



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 6, 2026 – 04:50 PM UTC

PDB ID : 3CCJ / pdb_00003ccj
Title : Structure of Anisomycin resistant 50S Ribosomal Subunit: 23S rRNA mutation C2534U
Authors : Blaha, G.; Gurel, G.
Deposited on : 2008-02-26
Resolution : 3.30 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

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

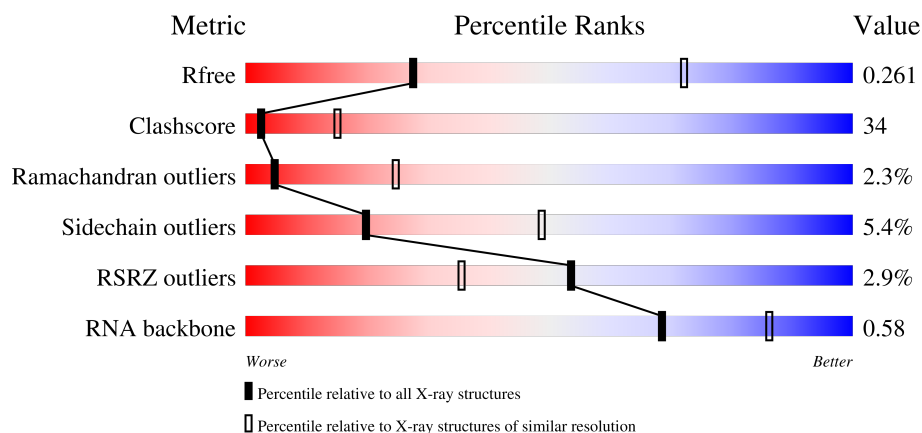
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.30 Å.

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



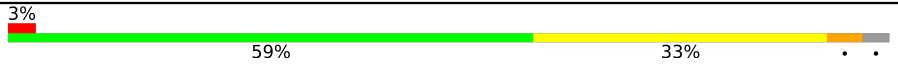
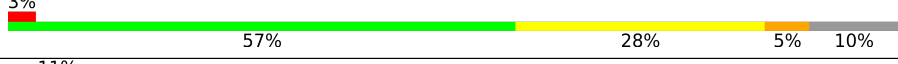
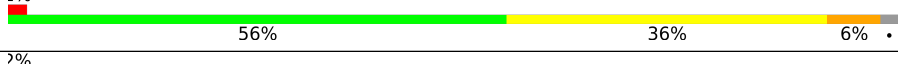
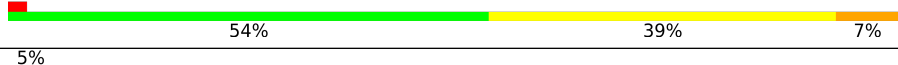
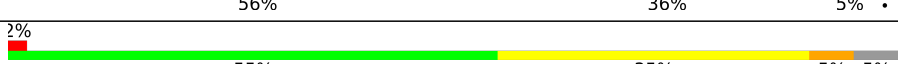
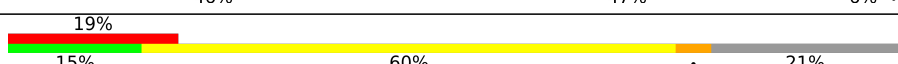
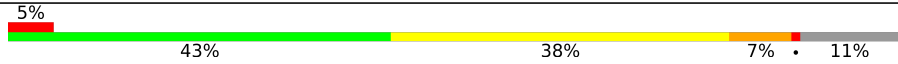
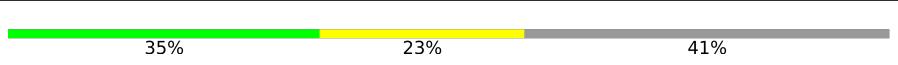
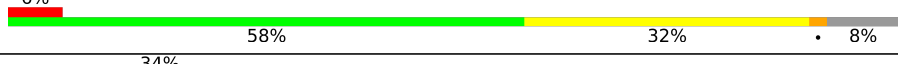
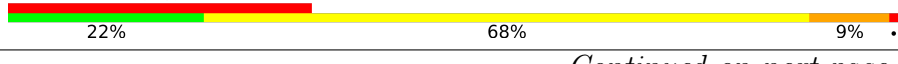
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1169 (3.32-3.28)
Clashscore	190562	1209 (3.32-3.28)
Ramachandran outliers	187476	1188 (3.32-3.28)
Sidechain outliers	187428	1187 (3.32-3.28)
RSRZ outliers	180081	1169 (3.32-3.28)
RNA backbone	3983	1048 (3.60-3.00)

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

Mol	Chain	Length	Quality of chain
1	A	240	
2	B	338	
3	C	246	
4	D	177	

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Mol	Chain	Length	Quality of chain
5	E	178	
6	F	120	
7	G	348	
8	H	177	
9	I	162	
10	J	145	
11	K	132	
12	L	165	
13	M	196	
14	N	187	
15	O	116	
16	P	149	
17	Q	96	
18	R	155	
19	S	85	
20	T	120	
21	U	67	
22	V	71	
23	W	154	
24	X	92	
25	Y	241	
26	Z	116	
27	1	57	
28	2	50	
29	3	92	

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Mol	Chain	Length	Quality of chain
30	0	2923	
31	9	122	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
33	CL	0	8812	-	-	X	-
33	CL	0	8813	-	-	X	-
33	CL	3	8804	-	-	X	-
33	CL	J	8801	-	-	X	-
33	CL	M	8818	-	-	X	-
33	CL	N	8807	-	-	X	-
35	NA	0	8518	-	-	-	X
35	NA	0	8522	-	-	-	X
35	NA	0	8574	-	-	-	X
37	CD	3	8704	-	-	-	X

2 Entry composition

There are 38 unique types of molecules in this entry. The entry contains 99122 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called 50S ribosomal protein L2P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	237	Total	C	N	O	S	0	0	0
			1753	1072	352	324	5			

- Molecule 2 is a protein called 50S ribosomal protein L3P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	337	Total	C	N	O	S	0	0	0
			2625	1616	493	511	5			

- Molecule 3 is a protein called 50S ribosomal protein L4P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	C	246	Total	C	N	O	S	0	0	0
			1860	1130	345	384	1			

- Molecule 4 is a protein called 50S ribosomal protein L5P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	D	140	Total	C	N	O	S	0	0	0
			1094	685	195	210	4			

- Molecule 5 is a protein called 50S ribosomal protein L6P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	E	172	Total	C	N	O	S	0	0	0
			1357	840	224	289	4			

- Molecule 6 is a protein called 50S ribosomal protein L7Ae.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	F	119	Total	C	N	O	S	0	0	0
			890	551	141	197	1			

- Molecule 7 is a protein called 50S ribosomal protein L10E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	G	29	Total	C	N	O	S	0	0	0
			240	149	39	51	1			

- Molecule 8 is a protein called 50S ribosomal protein L10e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	H	160	Total	C	N	O	S	0	0	0
			1282	798	240	238	6			

- Molecule 9 is a protein called 50S ribosomal protein L11P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	I	70	Total	C	N	O	S	0	0	0
			519	323	81	114	1			

- Molecule 10 is a protein called 50S ribosomal protein L13P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	J	142	Total	C	N	O	S	0	0	0
			1120	696	199	222	3			

- Molecule 11 is a protein called 50S ribosomal protein L14P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	K	132	Total	C	N	O	S	0	0	0
			994	609	189	192	4			

- Molecule 12 is a protein called 50S ribosomal protein L15P.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
12	L	145	Total	C	N	O	0	0	0
			1118	670	222	226			

- Molecule 13 is a protein called 50S ribosomal protein L15e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	M	194	Total	C	N	O	S	0	0	0
			1558	943	333	281	1			

- Molecule 14 is a protein called 50S ribosomal protein L18P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	N	186	Total	C	N	O	S	0	0	0
			1445	895	262	286	2			

- Molecule 15 is a protein called 50S ribosomal protein L18e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	O	115	Total	C	N	O		0	0	0
			865	529	161	175				

- Molecule 16 is a protein called 50S ribosomal protein L19e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	P	143	Total	C	N	O		0	0	0
			1136	683	229	224				

- Molecule 17 is a protein called 50S ribosomal protein L21e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	Q	95	Total	C	N	O		0	0	0
			735	450	141	144				

- Molecule 18 is a protein called 50S ribosomal protein L22P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	R	150	Total	C	N	O	S	0	0	0
			1149	713	209	223	4			

- Molecule 19 is a protein called 50S ribosomal protein L23P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	S	81	Total	C	N	O	S	0	0	0
			641	389	111	138	3			

- Molecule 20 is a protein called 50S ribosomal protein L24P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	T	119	Total	C	N	O		0	0	0
			950	568	180	202				

- Molecule 21 is a protein called 50S ribosomal protein L24e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	U	53	Total	C	N	O	S	0	0	0
			410	244	75	86	5			

- Molecule 22 is a protein called 50S ribosomal protein L29P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	V	65	Total	C	N	O	S	0	0	0
			499	304	94	100	1			

- Molecule 23 is a protein called 50S ribosomal protein L30P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	W	154	Total	C	N	O	S	0	0	0
			1196	737	209	244	6			

- Molecule 24 is a protein called 50S ribosomal protein L31e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	X	82	Total	C	N	O	S	0	0	0
			654	402	129	122	1			

- Molecule 25 is a protein called 50S ribosomal protein L32e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	Y	142	Total	C	N	O		0	0	0
			1130	686	228	216				

- Molecule 26 is a protein called 50S ribosomal protein L37Ae.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	Z	73	Total	C	N	O	S	0	0	0
			573	343	113	112	5			

- Molecule 27 is a protein called 50S ribosomal protein L37e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	1	56	Total	C	N	O	S	0	0	0
			431	258	86	83	4			

- Molecule 28 is a protein called 50S ribosomal protein L39e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	2	46	Total	C	N	O	S	0	0	0
			396	239	89	67	1			

- Molecule 29 is a protein called 50S ribosomal protein L44E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	3	92	Total	C	N	O	S	0	0	0
			755	458	153	137	7			

- Molecule 30 is a RNA chain called 23S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	0	2754	Total	C	N	O	P	0	0	0
			59020	26349	10872	19054	2745			

- Molecule 31 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	9	122	Total	C	N	O	P	0	0	0
			2599	1160	471	847	121			

- Molecule 32 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
32	A	2	Total	Mg	0	0
			2	2		
32	K	1	Total	Mg	0	0
			1	1		
32	T	1	Total	Mg	0	0
			1	1		
32	Y	2	Total	Mg	0	0
			2	2		
32	0	85	Total	Mg	0	0
			85	85		
32	9	2	Total	Mg	0	0
			2	2		

- Molecule 33 is CHLORIDE ION (CCD ID: CL) (formula: Cl).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	A	1	Total	Cl	0	0
			1	1		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	B	1	Total 1	Cl 1	0	0
33	J	4	Total 4	Cl 4	0	0
33	L	1	Total 1	Cl 1	0	0
33	M	1	Total 1	Cl 1	0	0
33	N	1	Total 1	Cl 1	0	0
33	O	1	Total 1	Cl 1	0	0
33	Q	1	Total 1	Cl 1	0	0
33	R	1	Total 1	Cl 1	0	0
33	Y	1	Total 1	Cl 1	0	0
33	3	1	Total 1	Cl 1	0	0
33	0	8	Total 8	Cl 8	0	0

- Molecule 34 is STRONTIUM ION (CCD ID: SR) (formula: Sr).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
34	A	2	Total 2	Sr 2	0	0
34	B	2	Total 2	Sr 2	0	0
34	F	1	Total 1	Sr 1	0	0
34	J	1	Total 1	Sr 1	0	0
34	R	1	Total 1	Sr 1	0	0
34	S	1	Total 1	Sr 1	0	0
34	1	2	Total 2	Sr 2	0	0
34	2	1	Total 1	Sr 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
34	3	2	Total 2	Sr 2	0	0
34	0	93	Total 93	Sr 93	0	0
34	9	2	Total 2	Sr 2	0	0

- Molecule 35 is SODIUM ION (CCD ID: NA) (formula: Na).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
35	B	1	Total 1	Na 1	0	0
35	C	1	Total 1	Na 1	0	0
35	J	1	Total 1	Na 1	0	0
35	L	1	Total 1	Na 1	0	0
35	M	1	Total 1	Na 1	0	0
35	Q	1	Total 1	Na 1	0	0
35	R	3	Total 3	Na 3	0	0
35	S	1	Total 1	Na 1	0	0
35	0	63	Total 63	Na 63	0	0
35	9	2	Total 2	Na 2	0	0

- Molecule 36 is POTASSIUM ION (CCD ID: K) (formula: K).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
36	M	1	Total 1	K 1	0	0
36	0	1	Total 1	K 1	0	0

- Molecule 37 is CADMIUM ION (CCD ID: CD) (formula: Cd).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
37	O	1	Total Cd 1 1	0	0
37	U	1	Total Cd 1 1	0	0
37	Z	1	Total Cd 1 1	0	0
37	1	1	Total Cd 1 1	0	0
37	3	1	Total Cd 1 1	0	0

- Molecule 38 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
38	A	122	Total O 122 122	0	0
38	B	158	Total O 158 158	0	0
38	C	176	Total O 176 176	0	0
38	D	51	Total O 51 51	0	0
38	E	51	Total O 51 51	0	0
38	F	27	Total O 27 27	0	0
38	G	15	Total O 15 15	0	0
38	H	73	Total O 73 73	0	0
38	I	3	Total O 3 3	0	0
38	J	55	Total O 55 55	0	0
38	K	61	Total O 61 61	0	0
38	L	99	Total O 99 99	0	0
38	M	148	Total O 148 148	0	0
38	N	56	Total O 56 56	0	0
38	O	42	Total O 42 42	0	0

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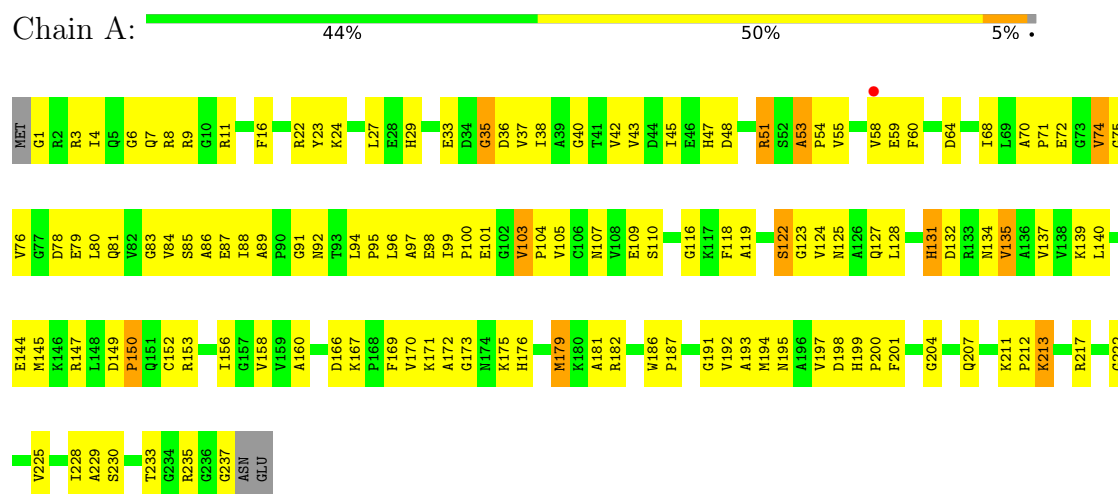
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
38	P	56	Total 56	O 56	0	0
38	Q	58	Total 58	O 58	0	0
38	R	78	Total 78	O 78	0	0
38	S	37	Total 37	O 37	0	0
38	T	41	Total 41	O 41	0	0
38	U	34	Total 34	O 34	0	0
38	V	10	Total 10	O 10	0	0
38	W	71	Total 71	O 71	0	0
38	X	28	Total 28	O 28	0	0
38	Y	102	Total 102	O 102	0	0
38	Z	33	Total 33	O 33	0	0
38	1	53	Total 53	O 53	0	0
38	2	48	Total 48	O 48	0	0
38	3	80	Total 80	O 80	0	0
38	0	5813	Total 5813	O 5813	0	0
38	9	144	Total 144	O 144	0	0

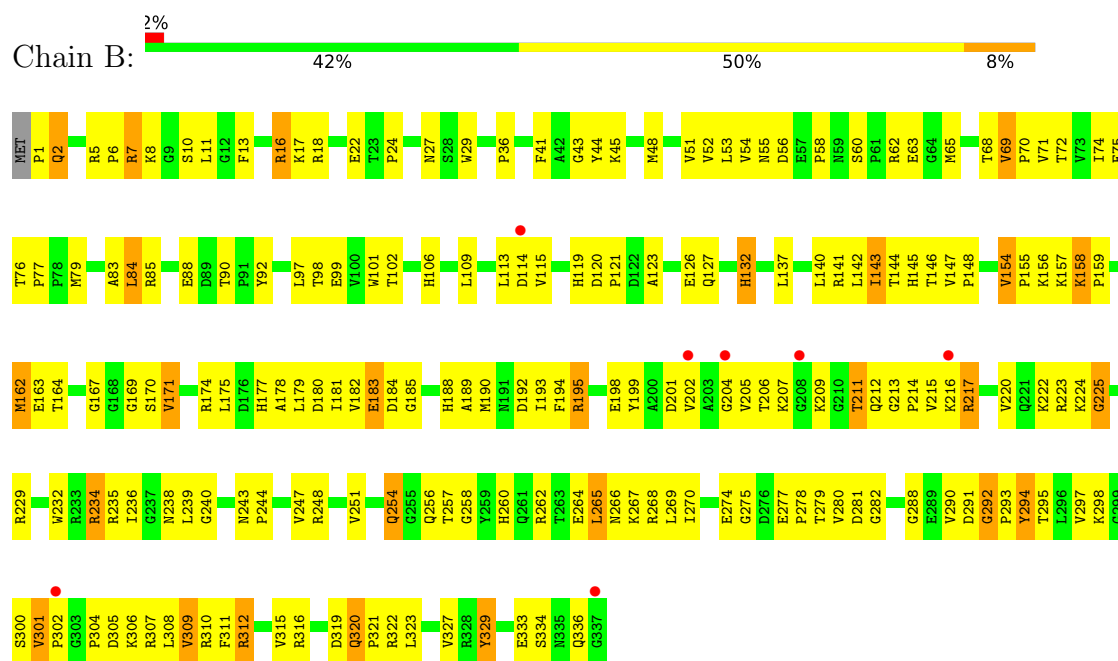
3 Residue-property plots

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 electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

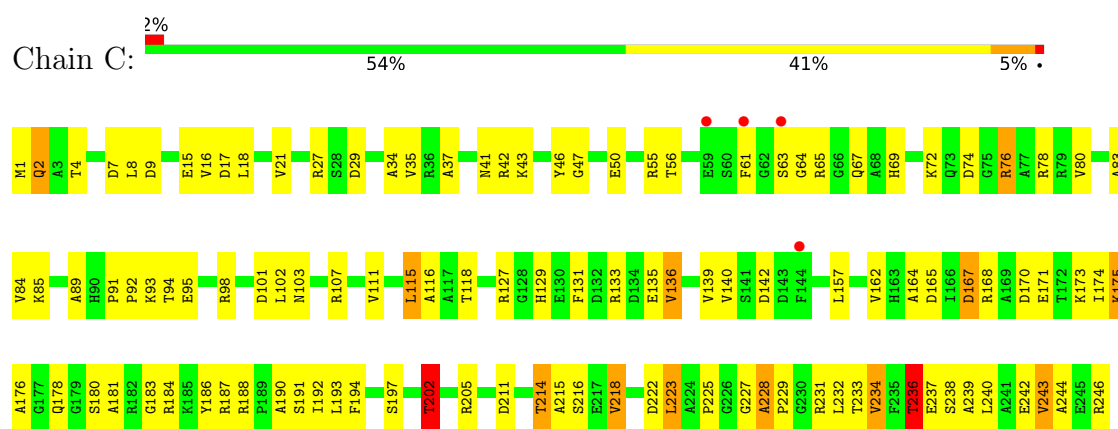
• Molecule 1: 50S ribosomal protein L2P



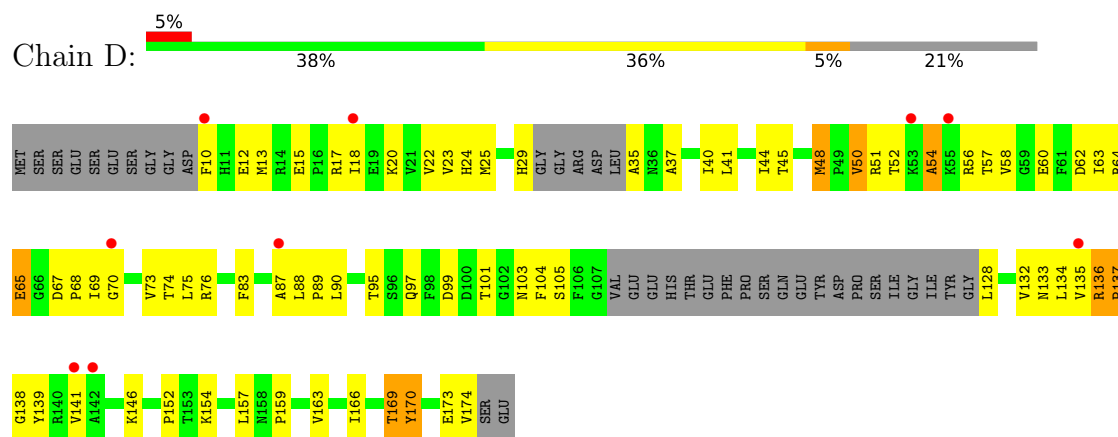
• Molecule 2: 50S ribosomal protein L3P



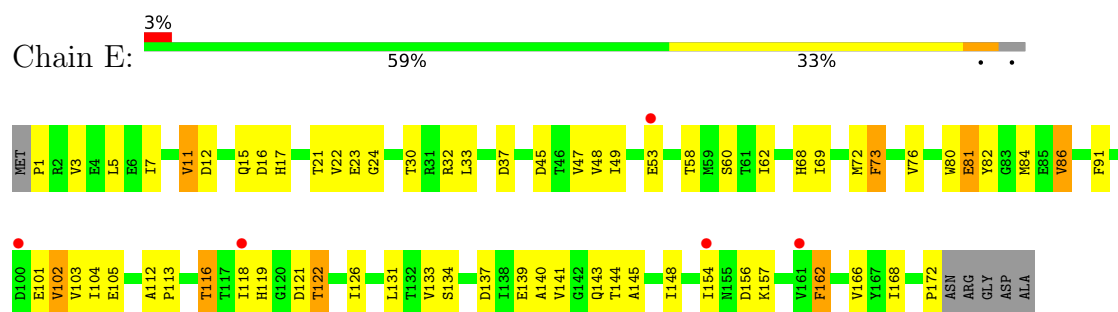
• Molecule 3: 50S ribosomal protein L4P



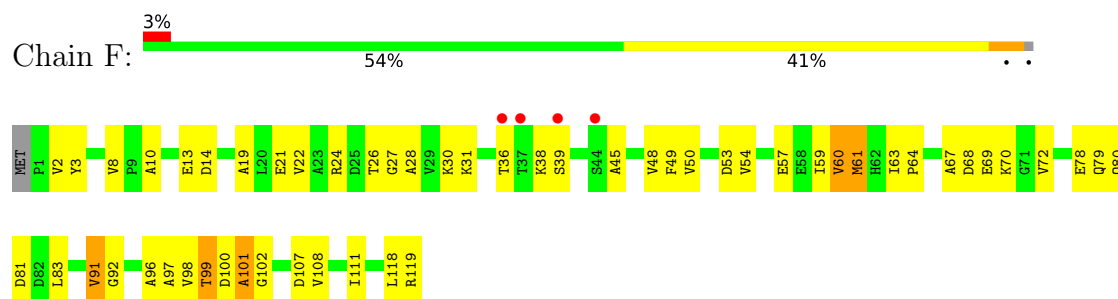
- Molecule 4: 50S ribosomal protein L5P



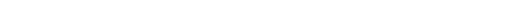
- Molecule 5: 50S ribosomal protein L6P

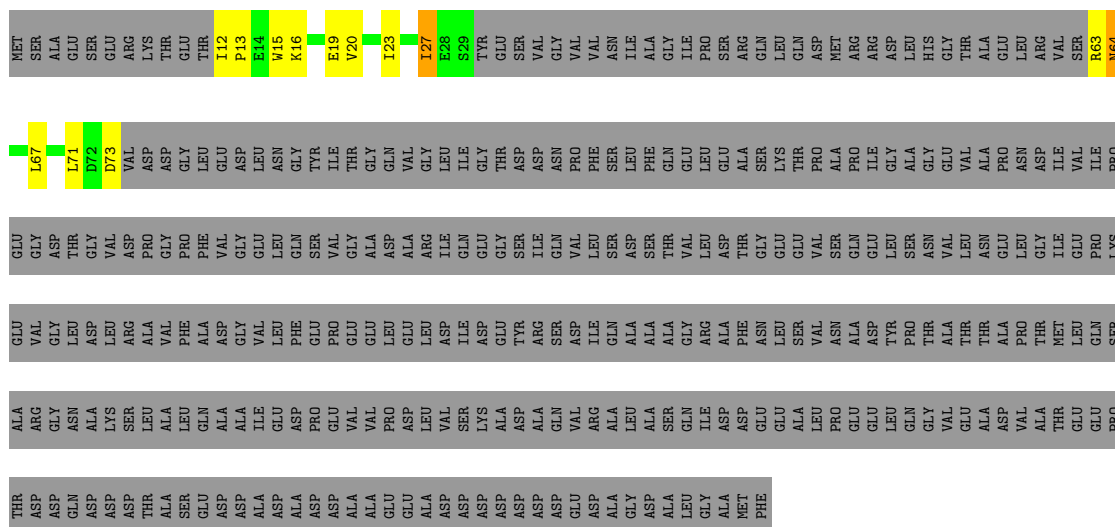


- Molecule 6: 50S ribosomal protein L7Ae

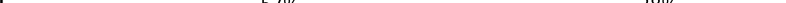


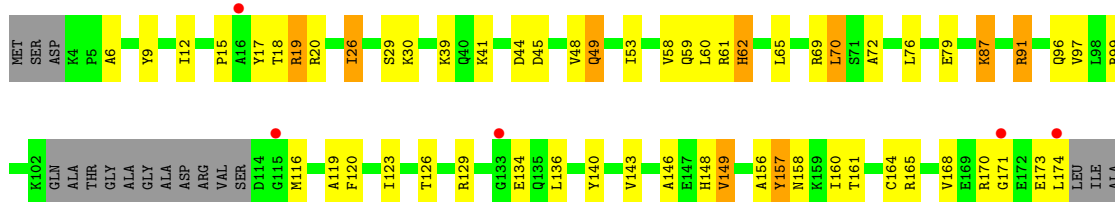
- Molecule 7: 50S ribosomal protein L10E

Chain G:  5% 2% 92%

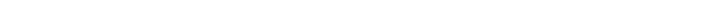


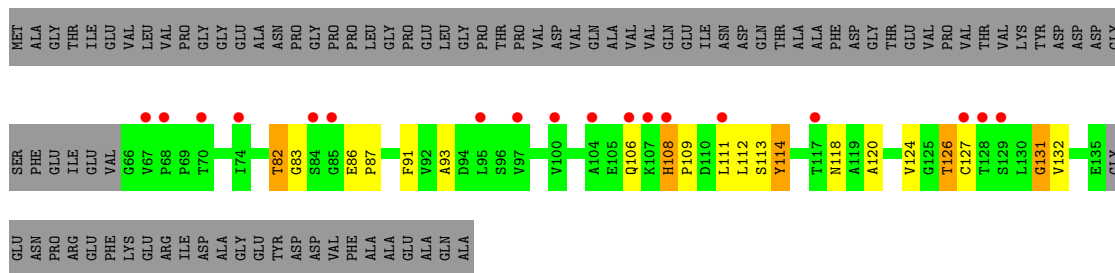
- Molecule 8: 50S ribosomal protein L10e

Chain H: 

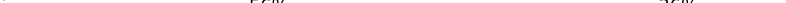


- Molecule 9: 50S ribosomal protein L11P

Chain I: 



- Molecule 10: 50S ribosomal protein L13P

Chain J:  2% 56% 36% 6%

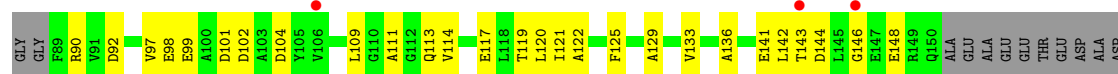




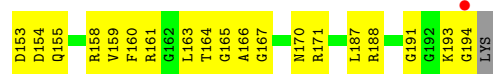
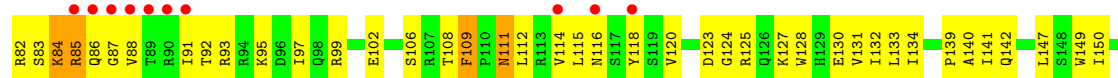
• Molecule 11: 50S ribosomal protein L14P



• Molecule 12: 50S ribosomal protein L15P

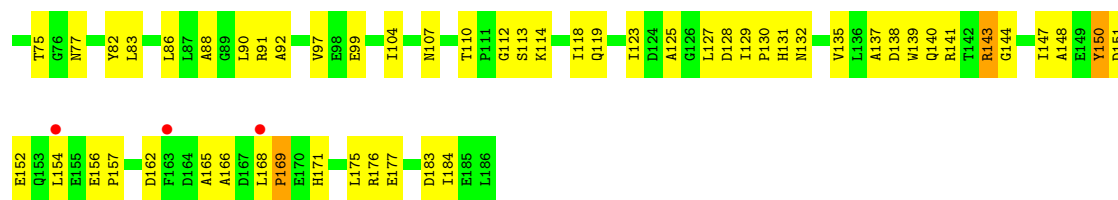


• Molecule 13: 50S ribosomal protein L15e

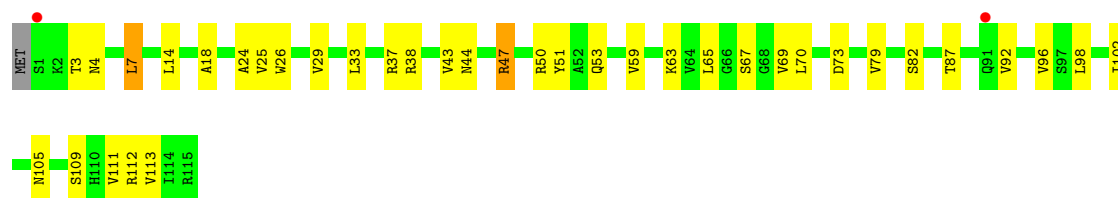


• Molecule 14: 50S ribosomal protein L18P

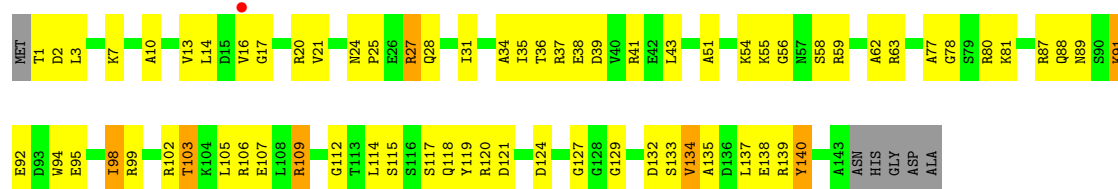




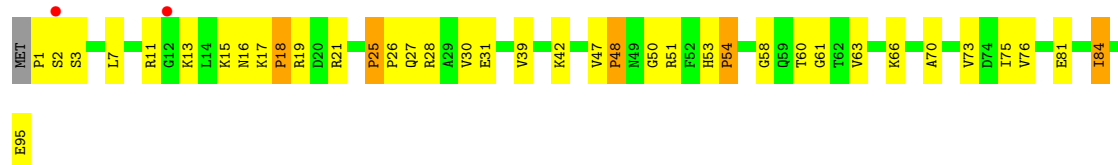
- Molecule 15: 50S ribosomal protein L18e



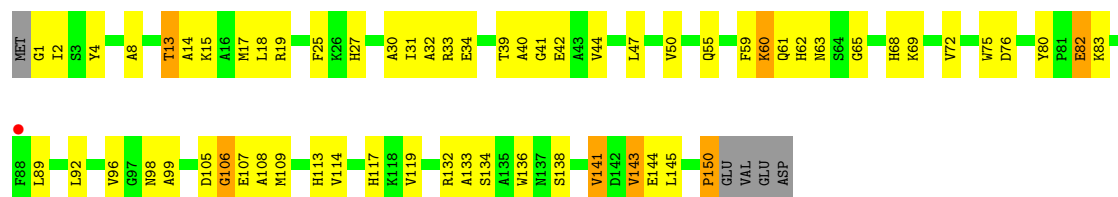
- Molecule 16: 50S ribosomal protein L19e



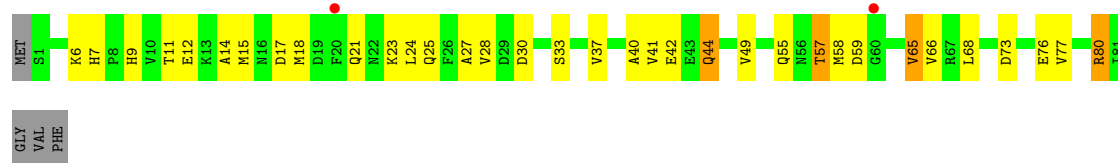
- Molecule 17: 50S ribosomal protein L21e



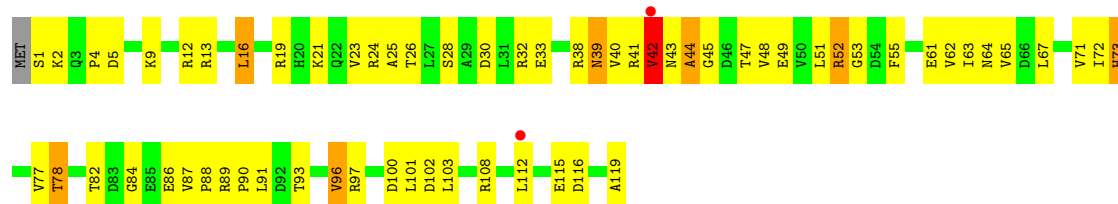
- Molecule 18: 50S ribosomal protein L22P



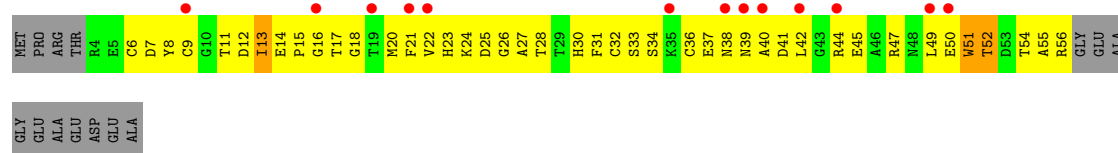
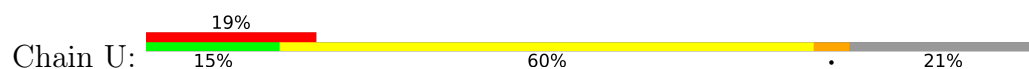
- Molecule 19: 50S ribosomal protein L23P



- Molecule 20: 50S ribosomal protein L24P



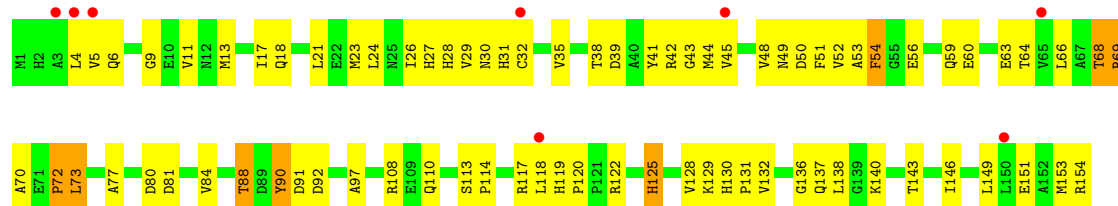
- Molecule 21: 50S ribosomal protein L24e



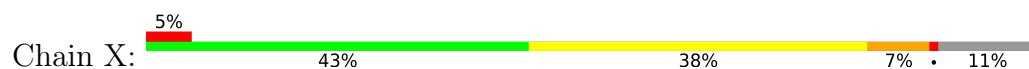
- Molecule 22: 50S ribosomal protein L29P

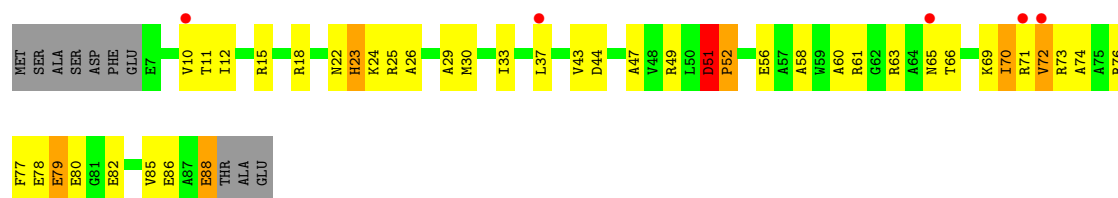


- Molecule 23: 50S ribosomal protein L30P



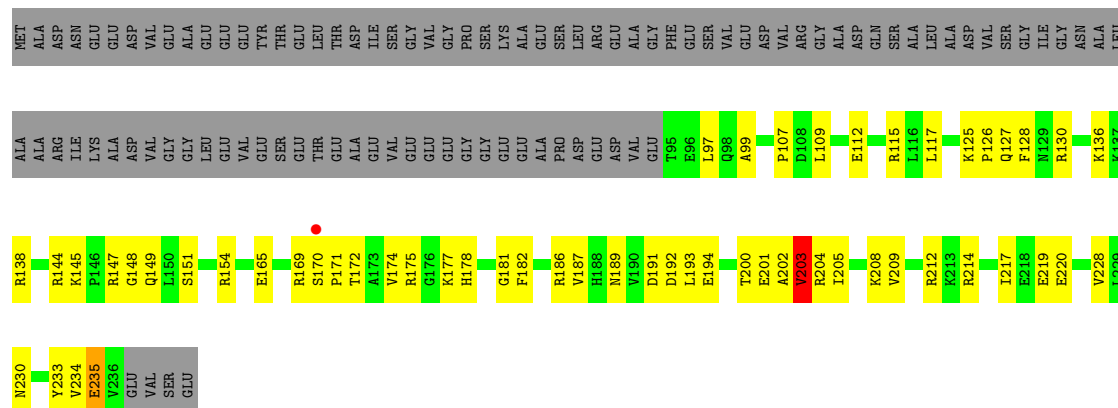
- Molecule 24: 50S ribosomal protein L31e





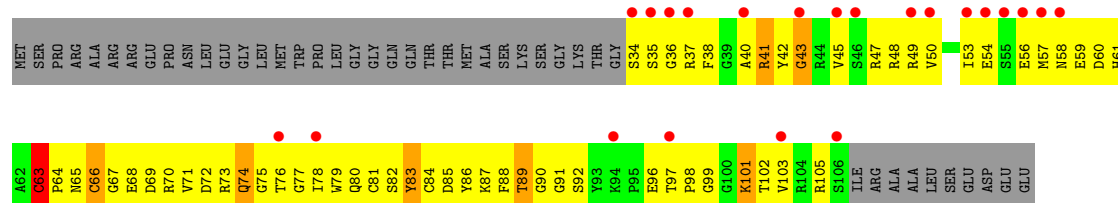
- Molecule 25: 50S ribosomal protein L32e

Chain Y: 35% 23% 41%



- Molecule 26: 50S ribosomal protein L37Ae

Chain Z: 11% 19% 45% 6% 37%



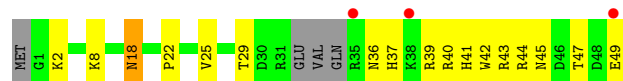
- Molecule 27: 50S ribosomal protein L37e

Chain 1: 46% 51%

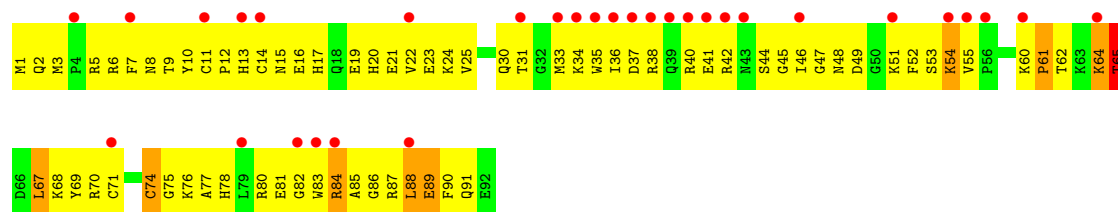


- Molecule 28: 50S ribosomal protein L39e

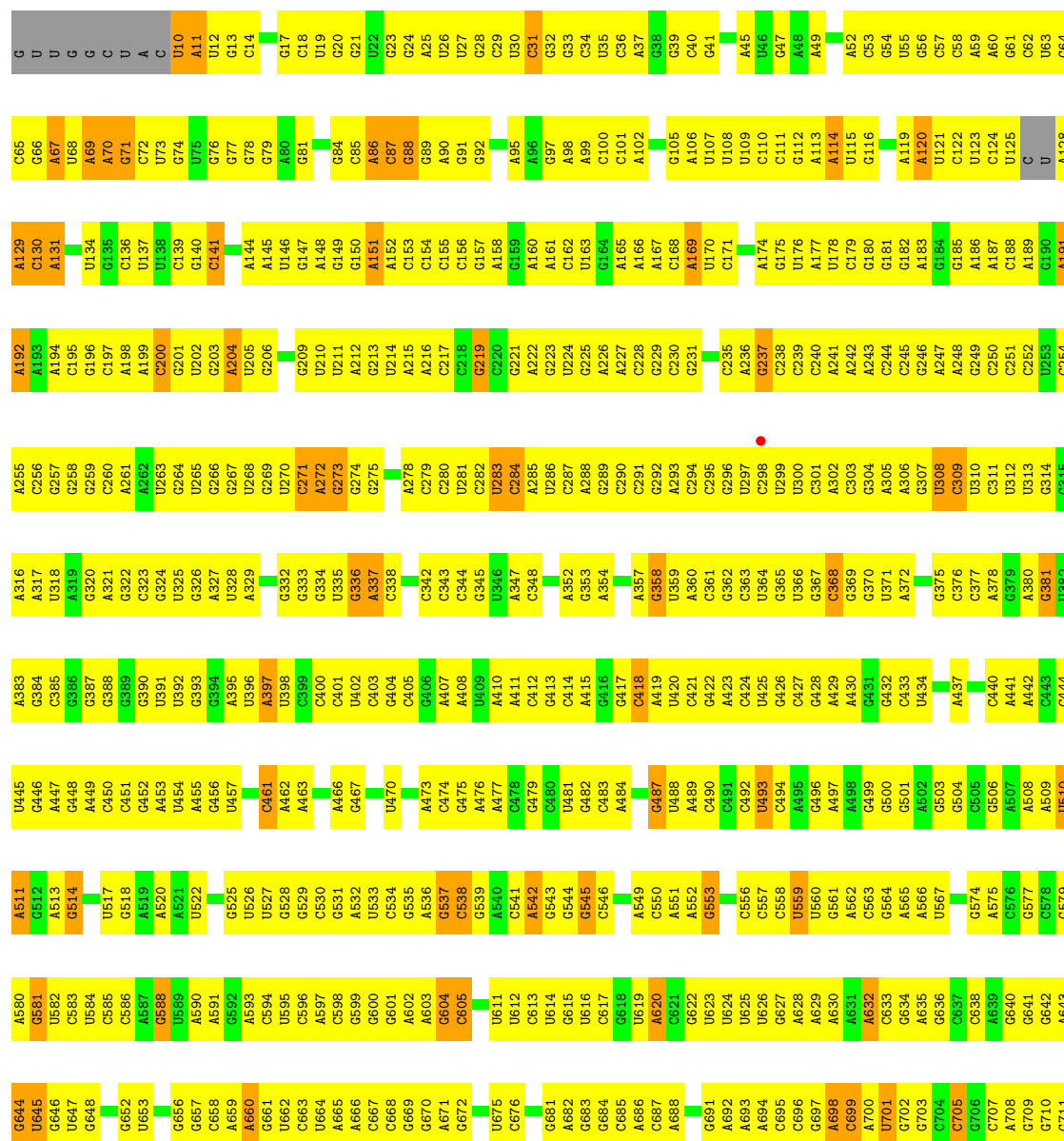
Chain 2: 6% 58% 32% 8%



- Molecule 29: 50S ribosomal protein L44E



• Molecule 30: 23S RIBOSOMAL RNA



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G1595	U1596	A1597	A1598	U1599	G1600	G1601	C1602	A1603	G1604	C1605	A1606	A1607	G1608	C1609	G1610	A1611	G1612	C1613	G1614	A1615	G1616	C1617	G1618	G1619	C1620	G1621	G1622	C1623	A1624	U1625	A1626	G1627	G1628	G1629	A1630	A1631	A1632	C1633	G1634	U1635	G1636	A1637	U1638	U1639	A1640	A1641	A1642	A1643	C1644	U1645	G1646	G1647	G1648	G1649	C1650	G1651	G1652	G1653	G1654	G1655	G1656																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
C1469	A1470	A1471	C1472	U1473	C1474	G1475	A1476	C1477	U1478	A1479	A1480	G1481	A1482	C1483	A1484	U1485	A1486	U1487	U1488	A1489	A1490	A1491	A1492	A1493	A1494	C1495	A1496	U1497	A1498	A1499	A1500	A1501	A1502	U1503	U1504	U1505	U1506	C1507	C1508	U1509	U1510	U1511	U1512	C1513	C1514	A1515	C1516	C1517	A1518	C1519	U1520	C1521	U1522	U1523	U1524	A1525	U1526	A1527	U1528	U1529	U1530	U1531	U1532	U1533	U1534	U1535	U1536	U1537	U1538	U1539	U1540	U1541	U1542	U1543	U1544	U1545	U1546	U1547	U1548	U1549	U1550	U1551	U1552	U1553	U1554	U1555	U1556	U1557	U1558	U1559	U1560	U1561	U1562	U1563	U1564	U1565	U1566	U1567	U1568	U1569	U1570	U1571	U1572	U1573	U1574	U1575	U1576	U1577	U1578	U1579	U1580	U1581	U1582	U1583	U1584	U1585	U1586	U1587	U1588	U1589	U1590	U1591	U1592	U1593	U1594	U1595	U1596	U1597	U1598	U1599	U1600	U1601	U1602	U1603	U1604	U1605	U1606	U1607	U1608	U1609	U1610	U1611	U1612	U1613	U1614	U1615	U1616	U1617	U1618	U1619	U1620	U1621	U1622	U1623	U1624	U1625	U1626	U1627	U1628	U1629	U1630	U1631	U1632	U1633	U1634	U1635	U1636	U1637	U1638	U1639	U1640	U1641	U1642	U1643	U1644	U1645	U1646	U1647	U1648	U1649	U1650	U1651	U1652	U1653	U1654	U1655	U1656	U1657	U1658	U1659	U1660	U1661	U1662	U1663	U1664	U1665	U1666	U1667	U1668	U1669	U1670	U1671	U1672	U1673	U1674	U1675	U1676	U1677	U1678	U1679	U1680	U1681	U1682	U1683	U1684	U1685	U1686	U1687	U1688	U1689	U1690	U1691	U1692	U1693	U1694	U1695	U1696	U1697	U1698	U1699	U1700	U1701	U1702	U1703	U1704	U1705	U1706	U1707	U1708	U1709	U1710	U1711	U1712	U1713	U1714	U1715	U1716	U1717	U1718	U1719	U1720	U1721	U1722	U1723	U1724	U1725	U1726	U1727	U1728	U1729	U1730	U1731	U1732	U1733	U1734	U1735	U1736	U1737	U1738	U1739	U1740	U1741	U1742	U1743	U1744	U1745	U1746	U1747	U1748	U1749	U1750	U1751	U1752	U1753	U1754	U1755	U1756	U1757	U1758	U1759	U1760	U1761	U1762	U1763	U1764	U1765	U1766	U1767	U1768	U1769	U1770	U1771	U1772	U1773	U1774	U1775	U1776	U1777	U1778	U1779	U1780	U1781	U1782	U1783	U1784	U1785	U1786	U1787	U1788	U1789	U1790	U1791	U1792	U1793	U1794	U1795	U1796	U1797	U1798	U1799	U1800	U1801	U1802	U1803	U1804	U1805	U1806	U1807	U1808	U1809	U1810	U1811	U1812	U1813	U1814	U1815	U1816	U1817	U1818	U1819	U1820	U1821	U1822	U1823	U1824	U1825	U1826	U1827	U1828	U1829	U1830	U1831	U1832	U1833	U1834	U1835	U1836	U1837	U1838	U1839	U1840	U1841	U1842	U1843	U1844	U1845	U1846	U1847	U1848	U1849	U1850	U1851	U1852	U1853	U1854	U1855	U1856	U1857	U1858	U1859	U1860	U1861	U1862	U1863	U1864	U1865	U1866	U1867	U1868	U1869	U1870	U1871	U1872	U1873	U1874	U1875	U1876	U1877	U1878	U1879	U1880	U1881	U1882	U1883	U1884	U1885	U1886	U1887	U1888	U1889	U1890	U1891	U1892	U1893	U1894	U1895	U1896	U1897	U1898	U1899	U1900	U1901	U1902	U1903	U1904	U1905	U1906	U1907	U1908	U1909	U1910	U1911	U1912	U1913	U1914	U1915	U1916	U1917	U1918	U1919	U1920	U1921	U1922	U1923	U1924	U1925	U1926	U1927	U1928	U1929	U1930	U1931	U1932	U1933	U1934	U1935	U1936	U1937	U1938	U1939	U1940	U1941	U1942	U1943	U1944	U1945	U1946	U1947	U1948	U1949	U1950	U1951	U1952	U1953	U1954	U1955	U1956	U1957	U1958	U1959	U1960	U1961	U1962	U1963	U1964	U1965	U1966	U1967	U1968	U1969	U1970	U1971	U1972	U1973	U1974	U1975	U1976	U1977	U1978	U1979	U1980	U1981	U1982	U1983	U1984	U1985	U1986	U1987	U1988	U1989	U1990	U1991	U1992	U1993	U1994	U1995	U1996	U1997	U1998	U1999	U2000	U2001	U2002	U2003	U2004	U2005	U2006	U2007	U2008	U2009	U2010	U2011	U2012	U2013	U2014	U2015	U2016	U2017	U2018	U2019	U2020	U2021	U2022	U2023	U2024	U2025	U2026	U2027	U2028	U2029	U2030	U2031	U2032	U2033	U2034	U2035	U2036	U2037	U2038	U2039	U2040	U2041	U2042	U2043	U2044	U2045	U2046	U2047	U2048	U2049	U2050	U2051	U2052	U2053	U2054	U2055	U2056	U2057	U2058	U2059	U2060	U2061	U2062	U2063	U2064	U2065	U2066	U2067	U2068	U2069	U2070	U2071	U2072	U2073	U2074	U2075	U2076	U2077	U2078	U2079	U2080	U2081	U2082	U2083	U2084	U2085	U2086	U2087	U2088	U2089	U2090	U2091	U2092	U2093	U2094	U2095	U2096	U2097	U2098	U2099	U2100	U2101	U2102	U2103	U2104	U2105	U2106	U2107	U2108	U2109	U2110	U2111	U2112	U2113	U2114	U2115	U2116	U2117	U2118	U2119	U2120	U2121	U2122	U2123	U2124	U2125	U2126	U2127	U2128	U2129	U2130	U2131	U2132	U2133	U2134	U2135	U2136	U2137	U2138	U2139	U2140	U2141	U2142	U2143	U2144	U2145	U2146	U2147	U2148	U2149	U2150	U2151	U2152	U2153	U2154	U2155	U2156	U2157	U2158	U2159	U2160	U2161	U2162	U2163	U2164	U2165	U2166	U2167	U2168	U2169	U2170	U2171	U2172	U2173	U2174	U2175	U2176	U2177	U2178	U2179	U2180	U2181	U2182	U2183	U2184	U2185	U2186	U2187	U2188	U2189	U2190	U2191	U2192	U2193	U2194	U2195	U2196	U2197	U2198	U2199	U2200	U2201	U2202	U2203	U2204	U2205	U2206	U2207	U2208	U2209	U2210	U2211	U2212	U2213	U2214	U2215	U2216	U2217	U2218	U2219	U2220	U2221	U2222	U2223	U2224	U2225	U2226	U2227	U2228	U2229	U2230	U2231	U2232	U2233	U2234	U2235	U2236	U2237	U2238	U2239	U2240	U2241	U2242	U2243	U2244	U2245	U2246	U2247	U2248	U2249	U2250	U2251	U2252	U2253	U2254	U2255	U2256	U2257	U2258	U2259	U2260	U2261	U2262	U2263	U2264	U2265	U2266	U2267	U2268	U2269	U2270	U2271	U2272	U2273	U2274	U2275	U2276	U2277	U2278	U2279	U2280	U2281	U2282	U2283	U2284	U2285	U2286	U2287	U2288	U2289	U2290	U2291	U2292	U2293	U2294	U2295	U2296	U2297	U2298	U2299	U2300	U2301	U2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A2699	C2762	C2825	U2889
G2700	G2763	G2826	A2890
G2701	A2764	A2827	A2891
A2702	G2765	G2828	G2892
A2703	A2766	G2829	C2893
C2704	C2767	U2830	C2894
	A2768	C2831	C2895
C2707	C2769	C2832	A2896
G2708	G2770	C2833	C2897
G2709	G2771	C2834	G2898
U2710		C2835	A2899
U2711	U2774	G2836	G2900
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U2713	A2776	A2838	A2902
G2714	G2777	C2839	C2903
G2715	A2778	A2840	U2904
G2716	G2779	A2841	A2905
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C2718	U2781	A2843	C2907
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G2720	A2783	G2845	G2909
U2721	G2784	C2846	A2910
G2722	C2785	G2847	C2911
G2723	G2786		C2912
U2724	C2787	G2851	A2913
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	A2792		C
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	A2801	G2867	
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	C2806	U2872	
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U2756	C2819	G2884	
A2757	A2820	A2885	
G2758	C2821	C2886	
G2759	C2822	G2887	
G2760	G2823		

● Molecule 31: 5S RIBOSOMAL RNA



U1	U2	A3	G4	G5	C6	G7	G8	C9	G10	A11	C12	A13	G14	G17	U18	G19	G20	G21	G22	U23	U24	G25	C26	C27	U28	C29	C30	C31	G32	U33	A34	C35	C36	C37	A38	U39	C40	C41	C42	G43	A44	A45	C46	A47	C48	G49	G50	A51	A52	G53	A54	U55	A56	A57	G58	C59	C60	C61
A62	C63	C64	A65	G66		U69	U70		G74	G75	G76	A77	G78	U79	A80	U81	U82	G83	G84	A85	G86	U87	G88	C89	G90	C91	U99	G98	U99	G100	G101	G102	A103	A104	A105	U106	C107	C108	G109	G110	U111	U112	C113	G114	C115	C116	G117	C118	C119	A120	C121	C122						

4 Data and refinement statistics

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α , β , γ	212.01Å 299.25Å 573.81Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	50.00 – 3.30 50.00 – 3.30	Depositor EDS
% Data completeness (in resolution range)	90.6 (50.00-3.30) 90.5 (50.00-3.30)	Depositor EDS
R_{merge}	0.18	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	0.00 (at 2.40Å)	Xtriage
Refinement program	CNS 1.0	Depositor
R, R_{free}	0.208 , 0.287 0.184 , 0.261	Depositor DCC
R_{free} test set	6547 reflections (0.98%)	wwPDB-VP
Wilson B-factor (Å ²)	79.9	Xtriage
Anisotropy	0.112	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.30 , 122.6	EDS
L-test for twinning ²	$\langle L \rangle = 0.47$, $\langle L^2 \rangle = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	99122	wwPDB-VP
Average B, all atoms (Å ²)	74.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.71% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: CL, CD, NA, SR, OMU, 1MA, MG, PSU, UR3, OMG, K

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	0.47	0/1786	1.05	11/2408 (0.5%)
2	B	0.49	0/2690	1.07	26/3652 (0.7%)
3	C	0.54	0/1885	1.06	11/2552 (0.4%)
4	D	0.43	0/1111	1.00	6/1498 (0.4%)
5	E	0.44	0/1382	0.95	4/1880 (0.2%)
6	F	0.44	0/901	1.02	4/1224 (0.3%)
7	G	0.43	0/241	1.00	1/324 (0.3%)
8	H	0.43	0/1302	1.01	7/1743 (0.4%)
9	I	0.43	0/526	0.98	1/716 (0.1%)
10	J	0.51	0/1136	1.02	6/1530 (0.4%)
11	K	0.48	0/1004	1.08	8/1351 (0.6%)
12	L	0.40	0/1130	0.97	6/1509 (0.4%)
13	M	0.53	1/1582 (0.1%)	1.03	8/2116 (0.4%)
14	N	0.41	0/1474	1.08	14/1999 (0.7%)
15	O	0.48	0/874	0.99	4/1181 (0.3%)
16	P	0.47	0/1147	0.96	5/1528 (0.3%)
17	Q	0.47	0/749	1.10	6/1005 (0.6%)
18	R	1.33	7/1172 (0.6%)	1.43	12/1578 (0.8%)
19	S	0.44	0/648	0.88	2/875 (0.2%)
20	T	0.47	0/958	1.02	2/1289 (0.2%)
21	U	0.58	0/417	1.09	2/562 (0.4%)
22	V	0.44	0/502	0.98	1/675 (0.1%)
23	W	0.55	0/1219	1.07	9/1655 (0.5%)
24	X	0.51	0/664	1.05	4/895 (0.4%)
25	Y	0.50	0/1146	1.01	3/1536 (0.2%)
26	Z	0.46	0/584	1.04	4/781 (0.5%)
27	1	0.54	0/438	0.96	3/578 (0.5%)
28	2	0.47	0/401	0.90	0/529
29	3	0.54	0/771	1.05	5/1024 (0.5%)
30	0	0.43	0/65957	0.62	11/102867 (0.0%)
31	9	0.40	0/2904	0.60	0/4526
All	All	0.47	8/98701 (0.0%)	0.76	186/147586 (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
18	R	1	0
23	W	0	1
30	0	0	19
All	All	1	20

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	R	150	PRO	CB-CG	27.19	2.85	1.49
18	R	150	PRO	CA-C	-17.63	1.16	1.52
18	R	150	PRO	CG-CD	13.59	1.97	1.50
18	R	150	PRO	N-CA	13.15	1.66	1.47
18	R	150	PRO	C-O	11.79	1.47	1.23
18	R	150	PRO	N-CD	10.83	1.62	1.47
18	R	150	PRO	CA-CB	7.91	1.69	1.53
13	M	13	LYS	C-O	-5.44	1.17	1.24

All (186) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	R	150	PRO	CB-CA-C	-28.56	55.84	110.10
18	R	150	PRO	N-CA-C	-20.16	61.71	112.10
18	R	150	PRO	N-CA-CB	12.31	116.54	103.00
18	R	150	PRO	CA-N-CD	11.91	128.68	112.00
1	A	53	ALA	CA-C-N	9.23	129.32	119.90
1	A	53	ALA	C-N-CA	9.23	129.32	119.90
3	C	228	ALA	CA-C-N	8.46	128.41	120.03
3	C	228	ALA	C-N-CA	8.46	128.41	120.03
13	M	109	PHE	CA-C-N	8.30	130.22	119.84
13	M	109	PHE	C-N-CA	8.30	130.22	119.84
5	E	11	VAL	N-CA-C	7.85	120.24	109.80
14	N	150	TYR	N-CA-C	-7.80	103.60	113.43
2	B	157	LYS	N-CA-C	-7.56	103.67	113.12
23	W	68	THR	N-CA-C	7.21	119.04	111.03
2	B	265	LEU	N-CA-C	7.13	119.18	110.41
2	B	222	LYS	N-CA-C	-7.06	100.01	110.46
2	B	158	LYS	CA-C-N	7.00	128.59	119.84
2	B	158	LYS	C-N-CA	7.00	128.59	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	H	119	ALA	N-CA-C	6.93	121.75	113.16
1	A	43	VAL	N-CA-C	6.85	117.60	110.62
17	Q	25	PRO	CA-C-N	6.81	126.44	119.56
17	Q	25	PRO	C-N-CA	6.81	126.44	119.56
1	A	103	VAL	N-CA-C	6.79	115.29	107.89
21	U	18	GLY	N-CA-C	6.78	120.91	110.88
17	Q	84	ILE	N-CA-C	6.78	117.79	108.84
6	F	79	GLN	N-CA-C	6.75	119.94	109.07
4	D	136	ARG	CA-C-N	6.67	128.17	119.84
4	D	136	ARG	C-N-CA	6.67	128.17	119.84
10	J	45	VAL	N-CA-C	6.63	117.03	107.88
17	Q	17	LYS	CA-C-N	6.62	128.12	119.84
17	Q	17	LYS	C-N-CA	6.62	128.12	119.84
26	Z	43	GLY	N-CA-C	6.62	118.24	111.95
7	G	27	ILE	N-CA-C	-6.59	106.59	112.12
11	K	82	ARG	CA-C-N	6.54	128.01	119.84
11	K	82	ARG	C-N-CA	6.54	128.01	119.84
23	W	73	LEU	N-CA-C	-6.46	105.94	113.88
20	T	78	THR	N-CA-C	6.42	119.18	109.41
1	A	213	LYS	N-CA-C	6.41	118.34	111.36
14	N	3	GLY	CA-C-N	6.41	125.98	119.19
14	N	3	GLY	C-N-CA	6.41	125.98	119.19
16	P	140	TYR	N-CA-C	-6.39	106.12	114.04
30	O	1592	G	N9-C1'-C2'	6.37	121.56	112.00
18	R	60	LYS	N-CA-C	6.35	119.01	111.71
3	C	80	VAL	CA-C-N	6.33	126.81	119.47
3	C	80	VAL	C-N-CA	6.33	126.81	119.47
18	R	150	PRO	CA-CB-CG	-6.32	92.49	104.50
1	A	166	ASP	N-CA-C	6.31	120.08	112.38
14	N	51	GLY	CA-C-N	6.30	127.71	119.84
14	N	51	GLY	C-N-CA	6.30	127.71	119.84
4	D	54	ALA	N-CA-C	6.29	119.43	109.81
18	R	150	PRO	CA-C-O	-6.27	100.20	119.00
2	B	292	GLY	CA-C-N	6.24	126.57	119.83
2	B	292	GLY	C-N-CA	6.24	126.57	119.83
23	W	50	ASP	N-CA-C	6.23	120.49	113.01
16	P	109	ARG	N-CA-C	-6.18	106.33	114.31
30	O	920	C	C2'-C3'-O3'	-6.18	104.42	113.70
1	A	222	GLY	N-CA-C	-6.12	107.40	114.69
17	Q	2	SER	N-CA-C	-6.11	106.47	114.04
16	P	134	VAL	N-CA-C	-6.06	104.60	110.72
9	I	106	GLN	N-CA-C	6.01	120.43	111.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	J	48	GLY	N-CA-C	6.00	119.05	111.85
1	A	135	VAL	N-CA-C	5.99	118.08	108.85
18	R	141	VAL	N-CA-C	5.99	117.63	108.71
21	U	21	PHE	N-CA-C	5.98	118.65	108.90
25	Y	178	HIS	N-CA-C	-5.98	101.53	109.84
3	C	202	THR	N-CA-C	-5.96	105.27	112.54
24	X	79	GLU	N-CA-C	5.91	118.20	111.11
4	D	170	TYR	N-CA-C	5.90	119.99	111.56
2	B	320	GLN	CA-C-N	5.90	125.83	119.76
2	B	320	GLN	C-N-CA	5.90	125.83	119.76
23	W	69	ARG	N-CA-C	5.88	120.07	113.02
14	N	169	PRO	N-CA-C	-5.86	106.83	114.03
3	C	167	ASP	N-CA-C	-5.85	105.40	112.54
6	F	8	VAL	CA-C-N	5.84	125.86	119.90
6	F	8	VAL	C-N-CA	5.84	125.86	119.90
15	O	43	VAL	N-CA-C	5.83	116.33	108.17
20	T	52	ARG	N-CA-C	5.82	123.19	110.80
2	B	294	TYR	N-CA-C	5.72	115.40	107.73
29	3	74	CYS	N-CA-C	-5.72	104.96	111.14
27	1	30	LYS	N-CA-C	-5.70	106.46	113.41
12	L	57	VAL	N-CA-C	-5.68	107.20	112.43
19	S	58	MET	N-CA-C	-5.67	106.69	113.21
13	M	61	ILE	N-CA-C	5.66	117.49	108.89
5	E	37	ASP	N-CA-C	5.64	120.12	113.23
15	O	7	LEU	N-CA-C	-5.62	105.15	112.23
3	C	175	LYS	N-CA-C	5.61	118.15	110.24
2	B	102	THR	N-CA-C	5.59	115.79	108.07
8	H	164	CYS	N-CA-C	5.59	117.46	109.14
8	H	148	HIS	N-CA-C	-5.56	104.72	112.45
11	K	46	LYS	N-CA-C	5.56	118.60	109.76
1	A	58	VAL	N-CA-C	5.56	116.13	108.12
26	Z	63	CYS	CA-C-N	5.55	126.78	119.84
26	Z	63	CYS	C-N-CA	5.55	126.78	119.84
27	1	51	GLN	N-CA-C	-5.55	106.36	113.02
18	R	19	ARG	N-CA-C	5.50	117.92	109.07
18	R	34	GLU	N-CA-C	5.49	117.07	111.14
1	A	198	ASP	N-CA-C	5.48	119.97	113.28
2	B	60	SER	CA-C-N	5.48	125.15	119.56
2	B	60	SER	C-N-CA	5.48	125.15	119.56
6	F	83	LEU	N-CA-C	-5.47	106.10	112.89
12	L	44	GLU	CA-C-N	5.47	126.68	119.84
12	L	44	GLU	C-N-CA	5.47	126.68	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	N	168	LEU	N-CA-C	5.47	120.57	108.27
2	B	143	ILE	N-CA-C	-5.46	102.00	109.37
29	3	67	LEU	N-CA-C	5.44	118.10	109.24
24	X	77	PHE	N-CA-C	5.43	115.71	108.38
15	O	69	VAL	N-CA-C	5.42	116.39	108.53
1	A	228	ILE	N-CA-C	5.41	115.37	108.12
2	B	120	ASP	CA-C-N	5.39	126.58	119.84
2	B	120	ASP	C-N-CA	5.39	126.58	119.84
3	C	236	THR	N-CA-C	-5.38	100.94	109.76
12	L	47	GLY	N-CA-C	5.38	118.31	111.37
5	E	73	PHE	N-CA-C	-5.38	105.11	110.97
14	N	131	HIS	N-CA-C	5.37	115.37	108.34
30	0	1261	A	N9-C1'-C2'	5.36	120.04	112.00
14	N	66	LEU	N-CA-C	-5.36	105.60	111.82
23	W	54	PHE	N-CA-C	5.35	117.12	109.14
23	W	113	SER	CA-C-N	5.35	126.53	119.84
23	W	113	SER	C-N-CA	5.35	126.53	119.84
15	O	82	SER	N-CA-C	-5.35	102.95	110.50
10	J	110	ASP	N-CA-C	-5.34	104.81	112.13
2	B	217	ARG	N-CA-C	5.34	116.91	111.14
2	B	266	ASN	N-CA-C	5.34	118.57	111.30
3	C	244	ALA	N-CA-C	5.34	117.10	111.28
5	E	48	VAL	N-CA-C	5.33	115.53	107.75
30	0	1279	U	N1-C1'-C2'	5.32	119.97	112.00
14	N	135	VAL	N-CA-C	-5.30	105.60	113.39
25	Y	203	VAL	N-CA-C	5.30	117.01	108.85
2	B	213	GLY	CA-C-N	5.29	124.92	119.05
2	B	213	GLY	C-N-CA	5.29	124.92	119.05
11	K	54	THR	N-CA-C	-5.29	101.07	109.96
18	R	82	GLU	N-CA-C	5.28	117.11	111.36
30	0	2673	U	N1-C1'-C2'	5.27	119.90	112.00
10	J	130	VAL	N-CA-C	5.26	116.24	108.45
19	S	80	ARG	N-CA-C	5.26	117.69	111.33
12	L	7	GLN	N-CA-C	5.26	118.95	112.54
27	1	43	ALA	N-CA-C	-5.25	106.13	112.54
22	V	30	ALA	N-CA-C	-5.25	105.70	112.68
13	M	111	ASN	N-CA-C	-5.24	107.90	114.56
12	L	20	ASN	N-CA-C	5.22	121.93	110.80
30	0	1504	A	O4'-C4'-C3'	-5.22	100.88	106.10
23	W	35	VAL	CA-C-N	5.22	125.50	119.92
23	W	35	VAL	C-N-CA	5.22	125.50	119.92
24	X	51	ASP	CA-C-N	5.21	126.35	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	X	51	ASP	C-N-CA	5.21	126.35	119.84
13	M	8	ILE	N-CA-C	-5.21	105.77	110.82
30	O	10	U	N1-C1'-C2'	5.21	119.81	112.00
8	H	26	ILE	CA-C-N	5.18	125.42	119.83
8	H	26	ILE	C-N-CA	5.18	125.42	119.83
8	H	136	LEU	N-CA-C	-5.18	105.32	111.69
10	J	112	ASP	N-CA-C	-5.15	102.85	110.48
11	K	64	MET	N-CA-C	5.15	118.02	111.69
18	R	50	VAL	N-CA-C	-5.14	105.48	110.42
2	B	329	TYR	N-CA-C	5.14	117.45	108.76
11	K	111	GLY	CA-C-N	5.14	125.86	120.11
11	K	111	GLY	C-N-CA	5.14	125.86	120.11
14	N	14	ARG	N-CA-C	-5.12	105.77	111.36
10	J	9	ASP	N-CA-C	-5.12	105.61	111.14
13	M	131	VAL	N-CA-C	5.12	115.22	107.75
2	B	132	HIS	N-CA-C	-5.11	105.79	111.36
13	M	124	GLY	N-CA-C	5.11	120.06	113.27
26	Z	101	LYS	N-CA-C	-5.10	106.22	112.90
25	Y	125	LYS	N-CA-C	5.09	112.71	108.13
16	P	27	ARG	N-CA-C	5.08	118.32	112.57
30	O	1819	G	C5'-C4'-C3'	5.08	123.63	116.00
30	O	2301	A	N9-C1'-C2'	5.08	119.62	112.00
2	B	154	VAL	CA-C-N	5.08	124.39	118.85
2	B	154	VAL	C-N-CA	5.08	124.39	118.85
3	C	91	PRO	CA-C-N	5.08	125.31	119.83
3	C	91	PRO	C-N-CA	5.08	125.31	119.83
4	D	67	ASP	CA-C-N	5.08	125.36	119.93
4	D	67	ASP	C-N-CA	5.08	125.36	119.93
30	O	755	G	O4'-C4'-C3'	-5.08	98.92	104.00
30	O	834	G	C2'-C3'-O3'	-5.08	106.08	113.70
29	3	65	THR	N-CA-C	5.08	116.32	107.49
14	N	152	GLU	N-CA-C	-5.07	105.94	111.82
2	B	69	VAL	CA-C-N	5.07	124.97	119.85
2	B	69	VAL	C-N-CA	5.07	124.97	119.85
11	K	25	GLY	N-CA-C	-5.06	108.34	114.92
8	H	79	GLU	N-CA-C	5.05	119.07	113.01
29	3	91	GLN	N-CA-C	5.04	117.48	109.96
14	N	8	VAL	CA-C-N	5.03	126.13	119.84
14	N	8	VAL	C-N-CA	5.03	126.13	119.84
13	M	140	ALA	N-CA-C	-5.03	105.69	111.07
16	P	103	THR	N-CA-C	-5.03	105.51	111.69
29	3	54	LYS	N-CA-C	5.01	117.32	110.55

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
18	R	150	PRO	CA

All (20) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
30	0	1237	U	Sidechain
30	0	1371	U	Sidechain
30	0	1592	G	Sidechain
30	0	1635	U	Sidechain
30	0	1736	A	Sidechain
30	0	1828	G	Sidechain
30	0	1829	A	Sidechain
30	0	1839	A	Sidechain
30	0	1878	G	Sidechain
30	0	2289	G	Sidechain
30	0	2492	U	Sidechain
30	0	2673	U	Sidechain
30	0	2842	G	Sidechain
30	0	2866	U	Sidechain
30	0	493	U	Sidechain
30	0	788	A	Sidechain
30	0	862	U	Sidechain
30	0	882	A	Sidechain
30	0	938	G	Sidechain
23	W	90	TYR	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	1753	0	1766	125	0
2	B	2625	0	2533	178	0
3	C	1860	0	1813	100	0
4	D	1094	0	1085	72	0
5	E	1357	0	1266	53	0
6	F	890	0	843	40	0
7	G	240	0	231	18	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
8	H	1282	0	1292	63	0
9	I	519	0	500	24	0
10	J	1120	0	1098	63	0
11	K	994	0	1027	60	0
12	L	1118	0	1076	56	0
13	M	1558	0	1573	121	0
14	N	1445	0	1401	74	0
15	O	865	0	873	49	0
16	P	1136	0	1123	66	0
17	Q	735	0	729	32	0
18	R	1149	0	1122	59	0
19	S	641	0	605	30	0
20	T	950	0	924	57	0
21	U	410	0	368	59	0
22	V	499	0	511	27	0
23	W	1196	0	1137	82	0
24	X	654	0	653	43	0
25	Y	1130	0	1133	71	0
26	Z	573	0	534	86	0
27	1	431	0	426	28	0
28	2	396	0	413	20	0
29	3	755	0	732	138	0
30	0	59020	0	29802	3480	0
31	9	2599	0	1325	195	0
32	0	85	0	0	0	0
32	9	2	0	0	0	0
32	A	2	0	0	0	0
32	K	1	0	0	0	0
32	T	1	0	0	0	0
32	Y	2	0	0	0	0
33	0	8	0	0	6	0
33	3	1	0	0	4	0
33	A	1	0	0	0	0
33	B	1	0	0	1	0
33	J	4	0	0	4	0
33	L	1	0	0	0	0
33	M	1	0	0	2	0
33	N	1	0	0	2	0
33	O	1	0	0	1	0
33	Q	1	0	0	1	0
33	R	1	0	0	0	0
33	Y	1	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
34	0	93	0	0	0	0
34	1	2	0	0	0	0
34	2	1	0	0	0	0
34	3	2	0	0	0	0
34	9	2	0	0	0	0
34	A	2	0	0	0	0
34	B	2	0	0	0	0
34	F	1	0	0	0	0
34	J	1	0	0	0	0
34	R	1	0	0	0	0
34	S	1	0	0	0	0
35	0	63	0	0	0	0
35	9	2	0	0	0	0
35	B	1	0	0	0	0
35	C	1	0	0	0	0
35	J	1	0	0	0	0
35	L	1	0	0	0	0
35	M	1	0	0	0	0
35	Q	1	0	0	0	0
35	R	3	0	0	0	0
35	S	1	0	0	0	0
36	0	1	0	0	0	0
36	M	1	0	0	0	0
37	1	1	0	0	0	0
37	3	1	0	0	0	0
37	O	1	0	0	0	0
37	U	1	0	0	0	0
37	Z	1	0	0	0	0
38	0	5813	0	0	458	0
38	1	53	0	0	3	0
38	2	48	0	0	0	0
38	3	80	0	0	12	0
38	9	144	0	0	18	0
38	A	122	0	0	13	0
38	B	158	0	0	20	0
38	C	176	0	0	16	0
38	D	51	0	0	7	0
38	E	51	0	0	3	0
38	F	27	0	0	2	0
38	G	15	0	0	1	0
38	H	73	0	0	2	0
38	I	3	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	J	55	0	0	4	0
38	K	61	0	0	6	0
38	L	99	0	0	11	0
38	M	148	0	0	15	0
38	N	56	0	0	7	0
38	O	42	0	0	3	0
38	P	56	0	0	4	0
38	Q	58	0	0	5	0
38	R	78	0	0	1	0
38	S	37	0	0	3	0
38	T	41	0	0	3	0
38	U	34	0	0	4	0
38	V	10	0	0	2	0
38	W	71	0	0	4	0
38	X	28	0	0	1	0
38	Y	102	0	0	8	0
38	Z	33	0	0	7	0
All	All	99122	0	59914	5107	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 34.

All (5107) 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)
18:R:150:PRO:CG	18:R:150:PRO:CD	1.97	1.43
30:0:871:G:C8	30:0:871:G:H5'	1.74	1.22
31:9:29:C:H2'	31:9:30:C:H5'	1.21	1.17
14:N:37:ARG:NH1	31:9:6:C:H5''	1.59	1.16
31:9:56:A:H2'	31:9:57:A:H5''	1.23	1.16
31:9:92:G:H2'	31:9:93:A:C8	1.81	1.16
30:0:1160:G:H5'	30:0:1161:A:C5'	1.76	1.15
26:Z:63:CYS:SG	26:Z:81:CYS:HB2	1.87	1.15
30:0:1523:G:H2'	30:0:1524:U:C6	1.80	1.15
30:0:735:C:H2'	30:0:736:A:O4'	1.49	1.12
18:R:150:PRO:CG	18:R:150:PRO:C	2.22	1.12
14:N:67:ALA:HA	14:N:71:TRP:HB3	1.32	1.11
30:0:1165:G:H1'	30:0:1174:A:H1'	1.21	1.11
10:J:82:THR:HG23	30:0:1242:A:H5'	1.27	1.10
30:0:1666:C:O2'	30:0:1667:A:H5''	1.52	1.09
30:0:1205:U:H2'	30:0:1206:U:H5'	1.31	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:545:G:H5'	30:0:545:G:H8	1.12	1.08
30:0:1160:G:C5'	30:0:1161:A:H5'	1.83	1.08
30:0:1632:A:H2'	30:0:1633:C:H5'	1.34	1.08
30:0:1375:A:H2'	30:0:1376:G:H5'	1.37	1.06
26:Z:60:ASP:HB3	26:Z:69:ASP:HB3	1.37	1.06
30:0:424:C:H2'	30:0:425:U:H6	1.20	1.05
30:0:1184:C:H1'	38:0:7367:HOH:O	1.57	1.05
30:0:2397:G:H2'	30:0:2398:A:H8	1.20	1.04
25:Y:187:VAL:HG23	25:Y:192:ASP:HB2	1.40	1.04
30:0:871:G:H5'	30:0:871:G:H8	0.89	1.04
30:0:595:U:H3'	38:0:6403:HOH:O	1.57	1.04
30:0:735:C:H3'	30:0:736:A:H8	1.18	1.03
30:0:2533:C:H5'	30:0:2533:C:H6	1.24	1.03
13:M:159:VAL:HG12	33:M:8818:CL:CL	1.96	1.02
14:N:37:ARG:HH12	31:9:6:C:H5''	0.89	1.01
30:0:236:A:H4'	30:0:237:G:H5'	1.37	1.01
30:0:2534:U:H1'	38:0:3475:HOH:O	1.61	1.01
13:M:171:ARG:HD3	30:0:156:C:H5''	1.43	1.00
28:2:43:ARG:HH22	30:0:1684:A:H1'	1.21	1.00
29:3:5:ARG:HG3	29:3:6:ARG:HG3	1.43	1.00
30:0:2717:C:C2'	30:0:2718:C:H5''	1.90	1.00
15:O:47:ARG:HH11	15:O:47:ARG:HG3	1.23	1.00
13:M:77:HIS:HE1	13:M:86:GLN:HG2	1.25	1.00
30:0:2502:C:H2'	30:0:2503:A:H5'	1.39	0.99
30:0:735:C:H3'	30:0:736:A:C8	1.98	0.99
13:M:79:ALA:HB3	13:M:81:ARG:HH12	1.28	0.98
29:3:11:CYS:SG	29:3:13:HIS:HD2	1.85	0.98
31:9:76:G:H3'	31:9:77:A:H5''	1.46	0.98
17:Q:27:GLN:HE21	31:9:8:G:H4'	1.27	0.98
30:0:432:G:H3'	38:0:7100:HOH:O	1.63	0.98
30:0:871:G:H8	30:0:871:G:C5'	1.76	0.98
25:Y:208:LYS:NZ	30:0:1343:C:H1'	1.80	0.97
30:0:1563:G:H4'	38:0:4202:HOH:O	1.62	0.97
31:9:56:A:C2'	31:9:57:A:H5''	1.95	0.97
30:0:545:G:H5'	30:0:545:G:C8	2.00	0.96
1:A:51:ARG:HH11	1:A:51:ARG:HB2	1.29	0.96
20:T:64:ASN:HB3	20:T:73:HIS:HB2	1.47	0.96
30:0:496:G:H3'	38:0:7569:HOH:O	1.62	0.96
29:3:13:HIS:HB2	29:3:74:CYS:SG	2.05	0.96
30:0:2420:G:O2'	30:0:2421:G:H5'	1.65	0.95
14:N:37:ARG:HD3	33:N:8807:CL:CL	2.03	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:541:C:H2'	30:0:542:A:H5''	1.46	0.95
30:0:1160:G:H5'	30:0:1161:A:H5'	0.99	0.95
30:0:282:C:O2'	30:0:283:U:H5'	1.64	0.95
18:R:99:ALA:HB1	18:R:109:MET:HE1	1.49	0.94
30:0:1451:C:H5'	30:0:1505:U:C5	2.02	0.94
30:0:1528:A:H61	30:0:1663:G:H1'	1.32	0.94
30:0:1679:C:H5'	38:0:9328:HOH:O	1.67	0.94
38:Q:2875:HOH:O	30:0:2392:C:H4'	1.66	0.94
30:0:596:C:H2'	30:0:597:A:H8	1.32	0.94
23:W:5:VAL:HG11	23:W:153:MET:HE1	1.49	0.94
30:0:1166:A:P	30:0:1174:A:H4'	2.08	0.94
30:0:2502:C:C2'	30:0:2503:A:H5'	1.97	0.94
30:0:506:G:H22	30:0:509:A:C5'	1.81	0.94
29:3:36:ILE:HD13	30:0:2432:C:H5''	1.50	0.93
31:9:97:U:H3'	38:9:5983:HOH:O	1.67	0.93
31:9:92:G:H2'	31:9:93:A:H8	1.25	0.93
30:0:1205:U:H2'	30:0:1206:U:C5'	1.98	0.93
30:0:1626:A:H2'	30:0:1627:G:H5'	1.50	0.93
30:0:1523:G:H2'	30:0:1524:U:H6	1.32	0.93
30:0:1603:A:H5'	30:0:1605:G:O4'	1.68	0.93
30:0:2440:C:H4'	38:0:3795:HOH:O	1.68	0.92
30:0:363:C:H1'	38:0:5232:HOH:O	1.69	0.92
30:0:1170:U:H1'	30:0:1172:G:N7	1.83	0.92
30:0:1632:A:C2'	30:0:1633:C:H5'	2.00	0.92
12:L:111:ALA:HB2	30:0:698:A:H5''	1.51	0.92
30:0:2717:C:O2'	30:0:2718:C:H5''	1.69	0.91
30:0:2397:G:H2'	30:0:2398:A:C8	2.05	0.91
30:0:2751:C:H3'	38:0:7172:HOH:O	1.71	0.91
30:0:1181:A:H2'	30:0:1182:C:H5'	1.50	0.91
30:0:1736:A:H1'	38:0:7486:HOH:O	1.70	0.91
30:0:2241:C:H2'	30:0:2242:U:H6	1.36	0.90
30:0:1375:A:C2'	30:0:1376:G:H5'	2.01	0.90
30:0:2717:C:H2'	30:0:2718:C:H5''	1.48	0.90
25:Y:208:LYS:HZ2	30:0:1343:C:H1'	1.34	0.90
13:M:77:HIS:HB2	13:M:81:ARG:HH21	1.35	0.90
31:9:14:G:H5'	31:9:14:G:H8	1.36	0.90
30:0:197:C:H5'	38:0:4888:HOH:O	1.71	0.90
30:0:1666:C:C2'	30:0:1667:A:H5''	2.02	0.90
30:0:1774:G:O2'	30:0:1775:A:H5'	1.72	0.89
30:0:2371:G:H5'	38:0:4962:HOH:O	1.70	0.89
30:0:2533:C:H5'	30:0:2533:C:C6	2.06	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:951:A:C2'	30:0:952:G:H5'	2.03	0.89
10:J:82:THR:CG2	30:0:1242:A:H5'	2.02	0.89
30:0:2248:C:H3'	38:0:5390:HOH:O	1.71	0.89
13:M:77:HIS:CE1	13:M:86:GLN:HG2	2.07	0.89
30:0:1626:A:H2'	30:0:1627:G:C5'	2.01	0.89
11:K:18:ILE:HG22	11:K:93:ASN:HD22	1.36	0.88
15:O:3:THR:HG22	30:0:656:G:H5'	1.54	0.88
30:0:1130:U:H2'	30:0:1131:G:O4'	1.73	0.88
30:0:69:A:H5'	30:0:69:A:C8	2.09	0.88
30:0:2507:G:H2'	30:0:2510:C:H42	1.36	0.88
15:O:3:THR:CG2	30:0:656:G:H5'	2.04	0.88
31:9:29:C:C2'	31:9:30:C:H5'	2.02	0.88
31:9:49:G:O2'	31:9:50:G:H5'	1.73	0.88
30:0:2415:A:H2'	30:0:2416:G:H5'	1.55	0.88
30:0:947:U:O2'	30:0:948:G:H5'	1.74	0.88
30:0:2329:C:O2'	30:0:2330:U:H5'	1.74	0.87
29:3:42:ARG:NH1	30:0:396:U:H5'	1.88	0.87
30:0:1834:C:H2'	30:0:1840:A:H62	1.38	0.87
4:D:58:VAL:HB	4:D:62:ASP:HB3	1.53	0.87
30:0:541:C:C2'	30:0:542:A:H5''	2.04	0.87
30:0:870:G:H2'	30:0:871:G:H5''	1.57	0.87
11:K:39:GLY:HA2	38:0:5173:HOH:O	1.75	0.87
29:3:47:GLY:HA2	30:0:2121:G:H4'	1.57	0.87
30:0:2442:G:H2'	38:0:9197:HOH:O	1.75	0.87
13:M:70:GLY:HA2	30:0:2263:G:H5''	1.57	0.86
30:0:924:G:H5''	38:0:3656:HOH:O	1.73	0.86
30:0:1483:C:O2'	30:0:1484:G:H5'	1.74	0.86
22:V:39:ALA:H	22:V:40:PRO:HD2	1.41	0.86
30:0:120:A:H3'	38:0:4004:HOH:O	1.74	0.86
30:0:2465:A:H3'	38:0:3625:HOH:O	1.74	0.86
30:0:1206:U:H2'	30:0:1207:A:O4'	1.75	0.86
30:0:559:U:H6	30:0:559:U:H5'	1.40	0.86
30:0:1118:A:C8	30:0:1118:A:H3'	2.10	0.86
30:0:1372:A:H3'	38:0:7091:HOH:O	1.75	0.86
30:0:292:G:H2'	30:0:358:G:N2	1.90	0.86
30:0:1942:A:H5'	38:0:7247:HOH:O	1.76	0.85
24:X:74:ALA:HB2	24:X:85:VAL:HG13	1.57	0.85
30:0:718:C:O2'	30:0:719:C:H5'	1.76	0.85
30:0:1201:C:H2'	30:0:1202:A:H5'	1.56	0.85
30:0:69:A:H5'	30:0:69:A:H8	1.40	0.85
30:0:877:G:H5'	30:0:878:G:OP1	1.76	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1351:G:H3'	38:0:6328:HOH:O	1.74	0.85
30:0:1641:A:H2'	30:0:1642:A:C5'	2.05	0.85
3:C:1:MET:HG2	3:C:2:GLN:H	1.41	0.85
30:0:424:C:H2'	30:0:425:U:C6	2.09	0.85
30:0:1641:A:C2'	30:0:1642:A:H5'	2.06	0.85
30:0:2336:G:O2'	30:0:2337:G:H5'	1.76	0.85
30:0:2102:G:H2'	38:0:7667:HOH:O	1.75	0.85
18:R:18:LEU:HB2	18:R:143:VAL:HG13	1.59	0.85
14:N:141:ARG:HH21	31:9:48:C:H4'	1.42	0.85
30:0:2661:U:H3	30:0:2812:A:H62	1.19	0.85
4:D:154:LYS:H	4:D:154:LYS:HD2	1.42	0.84
30:0:671:A:O2'	30:0:672:G:H2'	1.77	0.84
2:B:41:PHE:CD1	2:B:79:MET:HE2	2.12	0.84
30:0:391:U:H3'	38:0:4623:HOH:O	1.75	0.84
30:0:1641:A:H2'	30:0:1642:A:H5'	1.59	0.84
30:0:1762:C:H2'	30:0:1763:C:H6	1.41	0.84
30:0:2506:A:HO2'	30:0:2507:G:H8	0.85	0.84
30:0:2868:C:H1'	38:0:7024:HOH:O	1.76	0.84
30:0:380:A:H2'	38:0:7130:HOH:O	1.78	0.84
30:0:1964:U:H2'	30:0:1964:U:O2	1.77	0.84
1:A:47:HIS:HD2	30:0:1654:U:H2'	1.41	0.84
14:N:37:ARG:HH12	31:9:6:C:C5'	1.84	0.84
29:3:24:LYS:HE2	33:3:8804:CL:CL	2.14	0.84
30:0:664:U:H5'	38:0:3760:HOH:O	1.77	0.84
30:0:24:G:N2	30:0:518:G:H1'	1.93	0.84
30:0:1797:A:H4'	30:0:1798:C:C5	2.13	0.84
30:0:652:G:H5''	38:0:3006:HOH:O	1.78	0.84
30:0:1735:C:O2'	30:0:1736:A:H5'	1.77	0.84
30:0:282:C:H1'	30:0:368:C:N4	1.93	0.84
23:W:44:MET:HE2	30:0:944:G:H21	1.43	0.83
30:0:2472:C:H3'	38:0:3589:HOH:O	1.77	0.83
3:C:127:ARG:NH2	3:C:225:PRO:HG2	1.92	0.83
13:M:70:GLY:HA2	30:0:2263:G:C5'	2.08	0.83
30:0:57:C:H42	30:0:89:G:H1	1.26	0.83
30:0:847:C:H1'	38:0:4278:HOH:O	1.76	0.83
30:0:1477:C:O2'	30:0:1478:U:H5'	1.78	0.83
30:0:1810:C:H4'	38:0:6580:HOH:O	1.78	0.83
27:1:20:ARG:HH21	30:0:120:A:H5'	1.43	0.83
30:0:396:U:H4'	38:0:4309:HOH:O	1.79	0.83
30:0:1116:U:HO2'	30:0:1118:A:H2	0.90	0.83
30:0:1834:C:H2'	30:0:1840:A:N6	1.93	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1940:C:H1'	38:0:9376:HOH:O	1.78	0.83
11:K:27:ARG:HD2	11:K:60:GLY:HA2	1.60	0.83
15:O:51:TYR:HD1	30:0:721:A:H4'	1.43	0.83
29:3:65:THR:HG22	33:3:8804:CL:CL	2.15	0.83
30:0:2469:A:H1'	38:0:3226:HOH:O	1.78	0.83
30:0:2578:G:H5'	30:0:2578:G:H8	1.43	0.83
30:0:461:C:H2'	38:0:3977:HOH:O	1.78	0.83
30:0:2256:G:H2'	30:0:2257:G:H5'	1.61	0.83
13:M:164:THR:HG22	13:M:166:ALA:H	1.44	0.83
30:0:1181:A:C2'	30:0:1182:C:H5'	2.09	0.83
30:0:2769:C:C2'	30:0:2770:G:H5'	2.09	0.82
30:0:2089:A:O2'	30:0:2090:G:H5'	1.79	0.82
30:0:2768:A:H3'	30:0:2768:A:N3	1.94	0.82
2:B:162:MET:HE2	2:B:310:ARG:HD3	1.59	0.82
20:T:71:VAL:HG11	20:T:90:PRO:HB3	1.60	0.82
30:0:1450:C:H3'	38:0:9443:HOH:O	1.77	0.82
30:0:2474:A:N7	30:0:2621:PSU:H4'	1.94	0.82
30:0:90:A:H2'	30:0:91:G:O4'	1.79	0.82
30:0:2508:C:H2'	38:0:6666:HOH:O	1.78	0.82
30:0:669:G:O2'	30:0:670:G:H5'	1.80	0.82
30:0:282:C:C2'	30:0:283:U:H5'	2.09	0.82
13:M:82:ARG:O	13:M:86:GLN:HG3	1.80	0.82
14:N:37:ARG:NH1	31:9:6:C:C5'	2.42	0.82
28:2:41:HIS:HD2	28:2:44:ARG:H	1.27	0.82
30:0:1477:C:H5'	30:0:1868:G:H5'	1.59	0.82
30:0:1625:U:H4'	38:0:4622:HOH:O	1.80	0.82
30:0:2506:A:O2'	30:0:2507:G:H8	1.63	0.82
30:0:1118:A:H3'	30:0:1118:A:H8	1.45	0.82
29:3:25:VAL:HG22	29:3:68:LYS:HB2	1.60	0.81
30:0:2871:G:H2'	30:0:2872:U:H6	1.45	0.81
5:E:69:ILE:HA	5:E:72:MET:HE3	1.62	0.81
30:0:2281:C:H2'	30:0:2282:U:H5'	1.60	0.81
11:K:76:GLN:HA	11:K:93:ASN:HB3	1.62	0.81
29:3:49:ASP:HB3	29:3:52:PHE:HB2	1.62	0.81
30:0:2468:A:H3'	38:0:5402:HOH:O	1.81	0.81
6:F:39:SER:HB3	6:F:45:ALA:HB2	1.62	0.81
38:Y:8920:HOH:O	30:0:1330:A:H4'	1.81	0.81
30:0:1666:C:H2'	30:0:1667:A:C5'	2.10	0.81
30:0:2241:C:H2'	30:0:2242:U:C6	2.15	0.81
30:0:2894:C:O2'	30:0:2895:C:H5'	1.81	0.81
30:0:385:C:O5'	30:0:385:C:H6	1.64	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1116:U:O2'	30:0:1118:A:H2	1.63	0.81
30:0:2769:C:O2'	30:0:2770:G:H5'	1.80	0.81
29:3:48:ASN:ND2	30:0:169:A:H1'	1.96	0.81
38:3:9016:HOH:O	30:0:2434:A:H4'	1.81	0.81
30:0:2253:G:H2'	30:0:2254:G:H8	1.45	0.81
4:D:25:MET:HE2	4:D:41:LEU:HG	1.61	0.81
30:0:558:C:C2'	30:0:559:U:H5''	2.11	0.81
30:0:1474:C:H6	30:0:1474:C:H5'	1.46	0.81
33:Y:8820:CL:CL	38:0:3632:HOH:O	2.36	0.81
13:M:99:ARG:HE	13:M:170:ASN:HD22	1.29	0.80
30:0:1151:G:H2'	38:0:4973:HOH:O	1.79	0.80
30:0:2065:C:O2'	30:0:2066:C:H5'	1.80	0.80
30:0:2106:C:H2'	30:0:2107:U:C6	2.16	0.80
4:D:141:VAL:HG21	31:9:57:A:C8	2.15	0.80
30:0:2644:C:H4'	38:0:3380:HOH:O	1.81	0.80
30:0:2505:G:H2'	30:0:2506:A:H5'	1.61	0.80
33:0:8813:CL:CL	38:0:4640:HOH:O	2.37	0.80
3:C:129:HIS:CE1	3:C:231:ARG:HA	2.17	0.80
22:V:1:THR:HG23	22:V:2:VAL:H	1.47	0.80
23:W:38:THR:HG22	23:W:39:ASP:H	1.46	0.80
1:A:100:PRO:HG2	1:A:103:VAL:HG21	1.64	0.80
30:0:1855:G:H4'	30:0:1856:C:O5'	1.78	0.80
30:0:1132:A:N6	30:0:1229:C:H2'	1.97	0.80
25:Y:154:ARG:HH21	30:0:1293:U:H5'	1.47	0.80
30:0:56:G:H3'	38:0:5388:HOH:O	1.81	0.80
30:0:368:C:H2'	30:0:369:G:H5'	1.62	0.80
30:0:2871:G:H2'	30:0:2872:U:C6	2.16	0.80
14:N:144:GLY:O	14:N:147:ILE:HG22	1.81	0.80
15:O:51:TYR:CE1	30:0:721:A:H5''	2.16	0.80
22:V:8:ILE:HA	22:V:11:MET:HE3	1.63	0.80
1:A:51:ARG:HB2	1:A:51:ARG:NH1	1.95	0.80
21:U:56:ARG:HD2	30:0:2890:A:C8	2.17	0.80
30:0:1120:U:H5''	30:0:1120:U:C6	2.17	0.79
30:0:2009:G:H5'	38:0:9852:HOH:O	1.81	0.79
30:0:2243:C:H5''	38:0:3730:HOH:O	1.82	0.79
10:J:52:GLN:HE22	30:0:1119:G:H2'	1.46	0.79
30:0:213:G:N2	30:0:225:G:H2'	1.97	0.79
30:0:1346:U:H2'	30:0:1347:U:H6	1.46	0.79
30:0:1596:U:H2'	30:0:1598:A:OP2	1.82	0.79
30:0:2735:U:H2'	30:0:2736:U:H6	1.45	0.79
15:O:51:TYR:CD1	30:0:721:A:H4'	2.18	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:449:A:H3'	38:0:5340:HOH:O	1.79	0.79
30:0:2533:C:H6	30:0:2533:C:C5'	1.96	0.79
8:H:158:ASN:ND2	30:0:2502:C:H4'	1.98	0.79
30:0:951:A:O2'	30:0:952:G:H5'	1.81	0.79
30:0:1209:C:H2'	30:0:1210:G:H8	1.44	0.79
30:0:2785:C:H5'	38:0:7614:HOH:O	1.81	0.79
30:0:560:U:H2'	30:0:561:G:H8	1.48	0.79
30:0:1666:C:H2'	30:0:1667:A:H5'	1.65	0.79
30:0:506:G:H22	30:0:509:A:H5''	1.48	0.79
30:0:2315:C:H5''	38:0:3506:HOH:O	1.81	0.79
31:9:29:C:H2'	31:9:30:C:C5'	2.09	0.79
30:0:1741:U:O2'	30:0:2723:G:H4'	1.82	0.79
30:0:2717:C:H2'	30:0:2718:C:C5'	2.11	0.79
30:0:2005:G:H3'	30:0:2005:G:OP2	1.82	0.79
11:K:14:LYS:HB2	11:K:45:PRO:HG2	1.65	0.78
30:0:2750:G:H2'	30:0:2751:C:C6	2.19	0.78
4:D:141:VAL:HG21	31:9:57:A:H8	1.48	0.78
30:0:213:G:H22	30:0:225:G:H2'	1.47	0.78
12:L:90:ARG:HA	12:L:119:THR:HB	1.65	0.78
30:0:2241:C:O2'	30:0:2242:U:H5'	1.83	0.78
30:0:2908:A:H2'	30:0:2909:G:O4'	1.83	0.78
30:0:1278:A:H4'	30:0:1279:U:N3	1.98	0.78
30:0:1505:U:H4'	38:0:5132:HOH:O	1.83	0.78
30:0:2114:C:H3'	38:0:9705:HOH:O	1.82	0.78
9:I:83:GLY:H	30:0:1168:C:H5''	1.48	0.78
17:Q:15:LYS:HD3	30:0:2364:A:H5''	1.66	0.78
30:0:1116:U:H3	30:0:1246:A:H62	1.30	0.78
30:0:1202:A:H2'	30:0:1203:G:O4'	1.82	0.78
30:0:1626:A:C2'	30:0:1627:G:H5'	2.12	0.78
25:Y:165:GLU:HB3	38:0:6614:HOH:O	1.83	0.78
30:0:107:U:H2'	30:0:108:U:H5'	1.66	0.78
30:0:541:C:H2'	30:0:542:A:C5'	2.13	0.78
30:0:1773:G:H4'	38:0:3502:HOH:O	1.84	0.78
38:B:8996:HOH:O	30:0:2766:A:H5'	1.82	0.78
16:P:77:ALA:HA	16:P:80:ARG:HG3	1.64	0.78
29:3:3:MET:O	29:3:90:PHE:HA	1.84	0.78
30:0:1423:C:O2'	30:0:1424:A:H5'	1.84	0.78
30:0:1664:A:H8	30:0:1664:A:OP1	1.67	0.78
30:0:2439:C:H2'	30:0:2440:C:H6	1.46	0.78
11:K:10:GLN:NE2	11:K:10:GLN:H	1.81	0.78
14:N:17:ARG:HB3	14:N:17:ARG:HH11	1.46	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2507:G:H2'	30:0:2510:C:N4	1.99	0.78
30:0:200:C:H2'	38:0:3428:HOH:O	1.82	0.77
30:0:228:C:C2'	30:0:229:G:H5'	2.14	0.77
30:0:822:C:H1'	38:0:4074:HOH:O	1.82	0.77
30:0:1331:G:O2'	30:0:1332:C:H5'	1.84	0.77
30:0:2410:G:O2'	30:0:2411:C:H5'	1.84	0.77
30:0:2869:G:H5'	38:0:5440:HOH:O	1.84	0.77
24:X:43:VAL:HG12	24:X:44:ASP:H	1.48	0.77
30:0:2498:C:O2'	30:0:2499:U:H5'	1.84	0.77
30:0:2794:G:C2	30:0:2795:C:C6	2.73	0.77
13:M:139:PRO:HA	13:M:142:GLN:HB2	1.65	0.77
30:0:2812:A:H1'	38:0:5719:HOH:O	1.84	0.77
24:X:37:LEU:HD13	24:X:85:VAL:HG21	1.67	0.77
30:0:766:A:H2'	38:0:3818:HOH:O	1.85	0.77
9:I:87:PRO:HD2	30:0:1180:U:H1'	1.66	0.77
30:0:106:A:O2'	30:0:107:U:H5'	1.84	0.77
30:0:182:G:H5'	38:0:5110:HOH:O	1.85	0.77
30:0:625:U:H5''	30:0:1044:C:N4	2.00	0.77
30:0:1947:G:H2'	30:0:1948:G:H8	1.49	0.77
2:B:36:PRO:HG3	2:B:169:GLY:HA3	1.66	0.76
30:0:1119:G:H22	30:0:1246:A:H2	1.33	0.76
30:0:1889:C:C4	30:0:1890:U:C5	2.73	0.76
30:0:154:C:H2'	30:0:155:C:H6	1.48	0.76
30:0:711:G:C2	30:0:718:C:C2	2.72	0.76
30:0:1787:C:O2'	30:0:1788:U:H5'	1.85	0.76
12:L:55:GLN:HA	12:L:58:GLN:HE21	1.49	0.76
17:Q:27:GLN:HE21	31:9:8:G:C4'	1.99	0.76
30:0:561:G:H2'	30:0:562:A:H8	1.50	0.76
31:9:52:A:H2'	31:9:53:G:O4'	1.85	0.76
1:A:47:HIS:CD2	30:0:1654:U:H2'	2.20	0.76
30:0:557:C:O2'	30:0:558:C:H5'	1.86	0.76
30:0:1119:G:N2	30:0:1246:A:C2	2.51	0.76
1:A:199:HIS:CD2	1:A:201:PHE:H	2.03	0.76
30:0:506:G:H22	30:0:509:A:H5'	1.48	0.76
3:C:115:LEU:HD13	3:C:223:LEU:HD21	1.68	0.76
5:E:133:VAL:HG12	5:E:141:VAL:HG13	1.66	0.76
30:0:2073:G:H2'	38:0:3803:HOH:O	1.83	0.76
30:0:2624:A:H1'	38:0:9771:HOH:O	1.84	0.76
8:H:59:GLN:HE22	8:H:96:GLN:HG2	1.49	0.76
12:L:53:ARG:HD2	30:0:2441:U:H4'	1.66	0.76
22:V:25:THR:HG22	22:V:29:ASN:HD21	1.50	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:951:A:H2'	30:0:952:G:H5'	1.66	0.76
30:0:1072:G:H5'	38:0:6511:HOH:O	1.85	0.76
31:9:57:A:H2'	31:9:58:G:H5'	1.68	0.76
30:0:1205:U:C2'	30:0:1206:U:H5'	2.15	0.76
30:0:2803:C:O2'	30:0:2804:C:H5'	1.86	0.76
30:0:2256:G:C2'	30:0:2257:G:H5'	2.16	0.76
8:H:123:ILE:HD12	8:H:123:ILE:H	1.51	0.76
14:N:141:ARG:NH2	31:9:48:C:H4'	2.00	0.76
30:0:2687:G:O2'	30:0:2688:U:H5'	1.86	0.76
23:W:125:HIS:NE2	30:0:1097:A:H5''	2.00	0.75
30:0:1120:U:H5''	30:0:1120:U:H6	1.51	0.75
30:0:659:A:H5''	38:0:7001:HOH:O	1.87	0.75
30:0:1164:U:C2	30:0:1166:A:H4'	2.21	0.75
30:0:1666:C:C2'	30:0:1667:A:C5'	2.63	0.75
30:0:1921:A:O2'	30:0:1922:A:H5'	1.87	0.75
23:W:11:VAL:HG11	30:0:1086:A:C6	2.22	0.75
29:3:62:THR:HG21	29:3:84:ARG:HB3	1.68	0.75
30:0:870:G:C2'	30:0:871:G:H5''	2.17	0.75
1:A:47:HIS:HD2	30:0:1654:U:C2'	1.99	0.75
13:M:95:LYS:HA	13:M:170:ASN:HD21	1.50	0.75
2:B:264:GLU:HG2	2:B:267:LYS:HE3	1.68	0.75
9:I:83:GLY:HA3	30:0:1168:C:H5'	1.68	0.75
30:0:120:A:H2'	30:0:120:A:N3	2.02	0.75
30:0:303:C:O2'	30:0:304:G:H5'	1.86	0.75
8:H:120:PHE:CD1	30:0:2311:A:H5'	2.21	0.75
10:J:131:THR:HB	10:J:134:GLU:HG3	1.67	0.75
29:3:74:CYS:SG	29:3:76:LYS:HD2	2.27	0.75
30:0:136:C:H2'	30:0:137:U:O4'	1.85	0.75
30:0:2697:A:H2'	30:0:2698:G:O4'	1.87	0.75
2:B:238:ASN:HD22	2:B:240:GLY:H	1.32	0.75
3:C:129:HIS:HE1	3:C:231:ARG:HA	1.51	0.75
30:0:300:U:H2'	30:0:301:C:H6	1.52	0.75
30:0:1521:C:H2'	30:0:1522:A:H8	1.52	0.75
2:B:206:THR:HG21	30:0:2716:G:H5''	1.67	0.74
8:H:19:ARG:HH12	30:0:1008:C:H5''	1.52	0.74
10:J:19:MET:HE3	10:J:132:LEU:HD11	1.69	0.74
23:W:88:THR:HB	38:W:6679:HOH:O	1.85	0.74
29:3:12:PRO:HG3	30:0:2382:A:H4'	1.68	0.74
30:0:694:A:H1'	38:0:3795:HOH:O	1.86	0.74
30:0:1175:G:H2'	30:0:1176:C:O4'	1.87	0.74
31:9:54:A:O2'	31:9:55:U:H5'	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:503:G:H2'	30:0:504:G:H8	1.51	0.74
30:0:1557:G:H2'	30:0:1558:C:H6	1.51	0.74
11:K:8:VAL:HG13	11:K:80:ILE:HG22	1.68	0.74
30:0:228:C:H2'	30:0:229:G:H5'	1.69	0.74
30:0:2672:C:O2	30:0:2672:C:H2'	1.85	0.74
5:E:143:GLN:HE21	30:0:2780:C:H1'	1.51	0.74
30:0:594:C:H2'	30:0:595:U:H6	1.53	0.74
31:9:14:G:H5'	31:9:14:G:C8	2.21	0.74
30:0:748:C:H3'	38:0:4014:HOH:O	1.86	0.74
30:0:2239:C:H2'	30:0:2240:U:H6	1.50	0.74
30:0:2820:A:H2'	30:0:2821:C:C6	2.22	0.74
30:0:1201:C:H5'	38:0:5677:HOH:O	1.88	0.74
30:0:1741:U:H5'	30:0:1742:A:OP1	1.87	0.74
4:D:25:MET:SD	4:D:40:ILE:HD11	2.27	0.74
30:0:119:A:H2'	30:0:120:A:C5'	2.17	0.74
38:C:8665:HOH:O	30:0:656:G:H1'	1.87	0.74
17:Q:25:PRO:HB2	38:Q:4350:HOH:O	1.88	0.74
2:B:88:GLU:HB3	2:B:97:LEU:HD12	1.70	0.74
23:W:88:THR:HG23	23:W:110:GLN:HB3	1.70	0.74
30:0:681:G:N3	30:0:681:G:H5'	2.02	0.74
30:0:1206:U:H5'	30:0:1206:U:H6	1.50	0.74
30:0:1973:A:H2'	30:0:1974:G:O4'	1.88	0.74
30:0:2827:A:H2'	30:0:2828:G:O4'	1.87	0.74
1:A:217:ARG:HH12	30:0:1853:C:H4'	1.50	0.74
30:0:2426:G:H1'	38:0:6014:HOH:O	1.86	0.74
6:F:91:VAL:HG12	6:F:92:GLY:H	1.53	0.73
14:N:21:HIS:CE1	30:0:2369:A:H4'	2.22	0.73
30:0:1527:A:H1'	30:0:1528:A:C8	2.22	0.73
24:X:26:ALA:HB2	24:X:63:ARG:HA	1.70	0.73
30:0:2472:C:O2'	30:0:2634:G:H4'	1.87	0.73
23:W:149:LEU:HG	23:W:153:MET:HE2	1.68	0.73
30:0:558:C:H2'	30:0:559:U:H5''	1.70	0.73
30:0:871:G:C8	30:0:871:G:C5'	2.59	0.73
30:0:2130:C:H1'	38:0:3910:HOH:O	1.89	0.73
30:0:2587:OMU:O5'	30:0:2587:OMU:H6	1.88	0.73
30:0:2735:U:H2'	30:0:2736:U:C6	2.23	0.73
11:K:8:VAL:HG12	11:K:9:THR:H	1.54	0.73
13:M:74:LYS:HG3	38:M:8885:HOH:O	1.88	0.73
29:3:11:CYS:SG	29:3:13:HIS:CD2	2.77	0.73
30:0:1451:C:H5'	30:0:1505:U:H5	1.51	0.73
13:M:99:ARG:HD2	13:M:167:GLY:HA2	1.68	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:287:C:H42	30:0:365:G:H1	1.37	0.73
30:0:418:C:H2'	30:0:419:A:C8	2.24	0.73
30:0:1181:A:H2'	30:0:1182:C:C5'	2.18	0.73
30:0:1205:U:C2'	30:0:1206:U:C5'	2.66	0.73
30:0:1255:A:H3'	38:0:7057:HOH:O	1.87	0.73
2:B:198:GLU:HA	38:B:9141:HOH:O	1.88	0.73
5:E:154:ILE:HD11	5:E:157:LYS:HB2	1.70	0.73
30:0:119:A:H2'	30:0:120:A:H5''	1.71	0.73
30:0:1366:C:H1'	38:0:9256:HOH:O	1.87	0.73
30:0:1759:A:N3	30:0:1818:C:H2'	2.04	0.73
30:0:2106:C:H2'	30:0:2107:U:H6	1.52	0.73
2:B:244:PRO:HG3	2:B:248:ARG:HH21	1.53	0.73
12:L:46:LEU:O	30:0:2430:A:H4'	1.88	0.73
25:Y:204:ARG:HH22	30:0:553:G:P	2.12	0.73
26:Z:59:GLU:HB2	26:Z:61:HIS:CE1	2.24	0.73
30:0:2586:U:H3	30:0:2592:G:H22	1.37	0.73
1:A:207:GLN:HA	38:A:8983:HOH:O	1.89	0.73
8:H:29:SER:HA	8:H:62:HIS:HD2	1.52	0.73
30:0:116:G:H1'	30:0:129:A:N3	2.04	0.73
30:0:2040:C:O2'	30:0:2041:G:H5'	1.89	0.73
30:0:2667:G:H1'	30:0:2914:A:N3	2.04	0.73
4:D:50:VAL:HG13	31:9:41:C:O4'	1.90	0.72
29:3:47:GLY:CA	30:0:2121:G:H4'	2.19	0.72
9:I:83:GLY:H	30:0:1168:C:C5'	2.01	0.72
30:0:267:G:H2'	30:0:268:U:O4'	1.89	0.72
30:0:1016:U:H2'	30:0:1017:U:H6	1.52	0.72
30:0:1942:A:O2'	30:0:1943:C:H5'	1.89	0.72
30:0:2851:G:H2'	30:0:2902:A:H61	1.51	0.72
2:B:212:GLN:HB2	2:B:257:THR:HG21	1.70	0.72
27:1:38:GLY:HA3	38:1:6935:HOH:O	1.88	0.72
30:0:596:C:H2'	30:0:597:A:C8	2.20	0.72
30:0:711:G:N2	30:0:718:C:C2	2.58	0.72
16:P:80:ARG:HD3	16:P:87:ARG:HH11	1.55	0.72
27:1:2:GLY:O	27:1:6:PRO:HG2	1.89	0.72
31:9:49:G:H5''	38:9:4707:HOH:O	1.88	0.72
30:0:1730:G:H5''	30:0:1731:C:H5	1.53	0.72
30:0:2647:C:H1'	38:0:6339:HOH:O	1.87	0.72
30:0:2297:U:O2'	30:0:2298:C:H5'	1.89	0.72
2:B:217:ARG:HG3	2:B:257:THR:HG22	1.72	0.72
3:C:46:TYR:CE1	30:0:450:C:H4'	2.24	0.72
30:0:1474:C:H5'	30:0:1474:C:C6	2.25	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:27:ARG:HH12	13:M:44:THR:HG21	1.53	0.72
16:P:115:SER:H	16:P:118:GLN:HB2	1.55	0.72
30:0:2576:A:H3'	38:0:9077:HOH:O	1.89	0.72
31:9:36:C:H2'	31:9:37:C:H5'	1.72	0.72
16:P:13:VAL:HG21	16:P:41:ARG:HG2	1.72	0.71
30:0:708:A:H2'	30:0:709:G:O4'	1.90	0.71
30:0:1309:U:H3'	38:0:4114:HOH:O	1.90	0.71
30:0:1667:A:H5'	30:0:1667:A:H8	1.54	0.71
30:0:2061:C:H2'	30:0:2062:A:H5'	1.72	0.71
30:0:2073:G:H5''	38:0:3803:HOH:O	1.88	0.71
30:0:2748:G:H2'	38:0:7440:HOH:O	1.89	0.71
12:L:7:GLN:HA	12:L:7:GLN:HE21	1.55	0.71
13:M:70:GLY:HA2	30:0:2263:G:H4'	1.72	0.71
26:Z:70:ARG:HG2	26:Z:83:TYR:N	2.05	0.71
30:0:2769:C:H2'	30:0:2770:G:O4'	1.88	0.71
18:R:114:VAL:HB	18:R:145:LEU:HD12	1.70	0.71
29:3:68:LYS:HE3	30:0:2436:U:H5'	1.71	0.71
31:9:108:C:H2'	31:9:109:G:C8	2.24	0.71
20:T:48:VAL:HG21	20:T:96:VAL:HG13	1.72	0.71
21:U:56:ARG:NE	30:0:2890:A:H1'	2.06	0.71
30:0:192:A:H5'	38:0:7544:HOH:O	1.90	0.71
30:0:421:C:H4'	30:0:1919:A:C6	2.25	0.71
30:0:2004:U:H2'	30:0:2004:U:O2	1.91	0.71
30:0:2479:A:H5''	38:0:4609:HOH:O	1.91	0.71
3:C:236:THR:HA	38:C:8655:HOH:O	1.90	0.71
30:0:814:G:H4'	38:0:3121:HOH:O	1.90	0.71
8:H:59:GLN:NE2	8:H:129:ARG:HE	1.88	0.71
30:0:24:G:H22	30:0:518:G:H1'	1.56	0.71
30:0:1165:G:H21	30:0:1173:A:C5'	2.04	0.71
30:0:1278:A:H4'	30:0:1279:U:C4	2.26	0.71
30:0:1972:U:H2'	30:0:1973:A:H5'	1.71	0.71
30:0:2256:G:H2'	30:0:2257:G:C5'	2.20	0.71
1:A:211:LYS:HB3	1:A:212:PRO:HD2	1.70	0.71
3:C:174:ILE:HD11	30:0:338:C:H4'	1.73	0.71
23:W:88:THR:HG22	23:W:90:TYR:HD1	1.55	0.71
30:0:1574:C:H2'	30:0:1575:C:H6	1.54	0.71
2:B:84:LEU:HD23	2:B:142:LEU:HD23	1.73	0.71
30:0:300:U:C5	30:0:301:C:H5	2.09	0.71
30:0:1118:A:H62	30:0:1244:U:H3	1.36	0.71
30:0:1477:C:H5'	30:0:1868:G:C5'	2.20	0.71
30:0:2061:C:C2'	30:0:2062:A:H5'	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2103:A:H2'	30:0:2104:C:H5'	1.73	0.71
30:0:2505:G:C2'	30:0:2506:A:H5'	2.20	0.71
30:0:2717:C:C2'	30:0:2718:C:C5'	2.68	0.71
30:0:2890:A:H2'	30:0:2890:A:N3	2.06	0.71
30:0:1043:C:H2'	38:0:3180:HOH:O	1.90	0.71
30:0:1342:C:H2'	30:0:1343:C:H5'	1.73	0.71
30:0:2536:C:H3'	38:0:9240:HOH:O	1.90	0.71
31:9:119:C:H4'	38:9:2285:HOH:O	1.90	0.71
23:W:44:MET:CE	30:0:944:G:H21	2.04	0.70
24:X:26:ALA:HB3	24:X:63:ARG:HG3	1.72	0.70
30:0:960:G:H1'	38:0:5895:HOH:O	1.89	0.70
30:0:2239:C:H2'	30:0:2240:U:C6	2.26	0.70
30:0:1189:A:H3'	38:0:7580:HOH:O	1.90	0.70
30:0:1701:A:H4'	30:0:1702:U:H5''	1.72	0.70
30:0:2670:G:O2'	30:0:2671:U:H5'	1.91	0.70
1:A:179:MET:HG2	1:A:186:TRP:HB2	1.73	0.70
10:J:107:ASN:HD21	10:J:109:TYR:HB2	1.56	0.70
25:Y:187:VAL:HG23	25:Y:192:ASP:CB	2.19	0.70
30:0:2250:G:H2'	30:0:2251:G:C8	2.26	0.70
30:0:2482:G:H5''	38:0:4984:HOH:O	1.90	0.70
30:0:2689:A:H2'	30:0:2690:U:H5'	1.72	0.70
17:Q:53:HIS:N	33:Q:8811:CL:CL	2.61	0.70
30:0:106:A:C2'	30:0:107:U:H5'	2.21	0.70
30:0:282:C:H1'	30:0:368:C:H41	1.54	0.70
30:0:893:C:H5''	38:0:7590:HOH:O	1.90	0.70
30:0:1118:A:C8	30:0:1118:A:C3'	2.74	0.70
30:0:2747:C:H4'	30:0:2748:G:OP1	1.91	0.70
30:0:447:A:O2'	30:0:448:G:H5'	1.90	0.70
30:0:1167:G:H2'	30:0:1168:C:O4'	1.91	0.70
30:0:2812:A:H2	30:0:2814:A:H62	1.37	0.70
12:L:56:LYS:HE3	30:0:2443:C:H1'	1.74	0.70
24:X:43:VAL:HG11	24:X:82:GLU:HA	1.74	0.70
30:0:529:G:C5	30:0:530:C:C5	2.79	0.70
30:0:558:C:H2'	30:0:559:U:C5'	2.22	0.70
30:0:2659:U:H5''	38:0:4098:HOH:O	1.91	0.70
30:0:1641:A:O2'	30:0:1642:A:H5'	1.90	0.70
30:0:1805:G:O2'	30:0:1806:G:H5'	1.92	0.70
2:B:223:ARG:HD3	33:B:8819:CL:CL	2.29	0.70
3:C:174:ILE:CD1	30:0:338:C:H4'	2.22	0.70
16:P:117:SER:HB3	30:0:1593:C:OP1	1.92	0.70
38:Y:8887:HOH:O	30:0:2060:A:H4'	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:843:A:C2	30:0:846:A:C8	2.80	0.70
30:0:1835:U:H5	30:0:1840:A:N7	1.89	0.70
30:0:2906:A:H5'	30:0:2907:C:O4'	1.92	0.70
1:A:4:ILE:HG12	1:A:7:GLN:HG3	1.73	0.70
8:H:17:TYR:HE1	30:0:1006:A:H62	1.39	0.70
13:M:83:SER:HB2	29:3:47:GLY:HA3	1.72	0.70
25:Y:169:ARG:HD2	30:0:1328:A:OP1	1.92	0.70
30:0:243:A:H61	30:0:269:G:C1'	2.05	0.70
30:0:292:G:H1'	30:0:360:A:N6	2.06	0.70
30:0:2748:G:H5'	38:0:7440:HOH:O	1.91	0.70
30:0:2752:C:O2'	30:0:2753:G:H5'	1.91	0.70
30:0:2820:A:H2'	30:0:2821:C:H6	1.54	0.70
8:H:26:ILE:HA	8:H:123:ILE:HG21	1.74	0.70
38:M:8871:HOH:O	30:0:2244:A:H1'	1.92	0.70
30:0:1051:C:H2'	30:0:1052:G:O4'	1.92	0.70
30:0:1447:U:H3'	30:0:1506:U:O2	1.92	0.70
30:0:2301:A:H5''	30:0:2302:A:H5'	1.73	0.70
30:0:2783:A:H3'	38:0:5184:HOH:O	1.90	0.70
13:M:52:GLN:NE2	13:M:118:TYR:HB3	2.07	0.69
20:T:61:GLU:HG2	38:T:3851:HOH:O	1.90	0.69
30:0:960:G:H4'	38:0:7334:HOH:O	1.92	0.69
1:A:95:PRO:HA	1:A:153:ARG:HA	1.74	0.69
6:F:49:PHE:HB2	6:F:96:ALA:HB3	1.74	0.69
16:P:28:GLN:HE22	30:0:1387:G:H1'	1.57	0.69
38:Q:5297:HOH:O	30:0:2402:A:H4'	1.91	0.69
18:R:98:ASN:HD21	30:0:500:G:H21	1.41	0.69
29:3:51:LYS:HA	29:3:54:LYS:HE3	1.72	0.69
30:0:1165:G:O3'	30:0:1174:A:H4'	1.92	0.69
31:9:24:U:H3'	31:9:25:G:C5'	2.22	0.69
5:E:84:MET:HE1	5:E:148:ILE:HD12	1.73	0.69
30:0:289:G:O2'	30:0:290:C:H5'	1.92	0.69
30:0:685:C:O2	30:0:748:C:H4'	1.93	0.69
30:0:1931:A:H2'	30:0:1932:G:H5'	1.72	0.69
30:0:2578:G:H5'	30:0:2578:G:C8	2.26	0.69
30:0:1585:C:H2'	30:0:1586:G:H8	1.57	0.69
26:Z:57:MET:SD	26:Z:73:ARG:HD2	2.31	0.69
26:Z:64:PRO:HB2	26:Z:86:TYR:CE2	2.28	0.69
28:2:43:ARG:NH2	30:0:1684:A:H1'	2.03	0.69
30:0:210:U:O2'	30:0:211:U:H5'	1.93	0.69
30:0:302:A:C2'	30:0:303:C:H5'	2.22	0.69
30:0:734:U:H2'	30:0:736:A:OP2	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1564:C:H5'	38:0:4202:HOH:O	1.93	0.69
30:0:2787:C:H5	38:0:4591:HOH:O	1.75	0.69
22:V:44:GLY:HA3	30:0:92:G:H4'	1.73	0.69
30:0:2591:C:H2'	30:0:2592:G:O4'	1.93	0.69
30:0:2712:G:H1'	38:0:5774:HOH:O	1.92	0.69
30:0:2887:G:H2'	30:0:2888:U:C6	2.27	0.69
31:9:108:C:H2'	31:9:109:G:H8	1.57	0.69
3:C:139:VAL:HG13	38:C:8651:HOH:O	1.92	0.69
9:I:82:THR:HG22	30:0:1168:C:H5''	1.73	0.69
9:I:112:LEU:HD11	30:0:1162:G:H1'	1.75	0.69
18:R:96:VAL:HG13	18:R:106:GLY:HA3	1.75	0.69
21:U:9:CYS:SG	21:U:11:THR:HG23	2.32	0.69
21:U:45:GLU:HB3	38:U:4381:HOH:O	1.91	0.69
30:0:122:C:H5''	38:0:3570:HOH:O	1.91	0.69
30:0:960:G:N3	30:0:960:G:H2'	2.07	0.69
30:0:1183:C:H2'	38:0:6169:HOH:O	1.91	0.69
30:0:2461:U:O2	30:0:2466:G:H1'	1.92	0.69
30:0:10:U:C4	30:0:532:A:C8	2.81	0.69
30:0:100:C:H2'	30:0:101:C:H6	1.58	0.69
30:0:2064:U:H5'	30:0:2652:U:O3'	1.92	0.69
27:1:20:ARG:HG2	30:0:111:C:O2'	1.93	0.69
30:0:279:C:O2'	30:0:280:C:H5'	1.93	0.69
30:0:283:U:H5	30:0:284:C:N3	1.91	0.69
30:0:970:U:H3'	30:0:970:U:H6	1.57	0.69
30:0:1164:U:N3	30:0:1166:A:H4'	2.08	0.69
30:0:1965:C:H2'	30:0:1966:U:C6	2.28	0.69
30:0:2114:C:O2'	30:0:2115:U:H5'	1.93	0.69
30:0:2781:U:C2'	30:0:2782:G:H5'	2.22	0.69
13:M:161:ARG:HH11	30:0:183:A:H1'	1.56	0.68
30:0:363:C:O2'	30:0:364:U:H5'	1.93	0.68
30:0:432:G:H2'	30:0:433:C:H6	1.58	0.68
30:0:867:A:H5''	38:0:4374:HOH:O	1.92	0.68
30:0:1300:G:H1'	38:0:4640:HOH:O	1.90	0.68
30:0:1464:C:H5''	38:0:5843:HOH:O	1.93	0.68
30:0:1706:G:C5	30:0:1707:G:C6	2.81	0.68
30:0:2318:C:H2'	30:0:2319:C:H6	1.57	0.68
30:0:2824:C:O3'	30:0:2825:C:H6	1.75	0.68
30:0:2852:A:C8	30:0:2902:A:C6	2.82	0.68
24:X:73:ARG:HH12	24:X:88:GLU:HA	1.57	0.68
30:0:247:A:H2'	38:0:3901:HOH:O	1.93	0.68
30:0:601:G:O2'	30:0:602:A:H5'	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:28:GLU:HB3	11:K:58:THR:HB	1.75	0.68
14:N:151:ASP:HB3	38:N:8822:HOH:O	1.94	0.68
22:V:25:THR:HG22	22:V:29:ASN:ND2	2.08	0.68
30:0:292:G:H2'	30:0:358:G:H21	1.57	0.68
26:Z:42:TYR:HA	30:0:1829:A:H61	1.59	0.68
26:Z:70:ARG:HG3	26:Z:82:SER:HB2	1.75	0.68
30:0:1157:C:C2'	30:0:1158:G:H5'	2.23	0.68
30:0:1566:C:H2'	30:0:1567:G:H8	1.59	0.68
26:Z:34:SER:HA	30:0:797:A:H4'	1.74	0.68
30:0:169:A:H4'	38:0:9690:HOH:O	1.94	0.68
30:0:226:A:H1'	30:0:393:G:C5	2.28	0.68
30:0:821:U:H3'	38:0:3750:HOH:O	1.92	0.68
30:0:1398:G:H4'	38:0:6576:HOH:O	1.92	0.68
30:0:2348:C:H2'	30:0:2349:G:H8	1.57	0.68
30:0:2781:U:O2'	30:0:2782:G:H5'	1.94	0.68
30:0:1421:C:H2'	30:0:1422:U:H6	1.58	0.68
30:0:1585:C:N3	30:0:1611:G:C2	2.62	0.68
30:0:2281:C:C2'	30:0:2282:U:H5'	2.23	0.68
30:0:2421:G:H1'	38:0:3680:HOH:O	1.94	0.68
30:0:2533:C:O2'	30:0:2534:U:H5'	1.94	0.68
4:D:135:VAL:HG21	4:D:139:TYR:CD1	2.29	0.68
30:0:308:U:C4	30:0:342:C:H1'	2.29	0.68
30:0:2564:G:H5''	30:0:2565:C:H5''	1.76	0.68
21:U:56:ARG:HD2	30:0:2890:A:H8	1.59	0.68
30:0:236:A:C4'	30:0:237:G:H5'	2.20	0.68
30:0:613:C:H2'	30:0:614:U:H6	1.59	0.68
30:0:1982:C:H2'	30:0:1983:C:O4'	1.93	0.68
13:M:79:ALA:HB3	13:M:81:ARG:NH1	2.04	0.68
15:O:47:ARG:HG3	15:O:47:ARG:NH1	2.03	0.68
38:3:9033:HOH:O	30:0:2382:A:H5'	1.94	0.68
30:0:1970:G:H5''	38:0:6973:HOH:O	1.93	0.68
4:D:23:VAL:HG22	4:D:73:VAL:HB	1.74	0.68
9:I:127:CYS:HB3	9:I:132:VAL:HB	1.75	0.68
10:J:90:LYS:HB2	33:J:8802:CL:CL	2.31	0.68
30:0:1363:G:H1'	38:0:9415:HOH:O	1.93	0.68
2:B:244:PRO:HG3	2:B:248:ARG:NH2	2.08	0.67
29:3:81:GLU:HG2	38:3:9067:HOH:O	1.93	0.67
30:0:1074:G:H4'	30:0:1260:G:C6	2.29	0.67
30:0:2685:C:H1'	38:0:3426:HOH:O	1.94	0.67
3:C:115:LEU:HD21	3:C:243:VAL:HG22	1.75	0.67
30:0:625:U:H5'	38:0:3172:HOH:O	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:702:G:O2'	30:0:703:G:H5'	1.94	0.67
30:0:1829:A:H5''	38:0:3071:HOH:O	1.93	0.67
30:0:2594:C:O2'	30:0:2595:U:H5'	1.94	0.67
1:A:42:VAL:HG21	1:A:74:VAL:CG1	2.24	0.67
2:B:162:MET:CE	2:B:310:ARG:HD3	2.23	0.67
30:0:1197:G:H1'	30:0:1203:G:H22	1.59	0.67
30:0:1595:G:O2'	30:0:1596:U:H5'	1.94	0.67
30:0:2750:G:H2'	30:0:2751:C:H6	1.58	0.67
4:D:173:GLU:HG3	4:D:174:VAL:HG23	1.76	0.67
5:E:91:PHE:CE1	30:0:2694:A:H4'	2.30	0.67
10:J:52:GLN:NE2	30:0:1119:G:H2'	2.09	0.67
29:3:62:THR:CG2	29:3:84:ARG:HB3	2.25	0.67
30:0:753:U:H4'	38:0:6877:HOH:O	1.94	0.67
30:0:1165:G:N2	30:0:1173:A:H5'	2.09	0.67
1:A:11:ARG:HD3	38:A:8938:HOH:O	1.93	0.67
2:B:179:LEU:O	2:B:183:GLU:HG2	1.93	0.67
30:0:1024:G:C5	30:0:1025:C:C5	2.83	0.67
30:0:1969:A:H3'	30:0:1970:G:N2	2.10	0.67
30:0:2531:U:H4'	38:0:9592:HOH:O	1.94	0.67
33:J:8801:CL:CL	38:J:4038:HOH:O	2.50	0.67
29:3:68:LYS:CE	30:0:2436:U:H5'	2.24	0.67
30:0:39:G:C2	30:0:444:C:C2	2.83	0.67
30:0:248:A:H5'	30:0:249:G:OP2	1.93	0.67
30:0:252:C:O2	30:0:252:C:H2'	1.95	0.67
1:A:96:LEU:HD22	1:A:128:LEU:HD13	1.77	0.67
8:H:59:GLN:HE21	8:H:129:ARG:HE	1.42	0.67
14:N:5:ARG:HB2	14:N:5:ARG:HH11	1.60	0.67
14:N:86:LEU:HD12	14:N:125:ALA:HB2	1.76	0.67
21:U:31:PHE:CG	21:U:37:GLU:HG2	2.29	0.67
30:0:152:A:O2'	30:0:153:C:H5'	1.95	0.67
30:0:1495:C:H1'	30:0:1573:A:H1'	1.77	0.67
30:0:1701:A:H5'	38:0:6206:HOH:O	1.95	0.67
30:0:1759:A:C2	30:0:1818:C:C2	2.82	0.67
30:0:1931:A:C2'	30:0:1932:G:H5'	2.25	0.67
31:9:2:U:OP2	31:9:3:A:H5'	1.95	0.67
3:C:2:GLN:HA	3:C:18:LEU:H	1.60	0.67
11:K:37:TYR:HB3	38:0:7270:HOH:O	1.94	0.67
18:R:150:PRO:CG	18:R:150:PRO:O	2.41	0.67
27:1:34:CYS:HB3	27:1:39:PHE:H	1.59	0.67
30:0:544:G:H2'	30:0:545:G:H5''	1.76	0.67
30:0:1081:A:H5''	38:0:3140:HOH:O	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1391:G:N2	30:0:1434:A:H5''	2.10	0.67
1:A:48:ASP:HB3	38:A:9024:HOH:O	1.94	0.67
29:3:35:TRP:HA	29:3:38:ARG:NH1	2.09	0.67
30:0:107:U:C2'	30:0:108:U:H5'	2.24	0.67
30:0:2512:U:H4'	30:0:2514:U:O4	1.95	0.67
4:D:88:LEU:HB2	4:D:89:PRO:HD3	1.76	0.67
30:0:67:A:H2'	38:0:4106:HOH:O	1.95	0.67
30:0:228:C:H2'	30:0:229:G:C5'	2.25	0.67
25:Y:117:LEU:HB2	25:Y:174:VAL:HG21	1.77	0.66
30:0:559:U:H2'	30:0:560:U:H5'	1.77	0.66
30:0:1644:C:O2'	30:0:1645:U:H5'	1.94	0.66
14:N:154:LEU:HD11	14:N:157:PRO:HA	1.76	0.66
29:3:48:ASN:CG	30:0:169:A:H1'	2.20	0.66
30:0:544:G:C2'	30:0:545:G:H5''	2.26	0.66
30:0:1609:C:H2'	30:0:1610:G:H8	1.60	0.66
10:J:49:ARG:HD3	30:0:1119:G:OP2	1.95	0.66
30:0:154:C:C2	30:0:155:C:C5	2.83	0.66
30:0:334:G:H2'	30:0:335:U:O4'	1.95	0.66
30:0:1640:C:H5	38:0:6032:HOH:O	1.78	0.66
30:0:1706:G:C6	30:0:1707:G:C6	2.83	0.66
31:9:18:U:H2'	31:9:19:G:H8	1.60	0.66
10:J:26:VAL:HG13	10:J:36:VAL:HG11	1.76	0.66
30:0:1878:G:H1'	38:0:6044:HOH:O	1.96	0.66
30:0:2313:C:H3'	38:0:5898:HOH:O	1.95	0.66
30:0:2354:A:C2	30:0:2367:A:C8	2.83	0.66
30:0:2846:C:H4'	38:0:5034:HOH:O	1.94	0.66
30:0:2134:G:N2	30:0:2242:U:C2	2.64	0.66
2:B:264:GLU:HG2	2:B:267:LYS:CE	2.26	0.66
15:O:38:ARG:HD3	38:0:7633:HOH:O	1.95	0.66
25:Y:174:VAL:HG23	25:Y:177:LYS:HD2	1.75	0.66
30:0:124:C:H5'	38:0:6332:HOH:O	1.94	0.66
30:0:128:A:C8	30:0:128:A:H3'	2.30	0.66
30:0:1444:G:O2'	30:0:1445:G:H5'	1.96	0.66
30:0:2026:C:O2'	30:0:2027:U:H5'	1.95	0.66
30:0:2133:U:H4'	30:0:2134:G:H5'	1.77	0.66
31:9:5:G:O2'	31:9:6:C:H5'	1.96	0.66
18:R:2:ILE:HG22	30:0:21:G:H4'	1.78	0.66
23:W:4:LEU:HD23	23:W:54:PHE:HB3	1.76	0.66
30:0:302:A:O2'	30:0:303:C:H5'	1.95	0.66
30:0:2875:A:C2	30:0:2883:A:C2	2.83	0.66
31:9:36:C:H4'	38:9:1968:HOH:O	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:940:G:H2'	30:0:941:G:H5'	1.77	0.66
30:0:1362:U:O2'	30:0:1363:G:H5'	1.96	0.66
30:0:1809:G:H4'	38:0:6148:HOH:O	1.95	0.66
31:9:29:C:C5	31:9:30:C:C6	2.84	0.66
38:B:9002:HOH:O	30:0:2678:A:H1'	1.95	0.66
13:M:76:ARG:HA	38:M:8947:HOH:O	1.94	0.66
20:T:9:LYS:HD2	38:0:3736:HOH:O	1.95	0.66
26:Z:43:GLY:HA2	30:0:1771:U:O2	1.95	0.66
30:0:1711:A:H3'	38:0:6254:HOH:O	1.96	0.66
30:0:2415:A:C2'	30:0:2416:G:H5'	2.24	0.66
30:0:128:A:H3'	30:0:128:A:H8	1.61	0.66
30:0:582:U:H2'	30:0:583:C:C6	2.31	0.66
30:0:1185:U:H5'	38:0:7367:HOH:O	1.94	0.66
30:0:1935:C:H2'	30:0:1936:C:H6	1.59	0.66
30:0:228:C:O2'	30:0:229:G:H5'	1.96	0.65
30:0:1730:G:H4'	30:0:1731:C:H6	1.59	0.65
2:B:270:ILE:HG12	2:B:298:LYS:HB2	1.76	0.65
13:M:97:ILE:HD12	13:M:127:LYS:HD2	1.78	0.65
14:N:130:PRO:HA	38:N:8834:HOH:O	1.96	0.65
15:O:25:VAL:HG12	30:0:709:G:O2'	1.96	0.65
16:P:89:ASN:OD1	16:P:92:GLU:HG3	1.97	0.65
29:3:47:GLY:O	30:0:2121:G:H4'	1.96	0.65
30:0:77:G:O2'	30:0:78:G:H5'	1.95	0.65
30:0:660:A:N6	30:0:746:A:O4'	2.29	0.65
30:0:1165:G:H21	30:0:1173:A:H5'	1.58	0.65
30:0:1856:C:H5'	30:0:1858:A:O4'	1.95	0.65
30:0:2539:U:H1'	38:0:7688:HOH:O	1.95	0.65
31:9:20:G:H3'	38:9:2984:HOH:O	1.94	0.65
31:9:96:C:H2'	31:9:97:U:H6	1.61	0.65
1:A:135:VAL:HG21	1:A:147:ARG:HB3	1.78	0.65
21:U:51:TRP:HA	21:U:56:ARG:HE	1.61	0.65
21:U:52:THR:HG22	21:U:54:THR:H	1.61	0.65
29:3:47:GLY:HA2	30:0:2121:G:C4'	2.26	0.65
30:0:559:U:H2'	30:0:560:U:C5'	2.27	0.65
30:0:821:U:H2'	30:0:822:C:H6	1.59	0.65
30:0:963:C:H2'	30:0:964:G:C8	2.31	0.65
30:0:1325:G:C2	30:0:1326:C:C6	2.85	0.65
30:0:1878:G:HO2'	30:0:1879:U:H6	1.44	0.65
1:A:47:HIS:CD2	30:0:1654:U:C6	2.84	0.65
8:H:49:GLN:HE21	8:H:170:ARG:HE	1.43	0.65
13:M:66:SER:HB3	13:M:128:TRP:CD1	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:68:ARG:HB2	38:0:6930:HOH:O	1.95	0.65
28:2:43:ARG:HH22	30:0:1684:A:C1'	2.02	0.65
30:0:272:A:H5'	30:0:273:G:OP2	1.95	0.65
30:0:352:A:O2'	30:0:353:G:H5'	1.95	0.65
30:0:542:A:H5'	30:0:542:A:H8	1.61	0.65
30:0:1302:G:H5'	30:0:1331:G:H4'	1.79	0.65
30:0:2872:U:H2'	30:0:2873:C:H6	1.60	0.65
5:E:81:GLU:O	5:E:172:PRO:HD3	1.97	0.65
10:J:105:LEU:HA	38:J:5907:HOH:O	1.95	0.65
25:Y:182:PHE:HD2	25:Y:200:THR:O	1.80	0.65
30:0:1118:A:H8	30:0:1119:G:H5''	1.62	0.65
30:0:2474:A:C8	30:0:2621:PSU:H4'	2.31	0.65
30:0:2511:A:H2'	30:0:2512:U:O4'	1.97	0.65
30:0:2777:G:O2'	30:0:2778:A:H5'	1.96	0.65
25:Y:219:GLU:HG3	25:Y:220:GLU:N	2.11	0.65
26:Z:47:ARG:HH21	30:0:1771:U:H1'	1.61	0.65
30:0:255:A:H2'	30:0:256:C:C6	2.32	0.65
30:0:255:A:H2'	30:0:256:C:H6	1.60	0.65
30:0:1016:U:C2	30:0:1017:U:C6	2.84	0.65
30:0:1412:U:O4	30:0:1681:G:H2'	1.97	0.65
30:0:2742:G:H5'	38:0:5759:HOH:O	1.97	0.65
30:0:2804:C:H2'	30:0:2805:A:O4'	1.97	0.65
5:E:7:ILE:HG22	5:E:73:PHE:CZ	2.32	0.65
30:0:969:G:N2	30:0:1000:C:C2	2.64	0.65
30:0:1769:C:O2'	30:0:1770:U:H5'	1.97	0.65
11:K:20:CYS:HB2	11:K:29:LEU:HG	1.77	0.65
30:0:146:U:O2'	30:0:147:G:H5'	1.97	0.65
30:0:1157:C:O2'	30:0:1158:G:H5'	1.97	0.65
30:0:1279:U:O2	30:0:1279:U:H2'	1.95	0.65
30:0:1397:C:O2'	30:0:1398:G:H5'	1.97	0.65
30:0:2795:C:O2'	30:0:2796:U:H5'	1.96	0.65
2:B:201:ASP:HB2	2:B:312:ARG:HD2	1.77	0.65
15:O:73:ASP:HA	15:O:92:VAL:O	1.96	0.65
30:0:429:A:C8	38:0:3806:HOH:O	2.50	0.65
30:0:1201:C:H6	38:0:5689:HOH:O	1.78	0.65
30:0:1342:C:C2'	30:0:1343:C:H5'	2.27	0.65
30:0:1742:A:H61	30:0:2037:C:H42	1.44	0.65
30:0:2110:G:H4'	38:0:7608:HOH:O	1.96	0.65
30:0:2867:G:H2'	30:0:2868:C:C6	2.32	0.65
16:P:98:ILE:HD12	16:P:102:ARG:NE	2.12	0.65
30:0:549:A:C2	30:0:550:C:C2	2.85	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:560:U:H2'	30:0:561:G:C8	2.29	0.65
30:0:574:G:O2'	30:0:575:A:H5'	1.96	0.65
30:0:2272:G:H5''	38:0:4183:HOH:O	1.97	0.65
31:9:96:C:H2'	31:9:97:U:C6	2.32	0.65
13:M:84:LYS:HB2	30:0:170:U:OP1	1.98	0.64
16:P:114:LEU:HA	16:P:118:GLN:NE2	2.11	0.64
17:Q:13:LYS:HD3	38:0:4008:HOH:O	1.97	0.64
30:0:37:A:C2	30:0:446:G:C2	2.85	0.64
30:0:1118:A:C8	30:0:1119:G:H5''	2.32	0.64
30:0:1527:A:N6	30:0:1663:G:H2'	2.12	0.64
30:0:1741:U:C4	30:0:2033:G:C8	2.85	0.64
30:0:1778:A:H2'	30:0:1779:A:H5'	1.79	0.64
31:9:45:A:C5	31:9:46:C:C5	2.86	0.64
13:M:52:GLN:HE22	13:M:118:TYR:HB3	1.62	0.64
14:N:67:ALA:CA	14:N:71:TRP:HB3	2.21	0.64
30:0:1172:G:H1'	38:0:4927:HOH:O	1.96	0.64
30:0:2289:G:O2'	30:0:2290:U:H5'	1.98	0.64
20:T:1:SER:HB2	30:0:447:A:P	2.37	0.64
24:X:30:MET:HE1	24:X:58:ALA:HB3	1.78	0.64
30:0:294:C:H5	30:0:357:A:N6	1.94	0.64
30:0:405:C:H3'	38:0:7424:HOH:O	1.95	0.64
30:0:559:U:C2'	30:0:560:U:H5'	2.27	0.64
30:0:1359:U:C5	30:0:2101:A:C8	2.85	0.64
30:0:1632:A:C3'	30:0:1633:C:H5'	2.27	0.64
30:0:2278:U:O2	30:0:2470:A:C8	2.50	0.64
30:0:2402:A:O2'	30:0:2403:C:H5'	1.97	0.64
21:U:39:ASN:ND2	21:U:44:ARG:HH11	1.96	0.64
30:0:1835:U:C5	30:0:1840:A:N7	2.65	0.64
30:0:2769:C:H2'	30:0:2770:G:C5'	2.27	0.64
31:9:9:C:H2'	31:9:10:C:H5'	1.79	0.64
31:9:28:U:O2	31:9:28:U:H2'	1.97	0.64
3:C:2:GLN:HB3	3:C:17:ASP:HA	1.80	0.64
38:K:4440:HOH:O	30:0:2582:G:H4'	1.96	0.64
30:0:29:C:O2'	30:0:30:U:H5'	1.97	0.64
30:0:281:U:H2'	30:0:282:C:O4'	1.97	0.64
30:0:1398:G:O2'	30:0:1399:A:H5'	1.96	0.64
30:0:1628:G:O2'	30:0:1629:G:H5'	1.98	0.64
30:0:1634:G:H2'	30:0:1635:U:C6	2.32	0.64
30:0:2268:C:H2'	30:0:2269:C:H6	1.63	0.64
30:0:2326:C:H4'	30:0:2412:G:C4'	2.27	0.64
5:E:91:PHE:HE1	30:0:2694:A:H4'	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:131:THR:HG22	10:J:133:GLY:H	1.63	0.64
30:0:100:C:C5	30:0:101:C:H5	2.15	0.64
30:0:195:C:H2'	30:0:196:G:H5'	1.78	0.64
30:0:1750:C:H5''	38:0:3647:HOH:O	1.97	0.64
30:0:1928:C:H2'	30:0:1929:G:O4'	1.97	0.64
25:Y:170:SER:OG	25:Y:175:ARG:HG3	1.98	0.64
30:0:420:U:H2'	30:0:421:C:C6	2.33	0.64
30:0:451:C:O2'	30:0:452:G:H5'	1.97	0.64
30:0:1159:G:H2'	30:0:1160:G:O4'	1.97	0.64
30:0:1479:G:H5''	38:0:3720:HOH:O	1.97	0.64
30:0:1933:G:N2	30:0:1934:A:H1'	2.12	0.64
27:1:1:THR:HB	38:0:7045:HOH:O	1.97	0.64
29:3:11:CYS:SG	29:3:20:HIS:NE2	2.71	0.64
30:0:736:A:H2	30:0:2406:U:H1'	1.63	0.64
31:9:110:G:C5	31:9:111:U:C5	2.85	0.64
13:M:164:THR:HG22	13:M:166:ALA:N	2.13	0.64
21:U:56:ARG:HB2	30:0:2890:A:H8	1.61	0.64
30:0:629:A:H4'	38:0:4483:HOH:O	1.96	0.64
30:0:1520:G:O2'	30:0:1521:C:H5'	1.97	0.64
30:0:1568:G:O2'	30:0:1569:U:H5'	1.98	0.64
30:0:1634:G:H3'	38:0:3870:HOH:O	1.96	0.64
30:0:1909:A:H2'	30:0:1910:A:C8	2.32	0.64
31:9:86:G:C2	31:9:88:G:C8	2.86	0.64
22:V:44:GLY:HA3	30:0:92:G:C4'	2.28	0.64
30:0:525:G:H5''	38:0:4554:HOH:O	1.98	0.64
30:0:1933:G:O2'	30:0:1934:A:H5'	1.98	0.64
30:0:2491:G:H1'	38:0:6784:HOH:O	1.96	0.64
31:9:18:U:H2'	31:9:19:G:C8	2.33	0.64
38:Y:8896:HOH:O	30:0:1357:A:H4'	1.98	0.63
26:Z:37:ARG:HB2	30:0:819:A:H4'	1.80	0.63
27:1:46:ARG:HA	38:0:3013:HOH:O	1.98	0.63
30:0:594:C:C5	30:0:595:U:C5	2.86	0.63
30:0:2769:C:H2'	30:0:2770:G:H5'	1.80	0.63
31:9:64:C:C2'	31:9:65:A:H5'	2.28	0.63
4:D:154:LYS:HD2	4:D:154:LYS:N	2.11	0.63
8:H:59:GLN:NE2	8:H:96:GLN:HG2	2.13	0.63
30:0:1160:G:O2'	30:0:1190:G:H8	1.81	0.63
30:0:1641:A:C2'	30:0:1642:A:C5'	2.73	0.63
1:A:1:GLY:HA2	30:0:2114:C:OP1	1.98	0.63
1:A:105:VAL:HG12	1:A:156:ILE:HA	1.81	0.63
5:E:84:MET:HE2	5:E:133:VAL:HG23	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:314:G:N2	30:0:317:A:C8	2.66	0.63
30:0:717:C:O2'	30:0:718:C:H5'	1.97	0.63
30:0:2830:U:O2'	30:0:2831:C:H5'	1.98	0.63
2:B:274:GLU:HA	2:B:292:GLY:O	1.98	0.63
13:M:84:LYS:HD3	13:M:85:ARG:HH11	1.64	0.63
21:U:23:HIS:HD2	21:U:27:ALA:HB3	1.64	0.63
30:0:802:G:H2'	30:0:803:C:C6	2.33	0.63
30:0:1224:G:H2'	30:0:1225:C:H6	1.61	0.63
31:9:89:C:O2'	31:9:90:G:H5'	1.97	0.63
3:C:98:ARG:HD3	38:C:8549:HOH:O	1.98	0.63
3:C:218:VAL:HG23	3:C:222:ASP:OD1	1.99	0.63
13:M:72:ALA:HB3	38:M:8965:HOH:O	1.97	0.63
13:M:73:ARG:HG2	30:0:1469:C:H5''	1.79	0.63
14:N:112:GLY:HA2	14:N:137:ALA:HB2	1.79	0.63
25:Y:149:GLN:HG2	38:Y:8856:HOH:O	1.98	0.63
26:Z:47:ARG:NH2	30:0:1771:U:H1'	2.14	0.63
29:3:33:MET:HG2	30:0:1922:A:H2'	1.80	0.63
4:D:103:ASN:ND2	4:D:133:ASN:HA	2.13	0.63
13:M:77:HIS:CD2	13:M:81:ARG:H	2.16	0.63
26:Z:47:ARG:HD3	38:Z:8720:HOH:O	1.99	0.63
30:0:10:U:H5''	30:0:531:G:C6	2.34	0.63
30:0:297:U:H2'	30:0:298:C:H6	1.63	0.63
30:0:466:A:H61	30:0:475:G:H1'	1.64	0.63
30:0:908:A:C4'	38:0:4914:HOH:O	2.45	0.63
30:0:1189:A:O2'	30:0:1208:C:H2'	1.97	0.63
30:0:1209:C:H2'	30:0:1210:G:C8	2.31	0.63
30:0:2304:G:H5'	38:0:3355:HOH:O	1.98	0.63
30:0:2564:G:H5''	30:0:2565:C:C5'	2.29	0.63
23:W:4:LEU:HD22	23:W:52:VAL:HG21	1.80	0.63
27:1:10:LYS:HG3	38:1:2979:HOH:O	1.98	0.63
30:0:1585:C:H2'	30:0:1586:G:C8	2.32	0.63
31:9:3:A:H2	31:9:21:G:N3	1.95	0.63
1:A:80:LEU:HD22	1:A:91:GLY:HA3	1.81	0.63
21:U:42:LEU:O	30:0:1810:C:H5'	1.99	0.63
30:0:109:U:O2	30:0:109:U:H2'	1.98	0.63
30:0:2608:C:H2'	38:0:3556:HOH:O	1.98	0.63
1:A:199:HIS:HD2	1:A:201:PHE:H	1.47	0.63
17:Q:27:GLN:HE21	31:9:8:G:C5'	2.12	0.63
30:0:432:G:C2	30:0:433:C:C5	2.86	0.63
30:0:1449:G:H4'	38:0:9214:HOH:O	1.99	0.63
30:0:1552:G:C6	30:0:1634:G:C6	2.87	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2255:A:O2'	30:0:2256:G:H5'	1.99	0.63
31:9:17:G:O2'	31:9:18:U:H5'	1.99	0.63
11:K:118:ALA:HA	11:K:125:ALA:HB2	1.80	0.62
30:0:287:C:N4	30:0:365:G:H1	1.96	0.62
30:0:1819:G:H2'	30:0:1820:G:C5'	2.29	0.62
30:0:2613:G:O2'	30:0:2614:C:H5'	1.99	0.62
1:A:72:GLU:HG3	26:Z:90:GLY:HA2	1.81	0.62
14:N:24:LEU:HD13	17:Q:26:PRO:HB3	1.81	0.62
14:N:119:GLN:O	14:N:123:ILE:HG13	2.00	0.62
25:Y:174:VAL:CG2	25:Y:177:LYS:HD2	2.28	0.62
26:Z:63:CYS:SG	26:Z:71:VAL:HG23	2.39	0.62
30:0:1224:G:H2'	30:0:1225:C:C6	2.33	0.62
30:0:1504:A:H5''	38:0:4378:HOH:O	1.99	0.62
30:0:2502:C:H2'	30:0:2503:A:C5'	2.23	0.62
2:B:214:PRO:HD2	38:0:9081:HOH:O	1.99	0.62
18:R:39:THR:HB	18:R:42:GLU:CG	2.30	0.62
30:0:57:C:N4	30:0:89:G:H1	1.97	0.62
30:0:236:A:H4'	30:0:237:G:OP1	1.99	0.62
30:0:275:G:C2	30:0:376:C:C2	2.87	0.62
30:0:727:G:H3'	30:0:728:C:H6	1.63	0.62
30:0:1900:A:O2'	30:0:1901:G:H5'	1.99	0.62
30:0:2388:C:O2'	30:0:2389:U:H5'	1.99	0.62
2:B:282:GLY:O	30:0:2898:G:H1'	1.99	0.62
20:T:19:ARG:HD3	20:T:67:LEU:O	2.00	0.62
30:0:1051:C:H5''	38:0:5864:HOH:O	2.00	0.62
30:0:1156:C:O5'	30:0:1156:C:H6	1.83	0.62
30:0:1182:C:H1'	30:0:1192:A:H8	1.63	0.62
30:0:2071:C:O2'	30:0:2534:U:H4'	2.00	0.62
30:0:2694:A:C8	30:0:2695:C:C5	2.87	0.62
33:0:8812:CL:CL	38:0:5079:HOH:O	2.53	0.62
1:A:42:VAL:O	1:A:76:VAL:HA	2.00	0.62
30:0:424:C:C2	30:0:425:U:C5	2.87	0.62
30:0:694:A:H2'	30:0:695:C:H5'	1.81	0.62
2:B:307:ARG:HH11	2:B:307:ARG:HG3	1.64	0.62
13:M:68:ARG:HG3	30:0:1469:C:OP1	2.00	0.62
29:3:12:PRO:HD2	38:3:9035:HOH:O	1.98	0.62
30:0:178:U:H2'	30:0:179:C:H6	1.63	0.62
30:0:290:C:O2'	30:0:291:C:H5'	1.99	0.62
30:0:1619:G:H2'	30:0:1620:C:C6	2.33	0.62
30:0:1667:A:C2	30:0:1668:U:C2	2.88	0.62
30:0:2246:U:H2'	30:0:2247:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2637:A:H4'	38:0:4882:HOH:O	1.99	0.62
26:Z:43:GLY:O	26:Z:47:ARG:HG2	1.99	0.62
30:0:737:A:H2'	30:0:738:G:C8	2.34	0.62
30:0:1477:C:C2'	30:0:1478:U:H5'	2.29	0.62
30:0:1666:C:O2	30:0:1667:A:C8	2.53	0.62
30:0:2064:U:H2'	30:0:2065:C:H6	1.64	0.62
3:C:129:HIS:CE1	3:C:232:LEU:H	2.18	0.62
11:K:76:GLN:HA	11:K:93:ASN:HA	1.82	0.62
18:R:39:THR:HB	18:R:42:GLU:HG3	1.81	0.62
20:T:32:ARG:HG2	20:T:38:ARG:HA	1.80	0.62
26:Z:73:ARG:HG2	26:Z:74:GLN:H	1.64	0.62
30:0:107:U:H2'	30:0:108:U:C5'	2.29	0.62
30:0:1076:G:O2'	30:0:1077:G:H5'	1.99	0.62
30:0:1434:A:H2'	30:0:1436:C:C5	2.34	0.62
30:0:2313:C:H6	38:0:5898:HOH:O	1.82	0.62
30:0:2590:U:H2'	30:0:2591:C:H5'	1.80	0.62
30:0:2851:G:O2'	30:0:2852:A:H5'	1.98	0.62
3:C:64:GLY:O	30:0:2100:A:H4'	1.99	0.62
13:M:70:GLY:HA2	30:0:2263:G:C4'	2.29	0.62
26:Z:70:ARG:HG2	26:Z:83:TYR:H	1.63	0.62
30:0:245:C:H2'	30:0:246:G:H5'	1.80	0.62
30:0:1309:U:C4	30:0:1310:U:C5	2.88	0.62
30:0:1528:A:N6	30:0:1663:G:H1'	2.11	0.62
30:0:1904:A:H2'	30:0:1905:U:O4'	2.00	0.62
30:0:2010:A:H2'	38:0:5883:HOH:O	1.99	0.62
30:0:2639:G:O2'	30:0:2640:U:H5'	1.99	0.62
2:B:212:GLN:HA	30:0:1733:A:H4'	1.82	0.62
8:H:158:ASN:HD22	30:0:2502:C:H4'	1.62	0.62
27:1:54:ALA:HB2	30:0:892:G:H5''	1.82	0.62
30:0:1161:A:O5'	30:0:1161:A:H8	1.83	0.62
30:0:1346:U:H1'	38:0:4405:HOH:O	2.00	0.62
29:3:2:GLN:H	30:0:2320:U:H5'	1.64	0.61
30:0:536:A:H3'	38:0:5002:HOH:O	2.00	0.61
30:0:542:A:O2'	30:0:543:G:H5'	2.00	0.61
30:0:661:G:C6	30:0:662:U:C4	2.88	0.61
30:0:1165:G:H1'	30:0:1174:A:C1'	2.14	0.61
30:0:1511:U:O2'	30:0:1512:G:H5'	2.00	0.61
30:0:2032:U:H2'	30:0:2033:G:C5'	2.30	0.61
30:0:2251:G:C6	30:0:2252:A:C6	2.88	0.61
31:9:3:A:N6	31:9:22:G:H1'	2.14	0.61
13:M:43:PRO:HG3	13:M:62:VAL:HG21	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:126:PRO:HG2	25:Y:128:PHE:CE1	2.34	0.61
30:0:293:A:O2'	30:0:294:C:H5'	2.00	0.61
30:0:517:U:H2'	30:0:518:G:H5'	1.81	0.61
30:0:957:A:H8	30:0:957:A:O5'	1.83	0.61
30:0:1964:U:O2	30:0:1964:U:C2'	2.48	0.61
30:0:2421:G:H3'	30:0:2422:U:C5'	2.31	0.61
1:A:191:GLY:HA2	1:A:194:MET:HE2	1.81	0.61
23:W:151:GLU:O	23:W:154:ARG:HB2	1.99	0.61
30:0:853:C:H3'	38:0:4515:HOH:O	1.98	0.61
30:0:1616:A:H5''	30:0:1617:C:OP1	2.00	0.61
30:0:2734:G:H4'	38:0:9571:HOH:O	1.99	0.61
2:B:190:MET:HE1	2:B:311:PHE:CD1	2.35	0.61
3:C:140:VAL:HB	38:C:8655:HOH:O	2.00	0.61
6:F:13:GLU:OE2	6:F:78:GLU:HG2	2.00	0.61
30:0:807:A:O2'	30:0:808:A:H5'	2.00	0.61
30:0:932:U:O2'	30:0:1296:A:H1'	2.00	0.61
30:0:1346:U:O2'	30:0:1347:U:H5'	2.00	0.61
30:0:1921:A:C6	30:0:1922:A:C2	2.88	0.61
30:0:2314:G:C2'	30:0:2315:C:H5'	2.30	0.61
30:0:2635:A:O2'	30:0:2636:C:H5'	1.99	0.61
2:B:36:PRO:HB3	2:B:174:ARG:HA	1.81	0.61
6:F:30:LYS:HB2	6:F:97:ALA:HB3	1.83	0.61
6:F:63:ILE:HB	6:F:64:PRO:HD3	1.82	0.61
30:0:243:A:H61	30:0:269:G:H1'	1.64	0.61
30:0:869:G:H1'	38:0:3296:HOH:O	2.01	0.61
30:0:958:G:H4'	31:9:105:A:H4'	1.81	0.61
30:0:963:C:O2	30:0:1005:A:N1	2.33	0.61
30:0:1015:C:H2'	30:0:1016:U:H6	1.65	0.61
30:0:1165:G:H3'	30:0:1166:A:C5'	2.31	0.61
30:0:1483:C:C2'	30:0:1484:G:H5'	2.30	0.61
30:0:2070:G:H2'	30:0:2072:G:OP1	2.01	0.61
1:A:51:ARG:HG3	38:A:9024:HOH:O	2.00	0.61
23:W:52:VAL:HG22	23:W:53:ALA:H	1.64	0.61
24:X:47:ALA:HB1	24:X:82:GLU:CB	2.31	0.61
30:0:271:C:N4	30:0:378:A:C2	2.69	0.61
30:0:527:U:H2'	30:0:528:G:H8	1.66	0.61
30:0:946:C:H2'	30:0:947:U:C6	2.35	0.61
30:0:1613:C:H2'	30:0:1614:G:O4'	2.01	0.61
30:0:1623:C:C5	30:0:1624:A:C5	2.88	0.61
30:0:1774:G:C2'	30:0:1775:A:H5'	2.31	0.61
30:0:1931:A:H2'	30:0:1932:G:C5'	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2110:G:C2	30:0:2478:U:C2	2.88	0.61
30:0:2707:C:O2	30:0:2707:C:H2'	2.00	0.61
30:0:2787:C:H2'	30:0:2788:A:O4'	2.00	0.61
2:B:142:LEU:HD21	2:B:178:ALA:HB1	1.83	0.61
2:B:267:LYS:HD3	38:B:8996:HOH:O	2.00	0.61
4:D:25:MET:HE2	4:D:41:LEU:CG	2.30	0.61
5:E:139:GLU:OE2	30:0:2781:U:H1'	2.01	0.61
12:L:53:ARG:NH2	12:L:57:VAL:HG12	2.15	0.61
12:L:121:ILE:HA	12:L:141:GLU:O	2.01	0.61
29:3:38:ARG:HD2	29:3:42:ARG:HH12	1.66	0.61
29:3:54:LYS:HB3	38:3:9017:HOH:O	1.99	0.61
30:0:60:A:C2	30:0:61:G:C8	2.89	0.61
30:0:723:G:H2'	30:0:724:G:H8	1.63	0.61
30:0:1206:U:H3'	30:0:1206:U:C6	2.35	0.61
30:0:1670:A:O2'	30:0:1671:U:H5'	2.01	0.61
30:0:2526:C:O2'	30:0:2527:U:H5'	2.01	0.61
38:H:196:HOH:O	30:0:965:A:H2'	2.00	0.61
24:X:73:ARG:NH2	24:X:88:GLU:HB2	2.15	0.61
30:0:283:U:H5''	30:0:284:C:OP2	2.01	0.61
30:0:1127:C:C5	30:0:1128:U:C4	2.88	0.61
30:0:1485:A:H3'	38:0:5253:HOH:O	1.99	0.61
30:0:1642:A:C8	30:0:1643:C:C5	2.88	0.61
30:0:2032:U:O2'	30:0:2033:G:H5''	2.00	0.61
30:0:2111:G:H1'	38:0:9053:HOH:O	2.00	0.61
30:0:2637:A:H5'	38:0:9278:HOH:O	1.99	0.61
4:D:25:MET:CE	4:D:37:ALA:HB1	2.31	0.61
16:P:134:VAL:O	16:P:137:LEU:HB3	2.00	0.61
30:0:249:G:N2	30:0:250:C:C2	2.69	0.61
30:0:304:G:H1'	30:0:347:A:N6	2.15	0.61
30:0:684:G:H2'	30:0:685:C:C6	2.36	0.61
30:0:1453:G:H2'	30:0:1454:U:O4'	2.01	0.61
30:0:1790:C:H2'	30:0:1791:U:H6	1.65	0.61
30:0:2248:C:H2'	30:0:2249:G:H8	1.65	0.61
13:M:95:LYS:HE3	30:0:157:G:H4'	1.82	0.61
30:0:946:C:H2'	30:0:947:U:H6	1.65	0.61
30:0:1165:G:N2	30:0:1173:A:C5'	2.64	0.61
30:0:1531:U:O2	30:0:1661:A:C2	2.54	0.61
30:0:2727:A:H2'	30:0:2728:C:H5'	1.83	0.61
7:G:64:ASN:HD22	7:G:64:ASN:N	1.98	0.60
26:Z:60:ASP:CB	26:Z:69:ASP:HB3	2.23	0.60
30:0:64:G:O2'	30:0:65:C:H5'	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:366:U:H2'	30:0:367:G:O4'	2.01	0.60
30:0:2291:A:C8	30:0:2309:C:H5'	2.36	0.60
30:0:2703:A:H2'	30:0:2704:C:H6	1.66	0.60
4:D:159:PRO:O	4:D:163:VAL:HG23	2.01	0.60
13:M:28:GLN:O	13:M:32:ARG:HG3	2.00	0.60
13:M:46:LEU:HD22	13:M:50:ARG:HD2	1.82	0.60
16:P:115:SER:N	16:P:118:GLN:HB2	2.15	0.60
19:S:21:GLN:HE22	30:0:1508:C:H4'	1.66	0.60
21:U:31:PHE:CD2	21:U:37:GLU:HG2	2.36	0.60
23:W:48:VAL:HG12	23:W:52:VAL:HB	1.83	0.60
29:3:2:GLN:H	30:0:2320:U:C5'	2.14	0.60
30:0:1238:C:H5''	38:0:6777:HOH:O	1.99	0.60
30:0:2421:G:H3'	30:0:2422:U:H5''	1.82	0.60
30:0:2563:U:O2'	30:0:2564:G:H8	1.84	0.60
1:A:192:VAL:HG23	38:A:9014:HOH:O	2.01	0.60
23:W:24:LEU:HD21	23:W:44:MET:SD	2.42	0.60
30:0:1603:A:H5''	30:0:1605:G:H5'	1.83	0.60
30:0:2820:A:H2'	30:0:2821:C:O4'	2.01	0.60
31:9:55:U:H4'	31:9:56:A:C8	2.36	0.60
6:F:2:VAL:HG22	6:F:57:GLU:OE1	2.01	0.60
9:I:113:SER:HA	30:0:1186:C:H5'	1.83	0.60
16:P:35:ILE:HA	38:P:2641:HOH:O	2.00	0.60
26:Z:42:TYR:HD2	30:0:1829:A:H61	1.48	0.60
30:0:513:A:H1'	38:0:3639:HOH:O	2.00	0.60
30:0:545:G:H8	30:0:545:G:C5'	2.00	0.60
30:0:597:A:C2	30:0:598:C:C4	2.89	0.60
30:0:1209:C:O2'	30:0:1210:G:H5'	2.02	0.60
30:0:1819:G:H2'	30:0:1820:G:H5'	1.84	0.60
30:0:2089:A:C2'	30:0:2090:G:H5'	2.30	0.60
30:0:2694:A:C2	30:0:2702:A:C4	2.89	0.60
30:0:2757:A:H2'	30:0:2758:G:H5'	1.83	0.60
31:9:107:C:O2'	31:9:108:C:H5'	2.01	0.60
11:K:76:GLN:HA	11:K:93:ASN:CB	2.31	0.60
21:U:56:ARG:HH11	21:U:56:ARG:HG3	1.66	0.60
25:Y:154:ARG:NH2	30:0:1293:U:H5'	2.16	0.60
30:0:287:C:H2'	30:0:288:A:C8	2.37	0.60
30:0:1159:G:H1	30:0:1208:C:H42	1.50	0.60
30:0:1168:C:C5	30:0:1169:U:C5	2.89	0.60
30:0:1182:C:H1'	30:0:1192:A:C8	2.36	0.60
18:R:82:GLU:HG3	18:R:83:LYS:N	2.16	0.60
22:V:50:ARG:NH1	30:0:56:G:H5''	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:255:A:C5	30:0:256:C:C4	2.89	0.60
30:0:316:A:N3	30:0:336:G:O2'	2.34	0.60
30:0:586:C:H5''	38:0:7189:HOH:O	2.02	0.60
30:0:810:G:C5	30:0:811:C:C5	2.89	0.60
30:0:1377:C:C5	30:0:1693:A:C6	2.89	0.60
30:0:1568:G:C4	30:0:1569:U:C6	2.89	0.60
30:0:1928:C:N3	30:0:1929:G:C8	2.70	0.60
30:0:1964:U:H6	38:0:4522:HOH:O	1.83	0.60
30:0:2253:G:H2'	30:0:2254:G:C8	2.32	0.60
30:0:2895:C:H4'	38:0:5133:HOH:O	2.01	0.60
30:0:2900:G:O2'	30:0:2901:C:H5'	2.00	0.60
31:9:60:C:O2'	31:9:61:C:H5'	2.02	0.60
2:B:154:VAL:CG1	2:B:156:LYS:HG2	2.31	0.60
5:E:137:ASP:OD1	5:E:139:GLU:HB2	2.01	0.60
6:F:27:GLY:H	6:F:102:GLY:HA3	1.66	0.60
9:I:112:LEU:CD1	30:0:1162:G:H1'	2.32	0.60
24:X:73:ARG:HH22	24:X:88:GLU:HB2	1.65	0.60
30:0:10:U:C5	30:0:532:A:C8	2.89	0.60
30:0:1203:G:H5'	38:0:7165:HOH:O	2.01	0.60
30:0:1494:A:H4'	30:0:1494:A:OP1	2.01	0.60
30:0:1538:C:O2'	30:0:1539:U:H5'	2.02	0.60
30:0:1725:C:H4'	38:0:3409:HOH:O	2.00	0.60
30:0:2019:A:H1'	38:0:5660:HOH:O	2.00	0.60
4:D:25:MET:HE3	4:D:37:ALA:HB1	1.83	0.60
38:D:217:HOH:O	31:9:54:A:H4'	2.00	0.60
25:Y:189:ASN:HD22	25:Y:191:ASP:H	1.47	0.60
30:0:31:C:H4'	38:0:7326:HOH:O	2.01	0.60
30:0:300:U:C4	30:0:301:C:C5	2.89	0.60
30:0:1566:C:H2'	30:0:1567:G:C8	2.36	0.60
30:0:1883:U:H5''	30:0:2013:G:OP2	2.02	0.60
17:Q:1:PRO:HA	30:0:2299:G:O6	2.00	0.60
29:3:1:MET:HE3	30:0:2320:U:C5	2.37	0.60
29:3:24:LYS:HE3	29:3:90:PHE:HE1	1.67	0.60
29:3:40:ARG:HA	29:3:52:PHE:CE2	2.37	0.60
30:0:365:G:C5	30:0:366:U:C5	2.90	0.60
30:0:451:C:C5	30:0:452:G:C5	2.90	0.60
30:0:1421:C:H2'	30:0:1422:U:C6	2.36	0.60
30:0:2757:A:C2'	30:0:2758:G:H5'	2.32	0.60
30:0:2781:U:H2'	30:0:2782:G:H5'	1.84	0.60
31:9:94:G:O2'	31:9:95:C:H5'	2.02	0.60
10:J:56:LYS:HE2	10:J:60:ARG:HH21	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:65:LEU:HD13	30:0:746:A:C6	2.37	0.60
30:0:283:U:C5	30:0:284:C:N3	2.69	0.60
30:0:1424:A:N1	30:0:1441:G:C6	2.70	0.60
30:0:1934:A:C8	30:0:1935:C:C5	2.90	0.60
31:9:79:U:H2'	31:9:79:U:O2	2.02	0.60
29:3:51:LYS:HB3	30:0:219:G:O2'	2.02	0.59
30:0:718:C:C2'	30:0:719:C:H5'	2.32	0.59
30:0:1081:A:C6	30:0:1082:A:N1	2.69	0.59
30:0:2325:U:O2'	30:0:2411:C:H1'	2.01	0.59
6:F:50:VAL:HG21	6:F:63:ILE:HG21	1.84	0.59
11:K:8:VAL:HG12	11:K:9:THR:N	2.15	0.59
12:L:6:ARG:HD3	30:0:1299:G:O6	2.02	0.59
13:M:52:GLN:OE1	13:M:116:ASN:HB3	2.01	0.59
30:0:724:G:O2'	30:0:725:C:H5'	2.01	0.59
30:0:844:A:C6	30:0:882:A:C5	2.89	0.59
2:B:310:ARG:HD2	38:B:9130:HOH:O	2.02	0.59
3:C:101:ASP:HB2	30:0:750:A:O3'	2.03	0.59
6:F:21:GLU:O	6:F:24:ARG:HG2	2.01	0.59
11:K:26:ALA:HB2	11:K:64:MET:HE3	1.84	0.59
14:N:114:LYS:O	14:N:118:ILE:HG13	2.02	0.59
21:U:12:ASP:HB2	38:U:6067:HOH:O	2.02	0.59
25:Y:148:GLY:HA3	30:0:622:G:P	2.42	0.59
25:Y:151:SER:HB3	25:Y:154:ARG:HB3	1.84	0.59
26:Z:34:SER:HA	30:0:797:A:C4'	2.33	0.59
30:0:522:U:O2'	30:0:1366:C:H5'	2.02	0.59
30:0:1083:C:H4'	38:0:7040:HOH:O	2.02	0.59
30:0:1332:C:H2'	30:0:1333:U:H6	1.66	0.59
30:0:1424:A:C2	30:0:1441:G:C6	2.90	0.59
30:0:1883:U:H5'	30:0:2012:U:OP2	2.00	0.59
30:0:1925:G:O2'	30:0:1926:G:H5'	2.02	0.59
1:A:60:PHE:HD1	1:A:64:ASP:HB3	1.67	0.59
3:C:225:PRO:O	30:0:1308:A:H4'	2.03	0.59
13:M:77:HIS:HB2	13:M:81:ARG:NH2	2.14	0.59
14:N:143:ARG:HH21	14:N:169:PRO:HB2	1.67	0.59
15:O:44:ASN:HB2	33:O:8808:CL:CL	2.38	0.59
30:0:101:C:H2'	30:0:102:A:H8	1.66	0.59
30:0:192:A:C4	30:0:194:A:H1'	2.38	0.59
30:0:625:U:H3'	38:0:3239:HOH:O	2.01	0.59
30:0:891:G:O2'	30:0:892:G:H5'	2.01	0.59
30:0:1213:C:O2'	30:0:1214:G:H5'	2.03	0.59
30:0:1626:A:C2'	30:0:1627:G:C5'	2.77	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1665:G:O2'	30:0:1666:C:H5'	2.02	0.59
12:L:10:SER:O	12:L:11:ARG:HB3	2.02	0.59
21:U:23:HIS:CD2	21:U:27:ALA:HB3	2.37	0.59
21:U:49:LEU:HD13	21:U:51:TRP:CZ2	2.37	0.59
23:W:64:THR:O	23:W:68:THR:HG22	2.01	0.59
26:Z:40:ALA:O	30:0:2018:A:H2	1.85	0.59
30:0:62:C:H2'	30:0:63:U:C6	2.36	0.59
30:0:292:G:C2'	30:0:358:G:N2	2.63	0.59
30:0:529:G:H5''	30:0:546:C:O2'	2.03	0.59
30:0:635:A:H2'	30:0:636:G:H5''	1.85	0.59
30:0:735:C:C3'	30:0:736:A:H8	2.03	0.59
30:0:970:U:H3'	30:0:970:U:C6	2.37	0.59
30:0:1044:C:H5''	38:0:9030:HOH:O	2.03	0.59
30:0:1270:U:O2'	30:0:1271:A:H5'	2.02	0.59
30:0:1622:G:H2'	30:0:1623:C:H5'	1.83	0.59
30:0:1838:U:O2'	30:0:2644:C:H5'	2.03	0.59
30:0:2297:U:H3'	38:0:7375:HOH:O	2.03	0.59
30:0:2332:A:H3'	30:0:2333:G:H8	1.67	0.59
30:0:2830:U:C2'	30:0:2831:C:H5'	2.33	0.59
31:9:64:C:O2'	31:9:65:A:H5'	2.02	0.59
30:0:1971:G:H5'	38:0:7283:HOH:O	2.02	0.59
29:3:47:GLY:C	30:0:2121:G:H4'	2.27	0.59
30:0:20:G:H2'	30:0:21:G:O5'	2.01	0.59
30:0:163:U:O3'	30:0:896:C:H4'	2.02	0.59
30:0:226:A:H2'	30:0:227:A:O4'	2.02	0.59
30:0:711:G:O2'	30:0:712:C:H5'	2.03	0.59
30:0:810:G:C6	30:0:811:C:C4	2.91	0.59
30:0:1323:G:H1	30:0:1334:C:H42	1.50	0.59
30:0:2587:OMU:CM2	30:0:2589:U:C6	2.86	0.59
30:0:2668:G:H2'	30:0:2669:U:H6	1.67	0.59
8:H:6:ALA:HA	8:H:61:ARG:NH1	2.18	0.59
8:H:48:VAL:HA	8:H:170:ARG:O	2.03	0.59
30:0:559:U:H5'	30:0:559:U:C6	2.31	0.59
30:0:1206:U:H5'	30:0:1206:U:C6	2.35	0.59
30:0:1790:C:H4'	38:0:6543:HOH:O	2.02	0.59
30:0:2731:G:O2'	30:0:2732:U:H5'	2.02	0.59
31:9:104:A:H3'	38:9:4108:HOH:O	2.02	0.59
2:B:5:ARG:HH11	2:B:8:LYS:HE2	1.68	0.59
7:G:16:LYS:HZ1	7:G:63:ARG:HH12	1.51	0.59
8:H:53:ILE:HA	8:H:134:GLU:O	2.03	0.59
15:O:112:ARG:HG3	15:O:113:VAL:N	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:73:ASP:HB3	19:S:76:GLU:HB2	1.85	0.59
24:X:71:ARG:HB2	24:X:88:GLU:HG2	1.84	0.59
30:0:249:G:O2'	30:0:250:C:H5'	2.03	0.59
30:0:1249:U:H2'	30:0:1250:C:C6	2.38	0.59
30:0:1512:G:H2'	30:0:1513:C:H6	1.67	0.59
30:0:1575:C:O2'	30:0:1576:G:H5'	2.03	0.59
30:0:1771:U:O2'	30:0:1773:G:N7	2.36	0.59
13:M:93:ARG:HG2	38:0:3430:HOH:O	2.02	0.59
14:N:34:LEU:HD22	14:N:129:ILE:HD13	1.84	0.59
17:Q:27:GLN:NE2	31:9:8:G:H4'	2.08	0.59
30:0:128:A:C8	30:0:128:A:C3'	2.84	0.59
30:0:368:C:C2'	30:0:369:G:H5'	2.32	0.59
30:0:844:A:C6	30:0:882:A:C6	2.90	0.59
30:0:1156:C:C6	30:0:1156:C:H3'	2.37	0.59
30:0:1309:U:O2'	30:0:1310:U:H5'	2.02	0.59
30:0:2714:U:H2'	30:0:2715:G:C8	2.37	0.59
31:9:3:A:C2	31:9:21:G:N3	2.71	0.59
1:A:22:ARG:HH22	1:A:181:ALA:HA	1.67	0.58
25:Y:205:ILE:HD12	25:Y:214:ARG:NH1	2.18	0.58
27:1:15:THR:HB	27:1:28:HIS:CD2	2.37	0.58
29:3:80:ARG:NH2	30:0:2381:C:H4'	2.18	0.58
30:0:937:C:O2'	30:0:938:G:H5'	2.03	0.58
30:0:1187:U:H2'	38:0:6812:HOH:O	2.02	0.58
30:0:1583:U:O2'	30:0:1584:C:H5'	2.03	0.58
30:0:2563:U:HO2'	30:0:2564:G:H8	1.49	0.58
30:0:2721:U:H3	30:0:2763:G:H1'	1.68	0.58
1:A:3:ARG:HB2	1:A:8:ARG:HE	1.67	0.58
1:A:122:SER:O	1:A:124:VAL:HG13	2.03	0.58
5:E:145:ALA:HB1	5:E:168:ILE:HD11	1.84	0.58
6:F:49:PHE:HE1	6:F:98:VAL:HG23	1.68	0.58
9:I:93:ALA:O	9:I:132:VAL:HA	2.02	0.58
15:O:4:ASN:HB3	15:O:7:LEU:HB3	1.85	0.58
18:R:59:PHE:O	18:R:63:ASN:HB3	2.02	0.58
18:R:80:TYR:O	30:0:2050:G:H5''	2.03	0.58
23:W:130:HIS:O	23:W:136:GLY:HA3	2.03	0.58
30:0:282:C:H2'	30:0:283:U:O4'	2.02	0.58
30:0:1346:U:H2'	30:0:1347:U:C6	2.32	0.58
30:0:1441:G:H1'	38:0:7665:HOH:O	2.01	0.58
30:0:2271:G:N3	30:0:2271:G:H2'	2.17	0.58
2:B:79:MET:HB2	2:B:188:HIS:HE1	1.68	0.58
4:D:54:ALA:HB2	4:D:69:ILE:CD1	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:63:LYS:NZ	30:0:659:A:N7	2.47	0.58
30:0:24:G:C2	30:0:518:G:N3	2.71	0.58
30:0:210:U:H2'	30:0:211:U:O4'	2.03	0.58
30:0:1170:U:H1'	30:0:1172:G:C8	2.39	0.58
30:0:1523:G:C5	30:0:1524:U:C4	2.91	0.58
30:0:1766:U:O2	30:0:1778:A:H5'	2.03	0.58
30:0:2397:G:C5	30:0:2465:A:C6	2.91	0.58
30:0:2572:G:O2'	30:0:2573:G:H5'	2.03	0.58
12:L:77:ALA:HB3	38:L:8831:HOH:O	2.03	0.58
20:T:4:PRO:HB3	30:0:333:G:H5''	1.86	0.58
20:T:40:VAL:HG11	20:T:101:LEU:HD21	1.83	0.58
23:W:4:LEU:O	23:W:32:CYS:HA	2.04	0.58
23:W:80:ASP:O	23:W:84:VAL:HG23	2.03	0.58
24:X:43:VAL:HG22	24:X:76:ARG:NH1	2.18	0.58
29:3:78:HIS:HD2	29:3:80:ARG:HG3	1.67	0.58
30:0:124:C:H3'	38:0:7559:HOH:O	2.03	0.58
30:0:170:U:H2'	30:0:171:C:H5'	1.85	0.58
30:0:433:C:C2	30:0:434:U:C6	2.91	0.58
30:0:1579:C:H4'	30:0:1580:A:OP1	2.02	0.58
30:0:1829:A:H2'	30:0:1830:C:H5'	1.84	0.58
30:0:2691:A:OP1	30:0:2691:A:H8	1.85	0.58
30:0:2824:C:H5'	30:0:2914:A:N6	2.18	0.58
2:B:144:THR:HG22	2:B:145:HIS:H	1.67	0.58
3:C:4:THR:HA	3:C:15:GLU:HB3	1.85	0.58
15:O:59:VAL:HG23	15:O:111:VAL:HG21	1.85	0.58
18:R:99:ALA:HB1	18:R:109:MET:CE	2.29	0.58
30:0:876:A:N7	30:0:878:G:H1'	2.18	0.58
30:0:1100:G:N2	30:0:1101:U:C2	2.72	0.58
30:0:1120:U:H5'	30:0:1121:G:OP2	2.04	0.58
1:A:51:ARG:NH2	1:A:53:ALA:HB3	2.18	0.58
4:D:17:ARG:NH1	4:D:137:PRO:HA	2.18	0.58
4:D:134:LEU:HD11	4:D:166:ILE:HD11	1.85	0.58
13:M:95:LYS:CE	30:0:157:G:H4'	2.33	0.58
16:P:78:GLY:O	30:0:1813:U:H4'	2.04	0.58
21:U:39:ASN:HD22	21:U:44:ARG:HD3	1.67	0.58
30:0:57:C:O2'	30:0:58:C:H5'	2.03	0.58
30:0:65:C:O2'	30:0:66:G:H5'	2.02	0.58
30:0:413:G:O2'	30:0:414:C:H5'	2.03	0.58
30:0:1481:G:H2'	30:0:1482:A:C8	2.38	0.58
30:0:1587:U:C2'	30:0:1588:G:H5'	2.32	0.58
30:0:1617:C:C5	30:0:1643:C:H4'	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1753:C:O5'	30:0:1753:C:H6	1.86	0.58
30:0:2282:U:H4'	30:0:2309:C:C5	2.39	0.58
30:0:2581:U:H1'	38:0:4436:HOH:O	2.03	0.58
31:9:49:G:C2'	31:9:50:G:H5'	2.33	0.58
31:9:58:G:C8	31:9:59:C:C5	2.91	0.58
38:A:8939:HOH:O	30:0:2270:G:H4'	2.04	0.58
4:D:57:THR:HG23	4:D:63:ILE:HA	1.85	0.58
6:F:31:LYS:HD2	38:0:4760:HOH:O	2.02	0.58
30:0:499:G:O2'	30:0:500:G:H5'	2.04	0.58
30:0:537:G:O4'	30:0:538:C:C5	2.57	0.58
30:0:881:C:H5''	38:0:3619:HOH:O	2.01	0.58
30:0:2655:U:C4	30:0:2656:G:N7	2.71	0.58
2:B:189:ALA:O	2:B:192:ASP:HB2	2.04	0.58
11:K:64:MET:HA	11:K:67:GLN:HE21	1.69	0.58
14:N:48:VAL:CG1	14:N:55:ASP:HB3	2.33	0.58
16:P:133:SER:HB3	30:0:1793:C:H5''	1.86	0.58
29:3:44:SER:HA	29:3:49:ASP:OD2	2.04	0.58
30:0:287:C:H2'	30:0:288:A:H8	1.68	0.58
30:0:1281:C:H2'	30:0:1282:U:O4'	2.04	0.58
30:0:2493:C:O2	30:0:2493:C:H2'	2.04	0.58
31:9:114:G:H2'	31:9:115:C:H6	1.67	0.58
9:I:83:GLY:CA	30:0:1168:C:H5'	2.32	0.58
10:J:27:ALA:HB1	10:J:87:LEU:HD21	1.85	0.58
11:K:114:ALA:HB3	11:K:117:VAL:HG23	1.84	0.58
12:L:143:THR:HG22	12:L:144:ASP:H	1.67	0.58
22:V:39:ALA:H	22:V:40:PRO:CD	2.14	0.58
30:0:149:G:O2'	30:0:150:G:H5'	2.04	0.58
30:0:303:C:C2'	30:0:304:G:H5'	2.34	0.58
30:0:686:A:O2'	30:0:747:G:H4'	2.04	0.58
30:0:1188:A:N7	30:0:1189:A:C2	2.71	0.58
30:0:2780:C:H2'	30:0:2781:U:C6	2.38	0.58
4:D:13:MET:HB3	31:9:56:A:C4	2.39	0.58
21:U:56:ARG:HD2	30:0:2890:A:C1'	2.33	0.58
30:0:148:A:O2'	30:0:149:G:H5'	2.04	0.58
30:0:1206:U:C6	30:0:1206:U:C3'	2.86	0.58
30:0:1434:A:O2'	30:0:1435:U:H2'	2.04	0.58
30:0:2328:U:N3	30:0:2329:C:C5	2.72	0.58
30:0:2387:U:H2'	30:0:2388:C:C6	2.39	0.58
30:0:2498:C:C2'	30:0:2499:U:H5'	2.33	0.58
30:0:2769:C:C2'	30:0:2770:G:C5'	2.82	0.58
1:A:167:LYS:CE	26:Z:50:VAL:HG13	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:237:GLY:O	30:0:1939:U:H5''	2.03	0.57
4:D:52:THR:HG23	30:0:2346:C:O3'	2.04	0.57
6:F:26:THR:HB	6:F:102:GLY:HA3	1.86	0.57
30:0:23:G:H1'	30:0:520:A:N6	2.19	0.57
30:0:116:G:H1'	30:0:129:A:C4	2.38	0.57
30:0:229:G:O2'	30:0:230:C:H5'	2.03	0.57
30:0:413:G:C6	30:0:428:G:C6	2.92	0.57
30:0:727:G:C2	30:0:728:C:H1'	2.39	0.57
30:0:1167:G:H2'	30:0:1168:C:C6	2.39	0.57
30:0:1253:C:H2'	30:0:1254:C:H6	1.68	0.57
30:0:1634:G:H2'	30:0:1635:U:H6	1.69	0.57
30:0:2402:A:H1'	38:0:4380:HOH:O	2.04	0.57
30:0:2695:C:N4	30:0:2701:G:N2	2.52	0.57
5:E:102:VAL:HG11	5:E:148:ILE:HD11	1.86	0.57
20:T:49:GLU:OE2	20:T:97:ARG:HD2	2.05	0.57
30:0:169:A:HO2'	30:0:170:U:H6	1.50	0.57
30:0:221:G:H5'	38:0:6463:HOH:O	2.03	0.57
30:0:907:A:C2	30:0:1299:G:C6	2.92	0.57
12:L:133:VAL:HA	38:L:8886:HOH:O	2.03	0.57
29:3:1:MET:HA	30:0:2319:C:H3'	1.86	0.57
30:0:962:C:H2'	30:0:963:C:H5'	1.86	0.57
30:0:1187:U:O2'	30:0:1189:A:H2	1.87	0.57
30:0:1464:C:H4'	38:0:6125:HOH:O	2.04	0.57
30:0:2061:C:H2'	30:0:2062:A:C5'	2.34	0.57
30:0:2694:A:C6	30:0:2702:A:C8	2.92	0.57
2:B:79:MET:HB2	2:B:188:HIS:CE1	2.39	0.57
3:C:133:ARG:NH2	3:C:135:GLU:HB2	2.19	0.57
16:P:88:GLN:HE21	30:0:1800:G:H1'	1.67	0.57
19:S:25:GLN:HG2	19:S:65:VAL:HG13	1.87	0.57
20:T:71:VAL:HG11	20:T:90:PRO:CB	2.32	0.57
25:Y:115:ARG:HH21	30:0:1266:U:H4'	1.70	0.57
30:0:745:G:H5''	30:0:746:A:OP1	2.04	0.57
30:0:1014:A:H5''	31:9:101:G:O2'	2.04	0.57
30:0:1312:G:O2'	30:0:1313:A:H5'	2.05	0.57
30:0:1482:A:O2'	30:0:1483:C:H5'	2.05	0.57
30:0:1587:U:O2'	30:0:1588:G:H5'	2.04	0.57
30:0:2103:A:H2'	30:0:2104:C:C5'	2.34	0.57
30:0:2689:A:C2'	30:0:2690:U:H5'	2.34	0.57
30:0:2829:G:N2	30:0:2912:C:C2	2.73	0.57
3:C:34:ALA:HA	3:C:102:LEU:CD2	2.34	0.57
8:H:61:ARG:HH11	8:H:61:ARG:HG3	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:10:GLN:NE2	11:K:10:GLN:N	2.50	0.57
28:2:29:THR:HG22	30:0:86:A:O4'	2.04	0.57
29:3:47:GLY:HA2	30:0:2121:G:O2'	2.03	0.57
30:0:387:G:O2'	30:0:388:G:H5'	2.04	0.57
30:0:590:A:H2'	30:0:591:A:H5'	1.86	0.57
30:0:1768:C:H2'	30:0:1769:C:O4'	2.04	0.57
30:0:2777:G:H5'	38:0:9874:HOH:O	2.05	0.57
30:0:2843:A:H2'	30:0:2844:C:H5'	1.86	0.57
11:K:74:VAL:HG11	11:K:113:ILE:HG12	1.85	0.57
18:R:1:GLY:HA2	18:R:119:VAL:HG21	1.86	0.57
23:W:154:ARG:NH1	30:0:588:G:O6	2.37	0.57
26:Z:99:GLY:O	26:Z:103:VAL:HG23	2.05	0.57
29:3:23:GLU:HA	38:3:9000:HOH:O	2.04	0.57
30:0:292:G:O5'	30:0:292:G:H8	1.87	0.57
30:0:1361:C:H2'	30:0:1362:U:H6	1.68	0.57
30:0:1462:C:O2'	30:0:1463:U:H5'	2.04	0.57
30:0:1588:G:C6	30:0:1589:G:N1	2.73	0.57
30:0:1930:A:H2'	30:0:1931:A:C8	2.39	0.57
30:0:1969:A:O2'	30:0:1970:G:H5'	2.05	0.57
30:0:2326:C:H2'	30:0:2327:A:C8	2.38	0.57
30:0:2375:A:H2'	30:0:2376:C:C6	2.39	0.57
30:0:2673:U:C4	30:0:2674:G:C6	2.92	0.57
30:0:2793:A:H1'	38:0:6249:HOH:O	2.04	0.57
16:P:37:ARG:HB2	38:0:4445:HOH:O	2.04	0.57
18:R:18:LEU:HB2	18:R:143:VAL:CG1	2.34	0.57
30:0:64:G:H2'	30:0:65:C:O4'	2.05	0.57
30:0:559:U:H6	30:0:559:U:C5'	2.14	0.57
30:0:619:U:H3'	38:0:3266:HOH:O	2.04	0.57
30:0:633:C:O2'	30:0:634:G:H5'	2.04	0.57
30:0:716:G:N2	30:0:717:C:C2	2.73	0.57
30:0:877:G:C5'	30:0:878:G:OP1	2.51	0.57
30:0:1278:A:O2'	30:0:1279:U:H3'	2.04	0.57
30:0:1559:A:O2'	30:0:1561:U:H5	1.88	0.57
31:9:42:C:H5'	31:9:43:G:OP2	2.03	0.57
31:9:99:U:H2'	31:9:100:G:H8	1.70	0.57
4:D:105:SER:OG	30:0:2338:G:H1'	2.05	0.57
19:S:33:SER:O	19:S:37:VAL:HG23	2.04	0.57
25:Y:115:ARG:NH2	30:0:1266:U:H4'	2.19	0.57
29:3:83:TRP:HD1	29:3:85:ALA:HB2	1.69	0.57
30:0:840:U:C2	30:0:2648:U:O4	2.58	0.57
30:0:1206:U:C5'	30:0:1206:U:H6	2.16	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1762:C:H2'	30:0:1763:C:C6	2.31	0.57
30:0:2256:G:O2'	30:0:2257:G:H5'	2.05	0.57
30:0:2327:A:H61	30:0:2372:A:N6	2.02	0.57
10:J:19:MET:HE1	10:J:78:ILE:HG22	1.86	0.57
17:Q:19:ARG:NH2	31:9:11:A:H3'	2.19	0.57
18:R:39:THR:HG23	18:R:107:GLU:O	2.05	0.57
28:2:36:ASN:HD22	28:2:39:ARG:HG2	1.70	0.57
30:0:101:C:H2'	30:0:102:A:C8	2.40	0.57
30:0:383:A:H2'	30:0:384:G:O4'	2.05	0.57
30:0:878:G:H5'	38:0:9229:HOH:O	2.04	0.57
30:0:1398:G:H2'	30:0:1399:A:C8	2.40	0.57
2:B:234:ARG:HD3	30:0:1734:C:OP1	2.04	0.57
4:D:63:ILE:HG13	4:D:64:ARG:N	2.20	0.57
10:J:70:PHE:CD1	30:0:2676:C:H4'	2.40	0.57
14:N:66:LEU:HD11	14:N:83:LEU:HB3	1.87	0.57
20:T:28:SER:O	20:T:32:ARG:HG3	2.05	0.57
20:T:65:VAL:HG22	20:T:72:ILE:HG22	1.87	0.57
30:0:1982:C:H3'	30:0:1983:C:C6	2.40	0.57
30:0:2268:C:H2'	30:0:2269:C:C6	2.40	0.57
30:0:2608:C:H3'	38:0:7708:HOH:O	2.04	0.57
31:9:77:A:H1'	31:9:79:U:C6	2.40	0.57
1:A:230:SER:CB	30:0:1852:A:H4'	2.35	0.56
2:B:235:ARG:HA	38:B:9071:HOH:O	2.03	0.56
3:C:142:ASP:OD1	3:C:237:GLU:HB3	2.05	0.56
19:S:17:ASP:HB3	19:S:23:LYS:HB2	1.88	0.56
30:0:125:U:H4'	38:0:4400:HOH:O	2.04	0.56
30:0:236:A:H4'	30:0:237:G:C5'	2.24	0.56
30:0:282:C:C2'	30:0:283:U:C5'	2.82	0.56
30:0:686:A:C5	30:0:687:C:C5	2.92	0.56
30:0:792:G:H4'	38:0:3403:HOH:O	2.05	0.56
30:0:1185:U:H2'	30:0:1186:C:H6	1.70	0.56
30:0:1325:G:N3	30:0:1326:C:C6	2.73	0.56
30:0:1503:U:O2'	30:0:1504:A:H5'	2.05	0.56
30:0:1748:U:C5	30:0:1749:U:C5	2.93	0.56
30:0:1878:G:O2'	30:0:1879:U:H6	1.88	0.56
30:0:2429:A:H5'	38:0:9501:HOH:O	2.05	0.56
38:K:992:HOH:O	30:0:2583:A:H5'	2.05	0.56
26:Z:63:CYS:SG	26:Z:81:CYS:CB	2.79	0.56
27:1:28:HIS:O	27:1:32:LYS:N	2.34	0.56
30:0:168:C:O5'	30:0:168:C:H6	1.88	0.56
30:0:293:A:P	30:0:358:G:H22	2.27	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:822:C:C2	30:0:823:U:C5	2.93	0.56
30:0:2570:G:H5''	38:0:4868:HOH:O	2.04	0.56
30:0:2574:G:H2'	30:0:2575:C:H6	1.70	0.56
3:C:170:ASP:HA	3:C:188:ARG:HH21	1.71	0.56
4:D:87:ALA:O	4:D:90:LEU:HB2	2.06	0.56
8:H:15:PRO:HG3	30:0:1053:G:OP1	2.05	0.56
12:L:78:ALA:HB2	38:L:8866:HOH:O	2.05	0.56
13:M:115:LEU:HD23	13:M:150:ILE:HD12	1.87	0.56
14:N:46:GLN:HE22	31:9:5:G:H21	1.52	0.56
17:Q:26:PRO:O	17:Q:30:VAL:HG23	2.05	0.56
23:W:11:VAL:HG11	30:0:1086:A:N6	2.20	0.56
28:2:22:PRO:HG2	28:2:25:VAL:HG23	1.86	0.56
29:3:69:TYR:O	29:3:77:ALA:HA	2.05	0.56
30:0:257:G:C2	30:0:258:G:C4	2.93	0.56
30:0:999:C:O2'	30:0:1000:C:H5'	2.04	0.56
30:0:1188:A:C5	30:0:1189:A:C2	2.93	0.56
30:0:1419:U:H5'	30:0:1420:C:OP2	2.05	0.56
30:0:1748:U:C5	30:0:1749:U:C4	2.92	0.56
30:0:1909:A:N1	30:0:2128:G:H1'	2.21	0.56
30:0:2348:C:H2'	30:0:2349:G:C8	2.39	0.56
30:0:2411:C:H2'	30:0:2412:G:C8	2.40	0.56
30:0:2460:A:C2	30:0:2461:U:C2	2.93	0.56
30:0:2678:A:O2'	30:0:2679:G:H5'	2.05	0.56
30:0:2799:A:H5'	30:0:2800:A:P	2.44	0.56
30:0:2899:A:C2	30:0:2900:G:C4	2.93	0.56
30:0:2908:A:H2'	30:0:2909:G:C1'	2.35	0.56
24:X:43:VAL:HG12	24:X:44:ASP:N	2.17	0.56
29:3:33:MET:HG2	30:0:1922:A:C2'	2.35	0.56
30:0:556:C:C2	30:0:602:A:C2	2.93	0.56
30:0:669:G:C5	30:0:670:G:C8	2.94	0.56
30:0:669:G:C6	30:0:670:G:N7	2.73	0.56
30:0:1024:G:C6	30:0:1025:C:C4	2.93	0.56
30:0:1024:G:C4	30:0:1025:C:C5	2.92	0.56
30:0:1156:C:O2'	30:0:1157:C:H5'	2.06	0.56
30:0:1304:U:H3	30:0:1350:U:H3	1.52	0.56
30:0:1647:G:O2'	30:0:1648:G:H5'	2.04	0.56
30:0:1678:A:C5	30:0:1679:C:C5	2.93	0.56
30:0:1829:A:C2'	30:0:1830:C:H5'	2.35	0.56
30:0:1903:U:H2'	30:0:1905:U:O4	2.05	0.56
30:0:2439:C:H2'	30:0:2440:C:C6	2.35	0.56
1:A:97:ALA:HB2	1:A:150:PRO:HB2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:63:ILE:HG23	30:0:1235:G:C1'	2.36	0.56
14:N:44:ARG:NH1	31:9:4:G:H21	2.03	0.56
30:0:107:U:C5	30:0:108:U:C5	2.94	0.56
30:0:257:G:N2	30:0:258:G:C4	2.73	0.56
30:0:292:G:H1'	30:0:360:A:H61	1.70	0.56
30:0:306:A:O2'	30:0:325:U:H1'	2.05	0.56
30:0:380:A:H5'	30:0:430:A:N3	2.20	0.56
30:0:1103:C:C2	30:0:1241:G:N2	2.74	0.56
30:0:1568:G:C5	30:0:1569:U:C5	2.94	0.56
30:0:1603:A:H5''	30:0:1604:G:H3'	1.86	0.56
30:0:2001:G:O2'	30:0:2002:C:H5'	2.06	0.56
30:0:2473:U:O2'	30:0:2474:A:H5''	2.04	0.56
30:0:2756:U:H3	30:0:2896:A:H2	1.54	0.56
3:C:27:ARG:NH2	30:0:657:G:OP1	2.37	0.56
13:M:83:SER:HB2	29:3:47:GLY:CA	2.35	0.56
15:O:47:ARG:HH11	15:O:47:ARG:CG	2.08	0.56
18:R:68:HIS:O	30:0:2842:G:H5'	2.06	0.56
30:0:106:A:H2'	30:0:107:U:H5'	1.88	0.56
30:0:206:G:C6	30:0:437:A:C2	2.93	0.56
30:0:545:G:C8	30:0:545:G:C5'	2.83	0.56
30:0:613:C:H2'	30:0:614:U:C6	2.40	0.56
30:0:710:G:O2'	30:0:711:G:H5'	2.05	0.56
30:0:922:A:N7	30:0:2281:C:H5'	2.21	0.56
30:0:940:G:C2'	30:0:941:G:H5'	2.36	0.56
30:0:1324:G:C6	30:0:1325:G:N7	2.74	0.56
30:0:1586:G:O2'	30:0:1587:U:H5'	2.06	0.56
30:0:1634:G:C5	30:0:1635:U:C4	2.93	0.56
30:0:1635:U:O2'	30:0:1636:G:H5'	2.05	0.56
30:0:1889:C:C5	30:0:1890:U:H5	2.23	0.56
30:0:2279:G:H4'	38:0:7466:HOH:O	2.06	0.56
30:0:2541:U:H3'	38:0:9065:HOH:O	2.05	0.56
30:0:2872:U:H2'	30:0:2873:C:C6	2.40	0.56
19:S:21:GLN:OE1	30:0:1508:C:H5'	2.06	0.56
26:Z:40:ALA:O	30:0:2018:A:C2	2.59	0.56
30:0:264:G:H1'	30:0:265:U:H5	1.69	0.56
30:0:302:A:H2'	30:0:303:C:H5'	1.87	0.56
30:0:483:C:C4	30:0:484:A:C6	2.94	0.56
30:0:1324:G:H3'	38:0:6144:HOH:O	2.06	0.56
5:E:3:VAL:HG22	5:E:49:ILE:HB	1.88	0.56
6:F:27:GLY:N	6:F:102:GLY:HA3	2.21	0.56
8:H:61:ARG:HG3	38:0:4925:HOH:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:56:LYS:HE2	10:J:60:ARG:NH2	2.20	0.56
13:M:191:GLY:O	30:0:175:G:H3'	2.05	0.56
23:W:13:MET:HE2	23:W:18:GLN:N	2.21	0.56
30:0:297:U:H2'	30:0:298:C:C6	2.40	0.56
30:0:700:A:H5''	30:0:701:U:H5'	1.88	0.56
30:0:1173:A:H4'	30:0:1174:A:C8	2.41	0.56
30:0:1268:C:H2'	30:0:1269:G:C8	2.40	0.56
30:0:1690:C:C5	30:0:1692:C:C4	2.94	0.56
30:0:1793:C:H2'	30:0:1794:G:C8	2.41	0.56
30:0:2363:G:C6	30:0:2364:A:C5	2.94	0.56
30:0:2464:C:H5''	30:0:2465:A:OP1	2.05	0.56
30:0:2803:C:C2'	30:0:2804:C:H5'	2.36	0.56
31:9:36:C:C2'	31:9:37:C:H5'	2.35	0.56
31:9:37:C:O2	31:9:47:A:H1'	2.05	0.56
10:J:86:MET:HE2	30:0:1241:G:H21	1.71	0.56
22:V:55:ARG:O	22:V:59:ILE:HG12	2.06	0.56
26:Z:84:CYS:SG	26:Z:86:TYR:HB2	2.45	0.56
30:0:191:A:H2'	30:0:237:G:O6	2.06	0.56
30:0:594:C:C6	30:0:595:U:C5	2.94	0.56
30:0:2326:C:H4'	30:0:2412:G:H4'	1.87	0.56
30:0:2377:U:C2	30:0:2378:U:H5	2.23	0.56
2:B:7:ARG:HG2	2:B:7:ARG:HH11	1.70	0.56
19:S:24:LEU:CD1	19:S:68:LEU:HD11	2.36	0.56
30:0:657:G:H2'	30:0:658:C:H6	1.70	0.56
30:0:1166:A:H3'	38:0:4377:HOH:O	2.05	0.56
30:0:1481:G:H2'	30:0:1482:A:H8	1.70	0.56
30:0:1517:C:O2	30:0:1670:A:C2	2.59	0.56
30:0:2128:G:C5	30:0:2129:U:C5	2.94	0.56
30:0:2267:G:O2'	30:0:2268:C:H5'	2.05	0.56
30:0:2661:U:H3	30:0:2812:A:N6	1.97	0.56
2:B:5:ARG:HD2	2:B:8:LYS:HE2	1.88	0.55
3:C:27:ARG:HH22	30:0:657:G:P	2.29	0.55
19:S:37:VAL:O	19:S:41:VAL:HG23	2.05	0.55
29:3:70:ARG:HG2	29:3:77:ALA:HB2	1.89	0.55
30:0:1160:G:HO2'	30:0:1190:G:H8	1.53	0.55
30:0:1202:A:H2'	30:0:1203:G:C8	2.40	0.55
30:0:1515:A:H2'	30:0:1516:U:C6	2.41	0.55
30:0:1571:G:H2'	30:0:1624:A:N6	2.21	0.55
30:0:1797:A:O3'	30:0:1798:C:C6	2.59	0.55
30:0:1819:G:C2'	30:0:1820:G:H5'	2.36	0.55
30:0:2840:A:N3	30:0:2840:A:H2'	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:41:LEU:HA	4:D:44:ILE:HG22	1.87	0.55
11:K:27:ARG:CD	11:K:60:GLY:HA2	2.34	0.55
14:N:61:ALA:HB3	14:N:88:ALA:HB2	1.87	0.55
15:O:37:ARG:HD2	30:0:656:G:OP2	2.06	0.55
29:3:83:TRP:CD1	29:3:85:ALA:HB2	2.41	0.55
30:0:583:C:H2'	30:0:584:U:H6	1.71	0.55
30:0:694:A:N3	38:0:3795:HOH:O	2.33	0.55
30:0:844:A:N1	30:0:882:A:C5	2.74	0.55
30:0:1188:A:C6	30:0:1189:A:C6	2.94	0.55
30:0:1482:A:H1'	38:0:9425:HOH:O	2.07	0.55
30:0:1559:A:H1'	30:0:1562:C:N4	2.21	0.55
30:0:2505:G:H2'	30:0:2506:A:C5'	2.32	0.55
31:9:45:A:N7	31:9:46:C:C5	2.74	0.55
31:9:70:U:H5	38:9:6867:HOH:O	1.90	0.55
1:A:88:ILE:HD13	1:A:100:PRO:HD3	1.89	0.55
6:F:53:ASP:OD1	6:F:80:GLN:HB2	2.06	0.55
9:I:111:LEU:HD23	30:0:1163:G:H4'	1.87	0.55
19:S:24:LEU:HD11	19:S:68:LEU:HD11	1.87	0.55
23:W:132:VAL:HG21	23:W:140:LYS:O	2.06	0.55
30:0:13:G:H2'	30:0:14:C:H6	1.72	0.55
30:0:298:C:N3	30:0:299:U:C5	2.74	0.55
30:0:542:A:H2'	30:0:543:G:O4'	2.06	0.55
30:0:766:A:O2'	30:0:767:A:H5''	2.07	0.55
30:0:1159:G:H1	30:0:1208:C:N4	2.04	0.55
30:0:1177:A:H2'	30:0:1177:A:N3	2.21	0.55
30:0:1246:A:C4	30:0:1248:A:C8	2.94	0.55
30:0:1268:C:H2'	30:0:1269:G:H8	1.72	0.55
30:0:1477:C:C5'	30:0:1868:G:C5'	2.84	0.55
30:0:1521:C:H2'	30:0:1522:A:C8	2.36	0.55
30:0:1581:A:C5	30:0:1582:C:C5	2.94	0.55
30:0:2372:A:H2'	30:0:2373:U:C6	2.41	0.55
30:0:2407:G:O2'	30:0:2408:A:H5'	2.06	0.55
30:0:2451:G:H8	38:0:5131:HOH:O	1.90	0.55
30:0:2851:G:H2'	30:0:2902:A:N6	2.21	0.55
31:9:110:G:C4	31:9:111:U:C6	2.94	0.55
1:A:97:ALA:HA	1:A:131:HIS:NE2	2.21	0.55
4:D:135:VAL:HG22	4:D:136:ARG:H	1.71	0.55
10:J:74:ARG:HB3	10:J:74:ARG:HH11	1.71	0.55
26:Z:54:GLU:HG3	38:0:7399:HOH:O	2.06	0.55
29:3:49:ASP:O	29:3:52:PHE:HD1	1.90	0.55
30:0:1157:C:H2'	30:0:1158:G:H5'	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1174:A:C6	30:0:1201:C:H4'	2.41	0.55
30:0:1377:C:C6	30:0:1377:C:H5'	2.41	0.55
30:0:2471:G:C4	30:0:2472:C:C5	2.94	0.55
30:0:2804:C:N4	30:0:2805:A:C2	2.74	0.55
2:B:239:LEU:HD12	30:0:2093:G:OP1	2.06	0.55
4:D:52:THR:HG21	30:0:2346:C:O2'	2.06	0.55
6:F:68:ASP:C	6:F:70:LYS:H	2.15	0.55
11:K:10:GLN:N	11:K:10:GLN:HE21	2.05	0.55
22:V:8:ILE:HG21	22:V:59:ILE:HG13	1.89	0.55
29:3:48:ASN:ND2	30:0:169:A:O2'	2.39	0.55
30:0:52:A:H1'	30:0:121:U:O2	2.06	0.55
30:0:1166:A:H2'	30:0:1166:A:N3	2.21	0.55
30:0:1275:C:N3	30:0:1281:C:N4	2.55	0.55
30:0:1856:C:H1'	38:0:5804:HOH:O	2.06	0.55
30:0:1928:C:O2'	30:0:1929:G:H5'	2.06	0.55
30:0:2891:A:C2	30:0:2892:G:C4	2.95	0.55
1:A:6:GLY:HA3	38:0:4582:HOH:O	2.07	0.55
1:A:132:ASP:C	1:A:134:ASN:H	2.15	0.55
6:F:107:ASP:O	6:F:111:ILE:HG13	2.06	0.55
8:H:9:TYR:O	8:H:59:GLN:HB2	2.07	0.55
10:J:107:ASN:ND2	10:J:109:TYR:H	2.05	0.55
11:K:130:MET:SD	21:U:26:GLY:HA3	2.46	0.55
26:Z:41:ARG:HD2	30:0:1830:C:O2	2.07	0.55
30:0:534:C:O2'	30:0:535:G:H5'	2.07	0.55
30:0:577:G:N2	30:0:580:A:OP2	2.40	0.55
30:0:1168:C:C4	30:0:1169:U:C5	2.94	0.55
30:0:1559:A:O2'	30:0:1561:U:C5	2.59	0.55
30:0:1736:A:H8	30:0:1736:A:O5'	1.90	0.55
30:0:1835:U:H3'	38:0:5521:HOH:O	2.05	0.55
30:0:1894:C:C5	30:0:1940:C:C5	2.94	0.55
30:0:2064:U:H4'	30:0:2653:A:OP1	2.07	0.55
30:0:2346:C:O5'	30:0:2346:C:C6	2.60	0.55
30:0:2607:U:H5'	38:0:5345:HOH:O	2.06	0.55
31:9:57:A:H2'	31:9:58:G:C5'	2.36	0.55
31:9:76:G:C3'	31:9:77:A:H5''	2.28	0.55
1:A:51:ARG:HH11	1:A:51:ARG:CB	2.13	0.55
1:A:217:ARG:HH11	1:A:229:ALA:HB3	1.71	0.55
2:B:223:ARG:HG3	2:B:232:TRP:O	2.07	0.55
14:N:147:ILE:HD12	38:9:4707:HOH:O	2.05	0.55
17:Q:61:GLY:HA3	17:Q:73:VAL:CG1	2.36	0.55
22:V:39:ALA:N	22:V:40:PRO:HD2	2.16	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:99:ALA:HB2	25:Y:233:TYR:CZ	2.41	0.55
30:0:279:C:C2'	30:0:280:C:H5'	2.36	0.55
30:0:441:A:H8	30:0:441:A:O5'	1.90	0.55
30:0:1212:C:H2'	30:0:1213:C:O4'	2.06	0.55
30:0:1245:C:H3'	30:0:1245:C:H6	1.72	0.55
30:0:1398:G:H2'	30:0:1399:A:H8	1.71	0.55
30:0:1441:G:O2'	30:0:1442:A:H5'	2.06	0.55
30:0:1759:A:C2	30:0:1818:C:N3	2.75	0.55
30:0:2576:A:H4'	30:0:2799:A:N1	2.21	0.55
2:B:123:ALA:O	2:B:126:GLU:HB2	2.07	0.55
5:E:101:GLU:HB2	5:E:116:THR:O	2.07	0.55
6:F:96:ALA:HA	38:F:3111:HOH:O	2.05	0.55
12:L:92:ASP:HA	12:L:121:ILE:HB	1.87	0.55
13:M:147:LEU:O	13:M:150:ILE:HG22	2.07	0.55
14:N:48:VAL:HG11	14:N:55:ASP:HB3	1.88	0.55
26:Z:75:GLY:HA3	38:Z:8716:HOH:O	2.06	0.55
30:0:149:G:C2'	30:0:150:G:H5'	2.37	0.55
30:0:421:C:H4'	30:0:1919:A:N6	2.22	0.55
30:0:558:C:O2'	30:0:559:U:H5''	2.07	0.55
30:0:941:G:C5	30:0:942:U:C4	2.95	0.55
30:0:970:U:C6	30:0:970:U:C3'	2.90	0.55
30:0:1311:G:C5	30:0:1344:G:C6	2.95	0.55
30:0:1454:U:H5''	30:0:1455:C:OP2	2.06	0.55
30:0:1503:U:H2'	30:0:1504:A:O4'	2.07	0.55
30:0:1576:G:C6	30:0:1577:U:C4	2.95	0.55
30:0:1626:A:O2'	30:0:1627:G:H5'	2.05	0.55
30:0:2514:U:OP1	30:0:2572:G:H1'	2.06	0.55
30:0:2573:G:O2'	30:0:2574:G:H5'	2.06	0.55
30:0:2840:A:H3'	38:0:7548:HOH:O	2.06	0.55
31:9:13:A:O2'	31:9:14:G:H5''	2.07	0.55
2:B:41:PHE:HB3	2:B:190:MET:HE3	1.89	0.55
2:B:234:ARG:HG3	30:0:1735:C:OP2	2.07	0.55
13:M:9:ARG:HD2	30:0:380:A:OP2	2.06	0.55
20:T:48:VAL:HG23	20:T:97:ARG:C	2.31	0.55
30:0:56:G:N3	30:0:70:A:C2	2.75	0.55
30:0:325:U:O2	30:0:326:G:C8	2.60	0.55
30:0:561:G:H2'	30:0:562:A:C8	2.39	0.55
30:0:661:G:C4	30:0:686:A:C2	2.94	0.55
30:0:716:G:C6	30:0:717:C:N4	2.75	0.55
30:0:731:U:H2'	30:0:732:C:C6	2.41	0.55
30:0:1038:G:O2'	30:0:1039:G:H5'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1165:G:H3'	30:0:1166:A:H5'	1.89	0.55
30:0:1476:A:H8	30:0:1476:A:O5'	1.89	0.55
30:0:1622:G:C2'	30:0:1623:C:H5'	2.37	0.55
30:0:2318:C:H2'	30:0:2319:C:C6	2.41	0.55
30:0:2367:A:C5'	38:0:5062:HOH:O	2.55	0.55
30:0:2710:U:O2'	30:0:2711:U:H5'	2.06	0.55
30:0:2799:A:H5'	30:0:2800:A:OP2	2.07	0.55
30:0:2867:G:H2'	30:0:2868:C:H6	1.72	0.55
1:A:54:PRO:HG2	1:A:160:ALA:HB3	1.88	0.55
15:O:51:TYR:CD1	30:0:721:A:H5''	2.42	0.55
16:P:1:THR:O	30:0:1396:C:H1'	2.07	0.55
18:R:132:ARG:HG2	18:R:133:ALA:N	2.21	0.55
23:W:120:PRO:HG3	30:0:1262:C:H1'	1.88	0.55
26:Z:41:ARG:HG2	38:0:7344:HOH:O	2.07	0.55
29:3:9:THR:HG23	29:3:20:HIS:ND1	2.22	0.55
30:0:10:U:C4	30:0:532:A:H8	2.25	0.55
30:0:62:C:H2'	30:0:63:U:H6	1.72	0.55
30:0:858:U:H2'	30:0:859:C:H6	1.72	0.55
30:0:1252:A:H1'	38:0:5158:HOH:O	2.06	0.55
30:0:1562:C:O2	30:0:1562:C:H2'	2.06	0.55
30:0:2019:A:H5'	38:0:4502:HOH:O	2.06	0.55
1:A:110:SER:O	1:A:152:CYS:SG	2.59	0.54
13:M:161:ARG:NH1	30:0:183:A:H1'	2.22	0.54
38:M:8875:HOH:O	30:0:381:G:H5''	2.06	0.54
20:T:16:LEU:HB2	30:0:100:C:H4'	1.89	0.54
30:0:624:U:C2	30:0:632:A:C2	2.96	0.54
30:0:1186:C:N4	30:0:1187:U:C4	2.75	0.54
30:0:1589:G:H5''	38:0:6772:HOH:O	2.07	0.54
30:0:2327:A:N6	30:0:2372:A:N6	2.55	0.54
30:0:2433:A:H8	30:0:2433:A:O5'	1.90	0.54
30:0:2757:A:H2'	30:0:2758:G:C5'	2.37	0.54
1:A:42:VAL:HG23	1:A:78:ASP:O	2.07	0.54
1:A:167:LYS:HD2	26:Z:53:ILE:HG21	1.88	0.54
2:B:45:LYS:HD2	2:B:301:VAL:HG12	1.89	0.54
3:C:1:MET:HG2	3:C:2:GLN:N	2.17	0.54
3:C:135:GLU:O	3:C:136:VAL:HB	2.07	0.54
6:F:50:VAL:CG2	6:F:63:ILE:HG21	2.37	0.54
16:P:80:ARG:CD	16:P:87:ARG:HH11	2.20	0.54
25:Y:187:VAL:HG13	25:Y:205:ILE:HA	1.90	0.54
30:0:1198:U:C6	30:0:1200:A:OP2	2.60	0.54
30:0:2745:C:H5''	38:0:6211:HOH:O	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2836:G:H5''	38:0:5114:HOH:O	2.07	0.54
1:A:167:LYS:HE2	26:Z:50:VAL:HG13	1.89	0.54
13:M:187:LEU:CD2	13:M:194:GLY:HA3	2.38	0.54
18:R:4:TYR:CZ	18:R:15:LYS:HB3	2.42	0.54
19:S:7:HIS:CD2	19:S:27:ALA:HB3	2.42	0.54
21:U:51:TRP:HA	21:U:56:ARG:NE	2.22	0.54
24:X:23:HIS:HE1	30:0:2044:G:OP1	1.90	0.54
25:Y:154:ARG:HH22	30:0:1071:G:H4'	1.71	0.54
26:Z:77:GLY:HA2	26:Z:92:SER:HA	1.88	0.54
30:0:95:A:C8	30:0:97:G:N1	2.75	0.54
30:0:378:A:H1'	38:0:3483:HOH:O	2.07	0.54
30:0:736:A:C2	30:0:2406:U:H1'	2.42	0.54
30:0:1012:A:H8	30:0:1012:A:O5'	1.91	0.54
30:0:1244:U:H4'	30:0:1246:A:O4'	2.08	0.54
30:0:1889:C:H2'	30:0:1890:U:H6	1.70	0.54
30:0:1997:A:N6	30:0:1998:G:C6	2.76	0.54
30:0:2247:C:O5'	30:0:2247:C:H6	1.91	0.54
30:0:2278:U:H5'	38:0:9472:HOH:O	2.06	0.54
30:0:2420:G:C2'	30:0:2421:G:H5'	2.36	0.54
30:0:2890:A:N3	30:0:2890:A:C2'	2.70	0.54
31:9:58:G:H3'	31:9:59:C:C5	2.42	0.54
1:A:230:SER:HB2	30:0:1852:A:H4'	1.89	0.54
16:P:129:GLY:HA2	38:P:641:HOH:O	2.06	0.54
18:R:105:ASP:HB3	18:R:108:ALA:HB3	1.89	0.54
29:3:45:GLY:HA3	38:3:9027:HOH:O	2.06	0.54
30:0:312:U:O2'	30:0:313:U:H5'	2.07	0.54
30:0:660:A:H4'	30:0:661:G:O5'	2.08	0.54
30:0:1016:U:H2'	30:0:1017:U:C6	2.40	0.54
30:0:1202:A:C8	30:0:1203:G:C8	2.95	0.54
30:0:1384:C:H2'	30:0:1385:G:H8	1.73	0.54
30:0:1502:A:H2'	38:0:9624:HOH:O	2.08	0.54
30:0:1764:C:O2'	30:0:1765:G:H5'	2.08	0.54
30:0:2317:C:C5	30:0:2318:C:C4	2.96	0.54
30:0:2367:A:H5''	38:0:5062:HOH:O	2.07	0.54
30:0:2397:G:C5	30:0:2465:A:N6	2.75	0.54
31:9:9:C:OP2	31:9:10:C:H5	1.91	0.54
31:9:65:A:N6	31:9:112:U:C6	2.75	0.54
31:9:99:U:H2'	31:9:100:G:C8	2.42	0.54
1:A:186:TRP:CG	1:A:187:PRO:HA	2.43	0.54
6:F:54:VAL:HG13	30:0:263:U:C4	2.43	0.54
12:L:57:VAL:HG21	30:0:2443:C:H5'	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:171:ARG:NH2	30:0:189:A:OP1	2.41	0.54
17:Q:28:ARG:HG2	38:Q:4350:HOH:O	2.05	0.54
28:2:42:TRP:HZ2	30:0:1438:G:H1'	1.72	0.54
29:3:3:MET:SD	29:3:83:TRP:HZ2	2.31	0.54
29:3:14:CYS:SG	29:3:74:CYS:HB2	2.48	0.54
29:3:31:THR:O	30:0:1923:G:H4'	2.07	0.54
30:0:17:G:O2'	30:0:18:C:H5'	2.08	0.54
30:0:31:C:H2'	38:0:7589:HOH:O	2.06	0.54
30:0:68:U:H1'	38:0:6239:HOH:O	2.06	0.54
30:0:100:C:C5	30:0:101:C:C5	2.95	0.54
30:0:614:U:H2'	30:0:615:G:H8	1.72	0.54
30:0:951:A:H2'	30:0:952:G:C5'	2.37	0.54
30:0:1185:U:C2	30:0:1186:C:C6	2.95	0.54
30:0:1380:U:H3'	38:0:9693:HOH:O	2.07	0.54
30:0:2117:U:OP2	30:0:2271:G:N2	2.38	0.54
30:0:2426:G:H5'	38:0:9237:HOH:O	2.08	0.54
1:A:135:VAL:HG11	1:A:147:ARG:NH2	2.22	0.54
16:P:10:ALA:HA	16:P:13:VAL:HG12	1.89	0.54
30:0:105:G:O2'	30:0:106:A:H5'	2.07	0.54
30:0:308:U:H5'	30:0:309:C:OP1	2.07	0.54
30:0:325:U:O2'	30:0:326:G:H5'	2.07	0.54
30:0:585:C:H2'	30:0:586:C:C6	2.43	0.54
30:0:807:A:H2'	30:0:808:A:O4'	2.07	0.54
30:0:834:G:H4'	30:0:835:U:OP2	2.08	0.54
30:0:1210:G:C4	30:0:1211:G:C8	2.96	0.54
30:0:1377:C:H5'	30:0:1377:C:H6	1.73	0.54
30:0:1453:G:C2	30:0:1675:C:C2	2.95	0.54
30:0:1886:A:H4'	38:0:9329:HOH:O	2.07	0.54
1:A:9:ARG:HG2	1:A:16:PHE:CD2	2.42	0.54
1:A:212:PRO:HB2	38:0:4330:HOH:O	2.08	0.54
2:B:41:PHE:CD2	2:B:190:MET:HE3	2.43	0.54
2:B:297:VAL:HB	38:B:9083:HOH:O	2.06	0.54
13:M:158:ARG:HH11	13:M:158:ARG:HG3	1.73	0.54
30:0:98:A:C2'	30:0:99:A:H5'	2.37	0.54
30:0:274:G:N2	30:0:377:C:C2	2.76	0.54
30:0:492:C:O2'	30:0:493:U:H5'	2.08	0.54
30:0:1383:U:C4	30:0:1384:C:N4	2.76	0.54
30:0:1494:A:C4	30:0:1495:C:C5	2.96	0.54
30:0:1496:A:H5'	30:0:1572:A:H1'	1.89	0.54
30:0:1559:A:N3	30:0:1563:G:O6	2.40	0.54
30:0:1561:U:C5	30:0:1562:C:H5	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1730:G:H5''	30:0:1731:C:C5	2.37	0.54
30:0:1871:U:O4'	30:0:1873:G:C8	2.60	0.54
30:0:2713:G:C2'	30:0:2714:U:H5'	2.38	0.54
30:0:2852:A:C8	30:0:2902:A:N6	2.76	0.54
8:H:146:ALA:O	8:H:149:VAL:HG12	2.07	0.54
14:N:86:LEU:O	14:N:90:LEU:HG	2.08	0.54
14:N:113:SER:HB3	38:9:5851:HOH:O	2.08	0.54
14:N:148:ALA:C	14:N:150:TYR:H	2.16	0.54
23:W:88:THR:C	23:W:90:TYR:H	2.15	0.54
25:Y:219:GLU:HG3	25:Y:220:GLU:H	1.72	0.54
30:0:100:C:C6	30:0:101:C:H5	2.26	0.54
30:0:1024:G:C4	30:0:1025:C:C6	2.96	0.54
30:0:1315:G:H3'	30:0:1316:G:H5'	1.90	0.54
30:0:1361:C:H2'	30:0:1362:U:C6	2.43	0.54
30:0:1444:G:O2'	30:0:1502:A:N1	2.38	0.54
30:0:1859:A:N7	30:0:1860:U:C5	2.75	0.54
30:0:2269:C:O2'	30:0:2270:G:H5'	2.07	0.54
30:0:2314:G:H2'	30:0:2315:C:H5'	1.89	0.54
30:0:2327:A:C5	30:0:2328:U:C5	2.96	0.54
30:0:2497:A:C2	30:0:2524:G:C4	2.95	0.54
30:0:2576:A:H4'	30:0:2799:A:C2	2.43	0.54
30:0:2712:G:H5'	38:0:5173:HOH:O	2.07	0.54
2:B:70:PRO:HG3	30:0:2719:A:C2	2.43	0.54
2:B:312:ARG:HD3	2:B:315:VAL:HG13	1.89	0.54
14:N:26:LEU:HD13	30:0:2415:A:N3	2.23	0.54
16:P:2:ASP:OD1	30:0:1396:C:H4'	2.08	0.54
20:T:9:LYS:HE3	20:T:13:ARG:NH1	2.22	0.54
29:3:2:GLN:HG2	30:0:2320:U:O5'	2.08	0.54
30:0:67:A:N1	30:0:109:U:H1'	2.23	0.54
30:0:239:C:H2'	30:0:240:C:O5'	2.07	0.54
30:0:908:A:H4'	38:0:4914:HOH:O	2.08	0.54
30:0:1063:G:H5''	38:0:9858:HOH:O	2.08	0.54
30:0:1192:A:H3'	30:0:1193:A:H5'	1.89	0.54
30:0:1503:U:C2'	30:0:1504:A:H5'	2.38	0.54
30:0:1557:G:O2'	30:0:1558:C:H5'	2.08	0.54
30:0:1641:A:H2'	30:0:1642:A:O4'	2.08	0.54
30:0:1649:G:O2'	30:0:1650:C:H5'	2.08	0.54
30:0:1878:G:C1'	38:0:6044:HOH:O	2.54	0.54
31:9:114:G:C4	31:9:115:C:C5	2.95	0.54
2:B:145:HIS:CD2	2:B:146:THR:O	2.61	0.54
2:B:243:ASN:HB2	30:0:2607:U:OP2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:64:ASN:HD22	7:G:64:ASN:H	1.55	0.54
14:N:113:SER:HB2	38:N:8850:HOH:O	2.08	0.54
16:P:91:LYS:O	16:P:95:GLU:HG3	2.08	0.54
27:1:28:HIS:HB3	27:1:31:LYS:HB2	1.90	0.54
30:0:49:A:H61	30:0:112:G:C2'	2.22	0.54
30:0:551:A:C6	30:0:552:A:N1	2.75	0.54
30:0:652:G:C2	30:0:653:U:H1'	2.42	0.54
30:0:889:C:H2'	30:0:890:C:C6	2.43	0.54
30:0:903:U:C5'	38:0:4328:HOH:O	2.56	0.54
30:0:1185:U:H2'	30:0:1186:C:C6	2.43	0.54
30:0:1187:U:C2	30:0:1189:A:OP2	2.61	0.54
30:0:1730:G:H4'	30:0:1731:C:C6	2.42	0.54
30:0:2246:U:O2'	30:0:2247:C:H5'	2.08	0.54
30:0:2278:U:O2	30:0:2470:A:H3'	2.08	0.54
30:0:2447:A:C5	30:0:2448:U:C5	2.96	0.54
30:0:2506:A:H1'	38:0:3726:HOH:O	2.07	0.54
30:0:2818:A:H2'	30:0:2819:C:H6	1.72	0.54
31:9:30:C:O2	31:9:51:A:H2	1.91	0.54
31:9:59:C:O5'	31:9:59:C:H6	1.91	0.54
3:C:242:GLU:HB2	38:C:8577:HOH:O	2.08	0.53
4:D:152:PRO:HD2	31:9:57:A:O2'	2.08	0.53
27:1:18:LYS:HG2	30:0:121:U:O4	2.08	0.53
30:0:790:A:H2'	30:0:791:A:H5'	1.89	0.53
30:0:1195:G:N1	30:0:1196:C:C4	2.76	0.53
30:0:1200:A:H3'	38:0:5689:HOH:O	2.09	0.53
30:0:1427:A:H61	30:0:1440:U:C1'	2.21	0.53
30:0:1928:C:C4	30:0:1929:G:N7	2.76	0.53
30:0:2716:G:O2'	30:0:2717:C:H5'	2.08	0.53
38:D:198:HOH:O	31:9:59:C:H5'	2.09	0.53
10:J:27:ALA:HB1	10:J:87:LEU:CD2	2.38	0.53
24:X:12:ILE:HG21	24:X:33:ILE:HA	1.91	0.53
30:0:146:U:C2'	30:0:147:G:H5'	2.38	0.53
30:0:282:C:H2'	30:0:283:U:C4'	2.39	0.53
30:0:444:C:H2'	30:0:445:U:C6	2.43	0.53
30:0:506:G:N2	30:0:509:A:H5''	2.22	0.53
30:0:527:U:H2'	30:0:528:G:C8	2.42	0.53
30:0:1548:U:O2'	30:0:1549:C:H5'	2.08	0.53
30:0:1921:A:H2'	30:0:1922:A:O4'	2.08	0.53
30:0:1937:U:O2'	30:0:1938:G:H5'	2.08	0.53
30:0:2326:C:H2'	30:0:2327:A:H8	1.73	0.53
30:0:2327:A:N6	30:0:2372:A:H61	2.06	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2562:G:H4'	38:0:4188:HOH:O	2.07	0.53
30:0:2681:A:H4'	30:0:2682:C:OP1	2.08	0.53
38:J:1727:HOH:O	30:0:2065:C:H4'	2.08	0.53
11:K:63:GLU:HG2	38:K:6344:HOH:O	2.08	0.53
12:L:18:HIS:HD2	30:0:902:G:N7	2.05	0.53
13:M:47:ASP:CG	13:M:48:LYS:H	2.16	0.53
13:M:187:LEU:HD21	13:M:194:GLY:HA3	1.91	0.53
23:W:66:LEU:O	23:W:70:ALA:HB3	2.09	0.53
30:0:404:G:OP1	30:0:2131:G:H1'	2.09	0.53
30:0:1183:C:N4	30:0:1184:C:H41	2.05	0.53
30:0:1294:A:H2'	30:0:1295:G:O4'	2.09	0.53
30:0:1518:A:H61	30:0:1667:A:N6	2.07	0.53
30:0:1540:G:O2'	30:0:1541:G:H5'	2.08	0.53
30:0:1574:C:H2'	30:0:1575:C:C6	2.41	0.53
30:0:1682:A:H5''	38:0:9460:HOH:O	2.08	0.53
30:0:2414:A:H2'	30:0:2415:A:C8	2.43	0.53
1:A:70:ALA:HB1	26:Z:89:THR:CG2	2.39	0.53
2:B:54:VAL:HB	38:B:9093:HOH:O	2.07	0.53
8:H:143:VAL:HG11	8:H:173:GLU:HB3	1.91	0.53
10:J:39:VAL:HG13	10:J:106:GLY:O	2.09	0.53
13:M:159:VAL:CG1	33:M:8818:CL:CL	2.85	0.53
29:3:62:THR:HG22	30:0:2317:C:OP2	2.07	0.53
30:0:10:U:H5''	30:0:531:G:O6	2.09	0.53
30:0:940:G:N3	30:0:1032:A:C2	2.77	0.53
30:0:1063:G:H8	38:0:9858:HOH:O	1.92	0.53
30:0:1096:U:H1'	38:0:3468:HOH:O	2.08	0.53
30:0:1216:G:N2	30:0:1217:G:H1'	2.23	0.53
30:0:1387:G:H2'	30:0:1388:U:H6	1.73	0.53
30:0:2314:G:O2'	30:0:2315:C:H5'	2.09	0.53
30:0:2457:U:H2'	30:0:2458:U:H6	1.72	0.53
30:0:2650:U:O2'	30:0:2651:C:H5'	2.08	0.53
1:A:127:GLN:HB3	1:A:139:LYS:HB3	1.91	0.53
12:L:120:LEU:HD12	12:L:133:VAL:HG21	1.91	0.53
21:U:42:LEU:HD22	30:0:1810:C:H1'	1.90	0.53
23:W:44:MET:HE2	30:0:944:G:N2	2.18	0.53
29:3:49:ASP:CB	29:3:52:PHE:HB2	2.36	0.53
30:0:256:C:H2'	30:0:257:G:O4'	2.09	0.53
30:0:1502:A:H3'	38:0:9624:HOH:O	2.07	0.53
30:0:1634:G:C3'	38:0:3870:HOH:O	2.56	0.53
30:0:2296:C:H2'	30:0:2297:U:C6	2.43	0.53
30:0:2336:G:C2'	30:0:2337:G:H5'	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2511:A:H3'	30:0:2512:U:C6	2.44	0.53
2:B:62:ARG:HA	2:B:65:MET:HE3	1.89	0.53
5:E:154:ILE:HD11	5:E:157:LYS:HE2	1.90	0.53
6:F:59:ILE:CD1	30:0:263:U:C2	2.91	0.53
7:G:12:ILE:HG21	30:0:1150:A:N7	2.23	0.53
8:H:41:LYS:HE2	8:H:45:ASP:HB3	1.91	0.53
15:O:25:VAL:HG23	15:O:26:TRP:N	2.23	0.53
24:X:85:VAL:HG12	24:X:86:GLU:N	2.24	0.53
26:Z:70:ARG:HA	38:Z:8731:HOH:O	2.07	0.53
29:3:13:HIS:CD2	29:3:76:LYS:HB2	2.44	0.53
30:0:212:A:O4'	30:0:214:U:C6	2.61	0.53
30:0:1156:C:C6	30:0:1156:C:C3'	2.91	0.53
30:0:1485:A:H1'	38:0:9173:HOH:O	2.07	0.53
30:0:1561:U:H2'	30:0:1562:C:O5'	2.09	0.53
30:0:1667:A:O2'	30:0:1668:U:H5'	2.09	0.53
30:0:2326:C:H4'	30:0:2412:G:O4'	2.09	0.53
30:0:2657:G:H1'	38:0:9492:HOH:O	2.08	0.53
30:0:2911:C:O2'	30:0:2912:C:H5'	2.09	0.53
38:A:8979:HOH:O	26:Z:91:GLY:HA3	2.08	0.53
2:B:202:VAL:HG11	2:B:301:VAL:HG22	1.90	0.53
3:C:84:VAL:HG12	3:C:85:LYS:HG2	1.90	0.53
3:C:236:THR:HG22	3:C:239:ALA:H	1.74	0.53
13:M:81:ARG:HG3	30:0:161:A:OP1	2.08	0.53
18:R:60:LYS:HB2	38:R:8947:HOH:O	2.08	0.53
20:T:47:THR:HB	20:T:100:ASP:HB3	1.89	0.53
30:0:364:U:H2'	30:0:365:G:O4'	2.08	0.53
30:0:1314:U:H5''	30:0:1316:G:O4'	2.09	0.53
30:0:1369:A:H5'	38:0:7739:HOH:O	2.09	0.53
30:0:1400:C:C2'	30:0:1401:G:H5'	2.39	0.53
30:0:1434:A:H4'	30:0:1435:U:H5	1.74	0.53
30:0:1496:A:H2'	30:0:1497:G:O4'	2.08	0.53
30:0:1889:C:C5	30:0:1890:U:C5	2.96	0.53
30:0:2387:U:H2'	30:0:2388:C:H6	1.73	0.53
30:0:2781:U:H2'	30:0:2782:G:C5'	2.38	0.53
2:B:51:VAL:CG2	2:B:327:VAL:HG13	2.39	0.53
3:C:103:ASN:HB3	38:0:9119:HOH:O	2.08	0.53
38:C:8545:HOH:O	30:0:457:U:H4'	2.08	0.53
5:E:166:VAL:HG12	38:E:3134:HOH:O	2.08	0.53
11:K:9:THR:HG23	38:0:3270:HOH:O	2.09	0.53
11:K:33:SER:HB2	11:K:54:THR:HB	1.90	0.53
13:M:27:ARG:HH12	13:M:44:THR:CG2	2.21	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:95:GLU:HA	30:0:949:U:H4'	1.90	0.53
18:R:39:THR:HG22	18:R:41:GLY:H	1.73	0.53
21:U:56:ARG:CZ	30:0:2890:A:H1'	2.39	0.53
22:V:12:THR:HG22	22:V:15:GLU:HG3	1.91	0.53
29:3:51:LYS:HB2	38:3:9030:HOH:O	2.08	0.53
30:0:256:C:C2'	30:0:257:G:H5'	2.39	0.53
30:0:1066:U:H2'	30:0:1067:A:C8	2.44	0.53
30:0:1323:G:N2	30:0:1334:C:N3	2.50	0.53
30:0:2859:C:H42	30:0:2898:G:H1	1.57	0.53
30:0:2902:A:H2'	30:0:2902:A:N3	2.23	0.53
31:9:61:C:H2'	31:9:62:A:H8	1.74	0.53
31:9:110:G:C6	31:9:111:U:C5	2.97	0.53
1:A:167:LYS:HE3	26:Z:50:VAL:HA	1.91	0.53
11:K:125:ALA:C	11:K:127:ALA:H	2.17	0.53
13:M:193:LYS:HB3	30:0:392:U:C5'	2.39	0.53
14:N:63:SER:HB2	14:N:75:THR:HB	1.91	0.53
30:0:105:G:H1'	38:0:5120:HOH:O	2.08	0.53
30:0:106:A:H2'	30:0:107:U:C5'	2.38	0.53
30:0:265:U:C2	30:0:266:G:C8	2.97	0.53
30:0:314:G:C2	30:0:317:A:C8	2.96	0.53
30:0:420:U:H2'	30:0:421:C:H6	1.72	0.53
30:0:488:U:H2'	38:0:3983:HOH:O	2.09	0.53
30:0:559:U:H2'	30:0:560:U:O4'	2.09	0.53
30:0:590:A:C2'	30:0:591:A:H5'	2.39	0.53
30:0:1141:U:O2'	30:0:1142:C:H5'	2.09	0.53
30:0:1205:U:O2'	30:0:1206:U:H5''	2.08	0.53
30:0:1423:C:C2'	30:0:1424:A:H5'	2.38	0.53
30:0:2735:U:C2	30:0:2736:U:C5	2.97	0.53
31:9:38:A:H2'	31:9:39:U:C6	2.43	0.53
2:B:254:GLN:HB3	38:0:3539:HOH:O	2.08	0.53
5:E:1:PRO:HD2	5:E:53:GLU:O	2.09	0.53
8:H:59:GLN:HE21	8:H:129:ARG:HG2	1.73	0.53
27:1:20:ARG:HA	30:0:121:U:C5	2.43	0.53
29:3:64:LYS:HA	29:3:84:ARG:HA	1.90	0.53
30:0:255:A:C5	30:0:256:C:C5	2.97	0.53
30:0:334:G:C5	30:0:335:U:C5	2.96	0.53
30:0:535:G:C5	30:0:2063:U:C4	2.97	0.53
30:0:1009:U:H5	38:0:6019:HOH:O	1.92	0.53
30:0:1119:G:C5	30:0:1243:C:C4	2.97	0.53
30:0:1191:A:H3'	30:0:1192:A:H5''	1.89	0.53
30:0:1202:A:C8	30:0:1203:G:N7	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1518:A:N6	30:0:1667:A:H61	2.07	0.53
30:0:2402:A:C2'	30:0:2403:C:H5'	2.39	0.53
30:0:2433:A:H2	30:0:2458:U:H3	1.57	0.53
30:0:2589:U:H2'	30:0:2590:U:C6	2.44	0.53
30:0:2770:G:H2'	30:0:2771:G:O4'	2.08	0.53
31:9:24:U:H3'	31:9:25:G:H5'	1.91	0.53
31:9:83:G:C2	31:9:84:G:C8	2.97	0.53
2:B:76:THR:H	2:B:294:TYR:HA	1.74	0.52
3:C:103:ASN:ND2	30:0:663:C:H5''	2.24	0.52
4:D:76:ARG:CZ	31:9:44:A:H1'	2.40	0.52
14:N:22:GLN:O	14:N:26:LEU:HB2	2.08	0.52
15:O:24:ALA:HB3	30:0:710:G:OP1	2.08	0.52
29:3:60:LYS:HG3	29:3:61:PRO:HD2	1.90	0.52
30:0:191:A:N6	30:0:236:A:C2	2.77	0.52
30:0:537:G:C6	30:0:620:A:C8	2.97	0.52
30:0:661:G:C5	30:0:686:A:C2	2.97	0.52
30:0:1197:G:H1'	30:0:1203:G:N2	2.24	0.52
30:0:1393:A:C2	30:0:1726:G:H4'	2.44	0.52
30:0:1556:G:O2'	30:0:1557:G:H5'	2.09	0.52
30:0:1585:C:H3'	30:0:1585:C:H6	1.74	0.52
30:0:1774:G:H2'	30:0:1775:A:C5'	2.39	0.52
30:0:1917:G:C5	30:0:1918:U:C5	2.97	0.52
30:0:2292:C:C2	30:0:2463:A:H4'	2.44	0.52
30:0:2377:U:N3	30:0:2378:U:H5	2.06	0.52
30:0:2651:C:H2'	30:0:2652:U:O4'	2.08	0.52
30:0:2792:A:H2'	30:0:2792:A:N3	2.23	0.52
30:0:2878:U:H2'	30:0:2879:A:O4'	2.08	0.52
23:W:129:LYS:HE3	30:0:1099:G:OP1	2.08	0.52
29:3:17:HIS:CG	30:0:2409:C:H4'	2.43	0.52
30:0:154:C:H2'	30:0:155:C:C6	2.38	0.52
30:0:256:C:H2'	30:0:257:G:H5'	1.89	0.52
30:0:473:A:O2'	30:0:890:C:H5'	2.10	0.52
30:0:1303:C:O2	30:0:1353:C:H1'	2.09	0.52
30:0:1523:G:C4	30:0:1524:U:C5	2.98	0.52
30:0:1679:C:H2'	30:0:1679:C:O2	2.08	0.52
30:0:2292:C:O2	30:0:2463:A:H4'	2.09	0.52
30:0:2377:U:C2	30:0:2378:U:C5	2.97	0.52
3:C:127:ARG:CZ	3:C:225:PRO:HG2	2.39	0.52
5:E:80:TRP:O	5:E:134:SER:HA	2.09	0.52
23:W:117:ARG:HH22	30:0:1264:U:P	2.32	0.52
29:3:34:LYS:HB2	29:3:37:ASP:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:70:A:H2'	30:0:70:A:N3	2.23	0.52
30:0:536:A:C2	30:0:2075:G:N3	2.78	0.52
30:0:579:G:H2'	30:0:580:A:C8	2.45	0.52
30:0:903:U:H5'	38:0:4328:HOH:O	2.08	0.52
30:0:1150:A:H8	38:0:4681:HOH:O	1.93	0.52
30:0:1343:C:H2'	30:0:1344:G:O5'	2.09	0.52
30:0:1682:A:O2'	30:0:1683:G:H5''	2.08	0.52
30:0:1769:C:C2'	30:0:1770:U:H5'	2.40	0.52
30:0:2646:G:C5	30:0:2647:C:C5	2.98	0.52
1:A:191:GLY:HA2	1:A:194:MET:CE	2.39	0.52
3:C:42:ARG:NH1	30:0:675:U:O2'	2.43	0.52
4:D:45:THR:HB	4:D:75:LEU:HD21	1.91	0.52
4:D:54:ALA:HB2	4:D:69:ILE:HD11	1.90	0.52
8:H:72:ALA:HB2	8:H:156:ALA:HB2	1.91	0.52
15:O:50:ARG:HD2	15:O:51:TYR:CE2	2.45	0.52
15:O:59:VAL:HG23	15:O:111:VAL:CG2	2.40	0.52
24:X:73:ARG:NH1	24:X:88:GLU:HA	2.22	0.52
30:0:182:G:O2'	30:0:183:A:H5'	2.10	0.52
30:0:462:A:N6	30:0:477:A:C2	2.78	0.52
30:0:905:C:H3'	38:0:5139:HOH:O	2.10	0.52
30:0:1157:C:H2'	30:0:1158:G:C5'	2.39	0.52
30:0:1168:C:C2'	30:0:1169:U:H5'	2.39	0.52
30:0:1279:U:O2	30:0:1279:U:C2'	2.58	0.52
30:0:1337:G:C5	30:0:1338:U:C5	2.98	0.52
30:0:2727:A:N1	30:0:2756:U:C2	2.77	0.52
2:B:72:THR:HB	38:B:9083:HOH:O	2.10	0.52
13:M:61:ILE:HD12	13:M:61:ILE:N	2.25	0.52
15:O:25:VAL:HG23	15:O:26:TRP:H	1.75	0.52
18:R:76:ASP:OD2	30:0:2087:C:H1'	2.10	0.52
29:3:67:LEU:HB2	29:3:69:TYR:CE1	2.45	0.52
30:0:257:G:N2	30:0:258:G:N3	2.58	0.52
30:0:324:G:C2	30:0:325:U:C5	2.98	0.52
30:0:407:A:H2'	30:0:408:A:C8	2.45	0.52
30:0:1150:A:H3'	30:0:1151:G:C5'	2.39	0.52
30:0:1375:A:H2'	30:0:1376:G:C5'	2.26	0.52
30:0:1531:U:C2	30:0:1661:A:C2	2.98	0.52
30:0:1541:G:O2'	30:0:1542:G:H5'	2.09	0.52
30:0:1634:G:C2'	38:0:3870:HOH:O	2.57	0.52
30:0:1909:A:H4'	38:0:3505:HOH:O	2.08	0.52
30:0:2250:G:C6	30:0:2251:G:C6	2.98	0.52
6:F:118:LEU:O	6:F:119:ARG:HB3	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:6:ARG:NH1	30:0:1299:G:N7	2.57	0.52
21:U:56:ARG:NH1	30:0:2890:A:C8	2.78	0.52
30:0:187:A:C5	30:0:188:C:C5	2.97	0.52
30:0:536:A:H2	30:0:2075:G:N3	2.07	0.52
30:0:692:A:H2'	30:0:693:A:O4'	2.10	0.52
30:0:912:A:C4	30:0:1294:A:C2	2.98	0.52
30:0:2027:U:O2'	30:0:2028:U:H5'	2.10	0.52
30:0:2054:A:H2'	30:0:2054:A:N3	2.25	0.52
30:0:2579:G:O2'	30:0:2580:G:H5'	2.10	0.52
1:A:36:ASP:HA	1:A:83:GLY:HA3	1.90	0.52
1:A:70:ALA:HB1	26:Z:89:THR:HG21	1.91	0.52
2:B:58:PRO:HA	2:B:63:GLU:CD	2.34	0.52
2:B:109:LEU:HD11	2:B:113:LEU:HD12	1.92	0.52
12:L:17:SER:HB3	12:L:20:ASN:OD1	2.10	0.52
21:U:44:ARG:HB3	21:U:49:LEU:HD11	1.92	0.52
30:0:301:C:O2	30:0:301:C:H2'	2.09	0.52
30:0:312:U:C2	30:0:320:G:N2	2.77	0.52
30:0:594:C:C4	30:0:595:U:C5	2.98	0.52
30:0:682:A:H2'	30:0:683:G:O4'	2.09	0.52
30:0:1642:A:N7	30:0:1643:C:C4	2.78	0.52
30:0:2723:G:O2'	30:0:2724:U:H5'	2.09	0.52
5:E:21:THR:HA	5:E:30:THR:HA	1.92	0.52
6:F:50:VAL:HG13	6:F:60:VAL:HG11	1.91	0.52
19:S:73:ASP:O	19:S:77:VAL:HG23	2.09	0.52
20:T:71:VAL:HG13	20:T:91:LEU:O	2.09	0.52
22:V:11:MET:HB3	22:V:15:GLU:HB2	1.91	0.52
23:W:125:HIS:HE1	38:W:3071:HOH:O	1.92	0.52
30:0:285:A:H2'	30:0:286:U:O4'	2.10	0.52
30:0:597:A:H2'	30:0:598:C:C6	2.45	0.52
30:0:790:A:H2'	30:0:791:A:C5'	2.40	0.52
30:0:2345:A:H3'	30:0:2346:C:C5	2.44	0.52
30:0:2416:G:H2'	30:0:2417:C:C6	2.45	0.52
30:0:2549:C:O2'	30:0:2550:U:H5'	2.10	0.52
30:0:2727:A:C6	30:0:2756:U:C4	2.98	0.52
1:A:54:PRO:HD3	26:Z:77:GLY:HA3	1.91	0.52
2:B:258:GLY:H	2:B:260:HIS:CE1	2.28	0.52
2:B:260:HIS:HE1	38:B:9063:HOH:O	1.93	0.52
7:G:16:LYS:NZ	7:G:63:ARG:HH12	2.07	0.52
8:H:168:VAL:HG13	38:H:216:HOH:O	2.10	0.52
10:J:127:ILE:HG22	33:J:8801:CL:CL	2.47	0.52
11:K:43:ARG:O	30:0:2583:A:H4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:50:GLY:C	30:0:2453:G:H4'	2.34	0.52
13:M:83:SER:CB	29:3:47:GLY:HA3	2.39	0.52
29:3:13:HIS:CB	29:3:74:CYS:SG	2.91	0.52
30:0:287:C:H3'	30:0:287:C:H6	1.73	0.52
30:0:517:U:C2'	30:0:518:G:H5'	2.40	0.52
30:0:788:A:H4'	38:0:6882:HOH:O	2.09	0.52
30:0:1400:C:H2'	30:0:1401:G:H5'	1.92	0.52
30:0:1649:G:H5'	38:0:9906:HOH:O	2.09	0.52
30:0:2011:A:H4'	30:0:2012:U:O5'	2.10	0.52
30:0:2237:G:H1'	30:0:2238:A:C8	2.45	0.52
31:9:31:C:O2'	31:9:32:G:H5'	2.09	0.52
1:A:42:VAL:HG21	1:A:74:VAL:HG12	1.90	0.52
2:B:320:GLN:NE2	2:B:321:PRO:HD2	2.25	0.52
38:B:8993:HOH:O	30:0:2547:C:H1'	2.10	0.52
3:C:175:LYS:HE3	38:0:6736:HOH:O	2.09	0.52
13:M:87:GLY:HA3	13:M:91:ILE:HD12	1.92	0.52
26:Z:45:VAL:HA	26:Z:48:ARG:HB3	1.92	0.52
30:0:418:C:H2'	30:0:419:A:H8	1.74	0.52
30:0:564:G:N2	30:0:593:A:OP2	2.43	0.52
30:0:643:A:H2	30:0:902:G:N3	2.08	0.52
30:0:700:A:C5'	30:0:701:U:H5'	2.40	0.52
30:0:1189:A:H1'	30:0:1209:C:O4'	2.10	0.52
30:0:1706:G:C6	30:0:1707:G:N1	2.78	0.52
30:0:1764:C:H2'	30:0:1765:G:O4'	2.10	0.52
30:0:1904:A:C2	30:0:1905:U:H1'	2.45	0.52
30:0:2032:U:C2'	30:0:2033:G:C5'	2.88	0.52
30:0:2128:G:H2'	30:0:2129:U:O4'	2.10	0.52
30:0:2363:G:C6	30:0:2364:A:N7	2.78	0.52
30:0:2754:G:H2'	30:0:2755:G:O4'	2.09	0.52
31:9:105:A:H2'	31:9:106:U:H5'	1.92	0.52
6:F:28:ALA:HB3	6:F:99:THR:O	2.10	0.51
10:J:56:LYS:O	10:J:60:ARG:HG3	2.09	0.51
25:Y:203:VAL:HG12	25:Y:228:VAL:HA	1.92	0.51
26:Z:96:GLU:OE1	26:Z:101:LYS:HG2	2.10	0.51
29:3:68:LYS:HE2	29:3:70:ARG:NH1	2.25	0.51
30:0:110:C:H1'	38:0:6615:HOH:O	2.10	0.51
30:0:801:U:O5'	30:0:801:U:H6	1.93	0.51
30:0:958:G:H2'	30:0:959:C:C6	2.45	0.51
30:0:962:C:H2'	30:0:963:C:C5'	2.40	0.51
30:0:1165:G:C1'	30:0:1174:A:H1'	2.15	0.51
30:0:1183:C:C2	30:0:1184:C:C5	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1244:U:H6	38:0:4793:HOH:O	1.93	0.51
30:0:1424:A:C2	30:0:1441:G:C2	2.98	0.51
30:0:1947:G:C5	30:0:1948:G:N7	2.78	0.51
2:B:207:LYS:HG3	30:0:2717:C:OP1	2.10	0.51
8:H:44:ASP:HA	8:H:170:ARG:HH12	1.76	0.51
12:L:11:ARG:HG2	12:L:12:THR:HG23	1.93	0.51
13:M:120:VAL:HG11	13:M:130:GLU:HG3	1.90	0.51
15:O:96:VAL:HA	38:O:4258:HOH:O	2.10	0.51
18:R:150:PRO:CG	18:R:150:PRO:CB	2.85	0.51
24:X:29:ALA:CB	24:X:66:THR:HG21	2.41	0.51
26:Z:97:THR:O	26:Z:101:LYS:HG3	2.09	0.51
27:1:37:CYS:SG	27:1:39:PHE:HB2	2.51	0.51
29:3:30:GLN:HB3	38:3:9055:HOH:O	2.09	0.51
30:0:116:G:C1'	30:0:129:A:C4	2.93	0.51
30:0:152:A:H1'	30:0:440:C:O2'	2.10	0.51
30:0:1312:G:C6	30:0:1343:C:N3	2.79	0.51
30:0:1531:U:C2	30:0:1661:A:N1	2.78	0.51
30:0:1545:C:H2'	30:0:1546:G:O4'	2.09	0.51
30:0:1619:G:H2'	30:0:1620:C:O4'	2.09	0.51
30:0:1754:A:H2'	30:0:1755:A:O4'	2.10	0.51
30:0:1779:A:H2'	30:0:1780:G:H5'	1.92	0.51
30:0:2073:G:OP2	30:0:2490:A:H5'	2.10	0.51
30:0:2255:A:C2	30:0:2256:G:C4	2.98	0.51
30:0:2421:G:H4'	38:0:4740:HOH:O	2.09	0.51
30:0:2658:G:H4'	30:0:2842:G:C8	2.45	0.51
30:0:2747:C:H3'	38:0:3844:HOH:O	2.09	0.51
30:0:2752:C:C2'	30:0:2753:G:H5'	2.40	0.51
30:0:2765:C:H2'	30:0:2766:A:C8	2.45	0.51
31:9:35:C:H5''	38:9:4078:HOH:O	2.10	0.51
1:A:95:PRO:HG2	1:A:98:GLU:HG2	1.91	0.51
3:C:4:THR:HA	3:C:15:GLU:CB	2.41	0.51
4:D:135:VAL:HG22	4:D:136:ARG:N	2.24	0.51
12:L:121:ILE:HG12	12:L:141:GLU:HB2	1.91	0.51
24:X:71:ARG:CB	24:X:88:GLU:HG2	2.40	0.51
29:3:60:LYS:NZ	30:0:2462:G:N7	2.46	0.51
30:0:57:C:C2'	30:0:58:C:H5'	2.39	0.51
30:0:300:U:C6	30:0:301:C:H5	2.27	0.51
30:0:353:G:H2'	30:0:354:A:C8	2.45	0.51
30:0:369:G:O2'	30:0:370:G:H5'	2.10	0.51
30:0:1096:U:O2	30:0:1261:A:C2	2.64	0.51
30:0:1268:C:O2'	30:0:1269:G:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1388:U:H2'	30:0:1389:G:O4'	2.10	0.51
30:0:1540:G:C6	30:0:1646:G:C5	2.98	0.51
30:0:1637:A:C2	30:0:1638:U:C2	2.98	0.51
30:0:1791:U:O2'	30:0:1792:C:H5'	2.10	0.51
30:0:1915:U:H2'	30:0:1916:C:C6	2.46	0.51
30:0:2097:G:N2	30:0:2098:C:H1'	2.25	0.51
30:0:2102:G:N2	30:0:2104:C:C2	2.78	0.51
30:0:2383:G:C6	30:0:2384:U:N3	2.78	0.51
24:X:10:VAL:HG12	24:X:11:THR:N	2.23	0.51
30:0:35:U:O2'	30:0:36:C:H5'	2.10	0.51
30:0:77:G:C2'	30:0:78:G:H5'	2.39	0.51
30:0:87:C:O2'	30:0:88:G:H5''	2.11	0.51
30:0:300:U:C4	30:0:301:C:H5	2.28	0.51
30:0:623:U:O2'	30:0:624:U:H5'	2.10	0.51
30:0:1583:U:C2'	30:0:1584:C:H5'	2.40	0.51
30:0:1947:G:N2	30:0:1966:U:C2	2.78	0.51
1:A:86:ALA:HB3	1:A:94:LEU:HB3	1.92	0.51
2:B:215:VAL:HA	2:B:220:VAL:HG22	1.93	0.51
7:G:13:PRO:HB2	7:G:15:TRP:CD1	2.45	0.51
14:N:42:HIS:HA	14:N:75:THR:O	2.11	0.51
16:P:27:ARG:O	16:P:31:ILE:HG13	2.10	0.51
26:Z:41:ARG:HB3	38:0:5660:HOH:O	2.11	0.51
28:2:49:GLU:OE1	30:0:120:A:H2	1.92	0.51
29:3:24:LYS:HE3	29:3:90:PHE:CE1	2.46	0.51
29:3:60:LYS:HD2	29:3:61:PRO:HD2	1.92	0.51
30:0:188:C:O2	30:0:188:C:H2'	2.10	0.51
30:0:1059:G:C8	30:0:2491:G:H4'	2.46	0.51
30:0:1130:U:H5'	38:0:7572:HOH:O	2.11	0.51
30:0:1304:U:H2'	30:0:1305:C:C6	2.44	0.51
30:0:1584:C:O2	30:0:1612:A:C2	2.64	0.51
30:0:1592:G:C5	30:0:1593:C:C4	2.99	0.51
30:0:1982:C:H3'	30:0:1983:C:H6	1.75	0.51
30:0:2032:U:C2'	30:0:2033:G:H5''	2.41	0.51
2:B:41:PHE:CE1	2:B:79:MET:HG3	2.45	0.51
2:B:48:MET:HB2	30:0:2719:A:OP1	2.10	0.51
3:C:83:ALA:HA	30:0:1361:C:H1'	1.92	0.51
21:U:56:ARG:CD	30:0:2890:A:C8	2.89	0.51
30:0:20:G:C2'	30:0:21:G:O5'	2.58	0.51
30:0:161:A:H2'	30:0:162:C:C6	2.46	0.51
30:0:170:U:C5	30:0:171:C:C6	2.99	0.51
30:0:422:G:C6	30:0:2446:G:C6	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:509:A:C6	30:0:511:A:N6	2.79	0.51
30:0:707:C:C2	30:0:708:A:C8	2.98	0.51
30:0:723:G:H2'	30:0:724:G:C8	2.45	0.51
30:0:939:A:C2	30:0:1027:G:N3	2.79	0.51
30:0:1132:A:H61	30:0:1229:C:H2'	1.72	0.51
30:0:1160:G:H2'	38:0:5570:HOH:O	2.10	0.51
30:0:1168:C:H2'	30:0:1169:U:H5'	1.92	0.51
30:0:1524:U:H6	30:0:1524:U:O5'	1.93	0.51
30:0:1745:G:H22	30:0:2033:G:H5'	1.75	0.51
30:0:1819:G:H2'	30:0:1820:G:H4'	1.93	0.51
30:0:2375:A:H2'	30:0:2376:C:H6	1.75	0.51
30:0:2407:G:C2	30:0:2408:A:C4	2.99	0.51
30:0:2642:G:H4'	38:0:9613:HOH:O	2.09	0.51
1:A:118:PHE:HB3	1:A:140:LEU:HD22	1.92	0.51
16:P:7:LYS:HD2	16:P:21:VAL:HG13	1.93	0.51
17:Q:11:ARG:HG3	30:0:2363:G:O2'	2.11	0.51
29:3:1:MET:HA	30:0:2320:U:C5'	2.41	0.51
29:3:6:ARG:HG2	29:3:21:GLU:HG2	1.91	0.51
29:3:60:LYS:CG	29:3:61:PRO:HD2	2.40	0.51
30:0:18:C:H2'	30:0:19:U:H6	1.76	0.51
30:0:1149:U:C5'	30:0:1151:G:H5'	2.41	0.51
30:0:1195:G:N2	30:0:1205:U:C2	2.78	0.51
30:0:1211:G:H2'	30:0:1212:C:C6	2.46	0.51
30:0:1701:A:H1'	30:0:1710:A:N7	2.26	0.51
31:9:39:U:H3	31:9:42:C:H5''	1.76	0.51
31:9:88:G:C2	31:9:89:C:C5	2.99	0.51
2:B:329:TYR:CE2	21:U:15:PRO:HG2	2.45	0.51
3:C:205:ARG:NH2	30:0:347:A:O2'	2.44	0.51
11:K:24:THR:HB	11:K:64:MET:HE2	1.91	0.51
14:N:25:ARG:HG2	30:0:2416:G:O2'	2.11	0.51
23:W:131:PRO:O	23:W:136:GLY:N	2.41	0.51
29:3:33:MET:CG	30:0:1922:A:H2'	2.41	0.51
30:0:68:U:C4	30:0:107:U:H4'	2.46	0.51
30:0:174:A:O4'	30:0:176:U:C6	2.63	0.51
30:0:302:A:H2'	30:0:303:C:C5'	2.41	0.51
30:0:483:C:N4	30:0:506:G:O2'	2.44	0.51
30:0:642:G:N2	38:0:9079:HOH:O	2.42	0.51
30:0:960:G:N3	30:0:960:G:C2'	2.72	0.51
30:0:1042:U:O2'	30:0:1043:C:H5'	2.10	0.51
30:0:2061:C:O2'	30:0:2062:A:H5'	2.11	0.51
30:0:2276:U:H2'	30:0:2277:U:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2644:C:H5	38:0:7010:HOH:O	1.93	0.51
30:0:2842:G:H2'	30:0:2843:A:C5'	2.39	0.51
31:9:12:C:H5'	31:9:70:U:O4'	2.09	0.51
1:A:199:HIS:CE1	1:A:225:VAL:HG11	2.46	0.51
3:C:176:ALA:HB2	30:0:1343:C:C5	2.46	0.51
16:P:99:ARG:HE	30:0:1597:A:H5'	1.76	0.51
20:T:82:THR:HG21	30:0:488:U:O2'	2.11	0.51
28:2:41:HIS:CD2	28:2:44:ARG:H	2.18	0.51
30:0:57:C:N3	30:0:89:G:N2	2.55	0.51
30:0:1377:C:H1'	38:0:3734:HOH:O	2.11	0.51
30:0:1391:G:H2'	30:0:1392:A:H5'	1.92	0.51
30:0:1514:C:O2'	30:0:1515:A:H5'	2.10	0.51
30:0:2356:A:H2'	30:0:2357:G:O4'	2.10	0.51
30:0:2505:G:O2'	30:0:2506:A:H5'	2.10	0.51
4:D:17:ARG:CZ	4:D:137:PRO:HA	2.41	0.51
38:D:189:HOH:O	31:9:58:G:H1'	2.11	0.51
6:F:36:THR:HG23	6:F:97:ALA:HB2	1.93	0.51
8:H:53:ILE:HB	8:H:165:ARG:HB2	1.93	0.51
9:I:124:VAL:C	9:I:126:THR:H	2.19	0.51
12:L:26:HIS:HB2	38:L:8811:HOH:O	2.09	0.51
12:L:117:GLU:HA	38:L:8857:HOH:O	2.11	0.51
14:N:37:ARG:CD	33:N:8807:CL:CL	2.90	0.51
18:R:92:LEU:HD23	18:R:145:LEU:HD21	1.93	0.51
29:3:1:MET:HE2	29:3:88:LEU:HD11	1.93	0.51
30:0:347:A:O2'	30:0:348:C:H5'	2.10	0.51
30:0:546:C:O5'	30:0:546:C:H6	1.94	0.51
30:0:604:G:H4'	30:0:605:C:O5'	2.09	0.51
30:0:727:G:H3'	30:0:728:C:C6	2.46	0.51
30:0:1835:U:H6	38:0:5521:HOH:O	1.93	0.51
30:0:1859:A:C5	30:0:1860:U:C5	2.98	0.51
30:0:1926:G:C4	30:0:1927:A:C8	2.99	0.51
30:0:2050:G:O2'	30:0:2051:G:H5'	2.11	0.51
30:0:2831:C:H2'	30:0:2832:C:O4'	2.11	0.51
30:0:2852:A:O4'	30:0:2853:U:H5	1.94	0.51
11:K:105:ARG:HH11	11:K:105:ARG:HG3	1.75	0.50
38:L:8903:HOH:O	25:Y:147:ARG:HG3	2.10	0.50
16:P:16:VAL:HG12	16:P:20:ARG:HB2	1.93	0.50
21:U:56:ARG:CD	30:0:2890:A:H1'	2.41	0.50
23:W:4:LEU:HD23	23:W:54:PHE:CB	2.41	0.50
26:Z:102:THR:HG23	26:Z:105:ARG:HD3	1.92	0.50
28:2:2:LYS:HG3	30:0:1486:A:C5	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:98:A:H2'	30:0:99:A:H5'	1.93	0.50
30:0:616:U:C4	30:0:617:C:C4	2.99	0.50
30:0:722:G:H2'	30:0:723:G:H5'	1.93	0.50
30:0:790:A:H1'	30:0:1710:A:H2'	1.93	0.50
30:0:1188:A:C8	30:0:1189:A:C2	2.99	0.50
30:0:1245:C:H3'	30:0:1245:C:C6	2.46	0.50
30:0:1666:C:C2	30:0:1667:A:C8	2.98	0.50
30:0:1878:G:O2'	30:0:1879:U:P	2.69	0.50
30:0:2015:A:H2'	30:0:2016:U:H6	1.76	0.50
30:0:2038:A:O2'	30:0:2039:A:H5'	2.11	0.50
30:0:2622:A:H1'	38:0:4060:HOH:O	2.11	0.50
30:0:2842:G:C2'	30:0:2843:A:H5'	2.41	0.50
31:9:92:G:C6	31:9:93:A:N6	2.79	0.50
2:B:320:GLN:HE21	2:B:321:PRO:HD2	1.76	0.50
10:J:45:VAL:HG23	10:J:130:VAL:O	2.11	0.50
20:T:87:VAL:HB	20:T:88:PRO:HD2	1.93	0.50
21:U:22:VAL:HA	21:U:27:ALA:O	2.11	0.50
28:2:36:ASN:HD22	28:2:39:ARG:CG	2.24	0.50
29:3:60:LYS:CD	29:3:61:PRO:HD2	2.41	0.50
30:0:59:A:C5'	38:0:4297:HOH:O	2.59	0.50
30:0:99:A:H2'	30:0:100:C:H5'	1.92	0.50
30:0:812:A:H2'	30:0:813:C:C6	2.47	0.50
30:0:1573:A:N7	30:0:1574:C:C2	2.79	0.50
30:0:1908:G:H1'	30:0:1931:A:N6	2.25	0.50
30:0:2088:C:H2'	30:0:2089:A:H8	1.77	0.50
30:0:2642:G:C6	30:0:2643:G:C6	2.99	0.50
30:0:2859:C:N4	30:0:2898:G:H1	2.09	0.50
1:A:40:GLY:O	1:A:79:GLU:HG3	2.10	0.50
1:A:125:ASN:CB	1:A:158:VAL:HG12	2.41	0.50
1:A:211:LYS:NZ	38:A:9041:HOH:O	2.39	0.50
2:B:288:GLY:HA2	30:0:2898:G:H4'	1.94	0.50
4:D:135:VAL:HG21	4:D:139:TYR:CG	2.45	0.50
12:L:142:LEU:HD11	12:L:146:GLY:HA3	1.93	0.50
13:M:68:ARG:O	13:M:68:ARG:HD3	2.11	0.50
30:0:323:C:O2'	30:0:324:G:H5'	2.12	0.50
30:0:632:A:C4	30:0:633:C:C5	2.99	0.50
30:0:711:G:C2	30:0:718:C:N3	2.78	0.50
30:0:1131:G:C6	30:0:1230:A:C4	3.00	0.50
30:0:1438:G:C4	30:0:1684:A:C2	3.00	0.50
30:0:1543:G:N1	30:0:1641:A:OP2	2.26	0.50
30:0:1550:A:C2	30:0:1636:G:C4	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1572:A:H3'	38:0:4076:HOH:O	2.11	0.50
30:0:2105:C:H2'	30:0:2106:C:C6	2.47	0.50
30:0:2239:C:C2	30:0:2240:U:C5	3.00	0.50
30:0:2741:A:H2'	30:0:2742:G:O4'	2.10	0.50
30:0:2871:G:C6	30:0:2887:G:C6	2.99	0.50
5:E:118:ILE:HG23	5:E:144:THR:HG21	1.94	0.50
8:H:49:GLN:HG3	8:H:140:TYR:CE2	2.47	0.50
12:L:27:ARG:HH21	12:L:30:ARG:HG2	1.76	0.50
24:X:43:VAL:HG22	24:X:76:ARG:HH12	1.77	0.50
24:X:70:ILE:HG23	24:X:70:ILE:O	2.12	0.50
25:Y:127:GLN:HA	38:Y:8915:HOH:O	2.11	0.50
27:1:4:GLY:O	27:1:8:GLN:HG2	2.11	0.50
30:0:324:G:C2	30:0:325:U:C6	3.00	0.50
30:0:962:C:C2'	30:0:963:C:H5'	2.42	0.50
30:0:1387:G:C2	30:0:1396:C:C2	3.00	0.50
30:0:1488:U:H3'	38:0:6122:HOH:O	2.10	0.50
30:0:1586:G:C5	30:0:1587:U:C5	2.99	0.50
30:0:2248:C:N3	30:0:2254:G:C2	2.80	0.50
30:0:2300:A:C2	30:0:2306:U:C5	3.00	0.50
30:0:2466:G:H5'	38:0:3625:HOH:O	2.10	0.50
30:0:2747:C:C3'	38:0:3844:HOH:O	2.59	0.50
31:9:114:G:H2'	31:9:115:C:C6	2.45	0.50
2:B:304:PRO:HD2	2:B:307:ARG:NE	2.27	0.50
2:B:305:ASP:O	2:B:306:LYS:HB2	2.11	0.50
8:H:157:TYR:CD1	8:H:157:TYR:C	2.90	0.50
9:I:114:TYR:CD1	9:I:114:TYR:N	2.78	0.50
10:J:47:THR:HB	38:0:4793:HOH:O	2.11	0.50
10:J:104:TYR:HA	38:J:2238:HOH:O	2.12	0.50
11:K:91:GLU:OE2	21:U:24:LYS:HB2	2.11	0.50
38:M:8832:HOH:O	29:3:46:ILE:HB	2.10	0.50
23:W:52:VAL:HG22	23:W:53:ALA:N	2.27	0.50
30:0:334:G:C4	30:0:335:U:C6	2.99	0.50
30:0:719:C:H2'	30:0:720:G:O5'	2.11	0.50
30:0:735:C:C2	30:0:736:A:H1'	2.47	0.50
30:0:784:A:H2'	30:0:785:U:O4'	2.11	0.50
30:0:1631:A:C6	30:0:1632:A:N1	2.80	0.50
30:0:1742:A:H61	30:0:2037:C:N4	2.08	0.50
30:0:1774:G:C2'	30:0:1775:A:C5'	2.90	0.50
30:0:1933:G:C2'	30:0:1934:A:H5'	2.41	0.50
30:0:2248:C:C2	30:0:2254:G:C2	3.00	0.50
30:0:2771:G:N3	30:0:2771:G:H2'	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:9:58:G:N7	31:9:59:C:C4	2.79	0.50
21:U:56:ARG:HG3	21:U:56:ARG:NH1	2.27	0.50
26:Z:61:HIS:HB2	26:Z:71:VAL:HB	1.92	0.50
29:3:55:VAL:HG13	38:3:9004:HOH:O	2.12	0.50
30:0:66:G:C2	30:0:109:U:C4	2.99	0.50
30:0:271:C:C2	30:0:273:G:O4'	2.65	0.50
30:0:1183:C:N3	30:0:1184:C:N4	2.59	0.50
30:0:1323:G:C2	30:0:1324:G:N7	2.80	0.50
30:0:1762:C:N3	30:0:1783:A:C2	2.79	0.50
30:0:2432:C:O5'	30:0:2432:C:H6	1.94	0.50
30:0:2489:G:H1'	38:0:7179:HOH:O	2.11	0.50
31:9:13:A:O4'	31:9:114:G:C8	2.65	0.50
2:B:280:VAL:HG12	2:B:281:ASP:N	2.25	0.50
7:G:19:GLU:O	7:G:23:ILE:HG13	2.12	0.50
12:L:27:ARG:NH2	12:L:30:ARG:HG2	2.27	0.50
21:U:39:ASN:ND2	21:U:51:TRP:HZ2	2.09	0.50
25:Y:212:ARG:HB2	30:0:1315:G:C4	2.46	0.50
30:0:45:A:N6	30:0:147:G:C4	2.80	0.50
30:0:387:G:C2'	30:0:388:G:H5'	2.41	0.50
30:0:415:A:C2	30:0:426:G:C2	2.99	0.50
30:0:790:A:C2'	30:0:791:A:H5'	2.41	0.50
30:0:1008:C:O2'	30:0:1009:U:H5'	2.12	0.50
30:0:1096:U:C2	30:0:1261:A:C2	3.00	0.50
30:0:1544:U:H2'	30:0:1545:C:C6	2.47	0.50
30:0:1948:G:C2	30:0:1949:G:C4	3.00	0.50
30:0:2064:U:H2'	30:0:2065:C:C6	2.47	0.50
30:0:2471:G:H2'	30:0:2472:C:H6	1.75	0.50
31:9:114:G:C5	31:9:115:C:C5	2.99	0.50
31:9:117:G:H2'	31:9:118:C:H6	1.76	0.50
1:A:233:THR:HB	30:0:1942:A:H5''	1.93	0.50
2:B:280:VAL:HA	38:B:9031:HOH:O	2.11	0.50
4:D:154:LYS:H	4:D:154:LYS:CD	2.21	0.50
12:L:37:LYS:NZ	38:L:8812:HOH:O	2.44	0.50
13:M:163:LEU:HD21	30:0:188:C:H5''	1.93	0.50
21:U:7:ASP:HB2	21:U:30:HIS:H	1.77	0.50
23:W:24:LEU:O	23:W:26:ILE:HG22	2.11	0.50
23:W:38:THR:HG22	23:W:39:ASP:N	2.22	0.50
23:W:119:HIS:HD2	23:W:120:PRO:O	1.95	0.50
25:Y:136:LYS:HB2	38:0:9314:HOH:O	2.12	0.50
25:Y:169:ARG:HD3	30:0:1328:A:C8	2.46	0.50
25:Y:186:ARG:HD2	38:0:4161:HOH:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:204:ARG:HA	25:Y:230:ASN:OD1	2.11	0.50
29:3:51:LYS:HD2	30:0:219:G:H4'	1.92	0.50
30:0:269:G:C2	30:0:270:U:O4	2.65	0.50
30:0:272:A:C5'	30:0:273:G:OP2	2.59	0.50
30:0:287:C:N3	30:0:365:G:N2	2.52	0.50
30:0:317:A:H4'	38:0:3752:HOH:O	2.10	0.50
30:0:669:G:C4	30:0:670:G:C8	2.99	0.50
30:0:937:C:C2'	30:0:938:G:H5'	2.42	0.50
30:0:1067:A:H3'	38:0:4262:HOH:O	2.11	0.50
30:0:2721:U:O2'	30:0:2722:G:H5'	2.11	0.50
30:0:2878:U:H5''	38:0:4138:HOH:O	2.12	0.50
2:B:10:SER:O	2:B:16:ARG:NH1	2.44	0.50
2:B:236:ILE:HG23	38:B:9080:HOH:O	2.11	0.50
13:M:149:TRP:HZ3	13:M:155:GLN:OE1	1.95	0.50
18:R:60:LYS:HG2	18:R:75:TRP:CD1	2.47	0.50
23:W:5:VAL:CG1	23:W:153:MET:HE1	2.30	0.50
26:Z:98:PRO:HA	26:Z:101:LYS:HD2	1.93	0.50
30:0:77:G:H2'	30:0:78:G:C5'	2.42	0.50
30:0:256:C:H2'	30:0:257:G:C5'	2.41	0.50
30:0:347:A:C2'	30:0:348:C:H5'	2.41	0.50
30:0:544:G:H2'	30:0:545:G:C5'	2.42	0.50
30:0:559:U:O2'	30:0:560:U:H5'	2.12	0.50
30:0:685:C:O2'	30:0:748:C:H5''	2.11	0.50
30:0:820:G:H5'	30:0:821:U:H5'	1.93	0.50
30:0:1023:C:H2'	30:0:1024:G:H8	1.77	0.50
30:0:1102:C:H1'	30:0:1109:U:C4	2.47	0.50
30:0:1337:G:C6	30:0:1338:U:C4	2.99	0.50
30:0:1386:G:O2'	30:0:1387:G:H5'	2.12	0.50
30:0:1481:G:O2'	30:0:1482:A:H5'	2.12	0.50
30:0:2277:U:H5	38:0:4871:HOH:O	1.95	0.50
30:0:2768:A:N3	30:0:2768:A:C3'	2.72	0.50
30:0:2774:U:O2'	30:0:2775:A:H5'	2.12	0.50
30:0:2851:G:C5	30:0:2902:A:C2	3.00	0.50
30:0:2855:G:C2	30:0:2904:U:C2	2.99	0.50
2:B:36:PRO:HA	2:B:167:GLY:O	2.12	0.49
14:N:35:VAL:O	14:N:45:ALA:HA	2.11	0.49
15:O:105:ASN:HD21	15:O:109:SER:H	1.59	0.49
20:T:23:VAL:O	20:T:42:VAL:HG23	2.12	0.49
21:U:56:ARG:HB2	30:0:2890:A:C8	2.45	0.49
29:3:22:VAL:HG12	29:3:67:LEU:HD22	1.94	0.49
30:0:65:C:H2'	30:0:66:G:C8	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:370:G:O2'	30:0:371:U:H5'	2.12	0.49
30:0:415:A:N3	30:0:426:G:C2	2.80	0.49
30:0:481:U:C4	30:0:487:G:O6	2.65	0.49
30:0:669:G:C2'	30:0:670:G:H5'	2.42	0.49
30:0:1373:G:C6	30:0:1374:C:C4	2.99	0.49
30:0:1424:A:C2	30:0:1441:G:N1	2.80	0.49
30:0:1718:G:O2'	30:0:1719:G:H5'	2.11	0.49
30:0:2511:A:H2'	30:0:2512:U:C6	2.47	0.49
30:0:2517:A:H2'	30:0:2518:C:O4'	2.12	0.49
30:0:2541:U:H2'	30:0:2542:C:H6	1.77	0.49
30:0:2869:G:H2'	30:0:2870:C:C6	2.47	0.49
12:L:14:GLY:O	30:0:1295:G:H5''	2.12	0.49
19:S:77:VAL:O	19:S:80:ARG:HG2	2.11	0.49
21:U:7:ASP:HB2	21:U:30:HIS:N	2.27	0.49
23:W:6:GLN:HB2	23:W:26:ILE:HD11	1.94	0.49
30:0:194:A:N7	30:0:427:C:H5'	2.27	0.49
30:0:202:U:C2'	30:0:203:G:H5'	2.42	0.49
30:0:561:G:N3	30:0:562:A:C8	2.81	0.49
30:0:707:C:N3	30:0:708:A:C8	2.80	0.49
30:0:1038:G:C2'	30:0:1039:G:H5'	2.42	0.49
30:0:1119:G:N2	30:0:1246:A:H2	2.03	0.49
30:0:1170:U:H2'	30:0:1172:G:OP2	2.13	0.49
30:0:1592:G:C2	30:0:1593:C:C2	3.00	0.49
30:0:1678:A:C4	30:0:1679:C:C6	3.00	0.49
30:0:1681:G:H4'	30:0:1682:A:N3	2.26	0.49
30:0:1947:G:C8	30:0:1947:G:H3'	2.47	0.49
30:0:1992:U:O2	30:0:1994:A:H8	1.95	0.49
30:0:2503:A:H2'	30:0:2511:A:C6	2.46	0.49
31:9:9:C:OP2	31:9:10:C:C5	2.65	0.49
31:9:61:C:H2'	31:9:62:A:C8	2.46	0.49
1:A:192:VAL:O	1:A:207:GLN:HG2	2.12	0.49
2:B:44:TYR:OH	2:B:148:PRO:HG3	2.12	0.49
2:B:55:ASN:HB3	2:B:63:GLU:HA	1.93	0.49
8:H:91:ARG:O	30:0:1003:U:H4'	2.11	0.49
11:K:66:ARG:NH2	30:0:1994:A:OP1	2.40	0.49
11:K:74:VAL:HG21	11:K:96:VAL:HG23	1.94	0.49
16:P:3:LEU:HD12	30:0:1397:C:H5'	1.95	0.49
19:S:42:GLU:C	19:S:44:GLN:H	2.20	0.49
20:T:41:ARG:HG2	20:T:41:ARG:HH11	1.77	0.49
24:X:18:ARG:HG2	24:X:25:ARG:NH2	2.27	0.49
29:3:33:MET:HG2	30:0:1922:A:O2'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:87:ARG:HG2	29:3:88:LEU:H	1.76	0.49
30:0:259:G:N2	30:0:260:C:H1'	2.27	0.49
30:0:295:C:O2'	30:0:296:G:H5'	2.12	0.49
30:0:566:A:H2'	30:0:567:U:O4'	2.12	0.49
30:0:802:G:H2'	30:0:803:C:H6	1.76	0.49
30:0:1013:A:C2	30:0:1014:A:H1'	2.46	0.49
30:0:1589:G:C5'	38:0:6772:HOH:O	2.60	0.49
30:0:1603:A:C5'	30:0:1605:G:H5'	2.41	0.49
30:0:1611:G:H2'	30:0:1612:A:H8	1.77	0.49
30:0:1617:C:C4	30:0:1643:C:H4'	2.46	0.49
30:0:2035:C:O2'	30:0:2036:C:H5'	2.12	0.49
30:0:2444:U:C4	30:0:2445:U:C5	3.00	0.49
30:0:2845:G:C6	30:0:2846:C:C4	3.00	0.49
31:9:19:G:C2	31:9:20:G:C8	3.00	0.49
2:B:43:GLY:HA3	2:B:76:THR:HG22	1.93	0.49
2:B:212:GLN:HB2	2:B:257:THR:CG2	2.41	0.49
2:B:256:GLN:HB2	30:0:2656:G:O2'	2.13	0.49
8:H:39:LYS:HD2	30:0:968:G:O2'	2.13	0.49
8:H:76:LEU:HD21	8:H:149:VAL:HA	1.93	0.49
11:K:29:LEU:HB3	11:K:55:VAL:HG21	1.94	0.49
14:N:104:ILE:HD12	14:N:107:ASN:O	2.11	0.49
14:N:154:LEU:C	14:N:156:GLU:H	2.20	0.49
14:N:171:HIS:CE1	38:N:8855:HOH:O	2.65	0.49
30:0:177:A:C8	30:0:178:U:C5	3.01	0.49
30:0:221:G:H2'	30:0:222:A:C8	2.48	0.49
30:0:242:A:N6	30:0:269:G:H1'	2.27	0.49
30:0:243:A:N6	30:0:269:G:H1'	2.27	0.49
30:0:295:C:C2'	30:0:296:G:H5'	2.43	0.49
30:0:727:G:N2	30:0:728:C:H1'	2.27	0.49
30:0:923:A:H2'	38:0:5612:HOH:O	2.11	0.49
30:0:1128:U:H1'	38:0:6010:HOH:O	2.13	0.49
30:0:1166:A:C6	30:0:1181:A:C2	3.00	0.49
30:0:1420:C:H2'	30:0:1420:C:O2	2.10	0.49
30:0:1574:C:C6	30:0:1575:C:H5	2.30	0.49
30:0:1594:C:O2'	30:0:1595:G:H5'	2.12	0.49
30:0:2295:G:N3	30:0:2361:A:H2	2.10	0.49
30:0:2842:G:H2'	30:0:2843:A:H5'	1.95	0.49
2:B:41:PHE:CZ	2:B:79:MET:HG3	2.47	0.49
8:H:12:ILE:HG23	8:H:129:ARG:CZ	2.43	0.49
12:L:21:ARG:HA	12:L:26:HIS:HD2	1.76	0.49
13:M:111:ASN:HB2	38:M:8854:HOH:O	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:116:G:H1'	30:0:129:A:C2	2.47	0.49
30:0:581:G:O2'	30:0:582:U:H5'	2.13	0.49
30:0:614:U:H2'	30:0:615:G:C8	2.46	0.49
30:0:660:A:C8	30:0:746:A:C6	3.01	0.49
30:0:746:A:H4'	30:0:747:G:OP1	2.11	0.49
30:0:1024:G:H2'	30:0:1025:C:H6	1.78	0.49
30:0:1180:U:O2'	30:0:1181:A:H5'	2.13	0.49
30:0:1194:A:O2'	30:0:1195:G:H5'	2.12	0.49
30:0:1427:A:H61	30:0:1440:U:H1'	1.76	0.49
30:0:1427:A:O2'	30:0:1428:C:H5'	2.13	0.49
30:0:1540:G:C4	30:0:1541:G:C8	3.01	0.49
30:0:1593:C:H2'	30:0:1594:C:H6	1.75	0.49
30:0:1734:C:O5'	30:0:1734:C:H6	1.95	0.49
30:0:2135:A:O4'	30:0:2243:C:N4	2.46	0.49
30:0:2533:C:H2'	30:0:2534:U:O5'	2.13	0.49
30:0:2731:G:H2'	30:0:2732:U:O4'	2.13	0.49
31:9:29:C:C5	31:9:30:C:C5	3.00	0.49
31:9:57:A:C2'	31:9:58:G:H5'	2.41	0.49
2:B:41:PHE:HD2	2:B:190:MET:HE3	1.76	0.49
2:B:223:ARG:HG3	2:B:232:TRP:C	2.37	0.49
18:R:40:ALA:O	18:R:44:VAL:HG23	2.13	0.49
20:T:9:LYS:HE3	20:T:13:ARG:CZ	2.43	0.49
25:Y:235:GLU:CD	25:Y:235:GLU:H	2.21	0.49
29:3:17:HIS:HB2	30:0:2409:C:H4'	1.94	0.49
30:0:375:G:N1	30:0:411:A:C2	2.81	0.49
30:0:626:U:O4	30:0:627:G:C6	2.66	0.49
30:0:735:C:C4	30:0:736:A:C4	3.00	0.49
30:0:1346:U:C2	30:0:1347:U:C6	3.01	0.49
30:0:1859:A:H8	30:0:1859:A:O5'	1.95	0.49
30:0:2336:G:HO2'	30:0:2337:G:H5'	1.77	0.49
30:0:2791:U:C4	30:0:2794:G:O6	2.65	0.49
30:0:2794:G:C6	30:0:2795:C:C5	3.01	0.49
30:0:2807:U:O2'	30:0:2808:U:H5'	2.12	0.49
31:9:30:C:O2	31:9:51:A:C2	2.65	0.49
2:B:13:PHE:O	2:B:16:ARG:HD2	2.12	0.49
10:J:107:ASN:ND2	10:J:109:TYR:HB2	2.27	0.49
13:M:77:HIS:CB	13:M:81:ARG:HH21	2.18	0.49
13:M:92:THR:HB	30:0:401:C:O2'	2.12	0.49
17:Q:3:SER:HB3	38:0:6444:HOH:O	2.12	0.49
29:3:1:MET:HE3	30:0:2320:U:H5	1.76	0.49
30:0:45:A:C2	30:0:113:A:C6	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:377:C:H6	30:0:377:C:O5'	1.96	0.49
30:0:597:A:H2'	30:0:598:C:H6	1.78	0.49
30:0:863:G:C6	30:0:864:U:C4	3.01	0.49
30:0:883:U:C6	30:0:888:U:H5'	2.47	0.49
30:0:1164:U:O2	30:0:1166:A:H4'	2.12	0.49
30:0:1252:A:C1'	38:0:5158:HOH:O	2.61	0.49
30:0:1315:G:H4'	30:0:1316:G:OP2	2.13	0.49
30:0:1523:G:C4	30:0:1524:U:C4	3.01	0.49
2:B:5:ARG:NH1	2:B:8:LYS:HE2	2.27	0.49
2:B:74:ILE:HD13	2:B:309:VAL:HG21	1.94	0.49
10:J:19:MET:HE2	10:J:79:PHE:HA	1.93	0.49
12:L:21:ARG:HG2	38:L:8827:HOH:O	2.12	0.49
13:M:36:ALA:O	13:M:65:VAL:HA	2.12	0.49
16:P:107:GLU:C	16:P:109:ARG:H	2.21	0.49
18:R:117:HIS:HD2	30:0:20:G:H21	1.59	0.49
25:Y:189:ASN:ND2	25:Y:191:ASP:H	2.09	0.49
26:Z:70:ARG:HH11	26:Z:83:TYR:HB2	1.78	0.49
30:0:238:C:H4'	30:0:287:C:OP1	2.13	0.49
30:0:287:C:H3'	30:0:287:C:C6	2.48	0.49
30:0:514:G:OP1	30:0:514:G:H2'	2.13	0.49
30:0:525:G:H2'	30:0:526:U:O4'	2.12	0.49
30:0:529:G:C6	30:0:530:C:C4	3.01	0.49
30:0:640:G:C4	30:0:641:G:C8	3.00	0.49
30:0:917:U:H5	38:0:4490:HOH:O	1.95	0.49
30:0:1096:U:O2'	30:0:1097:A:H5'	2.12	0.49
30:0:1165:G:H21	30:0:1173:A:H5''	1.75	0.49
30:0:1183:C:N3	30:0:1184:C:C5	2.81	0.49
30:0:1623:C:C5	30:0:1624:A:C4	3.00	0.49
30:0:2416:G:O2'	30:0:2417:C:H5'	2.12	0.49
30:0:2728:C:H5	38:0:6481:HOH:O	1.94	0.49
30:0:2829:G:O2'	30:0:2830:U:H5'	2.13	0.49
31:9:89:C:C2'	31:9:90:G:H5'	2.43	0.49
1:A:109:GLU:HG2	1:A:116:GLY:H	1.78	0.49
3:C:190:ALA:HB3	30:0:1309:U:OP1	2.13	0.49
11:K:27:ARG:NH1	11:K:27:ARG:HG2	2.28	0.49
12:L:55:GLN:HA	12:L:58:GLN:HG3	1.95	0.49
16:P:103:THR:HG23	16:P:106:ARG:HH12	1.78	0.49
20:T:21:LYS:HA	20:T:24:ARG:HG3	1.95	0.49
25:Y:189:ASN:HA	25:Y:217:ILE:HD11	1.95	0.49
30:0:29:C:C2'	30:0:30:U:H5'	2.42	0.49
30:0:181:G:H1'	38:0:3246:HOH:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:736:A:H3'	38:0:7109:HOH:O	2.12	0.49
30:0:1217:G:C2	30:0:1218:U:C2	3.01	0.49
30:0:1477:C:H2'	30:0:1478:U:O4'	2.12	0.49
30:0:1575:C:C2'	30:0:1576:G:H5'	2.42	0.49
30:0:2028:U:O2'	30:0:2029:C:H5'	2.12	0.49
30:0:2327:A:H2'	30:0:2328:U:H6	1.78	0.49
30:0:2607:U:H4'	38:0:9444:HOH:O	2.13	0.49
1:A:179:MET:HG2	1:A:186:TRP:CB	2.41	0.49
2:B:223:ARG:NE	2:B:232:TRP:HB3	2.28	0.49
3:C:76:ARG:NH2	30:0:1363:G:OP1	2.46	0.49
3:C:107:ARG:O	3:C:111:VAL:HG23	2.12	0.49
5:E:68:HIS:O	5:E:72:MET:HG3	2.13	0.49
6:F:54:VAL:HA	30:0:263:U:O4	2.12	0.49
8:H:87:LYS:HB2	8:H:87:LYS:NZ	2.28	0.49
10:J:45:VAL:HG21	10:J:129:PHE:CD1	2.47	0.49
18:R:4:TYR:CE1	18:R:15:LYS:HD3	2.48	0.49
30:0:39:G:N2	30:0:444:C:C2	2.81	0.49
30:0:152:A:C2	30:0:153:C:C2	3.01	0.49
30:0:180:G:C2'	30:0:181:G:H5'	2.43	0.49
30:0:1060:C:H5''	38:0:9805:HOH:O	2.13	0.49
30:0:1146:C:O2'	30:0:1147:C:H5'	2.13	0.49
30:0:1346:U:C2	30:0:1347:U:C5	3.00	0.49
30:0:1477:C:C5'	30:0:1868:G:H5''	2.43	0.49
30:0:1730:G:H2'	30:0:1730:G:N3	2.28	0.49
30:0:1758:U:H2'	30:0:1759:A:O4'	2.13	0.49
30:0:1851:G:O2'	30:0:1852:A:H5'	2.13	0.49
30:0:2726:U:O4'	30:0:2749:U:C2	2.66	0.49
31:9:29:C:H6	31:9:29:C:O5'	1.94	0.49
2:B:262:ARG:HG3	30:0:2716:G:H5'	1.95	0.48
4:D:52:THR:HB	4:D:70:GLY:CA	2.44	0.48
10:J:56:LYS:HD2	33:J:8816:CL:CL	2.50	0.48
11:K:28:GLU:HB3	11:K:59:LYS:H	1.78	0.48
18:R:69:LYS:HB2	18:R:72:VAL:HG23	1.95	0.48
20:T:32:ARG:NH1	20:T:38:ARG:NH1	2.61	0.48
21:U:20:MET:HG3	21:U:28:THR:HG23	1.95	0.48
30:0:352:A:C2	30:0:353:G:C4	3.01	0.48
30:0:423:A:H2'	30:0:424:C:O4'	2.13	0.48
30:0:699:C:O2'	30:0:744:G:H1'	2.13	0.48
30:0:1394:C:H5'	38:0:4258:HOH:O	2.12	0.48
30:0:1744:G:H2'	30:0:1745:G:H5'	1.95	0.48
30:0:2710:U:H6	30:0:2710:U:O5'	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2713:G:O2'	30:0:2714:U:H5'	2.13	0.48
2:B:119:HIS:C	2:B:121:PRO:HD3	2.38	0.48
4:D:58:VAL:HG12	4:D:60:GLU:HG2	1.96	0.48
15:O:112:ARG:HA	38:0:3167:HOH:O	2.13	0.48
19:S:28:VAL:HG11	19:S:37:VAL:HG13	1.94	0.48
23:W:128:VAL:O	23:W:138:LEU:HD11	2.13	0.48
26:Z:63:CYS:HA	26:Z:71:VAL:HG23	1.95	0.48
29:3:69:TYR:CE1	29:3:80:ARG:HB2	2.48	0.48
30:0:120:A:N3	30:0:120:A:C2'	2.75	0.48
30:0:255:A:C4	30:0:256:C:C5	3.01	0.48
30:0:421:C:H2'	30:0:422:G:C8	2.49	0.48
30:0:693:A:H2'	30:0:694:A:C8	2.48	0.48
30:0:694:A:H2'	30:0:695:C:C5'	2.41	0.48
30:0:853:C:H2'	30:0:854:G:O4'	2.12	0.48
30:0:916:A:C2	30:0:928:G:C4	3.02	0.48
30:0:1245:C:C6	30:0:1245:C:C3'	2.96	0.48
30:0:1434:A:HO2'	30:0:1435:U:H6	1.60	0.48
30:0:1458:A:H4'	38:0:9663:HOH:O	2.14	0.48
30:0:1610:G:C2	30:0:1611:G:C4	3.00	0.48
30:0:1656:A:H2'	30:0:1657:A:C8	2.47	0.48
30:0:1894:C:C5	30:0:1940:C:C4	3.01	0.48
30:0:2023:G:H1'	38:0:9149:HOH:O	2.13	0.48
30:0:2378:U:H4'	38:0:4535:HOH:O	2.14	0.48
31:9:59:C:O5'	31:9:59:C:C6	2.67	0.48
1:A:76:VAL:HG21	26:Z:87:LYS:HB3	1.95	0.48
3:C:56:THR:HG21	3:C:78:ARG:HB3	1.96	0.48
5:E:32:ARG:O	5:E:33:LEU:HD23	2.13	0.48
7:G:20:VAL:HA	7:G:23:ILE:HD12	1.93	0.48
14:N:82:TYR:C	14:N:82:TYR:CD2	2.91	0.48
15:O:51:TYR:CD1	30:0:721:A:C5'	2.96	0.48
19:S:40:ALA:O	19:S:44:GLN:HB2	2.13	0.48
23:W:4:LEU:HD11	23:W:45:VAL:HG12	1.94	0.48
23:W:81:ASP:OD1	23:W:92:ASP:HB2	2.14	0.48
24:X:72:VAL:HG22	24:X:85:VAL:HG12	1.95	0.48
26:Z:34:SER:CA	30:0:797:A:H4'	2.40	0.48
26:Z:68:GLU:C	26:Z:70:ARG:H	2.21	0.48
26:Z:81:CYS:SG	26:Z:83:TYR:HB3	2.52	0.48
29:3:2:GLN:NE2	29:3:89:GLU:HB2	2.28	0.48
30:0:12:U:H2'	30:0:13:G:H5'	1.93	0.48
30:0:668:C:O2'	30:0:669:G:H5'	2.12	0.48
30:0:696:C:O2'	30:0:697:G:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1190:G:C5	38:0:7580:HOH:O	2.67	0.48
30:0:1456:C:H2'	30:0:1457:U:C6	2.48	0.48
30:0:1623:C:N4	30:0:1624:A:C6	2.81	0.48
30:0:1626:A:H2'	30:0:1627:G:O5'	2.13	0.48
30:0:1739:G:O2'	30:0:1740:U:H5'	2.14	0.48
30:0:1794:G:N2	30:0:1796:A:H3'	2.28	0.48
30:0:1973:A:H5'	30:0:1973:A:H8	1.79	0.48
30:0:2055:A:H4'	38:0:7348:HOH:O	2.13	0.48
30:0:2445:U:H2'	30:0:2446:G:C8	2.49	0.48
30:0:2619:UR3:H2'	30:0:2620:U:H2'	1.95	0.48
31:9:24:U:H5'	31:9:25:G:H5'	1.94	0.48
2:B:190:MET:HG3	2:B:194:PHE:HD1	1.79	0.48
2:B:217:ARG:CG	2:B:257:THR:HG22	2.41	0.48
14:N:141:ARG:NH2	31:9:36:C:C2	2.81	0.48
19:S:9:HIS:HE1	30:0:1445:G:OP1	1.96	0.48
23:W:41:TYR:OH	30:0:1024:G:H4'	2.12	0.48
29:3:11:CYS:C	29:3:13:HIS:H	2.21	0.48
30:0:59:A:H5'	38:0:4297:HOH:O	2.11	0.48
30:0:933:C:H5''	38:0:3370:HOH:O	2.13	0.48
30:0:1432:U:O2	30:0:1432:U:H2'	2.13	0.48
30:0:1468:G:O2'	30:0:1865:A:H1'	2.13	0.48
30:0:1993:C:C4	30:0:1994:A:C6	3.02	0.48
30:0:2017:U:O2'	30:0:2018:A:C8	2.58	0.48
30:0:2374:G:H2'	30:0:2375:A:C8	2.48	0.48
30:0:2471:G:N3	30:0:2472:C:C6	2.82	0.48
30:0:2596:A:H2	33:0:8812:CL:CL	2.33	0.48
30:0:2672:C:O2	30:0:2672:C:C2'	2.52	0.48
30:0:2794:G:N3	38:0:5810:HOH:O	2.45	0.48
1:A:55:VAL:HG23	1:A:68:ILE:O	2.14	0.48
38:C:8616:HOH:O	30:0:676:C:H4'	2.13	0.48
12:L:113:GLN:HE22	30:0:700:A:H3'	1.78	0.48
16:P:114:LEU:HD22	16:P:118:GLN:HB3	1.96	0.48
18:R:63:ASN:ND2	18:R:75:TRP:HZ2	2.11	0.48
20:T:25:ALA:HB2	20:T:93:THR:HB	1.96	0.48
25:Y:200:THR:HG22	25:Y:201:GLU:HG3	1.94	0.48
27:1:11:LYS:HG2	30:0:777:U:O2'	2.14	0.48
30:0:54:G:N2	30:0:55:U:H1'	2.29	0.48
30:0:107:U:C5	30:0:108:U:C4	3.02	0.48
30:0:139:C:O4'	30:0:140:G:C2	2.66	0.48
30:0:177:A:N7	30:0:178:U:C4	2.82	0.48
30:0:1400:C:O2'	30:0:1401:G:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1545:C:C2	30:0:1641:A:N7	2.81	0.48
30:0:2025:G:H1'	38:0:6278:HOH:O	2.13	0.48
30:0:2047:C:H5'	38:0:9817:HOH:O	2.12	0.48
30:0:2240:U:O2'	30:0:2241:C:H5'	2.14	0.48
30:0:2253:G:O2'	30:0:2254:G:H5'	2.13	0.48
30:0:2255:A:C2	30:0:2256:G:N9	2.81	0.48
30:0:2766:A:O2'	30:0:2767:C:H5'	2.13	0.48
30:0:2793:A:H2'	30:0:2794:G:H5'	1.96	0.48
30:0:2818:A:H2'	30:0:2819:C:C6	2.48	0.48
1:A:144:GLU:HA	38:A:8955:HOH:O	2.14	0.48
4:D:97:GLN:HG2	4:D:97:GLN:O	2.14	0.48
13:M:50:ARG:HB2	38:M:8925:HOH:O	2.13	0.48
16:P:89:ASN:HA	38:P:1926:HOH:O	2.14	0.48
21:U:39:ASN:HD21	21:U:51:TRP:HZ2	1.62	0.48
24:X:47:ALA:HB1	24:X:82:GLU:HB2	1.96	0.48
30:0:65:C:H2'	30:0:66:G:H8	1.78	0.48
30:0:222:A:H8	30:0:222:A:O5'	1.97	0.48
30:0:395:A:H3'	30:0:397:A:N7	2.29	0.48
30:0:791:A:H4'	30:0:1709:G:H4'	1.96	0.48
30:0:1082:A:C2'	30:0:1083:C:OP1	2.62	0.48
30:0:1114:A:O2'	30:0:1115:U:H5'	2.13	0.48
30:0:1149:U:C5	30:0:1215:A:C5	3.02	0.48
30:0:1160:G:O2'	30:0:1190:G:C8	2.65	0.48
30:0:1842:A:C4	30:0:1979:G:C6	3.00	0.48
30:0:1872:C:H5'	38:0:9434:HOH:O	2.12	0.48
30:0:2761:A:C4	30:0:2763:G:C8	3.02	0.48
30:0:2831:C:C2'	30:0:2832:C:H5'	2.43	0.48
31:9:49:G:H2'	31:9:50:G:O4'	2.12	0.48
1:A:135:VAL:HG11	1:A:147:ARG:HH21	1.78	0.48
7:G:12:ILE:HG21	30:0:1150:A:C8	2.49	0.48
18:R:47:LEU:HB2	18:R:89:LEU:HD21	1.95	0.48
20:T:112:LEU:HG	20:T:119:ALA:HB3	1.95	0.48
30:0:64:G:C4	30:0:70:A:C8	3.02	0.48
30:0:816:G:C6	30:0:817:G:N1	2.82	0.48
30:0:1170:U:C1'	30:0:1172:G:N7	2.67	0.48
30:0:1246:A:C5	30:0:1248:A:C5	3.01	0.48
30:0:1309:U:C4	30:0:1310:U:C4	3.01	0.48
30:0:1332:C:C2	30:0:1333:U:C6	3.01	0.48
30:0:1504:A:C5'	38:0:4378:HOH:O	2.60	0.48
30:0:1739:G:C4	30:0:2041:G:N2	2.82	0.48
30:0:1783:A:C5	30:0:1784:U:C4	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1857:A:N1	30:0:2247:C:O4'	2.47	0.48
30:0:1933:G:N2	30:0:1934:A:C1'	2.77	0.48
30:0:2419:U:H5''	30:0:2420:G:H5'	1.96	0.48
30:0:2509:A:H2'	30:0:2510:C:O4'	2.14	0.48
30:0:2852:A:C5	30:0:2902:A:C5	3.02	0.48
1:A:94:LEU:HD12	1:A:98:GLU:CB	2.44	0.48
1:A:125:ASN:HB3	1:A:158:VAL:HG12	1.96	0.48
3:C:16:VAL:HG12	3:C:17:ASP:N	2.28	0.48
3:C:102:LEU:HA	38:C:8514:HOH:O	2.14	0.48
3:C:236:THR:HG22	3:C:239:ALA:N	2.28	0.48
11:K:113:ILE:HD12	11:K:128:ALA:HB2	1.95	0.48
13:M:102:GLU:OE1	13:M:164:THR:HG21	2.14	0.48
17:Q:39:VAL:O	17:Q:60:THR:HA	2.12	0.48
19:S:15:MET:HA	19:S:18:MET:HE2	1.95	0.48
22:V:13:PRO:HA	38:V:874:HOH:O	2.14	0.48
23:W:56:GLU:O	23:W:143:THR:HG23	2.13	0.48
26:Z:45:VAL:HG13	26:Z:49:ARG:NE	2.29	0.48
30:0:202:U:H2'	30:0:203:G:H5'	1.96	0.48
30:0:261:A:H8	30:0:261:A:O5'	1.96	0.48
30:0:297:U:H6	30:0:297:U:O5'	1.96	0.48
30:0:310:U:N3	30:0:322:G:C2	2.82	0.48
30:0:333:G:O2'	30:0:334:G:H5'	2.13	0.48
30:0:558:C:H2'	30:0:559:U:H5'	1.94	0.48
30:0:652:G:C5	30:0:754:G:C6	3.02	0.48
30:0:827:A:H5'	38:0:4093:HOH:O	2.14	0.48
30:0:1174:A:H5'	30:0:1176:C:OP2	2.13	0.48
30:0:1179:C:H6	30:0:1179:C:O5'	1.96	0.48
30:0:1305:C:H1'	38:0:6838:HOH:O	2.13	0.48
30:0:1310:U:C2'	30:0:1311:G:O5'	2.61	0.48
30:0:1668:U:H2'	30:0:1669:G:C8	2.49	0.48
30:0:1980:U:O2'	30:0:1981:A:H5'	2.14	0.48
30:0:2113:G:N2	30:0:2473:U:C2	2.82	0.48
30:0:2681:A:N6	30:0:2714:U:H4'	2.29	0.48
30:0:2686:C:O2	30:0:2709:G:C2	2.66	0.48
30:0:2722:G:N2	30:0:2760:C:O2	2.45	0.48
30:0:2866:U:C2	30:0:2891:A:C8	3.01	0.48
31:9:56:A:C3'	31:9:57:A:H5''	2.44	0.48
31:9:77:A:C1'	31:9:79:U:C6	2.96	0.48
31:9:114:G:C6	31:9:115:C:C4	3.01	0.48
1:A:47:HIS:HD2	30:0:1654:U:O2'	1.97	0.48
5:E:21:THR:HG23	5:E:30:THR:OG1	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:30:LYS:HE2	6:F:99:THR:HG21	1.95	0.48
10:J:80:LYS:HE3	10:J:101:VAL:O	2.13	0.48
14:N:132:ASN:HD22	30:0:2413:A:H4'	1.79	0.48
22:V:4:HIS:O	22:V:8:ILE:HG13	2.13	0.48
29:3:60:LYS:C	29:3:62:THR:H	2.22	0.48
30:0:147:G:N3	30:0:147:G:H2'	2.29	0.48
30:0:168:C:O2'	30:0:169:A:H5'	2.13	0.48
30:0:441:A:H1'	30:0:442:A:N7	2.29	0.48
30:0:454:U:H5'	38:0:5906:HOH:O	2.13	0.48
30:0:1029:U:O2'	30:0:1273:C:OP1	2.26	0.48
30:0:1163:G:N2	30:0:1184:C:N3	2.62	0.48
30:0:1211:G:N2	30:0:1212:C:C2	2.81	0.48
30:0:1698:U:O5'	30:0:1698:U:H6	1.97	0.48
30:0:2533:C:C6	30:0:2533:C:C5'	2.81	0.48
30:0:2614:C:O2'	30:0:2615:U:H5'	2.13	0.48
30:0:2714:U:H2'	30:0:2715:G:H8	1.78	0.48
30:0:2783:A:N1	30:0:2792:A:C8	2.82	0.48
30:0:2871:G:C5	30:0:2872:U:C4	3.02	0.48
31:9:22:G:N2	31:9:26:C:H42	2.12	0.48
2:B:206:THR:CG2	30:0:2716:G:H5''	2.39	0.48
5:E:105:GLU:HG2	5:E:113:PRO:HB3	1.96	0.48
6:F:61:MET:HG2	13:M:19:GLN:OE1	2.13	0.48
8:H:17:TYR:HD2	8:H:97:VAL:HB	1.77	0.48
11:K:87:ARG:NH1	38:K:4066:HOH:O	2.46	0.48
23:W:91:ASP:HB2	38:W:5425:HOH:O	2.12	0.48
23:W:125:HIS:HB2	23:W:137:GLN:HG2	1.96	0.48
30:0:56:G:C4	30:0:70:A:C2	3.02	0.48
30:0:223:G:C2	30:0:224:U:C6	3.02	0.48
30:0:451:C:C5	30:0:452:G:C6	3.02	0.48
30:0:549:A:O2'	30:0:550:C:H5'	2.14	0.48
30:0:669:G:H2'	30:0:670:G:O4'	2.13	0.48
30:0:694:A:C2'	30:0:695:C:H5'	2.44	0.48
30:0:1015:C:H2'	30:0:1016:U:C6	2.46	0.48
30:0:1149:U:O5'	30:0:1151:G:H5'	2.14	0.48
30:0:1183:C:H42	30:0:1184:C:H41	1.62	0.48
30:0:1228:C:H5	38:0:3440:HOH:O	1.97	0.48
30:0:1323:G:H1	30:0:1334:C:N4	2.11	0.48
30:0:1562:C:N3	30:0:1563:G:C6	2.82	0.48
30:0:1603:A:H5'	30:0:1605:G:C4'	2.44	0.48
30:0:2011:A:H5'	30:0:2013:G:H1'	1.96	0.48
30:0:2048:C:P	38:0:9234:HOH:O	2.72	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2637:A:H4'	38:0:4332:HOH:O	2.14	0.48
30:0:2643:G:N2	38:0:9156:HOH:O	2.47	0.48
30:0:2770:G:C4	30:0:2771:G:C8	3.01	0.48
30:0:2871:G:C4	30:0:2872:U:C5	3.02	0.48
31:9:77:A:H1'	31:9:79:U:C5	2.49	0.48
7:G:67:LEU:O	7:G:71:LEU:HG	2.14	0.47
10:J:18:ILE:HD13	30:0:1244:U:OP1	2.14	0.47
18:R:113:HIS:O	18:R:145:LEU:HA	2.14	0.47
21:U:50:GLU:O	21:U:56:ARG:HG2	2.14	0.47
23:W:29:VAL:O	23:W:30:ASN:HB2	2.14	0.47
23:W:59:GLN:HE22	23:W:97:ALA:CB	2.27	0.47
27:1:5:THR:HG23	30:0:1688:G:O2'	2.14	0.47
29:3:34:LYS:O	29:3:38:ARG:HG2	2.13	0.47
30:0:181:G:C6	30:0:182:G:C5	3.02	0.47
30:0:228:C:C2'	30:0:229:G:C5'	2.87	0.47
30:0:425:U:H2'	30:0:425:U:O2	2.13	0.47
30:0:731:U:H2'	30:0:732:C:H6	1.78	0.47
30:0:1592:G:O2'	30:0:1593:C:O5'	2.31	0.47
30:0:2030:A:P	38:0:3847:HOH:O	2.72	0.47
30:0:2321:A:C2	30:0:2323:G:C5	3.02	0.47
31:9:39:U:H1'	31:9:44:A:H61	1.79	0.47
31:9:47:A:C2	31:9:48:C:C2	3.02	0.47
31:9:81:C:C2'	31:9:82:U:H5'	2.44	0.47
1:A:213:LYS:HB2	38:0:9047:HOH:O	2.14	0.47
3:C:34:ALA:HA	3:C:102:LEU:HD21	1.96	0.47
3:C:246:ARG:NE	38:C:8627:HOH:O	2.47	0.47
12:L:143:THR:HG22	12:L:144:ASP:N	2.29	0.47
21:U:33:SER:O	21:U:37:GLU:HG3	2.14	0.47
22:V:39:ALA:C	22:V:41:GLU:H	2.21	0.47
24:X:61:ARG:HB2	24:X:65:ASN:HB2	1.96	0.47
29:3:83:TRP:O	29:3:85:ALA:N	2.48	0.47
30:0:52:A:C2	30:0:53:C:C2	3.02	0.47
30:0:73:U:O2'	30:0:74:G:H5'	2.14	0.47
30:0:181:G:N1	30:0:182:G:C5	2.82	0.47
30:0:215:A:H61	30:0:225:G:H1'	1.79	0.47
30:0:776:A:H1'	30:0:779:U:O4	2.13	0.47
30:0:940:G:H2'	30:0:941:G:C5'	2.42	0.47
30:0:1683:G:H5'	38:0:9801:HOH:O	2.14	0.47
30:0:1878:G:O2'	30:0:1879:U:C6	2.59	0.47
30:0:1998:G:C6	30:0:1999:C:N4	2.82	0.47
30:0:2363:G:C5	30:0:2364:A:C8	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:9:76:G:N2	31:9:106:U:H3	2.11	0.47
1:A:76:VAL:CG2	26:Z:87:LYS:HB3	2.45	0.47
2:B:333:GLU:OE1	21:U:14:GLU:HG2	2.14	0.47
3:C:170:ASP:HA	3:C:188:ARG:NH2	2.29	0.47
5:E:162:PHE:N	5:E:162:PHE:CD1	2.82	0.47
8:H:6:ALA:HB3	30:0:2521:A:OP2	2.13	0.47
13:M:159:VAL:HG13	13:M:160:PHE:N	2.29	0.47
15:O:113:VAL:O	30:0:721:A:H1'	2.14	0.47
17:Q:50:GLY:N	38:Q:5297:HOH:O	2.44	0.47
26:Z:56:GLU:HA	26:Z:59:GLU:OE2	2.13	0.47
29:3:38:ARG:HB2	29:3:42:ARG:NH1	2.29	0.47
30:0:662:U:H1'	30:0:748:C:H1'	1.97	0.47
30:0:691:G:O2'	30:0:693:A:N7	2.47	0.47
30:0:1041:U:C2'	30:0:1042:U:H5'	2.44	0.47
30:0:1052:G:O2'	30:0:2300:A:OP2	2.29	0.47
30:0:1093:G:C2	30:0:1264:U:O2	2.67	0.47
30:0:1701:A:H4'	30:0:1702:U:C5'	2.42	0.47
30:0:1883:U:C2'	30:0:1884:G:H5'	2.43	0.47
30:0:2103:A:C2'	30:0:2104:C:H5'	2.41	0.47
30:0:2826:G:C6	30:0:2913:A:C6	3.02	0.47
30:0:2830:U:H2'	30:0:2831:C:C5'	2.45	0.47
1:A:132:ASP:HB3	1:A:135:VAL:H	1.78	0.47
2:B:162:MET:HG3	2:B:310:ARG:CZ	2.45	0.47
2:B:195:ARG:HG2	2:B:323:LEU:CD2	2.44	0.47
2:B:336:GLN:O	30:0:2862:G:H4'	2.14	0.47
10:J:39:VAL:HG12	10:J:40:ASN:HD22	1.78	0.47
17:Q:48:PRO:O	17:Q:51:ARG:HD2	2.15	0.47
29:3:65:THR:OG1	29:3:82:GLY:HA3	2.14	0.47
29:3:65:THR:CG2	33:3:8804:CL:CL	2.96	0.47
30:0:52:A:O2'	30:0:53:C:H5'	2.13	0.47
30:0:69:A:C8	30:0:69:A:C5'	2.92	0.47
30:0:216:A:O2'	30:0:217:C:H5'	2.15	0.47
30:0:281:U:H5	38:0:7494:HOH:O	1.97	0.47
30:0:1477:C:C2'	30:0:1478:U:C5'	2.93	0.47
30:0:1561:U:C4	30:0:1562:C:C5	3.02	0.47
30:0:1587:U:H2'	30:0:1588:G:H5'	1.96	0.47
30:0:1999:C:H2'	30:0:2000:G:H8	1.78	0.47
30:0:2686:C:O2'	30:0:2687:G:H5'	2.14	0.47
30:0:2842:G:H2'	30:0:2843:A:O4'	2.15	0.47
30:0:2864:U:C2'	30:0:2865:G:H5'	2.45	0.47
1:A:137:VAL:HG11	1:A:145:MET:HE3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:75:GLU:C	2:B:77:PRO:HD3	2.39	0.47
4:D:22:VAL:HA	4:D:73:VAL:O	2.14	0.47
9:I:83:GLY:N	30:0:1168:C:H5'	2.29	0.47
12:L:44:GLU:HA	12:L:45:PRO:HD2	1.71	0.47
23:W:13:MET:HE2	23:W:18:GLN:CA	2.45	0.47
30:0:647:U:H2'	30:0:648:G:C8	2.50	0.47
30:0:867:A:H2	30:0:880:C:O2	1.97	0.47
30:0:1139:U:O2'	30:0:1140:C:H5'	2.14	0.47
30:0:1528:A:H61	30:0:1663:G:C1'	2.16	0.47
30:0:1644:C:C2'	30:0:1645:U:H5'	2.44	0.47
30:0:2057:U:O5'	30:0:2057:U:H6	1.96	0.47
30:0:2333:G:C6	30:0:2334:C:C4	3.03	0.47
30:0:2476:C:H2'	30:0:2476:C:O2	2.13	0.47
30:0:2527:U:H2'	30:0:2528:U:O4'	2.15	0.47
30:0:2822:C:H2'	30:0:2823:G:O4'	2.14	0.47
30:0:2830:U:H2'	30:0:2831:C:H5'	1.95	0.47
31:9:117:G:H2'	31:9:118:C:C6	2.49	0.47
2:B:175:LEU:C	2:B:175:LEU:HD23	2.39	0.47
3:C:27:ARG:HB2	38:C:8519:HOH:O	2.14	0.47
5:E:84:MET:HG2	5:E:168:ILE:HA	1.97	0.47
13:M:76:ARG:NH2	13:M:77:HIS:NE2	2.63	0.47
23:W:9:GLY:HA3	38:0:9333:HOH:O	2.13	0.47
25:Y:169:ARG:NH1	30:0:1327:G:O3'	2.46	0.47
29:3:87:ARG:HG2	29:3:88:LEU:N	2.30	0.47
30:0:667:C:H2'	30:0:668:C:H6	1.79	0.47
30:0:1055:G:N2	30:0:1057:A:H3'	2.29	0.47
30:0:1201:C:C2'	30:0:1202:A:H5'	2.37	0.47
30:0:1248:A:H2'	30:0:1249:U:C6	2.49	0.47
30:0:1345:A:C6	30:0:1346:U:O4	2.67	0.47
30:0:1611:G:N2	30:0:1612:A:C5	2.83	0.47
30:0:1707:G:N2	30:0:1709:G:H3'	2.30	0.47
30:0:1972:U:H2'	30:0:1973:A:C5'	2.43	0.47
30:0:2032:U:H2'	30:0:2033:G:H5''	1.95	0.47
30:0:2319:C:O2	30:0:2319:C:H2'	2.14	0.47
30:0:2332:A:H3'	30:0:2333:G:C8	2.48	0.47
30:0:2831:C:O2	30:0:2910:A:C2	2.67	0.47
2:B:267:LYS:HA	38:B:8996:HOH:O	2.13	0.47
3:C:170:ASP:O	3:C:171:GLU:HG3	2.15	0.47
4:D:52:THR:HB	4:D:70:GLY:N	2.29	0.47
8:H:18:THR:HB	38:0:4795:HOH:O	2.14	0.47
11:K:98:VAL:HG22	11:K:102:GLU:C	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:9:ARG:HG3	38:0:3171:HOH:O	2.15	0.47
15:O:29:VAL:HG21	15:O:59:VAL:HG11	1.96	0.47
16:P:39:ASP:O	16:P:43:LEU:HG	2.14	0.47
20:T:38:ARG:NH1	38:0:6594:HOH:O	2.46	0.47
23:W:4:LEU:CD2	23:W:54:PHE:HB3	2.43	0.47
23:W:59:GLN:O	23:W:63:GLU:HG3	2.15	0.47
29:3:64:LYS:HE3	29:3:84:ARG:NH1	2.30	0.47
30:0:37:A:C2	30:0:446:G:N3	2.83	0.47
30:0:106:A:N1	30:0:107:U:C2	2.83	0.47
30:0:255:A:C6	30:0:256:C:C4	3.03	0.47
30:0:305:A:C2	30:0:329:A:C4	3.02	0.47
30:0:327:A:H3'	38:0:4015:HOH:O	2.15	0.47
30:0:370:G:N1	30:0:371:U:C4	2.82	0.47
30:0:385:C:O5'	30:0:385:C:C6	2.55	0.47
30:0:594:C:H2'	30:0:595:U:C6	2.41	0.47
30:0:661:G:C6	30:0:686:A:N1	2.83	0.47
30:0:711:G:C2	30:0:718:C:O2	2.67	0.47
30:0:849:C:H2'	30:0:850:U:O4'	2.14	0.47
30:0:1050:G:C6	30:0:1051:C:C4	3.03	0.47
30:0:1116:U:C2'	30:0:1118:A:H2	2.28	0.47
30:0:1174:A:H5'	30:0:1176:C:P	2.54	0.47
30:0:1204:C:H2'	38:0:4403:HOH:O	2.15	0.47
30:0:1474:C:H6	30:0:1474:C:C5'	2.20	0.47
30:0:1486:A:H3'	38:0:4435:HOH:O	2.14	0.47
30:0:1741:U:HO2'	30:0:2723:G:H4'	1.77	0.47
30:0:1743:G:H2'	30:0:1744:G:O4'	2.15	0.47
30:0:1815:A:H4'	30:0:2751:C:O4'	2.15	0.47
30:0:1889:C:O2'	30:0:1890:U:H5'	2.15	0.47
30:0:2002:C:H2'	30:0:2003:U:H5'	1.96	0.47
30:0:2134:G:H2'	30:0:2135:A:H8	1.79	0.47
30:0:2238:A:C2	30:0:2239:C:C4	3.03	0.47
30:0:2353:A:H4'	30:0:2354:A:O5'	2.13	0.47
30:0:2373:U:H1'	38:0:4722:HOH:O	2.14	0.47
30:0:2384:U:H5''	38:0:3473:HOH:O	2.14	0.47
30:0:2416:G:H2'	30:0:2417:C:H6	1.80	0.47
30:0:2445:U:H2'	30:0:2446:G:H8	1.79	0.47
30:0:2824:C:O3'	30:0:2825:C:C6	2.64	0.47
31:9:10:C:H2'	38:9:7164:HOH:O	2.14	0.47
3:C:184:ARG:NH2	30:0:450:C:OP1	2.35	0.47
9:I:83:GLY:N	30:0:1168:C:C5'	2.74	0.47
10:J:24:SER:HA	10:J:86:MET:SD	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:42:GLU:HG3	10:J:145:TRP:CD1	2.50	0.47
12:L:34:GLY:HA3	12:L:38:HIS:CE1	2.50	0.47
14:N:176:ARG:HG3	14:N:176:ARG:HH11	1.80	0.47
16:P:94:TRP:CZ2	16:P:98:ILE:HG13	2.50	0.47
20:T:43:ASN:C	20:T:45:GLY:H	2.23	0.47
29:3:48:ASN:HB3	30:0:170:U:H5'	1.97	0.47
30:0:10:U:C5	30:0:532:A:N7	2.83	0.47
30:0:463:A:N1	30:0:476:A:H5''	2.30	0.47
30:0:603:A:H4'	30:0:604:G:O5'	2.15	0.47
30:0:719:C:N3	30:0:720:G:H1'	2.30	0.47
30:0:810:G:C4	30:0:811:C:C6	3.02	0.47
30:0:939:A:H5''	38:0:5361:HOH:O	2.13	0.47
30:0:1188:A:N6	30:0:1189:A:N6	2.63	0.47
30:0:1549:C:O2'	30:0:1550:A:H5'	2.14	0.47
30:0:1900:A:C2	30:0:1938:G:C4	3.02	0.47
30:0:1974:G:C5	30:0:1975:C:C5	3.02	0.47
30:0:2573:G:C2	30:0:2574:G:C8	3.03	0.47
30:0:2863:G:C2	30:0:2894:C:O2	2.68	0.47
2:B:98:THR:HG22	2:B:99:GLU:N	2.29	0.47
4:D:58:VAL:CG1	4:D:60:GLU:HG2	2.45	0.47
6:F:48:VAL:HG12	6:F:97:ALA:CB	2.45	0.47
9:I:82:THR:HG22	9:I:83:GLY:H	1.80	0.47
11:K:82:ARG:NH2	11:K:115:ARG:HG2	2.30	0.47
11:K:89:LYS:HA	38:K:7064:HOH:O	2.15	0.47
13:M:47:ASP:CG	13:M:48:LYS:N	2.73	0.47
13:M:81:ARG:HB3	13:M:85:ARG:HB2	1.97	0.47
16:P:88:GLN:NE2	30:0:1800:G:H1'	2.30	0.47
16:P:95:GLU:HG2	30:0:1597:A:O4'	2.15	0.47
23:W:23:MET:HE1	30:0:944:G:C8	2.50	0.47
24:X:12:ILE:HB	24:X:70:ILE:CG2	2.44	0.47
25:Y:208:LYS:HZ1	30:0:1343:C:H1'	1.74	0.47
27:1:22:CYS:HA	38:1:2086:HOH:O	2.15	0.47
30:0:53:C:H2'	30:0:54:G:O4'	2.15	0.47
30:0:235:C:O2'	30:0:236:A:H2'	2.15	0.47
30:0:307:G:H3'	30:0:342:C:OP2	2.15	0.47
30:0:627:G:H1'	38:0:4390:HOH:O	2.14	0.47
30:0:645:U:O2	30:0:761:A:H2	1.98	0.47
30:0:793:A:C5	30:0:794:U:C5	3.03	0.47
30:0:920:C:H4'	30:0:921:G:C2	2.50	0.47
30:0:951:A:C2'	30:0:952:G:C5'	2.86	0.47
30:0:1069:C:H2'	30:0:1070:A:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1118:A:H8	30:0:1119:G:C5'	2.28	0.47
30:0:1199:A:N6	30:0:1200:A:C6	2.83	0.47
30:0:1571:G:H1'	30:0:1627:G:N2	2.30	0.47
30:0:2297:U:C2	30:0:2298:C:C6	3.03	0.47
30:0:2328:U:C2	30:0:2329:C:C6	3.02	0.47
30:0:2673:U:C5	30:0:2674:G:C6	3.03	0.47
31:9:43:G:N2	31:9:46:C:N3	2.54	0.47
31:9:105:A:C2'	31:9:106:U:H5'	2.45	0.47
2:B:83:ALA:HB3	2:B:143:ILE:HB	1.96	0.47
2:B:119:HIS:CD2	2:B:121:PRO:HG3	2.50	0.47
3:C:214:THR:HG23	38:C:8638:HOH:O	2.15	0.47
4:D:52:THR:CG2	30:0:2346:C:H4'	2.44	0.47
5:E:122:THR:CG2	5:E:133:VAL:HG13	2.45	0.47
13:M:86:GLN:NE2	38:M:8888:HOH:O	2.48	0.47
13:M:106:SER:HB2	13:M:114:VAL:HG23	1.97	0.47
18:R:114:VAL:HB	18:R:145:LEU:CD1	2.43	0.47
38:S:8972:HOH:O	30:0:1507:C:H4'	2.15	0.47
23:W:118:LEU:HD12	23:W:153:MET:HE3	1.96	0.47
30:0:54:G:C4	30:0:55:U:C5	3.03	0.47
30:0:88:G:C6	30:0:89:G:C6	3.03	0.47
30:0:278:A:N6	30:0:372:A:N6	2.63	0.47
30:0:396:U:O2'	30:0:397:A:P	2.73	0.47
30:0:594:C:C6	30:0:595:U:H5	2.33	0.47
30:0:686:A:N7	30:0:687:C:C5	2.82	0.47
30:0:800:G:H2'	30:0:801:U:C6	2.50	0.47
30:0:1392:A:C6	30:0:1395:C:C2	3.03	0.47
30:0:1746:A:O2'	30:0:1752:G:N7	2.44	0.47
30:0:1987:C:O2'	30:0:1988:C:H5'	2.14	0.47
30:0:2523:U:O5'	30:0:2523:U:H6	1.98	0.47
13:M:28:GLN:HA	13:M:31:TRP:HB2	1.97	0.46
13:M:155:GLN:NE2	13:M:155:GLN:HA	2.30	0.46
15:O:33:LEU:HD21	15:O:79:VAL:HG21	1.96	0.46
17:Q:25:PRO:HD2	17:Q:28:ARG:HH21	1.80	0.46
19:S:17:ASP:O	19:S:21:GLN:HB2	2.14	0.46
21:U:38:ASN:HA	21:U:41:ASP:OD2	2.14	0.46
29:3:15:ASN:O	30:0:2408:A:H4'	2.15	0.46
30:0:123:U:O2'	30:0:124:C:H5'	2.14	0.46
30:0:820:G:O2'	30:0:856:G:H4'	2.14	0.46
30:0:1477:C:H2'	30:0:1478:U:C5'	2.44	0.46
30:0:1511:U:O2	30:0:1573:A:H2	1.98	0.46
30:0:1639:U:H2'	30:0:1640:C:O5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2015:A:C5	30:0:2016:U:C5	3.03	0.46
30:0:2689:A:H2'	30:0:2690:U:C5'	2.43	0.46
30:0:2716:G:C5	30:0:2717:C:C5	3.03	0.46
30:0:2780:C:C4	30:0:2781:U:C4	3.03	0.46
30:0:2826:G:C6	30:0:2913:A:N6	2.83	0.46
2:B:98:THR:CG2	2:B:99:GLU:N	2.77	0.46
4:D:87:ALA:HA	4:D:90:LEU:HD12	1.97	0.46
6:F:38:LYS:HE3	30:0:244:C:OP2	2.15	0.46
12:L:11:ARG:NH1	30:0:903:U:OP2	2.47	0.46
13:M:49:ALA:C	13:M:54:TYR:HB3	2.40	0.46
19:S:57:THR:C	19:S:59:ASP:H	2.22	0.46
26:Z:63:CYS:SG	26:Z:71:VAL:CG2	3.03	0.46
29:3:46:ILE:HG13	30:0:390:G:OP1	2.14	0.46
29:3:61:PRO:HG3	30:0:2316:G:O2'	2.15	0.46
29:3:64:LYS:HA	29:3:83:TRP:O	2.14	0.46
29:3:71:CYS:HB3	29:3:75:GLY:N	2.30	0.46
30:0:229:G:C2'	30:0:230:C:H5'	2.44	0.46
30:0:252:C:O2	30:0:252:C:C2'	2.60	0.46
30:0:292:G:C3'	30:0:358:G:H22	2.27	0.46
30:0:400:C:O2'	30:0:401:C:H5'	2.14	0.46
30:0:861:A:O5'	30:0:861:A:H8	1.98	0.46
30:0:861:A:H4'	30:0:1697:G:H4'	1.97	0.46
30:0:1041:U:H2'	30:0:1042:U:H5'	1.97	0.46
30:0:1183:C:C2	30:0:1184:C:H5	2.33	0.46
30:0:1194:A:O5'	30:0:1194:A:H8	1.97	0.46
30:0:1579:C:N4	30:0:1618:G:N1	2.63	0.46
30:0:1640:C:C5	38:0:6032:HOH:O	2.55	0.46
30:0:1739:G:C4	30:0:2041:G:C2	3.03	0.46
30:0:2496:C:H1'	30:0:2527:U:N3	2.29	0.46
30:0:2634:G:N2	30:0:2635:A:C4	2.83	0.46
30:0:2775:A:C6	30:0:2776:A:C6	3.04	0.46
30:0:2792:A:C2	30:0:2793:A:C8	3.03	0.46
30:0:2828:G:O5'	30:0:2828:G:H8	1.99	0.46
30:0:2871:G:C6	30:0:2872:U:C4	3.03	0.46
30:0:2912:C:C2'	30:0:2913:A:H5'	2.45	0.46
4:D:48:MET:SD	31:9:41:C:H5''	2.54	0.46
4:D:104:PHE:HE2	4:D:132:VAL:HB	1.81	0.46
13:M:115:LEU:HB3	13:M:132:ILE:HG22	1.97	0.46
21:U:23:HIS:HB3	38:U:151:HOH:O	2.14	0.46
26:Z:38:PHE:HD1	26:Z:47:ARG:HB3	1.80	0.46
26:Z:40:ALA:HA	30:0:1773:G:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:76:G:O2'	30:0:77:G:H5'	2.15	0.46
30:0:134:U:C2	30:0:145:A:C2	3.04	0.46
30:0:686:A:H1'	30:0:747:G:O2'	2.16	0.46
30:0:920:C:H5'	30:0:921:G:C4	2.50	0.46
30:0:1432:U:C5	30:0:1725:C:O4'	2.69	0.46
30:0:1648:G:C2	30:0:1649:G:C8	3.03	0.46
30:0:1894:C:C2	30:0:1939:U:C4	3.03	0.46
30:0:2072:G:H3'	30:0:2073:G:C5'	2.46	0.46
31:9:60:C:H2'	31:9:61:C:O5'	2.15	0.46
11:K:41:LYS:HA	30:0:2582:G:O3'	2.14	0.46
11:K:76:GLN:HA	11:K:93:ASN:CA	2.44	0.46
15:O:24:ALA:HB3	30:0:710:G:P	2.56	0.46
26:Z:35:SER:HB3	26:Z:38:PHE:CD1	2.50	0.46
28:2:25:VAL:HG21	30:0:60:A:N6	2.30	0.46
30:0:161:A:H3'	38:0:9337:HOH:O	2.14	0.46
30:0:658:C:O2'	30:0:662:U:OP1	2.30	0.46
30:0:695:C:H2'	30:0:696:C:C6	2.50	0.46
30:0:1022:A:C6	30:0:1023:C:C4	3.04	0.46
30:0:1154:A:H2'	30:0:1155:G:C8	2.50	0.46
30:0:1161:A:H1'	38:0:3946:HOH:O	2.15	0.46
30:0:1205:U:C2'	30:0:1206:U:H5''	2.45	0.46
30:0:1324:G:C4	30:0:1325:G:C8	3.03	0.46
30:0:1400:C:H2'	30:0:1401:G:C5'	2.45	0.46
30:0:1421:C:C2	30:0:1444:G:N2	2.83	0.46
30:0:1562:C:C4	30:0:1563:G:C6	3.03	0.46
30:0:1765:G:N1	30:0:1766:U:C4	2.84	0.46
30:0:2095:A:OP1	30:0:2096:A:H4'	2.15	0.46
30:0:2528:U:C2	30:0:2529:G:C8	3.03	0.46
30:0:2836:G:H2'	38:0:5114:HOH:O	2.14	0.46
31:9:1:U:O3'	31:9:3:A:H5''	2.16	0.46
31:9:37:C:H2'	31:9:38:A:O4'	2.15	0.46
8:H:6:ALA:HA	8:H:61:ARG:HH12	1.79	0.46
8:H:96:GLN:NE2	8:H:129:ARG:NH2	2.64	0.46
16:P:91:LYS:NZ	30:0:817:G:OP2	2.49	0.46
21:U:36:CYS:O	21:U:39:ASN:HB2	2.16	0.46
23:W:119:HIS:CG	23:W:120:PRO:HD2	2.51	0.46
26:Z:63:CYS:HA	26:Z:71:VAL:CG2	2.46	0.46
29:3:1:MET:CE	30:0:2320:U:H5	2.28	0.46
30:0:144:A:H8	38:0:3164:HOH:O	1.98	0.46
30:0:1152:A:C2	30:0:1216:G:N3	2.84	0.46
30:0:1211:G:H2'	30:0:1212:C:H6	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1311:G:C2	30:0:1312:G:C8	3.02	0.46
30:0:1719:G:H2'	30:0:1720:C:O4'	2.16	0.46
30:0:1749:U:C2	30:0:1751:G:OP2	2.68	0.46
30:0:1779:A:C2'	30:0:1780:G:H5'	2.45	0.46
30:0:1887:U:N3	30:0:1888:C:C5	2.84	0.46
30:0:2561:C:O2'	30:0:2562:G:H5'	2.16	0.46
1:A:45:ILE:CG2	26:Z:78:ILE:HG23	2.45	0.46
2:B:190:MET:HE2	2:B:194:PHE:CE1	2.50	0.46
3:C:95:GLU:CD	3:C:95:GLU:H	2.23	0.46
8:H:120:PHE:CD1	30:0:2311:A:C5'	2.94	0.46
18:R:65:GLY:N	30:0:2088:C:OP1	2.32	0.46
22:V:8:ILE:CG2	22:V:59:ILE:HG13	2.46	0.46
23:W:11:VAL:HB	38:0:9588:HOH:O	2.15	0.46
23:W:108:ARG:HG3	23:W:114:PRO:HG3	1.96	0.46
25:Y:205:ILE:HG22	25:Y:209:VAL:HG21	1.96	0.46
29:3:5:ARG:NH1	29:3:90:PHE:HB3	2.30	0.46
29:3:38:ARG:NH1	30:0:396:U:OP2	2.48	0.46
29:3:51:LYS:C	29:3:53:SER:H	2.24	0.46
30:0:33:G:C2	30:0:34:C:C2	3.04	0.46
30:0:251:C:H2'	30:0:252:C:H6	1.80	0.46
30:0:466:A:H2'	30:0:467:G:O4'	2.16	0.46
30:0:561:G:C6	30:0:597:A:N6	2.83	0.46
30:0:705:C:H6	30:0:705:C:OP2	1.99	0.46
30:0:735:C:C6	30:0:736:A:C8	3.03	0.46
30:0:735:C:C5	30:0:736:A:C5	3.03	0.46
30:0:1002:G:H2'	30:0:1003:U:O5'	2.15	0.46
30:0:1200:A:H2'	38:0:5689:HOH:O	2.14	0.46
30:0:1421:C:C2	30:0:1444:G:C2	3.04	0.46
30:0:1451:C:H2'	30:0:1452:G:H8	1.80	0.46
30:0:1595:G:N3	30:0:1600:G:C2	2.84	0.46
30:0:1804:A:H2'	30:0:1805:G:C8	2.50	0.46
30:0:2133:U:H4'	30:0:2134:G:C5'	2.45	0.46
30:0:2256:G:C2'	30:0:2257:G:C5'	2.88	0.46
30:0:2505:G:H3'	38:0:5576:HOH:O	2.16	0.46
30:0:2630:G:N2	30:0:2634:G:C4	2.84	0.46
30:0:2731:G:C2'	30:0:2732:U:H5'	2.46	0.46
30:0:2783:A:H2'	30:0:2784:A:C8	2.51	0.46
30:0:2846:C:H2'	30:0:2847:G:H8	1.79	0.46
3:C:21:VAL:HG13	38:C:8594:HOH:O	2.16	0.46
3:C:37:ALA:O	3:C:41:ASN:ND2	2.48	0.46
4:D:20:LYS:HG2	4:D:133:ASN:HB3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:193:LYS:HB3	30:0:392:U:H5''	1.97	0.46
14:N:49:THR:HG22	14:N:56:ASP:O	2.16	0.46
18:R:8:ALA:HB1	18:R:13:THR:HG21	1.97	0.46
22:V:59:ILE:HG22	22:V:63:GLU:HG2	1.98	0.46
29:3:14:CYS:HB3	29:3:16:GLU:HG2	1.97	0.46
30:0:272:A:N1	30:0:369:G:H5''	2.31	0.46
30:0:1360:C:H4'	38:0:9187:HOH:O	2.15	0.46
30:0:1472:C:O5'	30:0:1472:C:H6	1.98	0.46
30:0:1518:A:N6	30:0:1667:A:N6	2.64	0.46
30:0:1787:C:H2'	30:0:1788:U:H6	1.81	0.46
30:0:1914:C:O2'	30:0:1915:U:H5'	2.14	0.46
30:0:1981:A:H3'	38:0:6549:HOH:O	2.15	0.46
30:0:2438:G:H2'	30:0:2439:C:O4'	2.16	0.46
30:0:2494:G:N7	38:0:9521:HOH:O	2.46	0.46
30:0:2506:A:O2'	30:0:2507:G:O5'	2.34	0.46
30:0:2541:U:H2'	30:0:2542:C:C6	2.51	0.46
30:0:2543:G:H2'	30:0:2544:G:O4'	2.16	0.46
30:0:2587:OMU:CM2	30:0:2589:U:C5	2.99	0.46
30:0:2588:OMG:H3'	30:0:2589:U:H5''	1.98	0.46
30:0:2838:A:H1'	30:0:2844:C:O2	2.15	0.46
30:0:2873:C:O2	30:0:2873:C:H2'	2.15	0.46
1:A:47:HIS:CD2	30:0:1654:U:C2'	2.88	0.46
1:A:195:ASN:HB3	38:A:8935:HOH:O	2.15	0.46
2:B:145:HIS:HD2	2:B:159:PRO:HB3	1.81	0.46
3:C:191:SER:OG	3:C:192:ILE:N	2.49	0.46
5:E:137:ASP:HA	38:E:4098:HOH:O	2.15	0.46
11:K:8:VAL:CG1	11:K:9:THR:H	2.27	0.46
14:N:13:ARG:HG2	38:0:3438:HOH:O	2.15	0.46
20:T:2:LYS:O	30:0:332:G:H4'	2.15	0.46
23:W:29:VAL:O	30:0:1262:C:H4'	2.16	0.46
29:3:3:MET:SD	29:3:83:TRP:CZ2	3.08	0.46
30:0:154:C:N3	30:0:155:C:C5	2.83	0.46
30:0:1463:U:O5'	30:0:1463:U:H6	1.99	0.46
30:0:1540:G:C5	30:0:1541:G:N7	2.83	0.46
30:0:1904:A:C8	30:0:1905:U:C5	3.03	0.46
30:0:2668:G:O2'	30:0:2828:G:H4'	2.15	0.46
30:0:2758:G:H2'	30:0:2759:C:H6	1.81	0.46
30:0:2871:G:C5	30:0:2872:U:C5	3.04	0.46
1:A:235:ARG:HB2	38:A:9000:HOH:O	2.15	0.46
2:B:269:LEU:HD22	2:B:295:THR:HG21	1.98	0.46
3:C:7:ASP:C	3:C:9:ASP:H	2.24	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:99:ASP:HB3	4:D:103:ASN:HB2	1.98	0.46
5:E:101:GLU:HG3	5:E:101:GLU:O	2.16	0.46
6:F:28:ALA:C	6:F:99:THR:HG23	2.41	0.46
7:G:20:VAL:HG21	30:0:1150:A:C2	2.51	0.46
8:H:15:PRO:HB3	38:0:6399:HOH:O	2.15	0.46
9:I:118:ASN:HB3	30:0:1185:U:H5'	1.97	0.46
12:L:55:GLN:HA	12:L:58:GLN:NE2	2.26	0.46
13:M:127:LYS:HD3	38:M:8876:HOH:O	2.16	0.46
14:N:138:ASP:O	14:N:140:GLN:N	2.49	0.46
16:P:120:ARG:HA	16:P:120:ARG:HD2	1.59	0.46
22:V:60:GLN:HG2	38:V:874:HOH:O	2.16	0.46
30:0:553:G:O4'	30:0:1325:G:H5'	2.16	0.46
30:0:1079:A:N1	30:0:2068:G:O2'	2.43	0.46
30:0:1139:U:H2'	30:0:1140:C:H6	1.80	0.46
30:0:1425:G:C6	30:0:1426:C:N4	2.84	0.46
30:0:1583:U:H2'	30:0:1584:C:O4'	2.16	0.46
30:0:2250:G:C5	30:0:2251:G:C6	3.04	0.46
30:0:2450:C:H2'	30:0:2451:G:O5'	2.15	0.46
30:0:2646:G:C4	30:0:2647:C:C5	3.04	0.46
30:0:2778:A:H2'	30:0:2779:G:O4'	2.16	0.46
5:E:5:LEU:HB2	5:E:47:VAL:HB	1.96	0.46
8:H:17:TYR:HE1	30:0:1006:A:N6	2.10	0.46
9:I:114:TYR:N	9:I:114:TYR:HD1	2.14	0.46
13:M:58:GLN:NE2	30:0:259:G:H21	2.14	0.46
13:M:165:GLY:HA3	30:0:432:G:OP1	2.16	0.46
16:P:16:VAL:CG1	16:P:20:ARG:HB2	2.45	0.46
16:P:135:ALA:O	16:P:139:ARG:HG3	2.16	0.46
23:W:73:LEU:HD12	23:W:73:LEU:HA	1.80	0.46
25:Y:148:GLY:HA3	30:0:622:G:OP1	2.16	0.46
30:0:25:A:O2'	30:0:640:G:H5'	2.16	0.46
30:0:191:A:H4'	30:0:191:A:OP1	2.16	0.46
30:0:239:C:C2'	30:0:240:C:O5'	2.64	0.46
30:0:293:A:C5	30:0:360:A:C2	3.03	0.46
30:0:432:G:N3	30:0:433:C:C5	2.84	0.46
30:0:433:C:O2'	30:0:434:U:H5'	2.15	0.46
30:0:574:G:C2'	30:0:575:A:H5'	2.46	0.46
30:0:892:G:C6	30:0:893:C:C4	3.04	0.46
30:0:1359:U:C5	30:0:2101:A:N7	2.84	0.46
30:0:1387:G:C5	30:0:1388:U:C5	3.04	0.46
30:0:1581:A:C4	30:0:1582:C:C6	3.03	0.46
30:0:1586:G:C2'	30:0:1587:U:H5'	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2330:U:H4'	30:0:2331:C:OP1	2.16	0.46
30:0:2369:A:C4	30:0:2371:G:N7	2.84	0.46
30:0:2533:C:C6	30:0:2533:C:C4'	2.99	0.46
30:0:2560:C:O2	30:0:2560:C:H2'	2.16	0.46
30:0:2825:C:H4'	30:0:2826:G:O4'	2.15	0.46
2:B:177:HIS:O	2:B:181:ILE:HG13	2.16	0.45
2:B:229:ARG:NH2	30:0:1753:C:O2	2.39	0.45
16:P:41:ARG:HH22	30:0:1500:U:P	2.39	0.45
21:U:13:ILE:HG23	38:U:3194:HOH:O	2.16	0.45
25:Y:126:PRO:HG2	25:Y:128:PHE:CZ	2.51	0.45
25:Y:177:LYS:HD3	25:Y:181:GLY:O	2.16	0.45
29:3:7:PHE:HZ	29:3:80:ARG:HH12	1.64	0.45
30:0:292:G:H3'	30:0:358:G:H22	1.81	0.45
30:0:593:A:H1'	38:0:3786:HOH:O	2.14	0.45
30:0:629:A:H2'	30:0:630:A:O4'	2.16	0.45
30:0:1773:G:C2'	30:0:1774:G:H5'	2.45	0.45
30:0:1819:G:H2'	30:0:1820:G:C4'	2.45	0.45
30:0:1970:G:H4'	38:0:7283:HOH:O	2.16	0.45
30:0:2048:C:H3'	38:0:9234:HOH:O	2.16	0.45
30:0:2285:G:H2'	30:0:2286:G:H8	1.81	0.45
30:0:2366:C:O5'	30:0:2366:C:H6	2.00	0.45
30:0:2582:G:C5	30:0:2601:A:C5	3.05	0.45
30:0:2731:G:H8	30:0:2731:G:O5'	1.99	0.45
30:0:2759:C:O2	30:0:2760:C:H1'	2.16	0.45
2:B:62:ARG:HA	2:B:65:MET:CE	2.46	0.45
2:B:279:THR:HG22	2:B:280:VAL:N	2.31	0.45
4:D:51:ARG:NH1	4:D:68:PRO:HB3	2.31	0.45
6:F:10:ALA:O	6:F:14:ASP:HB2	2.16	0.45
6:F:108:VAL:HA	6:F:111:ILE:HD12	1.98	0.45
8:H:30:LYS:H	8:H:62:HIS:CD2	2.34	0.45
8:H:157:TYR:C	8:H:157:TYR:HD1	2.25	0.45
10:J:26:VAL:HG13	10:J:36:VAL:CG1	2.45	0.45
11:K:49:LEU:HD23	11:K:49:LEU:C	2.41	0.45
14:N:38:LYS:HA	14:N:43:VAL:HG22	1.98	0.45
14:N:64:SER:HB2	38:9:6669:HOH:O	2.16	0.45
15:O:50:ARG:HG3	30:0:701:U:OP2	2.16	0.45
18:R:13:THR:HG23	18:R:14:ALA:N	2.30	0.45
26:Z:41:ARG:NH2	30:0:820:G:OP1	2.49	0.45
26:Z:70:ARG:HB3	26:Z:82:SER:H	1.81	0.45
30:0:445:U:O2'	30:0:446:G:H5'	2.16	0.45
30:0:463:A:H5''	38:0:3793:HOH:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:722:G:C2'	30:0:723:G:H5'	2.46	0.45
30:0:952:G:H8	38:0:6547:HOH:O	1.99	0.45
30:0:1196:C:H2'	30:0:1197:G:H5'	1.98	0.45
30:0:1634:G:C6	30:0:1635:U:C4	3.04	0.45
30:0:1676:G:C6	30:0:1677:U:N3	2.84	0.45
30:0:1889:C:C2	30:0:1890:U:C6	3.04	0.45
30:0:1898:G:H2'	30:0:1899:C:C6	2.51	0.45
30:0:1910:A:O2'	30:0:1911:C:H5'	2.16	0.45
30:0:2318:C:O5'	30:0:2318:C:H6	2.00	0.45
30:0:2406:U:C4	30:0:2407:G:N7	2.84	0.45
30:0:2691:A:N1	30:0:2702:A:H5''	2.31	0.45
31:9:28:U:O2	31:9:28:U:C2'	2.64	0.45
31:9:65:A:O2'	31:9:66:G:C8	2.65	0.45
38:B:8989:HOH:O	30:0:2614:C:H4'	2.15	0.45
4:D:54:ALA:HB2	4:D:69:ILE:HD12	1.97	0.45
7:G:16:LYS:O	7:G:20:VAL:HG23	2.16	0.45
13:M:23:LEU:HD13	13:M:27:ARG:HH21	1.81	0.45
27:1:21:ARG:HD2	27:1:37:CYS:SG	2.56	0.45
30:0:565:A:N1	30:0:1093:G:H1'	2.32	0.45
30:0:1512:G:C5	30:0:1513:C:C5	3.04	0.45
30:0:1759:A:C2	30:0:1818:C:C4	3.05	0.45
30:0:1801:A:C2	30:0:1802:G:C4	3.04	0.45
30:0:1891:G:H1'	30:0:1972:U:O2	2.17	0.45
30:0:1942:A:H2'	30:0:1943:C:O5'	2.17	0.45
30:0:2779:G:N2	30:0:2796:U:C2	2.84	0.45
30:0:2892:G:C6	30:0:2893:C:N3	2.85	0.45
31:9:7:G:C5'	38:9:5071:HOH:O	2.65	0.45
1:A:75:GLY:HA3	26:Z:86:TYR:CZ	2.51	0.45
1:A:172:ALA:HB2	30:0:1846:U:O2'	2.16	0.45
3:C:93:LYS:HB3	3:C:95:GLU:OE2	2.16	0.45
5:E:22:VAL:HG12	5:E:76:VAL:HG21	1.99	0.45
13:M:14:ASN:C	13:M:16:GLY:H	2.24	0.45
21:U:42:LEU:HB3	30:0:1810:C:O4'	2.16	0.45
25:Y:208:LYS:HD2	38:0:4269:HOH:O	2.17	0.45
30:0:39:G:H2'	30:0:40:C:O4'	2.16	0.45
30:0:708:A:H61	30:0:720:G:C2'	2.28	0.45
30:0:716:G:N1	30:0:717:C:C4	2.85	0.45
30:0:940:G:C6	30:0:941:G:C5	3.04	0.45
30:0:957:A:O5'	30:0:957:A:C8	2.67	0.45
30:0:1188:A:N6	30:0:1189:A:C6	2.84	0.45
30:0:1287:A:C6	30:0:1288:U:C4	3.03	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1337:G:H2'	30:0:1338:U:H6	1.80	0.45
30:0:1476:A:C2'	30:0:1867:G:O2'	2.64	0.45
30:0:1737:A:N6	30:0:1738:C:C4	2.84	0.45
30:0:2563:U:O2'	30:0:2564:G:C8	2.68	0.45
30:0:2635:A:C2'	30:0:2636:C:H5'	2.45	0.45
1:A:195:ASN:HB3	1:A:197:VAL:HG12	1.99	0.45
4:D:76:ARG:NH1	31:9:42:C:O2	2.50	0.45
8:H:18:THR:O	8:H:20:ARG:N	2.49	0.45
9:I:86:GLU:HG2	30:0:1180:U:H4'	1.98	0.45
10:J:77:GLY:O	10:J:78:ILE:C	2.58	0.45
16:P:103:THR:HG23	16:P:106:ARG:NH1	2.31	0.45
19:S:55:GLN:OE1	30:0:1446:U:H2'	2.16	0.45
23:W:6:GLN:CB	23:W:26:ILE:HD11	2.46	0.45
30:0:324:G:N1	30:0:325:U:C5	2.85	0.45
30:0:598:C:C2	30:0:599:G:C8	3.04	0.45
30:0:815:U:O2'	30:0:1598:A:H4'	2.17	0.45
30:0:861:A:C4'	30:0:1697:G:H4'	2.47	0.45
30:0:1015:C:O5'	30:0:1015:C:H6	1.99	0.45
30:0:1076:G:C2	30:0:1084:C:C2	3.04	0.45
30:0:1342:C:H2'	30:0:1343:C:C5'	2.45	0.45
30:0:1343:C:C2'	30:0:1344:G:O5'	2.64	0.45
30:0:1606:A:N3	30:0:1606:A:H2'	2.30	0.45
30:0:1641:A:H2'	30:0:1642:A:C4'	2.46	0.45
30:0:2450:C:C2'	30:0:2451:G:O5'	2.64	0.45
30:0:2780:C:C4	30:0:2781:U:O4	2.70	0.45
30:0:2788:A:C6	30:0:2789:U:N3	2.85	0.45
31:9:5:G:C2'	31:9:6:C:H5'	2.46	0.45
31:9:55:U:H4'	31:9:56:A:H8	1.80	0.45
1:A:88:ILE:O	1:A:88:ILE:HG22	2.17	0.45
8:H:29:SER:HA	8:H:62:HIS:CD2	2.42	0.45
12:L:129:ALA:O	12:L:133:VAL:HG23	2.16	0.45
27:1:9:GLY:HA2	30:0:1687:C:O2	2.16	0.45
28:2:8:LYS:NZ	30:0:1677:U:OP2	2.47	0.45
29:3:11:CYS:HB2	29:3:20:HIS:CE1	2.51	0.45
29:3:60:LYS:HD3	30:0:2461:U:OP2	2.16	0.45
30:0:251:C:C5	30:0:252:C:H5	2.34	0.45
30:0:254:C:O2	30:0:254:C:H2'	2.17	0.45
30:0:533:U:H2'	30:0:2814:A:C6	2.52	0.45
30:0:556:C:O2	30:0:602:A:C2	2.69	0.45
30:0:661:G:C5	30:0:662:U:C4	3.04	0.45
30:0:805:G:N2	30:0:807:A:H3'	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:844:A:H2'	38:0:9567:HOH:O	2.16	0.45
30:0:907:A:C2	30:0:1299:G:C5	3.05	0.45
30:0:955:A:H2'	30:0:956:G:H5'	1.97	0.45
30:0:1167:G:N2	30:0:1180:U:C2	2.85	0.45
30:0:1189:A:C3'	38:0:7580:HOH:O	2.55	0.45
30:0:1241:G:H2'	30:0:1242:A:O4'	2.17	0.45
30:0:1359:U:C5	30:0:2101:A:H8	2.32	0.45
30:0:1630:A:N6	30:0:1631:A:N1	2.65	0.45
30:0:1757:U:H5	38:0:3207:HOH:O	1.99	0.45
30:0:2538:A:H3'	38:0:9174:HOH:O	2.17	0.45
31:9:44:A:N6	31:9:45:A:C6	2.85	0.45
2:B:146:THR:C	2:B:148:PRO:HD3	2.41	0.45
2:B:232:TRP:CD1	2:B:235:ARG:HD2	2.51	0.45
3:C:162:VAL:CG2	3:C:232:LEU:HD21	2.47	0.45
4:D:101:THR:O	4:D:157:LEU:HB3	2.17	0.45
5:E:84:MET:HE3	5:E:131:LEU:HB3	1.98	0.45
7:G:63:ARG:NH1	30:0:1151:G:OP1	2.50	0.45
12:L:113:GLN:NE2	30:0:700:A:H3'	2.32	0.45
14:N:7:LYS:HE3	17:Q:21:ARG:O	2.16	0.45
18:R:2:ILE:HG22	30:0:21:G:C4'	2.46	0.45
20:T:30:ASP:O	20:T:33:GLU:HB3	2.17	0.45
30:0:236:A:N3	30:0:237:G:H1'	2.31	0.45
30:0:293:A:C8	30:0:359:U:O4	2.69	0.45
30:0:304:G:H1'	30:0:347:A:H61	1.82	0.45
30:0:402:U:H2'	30:0:403:C:C6	2.51	0.45
30:0:494:C:O2'	30:0:496:G:N7	2.45	0.45
30:0:1016:U:C2	30:0:1017:U:C5	3.04	0.45
30:0:1051:C:H1'	38:0:3918:HOH:O	2.17	0.45
30:0:1082:A:H2'	30:0:1083:C:OP1	2.16	0.45
30:0:1164:U:H3	30:0:1166:A:H4'	1.78	0.45
30:0:1178:G:H2'	30:0:1179:C:C6	2.51	0.45
30:0:1213:C:C2'	30:0:1214:G:H5'	2.46	0.45
30:0:1274:A:C6	30:0:1275:C:C4	3.05	0.45
30:0:1849:G:C5	30:0:1850:U:C5	3.05	0.45
30:0:1871:U:C6	30:0:1873:G:C4	3.04	0.45
30:0:1934:A:N7	30:0:1935:C:C5	2.85	0.45
30:0:1945:G:H2'	30:0:1946:C:H6	1.82	0.45
30:0:1966:U:O5'	30:0:1966:U:H6	1.99	0.45
30:0:2497:A:C2	30:0:2524:G:C2	3.04	0.45
30:0:2686:C:C2	30:0:2709:G:C2	3.05	0.45
30:0:2692:G:N2	30:0:2701:G:C4	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2891:A:H2'	30:0:2891:A:N3	2.30	0.45
30:0:2898:G:H2'	30:0:2899:A:H8	1.82	0.45
8:H:58:VAL:HG21	8:H:60:LEU:HD21	1.99	0.45
13:M:76:ARG:O	13:M:77:HIS:C	2.60	0.45
13:M:83:SER:HA	38:M:8888:HOH:O	2.17	0.45
14:N:29:SER:HB3	30:0:2415:A:O2'	2.16	0.45
26:Z:71:VAL:HG22	26:Z:88:PHE:CE2	2.51	0.45
29:3:5:ARG:HD3	29:3:21:GLU:OE2	2.17	0.45
30:0:13:G:C4	30:0:14:C:C5	3.04	0.45
30:0:139:C:O5'	30:0:139:C:H6	1.99	0.45
30:0:558:C:C2'	30:0:559:U:C5'	2.84	0.45
30:0:1056:U:H2'	30:0:1057:A:O4'	2.16	0.45
30:0:1057:A:H1'	30:0:2492:U:O2'	2.17	0.45
30:0:1969:A:N7	30:0:1970:G:C6	2.85	0.45
30:0:2650:U:O5'	30:0:2650:U:H6	1.98	0.45
30:0:2681:A:C6	30:0:2714:U:H4'	2.51	0.45
30:0:2740:G:O2'	30:0:2741:A:H5'	2.16	0.45
31:9:36:C:H2'	31:9:37:C:C5'	2.43	0.45
2:B:145:HIS:HD2	2:B:146:THR:O	2.00	0.45
2:B:267:LYS:NZ	2:B:300:SER:O	2.48	0.45
7:G:23:ILE:O	7:G:27:ILE:HG13	2.17	0.45
10:J:75:PRO:HG2	10:J:105:LEU:HD21	1.99	0.45
16:P:55:LYS:HG3	16:P:56:GLY:N	2.31	0.45
30:0:248:A:H3'	30:0:248:A:N3	2.32	0.45
30:0:311:C:N3	30:0:321:A:C2	2.85	0.45
30:0:414:C:H2'	30:0:415:A:O4'	2.17	0.45
30:0:557:C:H42	30:0:600:G:H1	1.65	0.45
30:0:943:A:N6	30:0:1025:C:O2	2.48	0.45
30:0:952:G:N3	30:0:2302:A:H2'	2.32	0.45
30:0:1132:A:N3	30:0:2521:A:O2'	2.49	0.45
30:0:1592:G:O2'	30:0:1593:C:O4'	2.31	0.45
30:0:1762:C:C2	30:0:1783:A:C2	3.04	0.45
30:0:1947:G:C4	30:0:1948:G:N7	2.85	0.45
30:0:2269:C:C2'	30:0:2270:G:H5'	2.47	0.45
30:0:2299:G:N1	30:0:2300:A:N6	2.65	0.45
30:0:2372:A:H2'	30:0:2373:U:H6	1.80	0.45
30:0:2505:G:C2'	30:0:2506:A:C5'	2.92	0.45
30:0:2794:G:N3	30:0:2795:C:C6	2.84	0.45
30:0:2854:A:C6	30:0:2905:A:C6	3.05	0.45
33:0:8813:CL:CL	38:0:4929:HOH:O	2.58	0.45
2:B:24:PRO:HG2	2:B:204:GLY:HA2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:61:PHE:CD1	3:C:65:ARG:HD2	2.52	0.45
3:C:197:SER:HA	38:C:8638:HOH:O	2.16	0.45
11:K:20:CYS:HB2	11:K:29:LEU:CG	2.43	0.45
16:P:120:ARG:O	16:P:121:ASP:C	2.60	0.45
17:Q:27:GLN:NE2	31:9:8:G:C5'	2.77	0.45
24:X:80:GLU:HB3	38:X:5564:HOH:O	2.17	0.45
25:Y:148:GLY:O	25:Y:154:ARG:HD3	2.17	0.45
30:0:152:A:H2'	30:0:153:C:C6	2.52	0.45
30:0:195:C:C2'	30:0:196:G:H5'	2.46	0.45
30:0:482:G:H4'	30:0:508:A:N1	2.32	0.45
30:0:707:C:OP2	30:0:720:G:N1	2.38	0.45
30:0:716:G:C2	30:0:717:C:C2	3.04	0.45
30:0:945:U:H2'	30:0:946:C:C6	2.52	0.45
30:0:1086:A:H4'	30:0:1259:A:C2	2.52	0.45
30:0:1201:C:C5	38:0:6157:HOH:O	2.56	0.45
30:0:1511:U:H2'	30:0:1512:G:O4'	2.17	0.45
30:0:1829:A:H2	30:0:2018:A:N1	2.15	0.45
30:0:1915:U:H2'	30:0:1916:C:H6	1.82	0.45
30:0:2070:G:H4'	38:0:4310:HOH:O	2.17	0.45
30:0:2264:A:H4'	38:0:5143:HOH:O	2.14	0.45
30:0:2291:A:N9	30:0:2309:C:H5'	2.31	0.45
30:0:2315:C:H4'	30:0:2425:A:C6	2.52	0.45
30:0:2634:G:O2'	30:0:2635:A:H5'	2.17	0.45
30:0:2634:G:H5''	38:0:3991:HOH:O	2.16	0.45
30:0:2799:A:N7	30:0:2801:A:C6	2.84	0.45
1:A:100:PRO:HG2	1:A:103:VAL:CG2	2.41	0.44
2:B:84:LEU:O	2:B:99:GLU:HA	2.16	0.44
2:B:243:ASN:HA	2:B:244:PRO:C	2.42	0.44
20:T:72:ILE:HD13	20:T:93:THR:HG22	1.99	0.44
23:W:38:THR:O	23:W:42:ARG:HB2	2.16	0.44
23:W:68:THR:HG23	23:W:69:ARG:H	1.82	0.44
30:0:69:A:H8	30:0:69:A:C5'	2.21	0.44
30:0:580:A:N1	30:0:1253:C:O2'	2.50	0.44
30:0:583:C:C2	30:0:584:U:C5	3.05	0.44
30:0:665:A:H2'	30:0:666:A:O4'	2.17	0.44
30:0:816:G:C6	30:0:817:G:C6	3.05	0.44
30:0:1195:G:C6	30:0:1196:C:C5	3.05	0.44
30:0:1199:A:C6	30:0:1200:A:C6	3.05	0.44
30:0:1424:A:C2	30:0:1441:G:C5	3.05	0.44
30:0:1553:C:H2'	30:0:1554:C:H6	1.81	0.44
30:0:1576:G:H2'	30:0:1577:U:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1595:G:HO2'	30:0:1596:U:H5'	1.82	0.44
30:0:1658:A:H2'	30:0:1659:A:C8	2.52	0.44
30:0:1673:U:H5''	38:0:3233:HOH:O	2.16	0.44
30:0:1675:C:H1'	38:0:4712:HOH:O	2.16	0.44
30:0:1915:U:O5'	30:0:1915:U:H6	1.99	0.44
30:0:2096:A:C8	30:0:2539:U:C2	3.05	0.44
30:0:2416:G:H2'	30:0:2417:C:O4'	2.17	0.44
30:0:2502:C:N3	30:0:2518:C:N4	2.65	0.44
30:0:2523:U:O2'	30:0:2524:G:H5'	2.17	0.44
30:0:2746:A:N6	30:0:2750:G:C8	2.85	0.44
30:0:2761:A:H1'	30:0:2762:C:H2'	1.99	0.44
31:9:5:G:C2	31:9:119:C:O2	2.70	0.44
31:9:36:C:C5	31:9:37:C:C4	3.05	0.44
1:A:101:GLU:OE2	1:A:131:HIS:HB2	2.17	0.44
2:B:6:PRO:HD3	38:0:9962:HOH:O	2.17	0.44
2:B:77:PRO:HA	2:B:293:PRO:HB2	1.99	0.44
10:J:36:VAL:HG12	10:J:37:ALA:N	2.31	0.44
12:L:53:ARG:CD	30:0:2441:U:H4'	2.42	0.44
13:M:74:LYS:HG2	38:M:8947:HOH:O	2.17	0.44
14:N:77:ASN:OD1	14:N:77:ASN:N	2.50	0.44
17:Q:27:GLN:HB2	38:9:466:HOH:O	2.17	0.44
19:S:12:GLU:HB3	38:S:8988:HOH:O	2.16	0.44
23:W:122:ARG:NH2	38:0:5240:HOH:O	2.50	0.44
25:Y:144:ARG:NE	38:Y:8920:HOH:O	2.46	0.44
28:2:40:ARG:HD2	28:2:47:THR:HG22	1.99	0.44
30:0:287:C:C6	30:0:287:C:C3'	3.00	0.44
30:0:324:G:C6	30:0:325:U:C5	3.05	0.44
30:0:565:A:H4'	38:0:3932:HOH:O	2.17	0.44
30:0:632:A:H2'	30:0:633:C:H6	1.83	0.44
30:0:643:A:N1	30:0:902:G:O2'	2.46	0.44
30:0:707:C:N3	30:0:708:A:N7	2.64	0.44
30:0:1015:C:C2	30:0:1016:U:C5	3.05	0.44
30:0:1253:C:H2'	30:0:1254:C:C6	2.51	0.44
30:0:1447:U:C3'	30:0:1506:U:O2	2.64	0.44
30:0:1609:C:H2'	30:0:1610:G:C8	2.45	0.44
30:0:1787:C:H4'	30:0:2883:A:O4'	2.16	0.44
30:0:1790:C:H2'	30:0:1791:U:C6	2.49	0.44
30:0:2102:G:N2	30:0:2103:A:N1	2.64	0.44
30:0:2328:U:C4	30:0:2329:C:C5	3.06	0.44
30:0:2385:G:H2'	30:0:2386:U:H6	1.82	0.44
30:0:2896:A:N3	30:0:2896:A:H2'	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:18:ARG:HE	2:B:256:GLN:HE21	1.64	0.44
14:N:71:TRP:HZ2	38:N:8830:HOH:O	2.01	0.44
18:R:4:TYR:CE1	18:R:17:MET:HE2	2.52	0.44
22:V:44:GLY:O	22:V:48:GLU:HG2	2.16	0.44
30:0:10:U:O4	30:0:532:A:OP2	2.36	0.44
30:0:99:A:N7	30:0:100:C:C2	2.84	0.44
30:0:231:G:HO2'	30:0:666:A:H2	1.58	0.44
30:0:1181:A:O2'	30:0:1182:C:H5'	2.17	0.44
30:0:1205:U:H2'	30:0:1206:U:H5''	1.95	0.44
30:0:1309:U:C2	30:0:1310:U:C6	3.05	0.44
30:0:1337:G:C4	30:0:1338:U:C5	3.05	0.44
30:0:1538:C:C2'	30:0:1539:U:H5'	2.47	0.44
30:0:1564:C:H1'	30:0:2738:G:N2	2.33	0.44
30:0:1639:U:C2'	30:0:1640:C:O5'	2.66	0.44
30:0:1688:G:C6	30:0:1692:C:C5	3.05	0.44
30:0:1782:G:O2'	30:0:1783:A:H5'	2.16	0.44
30:0:1934:A:N7	30:0:1935:C:C4	2.86	0.44
30:0:1945:G:C5	30:0:1946:C:C5	3.05	0.44
30:0:2251:G:C6	30:0:2252:A:C5	3.05	0.44
30:0:2367:A:C4	30:0:2369:A:N6	2.85	0.44
30:0:2507:G:H5'	38:0:3726:HOH:O	2.17	0.44
30:0:2908:A:O5'	30:0:2908:A:H8	2.00	0.44
3:C:76:ARG:HH21	30:0:1363:G:P	2.41	0.44
5:E:119:HIS:O	5:E:140:ALA:HB1	2.18	0.44
13:M:74:LYS:HD3	13:M:87:GLY:O	2.17	0.44
13:M:76:ARG:HG2	38:M:8825:HOH:O	2.16	0.44
13:M:111:ASN:OD1	13:M:111:ASN:N	2.51	0.44
16:P:124:ASP:O	30:0:801:U:H4'	2.17	0.44
16:P:127:GLY:HA3	38:P:584:HOH:O	2.18	0.44
17:Q:66:LYS:HB2	17:Q:70:ALA:O	2.17	0.44
18:R:1:GLY:HA2	18:R:119:VAL:CG2	2.48	0.44
30:0:23:G:C6	30:0:24:G:C6	3.06	0.44
30:0:64:G:N3	30:0:70:A:C8	2.86	0.44
30:0:644:G:H5'	30:0:644:G:N3	2.33	0.44
30:0:716:G:C6	30:0:717:C:C4	3.05	0.44
30:0:1024:G:C5	30:0:1025:C:C4	3.05	0.44
30:0:1084:C:O5'	30:0:1084:C:H6	2.01	0.44
30:0:1167:G:N2	30:0:1179:C:O2	2.51	0.44
30:0:1179:C:H2'	38:0:3219:HOH:O	2.17	0.44
30:0:1576:G:C5	30:0:1577:U:C4	3.06	0.44
30:0:1755:A:H2'	30:0:1756:G:O4'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1773:G:N2	30:0:1774:G:C8	2.85	0.44
30:0:1998:G:C6	30:0:1999:C:C4	3.05	0.44
30:0:2065:C:C2'	30:0:2066:C:H5'	2.46	0.44
30:0:2286:G:H2'	30:0:2287:C:O4'	2.18	0.44
30:0:2300:A:H4'	30:0:2301:A:N3	2.33	0.44
2:B:144:THR:HG22	2:B:145:HIS:N	2.31	0.44
3:C:181:ALA:HB2	30:0:30:U:OP2	2.17	0.44
4:D:52:THR:HB	4:D:70:GLY:H	1.83	0.44
8:H:59:GLN:HE21	8:H:129:ARG:CG	2.30	0.44
11:K:29:LEU:HB3	11:K:55:VAL:CG2	2.48	0.44
12:L:52:LYS:NZ	30:0:215:A:OP1	2.50	0.44
16:P:37:ARG:HG3	30:0:1501:A:OP2	2.17	0.44
18:R:1:GLY:O	30:0:21:G:H5'	2.17	0.44
20:T:101:LEU:HD13	20:T:112:LEU:HD11	1.99	0.44
21:U:39:ASN:HD22	21:U:44:ARG:CD	2.30	0.44
25:Y:97:LEU:HA	25:Y:235:GLU:HA	2.00	0.44
26:Z:54:GLU:HG2	38:Z:8715:HOH:O	2.17	0.44
30:0:321:A:O2'	30:0:322:G:H5'	2.18	0.44
30:0:421:C:H2'	30:0:422:G:H8	1.82	0.44
30:0:629:A:C2	30:0:2074:A:C2	3.06	0.44
30:0:652:G:C5'	38:0:3006:HOH:O	2.52	0.44
30:0:799:C:H1'	30:0:1599:U:H5''	1.99	0.44
30:0:955:A:C2'	30:0:956:G:H5'	2.47	0.44
30:0:968:G:O2'	30:0:969:G:H5'	2.18	0.44
30:0:1182:C:C1'	30:0:1192:A:C8	2.98	0.44
30:0:1488:U:H4'	30:0:1489:G:OP1	2.18	0.44
30:0:1572:A:OP2	30:0:1624:A:N6	2.46	0.44
30:0:1759:A:N3	30:0:1818:C:C2	2.86	0.44
30:0:1911:C:H2'	30:0:1912:A:O4'	2.18	0.44
30:0:1969:A:H3'	30:0:1970:G:C2	2.52	0.44
30:0:2040:C:C2'	30:0:2041:G:H5'	2.46	0.44
30:0:2497:A:C2	30:0:2524:G:N3	2.85	0.44
30:0:2596:A:C2	33:0:8812:CL:CL	3.07	0.44
30:0:2723:G:H2'	30:0:2724:U:C6	2.53	0.44
31:9:64:C:H2'	31:9:65:A:H5'	1.98	0.44
1:A:84:VAL:C	1:A:86:ALA:H	2.26	0.44
2:B:56:ASP:HB3	2:B:322:ARG:HG2	2.00	0.44
2:B:182:VAL:C	2:B:184:ASP:H	2.25	0.44
3:C:2:GLN:HA	3:C:17:ASP:HA	1.98	0.44
3:C:233:THR:HG22	3:C:234:VAL:N	2.30	0.44
7:G:16:LYS:HE2	7:G:63:ARG:HH12	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:27:ARG:HG2	11:K:27:ARG:HH11	1.83	0.44
12:L:43:HIS:O	12:L:44:GLU:C	2.61	0.44
13:M:8:ILE:HD13	38:M:8920:HOH:O	2.17	0.44
13:M:85:ARG:HD2	13:M:85:ARG:N	2.33	0.44
13:M:109:PHE:HB3	13:M:112:LEU:HD12	2.00	0.44
18:R:30:ALA:HA	18:R:33:ARG:HH11	1.83	0.44
21:U:56:ARG:HD2	30:0:2890:A:H1'	1.97	0.44
25:Y:192:ASP:C	25:Y:194:GLU:H	2.26	0.44
30:0:100:C:C4	30:0:101:C:C5	3.06	0.44
30:0:291:C:H2'	30:0:292:G:H5'	1.99	0.44
30:0:529:G:H1'	30:0:611:U:O2'	2.18	0.44
30:0:711:G:C2'	30:0:712:C:H5'	2.48	0.44
30:0:810:G:H2'	30:0:811:C:H6	1.83	0.44
30:0:933:C:H4'	30:0:1297:U:H4'	2.00	0.44
30:0:947:U:C2'	30:0:948:G:H5'	2.47	0.44
30:0:961:A:C6	30:0:1010:C:C5	3.05	0.44
30:0:1138:G:C6	30:0:1139:U:N3	2.86	0.44
30:0:1515:A:C2	30:0:1672:G:C2	3.06	0.44
30:0:1883:U:O2'	30:0:1884:G:H5'	2.17	0.44
30:0:2102:G:O4'	30:0:2538:A:C5	2.70	0.44
30:0:2289:G:O2'	30:0:2291:A:N6	2.50	0.44
30:0:2377:U:N3	30:0:2378:U:C5	2.84	0.44
30:0:2448:U:O2'	30:0:2449:G:H5'	2.18	0.44
30:0:2700:G:C5	30:0:2701:G:C5	3.06	0.44
30:0:2852:A:O4'	30:0:2902:A:N6	2.51	0.44
2:B:300:SER:CB	30:0:2716:G:H21	2.31	0.44
4:D:134:LEU:HB2	4:D:157:LEU:HD23	1.99	0.44
5:E:11:VAL:HG12	5:E:12:ASP:N	2.33	0.44
8:H:173:GLU:O	8:H:174:LEU:HB2	2.18	0.44
9:I:112:LEU:HD11	30:0:1162:G:C1'	2.45	0.44
10:J:63:ILE:HG23	30:0:1235:G:O4'	2.18	0.44
11:K:49:LEU:HA	11:K:73:VAL:CG1	2.48	0.44
11:K:74:VAL:CG1	11:K:113:ILE:HG12	2.47	0.44
11:K:87:ARG:HG3	30:0:2721:U:H4'	1.99	0.44
19:S:6:LYS:O	19:S:7:HIS:HB3	2.18	0.44
26:Z:83:TYR:OH	30:0:1604:G:C4	2.70	0.44
27:1:20:ARG:HA	30:0:121:U:C6	2.53	0.44
29:3:71:CYS:HB3	29:3:75:GLY:H	1.82	0.44
30:0:165:A:H61	30:0:168:C:H3'	1.83	0.44
30:0:282:C:O2'	30:0:283:U:C5'	2.50	0.44
30:0:734:U:H1'	30:0:737:A:H62	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:862:U:O2'	30:0:863:G:H5'	2.18	0.44
30:0:1081:A:C5	30:0:1082:A:C6	3.06	0.44
30:0:1202:A:N7	30:0:1203:G:C5	2.86	0.44
30:0:1328:A:N7	30:0:1329:G:C5	2.85	0.44
30:0:1559:A:HO2'	30:0:1561:U:H5	1.63	0.44
30:0:1576:G:C5	30:0:1577:U:C5	3.06	0.44
30:0:2285:G:H2'	30:0:2286:G:C8	2.53	0.44
30:0:2350:G:H2'	30:0:2351:C:H6	1.82	0.44
30:0:2727:A:C2'	30:0:2728:C:H5'	2.46	0.44
31:9:36:C:C4	31:9:37:C:C2	3.05	0.44
1:A:7:GLN:O	30:0:1862:C:H5'	2.18	0.44
2:B:280:VAL:HG13	2:B:333:GLU:O	2.18	0.44
3:C:178:GLN:C	3:C:180:SER:N	2.74	0.44
5:E:86:VAL:HA	5:E:166:VAL:HA	1.99	0.44
10:J:39:VAL:HG12	10:J:40:ASN:ND2	2.33	0.44
10:J:70:PHE:CE1	30:0:2676:C:H4'	2.53	0.44
14:N:92:ALA:O	14:N:97:VAL:HB	2.18	0.44
16:P:54:LYS:HB2	30:0:1717:A:H5''	2.00	0.44
25:Y:234:VAL:HG12	25:Y:235:GLU:N	2.32	0.44
26:Z:61:HIS:HB3	38:Z:8707:HOH:O	2.18	0.44
30:0:23:G:C6	30:0:24:G:N1	2.86	0.44
30:0:400:C:H2'	30:0:401:C:C6	2.53	0.44
30:0:463:A:H3'	38:0:6340:HOH:O	2.17	0.44
30:0:736:A:C2'	30:0:737:A:H5'	2.48	0.44
30:0:795:G:N3	30:0:817:G:C2	2.86	0.44
30:0:830:G:C2'	30:0:831:U:H5'	2.48	0.44
30:0:861:A:H4'	30:0:1697:G:C4'	2.48	0.44
30:0:876:A:C6	30:0:878:G:C8	3.06	0.44
30:0:908:A:H1'	38:0:7745:HOH:O	2.17	0.44
30:0:1738:C:O2'	30:0:1739:G:H5'	2.18	0.44
30:0:1749:U:O2	30:0:1751:G:C8	2.71	0.44
30:0:1764:C:H2'	30:0:1765:G:C5'	2.48	0.44
30:0:1929:G:H3'	30:0:1929:G:N3	2.33	0.44
30:0:1932:G:C4	30:0:1933:G:C8	3.06	0.44
30:0:2032:U:H2'	30:0:2033:G:H5'	2.00	0.44
30:0:2119:C:H2'	30:0:2120:U:O4'	2.18	0.44
30:0:2454:C:O5'	30:0:2454:C:H6	2.00	0.44
30:0:2507:G:H22	30:0:2512:U:H5'	1.82	0.44
31:9:54:A:C2'	31:9:55:U:H5'	2.48	0.44
2:B:199:TYR:HA	2:B:268:ARG:HA	1.99	0.44
7:G:16:LYS:CE	7:G:63:ARG:HH12	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:27:HIS:O	18:R:31:ILE:HG13	2.18	0.44
18:R:69:LYS:NZ	30:0:2049:C:OP1	2.50	0.44
20:T:26:THR:HA	20:T:39:ASN:HB3	2.00	0.44
23:W:129:LYS:HE3	31:9:87:U:H2'	2.00	0.44
25:Y:109:LEU:HA	38:Y:8878:HOH:O	2.18	0.44
25:Y:154:ARG:HH21	30:0:1293:U:C5'	2.22	0.44
25:Y:171:PRO:HG3	30:0:1267:C:O2'	2.17	0.44
27:1:1:THR:HG22	27:1:2:GLY:N	2.33	0.44
30:0:81:G:N3	30:0:98:A:C2	2.86	0.44
30:0:370:G:C2	30:0:371:U:C5	3.06	0.44
30:0:612:U:H2'	30:0:613:C:C6	2.53	0.44
30:0:871:G:H4'	38:0:4374:HOH:O	2.17	0.44
30:0:1159:G:H21	30:0:1189:A:H8	1.66	0.44
30:0:1214:G:H4'	38:0:4703:HOH:O	2.18	0.44
30:0:1517:C:C2	30:0:1670:A:C2	3.05	0.44
30:0:1561:U:C2'	30:0:1562:C:O5'	2.66	0.44
30:0:1585:C:C2	30:0:1611:G:N2	2.85	0.44
30:0:1769:C:H2'	30:0:1770:U:C5'	2.48	0.44
30:0:1947:G:C5	30:0:1970:G:C8	3.06	0.44
30:0:1992:U:C2	30:0:1994:A:OP2	2.71	0.44
30:0:2335:C:H2'	30:0:2336:G:C8	2.52	0.44
30:0:2681:A:H2'	38:0:5519:HOH:O	2.16	0.44
30:0:2723:G:H2'	30:0:2724:U:H6	1.82	0.44
30:0:2748:G:OP1	30:0:2749:U:H5''	2.17	0.44
30:0:2851:G:N2	30:0:2905:A:N6	2.65	0.44
31:9:33:U:C2	31:9:43:G:N7	2.86	0.44
1:A:217:ARG:NH1	1:A:229:ALA:HB3	2.31	0.43
2:B:137:LEU:HD21	2:B:140:LEU:HD21	1.99	0.43
2:B:141:ARG:HD2	2:B:163:GLU:OE2	2.18	0.43
3:C:55:ARG:HB2	38:0:9141:HOH:O	2.17	0.43
5:E:103:VAL:HG12	5:E:104:ILE:N	2.32	0.43
9:I:120:ALA:O	9:I:124:VAL:HG23	2.18	0.43
14:N:99:GLU:HB3	14:N:128:ASP:HB2	2.00	0.43
16:P:36:THR:O	16:P:39:ASP:HB2	2.18	0.43
25:Y:138:ARG:HB3	30:0:638:C:OP1	2.18	0.43
30:0:79:G:N2	30:0:97:G:H1'	2.33	0.43
30:0:169:A:C6	30:0:2469:A:C6	3.06	0.43
30:0:268:U:O4	30:0:269:G:N1	2.51	0.43
30:0:807:A:H2'	30:0:808:A:C8	2.53	0.43
30:0:862:U:H5'	38:0:7180:HOH:O	2.18	0.43
30:0:876:A:N7	38:0:4295:HOH:O	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1020:A:H2'	30:0:1021:G:C8	2.53	0.43
30:0:1061:C:C4	30:0:1062:U:C5	3.06	0.43
30:0:1103:C:N3	30:0:1241:G:N2	2.65	0.43
30:0:1187:U:O2'	30:0:1188:A:C8	2.71	0.43
30:0:1210:G:C2	30:0:1211:G:C8	3.06	0.43
30:0:1377:C:C6	30:0:1693:A:N1	2.86	0.43
30:0:1544:U:H5'	30:0:1618:G:O3'	2.18	0.43
30:0:1552:G:N1	30:0:1634:G:C5	2.86	0.43
30:0:1713:G:N2	30:0:2735:U:H4'	2.32	0.43
30:0:1744:G:C2'	30:0:1745:G:H5'	2.49	0.43
30:0:2004:U:O2	30:0:2004:U:C2'	2.59	0.43
30:0:2291:A:H2'	30:0:2291:A:N3	2.32	0.43
30:0:2336:G:H1'	38:0:6218:HOH:O	2.18	0.43
30:0:2671:U:N3	30:0:2672:C:C6	2.86	0.43
30:0:2707:C:O2	30:0:2707:C:C2'	2.63	0.43
30:0:2853:U:H2'	30:0:2854:A:C8	2.53	0.43
31:9:23:U:H2'	31:9:24:U:OP2	2.18	0.43
31:9:95:C:N4	38:9:6156:HOH:O	2.50	0.43
2:B:85:ARG:NH1	2:B:143:ILE:HD11	2.33	0.43
2:B:247:VAL:HB	30:0:2654:C:H1'	1.99	0.43
2:B:320:GLN:HA	2:B:321:PRO:HD3	1.86	0.43
3:C:16:VAL:HG12	3:C:17:ASP:H	1.83	0.43
4:D:104:PHE:CE2	4:D:132:VAL:HB	2.52	0.43
5:E:11:VAL:HA	5:E:23:GLU:O	2.17	0.43
13:M:83:SER:O	29:3:46:ILE:HG22	2.18	0.43
29:3:10:TYR:CD1	30:0:2408:A:O2'	2.71	0.43
30:0:23:G:H8	30:0:23:G:O5'	2.00	0.43
30:0:68:U:O4	30:0:107:U:H4'	2.18	0.43
30:0:146:U:C4	30:0:147:G:C6	3.07	0.43
30:0:149:G:H2'	30:0:150:G:H5'	2.00	0.43
30:0:419:A:H1'	30:0:1921:A:C2	2.53	0.43
30:0:564:G:H2'	30:0:565:A:OP2	2.18	0.43
30:0:647:U:H2'	30:0:648:G:O4'	2.17	0.43
30:0:681:G:N3	30:0:681:G:H2'	2.33	0.43
30:0:816:G:C5	30:0:817:G:C6	3.07	0.43
30:0:830:G:N2	30:0:2022:A:C2	2.86	0.43
30:0:1087:G:H4'	30:0:1088:A:OP1	2.17	0.43
30:0:1169:U:C4	30:0:1170:U:C2	3.06	0.43
30:0:1175:G:H4'	38:0:6771:HOH:O	2.18	0.43
30:0:1332:C:C4	30:0:1333:U:C5	3.06	0.43
30:0:1476:A:H2'	30:0:1867:G:O2'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1492:A:C6	30:0:1493:A:C6	3.06	0.43
30:0:1588:G:C6	30:0:1589:G:C6	3.06	0.43
30:0:1592:G:C2	30:0:1593:C:N3	2.86	0.43
30:0:1689:A:H8	30:0:1689:A:OP2	2.01	0.43
30:0:1886:A:C5	30:0:1887:U:C6	3.06	0.43
30:0:1886:A:C5	30:0:1887:U:C5	3.06	0.43
30:0:1901:G:O2'	30:0:1902:G:H5'	2.18	0.43
30:0:1925:G:N2	30:0:1926:G:H1'	2.33	0.43
30:0:1947:G:C8	30:0:1947:G:C3'	3.02	0.43
30:0:2114:C:H2'	30:0:2115:U:H6	1.83	0.43
30:0:2317:C:C5	30:0:2318:C:N4	2.85	0.43
30:0:2374:G:C6	30:0:2375:A:C6	3.05	0.43
30:0:2456:A:O2'	30:0:2457:U:H5'	2.18	0.43
30:0:2555:C:O5'	30:0:2555:C:H6	2.02	0.43
2:B:239:LEU:HD12	30:0:2093:G:P	2.58	0.43
10:J:53:ILE:O	10:J:57:TYR:HD1	2.00	0.43
14:N:38:LYS:HB2	14:N:38:LYS:HE3	1.86	0.43
17:Q:47:VAL:HA	17:Q:48:PRO:HD3	1.78	0.43
20:T:2:LYS:HG2	30:0:447:A:OP1	2.18	0.43
20:T:48:VAL:HG21	20:T:96:VAL:CG1	2.45	0.43
28:2:2:LYS:HG3	30:0:1486:A:C4	2.54	0.43
30:0:13:G:H2'	30:0:14:C:C6	2.52	0.43
30:0:54:G:C4	30:0:55:U:C6	3.06	0.43
30:0:191:A:N1	30:0:236:A:O2'	2.43	0.43
30:0:210:U:H2'	30:0:211:U:H6	1.83	0.43
30:0:283:U:O2'	30:0:368:C:C6	2.70	0.43
30:0:343:C:O2'	30:0:344:C:H5'	2.18	0.43
30:0:669:G:C5	30:0:670:G:N7	2.87	0.43
30:0:712:C:C5	30:0:714:U:C5	3.07	0.43
30:0:755:G:H5''	38:0:4855:HOH:O	2.18	0.43
30:0:1018:A:C6	30:0:1019:C:C4	3.07	0.43
30:0:1209:C:C2	30:0:1210:G:C8	3.06	0.43
30:0:1279:U:H5'	30:0:1280:A:OP2	2.19	0.43
30:0:1319:G:H1'	38:0:4649:HOH:O	2.18	0.43
30:0:1345:A:C4	30:0:1346:U:C5	3.07	0.43
30:0:1646:G:C2	30:0:1647:G:C8	3.06	0.43
30:0:2121:G:H5''	38:0:6487:HOH:O	2.17	0.43
30:0:2587:OMU:HM22	30:0:2589:U:C6	2.53	0.43
31:9:33:U:H2'	38:9:3797:HOH:O	2.17	0.43
31:9:79:U:O2	31:9:79:U:C2'	2.66	0.43
1:A:89:ALA:HB3	1:A:92:ASN:ND2	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:35:VAL:HG11	3:C:227:GLY:N	2.33	0.43
3:C:135:GLU:HB3	38:C:8572:HOH:O	2.18	0.43
5:E:82:TYR:CD1	5:E:141:VAL:HG12	2.53	0.43
13:M:70:GLY:CA	30:0:2263:G:H4'	2.46	0.43
38:M:8824:HOH:O	29:3:48:ASN:HB2	2.18	0.43
17:Q:58:GLY:HA2	30:0:951:A:O4'	2.17	0.43
18:R:60:LYS:HA	18:R:75:TRP:NE1	2.33	0.43
20:T:44:ALA:HA	20:T:62:VAL:O	2.18	0.43
24:X:22:ASN:OD1	24:X:25:ARG:HD2	2.18	0.43
28:2:41:HIS:O	28:2:45:ASN:HB2	2.18	0.43
30:0:114:A:H5''	38:0:9745:HOH:O	2.17	0.43
30:0:222:A:C4	30:0:223:G:H1'	2.53	0.43
30:0:562:A:C2	30:0:563:C:C2	3.05	0.43
30:0:584:U:N3	30:0:585:C:C5	2.86	0.43
30:0:842:C:H5'	38:0:6855:HOH:O	2.19	0.43
30:0:1032:A:H2'	30:0:1032:A:N3	2.33	0.43
30:0:1166:A:OP2	30:0:1174:A:H4'	2.17	0.43
30:0:1270:U:H2'	30:0:1271:A:C8	2.53	0.43
30:0:1502:A:C3'	38:0:9624:HOH:O	2.64	0.43
30:0:1595:G:C2	30:0:1600:G:C2	3.06	0.43
30:0:1688:G:C6	30:0:1692:C:C6	3.06	0.43
30:0:1711:A:C6	30:0:1712:A:N7	2.86	0.43
30:0:2511:A:H3'	30:0:2512:U:H6	1.81	0.43
30:0:2711:U:H4'	38:0:6212:HOH:O	2.18	0.43
30:0:2750:G:C5	30:0:2751:C:C4	3.06	0.43
30:0:2834:G:H2'	30:0:2835:C:O5'	2.17	0.43
30:0:2854:A:N1	30:0:2905:A:C5	2.86	0.43
30:0:2895:C:O2'	30:0:2896:A:H5''	2.18	0.43
2:B:1:PRO:O	2:B:2:GLN:HB2	2.19	0.43
2:B:294:TYR:HE2	38:B:9132:HOH:O	2.00	0.43
2:B:302:PRO:HA	30:0:2717:C:H5'	2.01	0.43
3:C:157:LEU:HD11	3:C:194:PHE:HZ	1.84	0.43
4:D:65:GLU:HA	38:D:213:HOH:O	2.18	0.43
10:J:86:MET:HE2	30:0:1241:G:N3	2.34	0.43
14:N:151:ASP:OD1	14:N:166:ALA:HA	2.19	0.43
15:O:14:LEU:CD2	15:O:102:ILE:HD11	2.48	0.43
20:T:41:ARG:HG2	20:T:41:ARG:NH1	2.33	0.43
20:T:77:VAL:HG12	20:T:89:ARG:HB3	2.01	0.43
23:W:60:GLU:O	23:W:63:GLU:HB2	2.18	0.43
29:3:40:ARG:HG3	29:3:52:PHE:HD2	1.84	0.43
29:3:42:ARG:HH11	30:0:396:U:H5'	1.78	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:77:G:H2'	30:0:78:G:H5'	2.00	0.43
30:0:236:A:H1'	30:0:237:G:O4'	2.18	0.43
30:0:309:C:H42	30:0:322:G:H1	1.66	0.43
30:0:577:G:C2	30:0:581:G:C5	3.06	0.43
30:0:657:G:H2'	30:0:658:C:C6	2.53	0.43
30:0:660:A:N7	30:0:746:A:C5	2.87	0.43
30:0:1455:C:O2'	30:0:1456:C:H5'	2.19	0.43
30:0:1478:U:H2'	30:0:1479:G:C8	2.53	0.43
30:0:1498:G:O2'	30:0:1499:U:H5'	2.18	0.43
30:0:1590:A:C5	30:0:1606:A:N7	2.86	0.43
30:0:1610:G:N1	30:0:1611:G:C5	2.87	0.43
30:0:1615:A:H4'	38:0:5813:HOH:O	2.18	0.43
30:0:1666:C:C2	30:0:1667:A:N7	2.85	0.43
30:0:1768:C:C5	30:0:1769:C:C5	3.06	0.43
30:0:2248:C:C2	30:0:2254:G:N2	2.86	0.43
30:0:2385:G:C4	30:0:2386:U:C5	3.07	0.43
30:0:2407:G:N2	30:0:2408:A:N3	2.67	0.43
30:0:2504:A:H2'	30:0:2505:G:O4'	2.18	0.43
30:0:2507:G:O6	30:0:2511:A:H4'	2.19	0.43
30:0:2784:A:O5'	30:0:2784:A:H8	2.02	0.43
31:9:49:G:C2'	31:9:50:G:C5'	2.96	0.43
2:B:209:LYS:HB2	2:B:257:THR:O	2.19	0.43
2:B:279:THR:OG1	2:B:290:VAL:O	2.34	0.43
4:D:146:LYS:NZ	14:N:107:ASN:HD21	2.17	0.43
14:N:154:LEU:CD1	14:N:157:PRO:HA	2.47	0.43
15:O:25:VAL:CG1	30:0:709:G:O2'	2.66	0.43
20:T:32:ARG:NH1	20:T:38:ARG:HH12	2.16	0.43
21:U:52:THR:CG2	21:U:54:THR:H	2.29	0.43
23:W:23:MET:O	30:0:1025:C:H5'	2.18	0.43
23:W:27:HIS:C	23:W:28:HIS:CD2	2.96	0.43
23:W:27:HIS:HB2	23:W:28:HIS:HD2	1.84	0.43
24:X:60:ALA:HA	38:0:7363:HOH:O	2.17	0.43
27:1:16:HIS:HD2	30:0:470:U:O2'	2.02	0.43
30:0:28:G:O2'	30:0:1342:C:OP1	2.36	0.43
30:0:54:G:C5	30:0:55:U:C5	3.07	0.43
30:0:180:G:H2'	30:0:181:G:H5'	1.99	0.43
30:0:241:A:C2	30:0:378:A:H4'	2.54	0.43
30:0:250:C:O2'	30:0:251:C:H5'	2.19	0.43
30:0:567:U:H5''	38:0:5240:HOH:O	2.18	0.43
30:0:745:G:H4'	30:0:746:A:OP1	2.19	0.43
30:0:968:G:H2'	30:0:969:G:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1185:U:H3'	38:0:5640:HOH:O	2.17	0.43
30:0:1831:U:O2	30:0:1831:U:H2'	2.18	0.43
30:0:1936:C:C2	30:0:1937:U:C5	3.06	0.43
30:0:1999:C:O2'	30:0:2000:G:H5'	2.19	0.43
30:0:2073:G:C6	30:0:2607:U:C2	3.07	0.43
30:0:2135:A:C2	30:0:2241:C:C2	3.07	0.43
30:0:2552:C:C6	30:0:2577:A:N7	2.87	0.43
30:0:2687:G:C2'	30:0:2688:U:H5'	2.49	0.43
30:0:2726:U:H5''	30:0:2749:U:H3	1.83	0.43
31:9:39:U:C2'	31:9:40:C:OP1	2.67	0.43
1:A:85:SER:HA	38:A:9033:HOH:O	2.17	0.43
1:A:99:ILE:O	1:A:131:HIS:HE1	2.02	0.43
3:C:165:ASP:O	3:C:168:ARG:HB3	2.18	0.43
3:C:214:THR:HG22	3:C:216:SER:OG	2.18	0.43
4:D:12:GLU:O	4:D:15:GLU:HG2	2.18	0.43
11:K:81:ARG:HB2	11:K:87:ARG:NH1	2.33	0.43
15:O:112:ARG:HH11	30:0:709:G:N2	2.16	0.43
16:P:37:ARG:NE	30:0:1500:U:C5	2.87	0.43
25:Y:109:LEU:HD11	25:Y:181:GLY:HA3	2.00	0.43
26:Z:71:VAL:HG22	26:Z:88:PHE:HE2	1.84	0.43
30:0:26:U:H2'	30:0:27:U:C6	2.53	0.43
30:0:204:A:H2'	30:0:205:U:H5'	2.00	0.43
30:0:298:C:C4	30:0:299:U:C5	3.07	0.43
30:0:344:C:H2'	30:0:345:G:O4'	2.19	0.43
30:0:392:U:O2	30:0:398:U:C2	2.72	0.43
30:0:541:C:C2'	30:0:542:A:C5'	2.84	0.43
30:0:732:C:H2'	30:0:733:U:C6	2.54	0.43
30:0:1020:A:O2'	30:0:1021:G:H5'	2.18	0.43
30:0:1021:G:H2'	30:0:1022:A:H8	1.82	0.43
30:0:1059:G:C6	30:0:1127:C:C2	3.07	0.43
30:0:1087:G:C8	33:0:8822:CL:CL	3.09	0.43
30:0:1449:G:N3	30:0:1493:A:C2	2.87	0.43
30:0:1513:C:O2	30:0:1513:C:H2'	2.17	0.43
30:0:2471:G:C2	30:0:2472:C:C6	3.06	0.43
30:0:2538:A:C3'	38:0:9174:HOH:O	2.66	0.43
30:0:2667:G:O2'	30:0:2668:G:H5'	2.19	0.43
30:0:2679:G:H2'	30:0:2680:A:H3'	1.99	0.43
30:0:2887:G:H2'	30:0:2888:U:O4'	2.19	0.43
30:0:2903:C:H6	30:0:2903:C:O5'	2.02	0.43
2:B:190:MET:HE2	2:B:194:PHE:CD1	2.54	0.43
2:B:278:PRO:HD3	2:B:294:TYR:CZ	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:68:HIS:CE1	38:E:5919:HOH:O	2.71	0.43
6:F:19:ALA:O	6:F:22:VAL:HG22	2.18	0.43
13:M:95:LYS:HA	13:M:170:ASN:ND2	2.26	0.43
14:N:11:ARG:HD3	31:9:114:G:O6	2.19	0.43
20:T:26:THR:HB	30:0:343:C:OP1	2.19	0.43
21:U:34:SER:HA	21:U:37:GLU:HB2	2.00	0.43
29:3:1:MET:HA	30:0:2320:U:P	2.59	0.43
30:0:24:G:C4	30:0:518:G:N2	2.86	0.43
30:0:429:A:H8	38:0:3806:HOH:O	1.97	0.43
30:0:433:C:H1'	38:0:3008:HOH:O	2.18	0.43
30:0:1308:A:H2'	30:0:1309:U:H6	1.83	0.43
30:0:1549:C:C2'	30:0:1550:A:H5'	2.48	0.43
30:0:1673:U:C5'	38:0:3233:HOH:O	2.66	0.43
30:0:1706:G:H3'	30:0:1707:G:C8	2.54	0.43
30:0:1928:C:C2	30:0:1929:G:C8	3.07	0.43
30:0:2038:A:C2	30:0:2039:A:N7	2.87	0.43
30:0:2687:G:H1	30:0:2707:C:H42	1.67	0.43
30:0:2696:G:O2'	30:0:2698:G:N7	2.44	0.43
30:0:2702:A:H2'	30:0:2702:A:N3	2.34	0.43
30:0:2775:A:H2'	30:0:2776:A:C8	2.53	0.43
30:0:2855:G:C2	30:0:2904:U:O2	2.72	0.43
30:0:2869:G:H2'	30:0:2870:C:O4'	2.19	0.43
31:9:45:A:C8	31:9:46:C:C5	3.07	0.43
31:9:59:C:H1'	38:9:2772:HOH:O	2.17	0.43
1:A:59:GLU:HA	1:A:64:ASP:O	2.19	0.43
2:B:79:MET:HB3	2:B:145:HIS:O	2.18	0.43
2:B:156:LYS:HE3	30:0:2846:C:H5''	2.01	0.43
5:E:69:ILE:HA	5:E:72:MET:CE	2.42	0.43
10:J:86:MET:HE2	30:0:1241:G:N2	2.34	0.43
11:K:82:ARG:HH12	21:U:20:MET:HE1	1.84	0.43
13:M:48:LYS:HE3	13:M:52:GLN:HE21	1.83	0.43
13:M:70:GLY:CA	13:M:73:ARG:HH12	2.32	0.43
13:M:153:ASP:C	13:M:155:GLN:H	2.26	0.43
15:O:51:TYR:CD1	30:0:721:A:C4'	2.96	0.43
25:Y:154:ARG:NH1	25:Y:154:ARG:HG2	2.34	0.43
26:Z:72:ASP:HA	38:Z:8728:HOH:O	2.18	0.43
30:0:282:C:H2'	30:0:283:U:C5'	2.49	0.43
30:0:441:A:O5'	30:0:441:A:C8	2.70	0.43
30:0:559:U:C6	30:0:559:U:C3'	3.01	0.43
30:0:594:C:C4	30:0:595:U:C4	3.06	0.43
30:0:795:G:H1'	30:0:817:G:N2	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1216:G:C2	30:0:1217:G:N9	2.87	0.43
30:0:1668:U:H2'	30:0:1669:G:H8	1.84	0.43
30:0:1679:C:N4	38:0:6168:HOH:O	2.51	0.43
30:0:2128:G:H1	30:0:2265:U:H3	1.67	0.43
30:0:2237:G:H1'	30:0:2238:A:N7	2.34	0.43
30:0:2297:U:C2'	30:0:2298:C:H5'	2.48	0.43
30:0:2506:A:C4	38:0:5977:HOH:O	2.69	0.43
30:0:2582:G:C2	30:0:2583:A:C8	3.07	0.43
30:0:2672:C:C2	30:0:2818:A:C2	3.07	0.43
30:0:2803:C:H2'	30:0:2804:C:C5'	2.49	0.43
30:0:2854:A:C2	30:0:2905:A:C4	3.06	0.43
31:9:4:G:C6	31:9:120:A:C2	3.06	0.43
31:9:11:A:C2	31:9:69:U:O4'	2.72	0.43
1:A:94:LEU:HD12	1:A:98:GLU:HB3	1.99	0.43
2:B:101:TRP:H	2:B:119:HIS:CD2	2.37	0.43
5:E:60:SER:OG	30:0:2784:A:H1'	2.19	0.43
13:M:155:GLN:HA	13:M:155:GLN:HE21	1.83	0.43
16:P:16:VAL:HG12	16:P:17:GLY:N	2.34	0.43
18:R:62:HIS:HB3	30:0:1370:G:O5'	2.18	0.43
20:T:82:THR:C	20:T:84:GLY:H	2.27	0.43
22:V:39:ALA:N	22:V:40:PRO:CD	2.78	0.43
24:X:56:GLU:HG2	30:0:1400:C:H4'	2.01	0.43
27:1:18:LYS:HE2	30:0:121:U:O4	2.19	0.43
30:0:54:G:N3	30:0:55:U:C6	2.86	0.43
30:0:149:G:H2'	30:0:150:G:C5'	2.49	0.43
30:0:169:A:O2'	30:0:170:U:H6	2.01	0.43
30:0:301:C:O2	30:0:301:C:C2'	2.67	0.43
30:0:320:G:C6	30:0:321:A:C6	3.07	0.43
30:0:810:G:C4	30:0:811:C:C5	3.07	0.43
30:0:834:G:C4'	30:0:835:U:OP2	2.67	0.43
30:0:1151:G:H1'	30:0:1215:A:N6	2.34	0.43
30:0:1571:G:H2'	30:0:1624:A:H61	1.83	0.43
30:0:2295:G:N3	30:0:2361:A:C2	2.87	0.43
30:0:2602:G:H2'	30:0:2603:G:C8	2.54	0.43
30:0:2629:C:C2	30:0:2635:A:C2	3.07	0.43
30:0:2757:A:O2'	30:0:2758:G:H5'	2.19	0.43
30:0:2784:A:C5	30:0:2785:C:C5	3.07	0.43
30:0:2833:C:O2	30:0:2906:A:O2'	2.36	0.43
31:9:39:U:H2'	31:9:40:C:OP1	2.18	0.43
2:B:170:SER:O	2:B:171:VAL:C	2.62	0.42
4:D:35:ALA:N	38:D:202:HOH:O	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:7:ILE:HG12	5:E:45:ASP:O	2.19	0.42
5:E:15:GLN:HG2	5:E:16:ASP:N	2.34	0.42
5:E:119:HIS:HB2	5:E:144:THR:OG1	2.19	0.42
5:E:137:ASP:O	5:E:141:VAL:HG23	2.19	0.42
6:F:70:LYS:C	6:F:72:VAL:H	2.27	0.42
8:H:19:ARG:NH2	30:0:1008:C:OP1	2.51	0.42
8:H:120:PHE:CE1	30:0:2311:A:H5'	2.54	0.42
10:J:107:ASN:C	10:J:107:ASN:HD22	2.27	0.42
12:L:1:THR:HB	12:L:6:ARG:NH1	2.34	0.42
12:L:26:HIS:O	30:0:925:C:H5'	2.19	0.42
13:M:46:LEU:O	13:M:50:ARG:HG3	2.19	0.42
13:M:134:ILE:HG23	13:M:141:ILE:HD13	2.00	0.42
14:N:37:ARG:NH1	31:9:6:C:OP1	2.53	0.42
19:S:11:THR:H	19:S:14:ALA:HB3	1.84	0.42
19:S:11:THR:HG22	30:0:1444:G:H5''	2.00	0.42
20:T:51:LEU:O	20:T:52:ARG:HD3	2.19	0.42
22:V:27:LEU:HB2	22:V:49:LEU:HD22	2.01	0.42
23:W:17:ILE:HG21	23:W:51:PHE:CE1	2.54	0.42
27:1:26:SER:O	27:1:34:CYS:HA	2.19	0.42
30:0:23:G:H1'	30:0:520:A:H61	1.84	0.42
30:0:160:A:C4	30:0:177:A:C2	3.07	0.42
30:0:245:C:C2'	30:0:246:G:H5'	2.47	0.42
30:0:820:G:C5'	30:0:821:U:H5'	2.49	0.42
30:0:852:U:O2'	30:0:853:C:H5'	2.18	0.42
30:0:1154:A:H2'	30:0:1155:G:H8	1.84	0.42
30:0:1176:C:O5'	30:0:1176:C:H6	2.02	0.42
30:0:1209:C:O2'	30:0:1210:G:C5'	2.67	0.42
30:0:1522:A:C2	30:0:1665:G:C6	3.06	0.42
30:0:1568:G:H2'	30:0:1569:U:O4'	2.18	0.42
30:0:1855:G:H4'	30:0:1856:C:C5'	2.49	0.42
30:0:1972:U:C2'	30:0:1973:A:H5'	2.45	0.42
30:0:2097:G:C2	30:0:2098:C:C6	3.07	0.42
30:0:2253:G:C4	30:0:2254:G:C8	3.06	0.42
30:0:2279:G:H2'	30:0:2280:A:O4'	2.19	0.42
30:0:2503:A:H2	30:0:2517:A:N7	2.16	0.42
30:0:2763:G:C2	30:0:2764:C:C2	3.06	0.42
30:0:2864:U:C5	30:0:2865:G:C6	3.07	0.42
31:9:78:G:N2	31:9:102:G:H2'	2.34	0.42
1:A:76:VAL:HG23	26:Z:87:LYS:O	2.19	0.42
2:B:224:LYS:O	2:B:225:GLY:C	2.62	0.42
3:C:46:TYR:CE2	3:C:98:ARG:NH1	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:123:ILE:H	8:H:123:ILE:CD1	2.25	0.42
10:J:6:PHE:HB3	10:J:109:TYR:OH	2.19	0.42
10:J:116:LEU:HB2	10:J:119:THR:HG21	2.01	0.42
11:K:74:VAL:HG21	11:K:96:VAL:CG2	2.48	0.42
13:M:70:GLY:HA3	13:M:73:ARG:NH2	2.34	0.42
19:S:49:VAL:HG13	19:S:66:VAL:HG13	2.01	0.42
24:X:85:VAL:HG12	24:X:86:GLU:H	1.83	0.42
25:Y:112:GLU:CD	25:Y:115:ARG:HH11	2.27	0.42
25:Y:145:LYS:O	25:Y:147:ARG:HG2	2.19	0.42
29:3:8:ASN:HA	29:3:19:GLU:HA	2.00	0.42
30:0:39:G:C2	30:0:444:C:N3	2.86	0.42
30:0:113:A:P	38:0:9745:HOH:O	2.76	0.42
30:0:317:A:H5'	38:0:3704:HOH:O	2.18	0.42
30:0:377:C:O2'	30:0:378:A:H5'	2.19	0.42
30:0:474:C:H1'	38:0:9542:HOH:O	2.18	0.42
30:0:640:G:H1'	38:0:9035:HOH:O	2.19	0.42
30:0:1265:G:H1'	38:0:4953:HOH:O	2.18	0.42
30:0:1281:C:C5	30:0:1282:U:C5	3.08	0.42
30:0:1310:U:H2'	30:0:1311:G:O5'	2.18	0.42
30:0:1332:C:O5'	30:0:1332:C:H6	2.01	0.42
30:0:1365:C:O2'	30:0:1366:C:H5'	2.19	0.42
30:0:1462:C:H2'	30:0:1463:U:C6	2.55	0.42
30:0:1483:C:C2'	30:0:1484:G:C5'	2.96	0.42
30:0:1540:G:C5	30:0:1541:G:C8	3.08	0.42
30:0:1727:G:H1	30:0:2048:C:H42	1.67	0.42
30:0:1741:U:C4	30:0:2033:G:N7	2.87	0.42
30:0:1973:A:C2'	30:0:1974:G:O5'	2.67	0.42
30:0:1991:A:H2'	30:0:1992:U:C6	2.54	0.42
30:0:2038:A:C2	30:0:2039:A:C5	3.07	0.42
30:0:2323:G:H5''	38:0:4740:HOH:O	2.19	0.42
30:0:2382:A:H2'	30:0:2383:G:O4'	2.19	0.42
30:0:2587:OMU:H2'	30:0:2589:U:H5''	2.01	0.42
30:0:2793:A:C2'	30:0:2794:G:H5'	2.48	0.42
30:0:2838:A:O2'	30:0:2843:A:N1	2.52	0.42
30:0:2900:G:H2'	30:0:2901:C:O4'	2.19	0.42
31:9:1:U:H5''	31:9:3:A:OP1	2.19	0.42
1:A:95:PRO:HD3	1:A:153:ARG:HG2	2.00	0.42
5:E:121:ASP:O	5:E:122:THR:C	2.62	0.42
10:J:19:MET:HE1	10:J:78:ILE:CG2	2.47	0.42
10:J:77:GLY:O	10:J:80:LYS:N	2.53	0.42
11:K:10:GLN:H	11:K:10:GLN:CD	2.26	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:51:PHE:HE1	12:L:53:ARG:HG3	1.85	0.42
18:R:4:TYR:HA	18:R:144:GLU:OE2	2.19	0.42
24:X:51:ASP:HB3	24:X:85:VAL:O	2.18	0.42
24:X:69:LYS:O	24:X:70:ILE:HB	2.19	0.42
28:2:37:HIS:CE1	30:0:462:A:C8	3.08	0.42
29:3:24:LYS:HG2	33:3:8804:CL:CL	2.56	0.42
30:0:241:A:OP2	30:0:269:G:N2	2.49	0.42
30:0:272:A:C2	30:0:369:G:H5''	2.54	0.42
30:0:291:C:C2'	30:0:292:G:H5'	2.49	0.42
30:0:713:U:O5'	30:0:713:U:H6	2.01	0.42
30:0:869:G:C8	30:0:869:G:OP2	2.73	0.42
30:0:1084:C:H2'	30:0:1085:C:H6	1.84	0.42
30:0:1323:G:C2	30:0:1324:G:C8	3.08	0.42
30:0:1592:G:HO2'	30:0:1593:C:C4'	2.32	0.42
30:0:1873:G:H3'	38:0:5163:HOH:O	2.19	0.42
30:0:1948:G:C6	30:0:1949:G:C6	3.07	0.42
30:0:2269:C:H2'	30:0:2270:G:C5'	2.49	0.42
30:0:2453:G:O2'	30:0:2454:C:H5'	2.19	0.42
30:0:2663:U:C4	30:0:2664:A:C6	3.07	0.42
30:0:2738:G:O2'	30:0:2739:A:H5'	2.19	0.42
30:0:2881:C:H6	30:0:2881:C:O5'	2.01	0.42
1:A:204:GLY:N	30:0:2634:G:OP2	2.52	0.42
2:B:85:ARG:NH2	30:0:2671:U:O2	2.52	0.42
2:B:106:HIS:CE1	2:B:147:VAL:HG13	2.54	0.42
2:B:298:LYS:HD3	38:B:9105:HOH:O	2.18	0.42
3:C:193:LEU:HA	3:C:211:ASP:O	2.19	0.42
4:D:25:MET:HG2	4:D:128:LEU:HA	2.00	0.42
4:D:95:THR:C	4:D:97:GLN:H	2.26	0.42
5:E:24:GLY:N	5:E:76:VAL:HB	2.34	0.42
6:F:48:VAL:HG12	6:F:97:ALA:HB2	2.01	0.42
7:G:16:LYS:NZ	30:0:1151:G:OP1	2.49	0.42
8:H:53:ILE:HD12	8:H:165:ARG:HD2	2.01	0.42
13:M:70:GLY:N	13:M:73:ARG:HH12	2.17	0.42
13:M:73:ARG:HG3	30:0:1864:C:O2'	2.19	0.42
15:O:98:LEU:O	15:O:102:ILE:HG13	2.20	0.42
18:R:98:ASN:HD21	30:0:500:G:N2	2.12	0.42
23:W:88:THR:HG23	23:W:110:GLN:HE21	1.84	0.42
25:Y:138:ARG:HB3	30:0:638:C:P	2.59	0.42
25:Y:189:ASN:N	25:Y:192:ASP:OD2	2.53	0.42
26:Z:35:SER:HB3	26:Z:38:PHE:CE1	2.54	0.42
29:3:11:CYS:HA	29:3:12:PRO:HD2	1.90	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:69:TYR:CD1	29:3:78:HIS:O	2.72	0.42
30:0:25:A:C2'	30:0:26:U:H5'	2.50	0.42
30:0:100:C:C6	30:0:101:C:C5	3.06	0.42
30:0:129:A:O2'	30:0:131:A:OP1	2.37	0.42
30:0:451:C:C5	30:0:452:G:N7	2.88	0.42
30:0:500:G:H2'	30:0:501:G:H8	1.84	0.42
30:0:623:U:H2'	30:0:624:U:H6	1.84	0.42
30:0:844:A:C2	30:0:882:A:C4	3.07	0.42
30:0:1165:G:N2	30:0:1173:A:H5''	2.32	0.42
30:0:1206:U:C6	30:0:1206:U:C4'	3.02	0.42
30:0:1334:C:O2'	30:0:1335:C:H5'	2.19	0.42
30:0:1904:A:H3'	30:0:1905:U:H6	1.84	0.42
30:0:2113:G:C6	30:0:2114:C:C4	3.08	0.42
30:0:2278:U:C5'	38:0:9472:HOH:O	2.65	0.42
30:0:2471:G:C2	30:0:2472:C:C5	3.07	0.42
30:0:2669:U:C2	30:0:2670:G:C8	3.07	0.42
30:0:2694:A:H3'	30:0:2695:C:H6	1.83	0.42
30:0:2833:C:O2'	30:0:2834:G:H5'	2.19	0.42
30:0:2866:U:O2	30:0:2891:A:C8	2.72	0.42
31:9:34:A:H2'	31:9:35:C:O4'	2.19	0.42
31:9:60:C:O5'	31:9:60:C:H6	2.02	0.42
1:A:94:LEU:HG	1:A:99:ILE:CD1	2.50	0.42
5:E:112:ALA:HA	5:E:113:PRO:HD3	1.87	0.42
5:E:131:LEU:HD12	5:E:166:VAL:HG11	2.02	0.42
10:J:74:ARG:HH11	10:J:74:ARG:CB	2.32	0.42
13:M:106:SER:HB2	13:M:114:VAL:CG2	2.49	0.42
13:M:118:TYR:CZ	13:M:130:GLU:HB2	2.54	0.42
13:M:120:VAL:CG1	13:M:130:GLU:HG3	2.49	0.42
21:U:56:ARG:CB	30:0:2890:A:H8	2.30	0.42
29:3:46:ILE:HA	38:0:7804:HOH:O	2.19	0.42
30:0:60:A:N3	30:0:61:G:C8	2.88	0.42
30:0:85:C:H3'	30:0:86:A:H2'	2.02	0.42
30:0:499:G:H2'	30:0:500:G:O4'	2.19	0.42
30:0:939:A:N1	30:0:1027:G:O2'	2.39	0.42
30:0:965:A:C2	30:0:1004:C:C2	3.08	0.42
30:0:1152:A:H2	30:0:1216:G:N3	2.18	0.42
30:0:1266:U:H2'	30:0:1267:C:C6	2.54	0.42
30:0:1278:A:H8	30:0:1278:A:O5'	2.01	0.42
30:0:1495:C:C1'	30:0:1573:A:H1'	2.48	0.42
30:0:1523:G:H2'	30:0:1524:U:C5	2.43	0.42
30:0:1723:G:H2'	38:0:9626:HOH:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1750:C:C5'	38:0:3647:HOH:O	2.62	0.42
30:0:1765:G:C6	30:0:1766:U:C4	3.07	0.42
30:0:2048:C:C5'	38:0:9234:HOH:O	2.67	0.42
30:0:2128:G:C4	30:0:2129:U:C6	3.07	0.42
30:0:2321:A:C5	30:0:2323:G:C8	3.08	0.42
30:0:2323:G:N2	38:0:6034:HOH:O	2.51	0.42
30:0:2414:A:C2	30:0:2415:A:C6	3.07	0.42
30:0:2471:G:C5	30:0:2472:C:C5	3.08	0.42
30:0:2861:G:C6	30:0:2862:G:N7	2.88	0.42
30:0:2898:G:O2'	30:0:2899:A:H5'	2.18	0.42
31:9:44:A:H2'	31:9:45:A:O4'	2.19	0.42
31:9:88:G:C2	31:9:96:C:O2	2.72	0.42
1:A:169:PHE:HB2	30:0:1847:A:H4'	2.02	0.42
2:B:17:LYS:HB2	30:0:2657:G:OP1	2.19	0.42
2:B:265:LEU:HD21	2:B:316:ARG:HD3	2.01	0.42
3:C:67:GLN:NE2	3:C:72:LYS:NZ	2.68	0.42
3:C:93:LYS:O	3:C:98:ARG:NH2	2.52	0.42
8:H:49:GLN:NE2	8:H:170:ARG:HE	2.14	0.42
12:L:109:LEU:HD11	30:0:697:G:C2	2.54	0.42
19:S:11:THR:HA	38:S:8963:HOH:O	2.19	0.42
21:U:42:LEU:HD22	30:0:1810:C:C1'	2.49	0.42
24:X:47:ALA:HB1	24:X:82:GLU:HB3	2.02	0.42
24:X:49:ARG:HH21	30:0:1385:G:H4'	1.84	0.42
25:Y:130:ARG:HD2	38:Y:8855:HOH:O	2.20	0.42
26:Z:57:MET:HG3	26:Z:79:TRP:CH2	2.55	0.42
30:0:500:G:C4	30:0:501:G:C8	3.08	0.42
30:0:656:G:H2'	30:0:657:G:H8	1.85	0.42
30:0:667:C:C2	30:0:668:C:C5	3.08	0.42
30:0:796:A:C2	30:0:797:A:C4	3.08	0.42
30:0:810:G:H2'	30:0:811:C:O4'	2.20	0.42
30:0:1023:C:H2'	30:0:1024:G:C8	2.55	0.42
30:0:1713:G:N2	30:0:2735:U:H5'	2.35	0.42
30:0:1768:C:C5	30:0:1769:C:C4	3.07	0.42
30:0:1942:A:C2'	30:0:1943:C:O5'	2.68	0.42
30:0:2117:U:O2	30:0:2117:U:H2'	2.19	0.42
30:0:2383:G:N2	30:0:2406:U:C2	2.87	0.42
30:0:2809:G:H2'	30:0:2810:G:O4'	2.19	0.42
1:A:27:LEU:HD21	1:A:55:VAL:HG21	2.02	0.42
2:B:101:TRP:HB2	2:B:119:HIS:CD2	2.55	0.42
2:B:154:VAL:HG12	2:B:156:LYS:HG2	2.02	0.42
2:B:211:THR:HG21	38:0:7356:HOH:O	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:216:LYS:HE2	38:B:9030:HOH:O	2.20	0.42
3:C:116:ALA:C	3:C:118:THR:H	2.27	0.42
10:J:80:LYS:NZ	30:0:2815:G:N7	2.67	0.42
15:O:14:LEU:HG	15:O:102:ILE:HD11	2.02	0.42
15:O:44:ASN:CG	15:O:67:SER:HB3	2.44	0.42
18:R:18:LEU:HD23	18:R:18:LEU:HA	1.86	0.42
18:R:25:PHE:HA	18:R:141:VAL:HG21	2.01	0.42
19:S:23:LYS:HE2	38:0:4624:HOH:O	2.19	0.42
20:T:102:ASP:O	20:T:103:LEU:HD23	2.19	0.42
30:0:175:G:O2'	30:0:176:U:OP2	2.37	0.42
30:0:180:G:O2'	30:0:181:G:H5'	2.19	0.42
30:0:322:G:C2	30:0:323:C:C2	3.07	0.42
30:0:536:A:C6	30:0:2076:U:H5'	2.54	0.42
30:0:710:G:C2'	30:0:711:G:H5'	2.50	0.42
30:0:758:A:H2'	30:0:759:C:O4'	2.20	0.42
30:0:1332:C:O2'	30:0:1333:U:H5'	2.20	0.42
30:0:1394:C:H5	38:0:7433:HOH:O	2.02	0.42
30:0:1545:C:N3	30:0:1641:A:N7	2.68	0.42
30:0:1579:C:H1'	30:0:1580:A:C8	2.54	0.42
30:0:1667:A:H5'	30:0:1667:A:C8	2.42	0.42
30:0:1679:C:O2	30:0:1679:C:C2'	2.67	0.42
30:0:1945:G:C4	30:0:1946:C:C6	3.08	0.42
30:0:2010:A:C2'	38:0:5883:HOH:O	2.62	0.42
30:0:2082:G:H2'	30:0:2083:A:C8	2.55	0.42
30:0:2243:C:O2'	30:0:2258:A:N6	2.52	0.42
30:0:2317:C:C4	30:0:2318:C:C4	3.08	0.42
30:0:2415:A:C3'	30:0:2416:G:H5'	2.48	0.42
30:0:2637:A:C4'	38:0:4332:HOH:O	2.66	0.42
30:0:2734:G:O2'	30:0:2735:U:H5'	2.20	0.42
30:0:2757:A:C4	30:0:2896:A:C2	3.07	0.42
30:0:2764:C:O2'	30:0:2765:C:H5'	2.18	0.42
30:0:2786:G:O2'	30:0:2787:C:H5'	2.19	0.42
30:0:2831:C:C2	30:0:2910:A:C2	3.07	0.42
4:D:152:PRO:HG2	31:9:58:G:OP1	2.20	0.42
8:H:161:THR:HG23	30:0:2521:A:OP1	2.19	0.42
12:L:5:LYS:HA	12:L:5:LYS:HD2	1.85	0.42
12:L:57:VAL:HG11	30:0:2442:G:OP1	2.20	0.42
12:L:136:ALA:HB3	38:L:8886:HOH:O	2.20	0.42
16:P:16:VAL:HG13	16:P:20:ARG:NH1	2.34	0.42
18:R:136:TRP:CE2	30:0:2053:G:H4'	2.54	0.42
20:T:61:GLU:O	20:T:63:ILE:HG12	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:17:THR:HG23	30:0:2720:C:O3'	2.20	0.42
22:V:12:THR:HG23	22:V:14:ALA:H	1.84	0.42
23:W:31:HIS:HB3	38:W:5420:HOH:O	2.19	0.42
27:1:5:THR:N	27:1:6:PRO:HD2	2.34	0.42
29:3:1:MET:CA	30:0:2319:C:H3'	2.50	0.42
29:3:60:LYS:O	29:3:62:THR:N	2.52	0.42
30:0:40:C:N4	30:0:41:G:O6	2.53	0.42
30:0:188:C:H1'	38:0:9585:HOH:O	2.20	0.42
30:0:210:U:H2'	30:0:211:U:C6	2.55	0.42
30:0:214:U:H5'	38:0:6061:HOH:O	2.20	0.42
30:0:426:G:O2'	30:0:427:C:H5'	2.20	0.42
30:0:462:A:N6	30:0:477:A:H2	2.16	0.42
30:0:510:U:H4'	38:0:5151:HOH:O	2.20	0.42
30:0:533:U:C5	30:0:2812:A:H2	2.37	0.42
30:0:683:G:O2'	30:0:684:G:H5'	2.19	0.42
30:0:777:U:OP2	30:0:777:U:H4'	2.19	0.42
30:0:1028:U:H5'	30:0:1031:G:O4'	2.19	0.42
30:0:1202:A:C8	30:0:1203:G:C5	3.08	0.42
30:0:1325:G:H2'	30:0:1326:C:H6	1.85	0.42
30:0:1562:C:N4	38:0:5793:HOH:O	2.51	0.42
30:0:1669:G:O2'	30:0:1670:A:H5'	2.19	0.42
30:0:1805:G:C2'	30:0:1806:G:H5'	2.50	0.42
30:0:1930:A:O2'	30:0:1931:A:H5'	2.19	0.42
30:0:2249:G:C6	30:0:2253:G:O6	2.73	0.42
30:0:2321:A:H2	30:0:2378:U:C4	2.37	0.42
30:0:2336:G:C6	30:0:2349:G:C6	3.08	0.42
30:0:2345:A:H3'	30:0:2346:C:H5	1.84	0.42
30:0:2372:A:H2'	30:0:2373:U:O4'	2.20	0.42
30:0:2527:U:O2'	30:0:2528:U:H5'	2.19	0.42
30:0:2675:A:H1'	30:0:2813:A:C2	2.54	0.42
30:0:2780:C:H2'	30:0:2781:U:H6	1.83	0.42
31:9:4:G:C5	31:9:120:A:C2	3.08	0.42
31:9:7:G:H5''	38:9:5071:HOH:O	2.20	0.42
1:A:171:LYS:HB2	30:0:820:G:N7	2.34	0.42
1:A:173:GLY:O	1:A:176:HIS:HB3	2.20	0.42
2:B:97:LEU:HD21	2:B:127:GLN:HG2	2.02	0.42
2:B:195:ARG:HG2	2:B:323:LEU:HD22	2.00	0.42
6:F:54:VAL:HG13	30:0:263:U:C5	2.55	0.42
8:H:157:TYR:HA	8:H:160:ILE:HG12	2.01	0.42
16:P:41:ARG:NH2	30:0:1500:U:OP2	2.52	0.42
26:Z:77:GLY:CA	26:Z:92:SER:HA	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:53:LYS:O	27:1:54:ALA:C	2.63	0.42
30:0:13:G:C2	30:0:14:C:C5	3.07	0.42
30:0:55:U:O2'	30:0:69:A:H2'	2.20	0.42
30:0:151:A:H2'	30:0:152:A:O4'	2.20	0.42
30:0:236:A:C4'	30:0:237:G:OP1	2.65	0.42
30:0:266:G:O2'	30:0:267:G:H5'	2.20	0.42
30:0:686:A:C5	30:0:687:C:C6	3.08	0.42
30:0:700:A:O5'	30:0:701:U:H5'	2.20	0.42
30:0:735:C:C2	30:0:736:A:C1'	3.02	0.42
30:0:788:A:H2'	30:0:789:C:C6	2.55	0.42
30:0:968:G:C2	30:0:1001:U:O2	2.72	0.42
30:0:1186:C:H2'	30:0:1187:U:H5'	2.02	0.42
30:0:1324:G:C5	30:0:1325:G:N7	2.88	0.42
30:0:1407:A:O2'	30:0:1408:U:H3'	2.20	0.42
30:0:1493:A:C2'	30:0:1494:A:H5''	2.50	0.42
30:0:1641:A:C8	30:0:1702:U:O4	2.73	0.42
30:0:1765:G:H1'	30:0:1780:G:N2	2.34	0.42
30:0:1849:G:C6	30:0:1850:U:C5	3.08	0.42
30:0:2007:A:N3	30:0:2627:G:O2'	2.47	0.42
31:9:22:G:C6	31:9:55:U:C2	3.08	0.42
1:A:35:GLY:O	1:A:36:ASP:HB3	2.20	0.42
2:B:280:VAL:CG1	2:B:281:ASP:N	2.82	0.42
4:D:83:PHE:CE2	4:D:87:ALA:HB2	2.55	0.42
6:F:67:ALA:HB1	6:F:72:VAL:O	2.20	0.42
16:P:81:LYS:O	30:0:1761:U:H5'	2.19	0.42
16:P:109:ARG:HD3	16:P:119:TYR:CD1	2.55	0.42
20:T:40:VAL:CG2	20:T:108:ARG:HH21	2.32	0.42
30:0:194:A:OP2	30:0:426:G:N2	2.49	0.42
30:0:221:G:C6	30:0:222:A:C6	3.08	0.42
30:0:454:U:C2	38:0:9035:HOH:O	2.57	0.42
30:0:577:G:C2	30:0:581:G:C6	3.08	0.42
30:0:708:A:H2'	30:0:709:G:C8	2.54	0.42
30:0:719:C:C2'	30:0:720:G:O5'	2.68	0.42
30:0:736:A:O2'	30:0:737:A:H5'	2.19	0.42
30:0:822:C:N3	30:0:823:U:C5	2.87	0.42
30:0:824:G:N2	30:0:826:U:C5	2.87	0.42
30:0:870:G:C3'	30:0:871:G:H5''	2.50	0.42
30:0:967:U:C2	30:0:1002:G:C4	3.08	0.42
30:0:1058:A:O4'	30:0:2492:U:H4'	2.20	0.42
30:0:1552:G:C6	30:0:1634:G:C5	3.08	0.42
30:0:1572:A:C2	30:0:1573:A:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1771:U:H4'	30:0:1772:C:OP2	2.20	0.42
30:0:2067:A:C4	30:0:2068:G:C8	3.08	0.42
30:0:2286:G:H2'	30:0:2287:C:H6	1.85	0.42
30:0:2508:C:H3'	38:0:4505:HOH:O	2.20	0.42
30:0:2561:C:H42	30:0:2572:G:H1	1.66	0.42
30:0:2721:U:O2	30:0:2763:G:H4'	2.19	0.42
31:9:110:G:N2	31:9:111:U:H1'	2.35	0.42
1:A:122:SER:O	1:A:124:VAL:N	2.53	0.41
2:B:69:VAL:HA	2:B:70:PRO:HD3	1.80	0.41
2:B:162:MET:CE	2:B:308:LEU:HD21	2.50	0.41
2:B:202:VAL:HG11	2:B:301:VAL:CG2	2.50	0.41
2:B:275:GLY:O	2:B:291:ASP:HA	2.20	0.41
5:E:68:HIS:CE1	30:0:2782:G:H4'	2.55	0.41
5:E:139:GLU:OE2	30:0:2781:U:C1'	2.65	0.41
6:F:101:ALA:HA	38:F:5413:HOH:O	2.20	0.41
8:H:12:ILE:HG23	8:H:129:ARG:NE	2.35	0.41
8:H:99:ARG:NH1	30:0:1055:G:OP2	2.53	0.41
10:J:45:VAL:HG22	10:J:46:ILE:N	2.34	0.41
11:K:113:ILE:HG22	11:K:114:ALA:N	2.35	0.41
38:N:8817:HOH:O	31:9:51:A:H2'	2.20	0.41
15:O:50:ARG:C	15:O:51:TYR:HD2	2.28	0.41
16:P:3:LEU:HD22	16:P:31:ILE:HG22	2.02	0.41
18:R:30:ALA:HA	18:R:33:ARG:NH1	2.35	0.41
22:V:49:LEU:O	22:V:53:ILE:HG13	2.20	0.41
23:W:119:HIS:CG	38:0:5240:HOH:O	2.73	0.41
23:W:119:HIS:CD2	23:W:120:PRO:O	2.73	0.41
30:0:489:A:C6	30:0:490:C:C2	3.08	0.41
30:0:852:U:H5	38:0:7598:HOH:O	2.02	0.41
30:0:1033:C:H2'	30:0:1034:G:O4'	2.20	0.41
30:0:1142:C:C2	30:0:1222:A:C2	3.08	0.41
30:0:1246:A:C4	30:0:1248:A:N7	2.88	0.41
30:0:1305:C:P	38:0:9049:HOH:O	2.78	0.41
30:0:1475:G:O2'	30:0:1866:A:N1	2.42	0.41
30:0:2002:C:H2'	30:0:2003:U:C5'	2.50	0.41
30:0:2073:G:C6	30:0:2489:G:H4'	2.55	0.41
30:0:2694:A:N6	30:0:2701:G:H1'	2.35	0.41
31:9:37:C:N3	31:9:43:G:C6	2.88	0.41
3:C:133:ARG:HD2	38:C:8611:HOH:O	2.21	0.41
11:K:14:LYS:NZ	38:K:1163:HOH:O	2.48	0.41
13:M:42:ARG:HA	13:M:43:PRO:HD3	1.89	0.41
13:M:188:ARG:HD3	30:0:155:C:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:76:VAL:HA	17:Q:81:GLU:HA	2.01	0.41
18:R:109:MET:HB2	18:R:109:MET:HE3	1.87	0.41
21:U:47:ARG:O	21:U:55:ALA:HB2	2.20	0.41
25:Y:169:ARG:HH11	30:0:1328:A:P	2.43	0.41
29:3:17:HIS:CB	30:0:2409:C:H4'	2.49	0.41
30:0:25:A:H2'	30:0:26:U:C5'	2.50	0.41
30:0:84:G:C6	30:0:85:C:C4	3.08	0.41
30:0:168:C:C2'	30:0:169:A:H5'	2.50	0.41
30:0:178:U:H1'	30:0:771:G:O2'	2.20	0.41
30:0:226:A:H1'	30:0:393:G:C6	2.54	0.41
30:0:529:G:C6	30:0:530:C:C5	3.08	0.41
30:0:685:C:O2'	30:0:748:C:OP1	2.34	0.41
30:0:940:G:C5	30:0:1027:G:C2	3.08	0.41
30:0:962:C:C5	30:0:963:C:C5	3.08	0.41
30:0:1023:C:H4'	38:0:6013:HOH:O	2.20	0.41
30:0:1337:G:H2'	30:0:1338:U:C6	2.55	0.41
30:0:1377:C:C5	30:0:1693:A:N6	2.87	0.41
30:0:1478:U:H2'	30:0:1479:G:H8	1.82	0.41
30:0:1569:U:O2'	30:0:1633:C:H4'	2.20	0.41
30:0:1597:A:C4	30:0:1598:A:C8	3.09	0.41
30:0:2255:A:C2'	30:0:2256:G:H5'	2.50	0.41
30:0:2512:U:C4'	30:0:2514:U:O4	2.67	0.41
30:0:2686:C:H2'	30:0:2687:G:C8	2.54	0.41
30:0:2768:A:H2'	30:0:2769:C:C6	2.56	0.41
30:0:2852:A:N7	30:0:2902:A:C6	2.88	0.41
31:9:36:C:H5	31:9:37:C:C4	2.38	0.41
2:B:254:GLN:HG3	38:0:9701:HOH:O	2.20	0.41
3:C:69:HIS:O	30:0:765:G:H4'	2.21	0.41
4:D:18:ILE:HG12	4:D:134:LEU:CD2	2.50	0.41
8:H:61:ARG:NH1	8:H:61:ARG:HG3	2.34	0.41
8:H:116:MET:HB3	30:0:2283:G:C5	2.56	0.41
9:I:91:PHE:CD2	9:I:131:GLY:HA2	2.56	0.41
11:K:34:VAL:O	11:K:35:HIS:C	2.63	0.41
11:K:124:VAL:O	11:K:127:ALA:HB3	2.20	0.41
18:R:32:ALA:O	18:R:33:ARG:C	2.63	0.41
18:R:39:THR:HG22	18:R:41:GLY:N	2.35	0.41
21:U:38:ASN:O	21:U:42:LEU:HG	2.20	0.41
23:W:69:ARG:HG3	23:W:118:LEU:HA	2.02	0.41
25:Y:189:ASN:HD21	25:Y:191:ASP:HB2	1.85	0.41
28:2:22:PRO:HG2	28:2:25:VAL:CG2	2.51	0.41
29:3:86:GLY:HA2	38:3:9031:HOH:O	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:222:A:C5	30:0:223:G:H1'	2.55	0.41
30:0:404:G:C5	30:0:405:C:C5	3.07	0.41
30:0:564:G:C2'	30:0:565:A:OP2	2.68	0.41
30:0:646:G:H2'	30:0:647:U:C6	2.55	0.41
30:0:783:C:O5'	30:0:783:C:H6	2.03	0.41
30:0:814:G:H2'	30:0:815:U:H6	1.84	0.41
30:0:1504:A:O2'	30:0:1506:U:OP2	2.38	0.41
30:0:1634:G:C4	30:0:1635:U:C5	3.08	0.41
30:0:1667:A:H2'	30:0:1668:U:O4'	2.20	0.41
30:0:2700:G:C6	30:0:2701:G:C4	3.08	0.41
31:9:17:G:C2	31:9:64:C:N3	2.88	0.41
31:9:102:G:O2'	31:9:103:A:O4'	2.35	0.41
1:A:194:MET:SD	30:0:875:A:C2	3.14	0.41
3:C:127:ARG:HD3	3:C:129:HIS:HE1	1.85	0.41
3:C:133:ARG:CZ	3:C:135:GLU:HB2	2.51	0.41
3:C:228:ALA:HA	3:C:229:PRO:HD3	1.79	0.41
4:D:22:VAL:HG22	4:D:74:THR:HG22	2.02	0.41
4:D:51:ARG:HH11	4:D:68:PRO:HB3	1.84	0.41
10:J:70:PHE:HD1	30:0:2676:C:H4'	1.86	0.41
13:M:68:ARG:CZ	13:M:73:ARG:NH1	2.83	0.41
13:M:188:ARG:HB2	30:0:156:C:OP2	2.21	0.41
15:O:70:LEU:O	15:O:92:VAL:HG21	2.20	0.41
18:R:114:VAL:HA	18:R:144:GLU:O	2.20	0.41
21:U:8:TYR:CE1	21:U:40:ALA:HB2	2.56	0.41
23:W:154:ARG:HD2	38:0:6479:HOH:O	2.19	0.41
24:X:72:VAL:HG22	24:X:85:VAL:CG1	2.51	0.41
25:Y:107:PRO:HB3	25:Y:182:PHE:CD2	2.56	0.41
25:Y:107:PRO:HB3	25:Y:182:PHE:CE2	2.56	0.41
26:Z:66:CYS:O	26:Z:68:GLU:N	2.53	0.41
26:Z:70:ARG:HG2	26:Z:70:ARG:HH11	1.85	0.41
30:0:154:C:C2	30:0:155:C:C6	3.08	0.41
30:0:178:U:H2'	30:0:179:C:C6	2.50	0.41
30:0:291:C:H2'	30:0:292:G:C5'	2.50	0.41
30:0:305:A:C5	30:0:329:A:C2	3.08	0.41
30:0:530:C:H4'	30:0:612:U:H4'	2.02	0.41
30:0:577:G:N2	30:0:581:G:C5	2.89	0.41
30:0:633:C:C2	38:0:9317:HOH:O	2.72	0.41
30:0:851:C:H4'	38:0:5526:HOH:O	2.20	0.41
30:0:1159:G:C8	30:0:1160:G:C8	3.09	0.41
30:0:1206:U:H2'	30:0:1207:A:C1'	2.48	0.41
30:0:1407:A:H4'	38:0:4676:HOH:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1505:U:H6	30:0:1505:U:H2'	1.70	0.41
30:0:1641:A:H8	30:0:1702:U:O4	2.02	0.41
30:0:1933:G:C2	30:0:1934:A:N9	2.88	0.41
30:0:2119:C:O2'	30:0:2120:U:H5'	2.19	0.41
30:0:2484:U:H4'	38:0:9461:HOH:O	2.19	0.41
30:0:2699:A:H2'	30:0:2700:G:O4'	2.20	0.41
30:0:2716:G:H2'	30:0:2717:C:H6	1.84	0.41
30:0:2793:A:C5	30:0:2794:G:C8	3.09	0.41
30:0:2861:G:C5	30:0:2862:G:C8	3.08	0.41
30:0:2869:G:C6	30:0:2870:C:C4	3.08	0.41
1:A:23:TYR:OH	1:A:182:ARG:HA	2.21	0.41
3:C:164:ALA:HA	3:C:167:ASP:OD1	2.20	0.41
10:J:19:MET:HG3	10:J:79:PHE:CE1	2.55	0.41
14:N:110:THR:CG2	31:9:37:C:H4'	2.51	0.41
16:P:98:ILE:HD12	16:P:102:ARG:CZ	2.49	0.41
16:P:105:LEU:HD21	16:P:137:LEU:HD21	2.02	0.41
18:R:134:SER:HB2	30:0:2055:A:H5'	2.00	0.41
24:X:58:ALA:C	24:X:60:ALA:H	2.28	0.41
25:Y:107:PRO:HD3	25:Y:182:PHE:CE1	2.56	0.41
26:Z:41:ARG:HD3	38:Z:8709:HOH:O	2.20	0.41
29:3:34:LYS:HD2	29:3:34:LYS:N	2.35	0.41
30:0:52:A:C4'	30:0:121:U:H3	2.34	0.41
30:0:106:A:C2'	30:0:107:U:C5'	2.92	0.41
30:0:215:A:N6	30:0:225:G:H1'	2.35	0.41
30:0:410:A:O4'	30:0:412:C:C2	2.73	0.41
30:0:510:U:H6	38:0:7340:HOH:O	2.03	0.41
30:0:542:A:H5'	30:0:542:A:C8	2.50	0.41
30:0:635:A:H2	38:0:9223:HOH:O	2.02	0.41
30:0:745:G:C4'	30:0:746:A:OP1	2.69	0.41
30:0:752:G:H2'	30:0:753:U:O4'	2.21	0.41
30:0:824:G:H2'	30:0:826:U:OP1	2.19	0.41
30:0:1061:C:H1'	30:0:2283:G:O6	2.20	0.41
30:0:1150:A:H3'	30:0:1151:G:H5'	2.02	0.41
30:0:1427:A:N6	30:0:1440:U:H1'	2.35	0.41
30:0:1547:A:C2	30:0:1639:U:O2	2.73	0.41
30:0:1549:C:C6	30:0:1549:C:H3'	2.56	0.41
30:0:1562:C:N3	30:0:1563:G:C5	2.88	0.41
30:0:1664:A:OP1	30:0:1664:A:C8	2.60	0.41
30:0:1739:G:C2'	30:0:1740:U:H5'	2.50	0.41
30:0:1891:G:H1'	30:0:1972:U:C2	2.55	0.41
30:0:2326:C:O2	30:0:2375:A:C2	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2350:G:O2'	30:0:2351:C:H5'	2.20	0.41
30:0:2425:A:H2'	38:0:9237:HOH:O	2.19	0.41
30:0:2543:G:O3'	30:0:2590:U:H5'	2.21	0.41
30:0:2599:A:C6	30:0:2600:A:C6	3.08	0.41
30:0:2852:A:C2	30:0:2901:C:C4	3.08	0.41
30:0:2885:A:H2'	30:0:2886:C:O4'	2.20	0.41
1:A:103:VAL:HA	1:A:104:PRO:HD3	1.76	0.41
1:A:149:ASP:HA	1:A:150:PRO:HD2	1.86	0.41
2:B:90:THR:C	2:B:92:TYR:H	2.28	0.41
4:D:138:GLY:N	38:D:225:HOH:O	2.54	0.41
12:L:148:GLU:HG3	38:L:8856:HOH:O	2.19	0.41
14:N:13:ARG:HA	14:N:13:ARG:HD2	1.87	0.41
14:N:33:ARG:NH2	31:9:6:C:O2'	2.51	0.41
15:O:18:ALA:HB2	38:O:3062:HOH:O	2.19	0.41
15:O:25:VAL:O	15:O:29:VAL:HG23	2.21	0.41
23:W:21:LEU:HD21	23:W:48:VAL:HG11	2.02	0.41
23:W:69:ARG:HA	23:W:69:ARG:HD3	1.76	0.41
24:X:29:ALA:O	24:X:33:ILE:HG13	2.20	0.41
24:X:74:ALA:HB1	24:X:85:VAL:HG22	2.02	0.41
28:2:40:ARG:HG2	28:2:41:HIS:N	2.36	0.41
29:3:35:TRP:CE3	29:3:36:ILE:HG12	2.55	0.41
30:0:40:C:H6	30:0:40:C:O5'	2.04	0.41
30:0:52:A:C6	30:0:53:C:C4	3.08	0.41
30:0:151:A:C2	30:0:152:A:C4	3.09	0.41
30:0:165:A:N7	30:0:167:A:OP1	2.53	0.41
30:0:347:A:H2'	30:0:348:C:O4'	2.20	0.41
30:0:395:A:H5'	30:0:396:U:H5''	2.01	0.41
30:0:483:C:N4	30:0:484:A:C6	2.88	0.41
30:0:626:U:C4	30:0:627:G:C6	3.09	0.41
30:0:1161:A:O5'	30:0:1161:A:C8	2.70	0.41
30:0:1165:G:H4'	30:0:1174:A:O2'	2.20	0.41
30:0:1449:G:N3	30:0:1449:G:H2'	2.36	0.41
30:0:1512:G:C4	30:0:1513:C:C6	3.09	0.41
30:0:1708:C:H2'	30:0:1709:G:O4'	2.20	0.41
30:0:1773:G:H2'	30:0:1774:G:H5'	2.01	0.41
30:0:1907:U:O2	30:0:1933:G:C2	2.73	0.41
30:0:2064:U:O2'	30:0:2065:C:H5'	2.21	0.41
30:0:2088:C:H1'	30:0:2841:A:C2	2.56	0.41
30:0:2106:C:H1'	38:0:9577:HOH:O	2.20	0.41
30:0:2123:A:H3'	30:0:2124:G:H8	1.85	0.41
30:0:2670:G:C2'	30:0:2671:U:H5'	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2900:G:C2'	30:0:2901:C:H5'	2.51	0.41
3:C:142:ASP:OD2	3:C:238:SER:HB2	2.21	0.41
4:D:146:LYS:HD3	14:N:107:ASN:HD21	1.86	0.41
4:D:169:THR:HG22	4:D:170:TYR:CD1	2.55	0.41
6:F:59:ILE:HD13	30:0:263:U:O4'	2.21	0.41
13:M:97:ILE:CD1	13:M:127:LYS:HD2	2.49	0.41
14:N:11:ARG:NH1	31:9:8:G:O6	2.54	0.41
14:N:91:ARG:HD2	38:N:8813:HOH:O	2.20	0.41
15:O:105:ASN:ND2	15:O:109:SER:H	2.19	0.41
16:P:24:ASN:HA	16:P:25:PRO:HD3	1.90	0.41
20:T:41:ARG:NH1	20:T:42:VAL:O	2.53	0.41
20:T:52:ARG:NH2	30:0:308:U:H2'	2.36	0.41
22:V:32:ALA:O	22:V:35:ALA:HB3	2.20	0.41
23:W:110:GLN:HA	23:W:110:GLN:NE2	2.35	0.41
25:Y:182:PHE:CG	25:Y:202:ALA:HB2	2.55	0.41
30:0:165:A:C6	30:0:168:C:C5	3.09	0.41
30:0:353:G:C6	30:0:354:A:C6	3.09	0.41
30:0:385:C:C6	30:0:385:C:C3'	3.03	0.41
30:0:396:U:O2'	30:0:397:A:O5'	2.37	0.41
30:0:640:G:O2'	30:0:641:G:H5'	2.21	0.41
30:0:935:G:O2'	30:0:936:C:H5'	2.21	0.41
30:0:1281:C:C5	30:0:1282:U:C4	3.08	0.41
30:0:1483:C:H2'	30:0:1484:G:C5'	2.50	0.41
30:0:1611:G:C2	30:0:1612:A:N7	2.89	0.41
30:0:1631:A:C5	30:0:1632:A:C6	3.09	0.41
30:0:1644:C:H2'	30:0:1645:U:O4'	2.21	0.41
30:0:1898:G:O2'	30:0:1899:C:H5'	2.20	0.41
30:0:1971:G:C5'	38:0:7283:HOH:O	2.64	0.41
30:0:2300:A:N3	30:0:2306:U:C4	2.88	0.41
30:0:2321:A:C2	30:0:2378:U:N3	2.88	0.41
30:0:2410:G:C2'	30:0:2411:C:H5'	2.50	0.41
30:0:2588:OMG:H2'	30:0:2589:U:H4'	2.02	0.41
30:0:2639:G:H2'	30:0:2640:U:O5'	2.21	0.41
30:0:2834:G:C2'	30:0:2835:C:O5'	2.68	0.41
30:0:2860:G:C6	30:0:2861:G:C5	3.08	0.41
30:0:2876:G:H2'	30:0:2877:G:C8	2.56	0.41
31:9:44:A:C6	31:9:45:A:C5	3.09	0.41
31:9:77:A:C4	31:9:79:U:C4	3.09	0.41
1:A:80:LEU:HA	1:A:92:ASN:OD1	2.21	0.41
1:A:81:GLN:O	1:A:92:ASN:HB3	2.21	0.41
2:B:293:PRO:HD2	38:B:9050:HOH:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:116:ALA:C	3:C:118:THR:N	2.78	0.41
4:D:40:ILE:HG23	38:D:203:HOH:O	2.19	0.41
10:J:34:GLU:O	10:J:36:VAL:HG23	2.21	0.41
14:N:35:VAL:HB	14:N:46:GLN:HB2	2.03	0.41
14:N:44:ARG:CG	14:N:45:ALA:N	2.84	0.41
15:O:44:ASN:OD1	15:O:65:LEU:HB2	2.21	0.41
17:Q:75:ILE:HG12	17:Q:84:ILE:CD1	2.51	0.41
23:W:72:PRO:HG2	23:W:77:ALA:HB3	2.02	0.41
25:Y:205:ILE:H	25:Y:205:ILE:HG13	1.72	0.41
30:0:11:A:N3	30:0:11:A:H2'	2.36	0.41
30:0:72:C:H5'	38:0:5822:HOH:O	2.21	0.41
30:0:361:C:H2'	30:0:362:G:O4'	2.21	0.41
30:0:450:C:H1'	38:0:4341:HOH:O	2.19	0.41
30:0:455:A:H2'	30:0:456:G:O4'	2.20	0.41
30:0:533:U:C5	30:0:2812:A:C2	3.09	0.41
30:0:955:A:H2'	30:0:956:G:C5'	2.51	0.41
30:0:969:G:C2	30:0:1000:C:N3	2.89	0.41
30:0:1004:C:H4'	38:0:7615:HOH:O	2.20	0.41
30:0:1279:U:C5'	30:0:1280:A:OP2	2.68	0.41
30:0:1357:A:H1'	38:0:4127:HOH:O	2.19	0.41
30:0:1552:G:C2	30:0:1634:G:C4	3.09	0.41
30:0:1570:C:H2'	30:0:1571:G:H5'	2.03	0.41
30:0:1646:G:N3	30:0:1647:G:C8	2.88	0.41
30:0:1680:C:H5'	38:0:7195:HOH:O	2.19	0.41
30:0:2292:C:C2	30:0:2463:A:C4'	3.04	0.41
30:0:2324:G:H4'	30:0:2418:G:O2'	2.21	0.41
30:0:2432:C:O5'	30:0:2432:C:C6	2.73	0.41
30:0:2551:C:O2'	30:0:2552:C:H5'	2.21	0.41
30:0:2597:U:H2'	30:0:2598:U:H5'	2.02	0.41
30:0:2617:G:N3	30:0:2617:G:H2'	2.35	0.41
1:A:29:HIS:CE1	1:A:107:ASN:HD22	2.39	0.41
1:A:70:ALA:HA	1:A:71:PRO:HD3	1.71	0.41
1:A:193:ALA:HB2	38:A:9014:HOH:O	2.21	0.41
2:B:224:LYS:HD3	2:B:224:LYS:HA	1.83	0.41
2:B:292:GLY:O	2:B:294:TYR:HD2	2.03	0.41
3:C:43:LYS:HG2	30:0:449:A:C8	2.56	0.41
3:C:63:SER:HB3	30:0:2101:A:H5'	2.03	0.41
3:C:76:ARG:HB3	3:C:78:ARG:NH1	2.35	0.41
3:C:173:LYS:O	3:C:186:TYR:HA	2.20	0.41
8:H:70:LEU:HD12	8:H:70:LEU:HA	1.93	0.41
9:I:108:HIS:HB2	9:I:109:PRO:HD3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:133:GLY:O	10:J:137:GLU:HG3	2.21	0.41
12:L:97:VAL:HG12	12:L:98:GLU:O	2.21	0.41
12:L:117:GLU:HG2	38:L:8870:HOH:O	2.20	0.41
14:N:71:TRP:HB2	14:N:175:LEU:HD22	2.02	0.41
17:Q:19:ARG:HH22	31:9:11:A:H3'	1.82	0.41
17:Q:42:LYS:HA	17:Q:42:LYS:HD2	1.92	0.41
19:S:11:THR:O	19:S:15:MET:HG2	2.21	0.41
20:T:71:VAL:HG12	20:T:72:ILE:N	2.36	0.41
25:Y:149:GLN:HG3	38:0:3330:HOH:O	2.20	0.41
25:Y:154:ARG:NH2	30:0:1071:G:H4'	2.36	0.41
26:Z:53:ILE:O	26:Z:57:MET:HB2	2.20	0.41
26:Z:77:GLY:N	26:Z:92:SER:HA	2.36	0.41
29:3:52:PHE:HB3	38:3:9036:HOH:O	2.21	0.41
30:0:119:A:C2'	30:0:120:A:C5'	2.96	0.41
30:0:157:G:C6	30:0:158:A:N7	2.89	0.41
30:0:254:C:C2	30:0:255:A:C8	3.09	0.41
30:0:275:G:N2	30:0:376:C:C2	2.88	0.41
30:0:292:G:N1	30:0:358:G:H1'	2.35	0.41
30:0:300:U:H2'	30:0:301:C:C6	2.43	0.41
30:0:303:C:H2'	30:0:304:G:C5'	2.51	0.41
30:0:393:G:H5''	38:0:9856:HOH:O	2.21	0.41
30:0:420:U:H5'	30:0:1920:C:C2	2.56	0.41
30:0:481:U:C5	30:0:487:G:O6	2.74	0.41
30:0:509:A:C6	30:0:511:A:C6	3.09	0.41
30:0:567:U:C5'	38:0:5240:HOH:O	2.69	0.41
30:0:790:A:H2'	30:0:791:A:O4'	2.20	0.41
30:0:939:A:C5'	38:0:5361:HOH:O	2.68	0.41
30:0:1118:A:N6	30:0:1244:U:H3	2.11	0.41
30:0:1175:G:N3	30:0:1193:A:C6	2.88	0.41
30:0:1199:A:N6	30:0:1200:A:N6	2.68	0.41
30:0:1248:A:H2'	30:0:1249:U:H6	1.84	0.41
30:0:1252:A:H4'	38:0:9925:HOH:O	2.21	0.41
30:0:1378:G:H4'	38:0:9224:HOH:O	2.20	0.41
30:0:1476:A:HO2'	30:0:1867:G:C2'	2.34	0.41
30:0:1486:A:H2'	38:0:4435:HOH:O	2.20	0.41
30:0:1503:U:H2'	30:0:1504:A:C5'	2.51	0.41
30:0:1561:U:C5	30:0:1562:C:C5	3.07	0.41
30:0:1594:C:C2	30:0:1601:G:N2	2.89	0.41
30:0:1608:G:O2'	30:0:1609:C:H5'	2.20	0.41
30:0:1713:G:H1'	38:0:5026:HOH:O	2.21	0.41
30:0:1730:G:C5'	30:0:1731:C:C5	3.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1787:C:H2'	30:0:1788:U:C6	2.56	0.41
30:0:1806:G:H1'	30:0:2875:A:N3	2.36	0.41
30:0:1925:G:C2	30:0:1926:G:C8	3.09	0.41
30:0:2055:A:C4'	38:0:7348:HOH:O	2.68	0.41
30:0:2135:A:C2	30:0:2241:C:O2	2.74	0.41
30:0:2327:A:H2'	30:0:2328:U:C6	2.56	0.41
30:0:2444:U:C5	30:0:2445:U:C5	3.09	0.41
30:0:2474:A:H4'	30:0:2475:C:H3'	2.03	0.41
30:0:2683:G:C4	30:0:2712:G:N2	2.89	0.41
30:0:2727:A:C6	30:0:2756:U:N3	2.88	0.41
30:0:2761:A:N3	30:0:2762:C:O2'	2.52	0.41
30:0:2866:U:H5''	38:0:6354:HOH:O	2.20	0.41
1:A:132:ASP:C	1:A:134:ASN:N	2.77	0.41
2:B:256:GLN:HG2	38:B:9140:HOH:O	2.19	0.41
7:G:63:ARG:N	38:G:2569:HOH:O	2.54	0.41
13:M:71:SER:HB3	30:0:2264:A:OP1	2.21	0.41
13:M:84:LYS:HD3	13:M:85:ARG:NH1	2.34	0.41
20:T:78:THR:HB	20:T:86:GLU:HG3	2.03	0.41
21:U:34:SER:HA	21:U:37:GLU:CG	2.51	0.41
24:X:26:ALA:CB	24:X:63:ARG:HA	2.46	0.41
26:Z:36:GLY:C	26:Z:38:PHE:H	2.29	0.41
29:3:2:GLN:N	30:0:2320:U:H5'	2.35	0.41
30:0:47:G:H1'	30:0:114:A:N1	2.35	0.41
30:0:92:G:H5'	38:0:7329:HOH:O	2.21	0.41
30:0:816:G:O5'	30:0:816:G:H8	2.04	0.41
30:0:1063:G:O5'	30:0:2307:A:H1'	2.21	0.41
30:0:1158:G:C6	30:0:1159:G:C5	3.08	0.41
30:0:1292:G:H8	30:0:1292:G:O5'	2.04	0.41
30:0:1419:U:O2	30:0:1419:U:H3'	2.21	0.41
30:0:1497:G:C2	30:0:1498:G:C4	3.09	0.41
30:0:1562:C:O2	30:0:1562:C:C2'	2.67	0.41
30:0:1792:C:H6	30:0:1792:C:O5'	2.03	0.41
30:0:2528:U:H2'	30:0:2529:G:O4'	2.21	0.41
1:A:199:HIS:CD2	1:A:201:PHE:HB2	2.56	0.40
2:B:146:THR:O	2:B:148:PRO:HD3	2.21	0.40
3:C:131:PHE:N	3:C:131:PHE:CD2	2.89	0.40
3:C:193:LEU:HD13	3:C:222:ASP:HB2	2.02	0.40
4:D:25:MET:HE1	4:D:37:ALA:O	2.21	0.40
8:H:91:ARG:HB2	30:0:1003:U:OP1	2.21	0.40
10:J:31:LEU:HA	10:J:31:LEU:HD23	1.87	0.40
16:P:63:ARG:NE	30:0:1549:C:OP1	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:138:GLU:C	16:P:140:TYR:H	2.28	0.40
17:Q:7:LEU:HD12	30:0:2424:U:H1'	2.03	0.40
20:T:12:ARG:NH1	38:T:3035:HOH:O	2.54	0.40
23:W:43:GLY:HA3	30:0:945:U:O2'	2.21	0.40
23:W:59:GLN:HE22	23:W:97:ALA:HB3	1.86	0.40
26:Z:41:ARG:O	26:Z:47:ARG:NH1	2.53	0.40
30:0:36:C:C2	30:0:447:A:C2	3.09	0.40
30:0:101:C:O2	30:0:102:A:C8	2.74	0.40
30:0:130:C:H3'	30:0:141:C:H5	1.85	0.40
30:0:226:A:H1'	30:0:393:G:N7	2.35	0.40
30:0:361:C:H2'	30:0:362:G:C8	2.56	0.40
30:0:559:U:C6	30:0:559:U:C4'	3.04	0.40
30:0:582:U:H2'	30:0:583:C:H6	1.84	0.40
30:0:669:G:C6	30:0:670:G:C5	3.09	0.40
30:0:707:C:C4	30:0:708:A:N7	2.89	0.40
30:0:731:U:O2'	30:0:732:C:H5'	2.21	0.40
30:0:834:G:H3'	30:0:835:U:H4'	2.03	0.40
30:0:1195:G:C2	30:0:1205:U:N3	2.89	0.40
30:0:1249:U:H2'	30:0:1250:C:H6	1.85	0.40
30:0:1384:C:O5'	30:0:1384:C:H6	2.04	0.40
30:0:1461:U:O2'	30:0:1462:C:H5'	2.21	0.40
30:0:1503:U:C4	30:0:1504:A:C5	3.09	0.40
30:0:1587:U:H2'	30:0:1588:G:C5'	2.51	0.40
30:0:1597:A:C5	30:0:1598:A:C8	3.10	0.40
30:0:1628:G:C2'	30:0:1629:G:H5'	2.51	0.40
30:0:2015:A:O2'	30:0:2016:U:H5'	2.21	0.40
30:0:2255:A:N1	30:0:2256:G:C4	2.88	0.40
30:0:2502:C:O2'	30:0:2503:A:H5'	2.20	0.40
30:0:2600:A:H2'	30:0:2601:A:O4'	2.22	0.40
30:0:2713:G:H2'	30:0:2714:U:H5'	2.02	0.40
30:0:2759:C:H2'	30:0:2760:C:O4'	2.22	0.40
30:0:2766:A:C5	30:0:2767:C:C5	3.09	0.40
30:0:2768:A:H2'	30:0:2769:C:O4'	2.20	0.40
31:9:3:A:C8	31:9:26:C:N3	2.90	0.40
3:C:202:THR:HG21	30:0:328:U:O2	2.22	0.40
10:J:14:ALA:O	10:J:44:ALA:HA	2.21	0.40
10:J:38:VAL:HB	10:J:103:VAL:HG22	2.03	0.40
13:M:37:VAL:HG21	13:M:108:THR:OG1	2.21	0.40
16:P:31:ILE:O	16:P:34:ALA:HB3	2.21	0.40
16:P:59:ARG:O	16:P:62:ALA:HB3	2.20	0.40
16:P:102:ARG:CZ	30:0:1596:U:C5	3.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:316:A:C4	30:0:337:A:C2	3.10	0.40
30:0:453:A:C4	30:0:479:G:C8	3.09	0.40
30:0:590:A:H2'	30:0:591:A:C5'	2.50	0.40
30:0:691:G:N2	30:0:694:A:OP2	2.45	0.40
30:0:1419:U:H2'	30:0:1685:A:C2	2.56	0.40
30:0:1585:C:N3	30:0:1611:G:N2	2.68	0.40
30:0:1601:G:H2'	30:0:1602:C:C6	2.57	0.40
30:0:1624:A:H4'	30:0:1626:A:H5''	2.04	0.40
30:0:1726:G:C6	30:0:2050:G:O6	2.75	0.40
30:0:2089:A:H2'	30:0:2090:G:C5'	2.52	0.40
30:0:2319:C:O2	30:0:2319:C:C2'	2.69	0.40
30:0:2333:G:C2	30:0:2334:C:C2	3.10	0.40
30:0:2541:U:H5'	30:0:2611:G:O6	2.22	0.40
30:0:2554:U:O4'	30:0:2577:A:N6	2.53	0.40
30:0:2582:G:H22	30:0:2596:A:H2	1.69	0.40
30:0:2582:G:C8	30:0:2601:A:C4	3.09	0.40
30:0:2588:OMG:HM21	38:0:5634:HOH:O	2.22	0.40
30:0:2721:U:H5	38:0:9305:HOH:O	2.04	0.40
30:0:2769:C:H2'	30:0:2770:G:C4'	2.51	0.40
30:0:2769:C:C5	30:0:2770:G:N7	2.89	0.40
30:0:2790:C:HO2'	30:0:2791:U:H6	1.69	0.40
30:0:2896:A:N3	30:0:2896:A:C2'	2.84	0.40
31:9:114:G:C6	31:9:115:C:N4	2.89	0.40
1:A:87:GLU:HB3	1:A:92:ASN:ND2	2.36	0.40
2:B:29:TRP:CH2	2:B:164:THR:HA	2.55	0.40
2:B:52:VAL:O	2:B:53:LEU:HD12	2.22	0.40
2:B:68:THR:HG21	21:U:16:GLY:HA3	2.03	0.40
2:B:154:VAL:HA	2:B:155:PRO:HD3	1.82	0.40
2:B:281:ASP:HB2	2:B:334:SER:HB2	2.01	0.40
13:M:73:ARG:HB2	30:0:1470:A:OP1	2.21	0.40
16:P:88:GLN:HE21	30:0:1800:G:C1'	2.34	0.40
20:T:24:ARG:NH2	20:T:40:VAL:HA	2.36	0.40
20:T:52:ARG:O	30:0:317:A:OP1	2.38	0.40
26:Z:56:GLU:C	26:Z:58:ASN:N	2.79	0.40
30:0:139:C:H4'	30:0:140:G:O5'	2.21	0.40
30:0:302:A:C2'	30:0:303:C:C5'	2.96	0.40
30:0:702:G:C2	30:0:703:G:C8	3.09	0.40
30:0:1002:G:C2'	30:0:1003:U:O5'	2.70	0.40
30:0:1096:U:H2'	30:0:1097:A:O5'	2.21	0.40
30:0:1119:G:N2	30:0:1246:A:N1	2.68	0.40
30:0:1166:A:H5''	30:0:1167:G:OP2	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1168:C:H1'	38:0:7314:HOH:O	2.22	0.40
30:0:1386:G:C2	30:0:1397:C:N3	2.89	0.40
30:0:1432:U:C6	30:0:1725:C:H1'	2.56	0.40
30:0:1515:A:H2'	30:0:1516:U:O4'	2.21	0.40
30:0:1623:C:C4	30:0:1624:A:C6	3.10	0.40
30:0:1742:A:N6	30:0:2037:C:H42	2.14	0.40
30:0:1972:U:C2'	30:0:1973:A:C5'	2.99	0.40
30:0:2081:A:C6	30:0:2082:G:C5	3.09	0.40
30:0:2359:G:C5	30:0:2360:C:C4	3.10	0.40
30:0:2367:A:H5'	38:0:5062:HOH:O	2.18	0.40
30:0:2377:U:H6	30:0:2377:U:O5'	2.03	0.40
30:0:2515:C:C2'	30:0:2516:G:H5'	2.51	0.40
30:0:2766:A:H2'	30:0:2767:C:H6	1.86	0.40
31:9:74:G:N2	31:9:108:C:H1'	2.36	0.40
1:A:75:GLY:HA2	26:Z:88:PHE:HA	2.03	0.40
2:B:56:ASP:HB2	2:B:322:ARG:HE	1.86	0.40
3:C:183:GLY:HA2	20:T:4:PRO:HD3	2.03	0.40
10:J:19:MET:HG3	10:J:79:PHE:CD1	2.57	0.40
11:K:48:GLY:O	11:K:51:ASP:HB2	2.21	0.40
12:L:122:ALA:H	12:L:125:PHE:HZ	1.70	0.40
15:O:26:TRP:N	38:O:3062:HOH:O	2.54	0.40
15:O:59:VAL:CG2	15:O:111:VAL:HG21	2.50	0.40
16:P:14:LEU:HD13	16:P:51:ALA:HB2	2.02	0.40
16:P:38:GLU:HA	16:P:41:ARG:HH11	1.87	0.40
20:T:55:PHE:HB2	38:T:6384:HOH:O	2.22	0.40
29:3:38:ARG:HA	29:3:41:GLU:CD	2.46	0.40
30:0:18:C:H2'	30:0:19:U:C6	2.56	0.40
30:0:71:G:H1'	38:0:5249:HOH:O	2.21	0.40
30:0:209:G:O2'	30:0:665:A:H1'	2.22	0.40
30:0:462:A:H3'	38:0:4838:HOH:O	2.21	0.40
30:0:878:G:C5'	38:0:9229:HOH:O	2.67	0.40
30:0:1116:U:C2	30:0:1246:A:N6	2.90	0.40
30:0:1119:G:C6	30:0:1243:C:C4	3.10	0.40
30:0:1526:A:H4'	30:0:1527:A:O4'	2.20	0.40
30:0:1592:G:C6	30:0:1593:C:N4	2.89	0.40
30:0:1801:A:C2	30:0:1802:G:N9	2.90	0.40
30:0:2370:A:O5'	30:0:2370:A:H8	2.03	0.40
30:0:2383:G:C6	30:0:2384:U:C4	3.10	0.40
30:0:2533:C:C2'	30:0:2534:U:O5'	2.69	0.40
30:0:2570:G:H2'	30:0:2571:C:H6	1.86	0.40
30:0:2591:C:H2'	30:0:2592:G:C5'	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:2669:U:N3	30:0:2670:G:N7	2.69	0.40
30:0:2716:G:C4	30:0:2717:C:C6	3.09	0.40
30:0:2831:C:H2'	30:0:2832:C:H5'	2.03	0.40
30:0:2863:G:H1'	38:0:3258:HOH:O	2.21	0.40
30:0:2912:C:H2'	30:0:2913:A:H5'	2.04	0.40
31:9:58:G:H3'	31:9:59:C:C6	2.57	0.40
1:A:199:HIS:HD2	1:A:201:PHE:HB2	1.85	0.40
2:B:22:GLU:HA	2:B:205:VAL:HG21	2.04	0.40
2:B:262:ARG:HG3	30:0:2716:G:C5'	2.52	0.40
2:B:300:SER:HB3	38:0:4626:HOH:O	2.22	0.40
3:C:2:GLN:HA	3:C:18:LEU:N	2.33	0.40
3:C:47:GLY:HA2	3:C:92:PRO:O	2.22	0.40
3:C:84:VAL:O	3:C:85:LYS:HB2	2.22	0.40
15:O:112:ARG:HD2	38:0:9670:HOH:O	2.21	0.40
19:S:6:LYS:HB2	19:S:27:ALA:O	2.21	0.40
19:S:15:MET:O	19:S:18:MET:HB3	2.21	0.40
20:T:43:ASN:ND2	20:T:108:ARG:CZ	2.85	0.40
21:U:6:CYS:HB2	21:U:32:CYS:HB3	2.04	0.40
22:V:27:LEU:HA	22:V:49:LEU:HD13	2.04	0.40
23:W:68:THR:HG23	23:W:69:ARG:N	2.36	0.40
24:X:22:ASN:C	24:X:24:LYS:H	2.29	0.40
26:Z:80:GLN:CG	26:Z:81:CYS:N	2.85	0.40
29:3:40:ARG:HG3	29:3:52:PHE:CD2	2.56	0.40
30:0:31:C:O2'	30:0:32:G:H5'	2.22	0.40
30:0:199:A:H2'	30:0:201:G:C8	2.57	0.40
30:0:487:G:C4	30:0:513:A:N1	2.90	0.40
30:0:499:G:C2'	30:0:500:G:H5'	2.51	0.40
30:0:632:A:C5	30:0:633:C:C5	3.10	0.40
30:0:662:U:O2'	30:0:748:C:O2	2.33	0.40
30:0:732:C:H2'	30:0:733:U:H6	1.86	0.40
30:0:1117:A:C2	30:0:1244:U:C2	3.09	0.40
30:0:1162:G:O2'	30:0:1163:G:H5'	2.20	0.40
30:0:1211:G:C2	30:0:1212:C:C2	3.09	0.40
30:0:1293:U:O2'	30:0:1294:A:H5'	2.22	0.40
30:0:1362:U:C2	30:0:1363:G:C8	3.09	0.40
30:0:1561:U:C6	30:0:1562:C:H5	2.39	0.40
30:0:1585:C:C3'	30:0:1585:C:C6	3.05	0.40
30:0:1598:A:C2	30:0:1599:U:C2	3.09	0.40
30:0:1719:G:N3	38:0:3705:HOH:O	2.37	0.40
30:0:1733:A:C2	30:0:1734:C:H1'	2.57	0.40
30:0:1849:G:H1'	30:0:2011:A:N1	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:0:1916:C:C2	30:0:1924:A:C2	3.08	0.40
30:0:1997:A:C6	30:0:1998:G:C5	3.09	0.40
30:0:2299:G:C6	30:0:2300:A:C6	3.09	0.40
30:0:2363:G:C5	30:0:2364:A:N7	2.90	0.40
30:0:2634:G:C2	30:0:2635:A:C5	3.09	0.40
30:0:2851:G:C2'	30:0:2852:A:H5'	2.52	0.40
31:9:36:C:N4	31:9:37:C:C2	2.89	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	235/240 (98%)	198 (84%)	28 (12%)	9 (4%)	2	16
2	B	335/338 (99%)	287 (86%)	42 (12%)	6 (2%)	6	29
3	C	244/246 (99%)	211 (86%)	29 (12%)	4 (2%)	7	31
4	D	134/177 (76%)	109 (81%)	22 (16%)	3 (2%)	5	26
5	E	170/178 (96%)	152 (89%)	16 (9%)	2 (1%)	10	37
6	F	117/120 (98%)	102 (87%)	11 (9%)	4 (3%)	3	18
7	G	25/348 (7%)	23 (92%)	2 (8%)	0	100	100
8	H	156/177 (88%)	139 (89%)	14 (9%)	3 (2%)	6	28
9	I	68/162 (42%)	56 (82%)	10 (15%)	2 (3%)	3	21
10	J	140/145 (97%)	125 (89%)	12 (9%)	3 (2%)	5	26
11	K	130/132 (98%)	107 (82%)	21 (16%)	2 (2%)	8	32
12	L	141/165 (86%)	112 (79%)	25 (18%)	4 (3%)	4	21
13	M	192/196 (98%)	165 (86%)	22 (12%)	5 (3%)	4	23
14	N	184/187 (98%)	156 (85%)	23 (12%)	5 (3%)	4	22

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
15	O	113/116 (97%)	109 (96%)	4 (4%)	0	100	100
16	P	141/149 (95%)	125 (89%)	13 (9%)	3 (2%)	5	26
17	Q	93/96 (97%)	82 (88%)	7 (8%)	4 (4%)	2	14
18	R	148/155 (96%)	132 (89%)	15 (10%)	1 (1%)	18	49
19	S	79/85 (93%)	67 (85%)	11 (14%)	1 (1%)	9	35
20	T	117/120 (98%)	95 (81%)	18 (15%)	4 (3%)	3	18
21	U	51/67 (76%)	46 (90%)	3 (6%)	2 (4%)	2	16
22	V	63/71 (89%)	57 (90%)	5 (8%)	1 (2%)	7	31
23	W	152/154 (99%)	129 (85%)	21 (14%)	2 (1%)	9	35
24	X	80/92 (87%)	68 (85%)	8 (10%)	4 (5%)	1	11
25	Y	140/241 (58%)	131 (94%)	8 (6%)	1 (1%)	18	49
26	Z	71/116 (61%)	52 (73%)	13 (18%)	6 (8%)	0	4
27	1	54/57 (95%)	48 (89%)	5 (9%)	1 (2%)	6	28
28	2	42/50 (84%)	37 (88%)	4 (10%)	1 (2%)	4	24
29	3	90/92 (98%)	73 (81%)	14 (16%)	3 (3%)	3	19
All	All	3705/4472 (83%)	3193 (86%)	426 (12%)	86 (2%)	5	25

All (86) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	123	GLY
4	D	65	GLU
4	D	137	PRO
6	F	61	MET
6	F	101	ALA
8	H	19	ARG
12	L	21	ARG
13	M	79	ALA
14	N	139	TRP
14	N	184	ILE
20	T	16	LEU
24	X	70	ILE
29	3	64	LYS
1	A	170	VAL
2	B	225	GLY
10	J	143	LYS
12	L	45	PRO

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Mol	Chain	Res	Type
14	N	162	ASP
19	S	30	ASP
23	W	72	PRO
26	Z	85	ASP
26	Z	89	THR
28	2	18	ASN
29	3	84	ARG
1	A	24	LYS
1	A	33	GLU
2	B	183	GLU
3	C	215	ALA
6	F	69	GLU
11	K	10	GLN
11	K	83	PRO
12	L	32	ASP
14	N	165	ALA
14	N	183	ASP
17	Q	63	VAL
20	T	44	ALA
20	T	53	GLY
21	U	51	TRP
24	X	23	HIS
25	Y	193	LEU
26	Z	67	GLY
26	Z	83	TYR
27	1	54	ALA
29	3	61	PRO
1	A	35	GLY
1	A	37	VAL
1	A	150	PRO
2	B	2	GLN
3	C	8	LEU
3	C	89	ALA
4	D	56	ARG
6	F	100	ASP
12	L	35	ARG
16	P	112	GLY
17	Q	48	PRO
24	X	52	PRO
24	X	78	GLU
26	Z	65	ASN
26	Z	76	THR

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Mol	Chain	Res	Type
1	A	119	ALA
2	B	158	LYS
2	B	171	VAL
5	E	17	HIS
8	H	70	LEU
13	M	73	ARG
13	M	154	ASP
16	P	58	SER
22	V	39	ALA
23	W	49	ASN
3	C	136	VAL
5	E	122	THR
8	H	171	GLY
9	I	108	HIS
9	I	131	GLY
10	J	78	ILE
13	M	15	PRO
13	M	88	VAL
16	P	132	ASP
20	T	42	VAL
1	A	74	VAL
21	U	13	ILE
2	B	185	GLY
17	Q	18	PRO
17	Q	54	PRO
10	J	18	ILE
18	R	106	GLY

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	179/182 (98%)	172 (96%)	7 (4%)	28	56
2	B	282/283 (100%)	260 (92%)	22 (8%)	11	36
3	C	193/193 (100%)	177 (92%)	16 (8%)	10	34

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	D	117/148 (79%)	111 (95%)	6 (5%)	21	50
5	E	152/156 (97%)	143 (94%)	9 (6%)	18	46
6	F	93/94 (99%)	88 (95%)	5 (5%)	20	49
7	G	27/282 (10%)	25 (93%)	2 (7%)	13	38
8	H	134/145 (92%)	125 (93%)	9 (7%)	15	42
9	I	58/130 (45%)	55 (95%)	3 (5%)	21	49
10	J	118/121 (98%)	112 (95%)	6 (5%)	21	50
11	K	106/106 (100%)	97 (92%)	9 (8%)	10	33
12	L	113/127 (89%)	105 (93%)	8 (7%)	13	40
13	M	158/160 (99%)	151 (96%)	7 (4%)	25	54
14	N	149/150 (99%)	142 (95%)	7 (5%)	23	52
15	O	93/94 (99%)	90 (97%)	3 (3%)	34	60
16	P	113/117 (97%)	111 (98%)	2 (2%)	51	70
17	Q	79/80 (99%)	75 (95%)	4 (5%)	21	50
18	R	117/122 (96%)	112 (96%)	5 (4%)	26	54
19	S	71/74 (96%)	68 (96%)	3 (4%)	26	55
20	T	105/106 (99%)	98 (93%)	7 (7%)	15	42
21	U	44/53 (83%)	42 (96%)	2 (4%)	24	53
22	V	51/57 (90%)	47 (92%)	4 (8%)	11	36
23	W	130/130 (100%)	127 (98%)	3 (2%)	44	66
24	X	66/74 (89%)	60 (91%)	6 (9%)	9	31
25	Y	120/196 (61%)	117 (98%)	3 (2%)	42	64
26	Z	60/94 (64%)	56 (93%)	4 (7%)	15	42
27	1	46/47 (98%)	45 (98%)	1 (2%)	45	66
28	2	42/46 (91%)	41 (98%)	1 (2%)	43	65
29	3	79/79 (100%)	76 (96%)	3 (4%)	29	57
All	All	3095/3646 (85%)	2928 (95%)	167 (5%)	20	49

All (167) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	38	ILE
1	A	51	ARG

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Mol	Chain	Res	Type
1	A	122	SER
1	A	131	HIS
1	A	175	LYS
1	A	179	MET
1	A	200	PRO
2	B	7	ARG
2	B	11	LEU
2	B	16	ARG
2	B	27	ASN
2	B	71	VAL
2	B	84	LEU
2	B	114	ASP
2	B	115	VAL
2	B	132	HIS
2	B	162	MET
2	B	180	ASP
2	B	193	ILE
2	B	195	ARG
2	B	211	THR
2	B	234	ARG
2	B	251	VAL
2	B	254	GLN
2	B	277	GLU
2	B	301	VAL
2	B	309	VAL
2	B	312	ARG
2	B	319	ASP
3	C	2	GLN
3	C	29	ASP
3	C	50	GLU
3	C	74	ASP
3	C	76	ARG
3	C	94	THR
3	C	115	LEU
3	C	187	ARG
3	C	202	THR
3	C	214	THR
3	C	218	VAL
3	C	223	LEU
3	C	234	VAL
3	C	236	THR
3	C	240	LEU

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Mol	Chain	Res	Type
3	C	243	VAL
4	D	10	PHE
4	D	24	HIS
4	D	29	HIS
4	D	48	MET
4	D	50	VAL
4	D	169	THR
5	E	58	THR
5	E	62	ILE
5	E	81	GLU
5	E	86	VAL
5	E	102	VAL
5	E	116	THR
5	E	126	ILE
5	E	156	ASP
5	E	162	PHE
6	F	3	TYR
6	F	60	VAL
6	F	81	ASP
6	F	91	VAL
6	F	99	THR
7	G	64	ASN
7	G	73	ASP
8	H	49	GLN
8	H	62	HIS
8	H	65	LEU
8	H	69	ARG
8	H	87	LYS
8	H	91	ARG
8	H	126	THR
8	H	149	VAL
8	H	157	TYR
9	I	82	THR
9	I	114	TYR
9	I	126	THR
10	J	46	ILE
10	J	47	THR
10	J	74	ARG
10	J	86	MET
10	J	120	SER
10	J	132	LEU
11	K	10	GLN

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Mol	Chain	Res	Type
11	K	12	LEU
11	K	27	ARG
11	K	83	PRO
11	K	91	GLU
11	K	93	ASN
11	K	98	VAL
11	K	115	ARG
11	K	132	VAL
12	L	7	GLN
12	L	18	HIS
12	L	44	GLU
12	L	99	GLU
12	L	101	ASP
12	L	102	ASP
12	L	104	ASP
12	L	114	VAL
13	M	44	THR
13	M	46	LEU
13	M	84	LYS
13	M	85	ARG
13	M	123	ASP
13	M	125	ARG
13	M	133	LEU
14	N	5	ARG
14	N	17	ARG
14	N	26	LEU
14	N	43	VAL
14	N	127	LEU
14	N	143	ARG
14	N	177	GLU
15	O	47	ARG
15	O	53	GLN
15	O	87	THR
16	P	91	LYS
16	P	98	ILE
17	Q	16	ASN
17	Q	18	PRO
17	Q	31	GLU
17	Q	54	PRO
18	R	13	THR
18	R	55	GLN
18	R	61	GLN

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Mol	Chain	Res	Type
18	R	138	SER
18	R	143	VAL
19	S	44	GLN
19	S	57	THR
19	S	65	VAL
20	T	5	ASP
20	T	39	ASN
20	T	42	VAL
20	T	73	HIS
20	T	96	VAL
20	T	115	GLU
20	T	116	ASP
21	U	25	ASP
21	U	52	THR
22	V	1	THR
22	V	13	PRO
22	V	17	GLU
22	V	49	LEU
23	W	88	THR
23	W	125	HIS
23	W	146	ILE
24	X	15	ARG
24	X	51	ASP
24	X	52	PRO
24	X	72	VAL
24	X	79	GLU
24	X	88	GLU
25	Y	172	THR
25	Y	203	VAL
25	Y	235	GLU
26	Z	41	ARG
26	Z	63	CYS
26	Z	66	CYS
26	Z	74	GLN
27	1	14	THR
28	2	18	ASN
29	3	65	THR
29	3	88	LEU
29	3	89	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (94) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	5	GLN
1	A	29	HIS
1	A	47	HIS
1	A	176	HIS
1	A	199	HIS
2	B	106	HIS
2	B	145	HIS
2	B	238	ASN
2	B	260	HIS
2	B	286	ASN
2	B	320	GLN
3	C	2	GLN
3	C	67	GLN
3	C	73	GLN
3	C	129	HIS
3	C	151	GLN
3	C	206	ASN
4	D	47	GLN
4	D	97	GLN
4	D	103	ASN
4	D	133	ASN
5	E	74	HIS
5	E	143	GLN
7	G	64	ASN
8	H	34	HIS
8	H	40	GLN
8	H	49	GLN
8	H	59	GLN
8	H	62	HIS
8	H	75	HIS
8	H	142	ASN
8	H	158	ASN
9	I	88	GLN
10	J	52	GLN
10	J	107	ASN
10	J	142	ASN
11	K	10	GLN
11	K	44	HIS
11	K	67	GLN
11	K	93	ASN
12	L	7	GLN
12	L	18	HIS
12	L	41	HIS

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Mol	Chain	Res	Type
12	L	58	GLN
13	M	24	GLN
13	M	58	GLN
13	M	86	GLN
13	M	126	GLN
13	M	170	ASN
14	N	21	HIS
14	N	53	ASN
14	N	93	GLN
14	N	107	ASN
14	N	132	ASN
16	P	50	GLN
16	P	88	GLN
16	P	118	GLN
17	Q	16	ASN
17	Q	27	GLN
17	Q	40	HIS
18	R	22	GLN
18	R	94	ASN
18	R	98	ASN
18	R	140	GLN
19	S	7	HIS
19	S	9	HIS
19	S	25	GLN
19	S	44	GLN
19	S	51	GLN
19	S	53	ASN
21	U	23	HIS
21	U	39	ASN
22	V	29	ASN
22	V	34	GLN
22	V	60	GLN
23	W	28	HIS
23	W	110	GLN
23	W	119	HIS
24	X	23	HIS
25	Y	188	HIS
25	Y	189	ASN
26	Z	61	HIS
26	Z	74	GLN
26	Z	80	GLN
27	1	16	HIS

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Mol	Chain	Res	Type
28	2	36	ASN
28	2	41	HIS
29	3	2	GLN
29	3	13	HIS
29	3	15	ASN
29	3	30	GLN
29	3	43	ASN
29	3	48	ASN
29	3	78	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
30	0	2745/2923 (93%)	268 (9%)	14 (0%)
31	9	121/122 (99%)	18 (14%)	1 (0%)
All	All	2866/3045 (94%)	286 (9%)	15 (0%)

All (286) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
30	0	11	A
30	0	31	C
30	0	67	A
30	0	69	A
30	0	70	A
30	0	71	G
30	0	86	A
30	0	87	C
30	0	88	G
30	0	114	A
30	0	115	U
30	0	120	A
30	0	130	C
30	0	131	A
30	0	141	C
30	0	151	A
30	0	166	A
30	0	169	A
30	0	185	G
30	0	186	A
30	0	191	A

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Mol	Chain	Res	Type
30	0	192	A
30	0	198	A
30	0	200	C
30	0	204	A
30	0	219	G
30	0	237	G
30	0	271	C
30	0	272	A
30	0	273	G
30	0	283	U
30	0	284	C
30	0	308	U
30	0	309	C
30	0	318	U
30	0	336	G
30	0	337	A
30	0	358	G
30	0	368	C
30	0	381	G
30	0	397	A
30	0	417	G
30	0	418	C
30	0	461	C
30	0	487	G
30	0	497	A
30	0	510	U
30	0	511	A
30	0	514	G
30	0	537	G
30	0	538	C
30	0	539	G
30	0	542	A
30	0	545	G
30	0	553	G
30	0	559	U
30	0	581	G
30	0	588	G
30	0	604	G
30	0	605	C
30	0	620	A
30	0	632	A
30	0	644	G

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Mol	Chain	Res	Type
30	0	645	U
30	0	660	A
30	0	688	A
30	0	698	A
30	0	699	C
30	0	701	U
30	0	705	C
30	0	746	A
30	0	759	C
30	0	776	A
30	0	777	U
30	0	809	G
30	0	821	U
30	0	835	U
30	0	840	U
30	0	857	A
30	0	868	G
30	0	869	G
30	0	871	G
30	0	872	U
30	0	875	A
30	0	877	G
30	0	878	G
30	0	882	A
30	0	884	C
30	0	885	G
30	0	898	G
30	0	905	C
30	0	921	G
30	0	923	A
30	0	953	G
30	0	960	G
30	0	1006	A
30	0	1008	C
30	0	1029	U
30	0	1044	C
30	0	1045	G
30	0	1059	G
30	0	1060	C
30	0	1072	G
30	0	1081	A
30	0	1083	C

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Mol	Chain	Res	Type
30	0	1088	A
30	0	1109	U
30	0	1110	G
30	0	1119	G
30	0	1121	G
30	0	1130	U
30	0	1137	G
30	0	1151	G
30	0	1161	A
30	0	1164	U
30	0	1165	G
30	0	1166	A
30	0	1174	A
30	0	1175	G
30	0	1185	U
30	0	1192	A
30	0	1193	A
30	0	1202	A
30	0	1206	U
30	0	1207	A
30	0	1216	G
30	0	1234	U
30	0	1238	C
30	0	1239	G
30	0	1279	U
30	0	1280	A
30	0	1287	A
30	0	1289	C
30	0	1331	G
30	0	1342	C
30	0	1351	G
30	0	1353	C
30	0	1354	G
30	0	1360	C
30	0	1377	C
30	0	1378	G
30	0	1380	U
30	0	1407	A
30	0	1409	G
30	0	1474	C
30	0	1488	U
30	0	1505	U

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Mol	Chain	Res	Type
30	0	1506	U
30	0	1524	U
30	0	1525	G
30	0	1526	A
30	0	1528	A
30	0	1535	G
30	0	1559	A
30	0	1562	C
30	0	1592	G
30	0	1617	C
30	0	1625	U
30	0	1626	A
30	0	1627	G
30	0	1634	G
30	0	1656	A
30	0	1667	A
30	0	1682	A
30	0	1684	A
30	0	1685	A
30	0	1692	C
30	0	1701	A
30	0	1722	U
30	0	1723	G
30	0	1725	C
30	0	1730	G
30	0	1731	C
30	0	1732	A
30	0	1752	G
30	0	1778	A
30	0	1779	A
30	0	1798	C
30	0	1819	G
30	0	1820	G
30	0	1829	A
30	0	1856	C
30	0	1875	A
30	0	1879	U
30	0	1885	A
30	0	1919	A
30	0	1968	A
30	0	1971	G
30	0	1973	A

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Mol	Chain	Res	Type
30	0	1978	A
30	0	1979	G
30	0	1996	U
30	0	2004	U
30	0	2006	C
30	0	2007	A
30	0	2008	U
30	0	2012	U
30	0	2013	G
30	0	2033	G
30	0	2034	U
30	0	2064	U
30	0	2072	G
30	0	2073	G
30	0	2074	A
30	0	2096	A
30	0	2101	A
30	0	2102	G
30	0	2103	A
30	0	2110	G
30	0	2134	G
30	0	2243	C
30	0	2258	A
30	0	2271	G
30	0	2272	G
30	0	2291	A
30	0	2317	C
30	0	2320	U
30	0	2321	A
30	0	2354	A
30	0	2361	A
30	0	2369	A
30	0	2379	G
30	0	2419	U
30	0	2422	U
30	0	2434	A
30	0	2462	G
30	0	2466	G
30	0	2467	A
30	0	2476	C
30	0	2483	A
30	0	2507	G

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Mol	Chain	Res	Type
30	0	2511	A
30	0	2513	A
30	0	2526	C
30	0	2527	U
30	0	2533	C
30	0	2537	G
30	0	2541	U
30	0	2553	A
30	0	2589	U
30	0	2601	A
30	0	2602	G
30	0	2607	U
30	0	2608	C
30	0	2613	G
30	0	2649	A
30	0	2664	A
30	0	2681	A
30	0	2682	C
30	0	2718	C
30	0	2719	A
30	0	2726	U
30	0	2747	C
30	0	2748	G
30	0	2749	U
30	0	2750	G
30	0	2762	C
30	0	2768	A
30	0	2800	A
30	0	2811	A
30	0	2812	A
30	0	2825	C
30	0	2876	G
30	0	2890	A
30	0	2896	A
30	0	2903	C
30	0	2909	G
30	0	2914	A
31	9	2	U
31	9	3	A
31	9	7	G
31	9	14	G
31	9	23	U

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Mol	Chain	Res	Type
31	9	24	U
31	9	25	G
31	9	34	A
31	9	40	C
31	9	41	C
31	9	43	G
31	9	44	A
31	9	52	A
31	9	57	A
31	9	66	G
31	9	77	A
31	9	114	G
31	9	122	C

All (15) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
30	0	69	A
30	0	129	A
30	0	604	G
30	0	644	G
30	0	834	G
30	0	871	G
30	0	1237	U
30	0	1352	A
30	0	1377	C
30	0	1504	A
30	0	2011	A
30	0	2466	G
30	0	2526	C
30	0	2718	C
31	9	65	A

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

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

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the

expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
30	UR3	0	2619	30	19,22,23	0.53	0	26,32,35	0.68	1 (3%)
30	1MA	0	628	35,30	21,25,26	0.73	1 (4%)	30,37,40	0.80	1 (3%)
30	PSU	0	2621	30	18,21,22	1.46	3 (16%)	21,30,33	1.43	3 (14%)
30	OMU	0	2587	30	19,22,23	0.44	0	25,31,34	0.40	0
30	OMG	0	2588	30	23,26,27	0.37	0	32,38,41	0.38	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
30	UR3	0	2619	30	-	0/7/25/26	0/2/2/2
30	1MA	0	628	35,30	-	0/7/25/26	0/3/3/3
30	PSU	0	2621	30	-	0/7/25/26	0/2/2/2
30	OMU	0	2587	30	-	0/9/27/28	0/2/2/2
30	OMG	0	2588	30	-	0/9/27/28	0/3/3/3

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	0	2621	PSU	C2-N1	4.49	1.42	1.36
30	0	2621	PSU	C6-C5	2.75	1.38	1.35
30	0	628	1MA	C6-N6	2.41	1.33	1.28
30	0	2621	PSU	C4-C5	-2.19	1.38	1.44

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	0	2621	PSU	C6-C5-C4	3.74	120.70	118.17
30	0	2621	PSU	C6-N1-C2	-3.27	119.66	122.69
30	0	2619	UR3	C4-N3-C2	2.86	126.88	124.58
30	0	2621	PSU	O2-C2-N1	2.80	125.67	122.79
30	0	628	1MA	N1-C2-N3	2.78	129.29	126.00

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

4 monomers are involved in 11 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
30	0	2619	UR3	1	0
30	0	2621	PSU	2	0
30	0	2587	OMU	5	0
30	0	2588	OMG	3	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 305 ligands modelled in this entry, 305 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	237/240 (98%)	0.02	1 (0%) 88 79	36, 78, 117, 135	0
2	B	337/338 (99%)	0.06	7 (2%) 63 44	36, 72, 106, 116	0
3	C	246/246 (100%)	-0.14	4 (1%) 70 52	31, 60, 87, 97	0
4	D	140/177 (79%)	0.63	9 (6%) 25 17	91, 126, 152, 162	0
5	E	172/178 (96%)	0.06	5 (2%) 53 35	62, 89, 116, 123	0
6	F	119/120 (99%)	0.30	4 (3%) 48 32	68, 96, 130, 142	0
7	G	29/348 (8%)	0.39	0 100 100	104, 117, 126, 127	0
8	H	160/177 (90%)	0.01	5 (3%) 51 35	57, 81, 125, 130	0
9	I	70/162 (43%)	1.30	18 (25%) 1 1	149, 172, 188, 190	0
10	J	142/145 (97%)	0.08	3 (2%) 63 44	48, 67, 90, 114	0
11	K	132/132 (100%)	-0.09	2 (1%) 72 53	38, 69, 98, 107	0
12	L	145/165 (87%)	0.44	9 (6%) 26 18	50, 96, 141, 147	0
13	M	194/196 (98%)	0.38	20 (10%) 12 10	41, 61, 109, 119	0
14	N	186/187 (99%)	0.34	7 (3%) 44 30	72, 94, 145, 152	0
15	O	115/116 (99%)	0.11	2 (1%) 69 50	57, 72, 93, 98	0
16	P	143/149 (95%)	0.05	1 (0%) 84 70	52, 74, 92, 103	0
17	Q	95/96 (98%)	0.07	2 (2%) 63 44	55, 71, 88, 103	0
18	R	150/155 (96%)	-0.25	1 (0%) 84 70	45, 61, 87, 109	0
19	S	81/85 (95%)	0.02	2 (2%) 58 39	61, 80, 103, 113	0
20	T	119/120 (99%)	0.04	2 (1%) 69 50	51, 74, 105, 132	0
21	U	53/67 (79%)	1.46	13 (24%) 2 1	119, 128, 137, 138	0
22	V	65/71 (91%)	0.30	2 (3%) 51 35	68, 97, 141, 146	0
23	W	154/154 (100%)	0.09	8 (5%) 33 22	49, 66, 88, 103	0
24	X	82/92 (89%)	0.30	5 (6%) 27 18	57, 81, 104, 121	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
25	Y	142/241 (58%)	-0.15	1 (0%) 84 70	39, 59, 87, 116	0
26	Z	73/116 (62%)	1.75	22 (30%) 1 1	109, 128, 137, 141	0
27	1	56/57 (98%)	-0.44	0 100 100	34, 47, 56, 60	0
28	2	46/50 (92%)	0.36	3 (6%) 25 17	43, 84, 116, 122	0
29	3	92/92 (100%)	1.83	31 (33%) 1 1	112, 132, 141, 144	0
30	0	2749/2923 (94%)	-0.64	6 (0%) 91 86	31, 64, 118, 195	0
31	9	122/122 (100%)	-0.52	0 100 100	53, 94, 121, 167	0
All	All	6646/7517 (88%)	-0.15	195 (2%) 53 35	31, 72, 133, 195	0

All (195) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
13	M	80	GLY	11.3
13	M	89	THR	7.8
29	3	35	TRP	7.2
29	3	39	GLN	7.0
13	M	78	LYS	6.8
26	Z	50	VAL	6.2
2	B	204	GLY	5.9
29	3	11	CYS	5.9
29	3	46	ILE	5.7
29	3	41	GLU	5.6
29	3	36	ILE	5.6
29	3	38	ARG	5.6
13	M	194	GLY	5.5
13	M	73	ARG	5.1
13	M	91	ILE	4.9
29	3	79	LEU	4.9
12	L	60	GLU	4.8
21	U	42	LEU	4.8
26	Z	45	VAL	4.7
9	I	117	THR	4.7
29	3	34	LYS	4.5
24	X	10	VAL	4.5
13	M	74	LYS	4.4
9	I	104	ALA	4.4
4	D	18	ILE	4.4
3	C	61	PHE	4.3
20	T	42	VAL	4.2
21	U	49	LEU	4.1

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Mol	Chain	Res	Type	RSRZ
6	F	39	SER	4.1
26	Z	36	GLY	4.1
21	U	35	LYS	4.1
26	Z	78	ILE	4.0
29	3	7	PHE	4.0
26	Z	46	SER	4.0
26	Z	53	ILE	3.9
21	U	22	VAL	3.9
26	Z	58	ASN	3.9
2	B	337	GLY	3.8
13	M	88	VAL	3.8
12	L	48	LYS	3.8
13	M	90	ARG	3.7
29	3	4	PRO	3.7
10	J	27	ALA	3.6
21	U	39	ASN	3.6
12	L	106	VAL	3.6
29	3	83	TRP	3.6
9	I	108	HIS	3.5
23	W	4	LEU	3.5
21	U	19	THR	3.5
29	3	54	LYS	3.5
8	H	133	GLY	3.5
14	N	48	VAL	3.5
6	F	44	SER	3.5
29	3	33	MET	3.4
22	V	1	THR	3.4
29	3	84	ARG	3.4
6	F	37	THR	3.4
29	3	37	ASP	3.3
26	Z	40	ALA	3.3
26	Z	43	GLY	3.3
13	M	85	ARG	3.2
14	N	53	ASN	3.2
9	I	128	THR	3.2
17	Q	12	GLY	3.2
5	E	118	ILE	3.2
26	Z	54	GLU	3.2
26	Z	56	GLU	3.2
26	Z	37	ARG	3.2
2	B	216	LYS	3.1
9	I	97	VAL	3.1

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Mol	Chain	Res	Type	RSRZ
21	U	44	ARG	3.1
26	Z	97	THR	3.1
21	U	40	ALA	3.1
26	Z	55	SER	3.1
28	2	38	LYS	3.0
12	L	146	GLY	3.0
24	X	65	ASN	3.0
29	3	43	ASN	3.0
29	3	42	ARG	2.9
21	U	16	GLY	2.9
26	Z	76	THR	2.9
23	W	5	VAL	2.9
13	M	87	GLY	2.9
8	H	174	LEU	2.9
14	N	168	LEU	2.9
18	R	88	PHE	2.9
26	Z	106	SER	2.8
29	3	31	THR	2.8
4	D	70	GLY	2.8
21	U	9	CYS	2.8
9	I	74	ILE	2.8
14	N	154	LEU	2.8
29	3	55	VAL	2.7
24	X	71	ARG	2.7
13	M	79	ALA	2.7
14	N	47	LEU	2.7
28	2	49	GLU	2.7
9	I	100	VAL	2.7
13	M	81	ARG	2.7
2	B	302	PRO	2.6
13	M	75	ARG	2.6
9	I	129	SER	2.6
26	Z	34	SER	2.6
19	S	20	PHE	2.6
29	3	60	LYS	2.6
29	3	56	PRO	2.6
2	B	114	ASP	2.6
12	L	2	SER	2.6
4	D	135	VAL	2.6
15	O	1	SER	2.6
10	J	83	ILE	2.5
25	Y	170	SER	2.5

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Mol	Chain	Res	Type	RSRZ
2	B	208	GLY	2.5
4	D	53	LYS	2.5
26	Z	35	SER	2.5
9	I	67	VAL	2.5
23	W	65	VAL	2.5
8	H	16	ALA	2.5
12	L	143	THR	2.5
9	I	84	SER	2.5
20	T	112	LEU	2.5
30	0	2637	A	2.5
3	C	63	SER	2.5
4	D	87	ALA	2.5
22	V	30	ALA	2.5
29	3	71	CYS	2.5
14	N	58	LEU	2.5
29	3	13	HIS	2.5
9	I	85	GLY	2.5
26	Z	103	VAL	2.5
4	D	10	PHE	2.4
9	I	107	LYS	2.4
13	M	76	ARG	2.4
28	2	35	ARG	2.4
30	0	735	C	2.4
21	U	21	PHE	2.4
24	X	72	VAL	2.4
11	K	47	ALA	2.4
12	L	3	LYS	2.4
21	U	38	ASN	2.4
5	E	100	ASP	2.4
17	Q	2	SER	2.4
26	Z	49	ARG	2.3
30	0	298	C	2.3
4	D	55	LYS	2.3
4	D	142	ALA	2.3
9	I	68	PRO	2.3
11	K	6	ALA	2.3
24	X	37	LEU	2.3
2	B	202	VAL	2.3
5	E	53	GLU	2.3
14	N	163	PHE	2.3
1	A	58	VAL	2.3
23	W	118	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
9	I	111	LEU	2.2
29	3	88	LEU	2.2
13	M	118	TYR	2.2
30	0	734	U	2.2
16	P	16	VAL	2.2
9	I	95	LEU	2.2
8	H	115	GLY	2.2
23	W	3	ALA	2.2
3	C	144	PHE	2.2
9	I	106	GLN	2.2
29	3	64	LYS	2.1
3	C	59	GLU	2.1
19	S	60	GLY	2.1
13	M	114	VAL	2.1
29	3	22	VAL	2.1
9	I	70	THR	2.1
15	O	91	GLN	2.1
21	U	50	GLU	2.1
4	D	141	VAL	2.1
5	E	161	VAL	2.1
26	Z	94	LYS	2.1
8	H	171	GLY	2.1
13	M	116	ASN	2.1
23	W	150	LEU	2.1
13	M	86	GLN	2.1
29	3	82	GLY	2.1
29	3	40	ARG	2.1
9	I	127	CYS	2.1
23	W	32	CYS	2.1
12	L	83	GLU	2.1
29	3	51	LYS	2.0
13	M	68	ARG	2.0
26	Z	57	MET	2.0
10	J	70	PHE	2.0
23	W	45	VAL	2.0
30	0	953	G	2.0
30	0	1130	U	2.0
6	F	36	THR	2.0
29	3	14	CYS	2.0
12	L	59	GLU	2.0
5	E	154	ILE	2.0

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
30	1MA	0	628	23/24	0.97	0.07	37,44,45,46	0
30	OMG	0	2588	24/25	0.97	0.07	48,51,54,55	0
30	UR3	0	2619	21/22	0.97	0.08	56,57,60,60	0
30	PSU	0	2621	20/21	0.97	0.07	49,51,60,60	0
30	OMU	0	2587	21/22	0.98	0.06	51,52,54,56	0

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
35	NA	0	8574	1/1	0.49	0.47	92,92,92,92	0
34	SR	0	8977	1/1	0.65	0.10	200,200,200,200	0
37	CD	U	8701	1/1	0.71	0.35	180,180,180,180	0
37	CD	3	8704	1/1	0.71	0.47	183,183,183,183	0
35	NA	0	8518	1/1	0.72	0.40	91,91,91,91	0
35	NA	9	8572	1/1	0.72	0.19	71,71,71,71	0
35	NA	0	8522	1/1	0.74	0.73	130,130,130,130	0
33	CL	3	8804	1/1	0.75	0.12	98,98,98,98	0
34	SR	3	8999	1/1	0.76	0.22	200,200,200,200	0
35	NA	0	8558	1/1	0.76	0.37	82,82,82,82	0
37	CD	Z	8703	1/1	0.76	0.36	188,188,188,188	0
34	SR	0	8957	1/1	0.76	0.29	200,200,200,200	0
34	SR	0	8955	1/1	0.78	0.23	200,200,200,200	0
32	MG	0	8030	1/1	0.79	0.34	75,75,75,75	0
33	CL	A	8809	1/1	0.80	0.35	116,116,116,116	0
34	SR	0	8983	1/1	0.80	0.11	200,200,200,200	0
33	CL	0	8815	1/1	0.81	0.20	130,130,130,130	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
35	NA	0	8559	1/1	0.81	0.32	96,96,96,96	0
35	NA	0	8573	1/1	0.81	0.24	89,89,89,89	0
34	SR	0	8993	1/1	0.81	0.10	200,200,200,200	0
33	CL	N	8807	1/1	0.82	0.37	99,99,99,99	0
35	NA	0	8506	1/1	0.82	0.13	91,91,91,91	0
32	MG	9	8074	1/1	0.82	0.14	97,97,97,97	0
34	SR	B	8987	1/1	0.83	0.37	200,200,200,200	0
34	SR	0	8982	1/1	0.83	0.33	200,200,200,200	0
34	SR	0	8938	1/1	0.83	0.08	200,200,200,200	0
34	SR	0	8976	1/1	0.84	0.20	195,195,195,195	0
34	SR	0	9006	1/1	0.84	0.39	200,200,200,200	0
34	SR	0	8919	1/1	0.84	0.24	185,185,185,185	0
35	NA	0	8571	1/1	0.84	0.17	99,99,99,99	0
34	SR	0	8988	1/1	0.84	0.08	200,200,200,200	0
32	MG	0	8066	1/1	0.85	0.24	71,71,71,71	0
34	SR	0	8953	1/1	0.85	0.11	179,179,179,179	0
35	NA	0	8544	1/1	0.85	0.24	76,76,76,76	0
34	SR	9	9003	1/1	0.86	0.07	200,200,200,200	0
35	NA	0	8560	1/1	0.86	0.16	80,80,80,80	0
32	MG	0	8029	1/1	0.86	0.18	62,62,62,62	0
34	SR	2	8947	1/1	0.86	0.12	195,195,195,195	0
35	NA	0	8520	1/1	0.86	0.12	44,44,44,44	0
34	SR	0	8979	1/1	0.86	0.15	200,200,200,200	0
35	NA	0	8528	1/1	0.86	0.32	113,113,113,113	0
34	SR	0	8997	1/1	0.86	0.51	200,200,200,200	0
34	SR	0	8959	1/1	0.86	0.10	190,190,190,190	0
34	SR	0	8969	1/1	0.87	0.39	200,200,200,200	0
34	SR	0	8975	1/1	0.87	0.09	189,189,189,189	0
35	NA	0	8537	1/1	0.87	0.06	46,46,46,46	0
32	MG	A	8051	1/1	0.87	0.10	95,95,95,95	0
35	NA	0	8557	1/1	0.87	0.16	70,70,70,70	0
35	NA	J	8538	1/1	0.88	0.18	84,84,84,84	0
35	NA	0	8554	1/1	0.88	0.41	124,124,124,124	0
35	NA	L	8568	1/1	0.88	0.09	59,59,59,59	0
35	NA	R	8575	1/1	0.88	0.27	97,97,97,97	0
34	SR	0	8956	1/1	0.88	0.12	200,200,200,200	0
35	NA	0	8509	1/1	0.88	0.20	84,84,84,84	0
34	SR	0	9000	1/1	0.88	0.19	200,200,200,200	0
34	SR	0	9001	1/1	0.88	0.11	200,200,200,200	0
34	SR	0	9004	1/1	0.88	0.25	200,200,200,200	0
35	NA	0	8524	1/1	0.88	0.08	53,53,53,53	0
35	NA	0	8525	1/1	0.88	0.18	113,113,113,113	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
32	MG	0	8038	1/1	0.88	0.06	94,94,94,94	0
32	MG	0	8036	1/1	0.88	0.13	62,62,62,62	0
35	NA	0	8529	1/1	0.89	0.10	61,61,61,61	0
32	MG	0	8091	1/1	0.89	0.13	67,67,67,67	0
34	SR	0	8967	1/1	0.89	0.07	163,163,163,163	0
32	MG	0	8042	1/1	0.89	0.21	75,75,75,75	0
33	CL	0	8822	1/1	0.89	0.32	140,140,140,140	0
32	MG	9	8040	1/1	0.90	0.19	101,101,101,101	0
35	NA	0	8511	1/1	0.90	0.07	53,53,53,53	0
32	MG	T	8057	1/1	0.90	0.22	80,80,80,80	0
34	SR	0	9002	1/1	0.90	0.13	200,200,200,200	0
34	SR	0	8971	1/1	0.90	0.12	200,200,200,200	0
34	SR	0	8922	1/1	0.90	0.14	181,181,181,181	0
34	SR	0	8991	1/1	0.90	0.08	188,188,188,188	0
35	NA	0	8527	1/1	0.90	0.16	92,92,92,92	0
32	MG	0	8047	1/1	0.90	0.48	90,90,90,90	0
34	SR	0	8994	1/1	0.90	0.42	200,200,200,200	0
34	SR	0	8939	1/1	0.90	0.24	155,155,155,155	0
34	SR	0	8998	1/1	0.90	0.32	200,200,200,200	0
34	SR	9	8980	1/1	0.91	0.06	191,191,191,191	0
35	NA	0	8556	1/1	0.91	0.29	94,94,94,94	0
35	NA	0	8562	1/1	0.91	0.35	83,83,83,83	0
33	CL	0	8805	1/1	0.91	0.12	105,105,105,105	0
34	SR	0	9007	1/1	0.91	0.32	200,200,200,200	0
34	SR	0	8951	1/1	0.92	0.07	183,183,183,183	0
33	CL	J	8821	1/1	0.92	0.14	99,99,99,99	0
32	MG	0	8056	1/1	0.92	0.09	47,47,47,47	0
34	SR	0	8927	1/1	0.92	0.16	171,171,171,171	0
35	NA	0	8523	1/1	0.92	0.10	51,51,51,51	0
34	SR	0	8933	1/1	0.92	0.16	126,126,126,126	0
34	SR	3	8932	1/1	0.92	0.20	148,148,148,148	0
35	NA	Q	8540	1/1	0.92	0.09	74,74,74,74	0
35	NA	R	8533	1/1	0.92	0.08	94,94,94,94	0
32	MG	0	8037	1/1	0.92	0.33	92,92,92,92	0
35	NA	9	8543	1/1	0.92	0.26	51,51,51,51	0
34	SR	0	8985	1/1	0.92	0.12	168,168,168,168	0
36	K	0	8401	1/1	0.92	0.18	145,145,145,145	0
34	SR	0	8941	1/1	0.92	0.09	141,141,141,141	0
35	NA	0	8545	1/1	0.92	0.19	74,74,74,74	0
35	NA	0	8553	1/1	0.92	0.22	81,81,81,81	0
35	NA	0	8507	1/1	0.93	0.08	38,38,38,38	0
34	SR	0	8984	1/1	0.93	0.05	124,124,124,124	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
33	CL	J	8816	1/1	0.93	0.53	99,99,99,99	0
35	NA	0	8514	1/1	0.93	0.36	74,74,74,74	0
32	MG	0	8039	1/1	0.93	0.34	94,94,94,94	0
34	SR	0	8974	1/1	0.93	0.12	196,196,196,196	0
34	SR	0	8992	1/1	0.93	0.24	141,141,141,141	0
34	SR	A	8930	1/1	0.93	0.16	131,131,131,131	0
33	CL	M	8818	1/1	0.93	0.16	58,58,58,58	0
34	SR	0	8996	1/1	0.93	0.22	200,200,200,200	0
32	MG	0	8043	1/1	0.93	0.16	62,62,62,62	0
35	NA	R	8532	1/1	0.93	0.13	68,68,68,68	0
32	MG	0	8093	1/1	0.93	0.14	48,48,48,48	0
34	SR	0	8964	1/1	0.93	0.08	176,176,176,176	0
35	NA	0	8542	1/1	0.93	0.30	79,79,79,79	0
35	NA	S	8510	1/1	0.93	0.05	41,41,41,41	0
33	CL	J	8802	1/1	0.93	0.08	86,86,86,86	0
35	NA	0	8516	1/1	0.94	0.11	27,27,27,27	0
35	NA	B	8552	1/1	0.94	0.20	70,70,70,70	0
34	SR	0	8915	1/1	0.94	0.11	123,123,123,123	0
32	MG	0	8082	1/1	0.94	0.09	62,62,62,62	0
34	SR	0	8920	1/1	0.94	0.11	145,145,145,145	0
32	MG	0	8089	1/1	0.94	0.13	56,56,56,56	0
32	MG	0	8061	1/1	0.94	0.09	47,47,47,47	0
35	NA	0	8567	1/1	0.94	0.43	83,83,83,83	0
35	NA	0	8570	1/1	0.94	0.07	57,57,57,57	0
32	MG	0	8092	1/1	0.94	0.07	53,53,53,53	0
33	CL	L	8810	1/1	0.94	0.14	91,91,91,91	0
35	NA	0	8502	1/1	0.94	0.10	66,66,66,66	0
35	NA	0	8536	1/1	0.94	0.05	64,64,64,64	0
32	MG	0	8065	1/1	0.94	0.09	66,66,66,66	0
36	K	M	8402	1/1	0.94	0.12	96,96,96,96	0
34	SR	0	8970	1/1	0.94	0.08	158,158,158,158	0
32	MG	0	8031	1/1	0.94	0.04	68,68,68,68	0
34	SR	0	8973	1/1	0.94	0.06	142,142,142,142	0
32	MG	0	8075	1/1	0.94	0.07	50,50,50,50	0
34	SR	0	8935	1/1	0.95	0.06	101,101,101,101	0
34	SR	0	8995	1/1	0.95	0.06	123,123,123,123	0
32	MG	0	8046	1/1	0.95	0.06	44,44,44,44	0
35	NA	0	8546	1/1	0.95	0.12	108,108,108,108	0
35	NA	0	8548	1/1	0.95	0.14	44,44,44,44	0
35	NA	0	8551	1/1	0.95	0.20	75,75,75,75	0
34	SR	0	8972	1/1	0.95	0.11	138,138,138,138	0
34	SR	F	9005	1/1	0.95	0.11	170,170,170,170	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
35	NA	0	8508	1/1	0.95	0.49	118,118,118,118	0
34	SR	J	8986	1/1	0.95	0.08	200,200,200,200	0
34	SR	0	8944	1/1	0.95	0.07	168,168,168,168	0
35	NA	0	8512	1/1	0.95	0.14	40,40,40,40	0
34	SR	0	8946	1/1	0.95	0.07	144,144,144,144	0
32	MG	0	8020	1/1	0.95	0.09	50,50,50,50	0
32	MG	0	8090	1/1	0.95	0.14	57,57,57,57	0
35	NA	0	8569	1/1	0.95	0.12	71,71,71,71	0
33	CL	O	8808	1/1	0.95	0.13	114,114,114,114	0
33	CL	Q	8811	1/1	0.95	0.12	124,124,124,124	0
33	CL	B	8819	1/1	0.95	0.35	83,83,83,83	0
33	CL	J	8801	1/1	0.95	0.11	85,85,85,85	0
35	NA	C	8503	1/1	0.95	0.05	36,36,36,36	0
32	MG	0	8049	1/1	0.95	0.12	82,82,82,82	0
34	SR	0	8989	1/1	0.95	0.09	174,174,174,174	0
34	SR	0	8965	1/1	0.95	0.08	160,160,160,160	0
35	NA	0	8535	1/1	0.95	0.06	58,58,58,58	0
32	MG	0	8071	1/1	0.95	0.23	78,78,78,78	0
32	MG	0	8034	1/1	0.95	0.06	50,50,50,50	0
34	SR	0	8963	1/1	0.96	0.04	117,117,117,117	0
35	NA	0	8541	1/1	0.96	0.10	60,60,60,60	0
33	CL	0	8814	1/1	0.96	0.20	51,51,51,51	0
32	MG	0	8014	1/1	0.96	0.06	25,25,25,25	0
35	NA	0	8501	1/1	0.96	0.08	53,53,53,53	0
34	SR	0	8928	1/1	0.96	0.06	156,156,156,156	0
34	SR	0	8968	1/1	0.96	0.08	175,175,175,175	0
35	NA	0	8550	1/1	0.96	0.24	129,129,129,129	0
32	MG	0	8017	1/1	0.96	0.04	28,28,28,28	0
34	SR	A	8929	1/1	0.96	0.19	139,139,139,139	0
34	SR	0	8937	1/1	0.96	0.07	126,126,126,126	0
32	MG	Y	8086	1/1	0.96	0.18	52,52,52,52	0
32	MG	0	8073	1/1	0.96	0.23	89,89,89,89	0
35	NA	0	8513	1/1	0.96	0.24	67,67,67,67	0
32	MG	0	8059	1/1	0.96	0.05	55,55,55,55	0
34	SR	0	8942	1/1	0.96	0.07	123,123,123,123	0
35	NA	0	8517	1/1	0.96	0.13	69,69,69,69	0
35	NA	0	8563	1/1	0.96	0.10	66,66,66,66	0
35	NA	0	8564	1/1	0.96	0.10	87,87,87,87	0
35	NA	0	8565	1/1	0.96	0.11	85,85,85,85	0
32	MG	0	8076	1/1	0.96	0.06	76,76,76,76	0
34	SR	R	8912	1/1	0.96	0.06	107,107,107,107	0
35	NA	0	8521	1/1	0.96	0.14	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
34	SR	0	8978	1/1	0.96	0.07	132,132,132,132	0
32	MG	0	8078	1/1	0.96	0.21	72,72,72,72	0
32	MG	0	8081	1/1	0.96	0.18	116,116,116,116	0
32	MG	0	8032	1/1	0.96	0.03	47,47,47,47	0
33	CL	0	8803	1/1	0.96	0.13	82,82,82,82	0
32	MG	0	8083	1/1	0.96	0.11	58,58,58,58	0
35	NA	M	8539	1/1	0.96	0.06	38,38,38,38	0
35	NA	0	8531	1/1	0.96	0.22	54,54,54,54	0
33	CL	0	8813	1/1	0.96	0.11	64,64,64,64	0
34	SR	0	8960	1/1	0.96	0.05	156,156,156,156	0
32	MG	0	8068	1/1	0.97	0.06	44,44,44,44	0
32	MG	0	8053	1/1	0.97	0.07	88,88,88,88	0
35	NA	0	8555	1/1	0.97	0.10	80,80,80,80	0
32	MG	0	8055	1/1	0.97	0.06	60,60,60,60	0
34	SR	0	8908	1/1	0.97	0.04	99,99,99,99	0
32	MG	0	8044	1/1	0.97	0.12	59,59,59,59	0
34	SR	0	8916	1/1	0.97	0.06	110,110,110,110	0
34	SR	0	8917	1/1	0.97	0.05	111,111,111,111	0
35	NA	0	8561	1/1	0.97	0.17	53,53,53,53	0
32	MG	0	8015	1/1	0.97	0.04	30,30,30,30	0
35	NA	0	8504	1/1	0.97	0.10	41,41,41,41	0
35	NA	0	8530	1/1	0.97	0.07	53,53,53,53	0
32	MG	A	8050	1/1	0.97	0.06	69,69,69,69	0
35	NA	0	8566	1/1	0.97	0.13	86,86,86,86	0
35	NA	0	8534	1/1	0.97	0.16	53,53,53,53	0
32	MG	0	8079	1/1	0.97	0.08	57,57,57,57	0
34	SR	0	8926	1/1	0.97	0.09	131,131,131,131	0
34	SR	0	8981	1/1	0.97	0.07	198,198,198,198	0
34	SR	B	8950	1/1	0.97	0.06	123,123,123,123	0
32	MG	0	8062	1/1	0.97	0.09	66,66,66,66	0
33	CL	Y	8820	1/1	0.97	0.10	58,58,58,58	0
34	SR	0	8934	1/1	0.97	0.13	138,138,138,138	0
32	MG	0	8035	1/1	0.97	0.11	76,76,76,76	0
35	NA	0	8547	1/1	0.97	0.30	115,115,115,115	0
34	SR	0	8936	1/1	0.97	0.04	114,114,114,114	0
32	MG	0	8052	1/1	0.97	0.10	63,63,63,63	0
35	NA	0	8519	1/1	0.97	0.06	51,51,51,51	0
34	SR	0	8924	1/1	0.98	0.10	131,131,131,131	0
34	SR	0	8925	1/1	0.98	0.06	98,98,98,98	0
32	MG	0	8027	1/1	0.98	0.05	44,44,44,44	0
32	MG	0	8063	1/1	0.98	0.09	60,60,60,60	0
32	MG	0	8064	1/1	0.98	0.05	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
34	SR	0	8931	1/1	0.98	0.03	120,120,120,120	0
32	MG	0	8048	1/1	0.98	0.09	26,26,26,26	0
32	MG	0	8085	1/1	0.98	0.07	67,67,67,67	0
32	MG	Y	8077	1/1	0.98	0.11	58,58,58,58	0
32	MG	0	8067	1/1	0.98	0.07	47,47,47,47	0
32	MG	0	8001	1/1	0.98	0.05	42,42,42,42	0
35	NA	0	8505	1/1	0.98	0.14	37,37,37,37	0
34	SR	S	8961	1/1	0.98	0.05	130,130,130,130	0
34	SR	1	8952	1/1	0.98	0.04	92,92,92,92	0
33	CL	R	8806	1/1	0.98	0.05	66,66,66,66	0
32	MG	0	8070	1/1	0.98	0.12	39,39,39,39	0
34	SR	0	8943	1/1	0.98	0.09	89,89,89,89	0
32	MG	0	8008	1/1	0.98	0.07	26,26,26,26	0
32	MG	0	8072	1/1	0.98	0.05	45,45,45,45	0
34	SR	0	8948	1/1	0.98	0.04	110,110,110,110	0
34	SR	0	8949	1/1	0.98	0.03	128,128,128,128	0
34	SR	0	8910	1/1	0.98	0.05	118,118,118,118	0
34	SR	0	8911	1/1	0.98	0.04	100,100,100,100	0
34	SR	0	8954	1/1	0.98	0.04	115,115,115,115	0
34	SR	0	8914	1/1	0.98	0.04	133,133,133,133	0
32	MG	0	8018	1/1	0.98	0.03	34,34,34,34	0
33	CL	0	8812	1/1	0.98	0.07	70,70,70,70	0
34	SR	0	8958	1/1	0.98	0.04	126,126,126,126	0
32	MG	0	8033	1/1	0.98	0.05	69,69,69,69	0
34	SR	0	8918	1/1	0.98	0.03	88,88,88,88	0
35	NA	0	8526	1/1	0.98	0.03	67,67,67,67	0
34	SR	0	8962	1/1	0.98	0.07	168,168,168,168	0
32	MG	0	8010	1/1	0.98	0.04	46,46,46,46	0
32	MG	0	8022	1/1	0.98	0.07	25,25,25,25	0
34	SR	0	8921	1/1	0.98	0.03	88,88,88,88	0
37	CD	O	8705	1/1	0.98	0.10	105,105,105,105	0
34	SR	0	8966	1/1	0.98	0.03	101,101,101,101	0
33	CL	0	8817	1/1	0.98	0.05	84,84,84,84	0
34	SR	0	8923	1/1	0.98	0.04	108,108,108,108	0
32	MG	0	8006	1/1	0.99	0.03	44,44,44,44	0
35	NA	0	8515	1/1	0.99	0.04	35,35,35,35	0
32	MG	0	8016	1/1	0.99	0.03	41,41,41,41	0
32	MG	0	8045	1/1	0.99	0.02	28,28,28,28	0
32	MG	0	8080	1/1	0.99	0.04	65,65,65,65	0
34	SR	0	9008	1/1	0.99	0.03	94,94,94,94	0
34	SR	0	8945	1/1	0.99	0.03	119,119,119,119	0
32	MG	0	8007	1/1	0.99	0.03	21,21,21,21	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
32	MG	K	8054	1/1	0.99	0.05	42,42,42,42	0
32	MG	0	8009	1/1	0.99	0.10	24,24,24,24	0
32	MG	0	8084	1/1	0.99	0.06	37,37,37,37	0
32	MG	0	8003	1/1	0.99	0.06	27,27,27,27	0
32	MG	0	8087	1/1	0.99	0.03	22,22,22,22	0
32	MG	0	8088	1/1	0.99	0.11	53,53,53,53	0
32	MG	0	8023	1/1	0.99	0.06	38,38,38,38	0
34	SR	1	8913	1/1	0.99	0.03	108,108,108,108	0
32	MG	0	8069	1/1	0.99	0.07	73,73,73,73	0
32	MG	0	8024	1/1	0.99	0.07	39,39,39,39	0
34	SR	0	8990	1/1	0.99	0.10	113,113,113,113	0
32	MG	0	8026	1/1	0.99	0.02	37,37,37,37	0
32	MG	0	8011	1/1	0.99	0.06	33,33,33,33	0
34	SR	0	8901	1/1	0.99	0.03	73,73,73,73	0
34	SR	0	8903	1/1	0.99	0.10	63,63,63,63	0
34	SR	0	8904	1/1	0.99	0.10	73,73,73,73	0
34	SR	0	8905	1/1	0.99	0.10	68,68,68,68	0
32	MG	0	8005	1/1	0.99	0.08	24,24,24,24	0
34	SR	0	8909	1/1	0.99	0.03	100,100,100,100	0
32	MG	0	8060	1/1	0.99	0.02	58,58,58,58	0
34	SR	0	8940	1/1	0.99	0.03	93,93,93,93	0
35	NA	0	8549	1/1	0.99	0.15	96,96,96,96	0
32	MG	0	8012	1/1	1.00	0.06	26,26,26,26	0
32	MG	0	8013	1/1	1.00	0.04	19,19,19,19	0
32	MG	0	8041	1/1	1.00	0.02	25,25,25,25	0
32	MG	0	8004	1/1	1.00	0.02	19,19,19,19	0
32	MG	0	8025	1/1	1.00	0.04	23,23,23,23	0
32	MG	0	8019	1/1	1.00	0.03	19,19,19,19	0
32	MG	0	8058	1/1	1.00	0.02	7,7,7,7	0
34	SR	0	8902	1/1	1.00	0.02	72,72,72,72	0
32	MG	0	8002	1/1	1.00	0.02	31,31,31,31	0
32	MG	0	8028	1/1	1.00	0.01	13,13,13,13	0
32	MG	0	8021	1/1	1.00	0.03	31,31,31,31	0
34	SR	0	8906	1/1	1.00	0.02	66,66,66,66	0
37	CD	1	8702	1/1	1.00	0.05	78,78,78,78	0
34	SR	0	8907	1/1	1.00	0.04	60,60,60,60	0

6.5 Other polymers

There are no such residues in this entry.