Full wwPDB X-ray Structure Validation Report (i)

Mar 9, 2026 – 05:51 AM UTC

PDB ID	:	4V4J / pdb_00004v4j
Title	:	Interactions and Dynamics of the Shine-Dalgarno Helix in the 70S Ribosome.
Authors	:	Korostelev, A.; Trakhanov, S.; Asahara, H.; Laurberg, M.; Noller, H.F.
Deposited on	:	2007-07-18
Resolution	:	3.83 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 (i) 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 (i)) were used in the production of this report:

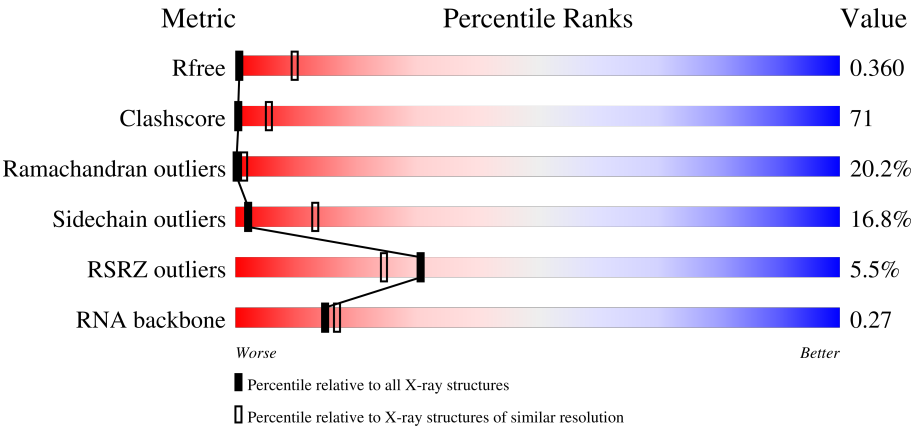
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry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

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.83 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 (4.00-3.68)
Clashscore	190562	1211 (4.00-3.68)
Ramachandran outliers	187476	1156 (4.00-3.68)
Sidechain outliers	187428	1149 (4.00-3.68)
RSRZ outliers	180081	1168 (4.00-3.68)
RNA backbone	3983	1010 (4.56-3.10)

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 <=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	w	2889	6% 10% 58% 30% .
2	x	120	2% 7% 57% 37%
3	A	229	2% 12% 30% 11% . 45%
4	B	276	5% 11% 52% 33% . .

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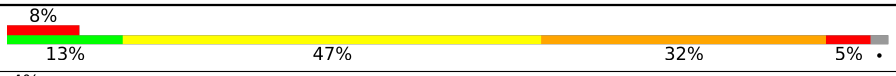
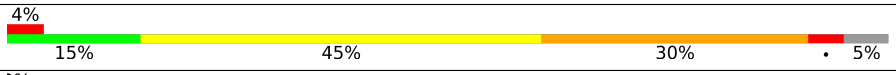
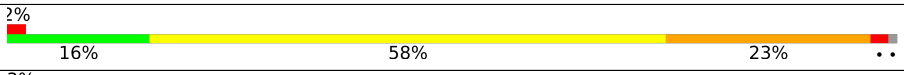
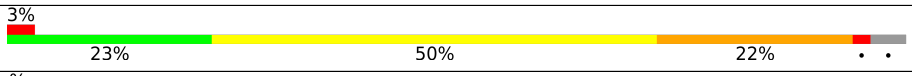
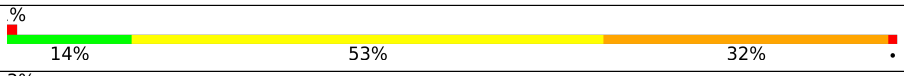
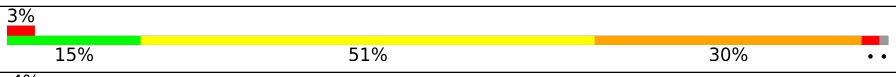
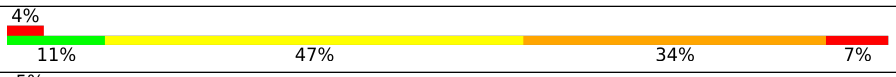
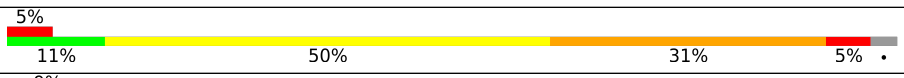
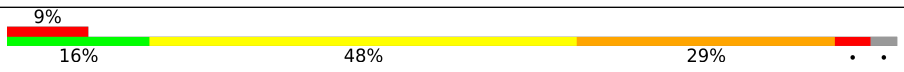
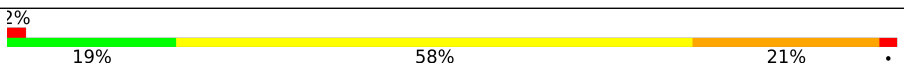
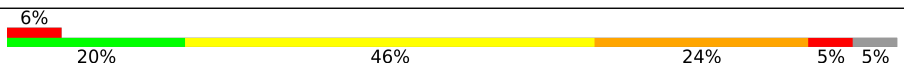
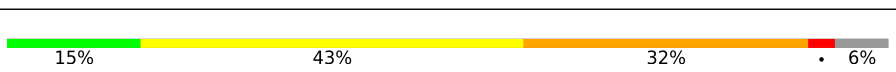
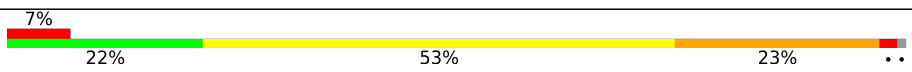
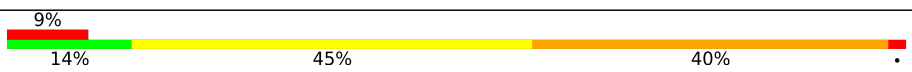
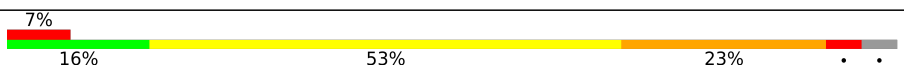
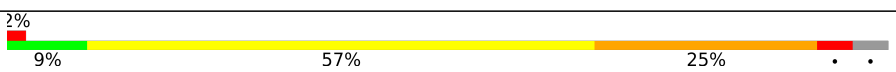
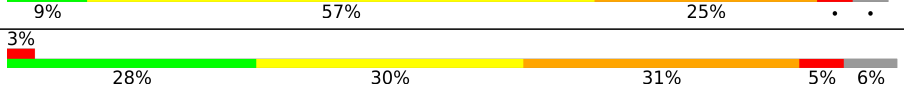
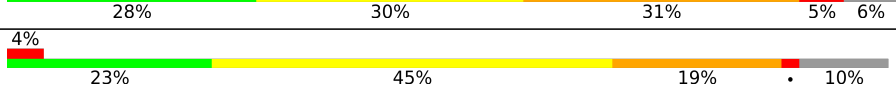
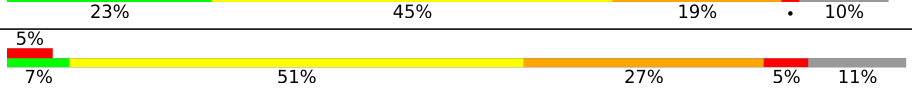
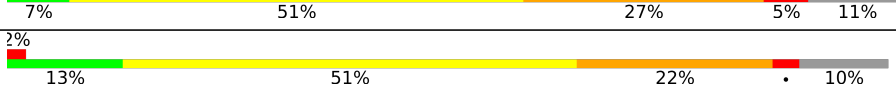
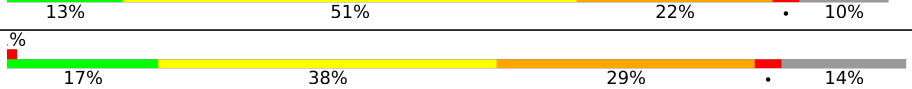
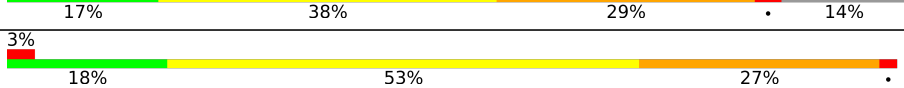
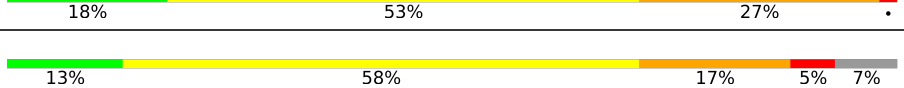
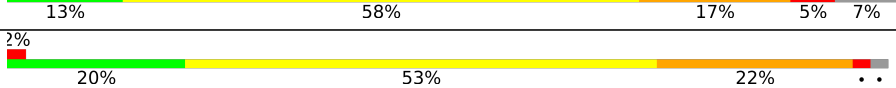
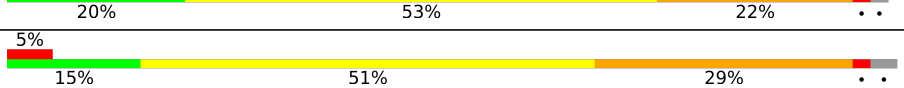
Mol	Chain	Length	Quality of chain
5	C	206	
6	D	205	
7	E	182	
8	F	180	
9	G	148	
10	H	140	
11	I	122	
12	J	150	
13	K	141	
14	L	118	
15	M	112	
16	N	146	
17	O	118	
18	P	101	
19	Q	113	
20	R	96	
21	S	110	
22	T	206	
23	U	85	
24	V	98	
25	W	72	
26	X	60	
27	Y	60	
28	Z	49	
29	a	65	

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Mol	Chain	Length	Quality of chain
30	b	37	16% 11% 68% 14% 5%
31	y	1522	7% 6% 61% 30%
32	z	77	9% 10% 64% 26%
33	2	76	14% 9% 62% 28%
34	3	18	22% 17% 56% 28%
35	c	256	3% 30% 41% 18% 9%
36	d	239	4% 14% 50% 19% 14%
37	e	209	4% 22% 56% 19%
38	f	162	7% 24% 51% 15% 7%
39	g	101	37% 43% 20%
40	h	156	20% 53% 23%
41	i	138	4% 15% 58% 25%
42	j	128	9% 31% 55% 12%
43	k	105	6% 27% 45% 21% 7%
44	l	129	13% 30% 46% 13% 10%
45	m	132	7% 17% 46% 29% 6%
46	n	126	14% 26% 46% 25%
47	o	61	3% 10% 49% 34% 5%
48	p	89	20% 58% 15% 6%
49	q	88	11% 45% 32% 6% 6%
50	r	105	10% 57% 28% 5%
51	s	88	18% 55% 18% 8%
52	t	93	18% 32% 32% 14%
53	u	106	3% 20% 47% 25% 7%
54	v	27	7% 15% 37% 37% 11%

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
31	MA6	y	1518	-	-	X	-

2 Entry composition (i)

There are 54 unique types of molecules in this entry. The entry contains 147125 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 RNA chain called 23S LARGE SUBUNIT RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	w	2889	62213	27690	11624	20011	2888	0	0	0

- Molecule 2 is a RNA chain called 5S LARGE SUBUNIT RIBOSOMAL RNA.

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

- Molecule 3 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	A	127	996	627	184	184	1	0	0	0

- Molecule 4 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	B	272	2115	1335	420	357	3	0	0	0

- Molecule 5 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
5	C	201	1541	974	295	267	5	0	0	0

- Molecule 6 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
6	D	194	1517	969	283	263	2	0	0	0

- Molecule 7 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	E	180	Total	C	N	O	S	0	0	0
			1468	938	267	259	4			

- Molecule 8 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	F	173	Total	C	N	O	S	0	0	0
			1319	839	245	234	1			

- Molecule 9 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	G	148	Total	C	N	O	S	0	0	0
			1156	737	204	214	1			

- Molecule 10 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	H	138	Total	C	N	O	S	0	0	0
			1103	712	206	182	3			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
H	24	VAL	MET	conflict	UNP Q72IN1

- Molecule 11 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	I	122	Total	C	N	O	S	0	0	0
			932	587	171	170	4			

- Molecule 12 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	J	146	Total	C	N	O	S	0	0	0
			1114	692	227	193	2			

- Molecule 13 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	K	137	Total	C	N	O	S	0	0	0
			1089	698	207	177	7			

- Molecule 14 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	L	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			

- Molecule 15 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
15	M	106	Total	C	N	O	0	0	0
			846	534	168	144			

- Molecule 16 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	N	137	Total	C	N	O	S	0	0	0
			1143	713	234	195	1			

- Molecule 17 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	O	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			

- Molecule 18 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	P	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 19 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	Q	109	Total	C	N	O	S	0	0	0
			868	547	170	150	1			

- Molecule 20 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
20	R	92	Total	C	N	O	0	0	0
			725	471	131	123			

- Molecule 21 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	S	103	Total	C	N	O	S	0	0	0
			793	510	151	126	6			

- Molecule 22 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	T	185	Total	C	N	O	S	0	0	0
			1475	941	262	269	3			

- Molecule 23 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	U	76	Total	C	N	O	S	0	0	0
			605	376	126	102	1			

- Molecule 24 is a protein called LSU ribosomal protein L28P.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
24	V	88	Total	C	N	O	0	0	0
			694	435	141	118			

- Molecule 25 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	W	62	Total	C	N	O	S	0	0	0
			520	325	102	91	2			

- Molecule 26 is a protein called LSU ribosomal protein L30P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	X	60	Total	C	N	O	S	0	0	0
			477	303	91	82	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	Y	56	Total	C	N	O	S	0	0	0
			436	275	84	72	5			

- Molecule 28 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	Z	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 29 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	a	63	Total	C	N	O	S	0	0	0
			507	326	101	78	2			

- Molecule 30 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	b	35	Total	C	N	O	S	0	0	0
			294	181	66	44	3			

- Molecule 31 is a RNA chain called 16S RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	y	1514	Total	C	N	O	P	0	0	0
			32546	14494	6022	10517	1513			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
y	466	G	C	conflict	GB 155076

- Molecule 32 is a RNA chain called P-site tRNAfMET.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	z	77	Total	C	N	O	P	0	0	0
			1639	732	297	534	76			

- Molecule 33 is a RNA chain called E-site tRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	2	76	Total	C	N	O	P	0	0	0
			1621	725	293	528	75			

- Molecule 34 is a RNA chain called MRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	3	18	Total	C	N	O	P	0	0	0
			390	176	80	117	17			

- Molecule 35 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	c	234	Total	C	N	O	S	0	0	0
			1900	1213	341	341	5			

- Molecule 36 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	d	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			

- Molecule 37 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	e	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

- Molecule 38 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	f	150	Total	C	N	O	S	0	0	0
			1146	724	217	201	4			

- Molecule 39 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	g	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 40 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	h	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 41 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	i	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 42 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	j	127	Total	C	N	O	0	0	0
			1011	639	198	174			

- Molecule 43 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	k	98	Total	C	N	O	S	0	0	0
			794	499	156	138	1			

- Molecule 44 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	l	116	Total	C	N	O	S	0	0	0
			864	537	164	160	3			

- Molecule 45 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	m	124	Total	C	N	O	S	0	0	0
			970	611	195	163	1			

- Molecule 46 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	n	125	Total	C	N	O	S	0	0	0
			997	617	207	171	2			

- Molecule 47 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	o	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 48 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	p	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

- Molecule 49 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	q	83	Total	C	N	O	S	0	0	0
			700	443	139	117	1			

- Molecule 50 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	r	104	Total	C	N	O	S	0	0	0
			857	547	161	147	2			

- Molecule 51 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
51	s	81	Total	C	N	O	0	0	0
			668	423	135	110			

- Molecule 52 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	t	80	Total	C	N	O	S	0	0	0
			647	414	119	112	2			

- Molecule 53 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	u	99	Total	C	N	O	S	0	0	0
			762	469	162	129	2			

- Molecule 54 is a protein called 30S ribosomal protein Thx.

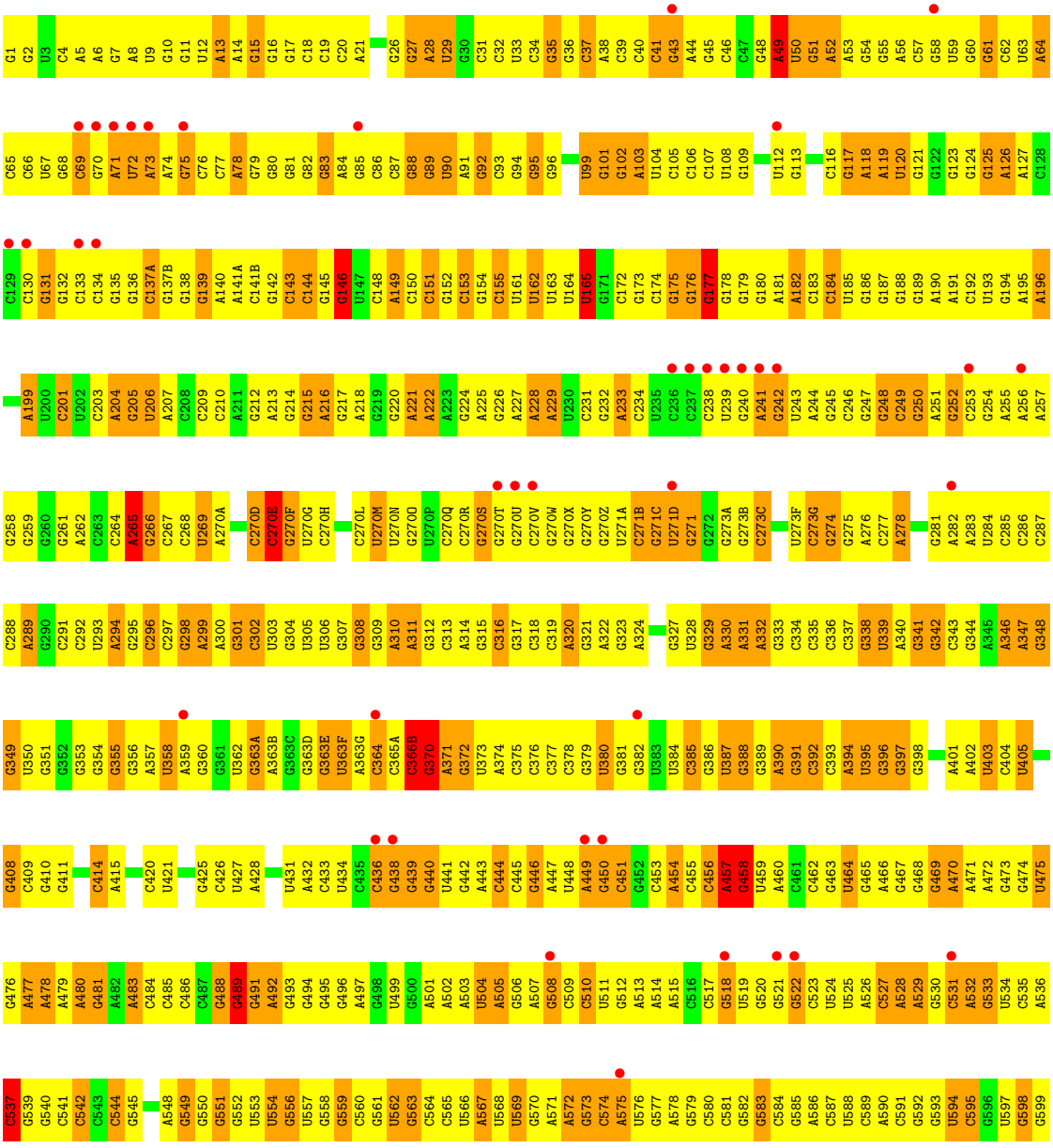
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
54	v	24	Total	C	N	O	0	0	0
			208	128	50	30			

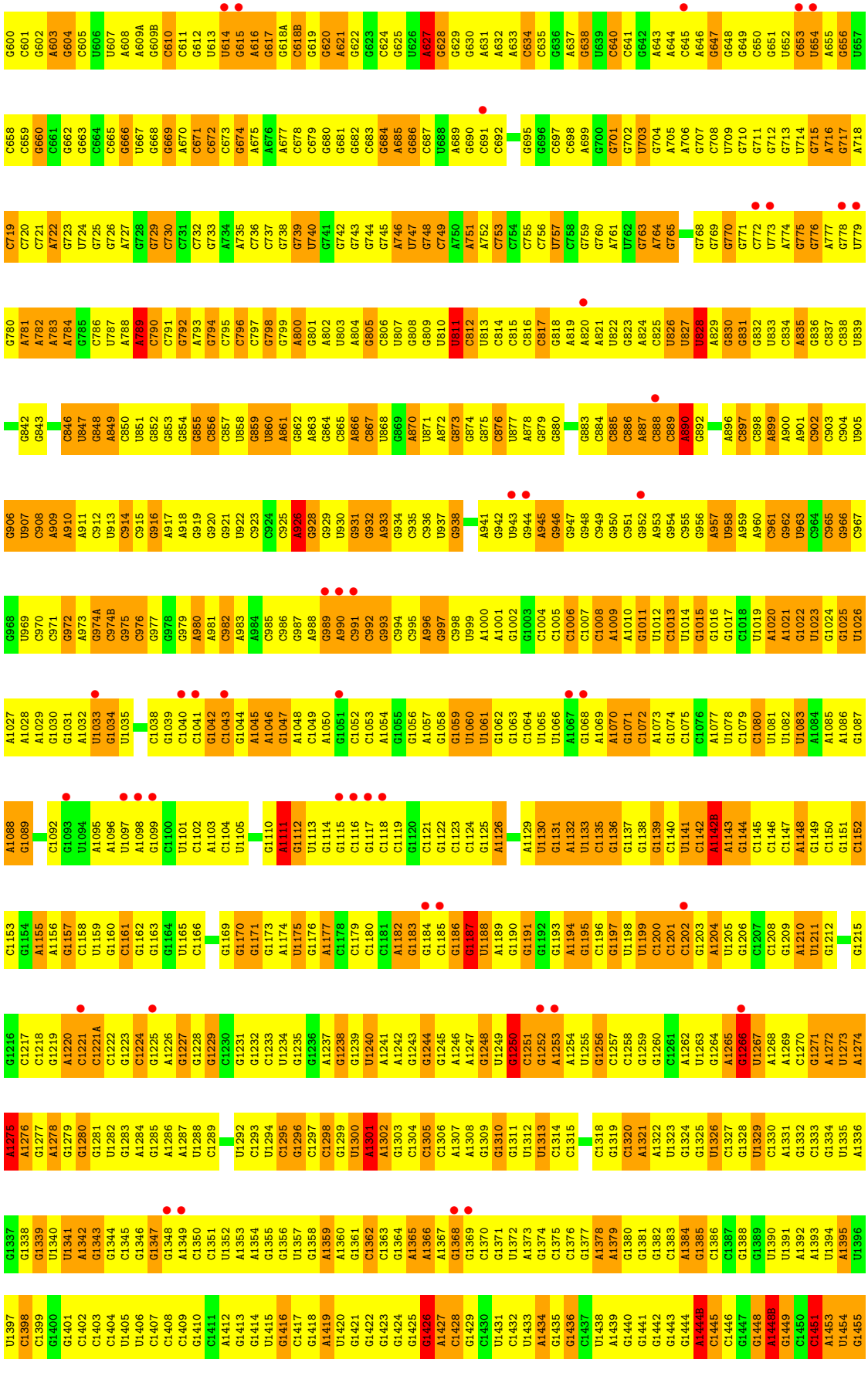
3 Residue-property plots (i)

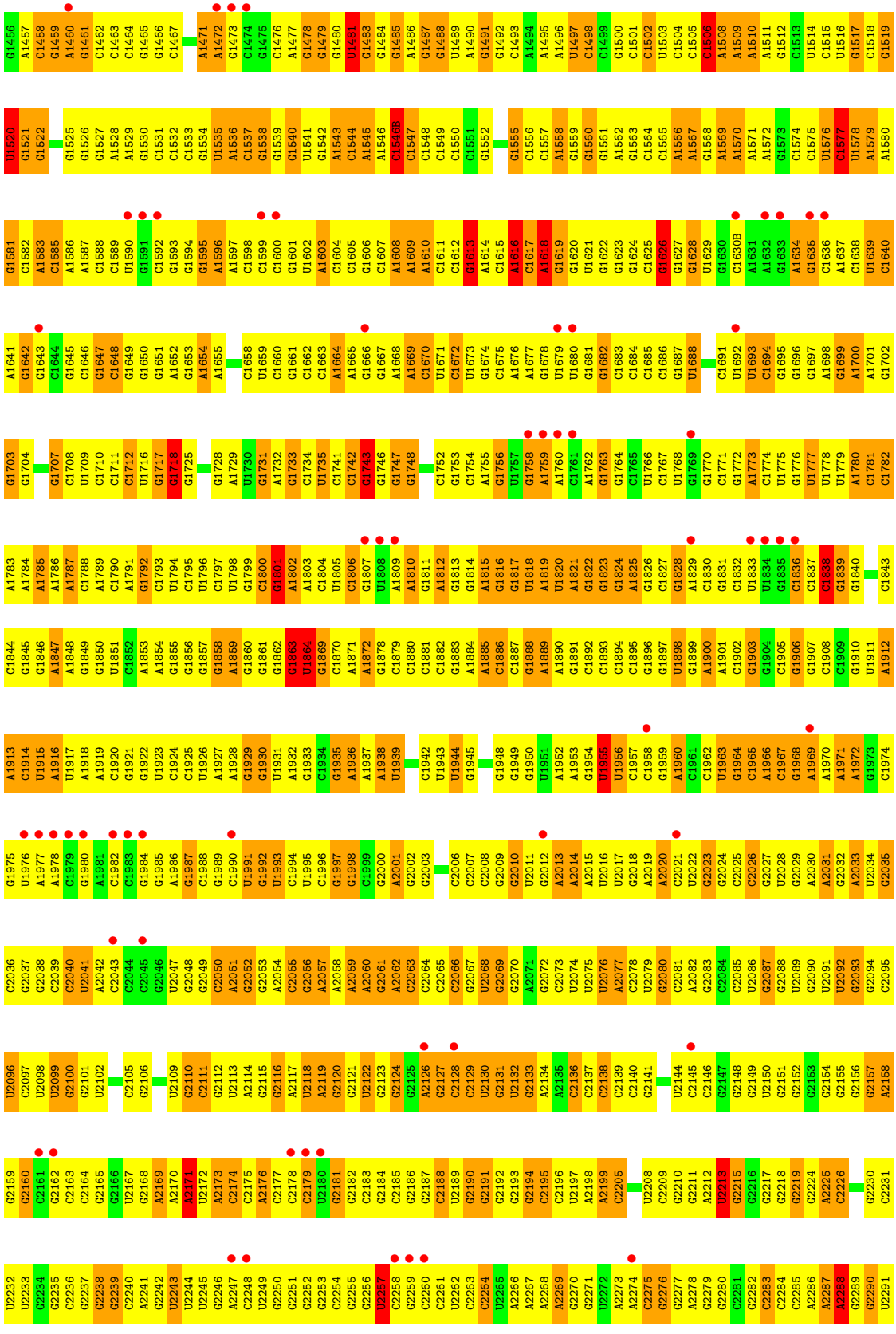
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

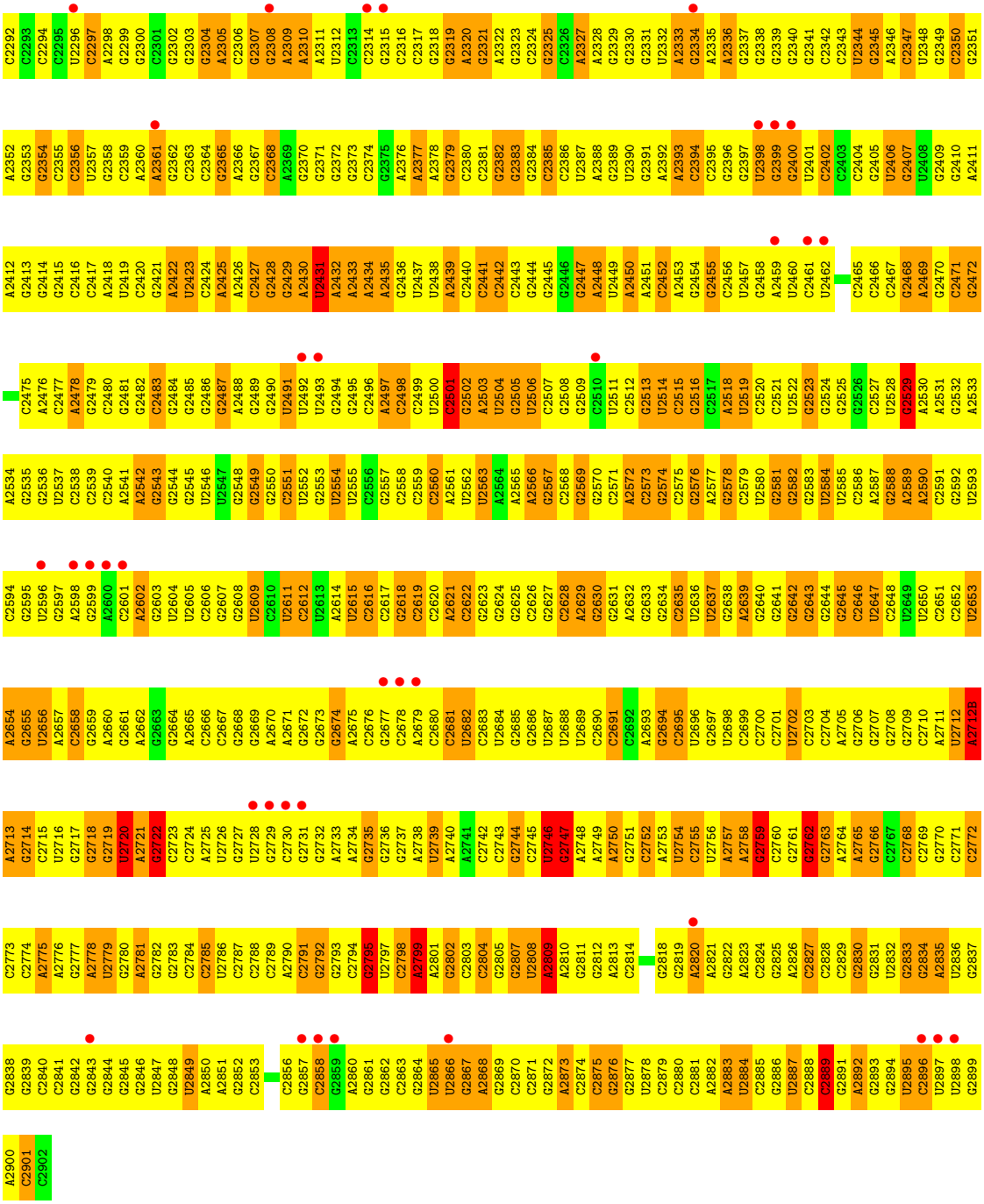
• Molecule 1: 23S LARGE SUBUNIT RIBOSOMAL RNA

Chain w:

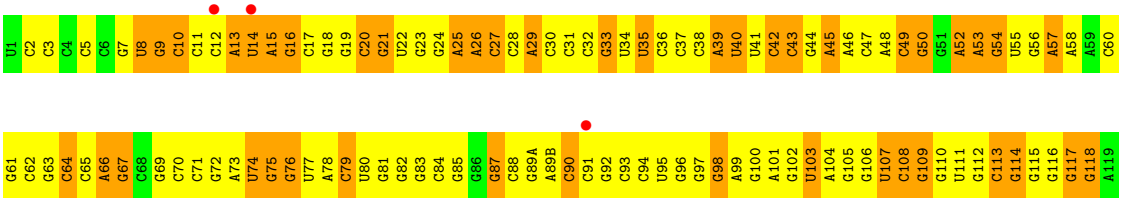





G1456 A1457 C1458 G1459 A1460 G1461 C1462 C1463 C1464 G1465 G1466 C1467 A1471 A1472 G1473 C1474 C1475 C1476 A1477 G1478 G1479 G1480 U1481 G1483 G1484 G1485 A1486 G1487 G1488 U1489 A1490 G1491 G1492 C1493 A1494 A1495 A1496 U1497 C1498 C1499 C1500 C1501 C1502 U1503 C1504 C1505 C1506 A1508 A1509 A1510 A1511 G1512 C1513 U1514 C1515 U1516 G1517 C1518 G1519
U1520 G1521 G1522 G1525 G1526 G1527 A1528 A1529 G1530 C1531 C1532 C1533 G1534 U1535 A1536 C1537 G1538 G1539 G1540 U1541 G1542 A1543 C1544 A1545 A1546 G15468 C1547 C1548 C1549 C1550 C1551 G1552 G1555 C1556 C1557 A1558 G1559 G1560 G1561 A1562 G1563 C1564 C1565 A1566 A1567 G1568 A1569 A1570 A1571 A1572 G1573 C1574 C1575 U1576 C1577 U1578 A1579 A1580
G1581 C1582 A1583 C1585 A1586 A1587 C1588 C1589 U1590 G1591 C1592 G1593 G1594 G1595 A1596 A1597 C1598 C1599 C1600 G1601 U1602 A1603 C1604 C1605 G1606 C1607 A1608 A1609 A1610 C1611 C1612 G1613 A1614 C1615 A1616 C1617 A1618 G1619 G1620 U1621 G1622 G1623 G1624 C1625 G1626 G1627 G1628 U1629 G1630 C1630B A1631 A1632 G1633 A1634 G1635 C1636 A1637 C1638 U1639 C1640
A1641 G1642 G1643 C1644 G1645 C1646 G1647 C1648 G1649 G1650 G1651 A1652 G1653 A1654 A1655 C1658 U1659 C1660 G1661 C1662 C1663 A1664 A1665 G1666 G1667 A1668 A1669 C1670 U1671 C1672 U1673 G1674 C1675 A1676 A1677 G1678 G1679 U1680 G1681 G1682 C1683 C1684 C1685 C1686 G1687 U1688 C1691 U1692 U1693 G1694 G1695 G1696 G1697 A1698 G1699 A1700 A1701 G1702
G1703 G1704 G1707 C1708 U1709 C1710 C1711 C1712 U1716 G1717 G1718 G1725 G1728 A1729 U1730 G1731 A1732 G1733 C1734 U1735 C1741 C1742 G1743 G1746 G1747 G1748 C1752 G1753 C1754 A1755 G1756 U1757 G1758 A1759 A1760 C1761 A1762 G1763 G1764 C1765 U1766 C1767 U1768 G1769 G1770 C1771 G1772 A1773 C1774 U1775 G1776 U1777 U1778 U1779 A1780 C1781 C1782
A1783 A1784 A1785 A1786 A1787 C1788 A1789 C1790 A1791 G1792 C1793 U1794 C1795 U1796 C1797 U1798 G1799 C1800 G1801 A1802 A1803 C1804 U1805 C1806 G1807 U1808 A1809 A1810 G1811 A1812 G1813 G1814 A1815 G1816 G1817 U1818 A1819 U1820 A1821 G1822 G1823 G1824 A1825 G1826 C1827 G1828 A1829 C1830 G1831 C1832 U1833 U1834 G1835 C1836 C1837 C1838 G1839 G1840 C1843
C1844 G1845 G1846 A1847 A1848 G1849 G1850 U1851 C1852 A1853 A1854 G1855 G1856 G1857 G1858 A1859 G1860 G1861 G1862 G1863 U1864 G1869 C1870 A1871 A1872 G1878 C1879 C1880 C1881 C1882 G1883 A1884 A1885 C1886 C1887 G1888 A1889 A1890 G1891 C1892 C1893 C1894 C1895 G1896 G1897 U1898 G1899 A1900 A1901 C1902 G1903 G1904 C1905 G1906 G1907 C1908 C1909 G1910 U1911 A1912
A1913 C1914 U1915 A1916 U1917 A1918 A1919 C1920 G1921 G1922 U1923 C1924 C1925 U1926 A1927 A1928 G1929 G1930 U1931 A1932 G1933 C1934 G1935 A1936 A1937 A1938 U1939 C1942 U1943 U1944 G1945 G1948 G1949 G1950 U1951 A1952 A1953 A1954 U1955 U1956 C1957 C1958 G1959 A1960 C1961 C1962 U1963 G1964 C1965 A1966 C1967 G1968 A1969 A1970 A1971 A1972 G1973 C1974
G1975 U1976 A1977 A1978 C1979 G1980 A1981 C1982 C1983 G1984 G1985 A1986 G1987 C1988 G1989 C1990 U1991 G1992 U1993 C1994 U1995 C1996 G1997 G1998 C1999 G2000 A2001 G2002 G2003 C2006 C2007 C2008 G2009 G2010 U2011 G2012 A2013 A2014 A2015 U2016 U2017 G2018 A2019 A2020 C2021 U2022 G2023 G2024 C2025 C2026 G2027 U2028 G2029 A2030 A2031 G2032 A2033 U2034 G2035
C2036 G2037 G2038 C2039 C2040 U2041 A2042 C2043 C2044 C2045 G2046 U2047 G2048 G2049 C2050 A2051 G2052 G2053 A2054 C2055 G2056 A2057 A2058 A2059 A2060 G2061 A2062 C2063 C2064 C2065 C2066 C2067 U2068 G2069 G2070 A2071 G2072 C2073 U2074 U2075 U2076 A2077 C2078 U2079 G2080 C2081 A2082 G2083 C2084 C2085 U2086 G2087 C2088 U2089 G2090 U2091 U2092 G2093 C2094 C2095
U2096 C2097 U2098 U2099 G2100 G2101 U2102 C2105 G2106 U2109 G2110 C2111 G2112 U2113 A2114 G2115 G2116 A2117 U2118 A2119 G2120 G2121 U2122 G2123 G2124 G2125 A2126 G2127 C2128 C2129 U2130 G2131 U2132 G2133 A2134 A2135 C2136 C2137 G2138 C2139 C2140 G2141 U2144 C2145 C2146 G2147 G2148 G2149 U2150 G2151 G2152 G2153 G2154 G2155 G2156 G2157 A2158
G2159 G2160 C2161 G2162 C2163 C2164 G2165 G2166 U2167 G2168 A2169 A2170 A2171 U2172 A2173 C2174 C2175 A2176 C2177 C2178 C2179 U2180 G2181 G2182 G2183 G2184 C2185 G2186 G2187 C2188 U2189 G2190 G2191 G2192 G2193 G2194 C2195 C2196 U2197 A2198 A2199 C2205 U2208 C2209 G2210 G2211 A2212 U2213 G2215 G2216 G2217 G2218 G2219 G2224 A2225 C2226 G2230 C2231
U2232 U2233 G2234 G2235 C2236 C2237 G2238 G2239 C2240 A2241 G2242 U2243 U2244 U2245 G2246 A2247 C2248 U2249 G2250 G2251 G2252 G2253 C2254 G2255 G2256 U2257 C2258 G2259 C2260 C2261 U2262 C2263 C2264 U2265 A2266 A2267 A2268 A2269 G2270 G2271 U2272 A2273 A2274 C2275 G2276 G2277 A2278 G2279 G2280 C2281 G2282 C2283 C2284 C2285 A2286 A2287 A2288 G2289 G2290 U2291

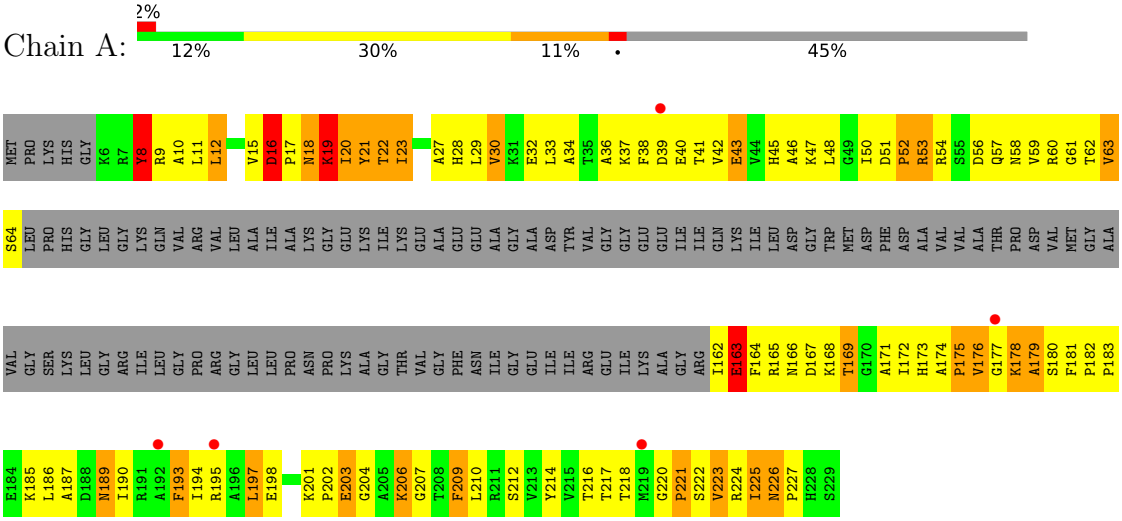


• Molecule 2: 5S LARGE SUBUNIT RIBOSOMAL RNA



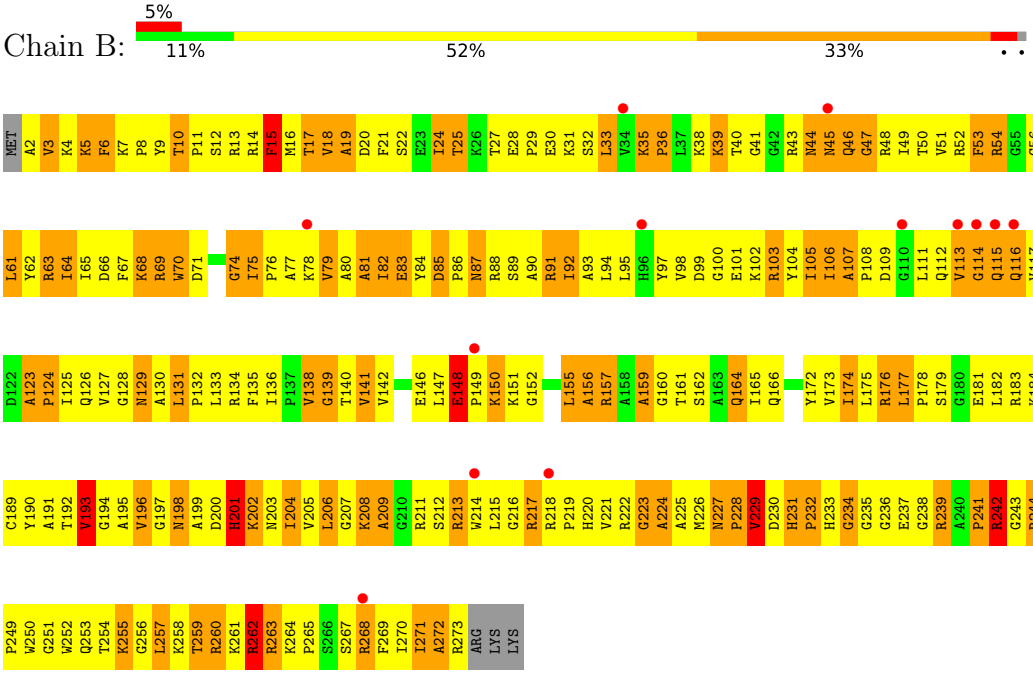
• Molecule 3: 50S ribosomal protein L1

Chain A:



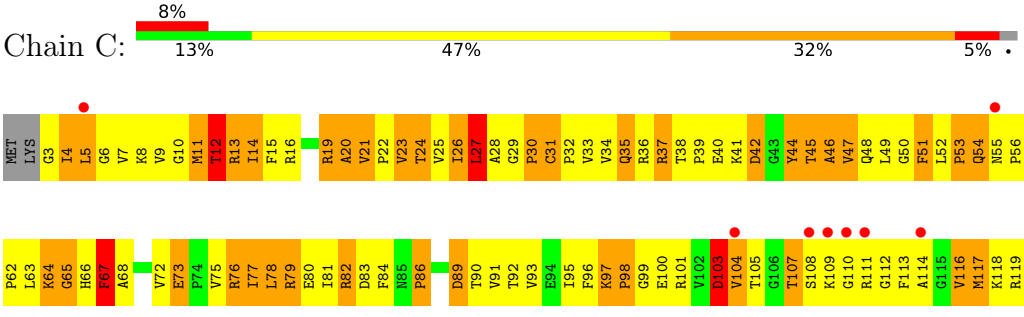
• Molecule 4: 50S ribosomal protein L2

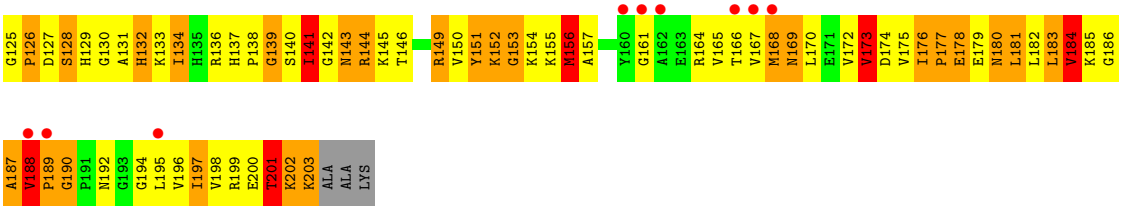
Chain B:



• Molecule 5: 50S ribosomal protein L3

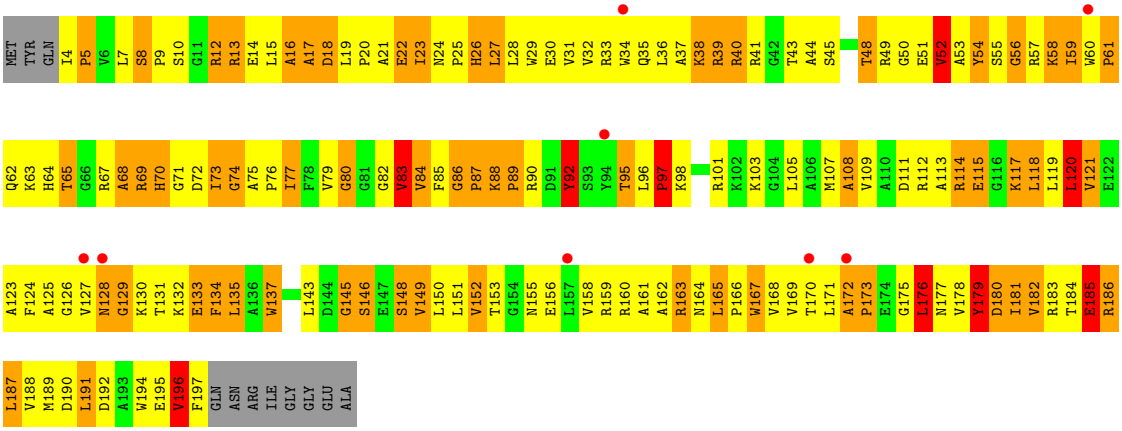
Chain C:





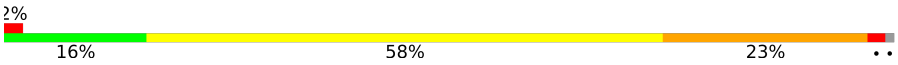
• Molecule 6: 50S ribosomal protein L4

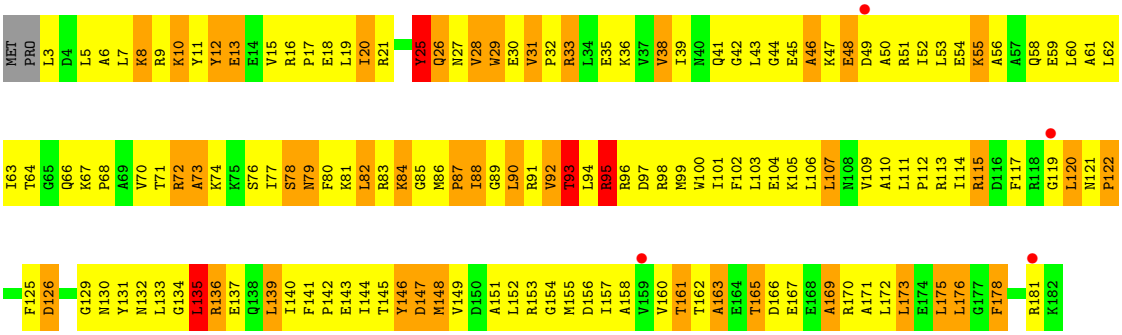
Chain D:



• Molecule 7: 50S ribosomal protein L5

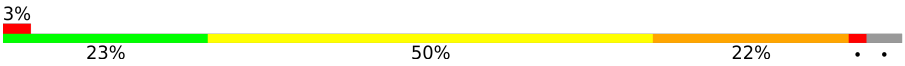
Chain E:

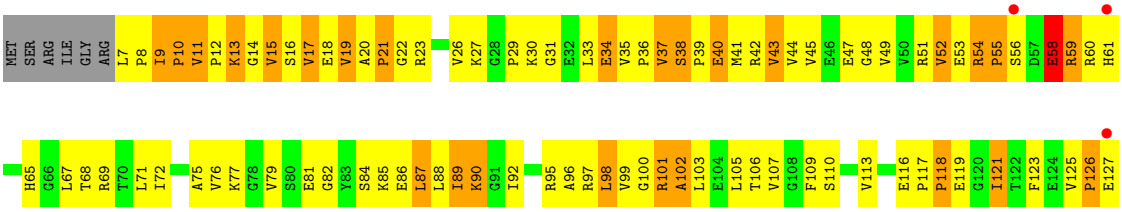


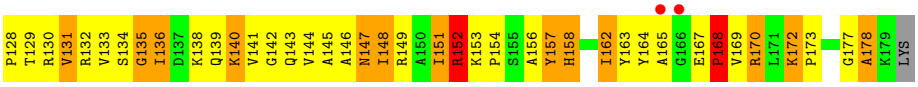


• Molecule 8: 50S ribosomal protein L6

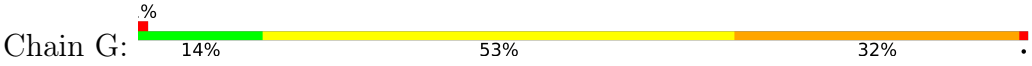
Chain F:

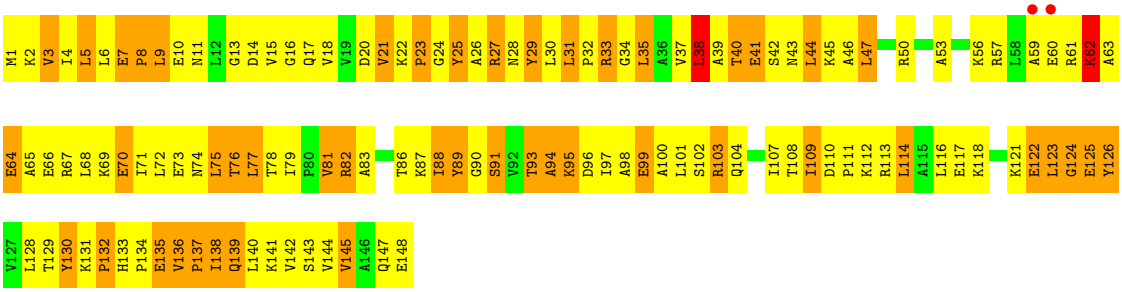




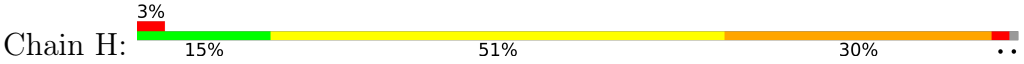


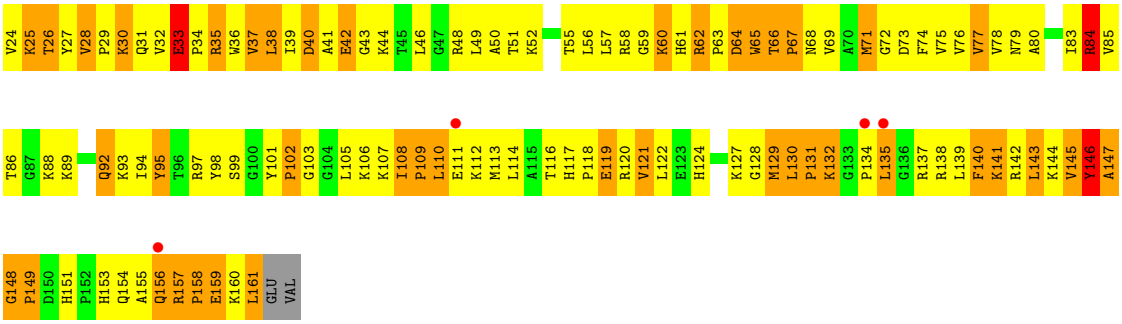
• Molecule 9: 50S ribosomal protein L9



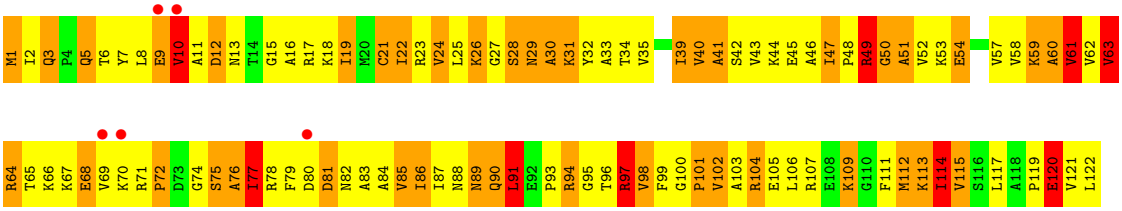


• Molecule 10: 50S ribosomal protein L13

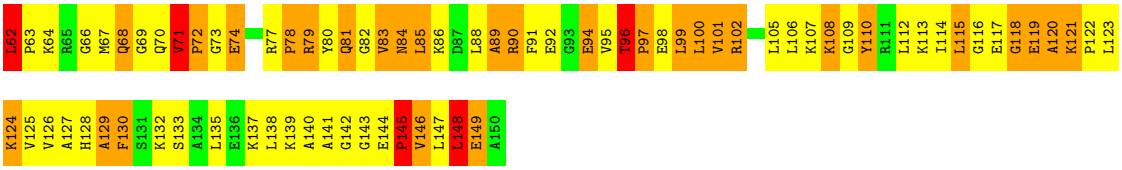




• Molecule 11: 50S ribosomal protein L14

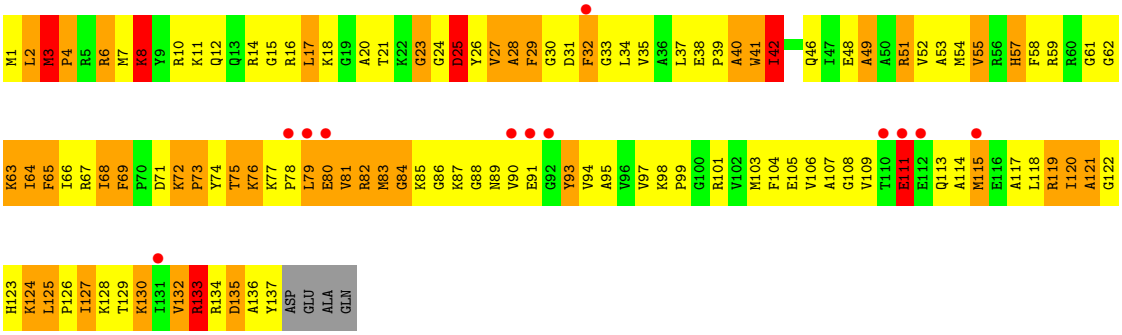


• Molecule 12: 50S ribosomal protein L15



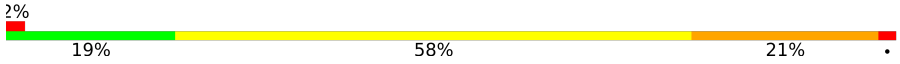
• Molecule 13: 50S ribosomal protein L16

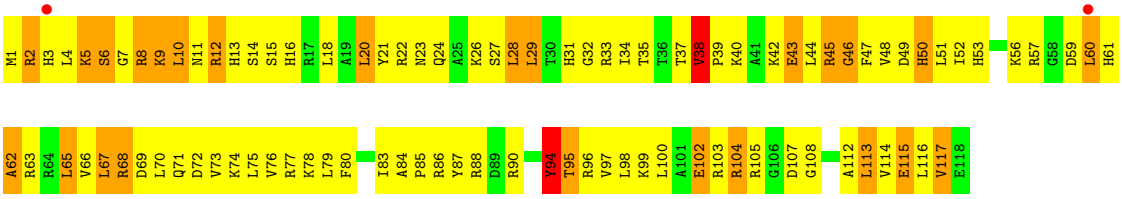
Chain K:



• Molecule 14: 50S ribosomal protein L17

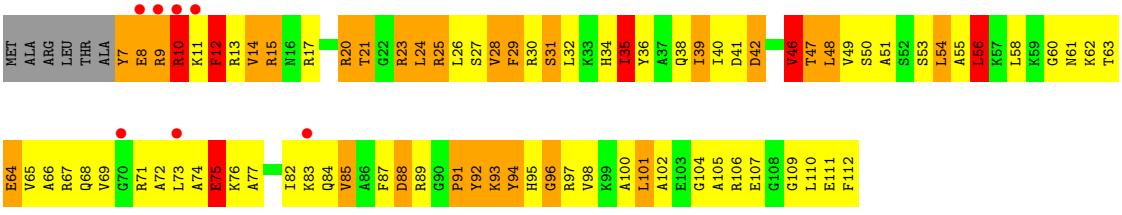
Chain L:





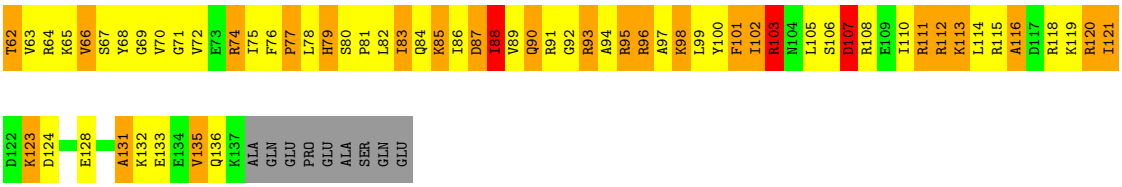
• Molecule 15: 50S ribosomal protein L18

Chain M:



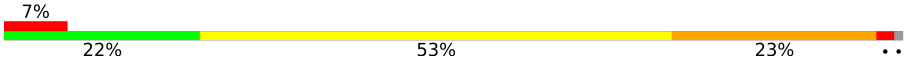
• Molecule 16: 50S ribosomal protein L19

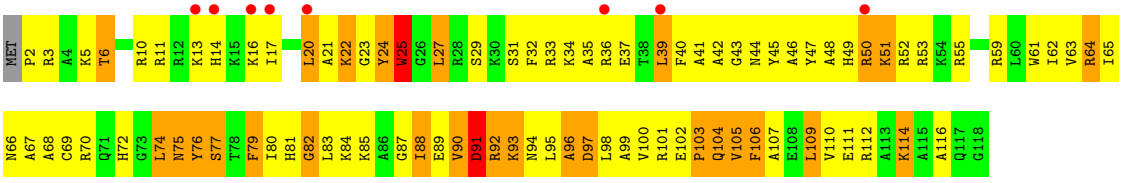
Chain N:



• Molecule 17: 50S ribosomal protein L20

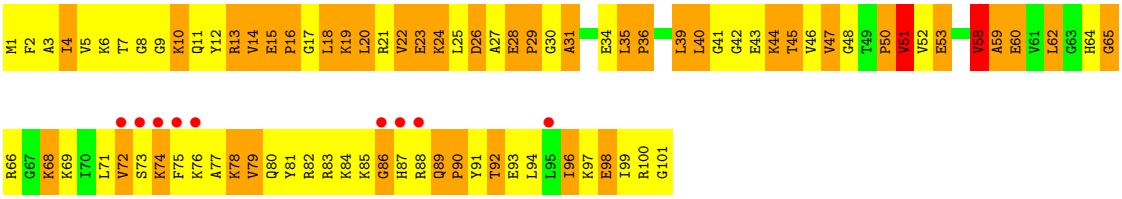
Chain O:





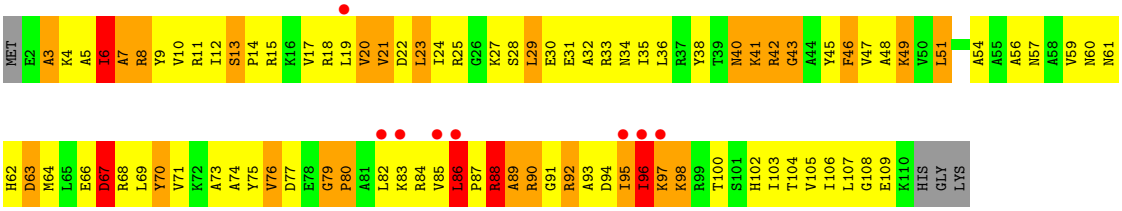
• Molecule 18: 50S ribosomal protein L21

Chain P:



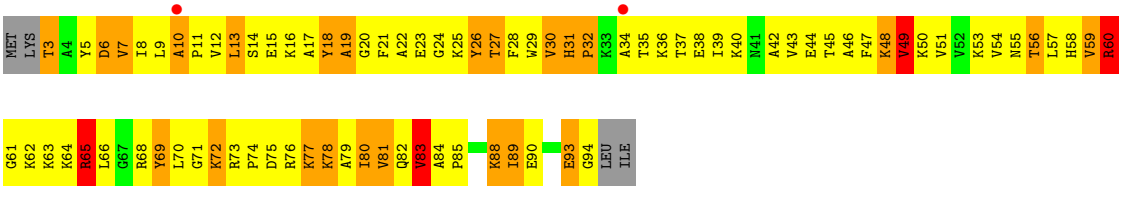
• Molecule 19: 50S ribosomal protein L22

Chain Q:



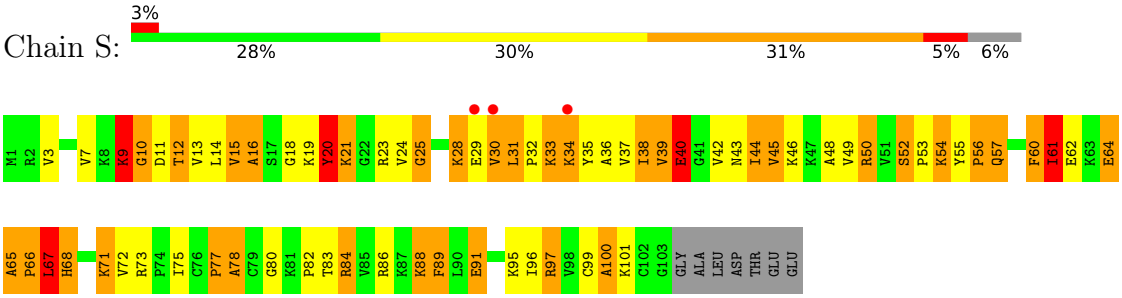
• Molecule 20: 50S ribosomal protein L23

Chain R:



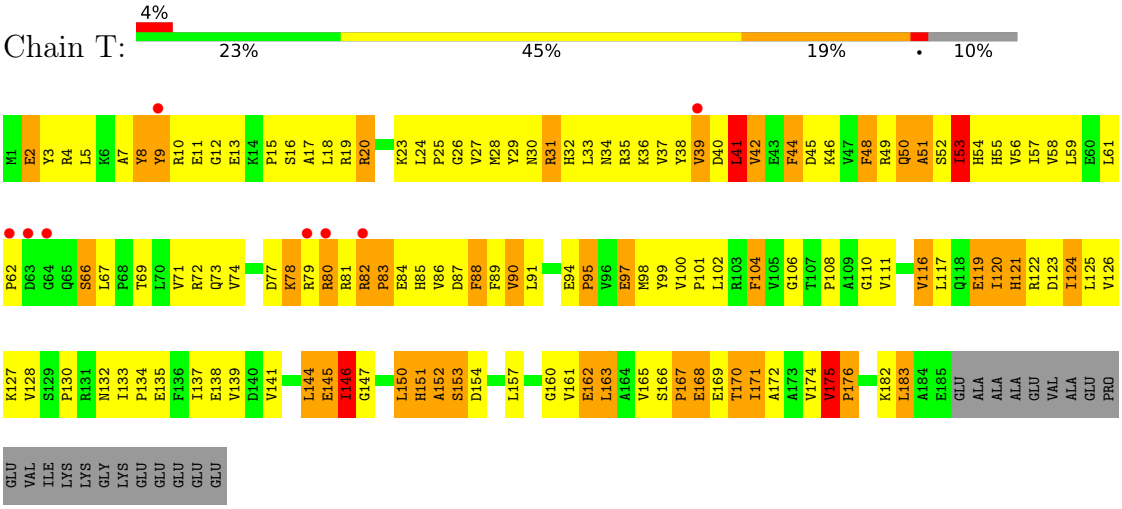
• Molecule 21: 50S ribosomal protein L24

Chain S:



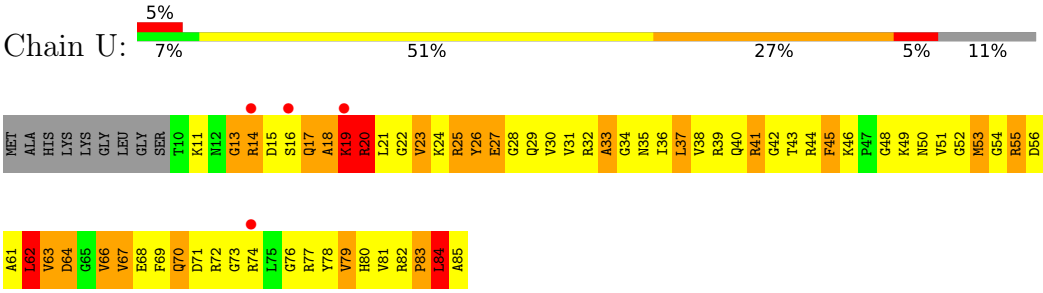
• Molecule 22: 50S ribosomal protein L25

Chain T:



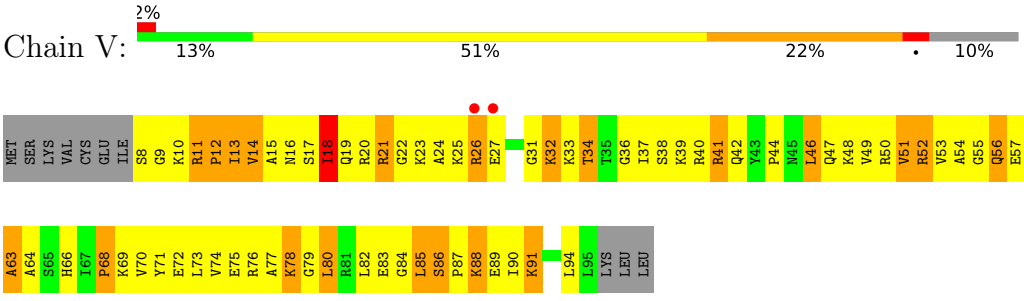
• Molecule 23: 50S ribosomal protein L27

Chain U:



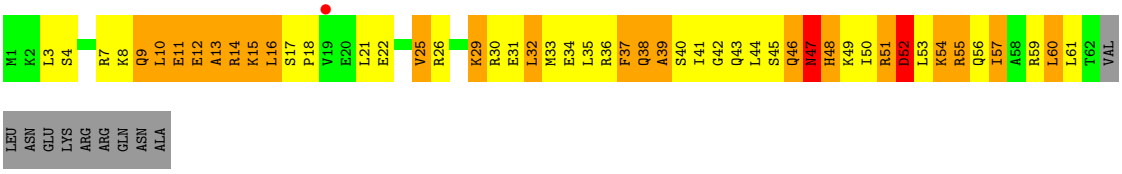
• Molecule 24: LSU ribosomal protein L28P

Chain V:



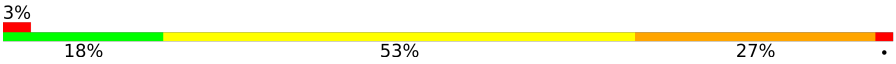
• Molecule 25: 50S ribosomal protein L29

Chain W:



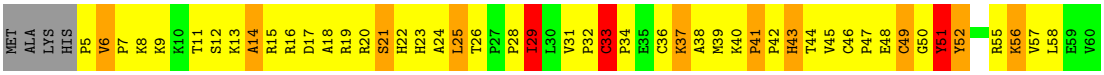
• Molecule 26: LSU ribosomal protein L30P

Chain X:



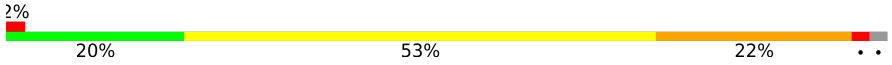
• Molecule 27: 50S ribosomal protein L32

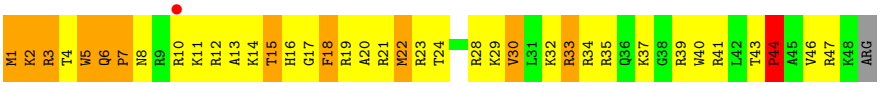
Chain Y:



• Molecule 28: 50S ribosomal protein L34

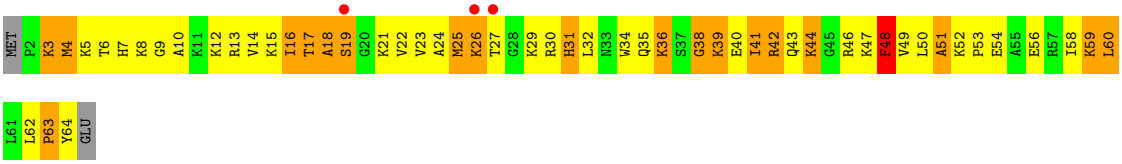
Chain Z:





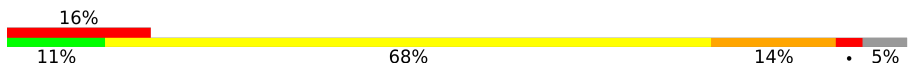
• Molecule 29: 50S ribosomal protein L35

Chain a:



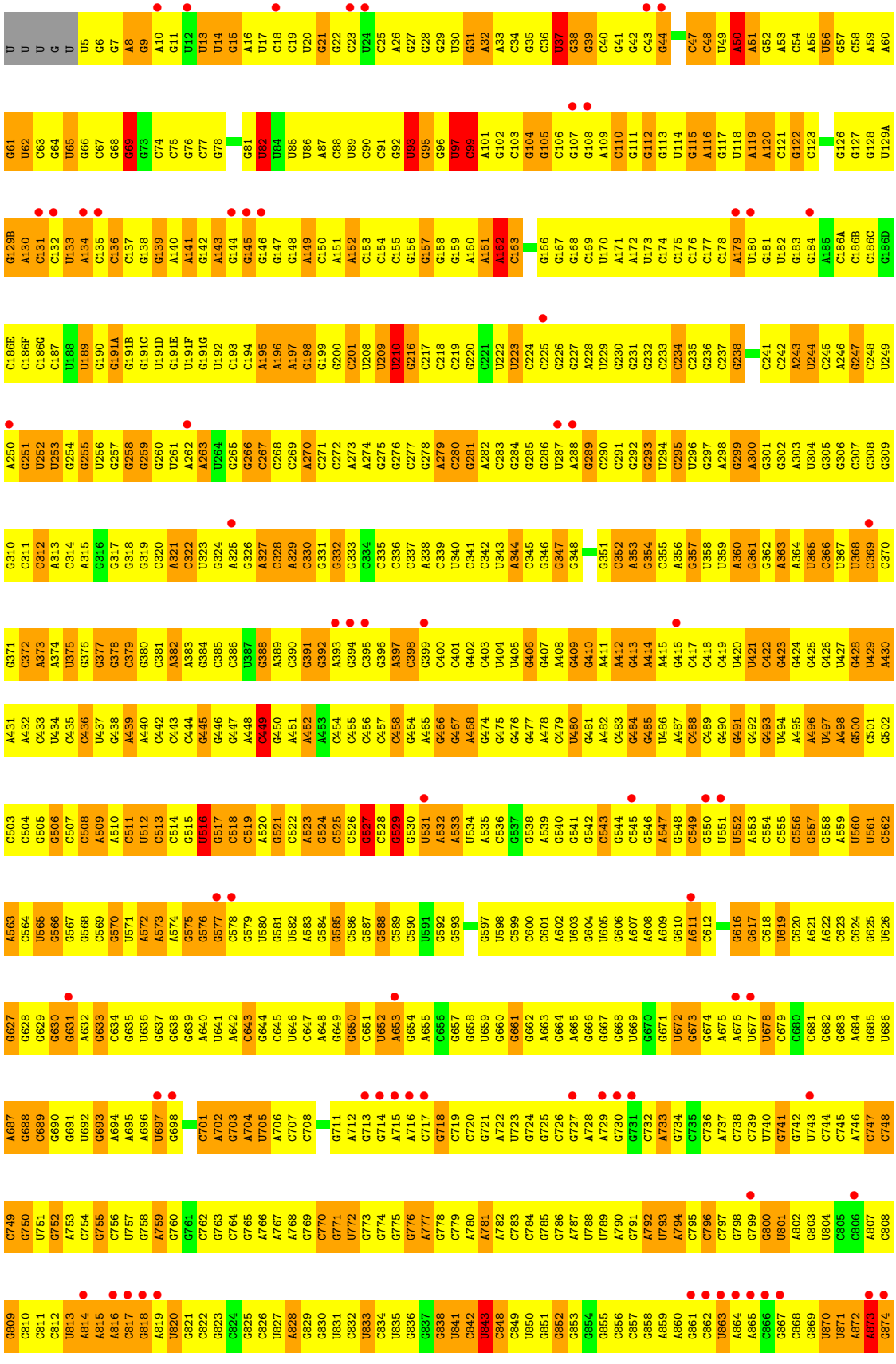
• Molecule 30: 50S ribosomal protein L36

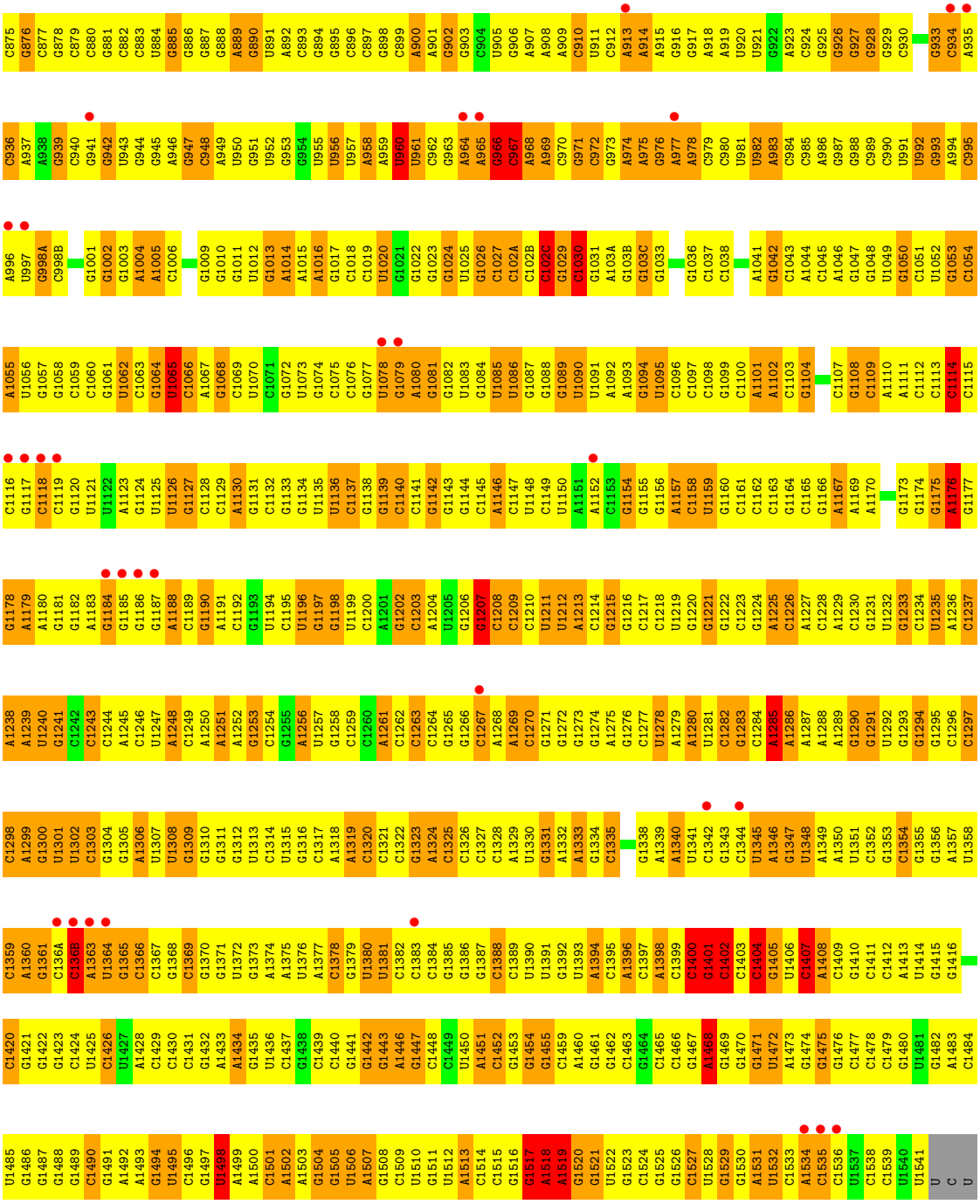
Chain b:



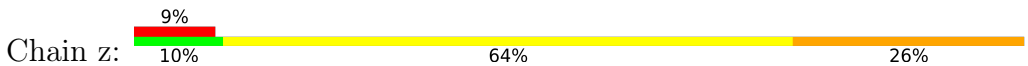
• Molecule 31: 16S RNA

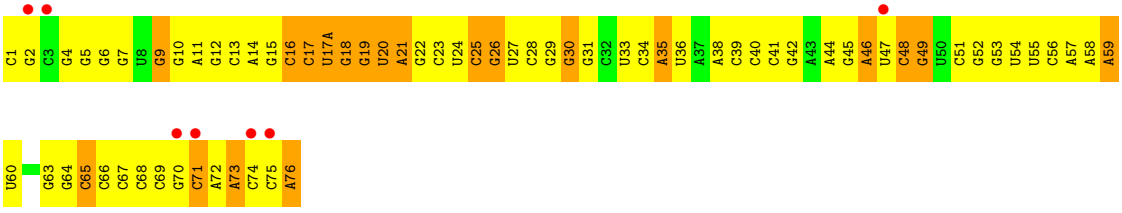
Chain y:





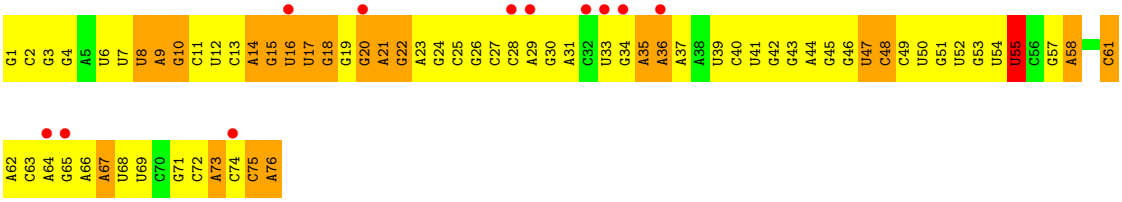
• Molecule 32: P-site tRNAfMET





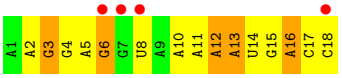
• Molecule 33: E-site tRNA

Chain 2:



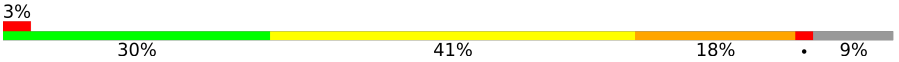
• Molecule 34: MRNA

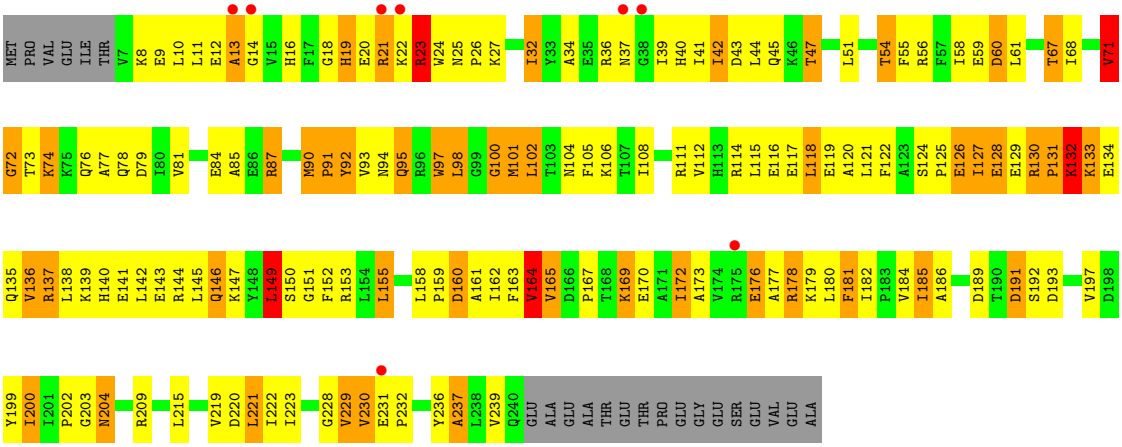
Chain 3:



• Molecule 35: 30S ribosomal protein S2

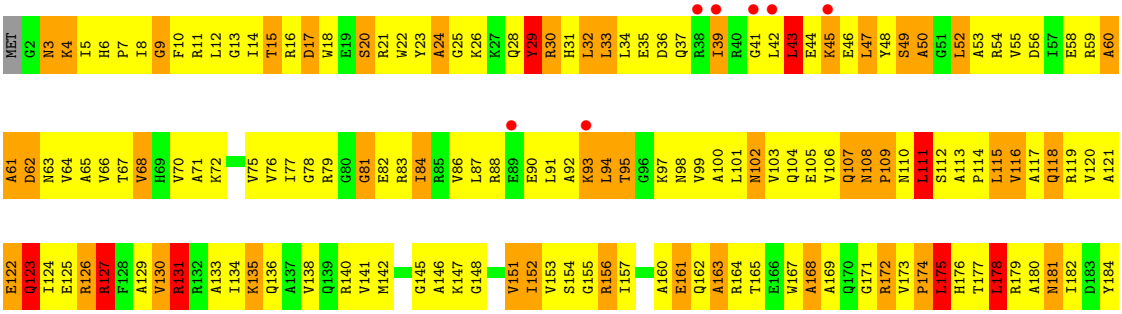
Chain c:

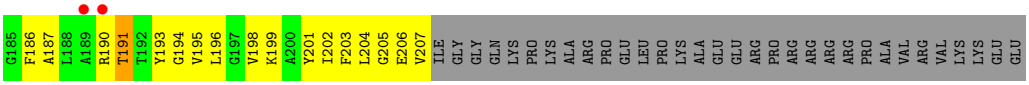




• Molecule 36: 30S ribosomal protein S3

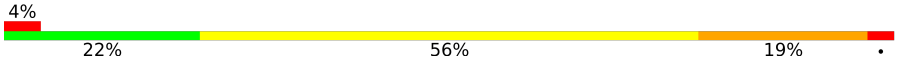
Chain d:

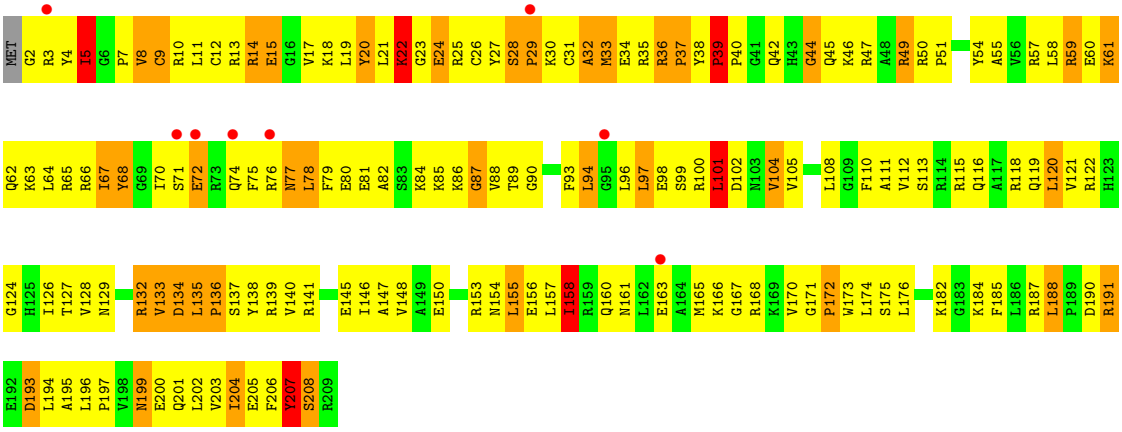




• Molecule 37: 30S ribosomal protein S4

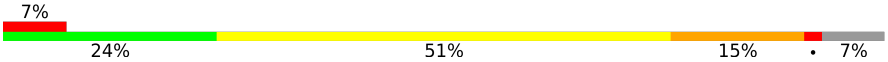
Chain e:

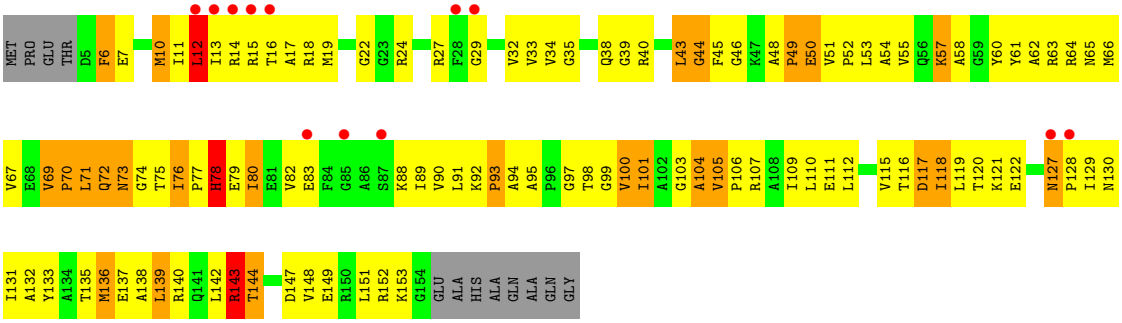




• Molecule 38: 30S ribosomal protein S5

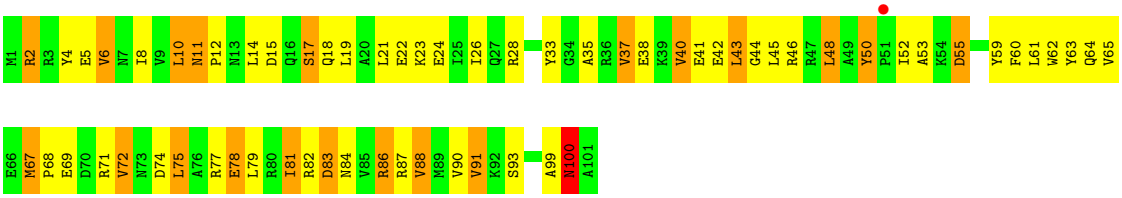
Chain f:





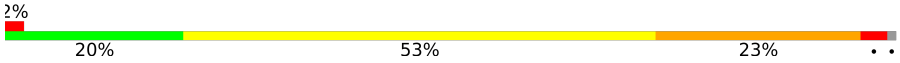
• Molecule 39: 30S ribosomal protein S6

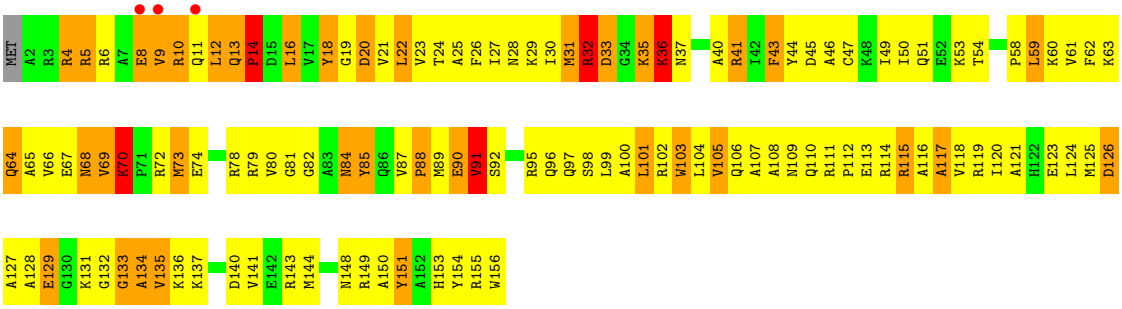
Chain g:



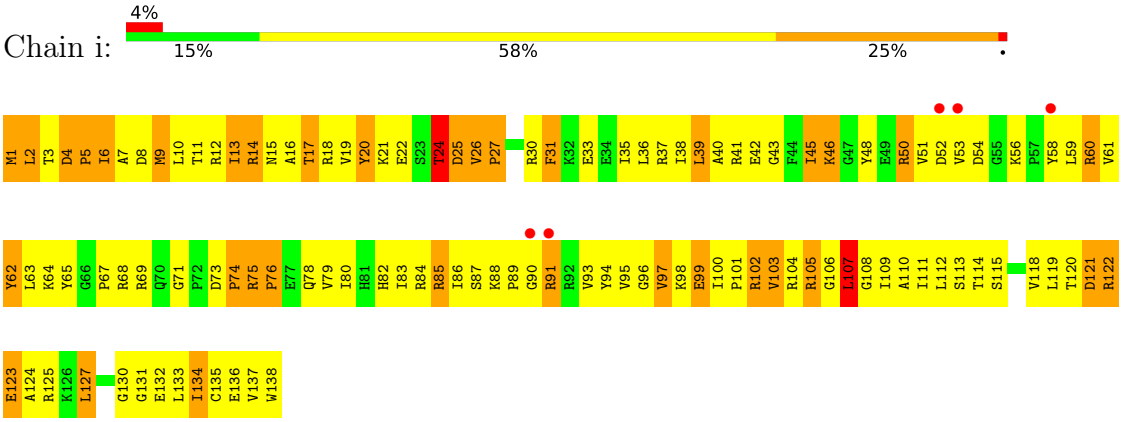
• Molecule 40: 30S ribosomal protein S7

Chain h:

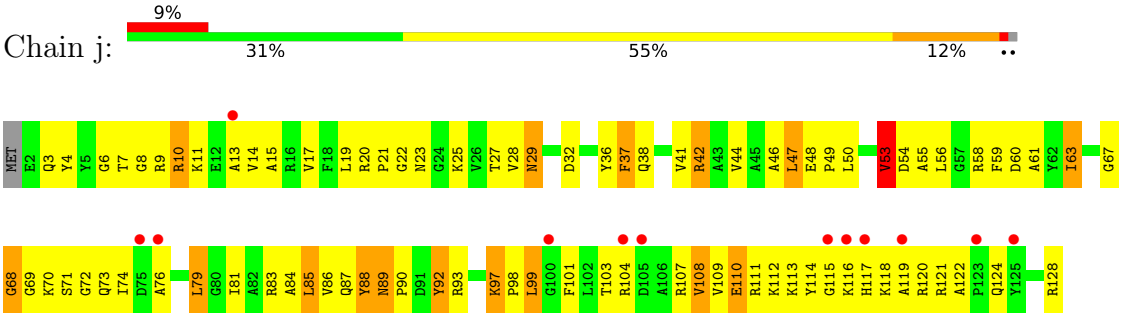




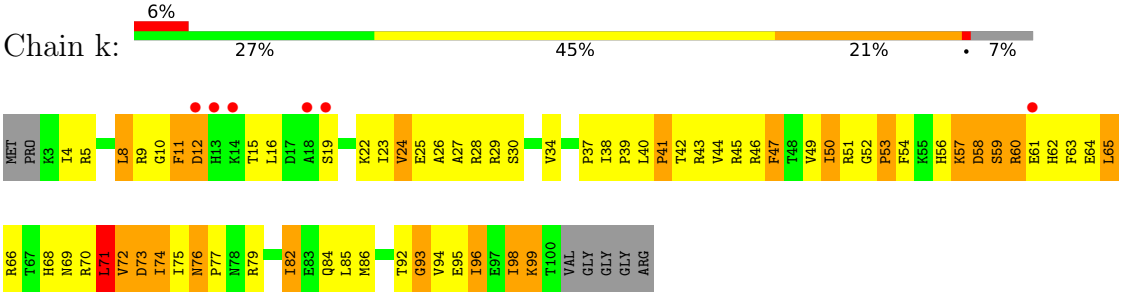
• Molecule 41: 30S ribosomal protein S8



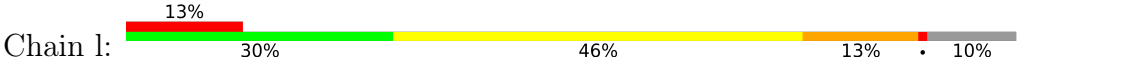
• Molecule 42: 30S ribosomal protein S9

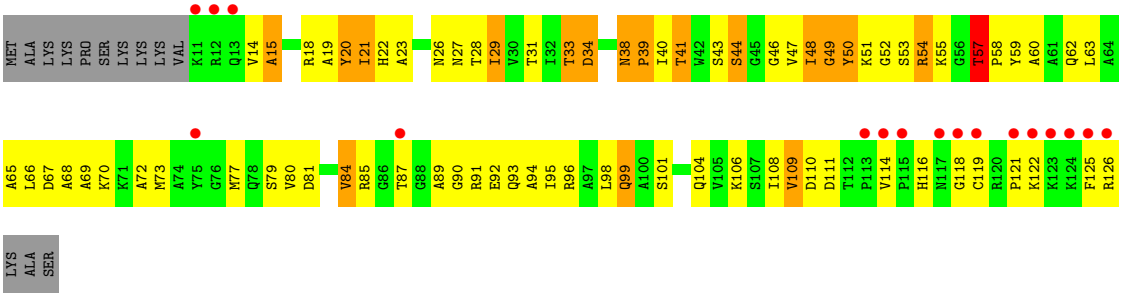


• Molecule 43: 30S ribosomal protein S10



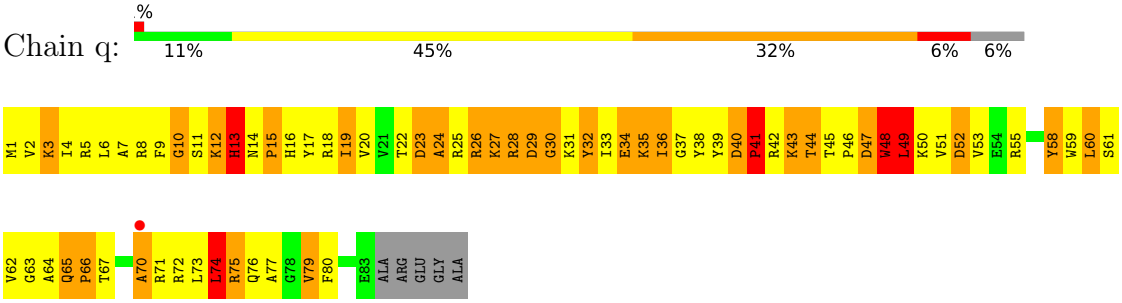
• Molecule 44: 30S ribosomal protein S11





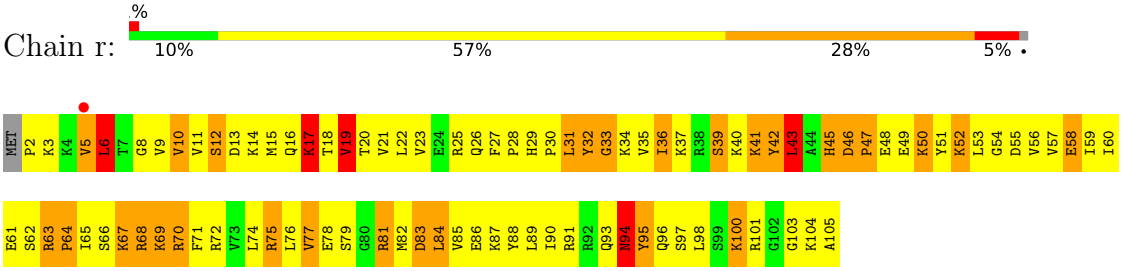
• Molecule 49: 30S ribosomal protein S16

Chain q:



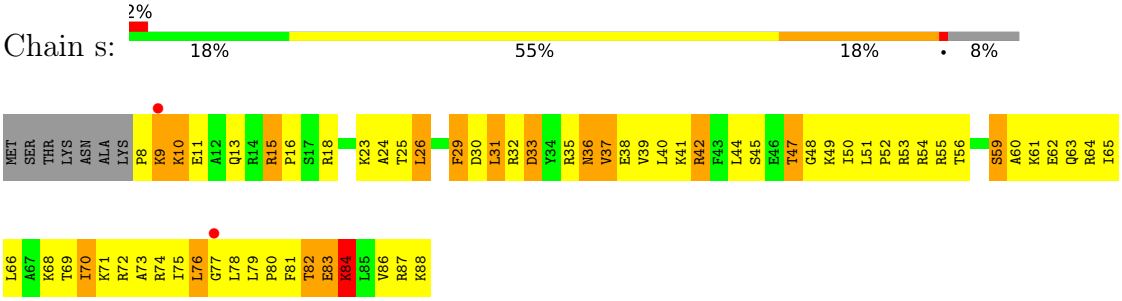
• Molecule 50: 30S ribosomal protein S17

Chain r:



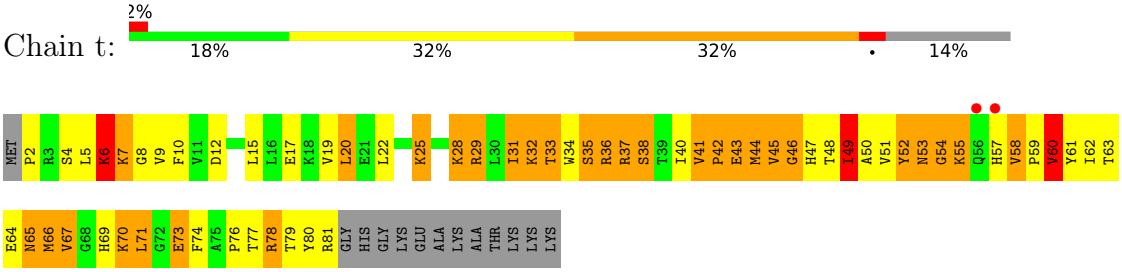
• Molecule 51: 30S ribosomal protein S18

Chain s:



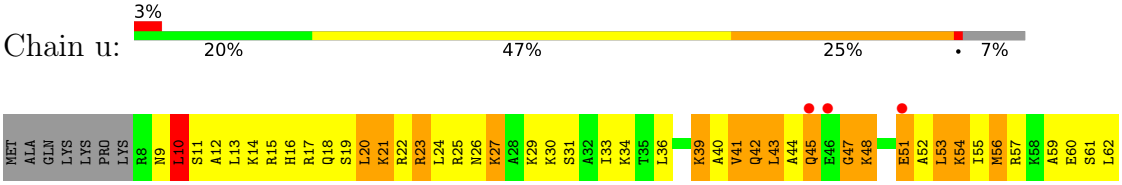
• Molecule 52: 30S ribosomal protein S19

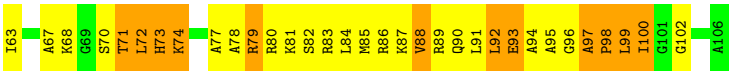
Chain t:



• Molecule 53: 30S ribosomal protein S20

Chain u:





• Molecule 54: 30S ribosomal protein Thx

4 Data and refinement statistics (i)

Property	Value	Source
Space group	I 4 2 2	Depositor
Cell constants a, b, c, α, β, γ	507.21Å 507.21Å 692.51Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	30.00 – 3.83 30.00 – 3.83	Depositor EDS
% Data completeness (in resolution range)	81.7 (30.00-3.83) 73.9 (30.00-3.83)	Depositor EDS
R_{merge}	0.15	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.43 (at 3.67Å)	Xtriage
Refinement program	REFMAC 5.2.0019, CNS	Depositor
R, R_{free}	0.327 , 0.351 0.340 , 0.360	Depositor DCC
R_{free} test set	10300 reflections (2.19%)	wwPDB-VP
Wilson B-factor (Å^2)	26.5	Xtriage
Anisotropy	0.111	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	-0.54 , 365.5	EDS
L-test for twinning[2]	$< \|L\| > = 0.22$, $< L^2 > = 0.07$	Xtriage
Estimated twinning fraction	0.267 for -1/2*h+1/2*k-1/2*l,1/2*h-1/2*k-1/2*l,-h-k 0.260 for -1/2*h-1/2*k+1/2*l,-1/2*h-1/2*k-1/2*l,h-k	Xtriage
F_o,F_c correlation	0.82	EDS
Total number of atoms	147125	wwPDB-VP
Average B, all atoms (Å^2)	1.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.08% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: PSU, MA6, 7MG, 5MC, 2MG, M2G

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	w	0.79	45/69679 (0.1%)	0.91	101/108779 (0.1%)
2	x	0.56	0/2878	0.82	0/4490
3	A	0.70	0/1015	1.05	7/1369 (0.5%)
4	B	0.71	0/2165	1.05	17/2919 (0.6%)
5	C	0.76	0/1574	1.06	10/2125 (0.5%)
6	D	0.74	0/1551	1.05	8/2101 (0.4%)
7	E	0.73	0/1492	1.04	8/2006 (0.4%)
8	F	0.79	0/1345	1.12	9/1819 (0.5%)
9	G	0.67	0/1171	1.06	4/1583 (0.3%)
10	H	0.67	0/1130	1.10	10/1525 (0.7%)
11	I	0.76	0/942	1.16	8/1268 (0.6%)
12	J	0.77	1/1131 (0.1%)	1.09	8/1504 (0.5%)
13	K	0.75	0/1110	1.08	7/1483 (0.5%)
14	L	0.61	0/982	0.96	1/1312 (0.1%)
15	M	0.65	0/856	0.94	3/1138 (0.3%)
16	N	0.72	0/1157	1.12	11/1544 (0.7%)
17	O	0.61	0/982	0.97	3/1306 (0.2%)
18	P	0.80	0/790	1.06	6/1057 (0.6%)
19	Q	0.68	0/878	1.08	7/1179 (0.6%)
20	R	0.81	0/739	1.10	9/993 (0.9%)
21	S	0.88	0/806	1.02	2/1074 (0.2%)
22	T	0.72	0/1507	1.04	12/2045 (0.6%)
23	U	0.70	0/613	1.06	4/816 (0.5%)
24	V	0.80	0/701	1.05	2/932 (0.2%)
25	W	0.66	0/522	1.04	2/690 (0.3%)
26	X	0.65	0/482	1.08	3/646 (0.5%)
27	Y	0.75	0/449	1.17	1/606 (0.2%)
28	Z	0.63	0/426	1.02	3/561 (0.5%)
29	a	0.77	0/515	1.07	2/679 (0.3%)
30	b	0.87	0/297	0.96	0/392
31	y	0.61	27/36178 (0.1%)	0.87	37/56463 (0.1%)
32	z	0.53	0/1831	0.84	0/2853

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	2	0.54	0/1791	0.80	1/2791 (0.0%)
34	3	0.59	1/439 (0.2%)	0.79	0/684
35	c	0.70	0/1935	1.04	14/2609 (0.5%)
36	d	0.63	0/1636	0.97	2/2205 (0.1%)
37	e	0.67	0/1733	1.02	11/2318 (0.5%)
38	f	0.76	0/1162	1.08	9/1564 (0.6%)
39	g	0.67	0/856	1.15	14/1154 (1.2%)
40	h	0.67	0/1276	1.09	9/1709 (0.5%)
41	i	0.65	0/1136	0.99	2/1527 (0.1%)
42	j	0.68	0/1029	0.99	4/1378 (0.3%)
43	k	0.83	0/807	1.02	3/1085 (0.3%)
44	l	0.76	0/879	1.03	6/1187 (0.5%)
45	m	0.70	0/986	1.20	10/1320 (0.8%)
46	n	0.66	0/1008	1.06	2/1347 (0.1%)
47	o	0.65	0/501	1.01	1/664 (0.2%)
48	p	0.62	0/745	1.03	6/992 (0.6%)
49	q	0.67	0/716	1.06	6/963 (0.6%)
50	r	0.75	0/870	1.07	6/1159 (0.5%)
51	s	0.72	0/675	1.00	2/894 (0.2%)
52	t	0.76	0/661	1.06	5/890 (0.6%)
53	u	0.54	0/764	0.97	2/1006 (0.2%)
54	v	0.64	0/212	0.81	0/277
All	All	0.72	74/159711 (0.0%)	0.94	420/238980 (0.2%)

All (74) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	w	41	C	O3'-P	34.69	2.13	1.61
1	w	1506	C	O3'-P	32.07	2.09	1.61
1	w	489	G	O3'-P	31.78	2.08	1.61
1	w	1448(B)	A	O3'-P	30.89	2.07	1.61
1	w	436	C	O3'-P	29.30	2.05	1.61
1	w	554	U	O3'-P	29.23	2.04	1.61
1	w	1743	G	O3'-P	29.15	2.04	1.61
1	w	1712	C	O3'-P	29.06	2.04	1.61
1	w	2213	U	O3'-P	28.49	2.03	1.61
1	w	366(B)	C	O3'-P	28.43	2.03	1.61
1	w	2712(B)	A	O3'-P	28.23	2.03	1.61
1	w	890	A	O3'-P	27.88	2.02	1.61
1	w	926	A	O3'-P	27.57	2.02	1.61
1	w	155	C	O3'-P	27.35	2.02	1.61
1	w	1583	A	O3'-P	27.15	2.01	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	w	99	U	O3'-P	26.71	2.01	1.61
1	w	1718	G	O3'-P	26.63	2.01	1.61
1	w	1481	U	O3'-P	25.49	1.99	1.61
1	w	1451	C	O3'-P	25.47	1.99	1.61
1	w	1735	U	O3'-P	25.30	1.99	1.61
1	w	537	C	O3'-P	25.16	1.98	1.61
1	w	1864	U	O3'-P	24.21	1.97	1.61
1	w	1171	G	O3'-P	24.12	1.97	1.61
1	w	1546(B)	C	O3'-P	23.70	1.96	1.61
1	w	1630(B)	C	O3'-P	23.28	1.96	1.61
1	w	1872	A	O3'-P	22.88	1.95	1.61
1	w	1142(B)	A	O3'-P	22.79	1.95	1.61
1	w	2219	G	O3'-P	22.70	1.95	1.61
1	w	1221(A)	C	O3'-P	22.28	1.94	1.61
1	w	165	U	O3'-P	21.89	1.94	1.61
1	w	1444(B)	A	O3'-P	21.46	1.93	1.61
1	w	1133	U	O3'-P	20.03	1.91	1.61
31	y	201	C	O3'-P	19.14	1.89	1.61
1	w	2746	U	O5'-C5'	18.65	1.70	1.42
1	w	2199	A	O3'-P	17.24	1.87	1.61
31	y	97	U	O3'-P	14.86	1.83	1.61
1	w	2799	A	O3'-P	13.76	1.81	1.61
1	w	2795	G	O3'-P	12.44	1.79	1.61
31	y	99	C	O3'-P	12.32	1.79	1.61
31	y	103(C)	G	O3'-P	12.30	1.79	1.61
31	y	1455	G	O3'-P	11.62	1.78	1.61
31	y	843	U	O3'-P	10.90	1.77	1.61
31	y	136(B)	C	O3'-P	10.48	1.76	1.61
31	y	458	C	O3'-P	10.40	1.76	1.61
31	y	102(C)	C	O3'-P	10.01	1.76	1.61
1	w	2722	G	O5'-C5'	9.76	1.57	1.42
31	y	1402	C	O5'-C5'	9.51	1.56	1.42
1	w	2746	U	O3'-P	9.44	1.75	1.61
31	y	838	G	O3'-P	9.13	1.74	1.61
1	w	2889	C	O3'-P	9.03	1.74	1.61
1	w	2720	U	O5'-C5'	8.75	1.55	1.42
31	y	93	U	O3'-P	7.79	1.72	1.61
31	y	97	U	O5'-C5'	7.18	1.53	1.42
31	y	1167	A	O3'-P	7.17	1.72	1.61
31	y	449	C	O5'-C5'	7.14	1.53	1.42
31	y	162	A	O5'-C5'	6.96	1.52	1.42
31	y	1114	C	O5'-C5'	6.75	1.52	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	y	37	U	O5'-C5'	6.69	1.52	1.42
1	w	2759	G	O5'-C5'	6.43	1.52	1.42
31	y	99	C	O5'-C5'	6.24	1.51	1.42
12	J	32	THR	CA-C	6.00	1.55	1.52
1	w	2747	G	P-O5'	5.94	1.68	1.59
31	y	1402	C	P-O5'	5.92	1.68	1.59
31	y	69	G	O3'-P	5.71	1.69	1.61
31	y	1030	C	O5'-C5'	5.68	1.50	1.42
31	y	1468	A	O5'-C5'	5.66	1.50	1.42
31	y	529	G	O5'-C5'	5.65	1.50	1.42
1	w	2746	U	P-O5'	5.58	1.68	1.59
34	3	3	G	O5'-C5'	5.37	1.50	1.42
31	y	1176	A	O5'-C5'	5.34	1.50	1.42
31	y	1498	U	C4-O4	5.17	1.33	1.23
31	y	1401	G	O5'-C5'	5.15	1.50	1.42
1	w	2747	G	O5'-C5'	5.14	1.50	1.42
1	w	2809	A	O5'-C5'	5.12	1.50	1.42

All (420) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	w	2712(B)	A	P-O3'-C3'	-18.77	92.04	120.20
1	w	489	G	P-O3'-C3'	-15.31	97.23	120.20
31	y	97	U	P-O3'-C3'	-13.87	99.40	120.20
1	w	2746	U	P-O5'-C5'	-12.79	101.71	120.90
1	w	41	C	P-O3'-C3'	-12.56	101.35	120.20
1	w	1712	C	P-O3'-C3'	-12.39	101.61	120.20
31	y	99	C	P-O3'-C3'	-12.35	101.68	120.20
1	w	2799	A	O3'-P-O5'	11.40	121.11	104.00
1	w	155	C	P-O3'-C3'	-10.98	103.73	120.20
27	Y	21	SER	N-CA-C	-10.85	99.45	111.28
1	w	537	C	P-O3'-C3'	-10.49	104.46	120.20
17	O	50	ARG	N-CA-C	-10.35	100.39	113.23
38	f	76	ILE	N-CA-C	10.27	117.46	108.63
1	w	1718	G	P-O3'-C3'	-10.17	104.94	120.20
45	m	29	ALA	CA-C-N	9.87	132.17	119.84
45	m	29	ALA	C-N-CA	9.87	132.17	119.84
31	y	1402	C	P-O5'-C5'	-9.82	106.18	120.90
31	y	136(B)	C	P-O3'-C3'	-9.71	105.63	120.20
1	w	436	C	P-O3'-C3'	-9.65	105.72	120.20
1	w	99	U	P-O3'-C3'	-9.56	105.86	120.20
31	y	201	C	P-O3'-C3'	-9.09	106.56	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
49	q	40	ASP	CA-C-N	9.09	131.20	119.84
49	q	40	ASP	C-N-CA	9.09	131.20	119.84
19	Q	13	SER	N-CA-C	9.08	121.19	109.93
53	u	12	ALA	N-CA-C	-8.94	102.53	113.97
31	y	93	U	P-O3'-C3'	-8.91	106.83	120.20
10	H	28	VAL	CA-C-N	8.90	128.93	119.05
10	H	28	VAL	C-N-CA	8.90	128.93	119.05
1	w	1735	U	P-O3'-C3'	-8.87	106.90	120.20
38	f	12	LEU	N-CA-C	8.70	119.38	107.73
31	y	99	C	O3'-P-O5'	-8.69	90.96	104.00
1	w	2393	A	N9-C1'-C2'	-8.62	99.07	112.00
1	w	1506	C	P-O3'-C3'	-8.59	107.32	120.20
1	w	1451	C	O3'-P-O5'	-8.57	91.14	104.00
1	w	1133	U	P-O3'-C3'	-8.47	107.49	120.20
31	y	838	G	P-O3'-C3'	-8.38	107.63	120.20
35	c	90	MET	CA-C-N	8.31	130.23	119.84
35	c	90	MET	C-N-CA	8.31	130.23	119.84
16	N	76	PHE	CA-C-N	8.31	130.22	119.84
16	N	76	PHE	C-N-CA	8.31	130.22	119.84
22	T	82	ARG	CA-C-N	8.22	130.12	119.84
22	T	82	ARG	C-N-CA	8.22	130.12	119.84
16	N	19	LEU	CA-C-N	8.13	130.01	119.84
16	N	19	LEU	C-N-CA	8.13	130.01	119.84
40	h	70	LYS	CA-C-N	8.06	128.12	119.90
40	h	70	LYS	C-N-CA	8.06	128.12	119.90
1	w	890	A	P-O3'-C3'	-8.01	108.19	120.20
1	w	1221(A)	C	P-O3'-C3'	-7.90	108.35	120.20
13	K	18	LYS	N-CA-C	7.90	118.40	108.45
23	U	56	ASP	N-CA-C	-7.86	103.64	113.23
25	W	52	ASP	N-CA-C	-7.76	103.81	113.20
37	e	28	SER	CA-C-N	7.57	129.30	119.84
37	e	28	SER	C-N-CA	7.57	129.30	119.84
11	I	41	ALA	N-CA-C	7.56	119.17	108.74
1	w	1743	G	P-O3'-C3'	-7.55	108.88	120.20
1	w	1448(B)	A	P-O3'-C3'	-7.52	108.92	120.20
9	G	102	SER	N-CA-C	7.47	119.33	111.03
48	p	35	ARG	N-CA-C	-7.47	103.78	113.12
39	g	50	TYR	CA-C-N	7.44	129.14	119.84
39	g	50	TYR	C-N-CA	7.44	129.14	119.84
11	I	47	ILE	CA-C-N	7.43	127.29	119.05
11	I	47	ILE	C-N-CA	7.43	127.29	119.05
50	r	6	LEU	N-CA-C	7.41	118.33	107.88

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	K	57	HIS	N-CA-C	-7.39	103.25	111.82
7	E	48	GLU	N-CA-C	-7.35	103.25	111.71
31	y	103(C)	G	P-O3'-C3'	-7.35	109.18	120.20
1	w	1187	G	N9-C1'-C2'	7.33	123.00	112.00
15	M	75	GLU	N-CA-C	-7.33	103.32	111.82
1	w	1266	G	C2'-C3'-O3'	7.31	120.47	109.50
31	y	102(C)	C	O3'-P-O5'	-7.31	93.04	104.00
39	g	67	MET	N-CA-C	7.27	114.68	108.13
10	H	121	VAL	N-CA-C	7.25	117.38	110.42
40	h	18	TYR	N-CA-C	7.22	114.70	108.78
31	y	50	A	C2'-C3'-O3'	7.20	120.30	109.50
8	F	37	VAL	N-CA-C	7.20	117.60	108.82
22	T	175	VAL	CA-C-N	7.15	127.75	120.38
22	T	175	VAL	C-N-CA	7.15	127.75	120.38
52	t	41	VAL	CA-C-N	7.15	128.78	119.84
52	t	41	VAL	C-N-CA	7.15	128.78	119.84
5	C	14	ILE	N-CA-C	7.11	117.50	108.82
31	y	1455	G	O3'-P-O5'	-7.08	93.38	104.00
23	U	21	LEU	CB-CA-C	-7.08	108.40	116.54
45	m	48	ASN	N-CA-C	7.07	119.11	107.73
1	w	926	A	P-O3'-C3'	-7.01	109.69	120.20
1	w	1955	U	N1-C1'-C2'	6.99	124.49	114.00
45	m	76	LEU	N-CA-C	6.97	117.18	108.19
18	P	28	GLU	CA-C-N	6.96	128.53	119.84
18	P	28	GLU	C-N-CA	6.96	128.53	119.84
7	E	38	VAL	N-CA-C	6.94	117.89	108.17
35	c	231	GLU	CA-C-N	6.93	128.50	119.84
35	c	231	GLU	C-N-CA	6.93	128.50	119.84
31	y	69	G	O3'-P-O5'	-6.92	93.63	104.00
45	m	49	SER	N-CA-C	-6.90	102.05	110.88
50	r	43	LEU	N-CA-C	6.89	120.75	109.24
36	d	68	VAL	N-CA-C	6.86	118.48	108.53
16	N	50	ILE	CB-CA-C	-6.86	103.66	111.55
1	w	2795	G	P-O3'-C3'	-6.82	109.97	120.20
24	V	58	ILE	N-CA-C	6.82	118.53	108.65
11	I	81	ASP	N-CA-C	6.76	116.79	107.73
31	y	468	A	O3'-P-O5'	6.76	114.14	104.00
13	K	55	VAL	N-CA-C	6.70	116.83	110.53
35	c	239	VAL	N-CA-C	-6.70	106.77	113.20
53	u	92	LEU	N-CA-C	-6.67	103.63	111.03
4	B	85	ASP	CA-C-N	6.65	128.16	119.84
4	B	85	ASP	C-N-CA	6.65	128.16	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	w	1838	C	C2'-C3'-O3'	6.64	119.46	109.50
7	E	18	GLU	N-CA-C	-6.62	103.99	111.14
35	c	126	GLU	N-CA-C	-6.59	104.38	112.88
1	w	1618	A	C2'-C3'-O3'	6.58	119.38	109.50
42	j	89	ASN	CA-C-N	6.58	126.27	119.56
42	j	89	ASN	C-N-CA	6.58	126.27	119.56
4	B	64	ILE	N-CA-C	6.56	117.93	108.48
48	p	18	PHE	CA-C-N	6.56	127.59	119.98
48	p	18	PHE	C-N-CA	6.56	127.59	119.98
20	R	56	THR	N-CA-C	6.52	120.23	108.69
12	J	96	THR	CA-C-N	6.52	127.99	119.84
12	J	96	THR	C-N-CA	6.52	127.99	119.84
6	D	74	GLY	N-CA-C	-6.51	105.66	113.99
8	F	147	ASN	N-CA-C	-6.48	105.25	113.02
46	n	24	GLY	N-CA-C	-6.47	105.69	115.00
10	H	33	GLU	CA-C-N	6.46	127.92	119.84
10	H	33	GLU	C-N-CA	6.46	127.92	119.84
3	A	226	ASN	CA-C-N	6.46	127.91	119.84
3	A	226	ASN	C-N-CA	6.46	127.91	119.84
39	g	67	MET	CA-C-N	6.46	126.48	119.90
39	g	67	MET	C-N-CA	6.46	126.48	119.90
38	f	76	ILE	CA-C-N	6.44	127.89	119.84
38	f	76	ILE	C-N-CA	6.44	127.89	119.84
22	T	94	GLU	CA-C-N	6.43	127.87	119.84
22	T	94	GLU	C-N-CA	6.43	127.87	119.84
37	e	135	LEU	CA-C-N	6.42	127.87	119.84
37	e	135	LEU	C-N-CA	6.42	127.87	119.84
1	w	828	U	N1-C1'-C2'	6.42	121.63	112.00
23	U	48	GLY	N-CA-C	-6.40	102.80	112.60
7	E	93	THR	N-CA-C	6.38	118.85	108.76
35	c	72	GLY	N-CA-C	6.37	119.87	110.63
1	w	2805	G	OP1-P-O3'	-6.37	88.90	108.00
39	g	40	VAL	N-CA-C	6.36	116.99	108.27
31	y	99	C	P-O5'-C5'	-6.34	111.39	120.90
26	X	54	VAL	N-CA-C	6.32	116.24	108.53
3	A	182	PRO	CA-C-N	6.30	127.45	120.45
3	A	182	PRO	C-N-CA	6.30	127.45	120.45
11	I	11	ALA	N-CA-C	-6.30	103.63	113.02
45	m	32	ARG	N-CA-C	6.28	117.69	108.14
11	I	98	VAL	N-CA-C	6.28	117.31	110.21
18	P	14	VAL	N-CA-C	6.27	116.95	108.17
38	f	127	ASN	CA-C-N	6.24	127.64	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	f	127	ASN	C-N-CA	6.24	127.64	119.84
43	k	57	LYS	N-CA-C	-6.22	105.63	113.72
10	H	66	THR	CA-C-N	6.20	127.58	119.84
10	H	66	THR	C-N-CA	6.20	127.58	119.84
44	l	38	ASN	CA-C-N	6.18	127.56	119.84
44	l	38	ASN	C-N-CA	6.18	127.56	119.84
39	g	10	LEU	N-CA-C	6.18	119.60	109.72
1	w	1872	A	P-O3'-C3'	-6.17	110.95	120.20
1	w	70	G	N9-C1'-C2'	6.16	121.24	112.00
19	Q	79	GLY	CA-C-N	6.16	127.54	119.84
19	Q	79	GLY	C-N-CA	6.16	127.54	119.84
1	w	2171	A	C2'-C3'-O3'	6.15	118.72	109.50
23	U	21	LEU	N-CA-C	6.15	117.65	108.31
1	w	2720	U	O5'-C5'-C4'	-6.14	102.28	111.50
43	k	73	ASP	N-CA-C	6.11	116.31	108.24
48	p	44	LYS	N-CA-C	-6.11	106.80	114.56
3	A	225	ILE	N-CA-C	6.10	115.97	108.53
1	w	789	A	C4'-C3'-O3'	-6.10	103.85	113.00
13	K	130	LYS	N-CA-C	6.09	116.32	108.34
52	t	60	VAL	N-CA-C	6.09	117.13	108.42
1	w	1577	C	N1-C1'-C2'	-6.08	102.88	112.00
1	w	366(B)	C	P-O3'-C3'	-6.05	111.12	120.20
20	R	16	LYS	N-CA-C	-6.03	104.77	111.71
1	w	508	G	C2'-C3'-O3'	6.02	118.53	109.50
1	w	1898	U	N1-C1'-C2'	6.02	121.03	112.00
16	N	120	ARG	N-CA-C	-6.00	107.78	114.62
26	X	15	TYR	CA-C-N	6.00	125.96	119.78
26	X	15	TYR	C-N-CA	6.00	125.96	119.78
4	B	103	ARG	N-CA-C	6.00	115.77	107.73
20	R	19	ALA	N-CA-C	-6.00	106.50	113.88
37	e	196	LEU	CA-C-N	6.00	127.34	119.84
37	e	196	LEU	C-N-CA	6.00	127.34	119.84
17	O	75	ASN	N-CA-C	5.99	118.31	109.69
16	N	76	PHE	N-CA-C	5.95	117.84	108.55
37	e	158	ILE	N-CA-C	-5.95	104.56	110.62
44	l	57	THR	N-CA-C	5.94	122.94	109.81
49	q	74	LEU	N-CA-C	-5.94	105.12	112.90
37	e	155	LEU	N-CA-C	5.93	118.11	108.26
5	C	97	LYS	CA-C-N	5.91	127.23	119.84
5	C	97	LYS	C-N-CA	5.91	127.23	119.84
1	w	270(E)	C	N1-C1'-C2'	5.91	120.86	112.00
1	w	1822	G	N9-C1'-C2'	-5.90	103.15	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	w	1221(A)	C	O3'-P-O5'	-5.88	95.18	104.00
31	y	243	A	C2'-C3'-O3'	5.88	118.31	109.50
31	y	960	U	N1-C1'-C2'	5.87	120.81	112.00
35	c	162	ILE	N-CA-C	5.85	116.43	107.77
1	w	1566	A	C2'-C3'-O3'	5.85	118.27	109.50
1	w	2471	C	C1'-C2'-O2'	-5.84	103.03	111.80
11	I	10	VAL	N-CA-C	5.84	117.26	109.37
1	w	1828	G	C2'-C3'-O3'	5.84	118.25	109.50
1	w	1250	G	C2'-C3'-O3'	5.83	118.25	109.50
5	C	31	CYS	CA-C-N	5.83	125.84	119.90
5	C	31	CYS	C-N-CA	5.83	125.84	119.90
4	B	148	GLU	CA-C-N	5.82	127.12	119.84
4	B	148	GLU	C-N-CA	5.82	127.12	119.84
29	a	48	PHE	N-CA-C	5.82	114.33	108.75
31	y	1401	G	P-O3'-C3'	-5.81	111.49	120.20
31	y	82	U	O3'-P-O5'	-5.80	95.31	104.00
35	c	230	VAL	N-CA-C	5.79	117.09	109.21
1	w	1426	G	N9-C1'-C2'	5.78	120.68	112.00
22	T	3	TYR	N-CA-C	5.78	118.89	109.59
1	w	1444(B)	A	P-O3'-C3'	-5.78	111.54	120.20
19	Q	106	ILE	N-CA-C	5.76	115.96	108.35
1	w	2795	G	O3'-P-O5'	-5.76	95.37	104.00
47	o	20	ALA	N-CA-C	5.75	117.75	110.33
29	a	44	LYS	N-CA-C	5.75	117.20	108.07
7	E	135	LEU	N-CA-C	5.74	116.13	108.38
36	d	18	TRP	N-CA-C	-5.74	105.92	114.64
4	B	15	PHE	N-CA-C	5.74	123.02	110.80
9	G	5	LEU	N-CA-C	5.73	118.12	109.41
45	m	77	GLN	N-CA-C	5.72	117.92	110.43
43	k	24	VAL	N-CA-C	-5.72	104.99	113.39
8	F	43	VAL	N-CA-C	5.71	116.44	109.30
31	y	93	U	O3'-P-O5'	-5.71	95.44	104.00
31	y	1401	G	C3'-C2'-C1'	-5.70	95.60	101.30
8	F	164	TYR	N-CA-C	-5.69	104.28	111.11
11	I	97	ARG	N-CA-C	5.69	118.38	108.76
1	w	457	A	N9-C1'-C2'	5.69	120.53	112.00
1	w	458	G	C1'-O4'-C4'	-5.69	104.21	109.90
4	B	233	HIS	N-CA-C	5.68	115.52	108.19
1	w	2393	A	C4'-C3'-O3'	5.67	121.50	113.00
35	c	189	ASP	N-CA-C	5.67	116.05	108.23
18	P	35	LEU	CA-C-N	5.67	126.92	119.84
18	P	35	LEU	C-N-CA	5.67	126.92	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	K	72	LYS	CA-C-N	5.66	126.91	119.84
13	K	72	LYS	C-N-CA	5.66	126.91	119.84
6	D	133	GLU	N-CA-C	-5.66	104.50	111.40
8	F	172	LYS	CA-C-N	5.65	126.90	119.84
8	F	172	LYS	C-N-CA	5.65	126.90	119.84
1	w	2213	U	P-O3'-C3'	-5.63	111.75	120.20
4	B	107	ALA	N-CA-C	5.63	116.79	109.64
10	H	151	HIS	CA-C-N	5.63	126.88	119.84
10	H	151	HIS	C-N-CA	5.63	126.88	119.84
49	q	49	LEU	N-CA-C	5.63	117.05	110.41
49	q	48	TRP	N-CA-C	5.63	119.33	111.56
1	w	1616	A	C4'-C3'-O3'	5.62	117.84	109.40
12	J	110	TYR	N-CA-C	-5.62	106.58	113.50
1	w	2257	U	N1-C1'-C2'	-5.62	103.57	112.00
39	g	11	ASN	CA-C-N	5.62	125.24	119.56
39	g	11	ASN	C-N-CA	5.62	125.24	119.56
15	M	88	ASP	N-CA-C	5.62	115.97	108.38
4	B	46	GLN	N-CA-C	-5.62	106.25	114.39
1	w	2746	U	O5'-C5'-C4'	-5.61	103.09	111.50
40	h	89	MET	N-CA-C	5.61	115.42	108.19
21	S	97	ARG	N-CA-C	5.61	117.49	109.14
49	q	75	ARG	N-CA-C	-5.60	105.17	112.23
1	w	1275	A	C2'-C3'-O3'	5.58	117.87	109.50
37	e	204	ILE	N-CA-C	-5.58	105.09	110.72
12	J	81	GLN	N-CA-C	5.57	115.37	108.19
1	w	811	U	N1-C1'-C2'	5.56	120.34	112.00
6	D	187	LEU	N-CA-C	5.56	116.71	108.60
38	f	80	ILE	N-CA-C	5.56	115.31	108.53
28	Z	6	GLN	CA-C-N	5.54	126.77	119.84
28	Z	6	GLN	C-N-CA	5.54	126.77	119.84
46	n	82	MET	N-CA-C	-5.54	106.56	113.38
37	e	39	PRO	CA-C-N	5.54	126.76	119.84
37	e	39	PRO	C-N-CA	5.54	126.76	119.84
1	w	1171	G	P-O3'-C3'	-5.53	111.90	120.20
17	O	39	LEU	N-CA-C	-5.53	105.41	111.82
16	N	48	ILE	N-CA-C	-5.52	103.97	110.21
31	y	1455	G	OP1-P-O3'	5.52	124.56	108.00
42	j	56	LEU	N-CA-C	-5.52	105.16	112.94
9	G	64	GLU	N-CA-C	-5.51	104.91	111.03
31	y	873	A	C2'-C3'-O3'	5.51	117.76	109.50
31	y	1498	U	N1-C1'-C2'	5.51	122.26	114.00
39	g	90	VAL	N-CA-C	5.51	116.03	107.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
31	y	971	G	C2'-C3'-O3'	-5.50	105.44	113.70
1	w	1801	G	N9-C1'-C2'	5.50	120.25	112.00
1	w	789	A	N9-C1'-C2'	5.49	120.24	112.00
31	y	1065	U	C2'-C3'-O3'	5.49	117.74	109.50
22	T	183	LEU	N-CA-C	-5.49	106.59	113.28
1	w	685	A	N9-C1'-C2'	5.48	120.22	112.00
1	w	2431	U	N1-C1'-C2'	-5.48	103.78	112.00
35	c	87	ARG	N-CA-C	-5.48	105.22	111.14
35	c	186	ALA	N-CA-C	5.47	117.39	109.07
51	s	84	LYS	N-CA-C	5.47	118.58	110.48
1	w	346	A	C2'-C3'-O3'	-5.47	105.50	113.70
41	i	5	PRO	N-CA-C	-5.47	105.93	113.53
20	R	60	ARG	N-CA-C	5.46	122.42	110.80
31	y	1285	A	C2'-C3'-O3'	5.45	117.67	109.50
1	w	1626	G	C4'-C3'-O3'	5.45	117.57	109.40
9	G	112	LYS	N-CA-C	-5.44	106.36	114.64
31	y	82	U	P-O3'-C3'	5.44	128.37	120.20
31	y	1517	G	C4'-C3'-O3'	5.44	121.16	113.00
19	Q	86	LEU	CA-C-N	5.43	125.73	119.92
19	Q	86	LEU	C-N-CA	5.43	125.73	119.92
22	T	176	PRO	N-CA-C	5.43	117.33	110.70
50	r	39	SER	N-CA-C	5.42	115.70	108.38
6	D	152	VAL	N-CA-C	5.42	115.67	107.75
1	w	1863	G	N9-C1'-C2'	-5.42	103.88	112.00
16	N	79	HIS	N-CA-C	5.41	122.32	110.80
39	g	68	PRO	N-CA-C	5.41	119.70	111.15
16	N	23	ARG	CA-C-N	5.40	126.59	119.84
16	N	23	ARG	C-N-CA	5.40	126.59	119.84
8	F	54	ARG	CA-C-N	5.40	126.59	119.84
8	F	54	ARG	C-N-CA	5.40	126.59	119.84
1	w	2468	G	N9-C1'-C2'	-5.39	105.92	114.00
1	w	1342	A	C2'-C3'-O3'	5.38	117.58	109.50
39	g	12	PRO	N-CA-C	5.38	120.58	113.86
35	c	71	VAL	N-CA-C	5.38	115.92	108.23
52	t	58	VAL	CA-C-N	5.38	125.28	119.85
52	t	58	VAL	C-N-CA	5.38	125.28	119.85
3	A	169	THR	N-CA-C	-5.37	106.66	114.12
39	g	6	VAL	N-CA-C	5.37	114.47	106.85
4	B	231	HIS	CA-C-N	5.37	126.55	119.84
4	B	231	HIS	C-N-CA	5.37	126.55	119.84
21	S	83	THR	N-CA-C	5.37	115.48	108.07
1	w	2433	A	C4'-C3'-O3'	5.37	117.45	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
45	m	55	ALA	N-CA-C	5.37	115.44	107.88
41	i	9	MET	N-CA-C	-5.36	106.58	113.01
48	p	76	GLU	N-CA-C	-5.36	106.58	113.23
1	w	49	A	N9-C1'-C2'	5.36	120.04	112.00
1	w	746	A	N9-C1'-C2'	5.33	120.00	112.00
25	W	10	LEU	N-CA-C	-5.33	106.75	113.20
4	B	193	VAL	N-CA-C	5.33	120.42	109.34
1	w	1822	G	C5'-C4'-C3'	-5.32	108.02	116.00
4	B	157	ARG	N-CA-C	5.32	115.41	108.07
6	D	114	ARG	N-CA-C	-5.32	106.76	113.20
22	T	176	PRO	CA-C-N	5.31	125.21	119.85
22	T	176	PRO	C-N-CA	5.31	125.21	119.85
33	2	58	A	C2'-C3'-O3'	5.30	117.45	109.50
4	B	155	LEU	N-CA-C	5.30	117.81	108.75
4	B	213	ARG	N-CA-C	-5.30	105.67	111.82
10	H	65	TRP	N-CA-C	5.30	118.01	108.48
19	Q	95	ILE	N-CA-C	5.29	117.38	108.81
12	J	99	LEU	N-CA-C	-5.28	104.94	111.33
45	m	68	TYR	N-CA-C	5.28	118.09	109.59
1	w	362	U	C3'-C2'-C1'	-5.28	96.02	101.30
20	R	10	ALA	CA-C-N	5.27	126.43	119.84
20	R	10	ALA	C-N-CA	5.27	126.43	119.84
1	w	1520	U	N1-C1'-C2'	5.26	119.90	112.00
5	C	11	MET	N-CA-C	5.26	115.49	108.38
1	w	913	U	C2'-C3'-O3'	5.26	117.39	109.50
40	h	13	GLN	CA-C-N	5.26	126.41	119.84
40	h	13	GLN	C-N-CA	5.26	126.41	119.84
6	D	95	THR	N-CA-C	5.25	116.12	108.14
3	A	182	PRO	N-CA-C	5.25	117.10	110.70
40	h	18	TYR	CB-CA-C	-5.25	109.51	117.07
1	w	2288	A	N9-C1'-C2'	5.24	119.85	112.00
5	C	20	ALA	N-CA-C	5.24	116.68	110.19
1	w	146	G	N9-C1'-C2'	5.23	119.85	112.00
1	w	2506	U	N1-C1'-C2'	5.23	119.85	112.00
1	w	2497	A	C2'-C3'-O3'	5.22	117.34	109.50
5	C	168	MET	N-CA-C	5.22	117.92	109.40
31	y	776	G	N9-C1'-C2'	5.21	119.82	112.00
7	E	169	ALA	N-CA-C	-5.21	105.68	111.36
12	J	120	ALA	N-CA-C	5.21	117.57	109.60
1	w	2237	G	N9-C1'-C2'	5.21	119.81	112.00
1	w	2805	G	OP2-P-O3'	5.21	123.62	108.00
1	w	1287	A	N9-C1'-C2'	5.21	119.81	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	w	177	G	N9-C1'-C2'	5.20	119.80	112.00
31	y	933	G	N9-C1'-C2'	5.20	119.80	112.00
1	w	2747	G	P-O5'-C5'	-5.19	113.11	120.90
20	R	31	HIS	CA-C-N	5.19	126.33	119.84
20	R	31	HIS	C-N-CA	5.19	126.33	119.84
50	r	41	LYS	N-CA-C	5.19	116.02	108.14
4	B	208	LYS	N-CA-C	5.18	116.95	108.76
15	M	101	LEU	N-CA-C	-5.18	106.27	112.59
1	w	265	A	N9-C1'-C2'	5.18	121.77	114.00
1	w	1288	U	C2'-C3'-O3'	-5.17	105.94	113.70
31	y	293	G	N9-C1'-C2'	5.17	119.75	112.00
18	P	4	ILE	N-CA-C	5.17	117.18	108.81
40	h	18	TYR	CA-C-O	5.17	120.94	117.94
31	y	793	U	N1-C1'-C2'	5.17	119.75	112.00
1	w	403	U	C4'-C3'-O3'	-5.16	105.26	113.00
14	L	115	GLU	N-CA-C	5.16	117.03	109.24
35	c	128	GLU	N-CA-C	-5.15	105.35	111.69
1	w	201	C	O4'-C1'-C2'	-5.15	102.45	107.60
12	J	102	ARG	N-CA-C	-5.15	105.85	111.82
42	j	63	ILE	N-CA-C	5.15	116.78	108.85
22	T	97	GLU	N-CA-C	5.14	117.49	109.52
31	y	210	U	OP1-P-O3'	-5.14	92.57	108.00
39	g	21	LEU	N-CA-C	-5.14	107.18	113.50
44	l	57	THR	CA-C-N	5.14	126.26	119.84
44	l	57	THR	C-N-CA	5.14	126.26	119.84
1	w	2468	G	C4'-C3'-O3'	5.13	117.10	109.40
5	C	132	HIS	CB-CA-C	-5.13	110.64	116.54
40	h	126	ASP	N-CA-C	-5.13	106.72	112.87
44	l	114	VAL	N-CA-C	5.12	112.62	107.55
1	w	908	C	O4'-C1'-C2'	-5.12	102.48	107.60
12	J	37	GLY	N-CA-C	-5.11	101.06	113.18
1	w	1812	A	C4'-C3'-C2'	-5.10	97.50	102.60
1	w	2529	G	N9-C1'-C2'	5.09	119.64	112.00
1	w	1111	A	C2'-C3'-O3'	5.09	117.14	109.50
31	y	119	A	C2'-C3'-O3'	5.09	117.13	109.50
1	w	2501	C	C2'-C3'-O3'	-5.08	106.08	113.70
1	w	2762	G	N9-C1'-C2'	5.08	119.62	112.00
31	y	1402	C	O4'-C4'-C3'	5.08	109.08	104.00
7	E	90	LEU	N-CA-C	5.07	114.98	108.34
24	V	60	PHE	N-CA-C	5.06	116.00	108.86
1	w	1159	U	O4'-C1'-C2'	-5.06	102.54	107.60
1	w	2497	A	C4'-C3'-O3'	5.05	116.98	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	f	69	VAL	CA-C-N	5.05	126.16	119.84
38	f	69	VAL	C-N-CA	5.05	126.16	119.84
1	w	454	A	N9-C1'-C2'	5.05	119.58	112.00
45	m	113	LYS	N-CA-C	-5.05	106.53	113.30
1	w	627	A	C2'-C3'-O3'	5.05	117.07	109.50
1	w	370	G	N9-C1'-C2'	5.04	119.56	112.00
48	p	6	GLU	N-CA-C	5.04	116.46	111.07
7	E	175	LEU	N-CA-C	-5.03	105.79	111.28
8	F	34	GLU	N-CA-C	5.03	116.81	110.33
20	R	62	LYS	N-CA-C	5.02	117.79	109.85
6	D	86	GLY	CA-C-N	5.02	126.11	119.84
6	D	86	GLY	C-N-CA	5.02	126.11	119.84
31	y	210	U	P-O3'-C3'	5.02	127.73	120.20
1	w	1301	A	C4'-C3'-O3'	5.01	116.92	109.40
5	C	176	ILE	N-CA-C	5.01	113.11	108.15
28	Z	33	ARG	N-CA-C	-5.01	105.09	111.11
51	s	56	THR	N-CA-C	-5.01	105.52	111.69
1	w	1613	G	C4'-C3'-O3'	-5.01	105.48	113.00
50	r	63	ARG	CA-C-N	5.01	126.10	119.84
50	r	63	ARG	C-N-CA	5.01	126.10	119.84
13	K	42	ILE	N-CA-C	5.00	115.68	108.48

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	w	62213	0	31375	5674	0
2	x	2573	0	1306	326	0
3	A	996	0	1013	149	0
4	B	2115	0	2195	524	0
5	C	1541	0	1599	417	0
6	D	1517	0	1565	287	0
7	E	1468	0	1529	267	0
8	F	1319	0	1399	167	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	G	1156	0	1239	206	6
10	H	1103	0	1177	231	0
11	I	932	0	994	203	0
12	J	1114	0	1187	252	0
13	K	1089	0	1156	242	0
14	L	968	0	1033	193	0
15	M	846	0	902	192	0
16	N	1143	0	1211	206	0
17	O	964	0	1022	202	0
18	P	779	0	852	172	0
19	Q	868	0	929	146	0
20	R	725	0	778	128	0
21	S	793	0	890	87	0
22	T	1475	0	1504	217	0
23	U	605	0	628	191	0
24	V	694	0	764	161	0
25	W	520	0	575	80	0
26	X	477	0	529	89	0
27	Y	436	0	460	81	0
28	Z	418	0	467	106	0
29	a	507	0	576	99	0
30	b	294	0	323	58	0
31	y	32546	0	16450	4133	6
32	z	1639	0	837	159	0
33	2	1621	0	821	161	0
34	3	390	0	198	24	0
35	c	1900	0	1951	189	0
36	d	1612	0	1677	307	0
37	e	1703	0	1767	357	0
38	f	1146	0	1207	185	0
39	g	843	0	857	75	0
40	h	1257	0	1296	231	0
41	i	1116	0	1177	222	0
42	j	1011	0	1043	138	0
43	k	794	0	840	109	0
44	l	864	0	881	127	0
45	m	970	0	1057	208	0
46	n	997	0	1072	144	0
47	o	492	0	533	164	0
48	p	734	0	771	112	0
49	q	700	0	720	172	0
50	r	857	0	930	202	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
51	s	668	0	748	89	0
52	t	647	0	673	100	0
53	u	762	0	859	174	0
54	v	208	0	221	52	0
All	All	147125	0	99763	17210	6

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 71.

All (17210) 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)
1:w:2746:U:O5'	1:w:2746:U:C5'	1.70	1.40
1:w:2784:C:C2'	1:w:2785:C:H5"	1.61	1.31
1:w:568:U:H2'	1:w:570:G:OP2	1.31	1.26
1:w:2588:G:H2'	1:w:2589:A:O4'	1.31	1.26
31:y:66:G:H4'	31:y:173:U:O4	1.36	1.25
31:y:943:U:O2'	31:y:944:G:H5'	1.38	1.23
1:w:1171:G:O3'	1:w:1173:G:P	1.97	1.23
31:y:102:G:H2'	31:y:103:C:C6	1.74	1.23
1:w:1864:U:O3'	1:w:1869:G:P	1.97	1.22
1:w:1546(B):C:O3'	1:w:1547:C:P	1.96	1.22
1:w:1616:A:H3'	1:w:1617:C:C5'	1.69	1.22
31:y:412:A:O2'	31:y:413:G:H5"	1.33	1.22
31:y:552:U:H4'	45:m:85:ARG:NH1	1.53	1.22
36:d:120:VAL:HA	36:d:123:GLN:HE22	1.05	1.22
1:w:1735:U:O3'	1:w:1741:C:P	1.99	1.21
1:w:1451:C:O3'	1:w:1453:A:P	1.99	1.21
31:y:965:A:OP1	31:y:1198:G:H5'	1.34	1.20
1:w:537:C:O3'	1:w:539:G:P	1.98	1.19
1:w:1481:U:O3'	1:w:1483:G:P	1.99	1.19
1:w:2653:U:H5'	1:w:2654:A:H5"	1.21	1.19
1:w:99:U:O3'	1:w:101:G:P	2.01	1.19
31:y:507:C:H3'	31:y:508:C:C5'	1.71	1.19
1:w:1583:A:O3'	1:w:1585:C:P	2.01	1.18
1:w:1718:G:O3'	1:w:1725:G:P	2.01	1.18
31:y:1298:C:H5'	40:h:114:ARG:NH2	1.59	1.18
1:w:2111:C:H41	1:w:2144:U:H4'	1.07	1.18
1:w:155:C:O3'	1:w:161:U:P	2.02	1.18
1:w:926:A:O3'	1:w:928:G:P	2.02	1.18
31:y:438:G:H2'	31:y:494:U:O4	1.39	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:21:G:H2'	2:x:22:U:C6	1.78	1.17
1:w:1565:C:H3'	1:w:1567:A:H62	1.08	1.17
1:w:890:A:O3'	1:w:892:G:P	2.03	1.17
1:w:2712(B):A:O3'	1:w:2713:A:P	2.03	1.16
31:y:1347:G:H22	31:y:1373:G:H2'	1.03	1.16
1:w:1815:A:H5"	1:w:1817:G:H1'	1.26	1.16
1:w:2875:C:C3'	1:w:2876:G:H5"	1.75	1.16
1:w:366(B):C:O3'	1:w:370:G:P	2.03	1.15
1:w:1743:G:O3'	1:w:1746:G:P	2.04	1.15
1:w:2622:C:H2'	1:w:2825:G:H22	1.02	1.15
11:I:97:ARG:HA	11:I:97:ARG:HE	1.04	1.15
1:w:554:U:O3'	1:w:556:G:P	2.05	1.15
1:w:675:A:H4'	6:D:62:GLN:HG3	1.23	1.15
1:w:2213:U:O3'	1:w:2215:G:P	2.03	1.15
4:B:65:ILE:HD12	4:B:105:ILE:HG13	1.18	1.15
1:w:436:C:O3'	1:w:438:G:P	2.05	1.15
1:w:346:A:H4'	1:w:347:A:H5'	1.21	1.14
1:w:1712:C:O3'	1:w:1716:U:P	2.04	1.14
31:y:673:G:H2'	31:y:674:G:C8	1.82	1.14
31:y:1112:C:H2'	31:y:1113:C:H5'	1.27	1.14
15:M:17:ARG:HE	15:M:89:ARG:HD2	1.06	1.14
49:q:43:LYS:HA	49:q:48:TRP:HE1	1.10	1.14
2:x:110:G:H2'	2:x:111:U:H5'	1.15	1.14
1:w:271(D):U:H2'	1:w:271:G:H4'	1.23	1.13
31:y:555:C:C3'	31:y:556:C:H5"	1.78	1.13
31:y:507:C:H3'	31:y:508:C:H5"	1.24	1.13
31:y:509:A:H2'	31:y:510:A:C8	1.83	1.13
31:y:608:A:H2'	31:y:609:A:H8	0.97	1.12
31:y:1196:U:OP1	31:y:1197:G:H4'	1.49	1.12
31:y:1469:G:H8	31:y:1469:G:O5'	1.32	1.12
37:e:13:ARG:HB3	37:e:33:MET:HB2	1.28	1.12
37:e:26:CYS:HA	37:e:31:CYS:HB2	1.24	1.12
1:w:2572:A:H4'	1:w:2573:C:H5'	1.32	1.12
2:x:8:U:H4'	15:M:89:ARG:HH21	0.98	1.12
1:w:1557:C:H3'	1:w:1558:A:H5"	1.27	1.12
31:y:291:C:H3'	31:y:305:G:N2	1.65	1.12
31:y:555:C:H3'	31:y:556:C:H5"	1.22	1.12
31:y:1053:G:H4'	31:y:1054:C:H5"	1.32	1.12
1:w:2784:C:H2'	1:w:2785:C:C5'	1.78	1.11
14:L:96:ARG:HG3	14:L:117:VAL:HG23	1.31	1.11
31:y:689:C:H5"	44:l:27:ASN:ND2	1.62	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1001:G:H3'	31:y:1002:G:H5"	1.31	1.11
37:e:31:CYS:SG	37:e:34:GLU:HB2	1.89	1.11
1:w:1448(B):A:O3'	1:w:1449:G:P	2.07	1.11
1:w:2009:G:H4'	19:Q:41:LYS:HG2	1.27	1.11
1:w:489:G:O3'	1:w:491:G:P	2.08	1.11
1:w:1506:C:O3'	1:w:1508:A:P	2.09	1.11
31:y:608:A:H2'	31:y:609:A:C8	1.85	1.11
31:y:1332:A:H2'	31:y:1333:A:O4'	1.48	1.11
1:w:788:A:H4'	1:w:789:A:H5'	1.32	1.11
22:T:10:ARG:HG2	22:T:37:VAL:HA	1.33	1.11
35:c:25:ASN:HB2	35:c:191:ASP:HA	1.21	1.11
13:K:133:ARG:HG2	13:K:134:ARG:H	1.14	1.11
26:X:5:LYS:HA	26:X:36:VAL:HG12	1.23	1.11
37:e:105:VAL:HG13	37:e:110:PHE:HB3	1.11	1.11
47:o:30:ALA:HA	47:o:33:VAL:HG13	1.13	1.11
1:w:1309:G:H2'	1:w:1310:G:H5"	1.13	1.10
1:w:1616:A:H3'	1:w:1617:C:H5'	1.12	1.10
2:x:8:U:H4'	15:M:89:ARG:NH2	1.65	1.10
15:M:28:VAL:HG12	15:M:29:PHE:H	1.10	1.10
50:r:54:GLY:HA3	50:r:82:MET:SD	1.90	1.10
1:w:2578:G:H1'	5:C:139:GLY:HA3	1.29	1.10
1:w:2682:U:C2	5:C:11:MET:HE2	1.85	1.10
6:D:150:LEU:HD12	6:D:169:VAL:HB	1.30	1.10
31:y:41:G:H2'	31:y:42:G:C8	1.85	1.10
31:y:1347:G:N2	31:y:1373:G:H2'	1.64	1.10
41:i:95:VAL:HB	41:i:99:GLU:HG2	1.32	1.10
43:k:51:ARG:HB3	43:k:59:SER:HB3	1.31	1.10
27:Y:38:ALA:HB2	27:Y:49:CYS:HB3	1.28	1.10
31:y:1429:C:O2'	31:y:1430:C:H5'	1.48	1.10
1:w:142:G:H2'	1:w:143:C:H5"	1.34	1.10
31:y:137:C:H1'	49:q:61:SER:O	1.52	1.10
31:y:668:G:H2'	31:y:669:U:O4'	1.52	1.10
35:c:122:PHE:HA	35:c:127:ILE:HG12	1.32	1.10
2:x:20:C:H2'	2:x:21:G:O4'	1.52	1.09
3:A:30:VAL:HA	3:A:33:LEU:HB2	1.34	1.09
31:y:528:C:C2'	31:y:529:G:H5'	1.83	1.09
31:y:1375:A:H5'	40:h:29:LYS:HG2	1.29	1.09
53:u:84:LEU:O	53:u:88:VAL:HB	1.50	1.09
1:w:1182:A:H3'	1:w:1183:G:H5"	1.34	1.09
1:w:2065:C:C2'	1:w:2066:C:H5"	1.82	1.09
1:w:2080:G:H5'	24:V:23:LYS:HD3	1.33	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2355:C:H1'	23:U:39:ARG:NH2	1.66	1.09
1:w:2633:G:N2	5:C:64:LYS:HD3	1.67	1.09
1:w:2721:A:C2'	1:w:2722:G:H5'	1.83	1.09
18:P:15:GLU:HB3	18:P:16:PRO:HD3	1.29	1.09
31:y:963:G:H2'	31:y:964:A:C8	1.86	1.09
1:w:834:C:H5'	29:a:52:LYS:HD3	1.34	1.09
1:w:2359:C:H2'	1:w:2360:A:O4'	1.52	1.09
4:B:124:PRO:HG2	4:B:129:ASN:HD21	0.94	1.09
5:C:93:VAL:HG12	5:C:182:LEU:HB2	1.18	1.09
17:O:51:LYS:HE3	17:O:55:ARG:HE	1.09	1.09
19:Q:11:ARG:HA	19:Q:100:THR:HG22	1.34	1.09
31:y:1387:G:C2'	31:y:1388:C:H5"	1.81	1.09
37:e:14:ARG:HA	37:e:40:PRO:HD2	1.34	1.09
1:w:2734:A:H2'	1:w:2735:G:H5'	1.25	1.09
31:y:1387:G:H2'	31:y:1388:C:H5"	1.34	1.09
1:w:467:G:H5'	28:Z:33:ARG:HH11	1.04	1.08
1:w:1678:G:N2	1:w:1989:G:H22	1.49	1.08
1:w:2734:A:C2'	1:w:2735:G:H5'	1.82	1.08
31:y:546:G:H4'	31:y:548:G:H4'	1.26	1.08
33:2:67:A:O2'	33:2:68:U:H5'	1.52	1.08
1:w:898:C:H3'	1:w:899:A:H5"	1.17	1.08
1:w:2512:C:H4'	5:C:122:PHE:CZ	1.87	1.08
31:y:226:G:H2'	31:y:227:G:H8	1.10	1.08
31:y:279:A:H4'	31:y:280:C:H5'	1.26	1.08
31:y:1499:A:H1'	31:y:1520:G:H4'	1.30	1.08
31:y:1518:MA6:H8	31:y:1518:MA6:O5'	1.53	1.08
1:w:2305:A:H5"	7:E:134:GLY:HA3	1.28	1.08
6:D:149:VAL:HB	6:D:186:ARG:HB2	1.09	1.08
24:V:48:LYS:HG2	24:V:63:ALA:HA	1.30	1.08
31:y:1012:U:H2'	31:y:1013:G:H5'	1.10	1.08
31:y:1237:C:H3'	31:y:1238:A:H5'	1.36	1.08
35:c:169:LYS:HD3	35:c:170:GLU:HG3	1.31	1.08
1:w:2355:C:H1'	23:U:39:ARG:HH21	1.16	1.08
1:w:2189:U:H3'	1:w:2190:G:H5"	1.27	1.07
37:e:9:CYS:HA	37:e:26:CYS:SG	1.94	1.07
1:w:2632:A:H1'	5:C:61:ARG:HH22	1.14	1.07
1:w:2875:C:H3'	1:w:2876:G:H5"	1.29	1.07
11:I:114:ILE:HD13	11:I:114:ILE:H	1.13	1.07
25:W:26:ARG:HD3	25:W:29:LYS:HD2	1.35	1.07
31:y:901:A:H8	31:y:901:A:O5'	1.34	1.07
31:y:943:U:C2'	31:y:944:G:H5'	1.82	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:22:TRP:HZ3	36:d:32:LEU:HD21	1.11	1.07
1:w:1426:G:H3'	1:w:1427:A:H5"	1.28	1.07
13:K:61:GLY:HA2	22:T:183:LEU:HG	1.35	1.07
18:P:96:ILE:HG22	18:P:97:LYS:H	1.13	1.07
38:f:94:ALA:HB2	38:f:119:LEU:H	1.01	1.07
31:y:22:G:H2'	31:y:23:C:H6	1.13	1.06
31:y:963:G:H2'	31:y:964:A:H8	1.02	1.06
31:y:1347:G:H22	31:y:1373:G:C2'	1.66	1.06
33:2:35:A:H2'	33:2:36:A:C8	1.89	1.06
4:B:35:LYS:HD3	4:B:64:ILE:HG22	1.37	1.06
15:M:30:ARG:HD2	15:M:31:SER:H	1.18	1.06
31:y:1462:G:H2'	31:y:1463:C:O4'	1.54	1.06
52:t:6:LYS:HD3	52:t:6:LYS:H	1.13	1.06
1:w:2296:U:H4'	1:w:2297:C:H5'	1.18	1.06
10:H:60:LYS:HZ1	17:O:67:ALA:HB2	1.19	1.06
31:y:1267:C:O2'	54:v:20:LYS:HE3	1.56	1.06
36:d:151:VAL:HG13	36:d:152:ILE:H	1.16	1.06
53:u:45:GLN:HA	53:u:91:LEU:HB3	1.07	1.06
1:w:2765:A:H3'	1:w:2765:A:N3	1.71	1.06
13:K:32:PHE:HB2	13:K:106:VAL:HB	1.38	1.06
32:z:9:G:OP1	32:z:9:G:H4'	1.53	1.06
1:w:885:C:H3'	1:w:886:C:H5'	1.33	1.06
1:w:2573:C:H5"	1:w:2574:G:H5"	1.36	1.06
18:P:66:ARG:HD2	18:P:68:LYS:HG3	1.36	1.06
31:y:519:C:H5'	45:m:50:ALA:HB2	1.37	1.06
38:f:143:ARG:HG2	38:f:144:THR:H	1.18	1.06
39:g:6:VAL:HB	39:g:63:TYR:HB2	1.35	1.06
43:k:63:PHE:CE2	47:o:58:LYS:HA	1.89	1.06
5:C:185:LYS:HG3	5:C:186:GLY:H	1.12	1.05
1:w:2712:U:H4'	1:w:2712(B):A:O5'	1.52	1.05
1:w:41:C:O3'	1:w:43:G:P	2.13	1.05
20:R:12:VAL:HG22	20:R:13:LEU:H	1.21	1.05
38:f:44:GLY:HA2	38:f:62:ALA:HB2	1.34	1.05
12:J:50:ARG:HG2	12:J:50:ARG:HH21	1.18	1.05
31:y:1175:G:O2'	31:y:1176:A:H5'	1.57	1.05
12:J:71:VAL:HG13	12:J:72:PRO:HD3	1.31	1.05
2:x:8:U:C4'	15:M:89:ARG:HH21	1.70	1.04
20:R:10:ALA:O	20:R:29:TRP:HB2	1.56	1.04
1:w:116:C:H2'	1:w:117:G:H5"	1.39	1.04
4:B:107:ALA:O	4:B:197:GLY:HA2	1.57	1.04
9:G:132:PRO:HD3	9:G:138:ILE:HG22	1.39	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:68:GLU:HB3	23:U:80:HIS:H	1.21	1.04
31:y:297:G:H4'	31:y:557:G:O2'	1.58	1.04
1:w:2426:A:H3'	1:w:2427:C:H5"	1.10	1.04
1:w:2790:A:H4'	1:w:2893:G:H21	1.15	1.04
1:w:787:U:H3'	1:w:791:C:H41	1.19	1.04
21:S:52:SER:HB3	21:S:53:PRO:HD2	1.38	1.04
31:y:151:A:H2'	31:y:152:A:H5'	1.33	1.04
38:f:94:ALA:HB2	38:f:119:LEU:N	1.73	1.04
47:o:24:CYS:HA	47:o:39:LEU:HA	1.40	1.04
1:w:655:A:H4'	1:w:656:G:O4'	1.58	1.04
1:w:2065:C:H2'	1:w:2066:C:H5"	1.08	1.04
1:w:2590:A:OP1	4:B:239:ARG:HD2	1.57	1.04
4:B:126:GLN:HG2	4:B:129:ASN:HD22	1.23	1.04
17:O:90:VAL:HG13	17:O:91:ASP:H	1.19	1.04
31:y:1470:G:H2'	31:y:1471:G:O4'	1.57	1.04
1:w:2709:G:O2'	1:w:2710:C:H5'	1.58	1.03
31:y:1348:U:H4'	42:j:120:ARG:HD3	1.36	1.03
31:y:1471:G:H2'	31:y:1472:U:C6	1.93	1.03
1:w:519:U:H4'	19:Q:25:ARG:HH22	1.21	1.03
31:y:357:G:OP1	31:y:367:U:H5'	1.58	1.03
31:y:382:A:O2'	31:y:383:A:H5'	1.58	1.03
31:y:1157:A:H61	31:y:1178:G:H1'	1.18	1.03
40:h:8:GLU:HG3	40:h:9:VAL:H	1.23	1.03
2:x:102:G:H2'	2:x:103:U:H5"	1.40	1.03
6:D:48:THR:O	6:D:52:VAL:HB	1.59	1.03
31:y:580:U:H2'	31:y:581:G:C8	1.93	1.03
1:w:1001:A:H2'	1:w:1002:G:O4'	1.58	1.03
1:w:1304:C:H2'	1:w:1305:C:H5"	1.39	1.03
31:y:109:A:H2'	31:y:326:G:N2	1.72	1.03
31:y:1518:MA6:H8	31:y:1518:MA6:C5'	1.88	1.03
38:f:71:LEU:HD22	38:f:74:GLY:HA2	1.37	1.03
1:w:1010:A:H4'	17:O:76:TYR:HD2	1.22	1.03
1:w:1815:A:H4'	1:w:1816:G:H5'	1.39	1.03
14:L:2:ARG:HG3	14:L:3:HIS:H	1.20	1.03
31:y:701:C:OP1	31:y:703:G:H5'	1.59	1.03
33:2:34:G:H2'	33:2:35:A:H5"	1.40	1.03
48:p:32:LEU:O	48:p:36:ILE:HG12	1.59	1.03
4:B:69:ARG:HH22	4:B:76:PRO:HG3	1.20	1.02
31:y:528:C:H2'	31:y:529:G:C5'	1.89	1.02
31:y:601:C:H2'	31:y:602:A:C8	1.95	1.02
1:w:2411:A:H2'	1:w:2412:A:H8	1.24	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:59:VAL:O	3:A:165:ARG:HA	1.60	1.02
31:y:975:A:N3	31:y:1357:A:N3	2.08	1.02
1:w:395:U:H2'	1:w:396:G:N7	1.72	1.02
31:y:564:C:O2'	31:y:565:U:H5'	1.58	1.02
31:y:598:U:H4'	41:i:94:TYR:HB3	1.41	1.02
40:h:12:LEU:HG	40:h:13:GLN:H	0.89	1.02
1:w:1797:C:H4'	4:B:257:LEU:O	1.59	1.02
24:V:91:LYS:HA	24:V:94:LEU:HD22	1.41	1.02
31:y:1233:G:N2	31:y:1364:U:H3	1.56	1.02
38:f:77:PRO:HG2	38:f:142:LEU:HD11	1.42	1.02
1:w:2818:G:H4'	1:w:2837:G:H4'	1.36	1.02
2:x:80:U:H2'	2:x:81:G:H8	1.19	1.02
5:C:108:SER:HA	5:C:189:PRO:HG3	1.39	1.02
31:y:1374:A:O2'	40:h:29:LYS:HA	1.58	1.02
36:d:5:ILE:HD12	36:d:175:LEU:HD23	1.41	1.02
37:e:12:CYS:SG	37:e:19:LEU:HB2	2.00	1.02
41:i:13:ILE:O	41:i:17:THR:HB	1.59	1.02
1:w:2733:A:O2'	1:w:2734:A:H5'	1.60	1.01
11:I:24:VAL:HG22	11:I:25:LEU:H	1.24	1.01
21:S:88:LYS:HG3	21:S:89:PHE:H	1.21	1.01
31:y:505:G:H2'	31:y:506:G:H5'	1.40	1.01
31:y:829:G:O2'	35:c:26:PRO:HG2	1.60	1.01
1:w:2562:U:H2'	1:w:2563:U:H5'	1.38	1.01
1:w:2745:C:C2'	1:w:2746:U:H5'	1.90	1.01
23:U:40:GLN:HG2	23:U:41:ARG:H	1.17	1.01
31:y:1342:C:H1'	42:j:124:GLN:HB2	1.40	1.01
1:w:2803:C:H2'	1:w:2804:C:H5'	1.40	1.01
31:y:1250:A:N6	31:y:1287:A:H61	1.57	1.01
1:w:2734:A:H62	1:w:2770:G:H21	1.07	1.01
2:x:63:G:H2'	2:x:64:C:H5"	1.41	1.01
23:U:66:VAL:O	23:U:81:VAL:HA	1.61	1.01
31:y:751:U:O2'	48:p:25:THR:HG23	1.58	1.01
2:x:9:G:H2'	2:x:10:C:H5'	1.40	1.00
15:M:39:ILE:HD11	15:M:49:VAL:HG13	1.43	1.00
24:V:40:ARG:HG2	24:V:41:ARG:H	1.25	1.00
31:y:546:G:O4'	31:y:548:G:O2'	1.78	1.00
31:y:677:U:H2'	31:y:678:U:C6	1.95	1.00
31:y:833:U:H2'	31:y:834:C:C6	1.95	1.00
31:y:1428:A:H2'	31:y:1429:C:C6	1.95	1.00
1:w:686:G:N2	1:w:788:A:H61	1.58	1.00
1:w:2296:U:H4'	1:w:2297:C:C5'	1.90	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:190:ILE:O	3:A:194:ILE:HG12	1.61	1.00
6:D:150:LEU:HD23	6:D:181:ILE:HG12	1.41	1.00
1:w:354:G:H2'	1:w:355:G:H5"	1.39	1.00
1:w:2432:A:H4'	33:2:76:A:H5"	1.40	1.00
1:w:2846:G:O2'	1:w:2847:U:H5'	1.62	1.00
11:I:85:VAL:HG12	11:I:86:ILE:H	1.25	1.00
17:O:98:LEU:HD11	17:O:105:VAL:HB	1.42	1.00
39:g:99:ALA:HB3	51:s:31:LEU:HD11	1.40	1.00
51:s:64:ARG:O	51:s:68:LYS:HG2	1.62	1.00
31:y:545:C:OP1	37:e:72:GLU:HG2	1.59	1.00
31:y:889:A:H4'	31:y:890:G:H4'	1.43	1.00
31:y:1422:G:H2'	31:y:1423:G:H8	1.22	1.00
41:i:53:VAL:HB	41:i:58:TYR:HD1	1.24	1.00
1:w:1304:C:C2'	1:w:1305:C:H5"	1.91	1.00
5:C:170:LEU:HD23	5:C:185:LYS:HB3	1.44	1.00
36:d:130:VAL:HG21	36:d:157:ILE:HD13	1.44	1.00
1:w:328:U:H3	1:w:332:A:H62	1.02	1.00
1:w:1801:G:H4'	1:w:1815:A:N1	1.76	1.00
1:w:1822:G:H5'	4:B:54:ARG:HH22	1.21	1.00
9:G:3:VAL:HB	9:G:21:VAL:HG21	1.38	1.00
26:X:8:LEU:HG	26:X:9:VAL:H	1.22	1.00
31:y:628:G:H2'	31:y:629:G:O4'	1.62	1.00
31:y:1379:G:H5"	40:h:4:ARG:CB	1.92	1.00
31:y:1500:A:C5'	31:y:1508:G:H5"	1.91	1.00
43:k:39:PRO:HA	43:k:70:ARG:HD2	1.41	1.00
1:w:2721:A:H2'	1:w:2722:G:H5'	1.40	1.00
31:y:571:U:H2'	31:y:917:G:H4'	1.43	1.00
42:j:85:LEU:HD23	42:j:92:TYR:HB2	1.44	1.00
1:w:1567:A:H5"	4:B:60:ARG:HH22	1.23	0.99
1:w:1986:A:H3'	1:w:1987:G:H5"	1.41	0.99
15:M:53:SER:OG	15:M:69:VAL:HG21	1.62	0.99
16:N:135:VAL:HG13	16:N:136:GLN:H	1.26	0.99
1:w:1800:C:O2'	1:w:1801:G:H5"	1.61	0.99
1:w:2175:C:H2'	1:w:2176:A:H5"	1.44	0.99
11:I:77:ILE:HB	16:N:74:ARG:HD2	1.44	0.99
33:2:48:C:H6	33:2:48:C:H5"	1.24	0.99
45:m:37:THR:HG22	45:m:38:VAL:HG23	1.37	0.99
1:w:533:G:OP1	17:O:25:TRP:HB2	1.62	0.99
1:w:2101:G:N2	1:w:2189:U:H1'	1.78	0.99
11:I:68:GLU:HB2	11:I:76:ALA:HB1	1.41	0.99
24:V:66:HIS:HB3	24:V:69:LYS:HG2	1.39	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1377:A:HO2'	31:y:1378:C:H5	1.05	0.99
31:y:136:C:H4'	49:q:1:MET:SD	2.01	0.99
31:y:186(F):C:H2'	31:y:186(G):C:H6	1.24	0.99
31:y:335:C:H1'	31:y:1433:A:C2	1.95	0.99
31:y:1237:C:H3'	31:y:1238:A:C5'	1.90	0.99
1:w:1602:U:H3'	1:w:1603:A:C5'	1.93	0.99
1:w:2619:C:H5'	5:C:151:TYR:O	1.62	0.99
7:E:7:LEU:HB3	7:E:100:TRP:HE1	1.26	0.99
29:a:6:THR:HG21	29:a:63:PRO:HD3	1.43	0.99
31:y:944:G:H21	31:y:1339:A:H62	1.08	0.99
50:r:13:ASP:HA	50:r:19:VAL:HB	1.40	0.99
1:w:2632:A:H1'	5:C:61:ARG:NH2	1.77	0.99
31:y:226:G:H2'	31:y:227:G:C8	1.97	0.99
41:i:36:LEU:HA	41:i:39:LEU:HD11	1.42	0.99
1:w:2791:C:H2'	1:w:2792:G:C8	1.97	0.99
8:F:149:ARG:HA	8:F:153:LYS:HG3	1.44	0.99
36:d:28:GLN:HE21	36:d:32:LEU:HB2	1.24	0.99
1:w:2111:C:N4	1:w:2144:U:H4'	1.76	0.99
14:L:63:ARG:HH22	14:L:76:VAL:HG12	1.27	0.99
31:y:1199:U:H4'	43:k:54:PHE:CD2	1.98	0.99
32:z:24:U:C2'	32:z:25:C:H5'	1.93	0.99
36:d:22:TRP:CZ3	36:d:32:LEU:HD21	1.98	0.99
1:w:2296:U:C4'	1:w:2297:C:H5'	1.93	0.99
29:a:39:LYS:HG2	29:a:40:GLU:H	1.22	0.99
40:h:106:GLN:HA	40:h:109:ASN:HD22	1.26	0.99
41:i:119:LEU:HD13	41:i:124:ALA:HA	1.43	0.99
1:w:2831:G:H4'	1:w:2883:A:H2	1.28	0.98
31:y:1347:G:H21	31:y:1349:A:H62	1.06	0.98
1:w:1602:U:H3'	1:w:1603:A:H5"	1.45	0.98
4:B:131:LEU:HD21	4:B:135:PHE:HB2	1.45	0.98
10:H:36:TRP:HB2	10:H:156:GLN:HB3	1.44	0.98
31:y:528:C:H2'	31:y:529:G:H5'	0.99	0.98
31:y:1347:G:O2'	31:y:1348:U:OP2	1.80	0.98
36:d:59:ARG:HA	36:d:64:VAL:HG13	1.44	0.98
1:w:2760:C:N4	30:b:19:ARG:HH22	1.61	0.98
16:N:112:ARG:HA	16:N:115:ARG:HH21	1.22	0.98
37:e:22:LYS:HB2	37:e:26:CYS:SG	2.04	0.98
38:f:76:ILE:HG13	38:f:118:ILE:HB	1.45	0.98
40:h:12:LEU:CG	40:h:13:GLN:H	1.72	0.98
1:w:671:C:H5	12:J:41:ARG:HD3	1.22	0.98
1:w:2754:U:H5'	1:w:2754:U:H6	1.29	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:13:LEU:HD22	20:R:29:TRP:HZ2	1.28	0.98
23:U:37:LEU:HD12	23:U:38:VAL:H	1.29	0.98
33:2:6:U:H2'	33:2:7:U:H5"	1.44	0.98
41:i:51:VAL:HB	41:i:60:ARG:HH21	1.27	0.98
15:M:13:ARG:HG3	15:M:91:PRO:HA	1.42	0.98
31:y:1399:C:H4'	31:y:1400:5MC:H5'	1.45	0.98
35:c:32:ILE:HB	35:c:41:ILE:O	1.64	0.98
36:d:124:ILE:HG12	36:d:130:VAL:HG13	1.44	0.98
1:w:1570:A:H2'	1:w:1571:A:C8	1.98	0.97
2:x:110:G:C2'	2:x:111:U:H5'	1.93	0.97
35:c:18:GLY:HA3	35:c:42:ILE:HB	1.46	0.97
43:k:51:ARG:HG2	43:k:52:GLY:H	1.26	0.97
26:X:35:ARG:HA	26:X:35:ARG:HE	1.28	0.97
31:y:438:G:H5"	31:y:439:A:OP1	1.64	0.97
31:y:833:U:H2'	31:y:834:C:C5	1.99	0.97
31:y:186(F):C:H2'	31:y:186(G):C:C6	1.99	0.97
31:y:1431:C:H2'	31:y:1432:G:O4'	1.63	0.97
35:c:140:HIS:O	35:c:144:ARG:HB3	1.62	0.97
2:x:30:C:O2'	2:x:31:C:H5'	1.61	0.97
5:C:28:ALA:CB	5:C:93:VAL:HG13	1.95	0.97
44:l:58:PRO:HB3	44:l:90:GLY:HA3	1.47	0.97
1:w:811:U:C2	1:w:1250:G:H3'	1.98	0.97
3:A:60:ARG:HA	3:A:164:PHE:O	1.65	0.97
6:D:8:SER:HB2	6:D:9:PRO:HD3	1.47	0.97
31:y:580:U:H2'	31:y:581:G:H8	1.26	0.97
31:y:1379:G:H2'	31:y:1380:U:H5"	1.46	0.97
49:q:15:PRO:HB2	49:q:41:PRO:HG2	1.47	0.97
7:E:144:ILE:HG23	7:E:147:ASP:HB2	1.46	0.97
12:J:113:LYS:HA	12:J:129:ALA:O	1.64	0.97
22:T:80:ARG:HD2	22:T:82:ARG:HD3	1.46	0.97
37:e:158:ILE:H	37:e:158:ILE:HD12	1.30	0.97
31:y:582:U:H5"	48:p:68:ARG:HH12	1.28	0.97
31:y:1501:C:OP2	31:y:1504:G:H8	1.46	0.97
1:w:2352:A:C2	23:U:33:ALA:HB1	1.98	0.97
24:V:54:ALA:HA	24:V:58:ILE:HG13	1.46	0.97
31:y:874:G:H2'	31:y:875:C:C6	1.99	0.97
31:y:1001:G:C3'	31:y:1002:G:H5"	1.95	0.97
1:w:449:A:H61	1:w:454:A:H62	1.09	0.97
1:w:2583:G:H2'	1:w:2584:U:H5'	1.44	0.97
23:U:51:VAL:HG23	23:U:81:VAL:HG23	1.45	0.97
1:w:378:C:H2'	1:w:379:G:H8	1.28	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:449:A:H4'	6:D:79:VAL:HG22	1.46	0.96
4:B:124:PRO:HG2	4:B:129:ASN:ND2	1.79	0.96
31:y:584:G:H2'	31:y:585:G:H8	1.29	0.96
31:y:1375:A:H2'	31:y:1376:U:H6	1.29	0.96
1:w:2712(B):A:C3'	1:w:2713:A:P	2.54	0.96
31:y:1379:G:C3'	31:y:1380:U:H5"	1.96	0.96
1:w:527:C:H2'	10:H:137:ARG:HH12	1.25	0.96
1:w:527:C:C4	1:w:2779:U:H2'	2.00	0.96
1:w:2515:C:O2'	1:w:2516:G:H5'	1.66	0.96
1:w:2575:C:H5'	5:C:144:ARG:HD2	1.44	0.96
1:w:2711:A:OP1	1:w:2712:U:C6	2.17	0.96
31:y:1298:C:C5'	40:h:114:ARG:NH2	2.27	0.96
10:H:60:LYS:NZ	17:O:67:ALA:HB2	1.80	0.96
15:M:17:ARG:NE	15:M:89:ARG:HD2	1.78	0.96
31:y:321:A:H62	31:y:328:C:H1'	1.31	0.96
33:2:74:C:H2'	33:2:75:C:C1'	1.95	0.96
42:j:25:LYS:HB2	42:j:60:ASP:OD1	1.65	0.96
23:U:36:ILE:HG12	23:U:39:ARG:NH2	1.79	0.96
31:y:50:A:O2'	31:y:51:A:OP2	1.84	0.96
1:w:2471:C:H2'	1:w:2472:G:C8	2.01	0.96
4:B:43:ARG:HD3	4:B:43:ARG:H	1.30	0.96
9:G:4:ILE:HA	9:G:17:GLN:O	1.64	0.96
21:S:67:LEU:HD13	21:S:68:HIS:H	1.30	0.96
35:c:132:LYS:HD2	35:c:133:LYS:H	1.29	0.96
41:i:17:THR:HG23	41:i:78:GLN:HG2	1.47	0.96
1:w:80:G:H1'	1:w:347:A:C6	2.00	0.96
1:w:761:A:H8	1:w:761:A:O5'	1.47	0.96
26:X:20:LYS:O	26:X:23:LEU:HG	1.62	0.96
30:b:24:TYR:HB3	30:b:35:ARG:HA	1.47	0.96
41:i:40:ALA:HB2	41:i:45:ILE:HG22	1.45	0.96
43:k:40:LEU:HB2	43:k:41:PRO:HD2	1.47	0.96
50:r:86:GLU:HA	50:r:89:LEU:HD13	1.48	0.96
1:w:1279:G:H2'	1:w:1280:G:O4'	1.64	0.96
1:w:2426:A:H3'	1:w:2427:C:C5'	1.95	0.96
1:w:2720:U:H6	1:w:2720:U:H5"	1.30	0.96
31:y:811:C:H2'	31:y:812:C:H5"	1.44	0.96
40:h:12:LEU:HG	40:h:13:GLN:N	1.72	0.96
20:R:12:VAL:CG2	20:R:13:LEU:H	1.79	0.96
20:R:65:ARG:NE	20:R:65:ARG:HA	1.81	0.96
53:u:45:GLN:HA	53:u:91:LEU:CB	1.96	0.96
1:w:1668:A:H62	1:w:1991:U:H3	1.06	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:7:GLU:H	9:G:8:PRO:HD3	1.30	0.95
22:T:150:LEU:HG	22:T:171:ILE:HD11	1.48	0.95
31:y:428:G:H1'	31:y:430:A:C8	2.01	0.95
31:y:1356:G:H2'	31:y:1357:A:C8	2.00	0.95
1:w:2653:U:C5'	1:w:2654:A:H5"	1.95	0.95
11:I:97:ARG:HA	11:I:97:ARG:NE	1.80	0.95
41:i:24:THR:HB	41:i:63:LEU:HD11	1.47	0.95
1:w:1309:G:C2'	1:w:1310:G:H5"	1.94	0.95
31:y:1012:U:C2'	31:y:1013:G:H5'	1.95	0.95
31:y:1441:G:H5"	31:y:1442:G:H5'	1.44	0.95
43:k:74:ILE:HG12	43:k:75:ILE:H	1.30	0.95
2:x:20:C:H3'	2:x:21:G:H5"	1.47	0.95
31:y:1407:5MC:O2'	31:y:1408:A:H5'	1.65	0.95
1:w:716:A:H2'	1:w:717:G:O4'	1.65	0.95
1:w:997:G:OP1	17:O:93:LYS:HD3	1.65	0.95
1:w:1678:G:H21	1:w:1989:G:H22	1.02	0.95
31:y:22:G:H2'	31:y:23:C:C6	2.02	0.95
31:y:1467:G:O2'	31:y:1468:A:H5'	1.65	0.95
43:k:40:LEU:H	43:k:70:ARG:HH11	1.13	0.95
18:P:96:ILE:HG22	18:P:97:LYS:N	1.80	0.95
37:e:82:ALA:HA	37:e:87:GLY:HA3	1.48	0.95
1:w:467:G:H5'	28:Z:33:ARG:NH1	1.81	0.95
1:w:1448:G:H2'	1:w:1448(B):A:C8	2.01	0.95
1:w:2393:A:H4'	12:J:61:ARG:O	1.66	0.95
31:y:410:G:OP2	37:e:25:ARG:HG3	1.66	0.95
31:y:486:U:O2'	31:y:487:A:H5'	1.67	0.95
31:y:673:G:H2'	31:y:674:G:H8	1.20	0.95
13:K:37:LEU:HG	13:K:128:LYS:H	1.31	0.95
31:y:60:A:H2	31:y:107:G:N3	1.63	0.95
47:o:29:ARG:HB3	47:o:40:CYS:HB3	1.49	0.95
1:w:465:G:H22	1:w:794:G:N2	1.64	0.95
1:w:1510:A:H2'	1:w:1511:A:O4'	1.67	0.95
1:w:2578:G:H1'	5:C:139:GLY:CA	1.97	0.95
2:x:23:G:H2'	2:x:24:G:C8	2.02	0.95
19:Q:21:VAL:HG11	19:Q:76:VAL:HG11	1.48	0.95
22:T:97:GLU:CD	22:T:125:LEU:HG	1.91	0.95
31:y:132:C:H2'	31:y:133:U:H5"	1.47	0.95
31:y:160:A:H2'	31:y:161:A:O4'	1.66	0.95
18:P:7:THR:HG21	18:P:22:VAL:HG23	1.49	0.95
38:f:104:ALA:O	38:f:107:ARG:HB3	1.66	0.95
1:w:465:G:H21	1:w:684:G:H1'	1.30	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:167:ASP:H	3:A:171:ALA:HA	1.30	0.94
43:k:25:GLU:HB3	43:k:29:ARG:HE	1.32	0.94
1:w:2602:A:H4'	1:w:2603:G:H5'	1.45	0.94
22:T:5:LEU:O	22:T:59:LEU:HA	1.67	0.94
24:V:10:LYS:O	24:V:12:PRO:HD2	1.66	0.94
28:Z:2:LYS:HD3	28:Z:2:LYS:H	1.32	0.94
4:B:211:ARG:HA	4:B:214:TRP:CE3	2.03	0.94
13:K:16:ARG:HG3	13:K:17:LEU:H	1.32	0.94
22:T:7:ALA:HB2	22:T:59:LEU:HB3	1.49	0.94
1:w:671:C:H2'	1:w:672:C:H5'	1.48	0.94
1:w:2759:G:H2'	1:w:2760:C:H5'	1.46	0.94
9:G:27:ARG:HD3	9:G:27:ARG:H	1.32	0.94
31:y:35:G:O2'	31:y:36:C:H5'	1.67	0.94
31:y:584:G:H2'	31:y:585:G:C8	2.01	0.94
31:y:741:G:O2'	48:p:55:GLY:HA3	1.68	0.94
31:y:1447:G:P	31:y:1447:G:H8	1.90	0.94
50:r:54:GLY:H	50:r:85:VAL:HG11	1.29	0.94
31:y:309:G:O3'	49:q:30:GLY:HA2	1.66	0.94
31:y:597:G:N2	41:i:94:TYR:HE2	1.65	0.94
1:w:182:A:H61	1:w:215:G:H1	0.95	0.94
1:w:479:A:H5'	1:w:480:A:H8	1.33	0.94
1:w:2563:U:H2'	1:w:2565:A:OP2	1.67	0.94
1:w:2590:A:H5"	4:B:239:ARG:HH21	1.31	0.94
1:w:2683:C:H1'	5:C:13:ARG:HH12	1.32	0.94
1:w:2831:G:H4'	1:w:2883:A:C2	2.01	0.94
17:O:84:LYS:HA	17:O:89:GLU:HG2	1.50	0.94
31:y:1266:G:N2	31:y:1269:A:OP2	1.99	0.94
1:w:674:G:H5"	6:D:72:ASP:CB	1.96	0.94
10:H:63:PRO:HA	17:O:64:ARG:NH2	1.82	0.94
37:e:8:VAL:O	37:e:12:CYS:SG	2.24	0.94
1:w:141(B):C:H2'	1:w:142:G:O4'	1.68	0.94
1:w:2760:C:H41	30:b:19:ARG:HH22	1.09	0.94
4:B:81:ALA:HB3	4:B:94:LEU:HB3	1.49	0.94
31:y:559:A:H5'	31:y:561:U:OP1	1.68	0.94
31:y:967:5MC:H3'	31:y:968:A:H2'	1.49	0.94
31:y:1532:U:H5"	31:y:1535:C:H41	1.30	0.94
31:y:109:A:C2'	31:y:326:G:N2	2.29	0.94
31:y:1379:G:C2'	31:y:1380:U:H5"	1.96	0.94
31:y:1469:G:O5'	31:y:1469:G:C8	2.21	0.94
5:C:174:ASP:H	5:C:183:LEU:HD11	1.33	0.94
31:y:1053:G:O2'	31:y:1054:C:OP2	1.85	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1173:G:H2'	1:w:1176:G:O6	1.68	0.93
1:w:2213:U:H1'	24:V:57:GLU:HB2	1.50	0.93
6:D:33:ARG:HH12	12:J:12:ALA:H	1.06	0.93
31:y:237:C:H2'	31:y:238:G:O4'	1.67	0.93
1:w:2839:G:C5'	14:L:46:GLY:HA2	1.97	0.93
6:D:149:VAL:CB	6:D:186:ARG:HB2	1.98	0.93
19:Q:88:ARG:HD2	19:Q:94:ASP:H	1.30	0.93
13:K:46:GLN:HE22	13:K:126:PRO:HD3	1.33	0.93
31:y:1342:C:O2'	42:j:124:GLN:HA	1.67	0.93
1:w:466:A:H5'	28:Z:21:ARG:NH2	1.82	0.93
1:w:819:A:N6	1:w:1188:U:H3	1.66	0.93
1:w:2586:C:H2'	1:w:2587:A:C8	2.03	0.93
1:w:2635:C:O5'	1:w:2635:C:H6	1.52	0.93
31:y:546:G:H4'	31:y:548:G:C4'	1.98	0.93
31:y:1378:C:H5"	40:h:5:ARG:O	1.68	0.93
38:f:82:VAL:HG21	38:f:138:ALA:HB2	1.48	0.93
1:w:215:G:H4'	1:w:216:A:H4'	1.48	0.93
31:y:85:U:H2'	31:y:86:U:C6	2.03	0.93
31:y:99:C:H2'	31:y:101:A:C8	2.03	0.93
31:y:827:U:H3	31:y:872:A:H61	0.96	0.93
31:y:1296:C:H1'	31:y:1302:U:H3	1.31	0.93
31:y:1347:G:C4	31:y:1348:U:H5	1.86	0.93
1:w:2747:G:O2'	8:F:67:LEU:HD13	1.68	0.93
31:y:520:A:P	45:m:50:ALA:HB1	2.07	0.93
31:y:618:C:H42	31:y:622:A:H62	1.16	0.93
31:y:995:C:H5'	47:o:7:ILE:HG21	1.48	0.93
44:l:92:GLU:HA	44:l:95:ILE:HD12	1.50	0.93
47:o:48:ALA:HA	47:o:53:LEU:HD23	1.45	0.93
1:w:2432:A:H4'	33:2:76:A:C5'	1.98	0.93
10:H:79:ASN:O	10:H:83:ILE:HD11	1.66	0.93
14:L:68:ARG:HH11	14:L:68:ARG:HB3	1.34	0.93
16:N:30:VAL:HG21	16:N:84:GLN:HG3	1.49	0.93
19:Q:77:ASP:H	19:Q:103:ILE:HG22	1.34	0.93
22:T:84:GLU:HG3	22:T:85:HIS:H	1.33	0.93
22:T:110:GLY:HA3	22:T:146:ILE:HG23	1.51	0.93
31:y:468:A:C4'	49:q:80:PHE:HB3	1.99	0.93
31:y:964:A:H3'	31:y:965:A:H5"	1.47	0.93
33:2:74:C:H2'	33:2:75:C:O4'	1.67	0.93
1:w:671:C:C5	12:J:41:ARG:HD3	2.04	0.93
1:w:2024:G:H2'	1:w:2025:C:C6	2.03	0.93
14:L:48:VAL:O	14:L:52:ILE:HG12	1.69	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:468:A:H4'	49:q:80:PHE:HB3	1.51	0.93
31:y:716:A:H2'	31:y:717:C:H5'	1.49	0.93
31:y:1223:C:H6	31:y:1223:C:H3'	1.34	0.93
1:w:354:G:C2'	1:w:355:G:H5"	1.98	0.93
3:A:197:LEU:HG	3:A:198:GLU:HG3	1.51	0.93
31:y:376:G:O2'	31:y:377:G:H5'	1.69	0.93
1:w:724:U:H2'	1:w:725:G:O4'	1.69	0.93
1:w:1568:G:H4'	4:B:59:LYS:HB3	1.51	0.93
7:E:139:LEU:HB2	7:E:146:TYR:H	1.33	0.92
12:J:92:GLU:OE2	12:J:123:LEU:HB3	1.69	0.92
14:L:76:VAL:HA	14:L:79:LEU:HG	1.51	0.92
31:y:144:G:N2	31:y:179:A:H1'	1.84	0.92
31:y:558:G:H2'	31:y:559:A:H2	1.31	0.92
45:m:87:GLY:H	45:m:97:TYR:HD2	1.13	0.92
1:w:1814:G:C8	1:w:1815:A:H2'	2.04	0.92
7:E:141:PHE:HD2	7:E:144:ILE:H	1.05	0.92
31:y:872:A:O2'	31:y:873:A:H3'	1.69	0.92
1:w:2885:C:H2'	1:w:2886:G:H5'	1.52	0.92
2:x:14:U:H5'	2:x:106:G:N2	1.84	0.92
2:x:104:A:H5"	22:T:72:ARG:CZ	2.00	0.92
1:w:673:C:H4'	6:D:76:PRO:HG3	1.49	0.92
33:2:34:G:C2'	33:2:35:A:H5"	1.99	0.92
36:d:76:VAL:HG12	36:d:84:ILE:HD12	1.52	0.92
7:E:115:ARG:HH22	46:n:67:GLU:HG3	1.32	0.92
12:J:101:VAL:HA	12:J:105:LEU:O	1.70	0.92
31:y:90:C:H2'	31:y:91:C:C6	2.05	0.92
31:y:637:G:H2'	31:y:638:G:C8	2.04	0.92
31:y:1194:U:H4'	38:f:22:GLY:O	1.70	0.92
31:y:1293:G:HO2'	31:y:1294:G:H8	1.13	0.92
42:j:99:LEU:HB2	42:j:101:PHE:HE1	1.32	0.92
1:w:2367:G:H2'	1:w:2368:C:H5"	1.47	0.92
1:w:2723:C:O5'	1:w:2723:C:H6	1.53	0.92
10:H:107:LYS:HG3	10:H:108:ILE:H	1.32	0.92
4:B:142:VAL:HG23	4:B:193:VAL:HA	1.52	0.92
6:D:117:LYS:HA	6:D:117:LYS:NZ	1.85	0.92
11:I:75:SER:HA	16:N:75:ILE:O	1.70	0.92
16:N:17:THR:HG23	16:N:18:ASP:H	1.35	0.92
19:Q:11:ARG:HB3	19:Q:98:LYS:HE2	1.49	0.92
31:y:66:G:H4'	31:y:173:U:C4	2.05	0.92
31:y:420:U:H3'	31:y:422:C:H41	1.33	0.92
31:y:684:A:H1'	44:l:39:PRO:HG2	1.52	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1347:G:N2	31:y:1349:A:N6	2.18	0.92
1:w:465:G:H22	1:w:794:G:H22	1.07	0.92
1:w:2759:G:C2'	1:w:2760:C:H5'	2.00	0.92
4:B:126:GLN:HG2	4:B:129:ASN:ND2	1.85	0.92
12:J:42:SER:HB2	12:J:45:LEU:HA	1.51	0.92
15:M:66:ALA:HB1	15:M:101:LEU:HG	1.49	0.92
17:O:37:GLU:HA	17:O:40:PHE:CD1	2.05	0.92
20:R:12:VAL:HG22	20:R:13:LEU:N	1.82	0.92
31:y:109:A:C8	31:y:327:A:H5'	2.05	0.92
31:y:390:C:H2'	31:y:391:G:O4'	1.69	0.92
31:y:1352:C:H2'	31:y:1353:G:O4'	1.70	0.92
31:y:148:G:H2'	31:y:149:A:O4'	1.69	0.91
31:y:603:U:H2'	31:y:604:G:C8	2.05	0.91
31:y:792:A:O2'	31:y:793:U:OP2	1.87	0.91
11:I:3:GLN:OE1	11:I:5:GLN:HB3	1.71	0.91
1:w:2661:G:O2'	1:w:2662:A:H5'	1.70	0.91
2:x:16:G:H8	2:x:16:G:OP2	1.54	0.91
31:y:950:U:H4'	31:y:971:G:N2	1.82	0.91
33:2:49:C:H2'	33:2:50:U:H6	1.33	0.91
3:A:164:PHE:HB2	3:A:172:ILE:HG21	1.51	0.91
9:G:129:THR:HA	9:G:139:GLN:HA	1.51	0.91
31:y:1112:C:O2	36:d:177:THR:HG23	1.69	0.91
31:y:1233:G:H21	31:y:1364:U:H3	0.93	0.91
37:e:64:LEU:HD22	37:e:199:ASN:H	1.33	0.91
50:r:57:VAL:HG22	50:r:76:LEU:HA	1.51	0.91
18:P:7:THR:HG21	18:P:22:VAL:CG2	2.00	0.91
47:o:29:ARG:HH21	47:o:42:ILE:HG21	1.33	0.91
1:w:887:A:H1'	1:w:889:C:H2'	1.53	0.91
1:w:2615:U:H2'	1:w:2616:C:H6	1.34	0.91
4:B:82:ILE:HG21	4:B:91:ARG:HH21	1.35	0.91
5:C:28:ALA:HB2	5:C:93:VAL:HG13	1.52	0.91
7:E:68:PRO:HB3	7:E:92:VAL:HB	1.51	0.91
31:y:1157:A:N6	31:y:1178:G:H1'	1.86	0.91
1:w:1005:C:H2'	1:w:1006:C:H5"	1.51	0.91
1:w:1021:A:N6	1:w:1141:U:H3	1.68	0.91
1:w:2654:A:O2'	1:w:2655:G:OP2	1.89	0.91
4:B:123:ALA:HB1	4:B:124:PRO:HD2	1.50	0.91
31:y:245:C:H42	31:y:283:C:H42	0.97	0.91
31:y:1128:C:O2'	31:y:1148:U:H1'	1.70	0.91
37:e:133:VAL:HG12	37:e:134:ASP:H	1.32	0.91
1:w:2128:C:H5'	3:A:37:LYS:HE3	1.51	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2622:C:H2'	1:w:2825:G:N2	1.86	0.91
31:y:827:U:H3	31:y:872:A:N6	1.69	0.91
31:y:1376:U:H2'	31:y:1377:A:C8	2.06	0.91
1:w:2790:A:H4'	1:w:2893:G:N2	1.85	0.91
11:I:1:MET:H2	11:I:67:LYS:HG2	1.35	0.91
31:y:122:G:H2'	31:y:123:C:C6	2.06	0.91
32:z:44:A:H2'	32:z:45:G:O4'	1.70	0.91
1:w:1281:G:H2'	1:w:1282:U:C6	2.06	0.91
11:I:71:ARG:HH22	16:N:74:ARG:HH22	1.18	0.91
31:y:194:C:H2'	31:y:195:A:H5"	1.49	0.91
31:y:1364:U:O2'	31:y:1365:G:H5'	1.71	0.91
47:o:41:ARG:NH1	47:o:42:ILE:HA	1.86	0.91
1:w:2717:G:H3'	1:w:2718:G:H5"	1.52	0.90
2:x:78:A:H3'	2:x:79:C:H5"	1.50	0.90
4:B:44:ASN:HA	4:B:49:ILE:HA	1.53	0.90
4:B:164:GLN:HE22	4:B:166:GLN:HG3	1.35	0.90
7:E:7:LEU:HB3	7:E:100:TRP:NE1	1.86	0.90
31:y:1349:A:H5"	42:j:121:ARG:HB3	1.51	0.90
41:i:51:VAL:HB	41:i:60:ARG:NH2	1.85	0.90
41:i:112:LEU:HA	41:i:134:ILE:HG12	1.53	0.90
1:w:519:U:H4'	19:Q:25:ARG:NH2	1.86	0.90
2:x:14:U:OP2	2:x:70:C:H1'	1.69	0.90
4:B:65:ILE:HG22	4:B:104:TYR:HD1	1.34	0.90
1:w:182:A:N6	1:w:215:G:H1	1.68	0.90
1:w:2624:G:H1'	27:Y:22:HIS:NE2	1.86	0.90
31:y:283:C:H2'	31:y:284:G:O4'	1.71	0.90
31:y:1221:G:C2	31:y:1222:G:H1'	2.06	0.90
33:2:49:C:H2'	33:2:50:U:C6	2.05	0.90
53:u:40:ALA:HA	53:u:55:ILE:HG21	1.54	0.90
31:y:7:G:H1'	31:y:8:A:OP1	1.69	0.90
33:2:9:A:N6	33:2:23:A:N7	2.18	0.90
36:d:77:ILE:HA	36:d:84:ILE:HB	1.51	0.90
45:m:87:GLY:N	45:m:97:TYR:HA	1.86	0.90
1:w:53:A:H2'	1:w:54:G:H5'	1.53	0.90
1:w:299:A:H62	1:w:339:U:H3	1.19	0.90
1:w:2579:C:O4'	5:C:134:ILE:HD11	1.70	0.90
1:w:2677:G:H2'	1:w:2678:C:C6	2.06	0.90
2:x:57:A:H2'	2:x:58:A:H8	1.33	0.90
2:x:79:C:C2'	2:x:80:U:H5'	2.02	0.90
35:c:137:ARG:H	35:c:137:ARG:HD2	1.36	0.90
1:w:898:C:C3'	1:w:899:A:H5"	2.00	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1663:C:HO2'	1:w:1664:A:H8	0.97	0.90
1:w:1991:U:H2'	1:w:1992:G:H5"	1.51	0.90
16:N:24:PRO:HA	16:N:49:VAL:HG11	1.52	0.90
23:U:83:PRO:O	23:U:84:LEU:HB2	1.69	0.90
24:V:88:LYS:HG3	24:V:89:GLU:H	1.36	0.90
31:y:497:U:H2'	31:y:498:A:H5"	1.54	0.90
35:c:54:THR:O	35:c:58:ILE:HG12	1.72	0.90
2:x:50:G:OP1	15:M:61:ASN:O	1.90	0.90
4:B:131:LEU:HD23	4:B:132:PRO:HD2	1.53	0.90
11:I:101:PRO:O	11:I:102:VAL:HG13	1.72	0.90
38:f:105:VAL:HG22	38:f:106:PRO:HD3	1.51	0.90
1:w:667:U:H2'	1:w:668:G:O4'	1.72	0.90
1:w:823:G:H2'	1:w:824:A:H8	1.36	0.90
1:w:2572:A:H4'	1:w:2573:C:C5'	2.02	0.90
7:E:46:ALA:HB1	7:E:53:LEU:HD11	1.51	0.90
13:K:34:LEU:HD11	13:K:118:LEU:HG	1.54	0.90
14:L:87:TYR:OH	14:L:116:LEU:HB3	1.71	0.90
31:y:397:A:H4'	31:y:398:C:OP1	1.66	0.90
31:y:1109:C:H3'	31:y:1110:A:H8	1.33	0.90
31:y:1500:A:H5"	31:y:1508:G:H5"	1.53	0.90
46:n:22:ILE:HG22	46:n:23:TYR:H	1.36	0.90
1:w:1130:U:O2	1:w:2025:C:H5"	1.72	0.90
13:K:98:LYS:HB2	13:K:101:ARG:HB2	1.52	0.90
31:y:1279:A:H3'	31:y:1279:A:N3	1.87	0.90
31:y:1375:A:H2'	31:y:1376:U:C6	2.06	0.90
1:w:130:C:H4'	1:w:1349:A:H1'	1.53	0.89
1:w:686:G:H2'	28:Z:6:GLN:HG3	1.55	0.89
1:w:2383:G:H2'	1:w:2384:G:H5'	1.52	0.89
2:x:35:U:C2'	2:x:36:C:H5'	2.02	0.89
8:F:38:SER:HB2	8:F:39:PRO:HD2	1.50	0.89
20:R:8:ILE:HA	20:R:30:VAL:HG23	1.53	0.89
31:y:561:U:H4'	31:y:563:A:N7	1.86	0.89
31:y:928:G:H8	31:y:928:G:O5'	1.54	0.89
43:k:74:ILE:HG12	43:k:75:ILE:N	1.87	0.89
1:w:1270:C:H5"	1:w:1271:G:H5'	1.52	0.89
1:w:2051:A:H5'	1:w:2578:G:P	2.12	0.89
31:y:136:C:C4'	49:q:1:MET:HB2	2.01	0.89
31:y:520:A:C2	31:y:521:G:H1'	2.07	0.89
31:y:1323:G:H5"	31:y:136(B):C:H41	1.37	0.89
38:f:78:HIS:HB2	41:i:104:ARG:HG3	1.55	0.89
1:w:1257:C:H4'	6:D:77:ILE:HG13	1.53	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2712(B):A:H3'	1:w:2713:A:P	2.10	0.89
2:x:100:G:O2'	2:x:101:A:H5'	1.72	0.89
4:B:133:LEU:HD13	4:B:136:ILE:HD12	1.54	0.89
4:B:259:THR:HG22	4:B:260:ARG:N	1.86	0.89
5:C:93:VAL:HB	5:C:182:LEU:HD13	1.53	0.89
13:K:133:ARG:CG	13:K:134:ARG:H	1.82	0.89
18:P:13:ARG:H	18:P:13:ARG:HH11	1.15	0.89
31:y:659:U:O5'	31:y:659:U:H6	1.54	0.89
1:w:2348:U:H3'	29:a:42:ARG:HH21	1.36	0.89
1:w:2515:C:C2'	1:w:2516:G:H5'	2.02	0.89
6:D:149:VAL:HB	6:D:186:ARG:CB	2.02	0.89
19:Q:85:VAL:HG13	19:Q:95:ILE:HG22	1.54	0.89
31:y:519:C:O3'	45:m:50:ALA:HB1	1.73	0.89
31:y:625:G:H2'	31:y:626:U:C6	2.07	0.89
31:y:1343:G:H4'	42:j:122:ALA:HB3	1.53	0.89
31:y:1518:MA6:H93	31:y:1519:MA6:H92	1.55	0.89
51:s:72:ARG:HA	51:s:75:ILE:HD12	1.54	0.89
1:w:589:C:H2'	1:w:590:A:H8	1.38	0.89
1:w:898:C:H3'	1:w:899:A:C5'	2.03	0.89
1:w:1136:G:H2'	1:w:1137:G:C8	2.07	0.89
1:w:1297:C:OP2	1:w:2710:C:H4'	1.72	0.89
1:w:1403:C:H4'	1:w:1471:A:H1'	1.54	0.89
1:w:2688:U:H2'	1:w:2719:G:H22	1.37	0.89
1:w:2875:C:C2'	1:w:2876:G:H5"	2.03	0.89
6:D:4:ILE:HB	6:D:5:PRO:HD3	1.53	0.89
11:I:65:THR:HA	11:I:82:ASN:ND2	1.87	0.89
13:K:37:LEU:HD11	13:K:128:LYS:HB2	1.54	0.89
31:y:579:G:H2'	31:y:580:U:C6	2.07	0.89
31:y:766:A:H2'	31:y:767:A:O4'	1.72	0.89
31:y:780:A:H8	31:y:780:A:O5'	1.53	0.89
31:y:1441:G:H5"	31:y:1442:G:C5'	2.02	0.89
37:e:31:CYS:SG	37:e:33:MET:HE2	2.12	0.89
1:w:673:C:C2'	1:w:674:G:H5'	2.03	0.89
8:F:20:ALA:HB1	8:F:21:PRO:HD2	1.54	0.89
31:y:227:G:H21	49:q:62:VAL:CB	1.86	0.89
31:y:1098:C:H2'	31:y:1099:G:O4'	1.73	0.89
31:y:1314:C:H41	52:t:4:SER:HB2	1.36	0.89
50:r:6:LEU:HD21	50:r:59:ILE:HG22	1.54	0.89
3:A:223:VAL:HG12	3:A:224:ARG:H	1.35	0.89
5:C:47:VAL:HG12	5:C:48:GLN:H	1.36	0.89
31:y:1500:A:H2'	31:y:1501:C:H5'	1.55	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:z:38:A:H8	32:z:38:A:O5'	1.55	0.89
35:c:32:ILE:HG22	35:c:42:ILE:HA	1.53	0.89
1:w:788:A:H5"	1:w:790:C:H41	1.37	0.89
2:x:31:C:O2'	2:x:53:A:N6	2.06	0.89
3:A:201:LYS:HB2	3:A:202:PRO:HD2	1.55	0.89
5:C:119:ARG:HG3	5:C:157:ALA:HA	1.53	0.89
16:N:106:SER:HA	16:N:110:ILE:HD13	1.53	0.89
31:y:244:U:H5"	31:y:245:C:H5'	1.55	0.89
31:y:910:C:H5"	45:m:96:ARG:NH2	1.88	0.89
1:w:729:G:H2'	1:w:729:G:N3	1.83	0.89
1:w:1815:A:H4'	1:w:1816:G:C5'	2.02	0.89
1:w:1993:U:H4'	5:C:129:HIS:NE2	1.86	0.89
33:2:41:U:H4'	40:h:143:ARG:NH1	1.88	0.89
37:e:121:VAL:HA	37:e:136:PRO:HG2	1.55	0.89
1:w:2712(B):A:H5"	1:w:2712(B):A:N3	1.88	0.89
31:y:688:G:H5'	44:l:46:GLY:O	1.73	0.89
31:y:936:C:H1'	31:y:1383:C:N4	1.87	0.89
31:y:961:U:H2'	31:y:962:C:H5'	1.55	0.89
31:y:1045:C:H2'	31:y:1046:A:H5'	1.55	0.89
31:y:1422:G:H2'	31:y:1423:G:C8	2.08	0.89
36:d:11:ARG:HB3	36:d:15:THR:HB	1.54	0.89
41:i:112:LEU:HB2	41:i:132:GLU:O	1.71	0.89
1:w:2133:G:OP2	1:w:2133:G:H8	1.56	0.88
2:x:108:C:O5'	2:x:108:C:H6	1.55	0.88
31:y:1323:G:H2'	31:y:1324:A:C8	2.08	0.88
33:2:16:U:H2'	33:2:17:U:H5'	1.53	0.88
36:d:175:LEU:HA	36:d:180:ALA:HB2	1.55	0.88
1:w:499:U:H3	1:w:503:A:H62	1.21	0.88
1:w:836:G:H2'	1:w:837:C:C6	2.08	0.88
1:w:2319:G:H4'	1:w:2320:A:OP1	1.72	0.88
5:C:66:HIS:O	5:C:67:PHE:HB2	1.71	0.88
5:C:104:VAL:HG22	5:C:198:VAL:HA	1.54	0.88
31:y:85:U:H2'	31:y:86:U:C5	2.07	0.88
31:y:279:A:H4'	31:y:280:C:C5'	2.02	0.88
31:y:864:A:H2'	31:y:865:A:C8	2.09	0.88
35:c:130:ARG:HB3	35:c:131:PRO:HD3	1.55	0.88
1:w:2748:A:H2'	1:w:2749:A:O4'	1.73	0.88
23:U:62:LEU:HD23	23:U:63:VAL:HG23	1.55	0.88
40:h:106:GLN:HA	40:h:109:ASN:ND2	1.87	0.88
45:m:109:VAL:HB	45:m:112:ARG:NH1	1.87	0.88
1:w:2426:A:C3'	1:w:2427:C:H5"	2.00	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2835:A:N6	1:w:2878:U:H2'	1.88	0.88
1:w:2642:G:O2'	1:w:2643:G:H5'	1.73	0.88
16:N:33:LYS:HD3	16:N:41:ARG:HB3	1.52	0.88
31:y:428:G:H1'	31:y:430:A:N7	1.87	0.88
31:y:598:U:H2'	31:y:599:C:H6	1.37	0.88
31:y:959:A:H3'	31:y:960:U:H5"	1.55	0.88
46:n:22:ILE:H	46:n:25:ILE:HG21	1.38	0.88
1:w:1519:G:C2	1:w:1520:U:H1'	2.08	0.88
2:x:78:A:H3'	2:x:79:C:C5'	2.03	0.88
14:L:33:ARG:HA	14:L:114:VAL:O	1.74	0.88
26:X:7:LYS:HG3	26:X:55:ARG:HB3	1.55	0.88
31:y:522:C:N4	31:y:523:A:H62	1.69	0.88
35:c:178:ARG:HH22	41:i:74:PRO:HB3	1.38	0.88
1:w:819:A:H62	1:w:1188:U:H3	0.88	0.88
1:w:2746:U:C5'	1:w:2746:U:P	2.62	0.88
6:D:59:ILE:HD11	6:D:71:GLY:HA2	1.54	0.88
31:y:191(F):U:H2'	31:y:191(G):G:C8	2.09	0.88
31:y:1343:G:C4'	42:j:122:ALA:HB3	2.02	0.88
1:w:811:U:C6	1:w:1251:C:H1'	2.09	0.88
11:I:85:VAL:HG12	11:I:86:ILE:N	1.85	0.88
13:K:34:LEU:HB3	13:K:129:THR:OG1	1.73	0.88
13:K:114:ALA:O	13:K:118:LEU:HD13	1.73	0.88
31:y:689:C:H5"	44:l:27:ASN:HD22	1.35	0.88
1:w:2839:G:H5'	14:L:46:GLY:HA2	1.54	0.88
2:x:35:U:H2'	2:x:36:C:H5'	1.55	0.88
7:E:125:PHE:HB2	7:E:166:ASP:CG	1.97	0.88
19:Q:23:LEU:HD13	27:Y:25:LEU:HG	1.54	0.88
31:y:650:G:O2'	31:y:651:C:H5'	1.73	0.88
36:d:123:GLN:HE21	36:d:133:ALA:HB1	1.35	0.88
1:w:1557:C:H3'	1:w:1558:A:C5'	2.03	0.88
1:w:2345:G:N2	1:w:2381:C:H2'	1.89	0.88
1:w:2717:G:C3'	1:w:2718:G:H5"	2.03	0.88
11:I:17:ARG:HH21	11:I:47:ILE:HB	1.37	0.88
1:w:1698:A:H4'	1:w:1699:G:OP1	1.73	0.87
1:w:1851:U:H4'	33:2:3:G:H21	1.38	0.87
1:w:2034:U:H3'	1:w:2035:G:H5"	1.56	0.87
1:w:2588:G:C2'	1:w:2589:A:O4'	2.20	0.87
4:B:174:ILE:HG22	4:B:175:LEU:H	1.37	0.87
31:y:901:A:O5'	31:y:901:A:C8	2.26	0.87
36:d:120:VAL:HA	36:d:123:GLN:NE2	1.88	0.87
37:e:19:LEU:HB3	37:e:21:LEU:HD13	1.53	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:o:29:ARG:NH1	47:o:29:ARG:HB2	1.89	0.87
53:u:90:GLN:HA	53:u:93:GLU:HB2	1.55	0.87
1:w:1704:G:H4'	31:y:1429:C:C5'	2.04	0.87
2:x:95:U:H2'	2:x:96:G:H8	1.38	0.87
7:E:74:LYS:HE3	7:E:88:ILE:HD11	1.55	0.87
14:L:24:GLN:O	14:L:28:LEU:HG	1.73	0.87
26:X:23:LEU:HA	26:X:26:LEU:HD12	1.54	0.87
47:o:25:VAL:H	47:o:39:LEU:HD23	1.34	0.87
13:K:125:LEU:HB3	13:K:126:PRO:HD2	1.54	0.87
31:y:598:U:H4'	41:i:94:TYR:CB	2.02	0.87
31:y:1298:C:H5'	40:h:114:ARG:HH21	1.33	0.87
36:d:43:LEU:HD12	36:d:44:GLU:H	1.39	0.87
37:e:108:LEU:HD21	37:e:174:LEU:HD22	1.54	0.87
1:w:84:A:H5'	1:w:85:G:OP1	1.73	0.87
1:w:674:G:H5"	6:D:72:ASP:HB3	1.56	0.87
1:w:805:G:N2	1:w:829:A:OP1	2.07	0.87
1:w:1759:A:H1'	1:w:2711:A:C2	2.09	0.87
9:G:3:VAL:H	9:G:21:VAL:CG2	1.87	0.87
11:I:64:ARG:O	11:I:82:ASN:HA	1.73	0.87
31:y:362:G:H4'	45:m:32:ARG:NH2	1.89	0.87
31:y:408:A:OP1	37:e:115:ARG:HB2	1.74	0.87
31:y:1293:G:O2'	31:y:1294:G:H8	1.54	0.87
32:z:24:U:H2'	32:z:25:C:H5'	1.54	0.87
33:2:36:A:H2'	33:2:37:A:H5'	1.57	0.87
53:u:55:ILE:O	53:u:59:ALA:HB2	1.73	0.87
1:w:26:G:H2'	1:w:27:G:O4'	1.75	0.87
1:w:2711:A:H5"	1:w:2712:U:C6	2.10	0.87
5:C:188:VAL:HG22	5:C:189:PRO:HD2	1.56	0.87
1:w:814:C:H1'	1:w:1225:G:H21	1.37	0.87
1:w:915:C:H2'	1:w:916:G:H5"	1.56	0.87
1:w:1068:G:H21	1:w:1096:A:H5'	1.37	0.87
1:w:1298:C:H2'	1:w:1299:G:H8	1.36	0.87
1:w:2089:U:H2'	1:w:2090:G:N7	1.89	0.87
5:C:11:MET:HB2	5:C:23:VAL:O	1.74	0.87
6:D:48:THR:HG23	6:D:49:ARG:H	1.40	0.87
13:K:39:PRO:HB3	13:K:99:PRO:HG3	1.55	0.87
31:y:210:U:H1'	31:y:216:G:N7	1.88	0.87
1:w:789:A:N1	28:Z:3:ARG:HD3	1.89	0.87
1:w:830:G:H1'	1:w:2448:A:C6	2.08	0.87
1:w:1699:G:H3'	1:w:1700:A:H5"	1.56	0.87
1:w:2250:G:H2'	13:K:82:ARG:HH22	1.40	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2575:C:HO2'	5:C:140:SER:HG	0.99	0.87
8:F:17:VAL:HG22	8:F:45:VAL:HB	1.57	0.87
38:f:43:LEU:HB3	38:f:136:MET:HE3	1.56	0.87
1:w:865:C:H42	1:w:909:A:H62	1.21	0.87
2:x:108:C:OP1	2:x:109:G:H4'	1.75	0.87
22:T:80:ARG:HH11	22:T:82:ARG:HB2	1.37	0.87
31:y:1249:C:H1'	42:j:70:LYS:NZ	1.90	0.87
45:m:58:ARG:HA	45:m:63:TYR:O	1.75	0.87
1:w:2733:A:H2'	1:w:2734:A:H8	1.36	0.87
2:x:57:A:H2'	2:x:58:A:C8	2.09	0.87
2:x:113:C:H2'	15:M:47:THR:CG2	2.05	0.87
4:B:19:ALA:HB1	4:B:24:ILE:HD11	1.56	0.87
4:B:39:LYS:HG3	4:B:40:THR:H	1.40	0.87
31:y:420:U:C3'	31:y:422:C:H41	1.88	0.87
31:y:637:G:H2'	31:y:638:G:H8	1.36	0.87
31:y:889:A:N1	31:y:907:A:H5"	1.88	0.87
37:e:35:ARG:HB3	37:e:36:ARG:CZ	2.05	0.87
42:j:22:GLY:HA3	42:j:60:ASP:HB2	1.57	0.87
53:u:79:ARG:O	53:u:83:ARG:HB2	1.73	0.87
1:w:182:A:N1	1:w:215:G:N2	2.23	0.86
1:w:666:G:H5"	12:J:49:ARG:HD3	1.57	0.86
11:I:97:ARG:HE	11:I:97:ARG:CA	1.86	0.86
31:y:1332:A:C2'	31:y:1333:A:H5'	2.04	0.86
7:E:46:ALA:HB2	7:E:87:PRO:HG3	1.56	0.86
41:i:82:HIS:O	41:i:83:ILE:HG13	1.74	0.86
1:w:271(C):G:H4'	1:w:271(D):U:O5'	1.75	0.86
1:w:1035:U:H5"	8:F:59:ARG:HH22	1.39	0.86
1:w:2712(B):A:C3'	1:w:2713:A:H5'	2.05	0.86
2:x:57:A:H1'	7:E:30:GLU:CD	1.99	0.86
4:B:221:VAL:HG23	4:B:223:GLY:H	1.41	0.86
22:T:53:ILE:HA	22:T:98:MET:SD	2.15	0.86
31:y:108:G:N2	31:y:108:G:OP2	2.06	0.86
31:y:601:C:H2'	31:y:602:A:H8	1.34	0.86
38:f:44:GLY:CA	38:f:62:ALA:HB2	2.05	0.86
45:m:59:LEU:HD13	45:m:61:SER:H	1.40	0.86
49:q:26:ARG:HH22	49:q:33:ILE:HG13	1.37	0.86
1:w:2238:G:H2'	1:w:2238:G:N3	1.89	0.86
14:L:34:ILE:HG22	14:L:35:THR:H	1.38	0.86
15:M:28:VAL:HG12	15:M:29:PHE:N	1.90	0.86
17:O:51:LYS:HE3	17:O:55:ARG:NE	1.89	0.86
31:y:262:A:H5'	53:u:74:LYS:HD2	1.55	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:808:C:O5'	31:y:808:C:H6	1.59	0.86
31:y:874:G:N2	41:i:11:THR:HG21	1.89	0.86
31:y:1015:A:H2'	31:y:1016:A:O4'	1.74	0.86
53:u:88:VAL:HA	53:u:91:LEU:HD12	1.56	0.86
1:w:118:A:N3	1:w:178:G:H1'	1.90	0.86
1:w:814:C:H1'	1:w:1225:G:N2	1.90	0.86
7:E:172:LEU:HA	7:E:175:LEU:HB2	1.55	0.86
31:y:1332:A:O2'	31:y:1333:A:H5'	1.75	0.86
44:l:87:THR:HA	44:l:91:ARG:HE	1.38	0.86
1:w:2876:G:H2'	1:w:2877:G:H8	1.39	0.86
31:y:555:C:H3'	31:y:556:C:C5'	2.03	0.86
37:e:13:ARG:HB2	37:e:37:PRO:HA	1.56	0.86
1:w:2828:C:H2'	1:w:2829:C:C6	2.11	0.86
9:G:109:ILE:O	9:G:111:PRO:HD3	1.75	0.86
14:L:9:LYS:HG3	14:L:10:LEU:H	1.41	0.86
31:y:226:G:O2'	31:y:227:G:H5'	1.75	0.86
31:y:502:G:OP1	45:m:117:SER:HB3	1.75	0.86
33:2:63:C:H2'	33:2:64:A:H8	1.41	0.86
1:w:1691:C:O2'	1:w:1977:A:H4'	1.75	0.86
10:H:57:LEU:CD1	10:H:139:LEU:HB3	2.05	0.86
29:a:39:LYS:HG2	29:a:40:GLU:N	1.90	0.86
31:y:1518:MA6:O5'	31:y:1518:MA6:C8	2.24	0.86
1:w:1345:C:H2'	1:w:1346:G:C8	2.11	0.86
1:w:1699:G:H3'	1:w:1700:A:C5'	2.05	0.86
1:w:1704:G:H4'	31:y:1429:C:H5'	1.54	0.86
1:w:2439:A:C8	1:w:2586:C:H4'	2.11	0.86
1:w:2490:G:H4'	1:w:2491:U:OP1	1.76	0.86
1:w:2531:A:H2'	1:w:2532:G:H8	1.41	0.86
1:w:2834:G:H5'	1:w:2835:A:OP2	1.74	0.86
5:C:28:ALA:HB2	5:C:93:VAL:CG1	2.05	0.86
5:C:174:ASP:N	5:C:183:LEU:HD11	1.90	0.86
6:D:27:LEU:HD13	6:D:27:LEU:H	1.41	0.86
23:U:28:GLY:HA3	23:U:67:VAL:O	1.74	0.86
31:y:31:G:H2'	31:y:31:G:OP1	1.74	0.86
47:o:30:ALA:HA	47:o:33:VAL:CG1	2.03	0.86
1:w:1152:C:H1'	17:O:77:SER:HB2	1.58	0.86
1:w:2093:G:OP1	9:G:24:GLY:HA2	1.75	0.86
1:w:2209:C:H2'	1:w:2210:G:H8	1.41	0.86
31:y:67:C:O2'	31:y:172:A:H1'	1.76	0.86
31:y:222:U:H3'	31:y:223:U:H5"	1.58	0.86
31:y:608:A:C2'	31:y:609:A:H8	1.86	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:2:18:G:N1	33:2:57:G:N1	2.24	0.86
37:e:105:VAL:CG1	37:e:110:PHE:HB3	2.02	0.86
46:n:92:HIS:ND1	46:n:98:VAL:HG11	1.90	0.86
1:w:668:G:H2'	1:w:670:A:H62	1.40	0.85
1:w:1303:G:H4'	1:w:1642:G:O2'	1.76	0.85
1:w:2529:G:OP2	1:w:2530:A:H5"	1.76	0.85
1:w:2711:A:C5'	1:w:2712:U:C6	2.58	0.85
1:w:2795:G:N2	1:w:2801:A:OP1	2.09	0.85
10:H:32:VAL:HG21	10:H:71:MET:HE3	1.56	0.85
31:y:814:A:O2'	31:y:815:A:H3'	1.75	0.85
37:e:72:GLU:HA	37:e:75:PHE:HD1	1.39	0.85
50:r:12:SER:HB3	50:r:20:THR:HB	1.58	0.85
1:w:1675:C:H42	5:C:129:HIS:CE1	1.93	0.85
1:w:1992:G:H5'	1:w:1994:C:H41	1.40	0.85
7:E:175:LEU:HB3	7:E:176:LEU:HD23	1.56	0.85
31:y:37:U:H3	31:y:397:A:H61	1.24	0.85
41:i:100:ILE:HD11	41:i:124:ALA:HB3	1.57	0.85
1:w:864:G:H1'	1:w:914:C:H42	1.42	0.85
1:w:1222:C:H2'	1:w:1223:G:O4'	1.76	0.85
1:w:2807:G:H3'	1:w:2808:U:H5"	1.57	0.85
22:T:69:THR:HG21	22:T:88:PHE:CE1	2.11	0.85
45:m:52:ARG:O	45:m:54:VAL:HG13	1.76	0.85
51:s:80:PRO:HB3	51:s:83:GLU:HB2	1.56	0.85
1:w:244:A:O2'	12:J:73:GLY:HA2	1.75	0.85
1:w:2512:C:O2'	5:C:141:ILE:HG22	1.76	0.85
1:w:2571:C:H2'	5:C:143:ASN:HD21	1.41	0.85
15:M:67:ARG:HA	15:M:100:ALA:O	1.74	0.85
31:y:944:G:N2	31:y:1339:A:H62	1.74	0.85
31:y:1314:C:H41	52:t:4:SER:CB	1.87	0.85
31:y:1506:U:C2'	31:y:1507:A:H5'	2.05	0.85
41:i:22:GLU:O	41:i:62:TYR:HA	1.76	0.85
43:k:9:ARG:O	43:k:94:VAL:HG13	1.77	0.85
49:q:43:LYS:HA	49:q:48:TRP:NE1	1.91	0.85
1:w:814:C:C1'	1:w:1225:G:H21	1.90	0.85
1:w:1136:G:H2'	1:w:1137:G:H8	1.41	0.85
1:w:1233:C:H2'	1:w:1234:U:H6	1.39	0.85
1:w:1791:A:N6	1:w:1828:G:O2'	2.10	0.85
1:w:2751:G:N3	1:w:2751:G:H2'	1.90	0.85
6:D:181:ILE:HA	6:D:184:THR:OG1	1.77	0.85
11:I:61:VAL:HG13	11:I:85:VAL:H	1.38	0.85
31:y:328:C:H4'	31:y:329:A:C5'	2.06	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:449:A:H61	1:w:454:A:N6	1.74	0.85
1:w:702:G:H3'	1:w:703:U:C5	2.11	0.85
1:w:805:G:H4'	12:J:39:LYS:HB3	1.58	0.85
1:w:1637:A:H2'	1:w:1638:C:C6	2.11	0.85
5:C:185:LYS:HG3	5:C:186:GLY:N	1.91	0.85
21:S:19:LYS:O	21:S:20:TYR:HB2	1.75	0.85
31:y:546:G:C4'	31:y:548:G:H4'	2.06	0.85
41:i:33:GLU:HA	41:i:36:LEU:HG	1.59	0.85
45:m:88:ARG:HG2	45:m:96:ARG:HA	1.58	0.85
1:w:460:A:H62	1:w:469:G:H21	1.16	0.85
1:w:1309:G:H2'	1:w:1310:G:C5'	2.04	0.85
1:w:2586:C:H2'	1:w:2587:A:H8	1.38	0.85
1:w:2818:G:OP1	14:L:42:LYS:HD3	1.73	0.85
7:E:5:LEU:HD13	7:E:9:ARG:HD3	1.59	0.85
15:M:30:ARG:HD2	15:M:31:SER:N	1.92	0.85
23:U:45:PHE:HA	23:U:77:ARG:O	1.77	0.85
31:y:191(B):G:O2'	31:y:191(C):G:H5'	1.77	0.85
31:y:287:U:H2'	31:y:288:A:H8	1.41	0.85
31:y:303:A:O2'	31:y:555:C:H4'	1.75	0.85
31:y:509:A:O2'	31:y:510:A:H5'	1.75	0.85
31:y:678:U:O2'	31:y:778:G:OP1	1.92	0.85
31:y:855:G:H5"	31:y:871:U:O4	1.77	0.85
31:y:1090:U:O2'	31:y:1091:U:H5'	1.76	0.85
53:u:82:SER:O	53:u:86:ARG:HB2	1.77	0.85
1:w:702:G:H3'	1:w:703:U:H5	1.42	0.85
2:x:88:C:O5'	2:x:88:C:H6	1.60	0.85
7:E:6:ALA:HB3	7:E:100:TRP:CZ2	2.12	0.85
11:I:19:ILE:HG22	11:I:43:VAL:HA	1.57	0.85
23:U:36:ILE:HA	23:U:60:PHE:HB2	1.56	0.85
31:y:25:C:N4	31:y:558:G:N2	2.24	0.85
31:y:1347:G:N2	31:y:1349:A:H62	1.72	0.85
31:y:1459:C:H2'	31:y:1460:A:H8	1.40	0.85
35:c:25:ASN:HB2	35:c:191:ASP:CA	2.06	0.85
36:d:120:VAL:HG11	36:d:134:ILE:HG22	1.57	0.85
1:w:691:C:H1'	4:B:43:ARG:CZ	2.07	0.85
1:w:2701:C:H3'	1:w:2702:U:H5"	1.59	0.85
9:G:63:ALA:HA	9:G:66:GLU:HB2	1.59	0.85
31:y:1057:G:H5"	36:d:154:SER:HB3	1.59	0.85
31:y:1306:A:N6	31:y:1331:G:O4'	2.09	0.85
37:e:88:VAL:HG13	38:f:97:GLY:HA3	1.57	0.85
41:i:98:LYS:HG2	41:i:99:GLU:OE1	1.77	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:r:29:HIS:HB2	50:r:36:ILE:HG21	1.58	0.85
9:G:3:VAL:HG12	9:G:21:VAL:HG11	1.57	0.85
9:G:98:ALA:HA	9:G:111:PRO:HG2	1.57	0.85
14:L:57:ARG:HG3	14:L:61:HIS:HB3	1.59	0.85
24:V:90:ILE:HB	24:V:91:LYS:HZ2	1.40	0.85
25:W:13:ALA:HB3	25:W:15:LYS:HE3	1.58	0.85
31:y:44:G:H1'	31:y:399:G:N2	1.90	0.85
31:y:189:U:H5'	31:y:189:U:C6	2.12	0.85
31:y:948:C:OP1	31:y:1306:A:H4'	1.75	0.85
31:y:1054:C:OP2	31:y:1197:G:OP1	1.95	0.85
37:e:10:ARG:O	37:e:13:ARG:HG2	1.77	0.85
1:w:1249:U:H2'	1:w:1250:G:O4'	1.77	0.84
1:w:2654:A:H62	1:w:2666:C:N4	1.74	0.84
3:A:53:ARG:HG3	33:2:54:U:O2'	1.75	0.84
4:B:133:LEU:HG	4:B:173:VAL:HG11	1.59	0.84
10:H:36:TRP:CB	10:H:156:GLN:HB3	2.06	0.84
17:O:49:HIS:HA	17:O:52:ARG:HB2	1.58	0.84
31:y:33:A:H2'	31:y:34:C:O4'	1.77	0.84
43:k:51:ARG:HG3	47:o:45:ARG:CZ	2.07	0.84
1:w:449:A:N6	1:w:454:A:H62	1.73	0.84
1:w:579:G:H4'	1:w:2017:U:H2'	1.59	0.84
1:w:2745:C:O2'	1:w:2746:U:H5'	1.76	0.84
15:M:63:THR:OG1	15:M:100:ALA:HB2	1.77	0.84
31:y:597:G:N2	41:i:94:TYR:CE2	2.44	0.84
31:y:952:U:C2'	31:y:953:G:H5'	2.07	0.84
31:y:1053:G:C4'	31:y:1054:C:H5"	2.07	0.84
48:p:31:LEU:HD22	48:p:32:LEU:HD12	1.59	0.84
1:w:2189:U:H3'	1:w:2190:G:C5'	2.06	0.84
1:w:2411:A:H2'	1:w:2412:A:C8	2.12	0.84
1:w:2720:U:H5"	1:w:2720:U:C6	2.11	0.84
18:P:15:GLU:HB3	18:P:16:PRO:CD	2.07	0.84
31:y:328:C:H4'	31:y:329:A:O5'	1.77	0.84
31:y:751:U:C2'	48:p:25:THR:HG23	2.06	0.84
31:y:770:C:H2'	31:y:771:G:H5'	1.59	0.84
31:y:910:C:H5"	45:m:96:ARG:HH21	1.41	0.84
49:q:48:TRP:H	49:q:48:TRP:HE3	1.20	0.84
1:w:8:A:O2'	1:w:9:U:H5'	1.77	0.84
1:w:1641:A:H2'	1:w:1642:G:H5'	1.60	0.84
1:w:2786:U:O2	5:C:62:PRO:HB3	1.76	0.84
7:E:77:ILE:HG12	32:z:19:G:C6	2.12	0.84
31:y:35:G:C2'	31:y:36:C:H5'	2.07	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:402:G:OP1	37:e:74:GLN:NE2	2.09	0.84
47:o:26:ARG:NE	47:o:43:CYS:HB3	1.92	0.84
1:w:2073:C:H2'	1:w:2074:U:C6	2.11	0.84
8:F:118:PRO:HD2	8:F:121:ILE:HG21	1.59	0.84
31:y:1112:C:C2'	31:y:1113:C:H5'	2.05	0.84
1:w:494:G:C5'	19:Q:8:ARG:HH12	1.89	0.84
1:w:885:C:C3'	1:w:886:C:H5'	2.07	0.84
1:w:918:A:C2	2:x:80:U:H4'	2.13	0.84
1:w:2704:C:H2'	1:w:2705:A:H5'	1.58	0.84
1:w:2784:C:H2'	1:w:2785:C:H5"	0.87	0.84
10:H:117:HIS:O	10:H:121:VAL:HG23	1.77	0.84
22:T:150:LEU:HD12	22:T:151:HIS:N	1.91	0.84
31:y:507:C:H3'	31:y:508:C:H5'	1.60	0.84
31:y:1252:A:H2'	31:y:1253:G:O4'	1.78	0.84
1:w:599:G:H2'	1:w:600:G:C8	2.12	0.84
1:w:1190:G:H5'	12:J:34:GLY:HA3	1.60	0.84
1:w:1339:G:C2	1:w:1340:U:H5	1.95	0.84
1:w:2584:U:H2'	1:w:2585:U:H2'	1.60	0.84
4:B:3:VAL:HA	4:B:17:THR:HG23	1.60	0.84
31:y:114:U:H2'	31:y:115:G:H5"	1.57	0.84
31:y:186(A):C:O2'	53:u:81:LYS:HB3	1.77	0.84
31:y:191(G):G:O2'	53:u:102:GLY:O	1.95	0.84
31:y:451:A:C6	31:y:481:G:N7	2.46	0.84
31:y:562:C:O2'	45:m:14:ARG:HD2	1.76	0.84
31:y:608:A:O2'	31:y:609:A:H5'	1.77	0.84
31:y:950:U:H5"	46:n:102:ARG:HH12	1.42	0.84
52:t:48:THR:HG21	52:t:60:VAL:O	1.75	0.84
1:w:727:A:H5"	1:w:1431:U:O2'	1.77	0.84
15:M:28:VAL:CG1	15:M:29:PHE:H	1.91	0.84
31:y:507:C:C3'	31:y:508:C:C5'	2.56	0.84
31:y:1253:G:H5'	31:y:1254:C:OP2	1.77	0.84
1:w:20:C:H2'	1:w:21:A:C8	2.12	0.84
12:J:50:ARG:HG2	12:J:50:ARG:NH2	1.92	0.84
13:K:3:MET:H	13:K:4:PRO:CD	1.90	0.84
13:K:114:ALA:C	13:K:118:LEU:HD13	2.03	0.84
16:N:100:TYR:HA	16:N:103:ARG:HH12	1.42	0.84
16:N:111:ARG:H	16:N:111:ARG:HD2	1.42	0.84
22:T:53:ILE:H	22:T:53:ILE:HD13	1.42	0.84
31:y:88:C:H2'	31:y:89:U:C6	2.13	0.84
31:y:335:C:H1'	31:y:1433:A:N3	1.93	0.84
31:y:528:C:H41	45:m:47:PRO:CB	1.89	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:f:43:LEU:HB3	38:f:136:MET:CE	2.07	0.84
48:p:51:HIS:O	48:p:54:ARG:HG3	1.77	0.84
1:w:378:C:H2'	1:w:379:G:C8	2.11	0.84
1:w:396:G:H5'	24:V:17:SER:OG	1.77	0.84
1:w:1223:G:H5"	1:w:1224:C:H5"	1.59	0.84
1:w:1616:A:C3'	1:w:1617:C:C5'	2.55	0.84
1:w:1699:G:C3'	1:w:1700:A:H5"	2.07	0.84
1:w:2583:G:H2'	1:w:2584:U:C5'	2.07	0.84
5:C:64:LYS:O	5:C:66:HIS:N	2.10	0.84
14:L:84:ALA:O	14:L:88:ARG:HB2	1.78	0.84
20:R:42:ALA:O	20:R:46:ALA:HB2	1.76	0.84
22:T:24:LEU:HD11	22:T:41:LEU:HA	1.60	0.84
31:y:116:A:C2	31:y:117:G:H1'	2.12	0.84
37:e:101:LEU:HD13	37:e:138:TYR:O	1.78	0.84
46:n:4:ILE:HG23	46:n:57:ARG:HA	1.59	0.84
46:n:34:LEU:HD13	46:n:41:PRO:HG3	1.60	0.84
1:w:669:G:O3'	12:J:44:GLY:HA2	1.78	0.83
1:w:2029:G:H2'	1:w:2031:A:OP1	1.77	0.83
1:w:2073:C:C5'	4:B:229:VAL:HG22	2.07	0.83
4:B:35:LYS:HE3	4:B:64:ILE:H	1.41	0.83
7:E:46:ALA:HA	7:E:53:LEU:HD21	1.60	0.83
31:y:297:G:H4'	31:y:557:G:HO2'	1.39	0.83
31:y:396:G:N2	31:y:398:C:C2	2.46	0.83
31:y:1127:G:H5'	31:y:1280:A:H2	1.39	0.83
33:2:18:G:C6	33:2:57:G:N1	2.45	0.83
1:w:478:A:H61	1:w:502:A:H61	1.26	0.83
1:w:649:G:H2'	1:w:650:C:H6	1.43	0.83
18:P:89:GLN:OE1	18:P:91:TYR:HB2	1.78	0.83
31:y:13:U:O4	31:y:21:G:N2	2.11	0.83
31:y:102:G:H2'	31:y:103:C:H6	1.34	0.83
31:y:376:G:C2'	31:y:377:G:H5'	2.08	0.83
31:y:407:G:H8	31:y:407:G:O5'	1.61	0.83
31:y:964:A:C3'	31:y:965:A:H5"	2.06	0.83
35:c:118:LEU:O	35:c:122:PHE:HB2	1.77	0.83
37:e:163:GLU:O	37:e:166:LYS:HG3	1.77	0.83
52:t:6:LYS:H	52:t:6:LYS:CD	1.84	0.83
1:w:527:C:N4	1:w:2779:U:H5'	1.91	0.83
1:w:996:A:H4'	17:O:92:ARG:HD3	1.59	0.83
2:x:84:C:H2'	2:x:85:G:H8	1.42	0.83
12:J:85:LEU:HD23	12:J:120:ALA:H	1.42	0.83
20:R:13:LEU:HD22	20:R:29:TRP:CZ2	2.12	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:30:VAL:HG22	20:R:31:HIS:H	1.41	0.83
31:y:61:G:H2'	31:y:62:U:O4'	1.78	0.83
31:y:178:C:C2'	31:y:179:A:H5'	2.09	0.83
31:y:447:G:N2	31:y:488:C:N4	2.26	0.83
31:y:586:C:H5"	50:r:34:LYS:NZ	1.94	0.83
31:y:813:U:H5"	31:y:816:A:H61	1.43	0.83
31:y:1516:G:H2'	31:y:1518:MA6:OP1	1.77	0.83
37:e:105:VAL:HG21	37:e:120:LEU:HD11	1.60	0.83
1:w:204:A:OP1	1:w:204:A:H8	1.61	0.83
1:w:587:C:C6	1:w:671:C:H1'	2.13	0.83
1:w:2193:G:H3'	1:w:2194:G:H5"	1.60	0.83
1:w:2712(B):A:H3'	1:w:2713:A:H5'	1.59	0.83
6:D:180:ASP:O	6:D:184:THR:HG23	1.78	0.83
11:I:19:ILE:CG2	11:I:43:VAL:HA	2.07	0.83
11:I:22:ILE:HG13	11:I:23:ARG:H	1.41	0.83
18:P:14:VAL:HG21	18:P:98:GLU:HG2	1.60	0.83
31:y:291:C:H3'	31:y:305:G:H22	1.39	0.83
31:y:1269:A:H4'	54:v:19:GLY:H	1.42	0.83
36:d:175:LEU:HA	36:d:180:ALA:CB	2.08	0.83
41:i:12:ARG:O	41:i:16:ALA:HB3	1.79	0.83
47:o:48:ALA:HA	47:o:53:LEU:CD2	2.07	0.83
53:u:19:SER:HA	53:u:22:ARG:HD2	1.59	0.83
1:w:270(M):U:H2'	1:w:270(N):U:C6	2.13	0.83
1:w:319:C:H2'	1:w:320:A:O4'	1.79	0.83
1:w:975:G:OP1	18:P:79:VAL:HG13	1.77	0.83
1:w:2744:G:H2'	1:w:2745:C:H6	1.43	0.83
1:w:2818:G:H2'	1:w:2819:G:H5'	1.58	0.83
3:A:63:VAL:HG22	3:A:64:SER:H	1.41	0.83
12:J:85:LEU:HD21	12:J:119:GLU:H	1.43	0.83
31:y:408:A:O2'	31:y:409:G:H5'	1.78	0.83
1:w:306:U:H3	1:w:310:A:H62	1.23	0.83
1:w:784:A:H5'	1:w:2588:G:OP1	1.79	0.83
1:w:2694:G:H2'	1:w:2695:C:H5'	1.60	0.83
2:x:79:C:H2'	2:x:80:U:H5'	1.59	0.83
4:B:211:ARG:HA	4:B:214:TRP:HE3	1.37	0.83
16:N:100:TYR:O	16:N:102:ILE:N	2.12	0.83
31:y:943:U:H6	31:y:943:U:O5'	1.62	0.83
31:y:952:U:H2'	31:y:953:G:H5'	1.60	0.83
31:y:1210:C:H4'	31:y:1214:C:C4	2.12	0.83
31:y:1238:A:OP2	31:y:1301:U:O4	1.94	0.83
31:y:1307:U:H2'	31:y:1308:U:C6	2.13	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:q:4:ILE:HB	49:q:66:PRO:HB3	1.60	0.83
1:w:789:A:C6	28:Z:3:ARG:HD3	2.14	0.83
1:w:814:C:H2'	1:w:815:C:C6	2.13	0.83
1:w:1884:A:H2'	1:w:1885:A:H5"	1.59	0.83
1:w:2525:G:C2	1:w:2539:C:C4	2.66	0.83
16:N:47:GLY:HA2	16:N:64:ARG:O	1.78	0.83
31:y:22:G:C5'	31:y:885:G:H5'	2.08	0.83
31:y:868:C:C2'	31:y:869:G:H5'	2.08	0.83
1:w:458:G:O2'	1:w:459:U:H5	1.62	0.83
1:w:670:A:H4'	1:w:671:C:O5'	1.77	0.83
1:w:1252:G:H21	17:O:33:ARG:HD3	1.43	0.83
1:w:2471:C:H2'	1:w:2472:G:H8	1.43	0.83
1:w:2590:A:C5'	4:B:239:ARG:HH21	1.91	0.83
21:S:23:ARG:HD3	21:S:38:ILE:HG21	1.59	0.83
29:a:49:VAL:O	29:a:53:PRO:HG3	1.79	0.83
31:y:47:C:C6	31:y:365:U:H2'	2.12	0.83
31:y:939:G:C6	31:y:940:C:N4	2.46	0.83
41:i:95:VAL:HB	41:i:99:GLU:CG	2.08	0.83
53:u:45:GLN:CA	53:u:91:LEU:HB3	2.01	0.83
1:w:1565:C:H3'	1:w:1567:A:N6	1.91	0.83
1:w:2655:G:H1'	1:w:2656:U:OP2	1.78	0.83
4:B:259:THR:HG22	4:B:260:ARG:H	1.40	0.83
7:E:47:LYS:HB2	7:E:72:ARG:HH12	1.43	0.83
13:K:8:LYS:HB3	13:K:12:GLN:HE21	1.44	0.83
13:K:32:PHE:CB	13:K:106:VAL:HB	2.07	0.83
38:f:18:ARG:HH21	38:f:27:ARG:HB3	1.44	0.83
38:f:78:HIS:NE2	38:f:80:ILE:HG12	1.93	0.83
1:w:662:G:H2'	1:w:663:G:C8	2.14	0.83
1:w:2190:G:HO2'	1:w:2191:G:H8	0.86	0.83
1:w:2240:C:H2'	1:w:2241:A:H5'	1.60	0.83
1:w:2683:C:C1'	5:C:13:ARG:NH1	2.42	0.83
1:w:2717:G:H2'	1:w:2718:G:O4'	1.79	0.83
1:w:2734:A:H62	1:w:2770:G:N2	1.76	0.83
1:w:2772:C:O5'	1:w:2772:C:H6	1.62	0.83
9:G:38:LEU:HD13	9:G:40:THR:HG22	1.61	0.83
10:H:62:ARG:HE	10:H:63:PRO:HD2	1.44	0.83
15:M:110:LEU:HG	15:M:111:GLU:H	1.43	0.83
31:y:132:C:C2'	31:y:133:U:H5"	2.09	0.83
31:y:583:A:H2'	31:y:584:G:O4'	1.79	0.83
31:y:1347:G:H3'	42:j:108:VAL:O	1.79	0.83
36:d:122:GLU:O	36:d:125:GLU:HG2	1.78	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1789:A:H5”	4:B:221:VAL:HA	1.60	0.82
1:w:2768:C:O2’	1:w:2769:C:H5’	1.79	0.82
1:w:2866:U:O2	1:w:2866:U:H2’	1.79	0.82
19:Q:10:VAL:HG12	19:Q:11:ARG:H	1.43	0.82
31:y:254:G:C2’	31:y:255:G:H5’	2.10	0.82
31:y:323:U:H4’	53:u:19:SER:O	1.77	0.82
31:y:1003:G:C2	31:y:1004:A:H1’	2.13	0.82
31:y:1125:U:H2’	31:y:1126:U:H5”	1.59	0.82
38:f:18:ARG:NH2	38:f:27:ARG:HB3	1.94	0.82
1:w:126:A:H5”	28:Z:19:ARG:HB2	1.59	0.82
1:w:598:G:H5’	12:J:15:ARG:CG	2.09	0.82
1:w:1699:G:C2’	1:w:1700:A:H5”	2.09	0.82
1:w:2893:G:H4’	1:w:2894:G:H8	1.43	0.82
2:x:74:U:H6	2:x:74:U:O5’	1.60	0.82
2:x:88:C:H2’	2:x:89(A):G:C8	2.14	0.82
2:x:100:G:C2’	2:x:101:A:H5’	2.09	0.82
31:y:553:A:H4’	45:m:30:PRO:HD2	1.60	0.82
49:q:38:TYR:CZ	49:q:50:LYS:HB2	2.14	0.82
2:x:43:C:C2’	2:x:44:G:H5’	2.09	0.82
8:F:151:ILE:C	8:F:152:ARG:HD2	2.03	0.82
15:M:17:ARG:HE	15:M:89:ARG:CD	1.90	0.82
16:N:108:ARG:HG3	31:y:1431:C:OP1	1.79	0.82
19:Q:27:LYS:O	19:Q:71:VAL:HB	1.78	0.82
22:T:108:PRO:HB3	22:T:144:LEU:HB3	1.59	0.82
26:X:35:ARG:HG3	26:X:37:LEU:HD21	1.61	0.82
31:y:1228:C:H4’	46:n:116:THR:HA	1.61	0.82
31:y:1326:C:OP2	54:v:6:ARG:NH1	2.12	0.82
48:p:8:LYS:HE2	48:p:9:GLN:HG2	1.61	0.82
1:w:479:A:H5’	1:w:480:A:C8	2.14	0.82
1:w:2571:C:H2’	5:C:143:ASN:ND2	1.94	0.82
1:w:2577:A:H4’	1:w:2612:C:H41	1.42	0.82
4:B:126:GLN:O	4:B:193:VAL:HG22	1.78	0.82
31:y:22:G:H4’	31:y:885:G:O4’	1.79	0.82
51:s:31:LEU:HD23	51:s:31:LEU:H	1.42	0.82
1:w:2549:G:O2’	1:w:2550:G:H5’	1.78	0.82
18:P:10:LYS:HZ1	18:P:22:VAL:HA	1.44	0.82
31:y:1364:U:O2’	31:y:1365:G:C5’	2.28	0.82
33:2:12:U:H3	33:2:23:A:H61	1.26	0.82
41:i:91:ARG:HA	50:r:34:LYS:HD3	1.62	0.82
1:w:14:A:H2’	27:Y:21:SER:HB3	1.59	0.82
1:w:459:U:H5’	28:Z:40:TRP:CG	2.14	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1812:A:H1'	4:B:45:ASN:HB2	1.62	0.82
1:w:2312:U:H5"	7:E:88:ILE:HG23	1.62	0.82
1:w:2690:C:O2'	1:w:2691:C:H5'	1.78	0.82
1:w:2818:G:C4'	1:w:2837:G:H4'	2.08	0.82
17:O:92:ARG:HB2	18:P:11:GLN:OE1	1.79	0.82
43:k:4:ILE:HG13	43:k:5:ARG:H	1.44	0.82
1:w:489:G:C3'	1:w:491:G:P	2.68	0.82
1:w:2320:A:N1	1:w:2333:A:H2'	1.94	0.82
1:w:2354:G:H1'	23:U:34:GLY:O	1.79	0.82
1:w:2618:G:H2'	1:w:2619:C:C5	2.15	0.82
1:w:2757:A:O2'	1:w:2758:A:H5'	1.80	0.82
1:w:2875:C:H3'	1:w:2876:G:C5'	2.09	0.82
11:I:17:ARG:HG2	11:I:46:ALA:HA	1.61	0.82
31:y:898:G:N2	31:y:901:A:OP2	2.12	0.82
31:y:1303:C:H2'	31:y:1304:G:O4'	1.79	0.82
31:y:1379:G:H5"	40:h:4:ARG:HB3	1.59	0.82
31:y:1506:U:C3'	31:y:1507:A:H5'	2.09	0.82
1:w:2739:U:O2'	1:w:2740:A:H5'	1.79	0.82
1:w:2822:G:OP2	14:L:2:ARG:O	1.97	0.82
7:E:79:ASN:CG	7:E:80:PHE:H	1.86	0.82
22:T:97:GLU:HB2	22:T:126:VAL:O	1.77	0.82
29:a:53:PRO:HA	29:a:56:GLU:OE1	1.78	0.82
31:y:130:A:O2'	31:y:263:A:H1'	1.79	0.82
31:y:476:G:H2'	31:y:477:G:H8	1.41	0.82
31:y:577:G:O2'	31:y:578:C:H5'	1.79	0.82
31:y:1369:C:OP2	42:j:111:ARG:HB2	1.79	0.82
31:y:1504:G:O2'	31:y:1505:G:OP2	1.97	0.82
37:e:31:CYS:O	37:e:33:MET:N	2.13	0.82
45:m:23:VAL:HA	45:m:97:TYR:OH	1.79	0.82
53:u:14:LYS:N	53:u:17:ARG:HH21	1.77	0.82
1:w:969:U:H2'	1:w:970:C:C6	2.14	0.82
1:w:2642:G:H2'	1:w:2643:G:H8	1.44	0.82
5:C:28:ALA:HB3	5:C:180:ASN:C	2.04	0.82
12:J:79:ARG:HB3	12:J:109:GLY:HA2	1.62	0.82
22:T:151:HIS:HB3	22:T:168:GLU:HA	1.61	0.82
31:y:109:A:O2'	31:y:326:G:N2	2.13	0.82
31:y:127:G:OP1	31:y:604:G:N2	2.13	0.82
31:y:688:G:H5'	44:l:46:GLY:C	2.05	0.82
31:y:755:G:H2'	31:y:756:C:C6	2.14	0.82
35:c:20:GLU:HG3	35:c:23:ARG:HH22	1.44	0.82
44:l:43:SER:HB3	44:l:68:ALA:HB2	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:m:86:GLY:O	45:m:98:HIS:HB2	1.77	0.82
1:w:492:A:H8	1:w:492:A:O5'	1.63	0.82
1:w:2683:C:H5'	16:N:58:ASN:ND2	1.95	0.82
11:I:15:GLY:O	11:I:46:ALA:HB1	1.78	0.82
11:I:68:GLU:HA	11:I:77:ILE:O	1.78	0.82
13:K:30:GLY:HA3	13:K:65:PHE:CZ	2.15	0.82
31:y:510:A:O2'	31:y:542:G:O2'	1.96	0.82
31:y:751:U:O2'	48:p:25:THR:CG2	2.28	0.82
31:y:1057:G:H5"	36:d:154:SER:CB	2.10	0.82
31:y:1081:G:OP1	38:f:18:ARG:NH1	2.13	0.82
31:y:1104:G:O2'	35:c:111:ARG:NH2	2.12	0.82
46:n:97:PRO:HA	46:n:110:ARG:HD3	1.60	0.82
1:w:1028:A:H1'	1:w:2487:G:OP1	1.80	0.81
2:x:82:G:H2'	2:x:83:G:C8	2.15	0.81
31:y:465:A:O2'	31:y:466:G:H5'	1.80	0.81
32:z:72:A:C2'	32:z:73:A:H5"	2.09	0.81
37:e:13:ARG:HB3	37:e:33:MET:CB	2.09	0.81
38:f:103:GLY:HA3	38:f:122:GLU:HG2	1.62	0.81
42:j:113:LYS:HD2	42:j:113:LYS:H	1.45	0.81
46:n:22:ILE:H	46:n:25:ILE:CG2	1.93	0.81
1:w:1531:C:H2'	1:w:1532:C:H6	1.45	0.81
1:w:2439:A:H1'	1:w:2587:A:OP1	1.80	0.81
6:D:169:VAL:HG13	6:D:170:THR:H	1.45	0.81
7:E:136:ARG:HA	7:E:155:MET:SD	2.20	0.81
17:O:92:ARG:HB3	17:O:95:LEU:HG	1.60	0.81
23:U:67:VAL:HG13	23:U:79:VAL:HG12	1.61	0.81
27:Y:33:CYS:HB3	27:Y:49:CYS:SG	2.20	0.81
29:a:40:GLU:O	29:a:42:ARG:N	2.12	0.81
31:y:1237:C:H5'	31:y:1238:A:O4'	1.80	0.81
39:g:42:GLU:HG3	39:g:61:LEU:HD23	1.59	0.81
45:m:23:VAL:HB	45:m:26:LEU:HA	1.62	0.81
1:w:354:G:H2'	1:w:355:G:C5'	2.10	0.81
1:w:1088:A:H4'	1:w:1089:G:H8	1.43	0.81
1:w:2175:C:C2'	1:w:2176:A:H5"	2.10	0.81
1:w:2559:C:H2'	1:w:2560:C:C6	2.16	0.81
1:w:2573:C:C5'	1:w:2574:G:H5"	2.09	0.81
5:C:185:LYS:CG	5:C:186:GLY:H	1.93	0.81
7:E:170:ARG:HB2	7:E:173:LEU:HD23	1.60	0.81
8:F:41:MET:HG3	8:F:54:ARG:HA	1.61	0.81
11:I:6:THR:HG22	11:I:7:TYR:H	1.45	0.81
12:J:88:LEU:O	12:J:88:LEU:HG	1.80	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:137:C:H2'	31:y:138:G:O4'	1.80	0.81
31:y:191(F):U:H2'	31:y:191(G):G:H8	1.42	0.81
31:y:402:G:O2'	31:y:620:C:N4	2.13	0.81
31:y:832:C:O2'	31:y:833:U:C4'	2.28	0.81
31:y:1506:U:H3'	31:y:1507:A:H5'	1.60	0.81
38:f:48:ALA:HB1	38:f:49:PRO:HD2	1.62	0.81
1:w:363(F):U:H2'	1:w:363(G):A:O4'	1.81	0.81
1:w:617:G:H2'	1:w:618(A):G:O4'	1.80	0.81
1:w:2239:G:H5'	4:B:232:PRO:HG2	1.63	0.81
3:A:8:TYR:HB2	3:A:11:LEU:HB2	1.61	0.81
20:R:12:VAL:HG13	20:R:17:ALA:HB2	1.60	0.81
31:y:275:G:C2	31:y:276:G:N7	2.49	0.81
31:y:374:A:H2'	31:y:375:U:O4'	1.80	0.81
35:c:122:PHE:HA	35:c:127:ILE:CG1	2.09	0.81
50:r:11:VAL:HG22	50:r:21:VAL:HA	1.63	0.81
1:w:380:U:P	24:V:21:ARG:HD3	2.20	0.81
1:w:811:U:O2	1:w:1250:G:H3'	1.79	0.81
1:w:2023:G:OP2	1:w:2617:C:H5"	1.79	0.81
1:w:2803:C:C2'	1:w:2804:C:H5'	2.09	0.81
31:y:267:C:OP2	50:r:67:LYS:HD2	1.80	0.81
31:y:359:U:H2'	31:y:360:A:C8	2.16	0.81
1:w:1820:U:N3	4:B:159:ALA:HB3	1.95	0.81
1:w:2825:G:H2'	1:w:2826:A:O4'	1.80	0.81
2:x:43:C:H2'	2:x:44:G:H5'	1.61	0.81
4:B:106:ILE:HG22	4:B:197:GLY:H	1.44	0.81
4:B:172:TYR:HD1	4:B:186:HIS:HA	1.43	0.81
25:W:3:LEU:HD11	25:W:8:LYS:HD3	1.62	0.81
31:y:245:C:C6	31:y:284:G:N2	2.49	0.81
31:y:299:G:N1	31:y:566:G:O6	2.13	0.81
31:y:586:C:H1'	31:y:878:G:O2'	1.79	0.81
31:y:692:U:H3'	31:y:692:U:H6	1.43	0.81
31:y:963:G:C2'	31:y:964:A:H8	1.92	0.81
31:y:1347:G:N3	31:y:1348:U:H5	1.78	0.81
31:y:1506:U:H2'	31:y:1507:A:H5'	1.63	0.81
36:d:78:GLY:HA3	36:d:82:GLU:HB2	1.63	0.81
1:w:467:G:OP1	28:Z:33:ARG:HD2	1.80	0.81
1:w:1441:G:H4'	1:w:1628:G:OP1	1.81	0.81
1:w:2575:C:H5"	5:C:144:ARG:HH11	1.43	0.81
1:w:2811:G:H2'	1:w:2812:G:O4'	1.81	0.81
1:w:2840:C:O2'	1:w:2841:C:H5'	1.81	0.81
31:y:908:A:H2'	31:y:909:A:H8	1.43	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:62:ASP:C	36:d:64:VAL:H	1.88	0.81
1:w:1170:G:H2'	1:w:1171:G:C8	2.15	0.81
1:w:1454:U:O2	1:w:1455:G:N7	2.14	0.81
1:w:2354:G:H21	23:U:39:ARG:HH22	1.29	0.81
1:w:2358:G:H1	12:J:55:ARG:HH12	1.28	0.81
1:w:2631:G:H4'	1:w:2892:A:H4'	1.61	0.81
26:X:5:LYS:HA	26:X:36:VAL:CG1	2.08	0.81
31:y:934:C:C5	31:y:1344:C:H2'	2.16	0.81
31:y:988:G:H1'	31:y:1014:A:H61	1.46	0.81
31:y:1045:C:C2'	31:y:1046:A:H5'	2.08	0.81
31:y:1356:G:H8	31:y:1356:G:O5'	1.63	0.81
35:c:169:LYS:CD	35:c:170:GLU:HG3	2.11	0.81
45:m:45:LYS:HG3	45:m:46:LYS:H	1.46	0.81
47:o:9:LYS:HG2	47:o:12:ARG:HA	1.63	0.81
47:o:29:ARG:CB	47:o:40:CYS:HB3	2.11	0.81
1:w:738:G:H2'	1:w:739:G:O4'	1.80	0.81
1:w:1284:A:N7	1:w:1285:G:N2	2.29	0.81
1:w:2322:A:H61	1:w:2335:A:H61	1.27	0.81
1:w:2386:C:H2'	1:w:2387:U:C6	2.15	0.81
1:w:2861:G:H2'	1:w:2862:G:C8	2.16	0.81
25:W:47:ASN:HA	25:W:50:ILE:O	1.81	0.81
32:z:26:G:H2'	32:z:27:U:H6	1.43	0.81
47:o:29:ARG:HH21	47:o:42:ILE:CG2	1.94	0.81
51:s:35:ARG:C	51:s:37:VAL:H	1.89	0.81
1:w:992:C:H2'	1:w:993:G:C8	2.16	0.81
1:w:2271:G:H5"	23:U:20:ARG:HD3	1.63	0.81
1:w:2801:A:H8	1:w:2801:A:O5'	1.64	0.81
2:x:55:U:O2'	2:x:56:G:H5'	1.81	0.81
2:x:102:G:C2'	2:x:103:U:H5"	2.11	0.81
9:G:94:ALA:HB2	9:G:116:LEU:HD21	1.63	0.81
11:I:88:ASN:H	11:I:93:PRO:HA	1.45	0.81
31:y:5:U:H1'	38:f:95:ALA:HB2	1.63	0.81
50:r:86:GLU:O	50:r:89:LEU:HB2	1.81	0.81
1:w:1837:C:OP1	31:y:784:C:H4'	1.80	0.80
1:w:2396:G:H4'	24:V:32:LYS:H	1.45	0.80
1:w:2579:C:C4'	5:C:134:ILE:HD11	2.11	0.80
1:w:2869:G:O2'	1:w:2870:C:H5'	1.80	0.80
4:B:93:ALA:HB2	4:B:107:ALA:HB2	1.64	0.80
4:B:247:ALA:HA	4:B:253:GLN:HA	1.61	0.80
15:M:26:LEU:HD22	15:M:39:ILE:CG2	2.12	0.80
24:V:11:ARG:HB2	24:V:12:PRO:CD	2.10	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:280:C:N3	50:r:39:SER:HB3	1.96	0.80
31:y:320:C:H2'	31:y:321:A:C8	2.16	0.80
31:y:428:G:H4'	31:y:429:U:OP1	1.81	0.80
31:y:794:A:H2'	31:y:795:C:C6	2.15	0.80
32:z:72:A:H2'	32:z:73:A:H5"	1.62	0.80
39:g:40:VAL:HG23	39:g:62:TRP:O	1.80	0.80
54:v:21:TYR:O	54:v:22:ARG:HB2	1.80	0.80
1:w:673:C:H4'	6:D:76:PRO:CG	2.10	0.80
1:w:2658:C:C2'	1:w:2659:G:H5'	2.12	0.80
3:A:29:LEU:O	3:A:33:LEU:HG	1.81	0.80
22:T:4:ARG:HA	22:T:58:VAL:HB	1.62	0.80
23:U:40:GLN:CG	23:U:41:ARG:H	1.93	0.80
31:y:189:U:H5'	31:y:189:U:H6	1.44	0.80
31:y:1062:U:H2'	31:y:1063:C:C5	2.15	0.80
31:y:1347:G:N3	31:y:1348:U:C5	2.49	0.80
41:i:103:VAL:HG12	41:i:108:GLY:O	1.82	0.80
1:w:116:C:C2'	1:w:117:G:H5"	2.10	0.80
1:w:190:A:H2	1:w:679:C:H1'	1.46	0.80
1:w:598:G:H5'	12:J:15:ARG:HG2	1.62	0.80
1:w:2615:U:H2'	1:w:2616:C:C6	2.17	0.80
1:w:2711:A:C5'	1:w:2712:U:H6	1.93	0.80
2:x:23:G:H2'	2:x:24:G:H8	1.43	0.80
2:x:95:U:H2'	2:x:96:G:C8	2.15	0.80
4:B:133:LEU:CD2	4:B:189:CYS:HB2	2.12	0.80
16:N:51:ARG:HG2	16:N:52:ILE:N	1.94	0.80
42:j:36:TYR:O	42:j:37:PHE:HB2	1.81	0.80
49:q:3:LYS:HD3	49:q:24:ALA:HA	1.63	0.80
1:w:465:G:N2	1:w:684:G:H1'	1.97	0.80
1:w:1140:C:H4'	10:H:48:ARG:NE	1.96	0.80
1:w:1250:G:O5'	12:J:23:PRO:HG2	1.82	0.80
1:w:1822:G:H5'	4:B:54:ARG:NH2	1.95	0.80
1:w:1845:G:H2'	1:w:1846:G:C8	2.16	0.80
1:w:1915:U:H3'	1:w:1916:A:H8	1.44	0.80
1:w:1927:A:H2'	1:w:1928:A:C8	2.16	0.80
1:w:2486:G:H5'	13:K:126:PRO:HB3	1.62	0.80
1:w:2877:G:H2'	1:w:2878:U:C6	2.15	0.80
2:x:104:A:H5"	22:T:72:ARG:NH1	1.96	0.80
5:C:93:VAL:CG1	5:C:182:LEU:HB2	2.09	0.80
5:C:154:LYS:HD2	5:C:155:LYS:H	1.44	0.80
21:S:15:VAL:HG13	21:S:16:ALA:H	1.46	0.80
31:y:28:G:H21	31:y:296:U:H4'	1.45	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:538:G:P	45:m:114:LYS:HD2	2.21	0.80
47:o:41:ARG:HH12	47:o:45:ARG:HD3	1.43	0.80
1:w:460:A:H62	1:w:469:G:N2	1.80	0.80
1:w:662:G:H2'	1:w:663:G:H8	1.47	0.80
2:x:63:G:C2'	2:x:64:C:H5"	2.11	0.80
12:J:71:VAL:CG1	12:J:72:PRO:HD3	2.12	0.80
13:K:51:ARG:HB2	13:K:51:ARG:NH1	1.97	0.80
18:P:15:GLU:CB	18:P:16:PRO:HD3	2.11	0.80
31:y:167:G:C2'	31:y:168:G:H5'	2.10	0.80
31:y:300:A:O2'	50:r:31:LEU:HD11	1.81	0.80
31:y:598:U:H2'	31:y:599:C:C6	2.16	0.80
31:y:645:C:H2'	31:y:646:U:C6	2.17	0.80
37:e:26:CYS:HA	37:e:31:CYS:CB	2.08	0.80
40:h:32:ARG:HA	40:h:32:ARG:HE	1.45	0.80
52:t:6:LYS:HD3	52:t:6:LYS:N	1.95	0.80
1:w:217:G:H2'	1:w:218:A:O4'	1.82	0.80
1:w:601:C:H2'	1:w:602:G:O4'	1.82	0.80
1:w:1419:A:H62	1:w:1578:U:H3	1.23	0.80
4:B:69:ARG:NH2	4:B:76:PRO:HG3	1.95	0.80
16:N:29:ARG:O	16:N:85:LYS:HE2	1.82	0.80
31:y:975:A:N3	31:y:1357:A:H1'	1.97	0.80
43:k:50:ILE:HG12	43:k:60:ARG:HG2	1.61	0.80
50:r:13:ASP:HA	50:r:19:VAL:CB	2.11	0.80
1:w:120:U:P	1:w:124:G:H1	2.05	0.80
1:w:2633:G:H21	5:C:64:LYS:HD3	1.44	0.80
1:w:2795:G:H2'	1:w:2798:C:OP2	1.82	0.80
12:J:6:LEU:C	12:J:8:PRO:HD3	2.06	0.80
13:K:24:GLY:H	13:K:98:LYS:HB3	1.46	0.80
24:V:12:PRO:O	24:V:13:ILE:HD12	1.81	0.80
24:V:50:ARG:NE	24:V:61:ARG:HB2	1.97	0.80
31:y:265:G:H4'	50:r:65:ILE:O	1.81	0.80
31:y:578:C:O2'	31:y:728:A:N3	2.14	0.80
31:y:769:G:N2	31:y:811:C:O2	2.15	0.80
45:m:86:GLY:C	45:m:98:HIS:H	1.89	0.80
53:u:90:GLN:HA	53:u:93:GLU:CB	2.12	0.80
1:w:1025:G:H5"	1:w:1026:U:H5'	1.62	0.80
1:w:2352:A:H62	1:w:2365:G:H21	1.29	0.80
1:w:2712(B):A:N3	1:w:2712(B):A:H2'	1.95	0.80
6:D:27:LEU:H	6:D:27:LEU:CD1	1.94	0.80
31:y:301:G:H5"	50:r:31:LEU:HD22	1.63	0.80
31:y:1356:G:O2'	31:y:1357:A:H5'	1.81	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:r:54:GLY:O	50:r:82:MET:HA	1.81	0.80
1:w:20:C:H2'	1:w:21:A:H8	1.45	0.80
1:w:220:G:H4'	1:w:234:C:H4'	1.62	0.80
1:w:743:G:H5"	5:C:130:GLY:O	1.82	0.80
1:w:889:C:H1'	1:w:890:A:C1'	2.12	0.80
1:w:1015:G:H4'	1:w:1015:G:OP1	1.81	0.80
1:w:2618:G:O2'	5:C:150:VAL:HB	1.82	0.80
1:w:2641:G:N1	1:w:2774:C:C4	2.50	0.80
2:x:19:G:C2'	2:x:20:C:H5'	2.12	0.80
3:A:27:ALA:HB2	3:A:186:LEU:HD11	1.64	0.80
7:E:68:PRO:HB2	7:E:91:ARG:O	1.81	0.80
18:P:66:ARG:HD2	18:P:68:LYS:CG	2.12	0.80
31:y:1347:G:H21	31:y:1349:A:N6	1.77	0.80
40:h:31:MET:O	40:h:32:ARG:HB2	1.81	0.80
1:w:616:A:C2	6:D:173:PRO:HG2	2.17	0.80
1:w:864:G:H1'	1:w:914:C:N4	1.97	0.80
1:w:2790:A:C4'	1:w:2893:G:H21	1.92	0.80
5:C:97:LYS:HB2	5:C:98:PRO:HD2	1.64	0.80
10:H:113:MET:HA	10:H:116:THR:HG22	1.61	0.80
12:J:146:VAL:HG13	12:J:147:LEU:H	1.47	0.80
13:K:72:LYS:HD3	13:K:72:LYS:C	2.07	0.80
16:N:31:SER:H	16:N:42:ILE:HB	1.47	0.80
31:y:93:U:H2'	31:y:95:G:H8	1.47	0.80
31:y:322:C:O2'	53:u:23:ARG:HB2	1.82	0.80
31:y:971:G:H5"	31:y:972:C:H5"	1.64	0.80
31:y:1074:G:N3	31:y:1101:A:C2	2.50	0.80
1:w:874:G:H1'	22:T:170:THR:OG1	1.82	0.79
1:w:1651:G:H3'	14:L:10:LEU:HD21	1.65	0.79
1:w:2167:U:H2'	1:w:2168:G:O4'	1.80	0.79
1:w:2348:U:H3'	29:a:42:ARG:NH2	1.96	0.79
1:w:2585:U:H5"	32:z:76:A:OP1	1.81	0.79
1:w:2675:A:H5'	11:I:31:LYS:HE3	1.62	0.79
9:G:23:PRO:HB2	9:G:27:ARG:NE	1.96	0.79
31:y:143:A:H61	31:y:220:G:H1	1.30	0.79
31:y:1333:A:H2'	31:y:1334:G:O4'	1.82	0.79
41:i:26:VAL:CG1	41:i:60:ARG:HA	2.12	0.79
41:i:38:ILE:HA	41:i:41:ARG:HB2	1.62	0.79
41:i:75:ARG:HH11	41:i:75:ARG:HG3	1.44	0.79
1:w:1031:G:H4'	30:b:6:SER:HA	1.64	0.79
1:w:2620:C:O2'	5:C:157:ALA:O	2.00	0.79
18:P:34:GLU:HB2	18:P:64:HIS:CE1	2.17	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:376:G:H4'	49:q:5:ARG:HD3	1.65	0.79
31:y:1097:C:O2'	31:y:1098:C:H5'	1.81	0.79
31:y:1128:C:HO2'	31:y:1148:U:H1'	1.46	0.79
36:d:64:VAL:HB	36:d:99:VAL:CG1	2.11	0.79
41:i:97:VAL:HG23	41:i:98:LYS:HD3	1.62	0.79
1:w:65:C:H2'	1:w:66:C:C6	2.16	0.79
1:w:2535:G:O2'	1:w:2536:G:H5'	1.82	0.79
1:w:2795:G:C4	1:w:2799:A:OP1	2.35	0.79
6:D:18:ASP:O	6:D:22:GLU:HG2	1.82	0.79
10:H:114:LEU:HA	10:H:121:VAL:HG13	1.64	0.79
31:y:250:A:H2'	31:y:250:A:N3	1.96	0.79
31:y:321:A:H4'	31:y:1436:U:H5'	1.65	0.79
31:y:393:A:H2'	31:y:394:G:H8	1.46	0.79
31:y:1061:G:H2'	31:y:1062:U:C6	2.18	0.79
31:y:1302:U:H3'	31:y:1303:C:C5'	2.13	0.79
1:w:414:C:H1'	1:w:1864:U:O2'	1.82	0.79
1:w:1137:G:H1'	1:w:2039:C:H5'	1.63	0.79
1:w:1933:G:O2'	1:w:1974:C:H4'	1.82	0.79
1:w:2580:U:O5'	1:w:2580:U:H6	1.65	0.79
1:w:2710:C:H2'	1:w:2711:A:O4'	1.82	0.79
1:w:2900:A:H2'	1:w:2901:C:O4'	1.83	0.79
2:x:80:U:H2'	2:x:81:G:C8	2.11	0.79
10:H:41:ALA:O	10:H:83:ILE:HD12	1.83	0.79
41:i:26:VAL:HG12	41:i:60:ARG:HA	1.65	0.79
45:m:89:VAL:HG12	45:m:98:HIS:HE1	1.47	0.79
1:w:589:C:H2'	1:w:590:A:C8	2.17	0.79
1:w:1022:G:H4'	1:w:1023:U:H5'	1.64	0.79
11:I:87:ILE:HD13	11:I:93:PRO:HB3	1.63	0.79
31:y:8:A:N3	38:f:103:GLY:O	2.15	0.79
31:y:783:C:O2'	31:y:784:C:H5'	1.82	0.79
33:2:54:U:H3	33:2:58:A:H62	1.27	0.79
39:g:23:LYS:HA	39:g:26:ILE:HD12	1.65	0.79
41:i:31:PHE:O	41:i:35:ILE:HG12	1.83	0.79
49:q:6:LEU:HD12	49:q:17:TYR:CE1	2.18	0.79
53:u:59:ALA:HA	53:u:62:LEU:HG	1.63	0.79
1:w:1010:A:H4'	17:O:76:TYR:CD2	2.14	0.79
2:x:43:C:H42	2:x:45:A:N6	1.81	0.79
10:H:114:LEU:HA	10:H:121:VAL:CG1	2.12	0.79
17:O:27:LEU:HD12	17:O:34:LYS:HG3	1.65	0.79
31:y:33:A:H4'	31:y:364:A:H1'	1.63	0.79
31:y:964:A:H5'	31:y:1199:U:OP1	1.82	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1109:C:H5'	31:y:1110:A:N7	1.98	0.79
31:y:1199:U:H4'	43:k:54:PHE:CE2	2.17	0.79
1:w:467:G:C5'	28:Z:33:ARG:HH11	1.90	0.79
1:w:1255:U:H5"	1:w:1256:G:H5"	1.62	0.79
1:w:2377:A:H8	1:w:2377:A:O5'	1.66	0.79
1:w:2786:U:H1'	5:C:64:LYS:HG3	1.64	0.79
23:U:15:ASP:O	23:U:20:ARG:HD2	1.83	0.79
31:y:244:U:H5"	31:y:245:C:C5'	2.13	0.79
31:y:505:G:C2'	31:y:506:G:H5'	2.12	0.79
31:y:739:C:O2'	48:p:42:HIS:HD2	1.66	0.79
31:y:740:U:HO2'	48:p:52:SER:HG	1.30	0.79
31:y:896:C:H4'	50:r:101:ARG:HA	1.63	0.79
31:y:975:A:H62	43:k:50:ILE:HG13	1.48	0.79
31:y:1141:C:C3'	31:y:1142:G:H5"	2.12	0.79
37:e:170:VAL:HG23	37:e:171:GLY:H	1.46	0.79
1:w:1201:C:H5'	1:w:1201:C:H6	1.47	0.79
1:w:2051:A:H2'	1:w:2614:A:H61	1.48	0.79
11:I:34:THR:HG22	11:I:35:VAL:H	1.46	0.79
31:y:564:C:O2'	31:y:565:U:C5'	2.29	0.79
46:n:75:ALA:HA	46:n:78:ILE:HD12	1.63	0.79
1:w:432:A:H2'	1:w:433:C:C6	2.17	0.79
1:w:573:G:H4'	1:w:574:C:OP1	1.81	0.79
1:w:1071:G:H1'	1:w:1089:G:C6	2.17	0.79
15:M:25:ARG:HE	15:M:89:ARG:NH1	1.80	0.79
31:y:109:A:H8	31:y:327:A:H5'	1.48	0.79
31:y:279:A:N6	50:r:98:LEU:HD13	1.96	0.79
31:y:426:G:H2'	31:y:427:U:C6	2.18	0.79
31:y:585:G:O2'	45:m:7:ASN:ND2	2.16	0.79
31:y:688:G:O3'	44:l:46:GLY:HA3	1.81	0.79
48:p:5:LYS:O	48:p:8:LYS:HG3	1.82	0.79
1:w:459:U:H5'	28:Z:40:TRP:CD1	2.18	0.79
1:w:1858:G:H2'	1:w:1883:G:N2	1.97	0.79
1:w:2656:U:H6	1:w:2656:U:O5'	1.66	0.79
8:F:123:PHE:HB2	8:F:131:VAL:HG13	1.65	0.79
21:S:49:VAL:HG12	21:S:50:ARG:H	1.45	0.79
31:y:323:U:O3'	53:u:22:ARG:HD3	1.82	0.79
50:r:78:GLU:HB2	50:r:81:ARG:NH1	1.97	0.79
1:w:304:G:H2'	1:w:305:U:C6	2.18	0.78
1:w:859:G:H2'	1:w:916:G:O6	1.82	0.78
1:w:1920:C:H2'	1:w:1921:G:O4'	1.83	0.78
1:w:1996:C:O3'	1:w:1997:G:H4'	1.83	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2635:C:H4'	5:C:79:ARG:HH21	1.48	0.78
1:w:2709:G:H2'	1:w:2710:C:C6	2.17	0.78
5:C:105:THR:HB	5:C:197:ILE:HD11	1.64	0.78
13:K:46:GLN:HE22	13:K:126:PRO:CD	1.96	0.78
26:X:8:LEU:CG	26:X:9:VAL:H	1.96	0.78
31:y:827:U:H4'	41:i:15:ASN:HD21	1.48	0.78
36:d:3:ASN:H	36:d:3:ASN:HD22	1.31	0.78
45:m:76:LEU:HD11	45:m:80:SER:HB2	1.62	0.78
50:r:61:GLU:HG2	50:r:71:PHE:CE1	2.17	0.78
1:w:1444:G:H2'	1:w:1445:C:C5	2.18	0.78
1:w:2577:A:C4'	1:w:2612:C:N4	2.47	0.78
4:B:83:GLU:HB2	4:B:92:ILE:HD11	1.64	0.78
8:F:145:ALA:O	8:F:149:ARG:HB2	1.82	0.78
15:M:25:ARG:HH21	15:M:89:ARG:NH2	1.80	0.78
16:N:99:LEU:HG	16:N:102:ILE:HG12	1.65	0.78
22:T:88:PHE:C	22:T:88:PHE:CD2	2.61	0.78
31:y:1235:U:H4'	54:v:3:LYS:O	1.83	0.78
31:y:1313:U:OP1	52:t:6:LYS:HG3	1.81	0.78
36:d:131:ARG:HH11	36:d:131:ARG:HB3	1.48	0.78
37:e:105:VAL:HG13	37:e:110:PHE:CB	2.03	0.78
37:e:173:TRP:HB2	37:e:187:ARG:H	1.46	0.78
44:l:33:THR:HB	44:l:39:PRO:HA	1.65	0.78
1:w:397:G:H2'	1:w:398:G:C8	2.18	0.78
1:w:673:C:O2'	1:w:674:G:H5'	1.82	0.78
1:w:1011:G:H2'	1:w:1013:C:H5"	1.66	0.78
1:w:1139:G:OP2	1:w:1139:G:C8	2.37	0.78
1:w:1170:G:H4'	1:w:1170:G:OP1	1.82	0.78
1:w:2075:U:H2'	1:w:2077:A:OP2	1.83	0.78
1:w:2771:C:H2'	1:w:2772:C:C6	2.19	0.78
1:w:2810:A:H2	5:C:61:ARG:NH2	1.82	0.78
1:w:2893:G:H5'	1:w:2894:G:O4'	1.83	0.78
6:D:151:LEU:H	6:D:169:VAL:CG1	1.97	0.78
6:D:169:VAL:HG13	6:D:170:THR:N	1.99	0.78
10:H:44:LYS:O	10:H:83:ILE:HG22	1.82	0.78
16:N:84:GLN:O	16:N:86:ILE:HG13	1.83	0.78
29:a:22:VAL:O	29:a:48:PHE:HA	1.83	0.78
31:y:1029:G:H2'	31:y:1031:G:OP2	1.82	0.78
35:c:117:GLU:O	35:c:121:LEU:HG	1.83	0.78
36:d:67:THR:HA	36:d:102:ASN:O	1.83	0.78
37:e:9:CYS:HB2	37:e:22:LYS:NZ	1.98	0.78
54:v:16:GLY:HA2	54:v:22:ARG:HH12	1.46	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:387:U:H4'	1:w:388:G:O4'	1.81	0.78
1:w:1566:A:OP2	1:w:1567:A:N6	2.17	0.78
19:Q:88:ARG:HD2	19:Q:94:ASP:N	1.98	0.78
31:y:391:G:C6	31:y:392:G:N7	2.51	0.78
31:y:554:C:H2'	31:y:555:C:C6	2.17	0.78
31:y:911:U:H2'	31:y:912:C:C5	2.18	0.78
31:y:988:G:H1'	31:y:1014:A:N6	1.99	0.78
53:u:18:GLN:HA	53:u:21:LYS:HE2	1.65	0.78
1:w:465:G:N2	1:w:794:G:H22	1.81	0.78
1:w:1313:U:O2	1:w:1313:U:H2'	1.83	0.78
1:w:1804:C:H4'	4:B:252:TRP:CZ2	2.18	0.78
1:w:2262:U:H4'	1:w:2328:A:C2	2.19	0.78
1:w:2589:A:H5"	4:B:237:GLU:HB3	1.66	0.78
4:B:91:ARG:HD3	4:B:198:ASN:HB2	1.65	0.78
7:E:78:SER:HB2	32:z:19:G:C2	2.19	0.78
10:H:63:PRO:HA	17:O:64:ARG:HH22	1.42	0.78
11:I:79:PHE:HE2	11:I:102:VAL:HG11	1.48	0.78
13:K:132:VAL:HG13	13:K:133:ARG:N	1.98	0.78
18:P:43:GLU:CD	18:P:44:LYS:H	1.92	0.78
23:U:68:GLU:HB3	23:U:80:HIS:N	1.98	0.78
31:y:243:A:H4'	31:y:244:U:H5"	1.65	0.78
31:y:292:G:OP2	31:y:305:G:N2	2.16	0.78
31:y:300:A:H2'	31:y:301:G:O4'	1.84	0.78
31:y:635:G:C2'	31:y:636:U:H5'	2.14	0.78
31:y:674:G:H1	31:y:716:A:H61	1.32	0.78
31:y:676:A:O2'	31:y:677:U:H5'	1.83	0.78
31:y:918:A:H2'	31:y:919:A:O4'	1.84	0.78
43:k:51:ARG:CG	43:k:52:GLY:H	1.97	0.78
47:o:25:VAL:HG12	47:o:39:LEU:HD21	1.66	0.78
52:t:40:ILE:HG12	52:t:69:HIS:O	1.83	0.78
52:t:51:VAL:HB	52:t:58:VAL:HG23	1.63	0.78
1:w:145:G:H2'	1:w:146:G:O4'	1.83	0.78
1:w:2683:C:H1'	5:C:13:ARG:NH1	1.98	0.78
4:B:108:PRO:HG2	4:B:111:LEU:HB2	1.66	0.78
18:P:65:GLY:H	18:P:96:ILE:HG13	1.49	0.78
20:R:81:VAL:HG22	20:R:82:GLN:H	1.47	0.78
31:y:311:C:H2'	31:y:312:C:C6	2.19	0.78
31:y:498:A:H61	31:y:546:G:H2'	1.47	0.78
31:y:510:A:H8	31:y:510:A:O5'	1.67	0.78
31:y:1064:G:O2'	31:y:1065:U:H5"	1.83	0.78
31:y:1175:G:C2'	31:y:1176:A:H5'	2.13	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:h:134:ALA:O	40:h:137:LYS:HB2	1.84	0.78
1:w:126:A:H4'	28:Z:19:ARG:HD2	1.66	0.78
1:w:312:G:H2'	1:w:313:C:C6	2.18	0.78
1:w:633:A:H8	1:w:633:A:O5'	1.67	0.78
1:w:1257:C:C4'	6:D:77:ILE:HG13	2.13	0.78
1:w:2354:G:N3	23:U:36:ILE:HD13	1.99	0.78
31:y:151:A:C2'	31:y:152:A:H5'	2.12	0.78
31:y:887:G:N2	31:y:911:U:H1'	1.99	0.78
31:y:1342:C:H1'	42:j:124:GLN:CB	2.12	0.78
31:y:1523:G:O2'	31:y:1524:C:H5'	1.83	0.78
32:z:54:U:C2'	32:z:55:U:H5'	2.13	0.78
1:w:539:G:H2'	1:w:540:G:H8	1.48	0.78
1:w:950:G:H2'	1:w:951:C:C6	2.18	0.78
1:w:2476:A:H2'	1:w:2477:C:C6	2.19	0.78
1:w:2557:G:H2'	1:w:2558:C:C5	2.18	0.78
1:w:2598:A:H8	1:w:2598:A:O5'	1.65	0.78
4:B:60:ARG:CZ	4:B:60:ARG:HA	2.14	0.78
6:D:179:TYR:H	6:D:179:TYR:HD2	1.32	0.78
9:G:9:LEU:HD23	9:G:10:GLU:H	1.48	0.78
11:I:71:ARG:NH2	16:N:74:ARG:HH22	1.82	0.78
31:y:137:C:C1'	49:q:61:SER:O	2.31	0.78
31:y:468:A:O3'	49:q:80:PHE:CB	2.31	0.78
31:y:1126:U:O2'	31:y:1281:U:H1'	1.83	0.78
31:y:1226:C:C4	46:n:104:ARG:HD3	2.19	0.78
35:c:197:VAL:HB	35:c:200:ILE:HG22	1.66	0.78
36:d:124:ILE:HD11	36:d:130:VAL:HA	1.66	0.78
40:h:12:LEU:HD23	40:h:21:VAL:HG23	1.66	0.78
12:J:88:LEU:HD22	12:J:100:LEU:HG	1.63	0.78
31:y:454:C:H41	31:y:478:A:H2	1.32	0.78
31:y:964:A:H5"	31:y:965:A:OP2	1.84	0.78
31:y:1043:C:O2'	31:y:1044:A:H5'	1.84	0.78
37:e:72:GLU:HA	37:e:75:PHE:CD1	2.19	0.78
1:w:126:A:C5'	28:Z:19:ARG:HB2	2.13	0.78
1:w:872:A:H2'	1:w:873:G:C8	2.19	0.78
1:w:1138:G:H1'	10:H:129:MET:HB3	1.66	0.78
1:w:1639:U:O2'	1:w:2699:C:H4'	1.82	0.78
1:w:2367:G:C2'	1:w:2368:C:H5"	2.14	0.78
1:w:2712:U:OP1	1:w:2714:G:H4'	1.83	0.78
1:w:2776:A:OP1	1:w:2776:A:H3'	1.83	0.78
2:x:47:C:H5"	15:M:93:LYS:HE2	1.63	0.78
31:y:359:U:H2'	31:y:360:A:H8	1.49	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:385:C:H2'	31:y:386:C:H6	1.49	0.78
31:y:910:C:O5'	31:y:910:C:H6	1.67	0.78
31:y:1126:U:H3	31:y:1280:A:H2'	1.47	0.78
31:y:1176:A:H2'	31:y:1177:G:O4'	1.83	0.78
31:y:1288:A:H1'	31:y:1353:G:H4'	1.66	0.78
31:y:1375:A:C5'	40:h:29:LYS:HG2	2.13	0.78
1:w:270(U):G:H2'	1:w:270(V):C:C5	2.19	0.77
1:w:537:C:C3'	1:w:539:G:P	2.72	0.77
1:w:777:A:H2'	1:w:778:G:O4'	1.82	0.77
1:w:814:C:H2'	1:w:815:C:H6	1.49	0.77
1:w:1712:C:C3'	1:w:1716:U:P	2.71	0.77
1:w:2279:G:O6	23:U:11:LYS:HB2	1.83	0.77
9:G:87:LYS:HB3	9:G:121:LYS:HD3	1.65	0.77
11:I:65:THR:O	11:I:79:PHE:HB2	1.84	0.77
31:y:983:A:H2	31:y:984:C:O4'	1.67	0.77
31:y:1113:C:H1'	36:d:11:ARG:HH12	1.49	0.77
33:2:9:A:H62	33:2:23:A:H62	1.32	0.77
39:g:14:LEU:HB3	39:g:18:GLN:HB3	1.66	0.77
39:g:38:GLU:HG2	39:g:64:GLN:O	1.84	0.77
1:w:752:A:P	28:Z:1:MET:HE1	2.24	0.77
1:w:794:G:H2'	1:w:795:C:O4'	1.84	0.77
1:w:1624:G:H2'	1:w:1625:C:C6	2.19	0.77
1:w:2322:A:H61	1:w:2335:A:N6	1.81	0.77
1:w:2559:C:H2'	1:w:2560:C:C5	2.18	0.77
5:C:77:ILE:HG22	5:C:78:LEU:H	1.49	0.77
6:D:96:LEU:HB3	6:D:97:PRO:CD	2.15	0.77
14:L:79:LEU:HA	14:L:83:ILE:CG1	2.14	0.77
17:O:99:ALA:HA	17:O:106:PHE:CE1	2.19	0.77
20:R:5:TYR:HE2	25:W:26:ARG:HG2	1.50	0.77
25:W:55:ARG:N	25:W:55:ARG:HH11	1.81	0.77
31:y:391:G:H3'	31:y:392:G:H5"	1.65	0.77
31:y:685:G:O2'	31:y:686:U:H5'	1.83	0.77
31:y:828:A:OP1	31:y:828:A:H4'	1.83	0.77
31:y:959:A:H1'	31:y:1221:G:N2	1.98	0.77
31:y:1001:G:H2'	31:y:1002:G:O4'	1.83	0.77
39:g:23:LYS:O	39:g:26:ILE:HB	1.85	0.77
40:h:70:LYS:HG2	40:h:96:GLN:HB2	1.67	0.77
1:w:190:A:C2	1:w:679:C:H1'	2.17	0.77
1:w:1372:U:H2'	1:w:1373:A:C8	2.20	0.77
2:x:110:G:H2'	2:x:111:U:C5'	2.07	0.77
15:M:66:ALA:HB3	15:M:100:ALA:HB3	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:40:PHE:HB3	18:P:78:LYS:HD3	1.64	0.77
26:X:35:ARG:HA	26:X:35:ARG:NE	1.99	0.77
43:k:63:PHE:HE2	47:o:58:LYS:HA	1.45	0.77
1:w:137(A):C:H2'	1:w:137(B):G:C8	2.20	0.77
1:w:1415:U:O2'	1:w:1416:G:H4'	1.84	0.77
1:w:1779:U:H2'	1:w:1783:A:H62	1.50	0.77
4:B:78:LYS:HE3	4:B:114:GLY:HA2	1.66	0.77
10:H:148:GLY:HA3	10:H:149:PRO:O	1.83	0.77
12:J:107:LYS:HG3	12:J:108:LYS:H	1.49	0.77
17:O:98:LEU:HD21	17:O:105:VAL:HG21	1.66	0.77
26:X:8:LEU:O	26:X:9:VAL:HG22	1.85	0.77
31:y:102:G:H2'	31:y:103:C:C5	2.18	0.77
31:y:343:U:H1'	31:y:347:G:N2	1.99	0.77
45:m:109:VAL:HG23	45:m:119:TYR:HB2	1.64	0.77
53:u:44:ALA:HB2	53:u:52:ALA:HB1	1.65	0.77
1:w:37:C:H1'	1:w:451:C:OP1	1.83	0.77
1:w:674:G:H4'	6:D:71:GLY:H	1.49	0.77
1:w:1063:G:H2'	1:w:1064:C:C6	2.20	0.77
1:w:1162:G:H1'	18:P:23:GLU:OE2	1.85	0.77
1:w:2513:G:H5'	1:w:2514:U:OP2	1.83	0.77
1:w:2744:G:H2'	1:w:2745:C:C6	2.18	0.77
4:B:126:GLN:CG	4:B:129:ASN:HD22	1.96	0.77
13:K:133:ARG:HG2	13:K:134:ARG:N	1.97	0.77
16:N:29:ARG:HG3	16:N:30:VAL:HG22	1.67	0.77
31:y:523:A:C2	45:m:90:LYS:HB2	2.19	0.77
31:y:957:U:H4'	52:t:79:THR:HG21	1.64	0.77
43:k:16:LEU:HD13	43:k:68:HIS:HB2	1.64	0.77
47:o:40:CYS:SG	47:o:42:ILE:HG22	2.24	0.77
53:u:43:LEU:HB3	53:u:51:GLU:HG3	1.67	0.77
1:w:123:G:H2'	1:w:124:G:H5'	1.65	0.77
1:w:1224:C:O2'	18:P:87:HIS:HA	1.84	0.77
1:w:1702:G:H2'	1:w:1703:G:O4'	1.83	0.77
1:w:2527:C:H5"	30:b:30:PRO:HB3	1.66	0.77
9:G:81:VAL:HG23	9:G:82:ARG:H	1.48	0.77
9:G:107:ILE:HG12	9:G:109:ILE:HG12	1.67	0.77
10:H:46:LEU:HD21	10:H:83:ILE:HB	1.66	0.77
20:R:12:VAL:CG1	20:R:17:ALA:HB2	2.14	0.77
31:y:652:U:O2'	31:y:653:A:H5"	1.84	0.77
31:y:964:A:H2	31:y:969:A:HO2'	1.33	0.77
31:y:1006:C:O5'	31:y:1006:C:H6	1.67	0.77
31:y:1194:U:H2'	31:y:1195:C:C5	2.19	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:j:99:LEU:HB2	42:j:101:PHE:CE1	2.18	0.77
1:w:966:G:H2'	1:w:967:C:O4'	1.85	0.77
1:w:1138:G:H2'	1:w:1139:G:H5'	1.65	0.77
1:w:2342:C:O2	1:w:2374:C:H4'	1.84	0.77
1:w:2602:A:H4'	1:w:2603:G:C5'	2.13	0.77
1:w:2734:A:N6	1:w:2770:G:H21	1.82	0.77
4:B:108:PRO:HG3	4:B:127:VAL:HG13	1.64	0.77
14:L:97:VAL:O	14:L:98:LEU:HG	1.84	0.77
25:W:8:LYS:HA	25:W:11:GLU:CB	2.14	0.77
28:Z:21:ARG:C	28:Z:23:ARG:H	1.91	0.77
31:y:152:A:H62	31:y:169:C:H42	1.29	0.77
1:w:43:G:P	1:w:43:G:C8	2.78	0.77
1:w:1341:U:H2'	1:w:1397:U:O2	1.83	0.77
1:w:1743:G:H2'	1:w:1746:G:H8	1.49	0.77
1:w:2262:U:H4'	1:w:2328:A:H2	1.50	0.77
1:w:2762:G:H3'	1:w:2763:G:H8	1.49	0.77
1:w:2875:C:C3'	1:w:2876:G:C5'	2.62	0.77
2:x:73:A:H2'	2:x:74:U:H5'	1.65	0.77
4:B:259:THR:O	4:B:260:ARG:HG2	1.83	0.77
6:D:26:HIS:HA	12:J:13:ASN:HB3	1.67	0.77
6:D:111:ASP:HA	6:D:114:ARG:HG2	1.66	0.77
6:D:172:ALA:HB3	6:D:173:PRO:CD	2.14	0.77
31:y:161:A:C2'	31:y:162:A:H5'	2.15	0.77
31:y:245:C:H42	31:y:283:C:N4	1.79	0.77
31:y:1249:C:HO2'	42:j:67:GLY:C	1.93	0.77
31:y:1276:G:C2'	31:y:1277:C:H5'	2.14	0.77
37:e:9:CYS:HB2	37:e:22:LYS:HZ3	1.50	0.77
38:f:43:LEU:HD11	38:f:65:ASN:HD22	1.47	0.77
40:h:115:ARG:HH11	40:h:115:ARG:HB3	1.49	0.77
1:w:181:A:H2'	1:w:182:A:C8	2.19	0.77
1:w:600:G:H5'	6:D:27:LEU:HG	1.65	0.77
6:D:15:LEU:HD22	6:D:19:LEU:HD22	1.66	0.77
10:H:57:LEU:HD11	10:H:139:LEU:HB3	1.66	0.77
31:y:176:C:H2'	31:y:177:C:C5	2.20	0.77
41:i:100:ILE:CD1	41:i:124:ALA:HB3	2.14	0.77
45:m:27:LYS:HA	45:m:27:LYS:HE3	1.67	0.77
51:s:15:ARG:HG2	51:s:15:ARG:O	1.84	0.77
1:w:865:C:N4	1:w:909:A:H62	1.82	0.77
1:w:2111:C:H41	1:w:2144:U:C4'	1.92	0.77
1:w:2864:G:H5'	16:N:119:LYS:HE2	1.67	0.77
2:x:66:A:N1	2:x:108:C:H1'	2.00	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:138:VAL:HG13	4:B:139:GLY:H	1.47	0.77
5:C:93:VAL:HA	5:C:182:LEU:HD22	1.66	0.77
6:D:117:LYS:HA	6:D:117:LYS:HZ2	1.46	0.77
7:E:70:VAL:HG12	7:E:90:LEU:HD21	1.66	0.77
10:H:55:THR:O	10:H:60:LYS:HB3	1.85	0.77
11:I:79:PHE:HD2	16:N:70:VAL:HG11	1.51	0.77
14:L:68:ARG:HB3	14:L:68:ARG:NH1	2.00	0.77
24:V:26:ARG:HD3	24:V:26:ARG:H	1.49	0.77
31:y:96:G:H2'	31:y:97:U:H6	1.49	0.77
31:y:480:U:OP2	31:y:480:U:H6	1.67	0.77
31:y:619:U:H2'	31:y:619:U:O2	1.82	0.77
31:y:1343:G:O2'	42:j:122:ALA:CB	2.31	0.77
31:y:1387:G:H2'	31:y:1388:C:C5'	2.12	0.77
31:y:1506:U:H3'	31:y:1507:A:C5'	2.14	0.77
37:e:165:MET:SD	37:e:168:ARG:HB2	2.25	0.77
46:n:45:VAL:O	46:n:48:LEU:HD22	1.84	0.77
1:w:685:A:OP2	1:w:774:A:N6	2.17	0.76
1:w:921:G:H2'	1:w:922:U:C5	2.18	0.76
1:w:2250:G:P	1:w:2250:G:H21	2.07	0.76
1:w:2345:G:C2	1:w:2381:C:H2'	2.20	0.76
1:w:2441:C:H2'	1:w:2442:C:H5"	1.68	0.76
2:x:66:A:N6	2:x:107:U:N3	2.30	0.76
4:B:69:ARG:NH2	4:B:119:ALA:HB2	1.99	0.76
5:C:37:ARG:HA	5:C:42:ASP:CG	2.11	0.76
9:G:77:LEU:HD12	9:G:142:VAL:HG13	1.65	0.76
18:P:47:VAL:HG13	18:P:48:GLY:N	2.00	0.76
21:S:88:LYS:HG3	21:S:89:PHE:N	2.00	0.76
31:y:292:G:OP2	31:y:293:G:N7	2.18	0.76
31:y:418:C:H1'	31:y:540:G:O2'	1.83	0.76
31:y:494:U:H6	31:y:494:U:O5'	1.68	0.76
31:y:570:G:C2	31:y:873:A:N6	2.53	0.76
31:y:603:U:H2'	31:y:604:G:H8	1.50	0.76
31:y:1159:U:C5	31:y:1182:G:H1'	2.19	0.76
31:y:1315:U:O2	31:y:1361:G:H1'	1.84	0.76
31:y:1347:G:HO2'	31:y:1348:U:P	2.08	0.76
42:j:20:ARG:HG3	42:j:21:PRO:HD2	1.66	0.76
1:w:4:C:H2'	1:w:5:A:H8	1.50	0.76
1:w:1799:G:N7	4:B:177:LEU:HD13	2.00	0.76
1:w:2818:G:C2'	1:w:2819:G:H5'	2.14	0.76
2:x:114:G:N2	15:M:38:GLN:HE22	1.84	0.76
4:B:77:ALA:O	4:B:117:VAL:HG23	1.84	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:35:GLU:OE2	7:E:160:VAL:HG12	1.85	0.76
7:E:139:LEU:CB	7:E:146:TYR:H	1.97	0.76
8:F:118:PRO:HG2	8:F:121:ILE:HB	1.67	0.76
9:G:23:PRO:HB2	9:G:27:ARG:HE	1.50	0.76
31:y:975:A:H5"	31:y:1363:A:N6	2.00	0.76
1:w:245:G:H5'	12:J:70:GLN:H	1.50	0.76
1:w:2128:C:H5'	3:A:37:LYS:CE	2.16	0.76
1:w:2289:G:H5"	1:w:2384:G:H4'	1.67	0.76
1:w:2641:G:N2	1:w:2774:C:C2	2.53	0.76
17:O:48:ALA:O	17:O:52:ARG:HG2	1.85	0.76
31:y:297:G:O2'	31:y:298:A:N7	2.16	0.76
31:y:302:G:O2'	31:y:556:C:OP1	2.02	0.76
31:y:322:C:H42	31:y:329:A:H62	1.33	0.76
31:y:612:C:N4	31:y:628:G:O6	2.17	0.76
37:e:78:LEU:HD22	37:e:79:PHE:H	1.50	0.76
38:f:43:LEU:HD13	38:f:43:LEU:H	1.49	0.76
44:l:85:ARG:HE	44:l:111:ASP:HB3	1.50	0.76
1:w:26:G:H2'	1:w:27:G:C1'	2.15	0.76
1:w:484:C:H2'	1:w:485:C:C6	2.20	0.76
1:w:954:G:OP1	13:K:17:LEU:HG	1.85	0.76
1:w:1675:C:H42	5:C:129:HIS:HE1	1.32	0.76
1:w:2240:C:C2'	1:w:2241:A:H5'	2.16	0.76
15:M:25:ARG:HH21	15:M:89:ARG:HH22	1.31	0.76
23:U:26:TYR:CD2	23:U:29:GLN:HB2	2.20	0.76
31:y:253:U:H2'	31:y:254:G:H8	1.49	0.76
31:y:554:C:H2'	31:y:555:C:H6	1.51	0.76
31:y:611:A:H2	31:y:629:G:H22	1.31	0.76
31:y:950:U:H5"	46:n:102:ARG:NH1	1.99	0.76
31:y:1516:G:H2'	31:y:1518:MA6:P	2.25	0.76
32:z:25:C:H2'	32:z:26:G:O4'	1.86	0.76
32:z:49:G:O6	32:z:65:C:N4	2.19	0.76
38:f:143:ARG:HG2	38:f:144:THR:N	1.98	0.76
1:w:69:C:H4'	1:w:75:G:N7	2.01	0.76
1:w:305:U:H2'	1:w:306:U:C6	2.21	0.76
1:w:518:G:H2'	1:w:519:U:C5	2.20	0.76
1:w:1031:G:H4'	30:b:6:SER:N	1.99	0.76
1:w:1082:U:H3'	1:w:1083:U:H5"	1.67	0.76
1:w:1173:G:H1'	1:w:1177:A:N6	2.00	0.76
1:w:1380:G:H21	1:w:1570:A:H2	1.29	0.76
1:w:1568:G:O3'	4:B:59:LYS:HG2	1.85	0.76
1:w:1624:G:H2'	1:w:1625:C:H6	1.50	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2577:A:H4'	1:w:2612:C:N4	2.00	0.76
1:w:2623:G:H2'	1:w:2624:G:H8	1.49	0.76
1:w:2736:G:H2'	1:w:2737:G:H8	1.49	0.76
1:w:2795:G:H1'	1:w:2801:A:N6	2.00	0.76
4:B:79:VAL:HA	4:B:95:LEU:CB	2.15	0.76
13:K:51:ARG:HB2	13:K:51:ARG:CZ	2.14	0.76
31:y:576:G:H5"	31:y:577:G:OP2	1.85	0.76
31:y:717:C:O2'	31:y:734:G:H5'	1.85	0.76
31:y:719:C:O2	51:s:50:ILE:HG12	1.86	0.76
31:y:1468:A:H2'	31:y:1469:G:O4'	1.85	0.76
31:y:1496:C:H2'	31:y:1497:G:C8	2.20	0.76
40:h:47:CYS:HB3	40:h:58:PRO:HB2	1.67	0.76
1:w:39:C:H2'	1:w:40:C:C6	2.20	0.76
1:w:1160:G:H21	18:P:9:GLY:HA3	1.49	0.76
1:w:1677:A:H2'	1:w:1678:G:O4'	1.86	0.76
4:B:6:PHE:HE1	4:B:18:VAL:HB	1.51	0.76
5:C:7:VAL:H	5:C:27:LEU:HD22	1.49	0.76
8:F:40:GLU:CD	8:F:55:PRO:HB3	2.10	0.76
11:I:21:CYS:SG	11:I:22:ILE:N	2.57	0.76
31:y:385:C:H2'	31:y:386:C:C6	2.21	0.76
31:y:691:G:O6	44:l:52:GLY:HA2	1.86	0.76
37:e:89:THR:HA	37:e:93:PHE:HB3	1.65	0.76
1:w:35:G:H2'	1:w:36:G:O4'	1.86	0.76
1:w:155:C:C3'	1:w:161:U:P	2.74	0.76
1:w:1204:A:H2	1:w:1241:A:H2	1.32	0.76
1:w:1529:A:H2'	1:w:1530:G:O4'	1.84	0.76
2:x:30:C:C2'	2:x:31:C:H5'	2.16	0.76
11:I:77:ILE:HD12	11:I:79:PHE:CE1	2.20	0.76
21:S:88:LYS:CG	21:S:89:PHE:H	1.97	0.76
31:y:37:U:O4	31:y:397:A:N1	2.18	0.76
31:y:154:C:H2'	31:y:155:C:C5	2.20	0.76
31:y:156:G:H2'	31:y:157:G:H5"	1.65	0.76
31:y:265:G:N2	31:y:267:C:H5'	2.01	0.76
31:y:268:C:H2'	31:y:269:C:C6	2.21	0.76
31:y:321:A:H2'	31:y:322:C:C6	2.21	0.76
31:y:692:U:H3'	31:y:692:U:C6	2.21	0.76
31:y:974:A:H4'	31:y:976:G:OP1	1.86	0.76
31:y:1165:C:H2'	31:y:1166:G:C8	2.20	0.76
31:y:1277:C:O2'	31:y:1279:A:H1'	1.86	0.76
31:y:1329:A:OP1	46:n:26:GLY:HA3	1.84	0.76
1:w:823:G:H2'	1:w:824:A:C8	2.20	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2159:G:H2'	1:w:2160:G:H5"	1.68	0.76
8:F:134:SER:HA	8:F:138:LYS:NZ	2.00	0.76
31:y:51:A:H4'	31:y:52:G:C5'	2.14	0.76
31:y:244:U:C5'	31:y:245:C:H5'	2.16	0.76
31:y:272:C:H2'	31:y:273:A:C8	2.20	0.76
31:y:575:G:H4'	31:y:576:G:H5'	1.67	0.76
31:y:830:G:H2'	31:y:831:U:O4'	1.85	0.76
31:y:965:A:OP1	31:y:1198:G:C5'	2.26	0.76
36:d:124:ILE:HG12	36:d:130:VAL:CG1	2.16	0.76
36:d:148:GLY:HA3	36:d:203:PHE:HB3	1.68	0.76
37:e:19:LEU:C	37:e:21:LEU:H	1.91	0.76
40:h:46:ALA:O	40:h:50:ILE:HG12	1.84	0.76
51:s:72:ARG:O	51:s:75:ILE:HB	1.86	0.76
1:w:287:C:H2'	1:w:288:C:H6	1.51	0.76
1:w:2885:C:H6	1:w:2885:C:O5'	1.69	0.76
4:B:123:ALA:HB1	4:B:124:PRO:CD	2.16	0.76
10:H:118:PRO:O	10:H:121:VAL:HB	1.85	0.76
22:T:110:GLY:CA	22:T:146:ILE:HD12	2.16	0.76
31:y:677:U:C2	31:y:678:U:C5	2.74	0.76
31:y:1219:U:H2'	31:y:1220:G:O4'	1.86	0.76
31:y:1305:G:OP2	54:v:5:ASP:HB2	1.85	0.76
36:d:32:LEU:HD22	36:d:33:LEU:HD22	1.67	0.76
37:e:9:CYS:HA	37:e:33:MET:SD	2.25	0.76
49:q:36:ILE:HD12	49:q:55:ARG:HB3	1.68	0.76
1:w:1258:C:H2'	1:w:1259:G:C8	2.21	0.76
1:w:2190:G:O2'	1:w:2191:G:H8	1.67	0.76
1:w:2559:C:O2'	1:w:2560:C:H5'	1.86	0.76
1:w:2623:G:H5'	1:w:2826:A:O2'	1.86	0.76
1:w:2648:C:H6	1:w:2648:C:O5'	1.69	0.76
13:K:34:LEU:HD21	13:K:118:LEU:HD23	1.67	0.76
31:y:122:G:O2'	31:y:123:C:H5'	1.86	0.76
31:y:738:C:H2'	31:y:739:C:C6	2.21	0.76
31:y:745:C:H1'	31:y:836:G:O2'	1.85	0.76
31:y:817:C:H4'	31:y:818:G:OP1	1.86	0.76
31:y:1501:C:OP2	31:y:1504:G:C8	2.37	0.76
35:c:94:ASN:O	35:c:95:GLN:HG2	1.86	0.76
36:d:29:TYR:O	36:d:33:LEU:HD23	1.84	0.76
37:e:31:CYS:HG	37:e:34:GLU:HB2	1.51	0.76
51:s:31:LEU:H	51:s:31:LEU:CD2	1.99	0.76
1:w:250:G:OP1	1:w:2394:C:H4'	1.85	0.75
1:w:450:G:H3'	1:w:451:C:H5'	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2488:A:H2'	1:w:2489:G:O4'	1.84	0.75
1:w:2531:A:H2'	1:w:2532:G:C8	2.20	0.75
4:B:164:GLN:NE2	4:B:166:GLN:HG3	2.01	0.75
5:C:122:PHE:CE2	5:C:138:PRO:HB3	2.22	0.75
8:F:146:ALA:HA	8:F:149:ARG:HB3	1.68	0.75
10:H:40:ASP:HB2	10:H:77:VAL:HG13	1.67	0.75
20:R:27:THR:HA	20:R:78:LYS:HB3	1.67	0.75
31:y:1379:G:OP2	40:h:4:ARG:HB2	1.85	0.75
31:y:1531:A:N1	34:3:6:G:C8	2.54	0.75
33:2:74:C:H2'	33:2:75:C:H1'	1.67	0.75
49:q:37:GLY:HA2	49:q:50:LYS:O	1.85	0.75
1:w:872:A:H2	1:w:905:U:O2	1.69	0.75
1:w:1390:U:H3	1:w:1395:A:H62	1.31	0.75
2:x:57:A:C2	7:E:29:TRP:O	2.38	0.75
9:G:59:ALA:O	9:G:63:ALA:HB3	1.86	0.75
17:O:103:PRO:O	17:O:105:VAL:N	2.19	0.75
31:y:17:U:H1'	31:y:1079:G:H21	1.51	0.75
31:y:297:G:H2'	31:y:298:A:C8	2.20	0.75
31:y:408:A:OP1	37:e:115:ARG:CB	2.34	0.75
31:y:491:G:H2'	31:y:492:G:C8	2.21	0.75
31:y:832:C:O2'	31:y:833:U:H4'	1.86	0.75
31:y:1126:U:H3	31:y:1280:A:C2'	1.98	0.75
31:y:1229:A:O2'	31:y:1230:C:H5'	1.86	0.75
31:y:1291:G:H8	31:y:1291:G:H5'	1.50	0.75
35:c:136:VAL:HG13	35:c:137:ARG:NH1	2.02	0.75
36:d:134:ILE:HG13	36:d:135:LYS:N	2.01	0.75
37:e:38:TYR:CD1	37:e:45:GLN:HB3	2.22	0.75
47:o:26:ARG:CZ	47:o:43:CYS:HB3	2.16	0.75
49:q:43:LYS:HG3	49:q:48:TRP:CZ2	2.21	0.75
1:w:558:G:H5'	10:H:135:LEU:CD1	2.17	0.75
1:w:761:A:O5'	1:w:761:A:C8	2.37	0.75
2:x:50:G:H5"	15:M:61:ASN:OD1	1.85	0.75
3:A:58:ASN:HA	3:A:166:ASN:OD1	1.86	0.75
9:G:88:ILE:HG23	9:G:89:TYR:H	1.52	0.75
11:I:34:THR:HG22	11:I:35:VAL:N	2.01	0.75
12:J:100:LEU:O	12:J:101:VAL:HG22	1.86	0.75
16:N:26:ASP:OD2	16:N:91:ARG:HB3	1.86	0.75
20:R:12:VAL:HG13	20:R:17:ALA:CB	2.15	0.75
31:y:552:U:H4'	45:m:85:ARG:CZ	2.16	0.75
31:y:967:5MC:HM52	31:y:968:A:N3	2.01	0.75
33:2:41:U:H2'	33:2:42:G:H8	1.52	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:155:GLY:C	36:d:196:LEU:HD11	2.12	0.75
39:g:37:VAL:HA	39:g:65:VAL:HA	1.66	0.75
47:o:24:CYS:SG	47:o:39:LEU:HD22	2.27	0.75
1:w:483:A:H2'	1:w:484:C:C6	2.21	0.75
6:D:137:TRP:HA	6:D:137:TRP:CE3	2.22	0.75
8:F:153:LYS:HB2	8:F:154:PRO:HD3	1.68	0.75
9:G:3:VAL:CB	9:G:21:VAL:HG21	2.17	0.75
14:L:72:ASP:O	14:L:76:VAL:HG23	1.85	0.75
31:y:371:G:H21	31:y:373:A:N6	1.84	0.75
31:y:505:G:H2'	31:y:506:G:C5'	2.17	0.75
31:y:878:G:H5'	41:i:89:PRO:HG2	1.68	0.75
31:y:880:C:OP2	45:m:5:THR:OG1	2.04	0.75
31:y:1059:C:O2'	43:k:53:PRO:HG3	1.85	0.75
31:y:1221:G:H5'	52:t:36:ARG:HH21	1.49	0.75
31:y:1373:G:O2'	40:h:31:MET:HE1	1.85	0.75
31:y:1479:C:H2'	31:y:1480:G:H8	1.50	0.75
42:j:118:LYS:O	42:j:121:ARG:HG2	1.85	0.75
53:u:39:LYS:O	53:u:43:LEU:HG	1.86	0.75
1:w:77:C:N4	1:w:78:A:H62	1.85	0.75
1:w:485:C:H2'	1:w:486:C:H6	1.52	0.75
1:w:992:C:O2'	1:w:993:G:H5'	1.85	0.75
1:w:1200:C:H2'	1:w:1201:C:H5"	1.69	0.75
1:w:1805:U:O2	4:B:50:THR:HB	1.86	0.75
1:w:2389:G:H5"	1:w:2390:U:H5'	1.68	0.75
4:B:35:LYS:HB2	4:B:36:PRO:HA	1.68	0.75
13:K:136:ALA:O	13:K:137:TYR:HB2	1.85	0.75
29:a:49:VAL:HG12	29:a:53:PRO:HD3	1.68	0.75
31:y:383:A:H8	31:y:383:A:O5'	1.69	0.75
31:y:501:C:O3'	45:m:117:SER:HB2	1.86	0.75
31:y:832:C:O2	31:y:833:U:H1'	1.85	0.75
31:y:965:A:P	31:y:1198:G:H5'	2.25	0.75
33:2:68:U:H2'	33:2:69:U:C6	2.21	0.75
43:k:27:ALA:CB	43:k:34:VAL:HB	2.16	0.75
43:k:98:ILE:O	43:k:99:LYS:HB2	1.84	0.75
50:r:29:HIS:HB2	50:r:36:ILE:CG2	2.15	0.75
1:w:432:A:H2'	1:w:433:C:H6	1.50	0.75
1:w:1567:A:C5'	4:B:60:ARG:HH22	1.99	0.75
1:w:1782:C:H2'	1:w:1783:A:H5'	1.67	0.75
1:w:2636:U:H4'	5:C:80:GLU:OE2	1.86	0.75
1:w:2760:C:H41	30:b:19:ARG:NH2	1.85	0.75
2:x:14:U:H5'	2:x:106:G:H21	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:30:ARG:CD	15:M:31:SER:H	1.99	0.75
22:T:166:SER:OG	22:T:169:GLU:HB2	1.87	0.75
25:W:29:LYS:HD3	25:W:30:ARG:N	2.01	0.75
31:y:507:C:C5	31:y:508:C:H2'	2.21	0.75
31:y:734:G:O5'	31:y:734:G:C8	2.40	0.75
31:y:1504:G:C4'	31:y:1505:G:H5'	2.17	0.75
35:c:219:VAL:O	35:c:222:ILE:HG22	1.85	0.75
41:i:24:THR:CB	41:i:63:LEU:HD11	2.16	0.75
46:n:48:LEU:HD21	46:n:53:VAL:HG22	1.69	0.75
1:w:142:G:H1'	20:R:38:GLU:OE1	1.87	0.75
1:w:483:A:O2'	21:S:56:PRO:HG3	1.87	0.75
1:w:518:G:H21	19:Q:75:TYR:HE1	1.33	0.75
1:w:1818:U:H5"	4:B:157:ARG:HB2	1.66	0.75
1:w:2662:A:H8	1:w:2662:A:O5'	1.70	0.75
3:A:21:TYR:N	3:A:21:TYR:CD2	2.55	0.75
12:J:79:ARG:NH1	12:J:108:LYS:HB2	2.02	0.75
19:Q:38:TYR:CD2	27:Y:41:PRO:HG3	2.22	0.75
31:y:128:G:H4'	50:r:3:LYS:HD2	1.69	0.75
31:y:553:A:H5"	45:m:30:PRO:HG2	1.67	0.75
41:i:119:LEU:CD1	41:i:124:ALA:HA	2.17	0.75
1:w:469:G:N7	28:Z:39:ARG:NH2	2.35	0.75
1:w:2006:C:H5"	1:w:2048:G:H5"	1.68	0.75
4:B:108:PRO:HD2	4:B:111:LEU:CD2	2.17	0.75
6:D:165:LEU:HG	6:D:169:VAL:O	1.87	0.75
7:E:120:LEU:HD22	7:E:121:ASN:H	1.52	0.75
12:J:148:LEU:HD22	12:J:149:GLU:H	1.51	0.75
22:T:15:PRO:O	22:T:19:ARG:HD2	1.86	0.75
26:X:7:LYS:HA	26:X:34:GLU:HA	1.67	0.75
31:y:811:C:O5'	31:y:811:C:H6	1.70	0.75
31:y:851:G:H2'	31:y:852:G:C8	2.22	0.75
37:e:102:ASP:O	37:e:105:VAL:HB	1.87	0.75
38:f:77:PRO:CG	38:f:142:LEU:HD11	2.16	0.75
1:w:1082:U:H3	1:w:1086:A:H61	1.35	0.75
2:x:47:C:O3'	15:M:93:LYS:HD3	1.86	0.75
4:B:65:ILE:CG2	4:B:105:ILE:HA	2.15	0.75
7:E:43:LEU:HG	7:E:153:ARG:NE	2.02	0.75
24:V:17:SER:HB2	24:V:44:PRO:O	1.86	0.75
24:V:90:ILE:HB	24:V:91:LYS:NZ	2.02	0.75
25:W:7:ARG:C	25:W:8:LYS:HD2	2.11	0.75
31:y:279:A:H1'	31:y:280:C:OP2	1.86	0.75
31:y:285:G:O2'	31:y:286:G:H5'	1.86	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:807:A:H2'	31:y:808:C:C6	2.21	0.75
31:y:944:G:H21	31:y:1339:A:N6	1.82	0.75
31:y:1199:U:H4'	43:k:54:PHE:CG	2.21	0.75
38:f:110:LEU:HB3	38:f:115:VAL:CG2	2.17	0.75
41:i:35:ILE:O	41:i:39:LEU:HG	1.87	0.75
47:o:29:ARG:HB2	47:o:29:ARG:HH11	1.50	0.75
49:q:48:TRP:O	49:q:49:LEU:HD12	1.86	0.75
1:w:878:A:H2'	1:w:879:G:C8	2.22	0.74
1:w:1663:C:O2'	1:w:1664:A:H8	1.68	0.74
1:w:1794:U:H1'	1:w:1900:A:C2	2.21	0.74
1:w:2676:C:H2'	1:w:2677:G:H8	1.52	0.74
1:w:2839:G:H5"	14:L:46:GLY:HA2	1.69	0.74
3:A:217:THR:OG1	3:A:220:GLY:N	2.20	0.74
7:E:3:LEU:HB2	7:E:100:TRP:CH2	2.22	0.74
11:I:64:ARG:HD3	11:I:102:VAL:HG21	1.69	0.74
13:K:23:GLY:HA3	13:K:98:LYS:HA	1.67	0.74
16:N:51:ARG:HG2	16:N:52:ILE:H	1.52	0.74
19:Q:33:ARG:HG3	19:Q:34:ASN:N	2.00	0.74
31:y:95:G:H4'	31:y:95:G:OP1	1.87	0.74
31:y:367:U:O2'	31:y:368:U:O5'	2.04	0.74
31:y:917:G:O2'	31:y:918:A:H5'	1.87	0.74
31:y:1347:G:N2	31:y:1373:G:N3	2.34	0.74
36:d:104:GLN:HG2	36:d:105:GLU:H	1.52	0.74
41:i:69:ARG:HB3	41:i:76:PRO:HG3	1.68	0.74
41:i:100:ILE:HG21	41:i:121:ASP:HA	1.69	0.74
1:w:224:G:H2'	1:w:225:A:O4'	1.86	0.74
1:w:324:A:N7	1:w:339:U:H1'	2.02	0.74
1:w:2355:C:H3'	1:w:2356:C:H5"	1.69	0.74
2:x:114:G:H21	15:M:38:GLN:HE22	1.34	0.74
7:E:61:ALA:O	7:E:64:THR:HG22	1.87	0.74
8:F:105:LEU:O	8:F:113:VAL:HB	1.87	0.74
11:I:16:ALA:HA	11:I:46:ALA:HB1	1.69	0.74
11:I:68:GLU:HA	11:I:77:ILE:C	2.11	0.74
13:K:64:ILE:HG12	13:K:106:VAL:HA	1.70	0.74
31:y:116:A:OP2	31:y:289:G:C5'	2.35	0.74
31:y:420:U:H2'	31:y:422:C:C5	2.22	0.74
31:y:684:A:H2	31:y:706:A:H61	1.35	0.74
31:y:1287:A:H2'	31:y:1288:A:H5'	1.69	0.74
32:z:9:G:H2'	32:z:10:G:N7	2.01	0.74
34:3:15:G:O2'	34:3:16:A:H5"	1.87	0.74
54:v:9:ARG:CZ	54:v:21:TYR:HB3	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:269:U:H2'	1:w:270(A):A:H8	1.53	0.74
1:w:485:C:H2'	1:w:486:C:C6	2.22	0.74
1:w:1718:G:C3'	1:w:1725:G:P	2.75	0.74
1:w:1921:G:H2'	1:w:1922:G:H8	1.51	0.74
1:w:2683:C:C1'	5:C:13:ARG:HH12	1.98	0.74
9:G:22:LYS:HB2	9:G:23:PRO:HD2	1.69	0.74
16:N:26:ASP:HA	16:N:48:ILE:HG23	1.69	0.74
31:y:611:A:C2	31:y:612:C:N4	2.55	0.74
31:y:908:A:H2'	31:y:909:A:C8	2.21	0.74
31:y:959:A:H1'	31:y:1221:G:H22	1.51	0.74
46:n:14:ARG:HA	46:n:44:ARG:HA	1.69	0.74
1:w:137(B):G:N2	20:R:38:GLU:HG3	2.02	0.74
1:w:142:G:C2'	1:w:143:C:H5"	2.15	0.74
1:w:247:G:C5	1:w:249:C:H1'	2.22	0.74
1:w:1881:C:H2'	1:w:1882:C:C6	2.21	0.74
1:w:2224:G:H4'	1:w:2226:C:C2	2.22	0.74
1:w:2711:A:P	1:w:2712:U:H6	2.10	0.74
1:w:2820:A:N1	5:C:194:GLY:HA2	2.02	0.74
4:B:182:LEU:HB3	4:B:271:ILE:HG22	1.68	0.74
11:I:77:ILE:HG13	16:N:72:VAL:HG13	1.68	0.74
31:y:314:C:H2'	31:y:315:A:H5"	1.68	0.74
31:y:408:A:C2'	31:y:409:G:H5'	2.18	0.74
31:y:1223:C:H3'	31:y:1223:C:C6	2.20	0.74
31:y:1389:C:H2'	31:y:1390:U:C6	2.22	0.74
33:2:48:C:H5"	33:2:48:C:C6	2.16	0.74
35:c:137:ARG:HD2	35:c:137:ARG:N	2.02	0.74
45:m:89:VAL:HG12	45:m:98:HIS:CE1	2.22	0.74
48:p:4:THR:HB	48:p:6:GLU:HG2	1.70	0.74
1:w:204:A:OP1	1:w:204:A:C8	2.41	0.74
1:w:1022:G:H1'	1:w:1024:G:O6	1.87	0.74
1:w:1516:U:O2'	1:w:1517:G:H8	1.70	0.74
1:w:1678:G:H21	1:w:1989:G:N2	1.84	0.74
1:w:2677:G:H2'	1:w:2678:C:H6	1.50	0.74
1:w:2730:C:O2'	1:w:2731:G:H5'	1.86	0.74
6:D:121:VAL:HA	6:D:189:MET:O	1.87	0.74
31:y:484:G:O2'	31:y:485:G:OP2	2.05	0.74
31:y:677:U:H2'	31:y:678:U:H6	1.48	0.74
31:y:1087:G:H2'	31:y:1088:G:C8	2.22	0.74
40:h:45:ASP:O	40:h:49:ILE:HG12	1.87	0.74
42:j:86:VAL:HA	42:j:90:PRO:HA	1.69	0.74
52:t:31:ILE:HG22	52:t:32:LYS:H	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:563:G:C6	1:w:2018:G:C6	2.76	0.74
1:w:1045:A:H4'	1:w:1047:G:H5'	1.69	0.74
1:w:1258:C:H2'	1:w:1259:G:H8	1.52	0.74
1:w:1802:A:OP2	1:w:1815:A:N6	2.19	0.74
1:w:2121:G:H21	3:A:169:THR:HG21	1.51	0.74
1:w:2641:G:H5'	10:H:98:TYR:OH	1.86	0.74
1:w:2688:U:H2'	1:w:2719:G:N2	2.01	0.74
2:x:42:C:H3'	2:x:43:C:H6	1.52	0.74
11:I:7:TYR:C	11:I:8:LEU:HD22	2.12	0.74
14:L:53:HIS:O	14:L:56:LYS:HG2	1.88	0.74
24:V:85:LEU:HB2	24:V:87:PRO:HD2	1.68	0.74
31:y:299:G:C6	31:y:566:G:O6	2.40	0.74
31:y:372:C:O2	31:y:375:U:O4	2.05	0.74
31:y:817:C:H6	31:y:817:C:H5"	1.52	0.74
36:d:20:SER:HB3	36:d:22:TRP:NE1	2.01	0.74
38:f:70:PRO:O	38:f:71:LEU:HB2	1.88	0.74
53:u:73:HIS:O	53:u:74:LYS:HG3	1.87	0.74
1:w:1031:G:H4'	30:b:6:SER:CA	2.18	0.74
2:x:73:A:C2'	2:x:74:U:H5'	2.17	0.74
7:E:78:SER:HB2	32:z:19:G:N2	2.03	0.74
12:J:148:LEU:CD2	12:J:149:GLU:H	2.00	0.74
31:y:701:C:OP1	31:y:701:C:H4'	1.86	0.74
31:y:842:C:H4'	31:y:848:C:H42	1.53	0.74
31:y:1053:G:H4'	31:y:1054:C:C5'	2.16	0.74
36:d:8:ILE:C	36:d:10:PHE:H	1.95	0.74
1:w:259:G:O2'	1:w:621:A:H4'	1.88	0.74
1:w:346:A:C4'	1:w:347:A:H5'	2.10	0.74
1:w:1321:A:H2'	1:w:1322:A:C8	2.23	0.74
1:w:1378:A:C2	1:w:1380:G:H1'	2.22	0.74
1:w:1567:A:H5"	4:B:60:ARG:NH2	2.02	0.74
5:C:108:SER:HA	5:C:189:PRO:CG	2.18	0.74
7:E:115:ARG:HH22	46:n:67:GLU:CG	1.99	0.74
8:F:38:SER:HB2	8:F:39:PRO:CD	2.17	0.74
9:G:7:GLU:N	9:G:8:PRO:HD3	2.03	0.74
11:I:109:LYS:HA	11:I:109:LYS:HE3	1.68	0.74
14:L:9:LYS:O	14:L:10:LEU:HB2	1.85	0.74
20:R:20:GLY:HA2	20:R:24:GLY:O	1.87	0.74
22:T:42:VAL:HG12	22:T:46:LYS:HD2	1.68	0.74
22:T:128:VAL:HG23	22:T:160:GLY:O	1.86	0.74
22:T:171:ILE:HD13	22:T:171:ILE:H	1.51	0.74
26:X:8:LEU:HG	26:X:9:VAL:N	2.01	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:299:G:O6	31:y:566:G:O6	2.04	0.74
31:y:391:G:C3'	31:y:392:G:H5"	2.17	0.74
31:y:667:G:H2'	31:y:668:G:C8	2.22	0.74
31:y:716:A:H1'	44:l:118:GLY:HA2	1.68	0.74
32:z:34:C:H2'	32:z:35:A:C8	2.23	0.74
48:p:62:GLN:HA	48:p:65:ARG:HD2	1.70	0.74
52:t:36:ARG:O	52:t:37:ARG:HB2	1.86	0.74
1:w:148:C:H5'	1:w:149:A:OP2	1.87	0.74
1:w:962:G:C3'	1:w:963:U:H5"	2.18	0.74
1:w:1184:G:O2'	1:w:1185:C:H5'	1.87	0.74
1:w:1932:A:H62	1:w:1968:G:H21	1.36	0.74
1:w:2016:U:H5'	1:w:2058:A:H5'	1.68	0.74
1:w:2271:G:H5'	23:U:19:LYS:O	1.88	0.74
1:w:2304:G:H1'	7:E:132:ASN:CG	2.13	0.74
1:w:2660:A:H2'	1:w:2661:G:C8	2.23	0.74
4:B:118:VAL:HG22	4:B:119:ALA:H	1.53	0.74
7:E:111:LEU:O	7:E:114:ILE:HB	1.88	0.74
11:I:16:ALA:HA	11:I:46:ALA:CB	2.16	0.74
31:y:528:C:H41	45:m:47:PRO:HB3	1.50	0.74
31:y:996:A:H2'	31:y:997:U:O4'	1.88	0.74
31:y:1442:G:N2	31:y:1446:A:H3'	2.03	0.74
37:e:93:PHE:O	37:e:96:LEU:HG	1.88	0.74
44:l:79:SER:OG	44:l:106:LYS:HE3	1.88	0.74
47:o:26:ARG:HE	47:o:43:CYS:HB3	1.53	0.74
1:w:671:C:C2'	1:w:672:C:H5'	2.17	0.74
1:w:2772:C:H2'	1:w:2773:C:C6	2.23	0.74
2:x:102:G:H2'	2:x:103:U:C5'	2.18	0.74
3:A:185:LYS:O	3:A:189:ASN:HB2	1.88	0.74
4:B:108:PRO:HD2	4:B:111:LEU:HD23	1.70	0.74
25:W:4:SER:H	25:W:7:ARG:HG3	1.53	0.74
31:y:27:G:O2'	31:y:28:G:H5'	1.87	0.74
31:y:321:A:N6	31:y:328:C:H1'	2.02	0.74
31:y:739:C:O2'	48:p:42:HIS:CD2	2.40	0.74
31:y:1347:G:C2	31:y:1373:G:H2'	2.23	0.74
33:2:29:A:O2'	33:2:30:G:H5'	1.87	0.74
1:w:256:A:H2'	1:w:257:A:H8	1.53	0.73
1:w:1458:C:H1'	1:w:1459:G:N1	2.02	0.73
1:w:2169:A:H3'	1:w:2170:A:C8	2.23	0.73
1:w:2348:U:C5	1:w:2382:G:N2	2.56	0.73
3:A:63:VAL:HG22	3:A:64:SER:N	2.03	0.73
5:C:110:GLY:HA2	5:C:161:GLY:HA3	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:71:THR:O	7:E:88:ILE:HB	1.87	0.73
11:I:114:ILE:H	11:I:114:ILE:CD1	1.90	0.73
22:T:97:GLU:OE1	22:T:125:LEU:HG	1.86	0.73
23:U:31:VAL:O	23:U:64:ASP:HA	1.87	0.73
31:y:60:A:H4'	31:y:61:G:O5'	1.88	0.73
31:y:272:C:H2'	31:y:273:A:H8	1.53	0.73
31:y:691:G:H1	44:l:52:GLY:CA	2.01	0.73
31:y:1314:C:H5	52:t:4:SER:HG	1.34	0.73
31:y:1398:A:H8	31:y:1398:A:H5'	1.53	0.73
32:z:6:G:N2	32:z:68:C:H1'	2.03	0.73
41:i:24:THR:HB	41:i:63:LEU:CD1	2.18	0.73
47:o:39:LEU:HD12	47:o:44:LEU:HD21	1.70	0.73
1:w:450:G:H3'	1:w:451:C:C5'	2.18	0.73
1:w:658:C:H2'	1:w:659:C:O5'	1.87	0.73
1:w:2082:A:H3'	1:w:2083:G:H8	1.52	0.73
1:w:2675:A:OP1	11:I:31:LYS:HB2	1.89	0.73
1:w:2678:C:H2'	1:w:2679:A:H5'	1.69	0.73
1:w:2877:G:H2'	1:w:2878:U:H6	1.52	0.73
6:D:155:ASN:O	6:D:158:VAL:HG12	1.88	0.73
9:G:122:GLU:HG2	9:G:123:LEU:N	2.01	0.73
29:a:13:ARG:HG3	29:a:14:VAL:HG13	1.70	0.73
31:y:139:G:H2'	31:y:140:A:C8	2.23	0.73
31:y:167:G:H2'	31:y:168:G:C5'	2.18	0.73
31:y:414:A:C2	31:y:415:A:C4	2.76	0.73
31:y:927:G:H4'	31:y:1503:A:H62	1.53	0.73
31:y:1459:C:O2'	31:y:1460:A:H5'	1.86	0.73
31:y:1468:A:H2'	31:y:1469:G:C8	2.23	0.73
31:y:1504:G:C5'	31:y:1505:G:H5'	2.17	0.73
32:z:27:U:C2	32:z:28:C:C5	2.76	0.73
35:c:197:VAL:HB	35:c:200:ILE:CG2	2.18	0.73
46:n:90:LEU:O	46:n:92:HIS:N	2.16	0.73
46:n:92:HIS:CE1	46:n:98:VAL:HG11	2.22	0.73
1:w:489:G:H3'	1:w:491:G:P	2.28	0.73
1:w:1165:U:H6	1:w:1165:U:O5'	1.71	0.73
1:w:1244:G:H1'	12:J:7:ARG:HH22	1.52	0.73
1:w:1458:C:H1'	1:w:1459:G:C6	2.24	0.73
1:w:2111:C:N4	1:w:2144:U:C4'	2.50	0.73
1:w:2537:U:H2'	1:w:2538:C:O4'	1.89	0.73
1:w:2588:G:C2'	1:w:2589:A:H5'	2.18	0.73
3:A:224:ARG:C	3:A:225:ILE:HD12	2.12	0.73
15:M:41:ASP:HB3	15:M:46:VAL:HG23	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:376:G:H2'	31:y:377:G:O4'	1.88	0.73
31:y:1287:A:C2'	31:y:1288:A:H5'	2.17	0.73
32:z:26:G:H8	32:z:26:G:OP2	1.72	0.73
34:3:8:U:H6	34:3:8:U:H3'	1.52	0.73
39:g:37:VAL:HG22	39:g:65:VAL:HG12	1.69	0.73
43:k:5:ARG:HA	43:k:73:ASP:OD2	1.88	0.73
44:l:92:GLU:O	44:l:96:ARG:HD3	1.88	0.73
50:r:58:GLU:OE2	50:r:74:LEU:HB3	1.87	0.73
1:w:99:U:C3'	1:w:101:G:P	2.75	0.73
1:w:310:A:H2'	1:w:311:A:H5"	1.69	0.73
1:w:779:U:OP1	4:B:49:ILE:HG12	1.88	0.73
2:x:100:G:H2'	2:x:101:A:H8	1.53	0.73
7:E:114:ILE:HG12	7:E:115:ARG:H	1.52	0.73
9:G:27:ARG:H	9:G:27:ARG:CD	2.00	0.73
14:L:39:PRO:O	14:L:43:GLU:HG2	1.88	0.73
19:Q:88:ARG:CD	19:Q:94:ASP:H	2.00	0.73
31:y:420:U:H3'	31:y:422:C:N4	2.03	0.73
31:y:533:A:C6	31:y:536:C:C6	2.77	0.73
31:y:719:C:N4	51:s:71:LYS:HD3	2.03	0.73
31:y:868:C:H2'	31:y:869:G:O4'	1.89	0.73
31:y:870:U:OP1	31:y:870:U:H3'	1.87	0.73
31:y:929:G:H2'	31:y:930:C:H5'	1.70	0.73
31:y:1108:G:C3'	31:y:1109:C:H5"	2.18	0.73
31:y:1196:U:O5'	31:y:1197:G:H5"	1.88	0.73
38:f:110:LEU:HB3	38:f:115:VAL:HG22	1.68	0.73
40:h:9:VAL:HG22	40:h:10:ARG:H	1.52	0.73
48:p:64:ARG:HA	48:p:67:LEU:HD12	1.68	0.73
48:p:66:LEU:O	48:p:69:TYR:HB3	1.88	0.73
1:w:85:G:H1'	1:w:103:A:C2	2.23	0.73
1:w:310:A:C2'	1:w:311:A:H5"	2.18	0.73
1:w:1138:G:C2'	1:w:1139:G:H5'	2.17	0.73
1:w:1954:G:N2	1:w:2551:C:H5"	2.04	0.73
1:w:2309:A:H3'	1:w:2310:A:C8	2.22	0.73
1:w:2353:G:N3	23:U:34:GLY:HA3	2.04	0.73
1:w:2632:A:C1'	5:C:61:ARG:HH22	1.98	0.73
1:w:2697:G:H2'	1:w:2698:U:O4'	1.88	0.73
1:w:2867:G:HO2'	1:w:2868:A:H8	1.34	0.73
5:C:38:THR:HG22	5:C:39:PRO:HD2	1.71	0.73
9:G:124:GLY:O	9:G:143:SER:HA	1.88	0.73
13:K:72:LYS:HZ2	13:K:73:PRO:HB2	1.53	0.73
23:U:32:ARG:HA	23:U:64:ASP:OD1	1.89	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:8:LYS:HA	25:W:11:GLU:HB2	1.69	0.73
27:Y:16:ARG:HG3	27:Y:17:ASP:H	1.54	0.73
31:y:167:G:O2'	31:y:168:G:H5'	1.88	0.73
31:y:1498:U:O4	34:3:14:U:H4'	1.88	0.73
32:z:38:A:H2'	32:z:39:C:O4'	1.89	0.73
36:d:22:TRP:HZ3	36:d:32:LEU:CD2	1.96	0.73
45:m:6:ILE:H	45:m:6:ILE:HD12	1.53	0.73
1:w:288:C:H3'	1:w:289:A:H5"	1.71	0.73
1:w:1472:A:H2'	1:w:1473:G:C8	2.24	0.73
1:w:1920:C:H5'	31:y:1517:G:C4	2.24	0.73
1:w:2271:G:C5'	23:U:20:ARG:HD3	2.18	0.73
1:w:2576:G:H5"	1:w:2578:G:N7	2.02	0.73
1:w:2661:G:C6	1:w:2662:A:C2	2.77	0.73
2:x:20:C:C2'	2:x:21:G:O4'	2.33	0.73
5:C:75:VAL:C	5:C:77:ILE:H	1.94	0.73
6:D:119:LEU:O	6:D:121:VAL:N	2.22	0.73
16:N:50:ILE:HD11	16:N:64:ARG:HB2	1.70	0.73
16:N:93:ARG:H	16:N:116:ALA:HA	1.53	0.73
21:S:39:VAL:HG12	21:S:40:GLU:H	1.53	0.73
24:V:90:ILE:O	24:V:94:LEU:HD13	1.87	0.73
31:y:122:G:H2'	31:y:123:C:H6	1.51	0.73
31:y:167:G:H2'	31:y:168:G:O4'	1.89	0.73
31:y:216:G:H2'	31:y:217:C:O4'	1.87	0.73
31:y:817:C:O4'	31:y:819:A:H5'	1.87	0.73
31:y:1078:U:H2'	31:y:1079:G:C8	2.23	0.73
31:y:1282:C:H2'	31:y:1282:C:O2	1.87	0.73
44:l:70:LYS:HA	44:l:73:MET:SD	2.28	0.73
1:w:918:A:N3	2:x:80:U:H4'	2.03	0.73
1:w:2060:A:O2'	1:w:2061:G:OP2	2.06	0.73
1:w:2678:C:C2'	1:w:2679:A:H5'	2.19	0.73
2:x:84:C:H2'	2:x:85:G:C8	2.22	0.73
5:C:28:ALA:HB1	5:C:93:VAL:HG13	1.70	0.73
6:D:8:SER:HB2	6:D:9:PRO:CD	2.17	0.73
12:J:7:ARG:N	12:J:8:PRO:HD3	2.03	0.73
18:P:34:GLU:HB2	18:P:64:HIS:NE2	2.02	0.73
24:V:14:VAL:O	24:V:46:LEU:HD11	1.89	0.73
31:y:254:G:O2'	31:y:255:G:H5'	1.88	0.73
31:y:321:A:H4'	31:y:1435:G:O2'	1.88	0.73
31:y:758:G:H4'	31:y:880:C:O2'	1.87	0.73
32:z:9:G:OP1	32:z:9:G:C4'	2.33	0.73
37:e:101:LEU:CD1	37:e:140:VAL:HG23	2.18	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:i:36:LEU:HA	41:i:39:LEU:CD1	2.17	0.73
51:s:30:ASP:OD1	51:s:32:ARG:HB3	1.89	0.73
1:w:494:G:H5'	19:Q:8:ARG:HH12	1.53	0.73
1:w:593:G:H1'	29:a:4:MET:SD	2.28	0.73
1:w:1027:A:H2	1:w:2488:A:H5"	1.52	0.73
1:w:2024:G:H2'	1:w:2025:C:H6	1.54	0.73
3:A:41:THR:O	3:A:217:THR:HB	1.88	0.73
4:B:65:ILE:HG21	4:B:105:ILE:HA	1.70	0.73
4:B:79:VAL:HA	4:B:95:LEU:HB3	1.71	0.73
4:B:131:LEU:HD23	4:B:132:PRO:CD	2.18	0.73
6:D:96:LEU:HB3	6:D:97:PRO:HD2	1.69	0.73
13:K:37:LEU:HG	13:K:128:LYS:N	2.04	0.73
14:L:29:LEU:HD21	14:L:75:LEU:HD13	1.70	0.73
21:S:9:LYS:HG3	21:S:10:GLY:H	1.54	0.73
31:y:234:C:O4'	50:r:64:PRO:HG2	1.89	0.73
31:y:746:A:H2'	31:y:747:C:C6	2.23	0.73
31:y:992:U:O4	31:y:1043:C:C6	2.42	0.73
31:y:1291:G:H2'	31:y:1292:U:C6	2.23	0.73
31:y:1306:A:N1	31:y:1331:G:H4'	2.04	0.73
31:y:1323:G:H5"	31:y:136(B):C:N4	2.02	0.73
31:y:1500:A:H5'	31:y:1508:G:H5"	1.69	0.73
31:y:1518:MA6:H93	31:y:1519:MA6:C9	2.17	0.73
33:2:51:G:H2'	33:2:52:U:C6	2.24	0.73
35:c:124:SER:HB2	35:c:125:PRO:HD2	1.69	0.73
37:e:78:LEU:H	37:e:78:LEU:HD13	1.53	0.73
48:p:83:GLU:HG3	48:p:84:LYS:H	1.54	0.73
1:w:13:A:N3	1:w:14:A:N7	2.37	0.73
1:w:460:A:N6	1:w:469:G:H21	1.86	0.73
1:w:1716:U:O2	1:w:1743:G:N1	2.20	0.73
1:w:2322:A:N6	1:w:2335:A:H61	1.87	0.73
1:w:2642:G:H2'	1:w:2643:G:C8	2.24	0.73
1:w:2810:A:C2	5:C:61:ARG:NH2	2.56	0.73
2:x:45:A:H2'	2:x:45:A:N3	2.03	0.73
4:B:31:LYS:HE3	4:B:32:SER:O	1.89	0.73
13:K:72:LYS:O	13:K:94:VAL:HG22	1.89	0.73
17:O:90:VAL:HG13	17:O:91:ASP:N	2.00	0.73
18:P:24:LYS:HG2	18:P:25:LEU:N	2.04	0.73
18:P:66:ARG:HE	18:P:94:LEU:HD21	1.52	0.73
36:d:151:VAL:HG13	36:d:152:ILE:N	1.96	0.73
39:g:99:ALA:O	39:g:100:ASN:HB2	1.87	0.73
41:i:104:ARG:HB3	41:i:107:LEU:HB2	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:492:A:O5'	1:w:492:A:C8	2.42	0.73
1:w:1244:G:H5'	12:J:16:ARG:NH1	2.04	0.73
1:w:1352:U:O2'	1:w:1353:A:H5'	1.88	0.73
1:w:2126:A:HO2'	1:w:2127:G:C1'	2.02	0.73
1:w:2256:G:H2'	1:w:2257:U:C6	2.22	0.73
1:w:2485:G:H4'	13:K:126:PRO:HD3	1.69	0.73
1:w:2579:C:O4'	5:C:134:ILE:CD1	2.37	0.73
1:w:2642:G:C2'	1:w:2643:G:H5'	2.18	0.73
1:w:2734:A:H2'	1:w:2735:G:C5'	2.15	0.73
2:x:73:A:O2'	2:x:74:U:H5'	1.88	0.73
3:A:46:ALA:HA	3:A:212:SER:O	1.89	0.73
4:B:97:TYR:HB2	4:B:102:LYS:HA	1.71	0.73
5:C:47:VAL:HG12	5:C:48:GLN:N	2.04	0.73
7:E:103:LEU:O	7:E:107:LEU:HG	1.89	0.73
18:P:78:LYS:HB2	18:P:83:ARG:NH1	2.02	0.73
23:U:28:GLY:CA	23:U:67:VAL:O	2.37	0.73
25:W:47:ASN:HB2	25:W:51:ARG:NH2	2.04	0.73
31:y:474:G:OP2	49:q:75:ARG:NE	2.19	0.73
31:y:563:A:H5'	31:y:566:G:N2	2.04	0.73
31:y:741:G:OP1	48:p:39:LEU:HD22	1.88	0.73
31:y:983:A:H1'	31:y:1049:U:O2	1.89	0.73
49:q:43:LYS:CA	49:q:48:TRP:HE1	1.97	0.73
1:w:54:G:H21	1:w:126:A:N6	1.86	0.72
1:w:350:U:H2'	1:w:351:G:C8	2.23	0.72
1:w:533:G:O5'	17:O:24:TYR:HB3	1.89	0.72
1:w:812:C:H5'	12:J:25:SER:OG	1.89	0.72
1:w:1426:G:C3'	1:w:1427:A:H5"	2.12	0.72
1:w:1925:C:H6	1:w:1925:C:O5'	1.71	0.72
1:w:2576:G:H3'	1:w:2576:G:N3	2.04	0.72
2:x:66:A:H62	2:x:107:U:H3	1.37	0.72
6:D:150:LEU:CD1	6:D:169:VAL:HB	2.16	0.72
11:I:10:VAL:HG11	11:I:17:ARG:HA	1.71	0.72
21:S:52:SER:HB3	21:S:53:PRO:CD	2.19	0.72
31:y:22:G:H5'	31:y:885:G:H5'	1.69	0.72
31:y:602:A:H2'	31:y:603:U:O4'	1.89	0.72
31:y:781:A:H4'	31:y:1522:U:O2'	1.89	0.72
31:y:829:G:C6	31:y:830:G:N7	2.57	0.72
31:y:1158:C:H2'	31:y:1158:C:O2	1.87	0.72
31:y:1197:G:H2'	31:y:1198:G:H8	1.53	0.72
31:y:1510:U:H2'	31:y:1511:G:C8	2.24	0.72
37:e:32:ALA:O	37:e:35:ARG:HB2	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:i:119:LEU:HD21	41:i:127:LEU:HD23	1.71	0.72
42:j:19:LEU:HD23	42:j:61:ALA:HB2	1.69	0.72
45:m:62:GLY:C	45:m:63:TYR:HD2	1.97	0.72
50:r:77:VAL:HG12	50:r:78:GLU:HG3	1.70	0.72
1:w:539:G:H2'	1:w:540:G:C8	2.23	0.72
1:w:613:U:H5'	1:w:616:A:N6	2.03	0.72
1:w:1372:U:H2'	1:w:1373:A:H8	1.54	0.72
1:w:1378:A:H2'	1:w:1380:G:N7	2.04	0.72
1:w:1735:U:C3'	1:w:1741:C:P	2.77	0.72
1:w:1860:G:H2'	1:w:1861:G:C8	2.23	0.72
1:w:2209:C:H2'	1:w:2210:G:C8	2.24	0.72
1:w:2803:C:H2'	1:w:2804:C:C5'	2.15	0.72
1:w:2803:C:C2'	1:w:2804:C:C5'	2.66	0.72
1:w:2819:G:O2'	14:L:1:MET:N	2.22	0.72
2:x:73:A:H2'	2:x:74:U:C5'	2.19	0.72
12:J:96:THR:HG23	12:J:99:LEU:HB2	1.70	0.72
13:K:123:HIS:HE1	30:b:8:LYS:NZ	1.87	0.72
31:y:295:C:O2'	31:y:296:U:H5'	1.89	0.72
31:y:662:G:O2'	31:y:663:A:H5'	1.89	0.72
31:y:689:C:C5'	44:l:27:ASN:ND2	2.47	0.72
35:c:178:ARG:HD3	35:c:184:VAL:HG21	1.70	0.72
37:e:8:VAL:HG21	37:e:115:ARG:HD2	1.71	0.72
37:e:21:LEU:O	37:e:26:CYS:SG	2.47	0.72
1:w:48:G:N2	1:w:177:G:N2	2.38	0.72
1:w:284:U:H2'	1:w:285:C:C6	2.24	0.72
1:w:788:A:O2'	28:Z:4:THR:HB	1.90	0.72
1:w:2618:G:H2'	1:w:2619:C:C6	2.24	0.72
12:J:85:LEU:HD21	12:J:119:GLU:N	2.05	0.72
15:M:8:GLU:HG2	15:M:11:LYS:HE3	1.70	0.72
31:y:7:G:H5'	31:y:298:A:H5'	1.71	0.72
31:y:468:A:O3'	49:q:80:PHE:HB3	1.89	0.72
31:y:560:U:H5'	31:y:566:G:N2	2.04	0.72
31:y:834:C:C2	31:y:853:G:C2	2.78	0.72
31:y:861:G:O2'	31:y:874:G:O2'	2.04	0.72
31:y:1092:A:C5	31:y:1093:A:N6	2.58	0.72
33:2:63:C:H2'	33:2:64:A:C8	2.24	0.72
35:c:92:TYR:O	35:c:151:GLY:HA3	1.89	0.72
35:c:145:LEU:HB3	35:c:149:LEU:HD22	1.71	0.72
36:d:151:VAL:HG12	36:d:168:ALA:O	1.89	0.72
37:e:100:ARG:HH21	37:e:137:SER:HB2	1.54	0.72
48:p:21:ASP:O	48:p:24:SER:HB2	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:271(C):G:H1'	1:w:271(D):U:H5"	1.70	0.72
1:w:364:C:H2'	1:w:365(A):C:H6	1.53	0.72
1:w:782:A:H8	1:w:782:A:P	2.12	0.72
1:w:2470:G:H2'	1:w:2471:C:H5"	1.70	0.72
1:w:2676:C:H2'	1:w:2677:G:C8	2.24	0.72
2:x:108:C:O5'	2:x:108:C:C6	2.41	0.72
3:A:21:TYR:H	3:A:21:TYR:HD2	1.34	0.72
4:B:81:ALA:HB3	4:B:94:LEU:CB	2.18	0.72
8:F:22:GLY:O	8:F:37:VAL:HG22	1.88	0.72
11:I:77:ILE:HD12	11:I:79:PHE:CD1	2.25	0.72
14:L:66:VAL:HA	14:L:68:ARG:HH12	1.53	0.72
14:L:83:ILE:O	14:L:87:TYR:HD1	1.72	0.72
20:R:32:PRO:HG3	20:R:72:LYS:HE2	1.69	0.72
27:Y:33:CYS:CB	27:Y:38:ALA:HB3	2.20	0.72
31:y:253:U:H2'	31:y:254:G:C8	2.24	0.72
31:y:323:U:H6	31:y:323:U:O5'	1.71	0.72
31:y:586:C:H5"	50:r:34:LYS:HZ3	1.53	0.72
31:y:879:C:OP1	45:m:7:ASN:ND2	2.22	0.72
35:c:185:ILE:HG23	35:c:199:TYR:HB2	1.71	0.72
1:w:4:C:H2'	1:w:5:A:C8	2.24	0.72
1:w:950:G:H2'	1:w:951:C:H6	1.53	0.72
1:w:1125:G:H3'	1:w:1126:A:H5"	1.68	0.72
1:w:1306:C:H2'	1:w:1307:A:C8	2.25	0.72
1:w:1908:C:O2'	32:z:12:G:H5"	1.90	0.72
1:w:1915:U:H3'	1:w:1916:A:C8	2.24	0.72
1:w:2316:C:H2'	1:w:2317:C:O4'	1.88	0.72
1:w:2714:G:C6	1:w:2715:C:N4	2.57	0.72
2:x:9:G:H2'	2:x:10:C:C5'	2.16	0.72
14:L:76:VAL:HA	14:L:79:LEU:CG	2.18	0.72
15:M:49:VAL:HG22	15:M:50:SER:H	1.53	0.72
16:N:85:LYS:HZ3	16:N:85:LYS:C	1.97	0.72
21:S:65:ALA:HB3	21:S:66:PRO:HD3	1.71	0.72
31:y:679:C:O5'	31:y:679:C:H6	1.73	0.72
31:y:1067:A:H8	31:y:1067:A:O5'	1.72	0.72
31:y:1343:G:O2'	42:j:122:ALA:HB3	1.89	0.72
31:y:1354:C:H2'	31:y:1355:G:H8	1.53	0.72
48:p:8:LYS:O	48:p:11:VAL:HG22	1.88	0.72
1:w:184:C:H4'	1:w:217:G:H21	1.55	0.72
1:w:328:U:O4'	21:S:66:PRO:HG2	1.89	0.72
1:w:479:A:H4'	1:w:480:A:C5'	2.19	0.72
1:w:494:G:H5"	19:Q:8:ARG:HH12	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:789:A:H5”	1:w:790:C:H5	1.55	0.72
1:w:2025:C:H2’	1:w:2026:C:C6	2.23	0.72
1:w:2224:G:H4’	1:w:2226:C:N3	2.04	0.72
1:w:2353:G:O2’	23:U:33:ALA:HB3	1.89	0.72
3:A:34:ALA:HB2	3:A:179:ALA:HB1	1.72	0.72
3:A:61:GLY:O	3:A:163:GLU:HA	1.90	0.72
4:B:20:ASP:O	4:B:24:ILE:HB	1.89	0.72
5:C:22:PRO:O	5:C:23:VAL:HG13	1.88	0.72
18:P:24:LYS:HB2	18:P:94:LEU:HG	1.71	0.72
19:Q:88:ARG:HG3	19:Q:94:ASP:CG	2.15	0.72
23:U:15:ASP:HB3	23:U:20:ARG:HH11	1.54	0.72
24:V:87:PRO:HB2	24:V:91:LYS:HD2	1.70	0.72
29:a:17:THR:OG1	29:a:21:LYS:HD2	1.89	0.72
31:y:17:U:O2’	31:y:18:C:H5’	1.89	0.72
31:y:1206:G:H5’	36:d:194:GLY:HA2	1.72	0.72
31:y:1500:A:H5”	31:y:1508:G:C5’	2.20	0.72
37:e:9:CYS:O	37:e:33:MET:HB3	1.89	0.72
1:w:569:U:O2’	1:w:946:G:N2	2.21	0.72
1:w:585:G:H21	1:w:1254:A:H62	1.37	0.72
1:w:1313:U:H4’	1:w:1332:G:H4’	1.71	0.72
1:w:1991:U:C2’	1:w:1992:G:H5”	2.20	0.72
5:C:131:ALA:O	5:C:133:LYS:HG2	1.90	0.72
12:J:96:THR:HG23	12:J:99:LEU:CB	2.19	0.72
16:N:72:VAL:CG1	16:N:74:ARG:HG2	2.20	0.72
31:y:109:A:C8	31:y:327:A:O4’	2.42	0.72
31:y:437:U:H2’	31:y:438:G:O4’	1.89	0.72
31:y:945:G:N3	31:y:945:G:H2’	2.03	0.72
31:y:1379:G:H3’	31:y:1380:U:H5”	1.69	0.72
53:u:87:LYS:O	53:u:91:LEU:HG	1.90	0.72
1:w:830:G:H1’	1:w:2448:A:N1	2.05	0.72
1:w:857:C:H5”	23:U:44:ARG:NH2	2.05	0.72
1:w:1527:G:H8	1:w:1527:G:H3’	1.55	0.72
1:w:1597:A:HO2’	1:w:1598:C:H5	1.36	0.72
1:w:1678:G:N2	1:w:1989:G:N2	2.33	0.72
1:w:2008:C:H2’	1:w:2009:G:C8	2.24	0.72
1:w:2711:A:P	1:w:2712:U:C6	2.82	0.72
6:D:59:ILE:HD11	6:D:71:GLY:CA	2.20	0.72
7:E:104:GLU:HA	7:E:107:LEU:HD12	1.70	0.72
16:N:30:VAL:HA	16:N:42:ILE:HB	1.71	0.72
19:Q:4:LYS:HD2	19:Q:62:HIS:HE1	1.55	0.72
23:U:40:GLN:HG2	23:U:41:ARG:N	1.98	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:83:GLU:O	24:V:88:LYS:HE2	1.89	0.72
31:y:678:U:H1'	31:y:777:A:O3'	1.90	0.72
31:y:1470:G:C2'	31:y:1471:G:H5'	2.20	0.72
36:d:206:GLU:O	36:d:207:VAL:HB	1.89	0.72
46:n:15:VAL:HG22	46:n:41:PRO:HA	1.71	0.72
52:t:12:ASP:HB2	52:t:15:LEU:HD22	1.72	0.72
1:w:43:G:P	1:w:43:G:H8	2.12	0.72
1:w:185:U:H2'	1:w:186:G:O4'	1.90	0.72
1:w:847:U:O4	1:w:933:A:N1	2.23	0.72
1:w:1275:A:N1	1:w:1296:G:H1'	2.05	0.72
1:w:1345:C:H2'	1:w:1346:G:H8	1.53	0.72
1:w:2782:G:N2	1:w:2783:G:H1'	2.04	0.72
11:I:17:ARG:NH2	11:I:47:ILE:HB	2.03	0.72
20:R:68:ARG:O	20:R:69:TYR:HB2	1.90	0.72
31:y:161:A:O2'	31:y:162:A:H5'	1.89	0.72
31:y:449:C:C2'	31:y:450:G:H5'	2.19	0.72
31:y:507:C:OP1	31:y:509:A:OP1	2.07	0.72
31:y:575:G:H4'	31:y:576:G:C5'	2.20	0.72
31:y:578:C:O2'	31:y:579:G:H5'	1.90	0.72
31:y:874:G:H21	41:i:11:THR:HG21	1.53	0.72
31:y:1269:A:O5'	31:y:1269:A:C8	2.43	0.72
31:y:1437:C:H6	31:y:1437:C:O5'	1.72	0.72
31:y:1500:A:OP2	31:y:1505:G:OP1	2.08	0.72
33:2:13:C:H2'	33:2:14:A:O4'	1.89	0.72
37:e:120:LEU:HD13	37:e:121:VAL:HG23	1.71	0.72
40:h:148:ASN:O	40:h:150:ALA:N	2.23	0.72
1:w:15:G:O2'	27:Y:18:ALA:HA	1.90	0.72
1:w:613:U:H2'	1:w:615:G:OP2	1.89	0.72
1:w:812:C:H3'	12:J:25:SER:HB3	1.70	0.72
1:w:1270:C:H5"	1:w:1271:G:C5'	2.19	0.72
1:w:2126:A:N6	1:w:2163:C:H4'	2.05	0.72
1:w:2520:C:H6	1:w:2520:C:O5'	1.72	0.72
2:x:43:C:N4	2:x:45:A:N6	2.38	0.72
14:L:2:ARG:HG3	14:L:3:HIS:N	2.01	0.72
21:S:50:ARG:HG3	21:S:54:LYS:NZ	2.05	0.72
26:X:8:LEU:CD2	26:X:33:GLN:H	2.03	0.72
31:y:8:A:HO2'	31:y:9:G:C4'	2.03	0.72
31:y:60:A:C4'	31:y:61:G:O5'	2.37	0.72
31:y:262:A:C5	31:y:263:A:N6	2.57	0.72
31:y:452:A:H62	31:y:480:U:H3	1.38	0.72
31:y:874:G:H2'	31:y:875:C:H6	1.51	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:h:108:ALA:HB1	40:h:119:ARG:HG3	1.71	0.72
42:j:27:THR:O	42:j:63:ILE:HB	1.90	0.72
52:t:33:THR:HG22	52:t:50:ALA:O	1.90	0.72
1:w:273(B):G:H3'	1:w:273(C):C:H5"	1.72	0.71
1:w:2383:G:C2'	1:w:2384:G:H5'	2.19	0.71
1:w:2745:C:O3'	1:w:2746:U:C5'	2.38	0.71
1:w:2756:U:H3	1:w:2758:A:H62	1.38	0.71
2:x:42:C:H3'	2:x:43:C:C6	2.24	0.71
2:x:48:A:H5'	15:M:95:HIS:ND1	2.04	0.71
4:B:106:ILE:HG22	4:B:197:GLY:N	2.05	0.71
5:C:77:ILE:HG22	5:C:78:LEU:N	2.04	0.71
6:D:69:ARG:HH21	6:D:69:ARG:HG3	1.53	0.71
7:E:144:ILE:HG23	7:E:147:ASP:CB	2.18	0.71
10:H:29:PRO:HB3	10:H:64:ASP:HB3	1.72	0.71
13:K:64:ILE:HD11	13:K:106:VAL:HG22	1.71	0.71
15:M:25:ARG:NE	15:M:89:ARG:NH1	2.37	0.71
25:W:47:ASN:HB2	25:W:51:ARG:CZ	2.20	0.71
31:y:90:C:H2'	31:y:91:C:H6	1.54	0.71
31:y:645:C:H2'	31:y:646:U:H6	1.55	0.71
31:y:834:C:C2	31:y:853:G:N2	2.58	0.71
31:y:1064:G:O2'	31:y:1065:U:OP2	2.06	0.71
31:y:1254:C:OP1	43:k:45:ARG:HG2	1.90	0.71
39:g:50:TYR:CE1	51:s:77:GLY:HA2	2.25	0.71
43:k:62:HIS:O	47:o:59:ALA:HB3	1.88	0.71
45:m:35:VAL:H	45:m:57:VAL:HG13	1.55	0.71
1:w:784:A:C5'	1:w:2588:G:OP1	2.37	0.71
2:x:33:G:O6	2:x:48:A:N6	2.22	0.71
6:D:129:GLY:O	6:D:161:ALA:HA	1.90	0.71
10:H:135:LEU:H	10:H:135:LEU:HD12	1.53	0.71
24:V:9:GLY:HA3	24:V:61:ARG:CZ	2.20	0.71
31:y:189:U:O2	50:r:63:ARG:NH2	2.22	0.71
31:y:291:C:H3'	31:y:305:G:H21	1.52	0.71
31:y:533:A:N6	31:y:536:C:N1	2.39	0.71
31:y:737:A:O2'	31:y:738:C:H5'	1.90	0.71
31:y:1058:G:H2'	31:y:1059:C:H5'	1.71	0.71
31:y:1221:G:H4'	52:t:77:THR:HG21	1.71	0.71
31:y:1379:G:H5"	40:h:4:ARG:HB2	1.70	0.71
37:e:78:LEU:HD22	37:e:79:PHE:N	2.05	0.71
37:e:115:ARG:O	37:e:118:ARG:HG2	1.89	0.71
38:f:79:GLU:HG2	38:f:93:PRO:HD3	1.71	0.71
1:w:395:U:H2'	1:w:396:G:C8	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:463:G:H1'	1:w:467:G:N2	2.05	0.71
1:w:518:G:H1'	19:Q:77:ASP:OD1	1.89	0.71
1:w:942:G:H2'	1:w:943:U:O4'	1.89	0.71
1:w:1277:G:H21	14:L:23:ASN:CG	1.98	0.71
1:w:2049:G:C6	1:w:2050:C:N4	2.58	0.71
1:w:2710:C:C2	1:w:2711:A:C8	2.77	0.71
3:A:21:TYR:O	3:A:225:ILE:HA	1.91	0.71
17:O:44:ASN:O	17:O:48:ALA:HB2	1.90	0.71
31:y:131:C:H2'	31:y:132:C:H6	1.55	0.71
31:y:245:C:N4	31:y:283:C:H42	1.81	0.71
31:y:524:G:H2'	31:y:525:C:C6	2.25	0.71
31:y:671:G:C6	31:y:736:C:N4	2.58	0.71
31:y:794:A:H2'	31:y:795:C:H6	1.53	0.71
31:y:910:C:O2'	31:y:911:U:H5'	1.90	0.71
31:y:1399:C:C4'	31:y:1400:5MC:H5'	2.19	0.71
1:w:1701:A:H2'	1:w:1702:G:H5'	1.73	0.71
1:w:1920:C:H5"	31:y:1517:G:C5	2.25	0.71
1:w:2239:G:C5'	4:B:232:PRO:HG2	2.19	0.71
2:x:8:U:H4'	15:M:89:ARG:CZ	2.19	0.71
2:x:8:U:H5'	2:x:9:G:OP1	1.89	0.71
2:x:72:G:H8	2:x:72:G:O5'	1.73	0.71
4:B:80:ALA:HB3	4:B:94:LEU:O	1.91	0.71
7:E:43:LEU:HG	7:E:153:ARG:HE	1.54	0.71
13:K:37:LEU:HB2	13:K:127:ILE:HB	1.72	0.71
19:Q:80:PRO:HD2	19:Q:102:HIS:NE2	2.05	0.71
23:U:28:GLY:H	23:U:69:PHE:HB2	1.55	0.71
26:X:8:LEU:HD21	26:X:33:GLN:H	1.55	0.71
31:y:136:C:H4'	49:q:1:MET:H3	1.55	0.71
31:y:138:G:H2'	31:y:139:G:C8	2.25	0.71
31:y:533:A:N6	31:y:536:C:C2	2.57	0.71
31:y:689:C:OP2	44:l:55:LYS:NZ	2.16	0.71
31:y:102(C):C:OP1	31:y:102(C):C:H4'	1.89	0.71
31:y:1221:G:H5'	52:t:36:ARG:NH2	2.05	0.71
33:2:16:U:C2'	33:2:17:U:H5'	2.19	0.71
37:e:170:VAL:HG23	37:e:171:GLY:N	2.04	0.71
46:n:88:ARG:HG3	46:n:98:VAL:HG12	1.70	0.71
1:w:557:U:H2'	1:w:558:G:O4'	1.90	0.71
1:w:838:C:H2'	1:w:839:U:H5'	1.71	0.71
1:w:896:A:H62	22:T:174:VAL:H	1.36	0.71
1:w:960:A:H4'	1:w:2457:U:H5'	1.71	0.71
1:w:1305:C:H5'	1:w:1305:C:H6	1.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2052:G:H5'	5:C:140:SER:OG	1.90	0.71
1:w:2099:U:H2'	1:w:2100:G:C8	2.25	0.71
1:w:2334:G:H21	15:M:14:VAL:HG21	1.53	0.71
1:w:2601:C:H4'	32:z:74:C:O3'	1.90	0.71
6:D:181:ILE:HD11	6:D:185:GLU:O	1.90	0.71
17:O:27:LEU:CD1	17:O:34:LYS:HG3	2.21	0.71
21:S:67:LEU:CD1	21:S:68:HIS:H	2.03	0.71
25:W:55:ARG:HH11	25:W:55:ARG:H	1.38	0.71
31:y:287:U:H2'	31:y:288:A:C8	2.23	0.71
31:y:769:G:H3'	31:y:770:C:H5"	1.72	0.71
31:y:1221:G:H4'	52:t:77:THR:CG2	2.19	0.71
31:y:1533:C:H2'	31:y:1533:C:O2	1.89	0.71
37:e:93:PHE:O	37:e:97:LEU:HD23	1.90	0.71
40:h:103:TRP:CH2	40:h:137:LYS:HB3	2.24	0.71
1:w:322:A:H5'	1:w:340:A:O4'	1.89	0.71
1:w:988:A:H8	1:w:988:A:O5'	1.72	0.71
1:w:995:C:H1'	17:O:61:TRP:HZ2	1.54	0.71
1:w:1068:G:N2	1:w:1096:A:H5'	2.05	0.71
1:w:1160:G:H8	1:w:1160:G:O5'	1.73	0.71
1:w:2592:G:H2'	1:w:2593:U:O4'	1.90	0.71
1:w:2712(B):A:H3'	1:w:2713:A:C5'	2.20	0.71
1:w:2876:G:H2'	1:w:2877:G:C8	2.25	0.71
2:x:113:C:H2'	15:M:47:THR:HG21	1.70	0.71
7:E:122:PRO:HB2	7:E:173:LEU:HD22	1.70	0.71
10:H:119:GLU:HG3	10:H:145:VAL:HG23	1.70	0.71
15:M:17:ARG:HG2	15:M:89:ARG:HA	1.72	0.71
27:Y:31:VAL:HG22	27:Y:40:LYS:O	1.90	0.71
31:y:89:U:H2'	31:y:90:C:C6	2.26	0.71
31:y:227:G:H21	49:q:62:VAL:CG1	2.02	0.71
31:y:1141:C:H3'	31:y:1142:G:H5"	1.71	0.71
36:d:120:VAL:CG1	36:d:134:ILE:HG22	2.20	0.71
44:l:62:GLN:HB2	44:l:93:GLN:CD	2.15	0.71
1:w:1443:G:H2'	1:w:1444:G:C8	2.25	0.71
1:w:1576:U:H2'	1:w:1577:C:C5	2.25	0.71
1:w:2742:C:O2'	1:w:2743:C:H5'	1.91	0.71
1:w:2811:G:H5'	5:C:61:ARG:HG2	1.73	0.71
4:B:200:ASP:C	4:B:202:LYS:H	1.98	0.71
7:E:129:GLY:HA3	7:E:161:THR:O	1.91	0.71
17:O:84:LYS:HE2	17:O:84:LYS:H	1.54	0.71
19:Q:76:VAL:HA	19:Q:103:ILE:HG22	1.70	0.71
20:R:8:ILE:HG13	20:R:42:ALA:HB1	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:Z:14:LYS:O	28:Z:20:ALA:HB1	1.90	0.71
31:y:68:G:H22	31:y:101:A:H2	1.37	0.71
31:y:543:C:H2'	31:y:544:G:C8	2.25	0.71
31:y:689:C:P	44:l:27:ASN:HD21	2.13	0.71
31:y:1091:U:H2'	31:y:1093:A:OP2	1.89	0.71
36:d:59:ARG:HH11	36:d:64:VAL:HG21	1.56	0.71
37:e:9:CYS:CA	37:e:26:CYS:SG	2.76	0.71
41:i:6:ILE:O	41:i:10:LEU:HG	1.89	0.71
41:i:53:VAL:HB	41:i:58:TYR:CD1	2.16	0.71
45:m:35:VAL:N	45:m:57:VAL:HG13	2.06	0.71
48:p:53:HIS:O	48:p:57:LEU:HB2	1.90	0.71
1:w:466:A:H8	1:w:466:A:O5'	1.73	0.71
1:w:993:G:H8	1:w:993:G:OP2	1.72	0.71
1:w:1170:G:H2'	1:w:1171:G:H8	1.55	0.71
1:w:1359:A:H62	1:w:1372:U:H3	1.39	0.71
1:w:2023:G:OP2	1:w:2617:C:H4'	1.91	0.71
1:w:2105:C:H2'	1:w:2106:G:H8	1.54	0.71
1:w:2123:G:N2	3:A:43:GLU:OE1	2.23	0.71
1:w:2512:C:H5"	1:w:2513:G:OP2	1.90	0.71
1:w:2525:G:O2'	1:w:2742:C:H4'	1.90	0.71
1:w:2661:G:C6	1:w:2662:A:N1	2.59	0.71
4:B:132:PRO:O	4:B:136:ILE:HG13	1.91	0.71
6:D:146:SER:H	6:D:167:TRP:NE1	1.89	0.71
9:G:109:ILE:C	9:G:111:PRO:HD3	2.16	0.71
10:H:39:ILE:HG13	10:H:40:ASP:H	1.55	0.71
26:X:4:LEU:HD13	26:X:58:VAL:HG22	1.71	0.71
29:a:22:VAL:HG21	29:a:53:PRO:HB2	1.73	0.71
31:y:154:C:H2'	31:y:155:C:C6	2.25	0.71
31:y:561:U:H2'	31:y:561:U:O2	1.90	0.71
31:y:712:A:H2'	31:y:713:G:O4'	1.90	0.71
31:y:1248:A:O2'	31:y:1249:C:H5'	1.90	0.71
31:y:1429:C:HO2'	31:y:1430:C:H5'	1.54	0.71
35:c:125:PRO:HA	35:c:128:GLU:HB2	1.73	0.71
48:p:31:LEU:O	48:p:35:ARG:HB2	1.91	0.71
52:t:48:THR:HB	52:t:62:ILE:CG2	2.21	0.71
1:w:1300:U:H5'	1:w:1300:U:H6	1.55	0.71
1:w:1304:C:H2'	1:w:1305:C:C5'	2.19	0.71
1:w:1341:U:H5"	1:w:1397:U:N3	2.06	0.71
1:w:1538:G:H2'	1:w:1539:G:N7	2.05	0.71
1:w:1602:U:C3'	1:w:1603:A:H5"	2.21	0.71
1:w:1637:A:H2'	1:w:1638:C:H6	1.52	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:38:LEU:HD12	9:G:38:LEU:N	2.06	0.71
11:I:77:ILE:HG12	16:N:74:ARG:H	1.54	0.71
31:y:195:A:H1'	31:y:222:U:O2'	1.91	0.71
31:y:410:G:OP2	37:e:25:ARG:CG	2.38	0.71
31:y:428:G:C1'	31:y:430:A:C8	2.73	0.71
31:y:556:C:H2'	31:y:557:G:O4'	1.91	0.71
31:y:849:C:O2'	31:y:850:U:H5'	1.90	0.71
31:y:1294:G:H2'	31:y:1295:G:C8	2.25	0.71
31:y:1310:G:H2'	31:y:1311:G:H8	1.56	0.71
31:y:1350:A:N3	40:h:33:ASP:OD1	2.23	0.71
31:y:1531:A:N1	34:3:6:G:H8	1.87	0.71
33:2:6:U:C2'	33:2:7:U:H5"	2.21	0.71
33:2:19:G:H5"	33:2:20:G:OP1	1.89	0.71
37:e:65:ARG:HH11	37:e:65:ARG:HG2	1.54	0.71
1:w:453:C:H2'	1:w:454:A:H5'	1.73	0.71
1:w:602:G:H2'	1:w:655:A:C2	2.26	0.71
1:w:673:C:H2'	1:w:674:G:H5'	1.72	0.71
1:w:897:C:H2'	1:w:898:C:C6	2.26	0.71
1:w:1233:C:H2'	1:w:1234:U:C6	2.26	0.71
1:w:1313:U:O3'	1:w:1332:G:H4'	1.91	0.71
1:w:2745:C:O3'	1:w:2746:U:H5'	1.89	0.71
2:x:63:G:H2'	2:x:64:C:C5'	2.18	0.71
22:T:110:GLY:HA3	22:T:146:ILE:HD12	1.72	0.71
22:T:151:HIS:CB	22:T:168:GLU:HA	2.20	0.71
24:V:69:LYS:HG3	24:V:70:VAL:N	2.04	0.71
31:y:32:A:H2'	31:y:33:A:C8	2.26	0.71
31:y:325:A:H2'	31:y:326:G:O4'	1.91	0.71
31:y:608:A:C2'	31:y:609:A:H5'	2.21	0.71
31:y:625:G:H5'	49:q:16:HIS:HB3	1.71	0.71
31:y:1211:U:H1'	31:y:1213:A:C2	2.26	0.71
31:y:1354:C:H2'	31:y:1355:G:C8	2.25	0.71
37:e:199:ASN:HD22	37:e:202:LEU:HG	1.56	0.71
51:s:84:LYS:HA	51:s:84:LYS:HE2	1.73	0.71
52:t:64:GLU:O	52:t:66:MET:N	2.23	0.71
1:w:89:G:H2'	1:w:90:U:O4'	1.90	0.70
1:w:164:U:H3'	1:w:165:U:H5'	1.73	0.70
1:w:309:G:H2'	1:w:330:A:N1	2.06	0.70
1:w:527:C:C5	1:w:2779:U:C2	2.79	0.70
1:w:817:C:O2'	1:w:839:U:OP1	2.08	0.70
1:w:1252:G:N2	17:O:33:ARG:HD3	2.05	0.70
1:w:1321:A:H2'	1:w:1322:A:H8	1.53	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1716:U:H2'	1:w:1717:G:N7	2.05	0.70
1:w:1911:U:H3	1:w:1920:C:H42	1.39	0.70
1:w:2261:C:OP2	23:U:14:ARG:HB2	1.91	0.70
1:w:2476:A:H2	1:w:2481:G:N1	1.89	0.70
3:A:48:LEU:HB2	3:A:209:PHE:O	1.90	0.70
4:B:15:PHE:O	4:B:16:MET:HG3	1.91	0.70
7:E:126:ASP:CB	7:E:130:ASN:HB2	2.20	0.70
16:N:90:GLN:HB3	16:N:120:ARG:NH1	2.06	0.70
18:P:18:LEU:O	18:P:19:LYS:HB2	1.90	0.70
31:y:136:C:H4'	49:q:1:MET:CB	2.20	0.70
31:y:156:G:C3'	31:y:157:G:H5"	2.21	0.70
31:y:407:G:H5'	37:e:118:ARG:HD3	1.73	0.70
31:y:476:G:H2'	31:y:477:G:C8	2.25	0.70
31:y:1447:G:OP2	31:y:1447:G:C8	2.44	0.70
38:f:33:VAL:HG21	38:f:109:ILE:HA	1.72	0.70
1:w:616:A:N1	6:D:173:PRO:HG2	2.06	0.70
1:w:666:G:H2'	1:w:667:U:C5	2.26	0.70
1:w:811:U:N3	1:w:1250:G:H3'	2.06	0.70
1:w:832:G:OP2	12:J:38:GLN:HA	1.91	0.70
1:w:1924:C:H4'	32:z:13:C:H4'	1.73	0.70
1:w:2271:G:H5"	23:U:20:ARG:CD	2.21	0.70
1:w:2659:G:H2'	1:w:2661:G:OP2	1.90	0.70
1:w:2662:A:O5'	1:w:2662:A:C8	2.44	0.70
1:w:2803:C:O2'	1:w:2804:C:H5"	1.91	0.70
5:C:173:VAL:H	5:C:183:LEU:HD11	1.54	0.70
6:D:150:LEU:O	6:D:187:LEU:HA	1.90	0.70
10:H:49:LEU:HA	10:H:52:LYS:HE2	1.73	0.70
10:H:62:ARG:NE	10:H:63:PRO:HD2	2.06	0.70
11:I:1:MET:H2	11:I:67:LYS:CG	2.04	0.70
16:N:64:ARG:HD3	16:N:102:ILE:HD11	1.72	0.70
22:T:130:PRO:HA	22:T:133:ILE:CG1	2.21	0.70
31:y:298:A:N1	31:y:299:G:C6	2.58	0.70
31:y:491:G:H2'	31:y:492:G:H8	1.53	0.70
36:d:87:LEU:HD12	36:d:88:ARG:N	2.06	0.70
37:e:134:ASP:O	37:e:136:PRO:HD3	1.92	0.70
45:m:45:LYS:HG2	45:m:91:ASP:O	1.90	0.70
53:u:45:GLN:HG3	53:u:91:LEU:HD22	1.73	0.70
1:w:671:C:OP1	12:J:45:LEU:HB2	1.92	0.70
1:w:1784:A:H1'	1:w:1785:A:C8	2.26	0.70
1:w:2658:C:H2'	1:w:2659:G:O4'	1.91	0.70
7:E:46:ALA:HA	7:E:53:LEU:CD2	2.20	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:133:HIS:NE2	9:G:136:VAL:HG23	2.06	0.70
14:L:66:VAL:CA	14:L:68:ARG:HH12	2.04	0.70
31:y:243:A:O2'	31:y:244:U:OP2	2.09	0.70
31:y:382:A:H2'	31:y:383:A:C8	2.26	0.70
31:y:755:G:C6	31:y:756:C:N4	2.59	0.70
31:y:1114:C:H2'	31:y:1115:C:H6	1.56	0.70
31:y:1187:G:O2'	47:o:60:SER:HB2	1.90	0.70
35:c:34:ALA:O	35:c:41:ILE:HB	1.91	0.70
36:d:148:GLY:CA	36:d:203:PHE:HB3	2.21	0.70
40:h:8:GLU:HG3	40:h:9:VAL:N	2.04	0.70
41:i:12:ARG:NH2	41:i:25:ASP:HB2	2.06	0.70
1:w:241:A:O2'	1:w:242:G:H4'	1.90	0.70
1:w:363(G):A:N3	1:w:364:C:H5	1.90	0.70
1:w:1511:A:H2'	1:w:1512:G:H8	1.55	0.70
1:w:1798:U:O2	1:w:1802:A:H2	1.73	0.70
1:w:2839:G:H5"	14:L:46:GLY:CA	2.21	0.70
6:D:128:ASN:HA	6:D:134:PHE:CZ	2.26	0.70
13:K:24:GLY:C	13:K:98:LYS:HD3	2.16	0.70
16:N:31:SER:HB3	16:N:42:ILE:C	2.16	0.70
31:y:728:A:H2'	31:y:729:A:C8	2.26	0.70
31:y:998(A):G:H2'	31:y:998(B):C:H5'	1.73	0.70
31:y:1074:G:H2'	31:y:1075:C:C6	2.27	0.70
31:y:1086:U:H2'	31:y:1087:G:C8	2.26	0.70
36:d:151:VAL:HG11	36:d:168:ALA:HB3	1.74	0.70
36:d:181:ASN:HB2	36:d:205:GLY:HA2	1.74	0.70
40:h:31:MET:HG2	40:h:32:ARG:N	2.07	0.70
41:i:85:ARG:HD3	41:i:86:ILE:H	1.57	0.70
45:m:109:VAL:HG11	45:m:112:ARG:HD3	1.74	0.70
47:o:8:GLU:HG2	47:o:9:LYS:N	2.07	0.70
53:u:83:ARG:O	53:u:87:LYS:HB2	1.91	0.70
1:w:106:C:O2	1:w:293:U:H1'	1.91	0.70
1:w:1021:A:H62	1:w:1141:U:H3	0.83	0.70
1:w:1886:C:H2'	1:w:1887:C:H6	1.55	0.70
1:w:2747:G:O6	1:w:2754:U:H3'	1.91	0.70
1:w:2757:A:H2'	1:w:2758:A:H8	1.57	0.70
1:w:2807:G:C3'	1:w:2808:U:H5"	2.21	0.70
3:A:27:ALA:CB	3:A:186:LEU:HD11	2.21	0.70
6:D:120:LEU:HD21	6:D:123:ALA:HB2	1.73	0.70
17:O:33:ARG:O	17:O:36:ARG:HB3	1.90	0.70
22:T:110:GLY:HA3	22:T:146:ILE:CG2	2.21	0.70
23:U:49:LYS:O	23:U:81:VAL:HB	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:67:VAL:HG13	23:U:79:VAL:CG1	2.21	0.70
31:y:280:C:C4	50:r:39:SER:HB3	2.26	0.70
31:y:890:G:N2	31:y:906:G:H3'	2.06	0.70
31:y:1375:A:H5'	40:h:29:LYS:CG	2.15	0.70
31:y:1443:G:C4'	31:y:1446:A:H5'	2.21	0.70
45:m:112:ARG:HH11	45:m:112:ARG:HB3	1.56	0.70
1:w:674:G:H5"	6:D:72:ASP:HB2	1.71	0.70
1:w:717:G:H2'	1:w:718:A:H5'	1.74	0.70
1:w:1118:C:H2'	1:w:1119:C:C6	2.26	0.70
1:w:1246:A:OP2	12:J:18:ARG:HD3	1.92	0.70
1:w:2656:U:H2'	1:w:2657:A:H8	1.56	0.70
5:C:41:LYS:HG3	5:C:42:ASP:OD2	1.90	0.70
8:F:153:LYS:HD2	8:F:162:ILE:O	1.90	0.70
17:O:51:LYS:O	17:O:51:LYS:HD3	1.92	0.70
31:y:39:G:C6	31:y:404:U:C4	2.80	0.70
31:y:230:G:H8	31:y:230:G:O5'	1.73	0.70
31:y:321:A:H2	31:y:332:G:H22	1.38	0.70
31:y:780:A:O5'	31:y:780:A:C8	2.42	0.70
31:y:889:A:C4'	31:y:890:G:H4'	2.18	0.70
32:z:72:A:H2'	32:z:73:A:C5'	2.22	0.70
33:2:61:C:O2'	33:2:62:A:H5'	1.90	0.70
38:f:75:THR:HG22	38:f:76:ILE:H	1.56	0.70
38:f:76:ILE:HD11	38:f:120:THR:HB	1.73	0.70
40:h:8:GLU:CG	40:h:9:VAL:H	1.99	0.70
41:i:27:PRO:HA	41:i:58:TYR:HD2	1.57	0.70
48:p:64:ARG:HA	48:p:67:LEU:CD1	2.21	0.70
49:q:7:ALA:O	49:q:17:TYR:HA	1.92	0.70
50:r:17:LYS:HB2	50:r:45:HIS:CE1	2.26	0.70
1:w:1401:G:H2'	1:w:1402:C:C6	2.26	0.70
2:x:82:G:H2'	2:x:83:G:H8	1.56	0.70
3:A:197:LEU:HG	3:A:198:GLU:N	2.07	0.70
4:B:43:ARG:HD3	4:B:43:ARG:N	2.05	0.70
11:I:64:ARG:HB3	11:I:102:VAL:HG21	1.73	0.70
12:J:46:LYS:HB3	12:J:51:PHE:CZ	2.26	0.70
15:M:11:LYS:O	15:M:14:VAL:HG12	1.91	0.70
17:O:40:PHE:CB	18:P:78:LYS:HD3	2.21	0.70
31:y:175:C:O2'	53:u:25:ARG:NH2	2.21	0.70
31:y:273:A:O2'	31:y:274:A:H5'	1.92	0.70
31:y:1310:G:H2'	31:y:1311:G:C8	2.27	0.70
36:d:43:LEU:HD13	36:d:44:GLU:HG2	1.73	0.70
37:e:124:GLY:HA3	37:e:134:ASP:O	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:128:VAL:HA	37:e:146:ILE:HG12	1.72	0.70
52:t:19:VAL:HG13	52:t:20:LEU:H	1.56	0.70
1:w:18:C:O2'	1:w:553:U:H5"	1.90	0.70
1:w:287:C:H2'	1:w:288:C:C6	2.27	0.70
1:w:488:G:H4'	19:Q:49:LYS:HE3	1.73	0.70
1:w:671:C:H5	12:J:41:ARG:CD	2.02	0.70
1:w:871:U:H6	1:w:871:U:O5'	1.73	0.70
1:w:1005:C:C2'	1:w:1006:C:H5"	2.22	0.70
1:w:1270:C:C5'	1:w:1271:G:H5'	2.22	0.70
1:w:1620:G:H4'	28:Z:2:LYS:NZ	2.07	0.70
1:w:2394:C:O2'	1:w:2395:C:H5'	1.91	0.70
1:w:2575:C:C5'	5:C:144:ARG:HH11	2.04	0.70
1:w:2748:A:C4'	8:F:67:LEU:HB2	2.22	0.70
3:A:193:PHE:CD2	3:A:193:PHE:C	2.70	0.70
11:I:1:MET:C	11:I:2:ILE:HD12	2.16	0.70
11:I:13:ASN:H	11:I:97:ARG:HB2	1.55	0.70
22:T:19:ARG:HH21	22:T:25:PRO:HB2	1.56	0.70
24:V:9:GLY:HA3	24:V:61:ARG:NH2	2.06	0.70
31:y:332:G:H2'	31:y:333:G:H8	1.56	0.70
31:y:376:G:O3'	49:q:5:ARG:NH1	2.23	0.70
31:y:406:G:H21	37:e:119:GLN:HE22	1.39	0.70
31:y:407:G:O5'	31:y:407:G:C8	2.44	0.70
31:y:635:G:H2'	31:y:636:U:H5'	1.72	0.70
31:y:1225:A:C5'	31:y:1226:C:OP2	2.40	0.70
31:y:1401:G:OP2	31:y:1401:G:C8	2.45	0.70
31:y:1500:A:OP2	31:y:1505:G:P	2.50	0.70
37:e:89:THR:O	37:e:94:LEU:HD22	1.91	0.70
37:e:158:ILE:H	37:e:158:ILE:CD1	2.01	0.70
1:w:1516:U:HO2'	1:w:1517:G:H8	1.35	0.70
1:w:2557:G:H2'	1:w:2558:C:H5	1.55	0.70
1:w:2578:G:C1'	5:C:139:GLY:HA3	2.15	0.70
1:w:2709:G:H2'	1:w:2710:C:H6	1.56	0.70
4:B:52:ARG:NH2	4:B:220:HIS:HA	2.07	0.70
4:B:133:LEU:H	4:B:133:LEU:HD22	1.57	0.70
4:B:255:LYS:HD3	4:B:255:LYS:O	1.91	0.70
8:F:102:ALA:HB2	8:F:117:PRO:HD3	1.74	0.70
14:L:9:LYS:CG	14:L:10:LEU:H	2.00	0.70
31:y:109:A:H2'	31:y:326:G:H22	1.52	0.70
31:y:529:G:H2'	31:y:530:G:H5"	1.72	0.70
31:y:574:A:H1'	31:y:882:C:O2'	1.92	0.70
31:y:716:A:C2'	31:y:717:C:H5'	2.20	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:801:U:H2'	31:y:802:A:O4'	1.91	0.70
31:y:911:U:H2'	31:y:912:C:C6	2.25	0.70
36:d:44:GLU:OE1	36:d:48:TYR:HA	1.91	0.70
37:e:12:CYS:HB3	37:e:19:LEU:H	1.55	0.70
37:e:82:ALA:HB2	37:e:93:PHE:CD1	2.26	0.70
37:e:108:LEU:HD23	37:e:176:LEU:HD12	1.73	0.70
1:w:29:U:OP1	1:w:583:G:H4'	1.92	0.70
1:w:328:U:H3	1:w:332:A:N6	1.84	0.70
1:w:828:U:H4'	1:w:831:G:N1	2.07	0.70
1:w:874:G:H2'	1:w:875:G:C8	2.26	0.70
1:w:1717:G:C4	1:w:1718:G:H1'	2.27	0.70
1:w:1759:A:C2	1:w:2697:G:H1'	2.27	0.70
1:w:1818:U:C5'	4:B:157:ARG:HB2	2.21	0.70
1:w:2012:G:O2'	1:w:2013:A:H5"	1.91	0.70
1:w:2478:A:H5'	1:w:2527:C:O2'	1.92	0.70
1:w:2638:G:H21	1:w:2778:A:H62	1.37	0.70
1:w:2825:G:C8	1:w:2826:A:C8	2.80	0.70
2:x:20:C:C3'	2:x:21:G:H5"	2.22	0.70
4:B:111:LEU:CD1	4:B:115:GLN:HB3	2.22	0.70
5:C:176:ILE:HB	5:C:181:LEU:O	1.92	0.70
6:D:137:TRP:HA	6:D:137:TRP:HE3	1.55	0.70
9:G:6:LEU:HD13	9:G:35:LEU:HD22	1.73	0.70
12:J:85:LEU:HD11	12:J:117:GLU:C	2.17	0.70
22:T:99:TYR:HA	22:T:124:ILE:O	1.92	0.70
28:Z:19:ARG:HG2	28:Z:23:ARG:NH2	2.07	0.70
31:y:136:C:O2'	49:q:63:GLY:HA2	1.91	0.70
31:y:249:U:O2'	31:y:252:U:H4'	1.90	0.70
31:y:371:G:H21	31:y:373:A:H62	1.39	0.70
31:y:474:G:OP1	49:q:75:ARG:HG3	1.92	0.70
31:y:528:C:C2'	31:y:529:G:C5'	2.60	0.70
31:y:573:A:H2'	31:y:574:A:C8	2.27	0.70
31:y:965:A:P	31:y:1198:G:C5'	2.80	0.70
31:y:966:M2G:O2'	31:y:967:5MC:O5'	2.10	0.70
31:y:995:C:O2'	31:y:996:A:H5'	1.92	0.70
31:y:1268:A:H1'	54:v:20:LYS:HB2	1.74	0.70
31:y:1346:A:H1'	31:y:1348:U:C6	2.27	0.70
32:z:14:A:H2'	32:z:15:G:O4'	1.91	0.70
1:w:220:G:C4'	1:w:234:C:H4'	2.21	0.69
1:w:458:G:HO2'	1:w:459:U:H5	1.34	0.69
1:w:1698:A:O4'	1:w:1700:A:H5'	1.92	0.69
1:w:1965:C:H3'	1:w:1966:A:H5"	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2455:G:H2'	1:w:2456:C:C6	2.27	0.69
1:w:2638:G:H1'	1:w:2639:A:C8	2.26	0.69
1:w:2697:G:O2'	1:w:2698:U:H5'	1.91	0.69
5:C:169:ASN:C	5:C:170:LEU:HD12	2.16	0.69
20:R:31:HIS:CG	20:R:32:PRO:HD2	2.27	0.69
24:V:24:ALA:HB1	24:V:36:GLY:HA2	1.74	0.69
30:b:3:VAL:HG12	30:b:35:ARG:H	1.57	0.69
31:y:7:G:C1'	31:y:8:A:OP1	2.40	0.69
31:y:505:G:H5'	31:y:534:U:H2'	1.72	0.69
31:y:507:C:OP2	31:y:508:C:H3'	1.91	0.69
31:y:952:U:H2'	31:y:953:G:C5'	2.21	0.69
31:y:1252:A:N3	31:y:1253:G:H1'	2.07	0.69
35:c:223:ILE:HD11	35:c:230:VAL:HG23	1.73	0.69
40:h:111:ARG:HD3	40:h:112:PRO:HD2	1.74	0.69
1:w:811:U:H3	1:w:1250:G:H5'	1.56	0.69
1:w:1139:G:OP2	1:w:1139:G:H8	1.74	0.69
1:w:1912:A:N1	31:y:1408:A:O4'	2.25	0.69
1:w:2565:A:H2'	1:w:2566:A:O4'	1.92	0.69
1:w:2633:G:H21	5:C:64:LYS:CD	2.05	0.69
1:w:2638:G:N2	1:w:2778:A:H62	1.90	0.69
3:A:30:VAL:HA	3:A:33:LEU:CB	2.20	0.69
4:B:63:ARG:HG3	4:B:63:ARG:HH11	1.57	0.69
5:C:25:VAL:HG13	5:C:183:LEU:HA	1.72	0.69
11:I:64:ARG:HE	11:I:83:ALA:HB2	1.57	0.69
15:M:28:VAL:H	15:M:89:ARG:HB2	1.57	0.69
15:M:67:ARG:N	15:M:100:ALA:HB1	2.08	0.69
23:U:36:ILE:HA	23:U:60:PHE:CB	2.20	0.69
31:y:347:G:H2'	31:y:348:G:O4'	1.92	0.69
31:y:553:A:C4'	45:m:30:PRO:HD2	2.22	0.69
31:y:1022:G:H2'	31:y:1023:G:H8	1.56	0.69
31:y:1364:U:O4'	54:v:14:TRP:HZ3	1.73	0.69
35:c:20:GLU:CG	35:c:23:ARG:HH22	2.04	0.69
40:h:20:ASP:HB3	40:h:23:VAL:HG23	1.74	0.69
41:i:26:VAL:HG11	41:i:61:VAL:HG13	1.74	0.69
46:n:90:LEU:C	46:n:92:HIS:H	2.00	0.69
49:q:40:ASP:HB3	49:q:48:TRP:CD1	2.26	0.69
52:t:45:VAL:C	52:t:47:HIS:H	1.99	0.69
1:w:41:C:C3'	1:w:43:G:P	2.80	0.69
1:w:463:G:H2'	1:w:465:G:OP2	1.91	0.69
1:w:1303:G:H2'	1:w:1304:C:O4'	1.93	0.69
1:w:1349:A:H2'	1:w:1349:A:N3	2.06	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1516:U:O2'	1:w:1517:G:C8	2.45	0.69
1:w:1605:C:H4'	1:w:1610:A:H62	1.55	0.69
1:w:2276:G:O2'	1:w:2277:G:H5'	1.92	0.69
1:w:2590:A:H5"	4:B:239:ARG:HD2	1.74	0.69
10:H:66:THR:O	10:H:68:ASN:N	2.25	0.69
11:I:6:THR:HG22	11:I:7:TYR:N	2.06	0.69
16:N:11:GLU:C	16:N:13:ARG:H	1.98	0.69
31:y:114:U:C2'	31:y:115:G:H5"	2.23	0.69
31:y:730:G:N2	31:y:765:G:H5"	2.08	0.69
31:y:1011:G:H2'	31:y:1012:U:C6	2.26	0.69
31:y:1452:C:H4'	31:y:1453:G:N3	2.08	0.69
1:w:335:C:H2'	1:w:336:C:H5	1.57	0.69
1:w:436:C:C3'	1:w:438:G:P	2.80	0.69
1:w:598:G:H8	1:w:598:G:O5'	1.75	0.69
1:w:632:A:H5'	12:J:67:MET:SD	2.32	0.69
1:w:1743:G:H2'	1:w:1746:G:C8	2.27	0.69
1:w:2373:G:H2'	1:w:2374:C:C6	2.27	0.69
1:w:2635:C:H5'	5:C:77:ILE:HG21	1.74	0.69
1:w:2832:U:H1'	1:w:2883:A:N6	2.07	0.69
4:B:108:PRO:HA	4:B:195:ALA:O	1.91	0.69
5:C:116:VAL:HG22	5:C:117:MET:H	1.57	0.69
6:D:152:VAL:HG23	6:D:171:LEU:HD22	1.73	0.69
9:G:99:GLU:HB3	9:G:103:ARG:NH1	2.08	0.69
12:J:85:LEU:HD11	12:J:118:GLY:N	2.07	0.69
31:y:26:A:H4'	31:y:508:C:N4	2.06	0.69
31:y:191(G):G:HO2'	53:u:102:GLY:C	1.96	0.69
31:y:261:U:O4	53:u:79:ARG:NH1	2.25	0.69
31:y:562:C:H5"	31:y:563:A:OP1	1.91	0.69
31:y:831:U:C2	31:y:832:C:C5	2.80	0.69
31:y:1348:U:O2'	42:j:120:ARG:HB2	1.91	0.69
31:y:1433:A:N1	31:y:1434:A:C5	2.61	0.69
37:e:38:TYR:HD1	37:e:45:GLN:HB3	1.57	0.69
37:e:121:VAL:HG22	37:e:136:PRO:HB2	1.72	0.69
1:w:917:A:O2'	2:x:98:G:H4'	1.93	0.69
1:w:1088:A:H4'	1:w:1089:G:C8	2.27	0.69
1:w:1527:G:H21	1:w:1545:A:H62	1.39	0.69
1:w:2049:G:C5	1:w:2050:C:N4	2.60	0.69
1:w:2715:C:O2'	1:w:2716:U:H5'	1.92	0.69
4:B:10:THR:OG1	4:B:11:PRO:HD2	1.93	0.69
7:E:35:GLU:HB2	7:E:161:THR:HA	1.73	0.69
13:K:10:ARG:H	13:K:12:GLN:HE22	1.40	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:23:LEU:HG	19:Q:24:ILE:N	1.99	0.69
22:T:30:ASN:HD21	22:T:32:HIS:HB2	1.56	0.69
22:T:99:TYR:CD1	22:T:125:LEU:HD13	2.27	0.69
22:T:130:PRO:HA	22:T:133:ILE:HG12	1.72	0.69
22:T:150:LEU:HD11	22:T:154:ASP:OD2	1.91	0.69
26:X:27:GLY:HA2	26:X:29:ARG:HH12	1.57	0.69
31:y:193:C:O4'	53:u:60:GLU:HB3	1.92	0.69
31:y:326:G:H2'	31:y:327:A:C5'	2.22	0.69
31:y:528:C:H41	45:m:47:PRO:HB2	1.57	0.69
31:y:625:G:C5'	49:q:16:HIS:HB3	2.22	0.69
32:z:57:A:H2'	32:z:58:A:H5'	1.74	0.69
37:e:133:VAL:HG12	37:e:134:ASP:N	2.06	0.69
40:h:32:ARG:HA	40:h:32:ARG:NE	2.04	0.69
42:j:85:LEU:HD23	42:j:92:TYR:CB	2.21	0.69
54:v:19:GLY:C	54:v:21:TYR:H	2.00	0.69
1:w:6:A:H2'	1:w:7:G:C8	2.27	0.69
1:w:142:G:O2'	20:R:37:THR:HG22	1.92	0.69
1:w:448:U:O4	1:w:583:G:H1'	1.93	0.69
1:w:727:A:OP1	1:w:1432:C:H5'	1.92	0.69
1:w:792:G:H21	1:w:2072:G:H1'	1.58	0.69
1:w:915:C:C2'	1:w:916:G:H5"	2.23	0.69
1:w:2622:C:C2'	1:w:2825:G:H22	1.94	0.69
1:w:2705:A:H2'	1:w:2706:G:O4'	1.92	0.69
1:w:2711:A:OP1	1:w:2712:U:H6	1.73	0.69
1:w:2723:C:OP1	14:L:3:HIS:ND1	2.26	0.69
4:B:19:ALA:HB1	4:B:24:ILE:CD1	2.22	0.69
6:D:145:GLY:O	6:D:146:SER:HB2	1.93	0.69
6:D:179:TYR:O	6:D:182:VAL:HG22	1.92	0.69
14:L:53:HIS:HA	14:L:56:LYS:HD3	1.75	0.69
22:T:88:PHE:C	22:T:88:PHE:HD2	2.00	0.69
31:y:60:A:C2	31:y:107:G:N3	2.54	0.69
31:y:563:A:H5'	31:y:566:G:H21	1.56	0.69
31:y:992:U:O2'	31:y:993:G:OP2	2.10	0.69
31:y:1074:G:H2'	31:y:1075:C:H6	1.56	0.69
31:y:1223:C:C6	31:y:1223:C:C3'	2.76	0.69
31:y:1314:C:O2'	31:y:1315:U:H5'	1.92	0.69
32:z:40:C:H2'	32:z:41:C:H6	1.57	0.69
44:l:109:VAL:HG22	51:s:86:VAL:HA	1.75	0.69
51:s:47:THR:HG22	51:s:47:THR:O	1.93	0.69
51:s:59:SER:HB3	51:s:62:GLU:HB2	1.75	0.69
53:u:80:ARG:O	53:u:84:LEU:HB3	1.90	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:739:G:H5”	1:w:740:U:OP1	1.93	0.69
1:w:991:C:H2’	1:w:992:C:H5”	1.73	0.69
1:w:1241:A:H2’	1:w:1242:A:C8	2.28	0.69
1:w:1315:C:H1’	1:w:1393:A:N3	2.08	0.69
1:w:1426:G:H3’	1:w:1427:A:C5’	2.15	0.69
1:w:2588:G:H2’	1:w:2589:A:C4’	2.23	0.69
3:A:56:ASP:OD2	3:A:57:GLN:HG3	1.91	0.69
9:G:7:GLU:H	9:G:8:PRO:CD	2.05	0.69
10:H:78:VAL:HG23	10:H:79:ASN:OD1	1.92	0.69
13:K:24:GLY:O	13:K:25:ASP:HB3	1.93	0.69
19:Q:11:ARG:HB3	19:Q:98:LYS:CE	2.21	0.69
24:V:48:LYS:HA	24:V:63:ALA:O	1.92	0.69
31:y:22:G:H5”	31:y:885:G:H5’	1.75	0.69
31:y:380:G:N2	31:y:382:A:H3’	2.07	0.69
31:y:559:A:H4’	31:y:560:U:O3’	1.92	0.69
31:y:684:A:H1’	44:l:39:PRO:CG	2.21	0.69
31:y:831:U:C2’	31:y:832:C:H5”	2.22	0.69
31:y:1237:C:C3’	31:y:1238:A:H5’	2.20	0.69
31:y:1243:C:H6	31:y:1243:C:OP2	1.75	0.69
31:y:1359:C:OP1	47:o:33:VAL:HG23	1.92	0.69
31:y:1447:G:H8	31:y:1447:G:OP2	1.76	0.69
35:c:11:LEU:C	35:c:13:ALA:H	2.00	0.69
36:d:65:ALA:HB1	36:d:101:LEU:HA	1.74	0.69
49:q:46:PRO:O	49:q:47:ASP:HB2	1.90	0.69
53:u:18:GLN:HA	53:u:21:LYS:CE	2.22	0.69
1:w:153:C:H2’	1:w:154:G:H8	1.58	0.69
1:w:282:A:H2’	1:w:283:A:O4’	1.93	0.69
1:w:457:A:O2’	1:w:458:G:H4’	1.92	0.69
1:w:519:U:H5”	19:Q:25:ARG:HH12	1.57	0.69
1:w:732:C:H2’	1:w:733:G:O4’	1.93	0.69
1:w:1243:G:O2’	12:J:10:PRO:HD2	1.93	0.69
1:w:1533:C:H2’	1:w:1534:G:O4’	1.92	0.69
1:w:1567:A:H3’	4:B:60:ARG:NH2	2.08	0.69
1:w:2396:G:O2’	24:V:32:LYS:N	2.26	0.69
1:w:2839:G:C5’	14:L:46:GLY:CA	2.71	0.69
1:w:2848:G:H5’	16:N:96:ARG:HH21	1.56	0.69
1:w:2875:C:H2’	1:w:2876:G:H5”	1.74	0.69
3:A:21:TYR:N	3:A:21:TYR:HD2	1.88	0.69
4:B:56:GLY:HA2	4:B:213:ARG:O	1.92	0.69
7:E:169:ALA:O	7:E:172:LEU:HG	1.93	0.69
10:H:78:VAL:HG12	10:H:146:TYR:OH	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:3:MET:H	13:K:4:PRO:HD2	1.58	0.69
18:P:17:GLY:HA2	18:P:98:GLU:OE2	1.93	0.69
18:P:47:VAL:HG13	18:P:48:GLY:H	1.56	0.69
23:U:29:GLN:HG2	23:U:30:VAL:N	2.07	0.69
24:V:26:ARG:H	24:V:26:ARG:CD	2.06	0.69
26:X:7:LYS:CA	26:X:34:GLU:HA	2.22	0.69
27:Y:29:ILE:HD13	27:Y:29:ILE:H	1.58	0.69
31:y:160:A:OP1	31:y:160:A:H8	1.74	0.69
31:y:227:G:H21	49:q:62:VAL:HG12	1.58	0.69
31:y:376:G:OP2	49:q:67:THR:HG21	1.93	0.69
31:y:733:A:O2'	31:y:734:G:H5"	1.91	0.69
31:y:741:G:OP1	48:p:39:LEU:CD2	2.41	0.69
31:y:880:C:OP1	45:m:11:ARG:NH1	2.25	0.69
31:y:1064:G:O2'	31:y:1065:U:P	2.51	0.69
31:y:1113:C:C1'	36:d:11:ARG:HH12	2.06	0.69
31:y:1194:U:H2'	31:y:1195:C:C6	2.28	0.69
31:y:1305:G:O2'	31:y:1306:A:C8	2.45	0.69
31:y:1497:G:N3	31:y:1518:MA6:H2	2.08	0.69
31:y:1500:A:C2'	31:y:1501:C:H5'	2.23	0.69
32:z:64:G:H2'	32:z:65:C:H5"	1.73	0.69
35:c:61:LEU:HD21	35:c:161:ALA:HB2	1.75	0.69
36:d:21:ARG:HB3	43:k:92:THR:CG2	2.23	0.69
45:m:24:PRO:HD3	45:m:88:ARG:HH21	1.56	0.69
46:n:75:ALA:HA	46:n:78:ILE:CD1	2.22	0.69
47:o:26:ARG:NH2	47:o:43:CYS:HB3	2.07	0.69
1:w:141(B):C:H2'	1:w:142:G:C1'	2.22	0.69
1:w:295:G:H3'	1:w:296:C:H5"	1.74	0.69
1:w:1993:U:H2'	1:w:1994:C:H6	1.57	0.69
1:w:2018:G:H2'	1:w:2019:A:O4'	1.92	0.69
1:w:2611:U:OP2	5:C:133:LYS:HE3	1.91	0.69
1:w:2757:A:OP1	30:b:18:ARG:O	2.11	0.69
1:w:2888:C:H2'	1:w:2889:C:C6	2.27	0.69
10:H:62:ARG:HE	10:H:63:PRO:CD	2.05	0.69
10:H:102:PRO:HG2	10:H:103:GLY:H	1.58	0.69
12:J:17:LYS:HB3	12:J:19:VAL:HG23	1.74	0.69
13:K:125:LEU:HB3	13:K:126:PRO:CD	2.23	0.69
15:M:25:ARG:NH2	15:M:89:ARG:HH22	1.89	0.69
20:R:82:GLN:HG3	20:R:83:VAL:HG22	1.73	0.69
31:y:822:C:O2'	31:y:823:G:H5'	1.93	0.69
31:y:929:G:C2'	31:y:930:C:H5'	2.23	0.69
31:y:1165:C:H2'	31:y:1166:G:H8	1.56	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1291:G:H2'	31:y:1292:U:O4'	1.93	0.69
31:y:1315:U:C2'	31:y:1316:G:H5'	2.23	0.69
37:e:158:ILE:HD12	37:e:158:ILE:N	2.06	0.69
43:k:51:ARG:HB3	43:k:59:SER:CB	2.17	0.69
47:o:30:ALA:CA	47:o:33:VAL:HG13	2.08	0.69
50:r:96:GLN:CG	50:r:97:SER:H	2.05	0.69
1:w:433:C:H2'	1:w:434:U:C6	2.28	0.69
1:w:890:A:C3'	1:w:892:G:P	2.81	0.69
1:w:1193:G:H2'	1:w:1194:A:O4'	1.92	0.69
1:w:1924:C:H2'	1:w:1925:C:C6	2.28	0.69
3:A:225:ILE:CG2	3:A:226:ASN:N	2.56	0.69
4:B:20:ASP:C	4:B:24:ILE:HB	2.18	0.69
4:B:45:ASN:CG	4:B:46:GLN:H	2.01	0.69
6:D:32:VAL:O	6:D:36:LEU:HG	1.93	0.69
7:E:79:ASN:CG	7:E:80:PHE:N	2.50	0.69
13:K:40:ALA:O	13:K:97:VAL:HB	1.93	0.69
20:R:28:PHE:N	20:R:77:LYS:O	2.19	0.69
24:V:85:LEU:HD12	24:V:85:LEU:H	1.56	0.69
31:y:156:G:C2'	31:y:157:G:H5"	2.22	0.69
31:y:376:G:C5'	49:q:5:ARG:HD3	2.23	0.69
31:y:1469:G:O2'	31:y:1470:G:H5'	1.93	0.69
41:i:63:LEU:HB2	41:i:65:TYR:OH	1.93	0.69
43:k:40:LEU:CB	43:k:41:PRO:HD2	2.23	0.69
1:w:328:U:O4	1:w:332:A:N7	2.26	0.68
1:w:371:A:O2'	1:w:372:G:H4'	1.92	0.68
1:w:957:A:H5'	13:K:76:LYS:N	2.07	0.68
1:w:1500:G:H21	4:B:100:GLY:HA3	1.57	0.68
1:w:2246:G:H2'	1:w:2247:A:H8	1.58	0.68
1:w:2365:G:P	23:U:55:ARG:HG2	2.33	0.68
1:w:2401:U:H2'	1:w:2402:C:H5"	1.74	0.68
1:w:2597:G:H2'	1:w:2598:A:C8	2.28	0.68
1:w:2641:G:C2	1:w:2774:C:C2	2.82	0.68
1:w:2754:U:H6	1:w:2754:U:C5'	2.05	0.68
2:x:19:G:H2'	2:x:20:C:H5'	1.75	0.68
2:x:39:A:H1'	2:x:44:G:N2	2.08	0.68
5:C:122:PHE:HE2	5:C:138:PRO:HB3	1.57	0.68
6:D:146:SER:H	6:D:167:TRP:HE1	1.41	0.68
9:G:62:LYS:O	9:G:66:GLU:HG3	1.93	0.68
31:y:744:C:H4'	31:y:852:G:O2'	1.93	0.68
31:y:813:U:H5"	31:y:816:A:N6	2.08	0.68
31:y:883:C:O2'	31:y:884:U:H5'	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:945:G:C2	31:y:946:A:N7	2.61	0.68
31:y:1501:C:H5"	31:y:1502:A:OP2	1.93	0.68
31:y:1531:A:N1	34:3:6:G:OP2	2.26	0.68
48:p:39:LEU:HD12	48:p:56:LEU:HB3	1.75	0.68
1:w:270(D):C:C5	1:w:270(E):C:H1'	2.28	0.68
1:w:379:G:O3'	24:V:21:ARG:HD3	1.93	0.68
1:w:685:A:P	1:w:774:A:H61	2.16	0.68
1:w:829:A:N7	1:w:2248:C:H5'	2.08	0.68
1:w:1953:A:N1	1:w:2550:G:H4'	2.08	0.68
1:w:2658:C:O2'	1:w:2659:G:H5'	1.93	0.68
2:x:78:A:C3'	2:x:79:C:H5"	2.23	0.68
24:V:19:GLN:HG2	24:V:20:ARG:H	1.57	0.68
31:y:292:G:OP2	31:y:293:G:C8	2.46	0.68
31:y:330:C:H2'	31:y:331:G:H5'	1.75	0.68
31:y:955:U:H2'	31:y:956:U:H4'	1.76	0.68
38:f:13:ILE:HG12	38:f:14:ARG:H	1.58	0.68
38:f:43:LEU:HD11	38:f:65:ASN:ND2	2.08	0.68
42:j:85:LEU:CD2	42:j:92:TYR:HB2	2.23	0.68
43:k:27:ALA:HB1	43:k:34:VAL:HB	1.76	0.68
46:n:22:ILE:HG22	46:n:23:TYR:N	2.07	0.68
47:o:9:LYS:HE3	47:o:22:THR:HA	1.74	0.68
1:w:268:C:H3'	1:w:269:U:H5"	1.75	0.68
1:w:787:U:H3'	1:w:791:C:N4	2.02	0.68
1:w:1225:G:H4'	18:P:86:GLY:CA	2.23	0.68
1:w:1298:C:H2'	1:w:1299:G:C8	2.23	0.68
1:w:2061:G:H2'	1:w:2501:C:O2'	1.93	0.68
1:w:2082:A:H3'	1:w:2083:G:C8	2.28	0.68
1:w:2100:G:H2'	1:w:2101:G:H8	1.57	0.68
1:w:2396:G:C4'	24:V:32:LYS:H	2.05	0.68
1:w:2495:G:O3'	13:K:81:VAL:HG12	1.93	0.68
1:w:2562:U:H2'	1:w:2562:U:O2	1.92	0.68
1:w:2563:U:H5"	11:I:28:SER:HA	1.73	0.68
2:x:8:U:H2'	2:x:9:G:C8	2.29	0.68
2:x:41:U:OP1	2:x:42:C:H5"	1.93	0.68
4:B:52:ARG:HH22	4:B:220:HIS:HA	1.57	0.68
4:B:121:PRO:HA	4:B:131:LEU:HG	1.76	0.68
5:C:93:VAL:HG11	5:C:181:LEU:O	1.92	0.68
7:E:105:LYS:O	7:E:109:VAL:HB	1.93	0.68
17:O:106:PHE:O	17:O:110:VAL:HG23	1.92	0.68
31:y:186(A):C:O4'	53:u:81:LYS:HG3	1.93	0.68
31:y:740:U:O2'	48:p:52:SER:OG	2.10	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1420:C:H2'	31:y:1421:G:O4'	1.93	0.68
31:y:1426:C:O2	31:y:1426:C:H2'	1.94	0.68
36:d:134:ILE:HG13	36:d:135:LYS:H	1.58	0.68
50:r:90:ILE:HG13	50:r:91:ARG:N	2.08	0.68
1:w:255:A:O2'	1:w:384:U:OP1	2.06	0.68
1:w:2320:A:N3	1:w:2320:A:H2'	2.09	0.68
1:w:2372:G:H2'	1:w:2373:G:C8	2.29	0.68
1:w:2393:A:H4'	12:J:62:LEU:HB3	1.74	0.68
1:w:2524:G:O6	1:w:2540:C:N4	2.27	0.68
3:A:41:THR:HG22	3:A:42:VAL:H	1.58	0.68
10:H:79:ASN:O	10:H:83:ILE:CD1	2.38	0.68
12:J:82:GLY:HA2	12:J:113:LYS:O	1.94	0.68
13:K:65:PHE:CE1	13:K:105:GLU:HB2	2.28	0.68
16:N:26:ASP:HA	16:N:48:ILE:HD12	1.75	0.68
18:P:47:VAL:HG22	18:P:48:GLY:H	1.57	0.68
31:y:136:C:H4'	49:q:1:MET:HB2	1.74	0.68
31:y:877:C:O2'	31:y:878:G:H5'	1.92	0.68
31:y:103(B):G:O2'	31:y:103(C):G:H5'	1.93	0.68
31:y:1141:C:H2'	31:y:1142:G:H5"	1.74	0.68
33:2:43:G:H2'	33:2:44:A:H8	1.59	0.68
37:e:22:LYS:HD2	37:e:25:ARG:HB2	1.75	0.68
37:e:82:ALA:CA	37:e:87:GLY:HA3	2.23	0.68
37:e:173:TRP:CD1	37:e:185:PHE:HA	2.29	0.68
42:j:50:LEU:HD12	42:j:55:ALA:HB3	1.75	0.68
49:q:16:HIS:HA	49:q:41:PRO:HD2	1.75	0.68
1:w:582:G:H2'	1:w:583:G:O4'	1.93	0.68
1:w:684:G:H3'	1:w:774:A:N6	2.08	0.68
1:w:896:A:N6	22:T:174:VAL:H	1.90	0.68
1:w:2619:C:C5'	5:C:151:TYR:O	2.40	0.68
1:w:2740:A:N6	1:w:2764:A:C8	2.62	0.68
4:B:2:ALA:HB2	4:B:20:ASP:OD2	1.94	0.68
7:E:77:ILE:HG12	32:z:19:G:O6	1.92	0.68
7:E:141:PHE:HD2	7:E:144:ILE:N	1.88	0.68
8:F:75:ALA:O	8:F:79:VAL:HG13	1.93	0.68
8:F:153:LYS:HZ2	8:F:163:TYR:HD1	1.39	0.68
9:G:122:GLU:HG2	9:G:123:LEU:H	1.57	0.68
22:T:161:VAL:HG12	22:T:162:GLU:N	2.08	0.68
31:y:96:G:H2'	31:y:97:U:C6	2.28	0.68
31:y:159:G:N2	31:y:162:A:OP2	2.24	0.68
31:y:918:A:C2	31:y:919:A:H1'	2.28	0.68
31:y:969:A:C2	31:y:970:C:C2	2.81	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:986:A:H2'	31:y:987:G:H8	1.58	0.68
31:y:1109:C:H3'	31:y:1110:A:C8	2.23	0.68
31:y:1305:G:O2'	31:y:1306:A:H8	1.77	0.68
31:y:1433:A:C2	31:y:1434:A:C4	2.81	0.68
37:e:64:LEU:CD2	37:e:199:ASN:H	2.06	0.68
39:g:79:LEU:HD13	39:g:88:VAL:HG11	1.76	0.68
1:w:1068:G:O2'	1:w:1069:A:H5'	1.93	0.68
1:w:1069:A:H4'	1:w:1070:A:H5"	1.76	0.68
1:w:1198:U:H2'	1:w:1199:U:C5	2.29	0.68
1:w:1478:G:H2'	1:w:1479:G:C8	2.29	0.68
1:w:2213:U:H5"	1:w:2215:G:C8	2.29	0.68
1:w:2269:A:H2'	1:w:2270:G:H8	1.59	0.68
1:w:2748:A:H4'	8:F:67:LEU:N	2.07	0.68
1:w:2748:A:O4'	8:F:67:LEU:HB2	1.93	0.68
4:B:17:THR:HB	4:B:205:VAL:H	1.58	0.68
4:B:212:SER:OG	4:B:217:ARG:NE	2.27	0.68
5:C:11:MET:O	5:C:12:THR:HG23	1.94	0.68
6:D:33:ARG:NH1	12:J:12:ALA:H	1.88	0.68
10:H:98:TYR:O	10:H:105:LEU:HB2	1.94	0.68
11:I:10:VAL:HG22	11:I:17:ARG:O	1.94	0.68
13:K:65:PHE:CD1	13:K:105:GLU:HB2	2.27	0.68
13:K:133:ARG:CG	13:K:134:ARG:N	2.56	0.68
22:T:73:GLN:O	22:T:87:ASP:HB2	1.93	0.68
31:y:30:U:O2'	31:y:31:G:P	2.52	0.68
31:y:186(G):C:C4	31:y:191(B):G:N2	2.61	0.68
31:y:194:C:H2'	31:y:195:A:C5'	2.21	0.68
31:y:259:G:OP2	53:u:83:ARG:HD3	1.94	0.68
31:y:297:G:C4'	31:y:557:G:O2'	2.40	0.68
31:y:332:G:H2'	31:y:333:G:C8	2.28	0.68
31:y:523:A:H2'	31:y:523:A:N3	2.08	0.68
31:y:889:A:OP1	31:y:891:U:H1'	1.93	0.68
31:y:928:G:H4'	31:y:1534:A:H4'	1.74	0.68
31:y:1013:G:N2	31:y:1016:A:N6	2.42	0.68
31:y:1123:A:H2'	31:y:1124:G:C8	2.28	0.68
31:y:1404:5MC:N4	31:y:1497:G:H1	1.90	0.68
38:f:143:ARG:HG3	38:f:147:ASP:HB2	1.76	0.68
44:l:87:THR:CA	44:l:91:ARG:HE	2.07	0.68
1:w:153:C:H2'	1:w:154:G:C8	2.27	0.68
1:w:286:C:H2'	1:w:287:C:C6	2.29	0.68
1:w:1448(B):A:N3	1:w:1529:A:C2	2.62	0.68
1:w:1993:U:C4'	5:C:129:HIS:NE2	2.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2077:A:H2'	1:w:2078:C:H6	1.58	0.68
1:w:2117:A:H5"	1:w:2118:U:H5"	1.75	0.68
1:w:2745:C:O2'	8:F:142:GLY:C	2.37	0.68
1:w:2864:G:C5'	16:N:119:LYS:HE2	2.24	0.68
6:D:14:GLU:HG2	6:D:16:ALA:H	1.59	0.68
6:D:150:LEU:HA	6:D:169:VAL:HG12	1.74	0.68
9:G:60:GLU:O	9:G:64:GLU:HB2	1.94	0.68
10:H:120:ARG:HG2	10:H:124:HIS:CE1	2.28	0.68
31:y:415:A:H8	31:y:415:A:O5'	1.76	0.68
31:y:706:A:HO2'	44:l:31:THR:HG1	1.36	0.68
31:y:1279:A:N3	31:y:1279:A:H5"	2.09	0.68
31:y:1298:C:C5'	40:h:114:ARG:HH22	2.06	0.68
31:y:1347:G:C4	31:y:1348:U:C5	2.78	0.68
42:j:109:VAL:O	42:j:110:GLU:O	2.12	0.68
1:w:262:A:H5'	1:w:609(B):G:O2'	1.94	0.68
1:w:347:A:C2'	1:w:348:G:H5'	2.24	0.68
1:w:715:G:H2'	1:w:716:A:O5'	1.94	0.68
1:w:902:C:H2'	1:w:903:C:C6	2.29	0.68
1:w:992:C:H2'	1:w:993:G:H8	1.57	0.68
1:w:1542:G:H3'	1:w:1542:G:C8	2.29	0.68
1:w:2753:A:H2'	1:w:2754:U:H5"	1.76	0.68
1:w:2756:U:O4'	1:w:2757:A:C8	2.46	0.68
8:F:126:PRO:CG	8:F:130:ARG:HB2	2.24	0.68
13:K:24:GLY:N	13:K:98:LYS:HB3	2.09	0.68
14:L:84:ALA:HB3	14:L:85:PRO:HD3	1.76	0.68
15:M:25:ARG:NE	15:M:89:ARG:HH12	1.91	0.68
17:O:95:LEU:C	17:O:97:ASP:H	2.01	0.68
31:y:33:A:C2	31:y:34:C:C2	2.82	0.68
31:y:617:G:O2'	49:q:44:THR:HG21	1.93	0.68
31:y:980:C:H3'	31:y:981:U:H6	1.58	0.68
31:y:103(B):G:C2'	31:y:103(C):G:H5'	2.24	0.68
31:y:1113:C:H1'	36:d:11:ARG:NH1	2.09	0.68
31:y:1268:A:O2'	31:y:1269:A:H5'	1.94	0.68
31:y:1426:C:N4	31:y:1475:G:N1	2.40	0.68
45:m:42:VAL:HG22	45:m:43:THR:H	1.59	0.68
1:w:297:C:H3'	1:w:298:G:H5"	1.76	0.68
1:w:530:G:H5"	1:w:561:G:O6	1.94	0.68
1:w:577:G:C2'	1:w:578:A:H5'	2.24	0.68
1:w:631:A:H2'	1:w:632:A:C8	2.28	0.68
1:w:1388:G:H4'	1:w:1525:G:O2'	1.94	0.68
1:w:1511:A:H2'	1:w:1512:G:C8	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2023:G:OP2	1:w:2617:C:C5'	2.41	0.68
1:w:2145:C:H2'	1:w:2146:C:C2	2.29	0.68
1:w:2243:U:H2'	1:w:2244:U:H6	1.58	0.68
1:w:2356:C:O5'	23:U:18:ALA:HB2	1.93	0.68
1:w:2639:A:O2'	10:H:120:ARG:NH2	2.27	0.68
2:x:8:U:H2'	2:x:8:U:O2	1.94	0.68
4:B:65:ILE:HG22	4:B:104:TYR:CD1	2.22	0.68
5:C:37:ARG:HA	5:C:42:ASP:OD2	1.94	0.68
9:G:122:GLU:CG	9:G:123:LEU:H	2.06	0.68
13:K:15:GLY:HA2	13:K:72:LYS:HE2	1.76	0.68
13:K:63:LYS:HE3	22:T:116:VAL:CG1	2.23	0.68
16:N:26:ASP:HB3	16:N:91:ARG:HG2	1.76	0.68
16:N:101:PHE:C	16:N:103:ARG:H	2.01	0.68
18:P:4:ILE:HB	18:P:39:LEU:HD21	1.76	0.68
31:y:135:C:H2'	31:y:136:C:H5"	1.76	0.68
31:y:421:U:OP2	31:y:422:C:N4	2.27	0.68
31:y:431:A:H2'	31:y:432:A:O4'	1.94	0.68
31:y:1062:U:H2'	31:y:1063:C:C6	2.29	0.68
31:y:1115:C:C4	31:y:1116:C:N4	2.61	0.68
31:y:1181:G:O2'	31:y:1182:G:H5'	1.93	0.68
32:z:41:C:H2'	32:z:42:G:H8	1.59	0.68
33:2:1:G:O2'	33:2:2:C:H5'	1.93	0.68
36:d:61:ALA:O	36:d:62:ASP:HB2	1.94	0.68
52:t:50:ALA:HA	52:t:59:PRO:HB3	1.75	0.68
53:u:9:ASN:O	53:u:10:LEU:HB2	1.93	0.68
1:w:1161:C:O5'	1:w:1161:C:H6	1.77	0.68
1:w:2635:C:C4'	5:C:79:ARG:HH21	2.07	0.68
1:w:2669:G:H2'	1:w:2670:A:O4'	1.94	0.68
4:B:10:THR:HG23	4:B:12:SER:H	1.58	0.68
6:D:54:TYR:H	6:D:54:TYR:HD2	1.42	0.68
7:E:107:LEU:O	7:E:111:LEU:HB3	1.94	0.68
17:O:79:PHE:CD2	17:O:79:PHE:C	2.72	0.68
27:Y:33:CYS:HB2	27:Y:38:ALA:HB3	1.76	0.68
31:y:618:C:N4	31:y:622:A:H62	1.90	0.68
31:y:902:G:H2'	31:y:903:G:H8	1.59	0.68
31:y:1276:G:H2'	31:y:1277:C:H5'	1.76	0.68
34:3:4:G:H2'	34:3:5:A:C8	2.28	0.68
42:j:50:LEU:HA	42:j:55:ALA:H	1.59	0.68
42:j:103:THR:HG22	42:j:104:ARG:H	1.58	0.68
45:m:109:VAL:HB	45:m:112:ARG:HH11	1.56	0.68
47:o:34:TYR:O	47:o:35:ARG:HG2	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:175:G:H3'	1:w:176:G:H8	1.57	0.67
1:w:273(F):U:H2'	1:w:273(G):C:C6	2.29	0.67
1:w:921:G:H2'	1:w:922:U:C6	2.28	0.67
1:w:1264:G:OP1	27:Y:11:THR:HG21	1.93	0.67
1:w:1412:A:H2'	1:w:1413:G:C8	2.28	0.67
1:w:1488:G:H8	1:w:1488:G:OP2	1.77	0.67
1:w:2328:A:O5'	1:w:2328:A:H8	1.77	0.67
1:w:2577:A:O4'	1:w:2612:C:N4	2.27	0.67
1:w:2762:G:H5'	1:w:2763:G:OP2	1.94	0.67
2:x:76:G:O6	2:x:100:G:N1	2.19	0.67
4:B:183:ARG:HD3	4:B:184:LYS:N	2.09	0.67
7:E:172:LEU:HA	7:E:175:LEU:CB	2.24	0.67
31:y:528:C:N4	45:m:47:PRO:HB2	2.09	0.67
31:y:1269:A:H5'	54:v:19:GLY:CA	2.24	0.67
31:y:1300:G:H4'	31:y:1301:U:C5	2.28	0.67
50:r:8:GLY:HA3	50:r:57:VAL:O	1.94	0.67
53:u:18:GLN:O	53:u:22:ARG:HG3	1.93	0.67
1:w:17:G:N2	1:w:524:U:H1'	2.09	0.67
1:w:675:A:C4'	6:D:62:GLN:HG3	2.14	0.67
1:w:2420:C:H41	29:a:31:HIS:HB3	1.59	0.67
1:w:2514:U:HO2'	5:C:151:TYR:HH	1.34	0.67
5:C:11:MET:CB	5:C:24:THR:HA	2.25	0.67
6:D:172:ALA:HB3	6:D:173:PRO:HD3	1.76	0.67
14:L:102:GLU:HG2	14:L:103:ARG:N	2.09	0.67
17:O:21:ALA:HB2	17:O:39:LEU:HD21	1.76	0.67
18:P:43:GLU:O	18:P:44:LYS:HB2	1.93	0.67
23:U:29:GLN:CG	23:U:30:VAL:H	2.07	0.67
31:y:49:U:C2	31:y:364:A:N6	2.62	0.67
31:y:326:G:H2'	31:y:327:A:H5'	1.75	0.67
31:y:518:C:H4'	31:y:519:C:O5'	1.94	0.67
31:y:558:G:H2'	31:y:559:A:C2	2.21	0.67
31:y:642:A:H2'	31:y:643:C:C6	2.30	0.67
36:d:48:TYR:O	36:d:50:ALA:N	2.27	0.67
37:e:54:TYR:O	37:e:57:ARG:HB3	1.94	0.67
37:e:105:VAL:O	37:e:110:PHE:HB2	1.93	0.67
40:h:24:THR:HA	40:h:27:ILE:HG22	1.76	0.67
50:r:47:PRO:C	50:r:49:GLU:H	2.01	0.67
1:w:13:A:H2'	1:w:15:G:N7	2.09	0.67
1:w:80:G:H1'	1:w:347:A:N6	2.09	0.67
1:w:577:G:O2'	1:w:578:A:H5'	1.94	0.67
1:w:1251:C:O2'	1:w:1252:G:H5'	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2575:C:O2'	5:C:140:SER:OG	1.94	0.67
9:G:4:ILE:CG1	9:G:18:VAL:HG22	2.24	0.67
11:I:66:LYS:HA	11:I:79:PHE:O	1.95	0.67
13:K:67:ARG:O	13:K:68:ILE:HG23	1.94	0.67
14:L:79:LEU:HA	14:L:83:ILE:HG13	1.75	0.67
15:M:40:ILE:HG22	15:M:41:ASP:N	2.07	0.67
16:N:64:ARG:NH2	16:N:103:ARG:O	2.27	0.67
17:O:74:LEU:HD21	17:O:79:PHE:HB3	1.76	0.67
18:P:4:ILE:HG13	18:P:13:ARG:HB3	1.75	0.67
31:y:60:A:H2	31:y:107:G:C2	2.12	0.67
31:y:200:G:N2	31:y:201:C:C2	2.62	0.67
31:y:346:G:H3'	31:y:347:G:H5"	1.76	0.67
31:y:438:G:H2'	31:y:494:U:C4	2.28	0.67
31:y:691:G:C6	44:l:52:GLY:HA2	2.29	0.67
31:y:859:A:H2'	31:y:860:A:O4'	1.95	0.67
31:y:1155:G:H2'	31:y:1156:G:H5'	1.76	0.67
31:y:1157:A:H5"	31:y:1158:C:O4'	1.95	0.67
31:y:1250:A:C6	31:y:1287:A:N6	2.58	0.67
31:y:1459:C:H2'	31:y:1460:A:C8	2.27	0.67
36:d:59:ARG:HD3	36:d:64:VAL:HG21	1.74	0.67
37:e:23:GLY:N	37:e:113:SER:HB2	2.09	0.67
40:h:11:GLN:O	40:h:12:LEU:HB2	1.92	0.67
1:w:270(M):U:H3	9:G:50:ARG:HG2	1.59	0.67
1:w:790:C:H3'	1:w:790:C:OP2	1.93	0.67
1:w:1182:A:H3'	1:w:1183:G:C5'	2.21	0.67
1:w:1817:G:H2'	1:w:1817:G:N3	2.10	0.67
1:w:2060:A:P	6:D:64:HIS:HA	2.33	0.67
2:x:42:C:H2'	2:x:42:C:O2	1.92	0.67
4:B:69:ARG:HH22	4:B:76:PRO:CG	2.03	0.67
4:B:160:GLY:HA2	4:B:196:VAL:HB	1.77	0.67
4:B:247:ALA:HB2	4:B:253:GLN:HG2	1.77	0.67
5:C:34:VAL:HG13	5:C:67:PHE:CE1	2.29	0.67
9:G:7:GLU:HG3	9:G:35:LEU:HD11	1.75	0.67
11:I:9:GLU:HA	11:I:18:LYS:HD2	1.76	0.67
13:K:75:THR:O	13:K:88:GLY:HA3	1.94	0.67
19:Q:56:ALA:O	19:Q:60:ASN:HB2	1.94	0.67
23:U:39:ARG:HA	23:U:58:THR:HG23	1.77	0.67
24:V:50:ARG:CZ	24:V:61:ARG:HB2	2.24	0.67
31:y:47:C:H6	31:y:365:U:H2'	1.57	0.67
31:y:138:G:C5	31:y:139:G:N7	2.63	0.67
31:y:143:A:N6	31:y:220:G:H1	1.91	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:150:C:H42	31:y:171:A:H62	1.43	0.67
31:y:1054:C:P	31:y:1197:G:OP1	2.52	0.67
33:2:41:U:H2'	33:2:42:G:C8	2.29	0.67
37:e:31:CYS:O	37:e:33:MET:SD	2.52	0.67
49:q:4:ILE:HG22	49:q:5:ARG:N	2.09	0.67
1:w:932:G:H5'	1:w:933:A:OP1	1.95	0.67
1:w:962:G:H2'	1:w:963:U:H5"	1.75	0.67
1:w:2884:U:O4	27:Y:43:HIS:ND1	2.27	0.67
10:H:57:LEU:O	10:H:72:GLY:HA2	1.95	0.67
10:H:146:TYR:N	10:H:146:TYR:HD2	1.91	0.67
12:J:98:GLU:O	12:J:102:ARG:HB3	1.94	0.67
13:K:39:PRO:HB3	13:K:99:PRO:CG	2.23	0.67
15:M:13:ARG:HG3	15:M:91:PRO:CA	2.20	0.67
19:Q:77:ASP:N	19:Q:103:ILE:HG22	2.08	0.67
24:V:40:ARG:HG2	24:V:41:ARG:N	2.04	0.67
31:y:230:G:H1'	49:q:25:ARG:NH1	2.09	0.67
31:y:332:G:H21	53:u:16:HIS:CE1	2.10	0.67
31:y:385:C:H2'	31:y:386:C:O4'	1.93	0.67
31:y:543:C:H2'	31:y:544:G:H8	1.59	0.67
31:y:818:G:C2'	31:y:819:A:H5"	2.25	0.67
31:y:1367:C:H2'	31:y:1368:G:O4'	1.95	0.67
32:z:21:A:N6	32:z:46:A:C2	2.63	0.67
37:e:154:ASN:C	37:e:155:LEU:HD22	2.19	0.67
40:h:103:TRP:CZ2	40:h:137:LYS:HB3	2.30	0.67
44:l:87:THR:HA	44:l:91:ARG:NE	2.10	0.67
1:w:630:G:H2'	1:w:632:A:OP2	1.93	0.67
1:w:2038:G:H2'	1:w:2039:C:O4'	1.94	0.67
1:w:2455:G:H2'	1:w:2456:C:H6	1.59	0.67
1:w:2657:A:OP2	1:w:2664:G:N2	2.28	0.67
3:A:29:LEU:HG	3:A:33:LEU:HG	1.76	0.67
6:D:25:PRO:HA	6:D:28:LEU:HD12	1.77	0.67
7:E:73:ALA:H	7:E:87:PRO:HA	1.59	0.67
7:E:99:MET:O	7:E:103:LEU:HG	1.94	0.67
9:G:81:VAL:O	9:G:148:GLU:HG3	1.94	0.67
11:I:61:VAL:CG1	11:I:85:VAL:HB	2.24	0.67
16:N:24:PRO:CA	16:N:49:VAL:HG11	2.25	0.67
19:Q:66:GLU:O	19:Q:67:ASP:HB2	1.95	0.67
24:V:85:LEU:C	24:V:87:PRO:HD2	2.19	0.67
31:y:298:A:H2'	31:y:299:G:O5'	1.95	0.67
31:y:416:G:H2'	31:y:417:C:C6	2.30	0.67
31:y:454:C:N4	31:y:479:C:C4	2.63	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:538:G:C5'	45:m:114:LYS:HG3	2.25	0.67
31:y:555:C:C2'	31:y:556:C:H5"	2.25	0.67
31:y:864:A:H8	31:y:864:A:O5'	1.77	0.67
31:y:943:U:H2'	31:y:944:G:H5'	1.71	0.67
31:y:1114:C:C2	31:y:1115:C:C5	2.82	0.67
31:y:1223:C:H6	31:y:1223:C:C3'	2.07	0.67
31:y:1381:U:O2'	31:y:1382:C:H5'	1.93	0.67
36:d:141:VAL:HG21	36:d:202:ILE:HD12	1.77	0.67
53:u:21:LYS:NZ	53:u:21:LYS:HB3	2.10	0.67
53:u:88:VAL:O	53:u:92:LEU:HG	1.95	0.67
1:w:53:A:C2'	1:w:54:G:H5'	2.24	0.67
1:w:177:G:H3'	1:w:178:G:C8	2.30	0.67
1:w:519:U:O4'	19:Q:75:TYR:HA	1.94	0.67
1:w:811:U:O2	1:w:811:U:H2'	1.94	0.67
1:w:1171:G:C3'	1:w:1173:G:P	2.82	0.67
1:w:1274:A:O2'	1:w:1275:A:H5'	1.94	0.67
1:w:1326:U:H2'	1:w:1327:C:O4'	1.95	0.67
1:w:1712:C:H2'	1:w:1716:U:O4'	1.95	0.67
1:w:2786:U:O2'	5:C:63:LEU:N	2.28	0.67
4:B:78:LYS:HE3	4:B:114:GLY:CA	2.25	0.67
10:H:29:PRO:CB	10:H:64:ASP:HB3	2.24	0.67
10:H:65:TRP:CD1	17:O:64:ARG:HE	2.13	0.67
13:K:132:VAL:HG22	13:K:133:ARG:H	1.59	0.67
24:V:26:ARG:CB	24:V:34:THR:HG23	2.25	0.67
31:y:5:U:O4	37:e:86:LYS:HA	1.94	0.67
31:y:227:G:H21	49:q:62:VAL:HB	1.58	0.67
31:y:498:A:H4'	31:y:498:A:OP1	1.94	0.67
31:y:513:C:N4	31:y:539:A:C2	2.63	0.67
31:y:538:G:H5"	45:m:114:LYS:HG3	1.77	0.67
31:y:982:U:O2	31:y:1222:G:N2	2.28	0.67
31:y:1249:C:O2'	42:j:67:GLY:C	2.38	0.67
31:y:1395:C:C4'	31:y:1401:G:H21	2.08	0.67
31:y:1409:C:O5'	31:y:1409:C:H6	1.77	0.67
32:z:75:C:H5"	32:z:76:A:OP2	1.94	0.67
35:c:22:LYS:C	35:c:24:TRP:H	2.02	0.67
35:c:118:LEU:CD1	35:c:138:LEU:HD11	2.25	0.67
38:f:148:VAL:O	38:f:152:ARG:HG3	1.94	0.67
41:i:7:ALA:O	41:i:10:LEU:HB2	1.93	0.67
50:r:30:PRO:O	50:r:31:LEU:C	2.37	0.67
1:w:440:G:H8	1:w:440:G:OP2	1.76	0.67
1:w:627:A:O2'	1:w:628:G:C8	2.48	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1357:U:H2'	1:w:1358:G:O4'	1.93	0.67
1:w:1413:G:H2'	1:w:1414:G:C8	2.30	0.67
1:w:1527:G:H3'	1:w:1527:G:C8	2.29	0.67
1:w:1664:A:H3'	1:w:1665:A:H8	1.59	0.67
1:w:2074:U:H2'	1:w:2075:U:C6	2.30	0.67
1:w:2573:C:H5"	1:w:2574:G:C5'	2.21	0.67
1:w:2574:G:H1'	5:C:143:ASN:HD21	1.60	0.67
1:w:2782:G:C2	1:w:2783:G:H1'	2.30	0.67
1:w:2841:C:O2'	1:w:2842:G:H5'	1.93	0.67
4:B:25:THR:O	4:B:25:THR:HG23	1.95	0.67
4:B:69:ARG:CZ	4:B:119:ALA:HB2	2.24	0.67
9:G:3:VAL:H	9:G:21:VAL:HG21	1.59	0.67
10:H:135:LEU:O	10:H:139:LEU:HG	1.94	0.67
26:X:40:THR:OG1	26:X:43:ILE:HD13	1.95	0.67
31:y:301:G:C5'	50:r:31:LEU:HD22	2.23	0.67
31:y:361:G:H2'	31:y:362:G:O4'	1.94	0.67
31:y:564:C:C2'	31:y:565:U:O5'	2.43	0.67
31:y:1108:G:H3'	31:y:1109:C:H5"	1.76	0.67
31:y:1108:G:H2'	31:y:1109:C:O4'	1.95	0.67
31:y:1467:G:C2'	31:y:1468:A:H5'	2.25	0.67
31:y:1504:G:H4'	31:y:1505:G:H5'	1.76	0.67
32:z:57:A:C2'	32:z:58:A:H5'	2.25	0.67
1:w:220:G:H4'	1:w:234:C:C4'	2.25	0.67
1:w:1395:A:H2'	1:w:1397:U:OP2	1.94	0.67
1:w:1995:U:OP2	1:w:1997:G:OP2	2.12	0.67
1:w:2351:G:O2'	1:w:2366:A:N6	2.28	0.67
1:w:2682:U:O2	5:C:11:MET:HE2	1.94	0.67
4:B:248:SER:HB3	4:B:249:PRO:HD2	1.75	0.67
5:C:117:MET:HA	5:C:122:PHE:N	2.09	0.67
6:D:178:VAL:O	6:D:181:ILE:HG22	1.95	0.67
8:F:12:PRO:C	8:F:14:GLY:H	2.02	0.67
9:G:81:VAL:HG22	9:G:145:VAL:O	1.95	0.67
12:J:78:PRO:HB3	12:J:110:TYR:HB2	1.75	0.67
18:P:65:GLY:N	18:P:96:ILE:HG13	2.09	0.67
31:y:17:U:C2'	31:y:1079:G:H21	2.08	0.67
31:y:251:G:C6	31:y:266:G:C6	2.83	0.67
31:y:626:U:H2'	31:y:627:G:O4'	1.95	0.67
31:y:1111:A:N6	36:d:176:HIS:HB3	2.09	0.67
31:y:1425:U:H2'	31:y:1426:C:C5	2.29	0.67
36:d:59:ARG:HD3	36:d:64:VAL:CG2	2.24	0.67
41:i:90:GLY:HA2	50:r:34:LYS:HZ3	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:l:85:ARG:NE	44:l:111:ASP:HB3	2.10	0.67
1:w:251:A:H2'	1:w:252:G:O4'	1.94	0.67
1:w:527:C:C5	1:w:2779:U:H2'	2.30	0.67
1:w:1594:G:H2'	1:w:1595:G:O4'	1.94	0.67
1:w:2419:U:C4	29:a:31:HIS:HA	2.30	0.67
1:w:2472:G:O6	1:w:2476:A:H4'	1.95	0.67
1:w:2525:G:C6	1:w:2539:C:N4	2.62	0.67
4:B:69:ARG:CG	4:B:190:TYR:HE2	2.08	0.67
5:C:117:MET:HB3	5:C:136:ARG:NH2	2.09	0.67
6:D:181:ILE:HD13	6:D:181:ILE:O	1.95	0.67
8:F:76:VAL:HA	8:F:79:VAL:HG22	1.75	0.67
9:G:93:THR:OG1	9:G:94:ALA:N	2.26	0.67
15:M:62:LYS:HG3	15:M:63:THR:HG22	1.77	0.67
16:N:27:THR:O	16:N:28:VAL:HG23	1.94	0.67
16:N:135:VAL:HG13	16:N:136:GLN:N	2.07	0.67
23:U:28:GLY:HA2	23:U:67:VAL:HB	1.77	0.67
23:U:41:ARG:HG2	23:U:42:GLY:H	1.60	0.67
26:X:15:TYR:HB3	26:X:16:PRO:HD2	1.77	0.67
31:y:47:C:C5	31:y:365:U:O2	2.47	0.67
31:y:663:A:O2'	31:y:664:G:H5'	1.95	0.67
31:y:780:A:OP1	44:l:122:LYS:HB2	1.95	0.67
31:y:1268:A:O2'	54:v:19:GLY:C	2.38	0.67
31:y:1534:A:H2'	31:y:1535:C:C6	2.30	0.67
36:d:11:ARG:HB3	36:d:15:THR:CB	2.24	0.67
36:d:25:GLY:O	36:d:28:GLN:HB3	1.92	0.67
41:i:10:LEU:O	41:i:14:ARG:HG2	1.95	0.67
43:k:30:SER:OG	43:k:84:GLN:HB3	1.95	0.67
46:n:78:ILE:HG22	46:n:93:ARG:NH2	2.10	0.67
53:u:39:LYS:NZ	53:u:39:LYS:HB3	2.09	0.67
1:w:58:G:OP1	20:R:72:LYS:HA	1.94	0.66
1:w:526:A:N6	1:w:2626:C:H4'	2.09	0.66
1:w:630:G:O2'	1:w:640:C:H4'	1.94	0.66
1:w:1448(B):A:N3	1:w:1529:A:H2	1.93	0.66
1:w:1539:G:C4	1:w:1540:G:H1'	2.30	0.66
1:w:1920:C:C5'	31:y:1517:G:C4	2.78	0.66
1:w:2378:A:H3'	1:w:2379:G:H5"	1.77	0.66
1:w:2617:C:H2'	1:w:2618:G:O5'	1.94	0.66
6:D:112:ARG:NH1	6:D:184:THR:O	2.28	0.66
6:D:150:LEU:HB2	6:D:187:LEU:CD2	2.26	0.66
12:J:85:LEU:HD11	12:J:118:GLY:CA	2.25	0.66
31:y:20:U:C2'	31:y:21:G:H5'	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:28:G:O2'	31:y:29:G:H5'	1.95	0.66
31:y:52:G:C2'	31:y:53:A:H5'	2.25	0.66
31:y:113:G:H2'	31:y:114:U:C6	2.30	0.66
31:y:818:G:C3'	31:y:819:A:H5"	2.24	0.66
31:y:920:U:H2'	31:y:921:U:O4'	1.94	0.66
31:y:1115:C:C2	31:y:1116:C:C5	2.83	0.66
31:y:1126:U:H1'	31:y:1281:U:O4'	1.95	0.66
31:y:1312:G:C2	31:y:1326:C:N3	2.63	0.66
31:y:1316:G:O4'	31:y:1360:A:C2	2.48	0.66
31:y:1432:G:H5"	31:y:1433:A:OP1	1.95	0.66
32:z:38:A:O5'	32:z:38:A:C8	2.46	0.66
32:z:41:C:H2'	32:z:42:G:C8	2.29	0.66
37:e:42:GLN:HA	37:e:45:GLN:HE21	1.59	0.66
38:f:48:ALA:HB3	38:f:54:ALA:CB	2.25	0.66
41:i:5:PRO:O	41:i:9:MET:HG2	1.95	0.66
1:w:993:G:C8	1:w:993:G:OP2	2.48	0.66
1:w:2105:C:H2'	1:w:2106:G:C8	2.30	0.66
1:w:2658:C:H2'	1:w:2659:G:H5'	1.76	0.66
1:w:2746:U:O4	1:w:2756:U:H5	1.78	0.66
2:x:99:A:C5	2:x:100:G:C5	2.83	0.66
9:G:95:LYS:HG3	9:G:96:ASP:H	1.60	0.66
11:I:69:VAL:HG12	11:I:77:ILE:HG22	1.77	0.66
14:L:22:ARG:HH22	14:L:71:GLN:HE21	1.40	0.66
19:Q:7:ALA:HB3	19:Q:103:ILE:O	1.95	0.66
31:y:405:U:O4	37:e:2:GLY:N	2.28	0.66
31:y:449:C:H2'	31:y:450:G:H5'	1.77	0.66
31:y:502:G:H4'	31:y:550:G:O2'	1.95	0.66
31:y:689:C:P	44:l:46:GLY:HA3	2.35	0.66
31:y:754:C:O2'	48:p:66:LEU:HG	1.95	0.66
31:y:890:G:H21	31:y:906:G:H3'	1.61	0.66
31:y:1080:A:C8	31:y:1080:A:H3'	2.31	0.66
31:y:1141:C:C2'	31:y:1142:G:H5"	2.25	0.66
31:y:1375:A:O2'	31:y:1376:U:H5'	1.95	0.66
31:y:1470:G:C2	31:y:1471:G:H1'	2.30	0.66
31:y:1523:G:C2'	31:y:1524:C:H5'	2.25	0.66
31:y:1531:A:H2'	31:y:1531:A:N3	2.10	0.66
35:c:129:GLU:O	35:c:130:ARG:HB2	1.95	0.66
40:h:80:VAL:HG21	40:h:85:TYR:CD1	2.30	0.66
52:t:31:ILE:C	52:t:49:ILE:HG22	2.20	0.66
1:w:643:A:H2'	1:w:644:A:O4'	1.95	0.66
1:w:889:C:H4'	1:w:890:A:O4'	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:926:A:C3'	1:w:928:G:P	2.84	0.66
1:w:1567:A:OP2	4:B:60:ARG:CZ	2.43	0.66
1:w:2262:U:H2'	1:w:2263:C:O4'	1.95	0.66
1:w:2441:C:C2'	1:w:2442:C:H5"	2.25	0.66
1:w:2733:A:H2'	1:w:2734:A:C8	2.27	0.66
1:w:2795:G:H8	1:w:2795:G:O5'	1.77	0.66
1:w:2840:C:C2'	1:w:2841:C:H5'	2.25	0.66
6:D:121:VAL:HG13	6:D:191:LEU:H	1.58	0.66
6:D:162:ALA:HB1	6:D:170:THR:OG1	1.96	0.66
7:E:73:ALA:N	7:E:87:PRO:HA	2.10	0.66
8:F:34:GLU:HG2	8:F:35:VAL:N	2.09	0.66
9:G:7:GLU:N	9:G:8:PRO:CD	2.58	0.66
18:P:34:GLU:HB2	18:P:64:HIS:HE2	1.60	0.66
22:T:120:ILE:HB	22:T:171:ILE:O	1.94	0.66
31:y:93:U:H2'	31:y:95:G:C8	2.31	0.66
31:y:104:G:H2'	31:y:105:G:C5'	2.26	0.66
31:y:116:A:OP2	31:y:289:G:H5'	1.94	0.66
31:y:160:A:OP1	31:y:160:A:C8	2.49	0.66
31:y:322:C:O2'	53:u:23:ARG:CB	2.43	0.66
31:y:818:G:H3'	31:y:819:A:C5'	2.25	0.66
31:y:851:G:H2'	31:y:852:G:H8	1.59	0.66
31:y:1308:U:O5'	31:y:1308:U:H6	1.78	0.66
31:y:1312:G:C2'	31:y:1313:U:H5'	2.26	0.66
49:q:28:ARG:O	49:q:29:ASP:C	2.38	0.66
50:r:87:LYS:HD3	50:r:87:LYS:C	2.19	0.66
53:u:27:LYS:HA	53:u:30:LYS:HD2	1.77	0.66
1:w:38:A:O2'	6:D:43:THR:HB	1.95	0.66
1:w:271(D):U:H2'	1:w:271:G:C4'	2.15	0.66
1:w:1266:G:H1'	1:w:1267:U:OP2	1.95	0.66
1:w:2061:G:OP1	6:D:63:LYS:HE3	1.95	0.66
1:w:2641:G:C2	1:w:2774:C:N3	2.63	0.66
1:w:2784:C:C3'	1:w:2785:C:H5"	2.25	0.66
1:w:2857:G:H3'	1:w:2858:C:C5'	2.25	0.66
5:C:173:VAL:H	5:C:183:LEU:CD1	2.08	0.66
11:I:93:PRO:C	11:I:95:GLY:H	2.04	0.66
16:N:112:ARG:HA	16:N:115:ARG:NH2	2.05	0.66
23:U:74:ARG:O	23:U:74:ARG:HD2	1.94	0.66
24:V:12:PRO:CG	24:V:63:ALA:HB2	2.26	0.66
31:y:22:G:C4	31:y:23:C:C5	2.84	0.66
31:y:222:U:H2'	31:y:223:U:C4'	2.25	0.66
31:y:878:G:C5'	41:i:89:PRO:HG2	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:2:69:U:H6	33:2:69:U:O5'	1.77	0.66
41:i:41:ARG:C	41:i:43:GLY:H	2.03	0.66
47:o:30:ALA:O	47:o:33:VAL:HG22	1.96	0.66
1:w:1687:G:C2'	1:w:1701:A:H61	2.07	0.66
1:w:1759:A:O2'	1:w:2714:G:H1'	1.95	0.66
1:w:1820:U:C4	4:B:202:LYS:HA	2.29	0.66
1:w:2308:G:N3	1:w:2308:G:H2'	2.11	0.66
1:w:2386:C:H1'	23:U:41:ARG:HD2	1.77	0.66
1:w:2439:A:O4'	1:w:2587:A:H5'	1.94	0.66
1:w:2712:U:C4'	1:w:2712(B):A:O5'	2.35	0.66
4:B:242:ARG:HB2	4:B:242:ARG:HH11	1.60	0.66
4:B:242:ARG:HB2	4:B:242:ARG:NH1	2.11	0.66
6:D:176:LEU:O	6:D:179:TYR:CE2	2.49	0.66
11:I:66:LYS:O	11:I:78:ARG:HG3	1.94	0.66
13:K:58:PHE:HZ	13:K:117:ALA:HB1	1.60	0.66
26:X:28:LEU:HD12	26:X:33:GLN:HB3	1.78	0.66
31:y:116:A:H2'	31:y:117:G:O4'	1.94	0.66
31:y:259:G:OP2	53:u:83:ARG:NH1	2.29	0.66
31:y:307:C:C5	31:y:308:C:C5	2.84	0.66
31:y:382:A:C2'	31:y:383:A:H5'	2.24	0.66
31:y:396:G:C2	31:y:398:C:C4	2.84	0.66
31:y:738:C:H2'	31:y:739:C:H6	1.61	0.66
31:y:964:A:C5'	31:y:1199:U:OP1	2.44	0.66
31:y:1001:G:H2'	31:y:1002:G:C4'	2.25	0.66
38:f:101:ILE:O	38:f:118:ILE:O	2.13	0.66
41:i:3:THR:C	41:i:5:PRO:HD3	2.20	0.66
46:n:100:GLY:O	46:n:101:GLN:HG3	1.95	0.66
48:p:84:LYS:HD2	48:p:85:LEU:HG	1.76	0.66
1:w:564:C:H2'	1:w:565:C:C6	2.31	0.66
1:w:572:A:H3'	1:w:573:G:C8	2.30	0.66
1:w:666:G:OP1	12:J:47:ASP:HB3	1.96	0.66
1:w:1264:G:P	27:Y:11:THR:HG21	2.36	0.66
1:w:1581:G:H2'	1:w:1582:C:O4'	1.94	0.66
1:w:1752:C:H5'	1:w:2862:G:C5'	2.25	0.66
1:w:1803:A:O3'	4:B:259:THR:HG21	1.96	0.66
1:w:2639:A:H62	1:w:2775:A:H2	1.43	0.66
5:C:36:ARG:NH1	5:C:86:PRO:HD2	2.10	0.66
5:C:117:MET:HA	5:C:122:PHE:H	1.61	0.66
7:E:103:LEU:HD12	7:E:104:GLU:N	2.10	0.66
18:P:15:GLU:CB	18:P:16:PRO:CD	2.73	0.66
22:T:80:ARG:NH1	22:T:82:ARG:HB2	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:29:GLN:HG2	23:U:30:VAL:H	1.59	0.66
26:X:8:LEU:HA	26:X:54:VAL:HG12	1.76	0.66
29:a:23:VAL:HG23	29:a:47:LYS:O	1.95	0.66
31:y:173:U:H5	31:y:198:G:O2'	1.78	0.66
31:y:209:U:H6	31:y:209:U:OP1	1.78	0.66
31:y:589:C:O2'	31:y:590:C:H5'	1.95	0.66
31:y:829:G:C2	31:y:830:G:C8	2.84	0.66
31:y:1188:A:H4'	47:o:58:LYS:HE3	1.76	0.66
31:y:1250:A:N6	31:y:1287:A:N6	2.39	0.66
31:y:1508:G:H2'	31:y:1509:C:C6	2.31	0.66
33:2:20:G:H22	33:2:22:G:H1'	1.60	0.66
37:e:13:ARG:HD3	37:e:37:PRO:HA	1.78	0.66
38:f:103:GLY:O	38:f:104:ALA:HB2	1.96	0.66
48:p:43:LEU:HD12	48:p:53:HIS:NE2	2.11	0.66
1:w:285:C:H2'	1:w:286:C:C6	2.31	0.66
1:w:294:A:H2'	1:w:295:G:C8	2.31	0.66
1:w:671:C:H5"	12:J:41:ARG:NH1	2.10	0.66
1:w:1944:U:C6	1:w:1955:U:H6	2.14	0.66
1:w:1993:U:H2'	1:w:1994:C:C6	2.30	0.66
1:w:2364:C:O2	23:U:36:ILE:HD11	1.96	0.66
1:w:2619:C:O5'	1:w:2619:C:H6	1.79	0.66
1:w:2795:G:H1'	1:w:2801:A:H61	1.60	0.66
2:x:40:U:O4	2:x:43:C:H5"	1.95	0.66
3:A:54:ARG:HA	3:A:54:ARG:NE	2.10	0.66
4:B:117:VAL:HG22	4:B:127:VAL:O	1.96	0.66
8:F:89:ILE:HD11	8:F:129:THR:OG1	1.96	0.66
9:G:5:LEU:HD23	9:G:9:LEU:HD12	1.77	0.66
16:N:32:TYR:HB3	16:N:82:LEU:HA	1.78	0.66
23:U:52:GLY:HA2	23:U:62:LEU:HD13	1.78	0.66
24:V:24:ALA:HA	24:V:37:ILE:HG22	1.78	0.66
31:y:20:U:H2'	31:y:21:G:C5'	2.26	0.66
31:y:178:C:O2'	31:y:179:A:H5'	1.95	0.66
31:y:868:C:O2'	31:y:869:G:H5'	1.95	0.66
31:y:897:C:O2'	31:y:898:G:H5'	1.95	0.66
33:2:7:U:O2'	33:2:49:C:H5'	1.95	0.66
35:c:61:LEU:HD21	35:c:161:ALA:CB	2.26	0.66
36:d:20:SER:HB3	36:d:22:TRP:HE1	1.60	0.66
36:d:136:GLN:HB3	36:d:140:ARG:HE	1.60	0.66
48:p:74:ASP:HB3	48:p:77:ARG:HG2	1.77	0.66
49:q:2:VAL:HG23	49:q:63:GLY:HA3	1.76	0.66
50:r:9:VAL:O	50:r:11:VAL:HG13	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:364:C:H2'	1:w:365(A):C:C6	2.31	0.66
1:w:479:A:H4'	1:w:480:A:O5'	1.95	0.66
1:w:548:A:O5'	1:w:548:A:H8	1.78	0.66
1:w:861:A:C2	1:w:862:G:H1'	2.31	0.66
1:w:1140:C:H4'	10:H:48:ARG:HE	1.56	0.66
1:w:1759:A:H1'	1:w:2711:A:H2	1.59	0.66
1:w:2588:G:O2'	1:w:2589:A:H5'	1.95	0.66
1:w:2651:C:H2'	1:w:2652:C:H6	1.60	0.66
5:C:37:ARG:HB3	5:C:42:ASP:CB	2.26	0.66
5:C:101:ARG:HD3	5:C:169:ASN:HB3	1.78	0.66
13:K:35:VAL:O	13:K:129:THR:HA	1.96	0.66
14:L:53:HIS:HB3	14:L:94:TYR:OH	1.94	0.66
15:M:20:ARG:HG3	15:M:21:THR:H	1.60	0.66
22:T:100:VAL:O	22:T:123:ASP:HB3	1.95	0.66
30:b:5:ALA:O	30:b:7:VAL:HG23	1.95	0.66
31:y:102:G:O2'	31:y:103:C:H5'	1.96	0.66
31:y:243:A:H4'	31:y:244:U:C5'	2.25	0.66
31:y:667:G:H4'	48:p:51:HIS:HB2	1.76	0.66
31:y:1081:G:P	38:f:18:ARG:HH11	2.19	0.66
31:y:1148:U:H6	31:y:1148:U:H3'	1.61	0.66
31:y:1346:A:H4'	42:j:120:ARG:NH2	2.11	0.66
36:d:21:ARG:HB2	36:d:58:GLU:OE1	1.96	0.66
37:e:9:CYS:O	37:e:33:MET:SD	2.53	0.66
37:e:84:LYS:HG3	37:e:85:LYS:H	1.60	0.66
38:f:143:ARG:CG	38:f:144:THR:H	2.02	0.66
49:q:72:ARG:HB3	49:q:73:LEU:HD22	1.76	0.66
1:w:515:A:H2	1:w:1260:G:N3	1.94	0.66
1:w:799:G:H8	1:w:799:G:O5'	1.78	0.66
1:w:1728:G:H21	1:w:1732:A:N6	1.92	0.66
1:w:2258:C:O2'	1:w:2426:A:H4'	1.96	0.66
1:w:2514:U:C4	1:w:2515:C:N4	2.64	0.66
1:w:2885:C:C6	1:w:2885:C:H3'	2.31	0.66
4:B:4:LYS:HB2	4:B:18:VAL:HG12	1.76	0.66
4:B:126:GLN:H	4:B:129:ASN:HD22	1.44	0.66
4:B:174:ILE:HG22	4:B:175:LEU:N	2.09	0.66
7:E:161:THR:HG22	7:E:163:ALA:H	1.58	0.66
9:G:124:GLY:C	9:G:144:VAL:H	2.04	0.66
10:H:39:ILE:HG13	10:H:40:ASP:N	2.11	0.66
31:y:243:A:N6	31:y:281:G:O2'	2.29	0.66
31:y:719:C:H41	51:s:71:LYS:HD3	1.60	0.66
31:y:758:G:H5'	31:y:880:C:H1'	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:959:A:H61	52:t:79:THR:HG22	1.61	0.66
31:y:1130:A:C8	31:y:1147:C:O2	2.49	0.66
31:y:1469:G:H8	31:y:1469:G:P	2.19	0.66
35:c:71:VAL:HG23	35:c:72:GLY:N	2.10	0.66
40:h:136:LYS:O	40:h:136:LYS:HD3	1.96	0.66
1:w:123:G:C2'	1:w:124:G:H5'	2.26	0.66
1:w:658:C:C2'	1:w:659:C:O5'	2.43	0.66
1:w:670:A:H4'	1:w:671:C:C5'	2.26	0.66
1:w:715:G:C2'	1:w:716:A:O5'	2.44	0.66
1:w:1191:G:H8	1:w:1191:G:OP2	1.79	0.66
1:w:1367:A:H2'	1:w:1368:G:H5'	1.78	0.66
1:w:1426:G:H8	1:w:1426:G:OP2	1.79	0.66
1:w:2040:C:H2'	1:w:2041:U:C6	2.31	0.66
1:w:2660:A:H3'	1:w:2660:A:H8	1.60	0.66
1:w:2745:C:C3'	1:w:2746:U:H5'	2.26	0.66
4:B:33:LEU:C	4:B:35:LYS:H	2.03	0.66
31:y:61:G:N2	31:y:379:C:H4'	2.11	0.66
31:y:545:C:P	37:e:72:GLU:HG2	2.35	0.66
31:y:745:C:H1'	31:y:836:G:C2'	2.26	0.66
31:y:1058:G:H2'	31:y:1059:C:C5'	2.26	0.66
31:y:1126:U:H1'	31:y:1281:U:C1'	2.26	0.66
31:y:1320:C:O2'	31:y:1321:C:H5'	1.95	0.66
32:z:44:A:C5	32:z:45:G:C5	2.84	0.66
36:d:161:GLU:HG3	36:d:162:GLN:H	1.61	0.66
37:e:115:ARG:O	37:e:118:ARG:CG	2.43	0.66
1:w:949:C:H2'	1:w:950:G:H8	1.60	0.65
1:w:1358:G:H2'	1:w:1371:G:N1	2.12	0.65
1:w:1575:C:H2'	1:w:1576:U:O4'	1.95	0.65
1:w:1636:C:H1'	1:w:1760:A:C2	2.31	0.65
1:w:1832:C:H2'	1:w:1833:U:O4'	1.96	0.65
1:w:2359:C:C2'	1:w:2360:A:O4'	2.40	0.65
1:w:2822:G:N7	14:L:1:MET:HA	2.11	0.65
1:w:2885:C:C2'	1:w:2886:G:H5'	2.25	0.65
2:x:117:G:C2	2:x:118:G:N7	2.64	0.65
7:E:120:LEU:HD13	7:E:121:ASN:N	2.11	0.65
30:b:3:VAL:HG11	30:b:34:GLN:HB3	1.78	0.65
31:y:81:G:H2'	31:y:82:U:H5"	1.78	0.65
31:y:335:C:H2'	31:y:336:C:C6	2.31	0.65
31:y:721:G:N2	31:y:733:A:C5	2.64	0.65
31:y:1187:G:C2'	47:o:60:SER:HB2	2.26	0.65
31:y:1398:A:H5'	31:y:1398:A:C8	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1509:C:C4	31:y:1510:U:C4	2.84	0.65
32:z:24:U:H2'	32:z:25:C:C5'	2.25	0.65
53:u:27:LYS:NZ	53:u:31:SER:HB3	2.11	0.65
1:w:215:G:H4'	1:w:216:A:C4'	2.24	0.65
1:w:558:G:H5'	10:H:135:LEU:HD11	1.78	0.65
1:w:780:G:H2'	1:w:782:A:C6	2.31	0.65
1:w:789:A:H5"	1:w:790:C:C5	2.31	0.65
1:w:880:G:N2	1:w:898:C:H1'	2.11	0.65
1:w:1028:A:O2'	1:w:1029:A:H5'	1.96	0.65
1:w:1142(B):A:C6	1:w:1144:G:C8	2.84	0.65
1:w:1311:G:H21	1:w:1603:A:H62	1.44	0.65
1:w:1699:G:H2'	1:w:1700:A:H5"	1.76	0.65
1:w:1837:C:O2	1:w:1927:A:H2	1.79	0.65
1:w:1996:C:O3'	1:w:1997:G:C4'	2.43	0.65
1:w:2193:G:C3'	1:w:2194:G:H5"	2.26	0.65
5:C:4:ILE:HG13	5:C:6:GLY:H	1.59	0.65
15:M:12:PHE:CD1	15:M:12:PHE:N	2.63	0.65
21:S:23:ARG:HG3	21:S:24:VAL:N	2.10	0.65
31:y:497:U:C2'	31:y:498:A:H5"	2.26	0.65
31:y:581:G:OP1	48:p:65:ARG:NH2	2.29	0.65
36:d:90:GLU:OE2	36:d:94:LEU:HD23	1.96	0.65
44:l:48:ILE:HG22	44:l:49:GLY:H	1.61	0.65
49:q:40:ASP:HB3	49:q:48:TRP:HD1	1.61	0.65
1:w:85:G:H1'	1:w:103:A:N1	2.11	0.65
1:w:138:G:H3'	1:w:139:G:H5'	1.78	0.65
1:w:314:A:H2'	1:w:315:G:C8	2.30	0.65
1:w:1500:G:O2'	4:B:101:GLU:HA	1.96	0.65
1:w:1593:G:H2'	1:w:1594:G:O4'	1.97	0.65
1:w:2133:G:O3'	1:w:2134:A:H8	1.79	0.65
1:w:2519:U:H3'	1:w:2519:U:P	2.35	0.65
1:w:2765:A:N3	1:w:2765:A:C3'	2.56	0.65
1:w:2793:G:H2'	1:w:2794:C:C6	2.31	0.65
4:B:63:ARG:HH11	4:B:63:ARG:CG	2.08	0.65
9:G:3:VAL:H	9:G:21:VAL:HG22	1.60	0.65
16:N:6:LEU:O	16:N:10:VAL:HG23	1.96	0.65
17:O:55:ARG:HH11	17:O:55:ARG:HG2	1.60	0.65
20:R:12:VAL:HB	20:R:27:THR:HB	1.78	0.65
27:Y:38:ALA:HB2	27:Y:49:CYS:CB	2.16	0.65
31:y:19:C:H2'	31:y:20:U:C6	2.31	0.65
31:y:509:A:H5"	37:e:55:ALA:HB1	1.78	0.65
31:y:691:G:H1	44:l:52:GLY:HA2	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:749:C:H2'	31:y:750:G:C8	2.31	0.65
31:y:899:C:H3'	31:y:900:A:C8	2.32	0.65
32:z:24:U:H2'	32:z:25:C:O4'	1.95	0.65
35:c:102:LEU:HD13	35:c:176:GLU:HB2	1.78	0.65
35:c:180:LEU:O	35:c:181:PHE:HB2	1.95	0.65
36:d:8:ILE:O	36:d:10:PHE:N	2.28	0.65
37:e:9:CYS:HB3	37:e:32:ALA:HB3	1.79	0.65
37:e:26:CYS:SG	37:e:33:MET:HE1	2.36	0.65
42:j:97:LYS:H	42:j:98:PRO:HD2	1.61	0.65
44:l:108:ILE:H	51:s:87:ARG:HA	1.62	0.65
1:w:471:A:H2'	1:w:472:A:O4'	1.96	0.65
1:w:519:U:H2'	1:w:520:G:O4'	1.97	0.65
1:w:571:A:N6	1:w:575:A:N7	2.44	0.65
1:w:2740:A:C6	1:w:2764:A:C5	2.84	0.65
3:A:201:LYS:HE3	3:A:203:GLU:HG2	1.78	0.65
22:T:102:LEU:H	22:T:123:ASP:HA	1.59	0.65
26:X:17:LYS:HE2	26:X:21:ALA:HB2	1.77	0.65
28:Z:30:VAL:O	28:Z:33:ARG:HB3	1.96	0.65
31:y:476:G:O2'	31:y:477:G:H5'	1.96	0.65
31:y:570:G:OP1	31:y:570:G:H8	1.80	0.65
31:y:986:A:H2'	31:y:987:G:C8	2.32	0.65
31:y:1155:G:C2'	31:y:1156:G:H5'	2.26	0.65
31:y:1343:G:H4'	42:j:122:ALA:CB	2.23	0.65
50:r:58:GLU:CD	50:r:74:LEU:HB3	2.20	0.65
1:w:299:A:H1'	1:w:322:A:C6	2.31	0.65
1:w:478:A:N6	1:w:502:A:H61	1.92	0.65
1:w:521:G:H2'	1:w:522:G:C8	2.31	0.65
1:w:540:G:H2'	1:w:541:C:C6	2.31	0.65
1:w:709:U:H2'	1:w:710:G:O4'	1.96	0.65
1:w:1339:G:C2	1:w:1340:U:C5	2.83	0.65
1:w:1627:G:O2'	1:w:1628:G:H8	1.78	0.65
1:w:1743:G:C3'	1:w:1746:G:P	2.85	0.65
1:w:2712(B):A:HO2'	14:L:13:HIS:CE1	2.14	0.65
3:A:62:THR:HG22	3:A:63:VAL:H	1.61	0.65
4:B:106:ILE:HG22	4:B:197:GLY:HA3	1.79	0.65
6:D:52:VAL:O	6:D:52:VAL:HG13	1.97	0.65
7:E:39:ILE:HG13	7:E:157:ILE:HG23	1.79	0.65
9:G:35:LEU:HD13	9:G:35:LEU:O	1.95	0.65
11:I:39:ILE:HD13	11:I:39:ILE:H	1.60	0.65
13:K:78:PRO:HG2	13:K:87:LYS:HG2	1.78	0.65
13:K:106:VAL:HG21	13:K:118:LEU:HD11	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:245:C:C5	31:y:284:G:N2	2.65	0.65
31:y:406:G:H2'	31:y:407:G:C8	2.32	0.65
31:y:538:G:H5"	45:m:114:LYS:HB2	1.77	0.65
31:y:555:C:C3'	31:y:556:C:C5'	2.66	0.65
31:y:896:C:H5"	50:r:101:ARG:HG2	1.79	0.65
31:y:955:U:O5'	31:y:955:U:H6	1.79	0.65
31:y:1210:C:H5"	31:y:1211:U:OP2	1.97	0.65
31:y:1309:G:OP2	31:y:1309:G:C8	2.49	0.65
38:f:52:PRO:O	38:f:55:VAL:HG22	1.96	0.65
41:i:61:VAL:C	41:i:62:TYR:HD2	2.04	0.65
42:j:53:VAL:CG2	42:j:58:ARG:HH22	2.10	0.65
1:w:71:A:H4'	1:w:72:U:O5'	1.97	0.65
1:w:269:U:H2'	1:w:270(A):A:C8	2.31	0.65
1:w:328:U:C4'	21:S:66:PRO:HG2	2.26	0.65
1:w:449:A:H5"	1:w:450:G:C8	2.31	0.65
1:w:992:C:H4'	18:P:75:PHE:HZ	1.61	0.65
1:w:2008:C:H2'	1:w:2009:G:H8	1.59	0.65
2:x:113:C:H2'	15:M:47:THR:HG22	1.77	0.65
4:B:218:ARG:HG2	4:B:219:PRO:HD2	1.78	0.65
8:F:170:ARG:HH22	8:F:172:LYS:HE3	1.60	0.65
11:I:71:ARG:HG2	11:I:72:PRO:HD2	1.78	0.65
16:N:3:ARG:O	16:N:7:ILE:HG12	1.96	0.65
22:T:25:PRO:HA	22:T:38:TYR:CB	2.27	0.65
24:V:12:PRO:HG3	24:V:63:ALA:N	2.10	0.65
31:y:17:U:C1'	31:y:1079:G:H21	2.08	0.65
31:y:401:C:H2'	31:y:402:G:H8	1.62	0.65
31:y:513:C:H2'	31:y:514:C:H6	1.61	0.65
31:y:935:A:H2'	31:y:936:C:O5'	1.95	0.65
31:y:1425:U:H2'	31:y:1426:C:C6	2.32	0.65
31:y:1470:G:C5	31:y:1471:G:C8	2.83	0.65
36:d:64:VAL:HB	36:d:99:VAL:HG11	1.78	0.65
37:e:8:VAL:HB	37:e:21:LEU:O	1.96	0.65
38:f:78:HIS:CB	41:i:104:ARG:HG3	2.26	0.65
40:h:31:MET:HA	40:h:36:LYS:HB3	1.77	0.65
48:p:63:ARG:O	48:p:67:LEU:HG	1.96	0.65
1:w:246:C:O5'	1:w:246:C:H6	1.80	0.65
1:w:322:A:OP1	6:D:163:ARG:HB2	1.96	0.65
1:w:2513:G:C6	1:w:2514:U:C4	2.85	0.65
1:w:2746:U:O5'	1:w:2746:U:C3'	2.44	0.65
3:A:167:ASP:N	3:A:171:ALA:HA	2.08	0.65
4:B:172:TYR:CD1	4:B:186:HIS:HA	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:61:VAL:HG11	11:I:85:VAL:HB	1.79	0.65
12:J:114:ILE:HG12	12:J:130:PHE:HA	1.78	0.65
16:N:50:ILE:HD12	16:N:62:THR:OG1	1.96	0.65
17:O:41:ALA:C	17:O:43:GLY:H	2.04	0.65
31:y:136:C:O2'	49:q:1:MET:N	2.29	0.65
31:y:404:U:H4'	37:e:122:ARG:HH21	1.60	0.65
31:y:519:C:C5'	45:m:50:ALA:HB2	2.20	0.65
31:y:520:A:H62	31:y:529:G:N2	1.95	0.65
31:y:1086:U:O2	31:y:1099:G:N2	2.30	0.65
31:y:1326:C:OP1	54:v:17:THR:HB	1.96	0.65
31:y:1347:G:C8	42:j:107:ARG:HB2	2.32	0.65
34:3:8:U:H3'	34:3:8:U:C6	2.30	0.65
46:n:71:ARG:O	46:n:74:VAL:HB	1.95	0.65
54:v:22:ARG:H	54:v:23:PRO:HD2	1.62	0.65
1:w:143:C:H4'	20:R:36:LYS:HG2	1.77	0.65
1:w:204:A:H4'	1:w:205:G:O5'	1.96	0.65
1:w:668:G:C2'	1:w:670:A:H62	2.08	0.65
1:w:683:C:H4'	28:Z:21:ARG:HH22	1.62	0.65
1:w:886:C:H4'	1:w:887:A:C8	2.31	0.65
1:w:889:C:H1'	1:w:890:A:N9	2.12	0.65
1:w:1620:G:H4'	28:Z:2:LYS:HZ3	1.62	0.65
1:w:1863:G:OP1	1:w:1863:G:H4'	1.95	0.65
1:w:2601:C:O2'	1:w:2602:A:H5'	1.97	0.65
1:w:2754:U:H5'	1:w:2754:U:C6	2.21	0.65
2:x:47:C:H5"	15:M:93:LYS:CE	2.27	0.65
2:x:81:G:C6	2:x:96:G:C6	2.85	0.65
10:H:78:VAL:HB	10:H:149:PRO:HA	1.79	0.65
12:J:35:HIS:N	12:J:36:LYS:HZ3	1.95	0.65
15:M:66:ALA:HB1	15:M:101:LEU:CG	2.27	0.65
20:R:6:ASP:HA	25:W:26:ARG:HH22	1.62	0.65
29:a:6:THR:CG2	29:a:62:LEU:HB2	2.26	0.65
31:y:66:G:C4'	31:y:173:U:O4	2.30	0.65
31:y:553:A:H4'	45:m:30:PRO:CD	2.27	0.65
31:y:565:U:OP2	31:y:567:G:OP1	2.14	0.65
31:y:769:G:C3'	31:y:770:C:H5"	2.27	0.65
31:y:1316:G:N2	31:y:1319:A:C8	2.65	0.65
32:z:54:U:H2'	32:z:55:U:H5'	1.78	0.65
37:e:19:LEU:O	37:e:21:LEU:N	2.29	0.65
39:g:43:LEU:HD23	39:g:60:PHE:HB3	1.77	0.65
45:m:23:VAL:CG1	45:m:30:PRO:HG3	2.27	0.65
47:o:25:VAL:H	47:o:39:LEU:CD2	2.08	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:s:37:VAL:O	51:s:41:LYS:N	2.30	0.65
1:w:245:G:H2'	1:w:246:C:C6	2.32	0.65
1:w:1296:G:H4'	14:L:16:HIS:HE1	1.60	0.65
1:w:1535:U:C2'	1:w:1536:A:H5'	2.27	0.65
1:w:2094:G:H4'	9:G:25:TYR:OH	1.95	0.65
1:w:2148:G:N2	1:w:2149:G:H1'	2.12	0.65
1:w:2355:C:H3'	1:w:2356:C:C5'	2.27	0.65
1:w:2602:A:N3	1:w:2602:A:H2'	2.10	0.65
1:w:2623:G:H2'	1:w:2624:G:C8	2.32	0.65
2:x:74:U:O5'	2:x:74:U:C6	2.48	0.65
8:F:26:VAL:HB	8:F:33:LEU:HB2	1.78	0.65
11:I:43:VAL:HG11	11:I:53:LYS:HA	1.77	0.65
16:N:45:PHE:HE2	16:N:64:ARG:HA	1.62	0.65
17:O:92:ARG:HG2	17:O:94:ASN:HD22	1.62	0.65
29:a:52:LYS:N	29:a:53:PRO:CD	2.60	0.65
31:y:20:U:H2'	31:y:21:G:O4'	1.97	0.65
31:y:776:G:N1	31:y:802:A:OP1	2.29	0.65
31:y:1016:A:O2'	31:y:1017:G:O4'	2.12	0.65
31:y:1309:G:OP1	46:n:99:ARG:HG3	1.97	0.65
31:y:1450:U:H1'	31:y:1454:G:N2	2.11	0.65
31:y:1513:A:C6	31:y:1523:G:O6	2.50	0.65
31:y:1528:U:C5'	31:y:1529:G:N2	2.60	0.65
1:w:523:C:H4'	1:w:552:G:H21	1.62	0.65
1:w:1059:G:H2'	1:w:1060:U:H3'	1.78	0.65
1:w:1503:U:H2'	1:w:1504:C:C6	2.32	0.65
1:w:1567:A:H3'	4:B:86:PRO:HB3	1.79	0.65
1:w:1669:A:H4'	1:w:2550:G:OP1	1.95	0.65
1:w:1770:G:H2'	1:w:1771:C:O4'	1.97	0.65
1:w:2016:U:O2'	27:Y:8:LYS:HG2	1.97	0.65
1:w:2124:G:H21	3:A:218:THR:HA	1.62	0.65
1:w:2243:U:H2'	1:w:2244:U:C6	2.32	0.65
1:w:2439:A:H1'	1:w:2587:A:P	2.37	0.65
4:B:58:HIS:O	4:B:60:ARG:N	2.30	0.65
11:I:29:ASN:HD22	11:I:29:ASN:C	2.05	0.65
17:O:92:ARG:HG2	17:O:94:ASN:ND2	2.12	0.65
19:Q:12:ILE:HG22	19:Q:13:SER:H	1.60	0.65
26:X:8:LEU:O	26:X:54:VAL:HA	1.96	0.65
31:y:173:U:C5	31:y:198:G:O2'	2.51	0.65
31:y:486:U:H2'	31:y:487:A:H8	1.61	0.65
31:y:892:A:H8	31:y:892:A:O5'	1.79	0.65
31:y:975:A:C2	31:y:1357:A:H1'	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1225:A:H5'	31:y:1226:C:OP2	1.97	0.65
32:z:70:G:H2'	32:z:71:C:H5"	1.79	0.65
39:g:11:ASN:HB2	39:g:84:ASN:O	1.96	0.65
1:w:346:A:H1'	1:w:347:A:C8	2.31	0.64
1:w:408:G:N2	1:w:420:C:H1'	2.12	0.64
1:w:612:G:H1'	1:w:617:G:N2	2.12	0.64
1:w:1221:C:O2'	1:w:1221(A):C:H5'	1.96	0.64
1:w:1753:G:H8	1:w:1753:G:O5'	1.81	0.64
1:w:2074:U:OP1	4:B:232:PRO:HG3	1.97	0.64
1:w:2298:A:H62	1:w:2318:G:H21	1.45	0.64
1:w:2542:A:H1'	1:w:2543:G:N7	2.12	0.64
1:w:2675:A:N6	1:w:2676:C:C4	2.66	0.64
4:B:126:GLN:H	4:B:129:ASN:ND2	1.94	0.64
5:C:175:VAL:HA	5:C:182:LEU:HD12	1.79	0.64
6:D:75:ALA:N	6:D:76:PRO:HD3	2.10	0.64
8:F:98:LEU:HB3	8:F:123:PHE:CZ	2.32	0.64
14:L:66:VAL:C	14:L:68:ARG:HH12	2.03	0.64
18:P:73:SER:HB2	18:P:89:GLN:H	1.62	0.64
31:y:68:G:H3'	31:y:69:G:H5"	1.79	0.64
31:y:505:G:C2'	31:y:506:G:C5'	2.74	0.64
31:y:546:G:C5'	31:y:548:G:H4'	2.26	0.64
31:y:781:A:P	31:y:1523:G:H5'	2.37	0.64
31:y:831:U:C2	31:y:832:C:H5	2.15	0.64
31:y:1269:A:H5'	54:v:19:GLY:C	2.22	0.64
31:y:1454:G:O2'	31:y:1455:G:H5'	1.96	0.64
33:2:14:A:C2	33:2:22:G:C2	2.85	0.64
33:2:74:C:C2'	33:2:75:C:O4'	2.42	0.64
35:c:22:LYS:HA	35:c:24:TRP:CE3	2.32	0.64
50:r:87:LYS:HD3	50:r:88:TYR:N	2.11	0.64
53:u:40:ALA:HA	53:u:55:ILE:CG2	2.26	0.64
1:w:183:C:H2'	1:w:184:C:H5"	1.78	0.64
1:w:788:A:C5'	1:w:790:C:H41	2.10	0.64
1:w:930:U:H5"	1:w:931:G:OP1	1.97	0.64
1:w:1282:U:H2'	1:w:1283:G:O4'	1.97	0.64
1:w:1712:C:H3'	1:w:1716:U:P	2.36	0.64
1:w:1944:U:O2'	1:w:1945:G:H5"	1.97	0.64
1:w:2090:G:N2	24:V:47:GLN:HG2	2.12	0.64
1:w:2273:A:H2'	1:w:2274:A:H8	1.62	0.64
1:w:2297:C:C2	1:w:2298:A:C8	2.84	0.64
9:G:28:ASN:O	9:G:29:TYR:HB2	1.97	0.64
9:G:38:LEU:HD12	9:G:38:LEU:H	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:80:GLU:O	13:K:81:VAL:HG13	1.97	0.64
15:M:39:ILE:HD13	15:M:39:ILE:H	1.62	0.64
17:O:45:TYR:HA	17:O:48:ALA:HB3	1.79	0.64
19:Q:25:ARG:HH21	19:Q:74:ALA:HB3	1.61	0.64
22:T:17:ALA:O	22:T:20:ARG:HG3	1.97	0.64
31:y:586:C:OP1	50:r:34:LYS:HE3	1.97	0.64
31:y:648:A:H2'	31:y:649:G:O4'	1.96	0.64
31:y:920:U:O2'	31:y:921:U:H5'	1.98	0.64
33:2:14:A:N6	33:2:21:A:C2	2.65	0.64
43:k:51:ARG:HG2	43:k:52:GLY:N	2.06	0.64
48:p:35:ARG:O	48:p:39:LEU:HG	1.97	0.64
50:r:61:GLU:HA	50:r:71:PHE:HD1	1.62	0.64
1:w:247:G:C4	1:w:249:C:H1'	2.32	0.64
1:w:834:C:O2	1:w:2358:G:N3	2.29	0.64
1:w:1636:C:H2'	1:w:1637:A:C8	2.32	0.64
1:w:2073:C:H5"	4:B:229:VAL:HG22	1.77	0.64
1:w:2077:A:H2'	1:w:2078:C:C6	2.33	0.64
1:w:2089:U:H2'	1:w:2090:G:C8	2.32	0.64
1:w:2573:C:OP1	1:w:2574:G:O5'	2.15	0.64
1:w:2828:C:H2'	1:w:2829:C:C5	2.31	0.64
4:B:35:LYS:HB2	4:B:36:PRO:CA	2.26	0.64
6:D:166:PRO:O	6:D:167:TRP:HB2	1.96	0.64
8:F:76:VAL:O	8:F:79:VAL:HG22	1.97	0.64
10:H:65:TRP:HB3	17:O:64:ARG:NE	2.12	0.64
10:H:108:ILE:HG21	10:H:112:LYS:HD2	1.78	0.64
11:I:71:ARG:CG	11:I:72:PRO:HD2	2.26	0.64
12:J:147:LEU:HD13	12:J:148:LEU:HD13	1.78	0.64
13:K:106:VAL:HG11	13:K:114:ALA:HB1	1.78	0.64
14:L:9:LYS:HG3	14:L:10:LEU:N	2.10	0.64
17:O:92:ARG:HD2	18:P:11:GLN:HB2	1.78	0.64
18:P:10:LYS:NZ	18:P:22:VAL:HA	2.11	0.64
26:X:30:ARG:HD2	26:X:33:GLN:HB2	1.80	0.64
28:Z:21:ARG:O	28:Z:23:ARG:N	2.31	0.64
31:y:26:A:H4'	31:y:508:C:H41	1.61	0.64
31:y:27:G:C2	31:y:557:G:C2	2.86	0.64
31:y:323:U:H5'	53:u:23:ARG:HB2	1.79	0.64
31:y:468:A:O3'	49:q:80:PHE:HB2	1.97	0.64
31:y:831:U:H2'	31:y:832:C:H5"	1.80	0.64
31:y:1127:G:H5'	31:y:1280:A:C2	2.27	0.64
31:y:1258:G:H2'	31:y:1259:C:C6	2.32	0.64
31:y:1535:C:H2'	31:y:1536:C:C6	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:123:GLN:NE2	36:d:133:ALA:HB1	2.10	0.64
47:o:39:LEU:HD12	47:o:44:LEU:CD2	2.26	0.64
47:o:56:VAL:O	47:o:56:VAL:HG13	1.97	0.64
53:u:44:ALA:HB2	53:u:52:ALA:CB	2.28	0.64
1:w:181:A:C2	1:w:434:U:H1'	2.33	0.64
1:w:1889:A:H2'	1:w:1890:A:C8	2.32	0.64
1:w:1919:A:H8	1:w:1919:A:O5'	1.79	0.64
1:w:2443:C:H2'	1:w:2444:G:C8	2.32	0.64
1:w:2840:C:C4	1:w:2841:C:C4	2.85	0.64
1:w:2893:G:H4'	1:w:2894:G:C8	2.31	0.64
5:C:103:ASP:HB2	5:C:199:ARG:HD3	1.78	0.64
5:C:184:VAL:HG12	5:C:185:LYS:H	1.61	0.64
10:H:40:ASP:HA	10:H:44:LYS:HG3	1.80	0.64
12:J:137:LYS:HB2	12:J:138:LEU:HD12	1.80	0.64
16:N:50:ILE:CD1	16:N:64:ARG:HB2	2.27	0.64
18:P:34:GLU:N	18:P:64:HIS:CE1	2.66	0.64
31:y:186(A):C:H2'	31:y:186(B):C:C6	2.33	0.64
31:y:250:A:H1'	31:y:252:U:N1	2.12	0.64
31:y:522:C:N3	31:y:523:A:N7	2.46	0.64
31:y:868:C:H2'	31:y:869:G:H5'	1.79	0.64
31:y:878:G:O2'	31:y:879:C:H5'	1.96	0.64
31:y:1130:A:H2	31:y:1131:G:N7	1.95	0.64
35:c:134:GLU:HA	35:c:137:ARG:NE	2.12	0.64
43:k:51:ARG:CB	43:k:59:SER:HB3	2.20	0.64
52:t:46:GLY:H	52:t:62:ILE:HG23	1.62	0.64
1:w:137(B):G:C4	1:w:138:G:H1'	2.32	0.64
1:w:704:G:H2'	1:w:726:G:N2	2.11	0.64
1:w:995:C:H1'	17:O:61:TRP:CZ2	2.32	0.64
1:w:1142:C:C5'	1:w:1142(B):A:H5"	2.27	0.64
1:w:1566:A:OP1	4:B:211:ARG:NH2	2.28	0.64
1:w:1576:U:H2'	1:w:1577:C:H5	1.59	0.64
1:w:1820:U:H3	4:B:159:ALA:HB3	1.60	0.64
1:w:2271:G:H5"	23:U:20:ARG:NE	2.13	0.64
1:w:2575:C:H5"	5:C:144:ARG:NH1	2.12	0.64
1:w:2633:G:N2	5:C:64:LYS:CD	2.53	0.64
1:w:2654:A:N6	1:w:2666:C:C5	2.66	0.64
1:w:2772:C:H2'	1:w:2773:C:C5	2.32	0.64
4:B:76:PRO:HA	4:B:97:TYR:CE1	2.32	0.64
5:C:12:THR:HG21	16:N:57:PHE:HB3	1.80	0.64
5:C:170:LEU:HB3	5:C:185:LYS:HB3	1.79	0.64
9:G:81:VAL:C	9:G:148:GLU:HG3	2.23	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:77:ILE:CB	16:N:74:ARG:HD2	2.24	0.64
31:y:582:U:H6	31:y:582:U:O5'	1.81	0.64
31:y:715:A:H2'	31:y:716:A:H8	1.60	0.64
31:y:964:A:H3'	31:y:965:A:C5'	2.27	0.64
31:y:980:C:H3'	31:y:981:U:C6	2.32	0.64
31:y:1199:U:C4'	43:k:54:PHE:CD2	2.76	0.64
31:y:1300:G:H22	31:y:1335:C:H4'	1.62	0.64
33:2:48:C:H4'	33:2:49:C:H5"	1.80	0.64
37:e:38:TYR:O	37:e:39:PRO:C	2.40	0.64
39:g:41:GLU:HB2	39:g:62:TRP:HB3	1.79	0.64
39:g:45:LEU:HA	39:g:59:TYR:HA	1.79	0.64
41:i:17:THR:CG2	41:i:78:GLN:HG2	2.24	0.64
46:n:80:ARG:CZ	46:n:80:ARG:HB3	2.26	0.64
50:r:11:VAL:HB	50:r:88:TYR:CZ	2.32	0.64
51:s:15:ARG:NH2	51:s:15:ARG:HB3	2.13	0.64
1:w:456:C:N4	20:R:66:LEU:HG	2.13	0.64
1:w:722:A:H2'	1:w:723:G:H8	1.62	0.64
1:w:906:G:H3'	1:w:907:U:H5"	1.80	0.64
1:w:1111:A:O3'	1:w:1112:G:H4'	1.97	0.64
1:w:1792:G:N2	1:w:1827:C:O2	2.30	0.64
1:w:1893:C:H2'	1:w:1894:C:H5'	1.80	0.64
1:w:2041:U:H2'	1:w:2042:A:C8	2.33	0.64
1:w:2352:A:C2	23:U:33:ALA:CB	2.77	0.64
1:w:2512:C:C4'	5:C:122:PHE:CZ	2.72	0.64
1:w:2543:G:O2'	1:w:2544:G:H5'	1.98	0.64
1:w:2625:G:H2'	1:w:2626:C:C6	2.32	0.64
1:w:2655:G:O2'	1:w:2656:U:OP2	2.16	0.64
1:w:2688:U:C5	1:w:2719:G:C6	2.86	0.64
2:x:16:G:OP2	2:x:16:G:C8	2.44	0.64
4:B:133:LEU:HB2	4:B:187:GLY:O	1.97	0.64
5:C:14:ILE:O	5:C:20:ALA:HA	1.98	0.64
5:C:170:LEU:CD2	5:C:185:LYS:HB3	2.24	0.64
7:E:110:ALA:HB1	7:E:140:ILE:HG13	1.80	0.64
13:K:63:LYS:HE3	22:T:116:VAL:HG13	1.78	0.64
17:O:105:VAL:HG22	18:P:43:GLU:CD	2.23	0.64
31:y:176:C:H2'	31:y:177:C:C6	2.32	0.64
31:y:412:A:O2'	31:y:413:G:C5'	2.27	0.64
31:y:559:A:C5'	31:y:561:U:OP1	2.45	0.64
31:y:899:C:H3'	31:y:900:A:H8	1.62	0.64
31:y:934:C:H5	31:y:1344:C:H2'	1.60	0.64
31:y:1373:G:H4'	40:h:31:MET:SD	2.38	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1386:G:H2'	31:y:1387:G:H8	1.63	0.64
36:d:130:VAL:HG23	36:d:131:ARG:H	1.62	0.64
41:i:6:ILE:H	41:i:6:ILE:HD12	1.62	0.64
43:k:25:GLU:HB3	43:k:29:ARG:NE	2.09	0.64
1:w:392:C:H5'	1:w:409:C:H5"	1.78	0.64
1:w:518:G:H4'	19:Q:18:ARG:NH1	2.12	0.64
1:w:554:U:H2'	1:w:556:G:C8	2.33	0.64
1:w:960:A:H5'	1:w:2457:U:H4'	1.79	0.64
1:w:962:G:C2'	1:w:963:U:H5"	2.26	0.64
1:w:1010:A:C2	1:w:1153:C:H1'	2.33	0.64
1:w:1186:G:C4	1:w:1187:G:H1'	2.33	0.64
1:w:1210:A:H5"	1:w:1211:U:H3'	1.78	0.64
1:w:1535:U:H2'	1:w:1536:A:H5'	1.78	0.64
1:w:1818:U:H5"	4:B:157:ARG:HD2	1.79	0.64
1:w:1894:C:H2'	1:w:1895:C:C6	2.32	0.64
1:w:2273:A:H2'	1:w:2274:A:C8	2.32	0.64
2:x:78:A:C2	2:x:99:A:C6	2.86	0.64
5:C:55:ASN:OD1	5:C:75:VAL:HG23	1.97	0.64
6:D:109:VAL:HA	6:D:112:ARG:HG2	1.79	0.64
13:K:123:HIS:HE1	30:b:8:LYS:HZ3	1.45	0.64
14:L:56:LYS:HD2	14:L:87:TYR:O	1.98	0.64
15:M:67:ARG:H	15:M:100:ALA:HB1	1.60	0.64
16:N:70:VAL:HG12	16:N:71:GLY:N	2.12	0.64
22:T:28:MET:HG2	22:T:37:VAL:HG22	1.79	0.64
24:V:51:VAL:O	24:V:52:ARG:HB2	1.98	0.64
31:y:104:G:H2'	31:y:105:G:H5"	1.78	0.64
31:y:311:C:C4	31:y:312:C:N4	2.66	0.64
31:y:323:U:OP1	53:u:23:ARG:HA	1.98	0.64
31:y:722:A:H61	31:y:733:A:H61	1.44	0.64
31:y:1268:A:O2'	54:v:20:LYS:N	2.31	0.64
32:z:2:G:O5'	32:z:2:G:C8	2.50	0.64
37:e:28:SER:O	37:e:30:LYS:N	2.31	0.64
40:h:27:ILE:HD12	40:h:30:ILE:CG2	2.28	0.64
45:m:45:LYS:HB2	45:m:45:LYS:NZ	2.13	0.64
54:v:12:LYS:HZ2	54:v:21:TYR:HB2	1.63	0.64
1:w:107:C:H4'	1:w:292:C:O2'	1.98	0.64
1:w:138:G:H3'	1:w:139:G:C5'	2.27	0.64
1:w:1007:C:P	1:w:1008:C:H3'	2.38	0.64
1:w:2094:G:H2'	1:w:2095:C:O4'	1.98	0.64
1:w:2218:G:H1'	4:B:148:GLU:CD	2.22	0.64
1:w:2324:C:O2'	1:w:2337:G:H5"	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2635:C:O5'	1:w:2635:C:C6	2.43	0.64
4:B:56:GLY:HA3	4:B:215:LEU:C	2.23	0.64
5:C:154:LYS:HZ2	5:C:155:LYS:HD2	1.62	0.64
9:G:81:VAL:HG11	9:G:144:VAL:HG13	1.80	0.64
10:H:37:VAL:CG1	10:H:38:LEU:N	2.60	0.64
11:I:85:VAL:CG1	11:I:86:ILE:H	1.93	0.64
15:M:12:PHE:N	15:M:12:PHE:HD1	1.96	0.64
24:V:88:LYS:HG3	24:V:89:GLU:N	2.12	0.64
31:y:229:U:O2	49:q:25:ARG:NH2	2.29	0.64
31:y:678:U:O2	31:y:777:A:H4'	1.98	0.64
31:y:771:G:O2'	31:y:772:U:H5'	1.98	0.64
31:y:811:C:C2'	31:y:812:C:H5"	2.24	0.64
31:y:825:G:H2'	31:y:826:C:C6	2.33	0.64
31:y:950:U:H4'	31:y:971:G:H22	1.62	0.64
36:d:167:TRP:CD1	36:d:168:ALA:H	2.15	0.64
36:d:184:TYR:HA	36:d:201:TYR:HB3	1.80	0.64
37:e:22:LYS:HB3	37:e:26:CYS:H	1.63	0.64
37:e:78:LEU:HD23	37:e:93:PHE:HZ	1.63	0.64
38:f:152:ARG:CA	41:i:43:GLY:HA3	2.28	0.64
50:r:96:GLN:HG3	50:r:97:SER:H	1.62	0.64
1:w:465:G:H4'	28:Z:16:HIS:CG	2.32	0.64
1:w:855:G:H21	23:U:27:GLU:H	1.45	0.64
1:w:1540:G:H3'	1:w:1541:U:H6	1.63	0.64
1:w:1782:C:C2'	1:w:1783:A:H5'	2.28	0.64
1:w:2465:C:H4'	30:b:4:ARG:NH2	2.13	0.64
1:w:2518:A:H2'	1:w:2518:A:N3	2.12	0.64
1:w:2588:G:C6	1:w:2607:G:C2	2.86	0.64
1:w:2724:C:OP1	5:C:111:ARG:NH1	2.28	0.64
1:w:2730:C:H2'	1:w:2731:G:C8	2.33	0.64
1:w:2762:G:H3'	1:w:2763:G:C8	2.31	0.64
4:B:228:PRO:O	4:B:230:ASP:N	2.31	0.64
6:D:149:VAL:C	6:D:150:LEU:HD22	2.23	0.64
10:H:36:TRP:O	10:H:37:VAL:HG23	1.98	0.64
11:I:17:ARG:HE	11:I:47:ILE:H	1.44	0.64
17:O:100:VAL:HG23	17:O:101:ARG:HD2	1.80	0.64
18:P:78:LYS:HB2	18:P:83:ARG:HH11	1.60	0.64
22:T:8:TYR:CD1	22:T:39:VAL:HG13	2.33	0.64
23:U:15:ASP:HB3	23:U:20:ARG:HG3	1.80	0.64
31:y:259:G:H2'	31:y:260:G:O4'	1.98	0.64
31:y:302:G:H2'	31:y:303:A:O4'	1.97	0.64
31:y:310:G:N2	31:y:311:C:C2	2.66	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:552:U:H4'	45:m:85:ARG:HH12	1.54	0.64
31:y:650:G:C2'	31:y:651:C:H5'	2.28	0.64
31:y:1003:G:N3	31:y:1004:A:H1'	2.13	0.64
31:y:1279:A:N3	31:y:1279:A:C3'	2.59	0.64
37:e:9:CYS:H	37:e:22:LYS:HG3	1.62	0.64
37:e:15:GLU:HG2	37:e:63:LYS:HG3	1.78	0.64
37:e:22:LYS:HB2	37:e:26:CYS:CB	2.27	0.64
45:m:123:LYS:HE2	45:m:123:LYS:HA	1.80	0.64
1:w:141(A):A:H2	1:w:1596:A:H4'	1.63	0.64
1:w:322:A:H5"	1:w:323:G:OP2	1.98	0.64
1:w:363(G):A:H2'	1:w:364:C:C5	2.32	0.64
1:w:781:A:O4'	4:B:219:PRO:HG3	1.98	0.64
1:w:811:U:H1'	1:w:1251:C:O3'	1.98	0.64
1:w:1800:C:O2'	1:w:1801:G:C5'	2.41	0.64
1:w:2022:U:N3	1:w:2616:C:O2'	2.31	0.64
1:w:2558:C:C2	1:w:2559:C:C6	2.86	0.64
1:w:2627:G:C2'	1:w:2628:C:H5'	2.28	0.64
1:w:2846:G:C6	1:w:2847:U:N3	2.65	0.64
4:B:69:ARG:HG3	4:B:190:TYR:HE2	1.62	0.64
4:B:184:LYS:HG2	4:B:185:VAL:H	1.63	0.64
6:D:151:LEU:H	6:D:169:VAL:HG11	1.62	0.64
13:K:14:ARG:N	13:K:14:ARG:HD2	2.13	0.64
16:N:86:ILE:HG22	16:N:87:ASP:N	2.13	0.64
18:P:94:LEU:HB3	18:P:96:ILE:HD13	1.79	0.64
21:S:67:LEU:HD13	21:S:68:HIS:N	2.09	0.64
22:T:39:VAL:HG12	22:T:40:ASP:H	1.63	0.64
31:y:50:A:C2	31:y:360:A:C2	2.86	0.64
31:y:559:A:H2'	31:y:559:A:N3	2.12	0.64
31:y:605:U:O4	31:y:606:G:N1	2.31	0.64
31:y:625:G:H5'	49:q:16:HIS:CB	2.28	0.64
31:y:692:U:C6	31:y:692:U:C3'	2.80	0.64
31:y:975:A:N7	43:k:50:ILE:HD12	2.13	0.64
31:y:1251:A:H2	31:y:1369:C:O2	1.80	0.64
36:d:154:SER:HA	36:d:165:THR:HA	1.80	0.64
41:i:12:ARG:HH21	41:i:25:ASP:HB2	1.63	0.64
1:w:82:G:N1	1:w:103:A:OP2	2.28	0.63
1:w:850:C:H4'	26:X:18:ASP:O	1.98	0.63
1:w:865:C:H41	1:w:908:C:N4	1.95	0.63
1:w:1531:C:H2'	1:w:1532:C:C6	2.31	0.63
1:w:1844:C:H2'	1:w:1845:G:O4'	1.98	0.63
1:w:2712(B):A:C4'	1:w:2713:A:H5'	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2756:U:O4'	1:w:2757:A:N7	2.31	0.63
4:B:24:ILE:O	4:B:25:THR:C	2.41	0.63
4:B:248:SER:HB3	4:B:249:PRO:CD	2.27	0.63
5:C:27:LEU:CD2	5:C:29:GLY:H	2.10	0.63
5:C:28:ALA:N	5:C:181:LEU:HA	2.11	0.63
5:C:175:VAL:HA	5:C:182:LEU:CD1	2.28	0.63
9:G:27:ARG:HD3	9:G:27:ARG:N	2.09	0.63
10:H:95:TYR:CD1	10:H:108:ILE:O	2.51	0.63
10:H:146:TYR:N	10:H:146:TYR:CD2	2.63	0.63
11:I:93:PRO:HG3	11:I:114:ILE:CG2	2.27	0.63
12:J:148:LEU:HD13	12:J:148:LEU:H	1.62	0.63
13:K:25:ASP:HB3	13:K:101:ARG:HD2	1.80	0.63
24:V:26:ARG:HB3	24:V:34:THR:HG23	1.80	0.63
24:V:87:PRO:HA	24:V:91:LYS:NZ	2.13	0.63
26:X:49:LYS:HA	26:X:49:LYS:NZ	2.14	0.63
31:y:36:C:H2'	31:y:37:U:C5	2.32	0.63
31:y:382:A:HO2'	31:y:383:A:H5'	1.62	0.63
31:y:546:G:C4'	31:y:548:G:O2'	2.45	0.63
31:y:657:G:N3	48:p:23:GLY:HA3	2.14	0.63
31:y:952:U:O2'	31:y:953:G:H5'	1.98	0.63
31:y:988:G:H21	31:y:1015:A:H2	1.44	0.63
39:g:43:LEU:H	39:g:43:LEU:HD22	1.63	0.63
46:n:14:ARG:H	46:n:44:ARG:HH11	1.45	0.63
48:p:60:VAL:O	48:p:63:ARG:HB3	1.98	0.63
48:p:79:ARG:O	48:p:83:GLU:HG2	1.98	0.63
1:w:92:G:H3'	1:w:93:C:H6	1.63	0.63
1:w:341:G:H2'	1:w:342:G:C8	2.32	0.63
1:w:929:G:O2'	1:w:930:U:H5'	1.98	0.63
1:w:1130:U:C2	1:w:2025:C:H5"	2.33	0.63
1:w:1150:C:C2	1:w:1151:G:C8	2.86	0.63
1:w:1240:U:O2'	1:w:1241:A:H5'	1.98	0.63
1:w:2174:C:H2'	1:w:2175:C:C6	2.32	0.63
1:w:2553:G:H1'	1:w:2582:G:N2	2.13	0.63
3:A:225:ILE:CG2	3:A:226:ASN:H	2.11	0.63
4:B:208:LYS:NZ	4:B:209:ALA:HB3	2.14	0.63
8:F:84:SER:OG	8:F:138:LYS:HE3	1.98	0.63
31:y:116:A:OP2	31:y:289:G:H5"	1.98	0.63
31:y:435:C:H2'	31:y:436:C:C5	2.33	0.63
31:y:789:U:H2'	31:y:791:G:OP2	1.98	0.63
31:y:1343:G:C2'	42:j:122:ALA:HB3	2.28	0.63
31:y:1359:C:P	47:o:33:VAL:HG23	2.39	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1466:C:O2'	31:y:1467:G:H5'	1.97	0.63
31:y:1528:U:H4'	31:y:1529:G:N3	2.12	0.63
39:g:5:GLU:HA	39:g:64:GLN:HA	1.79	0.63
41:i:98:LYS:HD3	41:i:98:LYS:H	1.63	0.63
46:n:56:LEU:HA	46:n:59:TYR:HB3	1.80	0.63
47:o:41:ARG:HH11	47:o:42:ILE:HA	1.61	0.63
53:u:91:LEU:O	53:u:95:ALA:HB3	1.99	0.63
1:w:1219:G:O2'	1:w:1220:A:H5"	1.97	0.63
1:w:1351:C:H2'	1:w:1352:U:C6	2.34	0.63
1:w:1638:C:H2'	1:w:1639:U:O4'	1.98	0.63
1:w:1864:U:C3'	1:w:1869:G:P	2.86	0.63
1:w:2290:G:N2	1:w:2343:C:H1'	2.13	0.63
1:w:2656:U:H2'	1:w:2657:A:C8	2.32	0.63
1:w:2772:C:O5'	1:w:2772:C:C6	2.48	0.63
4:B:109:ASP:HB2	4:B:199:ALA:HB2	1.79	0.63
6:D:19:LEU:HA	6:D:22:GLU:HG3	1.79	0.63
7:E:70:VAL:HG12	7:E:90:LEU:CD2	2.27	0.63
8:F:134:SER:HA	8:F:138:LYS:HZ1	1.63	0.63
14:L:44:LEU:HD23	14:L:47:PHE:CZ	2.33	0.63
22:T:24:LEU:CD1	22:T:41:LEU:HA	2.28	0.63
22:T:141:VAL:CG2	22:T:144:LEU:HB2	2.29	0.63
23:U:66:VAL:O	23:U:81:VAL:CA	2.43	0.63
29:a:62:LEU:H	29:a:63:PRO:CD	2.12	0.63
31:y:186(A):C:H1'	53:u:81:LYS:HD2	1.80	0.63
31:y:234:C:H2'	31:y:235:C:C6	2.33	0.63
31:y:291:C:C3'	31:y:305:G:H22	2.10	0.63
31:y:323:U:H4'	53:u:22:ARG:HB2	1.78	0.63
31:y:438:G:C2'	31:y:494:U:O4	2.33	0.63
31:y:936:C:C1'	31:y:1383:C:N4	2.59	0.63
31:y:1474:G:C6	31:y:1475:G:C5	2.87	0.63
36:d:87:LEU:HD11	36:d:101:LEU:HD11	1.79	0.63
37:e:89:THR:HA	37:e:93:PHE:CD2	2.33	0.63
1:w:43:G:C8	1:w:43:G:OP2	2.52	0.63
1:w:242:G:N2	1:w:254:G:H2'	2.13	0.63
1:w:448:U:O2'	6:D:79:VAL:HG11	1.98	0.63
1:w:463:G:C4	1:w:465:G:OP2	2.52	0.63
1:w:483:A:H2'	1:w:484:C:H6	1.62	0.63
1:w:807:U:H2'	1:w:808:G:C8	2.33	0.63
1:w:918:A:O2'	2:x:80:U:H1'	1.97	0.63
1:w:996:A:H2'	1:w:997:G:H8	1.63	0.63
1:w:1007:C:H4'	10:H:131:PRO:HA	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1321:A:H2'	1:w:1322:A:O4'	1.97	0.63
1:w:1838:C:H42	1:w:1901:A:H62	1.44	0.63
1:w:2635:C:H5'	5:C:77:ILE:CG2	2.29	0.63
1:w:2730:C:H2'	1:w:2731:G:H8	1.63	0.63
1:w:2899:G:C2'	1:w:2900:A:H5'	2.29	0.63
17:O:106:PHE:HA	17:O:109:LEU:CG	2.29	0.63
31:y:262:A:H2'	31:y:263:A:N7	2.13	0.63
31:y:408:A:C5	31:y:409:G:N7	2.66	0.63
31:y:585:G:OP1	50:r:37:LYS:HE3	1.99	0.63
31:y:668:G:C1'	48:p:49:ASP:HA	2.28	0.63
31:y:828:A:H2'	31:y:829:G:O4'	1.98	0.63
31:y:939:G:N1	31:y:940:C:N4	2.46	0.63
31:y:1013:G:C2	31:y:1016:A:N6	2.66	0.63
31:y:1430:C:N3	31:y:1471:G:C2	2.66	0.63
31:y:1440:C:C2'	31:y:1441:G:H5'	2.28	0.63
32:z:2:G:O5'	32:z:2:G:H8	1.81	0.63
38:f:57:LYS:O	38:f:57:LYS:HD2	1.98	0.63
42:j:97:LYS:H	42:j:98:PRO:CD	2.10	0.63
44:l:40:ILE:HG22	44:l:41:THR:OG1	1.98	0.63
1:w:54:G:O2'	28:Z:35:ARG:NH1	2.30	0.63
1:w:65:C:H5"	20:R:68:ARG:N	2.13	0.63
1:w:83:G:H2'	1:w:84:A:O4'	1.99	0.63
1:w:182:A:C2	1:w:433:C:H1'	2.34	0.63
1:w:337:C:H2'	1:w:338:G:O4'	1.99	0.63
1:w:589:C:O2'	1:w:590:A:H5'	1.98	0.63
1:w:1101:U:H2'	1:w:1102:C:O4'	1.99	0.63
1:w:1304:C:C3'	1:w:1305:C:H5"	2.29	0.63
1:w:1717:G:N3	1:w:1718:G:H1'	2.13	0.63
1:w:2041:U:H2'	1:w:2042:A:H8	1.63	0.63
2:x:44:G:H1'	2:x:47:C:N4	2.14	0.63
2:x:105:G:H2'	2:x:106:G:C8	2.33	0.63
10:H:65:TRP:CH2	10:H:67:PRO:HA	2.34	0.63
12:J:85:LEU:C	12:J:85:LEU:HD22	2.23	0.63
19:Q:88:ARG:NH1	19:Q:93:ALA:HA	2.14	0.63
31:y:20:U:H2'	31:y:21:G:H5'	1.81	0.63
31:y:35:G:H2'	31:y:36:C:H5'	1.80	0.63
31:y:254:G:H2'	31:y:255:G:H5'	1.80	0.63
31:y:912:C:H2'	31:y:913:A:C8	2.33	0.63
31:y:1016:A:H2'	31:y:1017:G:H8	1.63	0.63
31:y:1347:G:N2	31:y:1373:G:C2'	2.41	0.63
31:y:1442:G:H22	31:y:1446:A:H3'	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:z:64:G:C3'	32:z:65:C:H5"	2.27	0.63
33:2:68:U:H2'	33:2:69:U:H6	1.61	0.63
37:e:8:VAL:CG2	37:e:115:ARG:HD2	2.27	0.63
45:m:35:VAL:HB	45:m:58:ARG:HB2	1.79	0.63
46:n:64:TRP:N	46:n:64:TRP:CD1	2.66	0.63
46:n:77:ASN:HA	46:n:80:ARG:NH2	2.14	0.63
47:o:53:LEU:HD22	47:o:53:LEU:H	1.63	0.63
1:w:1668:A:N3	1:w:1670:C:N4	2.47	0.63
1:w:1682:G:H2'	1:w:1683:C:C6	2.34	0.63
1:w:1789:A:H5'	4:B:221:VAL:HG12	1.81	0.63
1:w:2232:U:O2'	1:w:2233:U:H5'	1.97	0.63
1:w:2835:A:H61	1:w:2878:U:H2'	1.61	0.63
4:B:91:ARG:HD3	4:B:198:ASN:CB	2.28	0.63
9:G:124:GLY:HA2	9:G:144:VAL:H	1.64	0.63
10:H:95:TYR:HB2	10:H:107:LYS:O	1.98	0.63
10:H:108:ILE:CG2	10:H:112:LYS:HD2	2.27	0.63
15:M:25:ARG:HH12	15:M:41:ASP:C	2.07	0.63
17:O:90:VAL:CG1	17:O:91:ASP:H	2.02	0.63
18:P:96:ILE:CG2	18:P:97:LYS:N	2.53	0.63
19:Q:24:ILE:HD12	19:Q:25:ARG:N	2.13	0.63
20:R:51:VAL:HB	20:R:79:ALA:HB1	1.80	0.63
22:T:80:ARG:HD2	22:T:82:ARG:CD	2.26	0.63
26:X:35:ARG:HG3	26:X:37:LEU:CD2	2.27	0.63
31:y:110:C:H6	31:y:110:C:C5'	2.11	0.63
31:y:1066:C:H42	31:y:1191:A:H62	1.45	0.63
31:y:1225:A:H3'	31:y:1226:C:C5	2.32	0.63
31:y:1440:C:H2'	31:y:1441:G:H5'	1.81	0.63
43:k:26:ALA:HB1	43:k:85:LEU:HB3	1.79	0.63
51:s:76:LEU:HB2	51:s:78:LEU:HG	1.79	0.63
1:w:273(B):G:H3'	1:w:273(C):C:C5'	2.29	0.63
1:w:445:C:O3'	17:O:3:ARG:HD2	1.99	0.63
1:w:558:G:H5'	10:H:135:LEU:HD13	1.80	0.63
1:w:670:A:H8	1:w:670:A:O5'	1.82	0.63
1:w:1052:C:H2'	1:w:1053:C:C6	2.34	0.63
1:w:1497:U:H6	1:w:1497:U:H3'	1.64	0.63
1:w:1549:C:H2'	1:w:1550:C:C6	2.33	0.63
1:w:1699:G:C3'	1:w:1700:A:C5'	2.71	0.63
1:w:1886:C:H2'	1:w:1887:C:C6	2.34	0.63
1:w:1943:U:C2	1:w:1945:G:H5'	2.33	0.63
1:w:2074:U:H2'	1:w:2075:U:H6	1.62	0.63
1:w:2213:U:HO3'	1:w:2215:G:P	2.20	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2370:G:H2'	1:w:2371:G:O4'	1.98	0.63
3:A:223:VAL:HG12	3:A:224:ARG:N	2.11	0.63
4:B:102:LYS:O	4:B:103:ARG:HG2	1.98	0.63
5:C:172:VAL:HG12	5:C:173:VAL:H	1.62	0.63
7:E:146:TYR:CG	7:E:147:ASP:N	2.67	0.63
11:I:111:PHE:O	11:I:114:ILE:HG12	1.98	0.63
15:M:8:GLU:H	15:M:10:ARG:NH1	1.95	0.63
15:M:13:ARG:CG	15:M:91:PRO:HA	2.21	0.63
26:X:31:LEU:O	26:X:32:GLN:HB2	1.98	0.63
27:Y:38:ALA:HB1	27:Y:40:LYS:CG	2.29	0.63
31:y:674:G:H2'	31:y:675:A:C8	2.34	0.63
31:y:909:A:H3'	31:y:910:C:C5	2.33	0.63
31:y:1044:A:H2'	31:y:1045:C:O4'	1.99	0.63
31:y:1269:A:H2'	31:y:1270:C:O5'	1.99	0.63
31:y:1270:C:O2'	31:y:1271:G:H5'	1.97	0.63
36:d:10:PHE:CD2	36:d:11:ARG:HG2	2.33	0.63
39:g:62:TRP:CD1	51:s:35:ARG:HH12	2.17	0.63
40:h:58:PRO:HA	40:h:61:VAL:HG23	1.80	0.63
40:h:118:VAL:HG23	40:h:119:ARG:H	1.64	0.63
1:w:449:A:H5'	6:D:79:VAL:O	1.99	0.63
1:w:588:U:O4	1:w:670:A:H1'	1.99	0.63
1:w:618(A):G:OP1	6:D:101:ARG:HD2	1.98	0.63
1:w:1275:A:H2'	1:w:1275:A:N3	2.14	0.63
1:w:1341:U:H5"	1:w:1397:U:C2	2.34	0.63
1:w:1544:C:O2'	1:w:1545:A:H8	1.81	0.63
1:w:1560:G:H2'	1:w:1561:G:H8	1.63	0.63
1:w:2094:G:H2'	1:w:2095:C:C6	2.33	0.63
1:w:2139:C:H2'	1:w:2140:C:O4'	1.98	0.63
1:w:2170:A:H8	1:w:2170:A:O5'	1.81	0.63
1:w:2210:G:C6	1:w:2212:A:H5"	2.34	0.63
1:w:2225:A:H1'	1:w:2226:C:OP2	1.99	0.63
1:w:2491:U:H2'	1:w:2492:U:H5'	1.80	0.63
1:w:2655:G:O2'	1:w:2656:U:P	2.56	0.63
4:B:92:ILE:HA	4:B:105:ILE:O	1.98	0.63
6:D:150:LEU:HD23	6:D:181:ILE:CG1	2.24	0.63
9:G:56:LYS:HG3	9:G:57:ARG:HD2	1.80	0.63
23:U:50:ASN:O	23:U:62:LEU:HB3	1.98	0.63
27:Y:16:ARG:HG3	27:Y:17:ASP:N	2.14	0.63
31:y:246:A:C6	31:y:279:A:C6	2.87	0.63
31:y:314:C:C2'	31:y:315:A:H5"	2.29	0.63
31:y:509:A:C2	31:y:510:A:N3	2.66	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:582:U:OP2	31:y:758:G:N1	2.30	0.63
31:y:1305:G:H5'	54:v:4:GLY:C	2.23	0.63
32:z:27:U:N3	32:z:28:C:C4	2.67	0.63
32:z:64:G:C2'	32:z:65:C:H5"	2.28	0.63
35:c:97:TRP:CZ2	35:c:172:ILE:HB	2.34	0.63
38:f:79:GLU:HA	38:f:91:LEU:O	1.99	0.63
45:m:96:ARG:O	45:m:97:TYR:HB2	1.99	0.63
47:o:27:CYS:SG	47:o:29:ARG:NH1	2.70	0.63
1:w:299:A:N6	1:w:339:U:H3	1.92	0.63
1:w:1241:A:H2'	1:w:1242:A:H8	1.64	0.63
1:w:1305:C:H5'	1:w:1305:C:C6	2.34	0.63
1:w:1938:A:C2	1:w:2590:A:H1'	2.34	0.63
1:w:2119:A:C2	1:w:2171:A:H1'	2.34	0.63
1:w:2291:U:H5'	1:w:2380:C:O2'	1.98	0.63
1:w:2338:G:O5'	1:w:2338:G:H8	1.82	0.63
1:w:2466:C:O3'	30:b:6:SER:HB3	1.99	0.63
1:w:2574:G:N2	1:w:2575:C:C2	2.66	0.63
2:x:66:A:C2	2:x:108:C:H1'	2.34	0.63
3:A:225:ILE:HG22	3:A:226:ASN:N	2.13	0.63
4:B:75:ILE:HG22	4:B:75:ILE:O	1.98	0.63
4:B:183:ARG:HA	4:B:269:PHE:O	1.99	0.63
6:D:175:GLY:O	6:D:176:LEU:HB2	1.98	0.63
10:H:40:ASP:OD1	10:H:41:ALA:N	2.32	0.63
11:I:61:VAL:O	11:I:84:ALA:HA	1.99	0.63
13:K:72:LYS:HD3	13:K:73:PRO:N	2.13	0.63
15:M:26:LEU:HB2	15:M:87:PHE:HA	1.81	0.63
16:N:19:LEU:HD22	16:N:83:ILE:O	1.98	0.63
16:N:61:PHE:N	16:N:61:PHE:CD1	2.67	0.63
16:N:70:VAL:HG12	16:N:71:GLY:H	1.64	0.63
22:T:4:ARG:C	22:T:5:LEU:HD22	2.23	0.63
31:y:76:G:H2'	31:y:77:C:H5'	1.78	0.63
31:y:167:G:H8	31:y:167:G:O5'	1.82	0.63
31:y:236:G:C5	31:y:237:C:N4	2.67	0.63
31:y:250:A:O2'	31:y:252:U:C6	2.47	0.63
31:y:576:G:H22	31:y:759:A:H5"	1.62	0.63
31:y:692:U:H2'	31:y:694:A:OP2	1.99	0.63
31:y:1098:C:O5'	31:y:1098:C:H6	1.82	0.63
31:y:1330:U:OP1	46:n:25:ILE:O	2.16	0.63
31:y:1469:G:C2'	31:y:1470:G:H5'	2.29	0.63
33:2:18:G:C2	33:2:57:G:C2	2.87	0.63
35:c:132:LYS:O	35:c:135:GLN:HB3	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:c:177:ALA:HB1	35:c:184:VAL:HG12	1.80	0.63
36:d:126:ARG:O	36:d:127:ARG:HB2	1.99	0.63
38:f:78:HIS:CD2	38:f:80:ILE:HG12	2.34	0.63
43:k:40:LEU:N	43:k:70:ARG:HH11	1.91	0.63
50:r:87:LYS:O	50:r:90:ILE:HG12	1.99	0.63
53:u:80:ARG:HH21	53:u:83:ARG:CB	2.12	0.63
1:w:270(D):C:C4	1:w:270(E):C:H1'	2.34	0.62
1:w:634:C:H2'	1:w:635:C:C6	2.34	0.62
1:w:922:U:O5'	1:w:922:U:H6	1.82	0.62
1:w:1198:U:H2'	1:w:1199:U:C6	2.34	0.62
1:w:1511:A:H8	1:w:1511:A:O5'	1.81	0.62
1:w:1570:A:H8	1:w:1570:A:O5'	1.82	0.62
1:w:1649:G:N3	14:L:107:ASP:OD2	2.32	0.62
1:w:2075:U:H4'	1:w:2596:U:O2	1.99	0.62
1:w:2476:A:H2'	1:w:2477:C:C5	2.34	0.62
1:w:2542:A:H1'	1:w:2543:G:C8	2.33	0.62
4:B:133:LEU:HG	4:B:173:VAL:CG1	2.27	0.62
5:C:7:VAL:HG22	5:C:27:LEU:HD22	1.81	0.62
6:D:45:SER:O	6:D:87:PRO:HG2	1.99	0.62
6:D:117:LYS:HZ2	6:D:186:ARG:HA	1.64	0.62
7:E:35:GLU:HB2	7:E:161:THR:CA	2.28	0.62
7:E:136:ARG:O	7:E:137:GLU:HG2	1.98	0.62
8:F:140:LYS:HD2	8:F:141:VAL:HG23	1.81	0.62
10:H:27:TYR:OH	17:O:64:ARG:HD3	2.00	0.62
23:U:52:GLY:CA	23:U:62:LEU:HB2	2.29	0.62
31:y:152:A:H62	31:y:169:C:N4	1.97	0.62
31:y:235:C:H2'	31:y:236:G:H8	1.64	0.62
31:y:343:U:H1'	31:y:347:G:H22	1.63	0.62
31:y:671:G:H2'	31:y:672:U:O5'	1.99	0.62
31:y:833:U:C2	31:y:834:C:C5	2.87	0.62
31:y:971:G:H2'	31:y:1365:G:O2'	1.99	0.62
31:y:1404:5MC:HN41	31:y:1497:G:H1	1.45	0.62
31:y:1406:U:H6	31:y:1406:U:H5"	1.63	0.62
31:y:1506:U:C3'	31:y:1507:A:C5'	2.76	0.62
46:n:14:ARG:HG2	46:n:44:ARG:NH1	2.14	0.62
1:w:54:G:H1'	28:Z:35:ARG:HH22	1.64	0.62
1:w:141(A):A:C2	1:w:1596:A:H4'	2.33	0.62
1:w:564:C:H2'	1:w:565:C:H6	1.62	0.62
1:w:1103:A:H5"	1:w:1104:C:H5	1.64	0.62
1:w:1314:C:OP1	1:w:1332:G:H5'	1.99	0.62
1:w:1545:A:H2'	1:w:1546:A:H5'	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1954:G:H21	1:w:2551:C:H5”	1.64	0.62
2:x:57:A:H1’	7:E:30:GLU:OE2	1.98	0.62
4:B:3:VAL:HG23	4:B:200:ASP:C	2.24	0.62
7:E:28:VAL:HG13	7:E:33:ARG:HE	1.64	0.62
8:F:11:VAL:HG12	8:F:11:VAL:O	2.00	0.62
9:G:122:GLU:CG	9:G:123:LEU:N	2.61	0.62
13:K:58:PHE:CD1	13:K:62:GLY:HA3	2.34	0.62
26:X:9:VAL:HG12	26:X:32:GLN:HA	1.80	0.62
31:y:538:G:H5”	45:m:114:LYS:CB	2.28	0.62
31:y:1506:U:O4	31:y:1521:G:H5”	1.99	0.62
37:e:57:ARG:CZ	38:f:107:ARG:HD2	2.29	0.62
46:n:99:ARG:O	46:n:100:GLY:O	2.16	0.62
53:u:19:SER:O	53:u:22:ARG:HB2	1.98	0.62
53:u:36:LEU:HB3	53:u:55:ILE:HD11	1.81	0.62
54:v:22:ARG:N	54:v:23:PRO:HD2	2.14	0.62
1:w:182:A:H2	1:w:433:C:H1’	1.65	0.62
1:w:922:U:H2’	1:w:923:C:O4’	1.99	0.62
1:w:1506:C:C3’	1:w:1508:A:P	2.87	0.62
1:w:1567:A:H3’	4:B:86:PRO:CB	2.29	0.62
1:w:1797:C:H2’	1:w:1798:U:C6	2.34	0.62
1:w:2032:G:N2	1:w:2572:A:N7	2.46	0.62
1:w:2134:A:N1	1:w:2158:A:H1’	2.15	0.62
1:w:2348:U:H5	1:w:2382:G:N2	1.96	0.62
1:w:2365:G:HO2’	23:U:60:PHE:HZ	1.47	0.62
1:w:2579:C:C4’	5:C:134:ILE:CG1	2.77	0.62
2:x:14:U:H4’	2:x:107:U:O2	1.99	0.62
2:x:42:C:C4’	7:E:68:PRO:HA	2.29	0.62
3:A:48:LEU:HB3	3:A:210:LEU:HD23	1.81	0.62
4:B:106:ILE:HG22	4:B:197:GLY:CA	2.29	0.62
6:D:112:ARG:O	6:D:117:LYS:HE2	2.00	0.62
22:T:77:ASP:H	22:T:83:PRO:HA	1.64	0.62
22:T:132:ASN:O	22:T:134:PRO:HD3	2.00	0.62
23:U:37:LEU:CD1	23:U:38:VAL:H	2.07	0.62
31:y:197:A:N3	31:y:198:G:H1’	2.14	0.62
31:y:393:A:H2’	31:y:394:G:C8	2.33	0.62
31:y:1314:C:H5	52:t:4:SER:OG	1.82	0.62
31:y:1315:U:H2’	31:y:1316:G:H5’	1.82	0.62
36:d:110:ASN:HB3	36:d:141:VAL:HA	1.81	0.62
36:d:131:ARG:HB3	36:d:131:ARG:NH1	2.13	0.62
38:f:106:PRO:O	38:f:109:ILE:HB	1.98	0.62
40:h:91:VAL:HG12	40:h:92:SER:H	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:m:87:GLY:H	45:m:97:TYR:HA	1.63	0.62
46:n:107:ALA:C	46:n:109:THR:H	2.07	0.62
47:o:6:LEU:HD22	47:o:28:GLY:HA3	1.82	0.62
47:o:53:LEU:HD22	47:o:53:LEU:N	2.14	0.62
1:w:819:A:N7	1:w:1188:U:O4	2.32	0.62
1:w:1831:G:H4'	31:y:899:C:O2'	1.99	0.62
1:w:2303:G:H2'	7:E:132:ASN:HB3	1.81	0.62
1:w:2641:G:C6	1:w:2774:C:N4	2.67	0.62
2:x:66:A:N6	2:x:107:U:C2	2.68	0.62
3:A:23:ILE:HG12	3:A:225:ILE:HG21	1.80	0.62
7:E:73:ALA:H	7:E:87:PRO:CA	2.13	0.62
8:F:14:GLY:C	8:F:16:SER:H	2.06	0.62
9:G:132:PRO:HD2	9:G:137:PRO:HA	1.81	0.62
13:K:119:ARG:O	13:K:120:ILE:C	2.42	0.62
19:Q:48:ALA:O	19:Q:51:LEU:HD13	1.98	0.62
28:Z:37:LYS:HZ3	28:Z:39:ARG:NH1	1.97	0.62
31:y:119:A:O2'	31:y:120:A:OP2	2.17	0.62
31:y:280:C:N4	50:r:39:SER:HB3	2.13	0.62
31:y:294:U:H2'	31:y:295:C:C6	2.33	0.62
31:y:583:A:O3'	50:r:91:ARG:NE	2.32	0.62
31:y:750:G:O2'	31:y:751:U:H5'	1.99	0.62
31:y:989:C:O2'	31:y:990:C:H5'	2.00	0.62
31:y:1221:G:H2'	31:y:1222:G:O4'	1.99	0.62
31:y:1472:U:H2'	31:y:1473:A:C8	2.34	0.62
31:y:1521:G:C2'	31:y:1522:U:H5'	2.29	0.62
33:2:14:A:H3'	33:2:15:G:C8	2.34	0.62
35:c:106:LYS:N	35:c:106:LYS:HD2	2.13	0.62
37:e:13:ARG:NE	37:e:33:MET:HA	2.14	0.62
42:j:85:LEU:HD22	42:j:85:LEU:C	2.24	0.62
1:w:241:A:H1'	1:w:243:U:C6	2.35	0.62
1:w:716:A:H2'	1:w:717:G:C1'	2.28	0.62
1:w:2051:A:H2'	1:w:2614:A:N6	2.13	0.62
1:w:2296:U:O2'	1:w:2297:C:H6	1.83	0.62
1:w:2603:G:H2'	1:w:2604:U:H5'	1.80	0.62
1:w:2825:G:H3'	1:w:2826:A:H8	1.65	0.62
2:x:43:C:OP1	7:E:67:LYS:HE3	1.98	0.62
5:C:77:ILE:CG2	5:C:78:LEU:H	2.12	0.62
6:D:44:ALA:HB1	6:D:87:PRO:HB2	1.82	0.62
7:E:144:ILE:HG22	7:E:144:ILE:O	1.99	0.62
10:H:77:VAL:HB	10:H:145:VAL:CG1	2.29	0.62
12:J:138:LEU:HA	12:J:142:GLY:N	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:19:LEU:C	27:Y:25:LEU:HD23	2.24	0.62
22:T:90:VAL:O	22:T:91:LEU:HD23	1.99	0.62
28:Z:13:ALA:HA	28:Z:17:GLY:HA3	1.82	0.62
31:y:123:C:H5"	31:y:311:C:O2'	1.99	0.62
31:y:245:C:C4	31:y:284:G:C2	2.87	0.62
31:y:279:A:C1'	31:y:280:C:OP2	2.48	0.62
31:y:418:C:C4	31:y:426:G:N2	2.67	0.62
31:y:632:A:H2'	31:y:633:G:O4'	1.99	0.62
31:y:756:C:O2'	31:y:757:U:H5'	1.98	0.62
31:y:1029:G:N2	31:y:1031:G:H3'	2.13	0.62
31:y:1126:U:H2'	31:y:1126:U:O2	1.99	0.62
31:y:1363:A:O4'	31:y:1365:G:C8	2.53	0.62
31:y:1470:G:O2'	31:y:1471:G:H5'	2.00	0.62
35:c:158:LEU:HD23	35:c:158:LEU:H	1.65	0.62
42:j:44:VAL:HA	42:j:47:LEU:HD13	1.80	0.62
46:n:54:VAL:C	46:n:56:LEU:H	2.06	0.62
53:u:59:ALA:HA	53:u:62:LEU:CG	2.28	0.62
1:w:904:C:H2'	1:w:905:U:O4'	2.00	0.62
1:w:1635:G:OP2	1:w:1635:G:C8	2.52	0.62
1:w:2133:G:OP2	1:w:2133:G:C8	2.46	0.62
1:w:2296:U:HO2'	1:w:2297:C:H6	1.48	0.62
1:w:2352:A:H62	1:w:2365:G:N2	1.96	0.62
1:w:2532:G:N2	1:w:2664:G:O4'	2.31	0.62
1:w:2579:C:C1'	5:C:134:ILE:HD11	2.28	0.62
4:B:124:PRO:CG	4:B:129:ASN:HD21	1.90	0.62
6:D:169:VAL:O	6:D:170:THR:HB	2.00	0.62
9:G:130:TYR:HB3	9:G:138:ILE:O	1.99	0.62
14:L:86:ARG:HG3	14:L:87:TYR:CD1	2.35	0.62
20:R:47:PHE:O	20:R:48:LYS:HB2	1.99	0.62
21:S:45:VAL:HA	21:S:57:GLN:HG2	1.81	0.62
31:y:20:U:O2'	31:y:21:G:H5'	1.99	0.62
31:y:257:G:H2'	31:y:258:G:O4'	1.99	0.62
31:y:321:A:C4'	31:y:1435:G:O2'	2.48	0.62
31:y:696:A:H2'	31:y:697:U:H5	1.63	0.62
31:y:716:A:C1'	44:l:118:GLY:HA2	2.29	0.62
31:y:998(A):G:C2'	31:y:998(B):C:H5'	2.29	0.62
31:y:1087:G:H2'	31:y:1088:G:H8	1.62	0.62
31:y:1274:G:H8	31:y:1274:G:O5'	1.82	0.62
33:2:66:A:N6	33:2:67:A:H62	1.96	0.62
39:g:74:ASP:O	39:g:77:ARG:HG3	2.00	0.62
40:h:126:ASP:HA	40:h:131:LYS:HG2	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:i:7:ALA:HA	41:i:10:LEU:HD12	1.81	0.62
42:j:9:ARG:HA	42:j:13:ALA:O	2.00	0.62
45:m:92:LEU:O	45:m:94:GLY:N	2.32	0.62
1:w:270(R):C:H2'	1:w:270(S):G:C8	2.34	0.62
1:w:347:A:H2'	1:w:348:G:H5'	1.80	0.62
1:w:1897:G:H2'	1:w:1898:U:O4'	1.99	0.62
1:w:1911:U:H3	1:w:1920:C:N4	1.96	0.62
1:w:2309:A:H3'	1:w:2310:A:H8	1.65	0.62
1:w:2531:A:O5'	1:w:2531:A:C8	2.53	0.62
1:w:2886:G:H8	1:w:2886:G:O5'	1.83	0.62
2:x:50:G:H8	2:x:50:G:OP2	1.82	0.62
4:B:74:GLY:HA2	4:B:119:ALA:HB3	1.80	0.62
14:L:76:VAL:O	14:L:79:LEU:HB2	2.00	0.62
24:V:11:ARG:HB2	24:V:12:PRO:HD2	1.81	0.62
31:y:178:C:H2'	31:y:179:A:H5'	1.81	0.62
31:y:347:G:H2'	31:y:348:G:O5'	2.00	0.62
31:y:347:G:C2'	31:y:348:G:O5'	2.48	0.62
31:y:517:G:H2'	31:y:531:U:C5	2.35	0.62
31:y:558:G:C4	31:y:559:A:C2	2.87	0.62
31:y:780:A:P	44:l:122:LYS:HB2	2.40	0.62
31:y:875:C:O2'	41:i:14:ARG:HD2	2.00	0.62
31:y:928:G:O5'	31:y:928:G:C8	2.45	0.62
34:3:15:G:O3'	34:3:16:A:H4'	2.00	0.62
35:c:152:PHE:CE2	35:c:155:LEU:HB3	2.35	0.62
37:e:7:PRO:HB2	37:e:10:ARG:HG3	1.82	0.62
37:e:187:ARG:HG3	37:e:188:LEU:H	1.65	0.62
48:p:56:LEU:O	48:p:60:VAL:HG23	1.99	0.62
50:r:6:LEU:HD12	50:r:23:VAL:HG21	1.81	0.62
50:r:54:GLY:HA2	50:r:85:VAL:HB	1.80	0.62
1:w:48:G:N2	1:w:177:G:H21	1.98	0.62
1:w:130:C:HO2'	1:w:1349:A:HO2'	1.47	0.62
1:w:788:A:H5"	1:w:790:C:N4	2.14	0.62
1:w:1158:C:H5'	26:X:31:LEU:HB2	1.82	0.62
1:w:1279:G:OP1	14:L:35:THR:HG22	2.00	0.62
1:w:1323:U:O5'	1:w:1323:U:H6	1.83	0.62
1:w:1377:G:H8	1:w:1377:G:O5'	1.83	0.62
1:w:1792:G:OP1	4:B:206:LEU:HB3	2.00	0.62
1:w:2126:A:H61	1:w:2163:C:H4'	1.64	0.62
1:w:2579:C:H5'	5:C:134:ILE:HG12	1.81	0.62
1:w:2760:C:N4	30:b:19:ARG:NH2	2.42	0.62
2:x:15:A:H1'	2:x:109:G:C5	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:114:ILE:HG12	7:E:115:ARG:N	2.15	0.62
8:F:170:ARG:HH22	8:F:172:LYS:CE	2.12	0.62
9:G:4:ILE:O	9:G:37:VAL:HB	2.00	0.62
18:P:73:SER:O	18:P:74:LYS:HB2	2.00	0.62
20:R:60:ARG:HB2	20:R:74:PRO:HG3	1.80	0.62
31:y:228:A:H1'	49:q:62:VAL:HB	1.82	0.62
31:y:247:G:OP2	50:r:100:LYS:HG3	1.99	0.62
31:y:251:G:N1	31:y:266:G:C6	2.67	0.62
31:y:518:C:C5	31:y:529:G:C5	2.88	0.62
31:y:518:C:C5	31:y:529:G:N7	2.68	0.62
31:y:546:G:O3'	31:y:547:A:C4'	2.47	0.62
31:y:693:G:N2	34:3:11:A:N3	2.47	0.62
31:y:992:U:O2'	31:y:993:G:P	2.58	0.62
31:y:1214:C:O2'	31:y:1215:G:H5"	1.99	0.62
31:y:1266:G:O2'	31:y:1268:A:N7	2.24	0.62
32:z:7:G:H1	32:z:66:C:H42	1.48	0.62
32:z:26:G:H2'	32:z:27:U:C6	2.30	0.62
35:c:115:LEU:O	35:c:142:LEU:HD13	1.99	0.62
36:d:107:GLN:CD	36:d:107:GLN:H	2.06	0.62
37:e:26:CYS:CA	37:e:31:CYS:HB2	2.16	0.62
37:e:170:VAL:CG2	37:e:171:GLY:H	2.12	0.62
49:q:3:LYS:HG2	49:q:65:GLN:O	2.00	0.62
1:w:308:G:H2'	1:w:308:G:N3	2.14	0.62
1:w:585:G:N2	1:w:1254:A:H62	1.97	0.62
1:w:665:C:H5'	12:J:48:PRO:HG2	1.82	0.62
1:w:923:C:H1'	23:U:26:TYR:CG	2.35	0.62
1:w:1259:G:H2'	1:w:1260:G:O4'	2.00	0.62
1:w:1283:G:O2'	1:w:1285:G:O6	2.17	0.62
1:w:1348:G:H2'	1:w:1349:A:C8	2.35	0.62
1:w:1497:U:H3	1:w:1578:U:P	2.23	0.62
1:w:1514:U:H2'	1:w:1515:C:C6	2.34	0.62
1:w:1616:A:H3'	1:w:1617:C:H5"	1.76	0.62
1:w:2051:A:H5'	1:w:2578:G:O5'	2.00	0.62
1:w:2392:A:H62	1:w:2424:C:H42	1.46	0.62
1:w:2683:C:O4'	5:C:13:ARG:NH1	2.33	0.62
1:w:2736:G:C5	1:w:2737:G:N7	2.67	0.62
7:E:7:LEU:HB3	7:E:100:TRP:CD1	2.35	0.62
13:K:133:ARG:HG3	22:T:81:ARG:NH2	2.14	0.62
16:N:101:PHE:C	16:N:103:ARG:N	2.57	0.62
31:y:186(F):C:C2	31:y:186(G):C:C5	2.88	0.62
31:y:314:C:H2'	31:y:315:A:C5'	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:369:C:N4	31:y:393:A:C2	2.67	0.62
31:y:520:A:OP2	45:m:50:ALA:HB1	1.99	0.62
31:y:781:A:H62	31:y:801:U:H3	1.46	0.62
31:y:832:C:O2'	31:y:833:U:O4'	2.17	0.62
31:y:937:A:H2	31:y:1378:C:H41	1.48	0.62
31:y:1013:G:C2'	31:y:1014:A:H5"	2.29	0.62
31:y:1042:G:C6	31:y:1043:C:C5	2.87	0.62
31:y:1154:G:OP1	31:y:1154:G:H4'	1.99	0.62
31:y:1276:G:H8	31:y:1276:G:O5'	1.83	0.62
36:d:29:TYR:O	36:d:32:LEU:HB3	2.00	0.62
37:e:161:ASN:O	37:e:165:MET:HB2	1.99	0.62
48:p:36:ILE:HD13	48:p:59:MET:HE3	1.81	0.62
1:w:245:G:H5'	12:J:69:GLY:CA	2.29	0.62
1:w:256:A:H2'	1:w:257:A:C8	2.35	0.62
1:w:281:G:C2'	1:w:359:A:H61	2.13	0.62
1:w:579:G:H1'	1:w:2017:U:C2	2.35	0.62
1:w:972:G:OP2	1:w:974(A):G:H5"	2.00	0.62
1:w:2068:U:H5'	1:w:2069:G:O5'	2.00	0.62
1:w:2113:U:H2'	1:w:2114:A:C8	2.35	0.62
1:w:2404:C:H2'	1:w:2405:G:O4'	2.00	0.62
1:w:2415:G:H4'	12:J:66:GLY:HA3	1.81	0.62
1:w:2558:C:O2'	1:w:2559:C:H5'	2.00	0.62
1:w:2632:A:O2'	5:C:61:ARG:NH2	2.33	0.62
1:w:2697:G:C6	1:w:2711:A:C6	2.87	0.62
1:w:2757:A:P	30:b:19:ARG:HA	2.40	0.62
1:w:2765:A:H2'	1:w:2766:G:OP1	1.99	0.62
12:J:114:ILE:HD11	12:J:130:PHE:HB3	1.81	0.62
13:K:58:PHE:HZ	13:K:117:ALA:CB	2.13	0.62
15:M:28:VAL:HG21	15:M:87:PHE:CZ	2.34	0.62
19:Q:69:LEU:HA	19:Q:108:GLY:O	2.00	0.62
25:W:21:LEU:HD23	25:W:21:LEU:C	2.25	0.62
26:X:27:GLY:HA2	26:X:29:ARG:NH1	2.13	0.62
29:a:10:ALA:O	29:a:13:ARG:HG2	2.00	0.62
31:y:244:U:C4'	31:y:245:C:H5'	2.28	0.62
31:y:303:A:H2'	31:y:304:U:H6	1.65	0.62
31:y:373:A:H4'	31:y:451:A:H62	1.64	0.62
31:y:556:C:H5'	31:y:556:C:H6	1.65	0.62
31:y:704:A:C5	31:y:705:U:C5	2.88	0.62
31:y:756:C:H2'	31:y:757:U:O4'	2.00	0.62
31:y:964:A:C5'	31:y:965:A:OP2	2.48	0.62
1:w:92:G:H3'	1:w:93:C:C6	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:321:G:H5"	6:D:163:ARG:HD2	1.80	0.61
1:w:1448(B):A:C3'	1:w:1449:G:P	2.87	0.61
1:w:1824:G:O2'	4:B:254:THR:HB	2.00	0.61
1:w:2121:G:H21	3:A:169:THR:CG2	2.12	0.61
1:w:2134:A:OP2	1:w:2157:G:N2	2.32	0.61
1:w:2230:G:H2'	1:w:2231:C:H6	1.65	0.61
1:w:2298:A:H62	1:w:2318:G:N2	1.98	0.61
1:w:2303:G:H4'	7:E:125:PHE:O	2.00	0.61
1:w:2357:U:P	23:U:18:ALA:HA	2.40	0.61
1:w:2656:U:O5'	1:w:2656:U:C6	2.50	0.61
1:w:2896:C:H2'	1:w:2897:U:H6	1.64	0.61
4:B:97:TYR:CB	4:B:102:LYS:HA	2.29	0.61
4:B:247:ALA:CA	4:B:253:GLN:HA	2.30	0.61
6:D:192:ASP:O	6:D:195:GLU:HG2	2.00	0.61
9:G:122:GLU:HG3	9:G:123:LEU:HD22	1.81	0.61
10:H:79:ASN:CA	10:H:147:ALA:HA	2.30	0.61
14:L:75:LEU:O	14:L:79:LEU:HG	2.00	0.61
16:N:92:GLY:HA2	16:N:114:LEU:HB3	1.80	0.61
18:P:50:PRO:HG2	18:P:51:VAL:H	1.65	0.61
20:R:82:GLN:O	20:R:83:VAL:HG13	2.00	0.61
22:T:146:ILE:HD13	22:T:146:ILE:H	1.65	0.61
22:T:161:VAL:HG12	22:T:162:GLU:H	1.64	0.61
30:b:34:GLN:O	30:b:35:ARG:HG3	2.00	0.61
31:y:36:C:H2'	31:y:37:U:C6	2.35	0.61
31:y:48:C:H2'	31:y:49:U:H5	1.64	0.61
31:y:234:C:O2'	31:y:235:C:H5'	2.00	0.61
31:y:324:G:N2	31:y:327:A:O5'	2.33	0.61
31:y:1188:A:H8	31:y:1188:A:O5'	1.82	0.61
33:2:34:G:H2'	33:2:35:A:C5'	2.22	0.61
36:d:62:ASP:N	36:d:64:VAL:HG23	2.15	0.61
38:f:72:GLN:N	38:f:72:GLN:HE21	1.98	0.61
45:m:124:PRO:C	45:m:125:LYS:HD2	2.25	0.61
46:n:90:LEU:C	46:n:91:ARG:HG2	2.25	0.61
51:s:26:LEU:HD13	51:s:29:PHE:CZ	2.35	0.61
52:t:53:ASN:ND2	52:t:77:THR:HG21	2.15	0.61
1:w:248:G:H5'	1:w:250:G:N7	2.15	0.61
1:w:464:U:O5'	1:w:464:U:H6	1.82	0.61
1:w:591:C:C4	1:w:592:G:N7	2.68	0.61
1:w:655:A:H4'	1:w:656:G:C4'	2.29	0.61
1:w:729:G:N7	4:B:208:LYS:NZ	2.49	0.61
1:w:848:G:C2	1:w:933:A:O2'	2.53	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:860:U:H3	1:w:917:A:H62	1.48	0.61
1:w:992:C:O2'	18:P:89:GLN:CD	2.43	0.61
1:w:1323:U:H2'	1:w:1324:G:H5"	1.81	0.61
1:w:1545:A:C2'	1:w:1546:A:H5'	2.29	0.61
1:w:1592:C:H2'	1:w:1593:G:H8	1.65	0.61
1:w:1791:A:H5'	4:B:217:ARG:NH2	2.15	0.61
1:w:2588:G:O6	1:w:2607:G:C2	2.53	0.61
1:w:2761:G:H2'	1:w:2762:G:H1'	1.81	0.61
2:x:75:G:O2'	22:T:27:VAL:HG22	2.00	0.61
2:x:87:G:O2'	2:x:89(B):A:N6	2.33	0.61
4:B:24:ILE:HG12	4:B:82:ILE:O	2.00	0.61
4:B:208:LYS:HD3	4:B:209:ALA:N	2.15	0.61
5:C:51:PHE:C	5:C:76:ARG:HB2	2.25	0.61
5:C:173:VAL:N	5:C:183:LEU:HD11	2.15	0.61
6:D:127:VAL:O	6:D:129:GLY:N	2.33	0.61
30:b:11:CYS:HG	30:b:14:CYS:HG	1.45	0.61
31:y:507:C:C3'	31:y:508:C:H5"	2.16	0.61
31:y:533:A:O2'	31:y:535:A:C8	2.52	0.61
31:y:889:A:C2	31:y:907:A:H5"	2.33	0.61
31:y:1188:A:C4'	47:o:58:LYS:HZ2	2.13	0.61
31:y:1364:U:O4'	54:v:14:TRP:CZ3	2.53	0.61
32:z:4:G:C4	32:z:5:G:C8	2.88	0.61
36:d:3:ASN:HD22	36:d:3:ASN:N	1.99	0.61
37:e:30:LYS:HG2	37:e:35:ARG:NH2	2.15	0.61
1:w:116:C:H2'	1:w:117:G:C5'	2.24	0.61
1:w:388:G:H2'	1:w:390:A:N7	2.14	0.61
1:w:588:U:O2'	1:w:589:C:H5'	1.99	0.61
1:w:686:G:N2	1:w:788:A:N6	2.41	0.61
1:w:988:A:O5'	1:w:988:A:C8	2.53	0.61
1:w:1187:G:H5'	18:P:82:ARG:HH12	1.65	0.61
1:w:1201:C:H5'	1:w:1201:C:C6	2.31	0.61
1:w:1446:C:C4	1:w:1466:G:N2	2.68	0.61
1:w:1527:G:N2	1:w:1545:A:H62	1.98	0.61
1:w:1918:A:H8	1:w:1918:A:O5'	1.82	0.61
1:w:1992:G:H5'	1:w:1994:C:N4	2.14	0.61
1:w:2321:G:N2	1:w:2322:A:O4'	2.30	0.61
1:w:2632:A:C1'	5:C:61:ARG:NH2	2.60	0.61
1:w:2770:G:N7	1:w:2771:C:H5	1.98	0.61
1:w:2822:G:O6	14:L:1:MET:SD	2.58	0.61
1:w:2875:C:H2'	1:w:2876:G:C4'	2.30	0.61
2:x:8:U:C3'	15:M:89:ARG:HH21	2.13	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:78:SER:O	7:E:79:ASN:HB3	2.00	0.61
9:G:41:GLU:O	9:G:44:LEU:HB3	1.99	0.61
14:L:29:LEU:HG	14:L:75:LEU:HD22	1.82	0.61
16:N:50:ILE:HG13	16:N:63:VAL:C	2.25	0.61
22:T:150:LEU:HB3	22:T:172:ALA:HB3	1.81	0.61
31:y:49:U:C2'	31:y:50:A:H5'	2.29	0.61
31:y:167:G:H2'	31:y:168:G:H5'	1.78	0.61
31:y:474:G:P	49:q:75:ARG:HE	2.23	0.61
31:y:509:A:C5'	37:e:55:ALA:HB1	2.30	0.61
31:y:691:G:N1	44:l:52:GLY:HA2	2.15	0.61
31:y:1312:G:N2	31:y:1313:U:H1'	2.14	0.61
36:d:181:ASN:HB2	36:d:205:GLY:CA	2.30	0.61
47:o:6:LEU:HB3	47:o:23:ARG:NH1	2.14	0.61
48:p:30:ALA:O	48:p:33:THR:HB	2.00	0.61
50:r:86:GLU:CA	50:r:89:LEU:HD13	2.26	0.61
53:u:81:LYS:O	53:u:85:MET:HB3	2.00	0.61
1:w:137(B):G:H2'	1:w:138:G:O4'	2.00	0.61
1:w:716:A:C2'	1:w:717:G:O4'	2.45	0.61
1:w:779:U:OP1	4:B:49:ILE:CG1	2.48	0.61
1:w:779:U:H2'	1:w:780:G:O4'	1.99	0.61
1:w:850:C:O2'	26:X:22:ALA:HB2	2.01	0.61
1:w:944:G:H1	12:J:38:GLN:HE21	1.49	0.61
1:w:2140:C:H2'	1:w:2141:G:C8	2.36	0.61
1:w:2617:C:H2'	1:w:2618:G:C5'	2.30	0.61
1:w:2821:A:N7	14:L:1:MET:N	2.37	0.61
6:D:183:ARG:HG2	12:J:7:ARG:HB3	1.81	0.61
9:G:33:ARG:HD3	9:G:34:GLY:N	2.14	0.61
10:H:89:LYS:C	10:H:110:LEU:HG	2.25	0.61
13:K:109:VAL:O	13:K:114:ALA:HB2	2.00	0.61
16:N:91:ARG:HA	16:N:116:ALA:HB2	1.82	0.61
19:Q:76:VAL:HA	19:Q:103:ILE:CG2	2.31	0.61
21:S:15:VAL:HG13	21:S:16:ALA:N	2.14	0.61
21:S:50:ARG:HG3	21:S:54:LYS:HZ2	1.65	0.61
22:T:124:ILE:HD12	22:T:125:LEU:H	1.64	0.61
23:U:29:GLN:CG	23:U:30:VAL:N	2.63	0.61
31:y:136:C:C4'	49:q:1:MET:SD	2.86	0.61
31:y:509:A:H2	31:y:543:C:H1'	1.64	0.61
31:y:509:A:N1	31:y:510:A:C2	2.68	0.61
31:y:960:U:C4	31:y:1225:A:C2	2.88	0.61
33:2:36:A:C2'	33:2:37:A:H5'	2.29	0.61
35:c:74:LYS:HB3	35:c:77:ALA:HB3	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:r:93:GLN:O	50:r:95:TYR:N	2.33	0.61
53:u:18:GLN:HA	53:u:21:LYS:NZ	2.16	0.61
1:w:301:G:H2'	1:w:302:C:O4'	2.00	0.61
1:w:610:C:O5'	1:w:610:C:H6	1.83	0.61
1:w:1031:G:H2'	1:w:1032:A:O4'	1.98	0.61
1:w:1503:U:H2'	1:w:1504:C:C5	2.36	0.61
1:w:2213:U:C3'	1:w:2215:G:P	2.89	0.61
1:w:2431:U:H5'	1:w:2431:U:H6	1.66	0.61
1:w:2745:C:O2'	8:F:142:GLY:O	2.18	0.61
2:x:42:C:C4	7:E:93:THR:HB	2.36	0.61
6:D:163:ARG:HG3	6:D:164:ASN:H	1.66	0.61
19:Q:21:VAL:CG1	19:Q:76:VAL:HG11	2.28	0.61
30:b:18:ARG:HA	30:b:22:ARG:O	2.01	0.61
31:y:42:G:H2'	31:y:43:C:C6	2.35	0.61
31:y:126:G:H2'	31:y:127:G:C8	2.36	0.61
31:y:376:G:H4'	49:q:5:ARG:HH11	1.66	0.61
31:y:586:C:H5'	31:y:879:C:OP1	2.01	0.61
31:y:898:G:H1'	31:y:901:A:N6	2.16	0.61
31:y:1080:A:H3'	31:y:1080:A:H8	1.65	0.61
31:y:1379:G:H2'	31:y:1380:U:C5'	2.25	0.61
31:y:1379:G:C3'	31:y:1380:U:C5'	2.75	0.61
31:y:1387:G:O2'	31:y:1388:C:H5"	1.99	0.61
31:y:1455:G:C6	31:y:1459:C:N4	2.69	0.61
36:d:5:ILE:HG21	36:d:175:LEU:HB2	1.82	0.61
37:e:9:CYS:CA	37:e:33:MET:SD	2.89	0.61
38:f:67:VAL:HG22	38:f:140:ARG:NH2	2.15	0.61
43:k:39:PRO:CA	43:k:70:ARG:HD2	2.25	0.61
1:w:615:G:H22	6:D:177:ASN:HD21	1.47	0.61
1:w:972:G:H2'	1:w:973:A:C8	2.36	0.61
1:w:1243:G:N3	12:J:7:ARG:NH2	2.49	0.61
1:w:1801:G:C4'	1:w:1815:A:N1	2.60	0.61
1:w:2101:G:H22	1:w:2189:U:H1'	1.61	0.61
1:w:2121:G:N2	3:A:169:THR:HG21	2.16	0.61
1:w:2278:A:OP1	13:K:14:ARG:HD3	2.00	0.61
1:w:2747:G:O6	1:w:2754:U:C3'	2.48	0.61
1:w:2821:A:C2'	1:w:2822:G:H5'	2.31	0.61
1:w:2875:C:H2'	1:w:2876:G:O4'	2.01	0.61
4:B:161:THR:O	4:B:196:VAL:HG23	2.01	0.61
10:H:38:LEU:HD22	10:H:76:VAL:HB	1.82	0.61
11:I:77:ILE:HG12	16:N:74:ARG:N	2.15	0.61
12:J:85:LEU:HD21	12:J:118:GLY:HA3	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:46:GLN:C	25:W:48:HIS:H	2.09	0.61
31:y:19:C:N3	31:y:20:U:C4	2.69	0.61
31:y:429:U:H4'	31:y:430:A:OP1	2.00	0.61
31:y:628:G:C2'	31:y:629:G:O4'	2.45	0.61
31:y:790:A:C2	31:y:791:G:O6	2.53	0.61
31:y:941:G:O2'	31:y:1350:A:H5"	2.01	0.61
31:y:1030:C:H6	31:y:1030:C:O5'	1.82	0.61
31:y:1178:G:OP2	31:y:1178:G:C8	2.53	0.61
31:y:1269:A:C2'	31:y:1270:C:O5'	2.49	0.61
32:z:35:A:O2'	32:z:36:U:H5'	2.00	0.61
35:c:19:HIS:HB2	35:c:39:ILE:HD12	1.83	0.61
35:c:178:ARG:HD3	35:c:184:VAL:CG2	2.30	0.61
36:d:32:LEU:HD23	36:d:36:ASP:OD2	2.00	0.61
36:d:153:VAL:HG12	36:d:198:VAL:HG13	1.82	0.61
51:s:15:ARG:H	51:s:16:PRO:CD	2.14	0.61
1:w:180:G:OP1	28:Z:32:LYS:HE2	2.00	0.61
1:w:527:C:H2'	10:H:137:ARG:NH1	2.06	0.61
1:w:1481:U:C3'	1:w:1483:G:P	2.88	0.61
1:w:1606:G:H4'	1:w:1608:A:N3	2.16	0.61
1:w:1830:C:H2'	1:w:1831:G:H8	1.65	0.61
1:w:2476:A:C2	1:w:2481:G:N1	2.69	0.61
1:w:2531:A:O5'	1:w:2531:A:H8	1.84	0.61
1:w:2574:G:H1'	5:C:143:ASN:ND2	2.14	0.61
1:w:2825:G:N7	1:w:2826:A:C5	2.68	0.61
4:B:75:ILE:HG23	4:B:98:VAL:HB	1.82	0.61
5:C:24:THR:HB	5:C:186:GLY:HA2	1.81	0.61
13:K:52:VAL:HG23	13:K:53:ALA:N	2.16	0.61
19:Q:23:LEU:HD21	19:Q:24:ILE:HG23	1.83	0.61
29:a:10:ALA:O	29:a:14:VAL:HG22	2.00	0.61
31:y:880:C:C2	31:y:881:G:C8	2.88	0.61
31:y:1013:G:H2'	31:y:1014:A:H5"	1.83	0.61
31:y:1342:C:O2'	31:y:1343:G:H5'	2.01	0.61
31:y:1379:G:H4'	40:h:156:TRP:CH2	2.36	0.61
35:c:71:VAL:HB	35:c:93:VAL:O	2.00	0.61
36:d:62:ASP:O	36:d:99:VAL:HG12	1.99	0.61
39:g:87:ARG:O	39:g:88:VAL:HG23	2.00	0.61
42:j:81:ILE:C	42:j:83:ARG:H	2.07	0.61
45:m:84:ILE:HG22	45:m:99:ILE:CD1	2.31	0.61
45:m:114:LYS:HD3	45:m:115:SER:HB2	1.81	0.61
52:t:66:MET:HB3	52:t:69:HIS:HB2	1.83	0.61
1:w:276:A:H2'	1:w:277:C:O4'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:404:C:H4’	1:w:405:U:H5’	1.83	0.61
1:w:527:C:C2’	10:H:137:ARG:HH12	2.07	0.61
1:w:846:C:H4’	1:w:847:U:O5’	2.01	0.61
1:w:885:C:H3’	1:w:886:C:C5’	2.21	0.61
1:w:1419:A:N6	1:w:1578:U:H3	1.96	0.61
1:w:1921:G:H2’	1:w:1922:G:C8	2.35	0.61
1:w:2520:C:O2’	1:w:2521:C:H5’	2.01	0.61
1:w:2658:C:H2’	1:w:2659:G:C5’	2.31	0.61
2:x:99:A:H2’	2:x:100:G:C8	2.36	0.61
4:B:221:VAL:HG23	4:B:223:GLY:N	2.14	0.61
5:C:65:GLY:HA3	5:C:73:GLU:OE1	2.00	0.61
6:D:33:ARG:HH12	12:J:12:ALA:N	1.88	0.61
15:M:95:HIS:O	15:M:98:VAL:N	2.31	0.61
16:N:26:ASP:HB2	16:N:88:ILE:HD12	1.81	0.61
16:N:46:GLU:CD	16:N:65:LYS:HG2	2.26	0.61
16:N:106:SER:HA	16:N:110:ILE:CD1	2.29	0.61
19:Q:30:GLU:HA	19:Q:33:ARG:HG2	1.82	0.61
22:T:69:THR:HG21	22:T:88:PHE:HE1	1.65	0.61
27:Y:44:THR:HG22	27:Y:45:VAL:N	2.15	0.61
31:y:136:C:C4’	49:q:1:MET:H3	2.13	0.61
31:y:186(B):C:H42	31:y:191(F):U:H3	1.48	0.61
31:y:237:C:H4’	50:r:25:ARG:HH12	1.66	0.61
31:y:360:A:H2’	31:y:360:A:N3	2.14	0.61
31:y:608:A:C2’	31:y:609:A:C8	2.71	0.61
31:y:762:C:C4	31:y:763:G:N7	2.68	0.61
31:y:910:C:O5’	31:y:910:C:C6	2.51	0.61
31:y:927:G:H4’	31:y:1503:A:N6	2.15	0.61
31:y:1234:C:H4’	31:y:1364:U:H1’	1.81	0.61
32:z:26:G:OP2	32:z:26:G:C8	2.53	0.61
35:c:200:ILE:HG12	35:c:202:PRO:HD3	1.82	0.61
40:h:115:ARG:HB3	40:h:115:ARG:NH1	2.16	0.61
46:n:13:LYS:O	46:n:45:VAL:HG23	2.00	0.61
1:w:366(B):C:C3’	1:w:370:G:P	2.88	0.61
1:w:865:C:H42	1:w:909:A:N6	1.96	0.61
1:w:1889:A:H2’	1:w:1890:A:H8	1.66	0.61
1:w:1992:G:N2	1:w:1995:U:H5	1.98	0.61
1:w:2263:C:H2’	1:w:2264:C:H5”	1.83	0.61
2:x:37:C:H42	2:x:48:A:H2’	1.65	0.61
2:x:73:A:H2	22:T:34:ASN:ND2	1.98	0.61
8:F:14:GLY:C	8:F:16:SER:N	2.58	0.61
11:I:64:ARG:HD3	11:I:102:VAL:CG2	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:11:GLU:C	16:N:57:PHE:HZ	2.09	0.61
16:N:47:GLY:CA	16:N:64:ARG:O	2.49	0.61
20:R:12:VAL:CG1	20:R:17:ALA:CB	2.78	0.61
24:V:27:GLU:HA	33:2:74:C:H4'	1.81	0.61
31:y:38:G:H1	31:y:397:A:P	2.24	0.61
31:y:134:A:O5'	31:y:134:A:C8	2.54	0.61
31:y:314:C:H2'	31:y:315:A:C4'	2.30	0.61
31:y:528:C:O2'	31:y:533:A:H1'	2.01	0.61
32:z:12:G:H8	32:z:12:G:O5'	1.82	0.61
38:f:63:ARG:HA	38:f:66:MET:HG2	1.82	0.61
41:i:50:ARG:O	41:i:50:ARG:HD3	1.99	0.61
1:w:56:A:H2'	1:w:57:C:C6	2.35	0.61
1:w:87:C:H5"	1:w:88:G:H5"	1.83	0.61
1:w:1103:A:H5"	1:w:1104:C:C5	2.35	0.61
1:w:1380:G:N2	1:w:1570:A:H2	1.99	0.61
1:w:1796:U:O3'	4:B:256:GLY:HA2	2.00	0.61
1:w:2827:C:N4	1:w:2828:C:H41	1.99	0.61
1:w:2895:U:C2	1:w:2896:C:C5	2.89	0.61
2:x:79:C:H2'	2:x:80:U:C5'	2.30	0.61
3:A:62:THR:HG22	3:A:63:VAL:N	2.16	0.61
4:B:133:LEU:HA	4:B:136:ILE:HB	1.81	0.61
5:C:30:PRO:HB3	5:C:90:THR:HG21	1.83	0.61
7:E:101:ILE:O	7:E:104:GLU:HG2	2.00	0.61
13:K:86:GLY:C	13:K:87:LYS:HD2	2.25	0.61
13:K:126:PRO:O	13:K:127:ILE:HG23	2.01	0.61
14:L:97:VAL:HA	14:L:113:LEU:O	2.00	0.61
15:M:49:VAL:HG22	15:M:50:SER:N	2.15	0.61
20:R:14:SER:O	20:R:17:ALA:HB3	2.00	0.61
22:T:146:ILE:HD13	22:T:146:ILE:N	2.15	0.61
26:X:8:LEU:HD21	26:X:30:ARG:O	2.00	0.61
29:a:32:LEU:HD22	29:a:41:ILE:HG23	1.83	0.61
31:y:51:A:H4'	31:y:52:G:H5'	1.81	0.61
31:y:509:A:C2	31:y:510:A:C2	2.89	0.61
31:y:1470:G:C4	31:y:1471:G:C8	2.88	0.61
33:2:51:G:H2'	33:2:52:U:H6	1.65	0.61
37:e:9:CYS:CB	37:e:22:LYS:HZ3	2.13	0.61
38:f:106:PRO:HD2	38:f:122:GLU:OE2	2.01	0.61
39:g:8:ILE:HD12	39:g:63:TYR:HE2	1.66	0.61
41:i:35:ILE:HG22	41:i:39:LEU:HD23	1.83	0.61
50:r:53:LEU:HD23	50:r:54:GLY:N	2.16	0.61
51:s:52:PRO:C	51:s:54:ARG:H	2.09	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:445:C:H2'	1:w:446:G:O4'	2.01	0.60
1:w:480:A:O3'	21:S:44:ILE:HG22	2.00	0.60
1:w:752:A:OP1	28:Z:1:MET:HE1	2.01	0.60
1:w:942:G:H5"	12:J:35:HIS:HA	1.81	0.60
1:w:1810:A:H2'	1:w:1811:G:O4'	2.01	0.60
1:w:2574:G:H1'	5:C:143:ASN:OD1	2.01	0.60
1:w:2580:U:C5	1:w:2581:G:C6	2.89	0.60
1:w:2655:G:C1'	1:w:2656:U:OP2	2.48	0.60
1:w:2683:C:N4	1:w:2727:G:H21	1.99	0.60
2:x:26:A:H2'	2:x:27:C:O5'	2.01	0.60
4:B:45:ASN:CG	4:B:46:GLN:N	2.57	0.60
5:C:201:THR:HG22	5:C:202:LYS:H	1.65	0.60
9:G:4:ILE:C	9:G:37:VAL:HB	2.25	0.60
9:G:138:ILE:O	9:G:138:ILE:HG23	2.01	0.60
17:O:90:VAL:C	17:O:92:ARG:H	2.09	0.60
18:P:42:GLY:O	18:P:47:VAL:HG11	2.01	0.60
23:U:52:GLY:HA3	23:U:62:LEU:HB2	1.83	0.60
31:y:61:G:H21	31:y:379:C:H4'	1.66	0.60
31:y:126:G:N2	31:y:236:G:N7	2.49	0.60
31:y:375:U:H2'	31:y:376:G:C8	2.36	0.60
31:y:519:C:C2	31:y:520:A:C8	2.89	0.60
31:y:684:A:O2'	44:l:39:PRO:HG2	2.00	0.60
31:y:1198:G:C6	31:y:1199:U:C4	2.89	0.60
31:y:1312:G:C2	31:y:1326:C:C2	2.90	0.60
31:y:1358:U:C5	31:y:1359:C:C5	2.89	0.60
31:y:1389:C:C4	31:y:1390:U:C4	2.88	0.60
31:y:1437:C:O5'	31:y:1437:C:C6	2.53	0.60
32:z:41:C:O2'	32:z:42:G:H5'	2.01	0.60
35:c:118:LEU:CD1	35:c:127:ILE:HG21	2.31	0.60
37:e:100:ARG:HE	37:e:137:SER:HA	1.65	0.60
41:i:13:ILE:O	41:i:17:THR:CB	2.41	0.60
41:i:88:LYS:HB3	41:i:89:PRO:HD2	1.83	0.60
47:o:12:ARG:HH22	47:o:17:LYS:HG3	1.66	0.60
47:o:24:CYS:HB3	47:o:28:GLY:N	2.15	0.60
47:o:24:CYS:CA	47:o:39:LEU:HA	2.22	0.60
53:u:26:ASN:O	53:u:30:LYS:HG3	2.00	0.60
1:w:76:C:H5'	25:W:49:LYS:HG2	1.82	0.60
1:w:464:U:C4	1:w:465:G:C6	2.89	0.60
1:w:686:G:C4	28:Z:11:LYS:HG2	2.36	0.60
1:w:1046:A:H3'	1:w:1047:G:C5'	2.31	0.60
1:w:2007:C:O5'	1:w:2007:C:H6	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2360:A:C6	1:w:2361:A:H1'	2.35	0.60
1:w:2627:G:O2'	1:w:2628:C:H5'	2.01	0.60
1:w:2660:A:H3'	1:w:2660:A:C8	2.37	0.60
1:w:2745:C:HO2'	8:F:142:GLY:C	2.08	0.60
2:x:3:C:C2	2:x:118:G:C6	2.89	0.60
5:C:103:ASP:O	5:C:104:VAL:HB	2.01	0.60
11:I:109:LYS:HA	11:I:109:LYS:CE	2.30	0.60
11:I:114:ILE:HD13	11:I:114:ILE:N	1.99	0.60
12:J:146:VAL:HG13	12:J:147:LEU:N	2.15	0.60
13:K:15:GLY:CA	13:K:72:LYS:HE2	2.31	0.60
24:V:86:SER:N	24:V:87:PRO:HD2	2.16	0.60
31:y:8:A:O2'	31:y:9:G:O4'	2.07	0.60
31:y:17:U:H1'	31:y:1079:G:N2	2.15	0.60
31:y:37:U:H3	31:y:397:A:N6	1.97	0.60
31:y:109:A:H8	31:y:327:A:C5'	2.14	0.60
31:y:502:G:N2	31:y:503:C:H1'	2.16	0.60
31:y:1061:G:H2'	31:y:1062:U:H6	1.63	0.60
31:y:1195:C:O5'	31:y:1195:C:H6	1.84	0.60
31:y:1447:G:P	31:y:1447:G:C8	2.82	0.60
37:e:14:ARG:HD3	37:e:14:ARG:C	2.26	0.60
41:i:80:ILE:HG23	41:i:83:ILE:HD12	1.83	0.60
44:l:108:ILE:HG22	44:l:108:ILE:O	2.00	0.60
1:w:303:U:H2'	1:w:304:G:C8	2.36	0.60
1:w:598:G:H2'	1:w:599:G:O4'	2.01	0.60
1:w:673:C:OP1	1:w:801:G:N3	2.34	0.60
1:w:674:G:N3	6:D:69:ARG:NH2	2.48	0.60
1:w:818:G:N7	1:w:1187:G:C5	2.69	0.60
1:w:2023:G:H5'	1:w:2617:C:H4'	1.82	0.60
1:w:2472:G:H22	1:w:2477:C:H5'	1.66	0.60
1:w:2739:U:C2'	1:w:2740:A:H5'	2.30	0.60
1:w:2746:U:O5'	1:w:2746:U:H3'	2.01	0.60
1:w:2788:C:O2	1:w:2809:A:H2	1.85	0.60
1:w:2837:G:O2'	1:w:2838:G:H5'	2.00	0.60
4:B:3:VAL:HA	4:B:17:THR:CG2	2.30	0.60
4:B:20:ASP:HB2	4:B:91:ARG:NH1	2.17	0.60
4:B:75:ILE:CG2	4:B:98:VAL:HB	2.31	0.60
4:B:212:SER:CB	4:B:217:ARG:HG2	2.31	0.60
5:C:56:PRO:HB2	5:C:58:ARG:HH11	1.65	0.60
7:E:68:PRO:CB	7:E:92:VAL:HB	2.28	0.60
8:F:103:LEU:HG	8:F:123:PHE:CE2	2.37	0.60
16:N:26:ASP:H	16:N:91:ARG:H	1.50	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:31:SER:H	16:N:42:ILE:CB	2.15	0.60
17:O:69:CYS:HB2	17:O:74:LEU:HD13	1.82	0.60
27:Y:13:LYS:O	27:Y:16:ARG:HG3	2.01	0.60
27:Y:19:ARG:HG3	27:Y:20:ARG:HG3	1.83	0.60
31:y:41:G:H2'	31:y:42:G:H8	1.54	0.60
31:y:217:C:H2'	31:y:218:C:C6	2.36	0.60
31:y:237:C:C2'	31:y:238:G:O4'	2.46	0.60
31:y:341:C:C2	31:y:342:C:C5	2.89	0.60
31:y:627:G:H8	31:y:627:G:OP2	1.84	0.60
31:y:716:A:H1'	44:l:118:GLY:O	2.01	0.60
31:y:1054:C:O4'	31:y:1196:U:O2'	2.19	0.60
31:y:1058:G:C2'	31:y:1059:C:H5'	2.31	0.60
31:y:1159:U:C4	31:y:1182:G:H1'	2.35	0.60
31:y:1293:G:O2'	31:y:1294:G:C8	2.35	0.60
31:y:1378:C:H5'	40:h:6:ARG:HA	1.82	0.60
44:l:27:ASN:OD1	44:l:55:LYS:HB3	2.01	0.60
50:r:18:THR:HA	50:r:45:HIS:HA	1.83	0.60
1:w:33:U:O5'	1:w:33:U:H6	1.84	0.60
1:w:48:G:H21	1:w:177:G:N2	1.97	0.60
1:w:291:C:H2'	1:w:292:C:C6	2.36	0.60
1:w:318:C:H2'	1:w:319:C:C5	2.36	0.60
1:w:363(G):A:N3	1:w:364:C:C5	2.69	0.60
1:w:484:C:H6	1:w:484:C:O5'	1.84	0.60
1:w:1034:G:H8	1:w:1034:G:OP2	1.84	0.60
1:w:1902:C:O3'	4:B:243:GLY:HA2	2.01	0.60
1:w:2134:A:C2	1:w:2158:A:H1'	2.35	0.60
1:w:2439:A:N7	1:w:2586:C:H4'	2.16	0.60
1:w:2733:A:C4	1:w:2734:A:C8	2.89	0.60
1:w:2828:C:H2'	1:w:2829:C:H6	1.66	0.60
1:w:2875:C:O2'	16:N:5:ALA:HB3	2.01	0.60
5:C:107:THR:O	5:C:189:PRO:HG2	2.00	0.60
15:M:93:LYS:O	15:M:94:TYR:C	2.44	0.60
17:O:66:ASN:HD21	17:O:70:ARG:NH2	1.98	0.60
17:O:98:LEU:HD11	17:O:105:VAL:CB	2.25	0.60
23:U:37:LEU:HD12	23:U:38:VAL:N	2.11	0.60
31:y:234:C:O2'	50:r:64:PRO:HG3	2.02	0.60
31:y:581:G:OP1	48:p:65:ARG:CZ	2.49	0.60
31:y:606:G:H3'	31:y:607:A:C5'	2.30	0.60
31:y:755:G:H2'	31:y:756:C:C5	2.36	0.60
31:y:1012:U:H2'	31:y:1013:G:C5'	2.06	0.60
31:y:1149:C:C2'	31:y:1150:U:H5'	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:44:GLU:HB3	36:d:48:TYR:HD1	1.66	0.60
38:f:99:GLY:O	38:f:117:ASP:HA	2.02	0.60
41:i:14:ARG:O	41:i:17:THR:HG22	2.01	0.60
41:i:100:ILE:HD11	41:i:124:ALA:CB	2.30	0.60
42:j:48:GLU:OE2	42:j:101:PHE:HZ	1.84	0.60
45:m:47:PRO:HD2	45:m:91:ASP:OD1	2.00	0.60
46:n:12:ASN:HA	46:n:46:LYS:HE3	1.82	0.60
47:o:24:CYS:HB3	47:o:28:GLY:H	1.65	0.60
47:o:41:ARG:HH12	47:o:45:ARG:CD	2.15	0.60
48:p:55:GLY:C	48:p:57:LEU:H	2.09	0.60
50:r:55:ASP:HA	50:r:78:GLU:O	2.01	0.60
50:r:61:GLU:HA	50:r:71:PHE:CD1	2.36	0.60
53:u:80:ARG:HA	53:u:80:ARG:HE	1.66	0.60
1:w:67:U:H3	1:w:74:A:H8	1.48	0.60
1:w:570:G:H2'	1:w:2030:A:C5	2.36	0.60
1:w:949:C:H2'	1:w:950:G:C8	2.35	0.60
1:w:1150:C:H2'	1:w:1151:G:H8	1.67	0.60
1:w:1527:G:HO2'	1:w:1528:A:H8	1.49	0.60
1:w:2094:G:H4'	9:G:25:TYR:CZ	2.35	0.60
1:w:2130:U:H3'	1:w:2131:G:C8	2.36	0.60
1:w:2263:C:H41	23:U:13:GLY:H	1.49	0.60
1:w:2298:A:H1'	1:w:2322:A:H1'	1.83	0.60
1:w:2319:G:C4	1:w:2320:A:N6	2.70	0.60
1:w:2498:C:O2'	1:w:2499:C:H5'	2.01	0.60
1:w:2635:C:C5'	5:C:79:ARG:NH2	2.64	0.60
1:w:2899:G:O2'	1:w:2900:A:H5'	2.01	0.60
3:A:186:LEU:HD12	3:A:187:ALA:N	2.16	0.60
5:C:13:ARG:HB3	5:C:22:PRO:HA	1.83	0.60
6:D:171:LEU:HD23	6:D:172:ALA:N	2.16	0.60
9:G:9:LEU:HD23	9:G:10:GLU:N	2.15	0.60
13:K:37:LEU:CG	13:K:128:LYS:H	2.10	0.60
13:K:58:PHE:CZ	13:K:117:ALA:HB1	2.37	0.60
14:L:86:ARG:HG3	14:L:87:TYR:CE1	2.37	0.60
18:P:47:VAL:HG22	18:P:48:GLY:N	2.16	0.60
20:R:88:LYS:O	20:R:89:ILE:HB	2.00	0.60
22:T:90:VAL:HG22	22:T:91:LEU:H	1.64	0.60
31:y:17:U:O2'	31:y:1079:G:N2	2.35	0.60
31:y:216:G:N7	31:y:217:C:C5	2.69	0.60
31:y:285:G:C2'	31:y:286:G:H5'	2.30	0.60
31:y:376:G:P	49:q:6:LEU:HD22	2.42	0.60
31:y:532:A:C8	31:y:532:A:H3'	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:861:G:N2	31:y:872:A:C8	2.70	0.60
31:y:936:C:C1'	31:y:1383:C:H42	2.14	0.60
31:y:103(A):A:H2'	31:y:103(B):G:O4'	2.01	0.60
31:y:1528:U:H5"	31:y:1529:G:N2	2.17	0.60
35:c:118:LEU:HD12	35:c:138:LEU:HD11	1.82	0.60
51:s:44:LEU:HD21	51:s:80:PRO:HD2	1.83	0.60
51:s:47:THR:O	51:s:82:THR:O	2.19	0.60
51:s:60:ALA:O	51:s:64:ARG:HG3	2.01	0.60
1:w:506:G:O2'	1:w:507:A:H8	1.84	0.60
1:w:518:G:H2'	1:w:519:U:H5	1.61	0.60
1:w:1026:U:H2'	1:w:1027:A:H5'	1.84	0.60
1:w:1451:C:C3'	1:w:1453:A:P	2.89	0.60
1:w:1620:G:H1'	28:Z:2:LYS:HD2	1.84	0.60
1:w:2187:G:H3'	1:w:2188:C:H5"	1.83	0.60
1:w:2354:G:O2'	23:U:36:ILE:N	2.35	0.60
1:w:2559:C:C2	1:w:2560:C:C5	2.90	0.60
1:w:2566:A:H5"	1:w:2566:A:H8	1.66	0.60
1:w:2590:A:OP2	4:B:239:ARG:HB2	2.02	0.60
1:w:2627:G:H2'	1:w:2628:C:O4'	2.02	0.60
1:w:2633:G:H22	5:C:64:LYS:HD3	1.62	0.60
1:w:2745:C:H2'	1:w:2746:U:H5'	1.81	0.60
2:x:113:C:C2'	15:M:47:THR:HG22	2.32	0.60
3:A:15:VAL:O	3:A:16:ASP:O	2.20	0.60
4:B:24:ILE:HG23	4:B:25:THR:HG22	1.82	0.60
4:B:261:LYS:HE2	4:B:261:LYS:HA	1.83	0.60
9:G:43:ASN:HA	9:G:46:ALA:HB3	1.84	0.60
11:I:6:THR:CG2	11:I:7:TYR:H	2.12	0.60
11:I:7:TYR:O	11:I:8:LEU:HD13	2.02	0.60
14:L:38:VAL:HB	14:L:39:PRO:HD3	1.84	0.60
18:P:5:VAL:HG22	18:P:6:LYS:N	2.16	0.60
22:T:84:GLU:HG3	22:T:85:HIS:N	2.12	0.60
31:y:186(A):C:O2	53:u:85:MET:HE1	2.01	0.60
31:y:209:U:H6	31:y:209:U:P	2.25	0.60
31:y:520:A:N1	31:y:521:G:H1'	2.17	0.60
31:y:960:U:C5	52:t:79:THR:HG21	2.37	0.60
31:y:1501:C:C6	31:y:1504:G:C5	2.89	0.60
37:e:38:TYR:O	37:e:38:TYR:CG	2.54	0.60
37:e:170:VAL:HG12	37:e:176:LEU:HD13	1.82	0.60
39:g:48:LEU:HD13	39:g:52:ILE:HD12	1.84	0.60
44:l:121:PRO:HB2	44:l:125:PHE:HB2	1.83	0.60
47:o:42:ILE:O	47:o:46:GLU:HG2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:r:11:VAL:O	50:r:12:SER:HB3	2.00	0.60
1:w:7:G:O5'	1:w:7:G:H8	1.83	0.60
1:w:308:G:H3'	1:w:309:G:C8	2.37	0.60
1:w:571:A:C6	1:w:575:A:N7	2.69	0.60
1:w:811:U:C2	1:w:811:U:OP2	2.53	0.60
1:w:973:A:O3'	1:w:1186:G:N2	2.34	0.60
1:w:1200:C:C2'	1:w:1201:C:H5"	2.32	0.60
1:w:1373:A:H2'	1:w:1374:G:O4'	2.02	0.60
1:w:1949:G:H2'	1:w:1950:G:O4'	2.02	0.60
1:w:2060:A:OP2	6:D:64:HIS:HA	2.01	0.60
1:w:2175:C:H2'	1:w:2176:A:H8	1.67	0.60
1:w:2331:G:H2'	1:w:2332:U:O4'	2.02	0.60
1:w:2372:G:H2'	1:w:2373:G:H8	1.66	0.60
1:w:2476:A:H2	1:w:2481:G:H1	1.46	0.60
1:w:2548:G:H2'	1:w:2549:G:H5"	1.82	0.60
1:w:2694:G:C2'	1:w:2695:C:H5'	2.29	0.60
1:w:2771:C:H2'	1:w:2771:C:O2	2.02	0.60
1:w:2827:C:H42	1:w:2828:C:N4	1.98	0.60
2:x:70:C:H2'	2:x:71:C:C6	2.37	0.60
2:x:104:A:OP1	22:T:72:ARG:NH2	2.35	0.60
4:B:133:LEU:HD21	4:B:189:CYS:HB2	1.81	0.60
6:D:69:ARG:HG3	6:D:69:ARG:NH2	2.17	0.60
10:H:79:ASN:HA	10:H:147:ALA:HA	1.82	0.60
11:I:10:VAL:HG13	11:I:17:ARG:C	2.27	0.60
15:M:110:LEU:HD21	15:M:112:PHE:CZ	2.37	0.60
18:P:39:LEU:CD1	18:P:40:LEU:H	2.14	0.60
19:Q:23:LEU:CD1	27:Y:25:LEU:HG	2.28	0.60
22:T:30:ASN:ND2	22:T:32:HIS:HB2	2.17	0.60
31:y:191(D):U:H2'	31:y:191(E):G:C8	2.37	0.60
31:y:201:C:N3	31:y:209:U:H5'	2.17	0.60
31:y:273:A:C2'	31:y:274:A:H5'	2.31	0.60
31:y:313:A:O2'	31:y:314:C:H5'	2.01	0.60
31:y:362:G:OP2	45:m:33:ARG:NH1	2.34	0.60
31:y:502:G:O4'	31:y:550:G:H4'	2.01	0.60
31:y:572:A:C5'	31:y:917:G:H5'	2.31	0.60
31:y:585:G:C6	31:y:586:C:N4	2.69	0.60
31:y:608:A:C4	31:y:609:A:C8	2.90	0.60
31:y:855:G:C2	31:y:856:C:C2	2.89	0.60
31:y:1016:A:H2'	31:y:1017:G:C8	2.36	0.60
31:y:1307:U:C2'	31:y:1308:U:C6	2.85	0.60
31:y:1452:C:H4'	31:y:1453:G:C4	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1535:C:H6	31:y:1535:C:H5"	1.67	0.60
36:d:15:THR:HG23	36:d:180:ALA:H	1.66	0.60
36:d:66:VAL:HG12	36:d:68:VAL:HG23	1.82	0.60
38:f:82:VAL:O	38:f:88:LYS:HG2	2.02	0.60
1:w:123:G:H2'	1:w:124:G:C5'	2.31	0.60
1:w:190:A:C6	1:w:191:A:C6	2.89	0.60
1:w:246:C:O5'	1:w:246:C:C6	2.54	0.60
1:w:388:G:OP1	24:V:34:THR:HB	2.01	0.60
1:w:996:A:H2'	1:w:997:G:C8	2.37	0.60
1:w:1930:G:N2	1:w:1968:G:H2'	2.17	0.60
1:w:1967:C:H5'	1:w:2593:U:OP1	2.02	0.60
1:w:2525:G:N1	1:w:2539:C:N4	2.50	0.60
1:w:2615:U:N3	27:Y:7:PRO:HB3	2.16	0.60
1:w:2857:G:H8	1:w:2857:G:O5'	1.84	0.60
1:w:2870:C:O5'	1:w:2870:C:H6	1.84	0.60
2:x:54:G:H2'	2:x:55:U:O4'	2.02	0.60
7:E:28:VAL:CG1	7:E:33:ARG:HH11	2.14	0.60
11:I:34:THR:CG2	11:I:35:VAL:H	2.14	0.60
12:J:90:ARG:HG2	12:J:91:PHE:HD1	1.66	0.60
31:y:323:U:C4'	53:u:19:SER:O	2.49	0.60
31:y:480:U:OP2	31:y:480:U:C6	2.53	0.60
31:y:817:C:H5"	31:y:817:C:C6	2.35	0.60
31:y:924:C:O2'	31:y:925:G:H5'	2.02	0.60
31:y:1146:A:H2'	31:y:1146:A:N3	2.17	0.60
31:y:1188:A:O2'	47:o:58:LYS:HE3	2.02	0.60
31:y:1430:C:O2'	31:y:1431:C:H5'	2.01	0.60
31:y:1534:A:H2'	31:y:1535:C:N1	2.17	0.60
32:z:66:C:C4	32:z:67:C:C5	2.90	0.60
36:d:35:GLU:OE2	36:d:95:THR:HG22	2.01	0.60
36:d:155:GLY:HA3	36:d:164:ARG:HB3	1.84	0.60
37:e:32:ALA:HA	37:e:35:ARG:HD3	1.83	0.60
37:e:94:LEU:O	37:e:97:LEU:HB2	2.01	0.60
38:f:76:ILE:CG1	38:f:118:ILE:HB	2.26	0.60
41:i:103:VAL:HG12	41:i:104:ARG:NH2	2.16	0.60
43:k:40:LEU:HB2	43:k:41:PRO:CD	2.27	0.60
45:m:23:VAL:CG2	45:m:30:PRO:HG3	2.32	0.60
53:u:43:LEU:HD13	53:u:51:GLU:HB2	1.83	0.60
1:w:35:G:O4'	1:w:454:A:H1'	2.02	0.60
1:w:150:C:H5"	1:w:151:C:OP2	2.02	0.60
1:w:176:G:H2'	1:w:177:G:N3	2.17	0.60
1:w:974(A):G:P	1:w:1186:G:H21	2.24	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1417:C:O2'	1:w:1587:A:N3	2.34	0.60
1:w:1508:A:N3	1:w:1510:A:N6	2.49	0.60
1:w:2345:G:H21	1:w:2381:C:H2'	1.65	0.60
1:w:2710:C:N3	1:w:2711:A:N7	2.50	0.60
2:x:28:C:OP1	15:M:34:HIS:NE2	2.34	0.60
8:F:96:ALA:HB3	8:F:128:PRO:O	2.02	0.60
9:G:88:ILE:HG23	9:G:89:TYR:N	2.17	0.60
14:L:79:LEU:O	14:L:83:ILE:HB	2.00	0.60
16:N:91:ARG:HA	16:N:116:ALA:CB	2.32	0.60
22:T:141:VAL:HG22	22:T:144:LEU:HB2	1.83	0.60
31:y:186(G):C:N4	31:y:191(B):G:N1	2.49	0.60
31:y:277:C:H2'	31:y:278:G:C8	2.36	0.60
31:y:726:C:O5'	31:y:726:C:H6	1.85	0.60
31:y:779:C:O3'	44:l:122:LYS:HB2	2.01	0.60
31:y:1509:C:C4	31:y:1510:U:C5	2.90	0.60
33:2:67:A:C2'	33:2:68:U:H5'	2.31	0.60
35:c:42:ILE:HD13	35:c:43:ASP:H	1.66	0.60
36:d:5:ILE:CD1	36:d:175:LEU:HD23	2.26	0.60
36:d:125:GLU:HG3	36:d:126:ARG:HD3	1.84	0.60
36:d:141:VAL:O	36:d:145:GLY:O	2.19	0.60
40:h:31:MET:HG3	40:h:36:LYS:HB3	1.82	0.60
40:h:47:CYS:O	40:h:58:PRO:HB3	2.01	0.60
45:m:101:ARG:HD2	45:m:109:VAL:HG22	1.84	0.60
50:r:56:VAL:H	50:r:81:ARG:HH12	1.49	0.60
1:w:312:G:H2'	1:w:313:C:H6	1.67	0.60
1:w:329:G:H5'	1:w:330:A:OP2	2.02	0.60
1:w:401:A:H2'	1:w:402:A:O4'	2.02	0.60
1:w:788:A:H4'	1:w:789:A:C5'	2.22	0.60
1:w:995:C:H41	10:H:24:VAL:HG23	1.66	0.60
1:w:1752:C:H5'	1:w:2862:G:H5'	1.83	0.60
1:w:1805:U:O2	4:B:50:THR:CB	2.49	0.60
1:w:2032:G:OP2	1:w:2455:G:H5'	2.02	0.60
1:w:2124:G:N2	3:A:218:THR:HG23	2.17	0.60
1:w:2432:A:C4'	33:2:76:A:C5'	2.77	0.60
1:w:2885:C:H2'	1:w:2886:G:C5'	2.31	0.60
3:A:217:THR:HG1	3:A:220:GLY:H	1.48	0.60
7:E:120:LEU:HD12	7:E:178:PHE:HB3	1.84	0.60
7:E:165:THR:C	7:E:167:GLU:H	2.09	0.60
8:F:100:GLY:O	8:F:101:ARG:HB3	2.02	0.60
10:H:88:LYS:HE3	10:H:92:GLN:HG3	1.82	0.60
11:I:77:ILE:CG1	16:N:72:VAL:HG13	2.30	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:71:VAL:HG13	12:J:72:PRO:CD	2.20	0.60
18:P:21:ARG:O	18:P:22:VAL:HB	2.01	0.60
24:V:27:GLU:HA	33:2:74:C:C5'	2.32	0.60
25:W:37:PHE:O	25:W:38:GLN:C	2.45	0.60
27:Y:13:LYS:HA	27:Y:16:ARG:HG2	1.84	0.60
31:y:14:U:C6	31:y:16:A:OP2	2.55	0.60
31:y:19:C:H2'	31:y:20:U:O4'	2.02	0.60
31:y:27:G:C2'	31:y:28:G:H5'	2.32	0.60
31:y:230:G:O5'	31:y:230:G:C8	2.55	0.60
31:y:236:G:C6	31:y:237:C:N4	2.70	0.60
31:y:520:A:P	45:m:51:LEU:H	2.24	0.60
31:y:522:C:O5'	31:y:522:C:H6	1.85	0.60
31:y:638:G:H2'	31:y:639:G:H8	1.66	0.60
31:y:691:G:N7	44:l:26:ASN:HB3	2.17	0.60
31:y:909:A:C2	31:y:910:C:H1'	2.37	0.60
31:y:939:G:C5	31:y:940:C:N4	2.70	0.60
31:y:1090:U:C2'	31:y:1091:U:H5'	2.31	0.60
31:y:1354:C:O5'	31:y:1354:C:H6	1.84	0.60
31:y:1371:G:O3'	42:j:69:GLY:HA2	2.01	0.60
38:f:152:ARG:HG2	41:i:42:GLU:O	2.01	0.60
46:n:23:TYR:HD1	46:n:70:LEU:HB3	1.66	0.60
1:w:335:C:O2'	21:S:67:LEU:HG	2.02	0.59
1:w:350:U:H2'	1:w:351:G:H8	1.67	0.59
1:w:506:G:HO2'	1:w:507:A:H8	1.48	0.59
1:w:518:G:H2'	1:w:519:U:C6	2.37	0.59
1:w:593:G:N3	1:w:593:G:H2'	2.17	0.59
1:w:659:C:O2'	6:D:96:LEU:HD21	2.01	0.59
1:w:946:G:H2'	1:w:947:G:O4'	2.01	0.59
1:w:1426:G:H5'	1:w:1427:A:H5'	1.84	0.59
1:w:1728:G:H21	1:w:1732:A:H62	1.50	0.59
1:w:1782:C:C4	1:w:2587:A:N1	2.70	0.59
1:w:1986:A:C3'	1:w:1987:G:H5"	2.25	0.59
1:w:2019:A:O3'	17:O:27:LEU:HG	2.02	0.59
1:w:2571:C:C4	1:w:2574:G:C8	2.90	0.59
1:w:2635:C:C5'	5:C:79:ARG:HH21	2.15	0.59
1:w:2695:C:O2'	1:w:2696:U:H5'	2.01	0.59
1:w:2711:A:H5"	1:w:2712:U:H5'	1.83	0.59
1:w:2770:G:O5'	1:w:2770:G:H8	1.84	0.59
1:w:2837:G:C2'	1:w:2838:G:H5'	2.32	0.59
4:B:38:LYS:O	4:B:38:LYS:HG3	2.02	0.59
4:B:79:VAL:HB	4:B:111:LEU:HG	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:91:ARG:HD3	4:B:198:ASN:CG	2.26	0.59
5:C:66:HIS:O	5:C:67:PHE:CB	2.49	0.59
7:E:78:SER:O	7:E:79:ASN:CB	2.50	0.59
7:E:96:ARG:HD3	7:E:97:ASP:N	2.17	0.59
7:E:139:LEU:HB2	7:E:146:TYR:N	2.10	0.59
11:I:77:ILE:C	11:I:77:ILE:HD13	2.27	0.59
13:K:8:LYS:CB	13:K:12:GLN:HE21	2.15	0.59
17:O:111:GLU:HA	17:O:114:LYS:HD3	1.83	0.59
19:Q:87:PRO:O	19:Q:88:ARG:HB3	2.01	0.59
20:R:83:VAL:HG23	20:R:85:PRO:HD2	1.83	0.59
23:U:35:ASN:H	23:U:61:ALA:HB3	1.67	0.59
27:Y:33:CYS:HB3	27:Y:38:ALA:HB3	1.83	0.59
27:Y:38:ALA:CB	27:Y:49:CYS:HB3	2.18	0.59
31:y:209:U:OP1	31:y:209:U:C6	2.55	0.59
31:y:445:G:H2'	31:y:446:G:C8	2.37	0.59
31:y:550:G:C6	31:y:551:U:C4	2.90	0.59
31:y:563:A:H4'	31:y:566:G:H1'	1.84	0.59
31:y:958:A:C8	31:y:959:A:N7	2.69	0.59
31:y:1158:C:O2	31:y:1158:C:C2'	2.50	0.59
31:y:1188:A:C4'	47:o:58:LYS:NZ	2.65	0.59
31:y:1287:A:O2'	31:y:1288:A:H5'	2.02	0.59
31:y:1521:G:H2'	31:y:1522:U:H5'	1.84	0.59
38:f:34:VAL:C	38:f:112:LEU:HD12	2.26	0.59
38:f:76:ILE:HG13	38:f:118:ILE:CB	2.25	0.59
40:h:12:LEU:HD23	40:h:21:VAL:CG2	2.30	0.59
41:i:96:GLY:O	41:i:99:GLU:HB2	2.02	0.59
47:o:29:ARG:HB3	47:o:40:CYS:CB	2.26	0.59
1:w:532:A:OP2	1:w:561:G:O2'	2.12	0.59
1:w:659:C:N4	1:w:660:G:O6	2.35	0.59
1:w:999:U:O2'	1:w:1000:A:H5'	2.03	0.59
1:w:1244:G:H5'	12:J:16:ARG:HH11	1.65	0.59
1:w:1974:C:H2'	1:w:1975:G:H8	1.67	0.59
1:w:2196:C:H2'	1:w:2197:U:H5'	1.83	0.59
1:w:2486:G:C6	1:w:2487:G:N7	2.70	0.59
1:w:2562:U:H2'	1:w:2563:U:C5'	2.24	0.59
2:x:8:U:H4'	15:M:89:ARG:NE	2.17	0.59
4:B:8:PRO:CG	4:B:15:PHE:H	2.15	0.59
6:D:62:GLN:O	6:D:63:LYS:C	2.45	0.59
31:y:126:G:N2	31:y:236:G:C5	2.70	0.59
31:y:266:G:H5"	31:y:268:C:C5	2.37	0.59
31:y:275:G:C4	31:y:276:G:N7	2.70	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:531:U:H6	31:y:531:U:O5'	1.84	0.59
31:y:782:A:O3'	31:y:1515:C:H4'	2.02	0.59
31:y:1130:A:H2'	31:y:1130:A:N3	2.15	0.59
37:e:13:ARG:HG3	37:e:40:PRO:HD3	1.84	0.59
47:o:24:CYS:SG	47:o:40:CYS:N	2.74	0.59
47:o:29:ARG:HG2	47:o:32:SER:OG	2.01	0.59
1:w:101:G:H2'	1:w:101:G:N3	2.17	0.59
1:w:193:U:H2'	1:w:194:G:H5'	1.83	0.59
1:w:240:G:H8	1:w:240:G:O5'	1.85	0.59
1:w:809:G:C6	12:J:33:ARG:NH2	2.71	0.59
1:w:965:C:H2'	1:w:966:G:H5'	1.84	0.59
1:w:1296:G:H4'	14:L:16:HIS:CE1	2.35	0.59
1:w:1345:C:OP2	1:w:1385:G:H3'	2.02	0.59
1:w:1368:G:H2'	1:w:1369:G:C8	2.37	0.59
1:w:1652:A:H2'	1:w:1653:G:O4'	2.02	0.59
1:w:2090:G:H21	24:V:47:GLN:HG2	1.66	0.59
1:w:2607:G:H2'	1:w:2608:G:O4'	2.02	0.59
1:w:2633:G:H21	5:C:64:LYS:CE	2.15	0.59
1:w:2702:U:HO2'	1:w:2703:C:H5	1.48	0.59
1:w:2728:U:O2'	1:w:2729:G:H5'	2.02	0.59
2:x:2:C:N4	2:x:3:C:C4	2.71	0.59
8:F:153:LYS:HD2	8:F:163:TYR:HA	1.84	0.59
14:L:65:LEU:O	14:L:68:ARG:NH1	2.36	0.59
15:M:62:LYS:O	15:M:65:VAL:HG22	2.01	0.59
24:V:91:LYS:O	24:V:94:LEU:HB2	2.02	0.59
31:y:13:U:O2	31:y:914:A:H3'	2.02	0.59
31:y:131:C:H2'	31:y:132:C:C6	2.36	0.59
31:y:376:G:OP1	49:q:6:LEU:HD22	2.02	0.59
31:y:495:A:H4'	31:y:496:A:OP1	2.00	0.59
31:y:498:A:H62	37:e:2:GLY:HA2	1.67	0.59
31:y:671:G:C2'	31:y:672:U:O5'	2.49	0.59
31:y:957:U:H1'	31:y:960:U:H5'	1.83	0.59
31:y:971:G:C5'	31:y:972:C:H5"	2.30	0.59
31:y:1064:G:O2'	31:y:1065:U:C5'	2.50	0.59
31:y:1474:G:H2'	31:y:1475:G:O4'	2.02	0.59
32:z:41:C:C2	32:z:42:G:C8	2.90	0.59
33:2:8:U:H2'	33:2:9:A:H5"	1.85	0.59
33:2:14:A:H62	33:2:21:A:H2	1.49	0.59
33:2:66:A:N6	33:2:67:A:N6	2.50	0.59
35:c:11:LEU:HG	35:c:12:GLU:H	1.67	0.59
36:d:180:ALA:O	36:d:182:ILE:N	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:101:LEU:HD11	37:e:140:VAL:HG23	1.83	0.59
38:f:48:ALA:HB1	38:f:49:PRO:CD	2.32	0.59
38:f:97:GLY:HA2	38:f:117:ASP:OD1	2.02	0.59
39:g:67:MET:HE2	39:g:72:VAL:HG22	1.84	0.59
50:r:11:VAL:O	50:r:12:SER:CB	2.50	0.59
1:w:79:G:H2'	1:w:80:G:H8	1.66	0.59
1:w:1204:A:C2	1:w:1241:A:H2	2.17	0.59
1:w:1462:C:H4'	1:w:2703:C:H5'	1.84	0.59
1:w:1658:C:H2'	1:w:1659:U:H6	1.66	0.59
1:w:1663:C:O2'	1:w:1664:A:H5'	2.03	0.59
1:w:1850:G:H2'	1:w:1851:U:C6	2.37	0.59
1:w:1862:G:H3'	1:w:1863:G:H5"	1.85	0.59
1:w:2080:G:C5'	24:V:23:LYS:HD3	2.21	0.59
1:w:2320:A:C8	1:w:2333:A:C6	2.90	0.59
1:w:2334:G:H21	15:M:14:VAL:CG2	2.14	0.59
1:w:2579:C:H4'	5:C:134:ILE:CG1	2.32	0.59
2:x:42:C:H4'	7:E:68:PRO:HA	1.85	0.59
4:B:27:THR:C	4:B:29:PRO:HD2	2.27	0.59
4:B:33:LEU:O	4:B:33:LEU:HD23	2.03	0.59
4:B:200:ASP:O	4:B:202:LYS:N	2.34	0.59
6:D:27:LEU:HD13	6:D:27:LEU:N	2.16	0.59
7:E:141:PHE:CD2	7:E:144:ILE:HB	2.37	0.59
14:L:79:LEU:HD23	14:L:83:ILE:HG13	1.82	0.59
15:M:26:LEU:HD22	15:M:39:ILE:HG21	1.83	0.59
16:N:107:ASP:O	16:N:111:ARG:HD3	2.02	0.59
20:R:42:ALA:O	20:R:46:ALA:CB	2.49	0.59
31:y:5:U:C4	37:e:86:LYS:HA	2.37	0.59
31:y:25:C:C4	31:y:558:G:N2	2.70	0.59
31:y:136:C:H4'	49:q:1:MET:CG	2.32	0.59
31:y:153:C:O2'	31:y:154:C:H5'	2.02	0.59
31:y:403:C:OP1	37:e:137:SER:HB3	2.01	0.59
31:y:772:U:C4	31:y:773:G:N7	2.70	0.59
31:y:792:A:O2'	31:y:794:A:N7	2.36	0.59
31:y:896:C:O2'	31:y:897:C:H5'	2.02	0.59
31:y:1197:G:H2'	31:y:1198:G:C8	2.37	0.59
31:y:1461:G:H2'	31:y:1462:G:C8	2.37	0.59
31:y:1500:A:P	31:y:1504:G:O3'	2.60	0.59
33:2:20:G:N2	33:2:22:G:H1'	2.17	0.59
36:d:43:LEU:HD12	36:d:44:GLU:N	2.15	0.59
37:e:23:GLY:O	37:e:27:TYR:HB2	2.02	0.59
37:e:64:LEU:O	37:e:67:ILE:HG13	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:99:SER:OG	37:e:139:ARG:HB2	2.03	0.59
38:f:75:THR:HG22	38:f:76:ILE:N	2.17	0.59
40:h:43:PHE:C	40:h:43:PHE:CD1	2.81	0.59
41:i:16:ALA:HA	41:i:19:VAL:HG12	1.84	0.59
43:k:74:ILE:CG1	43:k:75:ILE:H	2.07	0.59
45:m:37:THR:HB	45:m:56:LYS:O	2.02	0.59
52:t:53:ASN:CG	52:t:54:GLY:N	2.60	0.59
1:w:1023:U:OP1	1:w:1025:G:H2'	2.03	0.59
1:w:1024:G:H8	1:w:1024:G:O5'	1.86	0.59
1:w:1259:G:H2'	1:w:1260:G:C8	2.38	0.59
1:w:1486:A:H2'	1:w:1487:G:H5"	1.85	0.59
1:w:2037:G:H2'	1:w:2038:G:C8	2.38	0.59
1:w:2512:C:H2'	1:w:2513:G:C1'	2.31	0.59
1:w:2635:C:H5"	5:C:79:ARG:NH2	2.16	0.59
1:w:2681:C:H4'	1:w:2682:U:OP1	2.02	0.59
1:w:2810:A:H61	1:w:2891:G:C2'	2.15	0.59
2:x:12:C:OP2	23:U:73:GLY:HA2	2.01	0.59
4:B:65:ILE:HB	4:B:104:TYR:O	2.03	0.59
4:B:196:VAL:HG12	4:B:197:GLY:N	2.17	0.59
6:D:15:LEU:HD22	6:D:19:LEU:CD2	2.32	0.59
7:E:70:VAL:HA	7:E:90:LEU:HG	1.83	0.59
9:G:98:ALA:CA	9:G:111:PRO:HG2	2.28	0.59
14:L:63:ARG:HA	14:L:66:VAL:HG22	1.84	0.59
15:M:82:ILE:CG2	15:M:85:VAL:HB	2.33	0.59
15:M:84:GLN:HE21	15:M:112:PHE:HE2	1.49	0.59
19:Q:11:ARG:HD2	19:Q:98:LYS:NZ	2.18	0.59
22:T:151:HIS:HB3	22:T:168:GLU:CA	2.32	0.59
24:V:11:ARG:HB2	24:V:12:PRO:HD3	1.84	0.59
27:Y:8:LYS:O	27:Y:9:LYS:HB2	2.01	0.59
27:Y:31:VAL:O	27:Y:39:MET:HA	2.03	0.59
31:y:270:A:H2'	31:y:271:C:C6	2.37	0.59
31:y:401:C:O5'	31:y:401:C:H6	1.85	0.59
31:y:552:U:H2'	31:y:553:A:H5'	1.85	0.59
31:y:756:C:H2'	31:y:757:U:C6	2.37	0.59
31:y:820:U:O5'	31:y:820:U:H6	1.86	0.59
31:y:983:A:C2	31:y:984:C:H6	2.21	0.59
31:y:1109:C:H5'	31:y:1110:A:C8	2.37	0.59
31:y:1188:A:H4'	47:o:58:LYS:CE	2.32	0.59
31:y:1249:C:H1'	42:j:70:LYS:CE	2.31	0.59
37:e:70:ILE:HD11	37:e:100:ARG:NH1	2.17	0.59
38:f:152:ARG:HA	41:i:43:GLY:HA3	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:k:75:ILE:HG22	43:k:76:ASN:ND2	2.18	0.59
53:u:82:SER:O	53:u:86:ARG:CB	2.48	0.59
1:w:141(B):C:C2'	1:w:142:G:O4'	2.46	0.59
1:w:270(Q):C:H5"	9:G:45:LYS:NZ	2.18	0.59
1:w:467:G:H2'	1:w:468:G:O4'	2.02	0.59
1:w:532:A:H61	1:w:2020:A:H1'	1.68	0.59
1:w:1136:G:N3	1:w:2038:G:H4'	2.16	0.59
1:w:1252:G:H2'	1:w:1253:A:C5	2.38	0.59
1:w:1639:U:H2'	1:w:1640:C:H5"	1.84	0.59
1:w:1687:G:H1'	1:w:1702:G:N2	2.17	0.59
1:w:2122:U:H4'	3:A:168:LYS:HG3	1.84	0.59
1:w:2230:G:H2'	1:w:2231:C:C6	2.37	0.59
1:w:2575:C:O2'	5:C:140:SER:CB	2.50	0.59
1:w:2594:C:N3	1:w:2595:G:C5	2.69	0.59
1:w:2657:A:N6	1:w:2664:G:O2'	2.36	0.59
4:B:60:ARG:NH2	4:B:86:PRO:HB2	2.17	0.59
4:B:118:VAL:HG22	4:B:119:ALA:N	2.17	0.59
4:B:140:THR:HG23	4:B:165:ILE:HD13	1.83	0.59
8:F:12:PRO:HD2	8:F:15:VAL:HG21	1.84	0.59
9:G:4:ILE:HG12	9:G:18:VAL:HG22	1.83	0.59
19:Q:17:VAL:HG21	19:Q:103:ILE:HD13	1.84	0.59
22:T:25:PRO:HA	22:T:38:TYR:HB3	1.84	0.59
23:U:41:ARG:HG2	23:U:41:ARG:HH11	1.68	0.59
27:Y:12:SER:C	27:Y:14:ALA:H	2.09	0.59
31:y:15:G:O2'	38:f:17:ALA:HB3	2.01	0.59
31:y:38:G:N1	31:y:397:A:O5'	2.35	0.59
31:y:226:G:C4	31:y:227:G:N7	2.70	0.59
31:y:323:U:OP1	53:u:26:ASN:ND2	2.35	0.59
31:y:427:U:C4	31:y:428:G:C6	2.91	0.59
31:y:687:A:O2'	31:y:688:G:P	2.60	0.59
31:y:1053:G:HO2'	31:y:1054:C:P	2.21	0.59
31:y:1269:A:H4'	54:v:19:GLY:N	2.17	0.59
31:y:136(A):C:O2'	31:y:136(B):C:H5'	2.01	0.59
32:z:29:G:C2'	32:z:30:G:H5'	2.32	0.59
49:q:16:HIS:H	49:q:41:PRO:HG2	1.68	0.59
49:q:27:LYS:HD2	49:q:28:ARG:N	2.17	0.59
1:w:59:U:O5'	1:w:59:U:H6	1.84	0.59
1:w:137(A):C:H2'	1:w:137(B):G:H8	1.65	0.59
1:w:530:G:H5"	1:w:561:G:C6	2.38	0.59
1:w:826:U:O5'	1:w:2428:G:H3'	2.01	0.59
1:w:1664:A:H3'	1:w:1665:A:C8	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1784:A:H2'	1:w:1784:A:N3	2.17	0.59
1:w:1889:A:N3	1:w:2086:U:O2'	2.36	0.59
1:w:2019:A:H61	1:w:2035:G:H1	1.51	0.59
1:w:2357:U:H2'	1:w:2359:C:OP2	2.02	0.59
1:w:2567:G:H2'	1:w:2568:C:C6	2.37	0.59
1:w:2671:A:O2'	1:w:2672:G:H5'	2.02	0.59
1:w:2759:G:H2'	1:w:2760:C:C5'	2.29	0.59
2:x:12:C:H1'	2:x:15:A:N6	2.18	0.59
5:C:51:PHE:N	5:C:76:ARG:HB3	2.17	0.59
7:E:3:LEU:HB2	7:E:100:TRP:HH2	1.65	0.59
7:E:30:GLU:O	7:E:30:GLU:HG3	2.03	0.59
8:F:125:VAL:HB	8:F:128:PRO:CB	2.33	0.59
10:H:27:TYR:CE1	17:O:64:ARG:HD3	2.38	0.59
10:H:65:TRP:HB3	17:O:64:ARG:CD	2.32	0.59
13:K:120:ILE:O	13:K:124:LYS:HB3	2.03	0.59
14:L:1:MET:HG3	14:L:5:LYS:HA	1.84	0.59
15:M:73:LEU:HA	15:M:76:LYS:HE3	1.85	0.59
16:N:28:VAL:O	16:N:29:ARG:HB2	2.02	0.59
17:O:66:ASN:HA	17:O:69:CYS:SG	2.43	0.59
18:P:66:ARG:NE	18:P:94:LEU:HD21	2.18	0.59
31:y:123:C:H4'	31:y:311:C:O2	2.02	0.59
31:y:126:G:H2'	31:y:127:G:H8	1.67	0.59
31:y:136:C:C5'	49:q:1:MET:HB2	2.33	0.59
31:y:332:G:O2'	31:y:333:G:H5'	2.03	0.59
31:y:696:A:H2'	31:y:697:U:C5	2.38	0.59
31:y:717:C:H2'	31:y:734:G:OP2	2.03	0.59
31:y:770:C:C2'	31:y:771:G:H5'	2.31	0.59
31:y:829:G:O2'	35:c:26:PRO:CG	2.46	0.59
31:y:1023:G:H2'	31:y:1024:G:H5'	1.83	0.59
31:y:1249:C:H1'	42:j:70:LYS:HZ2	1.66	0.59
35:c:134:GLU:HA	35:c:137:ARG:CD	2.33	0.59
36:d:23:TYR:HB2	43:k:93:GLY:O	2.02	0.59
43:k:25:GLU:O	43:k:29:ARG:HG3	2.02	0.59
46:n:49:THR:HG22	46:n:51:ALA:H	1.68	0.59
46:n:90:LEU:O	46:n:91:ARG:HG2	2.02	0.59
1:w:451:C:C2	1:w:453:C:N4	2.70	0.59
1:w:1858:G:H8	1:w:1858:G:OP2	1.85	0.59
1:w:2431:U:C2	1:w:2433:A:H2'	2.37	0.59
1:w:2574:G:H2'	1:w:2575:C:C6	2.38	0.59
1:w:2631:G:C4'	1:w:2892:A:H4'	2.33	0.59
1:w:2762:G:C3'	1:w:2763:G:H5'	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:4:LYS:HD3	4:B:19:ALA:O	2.03	0.59
4:B:105:ILE:HG23	4:B:106:ILE:H	1.67	0.59
8:F:11:VAL:HA	8:F:15:VAL:HG22	1.84	0.59
11:I:106:LEU:HB2	11:I:115:VAL:HG22	1.85	0.59
12:J:133:SER:O	12:J:137:LYS:HG2	2.03	0.59
14:L:18:LEU:O	14:L:21:TYR:HB2	2.03	0.59
21:S:23:ARG:HG3	21:S:24:VAL:H	1.66	0.59
31:y:38:G:H1'	31:y:397:A:N6	2.18	0.59
31:y:104:G:C2'	31:y:105:G:H5"	2.33	0.59
31:y:259:G:N2	31:y:268:C:C2	2.71	0.59
31:y:275:G:C6	31:y:276:G:O6	2.56	0.59
31:y:317:G:H2'	31:y:318:G:O4'	2.03	0.59
31:y:331:G:OP1	31:y:332:G:C8	2.56	0.59
31:y:451:A:N1	31:y:481:G:N7	2.50	0.59
31:y:553:A:H2'	31:y:554:C:C6	2.37	0.59
31:y:677:U:H2'	31:y:678:U:C5	2.37	0.59
31:y:1111:A:H2'	31:y:1112:C:C6	2.38	0.59
35:c:106:LYS:HD2	35:c:106:LYS:H	1.67	0.59
35:c:146:GLN:O	35:c:150:SER:HB3	2.02	0.59
53:u:27:LYS:HZ3	53:u:31:SER:HB3	1.67	0.59
1:w:270(U):G:H2'	1:w:270(V):C:C6	2.38	0.59
1:w:299:A:N7	1:w:339:U:O4	2.36	0.59
1:w:363(F):U:H3'	1:w:363(G):A:H8	1.68	0.59
1:w:463:G:H1'	1:w:466:A:N6	2.17	0.59
1:w:697:C:N4	1:w:698:C:N4	2.51	0.59
1:w:1307:A:OP2	1:w:1606:G:N1	2.36	0.59
1:w:2019:A:N1	1:w:2035:G:N2	2.37	0.59
1:w:2432:A:H4'	33:2:76:A:H5'	1.84	0.59
1:w:2821:A:H2'	1:w:2822:G:H5'	1.85	0.59
2:x:75:G:H1'	22:T:27:VAL:HG21	1.85	0.59
3:A:48:LEU:HD23	3:A:48:LEU:H	1.68	0.59
5:C:90:THR:HG22	5:C:91:VAL:H	1.67	0.59
5:C:116:VAL:HG21	5:C:122:PHE:CD1	2.37	0.59
12:J:79:ARG:HG2	12:J:108:LYS:O	2.03	0.59
13:K:133:ARG:HE	13:K:134:ARG:N	2.00	0.59
17:O:83:LEU:HD23	17:O:84:LYS:HZ3	1.67	0.59
31:y:48:C:H6	31:y:48:C:H5"	1.68	0.59
31:y:691:G:H1	44:l:52:GLY:HA3	1.66	0.59
31:y:1001:G:C3'	31:y:1002:G:C5'	2.78	0.59
31:y:1203:C:H2'	31:y:1204:A:H8	1.67	0.59
31:y:1225:A:H3'	31:y:1226:C:C6	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1526:G:H2'	31:y:1527:C:O4'	2.01	0.59
35:c:81:VAL:O	35:c:85:ALA:HB3	2.03	0.59
36:d:126:ARG:HD3	36:d:126:ARG:N	2.16	0.59
37:e:81:GLU:HA	37:e:84:LYS:HG2	1.85	0.59
38:f:143:ARG:NH1	38:f:148:VAL:HG23	2.18	0.59
39:g:33:TYR:HA	39:g:71:ARG:NH2	2.17	0.59
40:h:107:ALA:HB1	40:h:134:ALA:H	1.66	0.59
40:h:148:ASN:C	40:h:150:ALA:H	2.11	0.59
46:n:88:ARG:CG	46:n:98:VAL:HG12	2.32	0.59
50:r:84:LEU:O	50:r:87:LYS:HB3	2.02	0.59
54:v:12:LYS:HB3	54:v:22:ARG:NH2	2.18	0.59
1:w:662:G:H4'	12:J:19:VAL:HB	1.84	0.59
1:w:704:G:H1'	1:w:727:A:N6	2.17	0.59
1:w:818:G:N1	1:w:1187:G:H3'	2.18	0.59
1:w:985:C:H2'	1:w:986:C:C6	2.37	0.59
1:w:1368:G:H2'	1:w:1369:G:H8	1.68	0.59
1:w:1687:G:H2'	1:w:1701:A:H61	1.67	0.59
1:w:1753:G:N2	1:w:1755:A:H8	2.01	0.59
1:w:1792:G:P	4:B:207:GLY:H	2.25	0.59
1:w:2053:G:H4'	5:C:145:LYS:HD3	1.85	0.59
1:w:2079:U:O2'	24:V:38:SER:HB2	2.02	0.59
1:w:2363:C:O2'	1:w:2364:C:H5'	2.03	0.59
1:w:2757:A:OP1	30:b:19:ARG:HA	2.03	0.59
3:A:9:ARG:HD3	3:A:9:ARG:C	2.27	0.59
28:Z:2:LYS:H	28:Z:2:LYS:CD	2.09	0.59
28:Z:19:ARG:O	28:Z:22:MET:HB3	2.03	0.59
31:y:253:U:H5'	31:y:276:G:H1'	1.84	0.59
31:y:344:A:H8	31:y:344:A:H5"	1.67	0.59
31:y:749:C:H1'	48:p:22:THR:HG21	1.85	0.59
31:y:876:G:O2'	31:y:877:C:H5'	2.03	0.59
31:y:976:G:H5"	31:y:1358:U:O2'	2.03	0.59
31:y:1060:C:O2'	31:y:1061:G:H5'	2.03	0.59
31:y:1258:G:H2'	31:y:1259:C:C5	2.37	0.59
31:y:1291:G:H2'	31:y:1292:U:H6	1.65	0.59
31:y:1513:A:C6	31:y:1514:C:N4	2.71	0.59
33:2:49:C:H1'	33:2:66:A:C2	2.38	0.59
35:c:102:LEU:HD22	35:c:176:GLU:HB2	1.83	0.59
37:e:89:THR:HA	37:e:93:PHE:HD2	1.67	0.59
40:h:26:PHE:CD1	40:h:101:LEU:HB3	2.37	0.59
43:k:40:LEU:H	43:k:70:ARG:NH1	1.94	0.59
52:t:41:VAL:O	52:t:43:GLU:HG2	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:t:41:VAL:O	52:t:43:GLU:N	2.34	0.59
1:w:570:G:H2'	1:w:2030:A:N7	2.16	0.58
1:w:582:G:H8	1:w:582:G:O5'	1.86	0.58
1:w:1342:A:H8	1:w:1342:A:O5'	1.86	0.58
1:w:1688:U:H2'	1:w:1698:A:N6	2.18	0.58
1:w:1789:A:OP1	4:B:222:ARG:N	2.36	0.58
1:w:1824:G:H2'	1:w:1825:A:O4'	2.03	0.58
1:w:2015:A:C2	27:Y:6:VAL:HG22	2.38	0.58
1:w:2360:A:N1	1:w:2361:A:H1'	2.18	0.58
1:w:2868:A:H2'	1:w:2869:G:C8	2.38	0.58
4:B:10:THR:HG22	4:B:13:ARG:HB2	1.85	0.58
5:C:105:THR:O	5:C:197:ILE:HD13	2.01	0.58
12:J:96:THR:C	12:J:98:GLU:H	2.11	0.58
16:N:25:GLY:C	16:N:48:ILE:HG23	2.28	0.58
22:T:117:LEU:HD23	22:T:117:LEU:H	1.68	0.58
27:Y:46:CYS:O	27:Y:57:VAL:HG21	2.02	0.58
29:a:59:LYS:C	29:a:60:LEU:HD23	2.28	0.58
31:y:51:A:H4'	31:y:52:G:H5"	1.85	0.58
31:y:277:C:H2'	31:y:278:G:H8	1.68	0.58
31:y:600:C:C4	31:y:639:G:N1	2.71	0.58
31:y:690:G:H8	31:y:690:G:O5'	1.86	0.58
31:y:1188:A:H4'	47:o:58:LYS:NZ	2.18	0.58
31:y:1225:A:H2'	31:y:1225:A:N3	2.18	0.58
31:y:1306:A:N1	31:y:1331:G:C4'	2.66	0.58
31:y:1408:A:H2'	31:y:1409:C:C6	2.37	0.58
42:j:81:ILE:O	42:j:85:LEU:HD12	2.03	0.58
1:w:519:U:H3'	1:w:520:G:C8	2.38	0.58
1:w:562:U:C4	1:w:2036:C:H4'	2.37	0.58
1:w:570:G:N1	1:w:2498:C:H4'	2.17	0.58
1:w:828:U:H4'	1:w:831:G:C6	2.37	0.58
1:w:986:C:H2'	1:w:987:G:H8	1.68	0.58
1:w:1022:G:H1	1:w:1141:U:H5	1.51	0.58
1:w:1263:U:O3'	27:Y:11:THR:HG21	2.03	0.58
1:w:2355:C:C1'	23:U:39:ARG:HH21	2.04	0.58
1:w:2618:G:C6	1:w:2619:C:N4	2.71	0.58
1:w:2697:G:O6	1:w:2711:A:N6	2.35	0.58
1:w:2711:A:OP1	1:w:2712(B):A:C1'	2.50	0.58
1:w:2827:C:N4	1:w:2828:C:N4	2.51	0.58
1:w:2835:A:N6	1:w:2878:U:C2'	2.64	0.58
1:w:2888:C:H2'	1:w:2889:C:H6	1.68	0.58
4:B:166:GLN:HE21	4:B:176:ARG:HB2	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:96:ARG:O	7:E:99:MET:HG3	2.02	0.58
9:G:81:VAL:O	9:G:82:ARG:HB2	2.03	0.58
10:H:38:LEU:HD13	10:H:39:ILE:N	2.19	0.58
14:L:66:VAL:HB	14:L:70:LEU:HD12	1.83	0.58
16:N:27:THR:HG22	16:N:87:ASP:HB3	1.85	0.58
17:O:41:ALA:C	17:O:43:GLY:N	2.59	0.58
31:y:275:G:C2	31:y:276:G:C5	2.92	0.58
31:y:712:A:H8	31:y:712:A:O5'	1.84	0.58
31:y:1352:C:N3	31:y:1353:G:C8	2.71	0.58
35:c:42:ILE:HD12	35:c:47:THR:HG21	1.84	0.58
36:d:46:GLU:O	36:d:47:LEU:HB2	2.01	0.58
36:d:130:VAL:CG2	36:d:157:ILE:HD13	2.28	0.58
37:e:14:ARG:HD3	37:e:14:ARG:O	2.04	0.58
37:e:134:ASP:OD2	37:e:135:LEU:HG	2.03	0.58
38:f:35:GLY:HA3	38:f:40:ARG:O	2.03	0.58
41:i:30:ARG:HH12	41:i:59:LEU:HD21	1.68	0.58
44:l:51:LYS:C	44:l:55:LYS:HG3	2.27	0.58
48:p:12:ILE:O	48:p:16:ALA:HB3	2.02	0.58
50:r:10:VAL:HG22	50:r:56:VAL:HA	1.85	0.58
50:r:96:GLN:HG3	50:r:97:SER:N	2.17	0.58
53:u:20:LEU:O	53:u:23:ARG:HB3	2.02	0.58
1:w:284:U:H2'	1:w:285:C:H6	1.66	0.58
1:w:455:C:H5"	1:w:456:C:OP2	2.03	0.58
1:w:562:U:H4'	1:w:563:G:H5"	1.85	0.58
1:w:627:A:N3	1:w:628:G:H1'	2.18	0.58
1:w:854:G:C6	1:w:855:G:N7	2.71	0.58
1:w:890:A:H2'	1:w:892:G:C5'	2.32	0.58
1:w:936:C:O5'	1:w:936:C:H6	1.86	0.58
1:w:1884:A:C2'	1:w:1885:A:H5"	2.32	0.58
1:w:2134:A:N6	1:w:2157:G:H1'	2.18	0.58
1:w:2471:C:O2'	1:w:2472:G:O4'	2.16	0.58
1:w:2576:G:H3'	1:w:2576:G:OP1	2.03	0.58
1:w:2635:C:H2'	1:w:2636:U:C6	2.39	0.58
1:w:2896:C:H2'	1:w:2897:U:C6	2.38	0.58
6:D:172:ALA:CB	6:D:173:PRO:CD	2.80	0.58
7:E:73:ALA:H	7:E:87:PRO:CB	2.15	0.58
9:G:44:LEU:O	9:G:47:LEU:HG	2.03	0.58
10:H:37:VAL:HG13	10:H:38:LEU:H	1.68	0.58
12:J:24:GLY:HA2	12:J:30:THR:HG23	1.85	0.58
12:J:61:ARG:HE	12:J:61:ARG:N	2.01	0.58
15:M:106:ARG:NH1	15:M:111:GLU:HA	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:40:LEU:HB2	18:P:50:PRO:HB3	1.84	0.58
18:P:66:ARG:CD	18:P:68:LYS:HG3	2.25	0.58
19:Q:17:VAL:O	19:Q:20:VAL:N	2.36	0.58
23:U:19:LYS:HZ3	23:U:19:LYS:HB2	1.66	0.58
31:y:27:G:C4	31:y:557:G:N2	2.71	0.58
31:y:283:C:O5'	31:y:283:C:H6	1.86	0.58
31:y:376:G:C4'	49:q:5:ARG:HD3	2.32	0.58
31:y:769:G:N2	31:y:811:C:C2	2.71	0.58
31:y:1266:G:H2'	31:y:1268:A:OP2	2.03	0.58
33:2:18:G:N1	33:2:57:G:C6	2.71	0.58
33:2:43:G:H2'	33:2:44:A:C8	2.37	0.58
33:2:65:G:C2'	33:2:66:A:H5'	2.33	0.58
36:d:156:ARG:HH11	36:d:161:GLU:H	1.51	0.58
40:h:12:LEU:HD22	40:h:25:ALA:CA	2.33	0.58
41:i:37:ARG:O	41:i:41:ARG:HG2	2.03	0.58
46:n:25:ILE:CG2	46:n:25:ILE:O	2.51	0.58
47:o:29:ARG:NH2	47:o:42:ILE:CG2	2.64	0.58
1:w:527:C:H4'	1:w:528:A:O5'	2.04	0.58
1:w:684:G:H3'	1:w:774:A:H61	1.68	0.58
1:w:1394:U:C6	1:w:1394:U:O5'	2.56	0.58
1:w:1851:U:H6	1:w:1851:U:O5'	1.87	0.58
1:w:2114:A:N3	1:w:2168:G:H4'	2.18	0.58
1:w:2497:A:H8	1:w:2497:A:O5'	1.86	0.58
1:w:2558:C:O5'	1:w:2558:C:H6	1.87	0.58
1:w:2575:C:H5"	1:w:2576:G:OP2	2.03	0.58
2:x:15:A:H1'	2:x:109:G:N7	2.19	0.58
2:x:73:A:C2	22:T:34:ASN:ND2	2.72	0.58
2:x:100:G:H2'	2:x:101:A:C8	2.35	0.58
4:B:148:GLU:O	4:B:151:LYS:HB2	2.03	0.58
5:C:154:LYS:NZ	5:C:155:LYS:HD2	2.17	0.58
6:D:67:ARG:O	6:D:68:ALA:HB2	2.03	0.58
8:F:12:PRO:O	8:F:14:GLY:N	2.34	0.58
9:G:64:GLU:HG3	9:G:67:ARG:NH2	2.18	0.58
10:H:132:LYS:HE3	10:H:132:LYS:N	2.18	0.58
11:I:24:VAL:HG22	11:I:25:LEU:N	2.04	0.58
12:J:97:PRO:CD	12:J:126:VAL:HB	2.32	0.58
16:N:45:PHE:HE2	16:N:64:ARG:CA	2.16	0.58
19:Q:28:SER:HB3	19:Q:29:LEU:HD23	1.85	0.58
20:R:30:VAL:H	20:R:76:ARG:HG3	1.68	0.58
24:V:66:HIS:HB3	24:V:69:LYS:CG	2.25	0.58
31:y:330:C:C2'	31:y:331:G:H5'	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:484:G:H4'	31:y:485:G:O5'	2.04	0.58
31:y:552:U:C4'	45:m:85:ARG:NH1	2.48	0.58
31:y:755:G:C5	31:y:756:C:N4	2.71	0.58
31:y:964:A:H2	31:y:969:A:O2'	1.86	0.58
31:y:1147:C:H6	31:y:1147:C:O5'	1.86	0.58
31:y:1170:A:H8	31:y:1170:A:O5'	1.86	0.58
31:y:1307:U:O5'	31:y:1307:U:H6	1.85	0.58
31:y:1318:A:H2'	31:y:1319:A:H5"	1.86	0.58
35:c:131:PRO:O	35:c:133:LYS:N	2.37	0.58
36:d:50:ALA:HB1	36:d:70:VAL:HB	1.84	0.58
36:d:127:ARG:CZ	36:d:127:ARG:HA	2.33	0.58
41:i:45:ILE:CG2	41:i:46:LYS:N	2.67	0.58
41:i:67:PRO:O	41:i:76:PRO:HG2	2.04	0.58
51:s:73:ALA:C	51:s:75:ILE:H	2.10	0.58
1:w:175:G:H3'	1:w:176:G:C8	2.38	0.58
1:w:356:G:H2'	1:w:357:A:O4'	2.02	0.58
1:w:576:U:H5"	1:w:2503:A:OP1	2.03	0.58
1:w:784:A:OP1	1:w:2588:G:O3'	2.22	0.58
1:w:1058:G:H3'	1:w:1059:G:H5"	1.85	0.58
1:w:1142(B):A:H1'	10:H:48:ARG:HH22	1.68	0.58
1:w:1158:C:C5'	26:X:31:LEU:HB2	2.33	0.58
1:w:1161:C:H2'	1:w:1162:G:C8	2.39	0.58
1:w:1284:A:H2'	1:w:1285:G:O4'	2.03	0.58
1:w:1309:G:H4'	28:Z:7:PRO:HB2	1.85	0.58
1:w:1567:A:C2'	4:B:86:PRO:HB3	2.33	0.58
1:w:1592:C:H2'	1:w:1593:G:C8	2.39	0.58
1:w:1671:U:O4	1:w:2550:G:OP1	2.22	0.58
1:w:1830:C:C2	1:w:1831:G:C8	2.92	0.58
1:w:1837:C:O5'	1:w:1837:C:H6	1.86	0.58
1:w:2303:G:N2	7:E:132:ASN:HD22	2.02	0.58
1:w:2365:G:OP2	23:U:55:ARG:HG2	2.03	0.58
1:w:2559:C:H2'	1:w:2560:C:H6	1.67	0.58
1:w:2681:C:C4'	1:w:2682:U:OP1	2.51	0.58
1:w:2711:A:H5'	1:w:2712:U:C5	2.39	0.58
1:w:2873:A:H2'	1:w:2873:A:N3	2.18	0.58
2:x:57:A:N3	7:E:30:GLU:OE2	2.36	0.58
4:B:6:PHE:HB3	4:B:8:PRO:HD3	1.84	0.58
4:B:81:ALA:O	4:B:93:ALA:HA	2.03	0.58
4:B:82:ILE:HG22	4:B:91:ARG:HE	1.68	0.58
7:E:141:PHE:HB3	7:E:144:ILE:HB	1.84	0.58
9:G:4:ILE:C	9:G:5:LEU:HD22	2.27	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:15:GLY:H	11:I:17:ARG:HH22	1.51	0.58
14:L:116:LEU:O	14:L:117:VAL:HG12	2.02	0.58
16:N:45:PHE:HD2	16:N:63:VAL:HG23	1.68	0.58
16:N:112:ARG:CA	16:N:115:ARG:HH21	2.08	0.58
23:U:28:GLY:HA2	23:U:67:VAL:CB	2.33	0.58
25:W:41:ILE:HD13	25:W:44:LEU:HD13	1.86	0.58
26:X:21:ALA:HA	26:X:24:LYS:NZ	2.17	0.58
28:Z:19:ARG:HG2	28:Z:23:ARG:HH21	1.67	0.58
31:y:167:G:C2'	31:y:168:G:C5'	2.78	0.58
31:y:523:A:N6	31:y:527:7MG:O6	2.36	0.58
31:y:665:A:C2	31:y:732:C:C4	2.92	0.58
31:y:768:A:H5'	31:y:1524:C:H1'	1.85	0.58
31:y:1053:G:C2'	31:y:1054:C:OP2	2.52	0.58
31:y:1081:G:P	38:f:18:ARG:NH1	2.76	0.58
31:y:1230:C:H4'	32:z:31:G:OP1	2.04	0.58
31:y:1232:U:H2'	31:y:1233:G:C8	2.38	0.58
31:y:1343:G:C3'	42:j:122:ALA:HB3	2.33	0.58
31:y:1389:C:H2'	31:y:1390:U:H6	1.67	0.58
36:d:122:GLU:HB3	36:d:126:ARG:NH2	2.18	0.58
37:e:133:VAL:CG1	37:e:134:ASP:H	2.13	0.58
47:o:32:SER:HB2	47:o:41:ARG:HD2	1.86	0.58
47:o:41:ARG:NH1	47:o:45:ARG:HD3	2.14	0.58
51:s:75:ILE:C	51:s:77:GLY:H	2.10	0.58
1:w:39:C:H2'	1:w:40:C:H6	1.67	0.58
1:w:270(G):U:H2'	1:w:270(H):C:C6	2.38	0.58
1:w:806:C:OP2	12:J:39:LYS:HE3	2.04	0.58
1:w:886:C:O2	1:w:886:C:H2'	2.03	0.58
1:w:995:C:N4	10:H:24:VAL:HG23	2.18	0.58
1:w:1303:G:H4'	1:w:1642:G:C2'	2.34	0.58
1:w:1312:U:H4'	1:w:1313:U:O5'	2.04	0.58
1:w:1728:G:N2	1:w:1732:A:H62	2.02	0.58
1:w:1753:G:N2	1:w:1755:A:C8	2.72	0.58
1:w:1812:A:C1'	4:B:45:ASN:HB2	2.33	0.58
1:w:1860:G:H2'	1:w:1861:G:H8	1.67	0.58
1:w:1891:G:H2'	1:w:1892:C:C6	2.39	0.58
1:w:2515:C:H2'	1:w:2516:G:O4'	2.03	0.58
1:w:2545:G:C5	1:w:2546:U:C5	2.91	0.58
1:w:2578:G:C8	5:C:140:SER:HB2	2.39	0.58
1:w:2745:C:H1'	8:F:143:GLN:CG	2.33	0.58
1:w:2846:G:HO2'	1:w:2847:U:H5'	1.67	0.58
1:w:2850:A:N7	1:w:2866:U:H5	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2867:G:O2'	1:w:2868:A:H8	1.86	0.58
4:B:76:PRO:HG2	4:B:117:VAL:HG12	1.83	0.58
9:G:109:ILE:HG22	9:G:111:PRO:HG3	1.85	0.58
12:J:97:PRO:HG3	12:J:126:VAL:O	2.02	0.58
13:K:32:PHE:C	13:K:132:VAL:HG11	2.28	0.58
20:R:32:PRO:CG	20:R:72:LYS:HE2	2.33	0.58
27:Y:33:CYS:O	27:Y:39:MET:HE1	2.02	0.58
31:y:52:G:O2'	31:y:53:A:H5'	2.03	0.58
31:y:314:C:O5'	31:y:314:C:H6	1.87	0.58
31:y:434:U:O5'	31:y:434:U:H6	1.86	0.58
31:y:468:A:C3'	49:q:80:PHE:HB3	2.34	0.58
31:y:766:A:N7	31:y:813:U:O4	2.36	0.58
31:y:842:C:C4'	31:y:848:C:H42	2.16	0.58
31:y:957:U:H2'	31:y:959:A:OP2	2.03	0.58
31:y:1166:G:C2	31:y:1169:A:P	2.97	0.58
31:y:1332:A:H2'	31:y:1333:A:C4'	2.33	0.58
31:y:1367:C:H5"	43:k:60:ARG:NH1	2.19	0.58
31:y:1432:G:H2'	31:y:1467:G:N1	2.18	0.58
33:2:14:A:C6	33:2:22:G:C6	2.91	0.58
33:2:26:G:O2'	33:2:27:C:H5'	2.02	0.58
36:d:28:GLN:O	36:d:29:TYR:C	2.46	0.58
36:d:138:VAL:O	36:d:141:VAL:HG12	2.03	0.58
37:e:173:TRP:HD1	37:e:185:PHE:HA	1.66	0.58
38:f:35:GLY:N	38:f:112:LEU:HD12	2.19	0.58
39:g:100:ASN:HA	51:s:23:LYS:HZ1	1.68	0.58
40:h:12:LEU:HD22	40:h:25:ALA:HB2	1.86	0.58
41:i:103:VAL:O	41:i:104:ARG:HB2	2.03	0.58
46:n:75:ALA:O	46:n:78:ILE:HB	2.04	0.58
51:s:73:ALA:HB1	51:s:78:LEU:HB2	1.85	0.58
1:w:310:A:H1'	1:w:330:A:N1	2.18	0.58
1:w:371:A:HO2'	1:w:373:U:H6	1.49	0.58
1:w:389:G:C8	1:w:2413:G:H4'	2.38	0.58
1:w:478:A:H2'	1:w:480:A:C8	2.39	0.58
1:w:593:G:C2	1:w:594:U:C2	2.91	0.58
1:w:692:C:O5'	1:w:692:C:H6	1.86	0.58
1:w:953:A:H2'	1:w:954:G:H8	1.67	0.58
1:w:990:A:H4'	1:w:1157:G:OP1	2.04	0.58
1:w:2432:A:C4'	33:2:76:A:H5'	2.34	0.58
1:w:2549:G:C2	1:w:2550:G:C4	2.92	0.58
1:w:2567:G:H2'	1:w:2568:C:H6	1.67	0.58
1:w:2588:G:C5	1:w:2607:G:N2	2.71	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2851:A:H2'	1:w:2852:G:O4'	2.04	0.58
1:w:2865:U:H3'	1:w:2866:U:H3'	1.85	0.58
4:B:6:PHE:C	4:B:8:PRO:HD3	2.28	0.58
5:C:44:TYR:HE2	5:C:46:ALA:HB3	1.69	0.58
5:C:98:PRO:HG3	5:C:174:ASP:HA	1.86	0.58
11:I:26:LYS:HB3	11:I:30:ALA:HB2	1.86	0.58
23:U:37:LEU:HD12	23:U:38:VAL:HG23	1.85	0.58
24:V:51:VAL:HG12	24:V:52:ARG:N	2.19	0.58
25:W:36:ARG:C	25:W:38:GLN:H	2.10	0.58
27:Y:58:LEU:HD12	27:Y:58:LEU:H	1.69	0.58
31:y:39:G:O6	31:y:547:A:H5"	2.04	0.58
31:y:160:A:C2'	31:y:161:A:O4'	2.46	0.58
31:y:319:G:C6	31:y:335:C:N4	2.72	0.58
31:y:452:A:N6	31:y:480:U:H3	2.02	0.58
31:y:582:U:H5"	48:p:68:ARG:NH1	2.10	0.58
31:y:960:U:H3'	31:y:960:U:O2	2.03	0.58
31:y:1186:G:N2	47:o:61:TRP:HA	2.18	0.58
31:y:1352:C:C2	31:y:1353:G:C8	2.91	0.58
33:2:35:A:H2'	33:2:36:A:N9	2.17	0.58
38:f:49:PRO:HG2	38:f:50:GLU:H	1.68	0.58
49:q:17:TYR:H	49:q:41:PRO:HD3	1.66	0.58
1:w:503:A:H4'	1:w:504:U:H5"	1.85	0.58
1:w:687:C:N3	1:w:787:U:H4'	2.18	0.58
1:w:883:G:H2'	1:w:884:C:C6	2.38	0.58
1:w:1658:C:H2'	1:w:1659:U:C6	2.38	0.58
1:w:2420:C:H2'	1:w:2421:G:C8	2.39	0.58
1:w:2485:G:O2'	13:K:126:PRO:HB3	2.04	0.58
1:w:2640:G:O3'	10:H:98:TYR:OH	2.20	0.58
1:w:2640:G:C6	1:w:2775:A:C2	2.92	0.58
1:w:2651:C:H2'	1:w:2652:C:C6	2.38	0.58
1:w:2721:A:O2'	1:w:2722:G:H5'	2.03	0.58
1:w:2786:U:O2'	5:C:62:PRO:C	2.46	0.58
3:A:166:ASN:HA	3:A:171:ALA:CB	2.34	0.58
5:C:44:TYR:CE2	5:C:46:ALA:HB3	2.38	0.58
7:E:135:LEU:HA	7:E:136:ARG:HH11	1.67	0.58
8:F:144:VAL:C	8:F:146:ALA:H	2.11	0.58
12:J:79:ARG:HH12	12:J:108:LYS:HB2	1.67	0.58
14:L:20:LEU:O	14:L:24:GLN:HG2	2.01	0.58
17:O:105:VAL:HG13	18:P:43:GLU:OE2	2.03	0.58
18:P:1:MET:HG3	18:P:43:GLU:O	2.04	0.58
18:P:73:SER:OG	18:P:89:GLN:HB3	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:108:G:H21	31:y:108:G:P	2.27	0.58
31:y:378:G:C6	31:y:379:C:N4	2.72	0.58
31:y:416:G:H2'	31:y:417:C:H6	1.67	0.58
31:y:486:U:HO2'	31:y:487:A:H5'	1.65	0.58
31:y:546:G:HO2'	31:y:547:A:C1'	2.17	0.58
31:y:1188:A:H1'	47:o:60:SER:OG	2.04	0.58
31:y:1190:G:H2'	31:y:1190:G:N3	2.19	0.58
35:c:127:ILE:HD12	35:c:128:GLU:N	2.19	0.58
37:e:30:LYS:HA	37:e:35:ARG:CZ	2.34	0.58
37:e:172:PRO:HG2	37:e:173:TRP:HE3	1.69	0.58
46:n:90:LEU:C	46:n:92:HIS:N	2.55	0.58
47:o:26:ARG:HE	47:o:43:CYS:CB	2.17	0.58
1:w:238:C:O2'	1:w:608:A:N3	2.37	0.58
1:w:527:C:H42	1:w:2779:U:H5'	1.69	0.58
1:w:528:A:H2	1:w:2042:A:H3'	1.67	0.58
1:w:773:U:H4'	4:B:47:GLY:O	2.04	0.58
1:w:782:A:P	1:w:782:A:C8	2.96	0.58
1:w:1295:C:H3'	1:w:1296:G:H8	1.68	0.58
1:w:1815:A:O4'	1:w:1817:G:C8	2.56	0.58
1:w:2219:G:H2'	1:w:2224:G:O4'	2.04	0.58
1:w:2328:A:H2'	1:w:2329:G:O4'	2.03	0.58
1:w:2509:G:N2	1:w:2580:U:C2	2.72	0.58
1:w:2832:U:H2'	1:w:2833:G:OP2	2.04	0.58
2:x:102:G:C3'	2:x:103:U:H5"	2.34	0.58
4:B:130:ALA:HA	4:B:191:ALA:O	2.03	0.58
4:B:212:SER:HB2	4:B:217:ARG:HG2	1.85	0.58
6:D:4:ILE:HB	6:D:5:PRO:CD	2.32	0.58
6:D:153:THR:OG1	6:D:158:VAL:HG11	2.04	0.58
7:E:89:GLY:C	7:E:90:LEU:HD12	2.29	0.58
20:R:9:LEU:O	25:W:30:ARG:HB2	2.04	0.58
21:S:25:GLY:HA2	21:S:37:VAL:HB	1.85	0.58
28:Z:10:ARG:HH11	28:Z:14:LYS:HE3	1.69	0.58
31:y:115:G:O2'	31:y:116:A:C8	2.53	0.58
31:y:291:C:OP2	31:y:305:G:C6	2.57	0.58
31:y:563:A:H5'	31:y:566:G:C2	2.37	0.58
31:y:694:A:H61	31:y:788:U:H5'	1.68	0.58
31:y:729:A:H2'	31:y:729:A:N3	2.17	0.58
31:y:1089:G:H2'	31:y:1090:U:H5'	1.86	0.58
32:z:18:G:C2	32:z:57:A:C2	2.92	0.58
36:d:151:VAL:O	36:d:152:ILE:HB	2.04	0.58
37:e:101:LEU:HD13	37:e:138:TYR:C	2.29	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:q:2:VAL:H	49:q:64:ALA:N	2.02	0.58
50:r:13:ASP:OD2	50:r:46:ASP:OD1	2.22	0.58
1:w:88:G:C2'	1:w:89:G:H5'	2.34	0.58
1:w:451:C:O2	1:w:453:C:N4	2.37	0.58
1:w:544:C:O5'	1:w:544:C:H6	1.86	0.58
1:w:800:A:H2'	1:w:800:A:N3	2.17	0.58
1:w:1124:C:O2	30:b:36:GLN:NE2	2.37	0.58
1:w:1286:A:C2	1:w:1329:U:O2	2.57	0.58
1:w:1394:U:O5'	1:w:1394:U:H6	1.87	0.58
1:w:1509:A:H4'	1:w:1510:A:C8	2.39	0.58
1:w:1709:U:H2'	1:w:1710:C:C6	2.38	0.58
1:w:2257:U:H2'	1:w:2258:C:C6	2.38	0.58
4:B:141:VAL:HG12	4:B:162:SER:OG	2.04	0.58
5:C:25:VAL:CG1	5:C:182:LEU:O	2.51	0.58
6:D:105:LEU:O	6:D:109:VAL:HG22	2.04	0.58
6:D:128:ASN:HA	6:D:134:PHE:HZ	1.69	0.58
8:F:23:ARG:HG2	8:F:36:PRO:HA	1.86	0.58
9:G:61:ARG:C	9:G:63:ALA:H	2.11	0.58
10:H:113:MET:O	10:H:121:VAL:HG22	2.04	0.58
12:J:41:ARG:HE	12:J:42:SER:H	1.51	0.58
13:K:10:ARG:NH2	32:z:51:C:H4'	2.18	0.58
13:K:134:ARG:NH2	13:K:137:TYR:HA	2.19	0.58
15:M:28:VAL:HG21	15:M:87:PHE:CE1	2.39	0.58
17:O:106:PHE:HA	17:O:109:LEU:HG	1.86	0.58
31:y:335:C:H5'	31:y:1434:A:H4'	1.86	0.58
31:y:562:C:H2'	31:y:562:C:O2	2.04	0.58
31:y:769:G:C2	31:y:811:C:O2	2.57	0.58
31:y:811:C:H2'	31:y:812:C:C5'	2.25	0.58
31:y:1405:G:O6	31:y:1496:C:N4	2.37	0.58
31:y:1518:MA6:H102	31:y:1519:MA6:H103	1.86	0.58
35:c:121:LEU:HD22	35:c:126:GLU:HG2	1.85	0.58
37:e:191:ARG:HG2	37:e:200:GLU:OE2	2.04	0.58
38:f:12:LEU:HD23	38:f:13:ILE:O	2.03	0.58
49:q:10:GLY:HA3	49:q:14:ASN:O	2.03	0.58
50:r:76:LEU:HD22	50:r:79:SER:HB2	1.86	0.58
1:w:72:U:O4	1:w:112:U:H4'	2.04	0.57
1:w:119:A:H4'	1:w:120:U:O5'	2.04	0.57
1:w:729:G:H3'	1:w:730:C:H5"	1.85	0.57
1:w:1035:U:C5'	8:F:59:ARG:HH22	2.14	0.57
1:w:1071:G:OP1	1:w:1097:U:H5'	2.04	0.57
1:w:1098:A:H3'	1:w:1099:G:H8	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1460:A:H2'	1:w:1461:G:H5'	1.86	0.57
1:w:1696:G:H2'	1:w:1697:G:O4'	2.04	0.57
1:w:1836:C:H2'	1:w:1837:C:C6	2.38	0.57
1:w:1845:G:H2'	1:w:1846:G:H8	1.64	0.57
1:w:2061:G:OP1	1:w:2061:G:H4'	2.04	0.57
1:w:2076:U:OP2	1:w:2238:G:N2	2.36	0.57
1:w:2532:G:OP2	1:w:2533:A:N7	2.37	0.57
1:w:2710:C:C4	1:w:2711:A:N7	2.72	0.57
5:C:37:ARG:HB3	5:C:42:ASP:HB2	1.86	0.57
5:C:84:PHE:HD1	5:C:86:PRO:HD3	1.68	0.57
7:E:15:VAL:O	7:E:15:VAL:HG12	2.03	0.57
7:E:43:LEU:HD22	7:E:45:GLU:HG2	1.85	0.57
9:G:4:ILE:HG13	9:G:18:VAL:HG22	1.85	0.57
10:H:93:LYS:HB3	10:H:110:LEU:HD21	1.86	0.57
12:J:25:SER:H	12:J:31:ALA:HB2	1.68	0.57
13:K:16:ARG:HG3	13:K:17:LEU:N	2.11	0.57
13:K:114:ALA:O	13:K:117:ALA:HB3	2.04	0.57
16:N:86:ILE:HG22	16:N:87:ASP:H	1.67	0.57
22:T:150:LEU:HD12	22:T:150:LEU:C	2.28	0.57
26:X:5:LYS:O	26:X:56:VAL:HA	2.04	0.57
31:y:60:A:C2	31:y:107:G:N2	2.72	0.57
31:y:265:G:C5'	50:r:65:ILE:O	2.52	0.57
31:y:324:G:O2'	31:y:326:G:N7	2.30	0.57
31:y:328:C:C2'	31:y:328:C:O2	2.52	0.57
31:y:718:G:H1'	44:l:116:HIS:HB3	1.84	0.57
31:y:825:G:N2	31:y:875:C:O2	2.33	0.57
31:y:890:G:N2	31:y:906:G:C8	2.72	0.57
31:y:1210:C:H4'	31:y:1214:C:N3	2.18	0.57
33:2:26:G:H1	33:2:44:A:H61	1.52	0.57
33:2:34:G:C3'	33:2:35:A:H5"	2.34	0.57
33:2:45:G:H2'	33:2:46:G:H5"	1.86	0.57
36:d:10:PHE:HD2	36:d:11:ARG:HG2	1.67	0.57
37:e:9:CYS:SG	37:e:26:CYS:SG	3.00	0.57
40:h:69:VAL:HG22	40:h:135:VAL:HG23	1.85	0.57
42:j:79:LEU:CD1	42:j:83:ARG:HH12	2.17	0.57
44:l:50:TYR:HD2	44:l:50:TYR:H	1.52	0.57
46:n:25:ILE:O	46:n:25:ILE:HG23	2.03	0.57
47:o:22:THR:HB	47:o:33:VAL:HB	1.86	0.57
1:w:164:U:H3'	1:w:165:U:C5'	2.34	0.57
1:w:315:G:H2'	1:w:316:C:O4'	2.04	0.57
1:w:531:C:H4'	1:w:532:A:OP1	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:537:C:H3'	1:w:539:G:P	2.43	0.57
1:w:789:A:N1	28:Z:3:ARG:NH1	2.53	0.57
1:w:1138:G:H1'	10:H:129:MET:CB	2.33	0.57
1:w:1367:A:H2'	1:w:1368:G:C5'	2.34	0.57
1:w:1536:A:H5"	1:w:1537:C:OP2	2.03	0.57
1:w:2571:C:C2'	5:C:143:ASN:ND2	2.67	0.57
1:w:2579:C:C4'	5:C:134:ILE:CD1	2.81	0.57
2:x:8:U:H4'	15:M:89:ARG:HE	1.69	0.57
2:x:15:A:P	2:x:108:C:H5'	2.44	0.57
2:x:79:C:O2'	2:x:80:U:H5'	2.04	0.57
4:B:177:LEU:C	4:B:179:SER:H	2.12	0.57
4:B:270:ILE:O	4:B:271:ILE:HD12	2.04	0.57
7:E:62:LEU:HD12	7:E:63:ILE:N	2.19	0.57
8:F:144:VAL:HG22	8:F:148:ILE:HD13	1.86	0.57
9:G:124:GLY:CA	9:G:144:VAL:H	2.17	0.57
15:M:27:SER:HB3	15:M:89:ARG:NH1	2.19	0.57
18:P:69:LYS:HD3	18:P:71:LEU:HD21	1.87	0.57
24:V:51:VAL:HG12	24:V:52:ARG:H	1.69	0.57
25:W:25:VAL:O	25:W:29:LYS:HG3	2.05	0.57
31:y:296:U:O2'	31:y:556:C:O2	2.21	0.57
31:y:456:C:O2'	31:y:457:C:H5'	2.03	0.57
31:y:474:G:P	49:q:75:ARG:HG3	2.43	0.57
31:y:575:G:H4'	31:y:576:G:O5'	2.03	0.57
31:y:780:A:O2'	31:y:1523:G:H4'	2.04	0.57
31:y:827:U:H4'	41:i:15:ASN:ND2	2.18	0.57
31:y:862:C:C2'	31:y:863:U:H5'	2.34	0.57
31:y:943:U:O2'	31:y:944:G:C5'	2.32	0.57
31:y:1047:G:H5"	47:o:4:LYS:HE2	1.86	0.57
33:2:8:U:O2	33:2:21:A:H2	1.86	0.57
33:2:35:A:C6	33:2:36:A:N6	2.73	0.57
36:d:115:LEU:HA	36:d:118:GLN:OE1	2.04	0.57
37:e:72:GLU:O	37:e:75:PHE:HB2	2.04	0.57
38:f:7:GLU:HG2	38:f:112:LEU:HD13	1.86	0.57
40:h:126:ASP:HA	40:h:131:LYS:CG	2.34	0.57
48:p:2:PRO:O	48:p:38:ARG:NH2	2.34	0.57
48:p:32:LEU:HB3	48:p:63:ARG:HD2	1.86	0.57
53:u:11:SER:HA	53:u:17:ARG:HH22	1.68	0.57
1:w:190:A:N6	1:w:191:A:N6	2.52	0.57
1:w:826:U:C6	1:w:828:U:H6	2.22	0.57
1:w:915:C:C3'	1:w:916:G:H5"	2.34	0.57
1:w:1259:G:H2'	1:w:1260:G:H8	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1681:G:O2'	1:w:1762:A:H2'	2.04	0.57
1:w:1824:G:OP2	4:B:52:ARG:HB2	2.04	0.57
1:w:2122:U:H4'	3:A:168:LYS:CG	2.35	0.57
1:w:2246:G:H1'	1:w:2426:A:C2	2.39	0.57
1:w:2588:G:H5'	1:w:2588:G:H8	1.68	0.57
1:w:2712:U:C2	1:w:2712(B):A:N7	2.73	0.57
1:w:2785:C:H5'	1:w:2785:C:H6	1.69	0.57
3:A:198:GLU:HB2	3:A:201:LYS:HG2	1.86	0.57
4:B:35:LYS:HD2	4:B:62:TYR:O	2.05	0.57
8:F:153:LYS:HA	8:F:162:ILE:O	2.04	0.57
13:K:8:LYS:N	13:K:8:LYS:HZ2	2.03	0.57
13:K:35:VAL:C	13:K:103:MET:SD	2.88	0.57
19:Q:19:LEU:C	19:Q:21:VAL:H	2.12	0.57
23:U:50:ASN:HB2	23:U:81:VAL:CB	2.33	0.57
31:y:545:C:OP2	37:e:66:ARG:NH2	2.32	0.57
31:y:586:C:H5"	50:r:34:LYS:HZ1	1.66	0.57
31:y:815:A:O4'	31:y:817:C:N4	2.37	0.57
31:y:944:G:C8	31:y:945:G:C8	2.92	0.57
31:y:946:A:H2'	31:y:947:G:H8	1.69	0.57
31:y:1067:A:O2'	31:y:1068:G:O5'	2.20	0.57
31:y:1109:C:C3'	31:y:1110:A:H8	2.11	0.57
31:y:1134:G:C6	31:y:1135:U:C2	2.92	0.57
31:y:1306:A:C2	31:y:1332:A:C8	2.93	0.57
31:y:1345:U:O2	31:y:1375:A:N6	2.37	0.57
31:y:1516:G:C4	31:y:1518:MA6:OP1	2.58	0.57
36:d:35:GLU:CD	36:d:95:THR:HG22	2.29	0.57
36:d:174:PRO:C	36:d:176:HIS:H	2.11	0.57
37:e:61:LYS:HG2	37:e:206:PHE:CE2	2.38	0.57
49:q:3:LYS:NZ	49:q:3:LYS:HB3	2.19	0.57
52:t:60:VAL:C	52:t:62:ILE:H	2.12	0.57
1:w:273(G):C:N4	1:w:274:G:N7	2.53	0.57
1:w:446:G:H21	1:w:454:A:H61	1.53	0.57
1:w:692:C:H4'	4:B:41:GLY:O	2.04	0.57
1:w:1567:A:H2'	4:B:86:PRO:HB3	1.86	0.57
1:w:1672:C:H1'	1:w:2553:G:H5"	1.86	0.57
1:w:1746:G:C6	1:w:1747:G:C4	2.93	0.57
1:w:1776:G:C2	1:w:1777:U:C4	2.92	0.57
1:w:1851:U:H4'	33:2:3:G:N2	2.14	0.57
1:w:1952:A:H2	1:w:2560:C:O2	1.87	0.57
1:w:2282:G:H4'	1:w:2389:G:O2'	2.04	0.57
1:w:2598:A:OP1	4:B:234:GLY:C	2.47	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2675:A:H61	1:w:2732:G:H1	1.53	0.57
1:w:2736:G:C4	1:w:2737:G:N7	2.73	0.57
1:w:2747:G:O6	1:w:2754:U:H2'	2.05	0.57
1:w:2825:G:H3'	1:w:2826:A:C8	2.38	0.57
1:w:2874:C:O2	1:w:2874:C:H2'	2.04	0.57
1:w:2875:C:O2'	16:N:5:ALA:CB	2.51	0.57
2:x:91:C:H2'	2:x:92:G:C8	2.40	0.57
5:C:33:VAL:HG13	5:C:47:VAL:HG11	1.85	0.57
5:C:187:ALA:O	5:C:188:VAL:HB	2.04	0.57
7:E:77:ILE:HG23	7:E:78:SER:N	2.20	0.57
9:G:38:LEU:HD13	9:G:40:THR:CG2	2.31	0.57
10:H:27:TYR:CE2	17:O:100:VAL:HG13	2.39	0.57
10:H:78:VAL:HA	10:H:146:TYR:CE2	2.39	0.57
12:J:45:LEU:HD23	12:J:46:LYS:H	1.69	0.57
12:J:78:PRO:CB	12:J:110:TYR:HB2	2.34	0.57
12:J:138:LEU:HG	12:J:142:GLY:HA3	1.85	0.57
19:Q:86:LEU:HD13	19:Q:87:PRO:HD2	1.86	0.57
21:S:45:VAL:HG12	21:S:57:GLN:HG2	1.85	0.57
21:S:82:PRO:HB3	21:S:97:ARG:NH1	2.18	0.57
24:V:15:ALA:HB2	24:V:48:LYS:NZ	2.20	0.57
31:y:513:C:H2'	31:y:514:C:C6	2.39	0.57
31:y:690:G:O6	31:y:691:G:C2	2.58	0.57
31:y:874:G:H21	41:i:11:THR:CG2	2.17	0.57
31:y:896:C:H2'	31:y:897:C:O5'	2.04	0.57
31:y:973:G:H3'	31:y:974:A:H5"	1.85	0.57
31:y:1447:G:H2'	31:y:1448:C:H6	1.70	0.57
31:y:1489:G:H2'	31:y:1490:C:C6	2.40	0.57
35:c:32:ILE:HD13	35:c:40:HIS:NE2	2.20	0.57
36:d:23:TYR:H	43:k:93:GLY:HA3	1.68	0.57
38:f:77:PRO:HD2	38:f:91:LEU:HD23	1.85	0.57
47:o:41:ARG:HD3	47:o:42:ILE:N	2.20	0.57
49:q:11:SER:C	49:q:13:HIS:H	2.12	0.57
50:r:29:HIS:O	50:r:33:GLY:HA2	2.04	0.57
53:u:84:LEU:O	53:u:88:VAL:CB	2.39	0.57
1:w:204:A:OP1	1:w:204:A:O4'	2.22	0.57
1:w:270(M):U:H2'	1:w:270(N):U:C5	2.39	0.57
1:w:321:G:C2	6:D:160:ARG:CZ	2.88	0.57
1:w:527:C:H5	1:w:2779:U:C2	2.22	0.57
1:w:1080:C:H2'	1:w:1081:U:O4'	2.04	0.57
1:w:1517:G:H2'	1:w:1518:C:C6	2.39	0.57
1:w:1790:C:OP1	4:B:220:HIS:N	2.36	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1970:A:H4'	1:w:1971:A:O5'	2.03	0.57
1:w:1971:A:C8	4:B:241:PRO:HB3	2.38	0.57
1:w:2162:G:H5'	1:w:2173:A:OP1	2.04	0.57
1:w:2344:U:H5"	1:w:2345:G:OP1	2.05	0.57
1:w:2584:U:H2'	1:w:2585:U:C2'	2.33	0.57
1:w:2852:G:C6	1:w:2853:C:C4	2.93	0.57
2:x:104:A:H2'	2:x:105:G:H5'	1.85	0.57
3:A:198:GLU:CB	3:A:201:LYS:HG2	2.34	0.57
3:A:225:ILE:HG23	3:A:226:ASN:H	1.68	0.57
4:B:212:SER:C	4:B:217:ARG:HG2	2.29	0.57
5:C:174:ASP:O	5:C:182:LEU:HD12	2.04	0.57
7:E:7:LEU:CB	7:E:100:TRP:HE1	2.10	0.57
7:E:96:ARG:HD3	7:E:97:ASP:H	1.69	0.57
8:F:13:LYS:HE2	8:F:29:PRO:HA	1.85	0.57
9:G:21:VAL:HG23	9:G:22:LYS:N	2.19	0.57
10:H:161:LEU:HD12	10:H:161:LEU:H	1.70	0.57
11:I:111:PHE:HB3	11:I:114:ILE:HG12	1.87	0.57
12:J:84:ASN:OD1	12:J:85:LEU:HD13	2.04	0.57
13:K:16:ARG:CG	13:K:17:LEU:H	2.12	0.57
14:L:34:ILE:HG22	14:L:35:THR:N	2.16	0.57
15:M:40:ILE:HG22	15:M:41:ASP:H	1.68	0.57
17:O:91:ASP:O	17:O:92:ARG:O	2.23	0.57
18:P:77:ALA:O	18:P:78:LYS:HB3	2.04	0.57
20:R:13:LEU:H	20:R:13:LEU:HD23	1.68	0.57
21:S:28:LYS:HA	21:S:35:TYR:HB3	1.86	0.57
22:T:146:ILE:HB	22:T:176:PRO:HD3	1.87	0.57
23:U:50:ASN:HB2	23:U:81:VAL:HB	1.87	0.57
31:y:321:A:H2'	31:y:322:C:H6	1.69	0.57
31:y:1067:A:H3'	31:y:1093:A:H4'	1.87	0.57
31:y:1285:A:O2'	31:y:1286:A:OP2	2.20	0.57
31:y:1500:A:OP1	31:y:1504:G:O3'	2.21	0.57
33:2:9:A:N7	33:2:12:U:O4	2.36	0.57
36:d:156:ARG:CA	36:d:160:ALA:HB3	2.34	0.57
37:e:13:ARG:CB	37:e:33:MET:HB2	2.19	0.57
37:e:84:LYS:HG3	37:e:85:LYS:N	2.19	0.57
39:g:8:ILE:HB	39:g:61:LEU:HB2	1.87	0.57
40:h:65:ALA:O	40:h:69:VAL:HG23	2.05	0.57
40:h:97:GLN:NE2	40:h:101:LEU:HD11	2.18	0.57
52:t:51:VAL:HG12	52:t:51:VAL:O	2.05	0.57
1:w:117:G:H4'	1:w:126:A:C2	2.39	0.57
1:w:298:G:H21	1:w:340:A:H62	1.51	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:353:G:H2'	1:w:354:G:C8	2.40	0.57
1:w:609(B):G:N1	1:w:619:G:H1'	2.19	0.57
1:w:746:A:N6	1:w:2611:U:OP1	2.38	0.57
1:w:887:A:O2'	1:w:889:C:C2	2.51	0.57
1:w:1567:A:H4'	1:w:1568:G:O5'	2.05	0.57
1:w:1567:A:H8	1:w:1568:G:N2	2.02	0.57
1:w:2016:U:H2'	1:w:2017:U:O4'	2.04	0.57
1:w:2542:A:O2'	1:w:2543:G:OP2	2.18	0.57
1:w:2718:G:C2	1:w:2719:G:H1'	2.40	0.57
2:x:21:G:H2'	2:x:22:U:H6	1.59	0.57
2:x:81:G:O6	2:x:96:G:C6	2.58	0.57
2:x:115:G:C2	2:x:116:G:C5	2.93	0.57
3:A:195:ARG:C	3:A:197:LEU:H	2.12	0.57
4:B:28:GLU:N	4:B:29:PRO:HD2	2.20	0.57
4:B:69:ARG:CG	4:B:190:TYR:CE2	2.87	0.57
4:B:97:TYR:HB2	4:B:102:LYS:CA	2.32	0.57
5:C:36:ARG:HH11	5:C:36:ARG:HG2	1.70	0.57
15:M:26:LEU:HD22	15:M:39:ILE:HG22	1.86	0.57
17:O:95:LEU:HD11	18:P:11:GLN:HB3	1.86	0.57
25:W:3:LEU:CD1	25:W:8:LYS:HD3	2.33	0.57
31:y:159:G:N3	31:y:161:A:OP2	2.36	0.57
31:y:200:G:C2	31:y:201:C:C2	2.93	0.57
31:y:227:G:N2	49:q:62:VAL:HG12	2.19	0.57
31:y:272:C:C2	31:y:273:A:C8	2.93	0.57
31:y:547:A:H1'	31:y:548:G:H1'	1.86	0.57
31:y:748:C:O2'	31:y:749:C:OP2	2.18	0.57
31:y:778:G:H4'	44:l:119:CYS:SG	2.44	0.57
31:y:1130:A:C2	31:y:1131:G:N7	2.72	0.57
31:y:1178:G:OP2	31:y:1178:G:H8	1.86	0.57
36:d:44:GLU:O	36:d:45:LYS:HB2	2.04	0.57
36:d:48:TYR:O	36:d:49:SER:C	2.47	0.57
37:e:3:ARG:HH12	37:e:70:ILE:HD12	1.69	0.57
37:e:100:ARG:NE	37:e:137:SER:HA	2.19	0.57
38:f:80:ILE:O	38:f:90:VAL:HG23	2.04	0.57
44:l:57:THR:O	44:l:60:ALA:HB3	2.03	0.57
45:m:45:LYS:HG3	45:m:46:LYS:N	2.18	0.57
52:t:46:GLY:N	52:t:62:ILE:HG23	2.20	0.57
1:w:28:A:H2	17:O:11:ARG:HH22	1.53	0.57
1:w:318:C:H2'	1:w:319:C:C6	2.39	0.57
1:w:598:G:H5'	12:J:15:ARG:HG3	1.85	0.57
1:w:890:A:H2'	1:w:892:G:H5'	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1341:U:H2'	1:w:1397:U:C2	2.39	0.57
1:w:1483:G:H2'	1:w:1484:G:O4'	2.05	0.57
1:w:1624:G:C2	1:w:1625:C:C4	2.93	0.57
1:w:2185:C:H2'	1:w:2186:G:O4'	2.04	0.57
1:w:2304:G:H21	7:E:156:ASP:CG	2.13	0.57
1:w:2475:C:H3'	1:w:2476:A:H5"	1.86	0.57
4:B:4:LYS:CB	4:B:18:VAL:HG12	2.34	0.57
4:B:35:LYS:CE	4:B:64:ILE:H	2.17	0.57
4:B:131:LEU:O	4:B:136:ILE:HD11	2.04	0.57
6:D:117:LYS:HA	6:D:117:LYS:HZ3	1.70	0.57
8:F:26:VAL:HG12	8:F:27:LYS:N	2.19	0.57
13:K:33:GLY:HA3	13:K:132:VAL:HB	1.87	0.57
16:N:18:ASP:O	16:N:19:LEU:C	2.48	0.57
16:N:30:VAL:HG21	16:N:84:GLN:CG	2.28	0.57
17:O:95:LEU:C	17:O:97:ASP:N	2.62	0.57
17:O:109:LEU:HA	17:O:112:ARG:HG3	1.87	0.57
22:T:106:GLY:C	22:T:108:PRO:HD3	2.29	0.57
24:V:58:ILE:HG12	24:V:82:LEU:HD11	1.87	0.57
27:Y:48:GLU:C	27:Y:50:GLY:H	2.13	0.57
29:a:49:VAL:HB	29:a:53:PRO:HB3	1.87	0.57
31:y:179:A:H3'	31:y:180:U:C5	2.40	0.57
31:y:197:A:H4'	31:y:198:G:OP1	2.03	0.57
31:y:608:A:H8	31:y:608:A:O5'	1.86	0.57
31:y:627:G:C2	31:y:628:G:N7	2.72	0.57
31:y:668:G:C2'	31:y:669:U:O4'	2.42	0.57
31:y:745:C:H1'	31:y:836:G:H2'	1.87	0.57
31:y:966:M2G:O2'	31:y:967:5MC:P	2.62	0.57
31:y:979:C:H5"	31:y:1222:G:O6	2.05	0.57
31:y:1013:G:H1'	31:y:1016:A:C2	2.40	0.57
31:y:1283:G:O2'	31:y:1284:C:H5'	2.04	0.57
35:c:68:ILE:HG23	35:c:161:ALA:HB3	1.87	0.57
40:h:27:ILE:HG12	40:h:40:ALA:HB2	1.86	0.57
45:m:45:LYS:CG	45:m:46:LYS:H	2.17	0.57
50:r:95:TYR:HD1	50:r:98:LEU:HD11	1.69	0.57
1:w:353:G:H8	1:w:353:G:O5'	1.88	0.57
1:w:802:A:H2'	1:w:803:U:O4'	2.04	0.57
1:w:817:C:H5"	1:w:932:G:N7	2.20	0.57
1:w:1056:G:H5"	1:w:1057:A:H5'	1.85	0.57
1:w:1171:G:H2'	1:w:1173:G:H5'	1.87	0.57
1:w:1912:A:H2	31:y:1407:5MC:O2	1.87	0.57
1:w:2154:G:H2'	1:w:2155:G:H8	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2459:A:H2'	1:w:2460:U:C6	2.40	0.57
1:w:2625:G:H2'	1:w:2626:C:H6	1.70	0.57
1:w:2681:C:C5'	1:w:2682:U:OP1	2.53	0.57
1:w:2709:G:C2'	1:w:2710:C:H5'	2.34	0.57
4:B:65:ILE:CB	4:B:105:ILE:HA	2.34	0.57
4:B:223:GLY:C	4:B:225:ALA:H	2.12	0.57
5:C:28:ALA:HB3	5:C:181:LEU:N	2.20	0.57
10:H:37:VAL:HG13	10:H:38:LEU:N	2.19	0.57
10:H:135:LEU:HD12	10:H:135:LEU:N	2.20	0.57
16:N:121:ILE:HD13	16:N:121:ILE:O	2.04	0.57
29:a:6:THR:CG2	29:a:63:PRO:HD3	2.27	0.57
29:a:9:GLY:HA2	29:a:12:LYS:HD3	1.85	0.57
31:y:138:G:C3'	31:y:139:G:H8	2.17	0.57
31:y:320:C:O2'	31:y:1435:G:H1'	2.05	0.57
31:y:450:G:N2	31:y:482:A:N6	2.52	0.57
31:y:1173:G:O2'	31:y:1174:G:H5'	2.05	0.57
31:y:1309:G:OP2	31:y:1309:G:H8	1.86	0.57
35:c:73:THR:O	35:c:74:LYS:HB2	2.05	0.57
37:e:35:ARG:HB3	37:e:36:ARG:NE	2.19	0.57
38:f:118:ILE:N	38:f:118:ILE:HD13	2.20	0.57
41:i:45:ILE:O	41:i:63:LEU:HA	2.04	0.57
45:m:54:VAL:HG12	45:m:68:TYR:CD1	2.40	0.57
46:n:108:ARG:CZ	46:n:114:ARG:HA	2.34	0.57
49:q:73:LEU:HA	49:q:76:GLN:HB2	1.86	0.57
52:t:19:VAL:HG21	52:t:43:GLU:HB2	1.85	0.57
52:t:25:LYS:HG2	52:t:25:LYS:O	2.04	0.57
53:u:41:VAL:O	53:u:42:GLN:C	2.47	0.57
1:w:123:G:C6	1:w:124:G:N3	2.72	0.57
1:w:245:G:OP1	12:J:68:GLN:HA	2.05	0.57
1:w:321:G:H2'	1:w:340:A:H1'	1.86	0.57
1:w:464:U:H5'	28:Z:5:TRP:CE3	2.40	0.57
1:w:506:G:O2'	1:w:507:A:C8	2.57	0.57
1:w:565:C:C2	1:w:577:G:N2	2.73	0.57
1:w:962:G:H3'	1:w:963:U:H5"	1.86	0.57
1:w:1346:G:OP2	1:w:1384:A:N6	2.38	0.57
1:w:2536:G:H2'	1:w:2537:U:O4'	2.04	0.57
1:w:2900:A:N6	1:w:2901:C:C4	2.73	0.57
4:B:94:LEU:HA	4:B:103:ARG:O	2.04	0.57
4:B:111:LEU:HD12	4:B:115:GLN:HB3	1.85	0.57
5:C:173:VAL:HG23	5:C:183:LEU:HD22	1.87	0.57
8:F:153:LYS:CB	8:F:154:PRO:HD3	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:104:ARG:H	11:I:104:ARG:HD2	1.69	0.57
16:N:87:ASP:N	16:N:87:ASP:OD1	2.37	0.57
17:O:103:PRO:C	17:O:105:VAL:N	2.60	0.57
19:Q:20:VAL:HA	19:Q:23:LEU:CD2	2.35	0.57
29:a:32:LEU:HD21	29:a:41:ILE:HG12	1.85	0.57
31:y:36:C:N3	31:y:37:U:O4	2.36	0.57
31:y:50:A:C2	31:y:52:G:H1'	2.39	0.57
31:y:61:G:C6	31:y:62:U:N3	2.73	0.57
31:y:111:G:H2'	31:y:111:G:N3	2.20	0.57
31:y:138:G:C4	31:y:139:G:C8	2.93	0.57
31:y:138:G:H3'	31:y:139:G:H8	1.70	0.57
31:y:297:G:C2	31:y:299:G:H5"	2.39	0.57
31:y:404:U:O2'	31:y:405:U:H5'	2.05	0.57
31:y:572:A:O5'	31:y:917:G:H5'	2.05	0.57
31:y:756:C:H2'	31:y:757:U:H6	1.70	0.57
31:y:831:U:O2'	31:y:832:C:H5"	2.04	0.57
31:y:1102:A:C5	31:y:1103:C:C5	2.92	0.57
31:y:1139:G:H5'	31:y:1140:C:OP1	2.05	0.57
31:y:1277:C:H4'	31:y:1282:C:C5	2.40	0.57
31:y:1315:U:O2	31:y:1361:G:C1'	2.51	0.57
31:y:1430:C:C2'	31:y:1431:C:H5'	2.34	0.57
31:y:1431:C:C2'	31:y:1432:G:O4'	2.46	0.57
36:d:77:ILE:CA	36:d:84:ILE:HB	2.30	0.57
37:e:12:CYS:HB3	37:e:19:LEU:N	2.19	0.57
38:f:127:ASN:O	38:f:130:ASN:HB2	2.05	0.57
40:h:88:PRO:HG3	40:h:151:TYR:HE1	1.70	0.57
43:k:24:VAL:O	43:k:28:ARG:CG	2.53	0.57
1:w:104:U:OP2	1:w:105:C:H5	1.88	0.57
1:w:194:G:H2'	1:w:195:A:O4'	2.05	0.57
1:w:587:C:O5'	1:w:587:C:H6	1.88	0.57
1:w:814:C:H5	12:J:27:HIS:HB2	1.68	0.57
1:w:847:U:H2'	1:w:848:G:H5"	1.87	0.57
1:w:866:A:H2	1:w:867:C:H41	1.51	0.57
1:w:1048:A:H62	1:w:1110:G:H21	1.52	0.57
1:w:1142:C:H5"	1:w:1142(B):A:H5"	1.87	0.57
1:w:1194:A:C6	1:w:1195:G:C5	2.93	0.57
1:w:1277:G:N3	14:L:23:ASN:ND2	2.52	0.57
1:w:1306:C:H2'	1:w:1307:A:H8	1.69	0.57
1:w:1782:C:O2	1:w:2608:G:O2'	2.18	0.57
1:w:1844:C:H5"	4:B:258:LYS:HG3	1.86	0.57
1:w:2095:C:H2'	1:w:2096:U:O4'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2638:G:H1'	1:w:2639:A:N7	2.19	0.57
9:G:63:ALA:CA	9:G:66:GLU:HB2	2.32	0.57
13:K:58:PHE:CZ	13:K:117:ALA:CB	2.87	0.57
14:L:5:LYS:HG2	14:L:6:SER:H	1.69	0.57
14:L:5:LYS:HG2	14:L:6:SER:N	2.20	0.57
16:N:11:GLU:O	16:N:13:ARG:N	2.37	0.57
17:O:99:ALA:HA	17:O:106:PHE:HE1	1.69	0.57
18:P:4:ILE:CG1	18:P:13:ARG:HB3	2.35	0.57
21:S:60:PHE:O	21:S:61:ILE:HG13	2.04	0.57
23:U:20:ARG:HH11	23:U:20:ARG:CG	2.18	0.57
28:Z:12:ARG:O	28:Z:17:GLY:N	2.38	0.57
28:Z:21:ARG:C	28:Z:23:ARG:N	2.61	0.57
31:y:134:A:O5'	31:y:134:A:H8	1.87	0.57
31:y:300:A:C2'	31:y:301:G:H5'	2.34	0.57
31:y:793:U:C2	31:y:1516:G:H4'	2.40	0.57
31:y:818:G:O2'	31:y:819:A:H5"	2.05	0.57
31:y:831:U:N3	31:y:832:C:C5	2.73	0.57
31:y:831:U:N3	31:y:832:C:H5	2.02	0.57
31:y:943:U:C2'	31:y:944:G:C5'	2.70	0.57
31:y:1064:G:HO2'	31:y:1065:U:P	2.25	0.57
31:y:1072:G:H2'	31:y:1073:U:C6	2.39	0.57
31:y:1510:U:H2'	31:y:1511:G:H8	1.70	0.57
33:2:67:A:HO2'	33:2:68:U:H5'	1.68	0.57
36:d:20:SER:HB3	36:d:22:TRP:CD1	2.40	0.57
36:d:182:ILE:CD1	36:d:203:PHE:HB2	2.35	0.57
37:e:100:ARG:HG2	37:e:102:ASP:HB3	1.85	0.57
37:e:155:LEU:C	37:e:158:ILE:HD13	2.29	0.57
38:f:149:GLU:HA	38:f:152:ARG:CG	2.35	0.57
45:m:56:LYS:O	45:m:57:VAL:HG23	2.05	0.57
48:p:81:LEU:HD13	48:p:84:LYS:NZ	2.19	0.57
50:r:26:GLN:O	50:r:27:PHE:HB3	2.05	0.57
50:r:54:GLY:N	50:r:85:VAL:HG11	2.09	0.57
52:t:57:HIS:O	52:t:58:VAL:HG13	2.04	0.57
54:v:9:ARG:NH1	54:v:9:ARG:HB2	2.18	0.57
1:w:379:G:N1	1:w:396:G:C6	2.73	0.56
1:w:463:G:C1'	1:w:467:G:N2	2.68	0.56
1:w:618(A):G:C2	1:w:618(B):C:C2	2.92	0.56
1:w:826:U:H5'	1:w:827:U:OP2	2.05	0.56
1:w:873:G:H2'	1:w:873:G:N3	2.20	0.56
1:w:907:U:H2'	1:w:908:C:C6	2.39	0.56
1:w:941:A:O2'	1:w:1190:G:H4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1403:C:H4'	1:w:1471:A:C1'	2.31	0.56
1:w:1562:A:H2'	1:w:1563:G:O4'	2.05	0.56
1:w:1788:C:O2'	1:w:1789:A:H5'	2.05	0.56
1:w:1920:C:C5'	31:y:1517:G:C5	2.88	0.56
1:w:2047:U:O2'	1:w:2823:A:N1	2.37	0.56
1:w:2245:U:O2	1:w:2435:A:C8	2.57	0.56
1:w:2335:A:H2'	15:M:15:ARG:NH1	2.20	0.56
4:B:80:ALA:N	4:B:95:LEU:HA	2.19	0.56
4:B:83:GLU:CB	4:B:92:ILE:HD11	2.35	0.56
4:B:221:VAL:C	4:B:223:GLY:H	2.12	0.56
5:C:24:THR:HB	5:C:186:GLY:CA	2.35	0.56
5:C:75:VAL:C	5:C:77:ILE:N	2.63	0.56
5:C:103:ASP:HA	5:C:168:MET:HA	1.87	0.56
11:I:16:ALA:C	11:I:17:ARG:HD3	2.30	0.56
11:I:22:ILE:HG13	11:I:23:ARG:N	2.16	0.56
14:L:63:ARG:HD3	14:L:67:LEU:CD2	2.35	0.56
17:O:93:LYS:HD2	17:O:93:LYS:N	2.20	0.56
17:O:94:ASN:OD1	17:O:95:LEU:HD23	2.05	0.56
22:T:44:PHE:CG	22:T:45:ASP:N	2.73	0.56
28:Z:10:ARG:O	28:Z:14:LYS:HD3	2.05	0.56
31:y:31:G:OP1	31:y:31:G:C2'	2.52	0.56
31:y:160:A:C6	31:y:161:A:C2	2.93	0.56
31:y:161:A:H2'	31:y:162:A:C8	2.40	0.56
31:y:468:A:C5'	49:q:80:PHE:HB3	2.34	0.56
31:y:529:G:O6	45:m:47:PRO:O	2.23	0.56
31:y:630:G:H8	31:y:630:G:OP2	1.88	0.56
31:y:864:A:H4'	31:y:1078:U:O4	2.04	0.56
31:y:898:G:H1'	31:y:901:A:H61	1.70	0.56
31:y:946:A:H1'	31:y:1333:A:O2'	2.04	0.56
31:y:1300:G:N2	31:y:1335:C:H4'	2.20	0.56
31:y:1374:A:C5	31:y:1375:A:C8	2.93	0.56
31:y:1412:C:H2'	31:y:1413:A:C8	2.40	0.56
35:c:97:TRP:CE2	35:c:172:ILE:HB	2.40	0.56
46:n:3:ARG:HG2	46:n:9:ILE:HG23	1.87	0.56
49:q:73:LEU:O	49:q:77:ALA:HB2	2.04	0.56
50:r:58:GLU:OE1	50:r:74:LEU:HB3	2.04	0.56
53:u:14:LYS:HA	53:u:17:ARG:HE	1.70	0.56
1:w:125:G:C1'	28:Z:13:ALA:HB1	2.36	0.56
1:w:270(N):U:H2'	1:w:270(O):G:H5'	1.87	0.56
1:w:392:C:H5'	1:w:409:C:C5'	2.35	0.56
1:w:857:C:O2'	1:w:858:U:H5'	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1082:U:O4	1:w:1086:A:N1	2.38	0.56
1:w:1132:A:N6	1:w:2038:G:N2	2.53	0.56
1:w:1156:A:OP1	17:O:55:ARG:NH2	2.38	0.56
1:w:1792:G:P	4:B:206:LEU:HB3	2.45	0.56
1:w:1911:U:C5	1:w:1918:A:N6	2.73	0.56
1:w:1923:U:H2'	1:w:1924:C:C6	2.40	0.56
1:w:2198:A:N3	1:w:2198:A:H2'	2.20	0.56
1:w:2683:C:H5'	16:N:58:ASN:CG	2.29	0.56
2:x:28:C:H5"	15:M:34:HIS:HE2	1.69	0.56
2:x:73:A:C5	2:x:104:A:C2	2.92	0.56
4:B:60:ARG:CZ	4:B:86:PRO:HB2	2.34	0.56
6:D:171:LEU:HD21	6:D:173:PRO:O	2.05	0.56
9:G:103:ARG:HD2	9:G:104:GLN:N	2.19	0.56
10:H:119:GLU:HG3	10:H:145:VAL:CG2	2.35	0.56
13:K:109:VAL:HG23	13:K:114:ALA:HB2	1.86	0.56
18:P:10:LYS:HZ1	18:P:22:VAL:HG23	1.69	0.56
18:P:18:LEU:H	18:P:98:GLU:CD	2.13	0.56
19:Q:4:LYS:HD2	19:Q:62:HIS:CE1	2.37	0.56
22:T:10:ARG:HG3	22:T:11:GLU:N	2.18	0.56
24:V:15:ALA:HB2	24:V:48:LYS:HZ2	1.70	0.56
24:V:33:LYS:HG2	24:V:34:THR:H	1.70	0.56
31:y:186(B):C:H2'	31:y:186(C):C:C6	2.40	0.56
31:y:445:G:H2'	31:y:446:G:H8	1.70	0.56
31:y:532:A:H3'	31:y:532:A:H8	1.70	0.56
31:y:880:C:OP2	45:m:5:THR:HG21	2.06	0.56
31:y:1187:G:H1'	47:o:61:TRP:N	2.20	0.56
31:y:1196:U:OP1	31:y:1197:G:C4'	2.39	0.56
31:y:1271:G:OP1	31:y:1314:C:H4'	2.05	0.56
31:y:1399:C:H5'	31:y:1401:G:C8	2.40	0.56
33:2:73:A:N1	33:2:74:C:N4	2.54	0.56
47:o:9:LYS:HE2	47:o:12:ARG:HD2	1.87	0.56
50:r:61:GLU:HG2	50:r:71:PHE:CD1	2.40	0.56
51:s:74:ARG:HG3	51:s:79:LEU:HB2	1.87	0.56
54:v:5:ASP:CG	54:v:6:ARG:H	2.13	0.56
1:w:262:A:H5"	1:w:610:C:H5'	1.87	0.56
1:w:371:A:H2'	1:w:371:A:N3	2.20	0.56
1:w:446:G:H5'	17:O:3:ARG:NH1	2.20	0.56
1:w:463:G:N2	1:w:466:A:OP2	2.38	0.56
1:w:544:C:H2'	1:w:545:G:C8	2.40	0.56
1:w:612:G:H2'	1:w:613:U:H5'	1.87	0.56
1:w:666:G:H8	1:w:666:G:OP2	1.89	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:729:G:H3'	1:w:730:C:C5'	2.36	0.56
1:w:1160:G:N2	18:P:9:GLY:HA3	2.20	0.56
1:w:1200:C:C3'	1:w:1201:C:H5"	2.34	0.56
1:w:1232:G:C2	1:w:1233:C:C2	2.93	0.56
1:w:1270:C:O2'	1:w:1648:C:OP1	2.21	0.56
1:w:1527:G:O2'	1:w:1528:A:H8	1.87	0.56
1:w:1871:A:H2'	1:w:1872:A:H8	1.71	0.56
1:w:1910:G:C6	1:w:1921:G:C2	2.93	0.56
1:w:2219:G:H3'	1:w:2224:G:H8	1.68	0.56
1:w:2286:A:H5"	1:w:2287:A:O5'	2.06	0.56
1:w:2352:A:N6	1:w:2365:G:H21	2.00	0.56
1:w:2356:C:O5'	23:U:18:ALA:CB	2.53	0.56
1:w:2438:U:H2'	1:w:2441:C:H5	1.70	0.56
1:w:2467:C:C4	1:w:2468:G:C6	2.93	0.56
1:w:2559:C:C2	1:w:2560:C:H5	2.23	0.56
1:w:2635:C:C4'	5:C:79:ARG:NH2	2.68	0.56
1:w:2875:C:H2'	1:w:2876:G:C5'	2.35	0.56
2:x:35:U:H2'	2:x:36:C:C5'	2.34	0.56
2:x:104:A:OP1	22:T:72:ARG:NE	2.38	0.56
3:A:166:ASN:HA	3:A:171:ALA:HA	1.87	0.56
5:C:30:PRO:HG3	5:C:92:THR:CG2	2.35	0.56
6:D:134:PHE:N	6:D:134:PHE:HD1	2.03	0.56
6:D:150:LEU:HB2	6:D:187:LEU:HD23	1.87	0.56
6:D:178:VAL:O	6:D:182:VAL:HG13	2.05	0.56
7:E:11:TYR:HA	7:E:15:VAL:HB	1.86	0.56
7:E:12:TYR:O	7:E:13:GLU:HB2	2.03	0.56
7:E:131:TYR:O	7:E:158:ALA:HB1	2.05	0.56
7:E:139:LEU:CB	7:E:146:TYR:N	2.68	0.56
8:F:126:PRO:HG2	8:F:130:ARG:HB2	1.87	0.56
10:H:89:LYS:O	10:H:110:LEU:HG	2.04	0.56
12:J:85:LEU:HD11	12:J:118:GLY:HA3	1.87	0.56
13:K:106:VAL:HG11	13:K:118:LEU:HD11	1.86	0.56
15:M:34:HIS:HB3	15:M:36:TYR:CE1	2.40	0.56
15:M:73:LEU:O	15:M:76:LYS:HB2	2.05	0.56
16:N:99:LEU:CG	16:N:102:ILE:HG12	2.33	0.56
18:P:72:VAL:HG13	18:P:88:ARG:HD3	1.86	0.56
19:Q:57:ASN:HD22	19:Q:61:ASN:ND2	2.02	0.56
22:T:53:ILE:H	22:T:53:ILE:CD1	2.16	0.56
23:U:16:SER:O	23:U:17:GLN:HB2	2.05	0.56
24:V:91:LYS:HE3	24:V:91:LYS:N	2.19	0.56
25:W:45:SER:O	25:W:46:GLN:HB2	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:X:7:LYS:HB3	26:X:34:GLU:HB3	1.88	0.56
29:a:6:THR:HG21	29:a:63:PRO:CD	2.25	0.56
30:b:3:VAL:HG22	30:b:4:ARG:H	1.71	0.56
31:y:190:G:H22	31:y:263:A:H4'	1.68	0.56
31:y:226:G:O2'	31:y:227:G:C5'	2.49	0.56
31:y:370:C:H2'	31:y:371:G:H8	1.70	0.56
31:y:404:U:C2	31:y:405:U:C5	2.93	0.56
31:y:546:G:C1'	31:y:548:G:O2'	2.53	0.56
31:y:582:U:O5'	31:y:582:U:C6	2.58	0.56
31:y:728:A:H2'	31:y:729:A:N7	2.19	0.56
31:y:818:G:C3'	31:y:819:A:C5'	2.82	0.56
31:y:887:G:C5	31:y:888:G:C5	2.93	0.56
31:y:1052:U:H2'	31:y:1055:A:OP2	2.05	0.56
31:y:1128:C:H1'	31:y:1148:U:O2	2.05	0.56
31:y:1276:G:H1'	31:y:1282:C:H1'	1.85	0.56
31:y:1323:G:H2'	31:y:1324:A:H8	1.65	0.56
31:y:1347:G:C2	31:y:1348:U:O4	2.58	0.56
34:3:17:C:C4	34:3:18:C:N4	2.73	0.56
36:d:59:ARG:O	36:d:60:ALA:CB	2.52	0.56
37:e:145:GLU:HG3	37:e:184:LYS:HB2	1.86	0.56
40:h:9:VAL:HG13	40:h:10:ARG:N	2.20	0.56
40:h:133:GLY:O	40:h:134:ALA:C	2.48	0.56
50:r:11:VAL:HB	50:r:88:TYR:CE2	2.40	0.56
50:r:13:ASP:HA	50:r:19:VAL:CG1	2.34	0.56
51:s:74:ARG:HG3	51:s:79:LEU:CB	2.35	0.56
51:s:74:ARG:HA	51:s:79:LEU:HB2	1.85	0.56
53:u:53:LEU:HG	53:u:100:ILE:HG21	1.88	0.56
54:v:21:TYR:O	54:v:22:ARG:CB	2.53	0.56
1:w:476:G:C3'	1:w:477:A:H5"	2.34	0.56
1:w:559:G:H22	17:O:49:HIS:CD2	2.23	0.56
1:w:748:G:OP2	19:Q:88:ARG:HB2	2.06	0.56
1:w:1334:G:H2'	1:w:1335:U:O4'	2.05	0.56
1:w:1518:C:H2'	1:w:1519:G:C5'	2.35	0.56
1:w:2352:A:C2	1:w:2366:A:C2	2.94	0.56
1:w:2366:A:H3'	1:w:2367:G:C8	2.41	0.56
1:w:2462:U:H6	1:w:2462:U:O5'	1.89	0.56
1:w:2466:C:O2'	1:w:2467:C:H5'	2.05	0.56
6:D:24:ASN:O	6:D:28:LEU:HG	2.04	0.56
9:G:16:GLY:O	9:G:18:VAL:HG23	2.06	0.56
11:I:27:GLY:O	11:I:28:SER:CB	2.53	0.56
11:I:60:ALA:HA	11:I:86:ILE:HA	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:83:VAL:CG1	12:J:114:ILE:HA	2.35	0.56
14:L:38:VAL:CB	14:L:39:PRO:HD3	2.36	0.56
16:N:24:PRO:HB3	16:N:49:VAL:HG21	1.87	0.56
29:a:24:ALA:C	29:a:46:ARG:HB2	2.30	0.56
31:y:48:C:H2'	31:y:49:U:C5	2.40	0.56
31:y:143:A:N1	31:y:220:G:N2	2.46	0.56
31:y:176:C:H2'	31:y:177:C:H5	1.68	0.56
31:y:184:G:O4'	31:y:224:C:H5"	2.05	0.56
31:y:401:C:C2	31:y:402:G:N7	2.72	0.56
31:y:634:C:O5'	31:y:634:C:H6	1.87	0.56
31:y:1015:A:H1'	31:y:1218:C:O2'	2.06	0.56
31:y:1187:G:H2'	47:o:60:SER:HB2	1.87	0.56
31:y:1263:C:H2'	31:y:1264:C:O4'	2.06	0.56
31:y:1410:G:H2'	31:y:1411:C:H6	1.69	0.56
31:y:1429:C:C2	31:y:1430:C:C5	2.93	0.56
31:y:1528:U:H5"	31:y:1529:G:H21	1.70	0.56
32:z:18:G:N3	32:z:58:A:C2	2.73	0.56
33:2:41:U:H4'	40:h:143:ARG:CZ	2.35	0.56
33:2:44:A:N6	33:2:45:G:N2	2.53	0.56
35:c:176:GLU:O	35:c:180:LEU:HG	2.05	0.56
38:f:79:GLU:HB2	41:i:104:ARG:HH11	1.70	0.56
1:w:359:A:H3'	1:w:360:G:H8	1.70	0.56
1:w:1333:C:H2'	1:w:1334:G:C8	2.40	0.56
1:w:1538:G:H2'	1:w:1539:G:C8	2.40	0.56
1:w:1783:A:H4'	1:w:2607:G:O2'	2.06	0.56
1:w:2051:A:H3'	1:w:2578:G:O5'	2.06	0.56
1:w:2055:C:H4'	1:w:2056:G:H5"	1.88	0.56
1:w:2091:U:H5"	1:w:2092:U:OP2	2.04	0.56
1:w:2199:A:H8	1:w:2199:A:O5'	1.88	0.56
1:w:2332:U:H4'	1:w:2336:A:N6	2.20	0.56
1:w:2352:A:H8	1:w:2352:A:O5'	1.88	0.56
1:w:2477:C:O5'	1:w:2477:C:H6	1.88	0.56
1:w:2680:C:H4'	5:C:188:VAL:C	2.31	0.56
1:w:2712(B):A:C3'	1:w:2713:A:C5'	2.82	0.56
1:w:2721:A:C3'	1:w:2722:G:H5'	2.36	0.56
1:w:2795:G:O5'	1:w:2795:G:C8	2.59	0.56
1:w:2822:G:N7	14:L:2:ARG:N	2.48	0.56
1:w:2849:U:O2	1:w:2866:U:C2	2.58	0.56
4:B:91:ARG:HD3	4:B:198:ASN:OD1	2.06	0.56
4:B:147:LEU:O	4:B:148:GLU:C	2.48	0.56
5:C:90:THR:HG22	5:C:91:VAL:N	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:134:PHE:N	6:D:134:PHE:CD1	2.73	0.56
6:D:165:LEU:HD13	6:D:165:LEU:H	1.71	0.56
7:E:20:ILE:HG22	7:E:21:ARG:N	2.20	0.56
7:E:46:ALA:CB	7:E:87:PRO:HG3	2.33	0.56
7:E:81:LYS:O	7:E:82:LEU:CB	2.53	0.56
10:H:108:ILE:HD13	10:H:112:LYS:HE3	1.88	0.56
16:N:3:ARG:O	16:N:4:GLY:C	2.48	0.56
16:N:93:ARG:N	16:N:116:ALA:HA	2.20	0.56
18:P:24:LYS:CG	18:P:25:LEU:N	2.68	0.56
19:Q:20:VAL:HA	19:Q:23:LEU:HD22	1.88	0.56
22:T:45:ASP:O	22:T:49:ARG:HG3	2.06	0.56
22:T:106:GLY:O	22:T:108:PRO:HD3	2.06	0.56
22:T:150:LEU:CG	22:T:171:ILE:HD11	2.30	0.56
29:a:22:VAL:O	29:a:48:PHE:CA	2.54	0.56
29:a:62:LEU:N	29:a:63:PRO:CD	2.69	0.56
31:y:22:G:C4	31:y:23:C:C6	2.94	0.56
31:y:37:U:H2'	31:y:38:G:C4'	2.36	0.56
31:y:136:C:H1'	49:q:63:GLY:HA2	1.87	0.56
31:y:189:U:H6	31:y:189:U:C5'	2.16	0.56
31:y:373:A:H4'	31:y:451:A:N6	2.21	0.56
31:y:439:A:OP2	31:y:493:G:N2	2.37	0.56
31:y:577:G:H4'	31:y:816:A:H2'	1.87	0.56
31:y:815:A:N1	31:y:1529:G:C5	2.73	0.56
31:y:988:G:C6	31:y:989:C:C5	2.94	0.56
31:y:1372:U:O5'	31:y:1372:U:H6	1.88	0.56
31:y:1401:G:OP2	31:y:1401:G:H8	1.87	0.56
31:y:1466:C:H2'	31:y:1467:G:C5'	2.36	0.56
32:z:18:G:N2	32:z:58:A:C4	2.73	0.56
36:d:124:ILE:CD1	36:d:130:VAL:HA	2.36	0.56
37:e:20:TYR:HB3	37:e:27:TYR:CD1	2.41	0.56
38:f:57:LYS:HB3	38:f:57:LYS:HZ2	1.70	0.56
40:h:111:ARG:CD	40:h:112:PRO:HD2	2.36	0.56
41:i:20:TYR:CE1	41:i:65:TYR:HB3	2.41	0.56
49:q:59:TRP:C	49:q:64:ALA:HB2	2.30	0.56
51:s:51:LEU:HD23	51:s:52:PRO:HD2	1.88	0.56
1:w:48:G:H2'	1:w:49:A:C2	2.41	0.56
1:w:245:G:H5'	12:J:70:GLN:N	2.17	0.56
1:w:1152:C:H1'	17:O:77:SER:CB	2.34	0.56
1:w:1270:C:O2'	1:w:1648:C:P	2.64	0.56
1:w:2333:A:O2'	15:M:8:GLU:OE1	2.23	0.56
1:w:2355:C:O2	23:U:17:GLN:NE2	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2383:G:H2'	1:w:2384:G:C5'	2.33	0.56
1:w:2487:G:O2'	1:w:2488:A:H5'	2.06	0.56
2:x:39:A:H1'	2:x:44:G:H22	1.70	0.56
4:B:63:ARG:HG2	4:B:86:PRO:HD2	1.88	0.56
4:B:82:ILE:HG23	4:B:107:ALA:HB3	1.87	0.56
5:C:34:VAL:HB	5:C:48:GLN:HB3	1.86	0.56
5:C:178:GLU:HG3	5:C:179:GLU:N	2.20	0.56
7:E:66:GLN:HE22	7:E:94:LEU:HD21	1.69	0.56
8:F:11:VAL:N	8:F:12:PRO:CD	2.69	0.56
8:F:157:TYR:HA	8:F:172:LYS:H	1.71	0.56
9:G:88:ILE:HG12	9:G:89:TYR:N	2.20	0.56
11:I:79:PHE:CE2	11:I:102:VAL:HG11	2.36	0.56
14:L:1:MET:O	14:L:2:ARG:C	2.48	0.56
16:N:61:PHE:N	16:N:61:PHE:HD1	2.03	0.56
16:N:115:ARG:O	16:N:116:ALA:HB3	2.05	0.56
20:R:89:ILE:HG22	20:R:89:ILE:O	2.05	0.56
25:W:54:LYS:C	25:W:55:ARG:HD2	2.31	0.56
31:y:130:A:OP1	31:y:189:U:O2	2.24	0.56
31:y:144:G:H21	31:y:179:A:H1'	1.66	0.56
31:y:161:A:N6	31:y:162:A:N1	2.54	0.56
31:y:175:C:H2'	31:y:176:C:H5'	1.87	0.56
31:y:186(G):C:N3	31:y:191(B):G:N2	2.53	0.56
31:y:228:A:H3'	31:y:229:U:C5	2.41	0.56
31:y:246:A:C2	31:y:282:A:C6	2.94	0.56
31:y:507:C:P	31:y:508:C:H3'	2.46	0.56
31:y:520:A:OP1	45:m:51:LEU:N	2.38	0.56
31:y:835:U:OP1	51:s:64:ARG:NH2	2.38	0.56
31:y:1111:A:C6	36:d:176:HIS:HB3	2.41	0.56
31:y:1364:U:C2'	31:y:1365:G:H5'	2.35	0.56
31:y:1428:A:O2'	31:y:1429:C:O4'	2.18	0.56
33:2:8:U:O2	33:2:21:A:C2	2.59	0.56
33:2:8:U:C2'	33:2:9:A:H5"	2.36	0.56
36:d:52:LEU:HG	36:d:114:PRO:HB3	1.86	0.56
37:e:89:THR:O	37:e:94:LEU:CD2	2.53	0.56
37:e:122:ARG:HD3	37:e:122:ARG:C	2.31	0.56
37:e:207:TYR:O	37:e:208:SER:C	2.48	0.56
40:h:12:LEU:HD13	40:h:25:ALA:HA	1.88	0.56
40:h:31:MET:HG2	40:h:32:ARG:H	1.71	0.56
41:i:54:ASP:OD1	41:i:56:LYS:HD3	2.05	0.56
46:n:56:LEU:CA	46:n:59:TYR:HB3	2.36	0.56
1:w:463:G:O2'	1:w:466:A:N6	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:478:A:H61	1:w:502:A:N6	1.98	0.56
1:w:834:C:H1'	1:w:2358:G:H21	1.71	0.56
1:w:834:C:H5"	29:a:52:LYS:HB3	1.87	0.56
1:w:836:G:H2'	1:w:837:C:C5	2.41	0.56
1:w:1021:A:O2'	1:w:1123:C:H5"	2.06	0.56
1:w:1082:U:H3	1:w:1086:A:N6	2.01	0.56
1:w:1462:C:O2'	1:w:1463:C:H5'	2.05	0.56
1:w:1526:G:C6	1:w:1546:A:N6	2.74	0.56
1:w:1688:U:HO2'	1:w:1700:A:H62	1.52	0.56
1:w:1871:A:H2'	1:w:1872:A:C8	2.41	0.56
1:w:2254:C:H2'	1:w:2255:G:C8	2.41	0.56
1:w:2431:U:O2	1:w:2433:A:H2'	2.04	0.56
1:w:2885:C:C6	1:w:2885:C:C3'	2.89	0.56
5:C:116:VAL:HG23	5:C:120:TRP:HD1	1.71	0.56
6:D:56:GLY:O	6:D:57:ARG:HB2	2.05	0.56
7:E:148:MET:N	7:E:148:MET:SD	2.79	0.56
7:E:149:VAL:C	7:E:151:ALA:H	2.12	0.56
9:G:130:TYR:HD2	9:G:131:LYS:N	2.04	0.56
12:J:35:HIS:CG	12:J:36:LYS:H	2.23	0.56
18:P:34:GLU:N	18:P:64:HIS:HE1	2.02	0.56
18:P:66:ARG:HE	18:P:94:LEU:CD2	2.18	0.56
19:Q:24:ILE:HG21	19:Q:36:LEU:HD11	1.88	0.56
21:S:45:VAL:HG12	21:S:57:GLN:HE21	1.71	0.56
22:T:141:VAL:HG21	22:T:144:LEU:HD23	1.87	0.56
24:V:50:ARG:HG2	24:V:61:ARG:HA	1.87	0.56
27:Y:12:SER:C	27:Y:14:ALA:N	2.62	0.56
31:y:115:G:N3	31:y:117:G:O6	2.38	0.56
31:y:364:A:C2	31:y:365:U:C5	2.93	0.56
31:y:447:G:H1'	31:y:487:A:H61	1.69	0.56
31:y:602:A:O2'	31:y:603:U:H5'	2.05	0.56
31:y:673:G:C6	31:y:734:G:C6	2.94	0.56
31:y:691:G:N1	44:l:52:GLY:CA	2.66	0.56
31:y:959:A:H3'	31:y:960:U:C5'	2.30	0.56
31:y:1047:G:H5"	47:o:4:LYS:HG2	1.87	0.56
31:y:1166:G:N3	31:y:1169:A:OP2	2.39	0.56
31:y:1504:G:H5"	31:y:1505:G:H5'	1.86	0.56
35:c:114:ARG:O	35:c:118:LEU:HB2	2.04	0.56
36:d:118:GLN:O	36:d:121:ALA:HB3	2.06	0.56
43:k:65:LEU:HD23	43:k:66:ARG:H	1.70	0.56
46:n:87:TYR:N	52:t:73:GLU:O	2.38	0.56
50:r:51:TYR:HD2	50:r:57:VAL:HG21	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:u:53:LEU:CG	53:u:100:ILE:HG21	2.36	0.56
1:w:55:G:N3	1:w:127:A:H2	2.03	0.56
1:w:270(N):U:H2'	1:w:270(O):G:O4'	2.06	0.56
1:w:456:C:H42	20:R:66:LEU:CB	2.19	0.56
1:w:630:G:H4'	1:w:640:C:O4'	2.06	0.56
1:w:965:C:OP1	1:w:2273:A:H1'	2.05	0.56
1:w:1225:G:H4'	18:P:86:GLY:HA2	1.87	0.56
1:w:1701:A:C2'	1:w:1702:G:H5'	2.35	0.56
1:w:1702:G:H3'	1:w:1703:G:H5"	1.87	0.56
1:w:2368:C:H5'	1:w:2368:C:H6	1.71	0.56
1:w:2416:C:OP1	12:J:64:LYS:HG2	2.06	0.56
1:w:2591:C:H2'	1:w:2592:G:O4'	2.06	0.56
3:A:197:LEU:CG	3:A:198:GLU:HG3	2.32	0.56
4:B:65:ILE:HB	4:B:105:ILE:HA	1.86	0.56
4:B:95:LEU:HD23	4:B:95:LEU:H	1.71	0.56
5:C:51:PHE:HB3	5:C:76:ARG:NE	2.21	0.56
5:C:134:ILE:HG22	5:C:137:HIS:HB2	1.87	0.56
7:E:111:LEU:O	7:E:112:PRO:C	2.48	0.56
7:E:145:THR:O	7:E:146:TYR:HB3	2.05	0.56
10:H:29:PRO:HG3	10:H:69:VAL:HG11	1.88	0.56
10:H:46:LEU:HD22	10:H:122:LEU:HG	1.87	0.56
12:J:61:ARG:HD2	12:J:62:LEU:N	2.21	0.56
13:K:78:PRO:O	13:K:79:LEU:CB	2.54	0.56
19:Q:20:VAL:HG11	19:Q:47:VAL:HG11	1.87	0.56
22:T:33:LEU:HD12	22:T:34:ASN:H	1.71	0.56
25:W:29:LYS:HB2	25:W:29:LYS:HZ3	1.71	0.56
31:y:33:A:C8	31:y:33:A:O5'	2.59	0.56
31:y:141:A:C4	31:y:142:G:C8	2.94	0.56
31:y:246:A:O2'	31:y:247:G:P	2.63	0.56
31:y:630:G:H5'	31:y:631:G:OP2	2.05	0.56
31:y:646:U:H2'	31:y:647:C:C6	2.41	0.56
31:y:716:A:H1'	44:l:118:GLY:CA	2.35	0.56
31:y:741:G:P	48:p:39:LEU:HD22	2.45	0.56
31:y:744:C:H2'	31:y:745:C:H6	1.71	0.56
31:y:1285:A:H4'	31:y:1286:A:O5'	2.05	0.56
31:y:1300:G:N2	31:y:1335:C:C4'	2.69	0.56
31:y:1316:G:O4'	31:y:1360:A:H2	1.88	0.56
31:y:1347:G:O6	31:y:1374:A:OP2	2.24	0.56
36:d:92:ALA:CB	36:d:99:VAL:H	2.18	0.56
36:d:110:ASN:HD22	36:d:141:VAL:HA	1.71	0.56
1:w:820:A:H2'	1:w:821:A:O4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1125:G:C3'	1:w:1126:A:H5"	2.36	0.56
1:w:1381:G:H2'	1:w:1382:G:H5'	1.88	0.56
1:w:2189:U:C3'	1:w:2190:G:H5"	2.18	0.56
1:w:2459:A:H4'	13:K:76:LYS:HZ2	1.71	0.56
1:w:2828:C:C4	1:w:2829:C:N4	2.73	0.56
1:w:2856:C:O2'	1:w:2857:G:H5'	2.06	0.56
1:w:2889:C:H2'	1:w:2889:C:O2	2.04	0.56
3:A:193:PHE:O	3:A:193:PHE:HD2	1.88	0.56
4:B:130:ALA:HB1	4:B:190:TYR:CZ	2.41	0.56
7:E:73:ALA:H	7:E:87:PRO:HB3	1.69	0.56
9:G:114:LEU:HB3	9:G:130:TYR:CD1	2.41	0.56
17:O:62:ILE:O	17:O:65:ILE:HB	2.05	0.56
24:V:15:ALA:HA	24:V:46:LEU:HG	1.88	0.56
24:V:57:GLU:O	24:V:82:LEU:HD11	2.06	0.56
27:Y:56:LYS:HD2	27:Y:57:VAL:H	1.71	0.56
31:y:250:A:N3	31:y:250:A:C2'	2.67	0.56
31:y:507:C:C3'	31:y:508:C:H5'	2.29	0.56
31:y:946:A:C1'	31:y:1333:A:O2'	2.54	0.56
31:y:1077:G:C2	31:y:1081:G:C2	2.94	0.56
31:y:1226:C:OP2	46:n:103:THR:HG23	2.05	0.56
31:y:1240:U:OP2	40:h:115:ARG:HA	2.06	0.56
31:y:1308:U:OP1	46:n:110:ARG:HD2	2.06	0.56
32:z:27:U:N3	32:z:28:C:C5	2.74	0.56
33:2:16:U:C3'	33:2:17:U:H5'	2.36	0.56
34:3:18:C:O5'	34:3:18:C:H6	1.89	0.56
37:e:154:ASN:O	37:e:155:LEU:HD13	2.06	0.56
38:f:45:PHE:HB3	38:f:61:TYR:CG	2.41	0.56
45:m:24:PRO:CD	45:m:88:ARG:HH21	2.18	0.56
46:n:23:TYR:C	46:n:70:LEU:HD12	2.30	0.56
1:w:67:U:H2'	1:w:68:G:O4'	2.06	0.56
1:w:216:A:H2'	1:w:217:G:C8	2.41	0.56
1:w:253:C:H2'	1:w:254:G:O4'	2.04	0.56
1:w:295:G:H3'	1:w:296:C:C5'	2.36	0.56
1:w:515:A:N1	1:w:1260:G:O2'	2.37	0.56
1:w:801:G:OP1	6:D:51:GLU:HA	2.06	0.56
1:w:957:A:OP2	13:K:75:THR:HG22	2.06	0.56
1:w:969:U:H4'	26:X:14:GLY:O	2.05	0.56
1:w:987:G:O2'	1:w:1000:A:N3	2.34	0.56
1:w:1204:A:H2	1:w:1241:A:C2	2.17	0.56
1:w:1518:C:H2'	1:w:1519:G:H5'	1.87	0.56
1:w:1825:A:OP1	4:B:249:PRO:HD3	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1970:A:O4'	1:w:1972:A:H1'	2.05	0.56
1:w:2396:G:H4'	24:V:32:LYS:N	2.20	0.56
1:w:2698:U:H2'	1:w:2699:C:C6	2.41	0.56
1:w:2710:C:O2'	1:w:2711:A:H5'	2.06	0.56
1:w:2824:C:O5'	1:w:2824:C:H6	1.89	0.56
1:w:2856:C:N4	1:w:2861:G:H1	2.04	0.56
2:x:21:G:C2'	2:x:22:U:C6	2.73	0.56
4:B:78:LYS:HB2	4:B:114:GLY:HA2	1.87	0.56
5:C:47:VAL:CG1	5:C:48:GLN:H	2.12	0.56
5:C:192:ASN:OD1	16:N:4:GLY:HA2	2.06	0.56
11:I:69:VAL:CG1	11:I:77:ILE:HG22	2.35	0.56
12:J:19:VAL:O	12:J:19:VAL:HG12	2.06	0.56
12:J:88:LEU:CD2	12:J:100:LEU:HG	2.34	0.56
12:J:112:LEU:H	12:J:128:HIS:HB2	1.70	0.56
15:M:58:LEU:HD23	15:M:60:GLY:H	1.71	0.56
18:P:34:GLU:H	18:P:64:HIS:HE1	1.53	0.56
22:T:5:LEU:CD2	22:T:57:ILE:HD11	2.36	0.56
22:T:9:TYR:CD2	22:T:37:VAL:HG11	2.41	0.56
31:y:319:G:H2'	31:y:320:C:O4'	2.06	0.56
31:y:323:U:H2'	31:y:324:G:O4'	2.05	0.56
31:y:411:A:C8	31:y:413:G:N7	2.74	0.56
31:y:582:U:OP2	31:y:758:G:N2	2.37	0.56
31:y:1011:G:H2'	31:y:1012:U:H6	1.68	0.56
31:y:1053:G:O2'	31:y:1054:C:P	2.63	0.56
31:y:1348:U:N3	31:y:1374:A:C8	2.63	0.56
35:c:145:LEU:HB3	35:c:149:LEU:CD2	2.36	0.56
36:d:13:GLY:HA3	47:o:57:ARG:HD2	1.88	0.56
38:f:142:LEU:HD23	38:f:143:ARG:N	2.21	0.56
47:o:24:CYS:HB3	47:o:28:GLY:CA	2.36	0.56
51:s:15:ARG:H	51:s:16:PRO:HD3	1.70	0.56
1:w:302:C:N4	1:w:314:A:N6	2.53	0.55
1:w:691:C:H1'	4:B:43:ARG:NH2	2.21	0.55
1:w:699:A:H1'	1:w:1634:A:N7	2.21	0.55
1:w:707:G:H2'	1:w:708:C:H6	1.71	0.55
1:w:1082:U:H3'	1:w:1083:U:C5'	2.35	0.55
1:w:1615:C:C4	1:w:1617:C:O2	2.58	0.55
1:w:2064:C:H5'	32:z:75:C:O2'	2.06	0.55
1:w:2257:U:O2'	1:w:2258:C:H5'	2.05	0.55
1:w:2291:U:H2'	1:w:2292:C:C5	2.41	0.55
1:w:2319:G:O6	15:M:8:GLU:HG3	2.06	0.55
1:w:2619:C:O2'	1:w:2620:C:H5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:180:ASN:O	5:C:181:LEU:HD13	2.06	0.55
7:E:66:GLN:NE2	7:E:94:LEU:HD21	2.21	0.55
10:H:41:ALA:C	10:H:43:GLY:H	2.13	0.55
10:H:77:VAL:HB	10:H:145:VAL:HG13	1.88	0.55
17:O:42:ALA:O	17:O:46:ALA:CB	2.54	0.55
20:R:8:ILE:CG1	20:R:42:ALA:HB1	2.35	0.55
22:T:150:LEU:HD12	22:T:151:HIS:C	2.30	0.55
26:X:10:LYS:HB2	26:X:53:LEU:HA	1.88	0.55
28:Z:46:VAL:HG12	28:Z:47:ARG:N	2.21	0.55
31:y:64:G:H4'	31:y:66:G:OP1	2.05	0.55
31:y:216:G:C8	31:y:217:C:C5	2.94	0.55
31:y:228:A:H2'	31:y:229:U:C6	2.41	0.55
31:y:248:C:C4	31:y:249:U:C4	2.93	0.55
31:y:265:G:O2'	31:y:267:C:OP1	2.23	0.55
31:y:401:C:H2'	31:y:402:G:C8	2.42	0.55
31:y:428:G:C4'	31:y:429:U:OP1	2.52	0.55
31:y:874:G:C5	31:y:875:C:C4	2.94	0.55
31:y:880:C:H2'	31:y:881:G:H8	1.71	0.55
31:y:992:U:C4	31:y:1043:C:C5	2.94	0.55
31:y:1332:A:H2'	31:y:1333:A:H5'	1.88	0.55
32:z:35:A:H2'	32:z:36:U:C6	2.41	0.55
38:f:153:LYS:HE3	41:i:41:ARG:O	2.06	0.55
42:j:19:LEU:HD13	42:j:84:ALA:HB2	1.88	0.55
44:l:23:ALA:HA	44:l:28:THR:HA	1.88	0.55
45:m:24:PRO:HD2	45:m:97:TYR:CE1	2.41	0.55
50:r:100:LYS:NZ	50:r:101:ARG:HG3	2.21	0.55
1:w:85:G:H5'	21:S:30:VAL:CG2	2.35	0.55
1:w:155:C:H3'	1:w:161:U:P	2.45	0.55
1:w:270(N):U:H2'	1:w:270(O):G:C5'	2.36	0.55
1:w:554:U:C3'	1:w:556:G:P	2.93	0.55
1:w:796:C:H2'	1:w:797:C:O4'	2.06	0.55
1:w:818:G:C6	1:w:1187:G:H3'	2.40	0.55
1:w:1010:A:N3	1:w:1153:C:H1'	2.21	0.55
1:w:1169:G:H3'	1:w:1170:G:H5"	1.89	0.55
1:w:1683:C:O2'	1:w:1684:C:H5'	2.06	0.55
1:w:2310:A:H8	1:w:2310:A:O5'	1.89	0.55
1:w:2640:G:O2'	10:H:98:TYR:OH	2.14	0.55
1:w:2723:C:O5'	1:w:2723:C:C6	2.46	0.55
1:w:2734:A:C3'	1:w:2735:G:H5'	2.35	0.55
1:w:2842:G:C6	1:w:2876:G:C6	2.94	0.55
2:x:113:C:O2	15:M:47:THR:HB	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:25:TYR:HD1	7:E:25:TYR:H	1.49	0.55
8:F:149:ARG:O	8:F:153:LYS:HB2	2.06	0.55
10:H:73:ASP:O	10:H:75:VAL:HG23	2.06	0.55
10:H:119:GLU:CG	10:H:145:VAL:HG23	2.37	0.55
13:K:8:LYS:N	13:K:8:LYS:NZ	2.55	0.55
13:K:106:VAL:HG12	13:K:107:ALA:N	2.21	0.55
14:L:5:LYS:CG	14:L:6:SER:H	2.18	0.55
14:L:99:LYS:HB3	27:Y:43:HIS:HD2	1.71	0.55
15:M:27:SER:CB	15:M:89:ARG:HG3	2.36	0.55
15:M:93:LYS:N	15:M:93:LYS:HD2	2.21	0.55
19:Q:12:ILE:HG22	19:Q:13:SER:N	2.20	0.55
25:W:7:ARG:O	25:W:8:LYS:HD2	2.06	0.55
31:y:67:C:O2'	31:y:172:A:C1'	2.51	0.55
31:y:158:G:C6	31:y:159:G:C5	2.95	0.55
31:y:502:G:C1'	31:y:550:G:H4'	2.36	0.55
31:y:684:A:H2	31:y:706:A:N6	2.03	0.55
31:y:868:C:H2'	31:y:869:G:C5'	2.35	0.55
31:y:913:A:O2'	31:y:914:A:C4'	2.55	0.55
31:y:946:A:H2'	31:y:947:G:C8	2.41	0.55
31:y:1276:G:O2'	31:y:1277:C:H5'	2.06	0.55
31:y:1302:U:H2'	31:y:1302:U:O2	2.05	0.55
31:y:1474:G:O6	31:y:1475:G:C6	2.59	0.55
36:d:61:ALA:H	36:d:64:VAL:HG22	1.71	0.55
37:e:38:TYR:CD1	37:e:38:TYR:O	2.59	0.55
41:i:15:ASN:O	41:i:19:VAL:HG12	2.05	0.55
41:i:91:ARG:CA	50:r:34:LYS:HD3	2.35	0.55
42:j:99:LEU:CB	42:j:101:PHE:HE1	2.11	0.55
46:n:66:LEU:O	46:n:70:LEU:HB2	2.06	0.55
50:r:78:GLU:HB3	50:r:81:ARG:HD2	1.88	0.55
51:s:10:LYS:O	51:s:11:GLU:HB2	2.06	0.55
53:u:77:ALA:C	53:u:81:LYS:HG2	2.31	0.55
1:w:813:U:O2'	1:w:1225:G:N3	2.38	0.55
1:w:947:G:H2'	1:w:948:G:H8	1.70	0.55
1:w:1023:U:O2	1:w:1023:U:H2'	2.06	0.55
1:w:1265:A:OP1	1:w:1265:A:H8	1.88	0.55
1:w:1367:A:C2'	1:w:1368:G:H5'	2.36	0.55
1:w:1639:U:C2'	1:w:1640:C:H5"	2.36	0.55
1:w:1702:G:C6	1:w:1703:G:C5	2.95	0.55
1:w:1752:C:C4'	1:w:2862:G:OP1	2.54	0.55
1:w:1794:U:H2'	1:w:1795:C:C6	2.42	0.55
1:w:1823:G:H2'	1:w:1824:G:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2175:C:HO2'	3:A:216:THR:HG1	1.54	0.55
1:w:2335:A:O2'	1:w:2337:G:N7	2.38	0.55
1:w:2660:A:C8	1:w:2660:A:C3'	2.89	0.55
1:w:2745:C:H1'	8:F:143:GLN:HG2	1.87	0.55
1:w:2768:C:OP2	1:w:2768:C:C6	2.59	0.55
2:x:8:U:OP2	2:x:8:U:C6	2.59	0.55
4:B:264:LYS:HD3	4:B:265:PRO:HD2	1.89	0.55
5:C:38:THR:CG2	5:C:39:PRO:HD2	2.36	0.55
5:C:182:LEU:HG	5:C:183:LEU:H	1.72	0.55
6:D:16:ALA:O	6:D:18:ASP:N	2.40	0.55
7:E:82:LEU:HD22	7:E:83:ARG:H	1.72	0.55
10:H:88:LYS:HE3	10:H:92:GLN:CG	2.35	0.55
13:K:106:VAL:HG21	13:K:118:LEU:CG	2.36	0.55
15:M:74:ALA:HB3	15:M:109:GLY:HA3	1.88	0.55
15:M:82:ILE:HG21	15:M:85:VAL:HB	1.87	0.55
22:T:137:ILE:HG12	22:T:138:GLU:H	1.70	0.55
23:U:34:GLY:HA2	23:U:60:PHE:CD2	2.42	0.55
31:y:28:G:N2	31:y:296:U:H4'	2.19	0.55
31:y:128:G:H5"	50:r:2:PRO:HD2	1.89	0.55
31:y:412:A:O2'	31:y:413:G:C8	2.52	0.55
31:y:684:A:C1'	44:l:39:PRO:HG2	2.30	0.55
31:y:750:G:O2'	48:p:21:ASP:OD1	2.24	0.55
31:y:945:G:C6	31:y:946:A:N6	2.74	0.55
31:y:1294:G:H2'	31:y:1295:G:H8	1.69	0.55
31:y:1312:G:C2	31:y:1313:U:N1	2.74	0.55
31:y:1376:U:OP1	40:h:98:SER:OG	2.10	0.55
31:y:1406:U:H5"	31:y:1406:U:C6	2.41	0.55
31:y:1439:C:C4	31:y:1440:C:C4	2.94	0.55
31:y:1479:C:H2'	31:y:1480:G:C8	2.36	0.55
32:z:57:A:O2'	32:z:58:A:H5'	2.06	0.55
33:2:63:C:O2'	33:2:64:A:H5'	2.06	0.55
35:c:120:ALA:C	35:c:122:PHE:H	2.13	0.55
36:d:35:GLU:OE1	36:d:95:THR:HG22	2.06	0.55
36:d:135:LYS:HD3	36:d:136:GLN:N	2.21	0.55
38:f:78:HIS:CE1	38:f:80:ILE:HG12	2.41	0.55
39:g:69:GLU:O	39:g:72:VAL:HG23	2.06	0.55
40:h:132:GLY:O	40:h:133:GLY:C	2.49	0.55
48:p:42:HIS:O	48:p:46:HIS:HB3	2.05	0.55
50:r:54:GLY:CA	50:r:82:MET:SD	2.82	0.55
53:u:80:ARG:HH21	53:u:83:ARG:HB3	1.71	0.55
1:w:410:G:H5"	1:w:411:G:H5"	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:668:G:H2'	1:w:670:A:N6	2.15	0.55
1:w:1000:A:N1	1:w:1001:A:C5	2.74	0.55
1:w:1169:G:H3'	1:w:1170:G:C5'	2.36	0.55
1:w:2120:G:N3	1:w:2120:G:H2'	2.20	0.55
1:w:2354:G:N2	23:U:39:ARG:HH22	2.02	0.55
1:w:2429:G:O2'	1:w:2430:A:H5'	2.07	0.55
1:w:2535:G:C2'	1:w:2536:G:H5'	2.37	0.55
1:w:2680:C:O5'	5:C:189:PRO:HD3	2.07	0.55
1:w:2757:A:H2'	1:w:2758:A:C8	2.39	0.55
2:x:14:U:O4'	2:x:107:U:H1'	2.06	0.55
2:x:63:G:C3'	2:x:64:C:H5"	2.37	0.55
2:x:83:G:C6	2:x:84:C:C4	2.95	0.55
5:C:9:VAL:HG11	5:C:27:LEU:HB2	1.88	0.55
7:E:46:ALA:CA	7:E:53:LEU:HD21	2.35	0.55
12:J:85:LEU:H	12:J:85:LEU:CD1	2.18	0.55
14:L:79:LEU:C	14:L:83:ILE:HB	2.31	0.55
18:P:100:ARG:HD2	18:P:101:GLY:N	2.22	0.55
19:Q:17:VAL:HG21	19:Q:103:ILE:CD1	2.37	0.55
31:y:136:C:H5"	49:q:1:MET:HB2	1.89	0.55
31:y:222:U:C3'	31:y:223:U:H5"	2.33	0.55
31:y:266:G:O2'	31:y:267:C:OP2	2.23	0.55
31:y:976:G:N2	31:y:136(A):C:C2	2.74	0.55
31:y:1393:U:C5'	31:y:1502:A:OP1	2.54	0.55
32:z:38:A:C8	32:z:39:C:C5	2.95	0.55
33:2:7:U:C2'	33:2:49:C:H5'	2.35	0.55
35:c:167:PRO:HG2	35:c:192:SER:CB	2.36	0.55
36:d:136:GLN:HB3	36:d:140:ARG:NE	2.21	0.55
37:e:71:SER:OG	37:e:74:GLN:HB2	2.06	0.55
37:e:111:ALA:HB1	37:e:116:GLN:HB2	1.89	0.55
37:e:120:LEU:O	37:e:124:GLY:HA2	2.06	0.55
40:h:84:ASN:HD22	40:h:84:ASN:N	2.05	0.55
41:i:97:VAL:HG23	41:i:98:LYS:H	1.71	0.55
49:q:43:LYS:HG3	49:q:48:TRP:HZ2	1.69	0.55
51:s:87:ARG:O	51:s:88:LYS:HB2	2.06	0.55
1:w:570:G:H1	1:w:2498:C:H4'	1.71	0.55
1:w:666:G:C5'	12:J:49:ARG:HD3	2.35	0.55
1:w:1146:C:O2'	1:w:1147:C:H5'	2.06	0.55
1:w:1176:G:H2'	1:w:1176:G:N3	2.21	0.55
1:w:1302:A:H2	1:w:1643:G:N2	2.04	0.55
1:w:1672:C:O2	1:w:2582:G:H1'	2.05	0.55
1:w:1798:U:H3	1:w:1821:A:H61	1.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2341:G:H2'	1:w:2342:C:C6	2.41	0.55
1:w:2351:G:N2	1:w:2365:G:H2'	2.21	0.55
1:w:2654:A:O3'	1:w:2655:G:H4'	2.06	0.55
1:w:2740:A:C5	1:w:2764:A:N7	2.75	0.55
1:w:2748:A:H4'	8:F:67:LEU:H	1.70	0.55
2:x:31:C:H2'	2:x:32:C:O4'	2.06	0.55
5:C:176:ILE:HD13	5:C:182:LEU:HA	1.89	0.55
6:D:112:ARG:HB3	6:D:117:LYS:HD2	1.89	0.55
10:H:114:LEU:HA	10:H:121:VAL:HG11	1.87	0.55
11:I:22:ILE:HG12	11:I:40:VAL:O	2.06	0.55
11:I:64:ARG:HB3	11:I:102:VAL:CG2	2.36	0.55
13:K:75:THR:HG23	13:K:77:LYS:NZ	2.21	0.55
14:L:38:VAL:HG23	14:L:39:PRO:HD3	1.88	0.55
16:N:91:ARG:HG3	16:N:92:GLY:N	2.22	0.55
18:P:34:GLU:C	18:P:35:LEU:HD23	2.32	0.55
19:Q:23:LEU:CD2	19:Q:24:ILE:HG23	2.37	0.55
31:y:126:G:N2	31:y:235:C:C2	2.72	0.55
31:y:138:G:H2'	31:y:139:G:O4'	2.06	0.55
31:y:250:A:H1'	31:y:252:U:C1'	2.37	0.55
31:y:328:C:O2	31:y:328:C:H2'	2.05	0.55
31:y:335:C:H1'	31:y:1433:A:H2	1.59	0.55
31:y:370:C:H2'	31:y:371:G:C8	2.41	0.55
31:y:436:C:C6	31:y:436:C:H5"	2.42	0.55
31:y:586:C:C5'	50:r:34:LYS:HZ3	2.19	0.55
31:y:625:G:C2'	31:y:626:U:C6	2.87	0.55
31:y:781:A:C8	31:y:782:A:C8	2.94	0.55
31:y:815:A:O4'	31:y:817:C:C4	2.59	0.55
31:y:819:A:O2'	31:y:820:U:OP1	2.24	0.55
31:y:1352:C:C4	31:y:1353:G:C8	2.94	0.55
31:y:1500:A:P	31:y:1505:G:OP1	2.64	0.55
36:d:131:ARG:HH11	36:d:131:ARG:CB	2.17	0.55
37:e:22:LYS:HB2	37:e:26:CYS:HB2	1.89	0.55
38:f:48:ALA:HB3	38:f:54:ALA:HB2	1.88	0.55
38:f:149:GLU:HA	38:f:152:ARG:HG3	1.89	0.55
40:h:9:VAL:HG13	40:h:10:ARG:HG3	1.89	0.55
45:m:26:LEU:O	45:m:27:LYS:HB2	2.06	0.55
45:m:80:SER:O	45:m:81:VAL:HG13	2.06	0.55
48:p:8:LYS:HD2	48:p:8:LYS:C	2.31	0.55
51:s:15:ARG:HB3	51:s:15:ARG:CZ	2.37	0.55
1:w:449:A:H4'	6:D:79:VAL:CG2	2.29	0.55
1:w:909:A:H1'	13:K:69:PHE:HE1	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1057:A:H2	1:w:1081:U:O2	1.89	0.55
1:w:1160:G:C5	1:w:1161:C:N4	2.74	0.55
1:w:1847:A:OP1	1:w:1847:A:H3'	2.06	0.55
1:w:1970:A:H5"	1:w:1971:A:OP1	2.06	0.55
1:w:2399:G:H3'	1:w:2400:G:H5"	1.87	0.55
1:w:2461:C:H2'	1:w:2462:U:C6	2.42	0.55
1:w:2624:G:H1'	27:Y:22:HIS:CD2	2.41	0.55
1:w:2795:G:N2	1:w:2802:G:C5	2.75	0.55
1:w:2846:G:C5	1:w:2847:U:C4	2.95	0.55
1:w:2898:U:H2'	1:w:2899:G:H8	1.71	0.55
2:x:15:A:H1'	2:x:109:G:C8	2.41	0.55
4:B:79:VAL:HB	4:B:111:LEU:CD1	2.37	0.55
5:C:11:MET:HB3	5:C:24:THR:HA	1.88	0.55
8:F:8:PRO:HB3	8:F:49:VAL:HA	1.88	0.55
8:F:41:MET:SD	8:F:55:PRO:HD3	2.47	0.55
8:F:87:LEU:O	8:F:130:ARG:HA	2.06	0.55
8:F:125:VAL:HG12	8:F:131:VAL:HG23	1.88	0.55
11:I:107:ARG:HB2	11:I:115:VAL:HG11	1.88	0.55
13:K:132:VAL:HG22	13:K:133:ARG:CZ	2.37	0.55
18:P:34:GLU:H	18:P:64:HIS:CE1	2.23	0.55
20:R:5:TYR:O	20:R:7:VAL:N	2.39	0.55
26:X:40:THR:HB	26:X:41:PRO:HD2	1.88	0.55
30:b:9:ARG:HH21	30:b:16:VAL:HG23	1.72	0.55
31:y:27:G:N1	31:y:557:G:C2	2.75	0.55
31:y:42:G:C6	31:y:43:C:N4	2.74	0.55
31:y:136:C:C4'	49:q:1:MET:CB	2.77	0.55
31:y:144:G:N2	31:y:179:A:C1'	2.64	0.55
31:y:265:G:C4'	50:r:65:ILE:O	2.51	0.55
31:y:266:G:O2'	31:y:267:C:P	2.65	0.55
31:y:275:G:H5"	31:y:275:G:H8	1.72	0.55
31:y:364:A:C2	31:y:365:U:H5	2.23	0.55
31:y:400:C:H2'	31:y:401:C:C6	2.42	0.55
31:y:418:C:C2'	31:y:419:C:H5'	2.37	0.55
31:y:579:G:H2'	31:y:580:U:C5	2.41	0.55
31:y:893:C:C6	31:y:893:C:O5'	2.59	0.55
31:y:1090:U:H2'	31:y:1091:U:C5'	2.37	0.55
31:y:1358:U:O2	31:y:1363:A:N1	2.40	0.55
31:y:1359:C:OP1	47:o:33:VAL:CG2	2.55	0.55
34:3:8:U:C6	34:3:8:U:C3'	2.89	0.55
35:c:91:PRO:HG3	35:c:155:LEU:HG	1.89	0.55
41:i:20:TYR:CD1	41:i:65:TYR:CD2	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:i:50:ARG:HA	41:i:59:LEU:HG	1.87	0.55
43:k:82:ILE:HD13	43:k:82:ILE:O	2.06	0.55
1:w:53:A:H8	1:w:53:A:O5'	1.90	0.55
1:w:104:U:OP2	1:w:105:C:C5	2.59	0.55
1:w:445:C:O2'	17:O:3:ARG:CZ	2.55	0.55
1:w:464:U:H2'	1:w:465:G:O4'	2.05	0.55
1:w:666:G:H2'	1:w:667:U:C6	2.40	0.55
1:w:780:G:H2'	1:w:782:A:C5	2.42	0.55
1:w:877:U:H2'	1:w:878:A:H5'	1.89	0.55
1:w:1047:G:OP1	1:w:1047:G:H3'	2.06	0.55
1:w:1131:G:N7	1:w:2025:C:H1'	2.22	0.55
1:w:1184:G:C2'	1:w:1185:C:H5'	2.37	0.55
1:w:1242:A:H2'	1:w:1243:G:O4'	2.07	0.55
1:w:1766:U:H2'	1:w:1767:C:O4'	2.06	0.55
1:w:1784:A:O2'	1:w:1785:A:P	2.64	0.55
1:w:1881:C:H2'	1:w:1882:C:C5	2.42	0.55
1:w:1975:G:C6	1:w:1976:U:C4	2.94	0.55
1:w:2050:C:O5'	1:w:2050:C:H6	1.90	0.55
1:w:2588:G:C2'	1:w:2589:A:C5'	2.84	0.55
1:w:2787:C:O2'	5:C:61:ARG:HB2	2.07	0.55
1:w:2808:U:O4	1:w:2892:A:C8	2.60	0.55
2:x:37:C:N4	2:x:48:A:H2'	2.20	0.55
2:x:95:U:C2	2:x:96:G:N7	2.75	0.55
4:B:82:ILE:HG21	4:B:91:ARG:NH2	2.15	0.55
4:B:105:ILE:HG12	4:B:106:ILE:N	2.22	0.55
4:B:211:ARG:HA	4:B:214:TRP:CZ3	2.42	0.55
5:C:47:VAL:HG23	5:C:84:PHE:HB3	1.89	0.55
7:E:28:VAL:O	7:E:30:GLU:N	2.40	0.55
7:E:96:ARG:O	7:E:99:MET:HE3	2.07	0.55
7:E:144:ILE:HA	7:E:147:ASP:OD2	2.07	0.55
7:E:173:LEU:HA	7:E:178:PHE:HD2	1.71	0.55
11:I:79:PHE:HE2	11:I:102:VAL:CG1	2.18	0.55
20:R:81:VAL:HG22	20:R:82:GLN:N	2.20	0.55
22:T:119:GLU:O	22:T:121:HIS:N	2.40	0.55
23:U:36:ILE:HG12	23:U:39:ARG:HH21	1.67	0.55
31:y:126:G:C6	31:y:127:G:O6	2.59	0.55
31:y:493:G:H2'	31:y:494:U:C5	2.42	0.55
31:y:605:U:C4	31:y:606:G:C6	2.95	0.55
31:y:833:U:N3	31:y:834:C:N4	2.54	0.55
31:y:959:A:H8	31:y:959:A:O5'	1.89	0.55
31:y:1223:C:H3'	31:y:1224:G:C5'	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1234:C:H1'	31:y:1364:U:N3	2.22	0.55
31:y:1433:A:N1	31:y:1434:A:C4	2.75	0.55
31:y:1468:A:H2'	31:y:1469:G:C1'	2.36	0.55
36:d:6:HIS:HD2	36:d:9:GLY:H	1.55	0.55
37:e:111:ALA:C	37:e:113:SER:H	2.14	0.55
40:h:97:GLN:HE22	40:h:101:LEU:HD11	1.71	0.55
43:k:69:ASN:O	43:k:70:ARG:HD3	2.07	0.55
46:n:14:ARG:N	46:n:44:ARG:HD3	2.22	0.55
47:o:26:ARG:CZ	47:o:27:CYS:SG	2.94	0.55
51:s:47:THR:C	51:s:82:THR:O	2.49	0.55
1:w:13:A:N6	1:w:525:U:C2	2.74	0.55
1:w:355:G:H2'	1:w:356:G:O4'	2.07	0.55
1:w:457:A:N6	1:w:470:A:H3'	2.22	0.55
1:w:673:C:H2'	1:w:674:G:C5'	2.36	0.55
1:w:751:A:H5'	19:Q:90:ARG:HA	1.88	0.55
1:w:1830:C:H2'	1:w:1831:G:C8	2.42	0.55
1:w:1859:A:C2	3:A:206:LYS:HE2	2.42	0.55
1:w:2076:U:P	1:w:2238:G:H22	2.29	0.55
1:w:2087:G:C6	1:w:2233:U:C2	2.95	0.55
1:w:2150:U:H2'	1:w:2151:G:C8	2.41	0.55
1:w:2378:A:H8	1:w:2378:A:O5'	1.90	0.55
1:w:2658:C:N4	1:w:2659:G:C6	2.74	0.55
3:A:54:ARG:HA	3:A:54:ARG:HE	1.69	0.55
6:D:7:LEU:H	6:D:7:LEU:HD12	1.71	0.55
9:G:109:ILE:CG2	9:G:110:ASP:N	2.69	0.55
16:N:112:ARG:NH2	16:N:113:LYS:HE3	2.22	0.55
22:T:174:VAL:O	22:T:175:VAL:HG23	2.05	0.55
31:y:50:A:C2	31:y:360:A:H2	2.23	0.55
31:y:546:G:O3'	31:y:547:A:H4'	2.07	0.55
31:y:783:C:C2'	31:y:784:C:H5'	2.36	0.55
31:y:1348:U:OP2	31:y:1373:G:N2	2.27	0.55
31:y:1374:A:H2'	31:y:1375:A:H5'	1.88	0.55
31:y:1478:C:H2'	31:y:1479:C:O5'	2.06	0.55
31:y:1502:A:C2	31:y:1505:G:N2	2.75	0.55
36:d:8:ILE:C	36:d:10:PHE:N	2.64	0.55
40:h:50:ILE:HG21	40:h:61:VAL:HG21	1.88	0.55
40:h:64:GLN:NE2	40:h:65:ALA:HA	2.21	0.55
40:h:125:MET:O	40:h:128:ALA:N	2.40	0.55
1:w:249:C:OP2	1:w:2394:C:O2'	2.12	0.55
1:w:611:C:N4	1:w:618(A):G:N1	2.55	0.55
1:w:1451:C:C4	1:w:1458:C:C4	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1527:G:C8	1:w:1527:G:C3'	2.90	0.55
1:w:2101:G:O2'	1:w:2102:U:H5'	2.07	0.55
1:w:2549:G:H2'	1:w:2550:G:C5'	2.37	0.55
1:w:2654:A:N6	1:w:2666:C:N4	2.48	0.55
1:w:2717:G:C2'	1:w:2718:G:H5"	2.37	0.55
1:w:2900:A:H3'	1:w:2901:C:H5"	1.89	0.55
5:C:116:VAL:C	5:C:118:LYS:H	2.13	0.55
6:D:179:TYR:N	6:D:179:TYR:CD2	2.62	0.55
6:D:196:VAL:O	6:D:196:VAL:HG13	2.06	0.55
8:F:149:ARG:CA	8:F:153:LYS:HG3	2.29	0.55
14:L:27:SER:C	14:L:29:LEU:H	2.14	0.55
14:L:53:HIS:HB2	14:L:56:LYS:HE2	1.88	0.55
16:N:30:VAL:HG12	16:N:42:ILE:HG21	1.89	0.55
16:N:45:PHE:CE2	16:N:64:ARG:HA	2.41	0.55
22:T:78:LYS:HD2	22:T:78:LYS:H	1.72	0.55
26:X:21:ALA:HA	26:X:24:LYS:HZ2	1.72	0.55
29:a:29:LYS:HG3	29:a:41:ILE:O	2.06	0.55
31:y:39:G:C2'	31:y:40:C:H5'	2.37	0.55
31:y:149:A:H61	31:y:172:A:H62	1.55	0.55
31:y:194:C:C2'	31:y:195:A:H5"	2.32	0.55
31:y:697:U:H2'	31:y:698:G:H5'	1.89	0.55
31:y:925:G:O2'	31:y:927:G:OP1	2.25	0.55
31:y:1343:G:H2'	31:y:1344:C:O4'	2.07	0.55
31:y:1375:A:C5'	40:h:29:LYS:CG	2.81	0.55
31:y:1499:A:O2'	31:y:1520:G:O3'	2.17	0.55
33:2:28:C:H6	33:2:28:C:O5'	1.90	0.55
35:c:223:ILE:HD11	35:c:230:VAL:CG2	2.37	0.55
36:d:134:ILE:CG1	36:d:135:LYS:N	2.69	0.55
42:j:28:VAL:HA	42:j:63:ILE:O	2.07	0.55
49:q:4:ILE:CG2	49:q:5:ARG:N	2.70	0.55
51:s:73:ALA:C	51:s:75:ILE:N	2.63	0.55
53:u:13:LEU:C	53:u:17:ARG:HE	2.14	0.55
54:v:22:ARG:N	54:v:23:PRO:CD	2.69	0.55
1:w:8:A:C2'	1:w:9:U:H5'	2.37	0.55
1:w:185:U:H2'	1:w:186:G:C8	2.42	0.55
1:w:393:C:N4	1:w:394:A:N6	2.55	0.55
1:w:886:C:OP1	1:w:889:C:O2	2.24	0.55
1:w:942:G:H5"	12:J:35:HIS:CA	2.37	0.55
1:w:1421:G:H2'	1:w:1422:G:C8	2.41	0.55
1:w:1782:C:N4	1:w:2587:A:C2	2.75	0.55
1:w:1790:C:H2'	1:w:1791:A:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2073:C:H5'	4:B:229:VAL:HG22	1.86	0.55
1:w:2167:U:O2	1:w:2171:A:N7	2.40	0.55
1:w:2693:A:H2'	1:w:2694:G:C8	2.42	0.55
1:w:2707:G:H2'	1:w:2708:G:H8	1.72	0.55
1:w:2733:A:N3	1:w:2734:A:C8	2.74	0.55
1:w:2737:G:N2	1:w:2738:A:C4	2.75	0.55
1:w:2745:C:O2'	8:F:142:GLY:HA3	2.07	0.55
1:w:2785:C:C5'	1:w:2785:C:H6	2.20	0.55
6:D:112:ARG:NH1	6:D:185:GLU:OE2	2.37	0.55
6:D:149:VAL:HG22	6:D:168:VAL:CG1	2.37	0.55
7:E:31:VAL:HG22	7:E:32:PRO:CD	2.37	0.55
9:G:6:LEU:HD22	9:G:7:GLU:HG2	1.89	0.55
10:H:37:VAL:HG22	10:H:158:PRO:O	2.07	0.55
11:I:93:PRO:C	11:I:95:GLY:N	2.65	0.55
13:K:42:ILE:O	13:K:94:VAL:HA	2.06	0.55
15:M:24:LEU:H	15:M:85:VAL:HG23	1.73	0.55
15:M:106:ARG:HD3	15:M:111:GLU:HA	1.88	0.55
17:O:109:LEU:O	17:O:112:ARG:HB2	2.07	0.55
18:P:43:GLU:CG	18:P:44:LYS:N	2.70	0.55
22:T:77:ASP:HB3	22:T:82:ARG:O	2.07	0.55
23:U:50:ASN:HB3	23:U:64:ASP:O	2.06	0.55
31:y:186(A):C:H4'	53:u:81:LYS:CB	2.37	0.55
31:y:301:G:H8	31:y:301:G:O5'	1.90	0.55
31:y:451:A:C6	31:y:481:G:C8	2.94	0.55
31:y:1068:G:N2	31:y:1191:A:C2	2.75	0.55
31:y:1267:C:H1'	54:v:20:LYS:NZ	2.23	0.55
31:y:1268:A:H4'	54:v:20:LYS:HA	1.89	0.55
31:y:1343:G:H2'	31:y:1344:C:C6	2.42	0.55
31:y:1343:G:H21	31:y:1349:A:H4'	1.72	0.55
31:y:1359:C:OP2	47:o:35:ARG:NH1	2.39	0.55
31:y:1368:G:P	42:j:114:TYR:HB3	2.47	0.55
31:y:1452:C:H4'	31:y:1453:G:C2	2.42	0.55
31:y:1513:A:C2	31:y:1523:G:C6	2.94	0.55
36:d:114:PRO:O	36:d:118:GLN:NE2	2.40	0.55
38:f:104:ALA:N	38:f:122:GLU:OE2	2.40	0.55
40:h:27:ILE:HG12	40:h:40:ALA:CB	2.37	0.55
40:h:66:VAL:HG13	40:h:100:ALA:HB1	1.89	0.55
41:i:104:ARG:CB	41:i:107:LEU:HB2	2.37	0.55
44:l:92:GLU:CB	44:l:96:ARG:HH11	2.19	0.55
49:q:74:LEU:HD22	49:q:79:VAL:CG1	2.37	0.55
50:r:17:LYS:HA	50:r:46:ASP:O	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:58:G:O2'	1:w:73:A:N1	2.36	0.54
1:w:268:C:C3'	1:w:269:U:H5"	2.36	0.54
1:w:281:G:H8	1:w:281:G:O5'	1.90	0.54
1:w:672:C:C6	1:w:672:C:H3'	2.42	0.54
1:w:674:G:C5'	6:D:72:ASP:HB3	2.34	0.54
1:w:793:A:OP2	1:w:2072:G:H5'	2.07	0.54
1:w:799:G:OP1	6:D:51:GLU:HG3	2.07	0.54
1:w:1363:C:O2	1:w:1809:A:C2	2.61	0.54
1:w:1381:G:C6	1:w:1382:G:C4	2.94	0.54
1:w:1788:C:H2'	1:w:1789:A:O4'	2.06	0.54
1:w:2579:C:H4'	5:C:134:ILE:HG13	1.88	0.54
1:w:2711:A:H5'	1:w:2712:U:C6	2.42	0.54
10:H:57:LEU:C	10:H:57:LEU:HD13	2.32	0.54
10:H:65:TRP:CZ3	10:H:71:MET:SD	3.00	0.54
13:K:51:ARG:O	13:K:54:MET:HB3	2.08	0.54
29:a:39:LYS:HE3	29:a:40:GLU:HB2	1.89	0.54
31:y:275:G:N3	31:y:276:G:N7	2.55	0.54
31:y:298:A:C2'	31:y:299:G:O5'	2.53	0.54
31:y:490:G:P	37:e:132:ARG:HH12	2.29	0.54
31:y:493:G:C2'	31:y:494:U:C5	2.90	0.54
31:y:538:G:H5"	45:m:114:LYS:CG	2.37	0.54
31:y:886:G:C6	31:y:887:G:C5	2.94	0.54
31:y:923:A:O4'	31:y:1398:A:C2	2.60	0.54
31:y:1101:A:H4'	31:y:1102:A:O5'	2.07	0.54
31:y:1123:A:H4'	43:k:37:PRO:HG2	1.89	0.54
31:y:1187:G:N1	31:y:1188:A:C2	2.75	0.54
33:2:47:U:O4	33:2:50:U:H5"	2.07	0.54
37:e:66:ARG:O	37:e:67:ILE:C	2.50	0.54
38:f:38:GLN:O	38:f:71:LEU:HD12	2.07	0.54
39:g:10:LEU:HD12	39:g:59:TYR:HB3	1.89	0.54
40:h:44:TYR:HA	40:h:47:CYS:SG	2.48	0.54
49:q:43:LYS:NZ	49:q:48:TRP:NE1	2.55	0.54
51:s:49:LYS:HE2	51:s:82:THR:HG23	1.89	0.54
53:u:80:ARG:HA	53:u:80:ARG:NE	2.22	0.54
1:w:13:A:H2	1:w:14:A:H62	1.55	0.54
1:w:88:G:H2'	1:w:89:G:H5'	1.89	0.54
1:w:108:U:H2'	1:w:109:G:H8	1.73	0.54
1:w:244:A:O2'	12:J:73:GLY:CA	2.53	0.54
1:w:576:U:O2'	1:w:577:G:H5'	2.07	0.54
1:w:729:G:N3	1:w:729:G:C2'	2.65	0.54
1:w:764:A:N6	1:w:1789:A:H2	2.05	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:951:C:C4	1:w:952:G:N7	2.76	0.54
1:w:957:A:H5'	13:K:76:LYS:H	1.72	0.54
1:w:1022:G:H5'	10:H:92:GLN:HE22	1.71	0.54
1:w:1098:A:H3'	1:w:1099:G:C8	2.43	0.54
1:w:1458:C:H4'	1:w:1459:G:O5'	2.07	0.54
1:w:1544:C:O2'	1:w:1545:A:C8	2.59	0.54
1:w:1692:U:O2'	1:w:1693:U:H5"	2.06	0.54
1:w:2256:G:H2'	1:w:2257:U:H6	1.73	0.54
1:w:2660:A:C8	1:w:2661:G:N7	2.76	0.54
1:w:2782:G:H2'	1:w:2783:G:O4'	2.07	0.54
1:w:2875:C:N3	1:w:2876:G:C8	2.75	0.54
3:A:53:ARG:HA	3:A:53:ARG:HE	1.73	0.54
3:A:54:ARG:HB3	3:A:56:ASP:OD1	2.08	0.54
4:B:117:VAL:HG12	4:B:118:VAL:H	1.71	0.54
5:C:174:ASP:H	5:C:183:LEU:CD1	2.15	0.54
7:E:120:LEU:HD13	7:E:121:ASN:C	2.32	0.54
8:F:156:ALA:O	8:F:158:HIS:N	2.40	0.54
15:M:38:GLN:HA	15:M:50:SER:HB3	1.89	0.54
18:P:3:ALA:HA	18:P:41:GLY:O	2.07	0.54
19:Q:20:VAL:O	19:Q:20:VAL:HG12	2.07	0.54
24:V:12:PRO:HG3	24:V:63:ALA:HB2	1.88	0.54
26:X:17:LYS:O	26:X:18:ASP:C	2.50	0.54
29:a:30:ARG:O	29:a:31:HIS:HB2	2.05	0.54
31:y:234:C:H2'	31:y:235:C:H6	1.72	0.54
31:y:235:C:O2'	31:y:236:G:H5'	2.07	0.54
31:y:356:A:N3	31:y:368:U:O2'	2.37	0.54
31:y:522:C:H42	31:y:523:A:H62	1.50	0.54
31:y:584:G:P	50:r:91:ARG:HE	2.29	0.54
31:y:738:C:C4	31:y:739:C:C4	2.96	0.54
31:y:797:C:O2'	31:y:798:G:H5'	2.06	0.54
31:y:1223:C:H5"	31:y:1225:A:H8	1.71	0.54
31:y:1273:G:O2'	31:y:1274:G:H5'	2.06	0.54
31:y:1447:G:H2'	31:y:1448:C:C6	2.42	0.54
33:2:17:U:H6	33:2:17:U:O5'	1.90	0.54
37:e:13:ARG:HB2	37:e:37:PRO:CA	2.32	0.54
37:e:155:LEU:HB3	37:e:158:ILE:HD13	1.89	0.54
45:m:85:ARG:HG3	45:m:86:GLY:N	2.22	0.54
47:o:20:ALA:C	47:o:21:TYR:HD1	2.15	0.54
51:s:44:LEU:HG	51:s:48:GLY:HA2	1.90	0.54
1:w:78:A:N6	1:w:109:G:O6	2.40	0.54
1:w:79:G:H2'	1:w:80:G:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:789:A:N6	28:Z:3:ARG:HD3	2.22	0.54
1:w:904:C:H6	1:w:904:C:O5'	1.90	0.54
1:w:1050:A:H1'	1:w:2751:G:N2	2.22	0.54
1:w:1361:G:H2'	1:w:1362:C:O4'	2.06	0.54
1:w:1668:A:N3	1:w:1670:C:C4	2.75	0.54
1:w:1804:C:OP1	4:B:259:THR:HG23	2.07	0.54
1:w:2100:G:H2'	1:w:2101:G:C8	2.40	0.54
1:w:2353:G:O2'	23:U:32:ARG:O	2.26	0.54
1:w:2704:C:C2'	1:w:2705:A:H5'	2.35	0.54
2:x:42:C:O2	2:x:42:C:C2'	2.55	0.54
2:x:42:C:C1'	7:E:68:PRO:HA	2.37	0.54
2:x:104:A:OP1	22:T:72:ARG:CZ	2.55	0.54
4:B:79:VAL:HB	4:B:111:LEU:CG	2.37	0.54
5:C:52:LEU:HB3	5:C:76:ARG:N	2.22	0.54
9:G:98:ALA:CB	9:G:111:PRO:HG2	2.38	0.54
15:M:7:TYR:O	15:M:8:GLU:HB2	2.06	0.54
17:O:76:TYR:CG	17:O:77:SER:N	2.74	0.54
18:P:24:LYS:HG2	18:P:25:LEU:H	1.70	0.54
21:S:61:ILE:CG2	21:S:62:GLU:N	2.70	0.54
22:T:167:PRO:C	22:T:169:GLU:H	2.15	0.54
24:V:10:LYS:HD2	24:V:15:ALA:H	1.73	0.54
24:V:31:GLY:O	24:V:32:LYS:HB2	2.07	0.54
26:X:49:LYS:C	26:X:51:ALA:H	2.15	0.54
31:y:323:U:H1'	53:u:19:SER:HB3	1.89	0.54
31:y:363:A:C6	45:m:31:PHE:HE2	2.25	0.54
31:y:427:U:OP2	37:e:10:ARG:NH2	2.39	0.54
31:y:486:U:H2'	31:y:487:A:C8	2.40	0.54
31:y:642:A:C2	41:i:113:SER:O	2.61	0.54
31:y:883:C:H6	31:y:883:C:O5'	1.90	0.54
31:y:917:G:H2'	31:y:918:A:H8	1.73	0.54
31:y:949:A:C5	31:y:950:U:C4	2.96	0.54
31:y:1013:G:C3'	31:y:1014:A:H5"	2.38	0.54
31:y:1052:U:H5"	31:y:1052:U:H6	1.73	0.54
31:y:1398:A:C8	31:y:1398:A:H3'	2.41	0.54
36:d:134:ILE:CG1	36:d:135:LYS:H	2.20	0.54
43:k:23:ILE:HG22	43:k:23:ILE:O	2.08	0.54
1:w:74:A:H4'	1:w:75:G:O5'	2.06	0.54
1:w:77:C:H6	1:w:77:C:O5'	1.91	0.54
1:w:270(W):G:N3	1:w:270(X):G:N7	2.54	0.54
1:w:503:A:H5'	1:w:505:A:H5"	1.88	0.54
1:w:574:C:C5	1:w:2054:A:H4'	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1013:C:H2'	1:w:1014:U:H6	1.73	0.54
1:w:1138:G:H4'	10:H:128:GLY:CA	2.37	0.54
1:w:1279:G:C4	1:w:1280:G:H1'	2.42	0.54
1:w:1344:G:O2'	1:w:1384:A:H2'	2.07	0.54
1:w:1414:G:H2'	1:w:1415:U:C6	2.42	0.54
1:w:1492:G:H8	1:w:1492:G:O5'	1.90	0.54
1:w:2271:G:H5'	23:U:19:LYS:C	2.31	0.54
1:w:2298:A:N6	1:w:2318:G:H21	2.05	0.54
1:w:2562:U:O4	1:w:2566:A:C8	2.60	0.54
1:w:2589:A:H5"	4:B:237:GLU:OE1	2.06	0.54
1:w:2618:G:C2	1:w:2619:C:C4	2.96	0.54
1:w:2770:G:N7	1:w:2771:C:C5	2.75	0.54
1:w:2793:G:H2'	1:w:2794:C:H6	1.72	0.54
6:D:24:ASN:HB3	6:D:27:LEU:HD11	1.90	0.54
6:D:72:ASP:C	6:D:74:GLY:H	2.15	0.54
6:D:95:THR:C	6:D:96:LEU:HD22	2.32	0.54
8:F:126:PRO:HG3	8:F:130:ARG:HB2	1.88	0.54
10:H:140:PHE:CE2	10:H:141:LYS:HD3	2.42	0.54
11:I:15:GLY:HA2	11:I:47:ILE:O	2.07	0.54
12:J:83:VAL:HG22	12:J:84:ASN:N	2.21	0.54
16:N:78:LEU:O	16:N:81:PRO:HD2	2.07	0.54
20:R:63:LYS:HD3	20:R:64:LYS:N	2.22	0.54
25:W:4:SER:N	25:W:7:ARG:HG3	2.23	0.54
31:y:161:A:C6	31:y:162:A:C2	2.96	0.54
31:y:300:A:H8	31:y:300:A:O5'	1.91	0.54
31:y:734:G:O5'	31:y:734:G:H8	1.86	0.54
31:y:1129:C:H2'	31:y:1139:G:C5	2.42	0.54
31:y:1409:C:O5'	31:y:1409:C:C6	2.59	0.54
31:y:1462:G:C2'	31:y:1463:C:O4'	2.42	0.54
31:y:1508:G:C2	31:y:1509:C:C4	2.96	0.54
31:y:1526:G:C2	31:y:1527:C:C2	2.96	0.54
32:z:53:G:H2'	32:z:54:U:C6	2.42	0.54
33:2:34:G:OP1	33:2:34:G:H8	1.90	0.54
40:h:143:ARG:HD2	40:h:143:ARG:C	2.31	0.54
43:k:9:ARG:HA	43:k:69:ASN:OD1	2.08	0.54
44:l:22:HIS:O	44:l:29:ILE:HG23	2.07	0.54
50:r:49:GLU:O	50:r:52:LYS:HG2	2.07	0.54
1:w:221:A:H1'	1:w:233:A:H1'	1.89	0.54
1:w:394:A:H2'	1:w:395:U:H4'	1.88	0.54
1:w:1792:G:OP2	4:B:206:LEU:HD12	2.06	0.54
1:w:1815:A:H4'	1:w:1816:G:C4'	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2367:G:C3'	1:w:2368:C:H5"	2.37	0.54
1:w:2378:A:H3'	1:w:2379:G:C5'	2.37	0.54
1:w:2438:U:H2'	1:w:2441:C:C5	2.42	0.54
1:w:2660:A:H2'	1:w:2661:G:N9	2.23	0.54
3:A:193:PHE:C	3:A:193:PHE:HD2	2.15	0.54
4:B:129:ASN:O	4:B:192:THR:HA	2.08	0.54
5:C:31:CYS:HB2	5:C:91:VAL:CG2	2.37	0.54
5:C:84:PHE:CD1	5:C:86:PRO:HD3	2.43	0.54
7:E:79:ASN:ND2	7:E:86:MET:SD	2.81	0.54
9:G:124:GLY:O	9:G:144:VAL:N	2.41	0.54
23:U:26:TYR:CE2	23:U:29:GLN:HB2	2.42	0.54
24:V:58:ILE:HG12	24:V:82:LEU:CD1	2.37	0.54
31:y:5:U:H2'	31:y:5:U:O2	2.08	0.54
31:y:129(B):G:H4'	31:y:130:A:OP2	2.07	0.54
31:y:138:G:C2'	31:y:139:G:H8	2.20	0.54
31:y:155:C:O5'	31:y:155:C:H6	1.91	0.54
31:y:371:G:N2	31:y:373:A:H62	2.04	0.54
31:y:420:U:H1'	31:y:424:G:N2	2.22	0.54
31:y:454:C:N4	31:y:479:C:N4	2.56	0.54
31:y:563:A:O2'	31:y:566:G:O3'	2.24	0.54
31:y:764:C:H2'	31:y:765:G:H5'	1.89	0.54
31:y:909:A:H3'	31:y:910:C:C6	2.42	0.54
31:y:929:G:O2'	31:y:930:C:H5'	2.08	0.54
31:y:1129:C:C5	31:y:1139:G:H2'	2.42	0.54
31:y:1300:G:C4'	31:y:1301:U:H5	2.20	0.54
31:y:1348:U:H2'	31:y:1349:A:O4'	2.08	0.54
31:y:1378:C:P	31:y:1378:C:H6	2.30	0.54
31:y:1509:C:C2	31:y:1510:U:C6	2.95	0.54
31:y:1513:A:C6	31:y:1514:C:C4	2.96	0.54
31:y:1513:A:N1	31:y:1523:G:C6	2.76	0.54
36:d:62:ASP:O	36:d:64:VAL:N	2.40	0.54
37:e:88:VAL:HG13	38:f:97:GLY:CA	2.34	0.54
37:e:204:ILE:HG13	37:e:205:GLU:N	2.23	0.54
38:f:118:ILE:O	38:f:118:ILE:HG12	2.07	0.54
48:p:56:LEU:HA	48:p:59:MET:HE2	1.89	0.54
1:w:1296:G:H5"	1:w:2710:C:H5'	1.90	0.54
1:w:1308:A:H2'	1:w:1309:G:O4'	2.07	0.54
1:w:1588:C:H2'	1:w:1589:C:O4'	2.07	0.54
1:w:1687:G:O2'	1:w:1701:A:N6	2.39	0.54
1:w:1952:A:C2	1:w:2560:C:O2	2.61	0.54
1:w:2090:G:H2'	1:w:2091:U:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2197:U:H1'	1:w:2198:A:N7	2.22	0.54
1:w:2545:G:C6	1:w:2546:U:C4	2.96	0.54
1:w:2545:G:O2'	1:w:2546:U:H5'	2.06	0.54
1:w:2618:G:C4	1:w:2619:C:C5	2.96	0.54
1:w:2711:A:OP1	1:w:2712:U:O4'	2.25	0.54
1:w:2747:G:O6	1:w:2754:U:C2'	2.55	0.54
2:x:20:C:H3'	2:x:21:G:C5'	2.30	0.54
4:B:228:PRO:C	4:B:229:VAL:HG23	2.32	0.54
5:C:50:GLY:O	5:C:51:PHE:HB2	2.06	0.54
5:C:109:LYS:HG3	5:C:189:PRO:HB2	1.89	0.54
5:C:170:LEU:HD23	5:C:185:LYS:CB	2.27	0.54
5:C:172:VAL:HG12	5:C:173:VAL:N	2.22	0.54
6:D:5:PRO:HD2	6:D:9:PRO:HG2	1.88	0.54
7:E:120:LEU:CD1	7:E:178:PHE:HB3	2.38	0.54
10:H:44:LYS:HB2	10:H:83:ILE:CG2	2.37	0.54
13:K:46:GLN:NE2	13:K:126:PRO:HD3	2.13	0.54
15:M:39:ILE:O	15:M:48:LEU:HB2	2.08	0.54
16:N:17:THR:HG23	16:N:18:ASP:N	2.16	0.54
22:T:59:LEU:HB2	22:T:67:LEU:HB3	1.87	0.54
23:U:34:GLY:HA2	23:U:60:PHE:CE2	2.43	0.54
25:W:3:LEU:HD23	25:W:4:SER:N	2.23	0.54
26:X:6:VAL:HB	26:X:35:ARG:O	2.08	0.54
27:Y:16:ARG:HB2	27:Y:20:ARG:HH12	1.71	0.54
30:b:29:ASN:C	30:b:31:LYS:H	2.16	0.54
31:y:49:U:H2'	31:y:50:A:H5'	1.90	0.54
31:y:352:C:H4'	31:y:354:G:OP1	2.07	0.54
31:y:425:G:H8	31:y:425:G:H5"	1.72	0.54
31:y:565:U:OP2	31:y:567:G:P	2.66	0.54
31:y:983:A:C2	31:y:984:C:C6	2.96	0.54
31:y:1090:U:C2	31:y:1096:C:N4	2.76	0.54
31:y:1140:C:O2'	31:y:1141:C:H5'	2.08	0.54
31:y:1159:U:C4	31:y:1182:G:N3	2.76	0.54
31:y:1432:G:H2'	31:y:1467:G:C6	2.42	0.54
31:y:1513:A:N1	31:y:1514:C:C4	2.76	0.54
37:e:134:ASP:CG	37:e:135:LEU:N	2.65	0.54
37:e:205:GLU:O	37:e:206:PHE:C	2.50	0.54
40:h:114:ARG:O	40:h:115:ARG:HB2	2.06	0.54
42:j:85:LEU:HD23	42:j:92:TYR:H	1.73	0.54
44:l:66:LEU:O	44:l:69:ALA:HB3	2.08	0.54
49:q:74:LEU:HD22	49:q:79:VAL:HB	1.88	0.54
53:u:14:LYS:O	53:u:18:GLN:HG2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:7:G:C8	1:w:7:G:O5'	2.60	0.54
1:w:502:A:H3'	1:w:502:A:C8	2.42	0.54
1:w:564:C:H41	1:w:573:G:H5"	1.72	0.54
1:w:751:A:OP2	19:Q:89:ALA:O	2.26	0.54
1:w:787:U:H5"	1:w:788:A:H5'	1.90	0.54
1:w:1363:C:O2	1:w:1809:A:H2	1.90	0.54
1:w:1472:A:H2'	1:w:1473:G:O4'	2.07	0.54
1:w:1753:G:C2	1:w:1756:G:C2	2.95	0.54
1:w:2212:A:H2'	1:w:2212:A:N3	2.23	0.54
1:w:2262:U:H1'	1:w:2328:A:H1'	1.90	0.54
1:w:2355:C:O3'	23:U:24:LYS:HE2	2.07	0.54
1:w:2396:G:O2'	24:V:32:LYS:HG3	2.07	0.54
1:w:2576:G:O2'	1:w:2577:A:H5"	2.07	0.54
1:w:2583:G:C2	1:w:2584:U:O4'	2.60	0.54
1:w:2591:C:O2'	1:w:2592:G:H5'	2.08	0.54
1:w:2751:G:C2	1:w:2751:G:OP1	2.61	0.54
2:x:28:C:H6	2:x:28:C:O5'	1.90	0.54
3:A:34:ALA:HB2	3:A:179:ALA:CB	2.37	0.54
4:B:224:ALA:HA	4:B:231:HIS:HD2	1.73	0.54
5:C:27:LEU:HG	5:C:28:ALA:N	2.22	0.54
9:G:7:GLU:CG	9:G:35:LEU:HD11	2.37	0.54
9:G:122:GLU:CG	9:G:123:LEU:HD22	2.38	0.54
11:I:68:GLU:HB2	11:I:76:ALA:CB	2.27	0.54
14:L:22:ARG:HH12	14:L:71:GLN:NE2	2.06	0.54
15:M:110:LEU:CG	15:M:111:GLU:H	2.19	0.54
19:Q:5:ALA:HB2	19:Q:54:ALA:HB2	1.90	0.54
19:Q:40:ASN:O	19:Q:41:LYS:HB2	2.08	0.54
20:R:54:VAL:HG22	20:R:55:ASN:N	2.23	0.54
22:T:23:LYS:O	22:T:25:PRO:HD3	2.06	0.54
25:W:38:GLN:O	25:W:40:SER:N	2.40	0.54
31:y:37:U:H2'	31:y:38:G:C5'	2.37	0.54
31:y:149:A:H61	31:y:172:A:N6	2.05	0.54
31:y:186(G):C:C4	31:y:191(B):G:C2	2.95	0.54
31:y:580:U:O5'	31:y:580:U:H6	1.90	0.54
31:y:757:U:O2'	31:y:879:C:H1'	2.08	0.54
31:y:1265:G:H2'	31:y:1266:G:O4'	2.08	0.54
31:y:1312:G:H2'	31:y:1313:U:H5'	1.88	0.54
31:y:1429:C:C2'	31:y:1430:C:H5'	2.36	0.54
31:y:1475:G:C4	31:y:1476:G:C8	2.96	0.54
31:y:1497:G:C8	31:y:1497:G:H3'	2.43	0.54
32:z:24:U:C2	32:z:25:C:C6	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:f:152:ARG:HB3	38:f:153:LYS:HD2	1.90	0.54
40:h:35:LYS:C	40:h:37:ASN:H	2.16	0.54
40:h:141:VAL:O	40:h:144:MET:HB2	2.07	0.54
45:m:118:LYS:O	45:m:119:TYR:CD2	2.61	0.54
46:n:80:ARG:HH11	46:n:80:ARG:HG2	1.71	0.54
47:o:6:LEU:O	47:o:10:ALA:HB2	2.08	0.54
48:p:27:VAL:O	48:p:28:GLN:C	2.51	0.54
1:w:69:C:H4'	1:w:75:G:C8	2.42	0.54
1:w:152:G:H2'	1:w:153:C:C6	2.42	0.54
1:w:192:C:H2'	1:w:193:U:H6	1.73	0.54
1:w:671:C:H5"	12:J:41:ARG:CZ	2.36	0.54
1:w:687:C:N4	1:w:787:U:O2'	2.41	0.54
1:w:784:A:O5'	1:w:2588:G:OP1	2.26	0.54
1:w:823:G:N2	1:w:2358:G:H1'	2.22	0.54
1:w:836:G:C5	1:w:837:C:N4	2.76	0.54
1:w:860:U:H2'	1:w:861:A:H8	1.73	0.54
1:w:1374:G:H2'	1:w:1375:C:C6	2.42	0.54
1:w:1441:G:H2'	1:w:1442:G:C8	2.43	0.54
1:w:1542:G:C8	1:w:1542:G:C3'	2.90	0.54
1:w:1568:G:OP1	4:B:86:PRO:HG3	2.08	0.54
1:w:1627:G:O2'	1:w:1628:G:C8	2.58	0.54
1:w:2064:C:H2'	1:w:2065:C:H6	1.72	0.54
1:w:2512:C:H2'	1:w:2513:G:O4'	2.07	0.54
1:w:2685:G:N2	1:w:2725:A:C4	2.76	0.54
1:w:2747:G:H22	1:w:2756:U:H5'	1.72	0.54
1:w:2793:G:C3'	1:w:2794:C:H6	2.19	0.54
2:x:108:C:OP1	2:x:109:G:C4'	2.52	0.54
4:B:183:ARG:HD3	4:B:184:LYS:O	2.08	0.54
5:C:5:LEU:HD12	5:C:5:LEU:N	2.23	0.54
5:C:61:ARG:HD2	5:C:62:PRO:HD3	1.89	0.54
5:C:93:VAL:HG12	5:C:182:LEU:CB	2.13	0.54
6:D:150:LEU:O	6:D:187:LEU:HD23	2.08	0.54
9:G:63:ALA:HA	9:G:66:GLU:CB	2.33	0.54
10:H:145:VAL:C	10:H:146:TYR:HD2	2.15	0.54
11:I:121:VAL:O	11:I:122:LEU:HG	2.08	0.54
12:J:7:ARG:O	12:J:7:ARG:HG3	2.08	0.54
13:K:29:PHE:CE1	22:T:120:ILE:O	2.61	0.54
15:M:87:PHE:HB2	15:M:112:PHE:HE1	1.73	0.54
19:Q:80:PRO:HD2	19:Q:102:HIS:CD2	2.43	0.54
23:U:71:ASP:HA	23:U:78:TYR:H	1.73	0.54
25:W:57:ILE:O	25:W:57:ILE:HG13	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:37:U:H1'	31:y:500:G:H4'	1.89	0.54
31:y:275:G:C2	31:y:276:G:C8	2.96	0.54
31:y:332:G:N2	53:u:16:HIS:CE1	2.76	0.54
31:y:501:C:H2'	31:y:502:G:H8	1.73	0.54
31:y:564:C:H2'	31:y:565:U:O5'	2.05	0.54
31:y:688:G:H2'	31:y:689:C:C6	2.42	0.54
31:y:864:A:C6	31:y:865:A:N6	2.75	0.54
31:y:929:G:H2'	31:y:930:C:C5'	2.36	0.54
31:y:947:G:C4'	31:y:1332:A:H2	2.21	0.54
31:y:1166:G:C2	31:y:1169:A:OP2	2.61	0.54
31:y:1268:A:C1'	54:v:20:LYS:HB2	2.36	0.54
31:y:1296:C:C1'	31:y:1302:U:H3	2.13	0.54
31:y:1450:U:O2'	31:y:1451:A:N7	2.41	0.54
37:e:88:VAL:HA	38:f:97:GLY:O	2.08	0.54
37:e:93:PHE:CZ	37:e:97:LEU:HD21	2.43	0.54
38:f:99:GLY:C	38:f:101:ILE:H	2.15	0.54
40:h:151:TYR:CD1	40:h:151:TYR:N	2.75	0.54
45:m:58:ARG:HD3	45:m:58:ARG:N	2.23	0.54
45:m:90:LYS:O	45:m:91:ASP:HB3	2.07	0.54
1:w:54:G:H1'	28:Z:35:ARG:NH2	2.23	0.54
1:w:64:A:C5	1:w:65:C:N4	2.76	0.54
1:w:119:A:H5'	1:w:120:U:OP1	2.08	0.54
1:w:446:G:H21	1:w:454:A:N6	2.06	0.54
1:w:609(A):A:C2	1:w:609(B):G:H1'	2.43	0.54
1:w:776:G:N3	1:w:776:G:H2'	2.23	0.54
1:w:1567:A:C8	1:w:1568:G:N2	2.75	0.54
1:w:1647:G:OP2	1:w:1647:G:H3'	2.08	0.54
1:w:2512:C:H2'	1:w:2513:G:H1'	1.89	0.54
1:w:2590:A:H5"	4:B:239:ARG:CD	2.37	0.54
1:w:2789:C:O2'	1:w:2892:A:N1	2.37	0.54
1:w:2795:G:H8	1:w:2795:G:P	2.31	0.54
1:w:2846:G:C2'	1:w:2847:U:H5'	2.38	0.54
2:x:8:U:OP2	2:x:8:U:H6	1.91	0.54
5:C:44:TYR:HE2	5:C:46:ALA:CB	2.21	0.54
19:Q:82:LEU:O	19:Q:97:LYS:HA	2.08	0.54
24:V:88:LYS:CG	24:V:89:GLU:H	2.16	0.54
31:y:404:U:N3	31:y:405:U:C4	2.75	0.54
31:y:411:A:N6	31:y:429:U:H5"	2.23	0.54
31:y:484:G:O2'	31:y:485:G:P	2.65	0.54
31:y:564:C:C4	31:y:565:U:C4	2.96	0.54
31:y:814:A:N3	31:y:816:A:OP1	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:865:A:N3	31:y:918:A:O2'	2.36	0.54
31:y:877:C:H4'	41:i:4:ASP:OD1	2.08	0.54
31:y:882:C:O5'	31:y:882:C:H6	1.91	0.54
31:y:910:C:H2'	31:y:911:U:O4'	2.08	0.54
31:y:1053:G:C4'	31:y:1054:C:C5'	2.80	0.54
31:y:1092:A:O4'	31:y:1183:A:N6	2.38	0.54
31:y:1347:G:C8	42:j:107:ARG:CB	2.91	0.54
31:y:1372:U:H2'	31:y:1373:G:O4'	2.08	0.54
31:y:1381:U:C2'	31:y:1382:C:H5'	2.38	0.54
31:y:1408:A:H2'	31:y:1409:C:H6	1.73	0.54
31:y:1425:U:O5'	31:y:1425:U:H6	1.91	0.54
31:y:1431:C:C5	31:y:1432:G:C5	2.96	0.54
37:e:78:LEU:HG	37:e:97:LEU:HD13	1.89	0.54
38:f:132:ALA:O	38:f:136:MET:HE2	2.08	0.54
40:h:72:ARG:O	40:h:73:MET:HG3	2.08	0.54
41:i:11:THR:HA	41:i:14:ARG:HG2	1.89	0.54
41:i:39:LEU:CD1	41:i:45:ILE:HB	2.37	0.54
41:i:75:ARG:HG3	41:i:75:ARG:NH1	2.20	0.54
41:i:119:LEU:CD2	41:i:127:LEU:HD23	2.37	0.54
43:k:23:ILE:O	43:k:23:ILE:CG2	2.56	0.54
45:m:112:ARG:NH1	45:m:112:ARG:HB3	2.23	0.54
49:q:43:LYS:NZ	49:q:49:LEU:HD13	2.23	0.54
50:r:36:ILE:HD12	50:r:37:LYS:N	2.23	0.54
1:w:182:A:N3	1:w:433:C:O2'	2.32	0.54
1:w:294:A:C3'	1:w:295:G:H8	2.21	0.54
1:w:655:A:H5"	1:w:656:G:OP1	2.08	0.54
1:w:748:G:O6	1:w:751:A:H5"	2.07	0.54
1:w:818:G:N2	1:w:1190:G:O6	2.41	0.54
1:w:849:A:C8	1:w:850:C:C5	2.96	0.54
1:w:856:C:H1'	23:U:27:GLU:HB2	1.90	0.54
1:w:1013:C:H2'	1:w:1014:U:C6	2.43	0.54
1:w:1080:C:H3'	1:w:1081:U:H6	1.72	0.54
1:w:1620:G:H2'	1:w:1621:U:H6	1.73	0.54
1:w:1935:G:O2'	1:w:1936:A:H5"	2.07	0.54
1:w:2116:G:H5"	1:w:2117:A:C8	2.43	0.54
1:w:2572:A:C4'	1:w:2573:C:C5'	2.82	0.54
1:w:2675:A:N6	1:w:2732:G:H1	2.06	0.54
1:w:2709:G:O2'	1:w:2710:C:C5'	2.46	0.54
4:B:2:ALA:O	4:B:3:VAL:C	2.50	0.54
9:G:5:LEU:HB2	9:G:13:GLY:HA2	1.90	0.54
11:I:77:ILE:HD13	11:I:78:ARG:C	2.33	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:95:VAL:O	12:J:125:VAL:HG23	2.08	0.54
14:L:68:ARG:HG2	14:L:69:ASP:N	2.22	0.54
17:O:95:LEU:HD13	18:P:4:ILE:HG21	1.89	0.54
20:R:80:ILE:O	20:R:81:VAL:HB	2.07	0.54
21:S:73:ARG:HD3	21:S:78:ALA:HB2	1.89	0.54
22:T:9:TYR:HB2	22:T:62:PRO:HG2	1.90	0.54
25:W:29:LYS:O	25:W:32:LEU:HB2	2.07	0.54
25:W:31:GLU:O	25:W:32:LEU:O	2.26	0.54
27:Y:41:PRO:HB2	27:Y:42:PRO:HD2	1.89	0.54
31:y:283:C:O5'	31:y:283:C:C6	2.60	0.54
31:y:547:A:H1'	31:y:548:G:C1'	2.38	0.54
31:y:681:C:H2'	31:y:682:G:O4'	2.08	0.54
31:y:737:A:H2'	31:y:738:C:C6	2.42	0.54
31:y:892:A:C2	31:y:907:A:C6	2.95	0.54
31:y:1052:U:H6	31:y:1052:U:C5'	2.21	0.54
31:y:1148:U:H3'	31:y:1148:U:C6	2.43	0.54
31:y:1239:A:N6	31:y:1299:A:C8	2.76	0.54
31:y:1254:C:OP1	43:k:45:ARG:CG	2.56	0.54
35:c:59:GLU:C	35:c:61:LEU:H	2.16	0.54
37:e:22:LYS:HD2	37:e:25:ARG:CB	2.37	0.54
42:j:53:VAL:HG21	42:j:58:ARG:HH22	1.72	0.54
43:k:4:ILE:HG13	43:k:5:ARG:N	2.20	0.54
49:q:26:ARG:HH22	49:q:33:ILE:CG1	2.16	0.54
1:w:67:U:N3	1:w:74:A:C8	2.70	0.53
1:w:71:A:OP2	1:w:113:G:H4'	2.08	0.53
1:w:301:G:H2'	1:w:302:C:C4'	2.37	0.53
1:w:649:G:H2'	1:w:650:C:C6	2.33	0.53
1:w:1967:C:H2'	1:w:1968:G:H5'	1.90	0.53
1:w:2146:C:H6	1:w:2146:C:H3'	1.73	0.53
1:w:2208:U:H4'	4:B:151:LYS:HE3	1.89	0.53
1:w:2248:C:H2'	1:w:2249:U:H5'	1.90	0.53
1:w:2548:G:C3'	1:w:2549:G:H5"	2.38	0.53
1:w:2553:G:H1'	1:w:2582:G:C2	2.44	0.53
1:w:2683:C:H42	1:w:2727:G:H21	1.56	0.53
4:B:111:LEU:HD12	4:B:115:GLN:CB	2.38	0.53
4:B:193:VAL:HG23	4:B:194:GLY:N	2.23	0.53
5:C:61:ARG:N	5:C:62:PRO:HD2	2.23	0.53
8:F:125:VAL:HG12	8:F:131:VAL:CG2	2.38	0.53
12:J:34:GLY:O	12:J:35:HIS:HB3	2.08	0.53
13:K:33:GLY:CA	13:K:132:VAL:HB	2.38	0.53
13:K:34:LEU:HA	13:K:130:LYS:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:78:PRO:HD3	13:K:87:LYS:HB3	1.89	0.53
13:K:106:VAL:HG21	13:K:118:LEU:CD1	2.38	0.53
22:T:150:LEU:O	22:T:171:ILE:HD13	2.08	0.53
27:Y:8:LYS:O	27:Y:9:LYS:HE2	2.08	0.53
31:y:236:G:H2'	31:y:237:C:C6	2.43	0.53
31:y:501:C:O2'	31:y:549:C:H1'	2.07	0.53
31:y:671:G:N1	31:y:736:C:C4	2.76	0.53
31:y:779:C:O3'	44:l:122:LYS:CB	2.55	0.53
31:y:923:A:H8	31:y:923:A:O5'	1.91	0.53
31:y:934:C:H5	31:y:1345:U:H5"	1.72	0.53
31:y:1281:U:H5"	31:y:1282:C:C5	2.43	0.53
31:y:1346:A:H4'	42:j:120:ARG:HH21	1.73	0.53
31:y:1401:G:C8	31:y:1401:G:H3'	2.43	0.53
31:y:1451:A:H5"	31:y:1452:C:H5	1.71	0.53
32:z:17:C:OP2	32:z:17(A):U:C2	2.60	0.53
35:c:25:ASN:CB	35:c:191:ASP:HA	2.15	0.53
35:c:87:ARG:HH22	35:c:230:VAL:HG22	1.72	0.53
36:d:76:VAL:CG1	36:d:84:ILE:HD12	2.32	0.53
42:j:20:ARG:CG	42:j:21:PRO:HD2	2.38	0.53
46:n:3:ARG:NH1	46:n:7:VAL:HG13	2.24	0.53
1:w:77:C:N4	1:w:78:A:N6	2.55	0.53
1:w:177:G:H3'	1:w:178:G:H8	1.68	0.53
1:w:186:G:H2'	1:w:187:G:C8	2.43	0.53
1:w:196:A:N6	1:w:831:G:H1'	2.23	0.53
1:w:363(F):U:H5'	1:w:363(F):U:H6	1.72	0.53
1:w:388:G:C8	1:w:390:A:N7	2.77	0.53
1:w:443:A:N7	6:D:40:ARG:HD3	2.22	0.53
1:w:519:U:H3'	1:w:520:G:H8	1.72	0.53
1:w:602:G:O2'	1:w:655:A:H2	1.91	0.53
1:w:697:C:N4	1:w:698:C:H41	2.06	0.53
1:w:782:A:H8	1:w:782:A:OP1	1.90	0.53
1:w:849:A:H2'	1:w:850:C:H6	1.72	0.53
1:w:1281:G:H2'	1:w:1282:U:H6	1.71	0.53
1:w:1284:A:N7	1:w:1285:G:C2	2.75	0.53
1:w:1448(B):A:C2	1:w:1529:A:N3	2.76	0.53
1:w:1503:U:N3	1:w:1504:C:N4	2.57	0.53
1:w:1628:G:H2'	1:w:1629:U:C6	2.43	0.53
1:w:1665:A:H1'	11:I:1:MET:SD	2.48	0.53
1:w:2183:C:H2'	1:w:2184:G:H8	1.73	0.53
1:w:2349:G:H2'	1:w:2350:C:H5"	1.89	0.53
1:w:2712:U:H1'	1:w:2712(B):A:C5	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:24:G:H1'	2:x:27:C:H42	1.74	0.53
4:B:69:ARG:NH2	4:B:118:VAL:O	2.42	0.53
4:B:117:VAL:HG13	4:B:128:GLY:C	2.33	0.53
10:H:42:GLU:HA	10:H:83:ILE:CD1	2.38	0.53
10:H:74:PHE:HA	10:H:142:ARG:HB2	1.90	0.53
13:K:73:PRO:HB3	13:K:89:ASN:O	2.08	0.53
14:L:84:ALA:O	14:L:87:TYR:C	2.51	0.53
16:N:26:ASP:HB3	16:N:91:ARG:CG	2.38	0.53
16:N:99:LEU:CD1	16:N:102:ILE:HG12	2.38	0.53
22:T:150:LEU:HG	22:T:171:ILE:CD1	2.31	0.53
24:V:48:LYS:HG2	24:V:63:ALA:CA	2.22	0.53
26:X:7:LYS:HA	26:X:33:GLN:O	2.08	0.53
31:y:51:A:C2	31:y:353:A:N6	2.76	0.53
31:y:227:G:H21	49:q:62:VAL:CA	2.20	0.53
31:y:298:A:C2	31:y:299:G:C5	2.96	0.53
31:y:375:U:O3'	49:q:6:LEU:HD22	2.07	0.53
31:y:442:C:O2'	31:y:443:C:H5'	2.09	0.53
31:y:498:A:O2'	31:y:500:G:OP2	2.24	0.53
31:y:549:C:C4	31:y:550:G:N7	2.76	0.53
31:y:803:G:O2'	31:y:804:U:H5'	2.08	0.53
31:y:977:A:N1	31:y:1224:G:OP1	2.41	0.53
31:y:1096:C:H1'	31:y:1170:A:O2'	2.08	0.53
31:y:1500:A:OP1	31:y:1508:G:OP1	2.26	0.53
32:z:18:G:C6	32:z:57:A:C6	2.96	0.53
35:c:24:TRP:C	35:c:24:TRP:CD1	2.85	0.53
36:d:14:ILE:H	47:o:57:ARG:HE	1.56	0.53
36:d:130:VAL:O	36:d:134:ILE:HG12	2.08	0.53
37:e:57:ARG:NH2	38:f:107:ARG:HD2	2.23	0.53
40:h:150:ALA:HB1	44:l:57:THR:OG1	2.07	0.53
45:m:59:LEU:HD13	45:m:61:SER:N	2.19	0.53
1:w:13:A:P	1:w:13:A:H8	2.31	0.53
1:w:377:C:H2'	1:w:378:C:C6	2.43	0.53
1:w:570:G:H22	1:w:2498:C:C1'	2.21	0.53
1:w:755:C:H2'	1:w:756:C:C6	2.43	0.53
1:w:897:C:H2'	1:w:898:C:H6	1.73	0.53
1:w:918:A:O2'	2:x:97:G:N2	2.41	0.53
1:w:1600:C:H2'	1:w:1601:G:O4'	2.09	0.53
1:w:1669:A:H5'	1:w:1671:U:O4	2.09	0.53
1:w:1790:C:O2'	4:B:209:ALA:HB2	2.08	0.53
1:w:2525:G:N1	1:w:2539:C:C4	2.75	0.53
1:w:2686:G:C6	1:w:2687:U:C4	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2785:C:H5'	1:w:2785:C:C6	2.42	0.53
1:w:2786:U:O2'	5:C:62:PRO:HA	2.07	0.53
2:x:76:G:H3'	2:x:77:U:C6	2.42	0.53
2:x:82:G:H2'	2:x:83:G:O4'	2.08	0.53
4:B:155:LEU:O	4:B:156:ALA:HB3	2.08	0.53
6:D:149:VAL:HG22	6:D:168:VAL:HG12	1.90	0.53
10:H:32:VAL:CG2	10:H:71:MET:HE3	2.35	0.53
11:I:43:VAL:HB	11:I:54:GLU:N	2.24	0.53
12:J:127:ALA:N	12:J:145:PRO:HG3	2.24	0.53
14:L:76:VAL:HA	14:L:79:LEU:CD1	2.38	0.53
16:N:66:VAL:HA	16:N:71:GLY:HA2	1.90	0.53
16:N:107:ASP:HB3	31:y:1431:C:H5"	1.90	0.53
17:O:74:LEU:HD22	17:O:75:ASN:N	2.23	0.53
17:O:98:LEU:HD22	17:O:101:ARG:O	2.08	0.53
18:P:23:GLU:CD	18:P:24:LYS:H	2.16	0.53
19:Q:3:ALA:HB1	19:Q:107:LEU:HB2	1.89	0.53
20:R:43:VAL:HA	20:R:46:ALA:HB3	1.89	0.53
21:S:23:ARG:HD3	21:S:38:ILE:CG2	2.36	0.53
26:X:49:LYS:HA	26:X:49:LYS:HZ2	1.72	0.53
29:a:24:ALA:O	29:a:46:ARG:HB2	2.08	0.53
31:y:128:G:C6	31:y:234:C:N4	2.75	0.53
31:y:186(E):C:O5'	31:y:186(E):C:H6	1.90	0.53
31:y:475:G:C6	31:y:476:G:C6	2.96	0.53
31:y:584:G:H5'	50:r:91:ARG:HH21	1.73	0.53
31:y:586:C:O2'	31:y:878:G:H4'	2.08	0.53
31:y:671:G:N1	31:y:736:C:N4	2.56	0.53
31:y:780:A:O3'	31:y:1523:G:H5'	2.07	0.53
31:y:807:A:H2'	31:y:808:C:C5	2.43	0.53
31:y:985:C:O2	31:y:986:A:C8	2.61	0.53
31:y:1329:A:OP2	54:v:7:ARG:NH1	2.41	0.53
31:y:1347:G:N1	31:y:1373:G:H2'	2.23	0.53
31:y:1408:A:O2'	31:y:1409:C:H5'	2.07	0.53
33:2:2:C:H6	33:2:2:C:O5'	1.90	0.53
33:2:64:A:H2'	33:2:65:G:C8	2.43	0.53
35:c:97:TRP:HH2	35:c:102:LEU:HD12	1.73	0.53
36:d:151:VAL:CG1	36:d:152:ILE:H	2.01	0.53
37:e:207:TYR:O	37:e:208:SER:O	2.26	0.53
42:j:19:LEU:HB3	42:j:59:PHE:HD2	1.71	0.53
44:l:14:VAL:O	44:l:15:ALA:HB3	2.08	0.53
45:m:52:ARG:HB3	45:m:68:TYR:OH	2.08	0.53
52:t:48:THR:HG23	52:t:49:ILE:N	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:t:65:ASN:C	52:t:67:VAL:H	2.16	0.53
1:w:63:U:H5"	1:w:64:A:OP1	2.09	0.53
1:w:294:A:H2'	1:w:295:G:H8	1.72	0.53
1:w:388:G:C2'	1:w:390:A:H62	2.22	0.53
1:w:774:A:H4'	1:w:777:A:N3	2.23	0.53
1:w:1121:C:O5'	1:w:1121:C:H6	1.92	0.53
1:w:1520:U:H3'	1:w:1521:G:C8	2.42	0.53
1:w:1597:A:O2'	1:w:1598:C:H5	1.91	0.53
1:w:1793:C:O2	1:w:1970:A:C2	2.61	0.53
1:w:1794:U:C1'	1:w:1900:A:C2	2.90	0.53
1:w:1795:C:H4'	1:w:1901:A:OP1	2.08	0.53
1:w:1996:C:H1'	1:w:1997:G:O2'	2.08	0.53
1:w:2751:G:N3	1:w:2751:G:C2'	2.68	0.53
1:w:2773:C:H5"	5:C:164:ARG:HB3	1.90	0.53
2:x:35:U:O2'	2:x:36:C:H5'	2.07	0.53
6:D:48:THR:HG23	6:D:85:PHE:CZ	2.44	0.53
9:G:77:LEU:HD11	9:G:79:ILE:HB	1.89	0.53
10:H:80:ALA:HB3	10:H:146:TYR:H	1.73	0.53
11:I:10:VAL:CG2	11:I:17:ARG:O	2.57	0.53
19:Q:38:TYR:HD2	27:Y:41:PRO:HG3	1.70	0.53
22:T:77:ASP:HB2	22:T:84:GLU:HB3	1.89	0.53
23:U:41:ARG:HA	23:U:57:PHE:CG	2.43	0.53
24:V:9:GLY:HA3	24:V:61:ARG:NH1	2.24	0.53
25:W:22:GLU:O	25:W:25:VAL:HG22	2.08	0.53
31:y:104:G:C2'	31:y:105:G:C5'	2.86	0.53
31:y:370:C:H2'	31:y:371:G:O4'	2.09	0.53
31:y:448:A:C4	31:y:487:A:C2	2.97	0.53
31:y:457:C:O2'	31:y:458:C:H5'	2.08	0.53
31:y:957:U:O2	31:y:960:U:H5'	2.08	0.53
31:y:1068:G:H8	31:y:1068:G:H5"	1.74	0.53
31:y:1074:G:C4	31:y:1075:C:C5	2.97	0.53
31:y:1126:U:H1'	31:y:1281:U:H1'	1.89	0.53
31:y:1386:G:C2	31:y:1387:G:C5	2.96	0.53
31:y:1443:G:N2	31:y:1448:C:OP2	2.40	0.53
31:y:1470:G:H2'	31:y:1471:G:C4'	2.37	0.53
31:y:1488:G:H2'	31:y:1489:G:H8	1.73	0.53
32:z:33:U:O5'	32:z:33:U:H6	1.91	0.53
32:z:75:C:H6	32:z:75:C:O5'	1.92	0.53
36:d:160:ALA:HB2	36:d:164:ARG:HH11	1.72	0.53
39:g:8:ILE:CG2	39:g:61:LEU:HD12	2.39	0.53
40:h:31:MET:HG3	40:h:36:LYS:HG2	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:k:10:GLY:HA2	43:k:94:VAL:HG22	1.91	0.53
46:n:23:TYR:O	46:n:66:LEU:HA	2.07	0.53
48:p:67:LEU:O	48:p:70:LEU:HB3	2.09	0.53
52:t:44:MET:HG2	52:t:62:ILE:CD1	2.38	0.53
53:u:14:LYS:HA	53:u:17:ARG:NE	2.24	0.53
1:w:143:C:H2'	1:w:144:C:H5"	1.91	0.53
1:w:449:A:H1'	17:O:3:ARG:HH22	1.73	0.53
1:w:548:A:O5'	1:w:548:A:C8	2.59	0.53
1:w:613:U:H1'	1:w:616:A:N7	2.22	0.53
1:w:811:U:N3	1:w:1250:G:H5'	2.24	0.53
1:w:827:U:OP2	1:w:2429:G:OP1	2.27	0.53
1:w:933:A:H2'	1:w:934:G:H8	1.73	0.53
1:w:957:A:P	13:K:76:LYS:HA	2.48	0.53
1:w:1451:C:O5'	1:w:1453:A:H8	1.92	0.53
1:w:1500:G:N2	4:B:100:GLY:HA3	2.22	0.53
1:w:1638:C:H5"	1:w:2710:C:H1'	1.90	0.53
1:w:1777:U:H6	1:w:1777:U:O5'	1.92	0.53
1:w:1969:A:H5'	1:w:1970:A:OP1	2.08	0.53
1:w:2064:C:C2	1:w:2450:A:N6	2.76	0.53
1:w:2359:C:O2'	29:a:49:VAL:HG13	2.07	0.53
1:w:2671:A:C2'	1:w:2672:G:H5'	2.38	0.53
1:w:2728:U:C2'	1:w:2729:G:H5'	2.38	0.53
7:E:17:PRO:HB3	7:E:20:ILE:HD12	1.90	0.53
7:E:56:ALA:O	7:E:60:LEU:HG	2.08	0.53
7:E:77:ILE:CG1	32:z:19:G:C6	2.89	0.53
7:E:77:ILE:HG21	32:z:56:C:N4	2.23	0.53
8:F:152:ARG:HD2	8:F:152:ARG:N	2.22	0.53
10:H:157:ARG:N	10:H:158:PRO:CD	2.71	0.53
12:J:5:ASP:C	12:J:6:LEU:HD12	2.32	0.53
13:K:32:PHE:HZ	13:K:111:GLU:HB3	1.72	0.53
14:L:38:VAL:CG2	14:L:39:PRO:HD3	2.39	0.53
17:O:98:LEU:HD12	17:O:106:PHE:CG	2.42	0.53
18:P:34:GLU:O	18:P:62:LEU:HD23	2.09	0.53
22:T:128:VAL:HG13	22:T:133:ILE:HD13	1.90	0.53
23:U:37:LEU:HG	23:U:60:PHE:HA	1.91	0.53
31:y:293:G:N2	31:y:294:U:C2	2.77	0.53
31:y:310:G:P	49:q:30:GLY:HA2	2.48	0.53
31:y:532:A:N1	31:y:1206:G:N2	2.53	0.53
31:y:533:A:N6	31:y:536:C:C6	2.77	0.53
31:y:538:G:OP1	45:m:114:LYS:HD2	2.09	0.53
31:y:592:G:C2	31:y:593:G:C4	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:659:U:O2	31:y:746:A:C2	2.61	0.53
31:y:813:U:C4	31:y:814:A:N7	2.76	0.53
31:y:1315:U:O2'	31:y:1316:G:H5'	2.09	0.53
31:y:1378:C:C5'	40:h:5:ARG:O	2.50	0.53
32:z:46:A:O2'	32:z:47:U:H5"	2.09	0.53
35:c:71:VAL:CG2	35:c:72:GLY:N	2.70	0.53
37:e:9:CYS:C	37:e:33:MET:SD	2.92	0.53
37:e:93:PHE:CE1	37:e:97:LEU:HD21	2.43	0.53
38:f:107:ARG:O	38:f:111:GLU:HG2	2.08	0.53
40:h:50:ILE:O	40:h:54:THR:O	2.26	0.53
40:h:150:ALA:HA	44:l:59:TYR:HB3	1.91	0.53
45:m:116:ARG:HH12	45:m:123:LYS:HD2	1.74	0.53
1:w:249:C:O2	1:w:249:C:H2'	2.09	0.53
1:w:294:A:H3'	1:w:295:G:C8	2.42	0.53
1:w:529:A:N6	1:w:2042:A:C4	2.76	0.53
1:w:1048:A:H8	1:w:1048:A:O5'	1.92	0.53
1:w:1056:G:H4'	1:w:1086:A:C8	2.44	0.53
1:w:1366:A:H5"	1:w:1367:A:N7	2.24	0.53
1:w:1497:U:H2'	1:w:1498:C:H5'	1.90	0.53
1:w:1651:G:H5'	14:L:39:PRO:HG2	1.90	0.53
1:w:1718:G:H3'	1:w:1725:G:P	2.47	0.53
1:w:1791:A:O2'	4:B:208:LYS:HA	2.09	0.53
1:w:1862:G:C6	1:w:1863:G:C8	2.96	0.53
1:w:1913:A:H61	31:y:1493:A:H8	1.56	0.53
1:w:2472:G:H22	1:w:2477:C:C5'	2.22	0.53
1:w:2497:A:O5'	1:w:2497:A:C8	2.62	0.53
1:w:2525:G:HO2'	1:w:2742:C:H4'	1.71	0.53
2:x:21:G:H2'	2:x:22:U:C5	2.36	0.53
2:x:81:G:C6	2:x:82:G:C5	2.96	0.53
3:A:216:THR:HA	3:A:221:PRO:O	2.09	0.53
5:C:93:VAL:O	5:C:96:PHE:O	2.26	0.53
5:C:127:ASP:O	5:C:128:SER:CB	2.56	0.53
6:D:52:VAL:O	6:D:52:VAL:CG1	2.56	0.53
7:E:12:TYR:CD2	7:E:12:TYR:N	2.76	0.53
12:J:46:LYS:HB3	12:J:51:PHE:CE2	2.44	0.53
13:K:61:GLY:CA	22:T:183:LEU:HG	2.23	0.53
16:N:107:ASP:O	16:N:111:ARG:CD	2.56	0.53
19:Q:21:VAL:CG2	19:Q:22:ASP:N	2.71	0.53
19:Q:66:GLU:O	19:Q:67:ASP:CB	2.57	0.53
25:W:59:ARG:O	25:W:61:LEU:N	2.37	0.53
30:b:14:CYS:O	30:b:15:LYS:HG3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:44:G:OP2	49:q:12:LYS:HB3	2.08	0.53
31:y:129(A):U:H2'	31:y:131:C:H5	1.74	0.53
31:y:263:A:H3'	31:y:263:A:N3	2.24	0.53
31:y:269:C:O2'	31:y:270:A:H5'	2.08	0.53
31:y:279:A:C6	50:r:98:LEU:HD13	2.43	0.53
31:y:323:U:H5'	53:u:23:ARG:CB	2.39	0.53
31:y:409:G:H2'	31:y:410:G:O4'	2.08	0.53
31:y:896:C:C4'	50:r:101:ARG:HA	2.37	0.53
31:y:103(B):G:H2'	31:y:103(C):G:H5'	1.89	0.53
31:y:1069:C:H1'	31:y:1192:C:O2	2.08	0.53
31:y:1268:A:O2'	31:y:1269:A:C5'	2.57	0.53
31:y:1509:C:N4	31:y:1510:U:C4	2.77	0.53
33:2:14:A:H2'	33:2:15:G:H5'	1.91	0.53
37:e:19:LEU:C	37:e:21:LEU:N	2.61	0.53
37:e:47:ARG:HB3	37:e:47:ARG:NH1	2.23	0.53
39:g:8:ILE:HD12	39:g:63:TYR:CE2	2.43	0.53
46:n:56:LEU:O	46:n:59:TYR:HB3	2.09	0.53
50:r:31:LEU:O	50:r:32:TYR:HB2	2.09	0.53
1:w:74:A:H5"	1:w:75:G:H4'	1.91	0.53
1:w:107:C:O3'	1:w:292:C:O2	2.27	0.53
1:w:233:A:H8	1:w:233:A:O5'	1.92	0.53
1:w:321:G:C2	1:w:341:G:H4'	2.44	0.53
1:w:443:A:N6	6:D:37:ALA:HB1	2.24	0.53
1:w:469:G:O6	28:Z:39:ARG:NE	2.42	0.53
1:w:603:A:H4'	1:w:604:G:C4'	2.39	0.53
1:w:1894:C:H2'	1:w:1895:C:H6	1.70	0.53
1:w:2051:A:C5'	1:w:2578:G:O5'	2.57	0.53
1:w:2164:C:H2'	1:w:2165:G:O4'	2.09	0.53
1:w:2271:G:C4'	23:U:19:LYS:HB3	2.38	0.53
1:w:2291:U:H2'	1:w:2292:C:C6	2.43	0.53
1:w:2365:G:OP1	23:U:55:ARG:N	2.42	0.53
1:w:2496:C:H5	1:w:2497:A:H62	1.56	0.53
1:w:2512:C:H5'	5:C:122:PHE:CE2	2.43	0.53
1:w:2525:G:N2	1:w:2539:C:C5	2.77	0.53
1:w:2573:C:C6	1:w:2573:C:O5'	2.62	0.53
1:w:2653:U:H3	1:w:2667:C:H42	1.56	0.53
1:w:2676:C:C2	1:w:2677:G:N7	2.77	0.53
2:x:30:C:H2'	2:x:31:C:C5'	2.38	0.53
4:B:117:VAL:HG12	4:B:118:VAL:N	2.23	0.53
6:D:51:GLU:O	6:D:52:VAL:HG12	2.08	0.53
6:D:112:ARG:CB	6:D:117:LYS:HD2	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:55:PRO:HG3	8:F:61:HIS:CE1	2.43	0.53
13:K:28:ALA:HB1	13:K:105:GLU:CD	2.34	0.53
21:S:32:PRO:O	21:S:33:LYS:HB2	2.09	0.53
22:T:41:LEU:HD13	22:T:42:VAL:HG23	1.90	0.53
22:T:59:LEU:HD23	22:T:67:LEU:HD12	1.90	0.53
31:y:659:U:H3'	31:y:659:U:C6	2.44	0.53
31:y:898:G:H2'	31:y:900:A:OP2	2.09	0.53
31:y:1136:U:OP2	31:y:1137:C:C5	2.62	0.53
31:y:1154:G:C6	31:y:1155:G:C6	2.96	0.53
31:y:1268:A:O4'	54:v:20:LYS:HG3	2.09	0.53
31:y:1344:C:O2'	42:j:120:ARG:CG	2.56	0.53
31:y:1352:C:C4	31:y:1353:G:N7	2.76	0.53
35:c:100:GLY:HA3	35:c:104:ASN:CB	2.38	0.53
35:c:119:GLU:O	35:c:122:PHE:HB3	2.09	0.53
38:f:105:VAL:HG22	38:f:106:PRO:CD	2.32	0.53
40:h:9:VAL:HG22	40:h:10:ARG:N	2.21	0.53
40:h:23:VAL:HG22	40:h:62:PHE:CE2	2.43	0.53
40:h:41:ARG:HH12	42:j:41:VAL:HA	1.73	0.53
40:h:69:VAL:HG21	40:h:104:LEU:HD11	1.90	0.53
42:j:4:TYR:HB3	42:j:87:GLN:OE1	2.08	0.53
43:k:8:LEU:HA	43:k:96:ILE:HG13	1.90	0.53
44:l:51:LYS:O	44:l:55:LYS:HE2	2.08	0.53
48:p:62:GLN:O	48:p:65:ARG:HG3	2.08	0.53
50:r:51:TYR:CD2	50:r:57:VAL:HG11	2.43	0.53
53:u:59:ALA:O	53:u:60:GLU:C	2.50	0.53
1:w:112:U:H3'	1:w:113:G:C8	2.44	0.53
1:w:116:C:O2'	1:w:126:A:C1'	2.56	0.53
1:w:331:A:H1'	1:w:1209:G:H22	1.73	0.53
1:w:439:G:H2'	1:w:440:G:O4'	2.08	0.53
1:w:523:C:H4'	1:w:552:G:N2	2.22	0.53
1:w:752:A:C2	1:w:2609:U:N3	2.74	0.53
1:w:902:C:H2'	1:w:903:C:O4'	2.09	0.53
1:w:995:C:C1'	17:O:61:TRP:HZ2	2.19	0.53
1:w:1161:C:C1'	18:P:8:GLY:HA3	2.38	0.53
1:w:1549:C:H2'	1:w:1550:C:C5	2.44	0.53
1:w:2321:G:H2'	1:w:2321:G:N3	2.23	0.53
1:w:2478:A:H2'	1:w:2479:G:O4'	2.08	0.53
1:w:2504:U:O2'	1:w:2505:G:H5'	2.09	0.53
1:w:2603:G:C2'	1:w:2604:U:H5'	2.38	0.53
4:B:198:ASN:HB3	4:B:201:HIS:CE1	2.43	0.53
7:E:47:LYS:HB2	7:E:72:ARG:NH1	2.18	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:156:ASP:C	7:E:157:ILE:HD12	2.34	0.53
9:G:82:ARG:HG2	9:G:83:ALA:H	1.72	0.53
27:Y:16:ARG:HB2	27:Y:20:ARG:NH1	2.24	0.53
28:Z:24:THR:H	28:Z:28:ARG:CD	2.21	0.53
29:a:30:ARG:NH1	29:a:31:HIS:NE2	2.57	0.53
30:b:11:CYS:C	30:b:13:LYS:H	2.17	0.53
31:y:126:G:H4'	31:y:634:C:H1'	1.89	0.53
31:y:193:C:H4'	53:u:61:SER:N	2.24	0.53
31:y:417:C:C2	31:y:418:C:C5	2.96	0.53
31:y:605:U:O4	31:y:606:G:C6	2.62	0.53
31:y:1112:C:O2	36:d:177:THR:CG2	2.52	0.53
41:i:112:LEU:O	41:i:118:VAL:HG13	2.08	0.53
44:l:92:GLU:C	44:l:96:ARG:HD3	2.33	0.53
50:r:6:LEU:CD2	50:r:59:ILE:HG22	2.33	0.53
51:s:61:LYS:HA	51:s:64:ARG:HB2	1.90	0.53
54:v:16:GLY:CA	54:v:22:ARG:HH12	2.18	0.53
1:w:65:C:O2'	1:w:456:C:C4	2.62	0.53
1:w:124:G:H5"	1:w:125:G:OP1	2.08	0.53
1:w:464:U:H4'	28:Z:5:TRP:HZ3	1.74	0.53
1:w:653:C:O3'	1:w:655:A:OP2	2.27	0.53
1:w:979:G:N2	1:w:985:C:N4	2.57	0.53
1:w:1189:A:H5"	12:J:32:THR:HG21	1.91	0.53
1:w:1277:G:H2'	1:w:1278:A:O4'	2.09	0.53
1:w:1448(B):A:C2'	1:w:1449:G:P	2.97	0.53
1:w:1570:A:C2	1:w:1571:A:N1	2.77	0.53
1:w:1708:C:O5'	1:w:1708:C:H6	1.92	0.53
1:w:2543:G:H2'	1:w:2544:G:O4'	2.08	0.53
1:w:2579:C:H4'	5:C:134:ILE:HD11	1.89	0.53
1:w:2772:C:H5'	5:C:166:THR:HG21	1.89	0.53
1:w:2881:C:H2'	1:w:2882:A:H8	1.74	0.53
4:B:79:VAL:CB	4:B:111:LEU:HG	2.39	0.53
5:C:177:PRO:O	5:C:180:ASN:N	2.39	0.53
7:E:83:ARG:O	7:E:85:GLY:N	2.42	0.53
8:F:41:MET:SD	8:F:55:PRO:CD	2.97	0.53
13:K:115:MET:O	13:K:118:LEU:HB2	2.09	0.53
19:Q:28:SER:C	19:Q:71:VAL:HG23	2.34	0.53
24:V:27:GLU:HB2	24:V:33:LYS:O	2.08	0.53
31:y:271:C:C2'	31:y:272:C:H5'	2.39	0.53
31:y:560:U:O2'	31:y:561:U:OP2	2.23	0.53
31:y:768:A:C5'	31:y:1524:C:H1'	2.39	0.53
31:y:813:U:H3'	31:y:816:A:H62	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:832:C:C2	31:y:833:U:H1'	2.44	0.53
31:y:892:A:O5'	31:y:892:A:C8	2.61	0.53
31:y:959:A:O5'	31:y:959:A:C8	2.62	0.53
31:y:1080:A:C8	31:y:1080:A:C3'	2.92	0.53
31:y:1101:A:C4'	31:y:1102:A:O5'	2.57	0.53
31:y:1282:C:H2'	31:y:1283:G:H5"	1.91	0.53
31:y:1451:A:OP2	31:y:1452:C:N4	2.42	0.53
33:2:75:C:H5'	33:2:76:A:OP1	2.09	0.53
35:c:137:ARG:H	35:c:137:ARG:HH11	1.56	0.53
35:c:178:ARG:HH21	41:i:71:GLY:H	1.57	0.53
36:d:97:LYS:O	36:d:99:VAL:HG13	2.08	0.53
37:e:76:ARG:NH1	37:e:79:PHE:HB3	2.23	0.53
38:f:44:GLY:N	38:f:62:ALA:HB2	2.22	0.53
39:g:8:ILE:HG22	39:g:61:LEU:HD12	1.91	0.53
39:g:11:ASN:ND2	39:g:86:ARG:CZ	2.72	0.53
40:h:46:ALA:CB	40:h:117:ALA:HB1	2.39	0.53
40:h:133:GLY:C	40:h:137:LYS:HD3	2.34	0.53
46:n:16:ASP:N	46:n:16:ASP:OD2	2.41	0.53
46:n:78:ILE:C	46:n:93:ARG:HH22	2.17	0.53
50:r:10:VAL:HG11	50:r:55:ASP:O	2.08	0.53
50:r:82:MET:HB3	50:r:86:GLU:OE2	2.09	0.53
52:t:36:ARG:O	52:t:37:ARG:CB	2.57	0.53
1:w:1:G:H2'	1:w:2:G:C8	2.43	0.53
1:w:442:G:C6	1:w:444:C:C4	2.97	0.53
1:w:443:A:O2'	17:O:2:PRO:HD3	2.09	0.53
1:w:608:A:H3'	1:w:609(A):A:H8	1.73	0.53
1:w:689:A:H2'	1:w:690:G:C8	2.44	0.53
1:w:957:A:N1	1:w:2458:G:H4'	2.23	0.53
1:w:1007:C:OP1	1:w:1008:C:H3'	2.09	0.53
1:w:1148:A:H5'	1:w:1149:G:OP2	2.08	0.53
1:w:1223:G:N2	1:w:1227:G:C4	2.76	0.53
1:w:1448:G:H2'	1:w:1448(B):A:H8	1.63	0.53
1:w:1448:G:C2'	1:w:1448(B):A:C8	2.86	0.53
1:w:1567:A:C3'	4:B:86:PRO:HB3	2.38	0.53
1:w:1818:U:H5"	4:B:157:ARG:CD	2.39	0.53
1:w:1855:G:H2'	1:w:1856:G:C8	2.43	0.53
1:w:2052:G:H4'	5:C:142:GLY:O	2.09	0.53
1:w:2634:G:H2'	1:w:2635:C:C6	2.44	0.53
1:w:2745:C:O2'	8:F:142:GLY:CA	2.57	0.53
4:B:8:PRO:HG2	4:B:15:PHE:H	1.74	0.53
4:B:69:ARG:HG2	4:B:190:TYR:CE2	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:6:ALA:HB3	7:E:100:TRP:HZ2	1.69	0.53
11:I:101:PRO:CB	11:I:120:GLU:HB3	2.39	0.53
14:L:63:ARG:HA	14:L:66:VAL:CG2	2.39	0.53
16:N:42:ILE:HG13	16:N:43:GLN:N	2.24	0.53
23:U:18:ALA:O	23:U:19:LYS:HB2	2.09	0.53
31:y:227:G:N2	49:q:62:VAL:HA	2.23	0.53
31:y:309:G:C6	31:y:310:G:N7	2.77	0.53
31:y:404:U:H2'	31:y:405:U:C6	2.43	0.53
31:y:616:G:H2'	31:y:617:G:C8	2.44	0.53
31:y:642:A:H2'	31:y:643:C:C5	2.44	0.53
31:y:1048:G:OP1	47:o:3:ARG:N	2.41	0.53
31:y:1267:C:C6	31:y:1267:C:O5'	2.62	0.53
31:y:1429:C:H2'	31:y:1430:C:H6	1.74	0.53
36:d:64:VAL:O	36:d:99:VAL:HB	2.09	0.53
36:d:87:LEU:CD1	36:d:101:LEU:HD11	2.39	0.53
37:e:78:LEU:HD23	37:e:93:PHE:CZ	2.43	0.53
42:j:55:ALA:HA	42:j:58:ARG:HD2	1.91	0.53
50:r:10:VAL:O	50:r:10:VAL:HG23	2.08	0.53
50:r:59:ILE:CG2	50:r:60:ILE:N	2.71	0.53
1:w:86:C:H4'	1:w:104:U:O2'	2.08	0.52
1:w:248:G:OP2	1:w:249:C:H5"	2.09	0.52
1:w:466:A:OP1	28:Z:34:ARG:NH1	2.37	0.52
1:w:1354:A:H62	1:w:1377:G:H21	1.57	0.52
1:w:1537:C:H2'	1:w:1538:G:O3'	2.10	0.52
1:w:1550:C:O5'	1:w:1550:C:H6	1.92	0.52
1:w:1560:G:H2'	1:w:1561:G:C8	2.44	0.52
1:w:1707:G:H2'	1:w:1708:C:C6	2.44	0.52
1:w:2017:U:H5"	27:Y:8:LYS:HE2	1.91	0.52
1:w:2051:A:C5'	1:w:2578:G:P	2.92	0.52
1:w:2426:A:H8	1:w:2426:A:OP2	1.92	0.52
1:w:2482:G:C2'	1:w:2483:C:H5'	2.39	0.52
1:w:2607:G:O2'	1:w:2608:G:H5'	2.09	0.52
1:w:2756:U:H3'	30:b:19:ARG:CB	2.39	0.52
5:C:28:ALA:H	5:C:181:LEU:HA	1.73	0.52
5:C:60:ASN:HB2	5:C:62:PRO:HD2	1.90	0.52
6:D:150:LEU:HB2	6:D:187:LEU:HD21	1.91	0.52
9:G:131:LYS:HZ3	9:G:134:PRO:HA	1.74	0.52
13:K:30:GLY:HA3	13:K:65:PHE:CE1	2.44	0.52
19:Q:8:ARG:HH11	19:Q:8:ARG:HG2	1.74	0.52
22:T:71:VAL:HG13	22:T:87:ASP:O	2.09	0.52
23:U:16:SER:HA	23:U:20:ARG:H	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:51:VAL:HG21	23:U:79:VAL:HB	1.90	0.52
31:y:225:C:O2'	31:y:226:G:H5'	2.09	0.52
31:y:306:G:C2	31:y:307:C:C2	2.97	0.52
31:y:314:C:C3'	31:y:315:A:H5"	2.38	0.52
31:y:363:A:N7	45:m:32:ARG:NH1	2.58	0.52
31:y:515:G:C2	31:y:516:PSU:H1'	2.44	0.52
31:y:671:G:C2	31:y:736:C:C4	2.97	0.52
31:y:719:C:C2	51:s:74:ARG:NH1	2.77	0.52
31:y:1091:U:O2	31:y:1094:G:OP2	2.26	0.52
31:y:1477:C:H2'	31:y:1478:C:C6	2.44	0.52
31:y:1494:G:H2'	31:y:1495:U:O5'	2.08	0.52
36:d:3:ASN:C	36:d:4:LYS:HD3	2.32	0.52
36:d:77:ILE:HG13	36:d:81:GLY:HA2	1.92	0.52
36:d:125:GLU:HG3	36:d:126:ARG:CD	2.38	0.52
37:e:57:ARG:CG	37:e:206:PHE:HD1	2.22	0.52
37:e:61:LYS:HD2	37:e:61:LYS:C	2.34	0.52
38:f:60:TYR:O	38:f:64:ARG:HG2	2.09	0.52
38:f:69:VAL:CG1	38:f:139:LEU:HD13	2.39	0.52
46:n:3:ARG:HH12	46:n:7:VAL:HG13	1.74	0.52
48:p:78:TYR:C	48:p:80:ALA:H	2.16	0.52
49:q:15:PRO:HB2	49:q:41:PRO:CG	2.31	0.52
50:r:10:VAL:HG21	50:r:55:ASP:C	2.34	0.52
53:u:48:LYS:HB3	53:u:51:GLU:CG	2.40	0.52
54:v:9:ARG:NH1	54:v:21:TYR:HB3	2.23	0.52
1:w:19:C:H2'	1:w:20:C:H5'	1.92	0.52
1:w:99:U:H3'	1:w:101:G:P	2.49	0.52
1:w:216:A:O2'	1:w:217:G:H5'	2.09	0.52
1:w:267:C:H2'	1:w:268:C:C6	2.44	0.52
1:w:338:G:N2	1:w:339:U:C2	2.77	0.52
1:w:558:G:C2	1:w:559:G:C5	2.98	0.52
1:w:637:A:H61	1:w:654:U:H3	1.58	0.52
1:w:706:A:H4'	4:B:7:LYS:HD3	1.91	0.52
1:w:1035:U:H5"	8:F:59:ARG:NH2	2.15	0.52
1:w:1173:G:H1'	1:w:1177:A:H62	1.74	0.52
1:w:1233:C:C2	1:w:1234:U:C5	2.97	0.52
1:w:1338:G:C6	1:w:1339:G:C6	2.97	0.52
1:w:1341:U:O2'	1:w:1342:A:H5'	2.08	0.52
1:w:1358:G:C8	1:w:1371:G:C6	2.98	0.52
1:w:1647:G:H4'	1:w:1648:C:O5'	2.07	0.52
1:w:1694:C:H1'	1:w:1695:G:N2	2.24	0.52
1:w:1710:C:O2'	1:w:2858:C:N4	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1895:C:H2'	1:w:1896:G:O4'	2.08	0.52
1:w:2069:G:N2	1:w:2443:C:C2	2.77	0.52
1:w:2472:G:H21	1:w:2478:A:H62	1.57	0.52
1:w:2521:C:H2'	1:w:2522:U:O4'	2.09	0.52
1:w:2574:G:H1'	5:C:143:ASN:CG	2.34	0.52
1:w:2578:G:OP2	1:w:2578:G:H4'	2.08	0.52
1:w:2711:A:H5"	1:w:2712:U:H6	1.58	0.52
1:w:2875:C:H4'	16:N:5:ALA:H	1.73	0.52
3:A:59:VAL:HG22	3:A:166:ASN:HB3	1.90	0.52
4:B:79:VAL:HB	4:B:111:LEU:HD11	1.91	0.52
5:C:81:ILE:O	5:C:82:ARG:C	2.52	0.52
11:I:16:ALA:HA	11:I:46:ALA:HB2	1.89	0.52
11:I:27:GLY:O	11:I:28:SER:HB3	2.09	0.52
12:J:61:ARG:HE	12:J:61:ARG:H	1.57	0.52
14:L:11:ASN:O	14:L:12:ARG:HB2	2.09	0.52
15:M:20:ARG:HG3	15:M:21:THR:N	2.25	0.52
17:O:92:ARG:NE	18:P:11:GLN:OE1	2.42	0.52
21:S:37:VAL:O	21:S:39:VAL:N	2.36	0.52
22:T:138:GLU:HG2	22:T:139:VAL:N	2.24	0.52
23:U:16:SER:O	23:U:17:GLN:CB	2.56	0.52
23:U:44:ARG:H	23:U:57:PHE:HZ	1.56	0.52
23:U:51:VAL:HG11	23:U:79:VAL:HG23	1.90	0.52
31:y:341:C:H2'	31:y:342:C:H6	1.74	0.52
31:y:476:G:C2	31:y:477:G:C5	2.98	0.52
31:y:518:C:H4'	31:y:518:C:OP1	2.09	0.52
31:y:552:U:C2'	31:y:553:A:H5'	2.39	0.52
31:y:625:G:C4'	49:q:16:HIS:HD2	2.22	0.52
31:y:667:G:H4'	48:p:51:HIS:ND1	2.24	0.52
31:y:956:U:O2	31:y:960:U:C2	2.62	0.52
31:y:985:C:O2'	31:y:986:A:H5'	2.09	0.52
31:y:1221:G:OP2	31:y:1222:G:N7	2.43	0.52
31:y:1306:A:H3'	31:y:1307:U:C6	2.44	0.52
31:y:1323:G:H2'	31:y:1324:A:O4'	2.09	0.52
31:y:1370:G:C2	31:y:1371:G:N7	2.77	0.52
31:y:1447:G:H2'	31:y:1448:C:O4'	2.07	0.52
32:z:4:G:C6	32:z:5:G:C5	2.97	0.52
33:2:73:A:C6	33:2:74:C:N4	2.77	0.52
35:c:27:LYS:HG2	35:c:193:ASP:OD2	2.09	0.52
36:d:30:ARG:HB3	47:o:37:PHE:HA	1.90	0.52
38:f:143:ARG:HH12	38:f:148:VAL:HG23	1.74	0.52
39:g:67:MET:HE1	39:g:72:VAL:HA	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:17:G:H8	1:w:17:G:OP2	1.93	0.52
1:w:494:G:H5"	19:Q:8:ARG:NH1	2.24	0.52
1:w:515:A:C2	1:w:1260:G:N3	2.75	0.52
1:w:573:G:H8	1:w:573:G:OP2	1.92	0.52
1:w:638:G:C2	1:w:651:G:H1'	2.43	0.52
1:w:675:A:H4'	6:D:62:GLN:CG	2.17	0.52
1:w:697:C:C4	1:w:698:C:C5	2.98	0.52
1:w:752:A:N6	1:w:1781:C:H1'	2.24	0.52
1:w:1602:U:C3'	1:w:1603:A:C5'	2.78	0.52
1:w:1798:U:H5'	4:B:259:THR:HB	1.92	0.52
1:w:2341:G:H2'	1:w:2342:C:H6	1.75	0.52
1:w:2549:G:C2'	1:w:2550:G:H5'	2.39	0.52
1:w:2867:G:C2'	1:w:2868:A:OP2	2.56	0.52
2:x:115:G:C2	2:x:116:G:N7	2.77	0.52
10:H:29:PRO:HB3	10:H:64:ASP:C	2.35	0.52
10:H:66:THR:O	10:H:69:VAL:HG12	2.09	0.52
13:K:37:LEU:HB2	13:K:127:ILE:CB	2.38	0.52
20:R:12:VAL:CG2	20:R:13:LEU:N	2.47	0.52
31:y:141:A:H1'	31:y:182:U:N3	2.24	0.52
31:y:228:A:H3'	31:y:229:U:H5	1.74	0.52
31:y:322:C:C4	31:y:323:U:N3	2.78	0.52
31:y:397:A:C2	31:y:548:G:O6	2.62	0.52
31:y:448:A:H2'	31:y:449:C:C6	2.44	0.52
31:y:503:C:H2'	31:y:504:C:H6	1.74	0.52
31:y:657:G:C4'	48:p:28:GLN:HG2	2.39	0.52
31:y:689:C:O2'	31:y:705:U:O2'	2.25	0.52
31:y:910:C:C2'	31:y:911:U:H5'	2.39	0.52
31:y:962:C:C2	31:y:963:G:C8	2.97	0.52
31:y:1350:A:O2'	40:h:33:ASP:OD2	2.23	0.52
35:c:42:ILE:HD13	35:c:43:ASP:N	2.24	0.52
36:d:110:ASN:HD22	36:d:141:VAL:CA	2.21	0.52
36:d:175:LEU:CA	36:d:180:ALA:HB2	2.36	0.52
37:e:65:ARG:HH22	37:e:66:ARG:NE	2.07	0.52
38:f:11:ILE:HG22	38:f:12:LEU:HD12	1.91	0.52
40:h:80:VAL:HG11	40:h:85:TYR:CZ	2.44	0.52
40:h:125:MET:C	40:h:127:ALA:N	2.65	0.52
41:i:69:ARG:CB	41:i:76:PRO:HG3	2.39	0.52
41:i:87:SER:HB2	41:i:93:VAL:H	1.74	0.52
41:i:93:VAL:CG1	41:i:95:VAL:HG13	2.39	0.52
44:l:58:PRO:O	44:l:93:GLN:HG2	2.09	0.52
48:p:55:GLY:C	48:p:57:LEU:N	2.67	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:q:22:THR:O	49:q:26:ARG:HB2	2.09	0.52
53:u:51:GLU:O	53:u:55:ILE:HG22	2.10	0.52
1:w:35:G:H2'	1:w:36:G:C8	2.44	0.52
1:w:331:A:H2'	1:w:331:A:N3	2.23	0.52
1:w:519:U:C3'	1:w:520:G:H8	2.23	0.52
1:w:650:C:O3'	29:a:17:THR:HB	2.10	0.52
1:w:740:U:H5'	1:w:1784:A:H3'	1.91	0.52
1:w:879:G:N2	1:w:898:C:O2	2.37	0.52
1:w:1013:C:H2'	1:w:1014:U:O4'	2.09	0.52
1:w:1072:C:H42	1:w:1092:C:N4	2.07	0.52
1:w:1223:G:H5'	1:w:1224:C:OP2	2.09	0.52
1:w:1251:C:H5'	17:O:10:ARG:HG3	1.91	0.52
1:w:1275:A:C5	14:L:16:HIS:CD2	2.97	0.52
1:w:1278:A:OP1	1:w:1278:A:H4'	2.10	0.52
1:w:1583:A:C3'	1:w:1585:C:P	2.97	0.52
1:w:1799:G:O4'	1:w:1800:C:C5	2.63	0.52
1:w:2049:G:H2'	1:w:2050:C:C5	2.44	0.52
1:w:2130:U:C5	1:w:2131:G:C2	2.97	0.52
1:w:2417:C:C4	1:w:2418:A:N7	2.76	0.52
1:w:2661:G:HO2'	1:w:2662:A:H5'	1.73	0.52
1:w:2718:G:H2'	1:w:2719:G:O4'	2.10	0.52
1:w:2756:U:H3'	30:b:19:ARG:HB2	1.90	0.52
1:w:2768:C:OP2	1:w:2768:C:H6	1.92	0.52
1:w:2876:G:P	16:N:1:MET:HB3	2.50	0.52
2:x:14:U:C5'	2:x:106:G:N2	2.68	0.52
5:C:173:VAL:N	5:C:183:LEU:CD1	2.72	0.52
6:D:196:VAL:O	6:D:196:VAL:CG1	2.56	0.52
7:E:3:LEU:HB2	7:E:100:TRP:CZ3	2.43	0.52
7:E:78:SER:HB2	32:z:19:G:N3	2.24	0.52
10:H:140:PHE:CG	10:H:141:LYS:N	2.78	0.52
16:N:31:SER:HB3	16:N:42:ILE:O	2.10	0.52
16:N:42:ILE:HG13	16:N:43:GLN:H	1.72	0.52
18:P:24:LYS:HB3	18:P:92:THR:OG1	2.10	0.52
23:U:28:GLY:H	23:U:69:PHE:HD2	1.57	0.52
25:W:14:ARG:HB3	25:W:54:LYS:HE2	1.91	0.52
25:W:26:ARG:HA	25:W:29:LYS:HG3	1.92	0.52
31:y:17:U:C2'	31:y:1079:G:N2	2.73	0.52
31:y:105:G:H2'	31:y:106:C:O4'	2.09	0.52
31:y:367:U:HO2'	31:y:368:U:P	2.33	0.52
31:y:635:G:O2'	31:y:636:U:H5'	2.09	0.52
31:y:767:A:H8	31:y:767:A:O5'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1029:G:C2	31:y:1031:G:O5'	2.62	0.52
31:y:1090:U:O2	31:y:1096:C:C4	2.61	0.52
31:y:1139:G:N2	31:y:1142:G:O6	2.37	0.52
31:y:1466:C:C2'	31:y:1467:G:H5'	2.39	0.52
31:y:1470:G:C6	31:y:1471:G:C5	2.97	0.52
32:z:18:G:C2	32:z:58:A:C4	2.97	0.52
34:3:17:C:H2'	34:3:18:C:C6	2.44	0.52
36:d:30:ARG:HB3	47:o:36:PHE:O	2.08	0.52
38:f:103:GLY:C	38:f:122:GLU:OE2	2.53	0.52
40:h:26:PHE:HB2	40:h:101:LEU:HD22	1.91	0.52
43:k:19:SER:O	43:k:23:ILE:HD13	2.09	0.52
45:m:44:PRO:HG3	45:m:52:ARG:NH2	2.24	0.52
46:n:22:ILE:CG2	46:n:23:TYR:H	2.15	0.52
48:p:62:GLN:O	48:p:66:LEU:HD13	2.08	0.52
50:r:27:PHE:HB2	50:r:28:PRO:HD2	1.90	0.52
52:t:42:PRO:C	52:t:44:MET:H	2.17	0.52
1:w:203:C:O5'	1:w:203:C:H6	1.92	0.52
1:w:247:G:H3'	1:w:249:C:H6	1.73	0.52
1:w:282:A:H8	1:w:282:A:O5'	1.93	0.52
1:w:359:A:H3'	1:w:360:G:C8	2.44	0.52
1:w:465:G:H4'	28:Z:16:HIS:ND1	2.24	0.52
1:w:574:C:H1'	1:w:2055:C:O5'	2.10	0.52
1:w:746:A:H2'	1:w:2611:U:O2'	2.10	0.52
1:w:858:U:N3	1:w:2268:A:C2	2.78	0.52
1:w:1224:C:H2'	1:w:1224:C:O2	2.10	0.52
1:w:1313:U:H4'	1:w:1332:G:O3'	2.09	0.52
1:w:1385:G:HO2'	1:w:1386:C:H6	1.58	0.52
1:w:1615:C:O2'	1:w:1616:A:H5'	2.10	0.52
1:w:1668:A:H4'	1:w:1669:A:O5'	2.10	0.52
1:w:1823:G:H2'	1:w:1824:G:C1'	2.40	0.52
1:w:1917:U:H2'	1:w:1918:A:O4'	2.09	0.52
1:w:2023:G:OP2	1:w:2617:C:C4'	2.57	0.52
1:w:2055:C:H4'	1:w:2055:C:OP1	2.09	0.52
1:w:2239:G:O5'	4:B:232:PRO:HG2	2.09	0.52
1:w:2572:A:H5"	1:w:2574:G:H4'	1.91	0.52
1:w:2711:A:OP1	1:w:2712(B):A:O4'	2.27	0.52
1:w:2729:G:H2'	1:w:2730:C:C6	2.44	0.52
1:w:2835:A:N6	1:w:2879:C:O5'	2.42	0.52
1:w:2838:G:O2'	14:L:45:ARG:HD3	2.09	0.52
1:w:2865:U:O5'	1:w:2865:U:H6	1.92	0.52
2:x:23:G:N1	2:x:24:G:O6	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:29:LEU:C	3:A:33:LEU:HG	2.34	0.52
4:B:88:ARG:HD2	4:B:90:ALA:HB2	1.91	0.52
5:C:25:VAL:HG13	5:C:183:LEU:CA	2.39	0.52
10:H:26:THR:O	10:H:27:TYR:HB3	2.09	0.52
10:H:145:VAL:C	10:H:146:TYR:CD2	2.88	0.52
10:H:157:ARG:N	10:H:158:PRO:HD3	2.25	0.52
11:I:74:GLY:O	11:I:75:SER:HB2	2.10	0.52
12:J:95:VAL:HA	12:J:100:LEU:HD21	1.91	0.52
13:K:3:MET:N	13:K:4:PRO:CD	2.64	0.52
13:K:42:ILE:CG2	13:K:95:ALA:HB3	2.39	0.52
17:O:14:HIS:O	17:O:17:ILE:HB	2.09	0.52
23:U:23:VAL:HG13	23:U:38:VAL:HG22	1.91	0.52
23:U:66:VAL:N	23:U:81:VAL:HG13	2.24	0.52
31:y:297:G:C2'	31:y:298:A:N7	2.72	0.52
31:y:371:G:N2	31:y:373:A:N6	2.54	0.52
31:y:971:G:C2'	31:y:1365:G:O2'	2.57	0.52
31:y:1013:G:N3	31:y:1016:A:C6	2.77	0.52
31:y:1089:G:H2'	31:y:1090:U:C5'	2.39	0.52
31:y:1322:C:O2'	31:y:1323:G:H5'	2.09	0.52
31:y:1375:A:O2'	40:h:102:ARG:NH2	2.43	0.52
31:y:1402:C:H2'	31:y:1403:C:C6	2.44	0.52
31:y:1468:A:H3'	31:y:1469:G:C8	2.44	0.52
37:e:13:ARG:NH2	37:e:32:ALA:C	2.67	0.52
40:h:140:ASP:O	40:h:144:MET:HG2	2.10	0.52
41:i:46:LYS:HB3	41:i:62:TYR:O	2.10	0.52
41:i:63:LEU:HB2	41:i:65:TYR:CZ	2.43	0.52
41:i:69:ARG:HB3	41:i:76:PRO:CG	2.38	0.52
45:m:105:ASP:O	45:m:106:ALA:HB3	2.09	0.52
48:p:27:VAL:O	48:p:29:VAL:N	2.43	0.52
52:t:17:GLU:O	52:t:20:LEU:HB3	2.10	0.52
1:w:60:G:N2	1:w:88:G:N7	2.51	0.52
1:w:300:A:H2'	1:w:334:C:O2'	2.09	0.52
1:w:559:G:H1	17:O:49:HIS:CD2	2.28	0.52
1:w:760:G:C6	1:w:761:A:C4	2.97	0.52
1:w:1311:G:O2'	1:w:1312:U:H5	1.93	0.52
1:w:1453:A:N1	1:w:2702:U:N1	2.57	0.52
1:w:2131:G:OP1	1:w:2131:G:O4'	2.26	0.52
1:w:2393:A:O2'	1:w:2394:C:H5'	2.09	0.52
1:w:2396:G:H2'	1:w:2396:G:N3	2.25	0.52
1:w:2576:G:O2'	1:w:2577:A:C5'	2.58	0.52
1:w:2711:A:OP2	1:w:2714:G:OP2	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:8:U:H3'	2:x:9:G:H8	1.74	0.52
2:x:29:A:N3	2:x:56:G:C2	2.78	0.52
3:A:11:LEU:H	3:A:11:LEU:HD12	1.75	0.52
3:A:62:THR:CG2	3:A:63:VAL:H	2.23	0.52
4:B:7:LYS:N	4:B:8:PRO:HD3	2.24	0.52
7:E:103:LEU:HA	7:E:106:LEU:HD23	1.92	0.52
7:E:122:PRO:HA	7:E:131:TYR:OH	2.10	0.52
7:E:132:ASN:C	7:E:133:LEU:HD22	2.34	0.52
8:F:44:VAL:HG22	8:F:45:VAL:N	2.24	0.52
8:F:125:VAL:HB	8:F:128:PRO:HB2	1.91	0.52
9:G:63:ALA:HA	9:G:66:GLU:HG3	1.92	0.52
10:H:65:TRP:HD1	17:O:64:ARG:HE	1.54	0.52
11:I:64:ARG:HH12	11:I:100:GLY:HA3	1.75	0.52
12:J:47:ASP:HB2	12:J:48:PRO:HA	1.92	0.52
13:K:16:ARG:NH1	13:K:17:LEU:HD21	2.25	0.52
13:K:75:THR:HG23	13:K:77:LYS:HZ2	1.75	0.52
16:N:23:ARG:HH21	16:N:94:ALA:HB2	1.74	0.52
19:Q:6:ILE:N	19:Q:6:ILE:HD13	2.23	0.52
19:Q:18:ARG:NH1	19:Q:76:VAL:HG23	2.25	0.52
19:Q:57:ASN:HA	19:Q:60:ASN:HB3	1.92	0.52
21:S:28:LYS:HD3	21:S:28:LYS:N	2.23	0.52
27:Y:36:CYS:O	27:Y:37:LYS:HB2	2.08	0.52
31:y:30:U:O2'	31:y:31:G:OP2	2.28	0.52
31:y:149:A:N6	31:y:172:A:H62	2.07	0.52
31:y:357:G:C2	31:y:358:U:C4	2.97	0.52
31:y:415:A:O5'	31:y:415:A:C8	2.62	0.52
31:y:458:C:H2'	31:y:464:G:O4'	2.10	0.52
31:y:750:G:N2	31:y:751:U:C2	2.78	0.52
31:y:754:C:O2	31:y:754:C:H2'	2.09	0.52
31:y:818:G:C2	31:y:820:U:O2'	2.63	0.52
31:y:1081:G:OP1	38:f:18:ARG:CZ	2.57	0.52
31:y:1197:G:O2'	31:y:1198:G:OP1	2.24	0.52
31:y:1333:A:H8	31:y:1333:A:OP2	1.92	0.52
31:y:1351:U:H2'	31:y:1352:C:C6	2.45	0.52
31:y:1392:G:H2'	31:y:1393:U:O4'	2.09	0.52
31:y:1443:G:H4'	31:y:1446:A:C5'	2.40	0.52
31:y:1450:U:H1'	31:y:1454:G:H22	1.74	0.52
33:2:33:U:H3	33:2:36:A:P	2.32	0.52
36:d:178:LEU:H	36:d:178:LEU:CD1	2.22	0.52
41:i:95:VAL:HB	41:i:99:GLU:CB	2.39	0.52
44:l:20:TYR:C	44:l:21:ILE:HG13	2.34	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:m:23:VAL:CB	45:m:26:LEU:HA	2.39	0.52
48:p:46:HIS:ND1	48:p:46:HIS:O	2.42	0.52
1:w:106:C:H1'	1:w:293:U:O4'	2.09	0.52
1:w:749:C:H1'	1:w:1618:A:OP1	2.09	0.52
1:w:813:U:OP2	12:J:27:HIS:HB3	2.10	0.52
1:w:1182:A:C3'	1:w:1183:G:H5"	2.24	0.52
1:w:1366:A:H5'	1:w:1367:A:OP2	2.09	0.52
1:w:1530:G:H22	1:w:1541:U:H1'	1.74	0.52
1:w:1602:U:H3'	1:w:1603:A:H5'	1.88	0.52
1:w:1779:U:OP2	1:w:1784:A:N6	2.38	0.52
1:w:1897:G:N7	1:w:1898:U:C5	2.77	0.52
1:w:1963:U:H4'	1:w:1964:G:OP1	2.08	0.52
1:w:2130:U:H2'	1:w:2131:G:OP1	2.09	0.52
1:w:2332:U:C2'	1:w:2333:A:H5"	2.40	0.52
1:w:2545:G:H21	1:w:2565:A:H2	1.58	0.52
1:w:2552:U:H3'	1:w:2554:U:OP2	2.09	0.52
1:w:2619:C:N3	1:w:2620:C:C5	2.78	0.52
1:w:2695:C:O2'	1:w:2696:U:C5'	2.58	0.52
1:w:2704:C:H2'	1:w:2705:A:C5'	2.35	0.52
1:w:2742:C:C2'	1:w:2743:C:H5'	2.38	0.52
2:x:81:G:H2'	2:x:82:G:H5'	1.92	0.52
5:C:61:ARG:H	5:C:62:PRO:HD2	1.75	0.52
5:C:111:ARG:HG3	14:L:3:HIS:HD2	1.73	0.52
5:C:150:VAL:O	5:C:151:TYR:C	2.52	0.52
5:C:151:TYR:C	5:C:153:GLY:H	2.17	0.52
9:G:68:LEU:O	9:G:72:LEU:HG	2.10	0.52
10:H:106:LYS:HG3	10:H:107:LYS:H	1.75	0.52
11:I:13:ASN:N	11:I:97:ARG:HB2	2.24	0.52
13:K:23:GLY:HA3	13:K:98:LYS:CA	2.39	0.52
13:K:72:LYS:HZ2	13:K:73:PRO:CB	2.22	0.52
15:M:40:ILE:CG2	15:M:41:ASP:N	2.71	0.52
20:R:77:LYS:HE3	20:R:77:LYS:HA	1.92	0.52
23:U:24:LYS:HG3	23:U:25:ARG:HG2	1.91	0.52
24:V:21:ARG:HG3	24:V:22:GLY:N	2.24	0.52
27:Y:12:SER:OG	27:Y:15:ARG:NH2	2.42	0.52
27:Y:41:PRO:HG2	27:Y:44:THR:OG1	2.09	0.52
29:a:32:LEU:CD2	29:a:41:ILE:HG12	2.39	0.52
31:y:50:A:N3	31:y:52:G:O4'	2.42	0.52
31:y:108:G:O6	53:u:15:ARG:HD2	2.09	0.52
31:y:111:G:H3'	31:y:112:G:H8	1.74	0.52
31:y:278:G:H21	31:y:279:A:H62	1.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:464:G:N2	31:y:467:G:C8	2.77	0.52
31:y:553:A:C5'	45:m:30:PRO:HG2	2.38	0.52
31:y:585:G:O4'	45:m:11:ARG:NH2	2.43	0.52
31:y:668:G:H1'	48:p:49:ASP:HA	1.91	0.52
31:y:687:A:O2'	31:y:688:G:O5'	2.28	0.52
31:y:779:C:H5"	44:l:122:LYS:HB3	1.90	0.52
31:y:1004:A:C2'	31:y:1005:A:O5'	2.58	0.52
31:y:1307:U:H2'	31:y:1308:U:N1	2.25	0.52
31:y:1401:G:OP1	34:3:16:A:OP2	2.28	0.52
31:y:1497:G:H1'	31:y:1518:MA6:N1	2.25	0.52
31:y:1498:U:C5	34:3:13:A:O2'	2.62	0.52
32:z:2:G:N1	32:z:72:A:C2	2.78	0.52
32:z:24:U:O2'	32:z:25:C:H5'	2.08	0.52
32:z:35:A:H2'	32:z:36:U:H6	1.74	0.52
33:2:13:C:H2'	33:2:14:A:C1'	2.39	0.52
35:c:11:LEU:C	35:c:13:ALA:N	2.67	0.52
37:e:33:MET:O	37:e:37:PRO:HG3	2.09	0.52
37:e:108:LEU:HD11	37:e:174:LEU:CD1	2.40	0.52
45:m:76:LEU:HD11	45:m:80:SER:CB	2.38	0.52
47:o:4:LYS:C	47:o:6:LEU:H	2.18	0.52
48:p:83:GLU:HG3	48:p:84:LYS:N	2.23	0.52
53:u:39:LYS:HB3	53:u:39:LYS:HZ2	1.74	0.52
1:w:190:A:H62	1:w:206:U:H3	1.56	0.52
1:w:331:A:H1'	1:w:1209:G:N2	2.24	0.52
1:w:363(F):U:H3'	1:w:363(G):A:C8	2.45	0.52
1:w:592:G:C6	1:w:666:G:C6	2.97	0.52
1:w:755:C:H2'	1:w:756:C:C5	2.44	0.52
1:w:879:G:H2'	1:w:880:G:O4'	2.10	0.52
1:w:880:G:H21	1:w:898:C:H1'	1.75	0.52
1:w:1059:G:C2	1:w:1080:C:N4	2.78	0.52
1:w:1189:A:H3'	1:w:1190:G:H8	1.73	0.52
1:w:1767:C:H2'	1:w:1768:U:O4'	2.09	0.52
1:w:2034:U:C3'	1:w:2035:G:H5"	2.36	0.52
1:w:2218:G:H1'	4:B:148:GLU:CG	2.39	0.52
1:w:2354:G:H2'	1:w:2355:C:C6	2.45	0.52
1:w:2513:G:C2	1:w:2514:U:C2	2.97	0.52
1:w:2521:C:C4	1:w:2522:U:C4	2.97	0.52
1:w:2528:U:OP2	1:w:2530:A:N6	2.43	0.52
1:w:2640:G:H2'	1:w:2641:G:O4'	2.09	0.52
1:w:2684:U:OP1	16:N:60:THR:HG21	2.10	0.52
2:x:100:G:H2'	2:x:101:A:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:177:GLY:O	8:F:178:ALA:HB3	2.10	0.52
14:L:29:LEU:CD2	14:L:75:LEU:HD22	2.40	0.52
16:N:26:ASP:CA	16:N:48:ILE:HD12	2.40	0.52
16:N:45:PHE:CD2	16:N:63:VAL:HG23	2.45	0.52
16:N:51:ARG:HB3	16:N:62:THR:CG2	2.39	0.52
20:R:53:LYS:O	20:R:79:ALA:HA	2.10	0.52
31:y:248:C:N4	31:y:249:U:O4	2.43	0.52
31:y:366:C:H2'	31:y:367:U:H5"	1.91	0.52
31:y:375:U:H2'	31:y:376:G:H8	1.73	0.52
31:y:448:A:H1'	31:y:487:A:N1	2.25	0.52
31:y:532:A:H2'	31:y:533:A:OP1	2.10	0.52
31:y:582:U:C5	31:y:758:G:N2	2.78	0.52
31:y:686:U:O2'	31:y:687:A:H5'	2.10	0.52
31:y:747:C:OP2	31:y:747:C:H6	1.93	0.52
31:y:763:G:H2'	31:y:764:C:H6	1.74	0.52
31:y:800:G:O2'	31:y:801:U:C5	2.61	0.52
31:y:1269:A:O4'	31:y:1326:C:H4'	2.10	0.52
31:y:1395:C:O2	31:y:1395:C:H2'	2.09	0.52
36:d:77:ILE:HG13	36:d:84:ILE:HG21	1.92	0.52
37:e:17:VAL:HG23	37:e:19:LEU:HG	1.92	0.52
37:e:30:LYS:C	37:e:32:ALA:H	2.18	0.52
38:f:46:GLY:HA3	38:f:58:ALA:CB	2.40	0.52
50:r:18:THR:HG22	50:r:43:LEU:CD1	2.40	0.52
51:s:80:PRO:C	51:s:82:THR:H	2.18	0.52
1:w:26:G:C6	1:w:27:G:C2	2.97	0.52
1:w:65:C:H2'	1:w:66:C:H6	1.71	0.52
1:w:143:C:O2'	20:R:36:LYS:HD3	2.10	0.52
1:w:534:U:O2	17:O:49:HIS:NE2	2.43	0.52
1:w:1038:C:C2	1:w:1039:G:C8	2.98	0.52
1:w:1155:A:O3'	1:w:1156:A:H8	1.93	0.52
1:w:1910:G:C5	1:w:1921:G:C2	2.98	0.52
1:w:2472:G:N2	1:w:2478:A:H62	2.08	0.52
1:w:2529:G:OP2	1:w:2530:A:H8	1.92	0.52
1:w:2694:G:H2'	1:w:2695:C:C5'	2.36	0.52
1:w:2759:G:O2'	1:w:2760:C:H5'	2.09	0.52
2:x:87:G:N3	2:x:89(A):G:OP2	2.42	0.52
3:A:54:ARG:HH12	33:2:53:G:H1'	1.75	0.52
3:A:176:VAL:HG13	3:A:177:GLY:H	1.75	0.52
9:G:53:ALA:O	9:G:57:ARG:HD3	2.10	0.52
9:G:73:GLU:C	9:G:75:LEU:H	2.18	0.52
9:G:82:ARG:HG2	9:G:83:ALA:N	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:40:ASP:OD1	10:H:79:ASN:O	2.28	0.52
11:I:24:VAL:CG2	11:I:25:LEU:H	2.07	0.52
11:I:43:VAL:HB	11:I:53:LYS:C	2.35	0.52
11:I:85:VAL:CG1	11:I:86:ILE:N	2.56	0.52
12:J:7:ARG:N	12:J:8:PRO:CD	2.72	0.52
12:J:144:GLU:HB3	12:J:145:PRO:HD2	1.92	0.52
14:L:63:ARG:CD	14:L:67:LEU:HD21	2.39	0.52
14:L:94:TYR:HB3	14:L:117:VAL:HG11	1.91	0.52
15:M:104:GLY:C	15:M:106:ARG:H	2.18	0.52
16:N:95:ARG:O	16:N:96:ARG:HB3	2.10	0.52
17:O:27:LEU:C	17:O:29:SER:H	2.18	0.52
19:Q:23:LEU:HD13	27:Y:25:LEU:CG	2.34	0.52
22:T:58:VAL:C	22:T:59:LEU:HD22	2.35	0.52
28:Z:43:THR:O	28:Z:44:PRO:C	2.53	0.52
31:y:81:G:H2'	31:y:82:U:C5'	2.39	0.52
31:y:186(A):C:H2'	31:y:186(B):C:H6	1.75	0.52
31:y:251:G:N2	31:y:253:U:C4	2.78	0.52
31:y:518:C:C4'	31:y:519:C:O5'	2.57	0.52
31:y:546:G:H8	31:y:546:G:O5'	1.93	0.52
31:y:664:G:H22	31:y:741:G:H1	1.58	0.52
31:y:889:A:OP1	31:y:891:U:C1'	2.57	0.52
31:y:957:U:H5"	52:t:79:THR:OG1	2.10	0.52
31:y:1302:U:H3'	31:y:1303:C:H5"	1.91	0.52
31:y:1307:U:C3'	31:y:1308:U:C6	2.93	0.52
31:y:1501:C:C6	31:y:1504:G:C6	2.98	0.52
33:2:34:G:C3'	33:2:35:A:C5'	2.88	0.52
36:d:23:TYR:O	36:d:24:ALA:CB	2.58	0.52
40:h:11:GLN:O	40:h:12:LEU:CB	2.57	0.52
41:i:39:LEU:HD13	41:i:45:ILE:HG13	1.91	0.52
46:n:17:VAL:O	46:n:18:ALA:C	2.53	0.52
46:n:20:THR:HG22	46:n:20:THR:O	2.09	0.52
48:p:78:TYR:C	48:p:80:ALA:N	2.68	0.52
53:u:96:GLY:O	53:u:97:ALA:HB3	2.09	0.52
1:w:125:G:H1'	28:Z:13:ALA:HB1	1.92	0.52
1:w:184:C:N3	1:w:213:A:C2	2.78	0.52
1:w:349:G:H2'	1:w:350:U:C6	2.45	0.52
1:w:380:U:O2	1:w:394:A:C2	2.63	0.52
1:w:415:A:O5'	1:w:415:A:C8	2.63	0.52
1:w:519:U:H2'	1:w:520:G:C8	2.45	0.52
1:w:669:G:H2'	1:w:669:G:N3	2.25	0.52
1:w:884:C:C4	1:w:885:C:H1'	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1149:G:H2'	1:w:1150:C:C6	2.45	0.52
1:w:1352:U:C2'	1:w:1353:A:H5'	2.40	0.52
1:w:1395:A:C2'	1:w:1397:U:OP2	2.56	0.52
1:w:1453:A:H2	1:w:2702:U:C4	2.28	0.52
1:w:1735:U:H3'	1:w:1741:C:P	2.50	0.52
1:w:1802:A:OP2	1:w:1814:G:N2	2.42	0.52
1:w:1902:C:H2'	1:w:1903:G:H4'	1.92	0.52
1:w:1932:A:H62	1:w:1968:G:N2	2.07	0.52
1:w:2019:A:OP2	27:Y:9:LYS:HD3	2.10	0.52
1:w:2590:A:P	4:B:239:ARG:HB2	2.50	0.52
1:w:2640:G:O3'	10:H:98:TYR:CZ	2.63	0.52
2:x:30:C:H2'	2:x:31:C:H5'	1.92	0.52
4:B:19:ALA:HA	4:B:201:HIS:HD2	1.74	0.52
4:B:181:GLU:HG3	4:B:272:ALA:O	2.10	0.52
4:B:267:SER:O	4:B:268:ARG:HB2	2.10	0.52
6:D:108:ALA:C	6:D:112:ARG:HG2	2.35	0.52
6:D:151:LEU:HD23	6:D:151:LEU:N	2.25	0.52
8:F:59:ARG:HG2	8:F:60:ARG:N	2.24	0.52
10:H:64:ASP:OD2	17:O:100:VAL:HG12	2.10	0.52
11:I:41:ALA:O	11:I:57:VAL:HA	2.10	0.52
12:J:138:LEU:HD23	12:J:143:GLY:N	2.25	0.52
13:K:42:ILE:HG22	13:K:95:ALA:O	2.10	0.52
15:M:26:LEU:HD21	15:M:85:VAL:HG11	1.92	0.52
16:N:11:GLU:C	16:N:13:ARG:N	2.66	0.52
17:O:103:PRO:C	17:O:105:VAL:H	2.18	0.52
18:P:72:VAL:HG12	18:P:73:SER:N	2.25	0.52
19:Q:18:ARG:HH11	19:Q:76:VAL:HG23	1.74	0.52
31:y:49:U:O2	31:y:364:A:N6	2.43	0.52
31:y:109:A:C6	31:y:327:A:C6	2.98	0.52
31:y:110:C:H2'	31:y:111:G:O4'	2.10	0.52
31:y:117:G:H8	31:y:117:G:O5'	1.93	0.52
31:y:187:C:H1'	31:y:191(A):G:N2	2.24	0.52
31:y:275:G:N3	31:y:276:G:C8	2.78	0.52
31:y:435:C:N3	31:y:436:C:N4	2.58	0.52
31:y:514:C:O2	31:y:514:C:H2'	2.10	0.52
31:y:562:C:O2'	45:m:14:ARG:CD	2.55	0.52
31:y:813:U:H3'	31:y:816:A:N6	2.24	0.52
31:y:943:U:H2'	31:y:944:G:C5'	2.37	0.52
31:y:978:A:H62	31:y:1360:A:H61	1.57	0.52
31:y:1029:G:N2	31:y:103(A):A:OP2	2.42	0.52
31:y:1065:U:O2'	31:y:1066:C:P	2.68	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1081:G:C5'	38:f:18:ARG:HD3	2.40	0.52
31:y:1198:G:C5	31:y:1199:U:C5	2.98	0.52
31:y:1326:C:O3'	54:v:19:GLY:HA3	2.10	0.52
31:y:1333:A:OP2	31:y:1333:A:C8	2.63	0.52
31:y:1411:C:O2'	31:y:1412:C:H5'	2.10	0.52
36:d:32:LEU:CD2	36:d:32:LEU:C	2.83	0.52
36:d:93:LYS:HB2	36:d:93:LYS:NZ	2.25	0.52
37:e:61:LYS:HG2	37:e:206:PHE:CZ	2.45	0.52
40:h:155:ARG:HD3	40:h:155:ARG:H	1.74	0.52
43:k:24:VAL:O	43:k:28:ARG:HB2	2.10	0.52
43:k:40:LEU:HD21	43:k:69:ASN:O	2.10	0.52
45:m:5:THR:OG1	45:m:8:GLN:N	2.42	0.52
49:q:2:VAL:H	49:q:64:ALA:H	1.57	0.52
50:r:15:MET:HE1	50:r:20:THR:OG1	2.10	0.52
50:r:56:VAL:HG22	50:r:85:VAL:CG2	2.40	0.52
52:t:19:VAL:HG13	52:t:20:LEU:N	2.24	0.52
53:u:86:ARG:O	53:u:89:ARG:HG2	2.09	0.52
1:w:225:A:H3'	1:w:226:G:H8	1.74	0.51
1:w:246:C:O2'	1:w:385:C:H4'	2.10	0.51
1:w:293:U:H3'	1:w:294:A:H4'	1.92	0.51
1:w:363(E):G:H2'	1:w:363(F):U:H5"	1.92	0.51
1:w:450:G:H1	1:w:454:A:P	2.34	0.51
1:w:554:U:H2'	1:w:556:G:H8	1.75	0.51
1:w:686:G:H1	28:Z:16:HIS:CD2	2.28	0.51
1:w:763:G:C2	1:w:765:G:C4	2.97	0.51
1:w:783:A:C2'	1:w:784:A:H4'	2.40	0.51
1:w:958:U:H5'	13:K:41:TRP:HZ2	1.75	0.51
1:w:969:U:OP1	26:X:16:PRO:HA	2.09	0.51
1:w:1451:C:H4'	1:w:1453:A:C8	2.45	0.51
1:w:1654:A:H2'	1:w:1655:A:O4'	2.10	0.51
1:w:1840:G:O5'	1:w:1840:G:C8	2.63	0.51
1:w:1985:G:H2'	1:w:1986:A:O4'	2.10	0.51
1:w:2262:U:C4'	1:w:2328:A:C2	2.93	0.51
1:w:2334:G:OP2	15:M:11:LYS:HD3	2.11	0.51
1:w:2415:G:C5'	12:J:66:GLY:HA3	2.39	0.51
1:w:2443:C:H2'	1:w:2444:G:H8	1.74	0.51
1:w:2657:A:O2'	1:w:2658:C:OP1	2.22	0.51
1:w:2718:G:C5	1:w:2719:G:C8	2.98	0.51
1:w:2732:G:P	1:w:2732:G:H8	2.32	0.51
1:w:2762:G:C5	1:w:2763:G:C5	2.98	0.51
1:w:2793:G:H3'	1:w:2794:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:57:A:C2'	2:x:58:A:H8	2.15	0.51
4:B:79:VAL:HG12	4:B:113:VAL:O	2.10	0.51
4:B:208:LYS:HZ2	4:B:209:ALA:HB3	1.75	0.51
5:C:79:ARG:C	5:C:80:GLU:HG3	2.35	0.51
5:C:103:ASP:O	5:C:104:VAL:CB	2.58	0.51
5:C:156:MET:HE2	5:C:157:ALA:H	1.75	0.51
6:D:29:TRP:HB3	6:D:33:ARG:HH11	1.75	0.51
6:D:163:ARG:HG3	6:D:164:ASN:N	2.24	0.51
6:D:163:ARG:NH2	6:D:164:ASN:HB3	2.25	0.51
7:E:109:VAL:O	7:E:112:PRO:HD2	2.09	0.51
11:I:112:MET:O	11:I:113:LYS:C	2.53	0.51
12:J:84:ASN:HD21	12:J:86:LYS:HB2	1.75	0.51
13:K:135:ASP:HA	22:T:48:PHE:CE1	2.45	0.51
14:L:2:ARG:CG	14:L:3:HIS:H	2.04	0.51
14:L:28:LEU:HB3	14:L:34:ILE:HG12	1.91	0.51
17:O:68:ALA:O	17:O:72:HIS:HB2	2.11	0.51
18:P:4:ILE:HG22	18:P:5:VAL:N	2.25	0.51
20:R:74:PRO:HB2	20:R:76:ARG:HE	1.74	0.51
22:T:81:ARG:O	22:T:83:PRO:HD3	2.10	0.51
22:T:99:TYR:CG	22:T:125:LEU:HD13	2.45	0.51
22:T:150:LEU:CD1	22:T:154:ASP:CG	2.83	0.51
25:W:15:LYS:O	25:W:17:SER:N	2.40	0.51
28:Z:13:ALA:O	28:Z:20:ALA:HB3	2.11	0.51
30:b:8:LYS:O	30:b:9:ARG:HB2	2.11	0.51
31:y:275:G:N1	31:y:276:G:C5	2.78	0.51
31:y:332:G:O2'	31:y:333:G:O4'	2.27	0.51
31:y:407:G:O6	31:y:408:A:C6	2.63	0.51
31:y:826:C:O2'	31:y:827:U:H5'	2.10	0.51
31:y:1065:U:O2'	31:y:1066:C:OP2	2.26	0.51
31:y:1217:C:H2'	31:y:1218:C:H6	1.75	0.51
31:y:1311:G:N7	52:t:2:PRO:N	2.58	0.51
31:y:1404:5MC:N4	31:y:1497:G:C6	2.78	0.51
31:y:1443:G:H4'	31:y:1443:G:OP1	2.10	0.51
31:y:1518:MA6:H8	31:y:1518:MA6:H5"	1.83	0.51
33:2:7:U:H2'	33:2:49:C:H5'	1.91	0.51
35:c:141:GLU:HA	35:c:145:LEU:HG	1.92	0.51
36:d:77:ILE:HG13	36:d:84:ILE:CG2	2.40	0.51
37:e:38:TYR:HD1	37:e:45:GLN:CB	2.21	0.51
37:e:170:VAL:CG2	37:e:171:GLY:N	2.71	0.51
38:f:14:ARG:HE	38:f:15:ARG:H	1.58	0.51
43:k:95:GLU:C	43:k:96:ILE:HD12	2.35	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:m:85:ARG:CG	45:m:86:GLY:N	2.73	0.51
1:w:48:G:N2	1:w:177:G:OP2	2.43	0.51
1:w:270(E):C:H2'	1:w:270(F):G:C8	2.45	0.51
1:w:466:A:C2	1:w:796:C:H5'	2.46	0.51
1:w:479:A:H4'	1:w:480:A:H5"	1.92	0.51
1:w:651:G:N3	1:w:651:G:H2'	2.25	0.51
1:w:871:U:O5'	1:w:871:U:C6	2.60	0.51
1:w:1071:G:N3	1:w:1071:G:H2'	2.25	0.51
1:w:1318:C:C4	1:w:1319:G:N7	2.79	0.51
1:w:1343:G:N2	1:w:1344:G:H1'	2.25	0.51
1:w:1358:G:H3'	1:w:1371:G:H1	1.75	0.51
1:w:1428:C:C5	1:w:1569:A:H5"	2.45	0.51
1:w:1762:A:H8	1:w:1762:A:O5'	1.93	0.51
1:w:1794:U:H2'	1:w:1795:C:H6	1.76	0.51
1:w:1907:G:C2	1:w:1924:C:C2	2.98	0.51
1:w:2803:C:C2'	1:w:2804:C:H5"	2.40	0.51
4:B:78:LYS:HA	4:B:115:GLN:O	2.10	0.51
6:D:29:TRP:HB3	6:D:33:ARG:NH1	2.24	0.51
9:G:109:ILE:HG23	9:G:110:ASP:N	2.24	0.51
10:H:56:LEU:CD1	10:H:61:HIS:HB3	2.40	0.51
13:K:119:ARG:HD2	13:K:119:ARG:N	2.25	0.51
15:M:35:ILE:CD1	15:M:66:ALA:HA	2.40	0.51
15:M:51:ALA:HB3	15:M:73:LEU:HD11	1.92	0.51
16:N:17:THR:O	16:N:19:LEU:N	2.43	0.51
16:N:31:SER:OG	16:N:32:TYR:N	2.43	0.51
17:O:5:LYS:O	17:O:5:LYS:HD2	2.10	0.51
18:P:22:VAL:C	18:P:23:GLU:HG3	2.34	0.51
21:S:20:TYR:O	21:S:21:LYS:HB2	2.10	0.51
22:T:72:ARG:O	22:T:73:GLN:HG3	2.11	0.51
25:W:29:LYS:HZ2	25:W:29:LYS:C	2.18	0.51
31:y:33:A:O5'	31:y:33:A:H8	1.92	0.51
31:y:136:C:O4'	49:q:1:MET:HB2	2.10	0.51
31:y:160:A:N1	31:y:161:A:C2	2.78	0.51
31:y:482:A:C6	31:y:483:C:O2	2.64	0.51
31:y:563:A:H1'	31:y:567:G:H5'	1.92	0.51
31:y:564:C:C5	50:r:32:TYR:HE1	2.28	0.51
31:y:834:C:N3	31:y:853:G:N1	2.58	0.51
31:y:956:U:O2	31:y:960:U:O2	2.28	0.51
31:y:1104:G:HO2'	35:c:111:ARG:HH22	1.53	0.51
31:y:1424:C:C2	31:y:1425:U:C5	2.98	0.51
35:c:178:ARG:HG2	35:c:184:VAL:HG11	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:83:ARG:HA	36:d:86:VAL:HG22	1.91	0.51
37:e:172:PRO:HD2	37:e:173:TRP:CE3	2.45	0.51
38:f:103:GLY:O	38:f:104:ALA:CB	2.59	0.51
42:j:3:GLN:HG3	42:j:20:ARG:NH2	2.25	0.51
43:k:38:ILE:HD12	43:k:71:LEU:HD22	1.92	0.51
45:m:54:VAL:HG12	45:m:68:TYR:CE1	2.45	0.51
46:n:59:TYR:C	46:n:59:TYR:CD2	2.87	0.51
50:r:55:ASP:HB3	50:r:76:LEU:HD21	1.91	0.51
1:w:39:C:H1'	6:D:43:THR:HG21	1.92	0.51
1:w:55:G:N3	1:w:127:A:C2	2.78	0.51
1:w:270(W):G:H2'	1:w:270(X):G:H8	1.74	0.51
1:w:394:A:N3	1:w:395:U:H1'	2.24	0.51
1:w:651:G:N2	1:w:652:U:H1'	2.25	0.51
1:w:811:U:OP1	12:J:31:ALA:CB	2.59	0.51
1:w:1125:G:H4'	30:b:4:ARG:NH1	2.26	0.51
1:w:1140:C:O2'	10:H:48:ARG:NH2	2.43	0.51
1:w:1398:C:H2'	1:w:1399:C:C6	2.44	0.51
1:w:1445:C:P	1:w:1445:C:H3'	2.51	0.51
1:w:1471:A:N6	1:w:1522:G:C2	2.78	0.51
1:w:1564:C:H2'	1:w:1565:C:C6	2.45	0.51
1:w:1794:U:H1'	1:w:1900:A:H2	1.73	0.51
1:w:1798:U:O2	1:w:1802:A:C2	2.60	0.51
1:w:2573:C:C4'	1:w:2574:G:H5"	2.40	0.51
1:w:2632:A:N3	5:C:61:ARG:NH1	2.59	0.51
1:w:2643:G:C5	1:w:2644:G:C5	2.99	0.51
1:w:2722:G:H5"	14:L:4:LEU:HD13	1.92	0.51
1:w:2733:A:N1	5:C:203:LYS:HA	2.26	0.51
5:C:122:PHE:HE2	5:C:138:PRO:CB	2.21	0.51
8:F:40:GLU:OE1	8:F:55:PRO:HB3	2.09	0.51
9:G:27:ARG:HB2	9:G:27:ARG:HH21	1.76	0.51
31:y:132:C:C3'	31:y:133:U:H5"	2.40	0.51
31:y:222:U:H2'	31:y:223:U:H4'	1.91	0.51
31:y:391:G:C2'	31:y:392:G:H5"	2.41	0.51
31:y:532:A:C8	31:y:532:A:C3'	2.93	0.51
31:y:925:G:H2'	31:y:927:G:OP1	2.10	0.51
31:y:971:G:H5"	31:y:972:C:C5'	2.38	0.51
31:y:976:G:C5	31:y:1363:A:N1	2.78	0.51
31:y:1016:A:OP2	31:y:1016:A:C8	2.62	0.51
31:y:1221:G:H3'	31:y:1222:G:H8	1.75	0.51
31:y:1270:C:HO2'	31:y:1271:G:H5'	1.73	0.51
31:y:1341:U:H6	31:y:1341:U:O5'	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1425:U:O2	31:y:1426:C:C5	2.64	0.51
31:y:1468:A:H2'	31:y:1469:G:N9	2.26	0.51
31:y:1471:G:H2'	31:y:1472:U:H6	1.66	0.51
32:z:18:G:C2	32:z:58:A:C2	2.99	0.51
32:z:40:C:H2'	32:z:41:C:C6	2.41	0.51
36:d:135:LYS:HD3	36:d:135:LYS:C	2.35	0.51
37:e:82:ALA:HB2	37:e:93:PHE:CE1	2.45	0.51
37:e:199:ASN:CB	37:e:202:LEU:HD12	2.40	0.51
42:j:50:LEU:HA	42:j:55:ALA:N	2.23	0.51
42:j:86:VAL:HA	42:j:90:PRO:CA	2.38	0.51
45:m:73:GLY:O	45:m:74:HIS:O	2.28	0.51
46:n:54:VAL:C	46:n:56:LEU:N	2.66	0.51
53:u:72:LEU:O	53:u:73:HIS:O	2.28	0.51
1:w:78:A:C6	1:w:109:G:C6	2.99	0.51
1:w:322:A:H5'	1:w:340:A:C1'	2.41	0.51
1:w:578:A:OP1	1:w:1255:U:O2'	2.22	0.51
1:w:685:A:O5'	1:w:774:A:N1	2.43	0.51
1:w:1457:A:C2	1:w:2703:C:N3	2.79	0.51
1:w:1458:C:C1'	1:w:1459:G:C6	2.92	0.51
1:w:1687:G:H2'	1:w:1701:A:N6	2.26	0.51
1:w:1858:G:O2'	1:w:1859:A:C8	2.64	0.51
1:w:2052:G:H2'	1:w:2053:G:H8	1.75	0.51
1:w:2134:A:H62	1:w:2157:G:H1'	1.75	0.51
1:w:2241:A:H2'	1:w:2242:G:C8	2.46	0.51
1:w:2420:C:H2'	1:w:2421:G:H8	1.75	0.51
1:w:2511:U:H2'	1:w:2512:C:O4'	2.10	0.51
1:w:2842:G:H2'	1:w:2843:G:O4'	2.11	0.51
1:w:2857:G:C3'	1:w:2858:C:C5'	2.89	0.51
1:w:2895:U:O2	1:w:2896:C:C5	2.63	0.51
2:x:13:A:H5'	2:x:15:A:N6	2.26	0.51
3:A:197:LEU:HG	3:A:198:GLU:H	1.75	0.51
7:E:31:VAL:HG22	7:E:32:PRO:HD2	1.91	0.51
7:E:120:LEU:CD2	7:E:121:ASN:H	2.22	0.51
7:E:135:LEU:HD13	7:E:155:MET:HG2	1.92	0.51
11:I:81:ASP:C	11:I:82:ASN:OD1	2.54	0.51
12:J:83:VAL:CG2	12:J:84:ASN:N	2.72	0.51
14:L:12:ARG:HH11	14:L:12:ARG:HG3	1.75	0.51
14:L:13:HIS:HB3	14:L:16:HIS:CD2	2.45	0.51
14:L:83:ILE:O	14:L:87:TYR:CD1	2.57	0.51
15:M:54:LEU:O	15:M:56:LEU:O	2.28	0.51
16:N:28:VAL:HG22	16:N:44:ASP:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:42:ALA:O	17:O:46:ALA:HB2	2.11	0.51
19:Q:82:LEU:HD13	19:Q:83:LYS:N	2.25	0.51
22:T:30:ASN:HA	22:T:89:PHE:CE1	2.45	0.51
26:X:49:LYS:HG3	26:X:50:VAL:N	2.26	0.51
31:y:380:G:H22	31:y:382:A:H3'	1.76	0.51
31:y:489:C:H2'	31:y:490:G:H8	1.76	0.51
31:y:546:G:O2'	31:y:547:A:O4'	2.28	0.51
31:y:766:A:O2'	31:y:767:A:H5'	2.09	0.51
31:y:994:A:H2'	31:y:994:A:N3	2.26	0.51
31:y:1010:G:O2'	31:y:1011:G:H5'	2.11	0.51
31:y:1130:A:H8	31:y:1147:C:O2	1.93	0.51
31:y:1398:A:C8	31:y:1398:A:C3'	2.93	0.51
37:e:120:LEU:CD1	37:e:121:VAL:HG23	2.40	0.51
40:h:64:GLN:CD	40:h:64:GLN:C	2.78	0.51
40:h:103:TRP:CH2	40:h:137:LYS:C	2.89	0.51
41:i:41:ARG:C	41:i:43:GLY:N	2.66	0.51
42:j:36:TYR:O	42:j:37:PHE:CB	2.57	0.51
44:l:65:ALA:HB1	44:l:98:LEU:HG	1.92	0.51
47:o:41:ARG:HA	47:o:44:LEU:HB2	1.91	0.51
1:w:7:G:H2'	1:w:8:A:O4'	2.10	0.51
1:w:241:A:O2'	1:w:242:G:C4'	2.59	0.51
1:w:907:U:H2'	1:w:908:C:H6	1.76	0.51
1:w:996:A:H4'	17:O:92:ARG:CD	2.33	0.51
1:w:1050:A:H1'	1:w:2751:G:C2	2.46	0.51
1:w:1194:A:H5'	1:w:1195:G:OP2	2.10	0.51
1:w:1534:G:H2'	1:w:1535:U:H5'	1.91	0.51
1:w:1710:C:H1'	1:w:2858:C:H42	1.76	0.51
1:w:1753:G:C4	1:w:1755:A:OP2	2.63	0.51
1:w:1797:C:C2	1:w:1823:G:C2	2.98	0.51
1:w:1854:A:H5'	1:w:1855:G:OP2	2.09	0.51
1:w:2240:C:H2'	1:w:2241:A:C5'	2.36	0.51
1:w:2472:G:H22	1:w:2477:C:H4'	1.75	0.51
1:w:2635:C:H4'	5:C:79:ARG:NH2	2.21	0.51
1:w:2707:G:H2'	1:w:2708:G:C8	2.46	0.51
1:w:2724:C:P	5:C:111:ARG:HH11	2.32	0.51
1:w:2884:U:O4	27:Y:43:HIS:CE1	2.64	0.51
2:x:87:G:C2	2:x:89(A):G:OP2	2.64	0.51
3:A:167:ASP:H	3:A:171:ALA:CA	2.14	0.51
4:B:3:VAL:HG13	4:B:17:THR:OG1	2.11	0.51
8:F:87:LEU:HD23	8:F:133:VAL:HG13	1.93	0.51
9:G:27:ARG:HH22	9:G:28:ASN:ND2	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:35:HIS:CG	12:J:36:LYS:N	2.79	0.51
13:K:78:PRO:O	13:K:79:LEU:HB2	2.11	0.51
17:O:83:LEU:HD23	17:O:84:LYS:NZ	2.26	0.51
18:P:36:PRO:O	18:P:59:ALA:HB1	2.09	0.51
21:S:53:PRO:O	21:S:54:LYS:CB	2.59	0.51
23:U:22:GLY:O	23:U:24:LYS:N	2.44	0.51
30:b:3:VAL:O	30:b:4:ARG:HG3	2.10	0.51
30:b:11:CYS:HB3	30:b:32:HIS:CD2	2.46	0.51
31:y:7:G:C5'	31:y:298:A:H5'	2.39	0.51
31:y:122:G:H5'	31:y:122:G:H8	1.76	0.51
31:y:304:U:C2	31:y:305:G:N7	2.78	0.51
31:y:398:C:H6	31:y:398:C:O5'	1.92	0.51
31:y:413:G:H1'	31:y:428:G:N2	2.24	0.51
31:y:418:C:N4	31:y:426:G:N1	2.59	0.51
31:y:564:C:C2'	31:y:565:U:C5'	2.88	0.51
31:y:600:C:O2'	31:y:601:C:H5'	2.11	0.51
31:y:654:G:O2'	31:y:655:A:H5'	2.10	0.51
31:y:817:C:C1'	31:y:819:A:H5'	2.40	0.51
31:y:838:G:C2	31:y:842:C:OP1	2.64	0.51
31:y:872:A:HO2'	31:y:873:A:H3'	1.71	0.51
31:y:935:A:H1'	31:y:1384:C:C2	2.45	0.51
31:y:959:A:H5'	31:y:985:C:H4'	1.92	0.51
31:y:1003:G:C6	31:y:1004:A:C4	2.99	0.51
31:y:1159:U:O4	31:y:1182:G:O2'	2.08	0.51
31:y:1243:C:OP2	54:v:10:ARG:NH2	2.44	0.51
31:y:1317:C:OP1	47:o:18:VAL:HG21	2.11	0.51
31:y:1371:G:H4'	42:j:68:GLY:O	2.11	0.51
31:y:1533:C:O2	31:y:1533:C:C2'	2.58	0.51
36:d:33:LEU:O	36:d:37:GLN:HG2	2.10	0.51
36:d:70:VAL:C	36:d:106:VAL:HG23	2.36	0.51
38:f:106:PRO:O	38:f:110:LEU:HG	2.10	0.51
38:f:133:TYR:HA	38:f:136:MET:HB2	1.91	0.51
38:f:143:ARG:HG3	38:f:147:ASP:CB	2.39	0.51
46:n:3:ARG:HG2	46:n:8:GLU:O	2.11	0.51
50:r:47:PRO:C	50:r:49:GLU:N	2.69	0.51
53:u:18:GLN:HA	53:u:21:LYS:HZ1	1.74	0.51
1:w:31:C:H5"	1:w:1239:G:OP1	2.11	0.51
1:w:116:C:C3'	1:w:117:G:H5"	2.40	0.51
1:w:592:G:H2'	1:w:593:G:C8	2.46	0.51
1:w:850:C:H5"	26:X:18:ASP:OD2	2.11	0.51
1:w:937:U:C4	1:w:938:G:N7	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:943:U:OP1	12:J:36:LYS:N	2.44	0.51
1:w:1394:U:O3'	1:w:1603:A:H4'	2.11	0.51
1:w:1571:A:H2'	1:w:1572:A:O4'	2.09	0.51
1:w:2124:G:OP1	3:A:172:ILE:HD11	2.11	0.51
1:w:2548:G:C2'	1:w:2549:G:H5"	2.41	0.51
4:B:224:ALA:HA	4:B:231:HIS:CD2	2.46	0.51
5:C:7:VAL:O	5:C:9:VAL:HG13	2.11	0.51
6:D:12:ARG:O	6:D:13:ARG:HB3	2.11	0.51
6:D:172:ALA:CB	6:D:173:PRO:HD3	2.39	0.51
7:E:107:LEU:O	7:E:111:LEU:CB	2.59	0.51
8:F:156:ALA:C	8:F:158:HIS:H	2.18	0.51
9:G:5:LEU:CD2	9:G:9:LEU:HD12	2.40	0.51
9:G:77:LEU:HD22	9:G:78:THR:N	2.25	0.51
12:J:88:LEU:O	12:J:88:LEU:CG	2.57	0.51
13:K:134:ARG:HD3	13:K:135:ASP:N	2.26	0.51
14:L:90:ARG:HB2	14:L:94:TYR:CE2	2.45	0.51
14:L:102:GLU:CG	14:L:103:ARG:N	2.74	0.51
15:M:67:ARG:HA	15:M:104:GLY:HA3	1.92	0.51
15:M:68:GLN:O	15:M:71:ARG:HG2	2.10	0.51
22:T:44:PHE:CD2	22:T:45:ASP:N	2.79	0.51
25:W:8:LYS:HA	25:W:11:GLU:HB3	1.92	0.51
25:W:51:ARG:HG3	25:W:51:ARG:HH11	1.74	0.51
26:X:34:GLU:O	26:X:36:VAL:HG13	2.11	0.51
27:Y:44:THR:HG22	27:Y:45:VAL:H	1.75	0.51
31:y:7:G:H21	38:f:121:LYS:NZ	2.09	0.51
31:y:109:A:C8	31:y:327:A:C5'	2.87	0.51
31:y:112:G:O2'	31:y:113:G:H5'	2.10	0.51
31:y:118:U:C6	31:y:288:A:N6	2.79	0.51
31:y:146:G:C2	31:y:177:C:N3	2.79	0.51
31:y:303:A:H2'	31:y:304:U:O4'	2.11	0.51
31:y:407:G:C5'	37:e:118:ARG:HD3	2.40	0.51
31:y:429:U:OP2	37:e:10:ARG:HG3	2.11	0.51
31:y:529:G:H1	45:m:48:ASN:CG	2.18	0.51
31:y:563:A:O2'	31:y:567:G:H5'	2.11	0.51
31:y:766:A:H62	31:y:813:U:H3	1.58	0.51
31:y:1188:A:H2'	31:y:1189:C:H5'	1.92	0.51
31:y:1188:A:N7	31:y:1189:C:C5	2.78	0.51
31:y:1284:C:O5'	31:y:1284:C:H6	1.94	0.51
31:y:1331:G:N9	31:y:1331:G:OP2	2.43	0.51
31:y:1432:G:O2'	31:y:1468:A:N6	2.44	0.51
31:y:1433:A:C2	31:y:1434:A:N9	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1504:G:H4'	31:y:1505:G:C5'	2.40	0.51
35:c:97:TRP:O	35:c:98:LEU:HG	2.11	0.51
36:d:72:LYS:O	36:d:75:VAL:HG22	2.10	0.51
36:d:151:VAL:O	36:d:152:ILE:CB	2.58	0.51
37:e:121:VAL:HG13	37:e:136:PRO:HD2	1.93	0.51
37:e:204:ILE:HD12	38:f:99:GLY:HA2	1.92	0.51
41:i:45:ILE:O	41:i:46:LYS:CB	2.58	0.51
44:l:18:ARG:HD3	44:l:34:ASP:O	2.10	0.51
45:m:36:CYS:HB3	45:m:80:SER:N	2.26	0.51
53:u:51:GLU:HA	53:u:54:LYS:HZ3	1.76	0.51
53:u:59:ALA:CA	53:u:62:LEU:HG	2.36	0.51
1:w:185:U:H2'	1:w:186:G:H8	1.76	0.51
1:w:630:G:C4	1:w:632:A:OP2	2.64	0.51
1:w:681:G:H2'	1:w:682:G:H8	1.76	0.51
1:w:813:U:H4'	1:w:1226:A:H5'	1.93	0.51
1:w:1010:A:H8	1:w:1010:A:O5'	1.94	0.51
1:w:1567:A:H3'	4:B:86:PRO:HG3	1.93	0.51
1:w:1848:A:C6	1:w:1849:G:H1'	2.46	0.51
1:w:1851:U:C6	1:w:1851:U:O5'	2.64	0.51
1:w:2041:U:H6	1:w:2041:U:OP2	1.94	0.51
1:w:2578:G:C1'	5:C:139:GLY:CA	2.79	0.51
1:w:2738:A:H61	1:w:2766:G:H1	1.58	0.51
2:x:14:U:C4'	2:x:107:U:H1'	2.41	0.51
2:x:38:C:C2'	2:x:39:A:H5'	2.41	0.51
2:x:99:A:H2'	2:x:100:G:H8	1.75	0.51
5:C:79:ARG:O	5:C:80:GLU:HG3	2.11	0.51
6:D:58:LYS:O	6:D:59:ILE:HG23	2.11	0.51
7:E:115:ARG:HD2	46:n:7:VAL:HG21	1.93	0.51
8:F:11:VAL:HA	8:F:15:VAL:CG2	2.41	0.51
8:F:55:PRO:HG2	8:F:61:HIS:CG	2.46	0.51
8:F:86:GLU:HA	8:F:132:ARG:HA	1.92	0.51
10:H:32:VAL:HG21	10:H:71:MET:CE	2.37	0.51
12:J:46:LYS:HB3	12:J:51:PHE:HZ	1.75	0.51
12:J:83:VAL:HG13	12:J:114:ILE:HA	1.93	0.51
16:N:107:ASP:CB	31:y:1431:C:H5"	2.40	0.51
17:O:21:ALA:HB2	17:O:39:LEU:CD2	2.41	0.51
18:P:3:ALA:C	18:P:4:ILE:HD12	2.36	0.51
22:T:39:VAL:HG12	22:T:40:ASP:N	2.25	0.51
24:V:21:ARG:HG3	24:V:22:GLY:H	1.75	0.51
31:y:7:G:O4'	31:y:298:A:O4'	2.28	0.51
31:y:52:G:H2'	31:y:53:A:H5'	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:319:G:C2	31:y:320:C:C6	2.99	0.51
31:y:362:G:H5"	45:m:60:THR:HG21	1.93	0.51
31:y:438:G:C5'	31:y:439:A:OP1	2.48	0.51
31:y:484:G:HO2'	31:y:485:G:P	2.34	0.51
31:y:1505:G:H5"	31:y:1506:U:C5'	2.40	0.51
33:2:41:U:O2'	40:h:143:ARG:NH2	2.43	0.51
35:c:132:LYS:CD	35:c:133:LYS:H	2.13	0.51
36:d:88:ARG:O	36:d:92:ALA:HB3	2.10	0.51
36:d:202:ILE:HG22	36:d:203:PHE:N	2.25	0.51
38:f:95:ALA:HB3	38:f:98:THR:HB	1.93	0.51
40:h:64:GLN:NE2	40:h:128:ALA:HA	2.26	0.51
44:l:59:TYR:CZ	44:l:63:LEU:HD11	2.45	0.51
45:m:87:GLY:HA3	45:m:98:HIS:HD1	1.76	0.51
45:m:109:VAL:CG2	45:m:119:TYR:HB2	2.38	0.51
1:w:56:A:H3'	1:w:57:C:C5	2.45	0.51
1:w:78:A:N6	1:w:79:G:C6	2.78	0.51
1:w:126:A:N7	1:w:127:A:C2	2.78	0.51
1:w:244:A:H4'	12:J:74:GLU:CD	2.35	0.51
1:w:294:A:H3'	1:w:295:G:H8	1.75	0.51
1:w:838:C:H6	1:w:838:C:O5'	1.93	0.51
1:w:1028:A:H2'	1:w:1029:A:H8	1.76	0.51
1:w:1333:C:H2'	1:w:1334:G:H8	1.75	0.51
1:w:1422:G:H2'	1:w:1423:G:O4'	2.11	0.51
1:w:1542:G:H2'	1:w:1543:A:C5	2.46	0.51
1:w:2279:G:N2	1:w:2327:A:N3	2.59	0.51
1:w:2320:A:C6	1:w:2333:A:H2'	2.46	0.51
1:w:2436:G:HO2'	1:w:2598:A:H2	1.55	0.51
1:w:2437:U:H2'	1:w:2438:U:C6	2.46	0.51
1:w:2465:C:H2'	1:w:2466:C:C5	2.46	0.51
1:w:2588:G:H2'	1:w:2589:A:C5'	2.39	0.51
1:w:2661:G:N1	1:w:2662:A:C2	2.78	0.51
1:w:2821:A:P	14:L:2:ARG:O	2.68	0.51
2:x:99:A:N7	2:x:100:G:C6	2.79	0.51
3:A:214:TYR:CD2	3:A:222:SER:HB2	2.46	0.51
6:D:32:VAL:HG23	6:D:33:ARG:N	2.25	0.51
9:G:24:GLY:O	9:G:27:ARG:NH2	2.44	0.51
10:H:35:ARG:HD2	10:H:73:ASP:OD2	2.11	0.51
11:I:111:PHE:HB3	11:I:114:ILE:CG1	2.39	0.51
12:J:132:LYS:O	12:J:135:LEU:HB3	2.11	0.51
13:K:37:LEU:CD1	13:K:128:LYS:HB2	2.36	0.51
21:S:49:VAL:O	21:S:54:LYS:O	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:183:G:H2'	31:y:183:G:N3	2.25	0.51
31:y:232:G:C2'	31:y:233:C:H5'	2.41	0.51
31:y:247:G:C2'	31:y:248:C:H5'	2.41	0.51
31:y:258:G:N1	31:y:259:G:C6	2.79	0.51
31:y:268:C:C4	31:y:269:C:N4	2.78	0.51
31:y:344:A:H5"	31:y:344:A:C8	2.45	0.51
31:y:357:G:OP1	31:y:367:U:H6	1.94	0.51
31:y:405:U:O4	37:e:2:GLY:HA2	2.10	0.51
31:y:665:A:N1	31:y:732:C:C4	2.79	0.51
31:y:689:C:H5"	44:l:27:ASN:HD21	1.64	0.51
31:y:729:A:C2	31:y:730:G:C8	2.99	0.51
31:y:819:A:C2'	31:y:820:U:OP1	2.58	0.51
31:y:882:C:N4	45:m:4:PRO:HG3	2.26	0.51
31:y:1322:C:C6	31:y:1322:C:O5'	2.64	0.51
31:y:1374:A:HO2'	40:h:29:LYS:HA	1.70	0.51
32:z:44:A:C6	32:z:45:G:C2	2.99	0.51
32:z:59:A:N3	32:z:59:A:H2'	2.26	0.51
33:2:55:PSU:O2'	33:2:57:G:N7	2.36	0.51
35:c:178:ARG:HH12	41:i:74:PRO:HG3	1.74	0.51
35:c:184:VAL:O	35:c:184:VAL:HG23	2.11	0.51
36:d:182:ILE:HD11	36:d:203:PHE:HB2	1.93	0.51
39:g:19:LEU:HD23	39:g:23:LYS:HG3	1.92	0.51
39:g:84:ASN:O	39:g:86:ARG:HG2	2.10	0.51
41:i:85:ARG:C	41:i:86:ILE:HD12	2.35	0.51
46:n:11:ARG:NH1	46:n:11:ARG:HB2	2.25	0.51
47:o:53:LEU:CD2	47:o:53:LEU:H	2.24	0.51
1:w:161:U:H2'	1:w:162:U:C5'	2.41	0.51
1:w:264:C:O2'	1:w:265:A:H3'	2.11	0.51
1:w:489:G:H3'	1:w:491:G:OP2	2.10	0.51
1:w:562:U:O2'	1:w:563:G:H5'	2.10	0.51
1:w:577:G:H8	1:w:577:G:O5'	1.94	0.51
1:w:811:U:C6	1:w:1251:C:C1'	2.89	0.51
1:w:1030:G:C2'	1:w:1031:G:H5'	2.41	0.51
1:w:1081:U:O2'	1:w:1082:U:C6	2.63	0.51
1:w:1152:C:C1'	17:O:77:SER:HB2	2.38	0.51
1:w:1158:C:H4'	26:X:31:LEU:O	2.11	0.51
1:w:1319:G:H3'	1:w:1320:C:H5"	1.92	0.51
1:w:1502:C:H2'	1:w:1503:U:H5'	1.91	0.51
1:w:1568:G:P	4:B:63:ARG:HH21	2.34	0.51
1:w:1650:G:C6	1:w:1651:G:C5	2.99	0.51
1:w:1654:A:O2'	1:w:1655:A:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1945:G:H8	1:w:1945:G:O5'	1.94	0.51
1:w:2186:G:H2'	1:w:2187:G:C8	2.46	0.51
1:w:2617:C:H2'	1:w:2618:G:H5'	1.92	0.51
1:w:2681:C:H5"	1:w:2682:U:OP1	2.10	0.51
1:w:2688:U:C6	1:w:2719:G:N1	2.79	0.51
1:w:2823:A:O2'	1:w:2824:C:H5'	2.11	0.51
1:w:2842:G:C4	1:w:2843:G:C8	2.99	0.51
1:w:2876:G:OP1	16:N:2:ASN:C	2.54	0.51
5:C:8:LYS:HG2	5:C:190:GLY:O	2.10	0.51
5:C:176:ILE:HG21	5:C:181:LEU:HD23	1.92	0.51
7:E:79:ASN:ND2	7:E:81:LYS:H	2.08	0.51
8:F:77:LYS:HD3	8:F:77:LYS:O	2.11	0.51
8:F:127:GLU:N	8:F:128:PRO:HA	2.25	0.51
9:G:77:LEU:CD2	9:G:100:ALA:HB1	2.40	0.51
9:G:131:LYS:NZ	9:G:134:PRO:HA	2.26	0.51
12:J:97:PRO:HG2	12:J:126:VAL:HB	1.93	0.51
15:M:95:HIS:O	15:M:96:GLY:C	2.53	0.51
19:Q:38:TYR:O	27:Y:28:PRO:HG3	2.10	0.51
19:Q:85:VAL:CG1	19:Q:95:ILE:HG22	2.35	0.51
20:R:57:LEU:HD21	20:R:59:VAL:HG22	1.91	0.51
31:y:109:A:H4'	31:y:110:C:OP2	2.11	0.51
31:y:114:U:O5'	31:y:114:U:H6	1.94	0.51
31:y:132:C:H2'	31:y:133:U:C5'	2.32	0.51
31:y:139:G:H2'	31:y:140:A:H8	1.73	0.51
31:y:152:A:C8	31:y:153:C:C6	2.98	0.51
31:y:306:G:N2	31:y:307:C:C2	2.78	0.51
31:y:326:G:C2'	31:y:327:A:C5'	2.88	0.51
31:y:418:C:H2'	31:y:419:C:H5'	1.93	0.51
31:y:519:C:O3'	45:m:50:ALA:CB	2.54	0.51
31:y:718:G:H5"	31:y:720:C:H41	1.76	0.51
31:y:743:U:H2'	31:y:744:C:C5	2.46	0.51
31:y:959:A:N6	52:t:79:THR:HG22	2.26	0.51
31:y:102(A):C:H2'	31:y:102(B):C:C6	2.45	0.51
31:y:103(C):G:H2'	31:y:1033:G:C8	2.45	0.51
31:y:1114:C:N3	31:y:1115:C:C5	2.79	0.51
31:y:1221:G:N1	31:y:1222:G:H1'	2.25	0.51
31:y:1256:A:N6	31:y:1279:A:OP2	2.44	0.51
31:y:1300:G:H22	31:y:1335:C:C4'	2.24	0.51
31:y:1501:C:C5'	31:y:1502:A:OP2	2.59	0.51
33:2:69:U:C6	33:2:69:U:O5'	2.63	0.51
36:d:118:GLN:HG2	36:d:119:ARG:N	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:151:VAL:CG1	36:d:168:ALA:HB3	2.40	0.51
36:d:156:ARG:HA	36:d:160:ALA:HB3	1.93	0.51
36:d:178:LEU:CD1	36:d:178:LEU:N	2.73	0.51
43:k:24:VAL:O	43:k:28:ARG:HG3	2.10	0.51
44:l:108:ILE:O	44:l:108:ILE:CG2	2.59	0.51
52:t:60:VAL:O	52:t:62:ILE:N	2.44	0.51
53:u:53:LEU:HB2	53:u:100:ILE:HG21	1.92	0.51
1:w:443:A:O3'	17:O:2:PRO:HD3	2.11	0.51
1:w:450:G:OP2	6:D:80:GLY:HA2	2.11	0.51
1:w:456:C:N3	20:R:66:LEU:HB3	2.26	0.51
1:w:535:C:O4'	17:O:49:HIS:HB3	2.11	0.51
1:w:544:C:H2'	1:w:545:G:H8	1.76	0.51
1:w:631:A:H2'	1:w:632:A:H8	1.73	0.51
1:w:705:A:OP2	1:w:725:G:N1	2.44	0.51
1:w:788:A:C4'	1:w:789:A:H5'	2.22	0.51
1:w:834:C:C5'	29:a:52:LYS:HD3	2.24	0.51
1:w:1029:A:H2'	1:w:1030:G:O4'	2.11	0.51
1:w:1133:U:O2'	1:w:1137:G:OP1	2.29	0.51
1:w:1139:G:O2'	1:w:1143:A:N1	2.31	0.51
1:w:1228:G:H3'	1:w:1229:G:H5"	1.93	0.51
1:w:1406:U:O2'	1:w:1407:C:H5'	2.11	0.51
1:w:1568:G:P	4:B:63:ARG:HE	2.34	0.51
1:w:1695:G:H2'	1:w:1696:G:O4'	2.11	0.51
1:w:1718:G:H2'	1:w:1718:G:N3	2.25	0.51
1:w:1827:C:O3'	1:w:1972:A:H5"	2.11	0.51
1:w:2048:G:N2	1:w:2620:C:O2	2.41	0.51
1:w:2512:C:C5'	5:C:122:PHE:CE2	2.93	0.51
1:w:2813:A:O2'	1:w:2814:C:H5'	2.10	0.51
4:B:93:ALA:O	4:B:104:TYR:HA	2.11	0.51
4:B:140:THR:CG2	4:B:165:ILE:HD13	2.41	0.51
4:B:259:THR:C	4:B:260:ARG:HG2	2.35	0.51
4:B:259:THR:CG2	4:B:260:ARG:N	2.60	0.51
5:C:37:ARG:HB2	5:C:45:THR:N	2.26	0.51
5:C:99:GLY:H	5:C:172:VAL:C	2.19	0.51
6:D:159:ARG:C	6:D:161:ALA:H	2.19	0.51
7:E:139:LEU:C	7:E:141:PHE:H	2.19	0.51
12:J:50:ARG:NH2	12:J:57:THR:OG1	2.44	0.51
12:J:96:THR:O	12:J:98:GLU:N	2.44	0.51
13:K:89:ASN:ND2	13:K:90:VAL:H	2.09	0.51
15:M:40:ILE:CG2	15:M:41:ASP:H	2.24	0.51
16:N:50:ILE:HG13	16:N:63:VAL:CA	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:14:HIS:HA	17:O:17:ILE:HD13	1.93	0.51
20:R:65:ARG:HA	20:R:65:ARG:CZ	2.38	0.51
24:V:21:ARG:O	24:V:39:LYS:HG3	2.11	0.51
31:y:104:G:H2'	31:y:105:G:H5'	1.93	0.51
31:y:314:C:O2'	31:y:315:A:H4'	2.10	0.51
31:y:392:G:C2	31:y:393:A:H1'	2.46	0.51
31:y:519:C:OP2	45:m:49:SER:HB3	2.11	0.51
31:y:689:C:C5'	44:l:27:ASN:HD21	2.22	0.51
31:y:988:G:C1'	31:y:1014:A:H61	2.20	0.51
31:y:1107:C:O2'	31:y:1191:A:H1'	2.11	0.51
31:y:1206:G:H2'	31:y:1207:2MG:H4'	1.93	0.51
31:y:1208:C:H2'	31:y:1209:C:O5'	2.11	0.51
31:y:1306:A:H2'	31:y:1307:U:O4'	2.11	0.51
31:y:1357:A:H8	31:y:1357:A:O5'	1.94	0.51
31:y:1489:G:H2'	31:y:1490:C:H6	1.75	0.51
31:y:1512:U:H2'	31:y:1513:A:H8	1.76	0.51
32:z:44:A:C5	32:z:45:G:C4	2.99	0.51
36:d:135:LYS:NZ	38:f:53:LEU:HD21	2.26	0.51
36:d:174:PRO:C	36:d:176:HIS:N	2.67	0.51
37:e:120:LEU:HD22	37:e:120:LEU:C	2.36	0.51
38:f:78:HIS:CA	41:i:104:ARG:HG3	2.41	0.51
38:f:149:GLU:O	38:f:152:ARG:HB2	2.11	0.51
51:s:65:ILE:O	51:s:69:THR:HG23	2.11	0.51
52:t:53:ASN:O	52:t:54:GLY:C	2.54	0.51
1:w:65:C:H1'	1:w:456:C:H41	1.76	0.50
1:w:226:G:N2	1:w:227:A:C2	2.79	0.50
1:w:293:U:H6	1:w:293:U:O5'	1.94	0.50
1:w:449:A:H1'	17:O:3:ARG:NH2	2.26	0.50
1:w:647:G:C6	1:w:648:G:C5	2.99	0.50
1:w:764:A:N6	1:w:1789:A:C2	2.77	0.50
1:w:855:G:C2	1:w:856:C:C2	2.98	0.50
1:w:861:A:OP2	1:w:862:G:N7	2.43	0.50
1:w:1309:G:C3'	1:w:1310:G:H5"	2.41	0.50
1:w:1543:A:C8	1:w:1544:C:H1'	2.47	0.50
1:w:1681:G:H2'	1:w:1762:A:C2	2.46	0.50
1:w:2024:G:N2	1:w:2040:C:C2	2.79	0.50
1:w:2290:G:H5'	1:w:2290:G:H8	1.75	0.50
1:w:2297:C:C2'	1:w:2298:A:H5'	2.40	0.50
1:w:2397:G:C2	1:w:2420:C:C2	2.99	0.50
1:w:2593:U:H2'	1:w:2594:C:H6	1.76	0.50
1:w:2659:G:C4	1:w:2661:G:OP2	2.63	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2736:G:C4	1:w:2737:G:C8	2.99	0.50
1:w:2862:G:H2'	1:w:2863:C:C6	2.46	0.50
6:D:15:LEU:HD23	6:D:114:ARG:HH12	1.76	0.50
6:D:48:THR:HG23	6:D:49:ARG:N	2.20	0.50
6:D:166:PRO:O	6:D:167:TRP:CB	2.57	0.50
6:D:176:LEU:CD2	6:D:178:VAL:HG22	2.41	0.50
7:E:59:GLU:OE2	7:E:151:ALA:HB1	2.11	0.50
7:E:115:ARG:HH11	7:E:115:ARG:HA	1.76	0.50
9:G:69:LYS:O	9:G:69:LYS:HD3	2.11	0.50
14:L:51:LEU:HD12	14:L:52:ILE:N	2.27	0.50
15:M:35:ILE:HG23	15:M:35:ILE:O	2.10	0.50
15:M:62:LYS:HA	15:M:97:ARG:NH1	2.27	0.50
17:O:16:LYS:O	17:O:20:LEU:HD23	2.11	0.50
22:T:19:ARG:HE	22:T:25:PRO:HG2	1.76	0.50
23:U:62:LEU:HD23	23:U:63:VAL:CG2	2.36	0.50
23:U:81:VAL:O	23:U:83:PRO:HD3	2.11	0.50
24:V:70:VAL:HG23	24:V:71:TYR:H	1.74	0.50
25:W:37:PHE:O	25:W:39:ALA:N	2.44	0.50
31:y:33:A:O2'	31:y:363:A:H1'	2.10	0.50
31:y:280:C:H42	50:r:39:SER:HB3	1.75	0.50
31:y:336:C:H6	31:y:336:C:O5'	1.94	0.50
31:y:428:G:H1'	31:y:430:A:C5	2.44	0.50
31:y:563:A:H5'	31:y:566:G:N3	2.25	0.50
31:y:102(C):C:H2'	31:y:1029:G:O5'	2.11	0.50
31:y:1112:C:C2'	31:y:1113:C:C5'	2.86	0.50
31:y:1494:G:C2'	31:y:1495:U:O5'	2.59	0.50
32:z:44:A:H2'	32:z:45:G:C8	2.46	0.50
32:z:54:U:O2'	32:z:55:U:H5'	2.11	0.50
35:c:134:GLU:HA	35:c:137:ARG:HD3	1.93	0.50
36:d:152:ILE:HB	36:d:199:LYS:O	2.11	0.50
37:e:9:CYS:SG	37:e:31:CYS:HA	2.51	0.50
37:e:58:LEU:HA	37:e:206:PHE:CE1	2.45	0.50
37:e:61:LYS:HZ3	37:e:62:GLN:HA	1.76	0.50
37:e:63:LYS:HE3	37:e:64:LEU:CD2	2.40	0.50
38:f:13:ILE:HG13	38:f:29:GLY:O	2.11	0.50
40:h:88:PRO:HG3	40:h:151:TYR:CE1	2.45	0.50
40:h:92:SER:CB	40:h:95:ARG:HH11	2.24	0.50
41:i:1:MET:CG	41:i:2:LEU:N	2.71	0.50
44:l:52:GLY:O	44:l:55:LYS:HB2	2.11	0.50
44:l:69:ALA:O	44:l:72:ALA:HB3	2.11	0.50
50:r:68:ARG:H	50:r:70:ARG:NH2	2.09	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:r:81:ARG:HH21	50:r:83:ASP:HB2	1.76	0.50
52:t:45:VAL:C	52:t:47:HIS:N	2.66	0.50
1:w:1:G:H2'	1:w:2:G:H8	1.77	0.50
1:w:512:G:HO2'	1:w:513:A:H8	1.58	0.50
1:w:671:C:P	12:J:41:ARG:HH12	2.33	0.50
1:w:855:G:N2	23:U:27:GLU:H	2.10	0.50
1:w:1221:C:C6	1:w:1221:C:OP1	2.63	0.50
1:w:1270:C:C4'	1:w:1271:G:H5'	2.41	0.50
1:w:1330:C:H2'	1:w:1331:A:H5'	1.94	0.50
1:w:1527:G:H21	1:w:1545:A:N6	2.09	0.50
1:w:1818:U:H5"	4:B:157:ARG:CB	2.39	0.50
1:w:2100:G:C4	1:w:2101:G:C8	2.99	0.50
1:w:2336:A:O2'	1:w:2337:G:H5'	2.11	0.50
1:w:2573:C:O5'	1:w:2573:C:H6	1.95	0.50
1:w:2644:G:H2'	1:w:2645:G:C8	2.46	0.50
1:w:2753:A:H2'	1:w:2754:U:C5'	2.42	0.50
2:x:81:G:O6	2:x:96:G:O6	2.29	0.50
2:x:83:G:C2	2:x:84:C:C2	2.99	0.50
4:B:133:LEU:HD23	4:B:189:CYS:HB2	1.93	0.50
7:E:12:TYR:H	7:E:12:TYR:HD2	1.58	0.50
7:E:172:LEU:C	7:E:172:LEU:HD12	2.36	0.50
9:G:23:PRO:HB2	9:G:27:ARG:CZ	2.41	0.50
9:G:130:TYR:HB3	9:G:138:ILE:HG23	1.93	0.50
16:N:35:LYS:HE2	16:N:40:THR:OG1	2.11	0.50
17:O:50:ARG:HG2	17:O:50:ARG:HH21	1.76	0.50
17:O:92:ARG:O	17:O:94:ASN:N	2.44	0.50
18:P:58:VAL:O	18:P:59:ALA:HB2	2.11	0.50
19:Q:88:ARG:HH11	19:Q:93:ALA:HA	1.74	0.50
22:T:8:TYR:HD1	22:T:39:VAL:HG13	1.75	0.50
22:T:72:ARG:C	22:T:73:GLN:HG3	2.35	0.50
24:V:88:LYS:CG	24:V:89:GLU:OE2	2.59	0.50
25:W:50:ILE:O	25:W:51:ARG:CB	2.58	0.50
29:a:36:LYS:H	29:a:36:LYS:HD2	1.77	0.50
30:b:27:CYS:SG	30:b:28:GLU:N	2.65	0.50
31:y:68:G:H2'	31:y:69:G:H4'	1.94	0.50
31:y:210:U:C1'	31:y:216:G:N7	2.68	0.50
31:y:419:C:H2'	31:y:420:U:O4'	2.10	0.50
31:y:508:C:H4'	31:y:509:A:O5'	2.10	0.50
31:y:584:G:C2'	31:y:585:G:H8	2.11	0.50
31:y:750:G:C2	31:y:751:U:C5	2.99	0.50
31:y:867:G:C2	31:y:868:C:N4	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:889:A:H5"	31:y:891:U:C6	2.46	0.50
31:y:984:C:C2	31:y:985:C:C5	2.99	0.50
31:y:102(C):C:C2'	31:y:1029:G:O5'	2.60	0.50
31:y:1053:G:H4'	31:y:1053:G:OP1	2.11	0.50
31:y:1063:C:O5'	31:y:1063:C:H6	1.92	0.50
31:y:1401:G:H8	31:y:1401:G:P	2.34	0.50
33:2:68:U:O2'	33:2:69:U:H5'	2.12	0.50
35:c:164:VAL:HG22	35:c:165:VAL:H	1.76	0.50
36:d:168:ALA:O	36:d:169:ALA:HB3	2.12	0.50
39:g:79:LEU:C	39:g:81:ILE:H	2.20	0.50
40:h:99:LEU:O	40:h:103:TRP:HB2	2.10	0.50
45:m:42:VAL:HG22	45:m:43:THR:N	2.25	0.50
45:m:92:LEU:C	45:m:94:GLY:H	2.18	0.50
49:q:55:ARG:O	49:q:58:TYR:HB3	2.12	0.50
50:r:10:VAL:HG13	50:r:57:VAL:N	2.27	0.50
54:v:24:ARG:HB3	54:v:25:LYS:HD2	1.93	0.50
1:w:64:A:H2'	1:w:65:C:C6	2.46	0.50
1:w:64:A:N7	1:w:65:C:N4	2.59	0.50
1:w:188:G:N2	1:w:209:C:C2	2.80	0.50
1:w:439:G:C2	1:w:440:G:C4	2.99	0.50
1:w:464:U:H4'	28:Z:5:TRP:CZ3	2.46	0.50
1:w:554:U:C2'	1:w:556:G:H5'	2.42	0.50
1:w:671:C:C2'	1:w:672:C:C5'	2.88	0.50
1:w:706:A:N6	1:w:707:G:C2	2.79	0.50
1:w:756:C:H2'	1:w:757:U:O4'	2.11	0.50
1:w:830:G:C4	1:w:2448:A:C5	2.99	0.50
1:w:944:G:O3'	1:w:946:G:OP2	2.28	0.50
1:w:1023:U:H4'	1:w:1123:C:OP1	2.11	0.50
1:w:1196:C:O4'	1:w:1226:A:N3	2.44	0.50
1:w:1319:G:N1	1:w:1334:G:C6	2.79	0.50
1:w:1793:C:O2	1:w:1970:A:H2	1.93	0.50
1:w:2037:G:C6	1:w:2038:G:C6	2.99	0.50
1:w:2256:G:C4	1:w:2257:U:C5	2.99	0.50
1:w:2358:G:N1	1:w:2359:C:C4	2.80	0.50
1:w:2579:C:O2	1:w:2580:U:C6	2.64	0.50
1:w:2640:G:HO2'	10:H:98:TYR:HH	1.48	0.50
1:w:2676:C:O2	1:w:2732:G:N2	2.44	0.50
1:w:2840:C:H5"	14:L:53:HIS:CE1	2.46	0.50
4:B:259:THR:C	4:B:261:LYS:H	2.19	0.50
7:E:81:LYS:O	7:E:82:LEU:HB2	2.11	0.50
11:I:77:ILE:HG23	11:I:79:PHE:CE1	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:13:ASN:O	12:J:13:ASN:ND2	2.44	0.50
12:J:59:LEU:HD11	29:a:13:ARG:NH1	2.26	0.50
13:K:81:VAL:HG21	13:K:82:ARG:NH1	2.27	0.50
16:N:32:TYR:O	16:N:33:LYS:O	2.29	0.50
16:N:83:ILE:HG13	16:N:84:GLN:H	1.76	0.50
18:P:60:GLU:OE1	18:P:62:LEU:HD22	2.11	0.50
18:P:64:HIS:HA	18:P:96:ILE:HG23	1.94	0.50
18:P:78:LYS:HG3	18:P:78:LYS:O	2.10	0.50
20:R:27:THR:HA	20:R:78:LYS:CB	2.38	0.50
22:T:28:MET:SD	22:T:35:ARG:HB2	2.52	0.50
23:U:28:GLY:N	23:U:69:PHE:HB2	2.23	0.50
25:W:53:LEU:HD23	25:W:54:LYS:N	2.26	0.50
30:b:9:ARG:HH21	30:b:16:VAL:CG2	2.24	0.50
31:y:42:G:C5	31:y:43:C:N4	2.79	0.50
31:y:180:U:O2	31:y:195:A:N7	2.44	0.50
31:y:262:A:N3	31:y:263:A:N7	2.60	0.50
31:y:331:G:OP1	31:y:332:G:H8	1.92	0.50
31:y:695:A:H2	31:y:787:A:H1'	1.77	0.50
31:y:745:C:H4'	31:y:836:G:C2	2.46	0.50
31:y:1126:U:N3	31:y:1280:A:O2'	2.45	0.50
31:y:1424:C:N3	31:y:1425:U:C4	2.79	0.50
32:z:44:A:C6	32:z:45:G:C4	2.99	0.50
35:c:19:HIS:HA	35:c:40:HIS:O	2.12	0.50
35:c:118:LEU:HD11	35:c:138:LEU:HD11	1.93	0.50
36:d:16:ARG:HD3	36:d:17:ASP:N	2.26	0.50
37:e:31:CYS:SG	37:e:33:MET:CE	2.93	0.50
37:e:170:VAL:C	37:e:174:LEU:HD12	2.37	0.50
40:h:84:ASN:HD22	40:h:84:ASN:H	1.58	0.50
40:h:85:TYR:N	40:h:85:TYR:CD2	2.79	0.50
40:h:137:LYS:O	40:h:140:ASP:HB3	2.11	0.50
41:i:21:LYS:HD3	41:i:21:LYS:C	2.37	0.50
43:k:40:LEU:O	43:k:70:ARG:NH1	2.44	0.50
43:k:82:ILE:O	43:k:86:MET:HB2	2.11	0.50
44:l:59:TYR:CE2	44:l:63:LEU:HD11	2.47	0.50
45:m:23:VAL:HG13	45:m:97:TYR:OH	2.11	0.50
45:m:41:THR:OG1	45:m:51:LEU:HB3	2.12	0.50
52:t:19:VAL:O	52:t:20:LEU:C	2.54	0.50
52:t:48:THR:HB	52:t:62:ILE:HG21	1.91	0.50
53:u:80:ARG:HA	53:u:84:LEU:H	1.77	0.50
1:w:184:C:H4'	1:w:217:G:N2	2.26	0.50
1:w:214:G:N2	1:w:216:A:C2	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:247:G:H4'	1:w:386:G:C5	2.46	0.50
1:w:414:C:H1'	1:w:1864:U:HO2'	1.75	0.50
1:w:454:A:P	1:w:454:A:H8	2.34	0.50
1:w:695:G:OP1	1:w:1380:G:O2'	2.29	0.50
1:w:1009:A:H4'	17:O:63:VAL:CG2	2.41	0.50
1:w:1339:G:OP1	20:R:14:SER:HB2	2.11	0.50
1:w:1798:U:H1'	1:w:1803:A:H1'	1.93	0.50
1:w:1836:C:H5"	31:y:783:C:O2'	2.11	0.50
1:w:2242:G:H2'	1:w:2243:U:O4'	2.11	0.50
1:w:2257:U:O2'	1:w:2258:C:C5'	2.59	0.50
1:w:2296:U:O2'	1:w:2297:C:C6	2.64	0.50
1:w:2315:G:H2'	1:w:2316:C:H6	1.76	0.50
1:w:2514:U:H2'	1:w:2515:C:C6	2.45	0.50
1:w:2701:C:H3'	1:w:2702:U:C5'	2.36	0.50
1:w:2720:U:C6	1:w:2720:U:C5'	2.91	0.50
1:w:2733:A:O2'	1:w:2734:A:C5'	2.48	0.50
1:w:2830:G:H2'	1:w:2830:G:N3	2.26	0.50
2:x:8:U:C5'	15:M:89:ARG:HE	2.24	0.50
4:B:88:ARG:HH11	4:B:88:ARG:HG2	1.77	0.50
4:B:91:ARG:HH11	4:B:198:ASN:CG	2.20	0.50
6:D:128:ASN:HA	6:D:134:PHE:CE1	2.46	0.50
6:D:132:LYS:HA	6:D:135:LEU:HB3	1.93	0.50
8:F:7:LEU:HB2	8:F:8:PRO:HD3	1.94	0.50
10:H:39:ILE:CG1	10:H:40:ASP:H	2.24	0.50
12:J:50:ARG:NH2	12:J:50:ARG:CG	2.65	0.50
13:K:133:ARG:HG3	22:T:81:ARG:HH21	1.76	0.50
14:L:11:ASN:O	14:L:12:ARG:CB	2.60	0.50
19:Q:45:TYR:O	19:Q:45:TYR:CG	2.63	0.50
25:W:16:LEU:C	25:W:16:LEU:HD23	2.36	0.50
25:W:41:ILE:C	25:W:43:GLN:H	2.20	0.50
25:W:54:LYS:N	25:W:55:ARG:HD2	2.25	0.50
27:Y:41:PRO:HB2	27:Y:42:PRO:CD	2.41	0.50
29:a:49:VAL:O	29:a:53:PRO:CG	2.53	0.50
31:y:314:C:H2'	31:y:315:A:O4'	2.12	0.50
31:y:377:G:H5'	49:q:5:ARG:HH12	1.76	0.50
31:y:403:C:H5"	37:e:135:LEU:HD22	1.94	0.50
31:y:406:G:N2	37:e:119:GLN:HE22	2.08	0.50
31:y:408:A:H2'	31:y:409:G:H8	1.76	0.50
31:y:411:A:C8	31:y:411:A:H3'	2.47	0.50
31:y:477:G:H2'	31:y:478:A:O4'	2.11	0.50
31:y:533:A:H8	31:y:533:A:O5'	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:546:G:O2'	31:y:547:A:C1'	2.59	0.50
31:y:570:G:H1'	31:y:820:U:C4	2.46	0.50
31:y:728:A:N3	31:y:729:A:N7	2.59	0.50
31:y:813:U:H2'	31:y:813:U:O2	2.09	0.50
31:y:1238:A:N6	31:y:1303:C:O4'	2.44	0.50
31:y:1262:C:H2'	31:y:1263:C:C6	2.45	0.50
31:y:1316:G:H2'	31:y:1318:A:N7	2.27	0.50
31:y:1325:C:H5'	54:v:15:ARG:HH21	1.75	0.50
31:y:1386:G:H2'	31:y:1387:G:C8	2.45	0.50
31:y:1469:G:C8	31:y:1469:G:P	3.01	0.50
35:c:163:PHE:HA	35:c:185:ILE:O	2.11	0.50
36:d:90:GLU:O	36:d:94:LEU:HB2	2.12	0.50
36:d:119:ARG:O	36:d:122:GLU:HB2	2.11	0.50
36:d:122:GLU:HB3	36:d:126:ARG:HH22	1.75	0.50
37:e:15:GLU:HG2	37:e:63:LYS:CG	2.40	0.50
37:e:31:CYS:SG	37:e:34:GLU:CB	2.81	0.50
41:i:118:VAL:HG12	41:i:119:LEU:N	2.26	0.50
46:n:71:ARG:C	46:n:74:VAL:HB	2.36	0.50
49:q:60:LEU:HA	49:q:64:ALA:HB3	1.94	0.50
52:t:65:ASN:C	52:t:67:VAL:N	2.70	0.50
53:u:53:LEU:HG	53:u:100:ILE:CG2	2.41	0.50
1:w:270(E):C:H2'	1:w:270(F):G:N7	2.27	0.50
1:w:321:G:H1'	6:D:160:ARG:HB2	1.94	0.50
1:w:440:G:OP2	1:w:440:G:C8	2.63	0.50
1:w:575:A:N3	1:w:575:A:H2'	2.25	0.50
1:w:702:G:H3'	1:w:703:U:C6	2.46	0.50
1:w:909:A:N3	1:w:909:A:H2'	2.27	0.50
1:w:1201:C:H6	1:w:1201:C:C5'	2.21	0.50
1:w:2124:G:N2	3:A:218:THR:HA	2.26	0.50
1:w:2440:C:H5"	1:w:2587:A:H4'	1.93	0.50
1:w:2459:A:H3'	1:w:2460:U:C6	2.46	0.50
1:w:2550:G:C6	1:w:2551:C:N3	2.80	0.50
1:w:2590:A:C6	1:w:2605:U:O4	2.64	0.50
1:w:2655:G:C2'	1:w:2656:U:OP2	2.59	0.50
1:w:2791:C:H2'	1:w:2792:G:N7	2.26	0.50
1:w:2828:C:C2	1:w:2829:C:C5	2.99	0.50
1:w:2846:G:C5	1:w:2847:U:N3	2.80	0.50
2:x:28:C:H5"	15:M:34:HIS:NE2	2.27	0.50
2:x:30:C:C2'	2:x:31:C:C5'	2.86	0.50
3:A:223:VAL:CG1	3:A:224:ARG:H	2.09	0.50
4:B:126:GLN:O	4:B:193:VAL:CG2	2.57	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:81:ILE:O	5:C:83:ASP:N	2.44	0.50
6:D:29:TRP:CG	6:D:33:ARG:HH11	2.28	0.50
6:D:129:GLY:HA2	6:D:161:ALA:HB2	1.93	0.50
11:I:89:ASN:O	11:I:90:GLN:C	2.54	0.50
12:J:41:ARG:NH1	12:J:45:LEU:HG	2.27	0.50
13:K:119:ARG:O	13:K:121:ALA:N	2.45	0.50
14:L:22:ARG:HH22	14:L:71:GLN:NE2	2.09	0.50
15:M:49:VAL:CG2	15:M:50:SER:H	2.23	0.50
24:V:87:PRO:HA	24:V:91:LYS:HZ2	1.77	0.50
27:Y:29:ILE:HG12	27:Y:42:PRO:HD3	1.93	0.50
31:y:27:G:C6	31:y:557:G:N1	2.79	0.50
31:y:54:C:N4	31:y:353:A:OP2	2.37	0.50
31:y:145:G:N1	31:y:178:C:N4	2.59	0.50
31:y:229:U:C6	31:y:229:U:O5’	2.65	0.50
31:y:302:G:H5’	45:m:16:LYS:CE	2.42	0.50
31:y:575:G:O2’	31:y:576:G:P	2.70	0.50
31:y:603:U:C2’	31:y:604:G:H8	2.23	0.50
31:y:848:C:O5’	31:y:848:C:H6	1.94	0.50
31:y:1093:A:H3’	31:y:1093:A:C8	2.46	0.50
31:y:1108:G:H2’	31:y:1109:C:H5”	1.92	0.50
31:y:1381:U:N3	31:y:1382:C:C5	2.80	0.50
31:y:1475:G:N2	31:y:1476:G:H1’	2.26	0.50
35:c:137:ARG:NH1	35:c:137:ARG:HB3	2.26	0.50
36:d:33:LEU:HD13	36:d:37:GLN:OE1	2.11	0.50
36:d:110:ASN:HB3	36:d:141:VAL:HG23	1.93	0.50
36:d:123:GLN:N	36:d:123:GLN:OE1	2.44	0.50
37:e:32:ALA:CA	37:e:35:ARG:HD3	2.42	0.50
37:e:105:VAL:HG22	37:e:110:PHE:CD2	2.47	0.50
41:i:27:PRO:O	41:i:58:TYR:HA	2.11	0.50
41:i:78:GLN:O	41:i:80:ILE:N	2.44	0.50
44:l:69:ALA:O	44:l:73:MET:SD	2.70	0.50
50:r:19:VAL:HG13	50:r:46:ASP:HB3	1.94	0.50
52:t:32:LYS:HA	52:t:49:ILE:HB	1.94	0.50
1:w:139:G:C4	1:w:140:A:N7	2.80	0.50
1:w:186:G:H2’	1:w:187:G:H8	1.75	0.50
1:w:305:U:H6	1:w:305:U:O5’	1.95	0.50
1:w:381:G:H2’	1:w:382:G:O4’	2.11	0.50
1:w:443:A:C2	1:w:1246:A:H1’	2.47	0.50
1:w:521:G:H2’	1:w:522:G:H8	1.76	0.50
1:w:528:A:C2	1:w:2042:A:H3’	2.45	0.50
1:w:580:C:OP1	1:w:2018:G:H4’	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:742:G:H4'	1:w:1675:C:O2'	2.11	0.50
1:w:1191:G:OP2	1:w:1191:G:C8	2.61	0.50
1:w:1397:U:OP1	1:w:1398:C:H5	1.95	0.50
1:w:1635:G:H3'	1:w:1635:G:P	2.51	0.50
1:w:2023:G:C2	1:w:2024:G:C4	3.00	0.50
1:w:2152:G:O5'	1:w:2152:G:H8	1.93	0.50
1:w:2159:G:C2'	1:w:2160:G:H5"	2.38	0.50
1:w:2253:G:C5	1:w:2254:C:C4	3.00	0.50
1:w:2328:A:H2'	1:w:2329:G:C8	2.47	0.50
1:w:2415:G:H5'	12:J:66:GLY:HA3	1.93	0.50
1:w:2420:C:O5'	1:w:2420:C:H6	1.93	0.50
1:w:2472:G:H22	1:w:2477:C:C4'	2.24	0.50
1:w:2677:G:H2'	1:w:2678:C:O4'	2.12	0.50
1:w:2795:G:C8	1:w:2795:G:OP2	2.65	0.50
1:w:2839:G:H5'	14:L:46:GLY:CA	2.32	0.50
2:x:29:A:C2	2:x:56:G:N1	2.80	0.50
6:D:130:LYS:HD3	6:D:131:THR:H	1.77	0.50
10:H:25:LYS:O	10:H:27:TYR:N	2.44	0.50
13:K:26:TYR:CD2	13:K:27:VAL:HG22	2.46	0.50
13:K:66:ILE:HG22	13:K:104:PHE:CD1	2.46	0.50
16:N:50:ILE:CG1	16:N:64:ARG:HB2	2.42	0.50
18:P:23:GLU:HB3	18:P:91:TYR:OH	2.11	0.50
18:P:40:LEU:HD13	18:P:41:GLY:N	2.25	0.50
19:Q:88:ARG:O	19:Q:89:ALA:O	2.30	0.50
22:T:28:MET:O	22:T:29:TYR:HB3	2.11	0.50
26:X:7:LYS:HB3	26:X:34:GLU:CB	2.42	0.50
26:X:10:LYS:HB2	26:X:53:LEU:CA	2.42	0.50
31:y:7:G:H5'	31:y:298:A:C5'	2.40	0.50
31:y:549:C:H6	31:y:549:C:O5'	1.94	0.50
31:y:679:C:O2	31:y:712:A:C2	2.65	0.50
31:y:792:A:O2'	31:y:793:U:P	2.69	0.50
31:y:832:C:C2'	31:y:833:U:O4'	2.60	0.50
31:y:834:C:N3	31:y:853:G:C2	2.79	0.50
31:y:947:G:OP1	46:n:108:ARG:HB2	2.11	0.50
31:y:956:U:H2'	31:y:957:U:C6	2.46	0.50
31:y:1015:A:C2'	31:y:1016:A:O4'	2.53	0.50
31:y:1187:G:N3	47:o:60:SER:O	2.44	0.50
31:y:1329:A:P	46:n:26:GLY:HA3	2.50	0.50
33:2:51:G:H2'	33:2:52:U:O4'	2.11	0.50
36:d:191:THR:O	36:d:194:GLY:O	2.30	0.50
37:e:74:GLN:O	37:e:78:LEU:HD13	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:126:ILE:HB	37:e:146:ILE:CG2	2.42	0.50
37:e:205:GLU:CD	38:f:107:ARG:NE	2.70	0.50
45:m:7:ASN:O	45:m:8:GLN:C	2.54	0.50
48:p:81:LEU:HD13	48:p:84:LYS:HZ3	1.75	0.50
49:q:3:LYS:HB3	49:q:3:LYS:HZ3	1.75	0.50
50:r:81:ARG:HD3	50:r:81:ARG:C	2.37	0.50
50:r:94:ASN:O	50:r:94:ASN:CG	2.53	0.50
1:w:61:G:O6	1:w:94:G:N2	2.45	0.50
1:w:91:A:H2'	1:w:92:G:C8	2.46	0.50
1:w:297:C:H3'	1:w:298:G:C5'	2.41	0.50
1:w:502:A:H3'	1:w:502:A:H8	1.76	0.50
1:w:679:C:O2'	1:w:680:G:H5'	2.11	0.50
1:w:874:G:O4'	22:T:170:THR:HG21	2.12	0.50
1:w:998:C:O5'	1:w:998:C:H6	1.94	0.50
1:w:1417:C:N4	1:w:1418:G:C6	2.80	0.50
1:w:1696:G:H21	1:w:1978:A:H5'	1.77	0.50
1:w:1971:A:H2'	1:w:1971:A:N3	2.26	0.50
1:w:2314:C:H2'	1:w:2315:G:C8	2.46	0.50
1:w:2661:G:C5	1:w:2662:A:C6	2.99	0.50
1:w:2712(B):A:N3	1:w:2712(B):A:C2'	2.70	0.50
1:w:2825:G:O5'	1:w:2825:G:H8	1.95	0.50
1:w:2886:G:H2'	1:w:2887:U:C6	2.47	0.50
4:B:90:ALA:O	4:B:92:ILE:N	2.45	0.50
5:C:149:ARG:HH12	5:C:152:LYS:HD2	1.75	0.50
10:H:97:ARG:HH12	10:H:127:LYS:HB3	1.75	0.50
14:L:62:ALA:HB1	14:L:80:PHE:CE1	2.47	0.50
15:M:40:ILE:HG12	15:M:47:THR:HA	1.93	0.50
16:N:42:ILE:O	16:N:43:GLN:HB2	2.11	0.50
17:O:61:TRP:HB3	17:O:93:LYS:O	2.12	0.50
20:R:5:TYR:CE2	25:W:26:ARG:HG2	2.38	0.50
23:U:35:ASN:N	23:U:61:ALA:HB3	2.26	0.50
31:y:339:C:H2'	31:y:340:U:C6	2.46	0.50
31:y:357:G:OP1	31:y:367:U:OP2	2.30	0.50
31:y:364:A:H8	31:y:364:A:O5'	1.93	0.50
31:y:744:C:H2'	31:y:745:C:C6	2.46	0.50
31:y:808:C:O5'	31:y:808:C:C6	2.51	0.50
31:y:961:U:H2'	31:y:962:C:C5'	2.36	0.50
31:y:984:C:H2'	31:y:984:C:O2	2.12	0.50
31:y:1223:C:H3'	31:y:1224:G:H5'	1.93	0.50
31:y:1305:G:H22	31:y:1331:G:H1'	1.75	0.50
31:y:1343:G:O2'	42:j:122:ALA:HB2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1347:G:C3'	42:j:108:VAL:O	2.57	0.50
33:2:31:A:H61	33:2:39:U:H3	1.60	0.50
34:3:10:A:C5	40:h:82:GLY:HA2	2.46	0.50
36:d:5:ILE:HG23	36:d:10:PHE:CD2	2.46	0.50
36:d:87:LEU:HD13	36:d:101:LEU:HD21	1.93	0.50
38:f:51:VAL:O	38:f:54:ALA:HB3	2.12	0.50
41:i:119:LEU:HD11	41:i:127:LEU:HG	1.94	0.50
42:j:10:ARG:HE	42:j:72:GLY:HA2	1.76	0.50
42:j:28:VAL:HG22	42:j:63:ILE:HG22	1.93	0.50
51:s:50:ILE:CD1	51:s:70:ILE:HG21	2.42	0.50
1:w:243:U:O2'	1:w:244:A:H5'	2.12	0.50
1:w:425:G:O2'	1:w:426:C:H5'	2.12	0.50
1:w:665:C:C5'	12:J:48:PRO:HD2	2.41	0.50
1:w:948:G:O2'	1:w:949:C:H5'	2.12	0.50
1:w:1048:A:O5'	1:w:1048:A:C8	2.65	0.50
1:w:1305:C:H6	1:w:1305:C:C5'	2.23	0.50
1:w:1313:U:O2	1:w:1313:U:C2'	2.58	0.50
1:w:1321:A:C2'	1:w:1322:A:H8	2.22	0.50
1:w:1848:A:C5	1:w:1849:G:H1'	2.47	0.50
1:w:1974:C:C2	1:w:1975:G:N7	2.80	0.50
1:w:2001:A:O4'	1:w:2689:U:C4	2.65	0.50
1:w:2057:A:C8	1:w:2058:A:N7	2.80	0.50
1:w:2184:G:H2'	1:w:2185:C:O4'	2.12	0.50
1:w:2394:C:H2'	1:w:2395:C:H6	1.77	0.50
1:w:2682:U:N3	5:C:11:MET:HE2	2.25	0.50
1:w:2761:G:H2'	1:w:2762:G:C1'	2.42	0.50
1:w:2837:G:H2'	1:w:2838:G:C5'	2.42	0.50
10:H:36:TRP:CE3	10:H:155:ALA:O	2.64	0.50
10:H:77:VAL:HB	10:H:145:VAL:HG12	1.93	0.50
18:P:43:GLU:CG	18:P:44:LYS:H	2.25	0.50
19:Q:11:ARG:O	19:Q:98:LYS:HE2	2.12	0.50
23:U:41:ARG:HG2	23:U:42:GLY:N	2.27	0.50
31:y:353:A:H2'	31:y:353:A:N3	2.26	0.50
31:y:382:A:N7	31:y:383:A:C6	2.80	0.50
31:y:577:G:C4'	31:y:816:A:H2'	2.42	0.50
31:y:868:C:C2'	31:y:869:G:C5'	2.88	0.50
31:y:880:C:OP2	45:m:8:GLN:HB2	2.12	0.50
31:y:920:U:O5'	31:y:920:U:H6	1.95	0.50
31:y:936:C:H1'	31:y:1383:C:H42	1.65	0.50
31:y:1436:U:O5'	31:y:1436:U:H6	1.95	0.50
35:c:67:THR:O	35:c:160:ASP:HB3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:c:134:GLU:O	35:c:137:ARG:HD3	2.11	0.50
36:d:44:GLU:HB3	36:d:48:TYR:CD1	2.47	0.50
38:f:10:MET:HA	38:f:32:VAL:HG12	1.94	0.50
38:f:110:LEU:HB3	38:f:115:VAL:HG21	1.92	0.50
40:h:69:VAL:HG12	40:h:70:LYS:H	1.76	0.50
40:h:102:ARG:O	40:h:105:VAL:HG12	2.11	0.50
42:j:6:GLY:HA2	42:j:83:ARG:HD2	1.94	0.50
44:l:50:TYR:N	44:l:50:TYR:CD2	2.80	0.50
47:o:26:ARG:NE	47:o:43:CYS:CB	2.67	0.50
47:o:46:GLU:O	47:o:49:HIS:CD2	2.64	0.50
48:p:11:VAL:HA	48:p:15:PHE:CD1	2.46	0.50
48:p:33:THR:C	48:p:35:ARG:H	2.19	0.50
48:p:62:GLN:HA	48:p:65:ARG:CD	2.39	0.50
1:w:145:G:N3	1:w:146:G:H1'	2.27	0.50
1:w:270(O):G:O5'	1:w:270(O):G:C8	2.64	0.50
1:w:297:C:H2'	1:w:298:G:H4'	1.94	0.50
1:w:807:U:H2'	1:w:808:G:H8	1.74	0.50
1:w:849:A:H62	1:w:929:G:H21	1.60	0.50
1:w:947:G:H2'	1:w:948:G:C8	2.46	0.50
1:w:1204:A:N3	1:w:1206:G:C6	2.79	0.50
1:w:1231:G:H2'	1:w:1232:G:H8	1.77	0.50
1:w:1461:G:C6	1:w:1462:C:N4	2.80	0.50
1:w:1598:C:H2'	1:w:1599:C:C6	2.47	0.50
1:w:2199:A:OP2	1:w:2205:C:N4	2.45	0.50
1:w:2304:G:H1'	7:E:132:ASN:CB	2.42	0.50
1:w:2347:C:OP2	29:a:38:GLY:HA2	2.12	0.50
1:w:2433:A:HO2'	1:w:2434:A:P	2.33	0.50
1:w:2589:A:C5'	4:B:237:GLU:HB3	2.39	0.50
1:w:2682:U:O2	1:w:2682:U:H2'	2.11	0.50
1:w:2711:A:C5'	1:w:2712:U:H5'	2.41	0.50
1:w:2860:A:H8	1:w:2860:A:O5'	1.95	0.50
2:x:91:C:O2'	2:x:92:G:H5'	2.10	0.50
2:x:107:U:H3'	2:x:108:C:C5	2.47	0.50
4:B:100:GLY:O	4:B:101:GLU:HG3	2.12	0.50
5:C:109:LYS:HZ3	14:L:4:LEU:HD11	1.77	0.50
5:C:120:TRP:O	5:C:121:ASN:CB	2.59	0.50
7:E:43:LEU:HG	7:E:153:ARG:CZ	2.42	0.50
9:G:24:GLY:H	9:G:27:ARG:NH1	2.10	0.50
10:H:25:LYS:HD2	10:H:25:LYS:H	1.77	0.50
10:H:146:TYR:CG	10:H:147:ALA:N	2.80	0.50
12:J:96:THR:HG23	12:J:99:LEU:HB3	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:74:TYR:C	13:K:88:GLY:O	2.55	0.50
14:L:76:VAL:HG13	14:L:79:LEU:HD12	1.93	0.50
16:N:67:SER:O	16:N:69:GLY:N	2.45	0.50
16:N:78:LEU:HD23	16:N:79:HIS:HB2	1.94	0.50
18:P:13:ARG:HH11	18:P:13:ARG:N	1.96	0.50
23:U:52:GLY:HA2	23:U:62:LEU:CD1	2.40	0.50
24:V:91:LYS:HE3	24:V:91:LYS:CA	2.41	0.50
29:a:25:MET:O	29:a:26:LYS:O	2.30	0.50
31:y:138:G:C2'	31:y:139:G:C8	2.92	0.50
31:y:160:A:H1'	31:y:344:A:C4	2.47	0.50
31:y:250:A:H1'	31:y:252:U:C6	2.46	0.50
31:y:391:G:C5	31:y:392:G:C8	3.00	0.50
31:y:468:A:H5"	49:q:80:PHE:HB3	1.93	0.50
31:y:554:C:O5'	31:y:554:C:H6	1.94	0.50
31:y:562:C:O2	31:y:562:C:C2'	2.60	0.50
31:y:667:G:O2'	48:p:49:ASP:OD2	2.27	0.50
31:y:902:G:H2'	31:y:903:G:C8	2.42	0.50
31:y:910:C:H2'	31:y:911:U:H6	1.76	0.50
31:y:1026:G:N7	31:y:1027:C:C6	2.80	0.50
31:y:1084:G:H3'	31:y:1085:U:H5'	1.94	0.50
31:y:1138:G:H2'	31:y:1140:C:C6	2.47	0.50
31:y:1379:G:H3'	31:y:1380:U:C5'	2.41	0.50
31:y:1520:G:C2	31:y:1521:G:C8	3.00	0.50
32:z:12:G:H1	32:z:23:C:H42	1.59	0.50
35:c:149:LEU:O	35:c:149:LEU:HD23	2.12	0.50
38:f:51:VAL:HB	38:f:52:PRO:HD3	1.94	0.50
41:i:62:TYR:CD2	41:i:62:TYR:N	2.79	0.50
50:r:40:LYS:HG2	50:r:41:LYS:N	2.26	0.50
51:s:9:LYS:O	51:s:10:LYS:HG2	2.12	0.50
1:w:13:A:H2	1:w:14:A:N6	2.10	0.49
1:w:143:C:O2	20:R:3:THR:HG23	2.12	0.49
1:w:380:U:H2'	1:w:381:G:C8	2.47	0.49
1:w:449:A:H3'	1:w:450:G:O4'	2.12	0.49
1:w:514:A:HO2'	1:w:581:C:HO2'	1.55	0.49
1:w:747:U:O2'	19:Q:89:ALA:HB2	2.11	0.49
1:w:852:G:H2'	1:w:853:G:C8	2.47	0.49
1:w:1567:A:O4'	1:w:1568:G:C2	2.65	0.49
1:w:2284:C:O2'	1:w:2288:A:N6	2.42	0.49
1:w:2315:G:H2'	1:w:2316:C:C6	2.47	0.49
1:w:2360:A:C2	1:w:2361:A:H1'	2.47	0.49
1:w:2683:C:H2'	1:w:2684:U:H6	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2720:U:H6	1:w:2720:U:C5'	2.14	0.49
1:w:2732:G:H8	1:w:2732:G:O5'	1.95	0.49
2:x:8:U:C3'	2:x:9:G:H8	2.24	0.49
2:x:20:C:C4	2:x:21:G:N7	2.80	0.49
6:D:120:LEU:CD2	6:D:123:ALA:HB2	2.41	0.49
9:G:5:LEU:HB2	9:G:13:GLY:CA	2.42	0.49
9:G:38:LEU:H	9:G:38:LEU:CD1	2.21	0.49
9:G:81:VAL:CG1	9:G:144:VAL:HG13	2.42	0.49
9:G:130:TYR:CD2	9:G:130:TYR:C	2.90	0.49
10:H:29:PRO:CA	10:H:64:ASP:HB3	2.41	0.49
10:H:79:ASN:N	10:H:147:ALA:HA	2.27	0.49
14:L:22:ARG:HH12	14:L:71:GLN:CD	2.19	0.49
14:L:79:LEU:CD2	14:L:83:ILE:HG13	2.42	0.49
16:N:30:VAL:O	16:N:85:LYS:HG2	2.12	0.49
16:N:47:GLY:O	16:N:63:VAL:HB	2.11	0.49
16:N:64:ARG:HG2	16:N:65:LYS:N	2.26	0.49
17:O:88:ILE:C	17:O:89:GLU:HG3	2.37	0.49
18:P:13:ARG:H	18:P:13:ARG:NH1	1.97	0.49
18:P:79:VAL:HG12	18:P:80:GLN:N	2.27	0.49
20:R:88:LYS:O	20:R:89:ILE:CB	2.60	0.49
22:T:101:PRO:HA	22:T:123:ASP:OD1	2.12	0.49
22:T:120:ILE:HG21	22:T:170:THR:O	2.11	0.49
22:T:150:LEU:HD13	22:T:154:ASP:CG	2.37	0.49
25:W:13:ALA:O	25:W:14:ARG:HG2	2.12	0.49
26:X:11:SER:O	26:X:53:LEU:HD13	2.12	0.49
31:y:156:G:H3'	31:y:157:G:H5"	1.93	0.49
31:y:237:C:C5'	50:r:25:ARG:NH1	2.75	0.49
31:y:298:A:N6	31:y:558:G:OP1	2.45	0.49
31:y:329:A:C5	31:y:332:G:C6	3.00	0.49
31:y:376:G:OP1	49:q:5:ARG:HB2	2.11	0.49
31:y:381:C:H2'	31:y:382:A:C8	2.47	0.49
31:y:578:C:H2'	31:y:579:G:O5'	2.12	0.49
31:y:688:G:H2'	31:y:689:C:H6	1.77	0.49
31:y:773:G:N1	31:y:807:A:C6	2.80	0.49
31:y:787:A:C2	31:y:796:C:N3	2.80	0.49
31:y:910:C:C2	31:y:911:U:C6	3.00	0.49
31:y:1002:G:C6	31:y:1003:G:C6	3.00	0.49
31:y:1250:A:H62	31:y:1287:A:H61	1.54	0.49
31:y:1300:G:C4'	31:y:1301:U:C5	2.94	0.49
35:c:97:TRP:CH2	35:c:101:MET:SD	3.05	0.49
36:d:16:ARG:NH2	36:d:54:ARG:HD3	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:175:LEU:HD13	36:d:175:LEU:H	1.77	0.49
41:i:68:ARG:HH11	41:i:68:ARG:HG2	1.76	0.49
44:l:67:ASP:C	44:l:69:ALA:H	2.18	0.49
45:m:85:ARG:C	45:m:85:ARG:HD2	2.37	0.49
47:o:8:GLU:HG2	47:o:9:LYS:H	1.77	0.49
49:q:70:ALA:O	49:q:73:LEU:N	2.43	0.49
50:r:39:SER:OG	50:r:40:LYS:N	2.44	0.49
50:r:54:GLY:O	50:r:81:ARG:NH1	2.45	0.49
50:r:66:SER:O	50:r:67:LYS:C	2.54	0.49
53:u:14:LYS:HA	53:u:17:ARG:HB2	1.94	0.49
53:u:21:LYS:HB3	53:u:21:LYS:HZ2	1.76	0.49
1:w:108:U:H2'	1:w:109:G:C8	2.47	0.49
1:w:124:G:H2'	28:Z:19:ARG:CZ	2.42	0.49
1:w:191:A:O2'	1:w:192:C:H5'	2.11	0.49
1:w:201:C:O2	1:w:251:A:H2	1.95	0.49
1:w:216:A:N7	1:w:431:U:C2	2.81	0.49
1:w:457:A:HO2'	1:w:458:G:H4'	1.77	0.49
1:w:563:G:C2	1:w:2018:G:C2	3.00	0.49
1:w:686:G:C4	28:Z:11:LYS:CG	2.95	0.49
1:w:772:C:H2'	1:w:773:U:C6	2.47	0.49
1:w:814:C:H2'	1:w:815:C:C5	2.45	0.49
1:w:865:C:O2	1:w:868:U:O4	2.30	0.49
1:w:919:G:C6	1:w:2268:A:N6	2.81	0.49
1:w:1138:G:H3'	1:w:1139:G:H8	1.76	0.49
1:w:1357:U:C4	1:w:1358:G:C5	3.01	0.49
1:w:1805:U:OP1	4:B:250:TRP:HB3	2.12	0.49
1:w:1820:U:H3	4:B:159:ALA:CB	2.25	0.49
1:w:2007:C:H5'	1:w:2824:C:O4'	2.12	0.49
1:w:2024:G:H2'	1:w:2025:C:C5	2.45	0.49
1:w:2085:C:C2	1:w:2235:G:C2	3.00	0.49
1:w:2239:G:N3	1:w:2239:G:H2'	2.27	0.49
1:w:2331:G:H4'	23:U:42:GLY:O	2.12	0.49
1:w:2354:G:O5'	23:U:35:ASN:ND2	2.45	0.49
1:w:2394:C:N4	1:w:2422:A:H61	2.10	0.49
1:w:2439:A:H1'	1:w:2586:C:O3'	2.12	0.49
1:w:2572:A:OP2	5:C:144:ARG:HG3	2.11	0.49
1:w:2617:C:C2'	1:w:2618:G:O5'	2.57	0.49
1:w:2641:G:H5'	10:H:98:TYR:HH	1.75	0.49
1:w:2721:A:H2'	1:w:2722:G:C5'	2.28	0.49
2:x:44:G:N3	2:x:46:A:N6	2.60	0.49
5:C:33:VAL:HG13	5:C:47:VAL:CG1	2.40	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:114:ALA:O	5:C:157:ALA:HB1	2.12	0.49
5:C:154:LYS:HG3	5:C:155:LYS:O	2.11	0.49
6:D:44:ALA:CB	6:D:87:PRO:HB2	2.41	0.49
8:F:72:ILE:O	8:F:75:ALA:HB3	2.12	0.49
8:F:87:LEU:CD2	8:F:133:VAL:HG13	2.42	0.49
8:F:163:TYR:OH	8:F:169:VAL:HG11	2.12	0.49
12:J:85:LEU:CD2	12:J:119:GLU:H	2.19	0.49
14:L:28:LEU:HA	14:L:34:ILE:HD11	1.93	0.49
16:N:45:PHE:CE1	16:N:72:VAL:HB	2.47	0.49
16:N:50:ILE:HG13	16:N:64:ARG:N	2.28	0.49
16:N:123:LYS:O	16:N:123:LYS:HD2	2.12	0.49
17:O:81:HIS:O	17:O:82:GLY:C	2.54	0.49
17:O:106:PHE:O	17:O:109:LEU:HG	2.12	0.49
18:P:24:LYS:HG2	18:P:25:LEU:O	2.12	0.49
20:R:63:LYS:CD	20:R:64:LYS:H	2.25	0.49
24:V:55:GLY:H	24:V:58:ILE:HD11	1.77	0.49
26:X:36:VAL:O	26:X:37:LEU:HD13	2.12	0.49
27:Y:13:LYS:O	27:Y:16:ARG:CG	2.60	0.49
28:Z:1:MET:O	28:Z:1:MET:HE3	2.12	0.49
31:y:5:U:O4	37:e:86:LYS:CA	2.61	0.49
31:y:179:A:C4	31:y:180:U:C5	3.00	0.49
31:y:275:G:O6	31:y:276:G:O6	2.29	0.49
31:y:604:G:C2	31:y:635:G:C2	3.00	0.49
31:y:675:A:H2'	31:y:676:A:H5'	1.94	0.49
31:y:730:G:H21	31:y:765:G:H5"	1.77	0.49
31:y:752:G:H1'	31:y:754:C:N4	2.27	0.49
31:y:781:A:OP1	31:y:1523:G:OP1	2.29	0.49
31:y:815:A:C2	31:y:1529:G:C6	3.00	0.49
31:y:821:G:N1	31:y:880:C:N3	2.60	0.49
31:y:897:C:C2'	31:y:898:G:H5'	2.42	0.49
31:y:1090:U:C2'	31:y:1091:U:C5'	2.90	0.49
31:y:1108:G:C2'	31:y:1109:C:H5"	2.41	0.49
31:y:1181:G:H2'	31:y:1182:G:O4'	2.13	0.49
31:y:1214:C:O5'	31:y:1214:C:H6	1.95	0.49
31:y:1405:G:O2'	31:y:1519:MA6:O5'	2.29	0.49
33:2:65:G:C2	33:2:66:A:C8	3.00	0.49
33:2:72:C:N4	33:2:73:A:N6	2.59	0.49
36:d:119:ARG:HH12	36:d:140:ARG:HH12	1.60	0.49
38:f:100:VAL:HG12	38:f:118:ILE:HD11	1.95	0.49
39:g:8:ILE:HG12	39:g:88:VAL:HG22	1.94	0.49
39:g:42:GLU:HG3	39:g:61:LEU:CD2	2.36	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:i:40:ALA:O	41:i:43:GLY:HA2	2.12	0.49
44:l:43:SER:HA	44:l:47:VAL:HG21	1.94	0.49
46:n:80:ARG:HH11	46:n:80:ARG:CG	2.25	0.49
47:o:56:VAL:O	47:o:56:VAL:CG1	2.60	0.49
50:r:33:GLY:O	50:r:34:LYS:HB3	2.11	0.49
51:s:74:ARG:HG2	51:s:81:PHE:HA	1.95	0.49
1:w:12:U:O4	1:w:2627:G:H5'	2.11	0.49
1:w:36:G:H4'	1:w:451:C:C2	2.48	0.49
1:w:149:A:H2'	1:w:150:C:C5'	2.43	0.49
1:w:293:U:H3	1:w:346:A:H61	1.59	0.49
1:w:465:G:N7	1:w:466:A:C6	2.80	0.49
1:w:465:G:H2'	1:w:466:A:C8	2.47	0.49
1:w:541:C:H2'	1:w:542:C:C5	2.47	0.49
1:w:665:C:H5'	12:J:48:PRO:HD2	1.94	0.49
1:w:1000:A:C6	1:w:1001:A:C5	3.01	0.49
1:w:1344:G:O2'	1:w:1385:G:H5"	2.12	0.49
1:w:1601:G:O2'	1:w:1602:U:H5'	2.12	0.49
1:w:1789:A:C5'	4:B:221:VAL:HG12	2.41	0.49
1:w:1816:G:O5'	4:B:39:LYS:HD2	2.12	0.49
1:w:2169:A:H3'	1:w:2170:A:N7	2.28	0.49
1:w:2305:A:O2'	1:w:2306:C:H5'	2.13	0.49
1:w:2311:A:OP1	1:w:2312:U:O4	2.29	0.49
1:w:2336:A:H1'	1:w:2385:C:O4'	2.12	0.49
1:w:2638:G:H8	1:w:2638:G:O5'	1.96	0.49
1:w:2695:C:C2'	1:w:2696:U:O5'	2.60	0.49
2:x:50:G:OP2	2:x:50:G:C8	2.64	0.49
3:A:45:HIS:ND1	3:A:173:HIS:HB3	2.26	0.49
4:B:105:ILE:HG12	4:B:106:ILE:H	1.78	0.49
8:F:14:GLY:O	8:F:16:SER:N	2.45	0.49
8:F:39:PRO:O	8:F:41:MET:N	2.38	0.49
11:I:39:ILE:HD13	11:I:39:ILE:N	2.26	0.49
13:K:55:VAL:O	13:K:58:PHE:N	2.44	0.49
16:N:26:ASP:CA	16:N:48:ILE:HG23	2.40	0.49
19:Q:11:ARG:HD2	19:Q:98:LYS:HZ3	1.76	0.49
21:S:25:GLY:HA3	21:S:28:LYS:HE3	1.94	0.49
21:S:40:GLU:CB	21:S:62:GLU:HG2	2.41	0.49
21:S:50:ARG:HG3	21:S:54:LYS:HZ3	1.75	0.49
25:W:18:PRO:O	25:W:22:GLU:HB2	2.12	0.49
28:Z:15:THR:O	28:Z:16:HIS:ND1	2.46	0.49
31:y:118:U:C5	31:y:288:A:C6	3.01	0.49
31:y:336:C:C2'	31:y:337:C:H5'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:383:A:H2'	31:y:384:G:O4'	2.12	0.49
31:y:436:C:O2'	31:y:437:U:C5'	2.60	0.49
31:y:520:A:OP2	45:m:50:ALA:CB	2.59	0.49
31:y:528:C:N4	45:m:47:PRO:CB	2.64	0.49
31:y:798:G:C6	31:y:799:G:C5	3.00	0.49
31:y:803:G:H2'	31:y:804:U:O4'	2.11	0.49
31:y:877:C:H2'	31:y:878:G:C8	2.48	0.49
31:y:965:A:OP2	31:y:1198:G:H5"	2.12	0.49
31:y:1068:G:H4'	31:y:1388:C:OP1	2.12	0.49
31:y:1223:C:C6	31:y:1223:C:O5'	2.66	0.49
31:y:1281:U:H5"	31:y:1282:C:H5	1.75	0.49
32:z:38:A:O2'	32:z:39:C:H5'	2.12	0.49
35:c:11:LEU:O	35:c:13:ALA:N	2.36	0.49
35:c:141:GLU:O	35:c:145:LEU:HB2	2.12	0.49
38:f:78:HIS:HB2	41:i:104:ARG:CG	2.32	0.49
41:i:109:ILE:O	41:i:137:VAL:HB	2.11	0.49
42:j:118:LYS:HB3	42:j:121:ARG:HD3	1.92	0.49
45:m:96:ARG:O	45:m:97:TYR:CB	2.59	0.49
48:p:18:PHE:HD2	48:p:21:ASP:HB2	1.78	0.49
50:r:19:VAL:O	50:r:43:LEU:HB2	2.12	0.49
51:s:44:LEU:O	51:s:45:SER:HB3	2.13	0.49
1:w:28:A:N6	1:w:512:G:O2'	2.45	0.49
1:w:123:G:C5	1:w:124:G:N3	2.80	0.49
1:w:258:G:H2'	1:w:259:G:C8	2.48	0.49
1:w:550:G:H2'	1:w:551:G:H5"	1.94	0.49
1:w:671:C:OP2	12:J:45:LEU:HD12	2.12	0.49
1:w:874:G:H1'	22:T:170:THR:CB	2.43	0.49
1:w:992:C:H4'	18:P:75:PHE:CZ	2.45	0.49
1:w:1080:C:H3'	1:w:1081:U:C6	2.47	0.49
1:w:1298:C:N4	1:w:1299:G:O6	2.46	0.49
1:w:1405:U:H2'	1:w:1406:U:H6	1.77	0.49
1:w:1448(B):A:C4	1:w:1529:A:C2	3.00	0.49
1:w:1668:A:N6	1:w:1991:U:H3	1.91	0.49
1:w:1772:G:N3	1:w:1774:C:OP1	2.45	0.49
1:w:1938:A:N1	1:w:2590:A:H1'	2.28	0.49
1:w:2311:A:OP1	1:w:2312:U:C5	2.66	0.49
1:w:2496:C:C5	1:w:2497:A:N6	2.78	0.49
1:w:2512:C:C5'	1:w:2513:G:OP2	2.60	0.49
1:w:2581:G:N3	1:w:2581:G:C5'	2.76	0.49
1:w:2629:A:N3	1:w:2629:A:H2'	2.27	0.49
1:w:2746:U:O5'	1:w:2746:U:C4'	2.55	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2786:U:O2'	5:C:62:PRO:CA	2.61	0.49
2:x:2:C:N4	2:x:3:C:C5	2.80	0.49
2:x:8:U:O2'	15:M:89:ARG:NH2	2.46	0.49
2:x:18:G:H2'	2:x:19:G:C8	2.47	0.49
2:x:60:C:H2'	2:x:61:G:H8	1.77	0.49
2:x:76:G:H3'	2:x:77:U:H6	1.77	0.49
5:C:117:MET:CA	5:C:122:PHE:H	2.24	0.49
11:I:61:VAL:CG1	11:I:85:VAL:H	2.18	0.49
12:J:85:LEU:HD13	12:J:85:LEU:H	1.76	0.49
18:P:90:PRO:O	18:P:91:TYR:HB3	2.12	0.49
19:Q:24:ILE:CG2	19:Q:36:LEU:HD11	2.42	0.49
22:T:26:GLY:HA2	22:T:85:HIS:CD2	2.47	0.49
31:y:405:U:O4	37:e:2:GLY:CA	2.61	0.49
31:y:501:C:H2'	31:y:502:G:C8	2.47	0.49
31:y:538:G:H2'	31:y:539:A:O5'	2.12	0.49
31:y:586:C:C5'	50:r:34:LYS:NZ	2.72	0.49
31:y:668:G:O4'	48:p:49:ASP:HA	2.12	0.49
31:y:983:A:C2	31:y:984:C:O4'	2.57	0.49
31:y:1001:G:C2'	31:y:1002:G:H5"	2.40	0.49
31:y:1067:A:O5'	31:y:1067:A:C8	2.60	0.49
31:y:1094:G:OP2	31:y:1095:U:C5	2.65	0.49
31:y:1312:G:C2	31:y:1313:U:C6	3.00	0.49
35:c:137:ARG:N	35:c:137:ARG:HH11	2.10	0.49
36:d:155:GLY:HA3	36:d:163:ALA:O	2.11	0.49
40:h:121:ALA:HA	40:h:124:LEU:HD12	1.94	0.49
42:j:103:THR:HG22	42:j:104:ARG:N	2.26	0.49
43:k:4:ILE:HG23	43:k:73:ASP:OD1	2.12	0.49
46:n:40:ASN:ND2	46:n:42:ALA:HB3	2.27	0.49
50:r:66:SER:O	50:r:69:LYS:HG3	2.12	0.49
53:u:16:HIS:C	53:u:18:GLN:H	2.20	0.49
1:w:387:U:H5"	1:w:388:G:OP1	2.12	0.49
1:w:479:A:H5"	1:w:480:A:OP1	2.12	0.49
1:w:671:C:H2'	1:w:672:C:C5'	2.33	0.49
1:w:888:C:O5'	1:w:888:C:H6	1.95	0.49
1:w:1014:U:H2'	1:w:1015:G:C8	2.48	0.49
1:w:1022:G:N1	1:w:1141:U:C5	2.80	0.49
1:w:1022:G:N1	1:w:1141:U:H5	2.10	0.49
1:w:1323:U:C2'	1:w:1324:G:H5"	2.41	0.49
1:w:1675:C:N4	5:C:129:HIS:CE1	2.72	0.49
1:w:1775:U:O5'	1:w:1775:U:H6	1.95	0.49
1:w:1822:G:O2'	1:w:1823:G:O5'	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1869:G:OP1	1:w:2409:G:N2	2.46	0.49
1:w:2057:A:N7	1:w:2058:A:C5	2.80	0.49
1:w:2081:C:C2	1:w:2082:A:C8	3.01	0.49
1:w:2519:U:H3'	1:w:2519:U:OP1	2.12	0.49
1:w:2654:A:N6	1:w:2666:C:H41	2.11	0.49
1:w:2712:U:H5"	1:w:2714:G:H5'	1.94	0.49
1:w:2729:G:C5	1:w:2730:C:N4	2.81	0.49
1:w:2795:G:C2	1:w:2802:G:N1	2.81	0.49
1:w:2837:G:H2'	1:w:2838:G:O4'	2.12	0.49
2:x:20:C:C3'	2:x:21:G:C5'	2.88	0.49
2:x:49:C:OP2	15:M:95:HIS:HE1	1.95	0.49
4:B:228:PRO:O	4:B:229:VAL:HG23	2.12	0.49
5:C:50:GLY:O	5:C:76:ARG:HD2	2.12	0.49
5:C:93:VAL:CB	5:C:182:LEU:HD13	2.32	0.49
7:E:96:ARG:CG	7:E:97:ASP:H	2.25	0.49
7:E:99:MET:SD	7:E:100:TRP:N	2.85	0.49
7:E:139:LEU:HA	7:E:144:ILE:O	2.13	0.49
7:E:148:MET:HA	7:E:148:MET:HE3	1.94	0.49
9:G:15:VAL:CG1	9:G:17:GLN:HG2	2.42	0.49
9:G:114:LEU:C	9:G:114:LEU:HD12	2.38	0.49
9:G:130:TYR:HD2	9:G:130:TYR:C	2.21	0.49
9:G:130:TYR:CD2	9:G:131:LYS:N	2.80	0.49
10:H:108:ILE:CG2	10:H:113:MET:HB2	2.43	0.49
11:I:50:GLY:O	11:I:51:ALA:HB2	2.13	0.49
15:M:25:ARG:NH1	15:M:41:ASP:C	2.69	0.49
15:M:27:SER:HB2	15:M:89:ARG:HG3	1.95	0.49
17:O:106:PHE:HA	17:O:109:LEU:HD21	1.95	0.49
21:S:61:ILE:HG23	21:S:62:GLU:N	2.28	0.49
22:T:99:TYR:CE1	22:T:125:LEU:HD22	2.48	0.49
24:V:71:TYR:O	24:V:72:GLU:C	2.55	0.49
28:Z:11:LYS:HE3	28:Z:15:THR:OG1	2.13	0.49
29:a:42:ARG:CG	29:a:43:GLN:H	2.24	0.49
31:y:38:G:H1'	31:y:397:A:H61	1.78	0.49
31:y:39:G:H2'	31:y:40:C:H5'	1.95	0.49
31:y:110:C:C5'	31:y:110:C:C6	2.94	0.49
31:y:136:C:C2'	49:q:63:GLY:HA2	2.43	0.49
31:y:253:U:OP1	50:r:68:ARG:NH1	2.46	0.49
31:y:266:G:H5"	31:y:268:C:H5	1.77	0.49
31:y:302:G:H5'	45:m:16:LYS:HE2	1.95	0.49
31:y:456:C:C2'	31:y:457:C:H5'	2.42	0.49
31:y:876:G:H1'	41:i:7:ALA:CB	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:956:U:O2'	31:y:960:U:O4	2.25	0.49
31:y:1377:A:O2'	31:y:1378:C:H5	1.82	0.49
31:y:1407:5MC:C2'	31:y:1408:A:H5'	2.42	0.49
31:y:1433:A:N3	31:y:1433:A:H2'	2.28	0.49
36:d:3:ASN:H	36:d:3:ASN:ND2	2.05	0.49
36:d:66:VAL:CG1	36:d:68:VAL:HG23	2.42	0.49
36:d:146:ALA:HB1	36:d:202:ILE:CG2	2.43	0.49
41:i:101:PRO:O	41:i:103:VAL:HG22	2.11	0.49
45:m:89:VAL:CG1	45:m:98:HIS:CE1	2.94	0.49
1:w:270(R):C:H5"	9:G:42:SER:OG	2.13	0.49
1:w:291:C:N3	1:w:292:C:N4	2.60	0.49
1:w:298:G:O6	1:w:338:G:H2'	2.13	0.49
1:w:660:G:H4'	6:D:34:TRP:CE2	2.48	0.49
1:w:686:G:H22	1:w:788:A:H61	1.55	0.49
1:w:933:A:H2'	1:w:934:G:C8	2.48	0.49
1:w:987:G:H1'	1:w:1001:A:H1'	1.95	0.49
1:w:1144:G:O2'	1:w:1145:C:H5'	2.12	0.49
1:w:1314:C:H2'	1:w:1315:C:H6	1.78	0.49
1:w:1362:C:N4	1:w:1363:C:N4	2.61	0.49
1:w:1542:G:H8	1:w:1542:G:O5'	1.95	0.49
1:w:1557:C:N4	1:w:1558:A:N7	2.61	0.49
1:w:1583:A:H3'	1:w:1583:A:N3	2.27	0.49
1:w:2235:G:C6	1:w:2236:C:C4	3.01	0.49
1:w:2617:C:C4	1:w:2618:G:C8	3.01	0.49
1:w:2834:G:H2'	1:w:2879:C:H41	1.77	0.49
2:x:17:C:H2'	2:x:18:G:O4'	2.13	0.49
3:A:214:TYR:HD2	3:A:222:SER:HB2	1.78	0.49
4:B:138:VAL:HG13	4:B:139:GLY:N	2.22	0.49
4:B:166:GLN:NE2	4:B:176:ARG:HB2	2.27	0.49
7:E:96:ARG:CD	7:E:97:ASP:H	2.25	0.49
7:E:152:LEU:O	7:E:153:ARG:HB2	2.12	0.49
10:H:60:LYS:O	17:O:64:ARG:NH1	2.45	0.49
12:J:57:THR:O	12:J:57:THR:HG23	2.11	0.49
15:M:58:LEU:HD23	15:M:60:GLY:N	2.26	0.49
16:N:106:SER:CA	16:N:110:ILE:HD13	2.34	0.49
21:S:13:VAL:HA	21:S:23:ARG:O	2.11	0.49
21:S:37:VAL:O	21:S:37:VAL:HG23	2.12	0.49
23:U:39:ARG:HD3	23:U:58:THR:HG21	1.95	0.49
27:Y:39:MET:SD	27:Y:39:MET:N	2.85	0.49
31:y:63:C:H5'	31:y:64:G:OP2	2.12	0.49
31:y:222:U:H2'	31:y:223:U:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:279:A:H5”	50:r:95:TYR:OH	2.12	0.49
31:y:378:G:C6	31:y:379:C:C4	3.00	0.49
31:y:413:G:H1’	31:y:428:G:H21	1.77	0.49
31:y:818:G:H3’	31:y:819:A:H5’	1.94	0.49
31:y:1097:C:H2’	31:y:1098:C:C6	2.48	0.49
31:y:1104:G:HO2’	35:c:111:ARG:NH2	2.10	0.49
31:y:1267:C:C2’	54:v:20:LYS:HE3	2.42	0.49
31:y:1374:A:H4’	40:h:28:ASN:OD1	2.13	0.49
31:y:1459:C:O2’	31:y:1460:A:C5’	2.58	0.49
32:z:16:C:H4’	32:z:17:C:OP1	2.12	0.49
33:2:49:C:O5’	33:2:49:C:H6	1.95	0.49
35:c:221:LEU:HD13	35:c:221:LEU:O	2.12	0.49
36:d:42:LEU:O	36:d:43:LEU:C	2.55	0.49
36:d:153:VAL:HG12	36:d:198:VAL:HG22	1.94	0.49
41:i:1:MET:CG	41:i:2:LEU:H	2.26	0.49
41:i:38:ILE:HA	41:i:41:ARG:CB	2.37	0.49
41:i:83:ILE:HG12	41:i:136:GLU:O	2.12	0.49
42:j:53:VAL:HG23	42:j:58:ARG:HH12	1.77	0.49
44:l:50:TYR:HB3	44:l:54:ARG:O	2.13	0.49
45:m:92:LEU:O	45:m:92:LEU:HD12	2.13	0.49
45:m:105:ASP:O	45:m:106:ALA:CB	2.60	0.49
46:n:3:ARG:CG	46:n:9:ILE:HG23	2.42	0.49
46:n:82:MET:O	46:n:83:ASP:C	2.56	0.49
1:w:77:C:H5”	25:W:53:LEU:HD12	1.95	0.49
1:w:125:G:C2’	28:Z:13:ALA:HB1	2.43	0.49
1:w:242:G:H22	1:w:254:G:H3’	1.77	0.49
1:w:270(D):C:H2’	1:w:270(E):C:H4’	1.95	0.49
1:w:305:U:H2’	1:w:306:U:H6	1.72	0.49
1:w:338:G:C2	1:w:339:U:C2	3.01	0.49
1:w:408:G:H22	1:w:420:C:H1’	1.75	0.49
1:w:450:G:C3’	1:w:451:C:C5’	2.91	0.49
1:w:468:G:H5”	1:w:797:C:OP1	2.12	0.49
1:w:557:U:O2’	10:H:135:LEU:HD11	2.12	0.49
1:w:616:A:N1	6:D:173:PRO:CG	2.75	0.49
1:w:686:G:H21	1:w:788:A:H61	1.51	0.49
1:w:944:G:O6	12:J:38:GLN:HG2	2.12	0.49
1:w:979:G:O5’	1:w:980:A:H5”	2.13	0.49
1:w:1031:G:O2’	1:w:1032:A:H5’	2.12	0.49
1:w:1197:G:H4’	1:w:1227:G:O3’	2.13	0.49
1:w:1350:C:H2’	1:w:1351:C:H6	1.78	0.49
1:w:1477:A:H2	1:w:1557:C:H1’	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1530:G:N1	1:w:1541:U:O2	2.46	0.49
1:w:1691:C:O5'	1:w:1691:C:H6	1.95	0.49
1:w:1912:A:O2'	31:y:1494:G:H1'	2.13	0.49
1:w:2198:A:C8	9:G:29:TYR:HE1	2.30	0.49
1:w:2297:C:H2'	1:w:2298:A:O4'	2.12	0.49
1:w:2332:U:C3'	1:w:2333:A:H5"	2.43	0.49
1:w:2559:C:H2'	1:w:2560:C:H5	1.74	0.49
1:w:2730:C:OP1	5:C:185:LYS:NZ	2.46	0.49
2:x:24:G:N2	2:x:28:C:O2	2.45	0.49
2:x:30:C:H2'	2:x:31:C:H6	1.77	0.49
6:D:48:THR:N	6:D:52:VAL:HG21	2.27	0.49
6:D:156:GLU:HA	6:D:159:ARG:HG3	1.93	0.49
10:H:57:LEU:HD12	10:H:139:LEU:HB3	1.88	0.49
13:K:28:ALA:HB1	13:K:105:GLU:OE2	2.12	0.49
16:N:84:GLN:OE1	16:N:86:ILE:HD11	2.12	0.49
21:S:28:LYS:HA	21:S:35:TYR:CB	2.42	0.49
22:T:51:ALA:HA	22:T:54:HIS:HB2	1.94	0.49
23:U:50:ASN:HD22	23:U:81:VAL:CG1	2.25	0.49
29:a:52:LYS:N	29:a:53:PRO:HD2	2.28	0.49
31:y:65:U:O2	31:y:199:G:N3	2.46	0.49
31:y:153:C:C2'	31:y:154:C:H5'	2.42	0.49
31:y:303:A:C2	31:y:304:U:H1'	2.47	0.49
31:y:405:U:C2	31:y:497:U:C5	3.01	0.49
31:y:544:G:H5"	37:e:66:ARG:HH21	1.77	0.49
31:y:625:G:O4'	49:q:16:HIS:HD2	1.96	0.49
31:y:784:C:H2'	31:y:785:G:O4'	2.13	0.49
31:y:810:C:H2'	31:y:811:C:C6	2.48	0.49
31:y:880:C:N3	31:y:881:G:N7	2.60	0.49
31:y:955:U:C2'	31:y:956:U:H4'	2.40	0.49
31:y:1176:A:C8	31:y:1177:G:C8	3.00	0.49
31:y:1312:G:C6	31:y:1313:U:C5	3.00	0.49
31:y:1338:G:H2'	31:y:1339:A:C8	2.48	0.49
31:y:1474:G:C6	31:y:1475:G:C6	3.01	0.49
35:c:138:LEU:C	35:c:138:LEU:HD23	2.37	0.49
37:e:4:TYR:O	37:e:5:ILE:HB	2.12	0.49
37:e:126:ILE:CD1	37:e:133:VAL:HB	2.43	0.49
38:f:43:LEU:O	38:f:44:GLY:C	2.55	0.49
39:g:33:TYR:HA	39:g:71:ARG:CZ	2.43	0.49
41:i:103:VAL:HG11	41:i:110:ALA:N	2.26	0.49
47:o:22:THR:CG2	47:o:38:GLY:HA2	2.43	0.49
50:r:59:ILE:HG23	50:r:60:ILE:N	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:44:A:C6	1:w:45:G:C6	3.01	0.49
1:w:371:A:H1'	1:w:373:U:N1	2.28	0.49
1:w:594:U:C4	1:w:595:C:N4	2.81	0.49
1:w:711:G:H8	1:w:711:G:O5'	1.96	0.49
1:w:712:G:C2'	1:w:713:G:H5'	2.43	0.49
1:w:733:G:H1	1:w:761:A:H2'	1.78	0.49
1:w:782:A:H1'	1:w:783:A:C5	2.47	0.49
1:w:889:C:C4'	1:w:890:A:O4'	2.61	0.49
1:w:1255:U:C5'	1:w:1256:G:H5"	2.38	0.49
1:w:1305:C:N4	1:w:1306:C:N4	2.61	0.49
1:w:1310:G:N7	1:w:1311:G:C5	2.81	0.49
1:w:1351:C:O2	1:w:1571:A:H2	1.96	0.49
1:w:1638:C:H1'	1:w:2698:U:O2'	2.13	0.49
1:w:1838:C:O2'	1:w:1839:G:P	2.70	0.49
1:w:1850:G:H2'	1:w:1851:U:H6	1.76	0.49
1:w:1963:U:H3'	1:w:1963:U:O2	2.12	0.49
1:w:2010:G:OP1	19:Q:41:LYS:C	2.56	0.49
1:w:2240:C:O5'	1:w:2240:C:H6	1.95	0.49
1:w:2512:C:C5'	5:C:122:PHE:CZ	2.96	0.49
1:w:2576:G:N3	1:w:2576:G:C3'	2.74	0.49
1:w:2595:G:N2	1:w:2598:A:OP2	2.33	0.49
1:w:2624:G:C6	1:w:2625:G:N7	2.81	0.49
1:w:2655:G:H22	1:w:2664:G:H3'	1.77	0.49
1:w:2676:C:C2	1:w:2732:G:N2	2.81	0.49
1:w:2714:G:H8	1:w:2714:G:O5'	1.95	0.49
2:x:7:G:H2'	2:x:8:U:C6	2.48	0.49
2:x:91:C:H2'	2:x:92:G:H8	1.77	0.49
4:B:39:LYS:HG3	4:B:40:THR:N	2.18	0.49
4:B:76:PRO:CG	4:B:117:VAL:HG12	2.41	0.49
5:C:111:ARG:HG3	14:L:3:HIS:CD2	2.46	0.49
7:E:115:ARG:HD2	46:n:7:VAL:CG2	2.43	0.49
9:G:29:TYR:C	9:G:32:PRO:HD2	2.38	0.49
9:G:43:ASN:O	9:G:47:LEU:HD23	2.12	0.49
9:G:90:GLY:O	9:G:91:SER:CB	2.61	0.49
13:K:136:ALA:O	13:K:137:TYR:CB	2.59	0.49
17:O:35:ALA:O	17:O:39:LEU:HG	2.13	0.49
24:V:89:GLU:HG2	24:V:90:ILE:H	1.78	0.49
31:y:136:C:H2'	31:y:137:C:O5'	2.13	0.49
31:y:137:C:H6	31:y:137:C:O5'	1.96	0.49
31:y:144:G:N7	31:y:145:G:C8	2.81	0.49
31:y:247:G:O2'	31:y:248:C:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:493:G:O2'	31:y:494:U:C5	2.63	0.49
31:y:575:G:N2	31:y:880:C:O2	2.42	0.49
31:y:714:G:O2'	31:y:777:A:N7	2.42	0.49
31:y:838:G:H2'	31:y:841:U:H5"	1.95	0.49
31:y:939:G:C2	31:y:940:C:N4	2.80	0.49
31:y:1004:A:O2'	31:y:1005:A:H5'	2.13	0.49
31:y:1148:U:C6	31:y:1148:U:C3'	2.96	0.49
31:y:1236:A:H2'	31:y:1237:C:O4'	2.12	0.49
31:y:1261:A:OP2	31:y:1261:A:C8	2.66	0.49
31:y:1410:G:H2'	31:y:1411:C:C6	2.47	0.49
31:y:1527:C:O2'	31:y:1528:U:H5'	2.13	0.49
33:2:24:G:H2'	33:2:25:C:O4'	2.13	0.49
35:c:112:VAL:O	35:c:116:GLU:HB2	2.13	0.49
36:d:160:ALA:HB1	36:d:164:ARG:HD2	1.94	0.49
37:e:12:CYS:HB2	37:e:33:MET:HG3	1.94	0.49
37:e:101:LEU:CD1	37:e:101:LEU:H	2.26	0.49
38:f:143:ARG:CG	38:f:147:ASP:HB2	2.43	0.49
40:h:79:ARG:HH11	40:h:84:ASN:HB3	1.77	0.49
41:i:103:VAL:CG1	41:i:104:ARG:NH2	2.75	0.49
43:k:23:ILE:HG21	43:k:72:VAL:HG11	1.94	0.49
45:m:117:SER:O	45:m:118:LYS:C	2.55	0.49
49:q:7:ALA:HB2	49:q:20:VAL:HG22	1.94	0.49
50:r:11:VAL:O	50:r:11:VAL:HG23	2.12	0.49
51:s:48:GLY:O	51:s:74:ARG:NH2	2.46	0.49
1:w:247:G:H3'	1:w:249:C:C6	2.47	0.49
1:w:420:C:O2	1:w:420:C:H2'	2.12	0.49
1:w:488:G:O2'	1:w:492:A:N6	2.43	0.49
1:w:558:G:OP1	10:H:134:PRO:HD2	2.13	0.49
1:w:674:G:N3	6:D:69:ARG:NH1	2.60	0.49
1:w:686:G:N3	28:Z:11:LYS:HG2	2.28	0.49
1:w:822:U:O4	1:w:944:G:N3	2.46	0.49
1:w:918:A:N3	2:x:80:U:O2'	2.30	0.49
1:w:1000:A:C6	1:w:1001:A:N7	2.80	0.49
1:w:1043:C:H2'	1:w:1044:G:H8	1.78	0.49
1:w:1068:G:C2	1:w:1095:A:O2'	2.65	0.49
1:w:1170:G:C2'	1:w:1171:G:C8	2.92	0.49
1:w:1358:G:C8	1:w:1371:G:O6	2.66	0.49
1:w:1516:U:O2'	1:w:1517:G:O5'	2.31	0.49
1:w:1902:C:OP1	4:B:242:ARG:HD2	2.13	0.49
1:w:2367:G:H8	1:w:2367:G:O5'	1.96	0.49
1:w:2496:C:OP1	13:K:82:ARG:NH2	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2549:G:C2'	1:w:2550:G:C5'	2.90	0.49
1:w:2590:A:H2	1:w:2604:U:O2	1.95	0.49
1:w:2712:U:P	1:w:2714:G:H4'	2.53	0.49
1:w:2787:C:H2'	1:w:2787:C:O2	2.13	0.49
1:w:2866:U:H1'	1:w:2868:A:O4'	2.12	0.49
1:w:2876:G:OP2	16:N:1:MET:HB3	2.12	0.49
4:B:3:VAL:HG23	4:B:200:ASP:HB3	1.95	0.49
4:B:89:SER:O	4:B:159:ALA:HA	2.13	0.49
6:D:16:ALA:O	6:D:17:ALA:C	2.55	0.49
6:D:121:VAL:HG13	6:D:191:LEU:N	2.27	0.49
7:E:16:ARG:HB3	7:E:17:PRO:CD	2.42	0.49
10:H:102:PRO:CG	10:H:103:GLY:H	2.24	0.49
11:I:49:ARG:HH22	31:y:1422:G:H4'	1.77	0.49
12:J:24:GLY:HA3	12:J:31:ALA:HB2	1.95	0.49
17:O:47:TYR:O	17:O:51:LYS:HB2	2.13	0.49
17:O:66:ASN:O	17:O:70:ARG:HG3	2.12	0.49
18:P:7:THR:HG21	18:P:22:VAL:HG22	1.89	0.49
19:Q:5:ALA:HB3	19:Q:105:VAL:HB	1.95	0.49
22:T:124:ILE:HG13	22:T:125:LEU:N	2.28	0.49
23:U:28:GLY:O	23:U:66:VAL:HB	2.12	0.49
23:U:51:VAL:HG21	23:U:79:VAL:CG2	2.43	0.49
29:a:29:LYS:HG2	29:a:29:LYS:O	2.12	0.49
30:b:15:LYS:O	30:b:25:VAL:HG23	2.13	0.49
31:y:39:G:N1	31:y:404:U:C5	2.81	0.49
31:y:130:A:C2	31:y:232:G:N2	2.81	0.49
31:y:159:G:N2	31:y:163:C:C4	2.81	0.49
31:y:448:A:P	31:y:485:G:H22	2.36	0.49
31:y:474:G:H2'	31:y:475:G:O4'	2.13	0.49
31:y:491:G:C2	31:y:492:G:C5	3.01	0.49
31:y:509:A:O2'	31:y:510:A:C5'	2.53	0.49
31:y:585:G:C6	31:y:586:C:C4	3.00	0.49
31:y:701:C:OP1	31:y:701:C:C4'	2.58	0.49
31:y:1102:A:C6	31:y:1103:C:N4	2.81	0.49
31:y:1102:A:C6	31:y:1103:C:C4	3.01	0.49
31:y:1102:A:N6	31:y:1103:C:N4	2.60	0.49
31:y:1107:C:H2'	31:y:1108:G:H8	1.78	0.49
31:y:1503:A:O2'	31:y:1504:G:C5'	2.61	0.49
31:y:1507:A:O2'	31:y:1508:G:H5'	2.13	0.49
33:2:49:C:C2	33:2:66:A:C2	3.01	0.49
33:2:53:G:N3	33:2:62:A:C2	2.81	0.49
35:c:159:PRO:O	35:c:161:ALA:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:c:204:ASN:N	35:c:204:ASN:HD22	2.11	0.49
36:d:76:VAL:HG11	36:d:103:VAL:HG11	1.95	0.49
37:e:102:ASP:CG	37:e:121:VAL:HG21	2.38	0.49
38:f:94:ALA:CB	38:f:119:LEU:N	2.62	0.49
38:f:142:LEU:HD23	38:f:143:ARG:H	1.77	0.49
41:i:21:LYS:HD3	41:i:21:LYS:O	2.13	0.49
42:j:42:ARG:HB3	42:j:74:ILE:HG13	1.94	0.49
45:m:64:GLU:CD	45:m:64:GLU:H	2.20	0.49
47:o:26:ARG:HH21	47:o:43:CYS:HB3	1.73	0.49
48:p:39:LEU:HB2	48:p:56:LEU:HD13	1.95	0.49
51:s:51:LEU:CD2	51:s:52:PRO:HD2	2.43	0.49
1:w:1075:C:O5'	1:w:1075:C:H6	1.96	0.49
1:w:1248:G:O6	17:O:3:ARG:HG3	2.13	0.49
1:w:1272:A:O2'	1:w:1273:U:H3'	2.12	0.49
1:w:1341:U:H5'	1:w:1602:U:N3	2.28	0.49
1:w:1589:C:H2'	1:w:1590:U:C6	2.48	0.49
1:w:1803:A:H3'	1:w:1804:C:C6	2.48	0.49
1:w:2119:A:C2	1:w:2171:A:C1'	2.96	0.49
1:w:2315:G:C6	1:w:2316:C:N4	2.81	0.49
1:w:2355:C:H4'	23:U:24:LYS:HZ3	1.77	0.49
1:w:2501:C:H5'	1:w:2502:G:H5"	1.94	0.49
1:w:2514:U:N3	1:w:2515:C:N4	2.61	0.49
1:w:2740:A:C6	1:w:2764:A:N7	2.81	0.49
1:w:2747:G:H1	1:w:2754:U:H2'	1.78	0.49
1:w:2793:G:C2'	1:w:2794:C:H6	2.26	0.49
1:w:2795:G:H3'	1:w:2798:C:OP1	2.12	0.49
1:w:2896:C:O2'	1:w:2897:U:H5'	2.12	0.49
2:x:2:C:C4	2:x:3:C:C5	3.00	0.49
2:x:76:G:C8	2:x:77:U:C4	3.01	0.49
4:B:43:ARG:O	4:B:51:VAL:HG22	2.13	0.49
4:B:146:GLU:OE2	4:B:150:LYS:HA	2.12	0.49
4:B:146:GLU:HA	4:B:152:GLY:O	2.13	0.49
6:D:19:LEU:N	6:D:20:PRO:HD2	2.28	0.49
6:D:179:TYR:HD2	6:D:179:TYR:N	2.05	0.49
7:E:139:LEU:C	7:E:141:PHE:N	2.70	0.49
9:G:81:VAL:O	9:G:82:ARG:CB	2.61	0.49
13:K:51:ARG:HA	13:K:54:MET:HE3	1.95	0.49
16:N:50:ILE:O	16:N:97:ALA:O	2.31	0.49
20:R:63:LYS:HB2	20:R:70:LEU:HB3	1.95	0.49
22:T:110:GLY:HA2	22:T:146:ILE:HD12	1.92	0.49
22:T:120:ILE:HB	22:T:171:ILE:C	2.38	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:18:ILE:HD12	24:V:18:ILE:N	2.27	0.49
26:X:52:HIS:NE2	26:X:53:LEU:HD22	2.28	0.49
31:y:241:C:H2'	31:y:242:C:O4'	2.13	0.49
31:y:346:G:C3'	31:y:347:G:H5"	2.41	0.49
31:y:376:G:H5"	49:q:5:ARG:HB2	1.95	0.49
31:y:482:A:C6	31:y:483:C:C2	3.01	0.49
31:y:509:A:C2'	31:y:510:A:C8	2.75	0.49
31:y:558:G:C2'	31:y:559:A:H2	2.16	0.49
31:y:751:U:C5	31:y:752:G:C5	3.01	0.49
31:y:766:A:C2'	31:y:767:A:H5'	2.42	0.49
31:y:790:A:H2'	31:y:791:G:C8	2.47	0.49
31:y:890:G:H21	31:y:906:G:C3'	2.25	0.49
31:y:896:C:C2'	31:y:897:C:O5'	2.61	0.49
31:y:957:U:O2'	31:y:959:A:N7	2.44	0.49
31:y:1267:C:H2'	31:y:1267:C:O2	2.10	0.49
33:2:41:U:C4'	40:h:143:ARG:NH1	2.70	0.49
36:d:13:GLY:HA3	47:o:57:ARG:CD	2.43	0.49
37:e:145:GLU:OE2	37:e:182:LYS:HB2	2.13	0.49
39:g:33:TYR:CD1	39:g:75:LEU:HD23	2.48	0.49
40:h:12:LEU:HD22	40:h:25:ALA:CB	2.43	0.49
40:h:50:ILE:O	40:h:50:ILE:HG22	2.13	0.49
47:o:9:LYS:HE2	47:o:12:ARG:CD	2.42	0.49
49:q:19:ILE:HD12	49:q:37:GLY:HA3	1.95	0.49
49:q:74:LEU:O	49:q:79:VAL:HG12	2.12	0.49
50:r:47:PRO:O	50:r:49:GLU:N	2.44	0.49
52:t:37:ARG:O	52:t:38:SER:CB	2.60	0.49
53:u:79:ARG:O	53:u:83:ARG:CB	2.54	0.49
1:w:7:G:H3'	1:w:8:A:H8	1.78	0.48
1:w:360:G:C8	1:w:360:G:O5'	2.66	0.48
1:w:686:G:N2	28:Z:11:LYS:HZ3	2.10	0.48
1:w:729:G:O2'	1:w:1775:U:H1'	2.13	0.48
1:w:776:G:H4'	1:w:777:A:H5"	1.93	0.48
1:w:889:C:H1'	1:w:890:A:O4'	2.12	0.48
1:w:976:C:H4'	1:w:1156:A:C6	2.48	0.48
1:w:1015:G:OP1	1:w:1015:G:C4'	2.55	0.48
1:w:1020:A:C6	1:w:1141:U:O2'	2.65	0.48
1:w:1031:G:H4'	30:b:6:SER:H	1.75	0.48
1:w:1031:G:OP2	13:K:128:LYS:HE2	2.13	0.48
1:w:1122:G:C2'	1:w:1123:C:H5'	2.43	0.48
1:w:1201:C:C4	1:w:1202:C:N4	2.81	0.48
1:w:1250:G:OP1	1:w:1251:C:C5	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1799:G:C5	4:B:177:LEU:HD13	2.48	0.48
1:w:1853:A:C6	1:w:1889:A:N6	2.81	0.48
1:w:1919:A:O2'	31:y:1517:G:N3	2.46	0.48
1:w:2331:G:H2'	1:w:2332:U:C6	2.47	0.48
1:w:2598:A:OP1	4:B:234:GLY:CA	2.61	0.48
1:w:2622:C:O2'	1:w:2825:G:N1	2.36	0.48
1:w:2645:G:H8	1:w:2645:G:OP2	1.95	0.48
1:w:2744:G:N1	1:w:2761:G:C6	2.80	0.48
1:w:2803:C:N4	1:w:2804:C:N4	2.61	0.48
1:w:2835:A:H62	1:w:2878:U:C3'	2.27	0.48
2:x:66:A:O2'	2:x:67:G:H5'	2.13	0.48
3:A:201:LYS:NZ	3:A:203:GLU:HA	2.28	0.48
4:B:20:ASP:O	4:B:22:SER:N	2.46	0.48
4:B:58:HIS:C	4:B:58:HIS:CD2	2.91	0.48
7:E:154:GLY:C	7:E:155:MET:SD	2.96	0.48
8:F:34:GLU:HG2	8:F:35:VAL:H	1.78	0.48
11:I:88:ASN:N	11:I:93:PRO:HA	2.23	0.48
11:I:91:LEU:HB2	11:I:111:PHE:HE1	1.78	0.48
16:N:131:ALA:O	16:N:132:LYS:HG3	2.13	0.48
31:y:105:G:C6	31:y:106:C:N3	2.81	0.48
31:y:227:G:N2	49:q:62:VAL:HB	2.28	0.48
31:y:234:C:C1'	50:r:64:PRO:CG	2.91	0.48
31:y:451:A:C8	31:y:481:G:O6	2.65	0.48
31:y:980:C:OP2	31:y:981:U:O4	2.31	0.48
31:y:989:C:O2'	31:y:1017:G:H4'	2.13	0.48
31:y:1022:G:H2'	31:y:1023:G:C8	2.44	0.48
31:y:1074:G:O2'	31:y:1101:A:N6	2.46	0.48
31:y:1221:G:OP1	31:y:1321:C:N3	2.46	0.48
31:y:1324:A:C8	31:y:1324:A:OP2	2.66	0.48
31:y:1369:C:P	42:j:111:ARG:HB2	2.53	0.48
31:y:1508:G:H2'	31:y:1509:C:C5	2.48	0.48
37:e:89:THR:CA	37:e:93:PHE:HB3	2.39	0.48
37:e:138:TYR:OH	37:e:141:ARG:HG3	2.13	0.48
42:j:10:ARG:HH21	42:j:71:SER:C	2.21	0.48
42:j:17:VAL:HG12	42:j:19:LEU:HG	1.95	0.48
42:j:44:VAL:CA	42:j:47:LEU:HD13	2.42	0.48
47:o:41:ARG:HH11	47:o:41:ARG:C	2.20	0.48
50:r:10:VAL:HG21	50:r:55:ASP:H	1.78	0.48
51:s:62:GLU:O	51:s:66:LEU:HB3	2.12	0.48
1:w:31:C:H2'	1:w:32:C:C6	2.49	0.48
1:w:250:G:H2'	1:w:251:A:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:328:U:H4'	21:S:66:PRO:HG2	1.95	0.48
1:w:349:G:H2'	1:w:350:U:O4'	2.12	0.48
1:w:396:G:O3'	24:V:46:LEU:HB3	2.13	0.48
1:w:446:G:H1'	1:w:449:A:C2	2.49	0.48
1:w:561:G:H4'	17:O:45:TYR:CE1	2.48	0.48
1:w:736:C:H2'	1:w:737:C:H6	1.78	0.48
1:w:887:A:O2'	1:w:888:C:H2'	2.13	0.48
1:w:1567:A:H5'	4:B:58:HIS:CE1	2.47	0.48
1:w:1663:C:H2'	1:w:1664:A:OP2	2.12	0.48
1:w:1784:A:O2'	1:w:1785:A:OP2	2.29	0.48
1:w:1800:C:H1'	1:w:1802:A:O4'	2.13	0.48
1:w:1818:U:OP2	4:B:157:ARG:HD3	2.14	0.48
1:w:1912:A:N3	31:y:1494:G:N2	2.60	0.48
1:w:1917:U:H6	1:w:1917:U:O5'	1.95	0.48
1:w:1970:A:C1'	1:w:1972:A:H1'	2.43	0.48
1:w:2355:C:O2'	23:U:17:GLN:HG3	2.13	0.48
1:w:2512:C:H5'	5:C:122:PHE:CD2	2.48	0.48
1:w:2570:G:C2	1:w:2571:C:C2	3.01	0.48
1:w:2574:G:O2'	5:C:144:ARG:HG2	2.12	0.48
1:w:2620:C:O4'	5:C:156:MET:HB3	2.13	0.48
1:w:2691:C:H4'	1:w:2871:C:O2'	2.13	0.48
1:w:2720:U:H2'	1:w:2721:A:H8	1.78	0.48
1:w:2744:G:C6	1:w:2761:G:O6	2.66	0.48
1:w:2900:A:C6	1:w:2901:C:C4	3.01	0.48
2:x:76:G:H21	22:T:84:GLU:CD	2.21	0.48
4:B:92:ILE:C	4:B:92:ILE:HD12	2.37	0.48
6:D:29:TRP:O	6:D:32:VAL:HG22	2.12	0.48
6:D:112:ARG:O	6:D:117:LYS:HG2	2.13	0.48
6:D:146:SER:N	6:D:167:TRP:CZ2	2.81	0.48
7:E:11:TYR:HD2	7:E:12:TYR:CD2	2.31	0.48
7:E:35:GLU:O	7:E:36:LYS:HG3	2.13	0.48
7:E:48:GLU:HG2	7:E:84:LYS:HB3	1.95	0.48
7:E:55:LYS:HD3	7:E:56:ALA:N	2.28	0.48
7:E:109:VAL:C	7:E:112:PRO:HD2	2.39	0.48
7:E:167:GLU:O	7:E:170:ARG:HG2	2.13	0.48
8:F:147:ASN:O	8:F:151:ILE:HG13	2.13	0.48
9:G:5:LEU:HB3	9:G:8:PRO:HD2	1.94	0.48
9:G:121:LYS:O	9:G:122:GLU:O	2.31	0.48
16:N:26:ASP:O	16:N:26:ASP:OD1	2.31	0.48
17:O:32:PHE:O	17:O:36:ARG:HB2	2.13	0.48
18:P:51:VAL:HG12	18:P:52:VAL:H	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:62:LEU:CD2	18:P:62:LEU:N	2.75	0.48
18:P:77:ALA:O	18:P:78:LYS:CB	2.61	0.48
21:S:34:LYS:HA	21:S:64:GLU:O	2.13	0.48
22:T:80:ARG:HG3	22:T:82:ARG:H	1.78	0.48
24:V:58:ILE:CG2	24:V:86:SER:HB2	2.42	0.48
25:W:51:ARG:C	25:W:53:LEU:H	2.20	0.48
31:y:51:A:C8	31:y:353:A:N7	2.80	0.48
31:y:298:A:C6	31:y:299:G:C6	3.01	0.48
31:y:298:A:H8	31:y:298:A:O5'	1.96	0.48
31:y:468:A:H5"	49:q:80:PHE:CD1	2.47	0.48
31:y:780:A:H8	31:y:780:A:P	2.35	0.48
31:y:952:U:H3'	31:y:952:U:C6	2.48	0.48
31:y:955:U:H2'	31:y:956:U:C4'	2.42	0.48
31:y:965:A:O2'	31:y:966:M2G:O5'	2.30	0.48
31:y:1504:G:H5"	31:y:1505:G:O4'	2.14	0.48
31:y:1507:A:C5	31:y:1508:G:N7	2.81	0.48
31:y:1528:U:C5'	31:y:1529:G:H21	2.25	0.48
33:2:36:A:N6	33:2:37:A:C5	2.82	0.48
35:c:73:THR:OG1	35:c:78:GLN:NE2	2.46	0.48
38:f:69:VAL:HG12	38:f:139:LEU:HD13	1.94	0.48
39:g:41:GLU:N	39:g:62:TRP:HE3	2.11	0.48
42:j:86:VAL:HG12	42:j:90:PRO:HA	1.95	0.48
45:m:109:VAL:HG23	45:m:119:TYR:CB	2.38	0.48
50:r:10:VAL:HG21	50:r:55:ASP:N	2.28	0.48
1:w:245:G:H2'	1:w:246:C:H6	1.79	0.48
1:w:686:G:H2'	28:Z:6:GLN:CG	2.36	0.48
1:w:714:U:N3	1:w:716:A:OP2	2.46	0.48
1:w:865:C:H6	1:w:865:C:OP2	1.96	0.48
1:w:866:A:H2'	1:w:866:A:N3	2.29	0.48
1:w:1577:C:H5'	1:w:1577:C:H6	1.78	0.48
1:w:1653:G:O6	14:L:10:LEU:HA	2.12	0.48
1:w:1914:C:N3	1:w:1915:U:N3	2.61	0.48
1:w:1939:U:C6	1:w:2591:C:O2'	2.66	0.48
1:w:2016:U:C5'	1:w:2058:A:H5'	2.39	0.48
1:w:2745:C:O2'	1:w:2746:U:C5'	2.55	0.48
2:x:29:A:C2	2:x:56:G:C2	3.01	0.48
4:B:17:THR:HB	4:B:205:VAL:N	2.27	0.48
4:B:174:ILE:O	4:B:175:LEU:HB2	2.12	0.48
5:C:25:VAL:HG13	5:C:182:LEU:O	2.13	0.48
5:C:141:ILE:N	5:C:141:ILE:HD13	2.28	0.48
6:D:73:ILE:C	6:D:75:ALA:N	2.69	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:145:GLY:HA2	6:D:167:TRP:CE2	2.48	0.48
6:D:183:ARG:HG2	12:J:7:ARG:CB	2.43	0.48
7:E:109:VAL:HG11	7:E:142:PRO:HB3	1.95	0.48
7:E:125:PHE:HB3	7:E:131:TYR:CE1	2.48	0.48
8:F:10:PRO:HB2	8:F:12:PRO:HD3	1.96	0.48
8:F:18:GLU:O	8:F:19:VAL:HB	2.13	0.48
8:F:127:GLU:HB2	8:F:129:THR:H	1.78	0.48
16:N:38:ASN:H	16:N:38:ASN:HD22	1.59	0.48
16:N:79:HIS:C	16:N:81:PRO:HD2	2.37	0.48
18:P:4:ILE:HG23	18:P:12:TYR:O	2.13	0.48
18:P:94:LEU:HD13	18:P:96:ILE:HD13	1.95	0.48
20:R:40:LYS:O	20:R:44:GLU:HB3	2.13	0.48
24:V:18:ILE:HA	24:V:44:PRO:HD2	1.95	0.48
24:V:87:PRO:CB	24:V:91:LYS:HD2	2.42	0.48
26:X:23:LEU:HA	26:X:26:LEU:HB2	1.95	0.48
29:a:7:HIS:NE2	29:a:9:GLY:HA3	2.28	0.48
31:y:142:G:H2'	31:y:142:G:N3	2.29	0.48
31:y:272:C:H2'	31:y:273:A:O4'	2.13	0.48
31:y:363:A:C5	45:m:31:PHE:HE2	2.31	0.48
31:y:447:G:N2	31:y:488:C:C4	2.81	0.48
31:y:451:A:OP1	31:y:481:G:N1	2.43	0.48
31:y:638:G:H2'	31:y:639:G:C8	2.46	0.48
31:y:741:G:C2	31:y:742:G:C5	3.01	0.48
31:y:752:G:H1'	31:y:754:C:H41	1.79	0.48
31:y:879:C:H2'	31:y:880:C:O5'	2.14	0.48
31:y:967:5MC:OP2	42:j:128:ARG:NH1	2.46	0.48
31:y:1160:G:C6	31:y:1161:C:C5	3.00	0.48
31:y:1332:A:C2'	31:y:1333:A:C5'	2.86	0.48
31:y:1387:G:C3'	31:y:1388:C:H5"	2.41	0.48
33:2:25:C:O5'	33:2:25:C:H6	1.95	0.48
36:d:47:LEU:O	36:d:48:TYR:C	2.56	0.48
36:d:111:LEU:HG	36:d:146:ALA:HB2	1.96	0.48
36:d:141:VAL:CG1	36:d:142:MET:N	2.75	0.48
37:e:12:CYS:SG	37:e:19:LEU:O	2.72	0.48
37:e:78:LEU:O	37:e:79:PHE:C	2.57	0.48
37:e:127:THR:O	37:e:127:THR:HG23	2.13	0.48
40:h:107:ALA:C	40:h:123:GLU:HG2	2.38	0.48
46:n:104:ARG:HD2	46:n:104:ARG:HA	1.54	0.48
1:w:15:G:C6	1:w:16:G:C5	3.02	0.48
1:w:52:A:H2'	1:w:53:A:C8	2.48	0.48
1:w:55:G:C2	1:w:56:A:C4	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:242:G:O2'	1:w:243:U:OP2	2.31	0.48
1:w:293:U:C3'	1:w:294:A:H4'	2.43	0.48
1:w:449:A:N7	1:w:450:G:C4	2.81	0.48
1:w:561:G:H4'	17:O:45:TYR:HE1	1.78	0.48
1:w:670:A:H5'	12:J:43:GLY:O	2.14	0.48
1:w:720:C:H2'	1:w:721:C:C6	2.48	0.48
1:w:957:A:OP2	13:K:76:LYS:HA	2.13	0.48
1:w:1219:G:C2	1:w:1221:C:N4	2.81	0.48
1:w:1275:A:O2'	1:w:1276:A:P	2.72	0.48
1:w:2018:G:N3	17:O:34:LYS:NZ	2.62	0.48
1:w:2113:U:H2'	1:w:2114:A:O4'	2.13	0.48
1:w:2442:C:O2'	1:w:2443:C:H5'	2.13	0.48
1:w:2590:A:OP1	4:B:239:ARG:CD	2.46	0.48
1:w:2674:G:H4'	11:I:26:LYS:HE2	1.94	0.48
1:w:2895:U:N3	1:w:2896:C:N4	2.61	0.48
4:B:75:ILE:H	4:B:76:PRO:HD3	1.78	0.48
5:C:50:GLY:C	5:C:76:ARG:HB3	2.38	0.48
5:C:117:MET:HB3	5:C:136:ARG:HH22	1.76	0.48
5:C:154:LYS:HD2	5:C:155:LYS:N	2.19	0.48
5:C:192:ASN:OD1	16:N:4:GLY:CA	2.60	0.48
7:E:59:GLU:OE2	7:E:151:ALA:CB	2.62	0.48
12:J:89:ALA:O	12:J:121:LYS:HD2	2.12	0.48
15:M:28:VAL:O	15:M:29:PHE:HB2	2.12	0.48
15:M:85:VAL:HG22	15:M:85:VAL:O	2.13	0.48
24:V:51:VAL:CG1	24:V:52:ARG:H	2.25	0.48
24:V:87:PRO:HA	24:V:91:LYS:HZ3	1.78	0.48
29:a:42:ARG:HG2	29:a:43:GLN:N	2.29	0.48
31:y:102:G:C2'	31:y:103:C:H6	2.17	0.48
31:y:130:A:N1	31:y:232:G:N2	2.59	0.48
31:y:414:A:C2	31:y:415:A:N9	2.81	0.48
31:y:510:A:O2'	31:y:542:G:C2'	2.60	0.48
31:y:546:G:C4'	31:y:548:G:HO2'	2.21	0.48
31:y:586:C:O2'	31:y:587:G:H5'	2.13	0.48
31:y:625:G:C4'	49:q:16:HIS:CD2	2.96	0.48
31:y:692:U:H6	31:y:692:U:C3'	2.16	0.48
31:y:713:G:H2'	31:y:714:G:C8	2.48	0.48
31:y:1115:C:N3	31:y:1116:C:C4	2.81	0.48
31:y:1125:U:C2'	31:y:1126:U:H5"	2.38	0.48
31:y:1197:G:HO2'	31:y:1198:G:P	2.36	0.48
31:y:1226:C:N4	46:n:104:ARG:HH11	2.11	0.48
31:y:1229:A:O3'	32:z:30:G:H5"	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1249:C:H1'	42:j:70:LYS:HE3	1.95	0.48
31:y:1347:G:H1	31:y:1373:G:H2'	1.78	0.48
32:z:38:A:C2'	32:z:39:C:H5'	2.43	0.48
33:2:53:G:C6	33:2:54:U:C4	3.01	0.48
35:c:129:GLU:O	35:c:130:ARG:CB	2.60	0.48
36:d:22:TRP:CZ3	36:d:32:LEU:CD2	2.81	0.48
36:d:127:ARG:HA	36:d:127:ARG:NE	2.28	0.48
40:h:30:ILE:O	40:h:32:ARG:HD2	2.13	0.48
40:h:125:MET:O	40:h:131:LYS:HE2	2.13	0.48
41:i:20:TYR:HE1	41:i:78:GLN:NE2	2.10	0.48
41:i:104:ARG:HD3	41:i:104:ARG:N	2.28	0.48
43:k:8:LEU:HD21	43:k:70:ARG:HB2	1.95	0.48
45:m:5:THR:O	45:m:6:ILE:C	2.57	0.48
48:p:55:GLY:O	48:p:57:LEU:N	2.46	0.48
50:r:57:VAL:HG13	50:r:75:ARG:O	2.13	0.48
51:s:29:PHE:N	51:s:29:PHE:CD2	2.81	0.48
51:s:84:LYS:HE2	51:s:84:LYS:CA	2.43	0.48
1:w:17:G:OP2	1:w:17:G:C8	2.66	0.48
1:w:126:A:OP2	28:Z:18:PHE:HB3	2.13	0.48
1:w:227:A:O2'	1:w:228:A:H5"	2.14	0.48
1:w:245:G:H5'	12:J:69:GLY:HA2	1.95	0.48
1:w:258:G:H2'	1:w:259:G:H8	1.78	0.48
1:w:607:U:OP2	6:D:97:PRO:HG3	2.13	0.48
1:w:617:G:H8	1:w:617:G:OP2	1.96	0.48
1:w:778:G:OP1	4:B:48:ARG:NH2	2.47	0.48
1:w:902:C:H2'	1:w:903:C:H6	1.78	0.48
1:w:1223:G:C4	1:w:1225:G:OP2	2.67	0.48
1:w:1529:A:H62	1:w:1542:G:H21	1.61	0.48
1:w:1639:U:C3'	1:w:1640:C:H5"	2.43	0.48
1:w:1735:U:H2'	1:w:1741:C:C5	2.48	0.48
1:w:1786:A:C2	1:w:1938:A:N6	2.82	0.48
1:w:1838:C:O2'	1:w:1839:G:OP2	2.30	0.48
1:w:2081:C:H2'	1:w:2082:A:O4'	2.14	0.48
1:w:2199:A:OP1	1:w:2205:C:H5	1.97	0.48
1:w:2319:G:H1'	1:w:2320:A:C5	2.47	0.48
1:w:2459:A:H4'	13:K:76:LYS:NZ	2.29	0.48
1:w:2588:G:N3	1:w:2589:A:H1'	2.29	0.48
1:w:2659:G:N2	1:w:2662:A:OP2	2.44	0.48
1:w:2822:G:C8	14:L:2:ARG:N	2.74	0.48
2:x:100:G:H2'	2:x:101:A:H5'	1.92	0.48
2:x:113:C:O2'	15:M:47:THR:HG22	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:97:TYR:HB2	4:B:102:LYS:C	2.38	0.48
4:B:196:VAL:CG1	4:B:197:GLY:N	2.76	0.48
5:C:32:PRO:HD3	5:C:51:PHE:HD2	1.78	0.48
5:C:53:PRO:O	5:C:54:GLN:C	2.56	0.48
5:C:108:SER:HB3	5:C:165:VAL:CG2	2.43	0.48
5:C:155:LYS:O	5:C:156:MET:HB2	2.12	0.48
7:E:28:VAL:C	7:E:30:GLU:H	2.21	0.48
7:E:94:LEU:HA	7:E:95:ARG:NH1	2.28	0.48
7:E:126:ASP:CG	7:E:130:ASN:HB2	2.38	0.48
9:G:44:LEU:C	9:G:44:LEU:HD13	2.39	0.48
10:H:43:GLY:C	10:H:84:ARG:HB2	2.39	0.48
10:H:106:LYS:HG3	10:H:107:LYS:N	2.29	0.48
12:J:139:LYS:O	12:J:140:ALA:HB3	2.13	0.48
16:N:124:ASP:N	16:N:124:ASP:OD1	2.46	0.48
18:P:36:PRO:HD2	18:P:60:GLU:CD	2.39	0.48
21:S:12:THR:O	21:S:13:VAL:HG23	2.14	0.48
21:S:99:CYS:O	21:S:100:ALA:HB2	2.13	0.48
22:T:163:LEU:HD12	22:T:163:LEU:H	1.78	0.48
29:a:9:GLY:CA	29:a:12:LYS:HD3	2.44	0.48
31:y:481:G:O2'	31:y:483:C:N4	2.46	0.48
31:y:522:C:C4	31:y:523:A:N7	2.82	0.48
31:y:554:C:O2'	31:y:555:C:H5'	2.12	0.48
31:y:751:U:C5	31:y:752:G:C8	3.02	0.48
31:y:828:A:C4	31:y:829:G:H1'	2.48	0.48
31:y:843:U:H5'	31:y:848:C:C5	2.47	0.48
31:y:899:C:C3'	31:y:900:A:C8	2.96	0.48
31:y:1285:A:OP1	31:y:1285:A:H8	1.97	0.48
31:y:1324:A:C2	31:y:1325:C:C2	3.01	0.48
32:z:16:C:O2'	32:z:17:C:P	2.71	0.48
32:z:24:U:C5	32:z:25:C:C5	3.02	0.48
35:c:136:VAL:O	35:c:139:LYS:HB3	2.13	0.48
36:d:50:ALA:O	36:d:71:ALA:HB3	2.13	0.48
45:m:37:THR:O	45:m:79:HIS:HB3	2.13	0.48
46:n:78:ILE:HA	46:n:92:HIS:CD2	2.49	0.48
46:n:97:PRO:HA	46:n:110:ARG:CD	2.39	0.48
46:n:97:PRO:CA	46:n:110:ARG:HD3	2.38	0.48
48:p:71:GLN:CD	48:p:71:GLN:C	2.81	0.48
1:w:68:G:H3'	1:w:69:C:H6	1.79	0.48
1:w:187:G:N1	1:w:188:G:C5	2.81	0.48
1:w:245:G:C5'	12:J:70:GLN:H	2.25	0.48
1:w:363(F):U:C2'	1:w:363(G):A:H8	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:611:C:H2'	1:w:612:G:O4'	2.14	0.48
1:w:1007:C:O2'	10:H:132:LYS:HD3	2.13	0.48
1:w:1246:A:OP1	12:J:18:ARG:CZ	2.61	0.48
1:w:1433:U:H2'	1:w:1434:A:C2	2.49	0.48
1:w:1509:A:OP1	1:w:1510:A:N3	2.46	0.48
1:w:1606:G:H4'	1:w:1608:A:C4	2.48	0.48
1:w:1650:G:H5'	14:L:104:ARG:HH22	1.79	0.48
1:w:1669:A:H2	1:w:1670:C:C6	2.32	0.48
1:w:1682:G:H2'	1:w:1683:C:C5	2.49	0.48
1:w:1848:A:C1'	31:y:702:A:H5'	2.43	0.48
1:w:1998:G:H5'	1:w:2725:A:H5'	1.94	0.48
1:w:2128:C:OP2	3:A:37:LYS:HE3	2.12	0.48
1:w:2304:G:H1'	7:E:132:ASN:HB3	1.94	0.48
1:w:2542:A:C1'	1:w:2543:G:N7	2.77	0.48
1:w:2563:U:O2	1:w:2566:A:C8	2.66	0.48
1:w:2623:G:O4'	1:w:2825:G:N2	2.46	0.48
1:w:2795:G:N2	1:w:2802:G:C6	2.82	0.48
1:w:2818:G:N1	1:w:2819:G:C5	2.82	0.48
2:x:104:A:C2'	2:x:105:G:H5'	2.43	0.48
4:B:118:VAL:O	4:B:129:ASN:HA	2.13	0.48
4:B:214:TRP:C	4:B:215:LEU:HD12	2.38	0.48
4:B:227:ASN:O	4:B:228:PRO:O	2.32	0.48
5:C:176:ILE:HB	5:C:181:LEU:C	2.39	0.48
5:C:180:ASN:C	5:C:181:LEU:HD22	2.37	0.48
6:D:79:VAL:O	6:D:79:VAL:HG13	2.13	0.48
7:E:11:TYR:HD2	7:E:12:TYR:CG	2.32	0.48
9:G:47:LEU:C	9:G:47:LEU:HD12	2.38	0.48
9:G:65:ALA:HB1	9:G:133:HIS:HD1	1.78	0.48
10:H:107:LYS:HG3	10:H:108:ILE:N	2.14	0.48
10:H:113:MET:HA	10:H:116:THR:CG2	2.38	0.48
17:O:95:LEU:O	17:O:97:ASP:N	2.47	0.48
18:P:18:LEU:O	18:P:19:LYS:CB	2.61	0.48
24:V:11:ARG:CB	24:V:12:PRO:CD	2.83	0.48
28:Z:43:THR:O	28:Z:43:THR:HG23	2.14	0.48
29:a:8:LYS:O	29:a:12:LYS:N	2.46	0.48
30:b:19:ARG:C	30:b:21:GLY:H	2.21	0.48
31:y:20:U:C2'	31:y:21:G:C5'	2.89	0.48
31:y:265:G:C2	31:y:267:C:H5'	2.48	0.48
31:y:323:U:C1'	53:u:19:SER:HB3	2.43	0.48
31:y:368:U:H6	31:y:368:U:H5"	1.79	0.48
31:y:447:G:H1'	31:y:487:A:N6	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:975:A:H5”	31:y:1363:A:H62	1.72	0.48
31:y:1019:C:H2’	31:y:1020:U:O5’	2.14	0.48
31:y:1188:A:O4’	47:o:60:SER:HB3	2.12	0.48
31:y:1199:U:C5’	43:k:54:PHE:CE2	2.96	0.48
31:y:1369:C:OP2	42:j:111:ARG:CB	2.57	0.48
31:y:1396:A:H5”	31:y:1398:A:O4’	2.12	0.48
31:y:1414:U:O5’	31:y:1414:U:H6	1.97	0.48
31:y:1426:C:N4	31:y:1475:G:H1	2.08	0.48
32:z:18:G:C4	32:z:58:A:C2	3.01	0.48
32:z:22:G:C2	32:z:23:C:C4	3.02	0.48
35:c:151:GLY:C	35:c:153:ARG:H	2.21	0.48
36:d:190:ARG:O	36:d:191:THR:C	2.56	0.48
37:e:104:VAL:O	37:e:108:LEU:HD13	2.14	0.48
38:f:52:PRO:HB2	38:f:53:LEU:HD22	1.96	0.48
39:g:6:VAL:O	39:g:63:TYR:N	2.46	0.48
40:h:70:LYS:HG3	40:h:96:GLN:O	2.13	0.48
41:i:122:ARG:HA	41:i:125:ARG:HB2	1.95	0.48
42:j:41:VAL:O	42:j:42:ARG:HB2	2.14	0.48
42:j:116:LYS:HD3	42:j:122:ALA:HB2	1.96	0.48
1:w:85:G:H5’	21:S:30:VAL:HG23	1.96	0.48
1:w:139:G:H2’	1:w:140:A:H8	1.78	0.48
1:w:307:G:H22	1:w:309:G:H3’	1.79	0.48
1:w:363(F):U:C3’	1:w:363(G):A:H8	2.26	0.48
1:w:697:C:H42	1:w:698:C:N4	2.10	0.48
1:w:989:G:C2’	1:w:990:A:H5”	2.44	0.48
1:w:1198:U:H2’	1:w:1199:U:H5	1.77	0.48
1:w:1451:C:O5’	1:w:1453:A:C8	2.67	0.48
1:w:1459:G:C6	1:w:1461:G:C5	3.02	0.48
1:w:2088:G:C2	1:w:2232:U:C2	3.01	0.48
1:w:2092:U:H5’	9:G:28:ASN:HD22	1.77	0.48
1:w:2271:G:H5’	23:U:20:ARG:HD3	1.95	0.48
1:w:2353:G:C5	1:w:2365:G:N2	2.81	0.48
1:w:2454:G:C5	1:w:2455:G:N7	2.81	0.48
1:w:2540:C:H2’	1:w:2540:C:O2	2.13	0.48
1:w:2579:C:H4’	5:C:134:ILE:CD1	2.44	0.48
1:w:2818:G:C6	1:w:2819:G:N7	2.81	0.48
1:w:2821:A:H2	1:w:2826:A:H61	1.61	0.48
2:x:57:A:H2’	2:x:58:A:O4’	2.14	0.48
8:F:9:ILE:HD12	8:F:10:PRO:HD2	1.95	0.48
8:F:58:GLU:O	8:F:59:ARG:C	2.56	0.48
9:G:131:LYS:HZ3	9:G:134:PRO:CA	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:101:TYR:N	10:H:102:PRO:CD	2.77	0.48
11:I:16:ALA:O	11:I:17:ARG:HD3	2.14	0.48
13:K:98:LYS:HB2	13:K:101:ARG:HD3	1.95	0.48
14:L:21:TYR:HA	14:L:24:GLN:HG3	1.96	0.48
16:N:16:ARG:O	16:N:79:HIS:CE1	2.66	0.48
16:N:45:PHE:O	16:N:46:GLU:C	2.56	0.48
16:N:112:ARG:HH21	16:N:113:LYS:HE3	1.77	0.48
17:O:51:LYS:HD3	17:O:51:LYS:C	2.38	0.48
18:P:14:VAL:HB	18:P:98:GLU:OE1	2.14	0.48
18:P:30:GLY:O	18:P:31:ALA:HB2	2.14	0.48
23:U:27:GLU:HA	23:U:69:PHE:CD2	2.48	0.48
23:U:68:GLU:O	23:U:79:VAL:HA	2.12	0.48
26:X:7:LYS:HB3	26:X:34:GLU:CA	2.43	0.48
31:y:260:G:OP2	53:u:79:ARG:HD2	2.13	0.48
31:y:673:G:C2	31:y:734:G:C4	3.02	0.48
31:y:791:G:N2	31:y:792:A:C2	2.82	0.48
31:y:983:A:H3'	31:y:983:A:N3	2.29	0.48
31:y:1375:A:C4	31:y:1376:U:C6	3.02	0.48
31:y:1432:G:O2'	31:y:1433:A:C8	2.67	0.48
33:2:73:A:C2	33:2:74:C:C4	3.01	0.48
37:e:10:ARG:HD2	37:e:13:ARG:NH2	2.29	0.48
37:e:101:LEU:HD13	37:e:101:LEU:H	1.77	0.48
40:h:5:ARG:O	40:h:5:ARG:HD2	2.14	0.48
40:h:143:ARG:O	40:h:144:MET:C	2.56	0.48
41:i:45:ILE:HG22	41:i:46:LYS:H	1.78	0.48
44:l:66:LEU:O	44:l:70:LYS:HG3	2.14	0.48
47:o:21:TYR:O	47:o:22:THR:CB	2.61	0.48
49:q:38:TYR:CE1	49:q:50:LYS:HB2	2.48	0.48
53:u:56:MET:O	53:u:59:ALA:HB3	2.13	0.48
1:w:302:C:N4	1:w:314:A:H61	2.10	0.48
1:w:442:G:H2'	1:w:444:C:H5'	1.96	0.48
1:w:527:C:H5"	1:w:528:A:OP1	2.14	0.48
1:w:585:G:H2'	1:w:1251:C:H42	1.79	0.48
1:w:743:G:C5'	5:C:130:GLY:O	2.60	0.48
1:w:875:G:H2'	1:w:876:C:H5'	1.95	0.48
1:w:998:C:H2'	1:w:999:U:O4'	2.13	0.48
1:w:1131:G:C5	10:H:99:SER:HB2	2.48	0.48
1:w:1327:C:O5'	1:w:1327:C:H6	1.96	0.48
1:w:1426:G:C3'	1:w:1427:A:C5'	2.85	0.48
1:w:1959:G:H2'	1:w:1960:A:O4'	2.13	0.48
1:w:1974:C:H2'	1:w:1975:G:C8	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2305:A:C6	7:E:154:GLY:HA3	2.48	0.48
1:w:2398:U:H2'	1:w:2399:G:C8	2.48	0.48
1:w:2598:A:H5"	4:B:234:GLY:O	2.14	0.48
1:w:2679:A:C2	1:w:2680:C:C2	3.02	0.48
1:w:2702:U:OP1	1:w:2702:U:O4'	2.32	0.48
1:w:2752:C:H3'	1:w:2753:A:H8	1.79	0.48
1:w:2766:G:H2'	1:w:2766:G:N3	2.28	0.48
1:w:2818:G:P	14:L:42:LYS:NZ	2.86	0.48
3:A:197:LEU:CG	3:A:198:GLU:N	2.77	0.48
5:C:48:GLN:HG2	5:C:78:LEU:HB2	1.95	0.48
12:J:20:GLY:O	12:J:21:ARG:HG2	2.14	0.48
12:J:44:GLY:O	12:J:45:LEU:O	2.31	0.48
13:K:52:VAL:CG2	13:K:53:ALA:N	2.76	0.48
17:O:55:ARG:HG2	17:O:55:ARG:NH1	2.25	0.48
17:O:91:ASP:O	17:O:95:LEU:HB2	2.13	0.48
19:Q:23:LEU:CB	27:Y:25:LEU:HG	2.43	0.48
24:V:85:LEU:O	24:V:86:SER:HB2	2.13	0.48
25:W:29:LYS:HD3	25:W:29:LYS:C	2.38	0.48
26:X:4:LEU:HD11	26:X:56:VAL:HB	1.95	0.48
26:X:49:LYS:HE3	26:X:52:HIS:CE1	2.49	0.48
29:a:49:VAL:HB	29:a:53:PRO:CB	2.43	0.48
31:y:50:A:OP1	31:y:50:A:H8	1.96	0.48
31:y:119:A:O2'	31:y:120:A:P	2.71	0.48
31:y:132:C:C3'	31:y:133:U:C5'	2.92	0.48
31:y:226:G:C2'	31:y:227:G:H8	2.02	0.48
31:y:327:A:C4	31:y:329:A:C8	3.02	0.48
31:y:371:G:H1'	31:y:482:A:H1'	1.96	0.48
31:y:719:C:H42	51:s:71:LYS:HB3	1.78	0.48
31:y:723:U:OP1	34:3:4:G:O2'	2.32	0.48
31:y:747:C:C6	31:y:747:C:OP2	2.67	0.48
31:y:925:G:C2'	31:y:927:G:OP1	2.61	0.48
31:y:944:G:C2	31:y:1340:A:C2	3.02	0.48
31:y:1426:C:N4	31:y:1475:G:C6	2.81	0.48
35:c:44:LEU:HA	35:c:47:THR:HG23	1.95	0.48
35:c:122:PHE:O	35:c:127:ILE:HD11	2.14	0.48
36:d:22:TRP:O	36:d:22:TRP:CG	2.66	0.48
37:e:26:CYS:SG	37:e:33:MET:SD	3.12	0.48
37:e:30:LYS:HA	37:e:35:ARG:NE	2.28	0.48
37:e:57:ARG:NE	38:f:107:ARG:HH11	2.11	0.48
37:e:65:ARG:HH11	37:e:65:ARG:CG	2.23	0.48
37:e:172:PRO:HG3	37:e:193:ASP:HB3	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:j:85:LEU:HB2	42:j:92:TYR:HB2	1.95	0.48
47:o:6:LEU:HB2	47:o:23:ARG:HD3	1.94	0.48
47:o:55:GLY:O	47:o:56:VAL:HG12	2.13	0.48
50:r:5:VAL:HG22	50:r:6:LEU:H	1.79	0.48
53:u:89:ARG:O	53:u:93:GLU:HB2	2.13	0.48
1:w:294:A:H2'	1:w:295:G:O4'	2.14	0.48
1:w:334:C:OP2	1:w:335:C:C5	2.67	0.48
1:w:346:A:H4'	1:w:347:A:C5'	2.15	0.48
1:w:474:G:H4'	1:w:475:U:OP1	2.14	0.48
1:w:593:G:C6	1:w:594:U:C4	3.01	0.48
1:w:668:G:O6	1:w:670:A:H2'	2.14	0.48
1:w:678:C:H42	1:w:799:G:H1	1.61	0.48
1:w:744:G:OP1	5:C:132:HIS:HB2	2.14	0.48
1:w:1030:G:O2'	1:w:1031:G:H5'	2.13	0.48
1:w:1131:G:O2'	1:w:1132:A:C8	2.65	0.48
1:w:1441:G:O3'	1:w:1628:G:H5"	2.14	0.48
1:w:1772:G:N2	1:w:1774:C:H4'	2.27	0.48
1:w:1987:G:C6	1:w:1988:C:N4	2.82	0.48
1:w:2259:G:C2	1:w:2260:C:C2	3.02	0.48
1:w:2539:C:C4	1:w:2540:C:C5	3.02	0.48
1:w:2773:C:H5"	5:C:164:ARG:CB	2.43	0.48
1:w:2825:G:C5	1:w:2826:A:C4	3.01	0.48
1:w:2841:C:C2'	1:w:2842:G:H5'	2.44	0.48
1:w:2867:G:O2'	1:w:2868:A:P	2.72	0.48
4:B:88:ARG:HG3	4:B:89:SER:N	2.28	0.48
8:F:89:ILE:H	8:F:89:ILE:HD12	1.79	0.48
8:F:152:ARG:O	8:F:153:LYS:C	2.56	0.48
9:G:77:LEU:HD23	9:G:100:ALA:HB1	1.96	0.48
10:H:41:ALA:H	10:H:44:LYS:HG3	1.79	0.48
10:H:42:GLU:HA	10:H:83:ILE:HD13	1.96	0.48
11:I:10:VAL:HG13	11:I:17:ARG:O	2.13	0.48
11:I:24:VAL:HA	11:I:39:ILE:HG22	1.95	0.48
11:I:64:ARG:HE	11:I:83:ALA:CB	2.25	0.48
12:J:35:HIS:H	12:J:36:LYS:HZ3	1.62	0.48
12:J:39:LYS:HB3	12:J:39:LYS:HZ2	1.79	0.48
12:J:126:VAL:HA	12:J:145:PRO:HB3	1.95	0.48
15:M:63:THR:HG23	15:M:64:GLU:N	2.29	0.48
18:P:22:VAL:O	18:P:23:GLU:HG3	2.13	0.48
18:P:43:GLU:HG3	18:P:44:LYS:N	2.29	0.48
20:R:5:TYR:OH	25:W:30:ARG:NH2	2.46	0.48
20:R:20:GLY:O	20:R:21:PHE:C	2.57	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:39:VAL:HG12	21:S:40:GLU:N	2.24	0.48
23:U:24:LYS:HG2	23:U:37:LEU:O	2.13	0.48
24:V:76:ARG:NH2	24:V:94:LEU:HG	2.28	0.48
31:y:5:U:C2	38:f:95:ALA:HB1	2.49	0.48
31:y:210:U:H6	31:y:210:U:H5"	1.79	0.48
31:y:419:C:O2'	31:y:420:U:H5'	2.14	0.48
31:y:503:C:H2'	31:y:504:C:C6	2.49	0.48
31:y:663:A:H2	31:y:742:G:H22	1.62	0.48
31:y:736:C:O2'	31:y:737:A:H5'	2.14	0.48
31:y:741:G:H21	48:p:54:ARG:HH22	1.62	0.48
31:y:778:G:H2'	31:y:779:C:C6	2.49	0.48
31:y:781:A:O3'	31:y:1522:U:O2'	2.31	0.48
31:y:878:G:C2'	31:y:879:C:H5'	2.43	0.48
31:y:992:U:O4	31:y:1043:C:C5	2.67	0.48
31:y:1005:A:O5'	31:y:1005:A:C8	2.66	0.48
31:y:1031:G:H2'	31:y:103(A):A:C5'	2.44	0.48
31:y:1049:U:C2'	31:y:1050:G:OP2	2.62	0.48
31:y:1075:C:O2'	31:y:1076:C:H5'	2.14	0.48
31:y:1078:U:O2'	38:f:129:ILE:HD12	2.14	0.48
31:y:1197:G:O2'	31:y:1198:G:P	2.72	0.48
31:y:1274:G:H2'	31:y:1275:A:H8	1.79	0.48
32:z:24:U:C4	32:z:25:C:C4	3.02	0.48
32:z:52:G:N1	32:z:63:G:C6	2.82	0.48
33:2:49:C:C1'	33:2:66:A:C2	2.96	0.48
36:d:32:LEU:HD23	36:d:32:LEU:C	2.38	0.48
36:d:177:THR:HG22	36:d:178:LEU:N	2.28	0.48
40:h:74:GLU:HG2	40:h:90:GLU:O	2.14	0.48
40:h:123:GLU:HA	40:h:126:ASP:CG	2.39	0.48
40:h:125:MET:C	40:h:128:ALA:H	2.21	0.48
41:i:33:GLU:HA	41:i:36:LEU:CG	2.37	0.48
41:i:73:ASP:O	41:i:75:ARG:N	2.46	0.48
49:q:8:ARG:HG3	49:q:17:TYR:HE2	1.79	0.48
50:r:55:ASP:HA	50:r:81:ARG:NH1	2.29	0.48
52:t:51:VAL:O	52:t:53:ASN:N	2.46	0.48
1:w:294:A:C2'	1:w:295:G:H8	2.27	0.48
1:w:390:A:O2'	1:w:391:G:N7	2.47	0.48
1:w:484:C:C4	1:w:485:C:N4	2.82	0.48
1:w:540:G:C6	1:w:541:C:N4	2.81	0.48
1:w:832:G:H2'	1:w:833:U:C6	2.49	0.48
1:w:1222:C:O5'	1:w:1222:C:H6	1.97	0.48
1:w:1320:C:O2	1:w:1331:A:N6	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1348:G:C4	1:w:1349:A:N7	2.81	0.48
1:w:1609:A:C2	1:w:1616:A:C2	3.02	0.48
1:w:1977:A:N7	1:w:1978:A:N7	2.62	0.48
1:w:2196:C:C2'	1:w:2197:U:H5'	2.44	0.48
1:w:2299:G:H2'	1:w:2300:G:C8	2.49	0.48
1:w:2377:A:O5'	1:w:2377:A:C8	2.57	0.48
2:x:40:U:O2	2:x:43:C:C4	2.67	0.48
3:A:41:THR:HA	3:A:178:LYS:HD2	1.95	0.48
3:A:162:ILE:O	3:A:162:ILE:HG13	2.13	0.48
3:A:176:VAL:HG13	3:A:177:GLY:N	2.29	0.48
4:B:108:PRO:HD2	4:B:111:LEU:HD22	1.91	0.48
9:G:125:GLU:O	9:G:126:TYR:CB	2.62	0.48
10:H:137:ARG:O	10:H:138:ARG:C	2.57	0.48
11:I:77:ILE:HG23	11:I:79:PHE:HE1	1.79	0.48
12:J:56:SER:O	12:J:59:LEU:HB3	2.13	0.48
14:L:62:ALA:HB1	14:L:80:PHE:CZ	2.49	0.48
14:L:62:ALA:O	14:L:66:VAL:HG13	2.14	0.48
23:U:45:PHE:C	23:U:46:LYS:HD2	2.38	0.48
24:V:58:ILE:HG21	24:V:86:SER:HB2	1.95	0.48
26:X:12:PRO:HG2	26:X:13:ILE:H	1.79	0.48
27:Y:16:ARG:CG	27:Y:17:ASP:N	2.76	0.48
31:y:74:C:H2'	31:y:75:C:C6	2.49	0.48
31:y:161:A:H2'	31:y:162:A:O4'	2.14	0.48
31:y:244:U:H4'	31:y:245:C:H5'	1.94	0.48
31:y:309:G:C2	31:y:310:G:C8	3.02	0.48
31:y:376:G:H5"	49:q:5:ARG:HD3	1.95	0.48
31:y:531:U:O5'	31:y:531:U:C6	2.66	0.48
31:y:611:A:N3	31:y:612:C:C5	2.82	0.48
31:y:769:G:H2'	31:y:770:C:H5"	1.95	0.48
31:y:773:G:C6	31:y:807:A:N6	2.82	0.48
31:y:1102:A:C4	31:y:1103:C:C5	3.01	0.48
31:y:1326:C:O3'	54:v:19:GLY:CA	2.62	0.48
31:y:1332:A:H2'	31:y:1333:A:C5'	2.44	0.48
34:3:11:A:H2'	34:3:12:A:C2	2.48	0.48
37:e:54:TYR:O	37:e:58:LEU:HD12	2.14	0.48
37:e:77:ASN:N	37:e:77:ASN:HD22	2.12	0.48
37:e:191:ARG:C	37:e:193:ASP:H	2.22	0.48
38:f:88:LYS:C	38:f:89:ILE:HD12	2.38	0.48
42:j:121:ARG:O	42:j:121:ARG:HG3	2.12	0.48
45:m:122:LYS:O	45:m:124:PRO:HD3	2.14	0.48
47:o:29:ARG:CB	47:o:40:CYS:CB	2.86	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:u:67:ALA:HA	53:u:73:HIS:HB2	1.95	0.48
1:w:69:C:O2	1:w:73:A:O2'	2.30	0.47
1:w:188:G:N7	1:w:189:G:C8	2.82	0.47
1:w:562:U:H1'	1:w:572:A:H1'	1.96	0.47
1:w:974(B):C:O2	1:w:974(B):C:H5"	2.14	0.47
1:w:1186:G:O6	1:w:1187:G:C2	2.66	0.47
1:w:1328:G:O5'	1:w:1328:G:H8	1.97	0.47
1:w:1426:G:OP2	1:w:1426:G:C8	2.63	0.47
1:w:1567:A:H5'	4:B:58:HIS:NE2	2.29	0.47
1:w:1701:A:H2'	1:w:1702:G:C5'	2.43	0.47
1:w:1704:G:H4'	31:y:1429:C:H5"	1.90	0.47
1:w:1853:A:H2'	1:w:1854:A:O4'	2.14	0.47
1:w:2440:C:O3'	1:w:2587:A:H4'	2.14	0.47
1:w:2512:C:O2'	5:C:141:ILE:CG2	2.57	0.47
2:x:9:G:C6	2:x:10:C:C5	3.02	0.47
4:B:69:ARG:HH12	4:B:76:PRO:HD3	1.78	0.47
5:C:151:TYR:H	5:C:151:TYR:HD1	1.62	0.47
6:D:45:SER:O	6:D:87:PRO:CG	2.62	0.47
7:E:55:LYS:O	7:E:58:GLN:HB3	2.14	0.47
7:E:149:VAL:C	7:E:151:ALA:N	2.72	0.47
11:I:32:TYR:O	11:I:33:ALA:HB2	2.13	0.47
12:J:148:LEU:H	12:J:148:LEU:CD1	2.26	0.47
15:M:39:ILE:HD11	15:M:49:VAL:CG1	2.29	0.47
16:N:42:ILE:CG1	16:N:43:GLN:H	2.25	0.47
16:N:99:LEU:HG	16:N:102:ILE:CG1	2.40	0.47
20:R:29:TRP:CG	20:R:76:ARG:HG2	2.49	0.47
22:T:18:LEU:HD13	22:T:38:TYR:CD2	2.49	0.47
23:U:74:ARG:HD2	23:U:74:ARG:C	2.39	0.47
31:y:39:G:C6	31:y:404:U:O4	2.66	0.47
31:y:497:U:H3	31:y:547:A:H62	1.62	0.47
31:y:679:C:O5'	31:y:679:C:C6	2.61	0.47
31:y:801:U:C4	31:y:802:A:N7	2.82	0.47
31:y:1059:C:H2'	31:y:1060:C:C6	2.49	0.47
31:y:1061:G:C6	31:y:1197:G:C6	3.02	0.47
31:y:1090:U:N3	31:y:1096:C:N4	2.62	0.47
31:y:1092:A:N7	31:y:1093:A:N6	2.61	0.47
31:y:1235:U:H5'	54:v:3:LYS:HG2	1.95	0.47
32:z:44:A:H8	32:z:44:A:O5'	1.97	0.47
35:c:151:GLY:C	35:c:153:ARG:N	2.72	0.47
37:e:14:ARG:NH1	37:e:39:PRO:HB3	2.29	0.47
37:e:20:TYR:C	37:e:26:CYS:HB3	2.38	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:47:ARG:HB3	37:e:47:ARG:CZ	2.44	0.47
38:f:57:LYS:HA	38:f:60:TYR:HB2	1.96	0.47
50:r:13:ASP:OD2	50:r:19:VAL:HG21	2.14	0.47
52:t:15:LEU:O	52:t:19:VAL:HG12	2.14	0.47
53:u:98:PRO:O	53:u:99:LEU:HB2	2.14	0.47
1:w:134:C:H2'	1:w:135:G:H8	1.79	0.47
1:w:176:G:O2'	1:w:177:G:H5'	2.15	0.47
1:w:307:G:H2'	1:w:309:G:N7	2.29	0.47
1:w:348:G:N7	1:w:349:G:C8	2.82	0.47
1:w:631:A:H8	1:w:631:A:O5'	1.98	0.47
1:w:671:C:H5"	12:J:41:ARG:HH12	1.78	0.47
1:w:674:G:H1'	6:D:69:ARG:HH22	1.79	0.47
1:w:813:U:OP2	12:J:26:GLY:C	2.57	0.47
1:w:834:C:O2	1:w:2358:G:C4	2.67	0.47
1:w:1140:C:H4'	10:H:48:ARG:CZ	2.43	0.47
1:w:2677:G:O2'	1:w:2678:C:H5'	2.14	0.47
1:w:2705:A:C2'	1:w:2706:G:H5'	2.44	0.47
1:w:2820:A:C4'	5:C:109:LYS:HE3	2.44	0.47
1:w:2856:C:N3	1:w:2861:G:N2	2.62	0.47
1:w:2869:G:C2'	1:w:2870:C:H5'	2.44	0.47
3:A:209:PHE:CD1	3:A:210:LEU:HG	2.48	0.47
4:B:75:ILE:HG21	4:B:99:ASP:HB3	1.95	0.47
5:C:8:LYS:O	5:C:192:ASN:HA	2.13	0.47
5:C:47:VAL:O	5:C:80:GLU:HG2	2.13	0.47
5:C:116:VAL:C	5:C:118:LYS:N	2.72	0.47
6:D:112:ARG:N	6:D:112:ARG:HD2	2.29	0.47
6:D:117:LYS:HE3	6:D:185:GLU:HG3	1.96	0.47
7:E:28:VAL:C	7:E:30:GLU:N	2.71	0.47
8:F:12:PRO:C	8:F:14:GLY:N	2.70	0.47
8:F:100:GLY:O	8:F:101:ARG:CB	2.62	0.47
8:F:125:VAL:HB	8:F:128:PRO:CA	2.44	0.47
9:G:69:LYS:O	9:G:70:GLU:HB2	2.14	0.47
11:I:88:ASN:O	11:I:89:ASN:C	2.56	0.47
15:M:8:GLU:O	15:M:9:ARG:HB2	2.14	0.47
15:M:62:LYS:HG3	15:M:63:THR:N	2.29	0.47
17:O:96:ALA:C	17:O:98:LEU:N	2.70	0.47
20:R:30:VAL:HG13	20:R:31:HIS:N	2.29	0.47
31:y:216:G:N7	31:y:217:C:C4	2.82	0.47
31:y:287:U:O2	31:y:288:A:C8	2.67	0.47
31:y:324:G:OP2	53:u:71:THR:HG23	2.13	0.47
31:y:391:G:H2'	31:y:392:G:H5"	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:443:C:O2'	31:y:444:C:H5'	2.14	0.47
31:y:511:C:O2'	31:y:512:U:P	2.72	0.47
31:y:714:G:C6	31:y:715:A:C6	3.03	0.47
31:y:1077:G:C6	31:y:1081:G:N1	2.82	0.47
31:y:1197:G:C4	31:y:1198:G:C8	3.02	0.47
31:y:1290:G:H2'	31:y:1291:G:H5'	1.97	0.47
31:y:1373:G:H8	31:y:1373:G:O5'	1.96	0.47
31:y:1379:G:H4'	40:h:156:TRP:CZ3	2.49	0.47
31:y:1379:G:H4'	40:h:156:TRP:HH2	1.77	0.47
31:y:1451:A:C5'	31:y:1452:C:H5	2.27	0.47
31:y:1513:A:C6	31:y:1523:G:C6	3.02	0.47
32:z:51:C:H2'	32:z:52:G:C8	2.49	0.47
32:z:69:C:H2'	32:z:70:G:O4'	2.15	0.47
35:c:43:ASP:O	35:c:47:THR:HG23	2.14	0.47
35:c:127:ILE:HD12	35:c:127:ILE:C	2.40	0.47
36:d:145:GLY:O	36:d:146:ALA:HB3	2.15	0.47
37:e:38:TYR:CD1	37:e:45:GLN:CB	2.96	0.47
37:e:57:ARG:HG3	37:e:206:PHE:HD1	1.79	0.47
37:e:175:SER:HB3	37:e:184:LYS:HB3	1.95	0.47
39:g:14:LEU:HD22	39:g:18:GLN:HG2	1.96	0.47
46:n:23:TYR:CD1	46:n:70:LEU:HD13	2.49	0.47
1:w:149:A:C2'	1:w:150:C:H5'	2.44	0.47
1:w:255:A:H1'	1:w:384:U:C6	2.49	0.47
1:w:309:G:H2'	1:w:330:A:C2	2.49	0.47
1:w:392:C:OP1	1:w:409:C:OP1	2.32	0.47
1:w:466:A:H5'	28:Z:21:ARG:HH21	1.73	0.47
1:w:562:U:O2'	1:w:572:A:H1'	2.14	0.47
1:w:571:A:O4'	1:w:2030:A:N6	2.47	0.47
1:w:637:A:N6	1:w:654:U:H3	2.12	0.47
1:w:753:C:H6	1:w:753:C:O5'	1.97	0.47
1:w:930:U:H4'	1:w:931:G:O5'	2.14	0.47
1:w:1142:C:H5'	1:w:1142(B):A:H5"	1.96	0.47
1:w:1313:U:C4'	1:w:1332:G:H4'	2.41	0.47
1:w:1398:C:O5'	1:w:1398:C:H6	1.96	0.47
1:w:1419:A:N7	1:w:1578:U:O4	2.48	0.47
1:w:1453:A:C2	1:w:2702:U:C2	3.02	0.47
1:w:1568:G:C4'	4:B:59:LYS:HB3	2.35	0.47
1:w:1641:A:O5'	1:w:1641:A:H8	1.97	0.47
1:w:1696:G:N2	1:w:1977:A:O2'	2.47	0.47
1:w:1801:G:H5'	1:w:1815:A:C6	2.49	0.47
1:w:1942:C:C4	1:w:1943:U:N3	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1998:G:H4'	1:w:2724:C:O2'	2.15	0.47
1:w:2092:U:H4'	1:w:2093:G:OP1	2.14	0.47
1:w:2527:C:O3'	30:b:30:PRO:HB2	2.13	0.47
1:w:2558:C:H2'	1:w:2559:C:C5'	2.44	0.47
1:w:2580:U:O5'	1:w:2580:U:C6	2.56	0.47
1:w:2674:G:C2'	11:I:29:ASN:HD21	2.27	0.47
1:w:2699:C:O2'	1:w:2700:C:H5'	2.14	0.47
1:w:2752:C:H5'	1:w:2753:A:OP2	2.14	0.47
1:w:2818:G:C2	1:w:2819:G:C8	3.02	0.47
2:x:104:A:H2'	2:x:105:G:C5'	2.43	0.47
6:D:44:ALA:HB1	6:D:87:PRO:CB	2.43	0.47
6:D:53:ALA:O	6:D:54:TYR:C	2.57	0.47
6:D:163:ARG:HH22	6:D:164:ASN:HB3	1.79	0.47
9:G:94:ALA:O	9:G:97:ILE:HG12	2.13	0.47
17:O:92:ARG:C	17:O:94:ASN:H	2.22	0.47
18:P:73:SER:HB2	18:P:89:GLN:N	2.27	0.47
19:Q:59:VAL:HG12	19:Q:59:VAL:O	2.14	0.47
22:T:4:ARG:O	22:T:5:LEU:HD22	2.13	0.47
26:X:7:LYS:HB3	26:X:34:GLU:HA	1.95	0.47
27:Y:46:CYS:HB3	27:Y:47:PRO:HD2	1.96	0.47
31:y:116:A:C2	31:y:117:G:C1'	2.91	0.47
31:y:193:C:C1'	53:u:60:GLU:HB3	2.43	0.47
31:y:265:G:H4'	50:r:66:SER:HA	1.96	0.47
31:y:507:C:H5	31:y:508:C:H2'	1.76	0.47
31:y:766:A:H3'	31:y:767:A:C8	2.49	0.47
31:y:899:C:C6	31:y:900:A:N7	2.82	0.47
31:y:900:A:H8	31:y:900:A:OP2	1.97	0.47
31:y:948:C:C5'	46:n:106:ASN:HB2	2.44	0.47
31:y:949:A:C6	31:y:950:U:C4	3.02	0.47
31:y:961:U:C5	31:y:983:A:N6	2.83	0.47
31:y:1157:A:H2	31:y:1178:G:H21	1.58	0.47
31:y:1199:U:C4'	43:k:54:PHE:CE2	2.95	0.47
31:y:1289:A:OP2	31:y:1290:G:N7	2.47	0.47
32:z:70:G:C2'	32:z:71:C:H5"	2.43	0.47
33:2:28:C:C2'	33:2:29:A:H5'	2.44	0.47
40:h:31:MET:O	40:h:32:ARG:CB	2.57	0.47
40:h:44:TYR:O	40:h:47:CYS:HB2	2.15	0.47
41:i:5:PRO:O	41:i:6:ILE:C	2.57	0.47
42:j:49:PRO:HG2	42:j:50:LEU:HD12	1.95	0.47
42:j:85:LEU:HD13	42:j:86:VAL:N	2.30	0.47
45:m:85:ARG:HG3	45:m:86:GLY:H	1.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:o:40:CYS:C	47:o:42:ILE:N	2.72	0.47
50:r:67:LYS:O	50:r:68:ARG:CB	2.62	0.47
1:w:288:C:C3'	1:w:289:A:H5"	2.43	0.47
1:w:299:A:C2	1:w:323:G:N2	2.83	0.47
1:w:363(A):G:O2'	1:w:363(B):A:H5'	2.14	0.47
1:w:458:G:O2'	1:w:459:U:C5	2.48	0.47
1:w:466:A:C8	1:w:466:A:H3'	2.48	0.47
1:w:548:A:N7	1:w:549:G:H1'	2.30	0.47
1:w:580:C:H2'	1:w:581:C:C6	2.49	0.47
1:w:592:G:O2'	29:a:3:LYS:O	2.26	0.47
1:w:668:G:H5"	1:w:669:G:OP2	2.15	0.47
1:w:942:G:C5'	12:J:35:HIS:HA	2.44	0.47
1:w:957:A:OP1	1:w:957:A:H8	1.98	0.47
1:w:1040:C:H2'	1:w:1041:C:C6	2.50	0.47
1:w:1115:G:H2'	1:w:1116:C:C6	2.49	0.47
1:w:1222:C:C2	1:w:1223:G:C8	3.02	0.47
1:w:1279:G:P	14:L:35:THR:HG22	2.54	0.47
1:w:1313:U:H5'	1:w:1333:C:OP1	2.14	0.47
1:w:1579:A:H2'	1:w:1580:A:H8	1.79	0.47
1:w:1796:U:H4'	4:B:256:GLY:N	2.30	0.47
1:w:1820:U:C2	4:B:159:ALA:HB3	2.49	0.47
1:w:1849:G:H5'	1:w:1850:G:OP2	2.13	0.47
1:w:1894:C:O2'	1:w:1895:C:H5'	2.13	0.47
1:w:1902:C:H4'	4:B:244:ARG:N	2.29	0.47
1:w:2308:G:N3	1:w:2308:G:C2'	2.77	0.47
1:w:2429:G:O2'	1:w:2430:A:C5'	2.61	0.47
1:w:2589:A:OP1	4:B:237:GLU:HB2	2.14	0.47
1:w:2793:G:N2	1:w:2794:C:C2	2.82	0.47
1:w:2822:G:P	5:C:112:GLY:H	2.38	0.47
1:w:2898:U:H2'	1:w:2899:G:C8	2.49	0.47
4:B:6:PHE:CD1	4:B:16:MET:O	2.67	0.47
4:B:103:ARG:HA	4:B:103:ARG:NE	2.29	0.47
4:B:147:LEU:HG	4:B:148:GLU:H	1.78	0.47
5:C:53:PRO:O	5:C:55:ASN:OD1	2.33	0.47
6:D:28:LEU:O	6:D:32:VAL:HG22	2.14	0.47
6:D:32:VAL:HG23	6:D:33:ARG:H	1.79	0.47
6:D:39:ARG:HG3	6:D:40:ARG:H	1.79	0.47
8:F:8:PRO:CB	8:F:49:VAL:HA	2.44	0.47
8:F:90:LYS:HD3	8:F:90:LYS:N	2.29	0.47
8:F:156:ALA:C	8:F:158:HIS:N	2.72	0.47
12:J:135:LEU:O	12:J:139:LYS:HB2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:107:ALA:O	13:K:109:VAL:N	2.47	0.47
13:K:115:MET:HA	13:K:118:LEU:HD22	1.97	0.47
15:M:24:LEU:O	15:M:25:ARG:C	2.57	0.47
16:N:12:SER:HA	16:N:15:VAL:HG22	1.97	0.47
17:O:51:LYS:NZ	17:O:55:ARG:HH21	2.12	0.47
17:O:66:ASN:ND2	17:O:70:ARG:NH2	2.61	0.47
17:O:74:LEU:HD22	17:O:75:ASN:O	2.14	0.47
17:O:96:ALA:C	17:O:98:LEU:H	2.22	0.47
21:S:19:LYS:O	21:S:20:TYR:CB	2.57	0.47
22:T:145:GLU:O	22:T:147:GLY:N	2.48	0.47
22:T:151:HIS:O	22:T:152:ALA:C	2.57	0.47
22:T:161:VAL:CG1	22:T:162:GLU:N	2.77	0.47
23:U:19:LYS:O	23:U:20:ARG:HB2	2.13	0.47
25:W:53:LEU:O	25:W:54:LYS:HB3	2.14	0.47
28:Z:13:ALA:O	28:Z:20:ALA:CB	2.63	0.47
31:y:44:G:C4	31:y:399:G:C2	3.02	0.47
31:y:161:A:C5	31:y:162:A:C5	3.03	0.47
31:y:186(G):C:OP2	31:y:187:C:N4	2.46	0.47
31:y:262:A:H4'	53:u:74:LYS:HD3	1.95	0.47
31:y:414:A:H2'	31:y:415:A:C8	2.49	0.47
31:y:533:A:N1	31:y:536:C:O4'	2.48	0.47
31:y:557:G:C5	31:y:558:G:C5	3.03	0.47
31:y:603:U:C2'	31:y:604:G:C8	2.88	0.47
31:y:671:G:O2'	31:y:672:U:H5'	2.14	0.47
31:y:786:G:C4	31:y:787:A:C8	3.02	0.47
31:y:899:C:C3'	31:y:900:A:H8	2.26	0.47
31:y:1054:C:OP1	31:y:1196:U:H3'	2.15	0.47
31:y:1091:U:O2	31:y:1093:A:H3'	2.14	0.47
31:y:1238:A:C2	31:y:1241:G:O2'	2.59	0.47
31:y:1331:G:OP2	31:y:1331:G:C4	2.67	0.47
31:y:1391:U:O2'	31:y:1392:G:H5'	2.14	0.47
31:y:1497:G:H8	31:y:1497:G:O5'	1.97	0.47
32:z:19:G:C2	32:z:57:A:C4	3.03	0.47
35:c:177:ALA:C	35:c:179:LYS:H	2.21	0.47
36:d:23:TYR:HD1	43:k:11:PHE:CE1	2.32	0.47
39:g:53:ALA:C	39:g:55:ASP:H	2.22	0.47
39:g:62:TRP:CD1	51:s:35:ARG:NH1	2.83	0.47
44:l:79:SER:HA	44:l:104:GLN:OE1	2.14	0.47
45:m:109:VAL:CG1	45:m:112:ARG:HD3	2.44	0.47
47:o:20:ALA:C	47:o:21:TYR:CD1	2.92	0.47
51:s:35:ARG:C	51:s:37:VAL:N	2.59	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:t:45:VAL:O	52:t:47:HIS:N	2.47	0.47
54:v:19:GLY:C	54:v:21:TYR:N	2.66	0.47
1:w:44:A:H2'	1:w:45:G:C8	2.49	0.47
1:w:228:A:H2'	1:w:229:A:H5'	1.96	0.47
1:w:319:C:N4	1:w:333:G:N1	2.62	0.47
1:w:666:G:H5"	12:J:49:ARG:CD	2.37	0.47
1:w:823:G:C6	1:w:835:A:C2	3.03	0.47
1:w:889:C:H4'	1:w:890:A:O5'	2.14	0.47
1:w:1165:U:O5'	1:w:1165:U:C6	2.60	0.47
1:w:1546:A:H5"	1:w:1546(B):C:OP2	2.15	0.47
1:w:1558:A:H2'	1:w:1560:G:C8	2.49	0.47
1:w:1567:A:OP2	4:B:86:PRO:HB2	2.13	0.47
1:w:1702:G:C6	1:w:1703:G:N7	2.83	0.47
1:w:1711:C:H2'	1:w:1712:C:H6	1.79	0.47
1:w:1734:C:C2	1:w:1735:U:H1'	2.49	0.47
1:w:1752:C:C5'	1:w:2862:G:H5"	2.44	0.47
1:w:1824:G:O2'	4:B:254:THR:CB	2.62	0.47
1:w:2027:G:C6	1:w:2028:U:C4	3.03	0.47
1:w:2117:A:H2'	1:w:2117:A:N3	2.29	0.47
1:w:2131:G:H5"	1:w:2131:G:H8	1.80	0.47
1:w:2284:C:H2'	1:w:2285:C:O4'	2.13	0.47
1:w:2550:G:N7	1:w:2551:C:C4	2.82	0.47
1:w:2577:A:H8	1:w:2577:A:O5'	1.97	0.47
1:w:2577:A:H3'	1:w:2578:G:C5'	2.43	0.47
1:w:2590:A:N1	1:w:2605:U:C4	2.83	0.47
1:w:2753:A:H1'	30:b:15:LYS:NZ	2.30	0.47
1:w:2791:C:C4	1:w:2893:G:C6	3.02	0.47
1:w:2885:C:O5'	1:w:2885:C:C6	2.57	0.47
4:B:111:LEU:HD13	4:B:115:GLN:HB3	1.95	0.47
10:H:58:ARG:HD2	10:H:65:TRP:CZ2	2.50	0.47
10:H:157:ARG:O	10:H:159:GLU:N	2.47	0.47
14:L:66:VAL:C	14:L:68:ARG:H	2.22	0.47
20:R:38:GLU:CD	20:R:38:GLU:H	2.23	0.47
22:T:24:LEU:CG	22:T:41:LEU:HA	2.44	0.47
24:V:26:ARG:HD3	24:V:26:ARG:N	2.23	0.47
24:V:64:ALA:C	24:V:66:HIS:H	2.22	0.47
25:W:52:ASP:HA	25:W:55:ARG:NH2	2.30	0.47
27:Y:22:HIS:O	27:Y:23:HIS:C	2.57	0.47
27:Y:38:ALA:HB1	27:Y:40:LYS:HG3	1.95	0.47
27:Y:51:TYR:O	27:Y:52:TYR:HB3	2.13	0.47
31:y:141:A:H1'	31:y:182:U:C2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:179:A:H3'	31:y:180:U:C6	2.49	0.47
31:y:226:G:C2'	31:y:227:G:O5'	2.63	0.47
31:y:324:G:N2	31:y:327:A:C8	2.83	0.47
31:y:355:C:C4	31:y:356:A:N7	2.83	0.47
31:y:533:A:O2'	31:y:535:A:N7	2.46	0.47
31:y:882:C:H2'	31:y:883:C:C6	2.50	0.47
31:y:1082:G:H2'	31:y:1083:U:O4'	2.14	0.47
31:y:1093:A:N1	31:y:1109:C:O2	2.48	0.47
31:y:1243:C:OP2	31:y:1243:C:C6	2.63	0.47
31:y:1379:G:C5'	40:h:4:ARG:HB3	2.36	0.47
31:y:1454:G:H2'	31:y:1455:G:H8	1.79	0.47
35:c:84:GLU:HB2	35:c:215:LEU:HD13	1.97	0.47
36:d:113:ALA:HB3	36:d:114:PRO:HD3	1.97	0.47
37:e:167:GLY:O	37:e:168:ARG:HG3	2.14	0.47
40:h:125:MET:C	40:h:127:ALA:H	2.21	0.47
42:j:97:LYS:N	42:j:98:PRO:CD	2.76	0.47
44:l:92:GLU:O	44:l:95:ILE:HB	2.15	0.47
48:p:86:GLY:C	48:p:88:ARG:H	2.23	0.47
49:q:46:PRO:O	49:q:47:ASP:CB	2.60	0.47
51:s:36:ASN:HD21	51:s:40:LEU:HD21	1.80	0.47
51:s:65:ILE:HD12	51:s:66:LEU:N	2.29	0.47
53:u:77:ALA:O	53:u:81:LYS:HG2	2.15	0.47
1:w:130:C:OP1	1:w:1348:G:N2	2.47	0.47
1:w:155:C:HO3'	1:w:161:U:P	2.30	0.47
1:w:671:C:P	12:J:45:LEU:HD12	2.54	0.47
1:w:896:A:N7	22:T:175:VAL:HB	2.29	0.47
1:w:920:G:H2'	1:w:921:G:O4'	2.15	0.47
1:w:1292:U:O2'	1:w:1293:C:H5'	2.14	0.47
1:w:1332:G:H5"	1:w:1333:C:OP2	2.15	0.47
1:w:1785:A:O2'	1:w:1786:A:H5'	2.14	0.47
1:w:2060:A:OP1	6:D:64:HIS:HA	2.15	0.47
1:w:2176:A:O2'	3:A:214:TYR:HD2	1.97	0.47
1:w:2178:C:N4	1:w:2179:C:N4	2.62	0.47
1:w:2246:G:C4	1:w:2247:A:C8	3.02	0.47
1:w:2396:G:O3'	24:V:31:GLY:HA2	2.14	0.47
1:w:2452:C:H2'	1:w:2453:A:O4'	2.15	0.47
1:w:2553:G:N3	1:w:2582:G:N2	2.63	0.47
1:w:2581:G:OP1	1:w:2581:G:H4'	2.14	0.47
1:w:2650:U:O2'	1:w:2651:C:H5'	2.15	0.47
1:w:2779:U:O4'	1:w:2781:A:N1	2.47	0.47
1:w:2856:C:H42	1:w:2861:G:H1	1.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:23:G:O2'	2:x:24:G:H5'	2.15	0.47
4:B:35:LYS:HE3	4:B:64:ILE:N	2.22	0.47
4:B:63:ARG:CB	4:B:85:ASP:HB2	2.44	0.47
4:B:255:LYS:HB2	4:B:255:LYS:NZ	2.29	0.47
6:D:109:VAL:CA	6:D:112:ARG:HG2	2.45	0.47
6:D:149:VAL:HG23	6:D:150:LEU:N	2.29	0.47
9:G:128:LEU:HD23	9:G:140:LEU:O	2.14	0.47
11:I:70:LYS:H	11:I:76:ALA:CB	2.27	0.47
12:J:107:LYS:CG	12:J:108:LYS:H	2.21	0.47
14:L:99:LYS:HG2	14:L:100:LEU:N	2.29	0.47
16:N:35:LYS:O	16:N:36:GLU:C	2.57	0.47
18:P:24:LYS:C	18:P:25:LEU:HD12	2.39	0.47
18:P:40:LEU:C	18:P:40:LEU:HD22	2.40	0.47
22:T:66:SER:O	22:T:67:LEU:HB2	2.15	0.47
23:U:31:VAL:HB	23:U:61:ALA:CB	2.44	0.47
28:Z:11:LYS:O	28:Z:12:ARG:C	2.57	0.47
31:y:36:C:C4	31:y:37:U:O4	2.67	0.47
31:y:141:A:H2'	31:y:142:G:O4'	2.15	0.47
31:y:179:A:C5	31:y:180:U:C4	3.03	0.47
31:y:186(B):C:OP1	53:u:82:SER:OG	2.27	0.47
31:y:312:C:H6	31:y:312:C:O5'	1.98	0.47
31:y:324:G:OP2	53:u:26:ASN:ND2	2.47	0.47
31:y:341:C:C2	31:y:342:C:H5	2.31	0.47
31:y:363:A:N1	31:y:364:A:C2	2.82	0.47
31:y:423:G:C2	31:y:424:G:H1'	2.50	0.47
31:y:423:G:N2	31:y:424:G:N9	2.62	0.47
31:y:560:U:C2'	31:y:561:U:OP2	2.63	0.47
31:y:564:C:C5	50:r:32:TYR:CE1	3.03	0.47
31:y:651:C:H2'	31:y:652:U:O4'	2.15	0.47
31:y:704:A:C4	31:y:705:U:C6	3.02	0.47
31:y:876:G:H1'	41:i:7:ALA:HB1	1.97	0.47
31:y:885:G:H8	31:y:885:G:O5'	1.97	0.47
31:y:936:C:O2'	31:y:1383:C:C4	2.68	0.47
31:y:1157:A:C5'	31:y:1158:C:C6	2.97	0.47
31:y:1210:C:H4'	31:y:1214:C:N4	2.28	0.47
31:y:1253:G:H3'	31:y:1254:C:C6	2.50	0.47
31:y:1253:G:H3'	31:y:1254:C:H6	1.79	0.47
31:y:1423:G:N2	31:y:1424:C:H1'	2.29	0.47
31:y:1441:G:C2'	31:y:1460:A:H61	2.26	0.47
32:z:2:G:C2	32:z:72:A:C2	3.03	0.47
35:c:102:LEU:HB3	35:c:176:GLU:HB2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:59:ARG:O	36:d:60:ALA:HB3	2.14	0.47
36:d:177:THR:C	36:d:179:ARG:H	2.21	0.47
37:e:12:CYS:SG	37:e:26:CYS:SG	3.12	0.47
37:e:94:LEU:HD21	37:e:200:GLU:HB2	1.95	0.47
40:h:69:VAL:HG12	40:h:70:LYS:N	2.30	0.47
41:i:1:MET:HG2	41:i:2:LEU:N	2.29	0.47
41:i:36:LEU:HD13	41:i:48:TYR:HB2	1.95	0.47
47:o:6:LEU:HB3	47:o:23:ARG:HH11	1.77	0.47
48:p:70:LEU:HD11	48:p:77:ARG:HB3	1.95	0.47
50:r:11:VAL:HG22	50:r:21:VAL:CA	2.40	0.47
51:s:31:LEU:CD2	51:s:31:LEU:N	2.72	0.47
1:w:13:A:H8	1:w:13:A:OP1	1.98	0.47
1:w:54:G:C1’	28:Z:35:ARG:HH12	2.27	0.47
1:w:62:C:O5’	1:w:63:U:H5	1.98	0.47
1:w:68:G:H3’	1:w:69:C:C6	2.49	0.47
1:w:107:C:H2’	1:w:348:G:N2	2.30	0.47
1:w:108:U:H1’	1:w:348:G:N3	2.29	0.47
1:w:188:G:H1’	1:w:1365:A:N1	2.30	0.47
1:w:242:G:C8	29:a:5:LYS:HB3	2.50	0.47
1:w:265:A:C8	1:w:266:G:H1’	2.50	0.47
1:w:270(N):U:H2’	1:w:270(O):G:C4’	2.45	0.47
1:w:270(W):G:C2	1:w:270(X):G:N7	2.82	0.47
1:w:319:C:N4	1:w:333:G:C2	2.83	0.47
1:w:319:C:H6	1:w:319:C:O5’	1.98	0.47
1:w:481:G:OP2	21:S:45:VAL:HG22	2.15	0.47
1:w:573:G:O2’	1:w:574:C:O5’	2.30	0.47
1:w:631:A:N3	1:w:2415:G:O2’	2.36	0.47
1:w:672:C:C6	1:w:672:C:C3’	2.98	0.47
1:w:751:A:H62	1:w:1614:A:H2	1.61	0.47
1:w:791:C:H4’	1:w:792:G:OP1	2.13	0.47
1:w:905:U:H2’	1:w:906:G:C8	2.49	0.47
1:w:942:G:C4’	12:J:35:HIS:HA	2.44	0.47
1:w:944:G:H3’	1:w:944:G:C8	2.50	0.47
1:w:951:C:C2	1:w:952:G:C8	3.02	0.47
1:w:986:C:H2’	1:w:987:G:C8	2.47	0.47
1:w:995:C:C4	10:H:24:VAL:HA	2.50	0.47
1:w:1077:A:H2’	1:w:1078:U:O4’	2.14	0.47
1:w:1257:C:O2’	1:w:1258:C:H5’	2.14	0.47
1:w:1284:A:C5	1:w:1285:G:N3	2.83	0.47
1:w:1429:G:O4’	1:w:1568:G:H1’	2.14	0.47
1:w:1466:G:C2	1:w:1547:C:N4	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1529:A:H62	1:w:1542:G:N2	2.13	0.47
1:w:1540:G:H5'	1:w:1541:U:OP2	2.15	0.47
1:w:1616:A:C3'	1:w:1617:C:H5'	2.07	0.47
1:w:1637:A:H5'	1:w:1760:A:H1'	1.95	0.47
1:w:1741:C:H3'	1:w:1742:C:H5"	1.96	0.47
1:w:1746:G:C4	1:w:1747:G:H1'	2.49	0.47
1:w:1812:A:N3	4:B:45:ASN:HB2	2.28	0.47
1:w:1917:U:N3	1:w:1918:A:C2	2.83	0.47
1:w:2064:C:H2'	1:w:2065:C:C6	2.50	0.47
1:w:2074:U:C2	1:w:2075:U:C5	3.03	0.47
1:w:2077:A:H1'	1:w:2435:A:H5"	1.95	0.47
1:w:2183:C:H2'	1:w:2184:G:C8	2.48	0.47
1:w:2305:A:H1'	7:E:136:ARG:CZ	2.44	0.47
1:w:2324:C:H1'	1:w:2337:G:H4'	1.96	0.47
1:w:2335:A:H2'	15:M:15:ARG:HH12	1.79	0.47
1:w:2374:C:H6	1:w:2374:C:O5'	1.97	0.47
1:w:2507:C:H2'	1:w:2508:G:O4'	2.15	0.47
1:w:2673:G:N2	1:w:2674:G:H1'	2.30	0.47
1:w:2714:G:C6	1:w:2715:C:C4	3.02	0.47
1:w:2819:G:OP1	14:L:5:LYS:NZ	2.34	0.47
1:w:2846:G:C2	1:w:2847:U:C2	3.03	0.47
1:w:2870:C:H2'	1:w:2871:C:O5'	2.14	0.47
1:w:2876:G:OP1	16:N:1:MET:C	2.57	0.47
1:w:2899:G:C2	1:w:2900:A:C4	3.03	0.47
2:x:45:A:N3	2:x:45:A:C2'	2.74	0.47
2:x:72:G:N2	2:x:105:G:C6	2.83	0.47
2:x:77:U:C2	2:x:78:A:C8	3.02	0.47
3:A:37:LYS:HG3	3:A:38:PHE:H	1.80	0.47
4:B:77:ALA:O	4:B:117:VAL:CG2	2.60	0.47
4:B:177:LEU:O	4:B:179:SER:N	2.47	0.47
6:D:108:ALA:O	6:D:112:ARG:HG2	2.14	0.47
7:E:8:LYS:C	7:E:10:LYS:H	2.23	0.47
7:E:71:THR:HB	7:E:88:ILE:HD12	1.96	0.47
10:H:78:VAL:O	10:H:79:ASN:C	2.56	0.47
11:I:74:GLY:O	11:I:75:SER:CB	2.62	0.47
13:K:64:ILE:HG23	13:K:65:PHE:N	2.29	0.47
14:L:44:LEU:O	14:L:45:ARG:C	2.57	0.47
14:L:63:ARG:HD3	14:L:67:LEU:HD21	1.96	0.47
15:M:106:ARG:HD2	15:M:110:LEU:O	2.14	0.47
17:O:93:LYS:CD	17:O:93:LYS:H	2.28	0.47
17:O:97:ASP:C	17:O:99:ALA:N	2.70	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:92:THR:OG1	18:P:93:GLU:N	2.46	0.47
19:Q:62:HIS:CD2	19:Q:62:HIS:N	2.83	0.47
20:R:12:VAL:HG23	20:R:13:LEU:HD23	1.96	0.47
22:T:9:TYR:CE2	22:T:61:LEU:HD11	2.50	0.47
22:T:33:LEU:HD12	22:T:34:ASN:N	2.28	0.47
22:T:99:TYR:CE2	22:T:125:LEU:HB2	2.49	0.47
22:T:135:GLU:N	22:T:135:GLU:OE2	2.47	0.47
24:V:21:ARG:CG	24:V:22:GLY:N	2.77	0.47
24:V:66:HIS:CG	24:V:69:LYS:HE3	2.49	0.47
24:V:88:LYS:HG3	24:V:89:GLU:OE2	2.15	0.47
26:X:30:ARG:O	26:X:30:ARG:HD3	2.14	0.47
29:a:42:ARG:HG2	29:a:43:GLN:H	1.79	0.47
30:b:11:CYS:HB2	30:b:13:LYS:HZ3	1.79	0.47
31:y:17:U:C1’	31:y:1079:G:N2	2.75	0.47
31:y:31:G:H8	31:y:31:G:O5’	1.98	0.47
31:y:159:G:C2	31:y:161:A:OP2	2.68	0.47
31:y:275:G:N1	31:y:276:G:C6	2.83	0.47
31:y:279:A:C8	50:r:95:TYR:HE1	2.33	0.47
31:y:298:A:H2’	31:y:299:G:O4’	2.14	0.47
31:y:304:U:N3	31:y:305:G:N7	2.63	0.47
31:y:319:G:N2	31:y:320:C:C2	2.83	0.47
31:y:375:U:O2’	49:q:6:LEU:HD21	2.15	0.47
31:y:377:G:N1	31:y:378:G:C5	2.82	0.47
31:y:392:G:C6	31:y:393:A:C4	3.02	0.47
31:y:449:C:H2’	31:y:450:G:O4’	2.14	0.47
31:y:505:G:O2’	31:y:506:G:H5”	2.15	0.47
31:y:584:G:C4	31:y:585:G:C8	3.02	0.47
31:y:625:G:O4’	49:q:16:HIS:CD2	2.68	0.47
31:y:659:U:O5’	31:y:659:U:C6	2.47	0.47
31:y:695:A:OP1	44:l:53:SER:HB3	2.13	0.47
31:y:900:A:H2’	31:y:901:A:C8	2.50	0.47
31:y:943:U:O5’	31:y:943:U:C6	2.54	0.47
31:y:990:C:C2	31:y:1216:G:N2	2.82	0.47
31:y:1009:G:O2’	31:y:1010:G:H5’	2.15	0.47
31:y:1092:A:C1’	31:y:1183:A:N6	2.78	0.47
31:y:1127:G:C5’	31:y:1280:A:H2	2.18	0.47
31:y:1250:A:C5	31:y:1287:A:N6	2.82	0.47
31:y:1270:C:H2’	31:y:1271:G:O4’	2.15	0.47
31:y:1341:U:O5’	31:y:1341:U:C6	2.67	0.47
31:y:1393:U:H5”	31:y:1502:A:OP1	2.14	0.47
31:y:1394:A:C5	31:y:1501:C:H4’	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1405:G:C5	31:y:1406:U:C5	3.03	0.47
31:y:1430:C:C2	31:y:1471:G:N2	2.83	0.47
31:y:1512:U:H2'	31:y:1513:A:C8	2.48	0.47
33:2:9:A:H62	33:2:23:A:N6	2.08	0.47
33:2:36:A:H8	33:2:36:A:OP2	1.97	0.47
35:c:100:GLY:HA3	35:c:104:ASN:HB3	1.96	0.47
36:d:39:ILE:C	36:d:41:GLY:N	2.72	0.47
39:g:18:GLN:O	39:g:22:GLU:HG2	2.14	0.47
39:g:79:LEU:C	39:g:81:ILE:N	2.71	0.47
40:h:85:TYR:N	40:h:85:TYR:HD2	2.13	0.47
41:i:19:VAL:O	41:i:20:TYR:HB2	2.15	0.47
45:m:59:LEU:O	45:m:60:THR:C	2.58	0.47
46:n:78:ILE:HG22	46:n:93:ARG:HH22	1.78	0.47
46:n:116:THR:HG22	46:n:117:VAL:N	2.30	0.47
48:p:67:LEU:O	48:p:70:LEU:N	2.48	0.47
49:q:49:LEU:O	49:q:51:VAL:HG23	2.14	0.47
50:r:22:LEU:HG	50:r:23:VAL:N	2.29	0.47
50:r:56:VAL:HG23	50:r:81:ARG:HH12	1.80	0.47
50:r:85:VAL:O	50:r:88:TYR:HB3	2.15	0.47
51:s:44:LEU:HD21	51:s:80:PRO:CD	2.45	0.47
52:t:60:VAL:C	52:t:62:ILE:N	2.70	0.47
52:t:60:VAL:HG21	52:t:74:PHE:HB3	1.96	0.47
1:w:41:C:HO3'	1:w:43:G:P	2.30	0.47
1:w:54:G:C4'	28:Z:35:ARG:HH12	2.28	0.47
1:w:192:C:H2'	1:w:193:U:C6	2.48	0.47
1:w:294:A:C2'	1:w:295:G:C8	2.97	0.47
1:w:574:C:H2'	1:w:574:C:O2	2.14	0.47
1:w:588:U:C2'	1:w:589:C:H5'	2.45	0.47
1:w:669:G:C2	1:w:801:G:O6	2.67	0.47
1:w:671:C:C5'	12:J:41:ARG:NH1	2.77	0.47
1:w:684:G:OP1	28:Z:21:ARG:CZ	2.63	0.47
1:w:722:A:H2'	1:w:723:G:C8	2.48	0.47
1:w:826:U:C4	1:w:828:U:H1'	2.49	0.47
1:w:958:U:H5'	13:K:41:TRP:CZ2	2.49	0.47
1:w:1122:G:H2'	1:w:1123:C:H5'	1.97	0.47
1:w:1150:C:N3	1:w:1151:G:N7	2.63	0.47
1:w:1266:G:OP2	19:Q:15:ARG:NH2	2.47	0.47
1:w:1439:A:H62	1:w:1552:G:N2	2.13	0.47
1:w:1506:C:HO3'	1:w:1508:A:P	2.33	0.47
1:w:1532:C:C4	1:w:1533:C:C4	3.03	0.47
1:w:1537:C:C5	1:w:1538:G:O2'	2.64	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1546(B):C:C3'	1:w:1547:C:P	3.00	0.47
1:w:1605:C:O2'	1:w:1610:A:N7	2.44	0.47
1:w:1794:U:C2	1:w:1795:C:C5	3.03	0.47
1:w:1914:C:H2'	1:w:1915:U:C1'	2.44	0.47
1:w:2097:C:H2'	1:w:2098:U:C6	2.50	0.47
1:w:2241:A:H2'	1:w:2242:G:H8	1.79	0.47
1:w:2419:U:H2'	1:w:2420:C:C6	2.50	0.47
1:w:2421:G:H5"	1:w:2422:A:OP2	2.15	0.47
1:w:2578:G:H2'	1:w:2579:C:O5'	2.14	0.47
1:w:2588:G:O6	1:w:2607:G:C6	2.68	0.47
1:w:2598:A:OP1	4:B:234:GLY:HA2	2.15	0.47
1:w:2642:G:C4	1:w:2643:G:C8	3.02	0.47
1:w:2750:A:H8	1:w:2750:A:OP1	1.98	0.47
1:w:2799:A:OP1	1:w:2799:A:H8	1.98	0.47
2:x:75:G:O2'	22:T:27:VAL:CG2	2.63	0.47
4:B:119:ALA:HB1	4:B:190:TYR:OH	2.14	0.47
5:C:156:MET:CE	5:C:157:ALA:H	2.28	0.47
6:D:15:LEU:HD23	6:D:114:ARG:NH1	2.30	0.47
7:E:8:LYS:O	7:E:12:TYR:HD2	1.98	0.47
8:F:20:ALA:HB3	8:F:23:ARG:O	2.15	0.47
8:F:153:LYS:CD	8:F:163:TYR:HA	2.44	0.47
10:H:94:ILE:HG13	10:H:95:TYR:N	2.30	0.47
10:H:95:TYR:CD1	10:H:95:TYR:N	2.83	0.47
11:I:104:ARG:HH11	11:I:104:ARG:CG	2.27	0.47
12:J:46:LYS:CB	12:J:51:PHE:HZ	2.28	0.47
12:J:84:ASN:HA	12:J:116:GLY:HA3	1.97	0.47
16:N:29:ARG:HG2	16:N:86:ILE:HB	1.95	0.47
16:N:115:ARG:O	16:N:116:ALA:CB	2.63	0.47
17:O:94:ASN:CG	17:O:95:LEU:N	2.72	0.47
18:P:30:GLY:CA	18:P:65:GLY:HA2	2.44	0.47
18:P:89:GLN:O	18:P:90:PRO:C	2.58	0.47
25:W:59:ARG:O	25:W:59:ARG:HG2	2.15	0.47
31:y:8:A:O2'	31:y:9:G:C4'	2.62	0.47
31:y:60:A:C2	31:y:107:G:C2	2.99	0.47
31:y:227:G:N2	49:q:62:VAL:CA	2.77	0.47
31:y:262:A:H5'	53:u:74:LYS:CD	2.35	0.47
31:y:297:G:N2	31:y:299:G:H5"	2.30	0.47
31:y:325:A:OP2	53:u:70:SER:HB2	2.14	0.47
31:y:435:C:H2'	31:y:436:C:C6	2.50	0.47
31:y:565:U:H6	31:y:566:G:H2'	1.80	0.47
31:y:741:G:C2	31:y:742:G:C8	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:750:G:N2	31:y:751:U:C6	2.83	0.47
31:y:790:A:N3	31:y:791:G:N7	2.62	0.47
31:y:813:U:N3	31:y:814:A:N7	2.63	0.47
31:y:827:U:C4'	41:i:15:ASN:ND2	2.78	0.47
31:y:908:A:O2'	31:y:909:A:H5'	2.14	0.47
31:y:928:G:H2'	31:y:929:G:O4'	2.15	0.47
31:y:947:G:H4'	31:y:1332:A:C2	2.50	0.47
31:y:960:U:O2'	31:y:961:U:OP2	2.28	0.47
31:y:992:U:C2'	31:y:993:G:OP2	2.63	0.47
31:y:1114:C:H2'	31:y:1115:C:C6	2.44	0.47
31:y:1298:C:O5'	40:h:114:ARG:NH2	2.42	0.47
31:y:1443:G:O4'	31:y:1446:A:H5'	2.15	0.47
32:z:18:G:C6	32:z:57:A:N6	2.83	0.47
32:z:24:U:C4	32:z:25:C:C5	3.02	0.47
35:c:204:ASN:N	35:c:204:ASN:ND2	2.63	0.47
36:d:78:GLY:O	36:d:79:ARG:HG3	2.15	0.47
36:d:155:GLY:O	36:d:196:LEU:HD11	2.15	0.47
37:e:22:LYS:CB	37:e:26:CYS:HB2	2.44	0.47
37:e:138:TYR:CG	37:e:139:ARG:N	2.83	0.47
42:j:13:ALA:HA	42:j:67:GLY:HA3	1.97	0.47
42:j:81:ILE:C	42:j:83:ARG:N	2.73	0.47
42:j:83:ARG:HA	42:j:86:VAL:HG22	1.96	0.47
44:l:52:GLY:N	44:l:55:LYS:HG3	2.30	0.47
47:o:36:PHE:CD2	47:o:36:PHE:N	2.83	0.47
52:t:6:LYS:HE2	52:t:7:LYS:H	1.78	0.47
1:w:63:U:O2'	1:w:64:A:N7	2.46	0.47
1:w:116:C:H1'	1:w:127:A:H1'	1.97	0.47
1:w:240:G:H5'	1:w:622:G:O2'	2.15	0.47
1:w:394:A:C2'	1:w:395:U:H4'	2.44	0.47
1:w:404:C:H5"	1:w:405:U:H5'	1.97	0.47
1:w:557:U:O3'	10:H:135:LEU:HD11	2.15	0.47
1:w:566:U:O2'	1:w:809:G:OP2	2.33	0.47
1:w:1365:A:O4'	24:V:16:ASN:ND2	2.44	0.47
1:w:1558:A:OP1	1:w:1558:A:H4'	2.15	0.47
1:w:1650:G:C2	1:w:2008:C:N3	2.83	0.47
1:w:1802:A:H8	1:w:1802:A:O5'	1.98	0.47
1:w:2574:G:C2	1:w:2575:C:C2	3.03	0.47
1:w:2618:G:H2'	1:w:2619:C:H5	1.73	0.47
1:w:2812:G:C2	1:w:2813:A:C5	3.03	0.47
1:w:2822:G:H2'	1:w:2823:A:H5"	1.97	0.47
1:w:2832:U:H1'	1:w:2883:A:H61	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:60:ARG:NH2	4:B:86:PRO:CB	2.77	0.47
4:B:247:ALA:CB	4:B:253:GLN:HA	2.44	0.47
5:C:37:ARG:O	5:C:45:THR:HA	2.15	0.47
5:C:109:LYS:HZ1	14:L:4:LEU:HD21	1.80	0.47
5:C:175:VAL:C	5:C:176:ILE:HD12	2.40	0.47
6:D:117:LYS:O	6:D:118:LEU:HB2	2.14	0.47
7:E:67:LYS:O	7:E:67:LYS:HG3	2.15	0.47
8:F:151:ILE:O	8:F:152:ARG:HB2	2.15	0.47
10:H:49:LEU:O	10:H:52:LYS:HB2	2.14	0.47
10:H:101:TYR:N	10:H:102:PRO:HD2	2.30	0.47
11:I:85:VAL:O	11:I:86:ILE:HG13	2.14	0.47
11:I:117:LEU:O	11:I:119:PRO:HD3	2.15	0.47
12:J:126:VAL:HA	12:J:145:PRO:CB	2.45	0.47
13:K:55:VAL:HG11	22:T:182:LYS:O	2.15	0.47
13:K:72:LYS:C	13:K:72:LYS:CD	2.85	0.47
13:K:83:MET:HG2	13:K:84:GLY:N	2.30	0.47
13:K:123:HIS:CE1	30:b:8:LYS:NZ	2.76	0.47
17:O:44:ASN:O	17:O:48:ALA:CB	2.61	0.47
20:R:12:VAL:HG13	20:R:17:ALA:HB1	1.96	0.47
23:U:62:LEU:CD2	23:U:63:VAL:HG23	2.38	0.47
24:V:89:GLU:HG2	24:V:90:ILE:HG13	1.97	0.47
31:y:43:C:H2'	31:y:44:G:O5'	2.15	0.47
31:y:126:G:N2	31:y:235:C:N3	2.62	0.47
31:y:220:G:H2'	31:y:220:G:N3	2.30	0.47
31:y:226:G:H2'	31:y:227:G:O5'	2.14	0.47
31:y:373:A:O2'	31:y:451:A:N7	2.48	0.47
31:y:397:A:N6	31:y:547:A:C2	2.83	0.47
31:y:520:A:OP1	45:m:51:LEU:HB2	2.14	0.47
31:y:695:A:C2	31:y:787:A:H1'	2.49	0.47
31:y:778:G:C4'	44:l:119:CYS:SG	3.03	0.47
31:y:849:C:C2'	31:y:850:U:H5'	2.45	0.47
31:y:889:A:N6	31:y:907:A:H3'	2.30	0.47
31:y:1178:G:H8	31:y:1178:G:P	2.37	0.47
31:y:1274:G:H2'	31:y:1275:A:C8	2.50	0.47
31:y:1314:C:N4	52:t:4:SER:HB2	2.17	0.47
31:y:1320:C:H2'	31:y:1321:C:O4'	2.14	0.47
31:y:1498:U:C4	34:3:14:U:H4'	2.49	0.47
35:c:25:ASN:C	35:c:27:LYS:H	2.22	0.47
36:d:14:ILE:HB	47:o:57:ARG:HH21	1.79	0.47
36:d:21:ARG:HD2	36:d:58:GLU:OE1	2.15	0.47
37:e:62:GLN:O	37:e:63:LYS:C	2.58	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:191:ARG:C	37:e:193:ASP:N	2.71	0.47
44:l:14:VAL:O	44:l:15:ALA:CB	2.62	0.47
48:p:81:LEU:HA	48:p:84:LYS:HZ1	1.79	0.47
49:q:36:ILE:HD12	49:q:55:ARG:CB	2.41	0.47
50:r:91:ARG:HH11	50:r:91:ARG:HA	1.80	0.47
52:t:44:MET:HG2	52:t:62:ILE:HD13	1.96	0.47
1:w:355:G:C5	1:w:356:G:N7	2.83	0.47
1:w:436:C:H3'	1:w:438:G:P	2.55	0.47
1:w:674:G:C6	1:w:804:A:N1	2.83	0.47
1:w:689:A:H2'	1:w:690:G:H8	1.80	0.47
1:w:826:U:H3'	1:w:828:U:C5	2.50	0.47
1:w:953:A:C2'	1:w:954:G:H8	2.28	0.47
1:w:1000:A:C5	1:w:1155:A:C6	3.03	0.47
1:w:1296:G:H2'	1:w:1297:C:H6	1.80	0.47
1:w:1568:G:H4'	4:B:59:LYS:CB	2.35	0.47
1:w:1685:C:H2'	1:w:1686:C:O4'	2.14	0.47
1:w:2129:C:H2'	1:w:2130:U:O4'	2.15	0.47
1:w:2271:G:H5"	23:U:20:ARG:HE	1.78	0.47
1:w:2489:G:O6	1:w:2490:G:N1	2.48	0.47
1:w:2619:C:C6	1:w:2619:C:O5'	2.64	0.47
1:w:2652:C:N4	1:w:2653:U:O4	2.48	0.47
1:w:2730:C:H4'	5:C:168:MET:O	2.15	0.47
4:B:62:TYR:CE2	4:B:64:ILE:HD12	2.50	0.47
4:B:83:GLU:HB2	4:B:92:ILE:CD1	2.41	0.47
5:C:51:PHE:HB3	5:C:76:ARG:CZ	2.45	0.47
6:D:29:TRP:CD1	6:D:33:ARG:HH11	2.33	0.47
6:D:48:THR:H	6:D:52:VAL:HG21	1.79	0.47
6:D:186:ARG:O	6:D:187:LEU:HG	2.15	0.47
9:G:122:GLU:OE1	9:G:126:TYR:HB2	2.15	0.47
10:H:27:TYR:O	10:H:28:VAL:C	2.57	0.47
14:L:29:LEU:CG	14:L:75:LEU:HD22	2.44	0.47
14:L:103:ARG:O	14:L:104:ARG:O	2.33	0.47
18:P:22:VAL:HG22	18:P:22:VAL:O	2.15	0.47
19:Q:14:PRO:O	19:Q:17:VAL:HG22	2.15	0.47
23:U:50:ASN:HB2	23:U:81:VAL:HG11	1.97	0.47
29:a:30:ARG:HD3	29:a:31:HIS:CD2	2.50	0.47
31:y:37:U:H2'	31:y:38:G:O4'	2.14	0.47
31:y:64:G:N2	31:y:67:C:N4	2.63	0.47
31:y:96:G:H2'	31:y:97:U:O4'	2.14	0.47
31:y:195:A:C6	31:y:196:A:N1	2.83	0.47
31:y:317:G:H2'	31:y:318:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:505:G:C5	31:y:506:G:N7	2.83	0.47
31:y:538:G:OP2	45:m:114:LYS:HD2	2.14	0.47
31:y:604:G:C6	31:y:635:G:C6	3.03	0.47
31:y:612:C:N4	31:y:629:G:N2	2.63	0.47
31:y:655:A:C6	31:y:751:U:O4	2.68	0.47
31:y:723:U:H3'	31:y:723:U:H6	1.80	0.47
31:y:780:A:N1	31:y:800:G:H2'	2.30	0.47
31:y:103(A):A:H3'	31:y:103(B):G:C8	2.50	0.47
31:y:1096:C:O2	31:y:1170:A:O2'	2.25	0.47
31:y:1245:A:C5	31:y:1246:C:C4	3.03	0.47
31:y:1312:G:H2'	31:y:1313:U:O4'	2.15	0.47
31:y:1531:A:C6	34:3:6:G:OP2	2.68	0.47
31:y:1538:C:H2'	31:y:1539:C:C6	2.50	0.47
33:2:65:G:O2'	33:2:66:A:H5'	2.15	0.47
35:c:18:GLY:HA2	35:c:203:GLY:O	2.15	0.47
35:c:105:PHE:HE1	35:c:152:PHE:CZ	2.33	0.47
35:c:134:GLU:CA	35:c:137:ARG:HD3	2.45	0.47
36:d:55:VAL:HG12	36:d:68:VAL:CG1	2.45	0.47
36:d:92:ALA:O	36:d:98:ASN:HA	2.14	0.47
36:d:118:GLN:HE21	36:d:118:GLN:HB3	1.54	0.47
38:f:118:ILE:HD13	38:f:118:ILE:H	1.80	0.47
1:w:18:C:H5"	17:O:25:TRP:O	2.15	0.46
1:w:82:G:O5'	1:w:82:G:H8	1.98	0.46
1:w:366(B):C:H6	1:w:366(B):C:O5'	1.98	0.46
1:w:457:A:H61	1:w:470:A:H3'	1.79	0.46
1:w:491:G:H1	1:w:1321:A:P	2.38	0.46
1:w:751:A:C6	1:w:789:A:N6	2.83	0.46
1:w:811:U:C5	1:w:1251:C:C2	3.03	0.46
1:w:818:G:H1	1:w:1187:G:H3'	1.79	0.46
1:w:848:G:N3	1:w:848:G:H2'	2.30	0.46
1:w:858:U:H1'	1:w:2269:A:H4'	1.98	0.46
1:w:1142(B):A:C5	1:w:1144:G:C8	3.04	0.46
1:w:1225:G:H4'	18:P:86:GLY:C	2.40	0.46
1:w:1383:C:H2'	1:w:1384:A:H5"	1.98	0.46
1:w:1583:A:HO3'	1:w:1585:C:P	2.26	0.46
1:w:1652:A:OP2	14:L:10:LEU:HG	2.13	0.46
1:w:1741:C:O5'	1:w:1741:C:H6	1.97	0.46
1:w:1758:G:H4'	1:w:1759:A:OP1	2.16	0.46
1:w:1817:G:H5'	4:B:88:ARG:HH21	1.80	0.46
1:w:1825:A:C2	1:w:1826:G:N7	2.84	0.46
1:w:1827:C:H5'	1:w:1971:A:O2'	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2081:C:O5'	1:w:2081:C:H6	1.99	0.46
1:w:2085:C:C4	1:w:2086:U:C4	3.03	0.46
1:w:2393:A:O2'	1:w:2394:C:O4'	2.33	0.46
1:w:2436:G:C5	1:w:2437:U:C4	3.04	0.46
1:w:2505:G:H2'	1:w:2576:G:N1	2.30	0.46
1:w:2825:G:C8	1:w:2826:A:N7	2.83	0.46
1:w:2870:C:H5"	14:L:65:LEU:HD22	1.97	0.46
2:x:8:U:O2	2:x:8:U:C2'	2.60	0.46
2:x:73:A:C2'	2:x:74:U:C5'	2.84	0.46
7:E:141:PHE:CE2	7:E:143:GLU:HB3	2.50	0.46
11:I:93:PRO:HG3	11:I:114:ILE:HG23	1.97	0.46
15:M:77:ALA:HB1	15:M:82:ILE:O	2.16	0.46
17:O:79:PHE:C	17:O:79:PHE:HD2	2.20	0.46
17:O:89:GLU:O	17:O:90:VAL:HB	2.15	0.46
23:U:15:ASP:H	23:U:20:ARG:NH1	2.13	0.46
29:a:7:HIS:CE1	29:a:9:GLY:HA3	2.50	0.46
31:y:90:C:C2'	31:y:91:C:C6	2.91	0.46
31:y:114:U:C3'	31:y:115:G:H5"	2.45	0.46
31:y:232:G:H2'	31:y:233:C:H5'	1.97	0.46
31:y:234:C:C1'	50:r:64:PRO:HG2	2.44	0.46
31:y:251:G:N1	31:y:266:G:O6	2.48	0.46
31:y:443:C:C2'	31:y:444:C:H5'	2.45	0.46
31:y:538:G:O5'	45:m:114:LYS:HG3	2.13	0.46
31:y:582:U:C4	31:y:583:A:N7	2.83	0.46
31:y:584:G:H8	31:y:584:G:O5'	1.98	0.46
31:y:624:C:H4'	49:q:10:GLY:HA2	1.96	0.46
31:y:749:C:H2'	31:y:750:G:H8	1.78	0.46
31:y:827:U:O5'	31:y:827:U:H6	1.98	0.46
31:y:969:A:H2'	31:y:970:C:C6	2.51	0.46
31:y:103(A):A:H8	31:y:103(A):A:O5'	1.98	0.46
31:y:1111:A:H61	36:d:176:HIS:CG	2.33	0.46
31:y:1136:U:OP2	31:y:1137:C:H5	1.97	0.46
31:y:1265:G:N7	31:y:1266:G:C5	2.83	0.46
31:y:1343:G:O2'	42:j:122:ALA:N	2.48	0.46
31:y:1347:G:H2'	42:j:107:ARG:O	2.14	0.46
31:y:1429:C:H2'	31:y:1430:C:C6	2.50	0.46
31:y:1468:A:C2'	31:y:1469:G:C8	2.95	0.46
31:y:1474:G:C5	31:y:1475:G:N7	2.83	0.46
31:y:1505:G:H5"	31:y:1506:U:H5'	1.97	0.46
32:z:18:G:C4	32:z:57:A:N1	2.83	0.46
33:2:26:G:C2'	33:2:27:C:H5'	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:c:236:TYR:O	35:c:237:ALA:HB3	2.15	0.46
36:d:23:TYR:H	43:k:93:GLY:CA	2.28	0.46
36:d:26:LYS:C	36:d:28:GLN:H	2.23	0.46
36:d:141:VAL:HG21	36:d:202:ILE:CD1	2.44	0.46
37:e:128:VAL:O	37:e:128:VAL:HG13	2.15	0.46
37:e:191:ARG:HH21	37:e:195:ALA:CB	2.28	0.46
39:g:6:VAL:CG1	39:g:63:TYR:HD2	2.28	0.46
40:h:12:LEU:CG	40:h:13:GLN:N	2.48	0.46
40:h:136:LYS:O	40:h:140:ASP:HB2	2.15	0.46
46:n:56:LEU:C	46:n:59:TYR:HB3	2.39	0.46
47:o:18:VAL:C	47:o:20:ALA:H	2.22	0.46
50:r:64:PRO:HA	50:r:70:ARG:HB3	1.97	0.46
52:t:22:LEU:HD13	52:t:47:HIS:HE1	1.81	0.46
52:t:34:TRP:HB2	52:t:35:SER:H	1.54	0.46
52:t:62:ILE:HG12	52:t:62:ILE:O	2.14	0.46
53:u:77:ALA:O	53:u:81:LYS:N	2.48	0.46
1:w:335:C:H2'	1:w:336:C:C5	2.43	0.46
1:w:391:G:H1'	1:w:411:G:H1'	1.96	0.46
1:w:470:A:H2'	1:w:471:A:C8	2.50	0.46
1:w:597:U:H2'	1:w:598:G:N7	2.30	0.46
1:w:760:G:C5	1:w:761:A:C5	3.04	0.46
1:w:799:G:O5'	1:w:799:G:C8	2.64	0.46
1:w:910:A:O4'	13:K:16:ARG:NH1	2.49	0.46
1:w:1282:U:H2'	1:w:1283:G:C4'	2.45	0.46
1:w:1311:G:N2	1:w:1603:A:H62	2.09	0.46
1:w:1831:G:N1	1:w:1975:G:C6	2.83	0.46
1:w:2093:G:O2'	1:w:2094:G:H5'	2.16	0.46
1:w:2577:A:H3'	1:w:2578:G:H5'	1.98	0.46
1:w:2737:G:C2	1:w:2738:A:C8	3.02	0.46
1:w:2776:A:N6	1:w:2782:G:C4	2.83	0.46
1:w:2788:C:O4'	1:w:2810:A:H1'	2.16	0.46
1:w:2795:G:C2	1:w:2802:G:C2	3.03	0.46
1:w:2824:C:H2'	1:w:2825:G:O4'	2.14	0.46
1:w:2867:G:H2'	1:w:2868:A:OP2	2.15	0.46
2:x:3:C:C2	2:x:118:G:N1	2.83	0.46
4:B:70:TRP:N	4:B:70:TRP:CE3	2.83	0.46
5:C:134:ILE:HG22	5:C:137:HIS:CD2	2.50	0.46
5:C:154:LYS:CD	5:C:155:LYS:N	2.79	0.46
6:D:22:GLU:O	6:D:107:MET:SD	2.73	0.46
10:H:131:PRO:O	10:H:132:LYS:HB3	2.15	0.46
14:L:32:GLY:O	14:L:115:GLU:HA	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:53:SER:HG	15:M:69:VAL:HG21	1.77	0.46
16:N:23:ARG:HD3	16:N:120:ARG:HD3	1.97	0.46
18:P:64:HIS:HA	18:P:96:ILE:CG2	2.45	0.46
20:R:17:ALA:C	20:R:19:ALA:H	2.24	0.46
20:R:21:PHE:HD2	20:R:26:TYR:HE1	1.63	0.46
22:T:29:TYR:OH	22:T:73:GLN:NE2	2.46	0.46
22:T:71:VAL:HG11	22:T:74:VAL:HG22	1.96	0.46
24:V:89:GLU:HG2	24:V:90:ILE:N	2.31	0.46
31:y:59:A:H2'	31:y:59:A:N3	2.31	0.46
31:y:127:G:C2	31:y:128:G:C8	3.04	0.46
31:y:600:C:H2'	31:y:601:C:O4'	2.15	0.46
31:y:605:U:C4	31:y:606:G:C5	3.03	0.46
31:y:693:G:O5'	31:y:693:G:H8	1.98	0.46
31:y:857:C:C4	31:y:858:G:C5	3.02	0.46
31:y:978:A:H2	52:t:37:ARG:HH22	1.63	0.46
31:y:1084:G:H3'	31:y:1085:U:C5'	2.44	0.46
31:y:1188:A:C4'	47:o:58:LYS:HE3	2.45	0.46
31:y:1312:G:N2	31:y:1326:C:C2	2.83	0.46
31:y:1346:A:OP1	42:j:120:ARG:NH2	2.45	0.46
31:y:1441:G:N2	31:y:1459:C:C5	2.83	0.46
33:2:18:G:C4	33:2:57:G:N2	2.83	0.46
35:c:32:ILE:CB	35:c:41:ILE:O	2.49	0.46
36:d:146:ALA:O	36:d:147:LYS:HG3	2.15	0.46
36:d:148:GLY:HA2	36:d:171:GLY:O	2.14	0.46
37:e:64:LEU:HD13	37:e:199:ASN:O	2.15	0.46
37:e:113:SER:C	37:e:115:ARG:H	2.23	0.46
40:h:68:ASN:HD22	40:h:68:ASN:HA	1.60	0.46
40:h:118:VAL:O	40:h:119:ARG:C	2.57	0.46
41:i:5:PRO:HA	41:i:8:ASP:OD2	2.15	0.46
42:j:3:GLN:HA	42:j:20:ARG:NE	2.30	0.46
51:s:84:LYS:HA	51:s:84:LYS:CE	2.43	0.46
52:t:37:ARG:O	52:t:38:SER:HB2	2.16	0.46
53:u:23:ARG:HA	53:u:26:ASN:HD22	1.80	0.46
53:u:85:MET:O	53:u:89:ARG:HG2	2.15	0.46
1:w:9:U:H3	1:w:2629:A:H62	1.63	0.46
1:w:149:A:H2'	1:w:150:C:H5'	1.96	0.46
1:w:535:C:H2'	1:w:536:A:H8	1.80	0.46
1:w:579:G:H1'	1:w:2017:U:N3	2.29	0.46
1:w:1279:G:N3	1:w:1280:G:H1'	2.30	0.46
1:w:1282:U:C4	1:w:1283:G:N3	2.83	0.46
1:w:1345:C:H3'	1:w:1384:A:N6	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1365:A:C4'	24:V:16:ASN:HD22	2.27	0.46
1:w:1477:A:H61	1:w:1516:U:H3	1.62	0.46
1:w:1614:A:P	28:Z:3:ARG:HE	2.38	0.46
1:w:1756:G:OP2	1:w:1756:G:C8	2.68	0.46
1:w:1952:A:N3	1:w:2560:C:H1'	2.31	0.46
1:w:2066:C:C2	1:w:2445:G:N2	2.82	0.46
1:w:2189:U:C3'	1:w:2190:G:C5'	2.85	0.46
1:w:2266:A:H4'	1:w:2267:A:O5'	2.15	0.46
1:w:2373:G:H2'	1:w:2374:C:C5	2.49	0.46
1:w:2482:G:H2'	1:w:2483:C:O4'	2.15	0.46
1:w:2560:C:H2'	1:w:2561:A:C8	2.50	0.46
1:w:2635:C:H2'	1:w:2636:U:H6	1.78	0.46
1:w:2661:G:O2'	1:w:2662:A:C5'	2.54	0.46
1:w:2765:A:C2'	1:w:2766:G:OP1	2.64	0.46
1:w:2781:A:O5'	1:w:2781:A:C8	2.68	0.46
1:w:2827:C:C4	1:w:2828:C:C5	3.04	0.46
1:w:2840:C:H5"	14:L:53:HIS:NE2	2.31	0.46
2:x:7:G:N2	15:M:47:THR:OG1	2.42	0.46
2:x:47:C:H5"	15:M:93:LYS:NZ	2.30	0.46
2:x:76:G:N7	2:x:100:G:O6	2.48	0.46
3:A:54:ARG:NH2	33:2:53:G:N3	2.58	0.46
4:B:53:PHE:HA	4:B:218:ARG:CB	2.44	0.46
4:B:91:ARG:CB	4:B:198:ASN:HB2	2.45	0.46
6:D:39:ARG:O	6:D:40:ARG:C	2.58	0.46
7:E:126:ASP:HB3	7:E:130:ASN:HB2	1.97	0.46
9:G:38:LEU:HB2	9:G:39:ALA:H	1.46	0.46
11:I:77:ILE:HD13	11:I:78:ARG:N	2.30	0.46
11:I:101:PRO:CG	11:I:120:GLU:HB3	2.45	0.46
20:R:75:ASP:C	20:R:76:ARG:HD3	2.41	0.46
21:S:49:VAL:HG12	21:S:50:ARG:N	2.24	0.46
22:T:13:GLU:O	22:T:15:PRO:HD3	2.15	0.46
23:U:66:VAL:O	23:U:81:VAL:HG13	2.16	0.46
26:X:10:LYS:HB3	26:X:11:SER:H	1.49	0.46
29:a:6:THR:HG22	29:a:62:LEU:HD13	1.98	0.46
29:a:8:LYS:C	29:a:12:LYS:HD3	2.40	0.46
29:a:22:VAL:CG2	29:a:53:PRO:HB2	2.44	0.46
29:a:58:ILE:C	29:a:60:LEU:H	2.23	0.46
31:y:7:G:C8	31:y:298:A:H1'	2.50	0.46
31:y:22:G:OP2	31:y:561:U:C6	2.68	0.46
31:y:135:C:C2'	31:y:136:C:H5"	2.43	0.46
31:y:321:A:C4'	31:y:1435:G:HO2'	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:398:C:O5'	31:y:398:C:C6	2.68	0.46
31:y:408:A:HO2'	31:y:409:G:H5'	1.77	0.46
31:y:439:A:OP2	31:y:493:G:C2	2.67	0.46
31:y:515:G:H8	31:y:515:G:O5'	1.98	0.46
31:y:574:A:C2	31:y:883:C:C2	3.02	0.46
31:y:749:C:O2'	48:p:22:THR:HG22	2.15	0.46
31:y:877:C:H2'	31:y:878:G:H8	1.80	0.46
31:y:891:U:H2'	31:y:892:A:C8	2.50	0.46
31:y:1108:G:C2	31:y:1109:C:C6	3.03	0.46
31:y:1199:U:H1'	43:k:54:PHE:HB3	1.97	0.46
33:2:65:G:H2'	33:2:66:A:H5'	1.97	0.46
36:d:64:VAL:HB	36:d:99:VAL:HG12	1.94	0.46
36:d:120:VAL:O	36:d:123:GLN:OE1	2.34	0.46
37:e:9:CYS:N	37:e:22:LYS:HG3	2.28	0.46
39:g:6:VAL:CG2	39:g:65:VAL:HG22	2.46	0.46
43:k:22:LYS:O	43:k:26:ALA:N	2.43	0.46
43:k:71:LEU:O	43:k:72:VAL:HB	2.16	0.46
46:n:65:LYS:HB3	46:n:69:GLU:HB3	1.97	0.46
49:q:4:ILE:HD11	49:q:59:TRP:HD1	1.80	0.46
1:w:371:A:O2'	1:w:373:U:C6	2.62	0.46
1:w:440:G:H2'	1:w:441:U:O4'	2.15	0.46
1:w:479:A:N1	1:w:503:A:N1	2.63	0.46
1:w:562:U:C4	1:w:2036:C:C4'	2.99	0.46
1:w:585:G:H3'	1:w:1251:C:N4	2.31	0.46
1:w:674:G:H1'	6:D:69:ARG:NH2	2.31	0.46
1:w:872:A:H2'	1:w:873:G:H8	1.79	0.46
1:w:993:G:OP1	17:O:50:ARG:NH2	2.48	0.46
1:w:1428:C:N4	1:w:1569:A:H3'	2.30	0.46
1:w:1435:G:H2'	1:w:1436:G:C8	2.50	0.46
1:w:1621:U:O3'	1:w:1622:G:H8	1.99	0.46
1:w:1798:U:H5"	4:B:260:ARG:HB3	1.98	0.46
1:w:1925:C:O5'	1:w:1925:C:C6	2.61	0.46
1:w:1977:A:H8	1:w:1977:A:P	2.38	0.46
1:w:2163:C:H2'	1:w:2164:C:H5'	1.97	0.46
1:w:2255:G:H2'	1:w:2256:G:O4'	2.15	0.46
1:w:2420:C:OP2	29:a:32:LEU:O	2.34	0.46
1:w:2618:G:N3	1:w:2619:C:C5	2.84	0.46
1:w:2892:A:H2'	1:w:2893:G:O5'	2.15	0.46
2:x:44:G:N2	2:x:47:C:C2	2.84	0.46
5:C:16:ARG:O	5:C:19:ARG:CG	2.63	0.46
5:C:77:ILE:HG21	5:C:79:ARG:NH2	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:172:ALA:HB3	6:D:173:PRO:HD2	1.94	0.46
11:I:62:VAL:C	11:I:63:VAL:HG22	2.40	0.46
12:J:59:LEU:O	12:J:61:ARG:NE	2.49	0.46
16:N:31:SER:N	16:N:42:ILE:HB	2.24	0.46
17:O:43:GLY:O	17:O:47:TYR:HB3	2.16	0.46
17:O:80:ILE:O	17:O:81:HIS:C	2.59	0.46
18:P:29:PRO:HA	18:P:66:ARG:HB3	1.97	0.46
18:P:82:ARG:HH11	18:P:82:ARG:HG2	1.80	0.46
18:P:96:ILE:O	18:P:97:LYS:HE2	2.16	0.46
20:R:81:VAL:HG13	20:R:82:GLN:N	2.31	0.46
21:S:42:VAL:HB	21:S:61:ILE:HG22	1.97	0.46
24:V:13:ILE:HD13	24:V:66:HIS:CE1	2.50	0.46
26:X:52:HIS:CD2	26:X:53:LEU:HD22	2.51	0.46
31:y:191(G):G:H2'	31:y:192:U:C6	2.51	0.46
31:y:269:C:C2'	31:y:270:A:H5'	2.45	0.46
31:y:279:A:C4'	31:y:280:C:C5'	2.86	0.46
31:y:281:G:O3'	31:y:282:A:H8	1.99	0.46
31:y:303:A:C4	31:y:304:U:C6	3.04	0.46
31:y:370:C:C2	31:y:371:G:C8	3.03	0.46
31:y:719:C:O5'	31:y:720:C:H5	1.98	0.46
31:y:749:C:C6	31:y:749:C:O5'	2.69	0.46
31:y:769:G:C2'	31:y:770:C:H5"	2.45	0.46
31:y:861:G:H22	31:y:872:A:H8	1.64	0.46
31:y:964:A:H4'	31:y:1198:G:O3'	2.15	0.46
31:y:1066:C:H3'	31:y:1067:A:C8	2.51	0.46
31:y:1251:A:H2'	31:y:1252:A:C8	2.51	0.46
31:y:1263:C:O2'	31:y:1264:C:H5'	2.15	0.46
31:y:1347:G:N7	42:j:107:ARG:CB	2.78	0.46
31:y:1466:C:H2'	31:y:1467:G:H5'	1.98	0.46
32:z:59:A:C6	32:z:60:U:C4	3.03	0.46
33:2:14:A:C2'	33:2:15:G:H5'	2.46	0.46
33:2:28:C:O2'	33:2:29:A:H5'	2.15	0.46
35:c:22:LYS:C	35:c:24:TRP:N	2.71	0.46
35:c:102:LEU:HD13	35:c:176:GLU:CB	2.43	0.46
36:d:39:ILE:C	36:d:41:GLY:H	2.21	0.46
36:d:130:VAL:O	36:d:131:ARG:C	2.58	0.46
37:e:199:ASN:HB3	37:e:202:LEU:HD12	1.97	0.46
40:h:22:LEU:HD23	40:h:22:LEU:C	2.40	0.46
41:i:99:GLU:O	41:i:101:PRO:HD3	2.14	0.46
45:m:110:LYS:O	45:m:111:ASP:C	2.58	0.46
46:n:80:ARG:HB3	46:n:80:ARG:NH1	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:s:8:PRO:HB2	51:s:9:LYS:H	1.60	0.46
51:s:48:GLY:HA3	51:s:82:THR:O	2.15	0.46
1:w:40:C:H2'	1:w:41:C:C6	2.50	0.46
1:w:224:G:C2'	1:w:225:A:O4'	2.62	0.46
1:w:533:G:H8	1:w:533:G:H5"	1.80	0.46
1:w:670:A:P	12:J:44:GLY:HA2	2.55	0.46
1:w:684:G:C2	1:w:794:G:C2	3.03	0.46
1:w:823:G:C5	1:w:824:A:N7	2.84	0.46
1:w:1068:G:H21	1:w:1096:A:C5'	2.18	0.46
1:w:1138:G:H1'	10:H:129:MET:CA	2.46	0.46
1:w:1138:G:H4'	10:H:128:GLY:HA3	1.98	0.46
1:w:1394:U:O2	1:w:1395:A:N3	2.48	0.46
1:w:1398:C:H2'	1:w:1399:C:H6	1.81	0.46
1:w:1608:A:C8	1:w:1611:C:N4	2.84	0.46
1:w:1617:C:H5'	1:w:1617:C:H6	1.81	0.46
1:w:1728:G:C6	1:w:1731:G:N7	2.83	0.46
1:w:2041:U:C2'	1:w:2042:A:H8	2.28	0.46
1:w:2126:A:O2'	1:w:2127:G:C1'	2.62	0.46
1:w:2131:G:P	1:w:2133:G:H5'	2.56	0.46
1:w:2351:G:H22	1:w:2365:G:H2'	1.80	0.46
1:w:2454:G:N7	1:w:2455:G:N7	2.64	0.46
1:w:2458:G:N3	1:w:2490:G:C2	2.83	0.46
1:w:2459:A:H3'	1:w:2460:U:C5	2.50	0.46
1:w:2514:U:O2'	5:C:151:TYR:OH	2.11	0.46
1:w:2549:G:H2'	1:w:2550:G:O5'	2.14	0.46
1:w:2641:G:C6	1:w:2774:C:C4	3.04	0.46
1:w:2717:G:H2'	1:w:2718:G:H5"	1.97	0.46
1:w:2782:G:C8	1:w:2782:G:P	3.08	0.46
1:w:2840:C:H2'	1:w:2841:C:H5'	1.98	0.46
2:x:7:G:H5'	15:M:29:PHE:CD1	2.51	0.46
4:B:132:PRO:C	4:B:136:ILE:HG13	2.41	0.46
5:C:78:LEU:H	5:C:78:LEU:HD23	1.79	0.46
5:C:105:THR:HB	5:C:197:ILE:CD1	2.42	0.46
6:D:31:VAL:O	6:D:32:VAL:C	2.59	0.46
6:D:152:VAL:CG2	6:D:171:LEU:HD22	2.43	0.46
10:H:29:PRO:HA	10:H:64:ASP:HB3	1.96	0.46
10:H:63:PRO:O	10:H:65:TRP:N	2.49	0.46
10:H:69:VAL:O	10:H:69:VAL:HG13	2.15	0.46
10:H:132:LYS:HE3	10:H:132:LYS:H	1.81	0.46
11:I:62:VAL:HG12	11:I:63:VAL:N	2.30	0.46
11:I:71:ARG:HG2	11:I:72:PRO:CD	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:24:GLY:CA	12:J:31:ALA:HB2	2.45	0.46
13:K:1:MET:O	13:K:2:LEU:HB2	2.16	0.46
13:K:23:GLY:HA2	13:K:98:LYS:HG2	1.98	0.46
14:L:26:LYS:O	14:L:29:LEU:HB3	2.16	0.46
16:N:65:LYS:HD2	16:N:66:VAL:N	2.30	0.46
17:O:5:LYS:O	17:O:6:THR:C	2.59	0.46
18:P:10:LYS:HZ1	18:P:22:VAL:CA	2.23	0.46
20:R:29:TRP:HA	20:R:76:ARG:CG	2.45	0.46
20:R:93:GLU:HG3	20:R:94:GLY:N	2.31	0.46
22:T:8:TYR:CD1	22:T:8:TYR:N	2.82	0.46
24:V:73:LEU:O	24:V:75:GLU:N	2.48	0.46
29:a:9:GLY:O	29:a:12:LYS:HB2	2.15	0.46
30:b:16:VAL:HB	30:b:18:ARG:HH12	1.79	0.46
31:y:186(A):C:O4'	53:u:81:LYS:CG	2.62	0.46
31:y:186(C):C:O5'	31:y:186(C):C:H6	1.99	0.46
31:y:502:G:C2	31:y:503:C:H1'	2.51	0.46
31:y:711:G:O2'	31:y:712:A:H5'	2.15	0.46
31:y:750:G:C2	31:y:751:U:C6	3.04	0.46
31:y:1013:G:N3	31:y:1016:A:N1	2.63	0.46
31:y:1074:G:N3	31:y:1101:A:H2	2.09	0.46
31:y:1133:G:O2'	31:y:1134:G:H5'	2.16	0.46
31:y:1212:U:C2'	31:y:1213:A:O5'	2.63	0.46
31:y:1338:G:N2	31:y:1339:A:C2	2.84	0.46
31:y:1347:G:C2	31:y:1373:G:N3	2.84	0.46
31:y:1347:G:N7	42:j:107:ARG:HB3	2.30	0.46
33:2:36:A:H2'	33:2:37:A:C5'	2.36	0.46
35:c:36:ARG:O	35:c:37:ASN:CB	2.63	0.46
36:d:23:TYR:O	36:d:24:ALA:HB2	2.15	0.46
36:d:138:VAL:HG21	36:d:169:ALA:HB2	1.97	0.46
37:e:120:LEU:HD13	37:e:121:VAL:N	2.31	0.46
37:e:150:GLU:O	37:e:153:ARG:HG3	2.15	0.46
38:f:79:GLU:CG	38:f:93:PRO:HD3	2.44	0.46
40:h:12:LEU:CD1	40:h:25:ALA:HA	2.45	0.46
40:h:88:PRO:HG3	40:h:148:ASN:HB3	1.97	0.46
42:j:41:VAL:O	42:j:42:ARG:CB	2.63	0.46
45:m:62:GLY:O	45:m:63:TYR:HD2	1.98	0.46
46:n:45:VAL:O	46:n:46:LYS:C	2.57	0.46
46:n:91:ARG:HH12	46:n:96:LEU:HD13	1.81	0.46
47:o:24:CYS:HB2	47:o:29:ARG:N	2.30	0.46
47:o:24:CYS:HG	47:o:43:CYS:HG	1.62	0.46
47:o:25:VAL:HG12	47:o:39:LEU:CD2	2.42	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:u:95:ALA:C	53:u:97:ALA:H	2.23	0.46
1:w:188:G:C2	1:w:209:C:N3	2.83	0.46
1:w:376:C:C4	1:w:377:C:N3	2.83	0.46
1:w:465:G:O2'	28:Z:21:ARG:NH2	2.48	0.46
1:w:479:A:C5'	1:w:480:A:C8	2.91	0.46
1:w:591:C:O5'	1:w:591:C:H6	1.98	0.46
1:w:677:A:N1	1:w:678:C:N4	2.63	0.46
1:w:783:A:H5"	4:B:237:GLU:OE1	2.15	0.46
1:w:813:U:OP2	12:J:27:HIS:N	2.49	0.46
1:w:960:A:C4'	1:w:2457:U:H5'	2.42	0.46
1:w:1022:G:H4'	1:w:1023:U:C5'	2.41	0.46
1:w:1049:C:O2	1:w:1049:C:H2'	2.14	0.46
1:w:1250:G:H21	17:O:13:LYS:NZ	2.14	0.46
1:w:1268:A:C2	1:w:2013:A:C5	3.04	0.46
1:w:1341:U:O2'	20:R:55:ASN:HB3	2.16	0.46
1:w:1370:C:C4	1:w:1371:G:C6	3.04	0.46
1:w:1425:G:H2'	1:w:1426:G:C1'	2.46	0.46
1:w:1495:A:H2'	1:w:1496:A:H8	1.79	0.46
1:w:1535:U:H3'	1:w:1536:A:O4'	2.16	0.46
1:w:1542:G:H2'	1:w:1543:A:C6	2.51	0.46
1:w:1545:A:O2'	1:w:1546:A:H5'	2.16	0.46
1:w:1605:C:C4'	1:w:1610:A:H62	2.24	0.46
1:w:1863:G:H2'	1:w:1864:U:O4'	2.15	0.46
1:w:2097:C:C2	1:w:2193:G:C2	3.04	0.46
1:w:2809:A:C5	1:w:2810:A:N7	2.83	0.46
2:x:13:A:O2'	2:x:15:A:OP2	2.25	0.46
3:A:166:ASN:HA	3:A:171:ALA:CA	2.46	0.46
4:B:68:LYS:O	4:B:69:ARG:HB2	2.15	0.46
4:B:70:TRP:N	4:B:70:TRP:HE3	2.14	0.46
7:E:46:ALA:C	7:E:48:GLU:H	2.24	0.46
7:E:113:ARG:O	7:E:140:ILE:HD11	2.15	0.46
9:G:77:LEU:HD12	9:G:142:VAL:CG1	2.40	0.46
9:G:88:ILE:HG12	9:G:89:TYR:H	1.80	0.46
10:H:118:PRO:HA	10:H:121:VAL:CG2	2.46	0.46
12:J:97:PRO:CG	12:J:126:VAL:HB	2.45	0.46
13:K:3:MET:O	13:K:4:PRO:O	2.34	0.46
13:K:7:MET:HA	13:K:8:LYS:NZ	2.31	0.46
13:K:119:ARG:C	13:K:123:HIS:HB2	2.41	0.46
16:N:50:ILE:HG12	16:N:64:ARG:HB2	1.98	0.46
17:O:51:LYS:HZ2	17:O:55:ARG:NH2	2.13	0.46
18:P:4:ILE:CG2	18:P:5:VAL:N	2.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:33:ARG:HG3	19:Q:34:ASN:H	1.78	0.46
19:Q:104:THR:HG22	19:Q:105:VAL:N	2.30	0.46
20:R:59:VAL:H	20:R:74:PRO:HG2	1.81	0.46
22:T:7:ALA:CB	22:T:59:LEU:HB3	2.32	0.46
24:V:50:ARG:HD3	24:V:60:PHE:O	2.16	0.46
25:W:36:ARG:C	25:W:38:GLN:N	2.73	0.46
27:Y:13:LYS:CA	27:Y:16:ARG:HG2	2.45	0.46
29:a:50:LEU:O	29:a:51:ALA:HB2	2.16	0.46
29:a:62:LEU:H	29:a:63:PRO:HD3	1.81	0.46
31:y:69:G:N2	31:y:101:A:C2	2.83	0.46
31:y:279:A:C2	31:y:281:G:N2	2.84	0.46
31:y:300:A:H2'	31:y:301:G:H5'	1.96	0.46
31:y:344:A:H3'	31:y:346:G:O6	2.15	0.46
31:y:571:U:H4'	31:y:819:A:N6	2.30	0.46
31:y:608:A:C4	31:y:609:A:N7	2.84	0.46
31:y:718:G:C1'	44:l:116:HIS:HB3	2.45	0.46
31:y:737:A:H2'	31:y:738:C:H6	1.81	0.46
31:y:838:G:O6	31:y:842:C:O4'	2.33	0.46
31:y:1001:G:H3'	31:y:1002:G:C5'	2.23	0.46
31:y:1175:G:H2'	31:y:1176:A:H5'	1.95	0.46
31:y:1186:G:H21	47:o:61:TRP:HA	1.80	0.46
31:y:1202:G:H21	47:o:26:ARG:NH1	2.14	0.46
31:y:1214:C:O5'	31:y:1214:C:C6	2.68	0.46
36:d:14:ILE:N	47:o:57:ARG:HE	2.14	0.46
36:d:59:ARG:NH1	36:d:64:VAL:HG21	2.28	0.46
38:f:100:VAL:HA	38:f:117:ASP:H	1.80	0.46
40:h:64:GLN:HE21	40:h:65:ALA:HA	1.80	0.46
41:i:69:ARG:HD3	41:i:76:PRO:HG3	1.97	0.46
41:i:84:ARG:O	41:i:135:CYS:HB2	2.16	0.46
45:m:51:LEU:C	45:m:52:ARG:HD2	2.40	0.46
46:n:55:ARG:HG2	46:n:55:ARG:O	2.15	0.46
53:u:90:GLN:HA	53:u:93:GLU:HB3	1.92	0.46
1:w:54:G:N2	1:w:126:A:C6	2.78	0.46
1:w:371:A:H1'	1:w:373:U:H1'	1.98	0.46
1:w:570:G:H2'	1:w:2030:A:C6	2.50	0.46
1:w:640:C:H2'	1:w:641:C:H6	1.81	0.46
1:w:674:G:C6	1:w:804:A:C6	3.03	0.46
1:w:847:U:H2'	1:w:848:G:C5'	2.45	0.46
1:w:1039:G:H2'	1:w:1040:C:C6	2.51	0.46
1:w:1174:A:HO2'	1:w:1175:U:H6	1.62	0.46
1:w:1485:G:H2'	1:w:1486:A:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1710:C:C1'	1:w:2858:C:H42	2.29	0.46
1:w:1837:C:O5'	1:w:1837:C:C6	2.68	0.46
1:w:2080:G:OP1	24:V:25:LYS:HE2	2.16	0.46
1:w:2181:G:H2'	1:w:2182:G:H8	1.80	0.46
1:w:2189:U:H5'	1:w:2190:G:OP2	2.16	0.46
1:w:2269:A:H2'	1:w:2270:G:C8	2.45	0.46
1:w:2355:C:O4'	23:U:36:ILE:HB	2.16	0.46
1:w:2457:U:O2'	1:w:2458:G:H5'	2.15	0.46
1:w:2562:U:O2	1:w:2562:U:C2'	2.62	0.46
1:w:2637:U:H3	1:w:2776:A:H62	1.62	0.46
1:w:2832:U:C2'	1:w:2833:G:OP2	2.63	0.46
1:w:2866:U:O2	1:w:2866:U:C2'	2.54	0.46
2:x:96:G:H2'	2:x:96:G:N3	2.31	0.46
3:A:40:GLU:OE2	3:A:220:GLY:N	2.49	0.46
3:A:165:ARG:O	3:A:171:ALA:HB1	2.16	0.46
4:B:165:ILE:CG2	4:B:166:GLN:N	2.79	0.46
4:B:248:SER:HB2	4:B:252:TRP:CD1	2.51	0.46
5:C:25:VAL:HG12	5:C:26:ILE:N	2.30	0.46
6:D:120:LEU:HD11	6:D:123:ALA:HB3	1.97	0.46
6:D:163:ARG:CG	6:D:164:ASN:H	2.28	0.46
8:F:96:ALA:O	8:F:97:ARG:HB2	2.15	0.46
8:F:102:ALA:HB2	8:F:117:PRO:CD	2.44	0.46
8:F:143:GLN:O	8:F:146:ALA:HB3	2.15	0.46
9:G:4:ILE:HG22	9:G:37:VAL:HG21	1.98	0.46
10:H:130:LEU:HB3	10:H:131:PRO:HD2	1.98	0.46
13:K:35:VAL:HG22	13:K:130:LYS:HB2	1.98	0.46
13:K:39:PRO:CB	13:K:99:PRO:HG3	2.35	0.46
14:L:18:LEU:C	14:L:18:LEU:HD23	2.41	0.46
14:L:44:LEU:O	14:L:48:VAL:HG23	2.15	0.46
15:M:35:ILE:HD12	15:M:66:ALA:HA	1.97	0.46
17:O:93:LYS:HD2	17:O:93:LYS:H	1.81	0.46
19:Q:21:VAL:HG11	19:Q:76:VAL:CG1	2.32	0.46
21:S:97:ARG:HD2	21:S:97:ARG:C	2.41	0.46
22:T:73:GLN:HB2	22:T:87:ASP:CB	2.45	0.46
31:y:337:C:C2	31:y:338:A:C8	3.04	0.46
31:y:355:C:H2'	31:y:356:A:O4'	2.16	0.46
31:y:376:G:C2'	31:y:377:G:C5'	2.85	0.46
31:y:518:C:C6	31:y:529:G:C6	3.03	0.46
31:y:526:C:O5'	31:y:526:C:H6	1.99	0.46
31:y:778:G:H2'	31:y:779:C:H6	1.80	0.46
31:y:984:C:N3	31:y:985:C:C5	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1038:C:H6	31:y:1038:C:O5'	1.99	0.46
31:y:1074:G:O2'	31:y:1101:A:C6	2.65	0.46
31:y:1148:U:C5	31:y:1149:C:H5	2.33	0.46
31:y:1265:G:H8	31:y:1265:G:O5'	1.99	0.46
31:y:1276:G:O2'	31:y:1282:C:H1'	2.16	0.46
31:y:1342:C:HO2'	42:j:124:GLN:HA	1.75	0.46
34:3:2:A:H8	34:3:2:A:O5'	1.99	0.46
36:d:130:VAL:HG22	36:d:157:ILE:HG21	1.98	0.46
36:d:178:LEU:N	36:d:178:LEU:HD12	2.30	0.46
41:i:39:LEU:HD13	41:i:45:ILE:HB	1.95	0.46
44:l:60:ALA:O	44:l:63:LEU:N	2.49	0.46
45:m:44:PRO:HB3	45:m:52:ARG:HE	1.81	0.46
47:o:35:ARG:C	47:o:37:PHE:H	2.23	0.46
52:t:33:THR:HB	52:t:49:ILE:HG13	1.98	0.46
1:w:31:C:H2'	1:w:32:C:H6	1.80	0.46
1:w:116:C:O2'	1:w:126:A:C4	2.69	0.46
1:w:488:G:N2	1:w:491:G:H5'	2.30	0.46
1:w:551:G:HO2'	1:w:1220:A:H2	1.60	0.46
1:w:666:G:O4'	29:a:4:MET:HE3	2.16	0.46
1:w:723:G:C5	1:w:724:U:C4	3.04	0.46
1:w:770:G:H21	1:w:1354:A:H2	1.64	0.46
1:w:904:C:O2'	1:w:905:U:H5'	2.15	0.46
1:w:936:C:O2'	1:w:937:U:H5'	2.16	0.46
1:w:1347:G:N3	1:w:1347:G:H2'	2.29	0.46
1:w:1755:A:O2'	1:w:1756:G:H5'	2.15	0.46
1:w:1858:G:H1'	1:w:1884:A:N6	2.30	0.46
1:w:2124:G:H21	3:A:218:THR:CA	2.27	0.46
1:w:2287:A:N1	1:w:2344:U:O2	2.49	0.46
2:x:20:C:C2	2:x:21:G:C8	3.04	0.46
2:x:100:G:C2'	2:x:101:A:C5'	2.90	0.46
4:B:3:VAL:O	4:B:5:LYS:HD2	2.16	0.46
5:C:24:THR:HG23	5:C:25:VAL:N	2.30	0.46
6:D:4:ILE:HD13	6:D:12:ARG:HE	1.81	0.46
9:G:130:TYR:O	9:G:138:ILE:N	2.48	0.46
11:I:23:ARG:HG2	11:I:24:VAL:N	2.30	0.46
11:I:111:PHE:O	11:I:115:VAL:HG23	2.16	0.46
13:K:23:GLY:CA	13:K:98:LYS:HG2	2.46	0.46
15:M:110:LEU:HG	15:M:111:GLU:N	2.22	0.46
16:N:79:HIS:HB3	16:N:80:SER:H	1.37	0.46
22:T:73:GLN:HB2	22:T:87:ASP:HB2	1.97	0.46
22:T:104:PHE:HD1	22:T:104:PHE:O	1.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:12:PRO:HG2	24:V:13:ILE:H	1.80	0.46
24:V:27:GLU:HA	33:2:74:C:H5'	1.97	0.46
24:V:84:GLY:C	24:V:86:SER:N	2.73	0.46
25:W:46:GLN:C	25:W:48:HIS:N	2.71	0.46
29:a:26:LYS:O	29:a:27:THR:HG23	2.15	0.46
31:y:7:G:H21	38:f:121:LYS:HZ3	1.63	0.46
31:y:22:G:N3	31:y:23:C:C6	2.84	0.46
31:y:123:C:H6	31:y:123:C:O5'	1.98	0.46
31:y:138:G:C2	31:y:226:G:C2	3.03	0.46
31:y:167:G:H2'	31:y:168:G:C4'	2.46	0.46
31:y:281:G:H5"	31:y:281:G:C8	2.51	0.46
31:y:297:G:C2'	31:y:298:A:C8	2.94	0.46
31:y:335:C:O4'	31:y:1434:A:O4'	2.34	0.46
31:y:586:C:OP1	50:r:34:LYS:CE	2.64	0.46
31:y:648:A:C4	31:y:649:G:C8	3.04	0.46
31:y:660:G:H8	31:y:660:G:O5'	1.99	0.46
31:y:832:C:H2'	31:y:833:U:O4'	2.16	0.46
31:y:858:G:O6	31:y:869:G:C8	2.69	0.46
31:y:882:C:H2'	31:y:883:C:C5	2.50	0.46
31:y:1188:A:C1'	47:o:60:SER:CB	2.94	0.46
31:y:1340:A:H3'	31:y:1341:U:H5	1.80	0.46
31:y:1441:G:N2	31:y:1459:C:H5	2.13	0.46
31:y:1468:A:C3'	31:y:1469:G:C8	2.99	0.46
31:y:1504:G:O2'	31:y:1505:G:P	2.74	0.46
31:y:1517:G:C8	31:y:1517:G:H3'	2.51	0.46
40:h:51:GLN:HA	40:h:54:THR:O	2.16	0.46
42:j:19:LEU:HB3	42:j:59:PHE:CD2	2.48	0.46
44:l:33:THR:HA	44:l:40:ILE:HG13	1.97	0.46
45:m:87:GLY:HA3	45:m:98:HIS:ND1	2.31	0.46
47:o:6:LEU:CB	47:o:23:ARG:HH11	2.29	0.46
48:p:70:LEU:HD11	48:p:77:ARG:CB	2.46	0.46
1:w:49:A:C6	1:w:177:G:N1	2.84	0.46
1:w:244:A:O3'	12:J:74:GLU:HG3	2.15	0.46
1:w:298:G:O6	1:w:338:G:H5"	2.16	0.46
1:w:319:C:C4	1:w:333:G:N2	2.84	0.46
1:w:562:U:O2'	1:w:563:G:C5'	2.64	0.46
1:w:583:G:C6	1:w:584:C:N4	2.83	0.46
1:w:612:G:N1	1:w:613:U:C2	2.84	0.46
1:w:834:C:C5'	29:a:52:LYS:HB3	2.46	0.46
1:w:848:G:OP2	1:w:929:G:N1	2.40	0.46
1:w:1156:A:H8	1:w:1156:A:P	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1228:G:C3'	1:w:1229:G:H5"	2.46	0.46
1:w:1268:A:O2'	1:w:1269:A:H5'	2.16	0.46
1:w:1370:C:C4	1:w:1371:G:C5	3.03	0.46
1:w:1511:A:C6	1:w:1512:G:C6	3.04	0.46
1:w:1766:U:O2'	1:w:1767:C:H5'	2.15	0.46
1:w:1824:G:H3'	1:w:1825:A:H5"	1.97	0.46
1:w:1957:C:HO2'	1:w:1984:G:H21	1.63	0.46
1:w:2238:G:N3	1:w:2238:G:C2'	2.70	0.46
1:w:2339:G:H2'	1:w:2340:G:O4'	2.16	0.46
1:w:2493:U:H2'	1:w:2494:G:O4'	2.16	0.46
1:w:2523:G:C6	1:w:2541:A:C2	3.04	0.46
1:w:2756:U:H3'	30:b:19:ARG:CG	2.46	0.46
1:w:2802:G:C2'	1:w:2803:C:H5'	2.45	0.46
1:w:2881:C:H2'	1:w:2882:A:C8	2.51	0.46
3:A:63:VAL:HG13	3:A:64:SER:N	2.30	0.46
4:B:60:ARG:HA	4:B:60:ARG:NH1	2.31	0.46
4:B:133:LEU:HD13	4:B:136:ILE:CD1	2.36	0.46
4:B:183:ARG:HH11	4:B:184:LYS:C	2.23	0.46
4:B:211:ARG:CA	4:B:214:TRP:HE3	2.20	0.46
6:D:178:VAL:HA	6:D:181:ILE:HG22	1.98	0.46
9:G:25:TYR:CG	9:G:30:LEU:HD12	2.51	0.46
12:J:123:LEU:O	12:J:124:LYS:C	2.59	0.46
13:K:37:LEU:HB2	13:K:127:ILE:CG2	2.45	0.46
13:K:134:ARG:HD3	13:K:134:ARG:C	2.40	0.46
14:L:97:VAL:HG13	14:L:112:ALA:HB1	1.97	0.46
15:M:83:LYS:O	15:M:110:LEU:HD12	2.16	0.46
19:Q:86:LEU:O	19:Q:88:ARG:HD3	2.16	0.46
20:R:54:VAL:HG22	20:R:55:ASN:H	1.81	0.46
23:U:40:GLN:CG	23:U:41:ARG:N	2.67	0.46
23:U:50:ASN:HD22	23:U:81:VAL:HG12	1.80	0.46
26:X:20:LYS:HA	26:X:23:LEU:HD21	1.96	0.46
30:b:5:ALA:O	30:b:6:SER:C	2.59	0.46
31:y:50:A:H1'	31:y:52:G:O5'	2.16	0.46
31:y:290:C:N4	31:y:291:C:N4	2.64	0.46
31:y:447:G:H2'	31:y:485:G:N2	2.31	0.46
31:y:520:A:H62	31:y:529:G:H21	1.64	0.46
31:y:602:A:C2'	31:y:603:U:H5'	2.46	0.46
31:y:608:A:H5'	49:q:32:TYR:OH	2.16	0.46
31:y:635:G:H2'	31:y:636:U:C5'	2.41	0.46
31:y:659:U:C6	31:y:659:U:C3'	2.99	0.46
31:y:684:A:H2'	31:y:685:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:697:U:O4'	31:y:786:G:H4'	2.16	0.46
31:y:738:C:C4	31:y:739:C:N4	2.84	0.46
31:y:758:G:OP1	31:y:821:G:N2	2.49	0.46
31:y:760:G:N2	50:r:105:ALA:CB	2.79	0.46
31:y:780:A:N6	31:y:800:G:H2'	2.31	0.46
31:y:983:A:N3	31:y:983:A:H2'	2.31	0.46
31:y:1080:A:H4'	38:f:16:THR:OG1	2.16	0.46
31:y:1096:C:H2'	31:y:1097:C:H6	1.80	0.46
31:y:1318:A:H1'	52:t:10:PHE:CE1	2.51	0.46
31:y:1374:A:H2'	31:y:1375:A:C5'	2.46	0.46
31:y:1516:G:N3	31:y:1518:MA6:OP1	2.49	0.46
32:z:18:G:C2	32:z:58:A:N3	2.83	0.46
32:z:18:G:N2	32:z:58:A:O4'	2.49	0.46
32:z:67:C:H3'	32:z:68:C:H6	1.81	0.46
33:2:44:A:N6	33:2:45:G:C2	2.83	0.46
36:d:49:SER:O	36:d:50:ALA:C	2.59	0.46
37:e:24:GLU:O	37:e:28:SER:HB2	2.15	0.46
37:e:97:LEU:C	37:e:99:SER:H	2.24	0.46
37:e:99:SER:O	37:e:139:ARG:HA	2.16	0.46
38:f:6:PHE:CZ	38:f:40:ARG:CZ	2.99	0.46
39:g:8:ILE:CD1	39:g:63:TYR:HE2	2.29	0.46
40:h:46:ALA:HB2	40:h:117:ALA:HB1	1.98	0.46
47:o:24:CYS:SG	47:o:43:CYS:SG	3.13	0.46
50:r:31:LEU:O	50:r:32:TYR:CB	2.63	0.46
50:r:78:GLU:CB	50:r:81:ARG:NH1	2.75	0.46
53:u:90:GLN:CA	53:u:93:GLU:HB2	2.36	0.46
1:w:7:G:H3'	1:w:8:A:C8	2.51	0.46
1:w:49:A:N6	1:w:177:G:C6	2.84	0.46
1:w:72:U:O4	1:w:112:U:O3'	2.34	0.46
1:w:145:G:C2	1:w:146:G:H1'	2.51	0.46
1:w:483:A:H4'	21:S:56:PRO:HB3	1.98	0.46
1:w:613:U:H4'	1:w:616:A:C5	2.51	0.46
1:w:640:C:H2'	1:w:641:C:C6	2.51	0.46
1:w:846:C:O2'	1:w:929:G:O6	2.33	0.46
1:w:889:C:O2	1:w:889:C:C2'	2.63	0.46
1:w:911:A:H2	1:w:2277:G:N3	2.13	0.46
1:w:1135:C:C5	1:w:1137:G:OP2	2.69	0.46
1:w:1426:G:C5'	1:w:1427:A:H5'	2.45	0.46
1:w:1801:G:H5'	1:w:1815:A:N1	2.30	0.46
1:w:1821:A:C6	1:w:1822:G:C5	3.03	0.46
1:w:1918:A:H2'	1:w:1919:A:N7	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1942:C:C5	1:w:1943:U:N3	2.84	0.46
1:w:2085:C:C2	1:w:2235:G:N2	2.84	0.46
1:w:2168:G:C3'	1:w:2169:A:H5"	2.46	0.46
1:w:2190:G:O2'	1:w:2191:G:H5"	2.16	0.46
1:w:2352:A:O5'	1:w:2352:A:C8	2.69	0.46
1:w:2712(B):A:H4'	1:w:2713:A:H3'	1.98	0.46
2:x:43:C:C3'	2:x:44:G:H5'	2.44	0.46
2:x:82:G:C4	2:x:83:G:C8	3.03	0.46
2:x:99:A:C8	2:x:100:G:N7	2.84	0.46
5:C:3:GLY:HA3	5:C:95:ILE:HD13	1.98	0.46
5:C:23:VAL:HG12	5:C:185:LYS:HD3	1.98	0.46
5:C:156:MET:HE2	5:C:156:MET:HA	1.97	0.46
6:D:55:SER:O	6:D:57:ARG:N	2.48	0.46
6:D:131:THR:OG1	6:D:163:ARG:HD3	2.16	0.46
7:E:82:LEU:HD13	7:E:83:ARG:C	2.41	0.46
8:F:58:GLU:HG2	8:F:61:HIS:CD2	2.51	0.46
9:G:3:VAL:HG12	9:G:21:VAL:CG1	2.38	0.46
9:G:24:GLY:O	9:G:25:TYR:C	2.58	0.46
11:I:70:LYS:HG3	11:I:71:ARG:N	2.31	0.46
13:K:114:ALA:O	13:K:115:MET:C	2.58	0.46
14:L:47:PHE:HA	14:L:50:HIS:HB2	1.98	0.46
17:O:36:ARG:HG2	17:O:40:PHE:CZ	2.51	0.46
18:P:39:LEU:HD12	18:P:40:LEU:H	1.81	0.46
18:P:40:LEU:HD13	18:P:41:GLY:H	1.81	0.46
18:P:66:ARG:HH11	18:P:66:ARG:HG2	1.81	0.46
18:P:71:LEU:O	18:P:90:PRO:O	2.33	0.46
23:U:15:ASP:HB3	23:U:20:ARG:NH1	2.29	0.46
24:V:78:LYS:C	24:V:78:LYS:HD2	2.41	0.46
30:b:11:CYS:SG	30:b:32:HIS:HB3	2.55	0.46
31:y:5:U:H1'	38:f:95:ALA:CB	2.39	0.46
31:y:82:U:C2	31:y:87:A:N6	2.84	0.46
31:y:186(B):C:O2'	53:u:89:ARG:NH1	2.48	0.46
31:y:321:A:C2	31:y:333:G:N2	2.84	0.46
31:y:388:G:OP1	31:y:388:G:H8	1.98	0.46
31:y:404:U:H2'	31:y:405:U:H6	1.80	0.46
31:y:503:C:O2'	31:y:504:C:H5'	2.16	0.46
31:y:509:A:H3'	31:y:509:A:OP2	2.16	0.46
31:y:671:G:C2	31:y:736:C:N3	2.84	0.46
31:y:886:G:C5	31:y:887:G:C8	3.04	0.46
31:y:983:A:N3	31:y:983:A:C2'	2.78	0.46
31:y:1011:G:N2	31:y:1019:C:C2	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:102(B):C:H3'	31:y:102(C):C:H5"	1.97	0.46
31:y:1158:C:H2'	31:y:1159:U:H4'	1.97	0.46
31:y:1197:G:H5'	31:y:1197:G:H8	1.81	0.46
31:y:1395:C:H2'	31:y:1396:A:H5'	1.98	0.46
31:y:1468:A:C2'	31:y:1469:G:O4'	2.60	0.46
31:y:1470:G:N2	31:y:1471:G:H1'	2.31	0.46
35:c:178:ARG:HH22	41:i:74:PRO:CB	2.18	0.46
38:f:151:LEU:O	41:i:64:LYS:HD3	2.16	0.46
40:h:126:ASP:HB3	40:h:132:GLY:CA	2.45	0.46
43:k:16:LEU:HD21	43:k:70:ARG:HE	1.80	0.46
44:l:23:ALA:HB2	44:l:28:THR:HG23	1.98	0.46
45:m:77:GLN:C	45:m:77:GLN:HE21	2.24	0.46
45:m:90:LYS:O	45:m:91:ASP:CB	2.64	0.46
46:n:78:ILE:HG23	46:n:92:HIS:CD2	2.51	0.46
47:o:12:ARG:NH2	47:o:17:LYS:HG3	2.30	0.46
48:p:70:LEU:HD21	48:p:77:ARG:HB3	1.98	0.46
49:q:64:ALA:O	49:q:65:GLN:HB2	2.16	0.46
1:w:68:G:C5	1:w:69:C:C4	3.04	0.45
1:w:149:A:H2'	1:w:150:C:O4'	2.15	0.45
1:w:199:A:N6	1:w:2434:A:N7	2.64	0.45
1:w:242:G:H2'	1:w:254:G:O6	2.16	0.45
1:w:270(X):G:H2'	1:w:270(Y):G:O4'	2.16	0.45
1:w:342:G:O2'	1:w:343:C:H5'	2.16	0.45
1:w:475:U:H2'	1:w:476:G:C8	2.51	0.45
1:w:533:G:O2'	17:O:42:ALA:HB2	2.16	0.45
1:w:670:A:OP2	1:w:670:A:C8	2.69	0.45
1:w:764:A:H5"	1:w:765:G:OP2	2.16	0.45
1:w:771:G:O2'	1:w:1355:G:H4'	2.15	0.45
1:w:781:A:O2'	1:w:1789:A:O4'	2.33	0.45
1:w:1297:C:H5"	1:w:2712:U:O4	2.16	0.45
1:w:1345:C:H3'	1:w:1384:A:H62	1.79	0.45
1:w:1444(B):A:H2'	1:w:1444(B):A:N3	2.30	0.45
1:w:1497:U:C3'	1:w:1497:U:C6	2.99	0.45
1:w:1920:C:H5"	31:y:1517:G:C4	2.47	0.45
1:w:2022:U:O2'	1:w:2034:U:C2	2.63	0.45
1:w:2077:A:H2	1:w:2434:A:N3	2.13	0.45
1:w:2136:C:H2'	1:w:2137:C:H6	1.80	0.45
1:w:2367:G:H8	1:w:2367:G:P	2.38	0.45
1:w:2432:A:C1'	33:2:76:A:H5'	2.46	0.45
1:w:2465:C:H4'	30:b:4:ARG:HH21	1.79	0.45
1:w:2515:C:N3	1:w:2570:G:C6	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2557:G:H2'	1:w:2558:C:C6	2.49	0.45
1:w:2680:C:H4'	5:C:188:VAL:O	2.16	0.45
1:w:2702:U:O2'	1:w:2703:C:C5	2.62	0.45
1:w:2744:G:C6	1:w:2761:G:C6	3.04	0.45
1:w:2745:C:H2'	1:w:2746:U:C6	2.50	0.45
1:w:2818:G:N1	1:w:2819:G:N7	2.64	0.45
2:x:79:C:H5'	2:x:79:C:H6	1.82	0.45
3:A:15:VAL:O	3:A:21:TYR:OH	2.34	0.45
4:B:25:THR:H	4:B:82:ILE:C	2.24	0.45
6:D:156:GLU:HA	6:D:159:ARG:CG	2.44	0.45
6:D:190:ASP:O	6:D:194:TRP:HB2	2.16	0.45
7:E:26:GLN:HG3	7:E:27:ASN:OD1	2.16	0.45
9:G:129:THR:HG23	9:G:139:GLN:HG3	1.98	0.45
11:I:49:ARG:HD3	11:I:49:ARG:H	1.81	0.45
15:M:63:THR:HG23	15:M:64:GLU:H	1.81	0.45
16:N:26:ASP:OD1	16:N:90:GLN:N	2.49	0.45
16:N:29:ARG:HB3	16:N:86:ILE:H	1.80	0.45
17:O:92:ARG:C	17:O:94:ASN:N	2.74	0.45
18:P:45:THR:HG22	18:P:46:VAL:HG23	1.99	0.45
20:R:5:TYR:O	20:R:7:VAL:HG12	2.16	0.45
22:T:2:GLU:HA	22:T:56:VAL:HG23	1.98	0.45
31:y:189:U:C6	31:y:189:U:C5'	2.93	0.45
31:y:195:A:C5	31:y:196:A:C6	3.05	0.45
31:y:200:G:H2'	31:y:201:C:H6	1.81	0.45
31:y:268:C:O2'	31:y:269:C:H5'	2.15	0.45
31:y:385:C:O2'	31:y:386:C:H5'	2.15	0.45
31:y:682:G:H2'	31:y:683:G:H8	1.81	0.45
31:y:695:A:C6	31:y:696:A:C6	3.04	0.45
31:y:957:U:H6	31:y:957:U:O5'	1.98	0.45
31:y:1088:G:O6	31:y:1089:G:O6	2.34	0.45
31:y:1125:U:OP2	31:y:1145:C:N4	2.49	0.45
31:y:1126:U:O2	31:y:1281:U:H4'	2.16	0.45
31:y:1306:A:H2'	31:y:1307:U:H5'	1.98	0.45
34:3:10:A:C4	40:h:82:GLY:HA2	2.51	0.45
35:c:145:LEU:O	35:c:146:GLN:C	2.58	0.45
38:f:116:THR:O	38:f:117:ASP:C	2.58	0.45
41:i:69:ARG:CG	41:i:76:PRO:HG3	2.45	0.45
41:i:101:PRO:O	41:i:102:ARG:C	2.58	0.45
41:i:109:ILE:HD12	41:i:137:VAL:HB	1.97	0.45
45:m:62:GLY:C	45:m:63:TYR:CD2	2.87	0.45
47:o:2:ALA:O	47:o:3:ARG:HB2	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:o:41:ARG:HD3	47:o:41:ARG:C	2.41	0.45
49:q:35:LYS:HG2	49:q:35:LYS:O	2.16	0.45
50:r:95:TYR:O	50:r:96:GLN:HG3	2.16	0.45
1:w:71:A:H5'	1:w:71:A:C8	2.51	0.45
1:w:126:A:O5'	28:Z:19:ARG:HB2	2.16	0.45
1:w:224:G:H2'	1:w:225:A:C8	2.51	0.45
1:w:271(C):G:C1'	1:w:271(D):U:H5"	2.42	0.45
1:w:274:G:H2'	1:w:274:G:N3	2.31	0.45
1:w:527:C:C5	1:w:2779:U:N1	2.85	0.45
1:w:587:C:C6	1:w:587:C:O5'	2.69	0.45
1:w:647:G:C6	1:w:648:G:C6	3.03	0.45
1:w:814:C:C5	12:J:27:HIS:HB2	2.51	0.45
1:w:847:U:C4	1:w:933:A:N1	2.84	0.45
1:w:872:A:H2	1:w:905:U:C2	2.34	0.45
1:w:877:U:H2'	1:w:878:A:C5'	2.46	0.45
1:w:979:G:H2'	1:w:982:C:N4	2.30	0.45
1:w:1009:A:H5"	17:O:63:VAL:HG21	1.99	0.45
1:w:1023:U:H3'	1:w:1024:G:C8	2.51	0.45
1:w:1064:C:O5'	1:w:1064:C:H6	1.99	0.45
1:w:1300:U:H5'	1:w:1300:U:C6	2.44	0.45
1:w:1329:U:H6	1:w:1329:U:O5'	1.99	0.45
1:w:1375:C:H2'	1:w:1376:C:C6	2.51	0.45
1:w:1375:C:H2'	1:w:1376:C:H6	1.80	0.45
1:w:1535:U:H2'	1:w:1536:A:C5'	2.45	0.45
1:w:1893:C:C2'	1:w:1894:C:H5'	2.46	0.45
1:w:1958:C:O2'	1:w:1959:G:H5'	2.17	0.45
1:w:2332:U:C4'	1:w:2336:A:N6	2.79	0.45
1:w:2489:G:C5	1:w:2490:G:C6	3.04	0.45
1:w:2575:C:C5'	5:C:144:ARG:HD2	2.32	0.45
1:w:2583:G:H2'	1:w:2584:U:O5'	2.14	0.45
1:w:2634:G:C5	1:w:2635:C:C4	3.04	0.45
1:w:2654:A:O2'	1:w:2655:G:P	2.74	0.45
1:w:2683:C:C2'	1:w:2684:U:O5'	2.64	0.45
1:w:2717:G:C6	1:w:2718:G:C5	3.04	0.45
1:w:2726:U:O2'	1:w:2727:G:H8	1.99	0.45
2:x:65:C:H5"	2:x:66:A:OP2	2.16	0.45
2:x:78:A:H4'	22:T:78:LYS:NZ	2.31	0.45
5:C:154:LYS:CD	5:C:155:LYS:H	2.21	0.45
6:D:64:HIS:O	6:D:65:THR:HG22	2.15	0.45
6:D:98:LYS:HA	6:D:101:ARG:HB3	1.98	0.45
6:D:182:VAL:CG2	6:D:183:ARG:N	2.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:76:VAL:HA	8:F:79:VAL:CG2	2.45	0.45
9:G:124:GLY:HA2	9:G:144:VAL:N	2.30	0.45
10:H:95:TYR:N	10:H:95:TYR:HD1	2.15	0.45
13:K:106:VAL:HG12	13:K:107:ALA:H	1.80	0.45
14:L:66:VAL:HG23	14:L:67:LEU:HD22	1.98	0.45
14:L:102:GLU:O	14:L:103:ARG:C	2.59	0.45
15:M:20:ARG:HB2	15:M:88:ASP:OD1	2.16	0.45
15:M:54:LEU:O	15:M:55:ALA:C	2.59	0.45
16:N:17:THR:O	16:N:18:ASP:C	2.59	0.45
17:O:99:ALA:HA	17:O:106:PHE:CZ	2.50	0.45
22:T:99:TYR:CD2	22:T:124:ILE:C	2.94	0.45
23:U:29:GLN:HG2	23:U:30:VAL:HG12	1.97	0.45
26:X:31:LEU:O	26:X:32:GLN:CB	2.61	0.45
29:a:17:THR:O	29:a:19:SER:N	2.50	0.45
31:y:117:G:C5	31:y:118:U:N3	2.84	0.45
31:y:358:U:C4	31:y:359:U:C5	3.04	0.45
31:y:376:G:H5"	49:q:5:ARG:CB	2.47	0.45
31:y:579:G:C4	31:y:580:U:C4	3.05	0.45
31:y:713:G:N2	31:y:777:A:H1'	2.31	0.45
31:y:874:G:H22	41:i:11:THR:HG21	1.74	0.45
31:y:950:U:H2'	31:y:951:G:H8	1.81	0.45
31:y:1015:A:H1'	31:y:1218:C:HO2'	1.80	0.45
31:y:1347:G:O2'	31:y:1373:G:N1	2.49	0.45
31:y:1374:A:N6	31:y:1375:A:C5	2.84	0.45
31:y:1391:U:H2'	31:y:1392:G:C8	2.51	0.45
31:y:1441:G:C5'	31:y:1442:G:O4'	2.65	0.45
31:y:1507:A:C4	31:y:1508:G:C8	3.04	0.45
37:e:199:ASN:ND2	37:e:202:LEU:HG	2.29	0.45
40:h:12:LEU:HD22	40:h:25:ALA:HA	1.98	0.45
40:h:32:ARG:NE	40:h:32:ARG:CA	2.76	0.45
40:h:87:VAL:HA	40:h:88:PRO:HD3	1.86	0.45
42:j:85:LEU:HD13	42:j:86:VAL:H	1.80	0.45
45:m:59:LEU:HB3	45:m:63:TYR:HB2	1.98	0.45
46:n:60:VAL:CG1	46:n:66:LEU:HD21	2.47	0.45
47:o:14:PRO:HG2	47:o:15:LYS:H	1.81	0.45
48:p:46:HIS:O	48:p:47:LYS:C	2.59	0.45
1:w:53:A:H1'	1:w:179:G:O2'	2.16	0.45
1:w:54:G:C2'	28:Z:35:ARG:HH12	2.28	0.45
1:w:209:C:H2'	1:w:210:C:C6	2.51	0.45
1:w:231:C:H2'	1:w:232:G:H5'	1.97	0.45
1:w:270(V):C:H2'	1:w:270(W):G:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:366(B):C:H5"	1:w:403:U:H3	1.81	0.45
1:w:497:A:H8	1:w:497:A:O5'	1.98	0.45
1:w:556:G:H2'	1:w:557:U:C6	2.51	0.45
1:w:681:G:H2'	1:w:682:G:C8	2.51	0.45
1:w:702:G:H5"	1:w:702:G:C8	2.52	0.45
1:w:825:C:O3'	1:w:2428:G:H2'	2.17	0.45
1:w:865:C:N4	1:w:908:C:N4	2.61	0.45
1:w:1113:U:H2'	1:w:1114:G:C8	2.52	0.45
1:w:1133:U:C2'	1:w:1137:G:OP1	2.63	0.45
1:w:1186:G:OP1	1:w:1186:G:H8	1.98	0.45
1:w:1294:U:H5'	14:L:26:LYS:HE3	1.96	0.45
1:w:1378:A:H4'	1:w:1379:A:N1	2.32	0.45
1:w:1453:A:N1	1:w:2702:U:C6	2.85	0.45
1:w:1567:A:H3'	4:B:86:PRO:CG	2.46	0.45
1:w:1856:G:C6	1:w:1857:G:C4	3.04	0.45
1:w:1888:G:H5'	1:w:1889:A:OP1	2.15	0.45
1:w:1991:U:C3'	1:w:1992:G:H5"	2.47	0.45
1:w:2019:A:C2	1:w:2035:G:N2	2.82	0.45
1:w:2124:G:H21	3:A:218:THR:CB	2.29	0.45
1:w:2154:G:H2'	1:w:2155:G:C8	2.49	0.45
1:w:2199:A:O5'	1:w:2199:A:C8	2.69	0.45
1:w:2357:U:OP2	23:U:18:ALA:HA	2.17	0.45
1:w:2505:G:C8	1:w:2576:G:C2	3.04	0.45
1:w:2654:A:N6	1:w:2666:C:C4	2.75	0.45
1:w:2669:G:C6	1:w:2670:A:C5	3.05	0.45
1:w:2780:G:O2'	1:w:2781:A:OP2	2.31	0.45
1:w:2793:G:C2'	1:w:2794:C:C6	3.00	0.45
3:A:172:ILE:HD13	3:A:174:ALA:HB2	1.99	0.45
4:B:3:VAL:HG22	4:B:201:HIS:HA	1.99	0.45
6:D:165:LEU:HD13	6:D:165:LEU:N	2.30	0.45
7:E:11:TYR:HA	7:E:15:VAL:CG2	2.46	0.45
7:E:16:ARG:HB3	7:E:17:PRO:HD3	1.98	0.45
7:E:165:THR:C	7:E:167:GLU:N	2.71	0.45
8:F:26:VAL:CG1	8:F:27:LYS:N	2.80	0.45
8:F:121:ILE:O	8:F:121:ILE:HG12	2.17	0.45
11:I:114:ILE:CD1	11:I:114:ILE:N	2.69	0.45
13:K:26:TYR:O	13:K:67:ARG:NH1	2.49	0.45
13:K:121:ALA:O	13:K:125:LEU:HD12	2.16	0.45
18:P:39:LEU:HD13	18:P:40:LEU:H	1.79	0.45
26:X:49:LYS:O	26:X:51:ALA:N	2.48	0.45
29:a:23:VAL:HG23	29:a:47:LYS:C	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:23:C:H4'	31:y:913:A:H61	1.82	0.45
31:y:245:C:N3	31:y:284:G:C2	2.84	0.45
31:y:367:U:O2'	31:y:368:U:P	2.73	0.45
31:y:435:C:H5"	31:y:436:C:OP1	2.16	0.45
31:y:592:G:N1	31:y:593:G:C5	2.84	0.45
31:y:639:G:H2'	31:y:640:A:H8	1.81	0.45
31:y:834:C:C4	31:y:853:G:N1	2.84	0.45
31:y:862:C:H2'	31:y:863:U:H5'	1.99	0.45
31:y:1045:C:O2'	31:y:1046:A:H5'	2.16	0.45
31:y:1100:C:N4	31:y:1103:C:OP1	2.50	0.45
31:y:1304:G:N7	31:y:1305:G:O6	2.48	0.45
31:y:1319:A:H4'	52:t:37:ARG:NH1	2.31	0.45
31:y:1327:C:N3	31:y:1328:C:C5	2.84	0.45
38:f:57:LYS:HZ2	38:f:58:ALA:N	2.15	0.45
38:f:79:GLU:OE2	41:i:102:ARG:HB3	2.17	0.45
41:i:5:PRO:C	41:i:9:MET:HG2	2.41	0.45
43:k:58:ASP:O	43:k:59:SER:CB	2.64	0.45
44:l:62:GLN:HB2	44:l:93:GLN:NE2	2.31	0.45
46:n:4:ILE:HA	46:n:57:ARG:HG3	1.98	0.45
1:w:270(L):C:N3	1:w:270(O):G:N2	2.61	0.45
1:w:346:A:H2	1:w:347:A:H62	1.64	0.45
1:w:394:A:H2'	1:w:395:U:C4'	2.47	0.45
1:w:464:U:H5'	28:Z:5:TRP:CZ3	2.51	0.45
1:w:533:G:H5'	17:O:24:TYR:HA	1.99	0.45
1:w:719:C:H2'	1:w:720:C:C6	2.51	0.45
1:w:1136:G:H21	1:w:2039:C:P	2.40	0.45
1:w:1356:G:H2'	1:w:1357:U:O4'	2.17	0.45
1:w:1372:U:O2'	1:w:1373:A:H5'	2.16	0.45
1:w:1535:U:H2'	1:w:1536:A:C4'	2.47	0.45
1:w:1613:G:H1	1:w:1617:C:C2'	2.29	0.45
1:w:1638:C:O2'	1:w:2709:G:N2	2.48	0.45
1:w:1697:G:H3'	1:w:1698:A:H2'	1.98	0.45
1:w:1752:C:H5'	1:w:2862:G:H5"	1.98	0.45
1:w:1804:C:OP1	4:B:259:THR:CG2	2.63	0.45
1:w:1805:U:C2	1:w:1813:G:N2	2.85	0.45
1:w:2051:A:C3'	1:w:2578:G:O5'	2.65	0.45
1:w:2248:C:H6	1:w:2248:C:O5'	1.99	0.45
1:w:2364:C:H5"	1:w:2365:G:OP2	2.16	0.45
1:w:2450:A:O2'	1:w:2451:A:H5'	2.17	0.45
1:w:2646:C:C2'	1:w:2647:U:OP1	2.64	0.45
1:w:2646:C:H3'	1:w:2647:U:H5"	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2748:A:C6	1:w:2757:A:N7	2.85	0.45
1:w:2832:U:O5'	1:w:2832:U:C6	2.69	0.45
2:x:3:C:N3	2:x:118:G:O6	2.49	0.45
2:x:27:C:O5'	2:x:27:C:H6	1.99	0.45
2:x:40:U:O2	2:x:43:C:C5	2.69	0.45
4:B:146:GLU:OE1	4:B:189:CYS:HA	2.16	0.45
5:C:84:PHE:CD1	5:C:84:PHE:C	2.95	0.45
5:C:118:LYS:HD2	5:C:118:LYS:HA	1.77	0.45
7:E:120:LEU:HD12	7:E:178:PHE:CB	2.46	0.45
8:F:38:SER:CB	8:F:39:PRO:CD	2.88	0.45
11:I:91:LEU:HD22	11:I:91:LEU:O	2.16	0.45
12:J:137:LYS:C	12:J:138:LEU:HD12	2.42	0.45
13:K:42:ILE:C	13:K:42:ILE:HD13	2.42	0.45
16:N:86:ILE:CG2	16:N:87:ASP:H	2.30	0.45
18:P:10:LYS:NZ	18:P:22:VAL:HG23	2.31	0.45
19:Q:5:ALA:O	19:Q:6:ILE:HG23	2.17	0.45
27:Y:50:GLY:O	27:Y:51:TYR:HB2	2.16	0.45
31:y:376:G:C5'	49:q:5:ARG:HB2	2.45	0.45
31:y:445:G:C6	31:y:490:G:C6	3.05	0.45
31:y:449:C:H2'	31:y:450:G:C5'	2.46	0.45
31:y:522:C:O5'	31:y:522:C:C6	2.66	0.45
31:y:775:G:C4	31:y:776:G:C8	3.05	0.45
31:y:965:A:O2'	31:y:966:M2G:P	2.75	0.45
31:y:1107:C:P	36:d:172:ARG:HD2	2.56	0.45
31:y:1404:5MC:N4	31:y:1497:G:N1	2.56	0.45
31:y:1501:C:P	31:y:1504:G:OP1	2.74	0.45
32:z:23:C:O5'	32:z:23:C:H6	2.00	0.45
37:e:13:ARG:HD3	37:e:36:ARG:O	2.17	0.45
38:f:95:ALA:CB	38:f:98:THR:HB	2.47	0.45
38:f:97:GLY:CA	38:f:117:ASP:OD1	2.64	0.45
40:h:126:ASP:HB3	40:h:132:GLY:N	2.32	0.45
43:k:40:LEU:CD2	43:k:69:ASN:O	2.64	0.45
44:l:90:GLY:O	44:l:93:GLN:HB3	2.17	0.45
47:o:9:LYS:C	47:o:11:LYS:H	2.22	0.45
49:q:17:TYR:O	49:q:18:ARG:HG3	2.17	0.45
49:q:32:TYR:CD1	49:q:32:TYR:O	2.70	0.45
49:q:58:TYR:CD2	49:q:58:TYR:C	2.93	0.45
53:u:81:LYS:C	53:u:83:ARG:N	2.72	0.45
1:w:82:G:C2	1:w:83:G:N2	2.85	0.45
1:w:95:G:H21	25:W:41:ILE:CD1	2.29	0.45
1:w:1022:G:C2	1:w:1140:C:N3	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1041:C:H2'	1:w:1042:G:O4'	2.16	0.45
1:w:1252:G:H2'	1:w:1253:A:C4	2.52	0.45
1:w:1314:C:P	1:w:1332:G:H5'	2.56	0.45
1:w:1421:G:P	1:w:1421:G:H8	2.39	0.45
1:w:1792:G:H2'	1:w:1793:C:C6	2.52	0.45
1:w:1952:A:H2'	1:w:1953:A:O4'	2.16	0.45
1:w:2089:U:C2'	1:w:2090:G:C8	3.00	0.45
1:w:2262:U:O4	1:w:2279:G:C6	2.69	0.45
1:w:2418:A:C5	1:w:2419:U:C4	3.04	0.45
1:w:2512:C:H4'	5:C:122:PHE:CE2	2.43	0.45
1:w:2562:U:C2	1:w:2563:U:O4'	2.70	0.45
1:w:2712:U:OP1	1:w:2714:G:C4'	2.60	0.45
1:w:2781:A:C8	1:w:2781:A:OP1	2.69	0.45
1:w:2799:A:H8	1:w:2799:A:P	2.39	0.45
1:w:2810:A:N6	1:w:2891:G:C2'	2.80	0.45
1:w:2821:A:H2'	1:w:2822:G:C5'	2.47	0.45
4:B:35:LYS:CB	4:B:36:PRO:CA	2.95	0.45
4:B:63:ARG:CG	4:B:63:ARG:NH1	2.72	0.45
4:B:186:HIS:HB3	4:B:189:CYS:SG	2.56	0.45
5:C:183:LEU:CD1	5:C:183:LEU:C	2.89	0.45
8:F:43:VAL:HB	8:F:53:GLU:H	1.82	0.45
8:F:88:LEU:HD12	8:F:130:ARG:HD2	1.99	0.45
9:G:113:ARG:HB2	9:G:130:TYR:CE2	2.52	0.45
14:L:38:VAL:HG23	14:L:39:PRO:CD	2.47	0.45
14:L:80:PHE:O	14:L:84:ALA:HB3	2.17	0.45
15:M:26:LEU:HD21	15:M:85:VAL:CG1	2.46	0.45
16:N:25:GLY:O	16:N:48:ILE:HG23	2.17	0.45
17:O:90:VAL:C	17:O:92:ARG:N	2.74	0.45
22:T:151:HIS:HB3	22:T:168:GLU:C	2.42	0.45
23:U:13:GLY:O	23:U:14:ARG:HB2	2.16	0.45
23:U:17:GLN:O	23:U:18:ALA:CB	2.64	0.45
24:V:19:GLN:H	24:V:44:PRO:HD3	1.82	0.45
31:y:146:G:H8	31:y:146:G:O5'	1.99	0.45
31:y:227:G:N3	49:q:62:VAL:HG12	2.32	0.45
31:y:375:U:O4	31:y:376:G:O6	2.34	0.45
31:y:408:A:C4	31:y:409:G:N7	2.84	0.45
31:y:599:C:O2'	31:y:600:C:H5'	2.17	0.45
31:y:1013:G:H1'	31:y:1016:A:N1	2.31	0.45
31:y:1130:A:N3	31:y:1130:A:C2'	2.78	0.45
31:y:1501:C:P	31:y:1504:G:C8	3.09	0.45
31:y:1528:U:H4'	31:y:1529:G:C2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:z:57:A:C2’	32:z:58:A:C5’	2.94	0.45
33:2:66:A:C6	33:2:67:A:N6	2.84	0.45
33:2:67:A:H2’	33:2:68:U:H6	1.82	0.45
35:c:125:PRO:CA	35:c:128:GLU:HB2	2.44	0.45
36:d:25:GLY:O	36:d:26:LYS:HB2	2.15	0.45
37:e:75:PHE:O	37:e:78:LEU:HD22	2.16	0.45
38:f:92:LYS:HD3	38:f:119:LEU:HD22	1.99	0.45
40:h:22:LEU:O	40:h:25:ALA:HB3	2.17	0.45
40:h:107:ALA:CB	40:h:134:ALA:H	2.29	0.45
40:h:117:ALA:O	40:h:120:ILE:HB	2.17	0.45
42:j:23:ASN:O	42:j:23:ASN:CG	2.59	0.45
45:m:23:VAL:HG13	45:m:30:PRO:HG3	1.97	0.45
48:p:78:TYR:O	48:p:80:ALA:N	2.50	0.45
49:q:38:TYR:CE2	49:q:50:LYS:HB2	2.51	0.45
51:s:15:ARG:N	51:s:16:PRO:CD	2.80	0.45
51:s:38:GLU:O	51:s:42:ARG:NH2	2.48	0.45
1:w:270(F):G:C6	1:w:270(W):G:N2	2.85	0.45
1:w:270(W):G:N2	1:w:270(X):G:C6	2.84	0.45
1:w:363(F):U:H2’	1:w:363(G):A:H8	1.81	0.45
1:w:589:C:O5’	1:w:589:C:H6	1.99	0.45
1:w:724:U:C4	1:w:725:G:C5	3.04	0.45
1:w:852:G:H2’	1:w:853:G:O4’	2.17	0.45
1:w:884:C:N4	1:w:885:C:H1’	2.32	0.45
1:w:958:U:N3	2:x:90:C:OP2	2.46	0.45
1:w:1133:U:H2’	1:w:1137:G:OP1	2.16	0.45
1:w:1366:A:N6	1:w:1367:A:N3	2.65	0.45
1:w:1370:C:N4	1:w:1371:G:C6	2.84	0.45
1:w:1491:G:H2’	1:w:1491:G:N3	2.30	0.45
1:w:1504:C:H2’	1:w:1505:C:O4’	2.16	0.45
1:w:1574:C:H2’	1:w:1575:C:H6	1.81	0.45
1:w:1758:G:O5’	1:w:1759:A:OP2	2.35	0.45
1:w:2013:A:O3’	19:Q:96:ILE:HG23	2.16	0.45
1:w:2175:C:H1’	3:A:217:THR:O	2.16	0.45
1:w:2249:U:O3’	1:w:2275:C:C5	2.70	0.45
1:w:2426:A:C3’	1:w:2427:C:C5’	2.73	0.45
1:w:2512:C:C4’	5:C:122:PHE:CE2	2.99	0.45
1:w:2514:U:C2	1:w:2515:C:C5	3.05	0.45
1:w:2525:G:C2	1:w:2539:C:C5	3.04	0.45
1:w:2562:U:O2	1:w:2563:U:O4’	2.35	0.45
1:w:2704:C:C4	1:w:2705:A:C8	3.05	0.45
1:w:2712(B):A:H3’	1:w:2713:A:O5’	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:4:ILE:C	5:C:5:LEU:HD12	2.42	0.45
6:D:125:ALA:HA	6:D:137:TRP:CD1	2.52	0.45
7:E:141:PHE:CB	7:E:144:ILE:HB	2.47	0.45
8:F:88:LEU:HB2	8:F:130:ARG:HG2	1.98	0.45
10:H:29:PRO:HB3	10:H:64:ASP:CB	2.44	0.45
11:I:15:GLY:H	11:I:17:ARG:NH2	2.13	0.45
11:I:101:PRO:HB3	11:I:119:PRO:O	2.15	0.45
11:I:101:PRO:HB2	11:I:120:GLU:C	2.42	0.45
12:J:122:PRO:HG2	12:J:141:ALA:O	2.17	0.45
13:K:24:GLY:O	13:K:25:ASP:CB	2.62	0.45
13:K:103:MET:HE1	13:K:129:THR:HB	1.98	0.45
18:P:3:ALA:O	18:P:13:ARG:HA	2.16	0.45
19:Q:70:TYR:CD2	19:Q:70:TYR:C	2.94	0.45
20:R:27:THR:HG22	20:R:77:LYS:O	2.17	0.45
21:S:67:LEU:CG	21:S:68:HIS:H	2.29	0.45
24:V:12:PRO:HG3	24:V:63:ALA:CB	2.47	0.45
31:y:66:G:C6	31:y:104:G:N3	2.84	0.45
31:y:126:G:C6	31:y:127:G:C6	3.04	0.45
31:y:230:G:N2	31:y:231:G:H1'	2.31	0.45
31:y:298:A:C2	31:y:299:G:C6	3.05	0.45
31:y:362:G:C2'	31:y:364:A:N7	2.80	0.45
31:y:513:C:N4	31:y:539:A:N1	2.65	0.45
31:y:586:C:O4'	31:y:878:G:O3'	2.34	0.45
31:y:894:G:C2'	31:y:895:G:H5'	2.47	0.45
31:y:926:G:OP2	31:y:927:G:OP1	2.33	0.45
31:y:977:A:N1	31:y:1224:G:P	2.90	0.45
31:y:1090:U:H2'	31:y:1091:U:O5'	2.16	0.45
31:y:1350:A:H1'	40:h:33:ASP:OD1	2.16	0.45
31:y:1367:C:H5"	43:k:60:ARG:HH11	1.82	0.45
31:y:1376:U:H2'	31:y:1377:A:H8	1.75	0.45
31:y:1392:G:O2'	31:y:1393:U:H5'	2.17	0.45
31:y:1431:C:H2'	31:y:1432:G:C1'	2.44	0.45
31:y:1462:G:C6	31:y:1463:C:C2	3.04	0.45
35:c:71:VAL:HB	35:c:93:VAL:HG13	1.98	0.45
36:d:173:VAL:O	36:d:173:VAL:HG23	2.17	0.45
37:e:13:ARG:CB	37:e:37:PRO:HA	2.38	0.45
38:f:57:LYS:HD2	38:f:57:LYS:C	2.42	0.45
40:h:31:MET:HA	40:h:36:LYS:CB	2.45	0.45
45:m:28:GLY:O	45:m:29:ALA:HB3	2.17	0.45
45:m:41:THR:HG21	45:m:51:LEU:HD23	1.99	0.45
46:n:19:LEU:O	46:n:21:TYR:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:n:34:LEU:CD1	46:n:41:PRO:HG3	2.37	0.45
48:p:70:LEU:C	48:p:70:LEU:HD13	2.42	0.45
51:s:74:ARG:CD	51:s:81:PHE:HA	2.47	0.45
53:u:44:ALA:CB	53:u:88:VAL:HG13	2.46	0.45
1:w:255:A:N6	1:w:256:A:C6	2.84	0.45
1:w:460:A:OP1	28:Z:41:ARG:NH2	2.49	0.45
1:w:514:A:C6	1:w:515:A:N6	2.85	0.45
1:w:624:C:C4	1:w:625:G:N7	2.85	0.45
1:w:660:G:O3'	6:D:34:TRP:CZ2	2.70	0.45
1:w:857:C:H5"	23:U:44:ARG:HH21	1.80	0.45
1:w:929:G:HO2'	1:w:930:U:H5'	1.82	0.45
1:w:945:A:C4	1:w:2448:A:C2	3.05	0.45
1:w:957:A:H5'	13:K:76:LYS:CA	2.47	0.45
1:w:1019:U:O2'	1:w:1021:A:C2	2.65	0.45
1:w:1170:G:C2'	1:w:1171:G:H8	2.27	0.45
1:w:1221:C:H2'	1:w:1221(A):C:H6	1.82	0.45
1:w:1364:G:C5	24:V:8:SER:HA	2.51	0.45
1:w:1718:G:N2	1:w:1742:C:O2	2.50	0.45
1:w:1789:A:C5'	4:B:221:VAL:HA	2.41	0.45
1:w:1906:G:N3	1:w:1929:G:C6	2.85	0.45
1:w:1959:G:C5	1:w:1960:A:N7	2.85	0.45
1:w:2018:G:H2'	1:w:2019:A:C8	2.51	0.45
1:w:2048:G:C2	1:w:2621:A:C2	3.05	0.45
1:w:2286:A:H1'	1:w:2287:A:C5	2.51	0.45
1:w:2303:G:H4'	7:E:125:PHE:C	2.42	0.45
1:w:2357:U:OP1	23:U:18:ALA:N	2.50	0.45
1:w:2594:C:C2	1:w:2595:G:C8	3.04	0.45
1:w:2615:U:C2	27:Y:7:PRO:HB3	2.51	0.45
1:w:2686:G:N2	1:w:2723:C:O2	2.41	0.45
1:w:2809:A:H2'	1:w:2810:A:C8	2.52	0.45
1:w:2818:G:O2'	1:w:2819:G:H5'	2.16	0.45
2:x:2:C:N4	2:x:3:C:N4	2.64	0.45
2:x:42:C:H4'	7:E:67:LYS:O	2.16	0.45
3:A:52:PRO:CG	3:A:167:ASP:HA	2.46	0.45
4:B:5:LYS:O	4:B:6:PHE:O	2.33	0.45
4:B:36:PRO:HG2	4:B:61:LEU:HG	1.98	0.45
4:B:155:LEU:O	4:B:156:ALA:CB	2.65	0.45
4:B:203:ASN:O	4:B:205:VAL:N	2.50	0.45
5:C:48:GLN:HA	5:C:79:ARG:O	2.17	0.45
5:C:92:THR:HB	5:C:93:VAL:H	1.60	0.45
5:C:100:GLU:O	5:C:172:VAL:HG23	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:28:VAL:HG12	7:E:29:TRP:N	2.31	0.45
7:E:49:ASP:O	7:E:50:ALA:HB3	2.17	0.45
7:E:55:LYS:HD3	7:E:56:ALA:H	1.81	0.45
7:E:135:LEU:C	7:E:136:ARG:HE	2.25	0.45
7:E:171:ALA:O	7:E:175:LEU:HB2	2.16	0.45
9:G:29:TYR:O	9:G:32:PRO:HD2	2.16	0.45
10:H:58:ARG:HA	10:H:139:LEU:HD13	1.98	0.45
12:J:88:LEU:O	12:J:90:ARG:N	2.49	0.45
13:K:72:LYS:HG2	13:K:73:PRO:HD2	1.97	0.45
13:K:124:LYS:HG3	13:K:125:LEU:N	2.32	0.45
15:M:68:GLN:HA	15:M:71:ARG:HG2	1.99	0.45
17:O:103:PRO:O	17:O:104:GLN:C	2.60	0.45
20:R:81:VAL:CG2	20:R:82:GLN:H	2.19	0.45
21:S:72:VAL:O	21:S:72:VAL:HG13	2.17	0.45
23:U:51:VAL:HG21	23:U:79:VAL:HG23	1.99	0.45
24:V:12:PRO:HG2	24:V:63:ALA:HB2	1.99	0.45
24:V:24:ALA:HB2	24:V:39:LYS:HZ2	1.82	0.45
24:V:86:SER:N	24:V:87:PRO:CD	2.79	0.45
25:W:45:SER:O	25:W:46:GLN:CB	2.65	0.45
31:y:297:G:H2'	31:y:298:A:N7	2.29	0.45
31:y:435:C:C4	31:y:436:C:N4	2.85	0.45
31:y:501:C:OP1	45:m:116:ARG:HB3	2.17	0.45
31:y:597:G:C2	41:i:94:TYR:CE2	3.04	0.45
31:y:1015:A:H2'	31:y:1016:A:C4'	2.46	0.45
31:y:1069:C:H1'	31:y:1192:C:C2	2.51	0.45
31:y:1305:G:H5"	54:v:5:ASP:HB2	1.99	0.45
31:y:1311:G:N1	31:y:1312:G:C5	2.84	0.45
31:y:1451:A:O5'	31:y:1452:C:C5	2.69	0.45
31:y:1506:U:C2'	31:y:1507:A:C5'	2.87	0.45
33:2:7:U:N3	33:2:67:A:N6	2.65	0.45
37:e:127:THR:HG22	37:e:148:VAL:O	2.16	0.45
37:e:157:LEU:C	37:e:160:GLN:H	2.24	0.45
37:e:191:ARG:HH21	37:e:195:ALA:HB1	1.81	0.45
39:g:2:ARG:NH2	48:p:2:PRO:HG2	2.31	0.45
40:h:80:VAL:HG21	40:h:85:TYR:CE1	2.51	0.45
40:h:120:ILE:O	40:h:121:ALA:C	2.59	0.45
45:m:53:LYS:HD2	45:m:53:LYS:H	1.82	0.45
47:o:11:LYS:O	47:o:12:ARG:HB2	2.16	0.45
47:o:25:VAL:N	47:o:39:LEU:HD23	2.16	0.45
49:q:17:TYR:HB2	49:q:39:TYR:HD2	1.81	0.45
50:r:56:VAL:HG22	50:r:85:VAL:HG22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:r:56:VAL:O	50:r:77:VAL:HB	2.17	0.45
52:t:80:TYR:O	52:t:81:ARG:HB2	2.17	0.45
1:w:255:A:OP1	1:w:255:A:H4'	2.17	0.45
1:w:270(Q):C:H5"	9:G:45:LYS:HZ3	1.82	0.45
1:w:467:G:H2'	1:w:468:G:H8	1.82	0.45
1:w:701:G:H2'	1:w:702:G:H8	1.82	0.45
1:w:786:C:H5"	1:w:1780:A:N7	2.32	0.45
1:w:1026:U:H2'	1:w:1026:U:O2	2.16	0.45
1:w:1171:G:C2'	1:w:1173:G:H5'	2.45	0.45
1:w:1273:U:C5	1:w:2003:G:H1'	2.52	0.45
1:w:1537:C:H3'	1:w:1538:G:H4'	1.99	0.45
1:w:1560:G:O2'	1:w:1561:G:H5'	2.17	0.45
1:w:1654:A:C2	5:C:113:PHE:HB3	2.52	0.45
1:w:1669:A:C2	1:w:1670:C:C6	3.04	0.45
1:w:1782:C:H2'	1:w:1783:A:C5'	2.39	0.45
1:w:1855:G:H2'	1:w:1856:G:H8	1.80	0.45
1:w:1944:U:C5	1:w:1955:U:H6	2.35	0.45
1:w:1953:A:O4'	1:w:2560:C:O4'	2.34	0.45
1:w:2053:G:H4'	5:C:145:LYS:HA	1.99	0.45
1:w:2065:C:C3'	1:w:2066:C:H5"	2.43	0.45
1:w:2239:G:OP2	4:B:232:PRO:HB2	2.17	0.45
1:w:2253:G:H2'	1:w:2254:C:C6	2.52	0.45
1:w:2311:A:OP1	1:w:2312:U:C4	2.70	0.45
1:w:2669:G:C2	1:w:2670:A:H1'	2.52	0.45
1:w:2723:C:P	14:L:4:LEU:HD12	2.57	0.45
1:w:2786:U:HO2'	5:C:63:LEU:N	2.14	0.45
1:w:2822:G:OP2	5:C:110:GLY:C	2.60	0.45
2:x:88:C:O5'	2:x:88:C:C6	2.52	0.45
4:B:20:ASP:HB3	4:B:24:ILE:HG13	1.98	0.45
4:B:181:GLU:HA	4:B:273:ARG:HA	1.98	0.45
4:B:206:LEU:H	4:B:206:LEU:HD22	1.82	0.45
5:C:4:ILE:HG22	5:C:91:VAL:C	2.41	0.45
6:D:117:LYS:NZ	6:D:186:ARG:HA	2.31	0.45
8:F:153:LYS:NZ	8:F:163:TYR:HD1	2.11	0.45
9:G:33:ARG:HG3	9:G:34:GLY:H	1.82	0.45
10:H:27:TYR:CZ	17:O:64:ARG:HD3	2.51	0.45
11:I:79:PHE:CD2	16:N:70:VAL:HG11	2.40	0.45
12:J:12:ALA:O	12:J:13:ASN:C	2.60	0.45
13:K:109:VAL:HG11	13:K:113:GLN:OE1	2.16	0.45
14:L:1:MET:HB2	14:L:4:LEU:O	2.17	0.45
14:L:5:LYS:CG	14:L:6:SER:N	2.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:94:TYR:HB2	14:L:95:THR:H	1.64	0.45
15:M:74:ALA:O	15:M:77:ALA:HB3	2.17	0.45
16:N:89:VAL:HG12	16:N:121:ILE:HG13	1.99	0.45
19:Q:12:ILE:CG2	19:Q:13:SER:H	2.27	0.45
22:T:124:ILE:CG1	22:T:125:LEU:N	2.80	0.45
23:U:15:ASP:CB	23:U:20:ARG:HG3	2.46	0.45
23:U:30:VAL:O	23:U:31:VAL:HG13	2.16	0.45
24:V:20:ARG:HA	24:V:41:ARG:HA	1.97	0.45
26:X:8:LEU:HD23	26:X:33:GLN:H	1.81	0.45
26:X:10:LYS:HB2	26:X:53:LEU:HB2	1.98	0.45
31:y:53:A:C6	31:y:54:C:C4	3.04	0.45
31:y:136:C:C2'	31:y:137:C:O5'	2.65	0.45
31:y:192:U:O2'	53:u:60:GLU:HG3	2.17	0.45
31:y:209:U:H5"	31:y:210:U:OP1	2.17	0.45
31:y:404:U:N3	31:y:405:U:C5	2.85	0.45
31:y:418:C:N3	31:y:426:G:N2	2.65	0.45
31:y:667:G:OP2	31:y:732:C:O2'	2.29	0.45
31:y:733:A:O2'	31:y:734:G:C5'	2.64	0.45
31:y:754:C:O2	31:y:754:C:C2'	2.63	0.45
31:y:937:A:H8	31:y:937:A:O5'	1.99	0.45
31:y:1077:G:N1	31:y:1079:G:H5"	2.32	0.45
31:y:1120:G:H2'	31:y:1121:U:H5'	1.99	0.45
31:y:1128:C:O2'	31:y:1148:U:O2	2.26	0.45
31:y:1149:C:H2'	31:y:1150:U:H5'	1.97	0.45
31:y:1244:C:N4	31:y:1245:A:H62	2.15	0.45
31:y:1249:C:H1'	42:j:70:LYS:HZ1	1.76	0.45
31:y:1459:C:C5	31:y:1460:A:N7	2.85	0.45
32:z:10:G:C2	32:z:11:A:C5	3.05	0.45
35:c:97:TRP:CH2	35:c:102:LEU:HD12	2.51	0.45
35:c:169:LYS:HB2	35:c:169:LYS:NZ	2.32	0.45
36:d:174:PRO:O	36:d:176:HIS:N	2.49	0.45
41:i:40:ALA:HB2	41:i:46:LYS:H	1.82	0.45
45:m:45:LYS:HB2	45:m:45:LYS:HZ3	1.82	0.45
45:m:86:GLY:C	45:m:98:HIS:N	2.69	0.45
49:q:27:LYS:HB3	49:q:27:LYS:NZ	2.32	0.45
50:r:5:VAL:O	50:r:6:LEU:HB3	2.17	0.45
1:w:95:G:H21	25:W:41:ILE:HD11	1.81	0.45
1:w:459:U:OP1	28:Z:40:TRP:N	2.49	0.45
1:w:491:G:H2'	1:w:492:A:H5'	1.99	0.45
1:w:673:C:O2'	6:D:76:PRO:HG2	2.16	0.45
1:w:777:A:H2'	1:w:778:G:C4'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:922:U:H2'	1:w:923:C:C6	2.51	0.45
1:w:1265:A:OP2	1:w:2615:U:OP1	2.34	0.45
1:w:1358:G:C3'	1:w:1371:G:H1	2.29	0.45
1:w:1422:G:H8	1:w:1422:G:O5'	1.99	0.45
1:w:1863:G:HO2'	1:w:1864:U:P	2.38	0.45
1:w:1906:G:C2	1:w:1929:G:N1	2.85	0.45
1:w:2038:G:C6	1:w:2039:C:C4	3.05	0.45
1:w:2063:C:H2'	1:w:2064:C:O4'	2.17	0.45
1:w:2267:A:OP2	1:w:2268:A:H4'	2.17	0.45
1:w:2429:G:OP2	1:w:2429:G:H2'	2.17	0.45
1:w:2792:G:H2'	1:w:2793:G:C8	2.52	0.45
1:w:2834:G:N2	1:w:2883:A:H62	2.15	0.45
2:x:32:C:O2'	2:x:52:A:N6	2.40	0.45
4:B:221:VAL:C	4:B:223:GLY:N	2.72	0.45
5:C:55:ASN:HD21	5:C:75:VAL:CG2	2.30	0.45
6:D:19:LEU:C	6:D:21:ALA:H	2.25	0.45
7:E:32:PRO:HA	7:E:162:THR:OG1	2.17	0.45
8:F:85:LYS:O	8:F:132:ARG:HG3	2.17	0.45
14:L:27:SER:O	14:L:29:LEU:N	2.39	0.45
14:L:63:ARG:NH2	14:L:76:VAL:HG12	2.11	0.45
15:M:68:GLN:HA	15:M:71:ARG:HD3	1.99	0.45
19:Q:21:VAL:HG22	19:Q:22:ASP:N	2.31	0.45
21:S:65:ALA:CB	21:S:66:PRO:HD3	2.46	0.45
21:S:77:PRO:O	21:S:78:ALA:HB2	2.17	0.45
23:U:70:GLN:HB3	23:U:71:ASP:H	1.63	0.45
26:X:23:LEU:HA	26:X:26:LEU:CD1	2.38	0.45
31:y:37:U:N3	31:y:38:G:H1'	2.32	0.45
31:y:50:A:N3	31:y:52:G:C1'	2.80	0.45
31:y:189:U:O2	50:r:63:ARG:CZ	2.64	0.45
31:y:216:G:C5	31:y:217:C:C4	3.05	0.45
31:y:340:U:O5'	31:y:340:U:H6	2.00	0.45
31:y:341:C:H2'	31:y:342:C:C6	2.52	0.45
31:y:427:U:O4	31:y:428:G:C6	2.70	0.45
31:y:548:G:C2'	31:y:549:C:H5'	2.46	0.45
31:y:556:C:H2'	31:y:557:G:C5'	2.47	0.45
31:y:880:C:OP2	45:m:5:THR:CG2	2.65	0.45
31:y:883:C:C2'	31:y:884:U:H5'	2.47	0.45
31:y:1092:A:C1'	31:y:1183:A:H62	2.28	0.45
31:y:1197:G:C2'	31:y:1198:G:O5'	2.64	0.45
31:y:1199:U:H4'	43:k:54:PHE:CZ	2.52	0.45
31:y:1296:C:H1'	31:y:1302:U:N3	2.13	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1307:U:H3'	31:y:1308:U:C6	2.52	0.45
31:y:1323:G:C2'	31:y:1324:A:H8	2.30	0.45
31:y:1346:A:N6	31:y:1375:A:C8	2.76	0.45
31:y:1470:G:C2	31:y:1471:G:C1'	3.00	0.45
32:z:44:A:N6	32:z:45:G:N1	2.65	0.45
32:z:66:C:N4	32:z:67:C:C4	2.85	0.45
36:d:59:ARG:HB3	36:d:60:ALA:H	1.43	0.45
37:e:19:LEU:HD13	37:e:21:LEU:HD22	1.98	0.45
37:e:76:ARG:NH2	37:e:80:GLU:HB2	2.31	0.45
38:f:95:ALA:O	38:f:117:ASP:HB3	2.16	0.45
40:h:27:ILE:CG1	40:h:40:ALA:HB2	2.47	0.45
40:h:108:ALA:C	40:h:110:GLN:H	2.24	0.45
41:i:96:GLY:H	41:i:99:GLU:HB2	1.81	0.45
41:i:121:ASP:O	41:i:125:ARG:HG3	2.17	0.45
42:j:19:LEU:CD1	42:j:84:ALA:HB2	2.47	0.45
42:j:93:ARG:HD3	42:j:93:ARG:C	2.42	0.45
45:m:23:VAL:HA	45:m:97:TYR:HH	1.80	0.45
45:m:64:GLU:CD	45:m:64:GLU:N	2.75	0.45
46:n:22:ILE:CG2	46:n:23:TYR:N	2.78	0.45
46:n:107:ALA:C	46:n:109:THR:N	2.75	0.45
47:o:40:CYS:SG	47:o:40:CYS:O	2.75	0.45
53:u:29:LYS:O	53:u:33:ILE:HG12	2.16	0.45
53:u:62:LEU:HD12	53:u:63:ILE:HG13	1.98	0.45
54:v:24:ARG:CB	54:v:25:LYS:HD2	2.47	0.45
1:w:66:C:N4	1:w:67:U:C4	2.85	0.45
1:w:77:C:H4'	25:W:53:LEU:HG	1.98	0.45
1:w:309:G:C4	1:w:330:A:C6	3.05	0.45
1:w:492:A:H3'	1:w:493:G:C8	2.52	0.45
1:w:535:C:H2'	1:w:536:A:C8	2.52	0.45
1:w:569:U:O2'	1:w:946:G:C2	2.70	0.45
1:w:578:A:O5'	1:w:579:G:OP2	2.33	0.45
1:w:670:A:H8	1:w:670:A:P	2.40	0.45
1:w:817:C:H2'	1:w:818:G:O4'	2.17	0.45
1:w:1001:A:H3'	1:w:1002:G:C8	2.52	0.45
1:w:1043:C:C2	1:w:1044:G:C8	3.05	0.45
1:w:1135:C:H5"	1:w:1137:G:OP1	2.17	0.45
1:w:1701:A:OP1	1:w:1763:G:N1	2.33	0.45
1:w:1820:U:N3	4:B:202:LYS:HA	2.31	0.45
1:w:1920:C:H5"	31:y:1517:G:C8	2.52	0.45
1:w:1950:G:N2	1:w:1957:C:N4	2.65	0.45
1:w:2015:A:C8	1:w:2016:U:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2073:C:H2'	1:w:2074:U:O4'	2.17	0.45
1:w:2160:G:C8	1:w:2160:G:H5'	2.52	0.45
1:w:2527:C:O2'	1:w:2528:U:H5'	2.15	0.45
1:w:2535:G:H2'	1:w:2536:G:H8	1.82	0.45
1:w:2540:C:H3'	1:w:2541:A:H8	1.82	0.45
1:w:2562:U:O2	1:w:2563:U:H5'	2.17	0.45
1:w:2598:A:OP1	4:B:234:GLY:O	2.35	0.45
1:w:2723:C:C4	1:w:2724:C:C5	3.05	0.45
1:w:2838:G:O2'	14:L:45:ARG:CD	2.65	0.45
2:x:76:G:C5	2:x:77:U:C2	3.04	0.45
2:x:117:G:C2	2:x:118:G:C8	3.05	0.45
4:B:140:THR:HG22	4:B:165:ILE:HB	1.99	0.45
4:B:147:LEU:HG	4:B:148:GLU:N	2.32	0.45
5:C:16:ARG:HB2	5:C:19:ARG:HG3	1.99	0.45
5:C:93:VAL:CA	5:C:182:LEU:HD22	2.43	0.45
9:G:31:LEU:HD21	9:G:38:LEU:HD23	1.98	0.45
9:G:93:THR:O	9:G:94:ALA:C	2.59	0.45
11:I:66:LYS:H	11:I:82:ASN:HD21	1.64	0.45
11:I:91:LEU:HB2	11:I:111:PHE:CE1	2.52	0.45
13:K:7:MET:C	13:K:8:LYS:HG2	2.42	0.45
13:K:8:LYS:NZ	13:K:8:LYS:H	2.15	0.45
17:O:103:PRO:O	17:O:106:PHE:CD2	2.70	0.45
18:P:43:GLU:O	18:P:44:LYS:CB	2.62	0.45
18:P:50:PRO:C	18:P:51:VAL:HG23	2.42	0.45
18:P:89:GLN:HB3	18:P:89:GLN:HE21	1.65	0.45
19:Q:89:ALA:O	19:Q:91:GLY:N	2.49	0.45
20:R:84:ALA:N	20:R:85:PRO:CD	2.80	0.45
23:U:23:VAL:HA	23:U:38:VAL:HA	1.98	0.45
28:Z:1:MET:HE2	28:Z:1:MET:HB3	1.77	0.45
31:y:19:C:H6	31:y:19:C:O5'	2.00	0.45
31:y:37:U:O4	31:y:397:A:C2	2.69	0.45
31:y:39:G:C8	31:y:497:U:O4	2.69	0.45
31:y:363:A:OP1	45:m:33:ARG:HB3	2.17	0.45
31:y:498:A:O2'	31:y:500:G:P	2.75	0.45
31:y:507:C:P	31:y:509:A:OP1	2.74	0.45
31:y:529:G:C2'	31:y:530:G:H5"	2.44	0.45
31:y:687:A:O2'	31:y:688:G:C5'	2.64	0.45
31:y:833:U:H2'	31:y:834:C:H6	1.68	0.45
31:y:863:U:H2'	31:y:865:A:OP2	2.17	0.45
31:y:947:G:H4'	31:y:1332:A:H2	1.82	0.45
31:y:966:M2G:O6	31:y:1400:5MC:N3	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1100:C:H2'	31:y:1102:A:H5'	1.99	0.45
31:y:1117:G:N1	31:y:1184:G:C2	2.85	0.45
31:y:1296:C:H3'	31:y:1297:C:C6	2.52	0.45
32:z:29:G:O2'	32:z:30:G:H5'	2.16	0.45
33:2:10:G:H2'	33:2:11:C:C6	2.52	0.45
33:2:72:C:C4	33:2:73:A:N6	2.84	0.45
35:c:43:ASP:OD2	35:c:45:GLN:HB2	2.16	0.45
36:d:60:ALA:O	36:d:61:ALA:HB3	2.16	0.45
36:d:99:VAL:HG23	36:d:99:VAL:O	2.17	0.45
37:e:118:ARG:HG3	37:e:119:GLN:N	2.32	0.45
37:e:140:VAL:HG12	37:e:141:ARG:O	2.17	0.45
38:f:143:ARG:HG3	38:f:147:ASP:CG	2.42	0.45
40:h:5:ARG:HD2	40:h:5:ARG:C	2.42	0.45
40:h:120:ILE:O	40:h:124:LEU:HG	2.16	0.45
40:h:153:HIS:HD1	40:h:154:TYR:N	2.15	0.45
44:l:70:LYS:C	44:l:72:ALA:H	2.25	0.45
45:m:84:ILE:HG22	45:m:99:ILE:HD12	1.97	0.45
49:q:48:TRP:CE3	49:q:48:TRP:N	2.80	0.45
1:w:246:C:N4	1:w:247:G:C6	2.86	0.44
1:w:304:G:H2'	1:w:305:U:C5	2.52	0.44
1:w:321:G:C2	6:D:160:ARG:NH1	2.85	0.44
1:w:528:A:H2'	1:w:2042:A:C2	2.51	0.44
1:w:537:C:C6	1:w:537:C:OP2	2.70	0.44
1:w:598:G:O2'	12:J:13:ASN:CG	2.60	0.44
1:w:633:A:C5	1:w:634:C:H1'	2.52	0.44
1:w:782:A:H1'	1:w:783:A:C6	2.52	0.44
1:w:826:U:H3'	1:w:828:U:C6	2.52	0.44
1:w:855:G:H21	23:U:27:GLU:CB	2.30	0.44
1:w:886:C:OP1	1:w:890:A:C6	2.70	0.44
1:w:1097:U:H2'	1:w:1098:A:H5'	1.98	0.44
1:w:1131:G:O2'	1:w:1132:A:H8	2.01	0.44
1:w:1223:G:O6	18:P:88:ARG:NH1	2.50	0.44
1:w:1268:A:H2'	1:w:1269:A:H8	1.82	0.44
1:w:1303:G:OP1	1:w:1304:C:OP2	2.35	0.44
1:w:1343:G:N2	1:w:1384:A:O2'	2.48	0.44
1:w:1344:G:C2	1:w:1404:C:C2	3.05	0.44
1:w:1538:G:N1	1:w:1539:G:O6	2.50	0.44
1:w:1570:A:C2'	1:w:1571:A:C8	2.87	0.44
1:w:1652:A:O2'	1:w:1653:G:H5'	2.18	0.44
1:w:1848:A:H62	31:y:702:A:N6	2.14	0.44
1:w:2015:A:H3'	1:w:2016:U:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2048:G:C6	1:w:2049:G:N7	2.85	0.44
1:w:2073:C:OP1	4:B:229:VAL:HG13	2.17	0.44
1:w:2120:G:C2	1:w:2121:G:C8	3.05	0.44
1:w:2213:U:C5'	1:w:2215:G:C8	2.98	0.44
1:w:2478:A:O2'	1:w:2479:G:H5'	2.16	0.44
1:w:2582:G:H2'	1:w:2582:G:N3	2.32	0.44
1:w:2590:A:C2	1:w:2604:U:O2	2.69	0.44
1:w:2593:U:H2'	1:w:2594:C:C6	2.52	0.44
1:w:2683:C:O2	1:w:2684:U:C6	2.69	0.44
1:w:2740:A:C6	1:w:2764:A:C8	3.04	0.44
1:w:2846:G:H2'	1:w:2847:U:C6	2.52	0.44
2:x:24:G:N2	2:x:56:G:N2	2.65	0.44
2:x:43:C:O2	2:x:45:A:N7	2.50	0.44
2:x:66:A:N1	2:x:108:C:C1'	2.77	0.44
4:B:69:ARG:NH1	4:B:76:PRO:HD3	2.32	0.44
4:B:262:ARG:O	4:B:264:LYS:N	2.40	0.44
5:C:192:ASN:HD22	5:C:192:ASN:C	2.24	0.44
6:D:67:ARG:O	6:D:68:ALA:CB	2.64	0.44
6:D:130:LYS:HB3	6:D:133:GLU:HB2	1.99	0.44
8:F:12:PRO:O	8:F:15:VAL:HG13	2.17	0.44
8:F:167:GLU:O	8:F:168:PRO:C	2.60	0.44
8:F:177:GLY:O	8:F:178:ALA:CB	2.65	0.44
10:H:160:LYS:HA	10:H:160:LYS:HD3	1.68	0.44
13:K:49:ALA:O	13:K:52:VAL:HG22	2.17	0.44
13:K:134:ARG:HH12	13:K:137:TYR:HE2	1.63	0.44
14:L:66:VAL:O	14:L:68:ARG:NH1	2.50	0.44
15:M:23:ARG:HB2	15:M:85:VAL:O	2.17	0.44
16:N:11:GLU:C	16:N:57:PHE:CZ	2.94	0.44
17:O:98:LEU:HD12	17:O:106:PHE:CD1	2.52	0.44
18:P:40:LEU:HB2	18:P:50:PRO:CB	2.45	0.44
19:Q:46:PHE:C	19:Q:48:ALA:N	2.73	0.44
20:R:32:PRO:HG3	20:R:72:LYS:CE	2.44	0.44
20:R:48:LYS:O	20:R:49:VAL:C	2.60	0.44
20:R:48:LYS:O	20:R:50:LYS:N	2.50	0.44
21:S:48:ALA:HA	21:S:56:PRO:HA	1.98	0.44
22:T:78:LYS:HD2	22:T:78:LYS:N	2.31	0.44
25:W:41:ILE:CD1	25:W:44:LEU:HD13	2.46	0.44
31:y:193:C:O2'	31:y:194:C:H5'	2.18	0.44
31:y:322:C:C5	31:y:323:U:C4	3.05	0.44
31:y:455:C:H2'	31:y:456:C:H6	1.82	0.44
31:y:575:G:O2'	31:y:576:G:O5'	2.28	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:601:C:O2'	31:y:602:A:H5'	2.17	0.44
31:y:687:A:O2'	31:y:688:G:OP2	2.34	0.44
31:y:745:C:H4'	31:y:836:G:N2	2.32	0.44
31:y:909:A:C6	31:y:910:C:C2	3.04	0.44
31:y:993:G:H2'	31:y:993:G:N3	2.32	0.44
31:y:1047:G:C2'	31:y:1048:G:H5'	2.46	0.44
31:y:1198:G:C4	31:y:1199:U:C5	3.05	0.44
31:y:1292:U:H4'	42:j:38:GLN:HG2	1.99	0.44
31:y:1297:C:C2'	31:y:1297:C:O2	2.64	0.44
31:y:1304:G:N2	31:y:1332:A:OP2	2.37	0.44
31:y:1358:U:H2'	31:y:1359:C:O5'	2.18	0.44
31:y:1509:C:O2'	31:y:1510:U:H5'	2.17	0.44
32:z:11:A:H2'	32:z:12:G:C8	2.51	0.44
33:2:21:A:N6	33:2:46:G:O2'	2.50	0.44
36:d:70:VAL:O	36:d:106:VAL:HG23	2.17	0.44
36:d:151:VAL:O	36:d:199:LYS:O	2.35	0.44
37:e:74:GLN:HA	37:e:77:ASN:CG	2.42	0.44
44:l:53:SER:C	44:l:55:LYS:H	2.24	0.44
45:m:5:THR:HG1	45:m:8:GLN:H	1.64	0.44
45:m:103:VAL:HG12	45:m:104:TYR:H	1.82	0.44
46:n:106:ASN:O	46:n:107:ALA:HB3	2.17	0.44
51:s:50:ILE:HD11	51:s:70:ILE:HG21	1.98	0.44
53:u:68:LYS:HG3	53:u:68:LYS:O	2.17	0.44
53:u:77:ALA:O	53:u:78:ALA:C	2.60	0.44
1:w:108:U:H6	1:w:108:U:O5'	2.00	0.44
1:w:183:C:C2'	1:w:184:C:H5"	2.47	0.44
1:w:195:A:H8	1:w:195:A:O5'	2.00	0.44
1:w:246:C:H1'	1:w:384:U:O2'	2.17	0.44
1:w:825:C:H42	1:w:832:G:H1	1.65	0.44
1:w:859:G:O2'	1:w:860:U:C5	2.70	0.44
1:w:1122:G:O2'	1:w:1123:C:H5'	2.17	0.44
1:w:1318:C:N4	1:w:1319:G:O6	2.51	0.44
1:w:1355:G:C6	1:w:1356:G:C5	3.05	0.44
1:w:1448:G:H4'	1:w:1543:A:C2	2.53	0.44
1:w:1606:G:H4'	1:w:1608:A:C2	2.51	0.44
1:w:1627:G:O2'	1:w:1628:G:O4'	2.35	0.44
1:w:1671:U:C2	1:w:1673:U:OP2	2.71	0.44
1:w:1777:U:H2'	1:w:1778:U:O4'	2.17	0.44
1:w:1963:U:O5'	1:w:1964:G:OP1	2.36	0.44
1:w:2000:G:HO2'	1:w:2689:U:H5	1.63	0.44
1:w:2205:C:H6	1:w:2205:C:O5'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2279:G:O6	23:U:11:LYS:CB	2.61	0.44
1:w:2348:U:C4	1:w:2349:G:N7	2.86	0.44
1:w:2516:G:C2	1:w:2569:G:N3	2.86	0.44
1:w:2520:C:C2'	1:w:2521:C:H5'	2.48	0.44
1:w:2563:U:H4'	11:I:28:SER:HB2	1.98	0.44
1:w:2563:U:O2'	1:w:2565:A:N7	2.46	0.44
1:w:2581:G:N3	1:w:2581:G:H5"	2.32	0.44
1:w:2712:U:N1	1:w:2712(B):A:C8	2.85	0.44
1:w:2718:G:C4	1:w:2719:G:C8	3.06	0.44
1:w:2746:U:O4	1:w:2756:U:C5	2.64	0.44
1:w:2747:G:C6	1:w:2754:U:H2'	2.53	0.44
1:w:2768:C:H2'	1:w:2769:C:O4'	2.17	0.44
2:x:94:C:H2'	2:x:95:U:C6	2.52	0.44
4:B:28:GLU:N	4:B:29:PRO:CD	2.80	0.44
5:C:44:TYR:CE2	5:C:46:ALA:CB	2.99	0.44
6:D:18:ASP:O	6:D:22:GLU:CG	2.61	0.44
7:E:120:LEU:HG	7:E:178:PHE:HB3	1.99	0.44
8:F:136:ILE:O	8:F:138:LYS:HE2	2.17	0.44
9:G:77:LEU:HB3	9:G:142:VAL:HG13	1.99	0.44
9:G:128:LEU:O	9:G:139:GLN:HB3	2.18	0.44
10:H:146:TYR:O	10:H:147:ALA:HB2	2.16	0.44
11:I:50:GLY:O	11:I:51:ALA:CB	2.65	0.44
11:I:104:ARG:H	11:I:104:ARG:CD	2.29	0.44
14:L:73:VAL:O	14:L:77:ARG:HG3	2.16	0.44
15:M:26:LEU:HG	15:M:85:VAL:HG13	2.00	0.44
17:O:37:GLU:O	17:O:40:PHE:HB2	2.17	0.44
24:V:39:LYS:O	24:V:40:ARG:HB2	2.17	0.44
25:W:54:LYS:O	25:W:55:ARG:HG2	2.18	0.44
26:X:9:VAL:O	26:X:9:VAL:HG23	2.17	0.44
26:X:19:GLN:CD	26:X:49:LYS:HD3	2.43	0.44
26:X:50:VAL:C	26:X:52:HIS:H	2.25	0.44
31:y:110:C:C2	31:y:111:G:C8	3.05	0.44
31:y:129(B):G:O3'	31:y:189:U:H2'	2.17	0.44
31:y:134:A:H8	31:y:134:A:P	2.41	0.44
31:y:302:G:H21	31:y:556:C:H4'	1.82	0.44
31:y:378:G:N1	31:y:379:C:C4	2.86	0.44
31:y:509:A:OP2	31:y:509:A:C3'	2.65	0.44
31:y:691:G:H1'	31:y:696:A:N6	2.32	0.44
31:y:755:G:C4	31:y:756:C:C5	3.05	0.44
31:y:790:A:C8	32:z:38:A:O2'	2.70	0.44
31:y:874:G:H8	31:y:874:G:O5'	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:897:C:H2'	31:y:898:G:O4'	2.16	0.44
31:y:909:A:OP2	31:y:910:C:N4	2.45	0.44
31:y:945:G:H22	31:y:1236:A:H2	1.65	0.44
31:y:1036:G:C8	31:y:1037:C:C5	3.05	0.44
31:y:1058:G:O2'	31:y:1059:C:H5'	2.17	0.44
31:y:1078:U:H2'	31:y:1079:G:H8	1.79	0.44
31:y:1108:G:H2'	31:y:1109:C:C4'	2.47	0.44
31:y:1128:C:H6	31:y:1128:C:O5'	2.01	0.44
31:y:1148:U:O2'	31:y:1149:C:H5'	2.17	0.44
31:y:1157:A:H5'	31:y:1158:C:C6	2.52	0.44
31:y:1269:A:C4'	31:y:1326:C:H4'	2.48	0.44
31:y:1390:U:H6	31:y:1390:U:O5'	1.99	0.44
31:y:1469:G:C2	31:y:1470:G:N7	2.85	0.44
32:z:72:A:C2'	32:z:73:A:C5'	2.84	0.44
36:d:9:GLY:HA3	47:o:49:HIS:O	2.17	0.44
36:d:30:ARG:HG3	36:d:31:HIS:H	1.81	0.44
36:d:134:ILE:O	36:d:138:VAL:HG23	2.17	0.44
37:e:9:CYS:HB3	37:e:31:CYS:O	2.17	0.44
37:e:25:ARG:HH21	37:e:32:ALA:HB2	1.81	0.44
37:e:207:TYR:HB3	37:e:208:SER:H	1.59	0.44
40:h:26:PHE:HB2	40:h:101:LEU:HD13	1.98	0.44
40:h:92:SER:O	40:h:96:GLN:HG2	2.17	0.44
44:l:80:VAL:HG12	44:l:81:ASP:N	2.32	0.44
45:m:116:ARG:HH12	45:m:123:LYS:CD	2.30	0.44
46:n:26:GLY:C	46:n:28:ALA:H	2.26	0.44
48:p:39:LEU:CD1	48:p:56:LEU:HD22	2.47	0.44
48:p:42:HIS:ND1	48:p:43:LEU:CD1	2.80	0.44
50:r:91:ARG:HB3	50:r:91:ARG:NH1	2.31	0.44
52:t:77:THR:O	52:t:78:ARG:CB	2.66	0.44
53:u:47:GLY:O	53:u:48:LYS:C	2.60	0.44
1:w:131:G:C2	1:w:132:G:N7	2.86	0.44
1:w:319:C:C6	1:w:319:C:O5'	2.71	0.44
1:w:354:G:C2'	1:w:355:G:C5'	2.78	0.44
1:w:593:G:N2	1:w:594:U:C2	2.85	0.44
1:w:640:C:O2'	1:w:641:C:H5'	2.17	0.44
1:w:775:G:H5'	1:w:776:G:OP1	2.17	0.44
1:w:813:U:C4	1:w:1195:G:N1	2.86	0.44
1:w:1343:G:C2	1:w:1405:U:N3	2.85	0.44
1:w:1414:G:O2'	1:w:1415:U:H5'	2.17	0.44
1:w:1445:C:H3'	1:w:1445:C:OP2	2.17	0.44
1:w:1613:G:OP1	28:Z:5:TRP:HD1	2.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1642:G:H2'	1:w:1643:G:O4'	2.17	0.44
1:w:1675:C:N3	5:C:129:HIS:ND1	2.66	0.44
1:w:2307:G:H21	1:w:2308:G:H5'	1.81	0.44
1:w:2470:G:C2'	1:w:2471:C:H5"	2.41	0.44
1:w:2488:A:C2'	1:w:2489:G:O4'	2.59	0.44
1:w:2675:A:N1	1:w:2676:C:C2	2.85	0.44
1:w:2722:G:O3'	14:L:4:LEU:HD12	2.17	0.44
1:w:2899:G:C2	1:w:2900:A:N9	2.86	0.44
3:A:198:GLU:OE2	3:A:198:GLU:O	2.35	0.44
3:A:201:LYS:HB2	3:A:202:PRO:CD	2.36	0.44
4:B:53:PHE:HA	4:B:218:ARG:HB3	1.99	0.44
4:B:184:LYS:HZ2	4:B:269:PHE:HE2	1.63	0.44
5:C:176:ILE:HD12	5:C:176:ILE:N	2.33	0.44
6:D:23:ILE:O	6:D:23:ILE:HG13	2.17	0.44
6:D:29:TRP:O	6:D:33:ARG:HG3	2.18	0.44
6:D:86:GLY:N	6:D:87:PRO:HD2	2.32	0.44
7:E:51:ARG:HA	7:E:54:GLU:HG3	1.99	0.44
8:F:7:LEU:HB2	8:F:8:PRO:CD	2.47	0.44
9:G:1:MET:O	9:G:2:LYS:C	2.59	0.44
11:I:29:ASN:HD22	11:I:30:ALA:N	2.15	0.44
11:I:113:LYS:O	11:I:117:LEU:HG	2.17	0.44
12:J:88:LEU:C	12:J:90:ARG:N	2.74	0.44
12:J:92:GLU:C	12:J:94:GLU:H	2.25	0.44
13:K:134:ARG:HH22	13:K:137:TYR:HA	1.81	0.44
17:O:106:PHE:HA	17:O:109:LEU:CD2	2.46	0.44
18:P:5:VAL:CG2	18:P:6:LYS:N	2.79	0.44
18:P:62:LEU:HD23	18:P:62:LEU:N	2.32	0.44
19:Q:85:VAL:HG12	19:Q:86:LEU:N	2.32	0.44
20:R:26:TYR:CD1	20:R:26:TYR:N	2.85	0.44
20:R:59:VAL:O	20:R:74:PRO:HD2	2.17	0.44
24:V:41:ARG:O	24:V:42:GLN:HB3	2.17	0.44
24:V:50:ARG:HD3	24:V:60:PHE:C	2.42	0.44
30:b:9:ARG:NH2	30:b:16:VAL:HG23	2.32	0.44
31:y:135:C:H3'	31:y:136:C:C5'	2.47	0.44
31:y:148:G:N2	31:y:149:A:C4	2.85	0.44
31:y:216:G:C6	31:y:217:C:N3	2.85	0.44
31:y:293:G:C2	31:y:294:U:C2	3.06	0.44
31:y:303:A:H1'	31:y:555:C:O2'	2.17	0.44
31:y:508:C:H1'	31:y:509:A:N7	2.32	0.44
31:y:545:C:H2'	31:y:545:C:O2	2.16	0.44
31:y:570:G:N2	31:y:873:A:H61	2.14	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:585:G:O2'	31:y:879:C:H5"	2.17	0.44
31:y:868:C:H2'	31:y:869:G:C4'	2.47	0.44
31:y:881:G:OP2	45:m:8:GLN:HG3	2.18	0.44
31:y:918:A:N1	31:y:919:A:N3	2.65	0.44
31:y:1055:A:H8	31:y:1055:A:O5'	2.00	0.44
31:y:1074:G:HO2'	31:y:1101:A:N6	2.15	0.44
31:y:1103:C:H2'	31:y:1104:G:C8	2.52	0.44
31:y:136(B):C:O3'	31:y:1363:A:H3'	2.17	0.44
31:y:1450:U:O2	31:y:1454:G:N1	2.50	0.44
31:y:1497:G:C8	31:y:1497:G:C3'	3.00	0.44
32:z:4:G:C5	32:z:5:G:N7	2.86	0.44
32:z:54:U:H2'	32:z:55:U:C5'	2.47	0.44
35:c:20:GLU:HG3	35:c:23:ARG:NH2	2.22	0.44
36:d:53:ALA:O	36:d:54:ARG:HB2	2.17	0.44
37:e:100:ARG:HE	37:e:137:SER:CA	2.30	0.44
39:g:2:ARG:NH1	39:g:69:GLU:HB3	2.32	0.44
39:g:77:ARG:C	39:g:79:LEU:H	2.25	0.44
46:n:22:ILE:H	46:n:25:ILE:HG22	1.78	0.44
46:n:58:GLU:HA	46:n:58:GLU:OE1	2.15	0.44
53:u:99:LEU:O	53:u:100:ILE:C	2.60	0.44
1:w:11:G:O6	1:w:2627:G:O3'	2.35	0.44
1:w:43:G:N2	1:w:438:G:C8	2.86	0.44
1:w:125:G:O2'	28:Z:13:ALA:O	2.35	0.44
1:w:140:A:N3	1:w:1408:C:H4'	2.32	0.44
1:w:227:A:HO2'	1:w:228:A:H5"	1.81	0.44
1:w:363(D):G:H2'	1:w:363(E):G:C8	2.52	0.44
1:w:372:G:O2'	1:w:373:U:C5	2.71	0.44
1:w:438:G:C8	1:w:438:G:OP1	2.70	0.44
1:w:532:A:N6	1:w:2020:A:H1'	2.30	0.44
1:w:666:G:OP1	12:J:49:ARG:N	2.51	0.44
1:w:811:U:O2	1:w:1250:G:C3'	2.58	0.44
1:w:823:G:C4	1:w:824:A:N7	2.85	0.44
1:w:886:C:O2	1:w:886:C:C2'	2.65	0.44
1:w:1203:G:P	1:w:1204:A:H3'	2.58	0.44
1:w:1789:A:OP1	4:B:222:ARG:HG3	2.18	0.44
1:w:1801:G:OP1	1:w:1801:G:H3'	2.18	0.44
1:w:1925:C:N3	1:w:1926:U:C5	2.86	0.44
1:w:1952:A:H5'	11:I:42:SER:HB2	1.99	0.44
1:w:2022:U:H1'	1:w:2034:U:N3	2.32	0.44
1:w:2070:G:C6	1:w:2442:C:C4	3.05	0.44
1:w:2219:G:N7	1:w:2224:G:C5	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2358:G:N3	1:w:2358:G:H2'	2.32	0.44
1:w:2394:C:H2'	1:w:2395:C:C6	2.52	0.44
1:w:2472:G:C8	1:w:2475:C:N4	2.85	0.44
1:w:2624:G:N1	1:w:2625:G:C5	2.85	0.44
1:w:2658:C:O5'	1:w:2658:C:H6	1.99	0.44
1:w:2755:C:O2'	30:b:19:ARG:HD2	2.17	0.44
1:w:2756:U:O2	1:w:2758:A:N7	2.51	0.44
1:w:2813:A:H2'	1:w:2814:C:O4'	2.18	0.44
2:x:25:A:H3'	2:x:25:A:OP2	2.18	0.44
2:x:73:A:N7	2:x:104:A:C6	2.85	0.44
2:x:75:G:H1'	22:T:27:VAL:CG2	2.46	0.44
2:x:76:G:O2'	22:T:85:HIS:ND1	2.42	0.44
3:A:29:LEU:HG	3:A:33:LEU:CG	2.44	0.44
5:C:55:ASN:HD21	5:C:75:VAL:HG23	1.83	0.44
5:C:154:LYS:CG	5:C:155:LYS:N	2.81	0.44
10:H:27:TYR:HE1	17:O:64:ARG:CD	2.30	0.44
10:H:83:ILE:O	10:H:84:ARG:C	2.60	0.44
11:I:69:VAL:H	11:I:77:ILE:H	1.64	0.44
13:K:32:PHE:HB2	13:K:106:VAL:CB	2.27	0.44
13:K:34:LEU:HD21	13:K:118:LEU:CD2	2.43	0.44
13:K:97:VAL:O	13:K:97:VAL:HG12	2.16	0.44
13:K:106:VAL:CG2	13:K:118:LEU:HD11	2.46	0.44
15:M:17:ARG:HB3	15:M:89:ARG:HD3	2.00	0.44
16:N:28:VAL:O	16:N:29:ARG:CB	2.66	0.44
18:P:16:PRO:O	18:P:98:GLU:OE2	2.36	0.44
20:R:44:GLU:HG2	20:R:44:GLU:O	2.17	0.44
21:S:42:VAL:HG12	21:S:43:ASN:N	2.31	0.44
27:Y:46:CYS:O	27:Y:50:GLY:HA2	2.17	0.44
31:y:5:U:O4	37:e:86:LYS:O	2.34	0.44
31:y:186(G):C:N3	31:y:191(B):G:C2	2.86	0.44
31:y:265:G:H3'	31:y:267:C:H5	1.82	0.44
31:y:328:C:H4'	31:y:329:A:H5'	1.97	0.44
31:y:417:C:H2'	31:y:418:C:H6	1.82	0.44
31:y:495:A:O4'	31:y:496:A:C8	2.71	0.44
31:y:518:C:C5	31:y:530:G:C8	3.05	0.44
31:y:597:G:N2	31:y:643:C:N3	2.65	0.44
31:y:657:G:O2'	31:y:658:G:H5'	2.17	0.44
31:y:665:A:H2'	31:y:732:C:O2	2.17	0.44
31:y:743:U:H2'	31:y:744:C:C6	2.53	0.44
31:y:877:C:C4'	41:i:4:ASP:OD1	2.65	0.44
31:y:1074:G:C6	31:y:1102:A:N6	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1199:U:H5”	43:k:54:PHE:CE2	2.53	0.44
31:y:1248:A:N6	31:y:1290:G:C4	2.86	0.44
31:y:1365:G:N2	31:y:1366:C:H1’	2.33	0.44
31:y:1425:U:H2’	31:y:1426:C:H5	1.79	0.44
31:y:1469:G:C2	31:y:1470:G:C5	3.05	0.44
33:2:2:C:O5’	33:2:2:C:C6	2.70	0.44
33:2:18:G:C2	33:2:57:G:N1	2.85	0.44
36:d:15:THR:HG21	36:d:180:ALA:HB3	1.98	0.44
36:d:77:ILE:HB	36:d:84:ILE:HD13	1.98	0.44
36:d:97:LYS:O	36:d:97:LYS:HG2	2.17	0.44
36:d:120:VAL:O	36:d:124:ILE:HD13	2.16	0.44
36:d:179:ARG:HG2	36:d:206:GLU:O	2.18	0.44
37:e:38:TYR:CE1	37:e:45:GLN:HB3	2.51	0.44
37:e:100:ARG:C	37:e:102:ASP:N	2.75	0.44
38:f:43:LEU:CD1	38:f:65:ASN:HD22	2.25	0.44
39:g:79:LEU:HD13	39:g:88:VAL:CG1	2.45	0.44
40:h:135:VAL:C	40:h:137:LYS:N	2.74	0.44
42:j:124:GLN:O	42:j:124:GLN:HG3	2.17	0.44
44:l:60:ALA:HA	44:l:63:LEU:HD12	2.00	0.44
44:l:70:LYS:CA	44:l:73:MET:SD	3.02	0.44
45:m:86:GLY:HA2	45:m:97:TYR:HB3	1.99	0.44
47:o:58:LYS:HZ2	47:o:60:SER:HB3	1.82	0.44
53:u:18:GLN:CA	53:u:21:LYS:HE2	2.44	0.44
1:w:126:A:C8	28:Z:18:PHE:CE2	3.05	0.44
1:w:270(Q):C:H5”	9:G:45:LYS:HZ2	1.81	0.44
1:w:278:A:H8	1:w:278:A:O5’	2.00	0.44
1:w:302:C:H2’	1:w:303:U:O4’	2.18	0.44
1:w:567:A:C2	1:w:568:U:H1’	2.53	0.44
1:w:792:G:N2	1:w:2072:G:H1’	2.26	0.44
1:w:811:U:OP2	1:w:811:U:N1	2.51	0.44
1:w:828:U:OP1	1:w:2068:U:O4	2.36	0.44
1:w:860:U:C5	1:w:916:G:N2	2.85	0.44
1:w:1001:A:H3’	1:w:1002:G:H8	1.83	0.44
1:w:1027:A:C2	1:w:2488:A:H5”	2.42	0.44
1:w:1221:C:C2	1:w:1221(A):C:C5	3.05	0.44
1:w:1242:A:C2’	1:w:1243:G:H5’	2.47	0.44
1:w:1423:G:H2’	1:w:1424:G:H8	1.82	0.44
1:w:1476:C:H2’	1:w:1477:A:O4’	2.18	0.44
1:w:1791:A:H5’	4:B:217:ARG:HH21	1.78	0.44
1:w:1987:G:C6	1:w:1988:C:C4	3.06	0.44
1:w:2052:G:N2	5:C:149:ARG:HA	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2081:C:H4'	24:V:40:ARG:HD2	2.00	0.44
1:w:2130:U:H5	1:w:2131:G:C2	2.35	0.44
1:w:2160:G:H8	1:w:2160:G:C5'	2.31	0.44
1:w:2414:G:C2	1:w:2415:G:C8	3.05	0.44
1:w:2436:G:C6	1:w:2437:U:N3	2.86	0.44
1:w:2558:C:H2'	1:w:2559:C:O5'	2.17	0.44
1:w:2619:C:C2	1:w:2620:C:C6	3.06	0.44
1:w:2628:C:OP2	1:w:2628:C:H6	2.00	0.44
1:w:2667:C:C5	1:w:2668:G:C8	3.06	0.44
1:w:2686:G:C2	1:w:2687:U:C2	3.05	0.44
1:w:2834:G:C2	1:w:2883:A:N6	2.84	0.44
1:w:2866:U:H6	1:w:2868:A:O2'	2.00	0.44
2:x:57:A:C5	2:x:58:A:N7	2.86	0.44
5:C:11:MET:SD	5:C:23:VAL:C	3.00	0.44
6:D:117:LYS:O	6:D:118:LEU:CB	2.65	0.44
6:D:162:ALA:O	6:D:163:ARG:C	2.60	0.44
7:E:72:ARG:HD2	7:E:73:ALA:N	2.33	0.44
7:E:74:LYS:HE3	7:E:88:ILE:CD1	2.38	0.44
7:E:115:ARG:NH2	46:n:67:GLU:CG	2.75	0.44
10:H:140:PHE:CD1	10:H:140:PHE:C	2.94	0.44
13:K:51:ARG:HA	13:K:54:MET:SD	2.56	0.44
15:M:9:ARG:C	15:M:11:LYS:H	2.25	0.44
15:M:94:TYR:OH	15:M:102:ALA:HB1	2.17	0.44
16:N:19:LEU:HD12	16:N:79:HIS:HA	1.99	0.44
17:O:98:LEU:HD21	18:P:43:GLU:HG2	1.99	0.44
18:P:39:LEU:HD12	18:P:39:LEU:H	1.83	0.44
24:V:13:ILE:HB	24:V:66:HIS:HE1	1.82	0.44
27:Y:44:THR:CG2	27:Y:45:VAL:N	2.79	0.44
29:a:9:GLY:O	29:a:13:ARG:NE	2.50	0.44
31:y:176:C:C2	31:y:177:C:C5	3.06	0.44
31:y:262:A:C5'	53:u:74:LYS:HD2	2.38	0.44
31:y:404:U:C2	31:y:405:U:C6	3.05	0.44
31:y:510:A:H5"	31:y:511:C:OP2	2.17	0.44
31:y:563:A:N3	31:y:563:A:H2'	2.31	0.44
31:y:599:C:C2	31:y:640:A:C2	3.05	0.44
31:y:774:G:H8	31:y:774:G:O5'	2.01	0.44
31:y:1085:U:OP2	31:y:1086:U:C4	2.70	0.44
31:y:1206:G:OP1	31:y:1207:2MG:OP2	2.35	0.44
31:y:1233:G:N2	31:y:1364:U:N3	2.39	0.44
31:y:1234:C:H1'	31:y:1364:U:C2	2.52	0.44
31:y:1279:A:N3	31:y:1279:A:C5'	2.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:2:33:U:O5'	33:2:33:U:H6	2.01	0.44
35:c:121:LEU:O	35:c:127:ILE:HG23	2.17	0.44
37:e:9:CYS:SG	37:e:22:LYS:HG3	2.58	0.44
37:e:68:TYR:CZ	37:e:98:GLU:HG3	2.52	0.44
37:e:157:LEU:HA	37:e:160:GLN:HB2	1.98	0.44
38:f:13:ILE:CG1	38:f:14:ARG:H	2.28	0.44
39:g:26:ILE:C	39:g:28:ARG:H	2.26	0.44
40:h:8:GLU:CG	40:h:9:VAL:N	2.68	0.44
40:h:35:LYS:C	40:h:37:ASN:N	2.72	0.44
43:k:42:THR:HG23	43:k:68:HIS:ND1	2.33	0.44
52:t:22:LEU:HD13	52:t:31:ILE:HD11	2.00	0.44
1:w:77:C:H42	1:w:78:A:N6	2.16	0.44
1:w:206:U:C2	1:w:207:A:C8	3.05	0.44
1:w:248:G:H5'	1:w:250:G:C5	2.53	0.44
1:w:324:A:N6	1:w:338:G:O2'	2.51	0.44
1:w:564:C:H5"	18:P:83:ARG:HH22	1.83	0.44
1:w:673:C:H2'	1:w:674:G:O4'	2.17	0.44
1:w:674:G:N7	1:w:804:A:N6	2.65	0.44
1:w:736:C:H2'	1:w:737:C:C6	2.52	0.44
1:w:799:G:OP1	1:w:800:A:H5"	2.17	0.44
1:w:859:G:C2'	1:w:916:G:O6	2.60	0.44
1:w:952:G:O2'	1:w:2267:A:H1'	2.17	0.44
1:w:1369:G:H1'	1:w:1809:A:N1	2.33	0.44
1:w:1397:U:O2	1:w:1397:U:H2'	2.16	0.44
1:w:1743:G:N1	1:w:1746:G:C6	2.85	0.44
1:w:1837:C:O2'	1:w:1927:A:H1'	2.18	0.44
1:w:1986:A:H3'	1:w:1987:G:C5'	2.30	0.44
1:w:2037:G:C2	1:w:2038:G:C4	3.06	0.44
1:w:2219:G:H3'	1:w:2224:G:C8	2.49	0.44
1:w:2248:C:C2'	1:w:2249:U:H5'	2.47	0.44
1:w:2489:G:C5	1:w:2490:G:C5	3.06	0.44
1:w:2651:C:N3	1:w:2670:A:N1	2.65	0.44
1:w:2669:G:C5	1:w:2670:A:C8	3.06	0.44
1:w:2717:G:C3'	1:w:2718:G:C5'	2.88	0.44
1:w:2753:A:C6	1:w:2754:U:C4	3.05	0.44
1:w:2810:A:N6	1:w:2891:G:H2'	2.33	0.44
2:x:117:G:N3	2:x:117:G:H2'	2.33	0.44
3:A:172:ILE:HG12	3:A:173:HIS:N	2.33	0.44
3:A:195:ARG:C	3:A:197:LEU:N	2.73	0.44
4:B:80:ALA:H	4:B:95:LEU:HA	1.81	0.44
5:C:98:PRO:HG3	5:C:174:ASP:CA	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:169:ASN:O	5:C:170:LEU:HD12	2.17	0.44
7:E:17:PRO:HA	7:E:20:ILE:HG13	1.99	0.44
9:G:97:ILE:O	9:G:101:LEU:HD23	2.18	0.44
10:H:25:LYS:HG3	18:P:13:ARG:NH2	2.33	0.44
13:K:7:MET:HA	13:K:8:LYS:HZ2	1.83	0.44
13:K:7:MET:C	13:K:8:LYS:HZ2	2.25	0.44
14:L:62:ALA:O	14:L:66:VAL:HG22	2.17	0.44
16:N:100:TYR:CA	16:N:103:ARG:HH12	2.23	0.44
17:O:42:ALA:O	17:O:46:ALA:HB3	2.18	0.44
17:O:64:ARG:O	17:O:67:ALA:HB3	2.17	0.44
20:R:40:LYS:O	20:R:45:THR:HG23	2.18	0.44
20:R:43:VAL:HG13	20:R:44:GLU:N	2.33	0.44
21:S:67:LEU:C	21:S:68:HIS:CD2	2.96	0.44
22:T:19:ARG:HD2	22:T:19:ARG:H	1.81	0.44
22:T:124:ILE:CD1	22:T:125:LEU:H	2.28	0.44
29:a:49:VAL:HB	29:a:53:PRO:HG3	1.98	0.44
31:y:21:G:H2'	31:y:22:G:C8	2.52	0.44
31:y:251:G:C2	31:y:266:G:C5	3.05	0.44
31:y:286:G:H2'	31:y:287:U:H6	1.83	0.44
31:y:377:G:C5'	49:q:5:ARG:HH12	2.31	0.44
31:y:399:G:O2'	31:y:400:C:H5'	2.18	0.44
31:y:411:A:H3'	31:y:411:A:H8	1.82	0.44
31:y:574:A:H1'	31:y:882:C:HO2'	1.79	0.44
31:y:599:C:N3	31:y:640:A:N1	2.65	0.44
31:y:644:G:C5	31:y:645:C:C6	3.06	0.44
31:y:880:C:C2	31:y:881:G:N7	2.85	0.44
31:y:883:C:O5'	31:y:883:C:C6	2.68	0.44
31:y:951:G:C6	31:y:1231:G:C6	3.05	0.44
31:y:1004:A:H2'	31:y:1005:A:O5'	2.18	0.44
31:y:1064:G:H4'	31:y:1065:U:O5'	2.18	0.44
31:y:1086:U:O2	31:y:1099:G:C2	2.70	0.44
31:y:1157:A:H5"	31:y:1158:C:C6	2.53	0.44
31:y:1160:G:N3	31:y:1160:G:H2'	2.32	0.44
31:y:1319:A:C4'	52:t:37:ARG:HH12	2.30	0.44
31:y:1322:C:O3'	31:y:136(B):C:N4	2.51	0.44
32:z:38:A:N7	32:z:39:C:C4	2.85	0.44
35:c:133:LYS:HZ3	35:c:137:ARG:NH2	2.16	0.44
36:d:33:LEU:O	36:d:34:LEU:C	2.60	0.44
37:e:121:VAL:O	37:e:136:PRO:HD2	2.17	0.44
38:f:75:THR:CG2	38:f:76:ILE:H	2.28	0.44
40:h:64:GLN:HE22	40:h:128:ALA:HA	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:j:46:ALA:C	42:j:48:GLU:H	2.25	0.44
44:l:81:ASP:OD2	44:l:106:LYS:HD3	2.18	0.44
44:l:92:GLU:HB3	44:l:96:ARG:HH11	1.80	0.44
45:m:36:CYS:O	45:m:79:HIS:HB2	2.18	0.44
47:o:11:LYS:HD2	47:o:12:ARG:O	2.17	0.44
47:o:32:SER:O	47:o:33:VAL:C	2.60	0.44
50:r:34:LYS:HG3	50:r:35:VAL:O	2.17	0.44
50:r:36:ILE:HD12	50:r:36:ILE:C	2.43	0.44
52:t:70:LYS:HB3	52:t:71:LEU:H	1.71	0.44
1:w:84:A:N6	1:w:102:G:C2	2.86	0.44
1:w:116:C:H4'	1:w:126:A:O2'	2.17	0.44
1:w:209:C:H2'	1:w:210:C:H6	1.81	0.44
1:w:214:G:H1'	1:w:217:G:H5'	1.98	0.44
1:w:299:A:C6	1:w:322:A:H2'	2.53	0.44
1:w:348:G:H3'	1:w:349:G:O4'	2.17	0.44
1:w:380:U:H2'	1:w:381:G:N7	2.33	0.44
1:w:466:A:C5'	28:Z:21:ARG:NH2	2.69	0.44
1:w:502:A:C8	1:w:502:A:C3'	2.99	0.44
1:w:527:C:C2'	10:H:137:ARG:NH1	2.75	0.44
1:w:669:G:C2	1:w:670:A:C8	3.05	0.44
1:w:1333:C:C2	1:w:1334:G:N7	2.85	0.44
1:w:1440:G:H2'	1:w:1441:G:O4'	2.17	0.44
1:w:1637:A:H8	1:w:1637:A:O5'	2.00	0.44
1:w:1962:C:O5'	1:w:1962:C:H6	2.01	0.44
1:w:2010:G:H2'	1:w:2011:U:H6	1.83	0.44
1:w:2286:A:H1'	1:w:2287:A:C6	2.53	0.44
1:w:2329:G:H8	1:w:2329:G:O5'	2.01	0.44
1:w:2602:A:N3	1:w:2602:A:C2'	2.80	0.44
1:w:2710:C:O3'	1:w:2712:U:C5	2.71	0.44
1:w:2712:U:O4'	1:w:2712(B):A:O4'	2.36	0.44
1:w:2772:C:C2	1:w:2773:C:C5	3.05	0.44
1:w:2795:G:C8	1:w:2798:C:H5"	2.53	0.44
2:x:100:G:C2'	2:x:101:A:H8	2.25	0.44
4:B:142:VAL:HG23	4:B:193:VAL:CA	2.35	0.44
5:C:7:VAL:HG22	5:C:27:LEU:HD13	2.00	0.44
7:E:29:TRP:CD1	7:E:29:TRP:H	2.35	0.44
7:E:41:GLN:CD	7:E:42:GLY:N	2.76	0.44
7:E:41:GLN:O	7:E:89:GLY:HA3	2.18	0.44
7:E:48:GLU:OE1	7:E:52:ILE:HG13	2.18	0.44
7:E:86:MET:N	7:E:87:PRO:CD	2.81	0.44
8:F:89:ILE:HG12	8:F:129:THR:HB	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:118:PRO:CD	8:F:121:ILE:HD12	2.48	0.44
8:F:123:PHE:HA	8:F:132:ARG:O	2.18	0.44
8:F:126:PRO:HD3	8:F:130:ARG:O	2.18	0.44
9:G:90:GLY:O	9:G:91:SER:OG	2.32	0.44
9:G:123:LEU:O	9:G:144:VAL:O	2.36	0.44
10:H:113:MET:O	10:H:121:VAL:CG2	2.66	0.44
10:H:113:MET:SD	10:H:116:THR:O	2.75	0.44
11:I:10:VAL:HB	11:I:99:PHE:CE2	2.52	0.44
12:J:61:ARG:O	12:J:62:LEU:HB3	2.17	0.44
12:J:88:LEU:O	12:J:89:ALA:C	2.61	0.44
13:K:17:LEU:N	13:K:17:LEU:HD13	2.33	0.44
14:L:79:LEU:HA	14:L:83:ILE:HB	1.99	0.44
16:N:30:VAL:HA	16:N:42:ILE:CB	2.45	0.44
16:N:50:ILE:HD12	16:N:62:THR:HG1	1.82	0.44
17:O:79:PHE:CE2	17:O:80:ILE:HD13	2.53	0.44
19:Q:18:ARG:O	19:Q:21:VAL:HG13	2.18	0.44
19:Q:42:ARG:O	19:Q:43:GLY:C	2.61	0.44
19:Q:45:TYR:O	19:Q:46:PHE:CG	2.71	0.44
22:T:98:MET:C	22:T:125:LEU:HD12	2.43	0.44
22:T:161:VAL:CG1	22:T:162:GLU:H	2.30	0.44
24:V:33:LYS:CG	24:V:34:THR:H	2.29	0.44
26:X:7:LYS:CB	26:X:34:GLU:HA	2.47	0.44
29:a:48:PHE:O	29:a:49:VAL:HG23	2.18	0.44
31:y:17:U:H2'	31:y:18:C:H6	1.83	0.44
31:y:109:A:H8	31:y:327:A:C4'	2.31	0.44
31:y:115:G:O2'	31:y:116:A:P	2.75	0.44
31:y:241:C:O2'	31:y:242:C:H5'	2.17	0.44
31:y:363:A:C4	45:m:31:PHE:CE2	3.06	0.44
31:y:526:C:O5'	31:y:526:C:C6	2.70	0.44
31:y:568:G:C2	31:y:569:C:C6	3.06	0.44
31:y:578:C:C2	31:y:579:G:C8	3.06	0.44
31:y:667:G:H4'	48:p:51:HIS:CG	2.53	0.44
31:y:760:G:N2	50:r:105:ALA:HB1	2.33	0.44
31:y:872:A:O2'	31:y:873:A:C3'	2.55	0.44
31:y:880:C:OP2	45:m:5:THR:CB	2.65	0.44
31:y:913:A:O2'	31:y:914:A:H4'	2.17	0.44
31:y:965:A:P	31:y:1198:G:H5"	2.58	0.44
31:y:1327:C:H42	31:y:1328:C:N4	2.15	0.44
32:z:19:G:N2	32:z:57:A:C4	2.86	0.44
35:c:36:ARG:O	35:c:37:ASN:HB3	2.17	0.44
35:c:100:GLY:HA3	35:c:104:ASN:HB2	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:50:ALA:HA	36:d:72:LYS:HG2	2.00	0.44
36:d:108:ASN:HA	36:d:109:PRO:HD2	1.89	0.44
37:e:12:CYS:HB2	37:e:33:MET:CG	2.47	0.44
37:e:65:ARG:HH22	37:e:66:ARG:HE	1.65	0.44
38:f:6:PHE:HZ	38:f:40:ARG:CZ	2.30	0.44
39:g:5:GLU:HB2	39:g:91:VAL:HG23	1.98	0.44
44:l:57:THR:OG1	44:l:58:PRO:HD2	2.18	0.44
46:n:27:LYS:O	46:n:27:LYS:HG3	2.17	0.44
46:n:79:LYS:O	46:n:82:MET:HB3	2.17	0.44
47:o:41:ARG:HA	47:o:44:LEU:HD12	2.00	0.44
50:r:91:ARG:HH11	50:r:91:ARG:CA	2.31	0.44
53:u:80:ARG:HH21	53:u:83:ARG:HB2	1.81	0.44
1:w:26:G:C2'	1:w:27:G:O4'	2.56	0.44
1:w:88:G:C6	1:w:89:G:O6	2.70	0.44
1:w:379:G:C6	1:w:396:G:C6	3.06	0.44
1:w:380:U:OP1	24:V:21:ARG:HA	2.17	0.44
1:w:468:G:OP2	28:Z:37:LYS:NZ	2.51	0.44
1:w:526:A:N6	1:w:2626:C:C4'	2.80	0.44
1:w:617:G:OP2	1:w:617:G:C8	2.71	0.44
1:w:637:A:H5'	1:w:638:G:OP1	2.17	0.44
1:w:892:G:H8	1:w:892:G:O5'	2.01	0.44
1:w:923:C:H1'	23:U:26:TYR:CB	2.47	0.44
1:w:932:G:C5'	1:w:933:A:OP1	2.64	0.44
1:w:954:G:N2	1:w:955:C:H1'	2.33	0.44
1:w:1103:A:H2'	1:w:1103:A:N3	2.33	0.44
1:w:1249:U:H6	1:w:1249:U:O5'	2.01	0.44
1:w:1381:G:C2'	1:w:1382:G:H5'	2.47	0.44
1:w:1479:G:C5	1:w:1480:G:C8	3.06	0.44
1:w:1527:G:C5	1:w:1542:G:O6	2.71	0.44
1:w:1685:C:N4	1:w:1686:C:N4	2.66	0.44
1:w:1793:C:H6	1:w:1793:C:O5'	2.01	0.44
1:w:1797:C:H2'	1:w:1798:U:H6	1.80	0.44
1:w:1992:G:N2	1:w:1995:U:C5	2.82	0.44
1:w:2592:G:H2'	1:w:2593:U:C6	2.52	0.44
1:w:2598:A:O5'	1:w:2598:A:C8	2.56	0.44
1:w:2624:G:C6	1:w:2625:G:C5	3.06	0.44
1:w:2651:C:O2	1:w:2670:A:C2	2.71	0.44
1:w:2677:G:C2'	1:w:2678:C:C6	2.90	0.44
1:w:2702:U:O2'	1:w:2703:C:H5	1.96	0.44
1:w:2710:C:N3	1:w:2711:A:C8	2.84	0.44
1:w:2747:G:N1	1:w:2754:U:C2	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2793:G:C3'	1:w:2794:C:C6	3.01	0.44
1:w:2795:G:N3	1:w:2799:A:OP1	2.50	0.44
1:w:2837:G:H2'	1:w:2838:G:H5'	1.98	0.44
2:x:3:C:N3	2:x:118:G:C6	2.86	0.44
2:x:57:A:O2'	2:x:58:A:H5'	2.18	0.44
2:x:60:C:C2	2:x:61:G:C8	3.06	0.44
2:x:115:G:C2	2:x:116:G:C8	3.06	0.44
3:A:20:ILE:O	3:A:20:ILE:HG22	2.17	0.44
4:B:117:VAL:HG13	4:B:128:GLY:HA3	1.99	0.44
5:C:11:MET:HB2	5:C:24:THR:HA	1.97	0.44
5:C:47:VAL:CG2	5:C:84:PHE:HB3	2.48	0.44
5:C:47:VAL:CG2	5:C:84:PHE:O	2.65	0.44
5:C:63:LEU:O	5:C:65:GLY:N	2.50	0.44
7:E:38:VAL:O	7:E:157:ILE:HG23	2.17	0.44
7:E:101:ILE:HG23	7:E:102:PHE:N	2.33	0.44
8:F:17:VAL:HG22	8:F:45:VAL:CB	2.38	0.44
9:G:98:ALA:HA	9:G:111:PRO:CG	2.40	0.44
11:I:10:VAL:CG1	11:I:17:ARG:HA	2.46	0.44
13:K:34:LEU:HB3	13:K:129:THR:HG1	1.77	0.44
13:K:37:LEU:O	13:K:127:ILE:HG21	2.18	0.44
17:O:17:ILE:HA	17:O:39:LEU:HD11	1.98	0.44
17:O:76:TYR:O	17:O:77:SER:C	2.61	0.44
19:Q:92:ARG:HB3	19:Q:93:ALA:H	1.51	0.44
21:S:52:SER:C	21:S:54:LYS:H	2.26	0.44
22:T:58:VAL:O	22:T:59:LEU:HD13	2.17	0.44
23:U:46:LYS:NZ	23:U:76:GLY:HA2	2.33	0.44
29:a:47:LYS:HG2	29:a:48:PHE:H	1.82	0.44
31:y:7:G:N2	38:f:121:LYS:NZ	2.65	0.44
31:y:392:G:H2'	31:y:393:A:O4'	2.18	0.44
31:y:420:U:H2'	31:y:422:C:C4	2.53	0.44
31:y:608:A:O4'	49:q:32:TYR:CZ	2.70	0.44
31:y:668:G:H2'	31:y:669:U:C1'	2.42	0.44
31:y:831:U:O2'	31:y:1541:U:H5"	2.18	0.44
31:y:1113:C:C4'	36:d:178:LEU:HD11	2.47	0.44
31:y:1188:A:O4'	47:o:60:SER:CB	2.66	0.44
31:y:1230:C:O2'	31:y:1231:G:H5'	2.18	0.44
31:y:1252:A:C2	31:y:1253:G:H1'	2.53	0.44
31:y:1298:C:H1'	31:y:1299:A:C6	2.53	0.44
31:y:1329:A:OP2	54:v:7:ARG:CZ	2.65	0.44
31:y:1356:G:O5'	31:y:1356:G:C8	2.55	0.44
31:y:1371:G:OP1	42:j:11:LYS:HG3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1395:C:H4'	31:y:1401:G:H21	1.81	0.44
31:y:1407:5MC:HO2'	31:y:1408:A:H5'	1.74	0.44
35:c:120:ALA:C	35:c:122:PHE:N	2.76	0.44
35:c:127:ILE:O	35:c:131:PRO:HG2	2.17	0.44
36:d:23:TYR:HA	43:k:11:PHE:CE1	2.53	0.44
38:f:98:THR:N	38:f:117:ASP:OD1	2.47	0.44
39:g:62:TRP:CG	51:s:35:ARG:HH12	2.36	0.44
46:n:126:LYS:HD3	46:n:126:LYS:C	2.43	0.44
47:o:21:TYR:CD1	47:o:21:TYR:N	2.85	0.44
49:q:5:ARG:HD2	49:q:28:ARG:HB3	2.00	0.44
50:r:9:VAL:HA	50:r:56:VAL:HG13	1.99	0.44
50:r:49:GLU:O	50:r:50:LYS:C	2.60	0.44
50:r:90:ILE:CG1	50:r:91:ARG:N	2.79	0.44
51:s:73:ALA:HA	51:s:78:LEU:HD12	2.00	0.44
51:s:75:ILE:C	51:s:77:GLY:N	2.76	0.44
53:u:71:THR:HB	53:u:72:LEU:HD23	2.00	0.44
53:u:80:ARG:NH2	53:u:83:ARG:HB3	2.31	0.44
53:u:89:ARG:HA	53:u:92:LEU:HD12	1.98	0.44
1:w:26:G:OP1	19:Q:80:PRO:HB3	2.17	0.44
1:w:602:G:C2'	1:w:655:A:H2	2.31	0.44
1:w:614:U:H3'	1:w:615:G:H8	1.82	0.44
1:w:713:G:H2'	1:w:714:U:C6	2.53	0.44
1:w:727:A:OP1	1:w:1432:C:C5'	2.63	0.44
1:w:735:A:H8	1:w:735:A:O5'	2.01	0.44
1:w:740:U:O4	1:w:757:U:O4	2.36	0.44
1:w:764:A:H3'	1:w:765:G:C5'	2.47	0.44
1:w:798:G:OP2	6:D:57:ARG:HG2	2.17	0.44
1:w:862:G:O5'	1:w:862:G:C8	2.71	0.44
1:w:909:A:H1'	13:K:69:PHE:CE1	2.52	0.44
1:w:981:A:H8	1:w:981:A:O5'	2.01	0.44
1:w:1066:U:H2'	1:w:1068:G:OP2	2.17	0.44
1:w:1356:G:H2'	1:w:1357:U:C6	2.52	0.44
1:w:1464:C:C2	1:w:1465:G:C8	3.06	0.44
1:w:1501:C:H2'	1:w:1502:C:C6	2.52	0.44
1:w:1623:G:C2	1:w:1624:G:C4	3.06	0.44
1:w:1743:G:C4	1:w:1746:G:N7	2.86	0.44
1:w:1787:A:OP2	1:w:1788:C:H5	2.01	0.44
1:w:1812:A:N3	4:B:45:ASN:CB	2.81	0.44
1:w:2062:A:H62	1:w:2503:A:H62	1.65	0.44
1:w:2132:U:O2	1:w:2132:U:H2'	2.18	0.44
1:w:2331:G:C2'	1:w:2332:U:O4'	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2458:G:C4	1:w:2490:G:C6	3.06	0.44
1:w:2576:G:C5'	1:w:2578:G:N7	2.76	0.44
1:w:2592:G:C8	1:w:2593:U:C5	3.06	0.44
1:w:2747:G:C6	1:w:2754:U:C2	3.05	0.44
1:w:2768:C:O2'	1:w:2769:C:C5'	2.58	0.44
1:w:2809:A:H2'	1:w:2810:A:H8	1.83	0.44
2:x:42:C:N4	7:E:93:THR:HB	2.32	0.44
2:x:42:C:O4'	7:E:68:PRO:HA	2.17	0.44
4:B:177:LEU:CD1	4:B:181:GLU:HB3	2.47	0.44
4:B:208:LYS:HD3	4:B:208:LYS:C	2.43	0.44
5:C:57:LYS:O	5:C:58:ARG:HG3	2.17	0.44
6:D:59:ILE:HB	6:D:60:TRP:H	1.44	0.44
6:D:178:VAL:O	6:D:179:TYR:C	2.61	0.44
7:E:46:ALA:CB	7:E:53:LEU:HD11	2.36	0.44
7:E:82:LEU:HD22	7:E:83:ARG:N	2.33	0.44
9:G:116:LEU:HD12	9:G:116:LEU:O	2.18	0.44
10:H:39:ILE:CG1	10:H:40:ASP:N	2.80	0.44
12:J:57:THR:O	12:J:58:THR:C	2.61	0.44
14:L:63:ARG:HD2	14:L:67:LEU:HD21	2.00	0.44
15:M:106:ARG:HH11	15:M:111:GLU:HA	1.83	0.44
17:O:74:LEU:H	17:O:74:LEU:HD12	1.83	0.44
19:Q:82:LEU:CD1	19:Q:84:ARG:HG3	2.47	0.44
20:R:63:LYS:CD	20:R:64:LYS:N	2.81	0.44
23:U:41:ARG:HA	23:U:57:PHE:CD2	2.53	0.44
26:X:38:GLU:HG2	26:X:39:ASP:N	2.33	0.44
31:y:10:A:O5'	31:y:10:A:C8	2.71	0.44
31:y:30:U:HO2'	31:y:31:G:P	2.36	0.44
31:y:42:G:C5	31:y:43:C:C4	3.06	0.44
31:y:50:A:O2'	31:y:51:A:P	2.75	0.44
31:y:123:C:H1'	31:y:290:C:O2'	2.18	0.44
31:y:194:C:C6	31:y:194:C:H3'	2.53	0.44
31:y:246:A:C6	31:y:279:A:N1	2.86	0.44
31:y:248:C:O2	31:y:277:C:O2	2.36	0.44
31:y:396:G:H2'	31:y:398:C:OP1	2.18	0.44
31:y:606:G:H3'	31:y:607:A:H5'	1.99	0.44
31:y:695:A:C2	31:y:696:A:C4	3.06	0.44
31:y:749:C:O2	48:p:22:THR:HG23	2.18	0.44
31:y:948:C:H5"	46:n:106:ASN:HB2	2.00	0.44
31:y:1051:C:C3'	31:y:1051:C:C6	3.01	0.44
31:y:1087:G:C2	31:y:1088:G:C4	3.06	0.44
31:y:1090:U:H2'	31:y:1091:U:H5'	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1130:A:N6	31:y:1146:A:H61	2.16	0.44
31:y:1244:C:H2'	31:y:1245:A:C8	2.52	0.44
31:y:1302:U:H3'	31:y:1303:C:H5'	1.97	0.44
31:y:1343:G:H1'	42:j:122:ALA:H	1.82	0.44
31:y:1465:C:O5'	31:y:1465:C:H6	2.01	0.44
31:y:1513:A:C4	31:y:1514:C:C5	3.05	0.44
35:c:11:LEU:HG	35:c:12:GLU:N	2.33	0.44
35:c:152:PHE:HE2	35:c:155:LEU:HB3	1.80	0.44
35:c:163:PHE:CG	35:c:164:VAL:N	2.85	0.44
38:f:57:LYS:HB3	38:f:57:LYS:NZ	2.33	0.44
40:h:31:MET:HE3	40:h:33:ASP:H	1.83	0.44
40:h:69:VAL:CG1	40:h:70:LYS:H	2.31	0.44
40:h:120:ILE:HG22	40:h:124:LEU:HD21	1.99	0.44
41:i:82:HIS:C	41:i:83:ILE:HG13	2.39	0.44
42:j:111:ARG:HG3	42:j:111:ARG:O	2.16	0.44
43:k:11:PHE:HB3	43:k:12:ASP:H	1.54	0.44
46:n:54:VAL:O	46:n:56:LEU:N	2.50	0.44
48:p:18:PHE:HA	48:p:19:PRO:HD3	1.74	0.44
49:q:73:LEU:HD22	49:q:73:LEU:N	2.32	0.44
50:r:13:ASP:CG	50:r:52:LYS:HA	2.43	0.44
51:s:47:THR:O	51:s:47:THR:CG2	2.64	0.44
52:t:41:VAL:C	52:t:43:GLU:H	2.22	0.44
1:w:65:C:H1'	1:w:456:C:N4	2.32	0.43
1:w:82:G:N2	1:w:83:G:N2	2.66	0.43
1:w:126:A:C8	1:w:127:A:C4	3.06	0.43
1:w:172:C:N4	1:w:173:G:O6	2.51	0.43
1:w:242:G:H22	1:w:254:G:C3'	2.31	0.43
1:w:346:A:O2'	1:w:347:A:C8	2.70	0.43
1:w:459:U:O5'	1:w:459:U:H6	2.00	0.43
1:w:542:C:O5'	1:w:542:C:H6	2.01	0.43
1:w:611:C:N4	1:w:618(A):G:C6	2.85	0.43
1:w:671:C:OP1	12:J:41:ARG:NH1	2.50	0.43
1:w:786:C:H5"	1:w:1780:A:C8	2.53	0.43
1:w:870:A:H5'	13:K:6:ARG:NH1	2.33	0.43
1:w:1004:C:H5'	1:w:1010:A:N6	2.33	0.43
1:w:1150:C:C2	1:w:1151:G:N7	2.86	0.43
1:w:1385:G:O2'	1:w:1386:C:H6	1.99	0.43
1:w:1459:G:C2	1:w:1461:G:C8	3.06	0.43
1:w:1488:G:C5	1:w:1489:U:C4	3.06	0.43
1:w:1688:U:O2'	1:w:1700:A:N6	2.36	0.43
1:w:1795:C:C2	1:w:1825:A:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1820:U:C5	4:B:202:LYS:HG2	2.52	0.43
1:w:1953:A:C2	1:w:2550:G:O4'	2.71	0.43
1:w:2357:U:P	23:U:18:ALA:CA	3.05	0.43
1:w:2549:G:H2'	1:w:2550:G:O4'	2.18	0.43
1:w:2590:A:C2	1:w:2605:U:C4	3.06	0.43
2:x:15:A:OP1	2:x:108:C:H5'	2.18	0.43
2:x:60:C:H2'	2:x:61:G:C8	2.52	0.43
2:x:116:G:H2'	2:x:117:G:O4'	2.18	0.43
3:A:39:ASP:O	3:A:40:GLU:HB3	2.17	0.43
3:A:190:ILE:HA	3:A:193:PHE:HB3	1.99	0.43
4:B:177:LEU:HD12	4:B:181:GLU:HB3	1.99	0.43
5:C:61:ARG:H	5:C:61:ARG:HG3	1.62	0.43
6:D:121:VAL:HG13	6:D:191:LEU:HA	1.99	0.43
7:E:25:TYR:CD1	7:E:25:TYR:N	2.79	0.43
8:F:8:PRO:O	8:F:9:ILE:HB	2.17	0.43
10:H:60:LYS:HZ1	17:O:67:ALA:CB	2.09	0.43
10:H:93:LYS:HB3	10:H:110:LEU:CD2	2.47	0.43
11:I:59:LYS:NZ	11:I:88:ASN:HA	2.33	0.43
12:J:35:HIS:H	12:J:36:LYS:NZ	2.16	0.43
12:J:114:ILE:O	12:J:115:LEU:HB3	2.17	0.43
13:K:3:MET:H	13:K:4:PRO:HD3	1.76	0.43
13:K:106:VAL:HG21	13:K:118:LEU:HG	1.99	0.43
14:L:86:ARG:NH2	14:L:116:LEU:HD13	2.33	0.43
15:M:91:PRO:HG2	15:M:92:TYR:CE2	2.53	0.43
15:M:94:TYR:OH	15:M:102:ALA:CB	2.66	0.43
17:O:88:ILE:HG22	18:P:51:VAL:O	2.18	0.43
20:R:28:PHE:O	20:R:29:TRP:HD1	2.00	0.43
20:R:35:THR:HG22	20:R:35:THR:O	2.18	0.43
26:X:40:THR:O	26:X:44:ARG:HD3	2.18	0.43
31:y:102:G:C4	31:y:103:C:C5	3.06	0.43
31:y:111:G:H21	31:y:389:A:H4'	1.83	0.43
31:y:253:U:H5"	50:r:68:ARG:NH1	2.33	0.43
31:y:267:C:P	50:r:67:LYS:HB3	2.57	0.43
31:y:300:A:O2'	50:r:31:LEU:CD1	2.60	0.43
31:y:322:C:O3'	53:u:23:ARG:HB2	2.18	0.43
31:y:323:U:H5"	53:u:23:ARG:N	2.33	0.43
31:y:396:G:N3	31:y:398:C:C5	2.86	0.43
31:y:512:U:C2	31:y:540:G:N2	2.86	0.43
31:y:588:G:H4'	41:i:2:LEU:HD12	2.00	0.43
31:y:771:G:O2'	31:y:772:U:C5'	2.64	0.43
31:y:935:A:C2'	31:y:936:C:O5'	2.56	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:952:U:C2'	31:y:953:G:C5'	2.86	0.43
31:y:1005:A:O5'	31:y:1005:A:H8	2.01	0.43
31:y:1051:C:H6	31:y:1051:C:O5'	2.01	0.43
31:y:1203:C:H2'	31:y:1204:A:C8	2.50	0.43
31:y:1470:G:C2'	31:y:1471:G:C5'	2.93	0.43
32:z:66:C:N4	32:z:67:C:N4	2.66	0.43
35:c:13:ALA:O	35:c:14:GLY:C	2.61	0.43
35:c:137:ARG:HH11	35:c:137:ARG:HB3	1.82	0.43
36:d:87:LEU:O	36:d:91:LEU:HD13	2.18	0.43
40:h:31:MET:CA	40:h:36:LYS:HB3	2.46	0.43
40:h:108:ALA:C	40:h:110:GLN:N	2.76	0.43
40:h:127:ALA:C	40:h:129:GLU:H	2.26	0.43
40:h:151:TYR:C	40:h:153:HIS:H	2.25	0.43
41:i:22:GLU:HA	41:i:65:TYR:OH	2.18	0.43
42:j:4:TYR:CD2	42:j:87:GLN:HB3	2.53	0.43
46:n:20:THR:HA	46:n:25:ILE:HG23	1.99	0.43
50:r:40:LYS:HE3	50:r:42:TYR:OH	2.18	0.43
51:s:38:GLU:HA	51:s:41:LYS:HB2	1.98	0.43
51:s:59:SER:HB3	51:s:62:GLU:CB	2.47	0.43
1:w:40:C:H2'	1:w:41:C:H6	1.84	0.43
1:w:65:C:O2'	1:w:456:C:N4	2.52	0.43
1:w:143:C:H1'	20:R:3:THR:CG2	2.48	0.43
1:w:247:G:H4'	1:w:386:G:C6	2.53	0.43
1:w:273(B):G:C3'	1:w:273(C):C:H5"	2.45	0.43
1:w:287:C:O2'	1:w:288:C:H5'	2.16	0.43
1:w:480:A:H2'	1:w:480:A:N3	2.33	0.43
1:w:531:C:C4'	1:w:532:A:OP1	2.66	0.43
1:w:569:U:O2'	1:w:946:G:N3	2.48	0.43
1:w:577:G:H2'	1:w:578:A:H5'	1.97	0.43
1:w:842:G:C6	1:w:843:G:C5	3.06	0.43
1:w:852:G:H8	1:w:852:G:O5'	2.01	0.43
1:w:917:A:C2	1:w:918:A:H1'	2.52	0.43
1:w:971:C:H5"	1:w:974(A):G:O2'	2.18	0.43
1:w:1021:A:H3'	1:w:1022:G:H5"	2.01	0.43
1:w:1349:A:N3	1:w:1349:A:C2'	2.80	0.43
1:w:1518:C:C2'	1:w:1519:G:H5"	2.47	0.43
1:w:1613:G:O2'	28:Z:3:ARG:NE	2.51	0.43
1:w:1696:G:H8	1:w:1696:G:O5'	2.01	0.43
1:w:1797:C:H5"	4:B:256:GLY:C	2.43	0.43
1:w:1912:A:C5	1:w:1918:A:H2	2.36	0.43
1:w:2073:C:H5"	4:B:229:VAL:HG13	1.98	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2080:G:H2'	1:w:2081:C:C6	2.53	0.43
1:w:2257:U:H2'	1:w:2258:C:H6	1.83	0.43
1:w:2363:C:H2'	1:w:2364:C:H6	1.83	0.43
1:w:2394:C:P	12:J:63:PRO:HD2	2.58	0.43
1:w:2395:C:H2'	1:w:2396:G:O4'	2.19	0.43
1:w:2496:C:OP1	13:K:81:VAL:HG11	2.17	0.43
1:w:2516:G:C4	1:w:2569:G:N2	2.86	0.43
1:w:2539:C:H2'	1:w:2540:C:O4'	2.18	0.43
1:w:2667:C:H2'	1:w:2668:G:O4'	2.17	0.43
1:w:2753:A:C2	1:w:2754:U:C6	3.05	0.43
1:w:2821:A:OP1	14:L:2:ARG:O	2.36	0.43
2:x:43:C:N4	2:x:45:A:H62	2.04	0.43
2:x:56:G:H4'	2:x:57:A:N7	2.33	0.43
2:x:99:A:H3'	2:x:100:G:C8	2.53	0.43
3:A:22:THR:O	3:A:23:ILE:C	2.60	0.43
3:A:175:PRO:HB2	3:A:176:VAL:H	1.59	0.43
5:C:72:VAL:O	5:C:73:GLU:O	2.35	0.43
7:E:111:LEU:HB3	7:E:112:PRO:HD3	1.99	0.43
7:E:120:LEU:HD22	7:E:121:ASN:N	2.28	0.43
8:F:89:ILE:HD12	8:F:89:ILE:O	2.18	0.43
9:G:64:GLU:O	9:G:67:ARG:HG2	2.17	0.43
10:H:29:PRO:O	10:H:30:LYS:O	2.36	0.43
10:H:32:VAL:HG11	10:H:71:MET:CB	2.48	0.43
10:H:80:ALA:HB3	10:H:146:TYR:O	2.18	0.43
12:J:97:PRO:HD2	12:J:126:VAL:HB	1.98	0.43
14:L:10:LEU:HA	14:L:10:LEU:HD23	1.89	0.43
15:M:106:ARG:O	15:M:107:GLU:C	2.60	0.43
18:P:13:ARG:N	18:P:13:ARG:HD3	2.34	0.43
19:Q:95:ILE:O	19:Q:96:ILE:HG23	2.17	0.43
20:R:8:ILE:HA	20:R:30:VAL:CG2	2.37	0.43
20:R:15:GLU:OE2	20:R:18:TYR:HB2	2.18	0.43
21:S:39:VAL:O	21:S:62:GLU:HG2	2.18	0.43
23:U:20:ARG:CG	23:U:20:ARG:NH1	2.81	0.43
23:U:51:VAL:HG21	23:U:79:VAL:CB	2.48	0.43
24:V:68:PRO:O	24:V:69:LYS:C	2.60	0.43
30:b:24:TYR:HB2	30:b:25:VAL:H	1.53	0.43
31:y:115:G:O2'	31:y:116:A:O5'	2.37	0.43
31:y:139:G:H2'	31:y:139:G:N3	2.32	0.43
31:y:261:U:O4	53:u:79:ARG:CZ	2.65	0.43
31:y:314:C:C2'	31:y:315:A:C5'	2.93	0.43
31:y:457:C:H2'	31:y:458:C:H6	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:608:A:H2'	31:y:609:A:H5'	1.99	0.43
31:y:625:G:H4'	49:q:16:HIS:CD2	2.53	0.43
31:y:657:G:H4'	48:p:28:GLN:HG2	1.99	0.43
31:y:661:G:N2	31:y:745:C:C4	2.86	0.43
31:y:956:U:H3'	31:y:957:U:C5	2.53	0.43
31:y:1047:G:C5'	47:o:4:LYS:HG2	2.48	0.43
31:y:1441:G:H5"	31:y:1442:G:O4'	2.19	0.43
31:y:1490:C:O2	31:y:1490:C:H2'	2.16	0.43
31:y:1500:A:C3'	31:y:1501:C:H5'	2.48	0.43
31:y:1531:A:N3	31:y:1531:A:C2'	2.81	0.43
37:e:44:GLY:C	37:e:46:LYS:H	2.26	0.43
37:e:78:LEU:H	37:e:78:LEU:CD1	2.26	0.43
38:f:54:ALA:O	38:f:58:ALA:HB2	2.17	0.43
38:f:82:VAL:O	38:f:88:LYS:HA	2.18	0.43
41:i:68:ARG:HG2	41:i:68:ARG:NH1	2.33	0.43
47:o:49:HIS:HD2	47:o:50:LYS:N	2.16	0.43
49:q:16:HIS:N	49:q:41:PRO:HG2	2.31	0.43
50:r:22:LEU:HD23	50:r:22:LEU:C	2.43	0.43
1:w:116:C:O2'	1:w:126:A:H1'	2.18	0.43
1:w:558:G:N2	1:w:559:G:C5	2.86	0.43
1:w:667:U:O5'	1:w:667:U:H6	2.02	0.43
1:w:673:C:O5'	1:w:673:C:H6	2.00	0.43
1:w:747:U:O2	1:w:747:U:H2'	2.19	0.43
1:w:813:U:C2	1:w:1195:G:N2	2.87	0.43
1:w:818:G:N7	1:w:1187:G:C4	2.86	0.43
1:w:885:C:C3'	1:w:886:C:C5'	2.89	0.43
1:w:915:C:H3'	1:w:916:G:H5"	1.99	0.43
1:w:1312:U:H5'	1:w:1313:U:C5	2.53	0.43
1:w:1853:A:N1	1:w:1889:A:C6	2.86	0.43
1:w:1952:A:C6	1:w:1953:A:C2	3.06	0.43
1:w:2129:C:OP2	1:w:2129:C:H6	2.02	0.43
1:w:2314:C:H2'	1:w:2315:G:H8	1.83	0.43
1:w:2447:G:H2'	1:w:2500:U:OP2	2.18	0.43
1:w:2578:G:H1'	5:C:139:GLY:HA2	1.96	0.43
1:w:2729:G:C6	1:w:2730:C:N4	2.86	0.43
1:w:2842:G:C2	1:w:2876:G:C2	3.07	0.43
8:F:141:VAL:HG12	8:F:141:VAL:O	2.18	0.43
9:G:61:ARG:C	9:G:63:ALA:N	2.77	0.43
9:G:118:LYS:HG2	9:G:118:LYS:O	2.18	0.43
10:H:80:ALA:HB3	10:H:146:TYR:N	2.34	0.43
11:I:77:ILE:O	11:I:77:ILE:HG23	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:70:TYR:C	19:Q:70:TYR:HD2	2.25	0.43
21:S:84:ARG:HD3	21:S:91:GLU:HG2	2.01	0.43
23:U:53:MET:SD	23:U:54:GLY:N	2.85	0.43
23:U:66:VAL:HG22	23:U:82:ARG:HB2	2.00	0.43
24:V:83:GLU:HG2	24:V:88:LYS:NZ	2.32	0.43
25:W:35:LEU:HA	25:W:37:PHE:CE2	2.54	0.43
31:y:9:G:H2'	31:y:9:G:N3	2.34	0.43
31:y:25:C:H2'	31:y:26:A:O4'	2.17	0.43
31:y:245:C:N1	31:y:284:G:N2	2.66	0.43
31:y:327:A:C5	31:y:329:A:C5	3.07	0.43
31:y:564:C:N4	31:y:565:U:O4	2.50	0.43
31:y:777:A:H2'	31:y:778:G:C8	2.53	0.43
31:y:795:C:H6	31:y:795:C:O5'	2.01	0.43
31:y:857:C:H2'	31:y:858:G:O4'	2.18	0.43
31:y:887:G:O6	31:y:888:G:N1	2.52	0.43
31:y:1312:G:H21	31:y:1313:U:H1'	1.81	0.43
31:y:1415:G:H5'	31:y:1416:G:OP2	2.17	0.43
33:2:16:U:C3'	33:2:17:U:C5'	2.97	0.43
36:d:62:ASP:C	36:d:64:VAL:N	2.58	0.43
37:e:26:CYS:SG	37:e:33:MET:CE	3.06	0.43
40:h:78:ARG:HG3	40:h:79:ARG:N	2.33	0.43
40:h:108:ALA:N	40:h:123:GLU:HG2	2.33	0.43
41:i:37:ARG:O	41:i:41:ARG:CG	2.66	0.43
45:m:51:LEU:N	45:m:51:LEU:HD12	2.33	0.43
49:q:8:ARG:HA	49:q:17:TYR:CD2	2.54	0.43
52:t:49:ILE:N	52:t:49:ILE:HD13	2.33	0.43
53:u:31:SER:HA	53:u:34:LYS:HG2	1.99	0.43
1:w:58:G:H5"	20:R:72:LYS:CB	2.49	0.43
1:w:281:G:H22	1:w:358:U:H3'	1.84	0.43
1:w:630:G:C6	1:w:632:A:OP1	2.72	0.43
1:w:782:A:C2	4:B:226:MET:SD	3.11	0.43
1:w:784:A:P	4:B:237:GLU:HG3	2.59	0.43
1:w:805:G:O2'	1:w:831:G:H4'	2.18	0.43
1:w:1039:G:C6	1:w:1117:G:C6	3.06	0.43
1:w:1204:A:H1'	1:w:1206:G:N7	2.33	0.43
1:w:1209:G:N2	1:w:1238:G:C6	2.87	0.43
1:w:1297:C:OP1	1:w:2712:U:C4	2.72	0.43
1:w:1364:G:N2	1:w:1366:A:C5'	2.81	0.43
1:w:1637:A:O2'	1:w:2697:G:N2	2.51	0.43
1:w:1666:G:O2'	11:I:3:GLN:NE2	2.51	0.43
1:w:1692:U:C2'	1:w:1693:U:H5"	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1772:G:HO2'	1:w:1774:C:P	2.41	0.43
1:w:1819:A:C8	1:w:1821:A:N6	2.87	0.43
1:w:1952:A:N6	1:w:1953:A:C2	2.86	0.43
1:w:2029:G:N2	1:w:2033:A:C5	2.87	0.43
1:w:2073:C:H2'	1:w:2074:U:H6	1.79	0.43
1:w:2077:A:H2	1:w:2434:A:C2	2.37	0.43
1:w:2080:G:H5'	24:V:23:LYS:CD	2.25	0.43
1:w:2252:G:C6	1:w:2253:G:C5	3.07	0.43
1:w:2503:A:H4'	1:w:2504:U:O5'	2.16	0.43
1:w:2588:G:H3'	1:w:2588:G:C8	2.53	0.43
1:w:2635:C:H5"	5:C:79:ARG:HH22	1.83	0.43
1:w:2852:G:C6	1:w:2853:C:N4	2.86	0.43
1:w:2885:C:O2	27:Y:32:PRO:HG2	2.18	0.43
2:x:99:A:C2'	2:x:100:G:C8	3.01	0.43
3:A:28:HIS:HA	3:A:183:PRO:HG3	2.01	0.43
3:A:62:THR:CG2	3:A:63:VAL:N	2.81	0.43
6:D:169:VAL:CG1	6:D:170:THR:H	2.22	0.43
6:D:173:PRO:HA	6:D:194:TRP:HZ2	1.84	0.43
7:E:157:ILE:HG22	7:E:158:ALA:N	2.32	0.43
7:E:176:LEU:HD23	7:E:176:LEU:N	2.34	0.43
9:G:14:ASP:N	9:G:14:ASP:OD2	2.49	0.43
10:H:26:THR:C	10:H:28:VAL:H	2.26	0.43
10:H:50:ALA:O	10:H:51:THR:C	2.61	0.43
10:H:57:LEU:HD21	10:H:142:ARG:HG3	2.00	0.43
10:H:112:LYS:HD3	10:H:116:THR:HG21	2.00	0.43
11:I:79:PHE:C	11:I:81:ASP:H	2.26	0.43
14:L:79:LEU:HA	14:L:83:ILE:CB	2.49	0.43
15:M:7:TYR:O	15:M:8:GLU:CB	2.66	0.43
15:M:24:LEU:N	15:M:24:LEU:HD22	2.33	0.43
15:M:34:HIS:CD2	15:M:36:TYR:OH	2.71	0.43
20:R:83:VAL:HG23	20:R:85:PRO:CD	2.47	0.43
25:W:29:LYS:HB2	25:W:29:LYS:NZ	2.32	0.43
26:X:7:LYS:O	26:X:55:ARG:N	2.50	0.43
26:X:28:LEU:CD1	26:X:33:GLN:HB3	2.45	0.43
31:y:160:A:N3	31:y:344:A:N7	2.66	0.43
31:y:179:A:H3'	31:y:180:U:H5	1.82	0.43
31:y:260:G:OP2	53:u:79:ARG:CD	2.66	0.43
31:y:302:G:C2'	31:y:556:C:OP1	2.67	0.43
31:y:376:G:H2'	31:y:377:G:C5'	2.48	0.43
31:y:396:G:H5"	31:y:397:A:OP2	2.18	0.43
31:y:451:A:N1	31:y:481:G:C8	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:545:C:H2'	31:y:546:G:O5'	2.18	0.43
31:y:667:G:H4'	48:p:51:HIS:CB	2.46	0.43
31:y:751:U:OP2	31:y:752:G:N7	2.52	0.43
31:y:768:A:O3'	31:y:1523:G:N2	2.52	0.43
31:y:1299:A:H3'	31:y:1299:A:N3	2.33	0.43
31:y:1307:U:OP1	46:n:101:GLN:OE1	2.36	0.43
31:y:1501:C:O5'	31:y:1504:G:N7	2.51	0.43
35:c:47:THR:HB	35:c:202:PRO:HG2	2.00	0.43
35:c:54:THR:O	35:c:55:PHE:C	2.61	0.43
35:c:197:VAL:CB	35:c:200:ILE:HG22	2.43	0.43
36:d:138:VAL:CG2	36:d:169:ALA:HB2	2.48	0.43
37:e:100:ARG:HH21	37:e:137:SER:CB	2.29	0.43
37:e:200:GLU:O	37:e:204:ILE:HG23	2.18	0.43
40:h:31:MET:HG3	40:h:36:LYS:CG	2.47	0.43
40:h:108:ALA:HB2	40:h:120:ILE:HA	2.00	0.43
43:k:5:ARG:HA	43:k:73:ASP:CG	2.44	0.43
46:n:79:LYS:O	46:n:82:MET:N	2.50	0.43
48:p:42:HIS:ND1	48:p:43:LEU:HD13	2.33	0.43
48:p:49:ASP:HB3	48:p:53:HIS:NE2	2.33	0.43
49:q:18:ARG:HG2	49:q:38:TYR:HA	2.01	0.43
50:r:29:HIS:CD2	50:r:30:PRO:HD2	2.53	0.43
50:r:95:TYR:CD1	50:r:98:LEU:HD11	2.50	0.43
1:w:6:A:C2'	1:w:7:G:C8	2.99	0.43
1:w:142:G:C6	1:w:143:C:C5	3.05	0.43
1:w:489:G:H2'	1:w:491:G:C8	2.54	0.43
1:w:492:A:H2'	1:w:493:G:C8	2.54	0.43
1:w:525:U:OP1	1:w:556:G:H5"	2.18	0.43
1:w:570:G:H22	1:w:2498:C:C4'	2.31	0.43
1:w:609(B):G:C2	1:w:619:G:H1'	2.54	0.43
1:w:691:C:H2'	1:w:692:C:C6	2.54	0.43
1:w:751:A:OP1	1:w:1614:A:N6	2.49	0.43
1:w:752:A:C6	1:w:1781:C:H1'	2.53	0.43
1:w:979:G:N2	1:w:985:C:H42	2.17	0.43
1:w:1073:A:H2'	1:w:1074:G:C8	2.54	0.43
1:w:1085:A:H1'	1:w:1105:U:O2'	2.19	0.43
1:w:1123:C:H2'	1:w:1124:C:O4'	2.19	0.43
1:w:1135:C:C6	1:w:1137:G:OP2	2.71	0.43
1:w:1162:G:H2'	1:w:1163:G:O4'	2.19	0.43
1:w:1225:G:O2'	18:P:86:GLY:HA3	2.17	0.43
1:w:1302:A:C2	1:w:1643:G:N2	2.82	0.43
1:w:1344:G:H5'	1:w:1345:C:H5"	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1380:G:O5'	1:w:1380:G:C8	2.72	0.43
1:w:1423:G:H2'	1:w:1424:G:C8	2.54	0.43
1:w:1663:C:O2'	1:w:1664:A:C5'	2.66	0.43
1:w:1797:C:C5'	4:B:256:GLY:C	2.92	0.43
1:w:1810:A:O5'	1:w:1810:A:C8	2.72	0.43
1:w:2632:A:H1'	5:C:61:ARG:CZ	2.46	0.43
1:w:2881:C:C2	1:w:2882:A:C8	3.06	0.43
3:A:23:ILE:H	3:A:23:ILE:HG13	1.70	0.43
4:B:38:LYS:O	4:B:38:LYS:CG	2.66	0.43
5:C:8:LYS:C	5:C:8:LYS:HD2	2.44	0.43
5:C:126:PRO:HB2	5:C:127:ASP:H	1.68	0.43
6:D:83:VAL:HB	6:D:84:VAL:H	1.56	0.43
6:D:101:ARG:O	6:D:105:LEU:HG	2.18	0.43
6:D:148:SER:O	6:D:184:THR:HB	2.18	0.43
8:F:17:VAL:CG2	8:F:45:VAL:H	2.31	0.43
9:G:132:PRO:HD3	9:G:138:ILE:CG2	2.28	0.43
11:I:63:VAL:O	11:I:64:ARG:C	2.61	0.43
12:J:100:LEU:N	12:J:100:LEU:HD22	2.33	0.43
13:K:6:ARG:HD3	13:K:6:ARG:C	2.43	0.43
13:K:37:LEU:HG	13:K:128:LYS:O	2.19	0.43
13:K:78:PRO:CG	13:K:87:LYS:HG2	2.47	0.43
16:N:64:ARG:HD3	16:N:102:ILE:CD1	2.46	0.43
17:O:21:ALA:HB1	17:O:24:TYR:CE1	2.54	0.43
17:O:31:SER:O	17:O:32:PHE:C	2.62	0.43
19:Q:29:LEU:HD23	19:Q:29:LEU:H	1.83	0.43
19:Q:46:PHE:C	19:Q:48:ALA:H	2.26	0.43
20:R:89:ILE:O	20:R:89:ILE:CG2	2.66	0.43
21:S:23:ARG:HH11	21:S:38:ILE:HG21	1.83	0.43
22:T:58:VAL:HG13	22:T:66:SER:HB3	2.00	0.43
23:U:84:LEU:O	23:U:85:ALA:HB2	2.18	0.43
24:V:24:ALA:CB	24:V:36:GLY:HA2	2.46	0.43
31:y:41:G:C6	31:y:42:G:C6	3.07	0.43
31:y:110:C:C6	31:y:110:C:H5'	2.53	0.43
31:y:136:C:C1'	49:q:63:GLY:HA2	2.49	0.43
31:y:186(A):C:C2'	53:u:81:LYS:HB3	2.48	0.43
31:y:246:A:O2'	31:y:247:G:OP2	2.36	0.43
31:y:406:G:H21	37:e:119:GLN:NE2	2.10	0.43
31:y:435:C:H3'	31:y:436:C:H5	1.83	0.43
31:y:436:C:O2'	31:y:437:U:O5'	2.37	0.43
31:y:476:G:C4	31:y:477:G:N7	2.87	0.43
31:y:642:A:H2	41:i:113:SER:O	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:701:C:O2'	31:y:702:A:P	2.76	0.43
31:y:782:A:C4	31:y:783:C:C6	3.06	0.43
31:y:1051:C:C6	31:y:1051:C:H3'	2.53	0.43
31:y:1115:C:C4	31:y:1186:G:N2	2.86	0.43
31:y:1126:U:C2	31:y:1280:A:O2'	2.71	0.43
31:y:1244:C:H2'	31:y:1245:A:H8	1.83	0.43
31:y:1291:G:H3'	31:y:1291:G:C8	2.53	0.43
31:y:1319:A:HO2'	31:y:1320:C:P	2.41	0.43
31:y:1322:C:OP1	31:y:1322:C:C5	2.72	0.43
31:y:1340:A:H2'	31:y:1341:U:C6	2.54	0.43
31:y:1349:A:OP1	42:j:118:LYS:O	2.37	0.43
31:y:1412:C:H2'	31:y:1413:A:H8	1.84	0.43
31:y:1462:G:H2'	31:y:1463:C:C1'	2.45	0.43
31:y:1535:C:C6	31:y:1535:C:H5"	2.50	0.43
32:z:27:U:C4	32:z:28:C:N4	2.86	0.43
32:z:59:A:N6	32:z:60:U:C4	2.86	0.43
32:z:70:G:C3'	32:z:71:C:H5"	2.47	0.43
35:c:133:LYS:NZ	35:c:137:ARG:NH2	2.66	0.43
36:d:119:ARG:HH12	36:d:140:ARG:NH1	2.16	0.43
37:e:49:ARG:O	37:e:50:ARG:C	2.61	0.43
37:e:59:ARG:HG3	37:e:60:GLU:N	2.34	0.43
39:g:4:TYR:O	39:g:64:GLN:C	2.61	0.43
40:h:120:ILE:CG2	40:h:124:LEU:HD21	2.48	0.43
42:j:87:GLN:O	42:j:88:TYR:HB2	2.19	0.43
43:k:75:ILE:O	43:k:76:ASN:HB2	2.18	0.43
45:m:42:VAL:HG12	45:m:54:VAL:HG11	2.00	0.43
48:p:31:LEU:C	48:p:33:THR:N	2.76	0.43
50:r:51:TYR:CD2	50:r:57:VAL:HG21	2.51	0.43
51:s:29:PHE:N	51:s:29:PHE:HD2	2.16	0.43
52:t:79:THR:O	52:t:80:TYR:HB2	2.17	0.43
1:w:124:G:C4	28:Z:19:ARG:NH2	2.87	0.43
1:w:363(E):G:H2'	1:w:363(F):U:C5'	2.48	0.43
1:w:460:A:H8	1:w:460:A:O5'	2.01	0.43
1:w:592:G:N2	29:a:4:MET:SD	2.86	0.43
1:w:810:U:H3	12:J:33:ARG:NH2	2.17	0.43
1:w:830:G:C2	1:w:2448:A:N7	2.86	0.43
1:w:1197:G:C6	1:w:1198:U:C2	3.07	0.43
1:w:1267:U:H3	1:w:2013:A:H62	1.65	0.43
1:w:1341:U:O2	1:w:1398:C:H5'	2.17	0.43
1:w:1518:C:H2'	1:w:1519:G:H5"	2.01	0.43
1:w:1541:U:H2'	1:w:1542:G:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1661:G:C6	1:w:1662:C:N4	2.86	0.43
1:w:1753:G:O5'	1:w:1753:G:C8	2.67	0.43
1:w:1805:U:H2'	1:w:1806:C:H5"	2.01	0.43
1:w:1830:C:O2'	1:w:1831:G:H5'	2.19	0.43
1:w:1891:G:H2'	1:w:1892:C:C5	2.54	0.43
1:w:1980:G:H8	1:w:1980:G:O5'	2.02	0.43
1:w:2063:C:O2'	1:w:2064:C:H5'	2.19	0.43
1:w:2431:U:H5'	1:w:2431:U:C6	2.48	0.43
1:w:2472:G:H2'	1:w:2475:C:H42	1.83	0.43
1:w:2883:A:H3'	1:w:2884:U:C5'	2.48	0.43
2:x:16:G:C6	2:x:17:C:N4	2.86	0.43
2:x:17:C:C4	2:x:18:G:C8	3.06	0.43
2:x:47:C:C5'	15:M:93:LYS:HE2	2.40	0.43
2:x:89(B):A:H8	2:x:89(B):A:O5'	2.02	0.43
3:A:51:ASP:C	3:A:53:ARG:H	2.26	0.43
4:B:250:TRP:O	4:B:250:TRP:CD1	2.72	0.43
5:C:75:VAL:O	5:C:77:ILE:N	2.51	0.43
5:C:151:TYR:O	5:C:153:GLY:N	2.49	0.43
8:F:55:PRO:HB2	8:F:56:SER:H	1.61	0.43
9:G:76:THR:HA	9:G:141:LYS:O	2.18	0.43
11:I:19:ILE:HB	11:I:42:SER:O	2.19	0.43
12:J:9:ASN:O	12:J:11:GLY:N	2.51	0.43
14:L:76:VAL:CA	14:L:79:LEU:HG	2.34	0.43
21:S:36:ALA:HA	21:S:62:GLU:HB2	2.01	0.43
22:T:78:LYS:HG2	22:T:79:ARG:N	2.33	0.43
23:U:63:VAL:O	23:U:64:ASP:OD1	2.37	0.43
24:V:15:ALA:HA	24:V:46:LEU:CG	2.48	0.43
24:V:27:GLU:HA	33:2:74:C:C4'	2.47	0.43
31:y:57:G:H2'	31:y:58:C:C6	2.54	0.43
31:y:116:A:P	31:y:289:G:H5'	2.57	0.43
31:y:296:U:O2'	31:y:556:C:H1'	2.18	0.43
31:y:451:A:C5	31:y:481:G:N7	2.85	0.43
31:y:468:A:H4'	49:q:80:PHE:CB	2.36	0.43
31:y:497:U:C3'	31:y:498:A:H5"	2.48	0.43
31:y:663:A:C2'	31:y:664:G:H5'	2.49	0.43
31:y:682:G:H2'	31:y:683:G:C8	2.53	0.43
31:y:990:C:H4'	31:y:1018:C:OP1	2.19	0.43
31:y:1053:G:C1'	31:y:1054:C:OP2	2.66	0.43
31:y:1058:G:C2'	31:y:1059:C:C5'	2.95	0.43
31:y:1115:C:H1'	47:o:61:TRP:HB2	2.01	0.43
31:y:1267:C:N3	31:y:1268:A:C5	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1291:G:H5'	31:y:1291:G:C8	2.41	0.43
31:y:1441:G:H5"	31:y:1442:G:C4'	2.46	0.43
31:y:1471:G:C2'	31:y:1472:U:C6	2.83	0.43
31:y:1501:C:OP2	31:y:1504:G:OP1	2.36	0.43
32:z:21:A:C6	32:z:46:A:C2	3.06	0.43
33:2:20:G:N2	33:2:22:G:C1'	2.81	0.43
33:2:36:A:C6	33:2:37:A:C4	3.07	0.43
35:c:141:GLU:O	35:c:142:LEU:C	2.61	0.43
36:d:187:ALA:HB3	36:d:198:VAL:O	2.19	0.43
37:e:170:VAL:CG1	37:e:176:LEU:HD13	2.48	0.43
37:e:204:ILE:CG1	37:e:205:GLU:N	2.82	0.43
38:f:32:VAL:O	38:f:44:GLY:HA3	2.19	0.43
38:f:67:VAL:HG21	38:f:136:MET:HG3	1.99	0.43
38:f:98:THR:HG22	38:f:98:THR:O	2.19	0.43
40:h:14:PRO:HA	40:h:21:VAL:HB	2.01	0.43
40:h:148:ASN:O	40:h:151:TYR:CE1	2.72	0.43
41:i:114:THR:O	41:i:115:SER:C	2.62	0.43
45:m:87:GLY:C	45:m:97:TYR:HA	2.44	0.43
46:n:34:LEU:HB3	46:n:39:ILE:O	2.18	0.43
49:q:22:THR:HA	49:q:26:ARG:HH21	1.84	0.43
50:r:60:ILE:HG23	50:r:72:ARG:HB2	2.00	0.43
53:u:33:ILE:HG13	53:u:34:LYS:N	2.34	0.43
1:w:55:G:N1	1:w:56:A:C6	2.86	0.43
1:w:64:A:H5"	20:R:63:LYS:HG3	2.00	0.43
1:w:187:G:C6	1:w:188:G:C5	3.07	0.43
1:w:366(B):C:OP2	1:w:366(B):C:C5	2.72	0.43
1:w:459:U:O5'	1:w:459:U:C6	2.71	0.43
1:w:695:G:C2	1:w:768:G:C5	3.07	0.43
1:w:791:C:O2'	1:w:792:G:P	2.76	0.43
1:w:890:A:H2'	1:w:892:G:O4'	2.19	0.43
1:w:904:C:O5'	1:w:904:C:C6	2.71	0.43
1:w:989:G:OP1	26:X:31:LEU:HD21	2.17	0.43
1:w:1007:C:OP2	1:w:1008:C:H3'	2.18	0.43
1:w:1221:C:OP1	1:w:1221:C:C5	2.71	0.43
1:w:1497:U:N3	1:w:1577:C:O3'	2.51	0.43
1:w:1534:G:H1'	1:w:1538:G:N1	2.34	0.43
1:w:1567:A:H3'	4:B:60:ARG:HH21	1.79	0.43
1:w:1660:C:C2	1:w:2001:A:C2	3.06	0.43
1:w:1732:A:H2'	1:w:1733:G:H5'	2.01	0.43
1:w:1848:A:C4	1:w:1849:G:H1'	2.54	0.43
1:w:1920:C:H4'	31:y:1517:G:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2332:U:H2'	1:w:2333:A:H5"	1.99	0.43
1:w:2406:U:H3	12:J:73:GLY:CA	2.31	0.43
1:w:2523:G:H2'	1:w:2524:G:H8	1.83	0.43
1:w:2682:U:C2	5:C:11:MET:CE	2.77	0.43
1:w:2695:C:H2'	1:w:2696:U:O5'	2.18	0.43
1:w:2714:G:C4	1:w:2715:C:C5	3.06	0.43
1:w:2823:A:C2'	1:w:2824:C:H5'	2.48	0.43
1:w:2900:A:C5	1:w:2901:C:C6	3.07	0.43
3:A:165:ARG:HD2	3:A:165:ARG:C	2.44	0.43
5:C:4:ILE:HG13	5:C:6:GLY:N	2.31	0.43
5:C:4:ILE:HD11	5:C:27:LEU:O	2.19	0.43
6:D:38:LYS:HD3	6:D:38:LYS:C	2.43	0.43
6:D:148:SER:HB3	6:D:184:THR:HB	2.00	0.43
7:E:148:MET:O	7:E:151:ALA:HB3	2.19	0.43
7:E:161:THR:HG22	7:E:163:ALA:N	2.31	0.43
8:F:95:ARG:HH21	8:F:95:ARG:HG3	1.84	0.43
8:F:105:LEU:HD11	8:F:107:VAL:HG23	2.01	0.43
11:I:48:PRO:C	11:I:50:GLY:H	2.26	0.43
11:I:98:VAL:HG22	11:I:99:PHE:N	2.32	0.43
14:L:50:HIS:HA	14:L:53:HIS:HE1	1.84	0.43
17:O:65:ILE:HD11	17:O:96:ALA:HB3	2.00	0.43
22:T:41:LEU:O	22:T:42:VAL:C	2.61	0.43
23:U:67:VAL:CG1	23:U:79:VAL:HG12	2.40	0.43
25:W:37:PHE:O	25:W:37:PHE:CG	2.71	0.43
29:a:18:ALA:O	29:a:19:SER:CB	2.66	0.43
31:y:41:G:N1	31:y:42:G:C6	2.87	0.43
31:y:271:C:O2'	31:y:272:C:H5'	2.18	0.43
31:y:309:G:C4	31:y:310:G:C8	3.07	0.43
31:y:448:A:H1'	31:y:487:A:C2	2.53	0.43
31:y:560:U:C6	31:y:566:G:C4	3.07	0.43
31:y:648:A:C5	31:y:649:G:C8	3.07	0.43
31:y:766:A:H2'	31:y:767:A:C8	2.53	0.43
31:y:781:A:H3'	31:y:782:A:H8	1.84	0.43
31:y:821:G:C2	31:y:880:C:C2	3.07	0.43
31:y:829:G:N1	31:y:830:G:N7	2.66	0.43
31:y:857:C:N4	31:y:858:G:C6	2.86	0.43
31:y:1004:A:O2'	31:y:1005:A:C5'	2.67	0.43
31:y:1187:G:O2'	47:o:60:SER:CB	2.62	0.43
31:y:1251:A:H2'	31:y:1252:A:H8	1.84	0.43
31:y:1319:A:O2'	31:y:1320:C:OP2	2.33	0.43
31:y:1344:C:O2'	42:j:120:ARG:HB3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1430:C:H2'	31:y:1431:C:C5'	2.49	0.43
31:y:1489:G:C4	31:y:1490:C:C5	3.07	0.43
33:2:7:U:H6	33:2:7:U:C5'	2.32	0.43
33:2:53:G:C5	33:2:54:U:C5	3.06	0.43
33:2:54:U:C2'	33:2:55:PSU:O5'	2.66	0.43
37:e:76:ARG:O	37:e:77:ASN:C	2.61	0.43
37:e:94:LEU:HD23	37:e:200:GLU:OE2	2.18	0.43
39:g:83:ASP:N	39:g:83:ASP:OD2	2.52	0.43
40:h:116:ALA:O	40:h:119:ARG:HG2	2.19	0.43
44:l:72:ALA:C	44:l:77:MET:HB2	2.43	0.43
45:m:57:VAL:CG1	45:m:58:ARG:N	2.81	0.43
45:m:112:ARG:HD2	45:m:118:LYS:HE3	2.01	0.43
47:o:37:PHE:CD1	47:o:44:LEU:HD22	2.53	0.43
48:p:37:ASN:HA	48:p:40:SER:HB3	1.99	0.43
50:r:19:VAL:HG13	50:r:45:HIS:O	2.19	0.43
51:s:35:ARG:O	51:s:37:VAL:N	2.52	0.43
1:w:138:G:H2'	1:w:141(A):A:N6	2.33	0.43
1:w:138:G:N2	1:w:140:A:OP2	2.51	0.43
1:w:181:A:H2'	1:w:182:A:H8	1.81	0.43
1:w:212:G:H2'	1:w:213:A:O4'	2.19	0.43
1:w:281:G:H2'	1:w:359:A:H61	1.83	0.43
1:w:371:A:OP1	1:w:371:A:O4'	2.37	0.43
1:w:443:A:H2	1:w:1245:G:H21	1.67	0.43
1:w:467:G:H2'	1:w:468:G:C8	2.53	0.43
1:w:527:C:H4'	1:w:528:A:O4'	2.19	0.43
1:w:640:C:O5'	1:w:640:C:H6	2.02	0.43
1:w:669:G:C8	1:w:801:G:N7	2.86	0.43
1:w:712:G:H2'	1:w:713:G:O4'	2.18	0.43
1:w:729:G:H8	1:w:764:A:OP1	2.01	0.43
1:w:774:A:O3'	1:w:777:A:H1'	2.19	0.43
1:w:830:G:C1'	1:w:2448:A:N1	2.79	0.43
1:w:888:C:O2'	1:w:889:C:O5'	2.33	0.43
1:w:1058:G:O6	1:w:1080:C:N4	2.49	0.43
1:w:1221(A):C:N3	1:w:1229:G:C2	2.87	0.43
1:w:1321:A:OP2	1:w:1322:A:OP2	2.36	0.43
1:w:1369:G:N2	1:w:1810:A:H1'	2.34	0.43
1:w:1444(B):A:H1'	1:w:1460:A:H1'	2.01	0.43
1:w:1453:A:C2	1:w:2702:U:C4	3.06	0.43
1:w:1588:C:H6	1:w:1588:C:O5'	2.01	0.43
1:w:1612:C:H2'	1:w:1613:G:H5"	2.00	0.43
1:w:1717:G:H8	1:w:1717:G:O5'	2.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1923:U:H2'	1:w:1924:C:C5	2.53	0.43
1:w:2052:G:H5'	5:C:140:SER:HG	1.83	0.43
1:w:2138:C:OP2	1:w:2138:C:H6	2.01	0.43
1:w:2146:C:H3'	1:w:2146:C:C6	2.53	0.43
1:w:2175:C:C3'	1:w:2176:A:H5"	2.47	0.43
1:w:2283:C:H2'	1:w:2284:C:C6	2.54	0.43
1:w:2423:U:O4'	1:w:2425:A:N7	2.51	0.43
1:w:2550:G:C5	1:w:2551:C:C4	3.07	0.43
1:w:2646:C:C3'	1:w:2647:U:H5"	2.49	0.43
1:w:2652:C:C2	1:w:2653:U:C5	3.06	0.43
1:w:2683:C:H5'	16:N:58:ASN:HD21	1.82	0.43
1:w:2779:U:O4'	1:w:2781:A:C2	2.71	0.43
2:x:114:G:N3	15:M:38:GLN:OE1	2.51	0.43
4:B:8:PRO:HB2	4:B:14:ARG:HA	2.01	0.43
4:B:117:VAL:O	4:B:118:VAL:HB	2.19	0.43
4:B:182:LEU:HD22	4:B:271:ILE:HB	2.01	0.43
4:B:212:SER:C	4:B:217:ARG:CG	2.91	0.43
4:B:238:GLY:O	4:B:239:ARG:C	2.61	0.43
5:C:97:LYS:N	5:C:97:LYS:HD3	2.34	0.43
5:C:127:ASP:O	5:C:128:SER:HB3	2.18	0.43
5:C:132:HIS:HB3	5:C:133:LYS:H	1.57	0.43
6:D:182:VAL:O	12:J:6:LEU:HA	2.19	0.43
8:F:67:LEU:C	8:F:69:ARG:H	2.27	0.43
9:G:27:ARG:HB2	9:G:27:ARG:NH2	2.34	0.43
9:G:67:ARG:O	9:G:71:ILE:HG22	2.19	0.43
9:G:88:ILE:HG12	9:G:89:TYR:CD1	2.54	0.43
13:K:37:LEU:CB	13:K:127:ILE:HB	2.47	0.43
14:L:68:ARG:CZ	14:L:69:ASP:H	2.32	0.43
15:M:75:GLU:CD	15:M:75:GLU:C	2.86	0.43
18:P:4:ILE:O	18:P:39:LEU:HG	2.17	0.43
19:Q:23:LEU:CG	27:Y:25:LEU:HG	2.49	0.43
21:S:40:GLU:HB2	21:S:62:GLU:OE2	2.18	0.43
22:T:2:GLU:HA	22:T:56:VAL:CG2	2.49	0.43
22:T:108:PRO:HD2	22:T:111:VAL:HG21	2.00	0.43
22:T:130:PRO:CA	22:T:133:ILE:HG12	2.43	0.43
23:U:13:GLY:O	23:U:14:ARG:CB	2.66	0.43
24:V:62:VAL:HG11	24:V:70:VAL:HG12	2.01	0.43
31:y:186(A):C:C4'	53:u:81:LYS:HG3	2.49	0.43
31:y:267:C:OP1	50:r:67:LYS:HB3	2.18	0.43
31:y:327:A:C6	31:y:329:A:C6	3.07	0.43
31:y:391:G:C6	31:y:392:G:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:411:A:N7	31:y:413:G:C5	2.87	0.43
31:y:435:C:C2'	31:y:436:C:C5	3.02	0.43
31:y:543:C:C2	31:y:544:G:C8	3.07	0.43
31:y:674:G:H1	31:y:716:A:N6	2.09	0.43
31:y:695:A:H2'	31:y:696:A:C8	2.54	0.43
31:y:757:U:H3'	31:y:758:G:C8	2.54	0.43
31:y:914:A:H2'	31:y:915:A:O5'	2.19	0.43
31:y:958:A:N7	31:y:959:A:N7	2.67	0.43
31:y:959:A:O4'	31:y:985:C:O4'	2.36	0.43
31:y:988:G:N2	31:y:1015:A:H2	2.15	0.43
31:y:1091:U:H3	31:y:1093:A:H5"	1.84	0.43
31:y:1195:C:C6	31:y:1195:C:O5'	2.69	0.43
31:y:1232:U:H6	31:y:1232:U:O5'	2.02	0.43
31:y:1267:C:H1'	54:v:20:LYS:HZ2	1.84	0.43
31:y:1324:A:H8	31:y:1324:A:OP2	2.01	0.43
31:y:1327:C:P	54:v:19:GLY:HA3	2.59	0.43
31:y:1440:C:H2'	31:y:1441:G:C5'	2.48	0.43
35:c:21:ARG:HB3	35:c:22:LYS:H	1.67	0.43
37:e:86:LYS:O	37:e:87:GLY:C	2.61	0.43
37:e:121:VAL:HG22	37:e:136:PRO:CB	2.43	0.43
38:f:7:GLU:O	38:f:112:LEU:HD11	2.19	0.43
39:g:17:SER:C	39:g:19:LEU:N	2.75	0.43
39:g:22:GLU:O	39:g:26:ILE:HG13	2.19	0.43
44:l:93:GLN:O	44:l:94:ALA:C	2.62	0.43
46:n:59:TYR:HD2	46:n:60:VAL:HG23	1.84	0.43
1:w:249:C:O5'	1:w:250:G:OP1	2.36	0.43
1:w:476:G:H2'	1:w:477:A:H5"	2.00	0.43
1:w:492:A:H3'	1:w:493:G:H8	1.83	0.43
1:w:611:C:H2'	1:w:612:G:H8	1.84	0.43
1:w:647:G:O6	1:w:648:G:O6	2.36	0.43
1:w:704:G:H1'	1:w:727:A:H61	1.83	0.43
1:w:904:C:O2'	22:T:169:GLU:OE1	2.29	0.43
1:w:1314:C:H2'	1:w:1315:C:C6	2.53	0.43
1:w:1709:U:H6	1:w:1709:U:O5'	2.02	0.43
1:w:1746:G:H3'	1:w:1747:G:H5"	2.01	0.43
1:w:1825:A:OP1	4:B:249:PRO:CD	2.67	0.43
1:w:1996:C:H4'	5:C:117:MET:HE1	2.00	0.43
1:w:2263:C:H41	23:U:13:GLY:N	2.17	0.43
1:w:2288:A:H2	1:w:2325:G:N9	2.16	0.43
1:w:2356:C:OP1	23:U:18:ALA:HB3	2.18	0.43
1:w:2558:C:N3	1:w:2559:C:C5	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2592:G:N7	1:w:2593:U:C4	2.87	0.43
1:w:2625:G:C2	1:w:2626:C:C2	3.07	0.43
1:w:2835:A:H1'	1:w:2879:C:C5	2.54	0.43
1:w:2849:U:H4'	1:w:2868:A:C2	2.54	0.43
1:w:2870:C:C2'	1:w:2871:C:O5'	2.67	0.43
4:B:112:GLN:O	4:B:113:VAL:C	2.61	0.43
4:B:259:THR:O	4:B:261:LYS:N	2.52	0.43
5:C:167:VAL:HG22	5:C:170:LEU:HD11	2.00	0.43
9:G:6:LEU:O	9:G:14:ASP:N	2.51	0.43
10:H:34:PRO:HB3	10:H:72:GLY:O	2.18	0.43
10:H:63:PRO:HA	17:O:64:ARG:CZ	2.48	0.43
11:I:70:LYS:H	11:I:76:ALA:HA	1.83	0.43
12:J:78:PRO:O	12:J:79:ARG:C	2.61	0.43
13:K:72:LYS:HD3	13:K:73:PRO:O	2.18	0.43
15:M:62:LYS:HG3	15:M:63:THR:H	1.83	0.43
16:N:4:GLY:O	16:N:7:ILE:HB	2.19	0.43
16:N:90:GLN:HB3	16:N:120:ARG:CZ	2.48	0.43
17:O:105:VAL:HB	17:O:106:PHE:H	1.62	0.43
18:P:35:LEU:HA	18:P:62:LEU:HD21	1.99	0.43
19:Q:75:TYR:O	19:Q:103:ILE:HB	2.19	0.43
20:R:65:ARG:O	20:R:66:LEU:HB2	2.19	0.43
21:S:23:ARG:CG	21:S:24:VAL:N	2.79	0.43
22:T:17:ALA:C	22:T:20:ARG:HG3	2.43	0.43
29:a:39:LYS:CG	29:a:40:GLU:N	2.70	0.43
29:a:50:LEU:O	29:a:50:LEU:HG	2.19	0.43
29:a:59:LYS:O	29:a:60:LEU:HD23	2.18	0.43
31:y:246:A:HO2'	31:y:247:G:P	2.41	0.43
31:y:283:C:C2'	31:y:284:G:H5'	2.49	0.43
31:y:377:G:C6	31:y:378:G:N7	2.87	0.43
31:y:382:A:N7	31:y:383:A:N6	2.67	0.43
31:y:585:G:C5	31:y:586:C:N4	2.87	0.43
31:y:604:G:C5	31:y:605:U:C5	3.07	0.43
31:y:809:G:C2	31:y:810:C:C6	3.07	0.43
31:y:887:G:C6	31:y:888:G:C6	3.06	0.43
31:y:102(B):C:C2'	31:y:102(C):C:OP1	2.66	0.43
31:y:1067:A:HO2'	31:y:1068:G:P	2.40	0.43
31:y:1187:G:C2	31:y:1188:A:C2	3.07	0.43
31:y:1197:G:N3	31:y:1198:G:C8	2.87	0.43
31:y:1305:G:H5'	54:v:4:GLY:O	2.18	0.43
31:y:1350:A:C6	31:y:1351:U:C4	3.06	0.43
31:y:1391:U:H2'	31:y:1392:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1447:G:O2'	31:y:1448:C:H5'	2.19	0.43
32:z:18:G:OP1	32:z:18:G:O4'	2.37	0.43
37:e:8:VAL:HG11	37:e:21:LEU:HB3	2.00	0.43
37:e:77:ASN:ND2	37:e:77:ASN:H	2.17	0.43
38:f:19:MET:HB2	38:f:24:ARG:HG2	2.00	0.43
40:h:24:THR:O	40:h:24:THR:HG22	2.18	0.43
40:h:80:VAL:HG21	40:h:85:TYR:CG	2.54	0.43
41:i:2:LEU:HD13	41:i:2:LEU:O	2.19	0.43
46:n:86:CYS:HB3	52:t:74:PHE:CE1	2.54	0.43
47:o:26:ARG:NH2	47:o:27:CYS:SG	2.91	0.43
1:w:32:C:N4	1:w:447:A:OP2	2.51	0.43
1:w:335:C:O2'	21:S:67:LEU:CG	2.67	0.43
1:w:440:G:H2'	1:w:441:U:C6	2.54	0.43
1:w:465:G:H21	1:w:684:G:C1'	2.17	0.43
1:w:481:G:H1'	1:w:506:G:N2	2.34	0.43
1:w:655:A:C4'	1:w:656:G:O4'	2.49	0.43
1:w:871:U:N3	1:w:872:A:N7	2.67	0.43
1:w:956:G:P	13:K:75:THR:HG21	2.59	0.43
1:w:1008:C:OP2	10:H:132:LYS:HE2	2.19	0.43
1:w:1199:U:H3	1:w:1246:A:H61	1.66	0.43
1:w:1217:C:C4	1:w:1218:C:C5	3.07	0.43
1:w:1265:A:H61	1:w:2013:A:H3'	1.84	0.43
1:w:1320:C:H5'	1:w:1329:U:P	2.58	0.43
1:w:1459:G:C2	1:w:1461:G:N7	2.87	0.43
1:w:1519:G:C6	1:w:1520:U:C6	3.07	0.43
1:w:1532:C:H3'	1:w:1533:C:C6	2.54	0.43
1:w:1636:C:O2'	1:w:1760:A:N3	2.32	0.43
1:w:1759:A:C4'	1:w:2714:G:H21	2.32	0.43
1:w:1772:G:H2'	1:w:1773:A:H4'	2.01	0.43
1:w:1782:C:N4	1:w:2587:A:N1	2.67	0.43
1:w:1790:C:H3'	1:w:1828:G:H22	1.82	0.43
1:w:2115:G:N1	1:w:2119:A:OP1	2.52	0.43
1:w:2354:G:C2	1:w:2355:C:C2	3.07	0.43
1:w:2433:A:O2'	1:w:2434:A:OP2	2.33	0.43
1:w:2688:U:C5	1:w:2719:G:C5	3.07	0.43
1:w:2694:G:C2'	1:w:2695:C:C5'	2.96	0.43
1:w:2711:A:OP1	1:w:2712(B):A:C8	2.72	0.43
1:w:2786:U:H4'	5:C:64:LYS:HA	2.01	0.43
1:w:2791:C:C2'	1:w:2792:G:C8	2.86	0.43
2:x:79:C:H2'	2:x:80:U:O4'	2.19	0.43
3:A:8:TYR:O	3:A:12:LEU:HD13	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:182:LEU:O	4:B:271:ILE:N	2.51	0.43
6:D:171:LEU:HD23	6:D:172:ALA:C	2.44	0.43
7:E:46:ALA:HA	7:E:53:LEU:CG	2.48	0.43
7:E:95:ARG:HA	7:E:99:MET:HG2	2.01	0.43
7:E:120:LEU:HD13	7:E:121:ASN:H	1.79	0.43
7:E:125:PHE:HB2	7:E:166:ASP:CB	2.48	0.43
7:E:139:LEU:H	7:E:139:LEU:HD13	1.83	0.43
11:I:86:ILE:O	11:I:93:PRO:CB	2.66	0.43
11:I:107:ARG:N	11:I:115:VAL:HG21	2.34	0.43
12:J:95:VAL:HG23	12:J:125:VAL:HA	2.00	0.43
12:J:121:LYS:HD3	12:J:121:LYS:O	2.19	0.43
15:M:26:LEU:CB	15:M:39:ILE:HG22	2.49	0.43
15:M:30:ARG:HB3	15:M:92:TYR:CE1	2.53	0.43
16:N:66:VAL:O	16:N:67:SER:C	2.61	0.43
16:N:95:ARG:O	16:N:96:ARG:CB	2.67	0.43
19:Q:3:ALA:CB	19:Q:107:LEU:HB2	2.48	0.43
22:T:102:LEU:HB2	22:T:123:ASP:O	2.17	0.43
23:U:51:VAL:HG11	23:U:79:VAL:CG2	2.48	0.43
30:b:3:VAL:CG1	30:b:34:GLN:HB3	2.46	0.43
31:y:27:G:C2	31:y:557:G:N3	2.87	0.43
31:y:161:A:H2'	31:y:162:A:H5'	1.96	0.43
31:y:227:G:N2	49:q:62:VAL:CB	2.68	0.43
31:y:356:A:C2	31:y:368:U:O2	2.72	0.43
31:y:411:A:C8	31:y:411:A:C3'	3.02	0.43
31:y:423:G:C2	31:y:424:G:C1'	3.02	0.43
31:y:546:G:O3'	31:y:547:A:O4'	2.37	0.43
31:y:625:G:H4'	49:q:16:HIS:HD2	1.84	0.43
31:y:629:G:O2'	31:y:630:G:O4'	2.27	0.43
31:y:713:G:H21	31:y:777:A:C1'	2.32	0.43
31:y:718:G:H5"	31:y:720:C:N4	2.34	0.43
31:y:878:G:C6	31:y:879:C:C4	3.07	0.43
31:y:1296:C:H3'	31:y:1297:C:C5	2.54	0.43
31:y:1323:G:C2'	31:y:1324:A:C8	2.91	0.43
31:y:1507:A:C5	31:y:1508:G:C8	3.07	0.43
31:y:1518:MA6:C10	31:y:1519:MA6:H103	2.49	0.43
32:z:41:C:O2	32:z:42:G:C8	2.72	0.43
33:2:36:A:C5	33:2:37:A:C8	3.07	0.43
35:c:140:HIS:C	35:c:144:ARG:HB3	2.40	0.43
37:e:72:GLU:CD	37:e:72:GLU:H	2.25	0.43
37:e:102:ASP:CB	37:e:121:VAL:HG21	2.48	0.43
37:e:135:LEU:C	37:e:137:SER:H	2.27	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:139:ARG:O	37:e:139:ARG:HG3	2.18	0.43
38:f:77:PRO:HD2	38:f:91:LEU:CD2	2.48	0.43
38:f:79:GLU:HG2	38:f:93:PRO:CD	2.46	0.43
38:f:105:VAL:CG2	38:f:106:PRO:HD3	2.36	0.43
43:k:43:ARG:HD2	43:k:69:ASN:HB2	2.01	0.43
45:m:9:LEU:C	45:m:9:LEU:HD23	2.44	0.43
45:m:92:LEU:N	45:m:93:PRO:HD3	2.34	0.43
45:m:116:ARG:HH12	45:m:123:LYS:CE	2.32	0.43
1:w:78:A:N6	1:w:109:G:C6	2.87	0.42
1:w:254:G:O6	29:a:5:LYS:HD2	2.19	0.42
1:w:330:A:O2'	1:w:1210:A:C2	2.66	0.42
1:w:481:G:O2'	1:w:506:G:N2	2.52	0.42
1:w:744:G:C5	1:w:745:G:C5	3.07	0.42
1:w:847:U:C3'	1:w:848:G:H5"	2.49	0.42
1:w:1124:C:H3'	1:w:1125:G:H8	1.84	0.42
1:w:1138:G:HO2'	1:w:1139:G:H5'	1.84	0.42
1:w:1313:U:C3'	1:w:1332:G:H4'	2.48	0.42
1:w:1323:U:H2'	1:w:1324:G:C5'	2.46	0.42
1:w:1335:U:H2'	1:w:1336:A:O4'	2.19	0.42
1:w:1361:G:C6	1:w:1362:C:C5	3.06	0.42
1:w:1402:C:O5'	1:w:1402:C:H6	2.02	0.42
1:w:1540:G:H3'	1:w:1541:U:C6	2.48	0.42
1:w:1563:G:H2'	1:w:1564:C:O4'	2.19	0.42
1:w:2090:G:N2	24:V:47:GLN:CG	2.82	0.42
1:w:2267:A:OP2	1:w:2268:A:H5"	2.18	0.42
1:w:2489:G:C6	1:w:2490:G:N1	2.87	0.42
1:w:2530:A:O2'	1:w:2534:A:N6	2.52	0.42
1:w:2566:A:H5"	1:w:2566:A:C8	2.50	0.42
1:w:2646:C:O2'	1:w:2647:U:OP1	2.30	0.42
1:w:2705:A:C8	1:w:2706:G:C8	3.07	0.42
1:w:2791:C:N4	1:w:2893:G:C6	2.87	0.42
1:w:2838:G:O2'	14:L:45:ARG:HG2	2.18	0.42
1:w:2899:G:N2	1:w:2900:A:H1'	2.34	0.42
2:x:49:C:OP2	15:M:95:HIS:CE1	2.71	0.42
4:B:63:ARG:HB3	4:B:85:ASP:HB2	2.01	0.42
4:B:65:ILE:CD1	4:B:105:ILE:HG13	2.13	0.42
5:C:28:ALA:O	5:C:30:PRO:HD3	2.19	0.42
9:G:24:GLY:H	9:G:27:ARG:CZ	2.32	0.42
9:G:88:ILE:HG23	9:G:90:GLY:H	1.84	0.42
9:G:113:ARG:O	9:G:131:LYS:O	2.36	0.42
9:G:147:GLN:O	9:G:148:GLU:HB2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:57:LEU:C	10:H:59:GLY:H	2.26	0.42
11:I:2:ILE:HB	11:I:33:ALA:O	2.19	0.42
12:J:135:LEU:C	12:J:135:LEU:HD13	2.44	0.42
13:K:3:MET:O	13:K:3:MET:SD	2.77	0.42
13:K:52:VAL:HG23	13:K:53:ALA:H	1.84	0.42
15:M:74:ALA:HB3	15:M:109:GLY:CA	2.49	0.42
19:Q:88:ARG:HD2	19:Q:93:ALA:CA	2.49	0.42
20:R:43:VAL:C	20:R:45:THR:N	2.77	0.42
21:S:31:LEU:CB	21:S:32:PRO:CD	2.97	0.42
22:T:15:PRO:C	22:T:19:ARG:HD2	2.44	0.42
24:V:85:LEU:HD12	24:V:85:LEU:N	2.30	0.42
26:X:10:LYS:O	26:X:12:PRO:HD3	2.19	0.42
31:y:41:G:C6	31:y:42:G:O6	2.72	0.42
31:y:49:U:C3'	31:y:50:A:C5'	2.97	0.42
31:y:52:G:C6	31:y:360:A:N6	2.87	0.42
31:y:127:G:C4	31:y:128:G:C8	3.06	0.42
31:y:161:A:C5	31:y:162:A:C6	3.07	0.42
31:y:408:A:N6	31:y:409:G:O6	2.51	0.42
31:y:451:A:C5	31:y:481:G:C5	3.06	0.42
31:y:486:U:O2'	31:y:487:A:C5'	2.53	0.42
31:y:509:A:H3'	31:y:509:A:P	2.58	0.42
31:y:599:C:C2'	31:y:600:C:H5'	2.49	0.42
31:y:604:G:C6	31:y:635:G:N1	2.87	0.42
31:y:666:G:H22	48:p:52:SER:HB2	1.84	0.42
31:y:716:A:H1'	44:l:118:GLY:C	2.44	0.42
31:y:821:G:O6	31:y:880:C:N4	2.51	0.42
31:y:951:G:O6	31:y:1230:C:N4	2.51	0.42
31:y:1061:G:H2'	31:y:1062:U:C5	2.54	0.42
31:y:1074:G:C6	31:y:1075:C:N4	2.86	0.42
31:y:1347:G:H22	31:y:1349:A:N6	2.09	0.42
31:y:1443:G:C4'	31:y:1446:A:C5'	2.92	0.42
33:2:45:G:C2'	33:2:46:G:H5"	2.48	0.42
35:c:118:LEU:HD11	35:c:127:ILE:HG21	2.00	0.42
40:h:41:ARG:NH1	42:j:41:VAL:HA	2.34	0.42
40:h:119:ARG:HG2	40:h:120:ILE:H	1.84	0.42
41:i:11:THR:C	41:i:13:ILE:N	2.76	0.42
41:i:16:ALA:HA	41:i:19:VAL:CG1	2.47	0.42
41:i:39:LEU:HD12	41:i:45:ILE:CG2	2.50	0.42
41:i:85:ARG:HD3	41:i:86:ILE:N	2.30	0.42
41:i:119:LEU:HB3	41:i:124:ALA:N	2.33	0.42
42:j:116:LYS:HB3	42:j:122:ALA:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:l:38:ASN:HA	44:l:39:PRO:HD2	1.76	0.42
44:l:85:ARG:HG2	44:l:111:ASP:O	2.19	0.42
47:o:48:ALA:HA	47:o:53:LEU:HD21	1.98	0.42
51:s:24:ALA:C	51:s:26:LEU:N	2.77	0.42
1:w:49:A:H4'	1:w:50:U:H5"	2.01	0.42
1:w:294:A:C3'	1:w:295:G:C8	3.02	0.42
1:w:376:C:C4	1:w:377:C:C4	3.07	0.42
1:w:449:A:C8	1:w:449:A:OP2	2.72	0.42
1:w:849:A:H2'	1:w:850:C:C6	2.53	0.42
1:w:855:G:C5	1:w:856:C:C4	3.07	0.42
1:w:987:G:N3	1:w:987:G:H2'	2.34	0.42
1:w:1275:A:O2'	1:w:1276:A:O5'	2.38	0.42
1:w:1305:C:C2	1:w:1624:G:N2	2.88	0.42
1:w:1459:G:C6	1:w:1461:G:C4	3.07	0.42
1:w:1465:G:N2	1:w:1546:A:O2'	2.47	0.42
1:w:1510:A:C2'	1:w:1511:A:O4'	2.54	0.42
1:w:1538:G:C2	1:w:1539:G:C6	3.07	0.42
1:w:1613:G:C5	1:w:1619:G:C6	3.07	0.42
1:w:1652:A:OP2	14:L:10:LEU:CG	2.67	0.42
1:w:1916:A:H5'	1:w:1917:U:OP2	2.19	0.42
1:w:2021:C:H5"	1:w:2022:U:OP2	2.19	0.42
1:w:2133:G:O3'	1:w:2134:A:C8	2.67	0.42
1:w:2185:C:C2	1:w:2186:G:C8	3.07	0.42
1:w:2299:G:H2'	1:w:2300:G:H8	1.84	0.42
1:w:2538:C:O2	1:w:2538:C:H2'	2.18	0.42
1:w:2754:U:C6	1:w:2754:U:C4'	3.02	0.42
1:w:2851:A:H3'	1:w:2852:G:C8	2.54	0.42
2:x:107:U:H3'	2:x:108:C:H5	1.84	0.42
4:B:25:THR:O	4:B:25:THR:CG2	2.63	0.42
4:B:76:PRO:HA	4:B:97:TYR:CD1	2.54	0.42
4:B:76:PRO:HD2	4:B:118:VAL:HA	2.01	0.42
5:C:142:GLY:O	5:C:144:ARG:N	2.51	0.42
5:C:186:GLY:O	5:C:187:ALA:HB2	2.19	0.42
6:D:30:GLU:OE1	12:J:12:ALA:HB1	2.19	0.42
7:E:39:ILE:HG13	7:E:157:ILE:CG2	2.45	0.42
11:I:100:GLY:HA2	11:I:101:PRO:HD3	1.87	0.42
12:J:85:LEU:CD1	12:J:117:GLU:C	2.92	0.42
12:J:128:HIS:HA	12:J:147:LEU:HA	2.01	0.42
13:K:14:ARG:HD2	13:K:14:ARG:H	1.82	0.42
14:L:28:LEU:HB3	14:L:34:ILE:CG1	2.49	0.42
15:M:27:SER:OG	15:M:40:ILE:HG13	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:91:PRO:HG2	15:M:92:TYR:CD2	2.55	0.42
16:N:31:SER:OG	16:N:32:TYR:HD1	2.02	0.42
18:P:47:VAL:CG1	18:P:48:GLY:H	2.22	0.42
22:T:141:VAL:HG21	22:T:144:LEU:HB2	1.99	0.42
24:V:69:LYS:HG3	24:V:70:VAL:H	1.81	0.42
25:W:26:ARG:HA	25:W:29:LYS:CG	2.49	0.42
29:a:6:THR:HG21	29:a:62:LEU:HB2	1.99	0.42
31:y:49:U:C3'	31:y:50:A:H5'	2.48	0.42
31:y:107:G:O6	53:u:15:ARG:HG2	2.20	0.42
31:y:300:A:H2'	31:y:301:G:C5'	2.49	0.42
31:y:332:G:H2'	31:y:333:G:O4'	2.18	0.42
31:y:335:C:C1'	31:y:1433:A:N3	2.74	0.42
31:y:343:U:C2	31:y:347:G:N1	2.87	0.42
31:y:404:U:C2'	31:y:405:U:H5'	2.49	0.42
31:y:421:U:H5'	31:y:422:C:C5	2.53	0.42
31:y:557:G:H2'	31:y:558:G:O4'	2.19	0.42
31:y:659:U:O2	31:y:746:A:H2	2.02	0.42
31:y:661:G:N2	31:y:745:C:N3	2.67	0.42
31:y:741:G:H1'	48:p:52:SER:OG	2.18	0.42
31:y:935:A:O4'	31:y:1384:C:O2	2.37	0.42
31:y:960:U:C5	52:t:79:THR:CG2	3.01	0.42
31:y:1069:C:C1'	31:y:1192:C:O2	2.67	0.42
31:y:1262:C:H2'	31:y:1263:C:H6	1.84	0.42
31:y:1306:A:C2'	31:y:1307:U:H5'	2.48	0.42
31:y:1377:A:N6	40:h:8:GLU:HG2	2.33	0.42
31:y:1459:C:C2	31:y:1460:A:C8	3.07	0.42
32:z:38:A:H2'	32:z:39:C:C6	2.54	0.42
35:c:115:LEU:C	35:c:115:LEU:HD12	2.44	0.42
36:d:52:LEU:CG	36:d:114:PRO:HB3	2.49	0.42
36:d:107:GLN:H	36:d:107:GLN:NE2	2.16	0.42
37:e:60:GLU:O	37:e:64:LEU:HG	2.18	0.42
37:e:100:ARG:HG2	37:e:102:ASP:CB	2.48	0.42
41:i:14:ARG:O	41:i:18:ARG:HD3	2.19	0.42
41:i:106:GLY:O	41:i:122:ARG:NH1	2.52	0.42
42:j:85:LEU:HD23	42:j:92:TYR:N	2.34	0.42
43:k:82:ILE:HD13	43:k:86:MET:HB2	2.00	0.42
46:n:66:LEU:O	46:n:67:GLU:C	2.61	0.42
47:o:24:CYS:SG	47:o:39:LEU:CD2	3.02	0.42
47:o:34:TYR:CD2	47:o:37:PHE:HB2	2.54	0.42
48:p:39:LEU:HD13	48:p:56:LEU:HD22	2.00	0.42
1:w:68:G:C4	1:w:74:A:C8	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:184:C:C4	1:w:185:U:C4	3.07	0.42
1:w:215:G:H4'	1:w:216:A:O5'	2.19	0.42
1:w:242:G:C2'	1:w:243:U:OP2	2.68	0.42
1:w:618(A):G:N2	1:w:618(B):C:C2	2.88	0.42
1:w:671:C:C5'	12:J:41:ARG:HH12	2.31	0.42
1:w:889:C:H5"	1:w:890:A:OP1	2.18	0.42
1:w:922:U:N3	1:w:923:C:C4	2.87	0.42
1:w:923:C:H1'	23:U:26:TYR:CD1	2.55	0.42
1:w:935:C:H2'	1:w:936:C:C6	2.54	0.42
1:w:947:G:C2	1:w:948:G:C5	3.07	0.42
1:w:1009:A:N3	17:O:59:ARG:NH2	2.67	0.42
1:w:1152:C:O2	1:w:1152:C:H2'	2.19	0.42
1:w:1244:G:OP1	12:J:9:ASN:OD1	2.37	0.42
1:w:1319:G:C3'	1:w:1320:C:H5"	2.49	0.42
1:w:1342:A:O5'	1:w:1342:A:C8	2.68	0.42
1:w:1416:G:N2	1:w:1582:C:O2	2.45	0.42
1:w:1445:C:H2'	1:w:1446:C:C6	2.54	0.42
1:w:1567:A:OP2	4:B:60:ARG:NH1	2.51	0.42
1:w:1710:C:H2'	1:w:1711:C:C6	2.54	0.42
1:w:1960:A:HO2'	31:y:1484:C:HO2'	1.65	0.42
1:w:2050:C:C5	1:w:2051:A:N7	2.88	0.42
1:w:2622:C:C2'	1:w:2825:G:H1	2.29	0.42
1:w:2652:C:N3	1:w:2653:U:C5	2.87	0.42
1:w:2762:G:C5	1:w:2763:G:C6	3.07	0.42
1:w:2876:G:C4	1:w:2877:G:N7	2.87	0.42
2:x:38:C:H2'	2:x:39:A:H5'	2.00	0.42
3:A:45:HIS:CD2	3:A:216:THR:HG22	2.53	0.42
4:B:53:PHE:C	4:B:218:ARG:HB2	2.44	0.42
5:C:92:THR:O	5:C:95:ILE:HG22	2.18	0.42
5:C:98:PRO:HG3	5:C:174:ASP:N	2.33	0.42
10:H:46:LEU:CD2	10:H:83:ILE:HB	2.42	0.42
10:H:114:LEU:O	10:H:121:VAL:HG11	2.19	0.42
12:J:85:LEU:HD13	12:J:85:LEU:N	2.35	0.42
13:K:73:PRO:HD3	13:K:93:TYR:CZ	2.55	0.42
14:L:44:LEU:HA	14:L:47:PHE:HE2	1.83	0.42
14:L:48:VAL:HG12	14:L:52:ILE:HD11	2.01	0.42
16:N:77:PRO:HB2	16:N:78:LEU:H	1.56	0.42
17:O:51:LYS:NZ	17:O:55:ARG:NH2	2.66	0.42
21:S:55:TYR:HB2	21:S:56:PRO:HD2	2.00	0.42
22:T:137:ILE:HG12	22:T:138:GLU:N	2.34	0.42
22:T:145:GLU:O	22:T:146:ILE:C	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:21:ARG:HD2	24:V:21:ARG:C	2.44	0.42
24:V:87:PRO:HB2	24:V:91:LYS:CD	2.43	0.42
25:W:51:ARG:C	25:W:53:LEU:N	2.75	0.42
31:y:49:U:H3'	31:y:50:A:C5'	2.49	0.42
31:y:59:A:C5'	31:y:60:A:H5"	2.48	0.42
31:y:92:G:C6	31:y:93:U:C4	3.07	0.42
31:y:136:C:O2'	31:y:137:C:H5'	2.18	0.42
31:y:234:C:H1'	50:r:64:PRO:CG	2.50	0.42
31:y:241:C:H5'	45:m:18:ARG:NH2	2.34	0.42
31:y:382:A:C2'	31:y:383:A:C5'	2.97	0.42
31:y:599:C:H2'	31:y:600:C:H5'	2.01	0.42
31:y:691:G:C6	44:l:52:GLY:CA	3.00	0.42
31:y:716:A:N3	44:l:118:GLY:CA	2.83	0.42
31:y:879:C:C2'	31:y:880:C:O5'	2.68	0.42
31:y:918:A:C6	31:y:919:A:C4	3.08	0.42
31:y:102(C):C:H2'	31:y:1029:G:C5'	2.48	0.42
31:y:1072:G:H2'	31:y:1073:U:H6	1.84	0.42
31:y:1217:C:H2'	31:y:1218:C:C6	2.53	0.42
31:y:1268:A:C4'	54:v:20:LYS:HA	2.49	0.42
31:y:1319:A:H4'	52:t:37:ARG:HH12	1.84	0.42
31:y:1360:A:OP1	47:o:20:ALA:O	2.36	0.42
31:y:1394:A:N7	31:y:1501:C:O3'	2.52	0.42
31:y:1443:G:C3'	31:y:1446:A:H5'	2.48	0.42
31:y:1459:C:P	53:u:31:SER:OG	2.76	0.42
35:c:91:PRO:HB3	35:c:155:LEU:HD12	2.01	0.42
35:c:132:LYS:HD2	35:c:133:LYS:N	2.13	0.42
36:d:53:ALA:HB2	36:d:106:VAL:HG21	2.02	0.42
37:e:37:PRO:O	37:e:39:PRO:HD3	2.19	0.42
39:g:19:LEU:HD11	39:g:59:TYR:CE2	2.54	0.42
40:h:111:ARG:HG2	40:h:123:GLU:OE1	2.18	0.42
41:i:11:THR:HA	41:i:14:ARG:CG	2.49	0.42
44:l:62:GLN:HB2	44:l:93:GLN:CG	2.49	0.42
46:n:53:VAL:O	46:n:57:ARG:HB2	2.18	0.42
49:q:34:GLU:HG2	49:q:36:ILE:CD1	2.49	0.42
50:r:87:LYS:C	50:r:87:LYS:CD	2.88	0.42
53:u:60:GLU:HA	53:u:60:GLU:OE1	2.18	0.42
1:w:203:C:H3'	1:w:204:A:H5"	2.00	0.42
1:w:457:A:N6	1:w:471:A:OP2	2.39	0.42
1:w:669:G:C8	1:w:669:G:O5'	2.73	0.42
1:w:674:G:O2'	6:D:70:HIS:HA	2.20	0.42
1:w:818:G:OP2	1:w:1187:G:O6	2.36	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:865:C:N4	1:w:908:C:H42	2.18	0.42
1:w:957:A:H5'	13:K:75:THR:HG22	2.00	0.42
1:w:1069:A:H2'	1:w:1073:A:OP1	2.19	0.42
1:w:1124:C:C5	1:w:1125:G:C5	3.08	0.42
1:w:1241:A:O2'	1:w:1242:A:H5'	2.20	0.42
1:w:1405:U:H2'	1:w:1406:U:C6	2.54	0.42
1:w:1454:U:O4	1:w:2702:U:O4	2.37	0.42
1:w:1784:A:H1'	1:w:1785:A:N7	2.35	0.42
1:w:1818:U:P	4:B:88:ARG:HE	2.42	0.42
1:w:1902:C:H3'	1:w:1903:G:H5"	2.02	0.42
1:w:1906:G:N3	1:w:1929:G:N1	2.68	0.42
1:w:1935:G:H2'	1:w:1962:C:N3	2.34	0.42
1:w:2259:G:C4'	1:w:2427:C:H3'	2.49	0.42
1:w:2305:A:N1	7:E:154:GLY:HA3	2.34	0.42
1:w:2579:C:C4'	5:C:134:ILE:HG12	2.49	0.42
1:w:2669:G:C2	1:w:2670:A:C4	3.08	0.42
1:w:2675:A:OP1	11:I:31:LYS:CB	2.65	0.42
1:w:2782:G:C8	1:w:2782:G:O5'	2.73	0.42
1:w:2856:C:H2'	1:w:2857:G:C8	2.54	0.42
1:w:2874:C:C2'	1:w:2875:C:O5'	2.68	0.42
1:w:2892:A:C2'	1:w:2893:G:O5'	2.67	0.42
2:x:44:G:C6	2:x:48:A:C2	3.08	0.42
2:x:99:A:C4	2:x:100:G:C8	3.07	0.42
4:B:118:VAL:CG2	4:B:119:ALA:H	2.27	0.42
6:D:68:ALA:O	6:D:70:HIS:N	2.52	0.42
8:F:144:VAL:C	8:F:146:ALA:N	2.77	0.42
9:G:33:ARG:HD3	9:G:33:ARG:C	2.44	0.42
9:G:137:PRO:HB2	9:G:138:ILE:H	1.62	0.42
11:I:106:LEU:HD12	11:I:106:LEU:H	1.85	0.42
12:J:12:ALA:HB3	12:J:16:ARG:HG3	2.00	0.42
12:J:32:THR:O	12:J:33:ARG:CG	2.68	0.42
12:J:83:VAL:CG2	12:J:84:ASN:H	2.32	0.42
13:K:32:PHE:HA	13:K:132:VAL:HG11	2.00	0.42
14:L:60:LEU:O	14:L:61:HIS:C	2.62	0.42
15:M:104:GLY:O	15:M:106:ARG:N	2.52	0.42
21:S:60:PHE:O	21:S:61:ILE:CG1	2.67	0.42
22:T:146:ILE:H	22:T:146:ILE:CD1	2.31	0.42
24:V:10:LYS:O	24:V:48:LYS:HE2	2.20	0.42
24:V:48:LYS:O	24:V:49:VAL:HG23	2.19	0.42
24:V:53:VAL:CG1	24:V:54:ALA:N	2.83	0.42
24:V:78:LYS:HD3	24:V:80:LEU:HD12	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:22:G:C5	31:y:23:C:C5	3.07	0.42
31:y:22:G:O2'	31:y:23:C:O4'	2.25	0.42
31:y:27:G:C6	31:y:557:G:C2	3.07	0.42
31:y:38:G:N3	31:y:38:G:H2'	2.34	0.42
31:y:105:G:C5	31:y:106:C:C4	3.07	0.42
31:y:237:C:C5'	50:r:25:ARG:HH12	2.31	0.42
31:y:332:G:OP2	53:u:13:LEU:HD12	2.18	0.42
31:y:362:G:OP1	45:m:60:THR:CG2	2.67	0.42
31:y:391:G:C6	31:y:392:G:C8	3.06	0.42
31:y:512:U:C2	31:y:513:C:H5	2.36	0.42
31:y:621:A:H2'	31:y:622:A:C8	2.54	0.42
31:y:646:U:H2'	31:y:647:C:H6	1.82	0.42
31:y:646:U:O2'	31:y:647:C:H5'	2.20	0.42
31:y:741:G:C2	31:y:742:G:N7	2.87	0.42
31:y:933:G:O6	31:y:1385:G:C6	2.72	0.42
31:y:1114:C:O2	47:o:61:TRP:HB3	2.20	0.42
31:y:1271:G:N1	31:y:1272:G:C6	2.88	0.42
31:y:1316:G:H2'	31:y:1318:A:OP2	2.19	0.42
31:y:1484:C:C4	31:y:1485:U:C5	3.08	0.42
31:y:1513:A:C5	31:y:1514:C:C5	3.08	0.42
31:y:1520:G:C2'	31:y:1521:G:O5'	2.68	0.42
31:y:1526:G:C6	31:y:1527:C:N3	2.87	0.42
36:d:14:ILE:HB	47:o:57:ARG:NH2	2.34	0.42
36:d:196:LEU:HD12	36:d:196:LEU:HA	1.80	0.42
37:e:66:ARG:HD3	37:e:66:ARG:HA	1.82	0.42
37:e:108:LEU:CD2	37:e:174:LEU:HD22	2.39	0.42
38:f:53:LEU:HD22	38:f:53:LEU:N	2.34	0.42
38:f:72:GLN:O	38:f:73:ASN:HB3	2.20	0.42
40:h:59:LEU:HG	40:h:60:LYS:N	2.34	0.42
40:h:119:ARG:HG2	40:h:120:ILE:N	2.34	0.42
41:i:109:ILE:HG22	41:i:121:ASP:HB3	2.02	0.42
44:l:21:ILE:HD12	44:l:84:VAL:HG13	2.01	0.42
49:q:4:ILE:CG2	49:q:5:ARG:H	2.32	0.42
49:q:71:ARG:O	49:q:72:ARG:C	2.61	0.42
50:r:21:VAL:HG12	50:r:22:LEU:N	2.34	0.42
51:s:52:PRO:C	51:s:54:ARG:N	2.75	0.42
51:s:74:ARG:NE	51:s:81:PHE:HA	2.35	0.42
52:t:12:ASP:OD2	52:t:15:LEU:HD13	2.19	0.42
53:u:15:ARG:O	53:u:18:GLN:HG3	2.19	0.42
53:u:62:LEU:HD12	53:u:63:ILE:N	2.33	0.42
53:u:87:LYS:C	53:u:91:LEU:HG	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:21:A:N1	1:w:520:G:C2	2.88	0.42
1:w:205:G:O2'	1:w:206:U:P	2.77	0.42
1:w:476:G:C4	1:w:478:A:OP2	2.72	0.42
1:w:514:A:N6	1:w:515:A:N6	2.68	0.42
1:w:670:A:H4'	1:w:671:C:H5'	2.01	0.42
1:w:686:G:C8	28:Z:8:ASN:HB3	2.54	0.42
1:w:792:G:H21	1:w:2072:G:C1'	2.29	0.42
1:w:926:A:H3'	1:w:928:G:P	2.58	0.42
1:w:990:A:H5'	1:w:1186:G:OP2	2.20	0.42
1:w:1007:C:O2'	10:H:131:PRO:HA	2.20	0.42
1:w:1008:C:O2'	1:w:1009:A:H8	2.02	0.42
1:w:1223:G:H3'	1:w:1224:C:H5"	2.01	0.42
1:w:1225:G:H5"	18:P:88:ARG:NH1	2.35	0.42
1:w:1351:C:O2	1:w:1571:A:C2	2.72	0.42
1:w:1392:A:N7	1:w:1393:A:N6	2.67	0.42
1:w:1433:U:H2'	1:w:1434:A:H2	1.84	0.42
1:w:1459:G:N1	1:w:1461:G:N7	2.68	0.42
1:w:1802:A:O2'	1:w:1803:A:H5'	2.20	0.42
1:w:2024:G:C6	1:w:2025:C:N4	2.87	0.42
1:w:2109:U:H2'	1:w:2110:G:C8	2.55	0.42
1:w:2250:G:H8	1:w:2497:A:P	2.42	0.42
1:w:2285:C:O4'	1:w:2288:A:N6	2.53	0.42
1:w:2303:G:O4'	7:E:126:ASP:HA	2.19	0.42
1:w:2319:G:N7	15:M:7:TYR:CD2	2.87	0.42
1:w:2357:U:C2'	1:w:2359:C:OP2	2.66	0.42
1:w:2453:A:O2'	1:w:2572:A:H1'	2.19	0.42
1:w:2543:G:H2'	1:w:2544:G:H8	1.84	0.42
1:w:2595:G:C2	1:w:2599:G:C2	3.07	0.42
1:w:2660:A:H2'	1:w:2661:G:O4'	2.20	0.42
1:w:2710:C:OP1	14:L:15:SER:HB2	2.19	0.42
1:w:2740:A:C5	1:w:2764:A:C5	3.06	0.42
4:B:250:TRP:O	4:B:250:TRP:HD1	2.03	0.42
5:C:36:ARG:NH1	5:C:36:ARG:HG2	2.33	0.42
5:C:170:LEU:HB3	5:C:185:LYS:CB	2.48	0.42
5:C:188:VAL:CG2	5:C:189:PRO:HD2	2.38	0.42
6:D:113:ALA:C	6:D:115:GLU:H	2.26	0.42
7:E:173:LEU:HA	7:E:178:PHE:CD2	2.53	0.42
11:I:101:PRO:HB2	11:I:120:GLU:HB3	2.01	0.42
12:J:15:ARG:HG2	12:J:15:ARG:H	1.64	0.42
12:J:96:THR:C	12:J:98:GLU:N	2.78	0.42
13:K:133:ARG:HE	13:K:134:ARG:C	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:25:ARG:NH1	15:M:42:ASP:HB3	2.34	0.42
15:M:63:THR:O	15:M:64:GLU:C	2.62	0.42
16:N:86:ILE:CG2	16:N:87:ASP:N	2.79	0.42
20:R:13:LEU:N	20:R:13:LEU:CD2	2.83	0.42
20:R:65:ARG:HA	20:R:65:ARG:HE	1.74	0.42
21:S:13:VAL:HG12	21:S:14:LEU:O	2.19	0.42
24:V:77:ALA:O	24:V:78:LYS:HB3	2.18	0.42
31:y:95:G:H2'	31:y:96:G:C8	2.54	0.42
31:y:109:A:H5"	31:y:109:A:N3	2.34	0.42
31:y:116:A:O2'	31:y:117:G:H5'	2.19	0.42
31:y:129(B):G:O6	31:y:187:C:O2'	2.38	0.42
31:y:180:U:C4	31:y:181:G:O6	2.72	0.42
31:y:310:G:C2	31:y:311:C:C4	3.08	0.42
31:y:399:G:C6	31:y:400:C:C4	3.07	0.42
31:y:417:C:C2	31:y:418:C:H5	2.38	0.42
31:y:418:C:C4	31:y:419:C:C5	3.08	0.42
31:y:540:G:C6	31:y:541:G:C4	3.08	0.42
31:y:637:G:C6	31:y:638:G:C6	3.07	0.42
31:y:707:C:H2'	31:y:708:C:O5'	2.19	0.42
31:y:1046:A:H2'	31:y:1047:G:O4'	2.20	0.42
31:y:1080:A:C8	31:y:1080:A:O5'	2.71	0.42
31:y:1115:C:H2'	31:y:1116:C:C6	2.55	0.42
31:y:1208:C:C2'	31:y:1209:C:O5'	2.68	0.42
31:y:1223:C:C3'	31:y:1224:G:H5'	2.49	0.42
31:y:1265:G:C2'	31:y:1266:G:H5'	2.50	0.42
31:y:1312:G:H2'	31:y:1313:U:C5'	2.49	0.42
31:y:1338:G:C6	31:y:1339:A:C6	3.08	0.42
31:y:1343:G:C5	31:y:1344:C:C4	3.07	0.42
31:y:1345:U:C4	31:y:1377:A:C2	3.08	0.42
31:y:1425:U:H2'	31:y:1426:C:H6	1.83	0.42
32:z:20:U:H2'	32:z:21:A:H4'	2.01	0.42
33:2:22:G:O2'	33:2:23:A:H5'	2.20	0.42
35:c:74:LYS:O	35:c:78:GLN:HG2	2.19	0.42
36:d:162:GLN:O	36:d:163:ALA:C	2.62	0.42
37:e:4:TYR:HB3	37:e:5:ILE:H	1.53	0.42
40:h:133:GLY:O	40:h:137:LYS:N	2.51	0.42
46:n:10:PRO:O	46:n:11:ARG:HG3	2.19	0.42
47:o:16:PHE:HB3	47:o:19:ARG:NH1	2.34	0.42
48:p:28:GLN:O	48:p:32:LEU:HD13	2.18	0.42
50:r:8:GLY:CA	50:r:57:VAL:O	2.64	0.42
1:w:38:A:C6	1:w:442:G:C2	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:139:G:H8	1:w:139:G:OP2	2.02	0.42
1:w:180:G:OP2	28:Z:32:LYS:NZ	2.50	0.42
1:w:183:C:O2'	1:w:432:A:N3	2.40	0.42
1:w:216:A:N7	1:w:431:U:O2	2.52	0.42
1:w:270(A):A:OP2	1:w:270(Z):G:N1	2.52	0.42
1:w:291:C:C4	1:w:292:C:N4	2.88	0.42
1:w:338:G:C6	1:w:339:U:C4	3.08	0.42
1:w:442:G:O2'	1:w:444:C:H5"	2.20	0.42
1:w:527:C:H4'	1:w:528:A:C5'	2.50	0.42
1:w:570:G:H2'	1:w:2030:A:N6	2.35	0.42
1:w:585:G:H3'	1:w:1251:C:H41	1.84	0.42
1:w:628:G:H2'	1:w:629:G:C8	2.55	0.42
1:w:763:G:N1	1:w:765:G:C6	2.88	0.42
1:w:788:A:H5"	1:w:789:A:H5"	2.02	0.42
1:w:815:C:H2'	1:w:816:C:H6	1.84	0.42
1:w:1138:G:O2'	10:H:129:MET:N	2.52	0.42
1:w:1188:U:O2'	1:w:1189:A:H5'	2.19	0.42
1:w:1520:U:O2	1:w:1520:U:H2'	2.19	0.42
1:w:1576:U:H2'	1:w:1577:C:C6	2.54	0.42
1:w:1682:G:C6	1:w:1683:C:N4	2.87	0.42
1:w:1918:A:H2'	1:w:1919:A:C8	2.55	0.42
1:w:1931:U:H2'	1:w:1932:A:H8	1.84	0.42
1:w:2032:G:C2	1:w:2572:A:N7	2.87	0.42
1:w:2101:G:H2'	1:w:2102:U:O4'	2.19	0.42
1:w:2302:G:N3	7:E:126:ASP:OD1	2.53	0.42
1:w:2367:G:C8	1:w:2367:G:O5'	2.73	0.42
1:w:2386:C:H1'	23:U:41:ARG:CD	2.48	0.42
1:w:2393:A:H2'	1:w:2394:C:C6	2.55	0.42
1:w:2441:C:OP1	1:w:2441:C:H4'	2.20	0.42
1:w:2777:G:O2'	1:w:2778:A:OP1	2.31	0.42
1:w:2795:G:H8	1:w:2795:G:OP2	2.02	0.42
2:x:19:G:C3'	2:x:20:C:H5'	2.50	0.42
2:x:44:G:H4'	7:E:95:ARG:HH21	1.84	0.42
2:x:61:G:H2'	2:x:62:C:C6	2.55	0.42
2:x:76:G:N2	22:T:84:GLU:OE2	2.53	0.42
3:A:48:LEU:HG	3:A:50:ILE:HG12	2.01	0.42
4:B:147:LEU:CG	4:B:148:GLU:H	2.33	0.42
4:B:177:LEU:C	4:B:179:SER:N	2.77	0.42
5:C:37:ARG:HG2	5:C:46:ALA:O	2.20	0.42
5:C:183:LEU:O	5:C:183:LEU:HD12	2.20	0.42
5:C:185:LYS:CG	5:C:186:GLY:N	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:124:PHE:CE1	6:D:126:GLY:O	2.71	0.42
10:H:34:PRO:HA	10:H:35:ARG:HH21	1.85	0.42
10:H:113:MET:CA	10:H:116:THR:HG22	2.41	0.42
10:H:143:LEU:O	10:H:144:LYS:C	2.63	0.42
12:J:52:GLU:O	12:J:54:GLY:N	2.51	0.42
13:K:130:LYS:HD3	13:K:130:LYS:HA	1.85	0.42
14:L:99:LYS:HE2	27:Y:42:PRO:HB2	2.01	0.42
15:M:77:ALA:O	15:M:82:ILE:N	2.51	0.42
16:N:91:ARG:C	16:N:93:ARG:H	2.27	0.42
17:O:87:GLY:O	17:O:89:GLU:HG3	2.20	0.42
18:P:44:LYS:O	18:P:45:THR:C	2.63	0.42
20:R:47:PHE:O	20:R:48:LYS:CB	2.67	0.42
20:R:57:LEU:CD2	20:R:59:VAL:HG22	2.49	0.42
20:R:77:LYS:O	20:R:78:LYS:HB3	2.18	0.42
21:S:9:LYS:O	21:S:11:ASP:N	2.53	0.42
22:T:108:PRO:O	22:T:111:VAL:N	2.53	0.42
31:y:229:U:O5’	31:y:229:U:H6	2.01	0.42
31:y:243:A:H4’	31:y:244:U:O5’	2.19	0.42
31:y:259:G:OP2	53:u:83:ARG:CD	2.66	0.42
31:y:581:G:H8	31:y:581:G:O5’	2.01	0.42
31:y:831:U:H2’	31:y:832:C:C5’	2.49	0.42
31:y:838:G:N2	31:y:842:C:OP1	2.52	0.42
31:y:889:A:N6	31:y:908:A:OP2	2.50	0.42
31:y:894:G:C6	31:y:895:G:C5	3.08	0.42
31:y:913:A:HO2’	31:y:914:A:P	2.43	0.42
31:y:971:G:H4’	31:y:972:C:C5’	2.50	0.42
31:y:972:C:H4’	43:k:57:LYS:HB3	2.02	0.42
31:y:1069:C:O2	31:y:1069:C:H2’	2.19	0.42
31:y:1080:A:H8	31:y:1080:A:OP2	2.03	0.42
31:y:1163:C:H2’	31:y:1164:G:O5’	2.20	0.42
31:y:1259:C:H6	31:y:1259:C:O5’	2.02	0.42
31:y:1280:A:H5’	43:k:43:ARG:NH2	2.34	0.42
31:y:1310:G:H2’	31:y:1311:G:O4’	2.19	0.42
31:y:1353:G:N3	31:y:1353:G:H2’	2.34	0.42
31:y:1357:A:H2’	31:y:1358:U:O4’	2.19	0.42
31:y:1363:A:O4’	31:y:1365:G:N7	2.53	0.42
31:y:1401:G:OP1	31:y:1402:C:OP2	2.38	0.42
31:y:1430:C:H2’	31:y:1431:C:H5’	1.98	0.42
32:z:44:A:C4	32:z:45:G:C8	3.08	0.42
36:d:52:LEU:HG	36:d:114:PRO:CB	2.50	0.42
37:e:15:GLU:HG2	37:e:63:LYS:HB2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:e:108:LEU:HD11	37:e:174:LEU:CD2	2.49	0.42
38:f:116:THR:O	38:f:118:ILE:HG23	2.19	0.42
41:i:22:GLU:C	41:i:24:THR:H	2.28	0.42
41:i:75:ARG:NH1	41:i:75:ARG:CG	2.82	0.42
42:j:114:TYR:CD1	42:j:115:GLY:N	2.88	0.42
43:k:58:ASP:O	43:k:59:SER:HB2	2.20	0.42
45:m:29:ALA:HB1	45:m:31:PHE:CZ	2.53	0.42
45:m:87:GLY:CA	45:m:97:TYR:HA	2.48	0.42
46:n:13:LYS:CE	46:n:17:VAL:HG11	2.50	0.42
47:o:9:LYS:C	47:o:12:ARG:H	2.27	0.42
47:o:22:THR:HG23	47:o:38:GLY:HA2	2.00	0.42
48:p:31:LEU:HD22	48:p:32:LEU:CD1	2.40	0.42
1:w:35:G:H8	1:w:35:G:O5'	2.02	0.42
1:w:196:A:H61	1:w:831:G:H1'	1.85	0.42
1:w:426:C:C4	1:w:427:U:C4	3.08	0.42
1:w:465:G:C8	1:w:466:A:C5	3.08	0.42
1:w:671:C:H5"	12:J:41:ARG:NH2	2.34	0.42
1:w:749:C:O2'	1:w:1617:C:O3'	2.37	0.42
1:w:810:U:O4	12:J:33:ARG:CZ	2.68	0.42
1:w:823:G:O2'	1:w:824:A:H5'	2.19	0.42
1:w:866:A:H2	1:w:867:C:N4	2.16	0.42
1:w:1033:U:H1'	1:w:1034:G:OP1	2.20	0.42
1:w:1326:U:H2'	1:w:1327:C:C1'	2.48	0.42
1:w:1453:A:N1	1:w:2702:U:C2	2.87	0.42
1:w:1484:G:H2'	1:w:1485:G:C5'	2.50	0.42
1:w:1927:A:C5	1:w:1928:A:C6	3.06	0.42
1:w:1931:U:H2'	1:w:1932:A:C8	2.55	0.42
1:w:1948:G:H1	1:w:1958:C:H42	1.66	0.42
1:w:2014:A:H3'	1:w:2015:A:C8	2.55	0.42
1:w:2065:C:C2'	1:w:2066:C:C5'	2.75	0.42
1:w:2250:G:C8	1:w:2496:C:H5"	2.54	0.42
1:w:2290:G:C6	1:w:2291:U:N3	2.88	0.42
1:w:2420:C:H41	29:a:31:HIS:CB	2.31	0.42
1:w:2437:U:H2'	1:w:2438:U:C5	2.55	0.42
1:w:2487:G:C2'	1:w:2488:A:O5'	2.67	0.42
1:w:2511:U:C4	1:w:2512:C:C4	3.07	0.42
1:w:2548:G:H3'	1:w:2549:G:H5"	2.02	0.42
1:w:2562:U:O4	1:w:2566:A:N7	2.53	0.42
1:w:2875:C:C2'	1:w:2876:G:C5'	2.86	0.42
1:w:2888:C:H6	1:w:2888:C:O5'	2.03	0.42
2:x:8:U:C2	2:x:9:G:N7	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:12:C:C5	23:U:73:GLY:HA3	2.54	0.42
3:A:9:ARG:HD3	3:A:10:ALA:N	2.35	0.42
4:B:63:ARG:H	4:B:87:ASN:HD21	1.66	0.42
4:B:184:LYS:HE3	4:B:269:PHE:HD2	1.84	0.42
5:C:37:ARG:HG2	5:C:37:ARG:H	1.54	0.42
5:C:47:VAL:CG1	5:C:48:GLN:N	2.74	0.42
5:C:177:PRO:O	5:C:178:GLU:C	2.62	0.42
7:E:87:PRO:HB2	7:E:88:ILE:H	1.68	0.42
8:F:157:TYR:O	8:F:158:HIS:HB2	2.19	0.42
10:H:28:VAL:HA	10:H:29:PRO:HD2	1.76	0.42
12:J:7:ARG:O	12:J:7:ARG:CG	2.67	0.42
12:J:144:GLU:HB3	12:J:145:PRO:CD	2.49	0.42
13:K:98:LYS:HB2	13:K:101:ARG:CB	2.37	0.42
14:L:78:LYS:C	14:L:80:PHE:H	2.28	0.42
15:M:13:ARG:O	15:M:17:ARG:HG3	2.19	0.42
17:O:98:LEU:CD1	17:O:105:VAL:HB	2.30	0.42
18:P:91:TYR:CG	18:P:92:THR:N	2.87	0.42
19:Q:64:MET:HE1	19:Q:109:GLU:HB3	2.02	0.42
22:T:48:PHE:CD1	22:T:48:PHE:C	2.97	0.42
24:V:76:ARG:CZ	24:V:94:LEU:HD11	2.50	0.42
24:V:88:LYS:HG2	24:V:89:GLU:OE2	2.19	0.42
25:W:15:LYS:C	25:W:18:PRO:HD2	2.44	0.42
27:Y:31:VAL:HB	27:Y:32:PRO:CD	2.50	0.42
31:y:10:A:O2'	31:y:11:G:H5'	2.20	0.42
31:y:50:A:OP1	31:y:50:A:C8	2.73	0.42
31:y:269:C:H2'	31:y:270:A:C8	2.55	0.42
31:y:292:G:P	31:y:293:G:C8	3.13	0.42
31:y:376:G:C4	31:y:377:G:C8	3.07	0.42
31:y:449:C:O2'	31:y:450:G:H5'	2.19	0.42
31:y:510:A:C8	31:y:510:A:O5'	2.59	0.42
31:y:772:U:N3	31:y:773:G:C8	2.88	0.42
31:y:962:C:H2'	31:y:963:G:H8	1.85	0.42
31:y:976:G:C5'	31:y:1358:U:O2'	2.67	0.42
31:y:1078:U:H6	31:y:1078:U:O5'	2.02	0.42
31:y:1290:G:C2	31:y:1291:G:C5	3.07	0.42
31:y:1388:C:N4	31:y:1389:C:N4	2.67	0.42
31:y:1462:G:C6	31:y:1463:C:N3	2.88	0.42
31:y:1470:G:H2'	31:y:1471:G:C5'	2.50	0.42
31:y:1483:A:H2'	31:y:1484:C:H5'	2.01	0.42
31:y:1518:MA6:H8	31:y:1518:MA6:C4'	2.46	0.42
32:z:48:C:C2	32:z:59:A:H1'	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:93:LYS:HD3	36:d:93:LYS:C	2.45	0.42
40:h:120:ILE:O	40:h:123:GLU:N	2.53	0.42
41:i:19:VAL:O	41:i:20:TYR:CB	2.68	0.42
41:i:82:HIS:HB3	41:i:138:TRP:CE2	2.55	0.42
41:i:123:GLU:O	41:i:127:LEU:HB2	2.18	0.42
42:j:20:ARG:CZ	42:j:20:ARG:HB2	2.49	0.42
44:l:33:THR:CB	44:l:39:PRO:HA	2.44	0.42
45:m:75:ASN:CG	45:m:76:LEU:H	2.27	0.42
49:q:11:SER:C	49:q:13:HIS:N	2.77	0.42
52:t:53:ASN:ND2	52:t:54:GLY:N	2.68	0.42
53:u:81:LYS:O	53:u:82:SER:C	2.62	0.42
1:w:40:C:C2	1:w:440:G:N2	2.88	0.42
1:w:41:C:H3'	1:w:43:G:P	2.58	0.42
1:w:75:G:H2'	1:w:75:G:N3	2.34	0.42
1:w:83:G:N2	1:w:102:G:O2'	2.53	0.42
1:w:130:C:C4'	1:w:1349:A:H1'	2.36	0.42
1:w:131:G:H2'	1:w:132:G:H8	1.84	0.42
1:w:273(A):G:H1	1:w:364:C:H42	1.68	0.42
1:w:306:U:H2'	1:w:307:G:O4'	2.20	0.42
1:w:459:U:H2'	1:w:460:A:H5'	2.01	0.42
1:w:467:G:OP1	28:Z:30:VAL:HG13	2.19	0.42
1:w:480:A:H3'	1:w:481:G:H5"	2.02	0.42
1:w:493:G:H5'	19:Q:9:TYR:CD1	2.55	0.42
1:w:499:U:H3	1:w:503:A:N6	2.03	0.42
1:w:503:A:H4'	1:w:504:U:C5'	2.50	0.42
1:w:586:A:C2	1:w:809:G:N3	2.87	0.42
1:w:637:A:H4'	1:w:638:G:H4'	2.01	0.42
1:w:674:G:C5	1:w:804:A:C6	3.07	0.42
1:w:697:C:N3	1:w:698:C:C5	2.88	0.42
1:w:759:G:H2'	1:w:760:G:H8	1.85	0.42
1:w:804:A:H2'	1:w:806:C:C4	2.54	0.42
1:w:883:G:H2'	1:w:884:C:C5	2.54	0.42
1:w:889:C:H4'	1:w:890:A:C4'	2.49	0.42
1:w:922:U:C4	1:w:923:C:N4	2.88	0.42
1:w:936:C:H2'	1:w:937:U:O4'	2.20	0.42
1:w:1136:G:H1'	1:w:2038:G:H4'	2.02	0.42
1:w:1188:U:C2'	1:w:1189:A:H5'	2.49	0.42
1:w:1506:C:H3'	1:w:1508:A:O5'	2.19	0.42
1:w:1519:G:C5	1:w:1520:U:C6	3.08	0.42
1:w:1725:G:N2	1:w:1741:C:H1'	2.35	0.42
1:w:1812:A:H2'	1:w:1813:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1825:A:H1'	4:B:254:THR:HG21	2.01	0.42
1:w:1920:C:H5"	31:y:1517:G:N7	2.34	0.42
1:w:1948:G:H2'	1:w:1949:G:O4'	2.20	0.42
1:w:2093:G:N2	1:w:2198:A:N6	2.68	0.42
1:w:2190:G:O2'	1:w:2191:G:C5'	2.68	0.42
1:w:2195:C:C4	1:w:2196:C:C5	3.08	0.42
1:w:2558:C:O5'	1:w:2558:C:C6	2.69	0.42
1:w:2573:C:C5'	1:w:2573:C:H6	2.33	0.42
1:w:2822:G:C5	14:L:1:MET:HA	2.55	0.42
1:w:2899:G:N1	1:w:2900:A:C5	2.88	0.42
4:B:12:SER:O	4:B:13:ARG:HD2	2.20	0.42
4:B:115:GLN:NE2	4:B:127:VAL:HG21	2.35	0.42
5:C:172:VAL:C	5:C:173:VAL:HG22	2.45	0.42
6:D:15:LEU:O	6:D:16:ALA:C	2.62	0.42
10:H:65:TRP:CZ2	10:H:67:PRO:HG3	2.55	0.42
10:H:101:TYR:N	10:H:101:TYR:CD1	2.87	0.42
13:K:132:VAL:O	13:K:133:ARG:HB3	2.20	0.42
17:O:105:VAL:HG21	18:P:43:GLU:HG2	2.02	0.42
18:P:52:VAL:O	18:P:53:GLU:HB2	2.19	0.42
19:Q:29:LEU:HD22	19:Q:69:LEU:O	2.20	0.42
19:Q:32:ALA:O	19:Q:33:ARG:C	2.63	0.42
20:R:43:VAL:C	20:R:45:THR:H	2.27	0.42
22:T:88:PHE:HD2	22:T:88:PHE:O	2.01	0.42
22:T:151:HIS:HB2	22:T:168:GLU:HA	2.00	0.42
23:U:41:ARG:NH1	23:U:42:GLY:H	2.18	0.42
23:U:50:ASN:HB2	23:U:81:VAL:CG1	2.48	0.42
25:W:10:LEU:C	25:W:10:LEU:HD12	2.44	0.42
31:y:136:C:H1'	49:q:1:MET:H2	1.85	0.42
31:y:160:A:H1'	31:y:344:A:C5	2.54	0.42
31:y:170:U:H2'	31:y:171:A:H8	1.85	0.42
31:y:194:C:C6	31:y:194:C:C3'	3.02	0.42
31:y:245:C:C2	31:y:284:G:C2	3.08	0.42
31:y:362:G:H2'	31:y:364:A:N7	2.35	0.42
31:y:426:G:C5	31:y:427:U:C4	3.07	0.42
31:y:432:A:C5	31:y:433:C:C4	3.08	0.42
31:y:492:G:H2'	31:y:493:G:O5'	2.19	0.42
31:y:574:A:C2	31:y:883:C:N1	2.88	0.42
31:y:582:U:OP2	31:y:758:G:C2	2.73	0.42
31:y:602:A:N1	31:y:637:G:C6	2.88	0.42
31:y:661:G:N2	31:y:745:C:C2	2.88	0.42
31:y:758:G:C5'	31:y:880:C:H1'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:780:A:C6	31:y:800:G:H2'	2.55	0.42
31:y:842:C:H4'	31:y:848:C:N4	2.29	0.42
31:y:957:U:O3'	52:t:79:THR:HB	2.20	0.42
31:y:103(C):G:H2'	31:y:1033:G:O4'	2.19	0.42
31:y:1080:A:C8	31:y:1080:A:OP2	2.73	0.42
31:y:1109:C:O2	31:y:1109:C:H2'	2.19	0.42
31:y:1226:C:P	46:n:103:THR:HG23	2.59	0.42
31:y:1274:G:H3'	31:y:1274:G:C8	2.55	0.42
31:y:1277:C:H2'	31:y:1278:U:H4'	2.02	0.42
31:y:1312:G:N1	31:y:1326:C:C4	2.88	0.42
31:y:1340:A:H3'	31:y:1341:U:C5	2.55	0.42
31:y:1407:5MC:H6	31:y:1407:5MC:H5"	1.85	0.42
31:y:1478:C:C2'	31:y:1479:C:O5'	2.68	0.42
37:e:18:LYS:C	37:e:33:MET:HE3	2.44	0.42
37:e:101:LEU:CD1	37:e:101:LEU:N	2.83	0.42
37:e:173:TRP:HH2	37:e:194:LEU:HD21	1.85	0.42
39:g:79:LEU:CD1	39:g:88:VAL:HG11	2.48	0.42
41:i:111:ILE:HG23	41:i:137:VAL:HG21	2.02	0.42
42:j:70:LYS:HD3	42:j:73:GLN:NE2	2.35	0.42
44:l:29:ILE:HB	44:l:44:SER:HB3	2.02	0.42
45:m:32:ARG:O	45:m:84:ILE:HD13	2.19	0.42
45:m:35:VAL:O	45:m:57:VAL:HG22	2.18	0.42
46:n:23:TYR:HB3	46:n:67:GLU:HA	2.02	0.42
47:o:45:ARG:HG3	47:o:46:GLU:N	2.35	0.42
50:r:103:GLY:O	50:r:104:LYS:HD2	2.20	0.42
52:t:28:LYS:HB3	52:t:29:ARG:HD2	2.01	0.42
53:u:16:HIS:O	53:u:20:LEU:HG	2.19	0.42
53:u:42:GLN:O	53:u:45:GLN:HB3	2.20	0.42
53:u:93:GLU:HB3	53:u:94:ALA:H	1.64	0.42
1:w:55:G:C2	1:w:56:A:C5	3.08	0.42
1:w:80:G:N2	1:w:81:G:H1'	2.35	0.42
1:w:379:G:N2	1:w:396:G:C4	2.88	0.42
1:w:463:G:H1'	1:w:466:A:H61	1.84	0.42
1:w:466:A:C8	1:w:466:A:C3'	3.03	0.42
1:w:492:A:H2'	1:w:493:G:O4'	2.20	0.42
1:w:502:A:C8	1:w:502:A:O5'	2.73	0.42
1:w:530:G:N2	1:w:2021:C:HO2'	2.17	0.42
1:w:537:C:OP2	1:w:537:C:H6	2.02	0.42
1:w:764:A:H61	1:w:1789:A:H2	1.58	0.42
1:w:846:C:H1'	1:w:847:U:C5	2.55	0.42
1:w:850:C:H2'	1:w:851:U:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:890:A:C2'	1:w:892:G:H5'	2.50	0.42
1:w:1046:A:H3'	1:w:1047:G:H5"	2.00	0.42
1:w:1047:G:O2'	1:w:1110:G:N2	2.49	0.42
1:w:1246:A:P	12:J:18:ARG:CZ	3.08	0.42
1:w:1293:C:O2'	14:L:26:LYS:HD3	2.20	0.42
1:w:1311:G:HO2'	1:w:1312:U:H5	1.68	0.42
1:w:1532:C:C4	1:w:1533:C:N3	2.87	0.42
1:w:1537:C:C6	1:w:1538:G:O2'	2.68	0.42
1:w:1566:A:O2'	4:B:58:HIS:CE1	2.73	0.42
1:w:1613:G:H1	1:w:1617:C:H2'	1.85	0.42
1:w:1672:C:H6	1:w:1672:C:H3'	1.83	0.42
1:w:1716:U:O2	1:w:1743:G:C2	2.73	0.42
1:w:1747:G:HO2'	1:w:1748:G:P	2.41	0.42
1:w:1778:U:C2	1:w:1787:A:C2	3.08	0.42
1:w:1786:A:C2	1:w:1938:A:N7	2.88	0.42
1:w:1837:C:O2	1:w:1927:A:C2	2.67	0.42
1:w:2030:A:H5'	1:w:2031:A:C8	2.55	0.42
1:w:2270:G:O3'	23:U:19:LYS:O	2.38	0.42
1:w:2468:G:H1'	1:w:2469:A:C8	2.55	0.42
1:w:2515:C:C2'	1:w:2516:G:C5'	2.86	0.42
1:w:2558:C:C2'	1:w:2559:C:H5'	2.50	0.42
1:w:2588:G:C3'	1:w:2589:A:H5'	2.48	0.42
1:w:2619:C:C2	1:w:2620:C:C5	3.07	0.42
1:w:2771:C:O2	1:w:2771:C:C2'	2.67	0.42
3:A:10:ALA:C	3:A:12:LEU:N	2.76	0.42
4:B:2:ALA:O	4:B:4:LYS:HD2	2.20	0.42
4:B:17:THR:CG2	4:B:204:ILE:HA	2.49	0.42
4:B:69:ARG:HH12	4:B:76:PRO:CG	2.33	0.42
4:B:75:ILE:N	4:B:76:PRO:CD	2.83	0.42
4:B:79:VAL:HG12	4:B:113:VAL:HA	2.01	0.42
4:B:116:GLN:C	4:B:117:VAL:HG23	2.45	0.42
4:B:164:GLN:HE22	4:B:166:GLN:CG	2.19	0.42
6:D:26:HIS:CA	12:J:13:ASN:HB3	2.45	0.42
6:D:37:ALA:O	6:D:38:LYS:C	2.62	0.42
7:E:103:LEU:HD12	7:E:104:GLU:H	1.84	0.42
9:G:81:VAL:HG11	9:G:144:VAL:CG1	2.48	0.42
9:G:94:ALA:HA	9:G:97:ILE:HG12	2.02	0.42
10:H:33:GLU:HA	10:H:34:PRO:HD3	1.75	0.42
11:I:69:VAL:HG12	11:I:76:ALA:C	2.45	0.42
15:M:106:ARG:HD3	15:M:111:GLU:C	2.45	0.42
16:N:70:VAL:CG1	16:N:71:GLY:N	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:64:ARG:HB3	17:O:64:ARG:HH21	1.85	0.42
17:O:104:GLN:O	17:O:107:ALA:HB3	2.19	0.42
19:Q:88:ARG:CZ	19:Q:92:ARG:O	2.68	0.42
20:R:12:VAL:CG2	20:R:13:LEU:HD23	2.50	0.42
20:R:63:LYS:HD3	20:R:64:LYS:HG2	2.02	0.42
23:U:17:GLN:O	23:U:18:ALA:HB3	2.20	0.42
25:W:41:ILE:O	25:W:43:GLN:N	2.53	0.42
29:a:15:LYS:HD2	29:a:16:ILE:H	1.84	0.42
31:y:50:A:H2	31:y:52:G:H1'	1.82	0.42
31:y:141:A:C2	31:y:223:U:O2	2.73	0.42
31:y:160:A:C6	31:y:161:A:N1	2.88	0.42
31:y:227:G:H21	49:q:62:VAL:HA	1.84	0.42
31:y:245:C:C4	31:y:284:G:N1	2.88	0.42
31:y:335:C:H4'	31:y:1433:A:O2'	2.19	0.42
31:y:346:G:H2'	31:y:347:G:C5'	2.50	0.42
31:y:403:C:N4	31:y:547:A:H5'	2.35	0.42
31:y:423:G:H3'	31:y:423:G:N3	2.34	0.42
31:y:475:G:C6	31:y:476:G:C5	3.08	0.42
31:y:548:G:H2'	31:y:549:C:H5'	2.00	0.42
31:y:564:C:C5	31:y:565:U:C5	3.08	0.42
31:y:751:U:C5	31:y:752:G:N7	2.88	0.42
31:y:926:G:C6	31:y:1505:G:N1	2.88	0.42
31:y:1118:C:H2'	31:y:1119:C:C6	2.55	0.42
31:y:1157:A:N7	31:y:1180:A:N6	2.67	0.42
31:y:1202:G:H2'	31:y:1203:C:O5'	2.19	0.42
31:y:1439:C:H2'	31:y:1440:C:O4'	2.19	0.42
31:y:1502:A:H2	31:y:1505:G:N2	2.17	0.42
32:z:10:G:H2'	32:z:11:A:C8	2.55	0.42
32:z:27:U:N3	32:z:28:C:N4	2.68	0.42
33:2:47:U:C4	33:2:50:U:H5"	2.54	0.42
37:e:11:LEU:HA	37:e:14:ARG:HB2	2.02	0.42
37:e:61:LYS:HG2	37:e:206:PHE:CD2	2.55	0.42
38:f:51:VAL:HA	38:f:54:ALA:HB3	2.02	0.42
38:f:76:ILE:HD12	38:f:119:LEU:N	2.35	0.42
39:g:6:VAL:HG23	39:g:65:VAL:HG22	2.02	0.42
39:g:37:VAL:HG13	39:g:65:VAL:CG1	2.50	0.42
39:g:43:LEU:HG	39:g:46:ARG:HH11	1.84	0.42
41:i:39:LEU:HD12	41:i:45:ILE:HB	2.02	0.42
44:l:20:TYR:N	44:l:20:TYR:CD1	2.87	0.42
44:l:93:GLN:O	44:l:96:ARG:N	2.53	0.42
47:o:9:LYS:C	47:o:11:LYS:N	2.78	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:o:26:ARG:HD2	47:o:26:ARG:C	2.45	0.42
47:o:49:HIS:CD2	47:o:49:HIS:C	2.97	0.42
48:p:4:THR:HB	48:p:6:GLU:CG	2.46	0.42
52:t:66:MET:H	52:t:66:MET:HG3	1.38	0.42
53:u:57:ARG:C	53:u:59:ALA:N	2.76	0.42
1:w:35:G:H1'	1:w:454:A:C4	2.54	0.42
1:w:116:C:C4	1:w:117:G:N7	2.88	0.42
1:w:261:G:C1'	1:w:609(A):A:H2	2.33	0.42
1:w:270(A):A:OP2	1:w:270(Z):G:C2	2.73	0.42
1:w:457:A:H1'	1:w:459:U:C5	2.54	0.42
1:w:602:G:C2'	1:w:655:A:C2	2.99	0.42
1:w:674:G:C5	1:w:804:A:N1	2.88	0.42
1:w:926:A:O3'	1:w:928:G:H5'	2.20	0.42
1:w:945:A:OP2	1:w:945:A:H4'	2.20	0.42
1:w:953:A:H2'	1:w:954:G:C8	2.49	0.42
1:w:954:G:H2'	1:w:955:C:H5'	2.02	0.42
1:w:993:G:O2'	1:w:994:C:H5'	2.20	0.42
1:w:1186:G:C5	1:w:1187:G:C4	3.08	0.42
1:w:1243:G:H4'	12:J:9:ASN:HA	2.01	0.42
1:w:1283:G:O2'	1:w:1285:G:N7	2.52	0.42
1:w:1446:C:N4	1:w:1466:G:N2	2.67	0.42
1:w:1806:C:N3	1:w:1812:A:C6	2.88	0.42
1:w:2056:G:N2	27:Y:5:PRO:N	2.68	0.42
1:w:2330:G:C6	1:w:2331:G:C5	3.08	0.42
1:w:2386:C:H2'	1:w:2387:U:H6	1.79	0.42
1:w:2581:G:N3	1:w:2581:G:O5'	2.53	0.42
1:w:2588:G:C5	1:w:2607:G:C2	3.08	0.42
1:w:2685:G:C2	1:w:2725:A:C2	3.08	0.42
1:w:2733:A:C4	1:w:2734:A:N7	2.88	0.42
1:w:2809:A:C8	1:w:2891:G:N2	2.88	0.42
1:w:2811:G:H5'	5:C:61:ARG:CG	2.47	0.42
2:x:43:C:H6	2:x:43:C:OP2	2.03	0.42
2:x:99:A:C5	2:x:100:G:C6	3.07	0.42
3:A:33:LEU:O	3:A:34:ALA:C	2.63	0.42
4:B:92:ILE:HD12	4:B:93:ALA:N	2.34	0.42
5:C:30:PRO:HG3	5:C:92:THR:HG22	2.02	0.42
5:C:116:VAL:HG13	5:C:122:PHE:HB2	2.00	0.42
7:E:17:PRO:HA	7:E:20:ILE:CG1	2.50	0.42
8:F:116:GLU:O	8:F:118:PRO:HD3	2.19	0.42
9:G:9:LEU:C	9:G:11:ASN:H	2.26	0.42
9:G:147:GLN:HE21	9:G:147:GLN:HA	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:112:LYS:NZ	10:H:116:THR:HG21	2.35	0.42
13:K:58:PHE:HB3	13:K:61:GLY:C	2.45	0.42
13:K:63:LYS:HE3	22:T:116:VAL:HG11	1.98	0.42
14:L:29:LEU:HD11	14:L:75:LEU:HB2	2.02	0.42
15:M:89:ARG:HH11	15:M:89:ARG:HG2	1.85	0.42
18:P:58:VAL:HB	18:P:59:ALA:H	1.71	0.42
19:Q:70:TYR:HD2	19:Q:70:TYR:O	2.03	0.42
23:U:51:VAL:HG23	23:U:81:VAL:CG2	2.34	0.42
24:V:12:PRO:HG3	24:V:63:ALA:H	1.84	0.42
26:X:16:PRO:O	26:X:19:GLN:HB2	2.19	0.42
27:Y:58:LEU:HD12	27:Y:58:LEU:N	2.35	0.42
31:y:25:C:N4	31:y:558:G:C2	2.87	0.42
31:y:76:G:H2'	31:y:77:C:C5'	2.49	0.42
31:y:137:C:H3'	31:y:137:C:C6	2.55	0.42
31:y:183:G:O2'	31:y:224:C:O4'	2.37	0.42
31:y:232:G:O2'	31:y:233:C:H5'	2.20	0.42
31:y:235:C:H2'	31:y:236:G:C8	2.51	0.42
31:y:273:A:H2'	31:y:274:A:H5'	2.00	0.42
31:y:313:A:C2	31:y:314:C:N3	2.87	0.42
31:y:552:U:C4'	45:m:85:ARG:CZ	2.93	0.42
31:y:557:G:C6	31:y:558:G:N1	2.88	0.42
31:y:643:C:O2'	31:y:644:G:H5'	2.20	0.42
31:y:706:A:O2'	44:l:31:THR:OG1	2.14	0.42
31:y:780:A:N6	31:y:800:G:C8	2.88	0.42
31:y:892:A:OP2	31:y:906:G:N2	2.53	0.42
31:y:1061:G:H4'	43:k:56:HIS:CE1	2.55	0.42
31:y:1077:G:C4	31:y:1079:G:OP2	2.73	0.42
31:y:1091:U:C2	31:y:1093:A:O5'	2.73	0.42
31:y:1154:G:N1	31:y:1155:G:C2	2.88	0.42
31:y:1188:A:H3'	31:y:1188:A:C8	2.55	0.42
31:y:1287:A:H2'	31:y:1288:A:C5'	2.44	0.42
31:y:1305:G:N2	31:y:1331:G:H1'	2.35	0.42
31:y:1432:G:O2'	31:y:1433:A:N7	2.51	0.42
32:z:7:G:C2	32:z:49:G:N7	2.88	0.42
32:z:18:G:N3	32:z:57:A:C2	2.88	0.42
36:d:15:THR:HG23	36:d:180:ALA:N	2.34	0.42
37:e:35:ARG:HB3	37:e:36:ARG:NH1	2.31	0.42
40:h:103:TRP:CZ3	40:h:137:LYS:HB3	2.55	0.42
43:k:47:PHE:HD2	43:k:47:PHE:HA	1.74	0.42
44:l:87:THR:HA	44:l:91:ARG:HH21	1.85	0.42
45:m:73:GLY:O	45:m:74:HIS:C	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:u:44:ALA:CA	53:u:52:ALA:HB2	2.50	0.42
53:u:53:LEU:HD12	53:u:57:ARG:CZ	2.50	0.42
54:v:24:ARG:HB3	54:v:25:LYS:NZ	2.35	0.42
1:w:38:A:C2	1:w:442:G:N3	2.88	0.41
1:w:58:G:H5"	20:R:72:LYS:HB2	2.01	0.41
1:w:225:A:H3'	1:w:226:G:C8	2.54	0.41
1:w:447:A:C8	1:w:454:A:N6	2.88	0.41
1:w:579:G:H2'	1:w:580:C:C6	2.55	0.41
1:w:592:G:H2'	1:w:593:G:H8	1.84	0.41
1:w:602:G:N2	1:w:656:G:C6	2.88	0.41
1:w:810:U:H4'	1:w:811:U:C6	2.55	0.41
1:w:811:U:H1'	1:w:1251:C:C4'	2.49	0.41
1:w:886:C:H4'	1:w:887:A:N9	2.34	0.41
1:w:961:C:O5'	1:w:962:G:OP2	2.38	0.41
1:w:1132:A:N6	1:w:2038:G:H21	2.17	0.41
1:w:1772:G:H2'	1:w:1773:A:O3'	2.20	0.41
1:w:1814:G:H3'	1:w:1815:A:C5'	2.49	0.41
1:w:1815:A:O4'	1:w:1817:G:H8	2.00	0.41
1:w:1819:A:H3'	4:B:179:SER:CB	2.50	0.41
1:w:2105:C:N4	1:w:2106:G:O6	2.52	0.41
1:w:2130:U:H5	1:w:2131:G:N1	2.18	0.41
1:w:2193:G:H2'	1:w:2194:G:O4'	2.19	0.41
1:w:2342:C:O2'	1:w:2374:C:H5"	2.20	0.41
1:w:2483:C:O2	13:K:49:ALA:HB1	2.19	0.41
1:w:2544:G:C4	1:w:2545:G:C8	3.08	0.41
1:w:2592:G:C5	1:w:2593:U:C4	3.07	0.41
1:w:2673:G:C2	1:w:2674:G:H1'	2.55	0.41
1:w:2793:G:C2	1:w:2794:C:C2	3.08	0.41
1:w:2832:U:O5'	1:w:2832:U:H6	2.03	0.41
3:A:48:LEU:CB	3:A:209:PHE:O	2.65	0.41
3:A:166:ASN:O	3:A:167:ASP:HB3	2.19	0.41
6:D:196:VAL:C	6:D:197:PHE:CD1	2.98	0.41
7:E:78:SER:OG	32:z:19:G:H2'	2.20	0.41
7:E:161:THR:CG2	7:E:163:ALA:H	2.31	0.41
11:I:8:LEU:HD22	11:I:8:LEU:N	2.34	0.41
11:I:10:VAL:HG12	11:I:12:ASP:O	2.19	0.41
11:I:70:LYS:HG3	11:I:71:ARG:H	1.85	0.41
11:I:79:PHE:HD2	16:N:70:VAL:CG1	2.27	0.41
24:V:31:GLY:O	24:V:32:LYS:CB	2.68	0.41
29:a:3:LYS:O	29:a:4:MET:HB2	2.20	0.41
31:y:246:A:C2	31:y:282:A:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:246:A:N6	31:y:279:A:C2	2.88	0.41
31:y:258:G:C6	31:y:259:G:C6	3.08	0.41
31:y:385:C:H6	31:y:385:C:O5'	2.03	0.41
31:y:479:C:H3'	31:y:480:U:C6	2.55	0.41
31:y:509:A:OP2	31:y:510:A:P	2.78	0.41
31:y:611:A:C2	31:y:612:C:C4	3.08	0.41
31:y:707:C:C2'	31:y:708:C:O5'	2.67	0.41
31:y:727:G:H8	31:y:727:G:O5'	2.02	0.41
31:y:768:A:OP1	31:y:1524:C:O2'	2.33	0.41
31:y:874:G:C2'	31:y:875:C:C6	2.89	0.41
31:y:921:U:H5"	31:y:1082:G:H5'	2.01	0.41
31:y:962:C:H2'	31:y:963:G:O5'	2.20	0.41
31:y:976:G:C8	31:y:1363:A:N6	2.88	0.41
31:y:988:G:H2'	31:y:989:C:H5'	2.02	0.41
31:y:1132:C:H2'	31:y:1133:G:H8	1.85	0.41
31:y:1141:C:H2'	31:y:1142:G:C5'	2.45	0.41
31:y:1217:C:O2'	31:y:1218:C:H5'	2.20	0.41
35:c:72:GLY:O	35:c:94:ASN:OD1	2.37	0.41
36:d:13:GLY:HA3	47:o:57:ARG:HE	1.85	0.41
36:d:16:ARG:HH21	36:d:54:ARG:HD3	1.85	0.41
36:d:110:ASN:ND2	36:d:141:VAL:HA	2.35	0.41
41:i:95:VAL:HG22	41:i:133:LEU:HB2	2.02	0.41
41:i:98:LYS:C	41:i:100:ILE:H	2.27	0.41
41:i:120:THR:OG1	41:i:121:ASP:N	2.53	0.41
42:j:42:ARG:CB	42:j:74:ILE:HG13	2.50	0.41
42:j:73:GLN:O	42:j:76:ALA:HB3	2.20	0.41
45:m:88:ARG:HG2	45:m:96:ARG:CA	2.37	0.41
46:n:3:ARG:O	46:n:57:ARG:HG3	2.20	0.41
46:n:23:TYR:CB	46:n:67:GLU:HA	2.50	0.41
46:n:48:LEU:CD2	46:n:53:VAL:HG22	2.45	0.41
46:n:91:ARG:HA	46:n:96:LEU:HB2	2.01	0.41
48:p:84:LYS:HE3	48:p:84:LYS:HB3	1.88	0.41
52:t:10:PHE:HE2	52:t:37:ARG:HB3	1.85	0.41
1:w:191:A:C2	1:w:799:G:N2	2.87	0.41
1:w:209:C:O2'	1:w:210:C:H5'	2.19	0.41
1:w:450:G:C2	1:w:451:C:H5	2.37	0.41
1:w:457:A:H1'	1:w:459:U:C6	2.54	0.41
1:w:464:U:O4	1:w:465:G:C6	2.74	0.41
1:w:474:G:C6	1:w:510:C:N4	2.88	0.41
1:w:496:G:H3'	1:w:497:A:C8	2.55	0.41
1:w:789:A:N1	28:Z:3:ARG:CD	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:813:U:O4'	1:w:1226:A:O4'	2.38	0.41
1:w:1292:U:H2'	1:w:1293:C:O4'	2.19	0.41
1:w:1301:A:C8	1:w:1303:G:N7	2.88	0.41
1:w:1492:G:H3'	1:w:1493:C:C5'	2.50	0.41
1:w:1579:A:H2'	1:w:1580:A:C8	2.55	0.41
1:w:1620:G:H4'	28:Z:2:LYS:HZ2	1.83	0.41
1:w:1655:A:N3	1:w:1655:A:H2'	2.35	0.41
1:w:1795:C:H6	1:w:1795:C:O5'	2.03	0.41
1:w:1912:A:C6	31:y:1408:A:O4'	2.73	0.41
1:w:1956:U:H2'	1:w:1957:C:H5'	2.02	0.41
1:w:2048:G:C6	1:w:2049:G:C5	3.08	0.41
1:w:2073:C:H4'	4:B:229:VAL:HG22	2.02	0.41
1:w:2213:U:O2	24:V:56:GLN:HG2	2.20	0.41
1:w:2315:G:C4	1:w:2316:C:C5	3.08	0.41
1:w:2355:C:H2'	23:U:17:GLN:CD	2.45	0.41
1:w:2397:G:H3'	1:w:2398:U:C5	2.55	0.41
1:w:2577:A:C3'	1:w:2578:G:H5'	2.50	0.41
1:w:2746:U:H2'	1:w:2747:G:H5'	2.02	0.41
1:w:2809:A:N7	1:w:2891:G:N2	2.68	0.41
1:w:2883:A:OP2	14:L:98:LEU:CD2	2.68	0.41
4:B:69:ARG:HH12	4:B:76:PRO:CD	2.33	0.41
7:E:103:LEU:HA	7:E:106:LEU:CD2	2.50	0.41
7:E:114:ILE:C	46:n:7:VAL:HG22	2.45	0.41
10:H:108:ILE:HG23	10:H:112:LYS:HD2	2.00	0.41
12:J:35:HIS:N	12:J:36:LYS:NZ	2.66	0.41
13:K:132:VAL:HG13	13:K:133:ARG:H	1.79	0.41
15:M:26:LEU:HB3	15:M:39:ILE:HG22	2.02	0.41
17:O:33:ARG:HG3	17:O:34:LYS:N	2.36	0.41
19:Q:29:LEU:HD11	19:Q:67:ASP:H	1.85	0.41
19:Q:86:LEU:HA	19:Q:87:PRO:HD3	1.88	0.41
20:R:57:LEU:HD23	20:R:58:HIS:N	2.36	0.41
22:T:127:LYS:HB3	22:T:162:GLU:HG3	2.00	0.41
23:U:49:LYS:HD2	23:U:49:LYS:H	1.86	0.41
30:b:2:LYS:HG3	30:b:35:ARG:HH11	1.84	0.41
30:b:16:VAL:HG13	30:b:24:TYR:O	2.19	0.41
31:y:39:G:C5	31:y:404:U:C4	3.08	0.41
31:y:77:C:H2'	31:y:78:G:C8	2.55	0.41
31:y:109:A:N7	31:y:327:A:H5'	2.31	0.41
31:y:183:G:H5'	31:y:184:G:OP2	2.20	0.41
31:y:227:G:C2	49:q:62:VAL:HG12	2.55	0.41
31:y:408:A:C2	31:y:435:C:N3	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:421:U:C5'	31:y:422:C:C5	3.03	0.41
31:y:457:C:C2	31:y:458:C:C5	3.09	0.41
31:y:541:G:C6	31:y:542:G:C5	3.09	0.41
31:y:568:G:O2'	31:y:569:C:H5'	2.20	0.41
31:y:584:G:H1	31:y:757:U:H3	1.68	0.41
31:y:603:U:H2'	31:y:604:G:N7	2.32	0.41
31:y:782:A:N6	31:y:801:U:C4	2.88	0.41
31:y:1041:A:N6	31:y:1042:G:C6	2.88	0.41
31:y:1134:G:H2'	31:y:1135:U:O4'	2.20	0.41
32:z:40:C:O2'	32:z:41:C:H5'	2.20	0.41
33:2:16:U:H3'	33:2:17:U:C5'	2.50	0.41
35:c:42:ILE:HD12	35:c:47:THR:CG2	2.48	0.41
35:c:134:GLU:C	35:c:137:ARG:HD3	2.46	0.41
35:c:228:GLY:O	35:c:229:VAL:HB	2.20	0.41
36:d:135:LYS:O	36:d:138:VAL:HB	2.20	0.41
37:e:13:ARG:NH2	37:e:32:ALA:O	2.54	0.41
37:e:61:LYS:HA	37:e:64:LEU:HD12	2.02	0.41
38:f:70:PRO:HB2	38:f:71:LEU:H	1.61	0.41
39:g:19:LEU:HD23	39:g:19:LEU:C	2.45	0.41
40:h:18:TYR:HB3	40:h:19:GLY:H	1.53	0.41
41:i:33:GLU:O	41:i:36:LEU:HB2	2.20	0.41
41:i:45:ILE:HG22	41:i:46:LYS:N	2.35	0.41
41:i:80:ILE:CG2	41:i:83:ILE:HD12	2.49	0.41
43:k:30:SER:CB	43:k:84:GLN:HB3	2.50	0.41
45:m:44:PRO:HG3	45:m:52:ARG:CZ	2.50	0.41
46:n:14:ARG:H	46:n:44:ARG:NH1	2.15	0.41
49:q:45:THR:HA	49:q:46:PRO:HD2	1.83	0.41
49:q:51:VAL:O	49:q:53:VAL:N	2.53	0.41
50:r:45:HIS:ND1	50:r:46:ASP:N	2.68	0.41
1:w:13:A:HO2'	1:w:14:A:H8	1.68	0.41
1:w:307:G:H21	1:w:330:A:H61	1.68	0.41
1:w:465:G:H4'	28:Z:16:HIS:CE1	2.55	0.41
1:w:618(A):G:H3'	1:w:618(B):C:C6	2.55	0.41
1:w:683:C:H5"	28:Z:21:ARG:HH12	1.84	0.41
1:w:711:G:O2'	1:w:712:G:H5'	2.20	0.41
1:w:787:U:C3'	1:w:791:C:H41	2.09	0.41
1:w:925:C:O5'	1:w:925:C:H6	2.04	0.41
1:w:1083:U:H2'	1:w:1085:A:OP2	2.20	0.41
1:w:1150:C:H2'	1:w:1151:G:C8	2.51	0.41
1:w:1203:G:OP1	1:w:1204:A:H3'	2.20	0.41
1:w:1300:U:C5	1:w:1626:G:O2'	2.70	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1378:A:H4'	1:w:1379:A:C6	2.54	0.41
1:w:1547:C:H2'	1:w:1548:C:C6	2.55	0.41
1:w:1625:C:C5	1:w:1626:G:C5	3.09	0.41
1:w:1653:G:O6	14:L:10:LEU:HD23	2.20	0.41
1:w:2001:A:H2'	1:w:2002:G:C8	2.55	0.41
1:w:2280:G:O6	23:U:11:LYS:HD3	2.21	0.41
1:w:2588:G:H8	1:w:2588:G:C5'	2.33	0.41
1:w:2757:A:C2	1:w:2758:A:N7	2.89	0.41
1:w:2782:G:P	1:w:2782:G:H8	2.43	0.41
1:w:2801:A:H8	1:w:2801:A:P	2.43	0.41
2:x:78:A:N3	2:x:78:A:H2'	2.35	0.41
2:x:90:C:H2'	2:x:91:C:C6	2.55	0.41
3:A:16:ASP:O	3:A:17:PRO:C	2.63	0.41
4:B:113:VAL:O	4:B:115:GLN:N	2.51	0.41
4:B:117:VAL:HG13	4:B:128:GLY:CA	2.50	0.41
5:C:89:ASP:O	5:C:90:THR:OG1	2.31	0.41
5:C:122:PHE:HB3	5:C:123:ALA:H	1.52	0.41
5:C:173:VAL:HG23	5:C:183:LEU:HD13	2.01	0.41
5:C:192:ASN:C	5:C:192:ASN:ND2	2.79	0.41
7:E:47:LYS:HD2	7:E:72:ARG:HH22	1.85	0.41
8:F:67:LEU:C	8:F:69:ARG:N	2.79	0.41
8:F:105:LEU:CD1	8:F:107:VAL:HG23	2.50	0.41
8:F:147:ASN:C	8:F:148:ILE:HD12	2.44	0.41
10:H:41:ALA:C	10:H:43:GLY:N	2.78	0.41
11:I:77:ILE:HD11	16:N:72:VAL:HA	2.02	0.41
15:M:106:ARG:HD2	15:M:106:ARG:O	2.19	0.41
16:N:16:ARG:C	16:N:79:HIS:NE2	2.79	0.41
16:N:60:THR:OG1	16:N:75:ILE:HG23	2.20	0.41
17:O:92:ARG:HH12	18:P:10:LYS:N	2.18	0.41
21:S:9:LYS:HG3	21:S:10:GLY:N	2.30	0.41
22:T:108:PRO:CB	22:T:144:LEU:HB3	2.40	0.41
22:T:150:LEU:HD13	22:T:154:ASP:OD1	2.20	0.41
23:U:54:GLY:O	23:U:57:PHE:O	2.37	0.41
26:X:19:GLN:O	26:X:20:LYS:C	2.63	0.41
26:X:50:VAL:C	26:X:52:HIS:N	2.79	0.41
26:X:59:VAL:HG23	26:X:59:VAL:O	2.21	0.41
27:Y:5:PRO:C	27:Y:6:VAL:HG23	2.46	0.41
31:y:7:G:H5'	31:y:298:A:C4'	2.50	0.41
31:y:104:G:N1	31:y:105:G:C5	2.88	0.41
31:y:564:C:H2'	31:y:565:U:C5'	2.50	0.41
31:y:576:G:N2	31:y:881:G:H4'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:790:A:C8	31:y:790:A:O5'	2.73	0.41
31:y:878:G:H5'	41:i:89:PRO:CG	2.45	0.41
31:y:952:U:C6	31:y:952:U:C3'	3.03	0.41
31:y:1053:G:H2'	31:y:1199:U:OP2	2.20	0.41
31:y:1282:C:O2	31:y:1282:C:C2'	2.56	0.41
31:y:1291:G:C5	31:y:1292:U:C4	3.08	0.41
31:y:1308:U:P	46:n:110:ARG:HD2	2.60	0.41
32:z:41:C:C2	32:z:42:G:N7	2.88	0.41
33:2:54:U:H2'	33:2:55:PSU:O5'	2.19	0.41
36:d:44:GLU:O	36:d:45:LYS:CB	2.67	0.41
36:d:110:ASN:HD22	36:d:141:VAL:CB	2.33	0.41
36:d:182:ILE:HD13	36:d:203:PHE:HB2	2.03	0.41
37:e:163:GLU:O	37:e:166:LYS:CG	2.60	0.41
43:k:44:VAL:HG11	43:k:65:LEU:O	2.19	0.41
44:l:84:VAL:HG23	44:l:110:ASP:OD2	2.20	0.41
49:q:43:LYS:HZ2	49:q:48:TRP:NE1	2.15	0.41
50:r:6:LEU:CD1	50:r:23:VAL:HG21	2.50	0.41
50:r:46:ASP:OD1	50:r:51:TYR:HB2	2.20	0.41
50:r:59:ILE:HG23	50:r:60:ILE:H	1.85	0.41
51:s:29:PHE:HD1	51:s:39:VAL:HG11	1.84	0.41
1:w:8:A:H4'	10:H:142:ARG:HH21	1.85	0.41
1:w:15:G:C5	1:w:16:G:N7	2.89	0.41
1:w:21:A:C2	1:w:520:G:N2	2.88	0.41
1:w:135:G:N2	1:w:136:G:H1'	2.35	0.41
1:w:188:G:C2	1:w:209:C:C2	3.08	0.41
1:w:270(M):U:N3	9:G:50:ARG:HG2	2.32	0.41
1:w:335:C:O2	1:w:336:C:C5	2.73	0.41
1:w:371:A:H1'	1:w:373:U:C1'	2.50	0.41
1:w:379:G:C2	1:w:396:G:C5	3.08	0.41
1:w:426:C:H2'	1:w:427:U:O4'	2.19	0.41
1:w:514:A:O2'	1:w:581:C:O2'	2.29	0.41
1:w:545:G:H8	1:w:545:G:O5'	2.03	0.41
1:w:665:C:H5'	12:J:48:PRO:CG	2.49	0.41
1:w:810:U:O2'	1:w:811:U:C4	2.70	0.41
1:w:909:A:C1'	13:K:69:PHE:HE1	2.32	0.41
1:w:957:A:C5'	13:K:75:THR:HG22	2.50	0.41
1:w:1007:C:H4'	10:H:131:PRO:CA	2.47	0.41
1:w:1009:A:H2'	1:w:1010:A:C8	2.56	0.41
1:w:1186:G:C6	1:w:1187:G:N3	2.88	0.41
1:w:1198:U:H2'	1:w:1199:U:H6	1.84	0.41
1:w:1535:U:C3'	1:w:1536:A:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:1620:G:C1'	28:Z:2:LYS:HD2	2.48	0.41
1:w:1782:C:C6	1:w:2609:U:C5	3.08	0.41
1:w:1783:A:P	1:w:1784:A:OP2	2.79	0.41
1:w:1817:G:H5"	4:B:157:ARG:NH1	2.36	0.41
1:w:1822:G:O2'	1:w:1823:G:H8	2.03	0.41
1:w:1870:C:C5	1:w:1871:A:N6	2.88	0.41
1:w:2016:U:H6	1:w:2016:U:O5'	2.02	0.41
1:w:2334:G:N2	15:M:14:VAL:HG21	2.29	0.41
1:w:2365:G:OP1	23:U:55:ARG:HG2	2.20	0.41
1:w:2465:C:H2'	1:w:2466:C:H5	1.86	0.41
1:w:2489:G:C6	1:w:2490:G:C2	3.09	0.41
1:w:2520:C:O5'	1:w:2520:C:C6	2.61	0.41
1:w:2562:U:C4	1:w:2566:A:N7	2.89	0.41
1:w:2588:G:C8	1:w:2588:G:C3'	3.04	0.41
1:w:2711:A:H2'	1:w:2714:G:O4'	2.20	0.41
1:w:2760:C:C2	1:w:2761:G:C8	3.08	0.41
1:w:2791:C:C4	1:w:2893:G:N1	2.89	0.41
1:w:2793:G:H3'	1:w:2794:C:H6	1.82	0.41
1:w:2808:U:H2'	1:w:2809:A:O5'	2.19	0.41
1:w:2846:G:C2	1:w:2847:U:O2	2.74	0.41
1:w:2852:G:O6	1:w:2853:C:N4	2.53	0.41
1:w:2875:C:C4	1:w:2876:G:C8	3.08	0.41
3:A:42:VAL:HG22	3:A:217:THR:HG22	2.02	0.41
3:A:194:ILE:O	3:A:197:LEU:HD23	2.21	0.41
4:B:248:SER:HB2	4:B:252:TRP:NE1	2.34	0.41
5:C:35:GLN:HB2	5:C:48:GLN:HB2	2.02	0.41
6:D:61:PRO:O	6:D:65:THR:HB	2.20	0.41
6:D:73:ILE:O	6:D:73:ILE:HG12	2.21	0.41
7:E:98:ARG:O	7:E:101:ILE:HG22	2.20	0.41
8:F:105:LEU:HD13	8:F:106:THR:N	2.36	0.41
10:H:38:LEU:HB3	10:H:159:GLU:HB2	2.02	0.41
14:L:18:LEU:HA	14:L:21:TYR:HB2	2.01	0.41
16:N:107:ASP:N	16:N:111:ARG:HH11	2.18	0.41
18:P:76:LYS:HE2	18:P:85:LYS:HB3	2.02	0.41
19:Q:22:ASP:HA	19:Q:25:ARG:HD2	2.02	0.41
23:U:36:ILE:HG13	23:U:60:PHE:HB3	2.01	0.41
29:a:38:GLY:O	29:a:39:LYS:HB3	2.20	0.41
30:b:30:PRO:HA	30:b:33:LYS:HG2	2.02	0.41
31:y:49:U:O5'	31:y:49:U:C6	2.73	0.41
31:y:136:C:C1'	49:q:1:MET:H2	2.33	0.41
31:y:146:G:O5'	31:y:146:G:C8	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:179:A:H2'	31:y:180:U:C6	2.55	0.41
31:y:191(G):G:H22	53:u:85:MET:HE1	1.85	0.41
31:y:222:U:H3'	31:y:223:U:C5'	2.42	0.41
31:y:279:A:N1	50:r:98:LEU:HD22	2.35	0.41
31:y:317:G:N2	31:y:337:C:C2	2.89	0.41
31:y:328:C:C4'	31:y:329:A:O5'	2.59	0.41
31:y:542:G:C2	31:y:543:C:C6	3.08	0.41
31:y:673:G:N1	31:y:734:G:C5	2.89	0.41
31:y:895:G:C6	31:y:896:C:N4	2.88	0.41
31:y:923:A:N6	31:y:1392:G:O6	2.53	0.41
31:y:976:G:H5"	31:y:1358:U:HO2'	1.84	0.41
31:y:1199:U:H4'	43:k:54:PHE:CD1	2.55	0.41
31:y:1263:C:H2'	31:y:1264:C:C6	2.56	0.41
31:y:1290:G:H2'	31:y:1291:G:C5'	2.50	0.41
31:y:1304:G:C5	31:y:1305:G:O6	2.73	0.41
31:y:1356:G:C6	31:y:1357:A:N6	2.88	0.41
31:y:1393:U:C2'	31:y:1394:A:OP2	2.69	0.41
31:y:1426:C:O2	31:y:1426:C:C2'	2.62	0.41
31:y:1428:A:H2	31:y:1472:U:O2	2.03	0.41
31:y:1495:U:C4	31:y:1496:C:N4	2.87	0.41
33:2:1:G:H2'	33:2:2:C:H6	1.85	0.41
35:c:118:LEU:HD13	35:c:127:ILE:HG21	2.01	0.41
36:d:61:ALA:H	36:d:64:VAL:CG2	2.31	0.41
36:d:112:SER:O	36:d:116:VAL:HG23	2.20	0.41
38:f:106:PRO:HG3	38:f:131:ILE:HG21	2.03	0.41
40:h:111:ARG:HG3	40:h:119:ARG:O	2.20	0.41
40:h:153:HIS:ND1	40:h:154:TYR:N	2.69	0.41
41:i:13:ILE:O	41:i:17:THR:CG2	2.67	0.41
41:i:38:ILE:CA	41:i:41:ARG:HB2	2.42	0.41
41:i:88:LYS:CB	41:i:89:PRO:HD2	2.49	0.41
43:k:95:GLU:O	43:k:96:ILE:HD12	2.21	0.41
45:m:59:LEU:CD1	45:m:61:SER:HB2	2.50	0.41
47:o:42:ILE:O	47:o:42:ILE:HD13	2.20	0.41
49:q:4:ILE:H	49:q:66:PRO:HA	1.86	0.41
49:q:43:LYS:HZ3	49:q:48:TRP:NE1	2.18	0.41
49:q:53:VAL:HG12	49:q:77:ALA:HB1	2.03	0.41
1:w:308:G:H5"	1:w:309:G:OP2	2.20	0.41
1:w:346:A:H1'	1:w:347:A:N7	2.35	0.41
1:w:655:A:O2'	1:w:656:G:C8	2.69	0.41
1:w:812:C:H1'	1:w:1250:G:N2	2.36	0.41
1:w:901:A:H2'	1:w:902:C:H5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:954:G:C2'	1:w:955:C:H5'	2.50	0.41
1:w:989:G:O2'	1:w:990:A:H5"	2.19	0.41
1:w:1030:G:C6	1:w:1031:G:C5	3.08	0.41
1:w:1043:C:H2'	1:w:1044:G:C8	2.56	0.41
1:w:1043:C:H2'	1:w:1044:G:O4'	2.21	0.41
1:w:1061:U:H1'	1:w:1070:A:O2'	2.20	0.41
1:w:1142:C:H6	1:w:1142:C:H3'	1.85	0.41
1:w:1186:G:OP1	1:w:1186:G:C8	2.73	0.41
1:w:1341:U:H5'	1:w:1602:U:C4	2.55	0.41
1:w:1357:U:O4	1:w:1358:G:C6	2.74	0.41
1:w:1497:U:H3'	1:w:1497:U:C6	2.49	0.41
1:w:1667:G:O2'	1:w:1990:C:N4	2.53	0.41
1:w:1746:G:H3'	1:w:1747:G:C5'	2.50	0.41
1:w:1752:C:O4'	1:w:2862:G:OP1	2.39	0.41
1:w:1853:A:C6	1:w:1889:A:C6	3.08	0.41
1:w:1889:A:C2'	1:w:1890:A:H8	2.32	0.41
1:w:2038:G:C6	1:w:2039:C:N3	2.89	0.41
1:w:2051:A:C4'	1:w:2578:G:O5'	2.68	0.41
1:w:2362:G:C6	1:w:2363:C:C4	3.08	0.41
1:w:2410:G:O6	1:w:2411:A:C2	2.74	0.41
1:w:2543:G:O2'	1:w:2544:G:C5'	2.66	0.41
1:w:2543:G:H2'	1:w:2544:G:C8	2.55	0.41
1:w:2601:C:O5'	1:w:2601:C:H6	2.03	0.41
1:w:2639:A:H2'	1:w:2640:G:H5'	2.01	0.41
2:x:22:U:H2'	2:x:23:G:C8	2.56	0.41
2:x:33:G:C6	2:x:34:U:O4	2.74	0.41
3:A:183:PRO:HA	3:A:186:LEU:HG	2.03	0.41
3:A:201:LYS:HZ1	3:A:203:GLU:HA	1.85	0.41
3:A:226:ASN:HA	3:A:227:PRO:HD2	1.95	0.41
4:B:92:ILE:HA	4:B:106:ILE:HA	2.02	0.41
4:B:140:THR:O	4:B:164:GLN:HA	2.21	0.41
4:B:174:ILE:CG2	4:B:175:LEU:H	2.20	0.41
4:B:228:PRO:HD3	4:B:236:GLY:HA2	2.03	0.41
5:C:20:ALA:O	5:C:21:VAL:HG13	2.20	0.41
5:C:119:ARG:HB3	5:C:120:TRP:CD1	2.56	0.41
5:C:172:VAL:O	5:C:173:VAL:HG13	2.21	0.41
5:C:173:VAL:HG23	5:C:183:LEU:CD2	2.49	0.41
8:F:51:ARG:O	8:F:52:VAL:C	2.64	0.41
8:F:101:ARG:HD2	8:F:121:ILE:HG23	2.02	0.41
9:G:1:MET:HA	9:G:1:MET:HE3	2.02	0.41
9:G:45:LYS:C	9:G:47:LEU:N	2.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:132:PRO:HG2	9:G:133:HIS:ND1	2.36	0.41
10:H:41:ALA:H	10:H:44:LYS:CG	2.33	0.41
11:I:5:GLN:NE2	11:I:5:GLN:O	2.53	0.41
12:J:118:GLY:O	12:J:119:GLU:HB3	2.21	0.41
16:N:105:LEU:O	16:N:110:ILE:HD13	2.21	0.41
19:Q:7:ALA:HB3	19:Q:103:ILE:HG13	2.02	0.41
19:Q:18:ARG:C	19:Q:21:VAL:HG13	2.46	0.41
19:Q:63:ASP:O	19:Q:64:MET:HG2	2.20	0.41
19:Q:79:GLY:HA3	19:Q:102:HIS:CD2	2.55	0.41
20:R:12:VAL:HG11	20:R:17:ALA:HB2	1.99	0.41
20:R:27:THR:O	20:R:28:PHE:HD2	2.03	0.41
21:S:32:PRO:O	21:S:33:LYS:CB	2.68	0.41
22:T:67:LEU:HD11	22:T:88:PHE:CZ	2.55	0.41
23:U:28:GLY:HA2	23:U:67:VAL:O	2.19	0.41
28:Z:46:VAL:HG12	28:Z:47:ARG:H	1.84	0.41
29:a:18:ALA:O	29:a:19:SER:HB3	2.21	0.41
29:a:63:PRO:CD	29:a:64:TYR:H	2.33	0.41
31:y:116:A:N6	31:y:117:G:C2	2.89	0.41
31:y:166:G:H2'	31:y:167:G:C8	2.56	0.41
31:y:190:G:N2	31:y:263:A:H4'	2.35	0.41
31:y:197:A:H1'	31:y:198:G:O4'	2.21	0.41
31:y:271:C:H2'	31:y:272:C:H5'	2.03	0.41
31:y:282:A:H3'	31:y:283:C:C5	2.55	0.41
31:y:319:G:C2	31:y:320:C:N1	2.89	0.41
31:y:367:U:O2'	31:y:368:U:H4'	2.20	0.41
31:y:425:G:H5"	31:y:425:G:C8	2.53	0.41
31:y:464:G:O2'	31:y:468:A:N6	2.54	0.41
31:y:557:G:C5	31:y:558:G:C6	3.09	0.41
31:y:611:A:N3	31:y:612:C:H5	2.19	0.41
31:y:829:G:N1	31:y:830:G:C5	2.89	0.41
31:y:948:C:OP1	31:y:1306:A:C4'	2.58	0.41
31:y:965:A:HO2'	31:y:966:M2G:P	2.43	0.41
31:y:103(B):G:H8	31:y:103(B):G:O5'	2.02	0.41
31:y:1056:U:H2'	31:y:1057:G:O4'	2.21	0.41
31:y:1190:G:OP1	36:d:5:ILE:HA	2.20	0.41
36:d:5:ILE:HD12	36:d:175:LEU:CD2	2.31	0.41
36:d:136:GLN:C	36:d:138:VAL:N	2.78	0.41
37:e:173:TRP:CH2	37:e:194:LEU:HD21	2.55	0.41
37:e:201:GLN:HA	37:e:204:ILE:HG12	2.01	0.41
38:f:63:ARG:HA	38:f:66:MET:CG	2.51	0.41
39:g:33:TYR:HD1	39:g:75:LEU:HD23	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:g:81:ILE:O	39:g:82:ARG:C	2.64	0.41
40:h:69:VAL:HG22	40:h:135:VAL:CG2	2.50	0.41
40:h:118:VAL:HG23	40:h:119:ARG:N	2.34	0.41
42:j:53:VAL:HB	42:j:58:ARG:NH2	2.35	0.41
45:m:6:ILE:HD12	45:m:6:ILE:N	2.29	0.41
45:m:27:LYS:O	45:m:28:GLY:C	2.63	0.41
45:m:40:ARG:O	45:m:54:VAL:HG22	2.21	0.41
46:n:13:LYS:HE2	46:n:17:VAL:HG11	2.02	0.41
46:n:23:TYR:CD1	46:n:70:LEU:HB3	2.51	0.41
46:n:86:CYS:HB3	52:t:74:PHE:HE1	1.85	0.41
48:p:27:VAL:HG12	48:p:28:GLN:N	2.36	0.41
49:q:3:LYS:HG2	49:q:65:GLN:HB3	2.02	0.41
49:q:7:ALA:HB2	49:q:20:VAL:CG2	2.50	0.41
50:r:6:LEU:HD23	50:r:59:ILE:O	2.20	0.41
53:u:60:GLU:CD	53:u:81:LYS:HZ2	2.28	0.41
1:w:19:C:H5'	1:w:553:U:OP1	2.21	0.41
1:w:81:G:C2	1:w:82:G:H1'	2.55	0.41
1:w:611:C:N3	1:w:618(A):G:C2	2.89	0.41
1:w:742:G:C4'	1:w:1675:C:O2'	2.68	0.41
1:w:779:U:OP2	4:B:49:ILE:HD11	2.20	0.41
1:w:784:A:P	1:w:2588:G:OP1	2.79	0.41
1:w:817:C:C5'	1:w:932:G:C5	3.04	0.41
1:w:979:G:H3'	1:w:980:A:C5'	2.50	0.41
1:w:1202:C:N4	1:w:1203:G:O6	2.53	0.41
1:w:1276:A:OP2	1:w:1645:G:O2'	2.25	0.41
1:w:1299:G:N2	1:w:1640:C:O2	2.48	0.41
1:w:1326:U:C2'	1:w:1327:C:O4'	2.68	0.41
1:w:1356:G:C5	1:w:1357:U:C4	3.08	0.41
1:w:1687:G:C2	1:w:1700:A:OP1	2.73	0.41
1:w:1799:G:C8	4:B:177:LEU:HD13	2.53	0.41
1:w:1817:G:C2	1:w:1818:U:C2	3.09	0.41
1:w:1858:G:O2'	1:w:1884:A:N6	2.53	0.41
1:w:1889:A:H8	1:w:1889:A:OP2	2.04	0.41
1:w:1925:C:C2	1:w:1926:U:C6	3.09	0.41
1:w:2106:G:C6	1:w:2184:G:O6	2.74	0.41
1:w:2134:A:H8	1:w:2134:A:P	2.44	0.41
1:w:2231:C:H2'	1:w:2232:U:O5'	2.21	0.41
1:w:2354:G:O4'	23:U:35:ASN:HA	2.20	0.41
1:w:2433:A:O2'	1:w:2434:A:P	2.79	0.41
1:w:2472:G:C5	1:w:2475:C:C4	3.09	0.41
1:w:2569:G:C2	1:w:2570:G:N7	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2624:G:C4	1:w:2625:G:C8	3.08	0.41
1:w:2652:C:OP1	1:w:2655:G:OP2	2.37	0.41
2:x:84:C:C2'	2:x:85:G:H8	2.23	0.41
3:A:45:HIS:CD2	3:A:216:THR:CG2	3.03	0.41
3:A:63:VAL:HG13	3:A:64:SER:H	1.86	0.41
3:A:179:ALA:O	3:A:181:PHE:N	2.53	0.41
4:B:4:LYS:HZ1	4:B:22:SER:H	1.68	0.41
6:D:98:LYS:HD3	6:D:101:ARG:HH21	1.84	0.41
6:D:109:VAL:HA	6:D:112:ARG:CG	2.49	0.41
6:D:194:TRP:C	6:D:196:VAL:N	2.75	0.41
9:G:99:GLU:HB3	9:G:103:ARG:HH12	1.83	0.41
10:H:95:TYR:CE1	10:H:109:PRO:HA	2.55	0.41
13:K:24:GLY:O	13:K:98:LYS:HD3	2.19	0.41
13:K:32:PHE:CA	13:K:132:VAL:HG11	2.51	0.41
13:K:72:LYS:NZ	13:K:73:PRO:HB2	2.30	0.41
14:L:27:SER:C	14:L:29:LEU:N	2.78	0.41
15:M:104:GLY:C	15:M:106:ARG:N	2.76	0.41
19:Q:10:VAL:HG12	19:Q:11:ARG:N	2.23	0.41
24:V:39:LYS:HD2	24:V:39:LYS:HA	1.82	0.41
24:V:84:GLY:O	24:V:85:LEU:C	2.64	0.41
27:Y:9:LYS:HD3	27:Y:9:LYS:HA	1.91	0.41
27:Y:15:ARG:HA	27:Y:18:ALA:HB3	2.01	0.41
28:Z:23:ARG:HH11	28:Z:23:ARG:HG2	1.85	0.41
31:y:167:G:C8	31:y:167:G:H3'	2.56	0.41
31:y:324:G:OP2	53:u:71:THR:CG2	2.69	0.41
31:y:408:A:H5"	37:e:116:GLN:CG	2.50	0.41
31:y:514:C:C2	31:y:515:G:N7	2.89	0.41
31:y:570:G:C2	31:y:873:A:C6	3.09	0.41
31:y:642:A:H2'	31:y:643:C:H6	1.80	0.41
31:y:665:A:N1	31:y:732:C:N4	2.69	0.41
31:y:666:G:N3	31:y:666:G:H2'	2.36	0.41
31:y:762:C:O5'	31:y:762:C:H6	2.03	0.41
31:y:880:C:H2'	31:y:881:G:C8	2.54	0.41
31:y:926:G:C2	31:y:1505:G:C4	3.08	0.41
31:y:928:G:H2'	31:y:929:G:C8	2.56	0.41
31:y:942:G:O6	31:y:1340:A:N6	2.54	0.41
31:y:973:G:C3'	31:y:974:A:H5"	2.49	0.41
31:y:1016:A:C4	31:y:1017:G:N7	2.88	0.41
31:y:1061:G:H1'	43:k:56:HIS:NE2	2.35	0.41
31:y:1091:U:O2	31:y:1093:A:H8	2.04	0.41
31:y:1187:G:C6	31:y:1188:A:N1	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1311:G:N7	52:t:2:PRO:CD	2.84	0.41
31:y:1429:C:O2'	31:y:1430:C:C5'	2.41	0.41
31:y:1455:G:C6	31:y:1459:C:C4	3.08	0.41
31:y:1469:G:N3	31:y:1470:G:C8	2.89	0.41
31:y:1483:A:H2'	31:y:1484:C:O4'	2.20	0.41
31:y:1518:MA6:H102	31:y:1518:MA6:N7	2.35	0.41
31:y:1520:G:N3	31:y:1521:G:C8	2.88	0.41
32:z:22:G:H2'	32:z:23:C:C6	2.55	0.41
33:2:49:C:O5'	33:2:49:C:C6	2.73	0.41
36:d:6:HIS:HA	36:d:7:PRO:HD2	1.88	0.41
36:d:13:GLY:HA2	36:d:17:ASP:O	2.20	0.41
39:g:100:ASN:OD1	51:s:29:PHE:HE2	2.03	0.41
47:o:29:ARG:HG2	47:o:32:SER:HG	1.85	0.41
48:p:50:HIS:O	48:p:53:HIS:HB2	2.21	0.41
51:s:18:ARG:HB2	51:s:55:ARG:HD3	2.03	0.41
1:w:88:G:C6	1:w:89:G:C6	3.08	0.41
1:w:293:U:H3'	1:w:293:U:C6	2.55	0.41
1:w:443:A:O4'	6:D:40:ARG:NH1	2.54	0.41
1:w:563:G:O6	1:w:2018:G:C6	2.74	0.41
1:w:572:A:H61	1:w:2029:G:H21	1.69	0.41
1:w:712:G:C6	1:w:713:G:C4	3.09	0.41
1:w:769:G:H2'	1:w:770:G:O4'	2.21	0.41
1:w:783:A:H2'	1:w:784:A:O2'	2.20	0.41
1:w:817:C:H4'	1:w:932:G:C5	2.55	0.41
1:w:859:G:O2'	1:w:916:G:N1	2.54	0.41
1:w:934:G:C6	1:w:935:C:C4	3.08	0.41
1:w:944:G:H1	12:J:38:GLN:NE2	2.14	0.41
1:w:991:C:H2'	1:w:992:C:C5'	2.48	0.41
1:w:1097:U:C2'	1:w:1098:A:H5'	2.50	0.41
1:w:1152:C:OP2	1:w:1152:C:C6	2.74	0.41
1:w:1186:G:H3'	1:w:1187:G:O4'	2.21	0.41
1:w:1305:C:C2	1:w:1624:G:C2	3.08	0.41
1:w:1361:G:H3'	1:w:1362:C:H5"	2.03	0.41
1:w:1544:C:O2'	1:w:1545:A:O5'	2.38	0.41
1:w:1555:G:O2'	1:w:1556:C:H5'	2.20	0.41
1:w:1635:G:H2'	1:w:1636:C:H6	1.85	0.41
1:w:2156:G:N1	1:w:2157:G:N2	2.69	0.41
1:w:2483:C:H2'	13:K:49:ALA:HB2	2.02	0.41
1:w:2572:A:OP1	1:w:2574:G:H4'	2.20	0.41
1:w:2578:G:C2'	1:w:2579:C:O5'	2.69	0.41
1:w:2883:A:OP2	14:L:98:LEU:HD23	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:41:THR:HG22	3:A:42:VAL:N	2.29	0.41
7:E:77:ILE:HG21	32:z:56:C:C4	2.55	0.41
9:G:63:ALA:HA	9:G:66:GLU:CG	2.50	0.41
9:G:109:ILE:HG23	9:G:110:ASP:H	1.85	0.41
12:J:25:SER:N	12:J:31:ALA:HB2	2.34	0.41
13:K:52:VAL:CG2	13:K:53:ALA:H	2.32	0.41
13:K:132:VAL:HG22	13:K:133:ARG:N	2.32	0.41
15:M:27:SER:C	15:M:28:VAL:HG23	2.45	0.41
15:M:67:ARG:CA	15:M:100:ALA:O	2.57	0.41
16:N:135:VAL:CG1	16:N:136:GLN:H	2.09	0.41
20:R:7:VAL:HG13	20:R:8:ILE:N	2.36	0.41
21:S:37:VAL:HG22	21:S:62:GLU:OE1	2.20	0.41
22:T:36:LYS:O	22:T:37:VAL:HG13	2.20	0.41
22:T:44:PHE:CD1	22:T:44:PHE:C	2.95	0.41
22:T:167:PRO:O	22:T:169:GLU:N	2.49	0.41
23:U:50:ASN:CB	23:U:81:VAL:HG11	2.50	0.41
31:y:116:A:N3	31:y:117:G:C1’	2.84	0.41
31:y:186(A):C:C4’	53:u:81:LYS:HB3	2.50	0.41
31:y:186(B):C:H5’	53:u:82:SER:HA	2.02	0.41
31:y:276:G:O2’	50:r:68:ARG:NH2	2.54	0.41
31:y:322:C:N4	31:y:329:A:H62	2.10	0.41
31:y:392:G:C5	31:y:393:A:C8	3.09	0.41
31:y:509:A:O2’	31:y:510:A:O4’	2.32	0.41
31:y:529:G:C6	45:m:47:PRO:O	2.74	0.41
31:y:565:U:H3’	31:y:566:G:H2’	2.02	0.41
31:y:584:G:C4	31:y:585:G:N7	2.88	0.41
31:y:664:G:N2	31:y:742:G:C2	2.89	0.41
31:y:677:U:C2	31:y:678:U:C4	3.08	0.41
31:y:687:A:H2	31:y:704:A:C5	2.39	0.41
31:y:925:G:C6	31:y:927:G:N7	2.89	0.41
31:y:976:G:N7	31:y:1358:U:C2	2.88	0.41
31:y:103(A):A:H3’	31:y:103(B):G:H8	1.86	0.41
31:y:1054:C:OP1	31:y:1197:G:O5’	2.38	0.41
31:y:1061:G:O2’	43:k:56:HIS:HE1	2.04	0.41
31:y:1077:G:C6	31:y:1079:G:H5”	2.56	0.41
31:y:1080:A:OP2	31:y:1081:G:OP2	2.37	0.41
31:y:1174:G:H2’	31:y:1175:G:O4’	2.21	0.41
31:y:1268:A:O5’	31:y:1268:A:H8	2.04	0.41
31:y:1318:A:OP2	31:y:1318:A:C8	2.73	0.41
31:y:1454:G:H2’	31:y:1455:G:C8	2.55	0.41
31:y:1500:A:P	31:y:1505:G:P	3.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:z:41:C:C2’	32:z:42:G:H5’	2.50	0.41
37:e:77:ASN:N	37:e:77:ASN:ND2	2.68	0.41
38:f:79:GLU:O	41:i:104:ARG:HD2	2.20	0.41
40:h:9:VAL:HG13	40:h:10:ARG:H	1.85	0.41
40:h:24:THR:O	40:h:24:THR:CG2	2.68	0.41
41:i:20:TYR:OH	41:i:75:ARG:HG2	2.20	0.41
41:i:36:LEU:CD1	41:i:48:TYR:HB2	2.50	0.41
41:i:119:LEU:HD22	41:i:123:GLU:O	2.21	0.41
42:j:83:ARG:HB2	42:j:83:ARG:NH1	2.35	0.41
44:l:43:SER:O	44:l:44:SER:CB	2.67	0.41
45:m:99:ILE:HG13	45:m:100:VAL:N	2.36	0.41
46:n:5:ALA:O	46:n:6:GLY:C	2.63	0.41
50:r:45:HIS:O	50:r:46:ASP:HB3	2.21	0.41
53:u:53:LEU:CB	53:u:100:ILE:HG21	2.50	0.41
1:w:38:A:C5	1:w:442:G:C2	3.09	0.41
1:w:446:G:H1’	1:w:449:A:H2	1.86	0.41
1:w:462:C:O2’	1:w:463:G:H5’	2.21	0.41
1:w:563:G:C6	1:w:564:C:C5	3.09	0.41
1:w:616:A:H3’	1:w:616:A:C8	2.56	0.41
1:w:751:A:O5’	1:w:751:A:H8	2.04	0.41
1:w:987:G:H1’	1:w:1001:A:C1’	2.50	0.41
1:w:1162:G:H8	1:w:1162:G:O5’	2.04	0.41
1:w:1327:C:C5	1:w:1328:G:C6	3.09	0.41
1:w:1532:C:C5	1:w:1533:C:C4	3.09	0.41
1:w:1583:A:H4’	1:w:1585:C:P	2.61	0.41
1:w:1618:A:O2’	1:w:1619:G:P	2.79	0.41
1:w:1619:G:O2’	28:Z:1:MET:N	2.53	0.41
1:w:1824:G:C6	1:w:1825:A:C6	3.08	0.41
1:w:1847:A:H3’	1:w:1847:A:P	2.61	0.41
1:w:1905:C:H2’	1:w:1930:G:C8	2.56	0.41
1:w:2032:G:N2	1:w:2572:A:C8	2.88	0.41
1:w:2051:A:H5”	1:w:2614:A:N6	2.36	0.41
1:w:2055:C:OP1	1:w:2056:G:H5”	2.21	0.41
1:w:2305:A:C5	1:w:2306:C:C5	3.09	0.41
1:w:2639:A:C5	1:w:2640:G:C8	3.09	0.41
1:w:2672:G:H2’	1:w:2673:G:C8	2.55	0.41
1:w:2697:G:C2’	1:w:2698:U:H5’	2.51	0.41
1:w:2704:C:N4	1:w:2705:A:C5	2.89	0.41
1:w:2820:A:OP1	14:L:4:LEU:HD23	2.21	0.41
1:w:2837:G:H8	1:w:2837:G:O5’	2.03	0.41
1:w:2840:C:N4	1:w:2841:C:N4	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:x:52:A:OP1	2:x:52:A:C4'	2.69	0.41
2:x:115:G:N1	2:x:116:G:C5	2.89	0.41
4:B:74:GLY:C	4:B:75:ILE:HG13	2.45	0.41
5:C:77:ILE:HB	5:C:79:ARG:NE	2.36	0.41
8:F:20:ALA:O	8:F:22:GLY:N	2.54	0.41
8:F:89:ILE:CG1	8:F:129:THR:HB	2.51	0.41
10:H:63:PRO:O	10:H:64:ASP:C	2.64	0.41
11:I:87:ILE:HA	11:I:93:PRO:HA	2.03	0.41
12:J:8:PRO:O	12:J:9:ASN:C	2.63	0.41
15:M:68:GLN:O	15:M:72:ALA:N	2.54	0.41
16:N:100:TYR:N	16:N:100:TYR:CD1	2.88	0.41
17:O:32:PHE:CG	17:O:33:ARG:N	2.88	0.41
18:P:28:GLU:O	18:P:29:PRO:O	2.37	0.41
19:Q:19:LEU:O	27:Y:25:LEU:HD23	2.20	0.41
23:U:54:GLY:O	23:U:57:PHE:C	2.64	0.41
24:V:18:ILE:HD12	24:V:18:ILE:H	1.86	0.41
24:V:79:GLY:O	24:V:80:LEU:HG	2.21	0.41
25:W:7:ARG:H	25:W:7:ARG:HG2	1.71	0.41
27:Y:44:THR:CG2	27:Y:45:VAL:H	2.33	0.41
31:y:55:A:H2'	31:y:56:U:O5'	2.21	0.41
31:y:105:G:C6	31:y:106:C:C4	3.08	0.41
31:y:232:G:C5	31:y:233:C:C5	3.09	0.41
31:y:297:G:H2'	31:y:298:A:H8	1.78	0.41
31:y:451:A:C6	31:y:481:G:C5	3.09	0.41
31:y:585:G:C5	31:y:586:C:C4	3.08	0.41
31:y:712:A:H3'	31:y:712:A:C8	2.56	0.41
31:y:768:A:O2'	31:y:1512:U:O2	2.36	0.41
31:y:871:U:H5'	31:y:871:U:H6	1.86	0.41
31:y:876:G:C2'	31:y:877:C:H5'	2.51	0.41
31:y:877:C:O2'	41:i:89:PRO:HG3	2.20	0.41
31:y:886:G:H2'	31:y:887:G:O4'	2.21	0.41
31:y:1096:C:H2'	31:y:1097:C:C6	2.56	0.41
31:y:1103:C:H5"	35:c:98:LEU:HD22	2.03	0.41
31:y:1206:G:C5	31:y:1207:2MG:H1'	2.55	0.41
31:y:1215:G:H8	31:y:1215:G:H5'	1.85	0.41
31:y:1256:A:O4'	31:y:1256:A:OP2	2.39	0.41
31:y:1269:A:H5"	54:v:18:TYR:HB3	2.01	0.41
31:y:1271:G:C2	31:y:1272:G:C4	3.09	0.41
31:y:1290:G:N1	31:y:1291:G:C5	2.89	0.41
31:y:1312:G:O2'	31:y:1313:U:H5'	2.20	0.41
31:y:1315:U:H2'	31:y:1316:G:C5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1347:G:N3	31:y:1373:G:C2	2.88	0.41
31:y:1496:C:O2'	31:y:1497:G:H5'	2.21	0.41
31:y:1508:G:C6	31:y:1509:C:N4	2.89	0.41
32:z:29:G:H2'	32:z:30:G:H5'	2.01	0.41
33:2:43:G:O2'	33:2:44:A:H5'	2.20	0.41
36:d:28:GLN:HE21	36:d:32:LEU:CB	2.13	0.41
36:d:117:ALA:HB1	36:d:187:ALA:HB2	2.02	0.41
37:e:7:PRO:HB2	37:e:10:ARG:CG	2.48	0.41
37:e:8:VAL:HG21	37:e:115:ARG:CD	2.47	0.41
37:e:20:TYR:HB3	37:e:27:TYR:CE1	2.56	0.41
37:e:64:LEU:C	37:e:66:ARG:N	2.79	0.41
37:e:102:ASP:HB2	37:e:121:VAL:HG21	2.02	0.41
39:g:33:TYR:CD2	39:g:71:ARG:NH1	2.89	0.41
40:h:66:VAL:O	40:h:69:VAL:HB	2.20	0.41
40:h:137:LYS:O	40:h:140:ASP:CB	2.68	0.41
41:i:6:ILE:O	41:i:10:LEU:N	2.53	0.41
42:j:114:TYR:HD1	42:j:115:GLY:N	2.18	0.41
43:k:51:ARG:HG3	47:o:45:ARG:NE	2.34	0.41
44:l:96:ARG:O	44:l:99:GLN:HG3	2.21	0.41
45:m:124:PRO:HG2	45:m:125:LYS:H	1.86	0.41
51:s:61:LYS:O	51:s:65:ILE:HG13	2.21	0.41
54:v:23:PRO:HB2	54:v:24:ARG:H	1.69	0.41
1:w:51:G:O2'	1:w:118:A:N6	2.51	0.41
1:w:53:A:C3'	1:w:54:G:H5'	2.51	0.41
1:w:57:C:H4'	20:R:73:ARG:HH21	1.86	0.41
1:w:71:A:C8	1:w:73:A:C2	3.09	0.41
1:w:253:C:C2'	1:w:254:G:H5'	2.50	0.41
1:w:510:C:O2'	1:w:511:U:H5'	2.19	0.41
1:w:530:G:H5"	1:w:561:G:N1	2.36	0.41
1:w:532:A:O3'	1:w:533:G:O4'	2.38	0.41
1:w:539:G:C2	1:w:556:G:C2	3.09	0.41
1:w:545:G:C2	1:w:549:G:C2	3.09	0.41
1:w:559:G:OP1	10:H:132:LYS:NZ	2.45	0.41
1:w:604:G:C6	1:w:625:G:C6	3.09	0.41
1:w:609(B):G:H1	1:w:619:G:H1'	1.85	0.41
1:w:669:G:N1	1:w:801:G:O6	2.53	0.41
1:w:669:G:N1	1:w:670:A:C5	2.89	0.41
1:w:678:C:N4	1:w:799:G:H1	2.18	0.41
1:w:755:C:C4	1:w:756:C:N4	2.89	0.41
1:w:779:U:H2'	1:w:780:G:C8	2.56	0.41
1:w:782:A:C8	1:w:782:A:O5'	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:782:A:H2	4:B:226:MET:SD	2.44	0.41
1:w:906:G:H2'	1:w:906:G:N3	2.36	0.41
1:w:941:A:N1	1:w:942:G:C5	2.89	0.41
1:w:956:G:P	13:K:75:THR:CG2	3.09	0.41
1:w:965:C:C2'	1:w:966:G:H5'	2.49	0.41
1:w:1031:G:C2'	1:w:1032:A:H5'	2.51	0.41
1:w:1126:A:OP1	1:w:1126:A:H8	2.04	0.41
1:w:1215:G:N1	1:w:1235:G:H1'	2.36	0.41
1:w:1275:A:C8	1:w:1276:A:H1'	2.56	0.41
1:w:1346:G:C5	1:w:1347:G:C8	3.08	0.41
1:w:1391:U:N3	1:w:1394:U:C5	2.88	0.41
1:w:1472:A:H2'	1:w:1473:G:H8	1.82	0.41
1:w:1472:A:H62	1:w:1521:G:H21	1.68	0.41
1:w:1506:C:H3'	1:w:1508:A:P	2.60	0.41
1:w:1556:C:O2'	1:w:1557:C:H5'	2.19	0.41
1:w:1570:A:H2'	1:w:1571:A:N9	2.33	0.41
1:w:1793:C:H2'	1:w:1794:U:O4'	2.21	0.41
1:w:1813:G:H3'	1:w:1814:G:C8	2.56	0.41
1:w:1825:A:O3'	4:B:224:ALA:HB3	2.21	0.41
1:w:1832:C:C2	1:w:1833:U:C6	3.08	0.41
1:w:1838:C:C6	1:w:1898:U:C5	3.09	0.41
1:w:1927:A:C6	1:w:1928:A:C6	3.09	0.41
1:w:2016:U:O2'	1:w:2017:U:H5'	2.21	0.41
1:w:2029:G:N2	1:w:2033:A:C4	2.89	0.41
1:w:2123:G:O3'	3:A:172:ILE:HG13	2.20	0.41
1:w:2160:G:H5'	1:w:2160:G:H8	1.86	0.41
1:w:2320:A:C2	1:w:2333:A:H2'	2.55	0.41
1:w:2343:C:O2'	1:w:2373:G:O2'	2.24	0.41
1:w:2373:G:H8	1:w:2373:G:O5'	2.04	0.41
1:w:2416:C:O5'	1:w:2416:C:H6	2.04	0.41
1:w:2428:G:H4'	1:w:2429:G:O5'	2.21	0.41
1:w:2436:G:H2'	1:w:2437:U:C6	2.56	0.41
1:w:2451:A:H1'	32:z:76:A:H2'	2.03	0.41
1:w:2523:G:O2'	1:w:2764:A:O2'	2.37	0.41
1:w:2579:C:H5'	5:C:134:ILE:CG1	2.50	0.41
1:w:2630:G:H21	1:w:2892:A:H1'	1.85	0.41
1:w:2633:G:H2'	1:w:2634:G:O5'	2.21	0.41
1:w:2683:C:H42	1:w:2727:G:N2	2.18	0.41
1:w:2784:C:H6	1:w:2784:C:O5'	2.03	0.41
1:w:2823:A:H2'	1:w:2824:C:H5'	2.03	0.41
1:w:2877:G:C2'	1:w:2878:U:C6	2.97	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2883:A:H3'	1:w:2884:U:H5'	2.02	0.41
1:w:2899:G:H2'	1:w:2900:A:O4'	2.21	0.41
2:x:9:G:C6	2:x:112:G:C6	3.08	0.41
2:x:71:C:H42	2:x:105:G:H1	1.68	0.41
2:x:75:G:H2'	22:T:85:HIS:HE1	1.85	0.41
2:x:90:C:H2'	2:x:91:C:H6	1.86	0.41
4:B:30:GLU:HB3	4:B:63:ARG:HH22	1.85	0.41
4:B:44:ASN:HA	4:B:49:ILE:CA	2.36	0.41
4:B:75:ILE:H	4:B:76:PRO:CD	2.32	0.41
4:B:90:ALA:O	4:B:91:ARG:C	2.63	0.41
4:B:133:LEU:HD22	4:B:133:LEU:N	2.32	0.41
4:B:201:HIS:C	4:B:203:ASN:N	2.77	0.41
4:B:242:ARG:HB3	4:B:243:GLY:H	1.55	0.41
5:C:55:ASN:CG	5:C:75:VAL:HG23	2.46	0.41
5:C:77:ILE:HG21	5:C:79:ARG:HH21	1.86	0.41
6:D:132:LYS:HA	6:D:135:LEU:CB	2.51	0.41
6:D:178:VAL:CA	6:D:181:ILE:HG22	2.51	0.41
7:E:43:LEU:HB3	7:E:44:GLY:H	1.77	0.41
7:E:72:ARG:HD2	7:E:87:PRO:HB3	2.03	0.41
7:E:83:ARG:O	7:E:84:LYS:C	2.63	0.41
7:E:125:PHE:HB3	7:E:131:TYR:HE1	1.84	0.41
8:F:76:VAL:CA	8:F:79:VAL:HG22	2.46	0.41
9:G:3:VAL:N	9:G:21:VAL:HG21	2.31	0.41
10:H:62:ARG:HA	10:H:63:PRO:HD2	1.96	0.41
11:I:12:ASP:OD1	11:I:86:ILE:HD12	2.20	0.41
11:I:77:ILE:CD1	11:I:79:PHE:CD1	3.01	0.41
12:J:122:PRO:O	12:J:123:LEU:HB2	2.21	0.41
13:K:7:MET:HB2	13:K:93:TYR:CD2	2.56	0.41
13:K:72:LYS:O	13:K:73:PRO:O	2.38	0.41
15:M:24:LEU:HB2	15:M:85:VAL:CG2	2.51	0.41
15:M:106:ARG:CD	15:M:111:GLU:HA	2.51	0.41
16:N:5:ALA:O	16:N:8:LYS:N	2.54	0.41
16:N:88:ILE:HB	16:N:89:VAL:H	1.50	0.41
16:N:95:ARG:HG3	16:N:96:ARG:NH1	2.36	0.41
17:O:27:LEU:C	17:O:29:SER:N	2.79	0.41
18:P:21:ARG:O	18:P:22:VAL:CB	2.69	0.41
18:P:23:GLU:O	18:P:24:LYS:CB	2.68	0.41
19:Q:29:LEU:HD23	19:Q:29:LEU:N	2.36	0.41
20:R:21:PHE:CD2	20:R:26:TYR:HE1	2.39	0.41
20:R:39:ILE:HD13	20:R:43:VAL:HG12	2.02	0.41
20:R:61:GLY:HA2	20:R:71:GLY:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:71:LYS:NZ	21:S:73:ARG:HE	2.18	0.41
22:T:11:GLU:O	22:T:13:GLU:N	2.49	0.41
22:T:26:GLY:HA3	22:T:86:VAL:CG2	2.50	0.41
22:T:151:HIS:O	22:T:153:SER:N	2.53	0.41
24:V:55:GLY:N	24:V:58:ILE:HD11	2.35	0.41
25:W:60:LEU:O	25:W:60:LEU:HD13	2.21	0.41
26:X:36:VAL:C	26:X:37:LEU:HD22	2.46	0.41
28:Z:19:ARG:CG	28:Z:23:ARG:HH21	2.32	0.41
29:a:22:VAL:HG11	29:a:53:PRO:HB2	2.03	0.41
29:a:25:MET:HA	29:a:46:ARG:HB3	2.03	0.41
29:a:40:GLU:O	29:a:41:ILE:C	2.63	0.41
29:a:63:PRO:HD2	29:a:64:TYR:H	1.86	0.41
31:y:13:U:C4	31:y:21:G:N2	2.85	0.41
31:y:43:C:H1'	31:y:622:A:C2	2.56	0.41
31:y:116:A:P	31:y:289:G:C5'	3.08	0.41
31:y:191(G):G:C5	31:y:192:U:C4	3.09	0.41
31:y:197:A:H2	31:y:198:G:N3	2.19	0.41
31:y:259:G:N2	31:y:268:C:O2	2.53	0.41
31:y:279:A:H8	31:y:279:A:O5'	2.03	0.41
31:y:332:G:O2'	31:y:333:G:C5'	2.68	0.41
31:y:366:C:N4	31:y:367:U:O4	2.54	0.41
31:y:390:C:H2'	31:y:391:G:C4'	2.49	0.41
31:y:396:G:C2	31:y:398:C:N3	2.89	0.41
31:y:403:C:H42	31:y:547:A:C5'	2.33	0.41
31:y:418:C:C4	31:y:426:G:C2	3.09	0.41
31:y:558:G:C2'	31:y:559:A:C2	2.99	0.41
31:y:561:U:C2'	31:y:562:C:OP2	2.68	0.41
31:y:584:G:O2'	31:y:585:G:H5'	2.21	0.41
31:y:639:G:C2	31:y:640:A:N7	2.88	0.41
31:y:663:A:H5'	31:y:836:G:OP1	2.21	0.41
31:y:721:G:C2	31:y:733:A:C6	3.09	0.41
31:y:721:G:H8	31:y:721:G:O5'	2.04	0.41
31:y:777:A:C2	31:y:778:G:C4	3.09	0.41
31:y:859:A:N7	31:y:860:A:N7	2.69	0.41
31:y:861:G:N7	31:y:862:C:C5	2.89	0.41
31:y:862:C:O2'	31:y:863:U:H5'	2.20	0.41
31:y:889:A:H61	31:y:907:A:H3'	1.86	0.41
31:y:918:A:N3	31:y:919:A:H1'	2.36	0.41
31:y:933:G:C6	31:y:1385:G:N1	2.89	0.41
31:y:943:U:H2'	31:y:944:G:O4'	2.21	0.41
31:y:987:G:H1'	52:t:52:TYR:OH	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:1013:G:N2	31:y:1016:A:C6	2.89	0.41
31:y:1089:G:H2'	31:y:1090:U:O5'	2.21	0.41
31:y:1093:A:C2	31:y:1109:C:O2	2.74	0.41
31:y:1126:U:O2	31:y:1126:U:C2'	2.67	0.41
31:y:1188:A:H1'	47:o:60:SER:CB	2.51	0.41
31:y:1252:A:O4'	31:y:1369:C:H4'	2.21	0.41
31:y:1290:G:C2'	31:y:1291:G:H5"	2.51	0.41
31:y:1306:A:C6	31:y:1331:G:O4'	2.73	0.41
31:y:1367:C:OP1	42:j:114:TYR:HB2	2.21	0.41
31:y:1393:U:H4'	31:y:1502:A:OP1	2.21	0.41
31:y:1471:G:C2	31:y:1472:U:C2	3.09	0.41
31:y:1535:C:H2'	31:y:1536:C:O4'	2.20	0.41
32:z:7:G:O2'	32:z:49:G:H5'	2.21	0.41
35:c:102:LEU:HD13	35:c:176:GLU:HG3	2.02	0.41
36:d:91:LEU:HD12	36:d:91:LEU:N	2.36	0.41
36:d:156:ARG:CB	36:d:196:LEU:HD13	2.51	0.41
37:e:13:ARG:HH21	37:e:32:ALA:C	2.28	0.41
37:e:58:LEU:HG	37:e:206:PHE:CE1	2.56	0.41
37:e:80:GLU:OE2	37:e:84:LYS:HB3	2.20	0.41
37:e:108:LEU:HD12	37:e:108:LEU:N	2.36	0.41
37:e:134:ASP:CG	37:e:135:LEU:H	2.29	0.41
38:f:10:MET:HG2	38:f:11:ILE:N	2.36	0.41
40:h:31:MET:HG3	40:h:36:LYS:CB	2.50	0.41
40:h:67:GLU:HA	40:h:67:GLU:OE2	2.21	0.41
40:h:133:GLY:O	40:h:136:LYS:N	2.54	0.41
40:h:151:TYR:C	40:h:153:HIS:N	2.79	0.41
41:i:9:MET:O	41:i:13:ILE:HG12	2.20	0.41
42:j:15:ALA:O	42:j:17:VAL:HG23	2.21	0.41
43:k:25:GLU:HB3	43:k:29:ARG:CG	2.50	0.41
44:l:19:ALA:HB3	44:l:81:ASP:O	2.21	0.41
45:m:63:TYR:CD2	45:m:63:TYR:N	2.87	0.41
45:m:81:VAL:O	45:m:82:VAL:HB	2.20	0.41
45:m:101:ARG:HD3	45:m:107:ALA:O	2.21	0.41
46:n:40:ASN:HD21	46:n:42:ALA:HB3	1.86	0.41
46:n:80:ARG:CG	46:n:80:ARG:NH1	2.83	0.41
47:o:2:ALA:O	47:o:3:ARG:CB	2.68	0.41
52:t:31:ILE:HD12	52:t:31:ILE:N	2.35	0.41
52:t:42:PRO:C	52:t:44:MET:N	2.79	0.41
52:t:77:THR:O	52:t:78:ARG:HB2	2.21	0.41
53:u:84:LEU:CD2	53:u:88:VAL:HG21	2.51	0.41
1:w:106:C:C2'	1:w:107:C:O5'	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:126:A:N7	1:w:127:A:C6	2.89	0.41
1:w:132:G:H3'	1:w:133:C:C5	2.56	0.41
1:w:212:G:C6	1:w:213:A:C5	3.08	0.41
1:w:244:A:H2'	1:w:245:G:O4'	2.21	0.41
1:w:286:C:C4	1:w:287:C:N4	2.89	0.41
1:w:479:A:O4'	1:w:480:A:C8	2.73	0.41
1:w:495:G:H1'	19:Q:57:ASN:ND2	2.36	0.41
1:w:585:G:H2'	1:w:586:A:N7	2.36	0.41
1:w:604:G:O2'	1:w:605:C:H5'	2.21	0.41
1:w:847:U:H3'	1:w:848:G:H5"	2.03	0.41
1:w:979:G:H3'	1:w:980:A:H5"	2.03	0.41
1:w:1259:G:O2'	1:w:1260:G:H5'	2.21	0.41
1:w:1341:U:O2'	20:R:55:ASN:CG	2.64	0.41
1:w:1422:G:C4	1:w:1423:G:C8	3.08	0.41
1:w:1457:A:C2	1:w:2703:C:C4	3.09	0.41
1:w:1501:C:O5'	1:w:1501:C:H6	2.04	0.41
1:w:1565:C:C2	1:w:1567:A:N7	2.89	0.41
1:w:1647:G:H4'	1:w:1648:C:C5'	2.51	0.41
1:w:1667:G:OP1	11:I:6:THR:HA	2.21	0.41
1:w:1670:C:OP2	1:w:1671:U:H5	2.04	0.41
1:w:1735:U:H3'	1:w:1741:C:OP2	2.21	0.41
1:w:1814:G:N7	1:w:1815:A:H2'	2.33	0.41
1:w:1890:A:O4'	1:w:2086:U:H4'	2.21	0.41
1:w:1923:U:O2'	32:z:12:G:O2'	2.39	0.41
1:w:2356:C:H2'	1:w:2357:U:C6	2.56	0.41
1:w:2427:C:H4'	1:w:2429:G:H5'	2.03	0.41
1:w:2527:C:H2'	1:w:2528:U:O4'	2.21	0.41
1:w:2528:U:H2'	1:w:2530:A:O5'	2.21	0.41
1:w:2661:G:H2'	1:w:2662:A:C8	2.57	0.41
1:w:2712:U:H1'	1:w:2712(B):A:C4	2.55	0.41
1:w:2743:C:H2'	1:w:2744:G:H5"	2.03	0.41
1:w:2756:U:C3'	30:b:19:ARG:HG3	2.50	0.41
1:w:2827:C:N3	1:w:2828:C:C5	2.89	0.41
1:w:2856:C:H6	1:w:2856:C:O5'	2.03	0.41
3:A:53:ARG:CG	33:2:54:U:O2'	2.57	0.41
5:C:105:THR:O	5:C:196:VAL:HG22	2.21	0.41
5:C:173:VAL:CA	5:C:183:LEU:HD11	2.51	0.41
5:C:176:ILE:CG2	5:C:181:LEU:HD23	2.51	0.41
6:D:165:LEU:HD12	6:D:170:THR:HB	2.03	0.41
7:E:5:LEU:CD1	7:E:9:ARG:HD3	2.39	0.41
7:E:151:ALA:O	7:E:152:LEU:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:127:GLU:H	8:F:128:PRO:HA	1.85	0.41
10:H:62:ARG:CZ	10:H:63:PRO:HD2	2.50	0.41
12:J:137:LYS:CB	12:J:138:LEU:HD12	2.49	0.41
13:K:53:ALA:O	13:K:57:HIS:HB2	2.21	0.41
14:L:7:GLY:O	14:L:8:ARG:HB2	2.20	0.41
17:O:21:ALA:O	17:O:22:LYS:C	2.63	0.41
19:Q:29:LEU:HD11	19:Q:67:ASP:N	2.36	0.41
19:Q:40:ASN:O	19:Q:41:LYS:CB	2.67	0.41
22:T:31:ARG:HG3	22:T:32:HIS:CE1	2.56	0.41
23:U:54:GLY:O	23:U:55:ARG:C	2.64	0.41
29:a:53:PRO:HG2	29:a:54:GLU:N	2.36	0.41
30:b:11:CYS:SG	30:b:27:CYS:SG	3.18	0.41
31:y:178:C:H2'	31:y:179:A:C5'	2.50	0.41
31:y:201:C:N4	31:y:209:U:C4'	2.84	0.41
31:y:343:U:HO2'	31:y:344:A:H8	1.68	0.41
31:y:396:G:C2	31:y:398:C:C5	3.09	0.41
31:y:404:U:O2	31:y:497:U:H5	2.03	0.41
31:y:476:G:C2	31:y:477:G:N7	2.89	0.41
31:y:578:C:HO2'	31:y:579:G:H5'	1.83	0.41
31:y:900:A:C8	31:y:900:A:OP2	2.74	0.41
31:y:970:C:O5'	31:y:970:C:H6	2.03	0.41
31:y:1131:G:C5	31:y:1132:C:C5	3.09	0.41
31:y:1190:G:H8	31:y:1190:G:OP2	2.03	0.41
31:y:1238:A:N7	31:y:1301:U:C2	2.89	0.41
31:y:1323:G:C2'	31:y:1324:A:O4'	2.68	0.41
31:y:1374:A:OP1	40:h:28:ASN:OD1	2.39	0.41
31:y:1423:G:C2	31:y:1424:C:H1'	2.56	0.41
31:y:1424:C:O2	31:y:1424:C:H2'	2.20	0.41
31:y:1507:A:H2'	31:y:1508:G:O4'	2.22	0.41
31:y:1513:A:N6	31:y:1514:C:N4	2.69	0.41
32:z:49:G:O6	32:z:66:C:N4	2.54	0.41
32:z:57:A:O2'	32:z:58:A:C5'	2.69	0.41
33:2:11:C:C4	33:2:12:U:C5	3.08	0.41
35:c:124:SER:HB2	35:c:125:PRO:CD	2.45	0.41
36:d:113:ALA:O	36:d:114:PRO:C	2.63	0.41
37:e:89:THR:HA	37:e:93:PHE:CB	2.43	0.41
37:e:121:VAL:HG13	37:e:136:PRO:HB2	2.03	0.41
39:g:24:GLU:C	39:g:26:ILE:N	2.79	0.41
39:g:42:GLU:C	39:g:44:GLY:N	2.75	0.41
40:h:123:GLU:O	40:h:126:ASP:HB2	2.21	0.41
42:j:8:GLY:O	42:j:14:VAL:HA	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:q:9:PHE:O	49:q:10:GLY:C	2.63	0.41
50:r:42:TYR:CD1	50:r:42:TYR:N	2.88	0.41
50:r:87:LYS:HE2	50:r:91:ARG:CG	2.51	0.41
52:t:44:MET:O	52:t:62:ILE:HD13	2.21	0.41
1:w:125:G:C8	28:Z:13:ALA:HB1	2.56	0.40
1:w:149:A:H2'	1:w:150:C:C4'	2.51	0.40
1:w:380:U:O2	1:w:394:A:H2	2.03	0.40
1:w:560:C:H2'	1:w:561:G:O4'	2.20	0.40
1:w:570:G:C2	1:w:2498:C:H4'	2.56	0.40
1:w:617:G:C5	1:w:618(A):G:C8	3.09	0.40
1:w:789:A:C2	28:Z:3:ARG:NH1	2.83	0.40
1:w:813:U:H5'	1:w:1226:A:H4'	2.02	0.40
1:w:838:C:O5'	1:w:838:C:C6	2.73	0.40
1:w:906:G:C3'	1:w:907:U:H5"	2.49	0.40
1:w:919:G:C4	1:w:920:G:C8	3.09	0.40
1:w:951:C:O2'	1:w:952:G:H5'	2.20	0.40
1:w:1065:U:O5'	1:w:1065:U:H6	2.03	0.40
1:w:1162:G:H21	18:P:91:TYR:HD1	1.69	0.40
1:w:1612:C:N3	1:w:1620:G:C2	2.89	0.40
1:w:1677:A:H2'	1:w:1678:G:C8	2.56	0.40
1:w:1679:U:C4	1:w:1680:U:C4	3.09	0.40
1:w:1712:C:H3'	1:w:1716:U:H6	1.85	0.40
1:w:1717:G:H2'	1:w:1718:G:C1'	2.51	0.40
1:w:1838:C:OP1	1:w:1899:G:O6	2.39	0.40
1:w:2074:U:H2'	1:w:2075:U:C5	2.56	0.40
1:w:2082:A:C5	1:w:2083:G:C5	3.10	0.40
1:w:2139:C:O5'	1:w:2139:C:H6	2.04	0.40
1:w:2349:G:P	29:a:42:ARG:HH21	2.45	0.40
1:w:2455:G:O2'	1:w:2456:C:H5'	2.21	0.40
1:w:2486:G:C6	1:w:2487:G:C8	3.09	0.40
1:w:2522:U:O2'	1:w:2647:U:OP2	2.31	0.40
1:w:2630:G:H1'	1:w:2894:G:C4	2.56	0.40
1:w:2658:C:H2'	1:w:2659:G:C4'	2.52	0.40
1:w:2679:A:C2	1:w:2680:C:N3	2.89	0.40
1:w:2711:A:C3'	1:w:2712:U:C5'	2.99	0.40
1:w:2722:G:O3'	14:L:4:LEU:HB2	2.20	0.40
1:w:2747:G:H21	1:w:2757:A:H62	1.70	0.40
1:w:2761:G:N3	1:w:2762:G:H1'	2.36	0.40
1:w:2785:C:C5'	1:w:2785:C:C6	3.02	0.40
1:w:2842:G:N1	1:w:2876:G:C6	2.89	0.40
1:w:2849:U:C5	1:w:2867:G:N3	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:198:GLU:HA	3:A:201:LYS:HB3	2.03	0.40
4:B:134:ARG:HD2	4:B:134:ARG:HA	1.93	0.40
4:B:244:ARG:HA	4:B:245:PRO:HA	1.89	0.40
4:B:270:ILE:HD12	4:B:270:ILE:C	2.46	0.40
5:C:27:LEU:HG	5:C:28:ALA:H	1.83	0.40
5:C:34:VAL:HG13	5:C:67:PHE:HE1	1.81	0.40
6:D:88:LYS:O	6:D:89:PRO:C	2.65	0.40
6:D:92:TYR:CD1	6:D:92:TYR:N	2.89	0.40
6:D:130:LYS:HD3	6:D:131:THR:N	2.35	0.40
6:D:149:VAL:O	6:D:150:LEU:HD13	2.20	0.40
6:D:196:VAL:HG22	6:D:197:PHE:CD1	2.55	0.40
7:E:125:PHE:HB2	7:E:166:ASP:OD1	2.16	0.40
9:G:124:GLY:HA2	9:G:144:VAL:O	2.21	0.40
10:H:57:LEU:C	10:H:59:GLY:N	2.77	0.40
11:I:10:VAL:CG1	11:I:17:ARG:C	2.94	0.40
11:I:43:VAL:HG12	11:I:44:LYS:N	2.36	0.40
11:I:47:ILE:HG22	11:I:49:ARG:HG2	2.04	0.40
11:I:88:ASN:HB2	11:I:94:ARG:HB2	2.03	0.40
13:K:33:GLY:N	13:K:132:VAL:HG11	2.37	0.40
13:K:72:LYS:HA	13:K:73:PRO:HD3	1.98	0.40
14:L:21:TYR:O	14:L:24:GLN:HB2	2.21	0.40
16:N:44:ASP:OD2	16:N:85:LYS:HD2	2.22	0.40
16:N:107:ASP:HB2	31:y:1431:C:OP1	2.21	0.40
22:T:9:TYR:HD2	22:T:9:TYR:HA	1.77	0.40
22:T:58:VAL:HG12	22:T:59:LEU:N	2.36	0.40
22:T:125:LEU:HD12	22:T:125:LEU:HA	1.84	0.40
25:W:50:ILE:O	25:W:51:ARG:HB2	2.20	0.40
26:X:8:LEU:HD11	26:X:31:LEU:HA	2.03	0.40
28:Z:22:MET:O	28:Z:22:MET:HG2	2.22	0.40
29:a:7:HIS:CD2	29:a:9:GLY:H	2.40	0.40
31:y:61:G:C2	31:y:62:U:C2	3.09	0.40
31:y:108:G:C6	53:u:15:ARG:HD2	2.56	0.40
31:y:116:A:C6	31:y:117:G:N3	2.89	0.40
31:y:135:C:C3'	31:y:136:C:C5'	2.99	0.40
31:y:161:A:C6	31:y:162:A:N1	2.89	0.40
31:y:167:G:O5'	31:y:167:G:C8	2.68	0.40
31:y:234:C:O4'	50:r:64:PRO:CG	2.66	0.40
31:y:329:A:C4	31:y:332:G:C5	3.09	0.40
31:y:329:A:H2'	31:y:329:A:OP2	2.21	0.40
31:y:403:C:N4	31:y:547:A:C5'	2.84	0.40
31:y:545:C:H5"	37:e:72:GLU:OE2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:y:605:U:H2'	31:y:606:G:O4'	2.21	0.40
31:y:633:G:C6	31:y:634:C:C4	3.09	0.40
31:y:811:C:C2'	31:y:812:C:C5'	2.95	0.40
31:y:1059:C:O2'	43:k:53:PRO:CG	2.62	0.40
31:y:1244:C:N4	31:y:1245:A:N6	2.68	0.40
31:y:1291:G:C8	31:y:1291:G:C3'	3.03	0.40
31:y:1486:G:C2	31:y:1487:G:N3	2.89	0.40
31:y:1509:C:C5	31:y:1510:U:C5	3.09	0.40
35:c:97:TRP:CZ2	35:c:173:ALA:N	2.89	0.40
36:d:102:ASN:HD22	36:d:102:ASN:HA	1.66	0.40
40:h:133:GLY:C	40:h:137:LYS:CD	2.94	0.40
41:i:82:HIS:O	41:i:138:TRP:O	2.39	0.40
42:j:17:VAL:CG1	42:j:19:LEU:HG	2.50	0.40
44:l:122:LYS:O	44:l:126:ARG:HG3	2.21	0.40
45:m:98:HIS:HB3	45:m:99:ILE:H	1.59	0.40
46:n:11:ARG:HB2	46:n:11:ARG:CZ	2.51	0.40
47:o:11:LYS:HB3	47:o:11:LYS:HE3	1.90	0.40
49:q:23:ASP:O	49:q:24:ALA:C	2.64	0.40
50:r:86:GLU:HA	50:r:89:LEU:CD1	2.35	0.40
51:s:47:THR:C	51:s:49:LYS:H	2.30	0.40
1:w:210:C:O4'	1:w:1366:A:H2	2.04	0.40
1:w:247:G:H1'	1:w:386:G:O6	2.21	0.40
1:w:457:A:N6	1:w:470:A:H2'	2.35	0.40
1:w:501:A:OP1	1:w:501:A:H8	2.03	0.40
1:w:502:A:H8	1:w:502:A:O5'	2.05	0.40
1:w:850:C:C5'	26:X:18:ASP:HA	2.51	0.40
1:w:857:C:H5"	23:U:44:ARG:HH22	1.83	0.40
1:w:862:G:H2'	1:w:863:A:H5'	2.03	0.40
1:w:922:U:C4	1:w:923:C:C4	3.09	0.40
1:w:954:G:OP1	13:K:17:LEU:CG	2.64	0.40
1:w:1174:A:O2'	1:w:1175:U:C6	2.71	0.40
1:w:1409:C:H2'	1:w:1410:G:C8	2.56	0.40
1:w:1815:A:H8	1:w:1815:A:H5'	1.85	0.40
1:w:1863:G:C6	1:w:1880:C:C4	3.09	0.40
1:w:1882:C:H6	1:w:1882:C:O5'	2.04	0.40
1:w:2001:A:H2'	1:w:2002:G:O4'	2.22	0.40
1:w:2075:U:C4	1:w:2238:G:C5	3.09	0.40
1:w:2131:G:OP1	1:w:2133:G:H4'	2.21	0.40
1:w:2414:G:N1	1:w:2415:G:C5	2.89	0.40
1:w:2426:A:O2'	1:w:2427:C:OP1	2.34	0.40
1:w:2558:C:C2	1:w:2559:C:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2689:U:H5”	1:w:2690:C:O4’	2.20	0.40
1:w:2696:U:O2’	1:w:2697:G:H5’	2.21	0.40
1:w:2725:A:O2’	1:w:2726:U:C6	2.74	0.40
1:w:2794:C:H2’	1:w:2794:C:O2	2.21	0.40
2:x:54:G:C2’	2:x:55:U:H5’	2.51	0.40
4:B:2:ALA:HA	4:B:200:ASP:HB2	2.02	0.40
5:C:61:ARG:HG3	5:C:62:PRO:CD	2.52	0.40
5:C:151:TYR:HB2	5:C:154:LYS:CB	2.52	0.40
6:D:35:GLN:HE21	6:D:39:ARG:HH22	1.69	0.40
6:D:129:GLY:HA2	6:D:161:ALA:CB	2.51	0.40
7:E:95:ARG:HH11	7:E:95:ARG:N	2.19	0.40
8:F:11:VAL:N	8:F:12:PRO:HD3	2.36	0.40
9:G:88:ILE:CG2	9:G:89:TYR:H	2.21	0.40
9:G:114:LEU:C	9:G:114:LEU:CD1	2.95	0.40
12:J:21:ARG:HB3	12:J:22:GLY:H	1.52	0.40
12:J:45:LEU:O	12:J:46:LYS:C	2.64	0.40
13:K:119:ARG:O	13:K:122:GLY:N	2.54	0.40
18:P:36:PRO:HD2	18:P:60:GLU:OE1	2.21	0.40
23:U:72:ARG:O	23:U:73:GLY:C	2.64	0.40
31:y:7:G:C2’	31:y:8:A:OP1	2.70	0.40
31:y:56:U:H3’	31:y:56:U:C6	2.57	0.40
31:y:110:C:C6	31:y:110:C:C4’	3.04	0.40
31:y:123:C:C6	31:y:123:C:O5’	2.73	0.40
31:y:255:G:C5	31:y:256:U:C4	3.08	0.40
31:y:451:A:C2	31:y:481:G:N7	2.90	0.40
31:y:529:G:H2’	31:y:530:G:C5’	2.45	0.40
31:y:579:G:C5	31:y:580:U:O4	2.74	0.40
31:y:590:C:N3	31:y:650:G:C6	2.88	0.40
31:y:637:G:C2	31:y:638:G:C4	3.09	0.40
31:y:855:G:C6	31:y:856:C:C4	3.09	0.40
31:y:928:G:C5	31:y:929:G:N7	2.89	0.40
31:y:102(C):C:O2’	31:y:1029:G:H5’	2.21	0.40
31:y:1176:A:N7	31:y:1177:G:C5	2.90	0.40
31:y:1202:G:C2’	31:y:1203:C:O5’	2.69	0.40
31:y:1466:C:C2’	31:y:1467:G:C5’	2.97	0.40
31:y:1513:A:C2	31:y:1514:C:C4	3.09	0.40
32:z:51:C:H2’	32:z:52:G:H8	1.86	0.40
32:z:65:C:H6	32:z:65:C:C5’	2.34	0.40
34:3:4:G:H2’	34:3:5:A:H8	1.84	0.40
35:c:90:MET:HA	35:c:91:PRO:HD2	1.85	0.40
36:d:28:GLN:NE2	36:d:32:LEU:HB2	2.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:d:152:ILE:O	36:d:152:ILE:HG22	2.20	0.40
36:d:179:ARG:HG2	36:d:206:GLU:C	2.46	0.40
40:h:4:ARG:HD2	40:h:4:ARG:C	2.46	0.40
41:i:103:VAL:HG12	41:i:104:ARG:HH21	1.85	0.40
41:i:109:ILE:HG22	41:i:121:ASP:CB	2.51	0.40
41:i:114:THR:HG22	41:i:130:GLY:HA2	2.02	0.40
42:j:28:VAL:O	42:j:29:ASN:HB3	2.21	0.40
42:j:119:ALA:C	42:j:121:ARG:H	2.28	0.40
44:l:59:TYR:O	44:l:62:GLN:HB3	2.21	0.40
48:p:31:LEU:O	48:p:33:THR:N	2.53	0.40
53:u:9:ASN:O	53:u:10:LEU:CB	2.66	0.40
1:w:52:A:C6	1:w:118:A:C2	3.10	0.40
1:w:188:G:OP1	24:V:18:ILE:HD13	2.21	0.40
1:w:387:U:H1'	1:w:388:G:N7	2.37	0.40
1:w:449:A:C2'	17:O:3:ARG:HH21	2.34	0.40
1:w:592:G:H2'	1:w:592:G:N3	2.36	0.40
1:w:957:A:H5'	13:K:76:LYS:HA	2.03	0.40
1:w:1150:C:C4	1:w:1151:G:N7	2.90	0.40
1:w:1223:G:C5	1:w:1225:G:OP1	2.74	0.40
1:w:1248:G:C6	17:O:3:ARG:HG2	2.56	0.40
1:w:1262:A:C2'	1:w:1263:U:H5'	2.50	0.40
1:w:1303:G:OP1	1:w:1304:C:P	2.79	0.40
1:w:1458:C:H1'	1:w:1459:G:C2	2.55	0.40
1:w:1478:G:C2	1:w:1479:G:C5	3.10	0.40
1:w:1566:A:O2'	1:w:1567:A:P	2.79	0.40
1:w:1604:C:C2'	1:w:1605:C:H5'	2.51	0.40
1:w:1728:G:OP2	1:w:1729:A:H5"	2.21	0.40
1:w:1813:G:N7	1:w:1814:G:C6	2.89	0.40
1:w:1927:A:H8	1:w:1927:A:O5'	2.04	0.40
1:w:1962:C:O2'	1:w:1964:G:OP2	2.37	0.40
1:w:2100:G:N3	1:w:2101:G:C8	2.90	0.40
1:w:2115:G:H8	1:w:2115:G:O5'	2.04	0.40
1:w:2283:C:H2'	1:w:2284:C:H6	1.85	0.40
1:w:2312:U:O5'	1:w:2312:U:H6	2.04	0.40
1:w:2359:C:H5'	29:a:51:ALA:CB	2.51	0.40
1:w:2395:C:O2'	24:V:33:LYS:HB2	2.21	0.40
1:w:2466:C:H5"	30:b:5:ALA:HB3	2.04	0.40
1:w:2523:G:H2'	1:w:2524:G:C8	2.56	0.40
1:w:2524:G:N1	1:w:2540:C:C4	2.89	0.40
1:w:2685:G:N2	1:w:2725:A:C5	2.90	0.40
1:w:2818:G:C4'	1:w:2837:G:C4'	2.91	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2886:G:O5'	1:w:2886:G:C8	2.70	0.40
2:x:73:A:H2'	2:x:74:U:O5'	2.20	0.40
2:x:93:C:H2'	2:x:94:C:C6	2.56	0.40
2:x:105:G:H2'	2:x:106:G:H8	1.83	0.40
4:B:164:GLN:NE2	4:B:165:ILE:C	2.80	0.40
5:C:5:LEU:N	5:C:5:LEU:CD1	2.83	0.40
8:F:60:ARG:HD3	8:F:60:ARG:HA	1.95	0.40
8:F:135:GLY:N	8:F:138:LYS:HZ2	2.20	0.40
9:G:24:GLY:N	9:G:27:ARG:CZ	2.84	0.40
9:G:62:LYS:HD2	9:G:135:GLU:HB3	2.02	0.40
11:I:26:LYS:CB	11:I:30:ALA:HB2	2.49	0.40
12:J:85:LEU:HD22	12:J:86:LYS:N	2.37	0.40
12:J:88:LEU:CD1	12:J:90:ARG:HH21	2.34	0.40
12:J:91:PHE:CD2	12:J:92:GLU:N	2.90	0.40
13:K:106:VAL:CG1	13:K:118:LEU:HD11	2.51	0.40
15:M:17:ARG:CZ	15:M:89:ARG:HD2	2.47	0.40
15:M:38:GLN:HA	15:M:50:SER:CB	2.49	0.40
15:M:38:GLN:HE21	15:M:38:GLN:HB2	1.61	0.40
16:N:97:ALA:HB3	16:N:98:LYS:NZ	2.37	0.40
21:S:84:ARG:C	21:S:84:ARG:HD2	2.46	0.40
23:U:37:LEU:CD1	23:U:38:VAL:HG23	2.50	0.40
23:U:57:PHE:O	23:U:58:THR:C	2.65	0.40
25:W:12:GLU:O	25:W:14:ARG:N	2.54	0.40
25:W:14:ARG:CB	25:W:54:LYS:HE2	2.50	0.40
28:Z:5:TRP:CE3	28:Z:5:TRP:HA	2.57	0.40
31:y:116:A:C6	31:y:117:G:C4	3.09	0.40
31:y:363:A:C2	45:m:31:PHE:CE2	3.10	0.40
31:y:363:A:H8	31:y:363:A:O5'	2.04	0.40
31:y:509:A:C2	31:y:510:A:C4	3.09	0.40
31:y:524:G:OP2	31:y:524:G:H3'	2.21	0.40
31:y:545:C:C2	31:y:546:G:C8	3.09	0.40
31:y:610:G:N3	31:y:610:G:H2'	2.36	0.40
31:y:786:G:N1	31:y:787:A:C5	2.90	0.40
31:y:1090:U:C2'	31:y:1091:U:O5'	2.69	0.40
31:y:1186:G:H21	47:o:61:TRP:CA	2.34	0.40
31:y:1253:G:C2	31:y:1254:C:O2	2.74	0.40
31:y:1281:U:H3'	31:y:1282:C:C5'	2.51	0.40
31:y:1312:G:C4	31:y:1313:U:C6	3.09	0.40
31:y:1316:G:C8	31:y:1318:A:OP2	2.74	0.40
31:y:1425:U:O5'	31:y:1425:U:C6	2.72	0.40
31:y:1469:G:H2'	31:y:1470:G:H8	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:2:3:G:H2'	33:2:4:G:H5'	2.04	0.40
36:d:22:TRP:CZ3	36:d:32:LEU:HD11	2.57	0.40
36:d:152:ILE:HG21	36:d:199:LYS:HE2	2.03	0.40
38:f:79:GLU:H	41:i:104:ARG:CD	2.35	0.40
38:f:83:GLU:HA	38:f:88:LYS:HG2	2.03	0.40
38:f:135:THR:O	38:f:139:LEU:HG	2.21	0.40
41:i:21:LYS:HD2	41:i:24:THR:HA	2.03	0.40
41:i:118:VAL:CG1	41:i:119:LEU:N	2.84	0.40
43:k:24:VAL:O	43:k:28:ARG:CB	2.70	0.40
43:k:25:GLU:C	43:k:27:ALA:H	2.29	0.40
43:k:40:LEU:HD23	43:k:70:ARG:HD3	2.03	0.40
44:l:91:ARG:C	44:l:93:GLN:N	2.79	0.40
46:n:15:VAL:O	46:n:19:LEU:HD23	2.21	0.40
1:w:39:C:H2'	1:w:40:C:O4'	2.21	0.40
1:w:221:A:N3	1:w:233:A:H1'	2.36	0.40
1:w:222:A:C5'	1:w:421:U:OP1	2.70	0.40
1:w:241:A:C8	1:w:243:U:C2	3.10	0.40
1:w:354:G:C3'	1:w:355:G:H5"	2.49	0.40
1:w:534:U:O2	17:O:49:HIS:CD2	2.74	0.40
1:w:617:G:N3	1:w:618(A):G:H1'	2.37	0.40
1:w:752:A:H2	1:w:2609:U:O2	2.04	0.40
1:w:815:C:C2	1:w:816:C:C5	3.09	0.40
1:w:830:G:O4'	1:w:2448:A:C2	2.74	0.40
1:w:842:G:N1	1:w:843:G:C5	2.90	0.40
1:w:1025:G:C4	1:w:1135:C:O4'	2.74	0.40
1:w:1025:G:H1'	1:w:1135:C:O5'	2.22	0.40
1:w:1248:G:C6	17:O:3:ARG:CG	3.04	0.40
1:w:1509:A:OP1	1:w:1510:A:C4	2.74	0.40
1:w:1676:A:HO2'	5:C:128:SER:HG	1.59	0.40
1:w:1694:C:O4'	1:w:1695:G:C2	2.75	0.40
1:w:1791:A:OP1	4:B:217:ARG:NH2	2.54	0.40
1:w:1848:A:C2	1:w:1849:G:H1'	2.55	0.40
1:w:2059:A:OP1	1:w:2059:A:H4'	2.20	0.40
1:w:2079:U:O3'	24:V:37:ILE:HG13	2.22	0.40
1:w:2198:A:C2	1:w:2225:A:N6	2.82	0.40
1:w:2333:A:O2'	15:M:8:GLU:CD	2.65	0.40
1:w:2407:G:O5'	1:w:2407:G:C8	2.74	0.40
1:w:2451:A:H2'	1:w:2452:C:H5'	2.02	0.40
1:w:2488:A:H2'	1:w:2489:G:C8	2.56	0.40
1:w:2580:U:C4	1:w:2581:G:C5	3.10	0.40
1:w:2732:G:C8	1:w:2732:G:OP2	2.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:w:2785:C:C6	1:w:2785:C:C4'	3.04	0.40
1:w:2795:G:C2	1:w:2802:G:C6	3.09	0.40
1:w:2810:A:O3'	5:C:61:ARG:HG2	2.22	0.40
3:A:8:TYR:N	3:A:8:TYR:CD1	2.89	0.40
5:C:38:THR:C	5:C:40:GLU:H	2.29	0.40
5:C:176:ILE:HD13	5:C:182:LEU:CA	2.50	0.40
6:D:148:SER:HB3	6:D:184:THR:HG22	2.03	0.40
6:D:150:LEU:C	6:D:187:LEU:HD23	2.46	0.40
10:H:127:LYS:HA	10:H:130:LEU:HD11	2.03	0.40
12:J:102:ARG:HD2	12:J:102:ARG:C	2.47	0.40
13:K:71:ASP:N	13:K:94:VAL:O	2.55	0.40
17:O:35:ALA:O	17:O:36:ARG:C	2.64	0.40
22:T:17:ALA:HA	22:T:20:ARG:HG2	2.04	0.40
25:W:55:ARG:HB2	25:W:56:GLN:OE1	2.21	0.40
31:y:20:U:C4	31:y:21:G:C4	3.09	0.40
31:y:159:G:C4	31:y:161:A:OP2	2.74	0.40
31:y:169:C:H2'	31:y:170:U:H5'	2.03	0.40
31:y:408:A:H2'	31:y:409:G:H5'	2.00	0.40
31:y:497:U:H2'	31:y:498:A:C5'	2.37	0.40
31:y:520:A:C6	31:y:521:G:H1'	2.56	0.40
31:y:523:A:N7	31:y:527:7MG:N1	2.70	0.40
31:y:652:U:C5	31:y:752:G:C2	3.10	0.40
31:y:715:A:O4'	31:y:777:A:C6	2.75	0.40
31:y:741:G:N3	31:y:741:G:H2'	2.37	0.40
31:y:1088:G:N2	31:y:1098:C:O2	2.54	0.40
31:y:1118:C:H1'	31:y:1179:A:C5	2.56	0.40
31:y:1163:C:O2	31:y:1164:G:C8	2.75	0.40
31:y:1185:G:H8	31:y:1185:G:O5'	2.03	0.40
31:y:1211:U:O3'	31:y:1212:U:H4'	2.22	0.40
31:y:1223:C:H5"	31:y:1225:A:C8	2.54	0.40
31:y:1224:G:C2	31:y:1322:C:O4'	2.74	0.40
31:y:1248:A:O2'	31:y:1249:C:C5'	2.67	0.40
31:y:1477:C:H2'	31:y:1478:C:H6	1.86	0.40
32:z:55:U:C5	32:z:57:A:OP2	2.75	0.40
33:2:71:G:C6	33:2:72:C:C4	3.09	0.40
35:c:16:HIS:HB2	35:c:204:ASN:OD1	2.21	0.40
35:c:145:LEU:C	35:c:147:LYS:N	2.79	0.40
36:d:33:LEU:CD1	36:d:37:GLN:OE1	2.69	0.40
37:e:200:GLU:CG	37:e:201:GLN:H	2.34	0.40
38:f:69:VAL:HG12	38:f:139:LEU:HB3	2.02	0.40
40:h:21:VAL:O	40:h:25:ALA:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:i:39:LEU:CD1	41:i:45:ILE:CB	2.99	0.40
41:i:104:ARG:O	41:i:105:ARG:HB2	2.20	0.40
44:l:29:ILE:HA	44:l:44:SER:HB3	2.04	0.40
45:m:103:VAL:O	45:m:104:TYR:O	2.40	0.40
46:n:49:THR:O	46:n:53:VAL:HG23	2.21	0.40
46:n:74:VAL:HG12	46:n:75:ALA:N	2.36	0.40
48:p:35:ARG:NH1	48:p:59:MET:SD	2.94	0.40
49:q:4:ILE:HD11	49:q:59:TRP:CD1	2.57	0.40
50:r:100:LYS:HD2	50:r:101:ARG:HG3	2.03	0.40
53:u:80:ARG:HD3	53:u:84:LEU:HD12	2.03	0.40
1:w:216:A:H2'	1:w:217:G:O4'	2.22	0.40
1:w:222:A:OP1	1:w:271(B):C:C4	2.74	0.40
1:w:439:G:H2'	1:w:440:G:C8	2.56	0.40
1:w:439:G:C2	1:w:440:G:C5	3.09	0.40
1:w:464:U:O4	1:w:465:G:O6	2.40	0.40
1:w:607:U:C5	1:w:620:G:N2	2.89	0.40
1:w:823:G:N2	1:w:2358:G:C1'	2.85	0.40
1:w:834:C:H1'	1:w:2358:G:N2	2.36	0.40
1:w:969:U:H2'	1:w:970:C:H6	1.77	0.40
1:w:1133:U:O2	1:w:1137:G:H4'	2.22	0.40
1:w:1141:U:H1'	1:w:1142(B):A:C8	2.57	0.40
1:w:1151:G:N3	1:w:1151:G:H2'	2.35	0.40
1:w:1497:U:C4	1:w:1577:C:O3'	2.75	0.40
1:w:1530:G:H3'	1:w:1531:C:C6	2.56	0.40
1:w:1801:G:C5'	1:w:1815:A:H61	2.34	0.40
1:w:1807:G:H2'	1:w:1809:A:OP2	2.21	0.40
1:w:2006:C:C5'	1:w:2048:G:H5"	2.46	0.40
1:w:2018:G:C2'	1:w:2019:A:O4'	2.66	0.40
1:w:2054:A:OP1	5:C:145:LYS:HE2	2.22	0.40
1:w:2164:C:H2'	1:w:2165:G:H8	1.86	0.40
1:w:2210:G:C6	1:w:2215:G:C2	3.10	0.40
1:w:2525:G:N2	1:w:2539:C:C6	2.90	0.40
1:w:2633:G:O5'	1:w:2633:G:H8	2.05	0.40
2:x:9:G:C2'	2:x:10:C:C5'	2.92	0.40
3:A:18:ASN:HB3	3:A:19:LYS:H	1.74	0.40
4:B:24:ILE:CG2	4:B:25:THR:HG22	2.51	0.40
4:B:92:ILE:HG22	4:B:105:ILE:O	2.22	0.40
4:B:151:LYS:HD2	4:B:151:LYS:HA	1.94	0.40
5:C:52:LEU:HB3	5:C:76:ARG:H	1.85	0.40
5:C:55:ASN:ND2	5:C:75:VAL:HG23	2.37	0.40
5:C:189:PRO:HB2	5:C:190:GLY:H	1.63	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:34:GLU:CG	8:F:35:VAL:N	2.81	0.40
8:F:121:ILE:O	8:F:121:ILE:HG23	2.20	0.40
9:G:65:ALA:CB	9:G:133:HIS:HD1	2.35	0.40
14:L:3:HIS:O	14:L:4:LEU:HG	2.22	0.40
15:M:25:ARG:NH2	15:M:89:ARG:NH2	2.55	0.40
16:N:33:LYS:HG3	16:N:42:ILE:O	2.22	0.40
19:Q:57:ASN:HD22	19:Q:61:ASN:HD22	1.69	0.40
21:S:49:VAL:CG1	21:S:50:ARG:H	2.26	0.40
31:y:144:G:C5	31:y:145:G:C8	3.09	0.40
31:y:147:G:H2'	31:y:148:G:O4'	2.22	0.40
31:y:250:A:O2'	31:y:252:U:C5	2.65	0.40
31:y:283:C:O2'	31:y:284:G:H5'	2.22	0.40
31:y:307:C:C6	31:y:308:C:C5	3.09	0.40
31:y:332:G:C2'	31:y:333:G:O4'	2.70	0.40
31:y:339:C:H2'	31:y:340:U:C5	2.56	0.40
31:y:550:G:C6	31:y:551:U:C5	3.09	0.40
31:y:585:G:OP1	50:r:37:LYS:CE	2.68	0.40
31:y:691:G:O6	44:l:52:GLY:CA	2.63	0.40
31:y:786:G:N3	31:y:787:A:C8	2.89	0.40
31:y:855:G:OP2	31:y:871:U:N3	2.34	0.40
31:y:914:A:O2'	31:y:915:A:H5'	2.20	0.40
31:y:1129:C:C4	31:y:1139:G:H2'	2.57	0.40
31:y:1228:C:OP1	46:n:108:ARG:NH2	2.55	0.40
31:y:1314:C:O2'	31:y:1315:U:C5'	2.65	0.40
31:y:1355:G:O2'	31:y:1356:G:H5'	2.21	0.40
31:y:1406:U:O2'	31:y:1407:5MC:OP1	2.35	0.40
31:y:1451:A:H5"	31:y:1452:C:C5	2.55	0.40
31:y:1534:A:H2'	31:y:1535:C:C1'	2.51	0.40
32:z:1:C:O2	32:z:1:C:H2'	2.22	0.40
32:z:27:U:H2'	32:z:28:C:C6	2.56	0.40
35:c:159:PRO:C	35:c:161:ALA:N	2.79	0.40
41:i:38:ILE:HA	41:i:41:ARG:CG	2.52	0.40
41:i:86:ILE:HD13	41:i:135:CYS:HA	2.02	0.40
43:k:58:ASP:HB3	43:k:59:SER:H	1.75	0.40
43:k:93:GLY:O	43:k:94:VAL:HG23	2.21	0.40
44:l:33:THR:OG1	44:l:34:ASP:N	2.54	0.40
47:o:40:CYS:C	47:o:42:ILE:H	2.30	0.40
49:q:74:LEU:HD22	49:q:79:VAL:CB	2.50	0.40
50:r:46:ASP:CG	50:r:51:TYR:HB2	2.47	0.40
50:r:49:GLU:O	50:r:51:TYR:N	2.54	0.40
50:r:90:ILE:HG13	50:r:91:ARG:H	1.82	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:t:50:ALA:HA	52:t:59:PRO:CB	2.48	0.40
53:u:43:LEU:HA	53:u:48:LYS:HB2	2.04	0.40

All (6) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:10:GLU:O	31:y:436:C:OP1[4_555]	1.78	0.42
9:G:89:TYR:O	31:y:357:G:O2'[4_555]	2.00	0.20
9:G:90:GLY:O	31:y:368:U:OP2[4_555]	2.11	0.09
9:G:90:GLY:O	31:y:368:U:OP1[4_555]	2.14	0.06
9:G:91:SER:O	31:y:368:U:OP1[4_555]	2.17	0.03
9:G:91:SER:OG	31:y:368:U:OP1[4_555]	2.19	0.01

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	
3	A	123/229 (54%)	72 (58%)	31 (25%)	20 (16%)	0	2
4	B	270/276 (98%)	134 (50%)	64 (24%)	72 (27%)	0	0
5	C	199/206 (97%)	99 (50%)	47 (24%)	53 (27%)	0	0
6	D	192/205 (94%)	91 (47%)	45 (23%)	56 (29%)	0	0
7	E	178/182 (98%)	97 (54%)	55 (31%)	26 (15%)	0	3
8	F	171/180 (95%)	90 (53%)	40 (23%)	41 (24%)	0	1
9	G	146/148 (99%)	83 (57%)	35 (24%)	28 (19%)	0	2
10	H	136/140 (97%)	62 (46%)	45 (33%)	29 (21%)	0	1
11	I	120/122 (98%)	62 (52%)	24 (20%)	34 (28%)	0	0
12	J	144/150 (96%)	63 (44%)	46 (32%)	35 (24%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
13	K	135/141 (96%)	56 (42%)	41 (30%)	38 (28%)	0	0
14	L	116/118 (98%)	64 (55%)	30 (26%)	22 (19%)	0	2
15	M	104/112 (93%)	58 (56%)	22 (21%)	24 (23%)	0	1
16	N	135/146 (92%)	56 (42%)	40 (30%)	39 (29%)	0	0
17	O	115/118 (98%)	66 (57%)	28 (24%)	21 (18%)	0	2
18	P	99/101 (98%)	39 (39%)	28 (28%)	32 (32%)	0	0
19	Q	107/113 (95%)	64 (60%)	23 (22%)	20 (19%)	0	2
20	R	90/96 (94%)	29 (32%)	36 (40%)	25 (28%)	0	0
21	S	101/110 (92%)	28 (28%)	31 (31%)	42 (42%)	0	0
22	T	183/206 (89%)	115 (63%)	45 (25%)	23 (13%)	0	4
23	U	74/85 (87%)	31 (42%)	21 (28%)	22 (30%)	0	0
24	V	86/98 (88%)	41 (48%)	29 (34%)	16 (19%)	0	2
25	W	60/72 (83%)	33 (55%)	11 (18%)	16 (27%)	0	0
26	X	58/60 (97%)	31 (53%)	20 (34%)	7 (12%)	0	4
27	Y	54/60 (90%)	27 (50%)	16 (30%)	11 (20%)	0	1
28	Z	46/49 (94%)	31 (67%)	10 (22%)	5 (11%)	0	6
29	a	61/65 (94%)	28 (46%)	20 (33%)	13 (21%)	0	1
30	b	33/37 (89%)	16 (48%)	10 (30%)	7 (21%)	0	1
35	c	232/256 (91%)	142 (61%)	59 (25%)	31 (13%)	0	3
36	d	204/239 (85%)	102 (50%)	60 (29%)	42 (21%)	0	1
37	e	206/209 (99%)	120 (58%)	60 (29%)	26 (13%)	0	4
38	f	148/162 (91%)	102 (69%)	32 (22%)	14 (10%)	0	9
39	g	99/101 (98%)	72 (73%)	19 (19%)	8 (8%)	1	11
40	h	153/156 (98%)	96 (63%)	30 (20%)	27 (18%)	0	2
41	i	136/138 (99%)	84 (62%)	33 (24%)	19 (14%)	0	3
42	j	125/128 (98%)	81 (65%)	29 (23%)	15 (12%)	0	4
43	k	96/105 (91%)	55 (57%)	25 (26%)	16 (17%)	0	2
44	l	114/129 (88%)	74 (65%)	28 (25%)	12 (10%)	0	7
45	m	122/132 (92%)	67 (55%)	35 (29%)	20 (16%)	0	2
46	n	123/126 (98%)	70 (57%)	35 (28%)	18 (15%)	0	3
47	o	58/61 (95%)	30 (52%)	16 (28%)	12 (21%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
48	p	86/89 (97%)	51 (59%)	24 (28%)	11 (13%)	0 4
49	q	81/88 (92%)	34 (42%)	25 (31%)	22 (27%)	0 0
50	r	102/105 (97%)	54 (53%)	24 (24%)	24 (24%)	0 1
51	s	79/88 (90%)	45 (57%)	21 (27%)	13 (16%)	0 2
52	t	78/93 (84%)	30 (38%)	26 (33%)	22 (28%)	0 0
53	u	97/106 (92%)	47 (48%)	35 (36%)	15 (16%)	0 2
54	v	22/27 (82%)	8 (36%)	6 (27%)	8 (36%)	0 0
All	All	5697/6163 (92%)	3030 (53%)	1515 (27%)	1152 (20%)	0 1

All (1152) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	A	8	TYR
3	A	16	ASP
3	A	63	VAL
3	A	176	VAL
3	A	179	ALA
3	A	180	SER
3	A	209	PHE
4	B	3	VAL
4	B	6	PHE
4	B	15	PHE
4	B	21	PHE
4	B	36	PRO
4	B	39	LYS
4	B	44	ASN
4	B	59	LYS
4	B	69	ARG
4	B	83	GLU
4	B	91	ARG
4	B	105	ILE
4	B	138	VAL
4	B	149	PRO
4	B	156	ALA
4	B	196	VAL
4	B	206	LEU
4	B	209	ALA
4	B	227	ASN
4	B	228	PRO
4	B	235	GLY

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Mol	Chain	Res	Type
4	B	239	ARG
4	B	259	THR
4	B	262	ARG
4	B	263	ARG
5	C	35	GLN
5	C	51	PHE
5	C	54	GLN
5	C	65	GLY
5	C	67	PHE
5	C	73	GLU
5	C	77	ILE
5	C	82	ARG
5	C	104	VAL
5	C	121	ASN
5	C	122	PHE
5	C	128	SER
5	C	143	ASN
5	C	144	ARG
5	C	149	ARG
5	C	178	GLU
5	C	189	PRO
6	D	17	ALA
6	D	18	ASP
6	D	23	ILE
6	D	38	LYS
6	D	48	THR
6	D	54	TYR
6	D	58	LYS
6	D	59	ILE
6	D	68	ALA
6	D	87	PRO
6	D	120	LEU
6	D	128	ASN
6	D	146	SER
6	D	172	ALA
6	D	176	LEU
6	D	196	VAL
7	E	13	GLU
7	E	26	GLN
7	E	29	TRP
7	E	78	SER
7	E	79	ASN

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Mol	Chain	Res	Type
7	E	82	LEU
7	E	84	LYS
7	E	87	PRO
7	E	88	ILE
7	E	95	ARG
7	E	163	ALA
7	E	181	ARG
8	F	10	PRO
8	F	40	GLU
8	F	52	VAL
8	F	55	PRO
8	F	58	GLU
8	F	71	LEU
8	F	99	VAL
8	F	101	ARG
8	F	109	PHE
8	F	157	TYR
8	F	173	PRO
8	F	178	ALA
9	G	8	PRO
9	G	26	ALA
9	G	29	TYR
9	G	38	LEU
9	G	82	ARG
9	G	94	ALA
9	G	122	GLU
9	G	125	GLU
9	G	132	PRO
9	G	138	ILE
10	H	26	THR
10	H	67	PRO
10	H	102	PRO
10	H	108	ILE
10	H	110	LEU
10	H	146	TYR
10	H	147	ALA
10	H	153	HIS
11	I	5	GLN
11	I	51	ALA
11	I	52	VAL
11	I	54	GLU
11	I	60	ALA

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Mol	Chain	Res	Type
11	I	63	VAL
11	I	75	SER
11	I	85	VAL
11	I	90	GLN
11	I	91	LEU
11	I	115	VAL
12	J	12	ALA
12	J	17	LYS
12	J	33	ARG
12	J	35	HIS
12	J	45	LEU
12	J	52	GLU
12	J	71	VAL
12	J	90	ARG
12	J	106	LEU
12	J	119	GLU
12	J	124	LYS
12	J	148	LEU
13	K	3	MET
13	K	4	PRO
13	K	21	THR
13	K	25	ASP
13	K	27	VAL
13	K	31	ASP
13	K	38	GLU
13	K	68	ILE
13	K	73	PRO
13	K	79	LEU
13	K	80	GLU
13	K	81	VAL
13	K	83	MET
13	K	85	LYS
13	K	108	GLY
13	K	120	ILE
13	K	127	ILE
13	K	133	ARG
14	L	2	ARG
14	L	5	LYS
14	L	12	ARG
14	L	37	THR
14	L	45	ARG
14	L	60	LEU

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Mol	Chain	Res	Type
14	L	62	ALA
14	L	95	THR
14	L	102	GLU
14	L	104	ARG
14	L	117	VAL
15	M	8	GLU
15	M	9	ARG
15	M	10	ARG
15	M	12	PHE
15	M	32	LEU
15	M	35	ILE
16	N	12	SER
16	N	18	ASP
16	N	28	VAL
16	N	30	VAL
16	N	33	LYS
16	N	42	ILE
16	N	45	PHE
16	N	74	ARG
16	N	83	ILE
16	N	96	ARG
16	N	101	PHE
16	N	107	ASP
16	N	135	VAL
17	O	6	THR
17	O	22	LYS
17	O	25	TRP
17	O	76	TYR
17	O	90	VAL
17	O	92	ARG
17	O	104	GLN
17	O	105	VAL
18	P	15	GLU
18	P	22	VAL
18	P	26	ASP
18	P	27	ALA
18	P	29	PRO
18	P	31	ALA
18	P	44	LYS
18	P	50	PRO
18	P	51	VAL
18	P	53	GLU

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Mol	Chain	Res	Type
18	P	68	LYS
18	P	72	VAL
18	P	78	LYS
19	Q	40	ASN
19	Q	67	ASP
19	Q	80	PRO
19	Q	89	ALA
19	Q	90	ARG
19	Q	96	ILE
20	R	6	ASP
20	R	11	PRO
20	R	22	ALA
20	R	30	VAL
20	R	32	PRO
20	R	48	LYS
20	R	49	VAL
20	R	60	ARG
20	R	80	ILE
20	R	81	VAL
20	R	83	VAL
20	R	89	ILE
21	S	7	VAL
21	S	16	ALA
21	S	20	TYR
21	S	21	LYS
21	S	31	LEU
21	S	39	VAL
21	S	46	LYS
21	S	54	LYS
21	S	57	GLN
21	S	61	ILE
21	S	77	PRO
21	S	96	ILE
21	S	100	ALA
22	T	41	LEU
22	T	52	SER
22	T	66	SER
22	T	95	PRO
22	T	146	ILE
23	U	14	ARG
23	U	17	GLN
23	U	18	ALA

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Mol	Chain	Res	Type
23	U	45	PHE
23	U	84	LEU
24	V	11	ARG
24	V	21	ARG
24	V	51	VAL
24	V	52	ARG
24	V	80	LEU
24	V	86	SER
25	W	9	GLN
25	W	13	ALA
25	W	32	LEU
25	W	38	GLN
25	W	39	ALA
25	W	46	GLN
25	W	54	LYS
26	X	8	LEU
26	X	12	PRO
26	X	32	GLN
27	Y	29	ILE
27	Y	34	PRO
27	Y	37	LYS
27	Y	51	TYR
27	Y	52	TYR
28	Z	3	ARG
28	Z	18	PHE
28	Z	22	MET
28	Z	44	PRO
29	a	18	ALA
29	a	19	SER
29	a	26	LYS
29	a	41	ILE
30	b	6	SER
35	c	21	ARG
35	c	91	PRO
35	c	130	ARG
35	c	132	LYS
35	c	165	VAL
35	c	191	ASP
35	c	232	PRO
36	d	24	ALA
36	d	30	ARG
36	d	47	LEU

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Mol	Chain	Res	Type
36	d	49	SER
36	d	62	ASP
36	d	111	LEU
36	d	122	GLU
36	d	127	ARG
36	d	131	ARG
36	d	151	VAL
36	d	152	ILE
36	d	161	GLU
36	d	181	ASN
37	e	5	ILE
37	e	22	LYS
37	e	29	PRO
37	e	32	ALA
37	e	67	ILE
37	e	156	GLU
37	e	172	PRO
37	e	197	PRO
37	e	207	TYR
37	e	208	SER
38	f	44	GLY
38	f	70	PRO
38	f	78	HIS
38	f	101	ILE
38	f	104	ALA
38	f	128	PRO
39	g	35	ALA
39	g	100	ASN
40	h	12	LEU
40	h	20	ASP
40	h	31	MET
40	h	32	ARG
40	h	69	VAL
40	h	133	GLY
40	h	134	ALA
40	h	149	ARG
41	i	27	PRO
41	i	46	LYS
41	i	60	ARG
41	i	76	PRO
41	i	79	VAL
41	i	97	VAL

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Mol	Chain	Res	Type
42	j	37	PHE
42	j	47	LEU
42	j	88	TYR
42	j	110	GLU
42	j	112	LYS
42	j	117	HIS
43	k	59	SER
43	k	60	ARG
43	k	99	LYS
44	l	15	ALA
44	l	50	TYR
44	l	57	THR
45	m	74	HIS
45	m	78	GLU
45	m	97	TYR
45	m	104	TYR
45	m	109	VAL
46	n	17	VAL
46	n	18	ALA
46	n	20	THR
46	n	100	GLY
46	n	116	THR
47	o	3	ARG
47	o	17	LYS
47	o	35	ARG
48	p	28	GLN
48	p	47	LYS
48	p	50	HIS
49	q	3	LYS
49	q	24	ALA
49	q	41	PRO
49	q	47	ASP
50	r	12	SER
50	r	45	HIS
50	r	47	PRO
50	r	68	ARG
50	r	70	ARG
50	r	94	ASN
51	s	15	ARG
51	s	33	ASP
51	s	37	VAL
51	s	59	SER

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Mol	Chain	Res	Type
51	s	83	GLU
52	t	37	ARG
52	t	38	SER
52	t	42	PRO
52	t	65	ASN
52	t	70	LYS
52	t	78	ARG
53	u	10	LEU
53	u	42	GLN
53	u	48	LYS
53	u	71	THR
53	u	73	HIS
53	u	93	GLU
54	v	22	ARG
54	v	23	PRO
3	A	163	GLU
3	A	175	PRO
3	A	223	VAL
4	B	19	ALA
4	B	25	THR
4	B	84	TYR
4	B	113	VAL
4	B	114	GLY
4	B	118	VAL
4	B	174	ILE
4	B	198	ASN
4	B	204	ILE
4	B	223	GLY
4	B	232	PRO
4	B	242	ARG
4	B	272	ALA
5	C	10	GLY
5	C	12	THR
5	C	27	LEU
5	C	46	ALA
5	C	49	LEU
5	C	53	PRO
5	C	64	LYS
5	C	103	ASP
5	C	126	PRO
5	C	151	TYR
5	C	169	ASN

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Mol	Chain	Res	Type
5	C	173	VAL
5	C	177	PRO
5	C	187	ALA
5	C	190	GLY
5	C	195	LEU
5	C	201	THR
6	D	13	ARG
6	D	16	ALA
6	D	56	GLY
6	D	65	THR
6	D	69	ARG
6	D	73	ILE
6	D	82	GLY
6	D	92	TYR
6	D	118	LEU
6	D	129	GLY
6	D	145	GLY
6	D	167	TRP
6	D	173	PRO
6	D	186	ARG
6	D	191	LEU
7	E	8	LYS
7	E	20	ILE
7	E	28	VAL
7	E	46	ALA
7	E	126	ASP
8	F	9	ILE
8	F	13	LYS
8	F	17	VAL
8	F	19	VAL
8	F	21	PRO
8	F	48	GLY
8	F	119	GLU
8	F	136	ILE
8	F	168	PRO
9	G	20	ASP
9	G	23	PRO
9	G	40	THR
9	G	70	GLU
9	G	88	ILE
9	G	89	TYR
9	G	135	GLU

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Mol	Chain	Res	Type
9	G	137	PRO
10	H	30	LYS
10	H	64	ASP
10	H	84	ARG
10	H	85	VAL
10	H	111	GLU
10	H	131	PRO
10	H	148	GLY
10	H	154	GLN
10	H	156	GLN
10	H	158	PRO
11	I	26	LYS
11	I	28	SER
11	I	77	ILE
11	I	89	ASN
11	I	112	MET
11	I	114	ILE
12	J	13	ASN
12	J	21	ARG
12	J	47	ASP
12	J	83	VAL
12	J	89	ALA
12	J	94	GLU
12	J	97	PRO
12	J	115	LEU
12	J	118	GLY
13	K	6	ARG
13	K	20	ALA
13	K	28	ALA
13	K	76	LYS
13	K	119	ARG
14	L	10	LEU
14	L	28	LEU
14	L	74	LYS
15	M	20	ARG
15	M	21	THR
15	M	31	SER
15	M	46	VAL
15	M	91	PRO
15	M	92	TYR
15	M	94	TYR
15	M	96	GLY

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Mol	Chain	Res	Type
15	M	105	ALA
16	N	22	PHE
16	N	29	ARG
16	N	47	GLY
16	N	52	ILE
16	N	68	TYR
16	N	77	PRO
16	N	103	ARG
16	N	116	ALA
17	O	96	ALA
17	O	103	PRO
18	P	2	PHE
18	P	16	PRO
18	P	19	LYS
18	P	36	PRO
18	P	45	THR
18	P	47	VAL
18	P	74	LYS
18	P	86	GLY
18	P	96	ILE
18	P	99	ILE
19	Q	3	ALA
19	Q	6	ILE
19	Q	7	ALA
19	Q	20	VAL
19	Q	41	LYS
19	Q	43	GLY
19	Q	63	ASP
19	Q	92	ARG
20	R	18	TYR
20	R	25	LYS
20	R	69	TYR
20	R	72	LYS
20	R	77	LYS
20	R	93	GLU
21	S	38	ILE
21	S	66	PRO
21	S	68	HIS
21	S	88	LYS
21	S	89	PHE
21	S	91	GLU
21	S	95	LYS

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Mol	Chain	Res	Type
22	T	50	GLN
22	T	51	ALA
22	T	120	ILE
22	T	124	ILE
22	T	152	ALA
22	T	165	VAL
22	T	167	PRO
23	U	13	GLY
23	U	43	THR
23	U	55	ARG
23	U	58	THR
23	U	62	LEU
23	U	63	VAL
23	U	83	PRO
24	V	14	VAL
24	V	18	ILE
24	V	56	GLN
24	V	74	VAL
25	W	42	GLY
25	W	47	ASN
25	W	51	ARG
26	X	50	VAL
27	Y	14	ALA
27	Y	24	ALA
29	a	35	GLN
29	a	39	LYS
29	a	51	ALA
29	a	63	PRO
35	c	9	GLU
35	c	13	ALA
35	c	32	ILE
35	c	74	LYS
35	c	95	GLN
35	c	97	TRP
35	c	131	PRO
35	c	160	ASP
35	c	181	PHE
35	c	229	VAL
36	d	12	LEU
36	d	15	THR
36	d	20	SER
36	d	29	TYR

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Mol	Chain	Res	Type
36	d	45	LYS
36	d	50	ALA
36	d	60	ALA
36	d	63	ASN
36	d	100	ALA
36	d	108	ASN
36	d	109	PRO
36	d	156	ARG
36	d	191	THR
37	e	20	TYR
37	e	39	PRO
37	e	87	GLY
37	e	112	VAL
37	e	190	ASP
38	f	39	GLY
38	f	49	PRO
40	h	8	GLU
40	h	10	ARG
40	h	14	PRO
40	h	16	LEU
40	h	115	ARG
41	i	102	ARG
41	i	131	GLY
42	j	32	ASP
42	j	42	ARG
42	j	68	GLY
43	k	50	ILE
43	k	53	PRO
43	k	58	ASP
43	k	72	VAL
43	k	77	PRO
43	k	93	GLY
44	l	49	GLY
44	l	101	SER
44	l	109	VAL
45	m	7	ASN
45	m	28	GLY
45	m	30	PRO
45	m	62	GLY
45	m	71	GLY
45	m	93	PRO
45	m	106	ALA

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Mol	Chain	Res	Type
45	m	116	ARG
45	m	118	LYS
45	m	124	PRO
46	n	6	GLY
46	n	55	ARG
46	n	64	TRP
46	n	83	ASP
46	n	101	GLN
46	n	106	ASN
47	o	21	TYR
47	o	22	THR
47	o	32	SER
47	o	34	TYR
48	p	27	VAL
48	p	49	ASP
49	q	10	GLY
49	q	12	LYS
49	q	15	PRO
49	q	31	LYS
49	q	36	ILE
49	q	52	ASP
50	r	10	VAL
50	r	17	LYS
50	r	31	LEU
50	r	32	TYR
50	r	33	GLY
50	r	48	GLU
50	r	62	SER
50	r	67	LYS
50	r	75	ARG
51	s	10	LYS
51	s	36	ASN
51	s	47	THR
52	t	7	LYS
52	t	52	TYR
52	t	61	TYR
53	u	41	VAL
53	u	45	GLN
53	u	47	GLY
53	u	74	LYS
53	u	98	PRO
53	u	99	LEU

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Mol	Chain	Res	Type
54	v	15	ARG
54	v	17	THR
3	A	18	ASN
3	A	36	ALA
3	A	206	LYS
3	A	221	PRO
4	B	54	ARG
4	B	75	ILE
4	B	81	ALA
4	B	129	ASN
4	B	139	GLY
4	B	148	GLU
4	B	178	PRO
4	B	201	HIS
4	B	234	GLY
4	B	241	PRO
4	B	260	ARG
5	C	13	ARG
5	C	68	ALA
5	C	76	ARG
5	C	86	PRO
5	C	98	PRO
5	C	152	LYS
5	C	156	MET
6	D	5	PRO
6	D	8	SER
6	D	10	SER
6	D	26	HIS
6	D	40	ARG
6	D	41	ARG
6	D	61	PRO
6	D	90	ARG
6	D	108	ALA
6	D	148	SER
7	E	73	ALA
7	E	117	PHE
7	E	147	ASP
8	F	47	GLU
8	F	59	ARG
8	F	102	ALA
8	F	118	PRO
8	F	135	GLY

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Mol	Chain	Res	Type
8	F	158	HIS
8	F	165	ALA
9	G	7	GLU
9	G	25	TYR
9	G	81	VAL
9	G	86	THR
9	G	91	SER
9	G	95	LYS
9	G	126	TYR
10	H	31	GLN
11	I	30	ALA
11	I	61	VAL
11	I	64	ARG
12	J	72	PRO
12	J	145	PRO
13	K	84	GLY
13	K	91	GLU
13	K	115	MET
14	L	6	SER
14	L	50	HIS
14	L	67	LEU
14	L	94	TYR
14	L	108	GLY
15	M	25	ARG
15	M	28	VAL
15	M	29	PHE
15	M	47	THR
15	M	64	GLU
16	N	2	ASN
16	N	5	ALA
16	N	36	GLU
16	N	93	ARG
16	N	112	ARG
17	O	23	GLY
17	O	24	TYR
17	O	93	LYS
17	O	102	GLU
17	O	116	ALA
18	P	20	LEU
18	P	24	LYS
18	P	59	ALA
18	P	79	VAL

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Mol	Chain	Res	Type
19	Q	42	ARG
19	Q	73	ALA
19	Q	88	ARG
20	R	34	ALA
20	R	59	VAL
20	R	65	ARG
20	R	78	LYS
21	S	9	LYS
21	S	10	GLY
21	S	25	GLY
21	S	29	GLU
21	S	33	LYS
21	S	60	PHE
21	S	65	ALA
21	S	67	LEU
21	S	78	ALA
21	S	101	LYS
22	T	83	PRO
22	T	90	VAL
22	T	122	ARG
23	U	19	LYS
23	U	25	ARG
23	U	70	GLN
24	V	32	LYS
24	V	63	ALA
25	W	14	ARG
25	W	60	LEU
26	X	31	LEU
29	a	31	HIS
29	a	42	ARG
30	b	12	ASP
35	c	54	THR
35	c	60	ASP
35	c	100	GLY
35	c	149	LEU
36	d	43	LEU
36	d	123	GLN
36	d	163	ALA
36	d	178	LEU
37	e	44	GLY
37	e	49	ARG
37	e	147	ALA

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Mol	Chain	Res	Type
38	f	71	LEU
38	f	117	ASP
39	g	81	ILE
39	g	93	SER
40	h	41	ARG
40	h	63	LYS
40	h	73	MET
40	h	90	GLU
40	h	117	ALA
40	h	129	GLU
41	i	20	TYR
41	i	74	PRO
41	i	91	ARG
41	i	107	LEU
41	i	121	ASP
42	j	29	ASN
43	k	12	ASP
43	k	15	THR
44	l	44	SER
44	l	89	ALA
45	m	44	PRO
45	m	103	VAL
46	n	27	LYS
46	n	46	LYS
46	n	67	GLU
47	o	5	ALA
47	o	14	PRO
47	o	18	VAL
48	p	32	LEU
48	p	33	THR
48	p	55	GLY
48	p	56	LEU
48	p	72	ARG
48	p	79	ARG
49	q	13	HIS
49	q	26	ARG
49	q	29	ASP
49	q	30	GLY
49	q	34	GLU
49	q	65	GLN
50	r	83	ASP
51	s	25	THR

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Mol	Chain	Res	Type
51	s	53	ARG
51	s	76	LEU
51	s	82	THR
52	t	5	LEU
52	t	6	LYS
52	t	9	VAL
52	t	28	LYS
52	t	35	SER
52	t	46	GLY
54	v	3	LYS
3	A	19	LYS
3	A	23	ILE
3	A	203	GLU
3	A	207	GLY
4	B	5	LYS
4	B	9	TYR
4	B	35	LYS
4	B	123	ALA
4	B	124	PRO
4	B	159	ALA
4	B	224	ALA
5	C	45	THR
5	C	125	GLY
5	C	153	GLY
5	C	202	LYS
6	D	39	ARG
6	D	70	HIS
6	D	88	LYS
6	D	103	LYS
6	D	179	TYR
6	D	185	GLU
7	E	25	TYR
7	E	76	SER
7	E	122	PRO
8	F	30	LYS
8	F	81	GLU
8	F	126	PRO
8	F	152	ARG
9	G	62	LYS
9	G	74	ASN
10	H	33	GLU
10	H	40	ASP

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Mol	Chain	Res	Type
10	H	42	GLU
10	H	141	LYS
11	I	31	LYS
11	I	49	ARG
11	I	50	GLY
11	I	120	GLU
12	J	23	PRO
12	J	48	PRO
12	J	79	ARG
12	J	108	LYS
12	J	146	VAL
13	K	8	LYS
13	K	23	GLY
13	K	32	PHE
13	K	40	ALA
13	K	125	LEU
13	K	135	ASP
14	L	8	ARG
14	L	46	GLY
15	M	23	ARG
16	N	24	PRO
16	N	32	TYR
16	N	41	ARG
16	N	55	ASN
16	N	131	ALA
16	N	133	GLU
17	O	53	ARG
17	O	77	SER
17	O	91	ASP
19	Q	46	PHE
20	R	7	VAL
20	R	90	GLU
21	S	12	THR
21	S	15	VAL
21	S	18	GLY
21	S	40	GLU
22	T	2	GLU
22	T	39	VAL
22	T	153	SER
23	U	27	GLU
23	U	41	ARG
24	V	62	VAL

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Mol	Chain	Res	Type
24	V	88	LYS
25	W	15	LYS
26	X	9	VAL
35	c	56	ARG
35	c	182	ILE
35	c	209	ARG
35	c	237	ALA
36	d	17	ASP
36	d	129	ALA
36	d	168	ALA
36	d	175	LEU
37	e	101	LEU
38	f	73	ASN
40	h	33	ASP
40	h	36	LYS
40	h	53	LYS
40	h	70	LYS
41	i	52	ASP
42	j	7	THR
42	j	10	ARG
42	j	97	LYS
43	k	71	LEU
44	l	54	ARG
45	m	29	ALA
46	n	105	THR
46	n	117	VAL
47	o	33	VAL
49	q	23	ASP
49	q	28	ARG
49	q	42	ARG
49	q	70	ALA
50	r	50	LYS
50	r	77	VAL
51	s	9	LYS
52	t	20	LEU
52	t	55	LYS
52	t	67	VAL
53	u	43	LEU
54	v	20	LYS
4	B	45	ASN
4	B	47	GLY
4	B	53	PHE

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Mol	Chain	Res	Type
4	B	87	ASN
4	B	116	GLN
4	B	268	ARG
5	C	180	ASN
6	D	12	ARG
6	D	50	GLY
6	D	52	VAL
6	D	83	VAL
6	D	97	PRO
6	D	163	ARG
7	E	107	LEU
7	E	146	TYR
8	F	15	VAL
8	F	38	SER
8	F	170	ARG
10	H	119	GLU
10	H	130	LEU
11	I	24	VAL
11	I	94	ARG
11	I	103	ALA
12	J	61	ARG
12	J	78	PRO
12	J	129	ALA
13	K	2	LEU
13	K	49	ALA
13	K	63	LYS
13	K	121	ALA
13	K	132	VAL
15	M	48	LEU
15	M	56	LEU
16	N	95	ARG
16	N	128	GLU
18	P	23	GLU
18	P	58	VAL
18	P	84	LYS
18	P	90	PRO
19	Q	98	LYS
21	S	3	VAL
21	S	34	LYS
21	S	56	PRO
21	S	86	ARG
22	T	16	SER

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Mol	Chain	Res	Type
22	T	53	ILE
22	T	168	GLU
23	U	20	ARG
23	U	23	VAL
23	U	33	ALA
24	V	68	PRO
25	W	11	GLU
25	W	16	LEU
26	X	18	ASP
29	a	59	LYS
30	b	14	CYS
35	c	19	HIS
35	c	98	LEU
35	c	178	ARG
36	d	9	GLY
36	d	115	LEU
36	d	172	ARG
36	d	204	LEU
37	e	9	CYS
37	e	132	ARG
38	f	143	ARG
39	g	48	LEU
39	g	78	GLU
39	g	88	VAL
40	h	9	VAL
40	h	88	PRO
41	i	24	THR
42	j	54	ASP
43	k	76	ASN
43	k	98	ILE
44	l	39	PRO
45	m	70	PRO
46	n	99	ARG
46	n	119	GLY
49	q	66	PRO
50	r	95	TYR
52	t	8	GLY
54	v	18	TYR
54	v	19	GLY
4	B	251	GLY
5	C	30	PRO
5	C	188	VAL

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Mol	Chain	Res	Type
6	D	89	PRO
8	F	11	VAL
8	F	42	ARG
8	F	82	GLY
8	F	151	ILE
10	H	109	PRO
11	I	22	ILE
11	I	76	ALA
11	I	113	LYS
12	J	8	PRO
13	K	111	GLU
14	L	38	VAL
16	N	20	PRO
16	N	90	GLN
17	O	20	LEU
17	O	88	ILE
19	Q	35	ILE
20	R	88	LYS
21	S	30	VAL
21	S	52	SER
22	T	12	GLY
23	U	57	PHE
25	W	57	ILE
27	Y	55	ARG
29	a	4	MET
29	a	38	GLY
30	b	10	ILE
30	b	30	PRO
35	c	23	ARG
35	c	127	ILE
36	d	61	ALA
36	d	81	GLY
36	d	174	PRO
37	e	51	PRO
40	h	81	GLY
41	i	134	ILE
42	j	53	VAL
45	m	80	SER
50	r	16	GLN
50	r	64	PRO
52	t	76	PRO
3	A	204	GLY

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Mol	Chain	Res	Type
4	B	74	GLY
4	B	125	ILE
6	D	80	GLY
16	N	19	LEU
18	P	65	GLY
27	Y	41	PRO
28	Z	7	PRO
30	b	25	VAL
36	d	116	VAL
37	e	90	GLY
38	f	100	VAL
41	i	6	ILE
43	k	74	ILE
52	t	49	ILE
5	C	139	GLY
7	E	119	GLY
8	F	31	GLY
10	H	77	VAL
10	H	157	ARG
11	I	72	PRO
21	S	45	VAL
21	S	80	GLY
27	Y	33	CYS
38	f	93	PRO
40	h	91	VAL
47	o	56	VAL
49	q	19	ILE
4	B	229	VAL
4	B	246	PRO
5	C	184	VAL
6	D	121	VAL
8	F	121	ILE
9	G	124	GLY
11	I	19	ILE
11	I	101	PRO
12	J	20	GLY
16	N	88	ILE
17	O	82	GLY
22	T	42	VAL
24	V	12	PRO
37	e	37	PRO
37	e	136	PRO

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Mol	Chain	Res	Type
44	l	48	ILE
50	r	46	ASP
52	t	54	GLY
53	u	100	ILE
4	B	92	ILE
4	B	106	ILE
4	B	216	GLY
4	B	244	ARG
5	C	47	VAL
5	C	141	ILE
10	H	149	PRO
11	I	86	ILE
12	J	19	VAL
15	M	85	VAL
16	N	66	VAL
30	b	3	VAL
35	c	164	VAL
37	e	133	VAL
41	i	26	VAL
43	k	41	PRO
50	r	5	VAL
50	r	19	VAL
53	u	97	ALA
3	A	52	PRO
5	C	116	VAL
12	J	62	LEU
23	U	79	VAL
27	Y	6	VAL
39	g	72	VAL
41	i	4	ASP
44	l	21	ILE
4	B	245	PRO

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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
3	A	106/181 (59%)	89 (84%)	17 (16%)	2 14
4	B	214/218 (98%)	180 (84%)	34 (16%)	2 14
5	C	163/166 (98%)	128 (78%)	35 (22%)	1 6
6	D	154/162 (95%)	129 (84%)	25 (16%)	2 14
7	E	154/156 (99%)	132 (86%)	22 (14%)	3 17
8	F	142/148 (96%)	126 (89%)	16 (11%)	5 23
9	G	124/124 (100%)	97 (78%)	27 (22%)	1 6
10	H	117/119 (98%)	96 (82%)	21 (18%)	2 12
11	I	100/100 (100%)	73 (73%)	27 (27%)	0 3
12	J	112/116 (97%)	87 (78%)	25 (22%)	1 6
13	K	108/111 (97%)	88 (82%)	20 (18%)	1 11
14	L	101/101 (100%)	86 (85%)	15 (15%)	3 16
15	M	84/88 (96%)	70 (83%)	14 (17%)	2 13
16	N	121/128 (94%)	102 (84%)	19 (16%)	2 15
17	O	93/94 (99%)	81 (87%)	12 (13%)	4 20
18	P	82/82 (100%)	67 (82%)	15 (18%)	2 11
19	Q	89/92 (97%)	73 (82%)	16 (18%)	2 12
20	R	74/78 (95%)	65 (88%)	9 (12%)	5 21
21	S	86/91 (94%)	74 (86%)	12 (14%)	3 17
22	T	163/179 (91%)	134 (82%)	29 (18%)	2 12
23	U	61/67 (91%)	51 (84%)	10 (16%)	2 13
24	V	73/83 (88%)	62 (85%)	11 (15%)	3 16
25	W	58/67 (87%)	47 (81%)	11 (19%)	1 10
26	X	52/52 (100%)	43 (83%)	9 (17%)	2 12
27	Y	49/52 (94%)	41 (84%)	8 (16%)	2 14
28	Z	41/42 (98%)	34 (83%)	7 (17%)	2 12
29	a	53/55 (96%)	44 (83%)	9 (17%)	2 13
30	b	33/34 (97%)	31 (94%)	2 (6%)	17 43
35	c	202/220 (92%)	169 (84%)	33 (16%)	2 14
36	d	160/188 (85%)	132 (82%)	28 (18%)	2 12
37	e	180/181 (99%)	150 (83%)	30 (17%)	2 13
38	f	115/123 (94%)	100 (87%)	15 (13%)	4 19

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
39	g	90/90 (100%)	78 (87%)	12 (13%)	4 19
40	h	126/127 (99%)	105 (83%)	21 (17%)	2 13
41	i	119/119 (100%)	98 (82%)	21 (18%)	2 12
42	j	98/99 (99%)	91 (93%)	7 (7%)	13 40
43	k	88/92 (96%)	76 (86%)	12 (14%)	3 18
44	l	88/99 (89%)	81 (92%)	7 (8%)	11 36
45	m	104/109 (95%)	81 (78%)	23 (22%)	1 6
46	n	100/101 (99%)	75 (75%)	25 (25%)	0 4
47	o	49/50 (98%)	34 (69%)	15 (31%)	0 2
48	p	79/80 (99%)	68 (86%)	11 (14%)	3 17
49	q	72/74 (97%)	58 (81%)	14 (19%)	1 9
50	r	96/97 (99%)	82 (85%)	14 (15%)	3 16
51	s	71/77 (92%)	62 (87%)	9 (13%)	4 20
52	t	71/80 (89%)	53 (75%)	18 (25%)	0 3
53	u	76/82 (93%)	62 (82%)	14 (18%)	1 11
54	v	19/22 (86%)	17 (90%)	2 (10%)	6 26
All	All	4810/5096 (94%)	4002 (83%)	808 (17%)	2 13

All (808) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	A	8	TYR
3	A	12	LEU
3	A	16	ASP
3	A	19	LYS
3	A	20	ILE
3	A	21	TYR
3	A	22	THR
3	A	30	VAL
3	A	32	GLU
3	A	43	GLU
3	A	47	LYS
3	A	53	ARG
3	A	163	GLU
3	A	178	LYS
3	A	189	ASN

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Mol	Chain	Res	Type
3	A	193	PHE
3	A	197	LEU
4	B	10	THR
4	B	15	PHE
4	B	17	THR
4	B	18	VAL
4	B	24	ILE
4	B	33	LEU
4	B	60	ARG
4	B	61	LEU
4	B	63	ARG
4	B	66	ASP
4	B	67	PHE
4	B	68	LYS
4	B	70	TRP
4	B	71	ASP
4	B	79	VAL
4	B	82	ILE
4	B	115	GLN
4	B	131	LEU
4	B	141	VAL
4	B	150	LYS
4	B	164	GLN
4	B	176	ARG
4	B	177	LEU
4	B	193	VAL
4	B	201	HIS
4	B	202	LYS
4	B	217	ARG
4	B	229	VAL
4	B	242	ARG
4	B	255	LYS
4	B	257	LEU
4	B	262	ARG
4	B	263	ARG
4	B	271	ILE
5	C	4	ILE
5	C	5	LEU
5	C	12	THR
5	C	15	PHE
5	C	19	ARG
5	C	21	VAL

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Mol	Chain	Res	Type
5	C	23	VAL
5	C	24	THR
5	C	26	ILE
5	C	27	LEU
5	C	37	ARG
5	C	42	ASP
5	C	44	TYR
5	C	61	ARG
5	C	67	PHE
5	C	78	LEU
5	C	79	ARG
5	C	89	ASP
5	C	103	ASP
5	C	107	THR
5	C	117	MET
5	C	122	PHE
5	C	134	ILE
5	C	141	ILE
5	C	146	THR
5	C	156	MET
5	C	173	VAL
5	C	181	LEU
5	C	183	LEU
5	C	184	VAL
5	C	188	VAL
5	C	197	ILE
5	C	200	GLU
5	C	201	THR
5	C	203	LYS
6	D	22	GLU
6	D	27	LEU
6	D	52	VAL
6	D	77	ILE
6	D	83	VAL
6	D	84	VAL
6	D	92	TYR
6	D	97	PRO
6	D	115	GLU
6	D	117	LYS
6	D	120	LEU
6	D	134	PHE
6	D	135	LEU

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Mol	Chain	Res	Type
6	D	137	TRP
6	D	143	LEU
6	D	149	VAL
6	D	165	LEU
6	D	176	LEU
6	D	179	TYR
6	D	180	ASP
6	D	181	ILE
6	D	182	VAL
6	D	185	GLU
6	D	188	VAL
6	D	196	VAL
7	E	10	LYS
7	E	12	TYR
7	E	19	LEU
7	E	25	TYR
7	E	31	VAL
7	E	33	ARG
7	E	55	LYS
7	E	72	ARG
7	E	92	VAL
7	E	93	THR
7	E	95	ARG
7	E	115	ARG
7	E	120	LEU
7	E	135	LEU
7	E	136	ARG
7	E	139	LEU
7	E	148	MET
7	E	161	THR
7	E	165	THR
7	E	173	LEU
7	E	176	LEU
7	E	178	PHE
8	F	58	GLU
8	F	65	HIS
8	F	68	THR
8	F	87	LEU
8	F	89	ILE
8	F	90	LYS
8	F	92	ILE
8	F	98	LEU

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Mol	Chain	Res	Type
8	F	110	SER
8	F	131	VAL
8	F	139	GLN
8	F	140	LYS
8	F	148	ILE
8	F	152	ARG
8	F	162	ILE
8	F	168	PRO
9	G	3	VAL
9	G	9	LEU
9	G	21	VAL
9	G	27	ARG
9	G	31	LEU
9	G	33	ARG
9	G	35	LEU
9	G	38	LEU
9	G	41	GLU
9	G	44	LEU
9	G	47	LEU
9	G	62	LYS
9	G	75	LEU
9	G	76	THR
9	G	77	LEU
9	G	93	THR
9	G	99	GLU
9	G	103	ARG
9	G	108	THR
9	G	109	ILE
9	G	114	LEU
9	G	117	GLU
9	G	123	LEU
9	G	130	TYR
9	G	136	VAL
9	G	139	GLN
9	G	145	VAL
10	H	25	LYS
10	H	33	GLU
10	H	35	ARG
10	H	37	VAL
10	H	38	LEU
10	H	60	LYS
10	H	62	ARG

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Mol	Chain	Res	Type
10	H	71	MET
10	H	84	ARG
10	H	86	THR
10	H	92	GLN
10	H	95	TYR
10	H	129	MET
10	H	132	LYS
10	H	135	LEU
10	H	140	PHE
10	H	143	LEU
10	H	145	VAL
10	H	146	TYR
10	H	159	GLU
10	H	161	LEU
11	I	1	MET
11	I	3	GLN
11	I	9	GLU
11	I	10	VAL
11	I	12	ASP
11	I	21	CYS
11	I	29	ASN
11	I	39	ILE
11	I	40	VAL
11	I	45	GLU
11	I	49	ARG
11	I	58	VAL
11	I	59	LYS
11	I	61	VAL
11	I	63	VAL
11	I	68	GLU
11	I	77	ILE
11	I	80	ASP
11	I	91	LEU
11	I	96	THR
11	I	97	ARG
11	I	102	VAL
11	I	104	ARG
11	I	105	GLU
11	I	109	LYS
11	I	114	ILE
11	I	120	GLU
12	J	5	ASP

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Mol	Chain	Res	Type
12	J	13	ASN
12	J	30	THR
12	J	39	LYS
12	J	45	LEU
12	J	50	ARG
12	J	60	MET
12	J	61	ARG
12	J	62	LEU
12	J	68	GLN
12	J	71	VAL
12	J	74	GLU
12	J	77	ARG
12	J	80	TYR
12	J	81	GLN
12	J	84	ASN
12	J	85	LEU
12	J	96	THR
12	J	100	LEU
12	J	101	VAL
12	J	121	LYS
12	J	130	PHE
12	J	145	PRO
12	J	148	LEU
12	J	149	GLU
13	K	3	MET
13	K	8	LYS
13	K	11	LYS
13	K	17	LEU
13	K	25	ASP
13	K	29	PHE
13	K	41	TRP
13	K	42	ILE
13	K	48	GLU
13	K	51	ARG
13	K	59	ARG
13	K	64	ILE
13	K	65	PHE
13	K	69	PHE
13	K	75	THR
13	K	82	ARG
13	K	93	TYR
13	K	111	GLU

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Mol	Chain	Res	Type
13	K	124	LYS
13	K	133	ARG
14	L	9	LYS
14	L	14	SER
14	L	20	LEU
14	L	29	LEU
14	L	31	HIS
14	L	38	VAL
14	L	40	LYS
14	L	43	GLU
14	L	49	ASP
14	L	59	ASP
14	L	65	LEU
14	L	68	ARG
14	L	94	TYR
14	L	105	ARG
14	L	113	LEU
15	M	7	TYR
15	M	10	ARG
15	M	12	PHE
15	M	14	VAL
15	M	15	ARG
15	M	24	LEU
15	M	35	ILE
15	M	39	ILE
15	M	42	ASP
15	M	46	VAL
15	M	54	LEU
15	M	56	LEU
15	M	75	GLU
15	M	93	LYS
16	N	6	LEU
16	N	28	VAL
16	N	35	LYS
16	N	38	ASN
16	N	57	PHE
16	N	61	PHE
16	N	62	THR
16	N	85	LYS
16	N	87	ASP
16	N	88	ILE
16	N	98	LYS

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Mol	Chain	Res	Type
16	N	102	ILE
16	N	103	ARG
16	N	107	ASP
16	N	111	ARG
16	N	113	LYS
16	N	118	ARG
16	N	121	ILE
16	N	123	LYS
17	O	25	TRP
17	O	27	LEU
17	O	51	LYS
17	O	64	ARG
17	O	74	LEU
17	O	79	PHE
17	O	85	LYS
17	O	91	ASP
17	O	97	ASP
17	O	106	PHE
17	O	109	LEU
17	O	114	LYS
18	P	10	LYS
18	P	13	ARG
18	P	18	LEU
18	P	20	LEU
18	P	26	ASP
18	P	39	LEU
18	P	40	LEU
18	P	51	VAL
18	P	58	VAL
18	P	60	GLU
18	P	62	LEU
18	P	81	TYR
18	P	89	GLN
18	P	92	THR
18	P	98	GLU
19	Q	6	ILE
19	Q	8	ARG
19	Q	21	VAL
19	Q	23	LEU
19	Q	29	LEU
19	Q	31	GLU
19	Q	49	LYS

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Mol	Chain	Res	Type
19	Q	51	LEU
19	Q	67	ASP
19	Q	68	ARG
19	Q	70	TYR
19	Q	76	VAL
19	Q	86	LEU
19	Q	88	ARG
19	Q	96	ILE
19	Q	97	LYS
20	R	3	THR
20	R	13	LEU
20	R	23	GLU
20	R	26	TYR
20	R	27	THR
20	R	49	VAL
20	R	56	THR
20	R	65	ARG
20	R	83	VAL
21	S	9	LYS
21	S	20	TYR
21	S	28	LYS
21	S	40	GLU
21	S	44	ILE
21	S	50	ARG
21	S	61	ILE
21	S	64	GLU
21	S	67	LEU
21	S	71	LYS
21	S	75	ILE
21	S	84	ARG
22	T	8	TYR
22	T	9	TYR
22	T	20	ARG
22	T	31	ARG
22	T	41	LEU
22	T	44	PHE
22	T	48	PHE
22	T	50	GLN
22	T	53	ILE
22	T	55	HIS
22	T	78	LYS
22	T	80	ARG

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Mol	Chain	Res	Type
22	T	88	PHE
22	T	95	PRO
22	T	104	PHE
22	T	116	VAL
22	T	119	GLU
22	T	121	HIS
22	T	144	LEU
22	T	145	GLU
22	T	146	ILE
22	T	150	LEU
22	T	151	HIS
22	T	157	LEU
22	T	162	GLU
22	T	163	LEU
22	T	170	THR
22	T	171	ILE
22	T	175	VAL
23	U	19	LYS
23	U	20	ARG
23	U	26	TYR
23	U	37	LEU
23	U	53	MET
23	U	62	LEU
23	U	64	ASP
23	U	66	VAL
23	U	67	VAL
23	U	84	LEU
24	V	13	ILE
24	V	18	ILE
24	V	26	ARG
24	V	34	THR
24	V	41	ARG
24	V	46	LEU
24	V	58	ILE
24	V	62	VAL
24	V	78	LYS
24	V	85	LEU
24	V	91	LYS
25	W	9	GLN
25	W	12	GLU
25	W	25	VAL
25	W	29	LYS

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Mol	Chain	Res	Type
25	W	33	MET
25	W	34	GLU
25	W	37	PHE
25	W	47	ASN
25	W	48	HIS
25	W	52	ASP
25	W	55	ARG
26	X	6	VAL
26	X	9	VAL
26	X	13	ILE
26	X	17	LYS
26	X	23	LEU
26	X	28	LEU
26	X	29	ARG
26	X	49	LYS
26	X	58	VAL
27	Y	25	LEU
27	Y	26	THR
27	Y	29	ILE
27	Y	33	CYS
27	Y	43	HIS
27	Y	49	CYS
27	Y	51	TYR
27	Y	56	LYS
28	Z	1	MET
28	Z	2	LYS
28	Z	5	TRP
28	Z	15	THR
28	Z	29	LYS
28	Z	30	VAL
28	Z	44	PRO
29	a	3	LYS
29	a	16	ILE
29	a	17	THR
29	a	25	MET
29	a	34	TRP
29	a	36	LYS
29	a	44	LYS
29	a	48	PHE
29	a	60	LEU
30	b	24	TYR
30	b	25	VAL

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Mol	Chain	Res	Type
35	c	8	LYS
35	c	10	LEU
35	c	23	ARG
35	c	42	ILE
35	c	47	THR
35	c	51	LEU
35	c	60	ASP
35	c	67	THR
35	c	71	VAL
35	c	76	GLN
35	c	79	ASP
35	c	92	TYR
35	c	101	MET
35	c	102	LEU
35	c	108	ILE
35	c	118	LEU
35	c	132	LYS
35	c	133	LYS
35	c	136	VAL
35	c	137	ARG
35	c	143	GLU
35	c	146	GLN
35	c	149	LEU
35	c	155	LEU
35	c	164	VAL
35	c	169	LYS
35	c	172	ILE
35	c	176	GLU
35	c	185	ILE
35	c	200	ILE
35	c	204	ASN
35	c	220	ASP
35	c	221	LEU
36	d	3	ASN
36	d	4	LYS
36	d	29	TYR
36	d	32	LEU
36	d	33	LEU
36	d	39	ILE
36	d	43	LEU
36	d	52	LEU
36	d	56	ASP

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Mol	Chain	Res	Type
36	d	84	ILE
36	d	93	LYS
36	d	94	LEU
36	d	95	THR
36	d	102	ASN
36	d	107	GLN
36	d	111	LEU
36	d	118	GLN
36	d	123	GLN
36	d	126	ARG
36	d	127	ARG
36	d	130	VAL
36	d	131	ARG
36	d	135	LYS
36	d	175	LEU
36	d	178	LEU
36	d	186	PHE
36	d	193	TYR
36	d	195	VAL
37	e	5	ILE
37	e	8	VAL
37	e	14	ARG
37	e	15	GLU
37	e	22	LYS
37	e	24	GLU
37	e	29	PRO
37	e	33	MET
37	e	36	ARG
37	e	39	PRO
37	e	59	ARG
37	e	61	LYS
37	e	68	TYR
37	e	72	GLU
37	e	77	ASN
37	e	78	LEU
37	e	94	LEU
37	e	97	LEU
37	e	101	LEU
37	e	104	VAL
37	e	120	LEU
37	e	129	ASN
37	e	134	ASP

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Mol	Chain	Res	Type
37	e	158	ILE
37	e	188	LEU
37	e	191	ARG
37	e	193	ASP
37	e	199	ASN
37	e	203	VAL
37	e	207	TYR
38	f	6	PHE
38	f	10	MET
38	f	12	LEU
38	f	43	LEU
38	f	50	GLU
38	f	57	LYS
38	f	72	GLN
38	f	78	HIS
38	f	105	VAL
38	f	118	ILE
38	f	136	MET
38	f	137	GLU
38	f	139	LEU
38	f	143	ARG
38	f	144	THR
39	g	2	ARG
39	g	15	ASP
39	g	17	SER
39	g	37	VAL
39	g	43	LEU
39	g	55	ASP
39	g	75	LEU
39	g	78	GLU
39	g	83	ASP
39	g	86	ARG
39	g	91	VAL
39	g	100	ASN
40	h	4	ARG
40	h	5	ARG
40	h	14	PRO
40	h	16	LEU
40	h	22	LEU
40	h	32	ARG
40	h	35	LYS
40	h	36	LYS

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Mol	Chain	Res	Type
40	h	43	PHE
40	h	59	LEU
40	h	64	GLN
40	h	68	ASN
40	h	84	ASN
40	h	85	TYR
40	h	91	VAL
40	h	101	LEU
40	h	103	TRP
40	h	105	VAL
40	h	113	GLU
40	h	135	VAL
40	h	151	TYR
41	i	1	MET
41	i	2	LEU
41	i	13	ILE
41	i	14	ARG
41	i	17	THR
41	i	24	THR
41	i	25	ASP
41	i	31	PHE
41	i	39	LEU
41	i	45	ILE
41	i	50	ARG
41	i	62	TYR
41	i	75	ARG
41	i	85	ARG
41	i	99	GLU
41	i	103	VAL
41	i	105	ARG
41	i	107	LEU
41	i	122	ARG
41	i	123	GLU
41	i	127	LEU
42	j	53	VAL
42	j	79	LEU
42	j	85	LEU
42	j	89	ASN
42	j	92	TYR
42	j	99	LEU
42	j	108	VAL
43	k	8	LEU

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Mol	Chain	Res	Type
43	k	11	PHE
43	k	46	ARG
43	k	47	PHE
43	k	49	VAL
43	k	61	GLU
43	k	64	GLU
43	k	65	LEU
43	k	71	LEU
43	k	79	ARG
43	k	82	ILE
43	k	96	ILE
44	l	20	TYR
44	l	29	ILE
44	l	33	THR
44	l	34	ASP
44	l	41	THR
44	l	84	VAL
44	l	99	GLN
45	m	6	ILE
45	m	14	ARG
45	m	17	VAL
45	m	23	VAL
45	m	27	LYS
45	m	40	ARG
45	m	45	LYS
45	m	51	LEU
45	m	52	ARG
45	m	58	ARG
45	m	64	GLU
45	m	76	LEU
45	m	77	GLN
45	m	81	VAL
45	m	84	ILE
45	m	85	ARG
45	m	101	ARG
45	m	111	ASP
45	m	112	ARG
45	m	114	LYS
45	m	115	SER
45	m	121	THR
45	m	126	GLU
46	n	9	ILE

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Mol	Chain	Res	Type
46	n	15	VAL
46	n	16	ASP
46	n	23	TYR
46	n	25	ILE
46	n	59	TYR
46	n	62	ASN
46	n	64	TRP
46	n	66	LEU
46	n	69	GLU
46	n	70	LEU
46	n	73	GLU
46	n	82	MET
46	n	86	CYS
46	n	91	ARG
46	n	92	HIS
46	n	93	ARG
46	n	94	ARG
46	n	98	VAL
46	n	99	ARG
46	n	103	THR
46	n	104	ARG
46	n	105	THR
46	n	120	LYS
46	n	125	ARG
47	o	6	LEU
47	o	8	GLU
47	o	9	LYS
47	o	21	TYR
47	o	24	CYS
47	o	29	ARG
47	o	33	VAL
47	o	36	PHE
47	o	41	ARG
47	o	42	ILE
47	o	46	GLU
47	o	49	HIS
47	o	53	LEU
47	o	56	VAL
47	o	58	LYS
48	p	6	GLU
48	p	8	LYS
48	p	11	VAL

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Mol	Chain	Res	Type
48	p	32	LEU
48	p	34	LEU
48	p	35	ARG
48	p	47	LYS
48	p	56	LEU
48	p	57	LEU
48	p	67	LEU
48	p	83	GLU
49	q	13	HIS
49	q	27	LYS
49	q	32	TYR
49	q	35	LYS
49	q	41	PRO
49	q	43	LYS
49	q	44	THR
49	q	48	TRP
49	q	49	LEU
49	q	52	ASP
49	q	58	TYR
49	q	60	LEU
49	q	74	LEU
49	q	79	VAL
50	r	6	LEU
50	r	14	LYS
50	r	17	LYS
50	r	19	VAL
50	r	36	ILE
50	r	42	TYR
50	r	43	LEU
50	r	52	LYS
50	r	58	GLU
50	r	69	LYS
50	r	81	ARG
50	r	84	LEU
50	r	94	ASN
50	r	100	LYS
51	s	13	GLN
51	s	26	LEU
51	s	29	PHE
51	s	31	LEU
51	s	33	ASP
51	s	42	ARG

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Mol	Chain	Res	Type
51	s	63	GLN
51	s	70	ILE
51	s	84	LYS
52	t	6	LYS
52	t	25	LYS
52	t	29	ARG
52	t	31	ILE
52	t	32	LYS
52	t	33	THR
52	t	36	ARG
52	t	43	GLU
52	t	44	MET
52	t	45	VAL
52	t	49	ILE
52	t	53	ASN
52	t	55	LYS
52	t	60	VAL
52	t	63	THR
52	t	66	MET
52	t	71	LEU
52	t	73	GLU
53	u	10	LEU
53	u	20	LEU
53	u	21	LYS
53	u	23	ARG
53	u	24	LEU
53	u	27	LYS
53	u	39	LYS
53	u	51	GLU
53	u	53	LEU
53	u	54	LYS
53	u	56	MET
53	u	72	LEU
53	u	79	ARG
53	u	88	VAL
54	v	9	ARG
54	v	14	TRP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (146) such sidechains are listed below:

Mol	Chain	Res	Type
3	A	18	ASN

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Mol	Chain	Res	Type
3	A	58	ASN
4	B	58	HIS
4	B	87	ASN
4	B	115	GLN
4	B	129	ASN
4	B	164	GLN
4	B	166	GLN
4	B	201	HIS
4	B	203	ASN
4	B	231	HIS
4	B	253	GLN
5	C	54	GLN
5	C	55	ASN
5	C	66	HIS
5	C	132	HIS
5	C	143	ASN
6	D	35	GLN
6	D	128	ASN
6	D	177	ASN
7	E	26	GLN
7	E	40	ASN
7	E	41	GLN
7	E	66	GLN
7	E	79	ASN
7	E	138	GLN
8	F	61	HIS
8	F	65	HIS
8	F	74	ASN
8	F	143	GLN
9	G	28	ASN
9	G	43	ASN
9	G	147	GLN
10	H	92	GLN
10	H	124	HIS
11	I	3	GLN
11	I	5	GLN
11	I	29	ASN
12	J	38	GLN
12	J	81	GLN
13	K	12	GLN
13	K	45	GLN
13	K	46	GLN

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Mol	Chain	Res	Type
13	K	57	HIS
13	K	123	HIS
14	L	16	HIS
14	L	71	GLN
15	M	38	GLN
15	M	84	GLN
16	N	38	ASN
17	O	44	ASN
17	O	66	ASN
17	O	72	HIS
18	P	64	HIS
18	P	87	HIS
18	P	89	GLN
19	Q	57	ASN
20	R	41	ASN
20	R	82	GLN
21	S	57	GLN
22	T	34	ASN
22	T	55	HIS
22	T	65	GLN
22	T	75	ASN
23	U	35	ASN
23	U	40	GLN
23	U	80	HIS
24	V	19	GLN
24	V	66	HIS
25	W	43	GLN
26	X	32	GLN
28	Z	8	ASN
28	Z	16	HIS
28	Z	36	GLN
29	a	35	GLN
30	b	36	GLN
35	c	25	ASN
35	c	45	GLN
35	c	78	GLN
35	c	94	ASN
35	c	95	GLN
35	c	110	GLN
35	c	135	GLN
35	c	204	ASN
35	c	212	GLN

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Mol	Chain	Res	Type
36	d	3	ASN
36	d	6	HIS
36	d	28	GLN
36	d	63	ASN
36	d	102	ASN
36	d	110	ASN
36	d	118	GLN
36	d	136	GLN
36	d	139	GLN
37	e	45	GLN
37	e	74	GLN
37	e	77	ASN
37	e	116	GLN
37	e	119	GLN
37	e	129	ASN
37	e	199	ASN
38	f	20	GLN
38	f	65	ASN
38	f	72	GLN
38	f	78	HIS
39	g	18	GLN
39	g	27	GLN
39	g	32	ASN
40	h	13	GLN
40	h	64	GLN
40	h	68	ASN
40	h	84	ASN
40	h	86	GLN
40	h	97	GLN
40	h	106	GLN
40	h	109	ASN
40	h	110	GLN
40	h	122	HIS
41	i	15	ASN
41	i	70	GLN
42	j	73	GLN
42	j	89	ASN
43	k	56	HIS
43	k	62	HIS
43	k	76	ASN
44	l	27	ASN
44	l	38	ASN

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Mol	Chain	Res	Type
44	l	62	GLN
45	m	7	ASN
45	m	77	GLN
46	n	40	ASN
46	n	101	GLN
47	o	49	HIS
47	o	52	GLN
48	p	13	GLN
48	p	37	ASN
48	p	42	HIS
48	p	50	HIS
48	p	62	GLN
48	p	71	GLN
49	q	16	HIS
49	q	76	GLN
50	r	26	GLN
51	s	63	GLN
52	t	47	HIS
53	u	26	ASN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	w	2888/2889 (99%)	984 (34%)	0
2	x	119/120 (99%)	47 (39%)	0
31	y	1513/1522 (99%)	509 (33%)	0
32	z	76/77 (98%)	20 (26%)	0
33	2	75/76 (98%)	22 (29%)	0
34	3	17/18 (94%)	5 (29%)	0
All	All	4688/4702 (99%)	1587 (33%)	0

All (1587) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	w	10	G
1	w	13	A
1	w	15	G
1	w	27	G
1	w	28	A
1	w	29	U
1	w	34	C

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Mol	Chain	Res	Type
1	w	35	G
1	w	37	C
1	w	43	G
1	w	46	C
1	w	49	A
1	w	50	U
1	w	51	G
1	w	52	A
1	w	61	G
1	w	64	A
1	w	69	C
1	w	71	A
1	w	72	U
1	w	73	A
1	w	75	G
1	w	78	A
1	w	83	G
1	w	88	G
1	w	89	G
1	w	90	U
1	w	92	G
1	w	95	G
1	w	96	G
1	w	101	G
1	w	102	G
1	w	103	A
1	w	117	G
1	w	118	A
1	w	119	A
1	w	120	U
1	w	121	G
1	w	125	G
1	w	126	A
1	w	131	G
1	w	137(A)	C
1	w	139	G
1	w	143	C
1	w	144	C
1	w	146	G
1	w	149	A
1	w	151	C
1	w	153	C

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Mol	Chain	Res	Type
1	w	162	U
1	w	163	U
1	w	165	U
1	w	174	C
1	w	175	G
1	w	176	G
1	w	177	G
1	w	182	A
1	w	184	C
1	w	196	A
1	w	199	A
1	w	204	A
1	w	205	G
1	w	206	U
1	w	215	G
1	w	216	A
1	w	221	A
1	w	222	A
1	w	228	A
1	w	229	A
1	w	233	A
1	w	239	U
1	w	241	A
1	w	242	G
1	w	248	G
1	w	249	C
1	w	250	G
1	w	252	G
1	w	265	A
1	w	266	G
1	w	269	U
1	w	270(D)	C
1	w	270(E)	C
1	w	270(F)	G
1	w	270(M)	U
1	w	270(S)	G
1	w	270(T)	G
1	w	271(A)	U
1	w	271(B)	C
1	w	271(C)	G
1	w	271(D)	U
1	w	271	G

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Mol	Chain	Res	Type
1	w	273(C)	C
1	w	273(G)	C
1	w	274	G
1	w	275	G
1	w	278	A
1	w	289	A
1	w	294	A
1	w	296	C
1	w	298	G
1	w	299	A
1	w	301	G
1	w	302	C
1	w	308	G
1	w	310	A
1	w	311	A
1	w	316	C
1	w	317	G
1	w	320	A
1	w	327	G
1	w	329	G
1	w	330	A
1	w	331	A
1	w	332	A
1	w	338	G
1	w	339	U
1	w	341	G
1	w	342	G
1	w	344	G
1	w	347	A
1	w	348	G
1	w	349	G
1	w	355	G
1	w	358	U
1	w	363(A)	G
1	w	363(E)	G
1	w	363(F)	U
1	w	364	C
1	w	366(B)	C
1	w	370	G
1	w	371	A
1	w	372	G
1	w	374	A

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Mol	Chain	Res	Type
1	w	375	C
1	w	380	U
1	w	385	C
1	w	387	U
1	w	388	G
1	w	390	A
1	w	391	G
1	w	392	C
1	w	394	A
1	w	395	U
1	w	396	G
1	w	397	G
1	w	405	U
1	w	408	G
1	w	414	C
1	w	428	A
1	w	438	G
1	w	439	G
1	w	440	G
1	w	444	C
1	w	446	G
1	w	449	A
1	w	450	G
1	w	451	C
1	w	456	C
1	w	457	A
1	w	458	G
1	w	464	U
1	w	469	G
1	w	470	A
1	w	473	G
1	w	475	U
1	w	477	A
1	w	478	A
1	w	480	A
1	w	481	G
1	w	483	A
1	w	488	G
1	w	489	G
1	w	491	G
1	w	492	A
1	w	504	U

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Mol	Chain	Res	Type
1	w	505	A
1	w	508	G
1	w	509	C
1	w	510	C
1	w	517	C
1	w	518	G
1	w	522	G
1	w	527	C
1	w	528	A
1	w	529	A
1	w	531	C
1	w	532	A
1	w	533	G
1	w	537	C
1	w	542	C
1	w	544	C
1	w	549	G
1	w	551	G
1	w	556	G
1	w	559	G
1	w	562	U
1	w	563	G
1	w	567	A
1	w	569	U
1	w	572	A
1	w	573	G
1	w	574	C
1	w	575	A
1	w	583	G
1	w	594	U
1	w	595	C
1	w	598	G
1	w	603	A
1	w	604	G
1	w	610	C
1	w	614	U
1	w	615	G
1	w	616	A
1	w	617	G
1	w	618(B)	C
1	w	620	G
1	w	621	A

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Mol	Chain	Res	Type
1	w	627	A
1	w	628	G
1	w	634	C
1	w	638	G
1	w	640	C
1	w	645	C
1	w	646	A
1	w	647	G
1	w	653	C
1	w	654	U
1	w	656	G
1	w	660	G
1	w	666	G
1	w	669	G
1	w	671	C
1	w	672	C
1	w	674	G
1	w	684	G
1	w	686	G
1	w	701	G
1	w	703	U
1	w	715	G
1	w	716	A
1	w	717	G
1	w	719	C
1	w	722	A
1	w	729	G
1	w	730	C
1	w	739	G
1	w	740	U
1	w	747	U
1	w	748	G
1	w	749	C
1	w	751	A
1	w	753	C
1	w	757	U
1	w	763	G
1	w	764	A
1	w	765	G
1	w	770	G
1	w	775	G
1	w	776	G

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Mol	Chain	Res	Type
1	w	781	A
1	w	782	A
1	w	783	A
1	w	784	A
1	w	789	A
1	w	790	C
1	w	792	G
1	w	794	G
1	w	796	C
1	w	798	G
1	w	800	A
1	w	805	G
1	w	811	U
1	w	812	C
1	w	817	C
1	w	826	U
1	w	827	U
1	w	828	U
1	w	830	G
1	w	831	G
1	w	835	A
1	w	846	C
1	w	847	U
1	w	848	G
1	w	849	A
1	w	855	G
1	w	856	C
1	w	859	G
1	w	860	U
1	w	861	A
1	w	866	A
1	w	867	C
1	w	870	A
1	w	873	G
1	w	876	C
1	w	885	C
1	w	886	C
1	w	887	A
1	w	888	C
1	w	889	C
1	w	890	A
1	w	897	C

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Mol	Chain	Res	Type
1	w	899	A
1	w	900	A
1	w	902	C
1	w	906	G
1	w	907	U
1	w	909	A
1	w	910	A
1	w	912	C
1	w	914	C
1	w	916	G
1	w	926	A
1	w	928	G
1	w	931	G
1	w	932	G
1	w	933	A
1	w	938	G
1	w	945	A
1	w	946	G
1	w	957	A
1	w	958	U
1	w	959	A
1	w	961	C
1	w	962	G
1	w	963	U
1	w	965	C
1	w	966	G
1	w	972	G
1	w	974(A)	G
1	w	974(B)	C
1	w	975	G
1	w	976	C
1	w	977	G
1	w	980	A
1	w	982	C
1	w	983	A
1	w	989	G
1	w	990	A
1	w	991	C
1	w	992	C
1	w	993	G
1	w	996	A
1	w	997	G

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Mol	Chain	Res	Type
1	w	1006	C
1	w	1008	C
1	w	1009	A
1	w	1011	G
1	w	1012	U
1	w	1013	C
1	w	1015	G
1	w	1016	G
1	w	1017	G
1	w	1020	A
1	w	1021	A
1	w	1022	G
1	w	1023	U
1	w	1025	G
1	w	1026	U
1	w	1033	U
1	w	1034	G
1	w	1042	G
1	w	1043	C
1	w	1045	A
1	w	1046	A
1	w	1047	G
1	w	1054	A
1	w	1059	G
1	w	1060	U
1	w	1061	U
1	w	1062	G
1	w	1070	A
1	w	1071	G
1	w	1072	C
1	w	1079	C
1	w	1080	C
1	w	1083	U
1	w	1087	G
1	w	1088	A
1	w	1089	G
1	w	1111	A
1	w	1112	G
1	w	1126	A
1	w	1129	A
1	w	1130	U
1	w	1131	G

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Mol	Chain	Res	Type
1	w	1132	A
1	w	1135	C
1	w	1136	G
1	w	1139	G
1	w	1141	U
1	w	1142	C
1	w	1142(B)	A
1	w	1143	A
1	w	1144	G
1	w	1148	A
1	w	1152	C
1	w	1155	A
1	w	1157	G
1	w	1161	C
1	w	1166	C
1	w	1170	G
1	w	1175	U
1	w	1177	A
1	w	1179	C
1	w	1180	C
1	w	1182	A
1	w	1183	G
1	w	1186	G
1	w	1187	G
1	w	1188	U
1	w	1191	G
1	w	1194	A
1	w	1195	G
1	w	1197	G
1	w	1199	U
1	w	1200	C
1	w	1201	C
1	w	1202	C
1	w	1204	A
1	w	1205	U
1	w	1208	C
1	w	1210	A
1	w	1211	U
1	w	1212	G
1	w	1220	A
1	w	1221	C
1	w	1224	C

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Mol	Chain	Res	Type
1	w	1227	G
1	w	1229	G
1	w	1237	A
1	w	1238	G
1	w	1240	U
1	w	1244	G
1	w	1247	A
1	w	1248	G
1	w	1250	G
1	w	1251	C
1	w	1252	G
1	w	1253	A
1	w	1256	G
1	w	1265	A
1	w	1266	G
1	w	1267	U
1	w	1271	G
1	w	1272	A
1	w	1273	U
1	w	1274	A
1	w	1275	A
1	w	1276	A
1	w	1278	A
1	w	1280	G
1	w	1289	C
1	w	1295	C
1	w	1296	G
1	w	1298	C
1	w	1300	U
1	w	1301	A
1	w	1302	A
1	w	1305	C
1	w	1310	G
1	w	1313	U
1	w	1320	C
1	w	1321	A
1	w	1325	G
1	w	1326	U
1	w	1329	U
1	w	1339	G
1	w	1341	U
1	w	1343	G

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Mol	Chain	Res	Type
1	w	1347	G
1	w	1359	A
1	w	1360	A
1	w	1362	C
1	w	1365	A
1	w	1366	A
1	w	1368	G
1	w	1378	A
1	w	1379	A
1	w	1384	A
1	w	1385	G
1	w	1395	A
1	w	1398	C
1	w	1416	G
1	w	1419	A
1	w	1420	U
1	w	1426	G
1	w	1427	A
1	w	1428	C
1	w	1434	A
1	w	1436	G
1	w	1438	U
1	w	1444(B)	A
1	w	1445	C
1	w	1448	G
1	w	1448(B)	A
1	w	1449	G
1	w	1451	C
1	w	1453	A
1	w	1454	U
1	w	1455	G
1	w	1458	C
1	w	1459	G
1	w	1460	A
1	w	1461	G
1	w	1467	C
1	w	1471	A
1	w	1472	A
1	w	1478	G
1	w	1479	G
1	w	1481	U
1	w	1483	G

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Mol	Chain	Res	Type
1	w	1485	G
1	w	1487	G
1	w	1488	G
1	w	1490	A
1	w	1491	G
1	w	1497	U
1	w	1498	C
1	w	1502	C
1	w	1506	C
1	w	1508	A
1	w	1509	A
1	w	1510	A
1	w	1517	G
1	w	1519	G
1	w	1520	U
1	w	1521	G
1	w	1522	G
1	w	1535	U
1	w	1536	A
1	w	1537	C
1	w	1538	G
1	w	1540	G
1	w	1543	A
1	w	1544	C
1	w	1545	A
1	w	1546(B)	C
1	w	1547	C
1	w	1555	G
1	w	1558	A
1	w	1559	G
1	w	1560	G
1	w	1567	A
1	w	1569	A
1	w	1570	A
1	w	1576	U
1	w	1577	C
1	w	1578	U
1	w	1579	A
1	w	1581	G
1	w	1585	C
1	w	1586	A
1	w	1595	G

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Mol	Chain	Res	Type
1	w	1596	A
1	w	1603	A
1	w	1607	C
1	w	1608	A
1	w	1609	A
1	w	1610	A
1	w	1613	G
1	w	1616	A
1	w	1617	C
1	w	1618	A
1	w	1619	G
1	w	1626	G
1	w	1628	G
1	w	1634	A
1	w	1635	G
1	w	1639	U
1	w	1640	C
1	w	1642	G
1	w	1646	C
1	w	1647	G
1	w	1648	C
1	w	1654	A
1	w	1664	A
1	w	1669	A
1	w	1670	C
1	w	1672	C
1	w	1674	G
1	w	1682	G
1	w	1688	U
1	w	1693	U
1	w	1694	C
1	w	1699	G
1	w	1700	A
1	w	1703	G
1	w	1707	G
1	w	1717	G
1	w	1718	G
1	w	1731	G
1	w	1733	G
1	w	1742	C
1	w	1743	G
1	w	1747	G

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Mol	Chain	Res	Type
1	w	1748	G
1	w	1754	C
1	w	1756	G
1	w	1758	G
1	w	1759	A
1	w	1763	G
1	w	1764	G
1	w	1773	A
1	w	1777	U
1	w	1780	A
1	w	1781	C
1	w	1782	C
1	w	1785	A
1	w	1787	A
1	w	1792	G
1	w	1800	C
1	w	1801	G
1	w	1802	A
1	w	1806	C
1	w	1810	A
1	w	1815	A
1	w	1816	G
1	w	1817	G
1	w	1818	U
1	w	1819	A
1	w	1820	U
1	w	1821	A
1	w	1823	G
1	w	1824	G
1	w	1825	A
1	w	1829	A
1	w	1836	C
1	w	1838	C
1	w	1839	G
1	w	1843	C
1	w	1847	A
1	w	1858	G
1	w	1859	A
1	w	1863	G
1	w	1864	U
1	w	1869	G
1	w	1878	G

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Mol	Chain	Res	Type
1	w	1879	C
1	w	1885	A
1	w	1886	C
1	w	1888	G
1	w	1889	A
1	w	1900	A
1	w	1903	G
1	w	1906	G
1	w	1912	A
1	w	1913	A
1	w	1914	C
1	w	1915	U
1	w	1916	A
1	w	1929	G
1	w	1930	G
1	w	1935	G
1	w	1936	A
1	w	1937	A
1	w	1938	A
1	w	1939	U
1	w	1944	U
1	w	1955	U
1	w	1956	U
1	w	1960	A
1	w	1963	U
1	w	1964	G
1	w	1965	C
1	w	1966	A
1	w	1967	C
1	w	1968	G
1	w	1969	A
1	w	1971	A
1	w	1972	A
1	w	1982	C
1	w	1987	G
1	w	1991	U
1	w	1992	G
1	w	1993	U
1	w	1997	G
1	w	1998	G
1	w	2001	A
1	w	2010	G

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Mol	Chain	Res	Type
1	w	2013	A
1	w	2014	A
1	w	2020	A
1	w	2023	G
1	w	2026	C
1	w	2031	A
1	w	2033	A
1	w	2035	G
1	w	2040	C
1	w	2041	U
1	w	2043	C
1	w	2050	C
1	w	2051	A
1	w	2052	G
1	w	2055	C
1	w	2056	G
1	w	2057	A
1	w	2059	A
1	w	2060	A
1	w	2061	G
1	w	2062	A
1	w	2063	C
1	w	2066	C
1	w	2067	G
1	w	2068	U
1	w	2069	G
1	w	2076	U
1	w	2077	A
1	w	2080	G
1	w	2087	G
1	w	2092	U
1	w	2093	G
1	w	2096	U
1	w	2099	U
1	w	2100	G
1	w	2110	G
1	w	2111	C
1	w	2112	G
1	w	2116	G
1	w	2118	U
1	w	2119	A
1	w	2120	G

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Mol	Chain	Res	Type
1	w	2122	U
1	w	2124	G
1	w	2126	A
1	w	2127	G
1	w	2128	C
1	w	2129	C
1	w	2130	U
1	w	2131	G
1	w	2132	U
1	w	2133	G
1	w	2136	C
1	w	2138	C
1	w	2157	G
1	w	2158	A
1	w	2160	G
1	w	2169	A
1	w	2171	A
1	w	2172	U
1	w	2173	A
1	w	2174	C
1	w	2176	A
1	w	2177	C
1	w	2179	C
1	w	2181	G
1	w	2188	C
1	w	2190	G
1	w	2191	G
1	w	2192	G
1	w	2194	G
1	w	2195	C
1	w	2205	C
1	w	2211	G
1	w	2213	U
1	w	2215	G
1	w	2217	G
1	w	2225	A
1	w	2226	C
1	w	2238	G
1	w	2239	G
1	w	2243	U
1	w	2251	G
1	w	2257	U

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Mol	Chain	Res	Type
1	w	2264	C
1	w	2269	A
1	w	2275	C
1	w	2276	G
1	w	2283	C
1	w	2287	A
1	w	2288	A
1	w	2290	G
1	w	2294	C
1	w	2297	C
1	w	2304	G
1	w	2305	A
1	w	2307	G
1	w	2308	G
1	w	2309	A
1	w	2310	A
1	w	2319	G
1	w	2320	A
1	w	2321	G
1	w	2323	G
1	w	2325	G
1	w	2327	A
1	w	2333	A
1	w	2334	G
1	w	2336	A
1	w	2344	U
1	w	2345	G
1	w	2346	A
1	w	2347	C
1	w	2350	C
1	w	2354	G
1	w	2356	C
1	w	2361	A
1	w	2365	G
1	w	2368	C
1	w	2376	A
1	w	2377	A
1	w	2379	G
1	w	2382	G
1	w	2383	G
1	w	2385	C
1	w	2388	A

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Mol	Chain	Res	Type
1	w	2391	G
1	w	2394	C
1	w	2398	U
1	w	2399	G
1	w	2400	G
1	w	2402	C
1	w	2406	U
1	w	2407	G
1	w	2422	A
1	w	2423	U
1	w	2425	A
1	w	2427	C
1	w	2428	G
1	w	2429	G
1	w	2430	A
1	w	2431	U
1	w	2432	A
1	w	2434	A
1	w	2435	A
1	w	2439	A
1	w	2441	C
1	w	2442	C
1	w	2447	G
1	w	2448	A
1	w	2449	U
1	w	2450	A
1	w	2452	C
1	w	2455	G
1	w	2469	A
1	w	2472	G
1	w	2478	A
1	w	2480	C
1	w	2483	C
1	w	2484	G
1	w	2487	G
1	w	2491	U
1	w	2498	C
1	w	2501	C
1	w	2502	G
1	w	2503	A
1	w	2504	U
1	w	2505	G

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Mol	Chain	Res	Type
1	w	2506	U
1	w	2513	G
1	w	2514	U
1	w	2515	C
1	w	2516	G
1	w	2518	A
1	w	2519	U
1	w	2523	G
1	w	2529	G
1	w	2542	A
1	w	2543	G
1	w	2549	G
1	w	2551	C
1	w	2554	U
1	w	2555	U
1	w	2560	C
1	w	2563	U
1	w	2566	A
1	w	2567	G
1	w	2569	G
1	w	2572	A
1	w	2573	C
1	w	2574	G
1	w	2576	G
1	w	2578	G
1	w	2581	G
1	w	2582	G
1	w	2584	U
1	w	2588	G
1	w	2589	A
1	w	2590	A
1	w	2602	A
1	w	2606	C
1	w	2609	U
1	w	2611	U
1	w	2612	C
1	w	2615	U
1	w	2616	C
1	w	2618	G
1	w	2619	C
1	w	2621	A
1	w	2622	C

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Mol	Chain	Res	Type
1	w	2628	C
1	w	2629	A
1	w	2630	G
1	w	2635	C
1	w	2637	U
1	w	2639	A
1	w	2642	G
1	w	2643	G
1	w	2645	G
1	w	2646	C
1	w	2647	U
1	w	2653	U
1	w	2654	A
1	w	2655	G
1	w	2656	U
1	w	2658	C
1	w	2665	A
1	w	2674	G
1	w	2681	C
1	w	2682	U
1	w	2691	C
1	w	2694	G
1	w	2695	C
1	w	2702	U
1	w	2712	U
1	w	2712(B)	A
1	w	2713	A
1	w	2714	G
1	w	2718	G
1	w	2719	G
1	w	2720	U
1	w	2721	A
1	w	2722	G
1	w	2735	G
1	w	2739	U
1	w	2744	G
1	w	2746	U
1	w	2747	G
1	w	2750	A
1	w	2752	C
1	w	2754	U
1	w	2755	C

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Mol	Chain	Res	Type
1	w	2757	A
1	w	2758	A
1	w	2759	G
1	w	2762	G
1	w	2763	G
1	w	2765	A
1	w	2766	G
1	w	2768	C
1	w	2772	C
1	w	2775	A
1	w	2778	A
1	w	2779	U
1	w	2781	A
1	w	2785	C
1	w	2791	C
1	w	2792	G
1	w	2795	G
1	w	2797	U
1	w	2798	C
1	w	2799	A
1	w	2802	G
1	w	2804	C
1	w	2807	G
1	w	2808	U
1	w	2809	A
1	w	2820	A
1	w	2827	C
1	w	2830	G
1	w	2833	G
1	w	2834	G
1	w	2835	A
1	w	2836	U
1	w	2844	G
1	w	2845	G
1	w	2849	U
1	w	2858	C
1	w	2865	U
1	w	2866	U
1	w	2867	G
1	w	2868	A
1	w	2872	G
1	w	2873	A

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Mol	Chain	Res	Type
1	w	2875	C
1	w	2876	G
1	w	2880	C
1	w	2883	A
1	w	2884	U
1	w	2887	U
1	w	2889	C
1	w	2892	A
1	w	2895	U
1	w	2896	C
1	w	2901	C
2	x	5	C
2	x	8	U
2	x	9	G
2	x	10	C
2	x	11	C
2	x	13	A
2	x	14	U
2	x	15	A
2	x	16	G
2	x	20	C
2	x	21	G
2	x	25	A
2	x	26	A
2	x	27	C
2	x	29	A
2	x	33	G
2	x	35	U
2	x	39	A
2	x	40	U
2	x	42	C
2	x	43	C
2	x	45	A
2	x	49	C
2	x	50	G
2	x	52	A
2	x	53	A
2	x	54	G
2	x	57	A
2	x	64	C
2	x	66	A
2	x	67	G

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Mol	Chain	Res	Type
2	x	69	G
2	x	74	U
2	x	75	G
2	x	76	G
2	x	79	C
2	x	87	G
2	x	90	C
2	x	98	G
2	x	103	U
2	x	107	U
2	x	108	C
2	x	109	G
2	x	113	C
2	x	114	G
2	x	117	G
2	x	118	G
31	y	6	G
31	y	8	A
31	y	9	G
31	y	13	U
31	y	14	U
31	y	15	G
31	y	21	G
31	y	31	G
31	y	32	A
31	y	37	U
31	y	38	G
31	y	39	G
31	y	44	G
31	y	47	C
31	y	48	C
31	y	50	A
31	y	51	A
31	y	56	U
31	y	61	G
31	y	62	U
31	y	65	U
31	y	69	G
31	y	82	U
31	y	93	U
31	y	95	G
31	y	97	U

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Mol	Chain	Res	Type
31	y	99	C
31	y	104	G
31	y	105	G
31	y	110	C
31	y	112	G
31	y	115	G
31	y	116	A
31	y	120	A
31	y	121	C
31	y	122	G
31	y	129(B)	G
31	y	130	A
31	y	131	C
31	y	133	U
31	y	134	A
31	y	136	C
31	y	139	G
31	y	141	A
31	y	143	A
31	y	145	G
31	y	149	A
31	y	152	A
31	y	157	G
31	y	161	A
31	y	162	A
31	y	163	C
31	y	174	C
31	y	179	A
31	y	189	U
31	y	191(A)	G
31	y	195	A
31	y	196	A
31	y	197	A
31	y	198	G
31	y	208	U
31	y	209	U
31	y	210	U
31	y	216	G
31	y	219	C
31	y	223	U
31	y	234	C
31	y	238	G

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Mol	Chain	Res	Type
31	y	244	U
31	y	247	G
31	y	251	G
31	y	252	U
31	y	253	U
31	y	255	G
31	y	258	G
31	y	259	G
31	y	263	A
31	y	266	G
31	y	267	C
31	y	270	A
31	y	279	A
31	y	280	C
31	y	281	G
31	y	289	G
31	y	295	C
31	y	299	G
31	y	300	A
31	y	312	C
31	y	321	A
31	y	322	C
31	y	327	A
31	y	328	C
31	y	329	A
31	y	330	C
31	y	332	G
31	y	344	A
31	y	345	C
31	y	347	G
31	y	351	G
31	y	352	C
31	y	353	A
31	y	354	G
31	y	357	G
31	y	360	A
31	y	361	G
31	y	363	A
31	y	365	U
31	y	366	C
31	y	368	U
31	y	369	C

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Mol	Chain	Res	Type
31	y	372	C
31	y	373	A
31	y	375	U
31	y	377	G
31	y	378	G
31	y	379	C
31	y	382	A
31	y	388	G
31	y	391	G
31	y	392	G
31	y	395	C
31	y	397	A
31	y	398	C
31	y	406	G
31	y	409	G
31	y	410	G
31	y	412	A
31	y	413	G
31	y	414	A
31	y	421	U
31	y	422	C
31	y	423	G
31	y	428	G
31	y	429	U
31	y	430	A
31	y	436	C
31	y	439	A
31	y	440	A
31	y	445	G
31	y	449	C
31	y	452	A
31	y	466	G
31	y	467	G
31	y	480	U
31	y	484	G
31	y	485	G
31	y	488	C
31	y	491	G
31	y	493	G
31	y	496	A
31	y	497	U
31	y	498	A

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Mol	Chain	Res	Type
31	y	500	G
31	y	506	G
31	y	508	C
31	y	509	A
31	y	511	C
31	y	512	U
31	y	513	C
31	y	516	PSU
31	y	517	G
31	y	518	C
31	y	519	C
31	y	521	G
31	y	523	A
31	y	524	G
31	y	525	C
31	y	527	7MG
31	y	529	G
31	y	531	U
31	y	532	A
31	y	533	A
31	y	543	C
31	y	547	A
31	y	549	C
31	y	552	U
31	y	556	C
31	y	557	G
31	y	560	U
31	y	561	U
31	y	562	C
31	y	563	A
31	y	565	U
31	y	566	G
31	y	570	G
31	y	572	A
31	y	573	A
31	y	575	G
31	y	576	G
31	y	577	G
31	y	585	G
31	y	588	G
31	y	611	A
31	y	616	G

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Mol	Chain	Res	Type
31	y	617	G
31	y	619	U
31	y	623	C
31	y	627	G
31	y	630	G
31	y	631	G
31	y	633	G
31	y	641	U
31	y	643	C
31	y	650	G
31	y	652	U
31	y	653	A
31	y	661	G
31	y	672	U
31	y	673	G
31	y	678	U
31	y	687	A
31	y	688	G
31	y	689	C
31	y	693	G
31	y	697	U
31	y	701	C
31	y	702	A
31	y	703	G
31	y	704	A
31	y	705	U
31	y	718	G
31	y	724	G
31	y	725	G
31	y	733	A
31	y	741	G
31	y	747	C
31	y	748	C
31	y	749	C
31	y	750	G
31	y	752	G
31	y	753	A
31	y	755	G
31	y	759	A
31	y	770	C
31	y	771	G
31	y	772	U

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Mol	Chain	Res	Type
31	y	777	A
31	y	781	A
31	y	792	A
31	y	794	A
31	y	796	C
31	y	800	G
31	y	801	U
31	y	809	G
31	y	813	U
31	y	814	A
31	y	815	A
31	y	816	A
31	y	817	C
31	y	818	G
31	y	820	U
31	y	828	A
31	y	833	U
31	y	841	U
31	y	842	C
31	y	843	U
31	y	848	C
31	y	852	G
31	y	863	U
31	y	870	U
31	y	871	U
31	y	872	A
31	y	873	A
31	y	874	G
31	y	876	G
31	y	885	G
31	y	889	A
31	y	890	G
31	y	900	A
31	y	902	G
31	y	905	U
31	y	910	C
31	y	913	A
31	y	914	A
31	y	916	G
31	y	926	G
31	y	927	G
31	y	928	G

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Mol	Chain	Res	Type
31	y	934	C
31	y	936	C
31	y	939	G
31	y	942	G
31	y	947	G
31	y	948	C
31	y	956	U
31	y	958	A
31	y	960	U
31	y	961	U
31	y	964	A
31	y	965	A
31	y	966	M2G
31	y	967	5MC
31	y	968	A
31	y	969	A
31	y	972	C
31	y	974	A
31	y	975	A
31	y	976	G
31	y	977	A
31	y	978	A
31	y	982	U
31	y	983	A
31	y	991	U
31	y	992	U
31	y	993	G
31	y	995	C
31	y	998(A)	G
31	y	1002	G
31	y	1004	A
31	y	1005	A
31	y	1013	G
31	y	1014	A
31	y	1016	A
31	y	1020	U
31	y	1024	G
31	y	1025	U
31	y	1026	G
31	y	1027	C
31	y	102(A)	C
31	y	102(C)	C

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Mol	Chain	Res	Type
31	y	1029	G
31	y	1030	C
31	y	1042	G
31	y	1050	G
31	y	1053	G
31	y	1054	C
31	y	1055	A
31	y	1062	U
31	y	1064	G
31	y	1065	U
31	y	1066	C
31	y	1068	G
31	y	1070	U
31	y	1078	U
31	y	1079	G
31	y	1080	A
31	y	1081	G
31	y	1085	U
31	y	1086	U
31	y	1089	G
31	y	1090	U
31	y	1094	G
31	y	1095	U
31	y	1101	A
31	y	1102	A
31	y	1104	G
31	y	1108	G
31	y	1109	C
31	y	1114	C
31	y	1118	C
31	y	1126	U
31	y	1127	G
31	y	1130	A
31	y	1136	U
31	y	1137	C
31	y	1139	G
31	y	1140	C
31	y	1142	G
31	y	1143	G
31	y	1144	G
31	y	1146	A
31	y	1152	A

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Mol	Chain	Res	Type
31	y	1154	G
31	y	1157	A
31	y	1158	C
31	y	1159	U
31	y	1162	C
31	y	1167	A
31	y	1175	G
31	y	1176	A
31	y	1178	G
31	y	1179	A
31	y	1184	G
31	y	1188	A
31	y	1190	G
31	y	1196	U
31	y	1197	G
31	y	1198	G
31	y	1200	C
31	y	1202	G
31	y	1203	C
31	y	1207	2MG
31	y	1208	C
31	y	1209	C
31	y	1211	U
31	y	1212	U
31	y	1213	A
31	y	1215	G
31	y	1221	G
31	y	1225	A
31	y	1226	C
31	y	1227	A
31	y	1233	G
31	y	1235	U
31	y	1237	C
31	y	1238	A
31	y	1239	A
31	y	1240	U
31	y	1241	G
31	y	1243	C
31	y	1247	U
31	y	1248	A
31	y	1251	A
31	y	1253	G

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Mol	Chain	Res	Type
31	y	1256	A
31	y	1257	U
31	y	1261	A
31	y	1263	C
31	y	1267	C
31	y	1269	A
31	y	1270	C
31	y	1278	U
31	y	1280	A
31	y	1282	C
31	y	1283	G
31	y	1285	A
31	y	1286	A
31	y	1290	G
31	y	1291	G
31	y	1294	G
31	y	1297	C
31	y	1298	C
31	y	1299	A
31	y	1300	G
31	y	1301	U
31	y	1302	U
31	y	1303	C
31	y	1306	A
31	y	1308	U
31	y	1309	G
31	y	1319	A
31	y	1320	C
31	y	1323	G
31	y	1324	A
31	y	1325	C
31	y	1331	G
31	y	1333	A
31	y	1335	C
31	y	1340	A
31	y	1345	U
31	y	1346	A
31	y	1347	G
31	y	1348	U
31	y	1354	C
31	y	1359	C
31	y	1360	A

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Mol	Chain	Res	Type
31	y	1361	G
31	y	136(B)	C
31	y	1363	A
31	y	1364	U
31	y	1365	G
31	y	1366	C
31	y	1369	C
31	y	1378	C
31	y	1380	U
31	y	1381	U
31	y	1388	C
31	y	1394	A
31	y	1396	A
31	y	1397	C
31	y	1398	A
31	y	1400	5MC
31	y	1401	G
31	y	1402	C
31	y	1404	5MC
31	y	1405	G
31	y	1407	5MC
31	y	1408	A
31	y	1420	C
31	y	1426	C
31	y	1434	A
31	y	1442	G
31	y	1443	G
31	y	1446	A
31	y	1447	G
31	y	1451	A
31	y	1452	C
31	y	1454	G
31	y	1468	A
31	y	1471	G
31	y	1472	U
31	y	1475	G
31	y	1482	G
31	y	1490	C
31	y	1491	G
31	y	1492	A
31	y	1494	G
31	y	1495	U

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Mol	Chain	Res	Type
31	y	1498	U
31	y	1501	C
31	y	1502	A
31	y	1504	G
31	y	1505	G
31	y	1506	U
31	y	1507	A
31	y	1513	A
31	y	1517	G
31	y	1518	MA6
31	y	1519	MA6
31	y	1520	G
31	y	1521	G
31	y	1525	G
31	y	1527	C
31	y	1529	G
31	y	1530	G
31	y	1531	A
31	y	1532	U
31	y	1534	A
31	y	1535	C
32	z	9	G
32	z	16	C
32	z	17	C
32	z	17(A)	U
32	z	18	G
32	z	19	G
32	z	20	U
32	z	21	A
32	z	25	C
32	z	26	G
32	z	30	G
32	z	35	A
32	z	46	A
32	z	48	C
32	z	49	G
32	z	59	A
32	z	65	C
32	z	71	C
32	z	73	A
32	z	76	A
33	2	8	U

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Mol	Chain	Res	Type
33	2	9	A
33	2	10	G
33	2	14	A
33	2	15	G
33	2	16	U
33	2	17	U
33	2	18	G
33	2	20	G
33	2	21	A
33	2	22	G
33	2	35	A
33	2	36	A
33	2	40	C
33	2	47	U
33	2	48	C
33	2	55	PSU
33	2	61	C
33	2	67	A
33	2	73	A
33	2	75	C
33	2	76	A
34	3	3	G
34	3	6	G
34	3	12	A
34	3	13	A
34	3	16	A

There are no RNA pucker outliers to report.

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

11 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	$\#\|Z\|>2$
31	MA6	y	1518	31	23,26,27	1.75	6 (26%)	33,38,41	2.39	15 (45%)
31	M2G	y	966	31	24,27,28	1.19	3 (12%)	33,40,43	1.13	3 (9%)
33	PSU	2	55	33	18,21,22	1.84	3 (16%)	21,30,33	2.18	7 (33%)
31	5MC	y	1404	31	19,22,23	1.10	1 (5%)	26,32,35	1.51	4 (15%)
31	5MC	y	1400	31	19,22,23	0.97	1 (5%)	26,32,35	0.95	1 (3%)
31	7MG	y	527	31	23,26,27	2.86	4 (17%)	27,39,42	1.81	6 (22%)
31	5MC	y	1407	31	19,22,23	0.90	1 (5%)	26,32,35	1.27	3 (11%)
31	5MC	y	967	31	19,22,23	0.95	2 (10%)	26,32,35	1.28	3 (11%)
31	2MG	y	1207	31	23,26,27	1.40	3 (13%)	33,38,41	1.68	3 (9%)
31	PSU	y	516	31	18,21,22	2.04	4 (22%)	21,30,33	1.94	6 (28%)
31	MA6	y	1519	31	23,26,27	1.97	8 (34%)	33,38,41	2.56	17 (51%)

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
31	MA6	y	1518	31	-	2/11/29/30	0/3/3/3
31	M2G	y	966	31	-	2/11/29/30	0/3/3/3
33	PSU	2	55	33	-	2/7/25/26	0/2/2/2
31	5MC	y	1404	31	-	2/7/25/26	0/2/2/2
31	5MC	y	1400	31	-	0/7/25/26	0/2/2/2
31	7MG	y	527	31	-	0/7/37/38	0/3/3/3
31	5MC	y	1407	31	-	0/7/25/26	0/2/2/2
31	5MC	y	967	31	-	0/7/25/26	0/2/2/2
31	2MG	y	1207	31	-	2/9/27/28	0/3/3/3
31	PSU	y	516	31	-	0/7/25/26	0/2/2/2
31	MA6	y	1519	31	-	3/11/29/30	0/3/3/3

All (36) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	y	527	7MG	C8-N9	-12.42	1.37	1.45
33	2	55	PSU	O2-C2	5.14	1.34	1.23
31	y	516	PSU	O2-C2	5.00	1.34	1.23
31	y	516	PSU	C6-C5	4.82	1.40	1.35
33	2	55	PSU	C6-C5	4.35	1.40	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	y	1519	MA6	C10-N6	4.23	1.55	1.45
31	y	1207	2MG	C2-N1	4.06	1.43	1.36
31	y	1518	MA6	C6-N1	3.62	1.41	1.34
31	y	1207	2MG	C6-N1	3.40	1.45	1.38
31	y	1519	MA6	C6-N1	3.33	1.40	1.34
31	y	1518	MA6	C5-N7	-3.23	1.33	1.39
31	y	1519	MA6	C5-C6	3.16	1.49	1.41
33	2	55	PSU	C2-N1	3.07	1.40	1.36
31	y	966	M2G	C2-N1	3.06	1.43	1.36
31	y	1519	MA6	C9-N6	3.02	1.52	1.45
31	y	1518	MA6	C5-C6	3.00	1.49	1.41
31	y	516	PSU	C2-N1	2.99	1.40	1.36
31	y	966	M2G	C6-N1	2.92	1.44	1.38
31	y	1519	MA6	O4'-C1'	2.79	1.48	1.42
31	y	1518	MA6	C5-C4	2.77	1.44	1.39
31	y	527	7MG	C6-N1	2.74	1.44	1.38
31	y	1518	MA6	C6-N6	2.66	1.44	1.36
31	y	967	5MC	C5-C4	-2.63	1.42	1.44
31	y	1404	5MC	C4-N4	2.63	1.40	1.34
31	y	1407	5MC	C4-N4	2.60	1.40	1.34
31	y	1400	5MC	C4-N4	2.55	1.40	1.34
31	y	527	7MG	C5-N7	2.51	1.38	1.35
31	y	516	PSU	C2'-C1'	2.50	1.57	1.53
31	y	1519	MA6	C5-N7	-2.42	1.34	1.39
31	y	967	5MC	C4-N4	2.34	1.40	1.34
31	y	1207	2MG	CM2-N2	2.27	1.49	1.45
31	y	1519	MA6	C8-N7	2.26	1.36	1.31
31	y	527	7MG	C8-N7	-2.13	1.32	1.42
31	y	1518	MA6	C10-N6	2.05	1.50	1.45
31	y	966	M2G	C2-N2	2.04	1.38	1.35
31	y	1519	MA6	C5-C4	2.04	1.42	1.39

All (68) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
31	y	1519	MA6	C2'-C1'-N9	-6.58	96.96	113.30
31	y	527	7MG	N9-C8-N7	6.39	112.42	103.37
31	y	1207	2MG	C4'-O4'-C1'	-6.15	95.89	109.47
31	y	1518	MA6	N1-C6-N6	5.53	123.59	116.86
33	2	55	PSU	N1-C2-N3	5.10	120.55	115.17
31	y	1518	MA6	C5-C4-N3	-5.08	119.72	126.72
31	y	1519	MA6	C5-C4-N3	-4.55	120.45	126.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
31	y	516	PSU	N1-C2-N3	4.51	119.93	115.17
33	2	55	PSU	C4-N3-C2	-4.48	120.19	126.37
31	y	1518	MA6	N3-C4-N9	4.45	134.74	127.17
31	y	516	PSU	C4-N3-C2	-3.95	120.94	126.37
31	y	1207	2MG	C2-N3-C4	3.84	116.80	112.00
31	y	1519	MA6	C2-N3-C4	3.75	120.98	111.83
31	y	1519	MA6	N1-C6-N6	3.63	121.28	116.86
31	y	1518	MA6	C2-N3-C4	3.56	120.52	111.83
31	y	1519	MA6	O4'-C1'-N9	3.54	114.89	108.09
31	y	1519	MA6	C2-N1-C6	3.51	120.40	111.83
31	y	1519	MA6	N3-C4-N9	3.49	133.10	127.17
31	y	1518	MA6	C5-C6-N6	-3.46	119.86	125.33
31	y	1518	MA6	C2-N1-C6	3.46	120.27	111.83
31	y	1519	MA6	N1-C2-N3	-3.36	123.50	128.58
33	2	55	PSU	C3'-C2'-C1'	3.36	105.65	101.69
31	y	1519	MA6	N9-C8-N7	-3.32	109.23	113.94
31	y	1207	2MG	CM2-N2-C2	-3.28	116.59	123.65
31	y	516	PSU	C6-N1-C2	-3.25	119.68	122.69
31	y	1404	5MC	C1'-N1-C6	-3.21	115.87	121.15
31	y	1404	5MC	C1'-N1-C2	3.15	125.41	118.44
33	2	55	PSU	C6-N1-C2	-3.14	119.78	122.69
31	y	1519	MA6	C3'-C2'-C1'	3.08	107.28	101.46
31	y	967	5MC	CM5-C5-C6	-3.06	118.70	122.85
31	y	527	7MG	C4-C5-N7	3.04	108.97	105.38
31	y	1518	MA6	N1-C2-N3	-2.99	124.06	128.58
31	y	1519	MA6	C4-N9-C8	2.96	108.84	105.74
31	y	516	PSU	C4'-O4'-C1'	-2.92	101.13	108.44
31	y	527	7MG	C2-N3-C4	2.91	117.31	112.30
33	2	55	PSU	O2-C2-N1	-2.90	119.80	122.79
31	y	1518	MA6	C3'-C2'-C1'	2.88	106.91	101.46
31	y	1518	MA6	C4-C5-C6	2.88	118.89	115.91
31	y	1519	MA6	C2'-C3'-C4'	2.85	108.11	102.61
31	y	1518	MA6	O4'-C4'-C5'	2.72	118.04	109.33
31	y	516	PSU	O2-C2-N1	-2.69	120.01	122.79
31	y	966	M2G	O3'-C3'-C2'	2.69	120.44	111.82
31	y	1519	MA6	C5-N7-C8	2.69	107.67	103.45
33	2	55	PSU	C6-C5-C4	2.64	119.95	118.17
31	y	967	5MC	C3'-C2'-C1'	2.64	106.45	101.46
31	y	527	7MG	N9-C4-N3	2.58	129.25	125.46
31	y	1518	MA6	C5-N7-C8	2.53	107.43	103.45
31	y	1407	5MC	CM5-C5-C6	-2.52	119.44	122.85
31	y	1404	5MC	C4'-O4'-C1'	-2.47	104.01	109.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
31	y	1404	5MC	CM5-C5-C6	-2.47	119.51	122.85
31	y	1519	MA6	C4-C5-N7	-2.43	107.80	110.58
31	y	1519	MA6	C1'-N9-C8	-2.37	121.85	127.09
31	y	527	7MG	C5-C4-N3	-2.35	123.72	128.13
31	y	1519	MA6	C5-C6-N6	-2.33	121.64	125.33
31	y	1407	5MC	C3'-C2'-C1'	2.33	105.87	101.46
31	y	966	M2G	C3'-C2'-C1'	2.32	105.86	101.46
31	y	527	7MG	C4'-O4'-C1'	-2.31	104.36	109.47
31	y	1407	5MC	C2'-C1'-N1	-2.31	106.82	113.25
31	y	966	M2G	C2-N3-C4	2.26	116.68	112.51
31	y	1518	MA6	C1'-N9-C8	-2.25	122.09	127.09
31	y	1519	MA6	C10-N6-C9	2.22	123.31	116.18
31	y	967	5MC	C1'-N1-C6	-2.15	117.60	121.15
31	y	1400	5MC	O3'-C3'-C4'	2.12	117.16	111.08
31	y	1518	MA6	N9-C8-N7	-2.10	110.96	113.94
33	2	55	PSU	C5'-C4'-C3'	-2.08	107.74	115.21
31	y	1518	MA6	C5'-C4'-C3'	-2.06	107.79	115.21
31	y	1518	MA6	O4'-C4'-C3'	2.03	109.19	105.15
31	y	516	PSU	O4'-C4'-C5'	2.01	115.77	109.33

There are no chirality outliers.

All (13) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
31	y	1518	MA6	O4'-C4'-C5'-O5'
31	y	1519	MA6	C5-C6-N6-C9
33	2	55	PSU	C2'-C1'-C5-C4
31	y	1518	MA6	C3'-C4'-C5'-O5'
31	y	966	M2G	O4'-C1'-N9-C8
31	y	966	M2G	O4'-C1'-N9-C4
31	y	1404	5MC	C2'-C1'-N1-C2
31	y	1404	5MC	C2'-C1'-N1-C6
33	2	55	PSU	O4'-C1'-C5-C4
31	y	1207	2MG	C2'-C1'-N9-C4
31	y	1207	2MG	O4'-C4'-C5'-O5'
31	y	1519	MA6	N1-C6-N6-C9
31	y	1519	MA6	C5-C6-N6-C10

There are no ring outliers.

11 monomers are involved in 47 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
31	y	1518	MA6	16	0
31	y	966	M2G	6	0
33	2	55	PSU	3	0
31	y	1404	5MC	4	0
31	y	1400	5MC	3	0
31	y	527	7MG	2	0
31	y	1407	5MC	6	0
31	y	967	5MC	5	0
31	y	1207	2MG	3	0
31	y	516	PSU	1	0
31	y	1519	MA6	5	0

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	w	35
31	y	9

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	w	41:C	O3'	43:G	P	2.13
1	w	1506:C	O3'	1508:A	P	2.09
1	w	489:G	O3'	491:G	P	2.08
1	w	1448(B):A	O3'	1449:G	P	2.07
1	w	436:C	O3'	438:G	P	2.05

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	w	554:U	O3'	556:G	P	2.05
1	w	1712:C	O3'	1716:U	P	2.04
1	w	1743:G	O3'	1746:G	P	2.04
1	w	366(B):C	O3'	370:G	P	2.03
1	w	890:A	O3'	892:G	P	2.03
1	w	2213:U	O3'	2215:G	P	2.03
1	w	2712(B):A	O3'	2713:A	P	2.03
1	w	155:C	O3'	161:U	P	2.02
1	w	926:A	O3'	928:G	P	2.02
1	w	99:U	O3'	101:G	P	2.01
1	w	1583:A	O3'	1585:C	P	2.01
1	w	1718:G	O3'	1725:G	P	2.01
1	w	1451:C	O3'	1453:A	P	1.99
1	w	1481:U	O3'	1483:G	P	1.99
1	w	1735:U	O3'	1741:C	P	1.99
1	w	537:C	O3'	539:G	P	1.98
1	w	1171:G	O3'	1173:G	P	1.97
1	w	1864:U	O3'	1869:G	P	1.97
1	w	1546(B):C	O3'	1547:C	P	1.96
1	w	1630(B):C	O3'	1631:A	P	1.96
1	w	1142(B):A	O3'	1143:A	P	1.95
1	w	1872:A	O3'	1878:G	P	1.95
1	w	2219:G	O3'	2224:G	P	1.95
1	w	165:U	O3'	171:G	P	1.94
1	w	1221(A):C	O3'	1222:C	P	1.94
1	w	1444(B):A	O3'	1445:C	P	1.93
1	w	1133:U	O3'	1135:C	P	1.91
1	y	201:C	O3'	208:U	P	1.89
1	w	2199:A	O3'	2205:C	P	1.87
1	y	97:U	O3'	99:C	P	1.83
1	w	2799:A	O3'	2801:A	P	1.81
1	w	2795:G	O3'	2797:U	P	1.79
1	y	99:C	O3'	101:A	P	1.79
1	y	103(C):G	O3'	1033:G	P	1.79
1	y	1455:G	O3'	1459:C	P	1.78
1	y	843:U	O3'	848:C	P	1.77
1	y	458:C	O3'	464:G	P	1.76
1	y	102(C):C	O3'	1029:G	P	1.76
1	y	136(B):C	O3'	1363:A	P	1.76

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, 95^{th} 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	w	2889/2889 (100%)	-0.41	183 (6%)	26	22	1, 1, 1, 1	0
2	x	120/120 (100%)	-0.78	3 (2%)	58	40	1, 1, 1, 1	0
3	A	127/229 (55%)	-0.84	5 (3%)	43	31	1, 1, 1, 1	0
4	B	272/276 (98%)	-0.37	13 (4%)	35	27	1, 1, 1, 1	0
5	C	201/206 (97%)	-0.17	17 (8%)	16	17	1, 1, 1, 1	0
6	D	194/205 (94%)	-0.50	8 (4%)	41	30	1, 1, 1, 1	0
7	E	180/182 (98%)	-0.64	4 (2%)	62	44	1, 1, 1, 1	0
8	F	173/180 (96%)	-0.91	5 (2%)	53	37	1, 1, 1, 1	0
9	G	148/148 (100%)	-0.97	2 (1%)	73	52	1, 1, 1, 1	0
10	H	138/140 (98%)	-0.57	4 (2%)	53	37	1, 1, 1, 1	0
11	I	122/122 (100%)	-0.45	5 (4%)	41	30	1, 1, 1, 1	0
12	J	146/150 (97%)	-0.51	7 (4%)	35	27	1, 1, 1, 1	0
13	K	137/141 (97%)	-0.24	12 (8%)	15	16	1, 1, 1, 1	0
14	L	118/118 (100%)	-0.91	2 (1%)	69	48	1, 1, 1, 1	0
15	M	106/112 (94%)	-0.45	7 (6%)	24	21	1, 1, 1, 1	0
16	N	137/146 (93%)	-0.60	0	100	100	1, 1, 1, 1	0
17	O	117/118 (99%)	-0.49	8 (6%)	23	21	1, 1, 1, 1	0
18	P	101/101 (100%)	-0.25	9 (8%)	15	16	1, 1, 1, 1	0
19	Q	109/113 (96%)	-0.40	8 (7%)	21	19	1, 1, 1, 1	0
20	R	92/96 (95%)	-0.63	2 (2%)	62	44	1, 1, 1, 1	0
21	S	103/110 (93%)	-0.50	3 (2%)	53	37	1, 1, 1, 1	0
22	T	185/206 (89%)	-0.72	8 (4%)	40	29	1, 1, 1, 1	0
23	U	76/85 (89%)	-0.53	4 (5%)	32	25	1, 1, 1, 1	0
24	V	88/98 (89%)	-0.49	2 (2%)	61	43	1, 1, 1, 1	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
25	W	62/72 (86%)	-0.73	1 (1%) 70 49	1, 1, 1, 1	0
26	X	60/60 (100%)	-0.69	2 (3%) 49 34	1, 1, 1, 1	0
27	Y	56/60 (93%)	-0.80	0 100 100	1, 1, 1, 1	0
28	Z	48/49 (97%)	-0.68	1 (2%) 63 44	1, 1, 1, 1	0
29	a	63/65 (96%)	-0.06	3 (4%) 35 27	1, 1, 1, 1	0
30	b	35/37 (94%)	0.69	6 (17%) 4 7	1, 1, 1, 1	0
31	y	1504/1522 (98%)	-0.40	101 (6%) 24 21	1, 1, 1, 1	0
32	z	77/77 (100%)	-0.26	7 (9%) 15 16	1, 1, 1, 1	0
33	2	75/76 (98%)	0.14	11 (14%) 6 9	1, 1, 1, 1	0
34	3	18/18 (100%)	2.00	4 (22%) 2 4	1, 1, 1, 1	0
35	c	234/256 (91%)	-0.72	8 (3%) 48 34	1, 1, 1, 1	0
36	d	206/239 (86%)	-0.62	9 (4%) 39 29	1, 1, 1, 1	0
37	e	208/209 (99%)	-0.61	8 (3%) 44 32	1, 1, 1, 1	0
38	f	150/162 (92%)	-0.29	12 (8%) 18 18	1, 1, 1, 1	0
39	g	101/101 (100%)	-0.69	1 (0%) 79 58	1, 1, 1, 1	0
40	h	155/156 (99%)	-0.61	3 (1%) 66 46	1, 1, 1, 1	0
41	i	138/138 (100%)	-0.83	5 (3%) 46 33	1, 1, 1, 1	0
42	j	127/128 (99%)	-0.14	12 (9%) 14 16	1, 1, 1, 1	0
43	k	98/105 (93%)	-0.38	6 (6%) 27 23	1, 1, 1, 1	0
44	l	116/129 (89%)	0.25	17 (14%) 6 9	1, 1, 1, 1	0
45	m	124/132 (93%)	-0.42	9 (7%) 21 19	1, 1, 1, 1	0
46	n	125/126 (99%)	0.05	18 (14%) 6 9	1, 1, 1, 1	0
47	o	60/61 (98%)	-0.48	2 (3%) 49 34	1, 1, 1, 1	0
48	p	88/89 (98%)	-0.83	2 (2%) 61 43	1, 1, 1, 1	0
49	q	83/88 (94%)	-0.55	1 (1%) 76 55	1, 1, 1, 1	0
50	r	104/105 (99%)	-0.61	1 (0%) 79 58	1, 1, 1, 1	0
51	s	81/88 (92%)	-0.92	2 (2%) 58 40	1, 1, 1, 1	0
52	t	80/93 (86%)	-0.81	2 (2%) 58 40	1, 1, 1, 1	0
53	u	99/106 (93%)	-0.52	3 (3%) 52 36	1, 1, 1, 1	0
54	v	24/27 (88%)	-0.02	2 (8%) 17 17	1, 1, 1, 1	0
All	All	10478/10865 (96%)	-0.47	580 (5%) 30 24	1, 1, 1, 1	0

All (580) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
34	3	7	G	17.0
31	y	145	G	11.8
1	w	1983	C	11.2
44	l	125	PHE	10.8
5	C	167	VAL	10.7
44	l	118	GLY	10.5
1	w	1116	C	10.3
1	w	1473	G	9.9
48	p	3	ILE	9.4
13	K	111	GLU	9.2
33	2	33	U	9.1
12	J	37	GLY	9.0
1	w	2820	A	8.8
44	l	126	ARG	8.7
31	y	1536	C	8.5
31	y	1535	C	8.5
31	y	731	G	8.5
1	w	1369	G	8.3
31	y	865	A	8.3
1	w	1067	A	8.0
11	I	69	VAL	8.0
15	M	9	ARG	7.9
44	l	75	TYR	7.9
38	f	13	ILE	7.8
38	f	14	ARG	7.8
18	P	74	LYS	7.8
31	y	144	G	7.6
31	y	818	G	7.6
34	3	6	G	7.5
1	w	1472	A	7.4
44	l	119	CYS	7.3
12	J	38	GLN	7.2
46	n	76	ALA	7.2
33	2	34	G	7.2
1	w	1977	A	7.1
31	y	136(A)	C	7.1
52	t	56	GLN	7.0
31	y	716	A	7.0
1	w	1808	U	6.9
1	w	1460	A	6.8
44	l	124	LYS	6.7
1	w	237	C	6.7

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Mol	Chain	Res	Type	RSRZ
33	2	28	C	6.6
1	w	989	G	6.6
31	y	874	G	6.6
23	U	16	SER	6.6
1	w	2600	A	6.6
46	n	126	LYS	6.6
31	y	146	G	6.5
38	f	29	GLY	6.5
31	y	1117	G	6.5
46	n	125	ARG	6.5
17	O	17	ILE	6.4
5	C	109	LYS	6.4
18	P	87	HIS	6.4
11	I	70	LYS	6.4
1	w	888	C	6.3
31	y	1079	G	6.3
38	f	15	ARG	6.3
46	n	72	ALA	6.2
44	l	115	PRO	6.2
42	j	116	LYS	6.2
42	j	123	PRO	6.2
1	w	1600	C	6.2
46	n	79	LYS	6.2
44	l	117	ASN	6.2
1	w	438	G	6.1
31	y	23	C	6.1
33	2	36	A	6.1
31	y	1187	G	5.9
19	Q	85	VAL	5.9
43	k	18	ALA	5.9
13	K	91	GLU	5.9
45	m	20	LYS	5.9
1	w	1098	A	5.8
24	V	26	ARG	5.7
1	w	1635	G	5.7
1	w	2161	C	5.6
37	e	76	ARG	5.6
13	K	112	GLU	5.6
31	y	863	U	5.6
1	w	2897	U	5.5
1	w	1115	G	5.5
31	y	1078	U	5.4

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Mol	Chain	Res	Type	RSRZ
13	K	32	PHE	5.4
1	w	2296	U	5.4
31	y	677	U	5.4
36	d	93	LYS	5.4
34	3	8	U	5.4
40	h	9	VAL	5.4
39	g	51	PRO	5.4
38	f	85	GLY	5.3
31	y	913	A	5.3
42	j	105	ASP	5.3
1	w	1979	C	5.2
46	n	89	GLY	5.2
1	w	1368	G	5.2
45	m	27	LYS	5.2
38	f	28	PHE	5.2
35	c	37	ASN	5.2
1	w	615	G	5.1
31	y	44	G	5.1
1	w	1099	G	5.1
42	j	13	ALA	5.1
19	Q	82	LEU	5.1
1	w	1266	G	5.1
1	w	1221	C	5.1
18	P	88	ARG	5.0
31	y	965	A	5.0
31	y	24	U	5.0
13	K	110	THR	5.0
1	w	820	A	5.0
31	y	394	G	5.0
1	w	1599	C	4.9
1	w	2314	C	4.9
31	y	866	C	4.9
1	w	1976	U	4.9
31	y	287	U	4.9
4	B	114	GLY	4.9
31	y	108	G	4.9
8	F	166	GLY	4.9
31	y	1363	A	4.9
5	C	160	TYR	4.8
31	y	864	A	4.8
1	w	518	G	4.8
30	b	8	LYS	4.8

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Mol	Chain	Res	Type	RSRZ
5	C	108	SER	4.8
3	A	177	GLY	4.8
1	w	653	C	4.8
40	h	8	GLU	4.8
30	b	13	LYS	4.7
45	m	19	LYS	4.7
31	y	715	A	4.7
17	O	14	HIS	4.7
52	t	57	HIS	4.7
18	P	86	GLY	4.7
1	w	2729	G	4.7
1	w	2260	C	4.7
44	l	13	GLN	4.7
7	E	119	GLY	4.7
42	j	115	GLY	4.7
17	O	16	LYS	4.6
49	q	70	ALA	4.6
31	y	134	A	4.6
31	y	262	A	4.6
46	n	123	ALA	4.6
18	P	76	LYS	4.6
1	w	129	C	4.6
1	w	436	C	4.6
1	w	1040	C	4.6
1	w	2599	G	4.5
31	y	743	U	4.5
31	y	997	U	4.5
1	w	236	C	4.5
1	w	85	G	4.5
1	w	2399	G	4.5
42	j	75	ASP	4.4
1	w	2012	G	4.4
1	w	2400	G	4.4
1	w	2728	U	4.4
1	w	990	A	4.4
44	l	12	ARG	4.4
12	J	35	HIS	4.4
1	w	1591	G	4.4
1	w	1834	U	4.4
1	w	1348	G	4.4
1	w	2731	G	4.4
20	R	34	ALA	4.4

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Mol	Chain	Res	Type	RSRZ
31	y	1534	A	4.4
36	d	45	LYS	4.4
1	w	508	G	4.3
31	y	184	G	4.3
44	l	114	VAL	4.3
1	w	1097	U	4.3
31	y	1342	C	4.3
38	f	128	PRO	4.3
53	u	51	GLU	4.3
31	y	698	G	4.3
32	z	70	G	4.3
1	w	270(V)	C	4.3
1	w	2398	U	4.3
4	B	115	GLN	4.2
1	w	70	G	4.2
1	w	240	G	4.2
1	w	1117	G	4.2
34	3	18	C	4.2
1	w	75	G	4.2
31	y	531	U	4.2
1	w	1809	A	4.2
41	i	53	VAL	4.2
5	C	166	THR	4.2
46	n	75	ALA	4.2
46	n	86	CYS	4.1
1	w	1184	G	4.1
1	w	1980	G	4.1
1	w	1978	A	4.1
1	w	2274	A	4.1
12	J	48	PRO	4.1
43	k	14	LYS	4.1
9	G	59	ALA	4.1
31	y	697	U	4.1
38	f	12	LEU	4.1
1	w	242	G	4.1
5	C	104	VAL	4.1
54	v	14	TRP	4.1
31	y	730	G	4.1
31	y	1186	G	4.0
44	l	121	PRO	4.0
13	K	78	PRO	4.0
1	w	1636	C	4.0

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Mol	Chain	Res	Type	RSRZ
19	Q	83	LYS	4.0
33	2	65	G	4.0
18	P	73	SER	3.9
13	K	80	GLU	3.9
1	w	1474	C	3.9
1	w	1592	C	3.9
1	w	521	G	3.9
1	w	1835	G	3.9
36	d	41	GLY	3.9
1	w	130	C	3.9
25	W	19	VAL	3.9
38	f	127	ASN	3.9
45	m	21	SER	3.9
41	i	90	GLY	3.8
45	m	28	GLY	3.8
33	2	29	A	3.8
19	Q	19	LEU	3.8
1	w	73	A	3.8
1	w	1041	C	3.8
44	l	113	PRO	3.8
4	B	149	PRO	3.8
1	w	1043	C	3.8
1	w	1692	U	3.8
31	y	12	U	3.8
33	2	16	U	3.8
36	d	89	GLU	3.7
35	c	175	ARG	3.7
5	C	161	GLY	3.7
22	T	64	GLY	3.7
42	j	117	HIS	3.7
12	J	36	LYS	3.7
38	f	87	SER	3.7
1	w	2730	C	3.7
1	w	1769	G	3.7
31	y	416	G	3.7
6	D	157	LEU	3.7
1	w	654	U	3.6
54	v	16	GLY	3.6
19	Q	97	LYS	3.6
46	n	74	VAL	3.6
13	K	131	ILE	3.6
1	w	2145	C	3.6

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Mol	Chain	Res	Type	RSRZ
1	w	282	A	3.6
31	y	977	A	3.6
1	w	2492	U	3.6
1	w	2248	C	3.6
36	d	39	ILE	3.6
37	e	71	SER	3.6
19	Q	95	ILE	3.5
31	y	43	C	3.5
45	m	25	ALA	3.5
31	y	727	G	3.5
31	y	180	U	3.5
17	O	20	LEU	3.5
31	y	225	C	3.5
31	y	934	C	3.5
1	w	1759	A	3.5
32	z	74	C	3.5
36	d	42	LEU	3.5
21	S	30	VAL	3.5
1	w	364	C	3.5
1	w	2178	C	3.5
1	w	2461	C	3.5
46	n	124	PRO	3.5
31	y	1364	U	3.4
37	e	72	GLU	3.4
1	w	134	C	3.4
1	w	71	A	3.4
5	C	114	ALA	3.4
30	b	7	VAL	3.4
42	j	125	TYR	3.4
31	y	1184	G	3.4
12	J	60	MET	3.4
53	u	46	GLU	3.4
1	w	2843	G	3.4
31	y	577	G	3.4
1	w	2045	C	3.4
1	w	2678	C	3.4
1	w	241	A	3.4
1	w	1829	A	3.4
1	w	1093	G	3.3
31	y	861	G	3.3
33	2	20	G	3.3
31	y	18	C	3.3

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Mol	Chain	Res	Type	RSRZ
31	y	369	C	3.3
33	2	32	C	3.3
45	m	26	LEU	3.3
53	u	45	GLN	3.3
1	w	531	C	3.3
1	w	1807	G	3.3
1	w	2315	G	3.3
15	M	10	ARG	3.2
6	D	34	TRP	3.2
1	w	1679	U	3.2
1	w	1202	C	3.2
5	C	110	GLY	3.2
46	n	85	GLY	3.2
10	H	111	GLU	3.2
11	I	9	GLU	3.2
1	w	238	C	3.2
1	w	991	C	3.2
21	S	34	LYS	3.2
1	w	2857	G	3.2
3	A	39	ASP	3.2
35	c	14	GLY	3.2
29	a	27	THR	3.2
46	n	84	ILE	3.2
22	T	80	ARG	3.2
36	d	38	ARG	3.2
14	L	60	LEU	3.2
13	K	90	VAL	3.2
4	B	96	HIS	3.2
1	w	382	G	3.2
44	l	87	THR	3.2
1	w	772	C	3.1
15	M	83	LYS	3.1
1	w	112	U	3.1
44	l	123	LYS	3.1
1	w	2247	A	3.1
1	w	1761	C	3.1
31	y	135	C	3.1
31	y	395	C	3.1
31	y	136(B)	C	3.1
17	O	36	ARG	3.1
13	K	115	MET	3.1
7	E	159	VAL	3.1

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Mol	Chain	Res	Type	RSRZ
31	y	714	G	3.1
2	x	91	C	3.1
42	j	104	ARG	3.1
5	C	168	MET	3.1
1	w	2361	A	3.1
31	y	817	C	3.1
1	w	2898	U	3.0
5	C	189	PRO	3.0
38	f	16	THR	3.0
15	M	11	LYS	3.0
17	O	50	ARG	3.0
31	y	996	A	3.0
1	w	1118	C	3.0
46	n	73	GLU	3.0
1	w	271(D)	U	3.0
22	T	9	TYR	3.0
24	V	27	GLU	3.0
43	k	61	GLU	3.0
37	e	29	PRO	2.9
29	a	26	LYS	2.9
1	w	1982	C	2.9
1	w	2258	C	2.9
41	i	91	ARG	2.9
37	e	74	GLN	2.9
1	w	1633	G	2.9
1	w	2162	G	2.9
31	y	132	C	2.9
14	L	3	HIS	2.9
38	f	83	GLU	2.9
31	y	611	A	2.9
33	2	64	A	2.9
1	w	1958	C	2.9
1	w	1990	C	2.9
30	b	9	ARG	2.9
35	c	21	ARG	2.9
4	B	34	VAL	2.8
36	d	189	ALA	2.8
1	w	2896	C	2.8
31	y	862	C	2.8
5	C	111	ARG	2.8
46	n	69	GLU	2.8
46	n	68	GLY	2.8

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Mol	Chain	Res	Type	RSRZ
31	y	179	A	2.8
1	w	1680	U	2.8
2	x	14	U	2.8
1	w	1836	C	2.8
1	w	58	G	2.8
1	w	1760	A	2.8
1	w	2601	C	2.8
15	M	70	GLY	2.8
42	j	76	ALA	2.8
1	w	952	G	2.8
19	Q	96	ILE	2.8
3	A	219	MET	2.8
22	T	79	ARG	2.7
1	w	2128	C	2.7
31	y	1119	C	2.7
32	z	71	C	2.7
33	2	74	C	2.7
1	w	778	G	2.7
8	F	61	HIS	2.7
31	y	325	A	2.7
6	D	60	TRP	2.7
48	p	2	PRO	2.7
13	K	92	GLY	2.7
1	w	133	C	2.7
31	y	1118	C	2.7
29	a	19	SER	2.7
1	w	450	G	2.7
1	w	1252	G	2.7
31	y	799	G	2.7
26	X	21	ALA	2.7
21	S	29	GLU	2.7
51	s	9	LYS	2.7
1	w	2858	C	2.7
8	F	165	ALA	2.6
31	y	250	A	2.6
4	B	113	VAL	2.6
4	B	78	LYS	2.6
1	w	256	A	2.6
1	w	359	A	2.6
30	b	14	CYS	2.6
1	w	43	G	2.6
1	w	1643	G	2.6

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Mol	Chain	Res	Type	RSRZ
1	w	2334	G	2.6
50	r	5	VAL	2.6
45	m	18	ARG	2.6
1	w	691	C	2.6
37	e	95	GLY	2.6
1	w	239	U	2.6
32	z	47	U	2.6
19	Q	86	LEU	2.6
31	y	867	G	2.6
28	Z	10	ARG	2.6
31	y	1383	C	2.6
35	c	22	LYS	2.6
1	w	1349	A	2.6
1	w	2679	A	2.6
31	y	873	A	2.6
4	B	268	ARG	2.5
6	D	127	VAL	2.5
1	w	944	G	2.5
1	w	69	C	2.5
31	y	1116	C	2.5
3	A	192	ALA	2.5
10	H	135	LEU	2.5
17	O	39	LEU	2.5
1	w	2021	C	2.5
1	w	1632	A	2.5
31	y	288	A	2.5
4	B	45	ASN	2.5
42	j	119	ALA	2.5
22	T	62	PRO	2.5
4	B	110	GLY	2.5
45	m	61	SER	2.5
5	C	188	VAL	2.5
1	w	645	C	2.5
1	w	522	G	2.5
1	w	2493	U	2.5
31	y	819	A	2.5
22	T	63	ASP	2.5
30	b	12	ASP	2.5
42	j	100	GLY	2.4
1	w	2510	C	2.4
11	I	80	ASP	2.4
32	z	3	C	2.4

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Mol	Chain	Res	Type	RSRZ
1	w	943	U	2.4
1	w	270(U)	G	2.4
1	w	2859	G	2.4
31	y	393	A	2.4
46	n	70	LEU	2.4
51	s	77	GLY	2.4
18	P	72	VAL	2.4
5	C	5	LEU	2.4
1	w	773	U	2.4
1	w	1630(B)	C	2.4
31	y	717	C	2.4
1	w	2126	A	2.4
1	w	72	U	2.4
1	w	1590	U	2.4
1	w	2180	U	2.4
1	w	2462	U	2.4
1	w	270(T)	G	2.4
1	w	1068	G	2.4
4	B	214	TRP	2.4
15	M	73	LEU	2.4
41	i	58	TYR	2.4
1	w	1033	U	2.3
12	J	40	SER	2.3
1	w	2459	A	2.3
5	C	195	LEU	2.3
31	y	131	C	2.3
31	y	578	C	2.3
31	y	816	A	2.3
1	w	1051	G	2.3
43	k	12	ASP	2.3
8	F	56	SER	2.3
7	E	181	ARG	2.3
1	w	1185	C	2.3
2	x	12	C	2.3
5	C	162	ALA	2.3
31	y	806	C	2.3
31	y	1152	A	2.3
4	B	116	GLN	2.3
31	y	1344	C	2.3
1	w	1666	G	2.3
31	y	107	G	2.3
8	F	127	GLU	2.3

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Mol	Chain	Res	Type	RSRZ
1	w	779	U	2.3
11	I	10	VAL	2.3
17	O	13	LYS	2.3
1	w	253	C	2.3
1	w	2179	C	2.3
46	n	83	ASP	2.3
31	y	631	G	2.3
31	y	941	G	2.3
35	c	13	ALA	2.3
15	M	8	GLU	2.3
37	e	163	GLU	2.3
23	U	19	LYS	2.3
26	X	17	LYS	2.3
35	c	38	GLY	2.3
36	d	190	ARG	2.3
1	w	1984	G	2.2
1	w	2259	G	2.2
1	w	2308	G	2.2
3	A	195	ARG	2.2
4	B	218	ARG	2.2
22	T	39	VAL	2.2
7	E	49	ASP	2.2
43	k	13	HIS	2.2
1	w	1969	A	2.2
31	y	10	A	2.2
31	y	653	A	2.2
40	h	11	GLN	2.2
37	e	3	ARG	2.2
44	l	122	LYS	2.2
10	H	156	GLN	2.2
1	w	1225	G	2.2
23	U	74	ARG	2.2
31	y	550	G	2.2
1	w	449	A	2.2
6	D	172	ALA	2.2
20	R	10	ALA	2.2
13	K	79	LEU	2.2
18	P	95	LEU	2.2
43	k	19	SER	2.2
9	G	60	GLU	2.2
35	c	231	GLU	2.2
1	w	2598	A	2.2

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Mol	Chain	Res	Type	RSRZ
31	y	1185	G	2.2
1	w	2043	C	2.2
31	y	545	C	2.2
31	y	1267	C	2.2
1	w	2596	U	2.1
23	U	14	ARG	2.1
31	y	551	U	2.1
31	y	676	A	2.1
31	y	935	A	2.1
31	y	964	A	2.1
1	w	1758	G	2.1
1	w	2677	G	2.1
31	y	713	G	2.1
6	D	94	TYR	2.1
1	w	614	U	2.1
6	D	128	ASN	2.1
1	w	1833	U	2.1
1	w	575	A	2.1
1	w	1253	A	2.1
44	l	11	LYS	2.1
32	z	2	G	2.1
41	i	52	ASP	2.1
22	T	82	ARG	2.1
1	w	2866	U	2.1
5	C	55	ASN	2.1
31	y	729	A	2.0
31	y	814	A	2.0
47	o	49	HIS	2.0
6	D	170	THR	2.0
32	z	75	C	2.0
31	y	399	G	2.0
47	o	15	LYS	2.0
10	H	134	PRO	2.0
18	P	75	PHE	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, 95^{th} 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
33	PSU	2	55	20/21	0.94	0.10	1,1,1,1	0
31	7MG	y	527	24/25	0.98	0.13	1,1,1,1	0
31	M2G	y	966	25/26	0.98	0.07	1,1,1,1	0
31	5MC	y	1400	21/22	0.98	0.12	1,1,1,1	0
31	5MC	y	1404	21/22	0.98	0.10	1,1,1,1	0
31	PSU	y	516	20/21	0.98	0.07	1,1,1,1	0
31	5MC	y	1407	21/22	0.99	0.06	1,1,1,1	0
31	MA6	y	1518	24/25	0.99	0.04	1,1,1,1	0
31	MA6	y	1519	24/25	0.99	0.05	1,1,1,1	0
31	5MC	y	967	21/22	0.99	0.08	1,1,1,1	0
31	2MG	y	1207	24/25	1.00	0.03	1,1,1,1	0

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

There are no ligands in this entry.

6.5 Other polymers (i)

There are no such residues in this entry.