44:2:1545:C:H1'	2.43	0.53
44:2:1715:A:O2'	44:2:1716:A:H5'	2.08	0.53
44:2:2395:A:C3'	44:2:2396:C:H5''	2.37	0.53
44:2:2475:C:O5'	44:2:2475:C:H6	1.91	0.53
44:2:2843:C:C6	44:2:2843:C:H3'	2.43	0.53
44:2:3720:G:H2'	44:2:3720:G:N3	2.22	0.53
44:2:3907:G:C1'	44:2:3908:G:OP2	2.55	0.53
44:2:4544:A:C2	44:2:4680:C:OP2	2.61	0.53
1:A:13:GLY:O	1:A:17:ARG:HG3	2.08	0.53
5:E:223:ARG:CA	5:E:225:PRO:HD2	2.39	0.53
8:H:69:THR:HA	44:2:4660:A:H2	1.72	0.53
12:M:25:VAL:HG12	12:M:45:VAL:HG11	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:N:181:HIS:CE1	44:2:284:G:C6	2.97	0.53
13:N:200:LEU:HD13	13:N:204:ARG:CZ	2.39	0.53
43:u:151:LEU:HD11	43:u:184:LEU:HD21	1.90	0.53
44:2:45:U:C2'	44:2:46:U:H5'	2.38	0.53
44:2:673:G:C3'	44:2:674:G:H5''	2.38	0.53
44:2:978:G:H1	44:2:1051:C:H42	1.56	0.53
44:2:1260:C:H6	44:2:1260:C:O5'	1.92	0.53
44:2:1276:G:H5''	44:2:1277:U:OP2	2.08	0.53
44:2:1293:C:C2'	44:2:1293:C:O2	2.56	0.53
44:2:1785:G:H2'	44:2:1786:C:C1'	2.39	0.53
44:2:1800:G:O5'	44:2:1800:G:C8	2.61	0.53
44:2:1803:G:C6	44:2:1804:A:C6	2.97	0.53
44:2:2426:A:H3'	44:2:2427:G:O4'	2.09	0.53
44:2:2447:C:O2	44:2:2447:C:C2'	2.57	0.53
44:2:2690:C:H2'	44:2:2691:G:C8	2.43	0.53
44:2:3591:C:O5'	44:2:3591:C:H6	1.91	0.53
44:2:3752:A:H2	44:2:3758:C:H41	1.55	0.53
44:2:3903:G:O2'	44:2:3904:C:H5'	2.08	0.53
44:2:4537:U:H4'	44:2:4923:A:O2'	2.08	0.53
44:2:4621:G:H2'	44:2:4622:C:O4'	2.07	0.53
44:2:4942:C:H6	44:2:4942:C:O5'	1.91	0.53
45:3:58:G:H5''	45:3:97:A:C2	2.43	0.53
1:A:79:ALA:O	1:A:82:ILE:HG12	2.09	0.53
1:A:185:ALA:O	1:A:189:TYR:HD1	1.92	0.53
5:E:172:LEU:CD2	44:2:4896:G:H4'	2.38	0.53
7:G:41:ILE:CG2	7:G:42:GLY:H	2.16	0.53
25:Z:134:LEU:HD21	32:g:94:ALA:HB1	1.91	0.53
26:a:23:GLY:O	26:a:24:LYS:HB2	2.08	0.53
44:2:15:A:H3'	44:2:15:A:P	2.48	0.53
44:2:65:A:C2	44:2:76:A:O3'	2.59	0.53
44:2:79:C:O4'	44:2:329:A:H5'	2.08	0.53
44:2:474:G:P	44:2:659:A:H5''	2.49	0.53
44:2:1186:C:H2'	44:2:1187:C:C6	2.43	0.53
44:2:1220:G:OP2	44:2:1220:G:O4'	2.25	0.53
44:2:1405:G:H2'	44:2:1406:G:H8	1.74	0.53
44:2:2310:G:O3'	45:3:20:A:H5''	2.07	0.53
44:2:2380:A:H3'	44:2:2381:A:C8	2.42	0.53
44:2:2866:G:H2'	44:2:2867:C:O4'	2.09	0.53
44:2:3821:A:C8	44:2:3822:U:C5	2.97	0.53
44:2:4027:C:O5'	44:2:4027:C:H6	1.90	0.53
44:2:4084:U:C1'	44:2:4085:U:P	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4131:C:H3'	44:2:4132:A:C8	2.42	0.53
44:2:4507:C:H6	44:2:4507:C:H5''	1.72	0.53
44:2:4812:A:H2'	44:2:4813:C:C1'	2.38	0.53
44:2:4837:U:O2	44:2:4837:U:C2'	2.57	0.53
3:C:140:LYS:O	44:2:2274:U:H4'	2.08	0.53
9:I:53:VAL:HG23	9:I:164:LYS:O	2.09	0.53
12:M:128:LYS:O	12:M:132:LYS:N	2.40	0.53
13:N:6:TYR:CE1	34:i:40:VAL:HG22	2.44	0.53
15:P:25:HIS:CD2	44:2:2338:G:O6	2.61	0.53
22:W:49:ILE:HA	44:2:3584:G:N2	2.19	0.53
31:f:58:VAL:CG1	44:2:1278:C:H5''	2.39	0.53
35:j:64:MET:HB3	35:j:67:LEU:HB3	1.90	0.53
42:t:84:LYS:HD2	44:2:668:C:H1'	1.90	0.53
44:2:15:A:H2	45:3:143:G:C2	2.25	0.53
44:2:21:G:C2	44:2:22:G:H1'	2.44	0.53
44:2:24:G:N2	44:2:25:A:N3	2.57	0.53
44:2:475:U:H6	44:2:475:U:H3'	1.72	0.53
44:2:509:G:C2'	44:2:510:C:H5'	2.38	0.53
44:2:946:C:O2	44:2:946:C:H2'	2.07	0.53
44:2:1204:G:H2'	44:2:1204:G:N3	2.23	0.53
44:2:1654:C:P	44:2:4336:A:H2'	2.48	0.53
44:2:1783:A:H4'	44:2:1784:A:H3'	1.90	0.53
44:2:1912:A:N1	44:2:2026:U:N3	2.57	0.53
44:2:2383:G:O2'	44:2:2768:C:H5''	2.08	0.53
44:2:2496:U:H4'	44:2:2496:U:OP1	2.09	0.53
44:2:2564:A:C8	44:2:2564:A:H5''	2.43	0.53
44:2:3884:U:H2'	44:2:3885:G:O4'	2.08	0.53
44:2:4234:A:H2'	44:2:4235:G:H8	1.73	0.53
44:2:4269:G:C5'	44:2:4269:G:H8	2.20	0.53
44:2:4298:G:H22	44:2:4332:U:H2'	1.74	0.53
44:2:4604:G:H1	44:2:4613:C:N4	2.05	0.53
44:2:4651:A:C2	44:2:4660:A:C5	2.96	0.53
44:2:4738:U:C5	44:2:4740:U:O4	2.62	0.53
45:3:92:U:O5'	45:3:92:U:H6	1.92	0.53
1:A:186:TYR:N	1:A:196:TRP:NE1	2.56	0.53
4:D:64:ILE:HG13	4:D:109:LEU:HD22	1.90	0.53
5:E:192:LYS:NZ	44:2:698:G:H5'	2.23	0.53
8:H:45:LEU:HA	8:H:56:ARG:O	2.09	0.53
11:L:135:LYS:HE3	11:L:135:LYS:N	2.23	0.53
12:M:126:GLU:HB2	14:O:187:LYS:NZ	2.23	0.53
34:i:25:ARG:NH2	44:2:318:U:H5	1.99	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:j:76:HIS:NE2	45:3:93:C:H5''	2.23	0.53
36:k:44:THR:HB	44:2:2669:U:O2'	2.07	0.53
42:t:58:LYS:CB	44:2:670:C:O5'	2.57	0.53
44:2:8:U:O2	44:2:8:U:C3'	2.53	0.53
44:2:204:G:C8	44:2:397:C:H1'	2.44	0.53
44:2:407:U:C2'	44:2:408:G:H5'	2.38	0.53
44:2:443:A:C4'	44:2:444:G:OP1	2.57	0.53
44:2:958:C:N4	44:2:1255:G:H1	2.00	0.53
44:2:963:C:O2	44:2:963:C:H2'	2.08	0.53
44:2:1349:C:H2'	45:3:30:U:H4'	1.91	0.53
44:2:1428:G:H2'	44:2:1429:C:H6	1.73	0.53
44:2:1462:C:H3'	44:2:1463:G:N7	2.23	0.53
44:2:1652:U:H1'	44:2:4266:U:O4	2.09	0.53
44:2:2304:G:O2'	44:2:2305:U:H5'	2.07	0.53
44:2:2453:G:H2'	44:2:2454:A:C8	2.44	0.53
44:2:2727:G:H2'	44:2:2728:G:H8	1.74	0.53
44:2:2823:G:H2'	44:2:2824:G:H5'	1.90	0.53
44:2:2867:C:H42	44:2:3580:A:N6	2.05	0.53
44:2:3592:C:C5	44:2:3593:A:C2	2.97	0.53
44:2:4609:G:C6	44:2:4610:G:C2	2.96	0.53
44:2:4642:U:H2'	44:2:4643:U:H5''	1.91	0.53
44:2:4683:A:H2'	44:2:4684:C:C6	2.43	0.53
44:2:4903:C:C3'	44:2:4904:G:H5'	2.38	0.53
46:4:69:U:H2'	46:4:70:G:C8	2.44	0.53
4:D:193:GLU:O	4:D:197:LYS:HG2	2.09	0.53
4:D:204:VAL:HG21	46:4:47:G:H4'	1.91	0.53
6:F:48:LYS:HB2	44:2:1220:G:H5'	1.89	0.53
11:L:182:LEU:HD21	26:a:146:LEU:HD13	1.90	0.53
18:S:80:ILE:HG22	18:S:82:LEU:HD21	1.90	0.53
19:T:129:LYS:HA	44:2:1814:G:O3'	2.09	0.53
32:g:54:ARG:CB	44:2:2629:G:C2	2.91	0.53
42:t:119:ARG:O	42:t:122:LYS:HG2	2.09	0.53
44:2:193:C:C4'	44:2:194:A:OP2	2.54	0.53
44:2:351:A:N3	45:3:24:G:H1'	2.24	0.53
44:2:357:A:C8	44:2:358:C:C6	2.97	0.53
44:2:388:G:H2'	44:2:389:A:O4'	2.09	0.53
44:2:707:C:C2'	44:2:708:G:H5'	2.38	0.53
44:2:1138:G:H2'	44:2:1139:U:C6	2.43	0.53
44:2:1267:G:C2'	44:2:1268:G:H4'	2.39	0.53
44:2:1480:C:H3'	44:2:1481:G:H5''	1.89	0.53
44:2:1491:G:O2'	44:2:1827:U:H5''	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1652:U:H4'	44:2:4262:U:O2	2.08	0.53
44:2:1812:U:C6	44:2:1813:G:C8	2.96	0.53
44:2:2401:G:H3'	44:2:2401:G:H8	1.71	0.53
44:2:2417:U:H4'	44:2:2418:C:OP2	2.09	0.53
44:2:2455:C:OP2	44:2:2456:G:H5'	2.08	0.53
44:2:2546:G:O2'	44:2:2547:U:H5'	2.09	0.53
44:2:2686:C:H2'	44:2:2687:C:O5'	2.09	0.53
44:2:2700:U:H2'	44:2:2701:G:C8	2.43	0.53
44:2:3936:G:H3'	44:2:3937:U:C6	2.43	0.53
44:2:4168:U:H5'	44:2:4294:U:O2	2.08	0.53
44:2:4218:C:H6	44:2:4218:C:O5'	1.90	0.53
44:2:4278:C:C6	44:2:4278:C:C3'	2.92	0.53
44:2:4698:C:C2'	44:2:4699:G:H5'	2.39	0.53
44:2:5021:U:H2'	44:2:5022:U:H6	1.72	0.53
45:3:3:A:C8	45:3:3:A:H3'	2.43	0.53
1:A:117:GLU:HB3	1:A:119:LYS:O	2.08	0.53
12:M:2:VAL:CG2	44:2:4723:A:H2	2.22	0.53
12:M:65:PRO:HG2	12:M:72:TYR:CZ	2.44	0.53
12:M:66:HIS:HB3	44:2:736:G:O4'	2.09	0.53
14:O:22:ILE:HG23	18:S:166:ARG:HE	1.73	0.53
17:R:6:LEU:HD13	44:2:2389:A:OP1	2.08	0.53
21:V:40:ILE:HG13	21:V:41:SER:N	2.23	0.53
22:W:36:CYS:SG	22:W:51:TRP:HH2	2.31	0.53
23:X:107:HIS:HD2	45:3:131:G:H5'	1.73	0.53
40:O:48:TYR:CZ	44:2:3895:C:H4'	2.43	0.53
44:2:10:A:O2'	44:2:11:G:H5'	2.08	0.53
44:2:166:G:H21	44:2:167:C:H1'	1.73	0.53
44:2:1160:C:C2	44:2:1161:C:O2	2.62	0.53
44:2:1353:A:H2'	44:2:1354:G:C8	2.44	0.53
44:2:1394:C:H2'	44:2:1395:G:H8	1.72	0.53
44:2:1423:A:C2'	44:2:1424:G:H8	2.21	0.53
44:2:1437:C:C3'	44:2:1438:A:H8	2.20	0.53
44:2:1570:U:H3'	44:2:1570:U:H6	1.74	0.53
44:2:1873:G:C2	44:2:1874:A:H1'	2.43	0.53
44:2:2260:G:C8	44:2:2260:G:C5'	2.91	0.53
44:2:2302:G:H2'	44:2:2303:G:H8	1.74	0.53
44:2:2378:A:H61	44:2:2780:U:H3	1.57	0.53
44:2:2552:U:H3'	44:2:2552:U:C6	2.43	0.53
44:2:2740:U:H4'	44:2:2741:A:O5'	2.08	0.53
44:2:2823:G:C2'	44:2:2824:G:H5'	2.38	0.53
44:2:4133:G:O2'	44:2:4134:U:H5'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4374:A:C8	44:2:4382:A:C2	2.97	0.53
44:2:4480:G:H2'	44:2:4481:U:O4'	2.09	0.53
44:2:4671:C:O5'	44:2:4671:C:H6	1.92	0.53
44:2:4682:A:H2'	44:2:4683:A:H8	1.74	0.53
44:2:4704:G:H22	44:2:4910:A:H2	1.53	0.53
44:2:5017:G:H2'	44:2:5018:G:H5'	1.91	0.53
3:C:342:ARG:NH2	44:2:714:G:H4'	2.24	0.53
5:E:153:LEU:HB2	5:E:193:PHE:O	2.08	0.53
5:E:174:LEU:HD12	5:E:212:LEU:HD23	1.90	0.53
5:E:240:TYR:O	5:E:243:THR:HB	2.08	0.53
6:F:69:ILE:HD12	44:2:716:U:C4'	2.39	0.53
6:F:88:LYS:HB3	6:F:124:LYS:NZ	2.24	0.53
10:J:144:LYS:HG3	10:J:146:ARG:O	2.09	0.53
11:L:183:ARG:HD2	44:2:1466:G:H5''	1.91	0.53
22:W:57:ARG:HH11	22:W:63:GLN:HE22	1.56	0.53
24:Y:26:ARG:HD3	24:Y:75:ARG:O	2.09	0.53
34:i:33:LEU:HG	34:i:38:LYS:HE3	1.91	0.53
35:j:83:THR:O	45:3:67:U:H5'	2.08	0.53
43:u:152:ARG:NE	44:2:3938:G:OP1	2.42	0.53
44:2:361:U:H1'	44:2:1513:A:N1	2.23	0.53
44:2:710:G:H2'	44:2:711:A:H5'	1.90	0.53
44:2:957:G:C2'	44:2:958:C:O5'	2.57	0.53
44:2:957:G:C2'	44:2:958:C:H5''	2.30	0.53
44:2:1048:G:OP1	44:2:1215:G:H2'	2.09	0.53
44:2:1635:U:H6	44:2:1635:U:C5'	2.20	0.53
44:2:1846:A:H8	44:2:1846:A:O5'	1.92	0.53
44:2:1899:C:C3'	44:2:1900:G:H5''	2.39	0.53
44:2:2001:C:H6	44:2:2001:C:H5''	1.74	0.53
44:2:2358:A:C2	44:2:2402:U:C5	2.96	0.53
44:2:2465:C:H4'	44:2:2466:C:OP2	2.09	0.53
44:2:4033:G:H2'	44:2:4034:U:H6	1.71	0.53
44:2:4037:U:H5	44:2:4038:U:C4	2.27	0.53
44:2:4209:G:H2'	44:2:4210:G:H8	1.73	0.53
44:2:4533:G:C6	44:2:4681:G:C6	2.96	0.53
45:3:60:G:H21	45:3:64:U:C1'	2.22	0.53
45:3:126:C:C5	45:3:127:U:C2	2.96	0.53
45:3:126:C:H5''	45:3:128:C:C5	2.43	0.53
3:C:54:VAL:CB	44:2:2320:G:N7	2.72	0.53
9:I:204:GLY:H	46:4:64:G:P	2.32	0.53
34:i:69:ALA:O	34:i:73:ILE:HG12	2.09	0.53
38:m:111:ARG:HH21	44:2:4658:C:H5''	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:u:31:LEU:O	44:2:4024:A:P	2.67	0.53
44:2:15:A:O2'	44:2:16:G:H5'	2.09	0.53
44:2:24:G:C6	44:2:333:G:C8	2.96	0.53
44:2:136:G:H5''	44:2:136:G:C8	2.38	0.53
44:2:181:U:H5'	44:2:181:U:H6	1.73	0.53
44:2:282:U:C2	44:2:284:G:H2'	2.43	0.53
44:2:670:C:O2'	44:2:671:C:H5'	2.09	0.53
44:2:725:C:C3'	44:2:726:C:C6	2.91	0.53
44:2:1054:G:H2'	44:2:1055:G:H5'	1.90	0.53
44:2:1161:C:H6	44:2:1161:C:C3'	2.21	0.53
44:2:1179:G:C2'	44:2:1180:G:H8	2.06	0.53
44:2:1371:A:H8	44:2:1371:A:OP1	1.92	0.53
44:2:1801:U:C6	44:2:1801:U:C3'	2.92	0.53
44:2:1894:G:H3'	44:2:1894:G:C8	2.43	0.53
44:2:2369:C:H2'	44:2:2370:C:H6	1.74	0.53
44:2:2593:C:H1'	44:2:2699:G:N2	2.24	0.53
44:2:2686:C:H6	44:2:2686:C:H5''	1.74	0.53
44:2:2738:U:H1'	44:2:2739:G:N7	2.20	0.53
44:2:2751:C:C6	44:2:2751:C:O5'	2.62	0.53
44:2:4358:C:H6	44:2:4358:C:O5'	1.92	0.53
44:2:4602:U:O2'	44:2:4603:G:H5'	2.09	0.53
44:2:4688:A:O3'	44:2:4695:C:H1'	2.09	0.53
44:2:4976:C:H6	44:2:4976:C:O5'	1.92	0.53
3:C:13:GLU:CB	3:C:170:LEU:HD11	2.35	0.52
4:D:19:LYS:HG3	4:D:23:ARG:CZ	2.39	0.52
5:E:284:HIS:HA	31:f:41:PHE:CG	2.45	0.52
6:F:142:TRP:CZ2	6:F:235:ASN:HB2	2.43	0.52
10:J:129:ASP:OD1	44:2:4211:A:H8	1.91	0.52
13:N:58:GLY:HA3	13:N:142:ILE:CD1	2.38	0.52
14:O:110:PRO:HG2	14:O:111:PRO:HD3	1.92	0.52
15:P:87:SER:O	15:P:91:LEU:HD13	2.09	0.52
16:Q:10:ASP:OD2	44:2:2060:G:H4'	2.09	0.52
18:S:70:LYS:O	44:2:722:G:H4'	2.09	0.52
19:T:82:GLY:O	27:b:21:ILE:HA	2.09	0.52
24:Y:114:ASP:OD2	45:3:70:G:C8	2.62	0.52
26:a:37:GLY:HA2	26:a:45:PHE:CE2	2.44	0.52
40:o:56:PHE:CE2	44:2:4332:U:H4'	2.44	0.52
44:2:82:U:H3	44:2:101:A:N6	2.06	0.52
44:2:121:A:H2'	44:2:121:A:P	2.49	0.52
44:2:172:C:H2'	44:2:173:G:H5'	1.89	0.52
44:2:195:A:C8	44:2:195:A:H5''	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:438:C:C6	44:2:438:C:O5'	2.62	0.52
44:2:677:C:O2	44:2:677:C:C2'	2.57	0.52
44:2:712:C:C2'	44:2:713:G:H5'	2.39	0.52
44:2:715:C:H2'	44:2:716:U:C6	2.45	0.52
44:2:914:G:H21	44:2:915:C:C5'	2.22	0.52
44:2:916:A:C1'	44:2:917:G:C5'	2.87	0.52
44:2:952:C:H2'	44:2:953:C:C6	2.45	0.52
44:2:957:G:C2'	44:2:958:C:C5'	2.85	0.52
44:2:1569:C:C3'	44:2:1570:U:H4'	2.39	0.52
44:2:1632:A:H5''	44:2:1633:G:OP1	2.08	0.52
44:2:1774:A:H5''	46:4:98:G:C2'	2.39	0.52
44:2:2019:A:C2'	44:2:4424:A:C2	2.92	0.52
44:2:2281:U:H3'	44:2:2282:G:C5'	2.39	0.52
44:2:2347:A:C4'	44:2:2348:U:OP2	2.57	0.52
44:2:2638:U:H3'	44:2:2639:G:C4'	2.38	0.52
44:2:2672:A:H3'	44:2:2673:A:C5'	2.40	0.52
44:2:4280:G:H5''	44:2:4281:U:OP2	2.09	0.52
44:2:4364:U:O2	44:2:4364:U:H2'	2.08	0.52
44:2:4551:U:C6	44:2:4551:U:C5'	2.91	0.52
44:2:4709:G:C2'	44:2:4710:G:C5'	2.81	0.52
44:2:4850:C:H2'	44:2:4851:G:C8	2.44	0.52
1:A:20:VAL:O	44:2:3648:U:H5	1.92	0.52
2:B:285:TYR:OH	2:B:334:LYS:HD2	2.09	0.52
3:C:56:GLU:CD	44:2:347:G:O3'	2.51	0.52
3:C:230:LEU:HD11	3:C:239:LYS:CB	2.39	0.52
6:F:61:TYR:O	6:F:65:TYR:HD2	1.92	0.52
7:G:55:VAL:HA	23:X:44:PRO:O	2.09	0.52
7:G:77:PRO:HA	7:G:237:TRP:CE3	2.44	0.52
8:H:173:ARG:HD2	38:m:127:VAL:HA	1.91	0.52
28:c:10:SER:O	28:c:14:ILE:HG13	2.08	0.52
42:t:3:ALA:HA	42:t:45:HIS:ND1	2.24	0.52
44:2:1:C:C4	45:3:157:U:C4	2.97	0.52
44:2:270:A:O4'	44:2:272:U:H1'	2.08	0.52
44:2:487:G:N2	44:2:489:C:C5	2.77	0.52
44:2:638:G:H2'	44:2:639:G:H8	1.73	0.52
44:2:722:G:H3'	44:2:723:G:C4'	2.39	0.52
44:2:937:C:C2'	44:2:938:C:H5'	2.39	0.52
44:2:946:C:O2	44:2:946:C:C2'	2.57	0.52
44:2:947:G:C2'	44:2:948:A:H5'	2.39	0.52
44:2:1282:U:H3'	44:2:1284:C:H6	1.72	0.52
44:2:1458:G:H2'	44:2:1459:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2638:U:O2	44:2:2638:U:C2'	2.57	0.52
44:2:3895:C:H2'	44:2:3896:U:C6	2.44	0.52
44:2:3943:G:H8	44:2:3943:G:C5'	2.13	0.52
44:2:4574:G:H2'	44:2:4575:C:C6	2.44	0.52
44:2:4645:U:O2'	44:2:4646:G:H5'	2.08	0.52
44:2:4706:C:O2'	44:2:4707:U:H5'	2.09	0.52
44:2:4811:G:HO2'	44:2:4812:A:H8	1.54	0.52
46:4:34:C:O2'	46:4:35:U:H5'	2.09	0.52
3:C:130:ALA:O	3:C:136:LEU:HD12	2.10	0.52
4:D:178:LYS:HA	4:D:183:TYR:CD1	2.45	0.52
12:M:126:GLU:HB2	14:O:187:LYS:HE3	1.91	0.52
15:P:16:LYS:O	44:2:391:A:H5''	2.09	0.52
16:Q:64:SER:OG	44:2:1481:G:N2	2.43	0.52
21:V:66:LYS:HG3	21:V:67:LYS:HD2	1.90	0.52
34:i:33:LEU:HG	34:i:38:LYS:CE	2.39	0.52
44:2:99:A:C3'	44:2:100:C:C6	2.89	0.52
44:2:335:A:C6	45:3:31:G:C6	2.97	0.52
44:2:719:G:C2	44:2:720:A:C4	2.97	0.52
44:2:893:A:C4	44:2:894:G:C8	2.97	0.52
44:2:1221:C:C6	44:2:1221:C:C3'	2.91	0.52
44:2:1357:G:C8	44:2:1360:G:H2'	2.44	0.52
44:2:1379:G:C4	44:2:1380:G:N7	2.77	0.52
44:2:1659:G:C8	44:2:1659:G:C5'	2.84	0.52
44:2:1715:A:H2'	44:2:1716:A:C5'	2.40	0.52
44:2:2059:C:C2'	44:2:2060:G:H5'	2.39	0.52
44:2:2062:C:O2'	44:2:2063:G:H5'	2.08	0.52
44:2:2429:G:H2'	44:2:2429:G:N3	2.24	0.52
44:2:2630:C:H6	44:2:2630:C:H5''	1.73	0.52
44:2:2692:G:H3'	44:2:2693:C:H5	1.73	0.52
44:2:3888:C:C6	44:2:3888:C:C5'	2.92	0.52
44:2:4155:G:H1'	44:2:4156:G:OP2	2.08	0.52
44:2:4179:A:N3	44:2:4179:A:H2'	2.23	0.52
44:2:4204:A:H1'	44:2:4228:A:C4'	2.40	0.52
44:2:4837:U:C3'	44:2:4838:C:H5'	2.39	0.52
44:2:4881:C:H2'	44:2:4882:G:N7	2.24	0.52
44:2:4895:C:C2'	44:2:4896:G:OP1	2.58	0.52
45:3:6:C:H2'	45:3:7:U:H5'	1.92	0.52
45:3:27:U:H2'	45:3:28:C:O4'	2.09	0.52
45:3:28:C:H5''	45:3:28:C:H6	1.73	0.52
3:C:32:ILE:HG21	42:t:9:VAL:HG21	1.90	0.52
3:C:76:ILE:HG23	3:C:77:PRO:HD2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:155:THR:HG23	46:4:36:C:H4'	1.91	0.52
5:E:162:VAL:HG13	5:E:163:VAL:N	2.23	0.52
5:E:214:ASP:OD1	44:2:4896:G:C4	2.63	0.52
11:L:143:GLU:HG2	11:L:144:LEU:H	1.75	0.52
12:M:97:ALA:C	44:2:4826:C:N4	2.62	0.52
13:N:93:LYS:O	13:N:94:PHE:HB3	2.09	0.52
25:Z:17:ARG:HD2	32:g:75:SER:HB3	1.91	0.52
44:2:173:G:O2'	44:2:174:G:H5'	2.10	0.52
44:2:186:G:P	44:2:186:G:C8	2.98	0.52
44:2:199:C:H2'	44:2:200:U:O4'	2.09	0.52
44:2:468:C:O2'	44:2:469:G:H5'	2.10	0.52
44:2:949:G:C8	44:2:949:G:P	3.02	0.52
44:2:1547:C:H2'	44:2:1548:U:C5	2.44	0.52
44:2:1622:A:O5'	44:2:1622:A:C8	2.62	0.52
44:2:1797:G:C2	44:2:1801:U:C6	2.97	0.52
44:2:2336:U:O5'	44:2:2336:U:H6	1.91	0.52
44:2:2718:U:H1'	44:2:2719:G:OP2	2.10	0.52
44:2:2775:A:O2'	44:2:2776:G:H5'	2.09	0.52
44:2:2877:U:H6	44:2:2877:U:H5''	1.75	0.52
44:2:3620:A:H2'	44:2:3621:A:C8	2.44	0.52
44:2:3837:G:H8	44:2:3837:G:OP2	1.92	0.52
44:2:4044:G:N2	44:2:4130:A:H61	2.05	0.52
44:2:4308:A:H5'	44:2:4309:C:C6	2.45	0.52
44:2:4861:C:O2'	44:2:4862:G:H5'	2.09	0.52
44:2:4863:G:H8	44:2:4863:G:H3'	1.75	0.52
45:3:35:C:H2'	45:3:36:G:C8	2.44	0.52
3:C:48:ASN:CG	44:2:1352:A:H5'	2.34	0.52
3:C:50:GLN:HB2	3:C:51:PRO:HD3	1.90	0.52
7:G:71:TYR:CE1	13:N:25:VAL:CG1	2.92	0.52
9:I:145:LYS:CE	9:I:167:ILE:HD13	2.39	0.52
11:L:124:LEU:HD11	33:h:121:VAL:HG22	1.91	0.52
12:M:20:HIS:C	12:M:23:LYS:HD3	2.35	0.52
12:M:23:LYS:HE3	12:M:43:THR:HB	1.90	0.52
12:M:118:MET:CG	44:2:4884:C:O2'	2.58	0.52
17:R:105:LEU:C	17:R:105:LEU:HD13	2.35	0.52
31:f:50:VAL:HG22	31:f:69:VAL:HG22	1.92	0.52
33:h:7:ARG:HA	33:h:10:ARG:NH2	2.25	0.52
42:t:17:LEU:HD12	42:t:25:TYR:O	2.09	0.52
42:t:58:LYS:HB3	44:2:670:C:C5'	2.40	0.52
44:2:30:C:C2'	44:2:31:U:H5'	2.39	0.52
44:2:35:U:H4'	44:2:1504:A:N1	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:101:A:C8	44:2:102:G:N7	2.76	0.52
44:2:166:G:C2	44:2:258:G:N1	2.75	0.52
44:2:372:U:H3'	44:2:372:U:C6	2.44	0.52
44:2:402:G:H1'	44:2:403:G:OP2	2.10	0.52
44:2:636:G:O2'	44:2:637:G:H5'	2.10	0.52
44:2:1063:U:H2'	44:2:1064:C:H6	1.75	0.52
44:2:1171:C:H2'	44:2:1172:C:H6	1.74	0.52
44:2:1238:G:H2'	44:2:1239:G:C8	2.42	0.52
44:2:1270:G:C4'	44:2:4898:A:C2	2.84	0.52
44:2:1514:C:C2'	44:2:1515:U:H5'	2.39	0.52
44:2:1525:C:H4'	44:2:1562:A:C2	2.29	0.52
44:2:1906:C:N4	44:2:2033:G:OP2	2.42	0.52
44:2:2285:G:H8	44:2:2285:G:O5'	1.93	0.52
44:2:2864:U:H2'	44:2:3587:C:C6	2.45	0.52
44:2:3767:U:H5'	44:2:3768:A:OP2	2.10	0.52
44:2:3836:A:C2	44:2:3849:G:C5	2.97	0.52
44:2:4578:G:C2'	44:2:4579:U:H5'	2.39	0.52
44:2:4701:G:H2'	44:2:4702:G:H8	1.73	0.52
45:3:79:G:H2'	45:3:80:A:C1'	2.39	0.52
1:A:117:GLU:HB2	1:A:162:ASN:HD22	1.74	0.52
5:E:214:ASP:OD2	44:2:4896:G:H5'	2.10	0.52
13:N:183:THR:HB	13:N:188:ARG:HB3	1.91	0.52
14:O:48:TYR:CE1	44:2:1908:U:C2	2.98	0.52
16:Q:166:TYR:CZ	44:2:1325:A:H5'	2.45	0.52
25:Z:1:MET:HG2	28:c:68:LYS:HD3	1.92	0.52
43:u:27:LEU:HB2	43:u:163:VAL:CG2	2.40	0.52
44:2:24:G:C2	44:2:25:A:C5	2.97	0.52
44:2:52:G:H8	44:2:52:G:O5'	1.93	0.52
44:2:441:G:H1'	44:2:1274:A:C4'	2.39	0.52
44:2:634:C:H2'	44:2:635:G:H8	1.75	0.52
44:2:968:C:O2	44:2:968:C:H2'	2.08	0.52
44:2:1404:G:H2'	44:2:1405:G:H8	1.74	0.52
44:2:1454:G:N3	44:2:1455:C:H1'	2.24	0.52
44:2:1726:U:C6	44:2:1726:U:C5'	2.93	0.52
44:2:1770:U:H3'	44:2:1771:U:H6	1.75	0.52
44:2:1868:G:P	44:2:1868:G:C8	3.03	0.52
44:2:2505:G:C8	44:2:2505:G:H3'	2.45	0.52
44:2:2529:G:C2	44:2:2530:A:C8	2.97	0.52
44:2:2587:G:H1'	44:2:2663:G:O2'	2.09	0.52
44:2:3592:C:H6	44:2:3592:C:C3'	2.20	0.52
44:2:4441:U:O2	44:2:4441:U:C2'	2.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4502:U:O5'	44:2:4502:U:H6	1.92	0.52
44:2:4704:G:N2	44:2:4910:A:H2	2.08	0.52
44:2:4742:C:H3'	44:2:4742:C:C6	2.45	0.52
44:2:4749:G:H2'	44:2:4750:C:H6	1.74	0.52
44:2:4807:C:C2'	44:2:4808:C:H5'	2.40	0.52
44:2:4879:C:O5'	44:2:4879:C:H6	1.93	0.52
45:3:80:A:H2'	45:3:81:C:C6	2.44	0.52
45:3:115:G:H2'	45:3:116:C:H6	1.73	0.52
46:4:57:C:C2'	46:4:58:A:H5'	2.40	0.52
46:4:75:G:H4'	46:4:76:U:H5'	1.91	0.52
3:C:322:LEU:CD2	44:2:1217:C:H42	2.23	0.52
12:M:57:LEU:HD12	18:S:176:PHE:CZ	2.43	0.52
19:T:81:LYS:HG2	19:T:82:GLY:N	2.25	0.52
25:Z:23:ALA:HB1	25:Z:43:VAL:HB	1.91	0.52
44:2:85:G:H21	44:2:97:G:H2'	1.72	0.52
44:2:339:G:H8	44:2:339:G:O5'	1.93	0.52
44:2:1095:C:H2'	44:2:1096:C:C6	2.44	0.52
44:2:1161:C:H2'	44:2:1162:C:O4'	2.10	0.52
44:2:1349:C:H5''	44:2:1350:G:H8	1.74	0.52
44:2:1942:A:C2	44:2:1943:G:C4	2.98	0.52
44:2:2305:U:H3'	44:2:2306:G:H8	1.75	0.52
44:2:2711:U:H5''	44:2:2711:U:C6	2.44	0.52
44:2:3607:G:H2'	44:2:3608:U:H5'	1.91	0.52
44:2:3783:U:H2'	44:2:3784:G:O5'	2.09	0.52
44:2:4025:C:OP2	44:2:4025:C:C5	2.62	0.52
44:2:4373:C:O2	44:2:4373:C:C3'	2.58	0.52
44:2:4837:U:O2	44:2:4837:U:H2'	2.09	0.52
44:2:5002:C:O2'	44:2:5003:A:H5''	2.10	0.52
45:3:26:C:O2'	45:3:27:U:H5'	2.09	0.52
46:4:64:G:H2'	46:4:64:G:N3	2.24	0.52
1:A:130:SER:OG	44:2:3652:C:O2	2.25	0.52
3:C:326:LEU:HD13	44:2:1217:C:O2	2.10	0.52
5:E:144:ILE:HG13	5:E:144:ILE:O	2.10	0.52
7:G:106:THR:HB	7:G:195:HIS:CD2	2.45	0.52
12:M:132:LYS:HG3	44:2:4849:A:C4'	2.40	0.52
14:O:38:CYS:O	14:O:41:ILE:HG13	2.10	0.52
16:Q:64:SER:HB3	16:Q:92:VAL:CG2	2.40	0.52
19:T:81:LYS:HG2	19:T:82:GLY:H	1.75	0.52
19:T:81:LYS:CG	44:2:4264:A:C2	2.93	0.52
30:e:7:LEU:O	30:e:9:LYS:HG2	2.09	0.52
33:h:13:LYS:O	33:h:17:LEU:HG	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:t:75:THR:CG2	42:t:78:VAL:HG22	2.40	0.52
44:2:1:C:N3	45:3:157:U:C4	2.78	0.52
44:2:266:C:O2	44:2:266:C:H2'	2.10	0.52
44:2:468:C:H2'	44:2:469:G:H8	1.75	0.52
44:2:504:U:H2'	44:2:505:U:C6	2.44	0.52
44:2:710:G:H2'	44:2:711:A:O4'	2.10	0.52
44:2:721:A:O2'	44:2:722:G:H5''	2.09	0.52
44:2:735:A:C8	44:2:736:G:N7	2.78	0.52
44:2:905:C:H2'	44:2:906:C:C6	2.45	0.52
44:2:1318:G:O5'	44:2:1318:G:C8	2.62	0.52
44:2:2063:G:H2'	44:2:2064:G:H8	1.75	0.52
44:2:2665:G:H2'	44:2:2666:C:H5'	1.92	0.52
44:2:2840:G:H3'	44:2:2841:A:H8	1.73	0.52
44:2:3835:C:H2'	44:2:3836:A:O4'	2.09	0.52
44:2:4156:G:OP1	44:2:4156:G:C8	2.61	0.52
44:2:4600:C:H2'	44:2:4601:U:H5'	1.92	0.52
44:2:4612:G:H2'	44:2:4613:C:H5'	1.92	0.52
44:2:4851:G:C2	44:2:4882:G:C8	2.97	0.52
46:4:82:G:H8	46:4:82:G:O5'	1.92	0.52
3:C:75:ARG:HH22	44:2:4351:G:P	2.32	0.52
5:E:242:ILE:O	5:E:246:ARG:HG2	2.10	0.52
7:G:121:LYS:HB3	7:G:129:PRO:HG2	1.92	0.52
11:L:48:PRO:HD3	11:L:137:GLY:HA2	1.91	0.52
13:N:65:ARG:HG2	13:N:127:TYR:CD1	2.45	0.52
14:O:172:LYS:HG2	14:O:176:ARG:HH12	1.75	0.52
28:c:62:TYR:O	28:c:66:LEU:HG	2.10	0.52
31:f:4:ARG:HB3	44:2:4711:U:HO2'	1.75	0.52
43:u:121:VAL:O	43:u:124:PRO:HD2	2.10	0.52
44:2:68:U:O5'	44:2:68:U:H6	1.93	0.52
44:2:470:G:O2'	44:2:471:C:H5'	2.10	0.52
44:2:709:G:O6	44:2:928:A:N1	2.42	0.52
44:2:739:G:H2'	44:2:740:G:H8	1.74	0.52
44:2:943:G:H3'	44:2:1262:G:C5'	2.40	0.52
44:2:1060:C:H2'	44:2:1061:C:C6	2.44	0.52
44:2:1155:A:H2'	44:2:1156:C:H6	1.70	0.52
44:2:1156:C:H2'	44:2:1157:U:C6	2.44	0.52
44:2:1164:A:O2'	44:2:1165:G:H5'	2.10	0.52
44:2:1539:A:O5'	44:2:1539:A:C8	2.62	0.52
44:2:1715:A:C2	46:4:77:A:H2	2.27	0.52
44:2:3684:U:C6	44:2:3684:U:C5'	2.93	0.52
44:2:3929:A:H1'	44:2:4013:G:H5'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4090:C:C6	44:2:4090:C:C3'	2.93	0.52
44:2:4240:A:H3'	44:2:4241:A:C5'	2.40	0.52
44:2:4668:A:C5'	44:2:4669:U:H5	2.23	0.52
44:2:4677:A:H2'	44:2:4678:G:O4'	2.10	0.52
1:A:116:LEU:HG	1:A:126:LEU:HB2	1.91	0.52
2:B:228:TYR:CD1	44:2:2812:A:N3	2.78	0.52
5:E:182:ASN:O	5:E:183:ARG:HB3	2.10	0.52
8:H:117:PHE:HB3	8:H:124:ARG:NH2	2.25	0.52
11:L:50:PRO:O	11:L:51:ALA:HB3	2.10	0.52
13:N:21:PHE:O	13:N:25:VAL:HG23	2.10	0.52
14:O:193:THR:O	14:O:197:LYS:HG3	2.10	0.52
17:R:10:LEU:CD2	17:R:41:ILE:HG12	2.40	0.52
24:Y:113:LYS:HE2	45:3:84:A:C8	2.45	0.52
26:a:112:LEU:HD13	44:2:1367:A:C2	2.44	0.52
34:i:86:LYS:O	34:i:90:LEU:HD23	2.10	0.52
35:j:15:THR:OG1	44:2:1513:A:C2	2.61	0.52
44:2:327:A:H3'	44:2:328:U:H4'	1.91	0.52
44:2:460:C:OP1	44:2:679:U:O4'	2.28	0.52
44:2:462:A:N7	44:2:681:U:H5'	2.25	0.52
44:2:943:G:H2'	44:2:943:G:N3	2.24	0.52
44:2:1061:C:H2'	44:2:1062:C:C5	2.42	0.52
44:2:2294:G:H5''	44:2:2294:G:C8	2.43	0.52
44:2:2857:U:C5'	44:2:2857:U:H6	2.22	0.52
44:2:3600:U:O4'	44:2:3774:U:H5''	2.08	0.52
44:2:3630:G:H4'	44:2:3631:A:C5'	2.41	0.52
44:2:3767:U:H5''	44:2:3767:U:H6	1.75	0.52
44:2:3827:C:O2	44:2:3827:C:H2'	2.08	0.52
44:2:3938:G:H8	44:2:3938:G:OP2	1.93	0.52
44:2:4417:U:C2'	44:2:4418:C:H5'	2.40	0.52
44:2:4828:G:N3	44:2:4828:G:H2'	2.25	0.52
45:3:24:G:H2'	45:3:25:G:H5'	1.90	0.52
45:3:112:G:OP2	45:3:112:G:H8	1.93	0.52
46:4:92:C:H2'	46:4:93:G:H8	1.75	0.52
2:B:67:VAL:CG2	21:V:91:LYS:HD2	2.38	0.51
5:E:161:ARG:HD3	5:E:270:TYR:CE2	2.44	0.51
7:G:66:GLN:HB3	13:N:28:TRP:HH2	1.75	0.51
8:H:13:PRO:HG2	8:H:16:VAL:HG22	1.92	0.51
10:J:92:TYR:HB3	10:J:172:GLY:HA2	1.92	0.51
23:X:72:ASP:OD2	23:X:74:TYR:HB2	2.10	0.51
26:a:76:ASP:CB	26:a:114:LYS:HG2	2.39	0.51
32:g:100:GLN:NE2	44:2:4085:U:H3'	2.23	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:u:150:GLN:OE1	43:u:152:ARG:HD2	2.10	0.51
44:2:42:A:H2	44:2:3894:U:O4'	1.92	0.51
44:2:198:C:O2'	44:2:199:C:C5	2.62	0.51
44:2:303:G:C8	44:2:303:G:H3'	2.45	0.51
44:2:407:U:H2'	44:2:408:G:H5'	1.93	0.51
44:2:426:A:H2'	44:2:427:C:C6	2.41	0.51
44:2:896:G:H4'	44:2:897:U:O5'	2.09	0.51
44:2:901:A:H3'	44:2:901:A:C8	2.45	0.51
44:2:1055:G:H2'	44:2:1056:C:C6	2.46	0.51
44:2:1249:G:H3'	44:2:1250:A:C8	2.45	0.51
44:2:1350:G:C8	44:2:1350:G:O5'	2.63	0.51
44:2:1357:G:N7	44:2:1360:G:C2'	2.74	0.51
44:2:1717:A:C4'	46:4:101:A:C2	2.90	0.51
44:2:1797:G:N2	44:2:1801:U:C5'	2.73	0.51
44:2:2309:G:O3'	44:2:2310:G:C8	2.63	0.51
44:2:2351:A:H2'	44:2:2352:A:C8	2.45	0.51
44:2:2398:G:O5'	44:2:2805:U:H1'	2.10	0.51
44:2:2486:C:P	45:3:108:A:H4'	2.51	0.51
44:2:3736:C:H3'	44:2:3737:U:C5	2.44	0.51
44:2:4032:C:H2'	44:2:4033:G:C4'	2.38	0.51
44:2:4144:G:H8	44:2:4144:G:OP1	1.93	0.51
44:2:4298:G:H1	44:2:4332:U:H3'	1.74	0.51
44:2:4348:A:H2'	44:2:4349:C:C6	2.45	0.51
44:2:4538:G:H2'	44:2:4539:U:C6	2.45	0.51
44:2:4549:A:H1'	44:2:4550:A:O4'	2.09	0.51
44:2:4597:G:OP2	44:2:4597:G:H4'	2.09	0.51
44:2:4608:A:H2'	44:2:4609:G:O4'	2.10	0.51
44:2:4893:A:H2'	44:2:4894:C:O4'	2.10	0.51
46:4:36:C:O5'	46:4:36:C:C6	2.59	0.51
1:A:90:CYS:HB3	1:A:101:VAL:HG13	1.92	0.51
1:A:237:LEU:HD22	44:2:3627:C:O4'	2.11	0.51
2:B:118:PHE:HA	44:2:4538:G:O2'	2.10	0.51
3:C:232:VAL:HG21	3:C:256:ALA:HA	1.91	0.51
19:T:81:LYS:HD2	44:2:4264:A:H2	1.74	0.51
26:a:40:HIS:CA	44:2:1660:G:H21	2.23	0.51
31:f:62:GLY:HA3	31:f:65:ASN:HD22	1.74	0.51
32:g:94:ALA:HA	44:2:4089:G:C5	2.45	0.51
35:j:67:LEU:C	35:j:67:LEU:HD13	2.35	0.51
43:u:31:LEU:O	44:2:4024:A:OP1	2.28	0.51
44:2:384:U:H3'	44:2:385:G:C4'	2.40	0.51
44:2:438:C:O2'	44:2:439:G:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:446:C:C5	44:2:446:C:OP2	2.63	0.51
44:2:947:G:C6	44:2:948:A:C5	2.98	0.51
44:2:1425:U:C6	44:2:1425:U:O5'	2.63	0.51
44:2:1715:A:O2'	46:4:78:C:H4'	2.09	0.51
44:2:1715:A:C2'	44:2:1716:A:H5'	2.40	0.51
44:2:1786:C:O5'	44:2:1786:C:H6	1.92	0.51
44:2:1873:G:N3	44:2:1874:A:H1'	2.26	0.51
44:2:1915:C:O5'	44:2:1915:C:H6	1.92	0.51
44:2:2497:C:H2'	44:2:2498:G:H8	1.75	0.51
44:2:2587:G:C5'	44:2:2663:G:H21	2.22	0.51
44:2:2664:U:O2'	44:2:2665:G:H5'	2.10	0.51
44:2:2665:G:H8	44:2:2665:G:C5'	2.23	0.51
44:2:2759:U:H4'	44:2:2760:A:OP2	2.09	0.51
44:2:2762:C:H3'	44:2:2763:C:C6	2.44	0.51
44:2:3667:G:H8	44:2:3667:G:O5'	1.93	0.51
44:2:4413:C:C2'	44:2:4414:G:H5'	2.40	0.51
44:2:4536:U:O5'	44:2:4536:U:H6	1.93	0.51
44:2:4838:C:C3'	44:2:4839:G:H5''	2.39	0.51
2:B:128:LYS:HD2	44:2:4921:A:H3'	1.91	0.51
3:C:305:PRO:HB2	44:2:2064:G:H5''	1.93	0.51
4:D:62:CYS:SG	4:D:101:THR:HG22	2.50	0.51
6:F:21:LYS:O	6:F:25:PHE:HD1	1.93	0.51
7:G:136:LEU:HB3	7:G:204:PHE:CE2	2.45	0.51
11:L:42:LYS:HZ1	44:2:107:G:P	2.32	0.51
13:N:181:HIS:CG	13:N:182:HIS:N	2.79	0.51
14:O:181:ALA:O	14:O:187:LYS:HD2	2.09	0.51
18:S:15:ARG:O	18:S:16:CYS:HB3	2.10	0.51
21:V:85:ARG:HD3	21:V:99:GLU:O	2.10	0.51
23:X:77:ILE:HD11	23:X:98:PHE:CG	2.45	0.51
34:i:27:SER:O	34:i:28:ARG:HB2	2.09	0.51
43:u:55:GLN:HB3	43:u:162:ARG:NH2	2.26	0.51
44:2:105:A:C2	44:2:327:A:C2	2.84	0.51
44:2:105:A:H2	44:2:327:A:H2	1.55	0.51
44:2:286:A:H62	44:2:4322:A:H4'	1.76	0.51
44:2:378:G:C4	44:2:403:G:N1	2.79	0.51
44:2:465:C:H2'	44:2:466:G:C8	2.46	0.51
44:2:638:G:H2'	44:2:639:G:C8	2.45	0.51
44:2:679:U:O5'	44:2:679:U:C6	2.63	0.51
44:2:941:G:C5	44:2:2053:G:OP1	2.63	0.51
44:2:1063:U:O2'	44:2:1064:C:H5'	2.10	0.51
44:2:1318:G:C8	44:2:1318:G:OP2	2.63	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1351:A:H5''	44:2:1352:A:OP2	2.10	0.51
44:2:1476:A:H5''	44:2:1477:G:OP2	2.10	0.51
44:2:1536:C:C2'	44:2:1537:A:H5'	2.41	0.51
44:2:1761:U:H2'	44:2:1762:C:C6	2.46	0.51
44:2:2526:G:H3'	44:2:2527:G:O4'	2.10	0.51
44:2:2551:G:H3'	44:2:2551:G:P	2.50	0.51
44:2:2607:U:H4'	44:2:2608:U:OP2	2.06	0.51
44:2:2831:G:C3'	44:2:2832:G:H5'	2.41	0.51
44:2:4119:C:C5	44:2:4120:C:N4	2.79	0.51
44:2:4179:A:H5''	44:2:4180:A:OP2	2.10	0.51
44:2:4387:G:H5''	44:2:4387:G:C8	2.45	0.51
44:2:4863:G:H2'	44:2:4864:A:C5'	2.40	0.51
3:C:341:LEU:HG	44:2:1212:G:O2'	2.11	0.51
4:D:48:LYS:HE3	4:D:145:TYR:CE2	2.45	0.51
4:D:52:ILE:O	4:D:62:CYS:HA	2.10	0.51
5:E:217:PHE:HB2	44:2:4895:C:O2'	2.09	0.51
5:E:227:HIS:CE1	44:2:442:C:O4'	2.63	0.51
7:G:57:TRP:NE1	7:G:65:ARG:HH12	2.07	0.51
14:O:114:LYS:HA	44:2:4717:U:C6	2.45	0.51
16:Q:75:ARG:HH21	16:Q:78:LYS:HZ3	1.58	0.51
17:R:21:LYS:O	17:R:53:LYS:HB2	2.10	0.51
27:b:42:ASN:CG	44:2:1795:C:H1'	2.36	0.51
30:e:126:ASN:O	30:e:129:LEU:HB2	2.10	0.51
35:j:11:ARG:NH1	44:2:1513:A:C8	2.78	0.51
42:t:46:ARG:HB2	42:t:71:ARG:NH2	2.26	0.51
42:t:79:ARG:HG3	44:2:472:G:C8	2.45	0.51
43:u:192:PRO:O	43:u:195:ILE:HG22	2.11	0.51
44:2:14:C:C1'	44:2:15:A:H5'	2.40	0.51
44:2:179:G:OP1	44:2:179:G:H4'	2.11	0.51
44:2:642:C:H6	44:2:642:C:C5'	2.23	0.51
44:2:646:C:H2'	44:2:647:C:H6	1.76	0.51
44:2:1176:G:H2'	44:2:1177:C:O5'	2.10	0.51
44:2:1478:C:H4'	44:2:1479:A:OP1	2.11	0.51
44:2:1630:G:N2	44:2:1631:U:H1'	2.25	0.51
44:2:1754:A:C4	44:2:1755:A:C8	2.98	0.51
44:2:1860:U:H4'	44:2:1861:G:O5'	2.10	0.51
44:2:2047:A:O2'	44:2:2048:U:H2'	2.11	0.51
44:2:2373:A:C4'	44:2:2374:G:OP2	2.56	0.51
44:2:2420:G:H4'	44:2:2489:A:C4	2.46	0.51
44:2:2626:G:C2	44:2:2662:C:C2	2.98	0.51
44:2:3592:C:C4	44:2:3593:A:C2	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:3604:A:H5''	44:2:3604:A:H8	1.75	0.51
44:2:4043:U:H1'	44:2:4044:G:O5'	2.11	0.51
44:2:4164:C:OP2	44:2:4164:C:H4'	2.11	0.51
44:2:4402:U:O5'	44:2:4402:U:H6	1.92	0.51
44:2:4439:A:H2'	44:2:4440:A:H5'	1.92	0.51
44:2:4449:G:C6	44:2:4668:A:C5	2.99	0.51
44:2:4580:U:C5	44:2:4581:C:C5	2.98	0.51
44:2:4669:U:H2'	44:2:4670:C:C6	2.46	0.51
44:2:4806:G:N3	44:2:4807:C:H1'	2.25	0.51
44:2:4810:G:H2'	44:2:4811:G:H8	1.76	0.51
44:2:4869:C:C6	44:2:4869:C:P	3.04	0.51
45:3:109:C:H4'	45:3:110:U:H5	1.73	0.51
1:A:140:ASN:HB2	1:A:145:LYS:O	2.11	0.51
2:B:76:VAL:HG21	2:B:332:MET:SD	2.50	0.51
2:B:257:TRP:CG	44:2:4478:A:C8	2.99	0.51
2:B:262:VAL:HG11	2:B:268:ARG:NH1	2.25	0.51
2:B:268:ARG:HH21	44:2:3865:C:H1'	1.76	0.51
3:C:150:LEU:HB2	3:C:151:PRO:CD	2.39	0.51
7:G:62:ARG:CD	44:2:4053:A:N6	2.74	0.51
10:J:141:ILE:HG21	46:4:56:G:H4'	1.93	0.51
11:L:29:PRO:HB2	44:2:1351:A:OP2	2.10	0.51
12:M:43:THR:O	12:M:44:GLN:HB3	2.11	0.51
24:Y:87:ARG:HG3	24:Y:97:VAL:CG2	2.41	0.51
31:f:17:GLY:HA2	44:2:1894:G:C2	2.45	0.51
31:f:54:LYS:CB	44:2:4706:C:OP1	2.58	0.51
44:2:27:C:O2	44:2:27:C:H2'	2.10	0.51
44:2:236:C:H2'	44:2:237:G:H8	1.75	0.51
44:2:381:C:C6	44:2:381:C:C5'	2.88	0.51
44:2:411:A:H3'	44:2:412:C:C6	2.46	0.51
44:2:425:A:C8	44:2:425:A:O5'	2.64	0.51
44:2:500:A:O5'	44:2:500:A:H8	1.93	0.51
44:2:641:C:C2'	44:2:642:C:C5	2.78	0.51
44:2:726:C:C5	44:2:726:C:OP2	2.64	0.51
44:2:928:A:OP2	44:2:928:A:H4'	2.11	0.51
44:2:947:G:C4	44:2:948:A:C8	2.99	0.51
44:2:1205:U:OP2	44:2:1212:G:C8	2.54	0.51
44:2:1222:G:H2'	44:2:1223:C:C5	2.45	0.51
44:2:1313:A:H3'	44:2:1314:A:N7	2.24	0.51
44:2:1474:G:H2'	44:2:1475:G:C5'	2.40	0.51
44:2:2262:G:H2'	44:2:2263:G:C8	2.45	0.51
44:2:2333:U:C6	44:2:2333:U:C5'	2.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2417:U:H3'	44:2:2418:C:H5'	1.91	0.51
44:2:2531:U:H2'	44:2:2532:G:C5'	2.40	0.51
44:2:2547:U:H4'	44:2:2739:G:N2	2.26	0.51
44:2:2552:U:C6	44:2:2552:U:C3'	2.94	0.51
44:2:2841:A:H2'	44:2:2842:U:H6	1.74	0.51
44:2:3578:G:H2'	44:2:3579:A:O4'	2.11	0.51
44:2:3620:A:H2'	44:2:3621:A:O4'	2.10	0.51
44:2:3621:A:H2'	44:2:3622:A:C5	2.46	0.51
44:2:3942:G:C2'	44:2:3943:G:H5'	2.37	0.51
44:2:4329:A:O2'	44:2:4330:G:H5'	2.11	0.51
44:2:4484:G:H2'	44:2:4485:C:H5	1.69	0.51
44:2:4637:U:C1'	44:2:4638:G:OP1	2.54	0.51
44:2:4838:C:H2'	44:2:4838:C:O2	2.09	0.51
1:A:33:ASP:O	1:A:37:ARG:HG2	2.10	0.51
3:C:149:GLU:HA	42:t:75:THR:CA	2.39	0.51
3:C:199:ARG:NH2	44:2:339:G:H3'	2.26	0.51
3:C:318:PRO:HG2	6:F:155:TYR:HB3	1.93	0.51
4:D:260:GLU:CG	46:4:119:U:H3'	2.37	0.51
5:E:253:VAL:O	5:E:257:ILE:HG12	2.11	0.51
7:G:30:PRO:C	7:G:31:LEU:HD12	2.36	0.51
8:H:48:LEU:HD22	8:H:54:ARG:HH11	1.75	0.51
11:L:101:ARG:NH2	44:2:65:A:H5''	2.26	0.51
13:N:184:ILE:HG23	13:N:185:GLY:N	2.26	0.51
15:P:4:TYR:N	15:P:4:TYR:CD1	2.79	0.51
16:Q:42:THR:HB	44:2:1409:C:H5''	1.92	0.51
21:V:28:CYS:HB3	21:V:34:ALA:O	2.11	0.51
24:Y:120:GLU:HG3	24:Y:124:LYS:HD2	1.93	0.51
25:Z:10:VAL:HG22	25:Z:87:VAL:HG23	1.93	0.51
29:d:84:ILE:HD11	29:d:108:TYR:CE1	2.45	0.51
44:2:25:A:H2'	44:2:26:C:C6	2.45	0.51
44:2:116:G:N2	44:2:118:C:H2'	2.25	0.51
44:2:163:C:O2'	44:2:164:C:H5'	2.11	0.51
44:2:241:G:H8	44:2:241:G:O5'	1.93	0.51
44:2:388:G:O5'	44:2:388:G:H8	1.93	0.51
44:2:459:U:H3'	44:2:459:U:O2	2.09	0.51
44:2:1423:A:C8	44:2:1423:A:OP2	2.63	0.51
44:2:1427:C:O2	44:2:1427:C:H2'	2.10	0.51
44:2:1705:U:H2'	44:2:1706:U:C6	2.46	0.51
44:2:2020:A:H8	44:2:2021:A:C2	2.28	0.51
44:2:2525:C:H3'	44:2:2526:G:O4'	2.11	0.51
44:2:2831:G:H3'	44:2:2832:G:H5'	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2833:C:H5	44:2:2834:A:C5	2.29	0.51
44:2:4122:C:C5	45:3:150:C:C6	2.98	0.51
44:2:4215:A:C2'	44:2:4216:A:H5'	2.40	0.51
44:2:4233:A:C8	44:2:4233:A:H3'	2.46	0.51
44:2:4233:A:N7	44:2:4234:A:C5	2.79	0.51
44:2:4278:C:H2'	44:2:4279:C:O5'	2.11	0.51
44:2:4664:C:H2'	44:2:4665:A:O4'	2.11	0.51
44:2:4749:G:H2'	44:2:4750:C:C6	2.45	0.51
44:2:4935:C:O5'	44:2:4935:C:H6	1.93	0.51
46:4:7:G:C2'	46:4:8:G:H5'	2.41	0.51
46:4:69:U:H3'	46:4:69:U:H6	1.76	0.51
1:A:126:LEU:HD23	44:2:3630:G:H21	1.74	0.51
3:C:224:ILE:HG12	44:2:220:G:H22	1.75	0.51
4:D:13:PHE:C	46:4:66:G:O2'	2.53	0.51
8:H:111:LEU:HD23	8:H:127:ARG:HA	1.93	0.51
16:Q:160:HIS:H	16:Q:188:ASN:HB3	1.74	0.51
19:T:129:LYS:HG3	44:2:1814:G:H5''	1.93	0.51
23:X:60:TYR:HD1	44:2:16:G:OP1	1.93	0.51
23:X:117:TYR:HB2	23:X:119:ILE:HG12	1.91	0.51
28:c:53:PRO:HD3	41:p:41:PHE:O	2.11	0.51
29:d:89:SER:O	29:d:104:THR:HA	2.11	0.51
44:2:214:C:H3'	44:2:214:C:C6	2.44	0.51
44:2:283:G:C2	44:2:284:G:N7	2.79	0.51
44:2:918:C:OP2	44:2:918:C:H2'	2.10	0.51
44:2:1048:G:OP1	44:2:1215:G:C8	2.63	0.51
44:2:1209:C:O2	44:2:1209:C:H3'	2.10	0.51
44:2:1378:A:H3'	44:2:1378:A:N3	2.26	0.51
44:2:2027:G:O2'	44:2:2028:G:H5'	2.10	0.51
44:2:2278:C:H2'	44:2:2279:C:C5	2.45	0.51
44:2:3623:G:H3'	44:2:3623:G:C8	2.46	0.51
44:2:3651:A:H1'	44:2:3653:G:C4	2.45	0.51
44:2:3729:A:O2'	44:2:3730:C:P	2.69	0.51
44:2:3736:C:H2'	44:2:3737:U:C6	2.45	0.51
44:2:4502:U:H2'	44:2:4503:G:H5'	1.92	0.51
44:2:4533:G:H3'	44:2:4535:G:OP1	2.11	0.51
44:2:4563:C:H2'	44:2:4564:G:C5'	2.34	0.51
44:2:4688:A:O3'	44:2:4695:C:C1'	2.59	0.51
44:2:4739:G:N2	44:2:4744:C:H1'	2.25	0.51
44:2:4922:A:H8	44:2:4922:A:H5''	1.76	0.51
45:3:37:A:H2	45:3:105:C:N4	1.96	0.51
46:4:58:A:H2'	46:4:59:G:H8	1.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:217:ILE:HD12	2:B:347:LEU:HD12	1.93	0.51
3:C:8:ILE:HD11	3:C:24:LEU:CD1	2.38	0.51
4:D:33:ARG:HD2	46:4:7:G:O5'	2.10	0.51
7:G:174:CYS:HB3	7:G:179:VAL:O	2.11	0.51
11:L:101:ARG:HH21	44:2:65:A:H5''	1.75	0.51
11:L:169:ILE:HG13	26:a:96:GLY:O	2.09	0.51
15:P:111:SER:O	15:P:153:LYS:HB2	2.10	0.51
18:S:167:PHE:O	44:2:4829:A:OP2	2.29	0.51
20:U:46:ARG:HH22	44:2:2606:C:H5'	1.76	0.51
23:X:119:ILE:HD12	23:X:140:LEU:HD21	1.93	0.51
24:Y:59:ARG:HD2	44:2:206:U:H5''	1.92	0.51
35:j:34:CYS:HB3	35:j:39:TYR:H	1.75	0.51
43:u:32:ARG:HG3	43:u:33:ASP:OD1	2.11	0.51
44:2:32:G:H21	44:2:50:C:N4	2.08	0.51
44:2:249:C:O5'	44:2:249:C:H6	1.93	0.51
44:2:284:G:H4'	44:2:285:G:N9	2.20	0.51
44:2:391:A:H2'	44:2:392:G:O4'	2.11	0.51
44:2:692:C:O2'	44:2:693:G:H5'	2.11	0.51
44:2:1203:G:C5'	44:2:1210:U:C5	2.88	0.51
44:2:1322:A:C2'	44:2:1323:A:H5'	2.40	0.51
44:2:1474:G:HO2'	44:2:1475:G:H5'	1.73	0.51
44:2:1849:A:H5'	44:2:4403:C:OP1	2.10	0.51
44:2:1868:G:O5'	44:2:1868:G:C8	2.60	0.51
44:2:2034:G:C8	44:2:2036:G:N7	2.79	0.51
44:2:2288:U:O5'	44:2:2288:U:H6	1.94	0.51
44:2:2652:G:H8	44:2:2652:G:P	2.33	0.51
44:2:2672:A:N3	44:2:2672:A:C5'	2.74	0.51
44:2:2782:C:H6	44:2:2782:C:OP2	1.94	0.51
44:2:3732:A:C6	44:2:3733:U:C2	2.99	0.51
44:2:4061:G:C6	44:2:4081:C:N4	2.79	0.51
44:2:4745:G:C2'	44:2:4746:C:H5'	2.41	0.51
44:2:4895:C:H6	44:2:4895:C:C3'	2.19	0.51
2:B:56:ILE:CD1	2:B:368:ILE:HG12	2.41	0.51
3:C:52:TYR:O	3:C:53:ALA:HB2	2.11	0.51
3:C:322:LEU:HD23	44:2:1217:C:N4	2.26	0.51
4:D:207:TYR:CD1	46:4:33:U:C6	2.99	0.51
6:F:69:ILE:HD12	44:2:716:U:C5'	2.41	0.51
8:H:92:MET:HG2	8:H:181:VAL:HA	1.92	0.51
11:L:88:LYS:NZ	44:2:156:C:C1'	2.74	0.51
15:P:137:ASN:ND2	44:2:3830:A:H4'	2.26	0.51
16:Q:90:VAL:HG21	26:a:80:THR:CG2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:S:109:CYS:O	18:S:113:MET:HG2	2.11	0.51
20:U:76:VAL:HG13	20:U:77:PRO:HD2	1.93	0.51
24:Y:113:LYS:N	45:3:84:A:N6	2.58	0.51
33:h:103:LYS:HB3	33:h:107:GLN:OE1	2.11	0.51
34:i:41:ARG:CZ	44:2:299:G:N7	2.74	0.51
42:t:81:THR:C	42:t:83:ASN:N	2.67	0.51
44:2:28:C:O5'	44:2:28:C:H6	1.94	0.51
44:2:193:C:O2	44:2:193:C:C2'	2.59	0.51
44:2:210:G:C6	44:2:211:G:C8	2.99	0.51
44:2:269:G:H5''	44:2:269:G:C8	2.43	0.51
44:2:437:C:C3'	44:2:438:C:C5	2.89	0.51
44:2:507:C:H2'	44:2:508:C:H6	1.75	0.51
44:2:736:G:H2'	44:2:736:G:N3	2.26	0.51
44:2:1056:C:H41	44:2:1204:G:H1	1.56	0.51
44:2:1063:U:H2'	44:2:1064:C:C6	2.46	0.51
44:2:1194:C:H2'	44:2:1194:C:O2	2.10	0.51
44:2:1473:U:H4'	44:2:4257:G:H4'	1.93	0.51
44:2:1480:C:OP1	44:2:1480:C:C6	2.63	0.51
44:2:1630:G:H3'	44:2:1631:U:H6	1.75	0.51
44:2:2265:C:N4	44:2:2294:G:O2'	2.44	0.51
44:2:2549:C:C4'	44:2:2737:G:H8	2.24	0.51
44:2:2574:G:H2'	44:2:2574:G:N3	2.26	0.51
44:2:3595:G:C6	44:2:3805:A:C2	2.98	0.51
44:2:3658:G:H5''	44:2:3659:U:OP2	2.11	0.51
44:2:3761:G:H3'	44:2:3762:U:H5	1.75	0.51
44:2:3896:U:H6	44:2:3896:U:O5'	1.94	0.51
44:2:3914:A:C2'	44:2:3915:G:H8	2.12	0.51
44:2:4052:G:C8	44:2:4052:G:O5'	2.64	0.51
44:2:4136:C:H2'	44:2:4137:C:C6	2.46	0.51
44:2:4292:C:H2'	44:2:4292:C:O2	2.09	0.51
44:2:4608:A:C4	44:2:4609:G:C8	2.99	0.51
44:2:4659:U:H4'	44:2:4660:A:C5'	2.41	0.51
44:2:4811:G:O2'	44:2:4812:A:H8	1.93	0.51
44:2:4887:U:O5'	44:2:4887:U:H6	1.93	0.51
46:4:69:U:H2'	46:4:70:G:H8	1.76	0.51
1:A:130:SER:O	44:2:3652:C:O2	2.29	0.51
3:C:144:ILE:O	3:C:144:ILE:HG22	2.11	0.51
3:C:274:LYS:HD3	44:2:1355:C:H5''	1.92	0.51
6:F:44:LYS:HD2	44:2:956:C:OP1	2.11	0.51
6:F:222:LYS:HB2	44:2:1885:A:C4'	2.35	0.51
10:J:118:LYS:NZ	10:J:118:LYS:HB2	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:L:47:ALA:CB	11:L:48:PRO:CD	2.89	0.51
11:L:182:LEU:HD11	26:a:146:LEU:CD2	2.41	0.51
14:O:164:ALA:HA	44:2:4718:C:O3'	2.10	0.51
17:R:12:SER:HA	17:R:22:VAL:HG11	1.92	0.51
23:X:74:TYR:HD2	33:h:29:SER:OG	1.92	0.51
28:c:34:THR:O	28:c:38:ILE:HG12	2.11	0.51
31:f:60:PRO:C	44:2:4900:G:N1	2.68	0.51
31:f:72:GLY:HA3	31:f:88:PHE:CD2	2.47	0.51
44:2:450:C:H2'	44:2:451:C:H6	1.76	0.51
44:2:459:U:O2	44:2:459:U:C2'	2.59	0.51
44:2:672:G:H2'	44:2:673:G:C8	2.45	0.51
44:2:1086:A:O5'	44:2:1086:A:C8	2.60	0.51
44:2:1294:C:C2	44:2:3834:A:C2	3.00	0.51
44:2:1645:C:C2'	44:2:1646:G:H5'	2.41	0.51
44:2:2397:A:C3'	44:2:2398:G:H5'	2.41	0.51
44:2:2453:G:C2'	44:2:2454:A:O4'	2.57	0.51
44:2:2704:C:O2'	44:2:2705:U:H5'	2.11	0.51
44:2:2795:C:H3'	44:2:2795:C:C6	2.46	0.51
44:2:3724:G:C1'	44:2:3725:A:OP1	2.57	0.51
44:2:3743:A:H2'	44:2:3744:A:C8	2.46	0.51
44:2:3744:A:C2'	44:2:3745:G:H5''	2.41	0.51
44:2:4072:A:H2'	44:2:4073:G:C8	2.41	0.51
44:2:4251:G:C4'	44:2:4252:A:H5''	2.39	0.51
44:2:4512:U:H2'	44:2:4513:A:C8	2.46	0.51
44:2:4843:U:C2'	44:2:4844:G:H5'	2.41	0.51
44:2:4850:C:H2'	44:2:4851:G:H8	1.76	0.51
44:2:4851:G:N2	44:2:4882:G:H1'	2.26	0.51
46:4:21:G:O5'	46:4:21:G:C8	2.63	0.51
1:A:41:ILE:HD13	7:G:42:GLY:HA2	1.93	0.50
1:A:189:TYR:HB2	1:A:196:TRP:HD1	1.76	0.50
5:E:145:THR:O	5:E:148:THR:HG23	2.10	0.50
7:G:80:ILE:O	7:G:81:ASN:HB3	2.11	0.50
10:J:135:GLY:HA2	10:J:157:ILE:HD11	1.91	0.50
11:L:91:ALA:HA	11:L:94:ILE:HG22	1.92	0.50
24:Y:45:ARG:HB2	44:2:195:A:OP1	2.11	0.50
24:Y:62:TYR:HB3	24:Y:65:GLN:HG3	1.93	0.50
26:a:74:ASN:CB	26:a:114:LYS:HB2	2.40	0.50
34:i:43:MET:HG2	34:i:47:VAL:HG23	1.93	0.50
41:p:13:LYS:HE3	41:p:14:TYR:CZ	2.45	0.50
44:2:351:A:C2	45:3:24:G:N9	2.79	0.50
44:2:426:A:C4	44:2:427:C:C6	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:449:C:H2'	44:2:450:C:C6	2.45	0.50
44:2:457:A:C8	44:2:676:G:C5'	2.81	0.50
44:2:482:G:C8	44:2:482:G:C5'	2.93	0.50
44:2:697:C:H2'	44:2:698:G:H8	1.75	0.50
44:2:1186:C:C2'	44:2:1187:C:H5'	2.41	0.50
44:2:1209:C:H4'	44:2:1210:U:C1'	2.41	0.50
44:2:1461:G:N3	44:2:1461:G:C3'	2.75	0.50
44:2:1707:U:H2'	44:2:1708:A:C8	2.45	0.50
44:2:1837:C:H2'	44:2:1838:U:H6	1.76	0.50
44:2:2020:A:H2	44:2:4424:A:N1	2.09	0.50
44:2:2020:A:C8	44:2:2021:A:C4	2.96	0.50
44:2:2061:C:N4	44:2:2249:G:H22	2.09	0.50
44:2:2426:A:C8	44:2:2427:G:C8	2.99	0.50
44:2:2755:G:N2	45:3:113:C:P	2.84	0.50
44:2:3578:G:H8	44:2:3578:G:H5''	1.75	0.50
44:2:3585:U:C1'	44:2:3586:G:P	2.99	0.50
44:2:3727:U:H3'	44:2:3727:U:C6	2.46	0.50
44:2:4029:G:C2	44:2:4030:A:C5	2.99	0.50
44:2:4100:C:H2'	44:2:4101:C:H6	1.76	0.50
44:2:4142:G:H3'	44:2:4142:G:C8	2.47	0.50
44:2:4201:C:H2'	44:2:4201:C:O2	2.11	0.50
44:2:4362:C:H5'	44:2:4363:U:OP2	2.11	0.50
44:2:4428:U:H2'	44:2:4429:U:H5'	1.93	0.50
44:2:4962:A:H5'	44:2:4962:A:H8	1.75	0.50
44:2:5007:C:O5'	44:2:5007:C:H6	1.94	0.50
45:3:29:G:H2'	45:3:30:U:C6	2.46	0.50
45:3:35:C:H2'	45:3:36:G:H8	1.75	0.50
46:4:71:G:H2'	46:4:72:U:H6	1.75	0.50
1:A:159:SER:O	1:A:162:ASN:HB3	2.12	0.50
1:A:201:GLY:HA2	1:A:204:MET:HG3	1.93	0.50
3:C:174:LEU:O	3:C:175:LYS:HB2	2.10	0.50
4:D:191:ASN:ND2	4:D:194:VAL:HG23	2.25	0.50
5:E:170:SER:HB3	44:2:4896:G:C2	2.47	0.50
10:J:47:THR:HG23	46:4:39:C:H4'	1.92	0.50
12:M:132:LYS:HD2	44:2:4849:A:OP2	2.11	0.50
14:O:82:ARG:HA	14:O:85:ARG:NH2	2.26	0.50
40:o:15:CYS:SG	40:o:17:LYS:O	2.70	0.50
41:p:75:SER:O	41:p:79:VAL:HG23	2.12	0.50
42:t:75:THR:HB	44:2:474:G:N7	2.27	0.50
44:2:44:A:H2'	44:2:45:U:H6	1.76	0.50
44:2:131:C:C2	44:2:139:G:C2	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:231:G:H3'	44:2:232:A:H5''	1.93	0.50
44:2:697:C:H6	44:2:697:C:O5'	1.95	0.50
44:2:1059:C:H3'	44:2:1060:C:C6	2.45	0.50
44:2:1640:C:H2'	44:2:1641:C:C6	2.46	0.50
44:2:1905:U:OP1	44:2:1928:U:H5'	2.12	0.50
44:2:2283:A:N3	44:2:2283:A:C2'	2.74	0.50
44:2:2833:C:H3'	44:2:2833:C:H6	1.76	0.50
44:2:2836:G:C2'	44:2:2837:C:H5'	2.41	0.50
44:2:3610:U:O2	44:2:3610:U:H2'	2.11	0.50
44:2:3679:G:N3	44:2:3679:G:H2'	2.26	0.50
44:2:3685:C:H3'	44:2:3704:G:O6	2.11	0.50
44:2:3753:A:C5	44:2:3755:U:C5	2.99	0.50
44:2:3769:A:N3	44:2:4456:A:H1'	2.25	0.50
44:2:3821:A:H5''	44:2:3821:A:H8	1.76	0.50
44:2:3821:A:H8	44:2:3821:A:OP2	1.94	0.50
44:2:4025:C:O5'	44:2:4025:C:C6	2.65	0.50
44:2:4215:A:H2'	44:2:4216:A:H5'	1.92	0.50
44:2:4455:G:H5''	44:2:4455:G:C8	2.46	0.50
44:2:4456:A:C3'	44:2:4457:U:H5'	2.40	0.50
44:2:4490:U:H2'	44:2:4491:U:H6	1.76	0.50
44:2:4602:U:H2'	44:2:4603:G:H8	1.76	0.50
44:2:4819:U:C4	44:2:4820:C:N4	2.79	0.50
46:4:39:C:H6	46:4:39:C:OP1	1.93	0.50
3:C:252:TRP:CE3	3:C:260:LEU:HD11	2.47	0.50
5:E:232:ILE:HG22	5:E:233:PHE:N	2.26	0.50
7:G:162:ASP:O	7:G:164:ILE:N	2.44	0.50
15:P:25:HIS:ND1	44:2:2338:G:N7	2.60	0.50
15:P:95:LEU:HG	15:P:148:MET:CE	2.34	0.50
19:T:45:MET:HG3	19:T:94:GLU:HB3	1.93	0.50
21:V:24:ALA:HA	44:2:2825:G:H5'	1.93	0.50
27:b:24:PRO:O	27:b:25:ARG:HB3	2.11	0.50
30:e:105:SER:HA	30:e:108:ARG:HH11	1.75	0.50
40:o:8:ARG:NH2	44:2:4192:U:H3	2.09	0.50
43:u:198:VAL:CG1	43:u:210:VAL:HG22	2.42	0.50
44:2:104:G:C2'	44:2:105:A:H5'	2.41	0.50
44:2:105:A:H2'	44:2:106:A:C8	2.46	0.50
44:2:172:C:H2'	44:2:173:G:H8	1.76	0.50
44:2:263:U:H2'	44:2:264:U:C6	2.46	0.50
44:2:422:G:H21	44:2:3857:G:H3'	1.76	0.50
44:2:1567:U:H2'	44:2:1568:C:H6	1.69	0.50
44:2:2051:C:C6	44:2:2051:C:O5'	2.64	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2284:A:H1'	45:3:19:C:HO2'	1.73	0.50
44:2:2347:A:H1'	44:2:2348:U:P	2.51	0.50
44:2:2478:C:O5'	44:2:2478:C:H6	1.94	0.50
44:2:2503:C:O5'	44:2:2503:C:H6	1.94	0.50
44:2:2650:G:C4'	44:2:2651:A:OP2	2.57	0.50
44:2:2839:G:C2	44:2:3593:A:C8	2.99	0.50
44:2:4289:G:H3'	44:2:4289:G:N3	2.26	0.50
44:2:4374:A:C8	44:2:4382:A:N1	2.79	0.50
44:2:4473:A:H2'	44:2:4474:G:O4'	2.12	0.50
44:2:4803:C:H3'	44:2:4804:G:H4'	1.92	0.50
1:A:69:PHE:CE1	44:2:4092:C:H1'	2.45	0.50
3:C:311:ARG:CZ	44:2:944:A:N6	2.74	0.50
3:C:337:ARG:HH21	44:2:1213:G:H4'	1.77	0.50
4:D:156:GLY:HA3	46:4:35:U:H1'	1.92	0.50
5:E:172:LEU:HD13	5:E:188:ARG:HG2	1.94	0.50
5:E:278:THR:H	5:E:281:ILE:HG13	1.77	0.50
6:F:63:GLN:CD	44:2:1191:G:H4'	2.36	0.50
7:G:66:GLN:CB	13:N:28:TRP:HH2	2.24	0.50
11:L:71:ARG:NH2	44:2:102:G:P	2.85	0.50
12:M:49:ALA:HB2	18:S:100:LEU:CD2	2.41	0.50
15:P:64:ASN:HD22	15:P:64:ASN:H	1.59	0.50
16:Q:64:SER:CB	44:2:1481:G:N2	2.74	0.50
16:Q:155:ALA:HB1	16:Q:156:PRO:CD	2.31	0.50
22:W:33:ASN:HD22	22:W:33:ASN:N	2.09	0.50
26:a:40:HIS:HB2	44:2:1660:G:H21	1.76	0.50
28:c:28:VAL:HG21	28:c:37:MET:HG3	1.93	0.50
31:f:59:THR:N	44:2:1279:G:OP1	2.44	0.50
31:f:71:TRP:HE1	44:2:4901:U:H4'	1.76	0.50
32:g:43:LYS:HB3	32:g:52:ARG:HA	1.92	0.50
33:h:118:LYS:HD3	33:h:118:LYS:N	2.27	0.50
40:o:48:TYR:CG	40:o:49:GLY:N	2.79	0.50
44:2:70:A:H5'	44:2:72:C:N4	2.25	0.50
44:2:192:C:O5'	44:2:192:C:C6	2.63	0.50
44:2:444:G:C4'	44:2:445:U:OP2	2.60	0.50
44:2:457:A:C5	44:2:676:G:C8	2.99	0.50
44:2:1217:C:O2	44:2:1217:C:H2'	2.10	0.50
44:2:1466:G:C2'	44:2:1467:G:H5''	2.29	0.50
44:2:1542:A:P	44:2:1542:A:C8	3.04	0.50
44:2:2033:G:OP1	44:2:2033:G:C8	2.65	0.50
44:2:2052:C:H6	44:2:2052:C:O5'	1.94	0.50
44:2:2348:U:C6	44:2:2348:U:C5'	2.84	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:3920:G:N1	44:2:4029:G:N1	2.49	0.50
44:2:4413:C:H2'	44:2:4414:G:H5'	1.93	0.50
44:2:4417:U:O5'	44:2:4417:U:H6	1.95	0.50
44:2:4449:G:N3	44:2:4668:A:H2'	2.27	0.50
44:2:4607:G:P	44:2:4607:G:C8	3.05	0.50
44:2:4932:A:H2'	44:2:4933:G:O4'	2.12	0.50
44:2:4989:A:H2'	44:2:4990:U:O4'	2.12	0.50
46:4:67:C:C6	46:4:67:C:OP2	2.65	0.50
46:4:97:G:H5'	46:4:97:G:H8	1.76	0.50
2:B:257:TRP:CD1	44:2:4478:A:C8	2.99	0.50
6:F:88:LYS:NZ	19:T:135:PRO:HG2	2.26	0.50
7:G:31:LEU:HD22	25:Z:122:TYR:CZ	2.47	0.50
9:I:72:ALA:HB2	9:I:155:ALA:HB2	1.94	0.50
11:L:56:ARG:HB3	11:L:57:PRO:HD2	1.94	0.50
13:N:151:ILE:HG13	13:N:159:ARG:NH2	2.27	0.50
13:N:187:SER:HB2	44:2:29:G:OP1	2.11	0.50
15:P:22:LEU:HD13	15:P:90:PHE:HZ	1.73	0.50
17:R:104:ARG:HH21	44:2:2875:G:H5''	1.75	0.50
31:f:4:ARG:NH1	44:2:4904:G:H1	2.10	0.50
34:i:33:LEU:HD23	34:i:34:THR:H	1.76	0.50
44:2:2:G:N2	45:3:156:U:H3	2.09	0.50
44:2:239:U:O5'	44:2:239:U:C6	2.64	0.50
44:2:308:A:C2'	44:2:309:A:H5'	2.42	0.50
44:2:738:U:O5'	44:2:738:U:H6	1.95	0.50
44:2:1387:C:H6	44:2:1387:C:H5''	1.76	0.50
44:2:1389:C:O2	44:2:1389:C:C3'	2.60	0.50
44:2:1797:G:H21	44:2:1801:U:C5'	2.24	0.50
44:2:1846:A:H2'	44:2:1848:C:H6	1.76	0.50
44:2:2064:G:C8	44:2:2064:G:OP2	2.65	0.50
44:2:2266:C:H6	44:2:2266:C:C5'	2.24	0.50
44:2:2277:G:O5'	44:2:2277:G:C8	2.64	0.50
44:2:2479:G:H8	44:2:2479:G:H3'	1.76	0.50
44:2:2533:G:N2	44:2:2737:G:O6	2.45	0.50
44:2:2549:C:O3'	44:2:2736:G:H8	1.93	0.50
44:2:2795:C:O5'	44:2:2795:C:H6	1.95	0.50
44:2:3865:C:H2'	44:2:3866:G:C5	2.47	0.50
44:2:4043:U:H1'	44:2:4044:G:P	2.52	0.50
44:2:4397:U:H2'	44:2:4398:U:H5'	1.93	0.50
44:2:4649:U:C2'	44:2:4650:G:H5'	2.41	0.50
46:4:24:C:H2'	46:4:25:G:C8	2.46	0.50
1:A:236:GLY:HA2	44:2:3657:U:H1'	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:156:TYR:O	2:B:157:CYS:CB	2.57	0.50
3:C:53:ALA:O	3:C:54:VAL:HB	2.12	0.50
5:E:178:PRO:HB2	5:E:181:LEU:HB2	1.94	0.50
12:M:20:HIS:CE1	12:M:45:VAL:HG23	2.47	0.50
12:M:47:ARG:HH11	18:S:73:LEU:HB2	1.76	0.50
19:T:6:GLY:H	19:T:9:ARG:HB2	1.77	0.50
21:V:86:LYS:HD3	44:2:2823:G:H1'	1.93	0.50
23:X:66:PRO:CB	45:3:134:G:H5'	2.24	0.50
25:Z:62:ILE:HG13	25:Z:63:ALA:N	2.27	0.50
25:Z:108:ARG:NE	44:2:2551:G:O6	2.44	0.50
27:b:3:LYS:NZ	44:2:4155:G:C4	2.80	0.50
30:e:84:GLU:HG2	42:t:20:ARG:CZ	2.41	0.50
32:g:92:LYS:O	32:g:96:LEU:HG	2.11	0.50
35:j:3:LYS:CG	44:2:3612:A:N7	2.73	0.50
40:o:12:CYS:O	40:o:15:CYS:SG	2.70	0.50
42:t:18:ILE:HD13	42:t:18:ILE:N	2.27	0.50
44:2:19:G:N2	44:2:20:U:C5	2.80	0.50
44:2:694:C:O5'	44:2:694:C:H6	1.95	0.50
44:2:1080:U:H3'	44:2:1081:C:C5'	2.40	0.50
44:2:1282:U:O2'	44:2:1283:A:H5'	2.11	0.50
44:2:1315:G:H8	44:2:1315:G:O5'	1.94	0.50
44:2:1450:U:H2'	44:2:1451:C:H6	1.76	0.50
44:2:1491:G:H4'	44:2:1827:U:O3'	2.12	0.50
44:2:1590:C:H1'	44:2:1591:G:C8	2.47	0.50
44:2:1777:G:H4'	44:2:4175:C:C4	2.47	0.50
44:2:2332:G:C2'	44:2:2333:U:H5''	2.39	0.50
44:2:2431:U:O2	44:2:2431:U:C2'	2.58	0.50
44:2:2650:G:N2	44:2:2652:G:N2	2.58	0.50
44:2:3609:U:H5'	44:2:3610:U:OP2	2.12	0.50
44:2:3732:A:H3'	44:2:3733:U:C6	2.47	0.50
44:2:3856:C:H3'	44:2:3857:G:C8	2.47	0.50
44:2:3873:G:H1'	44:2:3874:A:O5'	2.12	0.50
44:2:3873:G:H1'	44:2:3874:A:P	2.52	0.50
44:2:4119:C:H5'	44:2:4120:C:OP2	2.11	0.50
44:2:4137:C:H2'	44:2:4138:A:H5'	1.94	0.50
44:2:4418:C:H2'	44:2:4419:U:C6	2.47	0.50
45:3:58:G:OP1	45:3:97:A:N1	2.44	0.50
46:4:25:G:H3'	46:4:26:C:H5	1.75	0.50
3:C:25:PRO:HB3	3:C:261:ASP:HB2	1.92	0.50
3:C:263:LEU:HD22	3:C:273:LEU:CD2	2.29	0.50
11:L:47:ALA:O	11:L:144:LEU:HD13	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:P:30:ARG:HD3	15:P:30:ARG:C	2.36	0.50
19:T:105:PHE:O	19:T:108:ARG:HB3	2.11	0.50
26:a:71:PRO:HG2	26:a:107:GLY:O	2.12	0.50
31:f:19:ARG:O	44:2:1291:G:H5'	2.12	0.50
40:o:1:MET:O	44:2:4191:C:P	2.70	0.50
44:2:326:A:C2'	44:2:327:A:C8	2.95	0.50
44:2:488:G:N1	44:2:658:G:H1'	2.27	0.50
44:2:738:U:H2'	44:2:739:G:H8	1.76	0.50
44:2:962:G:C8	44:2:962:G:P	3.05	0.50
44:2:1058:A:O2'	44:2:1059:C:H5''	2.12	0.50
44:2:1869:A:N7	44:2:1870:A:C5	2.80	0.50
44:2:2325:G:H5'	44:2:2328:C:N4	2.27	0.50
44:2:2495:G:H1'	44:2:2516:C:H1'	1.94	0.50
44:2:2519:G:C6	44:2:2520:A:C6	3.00	0.50
44:2:2580:C:O5'	44:2:2580:C:H6	1.94	0.50
44:2:2599:G:H2'	44:2:2600:A:H8	1.73	0.50
44:2:2763:C:H5''	44:2:2764:A:O4'	2.10	0.50
44:2:2782:C:H2'	44:2:2783:A:C8	2.47	0.50
44:2:3570:C:O2'	44:2:3571:C:H5'	2.12	0.50
44:2:3744:A:H3'	44:2:3745:G:H5''	1.94	0.50
44:2:3810:C:O2'	44:2:3811:C:H5'	2.11	0.50
44:2:3858:G:C3'	44:2:4679:G:N2	2.71	0.50
44:2:4269:G:H2'	44:2:4270:A:O4'	2.12	0.50
44:2:4386:C:O2	44:2:4386:C:H2'	2.12	0.50
44:2:4467:A:H5''	44:2:4467:A:C8	2.46	0.50
44:2:4536:U:H2'	44:2:4537:U:H6	1.73	0.50
44:2:4607:G:P	44:2:4607:G:H8	2.35	0.50
44:2:4640:G:H2'	44:2:4641:A:O5'	2.11	0.50
44:2:4643:U:H6	44:2:4643:U:H5'	1.77	0.50
44:2:4714:G:H8	44:2:4714:G:O5'	1.95	0.50
46:4:12:U:H5'	46:4:67:C:O2	2.10	0.50
46:4:25:G:H2'	46:4:26:C:C5	2.46	0.50
3:C:162:LYS:H	3:C:162:LYS:HD3	1.77	0.50
3:C:196:MET:HG2	44:2:343:G:C6	2.47	0.50
7:G:76:VAL:CG2	7:G:81:ASN:HB2	2.41	0.50
8:H:22:GLY:HA2	44:2:4725:C:OP1	2.11	0.50
8:H:71:ARG:HD2	44:2:4651:A:H4'	1.94	0.50
11:L:120:TYR:O	11:L:124:LEU:HD13	2.11	0.50
13:N:97:SER:HB3	44:2:291:A:H5''	1.94	0.50
16:Q:65:ARG:HH21	44:2:1481:G:H2'	1.76	0.50
25:Z:136:PHE:CB	44:2:4089:G:H21	2.24	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:a:39:HIS:HB3	44:2:1654:C:O2'	2.12	0.50
28:c:82:GLY:HA2	28:c:91:VAL:HG12	1.94	0.50
33:h:69:LEU:O	33:h:73:TYR:HD1	1.95	0.50
36:k:38:CYS:HB2	36:k:41:TYR:O	2.11	0.50
42:t:2:SER:O	42:t:6:GLN:HG2	2.11	0.50
42:t:46:ARG:HH22	42:t:106:LEU:HD11	1.76	0.50
44:2:3:C:H42	45:3:154:G:H1	1.59	0.50
44:2:384:U:OP2	44:2:384:U:H6	1.95	0.50
44:2:434:G:H1	44:2:1284:C:N4	2.09	0.50
44:2:480:C:O5'	44:2:480:C:H6	1.95	0.50
44:2:635:G:C2'	44:2:636:G:H5'	2.41	0.50
44:2:1249:G:H3'	44:2:1250:A:H8	1.76	0.50
44:2:1368:A:C5	44:2:1376:G:N2	2.80	0.50
44:2:1465:C:O5'	44:2:1465:C:H6	1.95	0.50
44:2:2020:A:H2	44:2:4424:A:N6	2.08	0.50
44:2:2312:C:H2'	44:2:2313:G:H8	1.76	0.50
44:2:2523:G:C2'	44:2:2524:G:H8	2.22	0.50
44:2:2650:G:H2'	44:2:2650:G:P	2.52	0.50
3:C:256:ALA:O	3:C:260:LEU:HG	2.12	0.50
5:E:262:LYS:HG3	44:2:4887:U:H5''	1.93	0.50
11:L:166:ALA:HB1	26:a:97:ALA:HB1	1.94	0.50
13:N:94:PHE:CE2	13:N:96:ARG:HB2	2.47	0.50
22:W:13:ILE:HG12	22:W:32:LEU:HB3	1.93	0.50
28:c:30:GLY:O	28:c:34:THR:HG23	2.12	0.50
34:i:34:THR:HG21	44:2:267:C:H3'	1.94	0.50
36:k:70:LYS:HA	44:2:2673:A:H2'	1.94	0.50
43:u:59:ILE:HD11	43:u:146:LYS:CA	2.42	0.50
43:u:155:GLU:CD	44:2:3936:G:H4'	2.35	0.50
44:2:14:C:O4'	44:2:15:A:C5'	2.48	0.50
44:2:174:G:H2'	44:2:175:C:C6	2.46	0.50
44:2:176:G:H2'	44:2:177:C:C6	2.46	0.50
44:2:178:C:N4	44:2:250:G:H21	2.10	0.50
44:2:298:A:C8	44:2:298:A:H3'	2.46	0.50
44:2:314:C:H1'	44:2:4315:G:N2	2.27	0.50
44:2:409:A:N1	45:3:17:A:H1'	2.27	0.50
44:2:445:U:C3'	44:2:446:C:H6	2.23	0.50
44:2:646:C:H2'	44:2:647:C:C6	2.47	0.50
44:2:726:C:H2'	44:2:727:G:C5'	2.37	0.50
44:2:915:C:H6	44:2:915:C:H5'	1.76	0.50
44:2:1149:G:H2'	44:2:1150:G:C8	2.47	0.50
44:2:1217:C:C5	44:2:1258:C:C2	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1316:G:H8	44:2:1316:G:O5'	1.95	0.50
44:2:1374:G:N2	44:2:1449:G:H5''	2.26	0.50
44:2:1475:G:C4'	44:2:1476:A:OP1	2.60	0.50
44:2:1515:U:C4'	44:2:3611:A:N1	2.75	0.50
44:2:1652:U:H2'	44:2:1653:C:C6	2.47	0.50
44:2:1653:C:H4'	44:2:4336:A:C5	2.47	0.50
44:2:2061:C:H5	44:2:2249:G:H22	1.56	0.50
44:2:3834:A:H2'	44:2:3835:C:H6	1.66	0.50
44:2:4021:A:H3'	44:2:4022:C:C6	2.47	0.50
44:2:4851:G:C2	44:2:4882:G:H8	2.30	0.50
2:B:3:HIS:O	2:B:4:ARG:C	2.55	0.49
3:C:67:TRP:HE1	3:C:80:ARG:HG2	1.76	0.49
3:C:236:ASN:ND2	44:2:1353:A:H4'	2.27	0.49
13:N:96:ARG:NH2	13:N:100:SER:HB3	2.26	0.49
14:O:46:ASN:HB2	14:O:134:LYS:HD2	1.93	0.49
15:P:4:TYR:N	15:P:4:TYR:HD1	2.10	0.49
19:T:2:THR:OG1	44:2:4163:A:H4'	2.12	0.49
25:Z:14:LEU:HD11	32:g:88:ARG:CG	2.40	0.49
30:e:5:ARG:N	30:e:6:PRO:HD3	2.27	0.49
34:i:58:MET:HE1	34:i:98:ARG:HH22	1.77	0.49
41:p:18:TYR:H	44:2:3604:A:H61	1.60	0.49
43:u:156:ARG:H	44:2:3936:G:C1'	2.23	0.49
44:2:30:C:O2	44:2:2437:A:H2	1.95	0.49
44:2:425:A:C2'	44:2:426:A:O5'	2.59	0.49
44:2:465:C:H2'	44:2:466:G:H8	1.76	0.49
44:2:696:G:H1'	44:2:4900:G:HO2'	1.73	0.49
44:2:921:U:H2'	44:2:922:C:H6	1.76	0.49
44:2:1282:U:C3'	44:2:1284:C:H6	2.25	0.49
44:2:1401:G:H2'	44:2:1402:G:C5'	2.38	0.49
44:2:1529:G:H1	44:2:1557:U:H3	1.59	0.49
44:2:1911:G:H8	44:2:1911:G:O5'	1.94	0.49
44:2:2294:G:C8	44:2:2294:G:C5'	2.95	0.49
44:2:2518:G:H2'	44:2:2519:G:H5''	1.94	0.49
44:2:2533:G:C8	44:2:2533:G:O5'	2.64	0.49
44:2:2693:C:H2'	44:2:2694:G:C8	2.44	0.49
44:2:3801:U:H2'	44:2:3802:C:O4'	2.12	0.49
44:2:4325:C:H2'	44:2:4326:A:H8	1.75	0.49
44:2:4874:G:H2'	44:2:4875:C:C6	2.46	0.49
46:4:89:G:C4	46:4:90:A:C8	3.00	0.49
6:F:104:LYS:HG3	6:F:135:ILE:HG21	1.93	0.49
7:G:80:ILE:C	7:G:82:GLN:H	2.19	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:L:115:GLN:OE1	44:2:509:G:H4'	2.12	0.49
12:M:114:LYS:CE	44:2:4885:C:H5''	2.42	0.49
14:O:94:ARG:NE	31:f:97:ILE:HD12	2.27	0.49
14:O:163:LYS:HG2	44:2:4718:C:O4'	2.12	0.49
18:S:164:LYS:HB3	18:S:165:PRO:HD3	1.91	0.49
24:Y:3:PHE:O	44:2:1348:A:OP2	2.30	0.49
24:Y:59:ARG:HB2	24:Y:103:LYS:HD2	1.93	0.49
24:Y:118:ILE:HD13	45:3:70:G:OP1	2.11	0.49
26:a:32:ARG:NH1	44:2:37:U:H5''	2.27	0.49
28:c:54:ALA:HB1	44:2:4087:U:OP1	2.11	0.49
35:j:21:ARG:HB2	35:j:39:TYR:CD1	2.47	0.49
36:k:25:ILE:HG21	36:k:57:LYS:HZ1	1.76	0.49
40:o:10:THR:HA	40:o:18:HIS:CD2	2.47	0.49
40:o:48:TYR:OH	44:2:3895:C:C1'	2.60	0.49
44:2:103:G:O3'	44:2:1360:G:N2	2.45	0.49
44:2:218:C:O2	44:2:219:C:C5	2.65	0.49
44:2:903:C:O5'	44:2:903:C:H6	1.95	0.49
44:2:1224:G:C3'	44:2:1225:C:C5'	2.87	0.49
44:2:1580:A:N7	44:2:3612:A:C4	2.80	0.49
44:2:1603:G:OP1	44:2:1605:G:H1'	2.12	0.49
44:2:1792:U:O2	44:2:1792:U:H2'	2.12	0.49
44:2:1795:C:O2	44:2:1795:C:H2'	2.12	0.49
44:2:1805:G:H5'	44:2:1806:C:OP2	2.12	0.49
44:2:1836:A:H5'	44:2:1837:C:OP2	2.11	0.49
44:2:1890:G:H2'	44:2:1891:C:H5'	1.93	0.49
44:2:2266:C:H2'	44:2:2267:G:C8	2.47	0.49
44:2:2482:C:C2'	44:2:2483:G:H5'	2.41	0.49
44:2:2525:C:C3'	44:2:2526:G:H4'	2.41	0.49
44:2:3682:U:H3'	44:2:3682:U:C6	2.46	0.49
44:2:3759:U:H4'	44:2:3760:C:OP1	2.12	0.49
44:2:3796:G:H4'	44:2:3797:A:OP2	2.12	0.49
44:2:4508:A:H4'	44:2:4509:G:O5'	2.13	0.49
44:2:4831:U:O2'	44:2:4832:G:C8	2.61	0.49
44:2:4863:G:H3'	44:2:4863:G:C8	2.47	0.49
46:4:107:G:O5'	46:4:107:G:H8	1.95	0.49
1:A:226:ARG:HG2	44:2:3676:U:OP2	2.12	0.49
2:B:254:ILE:HD13	44:2:3866:G:H5'	1.94	0.49
2:B:259:PRO:O	2:B:261:ARG:N	2.44	0.49
4:D:272:SER:CB	44:2:1167:G:H4'	2.42	0.49
5:E:165:LEU:HD23	5:E:203:ILE:HD13	1.93	0.49
5:E:178:PRO:HD2	5:E:182:ASN:OD1	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:183:ARG:CA	44:2:4892:C:H42	2.21	0.49
7:G:152:ALA:CA	7:G:205:THR:HG22	2.40	0.49
10:J:56:THR:HG23	10:J:62:ILE:O	2.12	0.49
13:N:84:PRO:O	40:o:48:TYR:CE2	2.66	0.49
15:P:25:HIS:CG	44:2:2338:G:C6	3.01	0.49
15:P:130:TYR:CD1	44:2:2772:A:N7	2.79	0.49
27:b:39:PHE:HA	27:b:42:ASN:ND2	2.28	0.49
28:c:56:ARG:NH1	44:2:2651:A:N3	2.59	0.49
35:j:29:LEU:H	35:j:29:LEU:HD12	1.78	0.49
44:2:19:G:C4'	44:2:20:U:OP1	2.60	0.49
44:2:160:A:H2'	44:2:161:G:H8	1.77	0.49
44:2:286:A:N1	44:2:308:A:C8	2.79	0.49
44:2:407:U:C3'	44:2:408:G:H5'	2.42	0.49
44:2:510:C:C6	44:2:510:C:C5'	2.81	0.49
44:2:690:U:C3'	44:2:691:G:H5''	2.42	0.49
44:2:1086:A:P	46:4:107:G:H4'	2.52	0.49
44:2:1193:G:O4'	44:2:1195:C:C4	2.66	0.49
44:2:1217:C:O2	44:2:1217:C:H3'	2.13	0.49
44:2:1367:A:O4'	44:2:1368:A:H5'	2.11	0.49
44:2:1406:G:N2	44:2:1438:A:C2	2.80	0.49
44:2:1499:C:C2'	44:2:1500:C:H5'	2.41	0.49
44:2:1570:U:H3'	44:2:1570:U:C6	2.47	0.49
44:2:1611:A:C8	44:2:1611:A:H3'	2.47	0.49
44:2:1716:A:O2'	46:4:77:A:H1'	2.12	0.49
44:2:1890:G:C2'	44:2:1891:C:H5'	2.42	0.49
44:2:1933:G:C6	44:2:2007:A:C6	2.99	0.49
44:2:2469:C:H4'	45:3:126:C:N3	2.27	0.49
44:2:2564:A:C8	44:2:2564:A:C5'	2.96	0.49
44:2:3935:A:H8	44:2:3935:A:O5'	1.95	0.49
44:2:4747:C:H2'	44:2:4748:G:H8	1.77	0.49
44:2:4889:A:H2'	44:2:4890:C:C6	2.47	0.49
45:3:57:C:O2'	45:3:58:G:H5'	2.13	0.49
45:3:90:C:H2'	45:3:91:A:C8	2.47	0.49
2:B:13:SER:HG	44:2:4549:A:H2	1.59	0.49
3:C:180:ILE:HD11	3:C:207:PRO:HG2	1.93	0.49
5:E:190:HIS:CA	44:2:4897:C:C2'	2.88	0.49
5:E:223:ARG:HD2	5:E:229:GLU:OE2	2.13	0.49
10:J:109:ILE:HD13	10:J:109:ILE:N	2.28	0.49
11:L:124:LEU:HA	33:h:120:ALA:O	2.13	0.49
15:P:15:CYS:SG	15:P:150:LEU:HB2	2.53	0.49
16:Q:68:ARG:CZ	44:2:1400:A:OP1	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Y:120:GLU:O	24:Y:125:SER:HB3	2.12	0.49
25:Z:36:ARG:HH12	25:Z:98:LYS:HD3	1.77	0.49
30:e:62:SER:C	44:2:2056:C:H5''	2.37	0.49
31:f:4:ARG:C	44:2:4711:U:O2'	2.55	0.49
31:f:54:LYS:HB2	44:2:4706:C:P	2.53	0.49
35:j:14:LYS:HB2	35:j:14:LYS:NZ	2.28	0.49
42:t:88:ALA:HB3	44:2:669:G:OP1	2.12	0.49
44:2:26:C:H4'	44:2:331:C:O2	2.11	0.49
44:2:33:A:H3'	44:2:34:A:C8	2.47	0.49
44:2:93:G:C6	44:2:94:A:C6	3.01	0.49
44:2:104:G:C1'	44:2:1340:G:N2	2.57	0.49
44:2:212:C:O2	44:2:217:C:C6	2.66	0.49
44:2:224:A:H2'	44:2:225:C:O4'	2.12	0.49
44:2:251:C:H6	44:2:251:C:O5'	1.95	0.49
44:2:366:G:H5''	44:2:366:G:H8	1.77	0.49
44:2:376:A:O2'	44:2:378:G:H5''	2.12	0.49
44:2:477:C:C5'	44:2:479:G:OP1	2.55	0.49
44:2:700:C:H3'	44:2:701:C:C5'	2.30	0.49
44:2:736:G:H22	44:2:902:G:H22	1.61	0.49
44:2:902:G:H2'	44:2:902:G:N3	2.27	0.49
44:2:903:C:H2'	44:2:904:C:C6	2.47	0.49
44:2:917:G:H1'	44:2:918:C:C4	2.48	0.49
44:2:1204:G:OP1	44:2:1211:C:H5	1.95	0.49
44:2:1367:A:H2	44:2:1376:G:N3	2.09	0.49
44:2:1498:C:H2'	44:2:1499:C:C6	2.47	0.49
44:2:1610:A:O5'	44:2:1610:A:C8	2.65	0.49
44:2:2000:C:C3'	44:2:2001:C:C6	2.95	0.49
44:2:2301:C:O2'	44:2:2302:G:H5'	2.12	0.49
44:2:2352:A:C3'	44:2:2353:A:H8	2.24	0.49
44:2:2401:G:C8	44:2:2401:G:C3'	2.94	0.49
44:2:2549:C:N1	44:2:2550:A:C8	2.81	0.49
44:2:2572:C:H2'	44:2:2573:G:H8	1.70	0.49
44:2:2587:G:O5'	44:2:2587:G:C8	2.65	0.49
44:2:2605:U:C6	44:2:2605:U:C3'	2.95	0.49
44:2:2605:U:H2'	44:2:2606:C:O2	2.13	0.49
44:2:2663:G:C5	44:2:2664:U:O2	2.66	0.49
44:2:3739:U:H2'	44:2:3740:C:C6	2.47	0.49
44:2:4195:G:O2'	44:2:4196:G:H5'	2.13	0.49
44:2:4296:A:H8	44:2:4296:A:H3'	1.77	0.49
44:2:4529:U:H2'	44:2:4530:G:H5'	1.94	0.49
44:2:4582:A:H2'	44:2:4583:G:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4630:C:O3'	44:2:4631:C:H3'	2.11	0.49
44:2:4673:G:C8	44:2:4674:C:C5	3.00	0.49
44:2:4704:G:H8	44:2:4704:G:O5'	1.95	0.49
44:2:4889:A:H2'	44:2:4890:C:H6	1.76	0.49
45:3:44:A:H2'	45:3:45:C:C6	2.47	0.49
1:A:200:ARG:O	1:A:204:MET:HG2	2.12	0.49
2:B:43:LEU:HD11	2:B:196:TRP:HH2	1.78	0.49
2:B:293:ILE:HG12	2:B:295:ASP:H	1.77	0.49
3:C:149:GLU:HG3	42:t:74:ALA:C	2.38	0.49
4:D:123:VAL:HG12	4:D:248:ARG:NH2	2.27	0.49
5:E:161:ARG:HD3	5:E:270:TYR:CZ	2.48	0.49
8:H:23:ARG:HE	8:H:39:ASN:HA	1.76	0.49
9:I:193:ASP:O	9:I:194:GLY:C	2.55	0.49
14:O:7:LEU:O	14:O:33:VAL:HA	2.12	0.49
14:O:147:TRP:NE1	14:O:149:TYR:HB2	2.27	0.49
22:W:49:ILE:CA	44:2:3584:G:H21	2.21	0.49
24:Y:74:TYR:HB3	24:Y:77:LYS:HB2	1.93	0.49
26:a:125:LYS:HG2	26:a:145:VAL:HB	1.94	0.49
29:d:39:LYS:NZ	44:2:3818:A:H4'	2.27	0.49
29:d:85:ARG:NH2	29:d:120:VAL:HG22	2.27	0.49
34:i:31:GLY:O	44:2:300:C:OP2	2.30	0.49
34:i:51:ALA:O	34:i:54:GLU:HB2	2.13	0.49
44:2:2:G:H2'	44:2:3:C:O5'	2.12	0.49
44:2:103:G:N2	44:2:1340:G:C2	2.81	0.49
44:2:115:C:C5	44:2:153:G:N2	2.80	0.49
44:2:274:G:O6	44:2:296:A:H2	1.95	0.49
44:2:961:C:H1'	44:2:1254:A:N6	2.20	0.49
44:2:1058:A:N1	44:2:1206:U:H1'	2.28	0.49
44:2:1216:C:H1'	44:2:1217:C:P	2.53	0.49
44:2:1396:G:H2'	44:2:1397:C:H6	1.78	0.49
44:2:1529:G:H8	44:2:1529:G:O5'	1.95	0.49
44:2:2397:A:H3'	44:2:2398:G:C5'	2.42	0.49
44:2:2423:C:C2'	44:2:2424:U:C6	2.95	0.49
44:2:2445:U:C6	44:2:2445:U:C3'	2.95	0.49
44:2:2479:G:H5'	44:2:4052:G:N2	2.27	0.49
44:2:2503:C:C5	44:2:2504:A:C6	3.00	0.49
44:2:2662:C:O2'	44:2:2663:G:H5'	2.13	0.49
44:2:2796:U:O2'	44:2:4605:C:H4'	2.13	0.49
44:2:3912:A:H3'	44:2:3913:G:C8	2.48	0.49
44:2:4101:C:H2'	44:2:4101:C:O2	2.11	0.49
44:2:4358:C:C6	44:2:4358:C:O5'	2.66	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:173:LEU:HD11	2:B:342:LYS:CD	2.42	0.49
3:C:50:GLN:HB2	3:C:51:PRO:CD	2.43	0.49
5:E:190:HIS:CD2	44:2:4898:A:OP1	2.66	0.49
14:O:130:LYS:HG3	14:O:131:PRO:HD2	1.95	0.49
15:P:25:HIS:CD2	15:P:142:SER:HB2	2.47	0.49
17:R:131:VAL:O	17:R:131:VAL:HG12	2.11	0.49
23:X:63:LYS:HE3	45:3:135:C:OP1	2.12	0.49
26:a:63:LEU:HB3	44:2:87:A:H4'	1.95	0.49
33:h:21:LEU:C	33:h:21:LEU:HD13	2.38	0.49
42:t:18:ILE:HD12	42:t:27:THR:HG23	1.94	0.49
44:2:9:C:O2	44:2:9:C:C2'	2.50	0.49
44:2:83:C:C2'	44:2:100:C:H42	2.24	0.49
44:2:95:G:OP1	44:2:95:G:H4'	2.12	0.49
44:2:297:A:H8	44:2:297:A:H3'	1.78	0.49
44:2:399:A:C4'	44:2:400:G:H5'	2.40	0.49
44:2:702:G:H2'	44:2:703:G:H8	1.76	0.49
44:2:1465:C:C3'	44:2:1466:G:H5'	2.42	0.49
44:2:1822:G:C8	44:2:1822:G:H5''	2.47	0.49
44:2:2294:G:H8	44:2:2294:G:C5'	2.22	0.49
44:2:2296:G:C8	44:2:2296:G:OP2	2.66	0.49
44:2:2366:A:C2'	44:2:2367:G:H5'	2.42	0.49
44:2:2686:C:H3'	44:2:2687:C:C6	2.47	0.49
44:2:3587:C:H5''	44:2:3589:G:N7	2.27	0.49
44:2:3732:A:H3'	44:2:3733:U:H6	1.77	0.49
44:2:3761:G:H3'	44:2:3762:U:C5	2.47	0.49
44:2:4154:U:O2'	44:2:4155:G:H5'	2.12	0.49
44:2:4518:U:C2'	44:2:4519:A:H5'	2.42	0.49
44:2:4649:U:H2'	44:2:4650:G:H5'	1.93	0.49
44:2:4702:G:H2'	44:2:4703:A:H8	1.76	0.49
44:2:4736:C:H6	44:2:4736:C:H5'	1.77	0.49
44:2:4938:C:O2'	44:2:4939:C:H5'	2.13	0.49
46:4:102:U:C2'	46:4:103:A:H5'	2.42	0.49
2:B:262:VAL:HG21	2:B:268:ARG:HH12	1.77	0.49
5:E:172:LEU:CD2	44:2:4897:C:H5''	2.41	0.49
6:F:132:MET:HE2	44:2:1705:U:H1'	1.93	0.49
10:J:112:HIS:CD2	10:J:126:TYR:H	2.31	0.49
10:J:151:ILE:CD1	10:J:156:ARG:HA	2.43	0.49
11:L:35:ARG:HB2	44:2:328:U:OP1	2.13	0.49
14:O:17:GLY:HA3	44:2:2031:C:H5'	1.94	0.49
16:Q:61:LEU:HD23	16:Q:82:VAL:CG1	2.40	0.49
17:R:95:TRP:CD2	44:2:1551:U:H4'	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:S:170:LYS:O	18:S:171:ARG:HB2	2.13	0.49
25:Z:14:LEU:HD21	32:g:88:ARG:NE	2.27	0.49
41:p:20:ALA:HA	41:p:23:ARG:HE	1.77	0.49
42:t:103:ARG:HD3	42:t:106:LEU:HB2	1.94	0.49
44:2:115:C:H41	44:2:154:U:H1'	1.76	0.49
44:2:248:G:H2'	44:2:249:C:C6	2.48	0.49
44:2:284:G:O2'	44:2:288:U:H5'	2.13	0.49
44:2:481:C:H2'	44:2:482:G:O4'	2.13	0.49
44:2:636:G:C2'	44:2:637:G:H5'	2.43	0.49
44:2:722:G:H3'	44:2:723:G:H5''	1.92	0.49
44:2:738:U:H2'	44:2:739:G:C8	2.48	0.49
44:2:916:A:P	44:2:916:A:O4'	2.71	0.49
44:2:949:G:C8	44:2:949:G:OP2	2.65	0.49
44:2:1189:U:HO2'	44:2:1190:C:H6	1.57	0.49
44:2:1230:C:H2'	44:2:1231:C:C6	2.47	0.49
44:2:1390:U:C6	44:2:1390:U:OP2	2.66	0.49
44:2:1424:G:N2	44:2:1425:U:H1'	2.28	0.49
44:2:1792:U:C6	44:2:1792:U:OP2	2.66	0.49
44:2:1803:G:H3'	44:2:1804:A:H8	1.77	0.49
44:2:1867:U:H5''	44:2:1868:G:OP2	2.12	0.49
44:2:1900:G:H2'	44:2:1901:A:O4'	2.11	0.49
44:2:2393:G:H1	44:2:2397:A:N6	2.08	0.49
44:2:2536:G:H2'	44:2:2537:C:C5	2.47	0.49
44:2:2608:U:O2'	44:2:2609:U:H4'	2.11	0.49
44:2:2853:G:N3	44:2:2853:G:C3'	2.75	0.49
44:2:2859:A:C3'	44:2:2860:G:H5'	2.42	0.49
44:2:3842:G:H2'	44:2:3843:G:O4'	2.13	0.49
44:2:3896:U:H2'	44:2:3897:A:C8	2.47	0.49
44:2:4047:C:H2'	44:2:4047:C:O2	2.12	0.49
44:2:4200:G:H2'	44:2:4200:G:N3	2.28	0.49
44:2:4218:C:O5'	44:2:4218:C:C6	2.66	0.49
44:2:4277:A:H4'	44:2:4277:A:OP1	2.12	0.49
44:2:4456:A:H3'	44:2:4457:U:C5'	2.42	0.49
44:2:4580:U:H2'	44:2:4581:C:H5'	1.93	0.49
45:3:85:U:H6	45:3:85:U:H5''	1.78	0.49
1:A:90:CYS:HB3	1:A:101:VAL:CG1	2.42	0.49
3:C:179:ASP:O	3:C:182:LYS:HB3	2.12	0.49
5:E:226:ARG:HA	5:E:226:ARG:HE	1.78	0.49
7:G:106:THR:N	7:G:109:GLU:HB2	2.23	0.49
8:H:102:ASN:HB3	8:H:115:ARG:HB2	1.93	0.49
11:L:64:VAL:CG1	44:2:70:A:H62	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:M:44:GLN:HG2	12:M:44:GLN:O	2.12	0.49
19:T:2:THR:HG22	44:2:4166:C:N4	2.27	0.49
23:X:77:ILE:HG23	23:X:77:ILE:O	2.12	0.49
26:a:76:ASP:HB3	26:a:114:LYS:HG2	1.94	0.49
27:b:19:ASN:ND2	44:2:1665:C:OP1	2.46	0.49
29:d:124:GLU:O	29:d:125:ASN:HB2	2.12	0.49
43:u:50:PRO:HG3	43:u:179:VAL:HG21	1.93	0.49
43:u:60:VAL:HG22	43:u:101:THR:CB	2.41	0.49
43:u:155:GLU:CD	44:2:3936:G:P	2.96	0.49
44:2:8:U:C2'	44:2:9:C:H5'	2.38	0.49
44:2:62:A:C6	44:2:63:G:C6	3.00	0.49
44:2:100:C:H2'	44:2:101:A:OP1	2.13	0.49
44:2:299:G:H4'	44:2:301:G:C4'	2.43	0.49
44:2:337:G:C8	44:2:337:G:O5'	2.66	0.49
44:2:393:A:C8	44:2:393:A:C5'	2.91	0.49
44:2:739:G:H2'	44:2:740:G:C8	2.47	0.49
44:2:929:U:H6	44:2:929:U:P	2.36	0.49
44:2:929:U:OP1	44:2:930:C:H5	1.95	0.49
44:2:941:G:N3	44:2:941:G:C2'	2.76	0.49
44:2:975:C:H2'	44:2:976:C:O4'	2.12	0.49
44:2:1162:C:C2'	44:2:1163:C:C6	2.96	0.49
44:2:1379:G:H2'	44:2:1380:G:C8	2.38	0.49
44:2:1628:U:O5'	44:2:1628:U:H6	1.96	0.49
44:2:1648:A:H1'	44:2:1830:U:O2'	2.13	0.49
44:2:2061:C:H41	44:2:2249:G:N2	2.11	0.49
44:2:2281:U:H3'	44:2:2282:G:H5'	1.94	0.49
44:2:2336:U:H5''	44:2:2337:A:OP2	2.13	0.49
44:2:2491:G:N3	44:2:2491:G:H2'	2.28	0.49
44:2:2576:G:H5''	44:2:2577:A:H2'	1.94	0.49
44:2:2629:G:C4	44:2:2630:C:H1'	2.48	0.49
44:2:2877:U:H5''	44:2:2877:U:C6	2.48	0.49
44:2:3646:U:OP2	44:2:3647:G:H2'	2.13	0.49
44:2:3684:U:H6	44:2:3684:U:O5'	1.96	0.49
44:2:4028:U:C2'	44:2:4029:G:H5'	2.42	0.49
44:2:4156:G:H8	44:2:4156:G:O5'	1.96	0.49
44:2:4198:G:H2'	44:2:4199:A:O4'	2.12	0.49
44:2:4367:G:C4	44:2:4368:G:C8	3.01	0.49
44:2:4371:G:H2'	44:2:4372:C:C6	2.47	0.49
44:2:4378:G:H2'	44:2:4435:G:H22	1.78	0.49
44:2:4525:C:O2	44:2:4525:C:H2'	2.13	0.49
44:2:4595:A:C5'	44:2:4624:A:H61	2.08	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4840:U:O2'	44:2:4841:C:H5'	2.12	0.49
44:2:4988:G:H8	44:2:4988:G:O5'	1.96	0.49
46:4:54:A:H3'	46:4:54:A:P	2.53	0.49
46:4:66:G:H3'	46:4:67:C:C5	2.48	0.49
2:B:171:LEU:HD11	2:B:323:TYR:OH	2.12	0.49
3:C:45:ARG:NE	3:C:238:LEU:HD22	2.28	0.49
3:C:139:SER:O	42:t:14:SER:CA	2.53	0.49
4:D:64:ILE:HG21	4:D:109:LEU:CD2	2.43	0.49
5:E:132:PRO:HG3	44:2:1264:G:O2'	2.13	0.49
9:I:171:TRP:HB3	9:I:174:THR:HG22	1.94	0.49
16:Q:142:PRO:HG3	44:2:1482:A:P	2.52	0.49
17:R:15:LEU:O	17:R:16:ARG:HB2	2.12	0.49
17:R:123:LEU:O	17:R:127:VAL:HG23	2.13	0.49
18:S:24:THR:N	18:S:25:PRO:HD3	2.28	0.49
25:Z:3:LYS:HE2	25:Z:30:ASP:OD2	2.12	0.49
25:Z:89:ILE:CG1	25:Z:93:LYS:HE2	2.43	0.49
28:c:82:GLY:CA	28:c:91:VAL:HG12	2.42	0.49
36:k:3:ARG:O	36:k:43:TYR:HA	2.13	0.49
40:o:33:LEU:O	40:o:34:TYR:HB2	2.13	0.49
40:o:52:THR:HG22	44:2:43:U:H4'	1.95	0.49
43:u:105:ILE:HD11	43:u:145:MET:CG	2.43	0.49
44:2:189:G:C8	44:2:189:G:O5'	2.65	0.49
44:2:240:A:C8	44:2:240:A:OP2	2.66	0.49
44:2:403:G:H3'	44:2:404:G:C5'	2.43	0.49
44:2:434:G:C8	44:2:434:G:O5'	2.63	0.49
44:2:674:G:C5'	44:2:674:G:C8	2.95	0.49
44:2:930:C:H2'	44:2:931:C:C6	2.48	0.49
44:2:1075:A:H2'	44:2:1076:C:C6	2.47	0.49
44:2:1200:G:H2'	44:2:1201:G:C8	2.47	0.49
44:2:1361:U:P	44:2:1361:U:C6	3.06	0.49
44:2:1369:U:OP1	44:2:1476:A:H2'	2.13	0.49
44:2:1650:U:H6	44:2:1650:U:H5''	1.78	0.49
44:2:1907:A:H2'	44:2:1907:A:N3	2.27	0.49
44:2:2042:G:C6	44:2:2043:G:C6	3.01	0.49
44:2:2062:C:C5	44:2:2063:G:C8	3.01	0.49
44:2:2257:U:O2'	44:2:2258:A:H5'	2.13	0.49
44:2:2549:C:H5''	44:2:2736:G:O2'	2.12	0.49
44:2:2647:C:H2'	44:2:2648:C:C6	2.48	0.49
44:2:3623:G:O2'	44:2:3624:C:H5'	2.12	0.49
44:2:4432:G:C2	44:2:4433:A:N7	2.81	0.49
44:2:4609:G:C6	44:2:4610:G:N2	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4743:C:H3'	44:2:4743:C:H6	1.78	0.49
44:2:4747:C:H2'	44:2:4748:G:C8	2.48	0.49
2:B:257:TRP:NE1	44:2:4478:A:N7	2.59	0.49
3:C:263:LEU:O	3:C:271:ALA:HB1	2.13	0.49
4:D:95:TYR:HE1	4:D:156:GLY:O	1.96	0.49
4:D:108:ARG:HG3	4:D:251:PRO:O	2.13	0.49
4:D:155:THR:HG22	4:D:179:ARG:NH1	2.28	0.49
10:J:79:ALA:O	10:J:83:LEU:HB2	2.13	0.49
16:Q:64:SER:HB3	16:Q:92:VAL:HG21	1.93	0.49
16:Q:159:PRO:CG	44:2:4267:A:OP2	2.61	0.49
19:T:19:PHE:CD1	19:T:20:ARG:HG3	2.48	0.49
19:T:129:LYS:HA	44:2:1815:A:P	2.53	0.49
31:f:36:ARG:NH2	44:2:2044:C:H5'	2.28	0.49
31:f:43:LEU:HD22	31:f:76:ARG:CA	2.42	0.49
35:j:15:THR:O	35:j:28:HIS:HA	2.13	0.49
43:u:106:ALA:O	43:u:131:PRO:HA	2.12	0.49
44:2:411:A:OP2	44:2:411:A:C8	2.66	0.49
44:2:730:G:O5'	44:2:730:G:C8	2.65	0.49
44:2:1218:A:H4'	44:2:1219:C:OP2	2.10	0.49
44:2:1220:G:H1'	44:2:1221:C:C4	2.48	0.49
44:2:1639:U:O2	44:2:2322:G:H2'	2.13	0.49
44:2:1643:U:H2'	44:2:1644:C:C6	2.48	0.49
44:2:1742:C:H3'	44:2:1743:G:H4'	1.94	0.49
44:2:1801:U:H2'	44:2:1802:G:C1'	2.43	0.49
44:2:1877:G:N7	44:2:2254:G:C5	2.81	0.49
44:2:2309:G:C1'	44:2:2310:G:C8	2.89	0.49
44:2:2348:U:O4'	44:2:2348:U:OP2	2.31	0.49
44:2:2737:G:C2'	44:2:2738:U:H5''	2.39	0.49
44:2:2842:U:O2'	44:2:2843:C:H5'	2.13	0.49
44:2:3592:C:C5	44:2:3593:A:N1	2.80	0.49
44:2:3866:G:N1	44:2:4519:A:H2	2.09	0.49
44:2:3943:G:C8	44:2:3943:G:C5'	2.93	0.49
44:2:4121:G:O2'	44:2:4122:C:H4'	2.13	0.49
44:2:4130:A:H1'	44:2:4131:C:OP2	2.13	0.49
44:2:4200:G:H5'	44:2:4201:C:OP2	2.13	0.49
44:2:4399:U:O2'	44:2:4400:G:H5'	2.13	0.49
44:2:4695:C:C2'	44:2:4696:G:C8	2.77	0.49
44:2:4851:G:N2	44:2:4882:G:C8	2.81	0.49
44:2:4872:C:H2'	44:2:4873:C:H6	1.77	0.49
44:2:4957:U:H3	44:2:5000:G:H1	1.60	0.49
46:4:67:C:H2'	46:4:68:C:C4'	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:4:67:C:OP2	46:4:67:C:H6	1.95	0.49
3:C:55:SER:O	3:C:56:GLU:HB2	2.11	0.48
3:C:197:ARG:HH22	44:2:342:C:H5''	1.77	0.48
4:D:51:MET:HG3	4:D:64:ILE:HD13	1.94	0.48
5:E:134:SER:O	5:E:135:GLN:HB2	2.13	0.48
7:G:225:ASN:O	7:G:229:ARG:HD2	2.13	0.48
12:M:2:VAL:HG11	12:M:4:ARG:CZ	2.43	0.48
16:Q:162:HIS:CG	44:2:1475:G:OP1	2.66	0.48
19:T:81:LYS:CG	44:2:4264:A:H2	2.26	0.48
26:a:52:TYR:HD1	26:a:53:PHE:CD1	2.31	0.48
26:a:62:HIS:CD2	44:2:306:G:N7	2.81	0.48
28:c:32:LYS:HB2	44:2:2652:G:C6	2.48	0.48
31:f:27:LEU:CD2	31:f:85:ARG:HG2	2.43	0.48
31:f:54:LYS:CB	44:2:4706:C:P	3.00	0.48
36:k:60:LEU:HD22	36:k:61:PRO:HD2	1.95	0.48
42:t:16:PHE:O	42:t:26:SER:HA	2.13	0.48
43:u:62:PHE:CE1	43:u:81:GLU:HB3	2.48	0.48
43:u:151:LEU:HD12	43:u:159:PHE:CE1	2.48	0.48
44:2:15:A:OP2	44:2:15:A:C8	2.59	0.48
44:2:15:A:C2'	44:2:16:G:H5'	2.42	0.48
44:2:180:C:C4'	44:2:182:C:C6	2.88	0.48
44:2:270:A:OP1	44:2:270:A:H2'	2.13	0.48
44:2:312:U:H3	44:2:4316:G:H1	1.61	0.48
44:2:379:A:H2'	44:2:393:A:N6	2.19	0.48
44:2:379:A:P	44:2:379:A:C8	3.05	0.48
44:2:974:C:O2	44:2:974:C:C2'	2.61	0.48
44:2:1216:C:C1'	44:2:1217:C:P	3.01	0.48
44:2:1250:A:O5'	44:2:1250:A:H8	1.96	0.48
44:2:1374:G:N2	44:2:1449:G:H4'	2.27	0.48
44:2:1378:A:H8	44:2:1399:G:N1	2.11	0.48
44:2:1478:C:OP2	44:2:1478:C:C6	2.66	0.48
44:2:1483:G:H8	44:2:1483:G:OP2	1.96	0.48
44:2:1514:C:H2'	44:2:1515:U:O4'	2.13	0.48
44:2:1570:U:H5''	44:2:4487:G:OP1	2.13	0.48
44:2:1582:C:O2'	44:2:1583:G:H5'	2.13	0.48
44:2:1595:U:O2'	44:2:1596:G:H5'	2.13	0.48
44:2:1716:A:C5'	46:4:78:C:H4'	2.35	0.48
44:2:2457:G:H2'	44:2:2458:G:C8	2.48	0.48
44:2:2579:G:C6	44:2:2580:C:C4	3.01	0.48
44:2:2624:A:N1	44:2:2664:U:C2	2.81	0.48
44:2:2652:G:OP2	44:2:2652:G:C8	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2771:C:O2	44:2:2771:C:H2'	2.12	0.48
44:2:3705:A:H8	44:2:3705:A:O5'	1.95	0.48
44:2:3714:U:O5'	44:2:3714:U:H6	1.95	0.48
44:2:4067:G:C8	44:2:4067:G:O5'	2.66	0.48
44:2:4137:C:C2'	44:2:4138:A:H5'	2.43	0.48
44:2:4158:G:C6	44:2:4159:C:N4	2.81	0.48
44:2:4233:A:C8	44:2:4233:A:C3'	2.95	0.48
44:2:4417:U:H2'	44:2:4418:C:C5'	2.43	0.48
44:2:4469:U:H1'	44:2:4472:U:C4	2.47	0.48
44:2:4648:C:O2'	44:2:4649:U:H5'	2.13	0.48
44:2:4812:A:H2'	44:2:4813:C:N1	2.28	0.48
44:2:4880:U:C2'	44:2:4881:C:H4'	2.41	0.48
44:2:4977:U:C2'	44:2:4978:C:H3'	2.42	0.48
2:B:53:MET:HG2	2:B:77:THR:HG22	1.94	0.48
2:B:106:PHE:HD1	2:B:133:TYR:OH	1.96	0.48
3:C:189:MET:HB3	3:C:195:LYS:HE3	1.94	0.48
24:Y:47:MET:HE3	24:Y:109:LEU:HD22	1.95	0.48
44:2:432:G:C2'	44:2:433:G:H5'	2.43	0.48
44:2:978:G:C4	44:2:979:C:C5	3.01	0.48
44:2:1057:C:O5'	44:2:1057:C:C6	2.65	0.48
44:2:1093:C:H2'	44:2:1094:U:C6	2.48	0.48
44:2:1835:C:H1'	44:2:1870:A:N3	2.27	0.48
44:2:2246:G:P	44:2:2246:G:H8	2.37	0.48
44:2:2276:A:H3'	44:2:2277:G:C5'	2.42	0.48
44:2:2541:G:H2'	44:2:2542:A:C8	2.48	0.48
44:2:2682:G:N2	44:2:2688:G:N1	2.62	0.48
44:2:3945:C:C5	44:2:3945:C:OP2	2.66	0.48
44:2:4251:G:H4'	44:2:4252:A:C3'	2.41	0.48
44:2:4418:C:H2'	44:2:4419:U:H6	1.78	0.48
44:2:4595:A:O3'	44:2:4596:U:H4'	2.13	0.48
44:2:4640:G:N3	44:2:4641:A:H1'	2.29	0.48
44:2:4675:C:C6	44:2:4675:C:C5'	2.96	0.48
45:3:87:G:C6	45:3:88:A:C2	3.01	0.48
1:A:176:ASP:O	41:p:25:MET:HE2	2.12	0.48
2:B:73:VAL:HG22	21:V:93:GLY:HA3	1.95	0.48
2:B:173:LEU:HD11	2:B:342:LYS:HD3	1.96	0.48
2:B:303:ALA:O	2:B:368:ILE:HD12	2.14	0.48
3:C:42:THR:HG22	3:C:46:LYS:HE3	1.95	0.48
3:C:316:LYS:HB2	3:C:324:ILE:CD1	2.43	0.48
6:F:40:LYS:HB3	44:2:955:U:OP1	2.12	0.48
6:F:51:TYR:OH	44:2:1218:A:C3'	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:83:PHE:O	7:G:84:THR:HB	2.12	0.48
7:G:121:LYS:CB	7:G:129:PRO:HG2	2.43	0.48
7:G:130:THR:CB	44:2:120:A:H61	2.21	0.48
9:I:42:LYS:HB2	9:I:45:GLU:HB2	1.95	0.48
11:L:40:GLN:O	11:L:44:ARG:HD3	2.12	0.48
11:L:84:ALA:HB2	11:L:117:LEU:HD13	1.94	0.48
11:L:111:GLN:HB2	44:2:510:C:H4'	1.95	0.48
12:M:130:LEU:HD12	14:O:181:ALA:CB	2.43	0.48
16:Q:95:VAL:CG2	16:Q:96:PRO:HD2	2.43	0.48
16:Q:152:PHE:O	16:Q:154:LYS:HD2	2.13	0.48
17:R:99:MET:HE1	17:R:128:LYS:HA	1.94	0.48
25:Z:6:LYS:HB3	25:Z:7:PRO:CD	2.43	0.48
28:c:53:PRO:CD	44:2:2651:A:N1	2.75	0.48
29:d:18:ASN:O	29:d:19:GLU:HB2	2.13	0.48
32:g:59:VAL:HG21	32:g:64:LEU:CD2	2.39	0.48
34:i:33:LEU:CD1	44:2:300:C:OP1	2.61	0.48
42:t:75:THR:HB	44:2:474:G:C5	2.48	0.48
44:2:17:A:C2'	44:2:18:C:H5'	2.43	0.48
44:2:24:G:H2'	44:2:25:A:O4'	2.13	0.48
44:2:63:G:H1'	44:2:76:A:N3	2.29	0.48
44:2:116:G:H21	44:2:118:C:H2'	1.78	0.48
44:2:131:C:H5''	44:2:132:G:OP2	2.13	0.48
44:2:325:A:H3'	44:2:326:A:H8	1.78	0.48
44:2:372:U:C6	44:2:372:U:C3'	2.95	0.48
44:2:404:G:H4'	44:2:404:G:OP2	2.13	0.48
44:2:496:G:H8	44:2:496:G:O5'	1.96	0.48
44:2:1221:C:H2'	44:2:1222:G:O4'	2.13	0.48
44:2:1302:A:H4'	44:2:1303:A:OP1	2.13	0.48
44:2:1847:G:C4	44:2:3846:A:C2	3.01	0.48
44:2:2003:A:H4'	44:2:2004:A:OP2	2.13	0.48
44:2:2345:A:N6	44:2:2765:U:C2	2.81	0.48
44:2:2624:A:C2	44:2:2665:G:C5	3.01	0.48
44:2:2685:U:H3'	44:2:2685:U:C6	2.48	0.48
44:2:2688:G:H8	44:2:2688:G:O5'	1.96	0.48
44:2:3727:U:O2'	44:2:3728:A:H8	1.96	0.48
44:2:3927:G:H2'	44:2:3927:G:N3	2.28	0.48
46:4:9:C:O2	46:4:9:C:C3'	2.58	0.48
7:G:64:GLN:HE21	45:3:151:G:H5'	1.77	0.48
8:H:31:ARG:HH21	8:H:188:GLN:CB	2.25	0.48
9:I:75:TYR:O	9:I:78:LYS:HG2	2.14	0.48
15:P:31:GLU:HG3	15:P:60:PHE:CD2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:Q:137:VAL:HG13	44:2:1436:G:H1'	1.95	0.48
17:R:154:LEU:HA	17:R:157:ASP:HB2	1.95	0.48
25:Z:10:VAL:HG23	25:Z:86:SER:HA	1.96	0.48
30:e:58:ILE:HD11	44:2:2057:G:C4'	2.42	0.48
38:m:104:HIS:CG	38:m:105:PRO:HD2	2.48	0.48
42:t:58:LYS:HB3	44:2:670:C:OP1	2.13	0.48
42:t:103:ARG:HD3	42:t:106:LEU:HB3	1.95	0.48
44:2:76:A:C2	44:2:77:U:C1'	2.96	0.48
44:2:259:G:H2'	44:2:260:G:H8	1.79	0.48
44:2:277:U:O2'	44:2:278:U:H5'	2.13	0.48
44:2:316:U:H6	44:2:316:U:O5'	1.97	0.48
44:2:473:G:H2'	44:2:473:G:N3	2.29	0.48
44:2:1352:A:H2'	44:2:1353:A:C8	2.48	0.48
44:2:1422:C:O2	44:2:1422:C:C3'	2.61	0.48
44:2:1592:A:H62	44:2:3606:U:H3	1.61	0.48
44:2:2020:A:H4'	44:2:2020:A:OP1	2.14	0.48
44:2:2457:G:H2'	44:2:2458:G:H8	1.79	0.48
44:2:2749:C:O5'	44:2:2749:C:H6	1.96	0.48
44:2:3730:C:H5'	44:2:3730:C:O2	2.12	0.48
44:2:3821:A:H5''	44:2:3821:A:C8	2.48	0.48
44:2:3930:G:H8	44:2:3930:G:O5'	1.96	0.48
44:2:4018:A:H3'	44:2:4019:C:C6	2.48	0.48
44:2:4044:G:H21	44:2:4130:A:N6	2.10	0.48
44:2:4064:C:H2'	44:2:4065:G:H5'	1.96	0.48
44:2:4169:G:H2'	44:2:4170:U:O4'	2.14	0.48
44:2:4401:A:H8	44:2:4401:A:OP2	1.96	0.48
44:2:4616:A:H2'	44:2:4616:A:OP2	2.14	0.48
44:2:4723:A:C1'	44:2:4724:G:P	3.01	0.48
44:2:4809:G:H2'	44:2:4810:G:H8	1.77	0.48
46:4:47:G:C5	46:4:48:G:O6	2.66	0.48
46:4:66:G:N3	46:4:66:G:C2'	2.66	0.48
3:C:150:LEU:O	3:C:151:PRO:C	2.56	0.48
5:E:183:ARG:O	44:2:4892:C:N3	2.46	0.48
11:L:74:ARG:NE	44:2:76:A:OP2	2.47	0.48
14:O:34:VAL:CG1	14:O:112:TYR:HE1	2.27	0.48
16:Q:11:ARG:HH22	44:2:1820:G:H5'	1.78	0.48
16:Q:152:PHE:CE1	44:2:1825:C:H4'	2.48	0.48
18:S:43:ARG:O	18:S:47:PHE:HD2	1.97	0.48
23:X:89:LYS:HE2	23:X:137:TYR:CE1	2.48	0.48
24:Y:115:ARG:C	24:Y:115:ARG:HD3	2.39	0.48
30:e:12:ILE:CG2	30:e:66:THR:HB	2.41	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:i:82:ARG:CZ	44:2:297:A:H2	2.27	0.48
40:o:48:TYR:CZ	44:2:3895:C:O2'	2.61	0.48
43:u:32:ARG:HD3	43:u:196:ASP:OD1	2.12	0.48
43:u:155:GLU:OE1	44:2:3936:G:O4'	2.31	0.48
44:2:2:G:C5	44:2:3:C:C5	3.01	0.48
44:2:29:G:C6	44:2:54:G:O6	2.67	0.48
44:2:33:A:H3'	44:2:34:A:H8	1.77	0.48
44:2:51:A:H1'	44:2:1507:U:O2'	2.13	0.48
44:2:67:C:O2	44:2:67:C:H2'	2.12	0.48
44:2:484:G:H2'	44:2:485:U:C6	2.47	0.48
44:2:942:G:C1'	44:2:2250:C:OP1	2.57	0.48
44:2:1093:C:O5'	44:2:1093:C:H6	1.95	0.48
44:2:1163:C:H2'	44:2:1164:A:C5'	2.42	0.48
44:2:1208:U:O2	44:2:1208:U:H2'	2.12	0.48
44:2:1267:G:H3'	44:2:1268:G:C4'	2.42	0.48
44:2:1277:U:C2'	44:2:1278:C:C6	2.95	0.48
44:2:1398:C:C6	44:2:1398:C:O5'	2.66	0.48
44:2:1868:G:N2	44:2:1916:C:N4	2.62	0.48
44:2:1894:G:C3'	44:2:1894:G:C8	2.96	0.48
44:2:1911:G:H21	44:2:2036:G:H5'	1.78	0.48
44:2:1929:G:C6	44:2:2011:A:N1	2.81	0.48
44:2:2323:C:O2'	44:2:2324:A:H3'	2.14	0.48
44:2:2329:U:H2'	44:2:2330:U:C6	2.49	0.48
44:2:2347:A:H4'	44:2:2348:U:OP2	2.14	0.48
44:2:2469:C:C2'	44:2:2470:G:C8	2.89	0.48
44:2:2572:C:O5'	44:2:2572:C:H6	1.96	0.48
44:2:2629:G:H8	44:2:2629:G:H5'	1.78	0.48
44:2:2702:A:OP2	44:2:2703:G:C8	2.66	0.48
44:2:3606:U:C2'	44:2:3607:G:H5'	2.44	0.48
44:2:3742:U:O2	44:2:3742:U:C2'	2.60	0.48
44:2:3746:G:H1'	44:2:3747:U:H5	1.78	0.48
44:2:4045:A:H2'	44:2:4046:C:C6	2.49	0.48
44:2:4105:C:H4'	44:2:4106:G:OP1	2.11	0.48
44:2:4133:G:H2'	44:2:4134:U:C5'	2.43	0.48
44:2:4329:A:C8	44:2:4329:A:OP2	2.67	0.48
44:2:4357:A:H5'	44:2:4358:C:OP2	2.14	0.48
44:2:4688:A:HO2'	44:2:4695:C:H1'	1.78	0.48
44:2:4696:G:H2'	44:2:4697:C:C6	2.48	0.48
44:2:4830:G:H8	44:2:4830:G:O5'	1.96	0.48
44:2:4845:G:O5'	44:2:4845:G:H8	1.95	0.48
46:4:112:U:O2'	46:4:113:G:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:132:LYS:O	2:B:135:LYS:HB3	2.14	0.48
2:B:325:GLU:O	2:B:326:VAL:HB	2.14	0.48
3:C:326:LEU:HB2	44:2:1218:A:N6	2.29	0.48
5:E:226:ARG:HA	5:E:226:ARG:NE	2.29	0.48
5:E:274:VAL:HG12	44:2:4837:U:C6	2.46	0.48
6:F:88:LYS:HB3	6:F:124:LYS:HZ1	1.79	0.48
6:F:165:LYS:O	6:F:166:ARG:C	2.56	0.48
10:J:80:GLU:HA	10:J:83:LEU:HB3	1.96	0.48
15:P:25:HIS:CE1	15:P:27:LYS:H	2.31	0.48
15:P:101:ASN:O	15:P:104:LEU:HB2	2.13	0.48
16:Q:172:ARG:O	16:Q:173:LYS:CB	2.62	0.48
18:S:46:TYR:O	18:S:49:SER:HB2	2.14	0.48
24:Y:19:PHE:HB3	45:3:23:C:N3	2.29	0.48
34:i:33:LEU:HD13	44:2:300:C:P	2.54	0.48
35:j:3:LYS:HB3	44:2:3611:A:C5	2.47	0.48
44:2:148:G:H8	44:2:148:G:OP1	1.97	0.48
44:2:194:A:H2'	44:2:194:A:N3	2.28	0.48
44:2:240:A:H2'	44:2:241:G:H8	1.72	0.48
44:2:661:C:H2'	44:2:662:G:H8	1.77	0.48
44:2:1088:C:H6	44:2:1088:C:C3'	2.23	0.48
44:2:1253:G:C2'	44:2:1254:A:H5''	2.44	0.48
44:2:1530:C:H5''	44:2:1530:C:C6	2.39	0.48
44:2:2009:C:C5'	44:2:2009:C:C6	2.96	0.48
44:2:2034:G:C4	44:2:2036:G:N7	2.81	0.48
44:2:2262:G:H8	44:2:2262:G:O5'	1.97	0.48
44:2:2362:U:H6	44:2:2362:U:O5'	1.96	0.48
44:2:3682:U:C6	44:2:3682:U:C3'	2.96	0.48
44:2:4109:C:O5'	44:2:4109:C:C6	2.67	0.48
44:2:4199:A:H3'	44:2:4200:G:H8	1.79	0.48
44:2:4539:U:H2'	44:2:4540:U:H6	1.78	0.48
44:2:4549:A:H2'	44:2:4549:A:N3	2.29	0.48
45:3:24:G:O2'	45:3:25:G:H5'	2.12	0.48
45:3:127:U:H5''	45:3:128:C:OP2	2.13	0.48
46:4:57:C:H2'	46:4:58:A:H5'	1.94	0.48
46:4:94:C:H2'	46:4:95:C:H6	1.78	0.48
2:B:128:LYS:O	2:B:131:THR:HG22	2.14	0.48
2:B:223:THR:O	2:B:274:TYR:HA	2.12	0.48
3:C:20:LYS:HB2	3:C:20:LYS:NZ	2.29	0.48
3:C:252:TRP:HB3	3:C:257:PHE:HB2	1.95	0.48
5:E:138:ARG:CZ	44:2:699:A:H5'	2.43	0.48
5:E:288:PHE:CE2	31:f:110:ILE:HD13	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:Q:17:GLU:HG3	16:Q:18:PRO:HD2	1.96	0.48
16:Q:68:ARG:NH1	44:2:1400:A:OP1	2.47	0.48
32:g:54:ARG:HD3	32:g:55:GLY:H	1.78	0.48
34:i:99:LYS:NZ	43:u:192:PRO:O	2.47	0.48
36:k:44:THR:HG21	44:2:2669:U:O3'	2.13	0.48
43:u:34:LEU:HB3	43:u:157:ARG:HD3	1.95	0.48
44:2:20:U:O2	44:2:20:U:C2'	2.62	0.48
44:2:373:G:H2'	44:2:375:A:N7	2.29	0.48
44:2:507:C:H2'	44:2:508:C:C6	2.48	0.48
44:2:957:G:P	44:2:1219:C:OP1	2.72	0.48
44:2:965:C:N4	44:2:1249:G:H1	2.11	0.48
44:2:1049:G:C2'	44:2:1050:G:OP1	2.62	0.48
44:2:1198:G:H2'	44:2:1199:G:H8	1.78	0.48
44:2:1282:U:C4'	44:2:1283:A:OP1	2.62	0.48
44:2:1737:G:H22	44:2:1753:C:H41	1.62	0.48
44:2:1769:U:O5'	44:2:1769:U:H6	1.96	0.48
44:2:1874:A:HO2'	44:2:2047:A:H2	1.55	0.48
44:2:1923:G:H2'	44:2:1924:G:C5'	2.44	0.48
44:2:2005:U:O2'	44:2:2006:C:H5'	2.14	0.48
44:2:2034:G:C4	44:2:2036:G:C8	3.01	0.48
44:2:2436:G:O5'	44:2:2436:G:H8	1.97	0.48
44:2:2565:C:N4	44:2:2728:G:OP1	2.46	0.48
44:2:2704:C:H2'	44:2:2705:U:O4'	2.13	0.48
44:2:3745:G:H5'	44:2:3745:G:N3	2.29	0.48
44:2:3829:A:H2'	44:2:3829:A:N3	2.28	0.48
44:2:3880:C:H2'	44:2:3881:U:H6	1.73	0.48
44:2:4051:U:C3'	44:2:4052:G:H5''	2.44	0.48
44:2:4535:G:H2'	44:2:4535:G:N3	2.29	0.48
44:2:4556:C:O5'	44:2:4556:C:H6	1.96	0.48
44:2:4582:A:H2'	44:2:4583:G:H8	1.79	0.48
44:2:4640:G:H5'	44:2:4640:G:C8	2.39	0.48
44:2:4867:G:C2	44:2:4868:G:O6	2.67	0.48
45:3:72:A:C4'	45:3:87:G:H21	2.27	0.48
2:B:51:ALA:HA	2:B:323:TYR:CD1	2.48	0.48
3:C:36:ILE:HG22	3:C:123:ALA:CB	2.40	0.48
4:D:94:ASN:HA	46:4:47:G:C5'	2.44	0.48
5:E:171:GLY:O	44:2:4897:C:C5	2.67	0.48
5:E:261:ILE:HG22	5:E:268:GLN:HG3	1.96	0.48
6:F:148:LYS:CD	44:2:926:G:H5''	2.44	0.48
7:G:109:GLU:O	7:G:112:GLN:HB3	2.14	0.48
7:G:182:CYS:HB3	7:G:222:ILE:HG21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:30:LYS:HG2	9:I:63:GLU:HB3	1.94	0.48
10:J:19:LYS:CE	10:J:73:THR:HB	2.44	0.48
13:N:15:GLN:OE1	44:2:296:A:OP1	2.32	0.48
13:N:68:ARG:NH2	44:2:294:C:OP2	2.47	0.48
14:O:56:ALA:O	14:O:59:ARG:HB3	2.14	0.48
17:R:138:LEU:O	17:R:138:LEU:HD22	2.14	0.48
19:T:84:ILE:HG13	27:b:24:PRO:HA	1.93	0.48
43:u:114:ILE:O	43:u:118:LEU:HB2	2.14	0.48
44:2:25:A:O2'	44:2:331:C:H1'	2.14	0.48
44:2:59:A:N7	44:2:329:A:C2	2.82	0.48
44:2:76:A:C2	44:2:77:U:H1'	2.49	0.48
44:2:100:C:O2	44:2:100:C:C2'	2.62	0.48
44:2:123:C:O5'	44:2:123:C:H6	1.96	0.48
44:2:170:C:O2'	44:2:171:C:H5'	2.14	0.48
44:2:191:C:O5'	44:2:191:C:H6	1.96	0.48
44:2:365:G:H2'	44:2:366:G:C5'	2.38	0.48
44:2:471:C:O5'	44:2:471:C:H6	1.97	0.48
44:2:700:C:C2'	44:2:701:C:C4'	2.88	0.48
44:2:1092:C:H2'	44:2:1093:C:C6	2.48	0.48
44:2:1142:G:H2'	44:2:1143:G:H8	1.79	0.48
44:2:1276:G:C8	44:2:1277:U:H1'	2.48	0.48
44:2:1423:A:H8	44:2:1423:A:C5'	2.23	0.48
44:2:1506:A:H5''	44:2:1507:U:OP2	2.14	0.48
44:2:1737:G:H2'	44:2:1738:G:H8	1.76	0.48
44:2:2009:C:H2'	44:2:2010:U:C5'	2.44	0.48
44:2:2022:U:O2'	44:2:2023:G:C8	2.67	0.48
44:2:2328:C:H2'	44:2:2329:U:C5	2.49	0.48
44:2:2571:C:H1'	44:2:4092:C:H42	1.72	0.48
44:2:3580:A:H2'	44:2:3581:C:C6	2.48	0.48
44:2:3876:G:H8	44:2:4408:G:OP2	1.97	0.48
44:2:3945:C:H2'	44:2:3946:C:H6	1.77	0.48
44:2:4057:G:N1	44:2:4121:G:N1	2.61	0.48
44:2:4085:U:O2	44:2:4085:U:C2'	2.61	0.48
44:2:4203:C:H42	44:2:4227:G:H1	1.61	0.48
44:2:4487:G:C8	44:2:4488:G:O6	2.66	0.48
44:2:4493:A:H8	44:2:4493:A:O5'	1.96	0.48
44:2:4954:G:H8	44:2:4954:G:O5'	1.95	0.48
44:2:4980:C:H3'	44:2:4980:C:H6	1.79	0.48
44:2:4990:U:O5'	44:2:4990:U:H6	1.96	0.48
45:3:6:C:C6	45:3:6:C:H3'	2.49	0.48
46:4:31:G:N2	46:4:48:G:O6	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:123:HIS:ND1	44:2:4942:C:C4	2.82	0.48
2:B:335:GLY:HA3	44:2:4634:C:H4'	1.94	0.48
3:C:283:LYS:HB2	16:Q:24:TYR:HB3	1.95	0.48
6:F:124:LYS:HZ3	6:F:197:VAL:HG11	1.78	0.48
7:G:73:ARG:HB3	44:2:4044:G:N7	2.29	0.48
7:G:104:PRO:HG3	7:G:194:VAL:HG23	1.94	0.48
9:I:204:GLY:O	46:4:64:G:OP1	2.31	0.48
10:J:64:ARG:O	40:o:103:VAL:HG12	2.13	0.48
11:L:152:GLY:O	11:L:156:PRO:HD3	2.13	0.48
12:M:132:LYS:HE3	12:M:136:LEU:CD1	2.44	0.48
16:Q:68:ARG:HH11	16:Q:68:ARG:HG3	1.78	0.48
19:T:84:ILE:HD11	27:b:24:PRO:HA	1.95	0.48
21:V:89:ARG:HB2	21:V:95:PHE:CE2	2.48	0.48
24:Y:55:VAL:CG1	24:Y:104:VAL:HB	2.44	0.48
31:f:11:PHE:CD1	31:f:92:LEU:HD12	2.48	0.48
44:2:77:U:H2'	44:2:78:U:H5'	1.96	0.48
44:2:917:G:O3'	44:2:918:C:C6	2.67	0.48
44:2:977:G:H1	44:2:1052:C:H42	1.60	0.48
44:2:978:G:C2'	44:2:979:C:C6	2.82	0.48
44:2:1086:A:OP1	46:4:107:G:H5'	2.14	0.48
44:2:1260:C:C6	44:2:1260:C:O5'	2.67	0.48
44:2:1360:G:H1'	44:2:1361:U:P	2.54	0.48
44:2:1430:C:H2'	44:2:1431:G:H8	1.79	0.48
44:2:1465:C:C2	44:2:1466:G:C8	3.01	0.48
44:2:1889:C:O4'	44:2:1895:A:C5	2.66	0.48
44:2:2481:C:OP2	44:2:2481:C:C6	2.67	0.48
44:2:2550:A:O5'	44:2:2736:G:C8	2.62	0.48
44:2:2688:G:C2	44:2:2689:G:H1'	2.49	0.48
44:2:2743:A:H2'	44:2:2744:U:C5	2.48	0.48
44:2:2750:G:H2'	44:2:2751:C:C5	2.44	0.48
44:2:3616:A:H2'	44:2:3617:A:H5''	1.95	0.48
44:2:4541:G:H2'	44:2:4542:C:H5'	1.94	0.48
45:3:73:U:C2'	45:3:74:U:H5'	2.43	0.48
46:4:102:U:H2'	46:4:103:A:H5'	1.96	0.48
1:A:236:GLY:HA2	44:2:3657:U:C1'	2.44	0.48
6:F:143:GLY:HA3	6:F:240:ILE:HG21	1.95	0.48
6:F:209:TRP:CD1	6:F:210:PRO:HD2	2.49	0.48
12:M:122:ILE:HG22	14:O:187:LYS:HB3	1.96	0.48
23:X:127:LEU:HB3	44:2:2414:C:C4'	2.44	0.48
24:Y:111:LEU:HB2	45:3:83:C:N4	2.29	0.48
25:Z:48:ARG:HB3	25:Z:69:LYS:HB3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:a:65:ARG:O	26:a:66:ASN:CB	2.60	0.48
32:g:45:ALA:HB2	32:g:81:SER:C	2.38	0.48
32:g:70:THR:CB	44:2:2564:A:N7	2.76	0.48
44:2:215:A:H4'	44:2:216:G:C5'	2.44	0.48
44:2:230:U:C2	44:2:2280:U:C5	3.02	0.48
44:2:397:C:N4	44:2:398:A:N6	2.62	0.48
44:2:718:G:N2	44:2:721:A:N6	2.61	0.48
44:2:929:U:C5	44:2:930:C:C5	3.02	0.48
44:2:949:G:H3'	44:2:950:A:C4'	2.38	0.48
44:2:1137:G:H2'	44:2:1138:G:H8	1.79	0.48
44:2:1322:A:O2'	44:2:1323:A:H5'	2.14	0.48
44:2:1773:A:H2	46:4:98:G:N2	2.11	0.48
44:2:1851:A:H2'	44:2:1852:A:H5'	1.95	0.48
44:2:2042:G:H4'	44:2:2042:G:OP1	2.14	0.48
44:2:2246:G:P	44:2:2246:G:C8	3.07	0.48
44:2:2280:U:O2	44:2:2280:U:H2'	2.13	0.48
44:2:2283:A:N1	44:2:2284:A:C4	2.81	0.48
44:2:2346:U:OP1	44:2:2804:G:N1	2.46	0.48
44:2:2409:U:H2'	44:2:2410:G:O4'	2.14	0.48
44:2:2561:G:H1'	44:2:2562:C:P	2.54	0.48
44:2:2843:C:C6	44:2:2843:C:C3'	2.97	0.48
44:2:3912:A:C3'	44:2:3913:G:C8	2.97	0.48
44:2:4177:G:O2'	44:2:4263:C:C6	2.63	0.48
44:2:4544:A:C2	44:2:4680:C:P	3.07	0.48
44:2:4544:A:H2'	44:2:4545:U:O4'	2.13	0.48
44:2:4742:C:C6	44:2:4742:C:C3'	2.96	0.48
44:2:4814:C:H2'	44:2:4815:G:C5'	2.44	0.48
46:4:25:G:H3'	46:4:26:C:C5	2.49	0.48
3:C:109:ARG:HG2	44:2:1320:C:O2'	2.14	0.47
3:C:224:ILE:CG1	44:2:220:G:H22	2.26	0.47
7:G:117:ARG:CG	7:G:121:LYS:HD3	2.43	0.47
10:J:135:GLY:HA2	10:J:157:ILE:CD1	2.44	0.47
12:M:49:ALA:HB2	18:S:100:LEU:HD21	1.95	0.47
12:M:100:ARG:HB3	14:O:198:THR:HG22	1.94	0.47
13:N:68:ARG:HG2	13:N:128:LYS:HG3	1.95	0.47
13:N:195:ARG:CZ	44:2:98:A:H4'	2.44	0.47
14:O:167:HIS:CG	44:2:4718:C:C6	3.02	0.47
16:Q:13:VAL:O	44:2:1670:G:H5''	2.13	0.47
16:Q:147:GLU:HG2	16:Q:150:ARG:HH21	1.79	0.47
19:T:89:ILE:HG22	19:T:91:VAL:HG23	1.96	0.47
21:V:46:LYS:CD	44:2:4579:U:H4'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Y:114:ASP:OD2	45:3:70:G:N7	2.46	0.47
31:f:30:ILE:HG23	31:f:33:VAL:HB	1.95	0.47
32:g:60:ARG:HG3	32:g:61:PRO:HD2	1.95	0.47
35:j:2:THR:O	35:j:7:SER:HB3	2.14	0.47
36:k:70:LYS:C	44:2:2673:A:H2'	2.38	0.47
41:p:44:LYS:HE2	41:p:46:LYS:HE2	1.96	0.47
44:2:64:A:O5'	44:2:64:A:C8	2.65	0.47
44:2:178:C:OP2	44:2:179:G:H5'	2.13	0.47
44:2:207:C:H41	44:2:228:U:H2'	1.79	0.47
44:2:214:C:C6	44:2:214:C:C3'	2.97	0.47
44:2:252:G:O5'	44:2:252:G:C8	2.66	0.47
44:2:368:A:N6	44:2:369:A:C2	2.82	0.47
44:2:409:A:C2'	44:2:410:A:H5'	2.44	0.47
44:2:470:G:H2'	44:2:471:C:H5'	1.96	0.47
44:2:975:C:O2'	44:2:976:C:H5'	2.14	0.47
44:2:1092:C:O5'	44:2:1092:C:H6	1.97	0.47
44:2:1368:A:H2'	44:2:1369:U:O4'	2.14	0.47
44:2:1460:C:N4	44:2:1463:G:H22	2.08	0.47
44:2:1711:C:C2'	44:2:1712:G:H5''	2.35	0.47
44:2:1849:A:H8	44:2:1849:A:O5'	1.97	0.47
44:2:2047:A:H5'	44:2:2047:A:C8	2.41	0.47
44:2:2302:G:H2'	44:2:2303:G:C8	2.49	0.47
44:2:2485:U:H3'	44:2:2486:C:H5''	1.95	0.47
44:2:2553:G:H8	44:2:2553:G:C5'	2.17	0.47
44:2:2749:C:C2'	44:2:2750:G:O5'	2.62	0.47
44:2:2829:U:C2	44:2:2831:G:H5''	2.49	0.47
44:2:3659:U:H5''	44:2:3788:G:OP2	2.13	0.47
44:2:3679:G:H2'	44:2:3680:A:H5'	1.96	0.47
44:2:3684:U:C6	44:2:3684:U:H5''	2.48	0.47
44:2:3684:U:C5'	44:2:3684:U:H6	2.27	0.47
44:2:3722:G:H22	44:2:3741:U:C2'	2.23	0.47
44:2:3753:A:C6	44:2:3755:U:C5	3.02	0.47
44:2:3866:G:C6	44:2:4519:A:C2	3.02	0.47
44:2:3907:G:C2	44:2:4131:C:OP1	2.67	0.47
44:2:4109:C:O5'	44:2:4109:C:H6	1.97	0.47
44:2:4429:U:H2'	44:2:4430:G:H8	1.79	0.47
44:2:4565:A:C8	44:2:4566:G:N7	2.82	0.47
44:2:4580:U:C2'	44:2:4581:C:H5'	2.44	0.47
45:3:145:C:H2'	45:3:146:U:C6	2.49	0.47
2:B:17:LEU:O	2:B:19:ARG:N	2.46	0.47
3:C:70:GLY:O	44:2:3874:A:O3'	2.31	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:214:ASP:OD1	44:2:185:G:O6	2.32	0.47
4:D:257:PRO:O	4:D:258:LYS:HB3	2.14	0.47
5:E:282:TYR:O	5:E:286:LEU:HG	2.13	0.47
5:E:282:TYR:HB2	5:E:285:LYS:HG2	1.96	0.47
6:F:76:ARG:HD3	44:2:719:G:H5''	1.97	0.47
7:G:62:ARG:HD2	44:2:4053:A:N6	2.27	0.47
7:G:73:ARG:HE	7:G:242:LEU:HA	1.79	0.47
10:J:96:LYS:C	10:J:97:ASN:O	2.56	0.47
13:N:143:ARG:HB3	33:h:99:GLU:OE1	2.14	0.47
14:O:110:PRO:HB2	14:O:111:PRO:HD3	1.96	0.47
16:Q:18:PRO:HD3	16:Q:52:PHE:CD1	2.50	0.47
25:Z:25:ILE:HA	25:Z:43:VAL:HG12	1.95	0.47
30:e:58:ILE:HG12	44:2:2057:G:H1'	1.95	0.47
31:f:4:ARG:HB3	44:2:4711:U:O2'	2.13	0.47
42:t:73:PRO:HB2	42:t:75:THR:HG22	1.96	0.47
43:u:156:ARG:CD	44:2:4023:U:H3	2.27	0.47
44:2:361:U:H4'	44:2:1513:A:N6	2.29	0.47
44:2:462:A:C8	44:2:680:U:O2'	2.63	0.47
44:2:957:G:H2'	44:2:958:C:O5'	2.14	0.47
44:2:1086:A:P	46:4:107:G:H5'	2.54	0.47
44:2:1188:G:H2'	44:2:1189:U:C4'	2.44	0.47
44:2:1189:U:H5'	44:2:1189:U:C6	2.45	0.47
44:2:1285:C:H6	44:2:1285:C:O5'	1.96	0.47
44:2:1377:A:C1'	44:2:1447:C:H4'	2.44	0.47
44:2:1481:G:H3'	44:2:1481:G:C8	2.49	0.47
44:2:1672:U:O2	44:2:1672:U:C2'	2.62	0.47
44:2:2011:A:H8	44:2:2011:A:H5''	1.79	0.47
44:2:2614:U:O2'	44:2:2695:U:H4'	2.14	0.47
44:2:2745:C:C1'	44:2:2746:U:P	3.02	0.47
44:2:3604:A:C2'	44:2:3605:C:H5''	2.43	0.47
44:2:3684:U:H2'	44:2:3685:C:H5'	1.95	0.47
44:2:3742:U:H2'	44:2:3743:A:H5'	1.97	0.47
44:2:3822:U:C4	44:2:3823:C:N4	2.82	0.47
44:2:4020:C:H2'	44:2:4021:A:H8	1.79	0.47
44:2:4259:U:H2'	44:2:4260:U:C6	2.49	0.47
44:2:4371:G:H2'	44:2:4372:C:H6	1.79	0.47
44:2:4408:G:H8	44:2:4408:G:H5''	1.78	0.47
44:2:4479:C:H3'	44:2:4479:C:C6	2.48	0.47
44:2:4549:A:C8	44:2:4550:A:H1'	2.49	0.47
44:2:4803:C:C3'	44:2:4804:G:H4'	2.44	0.47
44:2:4937:A:H2'	44:2:4938:C:C5'	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:4:107:G:H8	46:4:107:G:P	2.37	0.47
3:C:58:ALA:HB1	44:2:348:U:H4'	1.94	0.47
6:F:194:ILE:HA	6:F:201:PHE:CD2	2.49	0.47
7:G:41:ILE:O	7:G:43:GLN:N	2.44	0.47
8:H:42:ASN:HB3	44:2:4724:G:N2	2.29	0.47
8:H:173:ARG:HD2	38:m:127:VAL:CG1	2.43	0.47
10:J:76:GLY:O	10:J:78:LYS:N	2.46	0.47
13:N:140:LYS:HB3	13:N:144:ARG:NH1	2.29	0.47
15:P:83:TRP:O	44:2:3825:A:H5''	2.13	0.47
22:W:42:SER:HB2	22:W:44:ARG:HG2	1.96	0.47
25:Z:11:VAL:HG21	25:Z:80:LEU:HD13	1.96	0.47
30:e:89:LEU:HD21	42:t:117:ILE:CD1	2.44	0.47
32:g:70:THR:CG2	44:2:2564:A:C8	2.97	0.47
43:u:22:ARG:HA	43:u:166:GLU:OE2	2.14	0.47
44:2:74:G:H2'	44:2:75:G:O5'	2.14	0.47
44:2:274:G:C6	44:2:296:A:H2	2.31	0.47
44:2:327:A:H2'	44:2:329:A:OP2	2.14	0.47
44:2:383:U:H1'	44:2:390:G:H22	1.78	0.47
44:2:476:C:OP2	44:2:476:C:H4'	2.14	0.47
44:2:510:C:C6	44:2:510:C:C4'	2.97	0.47
44:2:921:U:C2	44:2:922:C:C5	3.02	0.47
44:2:1217:C:O2	44:2:1217:C:C3'	2.63	0.47
44:2:1421:C:H3'	44:2:1422:C:C6	2.49	0.47
44:2:1607:C:H2'	44:2:1607:C:O2	2.13	0.47
44:2:1835:C:H2'	44:2:1836:A:C8	2.49	0.47
44:2:1926:G:OP1	44:2:1926:G:C8	2.67	0.47
44:2:2023:G:O2'	44:2:2024:G:H2'	2.14	0.47
44:2:2397:A:O2'	44:2:2398:G:H5'	2.14	0.47
44:2:2527:G:H5'	44:2:2528:A:O5'	2.14	0.47
44:2:2555:G:H8	44:2:2555:G:OP2	1.97	0.47
44:2:2587:G:O3'	44:2:2665:G:H5''	2.14	0.47
44:2:2671:G:H4'	44:2:2672:A:O4'	2.13	0.47
44:2:2795:C:H1'	44:2:4604:G:O2'	2.15	0.47
44:2:2840:G:H2'	44:2:2840:G:N3	2.29	0.47
44:2:3588:G:N3	44:2:3588:G:H5''	2.30	0.47
44:2:3680:A:H8	44:2:3710:C:O2	1.97	0.47
44:2:3743:A:C2	44:2:3744:A:C4	3.01	0.47
44:2:3830:A:H8	44:2:3830:A:O5'	1.96	0.47
44:2:4249:U:H2'	44:2:4250:U:H6	1.79	0.47
44:2:4296:A:H3'	44:2:4296:A:C8	2.49	0.47
44:2:4315:G:H2'	44:2:4315:G:N3	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4500:C:H2'	44:2:4501:G:O4'	2.14	0.47
44:2:4550:A:H2'	44:2:4551:U:H6	1.79	0.47
44:2:4659:U:O4'	44:2:4660:A:H5'	2.15	0.47
44:2:4661:A:C3'	44:2:4662:G:H5'	2.43	0.47
44:2:4701:G:H5'	44:2:4701:G:C8	2.48	0.47
45:3:112:G:OP2	45:3:112:G:C8	2.66	0.47
46:4:25:G:C5	46:4:26:C:N4	2.82	0.47
46:4:69:U:C6	46:4:69:U:H3'	2.49	0.47
4:D:164:LYS:HG3	4:D:195:HIS:CE1	2.48	0.47
5:E:154:THR:HA	5:E:158:ARG:HD3	1.97	0.47
7:G:104:PRO:HB3	7:G:135:VAL:HG21	1.95	0.47
14:O:15:LEU:HA	14:O:42:ASN:O	2.15	0.47
14:O:182:GLU:O	14:O:191:LYS:HE3	2.15	0.47
16:Q:65:ARG:HA	44:2:1481:G:C2	2.50	0.47
17:R:41:ILE:HD12	17:R:44:LEU:HD12	1.97	0.47
24:Y:86:GLN:HA	24:Y:97:VAL:HG23	1.95	0.47
25:Z:101:PHE:CD2	25:Z:107:LYS:HE2	2.49	0.47
38:m:102:ARG:C	38:m:103:LEU:HD12	2.39	0.47
42:t:7:TRP:CD2	42:t:38:PHE:HB2	2.48	0.47
42:t:88:ALA:HB3	42:t:92:SER:HB3	1.96	0.47
42:t:88:ALA:CB	44:2:669:G:OP1	2.63	0.47
44:2:415:U:H6	44:2:415:U:O5'	1.97	0.47
44:2:479:G:H2'	44:2:480:C:H6	1.80	0.47
44:2:635:G:H2'	44:2:636:G:C8	2.44	0.47
44:2:717:G:C3'	44:2:718:G:C5'	2.93	0.47
44:2:733:G:N3	44:2:733:G:H2'	2.28	0.47
44:2:901:A:H3'	44:2:901:A:H8	1.79	0.47
44:2:918:C:OP2	44:2:918:C:C6	2.60	0.47
44:2:1093:C:H2'	44:2:1094:U:H6	1.78	0.47
44:2:1162:C:OP2	44:2:1162:C:C6	2.68	0.47
44:2:1367:A:H4'	44:2:1368:A:H5'	1.94	0.47
44:2:1437:C:C2'	44:2:1438:A:C8	2.98	0.47
44:2:1450:U:H2'	44:2:1451:C:C6	2.49	0.47
44:2:2457:G:O2'	44:2:2458:G:H5'	2.14	0.47
44:2:2567:G:O4'	44:2:2732:A:N6	2.48	0.47
44:2:2587:G:H2'	44:2:2588:A:C8	2.49	0.47
44:2:2844:C:H5'	44:2:2845:G:OP2	2.14	0.47
44:2:4088:G:N3	44:2:4088:G:H2'	2.29	0.47
44:2:4120:C:OP1	44:2:4120:C:H4'	2.14	0.47
44:2:4393:G:H2'	44:2:4394:C:C6	2.50	0.47
44:2:4877:C:H2'	44:2:4878:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4904:G:H2'	44:2:4905:U:O4'	2.15	0.47
46:4:116:G:H5'	46:4:117:G:OP2	2.14	0.47
2:B:234:ARG:NH2	2:B:235:TRP:HE1	2.13	0.47
2:B:279:GLU:CG	2:B:338:VAL:HG23	2.44	0.47
8:H:10:VAL:HG22	8:H:74:CYS:SG	2.54	0.47
9:I:47:PRO:HB3	9:I:171:TRP:CZ2	2.50	0.47
12:M:56:GLN:HG3	18:S:157:ARG:NH1	2.29	0.47
13:N:15:GLN:HG2	34:i:52:PRO:HD2	1.96	0.47
18:S:164:LYS:HB2	18:S:165:PRO:HD3	1.94	0.47
19:T:2:THR:HG23	19:T:3:ASN:N	2.30	0.47
24:Y:112:ASP:O	24:Y:116:LYS:CB	2.63	0.47
24:Y:121:ARG:O	24:Y:126:ARG:HA	2.14	0.47
35:j:30:GLN:HG2	44:2:1599:U:P	2.53	0.47
44:2:297:A:N6	44:2:298:A:C2	2.82	0.47
44:2:430:G:H2'	44:2:431:U:O5'	2.14	0.47
44:2:705:U:O2'	44:2:706:C:H5'	2.14	0.47
44:2:716:U:C2'	44:2:717:G:H5''	2.43	0.47
44:2:1191:G:N3	44:2:1192:G:C8	2.82	0.47
44:2:1453:C:H2'	44:2:1454:G:N7	2.29	0.47
44:2:1545:C:H6	44:2:1545:C:O5'	1.98	0.47
44:2:1649:G:C1'	44:2:1831:G:H4'	2.43	0.47
44:2:1825:C:H3'	44:2:1826:C:H6	1.79	0.47
44:2:1845:A:C2'	44:2:1846:A:H5'	2.44	0.47
44:2:1874:A:H8	44:2:1874:A:O5'	1.98	0.47
44:2:1885:A:C8	44:2:1885:A:C5'	2.92	0.47
44:2:2378:A:C2'	44:2:2379:G:H5''	2.45	0.47
44:2:2424:U:O2'	44:2:2425:G:H5'	2.15	0.47
44:2:2458:G:H2'	44:2:2459:C:C6	2.50	0.47
44:2:2595:G:O2'	44:2:2596:G:H5'	2.15	0.47
44:2:2703:G:O2'	44:2:2704:C:C6	2.63	0.47
44:2:2704:C:H2'	44:2:2705:U:H5'	1.95	0.47
44:2:3640:G:C3'	44:2:3641:G:H8	2.28	0.47
44:2:3752:A:H2	44:2:3758:C:N4	2.11	0.47
44:2:3770:U:C4'	44:2:4456:A:C2	2.87	0.47
44:2:3851:C:H2'	44:2:3852:U:C6	2.50	0.47
44:2:3898:G:H2'	44:2:3899:U:O4'	2.14	0.47
44:2:3913:G:C8	44:2:3914:A:N7	2.82	0.47
44:2:4130:A:H8	44:2:4130:A:O5'	1.98	0.47
44:2:4196:G:O2'	44:2:4288:G:H1'	2.14	0.47
44:2:4263:C:H5''	44:2:4264:A:H5'	1.95	0.47
44:2:4487:G:H4'	44:2:4488:G:O5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4845:G:H2'	44:2:4846:G:O4'	2.15	0.47
45:3:148:A:C8	45:3:148:A:C3'	2.98	0.47
2:B:156:TYR:CD1	44:2:4864:A:H5'	2.49	0.47
3:C:55:SER:CB	44:2:347:G:H5''	2.45	0.47
3:C:329:ASN:HB2	6:F:188:GLU:OE2	2.15	0.47
7:G:38:ASN:HB2	44:2:4082:G:N2	2.29	0.47
7:G:83:PHE:O	7:G:84:THR:CB	2.62	0.47
9:I:209:TRP:O	9:I:212:LEU:O	2.33	0.47
11:L:8:MET:HA	26:a:49:HIS:CE1	2.49	0.47
14:O:52:LEU:HD23	44:2:1908:U:H4'	1.96	0.47
18:S:83:ARG:HH21	19:T:155:PRO:C	2.23	0.47
22:W:44:ARG:HD2	44:2:3584:G:H2'	1.95	0.47
29:d:26:THR:HG23	29:d:85:ARG:HH11	1.80	0.47
35:j:5:THR:HG23	44:2:1580:A:OP1	2.15	0.47
44:2:12:A:H8	44:2:12:A:H5''	1.78	0.47
44:2:40:G:H3'	44:2:41:C:H6	1.79	0.47
44:2:146:A:H8	44:2:146:A:O5'	1.96	0.47
44:2:680:U:H2'	44:2:681:U:C5	2.49	0.47
44:2:728:G:O2'	44:2:729:C:H5'	2.15	0.47
44:2:1270:G:O4'	44:2:4898:A:C2	2.68	0.47
44:2:1437:C:C3'	44:2:1438:A:C8	2.98	0.47
44:2:1848:C:H2'	44:2:1849:A:C8	2.48	0.47
44:2:2266:C:H2'	44:2:2267:G:H8	1.79	0.47
44:2:2478:C:H6	44:2:2478:C:H3'	1.79	0.47
44:2:2625:G:N2	44:2:2662:C:C2	2.79	0.47
44:2:2653:A:N6	44:2:2654:G:H1	2.12	0.47
44:2:2730:G:C6	44:2:2731:G:N1	2.83	0.47
44:2:3590:A:C8	44:2:4602:U:H1'	2.50	0.47
44:2:3606:U:H2'	44:2:3607:G:O4'	2.13	0.47
44:2:4071:G:C2'	44:2:4072:A:O5'	2.61	0.47
44:2:4104:C:O5'	44:2:4104:C:H6	1.97	0.47
44:2:4598:U:H4'	44:2:4999:A:N3	2.29	0.47
44:2:4803:C:O5'	44:2:4804:G:H5''	2.14	0.47
44:2:4812:A:H2'	44:2:4813:C:O4'	2.14	0.47
44:2:4876:C:H2'	44:2:4877:C:C6	2.49	0.47
45:3:27:U:H2'	45:3:28:C:H6	1.80	0.47
45:3:34:U:O2	45:3:34:U:C2'	2.62	0.47
2:B:105:VAL:HG13	2:B:153:MET:HE3	1.96	0.47
3:C:48:ASN:CG	44:2:1352:A:C5'	2.88	0.47
4:D:146:LEU:HD11	4:D:163:LEU:HD22	1.97	0.47
4:D:289:ARG:O	4:D:293:ARG:HG3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:284:HIS:HD2	31:f:38:GLU:OE1	1.97	0.47
6:F:90:ALA:HB2	6:F:125:LEU:HD11	1.96	0.47
6:F:126:ASN:CG	19:T:132:PRO:HB2	2.40	0.47
8:H:86:LEU:HD13	8:H:186:THR:HG21	1.96	0.47
9:I:68:ALA:HA	9:I:158:LYS:HG3	1.97	0.47
10:J:13:ARG:O	10:J:14:GLU:O	2.33	0.47
10:J:56:THR:OG1	10:J:63:ARG:HA	2.15	0.47
11:L:29:PRO:O	11:L:33:ILE:HD13	2.15	0.47
11:L:34:ARG:HG2	45:3:31:G:OP1	2.14	0.47
11:L:103:ARG:HH21	34:i:25:ARG:CG	2.28	0.47
11:L:143:GLU:CG	11:L:144:LEU:H	2.27	0.47
12:M:51:PRO:HB2	12:M:53:LYS:HG2	1.95	0.47
14:O:110:PRO:CB	14:O:111:PRO:HD3	2.45	0.47
15:P:139:TYR:CE1	44:2:3828:G:H4'	2.50	0.47
16:Q:101:CYS:HA	16:Q:121:LEU:O	2.14	0.47
16:Q:186:TYR:CD2	44:2:4267:A:H4'	2.50	0.47
18:S:73:LEU:HD11	44:2:722:G:O2'	2.14	0.47
19:T:27:LEU:HA	19:T:30:TYR:CD2	2.50	0.47
19:T:129:LYS:CB	44:2:1815:A:H4'	2.38	0.47
24:Y:83:GLU:O	24:Y:84:ARG:CB	2.63	0.47
24:Y:112:ASP:O	24:Y:116:LYS:HE3	2.14	0.47
26:a:34:ASN:HD21	44:2:94:A:H5''	1.78	0.47
26:a:60:HIS:O	44:2:88:A:H5'	2.13	0.47
30:e:63:ASN:HA	44:2:2056:C:H5''	1.96	0.47
31:f:58:VAL:HG12	44:2:1278:C:H5''	1.95	0.47
31:f:59:THR:HA	31:f:63:LYS:CA	2.36	0.47
31:f:78:HIS:HB2	31:f:85:ARG:HG3	1.96	0.47
33:h:48:ARG:O	33:h:52:LYS:HD3	2.13	0.47
36:k:70:LYS:CA	44:2:2673:A:H2'	2.44	0.47
37:l:23:ILE:HG12	37:l:38:ASN:HB2	1.97	0.47
38:m:96:CYS:HA	38:m:121:LEU:HD23	1.96	0.47
40:o:31:ASP:HA	44:2:4304:U:H5''	1.97	0.47
42:t:99:LYS:CB	42:t:103:ARG:NH2	2.78	0.47
43:u:43:VAL:O	43:u:152:ARG:HA	2.15	0.47
43:u:62:PHE:HE1	43:u:81:GLU:HB3	1.80	0.47
44:2:40:G:H3'	44:2:41:C:C6	2.50	0.47
44:2:40:G:C8	44:2:41:C:C5	3.02	0.47
44:2:85:G:H22	44:2:97:G:C3'	2.27	0.47
44:2:153:G:O5'	44:2:153:G:H8	1.98	0.47
44:2:276:G:H2'	44:2:277:U:O4'	2.15	0.47
44:2:307:U:O2	44:2:307:U:H2'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:431:U:O2'	44:2:432:G:H5'	2.15	0.47
44:2:438:C:O5'	44:2:438:C:H6	1.96	0.47
44:2:473:G:N3	44:2:473:G:C2'	2.78	0.47
44:2:659:A:H2'	44:2:660:C:C6	2.49	0.47
44:2:709:G:C3'	44:2:710:G:H5'	2.44	0.47
44:2:941:G:H4'	44:2:2054:G:OP1	2.15	0.47
44:2:1148:G:H2'	44:2:1149:G:H5''	1.96	0.47
44:2:1197:G:C2'	44:2:1198:G:C8	2.97	0.47
44:2:1207:C:H2'	44:2:1208:U:OP2	2.15	0.47
44:2:1312:C:H2'	44:2:1313:A:H8	1.79	0.47
44:2:1313:A:C3'	44:2:1314:A:C8	2.88	0.47
44:2:1354:G:H2'	44:2:1354:G:N3	2.30	0.47
44:2:1359:C:O2	44:2:1359:C:H3'	2.15	0.47
44:2:1715:A:H2	46:4:77:A:H2	1.61	0.47
44:2:1773:A:H2'	44:2:1774:A:H5'	1.97	0.47
44:2:1811:G:C8	44:2:1811:G:C3'	2.98	0.47
44:2:1817:U:H2'	44:2:1818:G:C8	2.49	0.47
44:2:1821:A:C8	44:2:1821:A:OP2	2.68	0.47
44:2:1861:G:H8	44:2:1861:G:C5'	2.26	0.47
44:2:2005:U:OP2	44:2:2005:U:H2'	2.15	0.47
44:2:2010:U:H2'	44:2:2011:A:O5'	2.15	0.47
44:2:2020:A:C2	44:2:4424:A:N1	2.82	0.47
44:2:2415:A:C1'	44:2:2416:G:OP1	2.63	0.47
44:2:2444:U:OP1	44:2:2445:U:H5	1.97	0.47
44:2:2464:G:H21	45:3:125:C:N4	2.11	0.47
44:2:2503:C:O5'	44:2:2503:C:C6	2.68	0.47
44:2:2517:C:H2'	44:2:2518:G:C8	2.50	0.47
44:2:2531:U:C2'	44:2:2532:G:C5'	2.93	0.47
44:2:2579:G:C8	44:2:2719:G:N7	2.83	0.47
44:2:2601:G:O2'	44:2:2602:U:H6	1.97	0.47
44:2:2746:U:H2'	44:2:2747:C:O5'	2.15	0.47
44:2:2761:C:C6	44:2:2761:C:C3'	2.98	0.47
44:2:2763:C:H4'	44:2:2764:A:N9	2.29	0.47
44:2:3606:U:H2'	44:2:3607:G:H5'	1.96	0.47
44:2:3727:U:H2'	44:2:3728:A:C8	2.50	0.47
44:2:3758:C:C5	44:2:3759:U:C6	3.03	0.47
44:2:3820:U:H2'	44:2:3821:A:O4'	2.15	0.47
44:2:4155:G:C1'	44:2:4156:G:OP2	2.63	0.47
44:2:4177:G:H4'	44:2:4263:C:H1'	1.97	0.47
44:2:4393:G:O2'	44:2:4394:C:H5'	2.15	0.47
44:2:4511:U:H2'	44:2:4512:U:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4591:G:H2'	44:2:4592:U:C6	2.49	0.47
44:2:4699:G:O2'	44:2:4700:C:C6	2.66	0.47
44:2:4812:A:C2	44:2:4813:C:C2	3.02	0.47
44:2:4824:U:OP1	44:2:4825:G:C2	2.68	0.47
44:2:4925:C:O5'	44:2:4925:C:C6	2.68	0.47
45:3:105:C:H4'	45:3:106:G:H5''	1.97	0.47
46:4:86:G:C2'	46:4:87:G:H5'	2.40	0.47
2:B:56:ILE:CG2	2:B:365:LEU:HD22	2.45	0.47
2:B:341:LYS:O	2:B:342:LYS:HB2	2.15	0.47
3:C:83:GLY:HA3	44:2:359:C:O4'	2.15	0.47
4:D:104:LEU:HD13	4:D:247:ILE:HG23	1.97	0.47
4:D:219:TYR:HE1	4:D:227:ILE:HD11	1.79	0.47
4:D:264:LYS:HB3	46:4:1:G:C8	2.50	0.47
4:D:293:ARG:NH2	44:2:1159:U:O2'	2.48	0.47
6:F:105:VAL:HB	6:F:136:VAL:HG12	1.96	0.47
8:H:96:TYR:HB3	8:H:101:ILE:CD1	2.45	0.47
10:J:13:ARG:C	10:J:137:PRO:HD2	2.40	0.47
12:M:16:SER:HB3	18:S:160:ARG:HH21	1.80	0.47
15:P:129:THR:HG23	15:P:139:TYR:CG	2.49	0.47
18:S:30:MET:HG2	19:T:151:LEU:O	2.15	0.47
24:Y:121:ARG:CA	24:Y:125:SER:HB3	2.45	0.47
30:e:53:ILE:HG22	44:2:428:G:H5'	1.96	0.47
34:i:60:LEU:C	34:i:60:LEU:HD13	2.39	0.47
35:j:64:MET:SD	35:j:67:LEU:HD12	2.54	0.47
40:o:64:LYS:HA	40:o:87:ARG:HH11	1.79	0.47
44:2:59:A:C8	44:2:329:A:C2	3.03	0.47
44:2:179:G:O2'	44:2:180:C:H5'	2.15	0.47
44:2:212:C:C1'	44:2:213:C:P	3.03	0.47
44:2:308:A:H2'	44:2:309:A:H5'	1.96	0.47
44:2:378:G:C2	44:2:403:G:C2	3.03	0.47
44:2:385:G:H5'	44:2:387:A:OP2	2.15	0.47
44:2:400:G:H4'	44:2:401:A:O5'	2.14	0.47
44:2:649:C:H2'	44:2:650:G:H8	1.79	0.47
44:2:1208:U:H4'	44:2:1209:C:O5'	2.15	0.47
44:2:1302:A:C6	44:2:1306:A:C8	3.02	0.47
44:2:1318:G:H8	44:2:1318:G:P	2.38	0.47
44:2:1412:G:N2	44:2:1432:A:C2	2.83	0.47
44:2:1524:G:N3	44:2:1524:G:H2'	2.29	0.47
44:2:1715:A:H2	46:4:77:A:C2	2.33	0.47
44:2:1730:A:H3'	44:2:1731:G:C8	2.50	0.47
44:2:1730:A:H3'	44:2:1731:G:H8	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1846:A:O2'	44:2:1847:G:H3'	2.15	0.47
44:2:1846:A:O2'	44:2:1848:C:H5'	2.15	0.47
44:2:1934:A:C2	44:2:2006:C:N3	2.83	0.47
44:2:2276:A:H2'	44:2:2276:A:N3	2.30	0.47
44:2:2302:G:C4	44:2:2303:G:C8	3.03	0.47
44:2:2386:U:H3'	44:2:2386:U:O2	2.15	0.47
44:2:2630:C:H5''	44:2:2630:C:C6	2.49	0.47
44:2:2668:U:C2	44:2:2669:U:C5	3.03	0.47
44:2:2692:G:N3	44:2:2692:G:H2'	2.29	0.47
44:2:3614:U:C4	44:2:4493:A:C2	3.02	0.47
44:2:3746:G:O3'	44:2:3747:U:H6	1.98	0.47
44:2:3907:G:N2	44:2:4131:C:OP1	2.47	0.47
44:2:4051:U:H6	44:2:4053:A:H1'	1.80	0.47
44:2:4897:C:O2	44:2:4897:C:C3'	2.62	0.47
1:A:85:GLY:HA3	44:2:4088:G:N7	2.30	0.47
1:A:104:VAL:HB	1:A:146:THR:HG21	1.97	0.47
3:C:56:GLU:OE1	44:2:347:G:O3'	2.33	0.47
3:C:229:LEU:HD13	3:C:229:LEU:C	2.39	0.47
3:C:333:LYS:CE	44:2:1217:C:C5'	2.91	0.47
4:D:12:TYR:OH	44:2:4224:G:H5''	2.14	0.47
6:F:48:LYS:CG	44:2:1220:G:H5'	2.44	0.47
8:H:41:ILE:HD11	8:H:69:THR:HG22	1.96	0.47
13:N:186:GLY:O	13:N:187:SER:HB3	2.15	0.47
15:P:24:VAL:HG23	15:P:144:CYS:SG	2.55	0.47
16:Q:152:PHE:CZ	44:2:1825:C:H4'	2.49	0.47
18:S:100:LEU:H	18:S:100:LEU:HD12	1.79	0.47
22:W:57:ARG:NH1	22:W:63:GLN:HE22	2.13	0.47
28:c:31:TYR:O	28:c:35:LEU:HG	2.15	0.47
32:g:22:LEU:O	32:g:22:LEU:HG	2.15	0.47
44:2:119:G:C4'	44:2:120:A:C8	2.98	0.47
44:2:293:C:H4'	44:2:4136:C:O4'	2.15	0.47
44:2:469:G:N3	44:2:470:G:C8	2.83	0.47
44:2:661:C:H2'	44:2:662:G:C8	2.49	0.47
44:2:702:G:C2'	44:2:703:G:H5'	2.44	0.47
44:2:904:C:O2'	44:2:905:C:H5'	2.14	0.47
44:2:910:G:H2'	44:2:911:G:H5'	1.95	0.47
44:2:956:C:O2'	44:2:957:G:H5''	2.15	0.47
44:2:1066:C:H2'	44:2:1067:A:C5'	2.40	0.47
44:2:1165:G:HO2'	44:2:1166:U:H5'	1.79	0.47
44:2:1262:G:P	44:2:1262:G:H8	2.37	0.47
44:2:1330:C:O2'	44:2:1331:G:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1465:C:O2'	44:2:1466:G:H5'	2.15	0.47
44:2:1661:A:C6	44:2:1662:U:N3	2.83	0.47
44:2:2033:G:H8	44:2:2033:G:H5''	1.80	0.47
44:2:2693:C:O5'	44:2:2693:C:H6	1.98	0.47
44:2:3704:G:O5'	44:2:3704:G:C8	2.67	0.47
44:2:3722:G:H5''	44:2:3722:G:C8	2.49	0.47
44:2:3908:G:H8	44:2:3908:G:P	2.37	0.47
44:2:4348:A:H2'	44:2:4349:C:H6	1.79	0.47
44:2:4446:C:H1'	44:2:4643:U:O2	2.15	0.47
44:2:4660:A:H2'	44:2:4661:A:C5'	2.45	0.47
1:A:22:HIS:CB	1:A:52:PRO:HG2	2.45	0.47
1:A:179:ILE:HG21	44:2:3622:A:H5''	1.96	0.47
3:C:55:SER:OG	44:2:347:G:H5''	2.14	0.47
3:C:102:PHE:CE1	44:2:1498:C:O2'	2.67	0.47
3:C:163:LYS:CB	44:2:221:U:O4	2.62	0.47
4:D:277:LYS:NZ	44:2:1087:C:H5'	2.28	0.47
5:E:190:HIS:HA	44:2:4897:C:C1'	2.45	0.47
5:E:223:ARG:HA	5:E:225:PRO:HD2	1.95	0.47
7:G:59:ARG:O	7:G:63:LEU:HG	2.15	0.47
16:Q:11:ARG:HH21	44:2:1820:G:H3'	1.80	0.47
19:T:68:THR:HG21	44:2:4273:A:O3'	2.15	0.47
22:W:58:LYS:NZ	22:W:58:LYS:HB3	2.29	0.47
23:X:81:LEU:CD2	23:X:135:LYS:HE2	2.44	0.47
30:e:67:LYS:HG2	30:e:68:HIS:CD2	2.50	0.47
32:g:63:VAL:HA	32:g:66:ARG:HE	1.79	0.47
35:j:15:THR:CG2	44:2:1513:A:C2	2.97	0.47
43:u:64:GLU:H	43:u:67:THR:HB	1.80	0.47
43:u:114:ILE:HA	43:u:118:LEU:HD23	1.96	0.47
44:2:69:A:N3	44:2:69:A:C3'	2.78	0.47
44:2:85:G:N2	44:2:97:G:C2'	2.78	0.47
44:2:334:C:H5''	44:2:334:C:H6	1.76	0.47
44:2:481:C:H3'	44:2:482:G:H5''	1.97	0.47
44:2:928:A:H2	44:2:931:C:H42	1.62	0.47
44:2:929:U:C6	44:2:929:U:P	3.08	0.47
44:2:947:G:C2'	44:2:948:A:O5'	2.63	0.47
44:2:1942:A:N3	44:2:4654:G:C8	2.82	0.47
44:2:2279:C:O2	44:2:2279:C:C2'	2.63	0.47
44:2:2508:C:H1'	44:2:2509:C:OP1	2.15	0.47
44:2:2525:C:O2	44:2:2525:C:H2'	2.15	0.47
44:2:2566:C:O2	44:2:2566:C:H2'	2.15	0.47
44:2:2870:U:O2'	44:2:2871:A:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:3692:A:C2'	44:2:3693:A:H5'	2.44	0.47
44:2:3744:A:H2'	44:2:3745:G:H5''	1.97	0.47
44:2:4028:U:H2'	44:2:4029:G:C8	2.46	0.47
44:2:4611:A:H2'	44:2:4612:G:O4'	2.15	0.47
44:2:4700:C:C3'	44:2:4701:G:C5'	2.87	0.47
45:3:16:G:OP2	45:3:16:G:H8	1.95	0.47
45:3:24:G:H2'	45:3:25:G:O4'	2.16	0.47
3:C:122:TYR:CD2	3:C:280:PRO:HG3	2.50	0.46
3:C:139:SER:HA	42:t:14:SER:HA	1.97	0.46
4:D:41:LYS:HG3	19:T:67:VAL:HG13	1.96	0.46
5:E:149:ILE:HA	5:E:162:VAL:O	2.15	0.46
11:L:113:ASN:O	11:L:116:ARG:HB3	2.15	0.46
12:M:91:TRP:HB2	44:2:4825:G:C2	2.50	0.46
13:N:195:ARG:NE	44:2:98:A:H4'	2.30	0.46
19:T:42:ILE:HG12	19:T:96:ILE:CD1	2.45	0.46
26:a:32:ARG:CZ	44:2:37:U:H5''	2.45	0.46
28:c:53:PRO:HG2	44:2:2651:A:H2	1.76	0.46
28:c:56:ARG:NH2	44:2:2651:A:C4'	2.78	0.46
29:d:68:LEU:HD13	29:d:68:LEU:C	2.40	0.46
31:f:58:VAL:HB	44:2:1278:C:O3'	2.15	0.46
34:i:34:THR:HG22	34:i:36:HIS:N	2.31	0.46
36:k:69:LEU:O	36:k:70:LYS:HB3	2.13	0.46
38:m:95:ILE:HD11	38:m:124:LYS:NZ	2.30	0.46
43:u:110:LEU:HD22	43:u:110:LEU:HA	1.79	0.46
44:2:8:U:N3	44:2:9:C:C5	2.83	0.46
44:2:24:G:N2	44:2:332:G:O4'	2.44	0.46
44:2:63:G:H8	44:2:63:G:O5'	1.98	0.46
44:2:122:U:C4	44:2:123:C:N4	2.83	0.46
44:2:304:U:C5	44:2:304:U:OP2	2.68	0.46
44:2:692:C:H42	44:2:1273:G:H1	1.64	0.46
44:2:1221:C:H2'	44:2:1222:G:C4'	2.44	0.46
44:2:1250:A:H2'	44:2:1250:A:N3	2.30	0.46
44:2:1454:G:C4	44:2:1455:C:C1'	2.98	0.46
44:2:1653:C:O5'	44:2:1653:C:H6	1.97	0.46
44:2:1802:G:H8	44:2:1802:G:H5''	1.79	0.46
44:2:1856:G:H2'	44:2:1857:C:C5	2.49	0.46
44:2:1868:G:C8	44:2:1868:G:H3'	2.50	0.46
44:2:2251:G:H2'	44:2:2252:A:O4'	2.14	0.46
44:2:2407:C:O5'	44:2:2407:C:H6	1.98	0.46
44:2:2464:G:OP2	44:2:2464:G:H8	1.98	0.46
44:2:2568:A:C6	44:2:2732:A:H1'	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2723:A:H2'	44:2:2724:U:O4'	2.15	0.46
44:2:3573:A:OP2	44:2:3573:A:H2	1.99	0.46
44:2:3696:A:O2'	44:2:3697:A:C8	2.56	0.46
44:2:3697:A:H2'	44:2:3698:U:C4'	2.45	0.46
44:2:4125:C:H5'	44:2:4126:G:OP2	2.15	0.46
44:2:4135:G:H2'	44:2:4136:C:C6	2.50	0.46
44:2:4299:A:H2'	44:2:4300:U:C6	2.50	0.46
44:2:4338:A:O2'	44:2:4339:A:H2'	2.16	0.46
1:A:215:ASN:ND2	44:2:4506:A:H62	2.12	0.46
3:C:112:HIS:HB2	13:N:202:ARG:O	2.15	0.46
3:C:345:ARG:NH1	3:C:349:LEU:HD12	2.29	0.46
4:D:264:LYS:HA	46:4:1:G:C5	2.50	0.46
4:D:273:LEU:HD22	46:4:108:G:OP2	2.15	0.46
6:F:232:ASP:HA	6:F:236:ARG:NH2	2.31	0.46
7:G:55:VAL:HA	23:X:44:PRO:HA	1.96	0.46
9:I:99:ILE:O	9:I:120:GLY:HA3	2.15	0.46
13:N:61:ILE:HD13	13:N:133:ILE:CD1	2.45	0.46
16:Q:11:ARG:NH2	44:2:1820:G:C8	2.84	0.46
32:g:89:ASP:O	32:g:93:ARG:HG3	2.15	0.46
34:i:68:ARG:NH1	44:2:3691:G:P	2.88	0.46
42:t:22:LYS:O	42:t:22:LYS:HG2	2.14	0.46
44:2:19:G:C6	45:3:139:G:N1	2.83	0.46
44:2:183:G:O2'	44:2:184:U:H5'	2.15	0.46
44:2:215:A:H1'	44:2:216:G:O5'	2.15	0.46
44:2:284:G:N2	44:2:288:U:C4'	2.73	0.46
44:2:397:C:OP1	44:2:397:C:H6	1.98	0.46
44:2:409:A:O2'	44:2:410:A:H5'	2.15	0.46
44:2:457:A:OP1	44:2:463:C:N4	2.48	0.46
44:2:897:U:C5'	44:2:898:U:OP1	2.63	0.46
44:2:943:G:H3'	44:2:1262:G:O4'	2.15	0.46
44:2:1085:C:O2	44:2:1085:C:C2'	2.63	0.46
44:2:1305:C:H4'	44:2:1306:A:O5'	2.16	0.46
44:2:1305:C:O2	44:2:1305:C:O4'	2.33	0.46
44:2:1573:C:H2'	44:2:1574:G:O5'	2.16	0.46
44:2:1587:G:H8	44:2:1587:G:O5'	1.98	0.46
44:2:1717:A:O4'	46:4:100:A:C2	2.68	0.46
44:2:2274:U:OP2	44:2:2274:U:C6	2.66	0.46
44:2:2481:C:H1'	44:2:2482:C:OP1	2.14	0.46
44:2:2600:A:C2	44:2:2601:G:N7	2.83	0.46
44:2:2640:G:H2'	44:2:2641:G:H5'	1.96	0.46
44:2:2831:G:H2'	44:2:2832:G:H5'	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:3877:A:C8	44:2:3878:C:C6	3.04	0.46
44:2:4189:U:H2'	44:2:4190:C:O4'	2.14	0.46
44:2:4329:A:H8	44:2:4329:A:P	2.38	0.46
44:2:4428:U:H6	44:2:4428:U:O5'	1.99	0.46
44:2:4541:G:C2'	44:2:4542:C:H5'	2.46	0.46
44:2:4572:C:O5'	44:2:4572:C:H6	1.98	0.46
44:2:4938:C:H2'	44:2:4939:C:H5'	1.95	0.46
46:4:11:A:C2	46:4:66:G:N2	2.80	0.46
1:A:85:GLY:HA3	44:2:4088:G:C6	2.50	0.46
3:C:150:LEU:HD23	3:C:150:LEU:N	2.30	0.46
6:F:127:LYS:HE2	6:F:131:ASN:HD21	1.80	0.46
8:H:74:CYS:O	8:H:78:GLN:HG2	2.15	0.46
10:J:169:LYS:O	10:J:170:TYR:HB2	2.14	0.46
13:N:137:PRO:HB3	13:N:152:THR:HA	1.96	0.46
13:N:148:THR:O	13:N:151:ILE:HG22	2.16	0.46
16:Q:65:ARG:HB2	44:2:1481:G:N3	2.30	0.46
17:R:112:SER:O	17:R:113:LYS:CB	2.63	0.46
20:U:89:LYS:NZ	44:2:2603:U:H2'	2.30	0.46
21:V:29:ALA:HB2	21:V:83:ARG:NH2	2.31	0.46
24:Y:56:GLN:HA	24:Y:65:GLN:O	2.16	0.46
25:Z:21:ARG:HG2	25:Z:21:ARG:HH11	1.79	0.46
44:2:83:C:C2	44:2:100:C:N4	2.84	0.46
44:2:197:U:N3	44:2:235:C:O4'	2.49	0.46
44:2:218:C:O5'	44:2:218:C:C6	2.65	0.46
44:2:344:A:N1	44:2:351:A:C8	2.83	0.46
44:2:385:G:H3'	44:2:387:A:OP2	2.16	0.46
44:2:434:G:C6	44:2:1284:C:N4	2.84	0.46
44:2:943:G:C4'	44:2:944:A:OP1	2.64	0.46
44:2:1198:G:C4	44:2:1199:G:C8	3.04	0.46
44:2:1381:C:C6	44:2:1381:C:O5'	2.68	0.46
44:2:1886:A:H8	44:2:1886:A:O5'	1.98	0.46
44:2:2057:G:H8	44:2:2057:G:O5'	1.97	0.46
44:2:2327:U:H3'	44:2:2328:C:H5''	1.96	0.46
44:2:2746:U:OP1	44:2:2746:U:C6	2.69	0.46
44:2:2873:G:O5'	44:2:2873:G:C8	2.67	0.46
44:2:3870:A:H61	44:2:4406:U:H1'	1.79	0.46
44:2:3919:U:H2'	44:2:3920:G:H8	1.80	0.46
44:2:4374:A:H2'	44:2:4382:A:C6	2.49	0.46
44:2:4412:U:O2	44:2:4412:U:C2'	2.61	0.46
44:2:4418:C:H6	44:2:4418:C:O5'	1.99	0.46
44:2:4698:C:O2'	44:2:4699:G:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4850:C:C2'	44:2:4851:G:H8	2.28	0.46
45:3:109:C:O2'	45:3:110:U:H2'	2.16	0.46
3:C:149:GLU:O	3:C:152:LEU:HD23	2.15	0.46
3:C:333:LYS:HD2	44:2:1217:C:H3'	1.97	0.46
4:D:94:ASN:HB2	46:4:47:G:H5'	1.96	0.46
5:E:153:LEU:O	5:E:158:ARG:HG2	2.14	0.46
5:E:172:LEU:CD1	44:2:4896:G:C5'	2.90	0.46
6:F:25:PHE:O	6:F:29:LYS:HG3	2.16	0.46
6:F:70:ARG:CZ	44:2:1190:C:H5''	2.46	0.46
6:F:243:LEU:HD23	6:F:246:ARG:HH21	1.80	0.46
10:J:86:GLY:O	10:J:89:VAL:HB	2.16	0.46
18:S:153:PRO:C	18:S:155:PRO:HD3	2.41	0.46
24:Y:22:PRO:HG2	24:Y:24:HIS:CE1	2.49	0.46
25:Z:72:VAL:HG22	25:Z:111:ARG:HE	1.79	0.46
27:b:30:GLU:CG	27:b:31:SER:H	2.26	0.46
29:d:33:ILE:HG22	29:d:33:ILE:O	2.15	0.46
34:i:9:VAL:HA	34:i:13:LYS:HD3	1.98	0.46
35:j:19:CYS:SG	35:j:22:CYS:N	2.80	0.46
42:t:81:THR:HG23	44:2:472:G:O6	2.15	0.46
44:2:62:A:H2'	44:2:63:G:H8	1.78	0.46
44:2:85:G:OP1	44:2:85:G:H4'	2.15	0.46
44:2:174:G:C6	44:2:175:C:N4	2.83	0.46
44:2:255:C:O2	44:2:255:C:H2'	2.15	0.46
44:2:267:C:C6	44:2:267:C:H5''	2.49	0.46
44:2:432:G:H2'	44:2:433:G:H5'	1.95	0.46
44:2:436:U:H3'	44:2:436:U:O2	2.15	0.46
44:2:718:G:H21	44:2:721:A:N6	2.13	0.46
44:2:922:C:H2'	44:2:923:G:H8	1.72	0.46
44:2:1141:G:H2'	44:2:1142:G:C8	2.50	0.46
44:2:1209:C:O2	44:2:1209:C:H2'	2.15	0.46
44:2:1209:C:H4'	44:2:1210:U:O4'	2.16	0.46
44:2:1248:G:C3'	44:2:1249:G:C8	2.81	0.46
44:2:1323:A:C6	44:2:1324:C:C5	3.04	0.46
44:2:1431:G:H2'	44:2:1432:A:C8	2.51	0.46
44:2:1624:C:H2'	44:2:1625:A:O4'	2.14	0.46
44:2:2518:G:C2'	44:2:2519:G:H5''	2.46	0.46
44:2:2548:C:O2	44:2:2548:C:H2'	2.15	0.46
44:2:2663:G:C8	44:2:2664:U:H1'	2.50	0.46
44:2:2773:G:H8	44:2:2773:G:O5'	1.99	0.46
44:2:2831:G:C3'	44:2:2832:G:C5'	2.93	0.46
44:2:2869:C:H5''	44:2:2869:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:3640:G:C2'	44:2:3641:G:C8	2.98	0.46
44:2:3758:C:H5	44:2:3759:U:C6	2.34	0.46
44:2:3913:G:HO2'	44:2:3914:A:H5'	1.78	0.46
44:2:3920:G:N2	44:2:4029:G:N2	2.62	0.46
44:2:4176:G:N3	44:2:4176:G:H2'	2.30	0.46
44:2:4428:U:C6	44:2:4428:U:H3'	2.51	0.46
44:2:4434:A:C2	44:2:4442:U:C2	3.04	0.46
44:2:4502:U:C2'	44:2:4503:G:H5'	2.45	0.46
44:2:4561:U:C2'	44:2:4562:A:C8	2.90	0.46
44:2:4818:G:C6	44:2:4819:U:C4	3.04	0.46
44:2:4835:C:O2	44:2:4835:C:H2'	2.15	0.46
44:2:5004:G:H4'	44:2:5005:C:OP2	2.16	0.46
2:B:41:VAL:HG22	2:B:187:GLY:HA3	1.97	0.46
3:C:182:LYS:HA	44:2:2276:A:N7	2.31	0.46
4:D:56:THR:HB	46:4:26:C:C5'	2.33	0.46
7:G:58:PRO:HB3	44:2:2448:G:C1'	2.43	0.46
9:I:44:ASP:HA	9:I:171:TRP:HE1	1.80	0.46
10:J:89:VAL:HG11	10:J:109:ILE:HG13	1.96	0.46
11:L:24:THR:HB	11:L:26:PHE:CE2	2.51	0.46
11:L:103:ARG:NH2	34:i:25:ARG:HG2	2.31	0.46
18:S:168:THR:HA	44:2:4829:A:H5''	1.97	0.46
21:V:36:ASN:ND2	21:V:67:LYS:HB2	2.31	0.46
23:X:127:LEU:CD2	23:X:135:LYS:HB3	2.46	0.46
24:Y:66:GLN:O	24:Y:67:ILE:CB	2.63	0.46
29:d:59:THR:O	29:d:59:THR:HG23	2.15	0.46
42:t:39:ARG:HH21	44:2:2064:G:H22	1.61	0.46
42:t:58:LYS:HD2	44:2:671:C:OP2	2.15	0.46
43:u:26:ASP:HA	43:u:163:VAL:HG23	1.98	0.46
43:u:105:ILE:CG2	43:u:132:LEU:HD23	2.45	0.46
44:2:8:U:O4	44:2:9:C:H5	1.98	0.46
44:2:509:G:H2'	44:2:510:C:H6	1.78	0.46
44:2:951:C:C6	44:2:952:C:C5	3.04	0.46
44:2:1082:U:C1'	44:2:1083:C:P	3.04	0.46
44:2:1277:U:H2'	44:2:1278:C:H6	1.79	0.46
44:2:1280:G:C8	44:2:1280:G:OP2	2.67	0.46
44:2:1334:A:H4'	44:2:1335:G:O5'	2.15	0.46
44:2:1649:G:O4'	44:2:1831:G:H4'	2.14	0.46
44:2:1900:G:H1	44:2:2040:C:H42	1.63	0.46
44:2:2010:U:H3'	44:2:2010:U:C6	2.51	0.46
44:2:2016:U:C2'	44:2:2017:G:H5'	2.46	0.46
44:2:2479:G:H3'	44:2:2479:G:C8	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2640:G:C2'	44:2:2641:G:H5'	2.46	0.46
44:2:2759:U:H3'	44:2:2760:A:H5'	1.96	0.46
44:2:3662:U:H2'	44:2:3663:U:H5'	1.98	0.46
44:2:3909:U:O5'	44:2:3909:U:H6	1.98	0.46
44:2:4120:C:H6	44:2:4120:C:C5'	2.28	0.46
44:2:4157:G:H2'	44:2:4158:G:O4'	2.16	0.46
44:2:4282:G:H2'	44:2:4283:A:H3'	1.98	0.46
44:2:4637:U:O2'	44:2:4638:G:C8	2.68	0.46
1:A:177:LYS:HD3	41:p:29:ILE:CD1	2.45	0.46
4:D:191:ASN:HD22	4:D:194:VAL:HG23	1.80	0.46
4:D:266:TRP:HB2	46:4:22:A:N1	2.31	0.46
5:E:172:LEU:HD23	44:2:4897:C:H5''	1.96	0.46
6:F:43:ARG:HD3	6:F:46:ARG:HH21	1.80	0.46
8:H:59:LYS:HZ2	8:H:66:GLU:HB3	1.80	0.46
9:I:34:PHE:O	9:I:88:ARG:HA	2.16	0.46
11:L:55:ILE:HB	11:L:148:THR:HB	1.97	0.46
11:L:204:GLU:O	11:L:206:ASP:N	2.49	0.46
12:M:97:ALA:CB	44:2:4826:C:N4	2.78	0.46
13:N:187:SER:HB2	44:2:29:G:OP2	2.15	0.46
15:P:2:VAL:O	15:P:3:ARG:HB3	2.14	0.46
16:Q:42:THR:HG21	44:2:1409:C:P	2.56	0.46
18:S:173:ASN:O	44:2:4723:A:H8	1.98	0.46
25:Z:9:LYS:HE2	25:Z:82:PRO:HB2	1.97	0.46
26:a:70:CYS:CB	26:a:109:TYR:HB3	2.45	0.46
31:f:58:VAL:HG23	44:2:1279:G:OP1	2.15	0.46
31:f:106:TYR:C	31:f:108:SER:N	2.73	0.46
33:h:44:LEU:O	33:h:47:ILE:HG22	2.16	0.46
38:m:104:HIS:CD2	38:m:105:PRO:HD2	2.51	0.46
39:n:25:LYS:HG3	39:n:25:LYS:O	2.15	0.46
42:t:80:THR:O	42:t:83:ASN:CA	2.63	0.46
44:2:10:A:H2'	44:2:11:G:H5'	1.95	0.46
44:2:12:A:H5''	44:2:12:A:C8	2.51	0.46
44:2:87:A:H2'	44:2:88:A:O4'	2.16	0.46
44:2:108:A:N6	44:2:325:A:H1'	2.31	0.46
44:2:181:U:H4'	44:2:182:C:O5'	2.15	0.46
44:2:218:C:C2	44:2:219:C:C5	3.03	0.46
44:2:230:U:O2	44:2:2280:U:C5	2.69	0.46
44:2:309:A:H2'	44:2:310:A:O4'	2.16	0.46
44:2:416:U:C2'	44:2:417:A:H5'	2.45	0.46
44:2:472:G:H4'	44:2:472:G:OP1	2.16	0.46
44:2:699:A:P	44:2:699:A:H8	2.38	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:948:A:C5	44:2:949:G:N1	2.84	0.46
44:2:978:G:H1	44:2:1051:C:N4	2.13	0.46
44:2:1349:C:C2'	45:3:30:U:H4'	2.45	0.46
44:2:1357:G:N3	44:2:1357:G:C5'	2.72	0.46
44:2:1387:C:H2'	44:2:1388:G:C8	2.49	0.46
44:2:1424:G:H2'	44:2:1425:U:C5'	2.46	0.46
44:2:1460:C:H6	44:2:1460:C:C3'	2.18	0.46
44:2:1657:C:C5	44:2:4153:C:H5'	2.51	0.46
44:2:1872:C:C3'	44:2:1873:G:C5'	2.94	0.46
44:2:2464:G:O6	44:2:2466:C:H1'	2.16	0.46
44:2:2663:G:C4	44:2:2664:U:H1'	2.50	0.46
44:2:2672:A:N3	44:2:2672:A:C3'	2.77	0.46
44:2:2831:G:H22	44:2:2833:C:H5'	1.79	0.46
44:2:3664:U:H6	44:2:3664:U:H5''	1.80	0.46
44:2:3754:A:H4'	44:2:3755:U:OP2	2.14	0.46
44:2:4154:U:H4'	44:2:4181:C:H5	1.80	0.46
44:2:4212:C:H2'	44:2:4213:A:C8	2.51	0.46
44:2:4231:A:H2'	44:2:4232:G:H1'	1.97	0.46
44:2:4314:U:O2	44:2:4314:U:C2'	2.64	0.46
44:2:4527:G:C8	44:2:4527:G:H5''	2.51	0.46
44:2:4704:G:O5'	44:2:4704:G:C8	2.68	0.46
44:2:4882:G:N2	44:2:4883:C:C6	2.84	0.46
44:2:4910:A:H2'	44:2:4911:A:C8	2.50	0.46
46:4:11:A:C8	46:4:11:A:O5'	2.69	0.46
1:A:95:GLN:HG3	44:2:4084:U:O4	2.15	0.46
1:A:205:ASN:OD1	44:2:1612:G:H5''	2.15	0.46
1:A:243:THR:HG22	44:2:3714:U:O2'	2.16	0.46
2:B:71:GLU:O	21:V:92:ASP:HA	2.16	0.46
3:C:211:TYR:HD1	3:C:253:THR:OG1	1.98	0.46
5:E:192:LYS:CG	31:f:107:PRO:HD3	2.45	0.46
5:E:284:HIS:HB3	31:f:42:TYR:CE2	2.51	0.46
6:F:163:ASN:O	6:F:164:LYS:HB2	2.15	0.46
6:F:217:ARG:HH11	6:F:217:ARG:HG3	1.81	0.46
7:G:149:ASN:HB2	7:G:151:LYS:HD3	1.98	0.46
8:H:48:LEU:HD22	8:H:54:ARG:NH1	2.30	0.46
11:L:194:ILE:O	11:L:197:LYS:HB3	2.16	0.46
13:N:168:GLY:O	13:N:172:ARG:HG3	2.15	0.46
15:P:130:TYR:HB3	44:2:2772:A:C6	2.50	0.46
16:Q:42:THR:HG21	44:2:1408:U:O3'	2.16	0.46
16:Q:173:LYS:NZ	44:2:90:G:O6	2.49	0.46
17:R:109:TYR:HB2	17:R:115:ILE:HD12	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:S:69:GLU:OE2	18:S:76:LYS:HE3	2.15	0.46
18:S:87:ARG:NE	46:4:87:G:H5''	2.30	0.46
19:T:80:VAL:HG12	44:2:4264:A:H4'	1.97	0.46
32:g:32:TYR:OH	44:2:2782:C:H5''	2.15	0.46
33:h:78:TYR:CD1	44:2:16:G:C4'	2.89	0.46
34:i:100:ALA:HB3	43:u:197:THR:CB	2.24	0.46
35:j:76:HIS:HE2	45:3:93:C:H5''	1.80	0.46
41:p:52:VAL:HG22	44:2:2716:C:H5'	1.98	0.46
43:u:31:LEU:H	44:2:4023:U:H4'	1.80	0.46
44:2:24:G:N1	44:2:25:A:C6	2.84	0.46
44:2:133:C:O2'	44:2:173:G:H5''	2.15	0.46
44:2:382:U:O2	44:2:391:A:H2	1.99	0.46
44:2:402:G:H4'	44:2:403:G:O5'	2.15	0.46
44:2:653:C:H6	44:2:653:C:O5'	1.98	0.46
44:2:931:C:H2'	44:2:932:C:H6	1.81	0.46
44:2:1205:U:O2	44:2:1205:U:C2'	2.63	0.46
44:2:1898:C:O2'	44:2:1899:C:H3'	2.16	0.46
44:2:2458:G:H2'	44:2:2459:C:H6	1.81	0.46
44:2:2589:G:C8	44:2:2589:G:OP2	2.69	0.46
44:2:2717:U:H4'	44:2:2718:U:OP2	2.16	0.46
44:2:3577:A:C8	44:2:3577:A:H5''	2.51	0.46
44:2:3667:G:H1'	44:2:3747:U:O2	2.16	0.46
44:2:3885:G:H2'	44:2:3885:G:N3	2.31	0.46
44:2:4187:U:O5'	44:2:4187:U:H6	1.98	0.46
44:2:4419:U:H2'	44:2:4420:U:O5'	2.15	0.46
44:2:4449:G:C2	44:2:4668:A:H2'	2.51	0.46
44:2:4645:U:O5'	44:2:4645:U:C6	2.61	0.46
44:2:4735:G:H2'	44:2:4736:C:C4'	2.34	0.46
44:2:4738:U:O2'	44:2:4739:G:H5'	2.16	0.46
44:2:4837:U:O2'	44:2:4838:C:H6	1.75	0.46
45:3:149:G:H2'	45:3:151:G:OP1	2.16	0.46
2:B:41:VAL:HG13	2:B:185:VAL:CG2	2.45	0.46
3:C:147:VAL:HG11	3:C:249:PHE:CE2	2.49	0.46
5:E:214:ASP:OD2	44:2:4896:G:N3	2.49	0.46
7:G:105:GLU:OE2	7:G:113:ARG:HB2	2.16	0.46
8:H:52:LYS:O	8:H:52:LYS:HG2	2.15	0.46
12:M:49:ALA:HB2	18:S:100:LEU:CD1	2.45	0.46
13:N:183:THR:CB	13:N:188:ARG:HB3	2.45	0.46
14:O:109:PRO:HB3	14:O:110:PRO:HD2	1.97	0.46
16:Q:64:SER:CA	44:2:1481:G:N2	2.78	0.46
17:R:5:ARG:C	17:R:5:ARG:HD3	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:T:2:THR:CG2	44:2:4166:C:H41	2.28	0.46
19:T:81:LYS:HG3	44:2:4264:A:H2	1.79	0.46
19:T:108:ARG:O	19:T:112:ASN:N	2.48	0.46
29:d:84:ILE:HD12	29:d:114:PHE:HE1	1.80	0.46
33:h:109:ARG:O	33:h:113:LEU:HG	2.15	0.46
40:o:10:THR:O	40:o:18:HIS:HA	2.16	0.46
40:o:37:GLY:HA3	44:2:4302:C:O3'	2.16	0.46
44:2:241:G:H8	44:2:241:G:P	2.39	0.46
44:2:301:G:C8	44:2:301:G:H3'	2.51	0.46
44:2:351:A:N3	45:3:24:G:C1'	2.79	0.46
44:2:431:U:H2'	44:2:432:G:H8	1.81	0.46
44:2:488:G:N3	44:2:488:G:C2'	2.79	0.46
44:2:488:G:H1	44:2:658:G:H1'	1.81	0.46
44:2:903:C:O5'	44:2:903:C:C6	2.69	0.46
44:2:941:G:O2'	44:2:942:G:C8	2.68	0.46
44:2:1056:C:C6	44:2:1056:C:H5''	2.51	0.46
44:2:1086:A:OP1	46:4:107:G:C5'	2.64	0.46
44:2:1278:C:H6	44:2:1278:C:O5'	1.98	0.46
44:2:1499:C:O2'	44:2:1500:C:H5'	2.16	0.46
44:2:1548:U:C2'	44:2:1549:G:H5'	2.45	0.46
44:2:1556:G:O2'	44:2:1591:G:H5''	2.15	0.46
44:2:1812:U:H5''	44:2:1812:U:H6	1.80	0.46
44:2:2053:G:H2'	44:2:2054:G:O5'	2.16	0.46
44:2:2054:G:O5'	44:2:2054:G:H8	1.98	0.46
44:2:2289:A:OP2	44:2:2289:A:H4'	2.16	0.46
44:2:2291:G:O5'	44:2:2291:G:H8	1.99	0.46
44:2:2356:A:C2'	44:2:2357:G:H5'	2.45	0.46
44:2:2471:U:H2'	44:2:2472:U:C6	2.51	0.46
44:2:2609:U:C2'	44:2:2610:U:C5	2.95	0.46
44:2:3670:C:H4'	44:2:3671:A:C8	2.50	0.46
44:2:3752:A:H5'	44:2:3752:A:C8	2.48	0.46
44:2:4072:A:C2'	44:2:4073:G:H5'	2.46	0.46
44:2:4093:C:C3'	44:2:4094:A:H5''	2.45	0.46
44:2:4398:U:OP2	44:2:4398:U:H6	1.98	0.46
44:2:4593:G:H1	44:2:4623:G:H2'	1.80	0.46
44:2:4675:C:H6	44:2:4675:C:O5'	1.99	0.46
44:2:4970:G:N2	44:2:4989:A:H2	2.13	0.46
45:3:14:U:H3'	45:3:15:G:H8	1.81	0.46
45:3:58:G:H5''	45:3:97:A:H2	1.79	0.46
45:3:128:C:H2'	45:3:129:C:C6	2.50	0.46
3:C:55:SER:CB	44:2:347:G:H5'	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:18:VAL:HG22	46:4:11:A:OP2	2.16	0.46
6:F:88:LYS:HZ3	19:T:135:PRO:HG2	1.79	0.46
8:H:34:LEU:HD12	8:H:80:MET:O	2.15	0.46
12:M:130:LEU:O	12:M:134:ALA:N	2.43	0.46
14:O:90:HIS:CB	14:O:99:LEU:HD11	2.42	0.46
14:O:92:THR:HG22	14:O:94:ARG:H	1.81	0.46
16:Q:132:LYS:HE3	16:Q:134:CYS:HB3	1.96	0.46
24:Y:123:ALA:O	24:Y:126:ARG:HB3	2.16	0.46
28:c:53:PRO:HD2	44:2:2651:A:H61	1.80	0.46
38:m:99:CYS:HB2	38:m:101:ALA:H	1.80	0.46
43:u:62:PHE:HE1	43:u:81:GLU:CB	2.28	0.46
44:2:14:C:O4'	44:2:14:C:O2	2.31	0.46
44:2:21:G:H1'	45:3:103:A:N3	2.30	0.46
44:2:121:A:C6	44:2:147:U:C4	3.04	0.46
44:2:121:A:C6	44:2:147:U:N3	2.83	0.46
44:2:254:G:N2	44:2:255:C:C5	2.83	0.46
44:2:337:G:H8	44:2:337:G:O5'	1.99	0.46
44:2:463:C:H5'	44:2:463:C:H6	1.79	0.46
44:2:679:U:O5'	44:2:679:U:H6	1.99	0.46
44:2:943:G:H1'	44:2:944:A:P	2.56	0.46
44:2:962:G:H8	44:2:962:G:P	2.39	0.46
44:2:1086:A:C8	44:2:1086:A:P	3.09	0.46
44:2:1293:C:O2	44:2:1293:C:H2'	2.16	0.46
44:2:1299:U:H2'	44:2:1301:G:C8	2.51	0.46
44:2:1336:U:H2'	44:2:1337:C:C5	2.50	0.46
44:2:1867:U:H3'	44:2:1868:G:N7	2.31	0.46
44:2:2346:U:O2'	44:2:2347:A:H8	1.98	0.46
44:2:2350:C:O2'	44:2:2351:A:H5'	2.15	0.46
44:2:2382:G:H2'	44:2:2383:G:H5'	1.96	0.46
44:2:2400:A:H8	44:2:2400:A:OP2	1.99	0.46
44:2:2524:G:C2'	44:2:2525:C:H5'	2.46	0.46
44:2:2587:G:O3'	44:2:2665:G:C4'	2.63	0.46
44:2:3606:U:H2'	44:2:3607:G:C5'	2.46	0.46
44:2:3613:U:H2'	44:2:4514:G:O2'	2.15	0.46
44:2:3695:A:H8	44:2:3695:A:O5'	1.98	0.46
44:2:3840:A:H2'	44:2:3841:A:C8	2.51	0.46
44:2:3890:U:C5	44:2:4143:G:N7	2.84	0.46
44:2:4025:C:H2'	44:2:4026:U:H5'	1.98	0.46
44:2:4143:G:N3	44:2:4143:G:H5'	2.30	0.46
44:2:4407:C:O2'	44:2:4408:G:P	2.73	0.46
44:2:4599:G:N1	44:2:4621:G:C2	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4623:G:H4'	44:2:4958:U:O3'	2.16	0.46
44:2:4738:U:OP2	44:2:4740:U:C5	2.69	0.46
46:4:67:C:O2'	46:4:68:C:H4'	2.16	0.46
1:A:47:ASP:HA	1:A:84:THR:CG2	2.45	0.46
3:C:149:GLU:HG2	3:C:150:LEU:O	2.16	0.46
3:C:206:GLY:HA3	3:C:226:GLY:O	2.16	0.46
4:D:98:ALA:O	4:D:162:ALA:HA	2.16	0.46
8:H:173:ARG:HD2	38:m:127:VAL:CB	2.46	0.46
10:J:112:HIS:HD2	10:J:126:TYR:H	1.63	0.46
10:J:151:ILE:HD12	10:J:155:HIS:O	2.16	0.46
14:O:181:ALA:O	14:O:187:LYS:CD	2.63	0.46
18:S:7:LEU:CD1	18:S:35:PRO:HD3	2.46	0.46
18:S:7:LEU:HD12	18:S:35:PRO:HD3	1.97	0.46
21:V:36:ASN:HD21	21:V:67:LYS:HB2	1.80	0.46
24:Y:121:ARG:O	24:Y:126:ARG:N	2.49	0.46
28:c:38:ILE:HG21	28:c:63:TYR:HB3	1.98	0.46
29:d:33:ILE:HD11	29:d:45:ALA:HB2	1.98	0.46
29:d:85:ARG:HH22	29:d:120:VAL:HG22	1.81	0.46
35:j:71:TYR:CE1	44:2:334:C:O2'	2.68	0.46
36:k:26:LYS:HE3	36:k:28:ASN:ND2	2.31	0.46
44:2:298:A:H3'	44:2:298:A:H8	1.79	0.46
44:2:445:U:C2'	44:2:446:C:C6	2.99	0.46
44:2:722:G:H2'	44:2:723:G:H4'	1.97	0.46
44:2:914:G:N3	44:2:914:G:C2'	2.79	0.46
44:2:1253:G:H2'	44:2:1254:A:H5''	1.98	0.46
44:2:1581:U:H2'	44:2:1582:C:C6	2.50	0.46
44:2:1789:G:H1	44:2:1807:C:N4	2.12	0.46
44:2:1796:U:H3	44:2:1802:G:N2	2.13	0.46
44:2:1839:U:H2'	44:2:1840:U:O4'	2.16	0.46
44:2:1930:G:H8	44:2:1930:G:H5''	1.77	0.46
44:2:2000:C:H2'	44:2:2001:C:C6	2.51	0.46
44:2:2015:C:O5'	44:2:2015:C:H6	1.99	0.46
44:2:2400:A:OP2	44:2:2400:A:C8	2.69	0.46
44:2:2579:G:C6	44:2:2719:G:O6	2.69	0.46
44:2:2715:C:O3'	44:2:2716:C:H3'	2.16	0.46
44:2:3604:A:H2	44:2:3793:A:N1	2.14	0.46
44:2:3722:G:O4'	44:2:3745:G:C8	2.69	0.46
44:2:3758:C:C5	44:2:3759:U:C2	2.97	0.46
44:2:3940:G:H8	44:2:3940:G:O5'	1.99	0.46
44:2:4165:A:C8	44:2:4335:C:N4	2.84	0.46
44:2:4177:G:O2'	44:2:4263:C:H6	1.94	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4345:A:N7	44:2:4492:U:H4'	2.31	0.46
44:2:4602:U:H2'	44:2:4603:G:C8	2.51	0.46
44:2:4850:C:HO2'	44:2:4851:G:H8	1.60	0.46
44:2:4869:C:H2'	44:2:4870:G:O4'	2.16	0.46
45:3:58:G:C5'	45:3:97:A:C2	2.98	0.46
45:3:68:G:H2'	45:3:69:U:O4'	2.16	0.46
46:4:75:G:H1'	46:4:76:U:OP2	2.16	0.46
5:E:158:ARG:HB2	44:2:4903:C:O2	2.16	0.45
5:E:160:LYS:HZ2	5:E:183:ARG:HD3	1.78	0.45
5:E:262:LYS:HE3	44:2:4887:U:H4'	1.98	0.45
8:H:88:PHE:CD2	8:H:151:ILE:HB	2.52	0.45
9:I:35:ASP:C	9:I:36:LEU:HD12	2.41	0.45
10:J:96:LYS:HG2	10:J:174:ILE:CG2	2.46	0.45
10:J:128:LEU:HD23	10:J:130:PHE:CZ	2.51	0.45
10:J:151:ILE:HD12	10:J:156:ARG:HA	1.98	0.45
12:M:28:VAL:HG11	12:M:47:ARG:NH2	2.31	0.45
13:N:12:ARG:HG2	44:2:270:A:C4	2.51	0.45
13:N:142:ILE:N	13:N:142:ILE:HD12	2.30	0.45
16:Q:32:TYR:CE2	16:Q:47:VAL:HG11	2.52	0.45
17:R:35:ALA:HB3	17:R:44:LEU:HD11	1.97	0.45
24:Y:15:ARG:O	24:Y:19:PHE:HD2	1.99	0.45
26:a:128:PHE:HZ	34:i:9:VAL:HG13	1.81	0.45
26:a:132:ARG:HD3	26:a:132:ARG:N	2.31	0.45
28:c:51:ASN:HB2	41:p:43:GLY:HA3	1.98	0.45
29:d:84:ILE:HD12	29:d:114:PHE:CE1	2.51	0.45
35:j:60:GLY:CA	35:j:64:MET:HE3	2.46	0.45
40:o:51:GLN:HE21	40:o:53:LYS:H	1.63	0.45
40:o:98:LYS:NZ	44:2:4191:C:H4'	2.30	0.45
42:t:14:SER:C	42:t:17:LEU:H	2.24	0.45
44:2:286:A:C5'	44:2:287:A:C8	2.99	0.45
44:2:424:A:H1'	44:2:425:A:O5'	2.16	0.45
44:2:456:G:N2	44:2:679:U:C4	2.85	0.45
44:2:469:G:C2	44:2:470:G:C8	3.04	0.45
44:2:1075:A:H2'	44:2:1076:C:H6	1.80	0.45
44:2:1442:C:H2'	44:2:1443:C:C6	2.51	0.45
44:2:1474:G:C2'	44:2:1475:G:C5'	2.93	0.45
44:2:1866:A:N7	44:2:2027:G:H5''	2.31	0.45
44:2:1868:G:N2	44:2:1917:A:H61	2.14	0.45
44:2:2034:G:C5	44:2:2036:G:N7	2.84	0.45
44:2:2449:A:H5''	44:2:2450:A:OP2	2.15	0.45
44:2:2564:A:H2'	44:2:2565:C:C5'	2.40	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2657:G:H2'	44:2:2658:G:H8	1.78	0.45
44:2:2673:A:H5'	44:2:2674:A:H8	1.75	0.45
44:2:2685:U:C6	44:2:2685:U:C3'	2.99	0.45
44:2:2745:C:C6	44:2:2745:C:OP2	2.69	0.45
44:2:3746:G:O3'	44:2:3747:U:C6	2.69	0.45
44:2:3750:C:H5''	44:2:3790:A:O3'	2.16	0.45
44:2:3825:A:C6	44:2:3826:G:C6	3.04	0.45
44:2:3892:A:O5'	44:2:3892:A:H8	1.99	0.45
44:2:4083:C:H1'	44:2:4084:U:OP1	2.16	0.45
44:2:4117:A:H1'	44:2:4118:C:OP2	2.16	0.45
44:2:4523:U:H6	44:2:4523:U:O5'	1.98	0.45
44:2:4829:A:H2'	44:2:4830:G:C5	2.51	0.45
44:2:4833:C:O5'	44:2:4833:C:H6	1.99	0.45
44:2:4883:C:C2'	44:2:4884:C:H5'	2.45	0.45
45:3:32:C:H2'	45:3:33:G:C8	2.51	0.45
45:3:112:G:O2'	45:3:113:C:H5'	2.16	0.45
46:4:66:G:N2	46:4:67:C:C1'	2.79	0.45
2:B:49:TYR:C	2:B:79:VAL:HG23	2.41	0.45
5:E:223:ARG:H	5:E:229:GLU:HG2	1.81	0.45
6:F:37:PHE:CD1	6:F:37:PHE:C	2.94	0.45
7:G:104:PRO:CG	7:G:194:VAL:HG23	2.46	0.45
11:L:46:ILE:O	11:L:47:ALA:HB3	2.16	0.45
12:M:49:ALA:HB2	18:S:100:LEU:HD11	1.98	0.45
12:M:119:ARG:CA	14:O:190:ASP:HB3	2.45	0.45
13:N:85:VAL:CG1	40:o:49:GLY:HA3	2.39	0.45
14:O:182:GLU:HA	14:O:187:LYS:CE	2.46	0.45
15:P:91:LEU:O	15:P:95:LEU:HD13	2.16	0.45
19:T:105:PHE:O	19:T:109:VAL:HG23	2.15	0.45
25:Z:46:ILE:HG13	25:Z:69:LYS:O	2.16	0.45
33:h:34:ALA:HA	33:h:37:THR:CB	2.46	0.45
36:k:61:PRO:CG	36:k:64:LEU:HD12	2.44	0.45
40:o:64:LYS:HA	40:o:87:ARG:NH1	2.32	0.45
42:t:103:ARG:CZ	42:t:103:ARG:HB2	2.46	0.45
43:u:47:VAL:HG21	43:u:179:VAL:HG12	1.98	0.45
44:2:297:A:H3'	44:2:297:A:C8	2.50	0.45
44:2:380:A:H3'	44:2:380:A:C4	2.48	0.45
44:2:403:G:H4'	44:2:405:C:C2	2.50	0.45
44:2:424:A:C2	44:2:426:A:OP2	2.70	0.45
44:2:444:G:H4'	44:2:445:U:OP2	2.14	0.45
44:2:965:C:N4	44:2:1248:G:OP1	2.49	0.45
44:2:1049:G:H2'	44:2:1049:G:N3	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1336:U:OP2	44:2:1336:U:H6	1.99	0.45
44:2:1490:U:C5	44:2:1490:U:OP2	2.68	0.45
44:2:1492:U:H2'	44:2:1493:U:H6	1.76	0.45
44:2:1531:G:C4	44:2:1553:G:N2	2.83	0.45
44:2:1912:A:N1	44:2:2026:U:C4	2.84	0.45
44:2:2047:A:C8	44:2:2047:A:H3'	2.51	0.45
44:2:2061:C:C5	44:2:2062:C:C2	3.05	0.45
44:2:2062:C:C4	44:2:2249:G:N1	2.84	0.45
44:2:2362:U:H2'	44:2:2363:U:C6	2.50	0.45
44:2:2743:A:P	44:2:2743:A:H8	2.39	0.45
44:2:2847:A:C8	44:2:2847:A:OP2	2.69	0.45
44:2:3658:G:N3	44:2:3658:G:H2'	2.31	0.45
44:2:3667:G:H2'	44:2:3668:C:C6	2.51	0.45
44:2:3688:A:H2'	44:2:3688:A:N3	2.30	0.45
44:2:3919:U:H6	44:2:3919:U:O5'	1.99	0.45
44:2:4052:G:OP1	44:2:4052:G:C8	2.66	0.45
44:2:4088:G:N3	44:2:4088:G:C2'	2.79	0.45
44:2:4285:A:N7	44:2:4286:G:H1'	2.32	0.45
44:2:4409:A:H1'	44:2:4410:U:OP1	2.17	0.45
44:2:4580:U:C6	44:2:4580:U:H3'	2.51	0.45
44:2:4733:C:H1'	44:2:4734:C:H5	1.81	0.45
44:2:4848:A:C5'	44:2:4849:A:OP1	2.60	0.45
44:2:4850:C:O2'	44:2:4851:G:H8	1.99	0.45
44:2:4924:C:O5'	44:2:4924:C:H6	1.99	0.45
44:2:4980:C:C2'	44:2:4983:G:H5'	2.45	0.45
46:4:71:G:H2'	46:4:72:U:C6	2.51	0.45
1:A:196:TRP:CZ3	44:2:1592:A:N3	2.84	0.45
2:B:301:ASN:OD1	2:B:311:ASP:HA	2.16	0.45
4:D:231:VAL:HG13	4:D:235:MET:HB2	1.98	0.45
4:D:279:ARG:O	4:D:283:LYS:HG3	2.16	0.45
5:E:172:LEU:HB2	5:E:188:ARG:HB2	1.97	0.45
5:E:229:GLU:HA	44:2:1274:A:C5	2.51	0.45
8:H:29:GLY:HA3	8:H:84:VAL:HG13	1.94	0.45
10:J:57:VAL:O	10:J:58:ARG:HB3	2.17	0.45
11:L:57:PRO:HG3	11:L:75:GLY:C	2.41	0.45
11:L:134:PRO:HA	11:L:135:LYS:CE	2.46	0.45
12:M:123:ILE:O	12:M:127:VAL:HG23	2.16	0.45
14:O:33:VAL:O	14:O:102:LEU:HD22	2.16	0.45
16:Q:81:VAL:O	16:Q:138:LEU:HD12	2.16	0.45
16:Q:146:ARG:HH22	44:2:1327:G:P	2.39	0.45
26:a:74:ASN:ND2	26:a:112:LEU:HB2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:a:103:VAL:CG2	26:a:126:ALA:HB2	2.46	0.45
30:e:98:GLU:HG3	30:e:123:THR:OG1	2.16	0.45
31:f:93:PRO:O	31:f:94:ALA:HB3	2.16	0.45
35:j:25:LYS:HE3	37:l:51:LEU:CD1	2.44	0.45
42:t:44:ILE:HA	42:t:48:THR:CG2	2.45	0.45
43:u:84:LEU:CD1	43:u:118:LEU:HD21	2.42	0.45
44:2:188:G:O2'	44:2:189:G:P	2.75	0.45
44:2:309:A:O2'	44:2:310:A:H5'	2.17	0.45
44:2:356:U:C2'	44:2:357:A:H5'	2.46	0.45
44:2:409:A:C6	45:3:17:A:C1'	2.99	0.45
44:2:634:C:H2'	44:2:635:G:C8	2.51	0.45
44:2:717:G:C2'	44:2:718:G:H5'	2.47	0.45
44:2:943:G:N2	44:2:1261:G:O2'	2.50	0.45
44:2:1178:G:C3'	44:2:1179:G:C5'	2.91	0.45
44:2:1388:G:H21	44:2:1389:C:C1'	2.25	0.45
44:2:1459:C:O5'	44:2:1459:C:H6	2.00	0.45
44:2:1635:U:C2'	44:2:1636:G:H5'	2.47	0.45
44:2:1942:A:N3	44:2:4654:G:H8	2.13	0.45
44:2:2260:G:H3'	44:2:2261:A:C8	2.51	0.45
44:2:2283:A:C2	44:2:2284:A:N9	2.84	0.45
44:2:2308:A:H1'	44:2:2309:G:H2'	1.99	0.45
44:2:2504:A:H2'	44:2:2505:G:H5'	1.97	0.45
44:2:2668:U:H2'	44:2:2669:U:H6	1.81	0.45
44:2:2736:G:H4'	44:2:2742:A:H1'	1.99	0.45
44:2:4060:G:N1	44:2:4118:C:N4	2.64	0.45
44:2:4067:G:P	44:2:4067:G:H8	2.39	0.45
44:2:4151:G:H2'	44:2:4152:A:O4'	2.16	0.45
44:2:4173:A:H5''	44:2:4174:A:C5'	2.40	0.45
44:2:4177:G:H2'	44:2:4178:U:C6	2.50	0.45
44:2:4334:U:C3'	44:2:4335:C:H5'	2.46	0.45
44:2:4353:G:N7	44:2:4406:U:H3'	2.32	0.45
44:2:4388:A:H3'	44:2:4389:C:C5'	2.46	0.45
44:2:4523:U:C6	44:2:4523:U:O5'	2.69	0.45
44:2:4675:C:H5'	44:2:4676:C:OP2	2.15	0.45
45:3:55:U:O5'	45:3:55:U:H6	1.98	0.45
45:3:90:C:H2'	45:3:91:A:H8	1.80	0.45
46:4:22:A:C6	46:4:23:A:C6	3.04	0.45
46:4:47:G:C8	46:4:48:G:O6	2.70	0.45
2:B:279:GLU:HG3	2:B:338:VAL:HG23	1.98	0.45
4:D:34:LYS:O	4:D:38:ILE:HG13	2.16	0.45
4:D:155:THR:HG22	4:D:179:ARG:HH11	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:P:43:LYS:HB3	44:2:5019:G:C8	2.50	0.45
19:T:4:THR:OG1	44:2:4167:C:C4	2.65	0.45
26:a:56:VAL:O	44:2:4325:C:OP1	2.34	0.45
28:c:43:ALA:O	28:c:69:THR:HG21	2.16	0.45
28:c:44:LYS:HG2	28:c:105:ILE:HD11	1.98	0.45
29:d:18:ASN:ND2	29:d:102:LEU:HD11	2.32	0.45
35:j:12:ARG:CZ	44:2:2778:U:H1'	2.42	0.45
36:k:17:ARG:O	36:k:19:ASP:N	2.49	0.45
38:m:94:MET:HG2	38:m:105:PRO:HA	1.99	0.45
44:2:168:U:O5'	44:2:168:U:H6	2.00	0.45
44:2:457:A:N3	44:2:457:A:C2'	2.78	0.45
44:2:718:G:C8	44:2:719:G:N2	2.84	0.45
44:2:969:C:OP1	44:2:979:C:C5	2.69	0.45
44:2:1285:C:C5'	44:2:1285:C:C6	2.99	0.45
44:2:1363:G:H2'	44:2:1364:C:C6	2.51	0.45
44:2:1423:A:H8	44:2:1423:A:OP2	2.00	0.45
44:2:1493:U:H2'	44:2:1494:A:O4'	2.15	0.45
44:2:1715:A:H2'	44:2:1716:A:H5'	1.98	0.45
44:2:2021:A:N3	44:2:4476:G:H1'	2.31	0.45
44:2:2310:G:C6	44:2:2311:C:C5	3.04	0.45
44:2:2348:U:C2'	44:2:2349:U:C6	2.96	0.45
44:2:2575:A:C6	44:2:2576:G:C4	3.04	0.45
44:2:2608:U:OP1	44:2:2608:U:C6	2.69	0.45
44:2:2640:G:H21	44:2:2653:A:H1'	1.81	0.45
44:2:2866:G:H8	44:2:2866:G:O5'	2.00	0.45
44:2:2873:G:H8	44:2:2873:G:P	2.39	0.45
44:2:4028:U:O2'	44:2:4029:G:H5'	2.15	0.45
44:2:4072:A:O5'	44:2:4072:A:C8	2.69	0.45
44:2:4257:G:H2'	44:2:4258:A:C8	2.51	0.45
44:2:4527:G:H5''	44:2:4527:G:H8	1.81	0.45
44:2:4645:U:C2'	44:2:4646:G:H5'	2.46	0.45
44:2:4715:C:H2'	44:2:4716:C:H6	1.76	0.45
44:2:4727:G:O2'	44:2:4728:G:H5'	2.17	0.45
45:3:49:G:OP1	45:3:49:G:C8	2.69	0.45
45:3:76:C:H2'	45:3:77:A:C8	2.51	0.45
45:3:90:C:O5'	45:3:90:C:H6	2.00	0.45
45:3:102:G:C2	45:3:104:A:N6	2.84	0.45
5:E:227:HIS:CE1	44:2:442:C:H4'	2.51	0.45
7:G:194:VAL:O	7:G:194:VAL:HG22	2.16	0.45
7:G:194:VAL:CG1	7:G:199:CYS:SG	3.05	0.45
9:I:96:VAL:HG22	9:I:122:PRO:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:L:94:ILE:HG13	11:L:126:LEU:HD21	1.99	0.45
13:N:28:TRP:CD1	44:2:4045:A:C5'	2.86	0.45
14:O:196:LEU:C	14:O:198:THR:H	2.25	0.45
15:P:54:GLN:HA	15:P:83:TRP:CD1	2.51	0.45
16:Q:11:ARG:NH2	44:2:1820:G:H8	2.14	0.45
17:R:74:ARG:CZ	44:2:2868:U:H5	2.30	0.45
18:S:159:LEU:HG	18:S:159:LEU:O	2.16	0.45
24:Y:113:LYS:HB3	45:3:84:A:N7	2.31	0.45
29:d:75:LYS:O	44:2:4613:C:H4'	2.16	0.45
32:g:8:ARG:HB3	44:2:2507:U:H5	1.81	0.45
43:u:28:ALA:HB1	43:u:160:HIS:CE1	2.50	0.45
43:u:191:GLY:N	43:u:192:PRO:HD3	2.31	0.45
44:2:21:G:C2'	44:2:22:G:H5'	2.47	0.45
44:2:230:U:O2	44:2:2280:U:C6	2.70	0.45
44:2:304:U:H6	44:2:304:U:O5'	1.99	0.45
44:2:355:G:OP1	44:2:355:G:H4'	2.17	0.45
44:2:434:G:H3'	44:2:435:G:C8	2.52	0.45
44:2:934:G:H2'	44:2:935:G:C8	2.52	0.45
44:2:1176:G:C2'	44:2:1177:C:O5'	2.65	0.45
44:2:1203:G:C4	44:2:1204:G:C8	3.04	0.45
44:2:1219:C:O2	44:2:1219:C:C2'	2.64	0.45
44:2:1276:G:O5'	44:2:1276:G:C8	2.62	0.45
44:2:1281:C:C2'	44:2:1282:U:OP1	2.64	0.45
44:2:1773:A:C2'	44:2:1774:A:H5'	2.46	0.45
44:2:1914:C:O5'	44:2:1914:C:H6	2.00	0.45
44:2:2019:A:C1'	44:2:4424:A:C2	2.99	0.45
44:2:2397:A:C3'	44:2:2398:G:C5'	2.94	0.45
44:2:2466:C:H5''	44:2:2467:U:OP1	2.17	0.45
44:2:2539:G:H21	44:2:2541:G:H3'	1.82	0.45
44:2:3876:G:C4'	44:2:3877:A:OP1	2.64	0.45
44:2:4128:G:C2	44:2:4129:G:C1'	2.99	0.45
44:2:4287:C:C2'	44:2:4288:G:H5'	2.46	0.45
44:2:4388:A:H5''	44:2:4388:A:C8	2.51	0.45
44:2:4485:C:C6	44:2:4485:C:C5'	3.00	0.45
44:2:4831:U:O2	44:2:4831:U:H2'	2.16	0.45
2:B:4:ARG:HA	44:2:4480:G:O6	2.16	0.45
3:C:188:ARG:HD3	3:C:188:ARG:O	2.16	0.45
6:F:43:ARG:HD3	6:F:46:ARG:NH2	2.31	0.45
8:H:117:PHE:CZ	8:H:165:THR:HB	2.52	0.45
12:M:64:PHE:CE2	12:M:73:VAL:HG13	2.52	0.45
13:N:4:TYR:HD1	13:N:7:ILE:HD12	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:b:52:LYS:HG2	27:b:56:LYS:HZ3	1.82	0.45
35:j:14:LYS:HA	44:2:1513:A:C6	2.52	0.45
42:t:16:PHE:CD1	42:t:28:GLU:HA	2.51	0.45
43:u:28:ALA:HB2	44:2:4021:A:O2'	2.16	0.45
43:u:138:VAL:O	43:u:141:VAL:HG22	2.17	0.45
44:2:21:G:C5	44:2:22:G:C8	3.05	0.45
44:2:422:G:H5'	44:2:3858:G:C8	2.52	0.45
44:2:460:C:H4'	44:2:461:A:OP1	2.17	0.45
44:2:1044:G:H2'	44:2:1045:G:C8	2.52	0.45
44:2:1191:G:C4	44:2:1192:G:C8	3.04	0.45
44:2:1198:G:H2'	44:2:1199:G:H5'	1.95	0.45
44:2:1649:G:H2'	44:2:1833:G:OP2	2.17	0.45
44:2:1766:A:O2'	44:2:1767:A:H5'	2.16	0.45
44:2:1797:G:N2	44:2:1801:U:O4'	2.50	0.45
44:2:1822:G:H5''	44:2:1822:G:H8	1.80	0.45
44:2:2549:C:C6	44:2:2549:C:O5'	2.70	0.45
44:2:2653:A:N6	44:2:2654:G:N1	2.64	0.45
44:2:3605:C:C6	44:2:3605:C:C3'	3.00	0.45
44:2:4009:C:C5	44:2:4010:G:N7	2.84	0.45
44:2:4433:A:H4'	44:2:4434:A:OP1	2.16	0.45
44:2:4530:G:N3	44:2:4530:G:C2'	2.74	0.45
45:3:154:G:O5'	45:3:154:G:C8	2.66	0.45
46:4:92:C:H2'	46:4:93:G:C8	2.51	0.45
2:B:137:TRP:O	2:B:140:GLU:HG2	2.17	0.45
2:B:158:GLN:HG3	2:B:159:VAL:HG13	1.99	0.45
3:C:45:ARG:CZ	3:C:238:LEU:HD22	2.47	0.45
3:C:136:LEU:HD23	42:t:10:VAL:CG1	2.47	0.45
3:C:224:ILE:O	3:C:227:ILE:HG22	2.16	0.45
6:F:66:ARG:HA	6:F:69:ILE:CG1	2.47	0.45
14:O:182:GLU:HA	14:O:187:LYS:CD	2.47	0.45
16:Q:30:LYS:HZ3	42:t:4:HIS:CE1	2.35	0.45
16:Q:179:GLY:O	16:Q:188:ASN:N	2.46	0.45
23:X:147:LEU:HD13	23:X:147:LEU:C	2.42	0.45
26:a:70:CYS:HA	26:a:109:TYR:HB2	1.98	0.45
26:a:114:LYS:HE3	44:2:1479:A:C5	2.52	0.45
34:i:33:LEU:CD1	44:2:300:C:P	3.04	0.45
34:i:33:LEU:HD12	44:2:300:C:OP1	2.17	0.45
35:j:5:THR:HA	35:j:8:PHE:CD2	2.51	0.45
43:u:29:VAL:O	44:2:4023:U:H5'	2.04	0.45
43:u:98:ALA:HB2	43:u:121:VAL:HG12	1.99	0.45
43:u:156:ARG:N	44:2:3936:G:CI'	2.62	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:u:158:THR:CB	44:2:4022:C:H2'	2.35	0.45
44:2:2:G:C2	45:3:156:U:N3	2.85	0.45
44:2:19:G:C2	44:2:20:U:C4	3.05	0.45
44:2:79:C:H2'	44:2:80:C:H5'	1.98	0.45
44:2:475:U:C2'	44:2:476:C:OP1	2.64	0.45
44:2:1180:G:C2	44:2:1181:U:C2	3.05	0.45
44:2:1212:G:N3	44:2:1212:G:H2'	2.32	0.45
44:2:1219:C:N3	44:2:1249:G:O3'	2.50	0.45
44:2:1220:G:H2'	44:2:1221:C:O5'	2.16	0.45
44:2:1284:C:O2'	44:2:2289:A:C1'	2.65	0.45
44:2:1285:C:H4'	44:2:2289:A:C2	2.51	0.45
44:2:1588:U:H2'	44:2:1589:C:O4'	2.17	0.45
44:2:1653:C:O3'	44:2:4336:A:H2'	2.17	0.45
44:2:1719:C:C5'	44:2:1719:C:H6	2.30	0.45
44:2:1756:C:C5'	44:2:1756:C:H6	2.29	0.45
44:2:1830:U:C4	44:2:1831:G:N2	2.85	0.45
44:2:2370:C:O2	44:2:2370:C:H2'	2.16	0.45
44:2:2548:C:H2'	44:2:2737:G:C4	2.52	0.45
44:2:2683:G:O2'	44:2:2684:U:H5''	2.17	0.45
44:2:3595:G:H2'	44:2:3596:G:O4'	2.16	0.45
44:2:3703:U:C2'	44:2:3704:G:H5'	2.45	0.45
44:2:3733:U:C3'	44:2:3734:G:C8	3.00	0.45
44:2:3787:U:H3'	44:2:3788:G:H4'	1.99	0.45
44:2:4838:C:H3'	44:2:4839:G:H5''	1.95	0.45
44:2:4862:G:O3'	44:2:4863:G:C8	2.70	0.45
44:2:4884:C:H2'	44:2:4885:C:H6	1.82	0.45
1:A:185:ALA:C	1:A:196:TRP:NE1	2.56	0.45
3:C:342:ARG:HH21	44:2:714:G:H4'	1.82	0.45
4:D:222:GLN:O	4:D:223:PHE:HB2	2.17	0.45
7:G:55:VAL:HG13	7:G:57:TRP:CZ2	2.51	0.45
12:M:137:LYS:C	12:M:140:PRO:CD	2.90	0.45
14:O:71:TYR:HB2	14:O:73:PHE:CE2	2.52	0.45
15:P:6:LEU:HG	15:P:8:PRO:HD3	1.99	0.45
17:R:114:LYS:O	17:R:146:LYS:HD3	2.17	0.45
21:V:87:SER:HB3	22:W:19:ARG:NH2	2.32	0.45
32:g:22:LEU:HD11	44:2:2589:G:O4'	2.16	0.45
33:h:93:ARG:HD2	44:2:19:G:OP1	2.17	0.45
42:t:98:ARG:HG3	42:t:107:ARG:NH2	2.32	0.45
43:u:49:LEU:HD22	43:u:176:ASN:OD1	2.17	0.45
44:2:33:A:H5''	44:2:33:A:C8	2.46	0.45
44:2:169:C:O5'	44:2:169:C:H6	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:229:G:C1'	44:2:374:A:H1'	2.24	0.45
44:2:254:G:C2'	44:2:255:C:OP1	2.65	0.45
44:2:378:G:C4	44:2:403:G:C2	3.05	0.45
44:2:408:G:N3	45:3:16:G:C2	2.85	0.45
44:2:959:C:H5'	44:2:1214:G:N2	2.32	0.45
44:2:1177:C:O2'	44:2:1178:G:H5'	2.17	0.45
44:2:1294:C:C2	44:2:1295:C:C4	3.04	0.45
44:2:1474:G:H2'	44:2:1475:G:H5'	1.93	0.45
44:2:1525:C:C4'	44:2:1562:A:H2	2.20	0.45
44:2:1582:C:C2'	44:2:1583:G:H5'	2.47	0.45
44:2:1705:U:H2'	44:2:1706:U:H6	1.82	0.45
44:2:1803:G:H3'	44:2:1804:A:C8	2.52	0.45
44:2:2417:U:C6	44:2:2495:G:N2	2.85	0.45
44:2:2427:G:H2'	44:2:2427:G:N3	2.31	0.45
44:2:2526:G:C5'	44:2:2527:G:H5''	2.45	0.45
44:2:2764:A:H1'	44:2:2767:U:OP2	2.17	0.45
44:2:2821:A:O3'	44:2:2822:A:C8	2.70	0.45
44:2:3585:U:C1'	44:2:3586:G:OP2	2.65	0.45
44:2:3769:A:H2	44:2:4456:A:C1'	2.25	0.45
44:2:3822:U:H2'	44:2:3823:C:C6	2.51	0.45
44:2:3834:A:H2'	44:2:3835:C:C5	2.50	0.45
44:2:3873:G:C1'	44:2:3874:A:P	3.05	0.45
44:2:4073:G:H2'	44:2:4073:G:N3	2.31	0.45
44:2:4309:C:H5''	44:2:4309:C:H6	1.82	0.45
44:2:4549:A:O3'	44:2:4550:A:H4'	2.16	0.45
44:2:4820:C:H6	44:2:4820:C:O5'	1.99	0.45
44:2:4947:G:H8	44:2:4947:G:OP2	2.00	0.45
46:4:6:C:O2	46:4:6:C:O4'	2.34	0.45
46:4:26:C:H4'	46:4:27:G:OP1	2.17	0.45
2:B:376:HIS:CD2	22:W:33:ASN:HB3	2.52	0.45
3:C:54:VAL:C	3:C:56:GLU:N	2.75	0.45
3:C:210:ILE:HG22	3:C:232:VAL:HG22	1.99	0.45
5:E:217:PHE:HB3	5:E:246:ARG:HH22	1.81	0.45
6:F:44:LYS:HD3	44:2:1219:C:C4	2.51	0.45
8:H:12:ILE:HB	8:H:52:LYS:O	2.16	0.45
9:I:96:VAL:CG2	9:I:122:PRO:HB3	2.47	0.45
10:J:111:GLU:HG2	10:J:125:ILE:HG21	1.98	0.45
14:O:50:ASN:O	14:O:53:LYS:HB2	2.16	0.45
18:S:29:ARG:O	19:T:150:LEU:HA	2.17	0.45
21:V:89:ARG:HD3	21:V:95:PHE:CE1	2.51	0.45
23:X:119:ILE:HD12	23:X:140:LEU:CD2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:a:112:LEU:HD11	44:2:1376:G:C5	2.52	0.45
31:f:11:PHE:HZ	31:f:14:TYR:CE1	2.35	0.45
33:h:9:LEU:HD22	33:h:57:VAL:HG22	1.99	0.45
40:o:26:TYR:HB3	40:o:67:VAL:HB	1.97	0.45
43:u:45:GLU:O	43:u:151:LEU:HB3	2.17	0.45
43:u:107:GLU:OE1	43:u:132:LEU:HB2	2.17	0.45
44:2:90:G:H2'	44:2:91:G:OP2	2.16	0.45
44:2:113:A:H2	44:2:269:G:C4	2.35	0.45
44:2:248:G:H8	44:2:248:G:O5'	2.00	0.45
44:2:386:A:H2'	44:2:387:A:C1'	2.47	0.45
44:2:396:U:H2'	44:2:397:C:O5'	2.17	0.45
44:2:671:C:H2'	44:2:672:G:C8	2.52	0.45
44:2:675:C:H2'	44:2:676:G:O4'	2.17	0.45
44:2:1057:C:O5'	44:2:1057:C:H6	2.00	0.45
44:2:1094:U:H2'	44:2:1095:C:C6	2.52	0.45
44:2:1148:G:O5'	44:2:1148:G:C8	2.64	0.45
44:2:1166:U:C2'	44:2:1167:G:H8	2.22	0.45
44:2:1360:G:H2'	44:2:1360:G:N3	2.32	0.45
44:2:1389:C:O2	44:2:1389:C:C2'	2.65	0.45
44:2:1401:G:N1	44:2:1445:G:O4'	2.49	0.45
44:2:1430:C:H2'	44:2:1431:G:C8	2.52	0.45
44:2:1641:C:C1'	44:2:2297:G:H1'	2.46	0.45
44:2:1653:C:O3'	44:2:4336:A:C8	2.70	0.45
44:2:1728:A:H2'	44:2:1729:G:O4'	2.17	0.45
44:2:1874:A:C5'	44:2:1874:A:C8	3.00	0.45
44:2:1933:G:N1	44:2:2007:A:C5	2.85	0.45
44:2:2009:C:C6	44:2:2009:C:H5''	2.51	0.45
44:2:2289:A:C2	45:3:8:U:O4'	2.70	0.45
44:2:2369:C:C6	44:2:2369:C:H5'	2.51	0.45
44:2:2424:U:H2'	44:2:2424:U:O2	2.17	0.45
44:2:2438:G:H2'	44:2:2439:C:C6	2.52	0.45
44:2:2683:G:H2'	44:2:2683:G:OP2	2.17	0.45
44:2:2685:U:H2'	44:2:2686:C:O4'	2.17	0.45
44:2:4052:G:H8	44:2:4052:G:O5'	1.98	0.45
44:2:4157:G:H2'	44:2:4158:G:C5'	2.47	0.45
44:2:4366:U:C2'	44:2:4367:G:H5'	2.47	0.45
44:2:4578:G:H2'	44:2:4579:U:C5'	2.42	0.45
44:2:4725:C:C5'	44:2:4725:C:H6	2.30	0.45
44:2:5009:C:O2	44:2:5009:C:H2'	2.17	0.45
45:3:19:C:H2'	45:3:20:A:H8	1.81	0.45
45:3:106:G:H1'	45:3:136:U:O2	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:4:104:C:C2	46:4:105:C:C5	3.05	0.45
1:A:126:LEU:CD2	44:2:3630:G:N2	2.79	0.45
1:A:204:MET:O	1:A:212:GLY:CA	2.65	0.45
2:B:96:PRO:O	14:O:149:TYR:CD1	2.70	0.45
2:B:128:LYS:HD2	44:2:4922:A:OP2	2.17	0.45
2:B:300:LYS:HG3	2:B:313:SER:HB2	1.99	0.45
3:C:55:SER:HB2	44:2:347:G:C4'	2.47	0.45
3:C:197:ARG:CZ	44:2:341:C:H2'	2.47	0.45
5:E:188:ARG:CG	44:2:4896:G:OP2	2.65	0.45
6:F:221:LYS:O	6:F:222:LYS:HD2	2.16	0.45
7:G:174:CYS:HA	7:G:179:VAL:CG2	2.47	0.45
10:J:26:VAL:HG12	10:J:28:GLU:H	1.81	0.45
10:J:26:VAL:HG22	10:J:32:ARG:NH1	2.32	0.45
12:M:124:LYS:O	12:M:128:LYS:HB2	2.17	0.45
24:Y:42:TYR:HB2	24:Y:44:VAL:CG1	2.46	0.45
26:a:130:SER:HB2	44:2:1376:G:H5''	1.99	0.45
27:b:54:LEU:HD21	44:2:1806:C:O2'	2.17	0.45
31:f:54:LYS:HE2	44:2:433:G:O2'	2.17	0.45
31:f:54:LYS:HB3	44:2:4706:C:P	2.57	0.45
32:g:100:GLN:NE2	44:2:4085:U:C3'	2.79	0.45
33:h:121:VAL:O	33:h:122:LYS:HB2	2.17	0.45
44:2:69:A:N3	44:2:69:A:C2'	2.80	0.45
44:2:99:A:H8	44:2:99:A:O5'	2.00	0.45
44:2:444:G:H4'	44:2:445:U:C5'	2.47	0.45
44:2:444:G:C3'	44:2:445:U:H5''	2.47	0.45
44:2:476:C:P	44:2:658:G:C5'	3.04	0.45
44:2:665:C:H6	44:2:665:C:O5'	2.00	0.45
44:2:722:G:C3'	44:2:723:G:C4'	2.94	0.45
44:2:1085:C:OP2	44:2:1085:C:C4'	2.64	0.45
44:2:1277:U:H3'	44:2:1278:C:C6	2.52	0.45
44:2:1332:C:C6	44:2:1332:C:C5'	3.00	0.45
44:2:1361:U:C6	44:2:1361:U:OP2	2.70	0.45
44:2:1648:A:C8	44:2:1648:A:C5'	2.93	0.45
44:2:1911:G:C2	44:2:2034:G:N2	2.85	0.45
44:2:2260:G:H5'	44:2:2261:A:OP2	2.16	0.45
44:2:2310:G:C5'	45:3:20:A:O3'	2.65	0.45
44:2:2335:G:H2'	44:2:2336:U:H5'	1.99	0.45
44:2:2339:U:C5	44:2:3828:G:C2	3.04	0.45
44:2:2488:A:C2	44:2:2491:G:C4	3.05	0.45
44:2:2789:A:H5''	44:2:2790:A:OP2	2.16	0.45
44:2:2839:G:C2	44:2:3593:A:H8	2.33	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2849:C:C5	44:2:2849:C:OP2	2.70	0.45
44:2:3814:A:H4'	44:2:4628:U:O2'	2.18	0.45
44:2:3897:A:OP2	44:2:3897:A:H8	2.00	0.45
44:2:4018:A:H3'	44:2:4019:C:H6	1.82	0.45
44:2:4177:G:O3'	44:2:4263:C:H6	2.00	0.45
44:2:4388:A:H3'	44:2:4389:C:C4'	2.47	0.45
44:2:4428:U:C2'	44:2:4429:U:H5'	2.47	0.45
45:3:114:G:C2	45:3:115:G:C8	3.05	0.45
2:B:229:LYS:HD2	2:B:233:SER:HB2	1.99	0.44
2:B:391:PRO:O	44:2:4996:G:N2	2.50	0.44
3:C:304:ALA:HA	3:C:305:PRO:HD3	1.82	0.44
5:E:172:LEU:HB3	44:2:4897:C:O4'	2.16	0.44
6:F:80:ASN:HB3	19:T:141:VAL:O	2.17	0.44
6:F:81:PHE:HB2	19:T:141:VAL:CG2	2.47	0.44
6:F:131:ASN:HD22	44:2:1706:U:C5'	2.29	0.44
9:I:156:LYS:HG3	9:I:163:GLN:OE1	2.17	0.44
11:L:182:LEU:HD11	26:a:146:LEU:HD22	1.98	0.44
13:N:146:PRO:HG3	33:h:104:THR:HA	1.98	0.44
19:T:81:LYS:CD	44:2:4264:A:C2	2.97	0.44
23:X:109:ILE:O	23:X:113:VAL:HG23	2.18	0.44
42:t:22:LYS:HD2	44:2:2265:C:H5''	1.98	0.44
43:u:48:VAL:HG21	43:u:144:ARG:HG3	1.99	0.44
44:2:64:A:C2'	44:2:110:C:H41	2.30	0.44
44:2:103:G:H4'	44:2:1360:G:C2	2.52	0.44
44:2:288:U:O5'	44:2:288:U:H6	1.98	0.44
44:2:409:A:C6	45:3:17:A:H1'	2.51	0.44
44:2:469:G:C4	44:2:470:G:C8	3.05	0.44
44:2:743:C:H2'	44:2:744:G:H8	1.82	0.44
44:2:893:A:N3	44:2:894:G:C8	2.85	0.44
44:2:918:C:C6	44:2:918:C:P	3.10	0.44
44:2:943:G:H4'	44:2:944:A:OP1	2.17	0.44
44:2:1173:C:H2'	44:2:1174:G:C8	2.52	0.44
44:2:1249:G:O6	44:2:1250:A:C6	2.70	0.44
44:2:1569:C:C2'	44:2:1570:U:H4'	2.47	0.44
44:2:1599:U:H5'	44:2:1600:A:OP2	2.17	0.44
44:2:1672:U:C6	44:2:1672:U:O5'	2.70	0.44
44:2:1712:G:C5	44:2:4174:A:C2	3.04	0.44
44:2:1868:G:C8	44:2:1868:G:C3'	3.00	0.44
44:2:1873:G:HO2'	44:2:1885:A:H1'	1.80	0.44
44:2:1878:C:H2'	44:2:1879:C:O4'	2.17	0.44
44:2:1884:U:H2'	44:2:1885:A:C5'	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2421:U:C5'	44:2:2422:C:C5	2.93	0.44
44:2:2672:A:H5'	44:2:2673:A:OP2	2.17	0.44
44:2:2690:C:O2'	44:2:2691:G:H5'	2.17	0.44
44:2:3667:G:O5'	44:2:3667:G:C8	2.71	0.44
44:2:3720:G:H5''	44:2:3721:C:OP2	2.17	0.44
44:2:3904:C:H2'	44:2:3905:A:C8	2.48	0.44
44:2:3912:A:O3'	44:2:3913:G:C8	2.71	0.44
44:2:4308:A:C2	44:2:4310:C:C2	3.05	0.44
44:2:4508:A:OP1	44:2:4508:A:H3'	2.18	0.44
45:3:72:A:H4'	45:3:87:G:H21	1.81	0.44
45:3:111:U:H4'	45:3:112:G:H5'	1.99	0.44
1:A:65:ASP:HB3	1:A:68:ARG:O	2.17	0.44
2:B:285:TYR:HD2	2:B:365:LEU:HD21	1.82	0.44
3:C:329:ASN:ND2	6:F:188:GLU:HG2	2.32	0.44
5:E:224:LYS:HA	5:E:227:HIS:C	2.40	0.44
6:F:76:ARG:NH2	6:F:81:PHE:HE2	2.15	0.44
6:F:127:LYS:CB	19:T:133:ALA:HB3	2.47	0.44
9:I:145:LYS:HE3	9:I:167:ILE:HG21	1.99	0.44
10:J:19:LYS:HD2	10:J:75:ARG:HH21	1.82	0.44
10:J:54:ARG:CB	44:2:4218:C:OP1	2.64	0.44
11:L:35:ARG:CB	44:2:328:U:OP1	2.65	0.44
11:L:101:ARG:NH2	44:2:65:A:O4'	2.50	0.44
11:L:120:TYR:CE2	11:L:124:LEU:HD22	2.53	0.44
12:M:20:HIS:O	12:M:23:LYS:HD3	2.17	0.44
14:O:165:LYS:HD2	44:2:4814:C:O5'	2.17	0.44
18:S:25:PRO:O	19:T:146:LYS:HE3	2.17	0.44
18:S:29:ARG:HD3	19:T:148:PRO:HB2	1.98	0.44
18:S:68:PHE:HB3	44:2:721:A:C4	2.52	0.44
18:S:81:TRP:HA	18:S:93:MET:O	2.17	0.44
22:W:56:ARG:NH2	44:2:4996:G:C4	2.85	0.44
28:c:7:THR:O	28:c:11:LEU:HG	2.17	0.44
32:g:83:CYS:O	32:g:84:ALA:HB3	2.17	0.44
33:h:33:VAL:HG12	33:h:37:THR:OG1	2.16	0.44
33:h:43:LYS:HE2	45:3:49:G:N3	2.32	0.44
44:2:21:G:H2'	44:2:22:G:O4'	2.17	0.44
44:2:87:A:N3	44:2:88:A:H1'	2.33	0.44
44:2:99:A:H2'	44:2:100:C:O4'	2.17	0.44
44:2:196:G:H3'	44:2:235:C:OP2	2.17	0.44
44:2:286:A:H61	44:2:4322:A:C1'	2.29	0.44
44:2:384:U:OP2	44:2:384:U:C6	2.70	0.44
44:2:506:C:H3'	44:2:506:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:718:G:H4'	44:2:719:G:OP1	2.13	0.44
44:2:1191:G:C4	44:2:1192:G:N7	2.86	0.44
44:2:1193:G:O4'	44:2:1195:C:C5	2.70	0.44
44:2:1360:G:C2'	44:2:1360:G:N3	2.81	0.44
44:2:1361:U:P	44:2:1361:U:H6	2.40	0.44
44:2:1466:G:C5	44:2:1467:G:C8	3.05	0.44
44:2:1466:G:C4	44:2:1467:G:C8	3.05	0.44
44:2:1649:G:C8	44:2:1649:G:H5'	2.51	0.44
44:2:2411:G:H5''	44:2:2411:G:C8	2.52	0.44
44:2:2450:A:H8	44:2:2450:A:O5'	2.00	0.44
44:2:2726:C:H2'	44:2:2727:G:O4'	2.17	0.44
44:2:4080:U:H3'	44:2:4080:U:H6	1.82	0.44
44:2:4143:G:H4'	44:2:4144:G:N7	2.32	0.44
44:2:4742:C:H2'	44:2:4743:C:C6	2.52	0.44
46:4:23:A:C3'	46:4:24:C:C6	3.00	0.44
2:B:95:THR:CB	44:2:4865:A:H4'	2.47	0.44
3:C:42:THR:O	3:C:46:LYS:HG3	2.18	0.44
6:F:154:ILE:HG13	6:F:191:ILE:HD11	1.99	0.44
8:H:43:VAL:HG11	8:H:70:VAL:HG22	1.98	0.44
8:H:120:GLU:HB3	44:2:4572:C:O2	2.17	0.44
9:I:176:PHE:CD2	9:I:184:MET:HE1	2.52	0.44
13:N:42:PRO:HA	13:N:131:GLU:OE2	2.17	0.44
15:P:40:HIS:H	15:P:43:LYS:HD3	1.82	0.44
15:P:118:GLN:HG3	44:2:414:G:O2'	2.16	0.44
17:R:23:TRP:CZ3	17:R:51:ILE:HD12	2.52	0.44
17:R:119:MET:SD	17:R:145:LEU:HG	2.57	0.44
18:S:107:THR:O	18:S:111:ARG:HG2	2.18	0.44
18:S:175:PHE:HB3	44:2:4824:U:C4	2.52	0.44
24:Y:90:ALA:HB1	44:2:380:A:N6	2.31	0.44
25:Z:135:ARG:C	44:2:4089:G:H21	2.08	0.44
30:e:65:LYS:HZ2	30:e:65:LYS:HB2	1.81	0.44
32:g:7:TYR:CZ	32:g:12:SER:HA	2.52	0.44
34:i:43:MET:HG2	34:i:47:VAL:CG2	2.46	0.44
35:j:76:HIS:CD2	45:3:93:C:H5''	2.51	0.44
44:2:122:U:C6	44:2:122:U:P	3.10	0.44
44:2:122:U:C6	44:2:122:U:OP2	2.70	0.44
44:2:403:G:N3	44:2:403:G:C5'	2.80	0.44
44:2:441:G:N3	44:2:1274:A:C4'	2.77	0.44
44:2:721:A:C2'	44:2:722:G:H5''	2.47	0.44
44:2:722:G:C2'	44:2:723:G:H4'	2.47	0.44
44:2:934:G:H2'	44:2:935:G:H8	1.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1374:G:H2'	44:2:1375:U:H6	1.81	0.44
44:2:1378:A:H2'	44:2:1379:G:N7	2.32	0.44
44:2:1421:C:C2'	44:2:1422:C:O4'	2.65	0.44
44:2:1459:C:C6	44:2:1459:C:H3'	2.52	0.44
44:2:1559:C:H2'	44:2:1560:G:O4'	2.17	0.44
44:2:1595:U:H2'	44:2:1596:G:H5'	1.97	0.44
44:2:1821:A:H2'	44:2:1822:G:H8	1.82	0.44
44:2:1838:U:O2	44:2:1838:U:H2'	2.16	0.44
44:2:1867:U:H3	44:2:1917:A:N6	2.15	0.44
44:2:1911:G:N1	44:2:1912:A:C6	2.86	0.44
44:2:2718:U:O2'	44:2:2719:G:P	2.75	0.44
44:2:2831:G:H3'	44:2:2832:G:C5'	2.46	0.44
44:2:3722:G:C8	44:2:3723:G:C8	3.05	0.44
44:2:3878:C:O2	44:2:3879:C:C6	2.70	0.44
44:2:3910:G:C2	44:2:3911:A:C4	3.05	0.44
44:2:4414:G:H1	44:2:4486:U:H3	1.64	0.44
44:2:4640:G:C2'	44:2:4641:A:O5'	2.66	0.44
45:3:11:C:H2'	45:3:12:G:O4'	2.17	0.44
45:3:65:A:C2'	45:3:66:A:H5'	2.46	0.44
1:A:179:ILE:O	1:A:180:LEU:HB2	2.17	0.44
2:B:154:LYS:HG3	2:B:194:LEU:HD22	1.99	0.44
3:C:311:ARG:HA	44:2:943:G:C6	2.52	0.44
4:D:289:ARG:O	4:D:293:ARG:CG	2.65	0.44
11:L:143:GLU:CG	11:L:144:LEU:N	2.80	0.44
13:N:184:ILE:HG23	13:N:185:GLY:H	1.83	0.44
13:N:198:LEU:HD23	13:N:200:LEU:HG	2.00	0.44
19:T:81:LYS:HB2	44:2:4264:A:N3	2.32	0.44
19:T:84:ILE:HD11	27:b:24:PRO:CB	2.48	0.44
23:X:100:VAL:O	23:X:134:LYS:HB3	2.18	0.44
24:Y:37:GLU:O	24:Y:41:LYS:HG3	2.18	0.44
25:Z:61:LYS:HA	25:Z:64:LYS:HB3	1.98	0.44
26:a:102:ASP:OD1	26:a:104:VAL:HB	2.16	0.44
29:d:18:ASN:CG	29:d:102:LEU:HD11	2.42	0.44
31:f:57:THR:HB	31:f:65:ASN:H	1.82	0.44
35:j:24:SER:O	35:j:25:LYS:HB3	2.18	0.44
40:o:4:VAL:HG12	44:2:4192:U:C5	2.53	0.44
44:2:240:A:H8	44:2:240:A:P	2.40	0.44
44:2:245:C:C6	44:2:245:C:O5'	2.70	0.44
44:2:362:A:H2'	44:2:363:A:C8	2.52	0.44
44:2:390:G:C6	44:2:391:A:C6	3.06	0.44
44:2:454:A:H2'	44:2:455:G:H8	1.79	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:477:C:H4'	44:2:478:G:C5'	2.47	0.44
44:2:710:G:H2'	44:2:711:A:C5'	2.47	0.44
44:2:724:C:C3'	44:2:725:C:H5''	2.35	0.44
44:2:923:G:H2'	44:2:924:C:H5'	1.97	0.44
44:2:942:G:N2	44:2:1262:G:OP1	2.51	0.44
44:2:1205:U:O2'	44:2:1206:U:P	2.75	0.44
44:2:1645:C:O2	44:2:1667:G:H5''	2.17	0.44
44:2:1667:G:H2'	44:2:1668:G:O4'	2.17	0.44
44:2:1742:C:H3'	44:2:1743:G:C4'	2.47	0.44
44:2:1889:C:H5'	44:2:1895:A:N6	2.33	0.44
44:2:2455:C:OP2	44:2:2456:G:C8	2.61	0.44
44:2:2624:A:C6	44:2:2665:G:O6	2.69	0.44
44:2:2625:G:C2	44:2:2664:U:C4	3.05	0.44
44:2:2663:G:C3'	44:2:2664:U:H4'	2.47	0.44
44:2:2835:A:H2'	44:2:2836:G:O4'	2.17	0.44
44:2:3566:G:N3	44:2:3566:G:C3'	2.76	0.44
44:2:3590:A:C8	44:2:3590:A:OP2	2.70	0.44
44:2:3604:A:H2'	44:2:3605:C:H5''	2.00	0.44
44:2:3617:A:C2	44:2:3754:A:C5	3.06	0.44
44:2:3725:A:N1	44:2:3726:G:C6	2.85	0.44
44:2:3769:A:H5'	44:2:3769:A:H8	1.82	0.44
44:2:3791:U:C2'	44:2:3792:G:H5'	2.47	0.44
44:2:4086:C:H3'	44:2:4086:C:P	2.57	0.44
44:2:4088:G:C4'	44:2:4089:G:OP2	2.65	0.44
44:2:4151:G:H8	44:2:4151:G:H5''	1.83	0.44
44:2:4191:C:H5'	44:2:4194:A:N6	2.33	0.44
44:2:4195:G:H2'	44:2:4196:G:O5'	2.17	0.44
44:2:4222:C:O5'	44:2:4222:C:H6	2.00	0.44
44:2:4479:C:C6	44:2:4479:C:C3'	3.00	0.44
44:2:4520:C:O2	44:2:4520:C:O4'	2.34	0.44
44:2:4624:A:H2'	44:2:4625:A:H8	1.81	0.44
44:2:4648:C:O5'	44:2:4648:C:H6	2.00	0.44
44:2:4824:U:O2	44:2:4824:U:C2'	2.65	0.44
44:2:4862:G:N1	44:2:4868:G:N2	2.63	0.44
46:4:32:A:N1	46:4:41:G:C5	2.85	0.44
3:C:275:SER:O	3:C:276:ASN:CB	2.66	0.44
3:C:316:LYS:HD3	44:2:703:G:H4'	2.00	0.44
4:D:20:PHE:HZ	19:T:24:VAL:O	2.01	0.44
4:D:132:VAL:HG21	4:D:170:GLY:CA	2.42	0.44
6:F:37:PHE:CE1	44:2:1250:A:H4'	2.53	0.44
11:L:21:ARG:O	13:N:197:THR:HG23	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:M:28:VAL:CG1	12:M:67:SER:HA	2.48	0.44
16:Q:13:VAL:HG13	44:2:1670:G:C5	2.51	0.44
17:R:39:GLN:O	17:R:42:ARG:HB3	2.18	0.44
19:T:84:ILE:CD1	27:b:24:PRO:HA	2.48	0.44
21:V:84:GLN:HG3	21:V:86:LYS:H	1.83	0.44
27:b:44:ARG:O	27:b:47:LYS:HB2	2.17	0.44
33:h:71:LYS:HA	33:h:74:LYS:HG3	1.99	0.44
44:2:72:C:H6	44:2:72:C:OP2	1.99	0.44
44:2:79:C:H1'	44:2:329:A:H5'	1.96	0.44
44:2:103:G:H4'	44:2:1360:G:N2	2.32	0.44
44:2:689:G:OP2	44:2:690:U:C5	2.70	0.44
44:2:714:G:H2'	44:2:715:C:H6	1.81	0.44
44:2:1259:A:C4	44:2:1260:C:C5	3.05	0.44
44:2:1428:G:H2'	44:2:1429:C:C6	2.53	0.44
44:2:1457:C:H2'	44:2:1458:G:O4'	2.18	0.44
44:2:1638:U:OP1	44:2:2325:G:N7	2.50	0.44
44:2:1772:A:N3	44:2:1772:A:H2'	2.31	0.44
44:2:1798:G:C8	44:2:1798:G:OP1	2.71	0.44
44:2:2031:C:O5'	44:2:2031:C:H6	2.01	0.44
44:2:2324:A:OP1	44:2:2324:A:C8	2.71	0.44
44:2:2352:A:H3'	44:2:2353:A:C8	2.49	0.44
44:2:2549:C:N1	44:2:2550:A:H8	2.15	0.44
44:2:2719:G:H5''	44:2:2720:A:OP1	2.16	0.44
44:2:2721:A:C2	44:2:2722:A:C4	3.06	0.44
44:2:2878:G:C3'	44:2:2879:G:H5''	2.47	0.44
44:2:4209:G:H2'	44:2:4210:G:C8	2.52	0.44
44:2:4233:A:N7	44:2:4234:A:C6	2.86	0.44
44:2:4456:A:C3'	44:2:4457:U:C5'	2.96	0.44
44:2:4637:U:C4	44:2:4673:G:C2	3.06	0.44
44:2:4717:U:O2	44:2:4718:C:C5	2.71	0.44
44:2:4803:C:C4	44:2:4804:G:C1'	2.90	0.44
44:2:4849:A:H1'	44:2:4850:C:C6	2.53	0.44
45:3:3:A:H3'	45:3:3:A:H8	1.83	0.44
45:3:115:G:H2'	45:3:116:C:C6	2.51	0.44
46:4:109:U:O5'	46:4:109:U:H6	2.00	0.44
1:A:234:LYS:HB3	1:A:238:ILE:HD11	2.00	0.44
2:B:227:GLY:H	2:B:271:GLN:HE22	1.65	0.44
4:D:52:ILE:HG22	4:D:54:ARG:HG2	1.99	0.44
6:F:114:LEU:HA	6:F:119:ASN:HD21	1.82	0.44
6:F:126:ASN:O	6:F:130:ILE:HG13	2.17	0.44
7:G:65:ARG:HH22	45:3:150:C:N4	2.14	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:66:GLU:O	10:J:66:GLU:HG2	2.17	0.44
10:J:101:ASP:OD1	10:J:102:THR:HG23	2.17	0.44
12:M:86:TRP:O	12:M:89:THR:HG22	2.18	0.44
13:N:39:ALA:O	13:N:61:ILE:HB	2.17	0.44
14:O:48:TYR:CG	14:O:51:LYS:HE2	2.53	0.44
14:O:173:GLN:HE21	14:O:177:LEU:HG	1.81	0.44
14:O:176:ARG:HA	14:O:179:LYS:HG2	1.99	0.44
16:Q:11:ARG:HB2	44:2:2061:C:P	2.58	0.44
18:S:13:VAL:HG12	18:S:29:ARG:CB	2.47	0.44
19:T:68:THR:CG2	19:T:69:GLN:N	2.80	0.44
25:Z:1:MET:CB	28:c:68:LYS:HB3	2.47	0.44
25:Z:82:PRO:HG2	28:c:66:LEU:CD1	2.47	0.44
28:c:45:LEU:HG	28:c:104:ILE:HG21	2.00	0.44
32:g:61:PRO:HA	32:g:64:LEU:HD12	1.99	0.44
42:t:122:LYS:HA	42:t:125:MET:CE	2.48	0.44
43:u:74:VAL:CG2	43:u:139:VAL:HA	2.48	0.44
44:2:61:A:C2'	44:2:62:A:H5'	2.48	0.44
44:2:134:G:H3'	44:2:135:G:C4	2.52	0.44
44:2:174:G:C2	44:2:253:C:N4	2.82	0.44
44:2:903:C:C5	44:2:903:C:OP2	2.70	0.44
44:2:946:C:O2'	44:2:947:G:H5'	2.18	0.44
44:2:971:C:H3'	44:2:971:C:H6	1.82	0.44
44:2:1086:A:OP2	46:4:107:G:H4'	2.17	0.44
44:2:1200:G:C8	44:2:1200:G:OP2	2.70	0.44
44:2:1314:A:H8	44:2:1314:A:P	2.41	0.44
44:2:1377:A:C2'	44:2:1400:A:N6	2.78	0.44
44:2:1531:G:C2	44:2:1553:G:N3	2.85	0.44
44:2:1608:G:H21	44:2:1611:A:H62	1.66	0.44
44:2:1770:U:H3'	44:2:1771:U:C6	2.52	0.44
44:2:1773:A:C2	46:4:98:G:N2	2.85	0.44
44:2:1814:G:H3'	44:2:1814:G:N3	2.32	0.44
44:2:1865:G:H3'	44:2:1866:A:H5''	1.99	0.44
44:2:1926:G:OP1	44:2:1926:G:H8	2.01	0.44
44:2:2024:G:H4'	44:2:2025:A:O5'	2.17	0.44
44:2:2061:C:N4	44:2:2249:G:H1	2.13	0.44
44:2:2486:C:H6	44:2:2486:C:C5'	2.19	0.44
44:2:2567:G:C1'	44:2:2732:A:N6	2.81	0.44
44:2:2666:C:H2'	44:2:2667:C:H6	1.81	0.44
44:2:3873:G:O2'	44:2:3874:A:H5''	2.17	0.44
44:2:4017:U:HO2'	44:2:4018:A:P	2.40	0.44
44:2:4036:U:H3'	44:2:4036:U:H6	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4432:G:C4	44:2:4433:A:N7	2.86	0.44
44:2:4498:G:H2'	44:2:4498:G:N3	2.33	0.44
44:2:4587:U:H3'	44:2:4588:U:H6	1.83	0.44
44:2:4622:C:H5''	44:2:4622:C:H6	1.82	0.44
44:2:4803:C:C2'	44:2:4804:G:H4'	2.48	0.44
44:2:4859:G:H2'	44:2:4860:C:H6	1.82	0.44
44:2:4906:G:C2'	44:2:4907:G:H8	2.23	0.44
45:3:64:U:O2	45:3:64:U:H2'	2.17	0.44
46:4:23:A:O2'	46:4:119:U:P	2.75	0.44
46:4:39:C:OP1	46:4:39:C:C6	2.70	0.44
46:4:87:G:H1'	46:4:90:A:H62	1.83	0.44
1:A:193:ARG:NH2	44:2:3654:C:C5'	2.79	0.44
3:C:43:ASN:HD22	3:C:115:VAL:HG22	1.83	0.44
4:D:105:LEU:O	4:D:105:LEU:HD22	2.17	0.44
4:D:257:PRO:O	4:D:258:LYS:CB	2.66	0.44
4:D:274:ALA:CB	44:2:1087:C:OP1	2.66	0.44
4:D:282:GLN:CG	44:2:1158:G:H1'	2.48	0.44
5:E:177:GLY:O	5:E:178:PRO:C	2.59	0.44
7:G:69:ILE:CG2	7:G:73:ARG:NH1	2.81	0.44
7:G:194:VAL:HG11	7:G:199:CYS:SG	2.57	0.44
7:G:248:ALA:HB1	44:2:4058:G:H4'	1.99	0.44
14:O:42:ASN:HA	14:O:136:ALA:O	2.18	0.44
15:P:130:TYR:CG	44:2:2772:A:C5	3.06	0.44
17:R:117:ARG:HD3	44:2:2640:G:H4'	1.98	0.44
19:T:92:ARG:HB3	19:T:95:HIS:CD2	2.52	0.44
20:U:43:LEU:O	20:U:47:ILE:HG13	2.18	0.44
20:U:44:GLN:NE2	20:U:56:LEU:HB3	2.33	0.44
26:a:8:THR:HG21	44:2:1319:U:OP1	2.18	0.44
27:b:47:LYS:HA	27:b:50:ASN:HD22	1.83	0.44
28:c:36:LYS:HG3	28:c:39:ARG:NH2	2.32	0.44
31:f:17:GLY:HA2	44:2:1894:G:N2	2.33	0.44
34:i:57:ALA:O	34:i:60:LEU:HB3	2.17	0.44
35:j:11:ARG:HD2	44:2:1513:A:O2'	2.18	0.44
36:k:8:ILE:O	36:k:11:PHE:HB3	2.16	0.44
43:u:27:LEU:HD21	43:u:198:VAL:CG2	2.48	0.44
43:u:152:ARG:HD3	44:2:3937:U:O3'	2.17	0.44
43:u:155:GLU:H	44:2:3936:G:C2'	2.28	0.44
43:u:156:ARG:CD	44:2:4024:A:C8	2.97	0.44
44:2:52:G:O5'	44:2:52:G:C8	2.71	0.44
44:2:126:C:O5'	44:2:126:C:H6	2.01	0.44
44:2:141:G:H8	44:2:141:G:H5''	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:446:C:O2'	44:2:447:C:H5'	2.17	0.44
44:2:462:A:C4'	44:2:463:C:C5'	2.79	0.44
44:2:649:C:H2'	44:2:650:G:C8	2.52	0.44
44:2:1282:U:H3'	44:2:1284:C:C6	2.53	0.44
44:2:1318:G:C4	44:2:1498:C:O4'	2.70	0.44
44:2:1454:G:C3'	44:2:1455:C:C4'	2.95	0.44
44:2:1525:C:H2'	44:2:1590:C:H42	1.82	0.44
44:2:1648:A:C2	44:2:1830:U:H4'	2.52	0.44
44:2:1714:U:N3	44:2:4174:A:C8	2.86	0.44
44:2:1717:A:O5'	44:2:1717:A:H8	2.01	0.44
44:2:1910:A:H5''	44:2:1910:A:C8	2.45	0.44
44:2:1916:C:H4'	44:2:1917:A:O5'	2.18	0.44
44:2:2313:G:C5	44:2:2314:C:C4	3.05	0.44
44:2:2325:G:P	44:2:2328:C:N4	2.90	0.44
44:2:2517:C:C6	44:2:2517:C:O5'	2.71	0.44
44:2:2521:G:H8	44:2:2521:G:O5'	2.00	0.44
44:2:2560:C:O2	44:2:2560:C:C2'	2.66	0.44
44:2:2567:G:H1'	44:2:2731:G:N2	2.32	0.44
44:2:2742:A:H8	44:2:2742:A:O5'	2.00	0.44
44:2:3580:A:H2'	44:2:3581:C:H6	1.82	0.44
44:2:3751:C:H2'	44:2:3752:A:H5''	1.99	0.44
44:2:4053:A:H3'	44:2:4054:G:C5'	2.48	0.44
44:2:4061:G:O2'	44:2:4062:G:H5'	2.17	0.44
44:2:4153:C:C2'	44:2:4154:U:H5'	2.48	0.44
44:2:4381:C:C3'	44:2:4382:A:H5'	2.47	0.44
44:2:4575:C:H6	44:2:4575:C:O5'	2.00	0.44
44:2:4601:U:H2'	44:2:4602:U:C6	2.52	0.44
44:2:4852:G:H2'	44:2:4853:G:C8	2.51	0.44
45:3:42:G:O6	45:3:102:G:C2	2.71	0.44
45:3:81:C:O2	45:3:81:C:H2'	2.18	0.44
45:3:152:U:H2'	45:3:153:C:H6	1.82	0.44
46:4:66:G:N1	46:4:67:C:C2	2.86	0.44
46:4:69:U:H3	46:4:106:G:H1	1.65	0.44
1:A:204:MET:O	1:A:212:GLY:HA3	2.18	0.44
2:B:55:HIS:ND1	2:B:369:ASP:HB3	2.33	0.44
3:C:29:LYS:HD3	3:C:267:TRP:CZ2	2.53	0.44
3:C:122:TYR:CE2	3:C:280:PRO:HG3	2.53	0.44
4:D:275:GLN:HA	44:2:1166:U:H1'	2.00	0.44
5:E:231:GLU:HG2	5:E:235:THR:HG21	2.00	0.44
5:E:270:TYR:CD1	12:M:107:PHE:HA	2.53	0.44
8:H:25:VAL:O	8:H:35:ARG:HA	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:12:CYS:HB2	9:I:57:TYR:CE2	2.53	0.44
10:J:47:THR:HG22	46:4:39:C:H4'	1.98	0.44
11:L:84:ALA:HA	11:L:118:LYS:HZ1	1.82	0.44
15:P:139:TYR:CZ	44:2:3828:G:H4'	2.53	0.44
17:R:75:HIS:ND1	44:2:2866:G:OP1	2.50	0.44
17:R:132:PHE:HA	17:R:137:ILE:CD1	2.47	0.44
18:S:62:VAL:HG11	19:T:141:VAL:HG21	2.00	0.44
18:S:78:PHE:CE1	18:S:102:THR:HG22	2.53	0.44
23:X:77:ILE:HA	23:X:100:VAL:HG22	1.99	0.44
30:e:16:ARG:HD2	30:e:19:LYS:HD3	2.00	0.44
31:f:60:PRO:O	44:2:4900:G:C6	2.71	0.44
42:t:99:LYS:HB2	42:t:103:ARG:NH2	2.32	0.44
44:2:121:A:C2	44:2:147:U:C4	3.06	0.44
44:2:133:C:OP1	44:2:173:G:H4'	2.17	0.44
44:2:202:C:O5'	44:2:202:C:H6	2.01	0.44
44:2:202:C:H42	44:2:206:U:H5	1.66	0.44
44:2:887:C:H2'	44:2:888:C:C5	2.52	0.44
44:2:947:G:O2'	44:2:948:A:H5'	2.18	0.44
44:2:1089:C:H2'	44:2:1090:C:H6	1.81	0.44
44:2:1358:C:O2	44:2:1358:C:H3'	2.18	0.44
44:2:1429:C:C5	44:2:1429:C:OP2	2.71	0.44
44:2:1454:G:C5	44:2:1455:C:H1'	2.52	0.44
44:2:2019:A:C4	44:2:4424:A:C2	3.06	0.44
44:2:2032:U:O2'	44:2:2033:G:C5'	2.62	0.44
44:2:2283:A:C2	44:2:2284:A:O4'	2.69	0.44
44:2:3640:G:H3'	44:2:3641:G:H8	1.83	0.44
44:2:3686:A:C6	44:2:3705:A:C6	3.06	0.44
44:2:3724:G:N3	44:2:3725:A:C8	2.85	0.44
44:2:3728:A:N7	44:2:3734:G:C6	2.85	0.44
44:2:3770:U:C5'	44:2:4456:A:C2	3.01	0.44
44:2:3799:A:H5''	44:2:3800:U:OP2	2.18	0.44
44:2:4037:U:C5	44:2:4038:U:C4	3.01	0.44
44:2:4129:G:H4'	44:2:4131:C:C2	2.53	0.44
44:2:4239:A:H4'	44:2:4240:A:C5'	2.48	0.44
44:2:4294:U:C6	44:2:4294:U:H3'	2.52	0.44
44:2:4397:U:OP2	44:2:4397:U:H4'	2.17	0.44
44:2:4401:A:C8	44:2:4401:A:OP2	2.71	0.44
44:2:4681:G:N3	44:2:4681:G:C2'	2.80	0.44
44:2:4689:C:C5'	44:2:4690:G:C8	3.00	0.44
44:2:4699:G:C4'	44:2:4700:C:OP1	2.65	0.44
44:2:4891:G:H2'	44:2:4892:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:3:27:U:H6	45:3:27:U:O5'	2.00	0.44
1:A:34:PHE:CG	1:A:35:ALA:N	2.86	0.44
1:A:116:LEU:HD23	1:A:116:LEU:H	1.83	0.44
2:B:229:LYS:HD2	2:B:233:SER:CB	2.47	0.44
3:C:77:PRO:HD3	44:2:1501:G:OP1	2.17	0.44
3:C:110:ARG:HB2	13:N:204:ARG:NH1	2.32	0.44
3:C:133:LEU:HB2	3:C:136:LEU:CD1	2.48	0.44
4:D:41:LYS:NZ	19:T:34:TYR:HB2	2.33	0.44
4:D:145:TYR:CE1	44:2:4285:A:C5'	2.98	0.44
4:D:278:ASP:OD2	44:2:1166:U:H5'	2.18	0.44
5:E:172:LEU:HD21	44:2:4896:G:H4'	1.99	0.44
5:E:255:SER:O	5:E:259:PRO:HD2	2.18	0.44
6:F:69:ILE:HD12	44:2:716:U:H4'	1.99	0.44
8:H:173:ARG:HD2	38:m:127:VAL:HG22	2.00	0.44
11:L:145:LYS:HE2	33:h:122:LYS:HD3	1.99	0.44
11:L:198:ARG:O	11:L:202:ALA:HB3	2.17	0.44
13:N:92:LEU:H	13:N:92:LEU:HD12	1.82	0.44
16:Q:91:ARG:HG3	26:a:76:ASP:OD2	2.18	0.44
16:Q:187:LYS:NZ	44:2:1474:G:H5''	2.33	0.44
21:V:29:ALA:HB2	21:V:83:ARG:HH22	1.83	0.44
23:X:127:LEU:HB3	44:2:2414:C:H4'	2.00	0.44
24:Y:122:LYS:HG2	44:2:194:A:P	2.58	0.44
43:u:34:LEU:C	43:u:34:LEU:HD13	2.42	0.44
44:2:119:G:O4'	44:2:120:A:C8	2.71	0.44
44:2:287:A:C2	44:2:307:U:C4'	3.01	0.44
44:2:411:A:H2'	44:2:412:C:O4'	2.18	0.44
44:2:944:A:OP2	44:2:945:G:H5''	2.18	0.44
44:2:1052:C:H5'	44:2:1053:G:OP2	2.17	0.44
44:2:1079:C:O3'	44:2:1083:C:H1'	2.18	0.44
44:2:1164:A:C2	44:2:1165:G:C5	3.06	0.44
44:2:1383:G:H2'	44:2:1384:G:H8	1.83	0.44
44:2:1643:U:H2'	44:2:1644:C:H6	1.83	0.44
44:2:1732:G:H2'	44:2:1734:C:OP2	2.18	0.44
44:2:2304:G:H2'	44:2:2305:U:C5'	2.39	0.44
44:2:2870:U:H2'	44:2:2871:A:C8	2.53	0.44
44:2:3625:A:O4'	44:2:3716:A:C2	2.71	0.44
44:2:3725:A:H2'	44:2:3726:G:H5'	1.95	0.44
44:2:3741:U:H2'	44:2:3742:U:C5	2.49	0.44
44:2:3837:G:OP2	44:2:3837:G:C8	2.71	0.44
44:2:3894:U:C4	44:2:3895:C:C5	3.05	0.44
44:2:3945:C:C6	44:2:3945:C:O5'	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4038:U:H2'	44:2:4039:U:C6	2.53	0.44
44:2:4100:C:H2'	44:2:4101:C:C6	2.52	0.44
44:2:4378:G:H2'	44:2:4435:G:N2	2.33	0.44
44:2:4533:G:C6	44:2:4681:G:O6	2.71	0.44
44:2:4567:A:C8	44:2:4568:G:O4'	2.71	0.44
44:2:4697:C:C2	44:2:4698:C:C5	3.06	0.44
44:2:4851:G:N2	44:2:4882:G:H8	2.15	0.44
45:3:125:C:O2	45:3:125:C:H2'	2.17	0.44
1:A:198:ARG:O	44:2:3620:A:OP1	2.36	0.43
1:A:242:ARG:NH1	1:A:246:LEU:HD23	2.33	0.43
2:B:301:ASN:CG	2:B:311:ASP:HA	2.43	0.43
3:C:74:ALA:C	3:C:76:ILE:N	2.76	0.43
3:C:93:GLY:HA2	3:C:100:ARG:NH1	2.32	0.43
6:F:132:MET:HE3	44:2:1705:U:H1'	1.99	0.43
8:H:110:SER:HB2	8:H:128:MET:HB2	2.00	0.43
11:L:161:TYR:O	11:L:162:LYS:HB2	2.18	0.43
12:M:31:ILE:HD13	18:S:100:LEU:CD1	2.38	0.43
15:P:129:THR:HG21	44:2:2398:G:N2	2.34	0.43
16:Q:36:ALA:HB1	16:Q:45:GLN:NE2	2.33	0.43
19:T:80:VAL:O	19:T:81:LYS:HB3	2.18	0.43
19:T:126:VAL:O	19:T:127:GLN:HB2	2.17	0.43
22:W:13:ILE:HG12	22:W:32:LEU:HB2	1.99	0.43
29:d:94:GLU:O	29:d:95:ASP:HB2	2.18	0.43
31:f:6:TRP:CE3	31:f:102:ARG:HB2	2.52	0.43
43:u:32:ARG:HB3	43:u:196:ASP:OD1	2.17	0.43
43:u:62:PHE:HE1	43:u:81:GLU:HA	1.81	0.43
44:2:178:C:OP2	44:2:179:G:C5'	2.66	0.43
44:2:384:U:C2	44:2:385:G:H1'	2.53	0.43
44:2:693:G:H2'	44:2:694:C:C6	2.52	0.43
44:2:901:A:C8	44:2:901:A:C3'	3.00	0.43
44:2:973:U:H1'	44:2:974:C:P	2.58	0.43
44:2:1082:U:O2	44:2:1082:U:H2'	2.18	0.43
44:2:1180:G:H8	44:2:1180:G:O5'	2.00	0.43
44:2:1204:G:OP1	44:2:1211:C:C5	2.71	0.43
44:2:1209:C:H2'	44:2:1210:U:OP2	2.18	0.43
44:2:1270:G:H3'	44:2:1271:G:H8	1.83	0.43
44:2:1279:G:H8	44:2:1279:G:O5'	2.00	0.43
44:2:1425:U:H2'	44:2:1426:C:C5	2.53	0.43
44:2:1467:G:H2'	44:2:1468:G:O4'	2.18	0.43
44:2:1912:A:C5	44:2:2026:U:C2	3.06	0.43
44:2:2032:U:H1'	44:2:2034:G:C5	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2430:A:N6	44:2:2484:A:H2	2.05	0.43
44:2:2476:C:H2'	44:2:2477:U:H6	1.83	0.43
44:2:2778:U:H2'	44:2:2779:C:C5	2.53	0.43
44:2:3686:A:N7	44:2:3705:A:N6	2.65	0.43
44:2:3686:A:C5	44:2:3705:A:C6	3.06	0.43
44:2:3694:G:H5'	44:2:3695:A:OP2	2.17	0.43
44:2:4063:G:O2'	44:2:4064:C:H5'	2.17	0.43
44:2:4130:A:C1'	44:2:4131:C:OP2	2.66	0.43
44:2:4250:U:H4'	44:2:4251:G:OP1	2.17	0.43
44:2:4292:C:C6	44:2:4292:C:O5'	2.71	0.43
44:2:4345:A:H4'	44:2:4346:C:C5'	2.48	0.43
44:2:4621:G:H2'	44:2:4622:C:H5''	1.99	0.43
44:2:4636:G:C4'	44:2:4637:U:OP1	2.65	0.43
44:2:4658:C:O2'	44:2:4659:U:C6	2.69	0.43
44:2:4689:C:C5	44:2:4690:G:O6	2.71	0.43
44:2:4882:G:N2	44:2:4883:C:N1	2.66	0.43
44:2:4949:G:C2	44:2:5013:A:C2	3.05	0.43
44:2:4958:U:H2'	44:2:4959:C:O4'	2.18	0.43
1:A:226:ARG:HG2	44:2:3676:U:P	2.58	0.43
3:C:161:TYR:HB3	3:C:166:GLU:OE2	2.18	0.43
5:E:205:ASN:HB2	5:E:256:GLN:HB2	2.00	0.43
6:F:66:ARG:HA	6:F:69:ILE:HG12	1.99	0.43
6:F:142:TRP:CE2	6:F:235:ASN:HB2	2.54	0.43
6:F:154:ILE:HG13	6:F:191:ILE:CD1	2.48	0.43
8:H:173:ARG:HD2	38:m:127:VAL:CA	2.47	0.43
9:I:62:SER:CB	9:I:93:PRO:HG3	2.48	0.43
10:J:98:ASN:CG	44:2:4210:G:H5'	2.43	0.43
12:M:91:TRP:NE1	12:M:95:ILE:HD11	2.32	0.43
14:O:52:LEU:HD21	44:2:1909:C:H5''	1.99	0.43
15:P:25:HIS:CE1	15:P:27:LYS:HB2	2.53	0.43
19:T:129:LYS:HB2	19:T:131:GLN:HE22	1.83	0.43
24:Y:100:HIS:CD2	44:2:228:U:H4'	2.52	0.43
25:Z:81:MET:HE1	32:g:92:LYS:HG2	2.00	0.43
25:Z:82:PRO:O	28:c:62:TYR:HE2	2.01	0.43
26:a:13:GLY:H	44:2:1639:U:H3'	1.83	0.43
27:b:58:GLN:HG3	44:2:1791:C:H1'	1.97	0.43
33:h:44:LEU:O	33:h:44:LEU:HG	2.17	0.43
34:i:60:LEU:HD12	34:i:69:ALA:HB2	2.00	0.43
37:l:3:SER:OG	44:2:2762:C:N4	2.51	0.43
41:p:46:LYS:HB2	41:p:57:CYS:SG	2.58	0.43
43:u:59:ILE:CD1	43:u:145:MET:HB3	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:u:84:LEU:HD11	43:u:118:LEU:CD2	2.41	0.43
44:2:193:C:O2	44:2:193:C:C3'	2.66	0.43
44:2:209:A:H8	44:2:209:A:O5'	2.01	0.43
44:2:365:G:C2'	44:2:366:G:H5''	2.42	0.43
44:2:676:G:O3'	44:2:677:C:C5	2.72	0.43
44:2:924:C:C2'	44:2:925:C:H5''	2.48	0.43
44:2:1075:A:C4	44:2:1076:C:C5	3.05	0.43
44:2:1180:G:C8	44:2:1180:G:O5'	2.71	0.43
44:2:1270:G:P	44:2:4895:C:H41	2.40	0.43
44:2:1280:G:N2	44:2:1281:C:H41	2.17	0.43
44:2:1307:C:H2'	44:2:1307:C:O2	2.17	0.43
44:2:1438:A:C6	44:2:1439:C:C4	3.06	0.43
44:2:1457:C:C2'	44:2:1458:G:H8	2.29	0.43
44:2:1646:G:H8	44:2:1646:G:O5'	2.02	0.43
44:2:2441:C:C2'	44:2:2442:C:H5'	2.47	0.43
44:2:2687:C:H3'	44:2:2688:G:H8	1.81	0.43
44:2:3678:U:C2'	44:2:3679:G:H5'	2.45	0.43
44:2:3714:U:O5'	44:2:3714:U:C6	2.70	0.43
44:2:3923:A:O5'	44:2:3923:A:C8	2.71	0.43
44:2:4032:C:C3'	44:2:4033:G:H4'	2.49	0.43
44:2:4151:G:C8	44:2:4151:G:C5'	3.01	0.43
44:2:4195:G:H2'	44:2:4196:G:C5'	2.48	0.43
44:2:4195:G:C4	44:2:4196:G:C8	3.06	0.43
44:2:4262:U:C3'	44:2:4262:U:C6	3.01	0.43
44:2:4399:U:H2'	44:2:4400:G:C5'	2.44	0.43
44:2:4832:G:H2'	44:2:4833:C:C6	2.53	0.43
46:4:75:G:P	46:4:75:G:O4'	2.75	0.43
2:B:136:LYS:HB3	2:B:146:LEU:HD21	2.00	0.43
3:C:96:CYS:SG	44:2:2329:U:H4'	2.59	0.43
3:C:100:ARG:CZ	44:2:1629:A:C2	3.01	0.43
3:C:303:ARG:NH1	16:Q:40:ASN:HD22	2.16	0.43
3:C:311:ARG:HA	44:2:943:G:O6	2.19	0.43
4:D:205:ALA:O	4:D:233:PRO:HB3	2.18	0.43
4:D:291:GLN:NE2	9:I:210:ARG:NH2	2.66	0.43
5:E:164:PHE:HE1	5:E:173:LEU:HD22	1.83	0.43
7:G:52:THR:HG21	23:X:38:LYS:HD2	1.99	0.43
10:J:108:GLY:HA3	44:2:4211:A:C4'	2.48	0.43
11:L:59:VAL:CG1	44:2:74:G:O5'	2.66	0.43
12:M:67:SER:HB3	44:2:735:A:H2	1.83	0.43
14:O:172:LYS:CE	14:O:176:ARG:HH12	2.30	0.43
15:P:57:CYS:HB2	15:P:82:ARG:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:Q:75:ARG:NH1	44:2:1435:G:N2	2.67	0.43
16:Q:88:ASP:HB2	16:Q:109:ALA:N	2.32	0.43
17:R:12:SER:HB3	17:R:19:LYS:HG2	2.01	0.43
19:T:130:ARG:O	44:2:1815:A:C1'	2.66	0.43
21:V:109:LYS:HB2	21:V:111:GLU:OE1	2.18	0.43
23:X:48:ARG:HB2	44:2:2449:A:O3'	2.18	0.43
23:X:106:LYS:HG3	44:2:2756:C:OP1	2.17	0.43
25:Z:36:ARG:C	25:Z:38:TYR:H	2.25	0.43
31:f:11:PHE:HB2	31:f:101:ILE:HD13	1.99	0.43
31:f:41:PHE:CE1	31:f:110:ILE:HD11	2.50	0.43
43:u:175:ASP:O	43:u:178:ASP:HB3	2.18	0.43
44:2:12:A:H2	44:2:14:C:N4	2.14	0.43
44:2:180:C:H4'	44:2:182:C:H1'	1.98	0.43
44:2:282:U:O2	44:2:288:U:C2	2.72	0.43
44:2:451:C:O5'	44:2:451:C:C6	2.71	0.43
44:2:1147:C:N4	44:2:1176:G:O2'	2.51	0.43
44:2:1196:C:H5	44:2:1239:G:C5'	2.22	0.43
44:2:1249:G:N2	44:2:1250:A:H1'	2.34	0.43
44:2:1305:C:C5	44:2:3847:C:O3'	2.70	0.43
44:2:1568:C:C2'	44:2:1569:C:H5'	2.48	0.43
44:2:1634:C:H2'	44:2:1635:U:H5''	1.99	0.43
44:2:1804:A:C3'	44:2:1805:G:C8	2.94	0.43
44:2:2306:G:N3	44:2:2306:G:C2'	2.80	0.43
44:2:2350:C:HO2'	44:2:2351:A:H5'	1.83	0.43
44:2:2432:G:H1'	44:2:2448:G:OP1	2.18	0.43
44:2:2479:G:C8	44:2:2479:G:C3'	3.01	0.43
44:2:2548:C:C6	44:2:2548:C:C5'	3.01	0.43
44:2:2604:C:H42	44:2:4609:G:H22	1.61	0.43
44:2:2629:G:C5	44:2:2630:C:H1'	2.53	0.43
44:2:2740:U:H4'	44:2:2741:A:OP1	2.15	0.43
44:2:2837:C:H2'	44:2:2838:C:O5'	2.19	0.43
44:2:3909:U:H2'	44:2:3910:G:H8	1.83	0.43
44:2:4142:G:C8	44:2:4142:G:C3'	3.02	0.43
44:2:4919:C:O5'	44:2:4919:C:H6	2.01	0.43
46:4:73:U:H5''	46:4:74:A:H2'	1.98	0.43
1:A:227:ARG:HE	1:A:239:ALA:CB	2.31	0.43
2:B:19:ARG:HB2	2:B:234:ARG:NH1	2.33	0.43
2:B:301:ASN:HA	2:B:312:LYS:O	2.18	0.43
3:C:48:ASN:HB2	3:C:49:ARG:CZ	2.48	0.43
3:C:195:LYS:HB3	3:C:200:ARG:CZ	2.48	0.43
3:C:197:ARG:NH2	44:2:341:C:H2'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:90:VAL:HG11	4:D:225:GLN:HB3	2.01	0.43
7:G:32:PHE:HE1	25:Z:54:THR:C	2.27	0.43
7:G:57:TRP:HB3	7:G:61:ILE:HB	2.00	0.43
8:H:173:ARG:HG3	38:m:127:VAL:HG22	1.99	0.43
9:I:49:CYS:HB3	9:I:168:SER:HB3	2.00	0.43
9:I:77:VAL:HG23	9:I:82:LYS:HA	2.00	0.43
11:L:163:LYS:O	11:L:163:LYS:HD2	2.19	0.43
16:Q:48:LEU:O	16:Q:48:LEU:HD22	2.19	0.43
18:S:27:LEU:HD12	19:T:146:LYS:HE2	2.00	0.43
19:T:104:SER:O	19:T:108:ARG:HB2	2.17	0.43
24:Y:47:MET:SD	24:Y:48:PRO:O	2.76	0.43
26:a:62:HIS:CG	26:a:62:HIS:O	2.70	0.43
34:i:33:LEU:O	34:i:34:THR:CB	2.66	0.43
35:j:47:TYR:HB3	35:j:49:TRP:CD1	2.53	0.43
36:k:25:ILE:O	36:k:68:GLU:HA	2.17	0.43
40:o:68:LEU:HD11	40:o:85:ILE:HD11	1.99	0.43
43:u:88:GLY:HA2	43:u:117:TYR:CD1	2.53	0.43
44:2:43:U:H2'	44:2:44:A:O4'	2.18	0.43
44:2:131:C:H2'	44:2:138:C:N4	2.31	0.43
44:2:134:G:P	44:2:135:G:H1	2.41	0.43
44:2:135:G:H2'	44:2:136:G:C8	2.54	0.43
44:2:181:U:H3	44:2:247:G:H1	1.64	0.43
44:2:210:G:O5'	44:2:210:G:H8	2.00	0.43
44:2:923:G:H2'	44:2:924:C:C5'	2.49	0.43
44:2:949:G:N7	44:2:950:A:C1'	2.78	0.43
44:2:961:C:H2'	44:2:961:C:O2	2.18	0.43
44:2:1193:G:OP1	44:2:1194:C:H5'	2.17	0.43
44:2:1249:G:H8	44:2:1249:G:C5'	2.25	0.43
44:2:1360:G:C1'	44:2:1361:U:P	3.06	0.43
44:2:1372:A:O2'	44:2:1373:G:H5'	2.19	0.43
44:2:1575:U:H3'	44:2:1575:U:C6	2.53	0.43
44:2:1587:G:C6	44:2:1588:U:C4	3.07	0.43
44:2:1773:A:H5''	44:2:4174:A:N6	2.33	0.43
44:2:1791:C:O5'	44:2:1791:C:H6	2.01	0.43
44:2:1926:G:H8	44:2:1926:G:O5'	2.01	0.43
44:2:2397:A:H3'	44:2:2398:G:O4'	2.18	0.43
44:2:2457:G:C2'	44:2:2458:G:H5'	2.47	0.43
44:2:2546:G:C2'	44:2:2547:U:H5'	2.48	0.43
44:2:2591:C:H4'	44:2:2784:A:O3'	2.19	0.43
44:2:2754:G:H8	44:2:2754:G:O5'	2.01	0.43
44:2:3635:C:H5''	44:2:3636:C:OP2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:3757:C:H1'	44:2:3781:C:C2	2.53	0.43
44:2:3790:A:H2'	44:2:3791:U:O4'	2.17	0.43
44:2:3841:A:H2'	44:2:3842:G:H5'	2.00	0.43
44:2:4081:C:H2'	44:2:4117:A:N6	2.34	0.43
44:2:4128:G:C2'	44:2:4129:G:H5'	2.48	0.43
44:2:4600:C:H2'	44:2:4600:C:O2	2.19	0.43
44:2:4648:C:H2'	44:2:4649:U:H6	1.82	0.43
44:2:4737:C:H1'	44:2:4813:C:H42	1.82	0.43
44:2:4823:G:H5'	44:2:4825:G:N1	2.34	0.43
45:3:58:G:O5'	45:3:97:A:C2	2.72	0.43
46:4:48:G:C2'	46:4:48:G:N3	2.80	0.43
4:D:158:LYS:HD3	46:4:46:C:H5'	1.98	0.43
4:D:272:SER:HB3	44:2:1167:G:C4'	2.48	0.43
7:G:250:ILE:O	7:G:254:GLU:N	2.48	0.43
8:H:86:LEU:HB3	8:H:186:THR:HB	2.01	0.43
11:L:35:ARG:HG3	44:2:328:U:OP1	2.19	0.43
12:M:104:MET:CE	14:O:198:THR:HB	2.49	0.43
15:P:2:VAL:O	15:P:3:ARG:CB	2.66	0.43
17:R:119:MET:HE1	17:R:146:LYS:HA	2.01	0.43
19:T:4:THR:HG23	44:2:4167:C:C6	2.53	0.43
19:T:17:ARG:O	19:T:18:PRO:O	2.36	0.43
19:T:19:PHE:CE1	19:T:20:ARG:HG3	2.54	0.43
25:Z:58:GLY:O	25:Z:61:LYS:N	2.50	0.43
34:i:75:LYS:HD3	44:2:3689:G:OP1	2.18	0.43
44:2:119:G:H4'	44:2:120:A:C8	2.54	0.43
44:2:190:G:C8	44:2:190:G:O5'	2.72	0.43
44:2:298:A:C8	44:2:298:A:C3'	3.02	0.43
44:2:416:U:O2'	44:2:417:A:H5'	2.18	0.43
44:2:457:A:H2'	44:2:458:U:H5''	1.95	0.43
44:2:724:C:C2	44:2:725:C:O4'	2.71	0.43
44:2:959:C:O2'	44:2:960:G:P	2.77	0.43
44:2:1193:G:O4'	44:2:1195:C:N4	2.52	0.43
44:2:1218:A:C4'	44:2:1219:C:OP1	2.67	0.43
44:2:1532:A:C8	44:2:1532:A:OP2	2.71	0.43
44:2:1798:G:OP1	44:2:1798:G:H8	2.01	0.43
44:2:2019:A:H2'	44:2:4424:A:C2	2.54	0.43
44:2:2304:G:N2	44:2:2305:U:H1'	2.33	0.43
44:2:2836:G:O2'	44:2:2837:C:H5'	2.18	0.43
44:2:3894:U:H2'	44:2:3895:C:O4'	2.19	0.43
44:2:4026:U:H2'	44:2:4027:C:H6	1.78	0.43
44:2:4037:U:C6	44:2:4037:U:C3'	3.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4294:U:H3'	44:2:4294:U:H6	1.83	0.43
44:2:4411:G:O5'	44:2:4411:G:C8	2.64	0.43
44:2:4638:G:C2	44:2:4673:G:H1'	2.53	0.43
45:3:137:A:C2	45:3:138:C:N1	2.86	0.43
2:B:370:THR:HG23	2:B:370:THR:O	2.18	0.43
3:C:140:LYS:NZ	3:C:242:PRO:HD2	2.34	0.43
3:C:214:ASP:CG	44:2:185:G:N1	2.77	0.43
3:C:270:ALA:CB	3:C:276:ASN:HA	2.39	0.43
3:C:346:ASN:O	3:C:350:ARG:N	2.46	0.43
5:E:168:LEU:HD23	5:E:172:LEU:HD11	1.99	0.43
6:F:150:VAL:O	6:F:154:ILE:HG12	2.18	0.43
7:G:110:LYS:NZ	44:2:122:U:OP2	2.50	0.43
7:G:128:VAL:HG12	44:2:119:G:N2	2.33	0.43
9:I:185:VAL:C	9:I:187:GLU:N	2.76	0.43
10:J:47:THR:HG23	46:4:39:C:C4'	2.49	0.43
10:J:47:THR:O	46:4:39:C:H1'	2.18	0.43
12:M:28:VAL:HG12	12:M:67:SER:HA	2.00	0.43
12:M:118:MET:HG2	44:2:4884:C:H1'	2.01	0.43
18:S:173:ASN:HB3	44:2:4722:U:C4	2.54	0.43
19:T:84:ILE:HD11	27:b:24:PRO:CA	2.49	0.43
21:V:65:VAL:HG21	21:V:72:LEU:HG	2.01	0.43
25:Z:89:ILE:HG12	25:Z:93:LYS:HE2	2.00	0.43
31:f:104:MET:HG3	31:f:106:TYR:HD1	1.77	0.43
43:u:156:ARG:HE	44:2:3935:A:N1	1.49	0.43
44:2:21:G:O4'	45:3:103:A:H1'	2.19	0.43
44:2:241:G:C8	44:2:241:G:O5'	2.71	0.43
44:2:283:G:C6	44:2:284:G:O6	2.72	0.43
44:2:303:G:C2'	44:2:304:U:H5'	2.47	0.43
44:2:378:G:N3	44:2:403:G:C2	2.86	0.43
44:2:408:G:N2	45:3:16:G:C4	2.86	0.43
44:2:501:U:O2'	44:2:502:C:H5'	2.18	0.43
44:2:968:C:O3'	44:2:969:C:H4'	2.17	0.43
44:2:1015:C:O2'	44:2:1016:C:H5'	2.19	0.43
44:2:1220:G:C2'	44:2:1221:C:O5'	2.66	0.43
44:2:1220:G:N9	44:2:1221:C:C4	2.86	0.43
44:2:1282:U:H2'	44:2:1284:C:C6	2.54	0.43
44:2:1542:A:C8	44:2:1542:A:OP2	2.72	0.43
44:2:1708:A:O2'	44:2:1709:U:H5'	2.18	0.43
44:2:1773:A:OP1	44:2:1773:A:H4'	2.18	0.43
44:2:1832:G:H4'	44:2:1832:G:OP2	2.19	0.43
44:2:1934:A:N1	44:2:1935:U:C2	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2312:C:H2'	44:2:2313:G:C8	2.52	0.43
44:2:2491:G:C2'	44:2:2492:G:H5'	2.49	0.43
44:2:2652:G:H8	44:2:2652:G:O5'	2.01	0.43
44:2:2665:G:C8	44:2:2665:G:C5'	3.01	0.43
44:2:3581:C:H2'	44:2:3582:U:O4'	2.19	0.43
44:2:3753:A:H4'	44:2:3754:A:OP1	2.19	0.43
44:2:3792:G:H21	44:2:3793:A:N6	2.17	0.43
44:2:3915:G:H1	44:2:4035:U:H3	1.67	0.43
44:2:4467:A:H5''	44:2:4467:A:H8	1.83	0.43
44:2:4490:U:H2'	44:2:4491:U:H2'	2.01	0.43
44:2:4529:U:H3'	44:2:4530:G:C5'	2.47	0.43
45:3:67:U:H2'	45:3:68:G:H8	1.83	0.43
46:4:26:C:O5'	46:4:26:C:C6	2.68	0.43
46:4:75:G:H4'	46:4:76:U:OP2	2.17	0.43
46:4:75:G:C4'	46:4:76:U:OP2	2.66	0.43
1:A:3:ARG:HG2	1:A:4:VAL:N	2.33	0.43
2:B:298:LEU:HB3	2:B:299:ILE:H	1.68	0.43
3:C:347:HIS:O	3:C:351:VAL:HG23	2.19	0.43
5:E:220:LYS:HE3	5:E:235:THR:OG1	2.18	0.43
6:F:48:LYS:HB2	44:2:1220:G:O5'	2.19	0.43
7:G:65:ARG:CZ	45:3:150:C:N4	2.82	0.43
14:O:114:LYS:CA	44:2:4717:U:H6	2.31	0.43
16:Q:166:TYR:OH	44:2:1325:A:H5''	2.18	0.43
17:R:23:TRP:CH2	17:R:25:ASP:HB3	2.53	0.43
19:T:7:LYS:HB2	44:2:4294:U:C4'	2.41	0.43
21:V:26:ILE:HD13	21:V:39:ILE:HD11	2.00	0.43
24:Y:113:LYS:N	45:3:84:A:H62	2.16	0.43
25:Z:9:LYS:NZ	28:c:66:LEU:HD22	2.34	0.43
32:g:84:ALA:O	32:g:87:VAL:HB	2.18	0.43
32:g:99:GLU:O	32:g:103:VAL:HG23	2.19	0.43
36:k:12:LEU:O	36:k:16:ARG:HG2	2.19	0.43
44:2:241:G:C8	44:2:241:G:P	3.12	0.43
44:2:304:U:O5'	44:2:304:U:C6	2.70	0.43
44:2:339:G:N2	45:3:27:U:C2	2.87	0.43
44:2:441:G:C4	44:2:1274:A:H4'	2.53	0.43
44:2:692:C:O5'	44:2:692:C:H6	2.01	0.43
44:2:718:G:N2	44:2:721:A:H61	2.16	0.43
44:2:744:G:H2'	44:2:745:G:O4'	2.18	0.43
44:2:943:G:H5'	44:2:1262:G:H5'	2.01	0.43
44:2:946:C:H2'	44:2:947:G:H8	1.84	0.43
44:2:965:C:C6	44:2:965:C:C4'	3.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1340:G:H2'	44:2:1341:G:H5'	1.99	0.43
44:2:1397:C:H2'	44:2:1398:C:C5	2.51	0.43
44:2:1412:G:N2	44:2:1432:A:H2	2.16	0.43
44:2:1489:G:P	44:2:1489:G:H8	2.42	0.43
44:2:2061:C:H5	44:2:2249:G:N2	2.17	0.43
44:2:2371:G:H2'	44:2:2371:G:N3	2.33	0.43
44:2:2432:G:N2	44:2:2451:G:OP2	2.52	0.43
44:2:2549:C:C2	44:2:2550:A:C8	3.07	0.43
44:2:2746:U:C2'	44:2:2747:C:O5'	2.67	0.43
44:2:3618:A:C2	44:2:3619:C:C6	3.07	0.43
44:2:3877:A:H5'	44:2:3877:A:H8	1.84	0.43
44:2:4005:C:C2'	44:2:4006:C:H5'	2.48	0.43
44:2:4224:G:C2'	44:2:4227:G:O6	2.67	0.43
44:2:4285:A:H8	44:2:4285:A:O5'	2.02	0.43
44:2:4377:C:C5'	44:2:4377:C:C6	3.01	0.43
44:2:4435:G:OP2	44:2:4436:C:H5'	2.19	0.43
44:2:4731:C:H6	44:2:4731:C:O5'	2.01	0.43
44:2:4736:C:H1'	44:2:4815:G:N2	2.33	0.43
44:2:5006:C:H2'	44:2:5007:C:O4'	2.19	0.43
45:3:6:C:C6	45:3:6:C:C3'	3.02	0.43
46:4:65:G:C8	46:4:65:G:OP2	2.72	0.43
46:4:71:G:N2	46:4:105:C:C2	2.87	0.43
1:A:117:GLU:OE1	1:A:120:PRO:HA	2.19	0.43
2:B:2:SER:O	2:B:3:HIS:HB3	2.18	0.43
2:B:72:VAL:HG13	21:V:91:LYS:O	2.19	0.43
2:B:77:THR:HG23	2:B:336:CYS:HA	2.01	0.43
2:B:318:GLY:HA2	44:2:4955:G:H21	1.84	0.43
2:B:356:LYS:O	2:B:357:ARG:CB	2.67	0.43
3:C:49:ARG:CZ	44:2:340:A:N7	2.82	0.43
4:D:94:ASN:HB3	46:4:47:G:C5'	2.48	0.43
4:D:193:GLU:O	4:D:196:ARG:HB3	2.19	0.43
5:E:283:PRO:HB3	31:f:105:LEU:HD21	2.00	0.43
7:G:164:ILE:HG22	7:G:168:VAL:HG13	2.00	0.43
8:H:176:LEU:HD22	38:m:90:ASN:HD22	1.83	0.43
9:I:86:HIS:ND1	9:I:173:PHE:HE2	2.17	0.43
11:L:136:LYS:HA	11:L:136:LYS:HD2	1.81	0.43
14:O:141:LEU:O	14:O:145:VAL:HG23	2.18	0.43
15:P:25:HIS:CG	44:2:2338:G:C5	3.07	0.43
15:P:45:THR:HG23	15:P:92:LEU:CD1	2.49	0.43
20:U:81:ARG:HB3	20:U:81:ARG:NH1	2.34	0.43
24:Y:118:ILE:HD13	45:3:70:G:OP2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Z:1:MET:HA	28:c:67:ALA:C	2.44	0.43
25:Z:9:LYS:HE3	25:Z:83:THR:N	2.34	0.43
25:Z:36:ARG:HH22	25:Z:98:LYS:HD3	1.82	0.43
25:Z:66:SER:O	25:Z:68:ILE:HG13	2.19	0.43
26:a:64:LYS:HE3	26:a:67:GLN:NE2	2.33	0.43
30:e:14:LYS:O	30:e:15:LYS:HB2	2.19	0.43
31:f:60:PRO:HD2	31:f:62:GLY:O	2.19	0.43
31:f:106:TYR:CB	31:f:107:PRO:HD2	2.48	0.43
32:g:94:ALA:HA	44:2:4089:G:C6	2.54	0.43
37:l:13:LEU:HD22	44:2:2384:G:C5	2.53	0.43
43:u:157:ARG:O	44:2:4023:U:C1'	2.66	0.43
44:2:42:A:OP1	44:2:42:A:H4'	2.19	0.43
44:2:235:C:H5'	44:2:235:C:C6	2.53	0.43
44:2:304:U:OP2	44:2:304:U:H5	2.02	0.43
44:2:384:U:H2'	44:2:385:G:O3'	2.19	0.43
44:2:397:C:C4	44:2:398:A:N6	2.87	0.43
44:2:459:U:O2	44:2:459:U:C3'	2.67	0.43
44:2:717:G:H2'	44:2:718:G:H5'	2.01	0.43
44:2:910:G:C2'	44:2:911:G:H5'	2.48	0.43
44:2:924:C:C2'	44:2:925:C:C4'	2.90	0.43
44:2:1083:C:C3'	44:2:1084:C:C5'	2.91	0.43
44:2:1249:G:C4	44:2:1250:A:C8	3.06	0.43
44:2:1328:U:H2'	44:2:1329:G:H8	1.84	0.43
44:2:1338:G:H1'	44:2:1339:G:H5'	1.99	0.43
44:2:1565:G:H3'	44:2:1566:G:H8	1.80	0.43
44:2:1577:C:H1'	44:2:2775:A:H8	1.79	0.43
44:2:1673:C:C3'	44:2:1701:C:P	3.02	0.43
44:2:1753:C:O2	44:2:1753:C:O4'	2.36	0.43
44:2:2296:G:OP2	44:2:2296:G:H8	2.02	0.43
44:2:2316:G:OP2	44:2:2316:G:H8	2.02	0.43
44:2:2464:G:OP2	44:2:2464:G:C8	2.71	0.43
44:2:2470:G:H5'	45:3:126:C:O2'	2.19	0.43
44:2:2625:G:H3'	44:2:2625:G:OP2	2.18	0.43
44:2:2681:C:C4	44:2:2682:G:N7	2.86	0.43
44:2:2821:A:C5	44:2:3808:G:N7	2.86	0.43
44:2:3724:G:N2	44:2:3725:A:C4	2.87	0.43
44:2:3758:C:H3'	44:2:3758:C:C6	2.52	0.43
44:2:4225:U:H6	44:2:4225:U:O5'	2.01	0.43
44:2:4429:U:H2'	44:2:4430:G:C8	2.54	0.43
44:2:4455:G:H5''	44:2:4455:G:H8	1.83	0.43
44:2:4469:U:H1'	44:2:4472:U:C5	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4700:C:C6	44:2:4701:G:O4'	2.71	0.43
45:3:14:U:H5''	45:3:15:G:OP2	2.18	0.43
45:3:29:G:O2'	45:3:30:U:H5'	2.18	0.43
46:4:65:G:OP2	46:4:65:G:H8	2.02	0.43
1:A:196:TRP:CD2	1:A:197:PRO:HD3	2.53	0.43
2:B:73:VAL:CG2	21:V:93:GLY:HA3	2.49	0.43
2:B:213:GLN:NE2	2:B:287:ILE:HB	2.34	0.43
5:E:227:HIS:HE1	44:2:442:C:H4'	1.84	0.43
6:F:32:ARG:HA	6:F:35:LYS:HE3	2.01	0.43
7:G:130:THR:CB	44:2:120:A:N6	2.81	0.43
7:G:167:VAL:HG23	7:G:170:LEU:HD12	2.00	0.43
8:H:60:TRP:CD1	18:S:155:PRO:CD	3.02	0.43
8:H:171:ASP:OD2	44:2:4437:A:H4'	2.18	0.43
11:L:42:LYS:NZ	44:2:107:G:OP1	2.51	0.43
14:O:31:ARG:HE	14:O:33:VAL:CG2	2.32	0.43
15:P:133:HIS:HA	44:2:1579:A:O4'	2.19	0.43
16:Q:135:GLY:N	44:2:1410:C:O2'	2.51	0.43
19:T:2:THR:HA	44:2:4163:A:O4'	2.19	0.43
19:T:68:THR:HG23	19:T:69:GLN:H	1.82	0.43
21:V:66:LYS:C	21:V:67:LYS:HD2	2.43	0.43
24:Y:69:LYS:HB2	24:Y:69:LYS:NZ	2.34	0.43
26:a:78:LEU:CD2	26:a:81:LEU:HD12	2.49	0.43
34:i:64:SER:O	34:i:65:LYS:CB	2.66	0.43
34:i:99:LYS:HB3	43:u:196:ASP:O	2.18	0.43
37:l:17:GLN:NE2	44:2:2385:U:C5	2.86	0.43
42:t:16:PHE:HB3	42:t:28:GLU:HG2	2.01	0.43
43:u:28:ALA:C	44:2:4022:C:H4'	2.43	0.43
43:u:156:ARG:CA	44:2:3935:A:H2	2.32	0.43
44:2:224:A:H61	44:2:238:G:C2'	2.30	0.43
44:2:430:G:C2'	44:2:431:U:O5'	2.66	0.43
44:2:724:C:H3'	44:2:725:C:C5'	2.38	0.43
44:2:737:G:N2	44:2:738:U:C2	2.87	0.43
44:2:917:G:N3	44:2:918:C:N4	2.67	0.43
44:2:960:G:H5'	44:2:960:G:C8	2.43	0.43
44:2:970:C:O5'	44:2:970:C:H6	2.02	0.43
44:2:1202:A:N3	44:2:1202:A:H2'	2.33	0.43
44:2:1611:A:C8	44:2:1611:A:C3'	3.00	0.43
44:2:1630:G:H3'	44:2:1631:U:C5	2.53	0.43
44:2:1642:C:H42	44:2:2262:G:H1	1.66	0.43
44:2:1749:A:H2'	44:2:1750:U:O4'	2.19	0.43
44:2:2027:G:H8	44:2:2027:G:C5'	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2247:C:H2'	44:2:2248:C:C6	2.53	0.43
44:2:2302:G:C5	44:2:2303:G:N7	2.87	0.43
44:2:2530:A:HO2'	44:2:2531:U:C1'	2.31	0.43
44:2:2578:A:N1	44:2:2720:A:C8	2.87	0.43
44:2:2634:G:H8	44:2:2634:G:P	2.41	0.43
44:2:3571:C:H2'	44:2:3572:G:O4'	2.18	0.43
44:2:3699:U:HO2'	44:2:3700:C:H6	1.65	0.43
44:2:3730:C:H3'	44:2:3731:U:C6	2.53	0.43
44:2:4118:C:H2'	44:2:4119:C:O4'	2.19	0.43
44:2:4313:U:H5'	44:2:4314:U:C5'	2.42	0.43
44:2:4432:G:H2'	44:2:4433:A:H5'	2.01	0.43
44:2:4483:A:N9	44:2:4519:A:N6	2.64	0.43
44:2:4544:A:H2	44:2:4680:C:P	2.42	0.43
44:2:4598:U:H3	44:2:4621:G:H1	1.65	0.43
44:2:4642:U:C2'	44:2:4643:U:H5''	2.48	0.43
44:2:4709:G:C6	44:2:4710:G:N7	2.87	0.43
44:2:4882:G:H3'	44:2:4882:G:N3	2.34	0.43
44:2:4898:A:C2'	44:2:4899:C:O4'	2.62	0.43
44:2:5011:A:H2'	44:2:5012:C:C6	2.54	0.43
45:3:18:U:H6	45:3:18:U:O5'	2.01	0.43
46:4:89:G:C4	46:4:90:A:N7	2.87	0.43
46:4:106:G:H2'	46:4:107:G:C8	2.52	0.43
1:A:28:ARG:HH11	1:A:123:ARG:CZ	2.32	0.43
1:A:227:ARG:HE	1:A:239:ALA:HB3	1.84	0.43
4:D:211:LEU:HD11	46:4:33:U:O4	2.19	0.43
5:E:172:LEU:HD21	44:2:4896:G:C4'	2.49	0.43
5:E:172:LEU:HD22	44:2:4896:G:H4'	1.99	0.43
6:F:131:ASN:HD22	44:2:1706:U:H5'	1.84	0.43
8:H:34:LEU:HD12	8:H:84:VAL:HG23	2.01	0.43
8:H:81:ILE:O	8:H:84:VAL:HB	2.19	0.43
9:I:19:LYS:HE2	9:I:26:VAL:HG21	2.00	0.43
9:I:139:ARG:HG3	9:I:173:PHE:CZ	2.53	0.43
12:M:95:ILE:HG12	12:M:98:ARG:HH12	1.83	0.43
16:Q:72:LEU:HG	44:2:1436:G:OP1	2.18	0.43
17:R:74:ARG:CZ	44:2:2868:U:C5	3.02	0.43
24:Y:86:GLN:HG2	24:Y:96:HIS:HA	2.00	0.43
24:Y:121:ARG:O	24:Y:126:ARG:CA	2.67	0.43
26:a:36:GLY:HA3	26:a:40:HIS:CE1	2.54	0.43
30:e:16:ARG:HD2	30:e:60:TYR:CE2	2.53	0.43
32:g:45:ALA:CB	32:g:81:SER:C	2.92	0.43
35:j:16:HIS:HA	35:j:27:TYR:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:u:151:LEU:HD12	43:u:159:PHE:CD1	2.54	0.43
44:2:15:A:H2'	44:2:16:G:H5'	2.01	0.43
44:2:98:A:H8	44:2:98:A:O5'	2.02	0.43
44:2:666:G:H2'	44:2:667:C:C6	2.53	0.43
44:2:694:C:O5'	44:2:694:C:C6	2.72	0.43
44:2:887:C:H6	44:2:887:C:O5'	2.02	0.43
44:2:1278:C:C5	44:2:1278:C:OP2	2.72	0.43
44:2:1280:G:H8	44:2:1280:G:C5'	2.31	0.43
44:2:1341:G:H8	44:2:1341:G:O5'	2.02	0.43
44:2:1378:A:H8	44:2:1399:G:H1	1.66	0.43
44:2:1387:C:C3'	44:2:1388:G:C8	3.02	0.43
44:2:1490:U:OP2	44:2:1490:U:H5	2.02	0.43
44:2:1514:C:H2'	44:2:1515:U:H5'	2.00	0.43
44:2:1570:U:C6	44:2:1570:U:C3'	3.02	0.43
44:2:1671:C:H2'	44:2:1672:U:C6	2.54	0.43
44:2:1890:G:C1'	44:2:1897:G:N1	2.81	0.43
44:2:2268:C:H5''	44:2:2269:U:OP2	2.19	0.43
44:2:2296:G:H22	44:2:2297:G:N2	2.16	0.43
44:2:2471:U:H2'	44:2:2472:U:H6	1.84	0.43
44:2:2485:U:H2'	44:2:2486:C:C5	2.54	0.43
44:2:2717:U:O2'	44:2:2719:G:N2	2.52	0.43
44:2:2749:C:C6	44:2:2749:C:O5'	2.71	0.43
44:2:2764:A:N3	44:2:2764:A:C2'	2.81	0.43
44:2:3645:G:H2'	44:2:3646:U:H5'	2.00	0.43
44:2:3684:U:H5''	44:2:3685:C:C5	2.54	0.43
44:2:3689:G:C4	44:2:3690:U:C5	3.07	0.43
44:2:3870:A:N3	44:2:3870:A:H2'	2.34	0.43
44:2:4299:A:H3'	44:2:4300:U:H5	1.84	0.43
44:2:4328:G:H2'	44:2:4328:G:N3	2.34	0.43
44:2:4483:A:C1'	44:2:4519:A:H62	2.31	0.43
44:2:4673:G:N7	44:2:4674:C:C4	2.86	0.43
44:2:4699:G:O2'	44:2:4700:C:H6	2.01	0.43
44:2:4737:C:O2'	44:2:4738:U:H5'	2.18	0.43
44:2:4743:C:C6	44:2:4743:C:C3'	3.02	0.43
44:2:4930:G:H4'	44:2:4931:U:OP1	2.18	0.43
45:3:17:A:C4	45:3:18:U:C5	3.07	0.43
2:B:43:LEU:HD11	2:B:196:TRP:CH2	2.53	0.42
3:C:55:SER:C	3:C:56:GLU:CG	2.88	0.42
3:C:106:LYS:HD2	3:C:108:TRP:CH2	2.54	0.42
5:E:179:LEU:HD12	44:2:4892:C:N4	2.32	0.42
6:F:142:TRP:O	6:F:235:ASN:HA	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:53:ARG:NH2	44:2:4056:C:C5	2.87	0.42
7:G:146:LEU:HD13	7:G:205:THR:HG21	2.01	0.42
10:J:110:GLN:O	10:J:111:GLU:CB	2.67	0.42
11:L:77:SER:HA	11:L:99:ASP:O	2.19	0.42
12:M:127:VAL:O	12:M:131:GLN:N	2.41	0.42
15:P:22:LEU:HD13	15:P:90:PHE:CE1	2.54	0.42
15:P:109:VAL:HA	15:P:112:LEU:HD22	2.01	0.42
17:R:80:LYS:HE2	44:2:2865:G:C4'	2.46	0.42
17:R:115:ILE:HG22	17:R:116:ASP:O	2.18	0.42
17:R:121:HIS:NE2	17:R:125:LEU:HD11	2.34	0.42
18:S:81:TRP:CE3	18:S:128:LYS:HB2	2.54	0.42
19:T:12:ARG:HE	44:2:4235:G:H4'	1.84	0.42
19:T:29:THR:O	19:T:32:ARG:HB2	2.19	0.42
20:U:17:GLN:O	20:U:75:GLU:HA	2.19	0.42
24:Y:8:THR:HB	44:2:337:G:C5'	2.41	0.42
26:a:40:HIS:HB3	44:2:1654:C:O2	2.19	0.42
28:c:51:ASN:HB2	41:p:43:GLY:N	2.34	0.42
30:e:70:LEU:HB3	30:e:71:PRO:HD2	2.00	0.42
42:t:82:ILE:O	42:t:82:ILE:HG22	2.19	0.42
43:u:56:GLU:HB2	43:u:146:LYS:CG	2.49	0.42
44:2:22:G:H3'	44:2:23:C:C6	2.54	0.42
44:2:86:U:H3	44:2:98:A:H62	1.65	0.42
44:2:99:A:H3'	44:2:100:C:C5	2.54	0.42
44:2:272:U:O2	44:2:273:C:C5	2.72	0.42
44:2:286:A:N6	44:2:4322:A:C4'	2.82	0.42
44:2:309:A:C8	44:2:309:A:C3'	3.01	0.42
44:2:315:A:H2'	44:2:316:U:C6	2.54	0.42
44:2:443:A:H5''	44:2:444:G:OP1	2.18	0.42
44:2:449:C:H2'	44:2:450:C:H6	1.83	0.42
44:2:457:A:C2'	44:2:458:U:H5''	2.49	0.42
44:2:1185:G:C2'	44:2:1186:C:H5'	2.49	0.42
44:2:1198:G:C5	44:2:1199:G:N7	2.87	0.42
44:2:1741:C:H41	44:2:1743:G:N2	2.15	0.42
44:2:1800:G:H2'	44:2:1801:U:OP1	2.19	0.42
44:2:1825:C:H3'	44:2:1826:C:C6	2.54	0.42
44:2:1899:C:H3'	44:2:1900:G:H5''	1.99	0.42
44:2:2027:G:H5'	44:2:2027:G:C8	2.49	0.42
44:2:2547:U:H1'	44:2:2739:G:C6	2.54	0.42
44:2:2588:A:H5'	44:2:2665:G:H4'	2.00	0.42
44:2:2630:C:H3'	44:2:2631:C:C5	2.54	0.42
44:2:2741:A:H3'	44:2:2741:A:N3	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:3677:C:O2	44:2:3677:C:H2'	2.18	0.42
44:2:3729:A:C2'	44:2:3729:A:N3	2.82	0.42
44:2:3758:C:C6	44:2:3758:C:C3'	3.01	0.42
44:2:3907:G:H1'	44:2:3908:G:P	2.59	0.42
44:2:4073:G:C2	44:2:4074:G:H4'	2.54	0.42
44:2:4078:U:H5''	44:2:4079:C:OP2	2.19	0.42
44:2:4100:C:O5'	44:2:4100:C:H6	2.02	0.42
44:2:4154:U:C5	44:2:4157:G:OP1	2.71	0.42
44:2:4298:G:O6	44:2:4335:C:H1'	2.19	0.42
44:2:4575:C:C6	44:2:4575:C:O5'	2.72	0.42
2:B:102:PHE:CE1	2:B:157:CYS:HB2	2.52	0.42
3:C:303:ARG:O	16:Q:38:ARG:HD2	2.19	0.42
8:H:162:GLN:HG3	8:H:163:GLN:N	2.34	0.42
11:L:162:LYS:HE2	26:a:102:ASP:CG	2.44	0.42
12:M:94:LYS:O	44:2:4826:C:N3	2.52	0.42
15:P:10:ASN:ND2	15:P:12:THR:HB	2.34	0.42
15:P:28:ASN:O	15:P:32:THR:HG23	2.19	0.42
16:Q:84:GLY:O	16:Q:103:LEU:HB2	2.19	0.42
17:R:8:LYS:HE3	17:R:19:LYS:HB3	2.00	0.42
23:X:156:ILE:HG23	23:X:156:ILE:O	2.19	0.42
24:Y:122:LYS:NZ	44:2:194:A:H5''	2.33	0.42
30:e:88:LEU:HD22	30:e:88:LEU:HA	1.84	0.42
31:f:102:ARG:HB3	44:2:4711:U:H5'	2.01	0.42
36:k:23:VAL:HG21	36:k:64:LEU:HD13	2.02	0.42
43:u:24:THR:HG23	43:u:25:VAL:N	2.34	0.42
44:2:112:C:H2'	44:2:113:A:H5'	2.00	0.42
44:2:219:C:C2'	44:2:220:G:C5'	2.93	0.42
44:2:456:G:N3	44:2:456:G:H2'	2.34	0.42
44:2:702:G:H2'	44:2:703:G:C8	2.54	0.42
44:2:1059:C:C2'	44:2:1060:C:H5	2.31	0.42
44:2:1158:G:H2'	44:2:1159:U:C5	2.53	0.42
44:2:1211:C:C4'	44:2:1212:G:OP1	2.67	0.42
44:2:1305:C:O2	44:2:3870:A:H5''	2.18	0.42
44:2:1575:U:C6	44:2:1575:U:C3'	3.02	0.42
44:2:1740:G:H1	44:2:1750:U:H3	1.67	0.42
44:2:1779:U:OP1	44:2:1779:U:H4'	2.18	0.42
44:2:1815:A:H8	44:2:1815:A:H5''	1.84	0.42
44:2:1857:C:H6	44:2:1857:C:O5'	2.02	0.42
44:2:2263:G:H2'	44:2:2264:G:O4'	2.19	0.42
44:2:2297:G:H5'	44:2:2298:G:O5'	2.18	0.42
44:2:2376:G:H5''	44:2:2800:G:O2'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2444:U:OP1	44:2:2445:U:C5	2.73	0.42
44:2:2542:A:O5'	44:2:2542:A:C8	2.71	0.42
44:2:2544:G:H2'	44:2:2545:C:C6	2.54	0.42
44:2:2593:C:O2	44:2:2593:C:C2'	2.67	0.42
44:2:2738:U:C1'	44:2:2739:G:H8	2.21	0.42
44:2:2795:C:C6	44:2:2795:C:C3'	3.01	0.42
44:2:3613:U:C2'	44:2:3614:U:C5'	2.97	0.42
44:2:3698:U:O2'	44:2:3699:U:H5'	2.18	0.42
44:2:3783:U:H2'	44:2:3784:G:C5'	2.49	0.42
44:2:3814:A:H2'	44:2:3815:C:C6	2.54	0.42
44:2:3930:G:O5'	44:2:3930:G:C8	2.72	0.42
44:2:4039:U:H2'	44:2:4040:C:H6	1.84	0.42
44:2:4076:G:H2'	44:2:4077:C:C6	2.53	0.42
44:2:4240:A:C3'	44:2:4241:A:H5'	2.49	0.42
44:2:4415:G:C2'	44:2:4416:C:H5'	2.49	0.42
44:2:4505:G:C2'	44:2:4506:A:O5'	2.67	0.42
44:2:4673:G:C8	44:2:4674:C:C4	3.07	0.42
44:2:5021:U:H2'	44:2:5022:U:C6	2.54	0.42
46:4:23:A:C2	46:4:119:U:O2	2.70	0.42
46:4:68:C:H3'	46:4:69:U:C5	2.53	0.42
1:A:34:PHE:CD2	1:A:35:ALA:N	2.87	0.42
3:C:139:SER:CB	42:t:10:VAL:HB	2.49	0.42
3:C:159:GLU:OE2	3:C:253:THR:HG21	2.19	0.42
3:C:319:LEU:HD22	44:2:929:U:H5'	2.01	0.42
11:L:91:ALA:O	11:L:94:ILE:HG22	2.19	0.42
12:M:2:VAL:HB	44:2:4724:G:H1'	2.00	0.42
13:N:40:PRO:HG3	44:2:8:U:C4'	2.45	0.42
15:P:5:SER:O	15:P:6:LEU:C	2.61	0.42
16:Q:91:ARG:NH1	16:Q:91:ARG:HB2	2.35	0.42
23:X:67:ARG:HG3	23:X:68:ARG:O	2.19	0.42
31:f:49:TYR:O	31:f:69:VAL:HA	2.20	0.42
44:2:230:U:OP2	44:2:230:U:H4'	2.19	0.42
44:2:366:G:C5'	44:2:366:G:C8	3.02	0.42
44:2:402:G:C1'	44:2:403:G:OP2	2.67	0.42
44:2:413:C:O2'	44:2:414:G:H5'	2.19	0.42
44:2:413:C:O5'	44:2:413:C:H6	2.02	0.42
44:2:439:G:H8	44:2:439:G:C5'	2.32	0.42
44:2:458:U:OP2	44:2:463:C:N3	2.53	0.42
44:2:650:G:C2'	44:2:651:G:H5'	2.48	0.42
44:2:924:C:N3	44:2:925:C:C6	2.87	0.42
44:2:1174:G:C2	44:2:1175:G:N7	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1180:G:C6	44:2:1181:U:C4	3.07	0.42
44:2:1377:A:H1'	44:2:1447:C:C4'	2.49	0.42
44:2:1387:C:C5'	44:2:1387:C:C6	2.99	0.42
44:2:1423:A:N3	44:2:1424:G:N7	2.67	0.42
44:2:1926:G:H8	44:2:1926:G:P	2.42	0.42
44:2:2040:C:H5'	44:2:2041:G:OP2	2.18	0.42
44:2:2061:C:O2	44:2:2061:C:O4'	2.37	0.42
44:2:2479:G:C5'	44:2:4052:G:H22	2.33	0.42
44:2:2575:A:N6	44:2:2576:G:C6	2.88	0.42
44:2:2840:G:H3'	44:2:2841:A:C8	2.52	0.42
44:2:3595:G:H2'	44:2:3596:G:H8	1.83	0.42
44:2:3648:U:O2	44:2:3648:U:O4'	2.37	0.42
44:2:3702:A:H2'	44:2:3703:U:C6	2.53	0.42
44:2:3713:G:H2'	44:2:3714:U:H5'	2.01	0.42
44:2:3877:A:C3'	44:2:3878:C:C5'	2.95	0.42
44:2:4200:G:H3'	44:2:4201:C:H6	1.85	0.42
44:2:4253:U:O2	44:2:4253:U:H2'	2.20	0.42
44:2:4578:G:O5'	44:2:4578:G:H8	2.03	0.42
44:2:4621:G:C5	44:2:4622:C:C5	3.07	0.42
44:2:4828:G:C3'	44:2:4830:G:OP1	2.64	0.42
46:4:54:A:C2	46:4:55:A:C4	3.04	0.42
1:A:90:CYS:CB	1:A:101:VAL:HG13	2.49	0.42
1:A:196:TRP:CE3	1:A:197:PRO:CG	3.03	0.42
2:B:61:ASP:HA	2:B:68:ASN:OD1	2.20	0.42
2:B:298:LEU:O	2:B:299:ILE:HB	2.19	0.42
3:C:211:TYR:HA	3:C:253:THR:OG1	2.19	0.42
4:D:13:PHE:HD2	46:4:65:G:HO2'	1.65	0.42
4:D:264:LYS:O	4:D:265:ARG:HB3	2.18	0.42
5:E:282:TYR:CB	5:E:285:LYS:HG2	2.49	0.42
6:F:37:PHE:O	6:F:40:LYS:HG2	2.20	0.42
7:G:110:LYS:HE2	7:G:114:LEU:CD1	2.48	0.42
8:H:31:ARG:NH2	8:H:188:GLN:HB3	2.34	0.42
12:M:39:ASP:HB2	12:M:47:ARG:HG3	2.01	0.42
14:O:193:THR:HG22	14:O:197:LYS:HD2	2.01	0.42
16:Q:164:LYS:HD3	44:2:1476:A:H4'	2.01	0.42
19:T:48:VAL:HG12	19:T:50:LYS:H	1.85	0.42
21:V:46:LYS:HD3	44:2:4579:U:H4'	2.01	0.42
24:Y:50:ARG:HH11	24:Y:115:ARG:HH11	1.66	0.42
24:Y:51:LYS:HG3	45:3:72:A:P	2.59	0.42
25:Z:25:ILE:HG23	25:Z:41:ALA:HB1	2.02	0.42
31:f:54:LYS:CG	31:f:55:ASN:H	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:l:34:LYS:HZ2	44:2:352:C:H4'	1.85	0.42
40:o:33:LEU:O	40:o:34:TYR:CB	2.67	0.42
42:t:73:PRO:HG3	42:t:78:VAL:CG2	2.29	0.42
44:2:10:A:N1	45:3:147:G:C6	2.87	0.42
44:2:94:A:H2'	44:2:95:G:O4'	2.19	0.42
44:2:113:A:C2	44:2:269:G:C4	3.07	0.42
44:2:140:C:C5	44:2:140:C:OP2	2.73	0.42
44:2:192:C:C2'	44:2:193:C:OP1	2.66	0.42
44:2:308:A:N6	44:2:4320:U:H3	2.11	0.42
44:2:508:C:C2'	44:2:509:G:H5'	2.48	0.42
44:2:741:C:H2'	44:2:742:U:H6	1.84	0.42
44:2:1481:G:C4'	44:2:1482:A:OP1	2.66	0.42
44:2:1670:G:H1	44:2:1823:U:H3	1.66	0.42
44:2:1718:G:H5'	46:4:102:U:H1'	1.94	0.42
44:2:1734:C:OP2	44:2:1734:C:C5	2.72	0.42
44:2:1922:A:C8	44:2:1922:A:O5'	2.73	0.42
44:2:2047:A:C8	44:2:2047:A:C3'	3.03	0.42
44:2:2379:G:H5'	44:2:2763:C:H42	1.84	0.42
44:2:2452:G:O2'	44:2:2453:G:H5'	2.19	0.42
44:2:2706:C:C4	44:2:2707:U:O4	2.72	0.42
44:2:2746:U:P	44:2:2746:U:C6	3.12	0.42
44:2:3733:U:H6	44:2:3733:U:O5'	2.02	0.42
44:2:3856:C:H3'	44:2:3857:G:H8	1.85	0.42
44:2:3900:C:O5'	44:2:3900:C:H6	2.01	0.42
44:2:3920:G:C2	44:2:3921:A:C8	3.07	0.42
44:2:3942:G:C5'	44:2:3942:G:H8	2.32	0.42
44:2:4130:A:O2'	44:2:4131:C:P	2.77	0.42
44:2:4162:U:O5'	44:2:4162:U:H6	2.02	0.42
44:2:4377:C:H6	44:2:4377:C:H5''	1.83	0.42
44:2:4396:U:P	44:2:4396:U:H6	2.43	0.42
44:2:4702:G:H2'	44:2:4703:A:C8	2.53	0.42
44:2:4825:G:N3	44:2:4825:G:H2'	2.34	0.42
44:2:4894:C:H6	44:2:4894:C:H5''	1.84	0.42
45:3:129:C:C2	45:3:130:C:C5	3.07	0.42
46:4:34:C:O2	46:4:34:C:C2'	2.66	0.42
46:4:38:U:H2'	46:4:40:U:OP2	2.19	0.42
2:B:123:HIS:CE1	44:2:4942:C:C4	3.08	0.42
4:D:172:SER:C	4:D:173:ILE:HG13	2.45	0.42
6:F:90:ALA:HB1	6:F:142:TRP:HE3	1.84	0.42
9:I:5:PRO:HG2	44:2:4365:G:H5''	2.01	0.42
13:N:1:MET:N	34:i:36:HIS:CE1	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:O:51:LYS:HD2	14:O:144:GLU:CD	2.44	0.42
14:O:165:LYS:HB3	44:2:4814:C:H5''	2.02	0.42
17:R:115:ILE:HD11	17:R:142:ILE:HG23	2.01	0.42
26:a:112:LEU:HD11	44:2:1376:G:C6	2.54	0.42
28:c:32:LYS:O	28:c:36:LYS:HD2	2.20	0.42
30:e:12:ILE:HG12	30:e:66:THR:HB	2.01	0.42
31:f:4:ARG:CG	44:2:4711:U:H1'	2.44	0.42
32:g:9:ARG:HG3	32:g:34:TYR:CE1	2.54	0.42
32:g:11:LEU:HD23	32:g:11:LEU:H	1.83	0.42
32:g:77:ALA:O	32:g:78:TYR:HB2	2.20	0.42
37:l:40:LYS:HZ3	44:2:357:A:H5''	1.80	0.42
40:o:48:TYR:HH	44:2:3895:C:C4'	2.33	0.42
41:p:33:GLN:HG3	41:p:49:ARG:CD	2.48	0.42
42:t:58:LYS:HG3	44:2:671:C:OP1	2.19	0.42
44:2:165:C:C2	44:2:166:G:C8	3.06	0.42
44:2:310:A:H2	44:2:4319:U:C2	2.37	0.42
44:2:389:A:H3'	44:2:389:A:H8	1.82	0.42
44:2:409:A:H2	44:2:1313:A:O2'	2.02	0.42
44:2:446:C:C6	44:2:446:C:OP2	2.72	0.42
44:2:457:A:O2'	44:2:679:U:C5	2.72	0.42
44:2:889:C:O5'	44:2:889:C:C6	2.73	0.42
44:2:961:C:H3'	44:2:962:G:N7	2.34	0.42
44:2:1059:C:C2'	44:2:1060:C:C5	3.02	0.42
44:2:1068:C:H2'	44:2:1069:G:C8	2.55	0.42
44:2:1079:C:H2'	44:2:1080:U:C5'	2.48	0.42
44:2:1079:C:P	44:2:1080:U:OP2	2.78	0.42
44:2:1209:C:C2'	44:2:1210:U:OP2	2.67	0.42
44:2:1219:C:C2'	44:2:1220:G:OP2	2.68	0.42
44:2:1438:A:C8	44:2:1438:A:OP2	2.73	0.42
44:2:1462:C:H3'	44:2:1463:G:H8	1.76	0.42
44:2:1548:U:H2'	44:2:1549:G:H5'	2.00	0.42
44:2:1583:G:H2'	44:2:1584:G:H8	1.81	0.42
44:2:1611:A:C8	44:2:1612:G:H4'	2.55	0.42
44:2:1754:A:C4	44:2:1755:A:H8	2.37	0.42
44:2:1904:C:O5'	44:2:1904:C:H6	2.03	0.42
44:2:2009:C:H2'	44:2:2009:C:O2	2.19	0.42
44:2:2062:C:C6	44:2:2249:G:C2	3.07	0.42
44:2:2305:U:H2'	44:2:2306:G:N9	2.31	0.42
44:2:2373:A:OP2	44:2:2783:A:C5	2.72	0.42
44:2:2559:A:O2'	44:2:2631:C:H1'	2.20	0.42
44:2:2702:A:P	44:2:2703:G:H8	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:3609:U:H2'	44:2:3610:U:C6	2.54	0.42
44:2:3698:U:O5'	44:2:3698:U:H6	2.01	0.42
44:2:3722:G:H2'	44:2:3723:G:O4'	2.20	0.42
44:2:4032:C:N3	44:2:4033:G:H1'	2.35	0.42
44:2:4258:A:O2'	44:2:4259:U:H5'	2.20	0.42
44:2:4642:U:O4	44:2:4666:G:H2'	2.19	0.42
44:2:4658:C:HO2'	44:2:4659:U:H6	1.65	0.42
44:2:4824:U:OP1	44:2:4825:G:C4	2.72	0.42
45:3:10:G:H2'	45:3:11:C:C6	2.55	0.42
1:A:102:LEU:HB3	1:A:106:THR:OG1	2.19	0.42
2:B:291:TYR:O	2:B:292:LEU:HB2	2.18	0.42
3:C:13:GLU:HB2	3:C:170:LEU:CD1	2.35	0.42
3:C:162:LYS:N	3:C:166:GLU:OE2	2.52	0.42
6:F:51:TYR:CZ	44:2:1218:A:H3'	2.51	0.42
9:I:47:PRO:HB3	9:I:171:TRP:CE2	2.54	0.42
11:L:63:THR:N	44:2:72:C:O2	2.46	0.42
11:L:134:PRO:HA	11:L:135:LYS:HE3	2.01	0.42
13:N:88:GLY:O	13:N:92:LEU:HD11	2.20	0.42
17:R:52:ARG:O	17:R:53:LYS:HB2	2.19	0.42
17:R:81:ARG:HG3	17:R:88:ARG:HD2	2.02	0.42
17:R:119:MET:CE	17:R:149:LYS:HB2	2.50	0.42
24:Y:3:PHE:HA	44:2:1347:C:O4'	2.18	0.42
27:b:47:LYS:HE2	44:2:1805:G:H1'	2.01	0.42
32:g:82:MET:HE3	32:g:90:ARG:CZ	2.49	0.42
42:t:103:ARG:HB2	42:t:103:ARG:NH1	2.34	0.42
43:u:2:ASP:C	43:u:4:GLU:N	2.77	0.42
44:2:1:C:N3	45:3:157:U:N3	2.67	0.42
44:2:134:G:C5'	44:2:135:G:N1	2.82	0.42
44:2:917:G:H21	44:2:918:C:H42	1.68	0.42
44:2:1441:A:C4	44:2:1442:C:C5	3.07	0.42
44:2:1464:C:O5'	44:2:1464:C:H6	2.02	0.42
44:2:1497:A:H4'	44:2:1498:C:OP1	2.19	0.42
44:2:1704:U:H2'	44:2:1705:U:C6	2.55	0.42
44:2:1729:G:C5	44:2:1730:A:C8	3.07	0.42
44:2:1860:U:C4'	44:2:1861:G:O5'	2.66	0.42
44:2:1885:A:C8	44:2:1885:A:OP2	2.72	0.42
44:2:2000:C:H2'	44:2:2001:C:O4'	2.19	0.42
44:2:2032:U:O2'	44:2:2034:G:C8	2.64	0.42
44:2:2280:U:O2	44:2:2280:U:H5''	2.19	0.42
44:2:2442:C:OP2	44:2:2442:C:C6	2.63	0.42
44:2:2497:C:H1'	44:2:2617:G:H21	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2505:G:C8	44:2:2505:G:C3'	2.99	0.42
44:2:2853:G:N2	44:2:2854:G:C8	2.87	0.42
44:2:2878:G:H3'	44:2:2879:G:H5''	2.02	0.42
44:2:3705:A:H2'	44:2:3706:A:C8	2.55	0.42
44:2:3737:U:C2'	44:2:3738:C:H5'	2.50	0.42
44:2:3938:G:C8	44:2:3938:G:OP2	2.73	0.42
44:2:3943:G:H2'	44:2:3944:C:H6	1.83	0.42
44:2:4025:C:O5'	44:2:4025:C:H6	2.02	0.42
44:2:4189:U:H6	44:2:4189:U:C5'	2.28	0.42
44:2:4262:U:H3'	44:2:4262:U:C6	2.54	0.42
44:2:4574:G:H2'	44:2:4575:C:H6	1.83	0.42
45:3:126:C:C5	45:3:127:U:N3	2.88	0.42
3:C:54:VAL:HG11	44:2:2320:G:O6	2.19	0.42
3:C:180:ILE:CD1	3:C:207:PRO:HG2	2.50	0.42
4:D:94:ASN:HA	46:4:47:G:P	2.59	0.42
5:E:136:HIS:O	5:E:137:VAL:CB	2.65	0.42
6:F:27:GLU:O	6:F:31:LYS:HB3	2.19	0.42
6:F:92:VAL:HG13	6:F:140:ILE:HD12	2.00	0.42
7:G:138:ALA:HB3	7:G:196:ARG:HH22	1.82	0.42
12:M:6:PHE:H	12:M:11:ARG:NH1	2.17	0.42
12:M:23:LYS:CE	12:M:43:THR:HB	2.50	0.42
13:N:44:ARG:NH1	13:N:47:LYS:HG2	2.34	0.42
14:O:167:HIS:CB	44:2:4718:C:C6	3.03	0.42
17:R:106:LEU:C	17:R:120:TYR:HE2	2.28	0.42
17:R:119:MET:HE3	17:R:149:LYS:HD2	2.01	0.42
18:S:140:PRO:HA	18:S:143:LYS:HB3	2.01	0.42
22:W:44:ARG:HH12	44:2:3585:U:H3'	1.83	0.42
26:a:32:ARG:HD2	44:2:37:U:C4'	2.47	0.42
26:a:40:HIS:CB	44:2:1660:G:H21	2.33	0.42
29:d:124:GLU:O	29:d:125:ASN:CB	2.67	0.42
35:j:20:ARG:HB2	35:j:39:TYR:CZ	2.55	0.42
41:p:18:TYR:O	41:p:22:LEU:HD12	2.18	0.42
41:p:55:TRP:O	41:p:63:THR:HA	2.20	0.42
44:2:5:A:N1	45:3:153:C:C2	2.87	0.42
44:2:12:A:N1	44:2:14:C:N4	2.64	0.42
44:2:286:A:N6	44:2:4322:A:H4'	2.34	0.42
44:2:287:A:C2	44:2:307:U:O4'	2.73	0.42
44:2:319:A:H2'	44:2:319:A:N3	2.35	0.42
44:2:405:C:H4'	44:2:405:C:OP1	2.20	0.42
44:2:675:C:H3'	44:2:675:C:OP2	2.19	0.42
44:2:1187:C:OP2	44:2:1187:C:C5	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1198:G:HO2'	44:2:1199:G:H5'	1.84	0.42
44:2:1220:G:C1'	44:2:1221:C:C4	3.02	0.42
44:2:1336:U:H2'	44:2:1337:C:H6	1.81	0.42
44:2:1535:C:H1'	44:2:2646:C:OP1	2.20	0.42
44:2:1701:C:C5'	44:2:1701:C:P	3.05	0.42
44:2:1934:A:N1	44:2:2006:C:N3	2.68	0.42
44:2:2305:U:H2'	44:2:2306:G:C1'	2.50	0.42
44:2:2344:A:C2	44:2:2775:A:C4	3.07	0.42
44:2:2403:U:O2'	44:2:2404:G:H5'	2.19	0.42
44:2:2420:G:P	44:2:2493:G:H22	2.42	0.42
44:2:2450:A:C4'	44:2:2451:G:OP2	2.66	0.42
44:2:2463:G:H3'	44:2:2464:G:C8	2.55	0.42
44:2:2568:A:C2	44:2:2732:A:H1'	2.54	0.42
44:2:2633:U:H6	44:2:2633:U:O5'	2.03	0.42
44:2:2638:U:O5'	44:2:2639:G:H4'	2.19	0.42
44:2:2643:U:C2	44:2:2646:C:C5	3.07	0.42
44:2:2707:U:C4	44:2:2708:C:C5	3.08	0.42
44:2:3702:A:H2'	44:2:3703:U:N1	2.35	0.42
44:2:3920:G:C2	44:2:4029:G:N2	2.88	0.42
44:2:3926:U:H4'	44:2:3927:G:OP1	2.18	0.42
44:2:3938:G:O2'	44:2:3939:G:H5'	2.20	0.42
44:2:4039:U:H2'	44:2:4040:C:C6	2.55	0.42
44:2:4233:A:H8	44:2:4233:A:H3'	1.84	0.42
44:2:4269:G:C8	44:2:4269:G:O5'	2.73	0.42
44:2:4289:G:N3	44:2:4289:G:C2'	2.83	0.42
44:2:4529:U:H3'	44:2:4530:G:H5'	2.02	0.42
44:2:4530:G:H2'	44:2:4531:A:OP2	2.20	0.42
44:2:4542:C:C5	44:2:4543:C:C4	3.08	0.42
44:2:4557:U:H2'	44:2:4558:C:C5'	2.49	0.42
44:2:4720:G:C8	44:2:4720:G:H3'	2.55	0.42
45:3:3:A:C8	45:3:3:A:C3'	3.03	0.42
46:4:13:A:H5''	46:4:14:C:H5	1.85	0.42
46:4:78:C:H2'	46:4:79:U:H6	1.83	0.42
1:A:76:PHE:HZ	1:A:165:VAL:HG21	1.84	0.42
1:A:130:SER:O	44:2:3652:C:C2	2.73	0.42
2:B:9:PRO:CD	21:V:48:ARG:HH12	2.32	0.42
3:C:207:PRO:HB3	3:C:249:PHE:HD1	1.82	0.42
5:E:172:LEU:CB	5:E:188:ARG:HB2	2.50	0.42
6:F:80:ASN:HB2	19:T:140:PHE:CZ	2.55	0.42
6:F:88:LYS:HG2	19:T:135:PRO:CG	2.49	0.42
7:G:113:ARG:NH2	44:2:122:U:OP1	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:182:CYS:HB3	7:G:222:ILE:HG23	1.99	0.42
9:I:191:ILE:HG21	9:I:213:HIS:CE1	2.54	0.42
10:J:90:ARG:HD3	10:J:94:LEU:HD23	2.02	0.42
10:J:141:ILE:HD11	46:4:55:A:C2	2.55	0.42
11:L:49:ARG:HA	11:L:50:PRO:HD3	1.92	0.42
15:P:25:HIS:ND1	44:2:2338:G:C5	2.88	0.42
15:P:40:HIS:O	15:P:43:LYS:HG2	2.20	0.42
16:Q:42:THR:HB	44:2:1409:C:C5'	2.50	0.42
17:R:82:LYS:O	44:2:2841:A:H5'	2.19	0.42
20:U:25:CYS:O	20:U:29:VAL:HG23	2.19	0.42
30:e:85:LEU:HD11	30:e:114:ARG:HG3	2.02	0.42
32:g:6:THR:HG22	44:2:2377:G:N2	2.35	0.42
32:g:64:LEU:HD13	44:2:2726:C:C1'	2.47	0.42
32:g:72:LYS:HD2	44:2:2727:G:H5'	2.01	0.42
34:i:50:PHE:HB3	34:i:54:GLU:CB	2.50	0.42
36:k:17:ARG:C	36:k:19:ASP:H	2.28	0.42
37:l:13:LEU:HD22	44:2:2384:G:N7	2.35	0.42
43:u:121:VAL:C	43:u:124:PRO:HD2	2.45	0.42
44:2:10:A:C2	45:3:147:G:N1	2.88	0.42
44:2:35:U:H4'	44:2:1504:A:H2	1.84	0.42
44:2:69:A:C2	44:2:70:A:C4'	3.02	0.42
44:2:121:A:C6	44:2:147:U:C2	3.07	0.42
44:2:202:C:N3	44:2:206:U:C5	2.88	0.42
44:2:374:A:C6	44:2:375:A:C6	3.07	0.42
44:2:386:A:O4'	44:2:2356:A:C8	2.73	0.42
44:2:418:A:N6	45:3:7:U:N3	2.65	0.42
44:2:947:G:C2'	44:2:948:A:C5'	2.94	0.42
44:2:959:C:C4'	44:2:1215:G:H21	2.32	0.42
44:2:1307:C:H1'	44:2:4408:G:H21	1.85	0.42
44:2:1479:A:O3'	44:2:1481:G:H5'	2.19	0.42
44:2:2064:G:N1	44:2:2246:G:C6	2.88	0.42
44:2:2064:G:N1	44:2:2246:G:N1	2.67	0.42
44:2:2280:U:OP1	44:2:2281:U:H2'	2.20	0.42
44:2:2525:C:N4	44:2:2747:C:C2	2.87	0.42
44:2:2839:G:C5	44:2:3593:A:N7	2.87	0.42
44:2:3614:U:H6	44:2:3614:U:H2'	1.64	0.42
44:2:3727:U:C2'	44:2:3728:A:H8	2.33	0.42
44:2:3737:U:O2'	44:2:3738:C:H5'	2.19	0.42
44:2:3840:A:C2	44:2:3854:G:C2	3.08	0.42
44:2:3890:U:O5'	44:2:3890:U:H6	2.02	0.42
44:2:3913:G:H8	44:2:3913:G:P	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4584:A:H2'	44:2:4585:C:C6	2.55	0.42
44:2:4812:A:H2'	44:2:4813:C:H6	1.68	0.42
44:2:4825:G:C4'	44:2:4826:C:OP1	2.67	0.42
45:3:156:U:H3'	45:3:156:U:C6	2.54	0.42
46:4:77:A:O2'	46:4:78:C:H5'	2.20	0.42
1:A:178:PRO:HG2	41:p:26:VAL:CG2	2.49	0.42
2:B:102:PHE:HZ	2:B:156:TYR:O	2.02	0.42
2:B:173:LEU:HD11	2:B:342:LYS:HG2	2.02	0.42
3:C:234:LYS:HB3	44:2:1354:G:H1'	2.01	0.42
3:C:323:ARG:HG3	3:C:324:ILE:N	2.34	0.42
3:C:346:ASN:HA	3:C:349:LEU:CB	2.46	0.42
5:E:140:LEU:HD12	5:E:167:GLN:OE1	2.20	0.42
5:E:174:LEU:HD23	5:E:188:ARG:HB3	2.02	0.42
5:E:217:PHE:N	5:E:217:PHE:CD1	2.85	0.42
9:I:139:ARG:HG3	9:I:173:PHE:CE2	2.55	0.42
11:L:76:PHE:O	11:L:77:SER:CB	2.60	0.42
11:L:111:GLN:HG3	44:2:510:C:H4'	2.01	0.42
12:M:56:GLN:HG3	18:S:157:ARG:HH12	1.84	0.42
12:M:130:LEU:HD12	14:O:181:ALA:HB2	2.02	0.42
14:O:117:ARG:NH1	14:O:160:ARG:HH12	2.18	0.42
17:R:19:LYS:O	17:R:22:VAL:HG22	2.18	0.42
17:R:149:LYS:O	17:R:153:LYS:HG3	2.20	0.42
18:S:82:LEU:C	18:S:127:MET:HE2	2.45	0.42
18:S:109:CYS:O	18:S:112:ASP:HB3	2.20	0.42
20:U:78:PHE:CZ	20:U:83:LEU:HG	2.55	0.42
23:X:93:ASN:O	23:X:94:ASN:HB3	2.19	0.42
25:Z:58:GLY:O	25:Z:59:LYS:C	2.63	0.42
30:e:85:LEU:HD13	30:e:85:LEU:O	2.19	0.42
34:i:66:ASP:HA	34:i:69:ALA:HB3	2.02	0.42
35:j:13:ASN:O	44:2:1513:A:C5	2.72	0.42
43:u:155:GLU:HG3	44:2:3936:G:H4'	1.80	0.42
43:u:190:LYS:H	43:u:190:LYS:HD3	1.85	0.42
44:2:44:A:C2'	44:2:45:U:H5'	2.50	0.42
44:2:46:U:OP2	44:2:47:A:H2'	2.20	0.42
44:2:69:A:H2	44:2:70:A:HO2'	1.68	0.42
44:2:420:A:H8	44:2:420:A:O5'	2.03	0.42
44:2:438:C:H5	44:2:438:C:OP2	2.03	0.42
44:2:475:U:H3'	44:2:475:U:C6	2.53	0.42
44:2:676:G:H5'	44:2:677:C:OP1	2.20	0.42
44:2:1046:G:C8	44:2:1046:G:O5'	2.73	0.42
44:2:1199:G:H2'	44:2:1200:G:N7	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1384:G:C4	44:2:1385:C:C5	3.07	0.42
44:2:1607:C:H4'	44:2:1607:C:OP1	2.20	0.42
44:2:1630:G:H5''	44:2:1631:U:H5	1.84	0.42
44:2:1649:G:H8	44:2:1649:G:H5'	1.84	0.42
44:2:1656:U:H2'	44:2:1657:C:O4'	2.19	0.42
44:2:1737:G:N2	44:2:1753:C:H41	2.17	0.42
44:2:1792:U:H3'	44:2:1793:C:C5	2.55	0.42
44:2:1814:G:N3	44:2:1814:G:C2'	2.83	0.42
44:2:1835:C:C2	44:2:1836:A:C8	3.08	0.42
44:2:1851:A:C2'	44:2:1852:A:H5'	2.50	0.42
44:2:2282:G:H1'	44:2:2307:G:C2	2.54	0.42
44:2:2351:A:H2'	44:2:2352:A:H8	1.84	0.42
44:2:2353:A:C8	44:2:2353:A:OP2	2.73	0.42
44:2:2508:C:H2'	44:2:2509:C:C5	2.55	0.42
44:2:2625:G:C2	44:2:2664:U:N3	2.88	0.42
44:2:2672:A:C3'	44:2:2673:A:C5'	2.98	0.42
44:2:2676:C:O2	44:2:2676:C:H2'	2.19	0.42
44:2:2792:A:H2'	44:2:2793:G:C8	2.55	0.42
44:2:3595:G:H2'	44:2:3596:G:C8	2.54	0.42
44:2:3670:C:N4	44:2:3714:U:H3'	2.35	0.42
44:2:3753:A:C5	44:2:3755:U:H5	2.37	0.42
44:2:3800:U:O5'	44:2:3800:U:H6	2.02	0.42
44:2:4032:C:C4	44:2:4033:G:H1'	2.55	0.42
44:2:4651:A:C2	44:2:4660:A:C4	3.08	0.42
45:3:120:G:N2	45:3:131:G:C8	2.88	0.42
45:3:140:C:O5'	45:3:140:C:H6	2.03	0.42
46:4:87:G:H21	46:4:89:G:H3'	1.85	0.42
1:A:149:LYS:HB2	1:A:149:LYS:NZ	2.35	0.42
4:D:33:ARG:HE	19:T:27:LEU:HD12	1.84	0.42
4:D:150:LEU:HD12	10:J:146:ARG:HG3	2.02	0.42
5:E:138:ARG:CD	44:2:699:A:H4'	2.44	0.42
5:E:214:ASP:HB3	44:2:4896:G:C6	2.55	0.42
5:E:264:ILE:HG21	5:E:267:LEU:HB2	2.02	0.42
7:G:117:ARG:HG3	7:G:121:LYS:HD3	2.01	0.42
8:H:72:THR:HG22	44:2:4650:G:O2'	2.19	0.42
11:L:177:LYS:O	11:L:178:ALA:HB3	2.19	0.42
13:N:3:ALA:O	13:N:7:ILE:HG13	2.20	0.42
16:Q:68:ARG:O	16:Q:71:LYS:HB2	2.18	0.42
18:S:71:SER:HB3	18:S:74:ARG:HB2	2.02	0.42
28:c:32:LYS:O	28:c:35:LEU:HB2	2.19	0.42
42:t:14:SER:HB3	42:t:17:LEU:CB	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:t:14:SER:O	42:t:17:LEU:HB3	2.20	0.42
42:t:66:ARG:O	42:t:83:ASN:HB2	2.20	0.42
44:2:215:A:C4'	44:2:216:G:C5'	2.97	0.42
44:2:423:U:H3'	44:2:423:U:C6	2.54	0.42
44:2:463:C:O2	44:2:463:C:H2'	2.19	0.42
44:2:736:G:C8	44:2:736:G:H5''	2.55	0.42
44:2:1249:G:C8	44:2:1249:G:O5'	2.68	0.42
44:2:1294:C:C4	44:2:1295:C:N4	2.88	0.42
44:2:1299:U:C6	44:2:1299:U:C5'	2.99	0.42
44:2:1658:A:H4'	44:2:4354:A:N1	2.35	0.42
44:2:1713:G:H8	44:2:1713:G:OP2	2.03	0.42
44:2:1743:G:C3'	44:2:1744:A:H5'	2.50	0.42
44:2:1866:A:N7	44:2:2027:G:C5'	2.83	0.42
44:2:1873:G:C8	44:2:1873:G:C5'	2.98	0.42
44:2:1877:G:C1'	44:2:2254:G:C2	3.00	0.42
44:2:1890:G:C6	44:2:2035:A:C2	3.08	0.42
44:2:2060:G:C4	44:2:2251:G:C2	3.08	0.42
44:2:2281:U:OP1	44:2:2281:U:C6	2.73	0.42
44:2:2347:A:C1'	44:2:2348:U:P	3.07	0.42
44:2:2508:C:H2'	44:2:2509:C:H5	1.84	0.42
44:2:2629:G:H2'	44:2:2630:C:C4'	2.50	0.42
44:2:2839:G:C4	44:2:3593:A:N7	2.88	0.42
44:2:2845:G:H2'	44:2:2846:U:O4'	2.19	0.42
44:2:2856:A:C8	44:2:2858:A:O4'	2.73	0.42
44:2:3580:A:H1'	44:2:4971:A:O2'	2.20	0.42
44:2:3830:A:O2'	44:2:3831:A:H5'	2.19	0.42
44:2:3830:A:H2'	44:2:3831:A:H8	1.84	0.42
44:2:4053:A:C6	44:2:4124:C:C5	3.08	0.42
44:2:4091:G:H4'	44:2:4092:C:OP2	2.15	0.42
44:2:4167:C:O4'	44:2:4295:C:H1'	2.20	0.42
44:2:4225:U:H5'	44:2:4227:G:O6	2.20	0.42
44:2:4298:G:C6	44:2:4335:C:H1'	2.54	0.42
44:2:4320:U:H2'	44:2:4321:U:C6	2.55	0.42
44:2:4384:A:H3'	44:2:4385:G:C8	2.53	0.42
44:2:4517:U:H2'	44:2:4518:U:H5'	2.02	0.42
44:2:4573:C:C2	44:2:4574:G:C8	3.08	0.42
44:2:4740:U:H3'	44:2:4740:U:H6	1.84	0.42
45:3:12:G:C5	45:3:13:G:C8	3.08	0.42
46:4:33:U:O2	46:4:33:U:C2'	2.67	0.42
46:4:107:G:C8	46:4:107:G:OP2	2.73	0.42
1:A:103:PRO:HA	1:A:162:ASN:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:17:LEU:HB3	2:B:18:PRO:CD	2.48	0.41
2:B:261:ARG:HA	44:2:3867:G:N3	2.35	0.41
3:C:190:ARG:HB2	3:C:202:ILE:HG13	2.02	0.41
6:F:55:LYS:HB3	44:2:973:U:H3	1.84	0.41
6:F:186:CYS:O	6:F:189:ASP:HB3	2.19	0.41
7:G:75:LYS:HD2	7:G:240:ASN:HB2	2.00	0.41
9:I:185:VAL:C	9:I:187:GLU:H	2.27	0.41
12:M:11:ARG:HD3	12:M:57:LEU:HB3	2.01	0.41
12:M:125:ASN:HA	12:M:128:LYS:HB3	2.02	0.41
13:N:146:PRO:CG	33:h:104:THR:HA	2.50	0.41
13:N:157:LYS:HG3	13:N:158:HIS:CD2	2.55	0.41
13:N:192:TRP:CE2	44:2:48:G:H5''	2.53	0.41
13:N:198:LEU:CD2	13:N:200:LEU:HG	2.50	0.41
14:O:54:TYR:O	14:O:57:PHE:HB3	2.20	0.41
15:P:5:SER:OG	44:2:414:G:N2	2.53	0.41
19:T:71:ALA:HB3	44:2:4273:A:H4'	2.02	0.41
23:X:48:ARG:HB2	44:2:2449:A:O2'	2.20	0.41
24:Y:121:ARG:HA	24:Y:125:SER:OG	2.19	0.41
25:Z:16:GLY:O	32:g:76:ARG:HG3	2.19	0.41
26:a:75:LEU:HD11	26:a:133:ALA:HA	2.02	0.41
31:f:4:ARG:CA	44:2:4711:U:O2'	2.68	0.41
31:f:48:ALA:HB1	31:f:69:VAL:CG1	2.50	0.41
33:h:87:LYS:HE2	33:h:91:MET:HB3	2.02	0.41
42:t:120:SER:C	42:t:123:PRO:HD2	2.45	0.41
44:2:14:C:H2'	44:2:14:C:O5'	2.20	0.41
44:2:196:G:C1'	44:2:197:U:OP1	2.65	0.41
44:2:303:G:C8	44:2:303:G:C3'	3.03	0.41
44:2:437:C:C3'	44:2:438:C:C6	3.03	0.41
44:2:691:G:H2'	44:2:692:C:OP2	2.19	0.41
44:2:693:G:C4	44:2:694:C:C5	3.08	0.41
44:2:719:G:N2	44:2:720:A:C4	2.88	0.41
44:2:971:C:H3'	44:2:971:C:C6	2.55	0.41
44:2:1401:G:C6	44:2:1445:G:O4'	2.73	0.41
44:2:1547:C:C2	44:2:1548:U:C5	3.08	0.41
44:2:1580:A:N7	44:2:3612:A:N3	2.68	0.41
44:2:1631:U:H6	44:2:1631:U:O5'	2.04	0.41
44:2:1635:U:O4'	44:2:4351:G:H4'	2.20	0.41
44:2:1734:C:OP2	44:2:1734:C:C6	2.72	0.41
44:2:1770:U:C6	44:2:1771:U:C5	3.08	0.41
44:2:1770:U:H5''	44:2:1771:U:H5	1.85	0.41
44:2:2010:U:C6	44:2:2010:U:C3'	3.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2020:A:O2'	44:2:2021:A:C8	2.72	0.41
44:2:2282:G:N3	44:2:2307:G:C2	2.88	0.41
44:2:2395:A:C5	44:2:2396:C:C5	3.08	0.41
44:2:2616:U:C2	44:2:2671:G:C2	3.08	0.41
44:2:3647:G:OP1	44:2:3647:G:C8	2.68	0.41
44:2:3694:G:N2	44:2:3696:A:H2'	2.34	0.41
44:2:4332:U:OP2	44:2:4332:U:H6	2.03	0.41
44:2:4824:U:O2	44:2:4824:U:C3'	2.67	0.41
45:3:28:C:O2	45:3:28:C:H2'	2.20	0.41
5:E:274:VAL:HG13	44:2:4837:U:H6	1.84	0.41
6:F:51:TYR:CE2	44:2:972:C:H4'	2.56	0.41
10:J:131:TYR:CE1	44:2:4220:U:H1'	2.54	0.41
11:L:60:ARG:HD3	11:L:67:HIS:CE1	2.55	0.41
14:O:28:LEU:HD13	14:O:28:LEU:C	2.45	0.41
16:Q:91:ARG:HA	26:a:76:ASP:OD1	2.20	0.41
19:T:42:ILE:HG12	19:T:96:ILE:HD12	2.03	0.41
26:a:7:LYS:O	26:a:11:LEU:HD23	2.20	0.41
28:c:78:ASN:HB2	28:c:91:VAL:C	2.45	0.41
29:d:115:LYS:HG3	29:d:116:ASN:N	2.35	0.41
31:f:4:ARG:CB	44:2:4712:U:H5''	2.48	0.41
31:f:58:VAL:C	31:f:63:LYS:O	2.63	0.41
41:p:11:VAL:O	41:p:13:LYS:N	2.53	0.41
43:u:114:ILE:HG13	43:u:118:LEU:CD2	2.46	0.41
44:2:25:A:C8	44:2:26:C:C5	3.08	0.41
44:2:116:G:H21	44:2:118:C:H3'	1.85	0.41
44:2:202:C:N3	44:2:206:U:H5	2.18	0.41
44:2:259:G:H2'	44:2:260:G:C8	2.55	0.41
44:2:285:G:P	44:2:285:G:H8	2.42	0.41
44:2:367:A:C2	44:2:368:A:C4	3.08	0.41
44:2:663:G:C4	44:2:664:C:C5	3.08	0.41
44:2:680:U:H2'	44:2:681:U:C6	2.55	0.41
44:2:741:C:C2	44:2:742:U:C5	3.08	0.41
44:2:893:A:C6	44:2:894:G:N7	2.88	0.41
44:2:1277:U:H3'	44:2:1278:C:C5	2.55	0.41
44:2:1282:U:H1'	44:2:1283:A:P	2.60	0.41
44:2:1282:U:C2'	44:2:1284:C:C6	3.01	0.41
44:2:1350:G:H5'	45:3:30:U:H5''	2.02	0.41
44:2:1503:A:H5'	44:2:1504:A:OP2	2.20	0.41
44:2:1552:G:C6	44:2:1553:G:C2	3.08	0.41
44:2:1647:A:C3'	44:2:1648:A:H5''	2.51	0.41
44:2:1732:G:C3'	44:2:1733:U:H4'	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1830:U:H6	44:2:1830:U:O5'	2.03	0.41
44:2:2014:C:C6	44:2:2014:C:C5'	3.03	0.41
44:2:2454:A:H2'	44:2:2455:C:OP2	2.20	0.41
44:2:2549:C:P	44:2:2741:A:C8	3.13	0.41
44:2:2587:G:C5'	44:2:2663:G:N2	2.83	0.41
44:2:2789:A:C3'	44:2:2790:A:H8	2.29	0.41
44:2:4077:C:H2'	44:2:4078:U:O4'	2.19	0.41
44:2:4678:G:H8	44:2:4678:G:OP2	2.04	0.41
44:2:4691:G:O6	44:2:5022:U:H3'	2.20	0.41
44:2:4714:G:O5'	44:2:4714:G:C8	2.73	0.41
44:2:4867:G:H5''	44:2:4867:G:C8	2.53	0.41
45:3:103:A:C8	45:3:104:A:C8	3.08	0.41
45:3:154:G:C2	45:3:155:C:C2	3.08	0.41
46:4:3:C:H2'	46:4:4:U:C6	2.55	0.41
1:A:204:MET:SD	44:2:1610:A:C2	3.14	0.41
3:C:236:ASN:HB3	3:C:239:LYS:HD3	2.01	0.41
4:D:14:LYS:HG2	46:4:66:G:O3'	2.19	0.41
5:E:160:LYS:CE	5:E:183:ARG:HD3	2.51	0.41
5:E:229:GLU:HA	44:2:1274:A:N7	2.35	0.41
7:G:117:ARG:O	7:G:121:LYS:CG	2.68	0.41
8:H:41:ILE:HG21	8:H:43:VAL:HG22	2.02	0.41
9:I:76:MET:HE2	9:I:85:PHE:CG	2.55	0.41
13:N:11:TRP:CD1	44:2:271:G:OP2	2.73	0.41
15:P:4:TYR:CE2	15:P:16:LYS:HD3	2.55	0.41
22:W:3:VAL:HG11	22:W:12:LYS:CE	2.48	0.41
22:W:42:SER:HB3	22:W:44:ARG:NH1	2.35	0.41
25:Z:134:LEU:CD2	32:g:94:ALA:HB1	2.50	0.41
33:h:33:VAL:C	33:h:37:THR:HG1	2.27	0.41
36:k:24:LYS:HZ2	36:k:69:LEU:HD11	1.85	0.41
41:p:44:LYS:HE2	41:p:46:LYS:CE	2.50	0.41
43:u:59:ILE:HD13	43:u:145:MET:HB3	2.01	0.41
43:u:193:LEU:H	43:u:193:LEU:HD22	1.84	0.41
44:2:14:C:C1'	44:2:15:A:P	3.08	0.41
44:2:179:G:H5'	44:2:179:G:H8	1.86	0.41
44:2:220:G:H4'	44:2:221:U:OP1	2.20	0.41
44:2:309:A:H1'	44:2:3696:A:C2	2.55	0.41
44:2:398:A:O2'	44:2:400:G:H3'	2.19	0.41
44:2:409:A:N1	45:3:17:A:C1'	2.84	0.41
44:2:929:U:C4	44:2:930:C:C5	3.08	0.41
44:2:1160:C:C4	44:2:1161:C:N3	2.89	0.41
44:2:1517:U:O5'	44:2:1517:U:C6	2.71	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1599:U:O2	44:2:1599:U:H2'	2.20	0.41
44:2:1671:C:C2	44:2:1672:U:C5	3.09	0.41
44:2:1768:C:O2	44:2:1768:C:H2'	2.21	0.41
44:2:1862:C:C4'	44:2:2048:U:C5	3.00	0.41
44:2:2012:G:C5	44:2:2013:C:N4	2.88	0.41
44:2:2062:C:O2	44:2:2062:C:O4'	2.35	0.41
44:2:2390:U:H2'	44:2:2391:G:H8	1.84	0.41
44:2:2417:U:C5'	44:2:2418:C:H5	2.31	0.41
44:2:2642:U:H2'	44:2:2643:U:H6	1.83	0.41
44:2:3586:G:C2'	44:2:3587:C:C5'	2.90	0.41
44:2:3881:U:H6	44:2:3881:U:O5'	2.04	0.41
44:2:4248:C:O2	44:2:4281:U:H5'	2.20	0.41
44:2:4258:A:C2'	44:2:4259:U:H5'	2.50	0.41
44:2:4428:U:C6	44:2:4428:U:C3'	3.04	0.41
44:2:4595:A:H2'	44:2:4595:A:N3	2.35	0.41
44:2:4673:G:C3'	44:2:4674:C:C6	2.98	0.41
44:2:4710:G:O3'	44:2:4711:U:C4'	2.67	0.41
44:2:4922:A:H5''	44:2:4922:A:C8	2.54	0.41
44:2:4943:U:C2'	44:2:4944:U:OP2	2.68	0.41
46:4:3:C:O2	46:4:3:C:C3'	2.66	0.41
46:4:24:C:P	46:4:24:C:H6	2.43	0.41
3:C:55:SER:O	3:C:56:GLU:CB	2.69	0.41
3:C:136:LEU:HD22	42:t:9:VAL:HG12	2.00	0.41
3:C:252:TRP:CH2	3:C:260:LEU:HD11	2.55	0.41
5:E:192:LYS:HZ1	44:2:698:G:H5'	1.84	0.41
6:F:220:MET:HB3	44:2:1885:A:OP1	2.21	0.41
6:F:232:ASP:HA	6:F:236:ARG:HH21	1.85	0.41
7:G:76:VAL:HG22	7:G:238:GLY:CA	2.50	0.41
7:G:106:THR:HG22	7:G:109:GLU:HG2	2.03	0.41
9:I:62:SER:HB3	9:I:93:PRO:HG3	2.01	0.41
9:I:139:ARG:HG2	9:I:172:GLY:CA	2.50	0.41
12:M:114:LYS:HD3	12:M:114:LYS:C	2.45	0.41
13:N:14:LYS:HD2	44:2:271:G:C2	2.55	0.41
14:O:185:VAL:O	14:O:188:LYS:HB3	2.21	0.41
16:Q:67:ILE:HG12	16:Q:96:PRO:HD2	2.02	0.41
16:Q:75:ARG:NH1	16:Q:137:VAL:HG22	2.35	0.41
16:Q:162:HIS:CD2	44:2:1475:G:OP1	2.73	0.41
17:R:81:ARG:HH21	17:R:85:ALA:HA	1.85	0.41
18:S:44:PHE:O	18:S:48:VAL:HG23	2.20	0.41
19:T:25:VAL:HG21	19:T:94:GLU:OE2	2.20	0.41
19:T:117:LYS:O	19:T:120:LYS:HG2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Y:106:ILE:HG21	24:Y:109:LEU:HD23	2.02	0.41
29:d:32:ARG:HD3	29:d:48:GLU:CG	2.50	0.41
33:h:40:ALA:C	33:h:42:SER:N	2.79	0.41
34:i:27:SER:O	34:i:28:ARG:CB	2.68	0.41
44:2:74:G:C2'	44:2:75:G:O5'	2.68	0.41
44:2:88:A:C2	44:2:89:C:C6	3.09	0.41
44:2:186:G:H8	44:2:186:G:O5'	1.99	0.41
44:2:194:A:H8	44:2:194:A:P	2.44	0.41
44:2:196:G:H2'	44:2:235:C:P	2.59	0.41
44:2:256:C:O2	44:2:256:C:C3'	2.68	0.41
44:2:265:C:H2'	44:2:266:C:C6	2.54	0.41
44:2:333:G:C2	45:3:33:G:N2	2.88	0.41
44:2:693:G:H2'	44:2:694:C:H6	1.85	0.41
44:2:961:C:H2'	44:2:962:G:N7	2.35	0.41
44:2:1055:G:H2'	44:2:1056:C:O4'	2.21	0.41
44:2:1239:G:O2'	44:2:1240:G:H5'	2.20	0.41
44:2:1285:C:H2'	44:2:1286:C:O4'	2.20	0.41
44:2:1308:G:H5'	44:2:1308:G:H8	1.85	0.41
44:2:1446:C:H2'	44:2:1447:C:C6	2.55	0.41
44:2:1483:G:OP2	44:2:1483:G:C8	2.74	0.41
44:2:1649:G:N2	44:2:1832:G:H2'	2.35	0.41
44:2:1652:U:H4'	44:2:4262:U:C2	2.56	0.41
44:2:2040:C:O2	44:2:2040:C:H2'	2.20	0.41
44:2:2426:A:H8	44:2:2426:A:O5'	2.04	0.41
44:2:2469:C:H2'	44:2:2470:G:N7	2.31	0.41
44:2:2479:G:H1'	44:2:2481:C:H5	1.85	0.41
44:2:2550:A:OP1	44:2:2736:G:H1'	2.20	0.41
44:2:2604:C:N4	44:2:4609:G:H22	2.17	0.41
44:2:2657:G:O2'	44:2:2658:G:H5'	2.20	0.41
44:2:2741:A:N3	44:2:2741:A:C2'	2.84	0.41
44:2:3570:C:O5'	44:2:3570:C:H6	2.03	0.41
44:2:3573:A:H5'	44:2:3574:C:OP1	2.21	0.41
44:2:3605:C:C6	44:2:3605:C:C5'	2.95	0.41
44:2:3826:G:C6	44:2:3827:C:C5	3.08	0.41
44:2:4032:C:C3'	44:2:4033:G:C4'	2.98	0.41
44:2:4310:C:H2'	44:2:4311:U:H6	1.85	0.41
44:2:4459:G:H2'	44:2:4460:U:O4'	2.21	0.41
44:2:4542:C:C5	44:2:4543:C:N4	2.88	0.41
44:2:4578:G:C2'	44:2:4579:U:C5'	2.98	0.41
44:2:4627:C:O5'	44:2:4627:C:H6	2.03	0.41
44:2:4649:U:H2'	44:2:4650:G:C5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4674:C:C2	44:2:4675:C:C6	3.08	0.41
44:2:4709:G:N2	44:2:4905:U:C4	2.88	0.41
44:2:4735:G:C3'	44:2:4736:C:C5'	2.99	0.41
44:2:4738:U:OP2	44:2:4740:U:H5	2.03	0.41
45:3:114:G:N3	45:3:114:G:H2'	2.35	0.41
46:4:69:U:C6	46:4:69:U:C3'	3.03	0.41
2:B:140:GLU:HG3	2:B:140:GLU:O	2.20	0.41
3:C:54:VAL:CG1	44:2:2320:G:O6	2.68	0.41
3:C:136:LEU:HD23	42:t:10:VAL:HG13	2.03	0.41
3:C:147:VAL:HA	3:C:148:PRO:HD2	1.91	0.41
3:C:305:PRO:CB	44:2:2064:G:OP1	2.68	0.41
4:D:22:ARG:CD	4:D:27:LYS:HB2	2.51	0.41
5:E:214:ASP:OD1	44:2:4896:G:H5'	2.20	0.41
8:H:54:ARG:NH1	8:H:56:ARG:HD3	2.36	0.41
11:L:110:LEU:O	11:L:114:VAL:HG23	2.20	0.41
13:N:40:PRO:CG	44:2:8:U:H5'	2.51	0.41
16:Q:42:THR:CG2	44:2:1409:C:C5'	2.89	0.41
16:Q:43:PHE:CE1	16:Q:47:VAL:HG21	2.55	0.41
16:Q:78:LYS:HD2	16:Q:135:GLY:HA2	2.01	0.41
19:T:105:PHE:CD1	44:2:1781:A:H4'	2.52	0.41
19:T:158:PHE:C	19:T:159:MET:HG2	2.45	0.41
23:X:63:LYS:HD2	23:X:66:PRO:HA	2.01	0.41
23:X:81:LEU:HD22	23:X:135:LYS:HE2	2.02	0.41
25:Z:18:TYR:CE2	25:Z:73:LYS:HE3	2.55	0.41
37:l:23:ILE:CD1	37:l:38:ASN:HB2	2.50	0.41
41:p:8:VAL:O	41:p:11:VAL:HB	2.20	0.41
42:t:122:LYS:HA	42:t:125:MET:HE3	2.02	0.41
43:u:32:ARG:HB3	43:u:196:ASP:CG	2.45	0.41
43:u:62:PHE:CD2	43:u:62:PHE:C	2.97	0.41
43:u:156:ARG:HD3	44:2:4023:U:C2	2.50	0.41
44:2:89:C:H5''	44:2:285:G:H1'	2.03	0.41
44:2:154:U:O2	44:2:154:U:C2'	2.67	0.41
44:2:221:U:OP2	44:2:221:U:C6	2.73	0.41
44:2:408:G:H1'	45:3:16:G:C2	2.54	0.41
44:2:427:C:H2'	44:2:427:C:O2	2.21	0.41
44:2:429:G:H2'	44:2:430:G:H5'	2.02	0.41
44:2:725:C:C5'	44:2:725:C:H6	2.33	0.41
44:2:897:U:H3'	44:2:897:U:H6	1.86	0.41
44:2:956:C:C2'	44:2:957:G:C5'	2.98	0.41
44:2:959:C:OP1	44:2:970:C:O2	2.38	0.41
44:2:971:C:C6	44:2:971:C:C3'	3.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:1079:C:OP2	44:2:1079:C:H6	2.04	0.41
44:2:1170:C:H2'	44:2:1171:C:H6	1.81	0.41
44:2:1179:G:C2	44:2:1180:G:C5	3.09	0.41
44:2:1305:C:C5	44:2:3848:G:P	3.14	0.41
44:2:1317:A:C2	44:2:1638:U:O4'	2.74	0.41
44:2:2452:G:H2'	44:2:2453:G:H8	1.80	0.41
44:2:2793:G:H8	44:2:2793:G:O5'	2.04	0.41
44:2:3616:A:C2'	44:2:3617:A:H5''	2.51	0.41
44:2:3690:U:C6	44:2:3690:U:O5'	2.73	0.41
44:2:3903:G:C2'	44:2:3904:C:H5'	2.50	0.41
44:2:4007:G:H5'	44:2:4018:A:O4'	2.20	0.41
44:2:4043:U:C1'	44:2:4044:G:P	3.08	0.41
44:2:4050:G:O6	44:2:4053:A:C2	2.73	0.41
44:2:4057:G:C2	44:2:4121:G:N2	2.89	0.41
44:2:4184:A:H2'	44:2:4185:G:O4'	2.21	0.41
44:2:4197:C:H4'	44:2:4287:C:O2	2.21	0.41
44:2:4269:G:C8	44:2:4269:G:C5'	3.03	0.41
44:2:4269:G:H8	44:2:4269:G:O5'	2.04	0.41
44:2:4343:U:O5'	44:2:4343:U:H6	2.03	0.41
44:2:4383:U:H6	44:2:4383:U:C3'	2.27	0.41
44:2:4395:U:H3'	44:2:4396:U:C5	2.55	0.41
44:2:4502:U:O5'	44:2:4502:U:C6	2.72	0.41
44:2:4659:U:H4'	44:2:4660:A:H5''	2.02	0.41
44:2:4863:G:H2'	44:2:4864:A:H4'	2.02	0.41
45:3:117:C:O2'	45:3:118:C:H5'	2.21	0.41
45:3:151:G:H3'	45:3:152:U:H6	1.85	0.41
46:4:90:A:C4	46:4:91:C:H1'	2.55	0.41
1:A:186:TYR:HD1	1:A:196:TRP:CH2	2.38	0.41
3:C:93:GLY:O	3:C:99:GLY:HA3	2.20	0.41
3:C:106:LYS:HD2	3:C:108:TRP:CZ2	2.56	0.41
4:D:95:TYR:CD2	46:4:47:G:OP1	2.74	0.41
5:E:271:LEU:O	44:2:4837:U:C4	2.73	0.41
6:F:105:VAL:CB	6:F:136:VAL:HG12	2.49	0.41
6:F:148:LYS:HD2	44:2:926:G:H5''	2.02	0.41
11:L:61:CYS:SG	11:L:66:TYR:HB3	2.61	0.41
13:N:115:VAL:HA	13:N:134:LEU:HD23	2.02	0.41
14:O:7:LEU:HD23	14:O:31:ARG:HG3	2.02	0.41
15:P:6:LEU:CB	45:3:10:G:N2	2.77	0.41
18:S:12:VAL:HG22	18:S:64:CYS:SG	2.61	0.41
26:a:21:ARG:HD3	44:2:2258:A:H5''	2.01	0.41
26:a:114:LYS:HG3	44:2:1479:A:N1	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:375:A:N6	44:2:398:A:H61	2.19	0.41
44:2:379:A:C8	44:2:379:A:OP2	2.74	0.41
44:2:450:C:H2'	44:2:451:C:C6	2.54	0.41
44:2:639:G:H2'	44:2:640:A:H8	1.84	0.41
44:2:917:G:P	44:2:917:G:C3'	3.03	0.41
44:2:923:G:C2'	44:2:924:C:C5'	2.97	0.41
44:2:1082:U:H4'	44:2:1083:C:OP2	2.20	0.41
44:2:1198:G:H2'	44:2:1199:G:C8	2.54	0.41
44:2:1249:G:C6	44:2:1250:A:C6	3.07	0.41
44:2:1348:A:C4'	44:2:1349:C:H5'	2.50	0.41
44:2:1532:A:H4'	44:2:1533:A:OP2	2.20	0.41
44:2:1941:C:C2'	44:2:1942:A:H5'	2.51	0.41
44:2:2052:C:C6	44:2:2052:C:H3'	2.56	0.41
44:2:2349:U:H2'	44:2:2350:C:C5	2.55	0.41
44:2:2568:A:O2'	44:2:2569:U:H5'	2.20	0.41
44:2:2862:A:H2'	44:2:2863:U:C6	2.55	0.41
44:2:2864:U:H2'	44:2:3587:C:C5	2.54	0.41
44:2:3611:A:H3'	44:2:3612:A:H2'	2.02	0.41
44:2:3664:U:H5''	44:2:3664:U:C6	2.56	0.41
44:2:3738:C:C4	44:2:3739:U:C4	3.09	0.41
44:2:3753:A:H2'	44:2:3754:A:H3'	2.01	0.41
44:2:3788:G:C2	44:2:3789:G:N7	2.88	0.41
44:2:3832:C:H6	44:2:3832:C:O5'	2.03	0.41
44:2:3842:G:C6	44:2:3843:G:C6	3.08	0.41
44:2:3843:G:P	44:2:3843:G:H8	2.44	0.41
44:2:3863:A:H2'	44:2:3864:G:O4'	2.20	0.41
44:2:4004:G:C4	44:2:4005:C:C5	3.08	0.41
44:2:4037:U:C6	44:2:4038:U:H5	2.32	0.41
44:2:4066:A:H2'	44:2:4067:G:H8	1.84	0.41
44:2:4221:C:H2'	44:2:4222:C:C6	2.55	0.41
44:2:4251:G:H8	44:2:4251:G:O5'	2.03	0.41
44:2:4526:U:H2'	44:2:4527:G:O5'	2.20	0.41
44:2:4580:U:C6	44:2:4580:U:C3'	3.03	0.41
44:2:4621:G:C6	44:2:4622:C:C4	3.08	0.41
44:2:4802:G:H21	44:2:4803:C:H41	1.67	0.41
45:3:61:A:O3'	45:3:63:U:H1'	2.20	0.41
46:4:85:G:N2	46:4:93:G:C4	2.88	0.41
1:A:22:HIS:ND1	44:2:2719:G:H4'	2.35	0.41
1:A:196:TRP:HE3	1:A:197:PRO:HD3	1.86	0.41
2:B:232:THR:OG1	2:B:249:ARG:HB2	2.21	0.41
3:C:188:ARG:NH2	44:2:2312:C:H42	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:164:PHE:CE1	5:E:173:LEU:HD22	2.56	0.41
7:G:46:GLN:CD	44:2:4055:G:O6	2.64	0.41
9:I:165:ILE:O	9:I:165:ILE:HG13	2.21	0.41
12:M:43:THR:OG1	12:M:45:VAL:HG12	2.20	0.41
13:N:44:ARG:CZ	13:N:47:LYS:HG2	2.50	0.41
13:N:84:PRO:O	40:o:48:TYR:CD2	2.74	0.41
15:P:60:PHE:HB3	15:P:64:ASN:CB	2.51	0.41
15:P:109:VAL:O	15:P:112:LEU:HD22	2.21	0.41
16:Q:57:ASN:ND2	44:2:1671:C:H4'	2.36	0.41
16:Q:159:PRO:HB3	16:Q:188:ASN:O	2.20	0.41
17:R:76:MET:HG3	17:R:76:MET:O	2.20	0.41
19:T:12:ARG:NH2	44:2:4169:G:H4'	2.34	0.41
19:T:40:VAL:HB	19:T:96:ILE:CG2	2.51	0.41
25:Z:133:LYS:NZ	25:Z:133:LYS:HB3	2.36	0.41
28:c:51:ASN:HB2	41:p:42:CYS:C	2.45	0.41
30:e:63:ASN:HB3	30:e:66:THR:OG1	2.21	0.41
40:o:48:TYR:OH	44:2:3895:C:C4'	2.69	0.41
42:t:90:LEU:HA	42:t:93:ILE:CG2	2.48	0.41
43:u:43:VAL:HG22	43:u:188:LEU:HG	2.03	0.41
43:u:154:GLY:C	44:2:3936:G:O2'	2.56	0.41
44:2:154:U:O5'	44:2:154:U:C6	2.73	0.41
44:2:188:G:C1'	44:2:189:G:OP2	2.63	0.41
44:2:270:A:C8	44:2:270:A:OP2	2.74	0.41
44:2:433:G:HO2'	44:2:434:G:P	2.43	0.41
44:2:642:C:C6	44:2:643:G:O4'	2.74	0.41
44:2:723:G:N3	44:2:723:G:C2'	2.81	0.41
44:2:1199:G:O3'	44:2:1200:G:C8	2.72	0.41
44:2:1283:A:OP2	44:2:1283:A:C4'	2.65	0.41
44:2:1377:A:C1'	44:2:1447:C:C4'	2.99	0.41
44:2:1870:A:C8	44:2:1870:A:H3'	2.55	0.41
44:2:2350:C:C2'	44:2:2351:A:H5'	2.51	0.41
44:2:2478:C:C6	44:2:2478:C:C3'	3.04	0.41
44:2:2484:A:O2'	44:2:2485:U:H5'	2.20	0.41
44:2:2576:G:H3'	44:2:2577:A:H8	1.85	0.41
44:2:2608:U:OP1	44:2:2608:U:H6	2.04	0.41
44:2:3604:A:H3'	44:2:3604:A:C8	2.56	0.41
44:2:3713:G:C2'	44:2:3714:U:H5'	2.50	0.41
44:2:4148:U:H2'	44:2:4149:U:C6	2.54	0.41
44:2:4212:C:H5''	44:2:4213:A:OP2	2.19	0.41
44:2:4319:U:H5''	44:2:4319:U:C6	2.54	0.41
44:2:4740:U:H3'	44:2:4740:U:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4838:C:N4	44:2:4891:G:N2	2.68	0.41
44:2:4861:C:H2'	44:2:4862:G:H5'	2.01	0.41
44:2:4874:G:C2'	44:2:4875:C:H5'	2.50	0.41
44:2:4900:G:N3	44:2:4900:G:C2'	2.79	0.41
44:2:4948:G:N2	44:2:5014:C:C2	2.89	0.41
44:2:4953:G:H2'	44:2:4954:G:C8	2.56	0.41
45:3:25:G:C8	45:3:25:G:O5'	2.74	0.41
45:3:103:A:OP2	45:3:104:A:H2'	2.20	0.41
2:B:54:THR:O	2:B:76:VAL:HG22	2.20	0.41
3:C:312:ARG:H	44:2:943:G:H1	1.69	0.41
4:D:197:LYS:HD2	4:D:202:GLN:HG3	2.02	0.41
6:F:86:GLU:HG3	19:T:136:ARG:HG2	2.01	0.41
6:F:117:ILE:HG23	44:2:2050:C:H5'	2.02	0.41
7:G:43:GLN:NE2	44:2:4083:C:N3	2.69	0.41
7:G:173:LEU:CD2	34:i:43:MET:SD	3.09	0.41
7:G:220:GLU:HA	7:G:223:ARG:HE	1.86	0.41
8:H:31:ARG:NH2	8:H:187:VAL:HG12	2.35	0.41
13:N:53:TYR:HD1	13:N:133:ILE:HD11	1.85	0.41
18:S:99:ASP:OD2	18:S:105:ALA:HA	2.21	0.41
20:U:39:PHE:CE1	20:U:43:LEU:HD11	2.56	0.41
24:Y:114:ASP:N	45:3:84:A:H62	2.19	0.41
33:h:101:ASN:HD21	44:2:171:C:H5''	1.86	0.41
34:i:26:HIS:HB3	44:2:156:C:H5'	2.02	0.41
34:i:33:LEU:CD2	34:i:34:THR:H	2.33	0.41
36:k:4:LYS:HD3	44:2:2669:U:O4'	2.21	0.41
36:k:19:ASP:HB3	36:k:38:CYS:SG	2.61	0.41
40:o:48:TYR:CE1	44:2:3895:C:C4'	2.84	0.41
40:o:58:LYS:NZ	40:o:58:LYS:HB3	2.34	0.41
42:t:87:ARG:H	44:2:669:G:C5'	2.34	0.41
43:u:15:ASP:O	43:u:17:PRO:HD3	2.21	0.41
44:2:113:A:N1	44:2:269:G:C6	2.88	0.41
44:2:121:A:C2	44:2:147:U:C5	3.09	0.41
44:2:213:C:O2	44:2:213:C:C2'	2.69	0.41
44:2:286:A:N3	44:2:286:A:C2'	2.83	0.41
44:2:319:A:C2	44:2:320:A:C4	3.09	0.41
44:2:327:A:H4'	44:2:328:U:OP2	2.21	0.41
44:2:407:U:C2	45:3:17:A:N6	2.89	0.41
44:2:408:G:H1'	45:3:16:G:H22	1.81	0.41
44:2:423:U:C6	44:2:423:U:C3'	3.03	0.41
44:2:426:A:H3'	44:2:427:C:H5	1.85	0.41
44:2:457:A:C6	44:2:676:G:N7	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:460:C:O5'	44:2:679:U:H4'	2.21	0.41
44:2:461:A:H5'	44:2:462:A:OP2	2.21	0.41
44:2:640:A:C2	44:2:641:C:C2	3.09	0.41
44:2:736:G:N2	44:2:737:G:H1'	2.34	0.41
44:2:956:C:O2'	44:2:1218:A:O4'	2.38	0.41
44:2:970:C:O2	44:2:970:C:H2'	2.20	0.41
44:2:1055:G:H2'	44:2:1056:C:H6	1.84	0.41
44:2:1209:C:O2	44:2:1209:C:C3'	2.69	0.41
44:2:1428:G:C5'	44:2:1428:G:C8	3.04	0.41
44:2:1463:G:H8	44:2:1463:G:O5'	2.04	0.41
44:2:1532:A:C2	44:2:1554:A:H1'	2.56	0.41
44:2:1533:A:H3'	44:2:1534:G:H8	1.85	0.41
44:2:1717:A:H4'	46:4:101:A:N3	2.36	0.41
44:2:1785:G:C5'	44:2:1785:G:H8	2.34	0.41
44:2:1848:C:H2'	44:2:1849:A:H8	1.86	0.41
44:2:1907:A:N3	44:2:1907:A:C2'	2.84	0.41
44:2:2331:G:O2'	44:2:2332:G:H5'	2.21	0.41
44:2:2549:C:C4'	44:2:2737:G:C8	3.03	0.41
44:2:2620:G:O2'	44:2:2621:G:H5'	2.20	0.41
44:2:2788:G:N2	44:2:2790:A:H3'	2.36	0.41
44:2:2865:G:H2'	44:2:2866:G:H5'	2.02	0.41
44:2:3727:U:C6	44:2:3727:U:C3'	3.03	0.41
44:2:3943:G:C4	44:2:3944:C:C5	3.09	0.41
44:2:4093:C:O5'	44:2:4093:C:C6	2.73	0.41
44:2:4130:A:O5'	44:2:4130:A:C8	2.74	0.41
44:2:4151:G:H8	44:2:4151:G:C5'	2.34	0.41
44:2:4200:G:H3'	44:2:4201:C:O4'	2.21	0.41
44:2:4249:U:C2'	44:2:4250:U:O5'	2.68	0.41
44:2:4251:G:OP2	44:2:4253:U:H1'	2.20	0.41
44:2:4377:C:H3'	44:2:4378:G:C8	2.51	0.41
44:2:4648:C:H2'	44:2:4649:U:C6	2.56	0.41
44:2:4725:C:C6	44:2:4725:C:H5''	2.56	0.41
44:2:4735:G:H3'	44:2:4736:C:C5'	2.39	0.41
45:3:156:U:C6	45:3:156:U:C3'	3.04	0.41
1:A:138:SER:HB2	1:A:147:ARG:HB3	2.02	0.41
1:A:233:ARG:HG3	1:A:233:ARG:O	2.21	0.41
2:B:9:PRO:HD2	21:V:48:ARG:HH12	1.86	0.41
2:B:315:ASN:HA	2:B:316:PRO:HD3	1.83	0.41
3:C:84:THR:HG22	3:C:86:ARG:H	1.86	0.41
3:C:172:LYS:HA	3:C:177:TRP:HB2	2.03	0.41
4:D:178:LYS:HD3	44:2:4283:A:OP2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:264:LYS:CG	46:4:1:G:N7	2.84	0.41
7:G:136:LEU:HD13	7:G:202:VAL:HG13	2.03	0.41
8:H:41:ILE:HG23	8:H:43:VAL:HG22	2.01	0.41
8:H:130:PRO:O	8:H:153:LEU:HD13	2.21	0.41
10:J:19:LYS:HB3	10:J:133:VAL:HG11	2.03	0.41
10:J:82:ILE:O	10:J:85:LYS:HB3	2.21	0.41
10:J:97:ASN:HD22	10:J:97:ASN:HA	1.76	0.41
11:L:80:GLU:HG2	11:L:110:LEU:CD1	2.51	0.41
11:L:124:LEU:HD23	33:h:119:TYR:CD2	2.56	0.41
11:L:164:GLU:H	11:L:164:GLU:CD	2.28	0.41
11:L:165:LYS:HG3	44:2:502:C:H5''	2.03	0.41
12:M:9:VAL:HA	12:M:27:ILE:O	2.21	0.41
12:M:24:LEU:H	12:M:43:THR:HG21	1.85	0.41
13:N:59:TYR:CE2	13:N:135:ILE:HD12	2.56	0.41
13:N:73:ARG:HA	13:N:74:PRO:HD3	1.87	0.41
14:O:12:ARG:HB2	14:O:37:ARG:CD	2.51	0.41
15:P:36:ILE:CG2	15:P:114:ILE:HD12	2.51	0.41
16:Q:17:GLU:CG	16:Q:18:PRO:HD2	2.51	0.41
16:Q:65:ARG:HA	44:2:1481:G:N1	2.36	0.41
17:R:83:GLY:HA2	44:2:2789:A:C8	2.56	0.41
18:S:16:CYS:HA	18:S:59:GLY:HA2	2.03	0.41
18:S:24:THR:CG2	19:T:146:LYS:HD2	2.51	0.41
19:T:12:ARG:NE	44:2:4235:G:H4'	2.36	0.41
19:T:34:TYR:OH	19:T:97:LYS:HA	2.20	0.41
19:T:120:LYS:NZ	44:2:1811:G:H1'	2.35	0.41
24:Y:5:PRO:HA	44:2:1348:A:OP1	2.21	0.41
24:Y:19:PHE:HB3	45:3:23:C:C4	2.56	0.41
25:Z:9:LYS:CE	25:Z:82:PRO:HB2	2.50	0.41
25:Z:10:VAL:HB	25:Z:83:THR:CG2	2.51	0.41
25:Z:101:PHE:O	25:Z:102:ARG:HB2	2.21	0.41
26:a:114:LYS:HE3	44:2:1479:A:C6	2.56	0.41
27:b:45:PHE:CB	44:2:1794:G:OP1	2.69	0.41
28:c:45:LEU:C	28:c:45:LEU:HD13	2.46	0.41
28:c:52:CYS:HA	28:c:53:PRO:HD2	1.90	0.41
30:e:16:ARG:CD	30:e:19:LYS:HD3	2.51	0.41
31:f:46:ARG:HB2	31:f:106:TYR:OH	2.20	0.41
32:g:5:LEU:HD13	32:g:32:TYR:CZ	2.56	0.41
32:g:8:ARG:HH11	32:g:31:VAL:HG21	1.86	0.41
32:g:69:LYS:HA	32:g:72:LYS:HE2	2.01	0.41
33:h:101:ASN:ND2	44:2:171:C:H5''	2.35	0.41
41:p:5:THR:HB	41:p:8:VAL:HG22	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:p:49:ARG:HB2	41:p:55:TRP:CZ3	2.56	0.41
42:t:79:ARG:HG2	42:t:80:THR:N	2.36	0.41
43:u:23:GLU:CD	43:u:202:THR:HB	2.45	0.41
43:u:58:THR:HG21	43:u:100:ASP:O	2.21	0.41
43:u:59:ILE:HG22	43:u:61:VAL:HG23	2.02	0.41
43:u:94:ALA:HB2	43:u:117:TYR:OH	2.21	0.41
44:2:28:C:H3'	44:2:28:C:C6	2.55	0.41
44:2:47:A:H4'	44:2:48:G:H5'	2.03	0.41
44:2:86:U:O2	44:2:86:U:H2'	2.19	0.41
44:2:170:C:H5	44:2:170:C:OP2	2.03	0.41
44:2:205:A:O5'	44:2:205:A:H8	2.04	0.41
44:2:230:U:C2	44:2:2280:U:C6	3.09	0.41
44:2:241:G:N2	44:2:242:C:C4	2.88	0.41
44:2:252:G:C8	44:2:252:G:OP2	2.74	0.41
44:2:383:U:O5'	44:2:383:U:H6	2.04	0.41
44:2:402:G:H5''	44:2:405:C:H1'	2.02	0.41
44:2:736:G:N2	44:2:902:G:H22	2.18	0.41
44:2:743:C:H2'	44:2:744:G:C8	2.55	0.41
44:2:959:C:C6	44:2:959:C:OP2	2.74	0.41
44:2:967:C:O2	44:2:967:C:C2'	2.58	0.41
44:2:1059:C:C5	44:2:1202:A:N6	2.88	0.41
44:2:1068:C:H2'	44:2:1069:G:H8	1.86	0.41
44:2:1087:C:H6	44:2:1087:C:H5''	1.85	0.41
44:2:1149:G:H2'	44:2:1150:G:H8	1.86	0.41
44:2:1357:G:N7	44:2:1360:G:H3'	2.35	0.41
44:2:1374:G:H2'	44:2:1375:U:O4'	2.21	0.41
44:2:1393:C:H2'	44:2:1394:C:C6	2.55	0.41
44:2:1399:G:H2'	44:2:1399:G:N3	2.36	0.41
44:2:1558:C:O2'	44:2:1559:C:H5'	2.21	0.41
44:2:1778:G:H2'	44:2:1778:G:N3	2.35	0.41
44:2:1824:G:H8	44:2:1824:G:O5'	2.04	0.41
44:2:1916:C:H4'	44:2:1917:A:C5'	2.51	0.41
44:2:1942:A:O2'	44:2:4655:C:H1'	2.21	0.41
44:2:2020:A:N7	44:2:2021:A:N1	2.68	0.41
44:2:2032:U:O2	44:2:2032:U:H2'	2.21	0.41
44:2:2262:G:O2'	44:2:2263:G:H5'	2.21	0.41
44:2:2342:C:H5''	44:2:2342:C:C6	2.46	0.41
44:2:2481:C:O2'	44:2:2482:C:P	2.79	0.41
44:2:2497:C:O2	44:2:2617:G:N2	2.54	0.41
44:2:2498:G:O4'	44:2:2617:G:H1'	2.20	0.41
44:2:2509:C:C2	44:2:2510:C:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:2615:G:O2'	44:2:2616:U:H5'	2.20	0.41
44:2:2624:A:N6	44:2:2665:G:C6	2.89	0.41
44:2:2655:A:H2'	44:2:2656:G:H8	1.83	0.41
44:2:2702:A:OP2	44:2:2703:G:H8	2.04	0.41
44:2:2820:U:C2	44:2:2821:A:C8	3.09	0.41
44:2:3590:A:H3'	44:2:3591:C:C6	2.56	0.41
44:2:3686:A:N6	44:2:3705:A:C5	2.89	0.41
44:2:3891:G:N3	44:2:3891:G:H2'	2.35	0.41
44:2:3910:G:N2	44:2:3911:A:C8	2.87	0.41
44:2:3930:G:H3'	44:2:3931:A:C5'	2.51	0.41
44:2:3942:G:H2'	44:2:3943:G:H8	1.85	0.41
44:2:4030:A:H2'	44:2:4031:U:C5'	2.50	0.41
44:2:4175:C:OP1	44:2:4175:C:H3'	2.21	0.41
44:2:4177:G:H3'	44:2:4178:U:C6	2.56	0.41
44:2:4251:G:H4'	44:2:4252:A:C5'	2.44	0.41
44:2:4278:C:H6	44:2:4278:C:C3'	2.31	0.41
44:2:4296:A:C8	44:2:4296:A:C3'	3.04	0.41
44:2:4358:C:H6	44:2:4358:C:C3'	2.23	0.41
44:2:4397:U:C6	44:2:4397:U:H5'	2.56	0.41
44:2:4409:A:C4'	44:2:4410:U:OP1	2.68	0.41
44:2:4535:G:N2	44:2:4689:C:O2'	2.54	0.41
44:2:4622:C:C2'	44:2:4623:G:H5'	2.49	0.41
44:2:4643:U:H5	44:2:4666:G:H21	1.66	0.41
44:2:4706:C:C2'	44:2:4707:U:H5'	2.51	0.41
44:2:4712:U:H6	44:2:4713:G:C8	2.39	0.41
44:2:4720:G:H3'	44:2:4720:G:H8	1.86	0.41
44:2:4722:U:O2	44:2:4722:U:H3'	2.20	0.41
44:2:4725:C:C5'	44:2:4725:C:C6	3.04	0.41
44:2:4730:C:H2'	44:2:4731:C:C6	2.56	0.41
44:2:4736:C:N4	44:2:4811:G:H1	2.15	0.41
44:2:4743:C:C6	44:2:4743:C:H3'	2.55	0.41
44:2:4943:U:H3'	44:2:4943:U:C6	2.56	0.41
44:2:4956:U:C5'	44:2:4956:U:H6	2.34	0.41
45:3:97:A:C2'	45:3:98:C:H5'	2.51	0.41
45:3:104:A:C4'	45:3:105:C:C5	3.00	0.41
2:B:90:VAL:HG11	2:B:182:GLU:CD	2.45	0.41
2:B:105:VAL:HG22	2:B:153:MET:HE1	2.03	0.41
2:B:321:VAL:HG23	2:B:341:LYS:NZ	2.36	0.41
3:C:234:LYS:CD	44:2:1353:A:C2	2.99	0.41
3:C:259:LYS:O	3:C:263:LEU:HG	2.21	0.41
3:C:330:PRO:HB2	6:F:51:TYR:HE1	1.76	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:11:ALA:HA	4:D:14:LYS:HD2	2.03	0.41
4:D:33:ARG:HE	19:T:27:LEU:CD1	2.34	0.41
4:D:91:GLY:N	46:4:48:G:H5''	2.35	0.41
6:F:237:GLU:O	6:F:240:ILE:HG22	2.21	0.41
7:G:57:TRP:CD1	7:G:65:ARG:HH12	2.39	0.41
7:G:80:ILE:HG22	7:G:81:ASN:N	2.36	0.41
8:H:118:LEU:HD21	8:H:177:ASP:HB2	2.03	0.41
9:I:176:PHE:CE2	9:I:184:MET:HE1	2.56	0.41
10:J:12:MET:HB3	46:4:54:A:N7	2.36	0.41
11:L:84:ALA:HA	11:L:118:LYS:NZ	2.36	0.41
17:R:128:LYS:HG2	44:2:1536:C:H1'	2.03	0.41
18:S:84:TYR:HE1	18:S:93:MET:SD	2.44	0.41
19:T:20:ARG:HD3	46:4:11:A:H62	1.86	0.41
20:U:48:LYS:HA	20:U:52:LYS:O	2.21	0.41
25:Z:89:ILE:HD11	25:Z:93:LYS:HE2	2.02	0.41
32:g:44:SER:HB2	44:2:2574:G:H4'	2.03	0.41
32:g:76:ARG:NH2	44:2:2559:A:O5'	2.54	0.41
34:i:26:HIS:HB2	44:2:156:C:H4'	2.03	0.41
36:k:26:LYS:HD2	44:2:2672:A:OP1	2.21	0.41
44:2:5:A:C6	44:2:6:C:C5	3.09	0.41
44:2:16:G:H2'	44:2:17:A:O4'	2.21	0.41
44:2:134:G:N3	44:2:134:G:C2'	2.83	0.41
44:2:153:G:H3'	44:2:154:U:C5	2.56	0.41
44:2:438:C:C5	44:2:438:C:OP2	2.74	0.41
44:2:455:G:C3'	44:2:456:G:H8	2.28	0.41
44:2:977:G:C2'	44:2:978:G:H5''	2.46	0.41
44:2:1140:C:H2'	44:2:1141:G:H8	1.84	0.41
44:2:1160:C:C3'	44:2:1160:C:H6	2.28	0.41
44:2:1161:C:C6	44:2:1161:C:C5'	3.01	0.41
44:2:1207:C:O5'	44:2:1207:C:C6	2.71	0.41
44:2:1279:G:C8	44:2:1279:G:O5'	2.74	0.41
44:2:1708:A:H2'	44:2:1709:U:H5'	2.00	0.41
44:2:2295:C:C6	44:2:2295:C:C3'	3.04	0.41
44:2:2307:G:OP2	44:2:2307:G:C8	2.73	0.41
44:2:2625:G:N2	44:2:2662:C:N3	2.69	0.41
44:2:3577:A:H5''	44:2:3577:A:H8	1.86	0.41
44:2:3779:C:H6	44:2:3779:C:C3'	2.14	0.41
44:2:3859:A:C2'	44:2:3860:A:H5'	2.48	0.41
44:2:3895:C:O2'	44:2:3896:U:H5'	2.20	0.41
44:2:4067:G:C8	44:2:4067:G:OP2	2.74	0.41
44:2:4117:A:H1'	44:2:4118:C:OP1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4177:G:H3'	44:2:4178:U:H6	1.86	0.41
44:2:4204:A:N3	44:2:4228:A:OP1	2.54	0.41
44:2:4219:C:H6	44:2:4219:C:O5'	2.03	0.41
44:2:4294:U:C6	44:2:4294:U:C3'	3.04	0.41
44:2:4438:G:C8	44:2:4438:G:OP2	2.74	0.41
44:2:4466:C:C5	44:2:4467:A:N7	2.89	0.41
44:2:4497:C:H3'	44:2:4498:G:H8	1.86	0.41
44:2:4595:A:O2'	44:2:4597:G:H8	2.04	0.41
44:2:4818:G:C5	44:2:4819:U:C4	3.09	0.41
44:2:4818:G:C4	44:2:4819:U:C5	3.09	0.41
46:4:70:G:C2	46:4:106:G:C2	3.09	0.41
46:4:98:G:H3'	46:4:99:G:C8	2.53	0.41
46:4:101:A:H2'	46:4:102:U:C6	2.56	0.41
4:D:47:PRO:CB	4:D:66:TYR:HB2	2.51	0.40
4:D:208:MET:HE3	4:D:233:PRO:HG3	2.03	0.40
5:E:150:LEU:HB2	5:E:162:VAL:HG12	2.03	0.40
6:F:66:ARG:HG2	6:F:69:ILE:HD11	2.03	0.40
6:F:92:VAL:CG1	6:F:140:ILE:HD12	2.51	0.40
8:H:29:GLY:HA3	8:H:84:VAL:HG12	1.98	0.40
8:H:71:ARG:HB3	44:2:4651:A:H4'	2.02	0.40
9:I:36:LEU:HB2	9:I:87:ILE:CG2	2.47	0.40
9:I:46:PHE:HB3	9:I:140:THR:N	2.36	0.40
11:L:74:ARG:CZ	44:2:76:A:OP2	2.68	0.40
13:N:159:ARG:HB2	13:N:164:LEU:HB2	2.03	0.40
15:P:125:MET:SD	44:2:2396:C:OP2	2.79	0.40
19:T:71:ALA:CB	44:2:4273:A:H4'	2.51	0.40
25:Z:1:MET:HA	28:c:68:LYS:HB3	2.04	0.40
29:d:98:SER:HB3	29:d:99:PRO:HD2	2.04	0.40
30:e:45:VAL:HG22	30:e:52:GLN:HB3	2.04	0.40
33:h:27:GLU:O	33:h:31:LEU:HD13	2.21	0.40
35:j:9:GLY:HA3	44:2:2777:G:N3	2.35	0.40
40:o:105:GLN:O	40:o:106:PHE:HB2	2.21	0.40
43:u:151:LEU:HD13	43:u:159:PHE:CE2	2.57	0.40
44:2:95:G:H5''	44:2:95:G:C8	2.56	0.40
44:2:194:A:H8	44:2:194:A:O5'	2.04	0.40
44:2:216:G:C4'	44:2:217:C:OP1	2.60	0.40
44:2:335:A:H2'	44:2:336:C:H6	1.84	0.40
44:2:417:A:N1	45:3:8:U:C4	2.90	0.40
44:2:437:C:O2	44:2:437:C:C2'	2.69	0.40
44:2:928:A:C1'	44:2:929:U:P	3.09	0.40
44:2:961:C:O3'	44:2:962:G:C8	2.64	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:970:C:C6	44:2:970:C:O5'	2.75	0.40
44:2:1154:G:H22	44:2:1167:G:N2	2.19	0.40
44:2:1161:C:C6	44:2:1161:C:C4'	3.04	0.40
44:2:1186:C:O2'	44:2:1187:C:H5'	2.21	0.40
44:2:1221:C:H6	44:2:1221:C:C3'	2.29	0.40
44:2:1353:A:H2'	44:2:1354:G:H8	1.84	0.40
44:2:1361:U:C2'	44:2:1362:G:H5'	2.51	0.40
44:2:1367:A:C6	44:2:1377:A:N7	2.90	0.40
44:2:1463:G:H2'	44:2:1464:C:C1'	2.51	0.40
44:2:1464:C:H2'	44:2:1465:C:H1'	1.98	0.40
44:2:1481:G:C8	44:2:1481:G:C3'	3.05	0.40
44:2:1606:G:H8	44:2:1606:G:OP2	2.04	0.40
44:2:1633:G:N2	44:2:1656:U:C5'	2.82	0.40
44:2:1645:C:H2'	44:2:1646:G:H5'	2.03	0.40
44:2:1672:U:O5'	44:2:1672:U:H6	2.04	0.40
44:2:1811:G:H2'	44:2:1812:U:C5'	2.52	0.40
44:2:1821:A:C4	44:2:1822:G:C8	3.08	0.40
44:2:1892:C:H5''	44:2:1893:C:H3'	2.02	0.40
44:2:1898:C:H3'	44:2:1900:G:OP2	2.21	0.40
44:2:1927:U:O5'	44:2:1927:U:H6	2.03	0.40
44:2:2027:G:C2'	44:2:2028:G:O5'	2.70	0.40
44:2:2260:G:H3'	44:2:2261:A:H8	1.85	0.40
44:2:2284:A:H2'	44:2:2285:G:O4'	2.21	0.40
44:2:2436:G:H5''	44:2:2437:A:OP2	2.21	0.40
44:2:2526:G:H5''	44:2:2527:G:C5'	2.48	0.40
44:2:2586:G:O3'	44:2:2663:G:N2	2.54	0.40
44:2:2636:A:H4'	44:2:2636:A:OP1	2.21	0.40
44:2:2746:U:H2'	44:2:2746:U:O2	2.20	0.40
44:2:2842:U:C2'	44:2:2843:C:H5'	2.50	0.40
44:2:3605:C:C6	44:2:3605:C:C4'	3.04	0.40
44:2:3633:G:H2'	44:2:3634:G:H8	1.85	0.40
44:2:3826:G:C2'	44:2:3827:C:H5'	2.51	0.40
44:2:3903:G:H2'	44:2:3904:C:C6	2.55	0.40
44:2:3942:G:H8	44:2:3942:G:O5'	2.04	0.40
44:2:4050:G:O6	44:2:4053:A:H2	2.04	0.40
44:2:4120:C:H2'	44:2:4121:G:C8	2.56	0.40
44:2:4195:G:C5	44:2:4196:G:N7	2.90	0.40
44:2:4237:G:H2'	44:2:4237:G:N3	2.36	0.40
44:2:4380:U:OP2	44:2:4381:C:C5	2.74	0.40
44:2:4381:C:H2'	44:2:4382:A:H5'	2.03	0.40
44:2:4487:G:N3	44:2:4487:G:C2'	2.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4502:U:C3'	44:2:4503:G:H5'	2.51	0.40
44:2:4576:A:O5'	44:2:4576:A:H8	2.04	0.40
44:2:4587:U:H3'	44:2:4588:U:C6	2.56	0.40
46:4:22:A:C2	46:4:119:U:O2'	2.73	0.40
46:4:63:C:C1'	46:4:64:G:C5'	2.94	0.40
46:4:90:A:H2'	46:4:91:C:O4'	2.21	0.40
2:B:49:TYR:O	2:B:79:VAL:HG23	2.22	0.40
3:C:330:PRO:CB	6:F:51:TYR:OH	2.69	0.40
5:E:227:HIS:CD2	44:2:1274:A:OP2	2.74	0.40
5:E:278:THR:CB	5:E:281:ILE:HG12	2.51	0.40
7:G:63:LEU:HB3	13:N:29:GLN:HE22	1.86	0.40
13:N:181:HIS:CE1	13:N:182:HIS:HB2	2.57	0.40
14:O:161:LYS:O	14:O:164:ALA:HB3	2.20	0.40
16:Q:63:LEU:HD11	16:Q:109:ALA:HA	2.03	0.40
17:R:10:LEU:HG	17:R:41:ILE:HG12	2.03	0.40
17:R:40:GLN:O	17:R:44:LEU:HG	2.21	0.40
20:U:40:GLU:OE1	20:U:65:ARG:HB2	2.21	0.40
22:W:50:ASN:H	44:2:3584:G:H21	1.70	0.40
28:c:52:CYS:CB	28:c:92:CYS:SG	3.06	0.40
39:n:21:ARG:O	39:n:25:LYS:N	2.55	0.40
42:t:44:ILE:CG1	42:t:45:HIS:H	2.26	0.40
42:t:79:ARG:NE	44:2:471:C:H4'	2.35	0.40
44:2:9:C:N4	45:3:147:G:H1	2.19	0.40
44:2:87:A:H8	44:2:87:A:O5'	2.04	0.40
44:2:237:G:C2	44:2:238:G:H1'	2.56	0.40
44:2:284:G:O2'	44:2:288:U:C6	2.74	0.40
44:2:366:G:H8	44:2:366:G:C5'	2.35	0.40
44:2:673:G:H5''	44:2:674:G:OP2	2.21	0.40
44:2:1384:G:H3'	44:2:1385:C:H5	1.86	0.40
44:2:1397:C:H6	44:2:1397:C:O5'	2.04	0.40
44:2:1720:G:H3'	44:2:1720:G:N3	2.36	0.40
44:2:2247:C:H2'	44:2:2248:C:H6	1.85	0.40
44:2:2382:G:C2'	44:2:2383:G:H5'	2.51	0.40
44:2:2624:A:C5	44:2:2665:G:O6	2.74	0.40
44:2:2760:A:H3'	44:2:2761:C:C6	2.57	0.40
44:2:3673:U:H2'	44:2:3674:G:C8	2.56	0.40
44:2:3768:A:H2'	44:2:3769:A:C8	2.56	0.40
44:2:4043:U:C4'	44:2:4044:G:OP1	2.68	0.40
44:2:4072:A:C8	44:2:4072:A:H3'	2.57	0.40
44:2:4080:U:H2'	44:2:4081:C:C4'	2.49	0.40
44:2:4268:C:H2'	44:2:4269:G:H8	1.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4310:C:H2'	44:2:4311:U:C6	2.55	0.40
44:2:4529:U:C2'	44:2:4530:G:H5'	2.50	0.40
44:2:4637:U:O2'	44:2:4638:G:P	2.80	0.40
44:2:4846:G:O5'	44:2:4846:G:H8	2.04	0.40
44:2:4854:G:O2'	44:2:4856:G:H5''	2.21	0.40
44:2:4873:C:H2'	44:2:4874:G:H8	1.86	0.40
45:3:25:G:O5'	45:3:25:G:H8	2.03	0.40
46:4:82:G:H3'	46:4:82:G:C8	2.56	0.40
46:4:110:G:O2'	46:4:111:C:H5'	2.22	0.40
1:A:76:PHE:CZ	1:A:165:VAL:HG21	2.56	0.40
2:B:118:PHE:CE2	2:B:130:PHE:CE1	3.10	0.40
2:B:332:MET:HE1	2:B:365:LEU:HD13	2.02	0.40
3:C:103:ALA:CB	44:2:1319:U:H1'	2.51	0.40
3:C:112:HIS:CE1	13:N:202:ARG:HH21	2.40	0.40
3:C:177:TRP:O	3:C:180:ILE:HB	2.21	0.40
3:C:234:LYS:CD	44:2:1353:A:H2	2.35	0.40
4:D:41:LYS:CG	19:T:67:VAL:HG13	2.51	0.40
4:D:61:ILE:HG12	4:D:79:TYR:CD2	2.56	0.40
4:D:110:LEU:HD12	4:D:115:MET:HG3	2.03	0.40
4:D:278:ASP:CG	44:2:1165:G:O2'	2.64	0.40
5:E:140:LEU:HB3	5:E:144:ILE:HD13	2.03	0.40
7:G:54:PHE:HZ	44:2:4055:G:H4'	1.86	0.40
7:G:110:LYS:HE3	44:2:122:U:OP2	2.21	0.40
9:I:35:ASP:OD2	44:2:1728:A:H4'	2.22	0.40
9:I:46:PHE:CB	9:I:139:ARG:HB3	2.51	0.40
11:L:76:PHE:HB2	11:L:81:LEU:HD21	2.02	0.40
12:M:132:LYS:HE3	12:M:136:LEU:HD11	2.03	0.40
13:N:140:LYS:HB3	13:N:144:ARG:HH12	1.84	0.40
14:O:60:LYS:HZ2	44:2:2024:G:H5'	1.85	0.40
16:Q:57:ASN:C	16:Q:59:PRO:HD3	2.46	0.40
18:S:157:ARG:HD3	18:S:176:PHE:CD1	2.55	0.40
22:W:50:ASN:HA	22:W:55:TYR:CD1	2.56	0.40
24:Y:44:VAL:HG22	24:Y:45:ARG:N	2.37	0.40
25:Z:122:TYR:HD1	25:Z:131:PHE:CD2	2.38	0.40
26:a:131:ARG:O	26:a:135:GLU:HG3	2.21	0.40
35:j:49:TRP:CZ3	35:j:50:SER:HB3	2.56	0.40
44:2:10:A:H1'	44:2:2448:G:O6	2.21	0.40
44:2:48:G:C5	44:2:281:U:H4'	2.56	0.40
44:2:113:A:H2'	44:2:114:G:O4'	2.22	0.40
44:2:436:U:H2'	44:2:437:C:OP1	2.21	0.40
44:2:642:C:OP2	44:2:643:G:H5''	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:711:A:H2'	44:2:712:C:O4'	2.20	0.40
44:2:948:A:C5	44:2:949:G:C6	3.10	0.40
44:2:1325:A:H61	44:2:1490:U:H3	1.70	0.40
44:2:1555:G:O2'	44:2:1556:G:H5'	2.21	0.40
44:2:1632:A:H2'	44:2:1634:C:N4	2.37	0.40
44:2:1715:A:H1'	46:4:78:C:HO2'	1.86	0.40
44:2:1942:A:C2	44:2:1943:G:N9	2.89	0.40
44:2:2301:C:H2'	44:2:2302:G:O4'	2.22	0.40
44:2:2313:G:C6	44:2:2314:C:C4	3.09	0.40
44:2:2356:A:H2'	44:2:2357:G:H5'	2.04	0.40
44:2:2559:A:C6	44:2:2658:G:H1'	2.56	0.40
44:2:2561:G:H5'	44:2:2659:G:H4'	1.97	0.40
44:2:2588:A:C5'	44:2:2665:G:H4'	2.51	0.40
44:2:2589:G:H8	44:2:2589:G:OP2	2.04	0.40
44:2:2831:G:C2'	44:2:2832:G:H5'	2.51	0.40
44:2:2849:C:C6	44:2:2849:C:O5'	2.74	0.40
44:2:3787:U:H3'	44:2:3788:G:C4'	2.52	0.40
44:2:4409:A:C1'	44:2:4410:U:OP1	2.70	0.40
44:2:4417:U:O2'	44:2:4418:C:H5'	2.21	0.40
44:2:4448:A:H4'	44:2:4449:G:H8	1.87	0.40
44:2:4529:U:C3'	44:2:4530:G:H5'	2.51	0.40
44:2:4530:G:C2'	44:2:4531:A:OP2	2.69	0.40
44:2:4813:C:H2'	44:2:4813:C:O2	2.22	0.40
44:2:4910:A:H2'	44:2:4911:A:H8	1.87	0.40
45:3:51:U:H6	45:3:52:A:N7	2.20	0.40
46:4:23:A:H1'	46:4:119:U:C4'	2.52	0.40
46:4:103:A:H2'	46:4:103:A:N3	2.36	0.40
2:B:305:THR:H	2:B:308:ASP:HB3	1.86	0.40
3:C:69:THR:HG22	3:C:75:ARG:NE	2.35	0.40
3:C:136:LEU:HD22	42:t:9:VAL:HB	2.04	0.40
4:D:191:ASN:HD22	4:D:194:VAL:CG2	2.34	0.40
4:D:197:LYS:HD2	4:D:202:GLN:CG	2.51	0.40
5:E:264:ILE:CG2	5:E:267:LEU:HB2	2.51	0.40
5:E:283:PRO:CB	31:f:105:LEU:HD21	2.51	0.40
7:G:37:LYS:HE2	7:G:44:ASP:HB3	2.02	0.40
8:H:105:ILE:O	8:H:105:ILE:HG13	2.21	0.40
8:H:189:GLN:O	8:H:190:ALA:HB2	2.22	0.40
13:N:135:ILE:O	13:N:137:PRO:HD3	2.22	0.40
13:N:144:ARG:O	13:N:145:ASN:CB	2.67	0.40
13:N:186:GLY:O	13:N:187:SER:CB	2.69	0.40
15:P:135:ARG:HH21	44:2:1575:U:H4'	1.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:Q:19:LYS:HD2	44:2:1328:U:O2'	2.21	0.40
16:Q:126:LEU:HD13	16:Q:126:LEU:C	2.46	0.40
17:R:3:MET:CE	44:2:2362:U:H5'	2.52	0.40
17:R:132:PHE:C	17:R:137:ILE:HD11	2.47	0.40
19:T:80:VAL:HA	44:2:4264:A:P	2.61	0.40
19:T:81:LYS:CG	19:T:82:GLY:H	2.32	0.40
21:V:46:LYS:HB3	44:2:4580:U:H5'	2.04	0.40
24:Y:121:ARG:N	24:Y:125:SER:HB3	2.36	0.40
29:d:19:GLU:HB2	29:d:90:ARG:HH21	1.87	0.40
30:e:31:ILE:HD11	44:2:2324:A:C2	2.56	0.40
30:e:58:ILE:HG23	44:2:2254:G:N2	2.35	0.40
30:e:88:LEU:HB3	30:e:120:ILE:HD13	2.04	0.40
43:u:94:ALA:HB1	43:u:121:VAL:HG21	2.02	0.40
44:2:158:G:H2'	44:2:159:A:C8	2.51	0.40
44:2:380:A:H2'	44:2:381:C:OP2	2.21	0.40
44:2:895:U:H6	44:2:895:U:H3'	1.86	0.40
44:2:1050:G:C2'	44:2:1051:C:C5'	2.97	0.40
44:2:1180:G:C2'	44:2:1181:U:H5'	2.51	0.40
44:2:1188:G:H3'	44:2:1189:U:H5''	2.03	0.40
44:2:1197:G:O3'	44:2:1198:G:C8	2.67	0.40
44:2:1276:G:OP2	44:2:1277:U:C1'	2.69	0.40
44:2:1307:C:H1'	44:2:4408:G:N3	2.36	0.40
44:2:1463:G:C8	44:2:1463:G:O5'	2.75	0.40
44:2:1499:C:H6	44:2:1499:C:OP2	2.05	0.40
44:2:1505:G:N3	44:2:1506:A:C8	2.89	0.40
44:2:1729:G:C6	44:2:1730:A:C8	3.10	0.40
44:2:1825:C:O2	44:2:1825:C:H2'	2.21	0.40
44:2:1876:C:H2'	44:2:2255:A:H4'	2.03	0.40
44:2:1942:A:O2'	44:2:4655:C:C1'	2.68	0.40
44:2:2003:A:C2	44:2:2004:A:H1'	2.57	0.40
44:2:2285:G:H4'	45:3:19:C:H5'	2.03	0.40
44:2:2362:U:H2'	44:2:2363:U:H6	1.85	0.40
44:2:2430:A:C2'	44:2:2431:U:H5'	2.49	0.40
44:2:2602:U:O2	44:2:2602:U:C2'	2.67	0.40
44:2:3886:A:H2'	44:2:3887:G:H5'	2.03	0.40
44:2:3913:G:H2'	44:2:3914:A:H5'	2.02	0.40
44:2:4044:G:N2	44:2:4130:A:N6	2.69	0.40
44:2:4150:U:C5	44:2:4342:G:C8	3.09	0.40
44:2:4154:U:H4'	44:2:4181:C:C5	2.56	0.40
44:2:4352:G:O5'	44:2:4352:G:C8	2.70	0.40
44:2:4397:U:H1'	44:2:4476:G:OP1	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:4533:G:N1	44:2:4681:G:O6	2.54	0.40
44:2:4593:G:N1	44:2:4623:G:H2'	2.37	0.40
44:2:4638:G:O2'	44:2:4639:G:H8	2.03	0.40
44:2:4704:G:C6	44:2:4705:C:C4	3.10	0.40
44:2:4816:G:H2'	44:2:4817:G:C8	2.57	0.40
44:2:4824:U:OP2	44:2:4825:G:C5	2.74	0.40
45:3:18:U:N3	45:3:19:C:C4	2.90	0.40
45:3:45:C:H2'	45:3:46:G:O4'	2.21	0.40
45:3:142:U:H6	45:3:142:U:O5'	2.04	0.40
45:3:150:C:O5'	45:3:150:C:H6	2.04	0.40
46:4:22:A:C5	46:4:23:A:C6	3.10	0.40
1:A:3:ARG:NH1	44:2:1607:C:H41	2.18	0.40
1:A:24:LYS:HE3	1:A:49:ILE:HD13	2.02	0.40
2:B:262:VAL:HG23	44:2:3867:G:C5	2.57	0.40
3:C:293:LEU:HD11	16:Q:34:PHE:CD1	2.57	0.40
4:D:58:ARG:HA	4:D:93:THR:CG2	2.51	0.40
4:D:204:VAL:CG2	46:4:47:G:H4'	2.52	0.40
5:E:224:LYS:N	5:E:225:PRO:HD2	2.35	0.40
6:F:127:LYS:HB2	19:T:133:ALA:HB3	2.04	0.40
6:F:169:LEU:O	6:F:171:ASP:N	2.53	0.40
7:G:70:LEU:HD13	7:G:70:LEU:C	2.47	0.40
7:G:148:GLU:O	7:G:177:MET:HE2	2.21	0.40
8:H:86:LEU:HA	8:H:188:GLN:CG	2.52	0.40
8:H:186:THR:OG1	8:H:192:GLU:HA	2.22	0.40
11:L:34:ARG:CZ	44:2:328:U:H3	2.34	0.40
13:N:39:ALA:HA	13:N:40:PRO:HD2	1.94	0.40
14:O:47:PHE:HA	14:O:136:ALA:HB2	2.03	0.40
15:P:9:GLU:OE1	15:P:149:ILE:HG21	2.22	0.40
15:P:21:ASN:OD1	15:P:123:PRO:HD2	2.22	0.40
15:P:64:ASN:HD22	15:P:64:ASN:N	2.19	0.40
16:Q:158:THR:N	16:Q:159:PRO:CD	2.84	0.40
19:T:4:THR:CG2	44:2:4167:C:H3'	2.52	0.40
19:T:126:VAL:HB	19:T:128:LEU:HD12	2.02	0.40
26:a:112:LEU:HD23	26:a:130:SER:HB3	2.04	0.40
27:b:19:ASN:ND2	44:2:1665:C:C5'	2.84	0.40
31:f:88:PHE:HB3	31:f:90:SER:O	2.22	0.40
35:j:15:THR:OG1	44:2:1513:A:H2	2.03	0.40
38:m:83:ARG:O	38:m:87:GLN:HG3	2.22	0.40
40:o:14:LYS:HE3	40:o:77:CYS:SG	2.61	0.40
41:p:82:ALA:O	41:p:85:ARG:HB3	2.22	0.40
44:2:15:A:C2	45:3:143:G:N2	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:2:62:A:H1'	44:2:77:U:O2'	2.22	0.40
44:2:116:G:N2	44:2:118:C:H3'	2.36	0.40
44:2:205:A:O4'	44:2:229:G:C2	2.74	0.40
44:2:215:A:OP1	44:2:216:G:H5''	2.22	0.40
44:2:246:C:H6	44:2:246:C:O5'	2.05	0.40
44:2:451:C:OP2	44:2:451:C:C5	2.75	0.40
44:2:475:U:C6	44:2:475:U:C3'	3.05	0.40
44:2:726:C:H2'	44:2:727:G:O4'	2.21	0.40
44:2:1067:A:O2'	44:2:1068:C:H5'	2.21	0.40
44:2:1211:C:H1'	44:2:1212:G:P	2.62	0.40
44:2:1280:G:C8	44:2:1280:G:P	3.14	0.40
44:2:1552:G:C6	44:2:1553:G:N2	2.90	0.40
44:2:1555:G:C2	44:2:1557:U:H1'	2.56	0.40
44:2:1649:G:H1'	44:2:1831:G:H4'	2.04	0.40
44:2:1756:C:H6	44:2:1756:C:O5'	2.05	0.40
44:2:1766:A:N3	44:2:4170:U:O2'	2.55	0.40
44:2:2285:G:H2'	44:2:2286:C:O4'	2.22	0.40
44:2:2311:C:C6	44:2:2311:C:C4'	3.04	0.40
44:2:2348:U:C6	44:2:2348:U:C4'	3.04	0.40
44:2:2355:G:H21	44:2:2357:G:H3'	1.77	0.40
44:2:2481:C:H2'	44:2:2482:C:C5	2.56	0.40
44:2:2488:A:C4	44:2:2491:G:C6	3.10	0.40
44:2:2570:C:H6	44:2:2570:C:O5'	2.04	0.40
44:2:2740:U:O2'	44:2:2741:A:H5''	2.22	0.40
44:2:3651:A:H1'	44:2:3653:G:C5	2.56	0.40
44:2:3725:A:C4	44:2:3726:G:N7	2.90	0.40
44:2:3827:C:O2	44:2:3827:C:C2'	2.70	0.40
44:2:3848:G:H4'	44:2:3849:G:OP1	2.21	0.40
44:2:3874:A:H3'	44:2:3874:A:C8	2.57	0.40
44:2:3876:G:H1'	44:2:3877:A:OP1	2.21	0.40
44:2:3897:A:H5''	44:2:3898:G:OP2	2.22	0.40
44:2:4247:G:H8	44:2:4247:G:O5'	2.05	0.40
44:2:4360:G:H2'	44:2:4361:G:O4'	2.21	0.40
44:2:4517:U:C2'	44:2:4518:U:H5'	2.52	0.40
44:2:4721:A:C2	44:2:4721:A:OP2	2.75	0.40
44:2:4724:G:OP1	44:2:4724:G:O4'	2.39	0.40
45:3:18:U:H2'	45:3:19:C:O5'	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	245/257 (95%)	236 (96%)	6 (2%)	3 (1%)	10	44
2	B	394/403 (98%)	369 (94%)	11 (3%)	14 (4%)	2	20
3	C	362/427 (85%)	338 (93%)	9 (2%)	15 (4%)	2	18
4	D	288/297 (97%)	279 (97%)	4 (1%)	5 (2%)	7	36
5	E	156/288 (54%)	141 (90%)	8 (5%)	7 (4%)	2	17
6	F	232/248 (94%)	225 (97%)	3 (1%)	4 (2%)	7	36
7	G	233/266 (88%)	217 (93%)	7 (3%)	9 (4%)	2	19
8	H	190/192 (99%)	184 (97%)	3 (2%)	3 (2%)	7	38
9	I	192/214 (90%)	187 (97%)	2 (1%)	3 (2%)	7	38
10	J	168/178 (94%)	153 (91%)	3 (2%)	12 (7%)	1	11
11	L	198/211 (94%)	178 (90%)	9 (4%)	11 (6%)	1	14
12	M	138/215 (64%)	132 (96%)	4 (3%)	2 (1%)	9	40
13	N	202/204 (99%)	193 (96%)	6 (3%)	3 (2%)	8	40
14	O	194/203 (96%)	187 (96%)	4 (2%)	3 (2%)	8	40
15	P	151/184 (82%)	141 (93%)	7 (5%)	3 (2%)	6	31
16	Q	182/188 (97%)	169 (93%)	7 (4%)	6 (3%)	3	21
17	R	181/196 (92%)	174 (96%)	4 (2%)	3 (2%)	7	36
18	S	171/176 (97%)	158 (92%)	7 (4%)	6 (4%)	3	20
19	T	157/160 (98%)	150 (96%)	4 (2%)	3 (2%)	6	32
20	U	100/128 (78%)	97 (97%)	3 (3%)	0	100	100
21	V	126/140 (90%)	119 (94%)	5 (4%)	2 (2%)	7	38
22	W	62/157 (40%)	61 (98%)	1 (2%)	0	100	100
23	X	117/156 (75%)	113 (97%)	4 (3%)	0	100	100
24	Y	126/145 (87%)	119 (94%)	4 (3%)	3 (2%)	4	27
25	Z	134/136 (98%)	125 (93%)	5 (4%)	4 (3%)	3	23

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
26	a	145/148 (98%)	134 (92%)	6 (4%)	5 (3%)	3	21
27	b	67/159 (42%)	60 (90%)	3 (4%)	4 (6%)	1	13
28	c	102/115 (89%)	99 (97%)	1 (1%)	2 (2%)	6	31
29	d	107/125 (86%)	103 (96%)	3 (3%)	1 (1%)	14	51
30	e	126/135 (93%)	117 (93%)	6 (5%)	3 (2%)	4	27
31	f	105/110 (96%)	96 (91%)	4 (4%)	5 (5%)	2	16
32	g	113/117 (97%)	103 (91%)	6 (5%)	4 (4%)	3	20
33	h	120/123 (98%)	112 (93%)	5 (4%)	3 (2%)	4	26
34	i	95/105 (90%)	85 (90%)	4 (4%)	6 (6%)	1	13
35	j	83/97 (86%)	75 (90%)	6 (7%)	2 (2%)	4	27
36	k	67/70 (96%)	64 (96%)	2 (3%)	1 (2%)	8	40
37	l	48/51 (94%)	46 (96%)	1 (2%)	1 (2%)	5	30
38	m	50/128 (39%)	48 (96%)	1 (2%)	1 (2%)	6	31
39	n	23/25 (92%)	23 (100%)	0	0	100	100
40	o	104/106 (98%)	98 (94%)	4 (4%)	2 (2%)	6	32
41	p	89/92 (97%)	83 (93%)	3 (3%)	3 (3%)	3	21
42	t	128/137 (93%)	112 (88%)	9 (7%)	7 (6%)	1	15
43	u	208/210 (99%)	199 (96%)	6 (3%)	3 (1%)	9	40
All	All	6479/7422 (87%)	6102 (94%)	200 (3%)	177 (3%)	6	25

All (177) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	144	LYS
1	A	196	TRP
2	B	4	ARG
2	B	5	LYS
2	B	157	CYS
2	B	259	PRO
2	B	260	ALA
2	B	360	LEU
3	C	50	GLN
3	C	53	ALA
3	C	54	VAL
3	C	151	PRO
3	C	309	ILE

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Mol	Chain	Res	Type
4	D	258	LYS
5	E	137	VAL
5	E	183	ARG
5	E	185	PRO
6	F	222	LYS
7	G	41	ILE
7	G	42	GLY
7	G	162	ASP
8	H	4	ILE
8	H	61	TRP
9	I	189	ARG
10	J	11	PRO
10	J	14	GLU
10	J	77	ALA
10	J	155	HIS
10	J	175	LEU
11	L	47	ALA
11	L	52	SER
11	L	54	PRO
11	L	77	SER
11	L	205	GLN
12	M	21	ALA
13	N	184	ILE
15	P	3	ARG
15	P	6	LEU
16	Q	98	LEU
16	Q	155	ALA
17	R	131	VAL
18	S	171	ARG
19	T	18	PRO
24	Y	67	ILE
25	Z	32	GLY
25	Z	103	ASP
25	Z	125	GLY
26	a	48	TYR
27	b	30	GLU
27	b	56	LYS
28	c	107	SER
30	e	19	LYS
30	e	20	PHE
31	f	60	PRO
31	f	64	PRO

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Mol	Chain	Res	Type
31	f	106	TYR
31	f	107	PRO
32	g	84	ALA
33	h	122	LYS
34	i	28	ARG
34	i	33	LEU
34	i	34	THR
35	j	11	ARG
35	j	85	LYS
36	k	18	LYS
37	l	4	HIS
42	t	44	ILE
42	t	61	VAL
42	t	76	SER
42	t	104	PRO
43	u	190	LYS
2	B	299	ILE
2	B	309	LEU
2	B	357	ARG
3	C	55	SER
3	C	58	ALA
3	C	148	PRO
3	C	276	ASN
6	F	166	ARG
6	F	170	THR
7	G	84	THR
8	H	190	ALA
9	I	41	ALA
9	I	194	GLY
10	J	97	ASN
10	J	117	ILE
11	L	51	ALA
11	L	143	GLU
11	L	162	LYS
14	O	199	HIS
16	Q	157	GLY
17	R	113	LYS
21	V	85	ARG
24	Y	84	ARG
26	a	47	LYS
26	a	66	ASN
26	a	116	LYS

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Mol	Chain	Res	Type
32	g	44	SER
32	g	45	ALA
40	o	34	TYR
41	p	12	GLY
2	B	292	LEU
2	B	296	GLY
3	C	57	LEU
3	C	75	ARG
3	C	150	LEU
4	D	265	ARG
5	E	135	GLN
5	E	265	PRO
7	G	161	VAL
7	G	163	PRO
10	J	111	GLU
11	L	141	ALA
11	L	161	TYR
11	L	177	LYS
14	O	72	HIS
14	O	198	THR
15	P	5	SER
16	Q	12	LYS
18	S	135	SER
24	Y	123	ALA
25	Z	37	PRO
27	b	29	TYR
33	h	41	ALA
34	i	101	ALA
38	m	79	GLU
41	p	51	ALA
43	u	3	GLN
1	A	70	LYS
4	D	253	TYR
5	E	227	HIS
7	G	44	ASP
10	J	120	ASP
10	J	176	PRO
12	M	44	GLN
13	N	145	ASN
16	Q	164	LYS
18	S	16	CYS
18	S	158	VAL

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Mol	Chain	Res	Type
18	S	160	ARG
19	T	125	TRP
28	c	53	PRO
33	h	3	LYS
42	t	79	ARG
42	t	89	THR
2	B	189	THR
3	C	30	ALA
3	C	56	GLU
7	G	134	PRO
16	Q	156	PRO
18	S	164	LYS
42	t	45	HIS
43	u	39	PRO
2	B	326	VAL
4	D	125	VAL
4	D	259	LYS
6	F	184	ILE
10	J	58	ARG
17	R	53	LYS
19	T	123	GLY
26	a	24	LYS
27	b	21	ILE
31	f	59	THR
34	i	21	VAL
34	i	65	LYS
7	G	30	PRO
10	J	76	GLY
32	g	79	GLY
41	p	19	GLY
2	B	18	PRO
3	C	232	VAL
5	E	144	ILE
13	N	52	GLY
29	d	20	VAL
30	e	6	PRO
40	o	101	GLY
21	V	45	ILE

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	189/199 (95%)	182 (96%)	7 (4%)	30	51
2	B	344/349 (99%)	322 (94%)	22 (6%)	16	37
3	C	302/348 (87%)	283 (94%)	19 (6%)	16	37
4	D	244/250 (98%)	237 (97%)	7 (3%)	37	58
5	E	143/252 (57%)	133 (93%)	10 (7%)	14	35
6	F	203/215 (94%)	195 (96%)	8 (4%)	28	49
7	G	199/223 (89%)	190 (96%)	9 (4%)	24	46
8	H	171/171 (100%)	165 (96%)	6 (4%)	32	53
9	I	170/181 (94%)	161 (95%)	9 (5%)	20	41
10	J	143/149 (96%)	137 (96%)	6 (4%)	26	48
11	L	167/177 (94%)	157 (94%)	10 (6%)	17	39
12	M	118/161 (73%)	113 (96%)	5 (4%)	26	48
13	N	172/172 (100%)	167 (97%)	5 (3%)	37	58
14	O	168/174 (97%)	165 (98%)	3 (2%)	51	68
15	P	133/163 (82%)	126 (95%)	7 (5%)	20	41
16	Q	162/165 (98%)	157 (97%)	5 (3%)	35	56
17	R	161/175 (92%)	151 (94%)	10 (6%)	16	38
18	S	155/157 (99%)	149 (96%)	6 (4%)	28	49
19	T	139/140 (99%)	135 (97%)	4 (3%)	37	58
20	U	91/115 (79%)	91 (100%)	0	100	100
21	V	100/107 (94%)	100 (100%)	0	100	100
22	W	55/126 (44%)	52 (94%)	3 (6%)	19	41
23	X	107/133 (80%)	105 (98%)	2 (2%)	50	67
24	Y	119/135 (88%)	114 (96%)	5 (4%)	26	48
25	Z	118/118 (100%)	114 (97%)	4 (3%)	32	54
26	a	120/121 (99%)	115 (96%)	5 (4%)	26	48

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
27	b	58/126 (46%)	57 (98%)	1 (2%)	53	69
28	c	88/97 (91%)	87 (99%)	1 (1%)	65	76
29	d	100/110 (91%)	97 (97%)	3 (3%)	36	57
30	e	115/121 (95%)	111 (96%)	4 (4%)	32	53
31	f	87/89 (98%)	77 (88%)	10 (12%)	5	18
32	g	98/100 (98%)	89 (91%)	9 (9%)	8	27
33	h	109/110 (99%)	105 (96%)	4 (4%)	30	51
34	i	82/89 (92%)	76 (93%)	6 (7%)	13	34
35	j	71/80 (89%)	69 (97%)	2 (3%)	38	60
36	k	64/65 (98%)	64 (100%)	0	100	100
37	l	47/48 (98%)	46 (98%)	1 (2%)	47	65
38	m	48/116 (41%)	45 (94%)	3 (6%)	16	37
39	n	24/24 (100%)	24 (100%)	0	100	100
40	o	94/94 (100%)	90 (96%)	4 (4%)	26	47
41	p	74/75 (99%)	72 (97%)	2 (3%)	39	61
42	t	113/121 (93%)	108 (96%)	5 (4%)	25	47
43	u	177/177 (100%)	161 (91%)	16 (9%)	9	27
All	All	5642/6318 (89%)	5394 (96%)	248 (4%)	27	47

All (248) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	10	LYS
1	A	45	VAL
1	A	116	LEU
1	A	149	LYS
1	A	162	ASN
1	A	177	LYS
1	A	225	ILE
2	B	3	HIS
2	B	55	HIS
2	B	73	VAL
2	B	89	ILE
2	B	101	THR
2	B	131	THR
2	B	146	LEU

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Mol	Chain	Res	Type
2	B	157	CYS
2	B	240	LEU
2	B	243	LYS
2	B	248	LEU
2	B	254	ILE
2	B	258	HIS
2	B	291	TYR
2	B	300	LYS
2	B	305	THR
2	B	314	ILE
2	B	327	THR
2	B	345	LEU
2	B	351	LEU
2	B	352	LEU
2	B	370	THR
3	C	13	GLU
3	C	24	LEU
3	C	49	ARG
3	C	78	ARG
3	C	100	ARG
3	C	107	THR
3	C	150	LEU
3	C	151	PRO
3	C	162	LYS
3	C	163	LYS
3	C	188	ARG
3	C	193	LYS
3	C	215	ASN
3	C	232	VAL
3	C	253	THR
3	C	289	LEU
3	C	309	ILE
3	C	310	HIS
3	C	323	ARG
4	D	81	HIS
4	D	105	LEU
4	D	126	THR
4	D	155	THR
4	D	177	THR
4	D	262	LYS
4	D	293	ARG
5	E	137	VAL

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Mol	Chain	Res	Type
5	E	162	VAL
5	E	172	LEU
5	E	188	ARG
5	E	189	THR
5	E	197	THR
5	E	208	ILE
5	E	212	LEU
5	E	217	PHE
5	E	278	THR
6	F	37	PHE
6	F	44	LYS
6	F	55	LYS
6	F	83	VAL
6	F	127	LYS
6	F	199	LYS
6	F	222	LYS
6	F	226	HIS
7	G	34	LYS
7	G	46	GLN
7	G	55	VAL
7	G	81	ASN
7	G	136	LEU
7	G	162	ASP
7	G	163	PRO
7	G	199	CYS
7	G	218	LEU
8	H	2	LYS
8	H	20	LEU
8	H	41	ILE
8	H	45	LEU
8	H	129	ARG
8	H	188	GLN
9	I	33	ILE
9	I	39	LYS
9	I	53	VAL
9	I	96	VAL
9	I	129	VAL
9	I	163	GLN
9	I	166	HIS
9	I	174	THR
9	I	200	ILE
10	J	12	MET

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Mol	Chain	Res	Type
10	J	70	VAL
10	J	83	LEU
10	J	109	ILE
10	J	115	LEU
10	J	169	LYS
11	L	54	PRO
11	L	55	ILE
11	L	123	LYS
11	L	130	LYS
11	L	135	LYS
11	L	148	THR
11	L	151	THR
11	L	155	MET
11	L	163	LYS
11	L	183	ARG
12	M	2	VAL
12	M	7	VAL
12	M	45	VAL
12	M	78	GLN
12	M	114	LYS
13	N	5	LYS
13	N	31	ARG
13	N	36	LEU
13	N	60	VAL
13	N	174	LEU
14	O	169	ARG
14	O	187	LYS
14	O	197	LYS
15	P	2	VAL
15	P	4	TYR
15	P	64	ASN
15	P	67	VAL
15	P	78	TRP
15	P	94	MET
15	P	112	LEU
16	Q	48	LEU
16	Q	61	LEU
16	Q	72	LEU
16	Q	75	ARG
16	Q	120	ILE
17	R	1	MET
17	R	3	MET

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Mol	Chain	Res	Type
17	R	5	ARG
17	R	20	LYS
17	R	25	ASP
17	R	41	ILE
17	R	57	VAL
17	R	74	ARG
17	R	103	ARG
17	R	138	LEU
18	S	4	SER
18	S	7	LEU
18	S	24	THR
18	S	27	LEU
18	S	73	LEU
18	S	169	THR
19	T	17	ARG
19	T	68	THR
19	T	84	ILE
19	T	126	VAL
22	W	32	LEU
22	W	33	ASN
22	W	58	LYS
23	X	79	PHE
23	X	123	LYS
24	Y	8	THR
24	Y	36	LYS
24	Y	69	LYS
24	Y	70	VAL
24	Y	79	VAL
25	Z	1	MET
25	Z	89	ILE
25	Z	133	LYS
25	Z	136	PHE
26	a	8	THR
26	a	47	LYS
26	a	56	VAL
26	a	78	LEU
26	a	138	LYS
27	b	61	ASN
28	c	17	ARG
29	d	92	ARG
29	d	115	LYS
29	d	119	THR

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Mol	Chain	Res	Type
30	e	13	VAL
30	e	54	LEU
30	e	70	LEU
30	e	88	LEU
31	f	52	LYS
31	f	54	LYS
31	f	58	VAL
31	f	59	THR
31	f	63	LYS
31	f	73	LYS
31	f	89	ARG
31	f	101	ILE
31	f	102	ARG
31	f	107	PRO
32	g	4	ARG
32	g	5	LEU
32	g	22	LEU
32	g	36	LYS
32	g	54	ARG
32	g	60	ARG
32	g	67	LEU
32	g	74	VAL
32	g	81	SER
33	h	43	LYS
33	h	49	VAL
33	h	113	LEU
33	h	118	LYS
34	i	33	LEU
34	i	34	THR
34	i	68	ARG
34	i	79	THR
34	i	87	ARG
34	i	90	LEU
35	j	19	CYS
35	j	83	THR
37	l	5	LYS
38	m	112	LYS
38	m	115	CYS
38	m	118	THR
40	o	83	LEU
40	o	93	LEU
40	o	99	ARG

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Mol	Chain	Res	Type
40	o	100	LYS
41	p	29	ILE
41	p	52	VAL
42	t	4	HIS
42	t	18	ILE
42	t	61	VAL
42	t	77	TYR
42	t	81	THR
43	u	21	PHE
43	u	24	THR
43	u	30	ASN
43	u	34	LEU
43	u	53	THR
43	u	57	THR
43	u	60	VAL
43	u	101	THR
43	u	110	LEU
43	u	156	ARG
43	u	163	VAL
43	u	188	LEU
43	u	190	LYS
43	u	193	LEU
43	u	197	THR
43	u	210	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (147) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	38	HIS
1	A	132	ASN
1	A	140	ASN
1	A	209	HIS
1	A	215	ASN
2	B	25	HIS
2	B	167	GLN
2	B	208	ASN
2	B	213	GLN
2	B	271	GLN
2	B	328	ASN
2	B	354	GLN
3	C	43	ASN
3	C	50	GLN

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Mol	Chain	Res	Type
3	C	112	HIS
3	C	187	GLN
3	C	203	GLN
3	C	245	HIS
3	C	278	ASN
3	C	317	ASN
3	C	329	ASN
3	C	347	HIS
3	C	362	GLN
4	D	131	ASN
4	D	191	ASN
4	D	244	HIS
4	D	291	GLN
5	E	135	GLN
5	E	205	ASN
5	E	211	HIS
5	E	228	GLN
5	E	256	GLN
5	E	279	ASN
6	F	80	ASN
6	F	131	ASN
6	F	192	HIS
6	F	239	GLN
7	G	81	ASN
8	H	15	ASN
9	I	14	ASN
9	I	51	HIS
9	I	59	GLN
9	I	130	HIS
9	I	144	ASN
9	I	213	HIS
10	J	97	ASN
10	J	112	HIS
10	J	167	GLN
10	J	168	GLN
11	L	13	HIS
11	L	19	GLN
11	L	159	ASN
11	L	188	ASN
12	M	33	GLN
12	M	34	ASN
12	M	69	HIS

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Mol	Chain	Res	Type
12	M	78	GLN
12	M	131	GLN
13	N	8	GLN
13	N	15	GLN
13	N	29	GLN
13	N	86	HIS
13	N	139	HIS
13	N	158	HIS
13	N	181	HIS
13	N	182	HIS
13	N	201	HIS
14	O	42	ASN
14	O	180	GLN
14	O	199	HIS
15	P	25	HIS
15	P	54	GLN
15	P	64	ASN
15	P	80	GLN
15	P	93	HIS
15	P	120	ASN
16	Q	40	ASN
16	Q	162	HIS
17	R	34	ASN
17	R	39	GLN
17	R	40	GLN
17	R	118	HIS
17	R	141	HIS
18	S	50	GLN
18	S	66	GLN
18	S	91	HIS
18	S	117	HIS
18	S	122	HIS
18	S	125	GLN
18	S	146	HIS
18	S	156	HIS
19	T	69	GLN
19	T	127	GLN
19	T	131	GLN
19	T	139	HIS
19	T	144	ASN
20	U	17	GLN
20	U	44	GLN

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Mol	Chain	Res	Type
20	U	116	GLN
21	V	36	ASN
21	V	84	GLN
21	V	101	ASN
21	V	135	ASN
22	W	48	GLN
22	W	63	GLN
23	X	93	ASN
23	X	107	HIS
23	X	111	GLN
23	X	125	ASN
24	Y	66	GLN
24	Y	72	GLN
25	Z	132	GLN
26	a	17	HIS
26	a	40	HIS
26	a	67	GLN
26	a	74	ASN
27	b	42	ASN
27	b	50	ASN
27	b	60	ASN
28	c	15	ASN
28	c	33	GLN
29	d	116	ASN
29	d	125	ASN
30	e	43	ASN
30	e	126	ASN
31	f	21	GLN
31	f	65	ASN
32	g	3	GLN
32	g	100	GLN
33	h	20	GLN
33	h	101	ASN
34	i	20	ASN
34	i	36	HIS
34	i	80	HIS
35	j	30	GLN
38	m	87	GLN
38	m	90	ASN
40	o	45	GLN
40	o	51	GLN
40	o	102	GLN

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Mol	Chain	Res	Type
41	p	33	GLN
41	p	56	HIS
42	t	21	ASN
42	t	23	GLN
43	u	3	GLN
43	u	55	GLN
43	u	194	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
44	2	3605/5025 (71%)	2056 (57%)	325 (9%)
45	3	156/194 (80%)	81 (51%)	6 (3%)
46	4	118/121 (97%)	69 (58%)	9 (7%)
All	All	3879/5340 (72%)	2206 (56%)	340 (8%)

All (2206) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
44	2	2	G
44	2	3	C
44	2	5	A
44	2	6	C
44	2	8	U
44	2	9	C
44	2	11	G
44	2	12	A
44	2	13	U
44	2	14	C
44	2	15	A
44	2	18	C
44	2	19	G
44	2	20	U
44	2	21	G
44	2	22	G
44	2	24	G
44	2	25	A
44	2	26	C
44	2	27	C
44	2	31	U
44	2	33	A

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Mol	Chain	Res	Type
44	2	34	A
44	2	36	U
44	2	37	U
44	2	39	A
44	2	41	C
44	2	42	A
44	2	45	U
44	2	46	U
44	2	47	A
44	2	48	G
44	2	49	U
44	2	53	C
44	2	55	G
44	2	56	A
44	2	57	G
44	2	58	G
44	2	59	A
44	2	61	A
44	2	64	A
44	2	65	A
44	2	66	A
44	2	67	C
44	2	68	U
44	2	69	A
44	2	70	A
44	2	71	C
44	2	72	C
44	2	73	A
44	2	74	G
44	2	75	G
44	2	76	A
44	2	77	U
44	2	80	C
44	2	84	A
44	2	85	G
44	2	86	U
44	2	88	A
44	2	91	G
44	2	92	C
44	2	93	G
44	2	94	A
44	2	95	G

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Mol	Chain	Res	Type
44	2	96	U
44	2	97	G
44	2	98	A
44	2	101	A
44	2	102	G
44	2	103	G
44	2	104	G
44	2	105	A
44	2	107	G
44	2	108	A
44	2	109	G
44	2	112	C
44	2	113	A
44	2	115	C
44	2	119	G
44	2	120	A
44	2	121	A
44	2	122	U
44	2	123	C
44	2	130	C
44	2	132	G
44	2	133	C
44	2	134	G
44	2	135	G
44	2	137	G
44	2	139	G
44	2	140	C
44	2	143	G
44	2	148	G
44	2	149	U
44	2	155	A
44	2	156	C
44	2	157	G
44	2	158	G
44	2	165	C
44	2	168	U
44	2	169	C
44	2	170	C
44	2	171	C
44	2	173	G
44	2	175	C
44	2	177	C

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Mol	Chain	Res	Type
44	2	178	C
44	2	179	G
44	2	180	C
44	2	181	U
44	2	182	C
44	2	183	G
44	2	186	G
44	2	187	G
44	2	188	G
44	2	189	G
44	2	191	C
44	2	193	C
44	2	194	A
44	2	195	A
44	2	196	G
44	2	197	U
44	2	198	C
44	2	199	C
44	2	201	U
44	2	203	U
44	2	204	G
44	2	207	C
44	2	208	G
44	2	212	C
44	2	213	C
44	2	215	A
44	2	216	G
44	2	217	C
44	2	219	C
44	2	220	G
44	2	221	U
44	2	222	G
44	2	223	G
44	2	224	A
44	2	226	G
44	2	227	G
44	2	229	G
44	2	230	U
44	2	231	G
44	2	232	A
44	2	233	G
44	2	234	G

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Mol	Chain	Res	Type
44	2	235	C
44	2	236	C
44	2	238	G
44	2	239	U
44	2	240	A
44	2	241	G
44	2	242	C
44	2	243	G
44	2	246	C
44	2	247	G
44	2	251	C
44	2	252	G
44	2	253	C
44	2	254	G
44	2	255	C
44	2	256	C
44	2	258	G
44	2	259	G
44	2	266	C
44	2	267	C
44	2	268	G
44	2	269	G
44	2	270	A
44	2	271	G
44	2	279	G
44	2	284	G
44	2	285	G
44	2	286	A
44	2	287	A
44	2	288	U
44	2	289	G
44	2	291	A
44	2	292	G
44	2	293	C
44	2	295	C
44	2	296	A
44	2	297	A
44	2	299	G
44	2	300	C
44	2	301	G
44	2	303	G
44	2	305	G

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Mol	Chain	Res	Type
44	2	307	U
44	2	308	A
44	2	309	A
44	2	312	U
44	2	313	C
44	2	314	C
44	2	317	C
44	2	319	A
44	2	320	A
44	2	321	G
44	2	322	G
44	2	325	A
44	2	326	A
44	2	327	A
44	2	328	U
44	2	329	A
44	2	331	C
44	2	332	G
44	2	333	G
44	2	334	C
44	2	335	A
44	2	337	G
44	2	338	A
44	2	340	A
44	2	341	C
44	2	342	C
44	2	343	G
44	2	344	A
44	2	345	U
44	2	349	C
44	2	350	A
44	2	351	A
44	2	353	A
44	2	354	A
44	2	355	G
44	2	357	A
44	2	363	A
44	2	366	G
44	2	369	A
44	2	370	G
44	2	371	U
44	2	372	U

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Mol	Chain	Res	Type
44	2	373	G
44	2	376	A
44	2	377	A
44	2	378	G
44	2	379	A
44	2	380	A
44	2	381	C
44	2	382	U
44	2	383	U
44	2	384	U
44	2	385	G
44	2	386	A
44	2	387	A
44	2	389	A
44	2	391	A
44	2	393	A
44	2	394	G
44	2	395	U
44	2	396	U
44	2	397	C
44	2	398	A
44	2	399	A
44	2	400	G
44	2	401	A
44	2	402	G
44	2	403	G
44	2	404	G
44	2	405	C
44	2	406	G
44	2	408	G
44	2	411	A
44	2	421	G
44	2	423	U
44	2	424	A
44	2	425	A
44	2	426	A
44	2	431	U
44	2	432	G
44	2	433	G
44	2	434	G
44	2	435	G
44	2	436	U

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Mol	Chain	Res	Type
44	2	437	C
44	2	439	G
44	2	440	C
44	2	441	G
44	2	442	C
44	2	443	A
44	2	444	G
44	2	445	U
44	2	446	C
44	2	455	G
44	2	456	G
44	2	457	A
44	2	458	U
44	2	459	U
44	2	460	C
44	2	461	A
44	2	462	A
44	2	463	C
44	2	464	C
44	2	465	C
44	2	466	G
44	2	469	G
44	2	470	G
44	2	471	C
44	2	472	G
44	2	473	G
44	2	474	G
44	2	475	U
44	2	476	C
44	2	477	C
44	2	478	G
44	2	479	G
44	2	482	G
44	2	483	U
44	2	484	G
44	2	485	U
44	2	488	G
44	2	489	C
44	2	490	G
44	2	491	G
44	2	508	C
44	2	510	C

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Mol	Chain	Res	Type
44	2	634	C
44	2	636	G
44	2	640	A
44	2	641	C
44	2	642	C
44	2	643	G
44	2	644	U
44	2	650	G
44	2	651	G
44	2	654	C
44	2	655	G
44	2	656	G
44	2	657	C
44	2	658	G
44	2	659	A
44	2	666	G
44	2	671	C
44	2	674	G
44	2	675	C
44	2	676	G
44	2	677	C
44	2	678	A
44	2	679	U
44	2	680	U
44	2	691	G
44	2	692	C
44	2	701	C
44	2	703	G
44	2	706	C
44	2	708	G
44	2	709	G
44	2	710	G
44	2	712	C
44	2	713	G
44	2	714	G
44	2	717	G
44	2	718	G
44	2	719	G
44	2	720	A
44	2	721	A
44	2	722	G
44	2	723	G

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Mol	Chain	Res	Type
44	2	724	C
44	2	725	C
44	2	726	C
44	2	727	G
44	2	728	G
44	2	731	G
44	2	733	G
44	2	734	A
44	2	736	G
44	2	737	G
44	2	744	G
44	2	745	G
44	2	890	C
44	2	892	G
44	2	893	A
44	2	894	G
44	2	895	U
44	2	896	G
44	2	897	U
44	2	898	U
44	2	899	A
44	2	900	C
44	2	901	A
44	2	903	C
44	2	911	G
44	2	912	C
44	2	913	A
44	2	914	G
44	2	915	C
44	2	916	A
44	2	917	G
44	2	918	C
44	2	919	A
44	2	920	C
44	2	921	U
44	2	925	C
44	2	926	G
44	2	927	A
44	2	928	A
44	2	929	U
44	2	930	C
44	2	934	G

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Mol	Chain	Res	Type
44	2	938	C
44	2	939	G
44	2	940	A
44	2	941	G
44	2	942	G
44	2	943	G
44	2	944	A
44	2	945	G
44	2	946	C
44	2	947	G
44	2	948	A
44	2	950	A
44	2	951	C
44	2	957	G
44	2	958	C
44	2	959	C
44	2	960	G
44	2	961	C
44	2	962	G
44	2	963	C
44	2	964	U
44	2	965	C
44	2	966	U
44	2	967	C
44	2	968	C
44	2	969	C
44	2	970	C
44	2	971	C
44	2	972	C
44	2	973	U
44	2	974	C
44	2	975	C
44	2	976	C
44	2	977	G
44	2	978	G
44	2	1047	G
44	2	1048	G
44	2	1049	G
44	2	1050	G
44	2	1051	C
44	2	1052	C
44	2	1053	G

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Mol	Chain	Res	Type
44	2	1055	G
44	2	1056	C
44	2	1058	A
44	2	1059	C
44	2	1060	C
44	2	1062	C
44	2	1064	C
44	2	1066	C
44	2	1077	C
44	2	1079	C
44	2	1080	U
44	2	1081	C
44	2	1082	U
44	2	1083	C
44	2	1084	C
44	2	1085	C
44	2	1086	A
44	2	1087	C
44	2	1089	C
44	2	1090	C
44	2	1096	C
44	2	1142	G
44	2	1143	G
44	2	1144	G
44	2	1145	G
44	2	1146	G
44	2	1147	C
44	2	1148	G
44	2	1149	G
44	2	1159	U
44	2	1160	C
44	2	1161	C
44	2	1162	C
44	2	1165	G
44	2	1173	C
44	2	1174	G
44	2	1176	G
44	2	1177	C
44	2	1178	G
44	2	1179	G
44	2	1186	C
44	2	1187	C

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Mol	Chain	Res	Type
44	2	1188	G
44	2	1189	U
44	2	1190	C
44	2	1192	G
44	2	1193	G
44	2	1194	C
44	2	1195	C
44	2	1196	C
44	2	1197	G
44	2	1198	G
44	2	1199	G
44	2	1201	G
44	2	1202	A
44	2	1204	G
44	2	1205	U
44	2	1206	U
44	2	1207	C
44	2	1208	U
44	2	1209	C
44	2	1210	U
44	2	1212	G
44	2	1214	G
44	2	1215	G
44	2	1216	C
44	2	1217	C
44	2	1218	A
44	2	1219	C
44	2	1220	G
44	2	1221	C
44	2	1223	C
44	2	1224	G
44	2	1225	C
44	2	1242	G
44	2	1245	G
44	2	1246	G
44	2	1247	C
44	2	1248	G
44	2	1249	G
44	2	1250	A
44	2	1251	G
44	2	1254	A
44	2	1255	G

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Mol	Chain	Res	Type
44	2	1256	C
44	2	1258	C
44	2	1259	A
44	2	1262	G
44	2	1263	G
44	2	1264	G
44	2	1267	G
44	2	1268	G
44	2	1273	G
44	2	1274	A
44	2	1276	G
44	2	1277	U
44	2	1279	G
44	2	1280	G
44	2	1281	C
44	2	1282	U
44	2	1283	A
44	2	1284	C
44	2	1285	C
44	2	1287	A
44	2	1289	C
44	2	1290	C
44	2	1292	A
44	2	1293	C
44	2	1294	C
44	2	1297	U
44	2	1299	U
44	2	1300	U
44	2	1301	G
44	2	1302	A
44	2	1303	A
44	2	1305	C
44	2	1306	A
44	2	1308	G
44	2	1313	A
44	2	1314	A
44	2	1318	G
44	2	1323	A
44	2	1324	C
44	2	1326	C
44	2	1329	G
44	2	1332	C

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Mol	Chain	Res	Type
44	2	1334	A
44	2	1336	U
44	2	1337	C
44	2	1338	G
44	2	1339	G
44	2	1340	G
44	2	1341	G
44	2	1349	C
44	2	1350	G
44	2	1351	A
44	2	1354	G
44	2	1356	C
44	2	1357	G
44	2	1358	C
44	2	1359	C
44	2	1360	G
44	2	1361	U
44	2	1366	C
44	2	1367	A
44	2	1368	A
44	2	1372	A
44	2	1374	G
44	2	1376	G
44	2	1377	A
44	2	1378	A
44	2	1384	G
44	2	1388	G
44	2	1389	C
44	2	1390	U
44	2	1392	G
44	2	1393	C
44	2	1398	C
44	2	1399	G
44	2	1400	A
44	2	1401	G
44	2	1402	G
44	2	1406	G
44	2	1409	C
44	2	1410	C
44	2	1412	G
44	2	1416	C
44	2	1417	C

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Mol	Chain	Res	Type
44	2	1418	U
44	2	1419	C
44	2	1420	U
44	2	1421	C
44	2	1422	C
44	2	1423	A
44	2	1424	G
44	2	1426	C
44	2	1428	G
44	2	1433	G
44	2	1434	G
44	2	1436	G
44	2	1438	A
44	2	1444	G
44	2	1445	G
44	2	1446	C
44	2	1449	G
44	2	1452	U
44	2	1454	G
44	2	1455	C
44	2	1459	C
44	2	1460	C
44	2	1461	G
44	2	1463	G
44	2	1464	C
44	2	1465	C
44	2	1466	G
44	2	1467	G
44	2	1468	G
44	2	1471	G
44	2	1476	A
44	2	1477	G
44	2	1478	C
44	2	1479	A
44	2	1480	C
44	2	1481	G
44	2	1482	A
44	2	1483	G
44	2	1484	C
44	2	1487	A
44	2	1488	C
44	2	1493	U

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Mol	Chain	Res	Type
44	2	1495	G
44	2	1498	C
44	2	1499	C
44	2	1500	C
44	2	1502	A
44	2	1503	A
44	2	1504	A
44	2	1505	G
44	2	1513	A
44	2	1518	G
44	2	1520	C
44	2	1521	U
44	2	1522	G
44	2	1523	G
44	2	1524	G
44	2	1526	A
44	2	1530	C
44	2	1531	G
44	2	1532	A
44	2	1533	A
44	2	1537	A
44	2	1540	G
44	2	1541	G
44	2	1542	A
44	2	1543	A
44	2	1544	A
44	2	1545	C
44	2	1550	G
44	2	1553	G
44	2	1554	A
44	2	1555	G
44	2	1556	G
44	2	1557	U
44	2	1558	C
44	2	1561	U
44	2	1567	U
44	2	1570	U
44	2	1571	G
44	2	1572	A
44	2	1573	C
44	2	1574	G
44	2	1575	U

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Mol	Chain	Res	Type
44	2	1576	G
44	2	1580	A
44	2	1582	C
44	2	1583	G
44	2	1585	U
44	2	1590	C
44	2	1591	G
44	2	1593	C
44	2	1595	U
44	2	1596	G
44	2	1597	G
44	2	1599	U
44	2	1600	A
44	2	1603	G
44	2	1604	G
44	2	1607	C
44	2	1609	A
44	2	1610	A
44	2	1611	A
44	2	1612	G
44	2	1613	A
44	2	1614	C
44	2	1615	U
44	2	1616	A
44	2	1617	A
44	2	1619	C
44	2	1620	G
44	2	1623	C
44	2	1629	A
44	2	1630	G
44	2	1631	U
44	2	1633	G
44	2	1635	U
44	2	1637	G
44	2	1639	U
44	2	1640	C
44	2	1644	C
44	2	1648	A
44	2	1649	G
44	2	1650	U
44	2	1651	U
44	2	1653	C

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Mol	Chain	Res	Type
44	2	1654	C
44	2	1655	C
44	2	1656	U
44	2	1657	C
44	2	1658	A
44	2	1659	G
44	2	1660	G
44	2	1661	A
44	2	1663	A
44	2	1666	U
44	2	1667	G
44	2	1669	C
44	2	1671	C
44	2	1672	U
44	2	1673	C
44	2	1701	C
44	2	1703	G
44	2	1704	U
44	2	1706	U
44	2	1709	U
44	2	1710	C
44	2	1711	C
44	2	1712	G
44	2	1713	G
44	2	1714	U
44	2	1715	A
44	2	1719	C
44	2	1721	A
44	2	1725	A
44	2	1726	U
44	2	1727	U
44	2	1729	G
44	2	1730	A
44	2	1732	G
44	2	1733	U
44	2	1734	C
44	2	1736	U
44	2	1737	G
44	2	1743	G
44	2	1744	A
44	2	1745	A
44	2	1746	A

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Mol	Chain	Res	Type
44	2	1747	C
44	2	1749	A
44	2	1752	U
44	2	1754	A
44	2	1755	A
44	2	1757	C
44	2	1758	U
44	2	1759	A
44	2	1760	U
44	2	1761	U
44	2	1766	A
44	2	1768	C
44	2	1772	A
44	2	1773	A
44	2	1775	U
44	2	1779	U
44	2	1780	A
44	2	1781	A
44	2	1783	A
44	2	1784	A
44	2	1785	G
44	2	1786	C
44	2	1787	C
44	2	1789	G
44	2	1790	G
44	2	1792	U
44	2	1793	C
44	2	1794	G
44	2	1795	C
44	2	1796	U
44	2	1797	G
44	2	1798	G
44	2	1799	C
44	2	1800	G
44	2	1801	U
44	2	1802	G
44	2	1803	G
44	2	1804	A
44	2	1805	G
44	2	1806	C
44	2	1809	G
44	2	1810	G

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Mol	Chain	Res	Type
44	2	1811	G
44	2	1813	G
44	2	1815	A
44	2	1816	A
44	2	1818	G
44	2	1820	G
44	2	1821	A
44	2	1822	G
44	2	1825	C
44	2	1829	G
44	2	1832	G
44	2	1833	G
44	2	1835	C
44	2	1836	A
44	2	1837	C
44	2	1839	U
44	2	1840	U
44	2	1844	U
44	2	1845	A
44	2	1846	A
44	2	1847	G
44	2	1848	C
44	2	1849	A
44	2	1852	A
44	2	1853	C
44	2	1855	G
44	2	1856	G
44	2	1857	C
44	2	1859	C
44	2	1860	U
44	2	1861	G
44	2	1865	G
44	2	1867	U
44	2	1868	G
44	2	1869	A
44	2	1870	A
44	2	1871	C
44	2	1873	G
44	2	1874	A
44	2	1875	A
44	2	1876	C
44	2	1877	G

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Mol	Chain	Res	Type
44	2	1879	C
44	2	1880	G
44	2	1881	G
44	2	1883	U
44	2	1884	U
44	2	1885	A
44	2	1886	A
44	2	1891	C
44	2	1893	C
44	2	1894	G
44	2	1895	A
44	2	1896	U
44	2	1897	G
44	2	1898	C
44	2	1899	C
44	2	1900	G
44	2	1901	A
44	2	1903	G
44	2	1911	G
44	2	1912	A
44	2	1917	A
44	2	1918	G
44	2	1919	A
44	2	1920	A
44	2	1924	G
44	2	1925	U
44	2	1926	G
44	2	1929	G
44	2	1930	G
44	2	1931	U
44	2	1935	U
44	2	1936	A
44	2	1939	G
44	2	1941	C
44	2	1942	A
44	2	2000	C
44	2	2001	C
44	2	2002	G
44	2	2004	A
44	2	2005	U
44	2	2006	C
44	2	2007	A

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Mol	Chain	Res	Type
44	2	2009	C
44	2	2010	U
44	2	2011	A
44	2	2012	G
44	2	2013	C
44	2	2014	C
44	2	2016	U
44	2	2020	A
44	2	2022	U
44	2	2023	G
44	2	2024	G
44	2	2025	A
44	2	2026	U
44	2	2027	G
44	2	2029	C
44	2	2030	G
44	2	2031	C
44	2	2032	U
44	2	2033	G
44	2	2034	G
44	2	2035	A
44	2	2037	C
44	2	2039	U
44	2	2040	C
44	2	2041	G
44	2	2042	G
44	2	2043	G
44	2	2044	C
44	2	2046	C
44	2	2047	A
44	2	2048	U
44	2	2049	A
44	2	2050	C
44	2	2052	C
44	2	2056	C
44	2	2057	G
44	2	2061	C
44	2	2062	C
44	2	2064	G
44	2	2251	G
44	2	2254	G
44	2	2255	A

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Mol	Chain	Res	Type
44	2	2257	U
44	2	2258	A
44	2	2259	G
44	2	2260	G
44	2	2263	G
44	2	2264	G
44	2	2265	C
44	2	2266	C
44	2	2267	G
44	2	2268	C
44	2	2269	U
44	2	2270	G
44	2	2271	C
44	2	2273	G
44	2	2274	U
44	2	2275	G
44	2	2276	A
44	2	2277	G
44	2	2279	C
44	2	2280	U
44	2	2282	G
44	2	2283	A
44	2	2284	A
44	2	2288	U
44	2	2289	A
44	2	2290	G
44	2	2293	C
44	2	2294	G
44	2	2295	C
44	2	2296	G
44	2	2297	G
44	2	2298	G
44	2	2301	C
44	2	2302	G
44	2	2304	G
44	2	2306	G
44	2	2307	G
44	2	2308	A
44	2	2309	G
44	2	2310	G
44	2	2311	C
44	2	2315	C

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Mol	Chain	Res	Type
44	2	2320	G
44	2	2321	U
44	2	2322	G
44	2	2325	G
44	2	2326	A
44	2	2328	C
44	2	2329	U
44	2	2331	G
44	2	2332	G
44	2	2333	U
44	2	2334	G
44	2	2337	A
44	2	2344	A
44	2	2345	A
44	2	2346	U
44	2	2347	A
44	2	2348	U
44	2	2349	U
44	2	2351	A
44	2	2353	A
44	2	2354	C
44	2	2355	G
44	2	2358	A
44	2	2359	A
44	2	2360	C
44	2	2361	U
44	2	2362	U
44	2	2367	G
44	2	2368	G
44	2	2369	C
44	2	2370	C
44	2	2371	G
44	2	2372	A
44	2	2373	A
44	2	2374	G
44	2	2376	G
44	2	2379	G
44	2	2380	A
44	2	2381	A
44	2	2384	G
44	2	2385	U
44	2	2386	U

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Mol	Chain	Res	Type
44	2	2387	C
44	2	2388	C
44	2	2392	U
44	2	2393	G
44	2	2394	A
44	2	2395	A
44	2	2396	C
44	2	2397	A
44	2	2398	G
44	2	2399	C
44	2	2400	A
44	2	2402	U
44	2	2403	U
44	2	2405	A
44	2	2406	A
44	2	2407	C
44	2	2411	G
44	2	2412	G
44	2	2414	C
44	2	2415	A
44	2	2416	G
44	2	2418	C
44	2	2421	U
44	2	2424	U
44	2	2426	A
44	2	2427	G
44	2	2429	G
44	2	2430	A
44	2	2431	U
44	2	2433	G
44	2	2435	C
44	2	2436	G
44	2	2437	A
44	2	2440	G
44	2	2442	C
44	2	2443	G
44	2	2444	U
44	2	2445	U
44	2	2446	C
44	2	2447	C
44	2	2448	G
44	2	2449	A

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Mol	Chain	Res	Type
44	2	2450	A
44	2	2451	G
44	2	2452	G
44	2	2453	G
44	2	2455	C
44	2	2456	G
44	2	2457	G
44	2	2458	G
44	2	2462	U
44	2	2463	G
44	2	2464	G
44	2	2465	C
44	2	2466	C
44	2	2467	U
44	2	2468	C
44	2	2469	C
44	2	2477	U
44	2	2479	G
44	2	2480	G
44	2	2481	C
44	2	2482	C
44	2	2483	G
44	2	2484	A
44	2	2486	C
44	2	2490	A
44	2	2492	G
44	2	2494	A
44	2	2496	U
44	2	2499	G
44	2	2502	U
44	2	2503	C
44	2	2504	A
44	2	2507	U
44	2	2508	C
44	2	2509	C
44	2	2510	C
44	2	2511	C
44	2	2519	G
44	2	2521	G
44	2	2524	G
44	2	2525	C
44	2	2526	G

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Mol	Chain	Res	Type
44	2	2527	G
44	2	2528	A
44	2	2529	G
44	2	2531	U
44	2	2532	G
44	2	2537	C
44	2	2538	C
44	2	2544	G
44	2	2548	C
44	2	2549	C
44	2	2550	A
44	2	2552	U
44	2	2553	G
44	2	2554	C
44	2	2556	G
44	2	2557	U
44	2	2559	A
44	2	2560	C
44	2	2561	G
44	2	2562	C
44	2	2563	G
44	2	2564	A
44	2	2565	C
44	2	2566	C
44	2	2567	G
44	2	2574	G
44	2	2575	A
44	2	2576	G
44	2	2577	A
44	2	2578	A
44	2	2579	G
44	2	2582	G
44	2	2587	G
44	2	2588	A
44	2	2589	G
44	2	2590	C
44	2	2592	C
44	2	2593	C
44	2	2594	G
44	2	2596	G
44	2	2597	G
44	2	2598	A

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Mol	Chain	Res	Type
44	2	2599	G
44	2	2601	G
44	2	2602	U
44	2	2603	U
44	2	2604	C
44	2	2607	U
44	2	2608	U
44	2	2609	U
44	2	2613	U
44	2	2624	A
44	2	2625	G
44	2	2627	G
44	2	2628	C
44	2	2629	G
44	2	2630	C
44	2	2631	C
44	2	2632	C
44	2	2633	U
44	2	2635	G
44	2	2636	A
44	2	2639	G
44	2	2641	G
44	2	2642	U
44	2	2646	C
44	2	2647	C
44	2	2648	C
44	2	2651	A
44	2	2652	G
44	2	2653	A
44	2	2654	G
44	2	2658	G
44	2	2661	C
44	2	2663	G
44	2	2664	U
44	2	2665	G
44	2	2666	C
44	2	2669	U
44	2	2671	G
44	2	2672	A
44	2	2673	A
44	2	2674	A
44	2	2676	C

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Mol	Chain	Res	Type
44	2	2677	G
44	2	2678	U
44	2	2682	G
44	2	2683	G
44	2	2684	U
44	2	2685	U
44	2	2686	C
44	2	2687	C
44	2	2689	G
44	2	2692	G
44	2	2696	C
44	2	2698	G
44	2	2700	U
44	2	2701	G
44	2	2702	A
44	2	2703	G
44	2	2704	C
44	2	2705	U
44	2	2706	C
44	2	2707	U
44	2	2709	G
44	2	2710	C
44	2	2711	U
44	2	2715	C
44	2	2716	C
44	2	2717	U
44	2	2718	U
44	2	2719	G
44	2	2720	A
44	2	2729	G
44	2	2731	G
44	2	2732	A
44	2	2733	G
44	2	2734	A
44	2	2735	G
44	2	2736	G
44	2	2739	G
44	2	2740	U
44	2	2741	A
44	2	2742	A
44	2	2745	C
44	2	2746	U

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Mol	Chain	Res	Type
44	2	2750	G
44	2	2751	C
44	2	2752	C
44	2	2755	G
44	2	2759	U
44	2	2761	C
44	2	2762	C
44	2	2764	A
44	2	2765	U
44	2	2766	A
44	2	2767	U
44	2	2771	C
44	2	2772	A
44	2	2774	C
44	2	2775	A
44	2	2778	U
44	2	2780	U
44	2	2782	C
44	2	2783	A
44	2	2789	A
44	2	2791	C
44	2	2792	A
44	2	2794	C
44	2	2796	U
44	2	2801	C
44	2	2802	A
44	2	2803	U
44	2	2804	G
44	2	2805	U
44	2	2806	U
44	2	2807	G
44	2	2810	A
44	2	2811	C
44	2	2812	A
44	2	2815	G
44	2	2817	A
44	2	2818	G
44	2	2823	G
44	2	2826	A
44	2	2827	A
44	2	2828	G
44	2	2831	G

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Mol	Chain	Res	Type
44	2	2832	G
44	2	2833	C
44	2	2835	A
44	2	2837	C
44	2	2839	G
44	2	2840	G
44	2	2843	C
44	2	2844	C
44	2	2845	G
44	2	2846	U
44	2	2847	A
44	2	2848	A
44	2	2852	C
44	2	2853	G
44	2	2854	G
44	2	2857	U
44	2	2858	A
44	2	2860	G
44	2	2861	G
44	2	2863	U
44	2	2864	U
44	2	2867	C
44	2	2868	U
44	2	2869	C
44	2	2871	A
44	2	2873	G
44	2	2877	U
44	2	2878	G
44	2	2879	G
44	2	3567	C
44	2	3568	A
44	2	3570	C
44	2	3574	C
44	2	3575	U
44	2	3578	G
44	2	3579	A
44	2	3583	G
44	2	3584	G
44	2	3585	U
44	2	3586	G
44	2	3587	C
44	2	3588	G

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Mol	Chain	Res	Type
44	2	3590	A
44	2	3594	G
44	2	3595	G
44	2	3597	G
44	2	3599	A
44	2	3600	U
44	2	3602	C
44	2	3603	G
44	2	3604	A
44	2	3605	C
44	2	3610	U
44	2	3611	A
44	2	3612	A
44	2	3613	U
44	2	3617	A
44	2	3618	A
44	2	3619	C
44	2	3622	A
44	2	3624	C
44	2	3626	U
44	2	3627	C
44	2	3631	A
44	2	3634	G
44	2	3635	C
44	2	3636	C
44	2	3641	G
44	2	3642	C
44	2	3643	G
44	2	3646	U
44	2	3649	U
44	2	3650	G
44	2	3651	A
44	2	3652	C
44	2	3653	G
44	2	3654	C
44	2	3655	G
44	2	3657	U
44	2	3658	G
44	2	3661	A
44	2	3662	U
44	2	3664	U
44	2	3665	C

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Mol	Chain	Res	Type
44	2	3666	U
44	2	3667	G
44	2	3668	C
44	2	3675	C
44	2	3676	U
44	2	3678	U
44	2	3679	G
44	2	3680	A
44	2	3681	A
44	2	3682	U
44	2	3683	G
44	2	3684	U
44	2	3685	C
44	2	3686	A
44	2	3693	A
44	2	3695	A
44	2	3696	A
44	2	3697	A
44	2	3700	C
44	2	3706	A
44	2	3710	C
44	2	3717	A
44	2	3720	G
44	2	3722	G
44	2	3723	G
44	2	3724	G
44	2	3725	A
44	2	3726	G
44	2	3727	U
44	2	3728	A
44	2	3729	A
44	2	3730	C
44	2	3732	A
44	2	3733	U
44	2	3734	G
44	2	3736	C
44	2	3737	U
44	2	3741	U
44	2	3743	A
44	2	3744	A
44	2	3746	G
44	2	3749	G

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Mol	Chain	Res	Type
44	2	3750	C
44	2	3751	C
44	2	3753	A
44	2	3754	A
44	2	3755	U
44	2	3756	G
44	2	3759	U
44	2	3761	G
44	2	3764	A
44	2	3765	U
44	2	3767	U
44	2	3768	A
44	2	3769	A
44	2	3770	U
44	2	3771	U
44	2	3772	A
44	2	3776	A
44	2	3778	G
44	2	3779	C
44	2	3780	G
44	2	3781	C
44	2	3782	A
44	2	3786	A
44	2	3787	U
44	2	3788	G
44	2	3792	G
44	2	3793	A
44	2	3797	A
44	2	3798	G
44	2	3799	A
44	2	3800	U
44	2	3801	U
44	2	3802	C
44	2	3803	C
44	2	3807	U
44	2	3808	G
44	2	3809	U
44	2	3814	A
44	2	3815	C
44	2	3819	C
44	2	3821	A
44	2	3822	U

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Mol	Chain	Res	Type
44	2	3826	G
44	2	3830	A
44	2	3833	C
44	2	3834	A
44	2	3836	A
44	2	3837	G
44	2	3838	C
44	2	3845	A
44	2	3846	A
44	2	3847	C
44	2	3848	G
44	2	3850	G
44	2	3852	U
44	2	3854	G
44	2	3856	C
44	2	3857	G
44	2	3858	G
44	2	3859	A
44	2	3863	A
44	2	3865	C
44	2	3866	G
44	2	3867	G
44	2	3870	A
44	2	3871	A
44	2	3872	A
44	2	3873	G
44	2	3874	A
44	2	3875	A
44	2	3876	G
44	2	3877	A
44	2	3879	C
44	2	3883	U
44	2	3884	U
44	2	3885	G
44	2	3887	G
44	2	3888	C
44	2	3890	U
44	2	3891	G
44	2	3894	U
44	2	3895	C
44	2	3897	A
44	2	3898	G

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Mol	Chain	Res	Type
44	2	3905	A
44	2	3907	G
44	2	3908	G
44	2	3910	G
44	2	3911	A
44	2	3913	G
44	2	3914	A
44	2	3919	U
44	2	3922	G
44	2	3923	A
44	2	3924	G
44	2	3925	G
44	2	3926	U
44	2	3927	G
44	2	3931	A
44	2	3933	U
44	2	3934	A
44	2	3936	G
44	2	3938	G
44	2	3941	A
44	2	3942	G
44	2	3943	G
44	2	3945	C
44	2	4007	G
44	2	4008	C
44	2	4009	C
44	2	4011	G
44	2	4012	U
44	2	4015	A
44	2	4018	A
44	2	4024	A
44	2	4025	C
44	2	4026	U
44	2	4027	C
44	2	4029	G
44	2	4032	C
44	2	4033	G
44	2	4036	U
44	2	4037	U
44	2	4041	A
44	2	4044	G
44	2	4045	A

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Mol	Chain	Res	Type
44	2	4046	C
44	2	4047	C
44	2	4050	G
44	2	4051	U
44	2	4052	G
44	2	4053	A
44	2	4054	G
44	2	4055	G
44	2	4056	C
44	2	4057	G
44	2	4059	G
44	2	4060	G
44	2	4063	G
44	2	4066	A
44	2	4068	C
44	2	4069	C
44	2	4070	C
44	2	4071	G
44	2	4073	G
44	2	4074	G
44	2	4079	C
44	2	4080	U
44	2	4081	C
44	2	4082	G
44	2	4083	C
44	2	4084	U
44	2	4085	U
44	2	4086	C
44	2	4087	U
44	2	4089	G
44	2	4090	C
44	2	4092	C
44	2	4093	C
44	2	4094	A
44	2	4101	C
44	2	4103	C
44	2	4105	C
44	2	4106	G
44	2	4108	C
44	2	4109	C
44	2	4111	G
44	2	4117	A

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Mol	Chain	Res	Type
44	2	4118	C
44	2	4119	C
44	2	4120	C
44	2	4121	G
44	2	4122	C
44	2	4123	U
44	2	4124	C
44	2	4126	G
44	2	4129	G
44	2	4130	A
44	2	4131	C
44	2	4135	G
44	2	4137	C
44	2	4138	A
44	2	4142	G
44	2	4143	G
44	2	4144	G
44	2	4145	G
44	2	4151	G
44	2	4155	G
44	2	4156	G
44	2	4159	C
44	2	4163	A
44	2	4164	C
44	2	4165	A
44	2	4166	C
44	2	4168	U
44	2	4174	A
44	2	4175	C
44	2	4176	G
44	2	4177	G
44	2	4179	A
44	2	4180	A
44	2	4181	C
44	2	4182	G
44	2	4185	G
44	2	4186	G
44	2	4187	U
44	2	4188	G
44	2	4189	U
44	2	4190	C
44	2	4191	C

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Mol	Chain	Res	Type
44	2	4192	U
44	2	4193	A
44	2	4194	A
44	2	4195	G
44	2	4199	A
44	2	4200	G
44	2	4201	C
44	2	4210	G
44	2	4211	A
44	2	4212	C
44	2	4214	G
44	2	4215	A
44	2	4226	G
44	2	4227	G
44	2	4231	A
44	2	4232	G
44	2	4233	A
44	2	4234	A
44	2	4236	G
44	2	4237	G
44	2	4239	A
44	2	4240	A
44	2	4241	A
44	2	4242	A
44	2	4245	U
44	2	4247	G
44	2	4250	U
44	2	4251	G
44	2	4252	A
44	2	4253	U
44	2	4254	C
44	2	4255	U
44	2	4256	U
44	2	4261	U
44	2	4262	U
44	2	4263	C
44	2	4264	A
44	2	4265	G
44	2	4266	U
44	2	4267	A
44	2	4269	G
44	2	4270	A

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Mol	Chain	Res	Type
44	2	4271	A
44	2	4273	A
44	2	4276	G
44	2	4277	A
44	2	4279	C
44	2	4280	G
44	2	4283	A
44	2	4286	G
44	2	4287	C
44	2	4288	G
44	2	4289	G
44	2	4290	G
44	2	4291	G
44	2	4292	C
44	2	4293	C
44	2	4297	C
44	2	4298	G
44	2	4301	C
44	2	4303	U
44	2	4304	U
44	2	4305	C
44	2	4306	U
44	2	4308	A
44	2	4309	C
44	2	4313	U
44	2	4314	U
44	2	4315	G
44	2	4316	G
44	2	4317	G
44	2	4319	U
44	2	4321	U
44	2	4324	G
44	2	4326	A
44	2	4327	G
44	2	4328	G
44	2	4329	A
44	2	4331	G
44	2	4333	G
44	2	4335	C
44	2	4336	A
44	2	4337	G
44	2	4338	A

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Mol	Chain	Res	Type
44	2	4339	A
44	2	4341	A
44	2	4342	G
44	2	4345	A
44	2	4346	C
44	2	4347	C
44	2	4348	A
44	2	4350	A
44	2	4353	G
44	2	4354	A
44	2	4355	U
44	2	4357	A
44	2	4359	U
44	2	4362	C
44	2	4363	U
44	2	4366	U
44	2	4367	G
44	2	4370	G
44	2	4372	C
44	2	4373	C
44	2	4375	A
44	2	4376	G
44	2	4377	C
44	2	4379	U
44	2	4380	U
44	2	4382	A
44	2	4383	U
44	2	4384	A
44	2	4386	C
44	2	4387	G
44	2	4388	A
44	2	4389	C
44	2	4390	G
44	2	4394	C
44	2	4396	U
44	2	4397	U
44	2	4401	A
44	2	4404	C
44	2	4406	U
44	2	4407	C
44	2	4408	G
44	2	4409	A

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Mol	Chain	Res	Type
44	2	4410	U
44	2	4411	G
44	2	4412	U
44	2	4413	C
44	2	4415	G
44	2	4416	C
44	2	4420	U
44	2	4421	C
44	2	4422	C
44	2	4423	U
44	2	4424	A
44	2	4425	U
44	2	4426	C
44	2	4431	U
44	2	4433	A
44	2	4434	A
44	2	4435	G
44	2	4437	A
44	2	4438	G
44	2	4448	A
44	2	4449	G
44	2	4451	G
44	2	4452	U
44	2	4453	U
44	2	4454	G
44	2	4455	G
44	2	4456	A
44	2	4457	U
44	2	4458	U
44	2	4459	G
44	2	4460	U
44	2	4461	U
44	2	4465	C
44	2	4466	C
44	2	4470	A
44	2	4472	U
44	2	4473	A
44	2	4474	G
44	2	4477	A
44	2	4478	A
44	2	4479	C
44	2	4480	G

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Mol	Chain	Res	Type
44	2	4482	G
44	2	4483	A
44	2	4484	G
44	2	4488	G
44	2	4489	G
44	2	4491	U
44	2	4492	U
44	2	4494	G
44	2	4498	G
44	2	4499	U
44	2	4500	C
44	2	4502	U
44	2	4503	G
44	2	4505	G
44	2	4507	C
44	2	4508	A
44	2	4509	G
44	2	4510	G
44	2	4512	U
44	2	4515	U
44	2	4516	U
44	2	4519	A
44	2	4520	C
44	2	4521	C
44	2	4522	C
44	2	4525	C
44	2	4526	U
44	2	4527	G
44	2	4528	A
44	2	4529	U
44	2	4530	G
44	2	4532	U
44	2	4533	G
44	2	4534	U
44	2	4535	G
44	2	4536	U
44	2	4538	G
44	2	4539	U
44	2	4541	G
44	2	4543	C
44	2	4544	A
44	2	4545	U

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Mol	Chain	Res	Type
44	2	4549	A
44	2	4550	A
44	2	4551	U
44	2	4552	C
44	2	4557	U
44	2	4558	C
44	2	4560	G
44	2	4561	U
44	2	4562	A
44	2	4563	C
44	2	4566	G
44	2	4567	A
44	2	4568	G
44	2	4569	G
44	2	4570	A
44	2	4577	G
44	2	4578	G
44	2	4579	U
44	2	4580	U
44	2	4583	G
44	2	4584	A
44	2	4586	A
44	2	4587	U
44	2	4592	U
44	2	4594	U
44	2	4595	A
44	2	4596	U
44	2	4597	G
44	2	4598	U
44	2	4599	G
44	2	4600	C
44	2	4601	U
44	2	4602	U
44	2	4604	G
44	2	4609	G
44	2	4610	G
44	2	4612	G
44	2	4613	C
44	2	4615	A
44	2	4616	A
44	2	4617	U
44	2	4618	G

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Mol	Chain	Res	Type
44	2	4621	G
44	2	4622	C
44	2	4628	U
44	2	4629	A
44	2	4630	C
44	2	4632	A
44	2	4636	G
44	2	4637	U
44	2	4638	G
44	2	4639	G
44	2	4640	G
44	2	4641	A
44	2	4642	U
44	2	4643	U
44	2	4646	G
44	2	4651	A
44	2	4654	G
44	2	4655	C
44	2	4657	U
44	2	4658	C
44	2	4659	U
44	2	4660	A
44	2	4661	A
44	2	4664	C
44	2	4665	A
44	2	4668	A
44	2	4669	U
44	2	4671	C
44	2	4672	C
44	2	4675	C
44	2	4676	C
44	2	4678	G
44	2	4679	G
44	2	4680	C
44	2	4681	G
44	2	4682	A
44	2	4684	C
44	2	4688	A
44	2	4689	C
44	2	4690	G
44	2	4691	G
44	2	4692	C

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Mol	Chain	Res	Type
44	2	4693	A
44	2	4694	G
44	2	4696	G
44	2	4698	C
44	2	4699	G
44	2	4700	C
44	2	4701	G
44	2	4706	C
44	2	4710	G
44	2	4711	U
44	2	4712	U
44	2	4713	G
44	2	4714	G
44	2	4716	C
44	2	4718	C
44	2	4719	G
44	2	4720	G
44	2	4721	A
44	2	4723	A
44	2	4724	G
44	2	4725	C
44	2	4726	C
44	2	4733	C
44	2	4734	C
44	2	4735	G
44	2	4736	C
44	2	4739	G
44	2	4740	U
44	2	4741	C
44	2	4742	C
44	2	4746	C
44	2	4803	C
44	2	4804	G
44	2	4807	C
44	2	4808	C
44	2	4809	G
44	2	4812	A
44	2	4813	C
44	2	4814	C
44	2	4815	G
44	2	4816	G
44	2	4822	G

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Mol	Chain	Res	Type
44	2	4824	U
44	2	4825	G
44	2	4826	C
44	2	4827	G
44	2	4828	G
44	2	4829	A
44	2	4831	U
44	2	4832	G
44	2	4834	C
44	2	4836	U
44	2	4838	C
44	2	4839	G
44	2	4840	U
44	2	4844	G
44	2	4847	A
44	2	4848	A
44	2	4849	A
44	2	4850	C
44	2	4851	G
44	2	4852	G
44	2	4853	G
44	2	4854	G
44	2	4855	C
44	2	4856	G
44	2	4857	C
44	2	4858	G
44	2	4862	G
44	2	4863	G
44	2	4867	G
44	2	4868	G
44	2	4875	C
44	2	4879	C
44	2	4880	U
44	2	4881	C
44	2	4882	G
44	2	4883	C
44	2	4892	C
44	2	4893	A
44	2	4894	C
44	2	4895	C
44	2	4896	G
44	2	4897	C

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Mol	Chain	Res	Type
44	2	4898	A
44	2	4899	C
44	2	4900	G
44	2	4901	U
44	2	4902	U
44	2	4903	C
44	2	4904	G
44	2	4905	U
44	2	4906	G
44	2	4919	C
44	2	4921	A
44	2	4923	A
44	2	4924	C
44	2	4930	G
44	2	4931	U
44	2	4932	A
44	2	4940	U
44	2	4943	U
44	2	4944	U
44	2	4945	C
44	2	4946	U
44	2	4947	G
44	2	4949	G
44	2	4955	G
44	2	4956	U
44	2	4958	U
44	2	4959	C
44	2	4960	G
44	2	4962	A
44	2	4963	C
44	2	4968	C
44	2	4969	A
44	2	4972	G
44	2	4974	A
44	2	4975	G
44	2	4976	C
44	2	4978	C
44	2	4979	C
44	2	4980	C
44	2	4981	U
44	2	4982	C
44	2	4983	G

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Mol	Chain	Res	Type
44	2	4985	U
44	2	4986	G
44	2	4988	G
44	2	4995	U
44	2	4996	G
44	2	4998	A
44	2	5002	C
44	2	5003	A
44	2	5005	C
44	2	5009	C
44	2	5010	G
44	2	5015	A
44	2	5016	A
44	2	5017	G
44	2	5018	G
44	2	5019	G
44	2	5020	U
44	2	5021	U
45	3	4	C
45	3	6	C
45	3	7	U
45	3	8	U
45	3	9	A
45	3	10	G
45	3	12	G
45	3	13	G
45	3	14	U
45	3	16	G
45	3	20	A
45	3	23	C
45	3	24	G
45	3	25	G
45	3	26	C
45	3	28	C
45	3	30	U
45	3	32	C
45	3	34	U
45	3	38	U
45	3	43	A
45	3	47	C
45	3	49	G
45	3	51	U

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Mol	Chain	Res	Type
45	3	52	A
45	3	58	G
45	3	59	A
45	3	61	A
45	3	62	A
45	3	63	U
45	3	69	U
45	3	71	A
45	3	72	A
45	3	75	G
45	3	76	C
45	3	77	A
45	3	78	G
45	3	80	A
45	3	81	C
45	3	82	A
45	3	83	C
45	3	84	A
45	3	85	U
45	3	86	U
45	3	89	U
45	3	94	G
45	3	95	A
45	3	103	A
45	3	104	A
45	3	105	C
45	3	106	G
45	3	107	C
45	3	109	C
45	3	111	U
45	3	112	G
45	3	114	G
45	3	117	C
45	3	120	G
45	3	122	G
45	3	123	U
45	3	124	U
45	3	125	C
45	3	126	C
45	3	128	C
45	3	129	C
45	3	130	C

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Mol	Chain	Res	Type
45	3	131	G
45	3	137	A
45	3	138	C
45	3	140	C
45	3	141	C
45	3	143	G
45	3	144	U
45	3	146	U
45	3	147	G
45	3	148	A
45	3	149	G
45	3	150	C
45	3	151	G
45	3	156	U
45	3	157	U
46	4	3	C
46	4	6	C
46	4	7	G
46	4	9	C
46	4	10	C
46	4	11	A
46	4	12	U
46	4	13	A
46	4	15	C
46	4	19	C
46	4	22	A
46	4	27	G
46	4	28	C
46	4	29	C
46	4	30	C
46	4	33	U
46	4	34	C
46	4	35	U
46	4	36	C
46	4	40	U
46	4	41	G
46	4	46	C
46	4	47	G
46	4	48	G
46	4	49	A
46	4	53	U
46	4	54	A

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Mol	Chain	Res	Type
46	4	55	A
46	4	56	G
46	4	57	C
46	4	58	A
46	4	61	G
46	4	62	U
46	4	63	C
46	4	64	G
46	4	65	G
46	4	67	C
46	4	68	C
46	4	69	U
46	4	73	U
46	4	74	A
46	4	75	G
46	4	76	U
46	4	77	A
46	4	79	U
46	4	81	G
46	4	85	G
46	4	86	G
46	4	87	G
46	4	89	G
46	4	90	A
46	4	91	C
46	4	94	C
46	4	95	C
46	4	96	U
46	4	97	G
46	4	99	G
46	4	100	A
46	4	101	A
46	4	103	A
46	4	105	C
46	4	107	G
46	4	108	G
46	4	109	U
46	4	110	G
46	4	113	G
46	4	116	G
46	4	117	G
46	4	118	C

All (340) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
44	2	13	U
44	2	14	C
44	2	19	G
44	2	48	G
44	2	64	A
44	2	69	A
44	2	70	A
44	2	96	U
44	2	156	C
44	2	181	U
44	2	188	G
44	2	192	C
44	2	193	C
44	2	196	G
44	2	207	C
44	2	212	C
44	2	215	A
44	2	216	G
44	2	221	U
44	2	229	G
44	2	266	C
44	2	287	A
44	2	292	G
44	2	300	C
44	2	328	U
44	2	331	C
44	2	333	G
44	2	334	C
44	2	342	C
44	2	371	U
44	2	379	A
44	2	381	C
44	2	386	A
44	2	398	A
44	2	402	G
44	2	424	A
44	2	433	G
44	2	441	G
44	2	443	A
44	2	444	G
44	2	458	U
44	2	459	U

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Mol	Chain	Res	Type
44	2	460	C
44	2	461	A
44	2	462	A
44	2	473	G
44	2	474	G
44	2	477	C
44	2	482	G
44	2	633	G
44	2	658	G
44	2	717	G
44	2	718	G
44	2	719	G
44	2	720	A
44	2	721	A
44	2	727	G
44	2	736	G
44	2	897	U
44	2	914	G
44	2	916	A
44	2	927	A
44	2	928	A
44	2	939	G
44	2	941	G
44	2	943	G
44	2	944	A
44	2	947	G
44	2	957	G
44	2	959	C
44	2	967	C
44	2	973	U
44	2	974	C
44	2	1082	U
44	2	1147	C
44	2	1177	C
44	2	1193	G
44	2	1196	C
44	2	1197	G
44	2	1204	G
44	2	1205	U
44	2	1207	C
44	2	1208	U
44	2	1209	C

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Mol	Chain	Res	Type
44	2	1211	C
44	2	1216	C
44	2	1217	C
44	2	1218	A
44	2	1219	C
44	2	1249	G
44	2	1280	G
44	2	1282	U
44	2	1293	C
44	2	1299	U
44	2	1304	A
44	2	1340	G
44	2	1349	C
44	2	1357	G
44	2	1358	C
44	2	1360	G
44	2	1367	A
44	2	1377	A
44	2	1388	G
44	2	1400	A
44	2	1421	C
44	2	1423	A
44	2	1444	G
44	2	1453	C
44	2	1458	G
44	2	1475	G
44	2	1476	A
44	2	1478	C
44	2	1481	G
44	2	1497	A
44	2	1502	A
44	2	1523	G
44	2	1530	C
44	2	1532	A
44	2	1553	G
44	2	1554	A
44	2	1604	G
44	2	1612	G
44	2	1619	C
44	2	1628	U
44	2	1639	U
44	2	1659	G

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Mol	Chain	Res	Type
44	2	1673	C
44	2	1703	G
44	2	1732	G
44	2	1744	A
44	2	1745	A
44	2	1756	C
44	2	1783	A
44	2	1786	C
44	2	1802	G
44	2	1805	G
44	2	1836	A
44	2	1846	A
44	2	1855	G
44	2	1859	C
44	2	1860	U
44	2	1868	G
44	2	1870	A
44	2	1874	A
44	2	1883	U
44	2	1885	A
44	2	1900	G
44	2	1916	C
44	2	1918	G
44	2	1924	G
44	2	1930	G
44	2	2000	C
44	2	2003	A
44	2	2006	C
44	2	2009	C
44	2	2011	A
44	2	2023	G
44	2	2024	G
44	2	2034	G
44	2	2046	C
44	2	2048	U
44	2	2270	G
44	2	2294	G
44	2	2309	G
44	2	2310	G
44	2	2324	A
44	2	2333	U
44	2	2347	A

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Mol	Chain	Res	Type
44	2	2348	U
44	2	2358	A
44	2	2360	C
44	2	2369	C
44	2	2371	G
44	2	2373	A
44	2	2375	U
44	2	2394	A
44	2	2395	A
44	2	2396	C
44	2	2405	A
44	2	2411	G
44	2	2415	A
44	2	2450	A
44	2	2454	A
44	2	2465	C
44	2	2481	C
44	2	2489	A
44	2	2502	U
44	2	2508	C
44	2	2548	C
44	2	2551	G
44	2	2561	G
44	2	2564	A
44	2	2606	C
44	2	2607	U
44	2	2650	G
44	2	2673	A
44	2	2684	U
44	2	2702	A
44	2	2703	G
44	2	2716	C
44	2	2718	U
44	2	2735	G
44	2	2740	U
44	2	2741	A
44	2	2745	C
44	2	2749	C
44	2	2802	A
44	2	2803	U
44	2	2838	C
44	2	3578	G

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Mol	Chain	Res	Type
44	2	3583	G
44	2	3584	G
44	2	3585	U
44	2	3648	U
44	2	3666	U
44	2	3684	U
44	2	3696	A
44	2	3724	G
44	2	3727	U
44	2	3729	A
44	2	3733	U
44	2	3743	A
44	2	3753	A
44	2	3754	A
44	2	3769	A
44	2	3770	U
44	2	3802	C
44	2	3821	A
44	2	3845	A
44	2	3865	C
44	2	3866	G
44	2	3873	G
44	2	3876	G
44	2	3887	G
44	2	3907	G
44	2	3926	U
44	2	3933	U
44	2	4017	U
44	2	4033	G
44	2	4043	U
44	2	4044	G
44	2	4081	C
44	2	4083	C
44	2	4084	U
44	2	4085	U
44	2	4088	G
44	2	4091	G
44	2	4105	C
44	2	4117	A
44	2	4122	C
44	2	4130	A
44	2	4155	G

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Mol	Chain	Res	Type
44	2	4181	C
44	2	4211	A
44	2	4226	G
44	2	4236	G
44	2	4252	A
44	2	4254	C
44	2	4292	C
44	2	4336	A
44	2	4338	A
44	2	4354	A
44	2	4374	A
44	2	4387	G
44	2	4388	A
44	2	4396	U
44	2	4408	G
44	2	4409	A
44	2	4433	A
44	2	4437	A
44	2	4454	G
44	2	4455	G
44	2	4485	C
44	2	4515	U
44	2	4533	G
44	2	4551	U
44	2	4561	U
44	2	4562	A
44	2	4566	G
44	2	4596	U
44	2	4597	G
44	2	4609	G
44	2	4616	A
44	2	4628	U
44	2	4636	G
44	2	4637	U
44	2	4659	U
44	2	4660	A
44	2	4675	C
44	2	4680	C
44	2	4688	A
44	2	4690	G
44	2	4692	C
44	2	4693	A

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Mol	Chain	Res	Type
44	2	4699	G
44	2	4711	U
44	2	4712	U
44	2	4717	U
44	2	4723	A
44	2	4733	C
44	2	4740	U
44	2	4807	C
44	2	4813	C
44	2	4823	G
44	2	4824	U
44	2	4825	G
44	2	4827	G
44	2	4829	A
44	2	4837	U
44	2	4847	A
44	2	4848	A
44	2	4849	A
44	2	4854	G
44	2	4862	G
44	2	4867	G
44	2	4895	C
44	2	4930	G
44	2	4943	U
44	2	4944	U
44	2	4977	U
44	2	4978	C
44	2	4980	C
44	2	5002	C
44	2	5004	G
44	2	5019	G
45	3	22	U
45	3	71	A
45	3	84	A
45	3	105	C
45	3	111	U
45	3	125	C
46	4	12	U
46	4	26	C
46	4	54	A
46	4	63	C
46	4	74	A

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Mol	Chain	Res	Type
46	4	75	G
46	4	90	A
46	4	108	G
46	4	109	U

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

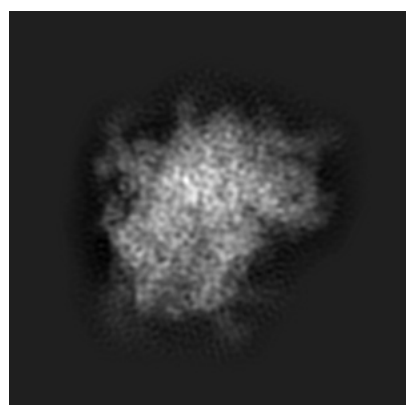
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-2813. These allow visual inspection of the internal detail of the map and identification of artifacts.

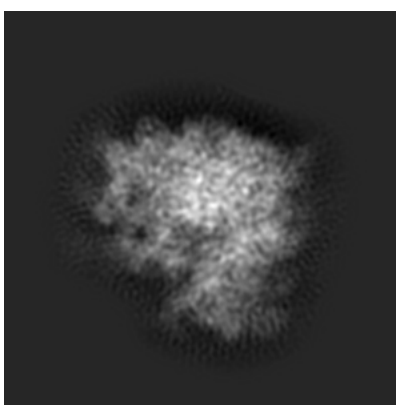
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

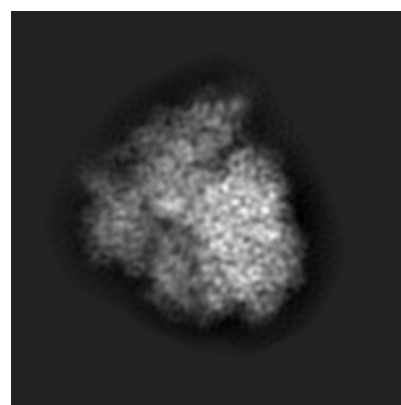
6.1.1 Primary map



X



Y

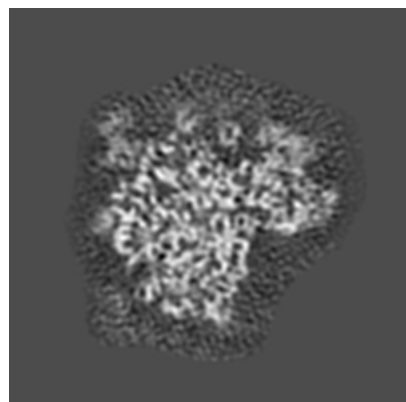


Z

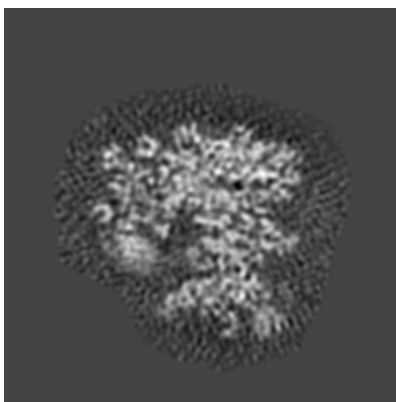
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

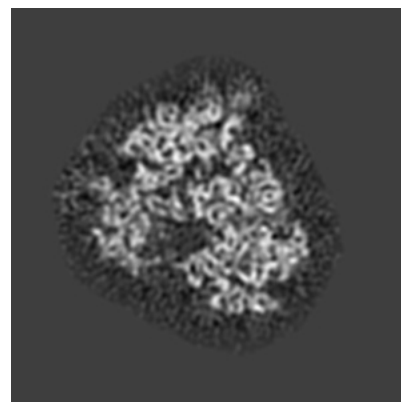
6.2.1 Primary map



X Index: 150



Y Index: 150

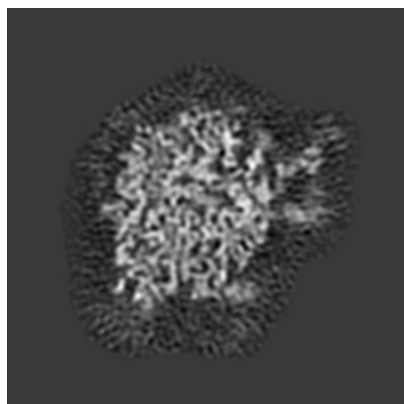


Z Index: 150

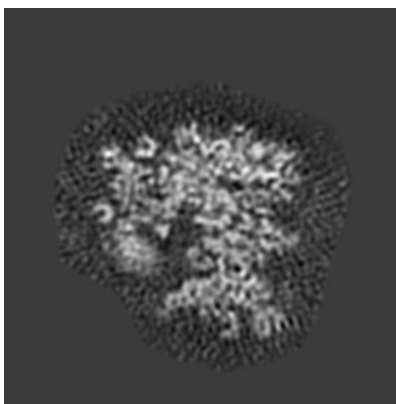
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

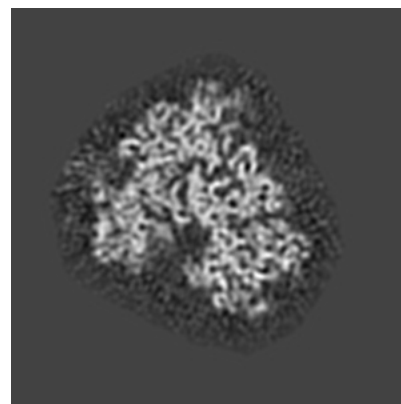
6.3.1 Primary map



X Index: 172



Y Index: 149

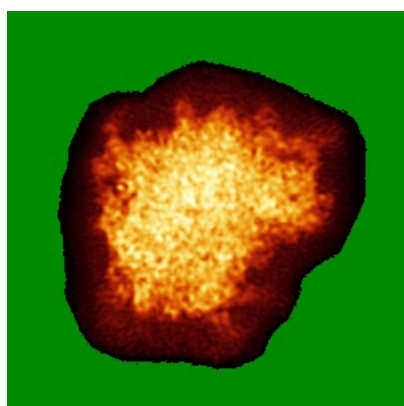


Z Index: 154

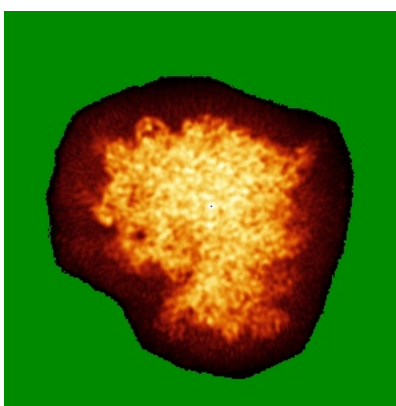
The images above show the largest variance slices of the map in three orthogonal directions.

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

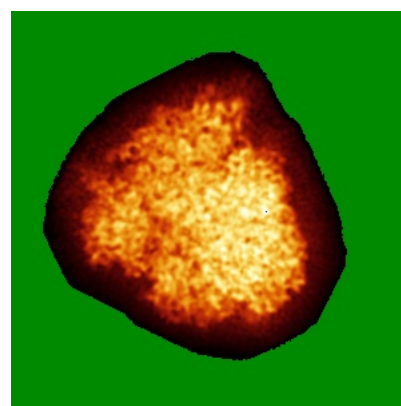
6.4.1 Primary map



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 [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 3.0. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

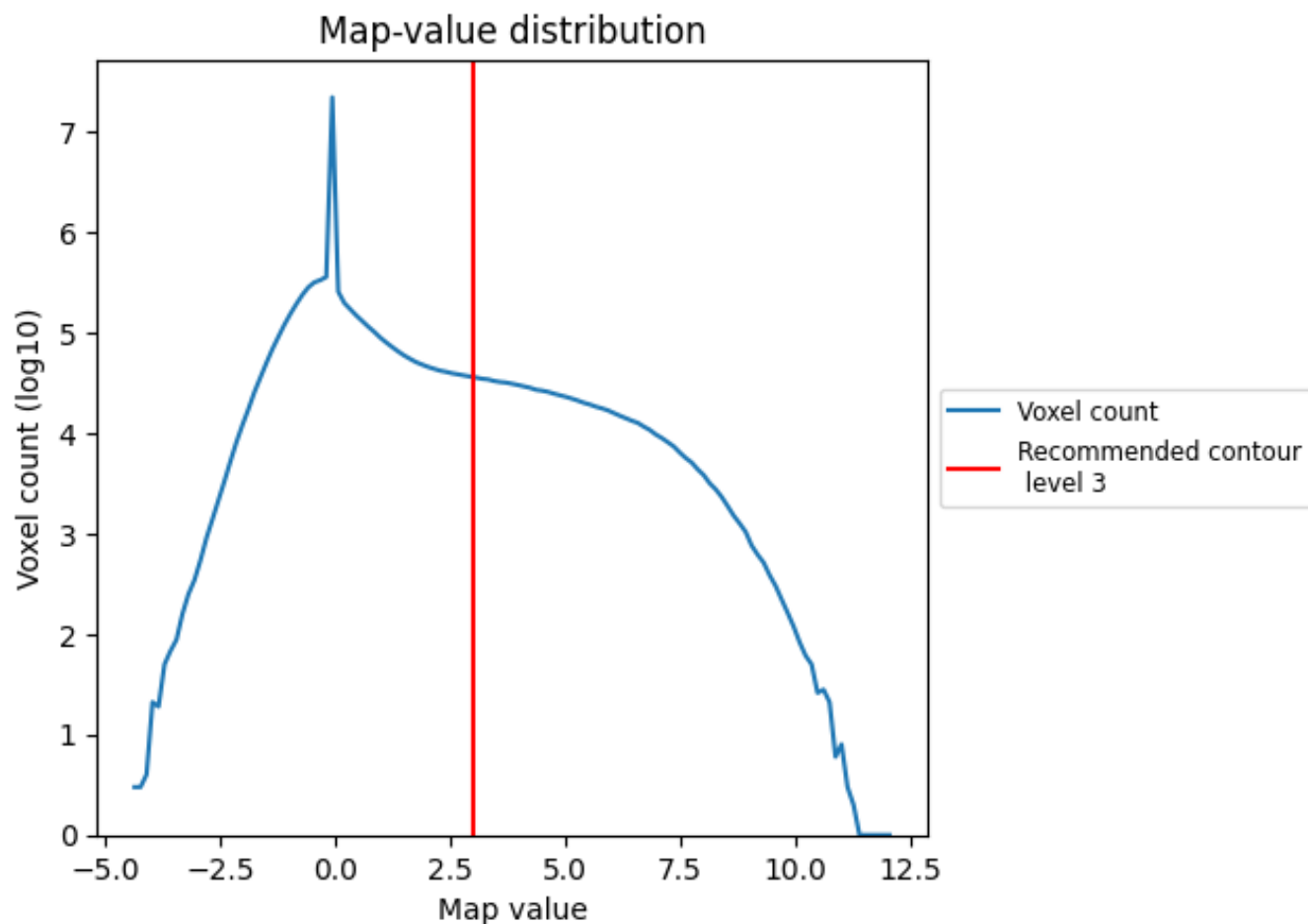
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

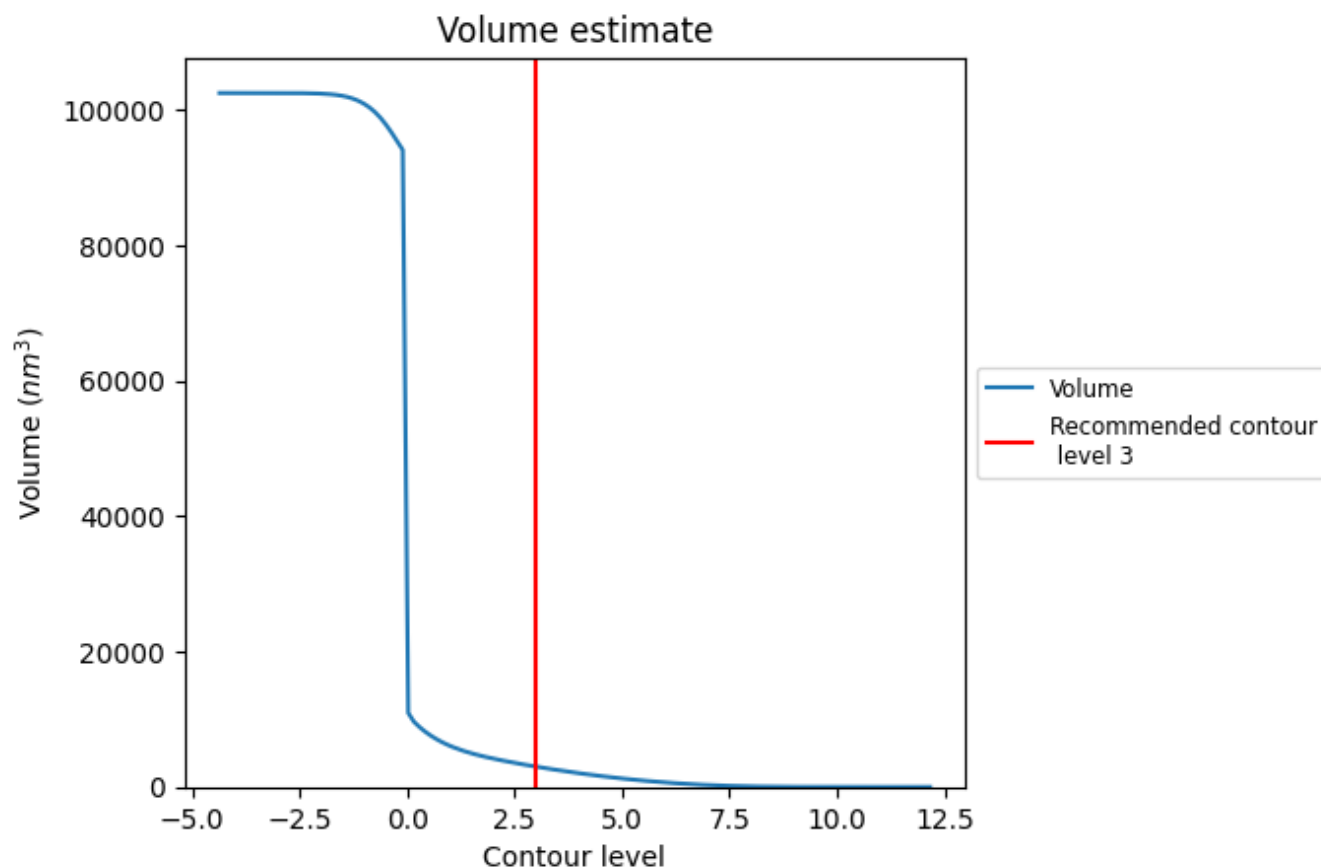
This section contains the results of statistical analysis of the map.

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.

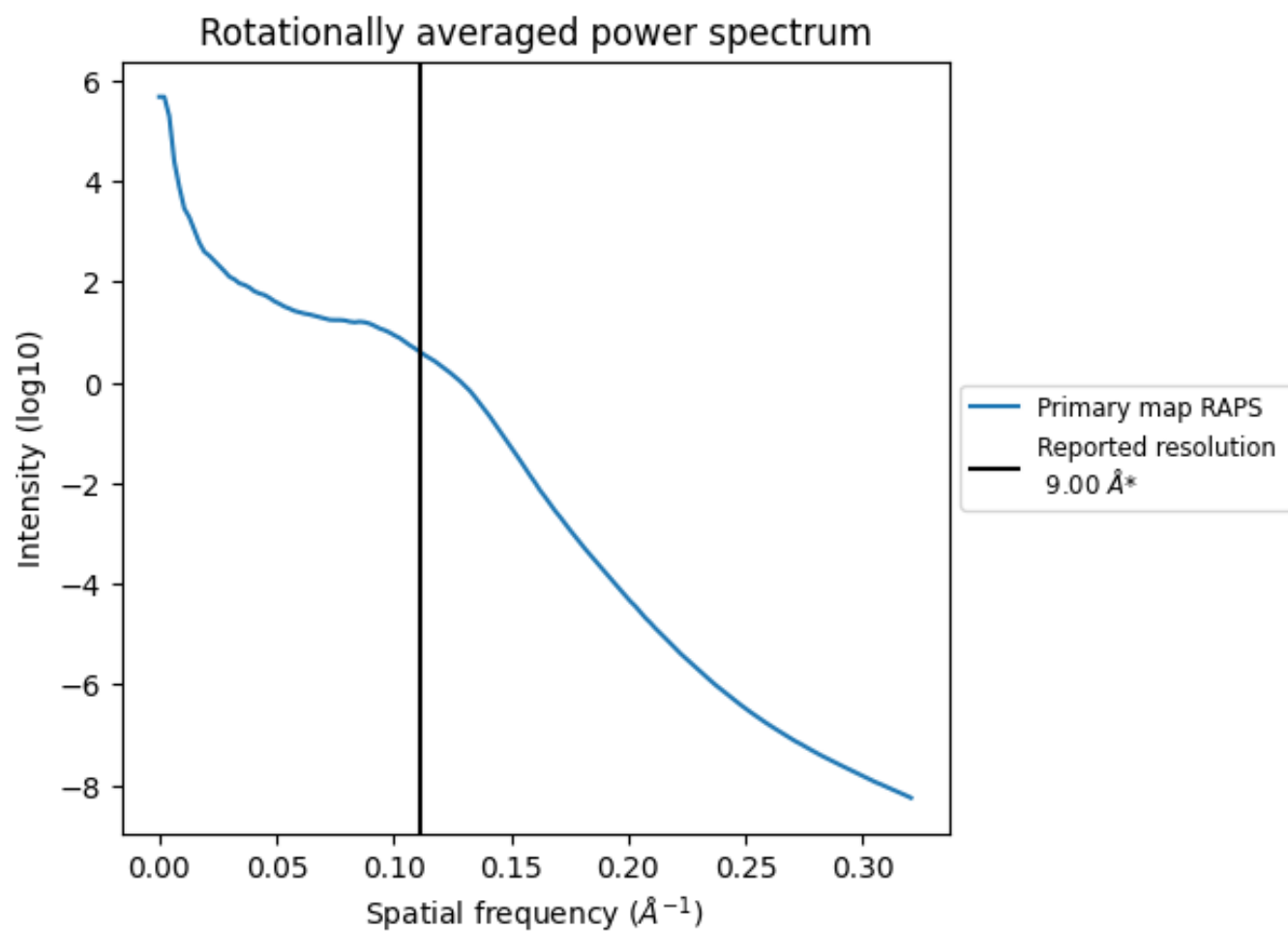
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 3001 nm³; this corresponds to an approximate mass of 2711 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 0.111 Å⁻¹

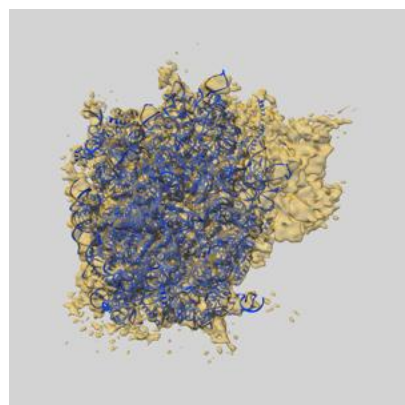
8 Fourier-Shell correlation

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

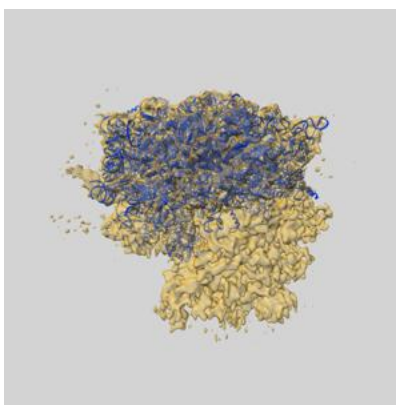
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-2813 and PDB model 4D67. Per-residue inclusion information can be found in [section 3](#) on [page 12](#).

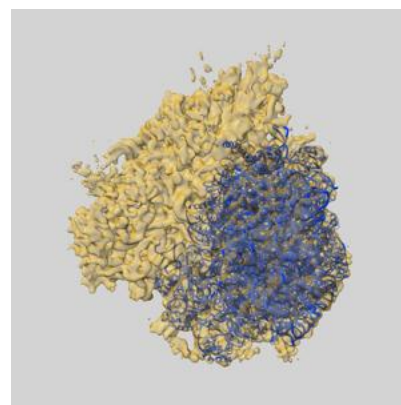
9.1 Map-model overlay [i](#)



X



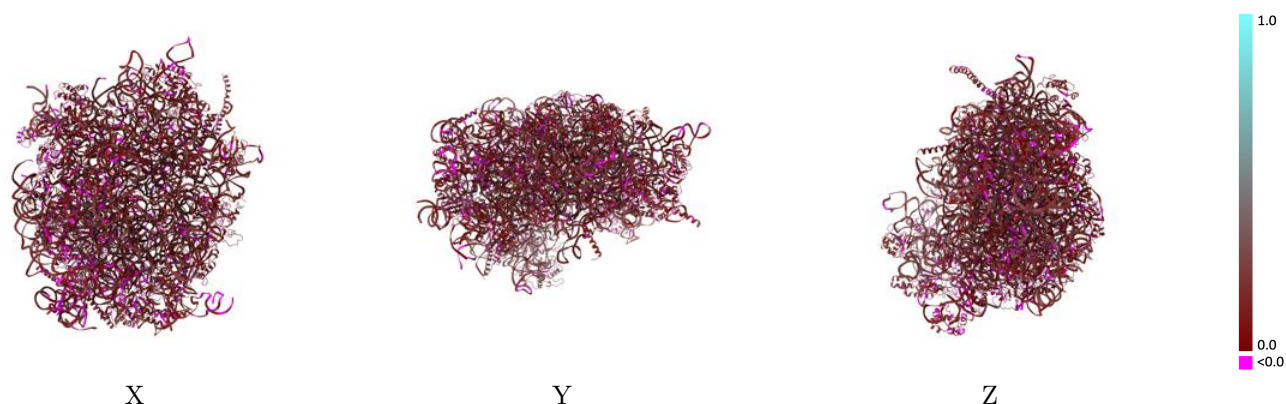
Y



Z

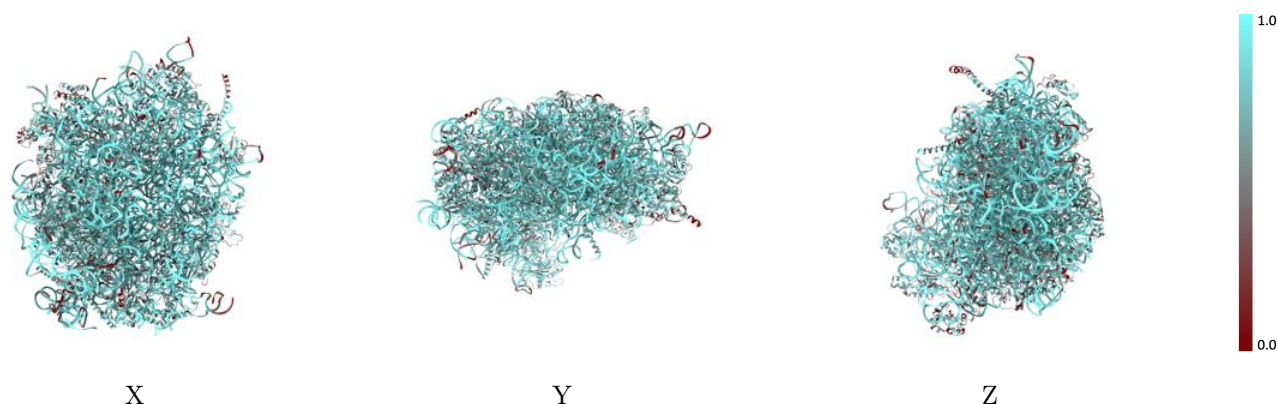
The images above show the 3D surface view of the map at the recommended contour level 3.0 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



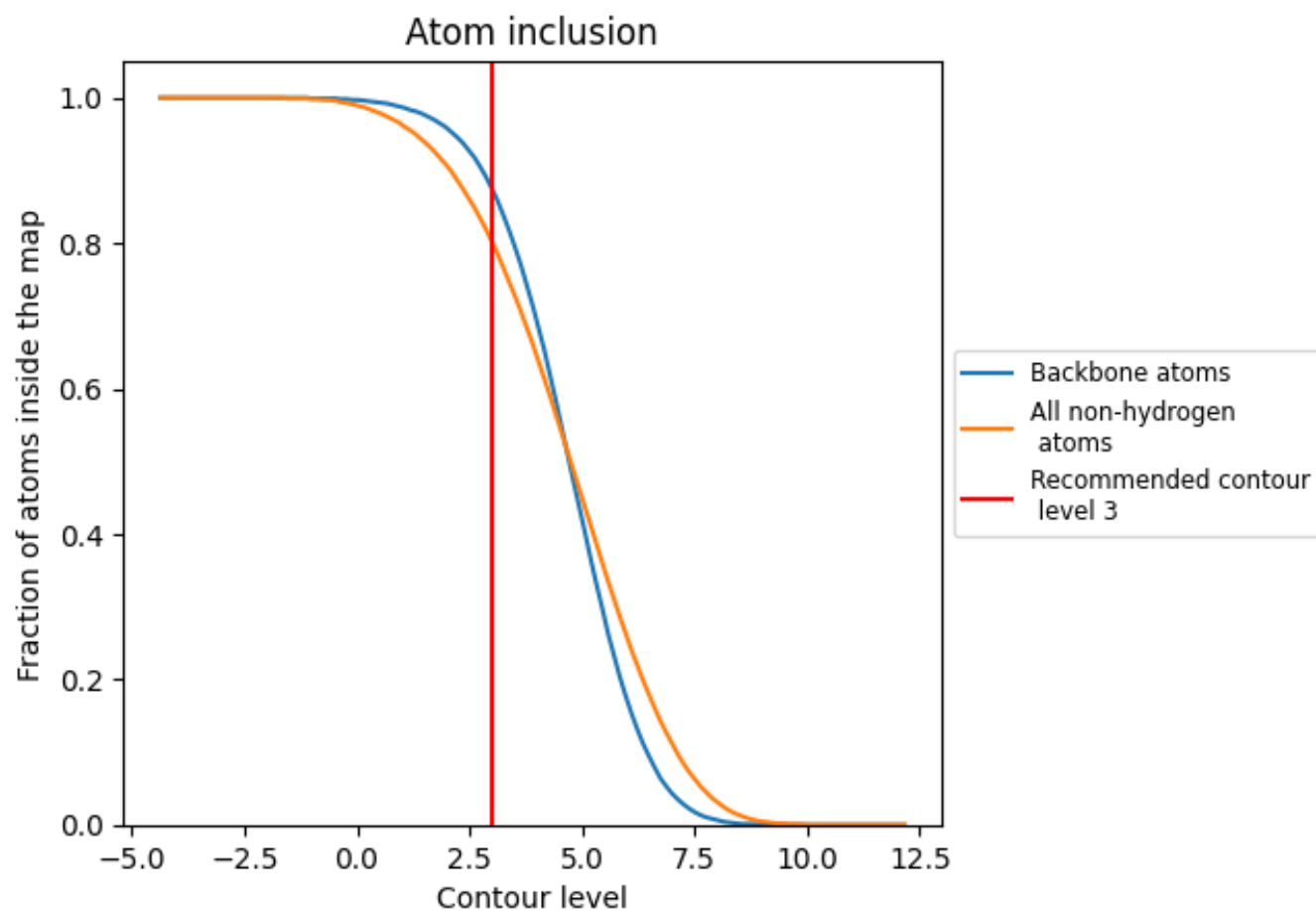
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (3).

9.4 Atom inclusion [i](#)



At the recommended contour level, 88% of all backbone atoms, 80% 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 (3) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8020	 0.1420
2	 0.8830	 0.1660
3	 0.9030	 0.1700
4	 0.9460	 0.1820
A	 0.6610	 0.0870
B	 0.6850	 0.0980
C	 0.6880	 0.0900
D	 0.6680	 0.1060
E	 0.6070	 0.0930
F	 0.6510	 0.1020
G	 0.6610	 0.1250
H	 0.7150	 0.1300
I	 0.6590	 0.1180
J	 0.7330	 0.1140
L	 0.6350	 0.1020
M	 0.7010	 0.1110
N	 0.6780	 0.0780
O	 0.6870	 0.1080
P	 0.6970	 0.0890
Q	 0.6580	 0.0980
R	 0.6720	 0.1170
S	 0.6820	 0.1090
T	 0.6660	 0.1050
U	 0.6230	 0.1370
V	 0.6310	 0.1120
W	 0.6860	 0.1100
X	 0.6350	 0.1070
Y	 0.7010	 0.1080
Z	 0.6830	 0.1160
a	 0.6760	 0.1000
b	 0.7040	 0.1090
c	 0.6310	 0.1200
d	 0.7100	 0.1200
e	 0.6480	 0.1020
f	 0.6590	 0.0690



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Chain	Atom inclusion	Q-score
g	 0.6830	 0.0980
h	 0.6620	 0.1140
i	 0.6600	 0.1260
j	 0.7530	 0.0940
k	 0.5880	 0.1300
l	 0.7630	 0.1260
m	 0.6980	 0.1130
n	 0.6470	 0.1010
o	 0.5870	 0.0950
p	 0.6620	 0.1090
t	 0.6670	 0.0860
u	 0.4880	 0.0770