Full wwPDB X-ray Structure Validation Report ⓘ

Mar 9, 2026 – 10:35 PM UTC

PDB ID	:	3DLL / pdb_00003dll
Title	:	The oxazolidinone antibiotics perturb the ribosomal peptidyl-transferase center and effect tRNA positioning
Authors	:	Wilson, D.N.; Schluenzen, F.; Harms, J.M.; Starosta, A.L.; Connell, S.R.; Fucini, P.
Deposited on	:	2008-06-27
Resolution	:	3.50 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

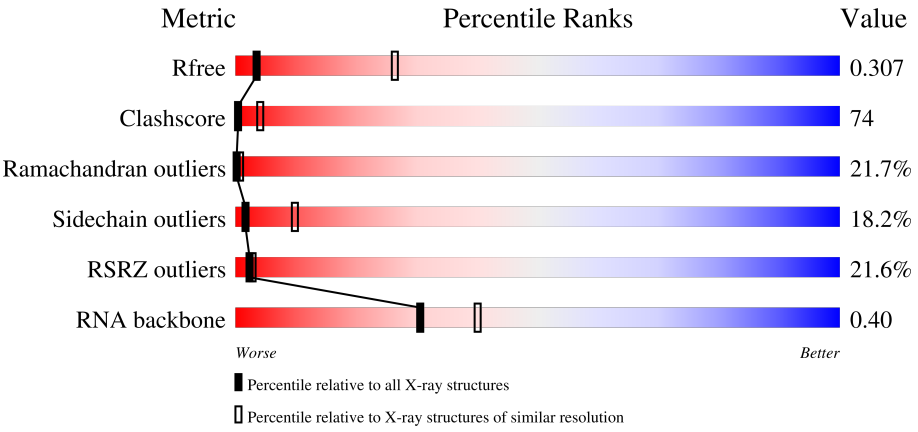
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal 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 3.50 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1085 (3.54-3.46)
Clashscore	190562	1140 (3.54-3.46)
Ramachandran outliers	187476	1113 (3.54-3.46)
Sidechain outliers	187428	1114 (3.54-3.46)
RSRZ outliers	180081	1084 (3.54-3.46)
RNA backbone	3983	1010 (3.98-3.02)

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	X	2880	23% 11% 52% 21% 9% 7%
2	Z	123	46% 21% 57% 20% ••
3	A	274	14% 5% 43% 27% 5% 20%

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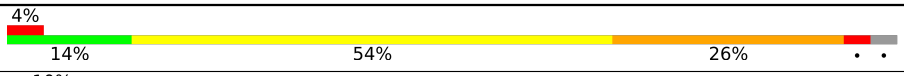
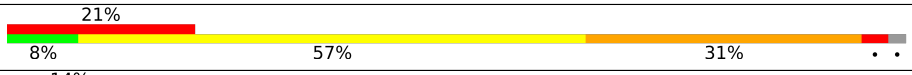
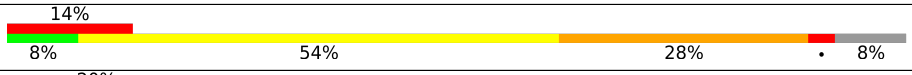
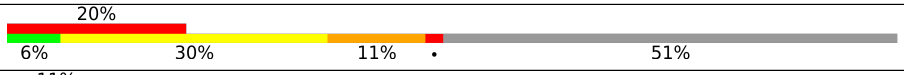
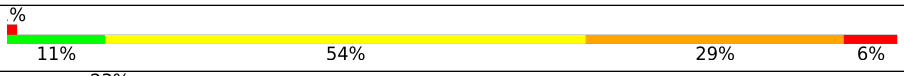
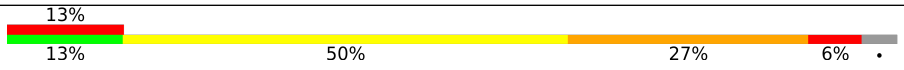
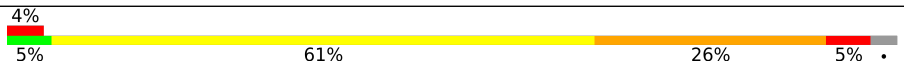
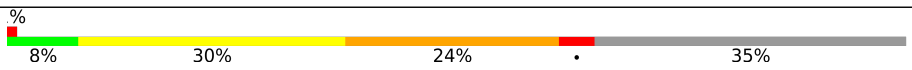
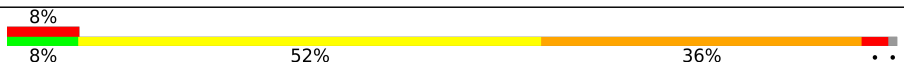
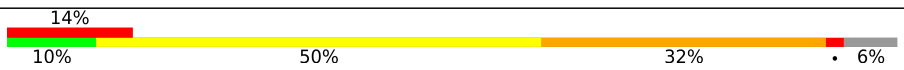
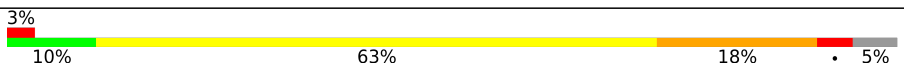
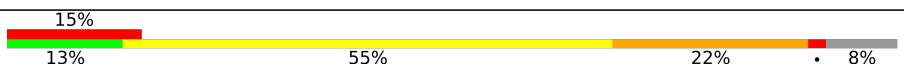
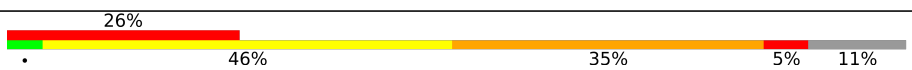
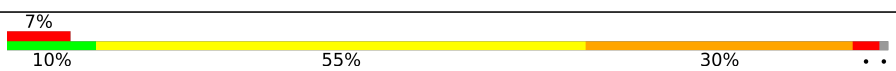
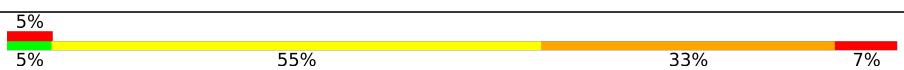
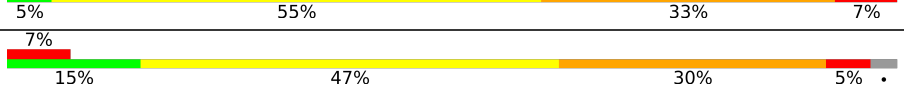
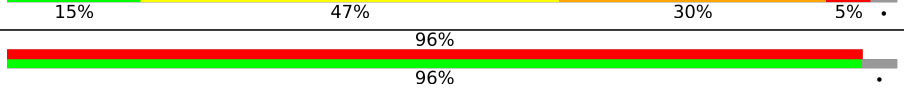
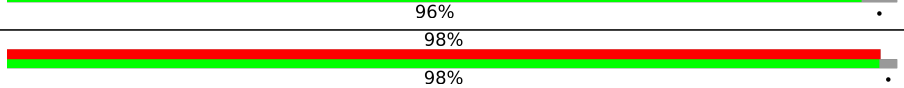
Mol	Chain	Length	Quality of chain
4	B	211	
5	C	205	
6	D	180	
7	E	185	
8	F	144	
9	G	174	
10	H	134	
11	I	156	
12	J	142	
13	K	116	
14	L	114	
15	M	166	
16	N	118	
17	O	100	
18	P	134	
19	Q	95	
20	R	115	
21	S	237	
22	T	91	
23	U	81	
24	V	67	
25	W	55	
26	Y	60	
27	1	55	
28	2	47	

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Mol	Chain	Length	Quality of chain
29	3	66	95% 92% 5%
30	4	37	22% 5% 76% 19%

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	MG	M	167	-	-	-	X
31	MG	X	2882	-	-	-	X
31	MG	X	2898	-	-	-	X
31	MG	X	2902	-	-	-	X
31	MG	X	2907	-	-	-	X
31	MG	X	2908	-	-	-	X
32	ZLD	X	2911	-	-	X	-

2 Entry composition (i)

There are 33 unique types of molecules in this entry. The entry contains 83657 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 rRNA-23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	X	2686	57651	25718	10642	18606	2685	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
2	Z	122	2598	1161	476	840	121	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	A	218	1637	1017	326	292	2	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	B	205	1539	965	295	271	8	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
5	C	197	1506	935	287	282	2	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
6	D	177	1400	892	247	254	7	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	E	171	Total	C	N	O	S	0	0	0
			1286	812	237	236	1			

- Molecule 8 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	F	70	Total	C	N	O	S	0	0	0
			504	314	90	97	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	G	142	Total	C	N	O	S	0	0	0
			1114	704	209	198	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	H	134	Total	C	N	O	S	0	0	0
			997	614	198	180	5			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
11	I	141	Total	C	N	O	0	0	0
			1067	655	216	196			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	J	136	Total	C	N	O	S	0	0	0
			1090	696	202	185	7			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
J	1	MET	-	initiating methionine	UNP Q9RXJ5

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	K	113	Total 878	C 541	N 178	O 157	S 2	0	0	0

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
14	L	104	Total 779	C 476	N 161	O 142	0	0	0

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
15	M	108	Total 871	C 543	N 172	O 156	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	N	117	Total 978	C 608	N 210	O 159	S 1	0	0	0

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
17	O	94	Total 741	C 465	N 139	O 137	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	P	127	Total 1014	C 639	N 199	O 174	S 2	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	Q	93	Total 726	C 458	N 136	O 130	S 2	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	R	110	Total	C	N	O	S	0	0	0
			825	513	160	151	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	S	175	Total	C	N	O	S	0	0	0
			1345	849	236	254	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	T	84	Total	C	N	O	S	0	0	0
			625	393	122	109	1			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
23	U	72	Total	C	N	O	0	0	0
			552	341	116	95			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	V	66	Total	C	N	O	S	0	0	0
			533	327	107	96	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	W	55	Total	C	N	O	S	0	0	0
			424	264	82	76	2			

- Molecule 26 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	Y	58	Total	C	N	O	S	0	0	0
			457	281	94	77	5			

- Molecule 27 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
27	1	53	Total C 53 53	0	0	53

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
28	2	46	Total C 46 46	0	0	46

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
29	3	63	Total C 63 63	0	0	63

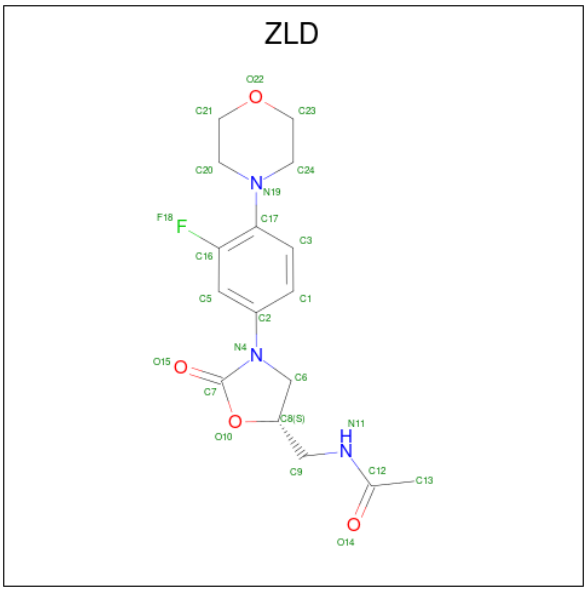
- Molecule 30 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
30	4	37	Total 297	C 179	N 66	O 47	S 5	0	0	0

- Molecule 31 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
31	X	30	Total Mg 30 30	0	0
31	Z	4	Total Mg 4 4	0	0
31	M	1	Total Mg 1 1	0	0

- Molecule 32 is N-{[(5S)-3-(3-fluoro-4-morpholin-4-ylphenyl)-2-oxo-1,3-oxazolidin-5-yl]methyl}acetamide (CCD ID: ZLD) (formula: $C_{16}H_{20}FN_3O_4$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
32	X	1	Total	C	F	N	O	0	0
			24	16	1	3	4		

- Molecule 33 is ZINC ION (CCD ID: ZN) (formula: Zn).

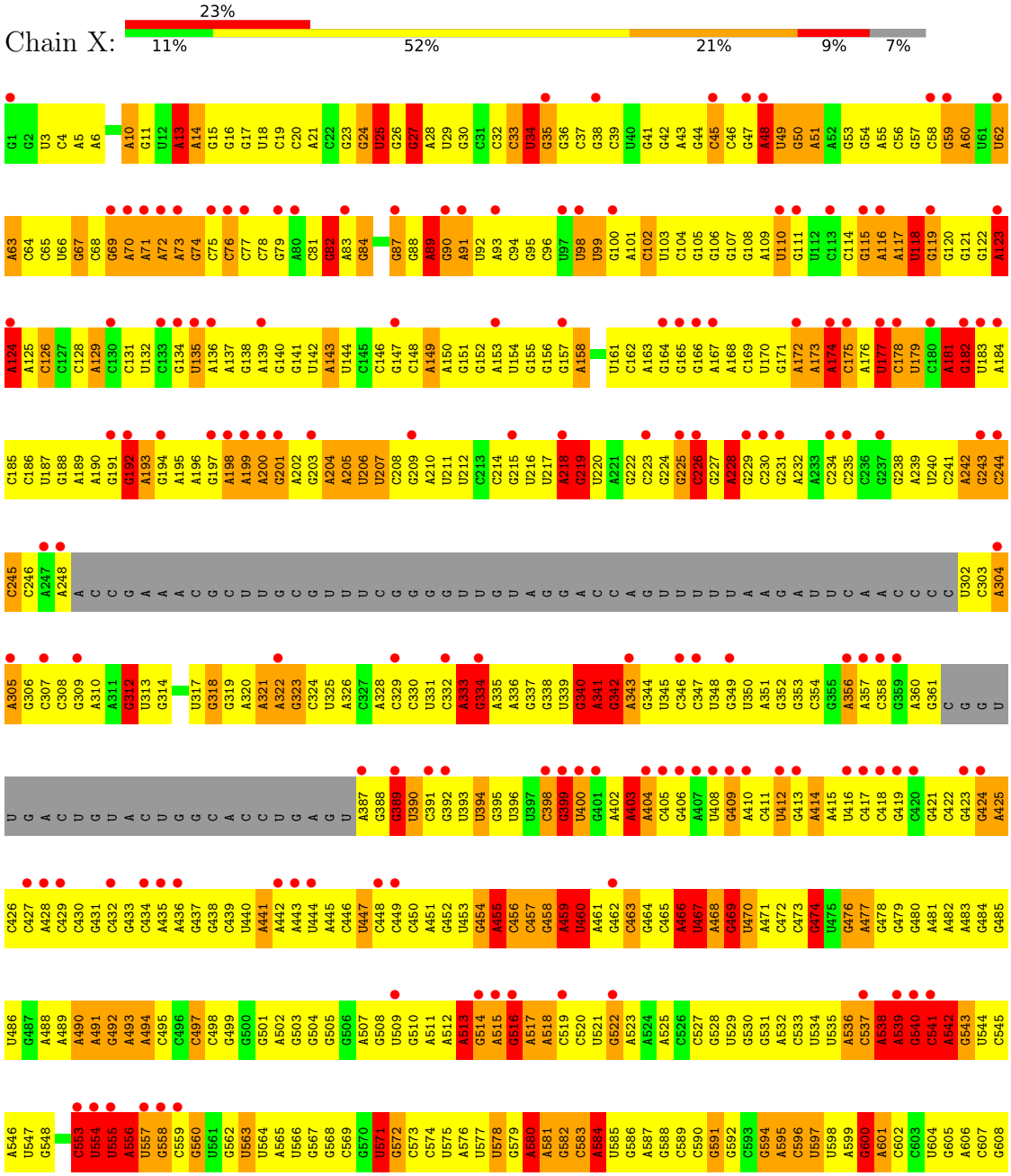
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	Y	1	Total	Zn	0	0
			1	1		
33	4	1	Total	Zn	0	0
			1	1		

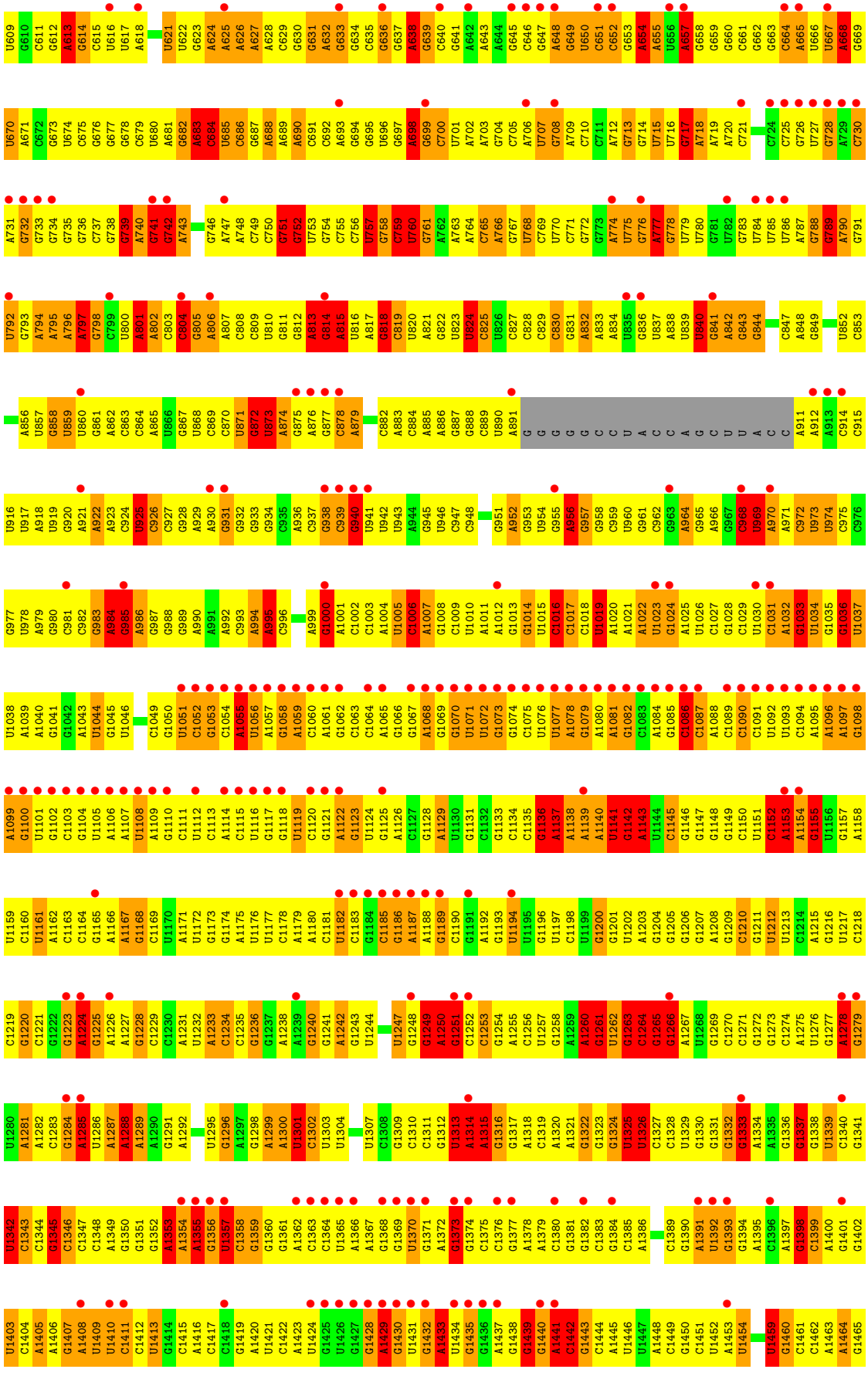
3 Residue-property plots (i)

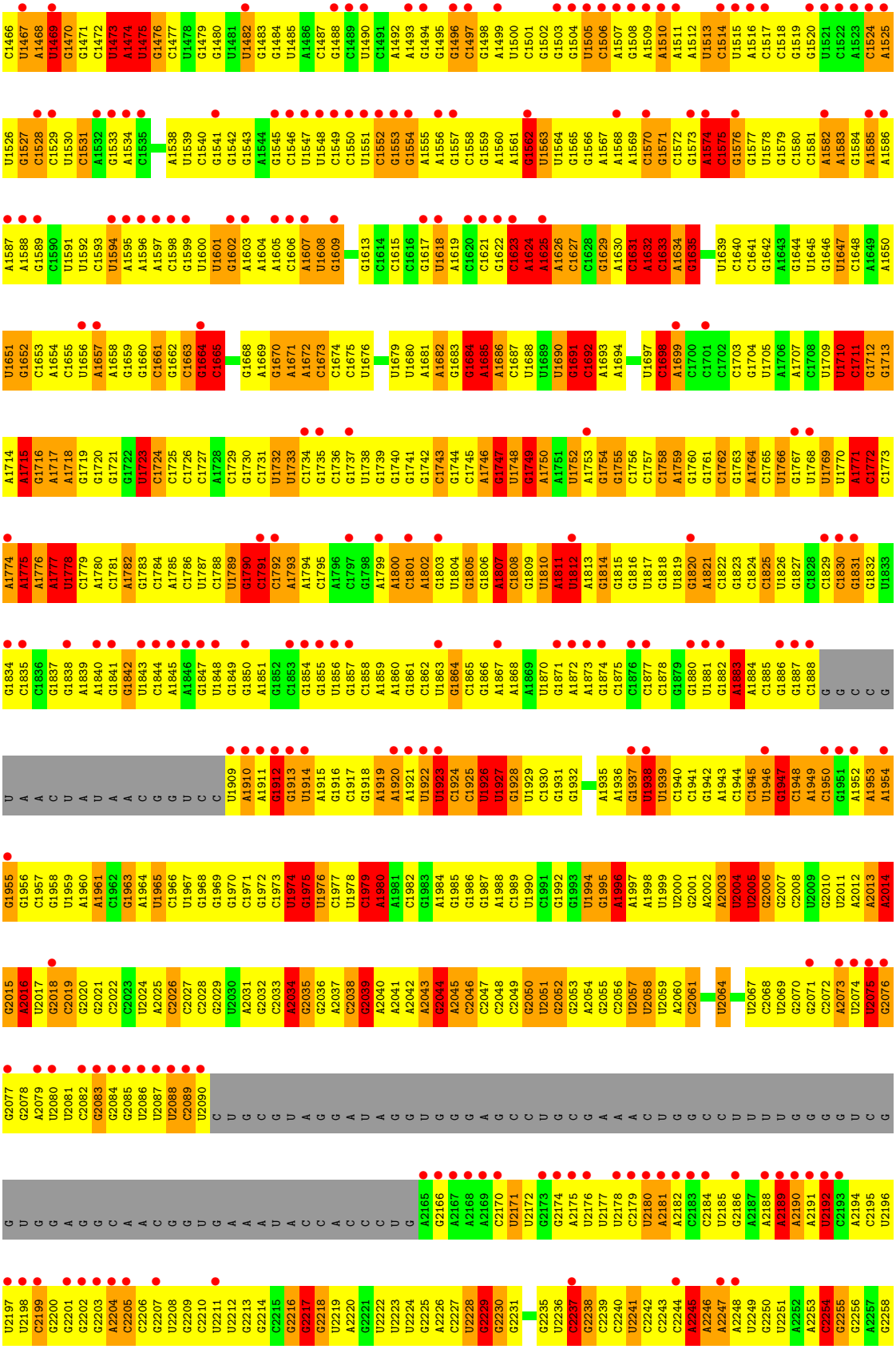
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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: rRNA-23S ribosomal RNA

Chain X:






C1466 U1467 A1468 U1469 G1470 G1471 C1472 U1473 A1474 U1475 G1476 C1477 U1478 G1479 G1480 U1481 U1482 G1483 G1484 U1485 A1486 C1487 G1488 C1489 U1490 C1491 A1492 A1493 G1494 G1495 G1496 C1497 G1498 A1499 U1500 C1501 G1502 G1503 G1504 U1505 C1506 A1507 G1508 A1509 A1510 A1511 A1512 U1513 C1514 U1515 A1516 C1517 C1518 G1519 C1520 U1521 C1522 A1523 C1524 A1525
U1526 G1527 C1528 C1529 U1530 C1531 A1532 G1533 A1534 C1535 A1538 U1539 C1540 G1541 G1542 G1543 A1544 G1545 C1546 U1547 U1548 C1549 C1550 U1551 C1552 G1553 G1554 A1555 A1556 G1557 C1558 G1559 A1560 A1561 G1562 U1563 U1564 G1565 G1566 A1567 A1568 A1569 C1570 G1571 C1572 G1573 A1574 C1575 G1576 G1577 U1578 G1579 C1580 C1581 A1582 A1583 G1584 A1585 A1586
A1587 A1588 G1589 C1590 U1591 U1592 C1593 U1594 A1595 A1596 A1597 C1598 G1599 U1600 U1601 G1602 A1603 A1604 A1605 C1606 A1607 U1608 G1609 G1613 C1614 C1615 C1616 G1617 U1618 A1619 C1620 C1621 G1622 C1623 A1624 A1625 A1626 C1627 C1628 G1629 A1630 C1631 A1632 C1633 A1634 G1635 U1639 C1640 C1641 G1642 A1643 G1644 U1645 G1646 U1647 C1648 A1649 A1650
U1651 G1652 C1653 A1654 C1655 U1656 A1657 A1658 G1659 G1660 C1661 G1662 C1663 G1664 C1665 G1668 A1669 G1670 A1671 A1672 C1673 C1674 C1675 U1676 U1679 U1680 A1681 A1682 G1683 G1684 A1685 A1686 C1687 U1688 U1689 U1690 G1691 C1692 A1693 A1694 U1697 C1698 A1699 C1700 C1701 C1702 C1703 G1704 U1705 A1706 A1707 C1708 U1709 U1710 C1711 G1712 G1713
A1714 A1715 G1716 A1717 A1718 G1719 G1720 G1721 G1722 U1723 C1724 C1725 C1726 C1727 A1728 C1729 G1730 C1731 U1732 U1733 C1734 G1735 C1736 G1737 U1738 G1739 G1740 G1741 G1742 C1743 G1744 C1745 A1746 G1747 U1748 G1749 A1750 A1751 U1752 A1753 G1754 G1755 C1756 C1757 C1758 A1759 G1760 G1761 C1762 G1763 A1764 C1765 U1766 G1767 U1768 U1769 U1770 A1771 C1772 C1773
A1774 A1775 A1776 A1777 U1778 C1779 A1780 C1781 A1782 G1783 C1784 A1785 C1786 U1787 C1788 U1789 G1790 C1791 C1792 A1793 A1794 C1795 A1796 C1797 G1798 A1799 A1800 C1801 A1802 G1803 U1804 G1805 G1806 A1807 C1808 G1809 U1810 A1811 U1812 A1813 G1814 G1815 G1816 U1817 G1818 U1819 G1820 A1821 C1822 G1823 C1824 C1825 U1826 G1827 C1828 C1829 C1830 G1831 G1832 U1833
G1834 C1835 C1836 G1837 G1838 A1839 A1840 G1841 G1842 U1843 C1844 A1845 A1846 G1847 U1848 G1849 G1850 A1851 G1852 C1853 G1854 G1855 A1856 C1857 C1858 A1859 A1860 C1861 C1862 U1863 G1864 C1865 C1866 A1867 A1868 A1869 U1870 G1871 A1872 A1873 G1874 C1875 C1876 C1877 C1878 G1879 G1880 U1881 C1882 A1883 A1884 C1885 G1886 G1887 C1888 G C C C
U A A C U A U A C G G U C C U1909 A1910 A1911 G1912 G1913 U1914 A1915 G1916 C1917 G1918 A1919 A1920 A1921 U1922 U1923 C1924 C1925 U1926 U1927 G1928 U1929 C1930 G1931 G1932 A1935 A1936 G1937 U1938 U1939 C1940 C1941 G1942 A1943 C1944 C1945 U1946 G1947 C1948 A1949 C1950 G1951 A1952 A1953 A1954
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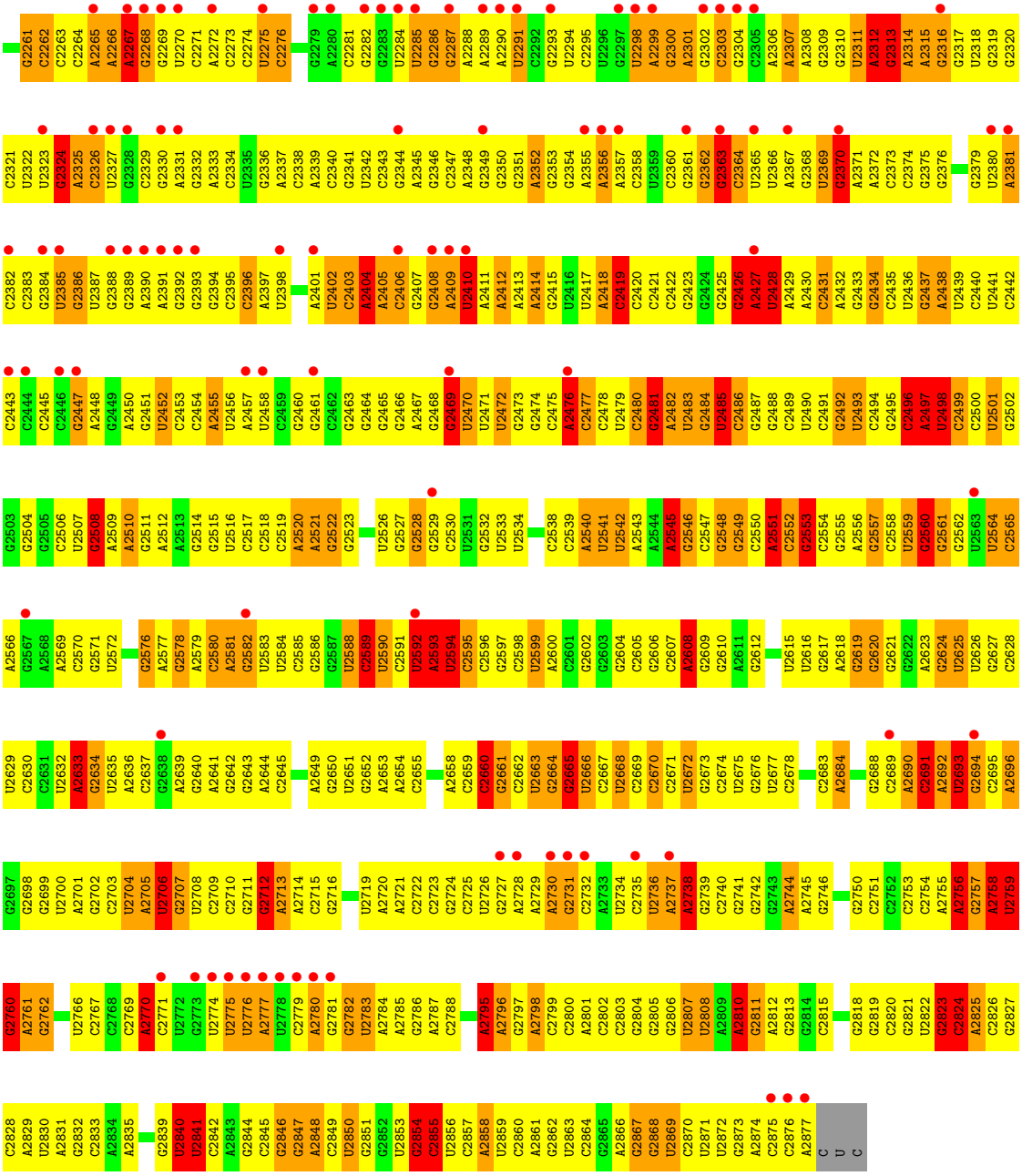
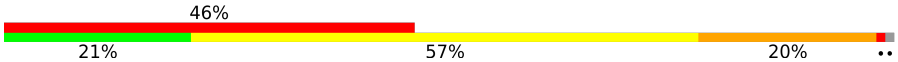
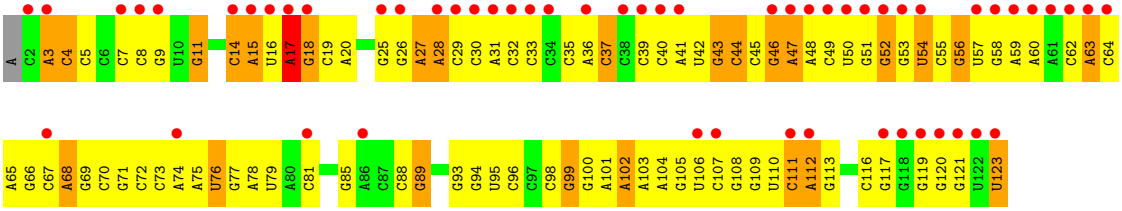
G2015 A2016 U2017 G2018 C2019 G2020 G2021 C2022 C2023 U2024 A2025 C2026 C2027 C2028 G2029 U2030 A2031 G2032 C2033 A2034 G2035 G2036 A2037 C2038 G2039 A2040 A2041 A2042 A2043 G2044 A2045 C2046 C2047 C2048 C2049 G2050 U2051 G2052 G2053 A2054 G2055 C2056 U2057 U2058 U2059 A2060 C2061 U2064 U2067 C2068 U2069 G2070 G2071 C2072 A2073 U2074 U2075 G2076
G2077 G2078 A2079 U2080 U2081 C2082 G2083 G2084 C2085 U2086 U2087 U2088 C2089 U2090 C U G C G U A G G A C C G U U G A C G U A C A A C C A G G U U A A A U A C C G G A A C C A A A C C A C A U G G U U C C U U G G G A A A C C C U U G G C C G G U U U U C C G G G G C C U U G G C C G G U U U U C C G G G G C C U U G G C C G G U U U U C C G G G G



• Molecule 2: rRNA-5S ribosomal RNA

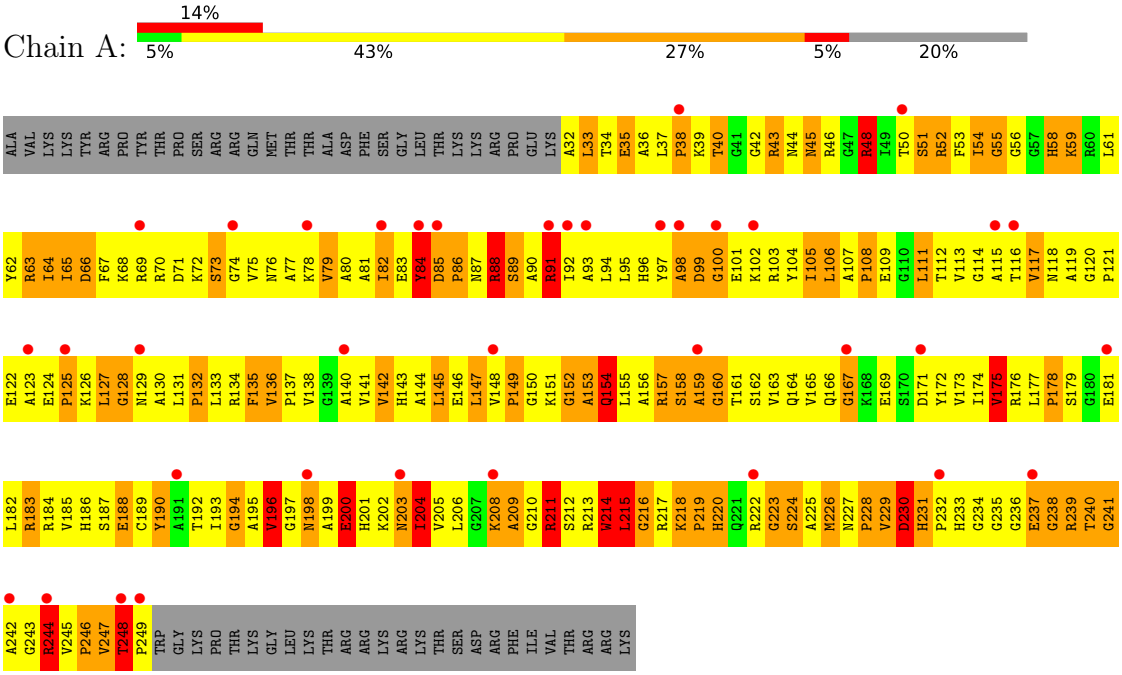
Chain Z:





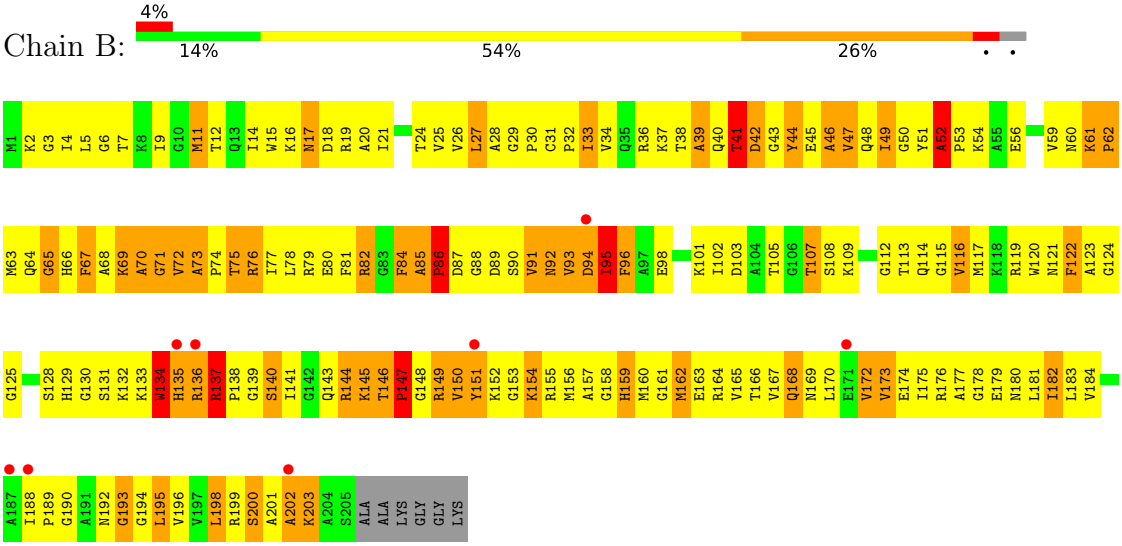
• Molecule 3: 50S ribosomal protein L2

Chain A:



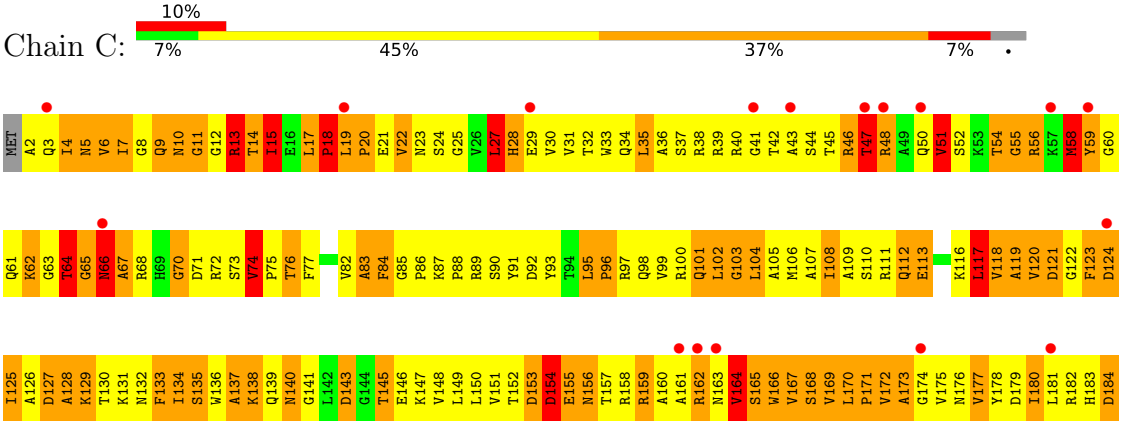
• Molecule 4: 50S ribosomal protein L3

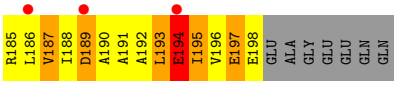
Chain B:



• Molecule 5: 50S ribosomal protein L4

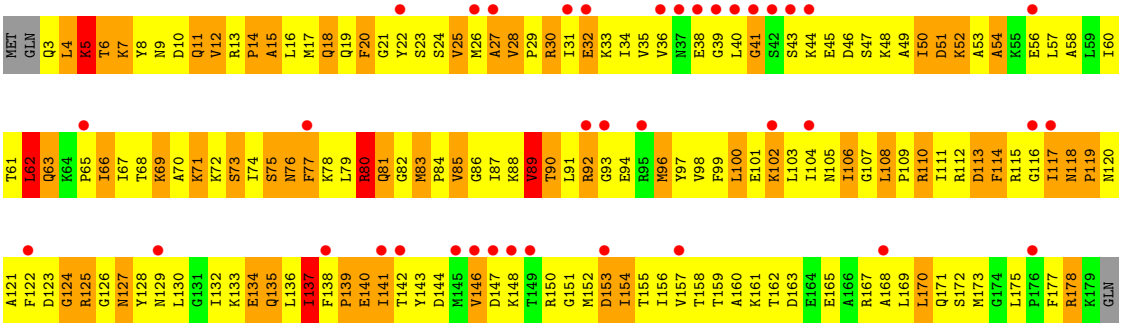
Chain C:





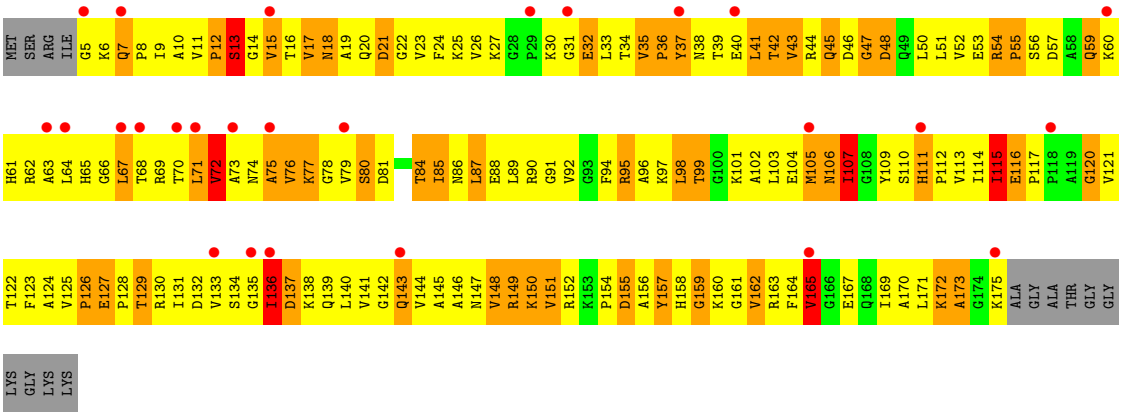
• Molecule 6: 50S ribosomal protein L5

Chain D:



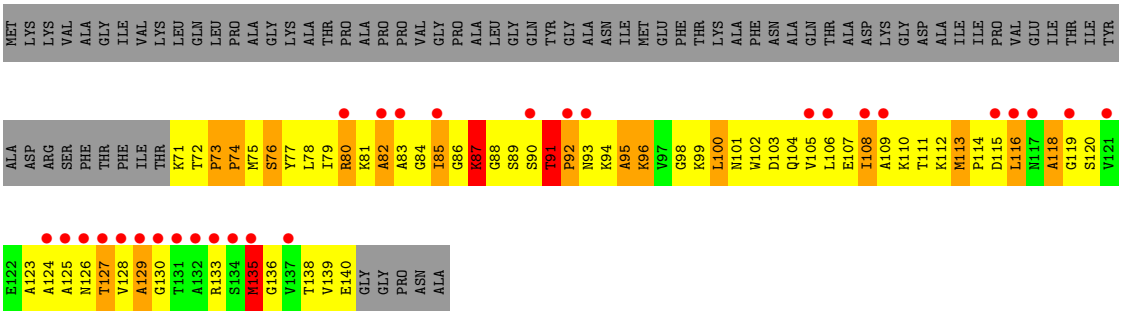
• Molecule 7: 50S ribosomal protein L6

Chain E:

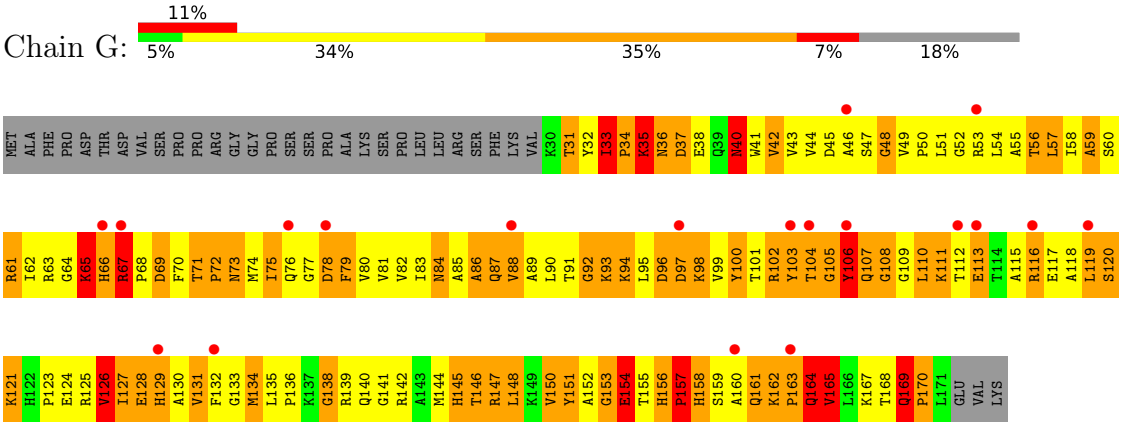


• Molecule 8: 50S ribosomal protein L11

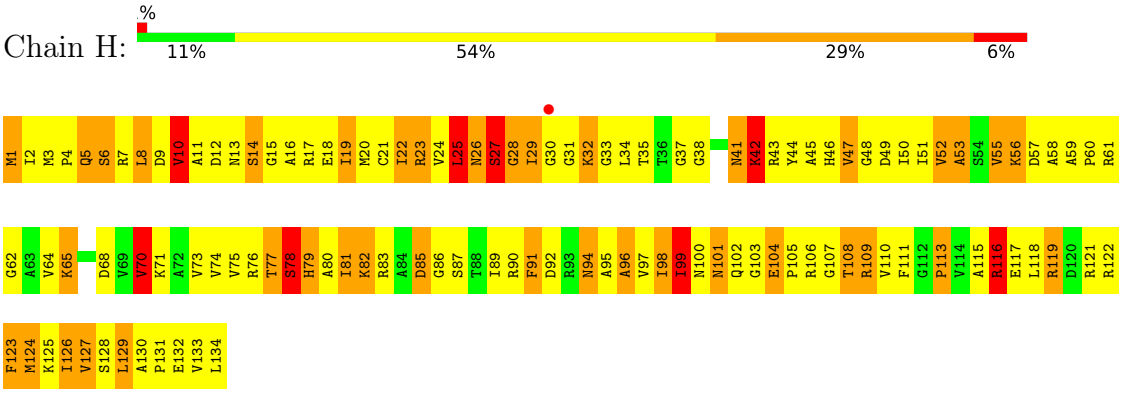
Chain F:



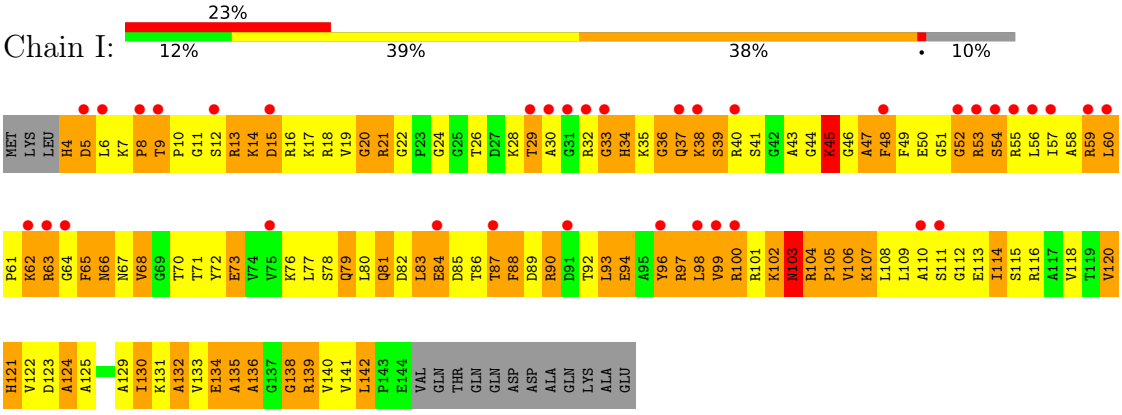
• Molecule 9: 50S ribosomal protein L13



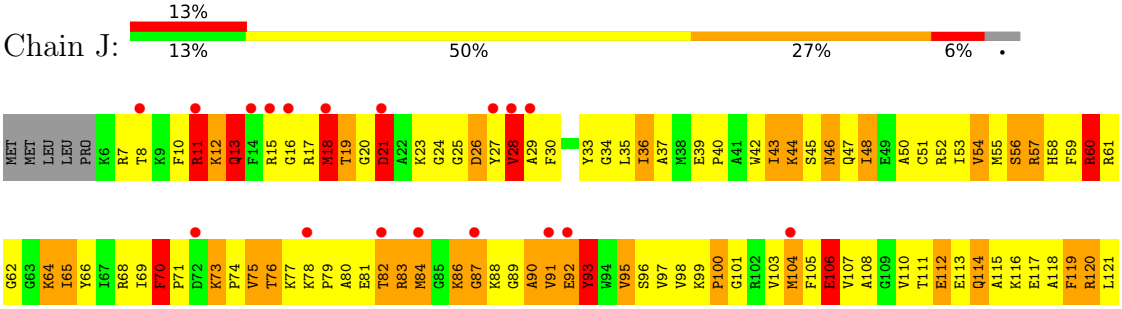
• Molecule 10: 50S ribosomal protein L14

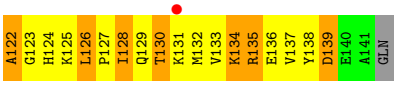


• Molecule 11: 50S ribosomal protein L15



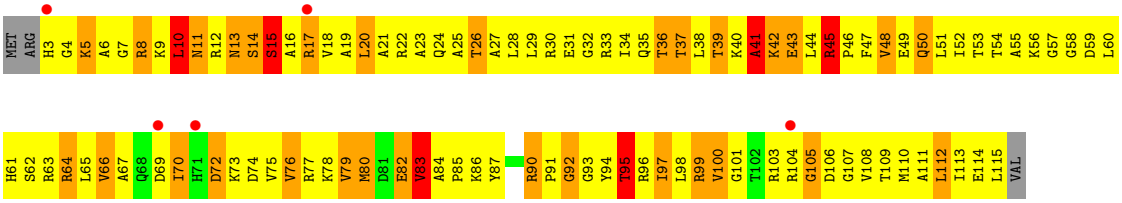
• Molecule 12: 50S ribosomal protein L16





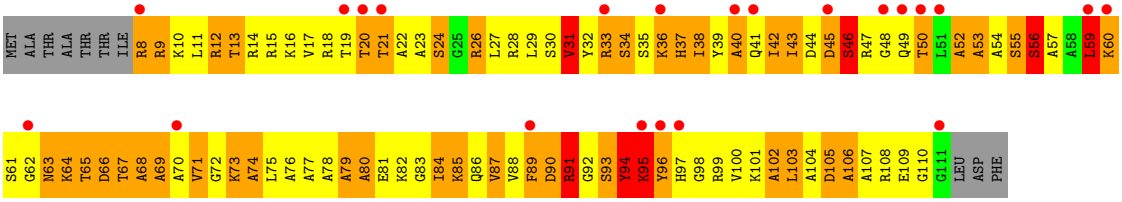
• Molecule 13: 50S ribosomal protein L17

Chain K:



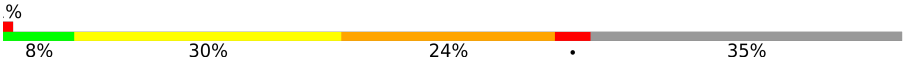
• Molecule 14: 50S ribosomal protein L18

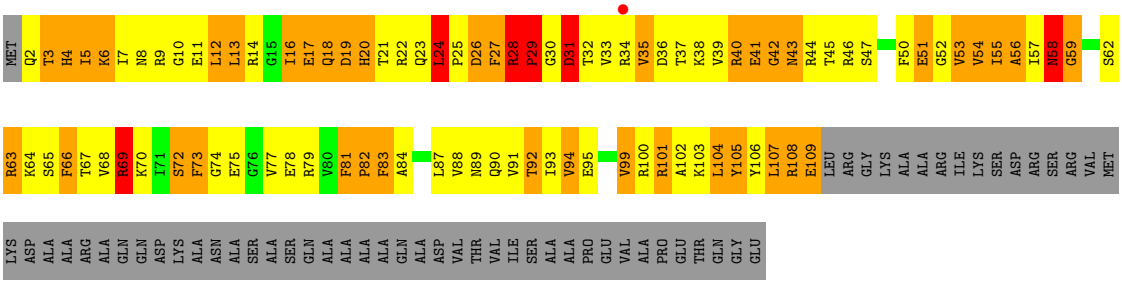
Chain L:



• Molecule 15: 50S ribosomal protein L19

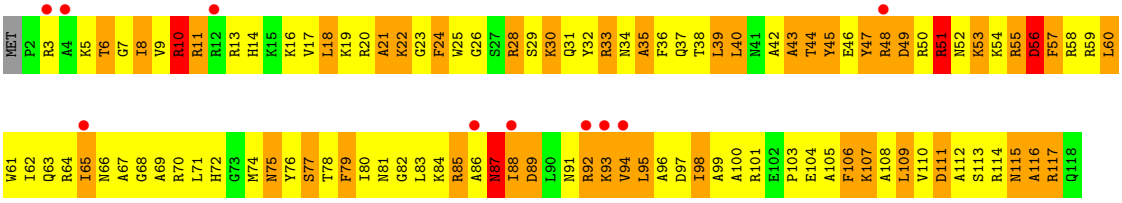
Chain M:



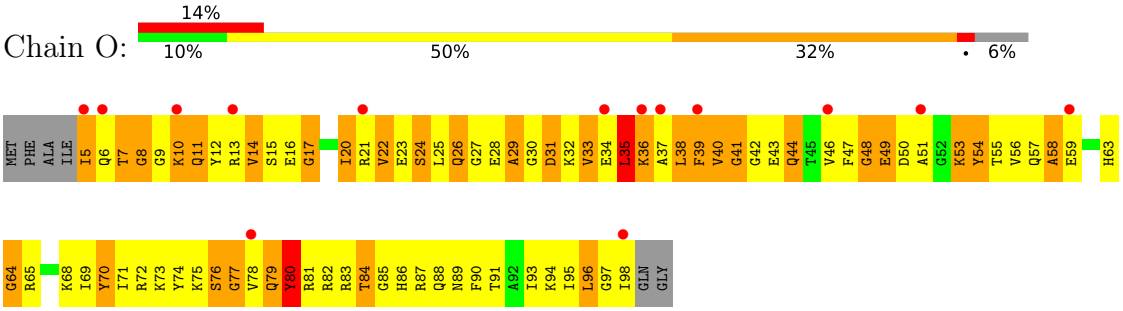


• Molecule 16: 50S ribosomal protein L20

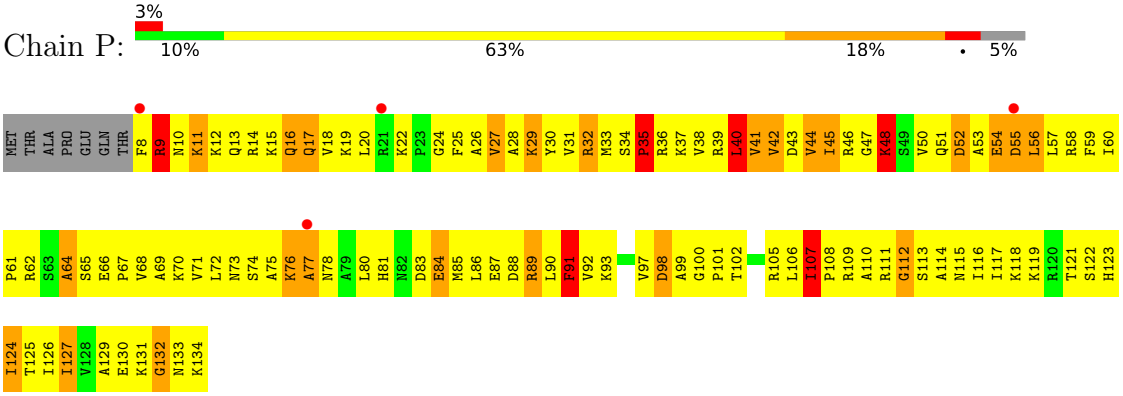
Chain N:



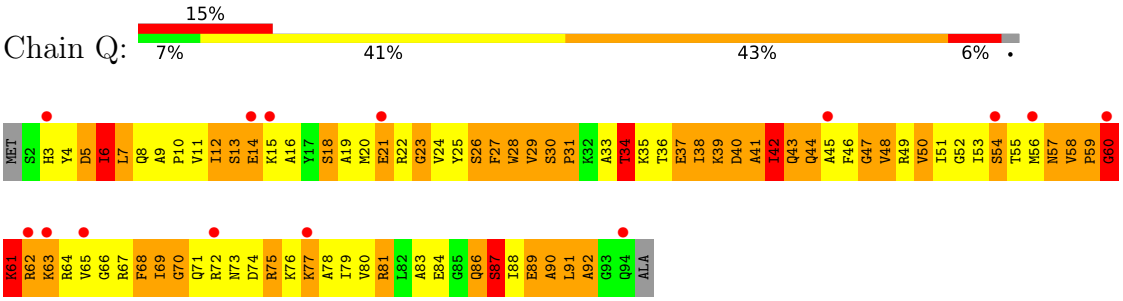
• Molecule 17: 50S ribosomal protein L21



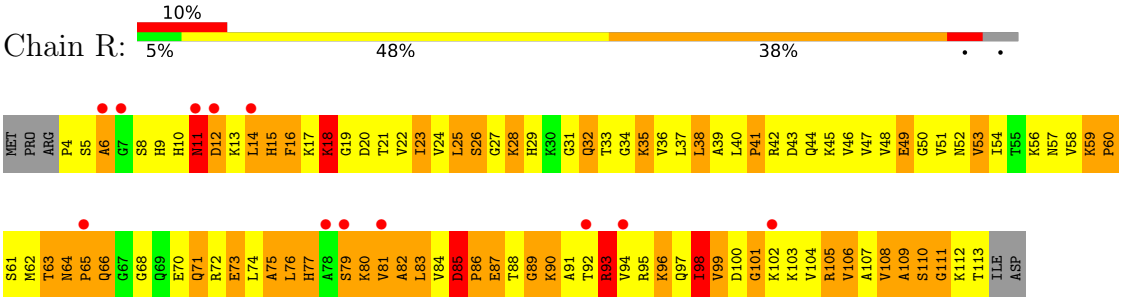
• Molecule 18: 50S ribosomal protein L22



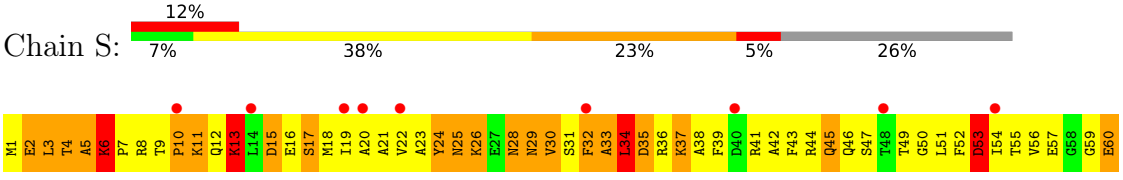
• Molecule 19: 50S ribosomal protein L23

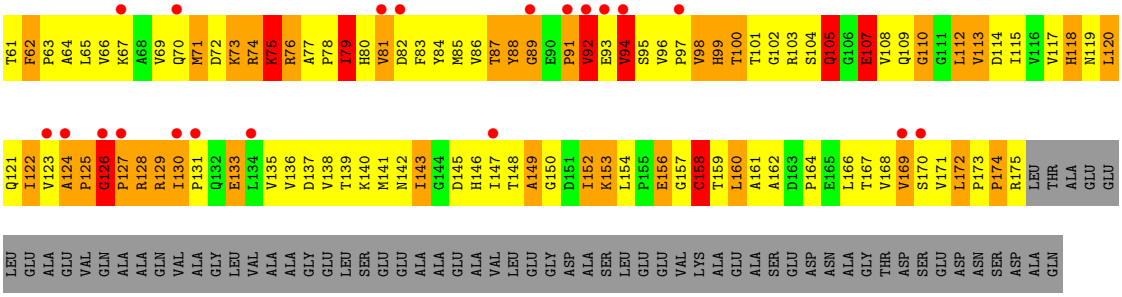


• Molecule 20: 50S ribosomal protein L24

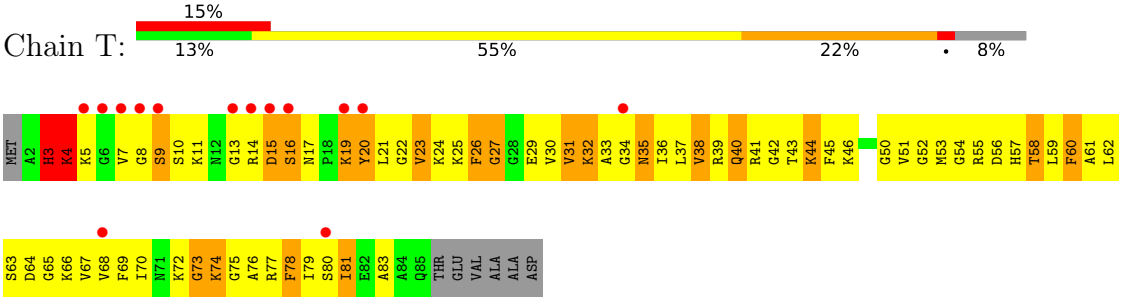


• Molecule 21: 50S ribosomal protein L25

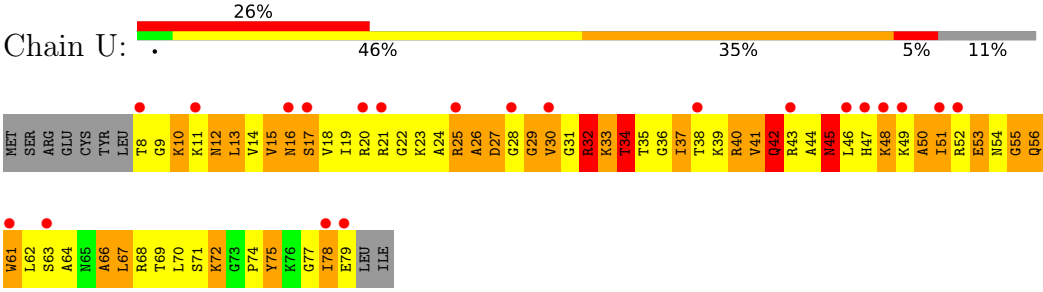




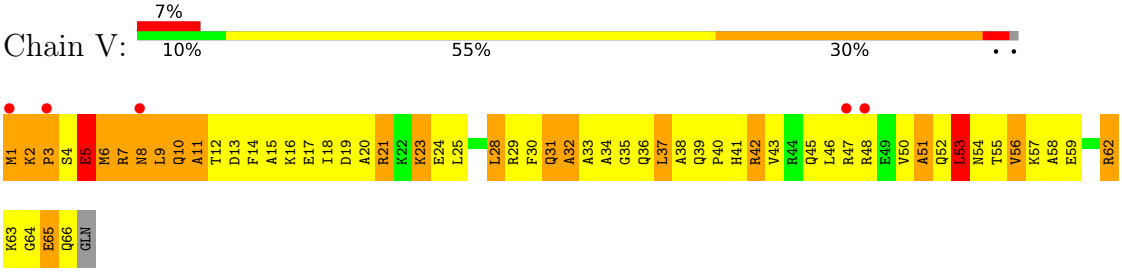
• Molecule 22: 50S ribosomal protein L27



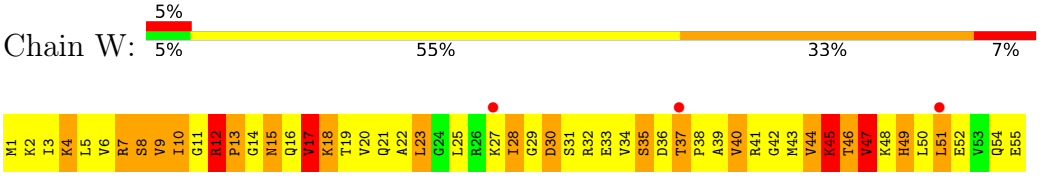
• Molecule 23: 50S ribosomal protein L28



• Molecule 24: 50S ribosomal protein L29



• Molecule 25: 50S ribosomal protein L30

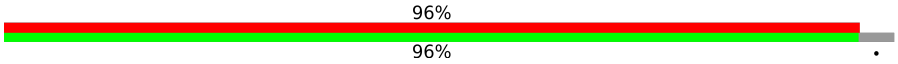


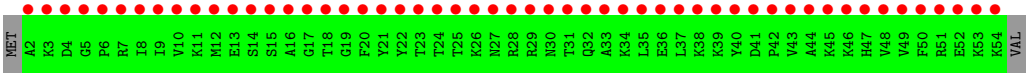
• Molecule 26: 50S ribosomal protein L32

Chain Y:

• Molecule 27: 50S ribosomal protein L33

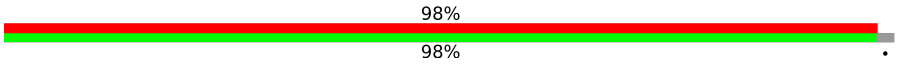
Chain 1:

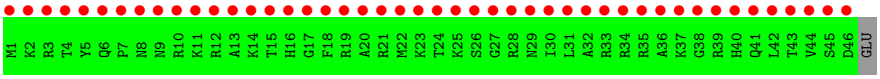




• Molecule 28: 50S ribosomal protein L34

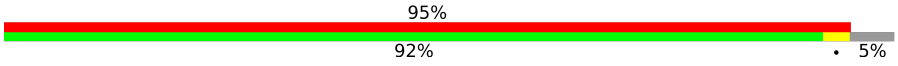
Chain 2:

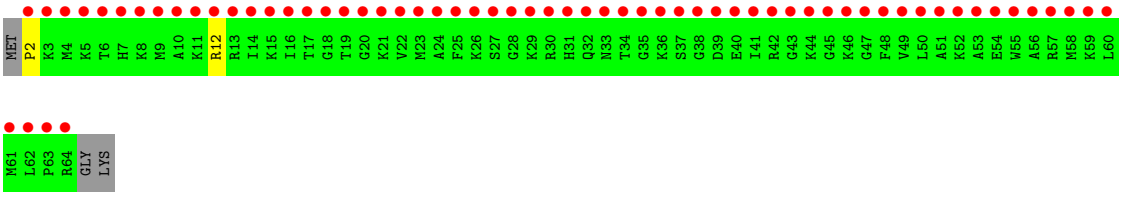




• Molecule 29: 50S ribosomal protein L35

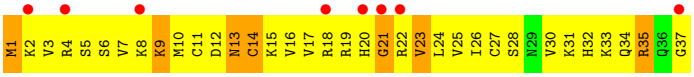
Chain 3:





• Molecule 30: 50S ribosomal protein L36

Chain 4:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	I 2 2 2	Depositor
Cell constants a, b, c, α, β, γ	169.70Å 410.00Å 695.00Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	29.98 – 3.50 29.98 – 3.50	Depositor EDS
% Data completeness (in resolution range)	90.5 (29.98-3.50) 90.2 (29.98-3.50)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.13	Depositor
$< I/\sigma(I) >$ [1]	1.84 (at 3.31Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.259 , 0.280 0.267 , 0.307	Depositor DCC
R_{free} test set	15358 reflections (4.97%)	wwPDB-VP
Wilson B-factor (Å^2)	68.5	Xtriage
Anisotropy	0.152	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.16 , 31.1	EDS
L-test for twinning[2]	$< \|L\| > = 0.42$, $< L^2 > = 0.24$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.85	EDS
Total number of atoms	83657	wwPDB-VP
Average B, all atoms (Å^2)	40.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.47% 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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: ZLD, MG, ZN

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	X	0.55	3/64561 (0.0%)	0.98	322/100708 (0.3%)
2	Z	0.42	0/2904	0.78	0/4525
3	A	0.79	0/1669	1.37	23/2254 (1.0%)
4	B	1.00	1/1567 (0.1%)	1.46	26/2105 (1.2%)
5	C	0.78	1/1529 (0.1%)	1.32	27/2070 (1.3%)
6	D	0.57	0/1419	1.21	17/1903 (0.9%)
7	E	0.60	0/1308	1.25	21/1771 (1.2%)
8	F	0.69	0/510	1.39	10/688 (1.5%)
9	G	0.78	1/1138 (0.1%)	1.39	23/1539 (1.5%)
10	H	1.03	2/1007 (0.2%)	1.43	18/1352 (1.3%)
11	I	0.84	2/1081 (0.2%)	1.44	18/1448 (1.2%)
12	J	0.82	3/1113 (0.3%)	1.29	17/1486 (1.1%)
13	K	1.16	0/886	1.50	15/1188 (1.3%)
14	L	0.65	0/785	1.18	10/1048 (1.0%)
15	M	0.96	0/884	2.02	30/1186 (2.5%)
16	N	0.81	0/994	1.15	6/1323 (0.5%)
17	O	0.69	0/750	1.27	7/1000 (0.7%)
18	P	0.98	0/1027	1.49	19/1373 (1.4%)
19	Q	0.79	0/737	1.40	15/988 (1.5%)
20	R	0.71	0/835	1.30	11/1121 (1.0%)
21	S	0.63	0/1370	1.26	20/1862 (1.1%)
22	T	0.74	0/633	1.30	9/838 (1.1%)
23	U	0.75	0/556	1.41	10/741 (1.3%)
24	V	0.60	0/537	1.25	6/714 (0.8%)
25	W	0.68	0/426	1.19	4/568 (0.7%)
26	Y	0.96	1/469 (0.2%)	1.52	15/629 (2.4%)
30	4	0.57	0/298	1.13	1/390 (0.3%)
All	All	0.63	14/90993 (0.0%)	1.08	700/136818 (0.5%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected

by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	X	0	228
2	Z	0	4
9	G	0	1
17	O	0	1
All	All	0	234

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	X	2594	U	P-OP2	14.72	1.78	1.49
1	X	2594	U	P-OP1	-11.28	1.26	1.49
1	X	2592	U	P-OP2	-10.37	1.28	1.49
11	I	29	THR	CA-CB	8.62	1.68	1.53
11	I	29	THR	CA-C	6.28	1.61	1.52
12	J	18	MET	CG-SD	5.83	1.95	1.80
10	H	98	ILE	CA-CB	-5.63	1.46	1.54
9	G	65	LYS	CA-C	-5.51	1.49	1.52
4	B	11	MET	SD-CE	-5.44	1.66	1.79
10	H	10	VAL	CA-CB	-5.43	1.47	1.54
12	J	104	MET	SD-CE	5.39	1.93	1.79
5	C	47	THR	CA-CB	5.33	1.62	1.53
26	Y	14	SER	CA-C	-5.25	1.47	1.53
12	J	84	MET	CG-SD	5.09	1.93	1.80

All (700) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	M	28	ARG	CA-C-N	30.73	158.25	119.84
15	M	28	ARG	C-N-CA	30.73	158.25	119.84
4	B	125	GLY	CA-C-N	12.97	133.84	119.83
4	B	125	GLY	C-N-CA	12.97	133.84	119.83
1	X	2592	U	N1-C1'-C2'	12.78	133.17	114.00
18	P	56	LEU	N-CA-C	-11.89	93.37	111.56
20	R	28	LYS	N-CA-C	-11.68	93.24	110.52
3	A	211	ARG	N-CA-C	-11.64	98.18	112.38
15	M	28	ARG	C-N-CD	-11.62	77.37	125.00
1	X	1975	G	C2'-C3'-O3'	11.54	126.81	109.50
6	D	6	THR	N-CA-C	-11.41	98.62	112.54
1	X	1979	C	C2'-C3'-O3'	11.36	126.53	109.50
8	F	127	THR	N-CA-C	-11.32	98.69	111.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	R	99	VAL	N-CA-C	-11.11	98.65	112.76
5	C	64	THR	N-CA-C	-10.93	99.95	113.18
1	X	2496	C	C2'-C3'-O3'	10.90	125.85	109.50
8	F	82	ALA	N-CA-C	-10.73	99.37	111.71
1	X	2841	U	C2'-C3'-O3'	10.72	125.58	109.50
1	X	777	A	C2'-C3'-O3'	10.13	124.69	109.50
20	R	65	PRO	N-CA-C	-10.10	100.63	114.27
9	G	66	HIS	N-CA-C	-10.05	98.63	112.30
1	X	2560	G	N9-C1'-C2'	9.91	128.87	114.00
9	G	120	SER	N-CA-C	-9.91	101.12	113.01
4	B	73	ALA	N-CA-C	-9.89	99.32	108.22
23	U	45	ASN	N-CA-C	9.89	123.17	108.14
1	X	2706	U	C2'-C3'-O3'	9.84	124.26	109.50
1	X	123	A	N9-C1'-C2'	9.80	128.69	114.00
1	X	2854	G	N9-C1'-C2'	9.66	128.49	114.00
3	A	88	ARG	N-CA-C	9.63	126.29	111.56
1	X	2592	U	C1'-O4'-C4'	-9.59	100.11	109.70
8	F	80	ARG	N-CA-C	-9.57	101.03	112.89
11	I	48	PHE	N-CA-C	-9.37	101.63	112.87
25	W	29	GLY	N-CA-C	-9.25	102.72	114.37
13	K	66	VAL	N-CA-C	-9.24	101.85	110.53
18	P	60	ILE	CA-C-N	9.21	131.35	119.84
18	P	60	ILE	C-N-CA	9.21	131.35	119.84
24	V	31	GLN	N-CA-C	-9.20	100.19	111.33
18	P	107	ILE	CA-C-N	9.20	129.76	119.92
18	P	107	ILE	C-N-CA	9.20	129.76	119.92
9	G	104	THR	N-CA-C	9.14	122.18	109.29
1	X	1775	A	C2'-C3'-O3'	9.12	123.19	109.50
30	4	13	ASN	N-CA-C	-9.09	100.82	114.64
17	O	76	SER	N-CA-C	9.07	123.47	109.96
18	P	64	ALA	N-CA-C	-9.06	102.00	113.23
1	X	804	C	C4'-C3'-O3'	-9.04	95.83	109.40
14	L	9	ARG	N-CA-C	-9.02	103.11	114.56
7	E	127	GLU	N-CA-C	-8.94	98.28	109.64
21	S	126	GLY	CA-C-N	8.94	131.01	119.84
21	S	126	GLY	C-N-CA	8.94	131.01	119.84
9	G	160	ALA	N-CA-C	-8.91	101.07	113.37
4	B	168	GLN	N-CA-C	8.90	123.94	110.14
1	X	1353	A	N9-C1'-C2'	8.89	127.34	114.00
1	X	1153	A	C2'-C3'-O3'	8.88	127.02	113.70
1	X	1357	U	C2'-C3'-O3'	8.87	122.80	109.50
12	J	76	THR	N-CA-C	8.75	119.80	108.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	S	2	GLU	N-CA-C	8.74	121.75	107.32
23	U	53	GLU	N-CA-C	8.70	121.82	108.42
15	M	88	VAL	CB-CA-C	-8.66	101.48	111.09
1	X	2608	A	C2'-C3'-O3'	8.63	122.45	109.50
1	X	2428	U	N1-C1'-C2'	8.60	126.89	114.00
5	C	113	GLU	N-CA-C	-8.58	102.83	113.38
3	A	34	THR	N-CA-C	8.56	121.54	108.52
15	M	4	HIS	N-CA-C	8.51	121.19	109.11
6	D	96	MET	N-CA-C	-8.49	102.10	111.36
13	K	13	ASN	N-CA-C	8.46	124.29	107.62
1	X	1723	U	N1-C1'-C2'	8.41	124.62	112.00
4	B	159	HIS	N-CA-C	-8.37	98.70	110.50
1	X	1342	U	N1-C1'-C2'	8.37	126.55	114.00
1	X	2854	G	C4'-C3'-O3'	-8.36	96.86	109.40
15	M	18	GLN	N-CA-C	-8.34	101.38	112.72
1	X	814	G	C2'-C3'-O3'	8.31	121.97	109.50
25	W	12	ARG	CA-C-N	8.29	128.05	119.76
25	W	12	ARG	C-N-CA	8.29	128.05	119.76
1	X	1036	G	C2'-C3'-O3'	8.23	121.85	109.50
1	X	2075	U	C2'-C3'-O3'	8.15	121.72	109.50
24	V	6	MET	N-CA-C	-8.13	100.49	111.96
1	X	968	C	N1-C1'-C2'	8.13	124.20	112.00
9	G	164	GLN	N-CA-C	-8.13	99.85	110.33
11	I	87	THR	N-CA-C	-8.12	103.48	113.15
18	P	76	LYS	N-CA-C	-8.12	102.84	114.12
1	X	1278	A	N9-C1'-C2'	8.01	126.02	114.00
1	X	1278	A	C2'-C3'-O3'	7.99	121.48	109.50
13	K	82	GLU	N-CA-C	7.99	122.95	112.72
23	U	17	SER	N-CA-C	7.99	118.78	108.24
1	X	801	A	C2'-C3'-O3'	7.98	121.47	109.50
1	X	2795	A	N9-C1'-C2'	7.98	123.97	112.00
1	X	1142	G	C4'-C3'-O3'	-7.98	97.44	109.40
3	A	48	ARG	N-CA-C	7.97	122.15	110.59
21	S	109	GLN	N-CA-C	-7.93	102.23	111.03
11	I	63	ARG	N-CA-C	-7.88	104.82	114.75
7	E	48	ASP	N-CA-C	-7.88	103.12	112.89
17	O	11	GLN	N-CA-C	7.88	127.58	110.80
1	X	2823	G	N9-C1'-C2'	7.86	125.79	114.00
9	G	108	GLY	N-CA-C	-7.83	94.63	113.18
19	Q	67	ARG	N-CA-C	-7.83	103.87	113.19
5	C	27	LEU	N-CA-C	-7.82	102.83	111.36
12	J	70	PHE	CA-C-N	7.81	129.61	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	J	70	PHE	C-N-CA	7.81	129.61	119.84
1	X	460	U	N1-C1'-C2'	7.81	125.72	114.00
1	X	1285	A	N9-C1'-C2'	7.80	125.70	114.00
21	S	53	ASP	N-CA-C	7.80	121.95	109.24
15	M	31	ASP	N-CA-C	7.78	121.21	110.24
12	J	36	ILE	N-CA-C	7.77	119.31	108.12
23	U	57	VAL	N-CA-C	7.77	119.61	109.58
1	X	1790	G	C2'-C3'-O3'	7.77	121.15	109.50
6	D	83	MET	CA-C-N	7.76	129.54	119.84
6	D	83	MET	C-N-CA	7.76	129.54	119.84
12	J	19	THR	N-CA-C	7.74	121.08	108.55
18	P	52	ASP	N-CA-C	-7.74	102.54	110.97
18	P	77	ALA	N-CA-C	-7.66	103.93	113.20
1	X	1288	A	C1'-C2'-O2'	-7.66	100.32	111.80
4	B	61	LYS	N-CA-C	-7.62	103.71	113.77
1	X	824	U	N1-C1'-C2'	7.61	125.41	114.00
11	I	60	LEU	CA-C-N	7.59	129.32	119.84
11	I	60	LEU	C-N-CA	7.59	129.32	119.84
16	N	10	ARG	N-CA-C	-7.59	102.36	111.69
1	X	2559	U	C2'-C3'-O3'	-7.59	102.32	113.70
7	E	107	ILE	N-CA-C	7.58	117.87	106.42
1	X	2324	G	C2'-C3'-O3'	7.55	120.83	109.50
4	B	144	ARG	N-CA-C	7.54	119.92	109.29
5	C	169	VAL	N-CA-C	7.53	119.34	107.98
1	X	2313	G	N9-C1'-C2'	7.52	125.27	114.00
1	X	1260	A	N9-C1'-C2'	7.47	125.21	114.00
22	T	44	LYS	N-CA-C	-7.47	103.21	111.36
1	X	1333	G	C4'-C3'-O3'	-7.45	101.82	113.00
15	M	69	ARG	N-CA-C	-7.43	98.85	110.36
1	X	399	G	C2'-C3'-O3'	7.39	120.59	109.50
4	B	146	THR	N-CA-C	-7.38	100.46	109.83
10	H	116	ARG	N-CA-C	-7.37	103.75	112.89
22	T	58	THR	N-CA-C	-7.36	100.62	110.55
11	I	20	GLY	N-CA-C	-7.36	105.73	114.48
1	X	2229	G	C4'-C3'-O3'	-7.35	101.98	113.00
14	L	65	THR	N-CA-C	-7.34	104.58	113.97
9	G	42	VAL	N-CA-C	7.33	118.90	108.42
1	X	1475	U	C4'-C3'-O3'	-7.28	102.08	113.00
19	Q	61	LYS	N-CA-C	7.27	126.28	110.80
1	X	2589	C	N1-C1'-C2'	7.26	124.89	114.00
1	X	218	A	N9-C1'-C2'	7.26	124.89	114.00
1	X	2760	G	C2'-C3'-O3'	7.25	120.37	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	H	96	ALA	N-CA-C	7.24	120.95	109.65
3	A	229	VAL	N-CA-C	7.21	117.73	110.23
9	G	35	LYS	N-CA-C	-7.19	95.48	110.80
18	P	102	THR	N-CA-C	7.19	121.25	109.24
19	Q	57	ASN	N-CA-C	7.19	119.85	110.43
12	J	135	ARG	N-CA-C	7.18	115.65	108.75
1	X	2050	G	C2'-C3'-O3'	-7.18	98.73	109.50
1	X	2426	G	C2'-C3'-O3'	7.17	120.25	109.50
1	X	2267	A	C2'-C3'-O3'	7.12	120.19	109.50
7	E	87	LEU	N-CA-C	7.11	120.06	108.26
1	X	1632	A	C4'-C3'-O3'	-7.11	98.74	109.40
1	X	2545	A	C4'-C3'-O3'	-7.10	102.35	113.00
5	C	58	MET	N-CA-C	7.10	125.92	110.80
1	X	2758	A	C4'-C3'-O3'	7.10	120.04	109.40
13	K	90	ARG	CA-C-N	7.09	128.70	119.84
13	K	90	ARG	C-N-CA	7.09	128.70	119.84
1	X	1474	A	C2'-C3'-O3'	7.08	120.11	109.50
1	X	341	A	C2'-C3'-O3'	7.06	120.09	109.50
7	E	54	ARG	N-CA-C	7.06	116.26	108.14
1	X	1562	G	C4'-C3'-O3'	-7.06	102.42	113.00
15	M	32	THR	N-CA-C	-7.06	98.69	109.41
8	F	91	THR	CA-C-N	7.04	128.63	119.84
8	F	91	THR	C-N-CA	7.04	128.63	119.84
6	D	154	ILE	N-CA-C	7.02	120.19	108.81
10	H	78	SER	N-CA-C	-7.02	104.45	112.87
1	X	1263	G	C2'-C3'-O3'	7.00	120.00	109.50
5	C	6	VAL	N-CA-C	7.00	118.00	112.12
1	X	698	A	C2'-C3'-O3'	-7.00	99.01	109.50
3	A	115	ALA	N-CA-C	-6.99	101.30	110.53
15	M	6	LYS	N-CA-C	-6.99	98.56	109.25
14	L	80	ALA	N-CA-C	-6.98	102.50	111.02
1	X	1441	A	C2'-C3'-O3'	6.98	119.96	109.50
1	X	555	U	N1-C1'-C2'	6.97	122.46	112.00
19	Q	91	LEU	N-CA-C	-6.96	104.90	113.19
1	X	2043	A	C2'-C3'-O3'	-6.95	103.28	113.70
1	X	2823	G	C4'-C3'-O3'	-6.94	98.99	109.40
1	X	1266	G	C2'-C3'-O3'	-6.94	99.09	109.50
1	X	13	A	C4'-C3'-O3'	6.93	119.80	109.40
5	C	162	ARG	N-CA-C	-6.93	104.01	113.30
6	D	48	LYS	N-CA-C	-6.93	103.78	111.82
4	B	109	LYS	N-CA-C	-6.92	101.89	110.41
1	X	2245	A	C2'-C3'-O3'	6.91	119.87	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	U	25	ARG	N-CA-C	-6.89	104.82	113.23
4	B	67	PHE	N-CA-C	-6.88	102.85	111.11
13	K	105	GLY	N-CA-C	6.87	120.80	112.49
15	M	81	PHE	CA-C-N	6.86	128.41	119.84
15	M	81	PHE	C-N-CA	6.86	128.41	119.84
23	U	48	LYS	N-CA-C	6.84	118.17	108.74
1	X	2633	A	C4'-C3'-O3'	6.83	119.65	109.40
7	E	115	ILE	N-CA-C	6.82	117.62	108.27
1	X	554	U	N1-C1'-C2'	6.80	122.20	112.00
1	X	1723	U	C4'-C3'-O3'	-6.79	102.81	113.00
17	O	64	GLY	N-CA-C	6.79	120.66	110.75
1	X	2593	A	OP1-P-O3'	6.77	128.31	108.00
24	V	5	GLU	N-CA-C	-6.77	104.03	113.37
5	C	7	ILE	N-CA-C	6.77	117.87	107.99
13	K	10	LEU	N-CA-C	-6.77	99.02	109.24
1	X	2469	G	C2'-C3'-O3'	-6.76	99.36	109.50
3	A	136	VAL	CA-C-N	6.74	127.66	120.11
3	A	136	VAL	C-N-CA	6.74	127.66	120.11
1	X	516	G	C2'-C3'-O3'	6.74	119.61	109.50
6	D	7	LYS	N-CA-C	-6.73	104.54	112.89
8	F	100	LEU	N-CA-C	6.73	120.15	109.65
1	X	940	G	N9-C1'-C2'	6.72	122.09	112.00
19	Q	30	SER	CA-C-N	6.71	127.25	119.47
19	Q	30	SER	C-N-CA	6.71	127.25	119.47
1	X	192	G	C2'-C3'-O3'	6.71	119.56	109.50
1	X	925	U	C4'-C3'-O3'	6.70	119.45	109.40
1	X	1152	C	N1-C1'-C2'	6.70	122.05	112.00
4	B	138	PRO	N-CA-C	-6.69	101.85	111.22
1	X	1299	A	C2'-C3'-O3'	6.68	119.52	109.50
1	X	580	A	C4'-C3'-O3'	-6.68	99.38	109.40
1	X	522	G	C4'-C3'-O3'	-6.67	102.99	113.00
14	L	74	ALA	N-CA-C	-6.66	103.19	112.45
1	X	2594	U	O5'-P-OP2	-6.65	88.04	108.00
4	B	93	VAL	N-CA-C	-6.64	100.60	109.30
5	C	145	THR	N-CA-C	-6.62	107.08	114.62
9	G	131	VAL	N-CA-C	-6.61	104.73	110.74
13	K	34	ILE	N-CA-C	-6.61	99.91	109.29
20	R	101	GLY	N-CA-C	-6.61	105.53	113.99
8	F	135	MET	N-CA-C	-6.58	105.26	113.55
1	X	2592	U	O4'-C1'-C2'	-6.57	99.23	105.80
26	Y	6	VAL	CA-C-N	6.57	127.02	120.52
26	Y	6	VAL	C-N-CA	6.57	127.02	120.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	X	2760	G	N9-C1'-C2'	6.56	123.84	114.00
3	A	209	ALA	N-CA-C	-6.56	101.72	110.24
5	C	35	LEU	N-CA-C	-6.55	103.03	111.02
16	N	45	TYR	N-CA-C	6.55	118.22	111.14
1	X	2312	A	C2'-C3'-O3'	6.55	119.32	109.50
21	S	34	LEU	N-CA-C	6.55	116.70	108.45
1	X	1811	A	C2'-C3'-O3'	6.53	119.29	109.50
10	H	52	VAL	N-CA-C	-6.53	100.38	109.45
1	X	1337	G	C4'-C3'-O3'	-6.52	99.62	109.40
21	S	105	GLN	N-CA-C	-6.52	105.20	112.57
15	M	93	ILE	N-CA-C	6.52	116.85	108.12
20	R	98	ILE	N-CA-C	-6.51	95.80	109.34
19	Q	18	SER	N-CA-C	-6.50	105.35	113.28
1	X	757	U	C4'-C3'-O3'	-6.49	103.27	113.00
15	M	58	ASN	N-CA-C	-6.49	101.52	110.35
15	M	77	VAL	N-CA-C	6.49	116.91	108.35
1	X	1326	U	N1-C1'-C2'	6.48	121.72	112.00
11	I	94	GLU	N-CA-C	-6.48	105.91	113.88
6	D	90	THR	N-CA-C	6.47	118.47	109.15
20	R	81	VAL	N-CA-C	6.47	117.91	108.53
1	X	1945	C	C4'-C3'-O3'	-6.47	103.30	113.00
10	H	70	VAL	N-CA-C	6.46	119.62	108.90
4	B	30	PRO	N-CA-C	-6.45	101.06	110.80
18	P	55	ASP	N-CA-C	6.44	121.19	112.88
1	X	1250	A	C4'-C3'-O3'	-6.44	103.34	113.00
1	X	2034	A	N9-C1'-C2'	6.43	123.65	114.00
1	X	459	A	N9-C1'-C2'	6.41	123.61	114.00
26	Y	42	SER	N-CA-C	6.40	119.14	108.96
10	H	8	LEU	N-CA-C	6.40	119.99	109.94
1	X	969	U	C2'-C3'-O3'	6.39	119.08	109.50
14	L	12	ARG	N-CA-C	-6.39	104.01	110.97
19	Q	87	SER	N-CA-C	6.37	124.37	110.80
1	X	333	A	N9-C1'-C2'	6.37	121.56	112.00
1	X	2560	G	C4'-C3'-O3'	-6.37	99.85	109.40
1	X	2824	C	C4'-C3'-O3'	-6.37	103.45	113.00
1	X	2363	G	N9-C1'-C2'	6.36	123.54	114.00
3	A	242	ALA	N-CA-C	6.36	124.35	110.80
1	X	1142	G	N9-C1'-C2'	6.36	123.54	114.00
12	J	86	LYS	N-CA-C	6.36	119.77	109.40
1	X	460	U	C2'-C3'-O3'	6.36	119.04	109.50
1	X	2370	G	N9-C1'-C2'	6.36	123.54	114.00
1	X	789	G	C2'-C3'-O3'	6.35	119.03	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	A	52	ARG	N-CA-C	6.35	118.49	110.24
5	C	189	ASP	N-CA-C	-6.35	103.65	111.33
26	Y	33	CYS	N-CA-C	6.34	119.50	110.24
1	X	2404	A	C2'-C3'-O3'	6.34	119.01	109.50
9	G	69	ASP	N-CA-C	-6.34	104.47	111.82
24	V	51	ALA	N-CA-C	-6.33	104.08	110.97
1	X	1774	A	C4'-C3'-O3'	-6.32	103.52	113.00
1	X	801	A	N9-C1'-C2'	6.32	123.47	114.00
10	H	32	LYS	N-CA-C	-6.32	100.91	110.70
1	X	2756	A	C2'-C3'-O3'	6.30	118.95	109.50
1	X	1033	G	N9-C1'-C2'	6.30	123.45	114.00
1	X	1265	G	N9-C1'-C2'	6.30	123.45	114.00
1	X	2841	U	N1-C1'-C2'	6.28	123.43	114.00
10	H	103	GLY	N-CA-C	6.28	120.30	113.58
1	X	1791	C	N1-C1'-C2'	6.28	123.42	114.00
14	L	77	ALA	N-CA-C	-6.26	104.55	111.82
1	X	688	A	N9-C1'-C2'	6.26	121.39	112.00
22	T	81	ILE	N-CA-C	6.26	115.87	106.42
19	Q	37	GLU	N-CA-C	-6.25	103.77	111.33
1	X	62	U	C2'-C3'-O3'	-6.24	104.34	113.70
1	X	50	G	C4'-C3'-O3'	-6.24	103.64	113.00
1	X	1137	A	C2'-C3'-O3'	-6.24	104.34	113.70
1	X	1439	G	C2'-C3'-O3'	6.24	123.06	113.70
1	X	804	C	N1-C1'-C2'	6.23	123.35	114.00
23	U	66	ALA	N-CA-C	-6.23	104.03	111.69
1	X	580	A	N9-C1'-C2'	6.23	123.34	114.00
1	X	2044	G	N9-C1'-C2'	6.22	123.33	114.00
21	S	29	ASN	N-CA-C	-6.22	103.85	112.30
26	Y	8	LYS	N-CA-C	6.22	122.76	114.12
1	X	1313	U	C5'-C4'-C3'	6.21	124.52	115.20
1	X	1927	U	C2'-C3'-O3'	6.21	118.82	109.50
3	A	100	GLY	N-CA-C	-6.20	105.81	115.67
15	M	55	ILE	N-CA-C	6.20	118.21	111.77
1	X	1771	A	N9-C1'-C2'	6.19	123.29	114.00
10	H	82	LYS	N-CA-C	6.19	118.85	108.02
1	X	840	U	C2'-C3'-O3'	-6.19	104.42	113.70
10	H	25	LEU	N-CA-C	-6.19	100.77	110.36
15	M	29	PRO	CA-N-CD	-6.19	103.33	112.00
1	X	1771	A	C4'-C3'-O3'	-6.17	100.14	109.40
5	C	56	ARG	N-CA-C	6.17	123.65	114.09
1	X	1313	U	O4'-C4'-C3'	-6.17	99.93	106.10
1	X	467	U	N1-C1'-C2'	6.16	121.25	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	D	141	ILE	N-CA-C	6.16	115.49	106.55
1	X	2824	C	N1-C1'-C2'	6.16	121.24	112.00
1	X	985	G	C2'-C3'-O3'	6.16	118.73	109.50
1	X	2592	U	C3'-C2'-C1'	-6.15	95.35	101.50
12	J	126	LEU	N-CA-C	6.14	118.52	109.62
12	J	130	THR	N-CA-C	6.14	116.19	108.45
7	E	43	VAL	N-CA-C	6.14	115.92	108.06
1	X	657	A	N9-C1'-C2'	6.13	121.20	112.00
1	X	555	U	C5'-C4'-C3'	6.13	125.20	116.00
1	X	1357	U	N1-C1'-C2'	6.13	123.19	114.00
18	P	99	ALA	N-CA-C	6.13	118.62	109.25
1	X	1019	U	N1-C1'-C2'	6.12	121.19	112.00
1	X	2665	G	C4'-C3'-O3'	-6.12	103.83	113.00
17	O	70	TYR	N-CA-C	-6.11	99.95	109.72
22	T	78	PHE	N-CA-C	6.11	119.50	108.69
1	X	2712	G	N9-C1'-C2'	6.11	123.16	114.00
1	X	1749	G	C2'-C3'-O3'	-6.10	100.34	109.50
1	X	2551	A	N9-C1'-C2'	6.10	123.15	114.00
1	X	985	G	N9-C1'-C2'	6.09	123.13	114.00
11	I	104	ARG	N-CA-C	6.09	115.31	108.25
1	X	2559	U	C4'-C3'-O3'	-6.08	103.88	113.00
7	E	22	GLY	N-CA-C	-6.08	107.77	115.31
4	B	200	SER	N-CA-C	-6.08	102.35	110.55
9	G	150	VAL	N-CA-C	6.07	117.76	108.71
1	X	668	A	N9-C1'-C2'	6.07	121.10	112.00
19	Q	90	ALA	N-CA-C	-6.07	105.70	113.23
1	X	747	A	C5'-C4'-C3'	6.06	125.09	116.00
1	X	683	A	N9-C1'-C2'	6.06	123.09	114.00
1	X	2480	C	N1-C1'-C2'	6.06	121.08	112.00
9	G	71	THR	N-CA-C	6.05	119.47	110.39
1	X	1710	U	N1-C1'-C2'	6.05	123.07	114.00
1	X	1152	C	C4'-C3'-O3'	-6.04	103.94	113.00
1	X	1342	U	C4'-C3'-O3'	-6.04	100.34	109.40
11	I	138	GLY	N-CA-C	6.04	118.58	110.43
4	B	52	ALA	CA-C-N	6.03	126.86	120.11
4	B	52	ALA	C-N-CA	6.03	126.86	120.11
1	X	1357	U	C4'-C3'-O3'	-6.03	100.36	109.40
1	X	1337	G	N9-C1'-C2'	6.03	123.04	114.00
1	X	1690	U	C4'-C3'-O3'	-6.02	103.97	113.00
3	A	204	ILE	N-CA-C	-6.02	101.78	109.30
19	Q	58	VAL	CA-C-N	6.01	127.36	119.84
19	Q	58	VAL	C-N-CA	6.01	127.36	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	E	13	SER	N-CA-C	6.01	123.59	110.80
11	I	59	ARG	N-CA-C	-6.01	106.35	113.38
1	X	25	U	C4'-C3'-O3'	-6.00	103.99	113.00
10	H	65	LYS	N-CA-C	6.00	117.33	108.86
1	X	2217	G	N9-C1'-C2'	6.00	123.00	114.00
5	C	133	PHE	N-CA-C	-5.99	104.38	111.03
1	X	1812	U	N1-C1'-C2'	5.99	120.99	112.00
1	X	2840	U	C4'-C3'-O3'	-5.99	104.02	113.00
15	M	23	GLN	N-CA-C	5.99	119.09	107.71
1	X	1947	G	C4'-C3'-O3'	5.99	118.38	109.40
1	X	118	U	N1-C1'-C2'	5.98	120.97	112.00
1	X	2770	A	N9-C1'-C2'	5.98	120.97	112.00
21	S	153	LYS	N-CA-C	5.97	118.59	110.35
1	X	2017	U	N1-C1'-C2'	5.96	120.94	112.00
1	X	1475	U	O4'-C4'-C3'	5.95	109.95	104.00
21	S	62	PHE	CA-C-N	5.95	127.28	119.84
21	S	62	PHE	C-N-CA	5.95	127.28	119.84
21	S	107	GLU	N-CA-C	-5.95	106.00	113.20
1	X	742	G	N9-C1'-C2'	5.95	120.92	112.00
1	X	1288	A	C2'-C3'-O3'	5.94	118.40	109.50
7	E	111	HIS	CA-C-N	5.93	127.25	119.84
7	E	111	HIS	C-N-CA	5.93	127.25	119.84
19	Q	28	TRP	N-CA-C	-5.93	100.87	109.59
1	X	1052	C	N1-C1'-C2'	5.92	120.88	112.00
22	T	38	VAL	N-CA-C	5.92	116.16	108.35
1	X	2660	C	N1-C1'-C2'	5.91	122.86	114.00
20	R	77	HIS	N-CA-C	5.90	117.50	108.30
21	S	81	VAL	N-CA-C	5.90	117.50	108.71
1	X	1754	G	C2'-C3'-O3'	-5.90	104.85	113.70
4	B	73	ALA	CA-C-N	-5.90	111.79	120.46
4	B	73	ALA	C-N-CA	-5.90	111.79	120.46
12	J	48	ILE	N-CA-C	-5.88	105.98	111.45
8	F	118	ALA	N-CA-C	-5.87	103.36	110.88
1	X	2427	A	C2'-C3'-O3'	5.87	118.31	109.50
1	X	1250	A	N9-C1'-C2'	5.87	120.80	112.00
10	H	85	ASP	N-CA-C	-5.87	104.89	111.28
11	I	57	ILE	N-CA-C	-5.86	103.94	110.62
11	I	15	ASP	N-CA-C	-5.86	99.26	108.63
15	M	107	LEU	N-CA-C	-5.85	104.98	111.71
21	S	6	LYS	CA-C-N	-5.85	114.58	120.31
21	S	6	LYS	C-N-CA	-5.85	114.58	120.31
1	X	460	U	C4'-C3'-O3'	-5.84	100.63	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	A	45	ASN	N-CA-C	5.84	118.73	109.50
5	C	15	ILE	N-CA-C	5.84	121.49	109.34
1	X	1267	A	C4'-C3'-O3'	-5.83	104.25	113.00
10	H	99	ILE	N-CA-C	5.83	121.47	109.34
15	M	19	ASP	N-CA-C	-5.83	104.68	113.89
1	X	2447	G	N9-C1'-C2'	5.82	120.74	112.00
9	G	103	TYR	N-CA-C	5.82	119.55	110.17
7	E	85	ILE	N-CA-C	5.82	115.69	106.32
12	J	92	GLU	N-CA-C	-5.82	104.84	111.07
6	D	100	LEU	N-CA-C	-5.82	104.85	111.07
6	D	43	SER	N-CA-C	-5.81	106.15	113.18
1	X	2599	U	C4'-C3'-O3'	-5.81	104.28	113.00
1	X	1278	A	C1'-O4'-C4'	-5.81	103.89	109.70
9	G	111	LYS	N-CA-C	5.80	120.61	112.72
1	X	600	G	N9-C1'-C2'	5.80	120.70	112.00
13	K	70	ILE	N-CA-C	-5.79	101.11	108.93
20	R	79	SER	N-CA-C	-5.79	105.88	113.17
1	X	584	A	C2'-C3'-O3'	-5.79	105.02	113.70
14	L	73	LYS	N-CA-C	-5.79	106.30	113.19
8	F	108	ILE	N-CA-C	-5.78	104.72	110.62
1	X	684	C	C5'-C4'-C3'	-5.78	107.34	116.00
3	A	230	ASP	N-CA-C	5.77	119.50	112.23
1	X	2770	A	C2'-C3'-O3'	5.77	122.35	113.70
13	K	83	VAL	N-CA-C	5.76	117.28	111.00
1	X	1264	C	C1'-C2'-O2'	-5.76	103.16	111.80
12	J	73	LYS	CA-C-N	5.76	127.04	119.84
12	J	73	LYS	C-N-CA	5.76	127.04	119.84
1	X	2759	U	C2'-C3'-O3'	-5.76	100.86	109.50
1	X	2034	A	C4'-C3'-O3'	-5.75	100.77	109.40
1	X	2706	U	N1-C1'-C2'	5.75	122.62	114.00
1	X	1712	G	N9-C1'-C2'	5.74	120.61	112.00
1	X	794	A	C4'-C3'-O3'	-5.74	104.39	113.00
5	C	61	GLN	N-CA-C	-5.74	105.95	113.12
4	B	96	PHE	N-CA-C	5.74	118.08	108.73
12	J	135	ARG	CB-CA-C	-5.73	108.11	116.53
1	X	1812	U	C4'-C3'-O3'	-5.73	104.41	113.00
5	C	169	VAL	CB-CA-C	-5.72	105.05	111.23
1	X	542	A	C4'-C3'-O3'	-5.72	104.42	113.00
1	X	2855	C	C2'-C3'-O3'	-5.71	105.14	113.70
1	X	801	A	C4'-C3'-O3'	-5.70	100.84	109.40
1	X	2254	C	N1-C1'-C2'	5.70	122.55	114.00
5	C	83	ALA	N-CA-C	-5.70	102.04	110.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	Y	33	CYS	CA-C-N	5.70	126.45	120.12
26	Y	33	CYS	C-N-CA	5.70	126.45	120.12
1	X	1562	G	N9-C1'-C2'	5.70	120.55	112.00
9	G	161	GLN	N-CA-C	5.70	117.81	108.52
12	J	21	ASP	N-CA-C	5.70	122.93	110.80
1	X	1749	G	O4'-C4'-C3'	-5.69	100.41	106.10
1	X	2324	G	N9-C1'-C2'	5.69	122.54	114.00
18	P	29	LYS	N-CA-C	5.68	117.94	109.59
20	R	93	ARG	N-CA-C	5.68	122.90	110.80
1	X	312	G	N9-C1'-C2'	5.68	122.52	114.00
1	X	228	A	C3'-C2'-O2'	5.67	119.21	110.70
22	T	64	ASP	N-CA-C	-5.67	100.72	108.38
16	N	39	LEU	N-CA-C	5.67	117.13	111.07
1	X	1715	A	C4'-C3'-O3'	5.67	117.90	109.40
1	X	1141	U	C2'-C3'-O3'	5.66	117.99	109.50
1	X	683	A	C2'-C3'-O3'	5.66	117.99	109.50
9	G	94	LYS	N-CA-C	-5.66	106.04	113.17
15	M	20	HIS	N-CA-C	-5.66	101.06	109.83
5	C	101	GLN	N-CA-C	-5.66	99.59	110.56
4	B	162	MET	N-CA-C	-5.65	103.59	111.39
1	X	321	A	C4'-C3'-O3'	-5.64	104.55	113.00
13	K	48	VAL	N-CA-C	-5.64	105.35	110.82
5	C	17	LEU	CA-C-N	5.63	126.88	119.84
5	C	17	LEU	C-N-CA	5.63	126.88	119.84
3	A	224	SER	N-CA-C	-5.63	103.93	112.04
1	X	2590	U	N1-C1'-C2'	5.63	120.44	112.00
1	X	474	G	C2'-C3'-O3'	-5.62	105.27	113.70
1	X	818	G	C1'-C2'-O2'	-5.62	103.37	111.80
7	E	12	PRO	N-CA-C	5.62	119.91	111.14
3	A	175	VAL	N-CA-C	5.62	118.02	108.86
18	P	98	ASP	N-CA-C	-5.62	103.28	110.53
5	C	187	VAL	N-CA-C	5.61	114.82	106.85
18	P	48	LYS	N-CA-C	5.61	117.77	110.53
11	I	134	GLU	N-CA-C	-5.61	105.17	111.28
1	X	312	G	C4'-C3'-O3'	-5.61	100.99	109.40
1	X	1807	A	N9-C1'-C2'	5.61	122.41	114.00
17	O	53	LYS	N-CA-C	-5.61	106.11	113.17
1	X	2497	A	N9-C1'-C2'	5.60	122.41	114.00
26	Y	14	SER	N-CA-C	-5.60	102.36	111.04
1	X	1921	A	C4'-C3'-O3'	-5.60	104.60	113.00
1	X	872	G	N9-C1'-C2'	5.59	120.39	112.00
21	S	74	ARG	CB-CA-C	-5.59	110.11	116.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	T	15	ASP	N-CA-C	5.59	122.71	110.80
1	X	389	G	N9-C1'-C2'	5.59	120.38	112.00
23	U	33	LYS	N-CA-C	-5.59	106.46	113.28
11	I	142	LEU	CA-C-N	5.58	126.82	119.84
11	I	142	LEU	C-N-CA	5.58	126.82	119.84
11	I	96	TYR	N-CA-C	-5.58	108.26	114.62
1	X	2693	U	N1-C1'-C2'	5.57	122.36	114.00
1	X	174	A	C4'-C3'-O3'	-5.57	104.65	113.00
1	X	1475	U	N1-C1'-C2'	5.57	120.35	112.00
12	J	13	GLN	N-CA-C	5.57	122.66	110.80
16	N	53	LYS	N-CA-C	-5.56	105.11	112.34
10	H	92	ASP	N-CA-C	5.56	118.06	111.33
13	K	72	ASP	N-CA-C	5.56	117.16	109.15
1	X	89	A	C4'-C3'-O3'	-5.56	104.67	113.00
1	X	1913	G	C2'-C3'-O3'	-5.56	105.36	113.70
1	X	1975	G	N9-C1'-C2'	5.55	122.33	114.00
1	X	1631	C	C4'-C3'-O3'	-5.54	101.08	109.40
16	N	89	ASP	N-CA-C	5.54	118.77	109.95
6	D	106	ILE	CB-CA-C	-5.54	106.18	111.06
9	G	104	THR	CB-CA-C	-5.54	107.47	114.40
9	G	117	GLU	N-CA-C	-5.54	105.62	112.38
1	X	1684	G	C4'-C3'-O3'	5.54	117.71	109.40
6	D	5	LYS	N-CA-C	-5.54	99.01	110.80
15	M	59	GLY	N-CA-C	5.53	126.30	113.18
1	X	1926	U	N1-C1'-C2'	5.52	122.28	114.00
1	X	1141	U	O4'-C1'-C2'	5.52	111.32	105.80
4	B	18	ASP	N-CA-C	-5.51	106.39	114.39
6	D	23	SER	N-CA-C	-5.51	105.17	112.34
1	X	538	A	C2'-C3'-O3'	5.51	121.97	113.70
1	X	1224	A	N9-C1'-C2'	5.51	120.27	112.00
1	X	1261	G	C2'-C3'-O3'	5.51	117.77	109.50
5	C	60	GLY	N-CA-C	-5.51	104.86	112.25
19	Q	60	GLY	N-CA-C	5.51	126.24	113.18
1	X	686	C	C4'-C3'-O3'	-5.51	104.74	113.00
1	X	1086	C	N1-C1'-C2'	5.50	120.25	112.00
1	X	2660	C	C2'-C3'-O3'	-5.50	101.25	109.50
1	X	27	G	O4'-C1'-C2'	5.50	111.30	105.80
7	E	135	GLY	N-CA-C	5.50	117.45	110.20
1	X	2592	U	O4'-C4'-C3'	-5.49	100.61	106.10
5	C	54	THR	N-CA-C	5.48	116.73	108.46
1	X	2476	A	N9-C1'-C2'	5.48	122.21	114.00
1	X	2005	U	C2'-C3'-O3'	-5.47	101.29	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	V	23	LYS	N-CA-C	-5.47	106.58	113.20
1	X	177	U	N1-C1'-C2'	5.47	120.21	112.00
7	E	71	LEU	N-CA-C	-5.47	105.32	111.28
13	K	41	ALA	N-CA-C	-5.47	99.16	110.80
15	M	24	LEU	CA-C-N	5.47	126.67	119.84
15	M	24	LEU	C-N-CA	5.47	126.67	119.84
1	X	1633	C	C4'-C3'-O3'	-5.46	101.20	109.40
15	M	3	THR	CA-C-N	-5.46	115.47	122.79
15	M	3	THR	C-N-CA	-5.46	115.47	122.79
1	X	1743	C	C4'-C3'-O3'	-5.46	104.81	113.00
1	X	1373	G	N9-C1'-C2'	5.46	120.19	112.00
1	X	1631	C	O4'-C1'-C2'	5.46	111.26	105.80
1	X	1153	A	C4'-C3'-O3'	-5.45	104.83	113.00
26	Y	19	ARG	N-CA-C	-5.44	104.21	112.04
1	X	1771	A	C1'-C2'-O2'	-5.43	103.65	111.80
25	W	13	PRO	N-CA-C	5.43	119.72	111.19
9	G	46	ALA	N-CA-C	5.43	117.50	107.73
1	X	334	G	C4'-C3'-O3'	-5.42	101.27	109.40
26	Y	45	ILE	CB-CA-C	-5.42	103.64	111.34
21	S	8	ARG	N-CA-C	-5.42	104.78	111.33
1	X	2777	A	N9-C1'-C2'	5.41	120.12	112.00
1	X	1632	A	N9-C1'-C2'	5.41	122.12	114.00
19	Q	69	ILE	N-CA-C	5.40	117.66	109.12
1	X	2481	G	C2'-C3'-O3'	-5.40	105.60	113.70
5	C	153	ASP	N-CA-C	-5.40	99.30	110.80
1	X	1314	A	C4'-C3'-O3'	-5.39	101.31	109.40
24	V	9	LEU	N-CA-C	5.38	117.37	109.24
1	X	466	A	C2'-C3'-O3'	5.38	117.56	109.50
1	X	2690	A	C4'-C3'-O3'	-5.37	104.94	113.00
1	X	995	A	N9-C1'-C2'	5.37	122.05	114.00
1	X	1912	G	N9-C1'-C2'	5.36	120.04	112.00
1	X	1136	G	N9-C1'-C2'	5.36	120.04	112.00
4	B	95	ILE	CA-C-N	-5.36	115.64	122.77
4	B	95	ILE	C-N-CA	-5.36	115.64	122.77
9	G	135	LEU	CA-C-N	5.36	126.54	119.84
9	G	135	LEU	C-N-CA	5.36	126.54	119.84
1	X	1570	C	C2'-C3'-O3'	-5.36	105.67	113.70
1	X	1883	A	N9-C1'-C2'	5.35	120.02	112.00
1	X	1249	G	C4'-C3'-O3'	-5.34	104.98	113.00
1	X	1749	G	C1'-C2'-O2'	-5.34	103.79	111.80
22	T	26	PHE	N-CA-C	5.33	118.43	109.95
1	X	536	A	C5'-C4'-C3'	-5.33	108.00	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	H	108	THR	N-CA-C	-5.33	106.45	113.17
1	X	181	A	C2'-C3'-O3'	5.33	117.49	109.50
7	E	45	GLN	N-CA-C	5.32	117.64	109.07
9	G	151	TYR	N-CA-C	5.32	117.06	108.34
18	P	127	ILE	N-CA-C	5.31	116.37	107.18
3	A	85	ASP	CA-C-N	5.30	126.47	119.84
3	A	85	ASP	C-N-CA	5.30	126.47	119.84
1	X	1142	G	C2'-C3'-O3'	5.30	117.45	109.50
1	X	82	G	C4'-C3'-O3'	-5.30	105.05	113.00
18	P	132	GLY	N-CA-C	-5.30	102.16	111.80
1	X	739	G	C4'-C3'-O3'	-5.30	105.05	113.00
1	X	1407	G	C4'-C3'-O3'	-5.30	105.05	113.00
1	X	469	G	C2'-C3'-O3'	5.29	117.44	109.50
7	E	72	VAL	N-CA-C	-5.29	104.59	110.62
3	A	231	HIS	CA-C-N	5.29	126.45	119.84
3	A	231	HIS	C-N-CA	5.29	126.45	119.84
1	X	830	C	C3'-C2'-O2'	5.29	118.63	110.70
6	D	30	ARG	N-CA-C	5.28	115.26	108.34
10	H	53	ALA	N-CA-C	5.28	117.11	108.76
1	X	1883	A	C4'-C3'-O3'	-5.28	105.08	113.00
1	X	2592	U	O5'-P-OP2	-5.27	92.18	108.00
21	S	129	ARG	N-CA-C	-5.27	106.62	113.16
1	X	751	G	N9-C1'-C2'	5.27	119.91	112.00
1	X	2759	U	C3'-C2'-O2'	-5.27	106.69	114.60
14	L	105	ASP	N-CA-C	-5.27	104.79	111.11
1	X	553	C	C4'-C3'-O3'	5.26	117.29	109.40
10	H	109	ARG	N-CA-C	5.26	116.44	108.07
18	P	78	ASN	N-CA-C	-5.26	107.52	114.31
1	X	1142	G	C1'-C2'-O2'	-5.26	103.91	111.80
1	X	2488	G	C4'-C3'-O3'	-5.26	105.11	113.00
4	B	140	SER	N-CA-C	-5.26	101.30	109.24
1	X	2846	G	C4'-C3'-O3'	-5.25	105.13	113.00
6	D	92	ARG	N-CA-C	5.25	115.28	107.88
1	X	2299	A	N9-C1'-C2'	5.24	119.87	112.00
1	X	1055	A	C2'-C3'-O3'	5.24	121.56	113.70
3	A	84	TYR	N-CA-C	-5.24	102.53	110.28
1	X	571	U	N1-C1'-C2'	5.23	121.84	114.00
8	F	76	SER	N-CA-C	-5.23	105.48	111.07
14	L	94	TYR	N-CA-C	5.23	117.24	107.99
1	X	1433	A	N9-C1'-C2'	5.23	119.84	112.00
15	M	35	VAL	N-CA-C	-5.22	100.93	108.71
1	X	1315	A	C4'-C3'-O3'	5.22	117.22	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	N	55	ARG	N-CA-C	-5.21	105.02	111.33
1	X	2693	U	C1'-C2'-O2'	-5.21	103.98	111.80
15	M	30	GLY	N-CA-C	-5.21	100.83	113.18
1	X	797	A	C4'-C3'-O3'	-5.20	105.20	113.00
7	E	75	ALA	N-CA-C	-5.20	104.87	111.11
1	X	513	A	N9-C1'-C2'	5.20	121.79	114.00
17	O	31	ASP	N-CA-C	5.19	117.08	108.20
10	H	57	ASP	N-CA-C	5.19	116.65	107.61
22	T	83	ALA	N-CA-C	5.19	118.16	109.96
1	X	878	C	N1-C1'-C2'	5.19	119.78	112.00
1	X	1225	G	N9-C1'-C2'	5.18	119.78	112.00
1	X	2520	A	N9-C1'-C2'	5.17	119.76	112.00
1	X	2593	A	N9-C1'-C2'	5.17	121.75	114.00
15	M	63	ARG	N-CA-C	5.17	119.30	112.89
1	X	1664	G	N9-C1'-C2'	5.17	121.75	114.00
1	X	1624	A	N9-C1'-C2'	5.16	121.75	114.00
26	Y	20	ARG	N-CA-C	5.16	119.33	113.19
7	E	98	LEU	N-CA-C	5.16	116.04	107.73
1	X	984	A	N9-C1'-C2'	5.16	119.74	112.00
4	B	193	GLY	N-CA-C	-5.16	105.99	114.76
12	J	93	TYR	N-CA-C	5.16	116.27	108.07
1	X	1287	A	C2'-C3'-O3'	-5.15	105.97	113.70
5	C	184	ASP	N-CA-C	5.15	116.71	111.14
1	X	1345	G	N9-C1'-C2'	5.15	121.72	114.00
26	Y	58	LEU	N-CA-C	5.14	116.93	110.24
1	X	2485	U	N1-C1'-C2'	5.14	119.71	112.00
11	I	52	GLY	N-CA-C	5.14	125.37	113.18
17	O	69	ILE	N-CA-C	-5.14	100.97	108.99
9	G	40	ASN	N-CA-C	-5.14	102.69	110.24
13	K	83	VAL	CB-CA-C	-5.14	105.35	112.24
15	M	12	LEU	N-CA-C	-5.14	105.57	111.07
20	R	86	PRO	N-CA-C	-5.14	107.33	114.27
1	X	1000	G	N9-C1'-C2'	5.13	121.70	114.00
4	B	144	ARG	CB-CA-C	-5.13	107.98	114.40
1	X	182	G	N9-C1'-C2'	5.13	121.69	114.00
1	X	2545	A	N9-C1'-C2'	5.13	119.69	112.00
1	X	2795	A	C4'-C3'-O3'	-5.13	105.31	113.00
1	X	48	A	C2'-C3'-O3'	5.13	117.19	109.50
1	X	1337	G	C3'-C2'-O2'	-5.13	106.91	114.60
1	X	2447	G	C4'-C3'-O3'	-5.12	105.32	113.00
3	A	247	VAL	N-CA-C	-5.12	98.69	109.34
1	X	1355	A	C2'-C3'-O3'	5.11	117.17	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	K	80	MET	N-CA-C	5.11	117.98	111.69
26	Y	4	HIS	CA-C-N	-5.11	113.45	119.84
26	Y	4	HIS	C-N-CA	-5.11	113.45	119.84
1	X	2303	C	C4'-C3'-O3'	-5.11	105.33	113.00
1	X	1685	A	C4'-C3'-C2'	5.11	107.71	102.60
1	X	813	A	O4'-C1'-C2'	5.11	110.91	105.80
1	X	226	C	C2'-C3'-O3'	-5.11	106.04	113.70
1	X	2043	A	C5'-C4'-C3'	5.10	123.65	116.00
20	R	75	ALA	N-CA-C	5.10	118.03	110.48
1	X	2810	A	C2'-C3'-O3'	-5.10	101.85	109.50
1	X	1301	U	N1-C1'-C2'	5.10	121.65	114.00
1	X	858	G	C4'-C3'-O3'	-5.10	105.36	113.00
1	X	1325	U	C4'-C3'-O3'	5.10	117.04	109.40
1	X	2014	A	C2'-C3'-O3'	5.09	117.14	109.50
1	X	741	G	C4'-C3'-O3'	5.09	117.03	109.40
1	X	1769	U	C2'-C3'-O3'	-5.08	106.07	113.70
1	X	2237	C	C4'-C3'-O3'	5.08	117.03	109.40
23	U	51	ILE	N-CA-C	5.08	116.12	109.21
1	X	34	U	N1-C1'-C2'	5.08	119.62	112.00
1	X	1664	G	O4'-C1'-C2'	5.08	110.88	105.80
1	X	2760	G	O4'-C1'-C2'	5.07	110.87	105.80
1	X	2363	G	C4'-C3'-O3'	-5.07	101.79	109.40
1	X	115	G	C3'-C2'-O2'	5.07	118.31	110.70
1	X	1772	C	N1-C1'-C2'	5.07	121.60	114.00
1	X	1979	C	C4'-C3'-O3'	5.07	117.00	109.40
14	L	34	SER	N-CA-C	-5.07	105.75	111.28
1	X	797	A	C3'-C2'-O2'	5.06	118.30	110.70
1	X	460	U	O4'-C1'-C2'	5.06	110.86	105.80
18	P	19	LYS	N-CA-C	-5.06	103.85	110.53
26	Y	25	LEU	N-CA-C	-5.06	103.85	110.53
1	X	1805	G	C4'-C3'-O3'	-5.06	105.41	113.00
1	X	613	A	N9-C1'-C2'	5.05	121.58	114.00
21	S	124	ALA	CA-C-N	5.05	126.16	119.84
21	S	124	ALA	C-N-CA	5.05	126.16	119.84
1	X	1691	G	C4'-C3'-O3'	-5.05	101.83	109.40
11	I	37	GLN	N-CA-C	5.04	121.55	110.80
6	D	25	VAL	N-CA-C	-5.04	104.63	111.89
1	X	1332	G	C2'-C3'-O3'	-5.04	106.14	113.70
1	X	1333	G	O4'-C4'-C3'	5.04	109.04	104.00
1	X	759	C	C4'-C3'-O3'	-5.03	105.45	113.00
1	X	2690	A	C2'-C3'-O3'	-5.03	106.16	113.70
1	X	2180	U	C4'-C3'-O3'	-5.03	105.46	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	E	15	VAL	N-CA-C	5.03	119.79	109.34
23	U	67	LEU	N-CA-C	-5.03	105.69	111.07
1	X	1938	U	O4'-C1'-C2'	5.02	110.82	105.80
5	C	170	LEU	CA-C-N	5.02	126.12	119.84
5	C	170	LEU	C-N-CA	5.02	126.12	119.84
1	X	752	G	C2'-C3'-O3'	-5.02	101.97	109.50
1	X	1625	A	C4'-C3'-O3'	-5.02	105.47	113.00
1	X	1672	A	C2'-C3'-O3'	-5.02	106.17	113.70
1	X	1698	C	C2'-C3'-O3'	-5.02	101.97	109.50
1	X	1581	C	N1-C1'-C2'	5.01	119.51	112.00
1	X	717	G	N9-C1'-C2'	5.00	119.51	112.00
7	E	47	GLY	N-CA-C	-5.00	105.66	112.52
1	X	638	A	C4'-C3'-O3'	5.00	116.91	109.40
1	X	698	A	C4'-C3'-O3'	5.00	116.91	109.40
1	X	1031	C	C2'-C3'-O3'	5.00	121.20	113.70

There are no chirality outliers.

All (234) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
9	G	106	TYR	Sidechain
17	O	80	TYR	Sidechain
1	X	10	A	Sidechain
1	X	1000	G	Sidechain
1	X	1005	U	Sidechain
1	X	1006	C	Sidechain
1	X	1010	U	Sidechain
1	X	1016	C	Sidechain
1	X	1030	U	Sidechain
1	X	1136	G	Sidechain
1	X	1141	U	Sidechain
1	X	1143	A	Sidechain
1	X	1152	C	Sidechain
1	X	1153	A	Sidechain
1	X	1155	G	Sidechain
1	X	118	U	Sidechain
1	X	1206	G	Sidechain
1	X	1210	C	Sidechain
1	X	1212	U	Sidechain
1	X	122	G	Sidechain
1	X	1228	G	Sidechain
1	X	123	A	Sidechain

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Mol	Chain	Res	Type	Group
1	X	1236	G	Sidechain
1	X	124	A	Sidechain
1	X	1242	A	Sidechain
1	X	1247	U	Sidechain
1	X	1250	A	Sidechain
1	X	1251	G	Sidechain
1	X	126	C	Sidechain
1	X	1260	A	Sidechain
1	X	1281	A	Sidechain
1	X	1285	A	Sidechain
1	X	1296	G	Sidechain
1	X	1301	U	Sidechain
1	X	1314	A	Sidechain
1	X	1322	G	Sidechain
1	X	1325	U	Sidechain
1	X	1326	U	Sidechain
1	X	1342	U	Sidechain
1	X	1353	A	Sidechain
1	X	1373	G	Sidechain
1	X	1393	G	Sidechain
1	X	1398	G	Sidechain
1	X	1403	U	Sidechain
1	X	1408	A	Sidechain
1	X	1413	U	Sidechain
1	X	1429	A	Sidechain
1	X	1441	A	Sidechain
1	X	1442	C	Sidechain
1	X	1459	U	Sidechain
1	X	1469	U	Sidechain
1	X	1473	U	Sidechain
1	X	149	A	Sidechain
1	X	1510	A	Sidechain
1	X	1562	G	Sidechain
1	X	1574	A	Sidechain
1	X	1575	C	Sidechain
1	X	1623	C	Sidechain
1	X	1629	G	Sidechain
1	X	1635	G	Sidechain
1	X	1647	U	Sidechain
1	X	165	G	Sidechain
1	X	1651	U	Sidechain
1	X	1654	A	Sidechain

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Mol	Chain	Res	Type	Group
1	X	1661	C	Sidechain
1	X	1664	G	Sidechain
1	X	1665	C	Sidechain
1	X	1673	C	Sidechain
1	X	1682	A	Sidechain
1	X	1688	U	Sidechain
1	X	1692	C	Sidechain
1	X	1697	U	Sidechain
1	X	1707	A	Sidechain
1	X	1709	U	Sidechain
1	X	1710	U	Sidechain
1	X	1711	C	Sidechain
1	X	172	A	Sidechain
1	X	1723	U	Sidechain
1	X	1746	A	Sidechain
1	X	1747	G	Sidechain
1	X	1748	U	Sidechain
1	X	1749	G	Sidechain
1	X	175	C	Sidechain
1	X	1759	A	Sidechain
1	X	1762	C	Sidechain
1	X	1766	U	Sidechain
1	X	177	U	Sidechain
1	X	1771	A	Sidechain
1	X	1777	A	Sidechain
1	X	1778	U	Sidechain
1	X	178	C	Sidechain
1	X	1789	U	Sidechain
1	X	179	U	Sidechain
1	X	1814	G	Sidechain
1	X	1923	U	Sidechain
1	X	1938	U	Sidechain
1	X	1947	G	Sidechain
1	X	1965	U	Sidechain
1	X	1974	U	Sidechain
1	X	1975	G	Sidechain
1	X	1980	A	Sidechain
1	X	1994	U	Sidechain
1	X	1996	A	Sidechain
1	X	1999	U	Sidechain
1	X	2004	U	Sidechain
1	X	201	G	Sidechain

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Mol	Chain	Res	Type	Group
1	X	2013	A	Sidechain
1	X	2016	A	Sidechain
1	X	2039	G	Sidechain
1	X	2045	A	Sidechain
1	X	2061	C	Sidechain
1	X	2064	U	Sidechain
1	X	207	U	Sidechain
1	X	218	A	Sidechain
1	X	2189	A	Sidechain
1	X	219	G	Sidechain
1	X	2192	U	Sidechain
1	X	2216	G	Sidechain
1	X	2258	G	Sidechain
1	X	226	C	Sidechain
1	X	2311	U	Sidechain
1	X	2313	G	Sidechain
1	X	2324	G	Sidechain
1	X	2352	A	Sidechain
1	X	2385	U	Sidechain
1	X	24	G	Sidechain
1	X	2410	U	Sidechain
1	X	2412	A	Sidechain
1	X	2419	C	Sidechain
1	X	2426	G	Sidechain
1	X	2428	U	Sidechain
1	X	2431	C	Sidechain
1	X	2434	G	Sidechain
1	X	2472	U	Sidechain
1	X	2479	U	Sidechain
1	X	2487	G	Sidechain
1	X	2493	U	Sidechain
1	X	2498	U	Sidechain
1	X	25	U	Sidechain
1	X	2508	G	Sidechain
1	X	2510	A	Sidechain
1	X	2528	G	Sidechain
1	X	2540	A	Sidechain
1	X	2541	U	Sidechain
1	X	2542	U	Sidechain
1	X	2548	G	Sidechain
1	X	2549	G	Sidechain
1	X	2553	G	Sidechain

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Mol	Chain	Res	Type	Group
1	X	2557	G	Sidechain
1	X	2576	G	Sidechain
1	X	2588	U	Sidechain
1	X	2592	U	Sidechain
1	X	2620	G	Sidechain
1	X	2663	U	Sidechain
1	X	2664	G	Sidechain
1	X	2665	G	Sidechain
1	X	2666	U	Sidechain
1	X	2672	U	Sidechain
1	X	2684	A	Sidechain
1	X	2691	C	Sidechain
1	X	2696	A	Sidechain
1	X	2704	U	Sidechain
1	X	2738	A	Sidechain
1	X	2760	G	Sidechain
1	X	2823	G	Sidechain
1	X	2824	C	Sidechain
1	X	2841	U	Sidechain
1	X	2854	G	Sidechain
1	X	34	U	Sidechain
1	X	340	G	Sidechain
1	X	342	G	Sidechain
1	X	356	A	Sidechain
1	X	389	G	Sidechain
1	X	390	U	Sidechain
1	X	394	U	Sidechain
1	X	396	U	Sidechain
1	X	403	A	Sidechain
1	X	455	A	Sidechain
1	X	457	C	Sidechain
1	X	459	A	Sidechain
1	X	460	U	Sidechain
1	X	462	G	Sidechain
1	X	467	U	Sidechain
1	X	469	G	Sidechain
1	X	474	G	Sidechain
1	X	476	G	Sidechain
1	X	477	A	Sidechain
1	X	518	A	Sidechain
1	X	539	A	Sidechain
1	X	540	G	Sidechain

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Mol	Chain	Res	Type	Group
1	X	541	C	Sidechain
1	X	555	U	Sidechain
1	X	556	A	Sidechain
1	X	563	U	Sidechain
1	X	571	U	Sidechain
1	X	578	U	Sidechain
1	X	591	G	Sidechain
1	X	594	G	Sidechain
1	X	600	G	Sidechain
1	X	613	A	Sidechain
1	X	621	U	Sidechain
1	X	650	U	Sidechain
1	X	654	A	Sidechain
1	X	670	U	Sidechain
1	X	681	A	Sidechain
1	X	683	A	Sidechain
1	X	684	C	Sidechain
1	X	685	U	Sidechain
1	X	707	U	Sidechain
1	X	708	G	Sidechain
1	X	713	G	Sidechain
1	X	715	U	Sidechain
1	X	752	G	Sidechain
1	X	757	U	Sidechain
1	X	758	G	Sidechain
1	X	760	U	Sidechain
1	X	761	G	Sidechain
1	X	768	U	Sidechain
1	X	771	C	Sidechain
1	X	774	A	Sidechain
1	X	792	U	Sidechain
1	X	814	G	Sidechain
1	X	815	A	Sidechain
1	X	824	U	Sidechain
1	X	872	G	Sidechain
1	X	873	U	Sidechain
1	X	956	A	Sidechain
1	X	974	U	Sidechain
1	X	98	U	Sidechain
1	X	993	C	Sidechain
2	Z	11	G	Sidechain
2	Z	17	A	Sidechain

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Mol	Chain	Res	Type	Group
2	Z	52	G	Sidechain
2	Z	89	G	Sidechain

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	X	57651	0	29049	4406	0
2	Z	2598	0	1328	214	0
3	A	1637	0	1673	483	0
4	B	1539	0	1600	376	0
5	C	1506	0	1525	414	0
6	D	1400	0	1481	458	0
7	E	1286	0	1336	346	0
8	F	504	0	530	133	0
9	G	1114	0	1144	394	0
10	H	997	0	1046	224	1
11	I	1067	0	1103	340	0
12	J	1090	0	1125	265	0
13	K	878	0	930	172	1
14	L	779	0	820	283	0
15	M	871	0	894	211	0
16	N	978	0	1020	304	0
17	O	741	0	756	244	0
18	P	1014	0	1096	198	0
19	Q	726	0	753	205	0
20	R	825	0	881	277	0
21	S	1345	0	1372	340	0
22	T	625	0	655	146	0
23	U	552	0	604	195	0
24	V	533	0	558	137	0
25	W	424	0	470	108	0
26	Y	457	0	462	88	0
27	1	53	0	0	0	0
28	2	46	0	0	0	0
29	3	63	0	0	2	0
30	4	297	0	329	86	0
31	M	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
31	X	30	0	0	0	0
31	Z	4	0	0	0	0
32	X	24	0	19	22	0
33	4	1	0	0	0	0
33	Y	1	0	0	0	0
All	All	83657	0	54559	10162	1

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 74.

All (10162) 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:X:1281:A:H1'	1:X:2592:U:C5	1.68	1.26
1:X:2198:U:H3'	1:X:2199:C:C4'	1.66	1.24
1:X:2198:U:C3'	1:X:2199:C:H4'	1.68	1.23
1:X:1781:C:OP1	3:A:219:PRO:HB2	1.41	1.20
1:X:1281:A:C1'	1:X:2592:U:H5	1.55	1.20
1:X:2712:G:H3'	1:X:2713:A:H5'	1.21	1.20
16:N:51:ARG:HH11	16:N:51:ARG:HB3	1.04	1.17
12:J:71:PRO:HA	12:J:96:SER:HB2	1.23	1.17
16:N:51:ARG:HH11	16:N:51:ARG:CB	1.57	1.16
11:I:85:ASP:HA	11:I:116:ARG:HH12	1.04	1.16
5:C:48:ARG:HB2	5:C:51:VAL:HG22	1.23	1.16
9:G:100:TYR:HB2	9:G:116:ARG:HH12	1.11	1.16
24:V:2:LYS:HA	24:V:6:MET:HE2	1.27	1.15
1:X:504:G:H4'	18:P:27:VAL:HG13	1.28	1.15
14:L:63:ASN:HB3	14:L:66:ASP:HB2	1.26	1.15
21:S:54:ILE:HG13	21:S:62:PHE:HB2	1.19	1.14
25:W:25:LEU:HD22	25:W:30:ASP:HB3	1.28	1.14
4:B:119:ARG:HA	4:B:160:MET:HE3	1.29	1.14
23:U:51:ILE:HG12	23:U:59:THR:HB	1.16	1.14
1:X:871:U:O2'	1:X:2247:A:H2'	1.46	1.13
1:X:1151:U:H5'	1:X:1153:A:H5'	1.16	1.13
1:X:2225:G:H2'	1:X:2226:A:H8	1.14	1.13
5:C:18:PRO:HG2	5:C:105:ALA:HB1	1.30	1.13
13:K:3:HIS:ND1	13:K:5:LYS:HE3	1.61	1.13
1:X:666:U:H2'	1:X:667:U:H4'	1.15	1.12
3:A:247:VAL:HG23	3:A:248:THR:HG23	1.13	1.13
5:C:7:ILE:HB	5:C:120:VAL:H	1.04	1.12
9:G:100:TYR:HB2	9:G:116:ARG:NH1	1.61	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:41:VAL:HG23	23:U:42:GLN:H	0.97	1.12
1:X:542:A:H5"	16:N:28:ARG:HH21	0.96	1.12
3:A:93:ALA:HB2	3:A:107:ALA:HB2	1.15	1.12
19:Q:35:LYS:HE2	19:Q:53:ILE:HG23	1.26	1.12
1:X:1314:A:O2'	1:X:1315:A:H3'	1.49	1.11
1:X:653:G:H2'	1:X:654:A:H5"	1.20	1.11
6:D:39:GLY:HA2	6:D:86:GLY:HA2	1.33	1.11
14:L:85:LYS:HG2	14:L:86:GLN:HE21	1.15	1.11
11:I:85:ASP:HA	11:I:116:ARG:NH1	1.66	1.11
1:X:332:C:H1'	5:C:159:ARG:HE	1.16	1.10
1:X:1508:G:H5'	1:X:1509:A:H5"	1.12	1.10
20:R:51:VAL:HG21	20:R:76:LEU:HD21	1.25	1.10
1:X:2616:U:H5"	4:B:82:ARG:HH21	0.98	1.10
8:F:75:MET:HA	8:F:78:LEU:HB3	1.32	1.10
16:N:66:ASN:HB3	16:N:76:TYR:HB2	1.32	1.10
16:N:85:ARG:HB3	16:N:116:ALA:HB1	1.18	1.10
6:D:60:ILE:HG13	6:D:61:THR:H	1.15	1.10
14:L:30:SER:H	14:L:43:ILE:HD11	1.03	1.10
6:D:132:ILE:HB	6:D:152:MET:HB2	1.28	1.10
14:L:64:LYS:HE2	14:L:64:LYS:N	1.66	1.10
18:P:109:ARG:HD2	18:P:115:ASN:HD21	1.17	1.10
6:D:69:LYS:HE2	6:D:84:PRO:HG3	1.25	1.09
16:N:66:ASN:HB2	16:N:70:ARG:HH12	1.14	1.09
1:X:623:G:H3'	1:X:624:A:H5"	1.21	1.09
10:H:23:ARG:HH12	10:H:25:LEU:HG	1.07	1.09
19:Q:12:ILE:HD12	19:Q:13:SER:H	1.16	1.09
1:X:1128:G:H2'	1:X:1129:A:H5"	1.25	1.09
1:X:2394:G:H3'	11:I:63:ARG:HH11	1.03	1.09
2:Z:46:G:H5'	6:D:92:ARG:HH12	1.18	1.09
14:L:40:ALA:HB2	14:L:103:LEU:HD11	1.24	1.09
5:C:149:LEU:HD11	5:C:170:LEU:HB2	1.28	1.08
14:L:64:LYS:HE2	14:L:64:LYS:H	0.94	1.08
1:X:2056:C:H2'	1:X:2057:U:H5"	1.35	1.08
1:X:451:A:H2'	1:X:452:G:H8	1.14	1.08
1:X:2672:U:H2'	1:X:2673:G:H8	1.19	1.08
14:L:31:VAL:HB	14:L:38:ILE:HD11	1.34	1.08
1:X:1148:G:H21	9:G:134:MET:HE1	1.12	1.07
1:X:317:U:H2'	1:X:318:G:H5"	1.31	1.07
3:A:69:ARG:HD2	3:A:130:ALA:HB2	1.32	1.07
9:G:33:ILE:HB	9:G:34:PRO:HD2	1.09	1.07
30:4:18:ARG:HD3	30:4:23:VAL:HG22	1.33	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:82:G:H22	1:X:100:G:H2'	1.16	1.07
7:E:16:THR:HG22	7:E:18:ASN:HD21	1.18	1.07
14:L:30:SER:N	14:L:43:ILE:HD11	1.69	1.07
15:M:33:VAL:HG22	15:M:51:GLU:HB2	1.13	1.07
1:X:1167:A:N6	16:N:48:ARG:HG2	1.70	1.06
23:U:28:GLY:HA3	23:U:32:ARG:HB3	1.30	1.06
10:H:27:SER:HB3	10:H:50:ILE:HG13	1.35	1.06
11:I:73:GLU:HB2	11:I:106:VAL:HA	1.30	1.06
17:O:12:TYR:HB2	17:O:39:PHE:HB2	1.38	1.06
30:4:15:LYS:HB2	30:4:26:ILE:HG13	1.34	1.06
1:X:1914:U:H6	1:X:1914:U:H5'	1.20	1.06
1:X:2056:C:C2'	1:X:2057:U:H5"	1.85	1.06
1:X:29:U:C4'	16:N:11:ARG:HH12	1.69	1.06
1:X:1474:A:O2'	1:X:1475:U:H5'	1.54	1.06
11:I:60:LEU:HD12	11:I:61:PRO:HD2	1.11	1.06
1:X:88:G:H3'	1:X:89:A:H5"	1.37	1.06
1:X:1095:A:H2'	1:X:1096:A:H5"	1.37	1.05
7:E:97:LYS:HE3	7:E:104:GLU:HG3	1.39	1.05
4:B:85:ALA:H	4:B:86:PRO:HD2	1.21	1.05
10:H:81:ILE:HG13	10:H:117:GLU:OE1	1.56	1.05
14:L:42:ILE:HB	14:L:52:ALA:HB3	1.37	1.05
1:X:1690:U:H2'	1:X:1691:G:H5"	1.38	1.04
5:C:176:ASN:HD21	5:C:178:TYR:HB3	0.95	1.04
11:I:108:LEU:HB2	11:I:122:VAL:HG11	1.35	1.04
22:T:53:MET:HE2	22:T:59:LEU:HD11	1.39	1.04
25:W:5:LEU:HB2	25:W:25:LEU:HD13	1.36	1.04
11:I:72:TYR:HB2	11:I:107:LYS:HE2	1.37	1.04
21:S:3:LEU:HD21	21:S:32:PHE:HB3	1.38	1.04
3:A:231:HIS:CD2	3:A:233:HIS:H	1.75	1.04
9:G:67:ARG:HB2	9:G:70:PHE:HA	1.37	1.04
21:S:123:VAL:N	21:S:161:ALA:HB2	1.73	1.04
4:B:38:THR:HG22	4:B:40:GLN:H	1.18	1.03
1:X:2212:U:H2'	1:X:2213:G:C8	1.94	1.03
24:V:38:ALA:O	24:V:40:PRO:HD3	1.58	1.03
17:O:36:LYS:HE3	17:O:56:VAL:HG13	1.39	1.03
1:X:1525:A:H3'	1:X:1526:U:C6	1.93	1.03
1:X:2225:G:H2'	1:X:2226:A:C8	1.93	1.03
16:N:66:ASN:CB	16:N:70:ARG:HH12	1.72	1.03
21:S:172:LEU:HD23	21:S:173:PRO:HD2	1.39	1.03
1:X:336:A:H2'	1:X:337:G:H8	1.20	1.03
1:X:1095:A:C2'	1:X:1096:A:H5"	1.89	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1173:G:H1'	17:O:21:ARG:HH21	1.22	1.03
11:I:72:TYR:HB3	11:I:107:LYS:HB2	1.36	1.03
16:N:10:ARG:HG2	16:N:13:ARG:HH22	1.16	1.03
19:Q:3:HIS:CE1	19:Q:44:GLN:HG3	1.94	1.02
1:X:1141:U:C4	4:B:147:PRO:HD3	1.93	1.02
3:A:173:VAL:HG12	3:A:174:ILE:H	1.24	1.02
1:X:1348:C:H2'	1:X:1349:A:H8	1.24	1.02
13:K:100:VAL:HG12	13:K:101:GLY:H	1.23	1.02
1:X:333:A:C5'	5:C:162:ARG:HD2	1.89	1.01
1:X:1023:U:H3	9:G:53:ARG:HD2	1.25	1.01
1:X:1508:G:H5'	1:X:1509:A:C5'	1.90	1.01
1:X:2713:A:H61	4:B:203:LYS:HE3	1.24	1.01
5:C:176:ASN:ND2	5:C:178:TYR:HB3	1.74	1.01
6:D:40:LEU:HG	6:D:150:ARG:HE	1.19	1.01
9:G:67:ARG:HD3	9:G:70:PHE:CA	1.90	1.01
22:T:25:LYS:HG2	22:T:37:LEU:HA	1.36	1.01
1:X:983:G:H3'	1:X:984:A:H5"	1.40	1.01
1:X:1333:G:N2	1:X:1344:C:H41	1.59	1.01
22:T:45:PHE:HA	22:T:77:ARG:HB2	1.42	1.01
1:X:1673:C:C5'	4:B:136:ARG:HD3	1.91	1.01
20:R:48:VAL:HG12	20:R:50:GLY:H	1.25	1.01
1:X:2222:U:H2'	1:X:2223:U:H6	1.26	1.00
4:B:116:VAL:HG22	4:B:136:ARG:HE	1.17	1.00
9:G:116:ARG:HD2	9:G:119:LEU:HD12	1.43	1.00
13:K:79:VAL:HA	13:K:83:VAL:CG2	1.89	1.00
21:S:123:VAL:H	21:S:161:ALA:HB2	0.88	1.00
1:X:313:U:H2'	1:X:314:G:H8	1.24	1.00
1:X:451:A:H2'	1:X:452:G:C8	1.96	1.00
1:X:538:A:H5'	9:G:142:ARG:NH2	1.75	1.00
1:X:1574:A:O2'	1:X:1575:C:H3'	1.61	1.00
4:B:116:VAL:HG22	4:B:136:ARG:NE	1.76	1.00
14:L:52:ALA:HB1	14:L:75:LEU:HD11	1.40	1.00
20:R:97:GLN:HB2	20:R:101:GLY:HA2	1.42	1.00
1:X:542:A:C2	1:X:2004:U:H2'	1.97	1.00
2:Z:46:G:C5'	6:D:92:ARG:HH12	1.74	1.00
21:S:3:LEU:HD13	21:S:4:THR:H	1.25	1.00
1:X:988:G:H5'	16:N:55:ARG:HH12	1.25	1.00
5:C:47:THR:HA	5:C:82:VAL:HB	1.41	1.00
1:X:333:A:H5"	5:C:162:ARG:CD	1.91	1.00
8:F:105:VAL:HG13	8:F:128:VAL:HG11	1.44	1.00
9:G:66:HIS:HA	16:N:67:ALA:HB1	1.39	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:11:ASN:HD21	13:K:17:ARG:NH1	1.60	1.00
15:M:99:VAL:HG21	15:M:104:LEU:HD21	1.42	1.00
1:X:1281:A:H1'	1:X:2592:U:H5	1.05	0.99
10:H:13:ASN:ND2	10:H:109:ARG:HG2	1.77	0.99
11:I:88:PHE:HB2	11:I:93:LEU:HD12	1.41	0.99
1:X:663:G:H3'	1:X:664:C:H4'	1.44	0.99
3:A:133:LEU:HB2	3:A:187:SER:HA	1.43	0.99
19:Q:43:GLN:HG2	19:Q:48:VAL:O	1.62	0.99
1:X:400:U:H5	23:U:23:LYS:HD3	1.27	0.99
4:B:33:ILE:H	4:B:33:ILE:HD12	1.26	0.99
1:X:1061:A:H2'	1:X:1062:G:H8	1.27	0.99
1:X:1128:G:C2'	1:X:1129:A:H5"	1.91	0.99
24:V:4:SER:HB3	24:V:7:ARG:HH21	1.27	0.99
1:X:1698:C:O2'	1:X:1753:A:H2'	1.61	0.99
1:X:2581:A:H3'	1:X:2582:G:H5"	1.42	0.99
3:A:91:ARG:HD2	3:A:198:ASN:HA	1.45	0.99
5:C:39:ARG:HH21	5:C:91:TYR:HB2	1.27	0.99
1:X:2197:U:H2'	1:X:2198:U:C5	1.98	0.99
3:A:48:ARG:H	3:A:48:ARG:HD2	1.22	0.99
12:J:27:TYR:HB2	12:J:137:VAL:HG11	1.45	0.99
15:M:66:PHE:HE2	15:M:81:PHE:HB2	1.23	0.99
5:C:164:VAL:HB	5:C:166:TRP:CZ3	1.97	0.98
9:G:65:LYS:CG	9:G:66:HIS:H	1.75	0.98
21:S:46:GLN:HB3	21:S:50:GLY:HA3	1.42	0.98
1:X:2291:U:H5'	6:D:85:VAL:HG21	1.43	0.98
21:S:49:THR:HG21	21:S:96:VAL:HG22	1.44	0.98
6:D:71:LYS:HD2	6:D:73:SER:OG	1.63	0.98
11:I:94:GLU:HB3	11:I:97:ARG:HE	1.24	0.98
11:I:72:TYR:HA	11:I:105:PRO:HG2	1.40	0.98
1:X:1448:A:H61	1:X:1574:A:H61	1.05	0.98
1:X:2394:G:H3'	11:I:63:ARG:NH1	1.77	0.98
1:X:2616:U:H5"	4:B:82:ARG:NH2	1.76	0.98
1:X:2617:G:HO2'	1:X:2618:A:H8	1.00	0.98
13:K:100:VAL:HG23	13:K:112:LEU:HD22	1.46	0.98
1:X:1075:C:H5"	8:F:85:ILE:HG21	1.45	0.98
1:X:2271:C:P	14:L:18:ARG:HH22	1.86	0.98
1:X:2787:A:H2'	1:X:2788:C:H6	1.24	0.98
20:R:94:VAL:HB	20:R:107:ALA:HB3	1.44	0.98
11:I:122:VAL:HG21	11:I:125:ALA:HB2	1.46	0.98
12:J:15:ARG:HD2	12:J:73:LYS:HG3	1.44	0.97
7:E:105:MET:HE2	7:E:105:MET:HA	1.42	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:46:G:H5'	6:D:92:ARG:NH1	1.80	0.97
30:4:9:LYS:HE2	30:4:16:VAL:HG21	1.46	0.97
3:A:211:ARG:O	3:A:214:TRP:HB2	1.63	0.97
6:D:74:ILE:HG12	6:D:80:ARG:HA	1.47	0.97
15:M:69:ARG:HH11	15:M:69:ARG:HG3	1.25	0.97
30:4:18:ARG:HG2	30:4:23:VAL:HA	1.43	0.97
5:C:109:ALA:O	5:C:113:GLU:HG3	1.64	0.97
9:G:87:GLN:HE21	9:G:87:GLN:H	1.11	0.97
1:X:2482:A:H1'	32:X:2911:ZLD:H13B	1.47	0.97
5:C:170:LEU:HD21	5:C:175:VAL:HA	1.43	0.97
6:D:111:ILE:HB	6:D:114:PHE:HB2	1.46	0.97
1:X:332:C:C1'	5:C:159:ARG:HE	1.78	0.97
17:O:10:LYS:HG3	17:O:11:GLN:HE21	1.29	0.97
1:X:29:U:H4'	16:N:11:ARG:HH12	1.24	0.96
14:L:28:ARG:HG3	14:L:43:ILE:HD13	1.46	0.96
19:Q:52:GLY:O	19:Q:80:VAL:HG23	1.65	0.96
23:U:20:ARG:HB2	23:U:43:ARG:HD2	1.43	0.96
23:U:41:VAL:HG23	23:U:42:GLN:N	1.74	0.96
9:G:103:TYR:CE2	9:G:111:LYS:HA	1.98	0.96
9:G:123:PRO:O	9:G:126:VAL:HG23	1.63	0.96
12:J:23:LYS:HA	21:S:73:LYS:NZ	1.80	0.96
21:S:3:LEU:HA	21:S:34:LEU:HB3	1.46	0.96
1:X:1086:C:H2'	1:X:1087:C:H5"	1.43	0.96
5:C:119:ALA:HB3	5:C:189:ASP:HA	1.45	0.96
23:U:41:VAL:CG2	23:U:42:GLN:H	1.77	0.96
4:B:75:THR:O	4:B:76:ARG:HB3	1.65	0.96
19:Q:7:LEU:HD11	24:V:30:PHE:CE2	1.99	0.96
23:U:51:ILE:CG1	23:U:59:THR:HB	1.94	0.96
1:X:984:A:H1'	1:X:1202:U:C6	1.99	0.96
1:X:1949:A:O2'	1:X:2572:U:H5'	1.66	0.96
1:X:2222:U:H2'	1:X:2223:U:C6	1.99	0.96
5:C:7:ILE:HB	5:C:120:VAL:N	1.80	0.96
12:J:57:ARG:HG2	12:J:57:ARG:HH11	1.29	0.96
24:V:3:PRO:O	24:V:6:MET:HB3	1.65	0.96
1:X:517:A:H5"	1:X:518:A:H5'	1.43	0.96
1:X:2551:A:C8	4:B:144:ARG:HD3	2.00	0.96
21:S:95:SER:HA	21:S:121:GLN:HA	1.43	0.96
1:X:958:G:H2'	1:X:959:C:C6	2.00	0.96
1:X:538:A:H5'	9:G:142:ARG:HH21	1.28	0.96
13:K:33:ARG:HG3	13:K:114:GLU:HB3	1.48	0.96
1:X:1525:A:H3'	1:X:1526:U:H6	1.26	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2498:U:H4'	1:X:2499:C:OP1	1.64	0.96
17:O:25:LEU:HB2	17:O:32:LYS:HE2	1.46	0.96
1:X:333:A:H3'	5:C:162:ARG:CZ	1.96	0.95
1:X:2188:A:H2'	1:X:2189:A:N7	1.79	0.95
20:R:60:PRO:HA	20:R:65:PRO:HA	1.47	0.95
1:X:1517:C:H4'	3:A:96:HIS:NE2	1.79	0.95
9:G:65:LYS:HG3	9:G:66:HIS:H	1.32	0.95
1:X:1919:A:H2	1:X:1926:U:H3	0.97	0.95
1:X:1122:A:C2	1:X:1123:G:H1'	2.01	0.95
7:E:127:GLU:HG3	7:E:129:THR:H	1.29	0.95
12:J:27:TYR:HB3	12:J:137:VAL:HG21	1.46	0.95
14:L:33:ARG:NH1	14:L:100:VAL:HA	1.79	0.95
1:X:336:A:H2'	1:X:337:G:C8	2.00	0.95
1:X:2375:G:H4'	23:U:32:ARG:O	1.66	0.95
6:D:4:LEU:HA	6:D:7:LYS:HB2	1.44	0.95
6:D:100:LEU:O	6:D:104:ILE:HG13	1.67	0.95
15:M:104:LEU:HD13	15:M:106:TYR:CE2	1.99	0.95
1:X:958:G:H2'	1:X:959:C:H6	1.30	0.95
25:W:28:ILE:H	25:W:28:ILE:HD13	1.29	0.95
1:X:1926:U:H4'	1:X:1927:U:H3'	1.47	0.95
1:X:2708:U:H2'	1:X:2709:C:C6	2.02	0.95
4:B:85:ALA:N	4:B:86:PRO:HD2	1.78	0.95
9:G:121:LYS:O	9:G:123:PRO:HD3	1.65	0.95
16:N:51:ARG:HB3	16:N:51:ARG:NH1	1.82	0.95
1:X:542:A:H5"	16:N:28:ARG:NH2	1.81	0.95
11:I:62:LYS:HE2	11:I:64:GLY:HA3	1.45	0.95
12:J:15:ARG:HB3	12:J:73:LYS:HZ2	1.30	0.95
12:J:35:LEU:HD12	12:J:131:LYS:O	1.67	0.95
13:K:99:ARG:HG2	13:K:99:ARG:HH11	1.31	0.95
18:P:44:VAL:HG23	18:P:45:ILE:H	1.30	0.95
1:X:128:C:H2'	1:X:129:A:H5"	1.46	0.94
1:X:504:G:H4'	18:P:27:VAL:CG1	1.97	0.94
1:X:971:A:H61	12:J:83:ARG:HH22	1.16	0.94
1:X:1524:C:H5"	1:X:1525:A:H8	1.27	0.94
18:P:89:ARG:HD3	18:P:132:GLY:H	1.29	0.94
1:X:2759:U:H4'	1:X:2760:G:H5"	1.48	0.94
1:X:1586:A:H5'	3:A:38:PRO:HG3	1.47	0.94
5:C:13:ARG:H	5:C:13:ARG:NE	1.65	0.94
6:D:13:ARG:HB3	6:D:14:PRO:HD3	1.48	0.94
20:R:98:ILE:HG22	20:R:99:VAL:H	1.33	0.94
1:X:2620:G:H5"	9:G:104:THR:HG21	1.47	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1587:A:H2'	1:X:1588:A:C8	2.02	0.94
25:W:3:ILE:HG22	25:W:4:LYS:H	1.31	0.94
1:X:1095:A:C3'	1:X:1096:A:H5"	1.97	0.94
1:X:1122:A:H2'	1:X:1123:G:H4'	1.46	0.94
1:X:1292:A:H4'	13:K:31:GLU:OE1	1.68	0.94
1:X:1668:G:H5'	13:K:39:THR:HG21	1.50	0.94
12:J:44:LYS:HB2	12:J:47:GLN:HG3	1.50	0.94
21:S:97:PRO:HA	21:S:119:ASN:HA	1.47	0.94
1:X:1185:C:H2'	1:X:1186:G:H3'	1.46	0.94
13:K:100:VAL:HG12	13:K:101:GLY:N	1.79	0.94
1:X:797:A:C5	3:A:229:VAL:HG21	2.03	0.94
1:X:1348:C:H2'	1:X:1349:A:C8	2.01	0.94
1:X:1673:C:H5'	4:B:136:ARG:HD3	1.50	0.94
7:E:43:VAL:HG23	7:E:52:VAL:HG22	1.50	0.94
9:G:33:ILE:HB	9:G:34:PRO:CD	1.96	0.94
2:Z:64:C:H2'	2:Z:65:A:H8	1.32	0.93
3:A:142:VAL:HG12	3:A:193:ILE:HA	1.47	0.93
14:L:8:ARG:HB2	14:L:8:ARG:HH11	1.32	0.93
1:X:333:A:H5"	5:C:162:ARG:HD2	0.95	0.93
1:X:1333:G:H21	1:X:1344:C:H41	0.98	0.93
1:X:2736:U:O2'	1:X:2737:A:H5"	1.69	0.93
9:G:47:SER:O	9:G:49:VAL:N	2.01	0.93
18:P:41:VAL:O	18:P:43:ASP:N	2.02	0.93
17:O:78:VAL:O	17:O:78:VAL:HG22	1.67	0.93
1:X:169:C:H2'	1:X:170:U:H5'	1.47	0.93
1:X:1563:U:H2'	1:X:1564:U:C6	2.03	0.93
4:B:119:ARG:HH11	4:B:119:ARG:HG3	1.30	0.93
15:M:103:LYS:O	15:M:104:LEU:HB2	1.65	0.93
1:X:731:A:H2'	1:X:732:G:H5'	1.50	0.93
1:X:833:A:H1'	1:X:954:U:H1'	1.47	0.93
1:X:2218:G:H5'	3:A:249:PRO:HB3	1.47	0.93
1:X:48:A:H4'	1:X:49:U:H5'	1.47	0.93
1:X:1808:C:H5"	3:A:39:LYS:NZ	1.84	0.93
5:C:166:TRP:N	5:C:166:TRP:HE3	1.65	0.93
1:X:1563:U:H2'	1:X:1564:U:H6	1.34	0.93
1:X:728:G:H3'	1:X:730:C:OP2	1.69	0.93
1:X:1122:A:C2'	1:X:1123:G:H4'	1.98	0.92
8:F:77:TYR:HB2	8:F:112:LYS:HZ1	1.31	0.92
21:S:123:VAL:H	21:S:161:ALA:CB	1.80	0.92
2:Z:17:A:OP2	2:Z:110:U:H2'	1.68	0.92
3:A:63:ARG:HD2	3:A:85:ASP:HB3	1.52	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:66:PHE:CE2	15:M:81:PHE:HB2	2.04	0.92
1:X:556:A:H1'	1:X:558:G:H21	1.33	0.92
22:T:40:GLN:HE22	22:T:43:THR:HA	1.30	0.92
3:A:231:HIS:HD2	3:A:233:HIS:H	1.10	0.92
2:Z:45:C:H2'	6:D:92:ARG:NE	1.85	0.92
2:Z:30:C:OP1	14:L:37:HIS:HB3	1.70	0.92
14:L:33:ARG:HH12	14:L:103:LEU:HB3	1.30	0.92
4:B:4:ILE:HD13	4:B:28:ALA:HB1	1.51	0.92
5:C:176:ASN:HD22	5:C:179:ASP:H	1.14	0.92
11:I:78:SER:HB3	11:I:112:GLY:HA3	1.52	0.92
13:K:82:GLU:O	13:K:86:LYS:HG3	1.68	0.92
1:X:1218:C:H2'	1:X:1219:C:H6	1.33	0.92
1:X:1710:U:H5'	1:X:1711:C:C5	2.04	0.92
21:S:94:VAL:HB	21:S:125:PRO:HB3	1.50	0.92
1:X:2074:U:H3'	1:X:2075:U:H5"	1.47	0.92
1:X:2240:C:O2'	1:X:2241:U:H5'	1.69	0.92
3:A:35:GLU:O	3:A:64:ILE:HD11	1.69	0.92
13:K:24:GLN:HB3	13:K:44:LEU:HD22	1.52	0.92
30:4:7:VAL:HG13	30:4:34:GLN:HE21	1.35	0.92
1:X:1087:C:OP1	8:F:94:LYS:HE3	1.70	0.91
24:V:13:ASP:HA	24:V:16:LYS:HD3	1.51	0.91
1:X:169:C:C2'	1:X:170:U:H5'	1.99	0.91
1:X:1953:A:H5'	1:X:1954:A:OP1	1.69	0.91
1:X:2020:G:H2'	1:X:2021:G:C8	2.05	0.91
3:A:67:PHE:HB3	3:A:153:ALA:H	1.33	0.91
11:I:77:LEU:HB2	11:I:111:SER:H	1.33	0.91
12:J:44:LYS:HD3	12:J:47:GLN:NE2	1.85	0.91
14:L:54:ALA:H	14:L:75:LEU:HD13	1.35	0.91
22:T:40:GLN:NE2	22:T:43:THR:HA	1.84	0.91
25:W:51:LEU:HD23	25:W:51:LEU:H	1.34	0.91
1:X:1171:A:H2'	1:X:1172:U:H6	1.35	0.91
16:N:66:ASN:HB2	16:N:70:ARG:NH1	1.84	0.91
23:U:51:ILE:HG23	23:U:59:THR:HA	1.48	0.91
1:X:788:G:H5'	1:X:790:A:H1'	1.52	0.91
1:X:1074:G:H21	8:F:91:THR:HA	1.36	0.91
1:X:2198:U:H3'	1:X:2199:C:H4'	0.92	0.91
20:R:54:ILE:HG12	20:R:71:GLN:HG2	1.53	0.91
7:E:105:MET:HB2	7:E:113:VAL:HB	1.53	0.91
1:X:1928:G:H2'	1:X:1929:U:C6	2.06	0.91
1:X:1838:G:H2'	1:X:1839:A:O4'	1.70	0.91
14:L:8:ARG:HB2	14:L:8:ARG:NH1	1.85	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:56:VAL:HA	17:O:97:GLY:HA3	1.52	0.91
21:S:36:ARG:HE	21:S:37:LYS:N	1.68	0.91
7:E:90:ARG:HH21	7:E:163:ARG:HH12	1.19	0.91
1:X:173:A:H61	1:X:844:G:H21	1.13	0.91
1:X:482:A:H2'	1:X:483:A:O4'	1.71	0.91
1:X:1242:A:H2'	1:X:1243:G:H8	1.36	0.91
1:X:1595:A:H2'	1:X:1596:A:O4'	1.70	0.91
7:E:136:ILE:H	7:E:136:ILE:HD12	1.34	0.91
1:X:634:G:H2'	1:X:635:C:H6	1.35	0.90
1:X:1091:C:H1'	8:F:127:THR:HA	1.53	0.90
1:X:663:G:H3'	1:X:664:C:C4'	2.01	0.90
2:Z:32:C:H1'	2:Z:59:A:H61	1.35	0.90
2:Z:53:G:H5'	14:L:64:LYS:HZ2	1.35	0.90
26:Y:32:GLU:HG2	26:Y:37:HIS:O	1.71	0.90
20:R:92:THR:HB	20:R:95:ARG:HH22	1.34	0.90
20:R:108:VAL:HG22	20:R:109:ALA:H	1.33	0.90
23:U:10:LYS:HD3	23:U:11:LYS:N	1.87	0.90
1:X:168:A:H2'	1:X:169:C:H6	1.35	0.90
1:X:651:C:H2'	1:X:652:C:H5"	1.51	0.90
1:X:1108:U:H2'	1:X:1109:A:O4'	1.70	0.90
3:A:131:LEU:HD23	3:A:131:LEU:H	1.34	0.90
1:X:1333:G:H22	1:X:1344:C:H5	1.19	0.90
2:Z:39:C:H5"	2:Z:40:C:C5	2.06	0.90
11:I:76:LYS:HB3	11:I:79:GLN:CG	2.00	0.90
1:X:557:U:H4'	1:X:558:G:O4'	1.71	0.90
9:G:61:ARG:HE	9:G:65:LYS:HE2	1.36	0.90
9:G:67:ARG:HD3	9:G:70:PHE:HA	1.53	0.90
25:W:2:LYS:HB3	25:W:54:GLN:HB3	1.51	0.90
13:K:3:HIS:ND1	13:K:5:LYS:CE	2.34	0.90
1:X:82:G:N2	1:X:100:G:H2'	1.86	0.90
2:Z:72:C:H2'	2:Z:73:C:C6	2.06	0.90
1:X:2272:A:P	14:L:15:ARG:HH21	1.95	0.89
1:X:1017:C:H1'	9:G:134:MET:HE3	1.54	0.89
1:X:2199:C:H2'	1:X:2200:G:C8	2.07	0.89
1:X:2476:A:H1'	1:X:2477:C:H5	1.35	0.89
1:X:2594:U:H5'	1:X:2594:U:H6	1.37	0.89
3:A:62:TYR:HE1	3:A:88:ARG:HH22	1.17	0.89
3:A:244:ARG:N	3:A:244:ARG:HD3	1.86	0.89
21:S:3:LEU:HD21	21:S:33:ALA:H	1.37	0.89
1:X:2447:G:HO2'	1:X:2448:A:H8	1.17	0.89
17:O:29:ALA:HA	17:O:59:GLU:HB3	1.54	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:7:ARG:HD2	24:V:8:ASN:N	1.88	0.89
1:X:1263:G:H5"	16:N:6:THR:HG22	1.54	0.89
1:X:1349:A:H2'	1:X:1350:G:H8	1.37	0.89
5:C:176:ASN:HD21	5:C:178:TYR:CB	1.85	0.89
7:E:84:THR:HA	7:E:134:SER:HA	1.50	0.89
9:G:33:ILE:CB	9:G:34:PRO:HD2	1.99	0.89
1:X:317:U:H2'	1:X:318:G:C5'	2.03	0.89
4:B:31:CYS:HB3	4:B:49:ILE:CG1	2.03	0.89
24:V:6:MET:HE3	24:V:56:VAL:HG21	1.54	0.89
2:Z:42:U:H1'	2:Z:47:A:N6	1.87	0.89
6:D:15:ALA:O	6:D:18:GLN:HB2	1.73	0.89
9:G:158:HIS:HA	9:G:161:GLN:HB2	1.53	0.89
21:S:2:GLU:HG2	21:S:55:THR:HB	1.52	0.89
22:T:3:HIS:CG	22:T:4:LYS:H	1.88	0.89
10:H:116:ARG:HB2	10:H:116:ARG:HH11	1.38	0.89
11:I:85:ASP:CA	11:I:116:ARG:HH12	1.85	0.89
16:N:88:ILE:HG13	17:O:49:GLU:HB2	1.53	0.89
22:T:32:LYS:HG2	22:T:33:ALA:H	1.37	0.89
30:4:15:LYS:CB	30:4:26:ILE:HG13	2.03	0.89
1:X:2850:U:H5'	1:X:2850:U:H6	1.37	0.89
4:B:154:LYS:O	4:B:156:MET:HG3	1.73	0.89
7:E:6:LYS:HB3	7:E:69:ARG:CZ	2.03	0.89
19:Q:26:SER:HB3	19:Q:79:ILE:HG13	1.52	0.89
25:W:25:LEU:CD2	25:W:30:ASP:HB3	2.02	0.89
7:E:124:ALA:O	7:E:131:ILE:HG23	1.73	0.88
1:X:173:A:OP2	11:I:53:ARG:HD2	1.72	0.88
1:X:635:C:H2'	1:X:636:G:H5"	1.56	0.88
1:X:841:G:H2'	1:X:842:A:C8	2.07	0.88
1:X:2422:C:O2'	1:X:2423:G:H5'	1.72	0.88
1:X:1448:A:H61	1:X:1574:A:N6	1.72	0.88
1:X:1466:C:H2'	1:X:1467:U:O4'	1.73	0.88
1:X:1729:C:H2'	1:X:1730:G:H8	1.35	0.88
3:A:172:TYR:CD2	3:A:186:HIS:HB3	2.07	0.88
18:P:89:ARG:CD	18:P:132:GLY:H	1.87	0.88
1:X:356:A:H2'	1:X:357:A:H8	1.37	0.88
21:S:89:GLY:O	21:S:127:PRO:HG3	1.73	0.88
10:H:116:ARG:HD2	15:M:38:LYS:NZ	1.87	0.88
21:S:100:THR:HG23	21:S:138:VAL:HG11	1.55	0.88
23:U:50:ALA:C	23:U:52:ARG:HH22	1.81	0.88
1:X:988:G:H5'	16:N:55:ARG:NH1	1.87	0.88
24:V:4:SER:C	24:V:6:MET:H	1.76	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:623:G:C3’	1:X:624:A:H5”	2.03	0.88
1:X:775:U:H4’	1:X:776:G:O5’	1.73	0.88
1:X:2261:G:H4’	1:X:2262:C:OP2	1.72	0.88
14:L:60:LYS:HE3	14:L:62:GLY:HA2	1.54	0.88
1:X:538:A:H3’	1:X:538:A:N3	1.89	0.88
1:X:663:G:H3’	1:X:664:C:C5’	2.03	0.88
7:E:44:ARG:O	7:E:50:LEU:HG	1.72	0.88
8:F:118:ALA:HB1	8:F:123:ALA:HB1	1.54	0.88
20:R:38:LEU:HD23	20:R:39:ALA:N	1.89	0.88
3:A:172:TYR:HB3	3:A:184:ARG:HG2	1.56	0.88
8:F:110:LYS:HA	8:F:113:MET:HE2	1.53	0.88
11:I:94:GLU:CB	11:I:97:ARG:HE	1.87	0.88
12:J:15:ARG:HD3	12:J:73:LYS:NZ	1.88	0.88
20:R:59:LYS:N	20:R:60:PRO:HD3	1.88	0.88
1:X:2170:C:H3’	1:X:2171:U:H5”	1.55	0.88
6:D:153:ASP:C	6:D:154:ILE:HD12	1.99	0.88
1:X:313:U:H2’	1:X:314:G:C8	2.10	0.87
1:X:732:G:H2’	1:X:733:G:C8	2.08	0.87
6:D:10:ASP:C	6:D:12:VAL:H	1.82	0.87
9:G:87:GLN:HE21	9:G:87:GLN:N	1.71	0.87
1:X:554:U:O2’	1:X:555:U:H1’	1.73	0.87
1:X:1914:U:H5’	1:X:1914:U:C6	2.09	0.87
22:T:25:LYS:HE2	22:T:36:ILE:O	1.73	0.87
1:X:946:U:H2’	1:X:947:C:H6	1.38	0.87
9:G:105:GLY:O	9:G:106:TYR:C	2.17	0.87
11:I:94:GLU:HB3	11:I:97:ARG:NE	1.89	0.87
15:M:99:VAL:HG22	15:M:100:ARG:H	1.39	0.87
23:U:20:ARG:HD2	23:U:43:ARG:CZ	2.03	0.87
1:X:2726:U:H1’	7:E:139:GLN:NE2	1.89	0.87
7:E:149:ARG:HA	7:E:162:VAL:HG11	1.54	0.87
9:G:164:GLN:O	9:G:165:VAL:HG13	1.75	0.87
18:P:89:ARG:HD3	18:P:132:GLY:N	1.90	0.87
24:V:10:GLN:HB2	24:V:12:THR:HG23	1.56	0.87
4:B:174:GLU:HB3	4:B:183:LEU:HD12	1.57	0.87
1:X:402:A:C8	1:X:2392:G:H4’	2.09	0.87
1:X:921:A:H2’	1:X:924:C:C5	2.10	0.87
1:X:1859:A:H2’	1:X:1860:A:H8	1.38	0.87
5:C:39:ARG:NH2	5:C:91:TYR:HB2	1.90	0.87
14:L:73:LYS:HE3	14:L:109:GLU:HG2	1.55	0.87
1:X:1218:C:H2’	1:X:1219:C:C6	2.10	0.87
1:X:2807:U:H5’	1:X:2807:U:H6	1.37	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2856:U:H2'	1:X:2857:C:H6	1.39	0.87
18:P:50:VAL:HB	18:P:90:LEU:O	1.74	0.87
23:U:71:SER:C	23:U:72:LYS:HE2	1.99	0.87
1:X:98:U:H5"	1:X:99:U:H5"	1.54	0.87
4:B:28:ALA:HB3	4:B:92:ASN:HD22	1.38	0.87
7:E:9:ILE:HG13	7:E:50:LEU:HD23	1.57	0.87
12:J:12:LYS:O	12:J:13:GLN:HB2	1.74	0.87
18:P:64:ALA:O	18:P:67:PRO:HD2	1.75	0.87
19:Q:7:LEU:HD11	24:V:30:PHE:HE2	1.38	0.87
1:X:76:C:H5'	1:X:76:C:H6	1.40	0.87
1:X:2482:A:O2'	32:X:2911:ZLD:C13	2.23	0.87
6:D:17:MET:HE3	6:D:25:VAL:HG12	1.57	0.87
9:G:144:MET:O	9:G:146:THR:N	2.08	0.87
17:O:36:LYS:HE3	17:O:56:VAL:CG1	2.05	0.87
25:W:38:PRO:HB3	25:W:41:ARG:NH2	1.89	0.87
3:A:102:LYS:O	3:A:103:ARG:HG3	1.74	0.86
6:D:57:LEU:HA	6:D:60:ILE:HD11	1.55	0.86
18:P:89:ARG:NH2	18:P:132:GLY:HA2	1.89	0.86
1:X:1512:A:H2'	1:X:1514:C:C5	2.09	0.86
9:G:156:HIS:HB2	9:G:157:PRO:HD3	1.55	0.86
1:X:303:C:O5'	1:X:303:C:H6	1.58	0.86
1:X:2672:U:H2'	1:X:2673:G:C8	2.10	0.86
2:Z:45:C:H2'	6:D:92:ARG:CZ	2.06	0.86
4:B:91:VAL:HG12	4:B:92:ASN:H	1.40	0.86
14:L:33:ARG:HH11	14:L:100:VAL:HA	1.36	0.86
1:X:2482:A:C8	32:X:2911:ZLD:C13	2.57	0.86
3:A:93:ALA:CB	3:A:107:ALA:HB2	2.04	0.86
3:A:165:VAL:O	3:A:166:GLN:HG3	1.74	0.86
20:R:97:GLN:CB	20:R:101:GLY:HA2	2.06	0.86
26:Y:16:ARG:HH11	26:Y:20:ARG:HH12	1.23	0.86
1:X:653:G:C2'	1:X:654:A:H5"	2.02	0.86
1:X:1812:U:H3	3:A:200:GLU:HA	1.40	0.86
1:X:2308:A:H2'	1:X:2309:G:C8	2.10	0.86
1:X:2757:G:H5"	1:X:2758:A:H5"	1.57	0.86
1:X:2796:A:OP2	13:K:3:HIS:CE1	2.28	0.86
4:B:134:TRP:CD1	4:B:134:TRP:H	1.93	0.86
18:P:85:MET:HE2	18:P:130:GLU:HG3	1.57	0.86
1:X:1587:A:H2'	1:X:1588:A:H8	1.39	0.86
16:N:5:LYS:C	16:N:7:GLY:H	1.80	0.86
17:O:12:TYR:HB2	17:O:39:PHE:CB	2.05	0.86
21:S:154:LEU:HD21	21:S:160:LEU:HG	1.56	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:94:GLU:HA	11:I:97:ARG:HG3	1.58	0.86
14:L:91:ARG:H	14:L:91:ARG:CD	1.89	0.86
21:S:36:ARG:HH11	21:S:37:LYS:HB2	1.39	0.86
1:X:317:U:C2'	1:X:318:G:H5"	2.06	0.86
6:D:69:LYS:HA	6:D:84:PRO:HA	1.57	0.86
6:D:72:LYS:HA	6:D:81:GLN:HA	1.58	0.86
6:D:100:LEU:HG	6:D:104:ILE:HD11	1.56	0.86
15:M:102:ALA:O	15:M:103:LYS:HD2	1.75	0.86
8:F:77:TYR:HE1	8:F:80:ARG:HH21	1.21	0.86
1:X:597:U:H2'	1:X:598:U:C6	2.11	0.86
1:X:2218:G:O4'	3:A:249:PRO:HG3	1.74	0.86
2:Z:30:C:H42	2:Z:58:G:H1	1.19	0.86
2:Z:67:C:H2'	2:Z:111:C:H42	1.41	0.86
23:U:54:ASN:C	23:U:56:GLN:H	1.80	0.86
5:C:166:TRP:N	5:C:166:TRP:CE3	2.43	0.85
15:M:28:ARG:CB	15:M:29:PRO:HD3	2.00	0.85
19:Q:62:ARG:O	19:Q:70:GLY:HA3	1.76	0.85
1:X:1949:A:C2	1:X:2572:U:H1'	2.11	0.85
1:X:2199:C:H2'	1:X:2200:G:H8	1.41	0.85
15:M:33:VAL:HG22	15:M:51:GLU:CB	2.05	0.85
17:O:47:PHE:O	17:O:50:ASP:HB3	1.76	0.85
1:X:1004:A:H2	17:O:21:ARG:HH22	1.19	0.85
1:X:137:A:C5	1:X:138:G:H1'	2.11	0.85
1:X:537:C:H5	1:X:2759:U:H3'	1.40	0.85
7:E:97:LYS:H	7:E:104:GLU:HB3	1.41	0.85
1:X:83:A:C2	1:X:98:U:H1'	2.11	0.85
1:X:1380:C:H2'	1:X:1381:G:H5'	1.58	0.85
1:X:1692:C:O2'	1:X:1693:A:H5'	1.76	0.85
3:A:243:GLY:C	3:A:244:ARG:HD3	2.00	0.85
6:D:137:ILE:HG13	6:D:138:PHE:CE1	2.12	0.85
16:N:56:ASP:O	16:N:59:ARG:N	2.08	0.85
1:X:1281:A:C1'	1:X:2592:U:C5	2.41	0.85
1:X:2482:A:C8	32:X:2911:ZLD:H13	2.12	0.85
4:B:27:LEU:O	4:B:27:LEU:HD23	1.76	0.85
4:B:176:ARG:NH2	15:M:16:ILE:HA	1.92	0.85
26:Y:42:SER:O	26:Y:43:HIS:HB2	1.77	0.85
5:C:102:LEU:O	5:C:102:LEU:HD23	1.77	0.85
6:D:65:PRO:HA	6:D:89:VAL:HG13	1.58	0.85
16:N:88:ILE:HG12	17:O:48:GLY:C	2.02	0.85
21:S:138:VAL:HA	21:S:141:MET:HE2	1.57	0.85
1:X:1729:C:H2'	1:X:1730:G:C8	2.12	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2482:A:H4'	1:X:2483:U:OP1	1.76	0.85
3:A:211:ARG:HA	3:A:214:TRP:CD1	2.12	0.85
4:B:136:ARG:HG2	4:B:137:ARG:H	1.42	0.85
24:V:56:VAL:HA	24:V:59:GLU:OE1	1.76	0.85
25:W:54:GLN:HG2	25:W:55:GLU:CD	2.02	0.85
3:A:93:ALA:HB2	3:A:107:ALA:CB	2.03	0.85
3:A:212:SER:O	3:A:215:LEU:HD12	1.76	0.85
5:C:132:ASN:O	5:C:135:SER:HB3	1.77	0.85
9:G:132:PHE:HB2	9:G:145:HIS:CE1	2.12	0.85
12:J:44:LYS:HD3	12:J:47:GLN:CD	2.02	0.85
14:L:33:ARG:NH2	14:L:103:LEU:HB2	1.90	0.85
19:Q:6:ILE:HG22	19:Q:7:LEU:N	1.91	0.85
1:X:1200:G:N2	1:X:1201:G:H1'	1.92	0.85
1:X:1323:G:H3'	1:X:1324:G:N2	1.92	0.85
2:Z:15:A:O2'	2:Z:16:U:H5"	1.76	0.85
10:H:19:ILE:H	10:H:19:ILE:HD13	1.40	0.85
10:H:23:ARG:NH1	10:H:25:LEU:HG	1.92	0.85
14:L:63:ASN:HB3	14:L:66:ASP:CB	2.06	0.84
22:T:25:LYS:HA	22:T:29:GLU:OE1	1.75	0.84
4:B:16:LYS:O	4:B:17:ASN:HB2	1.76	0.84
5:C:176:ASN:ND2	5:C:179:ASP:H	1.74	0.84
21:S:42:ALA:HA	21:S:45:GLN:HE21	1.42	0.84
1:X:27:G:N2	1:X:522:G:O2'	2.09	0.84
1:X:1838:G:H3'	1:X:1839:A:H8	1.43	0.84
21:S:105:GLN:HE22	21:S:139:THR:HG22	1.41	0.84
24:V:14:PHE:CD2	24:V:57:LYS:HB2	2.11	0.84
1:X:542:A:H2	1:X:2004:U:H2'	1.37	0.84
1:X:969:U:C2	12:J:17:ARG:HD2	2.13	0.84
1:X:1060:C:O2	1:X:1124:U:H4'	1.77	0.84
1:X:2710:C:O2'	1:X:2711:G:H5'	1.77	0.84
5:C:112:GLN:OE1	5:C:116:LYS:HD2	1.77	0.84
21:S:91:PRO:HG2	21:S:92:VAL:H	1.43	0.84
9:G:63:ARG:HG3	9:G:64:GLY:H	1.41	0.84
1:X:1286:U:H4'	1:X:1288:A:OP2	1.76	0.84
6:D:46:ASP:HB3	6:D:49:ALA:HB3	1.59	0.84
11:I:76:LYS:HD3	11:I:79:GLN:NE2	1.93	0.84
1:X:542:A:C5'	16:N:28:ARG:HH21	1.86	0.84
1:X:1503:G:H2'	1:X:1504:G:H8	1.43	0.84
1:X:969:U:C4	12:J:17:ARG:HB2	2.13	0.84
9:G:104:THR:OG1	9:G:110:LEU:HB3	1.76	0.84
20:R:51:VAL:HG21	20:R:76:LEU:CD2	2.08	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:149:ALA:HB3	21:S:164:PRO:HA	1.59	0.84
23:U:45:ASN:O	23:U:46:LEU:HG	1.77	0.84
1:X:70:A:H4'	1:X:71:A:O5'	1.75	0.84
1:X:726:G:H2'	1:X:727:U:C2	2.12	0.84
1:X:1053:G:H2'	1:X:1054:C:H6	1.42	0.84
1:X:1928:G:H2'	1:X:1929:U:H6	1.43	0.84
1:X:2180:U:H2'	1:X:2203:G:H22	1.42	0.84
1:X:2404:A:H4'	1:X:2405:A:C5'	2.07	0.84
16:N:30:LYS:HZ2	16:N:30:LYS:HB3	1.43	0.84
21:S:16:GLU:O	21:S:18:MET:HG2	1.77	0.84
1:X:1003:C:H4'	17:O:71:ILE:HD13	1.57	0.84
1:X:1690:U:C2'	1:X:1691:G:H5"	2.06	0.84
1:X:1710:U:H5'	1:X:1711:C:H5	1.42	0.84
1:X:575:U:H2'	1:X:576:A:H8	1.43	0.83
1:X:1673:C:H5'	4:B:136:ARG:HH11	1.43	0.83
1:X:886:A:H1'	12:J:30:PHE:CE1	2.13	0.83
1:X:1452:U:O2'	1:X:1453:A:H5'	1.78	0.83
2:Z:106:U:O2'	21:S:67:LYS:HG2	1.78	0.83
3:A:217:ARG:HG2	3:A:218:LYS:HG3	1.60	0.83
5:C:95:LEU:HD23	5:C:96:PRO:HD2	1.60	0.83
10:H:116:ARG:HH11	15:M:38:LYS:HZ2	1.24	0.83
14:L:85:LYS:HG2	14:L:86:GLN:NE2	1.93	0.83
16:N:51:ARG:H	16:N:51:ARG:HD2	1.43	0.83
16:N:91:ASN:O	16:N:93:LYS:HG3	1.77	0.83
17:O:12:TYR:O	17:O:13:ARG:HG2	1.77	0.83
23:U:28:GLY:HA3	23:U:32:ARG:CB	2.08	0.83
6:D:80:ARG:HD3	6:D:83:MET:HB2	1.58	0.83
13:K:84:ALA:HB3	13:K:85:PRO:HD3	1.60	0.83
17:O:15:SER:HA	17:O:95:ILE:HB	1.60	0.83
1:X:648:A:H4'	1:X:649:G:C5'	2.08	0.83
1:X:2712:G:H3'	1:X:2713:A:C5'	2.08	0.83
23:U:48:LYS:HG2	23:U:49:LYS:N	1.94	0.83
1:X:455:A:H1'	1:X:1215:A:O4'	1.78	0.83
2:Z:64:C:H2'	2:Z:65:A:C8	2.13	0.83
5:C:39:ARG:HH21	5:C:91:TYR:CB	1.91	0.83
3:A:206:LEU:O	3:A:211:ARG:HD2	1.77	0.83
5:C:48:ARG:CB	5:C:51:VAL:HG22	2.07	0.83
1:X:2811:G:H2'	1:X:2812:A:C8	2.14	0.83
7:E:140:LEU:O	7:E:144:VAL:HG23	1.78	0.83
18:P:32:ARG:NH1	18:P:119:LYS:HB3	1.93	0.83
19:Q:25:TYR:OH	19:Q:87:SER:HA	1.79	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:3:ILE:HG22	25:W:4:LYS:N	1.89	0.83
3:A:72:LYS:HE2	3:A:97:TYR:CD2	2.14	0.83
4:B:195:LEU:HB2	15:M:3:THR:CG2	2.09	0.83
16:N:93:LYS:HZ3	17:O:5:ILE:HG22	1.43	0.83
19:Q:20:MET:O	19:Q:22:ARG:N	2.11	0.83
22:T:53:MET:CE	22:T:59:LEU:HD11	2.07	0.83
24:V:46:LEU:O	24:V:50:VAL:HG23	1.78	0.83
1:X:1264:C:C5'	16:N:13:ARG:NH1	2.41	0.83
6:D:132:ILE:HG13	6:D:154:ILE:HD13	1.61	0.83
7:E:103:LEU:HD12	7:E:104:GLU:H	1.44	0.83
20:R:14:LEU:HD22	20:R:41:PRO:HA	1.58	0.83
1:X:1673:C:H5"	4:B:136:ARG:HB3	1.58	0.83
7:E:130:ARG:O	7:E:131:ILE:HD13	1.78	0.83
9:G:70:PHE:HB2	16:N:64:ARG:NE	1.94	0.83
13:K:49:GLU:OE1	13:K:95:THR:HB	1.78	0.83
19:Q:77:LYS:HG2	19:Q:79:ILE:HD11	1.61	0.83
21:S:102:GLY:O	21:S:138:VAL:HG21	1.79	0.83
21:S:112:LEU:HD12	21:S:113:VAL:N	1.93	0.83
21:S:168:VAL:HG12	21:S:169:VAL:HG22	1.60	0.83
1:X:1815:G:H2'	1:X:1816:G:H8	1.44	0.82
1:X:1956:G:H2'	1:X:1957:C:H6	1.44	0.82
10:H:64:VAL:HG22	10:H:106:ARG:NH2	1.94	0.82
15:M:55:ILE:O	15:M:56:ALA:HB2	1.78	0.82
16:N:91:ASN:O	16:N:93:LYS:N	2.12	0.82
17:O:10:LYS:HB2	17:O:37:ALA:H	1.44	0.82
1:X:1630:A:N1	18:P:114:ALA:HB2	1.94	0.82
8:F:72:THR:N	8:F:73:PRO:HD3	1.95	0.82
20:R:14:LEU:HD23	20:R:14:LEU:H	1.45	0.82
1:X:795:A:N1	3:A:226:MET:HE3	1.95	0.82
2:Z:53:G:H5'	14:L:64:LYS:NZ	1.95	0.82
16:N:85:ARG:CB	16:N:116:ALA:HB1	2.07	0.82
1:X:1045:G:H2'	1:X:1046:U:C6	2.14	0.82
5:C:24:SER:HA	5:C:27:LEU:HD23	1.60	0.82
6:D:98:VAL:HG12	6:D:102:LYS:HE3	1.59	0.82
14:L:75:LEU:O	14:L:78:ALA:HB3	1.80	0.82
21:S:112:LEU:HD12	21:S:113:VAL:H	1.44	0.82
26:Y:47:PRO:HG2	26:Y:48:ASN:H	1.44	0.82
1:X:512:A:H4'	18:P:15:LYS:HB3	1.60	0.82
1:X:1416:A:H2'	1:X:1417:C:C6	2.13	0.82
6:D:35:VAL:HG22	6:D:90:THR:HA	1.60	0.82
10:H:62:GLY:O	10:H:65:LYS:HE3	1.78	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:74:ASP:O	19:Q:75:ARG:HG3	1.79	0.82
1:X:1744:G:N2	1:X:1746:A:H3'	1.94	0.82
1:X:2272:A:H5"	14:L:15:ARG:NH2	1.94	0.82
1:X:2331:A:C2	22:T:33:ALA:HB1	2.14	0.82
3:A:84:TYR:HE2	3:A:91:ARG:HG2	1.45	0.82
14:L:33:ARG:NH1	14:L:103:LEU:HB3	1.93	0.82
16:N:39:LEU:O	16:N:42:ALA:N	2.11	0.82
1:X:667:U:O2	1:X:667:U:H2'	1.78	0.82
1:X:1314:A:HO2'	1:X:1315:A:H3'	1.43	0.82
1:X:2372:A:H2'	1:X:2373:C:H6	1.44	0.82
5:C:123:PHE:O	5:C:125:ILE:N	2.13	0.82
7:E:56:SER:HB2	7:E:61:HIS:CG	2.15	0.82
16:N:16:LYS:O	16:N:20:ARG:HG3	1.78	0.82
1:X:742:G:N1	3:A:208:LYS:HD3	1.93	0.82
1:X:787:A:H5"	3:A:48:ARG:HH22	1.42	0.82
1:X:1373:G:N2	1:X:1374:G:H1'	1.93	0.82
3:A:36:ALA:HB1	3:A:63:ARG:HA	1.62	0.82
10:H:3:MET:O	10:H:6:SER:HB2	1.80	0.82
16:N:10:ARG:HG2	16:N:13:ARG:NH2	1.94	0.82
21:S:54:ILE:HB	21:S:62:PHE:N	1.94	0.82
1:X:216:U:H5"	1:X:601:A:H62	1.45	0.82
1:X:2779:C:H2'	1:X:2780:A:O4'	1.78	0.82
3:A:119:ALA:HB1	3:A:130:ALA:HB3	1.59	0.82
9:G:157:PRO:C	9:G:161:GLN:HE21	1.88	0.82
10:H:116:ARG:HD3	15:M:40:ARG:HB3	1.61	0.82
12:J:8:THR:HG22	12:J:70:PHE:CZ	2.14	0.82
17:O:10:LYS:CD	17:O:37:ALA:HB3	2.08	0.82
1:X:67:G:H2'	1:X:68:C:C6	2.15	0.82
1:X:148:C:H3'	1:X:149:A:C8	2.14	0.82
1:X:536:A:H5'	1:X:537:C:OP1	1.80	0.82
1:X:1148:G:N2	9:G:134:MET:HE1	1.95	0.82
1:X:1219:C:H5'	11:I:7:LYS:O	1.80	0.82
1:X:2722:C:H2'	1:X:2723:C:H6	1.44	0.82
18:P:9:ARG:HB3	18:P:13:GLN:HG3	1.62	0.82
23:U:9:GLY:H	23:U:14:VAL:HG22	1.44	0.82
23:U:50:ALA:CB	23:U:52:ARG:HH22	1.93	0.82
1:X:173:A:N6	1:X:844:G:H21	1.78	0.81
1:X:836:G:H2'	1:X:837:U:H6	1.45	0.81
1:X:1673:C:H5"	4:B:136:ARG:HD3	1.61	0.81
1:X:1816:G:O2'	1:X:1817:U:H5'	1.79	0.81
1:X:2037:A:H2'	26:Y:8:LYS:HE3	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:116:LEU:HD22	8:F:118:ALA:HB3	1.60	0.81
2:Z:32:C:H2'	2:Z:33:C:H5'	1.61	0.81
5:C:58:MET:HA	5:C:58:MET:HE3	1.62	0.81
11:I:30:ALA:HB2	11:I:34:HIS:CE1	2.15	0.81
13:K:14:SER:OG	13:K:15:SER:N	2.08	0.81
17:O:26:GLN:HG2	17:O:27:GLY:H	1.45	0.81
1:X:3:U:H2'	1:X:4:C:H6	1.46	0.81
1:X:693:A:H2'	1:X:694:G:C8	2.15	0.81
1:X:1524:C:H5"	1:X:1525:A:C8	2.15	0.81
1:X:1822:C:O5'	1:X:1822:C:H6	1.62	0.81
1:X:2482:A:C1'	32:X:2911:ZLD:H13B	2.10	0.81
3:A:238:GLY:O	3:A:239:ARG:HG3	1.79	0.81
4:B:167:VAL:HG13	4:B:170:LEU:HD11	1.63	0.81
5:C:125:ILE:HD12	5:C:133:PHE:HA	1.62	0.81
8:F:77:TYR:HB2	8:F:112:LYS:NZ	1.93	0.81
11:I:32:ARG:O	11:I:32:ARG:HD3	1.79	0.81
11:I:72:TYR:CB	11:I:107:LYS:HB2	2.08	0.81
30:4:9:LYS:HB3	30:4:14:CYS:SG	2.21	0.81
1:X:38:G:H1	1:X:453:U:H3	1.25	0.81
3:A:134:ARG:HG3	3:A:135:PHE:CD2	2.15	0.81
4:B:134:TRP:H	4:B:134:TRP:HD1	1.27	0.81
9:G:151:TYR:HB3	9:G:157:PRO:HG3	1.62	0.81
12:J:23:LYS:HA	21:S:73:LYS:HZ1	1.45	0.81
14:L:43:ILE:HD12	14:L:43:ILE:H	1.46	0.81
19:Q:39:LYS:O	19:Q:43:GLN:HB2	1.81	0.81
20:R:108:VAL:HG22	20:R:109:ALA:N	1.94	0.81
22:T:66:LYS:O	22:T:68:VAL:HG23	1.81	0.81
1:X:228:A:H5'	11:I:53:ARG:HG2	1.62	0.81
1:X:813:A:H4'	1:X:814:G:O5'	1.81	0.81
1:X:1253:C:H2'	1:X:1254:G:H5'	1.63	0.81
1:X:2209:G:H4'	23:U:46:LEU:C	2.05	0.81
3:A:200:GLU:HG3	3:A:202:LYS:HB2	1.59	0.81
5:C:4:ILE:HA	5:C:13:ARG:HH22	1.45	0.81
23:U:32:ARG:HD2	23:U:34:THR:H	1.45	0.81
1:X:1264:C:H5"	16:N:13:ARG:NH1	1.95	0.81
1:X:1919:A:H2	1:X:1926:U:N3	1.78	0.81
1:X:1956:G:H2'	1:X:1957:C:C6	2.15	0.81
1:X:2005:U:H4'	1:X:2006:G:OP1	1.81	0.81
3:A:173:VAL:HG12	3:A:174:ILE:N	1.94	0.81
4:B:146:THR:HB	4:B:147:PRO:HD2	1.62	0.81
7:E:16:THR:HG22	7:E:18:ASN:ND2	1.95	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:32:TYR:OH	9:G:35:LYS:HE2	1.81	0.81
9:G:105:GLY:N	9:G:110:LEU:HD12	1.95	0.81
14:L:29:LEU:HB3	14:L:89:PHE:HA	1.61	0.81
18:P:87:GLU:HA	18:P:90:LEU:HD11	1.61	0.81
19:Q:20:MET:O	19:Q:23:GLY:N	2.14	0.81
21:S:24:TYR:HB3	21:S:29:ASN:OD1	1.79	0.81
24:V:4:SER:HB3	24:V:7:ARG:NH2	1.95	0.81
2:Z:30:C:N4	2:Z:58:G:H1	1.78	0.81
6:D:69:LYS:CE	6:D:84:PRO:HG3	2.10	0.81
11:I:33:GLY:HA2	17:O:79:GLN:HG3	1.61	0.81
11:I:94:GLU:HB3	11:I:97:ARG:HH11	1.46	0.81
1:X:491:A:H5"	20:R:74:LEU:HD11	1.63	0.81
1:X:1517:C:H4'	3:A:96:HIS:CE1	2.15	0.81
1:X:2311:U:C4'	1:X:2315:A:H62	1.94	0.81
1:X:2564:U:H3	32:X:2911:ZLD:C21	1.93	0.81
14:L:67:THR:O	14:L:71:VAL:HG12	1.81	0.81
15:M:29:PRO:HA	15:M:54:VAL:HG12	1.62	0.81
18:P:109:ARG:HD2	18:P:115:ASN:ND2	1.95	0.81
23:U:28:GLY:CA	23:U:32:ARG:HB3	2.10	0.81
23:U:53:GLU:HB2	23:U:56:GLN:O	1.80	0.81
3:A:33:LEU:HD21	3:A:63:ARG:NH2	1.95	0.81
5:C:125:ILE:CD1	5:C:133:PHE:HA	2.11	0.81
6:D:132:ILE:CB	6:D:152:MET:HB2	2.07	0.81
7:E:127:GLU:C	7:E:129:THR:H	1.89	0.81
17:O:39:PHE:CE1	17:O:46:VAL:HG21	2.15	0.81
23:U:48:LYS:CG	23:U:49:LYS:H	1.94	0.81
1:X:788:G:H5'	1:X:790:A:C1'	2.11	0.81
1:X:1349:A:H2'	1:X:1350:G:C8	2.16	0.81
1:X:1859:A:H2'	1:X:1860:A:C8	2.16	0.81
1:X:2759:U:H5"	1:X:2760:G:OP1	1.81	0.81
6:D:167:ARG:HG3	6:D:177:PHE:HE2	1.44	0.81
10:H:75:VAL:HG12	10:H:118:LEU:HD11	1.61	0.81
11:I:47:ALA:C	11:I:49:PHE:H	1.88	0.81
1:X:1151:U:H5'	1:X:1153:A:C5'	2.08	0.80
4:B:65:GLY:HA2	4:B:68:ALA:HB3	1.62	0.80
9:G:84:ASN:HA	9:G:153:GLY:O	1.80	0.80
25:W:39:ALA:O	25:W:43:MET:HG2	1.80	0.80
1:X:333:A:H3'	5:C:162:ARG:NH1	1.96	0.80
1:X:2528:G:H2'	1:X:2529:G:H8	1.46	0.80
1:X:2856:U:H2'	1:X:2857:C:C6	2.16	0.80
1:X:2871:U:H2'	1:X:2872:U:H6	1.45	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:128:ALA:HB2	5:C:159:ARG:CZ	2.11	0.80
10:H:19:ILE:HG22	10:H:55:VAL:HA	1.62	0.80
1:X:403:A:H3'	1:X:403:A:OP2	1.81	0.80
1:X:2871:U:H2'	1:X:2872:U:C6	2.16	0.80
3:A:108:PRO:HB3	3:A:143:HIS:CE1	2.17	0.80
4:B:115:GLY:HA3	4:B:136:ARG:HD2	1.63	0.80
7:E:103:LEU:HB2	7:E:123:PHE:CE2	2.15	0.80
9:G:103:TYR:HB3	9:G:107:GLN:HE21	1.45	0.80
11:I:77:LEU:HB3	11:I:112:GLY:N	1.97	0.80
21:S:117:VAL:CG2	21:S:168:VAL:HG13	2.12	0.80
1:X:1122:A:H2	1:X:1123:G:H1'	1.45	0.80
1:X:1122:A:O2'	1:X:1123:G:H4'	1.80	0.80
1:X:1151:U:C5'	1:X:1153:A:H5'	2.05	0.80
1:X:2418:A:H4'	1:X:2419:C:O5'	1.80	0.80
5:C:7:ILE:CB	5:C:120:VAL:H	1.92	0.80
16:N:74:MET:O	16:N:75:ASN:HB3	1.78	0.80
21:S:51:LEU:HD23	21:S:65:LEU:HD13	1.61	0.80
25:W:50:LEU:HB2	25:W:51:LEU:HD23	1.64	0.80
1:X:1135:C:H2'	1:X:1136:G:H8	1.47	0.80
1:X:1595:A:O5'	1:X:1595:A:H8	1.65	0.80
6:D:113:ASP:HB3	6:D:115:ARG:NH1	1.97	0.80
9:G:159:SER:C	9:G:161:GLN:H	1.84	0.80
21:S:42:ALA:CA	21:S:45:GLN:HE21	1.94	0.80
1:X:128:C:C2'	1:X:129:A:H5"	2.11	0.80
1:X:1219:C:H4'	11:I:7:LYS:H	1.47	0.80
1:X:1644:G:O2'	1:X:1645:U:H5'	1.81	0.80
1:X:2397:A:H2'	1:X:2398:U:O4'	1.82	0.80
3:A:43:ARG:HH21	3:A:54:ILE:HG13	1.46	0.80
11:I:30:ALA:H	11:I:34:HIS:CG	1.98	0.80
14:L:32:TYR:H	14:L:38:ILE:HD12	1.47	0.80
16:N:29:SER:O	16:N:30:LYS:HD2	1.81	0.80
17:O:10:LYS:HG3	17:O:11:GLN:N	1.97	0.80
17:O:23:GLU:CG	17:O:91:THR:HG21	2.11	0.80
20:R:37:LEU:HD21	20:R:49:GLU:HG3	1.63	0.80
21:S:3:LEU:HD13	21:S:4:THR:N	1.94	0.80
21:S:148:THR:HA	21:S:166:LEU:O	1.80	0.80
1:X:2490:U:H2'	1:X:2491:C:C6	2.15	0.80
1:X:2728:A:O2'	7:E:66:GLY:HA3	1.80	0.80
1:X:2728:A:H2'	1:X:2729:A:H8	1.46	0.80
4:B:72:VAL:HG12	4:B:73:ALA:N	1.96	0.80
5:C:122:GLY:HA3	5:C:136:TRP:CZ3	2.17	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:530:G:H2'	1:X:531:G:H8	1.46	0.80
3:A:75:VAL:HG12	3:A:76:ASN:O	1.82	0.80
3:A:104:TYR:C	3:A:105:ILE:HD12	2.07	0.80
11:I:11:GLY:H	11:I:14:LYS:CB	1.95	0.80
21:S:36:ARG:HE	21:S:37:LYS:H	1.28	0.80
1:X:16:G:O2'	1:X:17:G:H5'	1.82	0.80
1:X:631:G:H5'	1:X:632:A:OP1	1.81	0.80
6:D:82:GLY:O	6:D:83:MET:HG3	1.82	0.80
7:E:101:LYS:HD2	7:E:117:PRO:HG2	1.64	0.80
19:Q:61:LYS:H	19:Q:72:ARG:HD3	1.45	0.80
4:B:117:MET:HA	4:B:121:ASN:O	1.81	0.80
5:C:130:THR:O	5:C:133:PHE:HB3	1.82	0.80
14:L:99:ARG:HG3	14:L:100:VAL:N	1.95	0.80
19:Q:24:VAL:HG22	19:Q:81:ARG:HB2	1.62	0.80
24:V:7:ARG:HD2	24:V:7:ARG:C	2.06	0.80
1:X:840:U:H4'	1:X:841:G:C2	2.16	0.79
1:X:1416:A:H2'	1:X:1417:C:H6	1.46	0.79
1:X:687:G:C2'	1:X:688:A:H5'	2.13	0.79
1:X:1167:A:H61	16:N:48:ARG:HG2	1.43	0.79
16:N:94:VAL:O	16:N:96:ALA:N	2.14	0.79
20:R:107:ALA:HB1	20:R:111:GLY:HA2	1.62	0.79
1:X:1034:U:H2'	1:X:1035:G:H5'	1.63	0.79
8:F:129:ALA:HB1	8:F:133:ARG:CZ	2.13	0.79
11:I:32:ARG:NH2	17:O:79:GLN:HA	1.98	0.79
11:I:121:HIS:HA	11:I:141:VAL:HB	1.62	0.79
19:Q:53:ILE:HD13	19:Q:80:VAL:HB	1.64	0.79
21:S:127:PRO:O	21:S:128:ARG:HG2	1.82	0.79
1:X:57:G:H2'	1:X:58:C:C6	2.16	0.79
1:X:148:C:H3'	1:X:149:A:H8	1.46	0.79
1:X:2020:G:H2'	1:X:2021:G:H8	1.44	0.79
3:A:79:VAL:O	3:A:114:GLY:HA2	1.83	0.79
6:D:60:ILE:HG13	6:D:61:THR:N	1.95	0.79
10:H:25:LEU:HD11	10:H:52:VAL:HG23	1.64	0.79
14:L:63:ASN:CB	14:L:66:ASP:HB2	2.10	0.79
1:X:33:C:O2'	1:X:34:U:H5"	1.81	0.79
1:X:403:A:H4'	1:X:404:A:O5'	1.81	0.79
7:E:45:GLN:HA	7:E:50:LEU:HA	1.64	0.79
17:O:26:GLN:HG3	17:O:63:HIS:CD2	2.18	0.79
1:X:921:A:H2'	1:X:924:C:H5	1.48	0.79
7:E:136:ILE:HG22	7:E:137:ASP:H	1.45	0.79
9:G:72:PRO:O	9:G:74:MET:N	2.16	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:124:GLU:OE1	9:G:124:GLU:N	2.15	0.79
16:N:32:TYR:O	16:N:35:ALA:HB3	1.83	0.79
18:P:90:LEU:HA	18:P:129:ALA:O	1.81	0.79
1:X:356:A:H2'	1:X:357:A:C8	2.17	0.79
1:X:1336:G:OP1	18:P:105:ARG:NH1	2.16	0.79
3:A:187:SER:C	3:A:189:CYS:H	1.91	0.79
14:L:15:ARG:HG2	14:L:15:ARG:HH11	1.48	0.79
1:X:2604:G:H2'	1:X:2605:C:C6	2.18	0.79
3:A:184:ARG:HH11	3:A:184:ARG:HG3	1.48	0.79
8:F:81:LYS:HZ1	8:F:84:GLY:HA3	1.48	0.79
11:I:90:ARG:O	11:I:121:HIS:HB2	1.82	0.79
16:N:91:ASN:HA	17:O:10:LYS:NZ	1.96	0.79
17:O:36:LYS:HD2	17:O:55:THR:CA	2.13	0.79
4:B:136:ARG:O	4:B:137:ARG:HB2	1.82	0.79
5:C:7:ILE:O	5:C:120:VAL:HB	1.82	0.79
5:C:176:ASN:HD22	5:C:179:ASP:N	1.81	0.79
10:H:55:VAL:O	10:H:55:VAL:HG12	1.80	0.79
11:I:72:TYR:HB3	11:I:107:LYS:CB	2.13	0.79
21:S:3:LEU:CD2	21:S:33:ALA:H	1.95	0.79
21:S:3:LEU:CD2	21:S:32:PHE:HB3	2.13	0.79
1:X:414:A:H5'	1:X:414:A:H8	1.48	0.79
1:X:1445:A:H2'	1:X:1446:U:H6	1.48	0.79
1:X:2787:A:H2'	1:X:2788:C:C6	2.15	0.79
2:Z:36:A:H4'	2:Z:37:C:C5	2.18	0.79
8:F:101:ASN:O	8:F:104:GLN:HG2	1.82	0.79
20:R:5:SER:O	20:R:6:ALA:HB2	1.81	0.79
23:U:49:LYS:HB3	23:U:61:TRP:CD2	2.18	0.79
1:X:41:G:O2'	1:X:42:G:H5'	1.82	0.78
1:X:1914:U:H6	1:X:1914:U:C5'	1.94	0.78
1:X:2175:A:H2'	1:X:2176:U:H6	1.48	0.78
20:R:96:LYS:HZ2	20:R:105:ARG:HG3	1.48	0.78
24:V:10:GLN:HG3	24:V:12:THR:OG1	1.82	0.78
1:X:2245:A:H4'	1:X:2246:A:N3	1.97	0.78
5:C:5:ASN:HA	5:C:118:VAL:CG2	2.13	0.78
7:E:39:THR:C	7:E:41:LEU:H	1.89	0.78
10:H:9:ASP:HB2	10:H:95:ALA:CB	2.14	0.78
12:J:106:GLU:CD	12:J:106:GLU:N	2.41	0.78
1:X:332:C:H1'	5:C:159:ARG:NE	1.98	0.78
1:X:421:G:H2'	1:X:422:C:H6	1.49	0.78
1:X:704:G:H2'	1:X:705:C:H6	1.48	0.78
1:X:795:A:C2	3:A:226:MET:HE3	2.18	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1277:G:OP1	26:Y:19:ARG:NH2	2.14	0.78
1:X:2447:G:O2'	1:X:2448:A:H8	1.65	0.78
6:D:132:ILE:HB	6:D:152:MET:CB	2.12	0.78
10:H:116:ARG:HB2	10:H:116:ARG:NH1	1.98	0.78
14:L:27:LEU:HD23	14:L:44:ASP:HB2	1.66	0.78
18:P:45:ILE:O	18:P:48:LYS:HG2	1.83	0.78
1:X:1086:C:C2'	1:X:1087:C:H5"	2.13	0.78
1:X:1808:C:H5"	3:A:39:LYS:HZ3	1.45	0.78
1:X:1912:G:O2'	1:X:1913:G:H5'	1.84	0.78
1:X:2200:G:H2'	1:X:2201:G:C8	2.19	0.78
1:X:2426:G:H4'	1:X:2427:A:O5'	1.83	0.78
1:X:2867:G:H4'	1:X:2868:G:O5'	1.80	0.78
6:D:10:ASP:N	6:D:14:PRO:HD2	1.98	0.78
11:I:72:TYR:CB	11:I:107:LYS:HE2	2.11	0.78
11:I:80:LEU:O	11:I:84:GLU:HB3	1.84	0.78
19:Q:3:HIS:ND1	19:Q:41:ALA:HA	1.99	0.78
1:X:807:A:H2'	1:X:808:C:C6	2.17	0.78
1:X:2047:C:H1'	1:X:2429:A:C6	2.17	0.78
7:E:137:ASP:HB3	7:E:140:LEU:HB2	1.65	0.78
16:N:101:ARG:C	16:N:103:PRO:HD3	2.09	0.78
20:R:10:HIS:HB2	20:R:44:GLN:HE22	1.49	0.78
1:X:955:G:H5'	1:X:956:A:H5"	1.63	0.78
1:X:2372:A:H2'	1:X:2373:C:C6	2.18	0.78
1:X:2379:G:O2'	1:X:2380:U:H5'	1.83	0.78
3:A:76:ASN:HA	3:A:118:ASN:HA	1.65	0.78
4:B:152:LYS:HD2	9:G:106:TYR:H	1.48	0.78
7:E:131:ILE:HG22	7:E:132:ASP:N	1.99	0.78
8:F:109:ALA:O	8:F:113:MET:HG3	1.84	0.78
10:H:78:SER:HB2	10:H:94:ASN:OD1	1.83	0.78
1:X:1043:A:H5"	30:4:9:LYS:NZ	1.99	0.78
1:X:1188:A:H3'	1:X:1189:G:C8	2.17	0.78
7:E:136:ILE:HD12	7:E:136:ILE:N	1.98	0.78
17:O:20:ILE:HD12	17:O:21:ARG:N	1.99	0.78
18:P:57:LEU:CD1	18:P:69:ALA:HA	2.14	0.78
1:X:400:U:C5	23:U:23:LYS:HD3	2.15	0.78
1:X:2018:G:H4'	1:X:2019:C:OP2	1.82	0.78
5:C:151:VAL:HG11	5:C:175:VAL:HG13	1.65	0.78
5:C:164:VAL:O	5:C:166:TRP:N	2.16	0.78
6:D:111:ILE:CB	6:D:114:PHE:HB2	2.12	0.78
12:J:86:LYS:O	12:J:88:LYS:HG3	1.83	0.78
12:J:98:VAL:HG12	12:J:99:LYS:N	1.98	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:11:ASN:C	20:R:11:ASN:HD22	1.92	0.78
14:L:64:LYS:H	14:L:64:LYS:CE	1.88	0.78
14:L:67:THR:O	14:L:70:ALA:HB3	1.83	0.78
14:L:73:LYS:HG3	14:L:110:GLY:CA	2.14	0.78
1:X:2289:A:H2	6:D:79:LEU:HD21	1.49	0.78
1:X:2781:G:C2'	1:X:2782:G:H5"	2.14	0.78
21:S:54:ILE:CG1	21:S:62:PHE:HB2	2.09	0.78
1:X:732:G:H2'	1:X:733:G:H8	1.48	0.77
1:X:1003:C:O2'	17:O:71:ILE:HD11	1.84	0.77
5:C:147:LYS:HB3	5:C:183:HIS:HB3	1.65	0.77
7:E:67:LEU:O	7:E:71:LEU:HD23	1.84	0.77
13:K:74:ASP:HA	13:K:77:ARG:NH1	1.98	0.77
17:O:23:GLU:HG3	17:O:91:THR:HG21	1.66	0.77
1:X:33:C:N4	1:X:458:G:O2'	2.16	0.77
1:X:1467:U:H3'	1:X:1468:A:H5'	1.64	0.77
1:X:1781:C:P	3:A:219:PRO:HB2	2.24	0.77
1:X:2408:G:H5'	1:X:2409:A:OP2	1.84	0.77
4:B:60:ASN:HB3	4:B:62:PRO:HD2	1.66	0.77
9:G:67:ARG:CB	9:G:70:PHE:HA	2.14	0.77
26:Y:35:GLN:O	26:Y:37:HIS:N	2.17	0.77
30:4:30:VAL:C	30:4:32:HIS:H	1.91	0.77
1:X:683:A:H5"	11:I:45:LYS:H	1.49	0.77
1:X:1623:C:H4'	1:X:1624:A:O5'	1.84	0.77
3:A:82:ILE:HD12	3:A:82:ILE:N	1.99	0.77
6:D:69:LYS:HE2	6:D:84:PRO:CG	2.10	0.77
7:E:127:GLU:HG3	7:E:129:THR:N	1.99	0.77
12:J:65:ILE:HA	12:J:107:VAL:HG12	1.66	0.77
16:N:62:ILE:HG23	16:N:76:TYR:CD1	2.19	0.77
1:X:1385:C:H1'	1:X:2192:U:C5	2.19	0.77
4:B:9:ILE:HD11	4:B:27:LEU:HB3	1.65	0.77
11:I:77:LEU:HB3	11:I:112:GLY:H	1.50	0.77
12:J:15:ARG:HD3	12:J:73:LYS:HZ3	1.48	0.77
13:K:87:TYR:CE1	13:K:94:TYR:HD2	2.02	0.77
20:R:37:LEU:HB2	20:R:47:VAL:O	1.83	0.77
1:X:683:A:H5"	11:I:45:LYS:N	1.99	0.77
1:X:717:G:H2'	1:X:739:G:H22	1.50	0.77
1:X:836:G:H2'	1:X:837:U:C6	2.19	0.77
1:X:2016:A:O4'	1:X:2016:A:OP2	2.03	0.77
2:Z:107:C:H2'	2:Z:108:G:H5'	1.65	0.77
3:A:62:TYR:HE1	3:A:88:ARG:NH2	1.81	0.77
10:H:100:ASN:O	10:H:102:GLN:N	2.17	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:98:VAL:HG12	21:S:118:HIS:O	1.83	0.77
1:X:94:C:O2'	24:V:40:PRO:HD2	1.85	0.77
1:X:1012:A:H2'	1:X:1013:G:O4'	1.85	0.77
1:X:1467:U:H3'	1:X:1467:U:H6	1.48	0.77
1:X:1882:G:O2'	1:X:1883:A:H5"	1.85	0.77
3:A:43:ARG:HD2	3:A:43:ARG:N	1.98	0.77
3:A:97:TYR:HB2	3:A:101:GLU:OE1	1.84	0.77
10:H:9:ASP:HB2	10:H:95:ALA:HB2	1.65	0.77
11:I:94:GLU:C	11:I:96:TYR:H	1.90	0.77
21:S:71:MET:HA	21:S:78:PRO:HA	1.67	0.77
1:X:34:U:H1'	20:R:4:PRO:HA	1.65	0.77
1:X:635:C:C2'	1:X:636:G:H5"	2.14	0.77
3:A:213:ARG:C	3:A:215:LEU:H	1.92	0.77
6:D:135:GLN:HG2	6:D:152:MET:SD	2.25	0.77
7:E:24:PHE:HB2	7:E:35:VAL:O	1.84	0.77
9:G:107:GLN:HA	9:G:110:LEU:HG	1.66	0.77
18:P:42:VAL:O	18:P:42:VAL:HG12	1.85	0.77
1:X:682:G:H4'	1:X:683:A:OP1	1.83	0.77
1:X:1468:A:C8	1:X:1468:A:O5'	2.38	0.77
1:X:2082:C:H2'	1:X:2083:G:H5"	1.66	0.77
1:X:2206:C:H2'	1:X:2207:G:O4'	1.85	0.77
1:X:2236:U:H2'	1:X:2237:C:C6	2.20	0.77
1:X:2324:G:N3	1:X:2360:C:H2'	2.00	0.77
1:X:2781:G:H2'	1:X:2782:G:H5"	1.67	0.77
10:H:29:ILE:HD12	10:H:30:GLY:H	1.47	0.77
11:I:88:PHE:HB3	11:I:90:ARG:CD	2.15	0.77
1:X:1958:G:H2'	1:X:1959:U:C6	2.19	0.77
15:M:5:ILE:HD12	15:M:5:ILE:O	1.84	0.77
23:U:50:ALA:HB3	23:U:52:ARG:HH12	1.48	0.77
1:X:1675:C:OP1	4:B:134:TRP:NE1	2.18	0.77
4:B:91:VAL:HB	4:B:93:VAL:HG12	1.65	0.77
7:E:154:PRO:HA	7:E:160:LYS:O	1.84	0.77
11:I:85:ASP:HA	11:I:116:ARG:CZ	2.15	0.77
14:L:41:GLN:HA	14:L:53:ALA:HA	1.66	0.77
14:L:68:ALA:O	14:L:71:VAL:HG13	1.83	0.77
15:M:31:ASP:OD1	15:M:95:GLU:HG2	1.85	0.77
15:M:69:ARG:HH11	15:M:69:ARG:CG	1.98	0.77
21:S:115:ILE:HA	21:S:169:VAL:HG12	1.65	0.77
23:U:19:ILE:HA	23:U:42:GLN:HA	1.64	0.77
1:X:352:G:O2'	1:X:353:G:H5'	1.83	0.76
1:X:542:A:H3'	16:N:28:ARG:HE	1.50	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:760:U:C6	26:Y:3:LYS:HE2	2.20	0.76
1:X:1749:G:H5'	1:X:1750:A:OP2	1.84	0.76
1:X:2236:U:H2'	1:X:2237:C:H6	1.49	0.76
19:Q:7:LEU:C	19:Q:7:LEU:HD13	2.10	0.76
21:S:59:GLY:O	21:S:60:GLU:HG3	1.84	0.76
1:X:452:G:N2	5:C:40:ARG:HH22	1.83	0.76
1:X:1770:U:H5	1:X:1775:A:N7	1.82	0.76
1:X:2036:G:O2'	1:X:2037:A:H5'	1.84	0.76
2:Z:36:A:H4'	2:Z:37:C:H5	1.48	0.76
2:Z:63:A:H2'	2:Z:64:C:C6	2.20	0.76
9:G:155:THR:HG23	9:G:156:HIS:H	1.50	0.76
10:H:29:ILE:HG13	10:H:30:GLY:N	1.98	0.76
20:R:10:HIS:CB	20:R:44:GLN:HE22	1.99	0.76
20:R:93:ARG:NH1	20:R:108:VAL:HG23	2.00	0.76
23:U:52:ARG:HG2	23:U:52:ARG:HH21	1.49	0.76
1:X:1787:U:H2'	1:X:1788:C:H6	1.50	0.76
1:X:2272:A:H5"	14:L:15:ARG:HH22	1.51	0.76
3:A:165:VAL:HG12	3:A:166:GLN:H	1.49	0.76
5:C:45:THR:HG21	5:C:85:GLY:HA3	1.66	0.76
5:C:170:LEU:HD23	5:C:175:VAL:HG12	1.65	0.76
11:I:47:ALA:C	11:I:49:PHE:N	2.38	0.76
16:N:68:GLY:O	16:N:71:LEU:HB3	1.85	0.76
1:X:604:U:H2'	1:X:605:G:C8	2.19	0.76
1:X:1128:G:C3'	1:X:1129:A:H5"	2.15	0.76
10:H:16:ALA:HA	10:H:58:ALA:CB	2.14	0.76
12:J:70:PHE:C	12:J:70:PHE:CD2	2.64	0.76
14:L:91:ARG:H	14:L:91:ARG:HD2	1.49	0.76
15:M:34:ARG:NH2	15:M:66:PHE:CZ	2.53	0.76
18:P:62:ARG:NH2	26:Y:25:LEU:HD11	2.00	0.76
1:X:1437:A:H2'	1:X:1438:G:H8	1.51	0.76
3:A:43:ARG:CZ	3:A:55:GLY:HA2	2.14	0.76
4:B:31:CYS:HB3	4:B:49:ILE:HD11	1.66	0.76
5:C:112:GLN:HA	5:C:116:LYS:HD3	1.67	0.76
6:D:94:GLU:HA	6:D:97:TYR:HB2	1.68	0.76
14:L:42:ILE:HB	14:L:52:ALA:CB	2.13	0.76
24:V:52:GLN:C	24:V:54:ASN:H	1.93	0.76
1:X:632:A:H2'	1:X:633:G:H5'	1.66	0.76
1:X:2644:A:O2'	1:X:2645:C:H5'	1.85	0.76
4:B:31:CYS:HB3	4:B:49:ILE:CD1	2.15	0.76
10:H:1:MET:HE3	10:H:44:TYR:CE1	2.20	0.76
22:T:70:ILE:HB	22:T:78:PHE:HB2	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:38:PRO:HA	25:W:41:ARG:CZ	2.14	0.76
1:X:177:U:H2'	1:X:178:C:O4'	1.85	0.76
1:X:1445:A:H2'	1:X:1446:U:C6	2.21	0.76
1:X:2824:C:O2	1:X:2824:C:H2'	1.84	0.76
5:C:3:GLN:HG2	5:C:118:VAL:HG13	1.67	0.76
6:D:38:GLU:HB3	6:D:87:ILE:HB	1.67	0.76
6:D:124:GLY:HA2	6:D:163:ASP:OD2	1.85	0.76
16:N:31:GLN:O	16:N:35:ALA:HB2	1.85	0.76
21:S:37:LYS:HG2	21:S:38:ALA:N	1.99	0.76
22:T:30:VAL:HG13	22:T:65:GLY:O	1.85	0.76
23:U:72:LYS:HE2	23:U:72:LYS:N	2.01	0.76
1:X:155:G:O2'	1:X:156:G:H5'	1.86	0.76
1:X:1006:C:N3	9:G:31:THR:OG1	2.18	0.76
1:X:2284:U:H3'	1:X:2285:U:H5"	1.67	0.76
6:D:101:GLU:HA	6:D:104:ILE:HD12	1.66	0.76
13:K:97:ILE:HD12	13:K:97:ILE:N	2.01	0.76
1:X:450:C:H2'	1:X:451:A:C8	2.21	0.76
1:X:693:A:H2'	1:X:694:G:H8	1.48	0.76
2:Z:46:G:H5'	6:D:92:ARG:NH2	2.00	0.76
3:A:146:GLU:HG3	3:A:152:GLY:O	1.86	0.76
4:B:2:LYS:HD3	4:B:95:ILE:HG13	1.68	0.76
7:E:87:LEU:N	7:E:131:ILE:O	2.18	0.76
8:F:116:LEU:HD11	8:F:127:THR:HB	1.68	0.76
9:G:157:PRO:C	9:G:159:SER:H	1.94	0.76
10:H:1:MET:HA	10:H:45:ALA:O	1.86	0.76
13:K:33:ARG:HD3	13:K:112:LEU:HD12	1.67	0.76
14:L:97:HIS:O	14:L:101:LYS:HB2	1.85	0.76
16:N:47:TYR:CE2	16:N:51:ARG:NH2	2.53	0.76
16:N:51:ARG:HH11	16:N:51:ARG:CG	1.99	0.76
1:X:43:A:H2'	1:X:44:G:H8	1.50	0.76
1:X:627:A:H2'	1:X:628:A:H8	1.49	0.76
9:G:65:LYS:HG3	9:G:66:HIS:N	1.99	0.76
9:G:155:THR:C	9:G:157:PRO:HD2	2.11	0.76
11:I:56:LEU:HD13	11:I:56:LEU:C	2.11	0.76
17:O:10:LYS:CG	17:O:11:GLN:HE21	1.99	0.76
17:O:10:LYS:HD2	17:O:37:ALA:HB3	1.68	0.76
1:X:1885:C:H5'	3:A:244:ARG:HD2	1.67	0.75
4:B:31:CYS:HB3	4:B:49:ILE:HG13	1.66	0.75
16:N:47:TYR:O	16:N:51:ARG:HD3	1.87	0.75
18:P:36:ARG:NH2	26:Y:20:ARG:NH2	2.33	0.75
20:R:22:VAL:HG11	20:R:80:LYS:CE	2.16	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:31:GLN:HB3	24:V:37:LEU:HB2	1.66	0.75
1:X:796:A:H8	1:X:797:A:H4'	1.52	0.75
1:X:1673:C:H2'	1:X:1674:C:H6	1.50	0.75
3:A:36:ALA:CB	3:A:63:ARG:HA	2.16	0.75
5:C:44:SER:HB3	5:C:88:PRO:HD3	1.68	0.75
5:C:112:GLN:HB3	5:C:116:LYS:HD3	1.66	0.75
7:E:90:ARG:HH21	7:E:163:ARG:NH1	1.83	0.75
12:J:36:ILE:HG21	12:J:131:LYS:HE2	1.67	0.75
12:J:106:GLU:N	12:J:106:GLU:OE1	2.18	0.75
15:M:50:PHE:CE1	15:M:79:ARG:HG3	2.21	0.75
17:O:33:VAL:HG12	17:O:57:GLN:HG2	1.66	0.75
1:X:459:A:C2	1:X:466:A:C8	2.74	0.75
1:X:512:A:H2'	1:X:513:A:H5'	1.68	0.75
1:X:640:C:H4'	1:X:660:G:H21	1.51	0.75
1:X:2178:U:H2'	1:X:2179:C:H6	1.50	0.75
3:A:208:LYS:HA	3:A:208:LYS:HE3	1.68	0.75
5:C:155:GLU:O	5:C:157:THR:N	2.18	0.75
7:E:104:GLU:HA	7:E:104:GLU:OE2	1.85	0.75
7:E:125:VAL:HG13	7:E:131:ILE:HD11	1.68	0.75
11:I:62:LYS:CE	11:I:64:GLY:HA3	2.16	0.75
15:M:43:ASN:C	15:M:43:ASN:HD22	1.94	0.75
1:X:178:C:O2	1:X:178:C:H2'	1.85	0.75
1:X:824:U:O2	1:X:1263:G:H3'	1.85	0.75
1:X:1736:C:H2'	1:X:1737:G:H8	1.51	0.75
1:X:2282:G:H4'	6:D:122:PHE:HA	1.67	0.75
13:K:28:LEU:C	13:K:28:LEU:HD23	2.12	0.75
16:N:25:TRP:O	16:N:28:ARG:HB2	1.86	0.75
19:Q:12:ILE:HD12	19:Q:13:SER:N	1.98	0.75
1:X:439:C:H2'	1:X:440:U:C6	2.22	0.75
1:X:1607:A:H2'	1:X:1608:U:H6	1.51	0.75
3:A:39:LYS:HD3	3:A:62:TYR:HB2	1.67	0.75
6:D:46:ASP:CB	6:D:49:ALA:HB3	2.16	0.75
20:R:84:VAL:HA	20:R:90:LYS:HE2	1.66	0.75
21:S:147:ILE:HB	21:S:169:VAL:HG23	1.67	0.75
23:U:20:ARG:HG2	23:U:39:LYS:HE3	1.69	0.75
24:V:42:ARG:NH1	24:V:45:GLN:HE22	1.84	0.75
1:X:48:A:H1'	1:X:50:G:C2	2.22	0.75
1:X:177:U:O4	1:X:225:G:C2	2.39	0.75
1:X:211:U:H3	1:X:442:A:H61	1.35	0.75
1:X:1142:G:H4'	9:G:103:TYR:CE2	2.22	0.75
1:X:1670:G:H4'	1:X:1671:A:OP1	1.87	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1805:G:N3	3:A:50:THR:HG21	2.01	0.75
1:X:2355:A:H2	14:L:89:PHE:CZ	2.03	0.75
1:X:2691:C:O2'	1:X:2692:A:O5'	2.05	0.75
2:Z:39:C:H5"	2:Z:40:C:H5	1.48	0.75
9:G:35:LYS:HB3	9:G:69:ASP:OD2	1.87	0.75
21:S:42:ALA:HA	21:S:45:GLN:NE2	2.01	0.75
23:U:27:ASP:HA	23:U:32:ARG:NH1	2.01	0.75
1:X:482:A:O2'	1:X:483:A:H5'	1.86	0.75
1:X:634:G:H2'	1:X:635:C:C6	2.20	0.75
1:X:2197:U:H2'	1:X:2198:U:C6	2.20	0.75
1:X:2526:U:H2'	1:X:2527:G:H8	1.50	0.75
6:D:41:GLY:HA2	6:D:44:LYS:O	1.86	0.75
7:E:43:VAL:CG2	7:E:52:VAL:HG22	2.16	0.75
10:H:64:VAL:HG22	10:H:106:ARG:HH21	1.52	0.75
11:I:62:LYS:HD3	29:3:12:ARG:CA	2.16	0.75
11:I:89:ASP:HB3	11:I:120:VAL:HG13	1.69	0.75
20:R:96:LYS:NZ	20:R:105:ARG:HG3	2.01	0.75
26:Y:6:VAL:HG22	26:Y:7:PRO:HD2	1.68	0.75
1:X:24:G:H2'	1:X:25:U:O4'	1.84	0.75
1:X:1069:G:H3'	1:X:1070:G:H5"	1.69	0.75
15:M:39:VAL:O	15:M:41:GLU:N	2.20	0.75
21:S:79:ILE:HD13	21:S:79:ILE:O	1.86	0.75
23:U:32:ARG:HG2	23:U:33:LYS:H	1.52	0.75
24:V:14:PHE:HD2	24:V:57:LYS:HB2	1.52	0.75
24:V:25:LEU:HD21	24:V:47:ARG:HD2	1.69	0.75
1:X:531:G:H2'	1:X:532:A:H8	1.51	0.75
1:X:862:A:H2'	1:X:863:C:C6	2.21	0.75
1:X:2496:C:O2'	1:X:2497:A:H3'	1.86	0.75
3:A:231:HIS:HD2	3:A:233:HIS:N	1.83	0.75
5:C:62:LYS:HD3	5:C:63:GLY:N	2.01	0.75
10:H:24:VAL:CG1	10:H:42:LYS:HG2	2.17	0.75
14:L:37:HIS:NE2	14:L:39:TYR:CZ	2.55	0.75
20:R:85:ASP:H	20:R:86:PRO:CD	1.99	0.75
1:X:503:G:H2'	1:X:504:G:O4'	1.85	0.74
1:X:1189:G:H8	1:X:1189:G:O5'	1.70	0.74
1:X:1790:G:O6	3:A:178:PRO:HG2	1.86	0.74
1:X:1871:G:H3'	1:X:1871:G:N3	2.02	0.74
2:Z:46:G:H5'	6:D:92:ARG:HH22	1.48	0.74
14:L:54:ALA:O	14:L:71:VAL:HG23	1.87	0.74
1:X:88:G:C3'	1:X:89:A:H5"	2.14	0.74
1:X:859:U:H2'	1:X:859:U:O2	1.85	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1136:G:C6	1:X:1137:A:N6	2.56	0.74
1:X:1675:C:OP1	4:B:134:TRP:CE2	2.40	0.74
1:X:2482:A:O2'	32:X:2911:ZLD:H13A	1.86	0.74
9:G:169:GLN:HB2	9:G:170:PRO:HD2	1.69	0.74
23:U:48:LYS:CG	23:U:49:LYS:N	2.50	0.74
25:W:54:GLN:HG2	25:W:55:GLU:OE1	1.87	0.74
1:X:2178:U:O2'	1:X:2179:C:H5'	1.86	0.74
1:X:2457:A:H5'	30:4:31:LYS:HG2	1.69	0.74
2:Z:43:G:H5'	2:Z:44:C:H5'	1.68	0.74
4:B:93:VAL:O	4:B:94:ASP:HB2	1.84	0.74
6:D:160:ALA:HB1	6:D:165:GLU:HB2	1.68	0.74
8:F:85:ILE:HD13	8:F:89:SER:H	1.52	0.74
1:X:57:G:H2'	1:X:58:C:H6	1.52	0.74
1:X:173:A:P	11:I:53:ARG:HH21	2.11	0.74
1:X:1741:G:O2'	1:X:1742:G:H5'	1.87	0.74
1:X:1947:G:H4'	1:X:1948:C:OP2	1.88	0.74
4:B:152:LYS:HB2	9:G:106:TYR:HB3	1.69	0.74
6:D:128:TYR:HB3	6:D:156:ILE:HB	1.69	0.74
8:F:75:MET:O	8:F:79:ILE:HG12	1.87	0.74
9:G:45:ASP:HB2	9:G:83:ILE:HD11	1.67	0.74
1:X:116:A:H5'	1:X:117:A:C8	2.23	0.74
1:X:168:A:H2'	1:X:169:C:C6	2.21	0.74
1:X:476:G:H2'	1:X:477:A:C8	2.23	0.74
1:X:1223:G:H5"	1:X:1224:A:H5'	1.68	0.74
1:X:2082:C:H2'	1:X:2083:G:C5'	2.17	0.74
1:X:2556:A:H5"	1:X:2557:G:H5'	1.67	0.74
5:C:54:THR:HG22	5:C:55:GLY:O	1.88	0.74
16:N:33:ARG:O	16:N:34:ASN:C	2.29	0.74
16:N:50:ARG:C	16:N:52:ASN:H	1.93	0.74
20:R:54:ILE:HG12	20:R:71:GLN:CG	2.17	0.74
20:R:96:LYS:HE2	20:R:97:GLN:O	1.87	0.74
22:T:21:LEU:HD11	22:T:41:ARG:NE	2.00	0.74
1:X:1755:G:N2	1:X:1756:C:C2	2.56	0.74
1:X:1996:A:H2'	1:X:1997:A:H5'	1.70	0.74
12:J:23:LYS:C	12:J:25:GLY:H	1.94	0.74
16:N:95:LEU:HA	16:N:98:ILE:HG13	1.69	0.74
21:S:42:ALA:C	21:S:45:GLN:HE21	1.96	0.74
25:W:3:ILE:CG2	25:W:4:LYS:H	1.99	0.74
1:X:556:A:H1'	1:X:558:G:N2	2.03	0.74
9:G:103:TYR:CE2	9:G:111:LYS:CA	2.70	0.74
19:Q:63:LYS:HE2	19:Q:65:VAL:CA	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:59:LYS:O	20:R:62:MET:HB2	1.88	0.74
1:X:322:A:O2'	1:X:343:A:H4'	1.87	0.74
1:X:2048:C:H2'	1:X:2049:C:H6	1.51	0.74
1:X:2691:C:O2'	1:X:2692:A:H8	1.69	0.74
6:D:167:ARG:HG3	6:D:177:PHE:CE2	2.22	0.74
8:F:79:ILE:HA	8:F:82:ALA:HB2	1.70	0.74
9:G:154:GLU:OE1	9:G:154:GLU:N	2.21	0.74
10:H:97:VAL:HG11	10:H:126:ILE:HD13	1.69	0.74
13:K:41:ALA:O	13:K:43:GLU:N	2.21	0.74
14:L:82:LYS:HB3	14:L:84:ILE:HG13	1.70	0.74
16:N:51:ARG:CB	16:N:51:ARG:NH1	2.42	0.74
21:S:3:LEU:HD11	21:S:32:PHE:HA	1.67	0.74
21:S:45:GLN:CD	21:S:45:GLN:N	2.45	0.74
1:X:29:U:C4'	16:N:11:ARG:NH1	2.50	0.74
1:X:117:A:H5'	1:X:118:U:OP1	1.86	0.74
1:X:556:A:O2'	1:X:558:G:H1'	1.87	0.74
6:D:136:LEU:HD23	6:D:141:ILE:HG22	1.69	0.74
7:E:44:ARG:NH2	7:E:46:ASP:HB2	2.03	0.74
13:K:74:ASP:HA	13:K:77:ARG:HH12	1.53	0.74
16:N:30:LYS:HB3	16:N:30:LYS:NZ	2.01	0.74
22:T:58:THR:C	22:T:59:LEU:HD22	2.13	0.74
23:U:20:ARG:HB2	23:U:43:ARG:CD	2.17	0.74
23:U:50:ALA:C	23:U:52:ARG:NH2	2.45	0.74
24:V:64:GLY:C	24:V:66:GLN:H	1.96	0.74
25:W:38:PRO:N	25:W:41:ARG:NH1	2.35	0.74
30:4:10:MET:HB2	30:4:32:HIS:CD2	2.23	0.74
1:X:439:C:H2'	1:X:440:U:H6	1.53	0.74
1:X:1736:C:H2'	1:X:1737:G:C8	2.23	0.74
1:X:2799:C:H2'	1:X:2800:C:O4'	1.86	0.74
4:B:19:ARG:HE	4:B:21:ILE:HD11	1.53	0.74
5:C:74:VAL:HG23	5:C:76:THR:H	1.51	0.74
6:D:93:GLY:N	6:D:96:MET:HE2	2.02	0.74
6:D:133:LYS:O	6:D:151:GLY:HA2	1.87	0.74
7:E:89:LEU:HD11	7:E:105:MET:HE1	1.68	0.74
7:E:126:PRO:HD2	7:E:130:ARG:O	1.88	0.74
8:F:96:LYS:HB3	8:F:99:LYS:HE2	1.69	0.74
14:L:33:ARG:HH22	14:L:103:LEU:HB2	1.52	0.74
21:S:54:ILE:HG21	21:S:62:PHE:CD1	2.22	0.74
23:U:49:LYS:HB3	23:U:61:TRP:CE3	2.22	0.74
1:X:244:C:H3'	1:X:245:C:H5"	1.68	0.73
1:X:651:C:C2'	1:X:652:C:H5"	2.18	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1045:G:H2'	1:X:1046:U:H6	1.52	0.73
1:X:1686:A:H5"	1:X:1687:C:OP2	1.88	0.73
1:X:2289:A:C2	6:D:79:LEU:HD21	2.23	0.73
1:X:2751:C:C5'	4:B:203:LYS:HD3	2.18	0.73
6:D:47:SER:HA	6:D:50:ILE:HG13	1.68	0.73
9:G:108:GLY:C	9:G:110:LEU:HD23	2.13	0.73
12:J:75:VAL:HG12	12:J:76:THR:H	1.52	0.73
12:J:98:VAL:HG12	12:J:99:LYS:H	1.53	0.73
14:L:29:LEU:HD23	14:L:89:PHE:HB3	1.70	0.73
30:4:18:ARG:HA	30:4:22:ARG:O	1.88	0.73
1:X:936:A:O2'	1:X:937:C:H5'	1.87	0.73
1:X:1503:G:H2'	1:X:1504:G:C8	2.23	0.73
1:X:1512:A:H2'	1:X:1514:C:H5	1.53	0.73
2:Z:46:G:H5'	6:D:92:ARG:CZ	2.18	0.73
6:D:135:GLN:O	6:D:141:ILE:HG13	1.88	0.73
16:N:70:ARG:HG3	16:N:70:ARG:HH11	1.53	0.73
19:Q:61:LYS:H	19:Q:72:ARG:HA	1.53	0.73
1:X:333:A:OP1	5:C:162:ARG:HB2	1.86	0.73
1:X:889:C:H2'	1:X:890:U:C6	2.24	0.73
1:X:1017:C:H1'	9:G:134:MET:CE	2.17	0.73
1:X:1078:A:OP1	1:X:1078:A:H3'	1.89	0.73
1:X:2212:U:H2'	1:X:2213:G:H8	1.49	0.73
1:X:2620:G:H5"	9:G:104:THR:CG2	2.19	0.73
7:E:50:LEU:HG	7:E:51:LEU:H	1.53	0.73
10:H:83:ARG:HH11	15:M:40:ARG:HG3	1.51	0.73
11:I:106:VAL:HG23	11:I:123:ASP:HB2	1.71	0.73
1:X:320:A:O3'	20:R:27:GLY:HA2	1.87	0.73
1:X:2484:G:OP2	32:X:2911:ZLD:H9	1.89	0.73
2:Z:88:C:O2'	2:Z:89:G:H5'	1.87	0.73
5:C:5:ASN:HA	5:C:118:VAL:HG21	1.68	0.73
5:C:22:VAL:HA	5:C:106:MET:SD	2.28	0.73
15:M:24:LEU:HD13	15:M:91:VAL:HG21	1.68	0.73
15:M:28:ARG:CB	15:M:29:PRO:CD	2.64	0.73
18:P:27:VAL:CB	18:P:125:THR:HG22	2.18	0.73
1:X:404:A:H1'	1:X:424:G:H1'	1.69	0.73
1:X:469:G:N2	1:X:480:G:H2'	2.03	0.73
1:X:648:A:H4'	1:X:649:G:H5'	1.70	0.73
1:X:1060:C:H1'	1:X:1124:U:O2'	1.88	0.73
1:X:1071:U:H5"	1:X:1072:U:OP1	1.88	0.73
1:X:1313:U:H4'	1:X:1314:A:O5'	1.89	0.73
1:X:2307:A:H2'	1:X:2308:A:C8	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:236:GLY:O	3:A:237:GLU:HB2	1.87	0.73
10:H:19:ILE:HD13	10:H:19:ILE:N	2.01	0.73
11:I:99:VAL:O	11:I:101:ARG:HG2	1.87	0.73
12:J:36:ILE:CG2	12:J:131:LYS:HE2	2.19	0.73
15:M:14:ARG:HH22	15:M:18:GLN:NE2	1.86	0.73
16:N:51:ARG:H	16:N:51:ARG:CD	2.00	0.73
19:Q:60:GLY:H	19:Q:72:ARG:HH11	1.35	0.73
23:U:64:ALA:O	23:U:67:LEU:HB3	1.88	0.73
1:X:919:U:OP1	12:J:26:ASP:HB2	1.88	0.73
1:X:1333:G:N2	1:X:1344:C:N4	2.35	0.73
1:X:2077:G:H22	1:X:2179:C:H1'	1.54	0.73
6:D:38:GLU:O	6:D:40:LEU:HD12	1.89	0.73
10:H:116:ARG:HD2	15:M:38:LYS:HZ2	1.51	0.73
11:I:44:GLY:O	11:I:45:LYS:HB3	1.87	0.73
21:S:6:LYS:HD2	21:S:31:SER:HB2	1.69	0.73
24:V:62:ARG:CB	24:V:62:ARG:HH11	2.00	0.73
1:X:1231:A:H2'	1:X:1232:U:C6	2.24	0.73
1:X:1919:A:H5"	1:X:1920:A:O4'	1.89	0.73
1:X:2395:C:O2'	1:X:2396:C:H5"	1.87	0.73
1:X:2570:C:P	3:A:239:ARG:HH11	2.11	0.73
1:X:2824:C:P	15:M:100:ARG:HH11	2.12	0.73
3:A:143:HIS:C	3:A:145:LEU:H	1.95	0.73
10:H:28:GLY:O	10:H:35:THR:HG23	1.89	0.73
21:S:6:LYS:HB2	21:S:31:SER:CB	2.19	0.73
22:T:3:HIS:HB2	22:T:5:LYS:HD3	1.69	0.73
23:U:17:SER:HB2	23:U:44:ALA:HA	1.70	0.73
1:X:686:C:O2'	1:X:687:G:H5'	1.87	0.73
1:X:2326:C:H2'	1:X:2327:U:C6	2.24	0.73
3:A:142:VAL:O	3:A:163:VAL:HG12	1.88	0.73
9:G:93:LYS:HB3	9:G:96:ASP:OD1	1.89	0.73
11:I:88:PHE:HB3	11:I:90:ARG:HD2	1.71	0.73
16:N:104:GLU:O	16:N:107:LYS:HB3	1.88	0.73
17:O:75:LYS:HB2	17:O:80:TYR:HB3	1.70	0.73
1:X:48:A:H1'	1:X:50:G:N3	2.04	0.73
1:X:1056:U:OP1	1:X:1058:G:H4'	1.89	0.73
1:X:1173:G:H4'	17:O:22:VAL:HG23	1.70	0.73
1:X:1519:G:H2'	1:X:1520:G:H8	1.52	0.73
3:A:48:ARG:HD2	3:A:48:ARG:N	2.02	0.73
5:C:22:VAL:HG22	5:C:106:MET:HG3	1.71	0.73
9:G:33:ILE:HD13	9:G:33:ILE:H	1.51	0.73
24:V:55:THR:O	24:V:58:ALA:HB3	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1657:A:H2'	1:X:1658:A:O4'	1.89	0.73
1:X:2307:A:H2'	1:X:2308:A:H8	1.53	0.73
1:X:2404:A:H4'	1:X:2405:A:H5"	1.71	0.73
1:X:2484:G:OP2	32:X:2911:ZLD:C9	2.37	0.73
3:A:217:ARG:HG2	3:A:218:LYS:N	2.03	0.73
6:D:175:LEU:HD23	6:D:177:PHE:HE1	1.52	0.73
11:I:11:GLY:O	11:I:14:LYS:N	2.22	0.73
12:J:15:ARG:CD	12:J:73:LYS:HG3	2.19	0.73
14:L:99:ARG:CG	14:L:100:VAL:H	2.02	0.73
16:N:74:MET:HE2	16:N:79:PHE:HA	1.70	0.73
17:O:20:ILE:HD12	17:O:21:ARG:H	1.54	0.73
1:X:1575:C:H4'	1:X:1576:G:OP1	1.89	0.72
2:Z:32:C:O2	6:D:26:MET:HE2	1.89	0.72
2:Z:104:A:H2'	2:Z:105:G:O4'	1.88	0.72
3:A:95:LEU:HB2	3:A:105:ILE:HD11	1.70	0.72
3:A:96:HIS:HE1	3:A:100:GLY:HA2	1.53	0.72
6:D:111:ILE:HA	6:D:137:ILE:HG22	1.70	0.72
11:I:94:GLU:HB3	11:I:97:ARG:NH1	2.03	0.72
13:K:98:LEU:HD22	26:Y:56:GLN:HG2	1.71	0.72
14:L:37:HIS:NE2	14:L:39:TYR:OH	2.22	0.72
14:L:42:ILE:CB	14:L:52:ALA:HB3	2.17	0.72
22:T:4:LYS:NZ	22:T:4:LYS:HB3	2.03	0.72
1:X:1885:C:C4'	3:A:244:ARG:HD2	2.19	0.72
1:X:2015:G:H2'	4:B:145:LYS:NZ	2.05	0.72
1:X:2541:U:H4'	10:H:23:ARG:HH11	1.54	0.72
1:X:2615:U:C5'	4:B:80:GLU:HG3	2.17	0.72
1:X:2642:G:O2'	1:X:2643:G:H5'	1.88	0.72
1:X:2737:A:N3	1:X:2737:A:H2'	2.03	0.72
3:A:77:ALA:HB2	3:A:97:TYR:HA	1.69	0.72
3:A:105:ILE:HD12	3:A:105:ILE:N	2.04	0.72
6:D:74:ILE:HA	6:D:79:LEU:HB2	1.70	0.72
13:K:46:PRO:O	13:K:50:GLN:HB2	1.89	0.72
16:N:86:ALA:C	16:N:88:ILE:H	1.93	0.72
19:Q:88:ILE:O	19:Q:92:ALA:HB2	1.89	0.72
30:4:18:ARG:HG2	30:4:23:VAL:CA	2.18	0.72
1:X:3:U:H2'	1:X:4:C:C6	2.24	0.72
1:X:886:A:H1'	12:J:30:PHE:HE1	1.52	0.72
1:X:1171:A:H2'	1:X:1172:U:C6	2.22	0.72
1:X:1519:G:H2'	1:X:1520:G:C8	2.24	0.72
1:X:2284:U:C3'	1:X:2285:U:H5"	2.18	0.72
1:X:2501:U:O2'	1:X:2626:U:H5"	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:247:VAL:CG2	3:A:248:THR:HG23	2.08	0.72
13:K:79:VAL:HA	13:K:83:VAL:HG22	1.69	0.72
16:N:5:LYS:C	16:N:7:GLY:N	2.47	0.72
17:O:10:LYS:HG3	17:O:11:GLN:H	1.54	0.72
23:U:20:ARG:HD2	23:U:43:ARG:NH2	2.04	0.72
1:X:638:A:O2'	1:X:639:G:O4'	2.06	0.72
1:X:840:U:H2'	1:X:2051:U:C2	2.24	0.72
1:X:986:A:H4'	16:N:48:ARG:NH1	2.02	0.72
1:X:2035:G:O2'	1:X:2036:G:H5'	1.89	0.72
1:X:2728:A:H2'	1:X:2729:A:C8	2.24	0.72
4:B:60:ASN:O	4:B:64:GLN:HG3	1.89	0.72
5:C:107:ALA:HB1	5:C:180:ILE:HD13	1.70	0.72
9:G:47:SER:C	9:G:49:VAL:H	1.97	0.72
13:K:52:ILE:HG13	13:K:53:THR:N	2.03	0.72
14:L:73:LYS:HG3	14:L:110:GLY:HA3	1.72	0.72
16:N:7:GLY:O	16:N:9:VAL:HG23	1.89	0.72
20:R:48:VAL:HG12	20:R:50:GLY:N	2.04	0.72
23:U:48:LYS:HG2	23:U:49:LYS:H	1.51	0.72
30:4:27:CYS:HB3	30:4:32:HIS:HB3	1.70	0.72
1:X:2264:C:H5'	1:X:2267:A:N6	2.05	0.72
1:X:2777:A:N7	18:P:134:LYS:HD3	2.03	0.72
3:A:75:VAL:HG11	3:A:98:ALA:HB3	1.71	0.72
5:C:104:LEU:O	5:C:107:ALA:N	2.23	0.72
5:C:165:SER:C	5:C:166:TRP:HE3	1.95	0.72
6:D:39:GLY:HA2	6:D:86:GLY:CA	2.16	0.72
6:D:113:ASP:HB3	6:D:115:ARG:HH12	1.53	0.72
9:G:61:ARG:HE	9:G:65:LYS:CE	2.02	0.72
10:H:13:ASN:HD22	10:H:109:ARG:HG2	1.52	0.72
14:L:10:LYS:O	14:L:14:ARG:HB2	1.90	0.72
16:N:26:GLY:O	16:N:30:LYS:HG2	1.89	0.72
16:N:29:SER:C	16:N:30:LYS:HD2	2.14	0.72
17:O:13:ARG:HB3	17:O:16:GLU:OE2	1.89	0.72
21:S:54:ILE:HB	21:S:62:PHE:H	1.53	0.72
26:Y:56:GLN:HE21	26:Y:56:GLN:H	1.37	0.72
1:X:427:C:H1'	1:X:1856:U:H1'	1.71	0.72
1:X:663:G:C3'	1:X:664:C:H4'	2.19	0.72
1:X:2691:C:H5"	1:X:2694:G:H5"	1.71	0.72
3:A:172:TYR:HD2	3:A:186:HIS:HB3	1.55	0.72
14:L:32:TYR:C	14:L:34:SER:H	1.96	0.72
17:O:71:ILE:N	17:O:84:THR:O	2.21	0.72
24:V:1:MET:SD	24:V:2:LYS:HG2	2.29	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1949:A:H1'	1:X:2572:U:H4'	1.71	0.72
1:X:2394:G:C3'	11:I:63:ARG:HH11	1.93	0.72
1:X:2807:U:H5'	1:X:2807:U:C6	2.23	0.72
1:X:2825:A:H2'	1:X:2826:C:H6	1.54	0.72
2:Z:3:A:H2'	2:Z:4:C:C5'	2.20	0.72
2:Z:42:U:H1'	2:Z:47:A:H61	1.53	0.72
3:A:133:LEU:HD23	3:A:189:CYS:O	1.89	0.72
7:E:97:LYS:HE3	7:E:104:GLU:CG	2.19	0.72
11:I:124:ALA:HA	11:I:142:LEU:HD21	1.71	0.72
19:Q:12:ILE:CD1	19:Q:13:SER:H	1.98	0.72
23:U:50:ALA:CB	23:U:52:ARG:HH12	2.02	0.72
24:V:4:SER:C	24:V:6:MET:N	2.47	0.72
1:X:559:C:H2'	1:X:560:G:C4'	2.19	0.72
1:X:1088:A:H2'	1:X:1089:C:O4'	1.89	0.72
2:Z:33:C:H5'	6:D:26:MET:HE1	1.71	0.72
10:H:47:VAL:HG21	10:H:115:ALA:CB	2.19	0.72
13:K:33:ARG:CG	13:K:114:GLU:HB3	2.19	0.72
20:R:23:ILE:HD13	20:R:23:ILE:H	1.54	0.72
20:R:44:GLN:HB3	20:R:77:HIS:HD1	1.55	0.72
1:X:2722:C:H2'	1:X:2723:C:C6	2.24	0.72
1:X:2751:C:H5"	4:B:203:LYS:HD3	1.71	0.72
1:X:2825:A:H2'	1:X:2826:C:C6	2.25	0.72
3:A:126:LYS:O	3:A:128:GLY:N	2.23	0.72
3:A:134:ARG:HG3	3:A:135:PHE:HD2	1.53	0.72
4:B:21:ILE:N	4:B:21:ILE:HD12	2.05	0.72
7:E:88:GLU:HB3	7:E:163:ARG:HB2	1.72	0.72
9:G:158:HIS:CA	9:G:161:GLN:HB2	2.20	0.72
1:X:149:A:H2'	1:X:150:A:C8	2.25	0.72
1:X:173:A:H5'	1:X:174:A:OP2	1.90	0.72
1:X:640:C:H4'	1:X:660:G:N2	2.04	0.72
1:X:1783:G:P	3:A:206:LEU:HD12	2.30	0.72
1:X:2331:A:H2	22:T:33:ALA:HB1	1.54	0.72
5:C:13:ARG:NE	5:C:13:ARG:N	2.38	0.72
6:D:136:LEU:C	6:D:137:ILE:HG12	2.14	0.72
7:E:155:ASP:OD1	7:E:157:TYR:HB2	1.90	0.72
8:F:76:SER:HB3	8:F:111:THR:HB	1.72	0.72
1:X:43:A:H2'	1:X:44:G:C8	2.24	0.71
1:X:633:G:O2'	1:X:634:G:H5'	1.89	0.71
1:X:1128:G:H2'	1:X:1129:A:C5'	2.13	0.71
1:X:1391:A:O2'	1:X:1392:U:C6	2.42	0.71
8:F:110:LYS:CA	8:F:113:MET:HE2	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:98:LYS:HB3	9:G:116:ARG:HB2	1.71	0.71
20:R:15:HIS:C	20:R:16:PHE:HD2	1.97	0.71
1:X:712:A:H2'	1:X:713:G:O4'	1.90	0.71
1:X:1180:A:O5'	1:X:1180:A:H8	1.72	0.71
1:X:1508:G:C5'	1:X:1509:A:H5"	2.06	0.71
3:A:92:ILE:CD1	3:A:104:TYR:HB3	2.19	0.71
6:D:65:PRO:HA	6:D:89:VAL:CG1	2.21	0.71
6:D:132:ILE:HG21	6:D:138:PHE:HZ	1.54	0.71
8:F:81:LYS:NZ	8:F:84:GLY:HA3	2.04	0.71
8:F:101:ASN:HB3	8:F:104:GLN:HG2	1.70	0.71
9:G:110:LEU:HD23	9:G:110:LEU:N	2.05	0.71
12:J:78:LYS:HE3	12:J:80:ALA:C	2.14	0.71
14:L:101:LYS:HG2	14:L:105:ASP:OD2	1.90	0.71
20:R:59:LYS:N	20:R:60:PRO:CD	2.51	0.71
25:W:37:THR:HG22	25:W:38:PRO:HD2	1.72	0.71
1:X:577:U:C5'	1:X:956:A:H62	2.03	0.71
1:X:589:C:H5"	16:N:31:GLN:HE22	1.55	0.71
1:X:871:U:HO2'	1:X:2247:A:H2'	1.54	0.71
1:X:2209:G:H4'	23:U:46:LEU:O	1.90	0.71
4:B:72:VAL:HG12	4:B:73:ALA:H	1.53	0.71
5:C:24:SER:O	5:C:27:LEU:N	2.23	0.71
5:C:68:ARG:HG2	5:C:68:ARG:O	1.88	0.71
10:H:7:ARG:NH1	10:H:20:MET:HE3	2.05	0.71
10:H:10:VAL:HG21	10:H:16:ALA:O	1.90	0.71
1:X:1173:G:C1'	17:O:21:ARG:HH21	1.99	0.71
1:X:1193:G:H2'	1:X:1194:U:H5"	1.71	0.71
1:X:2175:A:H2'	1:X:2176:U:C6	2.26	0.71
4:B:120:TRP:O	4:B:121:ASN:HB2	1.88	0.71
9:G:158:HIS:HA	9:G:161:GLN:CB	2.20	0.71
15:M:5:ILE:HD13	15:M:7:ILE:CG1	2.20	0.71
21:S:44:ARG:HB3	21:S:45:GLN:HE22	1.55	0.71
24:V:48:ARG:C	24:V:50:VAL:H	1.96	0.71
24:V:56:VAL:HA	24:V:59:GLU:CD	2.15	0.71
25:W:25:LEU:HD22	25:W:30:ASP:CB	2.16	0.71
26:Y:16:ARG:HH11	26:Y:20:ARG:NH1	1.88	0.71
1:X:1051:U:H2'	1:X:1052:C:O4'	1.90	0.71
1:X:1554:G:O2'	1:X:1555:A:H5'	1.90	0.71
1:X:1625:A:H1'	1:X:1632:A:O2'	1.90	0.71
1:X:1727:C:H4'	1:X:2833:C:O2	1.91	0.71
1:X:1850:G:H1	1:X:1867:A:H2'	1.53	0.71
1:X:2208:U:H2'	1:X:2209:G:H8	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2482:A:O2'	32:X:2911:ZLD:H13B	1.90	0.71
3:A:43:ARG:HD2	3:A:43:ARG:H	1.55	0.71
6:D:105:ASN:HA	6:D:109:PRO:HG2	1.72	0.71
7:E:127:GLU:OE2	7:E:130:ARG:HB2	1.90	0.71
8:F:73:PRO:HD2	8:F:76:SER:OG	1.91	0.71
8:F:99:LYS:HA	8:F:138:THR:OG1	1.89	0.71
11:I:97:ARG:O	11:I:98:LEU:HB2	1.89	0.71
14:L:39:TYR:O	14:L:41:GLN:N	2.22	0.71
17:O:25:LEU:HB2	17:O:32:LYS:CE	2.20	0.71
17:O:36:LYS:CE	17:O:56:VAL:HG13	2.20	0.71
1:X:623:G:H3'	1:X:624:A:C5'	2.12	0.71
1:X:840:U:H2'	1:X:2051:U:O2	1.90	0.71
1:X:1053:G:H2'	1:X:1054:C:C6	2.25	0.71
1:X:1766:U:H2'	1:X:1767:G:H5'	1.71	0.71
1:X:2078:G:H2'	1:X:2079:A:C8	2.25	0.71
1:X:2708:U:H2'	1:X:2709:C:H6	1.55	0.71
4:B:144:ARG:O	4:B:146:THR:O	2.08	0.71
4:B:170:LEU:HB3	4:B:184:VAL:CG1	2.21	0.71
5:C:22:VAL:HG13	5:C:27:LEU:HD21	1.73	0.71
7:E:7:GLN:CA	7:E:69:ARG:HE	2.03	0.71
9:G:119:LEU:HD12	9:G:126:VAL:HG13	1.72	0.71
13:K:17:ARG:NH1	13:K:20:LEU:HD22	2.04	0.71
13:K:91:PRO:O	13:K:92:GLY:O	2.09	0.71
17:O:39:PHE:CD1	17:O:46:VAL:HG21	2.25	0.71
26:Y:56:GLN:HE21	26:Y:56:GLN:N	1.88	0.71
1:X:139:A:H2'	1:X:140:G:H8	1.56	0.71
1:X:1061:A:H2'	1:X:1062:G:C8	2.19	0.71
1:X:2355:A:C2	14:L:89:PHE:CZ	2.78	0.71
1:X:2538:C:O2'	1:X:2539:C:H5'	1.91	0.71
3:A:125:PRO:HB3	3:A:193:ILE:HD11	1.72	0.71
4:B:165:VAL:HG12	4:B:189:PRO:HG2	1.70	0.71
5:C:112:GLN:CB	5:C:116:LYS:HD3	2.21	0.71
5:C:133:PHE:HD2	5:C:134:ILE:HD13	1.54	0.71
9:G:108:GLY:H	9:G:110:LEU:HD21	1.54	0.71
11:I:107:LYS:HG2	11:I:109:LEU:HD21	1.72	0.71
14:L:33:ARG:HH12	14:L:103:LEU:CB	2.04	0.71
20:R:22:VAL:HG11	20:R:80:LYS:NZ	2.06	0.71
23:U:22:GLY:HA3	23:U:39:LYS:HE2	1.71	0.71
1:X:208:C:H2'	1:X:209:G:O4'	1.91	0.71
1:X:621:U:H2'	1:X:622:U:C6	2.26	0.71
1:X:647:G:O2'	1:X:649:G:H4'	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1495:G:H5'	1:X:1574:A:C2	2.25	0.71
2:Z:53:G:OP2	14:L:64:LYS:HE3	1.90	0.71
4:B:49:ILE:HD13	4:B:50:GLY:N	2.05	0.71
7:E:155:ASP:OD2	7:E:156:ALA:N	2.24	0.71
11:I:52:GLY:O	11:I:55:ARG:HB2	1.90	0.71
15:M:44:ARG:NH1	15:M:46:ARG:HH22	1.88	0.71
16:N:69:ALA:HB2	16:N:79:PHE:HD1	1.55	0.71
1:X:169:C:H2'	1:X:170:U:C5'	2.20	0.71
1:X:704:G:H2'	1:X:705:C:C6	2.26	0.71
1:X:758:G:H2'	1:X:759:C:H5'	1.73	0.71
1:X:2071:G:N2	1:X:2072:C:H1'	2.05	0.71
1:X:2796:A:H2'	1:X:2797:G:C8	2.25	0.71
3:A:70:ARG:C	3:A:72:LYS:H	1.97	0.71
4:B:149:ARG:HH12	9:G:106:TYR:HD1	1.38	0.71
5:C:122:GLY:HA3	5:C:136:TRP:HZ3	1.55	0.71
5:C:173:ALA:HB1	5:C:193:LEU:HD13	1.73	0.71
12:J:66:TYR:O	12:J:106:GLU:OE1	2.09	0.71
16:N:47:TYR:HE1	17:O:73:LYS:HZ3	1.37	0.71
20:R:92:THR:C	20:R:95:ARG:NH2	2.48	0.71
30:4:18:ARG:CD	30:4:23:VAL:HG22	2.16	0.71
1:X:107:G:N2	1:X:108:G:H1'	2.06	0.71
1:X:789:G:C5	1:X:806:A:N7	2.59	0.71
1:X:2271:C:OP1	14:L:18:ARG:NH2	2.24	0.71
1:X:2355:A:C2	14:L:89:PHE:CE1	2.79	0.71
5:C:112:GLN:CD	5:C:116:LYS:HB2	2.16	0.71
7:E:38:ASN:HB2	7:E:41:LEU:HD22	1.73	0.71
10:H:29:ILE:CG1	10:H:30:GLY:N	2.54	0.71
11:I:30:ALA:CB	11:I:34:HIS:CE1	2.74	0.71
16:N:47:TYR:CE2	16:N:51:ARG:NE	2.58	0.71
20:R:14:LEU:HD23	20:R:14:LEU:N	2.06	0.71
23:U:22:GLY:CA	23:U:39:LYS:HE2	2.21	0.71
1:X:50:G:H1'	1:X:116:A:H61	1.56	0.70
1:X:81:C:H2'	1:X:82:G:O4'	1.91	0.70
1:X:1075:C:H5"	8:F:85:ILE:CG2	2.21	0.70
1:X:2048:C:H2'	1:X:2049:C:C6	2.26	0.70
3:A:227:ASN:O	3:A:228:PRO:C	2.33	0.70
5:C:9:GLN:HG2	5:C:120:VAL:HG21	1.73	0.70
5:C:30:VAL:HG11	5:C:177:VAL:HG21	1.73	0.70
12:J:23:LYS:HA	21:S:73:LYS:HZ3	1.53	0.70
12:J:113:GLU:C	12:J:115:ALA:H	1.99	0.70
14:L:70:ALA:O	14:L:74:ALA:HB2	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:104:LEU:HD13	15:M:106:TYR:CZ	2.24	0.70
16:N:85:ARG:HG2	16:N:116:ALA:O	1.90	0.70
21:S:56:VAL:HG12	21:S:57:GLU:H	1.56	0.70
22:T:4:LYS:HB3	22:T:4:LYS:HZ3	1.55	0.70
1:X:460:U:O4	1:X:592:G:H1'	1.92	0.70
2:Z:70:C:H2'	2:Z:71:G:O4'	1.91	0.70
3:A:210:GLY:HA2	3:A:213:ARG:HG2	1.73	0.70
8:F:101:ASN:HB3	8:F:104:GLN:CD	2.15	0.70
10:H:47:VAL:HG21	10:H:115:ALA:HB3	1.72	0.70
1:X:554:U:HO2'	1:X:555:U:H1'	1.55	0.70
1:X:1517:C:H4'	3:A:96:HIS:CD2	2.27	0.70
6:D:5:LYS:H	6:D:7:LYS:H	1.39	0.70
6:D:47:SER:HA	6:D:50:ILE:CD1	2.22	0.70
9:G:61:ARG:HH22	9:G:78:ASP:HB2	1.56	0.70
15:M:104:LEU:O	15:M:107:LEU:N	2.19	0.70
17:O:58:ALA:HB1	17:O:94:LYS:O	1.92	0.70
23:U:22:GLY:H	23:U:39:LYS:CG	2.03	0.70
1:X:29:U:H4'	16:N:11:ARG:NH1	2.03	0.70
1:X:568:G:O2'	1:X:569:C:H5'	1.92	0.70
1:X:635:C:H2'	1:X:636:G:C5'	2.20	0.70
1:X:1070:G:H5'	1:X:1071:U:H3'	1.73	0.70
1:X:2042:A:O2'	5:C:62:LYS:HE2	1.91	0.70
1:X:2795:A:H4'	13:K:5:LYS:HG2	1.72	0.70
4:B:3:GLY:HA3	4:B:81:PHE:HE1	1.57	0.70
6:D:72:LYS:CA	6:D:81:GLN:HA	2.21	0.70
16:N:28:ARG:HG2	16:N:38:THR:OG1	1.91	0.70
20:R:56:LYS:HA	20:R:68:GLY:O	1.91	0.70
21:S:3:LEU:HD11	21:S:32:PHE:CA	2.21	0.70
1:X:882:C:H2'	1:X:883:A:H8	1.57	0.70
1:X:1080:A:H4'	1:X:1081:A:C8	2.26	0.70
1:X:1091:C:H1'	8:F:127:THR:CA	2.21	0.70
1:X:1625:A:H1'	1:X:1632:A:H1'	1.72	0.70
1:X:1752:U:H5"	1:X:1753:A:OP2	1.92	0.70
1:X:2299:A:N6	1:X:2312:A:H2'	2.05	0.70
2:Z:56:G:H2'	2:Z:57:U:C6	2.26	0.70
5:C:192:ALA:O	5:C:195:ILE:HG13	1.91	0.70
16:N:40:LEU:HD23	16:N:40:LEU:H	1.57	0.70
22:T:25:LYS:CG	22:T:37:LEU:HA	2.19	0.70
24:V:17:GLU:HA	24:V:17:GLU:OE2	1.90	0.70
1:X:2506:C:H5"	30:4:30:VAL:HB	1.74	0.70
4:B:133:LYS:O	4:B:134:TRP:O	2.09	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:117:LEU:CD2	5:C:187:VAL:HA	2.21	0.70
6:D:22:TYR:CZ	6:D:29:PRO:HD3	2.26	0.70
7:E:101:LYS:O	7:E:123:PHE:CD1	2.44	0.70
12:J:76:THR:HB	12:J:88:LYS:O	1.91	0.70
17:O:11:GLN:HA	17:O:38:LEU:O	1.90	0.70
19:Q:60:GLY:N	19:Q:72:ARG:HH11	1.88	0.70
1:X:589:C:H4'	16:N:31:GLN:CD	2.17	0.70
1:X:879:A:C2	1:X:926:C:H5"	2.26	0.70
1:X:1175:A:O2'	1:X:1176:U:H5'	1.91	0.70
1:X:1939:U:O2	1:X:1939:U:H2'	1.91	0.70
1:X:2034:A:OP1	4:B:137:ARG:NH2	2.25	0.70
1:X:2041:A:H8	1:X:2041:A:O5'	1.75	0.70
1:X:2285:U:H5'	1:X:2286:G:C1'	2.21	0.70
1:X:2821:G:H2'	1:X:2822:U:C6	2.26	0.70
11:I:76:LYS:HB3	11:I:79:GLN:CD	2.16	0.70
21:S:4:THR:O	21:S:5:ALA:O	2.10	0.70
21:S:93:GLU:O	21:S:94:VAL:HG23	1.91	0.70
26:Y:16:ARG:HD3	26:Y:20:ARG:NH2	2.06	0.70
1:X:48:A:C4'	1:X:49:U:H5'	2.20	0.70
1:X:537:C:C5	1:X:2759:U:H3'	2.23	0.70
1:X:847:C:C2	1:X:848:A:C8	2.79	0.70
1:X:1055:A:C2'	1:X:1056:U:H5"	2.21	0.70
1:X:1253:C:H2'	1:X:1254:G:C5'	2.21	0.70
1:X:1996:A:C2'	1:X:1997:A:H5'	2.22	0.70
1:X:2269:G:N2	1:X:2322:U:H1'	2.07	0.70
1:X:2713:A:N6	4:B:203:LYS:HE3	2.01	0.70
1:X:2737:A:OP2	30:4:19:ARG:HA	1.91	0.70
4:B:119:ARG:HA	4:B:160:MET:CE	2.15	0.70
5:C:14:THR:HG22	5:C:15:ILE:H	1.57	0.70
6:D:99:PHE:HA	6:D:102:LYS:HD2	1.74	0.70
9:G:108:GLY:N	9:G:110:LEU:CD2	2.54	0.70
17:O:36:LYS:HZ2	17:O:55:THR:C	1.99	0.70
1:X:538:A:N6	1:X:2025:A:H2'	2.06	0.70
1:X:999:A:N7	25:W:10:ILE:HG21	2.06	0.70
1:X:2581:A:H5'	1:X:2582:G:OP2	1.92	0.70
4:B:37:LYS:HA	4:B:42:ASP:OD2	1.91	0.70
6:D:143:TYR:HE1	6:D:148:LYS:HA	1.57	0.70
10:H:16:ALA:HA	10:H:58:ALA:HB2	1.73	0.70
12:J:70:PHE:C	12:J:70:PHE:HD2	1.99	0.70
14:L:37:HIS:NE2	14:L:39:TYR:CE1	2.60	0.70
16:N:52:ASN:C	16:N:54:LYS:N	2.48	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:304:A:H2'	1:X:305:A:H5"	1.73	0.70
1:X:741:G:N2	1:X:743:A:H1'	2.07	0.70
3:A:147:LEU:CD2	3:A:155:LEU:HD11	2.22	0.70
5:C:22:VAL:HG21	5:C:110:SER:OG	1.91	0.70
6:D:73:SER:O	6:D:80:ARG:N	2.25	0.70
9:G:85:ALA:O	9:G:87:GLN:N	2.24	0.70
11:I:7:LYS:C	11:I:9:THR:H	2.00	0.70
12:J:27:TYR:CB	12:J:137:VAL:HG11	2.21	0.70
12:J:134:LYS:N	12:J:134:LYS:HD2	2.07	0.70
13:K:99:ARG:HH11	13:K:99:ARG:CG	2.05	0.70
19:Q:66:GLY:C	19:Q:68:PHE:H	1.97	0.70
20:R:54:ILE:HA	20:R:71:GLN:HA	1.73	0.70
20:R:75:ALA:C	20:R:76:LEU:HD23	2.17	0.70
23:U:31:GLY:HA2	23:U:32:ARG:CZ	2.22	0.70
24:V:32:ALA:C	24:V:34:ALA:H	2.00	0.70
1:X:404:A:C1'	1:X:424:G:H1'	2.22	0.69
1:X:436:A:H5"	1:X:437:G:H5'	1.73	0.69
1:X:638:A:O2'	1:X:639:G:C8	2.42	0.69
1:X:879:A:H2'	1:X:879:A:N3	2.06	0.69
1:X:2409:A:C2	11:I:54:SER:HB3	2.27	0.69
2:Z:3:A:H2'	2:Z:4:C:H5'	1.73	0.69
7:E:107:ILE:HD13	7:E:107:ILE:H	1.56	0.69
7:E:161:GLY:O	7:E:163:ARG:HG3	1.91	0.69
9:G:123:PRO:HD2	9:G:124:GLU:OE1	1.92	0.69
12:J:61:ARG:HH12	21:S:175:ARG:HD2	1.57	0.69
17:O:7:THR:O	17:O:8:GLY:C	2.33	0.69
17:O:36:LYS:HB3	17:O:39:PHE:CE2	2.27	0.69
20:R:18:LYS:HD3	20:R:19:GLY:N	2.07	0.69
21:S:24:TYR:HA	21:S:28:ASN:O	1.91	0.69
21:S:103:ARG:O	21:S:139:THR:HA	1.92	0.69
1:X:173:A:H61	1:X:844:G:N2	1.88	0.69
1:X:833:A:N3	1:X:954:U:O2'	2.25	0.69
1:X:925:U:H4'	1:X:926:C:OP1	1.92	0.69
1:X:2310:G:N2	1:X:2364:C:C4	2.60	0.69
1:X:2839:G:H2'	1:X:2840:U:C6	2.27	0.69
4:B:67:PHE:CD2	4:B:74:PRO:HA	2.27	0.69
5:C:128:ALA:HB2	5:C:159:ARG:NH2	2.07	0.69
6:D:57:LEU:HA	6:D:60:ILE:CD1	2.22	0.69
9:G:65:LYS:CG	9:G:66:HIS:N	2.46	0.69
16:N:62:ILE:HG22	16:N:66:ASN:HD22	1.57	0.69
18:P:107:ILE:O	18:P:107:ILE:HG23	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:34:THR:HG23	19:Q:37:GLU:HB2	1.74	0.69
21:S:105:GLN:HE22	21:S:139:THR:CG2	2.04	0.69
21:S:138:VAL:HG23	21:S:139:THR:N	2.05	0.69
22:T:5:LYS:N	22:T:5:LYS:HD2	2.07	0.69
1:X:67:G:H2'	1:X:68:C:H6	1.53	0.69
1:X:198:A:H5"	1:X:199:A:H5'	1.74	0.69
1:X:1354:A:O2'	19:Q:54:SER:HB3	1.92	0.69
1:X:2057:U:H5'	1:X:2057:U:C6	2.27	0.69
1:X:2332:G:H4'	22:T:32:LYS:HE2	1.74	0.69
1:X:2594:U:H2'	1:X:2595:C:C6	2.28	0.69
1:X:2594:U:H2'	1:X:2595:C:H6	1.56	0.69
3:A:213:ARG:C	3:A:215:LEU:N	2.49	0.69
5:C:117:LEU:HD23	5:C:117:LEU:C	2.18	0.69
10:H:29:ILE:CD1	10:H:30:GLY:H	2.06	0.69
11:I:56:LEU:HD13	11:I:56:LEU:O	1.91	0.69
11:I:76:LYS:HB3	11:I:79:GLN:HG2	1.74	0.69
11:I:114:ILE:O	11:I:114:ILE:HD13	1.92	0.69
14:L:8:ARG:HH11	14:L:8:ARG:CB	2.05	0.69
14:L:99:ARG:CG	14:L:100:VAL:N	2.53	0.69
17:O:79:GLN:O	17:O:80:TYR:CB	2.39	0.69
21:S:117:VAL:HG22	21:S:168:VAL:HG13	1.74	0.69
1:X:1118:G:H2'	1:X:1119:U:H5"	1.72	0.69
1:X:2194:A:H2'	1:X:2195:C:O4'	1.93	0.69
1:X:2498:U:C4'	1:X:2499:C:OP1	2.39	0.69
1:X:2756:A:O2'	1:X:2757:G:OP2	2.10	0.69
6:D:96:MET:O	6:D:100:LEU:HB2	1.91	0.69
6:D:119:PRO:HG2	6:D:120:ASN:H	1.57	0.69
17:O:14:VAL:O	17:O:14:VAL:HG12	1.92	0.69
1:X:613:A:H5"	1:X:668:A:N6	2.07	0.69
1:X:666:U:C2'	1:X:667:U:H4'	2.08	0.69
1:X:920:G:P	12:J:24:GLY:HA3	2.32	0.69
1:X:1505:U:H2'	1:X:1506:C:H5"	1.74	0.69
1:X:1830:C:N4	1:X:1881:U:H3'	2.06	0.69
1:X:2417:U:O2'	1:X:2419:C:OP1	2.10	0.69
3:A:186:HIS:NE2	3:A:188:GLU:HB2	2.07	0.69
6:D:10:ASP:C	6:D:12:VAL:N	2.50	0.69
7:E:27:LYS:HG2	7:E:32:GLU:HB2	1.74	0.69
12:J:33:TYR:O	12:J:106:GLU:HA	1.92	0.69
15:M:44:ARG:NH1	15:M:46:ARG:NH2	2.41	0.69
18:P:80:LEU:CD2	18:P:87:GLU:HB3	2.21	0.69
19:Q:30:SER:O	19:Q:76:LYS:HD3	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:8:SER:O	20:R:10:HIS:N	2.26	0.69
23:U:27:ASP:C	23:U:32:ARG:NE	2.50	0.69
1:X:1051:U:H3'	1:X:1051:U:H6	1.57	0.69
1:X:1281:A:H1'	1:X:2592:U:C4	2.25	0.69
1:X:1323:G:H3'	1:X:1324:G:H21	1.57	0.69
1:X:1757:C:O2'	1:X:1758:C:H5'	1.91	0.69
1:X:1997:A:H2'	1:X:1998:A:C8	2.27	0.69
3:A:91:ARG:HD2	3:A:198:ASN:CA	2.21	0.69
5:C:41:GLY:HA3	5:C:89:ARG:O	1.93	0.69
5:C:112:GLN:CA	5:C:116:LYS:HD3	2.22	0.69
6:D:45:GLU:HB2	6:D:78:LYS:HZ3	1.58	0.69
14:L:80:ALA:C	14:L:82:LYS:H	1.99	0.69
18:P:34:SER:O	18:P:37:LYS:HB3	1.93	0.69
18:P:46:ARG:HA	18:P:92:VAL:HG11	1.73	0.69
18:P:66:GLU:O	18:P:67:PRO:C	2.34	0.69
20:R:22:VAL:HG11	20:R:80:LYS:HZ1	1.57	0.69
25:W:28:ILE:HD13	25:W:28:ILE:N	2.07	0.69
1:X:1431:U:H4'	1:X:1604:A:C4'	2.22	0.69
1:X:1440:G:H3'	1:X:1441:A:H5"	1.75	0.69
1:X:1621:C:H5'	1:X:1626:A:N6	2.07	0.69
6:D:4:LEU:HA	6:D:7:LYS:CB	2.21	0.69
6:D:60:ILE:CG1	6:D:61:THR:H	1.99	0.69
11:I:7:LYS:O	11:I:9:THR:HG23	1.92	0.69
13:K:44:LEU:O	13:K:44:LEU:HD12	1.93	0.69
14:L:32:TYR:O	14:L:34:SER:N	2.25	0.69
18:P:45:ILE:HG22	18:P:46:ARG:N	2.06	0.69
19:Q:68:PHE:N	19:Q:68:PHE:CD2	2.60	0.69
23:U:54:ASN:O	23:U:56:GLN:N	2.26	0.69
24:V:2:LYS:H	24:V:3:PRO:HD3	1.57	0.69
30:4:30:VAL:HG23	30:4:31:LYS:HD3	1.75	0.69
1:X:328:A:H2'	1:X:329:C:C6	2.28	0.69
1:X:1003:C:H4'	17:O:71:ILE:CD1	2.21	0.69
1:X:1513:U:H5"	1:X:1514:C:OP2	1.92	0.69
1:X:1713:G:C6	1:X:1714:A:C5	2.81	0.69
1:X:1923:U:H4'	1:X:1924:C:O5'	1.93	0.69
1:X:2294:U:O2'	6:D:125:ARG:HG3	1.92	0.69
1:X:2750:G:O2'	4:B:203:LYS:HE2	1.93	0.69
3:A:43:ARG:NH2	3:A:55:GLY:HA2	2.07	0.69
3:A:90:ALA:O	3:A:92:ILE:N	2.26	0.69
4:B:115:GLY:CA	4:B:136:ARG:HD2	2.22	0.69
6:D:22:TYR:HD2	6:D:27:ALA:HB3	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:60:ILE:HD12	6:D:61:THR:HG23	1.75	0.69
7:E:101:LYS:HG3	7:E:117:PRO:HD2	1.74	0.69
7:E:104:GLU:OE2	7:E:114:ILE:HG12	1.92	0.69
9:G:146:THR:O	9:G:148:LEU:N	2.26	0.69
11:I:86:THR:C	11:I:88:PHE:H	2.01	0.69
12:J:35:LEU:HD11	12:J:130:THR:OG1	1.92	0.69
13:K:14:SER:O	13:K:15:SER:C	2.35	0.69
15:M:50:PHE:CE1	15:M:79:ARG:CG	2.75	0.69
15:M:104:LEU:HD12	15:M:107:LEU:HD22	1.75	0.69
16:N:52:ASN:C	16:N:54:LYS:H	2.01	0.69
16:N:86:ALA:C	16:N:88:ILE:N	2.48	0.69
18:P:71:VAL:HG12	18:P:126:ILE:HG22	1.74	0.69
19:Q:74:ASP:O	19:Q:75:ARG:NH1	2.25	0.69
20:R:25:LEU:O	20:R:26:SER:HB3	1.92	0.69
20:R:51:VAL:CG2	20:R:76:LEU:HD11	2.23	0.69
21:S:46:GLN:CB	21:S:50:GLY:HA3	2.22	0.69
1:X:59:G:H1'	1:X:73:A:C2	2.28	0.69
1:X:455:A:H2	1:X:1258:G:N3	1.91	0.69
1:X:1044:U:H5	30:4:16:VAL:O	1.76	0.69
1:X:2042:A:OP1	5:C:66:ASN:ND2	2.26	0.69
1:X:2329:C:H2'	1:X:2330:G:O4'	1.93	0.69
1:X:2343:C:OP1	22:T:55:ARG:NE	2.24	0.69
5:C:149:LEU:CD1	5:C:170:LEU:HB2	2.17	0.69
6:D:30:ARG:HB2	6:D:159:THR:CG2	2.23	0.69
6:D:38:GLU:HG3	6:D:40:LEU:HD11	1.73	0.69
9:G:61:ARG:NE	9:G:65:LYS:HE2	2.08	0.69
25:W:23:LEU:HD13	25:W:51:LEU:HD11	1.74	0.69
1:X:143:A:H2'	1:X:144:U:H6	1.57	0.69
1:X:755:C:H2'	1:X:756:C:C6	2.28	0.69
1:X:857:U:H3'	1:X:858:G:C8	2.28	0.69
1:X:1971:C:O2'	1:X:1972:G:H5'	1.92	0.69
1:X:2532:G:C2	1:X:2533:U:H1'	2.27	0.69
1:X:2798:A:H2'	1:X:2799:C:H5'	1.74	0.69
2:Z:45:C:H2'	6:D:92:ARG:HE	1.58	0.69
11:I:54:SER:OG	11:I:59:ARG:NH1	2.26	0.69
14:L:33:ARG:HG3	14:L:38:ILE:HB	1.74	0.69
19:Q:42:ILE:C	19:Q:42:ILE:HD13	2.18	0.69
20:R:98:ILE:C	20:R:100:ASP:N	2.49	0.69
21:S:56:VAL:HG12	21:S:57:GLU:N	2.07	0.69
26:Y:11:THR:O	26:Y:12:SER:O	2.10	0.69
30:4:18:ARG:HG2	30:4:23:VAL:HG13	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:492:G:H1'	1:X:516:G:N2	2.08	0.68
1:X:1069:G:C3'	1:X:1070:G:H5"	2.22	0.68
1:X:1747:G:H4'	1:X:1749:G:H1'	1.75	0.68
1:X:2787:A:O2'	1:X:2788:C:H5'	1.92	0.68
5:C:130:THR:HA	5:C:160:ALA:HB1	1.73	0.68
7:E:84:THR:HB	7:E:134:SER:CB	2.23	0.68
10:H:23:ARG:CZ	10:H:23:ARG:HB3	2.21	0.68
10:H:71:LYS:O	10:H:99:ILE:HG12	1.92	0.68
11:I:89:ASP:OD2	11:I:120:VAL:HG22	1.93	0.68
12:J:52:ARG:HA	12:J:55:MET:HE3	1.75	0.68
14:L:37:HIS:O	14:L:37:HIS:CG	2.45	0.68
17:O:10:LYS:HD3	17:O:37:ALA:HB3	1.74	0.68
1:X:779:U:O2'	1:X:780:U:H5'	1.93	0.68
1:X:964:A:OP1	12:J:18:MET:SD	2.51	0.68
1:X:2637:C:N4	1:X:2643:G:N2	2.40	0.68
3:A:143:HIS:C	3:A:145:LEU:N	2.45	0.68
3:A:202:LYS:C	3:A:204:ILE:H	2.00	0.68
7:E:137:ASP:HB3	7:E:140:LEU:HD12	1.76	0.68
9:G:127:ILE:HG22	9:G:128:GLU:N	2.06	0.68
9:G:141:GLY:O	9:G:144:MET:HB2	1.93	0.68
10:H:100:ASN:HD21	10:H:104:GLU:HG3	1.58	0.68
16:N:56:ASP:O	16:N:57:PHE:C	2.34	0.68
25:W:13:PRO:HD2	25:W:16:GLN:NE2	2.09	0.68
1:X:627:A:H2'	1:X:628:A:C8	2.29	0.68
1:X:751:G:H1'	1:X:772:G:N2	2.08	0.68
1:X:811:G:OP2	5:C:56:ARG:HG3	1.92	0.68
1:X:1372:A:C5	1:X:1373:G:N7	2.61	0.68
4:B:15:TRP:CZ3	15:M:84:ALA:HB3	2.29	0.68
4:B:151:TYR:HB3	9:G:106:TYR:CD2	2.28	0.68
5:C:14:THR:HG21	5:C:195:ILE:HG22	1.76	0.68
5:C:158:ARG:HB2	5:C:169:VAL:HG11	1.74	0.68
7:E:44:ARG:O	7:E:51:LEU:N	2.25	0.68
7:E:105:MET:CB	7:E:113:VAL:HB	2.24	0.68
16:N:93:LYS:O	16:N:94:VAL:HG23	1.94	0.68
1:X:242:A:O2'	1:X:243:G:H4'	1.92	0.68
1:X:1339:U:H5"	1:X:1994:U:H1'	1.76	0.68
1:X:2433:G:O2'	1:X:2434:G:H5'	1.93	0.68
1:X:2598:C:O2'	1:X:2599:U:H5'	1.93	0.68
3:A:217:ARG:O	3:A:219:PRO:N	2.27	0.68
4:B:9:ILE:HD13	15:M:12:LEU:HD13	1.75	0.68
4:B:61:LYS:HB3	4:B:62:PRO:HD3	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:5:LYS:C	6:D:8:TYR:H	2.01	0.68
10:H:116:ARG:NH1	15:M:38:LYS:HZ2	1.90	0.68
13:K:55:ALA:C	13:K:57:GLY:H	2.00	0.68
15:M:17:GLU:HG3	15:M:62:SER:HB3	1.75	0.68
20:R:40:LEU:HB2	20:R:45:LYS:H	1.59	0.68
21:S:6:LYS:HB2	21:S:31:SER:HB3	1.74	0.68
23:U:22:GLY:H	23:U:39:LYS:HG3	1.59	0.68
23:U:32:ARG:CG	23:U:33:LYS:H	2.06	0.68
23:U:51:ILE:O	23:U:52:ARG:HD3	1.93	0.68
24:V:42:ARG:CZ	24:V:45:GLN:HE22	2.06	0.68
25:W:14:GLY:HA2	25:W:17:VAL:HG23	1.75	0.68
1:X:218:A:H1'	1:X:220:U:C5	2.28	0.68
1:X:403:A:H5"	1:X:404:A:OP1	1.93	0.68
1:X:546:A:H2'	1:X:547:U:C6	2.28	0.68
1:X:575:U:H2'	1:X:576:A:C8	2.29	0.68
1:X:604:U:H2'	1:X:605:G:H8	1.57	0.68
1:X:1138:A:H2'	1:X:1139:A:H5"	1.75	0.68
1:X:1745:C:H2'	1:X:1746:A:O4'	1.92	0.68
1:X:2265:A:H4'	1:X:2266:A:O4'	1.93	0.68
1:X:2658:A:O2'	1:X:2659:C:H5'	1.93	0.68
3:A:173:VAL:CG1	3:A:174:ILE:H	2.05	0.68
5:C:7:ILE:HG21	5:C:121:ASP:C	2.19	0.68
8:F:101:ASN:HB3	8:F:104:GLN:CG	2.23	0.68
9:G:118:ALA:C	9:G:120:SER:H	2.00	0.68
9:G:131:VAL:HG11	9:G:148:LEU:HD13	1.75	0.68
10:H:23:ARG:HH21	10:H:23:ARG:CG	2.06	0.68
14:L:38:ILE:HG13	14:L:39:TYR:N	2.08	0.68
15:M:89:ASN:ND2	15:M:90:GLN:NE2	2.42	0.68
18:P:17:GLN:HG2	18:P:18:VAL:HG23	1.73	0.68
18:P:35:PRO:O	18:P:38:VAL:N	2.26	0.68
21:S:113:VAL:HG22	21:S:171:VAL:HG22	1.74	0.68
1:X:135:U:H2'	1:X:136:A:C4	2.29	0.68
1:X:670:U:H2'	1:X:671:A:C8	2.28	0.68
5:C:151:VAL:N	5:C:187:VAL:O	2.26	0.68
5:C:153:ASP:C	5:C:154:ASP:OD1	2.37	0.68
11:I:108:LEU:CB	11:I:122:VAL:HG11	2.18	0.68
20:R:92:THR:CB	20:R:95:ARG:HH22	2.06	0.68
1:X:192:G:H4'	1:X:193:A:O5'	1.94	0.68
1:X:760:U:O2'	18:P:109:ARG:HD3	1.92	0.68
1:X:1430:G:H2'	1:X:1431:U:O4'	1.93	0.68
1:X:1459:U:H4'	1:X:1460:G:OP1	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2291:U:C5'	6:D:85:VAL:HG21	2.21	0.68
7:E:136:ILE:H	7:E:136:ILE:CD1	2.06	0.68
12:J:116:LYS:HA	12:J:132:MET:HE1	1.74	0.68
15:M:89:ASN:ND2	15:M:90:GLN:HE22	1.92	0.68
17:O:36:LYS:HD2	17:O:55:THR:HA	1.75	0.68
1:X:2340:C:H2'	1:X:2341:G:O4'	1.94	0.68
1:X:2546:G:H2'	1:X:2547:C:H6	1.59	0.68
1:X:2701:A:H2'	1:X:2702:G:H8	1.58	0.68
1:X:2802:C:H2'	1:X:2803:C:H6	1.58	0.68
3:A:78:LYS:HD3	3:A:116:THR:HB	1.74	0.68
3:A:200:GLU:CG	3:A:202:LYS:HB2	2.23	0.68
5:C:45:THR:C	5:C:47:THR:H	2.02	0.68
6:D:70:ALA:C	6:D:72:LYS:H	2.01	0.68
6:D:100:LEU:C	6:D:104:ILE:HG13	2.18	0.68
10:H:23:ARG:HH21	10:H:23:ARG:HG2	1.59	0.68
11:I:72:TYR:CD2	11:I:105:PRO:HB2	2.29	0.68
20:R:111:GLY:C	20:R:112:LYS:HD2	2.19	0.68
1:X:124:A:C2	1:X:125:A:C2	2.82	0.68
1:X:304:A:OP1	1:X:304:A:H4'	1.93	0.68
1:X:1287:A:N3	1:X:1310:C:H1'	2.09	0.68
1:X:2306:A:H2'	1:X:2307:A:C8	2.29	0.68
1:X:2379:G:C2'	1:X:2380:U:H5'	2.24	0.68
5:C:44:SER:HB3	5:C:88:PRO:CD	2.23	0.68
7:E:150:LYS:O	7:E:152:ARG:N	2.27	0.68
9:G:33:ILE:HD13	9:G:33:ILE:N	2.08	0.68
12:J:28:VAL:HG21	12:J:134:LYS:O	1.94	0.68
12:J:100:PRO:HB3	21:S:74:ARG:HG3	1.76	0.68
13:K:18:VAL:HG12	13:K:22:ARG:HD2	1.75	0.68
14:L:12:ARG:HH21	14:L:13:THR:HG23	1.58	0.68
15:M:34:ARG:NH2	15:M:66:PHE:CE2	2.62	0.68
1:X:63:A:O3'	19:Q:71:GLN:HB2	1.95	0.68
1:X:706:A:O2'	1:X:707:U:H5'	1.95	0.68
1:X:1715:A:H4'	1:X:1716:G:O5'	1.94	0.68
3:A:212:SER:O	3:A:215:LEU:N	2.27	0.68
6:D:40:LEU:HA	6:D:150:ARG:HH21	1.59	0.68
7:E:137:ASP:OD1	7:E:140:LEU:N	2.22	0.68
7:E:144:VAL:O	7:E:147:ASN:HB2	1.94	0.68
9:G:51:LEU:CD1	9:G:88:VAL:HG21	2.24	0.68
10:H:116:ARG:HD3	15:M:40:ARG:CB	2.23	0.68
12:J:136:GLU:HA	12:J:138:TYR:HE2	1.58	0.68
16:N:88:ILE:HG13	17:O:49:GLU:CB	2.24	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:53:MET:SD	22:T:57:HIS:HA	2.34	0.68
26:Y:9:LYS:O	26:Y:10:LYS:C	2.36	0.68
1:X:442:A:H2'	1:X:443:A:C8	2.29	0.67
1:X:1450:G:H2'	1:X:1451:C:O4'	1.94	0.67
2:Z:17:A:OP2	2:Z:110:U:C2'	2.42	0.67
5:C:15:ILE:HG22	5:C:17:LEU:HD22	1.76	0.67
6:D:85:VAL:HG23	6:D:86:GLY:H	1.59	0.67
7:E:102:ALA:HB2	7:E:116:GLU:HA	1.76	0.67
8:F:85:ILE:HG22	8:F:86:GLY:N	2.09	0.67
10:H:99:ILE:HG22	10:H:105:PRO:HA	1.76	0.67
11:I:54:SER:OG	11:I:59:ARG:CZ	2.41	0.67
20:R:37:LEU:HD21	20:R:49:GLU:CG	2.24	0.67
20:R:71:GLN:O	20:R:72:ARG:HG3	1.94	0.67
20:R:97:GLN:HA	20:R:103:LYS:O	1.94	0.67
1:X:321:A:OP1	20:R:27:GLY:N	2.15	0.67
1:X:1018:C:H3'	1:X:1019:U:C5'	2.24	0.67
1:X:1118:G:C2'	1:X:1119:U:H5"	2.24	0.67
1:X:1514:C:O4'	1:X:1593:C:H5'	1.93	0.67
1:X:1517:C:P	3:A:102:LYS:HZ1	2.16	0.67
1:X:2270:U:O2'	1:X:2271:C:H5'	1.93	0.67
2:Z:46:G:H1'	2:Z:49:C:N4	2.09	0.67
4:B:116:VAL:HG13	4:B:136:ARG:HH21	1.59	0.67
6:D:35:VAL:O	6:D:154:ILE:HG23	1.93	0.67
25:W:28:ILE:H	25:W:28:ILE:CD1	2.04	0.67
26:Y:35:GLN:C	26:Y:37:HIS:H	2.01	0.67
1:X:698:A:H1'	1:X:701:U:O4	1.94	0.67
1:X:805:G:N7	1:X:2419:C:H1'	2.10	0.67
1:X:1095:A:H3'	1:X:1096:A:H5"	1.75	0.67
1:X:1168:G:O2'	25:W:28:ILE:HD11	1.95	0.67
1:X:1264:C:P	16:N:13:ARG:HH12	2.18	0.67
1:X:2313:G:N2	14:L:17:VAL:HB	2.10	0.67
2:Z:45:C:H2'	6:D:92:ARG:NH1	2.08	0.67
5:C:185:ARG:HG2	5:C:185:ARG:HH21	1.60	0.67
5:C:194:GLU:O	5:C:195:ILE:HG23	1.93	0.67
7:E:9:ILE:O	7:E:11:VAL:HG23	1.94	0.67
11:I:94:GLU:HB3	11:I:97:ARG:CZ	2.25	0.67
12:J:113:GLU:HA	12:J:116:LYS:CB	2.24	0.67
18:P:38:VAL:O	18:P:39:ARG:C	2.37	0.67
26:Y:33:CYS:O	26:Y:37:HIS:HA	1.95	0.67
1:X:437:G:O2'	1:X:438:G:H5'	1.95	0.67
1:X:957:G:H2'	1:X:958:G:H8	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:972:C:H5'	1:X:973:U:OP2	1.95	0.67
1:X:1441:A:C2	1:X:1586:A:OP2	2.48	0.67
1:X:1931:G:O2'	1:X:1932:G:H5'	1.95	0.67
1:X:2689:C:O2'	1:X:2690:A:H5'	1.95	0.67
3:A:52:ARG:CZ	3:A:247:VAL:HG11	2.24	0.67
9:G:93:LYS:HD3	9:G:93:LYS:N	2.08	0.67
12:J:64:LYS:H	12:J:64:LYS:HD2	1.59	0.67
17:O:38:LEU:HD13	17:O:39:PHE:N	2.10	0.67
19:Q:79:ILE:HD12	19:Q:79:ILE:N	2.09	0.67
23:U:15:VAL:O	23:U:16:ASN:HB2	1.94	0.67
23:U:63:SER:HB3	23:U:66:ALA:HB2	1.76	0.67
30:4:25:VAL:HB	30:4:34:GLN:H	1.59	0.67
1:X:20:C:H2'	1:X:21:A:H8	1.60	0.67
1:X:178:C:OP2	23:U:40:ARG:HD2	1.94	0.67
1:X:1816:G:OP1	3:A:52:ARG:HG3	1.95	0.67
1:X:1909:U:H5'	1:X:1911:A:OP2	1.94	0.67
1:X:2811:G:H2'	1:X:2812:A:H8	1.59	0.67
5:C:110:SER:HA	5:C:113:GLU:OE1	1.95	0.67
7:E:84:THR:HB	7:E:134:SER:HB2	1.75	0.67
9:G:105:GLY:CA	9:G:110:LEU:HD12	2.25	0.67
9:G:162:LYS:H	9:G:163:PRO:HD2	1.59	0.67
12:J:35:LEU:HD23	12:J:105:PHE:HD2	1.58	0.67
14:L:41:GLN:OE1	14:L:50:THR:HG21	1.95	0.67
23:U:33:LYS:O	23:U:34:THR:HB	1.95	0.67
23:U:51:ILE:HG23	23:U:59:THR:CA	2.20	0.67
25:W:14:GLY:O	25:W:15:ASN:C	2.38	0.67
30:4:1:MET:HE1	30:4:34:GLN:HA	1.76	0.67
1:X:13:A:O2'	1:X:15:G:N7	2.25	0.67
1:X:350:U:H6	1:X:350:U:O5'	1.76	0.67
1:X:492:G:H1'	1:X:516:G:H21	1.58	0.67
1:X:1090:C:H2'	1:X:1091:C:H6	1.59	0.67
1:X:1135:C:H2'	1:X:1136:G:C8	2.28	0.67
1:X:1281:A:C2'	1:X:2592:U:H5	2.06	0.67
1:X:1461:C:H2'	1:X:1462:C:H6	1.59	0.67
1:X:1493:A:H2'	1:X:1494:G:O4'	1.94	0.67
1:X:1753:A:H8	1:X:1753:A:O5'	1.76	0.67
2:Z:53:G:C5'	14:L:64:LYS:HD2	2.24	0.67
3:A:162:SER:HB3	3:A:195:ALA:HB2	1.75	0.67
10:H:23:ARG:NH2	10:H:23:ARG:C	2.52	0.67
11:I:11:GLY:H	11:I:14:LYS:HB2	1.60	0.67
14:L:33:ARG:NH1	14:L:103:LEU:CB	2.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:89:ASN:HD22	15:M:90:GLN:NE2	1.92	0.67
23:U:26:ALA:HB2	23:U:35:THR:HG23	1.75	0.67
1:X:394:U:H2'	1:X:395:G:C8	2.30	0.67
1:X:626:A:O2'	5:C:176:ASN:HB2	1.94	0.67
1:X:999:A:C5	25:W:10:ILE:HG21	2.30	0.67
1:X:1739:G:H2'	1:X:1740:G:C8	2.30	0.67
1:X:1781:C:OP1	3:A:219:PRO:CB	2.32	0.67
1:X:2176:U:H2'	1:X:2177:U:O4'	1.94	0.67
4:B:19:ARG:HG3	4:B:21:ILE:HD11	1.77	0.67
5:C:180:ILE:HG13	5:C:186:LEU:HD22	1.76	0.67
6:D:88:LYS:O	6:D:89:VAL:HG22	1.94	0.67
9:G:66:HIS:O	9:G:70:PHE:CE1	2.48	0.67
13:K:16:ALA:O	13:K:17:ARG:C	2.37	0.67
14:L:60:LYS:HA	14:L:67:THR:HG21	1.75	0.67
15:M:28:ARG:HB3	15:M:29:PRO:HD3	1.76	0.67
16:N:66:ASN:CB	16:N:76:TYR:HB2	2.18	0.67
17:O:28:GLU:O	17:O:29:ALA:HB3	1.95	0.67
17:O:29:ALA:O	17:O:30:GLY:C	2.37	0.67
20:R:16:PHE:N	20:R:16:PHE:CD2	2.61	0.67
21:S:31:SER:C	21:S:32:PHE:HD2	2.02	0.67
22:T:25:LYS:CA	22:T:29:GLU:OE1	2.42	0.67
1:X:199:A:N6	1:X:209:G:H1'	2.10	0.67
1:X:1095:A:H2'	1:X:1096:A:C5'	2.19	0.67
1:X:1211:G:C4	1:X:1212:U:C5	2.82	0.67
1:X:2437:G:H2'	1:X:2469:G:H1	1.59	0.67
3:A:132:PRO:HA	3:A:190:TYR:HA	1.76	0.67
3:A:246:PRO:O	3:A:248:THR:O	2.13	0.67
6:D:50:ILE:C	6:D:52:LYS:H	2.03	0.67
10:H:25:LEU:CD1	10:H:52:VAL:HG23	2.25	0.67
11:I:94:GLU:HA	11:I:97:ARG:CG	2.24	0.67
12:J:8:THR:HG22	12:J:70:PHE:HZ	1.60	0.67
12:J:15:ARG:HB3	12:J:73:LYS:NZ	2.06	0.67
13:K:41:ALA:O	13:K:44:LEU:N	2.24	0.67
16:N:79:PHE:HE1	16:N:106:PHE:CE1	2.13	0.67
19:Q:63:LYS:HE2	19:Q:65:VAL:N	2.10	0.67
23:U:53:GLU:CD	23:U:57:VAL:HA	2.19	0.67
1:X:227:G:O2'	11:I:53:ARG:NE	2.28	0.67
1:X:647:G:H4'	1:X:649:G:O3'	1.95	0.67
1:X:774:A:H3'	1:X:774:A:H8	1.59	0.67
1:X:864:C:O2'	1:X:865:A:H5'	1.94	0.67
1:X:1055:A:H2'	1:X:1056:U:H5"	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1539:U:H2'	1:X:1540:C:H6	1.60	0.67
1:X:2467:A:O2'	1:X:2468:G:H5'	1.95	0.67
1:X:2827:G:H2'	1:X:2828:C:H6	1.60	0.67
2:Z:107:C:H5"	21:S:84:TYR:CE1	2.30	0.67
7:E:136:ILE:HG22	7:E:137:ASP:N	2.10	0.67
9:G:67:ARG:CD	9:G:70:PHE:HA	2.23	0.67
22:T:27:GLY:HA2	22:T:67:VAL:O	1.94	0.67
23:U:14:VAL:O	23:U:15:VAL:HG22	1.95	0.67
1:X:741:G:H21	1:X:743:A:H1'	1.60	0.67
1:X:1278:A:O2'	1:X:1279:G:O5'	2.10	0.67
1:X:1966:C:O2'	1:X:1967:U:H5'	1.94	0.67
1:X:2302:G:H1	1:X:2311:U:H5	1.42	0.67
1:X:2827:G:H2'	1:X:2828:C:C6	2.30	0.67
9:G:96:ASP:O	9:G:98:LYS:N	2.28	0.67
16:N:70:ARG:NH1	16:N:70:ARG:HG3	2.10	0.67
18:P:24:GLY:O	18:P:127:ILE:HA	1.94	0.67
20:R:11:ASN:O	20:R:11:ASN:ND2	2.27	0.67
21:S:152:ILE:CD1	21:S:152:ILE:H	2.07	0.67
1:X:125:A:H5"	1:X:126:C:O4'	1.95	0.66
1:X:622:U:H2'	1:X:623:G:O4'	1.96	0.66
1:X:801:A:O2'	1:X:802:A:OP2	2.08	0.66
1:X:1281:A:H2'	1:X:1282:A:H8	1.60	0.66
1:X:1605:A:O2'	1:X:1606:C:H5'	1.94	0.66
1:X:1977:C:O2'	1:X:1978:U:H5'	1.94	0.66
1:X:2286:G:C6	1:X:2287:G:H1'	2.30	0.66
1:X:2767:C:H1'	4:B:62:PRO:HG3	1.77	0.66
3:A:84:TYR:CE2	3:A:91:ARG:HG2	2.29	0.66
5:C:5:ASN:HD22	5:C:5:ASN:N	1.92	0.66
6:D:53:ALA:HB1	6:D:57:LEU:HD21	1.76	0.66
6:D:73:SER:O	6:D:79:LEU:HB3	1.95	0.66
7:E:42:THR:O	7:E:53:GLU:N	2.21	0.66
8:F:125:ALA:O	8:F:128:VAL:HB	1.95	0.66
9:G:157:PRO:O	9:G:159:SER:N	2.26	0.66
10:H:97:VAL:O	10:H:97:VAL:HG12	1.94	0.66
12:J:136:GLU:HA	12:J:138:TYR:CE2	2.30	0.66
18:P:44:VAL:HG23	18:P:45:ILE:N	2.08	0.66
20:R:93:ARG:HH12	20:R:108:VAL:HG23	1.59	0.66
21:S:112:LEU:O	21:S:172:LEU:N	2.28	0.66
1:X:574:C:H4'	1:X:1266:G:O6	1.95	0.66
1:X:820:U:H2'	1:X:821:A:H8	1.60	0.66
1:X:1615:C:OP1	19:Q:35:LYS:N	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:107:C:C2'	2:Z:108:G:H5'	2.26	0.66
4:B:49:ILE:HD13	4:B:49:ILE:C	2.20	0.66
6:D:5:LYS:O	6:D:8:TYR:HB3	1.94	0.66
6:D:63:GLN:OE1	6:D:89:VAL:HG12	1.95	0.66
6:D:80:ARG:HD3	6:D:83:MET:SD	2.35	0.66
9:G:75:ILE:HG13	9:G:140:GLN:CG	2.24	0.66
10:H:116:ARG:HD2	15:M:38:LYS:HZ3	1.59	0.66
11:I:53:ARG:C	11:I:55:ARG:H	2.02	0.66
20:R:59:LYS:H	20:R:60:PRO:HD3	1.60	0.66
21:S:53:ASP:HB3	21:S:61:THR:HG23	1.76	0.66
22:T:42:GLY:O	22:T:57:HIS:HB3	1.96	0.66
1:X:1392:U:H5"	1:X:1393:G:OP2	1.95	0.66
1:X:1507:A:H5'	3:A:99:ASP:OD1	1.96	0.66
1:X:1625:A:C4	1:X:1632:A:N3	2.63	0.66
1:X:2471:U:O2'	1:X:2472:U:H5'	1.95	0.66
5:C:44:SER:CB	5:C:88:PRO:HD3	2.25	0.66
5:C:110:SER:HA	5:C:113:GLU:CD	2.20	0.66
6:D:171:GLN:C	6:D:173:MET:H	2.03	0.66
10:H:4:PRO:O	10:H:5:GLN:HB2	1.93	0.66
21:S:103:ARG:NH2	21:S:107:GLU:HG2	2.10	0.66
30:4:1:MET:SD	30:4:2:LYS:C	2.78	0.66
1:X:60:A:H8	1:X:60:A:OP1	1.79	0.66
1:X:596:C:N4	11:I:36:GLY:HA3	2.11	0.66
1:X:741:G:C2	1:X:743:A:C4	2.83	0.66
1:X:1919:A:H1'	1:X:1923:U:N3	2.11	0.66
1:X:2185:U:H2'	1:X:2186:G:C8	2.31	0.66
1:X:2625:U:H2'	1:X:2626:U:O4'	1.95	0.66
4:B:182:ILE:O	4:B:183:LEU:HD23	1.96	0.66
5:C:35:LEU:O	5:C:38:ARG:N	2.27	0.66
7:E:109:TYR:HE1	7:E:152:ARG:NH2	1.92	0.66
14:L:69:ALA:HB2	14:L:102:ALA:HB1	1.78	0.66
17:O:93:ILE:O	17:O:93:ILE:HG13	1.94	0.66
18:P:50:VAL:HG11	18:P:90:LEU:HB2	1.77	0.66
20:R:23:ILE:HD11	20:R:81:VAL:HB	1.78	0.66
1:X:139:A:H2'	1:X:140:G:C8	2.30	0.66
1:X:530:G:H2'	1:X:531:G:C8	2.30	0.66
1:X:1276:U:C1'	26:Y:10:LYS:HG3	2.24	0.66
1:X:1524:C:H3'	1:X:1525:A:H5"	1.77	0.66
1:X:1885:C:C5'	3:A:244:ARG:HD2	2.25	0.66
1:X:2332:G:O2'	22:T:35:ASN:ND2	2.29	0.66
1:X:2404:A:H1'	1:X:2406:C:C4	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:47:A:H5'	2:Z:48:A:OP2	1.95	0.66
9:G:82:VAL:HB	9:G:150:VAL:HG13	1.76	0.66
10:H:83:ARG:NH1	15:M:40:ARG:HG3	2.11	0.66
12:J:36:ILE:HD11	12:J:103:VAL:HG22	1.76	0.66
12:J:36:ILE:HD12	12:J:131:LYS:HE3	1.77	0.66
12:J:64:LYS:HD3	12:J:108:ALA:O	1.95	0.66
14:L:27:LEU:HB2	14:L:87:VAL:HG22	1.77	0.66
14:L:38:ILE:CD1	14:L:39:TYR:H	2.08	0.66
17:O:56:VAL:CA	17:O:97:GLY:HA3	2.26	0.66
19:Q:50:VAL:HG13	19:Q:80:VAL:CG2	2.26	0.66
19:Q:63:LYS:HE2	19:Q:65:VAL:HA	1.78	0.66
20:R:108:VAL:C	20:R:110:SER:H	2.00	0.66
21:S:148:THR:O	21:S:150:GLY:N	2.28	0.66
1:X:124:A:H2'	1:X:125:A:C8	2.30	0.66
1:X:224:G:H4'	1:X:399:G:C5	2.30	0.66
1:X:589:C:H4'	16:N:31:GLN:OE1	1.94	0.66
1:X:1071:U:H1'	1:X:1073:G:H5'	1.78	0.66
1:X:1231:A:H2'	1:X:1232:U:H6	1.61	0.66
1:X:1790:G:N2	3:A:155:LEU:HA	2.10	0.66
1:X:1812:U:C2	3:A:159:ALA:HB1	2.31	0.66
1:X:2247:A:H8	1:X:2247:A:H5"	1.61	0.66
1:X:2272:A:C5'	14:L:15:ARG:NH2	2.58	0.66
5:C:22:VAL:HA	5:C:106:MET:HE2	1.77	0.66
6:D:45:GLU:HB2	6:D:78:LYS:NZ	2.09	0.66
7:E:7:GLN:N	7:E:69:ARG:HE	1.94	0.66
12:J:133:VAL:C	12:J:134:LYS:HD2	2.21	0.66
14:L:60:LYS:O	14:L:61:SER:OG	2.14	0.66
16:N:40:LEU:HD23	16:N:40:LEU:N	2.11	0.66
17:O:64:GLY:O	17:O:89:ASN:HA	1.96	0.66
18:P:89:ARG:HH21	18:P:132:GLY:HA2	1.61	0.66
20:R:96:LYS:HG2	20:R:97:GLN:N	2.08	0.66
1:X:199:A:H61	1:X:209:G:H1'	1.59	0.66
1:X:343:A:H1'	1:X:346:C:N4	2.10	0.66
1:X:469:G:O2'	1:X:470:U:OP2	2.14	0.66
1:X:1066:G:H2'	1:X:1067:G:C8	2.31	0.66
1:X:1539:U:H2'	1:X:1540:C:C6	2.30	0.66
1:X:2585:C:O2'	1:X:2586:G:H5'	1.96	0.66
13:K:24:GLN:HB3	13:K:44:LEU:CD2	2.25	0.66
18:P:32:ARG:HH12	18:P:119:LYS:HB3	1.60	0.66
19:Q:78:ALA:C	19:Q:79:ILE:HD12	2.20	0.66
1:X:540:G:O2'	1:X:542:A:C2	2.44	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:774:A:H3'	1:X:774:A:C8	2.31	0.66
1:X:1463:A:O2'	1:X:1464:A:H5'	1.96	0.66
1:X:1811:A:OP2	1:X:1811:A:H8	1.77	0.66
2:Z:76:U:H2'	2:Z:77:G:O4'	1.95	0.66
2:Z:123:U:O2	2:Z:123:U:H2'	1.95	0.66
4:B:119:ARG:HG3	4:B:119:ARG:NH1	2.07	0.66
4:B:176:ARG:HH21	15:M:16:ILE:HA	1.58	0.66
9:G:115:ALA:O	9:G:118:ALA:HB3	1.95	0.66
10:H:25:LEU:HD11	10:H:52:VAL:CG2	2.24	0.66
16:N:64:ARG:O	16:N:66:ASN:N	2.29	0.66
20:R:24:VAL:HB	20:R:29:HIS:O	1.96	0.66
21:S:54:ILE:HG22	21:S:54:ILE:O	1.95	0.66
21:S:123:VAL:HG23	21:S:161:ALA:HB1	1.77	0.66
25:W:38:PRO:CA	25:W:41:ARG:CZ	2.74	0.66
1:X:888:G:H4'	21:S:167:THR:OG1	1.95	0.66
1:X:1513:U:H3'	1:X:1513:U:OP2	1.95	0.66
1:X:2185:U:H2'	1:X:2186:G:H8	1.60	0.66
1:X:2407:G:H5"	1:X:2408:G:OP1	1.95	0.66
2:Z:19:C:H2'	2:Z:20:A:O4'	1.95	0.66
3:A:96:HIS:CE1	3:A:100:GLY:HA2	2.31	0.66
5:C:7:ILE:CG1	5:C:119:ALA:HB1	2.26	0.66
5:C:172:VAL:O	5:C:173:ALA:C	2.38	0.66
9:G:51:LEU:HD12	9:G:88:VAL:HG21	1.78	0.66
12:J:117:GLU:C	12:J:119:PHE:H	2.03	0.66
17:O:10:LYS:CG	17:O:11:GLN:H	2.07	0.66
20:R:10:HIS:HB2	20:R:44:GLN:NE2	2.10	0.66
21:S:19:ILE:HG23	21:S:79:ILE:C	2.21	0.66
25:W:38:PRO:HB3	25:W:41:ARG:HH22	1.61	0.66
1:X:1467:U:C4	1:X:1473:U:N3	2.64	0.66
1:X:1674:C:H2'	1:X:1675:C:C6	2.30	0.66
1:X:1838:G:H3'	1:X:1839:A:C8	2.27	0.66
1:X:2240:C:H3'	22:T:17:ASN:OD1	1.96	0.66
3:A:146:GLU:CD	3:A:150:GLY:O	2.39	0.66
6:D:126:GLY:O	6:D:127:ASN:O	2.14	0.66
8:F:118:ALA:HB1	8:F:123:ALA:CB	2.26	0.66
9:G:67:ARG:HD3	9:G:70:PHE:CB	2.25	0.66
10:H:124:MET:O	10:H:127:VAL:HG12	1.96	0.66
12:J:66:TYR:O	12:J:106:GLU:CD	2.39	0.66
14:L:33:ARG:HH22	14:L:103:LEU:H	1.42	0.66
14:L:99:ARG:HG3	14:L:100:VAL:H	1.60	0.66
15:M:99:VAL:O	15:M:100:ARG:HG2	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:104:LEU:HA	15:M:106:TYR:CE2	2.31	0.66
18:P:37:LYS:NZ	18:P:64:ALA:N	2.44	0.66
20:R:105:ARG:HH22	20:R:111:GLY:C	2.03	0.66
21:S:142:ASN:O	21:S:171:VAL:HB	1.95	0.66
22:T:51:VAL:HG23	22:T:81:ILE:HD11	1.78	0.66
22:T:74:LYS:O	22:T:76:ALA:N	2.29	0.66
1:X:83:A:H2	1:X:98:U:H1'	1.60	0.65
1:X:393:U:O2'	1:X:394:U:H5'	1.95	0.65
1:X:872:G:H2'	1:X:928:G:C6	2.31	0.65
4:B:136:ARG:HG2	4:B:137:ARG:N	2.10	0.65
4:B:141:ILE:CG2	4:B:150:VAL:HB	2.26	0.65
6:D:169:LEU:HA	6:D:172:SER:OG	1.96	0.65
8:F:75:MET:HA	8:F:78:LEU:CB	2.20	0.65
9:G:34:PRO:O	9:G:69:ASP:OD1	2.14	0.65
14:L:31:VAL:HG23	14:L:32:TYR:N	2.10	0.65
21:S:30:VAL:HG12	21:S:31:SER:N	2.10	0.65
1:X:1056:U:H4'	1:X:1058:G:H1'	1.78	0.65
1:X:1069:G:H2'	1:X:1070:G:O4'	1.96	0.65
1:X:1137:A:H4'	1:X:1138:A:H5"	1.77	0.65
1:X:1193:G:H2'	1:X:1194:U:O4'	1.96	0.65
1:X:1218:C:O2'	11:I:8:PRO:HA	1.94	0.65
1:X:1415:C:O2'	1:X:1416:A:H5'	1.95	0.65
4:B:37:LYS:HA	4:B:42:ASP:CG	2.21	0.65
6:D:88:LYS:HG2	6:D:89:VAL:N	2.11	0.65
6:D:132:ILE:HG13	6:D:154:ILE:CD1	2.26	0.65
7:E:131:ILE:HG22	7:E:132:ASP:H	1.61	0.65
9:G:84:ASN:HB3	9:G:87:GLN:HE22	1.61	0.65
14:L:60:LYS:HG2	14:L:62:GLY:H	1.61	0.65
21:S:21:ALA:HA	21:S:81:VAL:O	1.95	0.65
25:W:20:VAL:HA	25:W:23:LEU:HD12	1.78	0.65
1:X:650:U:H2'	1:X:651:C:C6	2.31	0.65
1:X:1422:C:H2'	1:X:1423:A:C8	2.31	0.65
1:X:1716:G:O3'	1:X:1717:A:H4'	1.96	0.65
1:X:2527:G:C6	1:X:2540:A:N1	2.63	0.65
1:X:2617:G:P	4:B:82:ARG:HH22	2.20	0.65
3:A:91:ARG:CD	3:A:198:ASN:HA	2.25	0.65
4:B:2:LYS:HG2	4:B:84:PHE:CE1	2.31	0.65
5:C:7:ILE:HG12	5:C:119:ALA:HB1	1.78	0.65
6:D:71:LYS:O	6:D:72:LYS:HB2	1.97	0.65
10:H:24:VAL:HG12	10:H:42:LYS:HG2	1.76	0.65
16:N:106:PHE:HA	16:N:109:LEU:HD12	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:54:ILE:HG21	21:S:62:PHE:HD1	1.62	0.65
21:S:154:LEU:HD13	21:S:158:CYS:O	1.97	0.65
25:W:38:PRO:CB	25:W:41:ARG:NH2	2.59	0.65
1:X:766:A:O2'	1:X:767:G:H5'	1.97	0.65
1:X:1354:A:OP1	1:X:1618:U:H2'	1.97	0.65
1:X:1409:U:H5"	1:X:1410:U:OP2	1.96	0.65
1:X:1515:U:H2'	1:X:1516:A:H8	1.61	0.65
1:X:1739:G:H2'	1:X:1740:G:H8	1.61	0.65
1:X:2197:U:H2'	1:X:2198:U:H5	1.58	0.65
1:X:2394:G:H5"	11:I:63:ARG:NE	2.10	0.65
1:X:2796:A:C2	1:X:2797:G:C4	2.85	0.65
4:B:24:THR:HG21	4:B:188:ILE:HD13	1.78	0.65
4:B:69:LYS:O	4:B:69:LYS:HD2	1.97	0.65
4:B:88:GLY:O	4:B:89:ASP:CG	2.40	0.65
6:D:132:ILE:HG21	6:D:138:PHE:CZ	2.31	0.65
6:D:171:GLN:HE22	6:D:177:PHE:HB2	1.60	0.65
9:G:44:VAL:O	9:G:83:ILE:HG12	1.97	0.65
14:L:69:ALA:HB1	14:L:106:ALA:HB2	1.78	0.65
16:N:33:ARG:HH11	16:N:33:ARG:HG3	1.61	0.65
20:R:86:PRO:HD3	20:R:90:LYS:HZ3	1.61	0.65
26:Y:6:VAL:CG2	26:Y:7:PRO:HD2	2.26	0.65
1:X:497:C:C6	1:X:497:C:H5'	2.32	0.65
1:X:617:U:H3'	1:X:617:U:O2	1.97	0.65
1:X:687:G:O2'	1:X:688:A:H5'	1.94	0.65
1:X:1211:G:H2'	1:X:1212:U:H6	1.61	0.65
1:X:1517:C:H2'	1:X:1518:C:H6	1.61	0.65
1:X:2451:G:H2'	1:X:2454:C:H42	1.62	0.65
1:X:2654:A:H5'	10:H:41:ASN:HB2	1.79	0.65
1:X:2761:A:H5"	1:X:2762:G:H5'	1.78	0.65
2:Z:95:U:H2'	2:Z:96:C:C6	2.32	0.65
4:B:147:PRO:C	4:B:149:ARG:H	2.05	0.65
6:D:34:ILE:HB	6:D:91:LEU:HB2	1.79	0.65
6:D:80:ARG:HD3	6:D:83:MET:CB	2.27	0.65
10:H:3:MET:HB2	10:H:4:PRO:HD2	1.78	0.65
11:I:86:THR:OG1	11:I:118:VAL:HG12	1.97	0.65
15:M:34:ARG:NH1	15:M:81:PHE:HB3	2.11	0.65
15:M:43:ASN:O	15:M:43:ASN:ND2	2.21	0.65
17:O:36:LYS:HB3	17:O:39:PHE:HE2	1.60	0.65
1:X:579:G:H5'	1:X:994:A:H2	1.61	0.65
1:X:983:G:H3'	1:X:984:A:C5'	2.21	0.65
1:X:1139:A:O2'	1:X:1140:A:O4'	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1840:A:H2'	1:X:1841:G:O4'	1.97	0.65
6:D:60:ILE:CD1	6:D:61:THR:HG23	2.27	0.65
9:G:70:PHE:HB2	16:N:64:ARG:CD	2.27	0.65
14:L:20:THR:HG23	14:L:23:ALA:HB3	1.76	0.65
18:P:64:ALA:C	18:P:67:PRO:HD2	2.21	0.65
30:4:11:CYS:HB3	30:4:32:HIS:CE1	2.31	0.65
1:X:48:A:C5'	1:X:49:U:H5'	2.26	0.65
1:X:538:A:C2	1:X:2025:A:C6	2.85	0.65
1:X:1935:A:C2	10:H:22:ILE:HD11	2.31	0.65
1:X:2262:C:C2'	1:X:2263:C:H5'	2.26	0.65
3:A:89:SER:HB2	3:A:201:HIS:CE1	2.31	0.65
4:B:91:VAL:HG12	4:B:92:ASN:N	2.11	0.65
4:B:152:LYS:CB	9:G:106:TYR:HB3	2.26	0.65
4:B:165:VAL:CG1	4:B:189:PRO:HG2	2.27	0.65
6:D:36:VAL:HG21	6:D:61:THR:HG21	1.79	0.65
11:I:82:ASP:H	11:I:114:ILE:HG21	1.62	0.65
15:M:44:ARG:HD2	15:M:46:ARG:HH21	1.62	0.65
18:P:36:ARG:HH22	26:Y:20:ARG:NH2	1.94	0.65
24:V:31:GLN:OE1	24:V:37:LEU:HA	1.96	0.65
1:X:542:A:N6	1:X:2003:A:N3	2.45	0.65
1:X:1125:G:O2'	1:X:1126:A:H5'	1.96	0.65
1:X:2018:G:O2'	1:X:2019:C:OP1	2.15	0.65
1:X:2331:A:C2	22:T:33:ALA:O	2.49	0.65
1:X:2394:G:OP1	11:I:63:ARG:HD2	1.96	0.65
1:X:2394:G:H2'	1:X:2395:C:C6	2.31	0.65
1:X:2551:A:O2'	1:X:2552:C:OP2	2.14	0.65
2:Z:29:C:O3'	14:L:37:HIS:CD2	2.50	0.65
4:B:40:GLN:O	4:B:41:THR:HG23	1.97	0.65
5:C:172:VAL:O	5:C:174:GLY:N	2.29	0.65
6:D:34:ILE:O	6:D:91:LEU:N	2.28	0.65
7:E:17:VAL:O	7:E:26:VAL:HA	1.95	0.65
9:G:75:ILE:HG13	9:G:140:GLN:HG3	1.77	0.65
13:K:79:VAL:HA	13:K:83:VAL:HG23	1.78	0.65
16:N:17:VAL:HG11	16:N:36:PHE:HB2	1.79	0.65
21:S:67:LYS:CE	21:S:84:TYR:HB2	2.27	0.65
21:S:91:PRO:O	21:S:92:VAL:HG13	1.97	0.65
21:S:137:ASP:CG	21:S:138:VAL:N	2.54	0.65
22:T:53:MET:HG3	22:T:58:THR:O	1.97	0.65
23:U:10:LYS:HD3	23:U:10:LYS:C	2.22	0.65
24:V:51:ALA:O	24:V:54:ASN:HB2	1.96	0.65
30:4:1:MET:HE2	30:4:1:MET:HA	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1242:A:H2'	1:X:1243:G:C8	2.27	0.65
1:X:1444:C:H2'	1:X:1445:A:H8	1.62	0.65
1:X:1724:C:O2'	1:X:1725:C:H5'	1.96	0.65
1:X:1800:A:C6	1:X:1802:A:C6	2.85	0.65
2:Z:46:G:C4'	6:D:92:ARG:HH12	2.09	0.65
4:B:48:GLN:O	4:B:48:GLN:HG2	1.96	0.65
5:C:46:ARG:HG2	5:C:46:ARG:HH11	1.62	0.65
7:E:109:TYR:O	7:E:111:HIS:N	2.29	0.65
11:I:94:GLU:CA	11:I:97:ARG:HE	2.09	0.65
12:J:36:ILE:HB	12:J:131:LYS:HG2	1.77	0.65
12:J:113:GLU:HA	12:J:116:LYS:HB2	1.77	0.65
14:L:38:ILE:HD12	14:L:39:TYR:H	1.61	0.65
16:N:64:ARG:O	16:N:67:ALA:N	2.29	0.65
16:N:79:PHE:CD2	16:N:79:PHE:C	2.74	0.65
18:P:38:VAL:HG13	18:P:64:ALA:HB1	1.78	0.65
20:R:93:ARG:HG2	20:R:108:VAL:HA	1.79	0.65
20:R:105:ARG:HH12	20:R:113:THR:H	1.45	0.65
22:T:23:VAL:HG13	22:T:38:VAL:HG22	1.79	0.65
22:T:43:THR:HG22	22:T:46:LYS:HD2	1.79	0.65
24:V:14:PHE:CE2	24:V:57:LYS:HB2	2.32	0.65
1:X:1186:G:H4'	1:X:1187:A:O5'	1.96	0.65
1:X:1783:G:OP1	3:A:206:LEU:HD12	1.97	0.65
1:X:2039:G:N2	26:Y:4:HIS:O	2.30	0.65
5:C:58:MET:HG3	5:C:59:TYR:N	2.12	0.65
9:G:65:LYS:HE3	9:G:66:HIS:HD2	1.61	0.65
17:O:10:LYS:HG3	17:O:11:GLN:NE2	2.08	0.65
1:X:118:U:H1'	1:X:143:A:C8	2.33	0.64
1:X:403:A:H3'	1:X:403:A:P	2.37	0.64
1:X:498:C:O2	18:P:74:SER:HB2	1.97	0.64
1:X:830:C:O2'	1:X:852:U:H5"	1.97	0.64
1:X:1354:A:H4'	19:Q:56:MET:HG2	1.78	0.64
1:X:1442:C:N4	1:X:1585:A:H5'	2.12	0.64
1:X:1880:G:H2'	1:X:1881:U:H6	1.62	0.64
1:X:2078:G:H2'	1:X:2079:A:H8	1.62	0.64
1:X:2170:C:C3'	1:X:2171:U:H5"	2.26	0.64
1:X:2285:U:H5'	1:X:2286:G:O4'	1.97	0.64
3:A:91:ARG:O	3:A:107:ALA:HB3	1.97	0.64
3:A:101:GLU:OE2	3:A:102:LYS:N	2.31	0.64
4:B:121:ASN:O	4:B:122:PHE:C	2.39	0.64
5:C:158:ARG:NH2	5:C:171:PRO:HA	2.12	0.64
6:D:97:TYR:HD2	6:D:100:LEU:HD23	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:101:THR:HA	9:G:113:GLU:HB3	1.79	0.64
19:Q:38:ILE:O	19:Q:39:LYS:C	2.38	0.64
19:Q:55:THR:HG22	19:Q:78:ALA:HA	1.78	0.64
20:R:22:VAL:O	20:R:33:THR:OG1	2.13	0.64
21:S:42:ALA:O	21:S:45:GLN:HG2	1.96	0.64
1:X:673:G:H5'	5:C:93:TYR:CE1	2.32	0.64
1:X:1039:A:C5	1:X:1136:G:N2	2.64	0.64
1:X:2633:A:H4'	1:X:2634:G:OP1	1.96	0.64
3:A:140:ALA:O	3:A:142:VAL:HG13	1.97	0.64
4:B:56:GLU:O	4:B:59:VAL:HG23	1.97	0.64
5:C:162:ARG:HG2	5:C:162:ARG:O	1.95	0.64
6:D:111:ILE:HB	6:D:114:PHE:CB	2.23	0.64
7:E:54:ARG:HG3	7:E:57:ASP:OD2	1.97	0.64
9:G:161:GLN:O	9:G:162:LYS:HG3	1.98	0.64
11:I:11:GLY:H	11:I:14:LYS:HB3	1.61	0.64
11:I:132:ALA:O	11:I:136:ALA:HB3	1.97	0.64
13:K:11:ASN:ND2	13:K:17:ARG:NH1	2.39	0.64
13:K:91:PRO:O	13:K:92:GLY:C	2.40	0.64
14:L:54:ALA:HB3	14:L:75:LEU:HB2	1.80	0.64
21:S:3:LEU:HD11	21:S:33:ALA:N	2.13	0.64
1:X:449:C:O2	1:X:449:C:H2'	1.98	0.64
1:X:490:A:N6	1:X:492:G:C2	2.66	0.64
1:X:1018:C:C5	1:X:1019:U:H5	2.15	0.64
1:X:2196:U:H2'	1:X:2197:U:N1	2.12	0.64
3:A:95:LEU:HD12	3:A:105:ILE:HG12	1.80	0.64
3:A:108:PRO:HB3	3:A:143:HIS:HE1	1.60	0.64
3:A:145:LEU:O	3:A:153:ALA:HA	1.97	0.64
10:H:4:PRO:O	10:H:5:GLN:CB	2.45	0.64
12:J:92:GLU:O	12:J:93:TYR:HB3	1.96	0.64
12:J:116:LYS:O	12:J:116:LYS:HD3	1.98	0.64
14:L:62:GLY:O	14:L:64:LYS:NZ	2.28	0.64
17:O:33:VAL:CG1	17:O:57:GLN:HG2	2.27	0.64
17:O:56:VAL:C	17:O:57:GLN:HG3	2.23	0.64
20:R:98:ILE:HG22	20:R:99:VAL:N	2.09	0.64
21:S:117:VAL:HG23	21:S:117:VAL:O	1.97	0.64
24:V:7:ARG:O	24:V:9:LEU:N	2.30	0.64
1:X:91:A:H3'	1:X:91:A:OP2	1.97	0.64
1:X:333:A:C3'	5:C:162:ARG:NH1	2.59	0.64
1:X:580:A:O2'	1:X:582:G:OP2	2.12	0.64
1:X:1142:G:H4'	9:G:103:TYR:HE2	1.62	0.64
1:X:2571:G:N1	1:X:2582:G:C6	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:9:ILE:HD11	4:B:27:LEU:HD22	1.80	0.64
6:D:34:ILE:HA	6:D:155:THR:O	1.98	0.64
6:D:65:PRO:HB2	6:D:87:ILE:CG2	2.28	0.64
7:E:35:VAL:HB	7:E:37:TYR:CE1	2.32	0.64
12:J:36:ILE:CB	12:J:131:LYS:HE2	2.27	0.64
13:K:31:GLU:O	13:K:33:ARG:N	2.27	0.64
16:N:82:GLY:O	16:N:116:ALA:HB3	1.98	0.64
1:X:88:G:H3'	1:X:89:A:C5'	2.23	0.64
1:X:925:U:O2'	1:X:926:C:H5'	1.98	0.64
1:X:1865:C:H2'	1:X:1866:G:O4'	1.96	0.64
1:X:1943:A:H2'	1:X:1944:C:O4'	1.97	0.64
6:D:4:LEU:CA	6:D:7:LYS:HB2	2.25	0.64
6:D:7:LYS:O	6:D:12:VAL:HG21	1.98	0.64
16:N:61:TRP:HZ3	16:N:94:VAL:H	1.43	0.64
19:Q:71:GLN:O	19:Q:73:ASN:OD1	2.15	0.64
20:R:41:PRO:HG2	20:R:42:ARG:H	1.62	0.64
20:R:70:GLU:OE2	20:R:72:ARG:HD2	1.97	0.64
21:S:61:THR:HG22	21:S:61:THR:O	1.97	0.64
24:V:37:LEU:CD2	24:V:39:GLN:H	2.10	0.64
26:Y:16:ARG:NH1	26:Y:20:ARG:HH12	1.93	0.64
1:X:53:G:H2'	1:X:54:G:O5'	1.98	0.64
1:X:428:A:H2'	1:X:429:C:C6	2.32	0.64
1:X:490:A:HO2'	1:X:491:A:P	2.20	0.64
1:X:718:A:H62	1:X:739:G:H1'	1.61	0.64
1:X:1004:A:OP1	16:N:50:ARG:NH1	2.31	0.64
1:X:1016:C:H2'	1:X:1017:C:C6	2.31	0.64
1:X:1118:G:H2'	1:X:1119:U:C5'	2.28	0.64
1:X:1314:A:C2'	1:X:1315:A:H3'	2.28	0.64
1:X:2037:A:C2	1:X:2595:C:N3	2.66	0.64
4:B:60:ASN:O	4:B:61:LYS:C	2.40	0.64
4:B:68:ALA:O	4:B:70:ALA:N	2.24	0.64
5:C:151:VAL:HG11	5:C:175:VAL:CG1	2.27	0.64
6:D:10:ASP:O	6:D:14:PRO:HD2	1.97	0.64
6:D:127:ASN:HA	6:D:158:THR:HG23	1.79	0.64
10:H:25:LEU:HD12	10:H:25:LEU:H	1.63	0.64
12:J:68:ARG:HB3	12:J:68:ARG:HH11	1.61	0.64
18:P:76:LYS:O	18:P:80:LEU:HG	1.98	0.64
25:W:47:VAL:CG2	25:W:51:LEU:HD21	2.28	0.64
1:X:215:G:N2	1:X:216:U:H1'	2.12	0.64
1:X:308:C:O2'	1:X:309:G:H5'	1.98	0.64
1:X:1104:G:H1'	1:X:1110:G:N2	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1656:U:O2'	1:X:1657:A:H5"	1.98	0.64
1:X:1812:U:H3	3:A:200:GLU:CA	2.09	0.64
1:X:2256:G:OP2	12:J:86:LYS:HD2	1.97	0.64
1:X:2509:A:C3'	1:X:2510:A:H5"	2.27	0.64
7:E:107:ILE:O	7:E:107:ILE:HG12	1.97	0.64
10:H:99:ILE:O	10:H:106:ARG:HG3	1.97	0.64
13:K:11:ASN:HD21	13:K:17:ARG:HH12	1.45	0.64
13:K:30:ARG:HG2	13:K:31:GLU:HG3	1.79	0.64
16:N:75:ASN:HD21	16:N:77:SER:HB3	1.63	0.64
22:T:3:HIS:HD2	22:T:5:LYS:HB2	1.63	0.64
22:T:72:LYS:HG3	22:T:78:PHE:CE1	2.32	0.64
24:V:10:GLN:O	24:V:13:ASP:N	2.29	0.64
24:V:16:LYS:O	24:V:20:ALA:HB2	1.97	0.64
1:X:223:C:H2'	1:X:224:G:H5'	1.80	0.64
1:X:482:A:C2'	1:X:483:A:H5'	2.27	0.64
1:X:542:A:N1	1:X:2004:U:H2'	2.13	0.64
1:X:583:C:H4'	1:X:584:A:O5'	1.96	0.64
1:X:691:C:O2'	1:X:692:C:H5'	1.97	0.64
1:X:1217:U:O2'	1:X:1218:C:H5'	1.98	0.64
1:X:1225:G:H2'	1:X:1249:G:N2	2.13	0.64
1:X:1591:U:H2'	1:X:1592:U:O4'	1.98	0.64
1:X:1597:A:H2'	1:X:1598:C:C6	2.33	0.64
1:X:2570:C:O2'	1:X:2571:G:H5'	1.98	0.64
4:B:4:ILE:HG12	4:B:5:LEU:N	2.12	0.64
8:F:91:THR:O	8:F:94:LYS:NZ	2.30	0.64
10:H:9:ASP:O	10:H:96:ALA:N	2.27	0.64
14:L:98:GLY:O	14:L:99:ARG:C	2.40	0.64
16:N:88:ILE:CG1	17:O:49:GLU:HB2	2.25	0.64
20:R:17:LYS:HB2	20:R:20:ASP:OD1	1.98	0.64
20:R:35:LYS:NZ	20:R:35:LYS:HB3	2.12	0.64
21:S:64:ALA:HA	21:S:85:MET:HA	1.78	0.64
25:W:14:GLY:HA2	25:W:17:VAL:CG2	2.28	0.64
1:X:328:A:H2'	1:X:329:C:H6	1.61	0.64
1:X:664:C:O5'	1:X:666:U:OP2	2.16	0.64
1:X:734:G:H2'	1:X:735:G:C8	2.33	0.64
1:X:1026:U:O2'	1:X:1027:C:H5'	1.98	0.64
1:X:1071:U:C1'	1:X:1073:G:H5'	2.27	0.64
1:X:1467:U:H3'	1:X:1467:U:C6	2.32	0.64
1:X:1812:U:N3	3:A:200:GLU:HA	2.11	0.64
1:X:1830:C:H41	1:X:1881:U:H3'	1.62	0.64
3:A:169:GLU:O	3:A:171:ASP:N	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:134:TRP:O	4:B:135:HIS:O	2.15	0.64
4:B:177:ALA:C	4:B:179:GLU:N	2.53	0.64
6:D:40:LEU:CG	6:D:150:ARG:HE	2.03	0.64
12:J:119:PHE:O	12:J:120:ARG:C	2.39	0.64
14:L:14:ARG:O	14:L:17:VAL:HG12	1.98	0.64
18:P:74:SER:HA	18:P:77:ALA:HB3	1.79	0.64
19:Q:6:ILE:CG2	19:Q:7:LEU:N	2.61	0.64
19:Q:29:VAL:HG23	19:Q:30:SER:N	2.11	0.64
1:X:389:G:H2'	1:X:390:U:C6	2.32	0.64
1:X:704:G:O2'	1:X:705:C:H5'	1.98	0.64
1:X:1090:C:H2'	1:X:1091:C:C6	2.33	0.64
1:X:1760:G:O2'	1:X:1761:G:H5'	1.98	0.64
1:X:2294:U:H4'	6:D:127:ASN:ND2	2.13	0.64
1:X:2564:U:H3	32:X:2911:ZLD:H21A	1.63	0.64
2:Z:116:C:H2'	2:Z:117:G:O4'	1.98	0.64
4:B:84:PHE:CD1	4:B:86:PRO:HD2	2.33	0.64
4:B:121:ASN:O	4:B:122:PHE:O	2.16	0.64
4:B:198:LEU:C	4:B:199:ARG:HG3	2.21	0.64
18:P:44:VAL:O	18:P:45:ILE:C	2.40	0.64
20:R:98:ILE:C	20:R:100:ASP:H	2.04	0.64
1:X:219:G:N2	1:X:231:G:H2'	2.12	0.63
1:X:814:G:O2'	1:X:815:A:OP1	2.16	0.63
1:X:954:U:OP2	11:I:38:LYS:NZ	2.28	0.63
1:X:1018:C:H3'	1:X:1019:U:H5"	1.80	0.63
1:X:1340:C:H2'	1:X:1341:G:O4'	1.98	0.63
1:X:1465:G:H2'	1:X:1466:C:C6	2.34	0.63
1:X:2227:C:H5"	1:X:2228:U:OP2	1.98	0.63
2:Z:31:A:H1'	2:Z:60:A:H61	1.61	0.63
3:A:133:LEU:O	3:A:136:VAL:HB	1.98	0.63
5:C:150:LEU:HA	5:C:187:VAL:HB	1.79	0.63
5:C:176:ASN:O	5:C:180:ILE:HG22	1.98	0.63
7:E:44:ARG:NH2	7:E:51:LEU:HB3	2.13	0.63
9:G:67:ARG:HD3	9:G:70:PHE:C	2.22	0.63
9:G:159:SER:C	9:G:161:GLN:N	2.49	0.63
13:K:16:ALA:O	13:K:18:VAL:N	2.31	0.63
14:L:86:GLN:O	14:L:87:VAL:HG23	1.98	0.63
18:P:107:ILE:O	18:P:107:ILE:CG2	2.46	0.63
20:R:105:ARG:HH22	20:R:112:LYS:CA	2.10	0.63
25:W:44:VAL:O	25:W:45:LYS:C	2.39	0.63
30:4:18:ARG:CG	30:4:23:VAL:HG13	2.28	0.63
1:X:171:G:N2	1:X:179:U:H1'	2.14	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:492:G:H2'	1:X:517:A:N1	2.13	0.63
1:X:589:C:H4'	16:N:31:GLN:NE2	2.12	0.63
1:X:946:U:C2	1:X:947:C:C6	2.86	0.63
1:X:1122:A:H2'	1:X:1123:G:C4'	2.23	0.63
1:X:1453:A:H2'	1:X:1454:U:O4'	1.98	0.63
1:X:2271:C:H4'	1:X:2354:G:O4'	1.97	0.63
1:X:2284:U:H2'	1:X:2285:U:C4'	2.27	0.63
1:X:2299:A:H4'	1:X:2300:G:C2	2.33	0.63
1:X:2753:C:O2'	1:X:2754:C:H5'	1.98	0.63
3:A:143:HIS:CD2	3:A:192:THR:HB	2.33	0.63
3:A:224:SER:OG	3:A:225:ALA:N	2.30	0.63
5:C:28:HIS:HA	11:I:15:ASP:OD2	1.99	0.63
6:D:93:GLY:H	6:D:96:MET:HE2	1.62	0.63
9:G:72:PRO:C	9:G:74:MET:N	2.53	0.63
12:J:15:ARG:HD3	12:J:73:LYS:HZ2	1.62	0.63
15:M:50:PHE:HE2	15:M:70:LYS:HB2	1.62	0.63
16:N:71:LEU:HG	16:N:72:HIS:ND1	2.12	0.63
16:N:74:MET:SD	16:N:110:VAL:HG13	2.38	0.63
16:N:88:ILE:HG23	17:O:48:GLY:HA3	1.80	0.63
21:S:16:GLU:CD	21:S:16:GLU:N	2.57	0.63
1:X:114:C:H2'	1:X:115:G:C8	2.33	0.63
1:X:613:A:H5"	1:X:668:A:H61	1.62	0.63
1:X:638:A:H4'	1:X:639:G:OP1	1.97	0.63
1:X:844:G:O3'	11:I:41:SER:OG	2.12	0.63
1:X:1437:A:H2'	1:X:1438:G:C8	2.32	0.63
1:X:1501:C:H2'	1:X:1502:G:O4'	1.98	0.63
1:X:1560:A:C6	1:X:1561:A:C6	2.86	0.63
1:X:1812:U:N3	3:A:200:GLU:HB2	2.12	0.63
1:X:2180:U:H2'	1:X:2203:G:N2	2.12	0.63
1:X:2291:U:OP1	6:D:71:LYS:HB2	1.98	0.63
1:X:2395:C:C2'	1:X:2396:C:H5"	2.27	0.63
3:A:197:GLY:C	3:A:199:ALA:N	2.55	0.63
4:B:60:ASN:C	4:B:64:GLN:HG3	2.22	0.63
4:B:101:LYS:HE3	4:B:169:ASN:O	1.98	0.63
5:C:153:ASP:O	5:C:154:ASP:CG	2.42	0.63
6:D:74:ILE:CA	6:D:79:LEU:HB2	2.29	0.63
7:E:72:VAL:O	7:E:76:VAL:HG23	1.97	0.63
13:K:100:VAL:CG2	13:K:112:LEU:HD22	2.26	0.63
17:O:16:GLU:H	17:O:95:ILE:HB	1.63	0.63
17:O:40:VAL:O	17:O:43:GLU:N	2.31	0.63
20:R:105:ARG:HH22	20:R:112:LYS:N	1.95	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:50:ALA:HB3	23:U:52:ARG:NH1	2.13	0.63
25:W:14:GLY:CA	25:W:17:VAL:HG23	2.27	0.63
26:Y:45:ILE:HD13	26:Y:57:VAL:HG22	1.80	0.63
1:X:331:U:O2'	5:C:162:ARG:HD3	1.98	0.63
1:X:1193:G:C2'	1:X:1194:U:H5"	2.29	0.63
1:X:1217:U:O2'	11:I:13:ARG:NE	2.28	0.63
1:X:1789:U:C4	1:X:1811:A:C2	2.86	0.63
1:X:2336:G:N2	1:X:2339:A:OP2	2.25	0.63
2:Z:28:A:N7	2:Z:29:C:N3	2.47	0.63
2:Z:35:C:H2'	2:Z:36:A:H8	1.63	0.63
5:C:98:GLN:HA	5:C:101:GLN:HG3	1.80	0.63
19:Q:40:ASP:O	19:Q:44:GLN:HG2	1.99	0.63
1:X:134:G:H2'	1:X:135:U:H5'	1.80	0.63
1:X:1175:A:C2	1:X:1176:U:C2	2.86	0.63
1:X:2546:G:H2'	1:X:2547:C:C6	2.33	0.63
4:B:33:ILE:HG21	4:B:47:VAL:HG11	1.79	0.63
4:B:37:LYS:HD2	4:B:42:ASP:OD2	1.98	0.63
5:C:124:ASP:OD2	5:C:136:TRP:HE3	1.80	0.63
6:D:75:SER:H	6:D:79:LEU:HD22	1.63	0.63
7:E:37:TYR:CD2	7:E:68:THR:HG23	2.33	0.63
8:F:116:LEU:HD22	8:F:118:ALA:CB	2.28	0.63
10:H:100:ASN:O	10:H:100:ASN:OD1	2.17	0.63
14:L:32:TYR:H	14:L:38:ILE:CD1	2.12	0.63
16:N:24:PHE:CE2	16:N:39:LEU:HD21	2.33	0.63
19:Q:38:ILE:O	19:Q:42:ILE:HG22	1.98	0.63
19:Q:55:THR:CG2	19:Q:78:ALA:HA	2.28	0.63
23:U:34:THR:CG2	23:U:35:THR:N	2.61	0.63
1:X:625:A:N3	1:X:625:A:H2'	2.14	0.63
1:X:1389:C:O2'	1:X:1390:G:H5'	1.98	0.63
1:X:1442:C:H41	1:X:1585:A:H5'	1.63	0.63
1:X:1741:G:C2'	1:X:1742:G:H5'	2.28	0.63
1:X:1850:G:H1	1:X:1867:A:C2'	2.11	0.63
6:D:53:ALA:C	6:D:57:LEU:HG	2.23	0.63
10:H:16:ALA:HA	10:H:58:ALA:HB1	1.81	0.63
15:M:36:ASP:HB2	15:M:87:LEU:O	1.98	0.63
19:Q:63:LYS:HB2	19:Q:70:GLY:CA	2.29	0.63
21:S:4:THR:OG1	21:S:5:ALA:N	2.31	0.63
21:S:15:ASP:HB2	21:S:16:GLU:OE2	1.97	0.63
26:Y:35:GLN:C	26:Y:37:HIS:N	2.55	0.63
1:X:1281:A:O2'	1:X:2592:U:C5	2.51	0.63
1:X:1303:U:H2'	1:X:1304:U:H6	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1385:C:H2'	1:X:1386:A:O4'	1.97	0.63
1:X:1452:U:C2'	1:X:1453:A:H5'	2.28	0.63
1:X:1953:A:C5'	1:X:1954:A:OP1	2.45	0.63
1:X:2375:G:H2'	1:X:2376:G:H8	1.63	0.63
1:X:2761:A:H5"	1:X:2762:G:C5'	2.29	0.63
1:X:2796:A:OP2	13:K:3:HIS:HE1	1.80	0.63
1:X:2847:G:H2'	1:X:2848:A:C8	2.34	0.63
1:X:2858:A:H3'	1:X:2859:U:H5'	1.81	0.63
6:D:47:SER:HA	6:D:50:ILE:CG1	2.29	0.63
7:E:6:LYS:HB3	7:E:69:ARG:NH2	2.14	0.63
12:J:39:GLU:OE2	12:J:129:GLN:N	2.31	0.63
12:J:70:PHE:CE2	12:J:71:PRO:O	2.52	0.63
13:K:100:VAL:CG1	13:K:101:GLY:H	2.03	0.63
16:N:75:ASN:OD1	16:N:78:THR:HB	1.99	0.63
16:N:93:LYS:NZ	17:O:5:ILE:HG22	2.12	0.63
1:X:308:C:H2'	1:X:309:G:O4'	1.99	0.63
1:X:764:A:C4	1:X:802:A:C2	2.87	0.63
1:X:831:G:H5'	1:X:852:U:OP1	1.99	0.63
1:X:1135:C:C2	1:X:1136:G:C8	2.87	0.63
1:X:1404:C:H5'	1:X:1405:A:OP2	1.99	0.63
1:X:1673:C:OP1	4:B:136:ARG:HD2	1.98	0.63
1:X:2247:A:H5"	1:X:2247:A:C8	2.33	0.63
1:X:2795:A:N1	15:M:2:GLN:N	2.46	0.63
2:Z:17:A:H1'	2:Z:112:A:C8	2.34	0.63
4:B:60:ASN:HB2	4:B:63:MET:HB2	1.81	0.63
5:C:46:ARG:O	5:C:51:VAL:HG23	1.99	0.63
6:D:94:GLU:O	6:D:98:VAL:HG23	1.99	0.63
9:G:144:MET:C	9:G:146:THR:N	2.56	0.63
10:H:133:VAL:HG12	10:H:133:VAL:O	1.98	0.63
11:I:81:GLN:HB3	11:I:114:ILE:HG22	1.81	0.63
12:J:66:TYR:HB2	12:J:106:GLU:O	1.99	0.63
16:N:60:LEU:C	16:N:60:LEU:HD13	2.23	0.63
16:N:92:ARG:HD3	16:N:92:ARG:H	1.64	0.63
23:U:78:ILE:O	23:U:79:GLU:O	2.17	0.63
1:X:1107:A:H3'	1:X:1108:U:H5"	1.79	0.63
1:X:1233:A:O2'	1:X:1234:C:OP1	2.15	0.63
1:X:2394:G:H2'	1:X:2395:C:H6	1.64	0.63
3:A:33:LEU:HD21	3:A:63:ARG:CZ	2.29	0.63
3:A:142:VAL:HA	3:A:194:GLY:N	2.14	0.63
4:B:141:ILE:HG21	4:B:150:VAL:HB	1.80	0.63
5:C:128:ALA:O	5:C:130:THR:N	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:94:GLU:HA	11:I:97:ARG:HE	1.64	0.63
12:J:44:LYS:HB2	12:J:47:GLN:CG	2.26	0.63
13:K:10:LEU:HD12	13:K:17:ARG:HG2	1.81	0.63
16:N:60:LEU:HD21	16:N:64:ARG:NE	2.13	0.63
17:O:12:TYR:C	17:O:13:ARG:HG2	2.23	0.63
21:S:20:ALA:CB	21:S:80:HIS:ND1	2.62	0.63
21:S:94:VAL:CB	21:S:125:PRO:HB3	2.25	0.63
23:U:62:LEU:HD21	23:U:67:LEU:HA	1.80	0.63
30:4:3:VAL:HG22	30:4:35:ARG:HB3	1.81	0.63
30:4:24:LEU:H	30:4:24:LEU:HD12	1.63	0.63
1:X:143:A:H2'	1:X:144:U:C6	2.34	0.62
1:X:493:A:H4'	20:R:56:LYS:HD2	1.81	0.62
1:X:777:A:O2'	1:X:778:G:OP1	2.16	0.62
1:X:2074:U:H1'	23:U:48:LYS:HE3	1.80	0.62
1:X:2082:C:C2'	1:X:2083:G:H5"	2.28	0.62
1:X:2617:G:O2'	1:X:2618:A:H8	1.76	0.62
7:E:167:GLU:HG3	7:E:169:ILE:HG13	1.81	0.62
9:G:164:GLN:C	9:G:165:VAL:HG22	2.24	0.62
12:J:12:LYS:O	12:J:13:GLN:CB	2.46	0.62
13:K:33:ARG:HA	13:K:114:GLU:HA	1.81	0.62
14:L:68:ALA:O	14:L:71:VAL:CG1	2.46	0.62
15:M:55:ILE:O	15:M:56:ALA:CB	2.43	0.62
19:Q:5:ASP:OD2	19:Q:5:ASP:N	2.31	0.62
20:R:23:ILE:H	20:R:23:ILE:CD1	2.10	0.62
20:R:93:ARG:HG2	20:R:93:ARG:HH11	1.64	0.62
23:U:50:ALA:HB3	23:U:52:ARG:HH22	1.63	0.62
1:X:166:G:H1	1:X:182:G:HO2'	1.46	0.62
1:X:594:G:H2'	1:X:1264:C:H42	1.63	0.62
1:X:683:A:C5'	11:I:45:LYS:H	2.11	0.62
1:X:822:G:H2'	1:X:823:U:O4'	1.99	0.62
1:X:986:A:O3'	16:N:48:ARG:NH1	2.33	0.62
1:X:1380:C:C2'	1:X:1381:G:H5'	2.29	0.62
1:X:2219:U:O2'	1:X:2220:A:H5'	1.99	0.62
1:X:2661:G:O6	1:X:2708:U:H1'	1.99	0.62
4:B:133:LYS:C	4:B:134:TRP:O	2.40	0.62
5:C:111:ARG:C	5:C:113:GLU:H	2.07	0.62
6:D:106:ILE:HG21	6:D:139:PRO:HB3	1.81	0.62
7:E:77:LYS:C	7:E:80:SER:HB3	2.24	0.62
7:E:105:MET:HA	7:E:105:MET:CE	2.24	0.62
7:E:107:ILE:HD13	7:E:107:ILE:N	2.15	0.62
11:I:73:GLU:HG3	11:I:101:ARG:HG3	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:85:ASP:HA	11:I:116:ARG:NH2	2.13	0.62
15:M:50:PHE:CD1	15:M:79:ARG:HG3	2.32	0.62
17:O:26:GLN:HG3	17:O:63:HIS:NE2	2.14	0.62
17:O:56:VAL:O	17:O:57:GLN:HG3	1.98	0.62
18:P:25:PHE:C	18:P:25:PHE:CD2	2.76	0.62
20:R:40:LEU:HB3	20:R:43:ASP:HB2	1.80	0.62
1:X:800:U:H3'	1:X:804:C:H41	1.64	0.62
1:X:1233:A:H4'	1:X:1234:C:OP2	1.98	0.62
1:X:1255:A:C6	1:X:1256:C:N4	2.67	0.62
1:X:2665:G:H2'	1:X:2666:U:H6	1.64	0.62
2:Z:29:C:O3'	14:L:37:HIS:HD2	1.81	0.62
3:A:217:ARG:CG	3:A:218:LYS:HG3	2.29	0.62
4:B:21:ILE:N	4:B:21:ILE:CD1	2.62	0.62
6:D:69:LYS:HG2	6:D:84:PRO:HA	1.80	0.62
9:G:97:ASP:O	9:G:99:VAL:HG23	2.00	0.62
16:N:80:ILE:O	16:N:84:LYS:N	2.30	0.62
18:P:80:LEU:HD21	18:P:87:GLU:HB3	1.81	0.62
20:R:5:SER:O	20:R:6:ALA:CB	2.47	0.62
1:X:1068:A:H62	1:X:1098:G:P	2.22	0.62
1:X:1778:U:H2'	1:X:1779:C:C6	2.33	0.62
1:X:1790:G:H21	3:A:155:LEU:HD23	1.63	0.62
1:X:2409:A:H4'	1:X:2410:U:OP2	1.99	0.62
3:A:165:VAL:HG12	3:A:166:GLN:N	2.14	0.62
4:B:38:THR:HG22	4:B:40:GLN:N	2.03	0.62
5:C:147:LYS:HB3	5:C:183:HIS:CB	2.29	0.62
6:D:29:PRO:HB3	6:D:160:ALA:HB2	1.80	0.62
9:G:90:LEU:HD23	9:G:94:LYS:CB	2.28	0.62
9:G:90:LEU:HD23	9:G:94:LYS:HB2	1.81	0.62
10:H:23:ARG:HB3	10:H:23:ARG:NH2	2.13	0.62
12:J:15:ARG:CB	12:J:73:LYS:HZ2	2.08	0.62
14:L:37:HIS:CE1	14:L:57:ALA:HB2	2.34	0.62
14:L:68:ALA:O	14:L:71:VAL:N	2.32	0.62
15:M:28:ARG:HB2	15:M:29:PRO:CD	2.28	0.62
16:N:10:ARG:CG	16:N:13:ARG:HH22	2.01	0.62
17:O:78:VAL:O	17:O:78:VAL:CG2	2.40	0.62
25:W:2:LYS:HD2	25:W:32:ARG:O	1.99	0.62
1:X:663:G:H3'	1:X:664:C:H5"	1.80	0.62
1:X:774:A:C8	1:X:774:A:O5'	2.52	0.62
1:X:1775:A:H4'	1:X:1776:A:O5'	2.00	0.62
1:X:1777:A:H5"	1:X:1778:U:OP2	2.00	0.62
1:X:1919:A:H62	1:X:1946:U:H3	1.45	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2355:A:H2	14:L:89:PHE:CE1	2.16	0.62
1:X:2736:U:O2'	1:X:2737:A:C5'	2.46	0.62
1:X:2777:A:C6	18:P:134:LYS:HB2	2.35	0.62
2:Z:15:A:C2'	2:Z:16:U:H5"	2.29	0.62
5:C:107:ALA:CB	5:C:180:ILE:HD13	2.30	0.62
5:C:112:GLN:HA	5:C:116:LYS:HB3	1.80	0.62
7:E:7:GLN:N	7:E:69:ARG:NE	2.47	0.62
11:I:62:LYS:HE2	11:I:64:GLY:CA	2.24	0.62
13:K:3:HIS:ND1	13:K:5:LYS:CD	2.63	0.62
16:N:86:ALA:O	16:N:88:ILE:N	2.33	0.62
17:O:36:LYS:HD3	17:O:54:TYR:HB2	1.82	0.62
17:O:76:SER:C	17:O:78:VAL:H	2.07	0.62
24:V:1:MET:SD	24:V:2:LYS:HE2	2.38	0.62
1:X:102:C:H2'	1:X:103:U:C6	2.35	0.62
1:X:421:G:H2'	1:X:422:C:C6	2.32	0.62
1:X:592:G:P	16:N:10:ARG:NH1	2.72	0.62
1:X:1177:U:H2'	1:X:1178:C:C6	2.35	0.62
1:X:1416:A:C2	1:X:1417:C:C2	2.87	0.62
1:X:1420:A:H2'	1:X:1421:U:C6	2.34	0.62
1:X:1468:A:O5'	1:X:1468:A:H8	1.82	0.62
1:X:1971:C:C2'	1:X:1972:G:H5'	2.30	0.62
2:Z:66:G:H2'	2:Z:67:C:O4'	1.99	0.62
3:A:46:ARG:O	3:A:46:ARG:HD3	1.99	0.62
3:A:54:ILE:HD12	3:A:55:GLY:N	2.14	0.62
6:D:34:ILE:HG22	6:D:91:LEU:HD12	1.80	0.62
7:E:154:PRO:HG3	7:E:162:VAL:O	1.99	0.62
9:G:155:THR:O	9:G:156:HIS:C	2.42	0.62
10:H:100:ASN:C	10:H:102:GLN:H	2.08	0.62
15:M:22:ARG:HH11	15:M:22:ARG:HG2	1.65	0.62
20:R:22:VAL:HG12	20:R:23:ILE:N	2.14	0.62
20:R:84:VAL:HG22	20:R:88:THR:O	1.99	0.62
21:S:103:ARG:HH11	21:S:108:VAL:CG2	2.13	0.62
25:W:4:LYS:HG2	25:W:52:GLU:O	1.99	0.62
1:X:562:G:H2'	1:X:563:U:O4'	1.99	0.62
1:X:719:A:H2'	1:X:720:A:O4'	2.00	0.62
1:X:765:C:H4'	1:X:766:A:O5'	2.00	0.62
1:X:956:A:C2	1:X:2427:A:N3	2.67	0.62
1:X:1036:G:O2'	1:X:1037:U:OP2	2.14	0.62
1:X:1658:A:N6	1:X:1659:G:C2	2.68	0.62
32:X:2911:ZLD:H20	32:X:2911:ZLD:F18	1.90	0.62
3:A:99:ASP:OD2	3:A:99:ASP:N	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:173:VAL:O	3:A:174:ILE:HD13	1.99	0.62
3:A:202:LYS:C	3:A:204:ILE:N	2.56	0.62
6:D:34:ILE:HG23	6:D:155:THR:O	2.00	0.62
12:J:69:ILE:HD13	12:J:104:MET:HG3	1.80	0.62
14:L:9:ARG:O	14:L:12:ARG:N	2.33	0.62
16:N:17:VAL:HA	16:N:20:ARG:HD2	1.81	0.62
20:R:22:VAL:HG13	20:R:81:VAL:O	2.00	0.62
20:R:105:ARG:NH2	20:R:111:GLY:C	2.58	0.62
23:U:9:GLY:H	23:U:14:VAL:CG2	2.12	0.62
1:X:17:G:H2'	1:X:18:U:C6	2.35	0.62
1:X:19:C:H2'	1:X:20:C:H6	1.65	0.62
1:X:356:A:C2'	1:X:357:A:H8	2.09	0.62
1:X:827:C:OP1	17:O:82:ARG:HA	1.98	0.62
1:X:1074:G:H4'	8:F:135:MET:SD	2.39	0.62
1:X:1671:A:O2'	1:X:1672:A:H5'	1.99	0.62
1:X:1873:A:N7	1:X:1874:G:C8	2.68	0.62
1:X:2035:G:H4'	4:B:143:GLN:O	2.00	0.62
1:X:2271:C:P	14:L:18:ARG:NH2	2.68	0.62
3:A:92:ILE:HD11	3:A:104:TYR:HB3	1.82	0.62
4:B:167:VAL:CG1	4:B:170:LEU:HD11	2.29	0.62
6:D:66:ILE:HG23	6:D:66:ILE:O	1.99	0.62
6:D:133:LYS:C	6:D:151:GLY:HA2	2.24	0.62
12:J:57:ARG:HH11	12:J:57:ARG:CG	2.06	0.62
16:N:30:LYS:NZ	16:N:30:LYS:CB	2.63	0.62
19:Q:61:LYS:N	19:Q:72:ARG:HD3	2.13	0.62
20:R:11:ASN:O	20:R:12:ASP:C	2.43	0.62
21:S:103:ARG:CZ	21:S:107:GLU:HB3	2.30	0.62
30:4:8:LYS:C	30:4:9:LYS:HE3	2.25	0.62
1:X:223:C:O2'	1:X:398:C:H5'	2.00	0.62
1:X:793:G:H1	3:A:230:ASP:CG	2.08	0.62
1:X:2043:A:H62	5:C:68:ARG:HH12	1.48	0.62
2:Z:53:G:H5"	14:L:64:LYS:HD2	1.79	0.62
4:B:75:THR:HG23	4:B:76:ARG:H	1.65	0.62
9:G:48:GLY:HA2	9:G:89:ALA:HB2	1.82	0.62
14:L:104:ALA:O	14:L:108:ARG:HB2	1.99	0.62
15:M:57:ILE:HG13	15:M:57:ILE:O	1.98	0.62
22:T:30:VAL:HA	22:T:65:GLY:O	2.00	0.62
1:X:216:U:H5"	1:X:601:A:N6	2.14	0.62
1:X:497:C:H5'	1:X:497:C:H6	1.63	0.62
1:X:761:G:C8	18:P:110:ALA:HB1	2.35	0.62
1:X:2299:A:H5'	1:X:2300:G:C5	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2326:C:H2'	1:X:2327:U:H6	1.64	0.62
1:X:2726:U:C4'	7:E:139:GLN:HG2	2.30	0.62
3:A:72:LYS:HE2	3:A:97:TYR:CG	2.34	0.62
3:A:218:LYS:O	3:A:219:PRO:C	2.42	0.62
7:E:84:THR:OG1	7:E:132:ASP:OD2	2.16	0.62
9:G:84:ASN:O	9:G:152:ALA:O	2.18	0.62
15:M:5:ILE:HD13	15:M:7:ILE:HB	1.82	0.62
15:M:104:LEU:O	15:M:106:TYR:N	2.33	0.62
17:O:35:LEU:HD22	17:O:36:LYS:N	2.15	0.62
18:P:45:ILE:O	18:P:46:ARG:C	2.43	0.62
25:W:12:ARG:HG2	25:W:12:ARG:HH11	1.64	0.62
1:X:322:A:O2'	1:X:343:A:C4'	2.48	0.61
1:X:360:A:H3'	1:X:361:G:C8	2.35	0.61
1:X:474:G:C6	1:X:478:G:O6	2.53	0.61
1:X:983:G:H5"	1:X:984:A:H5'	1.82	0.61
1:X:1043:A:H5"	30:4:9:LYS:HZ1	1.65	0.61
1:X:1071:U:N1	1:X:1073:G:H5'	2.15	0.61
1:X:1431:U:H4'	1:X:1604:A:H4'	1.82	0.61
1:X:2396:C:H5'	1:X:2396:C:H6	1.64	0.61
6:D:12:VAL:O	6:D:13:ARG:C	2.43	0.61
9:G:47:SER:O	9:G:49:VAL:HG23	2.00	0.61
9:G:162:LYS:N	9:G:163:PRO:HD2	2.14	0.61
10:H:97:VAL:O	10:H:99:ILE:HG23	2.00	0.61
14:L:92:GLY:O	14:L:93:SER:OG	2.12	0.61
16:N:56:ASP:OD2	16:N:56:ASP:N	2.31	0.61
16:N:82:GLY:HA3	16:N:117:ARG:HB2	1.82	0.61
18:P:27:VAL:HB	18:P:125:THR:HG22	1.82	0.61
22:T:43:THR:HB	22:T:46:LYS:NZ	2.15	0.61
24:V:29:ARG:O	24:V:32:ALA:HB3	2.00	0.61
1:X:402:A:H8	1:X:2392:G:H4'	1.64	0.61
1:X:870:C:H5'	22:T:69:PHE:CE2	2.35	0.61
1:X:917:U:C2'	1:X:918:A:H5'	2.30	0.61
1:X:1492:A:N1	1:X:1531:C:C5	2.68	0.61
1:X:1674:C:H2'	1:X:1675:C:H6	1.64	0.61
1:X:1764:A:H2'	1:X:1765:C:H5'	1.82	0.61
1:X:1804:U:H2'	1:X:1805:G:H8	1.63	0.61
1:X:2060:A:H1'	1:X:2414:A:O4'	2.00	0.61
1:X:2780:A:H2'	1:X:2781:G:C8	2.35	0.61
2:Z:18:G:H2'	2:Z:19:C:H6	1.65	0.61
2:Z:46:G:H4'	6:D:92:ARG:HH12	1.65	0.61
4:B:4:ILE:CD1	4:B:28:ALA:HB1	2.27	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:7:ILE:HG12	5:C:119:ALA:CB	2.30	0.61
5:C:112:GLN:NE2	5:C:116:LYS:HB2	2.15	0.61
6:D:16:LEU:O	6:D:20:PHE:N	2.33	0.61
8:F:106:LEU:O	8:F:110:LYS:HG3	1.99	0.61
13:K:49:GLU:O	13:K:52:ILE:HG12	2.01	0.61
19:Q:88:ILE:O	19:Q:89:GLU:O	2.17	0.61
21:S:133:GLU:OE2	21:S:135:VAL:HG23	1.99	0.61
26:Y:32:GLU:CG	26:Y:37:HIS:O	2.47	0.61
30:4:30:VAL:C	30:4:32:HIS:N	2.57	0.61
1:X:951:G:H3'	1:X:952:A:H5"	1.81	0.61
1:X:1345:G:C5	1:X:1625:A:C5	2.88	0.61
1:X:1494:G:O2'	1:X:1574:A:H2	1.83	0.61
1:X:1582:A:OP1	3:A:211:ARG:NH2	2.33	0.61
1:X:2058:U:H2'	1:X:2217:G:N2	2.15	0.61
1:X:2442:C:H2'	1:X:2443:C:H6	1.65	0.61
1:X:2594:U:H5'	1:X:2594:U:C6	2.28	0.61
4:B:119:ARG:HH11	4:B:119:ARG:CG	2.07	0.61
6:D:22:TYR:HD2	6:D:27:ALA:CB	2.13	0.61
9:G:151:TYR:CB	9:G:157:PRO:HB3	2.31	0.61
9:G:158:HIS:HA	9:G:161:GLN:CG	2.31	0.61
10:H:119:ARG:NH2	15:M:41:GLU:OE2	2.33	0.61
11:I:18:ARG:HB2	11:I:21:ARG:HB2	1.81	0.61
11:I:65:PHE:CG	11:I:65:PHE:O	2.52	0.61
12:J:27:TYR:HA	12:J:103:VAL:HG21	1.81	0.61
16:N:60:LEU:HD21	16:N:64:ARG:HE	1.64	0.61
16:N:62:ILE:O	16:N:66:ASN:ND2	2.32	0.61
22:T:3:HIS:HB2	22:T:5:LYS:CD	2.30	0.61
1:X:1219:C:H4'	11:I:7:LYS:N	2.15	0.61
1:X:1329:U:H2'	1:X:1330:G:H8	1.65	0.61
1:X:1538:A:H2'	1:X:1539:U:C6	2.34	0.61
1:X:2571:G:C2	1:X:2582:G:N1	2.68	0.61
1:X:2827:G:C6	1:X:2828:C:C4	2.89	0.61
3:A:54:ILE:HD12	3:A:55:GLY:H	1.65	0.61
3:A:68:LYS:HG2	3:A:69:ARG:N	2.15	0.61
8:F:76:SER:HB2	8:F:112:LYS:HG2	1.81	0.61
9:G:84:ASN:C	9:G:86:ALA:H	2.08	0.61
11:I:77:LEU:HD23	11:I:112:GLY:O	1.99	0.61
12:J:36:ILE:HB	12:J:131:LYS:CG	2.30	0.61
18:P:106:LEU:CD1	18:P:116:ILE:HG12	2.29	0.61
21:S:36:ARG:O	21:S:39:PHE:N	2.32	0.61
1:X:333:A:C8	5:C:162:ARG:NH1	2.68	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:824:U:H1'	1:X:1264:C:C1'	2.30	0.61
1:X:1043:A:H5"	30:4:9:LYS:HZ3	1.64	0.61
1:X:1077:U:H2'	1:X:1079:G:OP2	2.00	0.61
1:X:1467:U:C6	1:X:1467:U:C3'	2.84	0.61
1:X:1539:U:O2'	1:X:1540:C:H5'	2.00	0.61
1:X:2053:G:C2	1:X:2054:A:C4	2.89	0.61
1:X:2228:U:H5"	1:X:2229:G:OP2	2.00	0.61
1:X:2526:U:H2'	1:X:2527:G:C8	2.35	0.61
2:Z:43:G:H5"	6:D:66:ILE:CD1	2.30	0.61
2:Z:58:G:H5'	6:D:24:SER:OG	2.00	0.61
6:D:79:LEU:O	6:D:80:ARG:HB3	1.99	0.61
7:E:125:VAL:HG22	7:E:131:ILE:HD12	1.81	0.61
9:G:105:GLY:O	9:G:110:LEU:HG	2.00	0.61
9:G:155:THR:O	9:G:157:PRO:N	2.33	0.61
9:G:156:HIS:HB2	9:G:157:PRO:CD	2.30	0.61
10:H:15:GLY:O	10:H:58:ALA:HB1	2.00	0.61
10:H:83:ARG:HD2	10:H:89:ILE:HD11	1.83	0.61
11:I:90:ARG:HA	11:I:121:HIS:CE1	2.35	0.61
21:S:65:LEU:O	21:S:84:TYR:N	2.30	0.61
22:T:5:LYS:HD2	22:T:5:LYS:H	1.63	0.61
26:Y:15:LYS:HA	26:Y:18:MET:HG2	1.82	0.61
26:Y:51:TYR:CD2	26:Y:54:GLY:O	2.54	0.61
1:X:55:A:H2'	1:X:56:C:H6	1.65	0.61
1:X:171:G:C2	1:X:179:U:H1'	2.35	0.61
1:X:654:A:N3	1:X:655:A:H5"	2.15	0.61
1:X:698:A:H2'	1:X:786:U:O4	2.01	0.61
1:X:1075:C:H2'	1:X:1076:U:H5'	1.81	0.61
1:X:1162:A:H2'	1:X:1163:C:C6	2.35	0.61
1:X:1202:U:H2'	1:X:1203:A:H8	1.65	0.61
1:X:1781:C:H2'	1:X:1782:A:C5	2.35	0.61
1:X:2509:A:H2'	1:X:2510:A:H5"	1.82	0.61
3:A:128:GLY:H	3:A:193:ILE:HB	1.66	0.61
6:D:14:PRO:O	6:D:17:MET:N	2.33	0.61
9:G:155:THR:HG23	9:G:156:HIS:N	2.15	0.61
11:I:11:GLY:N	11:I:14:LYS:HB3	2.16	0.61
12:J:50:ALA:O	12:J:54:VAL:HG23	2.00	0.61
13:K:100:VAL:CG1	13:K:101:GLY:N	2.54	0.61
15:M:99:VAL:HG13	15:M:100:ARG:N	2.14	0.61
18:P:52:ASP:O	18:P:53:ALA:C	2.44	0.61
19:Q:15:LYS:O	19:Q:19:ALA:HB2	2.01	0.61
22:T:3:HIS:CG	22:T:4:LYS:N	2.61	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:787:A:H5”	3:A:48:ARG:NH2	2.14	0.61
1:X:1061:A:O2’	1:X:1062:G:H5’	2.01	0.61
1:X:1141:U:O2	4:B:149:ARG:NH2	2.34	0.61
1:X:2021:G:H2’	1:X:2022:C:H6	1.65	0.61
1:X:2356:A:H2’	1:X:2357:A:C8	2.36	0.61
1:X:2766:U:OP1	4:B:69:LYS:NZ	2.32	0.61
4:B:168:GLN:NE2	4:B:202:ALA:HB3	2.16	0.61
10:H:22:ILE:HG22	10:H:52:VAL:C	2.26	0.61
10:H:109:ARG:HA	10:H:129:LEU:HD12	1.81	0.61
12:J:98:VAL:CG1	12:J:99:LYS:H	2.13	0.61
21:S:113:VAL:HA	21:S:171:VAL:HA	1.82	0.61
23:U:20:ARG:CB	23:U:43:ARG:HD2	2.23	0.61
1:X:5:A:H2’	1:X:6:A:C8	2.35	0.61
1:X:224:G:H4’	1:X:399:G:C6	2.35	0.61
1:X:579:G:H5’	1:X:994:A:C2	2.35	0.61
1:X:813:A:C2	1:X:815:A:C8	2.89	0.61
1:X:1096:A:H4’	1:X:1097:A:OP1	1.98	0.61
1:X:1109:A:H2’	1:X:1110:G:H5’	1.83	0.61
1:X:2366:U:C1’	22:T:41:ARG:NH1	2.64	0.61
1:X:2482:A:C1’	32:X:2911:ZLD:C13	2.79	0.61
5:C:3:GLN:OE1	5:C:116:LYS:HG3	2.01	0.61
5:C:153:ASP:C	5:C:154:ASP:CG	2.69	0.61
7:E:16:THR:CG2	7:E:18:ASN:HD21	2.06	0.61
7:E:55:PRO:O	7:E:57:ASP:OD1	2.19	0.61
9:G:151:TYR:HB3	9:G:157:PRO:CG	2.30	0.61
13:K:14:SER:O	13:K:16:ALA:N	2.33	0.61
13:K:103:ARG:HD3	13:K:110:MET:SD	2.41	0.61
15:M:35:VAL:CG2	15:M:90:GLN:HG2	2.31	0.61
18:P:107:ILE:HD13	18:P:108:PRO:HD2	1.81	0.61
21:S:139:THR:O	21:S:140:LYS:C	2.43	0.61
24:V:7:ARG:HH11	24:V:8:ASN:HA	1.66	0.61
1:X:469:G:O2’	1:X:470:U:P	2.59	0.61
1:X:490:A:O2’	1:X:491:A:H5’	2.00	0.61
1:X:737:C:O5’	1:X:737:C:H6	1.82	0.61
1:X:1125:G:H2’	1:X:1126:A:H8	1.66	0.61
2:Z:35:C:H2’	2:Z:36:A:C8	2.36	0.61
3:A:187:SER:C	3:A:189:CYS:N	2.56	0.61
3:A:243:GLY:HA2	3:A:244:ARG:NH1	2.15	0.61
6:D:80:ARG:HD2	6:D:80:ARG:O	2.01	0.61
9:G:49:VAL:HG11	9:G:54:LEU:HD13	1.81	0.61
13:K:55:ALA:O	13:K:57:GLY:N	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:54:ALA:N	14:L:75:LEU:HD13	2.12	0.61
14:L:95:LYS:O	14:L:96:TYR:C	2.43	0.61
16:N:52:ASN:O	16:N:56:ASP:OD2	2.18	0.61
21:S:154:LEU:HD22	21:S:158:CYS:HB2	1.82	0.61
1:X:216:U:H2'	1:X:217:U:C6	2.35	0.61
1:X:677:G:O2'	1:X:678:G:H5'	2.01	0.61
1:X:971:A:N6	12:J:83:ARG:HH22	1.94	0.61
1:X:1113:C:H2'	1:X:1114:A:H8	1.64	0.61
1:X:1301:U:C2'	1:X:1302:C:OP1	2.47	0.61
1:X:1744:G:O6	1:X:1747:G:C6	2.53	0.61
1:X:2655:C:P	10:H:43:ARG:HH12	2.24	0.61
4:B:103:ASP:OD2	4:B:202:ALA:HB3	2.01	0.61
4:B:116:VAL:N	4:B:136:ARG:HE	1.99	0.61
6:D:100:LEU:HG	6:D:104:ILE:CD1	2.28	0.61
9:G:75:ILE:HG12	9:G:144:MET:HE2	1.82	0.61
11:I:94:GLU:CB	11:I:97:ARG:HH11	2.13	0.61
19:Q:69:ILE:HD12	19:Q:69:ILE:O	2.01	0.61
20:R:53:VAL:HG21	20:R:74:LEU:HD22	1.83	0.61
21:S:93:GLU:OE2	21:S:123:VAL:HG22	2.01	0.61
1:X:433:G:N2	1:X:434:C:H1'	2.16	0.60
1:X:1288:A:HO2'	1:X:1289:A:C4'	2.14	0.60
1:X:1333:G:N2	1:X:1344:C:C5	2.67	0.60
1:X:1448:A:C2	1:X:1449:C:C2	2.89	0.60
2:Z:57:U:O2'	6:D:24:SER:HB3	2.01	0.60
4:B:154:LYS:O	4:B:155:ARG:C	2.42	0.60
4:B:181:LEU:HD13	15:M:16:ILE:HD11	1.82	0.60
8:F:105:VAL:CG1	8:F:128:VAL:HG11	2.26	0.60
11:I:88:PHE:CG	11:I:90:ARG:HD2	2.36	0.60
17:O:40:VAL:O	17:O:40:VAL:HG23	1.98	0.60
17:O:93:ILE:HG13	17:O:95:ILE:CD1	2.31	0.60
20:R:28:LYS:O	20:R:29:HIS:HB2	1.99	0.60
21:S:20:ALA:HB3	21:S:80:HIS:CB	2.31	0.60
1:X:425:A:H3'	1:X:426:C:C6	2.35	0.60
1:X:698:A:H4'	1:X:699:G:O5'	2.00	0.60
1:X:1115:C:O2'	1:X:1116:U:H5'	2.01	0.60
1:X:1255:A:H2'	1:X:1256:C:C6	2.36	0.60
1:X:1691:G:H21	1:X:1694:A:H61	1.49	0.60
1:X:1698:C:O2'	1:X:1753:A:C2'	2.43	0.60
1:X:1778:U:H2'	1:X:1779:C:H6	1.65	0.60
1:X:2294:U:H2'	1:X:2295:C:C6	2.36	0.60
1:X:2528:G:H2'	1:X:2529:G:C8	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:39:C:H5'	2:Z:40:C:OP2	2.01	0.60
7:E:37:TYR:CD2	7:E:68:THR:HA	2.36	0.60
7:E:121:VAL:HG12	7:E:122:THR:N	2.16	0.60
9:G:108:GLY:N	9:G:110:LEU:HD21	2.16	0.60
11:I:80:LEU:HA	11:I:84:GLU:HB3	1.83	0.60
12:J:77:LYS:HG3	12:J:78:LYS:H	1.66	0.60
17:O:16:GLU:N	17:O:95:ILE:HB	2.17	0.60
20:R:57:ASN:ND2	20:R:59:LYS:HG3	2.15	0.60
20:R:92:THR:C	20:R:95:ARG:HH22	2.09	0.60
22:T:80:SER:O	22:T:81:ILE:HD13	2.00	0.60
24:V:9:LEU:HD22	24:V:13:ASP:OD2	2.01	0.60
1:X:632:A:C2	1:X:633:G:C8	2.89	0.60
1:X:683:A:O5'	11:I:45:LYS:HA	2.01	0.60
1:X:758:G:C2'	1:X:759:C:H5'	2.29	0.60
1:X:1188:A:H3'	1:X:1189:G:N7	2.16	0.60
1:X:1468:A:H8	1:X:1468:A:P	2.24	0.60
1:X:1516:A:O2'	3:A:102:LYS:HE2	2.01	0.60
1:X:1725:C:H2'	1:X:1726:C:H6	1.66	0.60
1:X:1923:U:H1'	1:X:1924:C:H5	1.66	0.60
1:X:2217:G:H5"	1:X:2218:G:OP1	2.02	0.60
1:X:2238:G:OP2	22:T:14:ARG:NH2	2.34	0.60
1:X:2580:C:H4'	1:X:2581:A:OP1	2.01	0.60
1:X:2615:U:OP1	4:B:80:GLU:N	2.32	0.60
3:A:50:THR:HG22	3:A:51:SER:N	2.16	0.60
4:B:38:THR:N	4:B:42:ASP:OD1	2.23	0.60
4:B:163:GLU:HG3	4:B:164:ARG:H	1.66	0.60
5:C:74:VAL:HG23	5:C:75:PRO:N	2.16	0.60
5:C:131:LYS:O	5:C:134:ILE:HG12	2.01	0.60
9:G:33:ILE:H	9:G:33:ILE:CD1	2.14	0.60
12:J:53:ILE:O	12:J:57:ARG:HG3	2.01	0.60
15:M:26:ASP:CG	15:M:27:PHE:H	2.07	0.60
19:Q:28:TRP:CE3	19:Q:75:ARG:HD2	2.36	0.60
1:X:118:U:O2	1:X:118:U:H2'	2.02	0.60
1:X:177:U:O2	1:X:178:C:H1'	2.02	0.60
1:X:347:C:H4'	20:R:15:HIS:CD2	2.36	0.60
1:X:566:U:O2'	1:X:567:G:H5'	2.01	0.60
1:X:1193:G:C3'	1:X:1194:U:H5"	2.30	0.60
1:X:1662:G:H5"	1:X:1663:C:H5'	1.83	0.60
1:X:2219:U:C2	1:X:2220:A:C8	2.89	0.60
1:X:2698:G:O6	1:X:2699:G:C6	2.54	0.60
7:E:127:GLU:C	7:E:129:THR:N	2.57	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:80:LEU:HA	11:I:84:GLU:CB	2.31	0.60
11:I:93:LEU:O	11:I:97:ARG:HG3	2.00	0.60
13:K:45:ARG:HD3	13:K:97:ILE:HD11	1.83	0.60
20:R:57:ASN:N	20:R:68:GLY:O	2.33	0.60
23:U:32:ARG:NE	23:U:32:ARG:N	2.49	0.60
26:Y:49:CYS:SG	26:Y:51:TYR:HB2	2.40	0.60
1:X:5:A:H2'	1:X:6:A:H8	1.67	0.60
1:X:632:A:H2'	1:X:633:G:C5'	2.30	0.60
1:X:877:G:H21	1:X:879:A:H61	1.49	0.60
1:X:915:C:H2'	1:X:916:U:C6	2.36	0.60
1:X:1167:A:H62	16:N:48:ARG:HG2	1.63	0.60
1:X:2395:C:H2'	1:X:2396:C:C5'	2.31	0.60
1:X:2422:C:C2'	1:X:2423:G:H5'	2.31	0.60
1:X:2804:G:H4'	15:M:4:HIS:CE1	2.36	0.60
4:B:12:THR:OG1	15:M:17:GLU:OE1	2.19	0.60
4:B:26:VAL:HG12	4:B:27:LEU:N	2.16	0.60
5:C:173:ALA:CB	5:C:193:LEU:HD13	2.30	0.60
6:D:69:LYS:C	6:D:85:VAL:HG22	2.26	0.60
6:D:74:ILE:O	6:D:75:SER:O	2.19	0.60
6:D:106:ILE:O	6:D:110:ARG:HB2	2.01	0.60
7:E:25:LYS:HG2	7:E:27:LYS:HE3	1.82	0.60
7:E:126:PRO:HD2	7:E:131:ILE:HD13	1.84	0.60
7:E:141:VAL:O	7:E:145:ALA:N	2.28	0.60
7:E:142:GLY:C	7:E:144:VAL:H	2.10	0.60
8:F:113:MET:N	8:F:114:PRO:HD2	2.15	0.60
9:G:33:ILE:O	9:G:69:ASP:OD1	2.20	0.60
9:G:108:GLY:N	9:G:110:LEU:HD23	2.15	0.60
11:I:135:ALA:O	11:I:136:ALA:HB2	1.99	0.60
14:L:55:SER:O	14:L:56:SER:HB2	2.02	0.60
15:M:51:GLU:HG3	15:M:51:GLU:O	2.00	0.60
20:R:14:LEU:CD2	20:R:41:PRO:HA	2.30	0.60
20:R:63:THR:HG22	20:R:64:ASN:HD22	1.65	0.60
21:S:41:ARG:O	21:S:45:GLN:NE2	2.35	0.60
21:S:88:TYR:O	21:S:127:PRO:HB3	2.00	0.60
21:S:103:ARG:HH11	21:S:108:VAL:HG23	1.67	0.60
21:S:137:ASP:CG	21:S:138:VAL:H	2.10	0.60
22:T:16:SER:C	22:T:17:ASN:HD22	2.08	0.60
24:V:48:ARG:C	24:V:50:VAL:N	2.52	0.60
25:W:36:ASP:O	25:W:41:ARG:NH1	2.34	0.60
1:X:115:G:C6	1:X:117:A:N6	2.69	0.60
1:X:977:G:O2'	1:X:978:U:H5'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1263:G:H5”	16:N:6:THR:CG2	2.30	0.60
1:X:2056:C:O2’	1:X:2057:U:H5”	1.99	0.60
1:X:2781:G:O2’	1:X:2782:G:H5”	2.02	0.60
4:B:112:GLY:O	4:B:159:HIS:HA	2.01	0.60
7:E:85:ILE:HD12	7:E:141:VAL:HG12	1.83	0.60
7:E:95:ARG:HA	7:E:128:PRO:O	2.01	0.60
11:I:94:GLU:C	11:I:96:TYR:N	2.59	0.60
12:J:19:THR:HG22	12:J:99:LYS:NZ	2.16	0.60
17:O:54:TYR:CD1	17:O:54:TYR:N	2.68	0.60
20:R:15:HIS:C	20:R:16:PHE:CD2	2.79	0.60
21:S:5:ALA:O	21:S:6:LYS:HB3	2.02	0.60
22:T:31:VAL:O	22:T:32:LYS:HB2	2.01	0.60
24:V:52:GLN:C	24:V:54:ASN:N	2.60	0.60
30:4:27:CYS:SG	30:4:28:SER:N	2.74	0.60
1:X:559:C:H2’	1:X:560:G:C5’	2.32	0.60
1:X:789:G:H4’	1:X:790:A:O5’	2.01	0.60
1:X:862:A:H2’	1:X:863:C:H6	1.66	0.60
1:X:954:U:OP2	11:I:38:LYS:HG3	2.02	0.60
1:X:1162:A:H2’	1:X:1163:C:H6	1.67	0.60
1:X:1504:G:H2’	1:X:1505:U:O2	2.02	0.60
1:X:2189:A:H2’	1:X:2190:A:H8	1.66	0.60
1:X:2708:U:H2’	1:X:2709:C:C5	2.37	0.60
1:X:2726:U:H2’	1:X:2727:G:H5’	1.82	0.60
6:D:10:ASP:N	6:D:14:PRO:CD	2.64	0.60
9:G:169:GLN:HB2	9:G:170:PRO:CD	2.31	0.60
11:I:114:ILE:HD13	11:I:114:ILE:C	2.27	0.60
16:N:85:ARG:HB3	16:N:116:ALA:CB	2.12	0.60
18:P:72:LEU:HD13	18:P:126:ILE:HD13	1.84	0.60
19:Q:20:MET:HA	19:Q:24:VAL:O	2.02	0.60
20:R:105:ARG:HH12	20:R:113:THR:N	1.99	0.60
21:S:66:VAL:HG13	21:S:81:VAL:CG1	2.32	0.60
26:Y:56:GLN:N	26:Y:56:GLN:NE2	2.48	0.60
1:X:16:G:H4’	26:Y:18:MET:HE2	1.84	0.60
1:X:717:G:C2’	1:X:739:G:H22	2.13	0.60
1:X:872:G:H2’	1:X:928:G:N1	2.17	0.60
1:X:983:G:H5”	1:X:984:A:C5’	2.32	0.60
1:X:2043:A:OP2	5:C:65:GLY:HA2	2.01	0.60
1:X:2395:C:H2’	1:X:2396:C:H5’	1.83	0.60
1:X:2625:U:O5’	1:X:2625:U:H6	1.85	0.60
3:A:76:ASN:HA	3:A:117:VAL:O	2.01	0.60
3:A:93:ALA:N	3:A:105:ILE:O	2.25	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:103:ASP:OD2	4:B:168:GLN:HG2	2.02	0.60
4:B:116:VAL:H	4:B:136:ARG:CD	2.13	0.60
4:B:176:ARG:O	4:B:179:GLU:HB3	2.02	0.60
6:D:143:TYR:CE1	6:D:148:LYS:HA	2.37	0.60
11:I:30:ALA:HB3	11:I:34:HIS:ND1	2.17	0.60
12:J:8:THR:HG22	12:J:70:PHE:CE2	2.37	0.60
12:J:105:PHE:C	12:J:106:GLU:CD	2.70	0.60
14:L:68:ALA:O	14:L:70:ALA:N	2.34	0.60
14:L:73:LYS:CE	14:L:109:GLU:HG2	2.30	0.60
15:M:104:LEU:O	15:M:105:TYR:C	2.44	0.60
17:O:15:SER:HA	17:O:95:ILE:CB	2.29	0.60
17:O:57:GLN:O	17:O:58:ALA:HB2	2.00	0.60
19:Q:76:LYS:HG2	19:Q:76:LYS:O	2.01	0.60
21:S:3:LEU:HD11	21:S:32:PHE:C	2.27	0.60
24:V:55:THR:O	24:V:59:GLU:HG3	2.01	0.60
25:W:12:ARG:HH11	25:W:12:ARG:CG	2.15	0.60
1:X:490:A:O2'	1:X:491:A:C5'	2.49	0.60
1:X:594:G:H2'	1:X:1264:C:N4	2.17	0.60
1:X:627:A:OP1	5:C:34:GLN:HG2	2.02	0.60
1:X:1770:U:C5	1:X:1775:A:N7	2.69	0.60
1:X:2262:C:O2'	1:X:2263:C:H5'	2.02	0.60
1:X:2414:A:C2	1:X:2415:G:C4	2.89	0.60
1:X:2526:U:C4	1:X:2545:A:N7	2.69	0.60
1:X:2823:G:O2'	1:X:2824:C:H6	1.85	0.60
1:X:2851:G:OP1	15:M:8:ASN:HA	2.02	0.60
3:A:65:ILE:HG23	3:A:92:ILE:HD11	1.83	0.60
5:C:28:HIS:O	5:C:29:GLU:C	2.43	0.60
5:C:48:ARG:C	5:C:50:GLN:H	2.08	0.60
5:C:194:GLU:C	5:C:195:ILE:HG12	2.25	0.60
11:I:11:GLY:N	11:I:14:LYS:CB	2.65	0.60
16:N:47:TYR:O	16:N:49:ASP:N	2.35	0.60
26:Y:52:TYR:O	26:Y:53:ASP:HB2	2.01	0.60
1:X:199:A:H5"	1:X:200:A:OP2	2.01	0.60
1:X:446:C:H2'	1:X:447:U:O4'	2.02	0.60
1:X:450:C:H2'	1:X:451:A:H8	1.65	0.60
1:X:875:G:H2'	1:X:876:A:O4'	2.02	0.60
1:X:1699:A:H61	1:X:1723:U:H3	1.49	0.60
1:X:2284:U:H2'	1:X:2285:U:O4'	2.01	0.60
1:X:2306:A:H2'	1:X:2307:A:O4'	2.02	0.60
2:Z:46:G:H4'	6:D:92:ARG:NH1	2.16	0.60
3:A:77:ALA:HB1	3:A:96:HIS:C	2.27	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:92:ILE:HD13	3:A:104:TYR:HB3	1.83	0.60
6:D:31:ILE:HD12	6:D:97:TYR:OH	2.02	0.60
6:D:133:LYS:O	6:D:135:GLN:N	2.35	0.60
7:E:9:ILE:HB	7:E:50:LEU:HB3	1.82	0.60
9:G:49:VAL:HG22	9:G:170:PRO:HG2	1.84	0.60
10:H:119:ARG:HG3	10:H:119:ARG:HH11	1.66	0.60
11:I:102:LYS:O	11:I:104:ARG:N	2.34	0.60
14:L:33:ARG:CZ	14:L:103:LEU:HB2	2.32	0.60
14:L:35:SER:OG	14:L:36:LYS:N	2.33	0.60
14:L:90:ASP:O	14:L:91:ARG:O	2.20	0.60
15:M:34:ARG:HD2	15:M:81:PHE:CZ	2.36	0.60
16:N:51:ARG:NH1	16:N:51:ARG:CG	2.60	0.60
18:P:34:SER:O	18:P:35:PRO:C	2.43	0.60
1:X:467:U:O2'	1:X:468:A:OP1	2.19	0.59
1:X:494:A:O2'	20:R:68:GLY:HA3	2.01	0.59
1:X:1238:A:H5'	17:O:85:GLY:H	1.67	0.59
1:X:1276:U:O4'	26:Y:10:LYS:HG3	2.02	0.59
1:X:1608:U:H2'	1:X:1609:G:C8	2.37	0.59
1:X:2081:U:H2'	1:X:2082:C:C6	2.37	0.59
1:X:2294:U:H2'	1:X:2295:C:H6	1.66	0.59
1:X:2650:G:H2'	1:X:2651:U:H6	1.66	0.59
1:X:2726:U:C2'	1:X:2727:G:H5'	2.32	0.59
3:A:121:PRO:C	3:A:123:ALA:H	2.10	0.59
3:A:184:ARG:HH11	3:A:184:ARG:CG	2.15	0.59
3:A:222:ARG:C	3:A:224:SER:H	2.10	0.59
4:B:84:PHE:CD1	4:B:86:PRO:CD	2.85	0.59
7:E:98:LEU:HG	7:E:99:THR:N	2.16	0.59
7:E:127:GLU:HG2	7:E:130:ARG:HB3	1.84	0.59
9:G:34:PRO:C	9:G:69:ASP:OD2	2.45	0.59
10:H:55:VAL:HG23	10:H:68:ASP:O	2.01	0.59
14:L:12:ARG:O	14:L:16:LYS:HB2	2.02	0.59
16:N:110:VAL:O	16:N:113:SER:HB3	2.01	0.59
20:R:48:VAL:C	20:R:50:GLY:H	2.10	0.59
21:S:101:THR:O	21:S:138:VAL:HG22	2.02	0.59
21:S:138:VAL:CG2	21:S:139:THR:N	2.65	0.59
1:X:55:A:H2'	1:X:56:C:C6	2.37	0.59
1:X:67:G:N2	1:X:73:A:C4	2.70	0.59
1:X:547:U:H2'	1:X:548:G:C8	2.37	0.59
1:X:574:C:H4'	1:X:1266:G:C6	2.37	0.59
1:X:596:C:H41	11:I:36:GLY:HA3	1.66	0.59
1:X:1200:G:H2'	1:X:1201:G:H8	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1288:A:O2'	1:X:1289:A:O4'	2.20	0.59
1:X:1324:G:H4'	1:X:1325:U:OP1	2.01	0.59
1:X:1355:A:O2'	1:X:1357:U:OP2	2.20	0.59
1:X:1484:G:H2'	1:X:1485:U:C6	2.37	0.59
1:X:1822:C:O2'	1:X:1823:G:H5'	2.02	0.59
1:X:1834:G:H2'	1:X:1835:C:C6	2.37	0.59
1:X:1886:G:H2'	1:X:1887:G:H8	1.67	0.59
1:X:2171:U:H4'	1:X:2171:U:OP1	2.01	0.59
1:X:2594:U:C2	26:Y:7:PRO:HA	2.37	0.59
1:X:2807:U:H4'	1:X:2808:U:H5"	1.83	0.59
3:A:76:ASN:OD1	3:A:118:ASN:HB2	2.03	0.59
3:A:202:LYS:O	3:A:204:ILE:N	2.36	0.59
4:B:24:THR:CG2	4:B:188:ILE:HD13	2.32	0.59
4:B:202:ALA:O	4:B:203:LYS:CB	2.49	0.59
6:D:143:TYR:HE1	6:D:148:LYS:CA	2.16	0.59
9:G:103:TYR:CD2	9:G:111:LYS:HA	2.36	0.59
9:G:116:ARG:HD2	9:G:119:LEU:CD1	2.24	0.59
10:H:85:ASP:OD2	10:H:87:SER:N	2.27	0.59
11:I:62:LYS:HG2	11:I:63:ARG:N	2.16	0.59
12:J:51:CYS:SG	12:J:122:ALA:O	2.58	0.59
15:M:39:VAL:HG12	15:M:45:THR:OG1	2.02	0.59
15:M:55:ILE:HG12	15:M:67:THR:HG22	1.84	0.59
17:O:36:LYS:NZ	17:O:98:ILE:H	1.99	0.59
18:P:71:VAL:O	18:P:72:LEU:C	2.43	0.59
20:R:10:HIS:CD2	20:R:44:GLN:HE21	2.20	0.59
22:T:37:LEU:HD11	22:T:61:ALA:HB2	1.85	0.59
24:V:32:ALA:O	24:V:34:ALA:N	2.35	0.59
25:W:47:VAL:HG23	25:W:51:LEU:HD21	1.84	0.59
1:X:460:U:C4	1:X:592:G:H1'	2.37	0.59
1:X:822:G:C2'	1:X:823:U:H5'	2.32	0.59
1:X:847:C:H2'	1:X:848:A:H8	1.67	0.59
1:X:878:C:O2'	1:X:879:A:H5"	2.02	0.59
1:X:1004:A:H2	17:O:21:ARG:NH2	1.95	0.59
1:X:1142:G:OP1	9:G:107:GLN:O	2.20	0.59
1:X:1437:A:O2'	1:X:1438:G:H5'	2.02	0.59
1:X:1770:U:C2	1:X:1774:A:N7	2.69	0.59
1:X:2223:U:O2'	1:X:2224:U:H5'	2.02	0.59
3:A:111:LEU:CD2	3:A:127:LEU:HB3	2.32	0.59
4:B:179:GLU:C	4:B:181:LEU:N	2.58	0.59
7:E:90:ARG:NH2	7:E:163:ARG:HH12	1.95	0.59
11:I:108:LEU:H	11:I:125:ALA:HA	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:30:LYS:HZ3	16:N:30:LYS:HA	1.65	0.59
18:P:62:ARG:HG3	18:P:62:ARG:NH1	2.17	0.59
18:P:85:MET:HE2	18:P:130:GLU:CG	2.32	0.59
20:R:84:VAL:CG1	20:R:88:THR:N	2.65	0.59
21:S:23:ALA:N	21:S:32:PHE:CE1	2.70	0.59
24:V:38:ALA:C	24:V:40:PRO:HD3	2.26	0.59
24:V:62:ARG:HH11	24:V:62:ARG:CG	2.14	0.59
1:X:580:A:N7	1:X:584:A:C6	2.70	0.59
1:X:852:U:H2'	1:X:853:C:C6	2.38	0.59
1:X:876:A:P	12:J:23:LYS:HD3	2.43	0.59
1:X:1461:C:H2'	1:X:1462:C:C6	2.37	0.59
1:X:1841:G:H2'	1:X:1842:G:H5'	1.85	0.59
1:X:2033:C:O2	4:B:156:MET:HE1	2.03	0.59
1:X:2035:G:H21	1:X:2036:G:H1'	1.67	0.59
1:X:2042:A:H5"	5:C:65:GLY:CA	2.32	0.59
1:X:2073:A:C6	1:X:2074:U:C4	2.91	0.59
1:X:2350:G:C6	1:X:2351:G:N7	2.71	0.59
2:Z:111:C:H5'	2:Z:111:C:H6	1.67	0.59
5:C:33:TRP:O	5:C:36:ALA:HB3	2.02	0.59
12:J:36:ILE:HB	12:J:131:LYS:HE2	1.84	0.59
13:K:106:ASP:OD1	13:K:108:VAL:HB	2.02	0.59
14:L:20:THR:HG22	14:L:24:SER:OG	2.01	0.59
16:N:66:ASN:O	16:N:70:ARG:NH1	2.36	0.59
21:S:67:LYS:HE3	21:S:84:TYR:HB2	1.85	0.59
21:S:115:ILE:HA	21:S:169:VAL:CG1	2.31	0.59
1:X:11:G:H8	1:X:11:G:O5'	1.85	0.59
1:X:322:A:HO2'	1:X:343:A:H4'	1.66	0.59
1:X:687:G:H2'	1:X:688:A:H5'	1.84	0.59
1:X:1314:A:C8	1:X:1316:G:C8	2.91	0.59
1:X:1949:A:C2	1:X:2572:U:C1'	2.84	0.59
1:X:2052:G:N1	1:X:2422:C:C4	2.70	0.59
1:X:2198:U:O3'	1:X:2199:C:H4'	1.99	0.59
1:X:2441:U:H2'	1:X:2442:C:C6	2.37	0.59
1:X:2508:G:OP2	7:E:172:LYS:HE2	2.02	0.59
4:B:117:MET:SD	4:B:124:GLY:HA3	2.42	0.59
7:E:10:ALA:O	7:E:12:PRO:HD2	2.02	0.59
8:F:73:PRO:CB	8:F:74:PRO:HD2	2.32	0.59
8:F:73:PRO:HB2	8:F:74:PRO:HD2	1.84	0.59
8:F:92:PRO:HG3	8:F:135:MET:C	2.27	0.59
9:G:61:ARG:HG2	9:G:65:LYS:NZ	2.18	0.59
13:K:75:VAL:O	13:K:78:LYS:N	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:52:ALA:O	14:L:53:ALA:CB	2.50	0.59
14:L:64:LYS:N	14:L:64:LYS:CE	2.54	0.59
14:L:94:TYR:HB3	14:L:99:ARG:HH21	1.65	0.59
17:O:10:LYS:HE3	17:O:11:GLN:NE2	2.16	0.59
18:P:105:ARG:O	18:P:116:ILE:HG23	2.02	0.59
20:R:84:VAL:CA	20:R:90:LYS:HE2	2.32	0.59
21:S:100:THR:CG2	21:S:138:VAL:HG11	2.31	0.59
21:S:147:ILE:CB	21:S:169:VAL:HG23	2.31	0.59
21:S:152:ILE:N	21:S:152:ILE:HD12	2.16	0.59
1:X:965:G:C2	1:X:975:C:O2	2.55	0.59
1:X:1412:C:H2'	1:X:1413:U:H6	1.67	0.59
1:X:1467:U:H6	1:X:1467:U:C3'	2.16	0.59
1:X:1607:A:H2'	1:X:1608:U:C6	2.34	0.59
1:X:2189:A:H2'	1:X:2190:A:C8	2.38	0.59
1:X:2620:G:P	9:G:102:ARG:NH2	2.76	0.59
1:X:2741:G:O2'	1:X:2742:G:H5'	2.02	0.59
1:X:2847:G:H4'	13:K:8:ARG:NH2	2.17	0.59
4:B:32:PRO:O	4:B:49:ILE:HA	2.02	0.59
5:C:34:GLN:O	5:C:38:ARG:HG3	2.02	0.59
6:D:9:ASN:O	6:D:12:VAL:HG23	2.02	0.59
6:D:30:ARG:N	6:D:159:THR:OG1	2.35	0.59
7:E:20:GLN:O	7:E:21:ASP:HB2	2.02	0.59
9:G:106:TYR:OH	9:G:108:GLY:HA2	2.02	0.59
10:H:3:MET:HB2	10:H:4:PRO:CD	2.33	0.59
12:J:36:ILE:HD12	12:J:131:LYS:CE	2.31	0.59
12:J:59:PHE:O	12:J:60:ARG:C	2.45	0.59
13:K:3:HIS:ND1	13:K:5:LYS:HD2	2.16	0.59
14:L:43:ILE:HD12	14:L:43:ILE:N	2.17	0.59
17:O:23:GLU:O	17:O:25:LEU:N	2.36	0.59
18:P:36:ARG:NH2	26:Y:20:ARG:CZ	2.66	0.59
20:R:18:LYS:HD3	20:R:19:GLY:H	1.66	0.59
1:X:19:C:H2'	1:X:20:C:C6	2.37	0.59
1:X:229:G:O2'	1:X:230:C:H5'	2.02	0.59
1:X:571:U:O2	1:X:581:A:C4	2.56	0.59
1:X:839:U:OP1	1:X:2408:G:OP2	2.20	0.59
1:X:1007:A:H1'	17:O:6:GLN:HG3	1.84	0.59
1:X:1016:C:H6	1:X:1016:C:OP1	1.86	0.59
1:X:1432:G:H2'	1:X:1594:U:O4	2.03	0.59
1:X:1466:C:H2'	1:X:1467:U:C1'	2.33	0.59
1:X:1774:A:C2	1:X:2566:A:C5	2.90	0.59
1:X:2262:C:H2'	1:X:2263:C:C5'	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2578:G:O2'	1:X:2579:A:H5'	2.03	0.59
1:X:2727:G:O6	1:X:2735:C:H5"	2.03	0.59
1:X:2823:G:HO2'	1:X:2824:C:H6	1.50	0.59
2:Z:32:C:H2'	2:Z:33:C:C5'	2.30	0.59
3:A:217:ARG:NH2	3:A:218:LYS:HE2	2.18	0.59
5:C:12:GLY:O	5:C:14:THR:N	2.36	0.59
5:C:135:SER:O	5:C:136:TRP:C	2.45	0.59
6:D:14:PRO:O	6:D:15:ALA:C	2.46	0.59
6:D:44:LYS:HB3	6:D:46:ASP:OD2	2.03	0.59
11:I:67:ASN:O	11:I:68:VAL:HB	2.03	0.59
11:I:77:LEU:CB	11:I:111:SER:H	2.11	0.59
12:J:98:VAL:CG1	12:J:99:LYS:N	2.64	0.59
13:K:24:GLN:CB	13:K:44:LEU:HD22	2.30	0.59
17:O:57:GLN:O	17:O:96:LEU:O	2.21	0.59
19:Q:3:HIS:CD2	19:Q:44:GLN:HB2	2.37	0.59
20:R:10:HIS:O	20:R:11:ASN:C	2.45	0.59
21:S:23:ALA:HB3	21:S:32:PHE:HZ	1.68	0.59
22:T:45:PHE:CZ	22:T:77:ARG:NH1	2.70	0.59
25:W:17:VAL:O	25:W:19:THR:N	2.35	0.59
1:X:688:A:C2	1:X:689:A:N7	2.70	0.59
1:X:764:A:H2	1:X:802:A:H2'	1.68	0.59
1:X:945:G:O2'	1:X:946:U:H5'	2.01	0.59
1:X:1171:A:H1'	17:O:6:GLN:OE1	2.03	0.59
1:X:1442:C:O2'	1:X:1443:G:OP1	2.20	0.59
1:X:2170:C:H2'	1:X:2171:U:C4'	2.32	0.59
1:X:2484:G:O2'	1:X:2485:U:H5'	2.01	0.59
1:X:2501:U:H5'	1:X:2502:G:OP2	2.02	0.59
1:X:2695:C:H2'	1:X:2696:A:H8	1.67	0.59
1:X:2815:C:H4'	13:K:92:GLY:HA3	1.83	0.59
3:A:238:GLY:O	3:A:239:ARG:CG	2.50	0.59
6:D:14:PRO:O	6:D:16:LEU:N	2.36	0.59
7:E:94:PHE:O	7:E:95:ARG:HB3	2.02	0.59
7:E:163:ARG:NE	7:E:169:ILE:HD12	2.17	0.59
14:L:38:ILE:CG1	14:L:39:TYR:N	2.65	0.59
17:O:76:SER:O	17:O:78:VAL:HG12	2.03	0.59
20:R:80:LYS:HE3	20:R:80:LYS:C	2.28	0.59
21:S:25:ASN:O	21:S:26:LYS:HB2	2.03	0.59
1:X:395:G:H1	1:X:404:A:N6	2.00	0.59
1:X:505:G:OP1	18:P:22:LYS:HE3	2.02	0.59
1:X:686:C:H5"	5:C:74:VAL:HB	1.85	0.59
1:X:731:A:C2'	1:X:732:G:H5'	2.30	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1087:C:H4'	8:F:94:LYS:NZ	2.18	0.59
1:X:1373:G:N2	1:X:1374:G:C1'	2.65	0.59
1:X:2021:G:H2'	1:X:2022:C:C6	2.38	0.59
1:X:2032:G:N2	1:X:2599:U:C2	2.70	0.59
1:X:2522:G:H5'	1:X:2522:G:H8	1.68	0.59
1:X:2532:G:H1'	1:X:2561:G:N3	2.17	0.59
1:X:2856:U:O2'	1:X:2857:C:H5'	2.02	0.59
4:B:116:VAL:CG2	4:B:136:ARG:HE	2.04	0.59
6:D:106:ILE:HG22	6:D:139:PRO:HD3	1.84	0.59
7:E:97:LYS:N	7:E:104:GLU:HB3	2.15	0.59
7:E:131:ILE:CG2	7:E:132:ASP:N	2.65	0.59
9:G:67:ARG:HD3	9:G:70:PHE:HB3	1.85	0.59
12:J:35:LEU:HD23	12:J:105:PHE:CD2	2.38	0.59
18:P:35:PRO:O	18:P:36:ARG:C	2.46	0.59
21:S:102:GLY:O	21:S:138:VAL:CG2	2.50	0.59
24:V:18:ILE:C	24:V:20:ALA:H	2.10	0.59
1:X:170:U:O2	1:X:170:U:H2'	2.02	0.59
1:X:1212:U:H2'	1:X:1213:U:C6	2.38	0.59
1:X:1248:G:N7	1:X:1249:G:C6	2.71	0.59
1:X:1545:G:C6	1:X:1559:G:N2	2.71	0.59
1:X:1621:C:C2'	1:X:1622:G:H5'	2.32	0.59
5:C:22:VAL:HA	5:C:106:MET:CE	2.33	0.59
6:D:31:ILE:O	6:D:31:ILE:HG22	2.02	0.59
10:H:116:ARG:CZ	15:M:38:LYS:HD2	2.31	0.59
11:I:51:GLY:O	11:I:55:ARG:NH1	2.35	0.59
12:J:23:LYS:C	12:J:25:GLY:N	2.61	0.59
12:J:28:VAL:CG2	12:J:134:LYS:O	2.51	0.59
13:K:5:LYS:HD3	13:K:5:LYS:N	2.17	0.59
21:S:44:ARG:HB3	21:S:45:GLN:NE2	2.18	0.59
1:X:116:A:N7	1:X:117:A:C4	2.71	0.58
1:X:868:U:H2'	1:X:869:C:C6	2.37	0.58
1:X:964:A:O2'	1:X:965:G:H5'	2.02	0.58
1:X:1216:G:O2'	1:X:1217:U:H5'	2.03	0.58
1:X:1822:C:C2'	1:X:1823:G:H5'	2.33	0.58
1:X:1931:G:C6	1:X:1942:G:C6	2.91	0.58
1:X:2001:G:H2'	1:X:2002:A:O4'	2.03	0.58
1:X:2491:C:H5"	1:X:2492:G:OP2	2.02	0.58
1:X:2533:U:H2'	1:X:2534:U:C6	2.38	0.58
2:Z:29:C:C5	2:Z:30:C:C5	2.91	0.58
3:A:53:PHE:O	3:A:54:ILE:HG22	2.03	0.58
12:J:36:ILE:HG12	12:J:103:VAL:HA	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:3:HIS:CG	13:K:5:LYS:HE3	2.34	0.58
14:L:39:TYR:O	14:L:40:ALA:C	2.47	0.58
16:N:101:ARG:O	16:N:103:PRO:HD3	2.02	0.58
17:O:15:SER:HB3	17:O:95:ILE:O	2.03	0.58
17:O:56:VAL:HA	17:O:97:GLY:CA	2.28	0.58
17:O:76:SER:O	17:O:78:VAL:N	2.35	0.58
18:P:89:ARG:O	18:P:90:LEU:HD23	2.02	0.58
20:R:71:GLN:C	20:R:71:GLN:OE1	2.46	0.58
20:R:93:ARG:NH1	20:R:93:ARG:HG2	2.18	0.58
23:U:46:LEU:O	23:U:47:HIS:ND1	2.35	0.58
1:X:172:A:N1	1:X:178:C:C2	2.71	0.58
1:X:248:A:H8	1:X:248:A:O5'	1.85	0.58
1:X:645:G:H2'	1:X:646:C:C6	2.38	0.58
1:X:1226:A:C8	1:X:1250:A:C2	2.91	0.58
1:X:1233:A:HO2'	1:X:1234:C:P	2.25	0.58
1:X:1252:C:O2'	1:X:1253:C:H5"	2.03	0.58
1:X:1264:C:OP1	16:N:13:ARG:NH1	2.36	0.58
1:X:1533:G:H2'	1:X:1534:A:H8	1.68	0.58
1:X:1547:U:H2'	1:X:1548:U:C6	2.38	0.58
1:X:1782:A:N6	1:X:1820:G:O2'	2.35	0.58
1:X:1954:A:O2'	3:A:239:ARG:HB3	2.02	0.58
1:X:2437:G:C2'	1:X:2469:G:H1	2.16	0.58
1:X:2726:U:H1'	7:E:139:GLN:CD	2.27	0.58
1:X:2859:U:H2'	1:X:2860:C:H5'	1.85	0.58
2:Z:44:C:O2'	6:D:63:GLN:HG2	2.03	0.58
3:A:109:GLU:HB2	3:A:196:VAL:O	2.03	0.58
4:B:172:VAL:O	4:B:172:VAL:HG12	2.03	0.58
5:C:153:ASP:OD2	5:C:172:VAL:HG13	2.03	0.58
7:E:43:VAL:HB	7:E:52:VAL:HG13	1.84	0.58
7:E:44:ARG:CZ	7:E:46:ASP:HB2	2.33	0.58
8:F:75:MET:HE3	8:F:79:ILE:HD11	1.84	0.58
11:I:77:LEU:HD22	11:I:110:ALA:HA	1.85	0.58
11:I:123:ASP:O	11:I:124:ALA:CB	2.51	0.58
13:K:10:LEU:HD21	13:K:14:SER:H	1.69	0.58
16:N:47:TYR:CE2	16:N:51:ARG:CZ	2.86	0.58
19:Q:11:VAL:HG21	19:Q:77:LYS:HG3	1.84	0.58
20:R:90:LYS:HD2	20:R:108:VAL:HG11	1.84	0.58
23:U:20:ARG:C	23:U:39:LYS:HD2	2.28	0.58
24:V:14:PHE:O	24:V:18:ILE:HG12	2.02	0.58
1:X:5:A:O2'	1:X:6:A:H5'	2.02	0.58
1:X:611:C:H6	1:X:611:C:H5"	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:917:U:H2'	1:X:918:A:H5'	1.85	0.58
1:X:1250:A:O2'	1:X:1251:G:O4'	2.22	0.58
1:X:2175:A:O2'	1:X:2176:U:H5'	2.04	0.58
1:X:2262:C:H2'	1:X:2263:C:H5'	1.84	0.58
1:X:2301:A:C6	1:X:2312:A:N6	2.71	0.58
1:X:2417:U:O2'	1:X:2418:A:H5"	2.03	0.58
1:X:2582:G:H2'	1:X:2583:U:O4'	2.02	0.58
1:X:2661:G:H4'	15:M:63:ARG:HD3	1.85	0.58
1:X:2725:C:H4'	7:E:142:GLY:C	2.28	0.58
1:X:2804:G:H2'	1:X:2805:G:H8	1.68	0.58
3:A:89:SER:HB2	3:A:201:HIS:NE2	2.18	0.58
3:A:124:GLU:O	3:A:126:LYS:N	2.36	0.58
6:D:35:VAL:CG2	6:D:90:THR:HG23	2.34	0.58
6:D:113:ASP:HB3	6:D:115:ARG:CZ	2.33	0.58
7:E:69:ARG:O	7:E:72:VAL:HB	2.03	0.58
9:G:59:ALA:O	9:G:62:ILE:N	2.35	0.58
24:V:62:ARG:HH11	24:V:62:ARG:HB3	1.68	0.58
1:X:63:A:H2'	1:X:63:A:N3	2.19	0.58
1:X:324:C:C2'	1:X:325:U:H5'	2.33	0.58
1:X:1466:C:C2'	1:X:1467:U:O4'	2.50	0.58
1:X:1922:U:H1'	1:X:2570:C:O2'	2.04	0.58
1:X:2386:G:H2'	1:X:2387:U:C6	2.38	0.58
1:X:2571:G:C2	1:X:2582:G:C2	2.92	0.58
1:X:2875:C:O2'	1:X:2876:C:H5'	2.02	0.58
2:Z:43:G:H8	6:D:66:ILE:CD1	2.16	0.58
6:D:30:ARG:HB2	6:D:159:THR:HG23	1.84	0.58
6:D:56:GLU:O	6:D:60:ILE:HG12	2.03	0.58
7:E:136:ILE:CG2	7:E:137:ASP:H	2.10	0.58
8:F:85:ILE:HG23	8:F:88:GLY:H	1.69	0.58
9:G:102:ARG:CZ	9:G:112:THR:HG21	2.33	0.58
12:J:81:GLU:HG2	12:J:82:THR:HG23	1.84	0.58
1:X:553:C:H4'	1:X:554:U:O5'	2.03	0.58
1:X:600:G:C6	1:X:602:C:C4	2.92	0.58
1:X:621:U:H2'	1:X:622:U:H6	1.67	0.58
1:X:941:U:H2'	1:X:942:U:O4'	2.04	0.58
1:X:1354:A:O2'	1:X:1355:A:OP1	2.19	0.58
3:A:101:GLU:C	3:A:101:GLU:CD	2.70	0.58
7:E:26:VAL:C	7:E:27:LYS:HG3	2.26	0.58
9:G:36:ASN:O	9:G:38:GLU:N	2.37	0.58
10:H:23:ARG:NH2	10:H:23:ARG:CB	2.65	0.58
14:L:26:ARG:HH11	14:L:88:VAL:HG22	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:22:ARG:HD3	15:M:83:PHE:O	2.02	0.58
18:P:9:ARG:CB	18:P:13:GLN:HG3	2.31	0.58
19:Q:68:PHE:H	19:Q:68:PHE:HD2	1.49	0.58
20:R:108:VAL:CG2	20:R:109:ALA:H	2.06	0.58
21:S:34:LEU:C	21:S:34:LEU:HD12	2.29	0.58
30:4:1:MET:HE1	30:4:34:GLN:C	2.27	0.58
1:X:48:A:H4'	1:X:49:U:C5'	2.28	0.58
1:X:89:A:O2'	1:X:90:G:H5"	2.02	0.58
1:X:389:G:H2'	1:X:390:U:H6	1.69	0.58
1:X:735:G:H2'	1:X:736:G:H5'	1.86	0.58
1:X:1496:G:C2'	1:X:1497:C:O5'	2.51	0.58
1:X:1516:A:N3	3:A:100:GLY:HA3	2.19	0.58
1:X:1960:A:C2'	1:X:1961:A:H5'	2.32	0.58
1:X:2036:G:C2'	1:X:2037:A:H5'	2.34	0.58
1:X:2048:C:H1'	1:X:2428:U:H3	1.69	0.58
1:X:2576:G:H8	1:X:2576:G:O5'	1.87	0.58
2:Z:103:A:N6	2:Z:104:A:C6	2.72	0.58
4:B:4:ILE:CG1	4:B:5:LEU:N	2.66	0.58
4:B:152:LYS:H	9:G:106:TYR:HB3	1.69	0.58
5:C:47:THR:O	5:C:48:ARG:C	2.47	0.58
14:L:28:ARG:CG	14:L:43:ILE:HD13	2.27	0.58
16:N:50:ARG:O	16:N:53:LYS:HG2	2.04	0.58
16:N:74:MET:CE	16:N:79:PHE:HA	2.34	0.58
18:P:39:ARG:O	18:P:43:ASP:CG	2.47	0.58
20:R:93:ARG:O	20:R:95:ARG:HD2	2.02	0.58
21:S:91:PRO:CG	21:S:92:VAL:H	2.13	0.58
23:U:52:ARG:HG2	23:U:52:ARG:NH2	2.18	0.58
1:X:34:U:C2	20:R:4:PRO:HB3	2.39	0.58
1:X:171:G:O2'	1:X:172:A:H5'	2.04	0.58
1:X:424:G:H3'	1:X:2385:U:O4	2.03	0.58
1:X:746:G:N7	1:X:774:A:C6	2.71	0.58
1:X:1004:A:N3	17:O:88:GLN:NE2	2.52	0.58
1:X:1595:A:O5'	1:X:1595:A:C8	2.52	0.58
1:X:2027:C:O2'	1:X:2028:C:H5'	2.03	0.58
1:X:2057:U:C6	1:X:2057:U:C5'	2.86	0.58
1:X:2431:C:C4	1:X:2432:A:C6	2.91	0.58
3:A:67:PHE:HB3	3:A:153:ALA:N	2.11	0.58
4:B:116:VAL:H	4:B:136:ARG:NE	2.01	0.58
6:D:17:MET:HA	6:D:21:GLY:HA2	1.86	0.58
6:D:135:GLN:C	6:D:141:ILE:HG21	2.29	0.58
9:G:101:THR:OG1	9:G:103:TYR:HE1	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:107:GLN:C	9:G:109:GLY:N	2.62	0.58
11:I:30:ALA:CB	11:I:34:HIS:ND1	2.66	0.58
11:I:134:GLU:HG2	11:I:139:ARG:HA	1.85	0.58
17:O:14:VAL:O	17:O:15:SER:HB2	2.03	0.58
18:P:57:LEU:HD12	18:P:69:ALA:HA	1.85	0.58
20:R:10:HIS:CB	20:R:44:GLN:NE2	2.66	0.58
20:R:25:LEU:HD12	20:R:80:LYS:CA	2.34	0.58
25:W:6:VAL:O	25:W:7:ARG:HG2	2.04	0.58
30:4:1:MET:HE1	30:4:34:GLN:CA	2.33	0.58
1:X:240:U:H2'	1:X:241:C:O4'	2.04	0.58
1:X:742:G:H2'	1:X:1766:U:H1'	1.86	0.58
1:X:760:U:O5'	1:X:760:U:H6	1.86	0.58
1:X:939:C:H5"	1:X:940:G:OP2	2.04	0.58
1:X:1051:U:H3'	1:X:1051:U:C6	2.38	0.58
1:X:1359:G:O2'	1:X:1360:G:H5'	2.04	0.58
1:X:1517:C:C4'	3:A:96:HIS:CE1	2.86	0.58
1:X:1572:C:O2'	1:X:1573:G:H5'	2.04	0.58
1:X:2240:C:C2'	1:X:2241:U:H5'	2.34	0.58
1:X:2618:A:H1'	1:X:2758:A:C2	2.39	0.58
1:X:2796:A:C2	1:X:2797:G:C5	2.91	0.58
3:A:217:ARG:HG2	3:A:218:LYS:H	1.69	0.58
4:B:65:GLY:CA	4:B:68:ALA:HB3	2.34	0.58
5:C:37:SER:HB2	5:C:92:ASP:OD2	2.03	0.58
5:C:50:GLN:O	5:C:52:SER:N	2.35	0.58
6:D:53:ALA:O	6:D:57:LEU:HG	2.03	0.58
8:F:71:LYS:C	8:F:73:PRO:HD3	2.28	0.58
9:G:163:PRO:O	9:G:165:VAL:HG22	2.03	0.58
11:I:106:VAL:O	11:I:106:VAL:HG12	2.04	0.58
14:L:12:ARG:HG3	14:L:92:GLY:O	2.02	0.58
14:L:17:VAL:HG13	14:L:18:ARG:N	2.19	0.58
14:L:38:ILE:CG1	14:L:39:TYR:H	2.16	0.58
1:X:322:A:O2'	1:X:323:G:P	2.61	0.58
1:X:742:G:C6	3:A:208:LYS:HD3	2.39	0.58
1:X:955:G:H5'	1:X:956:A:C5'	2.33	0.58
1:X:980:G:O3'	25:W:11:GLY:HA2	2.04	0.58
1:X:1128:G:H3'	1:X:1129:A:H5"	1.85	0.58
1:X:1278:A:H2	1:X:1997:A:H62	1.52	0.58
1:X:1295:U:H2'	1:X:1296:G:O4'	2.03	0.58
1:X:2564:U:N3	32:X:2911:ZLD:H21A	2.19	0.58
1:X:2661:G:C2	1:X:2662:C:C6	2.91	0.58
1:X:2804:G:H2'	1:X:2805:G:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:217:ARG:HG2	3:A:218:LYS:CG	2.33	0.58
5:C:83:ALA:O	5:C:85:GLY:N	2.37	0.58
5:C:97:ARG:O	5:C:101:GLN:HG2	2.04	0.58
6:D:13:ARG:HB3	6:D:14:PRO:CD	2.26	0.58
6:D:96:MET:O	6:D:100:LEU:CB	2.52	0.58
7:E:86:ASN:N	7:E:132:ASP:OD2	2.37	0.58
9:G:75:ILE:HD11	9:G:144:MET:HG3	1.85	0.58
18:P:107:ILE:HB	18:P:117:ILE:HD12	1.86	0.58
20:R:84:VAL:HG13	20:R:88:THR:O	2.03	0.58
22:T:37:LEU:H	22:T:37:LEU:HD12	1.67	0.58
1:X:76:C:H5'	1:X:76:C:C6	2.29	0.58
1:X:805:G:N7	1:X:2419:C:C1'	2.67	0.58
1:X:911:A:H2'	1:X:912:A:H8	1.68	0.58
1:X:1004:A:C5	1:X:1005:U:H5	2.21	0.58
1:X:1440:G:H8	1:X:1440:G:O5'	1.87	0.58
1:X:2074:U:C3'	1:X:2075:U:H5"	2.27	0.58
1:X:2394:G:O5'	11:I:63:ARG:CZ	2.51	0.58
2:Z:4:C:H2'	2:Z:5:C:O4'	2.04	0.58
4:B:52:ALA:O	4:B:75:THR:O	2.21	0.58
4:B:85:ALA:O	4:B:86:PRO:O	2.21	0.58
6:D:66:ILE:HG22	6:D:88:LYS:O	2.03	0.58
8:F:85:ILE:HA	8:F:88:GLY:HA3	1.86	0.58
9:G:102:ARG:NH2	9:G:112:THR:HG21	2.18	0.58
10:H:65:LYS:N	10:H:68:ASP:OD2	2.31	0.58
12:J:28:VAL:HG23	12:J:137:VAL:HG21	1.85	0.58
13:K:16:ALA:C	13:K:18:VAL:N	2.59	0.58
14:L:45:ASP:CG	14:L:46:SER:H	2.10	0.58
14:L:60:LYS:C	14:L:62:GLY:H	2.12	0.58
17:O:50:ASP:O	17:O:53:LYS:HB2	2.04	0.58
20:R:18:LYS:O	20:R:36:VAL:HB	2.03	0.58
24:V:10:GLN:C	24:V:12:THR:N	2.60	0.58
1:X:320:A:N3	1:X:340:G:O2'	2.27	0.57
1:X:466:A:H4'	1:X:467:U:O5'	2.03	0.57
1:X:494:A:H3'	1:X:495:C:H6	1.68	0.57
1:X:566:U:H2'	1:X:567:G:H8	1.69	0.57
1:X:815:A:C2	1:X:816:U:C2	2.92	0.57
1:X:1018:C:C5	1:X:1019:U:C5	2.92	0.57
1:X:1808:C:H5"	3:A:39:LYS:CE	2.34	0.57
1:X:1863:U:H2'	1:X:1864:G:C8	2.39	0.57
1:X:2725:C:H5'	7:E:146:ALA:HB2	1.84	0.57
3:A:78:LYS:O	3:A:80:ALA:N	2.36	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:116:VAL:N	4:B:136:ARG:NE	2.52	0.57
5:C:146:GLU:HB3	5:C:184:ASP:CB	2.34	0.57
11:I:30:ALA:N	11:I:34:HIS:ND1	2.51	0.57
11:I:73:GLU:OE2	11:I:104:ARG:CB	2.52	0.57
11:I:108:LEU:HB2	11:I:122:VAL:CG1	2.22	0.57
12:J:113:GLU:O	12:J:115:ALA:N	2.36	0.57
17:O:15:SER:OG	17:O:96:LEU:HA	2.04	0.57
17:O:35:LEU:O	17:O:36:LYS:HG3	2.03	0.57
18:P:50:VAL:CG1	18:P:90:LEU:HB2	2.34	0.57
19:Q:7:LEU:C	19:Q:7:LEU:CD1	2.77	0.57
21:S:1:MET:HE3	21:S:52:PHE:CD2	2.39	0.57
23:U:27:ASP:O	23:U:32:ARG:HG3	2.04	0.57
24:V:31:GLN:HB3	24:V:37:LEU:CB	2.34	0.57
30:4:10:MET:HE2	30:4:34:GLN:OE1	2.04	0.57
1:X:65:C:O2'	1:X:66:U:H5'	2.04	0.57
1:X:541:C:O2'	1:X:542:A:P	2.61	0.57
1:X:605:G:H2'	1:X:606:A:H8	1.70	0.57
1:X:867:G:H2'	1:X:868:U:O4'	2.04	0.57
1:X:1138:A:C2'	1:X:1139:A:H5"	2.33	0.57
1:X:2551:A:N7	4:B:144:ARG:HD3	2.19	0.57
1:X:2569:A:O3'	3:A:239:ARG:NH1	2.37	0.57
1:X:2570:C:OP1	3:A:239:ARG:NH1	2.34	0.57
1:X:2692:A:H5"	1:X:2693:U:OP2	2.04	0.57
1:X:2710:C:C2'	1:X:2711:G:H5'	2.34	0.57
2:Z:47:A:N3	2:Z:47:A:H2'	2.19	0.57
4:B:136:ARG:NH2	4:B:157:ALA:HB2	2.18	0.57
5:C:153:ASP:OD2	5:C:172:VAL:HG22	2.04	0.57
6:D:143:TYR:HA	6:D:146:VAL:HG21	1.85	0.57
6:D:167:ARG:CG	6:D:177:PHE:HE2	2.16	0.57
7:E:13:SER:C	7:E:15:VAL:H	2.12	0.57
7:E:73:ALA:O	7:E:77:LYS:HG2	2.04	0.57
11:I:14:LYS:HA	11:I:14:LYS:HE3	1.85	0.57
12:J:70:PHE:HE2	12:J:71:PRO:O	1.86	0.57
14:L:76:ALA:HB2	14:L:107:ALA:HA	1.86	0.57
17:O:36:LYS:NZ	17:O:55:THR:C	2.62	0.57
18:P:56:LEU:O	18:P:57:LEU:C	2.47	0.57
20:R:110:SER:OG	20:R:111:GLY:N	2.36	0.57
1:X:116:A:H5'	1:X:117:A:H8	1.67	0.57
1:X:678:G:O2'	1:X:679:C:H5'	2.05	0.57
1:X:1063:C:H2'	1:X:1064:C:C5	2.39	0.57
1:X:1086:C:C3'	1:X:1087:C:H5"	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1200:G:H2'	1:X:1201:G:C8	2.39	0.57
1:X:2367:A:N7	1:X:2368:G:C5	2.73	0.57
1:X:2751:C:H5'	4:B:203:LYS:HD3	1.85	0.57
1:X:2876:C:H2'	1:X:2877:A:C8	2.38	0.57
2:Z:4:C:H5'	2:Z:4:C:H6	1.69	0.57
3:A:244:ARG:N	3:A:244:ARG:CD	2.59	0.57
4:B:33:ILE:HG22	4:B:47:VAL:HG12	1.85	0.57
6:D:22:TYR:C	6:D:24:SER:N	2.58	0.57
6:D:80:ARG:CD	6:D:83:MET:HB2	2.33	0.57
9:G:151:TYR:HB2	9:G:157:PRO:HB3	1.86	0.57
11:I:32:ARG:CZ	17:O:81:ARG:NH2	2.67	0.57
14:L:59:LEU:HD22	14:L:61:SER:H	1.70	0.57
18:P:62:ARG:HG3	18:P:62:ARG:HH11	1.69	0.57
22:T:46:LYS:HD3	22:T:76:ALA:CB	2.34	0.57
23:U:43:ARG:HG2	23:U:43:ARG:HH21	1.69	0.57
1:X:29:U:O4'	16:N:11:ARG:NH1	2.37	0.57
1:X:82:G:N2	1:X:100:G:C2'	2.65	0.57
1:X:90:G:H5'	1:X:91:A:C8	2.38	0.57
1:X:94:C:H1'	24:V:40:PRO:HG2	1.86	0.57
1:X:586:G:C6	1:X:587:A:C6	2.91	0.57
1:X:1253:C:C2'	1:X:1254:G:H5'	2.33	0.57
1:X:1385:C:O2'	1:X:1386:A:H5'	2.04	0.57
1:X:1517:C:C4'	3:A:96:HIS:NE2	2.61	0.57
1:X:1807:A:H1'	1:X:1809:G:C8	2.40	0.57
1:X:1850:G:C6	1:X:1868:A:N7	2.72	0.57
1:X:2047:C:O2	1:X:2429:A:N6	2.37	0.57
1:X:2366:U:H1'	22:T:41:ARG:NH1	2.19	0.57
1:X:2482:A:C2'	32:X:2911:ZLD:C13	2.82	0.57
1:X:2624:G:H3'	1:X:2625:U:H5'	1.87	0.57
1:X:2691:C:O2'	1:X:2692:A:C8	2.55	0.57
1:X:2737:A:H61	7:E:67:LEU:HD11	1.69	0.57
2:Z:78:A:O2'	2:Z:79:U:H5'	2.05	0.57
8:F:107:GLU:HA	8:F:110:LYS:HB2	1.85	0.57
10:H:115:ALA:HA	10:H:134:LEU:OXT	2.05	0.57
11:I:77:LEU:CG	11:I:112:GLY:O	2.53	0.57
15:M:102:ALA:C	15:M:103:LYS:HD2	2.29	0.57
20:R:108:VAL:HG13	20:R:109:ALA:N	2.19	0.57
22:T:35:ASN:HD22	22:T:35:ASN:N	2.03	0.57
30:4:22:ARG:CZ	30:4:37:GLY:HA3	2.35	0.57
1:X:174:A:N1	1:X:840:U:O4	2.37	0.57
1:X:686:C:C2'	1:X:687:G:H5'	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:690:A:H2'	1:X:691:C:H6	1.69	0.57
1:X:734:G:H2'	1:X:735:G:H8	1.70	0.57
1:X:889:C:H2'	1:X:890:U:H6	1.67	0.57
1:X:922:A:C2	1:X:923:A:C2	2.92	0.57
1:X:1359:G:H2'	1:X:1360:G:O4'	2.05	0.57
1:X:1552:C:O2	1:X:1553:G:C2	2.58	0.57
1:X:1810:U:OP1	3:A:158:SER:HB3	2.04	0.57
1:X:1918:G:H3'	1:X:1945:C:H42	1.68	0.57
1:X:2070:G:O2'	1:X:2071:G:H5'	2.03	0.57
1:X:2308:A:H2'	1:X:2309:G:H8	1.65	0.57
1:X:2316:G:H2'	1:X:2317:G:H8	1.68	0.57
1:X:2698:G:C6	1:X:2699:G:C5	2.93	0.57
2:Z:14:C:H5	22:T:72:LYS:HD2	1.68	0.57
2:Z:15:A:C6	2:Z:72:C:H5'	2.39	0.57
5:C:104:LEU:O	5:C:105:ALA:C	2.47	0.57
5:C:137:ALA:O	5:C:138:LYS:C	2.47	0.57
5:C:181:LEU:HD12	5:C:181:LEU:O	2.04	0.57
6:D:33:LYS:HD2	6:D:90:THR:CG2	2.33	0.57
7:E:86:ASN:HA	7:E:132:ASP:HB2	1.87	0.57
9:G:72:PRO:O	9:G:73:ASN:C	2.48	0.57
10:H:108:THR:O	10:H:109:ARG:HB3	2.05	0.57
13:K:3:HIS:CE1	13:K:5:LYS:HD2	2.40	0.57
15:M:50:PHE:HD2	15:M:51:GLU:H	1.53	0.57
17:O:26:GLN:CG	17:O:27:GLY:H	2.15	0.57
18:P:29:LYS:O	18:P:30:TYR:HB2	2.05	0.57
19:Q:28:TRP:CE3	19:Q:75:ARG:HB3	2.40	0.57
21:S:114:ASP:OD1	21:S:115:ILE:N	2.37	0.57
30:4:25:VAL:CG2	30:4:34:GLN:HB2	2.34	0.57
1:X:541:C:H4'	1:X:542:A:O5'	2.04	0.57
1:X:709:A:C2	1:X:710:C:C2	2.93	0.57
1:X:978:U:H2'	1:X:979:A:C8	2.40	0.57
1:X:1469:U:OP1	1:X:1471:G:OP2	2.22	0.57
1:X:1510:A:H2'	1:X:1511:A:H8	1.68	0.57
1:X:2015:G:H2'	4:B:145:LYS:CE	2.35	0.57
1:X:2213:G:C2	1:X:2214:G:C8	2.92	0.57
1:X:2694:G:H8	1:X:2694:G:OP1	1.88	0.57
1:X:2824:C:OP1	15:M:100:ARG:NH1	2.38	0.57
2:Z:63:A:H2'	2:Z:64:C:H6	1.69	0.57
5:C:133:PHE:O	5:C:134:ILE:C	2.48	0.57
6:D:35:VAL:HG22	6:D:90:THR:HG23	1.86	0.57
6:D:123:ASP:OD1	6:D:125:ARG:HG2	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:90:ARG:HD3	7:E:163:ARG:HH11	1.68	0.57
9:G:85:ALA:C	9:G:87:GLN:N	2.61	0.57
10:H:10:VAL:CG1	10:H:98:ILE:HG13	2.34	0.57
14:L:15:ARG:HG2	14:L:15:ARG:NH1	2.12	0.57
17:O:36:LYS:HD2	17:O:55:THR:N	2.19	0.57
18:P:27:VAL:HG23	18:P:125:THR:HG22	1.86	0.57
21:S:20:ALA:HB1	21:S:80:HIS:ND1	2.20	0.57
23:U:33:LYS:HD3	23:U:33:LYS:N	2.20	0.57
1:X:34:U:N1	20:R:4:PRO:HB3	2.19	0.57
1:X:353:G:H2'	1:X:354:C:O4'	2.05	0.57
1:X:412:U:H5	23:U:68:ARG:NH1	2.01	0.57
1:X:577:U:H5'	1:X:956:A:H62	1.70	0.57
1:X:618:A:C2	1:X:632:A:N7	2.72	0.57
1:X:1443:G:H2'	1:X:1444:C:C6	2.39	0.57
1:X:1641:C:H2'	1:X:1642:G:H5'	1.85	0.57
1:X:2225:G:C2	1:X:2405:A:H1'	2.40	0.57
1:X:2500:C:H2'	1:X:2501:U:C6	2.40	0.57
1:X:2526:U:C2	1:X:2545:A:N6	2.72	0.57
5:C:17:LEU:HD12	5:C:109:ALA:HB2	1.85	0.57
5:C:24:SER:HA	5:C:27:LEU:CD2	2.31	0.57
5:C:48:ARG:H	5:C:48:ARG:HD2	1.69	0.57
5:C:55:GLY:O	5:C:56:ARG:HG2	2.03	0.57
5:C:179:ASP:O	5:C:182:ARG:HB3	2.04	0.57
6:D:77:PHE:C	6:D:79:LEU:HD12	2.29	0.57
7:E:35:VAL:HB	7:E:37:TYR:HE1	1.69	0.57
9:G:44:VAL:HG12	9:G:45:ASP:N	2.17	0.57
9:G:63:ARG:HG3	9:G:64:GLY:N	2.16	0.57
9:G:111:LYS:O	9:G:113:GLU:HG3	2.05	0.57
9:G:125:ARG:NH1	9:G:128:GLU:OE1	2.38	0.57
12:J:19:THR:HG22	12:J:99:LYS:HZ2	1.69	0.57
13:K:51:LEU:O	13:K:54:THR:N	2.37	0.57
14:L:34:SER:HB2	14:L:94:TYR:OH	2.05	0.57
19:Q:24:VAL:HG12	19:Q:25:TYR:N	2.19	0.57
1:X:53:G:C2'	1:X:54:G:O5'	2.53	0.57
1:X:118:U:O2'	1:X:119:G:OP2	2.21	0.57
1:X:742:G:C4	1:X:1766:U:C2	2.92	0.57
1:X:1075:C:OP1	8:F:85:ILE:HG13	2.05	0.57
1:X:1107:A:C3'	1:X:1108:U:H5"	2.35	0.57
1:X:1258:G:OP2	11:I:17:LYS:NZ	2.32	0.57
1:X:1510:A:C8	1:X:1511:A:N7	2.72	0.57
1:X:1710:U:O2'	1:X:1711:C:OP1	2.23	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1766:U:H2'	1:X:1767:G:C5'	2.35	0.57
1:X:1810:U:C5	3:A:157:ARG:NH1	2.72	0.57
1:X:1882:G:N2	1:X:1885:C:H41	2.02	0.57
1:X:2180:U:O2'	1:X:2181:A:N7	2.35	0.57
5:C:104:LEU:O	5:C:108:ILE:HG12	2.05	0.57
5:C:158:ARG:HG3	5:C:159:ARG:N	2.20	0.57
6:D:22:TYR:HB3	6:D:24:SER:O	2.04	0.57
6:D:22:TYR:CD2	6:D:27:ALA:HB3	2.40	0.57
6:D:75:SER:N	6:D:79:LEU:HD22	2.19	0.57
7:E:163:ARG:HE	7:E:169:ILE:HD12	1.68	0.57
8:F:85:ILE:HD13	8:F:89:SER:N	2.19	0.57
11:I:11:GLY:C	11:I:13:ARG:N	2.61	0.57
11:I:99:VAL:O	11:I:100:ARG:C	2.48	0.57
12:J:75:VAL:HG12	12:J:76:THR:N	2.19	0.57
18:P:85:MET:CE	18:P:130:GLU:HG3	2.33	0.57
18:P:112:GLY:O	18:P:113:SER:C	2.48	0.57
21:S:117:VAL:HG21	21:S:168:VAL:HG22	1.87	0.57
22:T:31:VAL:HG11	22:T:37:LEU:HD21	1.87	0.57
24:V:28:LEU:C	24:V:30:PHE:H	2.12	0.57
1:X:137:A:C6	1:X:138:G:H1'	2.39	0.57
1:X:882:C:H2'	1:X:883:A:C8	2.39	0.57
1:X:1075:C:C2'	1:X:1076:U:H5'	2.35	0.57
1:X:1313:U:O2'	1:X:1314:A:P	2.62	0.57
1:X:1496:G:H2'	1:X:1497:C:O5'	2.05	0.57
1:X:1524:C:C3'	1:X:1525:A:H5"	2.33	0.57
1:X:1787:U:H2'	1:X:1788:C:C6	2.37	0.57
1:X:1885:C:H4'	3:A:244:ARG:HD2	1.87	0.57
1:X:1923:U:H1'	1:X:1924:C:C5	2.40	0.57
1:X:2043:A:OP1	5:C:63:GLY:N	2.30	0.57
1:X:2390:A:H2'	1:X:2391:A:C8	2.39	0.57
1:X:2701:A:H2'	1:X:2702:G:C8	2.39	0.57
1:X:2856:U:C2	1:X:2857:C:C5	2.93	0.57
3:A:81:ALA:C	3:A:82:ILE:HD12	2.29	0.57
4:B:26:VAL:CG1	4:B:27:LEU:N	2.68	0.57
5:C:125:ILE:HD12	5:C:133:PHE:CA	2.34	0.57
7:E:51:LEU:HD12	7:E:52:VAL:N	2.20	0.57
7:E:97:LYS:HB2	7:E:104:GLU:HG2	1.87	0.57
9:G:132:PHE:CD1	9:G:145:HIS:CG	2.92	0.57
11:I:7:LYS:O	11:I:7:LYS:HG2	2.04	0.57
11:I:122:VAL:C	11:I:124:ALA:H	2.11	0.57
12:J:48:ILE:C	12:J:50:ALA:N	2.61	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:51:VAL:CG2	20:R:76:LEU:HD21	2.18	0.57
21:S:54:ILE:C	21:S:61:THR:HA	2.30	0.57
23:U:46:LEU:C	23:U:47:HIS:CG	2.83	0.57
25:W:4:LYS:O	25:W:6:VAL:HG13	2.04	0.57
25:W:45:LYS:HA	25:W:45:LYS:HE3	1.85	0.57
1:X:155:G:C2'	1:X:156:G:H5'	2.34	0.57
1:X:492:G:O2'	1:X:493:A:P	2.63	0.57
1:X:640:C:C4	1:X:641:G:N7	2.73	0.57
1:X:914:C:H2'	1:X:915:C:C6	2.40	0.57
1:X:1092:U:H4'	8:F:118:ALA:HB2	1.87	0.57
1:X:1328:C:O2'	1:X:1329:U:H5'	2.05	0.57
1:X:1368:G:O2'	1:X:1369:G:H5'	2.04	0.57
1:X:1431:U:H5"	1:X:1604:A:H1'	1.87	0.57
1:X:1693:A:C2	1:X:1694:A:C4	2.93	0.57
1:X:1766:U:C2'	1:X:1767:G:H5'	2.35	0.57
1:X:1789:U:O2'	1:X:1793:A:H1'	2.05	0.57
1:X:1984:A:H4'	1:X:2668:U:H2'	1.86	0.57
1:X:2623:A:H8	1:X:2623:A:O5'	1.87	0.57
2:Z:42:U:O2'	2:Z:47:A:N6	2.38	0.57
4:B:98:GLU:HA	4:B:172:VAL:HG12	1.87	0.57
4:B:117:MET:O	4:B:121:ASN:HA	2.03	0.57
5:C:124:ASP:CG	5:C:136:TRP:HE3	2.13	0.57
15:M:18:GLN:HG3	15:M:18:GLN:O	2.05	0.57
23:U:63:SER:HB3	23:U:66:ALA:CB	2.35	0.57
24:V:13:ASP:OD1	24:V:16:LYS:NZ	2.36	0.57
26:Y:3:LYS:O	26:Y:4:HIS:C	2.48	0.57
1:X:595:A:H8	1:X:595:A:O5'	1.88	0.56
1:X:665:A:H2	1:X:666:U:C6	2.22	0.56
1:X:788:G:C5'	1:X:790:A:H1'	2.31	0.56
1:X:1329:U:H2'	1:X:1330:G:C8	2.40	0.56
1:X:1343:C:O2	1:X:1344:C:C6	2.57	0.56
1:X:1431:U:C5'	1:X:1604:A:H1'	2.35	0.56
1:X:1793:A:C2	1:X:1794:A:C2	2.93	0.56
1:X:1937:G:O2'	1:X:1939:U:C5	2.58	0.56
1:X:2410:U:O2	1:X:2412:A:C8	2.58	0.56
3:A:95:LEU:HB2	3:A:105:ILE:CD1	2.35	0.56
3:A:222:ARG:O	3:A:224:SER:N	2.37	0.56
5:C:62:LYS:HD3	5:C:62:LYS:C	2.29	0.56
7:E:96:ALA:HA	7:E:104:GLU:O	2.04	0.56
8:F:110:LYS:HA	8:F:113:MET:CE	2.30	0.56
9:G:155:THR:C	9:G:157:PRO:CD	2.78	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:27:SER:CB	10:H:50:ILE:HG13	2.23	0.56
11:I:73:GLU:OE1	11:I:73:GLU:N	2.38	0.56
11:I:84:GLU:O	11:I:116:ARG:NH2	2.38	0.56
11:I:85:ASP:HA	11:I:116:ARG:HH22	1.69	0.56
11:I:90:ARG:HA	11:I:121:HIS:ND1	2.20	0.56
14:L:79:ALA:O	14:L:82:LYS:HB2	2.05	0.56
15:M:89:ASN:C	15:M:90:GLN:OE1	2.48	0.56
19:Q:26:SER:HB3	19:Q:79:ILE:CG1	2.31	0.56
21:S:23:ALA:HA	21:S:83:PHE:O	2.05	0.56
21:S:123:VAL:O	21:S:124:ALA:HB3	2.03	0.56
21:S:152:ILE:CD1	21:S:152:ILE:N	2.67	0.56
24:V:4:SER:HB3	24:V:7:ARG:HE	1.70	0.56
26:Y:51:TYR:HA	26:Y:54:GLY:O	2.05	0.56
1:X:615:C:H4'	1:X:669:G:N2	2.20	0.56
1:X:1664:G:H5"	1:X:1665:C:OP1	2.04	0.56
1:X:1880:G:H2'	1:X:1881:U:C6	2.41	0.56
1:X:2482:A:C8	32:X:2911:ZLD:H13B	2.41	0.56
1:X:2615:U:P	4:B:80:GLU:HG2	2.45	0.56
3:A:80:ALA:HB3	3:A:94:LEU:HD23	1.87	0.56
4:B:72:VAL:CG1	4:B:73:ALA:H	2.11	0.56
4:B:120:TRP:O	4:B:121:ASN:CB	2.52	0.56
5:C:3:GLN:NE2	5:C:4:ILE:O	2.37	0.56
5:C:9:GLN:HE21	5:C:120:VAL:HG21	1.70	0.56
6:D:58:ALA:O	6:D:62:LEU:HA	2.05	0.56
6:D:112:ARG:O	6:D:113:ASP:HB2	2.05	0.56
7:E:131:ILE:CG2	7:E:132:ASP:H	2.17	0.56
12:J:117:GLU:C	12:J:119:PHE:N	2.62	0.56
13:K:47:PHE:C	13:K:47:PHE:CD2	2.83	0.56
15:M:17:GLU:C	15:M:19:ASP:H	2.13	0.56
16:N:21:ALA:HA	16:N:24:PHE:CE2	2.40	0.56
17:O:5:ILE:HD13	17:O:5:ILE:N	2.19	0.56
17:O:17:GLY:HA2	17:O:93:ILE:O	2.04	0.56
19:Q:42:ILE:HG23	19:Q:43:GLN:N	2.20	0.56
21:S:42:ALA:HA	21:S:45:GLN:HG2	1.86	0.56
22:T:3:HIS:CD2	22:T:5:LYS:H	2.23	0.56
30:4:1:MET:SD	30:4:2:LYS:N	2.78	0.56
1:X:177:U:O4	1:X:225:G:N1	2.39	0.56
1:X:357:A:N3	1:X:357:A:H2'	2.20	0.56
1:X:556:A:H2'	1:X:557:U:C2	2.40	0.56
1:X:661:C:H2'	1:X:662:G:H8	1.70	0.56
1:X:1087:C:O4'	8:F:91:THR:HB	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1088:A:H2	1:X:1099:A:N3	2.03	0.56
1:X:1218:C:O4'	11:I:13:ARG:CD	2.53	0.56
1:X:1469:U:P	1:X:1471:G:OP2	2.64	0.56
1:X:1804:U:H2'	1:X:1805:G:C8	2.40	0.56
1:X:1837:G:H2'	1:X:1838:G:H8	1.71	0.56
1:X:2186:G:H4'	3:A:151:LYS:HE3	1.87	0.56
1:X:2198:U:H5"	1:X:2199:C:OP2	2.06	0.56
1:X:2284:U:C2'	1:X:2285:U:H5"	2.35	0.56
1:X:2352:A:H2'	1:X:2353:G:C8	2.40	0.56
1:X:2437:G:H2'	1:X:2469:G:O6	2.06	0.56
1:X:2473:G:H2'	1:X:2474:G:H8	1.69	0.56
1:X:2509:A:C2'	1:X:2510:A:H5"	2.36	0.56
1:X:2722:C:OP1	30:4:35:ARG:HD2	2.05	0.56
1:X:2726:U:H4'	7:E:139:GLN:HG2	1.87	0.56
1:X:2727:G:H4'	7:E:71:LEU:HD21	1.87	0.56
1:X:2777:A:C5	18:P:134:LYS:HB2	2.40	0.56
1:X:2807:U:H6	1:X:2807:U:C5'	2.13	0.56
3:A:111:LEU:HD22	3:A:127:LEU:HB3	1.87	0.56
3:A:208:LYS:HA	3:A:208:LYS:CE	2.35	0.56
5:C:31:VAL:O	5:C:35:LEU:HG	2.06	0.56
6:D:122:PHE:HB3	6:D:129:ASN:HD22	1.70	0.56
7:E:54:ARG:HG3	7:E:57:ASP:CG	2.30	0.56
7:E:84:THR:HB	7:E:134:SER:OG	2.06	0.56
7:E:139:GLN:O	7:E:142:GLY:N	2.39	0.56
8:F:118:ALA:O	8:F:120:SER:N	2.39	0.56
9:G:132:PHE:HD1	9:G:145:HIS:CG	2.24	0.56
10:H:13:ASN:HD21	10:H:109:ARG:HG2	1.66	0.56
10:H:20:MET:HG2	10:H:21:CYS:O	2.04	0.56
11:I:56:LEU:O	11:I:58:ALA:O	2.22	0.56
11:I:78:SER:CB	11:I:112:GLY:HA3	2.29	0.56
11:I:88:PHE:CB	11:I:90:ARG:HD2	2.34	0.56
17:O:12:TYR:CD2	17:O:40:VAL:HG22	2.40	0.56
19:Q:35:LYS:HE2	19:Q:53:ILE:CG2	2.19	0.56
21:S:13:LYS:O	21:S:16:GLU:O	2.23	0.56
23:U:10:LYS:HD3	23:U:11:LYS:HB2	1.87	0.56
25:W:7:ARG:O	25:W:8:SER:C	2.48	0.56
25:W:47:VAL:HG23	25:W:47:VAL:O	2.04	0.56
30:4:18:ARG:NH1	30:4:21:GLY:HA2	2.20	0.56
1:X:201:G:H2'	1:X:202:A:H8	1.69	0.56
1:X:414:A:C2	1:X:415:A:C4	2.93	0.56
1:X:789:G:C5	1:X:806:A:C8	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:822:G:O2'	1:X:823:U:H5'	2.06	0.56
1:X:833:A:H1'	1:X:954:U:C1'	2.28	0.56
1:X:930:A:H5"	2:Z:100:G:O2'	2.06	0.56
1:X:1158:A:O2'	1:X:1159:U:H5'	2.05	0.56
1:X:1256:C:H2'	1:X:1257:U:O4'	2.04	0.56
1:X:1391:A:O2'	1:X:1392:U:P	2.64	0.56
1:X:1851:A:O5'	1:X:1851:A:H8	1.88	0.56
1:X:2235:G:H2'	1:X:2236:U:H5'	1.87	0.56
1:X:2484:G:OP2	32:X:2911:ZLD:H9A	2.04	0.56
1:X:2725:C:H4'	7:E:142:GLY:CA	2.35	0.56
2:Z:108:G:H5"	21:S:26:LYS:HE3	1.88	0.56
4:B:33:ILE:HA	4:B:49:ILE:HA	1.87	0.56
4:B:36:ARG:O	4:B:37:LYS:C	2.49	0.56
5:C:124:ASP:CG	5:C:125:ILE:H	2.13	0.56
7:E:78:GLY:C	7:E:80:SER:N	2.61	0.56
10:H:29:ILE:HB	10:H:123:PHE:HE2	1.70	0.56
11:I:65:PHE:O	11:I:66:ASN:C	2.47	0.56
15:M:26:ASP:O	15:M:27:PHE:CG	2.59	0.56
15:M:99:VAL:HG22	15:M:100:ARG:N	2.17	0.56
18:P:13:GLN:O	18:P:16:GLN:N	2.29	0.56
23:U:15:VAL:O	23:U:16:ASN:CB	2.52	0.56
24:V:52:GLN:O	24:V:54:ASN:N	2.39	0.56
30:4:10:MET:HE3	30:4:32:HIS:HD2	1.71	0.56
1:X:357:A:H3'	1:X:358:C:O4'	2.05	0.56
1:X:452:G:H2'	1:X:453:U:C6	2.41	0.56
1:X:1160:C:H2'	1:X:1161:U:O4'	2.05	0.56
1:X:1542:G:N2	1:X:1562:G:H22	2.03	0.56
1:X:1731:C:H3'	1:X:1732:U:C5'	2.35	0.56
1:X:1745:C:OP1	15:M:101:ARG:HD2	2.04	0.56
1:X:2198:U:H3'	1:X:2199:C:C5'	2.35	0.56
1:X:2527:G:C6	1:X:2540:A:C2	2.93	0.56
3:A:135:PHE:CD2	3:A:135:PHE:N	2.74	0.56
6:D:35:VAL:HG12	6:D:36:VAL:N	2.20	0.56
6:D:134:GLU:O	6:D:137:ILE:HG12	2.06	0.56
9:G:34:PRO:C	9:G:69:ASP:CG	2.73	0.56
11:I:44:GLY:O	11:I:45:LYS:CB	2.51	0.56
11:I:62:LYS:HG2	11:I:64:GLY:N	2.21	0.56
11:I:134:GLU:C	11:I:136:ALA:H	2.14	0.56
12:J:56:SER:O	12:J:57:ARG:C	2.47	0.56
14:L:27:LEU:HD23	14:L:44:ASP:CB	2.35	0.56
20:R:24:VAL:HG11	20:R:29:HIS:HB2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:93:ARG:O	20:R:95:ARG:NE	2.38	0.56
21:S:74:ARG:HB3	21:S:75:LYS:HE3	1.88	0.56
22:T:37:LEU:HD11	22:T:61:ALA:N	2.20	0.56
22:T:73:GLY:O	22:T:74:LYS:HB2	2.06	0.56
25:W:4:LYS:HA	25:W:30:ASP:O	2.05	0.56
1:X:46:C:O2'	1:X:47:G:H5'	2.06	0.56
1:X:120:G:O2'	1:X:121:G:H5'	2.05	0.56
1:X:125:A:H5"	1:X:126:C:C6	2.41	0.56
1:X:166:G:N1	1:X:182:G:O2'	2.35	0.56
1:X:751:G:H1'	1:X:772:G:H22	1.71	0.56
1:X:765:C:C5	1:X:1772:C:C2	2.93	0.56
1:X:789:G:C6	1:X:806:A:N7	2.73	0.56
1:X:867:G:H2'	1:X:868:U:C6	2.41	0.56
1:X:2000:U:O2'	26:Y:9:LYS:HA	2.05	0.56
1:X:2240:C:O2'	1:X:2241:U:C5'	2.49	0.56
3:A:70:ARG:C	3:A:72:LYS:N	2.62	0.56
3:A:143:HIS:O	3:A:145:LEU:N	2.38	0.56
3:A:240:THR:OG1	3:A:241:GLY:N	2.39	0.56
4:B:68:ALA:C	4:B:70:ALA:H	2.13	0.56
6:D:66:ILE:N	6:D:88:LYS:O	2.27	0.56
6:D:111:ILE:O	6:D:114:PHE:HB2	2.06	0.56
11:I:72:TYR:HA	11:I:105:PRO:CG	2.26	0.56
13:K:18:VAL:O	13:K:19:ALA:C	2.48	0.56
16:N:33:ARG:HG3	16:N:33:ARG:NH1	2.20	0.56
20:R:106:VAL:HG23	20:R:113:THR:OG1	2.05	0.56
24:V:64:GLY:C	24:V:66:GLN:N	2.63	0.56
1:X:244:C:H2'	1:X:245:C:O4'	2.06	0.56
1:X:633:G:H2'	1:X:634:G:H8	1.70	0.56
1:X:657:A:H2	1:X:658:G:C4	2.22	0.56
1:X:823:U:OP1	1:X:1266:G:N7	2.39	0.56
1:X:1710:U:C5'	1:X:1711:C:C5	2.85	0.56
1:X:1790:G:H21	3:A:155:LEU:HA	1.71	0.56
1:X:2218:G:H5'	3:A:249:PRO:CB	2.29	0.56
1:X:2270:U:H2'	1:X:2271:C:C6	2.40	0.56
1:X:2334:C:O3'	22:T:24:LYS:NZ	2.39	0.56
1:X:2395:C:C2'	1:X:2396:C:C5'	2.83	0.56
1:X:2564:U:H5"	1:X:2565:C:OP1	2.05	0.56
3:A:197:GLY:C	3:A:199:ALA:H	2.12	0.56
3:A:223:GLY:O	3:A:233:HIS:HB2	2.05	0.56
4:B:28:ALA:HB3	4:B:92:ASN:ND2	2.15	0.56
4:B:177:ALA:C	4:B:179:GLU:H	2.12	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:62:ILE:HG22	9:G:62:ILE:O	2.06	0.56
13:K:28:LEU:HD21	13:K:115:LEU:HD23	1.86	0.56
13:K:75:VAL:O	13:K:78:LYS:HB3	2.05	0.56
13:K:96:ARG:C	13:K:97:ILE:HD12	2.31	0.56
14:L:79:ALA:HA	14:L:82:LYS:HB2	1.87	0.56
16:N:64:ARG:O	16:N:65:ILE:C	2.49	0.56
18:P:11:LYS:HG3	18:P:12:LYS:H	1.70	0.56
19:Q:4:TYR:CD2	24:V:23:LYS:HB2	2.40	0.56
19:Q:43:GLN:OE1	19:Q:49:ARG:HA	2.06	0.56
21:S:42:ALA:C	21:S:44:ARG:H	2.13	0.56
21:S:95:SER:HB3	21:S:119:ASN:HD21	1.71	0.56
1:X:408:U:H2'	1:X:409:G:C8	2.41	0.56
1:X:424:G:H3'	1:X:2385:U:C4	2.41	0.56
1:X:613:A:N3	1:X:668:A:C2	2.74	0.56
1:X:663:G:O5'	1:X:664:C:H5"	2.05	0.56
1:X:1174:G:C2	1:X:1175:A:N7	2.74	0.56
1:X:1392:U:O2	1:X:1392:U:H2'	2.06	0.56
1:X:1515:U:O2'	1:X:1516:A:H5'	2.04	0.56
1:X:1597:A:H2'	1:X:1598:C:H6	1.71	0.56
1:X:1744:G:H2'	1:X:1746:A:OP2	2.04	0.56
1:X:1817:U:H2'	1:X:1818:G:O4'	2.06	0.56
1:X:2228:U:H4'	1:X:2229:G:OP2	2.03	0.56
1:X:2661:G:O2'	1:X:2662:C:H5'	2.06	0.56
1:X:2795:A:H4'	13:K:5:LYS:CG	2.36	0.56
3:A:212:SER:C	3:A:214:TRP:N	2.62	0.56
4:B:60:ASN:O	4:B:64:GLN:N	2.39	0.56
4:B:77:ILE:HD13	4:B:195:LEU:HD22	1.88	0.56
5:C:107:ALA:O	5:C:108:ILE:C	2.49	0.56
6:D:169:LEU:O	6:D:171:GLN:N	2.38	0.56
7:E:8:PRO:C	7:E:9:ILE:HD13	2.31	0.56
8:F:75:MET:SD	8:F:78:LEU:HD23	2.46	0.56
9:G:79:PHE:CE2	9:G:147:ARG:HG2	2.41	0.56
10:H:119:ARG:CZ	15:M:41:GLU:HG2	2.36	0.56
12:J:20:GLY:C	12:J:99:LYS:HE2	2.31	0.56
14:L:73:LYS:HB2	14:L:106:ALA:HB1	1.88	0.56
14:L:94:TYR:O	14:L:96:TYR:N	2.32	0.56
15:M:53:VAL:HG12	15:M:54:VAL:N	2.20	0.56
17:O:5:ILE:HG13	17:O:9:GLY:CA	2.36	0.56
17:O:34:GLU:O	17:O:35:LEU:O	2.24	0.56
19:Q:6:ILE:HG22	19:Q:7:LEU:H	1.66	0.56
1:X:201:G:N7	1:X:433:G:H4'	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1092:U:H4'	8:F:118:ALA:CB	2.35	0.56
1:X:1225:G:H2'	1:X:1249:G:H22	1.70	0.56
1:X:1594:U:H2'	1:X:1595:A:C8	2.41	0.56
1:X:1655:C:H4'	1:X:2689:C:O2	2.06	0.56
1:X:1842:G:O2'	1:X:1843:U:H5'	2.05	0.56
2:Z:109:G:P	21:S:26:LYS:HE2	2.46	0.56
3:A:143:HIS:HD2	3:A:192:THR:HB	1.70	0.56
3:A:246:PRO:C	3:A:247:VAL:O	2.42	0.56
9:G:67:ARG:NH1	9:G:70:PHE:O	2.39	0.56
10:H:19:ILE:N	10:H:19:ILE:CD1	2.68	0.56
17:O:11:GLN:HE22	17:O:38:LEU:HB3	1.69	0.56
18:P:46:ARG:HA	18:P:92:VAL:CG1	2.36	0.56
18:P:107:ILE:HD13	18:P:108:PRO:CD	2.36	0.56
23:U:20:ARG:HG2	23:U:39:LYS:CE	2.34	0.56
23:U:75:TYR:N	23:U:75:TYR:CD1	2.73	0.56
24:V:62:ARG:O	24:V:66:GLN:HA	2.06	0.56
26:Y:36:CYS:HB3	26:Y:49:CYS:HB3	1.88	0.56
1:X:402:A:C8	1:X:2392:G:C4'	2.87	0.56
1:X:513:A:C6	1:X:516:G:C6	2.94	0.56
1:X:636:G:H5'	1:X:636:G:H8	1.71	0.56
1:X:695:G:O2'	1:X:696:U:H5'	2.06	0.56
1:X:1034:U:C2'	1:X:1035:G:H5'	2.35	0.56
1:X:1394:G:O2'	1:X:1395:A:H5'	2.06	0.56
1:X:1448:A:N6	1:X:1574:A:H61	1.89	0.56
1:X:1525:A:H2'	1:X:1526:U:O4'	2.05	0.56
1:X:1781:C:H4'	3:A:209:ALA:CB	2.36	0.56
1:X:2375:G:H2'	1:X:2376:G:C8	2.39	0.56
1:X:2383:C:H4'	11:I:67:ASN:HD21	1.71	0.56
1:X:2483:U:O5'	1:X:2483:U:H6	1.89	0.56
1:X:2620:G:OP1	9:G:102:ARG:NH2	2.39	0.56
2:Z:3:A:H2'	2:Z:4:C:H5"	1.87	0.56
5:C:34:GLN:OE1	5:C:176:ASN:OD1	2.24	0.56
11:I:73:GLU:N	11:I:73:GLU:CD	2.64	0.56
12:J:113:GLU:C	12:J:115:ALA:N	2.60	0.56
12:J:119:PHE:CE1	12:J:132:MET:HG3	2.41	0.56
13:K:11:ASN:OD1	13:K:17:ARG:CZ	2.54	0.56
15:M:29:PRO:CA	15:M:54:VAL:HG12	2.33	0.56
16:N:75:ASN:ND2	16:N:77:SER:HB3	2.20	0.56
19:Q:47:GLY:O	19:Q:48:VAL:HB	2.05	0.56
19:Q:88:ILE:C	19:Q:88:ILE:HD12	2.31	0.56
20:R:51:VAL:HG21	20:R:76:LEU:HD11	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:32:PHE:N	21:S:32:PHE:CD2	2.73	0.56
21:S:66:VAL:HA	21:S:82:ASP:O	2.06	0.56
21:S:148:THR:C	21:S:152:ILE:HD13	2.31	0.56
23:U:31:GLY:HA2	23:U:32:ARG:NH1	2.20	0.56
25:W:12:ARG:HD2	25:W:13:PRO:HD3	1.88	0.56
1:X:118:U:C2'	1:X:119:G:OP2	2.54	0.55
1:X:343:A:H1'	1:X:346:C:H42	1.71	0.55
1:X:590:C:OP2	16:N:33:ARG:NH1	2.38	0.55
1:X:1135:C:O2'	1:X:1136:G:H5'	2.05	0.55
1:X:1361:G:H2'	1:X:1362:A:H8	1.71	0.55
1:X:1917:C:O2'	1:X:1918:G:H5'	2.05	0.55
1:X:2440:C:H2'	1:X:2441:U:C6	2.41	0.55
1:X:2581:A:H3'	1:X:2582:G:C5'	2.27	0.55
3:A:134:ARG:C	3:A:136:VAL:H	2.13	0.55
5:C:54:THR:C	5:C:55:GLY:O	2.48	0.55
9:G:37:ASP:O	9:G:38:GLU:HB3	2.07	0.55
9:G:99:VAL:O	9:G:101:THR:N	2.39	0.55
13:K:48:VAL:HG13	13:K:49:GLU:N	2.21	0.55
14:L:33:ARG:NH1	14:L:100:VAL:CA	2.64	0.55
15:M:69:ARG:HG2	15:M:78:GLU:HG2	1.88	0.55
16:N:66:ASN:CG	16:N:70:ARG:HH12	2.14	0.55
16:N:69:ALA:HB2	16:N:79:PHE:CD1	2.40	0.55
16:N:93:LYS:NZ	17:O:5:ILE:CG2	2.69	0.55
17:O:15:SER:CA	17:O:95:ILE:HB	2.33	0.55
19:Q:33:ALA:O	19:Q:34:THR:C	2.48	0.55
21:S:149:ALA:HB3	21:S:164:PRO:CA	2.32	0.55
25:W:9:VAL:O	25:W:12:ARG:HB2	2.05	0.55
1:X:219:G:C2'	1:X:220:U:OP2	2.54	0.55
1:X:463:C:H42	1:X:467:U:H5	1.55	0.55
1:X:1263:G:O2'	1:X:1264:C:H5'	2.06	0.55
1:X:1987:G:C5	1:X:1988:A:C8	2.94	0.55
1:X:2014:A:C6	1:X:2477:C:H1'	2.40	0.55
1:X:2057:U:C5'	1:X:2057:U:H6	2.19	0.55
1:X:2230:G:OP1	12:J:84:MET:HE3	2.06	0.55
1:X:2272:A:P	14:L:15:ARG:NH2	2.74	0.55
1:X:2484:G:O2'	1:X:2485:U:C5'	2.54	0.55
1:X:2662:C:H2'	1:X:2663:U:H6	1.71	0.55
1:X:2875:C:C2'	1:X:2876:C:H5'	2.37	0.55
2:Z:43:G:H5"	6:D:66:ILE:HD13	1.88	0.55
3:A:39:LYS:O	3:A:40:THR:HB	2.06	0.55
3:A:131:LEU:HD23	3:A:131:LEU:N	2.11	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:213:ARG:O	3:A:215:LEU:N	2.39	0.55
6:D:155:THR:C	6:D:156:ILE:HD12	2.32	0.55
7:E:120:GLY:O	7:E:136:ILE:HD13	2.06	0.55
9:G:61:ARG:NH1	9:G:78:ASP:OD2	2.38	0.55
9:G:103:TYR:CE2	9:G:111:LYS:CB	2.89	0.55
11:I:39:SER:O	11:I:40:ARG:HB2	2.05	0.55
15:M:38:LYS:C	15:M:40:ARG:N	2.63	0.55
19:Q:16:ALA:O	19:Q:19:ALA:N	2.37	0.55
19:Q:48:VAL:HG22	19:Q:49:ARG:N	2.21	0.55
24:V:41:HIS:C	24:V:43:VAL:H	2.14	0.55
30:4:1:MET:HE2	30:4:1:MET:CA	2.35	0.55
1:X:1698:C:H2'	1:X:1753:A:N3	2.22	0.55
1:X:1873:A:C8	1:X:1874:G:C8	2.94	0.55
1:X:2053:G:H2'	1:X:2054:A:C8	2.40	0.55
1:X:2071:G:H21	1:X:2072:C:H1'	1.71	0.55
1:X:2311:U:H4'	1:X:2315:A:H62	1.72	0.55
1:X:2445:C:OP1	30:4:4:ARG:HB3	2.06	0.55
1:X:2457:A:H5'	30:4:31:LYS:CG	2.36	0.55
1:X:2463:G:H1'	12:J:125:LYS:HD2	1.87	0.55
1:X:2486:C:C2	1:X:2562:G:C2	2.94	0.55
1:X:2709:C:H2'	1:X:2710:C:C6	2.41	0.55
1:X:2736:U:H4'	1:X:2737:A:OP1	2.05	0.55
3:A:70:ARG:NH2	3:A:190:TYR:CD2	2.74	0.55
4:B:162:MET:HA	4:B:162:MET:HE3	1.87	0.55
4:B:201:ALA:C	4:B:203:LYS:H	2.14	0.55
5:C:117:LEU:HD22	5:C:187:VAL:HA	1.86	0.55
5:C:136:TRP:CD1	5:C:140:ASN:HD22	2.24	0.55
6:D:32:GLU:N	6:D:157:VAL:O	2.39	0.55
9:G:128:GLU:C	9:G:130:ALA:H	2.15	0.55
16:N:78:THR:HG23	16:N:117:ARG:HD2	1.86	0.55
17:O:11:GLN:C	17:O:39:PHE:HB3	2.31	0.55
18:P:14:ARG:HA	18:P:17:GLN:HB3	1.89	0.55
21:S:54:ILE:HG13	21:S:62:PHE:CB	2.13	0.55
1:X:1113:C:H2'	1:X:1114:A:C8	2.41	0.55
1:X:1129:A:H5'	1:X:1129:A:H8	1.72	0.55
1:X:1276:U:H1'	26:Y:10:LYS:HG3	1.87	0.55
1:X:1324:G:N2	1:X:1324:G:OP2	2.36	0.55
1:X:1810:U:O2'	1:X:1811:A:P	2.64	0.55
1:X:1870:U:O5'	1:X:1870:U:H6	1.89	0.55
1:X:1922:U:O2'	1:X:2571:G:H1'	2.07	0.55
1:X:2188:A:C2	1:X:2189:A:N6	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:72:C:H2'	2:Z:73:C:H6	1.66	0.55
3:A:145:LEU:HD22	3:A:163:VAL:HG21	1.88	0.55
3:A:160:GLY:HA2	3:A:196:VAL:HB	1.88	0.55
5:C:72:ARG:HG3	5:C:77:PHE:CE2	2.41	0.55
5:C:129:LYS:O	5:C:130:THR:HB	2.05	0.55
5:C:152:THR:OG1	5:C:154:ASP:OD1	2.23	0.55
5:C:190:ALA:C	5:C:192:ALA:H	2.12	0.55
6:D:66:ILE:HG22	6:D:88:LYS:C	2.31	0.55
11:I:106:VAL:HB	11:I:123:ASP:H	1.70	0.55
12:J:27:TYR:OH	12:J:131:LYS:NZ	2.40	0.55
14:L:28:ARG:HA	14:L:88:VAL:O	2.06	0.55
14:L:73:LYS:H	14:L:106:ALA:HB1	1.72	0.55
17:O:10:LYS:CG	17:O:11:GLN:N	2.60	0.55
17:O:23:GLU:O	17:O:24:SER:C	2.48	0.55
21:S:20:ALA:HB3	21:S:80:HIS:HB2	1.87	0.55
21:S:64:ALA:CB	21:S:85:MET:HA	2.36	0.55
24:V:2:LYS:H	24:V:3:PRO:CD	2.20	0.55
24:V:6:MET:HE3	24:V:56:VAL:CG2	2.32	0.55
1:X:1045:G:H2'	1:X:1046:U:O4'	2.06	0.55
1:X:1211:G:O2'	1:X:1212:U:H5'	2.06	0.55
1:X:1263:G:OP2	1:X:1263:G:H8	1.90	0.55
1:X:1715:A:C8	1:X:1717:A:O4'	2.60	0.55
1:X:1936:A:H2	1:X:2528:G:N3	2.05	0.55
1:X:2306:A:C6	1:X:2307:A:C6	2.94	0.55
1:X:2357:A:H1'	14:L:88:VAL:HG11	1.89	0.55
1:X:2776:U:O2	18:P:134:LYS:HD2	2.06	0.55
1:X:2796:A:O2'	1:X:2801:A:N1	2.37	0.55
1:X:2824:C:O2	1:X:2824:C:C2'	2.55	0.55
3:A:97:TYR:O	3:A:99:ASP:N	2.40	0.55
4:B:146:THR:CB	4:B:147:PRO:HD2	2.29	0.55
4:B:165:VAL:CG1	4:B:166:THR:N	2.70	0.55
5:C:22:VAL:HG13	5:C:106:MET:HG2	1.87	0.55
5:C:45:THR:N	5:C:86:PRO:O	2.39	0.55
5:C:163:ASN:ND2	5:C:166:TRP:CD1	2.75	0.55
7:E:85:ILE:C	7:E:132:ASP:CG	2.75	0.55
9:G:83:ILE:O	9:G:84:ASN:HB2	2.06	0.55
10:H:27:SER:HA	10:H:50:ILE:HD12	1.87	0.55
15:M:50:PHE:CE2	15:M:70:LYS:HD2	2.42	0.55
18:P:72:LEU:O	18:P:75:ALA:N	2.30	0.55
19:Q:51:ILE:CG1	19:Q:83:ALA:HA	2.36	0.55
20:R:22:VAL:CG1	20:R:80:LYS:HZ1	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:98:ILE:HG22	20:R:99:VAL:HG22	1.88	0.55
24:V:3:PRO:C	24:V:6:MET:HB3	2.31	0.55
1:X:436:A:H5"	1:X:437:G:C5'	2.35	0.55
1:X:577:U:C5'	1:X:956:A:N6	2.70	0.55
1:X:960:U:H2'	1:X:961:G:C8	2.41	0.55
1:X:1082:G:H1'	1:X:1100:G:C4	2.41	0.55
1:X:1096:A:H2'	1:X:1097:A:C4	2.41	0.55
1:X:1343:C:O2	1:X:1343:C:H2'	2.07	0.55
1:X:1517:C:H5'	3:A:102:LYS:NZ	2.22	0.55
1:X:2189:A:H8	1:X:2189:A:O5'	1.88	0.55
1:X:2357:A:H2'	1:X:2358:C:H5'	1.88	0.55
1:X:2729:A:H3'	1:X:2730:A:C5'	2.36	0.55
1:X:2870:C:H2'	1:X:2871:U:H6	1.71	0.55
4:B:9:ILE:HD11	4:B:27:LEU:CB	2.35	0.55
4:B:45:GLU:O	4:B:46:ALA:HB2	2.04	0.55
4:B:149:ARG:HG3	4:B:150:VAL:N	2.21	0.55
6:D:10:ASP:O	6:D:14:PRO:HB2	2.07	0.55
8:F:81:LYS:NZ	8:F:84:GLY:CA	2.70	0.55
9:G:144:MET:O	9:G:145:HIS:C	2.50	0.55
13:K:51:LEU:O	13:K:52:ILE:C	2.50	0.55
16:N:24:PHE:HE2	16:N:39:LEU:HD21	1.71	0.55
17:O:5:ILE:HG12	17:O:6:GLN:N	2.21	0.55
17:O:23:GLU:HG2	17:O:91:THR:CB	2.36	0.55
20:R:64:ASN:HB3	20:R:66:GLN:HB3	1.88	0.55
20:R:96:LYS:O	20:R:104:VAL:HA	2.06	0.55
21:S:39:PHE:HE1	21:S:83:PHE:HZ	1.53	0.55
21:S:70:GLN:NE2	21:S:71:MET:HE1	2.21	0.55
24:V:25:LEU:HD21	24:V:47:ARG:CD	2.36	0.55
26:Y:47:PRO:HG2	26:Y:48:ASN:N	2.18	0.55
1:X:333:A:C2'	5:C:162:ARG:NH1	2.70	0.55
1:X:540:G:N2	1:X:2005:U:OP1	2.39	0.55
1:X:559:C:H2'	1:X:560:G:O4'	2.04	0.55
1:X:987:G:C2	1:X:988:G:N7	2.75	0.55
1:X:1685:A:N7	1:X:1691:G:C6	2.75	0.55
1:X:1842:G:H2'	1:X:1843:U:H6	1.71	0.55
1:X:1845:A:N1	1:X:2070:G:H1'	2.21	0.55
1:X:1997:A:C2	1:X:1998:A:N1	2.75	0.55
1:X:2728:A:H5'	7:E:6:LYS:NZ	2.22	0.55
3:A:36:ALA:HB1	3:A:62:TYR:O	2.07	0.55
3:A:205:VAL:O	3:A:206:LEU:HB2	2.07	0.55
4:B:151:TYR:HB3	9:G:106:TYR:CE2	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:16:LEU:HA	6:D:20:PHE:CD1	2.41	0.55
6:D:108:LEU:O	6:D:111:ILE:HG13	2.06	0.55
9:G:110:LEU:N	9:G:110:LEU:CD2	2.70	0.55
11:I:54:SER:O	11:I:59:ARG:HD3	2.06	0.55
15:M:11:GLU:OE2	15:M:14:ARG:NH1	2.38	0.55
16:N:60:LEU:HD13	16:N:61:TRP:N	2.22	0.55
17:O:6:GLN:O	17:O:7:THR:CB	2.55	0.55
18:P:28:ALA:HB3	18:P:124:ILE:HG12	1.89	0.55
18:P:89:ARG:O	18:P:130:GLU:HA	2.06	0.55
18:P:106:LEU:HD13	18:P:116:ILE:HG12	1.89	0.55
20:R:35:LYS:HB3	20:R:35:LYS:HZ2	1.71	0.55
20:R:60:PRO:C	20:R:62:MET:H	2.14	0.55
21:S:113:VAL:HG13	21:S:171:VAL:HG22	1.88	0.55
24:V:18:ILE:HD13	24:V:53:LEU:HD13	1.88	0.55
30:4:11:CYS:HB3	30:4:32:HIS:HE1	1.71	0.55
1:X:242:A:C2’	1:X:243:G:H4’	2.37	0.55
1:X:529:U:H2’	1:X:530:G:H8	1.71	0.55
1:X:1101:U:H2’	1:X:1102:G:C8	2.42	0.55
1:X:1163:C:O2’	1:X:1164:C:H5’	2.07	0.55
1:X:1656:U:H4’	1:X:2678:C:H4’	1.89	0.55
1:X:1687:C:O2	4:B:129:HIS:HE1	1.89	0.55
2:Z:16:U:O2’	2:Z:110:U:H1’	2.06	0.55
3:A:44:ASN:HB2	3:A:48:ARG:O	2.07	0.55
5:C:12:GLY:HA3	5:C:13:ARG:NH2	2.22	0.55
6:D:32:GLU:CD	6:D:157:VAL:HG11	2.31	0.55
9:G:50:PRO:O	9:G:51:LEU:C	2.49	0.55
9:G:87:GLN:N	9:G:87:GLN:NE2	2.51	0.55
9:G:108:GLY:H	9:G:110:LEU:CD2	2.12	0.55
10:H:53:ALA:N	10:H:70:VAL:O	2.40	0.55
12:J:99:LYS:CD	12:J:100:PRO:HD2	2.37	0.55
15:M:35:VAL:HG22	15:M:90:GLN:HG2	1.89	0.55
16:N:50:ARG:C	16:N:52:ASN:N	2.61	0.55
17:O:11:GLN:HA	17:O:11:GLN:NE2	2.22	0.55
17:O:79:GLN:O	17:O:80:TYR:HB2	2.04	0.55
18:P:8:PHE:CG	18:P:9:ARG:N	2.74	0.55
19:Q:63:LYS:HE2	19:Q:64:ARG:C	2.32	0.55
23:U:26:ALA:O	23:U:27:ASP:O	2.24	0.55
1:X:547:U:H2’	1:X:548:G:H8	1.72	0.55
1:X:683:A:O2’	1:X:684:C:P	2.64	0.55
1:X:1056:U:H4’	1:X:1058:G:C1’	2.35	0.55
1:X:1088:A:O2’	1:X:1089:C:H5’	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1166:A:C2'	1:X:1167:A:H5"	2.36	0.55
1:X:1236:G:C2	1:X:1240:G:C2	2.95	0.55
1:X:1354:A:C5'	19:Q:56:MET:HG3	2.36	0.55
1:X:1397:A:C2'	1:X:1398:G:H5"	2.37	0.55
1:X:1555:A:H2'	1:X:1556:A:C8	2.42	0.55
1:X:2705:A:O2'	1:X:2706:U:O5'	2.25	0.55
1:X:2861:A:H2'	1:X:2862:G:O4'	2.07	0.55
2:Z:27:A:N1	2:Z:55:C:H5"	2.21	0.55
2:Z:93:G:OP1	12:J:19:THR:HB	2.07	0.55
4:B:147:PRO:O	4:B:149:ARG:N	2.38	0.55
5:C:45:THR:HG21	5:C:82:VAL:HG11	1.87	0.55
6:D:75:SER:O	6:D:79:LEU:HD13	2.07	0.55
7:E:36:PRO:C	7:E:37:TYR:CD1	2.85	0.55
7:E:85:ILE:N	7:E:132:ASP:OD1	2.40	0.55
7:E:109:TYR:HE1	7:E:152:ARG:HH21	1.54	0.55
8:F:81:LYS:C	8:F:83:ALA:N	2.58	0.55
8:F:87:LYS:HE3	8:F:87:LYS:HA	1.88	0.55
12:J:92:GLU:OE1	12:J:92:GLU:HA	2.06	0.55
13:K:48:VAL:O	13:K:49:GLU:C	2.50	0.55
15:M:24:LEU:HD13	15:M:91:VAL:CG2	2.36	0.55
20:R:32:GLN:HG2	20:R:33:THR:N	2.22	0.55
20:R:98:ILE:CG2	20:R:99:VAL:H	2.15	0.55
21:S:23:ALA:HB3	21:S:32:PHE:CZ	2.42	0.55
30:4:1:MET:SD	30:4:1:MET:C	2.90	0.55
1:X:75:C:H5"	24:V:48:ARG:HG3	1.89	0.55
1:X:612:G:H2'	1:X:668:A:N6	2.21	0.55
1:X:810:U:H2'	1:X:811:G:H8	1.72	0.55
1:X:1404:C:C2	1:X:1406:A:N7	2.74	0.55
1:X:1559:G:C8	1:X:1559:G:H3'	2.42	0.55
1:X:2362:G:H2'	1:X:2363:G:C8	2.42	0.55
1:X:2728:A:H5'	7:E:6:LYS:HZ1	1.72	0.55
3:A:88:ARG:O	3:A:89:SER:CB	2.55	0.55
3:A:129:ASN:O	3:A:131:LEU:HD23	2.07	0.55
3:A:165:VAL:HA	3:A:175:VAL:HG12	1.87	0.55
5:C:98:GLN:HA	5:C:101:GLN:CG	2.37	0.55
5:C:136:TRP:CD1	5:C:137:ALA:N	2.75	0.55
6:D:17:MET:O	6:D:21:GLY:HA2	2.06	0.55
6:D:35:VAL:HG11	6:D:88:LYS:HG3	1.89	0.55
8:F:85:ILE:CD1	8:F:89:SER:H	2.19	0.55
9:G:118:ALA:O	9:G:120:SER:N	2.40	0.55
11:I:90:ARG:HA	11:I:121:HIS:CG	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:92:THR:C	11:I:94:GLU:H	2.15	0.55
12:J:121:LEU:C	12:J:123:GLY:N	2.64	0.55
13:K:13:ASN:CG	13:K:13:ASN:O	2.48	0.55
14:L:33:ARG:HD3	14:L:100:VAL:CA	2.37	0.55
16:N:42:ALA:O	16:N:45:TYR:HB2	2.07	0.55
18:P:39:ARG:O	18:P:40:LEU:C	2.50	0.55
20:R:37:LEU:N	20:R:47:VAL:O	2.40	0.55
21:S:143:ILE:O	21:S:143:ILE:HD12	2.07	0.55
26:Y:4:HIS:CB	26:Y:5:PRO:HD3	2.37	0.55
1:X:105:G:O2'	1:X:106:G:H5'	2.07	0.54
1:X:334:G:H5'	5:C:162:ARG:NE	2.23	0.54
1:X:334:G:N7	5:C:164:VAL:HG22	2.22	0.54
1:X:358:C:O5'	1:X:358:C:H6	1.90	0.54
1:X:392:G:N2	1:X:409:G:C4	2.74	0.54
1:X:649:G:C5	1:X:650:U:C5	2.95	0.54
1:X:820:U:OP2	11:I:40:ARG:HD2	2.07	0.54
1:X:1374:G:C2	1:X:1375:C:C6	2.94	0.54
1:X:1439:G:H2'	1:X:1440:G:C8	2.42	0.54
1:X:1507:A:O4'	3:A:99:ASP:HB3	2.07	0.54
1:X:1625:A:O2'	1:X:1632:A:H4'	2.07	0.54
1:X:1791:C:O2	1:X:1791:C:H2'	2.07	0.54
1:X:2179:C:H2'	1:X:2180:U:O4'	2.07	0.54
1:X:2371:A:C4	1:X:2408:G:C6	2.95	0.54
1:X:2383:C:H1'	11:I:65:PHE:HZ	1.71	0.54
6:D:11:GLN:C	6:D:15:ALA:HB2	2.32	0.54
6:D:93:GLY:O	6:D:97:TYR:CD1	2.60	0.54
6:D:96:MET:CG	6:D:97:TYR:N	2.70	0.54
6:D:143:TYR:HA	6:D:146:VAL:CG2	2.37	0.54
11:I:64:GLY:O	11:I:65:PHE:HB2	2.06	0.54
11:I:120:VAL:O	11:I:140:VAL:HA	2.07	0.54
11:I:129:ALA:O	11:I:130:ILE:C	2.48	0.54
13:K:52:ILE:CG1	13:K:53:THR:N	2.71	0.54
14:L:46:SER:O	14:L:47:ARG:C	2.50	0.54
19:Q:8:GLN:HB2	19:Q:28:TRP:O	2.06	0.54
20:R:93:ARG:O	20:R:95:ARG:CD	2.55	0.54
22:T:80:SER:C	22:T:81:ILE:HD13	2.33	0.54
23:U:29:GLY:N	23:U:32:ARG:HB3	2.22	0.54
24:V:7:ARG:C	24:V:9:LEU:H	2.15	0.54
25:W:44:VAL:O	25:W:46:THR:N	2.40	0.54
1:X:214:C:H2'	1:X:215:G:H8	1.71	0.54
1:X:2226:A:C2	1:X:2227:C:C4	2.94	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2273:C:OP1	14:L:11:LEU:HD11	2.06	0.54
1:X:2342:U:O2'	1:X:2343:C:H5'	2.08	0.54
1:X:2815:C:C4'	13:K:92:GLY:HA3	2.37	0.54
1:X:2872:U:O2'	1:X:2873:G:H5'	2.07	0.54
2:Z:16:U:H1'	2:Z:109:G:H21	1.71	0.54
2:Z:71:G:H2'	2:Z:71:G:N3	2.21	0.54
3:A:43:ARG:O	3:A:44:ASN:HB3	2.06	0.54
5:C:95:LEU:CD2	5:C:96:PRO:HD2	2.36	0.54
6:D:70:ALA:O	6:D:72:LYS:N	2.40	0.54
6:D:77:PHE:N	6:D:77:PHE:CD1	2.75	0.54
7:E:109:TYR:CE1	7:E:152:ARG:NH2	2.73	0.54
10:H:85:ASP:HB3	15:M:87:LEU:HD12	1.89	0.54
12:J:77:LYS:H	12:J:89:GLY:HA3	1.70	0.54
12:J:121:LEU:O	12:J:123:GLY:N	2.41	0.54
13:K:33:ARG:HG3	13:K:114:GLU:CB	2.31	0.54
16:N:25:TRP:CE3	16:N:26:GLY:N	2.76	0.54
30:4:25:VAL:HG21	30:4:34:GLN:HB2	1.89	0.54
1:X:29:U:O2'	16:N:8:ILE:HG22	2.08	0.54
1:X:226:C:OP2	1:X:2373:C:O2'	2.25	0.54
1:X:303:C:H3'	1:X:304:A:H5"	1.89	0.54
1:X:340:G:H5'	1:X:341:A:OP2	2.07	0.54
1:X:412:U:C5	23:U:68:ARG:NH1	2.75	0.54
1:X:512:A:O2'	18:P:15:LYS:HD3	2.07	0.54
1:X:664:C:H5'	1:X:664:C:H6	1.72	0.54
1:X:749:C:O2'	1:X:750:C:H5'	2.08	0.54
1:X:1367:A:C8	1:X:1368:G:C8	2.95	0.54
1:X:1374:G:C2	1:X:1375:C:C5	2.95	0.54
1:X:1468:A:C8	1:X:1468:A:P	3.01	0.54
1:X:1576:G:C6	1:X:1577:G:N7	2.75	0.54
1:X:1826:U:O4'	1:X:1952:A:C2	2.60	0.54
1:X:1947:G:C2	1:X:1950:C:C5	2.95	0.54
1:X:2245:A:C2	1:X:2251:U:C5	2.96	0.54
1:X:2345:A:H2'	1:X:2346:G:O4'	2.08	0.54
1:X:2347:C:O2'	1:X:2348:A:H5'	2.08	0.54
1:X:2404:A:OP2	1:X:2406:C:H5'	2.07	0.54
1:X:2777:A:N7	18:P:134:LYS:CD	2.70	0.54
6:D:40:LEU:HG	6:D:150:ARG:NE	2.04	0.54
9:G:106:TYR:O	9:G:110:LEU:HG	2.06	0.54
10:H:110:VAL:HG12	10:H:111:PHE:N	2.21	0.54
11:I:80:LEU:HD22	11:I:84:GLU:OE1	2.06	0.54
12:J:51:CYS:C	12:J:55:MET:HE3	2.32	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:43:GLU:CD	13:K:43:GLU:C	2.75	0.54
14:L:33:ARG:CZ	14:L:99:ARG:O	2.56	0.54
14:L:36:LYS:HA	14:L:36:LYS:HE3	1.89	0.54
15:M:28:ARG:HB2	15:M:29:PRO:HD2	1.90	0.54
19:Q:53:ILE:HD12	19:Q:54:SER:H	1.72	0.54
21:S:60:GLU:HB3	21:S:62:PHE:CZ	2.43	0.54
23:U:20:ARG:HG2	23:U:39:LYS:CD	2.38	0.54
23:U:26:ALA:CB	23:U:35:THR:HG23	2.38	0.54
1:X:14:A:N7	1:X:15:G:C4	2.75	0.54
1:X:211:U:H3	1:X:442:A:N6	2.05	0.54
1:X:320:A:O2'	1:X:340:G:H2'	2.08	0.54
1:X:565:A:H2'	1:X:566:U:C6	2.43	0.54
1:X:590:C:OP1	16:N:33:ARG:HG2	2.06	0.54
1:X:674:U:H2'	1:X:675:C:O4'	2.07	0.54
1:X:754:G:O2'	1:X:755:C:H5'	2.06	0.54
1:X:765:C:O2'	1:X:766:A:OP2	2.22	0.54
1:X:986:A:H4'	16:N:48:ARG:HH11	1.73	0.54
1:X:2504:G:N2	1:X:2518:C:C2	2.75	0.54
1:X:2595:C:O2'	1:X:2596:C:H5'	2.08	0.54
1:X:2615:U:H5'	4:B:80:GLU:HG3	1.89	0.54
2:Z:30:C:P	14:L:37:HIS:HB3	2.46	0.54
4:B:116:VAL:HG22	4:B:136:ARG:CG	2.37	0.54
4:B:121:ASN:C	4:B:122:PHE:O	2.49	0.54
6:D:49:ALA:C	6:D:52:LYS:HB2	2.32	0.54
6:D:57:LEU:HA	6:D:60:ILE:CG1	2.38	0.54
6:D:70:ALA:C	6:D:72:LYS:N	2.65	0.54
7:E:127:GLU:O	7:E:129:THR:N	2.40	0.54
9:G:132:PHE:HB2	9:G:145:HIS:NE2	2.22	0.54
10:H:73:VAL:HG21	10:H:123:PHE:CE1	2.43	0.54
15:M:42:GLY:O	15:M:44:ARG:N	2.41	0.54
17:O:93:ILE:HG13	17:O:95:ILE:HD13	1.88	0.54
18:P:50:VAL:O	18:P:54:GLU:HB2	2.08	0.54
19:Q:41:ALA:O	19:Q:42:ILE:C	2.50	0.54
19:Q:53:ILE:CD1	19:Q:80:VAL:HB	2.36	0.54
21:S:95:SER:HA	21:S:121:GLN:CA	2.27	0.54
24:V:21:ARG:O	24:V:24:GLU:HB3	2.06	0.54
26:Y:17:ASP:C	26:Y:19:ARG:H	2.14	0.54
1:X:398:C:O2'	1:X:399:G:OP2	2.23	0.54
1:X:686:C:N4	1:X:821:A:C6	2.76	0.54
1:X:872:G:OP2	1:X:872:G:H8	1.91	0.54
1:X:970:A:H62	12:J:83:ARG:HH21	1.54	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1174:G:C2	1:X:1175:A:C8	2.96	0.54
1:X:1385:C:C2'	1:X:1386:A:H5'	2.37	0.54
1:X:1541:G:H2'	1:X:1542:G:O4'	2.08	0.54
1:X:1929:U:H2'	1:X:1930:C:C6	2.42	0.54
1:X:1948:C:C4	1:X:1949:A:C5	2.95	0.54
1:X:2405:A:OP1	1:X:2405:A:C8	2.61	0.54
1:X:2541:U:H4'	10:H:23:ARG:NH1	2.22	0.54
1:X:2674:C:H2'	1:X:2675:U:H6	1.72	0.54
3:A:82:ILE:N	3:A:82:ILE:CD1	2.70	0.54
3:A:129:ASN:HB2	3:A:131:LEU:HD22	1.90	0.54
3:A:246:PRO:O	3:A:247:VAL:C	2.50	0.54
4:B:38:THR:O	4:B:40:GLN:N	2.41	0.54
4:B:59:VAL:CG1	4:B:64:GLN:HG2	2.37	0.54
5:C:108:ILE:O	5:C:112:GLN:HG2	2.07	0.54
6:D:97:TYR:CD2	6:D:100:LEU:HD23	2.41	0.54
7:E:7:GLN:H	7:E:8:PRO:CD	2.19	0.54
7:E:150:LYS:C	7:E:152:ARG:N	2.65	0.54
10:H:2:ILE:HG23	10:H:6:SER:HB3	1.89	0.54
12:J:29:ALA:O	12:J:30:PHE:HB2	2.06	0.54
12:J:128:ILE:HD13	12:J:128:ILE:H	1.72	0.54
13:K:29:LEU:HD22	13:K:79:VAL:HG23	1.87	0.54
14:L:97:HIS:CG	14:L:98:GLY:N	2.74	0.54
14:L:102:ALA:O	14:L:105:ASP:N	2.40	0.54
18:P:27:VAL:CG2	18:P:28:ALA:N	2.70	0.54
18:P:27:VAL:CG2	18:P:125:THR:HG22	2.37	0.54
19:Q:24:VAL:HG13	19:Q:80:VAL:O	2.07	0.54
20:R:46:VAL:H	20:R:75:ALA:HB1	1.73	0.54
26:Y:8:LYS:O	26:Y:9:LYS:HG2	2.07	0.54
30:4:7:VAL:HG13	30:4:34:GLN:NE2	2.15	0.54
1:X:59:G:H1'	1:X:73:A:H2	1.72	0.54
1:X:222:G:O2'	1:X:223:C:H5'	2.08	0.54
1:X:332:C:H4'	5:C:159:ARG:HG2	1.90	0.54
1:X:986:A:C6	1:X:1001:A:C8	2.95	0.54
1:X:1006:C:H4'	1:X:1007:A:OP1	2.06	0.54
1:X:1341:G:H2'	1:X:1343:C:C5	2.43	0.54
1:X:1373:G:H21	1:X:1374:G:H1'	1.71	0.54
1:X:1623:C:O2'	1:X:1624:A:OP2	2.24	0.54
1:X:2035:G:N2	1:X:2036:G:H1'	2.23	0.54
1:X:2196:U:H2'	1:X:2197:U:C1'	2.38	0.54
1:X:2306:A:H2'	1:X:2307:A:N9	2.23	0.54
1:X:2311:U:O2	1:X:2311:U:H3'	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2366:U:H1'	22:T:41:ARG:HH11	1.72	0.54
1:X:2437:G:H2'	1:X:2469:G:N1	2.22	0.54
1:X:2451:G:C2'	1:X:2454:C:H42	2.20	0.54
1:X:2541:U:O2'	1:X:2542:U:H5'	2.08	0.54
1:X:2664:G:O2'	1:X:2665:G:H5'	2.08	0.54
2:Z:27:A:N6	2:Z:55:C:O3'	2.41	0.54
2:Z:75:A:N1	21:S:29:ASN:CG	2.66	0.54
4:B:85:ALA:N	4:B:86:PRO:CD	2.62	0.54
5:C:164:VAL:C	5:C:166:TRP:H	2.13	0.54
5:C:170:LEU:CD2	5:C:175:VAL:HA	2.28	0.54
6:D:171:GLN:NE2	6:D:177:PHE:HB2	2.22	0.54
7:E:89:LEU:CD1	7:E:105:MET:HE1	2.38	0.54
9:G:35:LYS:N	9:G:69:ASP:OD2	2.41	0.54
11:I:73:GLU:OE2	11:I:104:ARG:HB3	2.08	0.54
12:J:48:ILE:C	12:J:50:ALA:H	2.15	0.54
14:L:33:ARG:CZ	14:L:100:VAL:HA	2.37	0.54
14:L:89:PHE:CD2	14:L:108:ARG:NH1	2.76	0.54
15:M:26:ASP:O	15:M:27:PHE:CD2	2.61	0.54
17:O:95:ILE:HD13	17:O:95:ILE:N	2.21	0.54
18:P:13:GLN:O	18:P:14:ARG:C	2.48	0.54
19:Q:10:PRO:HD3	24:V:30:PHE:CE2	2.42	0.54
22:T:59:LEU:HD22	22:T:59:LEU:N	2.22	0.54
1:X:62:U:H5"	1:X:63:A:OP1	2.08	0.54
1:X:538:A:N3	1:X:538:A:C3'	2.67	0.54
1:X:557:U:C4'	1:X:558:G:O4'	2.50	0.54
1:X:754:G:C6	1:X:770:U:O2	2.61	0.54
1:X:930:A:C8	1:X:930:A:H3'	2.42	0.54
1:X:1086:C:H3'	1:X:1087:C:C5'	2.38	0.54
1:X:1141:U:O2'	1:X:1142:G:O5'	2.25	0.54
1:X:1148:G:H21	9:G:134:MET:CE	2.02	0.54
1:X:1301:U:O2'	1:X:1302:C:P	2.66	0.54
1:X:1347:C:O5'	1:X:1347:C:H6	1.90	0.54
1:X:1364:C:O2'	1:X:1587:A:H1'	2.08	0.54
1:X:1672:A:H3'	1:X:1673:C:C6	2.43	0.54
1:X:1873:A:H8	1:X:1873:A:H3'	1.72	0.54
1:X:2005:U:C4'	1:X:2006:G:OP1	2.54	0.54
1:X:2307:A:OP2	1:X:2307:A:H8	1.91	0.54
2:Z:66:G:O2'	2:Z:67:C:H5'	2.07	0.54
2:Z:77:G:H1'	21:S:22:VAL:HG11	1.89	0.54
3:A:117:VAL:HG22	3:A:129:ASN:OD1	2.07	0.54
3:A:175:VAL:O	3:A:182:LEU:HA	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:170:LEU:HB3	4:B:184:VAL:HG11	1.88	0.54
5:C:9:GLN:NE2	5:C:120:VAL:HG21	2.22	0.54
5:C:48:ARG:C	5:C:50:GLN:N	2.65	0.54
5:C:74:VAL:CG2	5:C:76:THR:H	2.21	0.54
8:F:129:ALA:O	8:F:130:GLY:C	2.48	0.54
9:G:104:THR:HG1	9:G:110:LEU:HB3	1.72	0.54
9:G:128:GLU:O	9:G:130:ALA:N	2.33	0.54
10:H:124:MET:O	10:H:125:LYS:C	2.49	0.54
12:J:36:ILE:CD1	12:J:103:VAL:HG22	2.37	0.54
13:K:29:LEU:CD1	13:K:70:ILE:HD11	2.38	0.54
15:M:34:ARG:HH21	15:M:91:VAL:HG21	1.72	0.54
15:M:50:PHE:CE1	15:M:79:ARG:HG2	2.42	0.54
16:N:28:ARG:HA	16:N:34:ASN:HB3	1.90	0.54
16:N:34:ASN:O	16:N:35:ALA:C	2.50	0.54
19:Q:59:PRO:HB2	19:Q:72:ARG:NH1	2.22	0.54
19:Q:66:GLY:C	19:Q:68:PHE:N	2.58	0.54
20:R:38:LEU:HD23	20:R:39:ALA:H	1.69	0.54
20:R:108:VAL:C	20:R:110:SER:N	2.66	0.54
21:S:79:ILE:HD13	21:S:79:ILE:C	2.32	0.54
23:U:41:VAL:O	23:U:42:GLN:HB2	2.07	0.54
30:4:17:VAL:HG12	30:4:18:ARG:N	2.22	0.54
1:X:26:G:C6	1:X:27:G:N1	2.76	0.54
1:X:76:C:OP1	24:V:52:GLN:NE2	2.41	0.54
1:X:104:C:O2'	1:X:105:G:H5'	2.08	0.54
1:X:110:U:C5	1:X:111:G:C5	2.95	0.54
1:X:182:G:O2'	1:X:183:U:OP2	2.21	0.54
1:X:242:A:N6	1:X:440:U:O2'	2.41	0.54
1:X:342:G:O2'	1:X:343:A:OP1	2.26	0.54
1:X:532:A:C2	1:X:533:C:C2	2.95	0.54
1:X:641:G:H4'	1:X:651:C:O2'	2.08	0.54
1:X:999:A:OP1	25:W:7:ARG:HD3	2.08	0.54
1:X:1182:U:H2'	1:X:1183:C:O4'	2.08	0.54
1:X:1201:G:H5"	17:O:80:TYR:HE2	1.73	0.54
1:X:2275:U:H4'	1:X:2276:C:H5'	1.90	0.54
1:X:2333:A:N6	1:X:2343:C:N4	2.55	0.54
1:X:2726:U:C2'	7:E:139:GLN:HE21	2.21	0.54
1:X:2812:A:C4	1:X:2813:G:C8	2.96	0.54
4:B:119:ARG:HG2	4:B:120:TRP:NE1	2.23	0.54
5:C:153:ASP:HA	5:C:158:ARG:HH21	1.73	0.54
6:D:156:ILE:HD12	6:D:156:ILE:N	2.23	0.54
7:E:88:GLU:N	7:E:163:ARG:O	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:172:LYS:O	7:E:173:ALA:HB2	2.05	0.54
9:G:69:ASP:O	9:G:70:PHE:HB2	2.07	0.54
11:I:38:LYS:O	11:I:39:SER:HB2	2.07	0.54
11:I:47:ALA:O	11:I:49:PHE:N	2.40	0.54
11:I:58:ALA:C	11:I:60:LEU:H	2.16	0.54
11:I:72:TYR:CE2	11:I:105:PRO:HB2	2.43	0.54
14:L:45:ASP:O	14:L:46:SER:O	2.25	0.54
15:M:59:GLY:HA3	15:M:64:LYS:HA	1.89	0.54
18:P:31:VAL:HG21	18:P:124:ILE:HG12	1.90	0.54
20:R:96:LYS:H	20:R:105:ARG:H	1.56	0.54
21:S:152:ILE:HG12	21:S:168:VAL:HG21	1.90	0.54
1:X:187:U:H2'	1:X:188:G:H8	1.73	0.54
1:X:511:A:H8	1:X:511:A:OP1	1.91	0.54
1:X:554:U:O2	1:X:554:U:H2'	2.08	0.54
1:X:568:G:C2'	1:X:569:C:H5'	2.38	0.54
1:X:1272:G:O2'	1:X:1273:G:H5'	2.08	0.54
1:X:1323:G:H3'	1:X:1324:G:C2	2.43	0.54
1:X:1354:A:H2'	1:X:1410:U:O2'	2.07	0.54
1:X:1431:U:O3'	1:X:1604:A:H4'	2.08	0.54
1:X:1725:C:O2'	1:X:1726:C:H5'	2.07	0.54
1:X:1922:U:H4'	1:X:1923:U:OP2	2.08	0.54
1:X:2181:A:O2'	1:X:2182:A:H5'	2.07	0.54
1:X:2344:G:OP1	22:T:55:ARG:N	2.35	0.54
1:X:2616:U:O2	1:X:2762:G:C2	2.61	0.54
2:Z:46:G:C5'	6:D:92:ARG:HH22	2.18	0.54
2:Z:107:C:H5"	21:S:84:TYR:CD1	2.43	0.54
3:A:147:LEU:O	3:A:148:VAL:HG23	2.08	0.54
4:B:179:GLU:C	4:B:181:LEU:H	2.13	0.54
5:C:116:LYS:O	5:C:117:LEU:CB	2.56	0.54
5:C:118:VAL:O	5:C:119:ALA:HB2	2.07	0.54
7:E:101:LYS:O	7:E:123:PHE:HD1	1.91	0.54
7:E:149:ARG:HA	7:E:162:VAL:HG21	1.90	0.54
9:G:67:ARG:CZ	9:G:70:PHE:O	2.56	0.54
9:G:163:PRO:C	9:G:164:GLN:O	2.46	0.54
10:H:81:ILE:O	10:H:81:ILE:HD13	2.08	0.54
11:I:104:ARG:HB3	11:I:105:PRO:HD2	1.89	0.54
16:N:21:ALA:O	16:N:22:LYS:C	2.50	0.54
16:N:74:MET:O	16:N:75:ASN:CB	2.53	0.54
17:O:16:GLU:O	17:O:17:GLY:C	2.51	0.54
18:P:41:VAL:C	18:P:43:ASP:N	2.63	0.54
20:R:22:VAL:HG12	20:R:23:ILE:H	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:40:LEU:O	20:R:44:GLN:HA	2.08	0.54
23:U:19:ILE:HG13	23:U:20:ARG:N	2.23	0.54
1:X:63:A:H5'	19:Q:71:GLN:HB3	1.89	0.54
1:X:306:G:C6	1:X:307:C:N4	2.76	0.54
1:X:448:C:H2'	1:X:449:C:H5'	1.90	0.54
1:X:613:A:O2'	1:X:614:G:P	2.66	0.54
1:X:877:G:H21	1:X:879:A:N6	2.05	0.54
1:X:1209:G:O2'	1:X:1210:C:H5'	2.08	0.54
1:X:1278:A:O2'	1:X:1279:G:P	2.66	0.54
1:X:1438:G:H2'	1:X:1439:G:C8	2.43	0.54
1:X:1658:A:N7	1:X:1659:G:C5	2.76	0.54
1:X:1713:G:O6	1:X:1714:A:C6	2.61	0.54
1:X:1714:A:C5'	1:X:1715:A:H3'	2.38	0.54
1:X:1742:G:C6	1:X:1743:C:N4	2.76	0.54
1:X:1838:G:N2	1:X:1878:C:C2	2.76	0.54
1:X:1873:A:C8	1:X:1873:A:H3'	2.43	0.54
1:X:2245:A:O2'	1:X:2246:A:OP2	2.23	0.54
1:X:2306:A:H2'	1:X:2307:A:C1'	2.37	0.54
1:X:2585:C:C2'	1:X:2586:G:H5'	2.38	0.54
4:B:116:VAL:CG2	4:B:136:ARG:HG2	2.38	0.54
5:C:34:GLN:HE22	5:C:177:VAL:HB	1.72	0.54
5:C:136:TRP:HD1	5:C:137:ALA:N	2.06	0.54
9:G:100:TYR:C	9:G:100:TYR:CD1	2.86	0.54
12:J:99:LYS:HG3	12:J:100:PRO:HD2	1.90	0.54
14:L:91:ARG:H	14:L:91:ARG:NE	2.06	0.54
16:N:42:ALA:O	16:N:46:GLU:HG3	2.08	0.54
16:N:79:PHE:CE2	16:N:83:LEU:HD22	2.43	0.54
18:P:42:VAL:O	18:P:43:ASP:OD2	2.26	0.54
18:P:89:ARG:NE	18:P:132:GLY:H	2.06	0.54
21:S:20:ALA:O	21:S:80:HIS:HA	2.07	0.54
1:X:196:A:H2'	1:X:197:G:H5'	1.89	0.53
1:X:398:C:C2'	1:X:399:G:OP2	2.56	0.53
1:X:425:A:H2'	1:X:425:A:N3	2.22	0.53
1:X:820:U:H2'	1:X:821:A:C8	2.43	0.53
1:X:931:G:C6	1:X:932:G:C5	2.95	0.53
1:X:1080:A:H4'	1:X:1081:A:N7	2.23	0.53
1:X:1479:G:O2'	1:X:1480:G:H5'	2.08	0.53
1:X:1854:G:H2'	1:X:1855:G:H8	1.73	0.53
1:X:1937:G:O2'	1:X:1939:U:H5	1.92	0.53
1:X:2204:A:O2'	1:X:2205:C:OP2	2.21	0.53
1:X:2225:G:C4	1:X:2226:A:N7	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2672:U:O2'	1:X:2673:G:H5'	2.09	0.53
1:X:2840:U:OP2	1:X:2841:U:H2'	2.09	0.53
1:X:2867:G:OP2	1:X:2867:G:H8	1.90	0.53
2:Z:15:A:C2	2:Z:71:G:H2'	2.44	0.53
2:Z:30:C:H2'	2:Z:31:A:H5'	1.90	0.53
2:Z:70:C:H2'	2:Z:71:G:C8	2.43	0.53
3:A:32:ALA:O	3:A:33:LEU:O	2.26	0.53
3:A:172:TYR:HA	3:A:185:VAL:O	2.08	0.53
4:B:15:TRP:CH2	15:M:84:ALA:HB3	2.42	0.53
4:B:44:TYR:OH	4:B:80:GLU:OE2	2.26	0.53
5:C:158:ARG:O	5:C:160:ALA:N	2.42	0.53
9:G:34:PRO:C	9:G:69:ASP:OD1	2.51	0.53
9:G:71:THR:HA	16:N:64:ARG:HH11	1.73	0.53
10:H:7:ARG:NH1	10:H:20:MET:CE	2.71	0.53
11:I:88:PHE:CB	11:I:93:LEU:HD12	2.25	0.53
13:K:97:ILE:N	13:K:97:ILE:CD1	2.72	0.53
15:M:34:ARG:NH1	15:M:81:PHE:CD2	2.76	0.53
16:N:64:ARG:C	16:N:66:ASN:N	2.64	0.53
19:Q:5:ASP:O	19:Q:7:LEU:N	2.41	0.53
19:Q:20:MET:O	19:Q:21:GLU:C	2.51	0.53
21:S:2:GLU:HG2	21:S:55:THR:CB	2.32	0.53
21:S:100:THR:HG23	21:S:138:VAL:CG1	2.34	0.53
23:U:28:GLY:O	23:U:30:VAL:N	2.41	0.53
26:Y:58:LEU:H	26:Y:58:LEU:HD12	1.73	0.53
1:X:38:G:N3	5:C:42:THR:HB	2.23	0.53
1:X:573:C:H5"	17:O:74:TYR:OH	2.09	0.53
1:X:665:A:H2	1:X:666:U:H6	1.56	0.53
1:X:763:A:H2'	1:X:764:A:H5"	1.89	0.53
1:X:807:A:O2'	1:X:808:C:H5'	2.08	0.53
1:X:1071:U:H4'	1:X:1072:U:O5'	2.08	0.53
1:X:1781:C:O2'	3:A:209:ALA:HB2	2.08	0.53
1:X:1965:U:C2	1:X:1966:C:C5	2.96	0.53
1:X:2198:U:P	1:X:2199:C:H5"	2.48	0.53
1:X:2379:G:H2'	1:X:2380:U:H5'	1.89	0.53
1:X:2496:C:H2'	1:X:2521:A:H62	1.73	0.53
2:Z:7:C:H2'	2:Z:8:C:C6	2.43	0.53
3:A:186:HIS:CD2	3:A:188:GLU:HB2	2.42	0.53
6:D:10:ASP:O	6:D:12:VAL:N	2.41	0.53
6:D:75:SER:O	6:D:76:ASN:C	2.50	0.53
6:D:171:GLN:C	6:D:173:MET:N	2.66	0.53
7:E:21:ASP:C	7:E:23:VAL:H	2.15	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:63:ARG:CZ	9:G:144:MET:HE1	2.37	0.53
11:I:86:THR:C	11:I:88:PHE:N	2.67	0.53
13:K:64:ARG:O	13:K:67:ALA:HB3	2.08	0.53
15:M:5:ILE:HD13	15:M:7:ILE:CB	2.38	0.53
17:O:28:GLU:O	17:O:29:ALA:CB	2.56	0.53
19:Q:57:ASN:C	19:Q:58:VAL:HG23	2.33	0.53
20:R:60:PRO:CA	20:R:65:PRO:HA	2.31	0.53
20:R:107:ALA:CB	20:R:111:GLY:HA2	2.34	0.53
21:S:11:LYS:O	21:S:13:LYS:N	2.40	0.53
21:S:16:GLU:CD	21:S:16:GLU:H	2.16	0.53
21:S:123:VAL:HG23	21:S:161:ALA:CB	2.38	0.53
1:X:171:G:C6	1:X:179:U:O2	2.61	0.53
1:X:177:U:C4	1:X:225:G:C2	2.96	0.53
1:X:717:G:C2'	1:X:739:G:N2	2.72	0.53
1:X:819:C:OP2	11:I:41:SER:HA	2.08	0.53
1:X:946:U:H2'	1:X:947:C:C6	2.30	0.53
1:X:1171:A:C1'	17:O:6:GLN:OE1	2.56	0.53
1:X:1218:C:O4'	11:I:13:ARG:HD3	2.08	0.53
1:X:1430:G:C2	1:X:1431:U:C2	2.96	0.53
1:X:1502:G:O2'	1:X:1503:G:H5'	2.07	0.53
1:X:1769:U:C5	1:X:1775:A:C4	2.97	0.53
2:Z:3:A:C2'	2:Z:4:C:H5"	2.37	0.53
2:Z:7:C:H2'	2:Z:8:C:H6	1.74	0.53
2:Z:67:C:C2'	2:Z:111:C:H42	2.18	0.53
3:A:70:ARG:O	3:A:72:LYS:N	2.41	0.53
3:A:217:ARG:CD	3:A:218:LYS:HG3	2.39	0.53
3:A:247:VAL:C	3:A:248:THR:O	2.48	0.53
5:C:65:GLY:C	5:C:66:ASN:HD22	2.15	0.53
7:E:44:ARG:HD2	7:E:45:GLN:N	2.24	0.53
9:G:162:LYS:H	9:G:163:PRO:CD	2.21	0.53
10:H:5:GLN:HA	10:H:20:MET:HE2	1.89	0.53
10:H:11:ALA:HB3	10:H:110:VAL:HG13	1.89	0.53
12:J:78:LYS:HE3	12:J:80:ALA:O	2.08	0.53
15:M:54:VAL:HG12	15:M:54:VAL:O	2.08	0.53
16:N:62:ILE:HG23	16:N:76:TYR:CE1	2.44	0.53
18:P:87:GLU:HA	18:P:90:LEU:CD1	2.36	0.53
19:Q:28:TRP:CZ3	19:Q:75:ARG:HD2	2.42	0.53
19:Q:63:LYS:HB2	19:Q:70:GLY:H	1.73	0.53
25:W:38:PRO:CA	25:W:41:ARG:NH2	2.71	0.53
1:X:700:C:H2'	1:X:701:U:O4'	2.09	0.53
1:X:828:C:C2	1:X:1207:G:C2	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:874:A:C4	1:X:929:A:C6	2.97	0.53
1:X:933:G:O2'	1:X:934:G:H5'	2.08	0.53
1:X:1242:A:O2'	1:X:1243:G:H5'	2.08	0.53
1:X:1288:A:O2'	1:X:1289:A:P	2.67	0.53
1:X:1757:C:N3	1:X:1970:G:C6	2.76	0.53
1:X:2380:U:C4	1:X:2381:A:H2	2.26	0.53
1:X:2508:G:O5'	1:X:2509:A:H5"	2.07	0.53
1:X:2740:C:C2'	1:X:2741:G:H5'	2.38	0.53
1:X:2862:G:O2'	1:X:2863:U:H5'	2.08	0.53
4:B:68:ALA:O	4:B:71:GLY:N	2.37	0.53
5:C:24:SER:O	5:C:25:GLY:C	2.50	0.53
5:C:127:ASP:O	5:C:129:LYS:N	2.42	0.53
7:E:78:GLY:C	7:E:80:SER:H	2.15	0.53
7:E:137:ASP:HB3	7:E:140:LEU:CB	2.38	0.53
8:F:116:LEU:HG	8:F:127:THR:HG21	1.90	0.53
9:G:65:LYS:HB2	9:G:66:HIS:CD2	2.43	0.53
9:G:125:ARG:O	9:G:126:VAL:C	2.51	0.53
12:J:77:LYS:HG3	12:J:78:LYS:N	2.23	0.53
14:L:59:LEU:HD23	14:L:60:LYS:H	1.74	0.53
19:Q:8:GLN:O	19:Q:9:ALA:HB2	2.06	0.53
20:R:85:ASP:H	20:R:86:PRO:HD3	1.71	0.53
23:U:22:GLY:N	23:U:39:LYS:HE2	2.24	0.53
1:X:90:G:H5'	1:X:91:A:H8	1.73	0.53
1:X:93:A:O2'	1:X:94:C:H5'	2.08	0.53
1:X:389:G:C4	1:X:390:U:C5	2.97	0.53
1:X:453:U:O2'	5:C:40:ARG:NH1	2.42	0.53
1:X:691:C:H2'	1:X:692:C:H6	1.73	0.53
1:X:960:U:H2'	1:X:961:G:H8	1.73	0.53
1:X:984:A:H1'	1:X:1202:U:N1	2.22	0.53
1:X:984:A:C4	1:X:1202:U:C4	2.97	0.53
1:X:1235:C:C2	1:X:1241:G:N2	2.77	0.53
1:X:1542:G:H22	1:X:1562:G:H22	1.56	0.53
1:X:1617:G:OP2	19:Q:56:MET:HE1	2.09	0.53
1:X:2468:G:H2'	1:X:2469:G:O4'	2.09	0.53
1:X:2629:U:H2'	1:X:2630:C:H6	1.73	0.53
1:X:2676:G:H2'	1:X:2677:U:C6	2.43	0.53
3:A:148:VAL:O	3:A:149:PRO:C	2.51	0.53
4:B:96:PHE:CE2	4:B:102:ILE:HG21	2.42	0.53
6:D:94:GLU:O	6:D:98:VAL:N	2.41	0.53
6:D:132:ILE:H	6:D:153:ASP:HA	1.74	0.53
7:E:8:PRO:HD2	7:E:69:ARG:HH11	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:43:VAL:CG2	7:E:50:LEU:HD21	2.38	0.53
9:G:132:PHE:CD1	9:G:145:HIS:HB2	2.43	0.53
10:H:41:ASN:O	10:H:42:LYS:O	2.26	0.53
13:K:63:ARG:CZ	13:K:80:MET:HG2	2.38	0.53
13:K:99:ARG:CG	13:K:99:ARG:NH1	2.68	0.53
16:N:32:TYR:CE1	16:N:36:PHE:HB2	2.43	0.53
17:O:32:LYS:O	17:O:57:GLN:HA	2.08	0.53
19:Q:60:GLY:H	19:Q:72:ARG:CD	2.21	0.53
20:R:94:VAL:O	20:R:95:ARG:NH1	2.40	0.53
23:U:49:LYS:HA	23:U:62:LEU:H	1.72	0.53
25:W:22:ALA:O	25:W:23:LEU:C	2.51	0.53
25:W:34:VAL:HG22	25:W:40:VAL:HG13	1.91	0.53
30:4:10:MET:HE3	30:4:32:HIS:HA	1.89	0.53
1:X:71:A:N6	1:X:110:U:H5"	2.24	0.53
1:X:143:A:O2'	1:X:144:U:H5'	2.08	0.53
1:X:574:C:P	17:O:77:GLY:HA2	2.48	0.53
1:X:578:U:O2'	1:X:994:A:N1	2.40	0.53
1:X:715:U:O2'	1:X:716:U:H5'	2.08	0.53
1:X:919:U:H2'	1:X:920:G:H8	1.74	0.53
1:X:955:G:H3'	1:X:955:G:N3	2.23	0.53
1:X:1510:A:H2'	1:X:1511:A:C8	2.43	0.53
1:X:1548:U:H2'	1:X:1549:C:C6	2.43	0.53
1:X:1753:A:O5'	1:X:1753:A:C8	2.60	0.53
1:X:1960:A:H8	1:X:1960:A:O5'	1.92	0.53
1:X:2189:A:O5'	1:X:2189:A:C8	2.62	0.53
1:X:2522:G:H2'	1:X:2523:G:O4'	2.09	0.53
1:X:2714:A:H2'	1:X:2715:C:O4'	2.08	0.53
1:X:2796:A:H2'	1:X:2797:G:H8	1.70	0.53
3:A:197:GLY:O	3:A:199:ALA:N	2.41	0.53
4:B:54:LYS:HB2	4:B:75:THR:O	2.08	0.53
4:B:107:THR:HA	4:B:163:GLU:O	2.09	0.53
8:F:72:THR:HG23	8:F:77:TYR:CD2	2.44	0.53
8:F:85:ILE:CD1	8:F:89:SER:N	2.71	0.53
9:G:32:TYR:HD2	16:N:100:ALA:HB1	1.74	0.53
10:H:125:LYS:O	10:H:129:LEU:HD23	2.09	0.53
11:I:102:LYS:C	11:I:104:ARG:H	2.17	0.53
13:K:57:GLY:O	13:K:59:ASP:N	2.39	0.53
14:L:31:VAL:HB	14:L:38:ILE:CD1	2.21	0.53
14:L:89:PHE:HD1	14:L:91:ARG:HH12	1.57	0.53
16:N:75:ASN:O	16:N:79:PHE:HB3	2.09	0.53
18:P:72:LEU:O	18:P:73:ASN:C	2.52	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:16:ALA:C	19:Q:19:ALA:H	2.17	0.53
19:Q:26:SER:HA	19:Q:78:ALA:O	2.09	0.53
19:Q:63:LYS:HD2	19:Q:64:ARG:H	1.73	0.53
20:R:8:SER:O	20:R:11:ASN:N	2.42	0.53
20:R:25:LEU:HD12	20:R:80:LYS:HA	1.89	0.53
20:R:45:LYS:HB3	20:R:75:ALA:HB1	1.91	0.53
20:R:84:VAL:HG11	20:R:88:THR:N	2.24	0.53
30:4:13:ASN:O	30:4:15:LYS:HG2	2.09	0.53
1:X:617:U:C5	1:X:632:A:N1	2.76	0.53
1:X:699:G:H4'	1:X:700:C:OP2	2.07	0.53
1:X:1325:U:O2'	1:X:1327:C:C5	2.61	0.53
1:X:1585:A:H4'	3:A:59:LYS:NZ	2.23	0.53
1:X:1656:U:C2'	1:X:1657:A:H5"	2.39	0.53
1:X:1703:C:H2'	1:X:1704:G:O4'	2.09	0.53
1:X:1935:A:N3	10:H:22:ILE:HD11	2.23	0.53
1:X:2069:U:H2'	1:X:2070:G:C8	2.44	0.53
1:X:2482:A:C2'	32:X:2911:ZLD:H13B	2.39	0.53
1:X:2489:C:C4	1:X:2490:U:C5	2.97	0.53
1:X:2581:A:C5'	1:X:2582:G:OP2	2.57	0.53
1:X:2738:A:C2'	1:X:2739:G:H5'	2.39	0.53
2:Z:3:A:C2'	2:Z:4:C:C5'	2.86	0.53
4:B:9:ILE:CD1	4:B:27:LEU:HB3	2.38	0.53
4:B:119:ARG:NH1	4:B:119:ARG:CG	2.68	0.53
5:C:4:ILE:HA	5:C:13:ARG:NH2	2.18	0.53
5:C:8:GLY:O	5:C:9:GLN:HB3	2.09	0.53
6:D:69:LYS:HG2	6:D:84:PRO:CA	2.39	0.53
9:G:61:ARG:HG2	9:G:65:LYS:HZ3	1.74	0.53
10:H:23:ARG:CG	10:H:23:ARG:NH2	2.69	0.53
11:I:32:ARG:NH2	17:O:81:ARG:NE	2.56	0.53
11:I:58:ALA:C	11:I:60:LEU:N	2.66	0.53
12:J:89:GLY:O	12:J:90:ALA:C	2.52	0.53
14:L:70:ALA:O	14:L:74:ALA:CB	2.57	0.53
20:R:8:SER:C	20:R:10:HIS:H	2.17	0.53
22:T:22:GLY:O	22:T:39:ARG:O	2.27	0.53
24:V:7:ARG:NH1	24:V:8:ASN:HA	2.23	0.53
1:X:163:A:O2'	1:X:164:G:H5'	2.08	0.53
1:X:831:G:C2	1:X:1204:G:O6	2.61	0.53
1:X:1070:G:C5'	1:X:1071:U:H3'	2.39	0.53
1:X:1264:C:C5'	16:N:13:ARG:HH12	2.21	0.53
1:X:1679:U:H2'	1:X:1680:U:O4'	2.09	0.53
1:X:1733:U:OP2	1:X:1733:U:H6	1.92	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1837:G:O2'	1:X:1838:G:H5'	2.09	0.53
1:X:2615:U:O5'	4:B:80:GLU:HG3	2.08	0.53
2:Z:45:C:C2'	6:D:92:ARG:CZ	2.85	0.53
3:A:116:THR:OG1	3:A:117:VAL:N	2.41	0.53
3:A:187:SER:O	3:A:189:CYS:N	2.42	0.53
3:A:210:GLY:C	3:A:212:SER:N	2.60	0.53
5:C:18:PRO:HG2	5:C:105:ALA:CB	2.22	0.53
5:C:192:ALA:O	5:C:195:ILE:CG1	2.56	0.53
6:D:143:TYR:O	6:D:146:VAL:HG22	2.08	0.53
7:E:90:ARG:CD	7:E:163:ARG:HH11	2.22	0.53
9:G:138:GLY:O	9:G:142:ARG:HG3	2.08	0.53
9:G:168:THR:O	9:G:169:GLN:O	2.27	0.53
14:L:80:ALA:C	14:L:82:LYS:N	2.67	0.53
15:M:10:GLY:O	15:M:13:LEU:HB2	2.09	0.53
16:N:52:ASN:O	16:N:54:LYS:N	2.42	0.53
20:R:16:PHE:CE2	20:R:80:LYS:NZ	2.77	0.53
20:R:98:ILE:N	20:R:98:ILE:HD12	2.23	0.53
21:S:32:PHE:HD2	21:S:32:PHE:N	2.06	0.53
22:T:42:GLY:O	22:T:57:HIS:CB	2.56	0.53
23:U:8:THR:HA	23:U:14:VAL:HG22	1.91	0.53
1:X:572:G:N7	1:X:2001:G:C6	2.77	0.53
1:X:717:G:H2'	1:X:739:G:N2	2.21	0.53
1:X:824:U:H1'	1:X:1264:C:O4'	2.09	0.53
1:X:1074:G:H2'	1:X:1075:C:C6	2.44	0.53
1:X:1103:C:N4	1:X:1111:C:H42	2.07	0.53
1:X:1275:A:N3	26:Y:10:LYS:HE2	2.24	0.53
1:X:1278:A:HO2'	1:X:1279:G:P	2.31	0.53
1:X:1301:U:H6	1:X:1301:U:OP2	1.92	0.53
1:X:1505:U:H1'	1:X:1506:C:C5	2.44	0.53
1:X:1511:A:H2'	1:X:1512:A:O4'	2.08	0.53
1:X:1514:C:O4'	1:X:1593:C:C5'	2.57	0.53
1:X:1526:U:H2'	1:X:1527:G:H5'	1.91	0.53
1:X:1790:G:C8	1:X:1811:A:N6	2.77	0.53
1:X:1877:C:H2'	1:X:1878:C:C6	2.44	0.53
1:X:2082:C:H2'	1:X:2083:G:H5'	1.91	0.53
1:X:2284:U:H3'	1:X:2284:U:C6	2.44	0.53
1:X:2467:A:H8	1:X:2467:A:O5'	1.92	0.53
1:X:2700:U:C2	1:X:2701:A:C8	2.96	0.53
2:Z:45:C:C2'	6:D:92:ARG:NH1	2.72	0.53
3:A:239:ARG:O	3:A:240:THR:HB	2.09	0.53
8:F:112:LYS:O	8:F:113:MET:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:69:ILE:HD13	12:J:104:MET:CG	2.39	0.53
13:K:25:ALA:HB2	13:K:47:PHE:HE2	1.74	0.53
16:N:87:ASN:HD22	16:N:87:ASN:C	2.17	0.53
16:N:114:ARG:HB3	16:N:114:ARG:CZ	2.39	0.53
21:S:64:ALA:HA	21:S:86:VAL:H	1.73	0.53
22:T:41:ARG:HE	22:T:41:ARG:HA	1.74	0.53
23:U:29:GLY:H	23:U:32:ARG:HB3	1.73	0.53
23:U:50:ALA:CB	23:U:52:ARG:NH2	2.68	0.53
26:Y:42:SER:O	26:Y:43:HIS:CB	2.51	0.53
1:X:10:A:N1	1:X:2608:A:C2	2.77	0.53
1:X:554:U:O3'	1:X:555:U:C4'	2.57	0.53
1:X:576:A:C2	1:X:577:U:H1'	2.44	0.53
1:X:689:A:C2	1:X:690:A:C8	2.96	0.53
1:X:841:G:N7	1:X:842:A:N6	2.56	0.53
1:X:1219:C:H4'	11:I:7:LYS:HD3	1.91	0.53
1:X:1369:G:H2'	1:X:1370:U:O4'	2.09	0.53
1:X:1625:A:C5	1:X:1632:A:C2	2.97	0.53
1:X:1644:G:H2'	1:X:1645:U:H6	1.72	0.53
1:X:1781:C:H4'	3:A:209:ALA:HB2	1.90	0.53
1:X:2039:G:H2'	1:X:2039:G:N3	2.23	0.53
1:X:2055:G:N1	1:X:2417:U:C2	2.77	0.53
1:X:2201:G:C2	1:X:2202:G:C8	2.97	0.53
1:X:2228:U:C5'	1:X:2229:G:OP2	2.57	0.53
1:X:2437:G:O2'	1:X:2439:U:O4	2.24	0.53
1:X:2604:G:H2'	1:X:2605:C:H6	1.74	0.53
2:Z:46:G:H1'	2:Z:49:C:H42	1.72	0.53
2:Z:70:C:H2'	2:Z:71:G:H8	1.74	0.53
3:A:154:GLN:O	3:A:155:LEU:HD23	2.09	0.53
4:B:67:PHE:CE1	4:B:75:THR:HG22	2.44	0.53
9:G:123:PRO:CD	9:G:124:GLU:OE1	2.57	0.53
9:G:127:ILE:O	9:G:128:GLU:C	2.52	0.53
11:I:62:LYS:CE	11:I:64:GLY:CA	2.84	0.53
14:L:32:TYR:C	14:L:34:SER:N	2.65	0.53
14:L:90:ASP:C	14:L:91:ARG:O	2.48	0.53
18:P:8:PHE:CD2	18:P:9:ARG:N	2.74	0.53
20:R:97:GLN:HB2	20:R:101:GLY:CA	2.28	0.53
21:S:72:ASP:OD1	21:S:75:LYS:CG	2.57	0.53
23:U:43:ARG:NH2	23:U:43:ARG:HG2	2.24	0.53
26:Y:11:THR:O	26:Y:12:SER:C	2.52	0.53
1:X:77:C:O2'	1:X:78:C:H5'	2.09	0.52
1:X:173:A:H2'	1:X:818:G:O6	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:322:A:C2'	1:X:323:G:OP1	2.57	0.52
1:X:556:A:O2'	1:X:557:U:O4'	2.26	0.52
1:X:874:A:H2'	1:X:875:G:O4'	2.09	0.52
1:X:1018:C:C6	1:X:1019:U:H5	2.27	0.52
1:X:1032:A:H8	1:X:1032:A:H3'	1.73	0.52
1:X:1563:U:C2	1:X:1564:U:C5	2.97	0.52
1:X:2394:G:C5'	11:I:63:ARG:NE	2.71	0.52
1:X:2451:G:H2'	1:X:2508:G:H22	1.73	0.52
2:Z:107:C:H2'	2:Z:108:G:C5'	2.36	0.52
3:A:90:ALA:O	3:A:91:ARG:C	2.51	0.52
3:A:134:ARG:C	3:A:136:VAL:N	2.66	0.52
4:B:33:ILE:HG21	4:B:47:VAL:CG1	2.38	0.52
4:B:152:LYS:H	9:G:106:TYR:HD2	1.57	0.52
5:C:34:GLN:NE2	5:C:177:VAL:HB	2.24	0.52
6:D:14:PRO:HA	6:D:17:MET:SD	2.48	0.52
6:D:70:ALA:N	6:D:85:VAL:HG22	2.23	0.52
6:D:101:GLU:C	6:D:103:LEU:H	2.18	0.52
9:G:66:HIS:O	9:G:67:ARG:O	2.27	0.52
11:I:64:GLY:O	11:I:65:PHE:CB	2.57	0.52
11:I:73:GLU:OE1	11:I:105:PRO:HG2	2.08	0.52
12:J:121:LEU:C	12:J:123:GLY:H	2.18	0.52
14:L:33:ARG:CD	14:L:100:VAL:HA	2.39	0.52
14:L:60:LYS:CA	14:L:67:THR:HG21	2.39	0.52
15:M:43:ASN:C	15:M:43:ASN:ND2	2.65	0.52
16:N:79:PHE:C	16:N:79:PHE:HD2	2.15	0.52
17:O:20:ILE:CD1	17:O:21:ARG:N	2.70	0.52
18:P:42:VAL:O	18:P:42:VAL:CG1	2.55	0.52
19:Q:12:ILE:O	19:Q:13:SER:O	2.27	0.52
21:S:32:PHE:O	21:S:33:ALA:HB2	2.07	0.52
21:S:43:PHE:CE1	21:S:47:SER:HA	2.44	0.52
23:U:17:SER:OG	23:U:45:ASN:HB2	2.08	0.52
23:U:53:GLU:O	23:U:78:ILE:HG23	2.09	0.52
1:X:172:A:N7	1:X:175:C:H5	2.06	0.52
1:X:388:G:N2	1:X:389:G:H1'	2.24	0.52
1:X:488:A:H8	1:X:488:A:OP1	1.92	0.52
1:X:509:U:H2'	1:X:510:G:H5'	1.90	0.52
1:X:774:A:C8	1:X:774:A:C3'	2.91	0.52
1:X:1032:A:O2'	1:X:1134:C:H5"	2.10	0.52
1:X:1200:G:C2	1:X:1201:G:H1'	2.43	0.52
1:X:1332:G:C2	1:X:1347:C:N3	2.77	0.52
1:X:1533:G:O2'	1:X:1534:A:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2199:C:C2'	1:X:2200:G:H8	2.18	0.52
1:X:2617:G:P	4:B:82:ARG:NH2	2.81	0.52
2:Z:44:C:H1'	6:D:89:VAL:CG1	2.39	0.52
4:B:170:LEU:HB3	4:B:184:VAL:HG13	1.90	0.52
6:D:92:ARG:CA	6:D:96:MET:HB3	2.39	0.52
9:G:110:LEU:HD23	9:G:110:LEU:H	1.72	0.52
10:H:91:PHE:N	10:H:91:PHE:CD1	2.77	0.52
12:J:66:TYR:HB2	12:J:106:GLU:HG2	1.91	0.52
12:J:123:GLY:HA2	12:J:126:LEU:HD12	1.91	0.52
13:K:112:LEU:HD21	26:Y:45:ILE:HD11	1.92	0.52
15:M:94:VAL:O	15:M:95:GLU:HB3	2.08	0.52
16:N:50:ARG:O	16:N:52:ASN:N	2.38	0.52
18:P:25:PHE:C	18:P:25:PHE:HD2	2.17	0.52
18:P:37:LYS:HZ3	18:P:64:ALA:N	2.07	0.52
20:R:25:LEU:O	20:R:25:LEU:HD22	2.09	0.52
20:R:85:ASP:HB3	20:R:90:LYS:NZ	2.24	0.52
21:S:42:ALA:C	21:S:44:ARG:N	2.66	0.52
21:S:62:PHE:HD1	21:S:85:MET:HE1	1.74	0.52
26:Y:13:LYS:HB2	26:Y:16:ARG:HH21	1.73	0.52
1:X:171:G:H2'	1:X:172:A:O4'	2.09	0.52
1:X:767:G:C6	1:X:768:U:O4	2.63	0.52
1:X:1011:A:N1	1:X:1012:A:C2	2.78	0.52
1:X:1095:A:C3'	1:X:1096:A:C5'	2.80	0.52
1:X:1141:U:O4	4:B:147:PRO:HD3	2.07	0.52
1:X:1176:U:O2'	1:X:1177:U:H5'	2.09	0.52
1:X:1361:G:H2'	1:X:1362:A:C8	2.44	0.52
1:X:1433:A:C8	1:X:1435:G:C6	2.97	0.52
1:X:1621:C:O2'	1:X:1622:G:H5'	2.09	0.52
1:X:2228:U:C4'	1:X:2229:G:OP2	2.57	0.52
1:X:2265:A:H5'	1:X:2266:A:OP1	2.09	0.52
1:X:2356:A:N3	14:L:89:PHE:HE1	2.08	0.52
1:X:2560:G:C5	1:X:2589:C:C4	2.97	0.52
1:X:2781:G:H2'	1:X:2782:G:C5'	2.39	0.52
3:A:33:LEU:HD21	3:A:63:ARG:HH22	1.73	0.52
4:B:152:LYS:N	9:G:106:TYR:HB3	2.24	0.52
5:C:3:GLN:HE21	5:C:4:ILE:C	2.18	0.52
5:C:191:ALA:O	5:C:194:GLU:HB3	2.10	0.52
6:D:135:GLN:O	6:D:138:PHE:HD1	1.92	0.52
11:I:7:LYS:N	11:I:7:LYS:HD3	2.24	0.52
14:L:95:LYS:HB3	14:L:95:LYS:NZ	2.25	0.52
17:O:40:VAL:HA	17:O:44:GLN:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:43:THR:HB	22:T:46:LYS:HZ2	1.75	0.52
25:W:34:VAL:HG22	25:W:40:VAL:CG1	2.39	0.52
25:W:54:GLN:O	25:W:55:GLU:HG3	2.08	0.52
1:X:204:A:N7	1:X:2386:G:H5'	2.25	0.52
1:X:508:G:O2'	1:X:509:U:H5'	2.10	0.52
1:X:520:C:O2	1:X:520:C:H2'	2.08	0.52
1:X:590:C:H2'	1:X:591:G:H8	1.74	0.52
1:X:605:G:H2'	1:X:606:A:C8	2.45	0.52
1:X:669:G:H2'	1:X:670:U:O4'	2.09	0.52
1:X:760:U:C5	26:Y:3:LYS:HE2	2.45	0.52
1:X:887:G:N2	1:X:888:G:H1'	2.25	0.52
1:X:954:U:OP2	11:I:38:LYS:CE	2.57	0.52
1:X:983:G:C3'	1:X:984:A:H5"	2.28	0.52
1:X:1710:U:H4'	1:X:1711:C:OP2	2.09	0.52
1:X:1915:A:H2'	1:X:1916:G:H5'	1.92	0.52
1:X:2201:G:H2'	1:X:2202:G:H8	1.74	0.52
1:X:2620:G:OP2	9:G:102:ARG:NH2	2.42	0.52
1:X:2821:G:C6	1:X:2846:G:N1	2.78	0.52
1:X:2827:G:C5	1:X:2828:C:C4	2.97	0.52
2:Z:108:G:H2'	2:Z:109:G:H8	1.75	0.52
3:A:112:THR:O	3:A:114:GLY:N	2.42	0.52
4:B:32:PRO:HD2	4:B:50:GLY:O	2.10	0.52
5:C:155:GLU:O	5:C:156:ASN:C	2.52	0.52
6:D:132:ILE:O	6:D:152:MET:O	2.27	0.52
7:E:70:THR:O	7:E:74:ASN:N	2.41	0.52
8:F:78:LEU:HA	8:F:81:LYS:HB2	1.91	0.52
9:G:70:PHE:CB	16:N:64:ARG:HG2	2.39	0.52
14:L:84:ILE:O	14:L:84:ILE:HG22	2.08	0.52
15:M:39:VAL:HA	15:M:45:THR:HA	1.91	0.52
16:N:39:LEU:O	16:N:40:LEU:C	2.50	0.52
16:N:61:TRP:O	16:N:65:ILE:HG13	2.09	0.52
20:R:10:HIS:CD2	20:R:44:GLN:NE2	2.77	0.52
21:S:1:MET:HE1	21:S:46:GLN:OE1	2.09	0.52
21:S:67:LYS:NZ	21:S:84:TYR:HB2	2.23	0.52
1:X:65:C:H2'	1:X:66:U:O4'	2.08	0.52
1:X:238:G:N1	1:X:239:A:C5	2.78	0.52
1:X:343:A:O5'	1:X:343:A:N3	2.43	0.52
1:X:739:G:O2'	1:X:740:A:P	2.67	0.52
1:X:1301:U:O2'	1:X:1302:C:OP1	2.26	0.52
1:X:1404:C:C5	1:X:1407:G:C6	2.98	0.52
1:X:1615:C:P	19:Q:35:LYS:HB2	2.50	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1714:A:H5"	1:X:1715:A:H3'	1.90	0.52
1:X:1808:C:C5	3:A:62:TYR:CE2	2.98	0.52
1:X:1960:A:H2'	1:X:1961:A:O4'	2.09	0.52
1:X:2015:G:O2'	1:X:2016:A:P	2.67	0.52
1:X:2673:G:N2	1:X:2674:C:C2	2.77	0.52
1:X:2844:G:O2'	1:X:2845:C:H5'	2.09	0.52
4:B:107:THR:HG23	4:B:163:GLU:O	2.10	0.52
4:B:134:TRP:O	4:B:135:HIS:C	2.52	0.52
5:C:112:GLN:OE1	5:C:116:LYS:HB2	2.09	0.52
5:C:157:THR:OG1	5:C:158:ARG:N	2.43	0.52
7:E:98:LEU:HG	7:E:99:THR:H	1.73	0.52
9:G:70:PHE:HB3	16:N:64:ARG:HG2	1.91	0.52
11:I:72:TYR:HD2	11:I:107:LYS:H	1.56	0.52
11:I:83:LEU:O	11:I:84:GLU:C	2.52	0.52
12:J:47:GLN:NE2	12:J:127:PRO:HG3	2.25	0.52
14:L:79:ALA:O	14:L:83:GLY:N	2.42	0.52
15:M:5:ILE:HD13	15:M:7:ILE:HG12	1.90	0.52
17:O:35:LEU:HD22	17:O:36:LYS:C	2.34	0.52
19:Q:26:SER:CB	19:Q:79:ILE:HG13	2.34	0.52
20:R:94:VAL:C	20:R:95:ARG:HD2	2.34	0.52
21:S:147:ILE:HG22	21:S:152:ILE:CD1	2.40	0.52
1:X:69:G:H2'	1:X:111:G:O2'	2.10	0.52
1:X:422:C:O2'	1:X:423:G:H5'	2.10	0.52
1:X:725:C:H2'	1:X:726:G:O4'	2.10	0.52
1:X:764:A:C5	1:X:802:A:C2	2.98	0.52
1:X:871:U:O2'	1:X:2247:A:C2'	2.39	0.52
1:X:1052:C:OP2	1:X:1052:C:H6	1.92	0.52
1:X:1301:U:HO2'	1:X:1302:C:P	2.32	0.52
1:X:1463:A:C4	1:X:1479:G:N2	2.78	0.52
1:X:1811:A:OP2	1:X:1811:A:C8	2.62	0.52
1:X:2039:G:C4	1:X:2556:A:C2	2.97	0.52
1:X:2516:U:H2'	1:X:2517:C:C6	2.45	0.52
1:X:2519:C:C4	1:X:2520:A:N7	2.77	0.52
1:X:2599:U:H2'	1:X:2600:A:H8	1.75	0.52
1:X:2695:C:H2'	1:X:2696:A:C8	2.45	0.52
1:X:2759:U:H1'	1:X:2761:A:C6	2.44	0.52
3:A:135:PHE:HD2	3:A:135:PHE:N	2.08	0.52
5:C:7:ILE:HG21	5:C:122:GLY:N	2.24	0.52
5:C:104:LEU:C	5:C:107:ALA:H	2.17	0.52
5:C:112:GLN:HB3	5:C:116:LYS:CD	2.37	0.52
6:D:32:GLU:HB3	6:D:157:VAL:HB	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:127:GLU:HG3	7:E:129:THR:CA	2.39	0.52
9:G:62:ILE:CD1	9:G:148:LEU:HB2	2.38	0.52
10:H:28:GLY:C	10:H:35:THR:H	2.17	0.52
10:H:55:VAL:HG23	10:H:70:VAL:HG22	1.92	0.52
11:I:29:THR:HA	11:I:34:HIS:CG	2.45	0.52
11:I:77:LEU:HG	11:I:112:GLY:O	2.10	0.52
12:J:33:TYR:O	12:J:106:GLU:CA	2.58	0.52
14:L:21:THR:HG23	14:L:45:ASP:HB2	1.90	0.52
14:L:66:ASP:C	14:L:68:ALA:H	2.16	0.52
14:L:89:PHE:CD1	14:L:91:ARG:NH2	2.77	0.52
15:M:69:ARG:CG	15:M:69:ARG:NH1	2.67	0.52
16:N:81:ASN:O	16:N:84:LYS:N	2.42	0.52
18:P:52:ASP:O	18:P:55:ASP:N	2.37	0.52
19:Q:61:LYS:N	19:Q:72:ARG:HA	2.23	0.52
19:Q:63:LYS:HB2	19:Q:70:GLY:HA3	1.92	0.52
20:R:62:MET:O	20:R:63:THR:C	2.52	0.52
20:R:95:ARG:NH1	20:R:106:VAL:HA	2.25	0.52
21:S:3:LEU:CD1	21:S:4:THR:N	2.69	0.52
21:S:64:ALA:CA	21:S:85:MET:HA	2.40	0.52
22:T:46:LYS:HD3	22:T:76:ALA:HB1	1.91	0.52
23:U:22:GLY:N	23:U:39:LYS:HG3	2.23	0.52
25:W:1:MET:HB2	25:W:34:VAL:CG1	2.39	0.52
1:X:53:G:N1	1:X:54:G:C4	2.78	0.52
1:X:143:A:H8	1:X:143:A:O5'	1.92	0.52
1:X:204:A:N6	1:X:2386:G:O4'	2.42	0.52
1:X:332:C:C1'	5:C:159:ARG:NE	2.61	0.52
1:X:579:G:H2'	1:X:2013:A:C5	2.45	0.52
1:X:600:G:O6	1:X:602:C:N4	2.42	0.52
1:X:760:U:N1	26:Y:3:LYS:HE2	2.24	0.52
1:X:1089:C:H5"	1:X:1090:C:OP1	2.09	0.52
1:X:1741:G:H2'	1:X:1742:G:C5'	2.40	0.52
1:X:1866:G:N2	1:X:1867:A:H2	2.08	0.52
1:X:1947:G:C2	1:X:1950:C:C6	2.98	0.52
1:X:2083:G:H2'	1:X:2084:G:C8	2.44	0.52
1:X:2363:G:H3'	1:X:2365:U:OP1	2.09	0.52
1:X:2526:U:C5	1:X:2545:A:N7	2.77	0.52
1:X:2615:U:OP1	4:B:80:GLU:HG2	2.08	0.52
1:X:2726:U:O2'	1:X:2727:G:H5'	2.09	0.52
1:X:2761:A:H5"	1:X:2762:G:O5'	2.10	0.52
2:Z:9:G:H5'	14:L:32:TYR:CD2	2.45	0.52
3:A:164:GLN:HB3	3:A:176:ARG:HB3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:13:ARG:N	5:C:13:ARG:HE	2.05	0.52
5:C:139:GLN:C	5:C:141:GLY:H	2.17	0.52
15:M:33:VAL:O	15:M:92:THR:HG23	2.10	0.52
15:M:33:VAL:HG23	15:M:94:VAL:CG2	2.40	0.52
17:O:23:GLU:HB3	17:O:32:LYS:HZ3	1.74	0.52
21:S:30:VAL:CG1	21:S:31:SER:N	2.72	0.52
21:S:103:ARG:HG3	21:S:104:SER:N	2.25	0.52
1:X:110:U:H2'	1:X:111:G:O4'	2.10	0.52
1:X:701:U:H5'	1:X:1771:A:C2	2.45	0.52
1:X:788:G:O2'	1:X:789:G:OP2	2.26	0.52
1:X:942:U:O2'	25:W:22:ALA:HA	2.10	0.52
1:X:1008:G:N2	1:X:1009:C:C2	2.77	0.52
1:X:1385:C:H1'	1:X:2192:U:C6	2.45	0.52
1:X:1450:G:O2'	1:X:1451:C:H5'	2.09	0.52
1:X:1757:C:HO2'	1:X:1758:C:H5'	1.73	0.52
1:X:2189:A:C2	1:X:2190:A:N7	2.78	0.52
1:X:2225:G:C4	1:X:2226:A:C8	2.98	0.52
1:X:2284:U:H2'	1:X:2285:U:H5"	1.91	0.52
1:X:2440:C:H2'	1:X:2441:U:H6	1.74	0.52
3:A:169:GLU:O	3:A:172:TYR:N	2.43	0.52
3:A:217:ARG:C	3:A:219:PRO:N	2.68	0.52
7:E:17:VAL:HA	7:E:26:VAL:HG13	1.91	0.52
7:E:88:GLU:OE2	7:E:90:ARG:HB2	2.10	0.52
7:E:150:LYS:C	7:E:152:ARG:H	2.18	0.52
10:H:26:ASN:HB3	10:H:38:GLY:H	1.75	0.52
12:J:43:ILE:HD13	12:J:127:PRO:HD2	1.91	0.52
16:N:47:TYR:CD2	16:N:51:ARG:NE	2.75	0.52
16:N:94:VAL:HG12	16:N:95:LEU:N	2.24	0.52
16:N:105:ALA:O	16:N:106:PHE:C	2.53	0.52
18:P:47:GLY:H	18:P:92:VAL:HB	1.74	0.52
20:R:45:LYS:HZ3	20:R:77:HIS:CE1	2.25	0.52
21:S:36:ARG:O	21:S:37:LYS:C	2.52	0.52
24:V:42:ARG:O	24:V:46:LEU:HG	2.09	0.52
30:4:1:MET:CE	30:4:34:GLN:C	2.82	0.52
1:X:244:C:C3'	1:X:245:C:H5"	2.37	0.52
1:X:502:A:H2'	1:X:503:G:O4'	2.10	0.52
1:X:516:G:O2'	1:X:517:A:P	2.68	0.52
1:X:938:G:H2'	1:X:940:G:C8	2.44	0.52
1:X:954:U:P	11:I:38:LYS:HG3	2.50	0.52
1:X:1014:G:O2'	1:X:1015:U:H5'	2.10	0.52
1:X:1271:C:C2	1:X:1272:G:C8	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1451:C:H2'	1:X:1452:U:C6	2.44	0.52
1:X:1560:A:N1	1:X:1561:A:C2	2.78	0.52
1:X:2395:C:OP2	11:I:63:ARG:NH1	2.43	0.52
1:X:2703:C:O2'	1:X:2704:U:H5'	2.10	0.52
3:A:52:ARG:NH2	3:A:247:VAL:HG11	2.24	0.52
4:B:31:CYS:CB	4:B:49:ILE:HG13	2.38	0.52
5:C:50:GLN:C	5:C:52:SER:H	2.18	0.52
6:D:9:ASN:HA	6:D:13:ARG:CB	2.39	0.52
9:G:45:ASP:HA	9:G:83:ILE:CG1	2.40	0.52
9:G:97:ASP:O	9:G:99:VAL:N	2.43	0.52
13:K:84:ALA:O	13:K:87:TYR:N	2.43	0.52
15:M:107:LEU:O	15:M:109:GLU:N	2.39	0.52
16:N:115:ASN:O	16:N:116:ALA:C	2.53	0.52
17:O:16:GLU:N	17:O:16:GLU:OE1	2.43	0.52
17:O:86:HIS:C	17:O:86:HIS:CD2	2.88	0.52
19:Q:39:LYS:O	19:Q:40:ASP:C	2.52	0.52
20:R:89:GLY:O	20:R:90:LYS:HB3	2.09	0.52
22:T:8:GLY:O	22:T:9:SER:C	2.52	0.52
22:T:16:SER:C	22:T:17:ASN:ND2	2.68	0.52
23:U:50:ALA:HB3	23:U:52:ARG:NH2	2.25	0.52
24:V:10:GLN:O	24:V:12:THR:N	2.42	0.52
1:X:214:C:O2'	1:X:215:G:H5'	2.10	0.52
1:X:324:C:H2'	1:X:325:U:H5'	1.90	0.52
1:X:330:C:H2'	1:X:331:U:H6	1.75	0.52
1:X:452:G:H21	5:C:40:ARG:HH22	1.55	0.52
1:X:490:A:O2'	1:X:491:A:H3'	2.10	0.52
1:X:516:G:O2'	1:X:517:A:OP2	2.26	0.52
1:X:873:U:H2'	1:X:874:A:O5'	2.10	0.52
1:X:1139:A:O2'	1:X:1140:A:O5'	2.28	0.52
1:X:1209:G:C2	1:X:1210:C:C5	2.98	0.52
1:X:1443:G:H2'	1:X:1444:C:H6	1.74	0.52
1:X:1673:C:H2'	1:X:1674:C:C6	2.38	0.52
1:X:1733:U:N3	1:X:1734:C:C5	2.78	0.52
1:X:1850:G:N7	1:X:1868:A:N6	2.58	0.52
1:X:1861:G:O2'	1:X:1862:C:H5'	2.10	0.52
1:X:2043:A:O2'	1:X:2481:G:O4'	2.27	0.52
1:X:2246:A:H61	1:X:2251:U:H3	1.58	0.52
1:X:2270:U:OP1	1:X:2360:C:H5'	2.10	0.52
1:X:2356:A:H1'	14:L:89:PHE:CZ	2.45	0.52
1:X:2597:G:H21	4:B:150:VAL:HG11	1.75	0.52
2:Z:42:U:H1'	2:Z:47:A:H62	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:50:U:O2'	2:Z:51:G:H5'	2.10	0.52
3:A:216:GLY:O	3:A:217:ARG:HB2	2.09	0.52
3:A:231:HIS:CD2	3:A:231:HIS:C	2.88	0.52
5:C:158:ARG:C	5:C:160:ALA:N	2.67	0.52
5:C:176:ASN:ND2	5:C:178:TYR:CB	2.58	0.52
7:E:18:ASN:C	7:E:20:GLN:H	2.18	0.52
9:G:155:THR:O	9:G:158:HIS:N	2.39	0.52
12:J:81:GLU:O	12:J:82:THR:OG1	2.24	0.52
13:K:28:LEU:HD21	13:K:115:LEU:CD2	2.40	0.52
16:N:114:ARG:HH21	16:N:114:ARG:HG2	1.74	0.52
18:P:41:VAL:HG21	18:P:64:ALA:HB3	1.91	0.52
21:S:127:PRO:C	21:S:129:ARG:H	2.17	0.52
21:S:147:ILE:HG22	21:S:152:ILE:HD11	1.91	0.52
22:T:58:THR:O	22:T:59:LEU:HD13	2.09	0.52
23:U:9:GLY:N	23:U:14:VAL:HG22	2.19	0.52
23:U:54:ASN:CG	23:U:55:GLY:N	2.68	0.52
25:W:37:THR:C	25:W:41:ARG:NH1	2.68	0.52
1:X:168:A:C4	1:X:169:C:C5	2.98	0.51
1:X:185:C:O2'	1:X:186:C:H5'	2.10	0.51
1:X:463:C:O5'	5:C:46:ARG:NH1	2.43	0.51
1:X:718:A:N6	1:X:739:G:H1'	2.24	0.51
1:X:833:A:H1'	1:X:954:U:O2'	2.10	0.51
1:X:914:C:H2'	1:X:915:C:H6	1.75	0.51
1:X:1058:G:H2'	1:X:1121:G:N2	2.25	0.51
1:X:1082:G:O2'	1:X:1100:G:H3'	2.10	0.51
1:X:1103:C:H42	1:X:1111:C:N4	2.07	0.51
1:X:1172:U:C2	1:X:1173:G:C8	2.98	0.51
1:X:1185:C:C2'	1:X:1186:G:H3'	2.31	0.51
1:X:1345:G:C6	1:X:1625:A:N7	2.79	0.51
1:X:1469:U:C5'	1:X:1470:G:OP2	2.58	0.51
1:X:1631:C:C5	1:X:1633:C:C4	2.98	0.51
1:X:1758:C:C2	1:X:1759:A:C8	2.98	0.51
1:X:2196:U:C5	1:X:2197:U:C4	2.97	0.51
1:X:2271:C:OP2	14:L:18:ARG:NH2	2.43	0.51
1:X:2559:U:H3'	1:X:2560:G:C2	2.45	0.51
1:X:2661:G:N3	1:X:2662:C:C6	2.78	0.51
1:X:2849:C:O2	1:X:2849:C:H2'	2.10	0.51
2:Z:19:C:O2'	2:Z:20:A:H5'	2.10	0.51
3:A:38:PRO:HA	3:A:61:LEU:HD23	1.91	0.51
3:A:166:GLN:HB2	3:A:174:ILE:O	2.09	0.51
5:C:119:ALA:O	5:C:189:ASP:O	2.28	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:49:ALA:O	6:D:52:LYS:HB2	2.10	0.51
6:D:88:LYS:C	6:D:89:VAL:HG22	2.35	0.51
6:D:94:GLU:CA	6:D:97:TYR:HB2	2.39	0.51
6:D:138:PHE:HB2	6:D:141:ILE:HG12	1.92	0.51
8:F:91:THR:O	8:F:91:THR:OG1	2.27	0.51
9:G:45:ASP:HA	9:G:83:ILE:HG12	1.91	0.51
9:G:72:PRO:C	9:G:74:MET:H	2.16	0.51
10:H:65:LYS:O	10:H:68:ASP:CG	2.54	0.51
11:I:70:THR:HG22	11:I:71:THR:N	2.25	0.51
12:J:34:GLY:HA2	12:J:106:GLU:HA	1.92	0.51
13:K:33:ARG:HB2	13:K:114:GLU:HB3	1.90	0.51
15:M:50:PHE:HE2	15:M:70:LYS:CB	2.22	0.51
17:O:51:ALA:C	17:O:53:LYS:H	2.17	0.51
19:Q:28:TRP:CZ3	19:Q:75:ARG:HB3	2.44	0.51
20:R:52:ASN:O	20:R:74:LEU:HB2	2.11	0.51
21:S:104:SER:OG	21:S:107:GLU:HB2	2.10	0.51
22:T:51:VAL:HG11	22:T:59:LEU:HB3	1.92	0.51
22:T:55:ARG:HG2	22:T:55:ARG:HH11	1.74	0.51
30:4:8:LYS:HA	30:4:9:LYS:HE3	1.91	0.51
30:4:31:LYS:HD3	30:4:31:LYS:N	2.25	0.51
1:X:201:G:H2'	1:X:202:A:C8	2.45	0.51
1:X:203:G:H1'	1:X:205:A:H61	1.75	0.51
1:X:317:U:C2'	1:X:318:G:C5'	2.77	0.51
1:X:469:G:H21	1:X:480:G:H2'	1.72	0.51
1:X:575:U:C2	1:X:576:A:C8	2.98	0.51
1:X:735:G:C2'	1:X:736:G:H5'	2.40	0.51
1:X:1060:C:C2	1:X:1124:U:H4'	2.43	0.51
1:X:1286:U:H5"	1:X:1663:C:N4	2.25	0.51
1:X:1431:U:H4'	1:X:1604:A:O4'	2.11	0.51
1:X:2229:G:O4'	1:X:2229:G:N3	2.42	0.51
1:X:2299:A:H2'	1:X:2299:A:N3	2.25	0.51
1:X:2494:C:H2'	1:X:2495:G:C8	2.45	0.51
1:X:2598:C:H4'	4:B:151:TYR:O	2.10	0.51
4:B:182:ILE:C	4:B:183:LEU:HD23	2.34	0.51
4:B:200:SER:O	4:B:201:ALA:C	2.51	0.51
6:D:92:ARG:HA	6:D:96:MET:HB3	1.92	0.51
6:D:123:ASP:O	6:D:125:ARG:N	2.35	0.51
7:E:87:LEU:O	7:E:130:ARG:HA	2.10	0.51
9:G:61:ARG:HH11	9:G:65:LYS:HE2	1.75	0.51
9:G:144:MET:C	9:G:146:THR:H	2.17	0.51
9:G:157:PRO:O	9:G:161:GLN:HG3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:64:VAL:O	10:H:65:LYS:HG3	2.10	0.51
11:I:112:GLY:C	11:I:113:GLU:HG3	2.35	0.51
12:J:136:GLU:HG3	12:J:136:GLU:O	2.10	0.51
16:N:23:GLY:O	16:N:24:PHE:O	2.28	0.51
16:N:115:ASN:O	16:N:117:ARG:N	2.44	0.51
21:S:69:VAL:HG22	21:S:81:VAL:HG13	1.91	0.51
21:S:72:ASP:OD1	21:S:75:LYS:HG3	2.10	0.51
23:U:37:ILE:HD13	23:U:37:ILE:N	2.26	0.51
1:X:136:A:C8	1:X:137:A:C8	2.99	0.51
1:X:687:G:H2'	1:X:817:A:H61	1.76	0.51
1:X:689:A:C2	1:X:815:A:N6	2.71	0.51
1:X:796:A:C8	1:X:797:A:H4'	2.40	0.51
1:X:1374:G:O2'	1:X:1375:C:H5'	2.10	0.51
1:X:1583:A:H8	1:X:1583:A:OP2	1.94	0.51
1:X:1693:A:C6	1:X:1694:A:C6	2.98	0.51
1:X:2294:U:O2	6:D:125:ARG:NH1	2.44	0.51
1:X:2313:G:O2'	1:X:2314:A:OP1	2.26	0.51
1:X:2343:C:C2'	1:X:2344:G:H5'	2.40	0.51
1:X:2371:A:C8	1:X:2372:A:C8	2.98	0.51
1:X:2490:U:H2'	1:X:2491:C:H6	1.72	0.51
1:X:2507:U:O3'	1:X:2508:G:H8	1.94	0.51
4:B:93:VAL:O	4:B:94:ASP:CB	2.56	0.51
6:D:38:GLU:O	6:D:40:LEU:CD1	2.58	0.51
7:E:125:VAL:HG13	7:E:131:ILE:CD1	2.39	0.51
9:G:35:LYS:CB	9:G:69:ASP:OD2	2.56	0.51
9:G:67:ARG:O	9:G:70:PHE:CD1	2.63	0.51
11:I:73:GLU:OE1	11:I:105:PRO:C	2.53	0.51
12:J:69:ILE:HG21	12:J:104:MET:HG3	1.92	0.51
12:J:136:GLU:C	12:J:138:TYR:CE2	2.88	0.51
13:K:28:LEU:C	13:K:28:LEU:CD2	2.83	0.51
17:O:78:VAL:C	17:O:79:GLN:O	2.48	0.51
17:O:79:GLN:OE1	17:O:79:GLN:N	2.44	0.51
30:4:18:ARG:HD2	30:4:22:ARG:O	2.11	0.51
1:X:26:G:N1	1:X:27:G:N2	2.58	0.51
1:X:36:G:H4'	1:X:463:C:C4	2.46	0.51
1:X:166:G:N2	1:X:183:U:C5	2.79	0.51
1:X:646:C:O2'	1:X:650:U:OP1	2.23	0.51
1:X:1068:A:C8	1:X:1097:A:H2'	2.46	0.51
1:X:1226:A:C2	1:X:1227:A:C4	2.98	0.51
1:X:1313:U:H1'	1:X:1642:G:C2	2.46	0.51
1:X:1788:C:C2	1:X:1789:U:C5	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1808:C:H5	3:A:62:TYR:CD2	2.29	0.51
1:X:1885:C:C5	1:X:1886:G:C8	2.99	0.51
1:X:2058:U:H2'	1:X:2217:G:H22	1.75	0.51
1:X:2311:U:H1'	1:X:2315:A:N7	2.26	0.51
1:X:2859:U:C5	1:X:2860:C:C2	2.98	0.51
4:B:38:THR:C	4:B:40:GLN:N	2.68	0.51
5:C:22:VAL:HA	5:C:106:MET:CG	2.39	0.51
5:C:147:LYS:O	5:C:184:ASP:HB2	2.09	0.51
5:C:163:ASN:ND2	5:C:166:TRP:CG	2.79	0.51
6:D:99:PHE:HA	6:D:102:LYS:CD	2.39	0.51
6:D:111:ILE:O	6:D:114:PHE:CB	2.59	0.51
7:E:142:GLY:C	7:E:144:VAL:N	2.67	0.51
9:G:167:LYS:O	9:G:168:THR:HG23	2.10	0.51
10:H:24:VAL:HG11	10:H:42:LYS:HG2	1.91	0.51
14:L:11:LEU:HA	14:L:14:ARG:HB3	1.92	0.51
17:O:35:LEU:CD2	17:O:36:LYS:N	2.73	0.51
19:Q:19:ALA:O	19:Q:22:ARG:HG2	2.11	0.51
20:R:58:VAL:C	20:R:60:PRO:HD3	2.36	0.51
21:S:44:ARG:CB	21:S:45:GLN:HE22	2.21	0.51
22:T:58:THR:HG22	22:T:59:LEU:N	2.25	0.51
24:V:1:MET:HG3	24:V:3:PRO:HD3	1.92	0.51
25:W:2:LYS:HB3	25:W:54:GLN:CB	2.30	0.51
1:X:131:C:C4	1:X:132:U:C4	2.99	0.51
1:X:409:G:O2'	1:X:410:A:H5'	2.09	0.51
1:X:556:A:H8	1:X:556:A:OP2	1.94	0.51
1:X:737:C:H2'	1:X:738:G:C8	2.44	0.51
1:X:951:G:C3'	1:X:952:A:H5"	2.41	0.51
1:X:1032:A:H3'	1:X:1032:A:C8	2.45	0.51
1:X:1223:G:H4'	1:X:1224:A:OP2	2.11	0.51
1:X:1385:C:H2'	1:X:1386:A:C5'	2.41	0.51
1:X:1849:G:N2	1:X:1850:G:O6	2.43	0.51
1:X:2658:A:C5'	4:B:165:VAL:HG21	2.40	0.51
1:X:2802:C:H2'	1:X:2803:C:C6	2.42	0.51
3:A:52:ARG:NH2	3:A:247:VAL:CG1	2.73	0.51
3:A:79:VAL:HA	3:A:95:LEU:HD23	1.92	0.51
4:B:24:THR:HG21	4:B:188:ILE:CD1	2.40	0.51
4:B:59:VAL:HG12	4:B:64:GLN:HG2	1.91	0.51
5:C:190:ALA:C	5:C:192:ALA:N	2.67	0.51
9:G:140:GLN:HG2	9:G:144:MET:HE3	1.93	0.51
10:H:31:GLY:C	10:H:33:GLY:H	2.19	0.51
10:H:60:PRO:O	10:H:61:ARG:HB2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:81:ILE:HD13	10:H:81:ILE:C	2.35	0.51
11:I:29:THR:HA	11:I:34:HIS:CD2	2.44	0.51
11:I:77:LEU:CD2	11:I:112:GLY:O	2.59	0.51
11:I:85:ASP:CA	11:I:116:ARG:HH22	2.22	0.51
12:J:61:ARG:NH1	21:S:175:ARG:HD2	2.22	0.51
13:K:87:TYR:CE1	13:K:94:TYR:CD2	2.91	0.51
14:L:33:ARG:HD3	14:L:100:VAL:HA	1.92	0.51
15:M:24:LEU:CB	15:M:25:PRO:CD	2.88	0.51
16:N:32:TYR:O	16:N:33:ARG:O	2.29	0.51
19:Q:3:HIS:C	19:Q:5:ASP:OD2	2.54	0.51
20:R:49:GLU:HA	20:R:73:GLU:OE2	2.10	0.51
21:S:25:ASN:HD21	21:S:28:ASN:ND2	2.09	0.51
21:S:107:GLU:OE1	21:S:113:VAL:HG23	2.10	0.51
1:X:20:C:H2'	1:X:21:A:C8	2.44	0.51
1:X:21:A:C6	1:X:530:G:C6	2.98	0.51
1:X:501:G:H2'	1:X:502:A:H8	1.76	0.51
1:X:1006:C:H6	1:X:1006:C:H5"	1.75	0.51
1:X:1074:G:N2	8:F:91:THR:HA	2.16	0.51
1:X:1092:U:O5'	1:X:1092:U:H6	1.93	0.51
1:X:1790:G:H21	3:A:155:LEU:CD2	2.24	0.51
1:X:1803:G:O2'	1:X:1804:U:H5'	2.11	0.51
1:X:2012:A:H2'	1:X:2014:A:OP1	2.09	0.51
1:X:2269:G:H22	1:X:2322:U:H1'	1.76	0.51
1:X:2327:U:C4	1:X:2361:G:N2	2.78	0.51
1:X:2559:U:H3'	1:X:2560:G:N3	2.25	0.51
1:X:2659:C:H2'	1:X:2660:C:C6	2.46	0.51
1:X:2756:A:N6	1:X:2762:G:H1'	2.26	0.51
1:X:2776:U:C6	1:X:2776:U:H3'	2.45	0.51
1:X:2827:G:O2'	1:X:2828:C:H5'	2.10	0.51
2:Z:53:G:H21	2:Z:54:U:H5	1.58	0.51
3:A:183:ARG:HD3	3:A:184:ARG:N	2.25	0.51
5:C:21:GLU:O	5:C:22:VAL:O	2.29	0.51
5:C:162:ARG:O	5:C:162:ARG:CG	2.57	0.51
5:C:176:ASN:O	5:C:178:TYR:N	2.44	0.51
6:D:17:MET:CE	6:D:25:VAL:HG12	2.35	0.51
6:D:103:LEU:C	6:D:105:ASN:N	2.66	0.51
7:E:156:ALA:O	7:E:157:TYR:CD1	2.64	0.51
8:F:116:LEU:HD13	8:F:124:ALA:HA	1.93	0.51
10:H:1:MET:N	10:H:79:HIS:HB2	2.26	0.51
10:H:11:ALA:CB	10:H:110:VAL:HG13	2.41	0.51
10:H:12:ASP:HA	10:H:109:ARG:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:32:ARG:NH2	17:O:81:ARG:HE	2.09	0.51
12:J:75:VAL:HG21	12:J:93:TYR:CE2	2.45	0.51
13:K:19:ALA:O	13:K:23:ALA:N	2.33	0.51
13:K:99:ARG:HG3	26:Y:44:HIS:CG	2.46	0.51
15:M:34:ARG:HD3	15:M:81:PHE:CE2	2.45	0.51
15:M:103:LYS:O	15:M:104:LEU:CB	2.44	0.51
17:O:57:GLN:C	17:O:96:LEU:O	2.53	0.51
22:T:50:GLY:O	22:T:62:LEU:HD23	2.09	0.51
22:T:51:VAL:HG22	22:T:61:ALA:HA	1.93	0.51
22:T:56:ASP:OD1	22:T:58:THR:OG1	2.21	0.51
1:X:218:A:N6	1:X:232:A:H5"	2.25	0.51
1:X:517:A:H5"	1:X:518:A:C5'	2.30	0.51
1:X:540:G:N3	1:X:2004:U:O2'	2.44	0.51
1:X:952:A:H2'	1:X:953:G:O4'	2.11	0.51
1:X:1142:G:C4'	9:G:103:TYR:CE2	2.92	0.51
1:X:1402:G:C5	1:X:1403:U:C5	2.98	0.51
1:X:1430:G:O2'	1:X:1431:U:H5'	2.11	0.51
1:X:1473:U:O2'	1:X:1474:A:P	2.68	0.51
1:X:1705:U:O4'	1:X:1718:A:N6	2.44	0.51
1:X:1975:G:N2	1:X:1979:C:O2	2.40	0.51
1:X:1982:C:H4'	1:X:2703:C:O2	2.11	0.51
1:X:1998:A:H1'	26:Y:3:LYS:HG2	1.92	0.51
1:X:2198:U:C4	1:X:2199:C:C2	2.99	0.51
1:X:2510:A:N7	7:E:175:LYS:HG2	2.26	0.51
1:X:2594:U:H6	1:X:2594:U:C5'	2.18	0.51
1:X:2629:U:H2'	1:X:2630:C:C6	2.45	0.51
2:Z:36:A:C4'	2:Z:37:C:H5	2.20	0.51
2:Z:45:C:C3'	6:D:92:ARG:NH1	2.74	0.51
2:Z:75:A:N1	21:S:29:ASN:ND2	2.58	0.51
4:B:179:GLU:CG	4:B:181:LEU:HD12	2.41	0.51
5:C:129:LYS:O	5:C:131:LYS:N	2.40	0.51
6:D:10:ASP:CA	6:D:14:PRO:HD2	2.41	0.51
6:D:116:GLY:HA3	6:D:178:ARG:HG3	1.92	0.51
7:E:84:THR:CB	7:E:134:SER:HB2	2.39	0.51
7:E:133:VAL:HG11	7:E:144:VAL:HG11	1.92	0.51
9:G:61:ARG:NE	9:G:65:LYS:CE	2.70	0.51
9:G:154:GLU:OE1	9:G:156:HIS:CD2	2.64	0.51
10:H:1:MET:HE3	10:H:44:TYR:CD1	2.46	0.51
11:I:32:ARG:CZ	17:O:81:ARG:CZ	2.88	0.51
14:L:36:LYS:HE2	14:L:65:THR:HG22	1.93	0.51
16:N:39:LEU:HB3	17:O:72:ARG:HH12	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:12:TYR:C	17:O:13:ARG:CG	2.83	0.51
19:Q:51:ILE:HD11	19:Q:83:ALA:HA	1.93	0.51
21:S:103:ARG:HH22	21:S:107:GLU:HG2	1.76	0.51
24:V:6:MET:HG3	24:V:56:VAL:HG11	1.92	0.51
25:W:39:ALA:C	25:W:43:MET:HG2	2.36	0.51
1:X:53:G:C6	1:X:54:G:C5	2.98	0.51
1:X:313:U:C2'	1:X:314:G:H8	2.11	0.51
1:X:334:G:H5'	5:C:162:ARG:HE	1.75	0.51
1:X:677:G:C2'	1:X:678:G:H5'	2.41	0.51
1:X:890:U:H2'	1:X:891:A:H8	1.76	0.51
1:X:987:G:OP1	16:N:48:ARG:NH2	2.44	0.51
1:X:1307:U:H6	1:X:1307:U:H5"	1.75	0.51
1:X:1393:G:C2	1:X:1394:G:C8	2.98	0.51
1:X:1448:A:H2'	1:X:1449:C:C6	2.45	0.51
1:X:1474:A:H1'	1:X:1475:U:H5"	1.93	0.51
1:X:1584:G:H5"	3:A:61:LEU:HG	1.92	0.51
1:X:1685:A:C2	1:X:1976:U:H1'	2.46	0.51
1:X:2263:C:H1'	1:X:2304:G:N2	2.26	0.51
1:X:2306:A:C2'	1:X:2307:A:O4'	2.59	0.51
1:X:2370:G:O2'	1:X:2403:C:N4	2.43	0.51
1:X:2460:G:C2'	1:X:2461:G:OP2	2.59	0.51
1:X:2461:G:H2'	1:X:2461:G:N3	2.25	0.51
1:X:2691:C:C2'	1:X:2692:A:O5'	2.58	0.51
2:Z:27:A:H61	2:Z:55:C:H5"	1.76	0.51
3:A:172:TYR:HA	3:A:186:HIS:HA	1.91	0.51
3:A:243:GLY:C	3:A:244:ARG:CD	2.80	0.51
5:C:33:TRP:NE1	5:C:93:TYR:O	2.42	0.51
5:C:136:TRP:C	5:C:136:TRP:CD1	2.88	0.51
6:D:40:LEU:HD12	6:D:40:LEU:N	2.26	0.51
9:G:125:ARG:O	9:G:127:ILE:N	2.44	0.51
10:H:79:HIS:CD2	10:H:80:ALA:H	2.28	0.51
10:H:85:ASP:CG	10:H:86:GLY:N	2.68	0.51
12:J:138:TYR:O	12:J:139:ASP:C	2.53	0.51
16:N:60:LEU:HA	16:N:63:GLN:OE1	2.11	0.51
19:Q:5:ASP:O	19:Q:6:ILE:C	2.54	0.51
19:Q:42:ILE:HG23	19:Q:43:GLN:H	1.74	0.51
19:Q:62:ARG:NH1	19:Q:73:ASN:ND2	2.59	0.51
20:R:86:PRO:O	20:R:87:GLU:HB2	2.11	0.51
20:R:93:ARG:HH11	20:R:93:ARG:CG	2.24	0.51
20:R:93:ARG:C	20:R:95:ARG:CZ	2.83	0.51
21:S:20:ALA:HB3	21:S:80:HIS:ND1	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:35:ASP:OD1	21:S:38:ALA:N	2.43	0.51
21:S:72:ASP:N	21:S:77:ALA:O	2.43	0.51
23:U:17:SER:OG	23:U:44:ALA:C	2.54	0.51
23:U:28:GLY:HA3	23:U:32:ARG:CG	2.41	0.51
26:Y:32:GLU:CG	26:Y:39:LYS:HE3	2.41	0.51
1:X:41:G:C2	1:X:451:A:C2	2.99	0.51
1:X:813:A:C4'	1:X:814:G:O5'	2.56	0.51
1:X:938:G:H2'	1:X:940:G:H8	1.75	0.51
1:X:1105:U:O2'	1:X:1106:A:N7	2.39	0.51
1:X:1128:G:C3'	1:X:1129:A:C5'	2.89	0.51
1:X:1354:A:H4'	19:Q:56:MET:CG	2.41	0.51
1:X:1658:A:N6	1:X:1659:G:N3	2.58	0.51
1:X:1788:C:N3	1:X:1789:U:C5	2.79	0.51
1:X:1849:G:H2'	1:X:1850:G:H8	1.75	0.51
1:X:1928:G:C4	1:X:1929:U:C5	2.99	0.51
1:X:2048:C:H1'	1:X:2428:U:N3	2.26	0.51
1:X:2737:A:OP1	1:X:2737:A:O4'	2.29	0.51
1:X:2839:G:C4	1:X:2840:U:C5	2.99	0.51
2:Z:35:C:O2'	2:Z:36:A:H5'	2.10	0.51
3:A:53:PHE:O	3:A:54:ILE:CG2	2.59	0.51
3:A:243:GLY:CA	3:A:244:ARG:HH11	2.24	0.51
4:B:60:ASN:HB2	4:B:63:MET:H	1.75	0.51
4:B:152:LYS:H	9:G:106:TYR:CB	2.23	0.51
4:B:175:ILE:O	4:B:175:ILE:HG22	2.10	0.51
5:C:31:VAL:HG23	5:C:32:THR:N	2.25	0.51
5:C:104:LEU:HA	5:C:107:ALA:CB	2.41	0.51
9:G:103:TYR:CZ	9:G:111:LYS:HA	2.44	0.51
10:H:127:VAL:CG1	10:H:128:SER:N	2.73	0.51
11:I:52:GLY:C	11:I:55:ARG:HB2	2.36	0.51
12:J:115:ALA:C	12:J:117:GLU:N	2.66	0.51
16:N:5:LYS:O	16:N:7:GLY:N	2.43	0.51
16:N:87:ASN:O	16:N:87:ASN:ND2	2.37	0.51
16:N:94:VAL:HG11	16:N:98:ILE:HD11	1.93	0.51
16:N:103:PRO:O	16:N:104:GLU:C	2.53	0.51
18:P:27:VAL:CA	18:P:125:THR:HG22	2.40	0.51
18:P:37:LYS:NZ	18:P:64:ALA:HB2	2.26	0.51
20:R:93:ARG:NH2	20:R:108:VAL:HG22	2.26	0.51
21:S:39:PHE:CZ	21:S:81:VAL:HG21	2.46	0.51
23:U:28:GLY:N	23:U:32:ARG:HE	2.08	0.51
24:V:5:GLU:HA	24:V:8:ASN:CB	2.41	0.51
1:X:141:G:H2'	1:X:142:U:H6	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:492:G:C2'	1:X:493:A:OP2	2.59	0.51
1:X:599:A:H2'	1:X:600:G:O4'	2.10	0.51
1:X:708:G:OP1	1:X:1393:G:H4'	2.10	0.51
1:X:915:C:H2'	1:X:916:U:C5	2.46	0.51
1:X:968:C:C4	1:X:970:A:C4	2.99	0.51
1:X:1068:A:N7	1:X:1097:A:H2'	2.25	0.51
1:X:1503:G:C2	1:X:1504:G:C5	2.99	0.51
1:X:1504:G:H5"	1:X:1505:U:OP2	2.11	0.51
1:X:1955:G:H2'	1:X:1956:G:H8	1.76	0.51
1:X:2083:G:H1	1:X:2172:U:H3	1.58	0.51
1:X:2235:G:C2'	1:X:2236:U:H5'	2.40	0.51
1:X:2511:G:C5	1:X:2512:A:C5	2.99	0.51
1:X:2606:G:N2	1:X:2757:G:C4	2.79	0.51
1:X:2787:A:N1	1:X:2864:C:C4	2.79	0.51
4:B:133:LYS:O	4:B:133:LYS:HG2	2.10	0.51
6:D:132:ILE:HG22	6:D:133:LYS:N	2.26	0.51
7:E:130:ARG:O	7:E:131:ILE:CD1	2.54	0.51
10:H:124:MET:O	10:H:127:VAL:N	2.44	0.51
11:I:10:PRO:HB2	11:I:14:LYS:HG2	1.93	0.51
14:L:90:ASP:N	14:L:90:ASP:OD1	2.43	0.51
17:O:15:SER:CB	17:O:95:ILE:O	2.59	0.51
21:S:10:PRO:O	21:S:13:LYS:HG2	2.10	0.51
1:X:426:C:O5'	1:X:426:C:H6	1.94	0.50
1:X:431:G:O2'	1:X:432:C:H5'	2.11	0.50
1:X:471:A:H3'	1:X:472:C:H6	1.75	0.50
1:X:641:G:N2	1:X:643:A:H3'	2.26	0.50
1:X:873:U:C4	1:X:2247:A:C8	2.99	0.50
1:X:953:G:H1'	1:X:1203:A:H2	1.76	0.50
1:X:1428:G:HO2'	1:X:1429:A:H8	1.59	0.50
1:X:1451:C:H2'	1:X:1452:U:H6	1.76	0.50
1:X:1592:U:O5'	1:X:1592:U:H6	1.94	0.50
1:X:1713:G:C8	1:X:1713:G:H5"	2.46	0.50
1:X:1887:G:O2'	1:X:1888:C:H5'	2.11	0.50
1:X:2411:A:C6	1:X:2412:A:N1	2.79	0.50
1:X:2453:C:H5'	1:X:2454:C:OP2	2.10	0.50
1:X:2674:C:O2'	1:X:2675:U:H5'	2.10	0.50
1:X:2726:U:C1'	7:E:139:GLN:HG2	2.41	0.50
1:X:2870:C:H2'	1:X:2871:U:C6	2.46	0.50
3:A:53:PHE:HA	3:A:217:ARG:HH21	1.76	0.50
3:A:173:VAL:N	3:A:185:VAL:O	2.43	0.50
6:D:80:ARG:HG3	6:D:83:MET:HE3	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:56:SER:HB2	7:E:61:HIS:CD2	2.46	0.50
9:G:58:ILE:HG21	9:G:148:LEU:CD1	2.41	0.50
10:H:116:ARG:NH1	15:M:38:LYS:CE	2.75	0.50
11:I:87:THR:O	11:I:93:LEU:HB3	2.11	0.50
20:R:26:SER:OG	20:R:79:SER:HB3	2.11	0.50
20:R:54:ILE:HG23	20:R:71:GLN:HB2	1.93	0.50
21:S:136:VAL:HG12	21:S:137:ASP:N	2.24	0.50
23:U:34:THR:HG23	23:U:35:THR:H	1.76	0.50
25:W:38:PRO:CD	25:W:41:ARG:HH12	2.23	0.50
1:X:64:C:P	19:Q:71:GLN:HB2	2.51	0.50
1:X:101:A:H3'	1:X:102:C:C5	2.46	0.50
1:X:228:A:OP1	11:I:53:ARG:HB3	2.11	0.50
1:X:308:C:C2'	1:X:309:G:H5'	2.42	0.50
1:X:399:G:O2'	1:X:400:U:P	2.69	0.50
1:X:414:A:H5'	1:X:414:A:C8	2.38	0.50
1:X:887:G:O2'	1:X:888:G:H5'	2.11	0.50
1:X:982:C:H2'	1:X:983:G:O4'	2.10	0.50
1:X:1524:C:H3'	1:X:1525:A:C5'	2.41	0.50
1:X:1621:C:H2'	1:X:1622:G:H5'	1.92	0.50
1:X:1919:A:N6	1:X:1946:U:H3	2.09	0.50
1:X:1939:U:O2	1:X:1939:U:C2'	2.56	0.50
1:X:2172:U:O5'	1:X:2172:U:H6	1.93	0.50
1:X:2343:C:OP1	22:T:55:ARG:NH2	2.44	0.50
1:X:2847:G:C2	1:X:2848:A:N6	2.79	0.50
2:Z:67:C:H2'	2:Z:111:C:N4	2.19	0.50
3:A:48:ARG:H	3:A:48:ARG:CD	2.08	0.50
3:A:200:GLU:OE1	3:A:202:LYS:HA	2.11	0.50
5:C:7:ILE:HG22	5:C:120:VAL:O	2.12	0.50
5:C:146:GLU:O	5:C:148:VAL:HG23	2.12	0.50
7:E:25:LYS:CG	7:E:27:LYS:HE3	2.41	0.50
7:E:167:GLU:HG2	7:E:169:ILE:HD11	1.93	0.50
8:F:92:PRO:HB3	8:F:136:GLY:HA2	1.93	0.50
9:G:106:TYR:O	9:G:110:LEU:CG	2.58	0.50
12:J:28:VAL:HG21	12:J:135:ARG:HA	1.92	0.50
12:J:58:HIS:CD2	12:J:118:ALA:HB2	2.47	0.50
12:J:59:PHE:CZ	12:J:110:VAL:HG11	2.46	0.50
13:K:13:ASN:O	13:K:14:SER:C	2.53	0.50
14:L:54:ALA:CB	14:L:75:LEU:HD13	2.41	0.50
16:N:77:SER:O	16:N:78:THR:C	2.53	0.50
16:N:91:ASN:O	16:N:92:ARG:C	2.54	0.50
16:N:94:VAL:CG1	16:N:98:ILE:HD11	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:25:ASN:HA	21:S:84:TYR:CE1	2.47	0.50
23:U:8:THR:OG1	23:U:13:LEU:HD12	2.10	0.50
23:U:11:LYS:C	23:U:12:ASN:CG	2.79	0.50
24:V:28:LEU:C	24:V:30:PHE:N	2.68	0.50
25:W:17:VAL:C	25:W:19:THR:N	2.68	0.50
1:X:29:U:H2'	1:X:30:G:C8	2.46	0.50
1:X:194:G:H2'	1:X:195:A:O4'	2.10	0.50
1:X:234:C:C2'	1:X:235:C:H5'	2.42	0.50
1:X:740:A:OP1	1:X:1445:A:O2'	2.29	0.50
1:X:755:C:H2'	1:X:756:C:H6	1.75	0.50
1:X:1265:G:O2'	1:X:1266:G:O4'	2.30	0.50
1:X:1529:C:H2'	1:X:1530:U:O4'	2.12	0.50
1:X:1682:A:H2'	1:X:1683:G:H5'	1.93	0.50
1:X:1810:U:H4'	1:X:1811:A:OP2	2.11	0.50
1:X:1922:U:O2'	1:X:1923:U:P	2.70	0.50
1:X:2299:A:H61	1:X:2312:A:H3'	1.77	0.50
1:X:2312:A:H4'	1:X:2313:G:O5'	2.12	0.50
1:X:2543:A:C2	1:X:2626:U:H4'	2.46	0.50
1:X:2782:G:H2'	1:X:2783:U:O5'	2.12	0.50
2:Z:41:A:O2'	2:Z:48:A:C2	2.60	0.50
2:Z:58:G:H1'	2:Z:59:A:N7	2.26	0.50
3:A:146:GLU:OE2	3:A:150:GLY:O	2.29	0.50
3:A:200:GLU:O	3:A:202:LYS:N	2.44	0.50
3:A:217:ARG:O	3:A:218:LYS:C	2.54	0.50
3:A:217:ARG:CZ	3:A:218:LYS:HE2	2.42	0.50
4:B:85:ALA:H	4:B:86:PRO:CD	2.09	0.50
4:B:133:LYS:HG3	4:B:137:ARG:HB3	1.92	0.50
4:B:161:GLY:O	4:B:162:MET:C	2.54	0.50
5:C:5:ASN:HA	5:C:118:VAL:HG23	1.93	0.50
6:D:57:LEU:HD12	6:D:65:PRO:HG3	1.93	0.50
6:D:85:VAL:HG23	6:D:86:GLY:N	2.24	0.50
9:G:85:ALA:C	9:G:87:GLN:H	2.19	0.50
10:H:64:VAL:C	10:H:65:LYS:HG3	2.36	0.50
11:I:134:GLU:HG2	11:I:138:GLY:O	2.12	0.50
12:J:68:ARG:HD3	12:J:103:VAL:HG12	1.91	0.50
14:L:33:ARG:O	14:L:99:ARG:CZ	2.59	0.50
14:L:67:THR:O	14:L:68:ALA:O	2.30	0.50
16:N:71:LEU:HG	16:N:72:HIS:CE1	2.46	0.50
18:P:9:ARG:CG	18:P:13:GLN:HG3	2.41	0.50
18:P:86:LEU:HB2	18:P:130:GLU:OE1	2.11	0.50
19:Q:14:GLU:O	19:Q:18:SER:OG	2.23	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:31:PRO:O	19:Q:76:LYS:HD2	2.11	0.50
21:S:115:ILE:HG23	21:S:169:VAL:CG1	2.41	0.50
23:U:34:THR:HG23	23:U:35:THR:N	2.26	0.50
1:X:59:G:C6	1:X:62:U:N3	2.80	0.50
1:X:119:G:H2'	1:X:120:G:H8	1.75	0.50
1:X:207:U:O2'	1:X:208:C:H5'	2.11	0.50
1:X:227:G:O2'	11:I:53:ARG:CZ	2.60	0.50
1:X:709:A:H2'	1:X:710:C:O4'	2.12	0.50
1:X:946:U:C2	1:X:947:C:C5	2.99	0.50
1:X:970:A:N6	12:J:83:ARG:NH2	2.60	0.50
1:X:985:G:N2	1:X:1200:G:C8	2.79	0.50
1:X:1007:A:N3	17:O:6:GLN:CD	2.69	0.50
1:X:1190:C:O5'	1:X:1190:C:H6	1.95	0.50
1:X:1231:A:C4	1:X:1232:U:C5	3.00	0.50
1:X:1351:G:N2	1:X:1352:G:H1'	2.26	0.50
1:X:1359:G:C5	1:X:1617:G:N2	2.80	0.50
1:X:1419:G:H2'	1:X:1420:A:O4'	2.12	0.50
1:X:1526:U:H2'	1:X:1527:G:C5'	2.42	0.50
1:X:1655:C:O2	1:X:2677:U:O2'	2.27	0.50
1:X:1692:C:C2'	1:X:1693:A:H5'	2.41	0.50
1:X:1949:A:H2	1:X:2572:U:H1'	1.73	0.50
1:X:2431:C:H2'	1:X:2432:A:C8	2.47	0.50
3:A:72:LYS:NZ	3:A:99:ASP:OD1	2.44	0.50
4:B:4:ILE:CG1	4:B:5:LEU:H	2.23	0.50
4:B:162:MET:HG3	4:B:162:MET:O	2.11	0.50
7:E:17:VAL:C	7:E:18:ASN:CG	2.77	0.50
8:F:73:PRO:CB	8:F:74:PRO:CD	2.90	0.50
11:I:67:ASN:O	11:I:68:VAL:CB	2.59	0.50
16:N:10:ARG:CB	16:N:10:ARG:HH11	2.25	0.50
16:N:46:GLU:OE2	17:O:72:ARG:HD3	2.11	0.50
16:N:62:ILE:O	16:N:63:GLN:C	2.54	0.50
17:O:75:LYS:HB2	17:O:80:TYR:CB	2.40	0.50
17:O:90:PHE:CD1	17:O:90:PHE:C	2.88	0.50
21:S:1:MET:HE3	21:S:52:PHE:CG	2.46	0.50
23:U:70:LEU:CD2	23:U:74:PRO:HA	2.42	0.50
24:V:5:GLU:HA	24:V:8:ASN:HB2	1.94	0.50
25:W:10:ILE:HG23	25:W:11:GLY:N	2.26	0.50
25:W:38:PRO:HD3	25:W:41:ARG:HH12	1.76	0.50
1:X:537:C:O2'	1:X:538:A:C4	2.65	0.50
1:X:635:C:O2'	1:X:636:G:H5"	2.11	0.50
1:X:808:C:O2'	1:X:809:C:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:858:G:P	1:X:858:G:H8	2.35	0.50
1:X:1331:G:N2	1:X:1332:G:H1'	2.26	0.50
1:X:1428:G:H2'	1:X:1428:G:N3	2.26	0.50
1:X:2570:C:H2'	1:X:2571:G:C8	2.46	0.50
1:X:2598:C:C4'	4:B:150:VAL:HG22	2.41	0.50
2:Z:32:C:H1'	2:Z:59:A:N6	2.17	0.50
3:A:177:LEU:HD12	3:A:181:GLU:OE1	2.12	0.50
4:B:49:ILE:CD1	4:B:50:GLY:N	2.73	0.50
5:C:44:SER:HB3	5:C:88:PRO:HG3	1.93	0.50
5:C:112:GLN:CD	5:C:116:LYS:CB	2.83	0.50
6:D:18:GLN:C	6:D:20:PHE:N	2.70	0.50
6:D:27:ALA:O	6:D:28:VAL:O	2.30	0.50
6:D:73:SER:HB3	6:D:79:LEU:HD23	1.93	0.50
11:I:32:ARG:NH1	17:O:81:ARG:NH2	2.60	0.50
13:K:57:GLY:C	13:K:59:ASP:H	2.20	0.50
19:Q:63:LYS:HB2	19:Q:70:GLY:N	2.25	0.50
23:U:11:LYS:O	23:U:12:ASN:ND2	2.44	0.50
1:X:29:U:H2'	1:X:30:G:H8	1.77	0.50
1:X:161:U:H2'	1:X:162:C:C6	2.47	0.50
1:X:342:G:H4'	1:X:343:A:OP1	2.11	0.50
1:X:726:G:H2'	1:X:727:U:N1	2.27	0.50
1:X:1763:G:H5"	1:X:1764:A:OP2	2.12	0.50
1:X:1809:G:H5'	3:A:88:ARG:HH12	1.76	0.50
1:X:2222:U:C2	1:X:2223:U:C5	3.00	0.50
1:X:2313:G:H21	14:L:17:VAL:HB	1.77	0.50
2:Z:31:A:H2'	2:Z:32:C:O4'	2.12	0.50
2:Z:32:C:C2'	2:Z:33:C:H5'	2.38	0.50
2:Z:71:G:N2	2:Z:72:C:C1'	2.74	0.50
2:Z:120:G:H2'	2:Z:121:G:O4'	2.11	0.50
3:A:58:HIS:ND1	3:A:58:HIS:O	2.40	0.50
6:D:17:MET:HA	6:D:21:GLY:CA	2.42	0.50
7:E:84:THR:HA	7:E:134:SER:CA	2.33	0.50
9:G:42:VAL:HG12	9:G:43:VAL:N	2.26	0.50
9:G:91:THR:HG22	9:G:92:GLY:N	2.26	0.50
10:H:17:ARG:HE	10:H:59:ALA:HB2	1.77	0.50
10:H:116:ARG:HA	10:H:133:VAL:CG1	2.41	0.50
12:J:57:ARG:HG2	12:J:57:ARG:NH1	2.10	0.50
12:J:113:GLU:HA	12:J:116:LYS:HB3	1.91	0.50
14:L:21:THR:HG22	14:L:22:ALA:N	2.26	0.50
14:L:33:ARG:O	14:L:99:ARG:NH1	2.44	0.50
15:M:34:ARG:NH1	15:M:81:PHE:CB	2.74	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:14:HIS:CE1	16:N:32:TYR:CD2	3.00	0.50
16:N:69:ALA:HB1	16:N:75:ASN:H	1.76	0.50
21:S:92:VAL:C	21:S:93:GLU:HG3	2.37	0.50
24:V:6:MET:CG	24:V:56:VAL:HG11	2.40	0.50
1:X:137:A:H2'	1:X:138:G:H5'	1.94	0.50
1:X:488:A:C6	1:X:489:A:C6	2.99	0.50
1:X:623:G:C2	1:X:627:A:C6	3.00	0.50
1:X:683:A:C5'	11:I:45:LYS:N	2.71	0.50
1:X:874:A:H61	1:X:928:G:H1'	1.77	0.50
1:X:968:C:N4	1:X:970:A:C4	2.80	0.50
1:X:1223:G:H4'	1:X:1224:A:H5'	1.94	0.50
1:X:1513:U:OP2	1:X:1514:C:H5	1.95	0.50
1:X:1514:C:C6	1:X:1593:C:H4'	2.47	0.50
1:X:1685:A:H4'	1:X:1686:A:O5'	2.12	0.50
1:X:1910:A:H8	1:X:1910:A:O5'	1.95	0.50
1:X:2243:C:H2'	1:X:2244:C:O4'	2.12	0.50
1:X:2344:G:H4'	22:T:60:PHE:CE2	2.46	0.50
1:X:2650:G:O2'	1:X:2651:U:H5'	2.12	0.50
3:A:105:ILE:O	3:A:107:ALA:N	2.45	0.50
4:B:188:ILE:HG22	4:B:189:PRO:N	2.26	0.50
5:C:104:LEU:O	5:C:108:ILE:N	2.43	0.50
6:D:27:ALA:O	6:D:28:VAL:C	2.54	0.50
9:G:146:THR:HG22	9:G:147:ARG:N	2.26	0.50
10:H:22:ILE:O	10:H:23:ARG:HB2	2.10	0.50
10:H:77:THR:C	10:H:79:HIS:N	2.67	0.50
11:I:88:PHE:O	11:I:93:LEU:HB2	2.12	0.50
13:K:17:ARG:NH1	13:K:20:LEU:CD2	2.74	0.50
16:N:91:ASN:HA	17:O:10:LYS:HZ1	1.71	0.50
17:O:14:VAL:H	17:O:16:GLU:CD	2.20	0.50
19:Q:38:ILE:O	19:Q:41:ALA:HB3	2.12	0.50
20:R:8:SER:C	20:R:10:HIS:N	2.67	0.50
20:R:17:LYS:O	20:R:20:ASP:OD1	2.30	0.50
23:U:20:ARG:CG	23:U:39:LYS:HE3	2.40	0.50
23:U:70:LEU:HD23	23:U:75:TYR:CD1	2.46	0.50
1:X:45:C:N3	1:X:157:G:C2	2.80	0.50
1:X:169:C:O2'	1:X:170:U:H5'	2.11	0.50
1:X:332:C:OP2	5:C:130:THR:HB	2.12	0.50
1:X:481:A:N1	1:X:482:A:C2	2.79	0.50
1:X:522:G:O2'	1:X:523:A:OP2	2.16	0.50
1:X:573:C:O2'	1:X:574:C:H5'	2.12	0.50
1:X:687:G:H5"	5:C:70:GLY:H	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:703:A:O2'	1:X:793:G:OP1	2.24	0.50
1:X:917:U:H2'	1:X:918:A:C5'	2.42	0.50
1:X:969:U:C5	12:J:17:ARG:HB2	2.47	0.50
1:X:1142:G:C4	1:X:1143:A:C8	3.00	0.50
1:X:1149:G:P	9:G:98:LYS:HZ3	2.35	0.50
1:X:1572:C:C2'	1:X:1573:G:H5'	2.42	0.50
1:X:1831:G:C5	1:X:1832:G:N7	2.80	0.50
1:X:1856:U:O2'	1:X:1857:G:H5'	2.12	0.50
1:X:1975:G:N2	1:X:1979:C:O2'	2.45	0.50
1:X:2302:G:C6	1:X:2303:C:C4	3.00	0.50
1:X:2639:A:H2'	1:X:2640:G:O4'	2.11	0.50
1:X:2839:G:C5	1:X:2840:U:C4	3.00	0.50
2:Z:53:G:P	14:L:64:LYS:HZ1	2.34	0.50
4:B:33:ILE:HD11	4:B:88:GLY:O	2.12	0.50
6:D:50:ILE:C	6:D:52:LYS:N	2.68	0.50
6:D:62:LEU:O	6:D:63:GLN:HB2	2.10	0.50
6:D:119:PRO:O	6:D:120:ASN:C	2.55	0.50
9:G:131:VAL:O	9:G:132:PHE:C	2.55	0.50
12:J:111:THR:OG1	12:J:114:GLN:HB2	2.11	0.50
13:K:25:ALA:HB2	13:K:47:PHE:CE2	2.47	0.50
13:K:33:ARG:HB2	13:K:114:GLU:CB	2.41	0.50
13:K:113:ILE:HG23	13:K:113:ILE:O	2.11	0.50
16:N:75:ASN:OD1	16:N:78:THR:N	2.45	0.50
16:N:88:ILE:HA	17:O:49:GLU:HG3	1.94	0.50
17:O:80:TYR:C	17:O:81:ARG:HG3	2.36	0.50
19:Q:61:LYS:HG2	19:Q:61:LYS:O	2.12	0.50
24:V:2:LYS:N	24:V:3:PRO:HD3	2.26	0.50
1:X:172:A:N7	1:X:175:C:C5	2.80	0.50
1:X:497:C:C6	1:X:497:C:H3'	2.47	0.50
1:X:624:A:H5'	1:X:624:A:N3	2.27	0.50
1:X:683:A:H4'	1:X:684:C:H5'	1.94	0.50
1:X:930:A:C8	1:X:930:A:C3'	2.94	0.50
1:X:1007:A:C6	1:X:1171:A:N1	2.80	0.50
1:X:1287:A:C6	1:X:1315:A:C2	3.00	0.50
1:X:1359:G:C5	1:X:1617:G:C2	3.00	0.50
1:X:1582:A:OP1	3:A:211:ARG:CZ	2.60	0.50
1:X:2289:A:H2	6:D:75:SER:HB2	1.76	0.50
1:X:2301:A:H2'	1:X:2302:G:O4'	2.12	0.50
1:X:2437:G:H2'	1:X:2469:G:C6	2.47	0.50
2:Z:31:A:H1'	2:Z:60:A:N6	2.26	0.50
2:Z:108:G:O2'	2:Z:109:G:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:43:ARG:NH2	3:A:54:ILE:HG13	2.23	0.50
5:C:104:LEU:CD1	5:C:175:VAL:HG23	2.42	0.50
5:C:164:VAL:C	5:C:166:TRP:CE3	2.90	0.50
7:E:13:SER:O	7:E:15:VAL:N	2.45	0.50
7:E:68:THR:O	7:E:72:VAL:N	2.33	0.50
9:G:156:HIS:N	9:G:157:PRO:CD	2.74	0.50
11:I:134:GLU:HG2	11:I:138:GLY:C	2.37	0.50
12:J:36:ILE:HG23	12:J:101:GLY:O	2.12	0.50
12:J:112:GLU:O	12:J:116:LYS:HB2	2.11	0.50
16:N:51:ARG:HD2	16:N:51:ARG:N	2.20	0.50
20:R:96:LYS:O	20:R:105:ARG:N	2.45	0.50
20:R:105:ARG:HH22	20:R:112:LYS:HA	1.76	0.50
22:T:21:LEU:HD11	22:T:41:ARG:HE	1.76	0.50
30:4:20:HIS:O	30:4:21:GLY:C	2.55	0.50
1:X:537:C:O2'	1:X:538:A:C2	2.52	0.49
1:X:719:A:O2'	1:X:720:A:H5'	2.12	0.49
1:X:1499:A:H2'	1:X:1500:U:C6	2.46	0.49
1:X:1566:G:O2'	1:X:1567:A:H5'	2.12	0.49
1:X:1657:A:O2'	1:X:1658:A:H5'	2.12	0.49
1:X:2473:G:H2'	1:X:2474:G:C8	2.47	0.49
4:B:33:ILE:CG2	4:B:47:VAL:HG12	2.42	0.49
5:C:44:SER:HB3	5:C:88:PRO:CG	2.42	0.49
5:C:170:LEU:CD2	5:C:175:VAL:HG12	2.40	0.49
6:D:88:LYS:C	6:D:89:VAL:CG2	2.84	0.49
6:D:103:LEU:HA	6:D:107:GLY:H	1.77	0.49
6:D:143:TYR:C	6:D:146:VAL:HG22	2.37	0.49
9:G:67:ARG:HD3	9:G:70:PHE:O	2.11	0.49
9:G:103:TYR:CE2	9:G:111:LYS:HB3	2.47	0.49
10:H:2:ILE:HG21	10:H:8:LEU:HD11	1.93	0.49
10:H:78:SER:HA	10:H:91:PHE:O	2.12	0.49
11:I:30:ALA:HB2	11:I:34:HIS:HE1	1.70	0.49
15:M:42:GLY:C	15:M:44:ARG:N	2.70	0.49
19:Q:13:SER:OG	19:Q:16:ALA:CB	2.60	0.49
19:Q:34:THR:C	19:Q:36:THR:N	2.67	0.49
20:R:92:THR:HB	20:R:95:ARG:NH2	2.15	0.49
21:S:24:TYR:OH	21:S:82:ASP:HB3	2.12	0.49
21:S:129:ARG:NH1	21:S:156:GLU:OE2	2.43	0.49
22:T:32:LYS:HB3	22:T:35:ASN:ND2	2.27	0.49
23:U:50:ALA:CA	23:U:52:ARG:HH22	2.24	0.49
1:X:313:U:C2	1:X:314:G:N7	2.80	0.49
1:X:497:C:C6	1:X:497:C:C3'	2.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:517:A:C5'	1:X:518:A:H5'	2.30	0.49
1:X:649:G:O2'	1:X:650:U:H5'	2.11	0.49
1:X:809:C:H2'	1:X:810:U:C6	2.47	0.49
1:X:954:U:P	11:I:38:LYS:CG	3.01	0.49
1:X:956:A:C2	1:X:2427:A:C2	3.00	0.49
1:X:956:A:C4	1:X:2427:A:C2	3.00	0.49
1:X:956:A:N3	1:X:2427:A:C2	2.80	0.49
1:X:1022:A:N6	1:X:1162:A:N6	2.60	0.49
1:X:1734:C:C5	1:X:1735:G:H1'	2.47	0.49
1:X:1767:G:C5	1:X:1768:U:C5	3.00	0.49
1:X:1938:U:O2'	1:X:1939:U:H5'	2.12	0.49
1:X:1942:G:N2	1:X:1943:A:N3	2.59	0.49
1:X:2198:U:O5'	1:X:2199:C:H5"	2.12	0.49
1:X:2298:U:O2'	1:X:2299:A:C8	2.61	0.49
1:X:2442:C:O2'	1:X:2443:C:H5'	2.12	0.49
1:X:2496:C:C5	1:X:2521:A:C5	3.01	0.49
1:X:2698:G:C6	1:X:2699:G:C6	3.00	0.49
1:X:2861:A:O2'	26:Y:31:THR:HG23	2.12	0.49
4:B:19:ARG:HG3	4:B:21:ILE:CD1	2.43	0.49
4:B:116:VAL:CG2	4:B:136:ARG:CG	2.89	0.49
6:D:88:LYS:HG2	6:D:89:VAL:H	1.77	0.49
6:D:108:LEU:O	6:D:109:PRO:C	2.55	0.49
7:E:37:TYR:HD2	7:E:68:THR:HA	1.76	0.49
8:F:113:MET:N	8:F:114:PRO:CD	2.75	0.49
12:J:21:ASP:N	12:J:99:LYS:HE2	2.26	0.49
13:K:40:LYS:O	13:K:43:GLU:OE2	2.30	0.49
13:K:48:VAL:C	13:K:50:GLN:N	2.66	0.49
14:L:106:ALA:O	14:L:110:GLY:N	2.45	0.49
15:M:53:VAL:CG1	15:M:54:VAL:N	2.74	0.49
16:N:68:GLY:HA2	16:N:71:LEU:HB3	1.94	0.49
17:O:10:LYS:CD	17:O:11:GLN:HE21	2.25	0.49
19:Q:3:HIS:HE1	19:Q:40:ASP:OD2	1.95	0.49
21:S:3:LEU:CD1	21:S:33:ALA:N	2.75	0.49
21:S:74:ARG:O	21:S:76:ARG:N	2.45	0.49
24:V:56:VAL:CA	24:V:59:GLU:OE1	2.55	0.49
1:X:94:C:H1'	24:V:40:PRO:CG	2.43	0.49
1:X:332:C:C2	5:C:159:ARG:NH1	2.78	0.49
1:X:921:A:C2'	1:X:924:C:C5	2.91	0.49
1:X:1033:G:C8	9:G:93:LYS:NZ	2.74	0.49
1:X:1179:A:C2	1:X:1196:G:C2	3.00	0.49
1:X:1357:U:O2'	1:X:1358:C:OP1	2.18	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1420:A:H2'	1:X:1421:U:H6	1.76	0.49
1:X:1429:A:H2'	1:X:1429:A:N3	2.26	0.49
1:X:1542:G:H22	1:X:1562:G:H1	1.59	0.49
1:X:1693:A:N1	1:X:1694:A:C2	2.80	0.49
1:X:1744:G:C6	1:X:1747:G:N1	2.80	0.49
1:X:1810:U:C6	3:A:157:ARG:HD2	2.47	0.49
1:X:2043:A:H62	5:C:68:ARG:NH1	2.10	0.49
1:X:2710:C:H4'	4:B:168:GLN:O	2.12	0.49
1:X:2725:C:H5'	7:E:146:ALA:CB	2.42	0.49
3:A:106:LEU:O	3:A:107:ALA:C	2.55	0.49
3:A:143:HIS:C	3:A:143:HIS:CD2	2.88	0.49
4:B:76:ARG:HG2	4:B:77:ILE:HG13	1.93	0.49
4:B:195:LEU:HD12	4:B:196:VAL:N	2.26	0.49
7:E:41:LEU:HD23	7:E:68:THR:OG1	2.12	0.49
7:E:170:ALA:C	7:E:171:LEU:HD12	2.37	0.49
9:G:85:ALA:O	9:G:88:VAL:HG12	2.12	0.49
10:H:85:ASP:CG	10:H:87:SER:H	2.15	0.49
12:J:110:VAL:CG2	12:J:115:ALA:HB2	2.42	0.49
14:L:8:ARG:HG3	14:L:9:ARG:HG3	1.94	0.49
14:L:34:SER:HA	14:L:94:TYR:CE2	2.46	0.49
14:L:91:ARG:CD	14:L:91:ARG:N	2.67	0.49
16:N:93:LYS:O	16:N:94:VAL:CG2	2.59	0.49
18:P:31:VAL:HG21	18:P:124:ILE:CG1	2.42	0.49
18:P:32:ARG:HA	18:P:121:THR:HG22	1.93	0.49
18:P:97:VAL:HG22	18:P:124:ILE:HA	1.95	0.49
21:S:101:THR:HG23	21:S:135:VAL:HG13	1.93	0.49
1:X:116:A:C5'	1:X:117:A:H8	2.24	0.49
1:X:131:C:O2'	1:X:132:U:H5'	2.12	0.49
1:X:219:G:H2'	1:X:231:G:C6	2.47	0.49
1:X:219:G:H2'	1:X:231:G:N1	2.28	0.49
1:X:360:A:H3'	1:X:361:G:H8	1.77	0.49
1:X:558:G:O2'	1:X:559:C:C2	2.61	0.49
1:X:674:U:H1'	11:I:22:GLY:HA3	1.94	0.49
1:X:700:C:N3	1:X:701:U:C2	2.81	0.49
1:X:838:A:C2	1:X:839:U:C2	3.00	0.49
1:X:1211:G:H2'	1:X:1212:U:C6	2.44	0.49
1:X:1226:A:N9	1:X:1250:A:C2	2.80	0.49
1:X:1264:C:O5'	16:N:13:ARG:NH1	2.41	0.49
1:X:1310:C:H2'	1:X:1311:C:H6	1.76	0.49
1:X:1391:A:O2'	1:X:1392:U:O5'	2.29	0.49
1:X:1560:A:N6	1:X:1561:A:C6	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1607:A:C2'	1:X:1608:U:O5'	2.61	0.49
1:X:1811:A:O2'	1:X:1812:U:P	2.69	0.49
1:X:2037:A:C2	1:X:2595:C:C2	3.00	0.49
1:X:2250:G:H8	1:X:2250:G:O5'	1.95	0.49
1:X:2379:G:H2'	1:X:2380:U:C5'	2.41	0.49
1:X:2760:G:O6	9:G:125:ARG:NH1	2.44	0.49
1:X:2850:U:H5'	1:X:2850:U:C6	2.29	0.49
1:X:2861:A:O2'	1:X:2862:G:H5'	2.11	0.49
3:A:101:GLU:OE2	3:A:101:GLU:C	2.55	0.49
3:A:222:ARG:C	3:A:224:SER:N	2.69	0.49
6:D:150:ARG:HG2	6:D:151:GLY:H	1.76	0.49
11:I:7:LYS:O	11:I:9:THR:N	2.45	0.49
11:I:58:ALA:O	11:I:59:ARG:HB2	2.12	0.49
11:I:132:ALA:N	11:I:135:ALA:HB3	2.27	0.49
12:J:52:ARG:CA	12:J:55:MET:HE3	2.41	0.49
13:K:84:ALA:HB3	13:K:85:PRO:CD	2.37	0.49
14:L:83:GLY:C	14:L:85:LYS:H	2.19	0.49
15:M:5:ILE:O	15:M:5:ILE:CD1	2.58	0.49
16:N:91:ASN:HA	17:O:10:LYS:HZ2	1.77	0.49
19:Q:49:ARG:O	19:Q:50:VAL:HG23	2.12	0.49
21:S:42:ALA:HA	21:S:45:GLN:CG	2.42	0.49
23:U:41:VAL:CG2	23:U:42:GLN:N	2.47	0.49
23:U:48:LYS:HG3	23:U:49:LYS:H	1.74	0.49
25:W:1:MET:HB2	25:W:34:VAL:HG12	1.94	0.49
1:X:76:C:H6	1:X:76:C:C5'	2.19	0.49
1:X:76:C:O2'	1:X:77:C:H5'	2.12	0.49
1:X:331:U:H4'	1:X:333:A:N7	2.27	0.49
1:X:968:C:OP1	12:J:78:LYS:HB3	2.12	0.49
1:X:1068:A:H5'	1:X:1069:G:OP2	2.12	0.49
1:X:1171:A:C5	1:X:1172:U:C5	3.00	0.49
1:X:1372:A:C4	1:X:1373:G:C8	3.01	0.49
1:X:1438:G:O2'	1:X:1439:G:H5'	2.13	0.49
1:X:1811:A:H4'	1:X:1812:U:H5"	1.94	0.49
1:X:1822:C:H2'	1:X:1823:G:H5'	1.93	0.49
1:X:2171:U:H2'	1:X:2172:U:C6	2.47	0.49
1:X:2388:G:C5	1:X:2389:G:N7	2.80	0.49
1:X:2569:A:O2'	1:X:2570:C:H5'	2.12	0.49
1:X:2873:G:H2'	1:X:2874:A:C8	2.47	0.49
2:Z:43:G:C8	6:D:66:ILE:HD11	2.48	0.49
3:A:43:ARG:O	3:A:44:ASN:CB	2.60	0.49
3:A:97:TYR:CB	3:A:101:GLU:OE1	2.56	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:61:LYS:O	4:B:64:GLN:HB2	2.12	0.49
4:B:133:LYS:O	4:B:134:TRP:C	2.54	0.49
6:D:47:SER:CA	6:D:50:ILE:HG13	2.38	0.49
9:G:65:LYS:NZ	9:G:65:LYS:CB	2.75	0.49
9:G:78:ASP:O	9:G:79:PHE:C	2.55	0.49
12:J:112:GLU:HG3	12:J:113:GLU:N	2.26	0.49
14:L:13:THR:O	14:L:17:VAL:HG12	2.12	0.49
14:L:75:LEU:O	14:L:78:ALA:CB	2.54	0.49
15:M:54:VAL:O	15:M:54:VAL:CG1	2.61	0.49
16:N:47:TYR:HE2	16:N:51:ARG:NH2	2.05	0.49
18:P:27:VAL:HA	18:P:125:THR:HG22	1.95	0.49
19:Q:50:VAL:O	19:Q:50:VAL:HG12	2.10	0.49
20:R:22:VAL:HG11	20:R:80:LYS:HE3	1.92	0.49
20:R:23:ILE:HD13	20:R:23:ILE:O	2.12	0.49
20:R:96:LYS:HD3	20:R:105:ARG:HB2	1.94	0.49
20:R:105:ARG:NE	20:R:106:VAL:O	2.46	0.49
21:S:113:VAL:CG2	21:S:171:VAL:HG22	2.40	0.49
21:S:146:HIS:O	21:S:147:ILE:HD13	2.11	0.49
25:W:23:LEU:HD13	25:W:51:LEU:CD1	2.41	0.49
25:W:42:GLY:O	25:W:43:MET:C	2.56	0.49
30:4:31:LYS:HD3	30:4:31:LYS:H	1.77	0.49
1:X:353:G:O2'	1:X:354:C:H5'	2.13	0.49
1:X:609:U:O2'	11:I:18:ARG:NH1	2.45	0.49
1:X:712:A:N3	1:X:1650:A:H1'	2.28	0.49
1:X:1079:G:OP2	1:X:1079:G:H8	1.96	0.49
1:X:1441:A:H1'	1:X:1442:C:C4	2.47	0.49
1:X:1685:A:C8	1:X:1691:G:C6	3.01	0.49
1:X:2042:A:H5"	5:C:65:GLY:HA3	1.93	0.49
1:X:2080:U:H2'	1:X:2081:U:O4'	2.13	0.49
1:X:2225:G:N1	1:X:2405:A:H1'	2.28	0.49
1:X:2307:A:C6	1:X:2308:A:N6	2.80	0.49
1:X:2798:A:C2'	1:X:2799:C:H5'	2.42	0.49
2:Z:74:A:H2	2:Z:107:C:H41	1.59	0.49
2:Z:112:A:H2'	2:Z:113:G:O4'	2.12	0.49
3:A:108:PRO:CB	3:A:143:HIS:HE1	2.25	0.49
5:C:7:ILE:O	5:C:120:VAL:CB	2.57	0.49
5:C:54:THR:O	5:C:55:GLY:O	2.29	0.49
5:C:116:LYS:O	5:C:117:LEU:HB3	2.12	0.49
5:C:149:LEU:HD21	5:C:170:LEU:HD22	1.94	0.49
6:D:77:PHE:N	6:D:77:PHE:HD1	2.10	0.49
8:F:125:ALA:O	8:F:129:ALA:N	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:15:ARG:CD	12:J:73:LYS:HZ2	2.26	0.49
12:J:28:VAL:HG23	12:J:137:VAL:CG2	2.42	0.49
12:J:70:PHE:CD2	12:J:71:PRO:N	2.81	0.49
14:L:14:ARG:O	14:L:17:VAL:CG1	2.60	0.49
15:M:34:ARG:CD	15:M:81:PHE:CE2	2.96	0.49
16:N:75:ASN:OD1	16:N:75:ASN:O	2.31	0.49
18:P:107:ILE:HB	18:P:117:ILE:CD1	2.43	0.49
25:W:3:ILE:HG21	25:W:25:LEU:HD11	1.94	0.49
26:Y:6:VAL:HG22	26:Y:7:PRO:CD	2.41	0.49
1:X:6:A:H4'	9:G:159:SER:O	2.13	0.49
1:X:172:A:C2	1:X:227:G:N2	2.81	0.49
1:X:304:A:C5	1:X:356:A:N6	2.80	0.49
1:X:706:A:C2	1:X:707:U:O2	2.65	0.49
1:X:750:C:N3	1:X:751:G:C8	2.81	0.49
1:X:1008:G:O2'	1:X:1009:C:H5'	2.11	0.49
1:X:1093:U:H2'	1:X:1094:C:O4'	2.12	0.49
1:X:1468:A:H5"	1:X:1472:C:N4	2.27	0.49
1:X:1682:A:C2'	1:X:1683:G:H5'	2.43	0.49
1:X:2204:A:H4'	1:X:2205:C:O5'	2.11	0.49
1:X:2264:C:H4'	1:X:2267:A:N7	2.28	0.49
1:X:2265:A:N3	1:X:2266:A:C6	2.81	0.49
1:X:2383:C:H1'	11:I:65:PHE:CZ	2.47	0.49
1:X:2445:C:H5"	30:4:6:SER:HB2	1.93	0.49
1:X:2827:G:C5	1:X:2828:C:C5	3.00	0.49
2:Z:44:C:O2	6:D:90:THR:N	2.46	0.49
4:B:149:ARG:NH1	9:G:106:TYR:HD1	2.07	0.49
5:C:150:LEU:N	5:C:150:LEU:HD12	2.28	0.49
6:D:70:ALA:HB2	6:D:85:VAL:HG13	1.95	0.49
6:D:154:ILE:HD12	6:D:154:ILE:N	2.28	0.49
7:E:9:ILE:CB	7:E:50:LEU:HB3	2.42	0.49
7:E:45:GLN:CA	7:E:50:LEU:HA	2.40	0.49
7:E:117:PRO:HB2	7:E:121:VAL:HB	1.95	0.49
8:F:96:LYS:CB	8:F:99:LYS:HE2	2.40	0.49
9:G:65:LYS:HG2	9:G:66:HIS:H	1.71	0.49
9:G:107:GLN:O	9:G:109:GLY:N	2.43	0.49
10:H:78:SER:O	10:H:79:HIS:O	2.30	0.49
11:I:130:ILE:HG22	11:I:131:LYS:N	2.25	0.49
12:J:11:ARG:HG3	12:J:11:ARG:NH1	2.26	0.49
12:J:59:PHE:CZ	12:J:110:VAL:HG21	2.48	0.49
14:L:33:ARG:NH1	14:L:100:VAL:O	2.45	0.49
15:M:50:PHE:HD2	15:M:51:GLU:N	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:70:ARG:HH11	16:N:70:ARG:CG	2.24	0.49
18:P:41:VAL:HG12	18:P:42:VAL:N	2.27	0.49
18:P:117:ILE:HG22	18:P:118:LYS:N	2.27	0.49
20:R:48:VAL:C	20:R:50:GLY:N	2.70	0.49
21:S:153:LYS:O	21:S:154:LEU:HG	2.13	0.49
22:T:44:LYS:O	22:T:44:LYS:HD2	2.13	0.49
1:X:57:G:C4	1:X:58:C:C5	3.01	0.49
1:X:848:A:C6	1:X:849:G:C5	3.01	0.49
1:X:860:U:O2	1:X:860:U:H2'	2.11	0.49
1:X:915:C:H2'	1:X:916:U:H6	1.76	0.49
1:X:1016:C:H2'	1:X:1017:C:H6	1.73	0.49
1:X:1123:G:H2'	1:X:1124:U:O4'	2.12	0.49
1:X:1314:A:O2'	1:X:1315:A:C3'	2.41	0.49
1:X:1630:A:N6	18:P:112:GLY:O	2.46	0.49
1:X:1984:A:C2	1:X:1985:G:C4	3.01	0.49
1:X:2012:A:C2	1:X:2016:A:C5	3.01	0.49
1:X:2508:G:OP2	7:E:172:LYS:NZ	2.45	0.49
1:X:2612:G:O2'	4:B:63:MET:HG2	2.12	0.49
1:X:2709:C:H2'	1:X:2710:C:H6	1.77	0.49
3:A:125:PRO:CB	3:A:193:ILE:HD11	2.40	0.49
4:B:193:GLY:O	15:M:2:GLN:N	2.46	0.49
6:D:135:GLN:HG3	6:D:150:ARG:O	2.13	0.49
7:E:96:ALA:HB1	7:E:103:LEU:HD11	1.95	0.49
11:I:123:ASP:O	11:I:124:ALA:HB2	2.13	0.49
12:J:54:VAL:HG11	12:J:121:LEU:HB3	1.95	0.49
12:J:68:ARG:HG2	12:J:104:MET:O	2.13	0.49
12:J:77:LYS:CG	12:J:78:LYS:H	2.25	0.49
12:J:83:ARG:HG2	12:J:83:ARG:HH11	1.77	0.49
12:J:112:GLU:C	12:J:112:GLU:OE1	2.55	0.49
14:L:21:THR:HG22	14:L:22:ALA:H	1.78	0.49
16:N:105:ALA:O	16:N:107:LYS:N	2.45	0.49
24:V:41:HIS:C	24:V:43:VAL:N	2.67	0.49
25:W:5:LEU:HG	25:W:28:ILE:HG22	1.94	0.49
1:X:27:G:O2'	1:X:28:A:P	2.71	0.49
1:X:152:G:O2'	1:X:153:A:H5'	2.13	0.49
1:X:190:A:O2'	1:X:191:G:H5'	2.12	0.49
1:X:589:C:C5'	16:N:31:GLN:HE22	2.22	0.49
1:X:769:C:H2'	1:X:770:U:H5'	1.95	0.49
1:X:840:U:O2'	1:X:841:G:N2	2.45	0.49
1:X:1065:A:C4	1:X:1117:G:N2	2.81	0.49
1:X:1071:U:C2	1:X:1073:G:H5'	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1303:U:H2'	1:X:1304:U:C6	2.45	0.49
1:X:1492:A:C6	1:X:1531:C:N4	2.81	0.49
1:X:1737:G:H2'	1:X:1738:U:C6	2.48	0.49
1:X:2247:A:H5'	1:X:2248:A:P	2.53	0.49
1:X:2490:U:O4	1:X:2554:C:N3	2.46	0.49
1:X:2529:G:C6	1:X:2538:C:N3	2.80	0.49
1:X:2619:G:C6	1:X:2755:A:C2	3.01	0.49
1:X:2777:A:N6	18:P:134:LYS:HB2	2.27	0.49
1:X:2819:G:C5	1:X:2820:C:C4	3.01	0.49
1:X:2867:G:OP2	1:X:2867:G:C8	2.65	0.49
3:A:65:ILE:O	3:A:66:ASP:HB2	2.12	0.49
3:A:149:PRO:HD3	3:A:189:CYS:SG	2.52	0.49
3:A:208:LYS:O	3:A:209:ALA:C	2.55	0.49
4:B:38:THR:C	4:B:40:GLN:H	2.21	0.49
5:C:153:ASP:CG	5:C:172:VAL:HA	2.37	0.49
6:D:60:ILE:O	6:D:99:PHE:CD1	2.66	0.49
6:D:112:ARG:O	6:D:113:ASP:CB	2.60	0.49
7:E:91:GLY:HA3	7:E:94:PHE:CD2	2.47	0.49
7:E:103:LEU:CD1	7:E:104:GLU:H	2.19	0.49
7:E:142:GLY:O	7:E:144:VAL:N	2.46	0.49
10:H:2:ILE:CG2	10:H:8:LEU:HD11	2.43	0.49
11:I:53:ARG:C	11:I:55:ARG:N	2.70	0.49
13:K:61:HIS:O	13:K:62:SER:C	2.55	0.49
14:L:69:ALA:CB	14:L:106:ALA:HB2	2.40	0.49
16:N:80:ILE:O	16:N:83:LEU:HB3	2.12	0.49
17:O:70:TYR:HA	17:O:85:GLY:HA2	1.95	0.49
21:S:23:ALA:HB3	21:S:85:MET:HE2	1.95	0.49
21:S:168:VAL:O	21:S:169:VAL:HG13	2.13	0.49
23:U:20:ARG:HB2	23:U:43:ARG:CG	2.42	0.49
23:U:22:GLY:N	23:U:39:LYS:CD	2.76	0.49
1:X:872:G:H22	1:X:929:A:P	2.35	0.49
1:X:1022:A:C2	1:X:1024:G:C4	3.01	0.49
1:X:1025:A:O2'	1:X:1026:U:H5'	2.12	0.49
1:X:1211:G:C6	1:X:1212:U:O4	2.65	0.49
1:X:1313:U:O2'	1:X:1314:A:OP2	2.29	0.49
1:X:1588:A:C4	1:X:1589:G:C8	3.01	0.49
1:X:1867:A:H3'	1:X:1867:A:H8	1.78	0.49
1:X:1919:A:H1'	1:X:1923:U:C2	2.48	0.49
1:X:2198:U:H2'	1:X:2199:C:O2'	2.12	0.49
1:X:2663:U:N3	1:X:2664:G:C8	2.81	0.49
1:X:2725:C:H1'	7:E:143:GLN:HG3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:75:A:N6	21:S:29:ASN:OD1	2.41	0.49
3:A:63:ARG:HD2	3:A:85:ASP:CB	2.33	0.49
3:A:63:ARG:HD3	3:A:85:ASP:CG	2.38	0.49
3:A:72:LYS:HE2	3:A:97:TYR:CB	2.43	0.49
6:D:13:ARG:CB	6:D:14:PRO:HD3	2.32	0.49
6:D:142:THR:HG22	6:D:144:ASP:HB2	1.95	0.49
7:E:137:ASP:CB	7:E:140:LEU:HD12	2.40	0.49
9:G:158:HIS:N	9:G:161:GLN:HE21	2.11	0.49
10:H:73:VAL:CG2	10:H:123:PHE:HE1	2.26	0.49
11:I:7:LYS:C	11:I:9:THR:N	2.71	0.49
11:I:9:THR:O	11:I:13:ARG:CG	2.61	0.49
12:J:23:LYS:O	12:J:25:GLY:N	2.45	0.49
12:J:128:ILE:HG12	12:J:129:GLN:N	2.27	0.49
14:L:33:ARG:HD3	14:L:99:ARG:HG3	1.95	0.49
16:N:40:LEU:HB3	17:O:74:TYR:CD1	2.48	0.49
16:N:76:TYR:O	16:N:80:ILE:HG12	2.12	0.49
18:P:97:VAL:CG1	18:P:122:SER:HB3	2.41	0.49
23:U:22:GLY:N	23:U:39:LYS:CG	2.74	0.49
23:U:70:LEU:HD21	23:U:75:TYR:H	1.78	0.49
1:X:330:C:C2	1:X:331:U:C6	3.01	0.48
1:X:516:G:O2'	1:X:517:A:H8	1.96	0.48
1:X:616:U:H2'	1:X:617:U:O4'	2.13	0.48
1:X:1220:G:O2'	1:X:1221:C:H5'	2.13	0.48
1:X:1483:G:C2	1:X:1541:G:N3	2.81	0.48
1:X:1811:A:OP2	1:X:1811:A:O4'	2.30	0.48
1:X:1811:A:C5'	3:A:161:THR:HG21	2.42	0.48
1:X:1915:A:H2'	1:X:1916:G:C5'	2.43	0.48
1:X:1923:U:O2'	1:X:1924:C:P	2.71	0.48
1:X:1926:U:H5"	1:X:1927:U:OP1	2.13	0.48
1:X:2071:G:C2	1:X:2072:C:C6	3.01	0.48
3:A:214:TRP:C	3:A:215:LEU:HG	2.38	0.48
4:B:25:VAL:CG2	15:M:16:ILE:HD12	2.43	0.48
4:B:37:LYS:CD	4:B:42:ASP:OD2	2.61	0.48
5:C:7:ILE:HG21	5:C:122:GLY:HA2	1.94	0.48
5:C:96:PRO:HB2	5:C:99:VAL:CG2	2.43	0.48
6:D:33:LYS:HB2	6:D:91:LEU:O	2.13	0.48
7:E:6:LYS:C	7:E:69:ARG:NE	2.71	0.48
7:E:12:PRO:O	7:E:13:SER:O	2.30	0.48
7:E:21:ASP:C	7:E:23:VAL:N	2.70	0.48
7:E:34:THR:O	7:E:36:PRO:HD3	2.12	0.48
9:G:65:LYS:HE3	9:G:66:HIS:CD2	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:156:HIS:O	9:G:158:HIS:N	2.45	0.48
11:I:89:ASP:CB	11:I:120:VAL:HG13	2.40	0.48
12:J:40:PRO:HB3	12:J:99:LYS:HZ2	1.78	0.48
14:L:37:HIS:CE1	14:L:39:TYR:CE1	3.01	0.48
16:N:60:LEU:O	16:N:60:LEU:HD22	2.12	0.48
16:N:92:ARG:HD3	16:N:92:ARG:N	2.28	0.48
19:Q:76:LYS:O	19:Q:77:LYS:C	2.55	0.48
20:R:23:ILE:O	20:R:80:LYS:HA	2.13	0.48
21:S:172:LEU:CD2	21:S:173:PRO:HD2	2.27	0.48
22:T:57:HIS:N	22:T:57:HIS:ND1	2.60	0.48
23:U:14:VAL:O	23:U:16:ASN:ND2	2.46	0.48
23:U:23:LYS:HB2	23:U:35:THR:CG2	2.42	0.48
23:U:32:ARG:CG	23:U:33:LYS:N	2.74	0.48
25:W:44:VAL:O	25:W:47:VAL:HG22	2.13	0.48
26:Y:15:LYS:NZ	26:Y:19:ARG:HH11	2.10	0.48
1:X:490:A:O2’	1:X:492:G:H5”	2.13	0.48
1:X:873:U:C2’	1:X:874:A:O5’	2.61	0.48
1:X:1186:G:O5’	1:X:1187:A:OP1	2.30	0.48
1:X:1215:A:H2’	1:X:1216:G:C8	2.49	0.48
1:X:1312:G:H5”	1:X:1313:U:OP1	2.12	0.48
1:X:1322:G:O2’	1:X:1323:G:H5’	2.14	0.48
1:X:1571:G:H2’	1:X:1572:C:H6	1.77	0.48
1:X:1762:C:H2’	1:X:1763:G:C8	2.48	0.48
1:X:1954:A:H5’	1:X:1955:G:H5”	1.95	0.48
1:X:2064:U:OP1	23:U:20:ARG:CZ	2.61	0.48
1:X:2264:C:H4’	1:X:2267:A:C5	2.48	0.48
1:X:2268:G:N3	1:X:2268:G:H2’	2.29	0.48
1:X:2310:G:C6	1:X:2311:U:C5	3.00	0.48
1:X:2351:G:C2	1:X:2352:A:N7	2.81	0.48
1:X:2664:G:OP1	10:H:90:ARG:NH1	2.46	0.48
1:X:2847:G:O2’	13:K:8:ARG:NH2	2.41	0.48
2:Z:28:A:N7	2:Z:29:C:C4	2.81	0.48
2:Z:59:A:N1	6:D:26:MET:HE3	2.28	0.48
3:A:214:TRP:O	3:A:215:LEU:HG	2.14	0.48
4:B:95:ILE:HG22	4:B:96:PHE:CD1	2.49	0.48
4:B:168:GLN:O	4:B:169:ASN:HB2	2.14	0.48
5:C:7:ILE:HG21	5:C:122:GLY:CA	2.42	0.48
5:C:14:THR:HG22	5:C:15:ILE:N	2.24	0.48
5:C:130:THR:O	5:C:131:LYS:C	2.56	0.48
7:E:70:THR:O	7:E:73:ALA:HB3	2.14	0.48
7:E:139:GLN:O	7:E:140:LEU:C	2.55	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:77:TYR:HE1	8:F:80:ARG:NH2	2.01	0.48
9:G:105:GLY:O	9:G:106:TYR:O	2.31	0.48
12:J:128:ILE:HG12	12:J:129:GLN:O	2.13	0.48
13:K:11:ASN:OD1	13:K:17:ARG:NH2	2.45	0.48
13:K:14:SER:O	13:K:17:ARG:N	2.46	0.48
13:K:33:ARG:CB	13:K:114:GLU:HB3	2.43	0.48
14:L:72:GLY:C	14:L:74:ALA:H	2.22	0.48
17:O:36:LYS:HE3	17:O:56:VAL:N	2.28	0.48
17:O:38:LEU:HD13	17:O:38:LEU:C	2.39	0.48
18:P:34:SER:O	18:P:37:LYS:CB	2.61	0.48
19:Q:14:GLU:HG3	19:Q:15:LYS:N	2.28	0.48
19:Q:16:ALA:O	19:Q:19:ALA:HB3	2.13	0.48
20:R:53:VAL:HG21	20:R:74:LEU:HD13	1.95	0.48
21:S:38:ALA:HA	21:S:41:ARG:HB3	1.94	0.48
23:U:69:THR:HG22	23:U:75:TYR:CE1	2.48	0.48
23:U:78:ILE:HD13	23:U:78:ILE:C	2.37	0.48
1:X:18:U:O2'	1:X:19:C:H5'	2.13	0.48
1:X:33:C:O2'	1:X:34:U:C5'	2.58	0.48
1:X:43:A:O2'	1:X:44:G:H5'	2.14	0.48
1:X:64:C:H1'	19:Q:68:PHE:CD1	2.48	0.48
1:X:229:G:OP1	11:I:49:PHE:CE1	2.66	0.48
1:X:471:A:H2'	1:X:472:C:O4'	2.11	0.48
1:X:586:G:C6	1:X:587:A:N6	2.81	0.48
1:X:609:U:H1'	11:I:18:ARG:CZ	2.43	0.48
1:X:847:C:O5'	1:X:847:C:H6	1.96	0.48
1:X:1036:G:C4	1:X:1145:C:H1'	2.48	0.48
1:X:1051:U:C6	1:X:1051:U:C3'	2.95	0.48
1:X:1474:A:C2'	1:X:1475:U:H5'	2.39	0.48
1:X:1713:G:H5"	1:X:1713:G:H8	1.76	0.48
1:X:1917:C:C2'	1:X:1918:G:H5'	2.43	0.48
1:X:2035:G:C2'	1:X:2036:G:H5'	2.43	0.48
1:X:2326:C:H2'	1:X:2327:U:C5	2.49	0.48
1:X:2425:G:H5"	1:X:2426:G:OP2	2.14	0.48
1:X:2541:U:C2'	1:X:2542:U:H5'	2.44	0.48
1:X:2787:A:C2	1:X:2864:C:N3	2.82	0.48
2:Z:57:U:O2	6:D:26:MET:HG3	2.13	0.48
3:A:146:GLU:HG2	3:A:147:LEU:N	2.29	0.48
3:A:184:ARG:CG	3:A:184:ARG:NH1	2.76	0.48
3:A:243:GLY:CA	3:A:244:ARG:NH1	2.76	0.48
5:C:46:ARG:O	5:C:47:THR:C	2.56	0.48
5:C:176:ASN:ND2	5:C:178:TYR:H	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:101:LYS:HG3	7:E:117:PRO:CD	2.41	0.48
8:F:89:SER:CB	8:F:135:MET:O	2.61	0.48
9:G:67:ARG:HB2	9:G:70:PHE:CA	2.26	0.48
9:G:84:ASN:O	9:G:86:ALA:N	2.38	0.48
9:G:162:LYS:O	9:G:163:PRO:O	2.31	0.48
10:H:55:VAL:O	10:H:56:LYS:C	2.55	0.48
13:K:87:TYR:CZ	13:K:94:TYR:HD2	2.31	0.48
15:M:27:PHE:CZ	15:M:66:PHE:CD1	3.00	0.48
16:N:10:ARG:O	16:N:11:ARG:C	2.55	0.48
17:O:36:LYS:NZ	17:O:98:ILE:HB	2.29	0.48
18:P:89:ARG:HD3	18:P:132:GLY:CA	2.43	0.48
19:Q:84:GLU:O	19:Q:86:GLN:N	2.46	0.48
21:S:113:VAL:HG22	21:S:171:VAL:HG13	1.94	0.48
24:V:4:SER:HB3	24:V:7:ARG:NE	2.28	0.48
24:V:4:SER:O	24:V:6:MET:N	2.45	0.48
24:V:12:THR:O	24:V:16:LYS:HB3	2.12	0.48
24:V:37:LEU:HD23	24:V:39:GLN:H	1.77	0.48
25:W:2:LYS:O	25:W:54:GLN:N	2.42	0.48
26:Y:51:TYR:HA	26:Y:55:ARG:HA	1.95	0.48
1:X:139:A:C2	1:X:140:G:C5	3.02	0.48
1:X:807:A:H2'	1:X:808:C:H6	1.75	0.48
1:X:840:U:H4'	1:X:841:G:N2	2.28	0.48
1:X:921:A:C2'	1:X:924:C:H5	2.21	0.48
1:X:2392:G:H2'	1:X:2393:G:O4'	2.13	0.48
1:X:2441:U:H2'	1:X:2442:C:H6	1.77	0.48
1:X:2819:G:N7	1:X:2820:C:C4	2.81	0.48
6:D:52:LYS:HD3	6:D:52:LYS:C	2.38	0.48
6:D:53:ALA:O	6:D:56:GLU:N	2.46	0.48
6:D:126:GLY:O	6:D:127:ASN:C	2.56	0.48
7:E:73:ALA:O	7:E:76:VAL:HB	2.12	0.48
10:H:41:ASN:HB2	10:H:42:LYS:H	1.56	0.48
11:I:45:LYS:HD3	11:I:46:GLY:N	2.26	0.48
14:L:36:LYS:HE3	14:L:36:LYS:CA	2.44	0.48
15:M:24:LEU:HB3	15:M:25:PRO:CD	2.43	0.48
15:M:34:ARG:NH2	15:M:91:VAL:HG21	2.28	0.48
16:N:71:LEU:HG	16:N:71:LEU:O	2.12	0.48
20:R:56:LYS:CA	20:R:68:GLY:O	2.60	0.48
22:T:46:LYS:CG	22:T:76:ALA:HB1	2.43	0.48
24:V:2:LYS:CA	24:V:6:MET:HE2	2.20	0.48
26:Y:36:CYS:C	26:Y:38:GLY:H	2.21	0.48
1:X:34:U:C6	20:R:4:PRO:HB3	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:190:A:C2	1:X:191:G:C4	3.01	0.48
1:X:319:G:H1'	1:X:511:A:O4'	2.14	0.48
1:X:435:A:C2	1:X:436:A:C5	3.01	0.48
1:X:640:C:C4'	1:X:660:G:H21	2.24	0.48
1:X:741:G:C2	1:X:743:A:N9	2.82	0.48
1:X:942:U:H4'	25:W:22:ALA:O	2.14	0.48
1:X:1236:G:P	17:O:87:ARG:HH11	2.36	0.48
1:X:1324:G:H2'	1:X:1325:U:C6	2.49	0.48
1:X:1782:A:N1	1:X:1821:A:H5'	2.29	0.48
1:X:1837:G:H2'	1:X:1838:G:C8	2.49	0.48
1:X:2014:A:H4'	1:X:2015:G:OP2	2.13	0.48
1:X:2042:A:O2'	5:C:62:LYS:CE	2.59	0.48
1:X:2073:A:C5	1:X:2074:U:C5	3.01	0.48
1:X:2088:U:O2'	1:X:2089:C:OP1	2.32	0.48
1:X:2271:C:H2'	1:X:2272:A:C8	2.48	0.48
2:Z:53:G:H5'	14:L:64:LYS:CE	2.43	0.48
2:Z:108:G:O3'	21:S:26:LYS:HE2	2.13	0.48
3:A:144:ALA:O	3:A:145:LEU:O	2.31	0.48
5:C:47:THR:CA	5:C:82:VAL:HB	2.29	0.48
5:C:158:ARG:HB2	5:C:169:VAL:CG1	2.43	0.48
6:D:171:GLN:HG3	6:D:175:LEU:O	2.13	0.48
8:F:108:ILE:O	8:F:112:LYS:HB2	2.13	0.48
10:H:116:ARG:NH1	15:M:38:LYS:NZ	2.60	0.48
11:I:41:SER:OG	11:I:41:SER:O	2.30	0.48
11:I:73:GLU:OE2	11:I:104:ARG:HB2	2.13	0.48
11:I:89:ASP:O	11:I:90:ARG:C	2.57	0.48
13:K:10:LEU:HG	13:K:17:ARG:HB2	1.94	0.48
14:L:97:HIS:O	14:L:101:LYS:CB	2.59	0.48
17:O:78:VAL:O	17:O:79:GLN:C	2.56	0.48
20:R:63:THR:O	20:R:64:ASN:HB2	2.14	0.48
21:S:64:ALA:HA	21:S:86:VAL:N	2.28	0.48
23:U:23:LYS:CB	23:U:35:THR:HG22	2.44	0.48
1:X:91:A:C2	1:X:92:U:C4	3.02	0.48
1:X:455:A:H1'	1:X:1215:A:C4'	2.44	0.48
1:X:689:A:C8	1:X:2422:C:H1'	2.49	0.48
1:X:800:U:H3'	1:X:804:C:N4	2.28	0.48
1:X:1002:C:OP2	1:X:1200:G:OP2	2.30	0.48
1:X:1281:A:C6	1:X:1996:A:C8	3.02	0.48
1:X:1385:C:H1'	1:X:2192:U:C4	2.48	0.48
1:X:1445:A:O2'	1:X:1446:U:H5'	2.13	0.48
1:X:1822:C:H2'	1:X:1823:G:C5'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2293:G:O2'	1:X:2294:U:H5'	2.14	0.48
1:X:2320:G:H22	1:X:2353:G:H4'	1.78	0.48
1:X:2345:A:H4'	22:T:62:LEU:CD1	2.42	0.48
1:X:2633:A:C4'	1:X:2634:G:OP1	2.61	0.48
1:X:2634:G:O6	10:H:32:LYS:NZ	2.43	0.48
1:X:2726:U:H2'	1:X:2727:G:C5'	2.43	0.48
4:B:195:LEU:HB2	15:M:3:THR:HG22	1.89	0.48
5:C:50:GLN:C	5:C:52:SER:N	2.70	0.48
5:C:193:LEU:C	5:C:195:ILE:H	2.21	0.48
6:D:34:ILE:C	6:D:91:LEU:HB2	2.39	0.48
6:D:78:LYS:HG2	6:D:80:ARG:NH1	2.28	0.48
6:D:169:LEU:C	6:D:171:GLN:N	2.71	0.48
9:G:85:ALA:O	9:G:86:ALA:C	2.57	0.48
10:H:3:MET:SD	10:H:44:TYR:HE1	2.37	0.48
11:I:11:GLY:O	11:I:12:SER:C	2.57	0.48
11:I:30:ALA:N	11:I:34:HIS:CG	2.76	0.48
11:I:80:LEU:CA	11:I:84:GLU:HB3	2.43	0.48
16:N:57:PHE:O	16:N:58:ARG:C	2.57	0.48
20:R:12:ASP:OD1	20:R:12:ASP:O	2.30	0.48
21:S:3:LEU:HD21	21:S:33:ALA:N	2.18	0.48
22:T:8:GLY:O	22:T:9:SER:O	2.32	0.48
22:T:10:SER:O	22:T:11:LYS:HE3	2.14	0.48
22:T:40:GLN:NE2	22:T:42:GLY:O	2.47	0.48
23:U:20:ARG:O	23:U:39:LYS:HD2	2.14	0.48
24:V:9:LEU:HD13	24:V:13:ASP:CG	2.38	0.48
1:X:238:G:C2	1:X:239:A:C8	3.02	0.48
1:X:698:A:H5"	1:X:699:G:H5"	1.96	0.48
1:X:847:C:N3	1:X:848:A:N7	2.61	0.48
1:X:859:U:O2	1:X:859:U:C2'	2.58	0.48
1:X:859:U:H1'	1:X:860:U:C5	2.49	0.48
1:X:921:A:H3'	1:X:924:C:H41	1.79	0.48
1:X:1014:G:N2	1:X:1164:C:N1	2.61	0.48
1:X:1115:C:C2'	1:X:1116:U:H5'	2.44	0.48
1:X:1223:G:H5"	1:X:1224:A:C5'	2.39	0.48
1:X:1223:G:H5'	1:X:1225:G:H1'	1.95	0.48
1:X:1337:G:H1'	1:X:1632:A:H62	1.78	0.48
1:X:1373:G:H2'	1:X:1374:G:H5'	1.95	0.48
1:X:1794:A:H2	1:X:1814:G:N3	2.11	0.48
1:X:1838:G:C2	1:X:1878:C:C2	3.02	0.48
1:X:1960:A:O5'	1:X:1960:A:C8	2.65	0.48
1:X:2002:A:H4'	16:N:34:ASN:HD21	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2482:A:N9	32:X:2911:ZLD:H13	2.29	0.48
3:A:75:VAL:HG12	3:A:76:ASN:N	2.29	0.48
4:B:33:ILE:CG2	4:B:47:VAL:CG1	2.92	0.48
5:C:45:THR:HG22	5:C:86:PRO:O	2.14	0.48
6:D:96:MET:O	6:D:100:LEU:N	2.45	0.48
6:D:113:ASP:HB3	6:D:115:ARG:NH2	2.28	0.48
7:E:11:VAL:HG12	7:E:15:VAL:HG11	1.96	0.48
9:G:51:LEU:O	9:G:52:GLY:C	2.57	0.48
9:G:103:TYR:OH	9:G:111:LYS:HB2	2.13	0.48
9:G:107:GLN:OE1	9:G:107:GLN:N	2.46	0.48
9:G:139:ARG:HG2	9:G:142:ARG:NH2	2.29	0.48
11:I:43:ALA:O	11:I:44:GLY:C	2.56	0.48
11:I:73:GLU:HG2	11:I:105:PRO:O	2.14	0.48
12:J:99:LYS:CG	12:J:100:PRO:HD2	2.44	0.48
16:N:3:ARG:NH2	16:N:5:LYS:NZ	2.62	0.48
16:N:20:ARG:C	16:N:22:LYS:H	2.21	0.48
16:N:31:GLN:O	16:N:35:ALA:CB	2.59	0.48
17:O:12:TYR:CB	17:O:39:PHE:CB	2.87	0.48
17:O:46:VAL:CG1	17:O:51:ALA:HB2	2.43	0.48
20:R:96:LYS:HG2	20:R:97:GLN:O	2.14	0.48
21:S:1:MET:CE	21:S:46:GLN:OE1	2.62	0.48
21:S:98:VAL:HG22	21:S:99:HIS:H	1.78	0.48
24:V:64:GLY:O	24:V:65:GLU:CB	2.61	0.48
1:X:157:G:H5'	1:X:158:A:OP1	2.13	0.48
1:X:188:G:C2	1:X:189:A:C5	3.02	0.48
1:X:760:U:C4	26:Y:3:LYS:HG3	2.49	0.48
1:X:1107:A:H3'	1:X:1108:U:C5'	2.43	0.48
1:X:1337:G:OP2	18:P:105:ARG:NH1	2.46	0.48
1:X:1354:A:H5'	19:Q:56:MET:HG3	1.93	0.48
1:X:1428:G:H1	1:X:1602:G:P	2.37	0.48
1:X:1811:A:H5"	3:A:161:THR:HG21	1.96	0.48
1:X:2516:U:H2'	1:X:2517:C:H6	1.77	0.48
1:X:2850:U:H2'	1:X:2851:G:O5'	2.14	0.48
2:Z:18:G:C4	2:Z:19:C:C5	3.01	0.48
3:A:121:PRO:HB2	3:A:135:PHE:HE1	1.78	0.48
4:B:119:ARG:HG2	4:B:120:TRP:CE2	2.48	0.48
5:C:129:LYS:HE3	5:C:132:ASN:HB2	1.95	0.48
6:D:17:MET:O	6:D:21:GLY:CA	2.62	0.48
6:D:80:ARG:HD3	6:D:83:MET:CG	2.43	0.48
8:F:89:SER:HB3	8:F:135:MET:O	2.14	0.48
9:G:91:THR:O	9:G:93:LYS:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:108:GLY:C	9:G:110:LEU:CD2	2.84	0.48
9:G:125:ARG:NH1	9:G:128:GLU:CD	2.72	0.48
11:I:29:THR:CA	11:I:34:HIS:CD2	2.97	0.48
12:J:19:THR:HG21	12:J:40:PRO:HB3	1.96	0.48
12:J:99:LYS:HE3	12:J:100:PRO:HD2	1.96	0.48
13:K:20:LEU:O	13:K:21:ALA:C	2.54	0.48
13:K:26:THR:HG23	13:K:70:ILE:HG23	1.96	0.48
16:N:79:PHE:HE1	16:N:106:PHE:HE1	1.57	0.48
17:O:7:THR:HG22	17:O:8:GLY:N	2.28	0.48
17:O:22:VAL:HA	17:O:91:THR:OG1	2.13	0.48
17:O:48:GLY:O	17:O:49:GLU:C	2.56	0.48
18:P:83:ASP:O	18:P:84:GLU:O	2.31	0.48
19:Q:27:PHE:N	19:Q:27:PHE:CD1	2.81	0.48
19:Q:62:ARG:HH12	19:Q:73:ASN:ND2	2.11	0.48
19:Q:75:ARG:HG3	19:Q:75:ARG:HH11	1.79	0.48
21:S:72:ASP:C	21:S:73:LYS:O	2.57	0.48
21:S:95:SER:OG	21:S:121:GLN:HB2	2.12	0.48
21:S:138:VAL:CA	21:S:141:MET:HE2	2.38	0.48
1:X:77:C:H2'	1:X:78:C:C6	2.49	0.48
1:X:155:G:C4	1:X:156:G:C8	3.02	0.48
1:X:321:A:P	20:R:27:GLY:H	2.32	0.48
1:X:453:U:O2	5:C:40:ARG:NH1	2.47	0.48
1:X:479:G:O2'	1:X:480:G:H5'	2.13	0.48
1:X:813:A:C2	1:X:815:A:H8	2.31	0.48
1:X:883:A:O2'	1:X:884:C:H5'	2.14	0.48
1:X:1726:C:H2'	1:X:1727:C:C6	2.49	0.48
1:X:1975:G:O2'	1:X:1976:U:OP2	2.25	0.48
1:X:2174:G:O2'	1:X:2175:A:H5'	2.13	0.48
1:X:2553:G:O2'	4:B:143:GLN:HB3	2.14	0.48
1:X:2740:C:H1'	7:E:143:GLN:HE21	1.79	0.48
1:X:2839:G:H2'	1:X:2840:U:H6	1.78	0.48
3:A:43:ARG:N	3:A:43:ARG:CD	2.67	0.48
3:A:146:GLU:HG2	3:A:147:LEU:H	1.77	0.48
3:A:164:GLN:O	3:A:175:VAL:HG12	2.13	0.48
4:B:182:ILE:C	4:B:182:ILE:HD13	2.38	0.48
5:C:7:ILE:HG13	5:C:136:TRP:HH2	1.78	0.48
5:C:101:GLN:C	5:C:103:GLY:N	2.70	0.48
5:C:104:LEU:HA	5:C:107:ALA:HB3	1.96	0.48
5:C:154:ASP:OD2	5:C:157:THR:OG1	2.29	0.48
12:J:110:VAL:HG21	12:J:115:ALA:HB2	1.95	0.48
12:J:115:ALA:C	12:J:117:GLU:H	2.21	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:K:60:LEU:O	13:K:61:HIS:C	2.54	0.48
14:L:33:ARG:HH22	14:L:103:LEU:CB	2.26	0.48
21:S:13:LYS:HB2	21:S:13:LYS:NZ	2.28	0.48
21:S:157:GLY:O	21:S:158:CYS:C	2.57	0.48
22:T:41:ARG:NE	22:T:41:ARG:HA	2.28	0.48
25:W:38:PRO:N	25:W:41:ARG:HH12	2.10	0.48
26:Y:15:LYS:C	26:Y:17:ASP:N	2.71	0.48
1:X:454:G:H4'	1:X:455:A:OP1	2.12	0.48
1:X:540:G:C6	1:X:2006:G:OP1	2.66	0.48
1:X:643:A:H4'	11:I:67:ASN:HB2	1.96	0.48
1:X:1034:U:H2'	1:X:1035:G:C5'	2.38	0.48
1:X:1398:G:O2'	1:X:1399:C:O5'	2.32	0.48
1:X:1935:A:H2	1:X:2539:C:O2	1.97	0.48
1:X:1935:A:C6	1:X:1936:A:C6	3.02	0.48
1:X:2529:G:C6	1:X:2530:C:N4	2.82	0.48
1:X:2532:G:N3	1:X:2533:U:H1'	2.28	0.48
1:X:2712:G:H8	1:X:2712:G:OP2	1.96	0.48
1:X:2728:A:O2'	1:X:2729:A:H5'	2.13	0.48
1:X:2826:C:H2'	1:X:2827:G:C5'	2.44	0.48
3:A:183:ARG:CD	3:A:184:ARG:O	2.62	0.48
4:B:149:ARG:NH1	9:G:106:TYR:CD1	2.82	0.48
4:B:152:LYS:CD	9:G:106:TYR:H	2.23	0.48
6:D:22:TYR:C	6:D:24:SER:H	2.21	0.48
6:D:36:VAL:HG22	6:D:154:ILE:HG13	1.95	0.48
7:E:137:ASP:OD1	7:E:139:GLN:HB2	2.14	0.48
8:F:95:ALA:O	8:F:96:LYS:C	2.56	0.48
9:G:32:TYR:OH	9:G:35:LYS:CE	2.59	0.48
10:H:116:ARG:CD	15:M:38:LYS:HZ2	2.24	0.48
14:L:79:ALA:O	14:L:82:LYS:N	2.47	0.48
16:N:75:ASN:OD1	16:N:75:ASN:C	2.57	0.48
17:O:10:LYS:CB	17:O:37:ALA:H	2.22	0.48
19:Q:57:ASN:HA	19:Q:76:LYS:HA	1.96	0.48
20:R:25:LEU:HD11	20:R:81:VAL:HG23	1.95	0.48
20:R:44:GLN:HB3	20:R:77:HIS:ND1	2.25	0.48
23:U:37:ILE:O	23:U:38:THR:HG23	2.14	0.48
23:U:51:ILE:HG23	23:U:59:THR:CB	2.44	0.48
23:U:51:ILE:O	23:U:52:ARG:CD	2.62	0.48
24:V:4:SER:HB3	24:V:7:ARG:CZ	2.43	0.48
1:X:109:A:H2'	1:X:110:U:C5'	2.44	0.47
1:X:333:A:C2	1:X:351:A:C6	3.02	0.47
1:X:413:G:C8	1:X:413:G:H3'	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:579:G:H4'	1:X:994:A:C2	2.49	0.47
1:X:884:C:H5"	12:J:70:PHE:CE1	2.48	0.47
1:X:1339:U:OP2	1:X:1339:U:C6	2.66	0.47
1:X:1382:G:C2'	1:X:1383:C:O5'	2.61	0.47
1:X:1495:G:C2	1:X:1530:U:O2	2.67	0.47
1:X:1514:C:O2'	1:X:1515:U:H5'	2.12	0.47
1:X:1549:C:H2'	1:X:1550:C:C6	2.49	0.47
1:X:1759:A:C6	1:X:1760:G:N7	2.82	0.47
1:X:1920:A:N1	1:X:1950:C:H1'	2.28	0.47
1:X:2064:U:P	23:U:39:LYS:HZ2	2.36	0.47
1:X:2509:A:H3'	1:X:2510:A:H5"	1.96	0.47
1:X:2699:G:H21	1:X:2847:G:H1	1.61	0.47
1:X:2725:C:O3'	7:E:142:GLY:HA3	2.13	0.47
1:X:2796:A:C6	1:X:2797:G:C6	3.01	0.47
3:A:74:GLY:N	3:A:119:ALA:O	2.47	0.47
3:A:86:PRO:O	3:A:87:ASN:HB2	2.13	0.47
3:A:109:GLU:HG3	3:A:109:GLU:O	2.14	0.47
3:A:217:ARG:NE	3:A:218:LYS:HG3	2.29	0.47
5:C:9:GLN:CG	5:C:120:VAL:HG21	2.43	0.47
5:C:134:ILE:HD13	5:C:134:ILE:N	2.29	0.47
6:D:10:ASP:H	6:D:14:PRO:CD	2.27	0.47
6:D:53:ALA:CB	6:D:57:LEU:HD11	2.43	0.47
6:D:132:ILE:CG2	6:D:152:MET:HB2	2.42	0.47
7:E:137:ASP:O	7:E:141:VAL:HG23	2.14	0.47
9:G:67:ARG:CG	9:G:70:PHE:HA	2.43	0.47
9:G:104:THR:O	9:G:105:GLY:O	2.31	0.47
12:J:27:TYR:HA	12:J:103:VAL:CG2	2.44	0.47
13:K:28:LEU:HD23	13:K:28:LEU:O	2.13	0.47
14:L:79:ALA:O	14:L:80:ALA:C	2.56	0.47
15:M:22:ARG:NH1	15:M:24:LEU:CD2	2.77	0.47
15:M:33:VAL:HG23	15:M:51:GLU:OE2	2.13	0.47
15:M:46:ARG:CG	15:M:47:SER:H	2.26	0.47
17:O:65:ARG:HH11	17:O:65:ARG:HG2	1.78	0.47
18:P:80:LEU:HD22	18:P:87:GLU:HB3	1.94	0.47
18:P:93:LYS:HB3	18:P:127:ILE:O	2.13	0.47
20:R:93:ARG:NH2	20:R:109:ALA:N	2.62	0.47
22:T:23:VAL:HB	22:T:26:PHE:CZ	2.49	0.47
22:T:52:GLY:N	22:T:62:LEU:HD21	2.29	0.47
23:U:53:GLU:OE2	23:U:57:VAL:HA	2.14	0.47
25:W:44:VAL:O	25:W:47:VAL:N	2.47	0.47
1:X:35:G:O2'	1:X:36:G:O5'	2.20	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:234:C:H2'	1:X:235:C:H5'	1.96	0.47
1:X:588:G:N2	1:X:1275:A:C4	2.82	0.47
1:X:689:A:C2'	1:X:690:A:H5'	2.44	0.47
1:X:717:G:O2'	1:X:718:A:P	2.72	0.47
1:X:761:G:C8	1:X:763:A:C8	3.02	0.47
1:X:968:C:N4	1:X:970:A:N3	2.62	0.47
1:X:1026:U:H2'	1:X:1027:C:C6	2.49	0.47
1:X:1216:G:C2'	1:X:1217:U:H5'	2.44	0.47
1:X:1226:A:C1'	1:X:1250:A:C2	2.98	0.47
1:X:1505:U:H3'	1:X:1505:U:H6	1.80	0.47
1:X:1525:A:H3'	1:X:1526:U:C5	2.45	0.47
1:X:1582:A:C5	3:A:214:TRP:CZ2	3.02	0.47
1:X:1639:U:O2'	1:X:1640:C:H5'	2.14	0.47
1:X:1690:U:C2'	1:X:1691:G:C5'	2.88	0.47
1:X:1727:C:O5'	1:X:1727:C:H6	1.97	0.47
1:X:1856:U:OP1	1:X:2389:G:O2'	2.32	0.47
1:X:2035:G:N2	1:X:2036:G:C4	2.82	0.47
1:X:2261:G:H21	1:X:2369:U:H3	1.60	0.47
1:X:2598:C:O4'	4:B:150:VAL:HG22	2.14	0.47
3:A:128:GLY:N	3:A:193:ILE:HB	2.30	0.47
3:A:145:LEU:HG	3:A:146:GLU:N	2.29	0.47
4:B:105:THR:HG22	4:B:166:THR:HG23	1.95	0.47
6:D:60:ILE:CG1	6:D:61:THR:HG23	2.44	0.47
6:D:103:LEU:O	6:D:104:ILE:C	2.57	0.47
6:D:111:ILE:HB	6:D:114:PHE:CD1	2.49	0.47
7:E:140:LEU:HA	7:E:143:GLN:HB2	1.96	0.47
8:F:72:THR:N	8:F:73:PRO:CD	2.74	0.47
10:H:101:ASN:O	10:H:102:GLN:NE2	2.47	0.47
11:I:89:ASP:HB2	11:I:120:VAL:HA	1.95	0.47
11:I:130:ILE:CG2	11:I:131:LYS:N	2.76	0.47
11:I:135:ALA:O	11:I:136:ALA:CB	2.62	0.47
13:K:85:PRO:O	13:K:86:LYS:C	2.57	0.47
14:L:68:ALA:C	14:L:70:ALA:N	2.71	0.47
17:O:20:ILE:CG1	17:O:21:ARG:N	2.77	0.47
17:O:36:LYS:HZ1	17:O:98:ILE:N	2.11	0.47
17:O:43:GLU:O	17:O:44:GLN:C	2.56	0.47
21:S:74:ARG:HD3	21:S:75:LYS:NZ	2.28	0.47
24:V:1:MET:O	24:V:2:LYS:HB3	2.14	0.47
24:V:8:ASN:O	24:V:8:ASN:CG	2.57	0.47
1:X:196:A:C2'	1:X:197:G:H5'	2.44	0.47
1:X:430:C:H1'	1:X:2386:G:N2	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:736:G:H2'	1:X:737:C:O4'	2.13	0.47
1:X:873:U:O2'	1:X:874:A:H5'	2.14	0.47
1:X:987:G:N3	1:X:988:G:C8	2.83	0.47
1:X:1153:A:O2'	1:X:1154:A:C5'	2.62	0.47
1:X:1248:G:C5	1:X:1249:G:N1	2.83	0.47
1:X:1253:C:C4	1:X:1254:G:C8	3.03	0.47
1:X:1377:G:N3	1:X:1379:A:OP2	2.47	0.47
1:X:1473:U:O2'	1:X:1474:A:OP2	2.25	0.47
1:X:1652:G:H2'	1:X:1653:C:C6	2.49	0.47
1:X:1657:A:H5'	1:X:1657:A:H8	1.79	0.47
1:X:2002:A:H2'	1:X:2003:A:O5'	2.13	0.47
1:X:2026:C:N4	1:X:2757:G:C6	2.82	0.47
1:X:2090:U:C2	1:X:2166:G:C2	3.03	0.47
1:X:2402:U:H4'	1:X:2404:A:N7	2.29	0.47
1:X:2506:C:C5'	30:4:30:VAL:HB	2.42	0.47
1:X:2720:A:N6	1:X:2744:A:C8	2.82	0.47
3:A:111:LEU:HD23	3:A:111:LEU:N	2.28	0.47
4:B:78:LEU:O	4:B:79:ARG:NE	2.48	0.47
4:B:131:SER:C	4:B:132:LYS:CG	2.87	0.47
5:C:13:ARG:H	5:C:13:ARG:CD	2.26	0.47
5:C:15:ILE:HG22	5:C:17:LEU:CD2	2.42	0.47
6:D:17:MET:CA	6:D:21:GLY:HA2	2.44	0.47
7:E:149:ARG:CA	7:E:162:VAL:HG11	2.36	0.47
9:G:37:ASP:O	9:G:38:GLU:CB	2.62	0.47
11:I:89:ASP:N	11:I:89:ASP:OD1	2.44	0.47
14:L:37:HIS:CD2	14:L:39:TYR:CE1	3.02	0.47
16:N:43:ALA:O	16:N:44:THR:C	2.57	0.47
21:S:89:GLY:O	21:S:127:PRO:CG	2.55	0.47
23:U:17:SER:OG	23:U:44:ALA:O	2.32	0.47
25:W:1:MET:O	25:W:33:GLU:OE2	2.32	0.47
1:X:177:U:OP2	23:U:40:ARG:NH2	2.47	0.47
1:X:310:A:N1	5:C:162:ARG:NH1	2.62	0.47
1:X:540:G:C2	1:X:2005:U:OP1	2.67	0.47
1:X:726:G:N2	1:X:731:A:OP1	2.48	0.47
1:X:793:G:H2'	1:X:795:A:N7	2.29	0.47
1:X:1234:C:H2'	1:X:1235:C:C6	2.48	0.47
1:X:1279:G:H2'	1:X:1995:G:O6	2.14	0.47
1:X:1820:G:OP2	1:X:1820:G:H8	1.97	0.47
1:X:1850:G:C8	1:X:1868:A:N6	2.82	0.47
1:X:2311:U:H5'	1:X:2315:A:N6	2.29	0.47
1:X:2319:G:H2'	1:X:2320:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2362:G:H2'	1:X:2363:G:H8	1.78	0.47
1:X:2469:G:H5"	1:X:2470:U:OP1	2.13	0.47
1:X:2620:G:P	9:G:102:ARG:HH21	2.36	0.47
2:Z:53:G:H5'	14:L:64:LYS:HD2	1.94	0.47
3:A:75:VAL:CG1	3:A:76:ASN:N	2.76	0.47
3:A:166:GLN:O	3:A:167:GLY:O	2.32	0.47
3:A:227:ASN:O	3:A:229:VAL:N	2.47	0.47
4:B:61:LYS:N	4:B:62:PRO:CD	2.77	0.47
4:B:165:VAL:HG12	4:B:166:THR:N	2.28	0.47
5:C:148:VAL:HG12	5:C:149:LEU:N	2.29	0.47
6:D:118:ASN:O	6:D:122:PHE:HZ	1.97	0.47
6:D:123:ASP:C	6:D:125:ARG:H	2.21	0.47
7:E:97:LYS:O	7:E:98:LEU:HB2	2.13	0.47
7:E:133:VAL:O	7:E:141:VAL:HG13	2.14	0.47
7:E:137:ASP:OD1	7:E:137:ASP:C	2.58	0.47
9:G:162:LYS:N	9:G:163:PRO:CD	2.78	0.47
14:L:80:ALA:O	14:L:82:LYS:N	2.44	0.47
15:M:68:VAL:O	15:M:78:GLU:HA	2.14	0.47
16:N:93:LYS:HE3	17:O:10:LYS:NZ	2.29	0.47
17:O:76:SER:C	17:O:78:VAL:N	2.72	0.47
19:Q:29:VAL:HG11	19:Q:78:ALA:CB	2.44	0.47
19:Q:45:ALA:HB3	19:Q:46:PHE:CE1	2.50	0.47
19:Q:90:ALA:C	19:Q:92:ALA:H	2.21	0.47
20:R:15:HIS:HB2	20:R:82:ALA:HB2	1.96	0.47
20:R:38:LEU:CD2	20:R:39:ALA:N	2.72	0.47
20:R:108:VAL:HG13	20:R:109:ALA:H	1.79	0.47
22:T:60:PHE:HD1	22:T:60:PHE:H	1.59	0.47
23:U:29:GLY:O	23:U:31:GLY:N	2.48	0.47
25:W:4:LYS:HG3	25:W:52:GLU:HB3	1.95	0.47
30:4:18:ARG:HG2	30:4:23:VAL:CG1	2.41	0.47
1:X:242:A:H2'	1:X:243:G:O4'	2.14	0.47
1:X:564:U:H2'	1:X:565:A:C8	2.50	0.47
1:X:946:U:O2'	1:X:947:C:H5'	2.13	0.47
1:X:1412:C:H6	1:X:1412:C:O5'	1.97	0.47
1:X:1442:C:HO2'	1:X:1443:G:P	2.37	0.47
1:X:1468:A:H5"	1:X:1472:C:H41	1.79	0.47
1:X:1527:G:H2'	1:X:1528:C:C1'	2.44	0.47
1:X:1658:A:C8	1:X:1659:G:C8	3.02	0.47
1:X:1684:G:H1'	1:X:1974:U:O4	2.14	0.47
1:X:1759:A:C6	1:X:1968:G:C6	3.03	0.47
1:X:1882:G:H21	1:X:1885:C:H41	1.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2006:G:C2	1:X:2007:G:C8	3.03	0.47
1:X:2026:C:N3	1:X:2757:G:C2	2.83	0.47
1:X:2190:A:N6	1:X:2196:U:C4	2.83	0.47
1:X:2411:A:N1	23:U:37:ILE:O	2.48	0.47
1:X:2506:C:O2'	1:X:2507:U:H5'	2.14	0.47
1:X:2640:G:H2'	1:X:2641:A:C8	2.50	0.47
1:X:2787:A:C5	1:X:2788:C:C5	3.03	0.47
3:A:119:ALA:HB1	3:A:130:ALA:CB	2.38	0.47
4:B:144:ARG:O	4:B:146:THR:N	2.47	0.47
4:B:179:GLU:HG2	4:B:181:LEU:HD12	1.96	0.47
5:C:5:ASN:N	5:C:5:ASN:ND2	2.62	0.47
7:E:167:GLU:HG3	7:E:169:ILE:CG1	2.45	0.47
8:F:102:TRP:CE3	8:F:139:VAL:HG12	2.48	0.47
9:G:158:HIS:C	9:G:161:GLN:HB2	2.40	0.47
10:H:116:ARG:NH1	15:M:38:LYS:HE3	2.29	0.47
11:I:90:ARG:NH2	11:I:93:LEU:HG	2.29	0.47
11:I:124:ALA:HA	11:I:142:LEU:CD2	2.42	0.47
14:L:28:ARG:HG3	14:L:43:ILE:CD1	2.32	0.47
18:P:8:PHE:O	18:P:9:ARG:HB2	2.13	0.47
19:Q:6:ILE:O	19:Q:7:LEU:C	2.57	0.47
20:R:63:THR:HG22	20:R:64:ASN:ND2	2.29	0.47
20:R:95:ARG:HD2	20:R:95:ARG:N	2.29	0.47
20:R:105:ARG:NH2	20:R:106:VAL:O	2.47	0.47
21:S:122:ILE:HG22	21:S:160:LEU:HA	1.95	0.47
24:V:10:GLN:C	24:V:12:THR:H	2.21	0.47
24:V:30:PHE:C	24:V:32:ALA:N	2.67	0.47
1:X:19:C:H5'	1:X:563:U:OP1	2.14	0.47
1:X:53:G:C6	1:X:54:G:C8	3.03	0.47
1:X:193:A:C4	1:X:445:A:C2	3.03	0.47
1:X:562:G:C6	1:X:563:U:C4	3.03	0.47
1:X:870:C:O2'	1:X:871:U:H5'	2.14	0.47
1:X:932:G:H2'	1:X:933:G:H8	1.79	0.47
1:X:1082:G:O4'	1:X:1100:G:C5	2.68	0.47
1:X:1142:G:H8	1:X:2008:C:H4'	1.80	0.47
1:X:1258:G:P	11:I:17:LYS:HE2	2.54	0.47
1:X:1366:A:C2	1:X:1367:A:C2	3.02	0.47
1:X:1469:U:O5'	1:X:1470:G:OP2	2.33	0.47
1:X:1517:C:C2	1:X:1518:C:C5	3.03	0.47
1:X:1673:C:OP1	4:B:136:ARG:CD	2.63	0.47
1:X:1725:C:H2'	1:X:1726:C:C6	2.47	0.47
1:X:1984:A:H2'	1:X:1985:G:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2348:A:O2'	1:X:2349:G:H5'	2.14	0.47
1:X:2451:G:O6	1:X:2455:A:H4'	2.15	0.47
1:X:2641:A:H2'	1:X:2642:G:O4'	2.15	0.47
1:X:2726:U:H1'	7:E:139:GLN:HE21	1.74	0.47
2:Z:30:C:H42	2:Z:58:G:H22	1.62	0.47
2:Z:68:A:H61	2:Z:110:U:H3'	1.80	0.47
2:Z:116:C:H6	2:Z:116:C:O5'	1.98	0.47
3:A:227:ASN:C	3:A:229:VAL:N	2.68	0.47
4:B:51:TYR:O	4:B:75:THR:OG1	2.32	0.47
5:C:7:ILE:CG2	5:C:122:GLY:HA2	2.45	0.47
5:C:31:VAL:O	5:C:32:THR:C	2.56	0.47
5:C:65:GLY:C	5:C:66:ASN:ND2	2.72	0.47
6:D:101:GLU:HA	6:D:104:ILE:CD1	2.39	0.47
6:D:162:THR:N	6:D:165:GLU:OE2	2.43	0.47
9:G:41:TRP:CZ3	9:G:79:PHE:CG	3.02	0.47
10:H:131:PRO:HB2	15:M:73:PHE:CZ	2.49	0.47
15:M:39:VAL:C	15:M:41:GLU:N	2.72	0.47
16:N:47:TYR:C	16:N:49:ASP:H	2.22	0.47
16:N:105:ALA:C	16:N:107:LYS:N	2.69	0.47
18:P:45:ILE:HG13	18:P:53:ALA:HB1	1.96	0.47
18:P:64:ALA:O	18:P:68:VAL:HG23	2.14	0.47
18:P:91:PHE:CE1	18:P:129:ALA:HB3	2.49	0.47
19:Q:34:THR:C	19:Q:36:THR:H	2.22	0.47
19:Q:38:ILE:HA	19:Q:41:ALA:HB3	1.95	0.47
21:S:36:ARG:HH11	21:S:37:LYS:CB	2.19	0.47
21:S:50:GLY:O	21:S:65:LEU:CD1	2.62	0.47
22:T:32:LYS:CG	22:T:33:ALA:H	2.07	0.47
22:T:72:LYS:HG3	22:T:78:PHE:HE1	1.74	0.47
23:U:29:GLY:O	23:U:30:VAL:C	2.58	0.47
1:X:107:G:C2	1:X:108:G:N9	2.83	0.47
1:X:173:A:P	11:I:53:ARG:NH2	2.85	0.47
1:X:177:U:C4	1:X:225:G:N2	2.83	0.47
1:X:344:G:N3	1:X:345:U:C6	2.83	0.47
1:X:536:A:N6	1:X:2605:C:H4'	2.30	0.47
1:X:648:A:H4'	1:X:649:G:C4'	2.45	0.47
1:X:654:A:H3'	1:X:655:A:H5'	1.97	0.47
1:X:663:G:H5"	1:X:664:C:OP2	2.14	0.47
1:X:713:G:C6	1:X:746:G:N2	2.83	0.47
1:X:754:G:C6	1:X:770:U:C2	3.03	0.47
1:X:789:G:C6	1:X:806:A:C8	3.01	0.47
1:X:843:G:C6	1:X:2427:A:C8	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:999:A:C6	25:W:10:ILE:HG21	2.50	0.47
1:X:1084:A:C5	1:X:1085:G:N7	2.82	0.47
1:X:1093:U:O2'	1:X:1094:C:H5'	2.14	0.47
1:X:1201:G:C8	1:X:1201:G:O5'	2.68	0.47
1:X:1326:U:O3'	1:X:1345:G:H5'	2.15	0.47
1:X:1782:A:O3'	3:A:206:LEU:HB2	2.15	0.47
1:X:1948:C:C6	1:X:1949:A:C8	3.02	0.47
1:X:2061:C:H1'	1:X:2413:A:N3	2.30	0.47
1:X:2247:A:H5'	1:X:2248:A:OP2	2.14	0.47
1:X:2628:C:H2'	1:X:2629:U:H6	1.80	0.47
1:X:2665:G:C5	1:X:2666:U:C5	3.03	0.47
1:X:2674:C:H2'	1:X:2675:U:C6	2.48	0.47
1:X:2703:C:HO2'	1:X:2704:U:H5'	1.80	0.47
1:X:2725:C:H4'	7:E:142:GLY:HA3	1.95	0.47
1:X:2736:U:H5"	30:4:19:ARG:HG2	1.97	0.47
2:Z:71:G:N2	2:Z:72:C:H1'	2.30	0.47
3:A:93:ALA:O	3:A:105:ILE:N	2.39	0.47
3:A:155:LEU:O	3:A:156:ALA:C	2.58	0.47
4:B:95:ILE:N	4:B:95:ILE:CD1	2.78	0.47
4:B:108:SER:OG	4:B:163:GLU:N	2.43	0.47
4:B:179:GLU:O	4:B:181:LEU:N	2.47	0.47
5:C:39:ARG:NH2	5:C:91:TYR:CD1	2.82	0.47
5:C:158:ARG:O	5:C:159:ARG:C	2.57	0.47
5:C:192:ALA:O	5:C:193:LEU:C	2.57	0.47
6:D:4:LEU:CD1	6:D:7:LYS:HB2	2.45	0.47
6:D:16:LEU:C	6:D:18:GLN:N	2.68	0.47
6:D:20:PHE:N	6:D:20:PHE:CD1	2.83	0.47
6:D:36:VAL:HG21	6:D:61:THR:CG2	2.44	0.47
6:D:57:LEU:HD23	6:D:60:ILE:HD11	1.95	0.47
7:E:44:ARG:HH22	7:E:51:LEU:HB3	1.78	0.47
7:E:76:VAL:C	7:E:78:GLY:N	2.72	0.47
7:E:145:ALA:O	7:E:148:VAL:N	2.48	0.47
7:E:149:ARG:HA	7:E:162:VAL:CG1	2.36	0.47
7:E:155:ASP:OD2	7:E:155:ASP:C	2.58	0.47
7:E:155:ASP:CG	7:E:157:TYR:HB2	2.38	0.47
8:F:103:ASP:OD1	8:F:106:LEU:HD11	2.15	0.47
8:F:109:ALA:O	8:F:112:LYS:C	2.58	0.47
9:G:100:TYR:CB	9:G:116:ARG:HH12	2.02	0.47
9:G:124:GLU:H	9:G:124:GLU:CD	2.07	0.47
10:H:79:HIS:O	10:H:80:ALA:HB2	2.14	0.47
10:H:97:VAL:O	10:H:98:ILE:C	2.57	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:86:LYS:O	12:J:87:GLY:C	2.58	0.47
12:J:100:PRO:CB	21:S:74:ARG:HG3	2.44	0.47
15:M:89:ASN:CG	15:M:90:GLN:OE1	2.58	0.47
16:N:14:HIS:NE2	16:N:32:TYR:CE2	2.83	0.47
16:N:56:ASP:O	16:N:58:ARG:N	2.47	0.47
16:N:58:ARG:O	16:N:62:ILE:HG13	2.13	0.47
16:N:82:GLY:CA	16:N:117:ARG:HB2	2.44	0.47
16:N:93:LYS:O	16:N:94:VAL:CB	2.62	0.47
16:N:110:VAL:O	16:N:111:ASP:C	2.56	0.47
17:O:5:ILE:HG13	17:O:9:GLY:HA2	1.97	0.47
18:P:131:LYS:HG3	18:P:132:GLY:O	2.14	0.47
20:R:10:HIS:CG	20:R:44:GLN:NE2	2.83	0.47
20:R:20:ASP:HB3	20:R:83:LEU:CD2	2.45	0.47
20:R:100:ASP:OD1	20:R:103:LYS:HG3	2.15	0.47
21:S:54:ILE:N	21:S:62:PHE:O	2.46	0.47
21:S:168:VAL:C	21:S:169:VAL:HG22	2.39	0.47
22:T:3:HIS:CD2	22:T:5:LYS:HB2	2.46	0.47
24:V:4:SER:CB	24:V:7:ARG:HE	2.27	0.47
24:V:10:GLN:HG3	24:V:12:THR:HG1	1.77	0.47
25:W:3:ILE:CG2	25:W:25:LEU:HD11	2.45	0.47
1:X:432:C:O2'	1:X:433:G:H5'	2.15	0.47
1:X:577:U:O4	1:X:984:A:OP2	2.32	0.47
1:X:580:A:C8	1:X:584:A:N6	2.83	0.47
1:X:594:G:C5	1:X:1264:C:C4	3.03	0.47
1:X:1163:C:H4'	16:N:77:SER:HA	1.97	0.47
1:X:1553:G:H2'	1:X:1554:G:C8	2.50	0.47
1:X:1781:C:H5'	3:A:219:PRO:CG	2.44	0.47
1:X:1910:A:C2	1:X:1911:A:C2	3.03	0.47
1:X:1929:U:C2	1:X:1930:C:C5	3.03	0.47
1:X:2209:G:C2	1:X:2210:C:C5	3.03	0.47
1:X:2550:C:N4	1:X:2553:G:C8	2.83	0.47
1:X:2849:C:H2'	1:X:2850:U:H5'	1.96	0.47
2:Z:9:G:H5'	14:L:32:TYR:CE2	2.50	0.47
3:A:77:ALA:HA	3:A:96:HIS:O	2.14	0.47
3:A:129:ASN:CB	3:A:131:LEU:HD22	2.45	0.47
5:C:7:ILE:HG13	5:C:119:ALA:HB1	1.97	0.47
6:D:71:LYS:HD2	6:D:73:SER:HG	1.75	0.47
6:D:101:GLU:C	6:D:103:LEU:N	2.72	0.47
7:E:85:ILE:C	7:E:132:ASP:OD2	2.58	0.47
7:E:105:MET:O	7:E:106:ASN:HB2	2.14	0.47
8:F:77:TYR:HB2	8:F:112:LYS:CE	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:55:MET:O	12:J:56:SER:C	2.58	0.47
18:P:84:GLU:O	18:P:85:MET:HG3	2.14	0.47
19:Q:43:GLN:HG3	19:Q:50:VAL:HG23	1.96	0.47
19:Q:51:ILE:HD11	19:Q:83:ALA:CB	2.44	0.47
20:R:28:LYS:O	20:R:29:HIS:CB	2.61	0.47
20:R:95:ARG:HH12	20:R:107:ALA:H	1.62	0.47
22:T:43:THR:CG2	22:T:46:LYS:HD2	2.43	0.47
22:T:60:PHE:N	22:T:60:PHE:CD1	2.80	0.47
1:X:60:A:OP1	1:X:60:A:C8	2.64	0.47
1:X:157:G:H5'	1:X:158:A:P	2.54	0.47
1:X:171:G:N1	1:X:179:U:C2	2.83	0.47
1:X:219:G:H2'	1:X:231:G:H1	1.78	0.47
1:X:738:G:H8	1:X:738:G:O5'	1.97	0.47
1:X:1164:C:N3	1:X:1165:G:C4	2.83	0.47
1:X:1223:G:H5'	1:X:1225:G:C1'	2.45	0.47
1:X:1250:A:O2'	1:X:1251:G:C4'	2.62	0.47
1:X:1319:C:C2	1:X:1320:A:C8	3.02	0.47
1:X:1390:G:H8	1:X:1390:G:O5'	1.97	0.47
1:X:1586:A:C5'	3:A:38:PRO:HG3	2.33	0.47
1:X:1588:A:C2	1:X:1589:G:C8	3.03	0.47
1:X:1810:U:H5	3:A:157:ARG:NH1	2.11	0.47
1:X:1827:G:H1'	1:X:1914:U:N3	2.29	0.47
1:X:2324:G:C2	1:X:2360:C:C2	3.03	0.47
1:X:2560:G:C8	1:X:2589:C:N4	2.83	0.47
1:X:2627:G:O5'	1:X:2627:G:H8	1.97	0.47
1:X:2738:A:H2'	1:X:2739:G:H5'	1.97	0.47
1:X:2776:U:O2	18:P:134:LYS:CD	2.63	0.47
1:X:2871:U:C2	1:X:2872:U:C5	3.03	0.47
2:Z:62:C:H2'	2:Z:63:A:C8	2.50	0.47
3:A:64:ILE:N	3:A:64:ILE:HD12	2.30	0.47
3:A:140:ALA:O	3:A:141:VAL:C	2.57	0.47
5:C:55:GLY:C	5:C:56:ARG:HG2	2.40	0.47
6:D:18:GLN:C	6:D:20:PHE:H	2.22	0.47
7:E:9:ILE:HG21	7:E:50:LEU:HD22	1.97	0.47
7:E:144:VAL:O	7:E:145:ALA:C	2.56	0.47
8:F:129:ALA:HB1	8:F:133:ARG:NE	2.29	0.47
13:K:35:GLN:O	13:K:36:THR:HB	2.15	0.47
13:K:55:ALA:C	13:K:57:GLY:N	2.62	0.47
14:L:79:ALA:CA	14:L:82:LYS:HB2	2.45	0.47
15:M:78:GLU:OE2	15:M:108:ARG:NE	2.48	0.47
17:O:36:LYS:HZ1	17:O:98:ILE:HB	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:106:LEU:HD12	18:P:106:LEU:HA	1.68	0.47
20:R:16:PHE:CD2	20:R:80:LYS:NZ	2.82	0.47
20:R:58:VAL:HA	20:R:60:PRO:HD3	1.95	0.47
21:S:148:THR:O	21:S:149:ALA:C	2.58	0.47
23:U:41:VAL:O	23:U:42:GLN:CB	2.63	0.47
24:V:18:ILE:C	24:V:20:ALA:N	2.73	0.47
1:X:146:C:H2'	1:X:147:G:O4'	2.15	0.47
1:X:456:C:H4'	5:C:43:ALA:CB	2.45	0.47
1:X:583:C:O2'	1:X:584:A:OP2	2.30	0.47
1:X:613:A:C4	1:X:668:A:C2	3.03	0.47
1:X:617:U:O2	1:X:617:U:C3'	2.61	0.47
1:X:1122:A:N3	1:X:1123:G:H1'	2.29	0.47
1:X:1185:C:H2'	1:X:1186:G:C3'	2.33	0.47
1:X:1228:G:C2'	1:X:1229:C:H5'	2.45	0.47
1:X:1382:G:H2'	1:X:1383:C:O5'	2.14	0.47
1:X:1406:A:N6	19:Q:15:LYS:HG2	2.29	0.47
1:X:1577:G:O2'	1:X:1578:U:H5'	2.15	0.47
1:X:1669:A:N7	1:X:1670:G:C6	2.83	0.47
1:X:2306:A:C6	1:X:2367:A:C2	3.03	0.47
1:X:2344:G:H4'	22:T:60:PHE:CZ	2.50	0.47
1:X:2496:C:HO2'	1:X:2497:A:H3'	1.79	0.47
1:X:2754:C:H2'	1:X:2755:A:C8	2.50	0.47
2:Z:119:G:O2'	2:Z:120:G:H5'	2.15	0.47
3:A:169:GLU:N	3:A:172:TYR:O	2.46	0.47
4:B:123:ALA:O	4:B:124:GLY:O	2.33	0.47
6:D:36:VAL:HG22	6:D:154:ILE:CG1	2.45	0.47
6:D:96:MET:HG3	6:D:97:TYR:N	2.30	0.47
7:E:38:ASN:HB2	7:E:41:LEU:HB2	1.97	0.47
7:E:125:VAL:HA	7:E:131:ILE:CD1	2.44	0.47
9:G:40:ASN:HB3	9:G:78:ASP:HB3	1.96	0.47
9:G:61:ARG:NE	9:G:65:LYS:NZ	2.63	0.47
9:G:65:LYS:CB	9:G:65:LYS:HZ2	2.28	0.47
10:H:48:GLY:HA2	10:H:118:LEU:CD2	2.45	0.47
11:I:9:THR:C	11:I:13:ARG:HH21	2.20	0.47
11:I:105:PRO:C	11:I:106:VAL:CG2	2.88	0.47
13:K:46:PRO:O	13:K:50:GLN:N	2.46	0.47
17:O:40:VAL:O	17:O:41:GLY:C	2.58	0.47
21:S:6:LYS:H	21:S:7:PRO:CD	2.28	0.47
22:T:37:LEU:HD23	22:T:67:VAL:HG22	1.97	0.47
23:U:71:SER:OG	23:U:72:LYS:HE2	2.14	0.47
26:Y:58:LEU:O	26:Y:59:ALA:C	2.58	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:39:C:O2	5:C:40:ARG:NH2	2.48	0.46
1:X:55:A:O4'	1:X:125:A:C2	2.68	0.46
1:X:192:G:C1'	1:X:193:A:H4'	2.45	0.46
1:X:421:G:C2	1:X:433:G:C4	3.03	0.46
1:X:455:A:N7	5:C:39:ARG:HG3	2.30	0.46
1:X:513:A:C6	1:X:515:A:C6	3.03	0.46
1:X:667:U:O2	1:X:667:U:C2'	2.54	0.46
1:X:818:G:H5'	1:X:819:C:OP2	2.15	0.46
1:X:954:U:OP2	11:I:38:LYS:CG	2.63	0.46
1:X:1026:U:H2'	1:X:1027:C:H6	1.80	0.46
1:X:1147:G:C2	1:X:1148:G:C4	3.03	0.46
1:X:1153:A:O2'	1:X:1154:A:H5"	2.16	0.46
1:X:1354:A:H3'	1:X:1410:U:O2	2.15	0.46
1:X:1433:A:C5	1:X:1435:G:C4	3.03	0.46
1:X:1577:G:H2'	1:X:1578:U:O4'	2.15	0.46
1:X:1681:A:C6	1:X:2706:U:C5	3.02	0.46
1:X:1783:G:H1	1:X:1819:U:H3	1.63	0.46
1:X:1824:C:N4	1:X:1825:C:C4	2.83	0.46
1:X:1850:G:O2'	1:X:1851:A:O4'	2.30	0.46
1:X:1970:G:N2	1:X:1971:C:C2	2.82	0.46
1:X:2176:U:O2'	1:X:2177:U:H5'	2.15	0.46
1:X:2306:A:C5	1:X:2307:A:C6	3.03	0.46
1:X:2374:C:O5'	1:X:2374:C:H6	1.98	0.46
1:X:2519:C:C5	1:X:2520:A:N7	2.84	0.46
1:X:2796:A:P	13:K:3:HIS:HE1	2.37	0.46
1:X:2859:U:H3	26:Y:52:TYR:HE1	1.60	0.46
3:A:72:LYS:O	3:A:73:SER:C	2.59	0.46
3:A:212:SER:O	3:A:213:ARG:C	2.59	0.46
4:B:7:THR:O	4:B:9:ILE:HG13	2.15	0.46
4:B:70:ALA:O	4:B:72:VAL:HG23	2.15	0.46
4:B:153:GLY:O	4:B:154:LYS:C	2.56	0.46
5:C:2:ALA:HA	5:C:13:ARG:HA	1.96	0.46
5:C:35:LEU:O	5:C:36:ALA:C	2.57	0.46
7:E:30:LYS:HZ1	7:E:81:ASP:HA	1.80	0.46
9:G:34:PRO:HA	9:G:69:ASP:CG	2.40	0.46
12:J:15:ARG:HD2	12:J:74:PRO:HD2	1.98	0.46
12:J:27:TYR:CB	12:J:137:VAL:HG21	2.32	0.46
12:J:58:HIS:HD2	12:J:118:ALA:HB2	1.80	0.46
13:K:73:LYS:O	13:K:74:ASP:C	2.56	0.46
13:K:99:ARG:HG2	13:K:99:ARG:NH1	2.10	0.46
17:O:68:LYS:CE	17:O:85:GLY:HA3	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:57:LEU:CD1	18:P:69:ALA:CA	2.90	0.46
20:R:16:PHE:CZ	20:R:80:LYS:NZ	2.82	0.46
20:R:17:LYS:O	20:R:18:LYS:C	2.58	0.46
20:R:17:LYS:O	20:R:19:GLY:N	2.48	0.46
20:R:21:THR:HA	20:R:35:LYS:HA	1.96	0.46
21:S:117:VAL:O	21:S:118:HIS:C	2.58	0.46
22:T:3:HIS:O	22:T:4:LYS:HB3	2.15	0.46
22:T:50:GLY:O	22:T:62:LEU:HB2	2.14	0.46
25:W:51:LEU:H	25:W:51:LEU:CD2	2.12	0.46
26:Y:47:PRO:CG	26:Y:48:ASN:H	2.23	0.46
1:X:208:C:N4	1:X:209:G:N2	2.63	0.46
1:X:305:A:H2'	1:X:306:G:H5'	1.97	0.46
1:X:306:G:N1	1:X:307:C:C4	2.82	0.46
1:X:333:A:OP1	5:C:162:ARG:CB	2.60	0.46
1:X:456:C:H2'	1:X:457:C:H6	1.79	0.46
1:X:556:A:OP2	1:X:556:A:H3'	2.15	0.46
1:X:601:A:H3'	1:X:602:C:H5'	1.97	0.46
1:X:1324:G:H2'	1:X:1325:U:H6	1.80	0.46
1:X:1404:C:O2	1:X:1406:A:N7	2.48	0.46
1:X:1421:U:O2'	1:X:1422:C:H5'	2.15	0.46
1:X:1422:C:H2'	1:X:1423:A:H8	1.80	0.46
1:X:1460:G:N3	1:X:1563:U:C2	2.83	0.46
1:X:1641:C:C2'	1:X:1642:G:H5'	2.45	0.46
1:X:1656:U:H2'	1:X:1657:A:C5'	2.45	0.46
1:X:1795:C:C4	1:X:1806:G:N2	2.83	0.46
1:X:1938:U:O3'	1:X:1939:U:H6	1.97	0.46
1:X:2208:U:C6	1:X:2208:U:H3'	2.50	0.46
1:X:2210:C:H2'	1:X:2211:U:O4'	2.15	0.46
1:X:2460:G:H2'	1:X:2461:G:OP2	2.16	0.46
1:X:2482:A:N9	32:X:2911:ZLD:C13	2.78	0.46
1:X:2750:G:O2'	4:B:203:LYS:CE	2.60	0.46
1:X:2828:C:H2'	1:X:2829:A:H8	1.79	0.46
3:A:202:LYS:O	3:A:204:ILE:O	2.33	0.46
4:B:81:PHE:O	4:B:82:ARG:HB2	2.15	0.46
5:C:3:GLN:CG	5:C:118:VAL:HG13	2.41	0.46
6:D:13:ARG:HG2	6:D:13:ARG:HH21	1.81	0.46
7:E:127:GLU:HG3	7:E:127:GLU:O	2.14	0.46
7:E:148:VAL:O	7:E:149:ARG:C	2.56	0.46
7:E:164:PHE:O	7:E:165:VAL:C	2.58	0.46
8:F:107:GLU:CG	8:F:110:LYS:HD2	2.45	0.46
9:G:94:LYS:HG2	9:G:95:LEU:HD12	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:106:TYR:CD1	9:G:107:GLN:N	2.83	0.46
9:G:119:LEU:C	9:G:121:LYS:N	2.72	0.46
10:H:2:ILE:HB	10:H:45:ALA:HB3	1.98	0.46
11:I:7:LYS:HG2	11:I:9:THR:HG23	1.97	0.46
11:I:80:LEU:C	11:I:84:GLU:HB3	2.40	0.46
11:I:102:LYS:C	11:I:104:ARG:N	2.70	0.46
12:J:19:THR:CG2	12:J:99:LYS:HZ2	2.27	0.46
12:J:36:ILE:HB	12:J:131:LYS:CE	2.43	0.46
14:L:92:GLY:O	14:L:93:SER:CB	2.64	0.46
18:P:25:PHE:CD2	18:P:26:ALA:N	2.83	0.46
19:Q:76:LYS:O	19:Q:76:LYS:CG	2.63	0.46
19:Q:91:LEU:HD22	19:Q:91:LEU:N	2.31	0.46
21:S:34:LEU:C	21:S:34:LEU:CD1	2.88	0.46
21:S:110:GLY:O	21:S:174:PRO:HD3	2.16	0.46
21:S:129:ARG:NH2	21:S:156:GLU:OE2	2.46	0.46
1:X:45:C:OP2	1:X:192:G:H3'	2.16	0.46
1:X:200:A:C2	1:X:421:G:O4'	2.69	0.46
1:X:543:G:C6	1:X:544:U:C4	3.03	0.46
1:X:571:U:O2'	1:X:581:A:H1'	2.15	0.46
1:X:613:A:N3	1:X:668:A:H2	2.13	0.46
1:X:654:A:N3	1:X:654:A:H2'	2.31	0.46
1:X:761:G:C8	1:X:763:A:N7	2.84	0.46
1:X:794:A:H5"	1:X:795:A:N7	2.30	0.46
1:X:953:G:O2'	1:X:1203:A:N3	2.39	0.46
1:X:957:G:O2'	1:X:958:G:H5'	2.16	0.46
1:X:957:G:N2	1:X:983:G:H1'	2.31	0.46
1:X:965:G:O2'	1:X:2253:A:N1	2.42	0.46
1:X:1174:G:C2	1:X:1175:A:C5	3.03	0.46
1:X:1393:G:N3	1:X:1585:A:N6	2.64	0.46
1:X:1517:C:OP1	3:A:102:LYS:NZ	2.49	0.46
1:X:1607:A:O2'	1:X:1608:U:H5'	2.16	0.46
1:X:1800:A:C5	1:X:1802:A:C6	3.03	0.46
1:X:2027:C:H2'	1:X:2028:C:H6	1.81	0.46
1:X:2219:U:O2	1:X:2220:A:C8	2.68	0.46
1:X:2434:G:C6	1:X:2435:C:N4	2.83	0.46
1:X:2776:U:C6	1:X:2776:U:C3'	2.98	0.46
2:Z:74:A:H1'	2:Z:108:G:N2	2.30	0.46
3:A:215:LEU:HD12	3:A:215:LEU:N	2.31	0.46
4:B:64:GLN:C	4:B:66:HIS:N	2.73	0.46
6:D:5:LYS:O	6:D:8:TYR:N	2.47	0.46
6:D:88:LYS:HE2	6:D:90:THR:OG1	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:103:LEU:HB2	7:E:123:PHE:CD2	2.49	0.46
8:F:92:PRO:HB3	8:F:136:GLY:CA	2.46	0.46
14:L:47:ARG:O	14:L:49:GLN:N	2.48	0.46
19:Q:50:VAL:HG13	19:Q:80:VAL:HG23	1.95	0.46
20:R:37:LEU:HD13	20:R:37:LEU:HA	1.78	0.46
20:R:64:ASN:C	20:R:66:GLN:N	2.73	0.46
22:T:4:LYS:NZ	22:T:4:LYS:CB	2.76	0.46
23:U:51:ILE:C	23:U:52:ARG:HH21	2.22	0.46
23:U:70:LEU:HD23	23:U:75:TYR:HD1	1.79	0.46
24:V:1:MET:HG3	24:V:2:LYS:N	2.30	0.46
24:V:62:ARG:CG	24:V:62:ARG:NH1	2.76	0.46
25:W:16:GLN:O	25:W:20:VAL:HG23	2.15	0.46
30:4:10:MET:HB2	30:4:32:HIS:NE2	2.30	0.46
1:X:209:G:C8	1:X:209:G:H3'	2.50	0.46
1:X:219:G:H2'	1:X:231:G:O6	2.15	0.46
1:X:414:A:H2'	1:X:415:A:O4'	2.15	0.46
1:X:602:C:H1'	29:3:2:PRO:CA	2.45	0.46
1:X:612:G:H2'	1:X:668:A:H61	1.81	0.46
1:X:621:U:O2'	1:X:622:U:H5'	2.15	0.46
1:X:645:G:O2'	1:X:646:C:H5'	2.15	0.46
1:X:759:C:H3'	1:X:759:C:H6	1.81	0.46
1:X:824:U:H1'	1:X:1264:C:H1'	1.96	0.46
1:X:1095:A:N3	1:X:1116:U:O2'	2.46	0.46
1:X:1182:U:N3	1:X:1183:C:C2	2.83	0.46
1:X:1585:A:H4'	3:A:59:LYS:HZ2	1.80	0.46
1:X:1827:G:H1'	1:X:1914:U:C4	2.51	0.46
1:X:2071:G:C2	1:X:2072:C:N1	2.83	0.46
1:X:2608:A:N7	1:X:2869:U:C4	2.83	0.46
2:Z:54:U:OP1	2:Z:54:U:H4'	2.15	0.46
3:A:105:ILE:N	3:A:105:ILE:CD1	2.76	0.46
3:A:172:TYR:HD2	3:A:186:HIS:CB	2.25	0.46
6:D:10:ASP:C	6:D:14:PRO:HD2	2.40	0.46
7:E:30:LYS:CD	7:E:79:VAL:O	2.63	0.46
7:E:37:TYR:CE2	7:E:68:THR:HA	2.51	0.46
7:E:39:THR:C	7:E:41:LEU:N	2.61	0.46
7:E:55:PRO:HD2	7:E:61:HIS:ND1	2.30	0.46
7:E:96:ALA:HB2	7:E:105:MET:HE2	1.97	0.46
9:G:75:ILE:HD11	9:G:144:MET:CG	2.45	0.46
9:G:156:HIS:CB	9:G:157:PRO:HD3	2.35	0.46
9:G:158:HIS:HA	9:G:161:GLN:CD	2.41	0.46
10:H:23:ARG:HH21	10:H:23:ARG:C	2.23	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:119:ARG:NE	15:M:41:GLU:HG2	2.31	0.46
14:L:68:ALA:O	14:L:69:ALA:C	2.59	0.46
15:M:22:ARG:NH2	15:M:89:ASN:O	2.48	0.46
15:M:37:THR:O	15:M:87:LEU:HD22	2.16	0.46
16:N:79:PHE:O	16:N:80:ILE:C	2.57	0.46
18:P:32:ARG:O	18:P:33:MET:HG2	2.15	0.46
20:R:24:VAL:O	20:R:31:GLY:N	2.41	0.46
21:S:103:ARG:CZ	21:S:107:GLU:HG2	2.45	0.46
23:U:27:ASP:C	23:U:32:ARG:CZ	2.88	0.46
23:U:52:ARG:O	23:U:58:LYS:O	2.33	0.46
1:X:49:U:H6	1:X:49:U:H5"	1.81	0.46
1:X:67:G:O2'	1:X:68:C:O4'	2.33	0.46
1:X:84:G:OP2	20:R:18:LYS:HB3	2.15	0.46
1:X:132:U:O2	1:X:140:G:C2	2.69	0.46
1:X:171:G:N2	1:X:172:A:C2	2.84	0.46
1:X:244:C:N4	1:X:245:C:C4	2.83	0.46
1:X:312:G:C6	1:X:328:A:C6	3.03	0.46
1:X:395:G:H1	1:X:404:A:H61	1.54	0.46
1:X:584:A:C4	1:X:585:U:C5	3.04	0.46
1:X:1055:A:N3	1:X:1055:A:H5"	2.30	0.46
1:X:1283:C:H5"	1:X:1284:G:O5'	2.16	0.46
1:X:1320:A:O2'	1:X:1321:A:H5'	2.16	0.46
1:X:1542:G:H22	1:X:1562:G:N2	2.14	0.46
1:X:1810:U:H3'	3:A:157:ARG:HG3	1.97	0.46
1:X:2057:U:N3	1:X:2058:U:C4	2.84	0.46
1:X:2082:C:C2'	1:X:2083:G:C5'	2.90	0.46
1:X:2219:U:H2'	1:X:2220:A:H8	1.81	0.46
1:X:2284:U:H2'	1:X:2285:U:C5'	2.45	0.46
1:X:2320:G:H2'	1:X:2321:C:C6	2.50	0.46
1:X:2330:G:H1'	1:X:2345:A:H61	1.80	0.46
1:X:2366:U:O4'	22:T:41:ARG:NH1	2.49	0.46
1:X:2386:G:H2'	1:X:2387:U:H6	1.78	0.46
5:C:147:LYS:C	5:C:183:HIS:HB3	2.40	0.46
6:D:80:ARG:CD	6:D:83:MET:SD	3.03	0.46
7:E:44:ARG:HH22	7:E:46:ASP:HB2	1.80	0.46
7:E:69:ARG:HG2	7:E:69:ARG:HH21	1.80	0.46
10:H:17:ARG:H	10:H:58:ALA:HA	1.80	0.46
12:J:11:ARG:HG3	12:J:11:ARG:HH11	1.79	0.46
13:K:48:VAL:HG13	13:K:49:GLU:H	1.80	0.46
14:L:37:HIS:O	14:L:38:ILE:O	2.33	0.46
16:N:43:ALA:C	16:N:45:TYR:N	2.71	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:13:ARG:HB3	17:O:16:GLU:CD	2.40	0.46
17:O:26:GLN:HG3	17:O:63:HIS:HE2	1.81	0.46
17:O:33:VAL:HB	17:O:56:VAL:O	2.16	0.46
17:O:35:LEU:O	17:O:36:LYS:CG	2.63	0.46
18:P:18:VAL:O	18:P:18:VAL:HG12	2.14	0.46
19:Q:27:PHE:O	19:Q:29:VAL:HG13	2.16	0.46
19:Q:40:ASP:O	19:Q:41:ALA:C	2.58	0.46
19:Q:46:PHE:O	19:Q:47:GLY:O	2.34	0.46
20:R:35:LYS:O	20:R:37:LEU:HD22	2.15	0.46
20:R:60:PRO:C	20:R:62:MET:N	2.71	0.46
24:V:6:MET:CE	24:V:56:VAL:HG21	2.35	0.46
1:X:171:G:C2'	1:X:172:A:H5'	2.45	0.46
1:X:177:U:C5	1:X:225:G:N2	2.83	0.46
1:X:459:A:N1	1:X:466:A:C8	2.84	0.46
1:X:577:U:O5'	1:X:956:A:N6	2.48	0.46
1:X:1016:C:O2'	9:G:56:THR:HG21	2.16	0.46
1:X:1033:G:C6	1:X:1150:C:C4	3.03	0.46
1:X:1111:C:H2'	1:X:1112:U:H6	1.80	0.46
1:X:1236:G:OP2	17:O:87:ARG:NH1	2.44	0.46
1:X:1277:G:H8	1:X:1277:G:O5'	1.99	0.46
1:X:1487:C:H2'	1:X:1488:G:O4'	2.15	0.46
1:X:1731:C:H2'	1:X:1732:U:H5"	1.98	0.46
1:X:1834:G:H1	1:X:1881:U:H3	1.63	0.46
1:X:2465:G:C2	1:X:2466:G:C4	3.04	0.46
1:X:2507:U:P	30:4:30:VAL:HG21	2.55	0.46
1:X:2508:G:OP2	7:E:172:LYS:CE	2.62	0.46
1:X:2510:A:H4'	7:E:157:TYR:CE2	2.50	0.46
1:X:2714:A:C6	1:X:2715:C:C2	3.04	0.46
1:X:2787:A:C2	1:X:2864:C:C2	3.04	0.46
6:D:31:ILE:HD11	6:D:173:MET:HE2	1.97	0.46
7:E:52:VAL:HB	7:E:65:HIS:NE2	2.30	0.46
7:E:103:LEU:HD21	7:E:105:MET:HE3	1.97	0.46
7:E:159:GLY:O	7:E:163:ARG:HD2	2.16	0.46
9:G:84:ASN:C	9:G:86:ALA:N	2.70	0.46
9:G:106:TYR:CZ	9:G:108:GLY:CA	2.98	0.46
13:K:10:LEU:HD21	13:K:14:SER:N	2.30	0.46
14:L:96:TYR:CE1	14:L:101:LYS:HA	2.51	0.46
15:M:104:LEU:C	15:M:106:TYR:N	2.73	0.46
17:O:23:GLU:HB3	17:O:32:LYS:NZ	2.30	0.46
18:P:29:LYS:HA	18:P:123:HIS:ND1	2.29	0.46
19:Q:40:ASP:OD1	19:Q:44:GLN:CD	2.58	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:Q:57:ASN:C	19:Q:58:VAL:CG2	2.88	0.46
20:R:105:ARG:NH1	20:R:113:THR:N	2.63	0.46
1:X:395:G:N1	1:X:404:A:N6	2.60	0.46
1:X:417:C:H6	1:X:417:C:P	2.39	0.46
1:X:433:G:H21	1:X:434:C:H1'	1.79	0.46
1:X:498:C:O4'	18:P:77:ALA:HB1	2.16	0.46
1:X:751:G:C6	1:X:752:G:C2	3.03	0.46
1:X:805:G:C8	1:X:2419:C:H1'	2.50	0.46
1:X:1415:C:C2'	1:X:1416:A:H5'	2.46	0.46
1:X:1529:C:O2'	1:X:1530:U:H5'	2.16	0.46
1:X:1731:C:C3'	1:X:1732:U:C5'	2.94	0.46
1:X:1782:A:O3'	3:A:205:VAL:O	2.34	0.46
1:X:2240:C:C2'	1:X:2241:U:C5'	2.93	0.46
1:X:2352:A:H2'	1:X:2353:G:H8	1.78	0.46
1:X:2379:G:N2	1:X:2380:U:H1'	2.30	0.46
1:X:2383:C:H2'	1:X:2384:G:O4'	2.15	0.46
1:X:2414:A:N1	1:X:2415:G:C4	2.84	0.46
1:X:2457:A:N7	1:X:2458:U:C5	2.84	0.46
1:X:2521:A:H5'	1:X:2522:G:OP1	2.16	0.46
1:X:2528:G:N3	1:X:2529:G:C8	2.84	0.46
1:X:2571:G:H2'	1:X:2572:U:O4'	2.14	0.46
1:X:2652:G:H2'	1:X:2653:A:H8	1.80	0.46
2:Z:43:G:H8	6:D:66:ILE:HD11	1.79	0.46
2:Z:101:A:H2'	2:Z:102:A:H5"	1.98	0.46
3:A:142:VAL:O	3:A:163:VAL:CG1	2.63	0.46
4:B:107:THR:O	4:B:190:GLY:HA2	2.16	0.46
5:C:22:VAL:CG2	5:C:110:SER:OG	2.60	0.46
5:C:45:THR:C	5:C:47:THR:N	2.72	0.46
5:C:102:LEU:O	5:C:105:ALA:HB3	2.16	0.46
6:D:117:ILE:O	6:D:118:ASN:HB2	2.15	0.46
7:E:102:ALA:HB1	7:E:115:ILE:C	2.40	0.46
7:E:104:GLU:OE2	7:E:104:GLU:CA	2.58	0.46
9:G:128:GLU:O	9:G:131:VAL:N	2.47	0.46
11:I:9:THR:O	11:I:13:ARG:HD2	2.16	0.46
11:I:54:SER:C	11:I:56:LEU:H	2.24	0.46
11:I:72:TYR:CG	11:I:107:LYS:HB2	2.51	0.46
12:J:70:PHE:HA	12:J:71:PRO:HD3	1.70	0.46
13:K:59:ASP:N	13:K:59:ASP:OD2	2.47	0.46
14:L:10:LYS:O	14:L:14:ARG:N	2.49	0.46
14:L:43:ILE:HG23	14:L:50:THR:CG2	2.45	0.46
16:N:54:LYS:O	16:N:55:ARG:C	2.57	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:28:ALA:HB1	18:P:31:VAL:CG2	2.46	0.46
20:R:23:ILE:HD13	20:R:81:VAL:H	1.81	0.46
20:R:84:VAL:HG13	20:R:88:THR:N	2.31	0.46
21:S:136:VAL:CG1	21:S:137:ASP:N	2.79	0.46
1:X:83:A:N1	1:X:98:U:O2	2.48	0.46
1:X:103:U:C5	1:X:104:C:H5	2.34	0.46
1:X:387:A:C5	1:X:388:G:C8	3.04	0.46
1:X:390:U:H2'	1:X:391:C:C6	2.51	0.46
1:X:1004:A:C5	1:X:1005:U:C5	3.03	0.46
1:X:1095:A:H3'	1:X:1096:A:C5'	2.42	0.46
1:X:1121:G:C8	1:X:1121:G:OP2	2.68	0.46
1:X:1142:G:N3	9:G:103:TYR:CD1	2.84	0.46
1:X:1236:G:H2'	1:X:1238:A:OP2	2.15	0.46
1:X:1407:G:C6	1:X:1408:A:C6	3.04	0.46
1:X:1428:G:O2'	1:X:1429:A:H8	1.99	0.46
1:X:1591:U:H2'	1:X:1592:U:C6	2.51	0.46
1:X:1598:C:H2'	1:X:1599:G:O4'	2.16	0.46
1:X:1629:G:C2	1:X:1633:C:C2	3.04	0.46
1:X:1724:C:N3	1:X:1747:G:C6	2.84	0.46
1:X:1741:G:C2	1:X:1742:G:N9	2.84	0.46
1:X:1978:U:O2	10:H:3:MET:HE1	2.15	0.46
1:X:2392:G:N2	1:X:2393:G:H1'	2.30	0.46
1:X:2492:G:N2	1:X:2493:U:C2	2.83	0.46
1:X:2510:A:H4'	7:E:157:TYR:CZ	2.50	0.46
1:X:2571:G:C2	1:X:2582:G:C6	3.04	0.46
2:Z:65:A:H2'	2:Z:66:G:H8	1.81	0.46
3:A:39:LYS:O	3:A:40:THR:CB	2.64	0.46
3:A:42:GLY:N	3:A:43:ARG:NH1	2.63	0.46
3:A:126:LYS:H	3:A:129:ASN:HD22	1.64	0.46
4:B:93:VAL:O	4:B:93:VAL:HG13	2.16	0.46
4:B:103:ASP:OD2	4:B:202:ALA:CB	2.63	0.46
4:B:147:PRO:C	4:B:149:ARG:N	2.71	0.46
5:C:131:LYS:HA	5:C:134:ILE:HG12	1.97	0.46
6:D:9:ASN:O	6:D:12:VAL:CG2	2.63	0.46
7:E:50:LEU:CG	7:E:51:LEU:H	2.26	0.46
7:E:121:VAL:O	7:E:122:THR:HG23	2.16	0.46
7:E:155:ASP:OD2	7:E:157:TYR:N	2.49	0.46
11:I:20:GLY:O	11:I:22:GLY:N	2.49	0.46
13:K:66:VAL:O	13:K:67:ALA:C	2.59	0.46
14:L:41:GLN:CD	14:L:50:THR:HG21	2.40	0.46
18:P:40:LEU:CD2	26:Y:25:LEU:HD13	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:25:LEU:CG	20:R:81:VAL:HG23	2.46	0.46
21:S:28:ASN:HB2	21:S:30:VAL:HG23	1.97	0.46
22:T:34:GLY:N	22:T:61:ALA:O	2.47	0.46
24:V:29:ARG:C	24:V:32:ALA:HB3	2.40	0.46
1:X:184:A:C8	1:X:185:C:C5	3.04	0.46
1:X:482:A:H2'	1:X:483:A:C5'	2.46	0.46
1:X:698:A:H4'	1:X:699:G:C5'	2.46	0.46
1:X:760:U:O4	26:Y:3:LYS:HG3	2.15	0.46
1:X:761:G:C8	18:P:110:ALA:CB	2.98	0.46
1:X:793:G:H2'	1:X:795:A:C5	2.50	0.46
1:X:1069:G:H2'	1:X:1070:G:C4'	2.45	0.46
1:X:1226:A:H62	1:X:1249:G:H1'	1.81	0.46
1:X:1363:C:O2'	1:X:1364:C:H5'	2.16	0.46
1:X:1538:A:C5	1:X:1539:U:C4	3.03	0.46
1:X:1618:U:O4	19:Q:56:MET:SD	2.74	0.46
1:X:1634:A:O2'	1:X:1635:G:H5'	2.16	0.46
1:X:1849:G:N1	1:X:1867:A:N6	2.63	0.46
2:Z:98:C:H2'	2:Z:99:G:C8	2.51	0.46
4:B:34:VAL:HG11	4:B:67:PHE:HD1	1.81	0.46
4:B:64:GLN:O	4:B:66:HIS:N	2.49	0.46
4:B:116:VAL:HG22	4:B:136:ARG:CD	2.42	0.46
7:E:30:LYS:HD2	7:E:79:VAL:O	2.16	0.46
7:E:76:VAL:O	7:E:78:GLY:N	2.49	0.46
9:G:69:ASP:O	9:G:70:PHE:CD2	2.69	0.46
9:G:125:ARG:HD2	9:G:129:HIS:CD2	2.51	0.46
9:G:156:HIS:C	9:G:158:HIS:H	2.24	0.46
10:H:2:ILE:HG23	10:H:6:SER:CB	2.45	0.46
10:H:76:ARG:O	10:H:94:ASN:HA	2.16	0.46
15:M:34:ARG:NH1	15:M:81:PHE:CG	2.84	0.46
15:M:89:ASN:ND2	15:M:90:GLN:CD	2.73	0.46
16:N:112:ALA:O	16:N:113:SER:C	2.59	0.46
20:R:96:LYS:CG	20:R:97:GLN:N	2.75	0.46
21:S:93:GLU:HG2	21:S:123:VAL:HA	1.98	0.46
1:X:26:G:H1'	1:X:525:A:H61	1.79	0.46
1:X:234:C:O2'	1:X:235:C:H5'	2.16	0.46
1:X:303:C:H2'	1:X:304:A:H5"	1.97	0.46
1:X:405:C:C2	1:X:406:G:C8	3.04	0.46
1:X:542:A:N6	1:X:2003:A:H1'	2.30	0.46
1:X:639:G:O2'	1:X:661:C:H1'	2.16	0.46
1:X:764:A:C2	1:X:802:A:C4	3.04	0.46
1:X:810:U:O2'	1:X:811:G:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:833:A:C2	1:X:834:A:C4	3.04	0.46
1:X:1094:C:O5'	1:X:1094:C:H6	1.98	0.46
1:X:1118:G:C2'	1:X:1119:U:C5'	2.92	0.46
1:X:1128:G:H3'	1:X:1129:A:C5'	2.45	0.46
1:X:1171:A:C8	1:X:1172:U:H5	2.34	0.46
1:X:1442:C:N4	1:X:1585:A:C5'	2.79	0.46
1:X:1559:G:C8	1:X:1559:G:C3'	2.99	0.46
1:X:1710:U:O2'	1:X:1711:C:P	2.74	0.46
1:X:1741:G:C2'	1:X:1742:G:C5'	2.94	0.46
1:X:2265:A:H4'	1:X:2266:A:O5'	2.15	0.46
1:X:2281:C:C2	1:X:2282:G:C8	3.04	0.46
1:X:2300:G:H3'	1:X:2300:G:N3	2.31	0.46
1:X:2345:A:H5'	22:T:60:PHE:CZ	2.50	0.46
1:X:2467:A:H2'	1:X:2468:G:O4'	2.16	0.46
4:B:70:ALA:O	4:B:71:GLY:C	2.58	0.46
5:C:197:GLU:HG2	5:C:198:GLU:H	1.80	0.46
6:D:53:ALA:O	6:D:54:ALA:C	2.59	0.46
7:E:41:LEU:HD11	7:E:64:LEU:HB2	1.97	0.46
7:E:45:GLN:CD	7:E:47:GLY:O	2.59	0.46
9:G:103:TYR:HE2	9:G:111:LYS:HB3	1.79	0.46
9:G:168:THR:C	9:G:169:GLN:O	2.57	0.46
10:H:22:ILE:HG22	10:H:52:VAL:O	2.15	0.46
10:H:101:ASN:C	10:H:102:GLN:HE21	2.24	0.46
13:K:20:LEU:O	13:K:23:ALA:N	2.49	0.46
16:N:49:ASP:O	16:N:52:ASN:HB3	2.16	0.46
17:O:57:GLN:O	17:O:96:LEU:C	2.59	0.46
18:P:45:ILE:HG13	18:P:53:ALA:HA	1.98	0.46
18:P:86:LEU:C	18:P:88:ASP:N	2.73	0.46
21:S:24:TYR:O	21:S:25:ASN:HB3	2.16	0.46
23:U:32:ARG:N	23:U:32:ARG:CD	2.78	0.46
24:V:57:LYS:O	24:V:57:LYS:HG2	2.16	0.46
1:X:51:A:H2	1:X:155:G:N3	2.14	0.45
1:X:150:A:H2'	1:X:151:G:O4'	2.16	0.45
1:X:404:A:O4'	1:X:424:G:H1'	2.16	0.45
1:X:829:C:H2'	1:X:830:C:C6	2.51	0.45
1:X:987:G:C2	1:X:988:G:C8	3.04	0.45
1:X:1063:C:H2'	1:X:1064:C:C6	2.51	0.45
1:X:1373:G:C2'	1:X:1374:G:H5'	2.46	0.45
1:X:1524:C:OP2	1:X:1525:A:N7	2.49	0.45
1:X:1829:C:O2'	1:X:1910:A:H1'	2.17	0.45
1:X:1882:G:N2	1:X:1885:C:N4	2.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2261:G:O2'	1:X:2369:U:C5	2.69	0.45
1:X:2861:A:C4	1:X:2862:G:C8	3.04	0.45
1:X:2864:C:H2'	1:X:2864:C:O2	2.16	0.45
2:Z:58:G:H4'	2:Z:59:A:C8	2.51	0.45
3:A:227:ASN:O	3:A:230:ASP:N	2.49	0.45
4:B:133:LYS:O	4:B:133:LYS:CG	2.64	0.45
6:D:10:ASP:O	6:D:14:PRO:CD	2.63	0.45
6:D:38:GLU:C	6:D:87:ILE:H	2.24	0.45
6:D:142:THR:HG22	6:D:144:ASP:H	1.81	0.45
7:E:127:GLU:OE2	7:E:130:ARG:CB	2.63	0.45
9:G:36:ASN:HB2	9:G:76:GLN:HE22	1.81	0.45
9:G:55:ALA:O	9:G:57:LEU:N	2.49	0.45
9:G:69:ASP:O	9:G:70:PHE:CB	2.63	0.45
9:G:69:ASP:O	9:G:70:PHE:HD2	1.99	0.45
9:G:154:GLU:CD	9:G:155:THR:H	2.24	0.45
11:I:14:LYS:HE3	11:I:14:LYS:CA	2.46	0.45
12:J:19:THR:HG23	12:J:99:LYS:HD3	1.98	0.45
14:L:52:ALA:O	14:L:53:ALA:HB3	2.15	0.45
15:M:19:ASP:HB2	15:M:20:HIS:CD2	2.51	0.45
15:M:22:ARG:NH1	15:M:24:LEU:HD23	2.30	0.45
15:M:34:ARG:HD3	15:M:81:PHE:CD2	2.51	0.45
15:M:38:LYS:C	15:M:40:ARG:H	2.23	0.45
16:N:86:ALA:HB1	16:N:88:ILE:HG22	1.98	0.45
17:O:12:TYR:CB	17:O:39:PHE:HB2	2.27	0.45
18:P:42:VAL:C	18:P:43:ASP:OD2	2.60	0.45
19:Q:53:ILE:C	19:Q:54:SER:OG	2.59	0.45
21:S:60:GLU:HB3	21:S:62:PHE:CE2	2.51	0.45
22:T:31:VAL:HG13	22:T:67:VAL:CG2	2.45	0.45
22:T:52:GLY:N	22:T:62:LEU:CD2	2.79	0.45
24:V:18:ILE:O	24:V:20:ALA:N	2.40	0.45
24:V:30:PHE:O	24:V:31:GLN:C	2.57	0.45
26:Y:14:SER:O	26:Y:17:ASP:HB2	2.16	0.45
26:Y:45:ILE:HG21	26:Y:57:VAL:HG22	1.97	0.45
1:X:344:G:C4	1:X:345:U:C5	3.04	0.45
1:X:683:A:C2'	1:X:684:C:OP2	2.64	0.45
1:X:714:G:C6	1:X:715:U:C5	3.04	0.45
1:X:787:A:P	3:A:48:ARG:HH12	2.38	0.45
1:X:796:A:N7	1:X:798:G:C8	2.84	0.45
1:X:941:U:C4	1:X:942:U:C4	3.04	0.45
1:X:969:U:O2'	1:X:970:A:P	2.74	0.45
1:X:1078:A:H3'	1:X:1078:A:P	2.56	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1235:C:C2	1:X:1241:G:C2	3.04	0.45
1:X:1564:U:C2	1:X:1565:G:C8	3.04	0.45
1:X:1935:A:C6	1:X:1936:A:N1	2.85	0.45
1:X:2002:A:C2'	1:X:2003:A:O5'	2.64	0.45
1:X:2033:C:N4	1:X:2034:A:N1	2.65	0.45
1:X:2225:G:N3	1:X:2226:A:C8	2.85	0.45
1:X:2397:A:C2	1:X:2398:U:H1'	2.51	0.45
1:X:2411:A:N3	23:U:25:ARG:HD2	2.32	0.45
2:Z:62:C:O5'	2:Z:62:C:H6	1.99	0.45
3:A:158:SER:O	3:A:160:GLY:N	2.49	0.45
4:B:32:PRO:O	4:B:49:ILE:HG12	2.16	0.45
4:B:116:VAL:O	4:B:117:MET:C	2.56	0.45
7:E:137:ASP:HB3	7:E:140:LEU:CD1	2.45	0.45
9:G:50:PRO:HG2	9:G:53:ARG:HB2	1.96	0.45
10:H:43:ARG:HG3	10:H:44:TYR:CD2	2.51	0.45
10:H:132:GLU:HG2	10:H:134:LEU:HG	1.98	0.45
11:I:76:LYS:HG3	11:I:111:SER:HB2	1.98	0.45
12:J:27:TYR:HB2	12:J:137:VAL:CG1	2.31	0.45
12:J:68:ARG:HH11	12:J:68:ARG:CB	2.27	0.45
13:K:37:THR:O	13:K:38:LEU:C	2.58	0.45
15:M:46:ARG:HG2	15:M:47:SER:H	1.82	0.45
16:N:24:PHE:CZ	16:N:39:LEU:HD21	2.52	0.45
16:N:79:PHE:CE1	16:N:106:PHE:CE1	3.01	0.45
18:P:72:LEU:HA	18:P:72:LEU:HD12	1.74	0.45
21:S:18:MET:HB3	21:S:34:LEU:O	2.17	0.45
21:S:41:ARG:O	21:S:41:ARG:HG2	2.15	0.45
21:S:92:VAL:O	21:S:93:GLU:HG3	2.16	0.45
21:S:152:ILE:H	21:S:152:ILE:HD12	1.75	0.45
25:W:10:ILE:CG2	25:W:11:GLY:N	2.78	0.45
1:X:1029:C:O3'	1:X:1131:G:N2	2.50	0.45
1:X:1135:C:H2'	1:X:1136:G:O4'	2.15	0.45
1:X:1142:G:O2'	1:X:1143:A:P	2.75	0.45
1:X:1330:G:C6	1:X:1331:G:N7	2.84	0.45
1:X:1359:G:C2'	1:X:1360:G:H5'	2.46	0.45
1:X:1867:A:H3'	1:X:1867:A:C8	2.51	0.45
1:X:2015:G:C8	1:X:2015:G:O5'	2.69	0.45
1:X:2018:G:HO2'	1:X:2019:C:P	2.38	0.45
1:X:2236:U:C4	1:X:2237:C:N4	2.85	0.45
1:X:2357:A:O2'	14:L:88:VAL:HG21	2.16	0.45
1:X:2391:A:O5'	1:X:2391:A:H8	1.99	0.45
1:X:2477:C:OP2	1:X:2478:C:OP2	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2728:A:OP1	7:E:70:THR:HG21	2.17	0.45
1:X:2740:C:H1'	7:E:143:GLN:NE2	2.31	0.45
1:X:2757:G:N3	1:X:2759:U:O4	2.48	0.45
1:X:2818:G:N2	1:X:2850:U:C2	2.84	0.45
1:X:2825:A:C4	1:X:2826:C:C5	3.05	0.45
1:X:2862:G:C6	1:X:2863:U:C4	3.03	0.45
2:Z:14:C:C5	22:T:72:LYS:HD2	2.50	0.45
3:A:35:GLU:OE1	3:A:35:GLU:HA	2.17	0.45
4:B:116:VAL:H	4:B:136:ARG:HE	1.59	0.45
4:B:176:ARG:HH21	15:M:16:ILE:HG23	1.81	0.45
5:C:27:LEU:HD11	5:C:106:MET:HB3	1.98	0.45
5:C:58:MET:HB2	5:C:70:GLY:O	2.15	0.45
6:D:4:LEU:HA	6:D:7:LYS:CG	2.47	0.45
6:D:61:THR:HB	6:D:91:LEU:HD21	1.98	0.45
7:E:96:ALA:HB2	7:E:105:MET:CE	2.46	0.45
8:F:101:ASN:C	8:F:104:GLN:HG2	2.40	0.45
9:G:44:VAL:CG1	9:G:45:ASP:N	2.80	0.45
11:I:35:LYS:O	11:I:36:GLY:O	2.35	0.45
13:K:75:VAL:O	13:K:76:VAL:C	2.55	0.45
14:L:9:ARG:O	14:L:10:LYS:C	2.59	0.45
15:M:82:PRO:O	15:M:83:PHE:C	2.60	0.45
16:N:86:ALA:HB1	16:N:88:ILE:CG2	2.47	0.45
18:P:29:LYS:O	18:P:30:TYR:CB	2.64	0.45
19:Q:69:ILE:HD12	19:Q:69:ILE:C	2.41	0.45
1:X:167:A:C8	1:X:184:A:C6	3.05	0.45
1:X:174:A:C6	1:X:840:U:O4	2.70	0.45
1:X:449:C:O2	1:X:449:C:C2'	2.64	0.45
1:X:614:G:C5	1:X:615:C:C5	3.05	0.45
1:X:783:G:C6	1:X:784:U:C4	3.04	0.45
1:X:843:G:H1'	1:X:2427:A:N6	2.32	0.45
1:X:1174:G:N3	1:X:1175:A:C8	2.85	0.45
1:X:1218:C:O2'	1:X:1219:C:H5'	2.16	0.45
1:X:1397:A:H2'	1:X:1398:G:H5"	1.97	0.45
1:X:1411:C:C2	1:X:1412:C:C5	3.04	0.45
1:X:1548:U:O5'	1:X:1548:U:H6	1.99	0.45
1:X:1629:G:H1	1:X:1633:C:H2'	1.82	0.45
1:X:1753:A:H8	1:X:1753:A:P	2.38	0.45
1:X:1791:C:N3	1:X:1810:U:O2	2.49	0.45
1:X:1848:U:O5'	1:X:1848:U:H6	1.99	0.45
1:X:1850:G:H1	1:X:1867:A:C1'	2.29	0.45
1:X:1930:C:N3	1:X:1943:A:C2	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2074:U:H4'	23:U:67:LEU:HD22	1.99	0.45
1:X:2080:U:H2'	1:X:2081:U:C6	2.51	0.45
1:X:2246:A:N6	1:X:2251:U:H3	2.14	0.45
1:X:2262:C:H2'	1:X:2263:C:O4'	2.17	0.45
1:X:2271:C:H2'	1:X:2272:A:H8	1.82	0.45
1:X:2274:C:C2'	1:X:2275:U:O5'	2.65	0.45
1:X:2299:A:C4	1:X:2312:A:C6	3.05	0.45
1:X:2549:G:O2'	1:X:2550:C:H5'	2.15	0.45
1:X:2571:G:C5	1:X:2572:U:C4	3.04	0.45
1:X:2775:U:P	1:X:2777:A:OP2	2.74	0.45
4:B:152:LYS:HD2	9:G:106:TYR:N	2.26	0.45
5:C:44:SER:HA	5:C:86:PRO:O	2.15	0.45
5:C:148:VAL:HG22	5:C:185:ARG:HB2	1.97	0.45
5:C:179:ASP:O	5:C:183:HIS:ND1	2.44	0.45
6:D:101:GLU:O	6:D:103:LEU:N	2.49	0.45
7:E:6:LYS:C	7:E:7:GLN:HG3	2.40	0.45
7:E:50:LEU:HG	7:E:51:LEU:N	2.26	0.45
7:E:107:ILE:HG13	7:E:152:ARG:HB2	1.99	0.45
8:F:118:ALA:O	8:F:123:ALA:HB3	2.16	0.45
9:G:91:THR:CG2	9:G:92:GLY:N	2.79	0.45
9:G:156:HIS:C	9:G:158:HIS:N	2.74	0.45
10:H:14:SER:OG	10:H:98:ILE:HD12	2.15	0.45
10:H:110:VAL:CG1	10:H:111:PHE:N	2.79	0.45
11:I:78:SER:O	11:I:82:ASP:HB3	2.15	0.45
11:I:83:LEU:O	11:I:85:ASP:N	2.48	0.45
11:I:134:GLU:OE2	11:I:139:ARG:HG3	2.16	0.45
14:L:83:GLY:O	14:L:85:LYS:N	2.43	0.45
14:L:94:TYR:CD2	14:L:99:ARG:NH2	2.84	0.45
16:N:54:LYS:O	16:N:58:ARG:HG3	2.16	0.45
16:N:86:ALA:CB	16:N:88:ILE:HG22	2.47	0.45
16:N:108:ALA:O	16:N:110:VAL:N	2.49	0.45
17:O:11:GLN:HB3	17:O:12:TYR:H	1.62	0.45
18:P:9:ARG:HG3	18:P:13:GLN:HG3	1.97	0.45
18:P:107:ILE:HG21	18:P:117:ILE:HD11	1.99	0.45
20:R:38:LEU:HD23	20:R:38:LEU:C	2.40	0.45
23:U:26:ALA:CA	23:U:35:THR:HG23	2.46	0.45
1:X:304:A:H61	1:X:357:A:H62	1.64	0.45
1:X:334:G:H8	5:C:164:VAL:HG13	1.81	0.45
1:X:456:C:H5"	5:C:43:ALA:HB2	1.99	0.45
1:X:541:C:HO2'	1:X:542:A:P	2.39	0.45
1:X:556:A:O2'	1:X:558:G:N3	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:703:A:H5”	1:X:703:A:H8	1.81	0.45
1:X:774:A:H8	1:X:774:A:O5’	1.97	0.45
1:X:843:G:H1’	1:X:2427:A:C6	2.51	0.45
1:X:977:G:H5’	1:X:2251:U:O2	2.16	0.45
1:X:1023:U:C5	9:G:56:THR:HG21	2.52	0.45
1:X:1059:A:H8	1:X:1059:A:OP2	1.99	0.45
1:X:1448:A:N6	1:X:1574:A:N6	2.54	0.45
1:X:1812:U:C2	3:A:200:GLU:HA	2.52	0.45
1:X:1885:C:H5’	3:A:244:ARG:CD	2.43	0.45
1:X:2201:G:N3	1:X:2202:G:C8	2.85	0.45
1:X:2426:G:H4’	1:X:2427:A:C5’	2.47	0.45
1:X:2564:U:C2	32:X:2911:ZLD:H21A	2.51	0.45
3:A:121:PRO:C	3:A:123:ALA:N	2.75	0.45
3:A:172:TYR:HE2	3:A:186:HIS:HD1	1.64	0.45
3:A:211:ARG:HE	3:A:214:TRP:CD1	2.34	0.45
4:B:162:MET:HE3	4:B:162:MET:CA	2.47	0.45
5:C:83:ALA:O	5:C:84:PHE:C	2.60	0.45
5:C:102:LEU:HD23	5:C:102:LEU:C	2.38	0.45
6:D:60:ILE:HG13	6:D:61:THR:HG23	1.98	0.45
7:E:13:SER:O	7:E:15:VAL:HG13	2.17	0.45
7:E:30:LYS:NZ	7:E:81:ASP:HA	2.32	0.45
7:E:87:LEU:HD23	7:E:164:PHE:HA	1.99	0.45
8:F:92:PRO:C	8:F:93:ASN:OD1	2.59	0.45
11:I:51:GLY:O	11:I:55:ARG:CZ	2.64	0.45
12:J:47:GLN:NE2	12:J:127:PRO:CG	2.79	0.45
14:L:33:ARG:NH2	14:L:68:ALA:HB1	2.31	0.45
16:N:99:ALA:HB2	16:N:106:PHE:CD1	2.52	0.45
17:O:36:LYS:HE3	17:O:56:VAL:CA	2.46	0.45
18:P:27:VAL:HG22	18:P:28:ALA:N	2.32	0.45
19:Q:3:HIS:CE1	19:Q:44:GLN:CG	2.82	0.45
19:Q:54:SER:C	19:Q:55:THR:CG2	2.90	0.45
21:S:6:LYS:HB2	21:S:31:SER:C	2.41	0.45
21:S:13:LYS:HB2	21:S:18:MET:HB2	1.99	0.45
21:S:41:ARG:NH2	21:S:42:ALA:HB2	2.31	0.45
21:S:53:ASP:OD2	21:S:53:ASP:N	2.50	0.45
25:W:3:ILE:HG23	25:W:51:LEU:HB2	1.98	0.45
30:4:18:ARG:HH12	30:4:21:GLY:HA2	1.81	0.45
1:X:66:U:O2	1:X:87:G:C2	2.69	0.45
1:X:73:A:H4’	1:X:74:G:O5’	2.15	0.45
1:X:151:G:O2’	1:X:152:G:H5’	2.17	0.45
1:X:513:A:O2’	1:X:514:G:H5”	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:558:G:O2'	1:X:559:C:N1	2.45	0.45
1:X:615:C:C4'	1:X:669:G:N2	2.79	0.45
1:X:695:G:N2	1:X:696:U:C2	2.85	0.45
1:X:734:G:C2	1:X:735:G:C5	3.05	0.45
1:X:917:U:O2'	1:X:918:A:H5'	2.16	0.45
1:X:919:U:O3'	12:J:24:GLY:HA3	2.17	0.45
1:X:1361:G:O2'	1:X:1362:A:H5'	2.17	0.45
1:X:1423:A:C2	1:X:1609:G:C2	3.04	0.45
1:X:1524:C:C5'	1:X:1525:A:H5"	2.47	0.45
1:X:1710:U:HO2'	1:X:1711:C:P	2.39	0.45
1:X:1713:G:C5	1:X:1714:A:N7	2.84	0.45
1:X:1809:G:C5'	3:A:88:ARG:NH1	2.79	0.45
1:X:1849:G:H1	1:X:1867:A:N6	2.14	0.45
1:X:1942:G:C2	1:X:1943:A:C4	3.05	0.45
1:X:1996:A:C2	1:X:1997:A:C4	3.05	0.45
1:X:2008:C:OP1	4:B:149:ARG:NH2	2.37	0.45
1:X:2337:A:H2'	1:X:2338:C:O4'	2.17	0.45
1:X:2388:G:C6	1:X:2389:G:N7	2.85	0.45
1:X:2735:C:H6	1:X:2735:C:O5'	1.99	0.45
1:X:2823:G:O2'	1:X:2824:C:C6	2.65	0.45
2:Z:108:G:OP1	21:S:84:TYR:OH	2.35	0.45
3:A:141:VAL:O	3:A:194:GLY:N	2.47	0.45
4:B:56:GLU:C	4:B:59:VAL:HG23	2.41	0.45
4:B:123:ALA:C	4:B:124:GLY:O	2.56	0.45
4:B:141:ILE:HG22	4:B:150:VAL:HB	1.97	0.45
5:C:131:LYS:CA	5:C:134:ILE:HG12	2.47	0.45
5:C:176:ASN:ND2	5:C:179:ASP:N	2.50	0.45
7:E:30:LYS:NZ	7:E:80:SER:O	2.46	0.45
9:G:59:ALA:O	9:G:60:SER:C	2.59	0.45
10:H:17:ARG:NE	10:H:59:ALA:HB2	2.31	0.45
10:H:29:ILE:HA	10:H:34:LEU:HD23	1.98	0.45
10:H:90:ARG:O	10:H:90:ARG:HG3	2.16	0.45
10:H:116:ARG:NH2	15:M:41:GLU:OE2	2.48	0.45
11:I:47:ALA:O	11:I:48:PHE:C	2.56	0.45
12:J:75:VAL:HB	12:J:93:TYR:CE2	2.52	0.45
15:M:40:ARG:O	15:M:41:GLU:CG	2.65	0.45
16:N:18:LEU:O	16:N:21:ALA:HB3	2.16	0.45
16:N:43:ALA:O	16:N:45:TYR:N	2.49	0.45
17:O:46:VAL:HG12	17:O:51:ALA:HB2	1.98	0.45
19:Q:4:TYR:CZ	24:V:23:LYS:HG3	2.52	0.45
19:Q:12:ILE:CD1	19:Q:13:SER:N	2.72	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:23:ILE:CD1	20:R:81:VAL:H	2.29	0.45
21:S:3:LEU:HD22	21:S:34:LEU:HB3	1.98	0.45
21:S:62:PHE:CD1	21:S:85:MET:HE1	2.51	0.45
26:Y:17:ASP:C	26:Y:19:ARG:N	2.70	0.45
1:X:5:A:C6	1:X:6:A:C6	3.05	0.45
1:X:167:A:N6	1:X:184:A:H1'	2.31	0.45
1:X:589:C:O2'	1:X:590:C:H5'	2.17	0.45
1:X:607:C:H2'	1:X:608:G:O4'	2.16	0.45
1:X:648:A:H5'	1:X:649:G:OP1	2.17	0.45
1:X:874:A:N9	1:X:929:A:N6	2.65	0.45
1:X:1275:A:C2	26:Y:10:LYS:HE2	2.52	0.45
1:X:1281:A:H2'	1:X:1282:A:C8	2.47	0.45
1:X:1598:C:H2'	1:X:1599:G:C8	2.52	0.45
1:X:1681:A:C6	1:X:2706:U:C4	3.04	0.45
1:X:1847:G:N1	1:X:1871:G:C8	2.85	0.45
1:X:1850:G:H22	1:X:1867:A:C2'	2.29	0.45
1:X:1886:G:H2'	1:X:1887:G:C8	2.49	0.45
1:X:1997:A:C2	1:X:1998:A:C2	3.04	0.45
1:X:2070:G:C4	1:X:2071:G:C8	3.05	0.45
1:X:2411:A:C5	1:X:2412:A:C6	3.04	0.45
1:X:2615:U:O5'	4:B:80:GLU:CG	2.64	0.45
2:Z:44:C:H1'	6:D:89:VAL:HG12	1.99	0.45
2:Z:46:G:H1'	2:Z:48:A:H62	1.81	0.45
5:C:45:THR:CG2	5:C:82:VAL:HG11	2.46	0.45
5:C:154:ASP:OD2	5:C:157:THR:HG21	2.17	0.45
6:D:5:LYS:C	6:D:7:LYS:N	2.69	0.45
8:F:81:LYS:HZ2	8:F:84:GLY:CA	2.30	0.45
9:G:51:LEU:HD13	9:G:88:VAL:HG21	1.95	0.45
9:G:156:HIS:N	9:G:157:PRO:HD2	2.31	0.45
10:H:27:SER:OG	10:H:49:ASP:HA	2.17	0.45
10:H:31:GLY:C	10:H:33:GLY:N	2.72	0.45
12:J:62:GLY:HA3	12:J:64:LYS:HE3	1.98	0.45
13:K:45:ARG:O	13:K:46:PRO:C	2.59	0.45
14:L:35:SER:C	14:L:36:LYS:HE3	2.41	0.45
14:L:63:ASN:O	14:L:67:THR:N	2.48	0.45
16:N:40:LEU:HB3	17:O:74:TYR:CE1	2.51	0.45
16:N:78:THR:HG23	16:N:117:ARG:CD	2.46	0.45
17:O:14:VAL:O	17:O:14:VAL:CG1	2.62	0.45
17:O:31:ASP:OD1	17:O:59:GLU:HG2	2.17	0.45
17:O:39:PHE:O	17:O:46:VAL:CG2	2.65	0.45
18:P:8:PHE:O	18:P:9:ARG:CB	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:10:ASN:O	18:P:11:LYS:C	2.59	0.45
18:P:74:SER:HA	18:P:77:ALA:CB	2.46	0.45
19:Q:7:LEU:HD11	24:V:30:PHE:CZ	2.50	0.45
19:Q:90:ALA:C	19:Q:92:ALA:N	2.74	0.45
20:R:23:ILE:CD1	20:R:23:ILE:N	2.75	0.45
20:R:100:ASP:OD1	20:R:102:LYS:C	2.60	0.45
21:S:51:LEU:CD2	21:S:65:LEU:HD13	2.40	0.45
21:S:74:ARG:CG	21:S:75:LYS:HE3	2.47	0.45
21:S:84:TYR:O	21:S:85:MET:C	2.58	0.45
23:U:29:GLY:C	23:U:31:GLY:N	2.74	0.45
23:U:48:LYS:O	23:U:62:LEU:O	2.35	0.45
23:U:62:LEU:CD2	23:U:67:LEU:HD12	2.47	0.45
26:Y:11:THR:C	26:Y:12:SER:O	2.59	0.45
30:4:1:MET:HE1	30:4:35:ARG:N	2.31	0.45
1:X:4:C:O2'	1:X:5:A:H5'	2.17	0.45
1:X:105:G:C2'	1:X:106:G:H5'	2.47	0.45
1:X:109:A:H2'	1:X:110:U:H5"	1.99	0.45
1:X:776:G:C2	1:X:778:G:C4	3.05	0.45
1:X:992:A:N1	1:X:2010:G:O2'	2.47	0.45
1:X:1075:C:C5'	8:F:85:ILE:HG13	2.47	0.45
1:X:1203:A:N3	1:X:1203:A:H2'	2.30	0.45
1:X:1373:G:H21	1:X:1374:G:C1'	2.29	0.45
1:X:1749:G:C5'	1:X:1750:A:OP2	2.60	0.45
1:X:1842:G:C5	1:X:1843:U:C5	3.05	0.45
1:X:2514:G:C2	1:X:2515:G:C8	3.05	0.45
1:X:2621:G:OP1	9:G:110:LEU:HD13	2.16	0.45
4:B:44:TYR:O	4:B:45:GLU:C	2.60	0.45
5:C:23:ASN:N	5:C:106:MET:SD	2.90	0.45
5:C:96:PRO:HB2	5:C:99:VAL:HG23	1.97	0.45
5:C:101:GLN:O	5:C:103:GLY:N	2.50	0.45
6:D:137:ILE:HG13	6:D:138:PHE:HE1	1.76	0.45
8:F:71:LYS:CG	8:F:114:PRO:HG2	2.47	0.45
11:I:11:GLY:O	11:I:13:ARG:N	2.49	0.45
11:I:106:VAL:CG2	11:I:123:ASP:HB2	2.44	0.45
12:J:28:VAL:HG11	12:J:135:ARG:HA	1.98	0.45
12:J:78:LYS:HD2	12:J:81:GLU:HA	1.99	0.45
15:M:66:PHE:HE2	15:M:81:PHE:CB	2.12	0.45
20:R:25:LEU:HG	20:R:81:VAL:CG2	2.47	0.45
20:R:86:PRO:O	20:R:87:GLU:CB	2.64	0.45
23:U:20:ARG:O	23:U:39:LYS:HB3	2.17	0.45
23:U:24:ALA:N	23:U:36:GLY:O	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:70:LEU:HD23	23:U:70:LEU:HA	1.77	0.45
26:Y:51:TYR:CD2	26:Y:54:GLY:C	2.95	0.45
1:X:38:G:H21	5:C:42:THR:HG21	1.82	0.45
1:X:84:G:O3'	20:R:41:PRO:HG3	2.17	0.45
1:X:589:C:H4'	16:N:31:GLN:HE22	1.81	0.45
1:X:689:A:H2'	1:X:690:A:H5'	1.99	0.45
1:X:732:G:H8	1:X:732:G:O5'	2.00	0.45
1:X:825:C:C2	1:X:1263:G:N1	2.84	0.45
1:X:832:A:OP2	1:X:1201:G:N2	2.46	0.45
1:X:911:A:H2'	1:X:912:A:C8	2.51	0.45
1:X:999:A:H3'	25:W:8:SER:HB2	1.98	0.45
1:X:1062:G:C2	1:X:1063:C:C2	3.04	0.45
1:X:1201:G:H8	1:X:1201:G:O5'	1.99	0.45
1:X:1332:G:N2	1:X:1347:C:C2	2.84	0.45
1:X:1557:G:O2'	1:X:1558:C:H5'	2.16	0.45
1:X:1758:C:O2'	1:X:1759:A:H5'	2.17	0.45
1:X:1816:G:OP2	3:A:220:HIS:CE1	2.70	0.45
1:X:2317:G:C2	1:X:2318:U:C6	3.04	0.45
1:X:2319:G:O2'	1:X:2320:G:H5'	2.17	0.45
1:X:2676:G:C6	1:X:2690:A:N1	2.85	0.45
1:X:2850:U:C2'	1:X:2851:G:O5'	2.65	0.45
1:X:2875:C:H2'	1:X:2876:C:H5'	1.99	0.45
2:Z:65:A:O2'	2:Z:66:G:H5'	2.16	0.45
3:A:172:TYR:HE2	3:A:186:HIS:ND1	2.14	0.45
4:B:117:MET:HE3	4:B:123:ALA:O	2.16	0.45
5:C:22:VAL:CG1	5:C:27:LEU:HD21	2.44	0.45
5:C:163:ASN:O	5:C:167:VAL:HG22	2.16	0.45
5:C:164:VAL:HB	5:C:166:TRP:CH2	2.47	0.45
6:D:73:SER:HB3	6:D:79:LEU:CD2	2.47	0.45
9:G:92:GLY:C	9:G:93:LYS:HD3	2.41	0.45
9:G:155:THR:CG2	9:G:156:HIS:H	2.24	0.45
11:I:49:PHE:C	11:I:50:GLU:HG2	2.41	0.45
11:I:62:LYS:CG	11:I:63:ARG:N	2.79	0.45
14:L:9:ARG:C	14:L:11:LEU:N	2.75	0.45
14:L:11:LEU:HA	14:L:14:ARG:CB	2.46	0.45
16:N:32:TYR:O	16:N:33:ARG:C	2.59	0.45
17:O:10:LYS:HG3	17:O:11:GLN:HG2	1.98	0.45
20:R:108:VAL:CG2	20:R:109:ALA:N	2.65	0.45
21:S:17:SER:O	21:S:18:MET:SD	2.75	0.45
21:S:98:VAL:HG22	21:S:99:HIS:N	2.32	0.45
23:U:27:ASP:CA	23:U:32:ARG:CZ	2.95	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:5:LEU:HA	25:W:51:LEU:HA	1.98	0.45
26:Y:13:LYS:O	26:Y:17:ASP:OD1	2.35	0.45
1:X:66:U:C2'	1:X:67:G:O5'	2.65	0.45
1:X:387:A:C4	1:X:388:G:C8	3.05	0.45
1:X:429:C:H2'	1:X:430:C:H6	1.82	0.45
1:X:1023:U:OP2	1:X:1023:U:H4'	2.17	0.45
1:X:1136:G:C5	1:X:1137:A:N6	2.85	0.45
1:X:1243:G:N2	1:X:1244:U:C2	2.85	0.45
1:X:1272:G:H2'	1:X:1273:G:H8	1.82	0.45
1:X:1444:C:H2'	1:X:1445:A:C8	2.46	0.45
1:X:1494:G:O2'	1:X:1574:A:C2	2.68	0.45
1:X:2010:G:C6	1:X:2011:U:N3	2.85	0.45
1:X:2067:U:H2'	1:X:2068:C:C6	2.51	0.45
1:X:2624:G:H8	1:X:2624:G:OP2	2.00	0.45
1:X:2810:A:N6	1:X:2853:U:H2'	2.31	0.45
2:Z:26:G:H4'	2:Z:27:A:O5'	2.17	0.45
2:Z:56:G:H2'	2:Z:57:U:H6	1.81	0.45
4:B:102:ILE:HB	4:B:199:ARG:O	2.17	0.45
4:B:107:THR:O	4:B:108:SER:C	2.60	0.45
4:B:107:THR:HG21	4:B:162:MET:CE	2.48	0.45
6:D:10:ASP:HA	6:D:14:PRO:HG2	1.99	0.45
6:D:11:GLN:O	6:D:15:ALA:HB2	2.17	0.45
6:D:112:ARG:NH1	6:D:134:GLU:OE2	2.50	0.45
7:E:103:LEU:HD12	7:E:104:GLU:N	2.23	0.45
7:E:139:GLN:CB	7:E:143:GLN:OE1	2.65	0.45
11:I:20:GLY:C	11:I:22:GLY:N	2.72	0.45
12:J:36:ILE:CG1	12:J:103:VAL:HG22	2.47	0.45
12:J:54:VAL:HB	12:J:55:MET:H	1.65	0.45
15:M:104:LEU:CD1	15:M:106:TYR:CZ	2.98	0.45
17:O:5:ILE:N	17:O:5:ILE:CD1	2.80	0.45
17:O:15:SER:HA	17:O:95:ILE:CG2	2.47	0.45
17:O:33:VAL:O	17:O:33:VAL:CG2	2.64	0.45
21:S:51:LEU:HD23	21:S:65:LEU:CD1	2.41	0.45
21:S:56:VAL:CG1	21:S:57:GLU:N	2.76	0.45
23:U:49:LYS:HB3	23:U:61:TRP:CE2	2.51	0.45
23:U:52:ARG:O	23:U:53:GLU:HB3	2.17	0.45
24:V:14:PHE:O	24:V:15:ALA:C	2.57	0.45
24:V:25:LEU:HD11	24:V:47:ARG:CD	2.47	0.45
30:4:1:MET:HE3	30:4:35:ARG:HB2	1.99	0.45
30:4:3:VAL:HG21	30:4:37:GLY:O	2.17	0.45
30:4:17:VAL:HG21	30:4:26:ILE:CD1	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:4:19:ARG:HG3	30:4:19:ARG:HH11	1.82	0.45
1:X:37:C:H2'	1:X:38:G:C8	2.51	0.44
1:X:53:G:C6	1:X:54:G:N7	2.85	0.44
1:X:198:A:C5	1:X:243:G:C5	3.05	0.44
1:X:218:A:H61	1:X:232:A:H5"	1.80	0.44
1:X:395:G:C6	1:X:404:A:N6	2.85	0.44
1:X:405:C:C4	1:X:406:G:N7	2.85	0.44
1:X:719:A:H8	1:X:719:A:O5'	1.99	0.44
1:X:834:A:H62	1:X:983:G:H21	1.65	0.44
1:X:994:A:N7	1:X:995:A:C5	2.86	0.44
1:X:1004:A:C4	1:X:1005:U:H5	2.34	0.44
1:X:1332:G:C2	1:X:1347:C:C2	3.05	0.44
1:X:1373:G:O6	1:X:1385:C:C4	2.70	0.44
1:X:1484:G:H2'	1:X:1485:U:H6	1.82	0.44
1:X:1571:G:C8	1:X:1571:G:OP2	2.69	0.44
1:X:1674:C:C2	1:X:1675:C:C5	3.05	0.44
1:X:1815:G:H2'	1:X:1816:G:C8	2.36	0.44
1:X:1822:C:O5'	1:X:1822:C:C6	2.54	0.44
1:X:1825:C:H2'	1:X:1952:A:C2	2.52	0.44
1:X:1910:A:N1	1:X:1911:A:C2	2.85	0.44
1:X:2040:A:H2	26:Y:2:ALA:HB3	1.81	0.44
1:X:2052:G:C6	1:X:2422:C:N4	2.85	0.44
1:X:2235:G:N2	1:X:2254:C:C4	2.85	0.44
1:X:2273:C:P	14:L:11:LEU:HD11	2.57	0.44
1:X:2338:C:H2'	1:X:2339:A:C8	2.52	0.44
1:X:2421:C:N4	1:X:2422:C:H41	2.15	0.44
1:X:2451:G:C4	1:X:2454:C:N3	2.85	0.44
1:X:2497:A:H5"	1:X:2498:U:OP2	2.17	0.44
1:X:2629:U:C2	1:X:2630:C:C5	3.05	0.44
1:X:2740:C:O2'	1:X:2741:G:H5'	2.17	0.44
1:X:2769:C:H2'	1:X:2770:A:C8	2.51	0.44
1:X:2780:A:H2'	1:X:2781:G:H8	1.79	0.44
3:A:145:LEU:HG	3:A:146:GLU:H	1.82	0.44
3:A:200:GLU:OE2	3:A:201:HIS:O	2.35	0.44
3:A:236:GLY:O	3:A:237:GLU:CB	2.60	0.44
4:B:113:THR:HA	4:B:158:GLY:O	2.18	0.44
4:B:131:SER:C	4:B:132:LYS:HG3	2.41	0.44
5:C:136:TRP:O	5:C:137:ALA:C	2.60	0.44
6:D:49:ALA:CA	6:D:52:LYS:HB2	2.48	0.44
6:D:53:ALA:HB1	6:D:57:LEU:CD2	2.44	0.44
6:D:68:THR:O	6:D:85:VAL:HG23	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:135:GLN:HG2	6:D:152:MET:CG	2.46	0.44
7:E:121:VAL:CG1	7:E:122:THR:N	2.79	0.44
8:F:79:ILE:HG22	8:F:108:ILE:HD11	1.98	0.44
13:K:39:THR:O	13:K:42:LYS:HB2	2.17	0.44
17:O:36:LYS:HD2	17:O:54:TYR:C	2.43	0.44
19:Q:24:VAL:C	19:Q:25:TYR:CD2	2.95	0.44
19:Q:29:VAL:CG1	19:Q:78:ALA:CB	2.95	0.44
19:Q:58:VAL:HA	19:Q:59:PRO:HD2	1.66	0.44
20:R:18:LYS:HA	20:R:36:VAL:HG11	1.99	0.44
20:R:33:THR:OG1	20:R:34:GLY:N	2.50	0.44
20:R:46:VAL:O	20:R:46:VAL:HG12	2.17	0.44
24:V:4:SER:HA	24:V:7:ARG:HG3	1.99	0.44
24:V:10:GLN:O	24:V:11:ALA:C	2.58	0.44
1:X:5:A:C2	1:X:6:A:C4	3.05	0.44
1:X:201:G:O6	1:X:433:G:H5'	2.17	0.44
1:X:224:G:C6	1:X:229:G:O6	2.71	0.44
1:X:242:A:H2'	1:X:243:G:C4'	2.46	0.44
1:X:303:C:C3'	1:X:304:A:H5"	2.47	0.44
1:X:512:A:C2'	1:X:513:A:H5'	2.41	0.44
1:X:768:U:H2'	1:X:769:C:C6	2.52	0.44
1:X:930:A:H8	1:X:930:A:O5'	2.00	0.44
1:X:1270:C:H4'	5:C:77:PHE:CE1	2.52	0.44
1:X:1343:C:N3	1:X:1344:C:C5	2.85	0.44
1:X:1391:A:N7	1:X:1393:G:C5	2.85	0.44
1:X:1474:A:H4'	1:X:1475:U:O5'	2.17	0.44
1:X:1567:A:N6	1:X:1568:A:C6	2.86	0.44
1:X:1785:A:O2'	1:X:1883:A:H2'	2.17	0.44
1:X:1960:A:H2'	1:X:1961:A:H5'	2.00	0.44
1:X:2448:A:C2	1:X:2461:G:C8	3.06	0.44
1:X:2659:C:C2	1:X:2660:C:C5	3.05	0.44
1:X:2872:U:O2	1:X:2873:G:C8	2.70	0.44
2:Z:123:U:O2	2:Z:123:U:C2'	2.65	0.44
3:A:197:GLY:O	3:A:198:ASN:C	2.59	0.44
4:B:50:GLY:HA3	4:B:75:THR:HG21	1.99	0.44
4:B:68:ALA:C	4:B:70:ALA:N	2.72	0.44
6:D:4:LEU:HD12	6:D:7:LYS:HB2	1.98	0.44
6:D:78:LYS:HG2	6:D:80:ARG:HH11	1.83	0.44
7:E:6:LYS:O	7:E:7:GLN:HG3	2.17	0.44
7:E:37:TYR:CD1	7:E:37:TYR:N	2.85	0.44
7:E:90:ARG:CD	7:E:163:ARG:NH1	2.79	0.44
8:F:98:GLY:O	8:F:138:THR:HG23	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:70:PHE:CD2	16:N:64:ARG:HD3	2.53	0.44
9:G:109:GLY:C	9:G:111:LYS:H	2.25	0.44
10:H:3:MET:SD	10:H:44:TYR:CE1	3.10	0.44
12:J:137:VAL:C	12:J:138:TYR:CG	2.95	0.44
13:K:45:ARG:CD	13:K:97:ILE:HD11	2.48	0.44
16:N:39:LEU:O	16:N:42:ALA:HB3	2.17	0.44
17:O:36:LYS:O	17:O:51:ALA:CB	2.65	0.44
19:Q:3:HIS:HE1	19:Q:40:ASP:CG	2.25	0.44
26:Y:51:TYR:CA	26:Y:54:GLY:O	2.64	0.44
30:4:8:LYS:N	30:4:34:GLN:HE22	2.14	0.44
1:X:55:A:N6	1:X:69:G:C6	2.86	0.44
1:X:134:G:C2'	1:X:135:U:H5'	2.45	0.44
1:X:138:G:C2	1:X:139:A:C8	3.06	0.44
1:X:203:G:N2	1:X:204:A:H2	2.14	0.44
1:X:248:A:O5'	1:X:248:A:C8	2.68	0.44
1:X:590:C:H2'	1:X:591:G:C8	2.52	0.44
1:X:629:C:H2'	1:X:630:G:O4'	2.17	0.44
1:X:678:G:O3'	11:I:50:GLU:OE1	2.35	0.44
1:X:708:G:OP1	1:X:1393:G:O2'	2.29	0.44
1:X:720:A:H2'	1:X:721:C:C6	2.53	0.44
1:X:945:G:C6	1:X:946:U:C4	3.05	0.44
1:X:972:C:C5'	1:X:973:U:OP2	2.65	0.44
1:X:1345:G:C4	1:X:1625:A:C6	3.06	0.44
1:X:1463:A:C2'	1:X:1464:A:H5'	2.48	0.44
1:X:1574:A:H2'	1:X:1575:C:H5"	1.98	0.44
1:X:1731:C:C3'	1:X:1732:U:H5"	2.48	0.44
1:X:1809:G:H2'	1:X:1809:G:N3	2.33	0.44
1:X:1914:U:C6	1:X:1914:U:C5'	2.84	0.44
1:X:1997:A:O2'	1:X:1998:A:O4'	2.28	0.44
1:X:2031:A:H2'	1:X:2032:G:O4'	2.17	0.44
1:X:2083:G:H5'	1:X:2083:G:H8	1.82	0.44
1:X:2245:A:H4'	1:X:2246:A:C2	2.51	0.44
1:X:2468:G:C6	1:X:2469:G:C6	3.06	0.44
1:X:2596:C:O2'	1:X:2597:G:H5'	2.17	0.44
1:X:2767:C:H4'	4:B:61:LYS:HG2	2.00	0.44
1:X:2787:A:O2'	1:X:2788:C:C5'	2.64	0.44
1:X:2804:G:C4'	15:M:4:HIS:CE1	2.99	0.44
1:X:2819:G:C8	1:X:2820:C:C5	3.05	0.44
2:Z:51:G:H5'	14:L:97:HIS:CD2	2.52	0.44
2:Z:57:U:H1'	6:D:26:MET:HG2	1.98	0.44
3:A:43:ARG:C	3:A:44:ASN:OD1	2.61	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:65:ILE:HD11	3:A:88:ARG:CZ	2.47	0.44
4:B:2:LYS:HE2	4:B:84:PHE:HE1	1.82	0.44
4:B:102:ILE:HD13	4:B:172:VAL:HG23	1.99	0.44
5:C:10:ASN:O	5:C:11:GLY:O	2.35	0.44
5:C:14:THR:HG21	5:C:195:ILE:CG2	2.47	0.44
6:D:100:LEU:HG	6:D:104:ILE:CG1	2.47	0.44
6:D:124:GLY:HA2	6:D:163:ASP:CG	2.42	0.44
7:E:56:SER:O	7:E:61:HIS:HB2	2.17	0.44
7:E:98:LEU:CG	7:E:99:THR:N	2.80	0.44
10:H:7:ARG:CZ	10:H:20:MET:HE3	2.47	0.44
10:H:18:GLU:HG2	10:H:19:ILE:N	2.32	0.44
10:H:41:ASN:O	10:H:42:LYS:C	2.59	0.44
11:I:73:GLU:HG3	11:I:101:ARG:CG	2.47	0.44
11:I:121:HIS:CD2	11:I:121:HIS:N	2.84	0.44
13:K:82:GLU:O	13:K:86:LYS:CG	2.54	0.44
14:L:38:ILE:HG13	14:L:39:TYR:H	1.73	0.44
16:N:17:VAL:O	16:N:20:ARG:HB2	2.18	0.44
16:N:107:LYS:O	16:N:108:ALA:C	2.61	0.44
17:O:36:LYS:HZ1	17:O:98:ILE:H	1.66	0.44
20:R:35:LYS:HG2	20:R:36:VAL:O	2.16	0.44
22:T:30:VAL:O	22:T:31:VAL:O	2.35	0.44
22:T:31:VAL:HG11	22:T:37:LEU:CD2	2.47	0.44
1:X:211:U:C5	1:X:212:U:C5	3.05	0.44
1:X:339:U:O4	1:X:343:A:C8	2.71	0.44
1:X:343:A:H2'	1:X:345:U:OP2	2.18	0.44
1:X:388:G:C2	1:X:389:G:C8	3.05	0.44
1:X:482:A:C2'	1:X:483:A:C5'	2.93	0.44
1:X:631:G:C5'	1:X:632:A:OP1	2.60	0.44
1:X:699:G:C4'	1:X:700:C:OP2	2.66	0.44
1:X:760:U:C4	1:X:2592:U:O2	2.70	0.44
1:X:795:A:H5"	1:X:796:A:OP1	2.18	0.44
1:X:1022:A:C6	1:X:1162:A:N6	2.86	0.44
1:X:1056:U:O2	1:X:1058:G:N2	2.50	0.44
1:X:1123:G:C6	1:X:1124:U:N3	2.86	0.44
1:X:1243:G:C2	1:X:1244:U:C2	3.05	0.44
1:X:1801:C:N4	23:U:49:LYS:NZ	2.66	0.44
1:X:1811:A:O5'	3:A:161:THR:HG21	2.18	0.44
1:X:1845:A:C5	1:X:1872:A:C6	3.05	0.44
1:X:2042:A:H5"	5:C:65:GLY:HA2	1.99	0.44
1:X:2231:G:H8	1:X:2231:G:O5'	1.99	0.44
1:X:2775:U:OP2	1:X:2776:U:C5	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:30:C:N4	2:Z:58:G:H22	2.16	0.44
2:Z:63:A:C6	2:Z:64:C:N4	2.86	0.44
3:A:228:PRO:HD3	3:A:235:GLY:N	2.33	0.44
4:B:5:LEU:N	4:B:5:LEU:CD1	2.80	0.44
4:B:37:LYS:HD2	4:B:42:ASP:CG	2.41	0.44
5:C:143:ASP:OD1	5:C:143:ASP:N	2.50	0.44
6:D:72:LYS:O	6:D:73:SER:C	2.59	0.44
6:D:73:SER:CB	6:D:79:LEU:HD23	2.48	0.44
6:D:111:ILE:HB	6:D:114:PHE:CG	2.52	0.44
6:D:161:LYS:HB3	6:D:165:GLU:OE2	2.16	0.44
6:D:169:LEU:C	6:D:171:GLN:H	2.25	0.44
7:E:86:ASN:HA	7:E:131:ILE:O	2.18	0.44
7:E:127:GLU:O	7:E:127:GLU:CG	2.66	0.44
11:I:94:GLU:HA	11:I:97:ARG:NE	2.32	0.44
12:J:57:ARG:CG	12:J:57:ARG:NH1	2.72	0.44
14:L:38:ILE:HG13	14:L:40:ALA:H	1.83	0.44
16:N:19:LYS:O	16:N:20:ARG:C	2.61	0.44
16:N:40:LEU:O	16:N:43:ALA:HB3	2.18	0.44
16:N:93:LYS:HZ3	16:N:93:LYS:HB2	1.83	0.44
16:N:108:ALA:O	16:N:109:LEU:C	2.61	0.44
20:R:100:ASP:C	20:R:102:LYS:N	2.75	0.44
22:T:59:LEU:HD13	22:T:59:LEU:HA	1.72	0.44
22:T:73:GLY:O	22:T:74:LYS:CB	2.66	0.44
24:V:6:MET:O	24:V:14:PHE:HE1	2.00	0.44
25:W:38:PRO:O	25:W:39:ALA:C	2.60	0.44
26:Y:16:ARG:CD	26:Y:20:ARG:NH2	2.79	0.44
1:X:24:G:N2	1:X:527:C:C2	2.85	0.44
1:X:218:A:H1'	1:X:220:U:C6	2.52	0.44
1:X:469:G:O2'	1:X:480:G:N1	2.47	0.44
1:X:959:C:O2'	1:X:960:U:H5'	2.18	0.44
1:X:1060:C:N4	1:X:1061:A:N6	2.66	0.44
1:X:1091:C:O2	8:F:127:THR:HG23	2.18	0.44
1:X:1569:A:H2'	1:X:1571:G:N7	2.33	0.44
1:X:2033:C:C5	1:X:2034:A:C5	3.06	0.44
1:X:2320:G:N2	1:X:2353:G:H4'	2.33	0.44
1:X:2550:C:O2'	4:B:146:THR:OG1	2.13	0.44
3:A:219:PRO:O	3:A:220:HIS:O	2.35	0.44
4:B:11:MET:HA	4:B:24:THR:HA	1.98	0.44
7:E:171:LEU:HD12	7:E:171:LEU:N	2.32	0.44
9:G:55:ALA:O	9:G:58:ILE:N	2.51	0.44
9:G:169:GLN:O	9:G:170:PRO:O	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:25:LEU:HD21	10:H:71:LYS:HE2	1.99	0.44
10:H:76:ARG:NH1	10:H:113:PRO:O	2.51	0.44
11:I:134:GLU:C	11:I:136:ALA:N	2.76	0.44
12:J:28:VAL:HG11	12:J:134:LYS:O	2.18	0.44
12:J:47:GLN:HE22	12:J:127:PRO:HG3	1.82	0.44
12:J:132:MET:O	12:J:133:VAL:HG13	2.17	0.44
14:L:96:TYR:CZ	14:L:101:LYS:HG3	2.52	0.44
17:O:6:GLN:O	17:O:7:THR:HB	2.17	0.44
18:P:51:GLN:HA	18:P:54:GLU:HB2	2.00	0.44
18:P:107:ILE:C	18:P:107:ILE:CD1	2.91	0.44
21:S:94:VAL:C	21:S:121:GLN:HG3	2.42	0.44
23:U:12:ASN:O	23:U:13:LEU:O	2.35	0.44
24:V:59:GLU:HG3	24:V:59:GLU:H	1.49	0.44
26:Y:4:HIS:HB3	26:Y:5:PRO:HD3	2.00	0.44
1:X:306:G:C2	1:X:307:C:C4	3.06	0.44
1:X:338:G:H1'	20:R:10:HIS:HE1	1.83	0.44
1:X:497:C:H6	1:X:497:C:H3'	1.81	0.44
1:X:606:A:C6	1:X:607:C:C4	3.05	0.44
1:X:626:A:O4'	1:X:626:A:OP1	2.36	0.44
1:X:647:G:O6	11:I:107:LYS:HE3	2.17	0.44
1:X:746:G:O6	1:X:774:A:C8	2.71	0.44
1:X:1061:A:N1	1:X:2731:G:C6	2.86	0.44
1:X:1171:A:H1'	17:O:6:GLN:HB3	1.99	0.44
1:X:1331:G:H2'	1:X:1331:G:N3	2.32	0.44
1:X:1344:C:C4	1:X:1346:C:C2	3.05	0.44
1:X:1483:G:N2	1:X:1541:G:H1'	2.33	0.44
1:X:1528:C:OP2	1:X:1528:C:H6	2.01	0.44
1:X:2032:G:C2	1:X:2599:U:N3	2.85	0.44
1:X:2033:C:N4	1:X:2034:A:C6	2.86	0.44
1:X:2198:U:O5'	1:X:2198:U:H6	2.00	0.44
1:X:2432:A:H2'	1:X:2433:G:C8	2.52	0.44
1:X:2440:C:C2	1:X:2441:U:C5	3.06	0.44
1:X:2463:G:O2'	1:X:2464:G:H5'	2.18	0.44
1:X:2636:A:H2'	1:X:2637:C:O4'	2.18	0.44
1:X:2775:U:O5'	1:X:2777:A:OP2	2.36	0.44
1:X:2797:G:H2'	1:X:2798:A:H5"	1.99	0.44
2:Z:74:A:C2	2:Z:107:C:N4	2.86	0.44
3:A:64:ILE:HD12	3:A:64:ILE:H	1.83	0.44
3:A:86:PRO:C	3:A:88:ARG:H	2.25	0.44
3:A:142:VAL:HB	3:A:192:THR:O	2.17	0.44
3:A:175:VAL:O	3:A:182:LEU:HD23	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:3:GLN:NE2	5:C:4:ILE:N	2.65	0.44
5:C:72:ARG:HG3	5:C:77:PHE:CD2	2.53	0.44
5:C:117:LEU:HD21	5:C:187:VAL:HG22	1.98	0.44
7:E:50:LEU:CG	7:E:51:LEU:N	2.81	0.44
7:E:89:LEU:O	7:E:129:THR:HG22	2.18	0.44
9:G:45:ASP:CB	9:G:83:ILE:HD11	2.44	0.44
9:G:105:GLY:O	9:G:110:LEU:CG	2.65	0.44
10:H:104:GLU:H	10:H:104:GLU:HG2	1.18	0.44
11:I:16:ARG:HB3	11:I:17:LYS:H	1.57	0.44
11:I:52:GLY:HA3	11:I:55:ARG:HB2	2.00	0.44
11:I:134:GLU:CG	11:I:139:ARG:HA	2.47	0.44
12:J:117:GLU:OE1	12:J:120:ARG:HD3	2.17	0.44
15:M:31:ASP:O	15:M:94:VAL:HB	2.17	0.44
19:Q:25:TYR:N	19:Q:25:TYR:CD2	2.86	0.44
19:Q:58:VAL:O	19:Q:74:ASP:HA	2.17	0.44
20:R:25:LEU:HG	20:R:81:VAL:HG23	1.98	0.44
21:S:142:ASN:N	21:S:145:ASP:OD1	2.50	0.44
21:S:149:ALA:O	21:S:152:ILE:HB	2.17	0.44
22:T:10:SER:HB2	22:T:11:LYS:HE2	2.00	0.44
24:V:64:GLY:O	24:V:65:GLU:HB3	2.16	0.44
25:W:19:THR:O	25:W:20:VAL:C	2.59	0.44
26:Y:16:ARG:HD3	26:Y:20:ARG:HH22	1.82	0.44
1:X:71:A:O2'	1:X:72:A:OP1	2.27	0.44
1:X:166:G:H1	1:X:182:G:C2'	2.28	0.44
1:X:318:G:H5'	1:X:318:G:H8	1.83	0.44
1:X:441:A:N7	1:X:442:A:C5	2.86	0.44
1:X:947:C:N3	1:X:948:C:C4	2.86	0.44
1:X:957:G:H22	1:X:983:G:H1'	1.81	0.44
1:X:961:G:H2'	1:X:962:C:O4'	2.17	0.44
1:X:1153:A:O2'	1:X:1154:A:O5'	2.36	0.44
1:X:1201:G:H5"	17:O:80:TYR:CE2	2.52	0.44
1:X:1325:U:O2'	1:X:1327:C:C4	2.70	0.44
1:X:1479:G:H2'	1:X:1480:G:C8	2.53	0.44
1:X:1672:A:H3'	1:X:1673:C:C5	2.53	0.44
1:X:1811:A:O2'	1:X:1812:U:OP2	2.31	0.44
1:X:1873:A:C8	1:X:1873:A:C3'	3.00	0.44
1:X:2029:G:C2	1:X:2602:G:C2	3.05	0.44
1:X:2190:A:N3	1:X:2190:A:H2'	2.33	0.44
1:X:2691:C:O2	1:X:2692:A:C8	2.70	0.44
1:X:2775:U:H5'	1:X:2776:U:C5'	2.47	0.44
1:X:2839:G:C4	1:X:2840:U:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:11:G:OP2	14:L:16:LYS:NZ	2.44	0.44
2:Z:36:A:H5"	2:Z:37:C:OP1	2.17	0.44
5:C:97:ARG:O	5:C:100:ARG:N	2.51	0.44
6:D:52:LYS:HD3	6:D:56:GLU:OE2	2.17	0.44
6:D:136:LEU:HD23	6:D:141:ILE:CG2	2.45	0.44
7:E:20:GLN:H	7:E:20:GLN:HG3	1.43	0.44
7:E:33:LEU:CD2	7:E:35:VAL:HG13	2.46	0.44
7:E:89:LEU:HD11	7:E:95:ARG:O	2.17	0.44
9:G:153:GLY:O	9:G:154:GLU:HG3	2.17	0.44
10:H:8:LEU:HD12	10:H:8:LEU:N	2.32	0.44
10:H:46:HIS:O	10:H:47:VAL:C	2.57	0.44
10:H:118:LEU:O	10:H:119:ARG:C	2.61	0.44
11:I:11:GLY:N	11:I:14:LYS:HB2	2.28	0.44
13:K:106:ASP:OD1	13:K:106:ASP:C	2.59	0.44
14:L:10:LYS:O	14:L:14:ARG:CB	2.64	0.44
17:O:36:LYS:HZ2	17:O:98:ILE:H	1.64	0.44
21:S:19:ILE:HG22	21:S:20:ALA:O	2.18	0.44
25:W:38:PRO:HA	25:W:41:ARG:NH2	2.32	0.44
26:Y:33:CYS:HA	26:Y:34:PRO:HD3	1.71	0.44
1:X:36:G:H4'	1:X:463:C:C5	2.53	0.44
1:X:177:U:O4	1:X:225:G:N2	2.49	0.44
1:X:209:G:H3'	1:X:209:G:H8	1.83	0.44
1:X:304:A:N7	1:X:356:A:N6	2.66	0.44
1:X:633:G:H2'	1:X:634:G:C8	2.52	0.44
1:X:665:A:H2'	1:X:665:A:N3	2.33	0.44
1:X:1006:C:C2	9:G:31:THR:OG1	2.69	0.44
1:X:1086:C:C3'	1:X:1087:C:C5'	2.94	0.44
1:X:1092:U:C4'	8:F:118:ALA:HB2	2.48	0.44
1:X:1261:G:OP2	5:C:86:PRO:HB3	2.18	0.44
1:X:1337:G:OP2	18:P:105:ARG:CZ	2.65	0.44
1:X:1379:A:C5	1:X:1380:C:C4	3.06	0.44
1:X:1756:C:O2'	1:X:1757:C:H5'	2.18	0.44
1:X:1774:A:N1	1:X:2566:A:C4	2.86	0.44
1:X:2040:A:H2'	1:X:2041:A:C8	2.53	0.44
1:X:2184:C:H2'	1:X:2185:U:C6	2.53	0.44
1:X:2538:C:C2'	1:X:2539:C:H5'	2.47	0.44
1:X:2664:G:C6	1:X:2705:A:C6	3.05	0.44
1:X:2665:G:H2'	1:X:2666:U:C6	2.48	0.44
1:X:2784:A:C6	1:X:2866:A:C8	3.06	0.44
3:A:45:ASN:CG	3:A:46:ARG:N	2.75	0.44
4:B:15:TRP:CZ3	15:M:84:ALA:CB	3.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:114:GLN:N	4:B:158:GLY:O	2.43	0.44
4:B:134:TRP:CD1	4:B:134:TRP:N	2.69	0.44
5:C:130:THR:O	5:C:133:PHE:N	2.50	0.44
6:D:4:LEU:HD12	6:D:4:LEU:C	2.42	0.44
6:D:9:ASN:HA	6:D:13:ARG:HB2	2.00	0.44
7:E:137:ASP:CG	7:E:140:LEU:HG	2.42	0.44
8:F:126:ASN:HA	8:F:129:ALA:CB	2.47	0.44
9:G:127:ILE:O	9:G:130:ALA:HB3	2.18	0.44
16:N:20:ARG:NH1	17:O:83:ARG:NH2	2.65	0.44
17:O:25:LEU:CB	17:O:32:LYS:HE2	2.34	0.44
18:P:117:ILE:CG2	18:P:118:LYS:N	2.80	0.44
19:Q:10:PRO:HD3	24:V:30:PHE:CD2	2.53	0.44
19:Q:13:SER:OG	19:Q:16:ALA:HB3	2.18	0.44
19:Q:25:TYR:HH	19:Q:87:SER:HA	1.79	0.44
19:Q:58:VAL:O	19:Q:59:PRO:O	2.36	0.44
20:R:14:LEU:H	20:R:14:LEU:CD2	2.16	0.44
20:R:54:ILE:HG23	20:R:71:GLN:CA	2.48	0.44
21:S:42:ALA:CA	21:S:45:GLN:HG2	2.48	0.44
21:S:96:VAL:N	21:S:120:LEU:O	2.30	0.44
23:U:26:ALA:HB2	23:U:35:THR:CG2	2.45	0.44
23:U:75:TYR:C	23:U:77:GLY:H	2.25	0.44
24:V:4:SER:O	24:V:7:ARG:NE	2.51	0.44
30:4:27:CYS:SG	30:4:32:HIS:ND1	2.89	0.44
1:X:28:A:H1'	1:X:523:A:C2	2.52	0.44
1:X:76:C:N4	1:X:108:G:C6	2.86	0.44
1:X:457:C:O2'	1:X:458:G:H5'	2.17	0.44
1:X:492:G:O2'	1:X:517:A:N6	2.51	0.44
1:X:499:G:C2	1:X:503:G:O6	2.71	0.44
1:X:548:G:H4'	9:G:34:PRO:HG3	1.99	0.44
1:X:574:C:H5"	11:I:32:ARG:NH1	2.32	0.44
1:X:574:C:H5"	11:I:32:ARG:HH12	1.83	0.44
1:X:661:C:H2'	1:X:662:G:C8	2.53	0.44
1:X:661:C:C2	1:X:662:G:C8	3.06	0.44
1:X:677:G:H2'	1:X:678:G:C5'	2.48	0.44
1:X:1067:G:HO2'	1:X:1097:A:H8	1.64	0.44
1:X:1134:C:O2'	1:X:1135:C:H5'	2.18	0.44
1:X:1168:G:C2	1:X:1169:C:C2	3.06	0.44
1:X:1234:C:H2'	1:X:1235:C:H6	1.83	0.44
1:X:1272:G:H2'	1:X:1273:G:C8	2.53	0.44
1:X:1312:G:N7	1:X:1656:U:H5	2.16	0.44
1:X:1331:G:C6	1:X:1348:C:N4	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1502:G:H2'	1:X:1503:G:H8	1.83	0.44
1:X:1509:A:H2'	1:X:1510:A:H5'	1.99	0.44
1:X:1517:C:H5'	3:A:102:LYS:HZ1	1.83	0.44
1:X:1567:A:C5	1:X:1568:A:N7	2.86	0.44
1:X:1625:A:C2	1:X:1632:A:C4	3.06	0.44
1:X:1625:A:N3	1:X:1632:A:C4	2.86	0.44
1:X:1816:G:C2'	1:X:1817:U:H5'	2.46	0.44
1:X:1882:G:O2'	1:X:1883:A:C5'	2.61	0.44
1:X:1948:C:C5	1:X:1949:A:C8	3.05	0.44
1:X:2046:C:O2	1:X:2430:A:C2	2.70	0.44
1:X:2084:G:P	1:X:2084:G:H8	2.40	0.44
1:X:2225:G:C2'	1:X:2226:A:H8	2.05	0.44
1:X:2286:G:H21	1:X:2290:A:N6	2.16	0.44
1:X:2294:U:H4'	6:D:127:ASN:HD22	1.81	0.44
1:X:2343:C:H2'	1:X:2344:G:H5'	1.99	0.44
1:X:2495:G:C4	1:X:2548:G:N2	2.85	0.44
1:X:2527:G:C2	1:X:2528:G:C8	3.06	0.44
1:X:2832:G:N2	1:X:2835:A:OP2	2.51	0.44
3:A:37:LEU:O	3:A:62:TYR:N	2.51	0.44
3:A:96:HIS:HE1	3:A:100:GLY:CA	2.28	0.44
3:A:184:ARG:C	3:A:185:VAL:HG23	2.42	0.44
4:B:25:VAL:HA	4:B:183:LEU:HD22	2.00	0.44
4:B:25:VAL:HG21	15:M:16:ILE:HD12	2.00	0.44
4:B:36:ARG:HG2	4:B:36:ARG:NH1	2.32	0.44
4:B:163:GLU:CG	4:B:164:ARG:N	2.81	0.44
4:B:177:ALA:O	4:B:179:GLU:N	2.51	0.44
5:C:130:THR:O	5:C:134:ILE:HG12	2.17	0.44
6:D:32:GLU:HB3	6:D:157:VAL:CB	2.48	0.44
6:D:170:LEU:O	6:D:175:LEU:HD22	2.18	0.44
7:E:133:VAL:HG11	7:E:144:VAL:CG1	2.47	0.44
9:G:57:LEU:C	9:G:57:LEU:HD12	2.43	0.44
9:G:65:LYS:HB2	9:G:65:LYS:HZ2	1.82	0.44
10:H:23:ARG:NH2	10:H:24:VAL:C	2.76	0.44
14:L:37:HIS:CD2	14:L:39:TYR:HE1	2.36	0.44
15:M:65:SER:HB2	15:M:81:PHE:O	2.17	0.44
17:O:10:LYS:CD	17:O:11:GLN:NE2	2.81	0.44
19:Q:55:THR:HG22	19:Q:78:ALA:CA	2.47	0.44
24:V:9:LEU:HB3	24:V:13:ASP:HB2	2.00	0.44
30:4:1:MET:SD	30:4:35:ARG:HB2	2.58	0.44
1:X:26:G:C2	1:X:27:G:N2	2.86	0.43
1:X:115:G:N1	1:X:117:A:N6	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:713:G:H2'	1:X:714:G:O4'	2.18	0.43
1:X:789:G:O6	1:X:2055:G:OP1	2.36	0.43
1:X:812:G:C4	1:X:813:A:N7	2.86	0.43
1:X:1107:A:H2'	1:X:1108:U:H5"	1.99	0.43
1:X:1164:C:H2'	1:X:1165:G:O4'	2.18	0.43
1:X:1288:A:N6	1:X:1309:G:H4'	2.33	0.43
1:X:1345:G:C5	1:X:1625:A:C6	3.06	0.43
1:X:1440:G:H3'	1:X:1441:A:C5'	2.47	0.43
1:X:1526:U:H3'	1:X:1527:G:C8	2.52	0.43
1:X:1720:G:C2	1:X:1721:G:C4	3.05	0.43
1:X:1758:C:N3	1:X:1759:A:C8	2.86	0.43
1:X:1849:G:H8	1:X:1849:G:O5'	2.01	0.43
1:X:2302:G:H2'	1:X:2303:C:O4'	2.17	0.43
1:X:2388:G:C6	1:X:2389:G:C5	3.06	0.43
1:X:2557:G:N9	4:B:139:GLY:O	2.51	0.43
1:X:2670:C:C2	1:X:2671:C:C5	3.06	0.43
1:X:2786:G:OP1	4:B:62:PRO:HD3	2.18	0.43
2:Z:62:C:H2'	2:Z:63:A:O4'	2.18	0.43
3:A:124:GLU:HA	3:A:125:PRO:HD2	1.74	0.43
3:A:134:ARG:O	3:A:136:VAL:N	2.51	0.43
3:A:172:TYR:CD1	3:A:184:ARG:HD2	2.53	0.43
4:B:163:GLU:CG	4:B:164:ARG:H	2.30	0.43
5:C:67:ALA:O	5:C:68:ARG:HB3	2.18	0.43
5:C:167:VAL:O	5:C:168:SER:HB2	2.18	0.43
6:D:22:TYR:OH	6:D:29:PRO:HD3	2.18	0.43
7:E:57:ASP:OD1	7:E:57:ASP:N	2.51	0.43
7:E:137:ASP:O	7:E:138:LYS:C	2.61	0.43
9:G:153:GLY:C	9:G:154:GLU:HG3	2.43	0.43
9:G:157:PRO:C	9:G:159:SER:N	2.61	0.43
10:H:24:VAL:HA	10:H:51:ILE:HG22	1.99	0.43
10:H:73:VAL:HG21	10:H:123:PHE:CD1	2.53	0.43
10:H:76:ARG:NE	15:M:75:GLU:HG3	2.31	0.43
12:J:97:VAL:O	12:J:97:VAL:HG23	2.18	0.43
14:L:11:LEU:O	14:L:14:ARG:HB3	2.18	0.43
14:L:84:ILE:O	14:L:86:GLN:N	2.51	0.43
15:M:40:ARG:O	15:M:41:GLU:HG3	2.18	0.43
16:N:66:ASN:C	16:N:70:ARG:NH1	2.76	0.43
17:O:23:GLU:HG2	17:O:91:THR:HB	1.99	0.43
18:P:32:ARG:C	18:P:32:ARG:HE	2.26	0.43
18:P:80:LEU:O	18:P:84:GLU:N	2.50	0.43
18:P:91:PHE:N	18:P:91:PHE:CD1	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:91:PHE:N	18:P:91:PHE:HD1	2.16	0.43
19:Q:30:SER:HA	19:Q:31:PRO:HD3	1.86	0.43
19:Q:61:LYS:HB2	19:Q:72:ARG:NE	2.33	0.43
20:R:85:ASP:HB3	20:R:90:LYS:HZ1	1.82	0.43
1:X:107:G:C2	1:X:108:G:C8	3.06	0.43
1:X:148:C:H6	1:X:148:C:OP1	2.01	0.43
1:X:198:A:H4'	1:X:199:A:OP2	2.19	0.43
1:X:310:A:N1	5:C:162:ARG:NH2	2.65	0.43
1:X:394:U:H2'	1:X:395:G:H8	1.80	0.43
1:X:546:A:H2'	1:X:547:U:H6	1.80	0.43
1:X:583:C:C6	1:X:2038:C:H5"	2.54	0.43
1:X:810:U:H2'	1:X:811:G:C8	2.52	0.43
1:X:815:A:C4	1:X:816:U:C5	3.07	0.43
1:X:832:A:H2	1:X:953:G:N3	2.15	0.43
1:X:1124:U:C2	1:X:1125:G:C8	3.06	0.43
1:X:1255:A:H2'	1:X:1256:C:H6	1.81	0.43
1:X:1494:G:C4	1:X:1495:G:C8	3.06	0.43
1:X:1556:A:H2'	1:X:1557:G:C8	2.53	0.43
1:X:1764:A:C2'	1:X:1765:C:H5'	2.47	0.43
1:X:1790:G:N2	3:A:155:LEU:CD2	2.81	0.43
1:X:1830:C:N4	1:X:1881:U:C3'	2.78	0.43
1:X:1866:G:N2	1:X:1867:A:C2	2.86	0.43
1:X:1996:A:N6	1:X:2592:U:C5	2.86	0.43
1:X:2204:A:H5'	1:X:2205:C:O4'	2.18	0.43
1:X:2294:U:H1'	6:D:123:ASP:OD2	2.18	0.43
1:X:2343:C:H5'	22:T:56:ASP:OD2	2.18	0.43
1:X:2447:G:O2'	1:X:2448:A:C8	2.50	0.43
1:X:2722:C:O2'	1:X:2723:C:H5'	2.18	0.43
3:A:37:LEU:HB3	3:A:38:PRO:HD2	2.00	0.43
3:A:70:ARG:HH21	3:A:190:TYR:H	1.65	0.43
3:A:83:GLU:O	3:A:92:ILE:HG22	2.18	0.43
3:A:177:LEU:O	3:A:179:SER:N	2.51	0.43
4:B:4:ILE:C	4:B:5:LEU:HD12	2.43	0.43
4:B:194:GLY:HA2	15:M:2:GLN:HB3	2.00	0.43
6:D:49:ALA:HA	6:D:52:LYS:HB2	2.01	0.43
8:F:94:LYS:HE2	8:F:94:LYS:HB2	1.85	0.43
8:F:105:VAL:O	8:F:109:ALA:N	2.35	0.43
9:G:36:ASN:CG	9:G:37:ASP:N	2.75	0.43
9:G:48:GLY:CA	9:G:89:ALA:HB2	2.45	0.43
9:G:97:ASP:C	9:G:99:VAL:HG23	2.42	0.43
9:G:106:TYR:CZ	9:G:108:GLY:HA2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:G:116:ARG:C	9:G:118:ALA:N	2.74	0.43
10:H:2:ILE:CG2	10:H:6:SER:HB3	2.47	0.43
10:H:81:ILE:HD12	10:H:89:ILE:HD12	1.99	0.43
15:M:42:GLY:O	15:M:43:ASN:C	2.61	0.43
15:M:104:LEU:HA	15:M:106:TYR:CD2	2.53	0.43
16:N:37:GLN:O	16:N:40:LEU:HG	2.18	0.43
16:N:49:ASP:O	16:N:53:LYS:N	2.42	0.43
16:N:106:PHE:O	16:N:107:LYS:C	2.61	0.43
17:O:93:ILE:O	17:O:93:ILE:CG1	2.66	0.43
19:Q:62:ARG:HG3	19:Q:63:LYS:N	2.33	0.43
20:R:93:ARG:HH21	20:R:109:ALA:HA	1.84	0.43
21:S:77:ALA:HA	21:S:78:PRO:HD3	1.89	0.43
22:T:16:SER:HB3	22:T:17:ASN:H	1.60	0.43
22:T:38:VAL:HG21	22:T:79:ILE:CD1	2.48	0.43
22:T:50:GLY:C	22:T:62:LEU:HD23	2.43	0.43
22:T:53:MET:HE2	22:T:59:LEU:CD1	2.28	0.43
23:U:49:LYS:O	23:U:50:ALA:HB2	2.17	0.43
24:V:4:SER:O	24:V:8:ASN:N	2.44	0.43
25:W:1:MET:HA	25:W:55:GLU:O	2.18	0.43
30:4:18:ARG:CA	30:4:22:ARG:O	2.62	0.43
1:X:95:G:N2	1:X:96:C:C2	2.86	0.43
1:X:473:C:H3'	1:X:473:C:H6	1.82	0.43
1:X:565:A:H8	1:X:565:A:O5'	2.00	0.43
1:X:856:A:H2'	1:X:857:U:O4'	2.18	0.43
1:X:1163:C:O3'	16:N:76:TYR:HE2	2.01	0.43
1:X:1310:C:C2	1:X:1311:C:C5	3.06	0.43
1:X:1515:U:C2	1:X:1516:A:C8	3.07	0.43
1:X:1659:G:O2'	1:X:1660:G:H5'	2.19	0.43
1:X:1745:C:OP1	15:M:101:ARG:CD	2.67	0.43
1:X:1851:A:C6	1:X:1867:A:H1'	2.53	0.43
1:X:2034:A:C5	1:X:2593:A:C5	3.07	0.43
1:X:2075:U:O2'	1:X:2076:G:P	2.76	0.43
1:X:2511:G:H2'	1:X:2512:A:C8	2.53	0.43
2:Z:49:C:H2'	2:Z:50:U:H5'	1.99	0.43
2:Z:51:G:O2'	2:Z:52:G:H5'	2.18	0.43
3:A:146:GLU:HG2	3:A:148:VAL:H	1.83	0.43
3:A:147:LEU:HD21	3:A:155:LEU:HD11	1.97	0.43
3:A:212:SER:OG	3:A:213:ARG:N	2.51	0.43
5:C:156:ASN:O	5:C:157:THR:C	2.60	0.43
7:E:24:PHE:CE1	7:E:37:TYR:O	2.71	0.43
9:G:61:ARG:HE	9:G:65:LYS:NZ	2.14	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:23:ARG:HH21	10:H:24:VAL:N	2.17	0.43
10:H:116:ARG:HH11	15:M:38:LYS:NZ	2.04	0.43
11:I:106:VAL:O	11:I:107:LYS:C	2.61	0.43
13:K:10:LEU:HD12	13:K:17:ARG:CG	2.48	0.43
15:M:33:VAL:HG23	15:M:94:VAL:HG21	2.00	0.43
15:M:37:THR:CG2	15:M:38:LYS:N	2.82	0.43
19:Q:73:ASN:O	19:Q:74:ASP:HB2	2.18	0.43
22:T:37:LEU:C	22:T:38:VAL:HG23	2.44	0.43
25:W:34:VAL:O	25:W:35:SER:O	2.36	0.43
30:4:15:LYS:HB3	30:4:26:ILE:HG13	1.97	0.43
30:4:30:VAL:HG12	30:4:33:LYS:HE3	2.01	0.43
1:X:48:A:H1'	1:X:50:G:C4	2.54	0.43
1:X:75:C:H2'	1:X:76:C:C5'	2.48	0.43
1:X:78:C:H2'	1:X:79:G:O4'	2.17	0.43
1:X:155:G:H2'	1:X:156:G:O4'	2.18	0.43
1:X:199:A:O2'	1:X:201:G:O4'	2.35	0.43
1:X:205:A:H2'	1:X:206:U:H5'	2.00	0.43
1:X:317:U:C3'	1:X:318:G:C5'	2.97	0.43
1:X:491:A:H5"	20:R:74:LEU:CD1	2.43	0.43
1:X:647:G:C6	11:I:109:LEU:HD11	2.53	0.43
1:X:689:A:O2'	1:X:690:A:H5'	2.18	0.43
1:X:708:G:C2	1:X:709:A:C8	3.05	0.43
1:X:754:G:H2'	1:X:755:C:H6	1.83	0.43
1:X:873:U:O4	1:X:929:A:N7	2.52	0.43
1:X:1107:A:C2'	1:X:1108:U:H5"	2.47	0.43
1:X:1153:A:N3	1:X:1155:G:C8	2.86	0.43
1:X:1216:G:H8	1:X:1216:G:O5'	2.01	0.43
1:X:1288:A:O2'	1:X:1289:A:O5'	2.36	0.43
1:X:1479:G:H2'	1:X:1480:G:H8	1.83	0.43
1:X:1791:C:HO2'	1:X:1792:C:P	2.41	0.43
1:X:1830:C:H41	1:X:1882:G:P	2.41	0.43
1:X:1926:U:H4'	1:X:1927:U:C3'	2.34	0.43
1:X:2015:G:O5'	1:X:2015:G:H8	2.02	0.43
1:X:2289:A:C2	6:D:75:SER:HB2	2.54	0.43
1:X:2364:C:H2'	1:X:2365:U:C6	2.54	0.43
1:X:2384:G:N2	1:X:2390:A:N7	2.66	0.43
1:X:2590:U:O2	1:X:2590:U:H2'	2.16	0.43
1:X:2737:A:N3	1:X:2737:A:C2'	2.78	0.43
1:X:2786:G:OP1	4:B:62:PRO:CD	2.67	0.43
1:X:2787:A:C4	1:X:2788:C:C5	3.06	0.43
3:A:120:GLY:O	3:A:123:ALA:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:158:SER:O	3:A:159:ALA:HB3	2.17	0.43
4:B:116:VAL:HG22	4:B:136:ARG:HG2	1.98	0.43
5:C:108:ILE:HG12	5:C:108:ILE:H	1.49	0.43
6:D:80:ARG:HD2	6:D:80:ARG:C	2.44	0.43
6:D:134:GLU:O	6:D:136:LEU:N	2.52	0.43
7:E:9:ILE:CG2	7:E:50:LEU:HB3	2.49	0.43
7:E:149:ARG:O	7:E:150:LYS:C	2.60	0.43
8:F:112:LYS:C	8:F:114:PRO:HD2	2.44	0.43
8:F:116:LEU:CG	8:F:127:THR:HG21	2.48	0.43
9:G:65:LYS:HG3	9:G:66:HIS:CD2	2.53	0.43
9:G:84:ASN:ND2	9:G:154:GLU:HB3	2.32	0.43
9:G:116:ARG:HD2	9:G:126:VAL:HG13	2.00	0.43
9:G:118:ALA:C	9:G:120:SER:N	2.67	0.43
10:H:25:LEU:HD12	10:H:25:LEU:N	2.29	0.43
11:I:32:ARG:HD3	11:I:32:ARG:C	2.42	0.43
11:I:56:LEU:C	11:I:56:LEU:CD1	2.84	0.43
12:J:39:GLU:OE2	12:J:128:ILE:HB	2.18	0.43
12:J:136:GLU:CA	12:J:138:TYR:CE2	2.98	0.43
13:K:41:ALA:O	13:K:42:LYS:C	2.61	0.43
13:K:43:GLU:OE2	13:K:44:LEU:N	2.51	0.43
14:L:91:ARG:HD2	14:L:91:ARG:N	2.24	0.43
15:M:28:ARG:HB3	15:M:28:ARG:HE	1.69	0.43
15:M:91:VAL:HG12	15:M:92:THR:N	2.33	0.43
16:N:65:ILE:HG21	16:N:80:ILE:HD11	2.00	0.43
17:O:12:TYR:HB2	17:O:39:PHE:CA	2.47	0.43
17:O:23:GLU:HG2	17:O:91:THR:HG21	1.95	0.43
21:S:1:MET:HE3	21:S:52:PHE:CB	2.48	0.43
21:S:25:ASN:ND2	21:S:28:ASN:ND2	2.66	0.43
1:X:67:G:O2'	1:X:68:C:O5'	2.36	0.43
1:X:346:C:H2'	1:X:347:C:H6	1.84	0.43
1:X:456:C:C5'	5:C:43:ALA:HB2	2.48	0.43
1:X:584:A:OP2	1:X:2038:C:N4	2.51	0.43
1:X:609:U:H1'	11:I:18:ARG:NH2	2.33	0.43
1:X:689:A:H2	1:X:815:A:H61	1.56	0.43
1:X:706:A:H2'	1:X:707:U:O4'	2.19	0.43
1:X:754:G:C4	1:X:755:C:C5	3.07	0.43
1:X:981:C:O2'	1:X:982:C:H5'	2.19	0.43
1:X:1087:C:H4'	8:F:94:LYS:HE3	2.01	0.43
1:X:1142:G:O5'	9:G:107:GLN:HB3	2.19	0.43
1:X:1153:A:H3'	1:X:1153:A:OP2	2.19	0.43
1:X:1165:G:H8	1:X:1165:G:O5'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1260:A:C6	1:X:1262:U:C2	3.07	0.43
1:X:1288:A:H4'	1:X:1289:A:OP1	2.18	0.43
1:X:1492:A:C6	1:X:1531:C:C5	3.06	0.43
1:X:1585:A:N6	1:X:1586:A:C6	2.86	0.43
1:X:1644:G:H2'	1:X:1645:U:C6	2.52	0.43
1:X:1687:C:OP2	1:X:2529:G:OP1	2.36	0.43
1:X:1949:A:N3	1:X:2572:U:O4'	2.50	0.43
1:X:2332:G:H1'	22:T:33:ALA:O	2.18	0.43
1:X:2607:C:H1'	1:X:2761:A:N3	2.33	0.43
1:X:2776:U:H6	1:X:2776:U:H5"	1.83	0.43
1:X:2855:C:O2'	13:K:90:ARG:HD3	2.18	0.43
2:Z:47:A:H8	6:D:92:ARG:NE	2.17	0.43
3:A:36:ALA:O	3:A:37:LEU:HD23	2.19	0.43
3:A:137:PRO:HB2	3:A:140:ALA:HB2	2.01	0.43
5:C:23:ASN:O	5:C:24:SER:C	2.60	0.43
6:D:34:ILE:HD12	6:D:96:MET:HB2	2.00	0.43
6:D:85:VAL:CG2	6:D:86:GLY:H	2.24	0.43
6:D:136:LEU:O	6:D:137:ILE:HG12	2.18	0.43
6:D:137:ILE:HG13	6:D:138:PHE:CD1	2.53	0.43
8:F:81:LYS:HZ2	8:F:84:GLY:HA2	1.84	0.43
8:F:92:PRO:O	8:F:93:ASN:CB	2.67	0.43
9:G:51:LEU:O	9:G:54:LEU:HB3	2.19	0.43
11:I:84:GLU:OE2	11:I:89:ASP:OD1	2.36	0.43
12:J:27:TYR:O	12:J:28:VAL:C	2.61	0.43
12:J:119:PHE:HE1	12:J:132:MET:HG3	1.82	0.43
12:J:121:LEU:O	12:J:124:HIS:N	2.51	0.43
12:J:136:GLU:OE1	12:J:138:TYR:HE2	2.02	0.43
14:L:37:HIS:CE1	14:L:39:TYR:CZ	3.06	0.43
15:M:4:HIS:CD2	15:M:4:HIS:N	2.86	0.43
15:M:105:TYR:C	15:M:107:LEU:N	2.75	0.43
17:O:11:GLN:NE2	17:O:11:GLN:CA	2.81	0.43
18:P:83:ASP:O	18:P:84:GLU:C	2.62	0.43
20:R:38:LEU:CD2	20:R:38:LEU:C	2.92	0.43
21:S:91:PRO:CG	21:S:92:VAL:N	2.79	0.43
21:S:159:THR:O	21:S:160:LEU:C	2.60	0.43
1:X:148:C:H2'	1:X:149:A:O4'	2.18	0.43
1:X:169:C:H2'	1:X:170:U:O4'	2.18	0.43
1:X:215:G:H2'	1:X:216:U:O4'	2.18	0.43
1:X:538:A:N3	1:X:538:A:H5"	2.33	0.43
1:X:649:G:N1	1:X:660:G:C6	2.85	0.43
1:X:688:A:C6	1:X:689:A:N6	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:712:A:C2	1:X:1650:A:H1'	2.52	0.43
1:X:776:G:H8	1:X:776:G:H3'	1.84	0.43
1:X:972:C:C4'	1:X:973:U:OP2	2.66	0.43
1:X:1153:A:C4	1:X:1155:G:N7	2.86	0.43
1:X:1219:C:H5"	11:I:7:LYS:HE2	2.01	0.43
1:X:1287:A:N1	1:X:1661:C:O2'	2.39	0.43
1:X:1467:U:H3'	1:X:1468:A:C5'	2.40	0.43
1:X:1631:C:C4	1:X:1633:C:C2	3.07	0.43
1:X:1685:A:C6	1:X:1976:U:C6	3.06	0.43
1:X:1963:G:O3'	1:X:1965:U:OP2	2.37	0.43
1:X:2024:U:H2'	1:X:2025:A:O4'	2.19	0.43
1:X:2043:A:O2'	1:X:2044:G:P	2.76	0.43
1:X:2320:G:H2'	1:X:2321:C:H6	1.84	0.43
1:X:2445:C:OP1	30:4:5:SER:N	2.50	0.43
1:X:2490:U:H1'	4:B:139:GLY:HA3	2.00	0.43
1:X:2527:G:C5	1:X:2540:A:C2	3.07	0.43
1:X:2576:G:C6	1:X:2577:A:N6	2.87	0.43
1:X:2726:U:C1'	7:E:139:GLN:NE2	2.72	0.43
2:Z:32:C:H6	2:Z:32:C:O5'	2.01	0.43
3:A:67:PHE:CD2	3:A:153:ALA:HB3	2.53	0.43
3:A:124:GLU:HG3	3:A:126:LYS:HG3	1.99	0.43
3:A:200:GLU:CD	3:A:202:LYS:HB2	2.44	0.43
4:B:66:HIS:O	4:B:67:PHE:C	2.62	0.43
4:B:128:SER:O	4:B:129:HIS:C	2.60	0.43
6:D:28:VAL:HA	6:D:29:PRO:HD3	1.95	0.43
6:D:56:GLU:C	6:D:58:ALA:N	2.76	0.43
7:E:7:GLN:HA	7:E:69:ARG:HE	1.83	0.43
7:E:9:ILE:HG13	7:E:50:LEU:CD2	2.36	0.43
8:F:93:ASN:C	8:F:94:LYS:HG3	2.44	0.43
9:G:75:ILE:HG13	9:G:140:GLN:CD	2.43	0.43
10:H:23:ARG:HH12	10:H:25:LEU:CG	2.01	0.43
10:H:27:SER:OG	10:H:121:ARG:NH2	2.52	0.43
11:I:73:GLU:HG3	11:I:101:ARG:CB	2.48	0.43
12:J:135:ARG:HB3	12:J:136:GLU:H	1.52	0.43
13:K:38:LEU:HD12	13:K:38:LEU:HA	1.68	0.43
14:L:102:ALA:O	14:L:103:LEU:C	2.61	0.43
15:M:68:VAL:O	15:M:68:VAL:HG23	2.17	0.43
17:O:5:ILE:HG12	17:O:7:THR:N	2.33	0.43
21:S:67:LYS:N	21:S:82:ASP:O	2.43	0.43
23:U:23:LYS:HB3	23:U:35:THR:HG22	2.00	0.43
23:U:54:ASN:C	23:U:56:GLN:N	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:4:8:LYS:CA	30:4:9:LYS:HE3	2.48	0.43
1:X:230:C:O2'	1:X:231:G:H5'	2.18	0.43
1:X:342:G:O2'	1:X:343:A:P	2.77	0.43
1:X:488:A:H2'	1:X:489:A:O4'	2.19	0.43
1:X:615:C:H4'	1:X:669:G:H22	1.82	0.43
1:X:932:G:H2'	1:X:933:G:C8	2.54	0.43
1:X:970:A:H62	12:J:83:ARG:NH2	2.14	0.43
1:X:1076:U:H3	1:X:1084:A:H61	1.66	0.43
1:X:1120:C:N4	1:X:1121:G:N2	2.67	0.43
1:X:1182:U:H5'	1:X:1182:U:H6	1.83	0.43
1:X:1296:G:H2'	1:X:1298:G:OP2	2.19	0.43
1:X:1376:C:O2'	1:X:1377:G:H5'	2.19	0.43
1:X:1439:G:O5'	1:X:1439:G:H8	2.02	0.43
1:X:1469:U:OP2	1:X:1471:G:OP2	2.37	0.43
1:X:1930:C:H2'	1:X:1931:G:H8	1.83	0.43
1:X:1935:A:C5	1:X:1936:A:C6	3.06	0.43
1:X:2198:U:C6	1:X:2199:C:H1'	2.53	0.43
1:X:2737:A:OP2	30:4:19:ARG:CA	2.63	0.43
1:X:2776:U:H3'	1:X:2776:U:H6	1.83	0.43
4:B:19:ARG:NE	4:B:21:ILE:HD11	2.28	0.43
5:C:30:VAL:HA	5:C:95:LEU:HD11	2.00	0.43
5:C:64:THR:O	5:C:65:GLY:O	2.36	0.43
6:D:19:GLN:HB3	6:D:20:PHE:CD1	2.53	0.43
6:D:108:LEU:CB	6:D:109:PRO:HD3	2.48	0.43
6:D:119:PRO:CG	6:D:120:ASN:H	2.28	0.43
7:E:137:ASP:OD1	7:E:139:GLN:N	2.51	0.43
9:G:98:LYS:HA	9:G:98:LYS:HD2	1.64	0.43
9:G:101:THR:OG1	9:G:103:TYR:CE1	2.68	0.43
9:G:104:THR:HB	9:G:105:GLY:H	1.43	0.43
9:G:107:GLN:HA	9:G:110:LEU:CG	2.43	0.43
12:J:55:MET:O	12:J:56:SER:O	2.36	0.43
12:J:59:PHE:CE2	12:J:110:VAL:HG11	2.54	0.43
12:J:131:LYS:HD2	21:S:76:ARG:HE	1.84	0.43
13:K:15:SER:OG	13:K:16:ALA:N	2.52	0.43
14:L:33:ARG:HH22	14:L:103:LEU:N	2.13	0.43
14:L:72:GLY:C	14:L:74:ALA:N	2.76	0.43
16:N:75:ASN:O	16:N:79:PHE:CB	2.66	0.43
18:P:44:VAL:HG23	18:P:45:ILE:HD13	2.01	0.43
18:P:69:ALA:O	18:P:71:VAL:N	2.51	0.43
18:P:86:LEU:C	18:P:88:ASP:H	2.25	0.43
20:R:71:GLN:OE1	20:R:72:ARG:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:25:ASN:CG	21:S:26:LYS:N	2.77	0.43
21:S:43:PHE:O	21:S:43:PHE:CG	2.72	0.43
21:S:43:PHE:CD1	21:S:47:SER:HA	2.53	0.43
21:S:89:GLY:HA2	21:S:127:PRO:CG	2.48	0.43
25:W:5:LEU:HB2	25:W:25:LEU:CD1	2.25	0.43
25:W:17:VAL:HB	25:W:18:LYS:H	1.49	0.43
1:X:67:G:HO2'	1:X:68:C:C4'	2.32	0.43
1:X:172:A:C8	1:X:175:C:N4	2.84	0.43
1:X:198:A:C4	1:X:243:G:C8	3.06	0.43
1:X:318:G:H4'	1:X:1224:A:OP1	2.19	0.43
1:X:510:G:C5	1:X:512:A:OP2	2.72	0.43
1:X:623:G:H5'	1:X:624:A:OP2	2.18	0.43
1:X:659:G:H2'	1:X:660:G:O4'	2.19	0.43
1:X:794:A:P	3:A:218:LYS:HD2	2.58	0.43
1:X:805:G:H2'	1:X:2419:C:N3	2.33	0.43
1:X:857:U:H2'	1:X:858:G:O4'	2.18	0.43
1:X:867:G:C5	1:X:868:U:C4	3.06	0.43
1:X:1103:C:H42	1:X:1111:C:H42	1.63	0.43
1:X:1133:G:C2	1:X:1134:C:C5	3.07	0.43
1:X:1142:G:C8	1:X:2008:C:H4'	2.54	0.43
1:X:1542:G:O2'	1:X:1543:G:H5'	2.18	0.43
1:X:1564:U:H2'	1:X:1565:G:H8	1.83	0.43
1:X:1567:A:C6	1:X:1568:A:C5	3.07	0.43
1:X:1573:G:H3'	1:X:1574:A:H5"	2.01	0.43
1:X:1579:G:H2'	1:X:1580:C:H6	1.84	0.43
1:X:1641:C:H2'	1:X:1642:G:C5'	2.48	0.43
1:X:1786:C:H2'	1:X:1787:U:O4'	2.18	0.43
1:X:1815:G:O2'	1:X:1816:G:H5'	2.18	0.43
1:X:1863:U:H2'	1:X:1864:G:H8	1.82	0.43
1:X:2019:C:O2'	1:X:2020:G:H5'	2.19	0.43
1:X:2059:U:O5'	1:X:2217:G:N2	2.52	0.43
1:X:2299:A:C5'	1:X:2300:G:C4	3.02	0.43
1:X:2445:C:H5'	30:4:5:SER:HB3	1.99	0.43
1:X:2627:G:O2'	1:X:2628:C:H5'	2.19	0.43
1:X:2673:G:C2	1:X:2674:C:C2	3.07	0.43
1:X:2676:G:C2	1:X:2690:A:C2	3.07	0.43
1:X:2872:U:H2'	1:X:2873:G:C8	2.53	0.43
3:A:53:PHE:CD2	3:A:220:HIS:CD2	3.07	0.43
5:C:19:LEU:H	5:C:19:LEU:HG	1.49	0.43
5:C:134:ILE:HD13	5:C:134:ILE:H	1.83	0.43
5:C:136:TRP:CD1	5:C:140:ASN:ND2	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:35:VAL:HG11	6:D:88:LYS:CG	2.49	0.43
6:D:111:ILE:O	6:D:114:PHE:N	2.51	0.43
6:D:138:PHE:CD1	6:D:138:PHE:N	2.87	0.43
8:F:86:GLY:O	8:F:87:LYS:CB	2.66	0.43
9:G:48:GLY:O	9:G:89:ALA:HB3	2.19	0.43
9:G:55:ALA:C	9:G:57:LEU:N	2.73	0.43
9:G:84:ASN:O	9:G:152:ALA:HA	2.19	0.43
10:H:29:ILE:CB	10:H:123:PHE:HE2	2.31	0.43
10:H:109:ARG:HA	10:H:129:LEU:CD1	2.49	0.43
11:I:78:SER:H	11:I:112:GLY:HA3	1.83	0.43
12:J:117:GLU:O	12:J:119:PHE:N	2.51	0.43
13:K:20:LEU:O	13:K:22:ARG:N	2.52	0.43
14:L:33:ARG:HH21	14:L:68:ALA:HB1	1.84	0.43
14:L:75:LEU:O	14:L:78:ALA:N	2.51	0.43
17:O:47:PHE:O	17:O:48:GLY:O	2.36	0.43
18:P:80:LEU:HD21	18:P:87:GLU:CB	2.47	0.43
20:R:82:ALA:C	20:R:83:LEU:HG	2.41	0.43
21:S:103:ARG:O	21:S:139:THR:CA	2.61	0.43
21:S:140:LYS:HG3	21:S:141:MET:N	2.34	0.43
25:W:47:VAL:O	25:W:50:LEU:HD12	2.19	0.43
1:X:41:G:N1	1:X:451:A:C6	2.86	0.43
1:X:163:A:H2'	1:X:164:G:H8	1.84	0.43
1:X:171:G:C6	1:X:179:U:C2	3.07	0.43
1:X:174:A:C2	1:X:840:U:O4	2.72	0.43
1:X:338:G:O6	1:X:343:A:C8	2.72	0.43
1:X:476:G:C6	1:X:477:A:N6	2.87	0.43
1:X:556:A:H8	1:X:556:A:H3'	1.83	0.43
1:X:557:U:O2'	1:X:558:G:C8	2.70	0.43
1:X:574:C:OP2	17:O:77:GLY:N	2.52	0.43
1:X:592:G:P	16:N:10:ARG:HH12	2.40	0.43
1:X:676:G:C6	1:X:677:G:C5	3.07	0.43
1:X:697:G:C2	1:X:807:A:C2	3.07	0.43
1:X:972:C:H4'	1:X:973:U:OP2	2.19	0.43
1:X:1033:G:C6	1:X:1151:U:C5	3.06	0.43
1:X:1062:G:N2	1:X:1063:C:C2	2.87	0.43
1:X:1469:U:P	1:X:1470:G:OP2	2.76	0.43
1:X:1574:A:HO2'	1:X:1575:C:H3'	1.77	0.43
1:X:1741:G:H2'	1:X:1742:G:H5'	1.96	0.43
1:X:1767:G:C6	1:X:1768:U:C5	3.07	0.43
1:X:1770:U:H5	1:X:1775:A:C8	2.37	0.43
1:X:1804:U:O2'	3:A:45:ASN:HB3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1831:G:C6	1:X:1832:G:N7	2.87	0.43
1:X:1915:A:C2'	1:X:1916:G:H5'	2.48	0.43
1:X:1973:C:H2'	1:X:1974:U:C6	2.53	0.43
1:X:1975:G:C4	1:X:1980:A:N6	2.86	0.43
1:X:1987:G:H2'	1:X:1988:A:H5'	2.00	0.43
1:X:2034:A:N7	1:X:2593:A:N7	2.67	0.43
1:X:2170:C:H3'	1:X:2171:U:C5'	2.36	0.43
1:X:2447:G:C8	1:X:2455:A:C2	3.07	0.43
1:X:2659:C:H2'	1:X:2660:C:H6	1.84	0.43
1:X:2721:A:H2'	1:X:2722:C:H5'	2.01	0.43
1:X:2728:A:C4	1:X:2729:A:C8	3.07	0.43
3:A:76:ASN:HA	3:A:118:ASN:CA	2.42	0.43
4:B:20:ALA:C	4:B:21:ILE:HD12	2.44	0.43
4:B:202:ALA:O	4:B:203:LYS:HB3	2.18	0.43
5:C:58:MET:HE3	5:C:58:MET:CA	2.42	0.43
5:C:163:ASN:O	5:C:164:VAL:O	2.37	0.43
6:D:22:TYR:CD2	6:D:28:VAL:N	2.86	0.43
6:D:107:GLY:HA2	6:D:137:ILE:O	2.19	0.43
6:D:150:ARG:HG3	6:D:150:ARG:NH1	2.34	0.43
6:D:150:ARG:HG3	6:D:150:ARG:HH11	1.83	0.43
7:E:33:LEU:HD23	7:E:35:VAL:CG2	2.49	0.43
7:E:74:ASN:O	7:E:75:ALA:C	2.62	0.43
8:F:85:ILE:HG22	8:F:86:GLY:H	1.80	0.43
9:G:58:ILE:O	9:G:59:ALA:C	2.62	0.43
9:G:66:HIS:CA	16:N:67:ALA:HB1	2.30	0.43
10:H:8:LEU:O	10:H:18:GLU:HG3	2.18	0.43
11:I:4:HIS:HB2	11:I:5:ASP:H	1.50	0.43
11:I:32:ARG:HD2	17:O:81:ARG:HD2	2.01	0.43
11:I:56:LEU:O	11:I:56:LEU:HD22	2.18	0.43
12:J:15:ARG:HB3	12:J:16:GLY:H	1.51	0.43
12:J:19:THR:HG21	12:J:40:PRO:CB	2.48	0.43
14:L:19:THR:O	14:L:21:THR:N	2.51	0.43
14:L:66:ASP:C	14:L:68:ALA:N	2.77	0.43
16:N:60:LEU:O	16:N:61:TRP:C	2.61	0.43
19:Q:39:LYS:HE3	19:Q:50:VAL:CG1	2.49	0.43
19:Q:68:PHE:N	19:Q:68:PHE:HD2	2.07	0.43
20:R:29:HIS:CE1	20:R:51:VAL:HA	2.53	0.43
21:S:30:VAL:CG1	21:S:31:SER:H	2.31	0.43
21:S:141:MET:HE3	21:S:171:VAL:HG23	2.01	0.43
23:U:27:ASP:CA	23:U:32:ARG:NH1	2.78	0.43
26:Y:58:LEU:H	26:Y:58:LEU:CD1	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:116:A:H3'	1:X:116:A:H8	1.83	0.43
1:X:202:A:H2'	1:X:203:G:O4'	2.19	0.43
1:X:244:C:C4	1:X:245:C:C5	3.07	0.43
1:X:421:G:O5'	1:X:421:G:H8	2.02	0.43
1:X:538:A:H62	1:X:2025:A:H2'	1.82	0.43
1:X:577:U:H4'	1:X:956:A:N6	2.34	0.43
1:X:687:G:H5"	5:C:70:GLY:N	2.33	0.43
1:X:689:A:H8	1:X:2052:G:H21	1.66	0.43
1:X:791:G:C6	1:X:792:U:C2	3.06	0.43
1:X:1032:A:C8	1:X:1032:A:C3'	3.01	0.43
1:X:1162:A:C6	1:X:1163:C:C4	3.07	0.43
1:X:1228:G:O2'	1:X:1229:C:H5'	2.19	0.43
1:X:1288:A:O2'	1:X:1289:A:C4'	2.66	0.43
1:X:1358:C:C3'	1:X:1359:G:C5'	2.96	0.43
1:X:1372:A:N7	1:X:1386:A:N1	2.66	0.43
1:X:1462:C:C2	1:X:1463:A:C8	3.06	0.43
1:X:1645:U:H2'	1:X:1646:G:O4'	2.19	0.43
1:X:1692:C:C2	4:B:129:HIS:CD2	3.07	0.43
1:X:1713:G:H8	1:X:1713:G:C5'	2.32	0.43
1:X:1783:G:OP1	3:A:205:VAL:O	2.37	0.43
1:X:1982:C:OP1	1:X:2703:C:O2'	2.35	0.43
1:X:2178:U:H2'	1:X:2179:C:C6	2.41	0.43
1:X:2319:G:C2	1:X:2320:G:N7	2.87	0.43
1:X:2334:C:O2'	22:T:24:LYS:HE3	2.18	0.43
1:X:2379:G:N1	1:X:2380:U:C2	2.87	0.43
1:X:2436:U:O2	1:X:2474:G:C2	2.72	0.43
1:X:2522:G:H5'	1:X:2522:G:C8	2.53	0.43
1:X:2692:A:C5'	1:X:2693:U:OP2	2.67	0.43
1:X:2820:C:O5'	1:X:2820:C:H6	2.02	0.43
1:X:2875:C:H2'	1:X:2876:C:C5'	2.49	0.43
2:Z:57:U:H1'	6:D:26:MET:CG	2.49	0.43
3:A:33:LEU:CD2	3:A:63:ARG:NH1	2.82	0.43
3:A:83:GLU:OE1	3:A:104:TYR:CE2	2.72	0.43
4:B:94:ASP:O	4:B:95:ILE:C	2.61	0.43
6:D:38:GLU:N	6:D:87:ILE:O	2.36	0.43
9:G:146:THR:C	9:G:148:LEU:N	2.74	0.43
9:G:168:THR:O	9:G:169:GLN:C	2.60	0.43
11:I:11:GLY:C	11:I:13:ARG:H	2.27	0.43
12:J:119:PHE:O	12:J:123:GLY:N	2.51	0.43
13:K:10:LEU:CD2	13:K:14:SER:H	2.32	0.43
13:K:69:ASP:O	13:K:70:ILE:C	2.60	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:26:ASP:CG	15:M:27:PHE:N	2.76	0.43
16:N:7:GLY:O	16:N:8:ILE:HG12	2.19	0.43
17:O:33:VAL:O	17:O:33:VAL:HG23	2.17	0.43
19:Q:61:LYS:C	19:Q:62:ARG:O	2.62	0.43
21:S:64:ALA:HB2	21:S:85:MET:SD	2.59	0.43
30:4:18:ARG:HG3	30:4:23:VAL:HG13	2.01	0.43
1:X:203:G:C2	1:X:204:A:C2	3.07	0.42
1:X:222:G:H2'	1:X:223:C:H6	1.84	0.42
1:X:510:G:N2	1:X:512:A:H3'	2.34	0.42
1:X:617:U:O2	1:X:617:U:H5"	2.18	0.42
1:X:674:U:O2'	1:X:675:C:H5'	2.19	0.42
1:X:748:A:H3'	1:X:749:C:C6	2.55	0.42
1:X:764:A:C2	1:X:802:A:H2'	2.51	0.42
1:X:965:G:C6	1:X:966:A:C5	3.07	0.42
1:X:985:G:O2'	1:X:986:A:P	2.77	0.42
1:X:1017:C:C2	1:X:1148:G:N2	2.87	0.42
1:X:1142:G:HO2'	1:X:1143:A:P	2.42	0.42
1:X:1148:G:O2'	9:G:130:ALA:O	2.37	0.42
1:X:1210:C:O2'	1:X:1211:G:H5'	2.19	0.42
1:X:1211:G:C4	1:X:1212:U:H5	2.33	0.42
1:X:1219:C:C5'	11:I:7:LYS:O	2.61	0.42
1:X:1441:A:O2'	1:X:1442:C:P	2.76	0.42
1:X:1524:C:H6	1:X:1525:A:C8	2.36	0.42
1:X:1775:A:O2'	1:X:1776:A:OP2	2.33	0.42
1:X:1805:G:H21	3:A:50:THR:CG2	2.32	0.42
1:X:1861:G:H2'	1:X:1862:C:O4'	2.19	0.42
1:X:2245:A:C4'	1:X:2246:A:C2	3.02	0.42
1:X:2465:G:N2	1:X:2466:G:C4	2.87	0.42
1:X:2548:G:O2'	1:X:2549:G:H5'	2.19	0.42
1:X:2740:C:H2'	1:X:2741:G:H5'	2.00	0.42
3:A:247:VAL:O	3:A:248:THR:C	2.62	0.42
4:B:177:ALA:O	4:B:178:GLY:C	2.62	0.42
5:C:47:THR:HB	5:C:87:LYS:HZ3	1.84	0.42
5:C:111:ARG:C	5:C:113:GLU:N	2.73	0.42
7:E:7:GLN:N	7:E:7:GLN:OE1	2.52	0.42
7:E:18:ASN:O	7:E:20:GLN:HG3	2.19	0.42
7:E:107:ILE:N	7:E:107:ILE:CD1	2.81	0.42
7:E:127:GLU:HG3	7:E:129:THR:C	2.44	0.42
8:F:125:ALA:C	8:F:128:VAL:HB	2.44	0.42
9:G:67:ARG:O	9:G:70:PHE:CE1	2.72	0.42
9:G:105:GLY:C	9:G:106:TYR:O	2.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:10:PRO:HA	11:I:14:LYS:HB2	2.01	0.42
11:I:70:THR:CG2	11:I:71:THR:N	2.81	0.42
12:J:77:LYS:CG	12:J:78:LYS:N	2.82	0.42
12:J:80:ALA:O	12:J:81:GLU:HB3	2.19	0.42
17:O:9:GLY:O	17:O:10:LYS:HB3	2.19	0.42
17:O:35:LEU:O	17:O:36:LYS:CB	2.67	0.42
17:O:47:PHE:O	17:O:48:GLY:C	2.62	0.42
19:Q:55:THR:HB	19:Q:78:ALA:HA	2.01	0.42
19:Q:74:ASP:O	19:Q:75:ARG:CG	2.61	0.42
20:R:76:LEU:HD23	20:R:76:LEU:N	2.33	0.42
20:R:105:ARG:CZ	20:R:106:VAL:O	2.67	0.42
21:S:39:PHE:CE2	21:S:43:PHE:HB2	2.54	0.42
21:S:56:VAL:CG1	21:S:57:GLU:H	2.27	0.42
21:S:75:LYS:CE	21:S:75:LYS:H	2.32	0.42
22:T:42:GLY:C	22:T:57:HIS:CD2	2.97	0.42
22:T:72:LYS:O	22:T:74:LYS:O	2.37	0.42
1:X:27:G:C2'	1:X:28:A:OP2	2.67	0.42
1:X:70:A:H4'	1:X:71:A:H3'	2.01	0.42
1:X:136:A:C8	1:X:137:A:N7	2.88	0.42
1:X:199:A:HO2'	1:X:201:G:C1'	2.32	0.42
1:X:204:A:N6	1:X:2386:G:C8	2.87	0.42
1:X:302:U:C4	1:X:361:G:N2	2.87	0.42
1:X:405:C:O2'	1:X:406:G:H5'	2.18	0.42
1:X:632:A:H3'	1:X:632:A:N3	2.34	0.42
1:X:683:A:O5'	11:I:45:LYS:CA	2.66	0.42
1:X:698:A:C8	1:X:786:U:O4	2.72	0.42
1:X:793:G:C2	1:X:795:A:C2	3.07	0.42
1:X:812:G:C8	1:X:813:A:C8	3.07	0.42
1:X:919:U:H2'	1:X:920:G:C8	2.54	0.42
1:X:923:A:H2	1:X:2256:G:N3	2.17	0.42
1:X:1016:C:H5'	1:X:1023:U:OP2	2.20	0.42
1:X:1082:G:C8	1:X:1082:G:O5'	2.71	0.42
1:X:1181:C:H2'	1:X:1182:U:C5'	2.49	0.42
1:X:1223:G:C5'	1:X:1224:A:H5'	2.42	0.42
1:X:1572:C:H2'	1:X:1573:G:H5'	2.01	0.42
1:X:1759:A:N1	1:X:1760:G:C5	2.87	0.42
1:X:1825:C:H2'	1:X:1952:A:H2	1.84	0.42
1:X:1843:U:N3	1:X:1844:C:C5	2.87	0.42
1:X:1886:G:N3	1:X:1887:G:C8	2.87	0.42
1:X:1925:C:H2'	1:X:1926:U:C5	2.54	0.42
1:X:1929:U:N3	1:X:1930:C:C4	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2228:U:H2'	1:X:2231:G:OP2	2.19	0.42
1:X:2351:G:H2'	1:X:2351:G:N3	2.34	0.42
1:X:2352:A:C2	1:X:2353:G:C5	3.07	0.42
1:X:2800:C:C5	1:X:2801:A:N7	2.87	0.42
1:X:2827:G:H2'	1:X:2828:C:O4'	2.19	0.42
1:X:2860:C:H2'	1:X:2861:A:O5'	2.19	0.42
3:A:54:ILE:N	3:A:217:ARG:HB3	2.34	0.42
3:A:159:ALA:O	3:A:197:GLY:C	2.61	0.42
4:B:79:ARG:NH1	4:B:195:LEU:HD21	2.34	0.42
6:D:99:PHE:HD1	6:D:102:LYS:HD2	1.85	0.42
6:D:134:GLU:O	6:D:134:GLU:HG2	2.18	0.42
7:E:20:GLN:O	7:E:21:ASP:CB	2.67	0.42
7:E:33:LEU:HD23	7:E:35:VAL:CG1	2.49	0.42
7:E:69:ARG:NH2	7:E:69:ARG:HG2	2.34	0.42
7:E:109:TYR:C	7:E:111:HIS:N	2.76	0.42
7:E:148:VAL:O	7:E:151:VAL:HG23	2.19	0.42
9:G:71:THR:HB	16:N:64:ARG:NH1	2.34	0.42
9:G:79:PHE:CZ	9:G:147:ARG:NE	2.87	0.42
10:H:23:ARG:HH21	10:H:23:ARG:CB	2.29	0.42
12:J:68:ARG:CB	12:J:68:ARG:NH1	2.82	0.42
14:L:11:LEU:O	14:L:11:LEU:HD23	2.18	0.42
14:L:78:ALA:O	14:L:80:ALA:N	2.52	0.42
17:O:40:VAL:O	17:O:42:GLY:N	2.52	0.42
17:O:46:VAL:O	17:O:47:PHE:CD1	2.72	0.42
17:O:71:ILE:HB	17:O:84:THR:O	2.18	0.42
18:P:45:ILE:HD11	18:P:56:LEU:HB2	2.00	0.42
20:R:40:LEU:O	20:R:44:GLN:CA	2.66	0.42
21:S:25:ASN:CG	21:S:26:LYS:H	2.27	0.42
23:U:62:LEU:HD23	23:U:67:LEU:CD1	2.49	0.42
24:V:41:HIS:O	24:V:43:VAL:N	2.53	0.42
25:W:2:LYS:HE2	25:W:31:SER:HB2	2.00	0.42
1:X:64:C:H1'	19:Q:68:PHE:HD1	1.84	0.42
1:X:118:U:O2'	1:X:119:G:C5'	2.68	0.42
1:X:168:A:N3	1:X:169:C:C5	2.88	0.42
1:X:215:G:H21	1:X:216:U:H1'	1.84	0.42
1:X:313:U:C2	1:X:314:G:C8	3.08	0.42
1:X:404:A:C6	1:X:405:C:N3	2.86	0.42
1:X:554:U:O2	1:X:554:U:C2'	2.67	0.42
1:X:554:U:O3'	1:X:555:U:H4'	2.19	0.42
1:X:572:G:C6	1:X:2001:G:C5	3.07	0.42
1:X:640:C:H4'	1:X:660:G:C2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:653:G:H8	1:X:653:G:H3'	1.84	0.42
1:X:859:U:H1'	1:X:860:U:C4	2.54	0.42
1:X:1056:U:H1'	1:X:1058:G:N3	2.33	0.42
1:X:1173:G:C4	1:X:1174:G:C8	3.07	0.42
1:X:1189:G:H2'	1:X:1190:C:O4'	2.20	0.42
1:X:1198:C:O5'	1:X:1198:C:H6	2.02	0.42
1:X:2073:A:N6	1:X:2074:U:O4	2.51	0.42
1:X:2208:U:C6	1:X:2208:U:C3'	3.02	0.42
1:X:2557:G:N2	1:X:2558:C:C2	2.87	0.42
1:X:2606:G:C5	1:X:2607:C:C4	3.07	0.42
1:X:2712:G:OP2	1:X:2712:G:C8	2.73	0.42
1:X:2862:G:N2	1:X:2863:U:C2	2.87	0.42
2:Z:58:G:H4'	2:Z:59:A:H8	1.83	0.42
3:A:133:LEU:CB	3:A:187:SER:HA	2.31	0.42
4:B:11:MET:O	4:B:12:THR:HB	2.19	0.42
4:B:49:ILE:CG1	4:B:50:GLY:N	2.82	0.42
4:B:92:ASN:O	4:B:93:VAL:C	2.63	0.42
4:B:144:ARG:O	4:B:145:LYS:C	2.62	0.42
5:C:73:SER:O	5:C:74:VAL:O	2.37	0.42
5:C:158:ARG:HG3	5:C:159:ARG:H	1.83	0.42
6:D:10:ASP:N	6:D:10:ASP:OD1	2.53	0.42
6:D:16:LEU:O	6:D:17:MET:C	2.60	0.42
6:D:74:ILE:O	6:D:75:SER:C	2.62	0.42
6:D:138:PHE:O	6:D:140:GLU:N	2.47	0.42
7:E:45:GLN:NE2	7:E:48:ASP:O	2.51	0.42
9:G:32:TYR:O	9:G:33:ILE:O	2.37	0.42
10:H:26:ASN:HD22	10:H:26:ASN:HA	1.51	0.42
10:H:47:VAL:HG21	10:H:115:ALA:HB2	1.99	0.42
10:H:100:ASN:ND2	10:H:104:GLU:HG3	2.29	0.42
11:I:7:LYS:HG2	11:I:9:THR:CG2	2.49	0.42
12:J:20:GLY:CA	12:J:99:LYS:HE2	2.49	0.42
12:J:54:VAL:CG1	12:J:121:LEU:HB3	2.49	0.42
14:L:55:SER:O	14:L:56:SER:CB	2.67	0.42
16:N:24:PHE:HB2	16:N:29:SER:HB2	2.02	0.42
21:S:9:THR:HG23	21:S:10:PRO:HD2	2.01	0.42
23:U:70:LEU:CD2	23:U:75:TYR:HD1	2.31	0.42
24:V:25:LEU:HD11	24:V:47:ARG:HG2	2.01	0.42
1:X:330:C:H2'	1:X:331:U:C6	2.55	0.42
1:X:471:A:H3'	1:X:472:C:C6	2.54	0.42
1:X:649:G:N1	1:X:660:G:N1	2.66	0.42
1:X:678:G:O3'	11:I:50:GLU:CD	2.63	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:831:G:C2	1:X:1204:G:C6	3.08	0.42
1:X:861:G:C4	1:X:862:A:C8	3.07	0.42
1:X:870:C:H5'	22:T:69:PHE:CD2	2.54	0.42
1:X:872:G:H2'	1:X:928:G:O6	2.19	0.42
1:X:1018:C:C4	1:X:1019:U:H5	2.36	0.42
1:X:1210:C:C2	1:X:1211:G:C8	3.07	0.42
1:X:1248:G:C6	1:X:1249:G:N1	2.87	0.42
1:X:1356:G:N3	1:X:1397:A:H2	2.17	0.42
1:X:1359:G:C4	1:X:1617:G:N2	2.87	0.42
1:X:1361:G:O6	1:X:1615:C:N4	2.53	0.42
1:X:1503:G:C4	1:X:1504:G:N7	2.88	0.42
1:X:1690:U:H2'	1:X:1691:G:C5'	2.27	0.42
1:X:1719:G:O2'	1:X:1720:G:H5'	2.20	0.42
1:X:1730:G:C6	1:X:1731:C:C4	3.07	0.42
1:X:1774:A:C2	1:X:2566:A:C4	3.07	0.42
1:X:1791:C:C2	1:X:1810:U:O2	2.72	0.42
1:X:1918:G:C5	1:X:1945:C:C5	3.08	0.42
1:X:2010:G:C6	1:X:2011:U:C4	3.08	0.42
1:X:2070:G:H2'	1:X:2071:G:H8	1.85	0.42
1:X:2286:G:H21	1:X:2290:A:H62	1.66	0.42
1:X:2299:A:H5'	1:X:2300:G:C4	2.53	0.42
1:X:2807:U:HO2'	1:X:2808:U:P	2.42	0.42
2:Z:54:U:H2'	2:Z:55:C:O4'	2.18	0.42
3:A:166:GLN:HB2	3:A:174:ILE:HG22	2.00	0.42
4:B:133:LYS:HG3	4:B:137:ARG:CB	2.48	0.42
6:D:75:SER:HB2	6:D:79:LEU:CD1	2.48	0.42
6:D:135:GLN:HG2	6:D:152:MET:HG2	2.02	0.42
6:D:138:PHE:C	6:D:140:GLU:H	2.27	0.42
9:G:80:VAL:HG12	9:G:81:VAL:N	2.34	0.42
10:H:23:ARG:NH2	10:H:24:VAL:N	2.67	0.42
10:H:73:VAL:O	10:H:73:VAL:HG13	2.20	0.42
11:I:77:LEU:HD22	11:I:110:ALA:CA	2.50	0.42
11:I:89:ASP:OD2	11:I:120:VAL:HG13	2.19	0.42
12:J:106:GLU:OE1	12:J:106:GLU:O	2.37	0.42
13:K:55:ALA:CB	13:K:80:MET:HE1	2.49	0.42
14:L:63:ASN:HB3	14:L:66:ASP:CG	2.45	0.42
16:N:71:LEU:O	16:N:71:LEU:CG	2.67	0.42
16:N:115:ASN:C	16:N:117:ARG:N	2.77	0.42
18:P:100:GLY:N	18:P:121:THR:O	2.52	0.42
19:Q:63:LYS:HE3	19:Q:68:PHE:O	2.19	0.42
20:R:52:ASN:OD1	20:R:53:VAL:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:56:LYS:HE2	20:R:56:LYS:HB3	1.70	0.42
21:S:34:LEU:HD13	21:S:35:ASP:O	2.19	0.42
21:S:36:ARG:NE	21:S:37:LYS:H	2.05	0.42
21:S:45:GLN:NE2	21:S:45:GLN:N	2.66	0.42
21:S:91:PRO:HG3	21:S:125:PRO:HG3	2.02	0.42
21:S:114:ASP:CG	21:S:115:ILE:N	2.76	0.42
21:S:127:PRO:C	21:S:128:ARG:HG2	2.42	0.42
21:S:130:ILE:O	21:S:131:PRO:C	2.61	0.42
22:T:26:PHE:CD1	22:T:26:PHE:N	2.87	0.42
1:X:207:U:H2'	1:X:208:C:O4'	2.20	0.42
1:X:429:C:O5'	1:X:429:C:H6	2.03	0.42
1:X:456:C:C4'	5:C:43:ALA:HB2	2.50	0.42
1:X:473:C:H3'	1:X:473:C:C6	2.54	0.42
1:X:531:G:N3	1:X:532:A:C8	2.87	0.42
1:X:565:A:H2'	1:X:566:U:H6	1.84	0.42
1:X:1513:U:H4'	1:X:1514:C:OP1	2.18	0.42
1:X:1515:U:H2'	1:X:1516:A:C8	2.46	0.42
1:X:1939:U:C4	1:X:1940:C:C5	3.07	0.42
1:X:2010:G:H2'	1:X:2011:U:O4'	2.20	0.42
1:X:2043:A:O2'	1:X:2044:G:OP2	2.32	0.42
1:X:2170:C:H2'	1:X:2171:U:H4'	2.01	0.42
1:X:2177:U:O2'	1:X:2178:U:H5'	2.19	0.42
1:X:2240:C:H2'	1:X:2241:U:O5'	2.19	0.42
1:X:2299:A:H61	1:X:2312:A:C3'	2.31	0.42
1:X:2445:C:N3	1:X:2464:G:C2	2.88	0.42
1:X:2507:U:H2'	1:X:2509:A:O5'	2.18	0.42
1:X:2726:U:C1'	7:E:139:GLN:HE21	2.33	0.42
1:X:2759:U:H4'	1:X:2760:G:C5'	2.35	0.42
3:A:88:ARG:O	3:A:89:SER:OG	2.36	0.42
3:A:165:VAL:CG1	3:A:166:GLN:H	2.27	0.42
4:B:188:ILE:HD12	4:B:188:ILE:N	2.34	0.42
5:C:45:THR:HB	5:C:86:PRO:HD2	2.01	0.42
5:C:112:GLN:OE1	5:C:116:LYS:CD	2.58	0.42
5:C:134:ILE:O	5:C:137:ALA:HB3	2.19	0.42
6:D:9:ASN:HB2	6:D:10:ASP:OD1	2.19	0.42
6:D:53:ALA:O	6:D:56:GLU:HB2	2.19	0.42
6:D:66:ILE:O	6:D:66:ILE:CG2	2.67	0.42
7:E:33:LEU:HD23	7:E:35:VAL:HG13	2.01	0.42
7:E:97:LYS:C	7:E:104:GLU:HB3	2.45	0.42
9:G:146:THR:O	9:G:147:ARG:C	2.63	0.42
10:H:81:ILE:HD11	10:H:83:ARG:HG2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:127:VAL:HG12	10:H:128:SER:N	2.35	0.42
11:I:72:TYR:CD2	11:I:107:LYS:HB2	2.55	0.42
11:I:89:ASP:O	11:I:94:GLU:OE1	2.38	0.42
11:I:92:THR:O	11:I:94:GLU:N	2.52	0.42
12:J:36:ILE:HG22	12:J:37:ALA:O	2.19	0.42
12:J:42:TRP:CE3	12:J:95:VAL:HG21	2.55	0.42
13:K:84:ALA:O	13:K:85:PRO:C	2.63	0.42
16:N:65:ILE:HD13	16:N:95:LEU:HD23	2.01	0.42
19:Q:36:THR:O	19:Q:37:GLU:C	2.61	0.42
20:R:81:VAL:HG11	20:R:90:LYS:H	1.85	0.42
21:S:73:LYS:O	21:S:74:ARG:C	2.62	0.42
21:S:146:HIS:HA	21:S:170:SER:HB2	2.00	0.42
22:T:31:VAL:HB	22:T:32:LYS:H	1.63	0.42
22:T:34:GLY:HA2	22:T:61:ALA:O	2.20	0.42
25:W:34:VAL:CG2	25:W:40:VAL:HG13	2.49	0.42
30:4:1:MET:SD	30:4:35:ARG:CB	3.08	0.42
1:X:13:A:N3	1:X:15:G:C6	2.87	0.42
1:X:59:G:O6	1:X:62:U:C2	2.72	0.42
1:X:75:C:H2'	1:X:76:C:H5"	2.02	0.42
1:X:75:C:C2'	1:X:76:C:H5"	2.49	0.42
1:X:202:A:O2'	1:X:234:C:H4'	2.19	0.42
1:X:228:A:C5'	11:I:53:ARG:HG2	2.43	0.42
1:X:540:G:C6	1:X:2005:U:H5"	2.55	0.42
1:X:1247:U:O4	1:X:1248:G:N1	2.53	0.42
1:X:1279:G:C8	1:X:1279:G:H3'	2.54	0.42
1:X:1343:C:O2	1:X:1343:C:C2'	2.68	0.42
1:X:1501:C:O2'	1:X:1502:G:H5'	2.19	0.42
1:X:1741:G:C2	1:X:1742:G:C8	3.07	0.42
1:X:1744:G:C6	1:X:1747:G:C2	3.07	0.42
1:X:1807:A:O2'	1:X:1808:C:H4'	2.20	0.42
1:X:1823:G:C6	1:X:1824:C:N4	2.88	0.42
1:X:2015:G:HO2'	1:X:2016:A:P	2.42	0.42
1:X:2086:U:H2'	1:X:2087:U:C6	2.55	0.42
1:X:2225:G:N2	1:X:2405:A:O2'	2.52	0.42
1:X:2484:G:O6	1:X:2555:G:H2'	2.20	0.42
1:X:2661:G:H2'	1:X:2662:C:H6	1.85	0.42
1:X:2775:U:OP2	1:X:2776:U:H5	2.03	0.42
1:X:2863:U:H2'	1:X:2864:C:H6	1.84	0.42
2:Z:8:C:H2'	2:Z:9:G:C8	2.54	0.42
3:A:46:ARG:O	3:A:46:ARG:CG	2.66	0.42
4:B:36:ARG:HG2	4:B:36:ARG:HH11	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:10:ASN:O	5:C:10:ASN:OD1	2.37	0.42
6:D:30:ARG:O	6:D:158:THR:HA	2.20	0.42
6:D:128:TYR:N	6:D:156:ILE:O	2.44	0.42
6:D:133:LYS:O	6:D:134:GLU:C	2.63	0.42
7:E:84:THR:C	7:E:132:ASP:OD2	2.63	0.42
9:G:100:TYR:CD1	9:G:100:TYR:O	2.72	0.42
11:I:49:PHE:O	11:I:50:GLU:HG2	2.19	0.42
11:I:76:LYS:C	11:I:79:GLN:HG2	2.44	0.42
11:I:121:HIS:CA	11:I:141:VAL:HB	2.40	0.42
13:K:11:ASN:ND2	13:K:12:ARG:HE	2.18	0.42
15:M:24:LEU:HB3	15:M:25:PRO:HD2	2.02	0.42
16:N:96:ALA:C	16:N:98:ILE:N	2.75	0.42
19:Q:40:ASP:O	19:Q:41:ALA:O	2.36	0.42
20:R:40:LEU:O	20:R:44:GLN:N	2.53	0.42
20:R:92:THR:O	20:R:95:ARG:NH2	2.53	0.42
20:R:93:ARG:N	20:R:95:ARG:NH2	2.68	0.42
21:S:66:VAL:HG13	21:S:81:VAL:HG13	2.00	0.42
21:S:127:PRO:O	21:S:129:ARG:N	2.41	0.42
1:X:32:C:N4	1:X:33:C:N4	2.67	0.42
1:X:140:G:N1	1:X:141:G:C5	2.88	0.42
1:X:201:G:C2	1:X:202:A:C5	3.08	0.42
1:X:318:G:N2	1:X:320:A:H3'	2.35	0.42
1:X:522:G:HO2'	1:X:523:A:P	2.39	0.42
1:X:824:U:O2'	1:X:1264:C:C4'	2.67	0.42
1:X:859:U:O2'	1:X:860:U:C6	2.58	0.42
1:X:885:A:H2	12:J:30:PHE:HZ	1.68	0.42
1:X:1040:A:C8	1:X:1041:G:C8	3.08	0.42
1:X:1313:U:HO2'	1:X:1314:A:P	2.42	0.42
1:X:1658:A:N7	1:X:1659:G:C4	2.88	0.42
1:X:1918:G:C6	1:X:1945:C:C5	3.08	0.42
1:X:1920:A:C5	1:X:1922:U:C5	3.08	0.42
1:X:2184:C:C4	1:X:2185:U:C4	3.07	0.42
1:X:2241:U:H5	22:T:17:ASN:ND2	2.17	0.42
1:X:2253:A:O2'	1:X:2255:G:OP1	2.31	0.42
1:X:2272:A:C6	1:X:2319:G:C6	3.07	0.42
1:X:2528:G:C2	1:X:2529:G:N7	2.87	0.42
1:X:2626:U:O5'	1:X:2626:U:H6	2.02	0.42
1:X:2724:G:N7	1:X:2735:C:H1'	2.35	0.42
1:X:2734:U:H2'	1:X:2736:U:OP2	2.20	0.42
1:X:2859:U:H5	1:X:2860:C:C4	2.37	0.42
2:Z:27:A:C2	2:Z:55:C:OP1	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:30:C:H2'	2:Z:31:A:C5'	2.49	0.42
2:Z:48:A:C5	2:Z:49:C:C4	3.07	0.42
3:A:91:ARG:HG3	3:A:198:ASN:OD1	2.19	0.42
3:A:138:VAL:C	3:A:140:ALA:N	2.76	0.42
3:A:145:LEU:CG	3:A:146:GLU:H	2.32	0.42
5:C:124:ASP:O	5:C:125:ILE:C	2.62	0.42
6:D:71:LYS:O	6:D:72:LYS:CB	2.65	0.42
6:D:142:THR:O	6:D:146:VAL:CG1	2.67	0.42
7:E:59:GLN:O	7:E:60:LYS:C	2.63	0.42
7:E:132:ASP:OD1	7:E:134:SER:N	2.52	0.42
7:E:140:LEU:N	7:E:143:GLN:OE1	2.52	0.42
8:F:94:LYS:O	8:F:95:ALA:HB2	2.19	0.42
9:G:163:PRO:O	9:G:164:GLN:C	2.61	0.42
15:M:50:PHE:CD2	15:M:51:GLU:N	2.87	0.42
15:M:72:SER:O	15:M:73:PHE:HB2	2.20	0.42
16:N:68:GLY:O	16:N:71:LEU:N	2.52	0.42
17:O:26:GLN:CG	17:O:27:GLY:N	2.83	0.42
18:P:27:VAL:HG23	18:P:125:THR:CG2	2.49	0.42
18:P:74:SER:O	18:P:74:SER:OG	2.34	0.42
20:R:22:VAL:CG1	20:R:23:ILE:N	2.83	0.42
20:R:25:LEU:HD13	20:R:79:SER:O	2.18	0.42
20:R:88:THR:C	20:R:89:GLY:O	2.61	0.42
21:S:103:ARG:O	21:S:138:VAL:HG23	2.19	0.42
22:T:42:GLY:O	22:T:57:HIS:CD2	2.73	0.42
23:U:37:ILE:O	23:U:38:THR:CG2	2.68	0.42
24:V:24:GLU:O	24:V:25:LEU:C	2.62	0.42
1:X:102:C:H2'	1:X:103:U:O4'	2.20	0.42
1:X:162:C:H2'	1:X:163:A:H8	1.84	0.42
1:X:173:A:OP1	11:I:53:ARG:NH2	2.53	0.42
1:X:350:U:O5'	1:X:350:U:C6	2.65	0.42
1:X:444:U:O2'	1:X:445:A:H5'	2.19	0.42
1:X:521:U:H5"	1:X:522:G:OP2	2.20	0.42
1:X:525:A:H2	1:X:1273:G:N3	2.18	0.42
1:X:534:U:H2'	1:X:535:U:C6	2.55	0.42
1:X:580:A:O2'	1:X:581:A:O5'	2.38	0.42
1:X:637:G:H8	1:X:637:G:O5'	2.03	0.42
1:X:678:G:H4'	11:I:50:GLU:OE1	2.19	0.42
1:X:776:G:C2	1:X:778:G:N3	2.88	0.42
1:X:797:A:C6	3:A:229:VAL:HG21	2.49	0.42
1:X:1171:A:C4	1:X:1172:U:C5	3.08	0.42
1:X:1171:A:N3	17:O:6:GLN:HG2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1208:A:C2	1:X:1209:G:C4	3.08	0.42
1:X:1217:U:O5'	1:X:1217:U:H6	2.02	0.42
1:X:1333:G:N2	1:X:1344:C:C4	2.86	0.42
1:X:1359:G:C6	1:X:1617:G:N1	2.88	0.42
1:X:1484:G:N2	1:X:1539:U:O2	2.52	0.42
1:X:1621:C:H2'	1:X:1622:G:C5'	2.49	0.42
1:X:1713:G:C4	1:X:1714:A:C8	3.08	0.42
1:X:1919:A:C2	1:X:1928:G:C8	3.08	0.42
1:X:1926:U:C1'	1:X:1928:G:H5'	2.49	0.42
1:X:2090:U:H1'	1:X:2166:G:N2	2.35	0.42
1:X:2338:C:H2'	1:X:2339:A:H8	1.85	0.42
1:X:2401:A:C2	1:X:2403:C:N3	2.87	0.42
1:X:2484:G:C2'	1:X:2485:U:H5'	2.49	0.42
1:X:2642:G:H2'	1:X:2643:G:O5'	2.20	0.42
2:Z:44:C:H1'	6:D:89:VAL:HG13	2.01	0.42
3:A:134:ARG:H	3:A:187:SER:HB2	1.83	0.42
4:B:29:GLY:C	4:B:180:ASN:ND2	2.78	0.42
4:B:51:TYR:O	4:B:52:ALA:HB3	2.20	0.42
5:C:146:GLU:N	5:C:146:GLU:CD	2.78	0.42
8:F:79:ILE:C	8:F:82:ALA:H	2.28	0.42
9:G:61:ARG:NH1	9:G:65:LYS:HE2	2.34	0.42
10:H:23:ARG:HH22	10:H:25:LEU:N	2.17	0.42
11:I:76:LYS:CB	11:I:79:GLN:HG2	2.45	0.42
11:I:88:PHE:HB3	11:I:90:ARG:HD3	1.95	0.42
11:I:103:ASN:C	11:I:104:ARG:HG3	2.44	0.42
11:I:107:LYS:HA	11:I:124:ALA:O	2.19	0.42
15:M:52:GLY:O	15:M:53:VAL:C	2.62	0.42
16:N:48:ARG:O	16:N:52:ASN:HB2	2.20	0.42
19:Q:55:THR:CB	19:Q:78:ALA:HA	2.50	0.42
21:S:74:ARG:HD3	21:S:75:LYS:HE3	2.02	0.42
21:S:113:VAL:CG1	21:S:171:VAL:HG22	2.49	0.42
23:U:54:ASN:OD1	23:U:55:GLY:N	2.52	0.42
30:4:11:CYS:SG	30:4:27:CYS:SG	3.17	0.42
1:X:15:G:C6	1:X:16:G:N7	2.88	0.42
1:X:200:A:C8	1:X:435:A:O4'	2.73	0.42
1:X:541:C:O2'	1:X:542:A:OP2	2.38	0.42
1:X:584:A:C2	1:X:585:U:C5	3.07	0.42
1:X:668:A:O2'	1:X:669:G:O4'	2.36	0.42
1:X:689:A:H2	1:X:690:A:C8	2.37	0.42
1:X:742:G:C5	3:A:208:LYS:HB3	2.54	0.42
1:X:937:C:O2'	1:X:938:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:945:G:C5	1:X:946:U:C5	3.07	0.42
1:X:1056:U:C4'	1:X:1058:G:H1'	2.48	0.42
1:X:1087:C:H4'	8:F:94:LYS:CE	2.50	0.42
1:X:1271:C:H2'	1:X:1272:G:O5'	2.19	0.42
1:X:1355:A:H2'	1:X:1357:U:OP2	2.20	0.42
1:X:1359:G:C6	1:X:1617:G:C2	3.08	0.42
1:X:1375:C:C2	1:X:1376:C:C6	3.07	0.42
1:X:1397:A:H2'	1:X:1398:G:C5'	2.49	0.42
1:X:1622:G:H4'	1:X:1624:A:C2	2.55	0.42
1:X:1713:G:C6	1:X:1714:A:C6	3.08	0.42
1:X:2355:A:N1	14:L:91:ARG:NH2	2.67	0.42
1:X:2640:G:O2'	1:X:2641:A:H5'	2.20	0.42
1:X:2826:C:O2'	1:X:2827:G:H5'	2.20	0.42
2:Z:101:A:H8	2:Z:101:A:O5'	2.02	0.42
3:A:67:PHE:CB	3:A:153:ALA:H	2.18	0.42
3:A:120:GLY:O	3:A:123:ALA:CB	2.68	0.42
4:B:14:ILE:HG22	4:B:15:TRP:N	2.35	0.42
5:C:193:LEU:O	5:C:195:ILE:N	2.42	0.42
6:D:113:ASP:O	6:D:114:PHE:C	2.63	0.42
7:E:16:THR:HB	7:E:27:LYS:O	2.19	0.42
8:F:92:PRO:O	8:F:93:ASN:HB2	2.20	0.42
8:F:139:VAL:HG12	8:F:140:GLU:H	1.85	0.42
10:H:77:THR:C	10:H:79:HIS:H	2.28	0.42
10:H:81:ILE:HG12	10:H:82:LYS:N	2.34	0.42
12:J:36:ILE:HG12	12:J:103:VAL:HG22	2.02	0.42
14:L:32:TYR:HB3	14:L:39:TYR:CD1	2.55	0.42
14:L:101:LYS:O	14:L:104:ALA:HB3	2.19	0.42
14:L:103:LEU:C	14:L:103:LEU:HD23	2.45	0.42
15:M:57:ILE:HG22	15:M:66:PHE:CB	2.50	0.42
16:N:47:TYR:C	16:N:49:ASP:N	2.77	0.42
18:P:48:LYS:O	18:P:92:VAL:HG23	2.20	0.42
18:P:107:ILE:HA	18:P:108:PRO:HD2	1.73	0.42
19:Q:34:THR:O	19:Q:36:THR:N	2.53	0.42
20:R:23:ILE:HD13	20:R:23:ILE:N	2.22	0.42
20:R:24:VAL:HG11	20:R:29:HIS:CB	2.50	0.42
20:R:48:VAL:O	20:R:50:GLY:N	2.52	0.42
1:X:51:A:C2	1:X:155:G:N3	2.88	0.42
1:X:67:G:C2	1:X:73:A:C8	3.07	0.42
1:X:91:A:H2'	1:X:92:U:C6	2.54	0.42
1:X:441:A:N7	1:X:442:A:N7	2.68	0.42
1:X:459:A:C2	1:X:466:A:H8	2.30	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:540:G:O6	1:X:2006:G:P	2.78	0.42
1:X:841:G:O6	1:X:2226:A:H1'	2.20	0.42
1:X:973:U:H4'	1:X:2475:C:O2'	2.20	0.42
1:X:1443:G:C5	1:X:1584:G:C6	3.07	0.42
1:X:1675:C:H2'	1:X:1676:U:H6	1.85	0.42
1:X:1682:A:N6	1:X:1683:G:C5	2.87	0.42
1:X:1809:G:H5"	3:A:88:ARG:NH1	2.35	0.42
1:X:1914:U:C6	1:X:1914:U:C4'	3.03	0.42
1:X:2043:A:C2	1:X:2481:G:C6	3.08	0.42
1:X:2055:G:C6	1:X:2417:U:N3	2.87	0.42
1:X:2190:A:OP1	1:X:2190:A:C4'	2.68	0.42
1:X:2266:A:C2	1:X:2325:A:N7	2.88	0.42
1:X:2387:U:O2'	1:X:2388:G:H5'	2.20	0.42
1:X:2476:A:H1'	1:X:2477:C:C5	2.28	0.42
1:X:2548:G:C2'	1:X:2549:G:H5'	2.50	0.42
1:X:2634:G:O2'	1:X:2635:U:OP2	2.31	0.42
1:X:2670:C:N3	1:X:2671:C:C5	2.88	0.42
1:X:2727:G:H4'	7:E:71:LEU:CD2	2.50	0.42
1:X:2784:A:N6	1:X:2866:A:C8	2.87	0.42
3:A:44:ASN:ND2	3:A:48:ARG:C	2.78	0.42
3:A:119:ALA:CB	3:A:130:ALA:HB3	2.40	0.42
3:A:183:ARG:HD3	3:A:184:ARG:H	1.84	0.42
4:B:31:CYS:HA	4:B:32:PRO:HD3	1.69	0.42
5:C:6:VAL:HG12	5:C:7:ILE:HD13	2.02	0.42
5:C:124:ASP:OD2	5:C:136:TRP:CE3	2.69	0.42
6:D:16:LEU:HD13	6:D:29:PRO:HD2	2.02	0.42
6:D:67:ILE:HA	6:D:87:ILE:HA	2.02	0.42
7:E:137:ASP:HB3	7:E:140:LEU:CG	2.49	0.42
8:F:100:LEU:N	8:F:138:THR:OG1	2.51	0.42
8:F:139:VAL:HG12	8:F:140:GLU:N	2.33	0.42
9:G:104:THR:C	9:G:105:GLY:O	2.63	0.42
10:H:55:VAL:O	10:H:55:VAL:CG1	2.54	0.42
14:L:33:ARG:CZ	14:L:103:LEU:CB	2.97	0.42
14:L:60:LYS:HG2	14:L:62:GLY:N	2.30	0.42
14:L:82:LYS:HB3	14:L:84:ILE:CG1	2.46	0.42
15:M:17:GLU:C	15:M:19:ASP:N	2.76	0.42
15:M:44:ARG:HH11	15:M:46:ARG:NH2	2.14	0.42
16:N:63:GLN:HA	16:N:66:ASN:HD21	1.85	0.42
18:P:59:PHE:CD1	26:Y:30:LEU:HD11	2.55	0.42
20:R:51:VAL:HG21	20:R:76:LEU:CD1	2.50	0.42
20:R:53:VAL:O	20:R:72:ARG:O	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:3:HIS:CD2	22:T:5:LYS:N	2.88	0.42
22:T:3:HIS:ND1	22:T:3:HIS:N	2.68	0.42
23:U:10:LYS:CD	23:U:11:LYS:HB2	2.48	0.42
23:U:50:ALA:CB	23:U:52:ARG:NH1	2.74	0.42
24:V:17:GLU:OE2	24:V:17:GLU:CA	2.64	0.42
25:W:38:PRO:N	25:W:41:ARG:CZ	2.83	0.42
1:X:23:G:H21	18:P:98:ASP:CG	2.27	0.41
1:X:314:G:C6	1:X:326:A:C2	3.08	0.41
1:X:349:G:P	20:R:13:LYS:NZ	2.93	0.41
1:X:404:A:H2'	1:X:405:C:O4'	2.20	0.41
1:X:454:G:N2	1:X:456:C:C2	2.88	0.41
1:X:536:A:N6	1:X:2605:C:C4'	2.83	0.41
1:X:605:G:C2	1:X:606:A:C5	3.08	0.41
1:X:609:U:H5'	11:I:18:ARG:HD3	2.01	0.41
1:X:757:U:C2'	1:X:758:G:H5'	2.50	0.41
1:X:964:A:C2'	1:X:965:G:H5'	2.50	0.41
1:X:978:U:H2'	1:X:979:A:H8	1.82	0.41
1:X:1071:U:C5'	1:X:1072:U:OP1	2.64	0.41
1:X:1158:A:H2'	1:X:1159:U:H6	1.84	0.41
1:X:1235:C:H2'	1:X:1236:G:O4'	2.20	0.41
1:X:1249:G:O2'	1:X:1250:A:O5'	2.35	0.41
1:X:1372:A:C5	1:X:1373:G:C8	3.08	0.41
1:X:1385:C:N3	1:X:1386:A:C8	2.88	0.41
1:X:1399:C:O2'	1:X:1400:A:H5'	2.20	0.41
1:X:1423:A:H2'	1:X:1424:U:H6	1.84	0.41
1:X:1617:G:N7	1:X:1618:U:C4	2.88	0.41
1:X:1969:G:C2	1:X:1970:G:C8	3.08	0.41
1:X:2438:A:N6	1:X:2473:G:C6	2.88	0.41
1:X:2628:C:O5'	1:X:2628:C:H6	2.02	0.41
1:X:2839:G:C6	1:X:2840:U:O4	2.73	0.41
1:X:2847:G:H4'	13:K:8:ARG:HH21	1.84	0.41
3:A:145:LEU:CG	3:A:146:GLU:N	2.83	0.41
4:B:181:LEU:HA	4:B:181:LEU:HD23	1.68	0.41
5:C:72:ARG:HG3	5:C:77:PHE:HE2	1.84	0.41
6:D:53:ALA:HB1	6:D:57:LEU:CG	2.50	0.41
6:D:108:LEU:HB2	6:D:109:PRO:HD3	2.02	0.41
6:D:136:LEU:O	6:D:137:ILE:HG23	2.20	0.41
6:D:152:MET:O	6:D:153:ASP:HB2	2.20	0.41
8:F:103:ASP:HB3	8:F:106:LEU:HD12	2.01	0.41
8:F:116:LEU:CD1	8:F:124:ALA:HA	2.50	0.41
11:I:89:ASP:CB	11:I:120:VAL:HA	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:66:TYR:O	12:J:106:GLU:OE2	2.37	0.41
13:K:48:VAL:O	13:K:50:GLN:N	2.53	0.41
14:L:26:ARG:NH1	14:L:88:VAL:HG22	2.35	0.41
14:L:32:TYR:O	14:L:32:TYR:CG	2.73	0.41
14:L:102:ALA:O	14:L:104:ALA:N	2.53	0.41
15:M:101:ARG:HE	15:M:101:ARG:HB3	1.09	0.41
16:N:46:GLU:O	16:N:47:TYR:C	2.62	0.41
16:N:108:ALA:C	16:N:110:VAL:N	2.76	0.41
17:O:70:TYR:CD2	17:O:83:ARG:NH1	2.88	0.41
19:Q:16:ALA:HA	19:Q:19:ALA:HB3	2.02	0.41
20:R:51:VAL:HG12	20:R:52:ASN:N	2.34	0.41
20:R:81:VAL:O	20:R:83:LEU:N	2.53	0.41
22:T:55:ARG:HG2	22:T:55:ARG:NH1	2.34	0.41
23:U:24:ALA:C	23:U:26:ALA:N	2.77	0.41
30:4:17:VAL:HG23	30:4:26:ILE:HG12	2.02	0.41
1:X:32:C:C4	1:X:33:C:N4	2.88	0.41
1:X:118:U:O2'	1:X:119:G:P	2.79	0.41
1:X:234:C:H2'	1:X:235:C:C5'	2.50	0.41
1:X:239:A:C8	1:X:240:U:C5	3.08	0.41
1:X:463:C:C2	1:X:465:C:C5	3.08	0.41
1:X:501:G:H2'	1:X:502:A:C8	2.53	0.41
1:X:556:A:OP2	1:X:556:A:C8	2.72	0.41
1:X:647:G:C5	11:I:109:LEU:HD11	2.55	0.41
1:X:668:A:OP2	1:X:668:A:H4'	2.19	0.41
1:X:670:U:H2'	1:X:671:A:H8	1.81	0.41
1:X:683:A:O2'	1:X:684:C:OP2	2.38	0.41
1:X:873:U:H3	1:X:929:A:H62	1.64	0.41
1:X:992:A:C6	1:X:2011:U:H4'	2.55	0.41
1:X:1166:A:O2'	1:X:1167:A:H5"	2.20	0.41
1:X:1231:A:C5	1:X:1232:U:C4	3.09	0.41
1:X:1476:G:C5	1:X:1477:C:C4	3.08	0.41
1:X:1484:G:H1	1:X:1539:U:H3	1.68	0.41
1:X:1699:A:C8	1:X:1748:U:C4	3.07	0.41
1:X:1874:G:C6	1:X:1875:C:N3	2.88	0.41
1:X:2056:C:C3'	1:X:2057:U:H5"	2.47	0.41
1:X:2085:G:O2'	1:X:2086:U:H5'	2.20	0.41
1:X:2264:C:C5'	1:X:2267:A:N6	2.79	0.41
1:X:2452:U:C5	1:X:2453:C:C4	3.08	0.41
1:X:2540:A:C2'	1:X:2541:U:O5'	2.68	0.41
1:X:2691:C:O2'	1:X:2692:A:P	2.78	0.41
1:X:2757:G:H1'	1:X:2759:U:H5	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2759:U:C5'	1:X:2760:G:OP1	2.58	0.41
1:X:2777:A:H2'	1:X:2777:A:N3	2.35	0.41
3:A:72:LYS:NZ	3:A:99:ASP:CG	2.79	0.41
4:B:107:THR:CG2	4:B:163:GLU:O	2.68	0.41
5:C:35:LEU:O	5:C:38:ARG:HB2	2.21	0.41
5:C:133:PHE:C	5:C:135:SER:N	2.75	0.41
5:C:145:THR:HG22	5:C:146:GLU:OE2	2.20	0.41
6:D:61:THR:HA	6:D:99:PHE:CD1	2.54	0.41
6:D:67:ILE:HG23	6:D:87:ILE:HG12	2.02	0.41
7:E:33:LEU:HD23	7:E:35:VAL:HG22	2.02	0.41
8:F:85:ILE:HG22	8:F:87:LYS:H	1.84	0.41
9:G:108:GLY:O	9:G:110:LEU:CD2	2.68	0.41
10:H:116:ARG:NE	15:M:38:LYS:HD2	2.34	0.41
11:I:20:GLY:O	11:I:21:ARG:C	2.63	0.41
14:L:63:ASN:HA	14:L:66:ASP:OD2	2.20	0.41
15:M:99:VAL:O	15:M:100:ARG:CG	2.65	0.41
17:O:39:PHE:CE2	17:O:51:ALA:HB1	2.55	0.41
19:Q:3:HIS:C	19:Q:5:ASP:N	2.75	0.41
20:R:31:GLY:O	20:R:32:GLN:C	2.62	0.41
21:S:140:LYS:HG3	21:S:141:MET:H	1.85	0.41
22:T:50:GLY:O	22:T:62:LEU:CD2	2.68	0.41
24:V:42:ARG:HD2	24:V:45:GLN:OE1	2.21	0.41
25:W:16:GLN:OE1	25:W:49:HIS:NE2	2.52	0.41
1:X:219:G:H2'	1:X:220:U:OP2	2.20	0.41
1:X:320:A:C2'	1:X:340:G:H2'	2.50	0.41
1:X:601:A:H3'	1:X:602:C:C5'	2.51	0.41
1:X:677:G:H2'	1:X:678:G:H5'	2.02	0.41
1:X:691:C:N3	1:X:692:C:C5	2.88	0.41
1:X:741:G:H4'	1:X:742:G:OP2	2.19	0.41
1:X:867:G:C6	1:X:868:U:N3	2.88	0.41
1:X:873:U:H2'	1:X:874:A:H8	1.86	0.41
1:X:1088:A:C2'	1:X:1089:C:H5'	2.50	0.41
1:X:1330:G:C4	1:X:1331:G:C8	3.07	0.41
1:X:1505:U:H3'	1:X:1505:U:C6	2.55	0.41
1:X:1517:C:H2'	1:X:1518:C:C6	2.50	0.41
1:X:1533:G:C6	1:X:1534:A:N7	2.88	0.41
1:X:1811:A:H4'	1:X:1812:U:C5'	2.50	0.41
1:X:1820:G:O2'	1:X:1821:A:C5'	2.68	0.41
1:X:1851:A:N6	1:X:1867:A:N3	2.68	0.41
1:X:2037:A:N1	1:X:2595:C:C4	2.88	0.41
1:X:2055:G:C2	1:X:2417:U:O2	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2174:G:C6	1:X:2175:A:C5	3.09	0.41
1:X:2331:A:N1	22:T:33:ALA:O	2.53	0.41
1:X:2403:C:H2'	1:X:2408:G:O2'	2.21	0.41
1:X:2526:U:C5	1:X:2545:A:C5	3.07	0.41
1:X:2557:G:N7	4:B:140:SER:CB	2.83	0.41
1:X:2644:A:C2'	1:X:2645:C:H5'	2.49	0.41
1:X:2705:A:O2'	1:X:2706:U:P	2.78	0.41
1:X:2720:A:N7	1:X:2744:A:N7	2.68	0.41
2:Z:41:A:H8	2:Z:41:A:O5'	2.04	0.41
2:Z:44:C:H2'	2:Z:45:C:O4'	2.20	0.41
3:A:62:TYR:CE1	3:A:88:ARG:NH2	2.72	0.41
3:A:163:VAL:O	3:A:163:VAL:HG13	2.19	0.41
4:B:192:ASN:CG	15:M:9:ARG:NH1	2.78	0.41
5:C:176:ASN:ND2	5:C:178:TYR:N	2.68	0.41
6:D:31:ILE:HG22	6:D:96:MET:SD	2.61	0.41
6:D:34:ILE:HG22	6:D:91:LEU:CD1	2.48	0.41
7:E:55:PRO:C	7:E:57:ASP:OD1	2.63	0.41
7:E:158:HIS:O	7:E:159:GLY:C	2.64	0.41
9:G:62:ILE:O	9:G:62:ILE:CG2	2.68	0.41
12:J:16:GLY:H	12:J:73:LYS:HZ1	1.67	0.41
13:K:65:LEU:HD23	13:K:65:LEU:HA	1.70	0.41
13:K:90:ARG:HA	13:K:91:PRO:HD3	1.72	0.41
14:L:38:ILE:HD12	14:L:39:TYR:N	2.34	0.41
15:M:6:LYS:O	15:M:7:ILE:HG12	2.20	0.41
15:M:58:ASN:OD1	15:M:58:ASN:N	2.53	0.41
17:O:23:GLU:CG	17:O:91:THR:CG2	2.92	0.41
18:P:9:ARG:HG3	18:P:13:GLN:CD	2.45	0.41
18:P:28:ALA:O	18:P:31:VAL:HG23	2.21	0.41
21:S:39:PHE:C	21:S:41:ARG:N	2.78	0.41
23:U:34:THR:HG22	23:U:35:THR:N	2.35	0.41
24:V:3:PRO:HB2	24:V:4:SER:H	1.53	0.41
24:V:31:GLN:O	24:V:35:GLY:N	2.53	0.41
25:W:12:ARG:HA	25:W:13:PRO:HD3	1.80	0.41
1:X:15:G:C5	1:X:16:G:N7	2.89	0.41
1:X:357:A:C5	1:X:358:C:H1'	2.55	0.41
1:X:441:A:C8	1:X:442:A:N7	2.88	0.41
1:X:521:U:O4	1:X:522:G:N2	2.52	0.41
1:X:579:G:C5'	1:X:994:A:C2	3.02	0.41
1:X:594:G:H2'	1:X:595:A:N7	2.34	0.41
1:X:679:C:H2'	1:X:680:U:C6	2.55	0.41
1:X:720:A:C5	1:X:721:C:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:779:U:O2'	1:X:780:U:C5'	2.65	0.41
1:X:969:U:N1	12:J:17:ARG:HD2	2.34	0.41
1:X:1022:A:C6	1:X:1162:A:C6	3.08	0.41
1:X:1049:C:C2	1:X:1129:A:C2	3.07	0.41
1:X:1091:C:O2	8:F:127:THR:HA	2.21	0.41
1:X:1355:A:C2'	1:X:1357:U:OP2	2.67	0.41
1:X:1546:C:H2'	1:X:1547:U:H6	1.86	0.41
1:X:1686:A:H5"	1:X:2529:G:OP1	2.19	0.41
1:X:1838:G:C2	1:X:1878:C:N3	2.88	0.41
1:X:1918:G:C4	1:X:1945:C:C4	3.09	0.41
1:X:1940:C:O2'	1:X:1941:C:H5'	2.21	0.41
1:X:2237:C:H5'	22:T:14:ARG:CD	2.50	0.41
1:X:2245:A:N3	1:X:2251:U:C5	2.89	0.41
1:X:2306:A:C5	1:X:2367:A:N1	2.88	0.41
1:X:2343:C:O2'	1:X:2344:G:H5'	2.20	0.41
1:X:2517:C:H2'	1:X:2518:C:H6	1.84	0.41
1:X:2602:G:H4'	1:X:2800:C:O2	2.20	0.41
1:X:2632:U:H2'	1:X:2633:A:C8	2.55	0.41
1:X:2658:A:H5'	4:B:165:VAL:HG21	2.02	0.41
3:A:46:ARG:O	3:A:46:ARG:CD	2.68	0.41
3:A:126:LYS:HE2	3:A:126:LYS:HB3	1.93	0.41
4:B:88:GLY:C	4:B:89:ASP:CG	2.89	0.41
4:B:183:LEU:HD21	15:M:16:ILE:HD13	2.02	0.41
5:C:154:ASP:HB2	5:C:157:THR:CG2	2.50	0.41
5:C:171:PRO:O	5:C:172:VAL:C	2.62	0.41
5:C:185:ARG:HG2	5:C:185:ARG:NH2	2.30	0.41
6:D:31:ILE:O	6:D:32:GLU:C	2.63	0.41
6:D:119:PRO:HG2	6:D:120:ASN:N	2.28	0.41
6:D:153:ASP:C	6:D:154:ILE:CD1	2.84	0.41
9:G:40:ASN:HB3	9:G:78:ASP:CG	2.45	0.41
10:H:89:ILE:HG22	10:H:90:ARG:N	2.35	0.41
12:J:46:ASN:O	12:J:50:ALA:N	2.53	0.41
12:J:95:VAL:HG23	12:J:96:SER:N	2.35	0.41
16:N:117:ARG:HH21	16:N:117:ARG:HG3	1.84	0.41
18:P:44:VAL:O	18:P:48:LYS:HD3	2.20	0.41
18:P:45:ILE:HG13	18:P:53:ALA:CB	2.49	0.41
18:P:73:ASN:C	18:P:75:ALA:H	2.29	0.41
19:Q:42:ILE:O	19:Q:46:PHE:HD1	2.04	0.41
19:Q:89:GLU:HB3	19:Q:90:ALA:H	1.63	0.41
20:R:60:PRO:O	20:R:65:PRO:HA	2.19	0.41
20:R:101:GLY:C	20:R:103:LYS:H	2.28	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:65:LEU:C	21:S:84:TYR:H	2.26	0.41
21:S:126:GLY:C	21:S:130:ILE:HD13	2.45	0.41
23:U:21:ARG:CA	23:U:39:LYS:HD2	2.50	0.41
23:U:54:ASN:C	23:U:54:ASN:OD1	2.63	0.41
25:W:12:ARG:CG	25:W:12:ARG:NH1	2.78	0.41
25:W:17:VAL:C	25:W:19:THR:H	2.29	0.41
25:W:27:LYS:O	25:W:30:ASP:HB2	2.19	0.41
1:X:181:A:C4	1:X:183:U:O4	2.74	0.41
1:X:197:G:H1	1:X:440:U:H3'	1.85	0.41
1:X:246:C:C4	1:X:437:G:C6	3.08	0.41
1:X:347:C:N3	1:X:348:U:C4	2.89	0.41
1:X:464:G:C6	1:X:465:C:N4	2.89	0.41
1:X:489:A:N6	1:X:491:A:C6	2.88	0.41
1:X:1018:C:O4'	9:G:134:MET:O	2.38	0.41
1:X:1023:U:H3	9:G:53:ARG:HH21	1.67	0.41
1:X:1028:G:C6	1:X:1157:G:C6	3.08	0.41
1:X:1111:C:H2'	1:X:1112:U:C6	2.56	0.41
1:X:1174:G:N2	1:X:1175:A:C4	2.88	0.41
1:X:1249:G:O2'	1:X:1250:A:P	2.78	0.41
1:X:1300:A:N7	13:K:105:GLY:HA3	2.35	0.41
1:X:1467:U:N3	1:X:1473:U:O2	2.54	0.41
1:X:1482:U:H2'	1:X:1483:G:C8	2.55	0.41
1:X:1504:G:N3	1:X:1505:U:O2	2.53	0.41
1:X:1554:G:C2	1:X:1555:A:C4	3.08	0.41
1:X:1930:C:C2	1:X:1931:G:C8	3.08	0.41
1:X:1996:A:H2'	1:X:1997:A:C5'	2.46	0.41
1:X:2036:G:H2'	1:X:2037:A:H5'	2.02	0.41
1:X:2610:G:O2'	1:X:2785:A:N1	2.52	0.41
1:X:2621:G:N2	1:X:2753:C:C2	2.89	0.41
1:X:2683:C:C5	1:X:2684:A:N7	2.88	0.41
1:X:2775:U:H5'	1:X:2776:U:H5'	2.01	0.41
2:Z:3:A:C6	2:Z:4:C:C4	3.08	0.41
2:Z:25:G:C6	2:Z:63:A:N1	2.88	0.41
2:Z:100:G:H2'	2:Z:101:A:O4'	2.19	0.41
3:A:125:PRO:C	3:A:193:ILE:HG13	2.45	0.41
4:B:6:GLY:CA	4:B:27:LEU:O	2.68	0.41
4:B:7:THR:HG23	4:B:194:GLY:O	2.21	0.41
4:B:24:THR:CG2	4:B:188:ILE:CD1	2.97	0.41
5:C:128:ALA:O	5:C:160:ALA:HB2	2.21	0.41
5:C:129:LYS:C	5:C:131:LYS:N	2.79	0.41
6:D:53:ALA:HB1	6:D:57:LEU:HD11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:177:PHE:O	6:D:178:ARG:C	2.63	0.41
7:E:42:THR:HB	7:E:53:GLU:C	2.46	0.41
8:F:112:LYS:HB3	8:F:113:MET:H	1.69	0.41
9:G:65:LYS:NZ	9:G:65:LYS:HB3	2.36	0.41
9:G:100:TYR:OH	9:G:129:HIS:CE1	2.74	0.41
11:I:54:SER:C	11:I:56:LEU:N	2.77	0.41
11:I:81:GLN:CD	11:I:115:SER:H	2.29	0.41
11:I:122:VAL:HG22	11:I:140:VAL:CG1	2.51	0.41
12:J:119:PHE:CD1	12:J:132:MET:HE3	2.56	0.41
12:J:119:PHE:CD1	12:J:132:MET:SD	3.14	0.41
12:J:123:GLY:C	12:J:125:LYS:H	2.29	0.41
14:L:104:ALA:O	14:L:105:ASP:C	2.63	0.41
17:O:36:LYS:O	17:O:51:ALA:HB1	2.19	0.41
17:O:79:GLN:OE1	17:O:79:GLN:CA	2.67	0.41
19:Q:24:VAL:CG1	19:Q:25:TYR:N	2.84	0.41
21:S:19:ILE:HD12	21:S:78:PRO:C	2.46	0.41
21:S:44:ARG:CB	21:S:45:GLN:NE2	2.81	0.41
21:S:75:LYS:HE3	21:S:75:LYS:H	1.85	0.41
23:U:12:ASN:O	23:U:13:LEU:C	2.64	0.41
24:V:17:GLU:HB3	24:V:53:LEU:HD11	2.02	0.41
24:V:48:ARG:O	24:V:48:ARG:HG2	2.17	0.41
1:X:98:U:C6	1:X:98:U:O5'	2.73	0.41
1:X:529:U:H2'	1:X:530:G:C8	2.53	0.41
1:X:540:G:O6	1:X:2006:G:OP1	2.38	0.41
1:X:742:G:C2	3:A:208:LYS:HD3	2.54	0.41
1:X:759:C:C3'	1:X:759:C:C6	3.04	0.41
1:X:958:G:C4	1:X:959:C:C5	3.09	0.41
1:X:988:G:H2'	1:X:988:G:N3	2.35	0.41
1:X:1137:A:H4'	1:X:1138:A:C5'	2.48	0.41
1:X:1285:A:O2'	1:X:1286:U:OP1	2.36	0.41
1:X:1355:A:C5	1:X:1358:C:N4	2.88	0.41
1:X:1625:A:C6	1:X:1632:A:C2	3.09	0.41
1:X:1646:G:C5	1:X:1647:U:C4	3.08	0.41
1:X:2035:G:C2	1:X:2036:G:N9	2.88	0.41
1:X:2298:U:O2'	1:X:2299:A:O4'	2.38	0.41
1:X:2404:A:O2'	1:X:2405:A:P	2.79	0.41
1:X:2561:G:N2	1:X:2562:G:H1'	2.35	0.41
1:X:2636:A:C8	1:X:2637:C:C5	3.08	0.41
3:A:79:VAL:CG2	3:A:95:LEU:HD21	2.50	0.41
3:A:211:ARG:HA	3:A:214:TRP:CG	2.54	0.41
4:B:49:ILE:CD1	4:B:49:ILE:C	2.90	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:201:ALA:O	4:B:203:LYS:N	2.54	0.41
5:C:82:VAL:HG11	5:C:85:GLY:HA3	2.02	0.41
6:D:124:GLY:O	6:D:125:ARG:HD3	2.20	0.41
7:E:54:ARG:HE	7:E:62:ARG:HG2	1.86	0.41
7:E:120:GLY:O	7:E:121:VAL:HG23	2.21	0.41
7:E:139:GLN:O	7:E:141:VAL:N	2.54	0.41
8:F:112:LYS:O	8:F:113:MET:CB	2.68	0.41
9:G:41:TRP:C	9:G:42:VAL:CG2	2.93	0.41
9:G:69:ASP:O	16:N:64:ARG:CZ	2.68	0.41
10:H:9:ASP:H	10:H:95:ALA:HA	1.85	0.41
10:H:53:ALA:O	10:H:70:VAL:N	2.37	0.41
11:I:103:ASN:CG	11:I:104:ARG:HG3	2.46	0.41
12:J:64:LYS:H	12:J:64:LYS:CD	2.26	0.41
13:K:26:THR:O	13:K:27:ALA:C	2.61	0.41
14:L:98:GLY:O	14:L:101:LYS:N	2.54	0.41
15:M:6:LYS:O	15:M:7:ILE:HD13	2.21	0.41
15:M:46:ARG:CG	15:M:47:SER:N	2.83	0.41
16:N:60:LEU:O	16:N:63:GLN:HB2	2.21	0.41
16:N:64:ARG:C	16:N:66:ASN:H	2.29	0.41
19:Q:34:THR:OG1	19:Q:37:GLU:N	2.47	0.41
19:Q:60:GLY:H	19:Q:72:ARG:HD3	1.85	0.41
20:R:58:VAL:CA	20:R:60:PRO:HD3	2.51	0.41
20:R:60:PRO:O	20:R:62:MET:N	2.53	0.41
20:R:93:ARG:NH2	20:R:109:ALA:CA	2.84	0.41
1:X:54:G:C2	1:X:55:A:C8	3.09	0.41
1:X:103:U:H6	1:X:103:U:O5'	2.03	0.41
1:X:116:A:H3'	1:X:116:A:C8	2.56	0.41
1:X:344:G:C2	1:X:345:U:C6	3.08	0.41
1:X:592:G:OP2	16:N:10:ARG:NH1	2.54	0.41
1:X:825:C:H1'	1:X:1263:G:C2	2.56	0.41
1:X:970:A:N6	12:J:83:ARG:HH21	2.17	0.41
1:X:1004:A:C4	1:X:1005:U:C5	3.08	0.41
1:X:1014:G:C6	1:X:1015:U:C4	3.09	0.41
1:X:1134:C:N3	1:X:1135:C:C5	2.89	0.41
1:X:1218:C:H1'	11:I:8:PRO:O	2.20	0.41
1:X:1273:G:H2'	1:X:1274:C:C6	2.55	0.41
1:X:1366:A:N1	1:X:1367:A:C2	2.89	0.41
1:X:1528:C:H5'	1:X:1529:C:OP2	2.21	0.41
1:X:1596:A:N6	1:X:1597:A:C6	2.89	0.41
1:X:1634:A:O2'	1:X:1635:G:OP1	2.27	0.41
1:X:1672:A:H3'	1:X:1673:C:H6	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2015:G:H2'	4:B:145:LYS:HE2	2.03	0.41
1:X:2072:C:C2	1:X:2073:A:C8	3.09	0.41
1:X:2074:U:H1'	23:U:48:LYS:CE	2.49	0.41
1:X:2077:G:N1	1:X:2179:C:C2	2.89	0.41
1:X:2222:U:H2'	1:X:2223:U:C5	2.48	0.41
1:X:2519:C:C4	1:X:2520:A:C5	3.09	0.41
1:X:2665:G:H2'	1:X:2666:U:O4'	2.20	0.41
1:X:2725:C:H2'	1:X:2726:U:C6	2.56	0.41
1:X:2821:G:C6	1:X:2846:G:C2	3.09	0.41
1:X:2826:C:C2'	1:X:2827:G:H5'	2.50	0.41
2:Z:30:C:C2'	2:Z:31:A:H5'	2.49	0.41
3:A:79:VAL:HG22	3:A:95:LEU:HD21	2.03	0.41
3:A:160:GLY:HA2	3:A:196:VAL:CB	2.50	0.41
3:A:210:GLY:HA2	3:A:213:ARG:CG	2.47	0.41
3:A:212:SER:O	3:A:214:TRP:N	2.53	0.41
6:D:4:LEU:HD12	6:D:5:LYS:N	2.35	0.41
6:D:108:LEU:HA	6:D:111:ILE:CD1	2.50	0.41
6:D:136:LEU:N	6:D:141:ILE:HG21	2.35	0.41
7:E:30:LYS:HE3	7:E:79:VAL:O	2.20	0.41
7:E:54:ARG:NE	7:E:57:ASP:OD2	2.54	0.41
8:F:77:TYR:O	8:F:81:LYS:HB2	2.21	0.41
9:G:55:ALA:O	9:G:56:THR:C	2.63	0.41
9:G:71:THR:HA	9:G:72:PRO:HD3	1.82	0.41
9:G:71:THR:CA	16:N:64:ARG:HH11	2.34	0.41
9:G:105:GLY:O	9:G:110:LEU:CD1	2.68	0.41
9:G:158:HIS:HA	9:G:161:GLN:NE2	2.36	0.41
11:I:77:LEU:C	11:I:79:GLN:N	2.77	0.41
12:J:47:GLN:HE22	12:J:127:PRO:CG	2.34	0.41
12:J:62:GLY:HA3	12:J:64:LYS:NZ	2.36	0.41
15:M:39:VAL:CG1	15:M:45:THR:HG23	2.50	0.41
15:M:99:VAL:HG22	15:M:101:ARG:HG2	2.01	0.41
16:N:42:ALA:O	16:N:43:ALA:C	2.63	0.41
18:P:36:ARG:HH22	26:Y:20:ARG:HH21	1.68	0.41
19:Q:40:ASP:HA	19:Q:43:GLN:HE21	1.85	0.41
21:S:30:VAL:HG12	21:S:31:SER:H	1.82	0.41
21:S:87:THR:O	21:S:88:TYR:CB	2.69	0.41
22:T:70:ILE:HD12	22:T:78:PHE:HB3	2.03	0.41
24:V:56:VAL:C	24:V:58:ALA:N	2.76	0.41
25:W:19:THR:C	25:W:21:GLN:N	2.76	0.41
30:4:1:MET:CE	30:4:35:ARG:HB2	2.50	0.41
1:X:200:A:C5	1:X:435:A:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:459:A:C4	1:X:484:G:C8	3.09	0.41
1:X:544:U:H2'	1:X:545:C:C6	2.56	0.41
1:X:579:G:H2'	1:X:2013:A:C6	2.56	0.41
1:X:632:A:C2'	1:X:633:G:H5'	2.44	0.41
1:X:765:C:HO2'	1:X:766:A:P	2.40	0.41
1:X:776:G:H3'	1:X:776:G:C8	2.56	0.41
1:X:785:U:H2'	1:X:786:U:H6	1.85	0.41
1:X:814:G:O6	5:C:48:ARG:HA	2.21	0.41
1:X:982:C:C4	1:X:983:G:C5	3.08	0.41
1:X:1011:A:N6	1:X:1166:A:C8	2.89	0.41
1:X:1035:G:P	1:X:1036:G:O3'	2.79	0.41
1:X:1063:C:H2'	1:X:1064:C:H5	1.82	0.41
1:X:1265:G:H1	16:N:37:GLN:NE2	2.18	0.41
1:X:1271:C:O2'	1:X:1272:G:H5'	2.21	0.41
1:X:1401:G:O2'	1:X:1402:G:H5'	2.20	0.41
1:X:1546:C:H2'	1:X:1547:U:C6	2.56	0.41
1:X:1782:A:H61	1:X:1820:G:C2'	2.34	0.41
1:X:1850:G:C6	1:X:1867:A:C4	3.09	0.41
1:X:2035:G:N2	1:X:2036:G:C1'	2.83	0.41
1:X:2306:A:C5	1:X:2367:A:C2	3.09	0.41
1:X:2329:C:O2'	1:X:2330:G:H5'	2.20	0.41
1:X:2344:G:P	22:T:55:ARG:H	2.40	0.41
1:X:2483:U:O5'	1:X:2483:U:C6	2.71	0.41
1:X:2634:G:HO2'	1:X:2643:G:H1	1.69	0.41
1:X:2661:G:C2	1:X:2662:C:N1	2.88	0.41
2:Z:25:G:C6	2:Z:63:A:C6	3.09	0.41
2:Z:75:A:N6	2:Z:76:U:C2	2.88	0.41
3:A:141:VAL:HG23	3:A:194:GLY:HA2	2.03	0.41
3:A:147:LEU:HD23	3:A:147:LEU:HA	1.72	0.41
3:A:218:LYS:N	3:A:219:PRO:CD	2.84	0.41
5:C:101:GLN:HB2	5:C:102:LEU:H	1.76	0.41
5:C:164:VAL:C	5:C:166:TRP:N	2.77	0.41
6:D:22:TYR:O	6:D:24:SER:N	2.53	0.41
6:D:92:ARG:HH21	6:D:92:ARG:HG3	1.85	0.41
7:E:24:PHE:CB	7:E:35:VAL:O	2.61	0.41
9:G:36:ASN:OD1	9:G:37:ASP:N	2.54	0.41
9:G:64:GLY:HA3	9:G:67:ARG:HE	1.86	0.41
9:G:107:GLN:C	9:G:109:GLY:H	2.23	0.41
9:G:169:GLN:CB	9:G:170:PRO:CD	2.96	0.41
11:I:66:ASN:C	11:I:66:ASN:OD1	2.64	0.41
11:I:73:GLU:CG	11:I:105:PRO:O	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:J:42:TRP:HE3	12:J:95:VAL:HG11	1.85	0.41
12:J:75:VAL:HG23	12:J:93:TYR:O	2.20	0.41
13:K:66:VAL:O	13:K:69:ASP:N	2.33	0.41
14:L:15:ARG:HD3	14:L:15:ARG:HA	1.92	0.41
14:L:45:ASP:OD1	14:L:45:ASP:N	2.54	0.41
14:L:103:LEU:HD23	14:L:103:LEU:O	2.21	0.41
15:M:22:ARG:HH11	15:M:24:LEU:HD23	1.85	0.41
16:N:66:ASN:C	16:N:70:ARG:HH12	2.29	0.41
17:O:36:LYS:CE	17:O:56:VAL:N	2.84	0.41
18:P:28:ALA:N	18:P:124:ILE:O	2.54	0.41
19:Q:47:GLY:O	19:Q:48:VAL:CB	2.68	0.41
20:R:93:ARG:NH1	20:R:108:VAL:CG2	2.77	0.41
21:S:26:LYS:HB2	21:S:26:LYS:HE3	1.85	0.41
21:S:103:ARG:HH11	21:S:108:VAL:HG22	1.84	0.41
22:T:19:LYS:O	22:T:20:TYR:CB	2.68	0.41
30:4:3:VAL:HG13	30:4:37:GLY:H	1.85	0.41
1:X:35:G:HO2'	1:X:36:G:C5'	2.28	0.41
1:X:53:G:C5	1:X:54:G:C8	3.09	0.41
1:X:205:A:N3	1:X:207:U:H1'	2.35	0.41
1:X:209:G:C8	1:X:209:G:C3'	3.04	0.41
1:X:228:A:H2'	1:X:229:G:H5'	2.03	0.41
1:X:333:A:H3'	5:C:162:ARG:NE	2.33	0.41
1:X:341:A:O2'	1:X:342:G:OP1	2.35	0.41
1:X:410:A:H2'	1:X:411:C:O4'	2.21	0.41
1:X:425:A:H3'	1:X:426:C:C5	2.55	0.41
1:X:507:A:H2'	1:X:508:G:C8	2.55	0.41
1:X:572:G:C6	1:X:2001:G:C4	3.09	0.41
1:X:609:U:C1'	11:I:18:ARG:CZ	2.99	0.41
1:X:653:G:H3'	1:X:653:G:C8	2.56	0.41
1:X:701:U:C5'	1:X:1771:A:C2	3.04	0.41
1:X:923:A:C5	12:J:12:LYS:HE3	2.56	0.41
1:X:924:C:C2	1:X:925:U:C5	3.09	0.41
1:X:942:U:P	25:W:32:ARG:HH12	2.43	0.41
1:X:966:A:C2	1:X:974:U:C2	3.08	0.41
1:X:1018:C:C4	1:X:1019:U:C5	3.09	0.41
1:X:1028:G:C6	1:X:1157:G:O6	2.73	0.41
1:X:1068:A:N3	1:X:1068:A:H2'	2.35	0.41
1:X:1188:A:H8	1:X:1188:A:O5'	2.04	0.41
1:X:1373:G:O6	1:X:1385:C:N3	2.54	0.41
1:X:1391:A:N7	1:X:1393:G:C6	2.89	0.41
1:X:1443:G:H3'	1:X:1443:G:OP2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1461:C:C2	1:X:1462:C:C5	3.09	0.41
1:X:1463:A:C6	1:X:1479:G:N1	2.89	0.41
1:X:1483:G:C4	1:X:1541:G:N2	2.89	0.41
1:X:1513:U:H3'	1:X:1513:U:P	2.61	0.41
1:X:1600:U:H5'	1:X:1601:U:OP1	2.21	0.41
1:X:1625:A:N3	1:X:1632:A:N3	2.69	0.41
1:X:1668:G:C2	1:X:1990:U:C2	3.09	0.41
1:X:1693:A:C2	1:X:1694:A:N3	2.89	0.41
1:X:1741:G:N2	1:X:1742:G:H1'	2.36	0.41
1:X:1969:G:N3	1:X:1970:G:C8	2.89	0.41
1:X:2089:C:C4	1:X:2090:U:C5	3.09	0.41
1:X:2190:A:H2	1:X:2194:A:N1	2.19	0.41
1:X:2241:U:H4'	1:X:2307:A:H2	1.85	0.41
1:X:2339:A:C2	1:X:2340:C:H1'	2.55	0.41
1:X:2388:G:C5	1:X:2389:G:C8	3.09	0.41
1:X:2411:A:C6	1:X:2412:A:C6	3.09	0.41
1:X:2433:G:H2'	1:X:2434:G:H8	1.86	0.41
1:X:2477:C:O2'	1:X:2478:C:H5'	2.21	0.41
1:X:2491:C:N3	1:X:2492:G:C8	2.88	0.41
1:X:2499:C:C4	1:X:2546:G:C8	3.09	0.41
1:X:2577:A:H5"	3:A:235:GLY:HA3	2.01	0.41
1:X:2715:C:H2'	1:X:2716:G:O4'	2.21	0.41
1:X:2724:G:C2	1:X:2741:G:C4	3.09	0.41
1:X:2781:G:H8	1:X:2781:G:O5'	2.04	0.41
1:X:2796:A:N1	1:X:2797:G:C6	2.88	0.41
1:X:2800:C:C5	1:X:2801:A:C8	3.09	0.41
1:X:2802:C:C2	1:X:2803:C:C5	3.09	0.41
1:X:2806:G:O4'	1:X:2858:A:C2	2.74	0.41
1:X:2829:A:C2	1:X:2830:U:C2	3.09	0.41
1:X:2859:U:H5	1:X:2860:C:C2	2.39	0.41
2:Z:42:U:C1'	2:Z:47:A:H61	2.29	0.41
2:Z:75:A:H2'	2:Z:75:A:N3	2.36	0.41
2:Z:93:G:N2	2:Z:94:G:H1'	2.36	0.41
3:A:53:PHE:O	3:A:54:ILE:O	2.39	0.41
3:A:150:GLY:C	3:A:152:GLY:N	2.78	0.41
3:A:210:GLY:O	3:A:214:TRP:N	2.53	0.41
3:A:214:TRP:C	3:A:215:LEU:CG	2.94	0.41
4:B:48:GLN:O	4:B:48:GLN:CG	2.62	0.41
4:B:60:ASN:C	4:B:62:PRO:N	2.75	0.41
4:B:96:PHE:CE2	4:B:102:ILE:CG2	3.04	0.41
5:C:17:LEU:HD13	5:C:17:LEU:HA	1.94	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:29:GLU:O	5:C:32:THR:HB	2.21	0.41
5:C:124:ASP:CG	5:C:125:ILE:N	2.77	0.41
6:D:69:LYS:HA	6:D:85:VAL:H	1.86	0.41
7:E:5:GLY:O	7:E:6:LYS:HG3	2.20	0.41
7:E:24:PHE:O	7:E:35:VAL:O	2.38	0.41
7:E:85:ILE:O	7:E:132:ASP:HA	2.20	0.41
7:E:103:LEU:HD23	7:E:148:VAL:HG22	2.03	0.41
7:E:132:ASP:OD1	7:E:133:VAL:N	2.54	0.41
7:E:141:VAL:O	7:E:142:GLY:C	2.63	0.41
7:E:164:PHE:O	7:E:167:GLU:HB2	2.21	0.41
8:F:75:MET:HE3	8:F:79:ILE:CD1	2.49	0.41
9:G:40:ASN:CB	9:G:78:ASP:HB3	2.51	0.41
9:G:112:THR:C	9:G:113:GLU:HG3	2.45	0.41
10:H:1:MET:HG2	10:H:79:HIS:ND1	2.35	0.41
10:H:9:ASP:HB2	10:H:95:ALA:HB1	1.98	0.41
10:H:89:ILE:HG12	15:M:79:ARG:CD	2.50	0.41
10:H:100:ASN:C	10:H:102:GLN:N	2.73	0.41
10:H:122:ARG:C	10:H:124:MET:H	2.29	0.41
10:H:130:ALA:HA	10:H:131:PRO:HD2	1.88	0.41
11:I:78:SER:N	11:I:112:GLY:HA3	2.35	0.41
12:J:36:ILE:CG2	12:J:101:GLY:O	2.68	0.41
12:J:39:GLU:HA	12:J:40:PRO:HD3	1.73	0.41
12:J:59:PHE:HE2	12:J:114:GLN:O	2.03	0.41
12:J:59:PHE:CE1	12:J:110:VAL:HG11	2.56	0.41
12:J:81:GLU:HG2	12:J:82:THR:N	2.36	0.41
13:K:45:ARG:CB	13:K:46:PRO:CD	2.99	0.41
14:L:15:ARG:NH1	14:L:15:ARG:CG	2.81	0.41
14:L:83:GLY:C	14:L:85:LYS:N	2.79	0.41
15:M:39:VAL:HG12	15:M:45:THR:HG23	2.02	0.41
15:M:82:PRO:O	15:M:84:ALA:N	2.54	0.41
16:N:62:ILE:C	16:N:64:ARG:N	2.77	0.41
17:O:40:VAL:O	17:O:40:VAL:CG2	2.68	0.41
17:O:46:VAL:C	17:O:47:PHE:CD1	2.99	0.41
18:P:62:ARG:CZ	26:Y:25:LEU:HD11	2.50	0.41
19:Q:29:VAL:HG11	19:Q:78:ALA:HB2	2.03	0.41
20:R:84:VAL:HG22	20:R:88:THR:C	2.46	0.41
21:S:36:ARG:HE	21:S:37:LYS:CA	2.31	0.41
21:S:92:VAL:HG23	21:S:93:GLU:H	1.85	0.41
21:S:98:VAL:HG13	21:S:115:ILE:HG21	2.03	0.41
22:T:43:THR:HB	22:T:46:LYS:HZ1	1.84	0.41
23:U:20:ARG:CD	23:U:43:ARG:NH2	2.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:22:GLY:H	23:U:39:LYS:CB	2.34	0.41
23:U:28:GLY:CA	23:U:32:ARG:HE	2.34	0.41
24:V:16:LYS:HG2	24:V:17:GLU:N	2.36	0.41
24:V:24:GLU:OE2	24:V:46:LEU:CD1	2.69	0.41
26:Y:9:LYS:O	26:Y:11:THR:N	2.53	0.41
1:X:13:A:N1	1:X:535:U:C2	2.89	0.41
1:X:33:C:O2'	1:X:34:U:OP1	2.31	0.41
1:X:188:G:H2'	1:X:189:A:C8	2.56	0.41
1:X:196:A:H2'	1:X:197:G:C5'	2.51	0.41
1:X:204:A:N7	1:X:2386:G:C4'	2.84	0.41
1:X:527:C:O2'	18:P:39:ARG:NH2	2.51	0.41
1:X:528:G:C6	1:X:529:U:O4	2.74	0.41
1:X:546:A:C6	1:X:547:U:C4	3.09	0.41
1:X:677:G:H2'	1:X:678:G:O5'	2.21	0.41
1:X:739:G:O2'	1:X:740:A:H8	2.04	0.41
1:X:814:G:P	5:C:50:GLN:NE2	2.94	0.41
1:X:825:C:C4	1:X:1263:G:O6	2.74	0.41
1:X:938:G:C2'	1:X:939:C:OP2	2.69	0.41
1:X:1016:C:H4'	1:X:1023:U:O4'	2.21	0.41
1:X:1017:C:O2'	1:X:1018:C:H5'	2.21	0.41
1:X:1067:G:N2	1:X:1114:A:H62	2.19	0.41
1:X:1281:A:C2'	1:X:2592:U:C5	2.92	0.41
1:X:1317:G:O2'	1:X:1318:A:H5'	2.21	0.41
1:X:1324:G:H1'	1:X:1326:U:O4	2.21	0.41
1:X:1398:G:C2	1:X:1416:A:C4	3.09	0.41
1:X:1512:A:H1'	1:X:1593:C:O2'	2.21	0.41
1:X:1789:U:N3	1:X:1811:A:C2	2.89	0.41
1:X:1858:C:N3	1:X:1859:A:C5	2.89	0.41
1:X:1956:G:C4	1:X:1957:C:C5	3.09	0.41
1:X:2007:G:O2'	1:X:2008:C:H5'	2.21	0.41
1:X:2034:A:C8	1:X:2593:A:N6	2.89	0.41
1:X:2189:A:C4	1:X:2190:A:N7	2.89	0.41
1:X:2248:A:C6	1:X:2249:U:C4	3.09	0.41
1:X:2262:C:C2'	1:X:2263:C:C5'	2.94	0.41
1:X:2284:U:C3'	1:X:2285:U:C5'	2.96	0.41
1:X:2707:G:H2'	1:X:2708:U:H6	1.86	0.41
1:X:2779:C:C6	1:X:2780:A:C8	3.09	0.41
1:X:2801:A:C6	1:X:2802:C:C4	3.09	0.41
2:Z:18:G:N2	2:Z:71:G:H1'	2.36	0.41
2:Z:32:C:C5	2:Z:33:C:C5	3.08	0.41
2:Z:39:C:H2'	2:Z:39:C:O2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:39:C:H3'	2:Z:40:C:C6	2.56	0.41
2:Z:81:C:H6	2:Z:81:C:O5'	2.04	0.41
3:A:75:VAL:CG1	3:A:98:ALA:HB3	2.48	0.41
3:A:131:LEU:N	3:A:131:LEU:CD2	2.79	0.41
3:A:147:LEU:HG	3:A:155:LEU:HD11	2.02	0.41
3:A:182:LEU:HA	3:A:182:LEU:HD23	1.88	0.41
3:A:200:GLU:OE1	3:A:202:LYS:CA	2.69	0.41
5:C:56:ARG:HA	5:C:71:ASP:OD2	2.21	0.41
6:D:65:PRO:HB3	6:D:89:VAL:HG21	2.02	0.41
6:D:150:ARG:CG	6:D:151:GLY:H	2.33	0.41
6:D:151:GLY:O	6:D:152:MET:SD	2.79	0.41
7:E:42:THR:HB	7:E:53:GLU:HB2	2.03	0.41
8:F:81:LYS:HD2	8:F:81:LYS:HA	1.79	0.41
11:I:30:ALA:N	11:I:34:HIS:CE1	2.88	0.41
11:I:105:PRO:O	11:I:106:VAL:HG22	2.21	0.41
12:J:83:ARG:HG2	12:J:83:ARG:NH1	2.35	0.41
13:K:59:ASP:O	13:K:60:LEU:C	2.64	0.41
15:M:34:ARG:HD2	15:M:81:PHE:CE1	2.56	0.41
17:O:38:LEU:O	17:O:39:PHE:HB3	2.20	0.41
18:P:66:GLU:HB3	18:P:67:PRO:HD3	2.02	0.41
18:P:132:GLY:C	18:P:133:ASN:CG	2.89	0.41
19:Q:20:MET:C	19:Q:22:ARG:N	2.77	0.41
19:Q:55:THR:HB	19:Q:77:LYS:O	2.20	0.41
20:R:35:LYS:NZ	20:R:35:LYS:CB	2.84	0.41
21:S:160:LEU:HD22	21:S:162:ALA:HB3	2.04	0.41
23:U:10:LYS:HD3	23:U:11:LYS:CB	2.51	0.41
23:U:20:ARG:CG	23:U:43:ARG:HD2	2.51	0.41
24:V:25:LEU:HD11	24:V:47:ARG:HD3	2.03	0.41
1:X:15:G:C6	1:X:16:G:C5	3.09	0.40
1:X:34:U:H1'	20:R:4:PRO:CA	2.42	0.40
1:X:83:A:O3'	1:X:84:G:O4'	2.39	0.40
1:X:155:G:C2'	1:X:156:G:C5'	3.00	0.40
1:X:228:A:H2'	1:X:229:G:O4'	2.21	0.40
1:X:399:G:O2'	1:X:400:U:OP1	2.37	0.40
1:X:429:C:H2'	1:X:430:C:O4'	2.21	0.40
1:X:452:G:H22	5:C:40:ARG:HH22	1.65	0.40
1:X:539:A:C2	1:X:2006:G:C8	3.09	0.40
1:X:613:A:O4'	1:X:668:A:N1	2.54	0.40
1:X:649:G:C2	1:X:661:C:C2	3.09	0.40
1:X:696:U:C2'	1:X:697:G:O5'	2.69	0.40
1:X:741:G:N2	1:X:743:A:C1'	2.82	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:760:U:H2'	18:P:109:ARG:HE	1.86	0.40
1:X:825:C:H1'	1:X:1263:G:N2	2.36	0.40
1:X:1016:C:H2'	1:X:1017:C:C5	2.55	0.40
1:X:1020:A:H2'	1:X:1164:C:O2'	2.21	0.40
1:X:1086:C:H2'	1:X:1086:C:O2	2.21	0.40
1:X:1188:A:H8	1:X:1188:A:P	2.44	0.40
1:X:1204:G:H2'	1:X:1205:G:C8	2.56	0.40
1:X:1236:G:N2	1:X:1240:G:C4	2.89	0.40
1:X:1286:U:C6	1:X:1986:G:H4'	2.55	0.40
1:X:1621:C:H5'	1:X:1626:A:C6	2.56	0.40
1:X:1656:U:C2'	1:X:1657:A:C5'	2.99	0.40
1:X:1808:C:H5"	3:A:39:LYS:HZ1	1.81	0.40
1:X:1842:G:H2'	1:X:1843:U:O4'	2.21	0.40
1:X:2042:A:C5	1:X:2482:A:C2	3.08	0.40
1:X:2202:G:H2'	1:X:2203:G:H8	1.87	0.40
1:X:2667:C:C5	1:X:2699:G:C5	3.09	0.40
1:X:2824:C:O2'	1:X:2825:A:P	2.79	0.40
2:Z:85:G:H5"	25:W:49:HIS:CD2	2.56	0.40
5:C:44:SER:HB2	5:C:88:PRO:HD3	2.02	0.40
5:C:82:VAL:CG1	5:C:85:GLY:HA3	2.51	0.40
6:D:36:VAL:O	6:D:36:VAL:HG12	2.19	0.40
6:D:71:LYS:O	6:D:71:LYS:HD3	2.21	0.40
6:D:108:LEU:C	6:D:110:ARG:N	2.79	0.40
7:E:89:LEU:CD2	7:E:94:PHE:HB3	2.51	0.40
8:F:90:SER:C	8:F:91:THR:HG23	2.44	0.40
11:I:114:ILE:O	11:I:115:SER:HB3	2.20	0.40
12:J:52:ARG:N	12:J:55:MET:HE3	2.36	0.40
13:K:18:VAL:CG1	13:K:22:ARG:HD2	2.47	0.40
13:K:98:LEU:HD11	13:K:114:GLU:OE1	2.21	0.40
13:K:115:LEU:HD23	13:K:115:LEU:HA	1.60	0.40
14:L:21:THR:CG2	14:L:22:ALA:H	2.33	0.40
14:L:102:ALA:C	14:L:104:ALA:N	2.79	0.40
16:N:14:HIS:O	16:N:17:VAL:N	2.54	0.40
16:N:52:ASN:O	16:N:53:LYS:C	2.64	0.40
16:N:60:LEU:C	16:N:60:LEU:HD22	2.46	0.40
16:N:88:ILE:HG12	17:O:48:GLY:CA	2.51	0.40
18:P:47:GLY:N	18:P:92:VAL:HB	2.36	0.40
21:S:119:ASN:CG	21:S:120:LEU:N	2.79	0.40
24:V:20:ALA:O	24:V:23:LYS:HB3	2.21	0.40
1:X:118:U:O2	1:X:118:U:C2'	2.68	0.40
1:X:427:C:H2'	1:X:428:A:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:456:C:H4'	5:C:43:ALA:HB2	2.03	0.40
1:X:537:C:O2'	1:X:538:A:C6	2.74	0.40
1:X:556:A:H1'	1:X:558:G:C2	2.55	0.40
1:X:643:A:H4'	11:I:67:ASN:CB	2.51	0.40
1:X:683:A:HO2'	1:X:684:C:P	2.42	0.40
1:X:787:A:C5'	3:A:48:ARG:HH22	2.24	0.40
1:X:858:G:C8	1:X:858:G:OP2	2.74	0.40
1:X:989:G:H2'	1:X:990:A:O4'	2.21	0.40
1:X:1038:U:O2	1:X:2466:G:O3'	2.40	0.40
1:X:1075:C:H5'	8:F:85:ILE:HG13	2.04	0.40
1:X:1193:G:C5	1:X:1194:U:C5	3.10	0.40
1:X:1197:U:O2'	1:X:1198:C:H5'	2.21	0.40
1:X:1285:A:HO2'	1:X:1286:U:P	2.44	0.40
1:X:1291:G:OP1	13:K:36:THR:HB	2.21	0.40
1:X:1330:G:C6	1:X:1349:A:N6	2.89	0.40
1:X:1476:G:H2'	1:X:1477:C:O4'	2.22	0.40
1:X:1517:C:C5'	3:A:102:LYS:NZ	2.85	0.40
1:X:1780:A:C5	1:X:1781:C:C4	3.09	0.40
1:X:1811:A:H3'	3:A:178:PRO:HB2	2.02	0.40
1:X:1989:C:O5'	1:X:1989:C:H6	2.04	0.40
1:X:2060:A:C4	1:X:2414:A:C8	3.09	0.40
1:X:2239:C:H2'	1:X:2240:C:H6	1.86	0.40
1:X:2311:U:O2	1:X:2311:U:C3'	2.70	0.40
1:X:2431:C:N4	1:X:2432:A:C6	2.90	0.40
1:X:2450:A:N6	1:X:2451:G:C2	2.88	0.40
1:X:2661:G:C2'	1:X:2662:C:H5'	2.51	0.40
1:X:2688:G:C6	1:X:2689:C:N3	2.89	0.40
1:X:2757:G:C1'	1:X:2759:U:H5	2.33	0.40
1:X:2866:A:C6	1:X:2867:G:C2	3.09	0.40
2:Z:53:G:H5'	14:L:64:LYS:CD	2.51	0.40
3:A:183:ARG:HD2	3:A:184:ARG:O	2.21	0.40
5:C:9:GLN:HE21	5:C:120:VAL:HG11	1.87	0.40
5:C:22:VAL:HA	5:C:106:MET:HG3	2.03	0.40
6:D:13:ARG:NH1	6:D:14:PRO:HG3	2.36	0.40
6:D:105:ASN:CA	6:D:109:PRO:HG2	2.48	0.40
6:D:114:PHE:C	6:D:115:ARG:HG3	2.47	0.40
7:E:68:THR:O	7:E:72:VAL:HG23	2.21	0.40
8:F:101:ASN:CB	8:F:104:GLN:HG2	2.46	0.40
9:G:156:HIS:CB	9:G:157:PRO:CD	2.95	0.40
10:H:22:ILE:O	10:H:23:ARG:CB	2.69	0.40
10:H:74:VAL:HA	10:H:96:ALA:HB2	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:H:118:LEU:HD23	10:H:118:LEU:HA	1.68	0.40
11:I:45:LYS:HG2	11:I:46:GLY:H	1.86	0.40
11:I:97:ARG:O	11:I:98:LEU:CB	2.64	0.40
12:J:79:PRO:O	12:J:80:ALA:HB3	2.21	0.40
12:J:112:GLU:OE1	12:J:116:LYS:HB2	2.21	0.40
12:J:116:LYS:HA	12:J:132:MET:CE	2.47	0.40
13:K:94:TYR:HE1	13:K:96:ARG:NH1	2.18	0.40
14:L:59:LEU:CD2	14:L:61:SER:H	2.32	0.40
15:M:19:ASP:C	15:M:20:HIS:CG	2.99	0.40
15:M:69:ARG:CG	15:M:78:GLU:HG2	2.51	0.40
16:N:86:ALA:O	16:N:89:ASP:N	2.30	0.40
17:O:33:VAL:HG12	17:O:57:GLN:CG	2.45	0.40
17:O:38:LEU:CD2	17:O:46:VAL:O	2.70	0.40
17:O:50:ASP:O	17:O:53:LYS:CB	2.70	0.40
19:Q:51:ILE:CD1	19:Q:83:ALA:HA	2.52	0.40
19:Q:79:ILE:N	19:Q:79:ILE:CD1	2.80	0.40
21:S:4:THR:N	21:S:33:ALA:O	2.51	0.40
22:T:37:LEU:HD12	22:T:37:LEU:N	2.33	0.40
23:U:10:LYS:HD3	23:U:11:LYS:CA	2.48	0.40
1:X:18:U:HO2'	1:X:19:C:H5'	1.87	0.40
1:X:33:C:C2'	1:X:34:U:H5"	2.52	0.40
1:X:224:G:C5	1:X:229:G:O6	2.75	0.40
1:X:513:A:C6	1:X:515:A:N6	2.89	0.40
1:X:627:A:O2'	1:X:628:A:O4'	2.37	0.40
1:X:698:A:C2	1:X:702:A:C6	3.09	0.40
1:X:859:U:C1'	1:X:860:U:C5	3.05	0.40
1:X:994:A:O2'	1:X:995:A:OP1	2.36	0.40
1:X:1075:C:H4'	8:F:89:SER:O	2.21	0.40
1:X:1212:U:H2'	1:X:1213:U:H6	1.86	0.40
1:X:1295:U:C4	1:X:1296:G:C5	3.09	0.40
1:X:1371:G:N7	1:X:1384:G:C6	2.89	0.40
1:X:1408:A:C5	1:X:1411:C:C4	3.09	0.40
1:X:1474:A:N3	1:X:1474:A:H2'	2.36	0.40
1:X:1483:G:C2	1:X:1541:G:C2	3.10	0.40
1:X:1564:U:H2'	1:X:1565:G:C8	2.57	0.40
1:X:1625:A:C4	1:X:1632:A:C2	3.09	0.40
1:X:1675:C:H2'	1:X:1676:U:C6	2.56	0.40
1:X:2237:C:H5'	22:T:14:ARG:HD3	2.03	0.40
1:X:2314:A:C4	1:X:2316:G:C8	3.10	0.40
1:X:2334:C:H5'	22:T:25:LYS:NZ	2.36	0.40
1:X:2355:A:N1	14:L:91:ARG:CZ	2.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:2425:G:C2	1:X:2480:C:C5	3.09	0.40
1:X:2501:U:O2	1:X:2501:U:H2'	2.22	0.40
1:X:2546:G:C4	1:X:2547:C:C5	3.09	0.40
1:X:2695:C:O2'	1:X:2696:A:H5'	2.21	0.40
1:X:2831:A:N6	1:X:2832:G:C6	2.90	0.40
3:A:66:ASP:C	3:A:66:ASP:OD1	2.64	0.40
3:A:78:LYS:CD	3:A:116:THR:HB	2.47	0.40
3:A:245:VAL:HB	3:A:246:PRO:HD2	2.02	0.40
6:D:7:LYS:HD3	6:D:7:LYS:HA	1.91	0.40
6:D:143:TYR:HE1	6:D:148:LYS:C	2.30	0.40
9:G:59:ALA:O	9:G:62:ILE:HB	2.21	0.40
10:H:29:ILE:HA	10:H:34:LEU:HA	2.03	0.40
11:I:79:GLN:O	11:I:80:LEU:C	2.64	0.40
13:K:45:ARG:HD3	13:K:95:THR:CG2	2.51	0.40
13:K:72:ASP:OD2	13:K:72:ASP:C	2.62	0.40
18:P:57:LEU:O	18:P:59:PHE:N	2.54	0.40
19:Q:53:ILE:HG13	19:Q:54:SER:N	2.36	0.40
19:Q:62:ARG:O	19:Q:63:LYS:CB	2.69	0.40
19:Q:63:LYS:CE	19:Q:65:VAL:HA	2.50	0.40
20:R:52:ASN:CG	20:R:53:VAL:H	2.29	0.40
22:T:3:HIS:O	22:T:4:LYS:CB	2.69	0.40
23:U:23:LYS:HB2	23:U:35:THR:HG21	2.02	0.40
23:U:53:GLU:O	23:U:78:ILE:CG2	2.69	0.40
1:X:64:C:C1'	19:Q:68:PHE:HD1	2.34	0.40
1:X:107:G:C2	1:X:108:G:H1'	2.56	0.40
1:X:119:G:H4'	1:X:143:A:H5'	2.02	0.40
1:X:205:A:H1'	1:X:207:U:O4'	2.21	0.40
1:X:490:A:O2'	1:X:491:A:O5'	2.39	0.40
1:X:498:C:O2	18:P:74:SER:CB	2.68	0.40
1:X:501:G:H2'	1:X:502:A:O4'	2.21	0.40
1:X:665:A:C2	1:X:666:U:C6	3.07	0.40
1:X:684:C:H2'	1:X:685:U:C6	2.56	0.40
1:X:797:A:N7	3:A:229:VAL:HG21	2.35	0.40
1:X:938:G:O2'	1:X:939:C:H6	2.05	0.40
1:X:994:A:N7	1:X:995:A:C6	2.89	0.40
1:X:1006:C:H5"	1:X:1006:C:C6	2.55	0.40
1:X:1043:A:H2'	1:X:1044:U:H5'	2.03	0.40
1:X:1109:A:C2'	1:X:1110:G:H5'	2.49	0.40
1:X:1149:G:P	9:G:98:LYS:NZ	2.94	0.40
1:X:1164:C:H2'	1:X:1164:C:O2	2.21	0.40
1:X:1234:C:C2	1:X:1235:C:C5	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:1336:G:O6	1:X:1337:G:C6	2.75	0.40
1:X:1571:G:H2'	1:X:1572:C:C6	2.55	0.40
1:X:1624:A:C5	1:X:1627:C:C4	3.09	0.40
1:X:1755:G:C2	1:X:1756:C:C6	3.09	0.40
1:X:1769:U:H5	1:X:1775:A:C2	2.39	0.40
1:X:1820:G:OP2	1:X:1820:G:C8	2.74	0.40
1:X:1826:U:O2	1:X:1826:U:H2'	2.21	0.40
1:X:1992:G:H1'	13:K:107:GLY:HA3	2.02	0.40
1:X:2241:U:H2'	1:X:2242:C:H6	1.87	0.40
1:X:2245:A:C4'	1:X:2246:A:N3	2.75	0.40
1:X:2412:A:O5'	1:X:2412:A:H8	2.04	0.40
1:X:2451:G:H22	1:X:2456:U:H5"	1.87	0.40
1:X:2507:U:P	7:E:172:LYS:HZ1	2.44	0.40
1:X:2522:G:C6	1:X:2523:G:C6	3.10	0.40
2:Z:30:C:H42	2:Z:58:G:N2	2.19	0.40
3:A:193:ILE:HA	3:A:193:ILE:HD13	1.96	0.40
3:A:206:LEU:HD23	3:A:211:ARG:HG2	2.03	0.40
4:B:16:LYS:HD2	4:B:173:VAL:HG13	2.03	0.40
4:B:39:ALA:HA	4:B:43:GLY:C	2.46	0.40
4:B:202:ALA:O	4:B:203:LYS:HB2	2.21	0.40
5:C:152:THR:OG1	5:C:154:ASP:CG	2.64	0.40
7:E:65:HIS:CD2	7:E:65:HIS:C	2.99	0.40
7:E:104:GLU:OE2	7:E:114:ILE:CG1	2.67	0.40
9:G:42:VAL:O	9:G:81:VAL:N	2.55	0.40
9:G:103:TYR:CZ	9:G:111:LYS:CA	3.05	0.40
9:G:132:PHE:O	9:G:133:GLY:C	2.65	0.40
10:H:5:GLN:HG3	10:H:20:MET:HE2	2.02	0.40
12:J:40:PRO:HB3	12:J:99:LYS:HD2	2.03	0.40
13:K:45:ARG:O	13:K:48:VAL:HG12	2.22	0.40
20:R:52:ASN:O	20:R:53:VAL:HB	2.22	0.40
21:S:54:ILE:HD12	21:S:85:MET:HE1	2.03	0.40
21:S:107:GLU:OE1	21:S:112:LEU:HA	2.21	0.40
22:T:54:GLY:O	22:T:55:ARG:C	2.64	0.40
23:U:51:ILE:N	23:U:52:ARG:NH2	2.69	0.40
23:U:75:TYR:O	23:U:77:GLY:N	2.44	0.40
25:W:2:LYS:CD	25:W:32:ARG:O	2.68	0.40
1:X:88:G:N1	1:X:89:A:C6	2.89	0.40
1:X:118:U:H4'	1:X:119:G:H5"	2.03	0.40
1:X:162:C:O2'	1:X:163:A:H5'	2.21	0.40
1:X:178:C:O2	1:X:178:C:C2'	2.49	0.40
1:X:188:G:H2'	1:X:189:A:H8	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:X:218:A:C4	1:X:220:U:C4	3.09	0.40
1:X:469:G:C2'	1:X:470:U:OP2	2.68	0.40
1:X:696:U:H2'	1:X:697:G:O5'	2.22	0.40
1:X:788:G:H4'	1:X:789:G:O5'	2.21	0.40
1:X:938:G:H2'	1:X:939:C:OP2	2.21	0.40
1:X:951:G:H2'	1:X:952:A:C4'	2.51	0.40
1:X:981:C:H2'	1:X:982:C:O5'	2.20	0.40
1:X:994:A:N6	1:X:995:A:C2	2.89	0.40
1:X:1023:U:H5	9:G:56:THR:HG21	1.87	0.40
1:X:1281:A:C5	1:X:1996:A:N7	2.89	0.40
1:X:1385:C:C2'	1:X:1386:A:C5'	2.98	0.40
1:X:1460:G:N3	1:X:1460:G:H2'	2.37	0.40
1:X:1526:U:H3'	1:X:1527:G:H8	1.85	0.40
1:X:1584:G:H4'	3:A:59:LYS:O	2.22	0.40
1:X:1784:C:H2'	1:X:1785:A:O4'	2.22	0.40
1:X:1887:G:C2	1:X:1888:C:C6	3.09	0.40
1:X:1925:C:H2'	1:X:1926:U:C6	2.56	0.40
1:X:2044:G:O6	32:X:2911:ZLD:H6	2.21	0.40
1:X:2071:G:N2	1:X:2072:C:C1'	2.80	0.40
1:X:2216:G:H5"	1:X:2217:G:OP1	2.22	0.40
1:X:2311:U:C5'	1:X:2315:A:H62	2.33	0.40
1:X:2388:G:C4	1:X:2389:G:C8	3.09	0.40
1:X:2569:A:C2	1:X:2584:U:C2	3.10	0.40
1:X:2571:G:H2'	1:X:2572:U:C6	2.56	0.40
3:A:36:ALA:HB1	3:A:63:ARG:CA	2.44	0.40
3:A:176:ARG:HA	3:A:181:GLU:O	2.22	0.40
4:B:4:ILE:HD11	4:B:29:GLY:O	2.20	0.40
4:B:6:GLY:HA2	4:B:27:LEU:O	2.21	0.40
4:B:45:GLU:O	4:B:46:ALA:CB	2.68	0.40
5:C:7:ILE:CG2	5:C:120:VAL:O	2.69	0.40
5:C:74:VAL:CG2	5:C:76:THR:HG23	2.52	0.40
6:D:16:LEU:O	6:D:20:PHE:HB2	2.22	0.40
6:D:111:ILE:HG12	6:D:137:ILE:CG2	2.51	0.40
6:D:142:THR:O	6:D:146:VAL:HG11	2.21	0.40
9:G:119:LEU:HD13	9:G:126:VAL:HG22	2.02	0.40
12:J:120:ARG:O	12:J:123:GLY:N	2.48	0.40
13:K:100:VAL:H	13:K:111:ALA:HA	1.86	0.40
14:L:20:THR:CG2	14:L:23:ALA:HB3	2.45	0.40
21:S:16:GLU:O	21:S:18:MET:N	2.54	0.40
21:S:24:TYR:CD1	21:S:24:TYR:N	2.89	0.40
21:S:71:MET:HE2	21:S:71:MET:N	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:103:ARG:NH1	21:S:107:GLU:HB3	2.35	0.40
23:U:15:VAL:HG23	23:U:16:ASN:N	2.36	0.40
23:U:32:ARG:HE	23:U:32:ARG:H	1.69	0.40
23:U:41:VAL:O	23:U:42:GLN:OE1	2.39	0.40
23:U:49:LYS:HB3	23:U:61:TRP:CZ3	2.55	0.40
25:W:13:PRO:O	25:W:14:GLY:C	2.64	0.40
26:Y:36:CYS:C	26:Y:38:GLY:N	2.80	0.40

All (1) 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)
10:H:107:GLY:O	13:K:86:LYS:NZ[8_555]	2.03	0.17

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	216/274 (79%)	109 (50%)	52 (24%)	55 (26%)	0 0
4	B	203/211 (96%)	124 (61%)	47 (23%)	32 (16%)	0 2
5	C	195/205 (95%)	92 (47%)	46 (24%)	57 (29%)	0 0
6	D	175/180 (97%)	78 (45%)	54 (31%)	43 (25%)	0 0
7	E	169/185 (91%)	91 (54%)	42 (25%)	36 (21%)	0 1
8	F	68/144 (47%)	37 (54%)	21 (31%)	10 (15%)	0 3
9	G	140/174 (80%)	66 (47%)	32 (23%)	42 (30%)	0 0
10	H	132/134 (98%)	91 (69%)	26 (20%)	15 (11%)	0 5
11	I	139/156 (89%)	51 (37%)	50 (36%)	38 (27%)	0 0
12	J	134/142 (94%)	63 (47%)	46 (34%)	25 (19%)	0 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
13	K	111/116 (96%)	61 (55%)	31 (28%)	19 (17%)	0 2
14	L	102/114 (90%)	48 (47%)	25 (24%)	29 (28%)	0 0
15	M	106/166 (64%)	68 (64%)	17 (16%)	21 (20%)	0 1
16	N	115/118 (98%)	56 (49%)	30 (26%)	29 (25%)	0 0
17	O	92/100 (92%)	52 (56%)	19 (21%)	21 (23%)	0 1
18	P	125/134 (93%)	75 (60%)	35 (28%)	15 (12%)	0 4
19	Q	91/95 (96%)	44 (48%)	23 (25%)	24 (26%)	0 0
20	R	108/115 (94%)	63 (58%)	17 (16%)	28 (26%)	0 0
21	S	173/237 (73%)	97 (56%)	40 (23%)	36 (21%)	0 1
22	T	82/91 (90%)	51 (62%)	16 (20%)	15 (18%)	0 1
23	U	70/81 (86%)	39 (56%)	15 (21%)	16 (23%)	0 1
24	V	64/67 (96%)	32 (50%)	19 (30%)	13 (20%)	0 1
25	W	53/55 (96%)	22 (42%)	18 (34%)	13 (24%)	0 0
26	Y	56/60 (93%)	31 (55%)	17 (30%)	8 (14%)	0 3
30	4	35/37 (95%)	22 (63%)	11 (31%)	2 (6%)	1 13
All	All	2954/3391 (87%)	1563 (53%)	749 (25%)	642 (22%)	0 1

All (642) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	A	33	LEU
3	A	58	HIS
3	A	66	ASP
3	A	91	ARG
3	A	98	ALA
3	A	108	PRO
3	A	113	VAL
3	A	125	PRO
3	A	127	LEU
3	A	145	LEU
3	A	154	GLN
3	A	167	GLY
3	A	190	TYR
3	A	218	LYS
3	A	219	PRO
3	A	220	HIS
3	A	237	GLU

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Mol	Chain	Res	Type
3	A	240	THR
4	B	17	ASN
4	B	41	THR
4	B	70	ALA
4	B	86	PRO
4	B	90	SER
4	B	122	PHE
4	B	134	TRP
4	B	135	HIS
4	B	137	ARG
4	B	147	PRO
4	B	203	LYS
5	C	13	ARG
5	C	22	VAL
5	C	47	THR
5	C	58	MET
5	C	67	ALA
5	C	84	PHE
5	C	123	PHE
5	C	124	ASP
5	C	154	ASP
5	C	155	GLU
5	C	156	ASN
5	C	164	VAL
5	C	165	SER
5	C	167	VAL
5	C	168	SER
5	C	172	VAL
5	C	173	ALA
5	C	196	VAL
6	D	4	LEU
6	D	15	ALA
6	D	28	VAL
6	D	69	LYS
6	D	75	SER
6	D	114	PHE
6	D	121	ALA
6	D	127	ASN
6	D	134	GLU
6	D	137	ILE
7	E	7	GLN
7	E	13	SER

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Mol	Chain	Res	Type
7	E	17	VAL
7	E	55	PRO
7	E	105	MET
7	E	110	SER
7	E	126	PRO
7	E	136	ILE
7	E	151	VAL
7	E	172	LYS
8	F	85	ILE
8	F	87	LYS
8	F	92	PRO
8	F	95	ALA
8	F	113	MET
8	F	119	GLY
9	G	33	ILE
9	G	35	LYS
9	G	37	ASP
9	G	48	GLY
9	G	67	ARG
9	G	68	PRO
9	G	73	ASN
9	G	86	ALA
9	G	92	GLY
9	G	97	ASP
9	G	100	TYR
9	G	145	HIS
9	G	147	ARG
9	G	162	LYS
9	G	165	VAL
9	G	170	PRO
10	H	27	SER
10	H	79	HIS
10	H	101	ASN
11	I	9	THR
11	I	36	GLY
11	I	39	SER
11	I	45	LYS
11	I	62	LYS
11	I	65	PHE
11	I	84	GLU
11	I	98	LEU
11	I	103	ASN

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Mol	Chain	Res	Type
11	I	105	PRO
11	I	124	ALA
11	I	136	ALA
12	J	21	ASP
12	J	28	VAL
12	J	56	SER
12	J	60	ARG
12	J	83	ARG
12	J	90	ALA
12	J	91	VAL
12	J	112	GLU
13	K	6	ALA
13	K	9	LYS
13	K	15	SER
13	K	20	LEU
13	K	32	GLY
13	K	42	LYS
13	K	45	ARG
13	K	92	GLY
13	K	100	VAL
14	L	21	THR
14	L	33	ARG
14	L	38	ILE
14	L	40	ALA
14	L	45	ASP
14	L	46	SER
14	L	53	ALA
14	L	55	SER
14	L	56	SER
14	L	68	ALA
14	L	91	ARG
14	L	93	SER
14	L	95	LYS
15	M	29	PRO
15	M	53	VAL
15	M	105	TYR
16	N	22	LYS
16	N	24	PHE
16	N	33	ARG
16	N	35	ALA
16	N	47	TYR
16	N	48	ARG

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Mol	Chain	Res	Type
16	N	56	ASP
16	N	75	ASN
16	N	77	SER
16	N	92	ARG
16	N	94	VAL
16	N	95	LEU
16	N	107	LYS
16	N	115	ASN
17	O	10	LYS
17	O	24	SER
17	O	35	LEU
17	O	36	LYS
17	O	48	GLY
17	O	80	TYR
18	P	9	ARG
18	P	42	VAL
18	P	45	ILE
18	P	112	GLY
19	Q	5	ASP
19	Q	6	ILE
19	Q	13	SER
19	Q	21	GLU
19	Q	41	ALA
19	Q	48	VAL
19	Q	59	PRO
19	Q	61	LYS
19	Q	87	SER
19	Q	89	GLU
20	R	6	ALA
20	R	9	HIS
20	R	26	SER
20	R	53	VAL
20	R	66	GLN
20	R	82	ALA
20	R	85	ASP
20	R	87	GLU
21	S	5	ALA
21	S	6	LYS
21	S	11	LYS
21	S	12	GLN
21	S	17	SER
21	S	26	LYS

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Mol	Chain	Res	Type
21	S	30	VAL
21	S	33	ALA
21	S	37	LYS
21	S	75	LYS
21	S	88	TYR
21	S	91	PRO
21	S	92	VAL
21	S	118	HIS
21	S	125	PRO
21	S	149	ALA
22	T	3	HIS
22	T	4	LYS
22	T	7	VAL
22	T	9	SER
22	T	19	LYS
22	T	20	TYR
22	T	27	GLY
22	T	31	VAL
23	U	13	LEU
23	U	15	VAL
23	U	27	ASP
23	U	32	ARG
23	U	34	THR
23	U	56	GLN
23	U	60	VAL
24	V	2	LYS
24	V	3	PRO
24	V	8	ASN
24	V	33	ALA
25	W	4	LYS
25	W	17	VAL
25	W	18	LYS
25	W	35	SER
25	W	45	LYS
25	W	49	HIS
26	Y	12	SER
26	Y	36	CYS
3	A	54	ILE
3	A	56	GLY
3	A	73	SER
3	A	89	SER
3	A	106	LEU

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Mol	Chain	Res	Type
3	A	152	GLY
3	A	188	GLU
3	A	194	GLY
3	A	216	GLY
3	A	223	GLY
3	A	234	GLY
3	A	244	ARG
3	A	248	THR
4	B	46	ALA
4	B	71	GLY
4	B	76	ARG
4	B	130	GLY
4	B	136	ARG
4	B	145	LYS
4	B	154	LYS
4	B	202	ALA
5	C	9	GLN
5	C	11	GLY
5	C	14	THR
5	C	15	ILE
5	C	28	HIS
5	C	51	VAL
5	C	65	GLY
5	C	103	GLY
5	C	117	LEU
5	C	125	ILE
5	C	127	ASP
5	C	128	ALA
5	C	159	ARG
5	C	171	PRO
5	C	177	VAL
5	C	194	GLU
6	D	5	LYS
6	D	71	LYS
6	D	89	VAL
6	D	124	GLY
6	D	135	GLN
6	D	153	ASP
6	D	170	LEU
7	E	14	GLY
7	E	19	ALA
7	E	77	LYS

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Mol	Chain	Res	Type
7	E	95	ARG
7	E	106	ASN
7	E	120	GLY
7	E	137	ASP
7	E	143	GLN
7	E	150	LYS
7	E	159	GLY
7	E	165	VAL
8	F	74	PRO
9	G	34	PRO
9	G	59	ALA
9	G	72	PRO
9	G	77	GLY
9	G	79	PHE
9	G	88	VAL
9	G	105	GLY
9	G	128	GLU
9	G	129	HIS
9	G	138	GLY
9	G	146	THR
9	G	153	GLY
9	G	154	GLU
9	G	158	HIS
9	G	163	PRO
10	H	14	SER
10	H	28	GLY
10	H	37	GLY
10	H	113	PRO
10	H	124	MET
11	I	6	LEU
11	I	47	ALA
11	I	68	VAL
11	I	90	ARG
11	I	97	ARG
11	I	132	ALA
11	I	133	VAL
12	J	11	ARG
12	J	13	GLN
12	J	44	LYS
12	J	46	ASN
12	J	54	VAL
12	J	87	GLY

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Mol	Chain	Res	Type
12	J	114	GLN
13	K	7	GLY
13	K	14	SER
13	K	58	GLY
14	L	20	THR
14	L	48	GLY
14	L	52	ALA
14	L	69	ALA
14	L	84	ILE
14	L	85	LYS
14	L	102	ALA
15	M	40	ARG
15	M	43	ASN
15	M	56	ALA
15	M	108	ARG
16	N	51	ARG
16	N	65	ILE
16	N	79	PHE
16	N	87	ASN
16	N	116	ALA
17	O	7	THR
17	O	8	GLY
17	O	17	GLY
17	O	26	GLN
17	O	41	GLY
17	O	77	GLY
18	P	41	VAL
18	P	58	ARG
18	P	70	LYS
18	P	84	GLU
19	Q	47	GLY
19	Q	60	GLY
19	Q	62	ARG
19	Q	70	GLY
19	Q	77	LYS
19	Q	86	GLN
21	S	13	LYS
21	S	25	ASN
21	S	60	GLU
21	S	63	PRO
21	S	73	LYS
21	S	94	VAL

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Mol	Chain	Res	Type
21	S	158	CYS
22	T	15	ASP
22	T	32	LYS
22	T	73	GLY
22	T	74	LYS
22	T	75	GLY
23	U	26	ALA
23	U	29	GLY
23	U	42	GLN
24	V	32	ALA
24	V	53	LEU
25	W	44	VAL
25	W	46	THR
3	A	40	THR
3	A	59	LYS
3	A	65	ILE
3	A	71	ASP
3	A	79	VAL
3	A	132	PRO
3	A	149	PRO
3	A	153	ALA
3	A	203	ASN
3	A	215	LEU
3	A	238	GLY
4	B	39	ALA
4	B	72	VAL
5	C	18	PRO
5	C	48	ARG
5	C	102	LEU
5	C	112	GLN
5	C	135	SER
5	C	140	ASN
6	D	11	GLN
6	D	52	LYS
6	D	62	LEU
6	D	63	GLN
6	D	81	GLN
6	D	85	VAL
6	D	102	LYS
6	D	113	ASP
6	D	119	PRO
6	D	139	PRO

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Mol	Chain	Res	Type
6	D	168	ALA
6	D	178	ARG
7	E	59	GLN
7	E	173	ALA
8	F	96	LYS
9	G	56	THR
9	G	96	ASP
9	G	107	GLN
9	G	119	LEU
9	G	126	VAL
10	H	123	PHE
11	I	21	ARG
11	I	24	GLY
11	I	33	GLY
11	I	37	GLN
11	I	66	ASN
11	I	79	GLN
11	I	81	GLN
11	I	93	LEU
11	I	99	VAL
11	I	100	ARG
11	I	107	LYS
11	I	135	ALA
12	J	26	ASP
12	J	82	THR
12	J	106	GLU
12	J	120	ARG
12	J	122	ALA
12	J	139	ASP
13	K	39	THR
13	K	56	LYS
13	K	93	GLY
13	K	95	THR
14	L	79	ALA
14	L	96	TYR
14	L	106	ALA
15	M	24	LEU
15	M	74	GLY
15	M	104	LEU
16	N	109	LEU
17	O	44	GLN
17	O	49	GLU

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Mol	Chain	Res	Type
17	O	96	LEU
18	P	35	PRO
18	P	40	LEU
18	P	89	ARG
19	Q	34	THR
19	Q	63	LYS
19	Q	92	ALA
20	R	15	HIS
20	R	18	LYS
20	R	49	GLU
20	R	90	LYS
20	R	91	ALA
21	S	127	PRO
21	S	128	ARG
21	S	156	GLU
21	S	174	PRO
22	T	63	SER
23	U	40	ARG
23	U	50	ALA
23	U	55	GLY
25	W	48	LYS
26	Y	37	HIS
26	Y	53	ASP
3	A	55	GLY
3	A	128	GLY
3	A	159	ALA
3	A	196	VAL
3	A	198	ASN
3	A	200	GLU
4	B	52	ALA
4	B	69	LYS
4	B	82	ARG
4	B	94	ASP
4	B	151	TYR
5	C	20	PRO
5	C	66	ASN
5	C	70	GLY
5	C	121	ASP
5	C	126	ALA
5	C	129	LYS
5	C	161	ALA
6	D	14	PRO

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Mol	Chain	Res	Type
6	D	27	ALA
6	D	32	GLU
6	D	51	ASP
6	D	54	ALA
6	D	146	VAL
7	E	63	ALA
7	E	80	SER
7	E	99	THR
7	E	149	ARG
7	E	162	VAL
8	F	73	PRO
9	G	84	ASN
9	G	121	LYS
10	H	5	GLN
10	H	42	LYS
11	I	5	ASP
11	I	102	LYS
12	J	12	LYS
12	J	18	MET
12	J	45	SER
13	K	4	GLY
14	L	26	ARG
14	L	37	HIS
14	L	81	GLU
14	L	103	LEU
15	M	17	GLU
15	M	26	ASP
15	M	27	PHE
15	M	41	GLU
15	M	83	PHE
16	N	106	PHE
16	N	117	ARG
18	P	44	VAL
18	P	81	HIS
18	P	111	ARG
20	R	12	ASP
20	R	64	ASN
20	R	108	VAL
20	R	109	ALA
20	R	110	SER
21	S	4	THR
21	S	87	THR

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Mol	Chain	Res	Type
21	S	110	GLY
21	S	126	GLY
23	U	41	VAL
24	V	5	GLU
24	V	11	ALA
24	V	36	GLN
24	V	63	LYS
25	W	8	SER
25	W	47	VAL
26	Y	5	PRO
26	Y	21	SER
26	Y	43	HIS
30	4	14	CYS
3	A	86	PRO
3	A	178	PRO
3	A	214	TRP
4	B	85	ALA
4	B	148	GLY
5	C	10	ASN
5	C	46	ARG
5	C	74	VAL
5	C	137	ALA
5	C	197	GLU
6	D	18	GLN
6	D	73	SER
6	D	76	ASN
6	D	80	ARG
6	D	118	ASN
7	E	31	GLY
7	E	32	GLU
7	E	40	GLU
7	E	76	VAL
8	F	129	ALA
9	G	156	HIS
9	G	157	PRO
10	H	56	LYS
11	I	19	VAL
11	I	106	VAL
11	I	139	ARG
13	K	36	THR
13	K	41	ALA
14	L	31	VAL

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Mol	Chain	Res	Type
14	L	59	LEU
15	M	16	ILE
15	M	42	GLY
15	M	73	PHE
16	N	6	THR
16	N	11	ARG
16	N	43	ALA
16	N	57	PHE
17	O	29	ALA
17	O	39	PHE
17	O	58	ALA
17	O	79	GLN
18	P	91	PHE
19	Q	75	ARG
20	R	32	GLN
20	R	61	SER
20	R	89	GLY
21	S	10	PRO
21	S	130	ILE
25	W	7	ARG
26	Y	4	HIS
3	A	38	PRO
3	A	241	GLY
4	B	65	GLY
5	C	119	ALA
5	C	120	VAL
5	C	138	LYS
6	D	12	VAL
7	E	112	PRO
7	E	157	TYR
9	G	169	GLN
11	I	8	PRO
11	I	83	LEU
16	N	8	ILE
16	N	21	ALA
16	N	44	THR
19	Q	23	GLY
19	Q	39	LYS
19	Q	42	ILE
19	Q	50	VAL
20	R	11	ASN
20	R	59	LYS

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Mol	Chain	Res	Type
20	R	63	THR
20	R	111	GLY
22	T	13	GLY
23	U	16	ASN
24	V	19	ASP
24	V	42	ARG
25	W	23	LEU
6	D	41	GLY
10	H	55	VAL
20	R	60	PRO
20	R	98	ILE
4	B	173	VAL
10	H	99	ILE
15	M	28	ARG
21	S	79	ILE
21	S	89	GLY
21	S	98	VAL
24	V	56	VAL
3	A	142	VAL
4	B	91	VAL
5	C	55	GLY
9	G	136	PRO
10	H	29	ILE
17	O	14	VAL
5	C	118	VAL
6	D	50	ILE
7	E	36	PRO
7	E	92	VAL
15	M	82	PRO
15	M	99	VAL
20	R	41	PRO
23	U	18	VAL
3	A	160	GLY
4	B	62	PRO
12	J	100	PRO
17	O	40	VAL
30	4	21	GLY

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	164/215 (76%)	126 (77%)	38 (23%)	1 5
4	B	155/157 (99%)	130 (84%)	25 (16%)	2 14
5	C	157/163 (96%)	126 (80%)	31 (20%)	1 8
6	D	153/156 (98%)	136 (89%)	17 (11%)	6 25
7	E	136/144 (94%)	119 (88%)	17 (12%)	4 22
8	F	53/107 (50%)	48 (91%)	5 (9%)	8 31
9	G	118/146 (81%)	91 (77%)	27 (23%)	1 5
10	H	103/103 (100%)	79 (77%)	24 (23%)	1 5
11	I	108/121 (89%)	91 (84%)	17 (16%)	2 15
12	J	110/116 (95%)	91 (83%)	19 (17%)	2 11
13	K	90/93 (97%)	69 (77%)	21 (23%)	1 5
14	L	74/82 (90%)	51 (69%)	23 (31%)	0 2
15	M	94/134 (70%)	79 (84%)	15 (16%)	2 14
16	N	96/97 (99%)	80 (83%)	16 (17%)	2 13
17	O	75/79 (95%)	67 (89%)	8 (11%)	6 27
18	P	109/115 (95%)	92 (84%)	17 (16%)	2 15
19	Q	75/76 (99%)	58 (77%)	17 (23%)	1 5
20	R	91/96 (95%)	73 (80%)	18 (20%)	1 7
21	S	149/192 (78%)	118 (79%)	31 (21%)	1 6
22	T	62/67 (92%)	55 (89%)	7 (11%)	5 25
23	U	57/66 (86%)	45 (79%)	12 (21%)	1 6
24	V	54/55 (98%)	45 (83%)	9 (17%)	2 13
25	W	48/48 (100%)	36 (75%)	12 (25%)	0 4
26	Y	51/53 (96%)	42 (82%)	9 (18%)	2 11
30	4	35/35 (100%)	30 (86%)	5 (14%)	3 18
All	All	2417/2716 (89%)	1977 (82%)	440 (18%)	2 10

All (440) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	A	35	GLU
3	A	43	ARG
3	A	48	ARG
3	A	51	SER
3	A	63	ARG
3	A	64	ILE
3	A	82	ILE
3	A	84	TYR
3	A	88	ARG
3	A	91	ARG
3	A	99	ASP
3	A	105	ILE
3	A	111	LEU
3	A	117	VAL
3	A	122	GLU
3	A	135	PHE
3	A	147	LEU
3	A	154	GLN
3	A	157	ARG
3	A	158	SER
3	A	175	VAL
3	A	183	ARG
3	A	196	VAL
3	A	200	GLU
3	A	203	ASN
3	A	204	ILE
3	A	208	LYS
3	A	211	ARG
3	A	214	TRP
3	A	215	LEU
3	A	226	MET
3	A	228	PRO
3	A	230	ASP
3	A	232	PRO
3	A	239	ARG
3	A	244	ARG
3	A	246	PRO
3	A	248	THR
4	B	27	LEU
4	B	33	ILE
4	B	41	THR
4	B	42	ASP
4	B	44	TYR

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Mol	Chain	Res	Type
4	B	47	VAL
4	B	49	ILE
4	B	53	PRO
4	B	75	THR
4	B	84	PHE
4	B	86	PRO
4	B	87	ASP
4	B	92	ASN
4	B	95	ILE
4	B	107	THR
4	B	116	VAL
4	B	134	TRP
4	B	137	ARG
4	B	147	PRO
4	B	149	ARG
4	B	150	VAL
4	B	172	VAL
4	B	182	ILE
4	B	195	LEU
4	B	198	LEU
5	C	4	ILE
5	C	5	ASN
5	C	13	ARG
5	C	18	PRO
5	C	19	LEU
5	C	20	PRO
5	C	27	LEU
5	C	51	VAL
5	C	58	MET
5	C	59	TYR
5	C	62	LYS
5	C	64	THR
5	C	66	ASN
5	C	74	VAL
5	C	76	THR
5	C	90	SER
5	C	95	LEU
5	C	96	PRO
5	C	104	LEU
5	C	108	ILE
5	C	117	LEU
5	C	134	ILE

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Mol	Chain	Res	Type
5	C	143	ASP
5	C	154	ASP
5	C	164	VAL
5	C	166	TRP
5	C	180	ILE
5	C	188	ILE
5	C	193	LEU
5	C	194	GLU
5	C	195	ILE
6	D	3	GLN
6	D	6	THR
6	D	20	PHE
6	D	51	ASP
6	D	62	LEU
6	D	66	ILE
6	D	77	PHE
6	D	80	ARG
6	D	89	VAL
6	D	108	LEU
6	D	110	ARG
6	D	117	ILE
6	D	125	ARG
6	D	130	LEU
6	D	137	ILE
6	D	140	GLU
6	D	147	ASP
7	E	18	ASN
7	E	21	ASP
7	E	35	VAL
7	E	37	TYR
7	E	41	LEU
7	E	42	THR
7	E	67	LEU
7	E	72	VAL
7	E	84	THR
7	E	107	ILE
7	E	115	ILE
7	E	116	GLU
7	E	129	THR
7	E	136	ILE
7	E	148	VAL
7	E	155	ASP

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Mol	Chain	Res	Type
7	E	165	VAL
8	F	87	LYS
8	F	91	THR
8	F	115	ASP
8	F	116	LEU
8	F	135	MET
9	G	31	THR
9	G	33	ILE
9	G	36	ASN
9	G	40	ASN
9	G	57	LEU
9	G	61	ARG
9	G	65	LYS
9	G	67	ARG
9	G	75	ILE
9	G	78	ASP
9	G	87	GLN
9	G	93	LYS
9	G	98	LYS
9	G	102	ARG
9	G	106	TYR
9	G	110	LEU
9	G	113	GLU
9	G	116	ARG
9	G	126	VAL
9	G	127	ILE
9	G	134	MET
9	G	148	LEU
9	G	154	GLU
9	G	157	PRO
9	G	164	GLN
9	G	165	VAL
9	G	169	GLN
10	H	1	MET
10	H	6	SER
10	H	10	VAL
10	H	19	ILE
10	H	22	ILE
10	H	23	ARG
10	H	25	LEU
10	H	26	ASN
10	H	27	SER

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Mol	Chain	Res	Type
10	H	41	ASN
10	H	42	LYS
10	H	47	VAL
10	H	70	VAL
10	H	77	THR
10	H	78	SER
10	H	81	ILE
10	H	91	PHE
10	H	94	ASN
10	H	104	GLU
10	H	116	ARG
10	H	119	ARG
10	H	126	ILE
10	H	127	VAL
10	H	129	LEU
11	I	4	HIS
11	I	13	ARG
11	I	14	LYS
11	I	26	THR
11	I	28	LYS
11	I	34	HIS
11	I	38	LYS
11	I	45	LYS
11	I	53	ARG
11	I	54	SER
11	I	73	GLU
11	I	88	PHE
11	I	103	ASN
11	I	114	ILE
11	I	120	VAL
11	I	121	HIS
11	I	130	ILE
12	J	7	ARG
12	J	10	PHE
12	J	11	ARG
12	J	21	ASP
12	J	28	VAL
12	J	43	ILE
12	J	57	ARG
12	J	60	ARG
12	J	64	LYS
12	J	65	ILE

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Mol	Chain	Res	Type
12	J	70	PHE
12	J	75	VAL
12	J	91	VAL
12	J	93	TYR
12	J	95	VAL
12	J	106	GLU
12	J	119	PHE
12	J	128	ILE
12	J	134	LYS
13	K	5	LYS
13	K	8	ARG
13	K	10	LEU
13	K	11	ASN
13	K	15	SER
13	K	17	ARG
13	K	26	THR
13	K	37	THR
13	K	43	GLU
13	K	45	ARG
13	K	50	GLN
13	K	64	ARG
13	K	76	VAL
13	K	79	VAL
13	K	83	VAL
13	K	95	THR
13	K	97	ILE
13	K	99	ARG
13	K	104	ARG
13	K	109	THR
13	K	112	LEU
14	L	8	ARG
14	L	13	THR
14	L	24	SER
14	L	31	VAL
14	L	36	LYS
14	L	42	ILE
14	L	43	ILE
14	L	46	SER
14	L	50	THR
14	L	56	SER
14	L	59	LEU
14	L	60	LYS

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Mol	Chain	Res	Type
14	L	63	ASN
14	L	64	LYS
14	L	66	ASP
14	L	67	THR
14	L	71	VAL
14	L	87	VAL
14	L	89	PHE
14	L	90	ASP
14	L	91	ARG
14	L	94	TYR
14	L	95	LYS
15	M	5	ILE
15	M	13	LEU
15	M	21	THR
15	M	24	LEU
15	M	31	ASP
15	M	51	GLU
15	M	54	VAL
15	M	58	ASN
15	M	66	PHE
15	M	69	ARG
15	M	72	SER
15	M	92	THR
15	M	94	VAL
15	M	101	ARG
15	M	109	GLU
16	N	10	ARG
16	N	18	LEU
16	N	28	ARG
16	N	30	LYS
16	N	40	LEU
16	N	49	ASP
16	N	51	ARG
16	N	56	ASP
16	N	60	LEU
16	N	85	ARG
16	N	87	ASN
16	N	88	ILE
16	N	93	LYS
16	N	97	ASP
16	N	98	ILE
16	N	111	ASP

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Mol	Chain	Res	Type
17	O	5	ILE
17	O	20	ILE
17	O	22	VAL
17	O	33	VAL
17	O	35	LEU
17	O	38	LEU
17	O	54	TYR
17	O	84	THR
18	P	9	ARG
18	P	11	LYS
18	P	16	GLN
18	P	17	GLN
18	P	20	LEU
18	P	27	VAL
18	P	32	ARG
18	P	35	PRO
18	P	40	LEU
18	P	48	LYS
18	P	54	GLU
18	P	61	PRO
18	P	65	SER
18	P	91	PHE
18	P	101	PRO
18	P	107	ILE
18	P	124	ILE
19	Q	6	ILE
19	Q	7	LEU
19	Q	12	ILE
19	Q	14	GLU
19	Q	26	SER
19	Q	27	PHE
19	Q	29	VAL
19	Q	31	PRO
19	Q	34	THR
19	Q	38	ILE
19	Q	40	ASP
19	Q	42	ILE
19	Q	43	GLN
19	Q	44	GLN
19	Q	54	SER
19	Q	68	PHE
19	Q	81	ARG

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Mol	Chain	Res	Type
20	R	11	ASN
20	R	14	LEU
20	R	16	PHE
20	R	18	LYS
20	R	23	ILE
20	R	25	LEU
20	R	35	LYS
20	R	38	LEU
20	R	71	GLN
20	R	73	GLU
20	R	76	LEU
20	R	80	LYS
20	R	83	LEU
20	R	85	ASP
20	R	93	ARG
20	R	96	LYS
20	R	105	ARG
20	R	106	VAL
21	S	3	LEU
21	S	13	LYS
21	S	15	ASP
21	S	24	TYR
21	S	28	ASN
21	S	32	PHE
21	S	34	LEU
21	S	35	ASP
21	S	45	GLN
21	S	53	ASP
21	S	71	MET
21	S	75	LYS
21	S	76	ARG
21	S	79	ILE
21	S	92	VAL
21	S	94	VAL
21	S	99	HIS
21	S	100	THR
21	S	105	GLN
21	S	107	GLU
21	S	112	LEU
21	S	113	VAL
21	S	120	LEU
21	S	122	ILE

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Mol	Chain	Res	Type
21	S	133	GLU
21	S	143	ILE
21	S	152	ILE
21	S	158	CYS
21	S	160	LEU
21	S	169	VAL
21	S	172	LEU
22	T	3	HIS
22	T	4	LYS
22	T	16	SER
22	T	23	VAL
22	T	35	ASN
22	T	40	GLN
22	T	60	PHE
23	U	10	LYS
23	U	12	ASN
23	U	30	VAL
23	U	32	ARG
23	U	34	THR
23	U	37	ILE
23	U	42	GLN
23	U	45	ASN
23	U	61	TRP
23	U	72	LYS
23	U	75	TYR
23	U	78	ILE
24	V	1	MET
24	V	7	ARG
24	V	10	GLN
24	V	21	ARG
24	V	28	LEU
24	V	37	LEU
24	V	53	LEU
24	V	62	ARG
24	V	65	GLU
25	W	9	VAL
25	W	10	ILE
25	W	12	ARG
25	W	15	ASN
25	W	17	VAL
25	W	28	ILE
25	W	30	ASP

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Mol	Chain	Res	Type
25	W	37	THR
25	W	40	VAL
25	W	45	LYS
25	W	47	VAL
25	W	51	LEU
26	Y	4	HIS
26	Y	9	LYS
26	Y	25	LEU
26	Y	32	GLU
26	Y	35	GLN
26	Y	41	LEU
26	Y	46	CYS
26	Y	56	GLN
26	Y	58	LEU
30	4	1	MET
30	4	9	LYS
30	4	12	ASP
30	4	23	VAL
30	4	35	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (96) such sidechains are listed below:

Mol	Chain	Res	Type
3	A	143	HIS
3	A	154	GLN
3	A	166	GLN
3	A	220	HIS
3	A	231	HIS
4	B	13	GLN
4	B	17	ASN
4	B	35	GLN
4	B	129	HIS
4	B	143	GLN
4	B	168	GLN
4	B	180	ASN
4	B	192	ASN
5	C	9	GLN
5	C	50	GLN
5	C	61	GLN
5	C	66	ASN
5	C	132	ASN
5	C	140	ASN

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Mol	Chain	Res	Type
5	C	156	ASN
5	C	176	ASN
6	D	11	GLN
6	D	19	GLN
6	D	37	ASN
6	D	171	GLN
7	E	18	ASN
7	E	20	GLN
7	E	45	GLN
7	E	106	ASN
7	E	111	HIS
7	E	139	GLN
9	G	66	HIS
9	G	84	ASN
9	G	87	GLN
9	G	129	HIS
9	G	156	HIS
9	G	158	HIS
9	G	161	GLN
9	G	164	GLN
10	H	26	ASN
10	H	100	ASN
10	H	102	GLN
11	I	37	GLN
11	I	67	ASN
11	I	79	GLN
11	I	121	HIS
12	J	13	GLN
12	J	58	HIS
13	K	13	ASN
14	L	49	GLN
14	L	86	GLN
15	M	2	GLN
15	M	4	HIS
15	M	18	GLN
15	M	48	GLN
15	M	89	ASN
16	N	31	GLN
16	N	34	ASN
16	N	37	GLN
16	N	41	ASN
16	N	66	ASN

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Mol	Chain	Res	Type
16	N	81	ASN
17	O	11	GLN
17	O	44	GLN
17	O	88	GLN
18	P	16	GLN
18	P	17	GLN
18	P	81	HIS
18	P	115	ASN
19	Q	73	ASN
20	R	11	ASN
20	R	32	GLN
20	R	44	GLN
20	R	57	ASN
20	R	64	ASN
21	S	28	ASN
21	S	45	GLN
21	S	70	GLN
21	S	119	ASN
21	S	142	ASN
21	S	146	HIS
22	T	3	HIS
22	T	17	ASN
22	T	57	HIS
23	U	12	ASN
23	U	16	ASN
24	V	10	GLN
24	V	36	GLN
24	V	45	GLN
24	V	52	GLN
26	Y	4	HIS
26	Y	29	ASN
26	Y	43	HIS
26	Y	44	HIS
26	Y	56	GLN
30	4	34	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	X	2680/2880 (93%)	690 (25%)	283 (10%)
2	Z	121/123 (98%)	24 (19%)	0

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
All	All	2801/3003 (93%)	714 (25%)	283 (10%)

All (714) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	X	13	A
1	X	14	A
1	X	27	G
1	X	34	U
1	X	35	G
1	X	45	C
1	X	49	U
1	X	51	A
1	X	59	G
1	X	60	A
1	X	63	A
1	X	67	G
1	X	69	G
1	X	70	A
1	X	71	A
1	X	72	A
1	X	74	G
1	X	76	C
1	X	82	G
1	X	84	G
1	X	87	G
1	X	89	A
1	X	90	G
1	X	91	A
1	X	99	U
1	X	102	C
1	X	110	U
1	X	116	A
1	X	117	A
1	X	118	U
1	X	119	G
1	X	123	A
1	X	124	A
1	X	129	A
1	X	135	U
1	X	143	A
1	X	158	A

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Mol	Chain	Res	Type
1	X	173	A
1	X	174	A
1	X	176	A
1	X	177	U
1	X	181	A
1	X	182	G
1	X	193	A
1	X	199	A
1	X	200	A
1	X	204	A
1	X	205	A
1	X	206	U
1	X	210	A
1	X	218	A
1	X	219	G
1	X	225	G
1	X	228	A
1	X	242	A
1	X	243	G
1	X	244	C
1	X	245	C
1	X	304	A
1	X	305	A
1	X	318	G
1	X	323	G
1	X	333	A
1	X	334	G
1	X	335	A
1	X	340	G
1	X	341	A
1	X	342	G
1	X	343	A
1	X	399	G
1	X	400	U
1	X	403	A
1	X	404	A
1	X	409	G
1	X	412	U
1	X	414	A
1	X	416	U
1	X	418	C
1	X	419	G

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Mol	Chain	Res	Type
1	X	424	G
1	X	425	A
1	X	441	A
1	X	447	U
1	X	455	A
1	X	456	C
1	X	458	G
1	X	459	A
1	X	460	U
1	X	461	A
1	X	463	C
1	X	467	U
1	X	468	A
1	X	470	U
1	X	485	G
1	X	486	U
1	X	490	A
1	X	491	A
1	X	492	G
1	X	493	A
1	X	494	A
1	X	497	C
1	X	514	G
1	X	515	A
1	X	517	A
1	X	519	C
1	X	537	C
1	X	538	A
1	X	539	A
1	X	540	G
1	X	541	C
1	X	542	A
1	X	543	G
1	X	554	U
1	X	555	U
1	X	556	A
1	X	558	G
1	X	560	G
1	X	571	U
1	X	572	G
1	X	580	A
1	X	581	A

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Mol	Chain	Res	Type
1	X	582	G
1	X	583	C
1	X	584	A
1	X	595	A
1	X	596	C
1	X	597	U
1	X	601	A
1	X	613	A
1	X	614	G
1	X	624	A
1	X	625	A
1	X	626	A
1	X	627	A
1	X	631	G
1	X	632	A
1	X	633	G
1	X	636	G
1	X	639	G
1	X	649	G
1	X	651	C
1	X	652	C
1	X	654	A
1	X	655	A
1	X	657	A
1	X	664	C
1	X	665	A
1	X	667	U
1	X	668	A
1	X	683	A
1	X	684	C
1	X	690	A
1	X	699	G
1	X	700	C
1	X	718	A
1	X	728	G
1	X	730	C
1	X	732	G
1	X	740	A
1	X	742	G
1	X	743	A
1	X	751	G
1	X	752	G

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Mol	Chain	Res	Type
1	X	753	U
1	X	760	U
1	X	766	A
1	X	776	G
1	X	777	A
1	X	778	G
1	X	789	G
1	X	790	A
1	X	795	A
1	X	796	A
1	X	797	A
1	X	798	G
1	X	802	A
1	X	803	C
1	X	804	C
1	X	805	G
1	X	806	A
1	X	813	A
1	X	814	G
1	X	815	A
1	X	818	G
1	X	819	C
1	X	825	C
1	X	832	A
1	X	840	U
1	X	841	G
1	X	843	G
1	X	844	G
1	X	859	U
1	X	871	U
1	X	872	G
1	X	873	U
1	X	874	A
1	X	879	A
1	X	922	A
1	X	926	C
1	X	927	C
1	X	931	G
1	X	939	C
1	X	940	G
1	X	943	U
1	X	952	A

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Mol	Chain	Res	Type
1	X	956	A
1	X	957	G
1	X	964	A
1	X	968	C
1	X	969	U
1	X	970	A
1	X	972	C
1	X	973	U
1	X	983	G
1	X	984	A
1	X	985	G
1	X	986	A
1	X	994	A
1	X	995	A
1	X	996	C
1	X	1006	C
1	X	1007	A
1	X	1014	G
1	X	1016	C
1	X	1017	C
1	X	1019	U
1	X	1021	A
1	X	1022	A
1	X	1023	U
1	X	1024	G
1	X	1032	A
1	X	1033	G
1	X	1034	U
1	X	1036	G
1	X	1037	U
1	X	1044	U
1	X	1050	G
1	X	1051	U
1	X	1053	G
1	X	1056	U
1	X	1057	A
1	X	1058	G
1	X	1059	A
1	X	1068	A
1	X	1070	G
1	X	1071	U
1	X	1072	U

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Mol	Chain	Res	Type
1	X	1073	G
1	X	1077	U
1	X	1078	A
1	X	1079	G
1	X	1081	A
1	X	1082	G
1	X	1086	C
1	X	1087	C
1	X	1090	C
1	X	1096	A
1	X	1097	A
1	X	1098	G
1	X	1099	A
1	X	1100	G
1	X	1108	U
1	X	1119	U
1	X	1122	A
1	X	1123	G
1	X	1129	A
1	X	1137	A
1	X	1138	A
1	X	1139	A
1	X	1140	A
1	X	1141	U
1	X	1142	G
1	X	1143	A
1	X	1145	C
1	X	1146	G
1	X	1152	C
1	X	1153	A
1	X	1154	A
1	X	1155	G
1	X	1161	U
1	X	1167	A
1	X	1168	G
1	X	1182	U
1	X	1185	C
1	X	1186	G
1	X	1187	A
1	X	1189	G
1	X	1192	A
1	X	1194	U

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Mol	Chain	Res	Type
1	X	1200	G
1	X	1220	G
1	X	1224	A
1	X	1233	A
1	X	1234	C
1	X	1240	G
1	X	1250	A
1	X	1251	G
1	X	1253	C
1	X	1260	A
1	X	1261	G
1	X	1262	U
1	X	1263	G
1	X	1264	C
1	X	1265	G
1	X	1266	G
1	X	1269	G
1	X	1278	A
1	X	1279	G
1	X	1284	G
1	X	1285	A
1	X	1288	A
1	X	1289	A
1	X	1300	A
1	X	1301	U
1	X	1302	C
1	X	1313	U
1	X	1314	A
1	X	1315	A
1	X	1316	G
1	X	1324	G
1	X	1325	U
1	X	1326	U
1	X	1333	G
1	X	1334	A
1	X	1338	G
1	X	1339	U
1	X	1342	U
1	X	1343	C
1	X	1346	C
1	X	1354	A
1	X	1355	A

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Mol	Chain	Res	Type
1	X	1356	G
1	X	1358	C
1	X	1359	G
1	X	1365	U
1	X	1370	U
1	X	1378	A
1	X	1392	U
1	X	1398	G
1	X	1399	C
1	X	1405	A
1	X	1410	U
1	X	1411	C
1	X	1428	G
1	X	1429	A
1	X	1430	G
1	X	1432	G
1	X	1433	A
1	X	1434	U
1	X	1435	G
1	X	1440	G
1	X	1441	A
1	X	1442	C
1	X	1443	G
1	X	1454	U
1	X	1460	G
1	X	1464	A
1	X	1467	U
1	X	1468	A
1	X	1469	U
1	X	1470	G
1	X	1474	A
1	X	1475	U
1	X	1476	G
1	X	1482	U
1	X	1490	U
1	X	1497	C
1	X	1498	G
1	X	1505	U
1	X	1506	C
1	X	1513	U
1	X	1514	C
1	X	1524	C

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Mol	Chain	Res	Type
1	X	1525	A
1	X	1527	G
1	X	1528	C
1	X	1531	C
1	X	1551	U
1	X	1553	G
1	X	1554	G
1	X	1562	G
1	X	1563	U
1	X	1570	C
1	X	1571	G
1	X	1574	A
1	X	1575	C
1	X	1576	G
1	X	1582	A
1	X	1583	A
1	X	1585	A
1	X	1594	U
1	X	1601	U
1	X	1602	G
1	X	1603	A
1	X	1608	U
1	X	1609	G
1	X	1618	U
1	X	1619	A
1	X	1624	A
1	X	1625	A
1	X	1626	A
1	X	1627	C
1	X	1631	C
1	X	1632	A
1	X	1633	C
1	X	1635	G
1	X	1648	C
1	X	1651	U
1	X	1652	G
1	X	1657	A
1	X	1663	C
1	X	1664	G
1	X	1665	C
1	X	1670	G
1	X	1671	A

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Mol	Chain	Res	Type
1	X	1685	A
1	X	1686	A
1	X	1691	G
1	X	1692	C
1	X	1698	C
1	X	1699	A
1	X	1710	U
1	X	1711	C
1	X	1712	G
1	X	1713	G
1	X	1715	A
1	X	1716	G
1	X	1717	A
1	X	1718	A
1	X	1724	C
1	X	1732	U
1	X	1733	U
1	X	1747	G
1	X	1749	G
1	X	1750	A
1	X	1752	U
1	X	1754	G
1	X	1755	G
1	X	1758	C
1	X	1764	A
1	X	1771	A
1	X	1772	C
1	X	1773	C
1	X	1776	A
1	X	1778	U
1	X	1782	A
1	X	1790	G
1	X	1791	C
1	X	1792	C
1	X	1793	A
1	X	1800	A
1	X	1801	C
1	X	1802	A
1	X	1807	A
1	X	1808	C
1	X	1811	A
1	X	1812	U

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Mol	Chain	Res	Type
1	X	1813	A
1	X	1820	G
1	X	1821	A
1	X	1825	C
1	X	1830	C
1	X	1831	G
1	X	1842	G
1	X	1864	G
1	X	1883	A
1	X	1884	A
1	X	1910	A
1	X	1912	G
1	X	1914	U
1	X	1919	A
1	X	1920	A
1	X	1922	U
1	X	1923	U
1	X	1924	C
1	X	1925	C
1	X	1926	U
1	X	1927	U
1	X	1928	G
1	X	1937	G
1	X	1938	U
1	X	1939	U
1	X	1946	U
1	X	1947	G
1	X	1948	C
1	X	1949	A
1	X	1950	C
1	X	1953	A
1	X	1954	A
1	X	1955	G
1	X	1961	A
1	X	1964	A
1	X	1974	U
1	X	1976	U
1	X	1979	C
1	X	1980	A
1	X	1996	A
1	X	2003	A
1	X	2004	U

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Mol	Chain	Res	Type
1	X	2005	U
1	X	2006	G
1	X	2014	A
1	X	2015	G
1	X	2016	A
1	X	2019	C
1	X	2026	C
1	X	2034	A
1	X	2035	G
1	X	2038	C
1	X	2039	G
1	X	2044	G
1	X	2045	A
1	X	2046	C
1	X	2050	G
1	X	2051	U
1	X	2052	G
1	X	2057	U
1	X	2058	U
1	X	2073	A
1	X	2075	U
1	X	2076	G
1	X	2083	G
1	X	2089	C
1	X	2171	U
1	X	2181	A
1	X	2189	A
1	X	2190	A
1	X	2191	A
1	X	2192	U
1	X	2199	C
1	X	2204	A
1	X	2205	C
1	X	2217	G
1	X	2218	G
1	X	2229	G
1	X	2230	G
1	X	2238	G
1	X	2241	U
1	X	2245	A
1	X	2246	A
1	X	2247	A

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Mol	Chain	Res	Type
1	X	2254	C
1	X	2255	G
1	X	2262	C
1	X	2266	A
1	X	2267	A
1	X	2268	G
1	X	2275	U
1	X	2276	C
1	X	2285	U
1	X	2286	G
1	X	2287	G
1	X	2288	A
1	X	2291	U
1	X	2298	U
1	X	2300	G
1	X	2301	A
1	X	2307	A
1	X	2313	G
1	X	2314	A
1	X	2315	A
1	X	2316	G
1	X	2323	U
1	X	2324	G
1	X	2325	A
1	X	2326	C
1	X	2356	A
1	X	2362	G
1	X	2364	C
1	X	2369	U
1	X	2381	A
1	X	2382	C
1	X	2386	G
1	X	2396	C
1	X	2402	U
1	X	2403	C
1	X	2405	A
1	X	2406	C
1	X	2408	G
1	X	2410	U
1	X	2414	A
1	X	2418	A
1	X	2419	C

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Mol	Chain	Res	Type
1	X	2420	C
1	X	2427	A
1	X	2428	U
1	X	2437	G
1	X	2438	A
1	X	2452	U
1	X	2455	A
1	X	2470	U
1	X	2476	A
1	X	2477	C
1	X	2481	G
1	X	2482	A
1	X	2483	U
1	X	2484	G
1	X	2485	U
1	X	2486	C
1	X	2492	G
1	X	2497	A
1	X	2498	U
1	X	2499	C
1	X	2501	U
1	X	2508	G
1	X	2521	A
1	X	2522	G
1	X	2545	A
1	X	2546	G
1	X	2552	C
1	X	2553	G
1	X	2561	G
1	X	2565	C
1	X	2578	G
1	X	2581	A
1	X	2582	G
1	X	2588	U
1	X	2589	C
1	X	2591	C
1	X	2592	U
1	X	2593	A
1	X	2594	U
1	X	2595	C
1	X	2608	A
1	X	2609	G

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Mol	Chain	Res	Type
1	X	2619	G
1	X	2624	G
1	X	2625	U
1	X	2633	A
1	X	2634	G
1	X	2649	A
1	X	2660	C
1	X	2661	G
1	X	2668	U
1	X	2669	C
1	X	2670	C
1	X	2691	C
1	X	2692	A
1	X	2693	U
1	X	2694	G
1	X	2705	A
1	X	2706	U
1	X	2707	G
1	X	2712	G
1	X	2713	A
1	X	2719	U
1	X	2730	A
1	X	2731	G
1	X	2732	C
1	X	2736	U
1	X	2737	A
1	X	2738	A
1	X	2744	A
1	X	2745	A
1	X	2746	G
1	X	2757	G
1	X	2758	A
1	X	2759	U
1	X	2760	G
1	X	2761	A
1	X	2762	G
1	X	2770	A
1	X	2771	C
1	X	2774	U
1	X	2775	U
1	X	2776	U
1	X	2780	A

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Mol	Chain	Res	Type
1	X	2782	G
1	X	2783	U
1	X	2795	A
1	X	2796	A
1	X	2798	A
1	X	2807	U
1	X	2808	U
1	X	2810	A
1	X	2811	G
1	X	2823	G
1	X	2824	C
1	X	2825	A
1	X	2840	U
1	X	2841	U
1	X	2842	C
1	X	2847	G
1	X	2850	U
1	X	2854	G
1	X	2855	C
1	X	2858	A
1	X	2867	G
1	X	2868	G
1	X	2869	U
2	Z	3	A
2	Z	4	C
2	Z	14	C
2	Z	15	A
2	Z	17	A
2	Z	18	G
2	Z	27	A
2	Z	28	A
2	Z	37	C
2	Z	43	G
2	Z	44	C
2	Z	46	G
2	Z	47	A
2	Z	54	U
2	Z	56	G
2	Z	63	A
2	Z	68	A
2	Z	69	G
2	Z	76	U

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Mol	Chain	Res	Type
2	Z	99	G
2	Z	102	A
2	Z	111	C
2	Z	112	A
2	Z	123	U

All (283) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	X	13	A
1	X	27	G
1	X	33	C
1	X	48	A
1	X	69	G
1	X	70	A
1	X	71	A
1	X	73	A
1	X	117	A
1	X	118	U
1	X	123	A
1	X	154	U
1	X	173	A
1	X	176	A
1	X	181	A
1	X	182	G
1	X	192	G
1	X	198	A
1	X	199	A
1	X	218	A
1	X	312	G
1	X	322	A
1	X	334	G
1	X	340	G
1	X	341	A
1	X	342	G
1	X	398	C
1	X	399	G
1	X	403	A
1	X	424	G
1	X	454	G
1	X	458	G
1	X	459	A

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Mol	Chain	Res	Type
1	X	460	U
1	X	466	A
1	X	467	U
1	X	468	A
1	X	469	G
1	X	485	G
1	X	490	A
1	X	492	G
1	X	513	A
1	X	516	G
1	X	538	A
1	X	539	A
1	X	540	G
1	X	541	C
1	X	553	C
1	X	557	U
1	X	571	U
1	X	580	A
1	X	582	G
1	X	583	C
1	X	596	C
1	X	613	A
1	X	631	G
1	X	638	A
1	X	648	A
1	X	664	C
1	X	682	G
1	X	683	A
1	X	698	A
1	X	699	G
1	X	717	G
1	X	739	G
1	X	741	G
1	X	752	G
1	X	759	C
1	X	765	C
1	X	775	U
1	X	777	A
1	X	788	G
1	X	789	G
1	X	795	A
1	X	801	A

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Mol	Chain	Res	Type
1	X	802	A
1	X	803	C
1	X	804	C
1	X	805	G
1	X	806	A
1	X	813	A
1	X	814	G
1	X	818	G
1	X	824	U
1	X	842	A
1	X	843	G
1	X	871	U
1	X	872	G
1	X	925	U
1	X	938	G
1	X	939	C
1	X	956	A
1	X	969	U
1	X	972	C
1	X	984	A
1	X	985	G
1	X	994	A
1	X	995	A
1	X	1000	G
1	X	1006	C
1	X	1031	C
1	X	1033	G
1	X	1036	G
1	X	1055	A
1	X	1071	U
1	X	1096	A
1	X	1139	A
1	X	1141	U
1	X	1142	G
1	X	1153	A
1	X	1154	A
1	X	1167	A
1	X	1186	G
1	X	1223	G
1	X	1233	A
1	X	1249	G
1	X	1260	A

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Mol	Chain	Res	Type
1	X	1261	G
1	X	1263	G
1	X	1264	C
1	X	1265	G
1	X	1266	G
1	X	1278	A
1	X	1285	A
1	X	1288	A
1	X	1299	A
1	X	1301	U
1	X	1313	U
1	X	1314	A
1	X	1315	A
1	X	1324	G
1	X	1325	U
1	X	1333	G
1	X	1337	G
1	X	1338	G
1	X	1342	U
1	X	1345	G
1	X	1353	A
1	X	1354	A
1	X	1355	A
1	X	1357	U
1	X	1391	A
1	X	1398	G
1	X	1409	U
1	X	1410	U
1	X	1439	G
1	X	1441	A
1	X	1442	C
1	X	1459	U
1	X	1473	U
1	X	1474	A
1	X	1475	U
1	X	1496	G
1	X	1513	U
1	X	1552	C
1	X	1562	G
1	X	1575	C
1	X	1601	U
1	X	1607	A

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Mol	Chain	Res	Type
1	X	1613	G
1	X	1618	U
1	X	1623	C
1	X	1624	A
1	X	1626	A
1	X	1631	C
1	X	1632	A
1	X	1633	C
1	X	1634	A
1	X	1651	U
1	X	1664	G
1	X	1670	G
1	X	1684	G
1	X	1685	A
1	X	1691	G
1	X	1698	C
1	X	1710	U
1	X	1711	C
1	X	1715	A
1	X	1716	G
1	X	1749	G
1	X	1771	A
1	X	1772	C
1	X	1775	A
1	X	1777	A
1	X	1790	G
1	X	1791	C
1	X	1799	A
1	X	1807	A
1	X	1810	U
1	X	1811	A
1	X	1820	G
1	X	1830	C
1	X	1883	A
1	X	1920	A
1	X	1922	U
1	X	1923	U
1	X	1926	U
1	X	1927	U
1	X	1937	G
1	X	1938	U
1	X	1947	G

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Mol	Chain	Res	Type
1	X	1953	A
1	X	1963	G
1	X	1975	G
1	X	1979	C
1	X	1995	G
1	X	2004	U
1	X	2005	U
1	X	2014	A
1	X	2015	G
1	X	2016	A
1	X	2018	G
1	X	2034	A
1	X	2044	G
1	X	2045	A
1	X	2050	G
1	X	2057	U
1	X	2075	U
1	X	2088	U
1	X	2204	A
1	X	2217	G
1	X	2228	U
1	X	2237	C
1	X	2245	A
1	X	2254	C
1	X	2261	G
1	X	2265	A
1	X	2267	A
1	X	2275	U
1	X	2312	A
1	X	2313	G
1	X	2324	G
1	X	2363	G
1	X	2370	G
1	X	2381	A
1	X	2404	A
1	X	2405	A
1	X	2409	A
1	X	2418	A
1	X	2426	G
1	X	2427	A
1	X	2428	U
1	X	2437	G

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Mol	Chain	Res	Type
1	X	2469	G
1	X	2476	A
1	X	2482	A
1	X	2485	U
1	X	2496	C
1	X	2497	A
1	X	2498	U
1	X	2521	A
1	X	2551	A
1	X	2560	G
1	X	2564	U
1	X	2580	C
1	X	2588	U
1	X	2589	C
1	X	2592	U
1	X	2593	A
1	X	2608	A
1	X	2624	G
1	X	2633	A
1	X	2660	C
1	X	2668	U
1	X	2669	C
1	X	2693	U
1	X	2705	A
1	X	2706	U
1	X	2712	G
1	X	2736	U
1	X	2756	A
1	X	2758	A
1	X	2759	U
1	X	2760	G
1	X	2770	A
1	X	2807	U
1	X	2810	A
1	X	2823	G
1	X	2824	C
1	X	2841	U
1	X	2848	A
1	X	2854	G
1	X	2867	G

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 38 ligands modelled in this entry, 37 are monoatomic - leaving 1 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
32	ZLD	X	2911	-	26,26,26	1.23	2 (7%)	36,36,36	2.77	10 (27%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	ZLD	X	2911	-	-	8/13/33/33	0/3/3/3

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	X	2911	ZLD	O10-C7	3.30	1.40	1.35
32	X	2911	ZLD	C5-C16	2.08	1.41	1.37

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	X	2911	ZLD	C6-C8-C9	8.84	123.40	113.38
32	X	2911	ZLD	O10-C8-C9	7.74	117.90	109.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	X	2911	ZLD	C2-N4-C7	-6.42	119.25	125.98
32	X	2911	ZLD	O15-C7-N4	4.35	132.83	128.80
32	X	2911	ZLD	O10-C7-N4	-4.00	106.55	109.92
32	X	2911	ZLD	C5-C16-C17	-3.82	119.97	123.35
32	X	2911	ZLD	C6-N4-C7	3.68	113.89	111.17
32	X	2911	ZLD	F18-C16-C17	2.35	120.61	118.37
32	X	2911	ZLD	C2-C5-C16	2.09	121.18	118.86
32	X	2911	ZLD	C5-C2-N4	2.03	122.59	119.84

There are no chirality outliers.

All (8) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
32	X	2911	ZLD	C5-C2-N4-C7
32	X	2911	ZLD	C1-C2-N4-C7
32	X	2911	ZLD	C6-C8-C9-N11
32	X	2911	ZLD	O10-C8-C9-N11
32	X	2911	ZLD	C13-C12-N11-C9
32	X	2911	ZLD	O14-C12-N11-C9
32	X	2911	ZLD	C16-C17-N19-C20
32	X	2911	ZLD	C3-C17-N19-C20

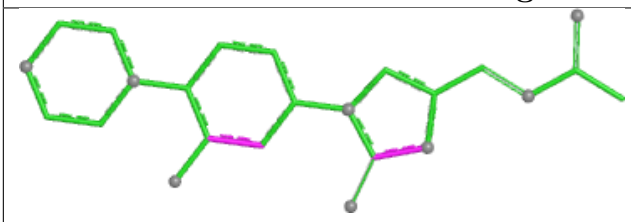
There are no ring outliers.

1 monomer is involved in 22 short contacts:

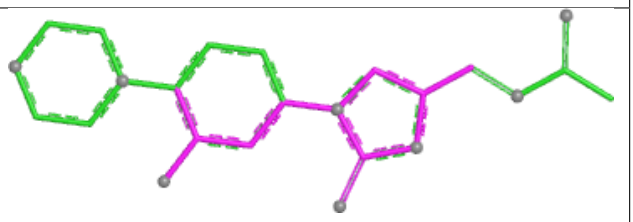
Mol	Chain	Res	Type	Clashes	Symm-Clashes
32	X	2911	ZLD	22	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

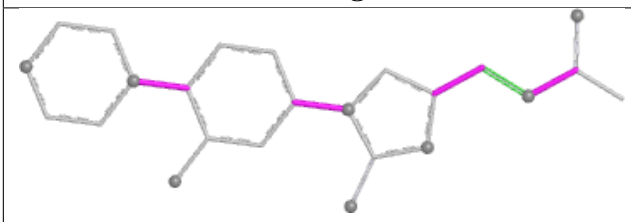
Ligand ZLD X 2911



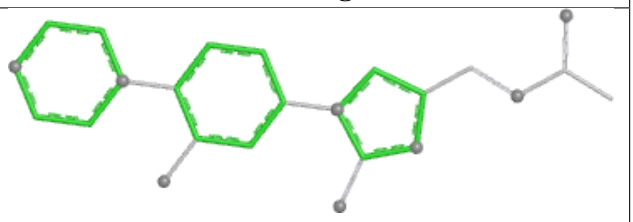
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 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	X	2686/2880 (93%)	1.46	676 (25%) 1 2	1, 35, 97, 115	0
2	Z	122/123 (99%)	1.99	56 (45%) 0 1	28, 74, 94, 101	0
3	A	218/274 (79%)	1.27	37 (16%) 4 4	8, 44, 57, 63	0
4	B	205/211 (97%)	0.31	8 (3%) 43 23	1, 12, 35, 53	0
5	C	197/205 (96%)	0.82	20 (10%) 12 8	2, 45, 62, 78	0
6	D	177/180 (98%)	1.27	38 (21%) 2 3	54, 65, 73, 76	0
7	E	171/185 (92%)	1.09	26 (15%) 5 5	38, 59, 72, 76	0
8	F	70/144 (48%)	2.07	29 (41%) 0 1	62, 71, 75, 76	0
9	G	142/174 (81%)	0.87	19 (13%) 7 6	19, 37, 53, 57	0
10	H	134/134 (100%)	0.32	1 (0%) 84 63	1, 8, 30, 42	0
11	I	141/156 (90%)	1.49	36 (25%) 1 2	10, 54, 69, 84	0
12	J	136/142 (95%)	0.93	19 (13%) 6 5	25, 44, 59, 66	0
13	K	113/116 (97%)	0.40	5 (4%) 39 21	1, 2, 13, 23	0
14	L	104/114 (91%)	1.18	22 (21%) 2 3	38, 54, 61, 67	0
15	M	108/166 (65%)	0.36	1 (0%) 81 58	1, 11, 40, 46	0
16	N	117/118 (99%)	0.74	10 (8%) 16 11	2, 32, 55, 64	0
17	O	94/100 (94%)	0.82	14 (14%) 5 5	13, 46, 63, 66	0
18	P	127/134 (94%)	0.33	4 (3%) 51 29	1, 10, 40, 57	0
19	Q	93/95 (97%)	0.95	14 (15%) 5 5	23, 36, 60, 63	0
20	R	110/115 (95%)	0.88	12 (10%) 10 7	32, 44, 66, 70	0
21	S	175/237 (73%)	1.16	29 (16%) 4 4	53, 62, 72, 79	0
22	T	84/91 (92%)	1.11	14 (16%) 4 4	23, 47, 66, 69	0
23	U	72/81 (88%)	1.43	21 (29%) 1 1	39, 52, 63, 64	0
24	V	66/67 (98%)	0.54	5 (7%) 20 13	34, 52, 72, 76	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
25	W	55/55 (100%)	0.63	3 (5%) 30 18	32, 41, 57, 66	0
26	Y	58/60 (96%)	0.45	4 (6%) 23 14	1, 7, 32, 34	0
27	1	53/55 (96%)	13.62	53 (100%) 0 0	33, 47, 62, 65	0
28	2	46/47 (97%)	11.97	46 (100%) 0 0	1, 12, 25, 35	0
29	3	63/66 (95%)	12.77	63 (100%) 0 0	23, 34, 43, 50	0
30	4	37/37 (100%)	1.42	8 (21%) 2 3	52, 65, 72, 73	0
All	All	5974/6562 (91%)	1.50	1293 (21%) 2 3	1, 41, 84, 115	0

All (1293) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
29	3	64	ARG	36.4
27	1	7	ARG	32.5
27	1	5	GLY	27.9
29	3	51	ALA	24.1
27	1	6	PRO	23.2
29	3	38	GLY	22.3
28	2	27	GLY	22.2
27	1	31	THR	21.0
28	2	11	LYS	20.7
28	2	10	ARG	20.6
29	3	10	ALA	20.5
27	1	2	ALA	20.4
27	1	15	SER	18.7
28	2	46	ASP	18.5
29	3	28	GLY	18.3
28	2	44	VAL	18.2
29	3	24	ALA	17.9
29	3	9	MET	17.9
29	3	63	PRO	17.7
29	3	27	SER	17.7
27	1	34	LYS	17.6
29	3	53	ALA	17.5
29	3	49	VAL	17.3
29	3	21	LYS	17.1
27	1	33	ALA	16.9
29	3	29	LYS	16.9
28	2	8	ASN	16.7
29	3	61	MET	16.7
29	3	47	GLY	16.4

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Mol	Chain	Res	Type	RSRZ
27	1	39	LYS	16.4
28	2	22	MET	16.4
27	1	50	PHE	16.3
29	3	52	LYS	16.1
29	3	62	LEU	16.1
27	1	35	LEU	16.1
27	1	25	THR	16.0
29	3	4	MET	15.7
27	1	27	ASN	15.7
28	2	9	ASN	15.6
28	2	24	THR	15.5
29	3	55	TRP	15.4
27	1	19	GLY	15.4
27	1	28	ARG	15.4
27	1	32	GLN	15.4
28	2	37	LYS	15.3
29	3	20	GLY	15.3
29	3	7	HIS	15.2
27	1	44	ALA	15.2
29	3	19	THR	15.2
29	3	33	ASN	14.6
27	1	45	LYS	14.6
28	2	13	ALA	14.5
27	1	12	MET	14.5
28	2	43	THR	14.4
29	3	37	SER	14.3
29	3	2	PRO	14.3
29	3	18	GLY	14.3
29	3	6	THR	14.1
28	2	31	LEU	14.1
29	3	13	ARG	14.1
27	1	21	TYR	13.9
27	1	10	VAL	13.8
28	2	4	THR	13.8
29	3	54	GLU	13.7
27	1	42	PRO	13.5
27	1	30	ASN	13.5
29	3	48	PHE	13.5
27	1	47	HIS	13.3
29	3	45	GLY	13.3
29	3	43	GLY	13.2
28	2	16	HIS	13.1

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Mol	Chain	Res	Type	RSRZ
28	2	45	SER	13.1
28	2	18	PHE	12.9
28	2	30	ILE	12.9
27	1	38	LYS	12.9
29	3	3	LYS	12.8
27	1	36	GLU	12.8
27	1	22	TYR	12.5
28	2	5	TYR	12.5
28	2	42	LEU	12.5
27	1	18	THR	12.3
28	2	17	GLY	12.3
29	3	25	PHE	12.3
28	2	36	ALA	12.2
27	1	3	LYS	12.1
27	1	51	ARG	11.9
29	3	8	LYS	11.9
28	2	26	SER	11.9
28	2	15	THR	11.7
27	1	49	VAL	11.7
27	1	20	PHE	11.7
27	1	26	LYS	11.7
29	3	11	LYS	11.6
29	3	12	ARG	11.5
28	2	14	LYS	11.4
27	1	13	GLU	11.4
27	1	43	VAL	11.4
27	1	24	THR	11.3
27	1	14	SER	11.3
27	1	11	LYS	11.1
28	2	7	PRO	11.1
28	2	39	ARG	11.0
28	2	35	ARG	10.9
27	1	48	VAL	10.8
27	1	54	LYS	10.8
29	3	36	LYS	10.7
28	2	19	ARG	10.7
29	3	30	ARG	10.5
29	3	46	LYS	10.5
29	3	41	ILE	10.4
27	1	16	ALA	10.3
29	3	59	LYS	10.1
28	2	20	ALA	10.0

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Mol	Chain	Res	Type	RSRZ
27	1	9	ILE	10.0
27	1	23	THR	9.9
29	3	35	GLY	9.9
28	2	25	LYS	9.8
1	X	1083	C	9.8
28	2	29	ASN	9.7
28	2	21	ARG	9.6
29	3	5	LYS	9.6
1	X	2409	A	9.5
1	X	2776	U	9.5
1	X	1522	C	9.4
29	3	31	HIS	9.4
1	X	1104	G	9.3
28	2	38	GLY	9.3
29	3	23	MET	9.2
27	1	37	LEU	9.2
29	3	16	ILE	9.2
27	1	40	TYR	9.2
27	1	29	ARG	9.2
27	1	52	GLU	9.1
27	1	46	LYS	9.1
28	2	34	ARG	9.1
29	3	40	GLU	9.1
29	3	44	LYS	9.1
27	1	53	LYS	9.1
27	1	8	ILE	8.9
29	3	39	ASP	8.7
1	X	730	C	8.7
28	2	12	ARG	8.6
1	X	1188	A	8.6
28	2	40	HIS	8.5
28	2	41	GLN	8.4
1	X	1093	U	8.3
29	3	26	LYS	8.3
1	X	727	U	8.2
27	1	4	ASP	8.2
28	2	23	LYS	8.1
1	X	1187	A	8.1
22	T	15	ASP	7.9
1	X	1094	C	7.9
9	G	97	ASP	7.9
2	Z	123	U	7.8

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Mol	Chain	Res	Type	RSRZ
1	X	1099	A	7.7
27	1	17	GLY	7.6
29	3	22	VAL	7.5
29	3	17	THR	7.5
28	2	32	ALA	7.5
1	X	1068	A	7.4
29	3	42	ARG	7.4
28	2	28	ARG	7.4
1	X	2290	A	7.4
28	2	6	GLN	7.3
1	X	731	A	7.3
1	X	1069	G	7.3
29	3	34	THR	7.3
1	X	1955	G	7.2
1	X	1074	G	7.2
27	1	41	ASP	7.1
1	X	1523	A	7.1
7	E	37	TYR	7.0
11	I	9	THR	7.0
1	X	726	G	6.9
1	X	2778	U	6.8
1	X	1100	G	6.8
3	A	203	ASN	6.8
11	I	48	PHE	6.8
15	M	34	ARG	6.8
8	F	131	THR	6.7
1	X	1086	C	6.7
28	2	2	LYS	6.7
1	X	2088	U	6.7
12	J	84	MET	6.6
1	X	1553	G	6.6
1	X	2777	A	6.6
1	X	514	G	6.6
1	X	1073	G	6.6
1	X	1189	G	6.5
1	X	1524	C	6.5
1	X	557	U	6.5
1	X	1506	C	6.4
16	N	48	ARG	6.3
1	X	1059	A	6.3
1	X	2289	A	6.2
4	B	135	HIS	6.2

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Mol	Chain	Res	Type	RSRZ
11	I	29	THR	6.1
8	F	130	GLY	6.0
17	O	39	PHE	6.0
1	X	1525	A	6.0
29	3	50	LEU	5.9
1	X	1098	G	5.9
2	Z	2	C	5.9
1	X	1081	A	5.9
1	X	1365	U	5.9
8	F	129	ALA	5.9
1	X	1085	G	5.7
11	I	63	ARG	5.7
1	X	1090	C	5.6
1	X	1186	G	5.6
25	W	37	THR	5.6
1	X	1514	C	5.5
1	X	417	C	5.5
29	3	60	LEU	5.5
30	4	20	HIS	5.4
2	Z	58	G	5.4
2	Z	29	C	5.4
12	J	21	ASP	5.4
1	X	2323	U	5.4
21	S	91	PRO	5.4
1	X	1548	U	5.4
1	X	2779	C	5.4
22	T	8	GLY	5.4
21	S	40	ASP	5.3
1	X	1053	G	5.3
1	X	1082	G	5.3
1	X	2169	A	5.3
5	C	189	ASP	5.3
1	X	1734	C	5.3
1	X	555	U	5.3
1	X	2189	A	5.3
1	X	2775	U	5.3
1	X	728	G	5.2
1	X	2173	G	5.2
1	X	2202	G	5.2
1	X	1552	C	5.2
1	X	1092	U	5.1
8	F	105	VAL	5.1

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Mol	Chain	Res	Type	RSRZ
30	4	37	GLY	5.1
22	T	7	VAL	5.1
11	I	55	ARG	5.1
8	F	121	VAL	5.1
1	X	2083	G	5.0
28	2	33	ARG	5.0
5	C	47	THR	5.0
1	X	2284	U	4.9
1	X	891	A	4.9
1	X	1106	A	4.9
1	X	1060	C	4.9
1	X	1279	G	4.9
1	X	1427	G	4.8
29	3	14	ILE	4.8
1	X	1606	C	4.8
8	F	125	ALA	4.7
1	X	2184	C	4.7
14	L	40	ALA	4.7
29	3	32	GLN	4.7
1	X	1511	A	4.7
1	X	427	C	4.7
1	X	2283	G	4.7
29	3	57	ARG	4.7
1	X	729	A	4.7
1	X	1057	A	4.7
1	X	1095	A	4.7
1	X	1080	A	4.6
1	X	1432	G	4.6
28	2	1	MET	4.6
3	A	100	GLY	4.6
23	U	52	ARG	4.6
8	F	128	VAL	4.6
1	X	2327	U	4.5
2	Z	18	G	4.5
8	F	126	ASN	4.5
1	X	1105	U	4.5
17	O	6	GLN	4.5
6	D	42	SER	4.5
16	N	65	ILE	4.5
2	Z	14	C	4.5
2	Z	28	A	4.5
23	U	79	GLU	4.5

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Mol	Chain	Res	Type	RSRZ
2	Z	38	C	4.4
1	X	1121	G	4.4
1	X	1516	A	4.4
6	D	138	PHE	4.4
1	X	733	G	4.4
1	X	304	A	4.4
1	X	356	A	4.4
1	X	625	A	4.4
1	X	774	A	4.4
1	X	2175	A	4.4
21	S	22	VAL	4.3
1	X	1426	U	4.3
1	X	1551	U	4.3
2	Z	30	C	4.3
1	X	2330	G	4.3
1	X	172	A	4.3
1	X	225	G	4.3
12	J	15	ARG	4.3
1	X	1792	C	4.3
1	X	248	A	4.2
1	X	1061	A	4.2
1	X	1602	G	4.2
1	X	2268	G	4.2
1	X	200	A	4.2
1	X	1855	G	4.2
1	X	1505	U	4.2
11	I	32	ARG	4.1
5	C	29	GLU	4.1
1	X	1185	C	4.1
1	X	2082	C	4.1
6	D	93	GLY	4.1
3	A	85	ASP	4.1
29	3	56	ALA	4.1
1	X	1067	G	4.1
21	S	54	ILE	4.1
1	X	436	A	4.1
1	X	657	A	4.1
8	F	80	ARG	4.1
30	4	4	ARG	4.1
1	X	434	C	4.1
1	X	1091	C	4.1
1	X	2408	G	4.1

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Mol	Chain	Res	Type	RSRZ
11	I	52	GLY	4.1
1	X	358	C	4.0
1	X	1588	A	4.0
16	N	88	ILE	4.0
1	X	2780	A	4.0
1	X	1554	G	4.0
1	X	177	U	4.0
28	2	3	ARG	4.0
22	T	6	GLY	4.0
1	X	199	A	4.0
1	X	725	C	4.0
1	X	2168	A	4.0
6	D	147	ASP	4.0
7	E	67	LEU	4.0
13	K	17	ARG	4.0
1	X	136	A	3.9
24	V	47	ARG	3.9
2	Z	111	C	3.9
1	X	111	G	3.9
8	F	117	ASN	3.9
1	X	1532	A	3.9
1	X	1801	C	3.9
22	T	34	GLY	3.9
1	X	1070	G	3.9
1	X	428	A	3.9
1	X	1845	A	3.9
30	4	22	ARG	3.8
1	X	1547	U	3.8
1	X	2198	U	3.8
1	X	2304	G	3.8
1	X	2384	G	3.8
3	A	249	PRO	3.8
1	X	1392	U	3.8
3	A	237	GLU	3.8
1	X	2328	G	3.8
2	Z	3	A	3.8
19	Q	72	ARG	3.8
10	H	30	GLY	3.8
11	I	31	GLY	3.8
1	X	1364	C	3.8
1	X	2303	C	3.8
1	X	2087	U	3.8

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Mol	Chain	Res	Type	RSRZ
29	3	15	LYS	3.8
1	X	1429	A	3.8
2	Z	15	A	3.8
1	X	2731	G	3.8
1	X	1077	U	3.8
1	X	1830	C	3.8
6	D	38	GLU	3.8
11	I	99	VAL	3.8
1	X	1872	A	3.7
1	X	2165	A	3.7
1	X	1110	G	3.7
1	X	1576	G	3.7
1	X	2174	G	3.7
1	X	2774	U	3.7
7	E	111	HIS	3.7
1	X	1075	C	3.7
1	X	2443	C	3.7
11	I	87	THR	3.7
12	J	11	ARG	3.7
1	X	1084	A	3.7
1	X	2877	A	3.7
1	X	1102	G	3.7
1	X	1951	G	3.7
1	X	2166	G	3.7
1	X	147	G	3.7
1	X	157	G	3.7
1	X	732	G	3.7
1	X	1831	G	3.7
1	X	1841	G	3.7
17	O	46	VAL	3.7
2	Z	118	G	3.6
17	O	10	LYS	3.6
21	S	67	LYS	3.6
7	E	136	ILE	3.6
23	U	51	ILE	3.6
3	A	91	ARG	3.6
7	E	60	LYS	3.6
17	O	21	ARG	3.6
1	X	559	C	3.6
1	X	1087	C	3.6
8	F	116	LEU	3.6
3	A	242	ALA	3.6

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Mol	Chain	Res	Type	RSRZ
1	X	1078	A	3.6
1	X	1594	U	3.6
1	X	418	C	3.6
18	P	77	ALA	3.6
1	X	1887	G	3.6
1	X	184	A	3.6
1	X	305	A	3.6
1	X	1354	A	3.6
1	X	1603	A	3.6
1	X	135	U	3.6
1	X	1922	U	3.6
3	A	191	ALA	3.6
20	R	79	SER	3.6
2	Z	64	C	3.5
1	X	940	G	3.5
1	X	1425	G	3.5
1	X	1595	A	3.5
17	O	98	ILE	3.5
2	Z	54	U	3.5
6	D	56	GLU	3.5
1	X	1521	U	3.5
1	X	462	G	3.5
9	G	66	HIS	3.5
5	C	161	ALA	3.5
1	X	346	C	3.5
1	X	1550	C	3.5
1	X	407	A	3.5
1	X	1097	A	3.5
1	X	2728	A	3.5
1	X	1503	G	3.5
1	X	1737	G	3.5
5	C	48	ARG	3.5
1	X	416	U	3.4
1	X	1072	U	3.4
1	X	80	A	3.4
1	X	1055	A	3.4
1	X	1510	A	3.4
6	D	40	LEU	3.4
11	I	6	LEU	3.4
1	X	83	A	3.4
1	X	522	G	3.4
1	X	1562	G	3.4

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Mol	Chain	Res	Type	RSRZ
1	X	2389	G	3.4
7	E	64	LEU	3.4
11	I	60	LEU	3.4
1	X	226	C	3.4
2	Z	49	C	3.4
1	X	1096	A	3.4
1	X	1109	A	3.4
1	X	1952	A	3.4
1	X	2355	A	3.4
1	X	2391	A	3.4
2	Z	41	A	3.4
6	D	26	MET	3.4
1	X	558	G	3.4
1	X	699	G	3.4
1	X	1882	G	3.4
1	X	1912	G	3.4
1	X	2582	G	3.4
3	A	208	LYS	3.4
1	X	939	C	3.4
1	X	1598	C	3.4
1	X	1071	U	3.4
1	X	1515	U	3.4
7	E	63	ALA	3.4
12	J	29	ALA	3.4
1	X	1153	A	3.4
1	X	2182	A	3.4
8	F	137	VAL	3.3
23	U	16	ASN	3.3
2	Z	32	C	3.3
23	U	8	THR	3.3
6	D	27	ALA	3.3
7	E	5	GLY	3.3
23	U	48	LYS	3.3
1	X	1056	U	3.3
1	X	1182	U	3.3
1	X	2203	G	3.3
1	X	2694	G	3.3
1	X	1517	C	3.3
3	A	244	ARG	3.3
1	X	435	A	3.3
1	X	1607	A	3.3
23	U	38	THR	3.3

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Mol	Chain	Res	Type	RSRZ
6	D	146	VAL	3.3
1	X	1076	U	3.3
20	R	102	LYS	3.3
1	X	398	C	3.3
1	X	2567	G	3.3
2	Z	121	G	3.3
3	A	159	ALA	3.3
8	F	134	SER	3.3
11	I	12	SER	3.2
1	X	408	U	3.2
1	X	1052	C	3.2
1	X	2179	C	3.2
1	X	218	A	3.2
1	X	2730	A	3.2
1	X	877	G	3.2
11	I	5	ASP	3.2
11	I	53	ARG	3.2
1	X	1089	C	3.2
1	X	1376	C	3.2
1	X	913	A	3.2
1	X	1605	A	3.2
1	X	1024	G	3.2
1	X	1079	G	3.2
1	X	2279	G	3.2
3	A	198	ASN	3.2
1	X	307	C	3.2
1	X	914	C	3.2
1	X	1103	C	3.2
1	X	2181	A	3.2
6	D	43	SER	3.2
22	T	9	SER	3.2
1	X	413	G	3.2
1	X	1820	G	3.2
1	X	554	U	3.2
1	X	1410	U	3.2
7	E	15	VAL	3.2
21	S	123	VAL	3.2
1	X	1065	A	3.1
1	X	2357	A	3.1
8	F	133	ARG	3.1
16	N	94	VAL	3.1
26	Y	2	ALA	3.1

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Mol	Chain	Res	Type	RSRZ
1	X	1	G	3.1
1	X	1000	G	3.1
1	X	1589	G	3.1
1	X	2084	G	3.1
1	X	2388	G	3.1
2	Z	46	G	3.1
2	Z	120	G	3.1
2	Z	50	U	3.1
2	Z	57	U	3.1
11	I	100	ARG	3.1
6	D	37	ASN	3.1
5	C	194	GLU	3.1
16	N	4	ALA	3.1
1	X	76	C	3.1
11	I	33	GLY	3.1
1	X	1467	U	3.1
2	Z	16	U	3.1
1	X	70	A	3.1
1	X	71	A	3.1
1	X	930	A	3.1
2	Z	17	A	3.1
1	X	968	C	3.1
3	A	84	TYR	3.1
16	N	86	ALA	3.1
7	E	135	GLY	3.1
12	J	16	GLY	3.1
1	X	656	U	3.1
1	X	166	G	3.1
1	X	1504	G	3.1
1	X	1573	G	3.1
1	X	2282	G	3.1
4	B	136	ARG	3.1
6	D	92	ARG	3.1
14	L	33	ARG	3.1
1	X	198	A	3.1
8	F	106	LEU	3.1
14	L	45	ASP	3.1
1	X	405	C	3.1
1	X	1183	C	3.1
1	X	1546	C	3.1
2	Z	67	C	3.1
6	D	117	ILE	3.0

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Mol	Chain	Res	Type	RSRZ
20	R	78	ALA	3.0
1	X	119	G	3.0
1	X	209	G	3.0
1	X	1284	G	3.0
1	X	1393	G	3.0
1	X	2638	G	3.0
2	Z	51	G	3.0
23	U	47	HIS	3.0
1	X	1568	A	3.0
12	J	27	TYR	3.0
1	X	235	C	3.0
1	X	332	C	3.0
11	I	8	PRO	3.0
6	D	39	GLY	3.0
1	X	110	U	3.0
29	3	58	MET	3.0
21	S	93	GLU	3.0
9	G	163	PRO	3.0
21	S	10	PRO	3.0
1	X	1058	G	3.0
1	X	1184	G	3.0
1	X	1803	G	3.0
1	X	2269	G	3.0
1	X	1114	A	3.0
1	X	1585	A	3.0
1	X	448	C	3.0
1	X	2876	C	3.0
9	G	129	HIS	3.0
22	T	14	ARG	3.0
14	L	96	TYR	3.0
6	D	149	THR	3.0
21	S	14	LEU	3.0
9	G	67	ARG	3.0
1	X	69	G	3.0
1	X	1248	G	3.0
1	X	45	C	3.0
1	X	519	C	3.0
1	X	878	C	3.0
1	X	1120	C	3.0
1	X	2237	C	3.0
1	X	2385	U	3.0
1	X	2265	A	2.9

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Mol	Chain	Res	Type	RSRZ
1	X	2381	A	2.9
1	X	192	G	2.9
1	X	931	G	2.9
1	X	1377	G	2.9
1	X	2361	G	2.9
2	Z	53	G	2.9
1	X	77	C	2.9
1	X	133	C	2.9
1	X	429	C	2.9
1	X	1791	C	2.9
1	X	400	U	2.9
1	X	1112	U	2.9
12	J	18	MET	2.9
1	X	90	G	2.9
1	X	134	G	2.9
1	X	633	G	2.9
1	X	1062	G	2.9
1	X	1118	G	2.9
1	X	640	C	2.9
1	X	651	C	2.9
1	X	1054	C	2.9
5	C	181	LEU	2.9
6	D	129	ASN	2.9
25	W	51	LEU	2.9
6	D	153	ASP	2.9
1	X	1913	G	2.9
1	X	2086	U	2.9
1	X	2183	C	2.9
1	X	2205	C	2.9
1	X	164	G	2.9
1	X	2298	U	2.9
6	D	41	GLY	2.9
21	S	89	GLY	2.9
30	4	21	GLY	2.9
16	N	12	ARG	2.9
23	U	30	VAL	2.8
7	E	75	ALA	2.8
19	Q	45	ALA	2.8
1	X	1856	U	2.8
1	X	1115	C	2.8
1	X	1621	C	2.8
1	X	2444	C	2.8

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Mol	Chain	Res	Type	RSRZ
1	X	2771	C	2.8
1	X	1735	G	2.8
2	Z	26	G	2.8
21	S	127	PRO	2.8
22	T	13	GLY	2.8
1	X	1867	A	2.8
14	L	60	LYS	2.8
1	X	2074	U	2.8
6	D	116	GLY	2.8
1	X	178	C	2.8
1	X	646	C	2.8
1	X	721	C	2.8
1	X	2382	C	2.8
19	Q	56	MET	2.8
1	X	423	G	2.8
1	X	1374	G	2.8
1	X	1541	G	2.8
21	S	81	VAL	2.8
21	S	92	VAL	2.8
3	A	74	GLY	2.8
3	A	181	GLU	2.8
1	X	247	A	2.8
1	X	343	A	2.8
1	X	1391	A	2.8
1	X	1920	A	2.8
12	J	14	PHE	2.8
3	A	38	PRO	2.8
22	T	16	SER	2.8
9	G	103	TYR	2.8
11	I	96	TYR	2.8
5	C	66	ASN	2.8
1	X	309	G	2.8
1	X	2393	G	2.8
1	X	2781	G	2.8
1	X	91	A	2.8
1	X	443	A	2.8
1	X	912	A	2.8
1	X	1507	A	2.8
6	D	32	GLU	2.8
11	I	64	GLY	2.8
12	J	104	MET	2.8
17	O	34	GLU	2.8

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Mol	Chain	Res	Type	RSRZ
1	X	2180	U	2.8
9	G	112	THR	2.8
12	J	72	ASP	2.7
20	R	12	ASP	2.7
1	X	2326	C	2.7
20	R	81	VAL	2.7
3	A	98	ALA	2.7
8	F	132	ALA	2.7
19	Q	21	GLU	2.7
1	X	35	G	2.7
1	X	47	G	2.7
1	X	1266	G	2.7
1	X	2392	G	2.7
2	Z	119	G	2.7
3	A	222	ARG	2.7
5	C	19	LEU	2.7
2	Z	59	A	2.7
1	X	1051	U	2.7
30	4	2	LYS	2.7
11	I	37	GLN	2.7
1	X	1411	C	2.7
1	X	1528	C	2.7
23	U	78	ILE	2.7
8	F	135	MET	2.7
9	G	78	ASP	2.7
1	X	1586	A	2.7
1	X	1871	G	2.7
1	X	1921	A	2.7
1	X	2299	A	2.7
1	X	1863	U	2.7
1	X	2192	U	2.7
11	I	111	SER	2.7
8	F	115	ASP	2.7
1	X	449	C	2.7
1	X	1888	C	2.7
24	V	3	PRO	2.7
3	A	167	GLY	2.7
8	F	124	ALA	2.7
8	F	93	ASN	2.7
1	X	174	A	2.7
1	X	665	A	2.7
1	X	98	U	2.7

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Mol	Chain	Res	Type	RSRZ
1	X	1165	G	2.7
1	X	1424	U	2.7
1	X	1431	U	2.7
1	X	1618	U	2.7
1	X	2270	U	2.7
20	R	7	GLY	2.7
6	D	44	LYS	2.7
13	K	104	ARG	2.6
5	C	174	GLY	2.6
17	O	51	ALA	2.6
1	X	1582	A	2.6
1	X	1597	A	2.6
1	X	2247	A	2.6
1	X	183	U	2.6
1	X	2211	U	2.6
1	X	2291	U	2.6
9	G	132	PHE	2.6
1	X	243	G	2.6
1	X	359	G	2.6
1	X	406	G	2.6
1	X	1436	G	2.6
1	X	1847	G	2.6
1	X	2201	G	2.6
21	S	124	ALA	2.6
1	X	664	C	2.6
1	X	804	C	2.6
1	X	1363	C	2.6
1	X	2089	C	2.6
1	X	2199	C	2.6
14	L	21	THR	2.6
7	E	165	VAL	2.6
1	X	123	A	2.6
1	X	970	A	2.6
1	X	1224	A	2.6
1	X	1840	A	2.6
1	X	2267	A	2.6
2	Z	63	A	2.6
3	A	82	ILE	2.6
19	Q	3	HIS	2.6
1	X	1923	U	2.6
1	X	194	G	2.6
1	X	419	G	2.6

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Mol	Chain	Res	Type	RSRZ
1	X	741	G	2.6
1	X	1430	G	2.6
1	X	1488	G	2.6
1	X	1508	G	2.6
1	X	1520	G	2.6
1	X	1664	G	2.6
1	X	2085	G	2.6
1	X	2287	G	2.6
19	Q	14	GLU	2.6
1	X	223	C	2.6
1	X	2170	C	2.6
2	Z	39	C	2.6
2	Z	81	C	2.6
6	D	168	ALA	2.6
1	X	876	A	2.6
11	I	84	GLU	2.6
13	K	69	ASP	2.6
1	X	2176	U	2.6
7	E	105	MET	2.6
9	G	46	ALA	2.6
1	X	182	G	2.6
1	X	1251	G	2.6
1	X	1382	G	2.6
8	F	127	THR	2.6
12	J	82	THR	2.6
11	I	54	SER	2.6
1	X	1549	C	2.6
1	X	1797	C	2.6
1	X	2244	C	2.6
11	I	91	ASP	2.6
7	E	79	VAL	2.6
1	X	124	A	2.6
1	X	139	A	2.6
1	X	1556	A	2.6
1	X	2356	A	2.6
1	X	2737	A	2.6
7	E	143	GLN	2.6
1	X	444	U	2.6
1	X	667	U	2.6
1	X	1946	U	2.6
21	S	19	ILE	2.5
16	N	92	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
26	Y	42	SER	2.5
11	I	15	ASP	2.5
1	X	392	G	2.5
1	X	875	G	2.5
1	X	938	G	2.5
1	X	1617	G	2.5
4	B	202	ALA	2.5
9	G	76	GLN	2.5
14	L	89	PHE	2.5
1	X	1853	C	2.5
9	G	53	ARG	2.5
1	X	1355	A	2.5
1	X	1357	U	2.5
1	X	2365	U	2.5
3	A	102	LYS	2.5
6	D	141	ILE	2.5
8	F	85	ILE	2.5
14	L	20	THR	2.5
13	K	3	HIS	2.5
7	E	71	LEU	2.5
12	J	91	VAL	2.5
1	X	540	G	2.5
1	X	645	G	2.5
1	X	1368	G	2.5
1	X	1371	G	2.5
1	X	1428	G	2.5
1	X	1886	G	2.5
1	X	2344	G	2.5
1	X	2447	G	2.5
1	X	175	C	2.5
1	X	537	C	2.5
1	X	2689	C	2.5
12	J	131	LYS	2.5
23	U	28	GLY	2.5
1	X	1534	A	2.5
1	X	1596	A	2.5
1	X	1873	A	2.5
1	X	1881	U	2.5
1	X	1914	U	2.5
1	X	2190	A	2.5
8	F	90	SER	2.5
13	K	71	HIS	2.5

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Mol	Chain	Res	Type	RSRZ
5	C	3	GLN	2.5
1	X	1535	C	2.5
1	X	2406	C	2.5
1	X	2735	C	2.5
1	X	2875	C	2.5
1	X	516	G	2.5
1	X	1191	G	2.5
1	X	1356	G	2.5
1	X	1435	G	2.5
1	X	1834	G	2.5
1	X	1857	G	2.5
1	X	2018	G	2.5
1	X	2207	G	2.5
2	Z	52	G	2.5
1	X	2197	U	2.5
1	X	642	A	2.5
1	X	1774	A	2.5
2	Z	31	A	2.5
2	Z	47	A	2.5
22	T	19	LYS	2.5
22	T	68	VAL	2.5
6	D	122	PHE	2.4
16	N	93	LYS	2.4
1	X	230	C	2.4
2	Z	40	C	2.4
1	X	1490	U	2.4
1	X	2285	U	2.4
1	X	229	G	2.4
1	X	399	G	2.4
1	X	647	G	2.4
1	X	1012	A	2.4
1	X	1117	G	2.4
1	X	1441	A	2.4
1	X	1533	G	2.4
1	X	1880	G	2.4
1	X	2297	G	2.4
2	Z	48	A	2.4
12	J	78	LYS	2.4
6	D	95	ARG	2.4
21	S	97	PRO	2.4
21	S	134	LEU	2.4
1	X	347	C	2.4

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Mol	Chain	Res	Type	RSRZ
1	X	1108	U	2.4
1	X	1252	C	2.4
1	X	1812	U	2.4
8	F	109	ALA	2.4
1	X	93	A	2.4
1	X	153	A	2.4
1	X	322	A	2.4
1	X	921	A	2.4
1	X	1278	A	2.4
1	X	1509	A	2.4
1	X	2204	A	2.4
1	X	2272	A	2.4
2	Z	60	A	2.4
8	F	119	GLY	2.4
14	L	111	GLY	2.4
1	X	165	G	2.4
1	X	231	G	2.4
1	X	734	G	2.4
1	X	1622	G	2.4
1	X	2370	G	2.4
4	B	94	ASP	2.4
22	T	20	TYR	2.4
4	B	171	GLU	2.4
17	O	59	GLU	2.4
6	D	145	MET	2.4
14	L	41	GLN	2.4
14	L	49	GLN	2.4
14	L	48	GLY	2.4
1	X	1023	U	2.4
5	C	186	LEU	2.4
1	X	1620	C	2.4
1	X	1835	C	2.4
1	X	1950	C	2.4
2	Z	34	C	2.4
1	X	1910	A	2.4
1	X	2401	A	2.4
9	G	116	ARG	2.4
23	U	43	ARG	2.4
4	B	187	ALA	2.4
21	S	20	ALA	2.4
1	X	100	G	2.4
1	X	334	G	2.4

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Mol	Chain	Res	Type	RSRZ
1	X	349	G	2.4
1	X	1599	G	2.4
1	X	2077	G	2.4
19	Q	63	LYS	2.4
5	C	163	ASN	2.4
23	U	17	SER	2.4
3	A	248	THR	2.4
16	N	3	ARG	2.4
3	A	78	LYS	2.4
14	L	95	LYS	2.4
30	4	8	LYS	2.4
2	Z	122	U	2.3
21	S	126	GLY	2.3
1	X	116	A	2.3
1	X	806	A	2.3
1	X	1340	C	2.3
1	X	1497	C	2.3
23	U	63	SER	2.3
1	X	1799	A	2.3
1	X	2167	A	2.3
21	S	48	THR	2.3
19	Q	62	ARG	2.3
30	4	18	ARG	2.3
1	X	87	G	2.3
1	X	203	G	2.3
1	X	401	G	2.3
1	X	409	G	2.3
1	X	636	G	2.3
1	X	1369	G	2.3
1	X	1384	G	2.3
1	X	1545	G	2.3
1	X	2349	G	2.3
17	O	37	ALA	2.3
7	E	118	PRO	2.3
20	R	94	VAL	2.3
1	X	785	U	2.3
17	O	13	ARG	2.3
5	C	57	LYS	2.3
1	X	180	C	2.3
1	X	1154	A	2.3
1	X	1314	A	2.3
1	X	1366	A	2.3

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Mol	Chain	Res	Type	RSRZ
1	X	2191	A	2.3
1	X	2280	A	2.3
3	A	93	ALA	2.3
3	A	123	ALA	2.3
26	Y	56	GLN	2.3
14	L	51	LEU	2.3
20	R	14	LEU	2.3
21	S	147	ILE	2.3
19	Q	65	VAL	2.3
19	Q	77	LYS	2.3
1	X	59	G	2.3
1	X	237	G	2.3
1	X	1494	G	2.3
1	X	1496	G	2.3
1	X	2469	G	2.3
11	I	56	LEU	2.3
1	X	786	U	2.3
1	X	1434	U	2.3
1	X	2080	U	2.3
3	A	148	VAL	2.3
1	X	410	A	2.3
1	X	1122	A	2.3
1	X	1226	A	2.3
1	X	1625	A	2.3
1	X	2079	A	2.3
14	L	8	ARG	2.3
19	Q	15	LYS	2.3
23	U	49	LYS	2.3
1	X	113	C	2.3
1	X	234	C	2.3
1	X	724	C	2.3
1	X	799	C	2.3
1	X	1380	C	2.3
1	X	1529	C	2.3
1	X	2193	C	2.3
6	D	22	TYR	2.3
9	G	113	GLU	2.3
14	L	36	LYS	2.3
9	G	104	THR	2.3
11	I	40	ARG	2.3
1	X	38	G	2.3
1	X	1874	G	2.3

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Mol	Chain	Res	Type	RSRZ
1	X	2186	G	2.3
1	X	1116	U	2.3
1	X	1469	U	2.3
20	R	6	ALA	2.3
1	X	72	A	2.3
1	X	2390	A	2.3
22	T	80	SER	2.3
1	X	130	C	2.3
1	X	391	C	2.3
1	X	1396	C	2.3
2	Z	33	C	2.3
2	Z	62	C	2.3
6	D	157	VAL	2.3
21	S	131	PRO	2.3
14	L	97	HIS	2.2
8	F	108	ILE	2.2
6	D	102	LYS	2.2
7	E	175	LYS	2.2
7	E	40	GLU	2.2
1	X	79	G	2.2
1	X	197	G	2.2
1	X	215	G	2.2
1	X	708	G	2.2
1	X	782	U	2.2
1	X	1373	G	2.2
2	Z	25	G	2.2
19	Q	60	GLY	2.2
7	E	70	THR	2.2
9	G	119	LEU	2.2
6	D	77	PHE	2.2
1	X	387	A	2.2
1	X	648	A	2.2
1	X	1453	A	2.2
1	X	553	C	2.2
1	X	1844	C	2.2
1	X	2305	C	2.2
6	D	148	LYS	2.2
18	P	21	ARG	2.2
23	U	20	ARG	2.2
3	A	125	PRO	2.2
3	A	50	THR	2.2
14	L	19	THR	2.2

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Mol	Chain	Res	Type	RSRZ
3	A	171	ASP	2.2
4	B	188	ILE	2.2
26	Y	29	ASN	2.2
1	X	1843	U	2.2
25	W	27	LYS	2.2
5	C	50	GLN	2.2
21	S	170	SER	2.2
1	X	191	G	2.2
1	X	389	G	2.2
1	X	1609	G	2.2
1	X	2363	G	2.2
1	X	2727	G	2.2
23	U	21	ARG	2.2
1	X	48	A	2.2
1	X	357	A	2.2
1	X	539	A	2.2
1	X	706	A	2.2
1	X	1107	A	2.2
1	X	2427	A	2.2
7	E	68	THR	2.2
11	I	57	ILE	2.2
1	X	58	C	2.2
2	Z	8	C	2.2
20	R	11	ASN	2.2
21	S	82	ASP	2.2
5	C	43	ALA	2.2
11	I	98	LEU	2.2
6	D	36	VAL	2.2
6	D	65	PRO	2.2
1	X	97	U	2.2
1	X	412	U	2.2
1	X	860	U	2.2
1	X	941	U	2.2
1	X	73	A	2.2
1	X	201	G	2.2
1	X	424	G	2.2
1	X	442	A	2.2
1	X	776	G	2.2
1	X	841	G	2.2
1	X	1440	G	2.2
1	X	1557	G	2.2
1	X	1699	A	2.2

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Mol	Chain	Res	Type	RSRZ
1	X	1838	G	2.2
1	X	1850	G	2.2
1	X	1911	A	2.2
1	X	2293	G	2.2
1	X	2367	A	2.2
2	Z	9	G	2.2
2	Z	86	A	2.2
2	Z	112	A	2.2
21	S	94	VAL	2.2
1	X	981	C	2.2
6	D	104	ILE	2.2
6	D	176	PRO	2.2
12	J	87	GLY	2.2
21	S	130	ILE	2.2
17	O	36	LYS	2.2
8	F	83	ALA	2.1
1	X	616	U	2.1
1	X	1030	U	2.1
1	X	1938	U	2.1
1	X	2075	U	2.1
1	X	2275	U	2.1
1	X	2398	U	2.1
1	X	2410	U	2.1
11	I	75	VAL	2.1
21	S	169	VAL	2.1
5	C	41	GLY	2.1
18	P	8	PHE	2.1
23	U	11	LYS	2.1
14	L	50	THR	2.1
1	X	747	A	2.1
1	X	1657	A	2.1
1	X	1954	A	2.1
1	X	2188	A	2.1
1	X	2248	A	2.1
1	X	2457	A	2.1
2	Z	61	A	2.1
1	X	836	G	2.1
1	X	1125	G	2.1
1	X	1767	G	2.1
1	X	2071	G	2.1
7	E	73	ALA	2.1
8	F	82	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
11	I	59	ARG	2.1
1	X	432	C	2.1
1	X	1570	C	2.1
1	X	1701	C	2.1
1	X	2732	C	2.1
2	Z	7	C	2.1
21	S	70	GLN	2.1
3	A	232	PRO	2.1
7	E	31	GLY	2.1
14	L	62	GLY	2.1
12	J	92	GLU	2.1
1	X	1370	U	2.1
1	X	1656	U	2.1
1	X	1768	U	2.1
2	Z	106	U	2.1
11	I	110	ALA	2.1
1	X	1437	A	2.1
1	X	1493	A	2.1
1	X	1574	A	2.1
1	X	1587	A	2.1
5	C	59	TYR	2.1
1	X	955	G	2.1
1	X	985	G	2.1
1	X	1937	G	2.1
1	X	244	C	2.1
1	X	420	C	2.1
1	X	1876	C	2.1
2	Z	107	C	2.1
1	X	62	U	2.1
1	X	1101	U	2.1
1	X	1848	U	2.1
1	X	2458	U	2.1
1	X	2563	U	2.1
3	A	97	TYR	2.1
14	L	59	LEU	2.1
3	A	116	THR	2.1
12	J	8	THR	2.1
20	R	92	THR	2.1
1	X	404	A	2.1
1	X	1239	A	2.1
1	X	1285	A	2.1
1	X	2476	A	2.1

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Mol	Chain	Res	Type	RSRZ
2	Z	36	A	2.1
2	Z	74	A	2.1
9	G	160	ALA	2.1
21	S	32	PHE	2.1
7	E	133	VAL	2.1
17	O	78	VAL	2.1
1	X	75	C	2.1
1	X	652	C	2.1
1	X	1064	C	2.1
1	X	1877	C	2.1
1	X	115	G	2.1
1	X	814	G	2.1
1	X	963	G	2.1
1	X	1223	G	2.1
1	X	1401	G	2.1
1	X	2076	G	2.1
1	X	2302	G	2.1
1	X	2316	G	2.1
1	X	2773	G	2.1
7	E	29	PRO	2.1
1	X	1909	U	2.1
1	X	2090	U	2.1
17	O	5	ILE	2.1
14	L	70	ALA	2.1
1	X	167	A	2.0
1	X	618	A	2.0
1	X	1139	A	2.0
1	X	1362	A	2.0
1	X	1408	A	2.0
1	X	1499	A	2.0
1	X	1846	A	2.0
1	X	2073	A	2.0
1	X	2331	A	2.0
9	G	106	TYR	2.0
8	F	92	PRO	2.0
20	R	65	PRO	2.0
3	A	69	ARG	2.0
5	C	124	ASP	2.0
6	D	142	THR	2.0
11	I	38	LYS	2.0
19	Q	54	SER	2.0
1	X	1418	C	2.0

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Mol	Chain	Res	Type	RSRZ
1	X	2446	C	2.0
9	G	88	VAL	2.0
12	J	28	VAL	2.0
3	A	129	ASN	2.0
24	V	8	ASN	2.0
1	X	742	G	2.0
1	X	1333	G	2.0
1	X	1854	G	2.0
1	X	2461	G	2.0
1	X	2529	G	2.0
2	Z	117	G	2.0
24	V	1	MET	2.0
1	X	784	U	2.0
1	X	792	U	2.0
4	B	151	TYR	2.0
5	C	162	ARG	2.0
6	D	31	ILE	2.0
11	I	62	LYS	2.0
24	V	48	ARG	2.0
23	U	61	TRP	2.0
3	A	115	ALA	2.0
11	I	30	ALA	2.0
1	X	515	A	2.0
1	X	693	A	2.0
1	X	1753	A	2.0
7	E	7	GLN	2.0
19	Q	94	GLN	2.0
22	T	5	LYS	2.0
3	A	92	ILE	2.0
23	U	25	ARG	2.0
1	X	329	C	2.0
1	X	541	C	2.0
1	X	1031	C	2.0
1	X	1489	C	2.0
1	X	1623	C	2.0
1	X	1829	C	2.0
18	P	55	ASP	2.0
23	U	46	LEU	2.0
1	X	509	U	2.0
1	X	835	U	2.0
1	X	1194	U	2.0
1	X	1482	U	2.0

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Mol	Chain	Res	Type	RSRZ
1	X	2178	U	2.0
1	X	2380	U	2.0
1	X	2592	U	2.0
3	A	140	ALA	2.0

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

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

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 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
31	MG	X	2902	1/1	0.56	0.81	61,61,61,61	0
31	MG	X	2897	1/1	0.62	0.26	1,1,1,1	0
32	ZLD	X	2911	24/24	0.63	0.23	28,31,37,37	0
31	MG	M	167	1/1	0.67	0.56	1,1,1,1	0
31	MG	X	2908	1/1	0.70	0.47	48,48,48,48	0
31	MG	X	2907	1/1	0.73	0.53	1,1,1,1	0
31	MG	X	2887	1/1	0.75	0.25	37,37,37,37	0
31	MG	X	2898	1/1	0.78	0.48	1,1,1,1	0
31	MG	X	2882	1/1	0.80	0.46	49,49,49,49	0
31	MG	X	2886	1/1	0.80	0.28	15,15,15,15	0
31	MG	X	2881	1/1	0.82	0.20	10,10,10,10	0
31	MG	X	2900	1/1	0.83	0.44	1,1,1,1	0
31	MG	X	2885	1/1	0.83	0.31	45,45,45,45	0
31	MG	X	2889	1/1	0.83	0.38	1,1,1,1	0
31	MG	X	2890	1/1	0.85	0.39	1,1,1,1	0
31	MG	X	2883	1/1	0.86	0.55	1,1,1,1	0
31	MG	Z	126	1/1	0.88	0.16	12,12,12,12	0
31	MG	X	2895	1/1	0.88	0.44	1,1,1,1	0
31	MG	X	2905	1/1	0.88	0.41	18,18,18,18	0

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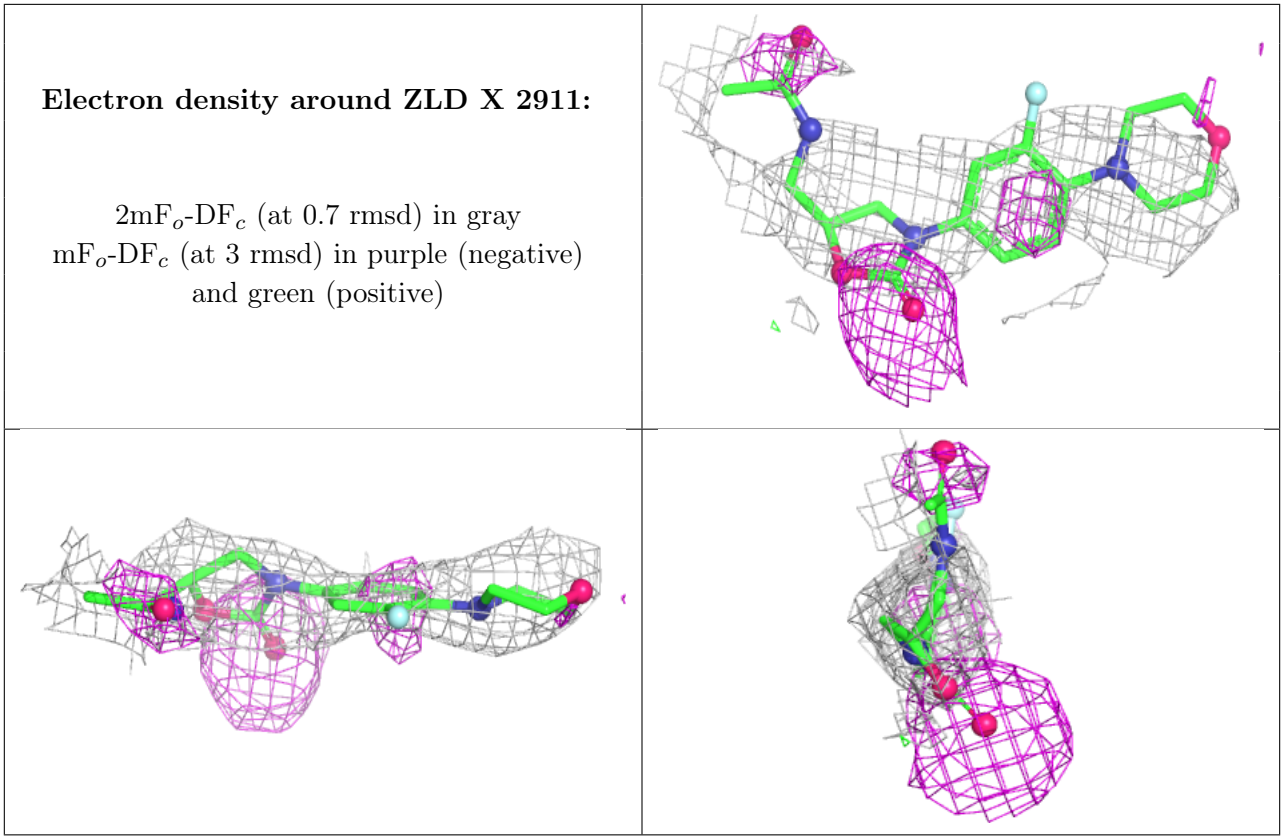
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
31	MG	X	2899	1/1	0.89	0.35	1,1,1,1	0
31	MG	Z	127	1/1	0.89	0.23	3,3,3,3	0
31	MG	X	2909	1/1	0.90	0.38	1,1,1,1	0
31	MG	X	2904	1/1	0.93	0.42	1,1,1,1	0
31	MG	X	2896	1/1	0.93	0.34	1,1,1,1	0
31	MG	X	2888	1/1	0.93	0.28	1,1,1,1	0
33	ZN	Y	61	1/1	0.93	0.20	89,89,89,89	0
31	MG	Z	124	1/1	0.94	0.22	11,11,11,11	0
31	MG	X	2906	1/1	0.94	0.13	40,40,40,40	0
31	MG	X	2891	1/1	0.94	0.22	23,23,23,23	0
31	MG	X	2901	1/1	0.95	0.36	1,1,1,1	0
31	MG	X	2903	1/1	0.95	0.31	1,1,1,1	0
31	MG	X	2910	1/1	0.95	0.53	14,14,14,14	0
33	ZN	4	38	1/1	0.95	0.05	78,78,78,78	0
31	MG	X	2893	1/1	0.96	0.17	3,3,3,3	0
31	MG	X	2884	1/1	0.96	0.09	19,19,19,19	0
31	MG	Z	125	1/1	0.96	0.26	1,1,1,1	0
31	MG	X	2892	1/1	0.97	0.20	1,1,1,1	0
31	MG	X	2894	1/1	0.97	0.25	2,2,2,2	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around ZLD X 2911:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



6.5 Other polymers (i)

There are no such residues in this entry.