Full wwPDB EM Validation Report ⓘ

Jul 28, 2025 – 05:40 PM EDT

PDB ID	:	9CWM / pdb_00009cwm
EMDB ID	:	EMD-45967
Title	:	Cryo-EM structure of human Low-density lipoprotein receptor-related protein 2
Authors	:	Zhang, Z.; Lyu, M.
Deposited on	:	2024-07-29
Resolution	:	3.30 Å(reported)

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

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

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

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

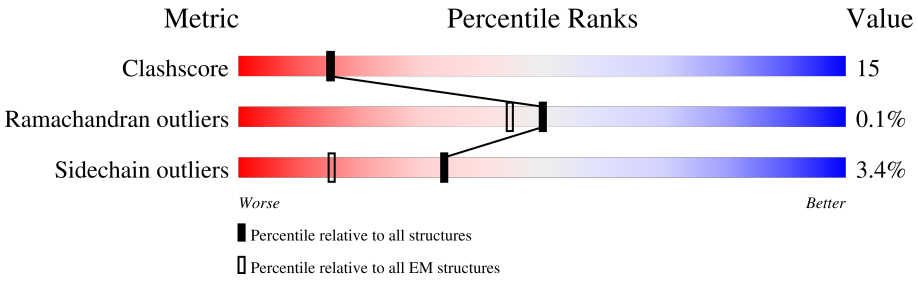
EMDB validation analysis	:	0.0.1.dev126
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0rc1
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.45.1

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.30 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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

Mol	Chain	Length	Quality of chain
1	A	4655	54% 25% • 21%
1	B	4655	53% 25% • 21%
2	C	3	33% 67%
2	D	3	33% 67%
2	E	3	67% 33%
2	F	3	100%
2	I	3	33% 67%
2	J	3	33% 67%

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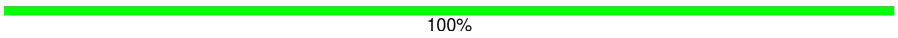
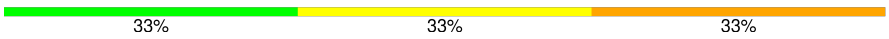
Mol	Chain	Length	Quality of chain
2	K	3	
2	L	3	
2	N	3	
3	G	2	
3	H	2	
3	M	2	

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
3	NAG	G	1	-	-	X	-

2 Entry composition (i)

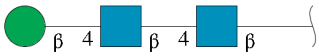
There are 4 unique types of molecules in this entry. The entry contains 58072 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Low-density lipoprotein receptor-related protein 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	3695	Total	C	N	O	S	0	0
			28662	17831	4991	5563	277		
1	B	3692	Total	C	N	O	S	0	0
			28653	17828	4988	5560	277		

- Molecule 2 is an oligosaccharide called beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.

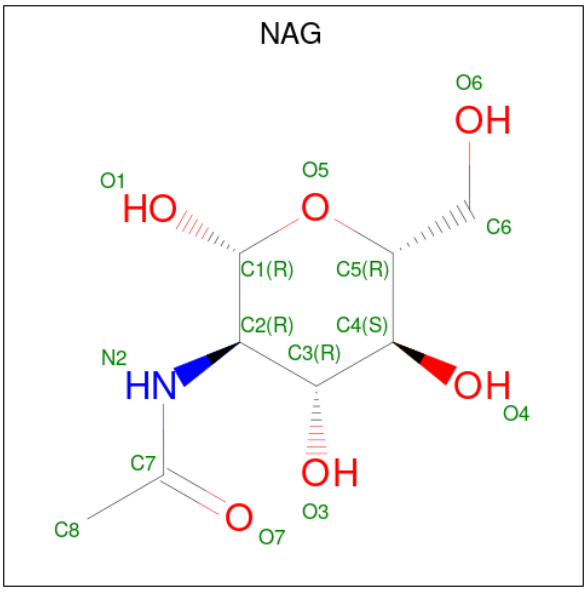


Mol	Chain	Residues	Atoms				AltConf	Trace
2	C	3	Total	C	N	O	0	0
			39	22	2	15		
2	D	3	Total	C	N	O	0	0
			39	22	2	15		
2	E	3	Total	C	N	O	0	0
			39	22	2	15		
2	F	3	Total	C	N	O	0	0
			39	22	2	15		
2	I	3	Total	C	N	O	0	0
			39	22	2	15		
2	J	3	Total	C	N	O	0	0
			39	22	2	15		
2	K	3	Total	C	N	O	0	0
			39	22	2	15		
2	L	3	Total	C	N	O	0	0
			39	22	2	15		
2	N	3	Total	C	N	O	0	0
			39	22	2	15		

- Molecule 3 is an oligosaccharide called 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose.

Mol	Chain	Residues	Atoms	AltConf	Trace
3	G	2	Total C N O 28 16 2 10	0	0
3	H	2	Total C N O 28 16 2 10	0	0
3	M	2	Total C N O 28 16 2 10	0	0

- Molecule 4 is 2-acetamido-2-deoxy-beta-D-glucopyranose (CCD ID: NAG) (formula: $C_8H_{15}NO_6$).



Mol	Chain	Residues	Atoms	AltConf
4	A	1	Total C N O 14 8 1 5	0
4	A	1	Total C N O 14 8 1 5	0
4	A	1	Total C N O 14 8 1 5	0
4	A	1	Total C N O 14 8 1 5	0
4	A	1	Total C N O 14 8 1 5	0
4	A	1	Total C N O 14 8 1 5	0

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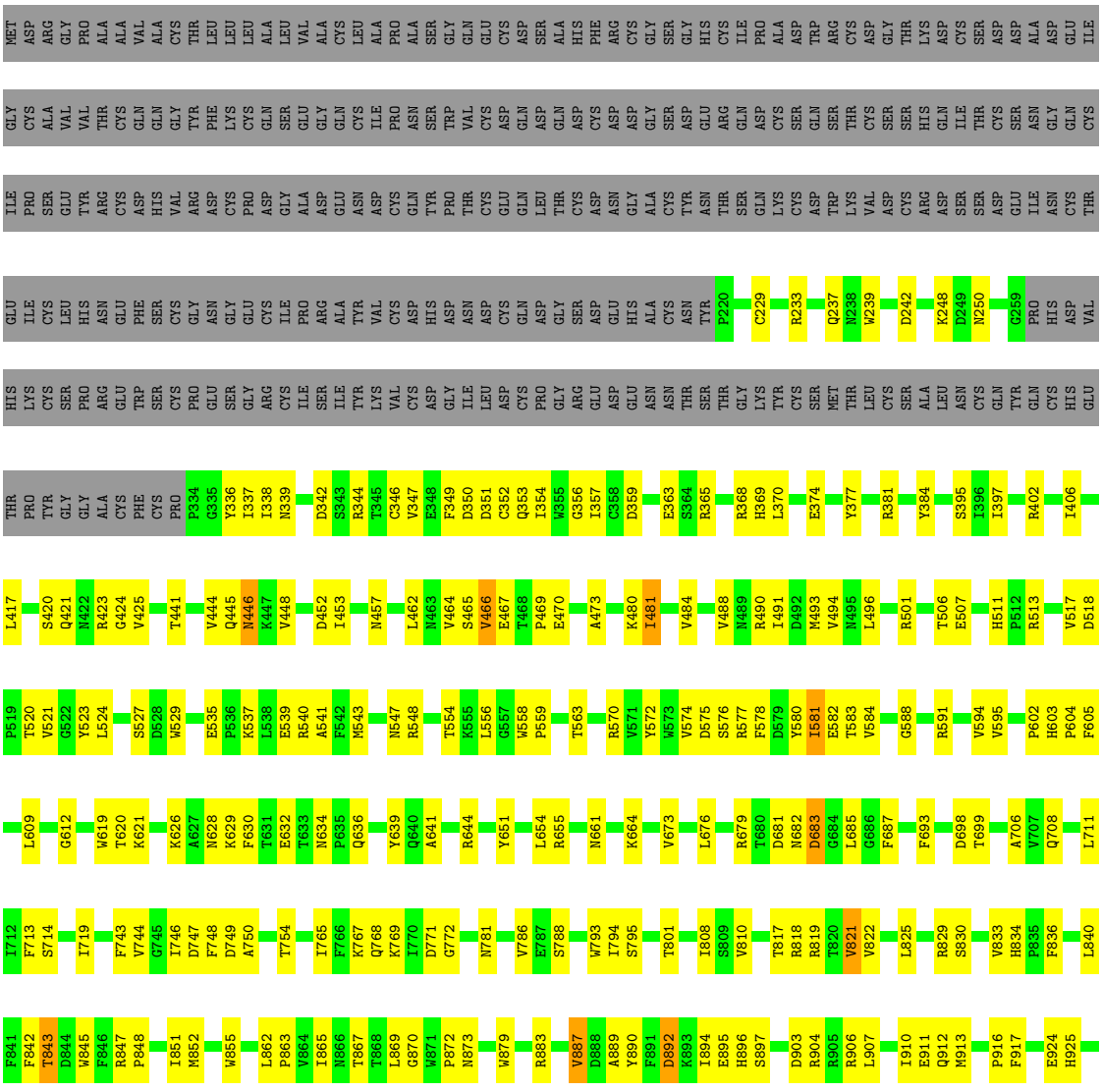
Mol	Chain	Residues	Atoms				AltConf
4	A	1	Total 14	C 8	N 1	O 5	0
4	A	1	Total 14	C 8	N 1	O 5	0
4	A	1	Total 14	C 8	N 1	O 5	0
4	A	1	Total 14	C 8	N 1	O 5	0
4	A	1	Total 14	C 8	N 1	O 5	0
4	A	1	Total 14	C 8	N 1	O 5	0
4	B	1	Total 14	C 8	N 1	O 5	0
4	B	1	Total 14	C 8	N 1	O 5	0
4	B	1	Total 14	C 8	N 1	O 5	0
4	B	1	Total 14	C 8	N 1	O 5	0
4	B	1	Total 14	C 8	N 1	O 5	0
4	B	1	Total 14	C 8	N 1	O 5	0
4	B	1	Total 14	C 8	N 1	O 5	0
4	B	1	Total 14	C 8	N 1	O 5	0
4	B	1	Total 14	C 8	N 1	O 5	0
4	B	1	Total 14	C 8	N 1	O 5	0
4	B	1	Total 14	C 8	N 1	O 5	0

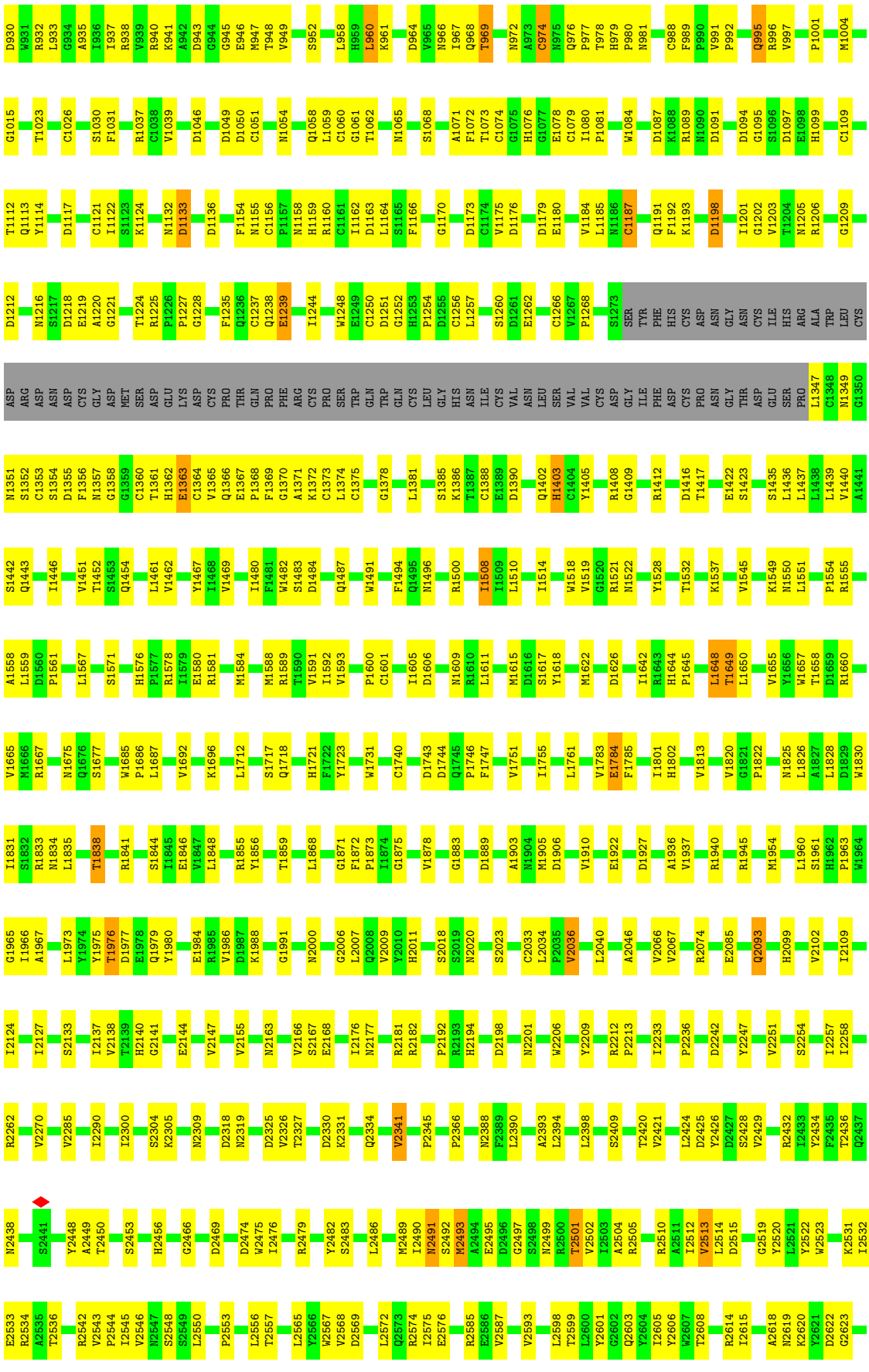
3 Residue-property plots (i)

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 atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: Low-density lipoprotein receptor-related protein 2

Chain A:

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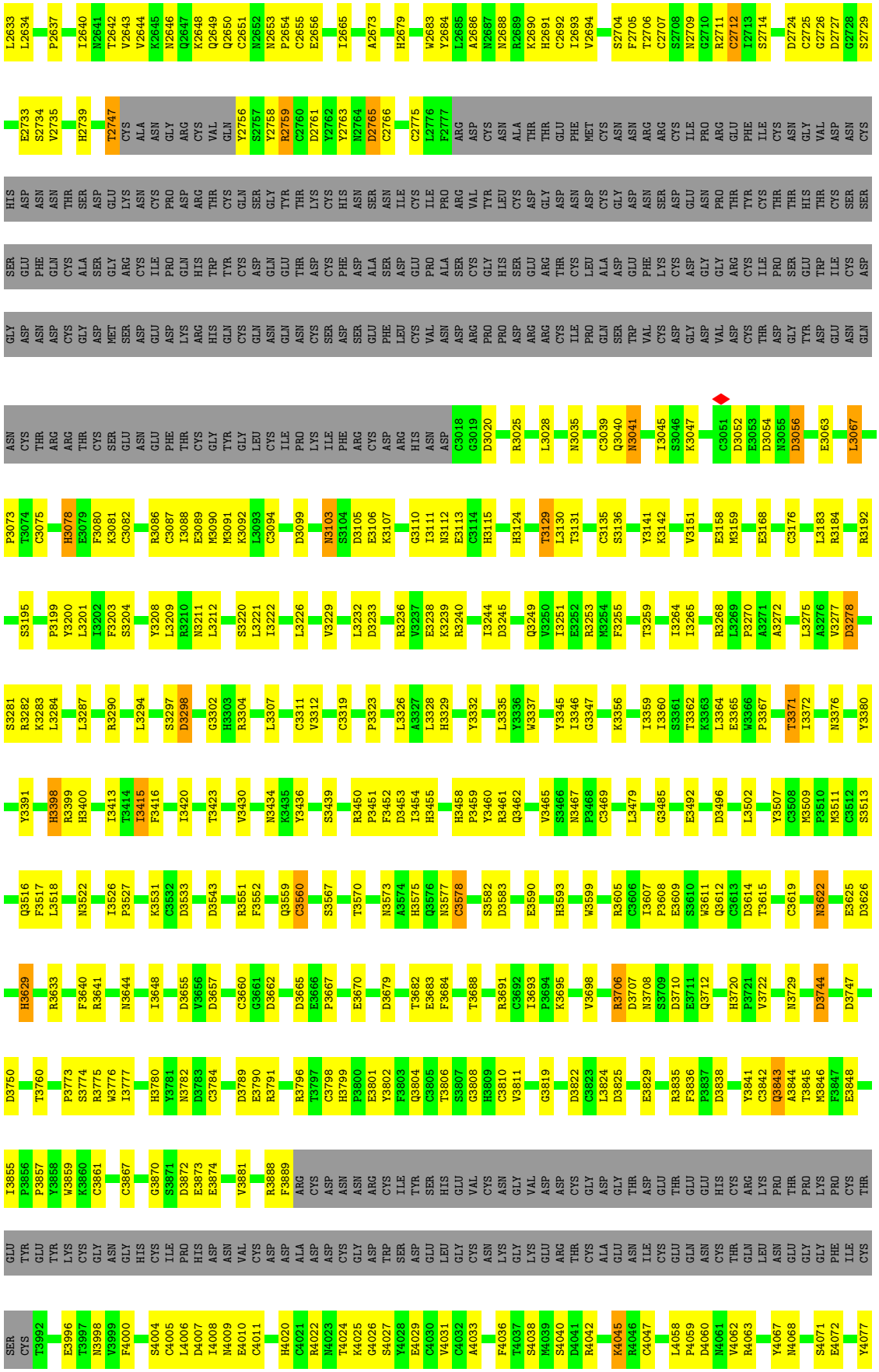
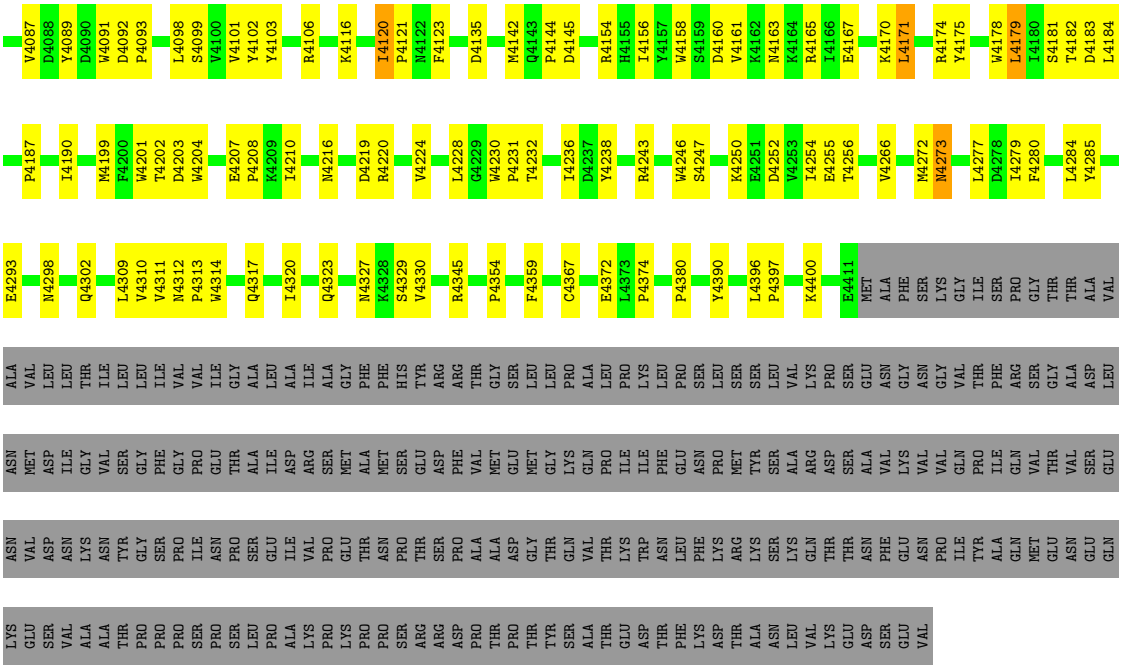
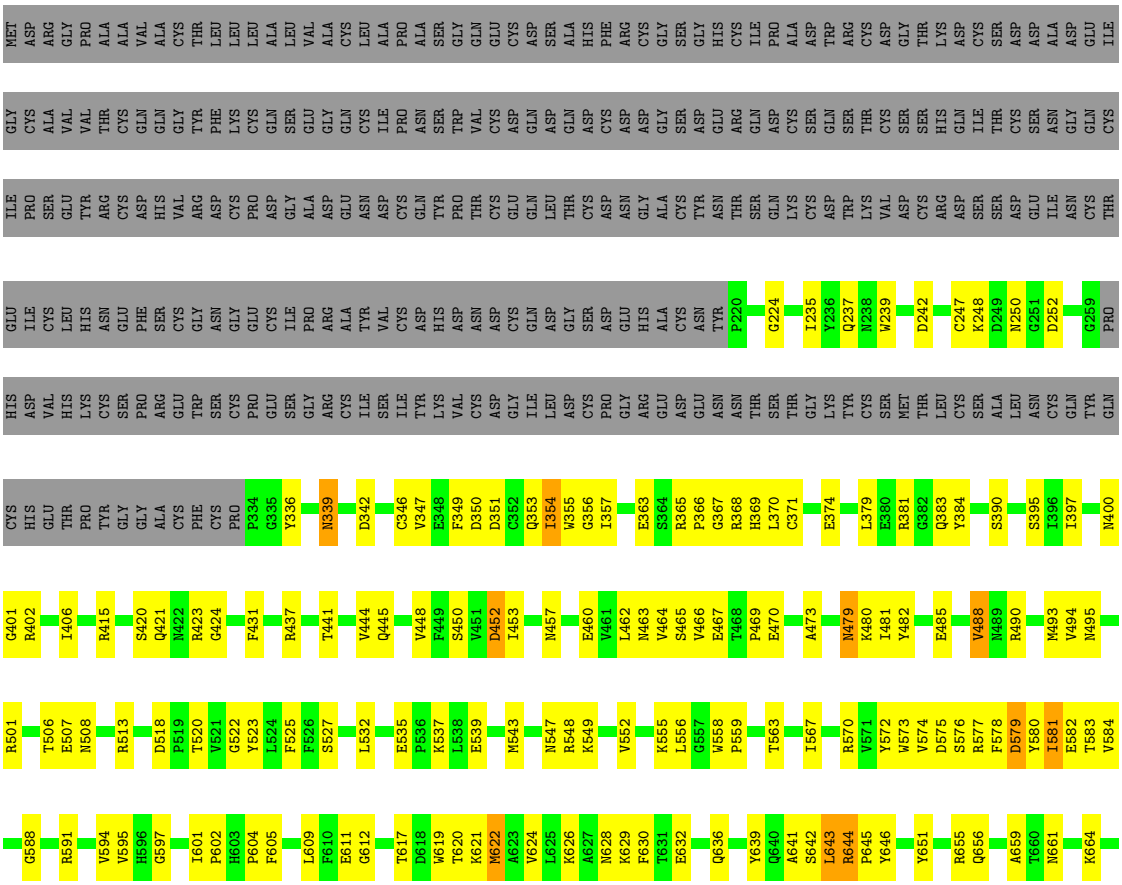
G1015 T1023 C1026 S1030 F1031 R1037 C1038 V1039 D1046 D1049 D1050 C1051 N1054 Q1058 L1059 C1060 G1061 T1062 N1065 S1068 A1071 F1072 T1073 C1074 G1075 H1076 G1077 E1078 C1079 I1080 P1081 W1084 D1087 K1088 R1089 N1090 D1091 D1094 G1095 S1096 D1097 E1098 H1099 C1109
T1112 Q1113 Y1114 D1117 C1121 I1122 S1123 K1124 N1132 D1133 D1136 F1154 N1155 C1156 P1157 N1158 H1159 R1160 G1161 I1162 D1163 L1164 S1165 F1166 G1170 D1173 C1174 V1175 D1176 D1179 E1180 V1184 L1185 N1186 C1187 Q1191 F1192 K1193 D1198 I1201 G1202 V1203 T1204 N1205 R1206 G1209
D1212 N1216 S1217 D1218 E1219 A1220 G1221 T1224 R1225 P1226 P1227 G1228 F1235 Q1236 C1237 Q1238 E1239 I1244 W1248 E1249 C1250 D1251 G1252 H1253 P1254 D1255 C1256 L1257 S1260 D1261 E1262 C1266 V1267 P1268 S1273 SER TYR PHE HIS CYS ASP ASN GLY ASN CYS ILE HIS ARG ALA TRP LEU CYS
ASP ARG ASP ASN ASP CYS GLY ASP MET SER ASP GLU LYS ASP CYS PRO THR GLN PRO PHE ARG CYS PRO SER TRP GLN TRP GLN CYS LEU GLY HIS ASN ILE CYS VAL ASN LEU SER VAL VAL CYS ASP GLY ILE PHE ASP CYS PRO ASN GLY THR ASP GLU SER PRO L1347 C1348 N1349 G1350
N1351 S1352 C1353 S1354 D1355 F1356 N1357 G1358 G1359 C1360 T1361 H1362 E1363 C1364 V1365 Q1366 E1367 P1368 F1369 G1370 A1371 K1372 C1373 L1374 C1375 G1378 L1381 S1385 K1386 T1387 C1388 E1389 D1390 Q1402 H1403 C1404 Y1405 R1408 G1409 R1412 D1416 T1417 E1422 S1423 S1435 L1436 L1437 L1438 L1439 V1440 A1441
S1442 Q1443 I1446 V1451 T1452 S1453 Q1454 L1461 V1462 Y1467 I1468 V1469 I1480 F1481 W1482 S1483 D1484 Q1487 W1491 F1494 Q1495 N1496 R1500 I1508 I1509 L1510 I1514 W1518 V1519 G1520 R1521 N1522 Y1528 T1532 K1537 V1545 K1549 N1550 L1551 P1554 R1555
A1558 L1559 D1560 P1561 L1567 S1571 H1576 P1577 R1578 I1579 E1580 R1581 M1584 M1588 R1589 T1590 V1591 I1592 V1593 P1600 C1601 I1605 D1606 N1609 R1610 L1611 M1615 D1616 S1617 Y1618 M1622 D1626 I1642 R1643 H1644 P1645 L1648 T1649 L1650 V1655 Y1656 W1657 T1658 D1659 R1660
V1665 M1666 R1667 N1675 Q1676 S1677 W1685 P1686 L1687 V1692 K1696 L1712 S1717 Q1718 H1721 F1722 Y1723 W1731 C1740 D1743 D1744 Q1745 P1746 F1747 V1751 I1755 L1761 V1783 E1784 F1785 I1801 H1802 V1813 V1820 G1821 P1822 N1825 L1826 A1827 L1828 D1829 R1830
I1831 S1832 R1833 N1834 L1835 T1838 R1841 S1844 T1845 E1846 V1847 L1848 R1855 Y1856 T1859 L1868 G1871 F1872 P1873 T1874 G1875 V1878 G1883 D1889 A1903 N1904 M1905 D1906 V1910 E1922 D1927 A1936 V1937 R1940 R1945 M1954 L1960 S1961 H1962 P1963 W1964
G1965 I1966 A1967 L1973 Y1974 Y1975 T1976 D1977 E1978 Q1979 Y1980 E1984 R1985 V1986 D1987 K1988 G1991 N2000 G2006 L2007 Q2008 V2009 Y2010 H2011 S2018 S2019 N2020 S2023 C2033 L2034 P2035 V2036 L2040 A2046 V2066 V2067 R2074 E2085 Q2093 H2099 V2102 I2109
I2124 I2127 S2133 I2137 V2138 T2139 H2140 G2141 E2144 V2147 V2155 N2163 V2166 S2167 E2168 I2176 N2177 R2181 R2182 P2192 R2193 H2194 D2198 N2201 W2206 Y2209 R2212 P2213 I2233 P2236 D2242 Y2247 V2251 S2254 I2257 I2258
R2262 V2270 V2285 I2290 I2300 S2304 K2305 N2309 D2318 N2319 D2325 V2326 T2327 D2330 K2331 Q2334 V2341 P2345 P2366 N2388 F2389 L2390 A2393 L2394 L2398 S2409 T2420 V2421 L2424 D2425 Y2426 D2427 S2428 V2429 R2432 I2433 Y2434 F2435 T2436 Q2437
N2438 S2441 Y2448 A2449 T2450 S2453 H2456 G2466 D2469 D2474 W2475 I2476 R2479 Y2482 S2483 L2486 M2489 I2490 N2491 S2492 M2493 A2494 E2495 D2496 G2497 S2498 N2499 R2500 T2501 V2502 I2503 A2504 R2505 R2510 A2511 I2512 V2513 L2514 D2515 G2519 Y2520 L2521 Y2522 W2523 K2531 I2532
E2533 R2534 A2535 T2536 R2542 V2543 P2544 I2545 V2546 W2547 S2548 S2549 L2550 P2553 L2556 T2557 L2565 Y2566 W2567 V2568 D2569 L2572 Q2573 R2574 I2575 E2576 R2585 E2586 V2587 V2593 L2598 T2599 L2600 Y2601 G2602 Q2603 Y2604 I2605 Y2606 W2607 T2608 R2614 I2615 A2618 N2619 K2620 Y2621 D2622 G2623

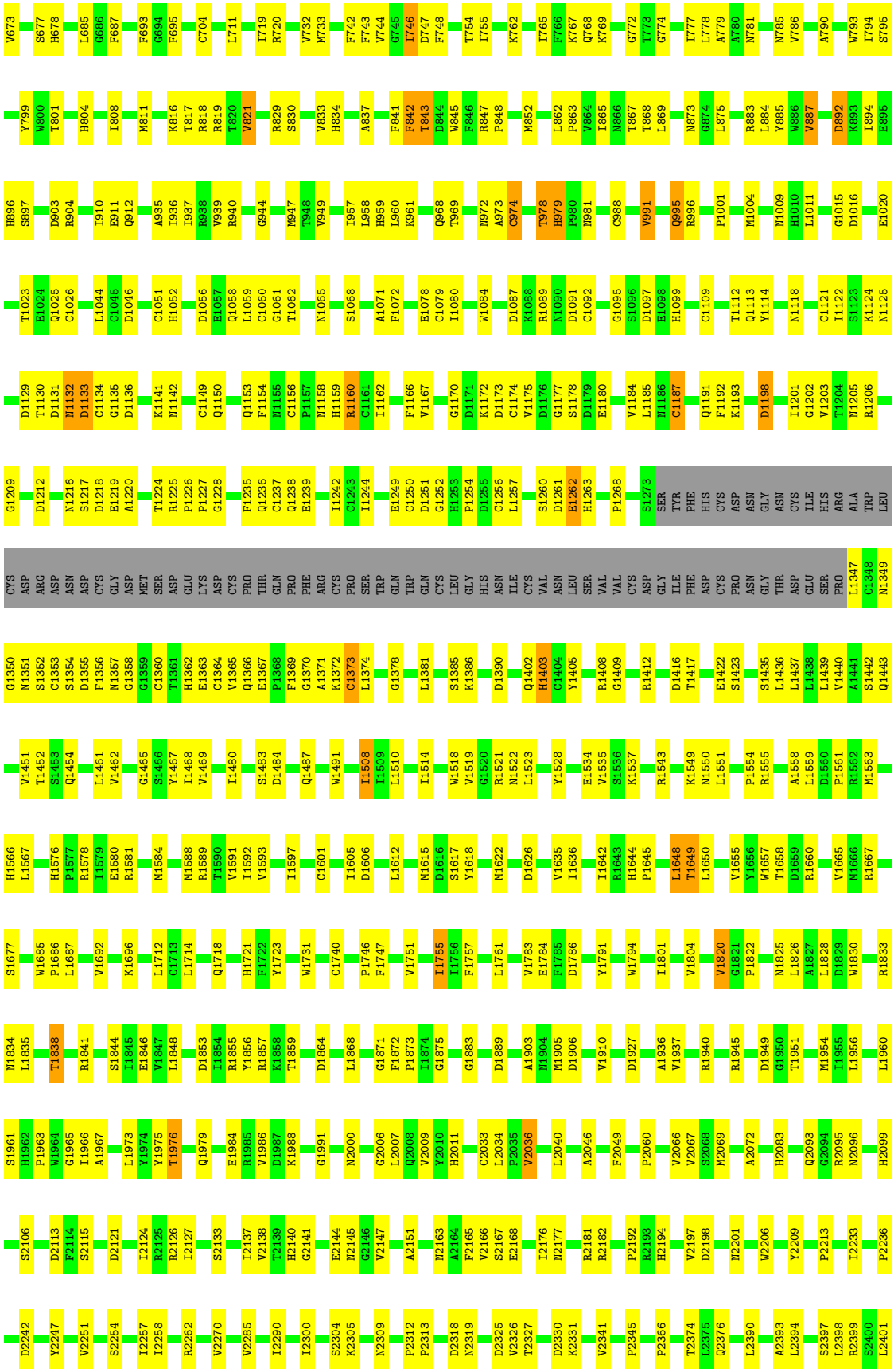




• Molecule 1: Low-density lipoprotein receptor-related protein 2

Chain B:




V673 S677 H678 L685 G686 F687 F693 G694 F695 C704 L711 I719 R720 V732 M733 F742 F743 V744 G745 I746 D747 F748 T754 I755 K762 I765 F766 K767 Q768 K769 G772 T773 G774 I777 L778 A779 A780 N781 N785 V786 A790 W793 I794 S795
Y799 W800 T801 H804 I808 M811 K816 T817 R818 R819 T820 V821 R829 S830 V833 H834 A837 F841 F842 T843 D844 W845 F846 R847 P848 M852 L862 P863 V864 I865 N866 T867 T868 L869 N873 G874 L875 R883 L884 Y885 W886 V887 D892 K893 I894 E895
H896 S897 D903 R904 I910 E911 Q912 A935 I936 I937 R938 V939 R940 G944 M947 T948 V949 I957 L958 H959 L960 K961 Q968 T969 N972 A973 C974 T978 H979 P980 N981 C988 V991 Q995 R996 P1001 M1004 N1009 H1010 L1011 G1015 D1016 E1020
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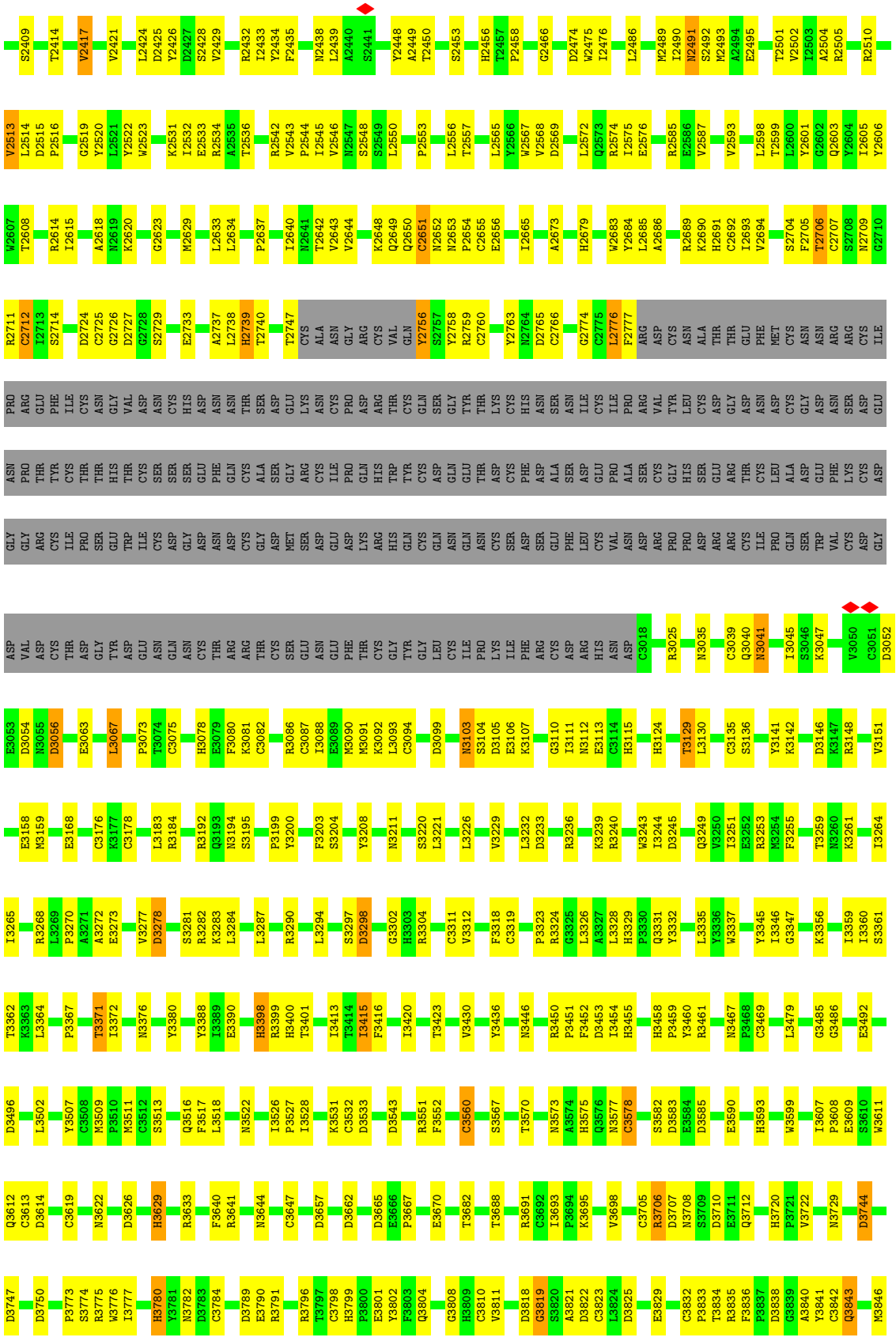
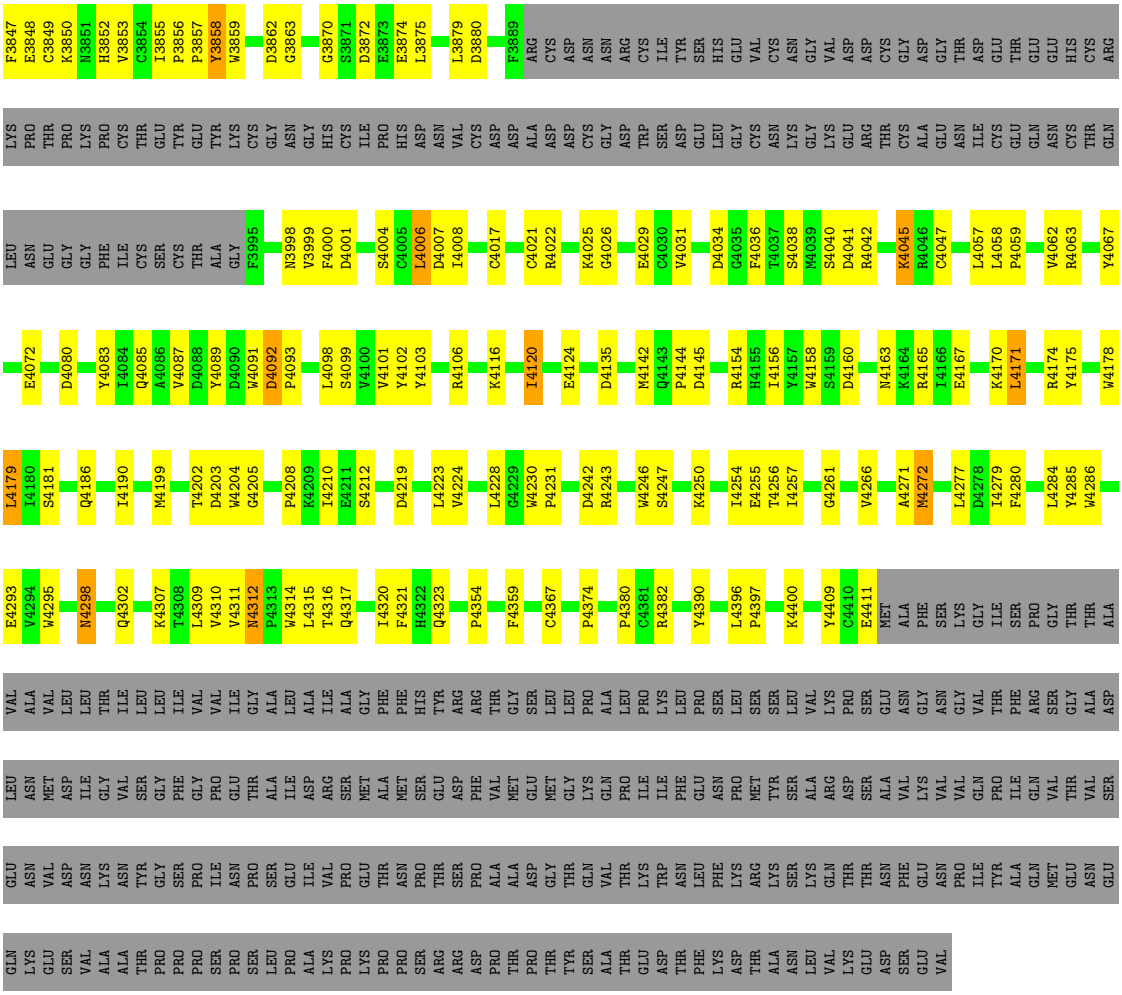
D1129 T1130 D1131 N1132 D1133 C1134 G1135 D1136 K1141 N1142 C1149 Q1150 Q1153 F1154 N1155 C1156 P1157 N1158 H1159 R1160 C1161 I1162 F1166 V1167 G1170 D1171 K1172 D1173 C1174 V1175 D1176 G1177 S1178 D1179 E1180 V1184 L1185 N1186 C1187 Q1191 F1192 K1193 D1198 I1201 G1202 V1203 T1204 N1205 R1206
G1209 D1212 N1216 S1217 D1218 E1219 A1220 T1224 R1225 P1226 P1227 G1228 F1235 Q1236 C1237 Q1238 E1239 I1242 C1243 I1244 E1249 C1250 D1251 G1252 H1253 P1254 D1255 C1256 L1257 S1260 D1261 E1262 H1263 P1268 S1273 SER TYR PHE HIS CYS ASP ASN GLY ASN CYS ILE HIS ARG ALA TRP LEU
CYS ASP ARG ASP ASN ASP CYS GLY ASP MET SER ASP GLU LYS ASP CYS PRO THR GLN PRO PHE ARG CYS PRO SER TRP GLN TRP GLN CYS LEU GLY HIS ASN ILE CYS VAL ASN LEU SER VAL VAL CYS ASP GLY ILE PHE ASP CYS PRO ASN GLY THR ASP GLU SER PRO L1347 C1348 N1349
G1350 N1351 S1352 C1353 S1354 D1355 F1356 N1357 G1358 G1359 C1360 T1361 H1362 E1363 C1364 V1365 Q1366 E1367 P1368 F1369 G1370 A1371 K1372 C1373 L1374 G1378 L1381 S1385 K1386 D1390 Q1402 H1403 C1404 Y1405 R1408 G1409 R1412 D1416 T1417 E1422 S1423 S1435 L1436 L1437 L1438 L1439 V1440 A1441 S1442 Q1443
V1451 T1452 S1453 Q1454 L1461 V1462 G1465 S1466 Y1467 I1468 V1469 I1480 S1483 D1484 Q1487 W1491 I1508 I1509 L1510 I1514 W1518 V1519 G1520 R1521 N1522 L1523 Y1528 E1534 V1535 S1536 K1537 R1543 K1549 N1550 L1551 P1554 R1555 A1558 L1559 D1560 P1561 R1562 M1563
H1566 L1567 H1576 P1577 R1578 I1579 E1580 R1581 M1584 M1588 R1589 T1590 V1591 I1592 V1593 I1597 C1601 I1605 D1606 L1612 M1615 D1616 S1617 Y1618 M1622 D1626 V1635 I1636 I1642 R1643 H1644 P1645 L1648 T1649 L1650 V1655 Y1656 W1657 T1658 D1659 R1660 V1665 M1666 R1667
S1677 W1685 P1686 L1687 V1692 K1696 L1712 C1713 L1714 Q1718 H1721 F1722 Y1723 W1731 C1740 P1746 F1747 V1751 I1755 I1756 F1757 L1761 V1783 E1784 F1785 D1786 Y1791 W1794 I1801 V1804 V1820 G1821 P1822 N1825 L1826 A1827 L1828 D1829 W1830 R1833
N1834 L1835 T1838 R1841 S1844 I1845 E1846 V1847 L1848 D1853 I1854 R1855 Y1856 R1857 K1858 T1859 D1864 L1868 G1871 F1872 P1873 I1874 G1875 G1883 D1889 A1903 N1904 M1905 D1906 V1910 D1927 A1936 V1937 R1940 R1945 D1949 G1950 T1951 M1954 I1955 L1956 L1960
S1961 H1962 P1963 W1964 G1965 I1966 A1967 L1973 Y1974 Y1975 T1976 Q1979 E1984 R1985 V1986 D1987 K1988 G1991 N2000 G2006 L2007 Q2008 V2009 Y2010 H2011 C2033 L2034 P2035 V2036 L2040 A2046 F2049 P2060 V2066 V2067 S2068 M2069 A2072 H2083 Q2093 G2094 R2095 N2096 H2099
S2106 D2113 F2114 S2115 D2121 I2124 R2125 R2126 I2127 S2133 I2137 V2138 T2139 H2140 G2141 E2144 N2145 G2146 V2147 A2151 N2163 K2164 F2165 V2166 S2167 E2168 I2176 N2177 R2181 R2182 P2192 R2193 H2194 V2197 D2198 N2201 W2206 Y2209 P2213 I2233 P2236
D2242 Y2247 V2251 S2254 I2257 I2258 R2262 V2270 V2285 I2290 I2300 S2304 K2305 N2309 P2312 P2313 D2318 N2319 D2325 V2326 T2327 D2330 K2331 V2341 P2345 P2366 T2374 L2375 Q2376 L2390 A2393 L2394 S2397 L2398 R2399 S2400 L2401





• Molecule 2: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain C:

• Molecule 2: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

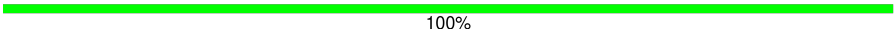
Chain D:

• Molecule 2: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain E:

• Molecule 2: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain F:



• Molecule 2: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain I:

• Molecule 2: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

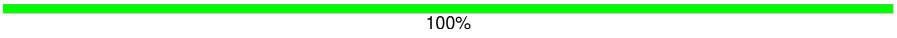
Chain J:

• Molecule 2: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain K:

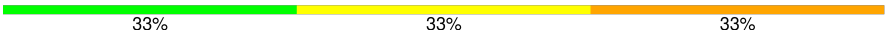
• Molecule 2: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain L:



• Molecule 2: beta-D-mannopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain N:



• Molecule 3: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain G:

• Molecule 3: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain H:

• Molecule 3: 2-acetamido-2-deoxy-beta-D-glucopyranose-(1-4)-2-acetamido-2-deoxy-beta-D-glucopyranose

Chain M:

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	111811	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	40	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	1500	Depositor
Magnification	81000	Depositor
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	1.033	Depositor
Minimum map value	-0.060	Depositor
Average map value	0.008	Depositor
Map value standard deviation	0.023	Depositor
Recommended contour level	0.1	Depositor
Map size (Å)	547.84, 547.84, 547.84	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.07, 1.07, 1.07	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: NAG, BMA

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.26	5/29362 (0.0%)	0.43	4/39957 (0.0%)
1	B	0.25	6/29354 (0.0%)	0.43	7/39946 (0.0%)
All	All	0.26	11/58716 (0.0%)	0.43	11/79903 (0.0%)

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	A	0	1

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	480	LYS	C-N	9.10	1.44	1.33
1	B	842	PHE	C-N	8.55	1.44	1.33
1	B	995	GLN	C-N	8.00	1.45	1.33
1	A	995	GLN	C-N	7.15	1.44	1.33
1	A	843	THR	C-N	6.31	1.41	1.33
1	B	841	PHE	C-N	-6.12	1.25	1.33
1	B	843	THR	C-N	6.04	1.42	1.33
1	A	481	ILE	C-N	5.63	1.41	1.33
1	B	367	GLY	C-N	5.59	1.41	1.33
1	B	996	ARG	C-N	5.46	1.40	1.33
1	A	996	ARG	C-N	5.04	1.39	1.33

All (11) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	2726	GLY	N-CA-C	-9.85	102.41	115.32
1	A	2726	GLY	N-CA-C	-9.74	102.56	115.32
1	B	3819	GLY	N-CA-C	-6.17	107.74	115.08
1	B	842	PHE	O-C-N	5.58	129.92	123.17
1	A	480	LYS	O-C-N	5.54	130.43	123.23
1	B	995	GLN	O-C-N	5.45	130.23	123.15
1	B	1132	ASN	N-CA-C	-5.32	105.96	113.20
1	B	611	GLU	CB-CA-C	-5.17	110.59	116.54
1	A	995	GLN	O-C-N	5.16	129.46	122.96
1	B	3613	CYS	N-CA-C	-5.04	104.39	110.44
1	A	3881	VAL	CB-CA-C	-5.02	109.02	114.35

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	819	ARG	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	A	28662	0	26485	823	0
1	B	28653	0	26477	829	0
2	C	39	0	34	2	0
2	D	39	0	34	2	0
2	E	39	0	34	5	0
2	F	39	0	34	0	0
2	I	39	0	34	3	0
2	J	39	0	34	3	0
2	K	39	0	34	6	0
2	L	39	0	34	0	0
2	N	39	0	34	2	0
3	G	28	0	25	7	0
3	H	28	0	25	1	0
3	M	28	0	25	1	0
4	A	168	0	156	1	0
4	B	154	0	143	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	58072	0	53642	1640	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 15.

All (1640) 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:A:4329:SER:HB2	3:G:1:NAG:C1	1.75	1.16
1:A:4007:ASP:HA	1:A:4025:LYS:HA	1.10	1.09
1:B:1228:GLY:HA3	1:B:3195:SER:HA	1.51	0.91
1:A:4007:ASP:HA	1:A:4025:LYS:CA	2.00	0.90
1:B:3611:TRP:HA	1:B:3614:ASP:HB3	1.55	0.88
1:B:3239:LYS:HB2	2:K:1:NAG:H62	1.56	0.87
1:A:339:ASN:HB2	1:A:342:ASP:HB2	1.55	0.87
1:A:3239:LYS:HB2	2:E:1:NAG:H62	1.58	0.83
1:B:4208:PRO:HB2	1:B:4228:LEU:HB2	1.61	0.83
1:A:4007:ASP:CA	1:A:4025:LYS:HA	2.02	0.83
1:A:1228:GLY:HA3	1:A:3195:SER:HA	1.59	0.83
1:B:4293:GLU:HG2	1:B:4310:VAL:HG22	1.61	0.82
1:B:1352:SER:HA	1:B:1355:ASP:HB2	1.60	0.82
1:A:3255:PHE:HD2	2:E:1:NAG:H5	1.42	0.82
1:B:3998:ASN:HB2	1:B:4001:ASP:HB2	1.60	0.82
1:B:1159:HIS:HB2	1:B:1175:VAL:HG13	1.60	0.81
1:A:911:GLU:HG2	1:A:912:GLN:HG3	1.63	0.81
1:A:3255:PHE:CD2	2:E:1:NAG:H5	2.15	0.81
1:B:3255:PHE:HD2	2:K:1:NAG:H5	1.45	0.80
1:B:354:ILE:HG23	1:B:357:ILE:HB	1.62	0.80
1:B:3255:PHE:CD2	2:K:1:NAG:H5	2.17	0.80
1:B:2758:TYR:HB3	1:B:2763:TYR:HB2	1.66	0.78
1:B:4124:GLU:HG3	3:M:1:NAG:H83	1.66	0.78
1:B:1172:LYS:HE2	1:B:1177:GLY:HA3	1.64	0.78
1:B:3244:ILE:HG12	1:B:3251:ILE:HG12	1.67	0.77
1:B:3287:LEU:HD13	1:B:3323:PRO:HB2	1.65	0.77
1:A:1349:ASN:HB3	1:A:1370:GLY:HA3	1.67	0.76
1:A:4179:LEU:HD13	1:A:4199:MET:HE1	1.66	0.76
1:B:2398:LEU:HD22	1:B:2424:LEU:HD21	1.68	0.76
1:A:3063:GLU:HB2	1:A:3067:LEU:HB2	1.67	0.75
1:B:2489:MET:HA	1:B:2505:ARG:HA	1.67	0.75
1:B:2475:TRP:HZ2	1:B:2649:GLN:HB2	1.50	0.75
1:B:3063:GLU:HB2	1:B:3067:LEU:HB2	1.67	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3244:ILE:HG12	1:A:3251:ILE:HG12	1.68	0.74
1:B:3819:GLY:H	1:B:3835:ARG:HH21	1.32	0.74
1:A:3287:LEU:HD13	1:A:3323:PRO:HB2	1.69	0.74
1:A:3791:ARG:HH21	1:B:4142:MET:HG3	1.52	0.74
1:B:3326:LEU:HG	1:B:3335:LEU:HD11	1.69	0.73
1:A:2489:MET:HA	1:A:2505:ARG:HA	1.68	0.73
1:B:2686:ALA:HB2	1:B:2693:ILE:HD11	1.69	0.73
1:A:363:GLU:HB2	1:A:370:LEU:HB3	1.71	0.73
1:A:1461:LEU:HD23	1:A:1462:VAL:HG23	1.71	0.73
1:B:363:GLU:HB2	1:B:370:LEU:HB3	1.69	0.73
1:A:2707:CYS:HB3	1:A:2729:SER:HB3	1.71	0.73
1:A:4329:SER:CB	3:G:1:NAG:C1	2.62	0.73
1:A:1074:CYS:HB2	1:A:1078:GLU:HB2	1.71	0.72
1:B:4179:LEU:HD13	1:B:4199:MET:HE1	1.70	0.72
1:B:1461:LEU:HD23	1:B:1462:VAL:HG23	1.71	0.72
1:B:2759:ARG:NH1	1:B:2760:CYS:SG	2.63	0.72
1:A:3326:LEU:HG	1:A:3335:LEU:HD11	1.69	0.72
1:B:578:PHE:HB3	1:B:1175:VAL:HG12	1.71	0.72
1:A:1254:PRO:HG2	4:A:4702:NAG:H83	1.70	0.71
1:B:3104:SER:HA	1:B:3107:LYS:HB3	1.72	0.71
1:A:466:VAL:HB	1:A:469:PRO:HG3	1.73	0.71
1:B:1354:SER:H	1:B:1366:GLN:HE21	1.37	0.71
1:B:3836:PHE:HD2	1:B:3838:ASP:HB3	1.55	0.71
1:A:911:GLU:HB3	1:A:947:MET:HE2	1.72	0.71
1:B:817:THR:HG23	1:B:1001:PRO:HB3	1.71	0.71
1:A:4022:ARG:HB3	1:A:4029:GLU:HB3	1.73	0.71
1:A:3423:THR:HB	1:A:3451:PRO:HB2	1.73	0.71
1:A:1352:SER:HA	1:A:1355:ASP:HB2	1.73	0.71
1:A:481:ILE:HG13	1:A:496:LEU:HD23	1.73	0.70
1:B:1364:CYS:HA	1:B:1373:CYS:HA	1.73	0.70
1:B:3364:LEU:HD11	1:B:3367:PRO:HB3	1.71	0.70
1:A:2686:ALA:HB2	1:A:2693:ILE:HD11	1.71	0.70
1:A:883:ARG:HE	1:A:896:HIS:HD2	1.38	0.70
1:B:237:GLN:HB2	1:B:549:LYS:HD2	1.74	0.70
1:A:3364:LEU:HD11	1:A:3367:PRO:HB3	1.74	0.70
1:A:4208:PRO:HB2	1:A:4228:LEU:HB2	1.72	0.70
1:B:2707:CYS:HB3	1:B:2729:SER:HB3	1.72	0.70
1:B:1353:CYS:SG	1:B:1364:CYS:HB2	2.32	0.70
1:A:4142:MET:HG3	1:B:3791:ARG:HH21	1.57	0.70
1:A:991:VAL:HG23	1:A:995:GLN:HG3	1.73	0.69
1:B:1160:ARG:HE	1:B:1162:ILE:HG22	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2475:TRP:HZ2	1:A:2649:GLN:HB2	1.55	0.69
1:A:3796:ARG:NH2	1:A:3810:CYS:SG	2.65	0.69
1:B:1658:THR:HB	1:B:1686:PRO:HB2	1.73	0.69
1:A:744:VAL:HG22	1:A:958:LEU:HD13	1.74	0.69
1:B:3423:THR:HB	1:B:3451:PRO:HB2	1.73	0.69
1:B:3875:LEU:HB3	1:B:3879:LEU:HA	1.74	0.69
1:A:582:GLU:HG2	1:A:591:ARG:HE	1.58	0.69
1:B:4204:TRP:HA	1:B:4231:PRO:HD2	1.74	0.69
1:B:3796:ARG:NH2	1:B:3810:CYS:SG	2.66	0.69
1:B:395:SER:HB2	1:B:651:TYR:HB3	1.74	0.68
1:A:1826:LEU:HD22	1:A:1835:LEU:HD21	1.76	0.68
1:A:1658:THR:HB	1:A:1686:PRO:HB2	1.75	0.68
1:A:1435:SER:HB2	1:A:1452:THR:HB	1.75	0.68
1:B:911:GLU:HG2	1:B:912:GLN:HG3	1.76	0.68
1:A:829:ARG:NH1	1:A:873:ASN:OD1	2.27	0.67
1:A:1588:MET:SD	1:A:1718:GLN:NE2	2.66	0.67
1:B:1435:SER:HB2	1:B:1452:THR:HB	1.76	0.67
1:B:2608:THR:HG22	1:B:2615:ILE:HG12	1.75	0.67
1:A:3264:ILE:HG22	1:A:3265:ILE:HG13	1.77	0.67
1:B:847:ARG:NH2	1:B:1251:ASP:OD2	2.28	0.67
1:B:3578:CYS:HB3	1:B:3583:ASP:HB2	1.77	0.67
1:B:1114:TYR:N	1:B:1122:ILE:O	2.27	0.67
1:A:2608:THR:HG22	1:A:2615:ILE:HG12	1.75	0.67
1:A:3867:CYS:HB3	1:A:3870:GLY:HA3	1.77	0.66
1:B:1071:ALA:HB1	1:B:1079:CYS:HB3	1.77	0.66
1:B:1125:ASN:HA	1:B:1153:GLN:HE21	1.60	0.66
1:B:2474:ASP:HB2	1:B:2514:LEU:HD13	1.78	0.66
1:B:4022:ARG:HB3	1:B:4029:GLU:HB3	1.75	0.66
1:A:4062:VAL:HG23	1:A:4063:ARG:HG3	1.78	0.66
1:B:1256:CYS:SG	1:B:1260:SER:OG	2.53	0.66
1:A:4311:VAL:HG12	1:A:4312:ASN:H	1.61	0.66
1:B:1058:GLN:HG2	1:B:1059:LEU:HG	1.78	0.66
1:B:1365:VAL:H	1:B:1373:CYS:H	1.43	0.66
1:A:493:MET:HE1	1:A:673:VAL:HG11	1.78	0.66
1:A:3611:TRP:HA	1:A:3614:ASP:HB3	1.77	0.66
1:B:609:LEU:O	1:B:655:ARG:NH1	2.28	0.66
1:A:1256:CYS:SG	1:A:1260:SER:OG	2.54	0.66
1:A:4036:PHE:HB3	1:A:4047:CYS:HB3	1.77	0.66
1:B:1187:CYS:H	1:B:1193:LYS:HE3	1.61	0.66
1:A:229:CYS:HB2	1:A:233:ARG:HG2	1.76	0.66
1:A:2505:ARG:O	1:A:2542:ARG:NH1	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:991:VAL:HG23	1:B:995:GLN:HG3	1.77	0.65
1:B:3298:ASP:OD1	1:B:3298:ASP:N	2.29	0.65
1:B:4243:ARG:HH21	1:B:4256:THR:HG23	1.59	0.65
1:B:711:LEU:HD11	1:B:960:LEU:HG	1.78	0.65
1:B:2285:VAL:HG22	1:B:2290:ILE:HG22	1.79	0.65
1:A:1156:CYS:HB2	1:A:1160:ARG:H	1.60	0.65
1:A:765:ILE:HD11	1:A:786:VAL:HG21	1.77	0.65
1:B:582:GLU:HG2	1:B:591:ARG:HE	1.61	0.65
1:B:1588:MET:SD	1:B:1718:GLN:NE2	2.69	0.65
1:B:3204:SER:HB3	1:B:3232:LEU:HD23	1.79	0.65
1:B:3836:PHE:CZ	1:B:3840:ALA:HB3	2.32	0.65
1:A:1058:GLN:HG2	1:A:1059:LEU:HG	1.79	0.64
1:A:3578:CYS:HB3	1:A:3583:ASP:HB2	1.78	0.64
1:B:580:TYR:CE2	1:B:582:GLU:HB2	2.33	0.64
1:B:594:VAL:HG12	1:B:595:VAL:HG23	1.80	0.64
1:B:2531:LYS:HB3	1:B:2544:PRO:HB3	1.79	0.64
1:B:4062:VAL:HG23	1:B:4063:ARG:HG3	1.79	0.64
1:A:1367:GLU:HG3	1:A:1370:GLY:H	1.62	0.64
1:A:1187:CYS:H	1:A:1193:LYS:HE3	1.61	0.64
1:A:3142:LYS:N	1:A:3151:VAL:O	2.28	0.64
1:A:3362:THR:O	1:A:3399:ARG:NH1	2.28	0.64
1:B:3856:PRO:HG2	1:B:3859:TRP:HD1	1.62	0.64
1:A:1592:ILE:HG13	1:A:1593:VAL:HG23	1.80	0.64
1:A:3236:ARG:HD3	1:A:3459:PRO:HA	1.80	0.64
1:A:3846:MET:HG2	1:A:3857:PRO:HD3	1.79	0.64
1:B:3835:ARG:HD3	1:B:3841:TYR:HD2	1.61	0.64
1:B:3836:PHE:CD2	1:B:3838:ASP:HB3	2.32	0.64
1:A:1365:VAL:O	1:A:1372:LYS:HB3	1.98	0.64
1:B:3264:ILE:HG22	1:B:3265:ILE:HG13	1.80	0.64
1:A:2479:ARG:HH12	1:A:2499:ASN:HB2	1.63	0.63
1:A:3855:ILE:HD11	1:A:3867:CYS:HB2	1.80	0.63
1:B:1252:GLY:N	1:B:1262:GLU:OE1	2.29	0.63
1:A:1072:PHE:N	1:A:1080:ILE:O	2.31	0.63
1:A:570:ARG:HH11	1:A:583:THR:HG22	1.64	0.63
1:A:1159:HIS:HB2	1:A:1175:VAL:HG22	1.80	0.63
1:A:3298:ASP:N	1:A:3298:ASP:OD1	2.32	0.63
1:A:4204:TRP:HA	1:A:4231:PRO:HD2	1.80	0.63
1:A:602:PRO:HG3	1:A:621:LYS:HE2	1.81	0.63
1:A:620:THR:HA	1:A:1132:ASN:HB2	1.79	0.63
1:A:4279:ILE:HG12	1:A:4284:LEU:HG	1.81	0.63
1:B:366:PRO:HD2	1:B:368:ARG:HH22	1.61	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1237:CYS:SG	1:A:1260:SER:OG	2.57	0.63
1:A:1252:GLY:N	1:A:1262:GLU:OE1	2.30	0.63
1:B:3999:VAL:HG23	1:B:4000:PHE:HD1	1.62	0.63
1:A:2285:VAL:HG22	1:A:2290:ILE:HG22	1.80	0.63
1:B:3073:PRO:HA	1:B:3081:LYS:HD2	1.80	0.63
1:A:2398:LEU:HD22	1:A:2424:LEU:HD21	1.80	0.63
1:A:2759:ARG:NH2	1:A:2761:ASP:OD1	2.32	0.63
1:B:3720:HIS:ND1	1:B:3722:VAL:O	2.32	0.63
1:A:421:GLN:O	1:A:445:GLN:NE2	2.32	0.62
1:A:747:ASP:HA	1:A:961:LYS:HE3	1.81	0.62
1:A:3259:THR:HG21	2:E:1:NAG:C7	2.29	0.62
1:B:3362:THR:O	1:B:3399:ARG:NH1	2.28	0.62
1:B:4170:LYS:HG2	1:B:4174:ARG:HH21	1.63	0.62
1:A:1114:TYR:N	1:A:1122:ILE:O	2.31	0.62
1:B:1354:SER:HB3	1:B:1366:GLN:HG2	1.81	0.62
1:B:2683:TRP:HB3	1:B:2692:CYS:HB3	1.81	0.62
1:A:2683:TRP:HB3	1:A:2692:CYS:HB3	1.80	0.62
1:B:576:SER:HA	1:B:604:PRO:HD2	1.81	0.62
1:B:1826:LEU:HD22	1:B:1835:LEU:HD21	1.80	0.62
1:A:3720:HIS:ND1	1:A:3722:VAL:O	2.32	0.62
1:B:3834:THR:HB	1:B:3840:ALA:O	2.00	0.62
1:B:4279:ILE:HG12	1:B:4284:LEU:HG	1.82	0.62
1:B:2648:LYS:HB2	1:B:2650:GLN:HE22	1.65	0.61
1:A:423:ARG:HA	1:A:1089:ARG:HE	1.65	0.61
1:B:507:GLU:HB3	1:B:548:ARG:NH1	2.15	0.61
1:B:2182:ARG:NH1	1:B:2409:SER:OG	2.33	0.61
1:B:3259:THR:HG21	2:K:1:NAG:C7	2.30	0.61
1:A:1060:CYS:HA	1:A:1065:ASN:HD22	1.66	0.61
1:A:1381:LEU:HB3	1:A:1385:SER:HA	1.82	0.61
1:A:3872:ASP:HB3	1:A:3874:GLU:HG3	1.82	0.61
1:B:580:TYR:HE2	1:B:582:GLU:HB2	1.65	0.61
1:B:3496:ASP:OD2	1:B:3516:GLN:NE2	2.33	0.61
1:A:1160:ARG:HE	1:A:1162:ILE:HG22	1.66	0.61
1:A:3158:GLU:HG2	1:A:3159:MET:HG3	1.82	0.61
1:A:2756:TYR:HA	1:A:2759:ARG:HB3	1.81	0.61
1:B:365:ARG:HB3	1:B:368:ARG:NH2	2.15	0.61
1:A:609:LEU:O	1:A:655:ARG:NH1	2.34	0.61
1:A:2176:ILE:HB	2:C:1:NAG:H82	1.82	0.61
1:A:4020:HIS:NE2	1:A:4033:ALA:HB2	2.16	0.61
1:B:1405:TYR:HB2	1:B:1412:ARG:HB3	1.83	0.61
1:B:4311:VAL:HG12	1:B:4312:ASN:H	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:795:SER:OG	1:A:974:CYS:SG	2.59	0.60
1:B:883:ARG:NH2	1:B:903:ASP:O	2.33	0.60
1:B:4036:PHE:HB3	1:B:4047:CYS:HB3	1.84	0.60
1:A:2394:LEU:HD11	1:A:2633:LEU:HD13	1.83	0.60
1:A:3836:PHE:HD2	1:A:3838:ASP:HB3	1.66	0.60
1:B:421:GLN:O	1:B:445:GLN:NE2	2.33	0.60
1:A:2251:VAL:HG12	1:A:2258:ILE:HG12	1.83	0.60
1:B:1349:ASN:HB3	1:B:1370:GLY:HA3	1.81	0.60
1:B:2709:ASN:HB3	1:B:2727:ASP:CG	2.26	0.60
1:A:801:THR:HG22	1:A:808:ILE:HG12	1.83	0.60
1:B:2505:ARG:O	1:B:2542:ARG:NH1	2.34	0.60
1:A:523:TYR:CD2	1:A:540:ARG:HD2	2.36	0.60
1:A:2531:LYS:HB3	1:A:2544:PRO:HB3	1.83	0.60
1:A:3073:PRO:HA	1:A:3081:LYS:HD2	1.82	0.60
1:A:4067:TYR:CD2	1:A:4309:LEU:HD11	2.36	0.60
1:B:747:ASP:HA	1:B:961:LYS:HE3	1.83	0.60
1:A:352:CYS:HA	1:A:357:ILE:HD13	1.84	0.60
1:A:3094:CYS:H	1:A:3105:ASP:HB2	1.66	0.60
1:A:3204:SER:HB3	1:A:3232:LEU:HD23	1.84	0.60
1:B:1356:PHE:C	1:B:1358:GLY:H	2.08	0.60
1:A:527:SER:HB2	1:A:559:PRO:HB2	1.83	0.60
1:A:822:VAL:HG12	1:A:825:LEU:HD21	1.84	0.60
1:A:3496:ASP:OD2	1:A:3516:GLN:NE2	2.35	0.60
1:B:415:ARG:NH2	1:B:453:ILE:O	2.34	0.60
1:B:2251:VAL:HG12	1:B:2258:ILE:HG12	1.84	0.60
1:B:2390:LEU:HD13	1:B:2640:ILE:HD11	1.84	0.60
1:B:3025:ARG:NH1	1:B:3040:GLN:O	2.35	0.60
1:B:4178:TRP:HB3	1:B:4181:SER:HB3	1.82	0.60
1:A:3780:HIS:HE2	1:A:3824:LEU:HB2	1.66	0.60
1:B:1352:SER:HA	1:B:1355:ASP:CB	2.31	0.60
1:B:1510:LEU:HB3	1:B:1528:TYR:HB3	1.83	0.60
1:A:3454:ILE:O	1:A:3455:HIS:ND1	2.34	0.59
1:B:3176:CYS:O	1:B:3184:ARG:NH1	2.35	0.59
1:B:555:LYS:HE3	1:B:1175:VAL:HB	1.84	0.59
1:B:1358:GLY:O	1:B:1386:LYS:HD3	2.01	0.59
1:A:239:TRP:HA	1:A:242:ASP:HB3	1.84	0.59
1:A:1205:ASN:ND2	1:A:1212:ASP:OD2	2.36	0.59
1:A:2532:ILE:HG21	1:A:2565:LEU:HD21	1.85	0.59
1:B:1381:LEU:HB3	1:B:1385:SER:HA	1.84	0.59
1:A:1095:GLY:O	1:A:1099:HIS:N	2.34	0.59
1:A:1250:CYS:HB3	1:A:1268:PRO:HG3	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4006:LEU:O	1:A:4008:ILE:HG13	2.01	0.59
1:B:3454:ILE:O	1:B:3455:HIS:ND1	2.35	0.59
1:A:347:VAL:HG22	1:A:349:PHE:H	1.66	0.59
1:A:847:ARG:NH2	1:A:1251:ASP:OD2	2.36	0.59
1:A:1060:CYS:SG	1:A:1061:GLY:N	2.73	0.59
1:A:1510:LEU:HB3	1:A:1528:TYR:HB3	1.85	0.59
1:B:661:ASN:HB3	1:B:664:LYS:HG3	1.84	0.59
1:B:2394:LEU:HD11	1:B:2633:LEU:HD13	1.84	0.59
1:A:3112:ASN:HB3	1:A:3115:HIS:HB2	1.84	0.59
1:B:423:ARG:NH1	1:B:1091:ASP:OD1	2.36	0.59
1:A:2474:ASP:HB2	1:A:2514:LEU:HD13	1.85	0.59
1:A:4280:PHE:HB2	1:A:4320:ILE:HD13	1.84	0.59
1:A:1871:GLY:N	1:A:1889:ASP:OD2	2.35	0.59
1:B:801:THR:HG22	1:B:808:ILE:HG12	1.85	0.59
1:B:558:TRP:HB2	1:B:577:ARG:HB2	1.83	0.59
1:B:602:PRO:HG3	1:B:621:LYS:HE2	1.83	0.59
1:B:1622:MET:HE3	1:B:1642:ILE:HD11	1.85	0.59
1:A:1356:PHE:C	1:A:1358:GLY:H	2.10	0.58
1:A:2648:LYS:HB2	1:A:2650:GLN:HE22	1.68	0.58
1:A:3200:TYR:CE1	2:D:1:NAG:H3	2.38	0.58
1:B:3226:LEU:HD13	1:B:3229:VAL:HG21	1.85	0.58
1:A:1062:THR:H	1:A:1065:ASN:HB2	1.68	0.58
1:A:1351:ASN:HA	1:A:1370:GLY:C	2.28	0.58
1:B:2739:HIS:O	1:B:2740:THR:C	2.46	0.58
1:B:3183:LEU:N	1:B:3192:ARG:O	2.35	0.58
3:G:1:NAG:H61	3:G:2:NAG:C7	2.33	0.58
1:A:817:THR:HG23	1:A:1001:PRO:HB3	1.85	0.58
1:A:1357:ASN:HA	1:A:1364:CYS:SG	2.43	0.58
1:A:2182:ARG:NH1	1:A:2409:SER:OG	2.36	0.58
1:A:2759:ARG:HD2	1:B:979:HIS:CG	2.38	0.58
1:B:887:VAL:HG22	1:B:894:ILE:HG12	1.85	0.58
1:B:2426:TYR:CD2	1:B:2643:VAL:HG13	2.39	0.58
1:B:2711:ARG:NH1	1:B:2724:ASP:O	2.36	0.58
1:A:1206:ARG:HA	1:A:1218:ASP:HB2	1.85	0.58
1:A:1351:ASN:HA	1:A:1370:GLY:CA	2.33	0.58
1:A:1358:GLY:O	1:A:1386:LYS:HD3	2.03	0.58
1:A:2533:GLU:HA	1:A:2544:PRO:HA	1.86	0.58
1:A:2686:ALA:N	1:A:2691:HIS:O	2.35	0.58
1:A:4313:PRO:HD3	1:B:4314:TRP:CE2	2.38	0.58
1:B:1871:GLY:N	1:B:1889:ASP:OD2	2.34	0.58
1:B:2739:HIS:CD2	1:B:2747:THR:HG21	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:574:VAL:HG12	1:A:581:ILE:HB	1.86	0.58
1:A:1405:TYR:HB2	1:A:1412:ARG:HB3	1.84	0.58
1:A:1658:THR:HG22	1:A:1665:VAL:HG22	1.86	0.58
1:B:1592:ILE:HG13	1:B:1593:VAL:HG23	1.84	0.58
1:B:2067:VAL:HG21	1:B:2300:ILE:HD13	1.86	0.58
1:B:2533:GLU:HA	1:B:2544:PRO:HA	1.85	0.58
1:B:3328:LEU:HG	1:B:3335:LEU:HD13	1.85	0.58
1:A:1046:ASP:HA	1:A:1068:SER:HB3	1.86	0.58
1:B:3200:TYR:CE1	2:J:1:NAG:H3	2.38	0.58
1:B:3599:TRP:N	1:B:3607:ILE:O	2.36	0.58
1:A:523:TYR:CE2	1:A:540:ARG:HD2	2.38	0.58
1:A:1945:ARG:NH2	1:A:1954:MET:SD	2.71	0.58
1:A:4293:GLU:HG2	1:A:4310:VAL:HG22	1.85	0.58
1:B:397:ILE:HG12	1:B:406:ILE:HG12	1.86	0.58
1:B:420:SER:O	1:B:1089:ARG:NH2	2.36	0.58
1:B:4101:VAL:HG21	1:B:4120:ILE:HD12	1.86	0.58
1:A:1617:SER:HA	1:A:1645:PRO:HD2	1.86	0.58
1:B:819:ARG:NH2	1:B:1001:PRO:O	2.37	0.58
1:B:1004:MET:HA	1:B:1015:GLY:HA2	1.86	0.58
1:B:3467:ASN:HD21	1:B:3469:CYS:HB2	1.68	0.58
1:A:1361:THR:HB	1:A:1388:CYS:H	1.69	0.58
1:A:3208:TYR:HH	1:A:3760:THR:HG1	1.50	0.57
1:B:402:ARG:HD3	1:B:1089:ARG:HH11	1.68	0.57
1:B:794:ILE:HG21	1:B:972:ASN:HB3	1.86	0.57
1:B:2598:LEU:HD11	1:B:2605:ILE:HD11	1.86	0.57
1:B:3142:LYS:N	1:B:3151:VAL:O	2.28	0.57
1:A:855:TRP:HB3	1:A:991:VAL:HG12	1.86	0.57
1:A:3423:THR:HG22	1:A:3430:VAL:HG22	1.86	0.57
1:A:3467:ASN:HD21	1:A:3469:CYS:HB2	1.69	0.57
1:A:4243:ARG:HH21	1:A:4256:THR:HG23	1.69	0.57
1:B:622:MET:HA	1:B:645:PRO:HD3	1.85	0.57
1:B:883:ARG:HH12	1:B:903:ASP:HB3	1.69	0.57
1:B:1172:LYS:HG2	1:B:1180:GLU:HB2	1.87	0.57
1:B:2704:SER:HA	1:B:2714:SER:HA	1.85	0.57
1:A:3176:CYS:O	1:A:3184:ARG:NH1	2.37	0.57
1:B:1617:SER:HA	1:B:1645:PRO:HD2	1.87	0.57
1:B:2491:ASN:HA	1:B:2502:VAL:HA	1.85	0.57
1:A:2683:TRP:HA	1:A:2693:ILE:O	2.05	0.57
1:A:3657:ASP:OD2	1:A:3706:ARG:NH2	2.35	0.57
1:B:746:ILE:HG13	1:B:961:LYS:HB3	1.86	0.57
1:A:1351:ASN:CG	1:A:1370:GLY:HA2	2.29	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3599:TRP:N	1:A:3607:ILE:O	2.36	0.57
1:B:4058:LEU:HD13	1:B:4311:VAL:HG21	1.86	0.57
1:B:754:THR:HA	1:B:769:LYS:HA	1.86	0.57
1:B:2399:ARG:HG2	1:B:2414:THR:HG23	1.87	0.57
1:B:3112:ASN:HB3	1:B:3115:HIS:HB2	1.86	0.57
1:B:3360:ILE:HD12	1:B:3399:ARG:HD2	1.86	0.57
1:B:3691:ARG:HG2	1:B:3693:ILE:HG23	1.85	0.57
1:A:4202:THR:HG22	1:A:4210:ILE:HG12	1.86	0.57
1:B:247:CYS:HB3	1:B:252:ASP:H	1.70	0.57
1:B:4007:ASP:HA	1:B:4025:LYS:HA	1.86	0.57
1:A:2711:ARG:HH11	1:A:2725:CYS:HA	1.69	0.57
1:B:1365:VAL:HG21	1:B:1374:LEU:HG	1.87	0.57
1:B:3657:ASP:OD2	1:B:3706:ARG:NH2	2.37	0.57
1:A:3203:PHE:HB3	1:A:3454:ILE:HG13	1.86	0.56
1:A:3691:ARG:HG2	1:A:3693:ILE:HG23	1.87	0.56
1:B:2510:ARG:NH2	1:B:2553:PRO:O	2.38	0.56
1:B:1254:PRO:HG2	4:B:4703:NAG:H83	1.87	0.56
1:A:402:ARG:HG2	1:A:425:VAL:HG12	1.87	0.56
1:A:1156:CYS:HB2	1:A:1159:HIS:HB3	1.87	0.56
1:A:1209:GLY:N	1:A:1219:GLU:OE1	2.37	0.56
1:A:1965:GLY:HA3	1:A:2006:GLY:HA2	1.86	0.56
1:A:3240:ARG:HD3	1:A:3253:ARG:HD2	1.87	0.56
1:A:3025:ARG:NH1	1:A:3040:GLN:O	2.38	0.56
1:B:2247:TYR:OH	1:B:2262:ARG:NH2	2.38	0.56
1:B:2683:TRP:HA	1:B:2693:ILE:O	2.04	0.56
1:B:4174:ARG:HD3	1:B:4374:PRO:HA	1.87	0.56
1:A:794:ILE:HG21	1:A:972:ASN:HB3	1.87	0.56
1:B:619:TRP:CD2	1:B:644:ARG:HD3	2.40	0.56
1:B:1362:HIS:HB3	1:B:1374:LEU:O	2.04	0.56
1:B:1965:GLY:HA3	1:B:2006:GLY:HA2	1.86	0.56
1:B:2432:ARG:HD2	1:B:2448:TYR:CD1	2.41	0.56
1:B:3575:HIS:O	1:B:3577:ASN:ND2	2.39	0.56
1:A:377:TYR:CE1	1:A:654:LEU:HD13	2.40	0.56
1:A:2711:ARG:NH1	1:A:2724:ASP:O	2.37	0.56
1:A:3312:VAL:HG11	1:A:3337:TRP:HZ2	1.70	0.56
1:A:706:ALA:O	1:A:708:GLN:NE2	2.38	0.56
1:A:3531:LYS:HA	1:A:3543:ASP:HB2	1.87	0.56
1:A:4101:VAL:HG21	1:A:4120:ILE:HD12	1.88	0.56
1:B:1846:GLU:HG3	1:B:1859:THR:HA	1.88	0.56
1:A:2426:TYR:CD2	1:A:2643:VAL:HG13	2.40	0.56
1:B:584:VAL:HB	1:B:588:GLY:HA2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1347:LEU:HB2	1:A:1369:PHE:HA	1.87	0.56
1:A:1622:MET:HE3	1:A:1642:ILE:HD11	1.86	0.56
1:A:3359:ILE:HG22	1:A:3360:ILE:HG12	1.88	0.56
1:B:1060:CYS:SG	1:B:1061:GLY:N	2.77	0.56
1:B:2545:ILE:HG22	1:B:2546:VAL:HG23	1.88	0.56
1:B:4202:THR:HG22	1:B:4210:ILE:HG12	1.88	0.56
1:A:2709:ASN:HB3	1:A:2727:ASP:CG	2.31	0.56
1:B:1439:LEU:HD21	1:B:1480:ILE:HD13	1.88	0.56
1:B:4359:PHE:HA	1:B:4367:CYS:HA	1.87	0.56
1:A:1113:GLN:HB3	1:A:1121:CYS:HB3	1.88	0.55
1:A:1136:ASP:OD1	1:A:1136:ASP:N	2.39	0.55
1:A:2510:ARG:NH2	1:A:2553:PRO:O	2.39	0.55
1:A:2644:VAL:HB	1:A:2648:LYS:HG2	1.88	0.55
1:B:1192:PHE:N	1:B:1201:ILE:O	2.38	0.55
1:B:2686:ALA:N	1:B:2691:HIS:O	2.36	0.55
1:B:574:VAL:HG12	1:B:581:ILE:HB	1.88	0.55
1:A:1555:ARG:NH1	1:A:1601:CYS:SG	2.80	0.55
1:A:4089:TYR:HB3	1:A:4101:VAL:HG22	1.89	0.55
1:B:1237:CYS:SG	1:B:1260:SER:OG	2.64	0.55
1:A:2067:VAL:HG21	1:A:2300:ILE:HD13	1.87	0.55
1:A:2432:ARG:HD2	1:A:2448:TYR:CD1	2.41	0.55
1:B:936:ILE:HG12	1:B:957:ILE:HD11	1.88	0.55
1:B:3842:CYS:SG	1:B:3848:GLU:HB3	2.46	0.55
1:B:1060:CYS:HA	1:B:1065:ASN:HD22	1.71	0.55
1:B:2644:VAL:HB	1:B:2648:LYS:HG2	1.88	0.55
1:B:3847:PHE:CE2	1:B:3855:ILE:HD13	2.42	0.55
1:B:1206:ARG:HA	1:B:1218:ASP:HB2	1.89	0.55
1:A:2168:GLU:OE2	1:A:2614:ARG:NH2	2.40	0.55
1:A:2704:SER:HA	1:A:2714:SER:HA	1.88	0.55
1:A:3415:ILE:O	1:A:3461:ARG:NH1	2.39	0.55
1:A:4170:LYS:HG2	1:A:4174:ARG:HH21	1.71	0.55
1:B:1354:SER:N	1:B:1366:GLN:HE21	2.03	0.55
1:A:1868:LEU:HD23	1:A:1910:VAL:HG23	1.89	0.55
1:A:2545:ILE:HG22	1:A:2546:VAL:HG23	1.88	0.55
1:A:4068:ASN:HB3	1:A:4071:SER:OG	2.06	0.55
1:B:366:PRO:HD2	1:B:368:ARG:NH2	2.22	0.55
1:B:1825:ASN:ND2	1:B:1875:GLY:HA2	2.22	0.55
1:B:3199:PRO:HB3	1:B:3458:HIS:HB2	1.89	0.55
1:B:4099:SER:O	1:B:4120:ILE:N	2.37	0.55
1:A:1354:SER:HB3	1:A:1366:GLN:HG2	1.89	0.55
1:B:1559:LEU:HD22	1:B:1584:MET:HE3	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2144:GLU:HG3	1:B:2166:VAL:HG23	1.87	0.55
1:A:424:GLY:HA3	1:A:445:GLN:HE21	1.72	0.55
1:A:935:ALA:HB1	1:A:949:VAL:HG13	1.88	0.55
1:A:1191:GLN:HA	1:A:1202:GLY:HA2	1.88	0.55
1:A:1576:HIS:O	1:A:1578:ARG:NH1	2.40	0.55
1:A:1936:ALA:HB2	1:A:1966:ILE:HD11	1.87	0.55
1:A:2099:HIS:CE1	1:A:2194:HIS:HD2	2.25	0.55
1:A:2247:TYR:OH	1:A:2262:ARG:NH2	2.40	0.55
1:B:3311:CYS:HA	1:B:3319:CYS:HA	1.87	0.55
1:B:1354:SER:H	1:B:1366:GLN:NE2	2.03	0.54
1:B:3236:ARG:HD3	1:B:3459:PRO:HA	1.88	0.54
1:B:3284:LEU:N	1:B:3297:SER:O	2.37	0.54
1:B:3415:ILE:O	1:B:3461:ARG:NH1	2.41	0.54
1:A:3332:TYR:O	1:A:3485:GLY:N	2.40	0.54
1:B:2168:GLU:OE2	1:B:2614:ARG:NH2	2.40	0.54
1:B:527:SER:HB2	1:B:559:PRO:HB2	1.89	0.54
2:J:1:NAG:H61	2:J:2:NAG:H82	1.90	0.54
1:A:501:ARG:HG2	1:A:693:PHE:HE2	1.73	0.54
1:A:945:GLY:O	1:A:946:GLU:HG3	2.07	0.54
1:A:1846:GLU:HG3	1:A:1859:THR:HA	1.88	0.54
1:A:3328:LEU:HG	1:A:3335:LEU:HD13	1.90	0.54
1:B:2492:SER:HB3	1:B:2501:THR:HG23	1.89	0.54
1:B:2515:ASP:O	1:B:2519:GLY:N	2.40	0.54
1:B:3872:ASP:HB3	1:B:3874:GLU:HG2	1.89	0.54
1:A:1059:LEU:O	1:A:1065:ASN:ND2	2.40	0.54
1:A:1354:SER:H	1:A:1366:GLN:HE21	1.55	0.54
1:A:2141:GLY:H	1:A:2634:LEU:HD11	1.72	0.54
1:A:2556:LEU:HD23	1:A:2567:TRP:HB3	1.90	0.54
1:A:2709:ASN:HD21	1:A:2725:CYS:HB3	1.72	0.54
1:A:3039:CYS:HB2	1:A:3041:ASN:HD21	1.73	0.54
1:B:237:GLN:HE22	1:B:547:ASN:HB3	1.72	0.54
1:B:2425:ASP:O	1:B:2434:TYR:N	2.38	0.54
1:B:3211:ASN:HB3	1:B:3220:SER:HB3	1.90	0.54
1:B:3819:GLY:N	1:B:3835:ARG:HH21	2.05	0.54
1:A:3311:CYS:HA	1:A:3319:CYS:HA	1.89	0.54
1:A:3819:GLY:H	1:A:3835:ARG:HH21	1.54	0.54
1:B:239:TRP:HA	1:B:242:ASP:HB3	1.90	0.54
1:B:1347:LEU:HB2	1:B:1369:PHE:HA	1.90	0.54
1:B:2141:GLY:H	1:B:2634:LEU:HD11	1.72	0.54
1:B:3849:CYS:SG	1:B:3855:ILE:HD11	2.47	0.54
1:A:368:ARG:HG3	1:A:369:HIS:H	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:781:ASN:O	1:A:818:ARG:NH1	2.26	0.54
1:A:976:GLN:HB2	1:A:979:HIS:HB3	1.90	0.54
1:A:3861:CYS:SG	1:A:3874:GLU:HB2	2.48	0.54
1:A:4161:VAL:HA	1:A:4187:PRO:HD2	1.89	0.54
1:B:1072:PHE:N	1:B:1080:ILE:O	2.38	0.54
1:B:2711:ARG:HH11	1:B:2725:CYS:HA	1.72	0.54
1:B:3773:PRO:HD2	1:B:3776:TRP:CE3	2.43	0.54
1:B:3835:ARG:HD3	1:B:3841:TYR:CD2	2.43	0.54
1:A:420:SER:O	1:A:1089:ARG:NH2	2.41	0.54
1:A:2390:LEU:HD13	1:A:2640:ILE:HD11	1.88	0.54
1:B:473:ALA:HB3	1:B:482:TYR:HB2	1.89	0.54
1:B:570:ARG:HH11	1:B:583:THR:HG22	1.72	0.54
1:B:1159:HIS:O	1:B:1160:ARG:HB3	2.07	0.54
1:A:661:ASN:HB3	1:A:664:LYS:HG3	1.89	0.54
1:A:1437:LEU:HB2	1:A:1692:VAL:HB	1.90	0.54
1:B:790:ALA:HB3	1:B:799:TYR:HB2	1.89	0.54
1:B:1362:HIS:CG	1:B:1363:GLU:N	2.75	0.54
1:B:4160:ASP:HB3	1:B:4163:ASN:HB2	1.90	0.54
1:A:1559:LEU:HD22	1:A:1584:MET:HE3	1.89	0.54
1:A:3575:HIS:O	1:A:3577:ASN:ND2	2.40	0.54
1:B:365:ARG:HB2	1:B:368:ARG:C	2.33	0.54
1:B:381:ARG:HD3	1:B:384:TYR:HE1	1.73	0.54
1:B:1658:THR:HG22	1:B:1665:VAL:HG22	1.89	0.54
1:B:1906:ASP:HA	1:B:2034:LEU:HD13	1.90	0.54
1:B:3233:ASP:OD2	1:B:3277:VAL:N	2.33	0.54
1:B:4280:PHE:HB2	1:B:4320:ILE:HD13	1.90	0.54
1:B:2325:ASP:OD1	1:B:2326:VAL:N	2.41	0.53
1:A:1362:HIS:HB3	1:A:1374:LEU:O	2.09	0.53
1:A:1487:GLN:OE1	1:A:1491:TRP:NE1	2.36	0.53
1:A:2325:ASP:OD1	1:A:2326:VAL:N	2.40	0.53
1:B:582:GLU:HG3	1:B:583:THR:H	1.73	0.53
1:B:795:SER:OG	1:B:974:CYS:SG	2.65	0.53
1:A:2137:ILE:HG22	1:A:2138:VAL:HG23	1.90	0.53
1:A:4038:SER:OG	1:A:4040:SER:O	2.26	0.53
1:B:1235:PHE:N	1:B:1244:ILE:O	2.41	0.53
1:B:1349:ASN:OD1	1:B:1350:GLY:N	2.34	0.53
1:B:3039:CYS:HB2	1:B:3041:ASN:HD21	1.73	0.53
1:A:1091:ASP:N	1:A:1097:ASP:OD2	2.40	0.53
1:B:3359:ILE:HG22	1:B:3360:ILE:HG12	1.91	0.53
1:A:1235:PHE:N	1:A:1244:ILE:O	2.41	0.53
1:A:2693:ILE:HG22	1:A:2694:VAL:H	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3626:ASP:HB3	1:A:3629:HIS:HD2	1.74	0.53
1:A:4160:ASP:HB3	1:A:4163:ASN:HB2	1.90	0.53
1:A:4359:PHE:HA	1:A:4367:CYS:HA	1.91	0.53
1:B:1062:THR:H	1:B:1065:ASN:HB2	1.73	0.53
1:B:3823:CYS:HB3	1:B:3825:ASP:OD1	2.08	0.53
1:A:580:TYR:CE2	1:A:582:GLU:HB2	2.43	0.53
1:A:644:ARG:NH2	1:A:1132:ASN:O	2.42	0.53
1:A:2425:ASP:O	1:A:2434:TYR:N	2.39	0.53
1:B:1059:LEU:O	1:B:1065:ASN:ND2	2.42	0.53
1:B:1095:GLY:O	1:B:1099:HIS:N	2.41	0.53
1:B:2520:TYR:HA	1:B:2536:THR:HA	1.90	0.53
1:A:2318:ASP:OD1	1:A:2319:ASN:N	2.42	0.53
1:B:374:GLU:HG3	1:B:567:ILE:HD12	1.90	0.53
1:B:1405:TYR:N	1:B:1412:ARG:O	2.36	0.53
1:B:3094:CYS:H	1:B:3105:ASP:HB2	1.74	0.53
1:A:554:THR:O	1:A:591:ARG:NH1	2.36	0.53
1:A:639:TYR:HE2	1:A:641:ALA:HB2	1.73	0.53
1:A:1439:LEU:HD21	1:A:1480:ILE:HD13	1.89	0.53
1:A:2491:ASN:HA	1:A:2502:VAL:HA	1.91	0.53
1:B:1154:PHE:HE2	1:B:1174:CYS:SG	2.31	0.53
1:A:930:ASP:HB3	1:A:933:LEU:HB2	1.90	0.53
1:A:2775:CYS:HB2	1:B:978:THR:HG21	1.91	0.53
1:A:3509:MET:HB3	1:A:3511:MET:HG2	1.91	0.53
1:B:1156:CYS:HB2	1:B:1160:ARG:H	1.72	0.53
1:B:1825:ASN:HD22	1:B:1875:GLY:HA2	1.74	0.53
1:B:4208:PRO:HB2	1:B:4228:LEU:CB	2.35	0.53
1:A:580:TYR:HE2	1:A:582:GLU:HB2	1.74	0.53
1:A:1004:MET:HA	1:A:1015:GLY:HA2	1.91	0.53
1:A:1906:ASP:HA	1:A:2034:LEU:HD13	1.91	0.53
1:B:842:PHE:CE1	1:B:852:MET:HB2	2.44	0.53
1:A:594:VAL:HG12	1:A:595:VAL:HG23	1.90	0.52
1:A:1351:ASN:HA	1:A:1370:GLY:HA2	1.90	0.52
1:A:1825:ASN:ND2	1:A:1875:GLY:HA2	2.24	0.52
1:A:2598:LEU:HD11	1:A:2605:ILE:HD11	1.91	0.52
1:A:3773:PRO:HD2	1:A:3776:TRP:CE3	2.44	0.52
1:B:768:GLN:HE21	1:B:772:GLY:HA2	1.74	0.52
1:B:1945:ARG:NH2	1:B:1954:MET:SD	2.74	0.52
1:A:1356:PHE:C	1:A:1358:GLY:N	2.65	0.52
1:A:3798:CYS:SG	1:A:3799:HIS:N	2.82	0.52
1:B:460:GLU:CD	1:B:463:ASN:HD22	2.18	0.52
1:B:490:ARG:HA	1:B:506:THR:HG22	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:834:HIS:CD2	1:B:837:ALA:H	2.27	0.52
1:B:1351:ASN:ND2	1:B:1370:GLY:HA2	2.25	0.52
1:B:2532:ILE:HG21	1:B:2565:LEU:HD21	1.91	0.52
1:B:2693:ILE:HG22	1:B:2694:VAL:H	1.73	0.52
1:B:4247:SER:HB3	1:B:4277:LEU:HD21	1.92	0.52
1:A:626:LYS:N	1:A:636:GLN:O	2.41	0.52
1:A:833:VAL:HG22	1:A:840:LEU:HD12	1.91	0.52
1:A:852:MET:HA	1:A:863:PRO:HA	1.92	0.52
1:A:2758:TYR:CD2	1:A:2765:ASP:HB2	2.44	0.52
1:B:1046:ASP:HA	1:B:1068:SER:HB3	1.91	0.52
1:A:3080:PHE:N	1:A:3088:ILE:O	2.37	0.52
1:A:3211:ASN:HB3	1:A:3220:SER:HB3	1.92	0.52
1:B:1225:ARG:O	1:B:1227:PRO:HD3	2.10	0.52
1:B:1484:ASP:HB3	1:B:1487:GLN:HB2	1.92	0.52
1:A:424:GLY:HA2	1:A:444:VAL:HB	1.90	0.52
1:A:576:SER:HA	1:A:604:PRO:HD2	1.91	0.52
1:A:2515:ASP:O	1:A:2519:GLY:N	2.43	0.52
1:A:3111:ILE:N	1:A:3113:GLU:OE2	2.40	0.52
1:B:1206:ARG:NH2	1:B:1217:SER:O	2.42	0.52
1:B:1250:CYS:HB3	1:B:1268:PRO:HG3	1.91	0.52
1:B:2556:LEU:HD23	1:B:2567:TRP:HB3	1.90	0.52
1:B:3047:LYS:HD3	1:B:3054:ASP:HB2	1.91	0.52
1:A:354:ILE:HD13	1:A:357:ILE:HD12	1.91	0.52
1:A:977:PRO:HD2	1:B:2776:LEU:HD22	1.91	0.52
1:B:3203:PHE:HB3	1:B:3454:ILE:HG13	1.92	0.52
1:B:3599:TRP:CE2	1:B:3612:GLN:HG3	2.45	0.52
1:B:3832:CYS:HB2	1:B:3833:PRO:HD2	1.91	0.52
1:A:713:PHE:HB3	1:A:960:LEU:HD12	1.90	0.52
1:A:1353:CYS:SG	1:A:1364:CYS:HB2	2.50	0.52
1:A:2688:ASN:HB2	1:A:2690:LYS:HE3	1.92	0.52
1:A:4060:ASP:HB3	1:A:4312:ASN:HD21	1.74	0.52
1:A:4174:ARG:HD3	1:A:4374:PRO:HA	1.92	0.52
1:A:4280:PHE:HB2	1:A:4320:ILE:HG21	1.92	0.52
1:B:578:PHE:CB	1:B:1175:VAL:HG12	2.39	0.52
1:B:1238:GLN:HE22	1:B:3178:CYS:H	1.57	0.52
1:B:1936:ALA:HB2	1:B:1966:ILE:HD11	1.90	0.52
1:A:1192:PHE:N	1:A:1201:ILE:O	2.43	0.52
1:A:1731:TRP:HB3	1:A:1740:CYS:SG	2.50	0.52
1:A:2432:ARG:NH2	1:A:2495:GLU:O	2.42	0.52
1:B:1205:ASN:ND2	1:B:1212:ASP:OD1	2.43	0.52
1:B:1731:TRP:HB3	1:B:1740:CYS:SG	2.50	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2318:ASP:OD1	1:B:2319:ASN:N	2.43	0.52
1:A:368:ARG:CG	1:A:369:HIS:H	2.23	0.51
1:A:1746:PRO:HB3	1:A:2011:HIS:HA	1.92	0.51
1:A:4020:HIS:CD2	1:A:4033:ALA:HB2	2.44	0.51
1:B:3332:TYR:O	1:B:3485:GLY:N	2.40	0.51
1:A:336:TYR:O	1:A:346:CYS:HB2	2.11	0.51
1:A:843:THR:CG2	1:A:872:PRO:HG2	2.39	0.51
1:B:1162:ILE:HG21	1:B:1173:ASP:HB3	1.93	0.51
1:B:1356:PHE:C	1:B:1358:GLY:N	2.65	0.51
1:B:3782:ASN:O	1:B:3782:ASN:ND2	2.43	0.51
1:A:946:GLU:O	1:A:947:MET:C	2.52	0.51
1:A:1073:THR:HA	1:A:1079:CYS:HA	1.92	0.51
1:B:1549:LYS:O	1:B:1589:ARG:NH1	2.34	0.51
1:B:1966:ILE:HG23	1:B:1973:LEU:HD11	1.92	0.51
1:A:2706:THR:HA	1:A:2712:CYS:HA	1.92	0.51
1:B:3245:ASP:O	1:B:3249:GLN:N	2.43	0.51
1:B:3509:MET:HB3	1:B:3511:MET:HG2	1.92	0.51
1:B:3688:THR:HB	1:B:3707:ASP:HB3	1.92	0.51
1:A:719:ILE:HD11	1:A:743:PHE:HB3	1.92	0.51
1:A:1685:TRP:HB3	1:A:1687:LEU:HD13	1.91	0.51
1:A:2523:TRP:NE1	1:A:2533:GLU:HB2	2.26	0.51
1:B:1113:GLN:HB3	1:B:1121:CYS:HB3	1.93	0.51
1:A:711:LEU:HD11	1:A:960:LEU:HG	1.92	0.51
1:A:862:LEU:HD12	1:A:863:PRO:HD2	1.92	0.51
1:A:907:LEU:HD22	1:A:943:ASP:HA	1.92	0.51
1:A:2569:ASP:HB3	1:A:2572:LEU:HB2	1.92	0.51
1:A:4091:TRP:CZ2	1:A:4323:GLN:HB2	2.46	0.51
1:B:441:THR:HG22	1:B:448:VAL:HG22	1.91	0.51
1:B:2242:ASP:OD2	1:B:2305:LYS:NZ	2.41	0.51
1:A:237:GLN:HE22	1:A:547:ASN:HB3	1.76	0.51
1:A:1484:ASP:HB3	1:A:1487:GLN:HB2	1.93	0.51
1:A:1650:LEU:O	1:A:1696:LYS:NZ	2.38	0.51
1:A:4224:VAL:HG23	1:A:4228:LEU:HD11	1.92	0.51
1:A:4232:THR:O	1:A:4247:SER:OG	2.29	0.51
1:B:465:SER:OG	1:B:501:ARG:NH1	2.43	0.51
1:B:1009:ASN:HD21	1:B:1011:LEU:HD12	1.75	0.51
1:B:1576:HIS:O	1:B:1578:ARG:NH1	2.41	0.51
1:B:1746:PRO:HB3	1:B:2011:HIS:HA	1.93	0.51
1:B:3862:ASP:O	1:B:3863:GLY:C	2.54	0.51
1:A:834:HIS:CD2	1:A:879:TRP:HZ3	2.28	0.51
1:A:2141:GLY:O	1:A:2163:ASN:ND2	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2534:ARG:HE	1:A:2545:ILE:HD11	1.75	0.51
1:A:3103:ASN:O	1:A:3107:LYS:HB3	2.11	0.51
1:B:1191:GLN:HA	1:B:1202:GLY:HA2	1.93	0.51
1:B:3798:CYS:SG	1:B:3799:HIS:N	2.84	0.51
1:A:1626:ASP:OD1	1:A:1626:ASP:N	2.41	0.51
1:A:4099:SER:O	1:A:4120:ILE:N	2.37	0.51
1:B:847:ARG:HD2	1:B:848:PRO:HA	1.92	0.51
1:B:1838:THR:HG23	1:B:1873:PRO:HG2	1.93	0.51
1:A:995:GLN:HA	1:B:2756:TYR:CE2	2.46	0.51
1:A:3329:HIS:HB2	1:A:3372:ILE:HD13	1.93	0.51
1:A:3479:LEU:HB2	1:A:3492:GLU:HB2	1.92	0.51
1:B:485:GLU:HG2	1:B:490:ARG:CZ	2.41	0.51
1:B:1187:CYS:SG	1:B:1193:LYS:HG2	2.51	0.51
1:B:1353:CYS:SG	1:B:1371:ALA:HA	2.51	0.51
1:B:1650:LEU:O	1:B:1696:LYS:NZ	2.35	0.51
1:B:3371:THR:HG23	1:B:3380:TYR:HB2	1.93	0.51
1:B:3398:HIS:HB2	1:B:3400:HIS:CE1	2.46	0.51
1:A:626:LYS:HB3	1:A:636:GLN:HB2	1.92	0.50
1:B:744:VAL:HG22	1:B:958:LEU:HD13	1.93	0.50
1:B:2523:TRP:NE1	1:B:2533:GLU:HB2	2.26	0.50
1:A:1198:ASP:N	1:A:1198:ASP:OD1	2.43	0.50
1:A:1378:GLY:HA3	1:A:1409:GLY:HA2	1.92	0.50
1:A:2176:ILE:HG22	1:A:2177:ASN:OD1	2.11	0.50
1:A:2653:ASN:HB3	1:A:2656:GLU:HG3	1.92	0.50
1:B:779:ALA:HB2	1:B:811:MET:HE1	1.93	0.50
1:B:1131:ASP:C	1:B:1133:ASP:H	2.19	0.50
1:B:1209:GLY:N	1:B:1219:GLU:OE1	2.41	0.50
1:B:3281:SER:O	1:B:3283:LYS:NZ	2.43	0.50
1:B:4091:TRP:CZ2	1:B:4323:GLN:HB2	2.47	0.50
1:A:3998:ASN:ND2	1:A:4000:PHE:H	2.09	0.50
1:B:3644:ASN:ND2	1:B:3662:ASP:OD2	2.45	0.50
1:B:4089:TYR:HB3	1:B:4101:VAL:HG22	1.92	0.50
1:A:1170:GLY:N	1:A:1180:GLU:OE2	2.45	0.50
1:A:3284:LEU:N	1:A:3297:SER:O	2.39	0.50
1:A:3782:ASN:O	1:A:3782:ASN:ND2	2.44	0.50
1:B:488:VAL:HG11	1:B:720:ARG:HD2	1.94	0.50
1:B:897:SER:HA	1:B:903:ASP:O	2.11	0.50
1:B:2603:GLN:HA	1:B:2620:LYS:HE3	1.93	0.50
1:B:2608:THR:HB	1:B:2637:PRO:HG2	1.93	0.50
1:B:2686:ALA:O	1:B:2690:LYS:N	2.34	0.50
1:A:3371:THR:HG23	1:A:3380:TYR:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:892:ASP:OD1	1:B:892:ASP:N	2.44	0.50
1:B:1198:ASP:OD1	1:B:1198:ASP:N	2.42	0.50
1:B:1967:ALA:HB1	1:B:2009:VAL:HG23	1.94	0.50
1:B:2137:ILE:HG22	1:B:2138:VAL:HG23	1.92	0.50
1:B:3208:TYR:HB3	1:B:3221:LEU:HD21	1.93	0.50
1:B:3799:HIS:HB2	1:B:3802:TYR:HD2	1.76	0.50
1:A:2492:SER:HB3	1:A:2501:THR:HG23	1.93	0.50
1:B:339:ASN:HB2	1:B:342:ASP:O	2.11	0.50
1:B:3531:LYS:HA	1:B:3543:ASP:HB2	1.93	0.50
1:A:1071:ALA:HB1	1:A:1079:CYS:HB3	1.93	0.50
1:A:3047:LYS:HD3	1:A:3054:ASP:HB2	1.93	0.50
1:A:3129:THR:OG1	1:A:3130:LEU:N	2.44	0.50
1:A:3183:LEU:N	1:A:3192:ARG:O	2.43	0.50
1:B:747:ASP:OD1	1:B:748:PHE:N	2.42	0.50
1:B:1367:GLU:HG3	1:B:1370:GLY:H	1.77	0.50
1:B:2476:ILE:HG13	1:B:2516:PRO:HB2	1.94	0.50
1:B:2758:TYR:HB2	1:B:2766:CYS:HB3	1.94	0.50
1:A:1518:TRP:HA	1:A:1521:ARG:HH21	1.77	0.50
1:A:4178:TRP:HB3	1:A:4181:SER:HB3	1.92	0.50
1:B:2257:ILE:HG13	1:B:2270:VAL:HG13	1.94	0.50
1:B:2432:ARG:NH2	1:B:2495:GLU:O	2.45	0.50
1:B:3626:ASP:HB3	1:B:3629:HIS:HD2	1.77	0.50
1:A:539:GLU:OE2	1:A:548:ARG:NE	2.45	0.50
1:A:892:ASP:OD1	1:A:892:ASP:N	2.44	0.50
1:B:336:TYR:O	1:B:346:CYS:HB2	2.11	0.50
1:B:556:LEU:HD11	1:B:559:PRO:HB3	1.93	0.50
1:B:940:ARG:NE	1:B:944:GLY:O	2.32	0.50
1:B:1685:TRP:HB3	1:B:1687:LEU:HD13	1.93	0.50
1:B:3608:PRO:HD2	1:B:3611:TRP:CE3	2.47	0.50
1:A:1549:LYS:O	1:A:1589:ARG:NH1	2.33	0.49
1:A:1822:PRO:HG3	1:A:1841:ARG:HH11	1.77	0.49
1:A:3599:TRP:CE2	1:A:3612:GLN:HG3	2.47	0.49
1:B:3111:ILE:N	1:B:3113:GLU:OE2	2.41	0.49
1:B:3855:ILE:HD12	1:B:3855:ILE:H	1.76	0.49
1:A:2167:SER:O	1:B:1618:TYR:OH	2.27	0.49
1:A:2449:ALA:HA	1:A:2456:HIS:CD2	2.47	0.49
1:B:1365:VAL:HG11	1:B:1372:LYS:HD3	1.94	0.49
1:B:2774:GLY:HA3	1:B:2777:PHE:HD2	1.77	0.49
1:B:3345:TYR:HD2	1:B:3347:GLY:H	1.60	0.49
1:B:3612:GLN:HG2	1:B:3629:HIS:HE1	1.75	0.49
1:B:3811:VAL:HG21	1:B:3822:ASP:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3829:GLU:HB3	1:B:3835:ARG:HH22	1.76	0.49
1:A:750:ALA:N	1:A:968:GLN:OE1	2.38	0.49
1:A:1225:ARG:O	1:A:1227:PRO:HD3	2.12	0.49
1:A:2426:TYR:CZ	1:A:2428:SER:HA	2.47	0.49
1:A:3398:HIS:HB2	1:A:3400:HIS:CE1	2.47	0.49
1:B:501:ARG:HG2	1:B:693:PHE:HE2	1.77	0.49
1:B:3312:VAL:HA	1:B:3356:LYS:HD3	1.94	0.49
1:B:3423:THR:HG22	1:B:3430:VAL:HG22	1.94	0.49
1:B:3804:GLN:HE21	1:B:3808:GLY:HA2	1.77	0.49
1:A:337:ILE:HA	1:A:346:CYS:HB2	1.94	0.49
1:A:3124:HIS:HE1	1:A:3141:TYR:CG	2.30	0.49
1:A:4008:ILE:N	1:A:4026:GLY:H	2.09	0.49
1:B:2345:PRO:HB2	1:B:2366:PRO:HB3	1.94	0.49
1:B:2548:SER:O	1:B:2585:ARG:NH1	2.38	0.49
1:B:4038:SER:OG	1:B:4040:SER:O	2.30	0.49
1:A:2393:ALA:HB2	1:A:2424:LEU:HG	1.93	0.49
1:A:2758:TYR:HB3	1:A:2763:TYR:HB2	1.94	0.49
1:A:2759:ARG:NE	1:A:2759:ARG:O	2.45	0.49
1:A:3199:PRO:HB3	1:A:3458:HIS:HB2	1.94	0.49
1:B:4116:LYS:HG2	1:B:4135:ASP:HA	1.94	0.49
1:A:768:GLN:HE21	1:A:772:GLY:HA2	1.77	0.49
1:A:1403:HIS:CD2	1:A:1403:HIS:H	2.29	0.49
1:A:1966:ILE:HG23	1:A:1973:LEU:HD11	1.94	0.49
1:A:1986:VAL:HB	1:A:1991:GLY:HA2	1.94	0.49
1:A:3513:SER:HB3	1:A:3593:HIS:CG	2.48	0.49
1:B:493:MET:HE1	1:B:673:VAL:HG11	1.94	0.49
1:B:744:VAL:HG13	1:B:959:HIS:HE1	1.78	0.49
1:B:3560:CYS:SG	1:B:3582:SER:HB3	2.53	0.49
1:A:754:THR:HG21	1:A:767:LYS:HE3	1.93	0.49
1:A:1416:ASP:OD1	1:A:1417:THR:N	2.45	0.49
1:A:1615:MET:HG3	1:A:1648:LEU:HD12	1.94	0.49
1:A:3268:ARG:HB2	1:A:3304:ARG:HH12	1.78	0.49
1:B:1822:PRO:HG3	1:B:1841:ARG:HH11	1.77	0.49
1:B:2706:THR:HA	1:B:2712:CYS:HA	1.94	0.49
1:B:3312:VAL:HG11	1:B:3337:TRP:HZ2	1.77	0.49
1:B:3821:ALA:HA	1:B:3829:GLU:HG2	1.94	0.49
1:A:359:ASP:O	1:A:629:LYS:NZ	2.40	0.49
1:A:894:ILE:HG13	1:A:913:MET:HE1	1.94	0.49
1:A:3081:LYS:HA	1:A:3087:CYS:HA	1.95	0.49
1:A:3360:ILE:HD12	1:A:3399:ARG:HD2	1.93	0.49
1:A:3608:PRO:HD2	1:A:3611:TRP:CE3	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3644:ASN:ND2	1:A:3662:ASP:OD2	2.46	0.49
1:B:3780:HIS:N	1:B:3790:GLU:OE1	2.40	0.49
1:B:4230:TRP:CG	1:B:4250:LYS:HB2	2.48	0.49
1:A:338:ILE:HG23	1:A:347:VAL:HG12	1.95	0.49
1:A:1967:ALA:HB1	1:A:2009:VAL:HG23	1.95	0.49
1:A:2242:ASP:OD2	1:A:2305:LYS:NZ	2.42	0.49
1:A:2420:THR:O	1:A:2438:ASN:N	2.46	0.49
1:A:2557:THR:HG21	1:A:2599:THR:HA	1.94	0.49
1:A:3259:THR:HG21	2:E:1:NAG:N2	2.28	0.49
1:A:3835:ARG:HH11	1:A:3841:TYR:HD2	1.60	0.49
1:B:1437:LEU:HB2	1:B:1692:VAL:HB	1.93	0.49
1:B:2176:ILE:HG22	1:B:2177:ASN:OD1	2.13	0.49
1:B:3657:ASP:OD1	1:B:3706:ARG:NE	2.46	0.49
1:A:2513:VAL:HB	1:A:2522:TYR:HB2	1.94	0.49
1:A:3657:ASP:OD1	1:A:3706:ARG:NE	2.45	0.49
1:A:3688:THR:HB	1:A:3707:ASP:HB3	1.94	0.49
1:B:1986:VAL:HB	1:B:1991:GLY:HA2	1.94	0.49
1:B:2475:TRP:CZ2	1:B:2649:GLN:HB2	2.39	0.49
1:A:865:ILE:HG22	1:A:869:LEU:HD11	1.94	0.48
1:A:1357:ASN:O	1:A:1364:CYS:HB3	2.13	0.48
1:A:2144:GLU:HG3	1:A:2166:VAL:HG23	1.94	0.48
1:B:390:SER:HB2	4:B:4701:NAG:O5	2.13	0.48
1:B:1170:GLY:N	1:B:1180:GLU:OE2	2.44	0.48
1:B:1856:TYR:HB3	1:B:2046:ALA:HB2	1.94	0.48
1:B:2601:TYR:HB2	1:B:2642:THR:HG21	1.95	0.48
1:A:887:VAL:HG22	1:A:894:ILE:HG12	1.94	0.48
1:A:924:GLU:HA	1:A:941:LYS:HE3	1.94	0.48
1:A:1362:HIS:CG	1:A:1363:GLU:N	2.80	0.48
1:A:1519:VAL:HB	1:A:1561:PRO:HB2	1.95	0.48
1:A:2493:MET:HG2	1:A:2497:GLY:HA2	1.95	0.48
1:A:2550:LEU:HD11	1:A:2553:PRO:HB3	1.94	0.48
1:A:2603:GLN:HA	1:A:2620:LYS:HE3	1.94	0.48
1:A:3518:LEU:HD11	1:A:3522:ASN:HD22	1.78	0.48
1:B:2466:GLY:HA3	1:B:2486:LEU:HD22	1.94	0.48
1:B:3129:THR:OG1	1:B:3130:LEU:N	2.46	0.48
1:A:1848:LEU:HD11	1:A:1855:ARG:HB3	1.95	0.48
1:A:3245:ASP:O	1:A:3249:GLN:N	2.45	0.48
1:A:4102:TYR:OH	1:A:4171:LEU:HG	2.14	0.48
1:B:1378:GLY:HA3	1:B:1409:GLY:HA2	1.95	0.48
1:B:1518:TRP:HA	1:B:1521:ARG:HH21	1.78	0.48
1:B:2428:SER:O	1:B:2429:VAL:C	2.56	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2449:ALA:HA	1:B:2456:HIS:CD2	2.48	0.48
1:B:3081:LYS:HA	1:B:3087:CYS:HA	1.94	0.48
1:B:3259:THR:HG21	2:K:1:NAG:N2	2.28	0.48
1:B:3582:SER:HA	1:B:3585:ASP:HB2	1.95	0.48
1:B:3849:CYS:SG	1:B:3853:VAL:HB	2.53	0.48
1:A:582:GLU:HG3	1:A:583:THR:H	1.78	0.48
1:A:748:PHE:O	1:A:968:GLN:NE2	2.46	0.48
1:A:1844:SER:OG	1:A:1846:GLU:OE2	2.24	0.48
1:A:2475:TRP:CZ2	1:A:2649:GLN:HB2	2.44	0.48
1:A:3056:ASP:OD1	1:A:3056:ASP:N	2.44	0.48
1:B:639:TYR:HE1	1:B:641:ALA:HB2	1.79	0.48
1:B:2450:THR:H	1:B:2456:HIS:CE1	2.31	0.48
1:B:2569:ASP:HB3	1:B:2572:LEU:HB2	1.95	0.48
1:B:2654:PRO:HB2	1:B:2673:ALA:HB2	1.95	0.48
1:A:1551:LEU:HD11	1:A:1554:PRO:HB3	1.95	0.48
1:A:3103:ASN:HD21	1:A:3106:GLU:HG2	1.78	0.48
1:B:424:GLY:HA2	1:B:444:VAL:HB	1.95	0.48
1:B:494:VAL:HG12	1:B:501:ARG:HA	1.95	0.48
1:B:2393:ALA:HB2	1:B:2424:LEU:HG	1.93	0.48
1:B:2394:LEU:HD22	1:B:2399:ARG:CZ	2.43	0.48
1:A:484:VAL:HG22	1:A:491:ILE:HG12	1.95	0.48
1:A:940:ARG:HG3	1:A:946:GLU:HG3	1.95	0.48
1:A:945:GLY:C	1:A:946:GLU:HG3	2.39	0.48
1:B:1868:LEU:HD23	1:B:1910:VAL:HG23	1.94	0.48
1:B:3103:ASN:ND2	1:B:3105:ASP:OD1	2.47	0.48
1:A:563:THR:HG23	1:A:572:TYR:HB2	1.96	0.48
1:A:842:PHE:CE1	1:A:852:MET:HB2	2.49	0.48
1:A:974:CYS:HB3	1:A:981:ASN:HA	1.95	0.48
1:A:1903:ALA:HB2	1:A:1910:VAL:HG12	1.94	0.48
1:A:1927:ASP:OD2	1:A:1988:LYS:NZ	2.46	0.48
1:A:2036:VAL:HG12	1:A:2040:LEU:HB2	1.96	0.48
1:A:2686:ALA:HB3	1:A:2691:HIS:HB2	1.96	0.48
1:B:555:LYS:HB3	1:B:591:ARG:HH22	1.79	0.48
1:B:685:LEU:HB3	1:B:687:PHE:CE2	2.49	0.48
1:B:1580:GLU:HG2	1:B:1591:VAL:HG22	1.96	0.48
1:B:4208:PRO:O	1:B:4228:LEU:HD12	2.13	0.48
1:A:1074:CYS:N	1:A:1078:GLU:O	2.44	0.48
1:A:1154:PHE:CG	1:A:1155:ASN:N	2.82	0.48
1:A:1469:VAL:HG13	1:A:1687:LEU:HD23	1.96	0.48
1:A:3244:ILE:HD13	1:A:3272:ALA:HB1	1.96	0.48
1:B:1136:ASP:OD1	1:B:1136:ASP:N	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1156:CYS:CB	1:A:1159:HIS:HB3	2.43	0.48
1:A:2608:THR:HB	1:A:2637:PRO:HG2	1.95	0.48
1:B:1160:ARG:NE	1:B:1162:ILE:HG22	2.28	0.48
1:B:1362:HIS:O	1:B:1363:GLU:C	2.57	0.48
1:B:1755:ILE:HD12	1:B:1757:PHE:HE2	1.79	0.48
1:B:3329:HIS:HB2	1:B:3372:ILE:HD13	1.96	0.48
1:B:3859:TRP:HA	1:B:3862:ASP:HB3	1.96	0.48
1:A:788:SER:HB2	1:A:830:SER:HA	1.96	0.48
1:B:981:ASN:HA	1:B:988:CYS:HB2	1.96	0.48
1:B:1483:SER:HB2	1:B:1514:ILE:HD11	1.96	0.48
1:B:1487:GLN:OE1	1:B:1491:TRP:NE1	2.36	0.48
1:B:2502:VAL:H	1:B:2679:HIS:HB3	1.79	0.48
1:B:4000:PHE:HA	1:B:4004:SER:HB3	1.96	0.48
1:B:4175:TYR:HB3	1:B:4354:PRO:HB3	1.96	0.48
1:A:354:ILE:HB	1:A:357:ILE:HB	1.95	0.47
1:A:584:VAL:HB	1:A:588:GLY:HA2	1.96	0.47
1:A:883:ARG:HH12	1:A:903:ASP:HB3	1.79	0.47
1:A:2020:ASN:N	1:A:2023:SER:OG	2.38	0.47
1:A:3836:PHE:CD2	1:A:3838:ASP:HB3	2.47	0.47
1:B:3834:THR:HA	1:B:3841:TYR:CE2	2.49	0.47
1:A:867:THR:O	1:A:904:ARG:NH1	2.37	0.47
1:B:1465:GLY:HA3	1:B:1468:ILE:HD11	1.95	0.47
1:B:1510:LEU:HD23	1:B:1528:TYR:HB3	1.96	0.47
1:B:1903:ALA:HB2	1:B:1910:VAL:HG12	1.95	0.47
1:B:3220:SER:OG	1:B:3221:LEU:N	2.47	0.47
1:A:397:ILE:HG12	1:A:406:ILE:HG12	1.95	0.47
1:A:520:THR:HA	1:A:679:ARG:HH21	1.79	0.47
1:A:3103:ASN:ND2	1:A:3105:ASP:OD1	2.47	0.47
1:A:3801:GLU:N	1:A:3801:GLU:OE1	2.42	0.47
1:A:3819:GLY:N	1:A:3829:GLU:OE1	2.47	0.47
1:B:479:ASN:N	1:B:479:ASN:OD1	2.48	0.47
1:B:3244:ILE:HG21	1:B:3272:ALA:HB3	1.96	0.47
1:B:3294:LEU:HD21	1:B:3335:LEU:HD23	1.97	0.47
1:B:3533:ASP:HA	1:B:3551:ARG:NE	2.29	0.47
1:A:1175:VAL:HG23	1:A:1176:ASP:N	2.30	0.47
1:A:2548:SER:O	1:A:2585:ARG:NH1	2.39	0.47
1:A:3560:CYS:SG	1:A:3582:SER:HB3	2.54	0.47
1:A:4182:THR:O	1:A:4184:LEU:HG	2.14	0.47
1:A:4255:GLU:HG2	1:A:4266:VAL:HG22	1.96	0.47
1:B:972:ASN:OD1	1:B:973:ALA:N	2.43	0.47
1:B:1522:ASN:HD22	1:B:1537:LYS:HA	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1567:LEU:HD13	1:B:1581:ARG:HD2	1.96	0.47
2:I:1:NAG:H61	2:I:2:NAG:H82	1.95	0.47
1:A:395:SER:HB2	1:A:651:TYR:HB3	1.96	0.47
1:A:843:THR:HG21	1:A:872:PRO:O	2.15	0.47
1:A:883:ARG:HH21	1:A:896:HIS:CD2	2.32	0.47
1:A:2000:ASN:ND2	1:B:2254:SER:O	2.47	0.47
1:B:224:GLY:O	1:B:523:TYR:OH	2.32	0.47
1:B:781:ASN:O	1:B:818:ARG:NH1	2.25	0.47
1:B:1416:ASP:OD1	1:B:1417:THR:N	2.47	0.47
1:B:3513:SER:HB3	1:B:3593:HIS:CG	2.48	0.47
1:A:1354:SER:H	1:A:1366:GLN:NE2	2.13	0.47
1:A:1825:ASN:HD22	1:A:1875:GLY:HA2	1.80	0.47
1:A:1838:THR:HG23	1:A:1873:PRO:HG2	1.95	0.47
1:A:1937:VAL:HG12	1:A:1940:ARG:H	1.80	0.47
1:A:3110:GLY:C	1:A:3111:ILE:HD12	2.40	0.47
1:A:4247:SER:HB3	1:A:4277:LEU:HD21	1.96	0.47
1:B:2707:CYS:CB	1:B:2729:SER:HB3	2.42	0.47
1:A:446:ASN:HB3	1:A:467:GLU:HA	1.96	0.47
1:A:1154:PHE:N	1:A:1162:ILE:O	2.48	0.47
1:A:2345:PRO:HB2	1:A:2366:PRO:HB3	1.96	0.47
1:A:3078:HIS:C	1:A:3090:MET:HG2	2.40	0.47
1:A:3633:ARG:HB3	1:A:3641:ARG:HH12	1.79	0.47
1:B:347:VAL:HG22	1:B:349:PHE:H	1.80	0.47
1:B:351:ASP:OD1	1:B:351:ASP:N	2.47	0.47
1:B:467:GLU:N	1:B:485:GLU:OE2	2.46	0.47
1:B:513:ARG:HD2	1:B:605:PHE:HE1	1.79	0.47
1:B:1519:VAL:HB	1:B:1561:PRO:HB2	1.96	0.47
1:B:1937:VAL:HG12	1:B:1940:ARG:H	1.79	0.47
1:B:2568:VAL:HG12	1:B:2575:ILE:HG23	1.95	0.47
1:B:2653:ASN:HB3	1:B:2656:GLU:HG3	1.96	0.47
1:B:3390:GLU:HG2	1:B:3401:THR:HA	1.96	0.47
1:B:4312:ASN:N	1:B:4312:ASN:HD22	2.12	0.47
1:A:248:LYS:C	1:A:250:ASN:H	2.23	0.47
1:B:617:THR:HG22	1:B:624:VAL:HG22	1.97	0.47
1:B:852:MET:HE3	1:B:863:PRO:HB3	1.96	0.47
1:B:1141:LYS:O	1:B:1142:ASN:C	2.57	0.47
1:B:1551:LEU:HD11	1:B:1554:PRO:HB3	1.97	0.47
1:B:3599:TRP:HB2	1:B:3609:GLU:HA	1.96	0.47
1:B:4293:GLU:OE1	1:B:4307:LYS:HE2	2.15	0.47
1:A:1163:ASP:OD1	1:A:1164:LEU:N	2.47	0.47
1:A:2686:ALA:O	1:A:2690:LYS:N	2.34	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1615:MET:HG3	1:B:1648:LEU:HD12	1.97	0.47
1:B:1626:ASP:OD1	1:B:1626:ASP:N	2.45	0.47
1:B:1848:LEU:HD11	1:B:1855:ARG:HB3	1.97	0.47
1:B:1975:TYR:OH	1:B:1984:GLU:OE1	2.21	0.47
1:B:2490:ILE:N	1:B:2504:ALA:O	2.47	0.47
1:B:2599:THR:HG22	1:B:2606:TYR:HB2	1.97	0.47
1:B:3195:SER:HB2	1:B:3460:TYR:CZ	2.50	0.47
1:B:3633:ARG:HB3	1:B:3641:ARG:HH12	1.80	0.47
1:B:3875:LEU:HD22	1:B:3880:ASP:H	1.80	0.47
1:B:4067:TYR:CD2	1:B:4309:LEU:HD11	2.49	0.47
1:B:4255:GLU:HG2	1:B:4266:VAL:HG22	1.96	0.47
1:A:989:PHE:HB2	1:A:997:VAL:O	2.15	0.47
1:A:1031:PHE:N	1:A:1039:VAL:O	2.40	0.47
1:A:1405:TYR:N	1:A:1412:ARG:O	2.36	0.47
1:A:2124:ILE:HD11	1:A:2147:VAL:HG11	1.97	0.47
1:A:3312:VAL:HA	1:A:3356:LYS:HD3	1.96	0.47
1:B:2127:ILE:HA	1:B:2133:SER:O	2.14	0.47
1:B:2435:PHE:HZ	1:B:2458:PRO:HB3	1.80	0.47
1:B:3518:LEU:HD11	1:B:3522:ASN:HD22	1.80	0.47
1:A:539:GLU:CD	1:A:548:ARG:HE	2.23	0.46
1:A:1187:CYS:SG	1:A:1193:LYS:HG2	2.55	0.46
1:A:1618:TYR:OH	1:B:2167:SER:O	2.25	0.46
1:A:1667:ARG:NH2	1:A:1677:SER:OG	2.47	0.46
1:A:3533:ASP:HA	1:A:3551:ARG:NE	2.30	0.46
1:A:3775:ARG:HD2	1:A:3802:TYR:HE2	1.80	0.46
1:B:867:THR:O	1:B:904:ARG:NH1	2.34	0.46
1:A:465:SER:OG	1:A:501:ARG:NH1	2.48	0.46
1:A:490:ARG:HH21	1:A:501:ARG:NH2	2.13	0.46
1:A:829:ARG:HB2	1:A:845:TRP:CD1	2.50	0.46
1:A:1825:ASN:OD1	1:A:1826:LEU:N	2.48	0.46
1:A:2428:SER:O	1:A:2429:VAL:C	2.58	0.46
1:A:3047:LYS:HA	1:A:3052:ASP:HB2	1.98	0.46
1:A:3103:ASN:O	1:A:3107:LYS:N	2.41	0.46
1:A:3502:LEU:HD11	1:A:3507:TYR:HB2	1.96	0.46
1:B:400:ASN:OD1	1:B:401:GLY:N	2.47	0.46
1:B:490:ARG:HH21	1:B:501:ARG:NH2	2.12	0.46
1:B:518:ASP:OD1	1:B:520:THR:OG1	2.30	0.46
1:B:552:VAL:HG21	1:B:573:TRP:CH2	2.51	0.46
1:B:3376:ASN:ND2	1:B:3436:TYR:OH	2.48	0.46
1:A:910:ILE:HG21	1:A:913:MET:HB2	1.97	0.46
1:A:3640:PHE:HE2	1:A:3665:ASP:HA	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:513:ARG:HD2	1:B:605:PHE:CE1	2.51	0.46
1:B:677:SER:OG	1:B:678:HIS:N	2.48	0.46
1:B:2426:TYR:CZ	1:B:2428:SER:HA	2.51	0.46
1:A:1081:PRO:HD2	1:A:1084:TRP:CE3	2.50	0.46
1:A:2576:GLU:HG2	1:A:2587:VAL:HG22	1.98	0.46
1:A:4058:LEU:HD13	1:A:4311:VAL:HG21	1.97	0.46
1:B:1084:TRP:HB3	1:B:1091:ASP:OD2	2.16	0.46
1:B:1156:CYS:HB3	1:B:1159:HIS:HB3	1.98	0.46
1:B:1606:ASP:N	1:B:1606:ASP:OD1	2.48	0.46
1:B:4224:VAL:HG23	1:B:4228:LEU:HD11	1.97	0.46
1:B:4277:LEU:HB3	1:B:4284:LEU:HD21	1.96	0.46
1:A:949:VAL:HG11	1:A:952:SER:HB3	1.97	0.46
1:A:2192:PRO:HB3	1:A:2206:TRP:CD1	2.50	0.46
1:A:4312:ASN:ND2	1:A:4314:TRP:HB2	2.30	0.46
1:A:685:LEU:HB3	1:A:687:PHE:CE2	2.49	0.46
1:A:2254:SER:O	1:B:2000:ASN:ND2	2.48	0.46
1:A:3092:LYS:HB3	1:A:3099:ASP:OD2	2.15	0.46
1:A:3204:SER:O	1:A:3452:PHE:HB2	2.16	0.46
1:A:3220:SER:OG	1:A:3221:LEU:N	2.48	0.46
1:A:3458:HIS:CD2	1:A:3460:TYR:H	2.34	0.46
1:B:248:LYS:C	1:B:250:ASN:H	2.24	0.46
1:B:2523:TRP:NE1	1:B:2533:GLU:OE1	2.38	0.46
1:B:2550:LEU:HD11	1:B:2553:PRO:HB3	1.97	0.46
1:B:4057:LEU:HG	1:B:4321:PHE:HB2	1.98	0.46
1:B:4098:LEU:HD13	1:B:4380:PRO:HG2	1.97	0.46
1:A:847:ARG:HH11	1:A:848:PRO:HA	1.81	0.46
1:A:1097:ASP:OD1	1:A:1097:ASP:N	2.49	0.46
1:A:2568:VAL:HG13	1:A:2598:LEU:HD22	1.97	0.46
1:A:3270:PRO:HB2	1:A:3290:ARG:HB3	1.98	0.46
1:B:508:ASN:O	1:B:532:LEU:HG	2.16	0.46
1:B:862:LEU:HD12	1:B:863:PRO:HD2	1.98	0.46
1:B:2450:THR:O	1:B:2453:SER:OG	2.33	0.46
1:B:3103:ASN:O	1:B:3107:LYS:N	2.48	0.46
1:B:3573:ASN:OD1	1:B:3577:ASN:ND2	2.40	0.46
1:B:3626:ASP:HB3	1:B:3629:HIS:CD2	2.51	0.46
1:B:4186:GLN:HB3	1:B:4204:TRP:CZ3	2.51	0.46
1:B:4272:MET:HE1	1:B:4295:TRP:CE2	2.51	0.46
1:A:1422:GLU:HG2	1:A:1423:SER:H	1.80	0.46
1:A:4203:ASP:O	1:A:4208:PRO:HA	2.16	0.46
1:A:4329:SER:HB3	3:G:1:NAG:H5	1.97	0.46
1:B:1249:GLU:HA	1:B:1261:ASP:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1403:HIS:CD2	1:B:1403:HIS:H	2.31	0.46
1:B:2576:GLU:HG2	1:B:2587:VAL:HG22	1.97	0.46
1:B:3103:ASN:HD21	1:B:3106:GLU:HG2	1.81	0.46
1:B:4087:VAL:HG12	1:B:4103:TYR:HB3	1.97	0.46
1:A:406:ILE:HD11	1:A:417:LEU:HD22	1.98	0.46
1:A:1352:SER:HA	1:A:1355:ASP:CB	2.43	0.46
1:A:1856:TYR:HB3	1:A:2046:ALA:HB2	1.98	0.46
1:A:3238:GLU:HG3	1:A:3282:ARG:HH22	1.81	0.46
1:B:1825:ASN:OD1	1:B:1826:LEU:N	2.48	0.46
1:B:3273:GLU:OE2	1:B:3324:ARG:NH2	2.48	0.46
1:B:3458:HIS:CD2	1:B:3460:TYR:H	2.34	0.46
1:B:4092:ASP:OD1	1:B:4092:ASP:N	2.48	0.46
1:A:771:ASP:OD1	1:A:771:ASP:N	2.38	0.46
1:A:1580:GLU:HG2	1:A:1591:VAL:HG22	1.98	0.46
1:A:3345:TYR:HD2	1:A:3347:GLY:H	1.64	0.46
1:A:4068:ASN:ND2	3:H:1:NAG:O7	2.49	0.46
1:B:1154:PHE:CD1	1:B:1167:VAL:HG22	2.51	0.46
1:B:1828:LEU:HD12	1:B:1835:LEU:HD12	1.98	0.46
1:B:2725:CYS:HB2	1:B:2727:ASP:O	2.15	0.46
1:B:3729:ASN:N	1:B:3747:ASP:OD2	2.47	0.46
1:A:513:ARG:HD2	1:A:605:PHE:HE1	1.81	0.45
1:A:1606:ASP:OD1	1:A:1606:ASP:N	2.49	0.45
1:A:2572:LEU:HD13	1:A:2574:ARG:HH21	1.81	0.45
1:A:3294:LEU:HD21	1:A:3335:LEU:HD23	1.97	0.45
1:A:4252:ASP:OD1	1:A:4272:MET:N	2.49	0.45
1:B:1960:LEU:HD13	1:B:1963:PRO:HB3	1.98	0.45
1:B:3047:LYS:HA	1:B:3052:ASP:HB2	1.98	0.45
1:B:3453:ASP:OD1	1:B:3454:ILE:N	2.48	0.45
1:A:3233:ASP:OD2	1:A:3277:VAL:N	2.36	0.45
1:B:1251:ASP:N	1:B:1262:GLU:OE1	2.49	0.45
1:B:1365:VAL:H	1:B:1373:CYS:N	2.12	0.45
1:B:1956:LEU:HD23	1:B:1973:LEU:HD22	1.97	0.45
1:B:2557:THR:HG21	1:B:2599:THR:HA	1.99	0.45
1:A:518:ASP:OD1	1:A:521:VAL:HG22	2.17	0.45
1:A:1440:VAL:HG21	1:A:1665:VAL:HG21	1.97	0.45
1:A:2140:HIS:O	1:A:2181:ARG:NH1	2.35	0.45
1:A:2450:THR:H	1:A:2456:HIS:CE1	2.34	0.45
1:B:558:TRP:H	1:B:575:ASP:CG	2.24	0.45
1:B:1109:CYS:HB3	1:B:1113:GLN:HB2	1.99	0.45
1:B:2618:ALA:HB1	1:B:2623:GLY:HA2	1.98	0.45
1:B:3124:HIS:HE1	1:B:3141:TYR:CG	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4007:ASP:HA	1:B:4026:GLY:H	1.80	0.45
1:A:578:PHE:CG	1:A:1175:VAL:HG12	2.52	0.45
1:A:754:THR:HA	1:A:769:LYS:HA	1.97	0.45
1:A:1721:HIS:HB3	1:A:1723:TYR:CE2	2.52	0.45
1:A:2601:TYR:HB2	1:A:2642:THR:HG21	1.99	0.45
1:A:3226:LEU:HD13	1:A:3229:VAL:HG21	1.99	0.45
1:A:3533:ASP:HA	1:A:3551:ARG:HE	1.82	0.45
1:B:754:THR:HG21	1:B:767:LYS:HE3	1.97	0.45
1:B:1644:HIS:CE1	1:B:1660:ARG:HD3	2.52	0.45
1:A:978:THR:C	1:A:980:PRO:HD3	2.41	0.45
1:A:1158:ASN:HB3	1:A:1175:VAL:CG2	2.46	0.45
1:A:3517:PHE:N	1:A:3526:ILE:O	2.49	0.45
1:A:4312:ASN:HB3	1:B:4312:ASN:HB3	1.98	0.45
1:B:369:HIS:HE1	1:B:371:CYS:HB2	1.82	0.45
1:B:2124:ILE:HD11	1:B:2147:VAL:HG11	1.99	0.45
1:B:2572:LEU:HD13	1:B:2574:ARG:HE	1.81	0.45
1:B:3479:LEU:HB2	1:B:3492:GLU:HB2	1.99	0.45
1:A:381:ARG:HD3	1:A:384:TYR:HE1	1.81	0.45
1:A:2102:VAL:O	1:A:2334:GLN:NE2	2.40	0.45
1:A:4006:LEU:O	1:A:4007:ASP:C	2.59	0.45
1:B:622:MET:HE3	1:B:622:MET:HB2	1.63	0.45
1:B:1203:VAL:HA	1:B:1206:ARG:HB2	1.99	0.45
1:A:1203:VAL:HA	1:A:1206:ARG:HB2	1.99	0.45
1:A:1483:SER:HB2	1:A:1514:ILE:HD11	1.98	0.45
1:A:2127:ILE:HA	1:A:2133:SER:O	2.17	0.45
1:A:2155:VAL:HG21	1:A:2341:VAL:HG11	1.98	0.45
1:A:2450:THR:O	1:A:2453:SER:OG	2.29	0.45
1:A:3706:ARG:H	1:A:3706:ARG:HD2	1.81	0.45
1:A:4077:TYR:CE1	1:A:4120:ILE:HG12	2.51	0.45
1:A:4087:VAL:HG12	1:A:4103:TYR:HB3	1.98	0.45
1:B:597:GLY:N	1:B:1158:ASN:HD21	2.15	0.45
1:B:765:ILE:HD11	1:B:786:VAL:HG21	1.97	0.45
1:B:1949:ASP:OD1	1:B:1951:THR:OG1	2.28	0.45
1:B:3078:HIS:C	1:B:3090:MET:HG2	2.42	0.45
1:B:3801:GLU:OE1	1:B:3801:GLU:N	2.49	0.45
1:B:4280:PHE:HB2	1:B:4320:ILE:HG21	1.98	0.45
2:C:1:NAG:H61	2:C:2:NAG:H82	1.98	0.45
1:A:3660:CYS:HB3	1:A:3665:ASP:HB3	1.99	0.45
1:A:4285:TYR:HD2	1:A:4320:ILE:HD11	1.82	0.45
1:B:883:ARG:HH21	1:B:896:HIS:HD2	1.65	0.45
1:B:1747:PHE:HA	1:B:1761:LEU:HG	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2374:THR:HG23	1:B:2376:GLN:HE22	1.82	0.45
1:B:2426:TYR:HA	1:B:2433:ILE:HA	1.99	0.45
1:B:2738:LEU:HB3	1:B:2740:THR:HG23	1.99	0.45
1:B:2774:GLY:HA3	1:B:2777:PHE:CD2	2.51	0.45
1:B:3158:GLU:HG2	1:B:3159:MET:HG3	1.99	0.45
1:B:3533:ASP:HA	1:B:3551:ARG:HE	1.82	0.45
1:B:3775:ARG:HD2	1:B:3802:TYR:HE2	1.82	0.45
1:B:4006:LEU:O	1:B:4008:ILE:HG13	2.16	0.45
1:B:1087:ASP:OD1	1:B:1087:ASP:N	2.46	0.45
1:B:3204:SER:O	1:B:3452:PHE:HB2	2.17	0.45
1:A:558:TRP:HB2	1:A:577:ARG:HB2	1.99	0.45
1:A:1049:ASP:HB2	1:A:1054:ASN:HA	1.99	0.45
1:A:1494:PHE:HB2	1:A:1496:ASN:OD1	2.17	0.45
1:A:1567:LEU:HD13	1:A:1581:ARG:HD2	1.99	0.45
1:A:2520:TYR:HA	1:A:2536:THR:HA	1.98	0.45
1:A:3208:TYR:HB3	1:A:3221:LEU:HD21	1.98	0.45
1:B:910:ILE:HD12	1:B:939:VAL:HG11	1.99	0.45
1:B:1422:GLU:HG2	1:B:1423:SER:H	1.80	0.45
1:B:2709:ASN:HD21	1:B:2725:CYS:HB3	1.82	0.45
1:B:4059:PRO:HD2	1:B:4317:GLN:O	2.17	0.45
2:D:1:NAG:H61	2:D:2:NAG:H82	1.99	0.45
1:A:1109:CYS:HB3	1:A:1113:GLN:HB2	1.99	0.44
1:A:2725:CYS:HB2	1:A:2727:ASP:O	2.18	0.44
1:A:3236:ARG:NH2	1:A:3462:GLN:O	2.50	0.44
1:A:3567:SER:O	1:A:3570:THR:OG1	2.33	0.44
1:A:4008:ILE:H	1:A:4026:GLY:H	1.65	0.44
1:A:4171:LEU:HD12	1:A:4171:LEU:HA	1.77	0.44
1:B:695:PHE:HB3	1:B:704:CYS:HB3	1.99	0.44
1:B:830:SER:H	1:B:843:THR:HG23	1.81	0.44
1:B:3244:ILE:HD13	1:B:3272:ALA:HB1	1.99	0.44
1:B:4390:TYR:CD1	1:B:4400:LYS:HG2	2.52	0.44
1:A:1360:CYS:HB3	1:A:1373:CYS:HB3	1.74	0.44
1:A:1522:ASN:HD22	1:A:1537:LYS:HA	1.82	0.44
1:A:1883:GLY:C	1:A:1905:MET:HG3	2.42	0.44
1:A:4004:SER:O	1:A:4006:LEU:HG	2.18	0.44
1:A:4091:TRP:O	1:A:4093:PRO:HD3	2.17	0.44
1:B:1563:MET:HA	1:B:1566:HIS:CE1	2.51	0.44
1:B:1844:SER:OG	1:B:1846:GLU:OE2	2.25	0.44
1:B:3567:SER:O	1:B:3570:THR:OG1	2.33	0.44
1:A:2304:SER:HB3	1:A:2309:ASN:HD22	1.82	0.44
1:A:3799:HIS:HB2	1:A:3802:TYR:HD2	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:626:LYS:N	1:B:636:GLN:O	2.47	0.44
1:B:2209:TYR:HB3	1:B:2236:PRO:HD2	2.00	0.44
1:B:2233:ILE:HD11	1:B:2236:PRO:HG3	1.98	0.44
1:B:2475:TRP:H	1:B:2475:TRP:HE3	1.64	0.44
1:B:4091:TRP:O	1:B:4093:PRO:HD3	2.17	0.44
1:A:584:VAL:HG12	1:A:591:ARG:HA	1.98	0.44
1:A:628:ASN:H	1:A:632:GLU:HB2	1.83	0.44
1:A:897:SER:HA	1:A:903:ASP:O	2.18	0.44
1:A:938:ARG:HB3	1:A:948:THR:HB	1.99	0.44
1:A:2653:ASN:HD21	1:A:2655:CYS:HB2	1.81	0.44
1:A:3110:GLY:N	1:A:3130:LEU:O	2.44	0.44
1:A:3110:GLY:H	1:A:3131:THR:HA	1.82	0.44
1:A:3615:THR:HA	1:A:3625:GLU:OE1	2.18	0.44
1:A:3682:THR:O	1:A:3695:LYS:N	2.51	0.44
1:A:3684:PHE:N	1:A:3693:ILE:O	2.41	0.44
1:A:3806:THR:OG1	1:A:3825:ASP:OD2	2.27	0.44
1:B:1044:LEU:HA	1:B:1056:ASP:HB2	2.00	0.44
1:B:1130:THR:HG1	1:B:1160:ARG:HH11	1.65	0.44
1:B:1154:PHE:CD2	1:B:1162:ILE:HD11	2.53	0.44
1:B:1830:TRP:HA	1:B:1833:ARG:HH21	1.83	0.44
1:B:1883:GLY:C	1:B:1905:MET:HG3	2.42	0.44
1:B:2140:HIS:O	1:B:2181:ARG:NH1	2.34	0.44
1:B:3298:ASP:OD1	1:B:3302:GLY:N	2.51	0.44
1:A:2490:ILE:N	1:A:2504:ALA:O	2.46	0.44
1:A:3278:ASP:OD2	1:A:3283:LYS:N	2.42	0.44
1:A:3599:TRP:HB2	1:A:3609:GLU:HA	2.00	0.44
1:B:350:ASP:HB3	1:B:353:GLN:HB2	1.99	0.44
1:B:865:ILE:HG22	1:B:869:LEU:HD11	1.98	0.44
1:B:935:ALA:HB1	1:B:949:VAL:HG13	1.99	0.44
1:B:1226:PRO:O	1:B:1228:GLY:N	2.44	0.44
1:B:1402:GLN:OE1	1:B:1416:ASP:N	2.50	0.44
1:B:1440:VAL:HG21	1:B:1665:VAL:HG21	1.99	0.44
1:B:1721:HIS:HB3	1:B:1723:TYR:CE2	2.52	0.44
1:B:2572:LEU:HD13	1:B:2574:ARG:HH21	1.81	0.44
1:B:3706:ARG:H	1:B:3706:ARG:HD2	1.81	0.44
1:B:3836:PHE:HD1	1:B:3843:GLN:HG3	1.83	0.44
1:B:4034:ASP:HB2	2:N:1:NAG:H5	1.98	0.44
1:A:3078:HIS:N	1:B:3078:HIS:HB3	2.33	0.44
1:A:3516:GLN:HA	1:A:3527:PRO:HA	1.99	0.44
1:A:4230:TRP:CG	1:A:4250:LYS:HB2	2.52	0.44
1:B:1347:LEU:N	1:B:1369:PHE:O	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2534:ARG:HE	1:B:2545:ILE:HD11	1.83	0.44
1:B:4212:SER:HB2	1:B:4223:LEU:HD11	2.00	0.44
1:A:612:GLY:HA2	1:A:629:LYS:HE2	1.98	0.44
1:A:683:ASP:OD1	1:A:683:ASP:N	2.50	0.44
1:A:714:SER:HA	1:A:719:ILE:HG12	1.98	0.44
1:A:1747:PHE:HA	1:A:1761:LEU:HG	1.99	0.44
1:A:2093:GLN:HE21	1:A:2093:GLN:HB3	1.63	0.44
1:A:3846:MET:HB3	1:A:3855:ILE:O	2.18	0.44
1:A:4098:LEU:HD13	1:A:4380:PRO:HG2	1.98	0.44
1:B:437:ARG:NH2	1:B:450:SER:OG	2.51	0.44
1:B:520:THR:HG22	1:B:659:ALA:HB2	2.00	0.44
1:B:2069:MET:HG2	1:B:2072:ALA:O	2.17	0.44
1:B:3789:ASP:OD1	1:B:3789:ASP:N	2.50	0.44
3:G:1:NAG:H61	3:G:2:NAG:N2	2.33	0.44
1:A:351:ASP:OD1	1:A:351:ASP:N	2.51	0.44
1:A:981:ASN:HA	1:A:988:CYS:HB2	2.00	0.44
1:A:1373:CYS:SG	1:A:1386:LYS:HG2	2.58	0.44
1:A:1834:ASN:ND2	1:A:2033:CYS:O	2.50	0.44
1:A:3612:GLN:HG2	1:A:3629:HIS:HE1	1.82	0.44
1:B:1751:VAL:HG21	1:B:1783:VAL:HB	2.00	0.44
1:B:2421:VAL:HG21	1:B:2435:PHE:HB2	2.00	0.44
1:B:4017:CYS:HB3	1:B:4021:CYS:HB2	1.99	0.44
1:B:4031:VAL:HA	1:B:4045:LYS:HD2	2.00	0.44
1:B:4083:TYR:HB3	1:B:4106:ARG:HG3	1.99	0.44
1:B:4396:LEU:HD12	1:B:4397:PRO:HD2	1.99	0.44
1:A:558:TRP:H	1:A:575:ASP:CG	2.26	0.44
1:A:847:ARG:HH21	1:A:1248:TRP:CD1	2.36	0.44
1:A:1206:ARG:NH1	1:A:1221:GLY:O	2.48	0.44
1:A:1675:ASN:N	1:A:1675:ASN:HD22	2.15	0.44
1:A:2209:TYR:HB3	1:A:2236:PRO:HD2	1.99	0.44
1:A:2466:GLY:HA3	1:A:2486:LEU:HD22	2.00	0.44
1:A:2502:VAL:HG23	1:A:2679:HIS:CD2	2.53	0.44
1:A:4273:ASN:OD1	1:A:4273:ASN:N	2.51	0.44
1:A:4327:ASN:ND2	3:G:1:NAG:O7	2.51	0.44
1:B:762:LYS:HA	1:B:1052:HIS:CE1	2.53	0.44
1:B:1467:TYR:H	1:B:1484:ASP:CG	2.26	0.44
1:B:1622:MET:HE1	1:B:1657:TRP:CE3	2.53	0.44
1:A:1173:ASP:N	1:A:1179:ASP:OD2	2.50	0.43
1:A:1266:CYS:HB3	1:A:1268:PRO:HD3	2.00	0.43
1:A:4000:PHE:HA	1:A:4004:SER:HB3	1.98	0.43
1:A:4390:TYR:CD1	1:A:4400:LYS:HG2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:355:TRP:CE2	1:B:630:PHE:HD1	2.36	0.43
1:B:480:LYS:NZ	1:B:495:ASN:OD1	2.31	0.43
1:B:875:LEU:HB3	1:B:884:LEU:HD11	2.00	0.43
1:B:3388:TYR:CD1	1:B:3390:GLU:HG3	2.53	0.43
1:B:3517:PHE:N	1:B:3526:ILE:O	2.51	0.43
1:A:473:ALA:HB1	1:A:517:VAL:HG22	1.99	0.43
1:A:661:ASN:HB3	1:A:664:LYS:HE3	2.00	0.43
1:A:1436:LEU:HD23	1:A:1436:LEU:H	1.82	0.43
1:A:1510:LEU:HD23	1:A:1528:TYR:HB3	1.99	0.43
1:A:2654:PRO:HB2	1:A:2673:ALA:HB2	1.99	0.43
1:B:1469:VAL:HG13	1:B:1687:LEU:HD23	1.99	0.43
1:B:2049:PHE:HA	1:B:2060:PRO:HA	2.01	0.43
1:B:2151:ALA:HB1	1:B:2197:VAL:HG12	2.00	0.43
1:B:3818:ASP:N	1:B:3829:GLU:OE1	2.52	0.43
1:B:3849:CYS:HB3	1:B:3870:GLY:CA	2.48	0.43
1:A:242:ASP:N	1:A:242:ASP:OD1	2.51	0.43
1:A:1216:ASN:O	1:A:1220:ALA:N	2.50	0.43
1:A:1960:LEU:HD13	1:A:1963:PRO:HB3	2.00	0.43
1:A:3434:ASN:HB3	1:A:3439:SER:H	1.84	0.43
1:A:4116:LYS:HG2	1:A:4135:ASP:HA	2.01	0.43
1:B:767:LYS:HB3	1:B:778:LEU:HD11	2.00	0.43
1:B:937:ILE:HG21	1:B:947:MET:HE2	2.00	0.43
1:B:1016:ASP:O	1:B:1020:GLU:N	2.46	0.43
1:B:1097:ASP:N	1:B:1097:ASP:OD1	2.52	0.43
1:B:1352:SER:CB	1:B:1358:GLY:HA2	2.48	0.43
1:B:4085:GLN:HG2	1:B:4145:ASP:HA	2.00	0.43
1:A:991:VAL:HB	1:A:992:PRO:HD2	2.00	0.43
1:A:1550:ASN:O	1:A:1589:ARG:NH2	2.52	0.43
1:A:2233:ILE:HD11	1:A:2236:PRO:HG3	1.99	0.43
1:A:2618:ALA:HB1	1:A:2623:GLY:HA2	2.01	0.43
1:A:3729:ASN:N	1:A:3747:ASP:OD2	2.48	0.43
1:A:3780:HIS:N	1:A:3790:GLU:OE1	2.43	0.43
1:A:4298:ASN:HB3	1:A:4302:GLN:O	2.18	0.43
1:B:402:ARG:CZ	1:B:1089:ARG:HD3	2.48	0.43
1:B:619:TRP:HB3	1:B:644:ARG:NH1	2.33	0.43
1:B:799:TYR:CD1	1:B:833:VAL:HG21	2.54	0.43
1:B:1555:ARG:NH1	1:B:1601:CYS:SG	2.90	0.43
1:B:1648:LEU:HD23	1:B:1649:THR:N	2.33	0.43
1:B:2401:LEU:HD21	1:B:2629:MET:HB3	2.00	0.43
1:B:3240:ARG:HD3	1:B:3253:ARG:HD2	1.99	0.43
1:B:3467:ASN:ND2	1:B:3469:CYS:HB2	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3858:TYR:CE1	1:B:3859:TRP:CD1	3.06	0.43
1:A:493:MET:HE3	1:A:493:MET:HB3	1.87	0.43
1:A:524:LEU:N	1:A:541:ALA:O	2.51	0.43
1:A:543:MET:HB2	1:A:676:LEU:O	2.19	0.43
1:A:889:ALA:HA	1:A:916:PRO:HD2	1.99	0.43
1:A:3708:ASN:O	1:A:3712:GLN:HG3	2.19	0.43
1:B:1534:GLU:OE1	1:B:1543:ARG:NH2	2.49	0.43
1:B:1927:ASP:OD2	1:B:1988:LYS:NZ	2.41	0.43
1:B:2124:ILE:HB	1:B:2138:VAL:HB	2.00	0.43
1:B:4272:MET:HE2	1:B:4272:MET:HB2	1.86	0.43
1:A:682:ASN:ND2	1:A:687:PHE:O	2.43	0.43
1:A:2572:LEU:HD13	1:A:2574:ARG:HE	1.83	0.43
1:A:3275:LEU:HD21	1:A:3277:VAL:HG23	2.00	0.43
1:A:3365:GLU:HB2	1:A:3682:THR:HG21	2.00	0.43
1:A:4009:ASN:C	1:A:4011:CYS:N	2.77	0.43
1:B:643:LEU:H	1:B:643:LEU:HD12	1.83	0.43
1:B:2523:TRP:CE2	1:B:2533:GLU:HB2	2.54	0.43
1:B:2758:TYR:CD2	1:B:2765:ASP:HB2	2.53	0.43
1:B:3080:PHE:N	1:B:3088:ILE:O	2.43	0.43
1:B:3850:LYS:C	1:B:3852:HIS:H	2.25	0.43
1:A:1117:ASP:N	1:A:1136:ASP:OD2	2.52	0.43
1:A:1977:ASP:HB3	1:A:1980:TYR:HB2	2.00	0.43
1:A:2074:ARG:NH1	1:A:2085:GLU:OE2	2.51	0.43
1:A:2483:SER:HB2	1:A:2512:ILE:HD11	2.01	0.43
1:A:3458:HIS:HD2	1:A:3460:TYR:H	1.67	0.43
1:A:3873:GLU:H	1:A:3873:GLU:CD	2.27	0.43
1:A:4042:ARG:HA	1:A:4045:LYS:NZ	2.34	0.43
1:B:1357:ASN:HA	1:B:1364:CYS:SG	2.58	0.43
1:B:1820:VAL:HG13	1:B:1857:ARG:HD3	2.01	0.43
1:B:2141:GLY:O	1:B:2163:ASN:ND2	2.45	0.43
1:B:3846:MET:HB3	1:B:3857:PRO:HD3	2.01	0.43
1:A:368:ARG:NH1	1:A:369:HIS:CD2	2.87	0.43
1:A:1352:SER:HB2	1:A:1356:PHE:CZ	2.54	0.43
1:A:1622:MET:HE1	1:A:1657:TRP:CE3	2.53	0.43
1:A:1961:SER:OG	1:A:1979:GLN:HB2	2.18	0.43
1:A:4175:TYR:HB3	1:A:4354:PRO:HB3	2.01	0.43
1:B:488:VAL:CG1	1:B:720:ARG:HD2	2.49	0.43
1:B:3056:ASP:OD1	1:B:3056:ASP:N	2.51	0.43
1:B:3532:CYS:N	1:B:3543:ASP:O	2.52	0.43
1:B:3774:SER:O	1:B:3777:ILE:HG22	2.18	0.43
1:B:4158:TRP:CZ2	1:B:4167:GLU:HB2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:870:GLY:HA3	1:A:890:TYR:HB3	2.01	0.43
1:A:1402:GLN:OE1	1:A:1416:ASP:N	2.51	0.43
1:A:1648:LEU:HD23	1:A:1649:THR:N	2.34	0.43
1:A:1830:TRP:HA	1:A:1833:ARG:HH21	1.84	0.43
1:A:2619:ASN:OD1	1:A:2622:ASP:N	2.40	0.43
1:A:4103:TYR:CZ	1:A:4116:LYS:HB2	2.54	0.43
1:B:1129:ASP:O	1:B:1160:ARG:NH1	2.52	0.43
1:B:1149:CYS:O	1:B:1150:GLN:C	2.62	0.43
1:B:2397:SER:HA	1:B:2417:VAL:HG22	2.00	0.43
1:B:3834:THR:HB	1:B:3840:ALA:C	2.44	0.43
1:B:3835:ARG:HB2	1:B:3841:TYR:HA	2.00	0.43
1:B:4382:ARG:HB3	1:B:4409:TYR:CD1	2.54	0.43
1:A:446:ASN:N	1:A:446:ASN:OD1	2.51	0.43
1:A:1367:GLU:O	1:A:1368:PRO:C	2.60	0.43
1:A:2124:ILE:HB	1:A:2138:VAL:HB	1.99	0.43
1:A:2599:THR:HG22	1:A:2606:TYR:HB2	2.00	0.43
1:A:3089:GLU:HG2	1:A:3091:MET:H	1.83	0.43
1:A:3573:ASN:O	1:A:3605:ARG:NH2	2.50	0.43
1:B:1238:GLN:NE2	1:B:3178:CYS:H	2.17	0.43
1:B:1535:VAL:HG11	1:B:1714:LEU:HD11	2.01	0.43
1:B:2036:VAL:HG12	1:B:2040:LEU:HB2	1.99	0.43
1:B:3450:ARG:HB2	1:B:3452:PHE:CE2	2.53	0.43
1:A:521:VAL:HG23	1:A:523:TYR:CD1	2.54	0.42
1:A:937:ILE:HD12	1:A:937:ILE:N	2.34	0.42
1:A:977:PRO:HB2	1:B:2776:LEU:CB	2.48	0.42
1:A:2330:ASP:OD1	1:A:2331:LYS:N	2.51	0.42
1:A:3996:GLU:OE2	1:A:3998:ASN:HB3	2.19	0.42
1:A:4216:ASN:ND2	1:A:4345:ARG:HB3	2.34	0.42
1:A:4396:LEU:HD12	1:A:4397:PRO:HD2	2.01	0.42
1:B:452:ASP:OD2	1:B:457:ASN:ND2	2.51	0.42
1:B:539:GLU:CD	1:B:548:ARG:HE	2.27	0.42
1:B:579:ASP:HB3	1:B:601:ILE:O	2.19	0.42
1:B:1360:CYS:HB3	1:B:1373:CYS:HB3	1.65	0.42
1:B:1558:ALA:HB1	1:B:1605:ILE:HG13	2.00	0.42
1:B:2095:ARG:HD3	1:B:2095:ARG:HA	1.85	0.42
1:B:2550:LEU:HD21	1:B:2553:PRO:HB3	2.01	0.42
1:B:3135:CYS:SG	1:B:3136:SER:N	2.92	0.42
1:B:4311:VAL:HG12	1:B:4312:ASN:N	2.31	0.42
1:A:513:ARG:HD2	1:A:605:PHE:CE1	2.54	0.42
1:A:1084:TRP:HB3	1:A:1091:ASP:OD2	2.18	0.42
1:A:1578:ARG:NE	1:A:1580:GLU:OE2	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1644:HIS:CE1	1:A:1660:ARG:HD3	2.55	0.42
1:A:3298:ASP:OD1	1:A:3302:GLY:N	2.52	0.42
1:A:4059:PRO:HD2	1:A:4317:GLN:O	2.19	0.42
1:B:2106:SER:HA	2:I:2:NAG:O6	2.19	0.42
1:B:3093:LEU:HA	1:B:3105:ASP:HB2	2.02	0.42
1:B:4103:TYR:CZ	1:B:4116:LYS:HB2	2.54	0.42
1:B:4243:ARG:NE	1:B:4256:THR:OG1	2.52	0.42
1:A:1822:PRO:HG3	1:A:1841:ARG:NH1	2.34	0.42
1:A:2482:TYR:CZ	1:A:2491:ASN:HB2	2.55	0.42
1:A:3698:VAL:HA	1:A:3710:ASP:HB2	2.00	0.42
1:A:3819:GLY:N	1:A:3835:ARG:HH21	2.17	0.42
1:A:3843:GLN:HE21	1:A:3843:GLN:HB2	1.65	0.42
1:A:4031:VAL:HA	1:A:4045:LYS:HD2	2.00	0.42
1:B:733:MET:HE1	1:B:755:ILE:HD13	2.01	0.42
1:B:829:ARG:HD2	1:B:873:ASN:HA	2.01	0.42
1:B:830:SER:HB3	1:B:843:THR:HG22	2.01	0.42
1:B:1436:LEU:H	1:B:1436:LEU:HD23	1.85	0.42
1:B:3146:ASP:O	1:B:3148:ARG:NH1	2.52	0.42
1:B:3821:ALA:HA	1:B:3829:GLU:CG	2.49	0.42
1:B:4067:TYR:CZ	1:B:4072:GLU:HA	2.55	0.42
3:G:1:NAG:H61	3:G:2:NAG:H82	2.00	0.42
1:A:978:THR:OG1	1:B:2776:LEU:N	2.52	0.42
1:A:1175:VAL:HG23	1:A:1176:ASP:H	1.83	0.42
1:A:1558:ALA:HB1	1:A:1605:ILE:HG13	2.01	0.42
1:A:1878:VAL:HB	1:A:1905:MET:HE3	2.02	0.42
1:A:3774:SER:O	1:A:3777:ILE:HG22	2.19	0.42
1:A:4067:TYR:CG	1:A:4309:LEU:HD11	2.54	0.42
1:B:339:ASN:HD22	1:B:346:CYS:HA	1.84	0.42
1:B:1025:GLN:HG2	1:B:1026:CYS:SG	2.59	0.42
1:B:1263:HIS:CD2	1:B:1263:HIS:H	2.35	0.42
1:B:2653:ASN:HD21	1:B:2655:CYS:HB2	1.85	0.42
1:B:3270:PRO:HB2	1:B:3290:ARG:HB3	2.01	0.42
1:A:558:TRP:HB2	1:A:577:ARG:H	1.85	0.42
1:A:851:ILE:HB	1:A:865:ILE:HB	2.00	0.42
1:A:1571:SER:HB3	1:A:1600:PRO:HB2	2.01	0.42
1:A:1609:ASN:HB3	1:A:1611:LEU:HD23	2.01	0.42
1:A:2102:VAL:HG12	1:A:2109:ILE:HG12	2.01	0.42
1:A:2568:VAL:HG12	1:A:2575:ILE:HG23	2.00	0.42
1:A:2684:TYR:O	1:A:2693:ILE:HG13	2.20	0.42
1:A:3082:CYS:N	1:A:3086:ARG:O	2.37	0.42
1:A:3199:PRO:HG3	1:A:3416:PHE:CE2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:431:PHE:O	1:B:656:GLN:NE2	2.47	0.42
1:B:1834:ASN:ND2	1:B:2033:CYS:O	2.51	0.42
1:B:2330:ASP:OD1	1:B:2331:LYS:N	2.53	0.42
1:B:3698:VAL:HA	1:B:3710:ASP:HB2	2.00	0.42
1:A:470:GLU:OE1	1:A:513:ARG:HD3	2.19	0.42
1:A:2568:VAL:HG12	1:A:2575:ILE:HG12	2.00	0.42
1:A:2739:HIS:CD2	1:A:2747:THR:HG21	2.54	0.42
1:A:3453:ASP:OD1	1:A:3454:ILE:N	2.52	0.42
1:A:3622:ASN:ND2	1:A:3625:GLU:HB2	2.35	0.42
1:A:3744:ASP:N	1:A:3750:ASP:OD2	2.52	0.42
1:B:885:TYR:CD2	1:B:896:HIS:HB3	2.54	0.42
1:B:1822:PRO:HG3	1:B:1841:ARG:NH1	2.34	0.42
1:B:2145:ASN:ND2	1:B:2165:PHE:O	2.53	0.42
1:B:3691:ARG:HD3	1:B:3705:CYS:HA	2.00	0.42
1:B:3848:GLU:HA	1:B:3853:VAL:O	2.20	0.42
1:A:964:ASP:HB3	1:A:967:ILE:HG13	2.02	0.42
1:A:3376:ASN:ND2	1:A:3436:TYR:OH	2.53	0.42
1:A:4311:VAL:HG12	1:A:4312:ASN:N	2.33	0.42
1:A:4329:SER:O	1:A:4330:VAL:C	2.63	0.42
1:B:356:GLY:O	1:B:383:GLN:NE2	2.52	0.42
1:B:1362:HIS:CG	1:B:1363:GLU:H	2.38	0.42
1:B:1365:VAL:CG1	1:B:1372:LYS:HD3	2.50	0.42
1:B:2198:ASP:OD2	1:B:2201:ASN:ND2	2.50	0.42
1:B:3517:PHE:HB2	1:B:3528:ILE:HD12	2.02	0.42
1:B:3819:GLY:N	1:B:3829:GLU:OE1	2.51	0.42
1:A:339:ASN:HD22	1:A:344:ARG:HA	1.85	0.42
1:A:441:THR:HG22	1:A:448:VAL:HG22	2.01	0.42
1:A:511:HIS:HB3	1:A:529:TRP:NE1	2.34	0.42
1:A:1205:ASN:HB3	1:A:1212:ASP:CG	2.45	0.42
1:A:1588:MET:SD	1:A:1717:SER:OG	2.77	0.42
1:A:1751:VAL:HG21	1:A:1783:VAL:HB	2.01	0.42
1:A:2469:ASP:N	1:A:2469:ASP:OD1	2.52	0.42
1:A:3135:CYS:SG	1:A:3136:SER:N	2.93	0.42
1:A:3209:LEU:O	1:A:3222:ILE:N	2.52	0.42
1:A:3706:ARG:HD2	1:A:3706:ARG:N	2.35	0.42
1:A:4067:TYR:CE2	1:A:4309:LEU:HD11	2.55	0.42
1:A:4154:ARG:C	1:A:4171:LEU:HD13	2.45	0.42
1:B:570:ARG:NH1	1:B:583:THR:HG22	2.35	0.42
1:B:3577:ASN:HD22	1:B:3583:ASP:CG	2.28	0.42
1:B:3682:THR:O	1:B:3695:LYS:N	2.53	0.42
1:A:698:ASP:OD1	1:A:699:THR:N	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1467:TYR:H	1:A:1484:ASP:CG	2.26	0.42
1:A:1784:GLU:OE1	1:A:1785:PHE:N	2.52	0.42
1:A:2644:VAL:HG12	1:A:2646:ASN:O	2.20	0.42
1:A:2758:TYR:HB2	1:A:2766:CYS:HB3	2.02	0.42
1:B:235:ILE:HG23	1:B:239:TRP:HE3	1.83	0.42
1:B:1205:ASN:HB3	1:B:1212:ASP:CG	2.45	0.42
1:B:2099:HIS:CE1	1:B:2194:HIS:HD2	2.38	0.42
1:B:3199:PRO:HG3	1:B:3416:PHE:CE2	2.55	0.42
1:B:3640:PHE:HE2	1:B:3665:ASP:HA	1.84	0.42
1:B:4242:ASP:OD1	1:B:4242:ASP:N	2.52	0.42
1:B:4314:TRP:O	1:B:4316:THR:HG23	2.19	0.42
1:A:507:GLU:HB3	1:A:548:ARG:NH1	2.35	0.42
1:A:558:TRP:CG	1:A:577:ARG:HB2	2.55	0.42
1:A:966:ASN:O	1:A:969:THR:OG1	2.38	0.42
1:A:1576:HIS:CE1	1:B:2213:PRO:HD2	2.55	0.42
1:A:1828:LEU:HD12	1:A:1835:LEU:HD12	2.02	0.42
1:A:4024:THR:HB	1:A:4027:SER:C	2.45	0.42
1:A:4158:TRP:CZ2	1:A:4167:GLU:HB2	2.55	0.42
1:B:441:THR:HB	1:B:469:PRO:HG2	2.01	0.42
1:B:628:ASN:H	1:B:632:GLU:HB2	1.85	0.42
1:B:785:ASN:HD22	1:B:804:HIS:HB2	1.85	0.42
1:B:1352:SER:O	1:B:1356:PHE:N	2.46	0.42
1:B:1514:ILE:HG23	1:B:1523:LEU:HD21	2.02	0.42
1:B:1550:ASN:O	1:B:1589:ARG:NH2	2.52	0.42
1:B:1667:ARG:NH2	1:B:1677:SER:OG	2.53	0.42
1:B:3516:GLN:HA	1:B:3527:PRO:HA	2.02	0.42
1:B:3708:ASN:O	1:B:3712:GLN:HG3	2.20	0.42
1:B:4298:ASN:HB3	1:B:4302:GLN:O	2.20	0.42
1:A:229:CYS:CB	1:A:233:ARG:HG2	2.48	0.41
1:A:490:ARG:HA	1:A:506:THR:HG22	2.01	0.41
1:A:1049:ASP:OD1	1:A:1049:ASP:N	2.50	0.41
1:A:2523:TRP:NE1	1:A:2533:GLU:OE1	2.43	0.41
1:A:3208:TYR:OH	1:A:3760:THR:OG1	2.23	0.41
1:A:3811:VAL:HG21	1:A:3822:ASP:HB3	2.02	0.41
1:A:4098:LEU:HA	1:A:4121:PRO:HA	2.02	0.41
1:A:4183:ASP:HB3	1:A:4220:ARG:HH12	1.85	0.41
1:B:563:THR:HG23	1:B:572:TYR:HB2	2.00	0.41
1:B:597:GLY:HA2	1:B:1158:ASN:OD1	2.20	0.41
1:B:777:ILE:O	1:B:816:LYS:NZ	2.40	0.41
1:B:1112:THR:HA	1:B:1124:LYS:HE3	2.02	0.41
1:B:2115:SER:HB2	1:B:2121:ASP:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3255:PHE:CE2	2:K:1:NAG:H5	2.55	0.41
1:B:4102:TYR:OH	1:B:4171:LEU:HG	2.20	0.41
1:A:365:ARG:HB2	1:A:368:ARG:C	2.44	0.41
1:A:1026:CYS:HB3	1:A:1030:SER:HB2	2.02	0.41
1:A:1060:CYS:SG	1:A:1065:ASN:HB3	2.60	0.41
1:A:2212:ARG:HH22	1:B:1597:ILE:H	1.68	0.41
1:A:2213:PRO:HD2	1:B:1576:HIS:CE1	2.55	0.41
1:A:2257:ILE:HG13	1:A:2270:VAL:HG13	2.02	0.41
1:A:3679:ASP:N	1:A:3683:GLU:HB2	2.35	0.41
1:A:3804:GLN:HE21	1:A:3808:GLY:HA2	1.84	0.41
1:A:4008:ILE:H	1:A:4026:GLY:N	2.18	0.41
1:A:4042:ARG:HA	1:A:4045:LYS:HZ1	1.85	0.41
1:B:793:TRP:CE2	1:B:968:GLN:HA	2.55	0.41
1:B:1786:ASP:HB3	1:B:1791:TYR:HB2	2.02	0.41
1:B:2192:PRO:HB3	1:B:2206:TRP:CD1	2.54	0.41
1:B:3192:ARG:HD3	1:B:3192:ARG:HA	1.95	0.41
1:B:4106:ARG:HA	1:B:4144:PRO:HD2	2.02	0.41
1:B:4154:ARG:C	1:B:4171:LEU:HD13	2.45	0.41
1:A:1112:THR:HA	1:A:1124:LYS:HE3	2.01	0.41
1:B:493:MET:HE3	1:B:493:MET:HB3	1.88	0.41
1:B:1216:ASN:O	1:B:1220:ALA:N	2.54	0.41
1:B:1635:VAL:HG12	1:B:1636:ILE:HG13	2.02	0.41
1:B:3082:CYS:N	1:B:3086:ARG:O	2.38	0.41
1:A:462:LEU:HD11	1:A:494:VAL:HG11	2.01	0.41
1:A:873:ASN:ND2	1:A:917:PHE:HD1	2.18	0.41
1:A:1365:VAL:HG21	1:A:1374:LEU:HD12	2.02	0.41
1:A:1446:ILE:HD11	1:A:1482:TRP:CG	2.55	0.41
1:A:2257:ILE:HD11	1:A:2270:VAL:HG22	2.02	0.41
1:A:2729:SER:O	1:A:2735:VAL:HG21	2.21	0.41
1:A:3844:ALA:HB3	1:A:3846:MET:HE3	2.01	0.41
1:A:4199:MET:HE3	1:A:4201:TRP:HZ3	1.85	0.41
1:B:522:GLY:C	1:B:543:MET:HG3	2.45	0.41
1:B:619:TRP:CD1	1:B:644:ARG:HG3	2.56	0.41
1:B:719:ILE:HD11	1:B:743:PHE:HB3	2.01	0.41
1:B:842:PHE:CZ	1:B:852:MET:HB2	2.56	0.41
1:B:1078:GLU:OE1	1:B:1092:CYS:HB2	2.20	0.41
1:B:1853:ASP:OD1	1:B:1853:ASP:N	2.48	0.41
1:B:1864:ASP:HB3	1:B:2083:HIS:CE1	2.55	0.41
1:B:2176:ILE:HB	2:I:1:NAG:H82	2.03	0.41
1:B:2531:LYS:HE2	1:B:2531:LYS:HB2	1.91	0.41
1:B:3093:LEU:HD22	1:B:3130:LEU:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3834:THR:HA	1:B:3841:TYR:CZ	2.56	0.41
1:A:2198:ASP:OD2	1:A:2201:ASN:ND2	2.49	0.41
1:A:2475:TRP:O	1:A:2476:ILE:C	2.64	0.41
1:A:2523:TRP:CE2	1:A:2533:GLU:HB2	2.55	0.41
1:A:4067:TYR:CZ	1:A:4072:GLU:HA	2.55	0.41
1:B:470:GLU:OE1	1:B:513:ARG:HD3	2.20	0.41
1:B:868:THR:HG21	1:B:1242:ILE:HG21	2.03	0.41
1:B:1236:GLN:NE2	1:B:3194:ASN:HD22	2.19	0.41
1:B:3502:LEU:HD11	1:B:3507:TYR:HB2	2.01	0.41
1:B:3706:ARG:HD2	1:B:3706:ARG:N	2.35	0.41
1:B:3744:ASP:N	1:B:3750:ASP:OD2	2.52	0.41
1:B:4285:TYR:HD1	1:B:4320:ILE:HD11	1.86	0.41
1:A:248:LYS:C	1:A:250:ASN:N	2.77	0.41
1:A:452:ASP:OD2	1:A:457:ASN:ND2	2.53	0.41
1:A:895:GLU:HG2	1:A:906:ARG:HB2	2.01	0.41
1:A:977:PRO:HB2	1:B:2776:LEU:HB3	2.02	0.41
1:A:1347:LEU:N	1:A:1369:PHE:O	2.53	0.41
1:A:1362:HIS:O	1:A:1363:GLU:C	2.61	0.41
1:A:2099:HIS:ND1	1:A:2194:HIS:HD2	2.19	0.41
1:A:3577:ASN:HD22	1:A:3583:ASP:CG	2.28	0.41
1:B:620:THR:HA	1:B:1132:ASN:HB2	2.01	0.41
1:B:1122:ILE:HD12	1:B:1133:ASP:OD2	2.21	0.41
1:B:1122:ILE:HG13	1:B:1134:CYS:HB3	2.02	0.41
1:B:1794:TRP:HZ3	1:B:1804:VAL:HG12	1.84	0.41
1:B:2096:ASN:O	1:B:2113:ASP:HA	2.20	0.41
1:B:2304:SER:HB3	1:B:2309:ASN:HD22	1.85	0.41
1:B:2513:VAL:HB	1:B:2522:TYR:HB2	2.02	0.41
1:B:2651:CYS:O	1:B:2652:ASN:C	2.61	0.41
1:A:793:TRP:CE2	1:A:968:GLN:HA	2.56	0.41
1:A:1037:ARG:NH1	1:A:1050:ASP:O	2.53	0.41
1:A:1239:GLU:HG3	1:A:1257:LEU:HB3	2.02	0.41
1:A:2707:CYS:CB	1:A:2729:SER:HB3	2.44	0.41
1:A:3640:PHE:N	1:A:3648:ILE:O	2.53	0.41
1:B:1872:PHE:H	1:B:1889:ASP:CG	2.28	0.41
1:B:1961:SER:OG	1:B:1979:GLN:HB2	2.20	0.41
1:B:2093:GLN:HE21	1:B:2093:GLN:HB3	1.65	0.41
1:B:2312:PRO:HA	1:B:2313:PRO:HD3	1.96	0.41
1:B:3243:TRP:HZ2	1:B:3261:LYS:HE3	1.85	0.41
1:B:3268:ARG:HB2	1:B:3304:ARG:HH12	1.86	0.41
1:B:3318:PHE:CZ	1:B:3361:SER:HB2	2.55	0.41
1:B:3614:ASP:OD1	1:B:3614:ASP:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3667:PRO:O	1:B:3670:GLU:N	2.54	0.41
1:B:4042:ARG:HA	1:B:4045:LYS:NZ	2.36	0.41
1:B:4246:TRP:CZ2	1:B:4255:GLU:HB2	2.55	0.41
1:A:350:ASP:HB3	1:A:353:GLN:HB2	2.01	0.41
1:A:925:HIS:CG	1:A:938:ARG:HD2	2.56	0.41
1:A:1076:HIS:N	1:A:1094:ASP:OD2	2.30	0.41
1:A:1965:GLY:H	1:A:1976:THR:HG23	1.86	0.41
1:A:4207:GLU:O	1:A:4208:PRO:C	2.62	0.41
1:B:462:LEU:HD11	1:B:494:VAL:HG11	2.03	0.41
1:B:523:TYR:HB3	1:B:525:PHE:CE1	2.56	0.41
1:B:1112:THR:O	1:B:1124:LYS:HG3	2.20	0.41
1:B:1162:ILE:HD12	1:B:1166:PHE:HB2	2.03	0.41
1:B:1373:CYS:SG	1:B:1386:LYS:HG2	2.60	0.41
1:B:3846:MET:CB	1:B:3857:PRO:HD3	2.50	0.41
1:A:535:GLU:HB2	1:A:537:LYS:HE3	2.03	0.41
1:A:556:LEU:HD11	1:A:559:PRO:HB3	2.03	0.41
1:A:681:ASP:OD1	1:A:682:ASN:N	2.53	0.41
1:A:834:HIS:NE2	1:A:836:PHE:HB2	2.36	0.41
1:A:917:PHE:HD2	1:A:958:LEU:HA	1.86	0.41
1:A:1112:THR:O	1:A:1124:LYS:HG3	2.20	0.41
1:A:1390:ASP:HB2	1:A:1408:ARG:NH1	2.35	0.41
1:A:1606:ASP:OD1	1:A:1650:LEU:HD13	2.21	0.41
1:A:1922:GLU:HG3	1:A:1963:PRO:O	2.20	0.41
1:A:2388:ASN:ND2	1:A:2601:TYR:OH	2.53	0.41
1:A:2501:THR:HB	1:A:2665:ILE:HD12	2.03	0.41
1:A:3281:SER:O	1:A:3283:LYS:NZ	2.52	0.41
1:A:3326:LEU:HD12	1:A:3326:LEU:HA	1.87	0.41
1:A:3655:ASP:HB2	1:A:3691:ARG:HH12	1.85	0.41
1:A:4121:PRO:C	1:A:4123:PHE:H	2.29	0.41
1:A:4165:ARG:NH2	1:A:4167:GLU:OE2	2.50	0.41
1:B:612:GLY:HA2	1:B:629:LYS:HE2	2.03	0.41
1:B:768:GLN:HA	1:B:774:GLY:O	2.21	0.41
1:B:1174:CYS:HB2	1:B:1178:SER:H	1.85	0.41
1:B:1352:SER:HB2	1:B:1358:GLY:HA2	2.03	0.41
1:B:1508:ILE:H	1:B:1508:ILE:HG13	1.49	0.41
1:B:1965:GLY:H	1:B:1976:THR:HG23	1.85	0.41
1:B:2438:ASN:O	1:B:2439:LEU:C	2.63	0.41
1:B:2684:TYR:O	1:B:2693:ILE:HG13	2.21	0.41
1:B:2685:LEU:HB3	1:B:2689:ARG:HA	2.03	0.41
1:B:2733:GLU:O	1:B:2737:ALA:N	2.54	0.41
1:B:3458:HIS:HD2	1:B:3460:TYR:H	1.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3633:ARG:NH2	1:B:3647:CYS:HB2	2.36	0.41
1:B:4411:GLU:OE1	1:B:4411:GLU:N	2.41	0.41
1:A:747:ASP:OD1	1:A:748:PHE:N	2.50	0.41
1:A:3020:ASP:OD1	1:A:3020:ASP:N	2.54	0.41
1:A:3025:ARG:HD3	1:A:3028:LEU:HD21	2.02	0.41
1:A:3090:MET:HE2	1:B:3091:MET:HG2	2.03	0.41
1:A:3551:ARG:HA	1:A:3559:GLN:NE2	2.36	0.41
1:A:3842:CYS:HB3	1:A:3846:MET:HB2	2.02	0.41
1:A:4170:LYS:HE2	1:A:4174:ARG:HH21	1.86	0.41
1:A:4246:TRP:CZ2	1:A:4255:GLU:HB2	2.56	0.41
1:B:742:PHE:O	1:B:744:VAL:HG23	2.21	0.41
1:B:845:TRP:CD1	1:B:845:TRP:H	2.39	0.41
1:B:1118:ASN:HD21	1:B:1136:ASP:H	1.69	0.41
1:B:1239:GLU:HG3	1:B:1257:LEU:HB3	2.03	0.41
1:B:2502:VAL:HG23	1:B:2679:HIS:CG	2.56	0.41
1:B:3092:LYS:HB3	1:B:3099:ASP:OD2	2.21	0.41
1:B:3312:VAL:HG11	1:B:3337:TRP:CZ2	2.55	0.41
1:B:3834:THR:O	1:B:3835:ARG:C	2.64	0.41
1:B:4257:ILE:HB	1:B:4261:GLY:HA2	2.03	0.41
1:A:1353:CYS:H	1:A:1371:ALA:HB2	1.86	0.40
1:A:1532:THR:HB	1:A:1545:VAL:HG13	2.03	0.40
1:A:1802:HIS:NE2	1:A:1813:VAL:HG22	2.37	0.40
1:A:1831:ILE:HD12	1:A:2018:SER:HA	2.03	0.40
1:A:2550:LEU:HD21	1:A:2553:PRO:HB3	2.03	0.40
1:A:2733:GLU:O	1:A:2734:SER:C	2.64	0.40
1:A:3201:LEU:N	1:A:3212:LEU:O	2.55	0.40
1:A:3391:TYR:CE1	1:A:3400:HIS:HB2	2.57	0.40
1:B:556:LEU:HG	1:B:559:PRO:HD3	2.02	0.40
1:B:1442:SER:OG	1:B:1443:GLN:N	2.54	0.40
1:B:1578:ARG:NE	1:B:1580:GLU:OE2	2.46	0.40
1:B:3110:GLY:C	1:B:3111:ILE:HD12	2.46	0.40
1:B:3200:TYR:CZ	2:J:1:NAG:H3	2.57	0.40
1:B:3858:TYR:O	1:B:3862:ASP:HB2	2.21	0.40
1:B:4203:ASP:C	1:B:4205:GLY:H	2.29	0.40
1:A:347:VAL:HG22	1:A:349:PHE:N	2.35	0.40
1:A:494:VAL:HG12	1:A:501:ARG:HA	2.03	0.40
1:A:932:ARG:HA	1:A:932:ARG:HD3	1.92	0.40
1:A:1163:ASP:HB3	1:A:1166:PHE:CD2	2.56	0.40
1:A:3307:LEU:HD23	1:A:3307:LEU:HA	1.88	0.40
1:A:3789:ASP:OD1	1:A:3789:ASP:N	2.54	0.40
1:A:4009:ASN:O	1:A:4010:GLU:C	2.65	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4092:ASP:OD1	1:A:4092:ASP:N	2.54	0.40
1:B:1060:CYS:SG	1:B:1065:ASN:HB3	2.61	0.40
1:B:2665:ILE:H	1:B:2665:ILE:HG13	1.64	0.40
1:A:423:ARG:NH2	1:A:1087:ASP:OD2	2.47	0.40
1:A:1375:CYS:SG	1:A:1381:LEU:HG	2.62	0.40
1:A:1872:PHE:H	1:A:1889:ASP:CG	2.28	0.40
1:A:3551:ARG:HA	1:A:3559:GLN:HE22	1.86	0.40
1:A:4175:TYR:OH	1:A:4372:GLU:N	2.53	0.40
1:A:4277:LEU:HB3	1:A:4284:LEU:HD21	2.03	0.40
1:B:535:GLU:O	1:B:537:LYS:HG3	2.21	0.40
1:B:746:ILE:CG1	1:B:961:LYS:HB3	2.51	0.40
1:B:1131:ASP:C	1:B:1133:ASP:N	2.77	0.40
1:B:1352:SER:HA	1:B:1355:ASP:CG	2.46	0.40
1:B:3278:ASP:OD2	1:B:3282:ARG:N	2.54	0.40
1:B:3875:LEU:HD22	1:B:3880:ASP:N	2.35	0.40
1:A:356:GLY:HA2	1:A:630:PHE:CG	2.56	0.40
1:A:1122:ILE:HD12	1:A:1133:ASP:OD2	2.21	0.40
1:A:1442:SER:OG	1:A:1443:GLN:N	2.55	0.40
1:A:1743:ASP:OD1	1:A:1744:ASP:N	2.53	0.40
1:A:3278:ASP:OD2	1:A:3282:ARG:N	2.53	0.40
1:A:3450:ARG:HB2	1:A:3452:PHE:CE2	2.56	0.40
1:A:4004:SER:O	1:A:4005:CYS:C	2.64	0.40
1:A:4106:ARG:HA	1:A:4144:PRO:HD2	2.03	0.40
1:A:4236:ILE:HB	1:A:4238:TYR:CZ	2.56	0.40
1:B:1132:ASN:O	1:B:1133:ASP:C	2.64	0.40
1:B:1365:VAL:HB	1:B:1372:LYS:HB3	2.04	0.40
1:B:2126:ARG:NE	1:B:2137:ILE:HD11	2.36	0.40
1:B:3513:SER:HB3	1:B:3593:HIS:ND1	2.36	0.40
1:B:4163:ASN:O	1:B:4165:ARG:HG3	2.22	0.40
1:B:4271:ALA:HB1	1:B:4286:TRP:NE1	2.37	0.40
1:A:603:HIS:CD2	1:A:619:TRP:HB2	2.56	0.40
1:A:632:GLU:HG3	1:A:634:ASN:H	1.85	0.40
1:A:749:ASP:HA	1:A:968:GLN:HE22	1.86	0.40
1:A:1462:VAL:HG13	1:A:1500:ARG:HH21	1.86	0.40
1:A:1508:ILE:H	1:A:1508:ILE:HG13	1.48	0.40
1:A:1975:TYR:OH	1:A:1984:GLU:OE1	2.21	0.40
1:A:3667:PRO:O	1:A:3670:GLU:N	2.54	0.40
1:A:3888:ARG:O	1:A:3889:PHE:C	2.65	0.40
1:A:4098:LEU:HD22	1:A:4380:PRO:HB2	2.04	0.40
1:A:4199:MET:HE3	1:A:4201:TRP:CZ3	2.57	0.40
1:B:379:LEU:HD12	1:B:384:TYR:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:793:TRP:CE3	1:B:968:GLN:HG2	2.56	0.40
1:B:1154:PHE:N	1:B:1162:ILE:O	2.55	0.40
1:B:1390:ASP:HB2	1:B:1408:ARG:NH1	2.35	0.40
1:B:1615:MET:HE3	1:B:1615:MET:HB2	1.90	0.40
1:B:2399:ARG:HG2	1:B:2414:THR:CG2	2.52	0.40
1:B:3331:GLN:O	1:B:3486:GLY:HA3	2.22	0.40
1:B:4314:TRP:O	1:B:4315:LEU:C	2.64	0.40
2:N:1:NAG:H82	2:N:1:NAG:H2	1.89	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	3683/4655 (79%)	3478 (94%)	203 (6%)	2 (0%)	48	76
1	B	3680/4655 (79%)	3478 (94%)	197 (5%)	5 (0%)	48	76
All	All	7363/9310 (79%)	6956 (94%)	400 (5%)	7 (0%)	50	76

All (7) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	1160	ARG
1	A	821	VAL
1	A	960	LEU
1	B	821	VAL
1	B	646	TYR
1	B	1135	GLY
1	B	2417	VAL

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 PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	3150/4105 (77%)	3047 (97%)	103 (3%)	33 60
1	B	3150/4105 (77%)	3038 (96%)	112 (4%)	30 57
All	All	6300/8210 (77%)	6085 (97%)	215 (3%)	34 59

All (215) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	374	GLU
1	A	446	ASN
1	A	453	ILE
1	A	464	VAL
1	A	466	VAL
1	A	488	VAL
1	A	581	ILE
1	A	683	ASP
1	A	746	ILE
1	A	810	VAL
1	A	821	VAL
1	A	887	VAL
1	A	892	ASP
1	A	969	THR
1	A	974	CYS
1	A	1023	THR
1	A	1051	CYS
1	A	1133	ASP
1	A	1184	VAL
1	A	1185	LEU
1	A	1187	CYS
1	A	1198	ASP
1	A	1224	THR
1	A	1238	GLN
1	A	1239	GLU
1	A	1363	GLU
1	A	1403	HIS

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Mol	Chain	Res	Type
1	A	1451	VAL
1	A	1454	GLN
1	A	1508	ILE
1	A	1648	LEU
1	A	1649	THR
1	A	1655	VAL
1	A	1712	LEU
1	A	1755	ILE
1	A	1784	GLU
1	A	1801	ILE
1	A	1820	VAL
1	A	1838	THR
1	A	1976	THR
1	A	2007	LEU
1	A	2036	VAL
1	A	2066	VAL
1	A	2093	GLN
1	A	2327	THR
1	A	2341	VAL
1	A	2421	VAL
1	A	2436	THR
1	A	2491	ASN
1	A	2493	MET
1	A	2501	THR
1	A	2513	VAL
1	A	2543	VAL
1	A	2593	VAL
1	A	2651	CYS
1	A	2705	PHE
1	A	2712	CYS
1	A	2747	THR
1	A	2759	ARG
1	A	2765	ASP
1	A	3035	ASN
1	A	3041	ASN
1	A	3045	ILE
1	A	3056	ASP
1	A	3067	LEU
1	A	3075	CYS
1	A	3078	HIS
1	A	3103	ASN
1	A	3129	THR

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Mol	Chain	Res	Type
1	A	3168	GLU
1	A	3278	ASP
1	A	3298	ASP
1	A	3346	ILE
1	A	3371	THR
1	A	3398	HIS
1	A	3413	ILE
1	A	3415	ILE
1	A	3420	ILE
1	A	3465	VAL
1	A	3552	PHE
1	A	3560	CYS
1	A	3578	CYS
1	A	3590	GLU
1	A	3619	CYS
1	A	3622	ASN
1	A	3629	HIS
1	A	3706	ARG
1	A	3744	ASP
1	A	3784	CYS
1	A	3843	GLN
1	A	3845	THR
1	A	3848	GLU
1	A	3859	TRP
1	A	4045	LYS
1	A	4120	ILE
1	A	4145	ASP
1	A	4156	ILE
1	A	4171	LEU
1	A	4179	LEU
1	A	4190	ILE
1	A	4219	ASP
1	A	4254	ILE
1	A	4273	ASN
1	B	339	ASN
1	B	354	ILE
1	B	452	ASP
1	B	464	VAL
1	B	466	VAL
1	B	479	ASN
1	B	481	ILE
1	B	488	VAL

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Mol	Chain	Res	Type
1	B	579	ASP
1	B	581	ILE
1	B	622	MET
1	B	642	SER
1	B	643	LEU
1	B	644	ARG
1	B	732	VAL
1	B	746	ILE
1	B	821	VAL
1	B	887	VAL
1	B	892	ASP
1	B	969	THR
1	B	974	CYS
1	B	978	THR
1	B	979	HIS
1	B	991	VAL
1	B	1023	THR
1	B	1051	CYS
1	B	1133	ASP
1	B	1184	VAL
1	B	1185	LEU
1	B	1187	CYS
1	B	1198	ASP
1	B	1224	THR
1	B	1262	GLU
1	B	1373	CYS
1	B	1403	HIS
1	B	1451	VAL
1	B	1454	GLN
1	B	1508	ILE
1	B	1612	LEU
1	B	1648	LEU
1	B	1649	THR
1	B	1655	VAL
1	B	1712	LEU
1	B	1755	ILE
1	B	1784	GLU
1	B	1801	ILE
1	B	1820	VAL
1	B	1838	THR
1	B	1976	THR
1	B	2007	LEU

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Mol	Chain	Res	Type
1	B	2036	VAL
1	B	2066	VAL
1	B	2327	THR
1	B	2341	VAL
1	B	2491	ASN
1	B	2493	MET
1	B	2513	VAL
1	B	2543	VAL
1	B	2593	VAL
1	B	2651	CYS
1	B	2705	PHE
1	B	2706	THR
1	B	2712	CYS
1	B	2739	HIS
1	B	2756	TYR
1	B	2776	LEU
1	B	3035	ASN
1	B	3041	ASN
1	B	3045	ILE
1	B	3056	ASP
1	B	3067	LEU
1	B	3075	CYS
1	B	3103	ASN
1	B	3129	THR
1	B	3168	GLU
1	B	3278	ASP
1	B	3298	ASP
1	B	3346	ILE
1	B	3371	THR
1	B	3398	HIS
1	B	3413	ILE
1	B	3415	ILE
1	B	3420	ILE
1	B	3446	ASN
1	B	3552	PHE
1	B	3560	CYS
1	B	3578	CYS
1	B	3590	GLU
1	B	3619	CYS
1	B	3622	ASN
1	B	3629	HIS
1	B	3706	ARG

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Mol	Chain	Res	Type
1	B	3744	ASP
1	B	3780	HIS
1	B	3784	CYS
1	B	3843	GLN
1	B	3858	TYR
1	B	4006	LEU
1	B	4041	ASP
1	B	4045	LYS
1	B	4080	ASP
1	B	4092	ASP
1	B	4120	ILE
1	B	4156	ILE
1	B	4171	LEU
1	B	4179	LEU
1	B	4190	ILE
1	B	4219	ASP
1	B	4254	ILE
1	B	4272	MET
1	B	4298	ASN
1	B	4312	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (132) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	353	GLN
1	A	369	HIS
1	A	410	HIS
1	A	445	GLN
1	A	489	ASN
1	A	547	ASN
1	A	596	HIS
1	A	661	ASN
1	A	696	GLN
1	A	716	GLN
1	A	768	GLN
1	A	785	ASN
1	A	896	HIS
1	A	976	GLN
1	A	986	HIS
1	A	1009	ASN
1	A	1064	ASN
1	A	1099	HIS

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Mol	Chain	Res	Type
1	A	1144	ASN
1	A	1153	GLN
1	A	1191	GLN
1	A	1231	HIS
1	A	1366	GLN
1	A	1454	GLN
1	A	1495	GLN
1	A	1522	ASN
1	A	1553	ASN
1	A	1575	HIS
1	A	1594	GLN
1	A	1754	HIS
1	A	1931	GLN
1	A	1969	HIS
1	A	2093	GLN
1	A	2194	HIS
1	A	2302	GLN
1	A	2376	GLN
1	A	2402	HIS
1	A	2529	HIS
1	A	2613	GLN
1	A	2636	GLN
1	A	2739	HIS
1	A	3041	ASN
1	A	3055	ASN
1	A	3103	ASN
1	A	3249	GLN
1	A	3303	HIS
1	A	3310	HIS
1	A	3376	ASN
1	A	3400	HIS
1	A	3458	HIS
1	A	3522	ASN
1	A	3600	GLN
1	A	3622	ASN
1	A	3787	ASN
1	A	3809	HIS
1	A	3843	GLN
1	A	3852	HIS
1	A	3998	ASN
1	A	4132	GLN
1	A	4163	ASN

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Mol	Chain	Res	Type
1	A	4240	ASN
1	B	237	GLN
1	B	339	ASN
1	B	353	GLN
1	B	369	HIS
1	B	410	HIS
1	B	445	GLN
1	B	596	HIS
1	B	603	HIS
1	B	661	ASN
1	B	696	GLN
1	B	708	GLN
1	B	729	GLN
1	B	768	GLN
1	B	785	ASN
1	B	834	HIS
1	B	896	HIS
1	B	976	GLN
1	B	1009	ASN
1	B	1099	HIS
1	B	1118	ASN
1	B	1142	ASN
1	B	1153	GLN
1	B	1158	ASN
1	B	1231	HIS
1	B	1236	GLN
1	B	1238	GLN
1	B	1351	ASN
1	B	1366	GLN
1	B	1454	GLN
1	B	1495	GLN
1	B	1522	ASN
1	B	1553	ASN
1	B	1575	HIS
1	B	1594	GLN
1	B	1754	HIS
1	B	1931	GLN
1	B	1969	HIS
1	B	2093	GLN
1	B	2145	ASN
1	B	2194	HIS
1	B	2302	GLN

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Mol	Chain	Res	Type
1	B	2376	GLN
1	B	2396	ASN
1	B	2402	HIS
1	B	2437	GLN
1	B	2529	HIS
1	B	2613	GLN
1	B	2636	GLN
1	B	3041	ASN
1	B	3055	ASN
1	B	3103	ASN
1	B	3115	HIS
1	B	3196	ASN
1	B	3249	GLN
1	B	3300	ASN
1	B	3303	HIS
1	B	3310	HIS
1	B	3376	ASN
1	B	3385	HIS
1	B	3400	HIS
1	B	3458	HIS
1	B	3522	ASN
1	B	3600	GLN
1	B	3622	ASN
1	B	3629	HIS
1	B	3787	ASN
1	B	3804	GLN
1	B	3843	GLN
1	B	4132	GLN
1	B	4163	ASN
1	B	4240	ASN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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)

33 monosaccharides are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
2	NAG	C	1	1,2	14,14,15	0.29	0	17,19,21	0.70	0
2	NAG	C	2	2	14,14,15	0.31	0	17,19,21	0.73	0
2	BMA	C	3	2	11,11,12	0.23	0	15,15,17	0.53	0
2	NAG	D	1	1,2	14,14,15	0.32	0	17,19,21	0.61	0
2	NAG	D	2	2	14,14,15	0.27	0	17,19,21	0.75	0
2	BMA	D	3	2	11,11,12	0.21	0	15,15,17	0.50	0
2	NAG	E	1	1,2	14,14,15	0.30	0	17,19,21	0.82	1 (5%)
2	NAG	E	2	2	14,14,15	0.26	0	17,19,21	0.68	0
2	BMA	E	3	2	11,11,12	0.21	0	15,15,17	0.55	0
2	NAG	F	1	1,2	14,14,15	0.25	0	17,19,21	0.50	0
2	NAG	F	2	2	14,14,15	0.29	0	17,19,21	0.61	0
2	BMA	F	3	2	11,11,12	0.21	0	15,15,17	0.56	0
3	NAG	G	1	3	14,14,15	0.40	0	17,19,21	0.76	0
3	NAG	G	2	3	14,14,15	0.40	0	17,19,21	2.00	4 (23%)
3	NAG	H	1	1,3	14,14,15	0.36	0	17,19,21	1.33	2 (11%)
3	NAG	H	2	3	14,14,15	0.39	0	17,19,21	2.00	4 (23%)
2	NAG	I	1	1,2	14,14,15	0.31	0	17,19,21	0.66	0
2	NAG	I	2	2	14,14,15	0.31	0	17,19,21	0.80	0
2	BMA	I	3	2	11,11,12	0.22	0	15,15,17	0.51	0
2	NAG	J	1	1,2	14,14,15	0.33	0	17,19,21	0.58	0
2	NAG	J	2	2	14,14,15	0.26	0	17,19,21	0.66	0
2	BMA	J	3	2	11,11,12	0.21	0	15,15,17	0.52	0
2	NAG	K	1	1,2	14,14,15	0.31	0	17,19,21	0.80	1 (5%)
2	NAG	K	2	2	14,14,15	0.25	0	17,19,21	0.68	0
2	BMA	K	3	2	11,11,12	0.22	0	15,15,17	0.56	0
2	NAG	L	1	1,2	14,14,15	0.25	0	17,19,21	0.49	0
2	NAG	L	2	2	14,14,15	0.27	0	17,19,21	0.63	0
2	BMA	L	3	2	11,11,12	0.21	0	15,15,17	0.55	0
3	NAG	M	1	1,3	14,14,15	0.42	0	17,19,21	1.05	1 (5%)
3	NAG	M	2	3	14,14,15	0.40	0	17,19,21	1.02	2 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
2	NAG	N	1	1,2	14,14,15	0.39	0	17,19,21	1.21	2 (11%)
2	NAG	N	2	2	14,14,15	0.41	0	17,19,21	1.10	1 (5%)
2	BMA	N	3	2	11,11,12	0.21	0	15,15,17	0.51	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	NAG	C	1	1,2	-	2/6/23/26	0/1/1/1
2	NAG	C	2	2	-	0/6/23/26	0/1/1/1
2	BMA	C	3	2	-	0/2/19/22	0/1/1/1
2	NAG	D	1	1,2	-	0/6/23/26	0/1/1/1
2	NAG	D	2	2	-	2/6/23/26	0/1/1/1
2	BMA	D	3	2	-	0/2/19/22	0/1/1/1
2	NAG	E	1	1,2	-	2/6/23/26	0/1/1/1
2	NAG	E	2	2	-	3/6/23/26	0/1/1/1
2	BMA	E	3	2	-	0/2/19/22	0/1/1/1
2	NAG	F	1	1,2	-	3/6/23/26	0/1/1/1
2	NAG	F	2	2	-	0/6/23/26	0/1/1/1
2	BMA	F	3	2	-	0/2/19/22	0/1/1/1
3	NAG	G	1	3	-	1/6/23/26	0/1/1/1
3	NAG	G	2	3	-	1/6/23/26	0/1/1/1
3	NAG	H	1	1,3	-	2/6/23/26	0/1/1/1
3	NAG	H	2	3	-	1/6/23/26	0/1/1/1
2	NAG	I	1	1,2	-	2/6/23/26	0/1/1/1
2	NAG	I	2	2	-	0/6/23/26	0/1/1/1
2	BMA	I	3	2	-	1/2/19/22	0/1/1/1
2	NAG	J	1	1,2	-	0/6/23/26	0/1/1/1
2	NAG	J	2	2	-	2/6/23/26	0/1/1/1
2	BMA	J	3	2	-	0/2/19/22	0/1/1/1
2	NAG	K	1	1,2	-	2/6/23/26	0/1/1/1
2	NAG	K	2	2	-	3/6/23/26	0/1/1/1
2	BMA	K	3	2	-	0/2/19/22	0/1/1/1
2	NAG	L	1	1,2	-	3/6/23/26	0/1/1/1
2	NAG	L	2	2	-	0/6/23/26	0/1/1/1
2	BMA	L	3	2	-	0/2/19/22	0/1/1/1
3	NAG	M	1	1,3	-	2/6/23/26	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	NAG	M	2	3	-	2/6/23/26	0/1/1/1
2	NAG	N	1	1,2	-	2/6/23/26	0/1/1/1
2	NAG	N	2	2	-	2/6/23/26	0/1/1/1
2	BMA	N	3	2	-	0/2/19/22	0/1/1/1

There are no bond length outliers.

All (18) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	H	2	NAG	O5-C5-C6	6.53	120.37	107.66
3	G	2	NAG	O5-C5-C6	6.52	120.35	107.66
2	N	2	NAG	O5-C1-C2	3.81	117.18	111.29
3	H	1	NAG	C1-C2-N2	3.69	116.25	110.43
3	H	1	NAG	C2-N2-C7	3.45	127.53	122.90
3	M	1	NAG	C2-N2-C7	3.12	127.08	122.90
3	M	2	NAG	C1-C2-N2	2.89	114.99	110.43
3	G	2	NAG	C4-C3-C2	2.74	115.03	111.02
2	N	1	NAG	C1-C2-N2	2.72	114.71	110.43
3	H	2	NAG	C4-C3-C2	2.71	114.99	111.02
3	M	2	NAG	C2-N2-C7	2.50	126.25	122.90
3	H	2	NAG	O3-C3-C4	2.46	116.18	110.38
3	G	2	NAG	O3-C3-C4	2.45	116.16	110.38
2	N	1	NAG	O5-C1-C2	2.40	115.00	111.29
2	E	1	NAG	C2-N2-C7	-2.17	119.99	122.90
2	K	1	NAG	C2-N2-C7	-2.07	120.12	122.90
3	G	2	NAG	O4-C4-C5	2.04	114.36	109.32
3	H	2	NAG	O4-C4-C5	2.04	114.35	109.32

There are no chirality outliers.

All (38) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	E	1	NAG	C8-C7-N2-C2
2	E	1	NAG	O7-C7-N2-C2
2	E	2	NAG	C3-C2-N2-C7
2	E	2	NAG	C8-C7-N2-C2
2	E	2	NAG	O7-C7-N2-C2
2	F	1	NAG	C1-C2-N2-C7
2	F	1	NAG	C8-C7-N2-C2
2	F	1	NAG	O7-C7-N2-C2

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Mol	Chain	Res	Type	Atoms
2	K	1	NAG	C8-C7-N2-C2
2	K	1	NAG	O7-C7-N2-C2
2	K	2	NAG	C3-C2-N2-C7
2	K	2	NAG	O7-C7-N2-C2
2	L	1	NAG	C1-C2-N2-C7
2	L	1	NAG	C8-C7-N2-C2
2	L	1	NAG	O7-C7-N2-C2
2	N	1	NAG	C8-C7-N2-C2
2	N	1	NAG	O7-C7-N2-C2
2	N	2	NAG	C8-C7-N2-C2
2	N	2	NAG	O7-C7-N2-C2
3	H	1	NAG	C1-C2-N2-C7
3	M	1	NAG	C8-C7-N2-C2
3	M	1	NAG	O7-C7-N2-C2
3	M	2	NAG	C1-C2-N2-C7
2	K	2	NAG	C8-C7-N2-C2
2	J	2	NAG	C8-C7-N2-C2
2	J	2	NAG	O7-C7-N2-C2
2	D	2	NAG	C8-C7-N2-C2
2	D	2	NAG	O7-C7-N2-C2
2	I	3	BMA	O5-C5-C6-O6
3	M	2	NAG	C3-C2-N2-C7
2	I	1	NAG	C8-C7-N2-C2
2	C	1	NAG	C8-C7-N2-C2
2	I	1	NAG	O7-C7-N2-C2
3	G	1	NAG	C1-C2-N2-C7
3	G	2	NAG	C1-C2-N2-C7
3	H	2	NAG	C1-C2-N2-C7
3	H	1	NAG	C3-C2-N2-C7
2	C	1	NAG	O7-C7-N2-C2

There are no ring outliers.

15 monomers are involved in 32 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	K	1	NAG	6	0
3	G	1	NAG	7	0
2	E	1	NAG	5	0
2	D	1	NAG	2	0
2	I	1	NAG	2	0
2	J	2	NAG	1	0
2	N	1	NAG	2	0

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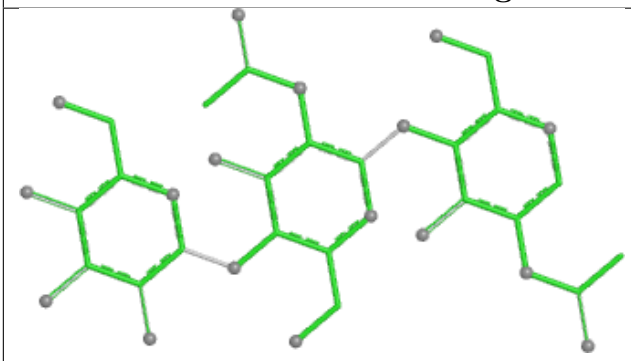
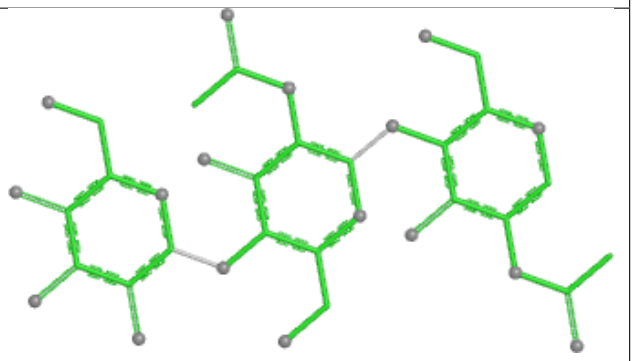
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	I	2	NAG	2	0
2	C	2	NAG	1	0
3	M	1	NAG	1	0
3	H	1	NAG	1	0
3	G	2	NAG	3	0
2	J	1	NAG	3	0
2	D	2	NAG	1	0
2	C	1	NAG	2	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for oligosaccharide.

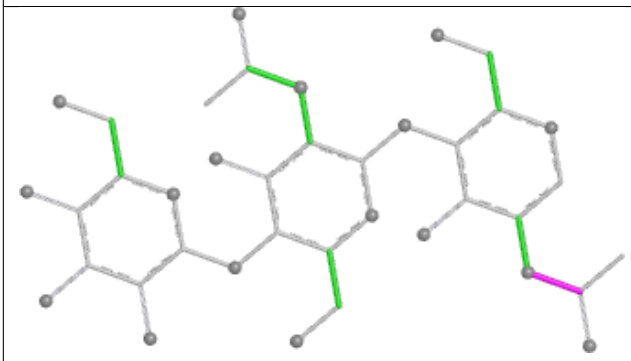
Oligosaccharide Chain C



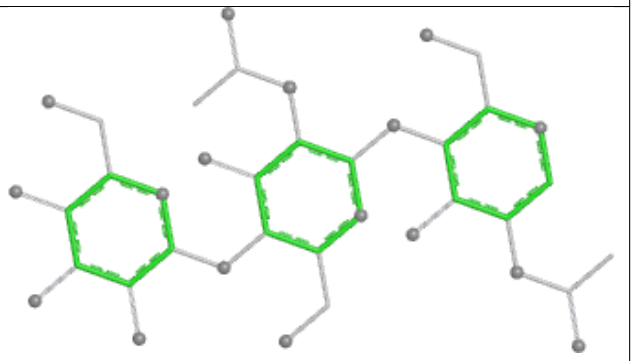
Bond lengths



Bond angles

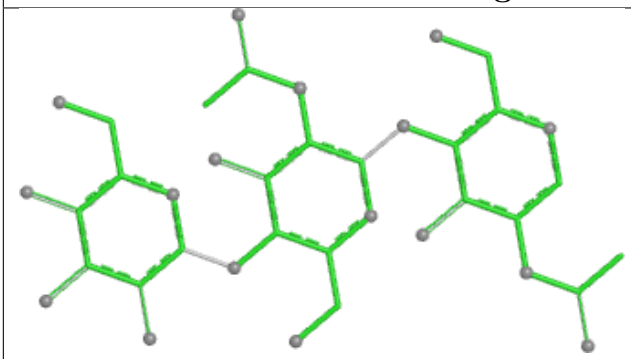


Torsions

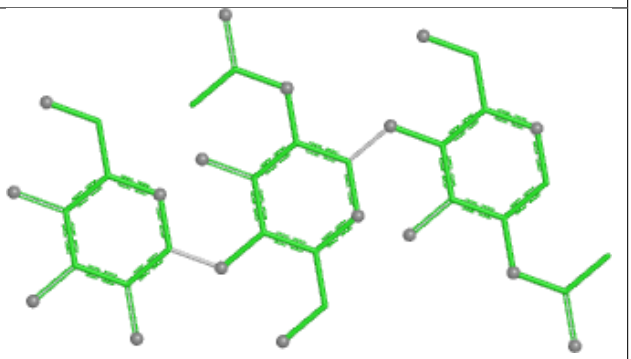


Rings

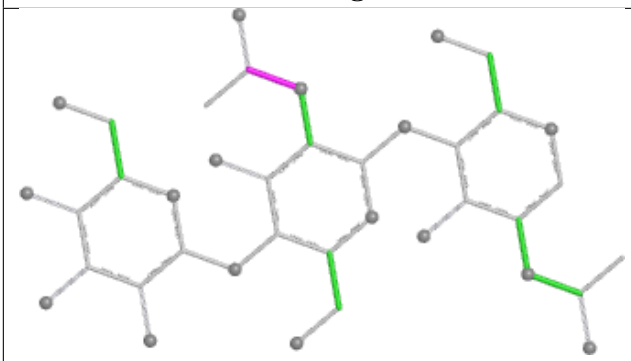
Oligosaccharide Chain D



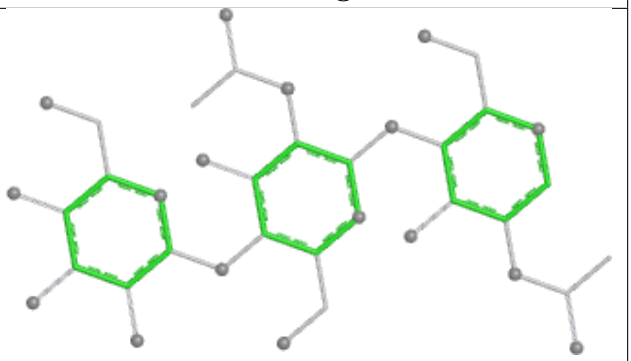
Bond lengths



Bond angles

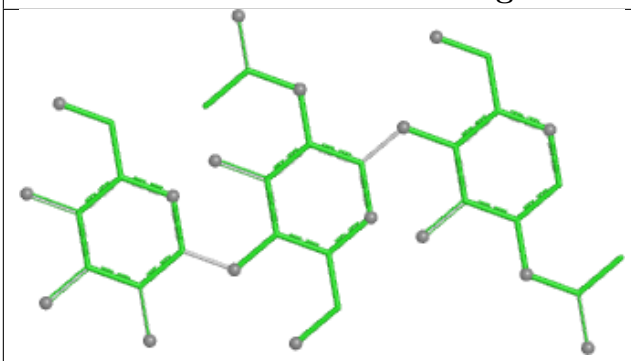


Torsions

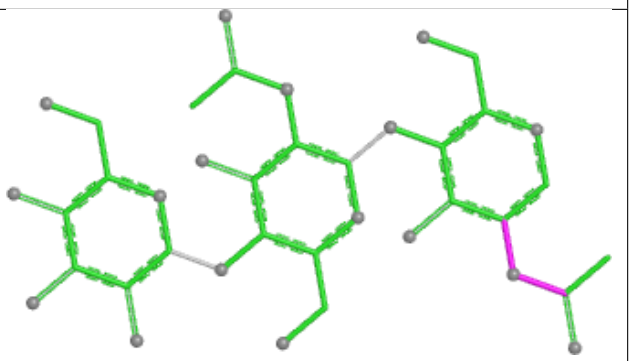


Rings

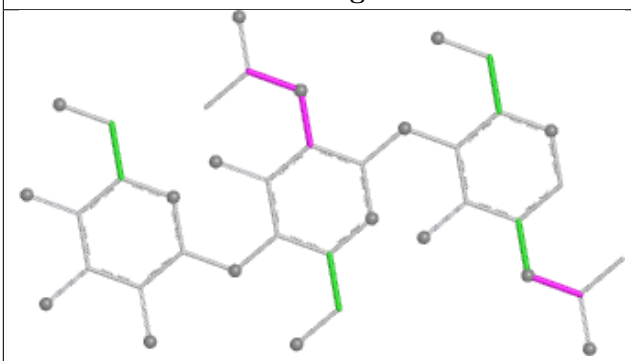
Oligosaccharide Chain E



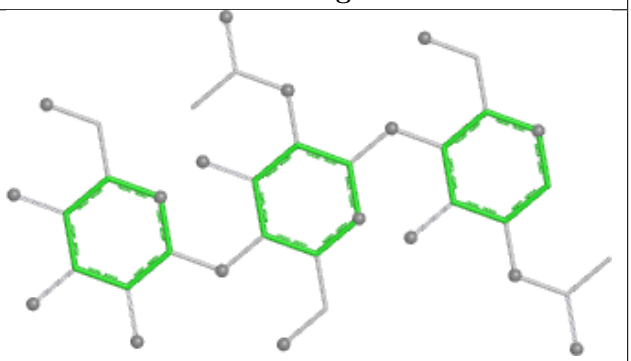
Bond lengths



Bond angles

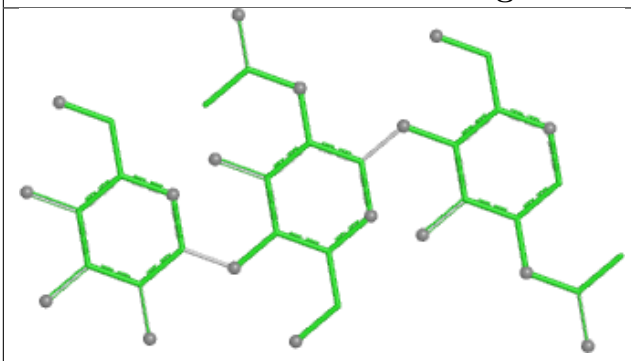


Torsions

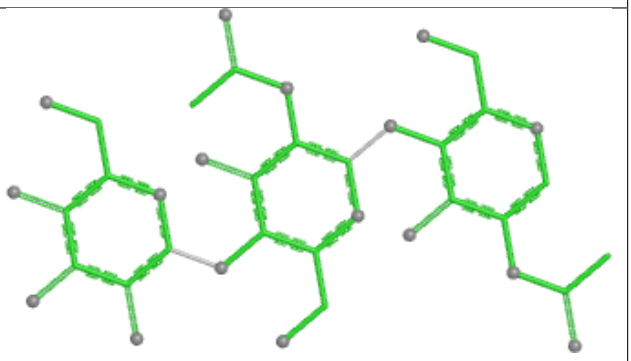


Rings

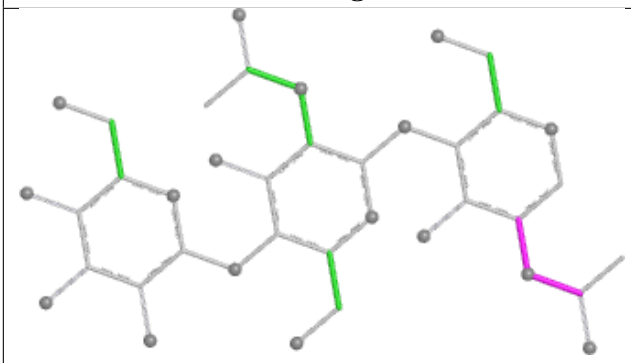
Oligosaccharide Chain F



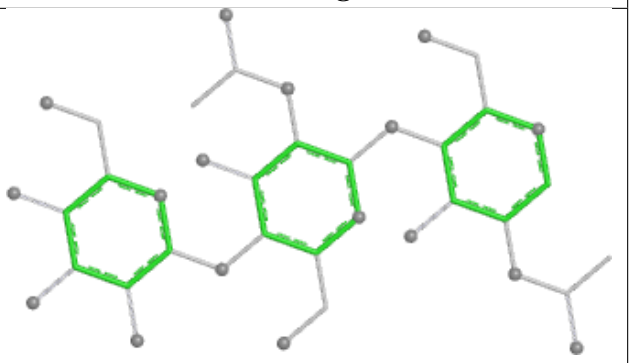
Bond lengths



Bond angles

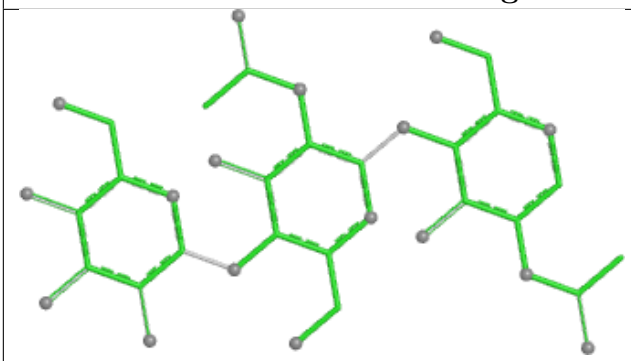


Torsions

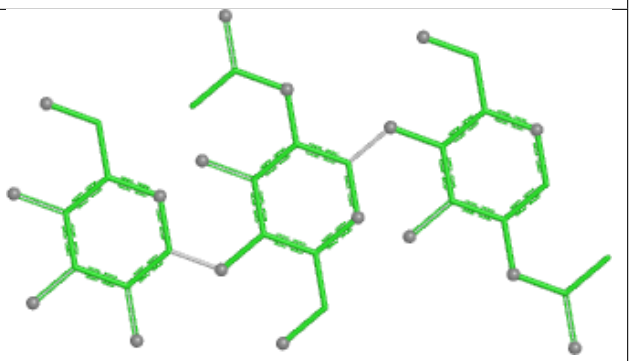


Rings

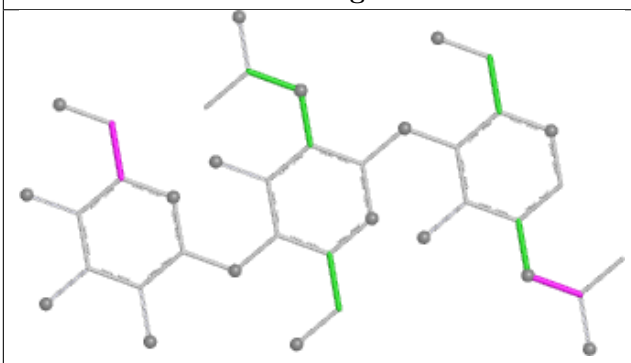
Oligosaccharide Chain I



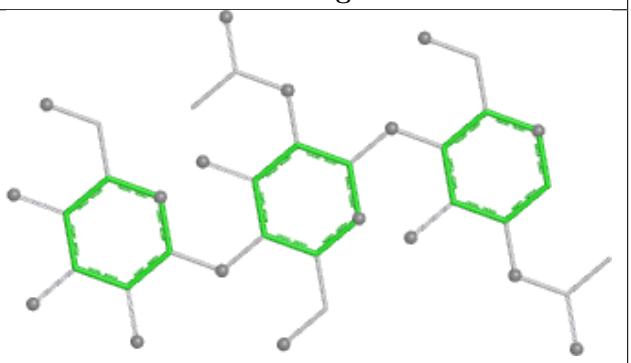
Bond lengths



Bond angles

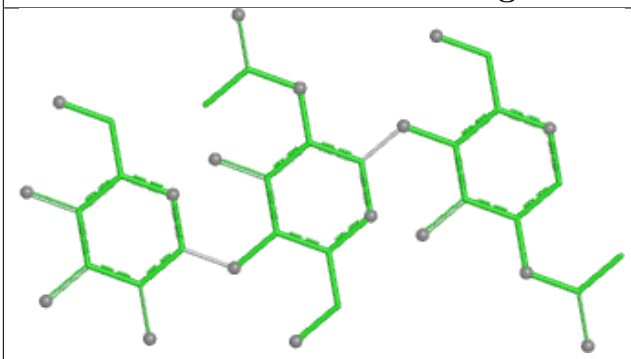


Torsions

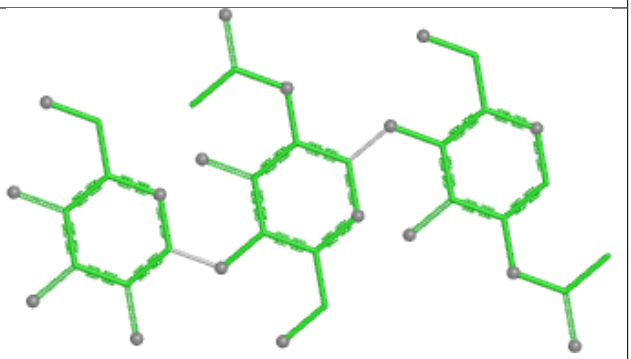


Rings

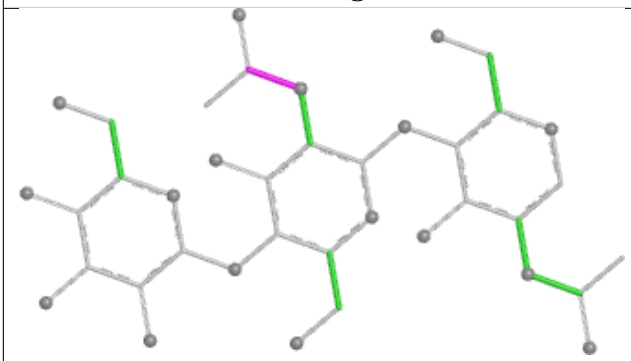
Oligosaccharide Chain J



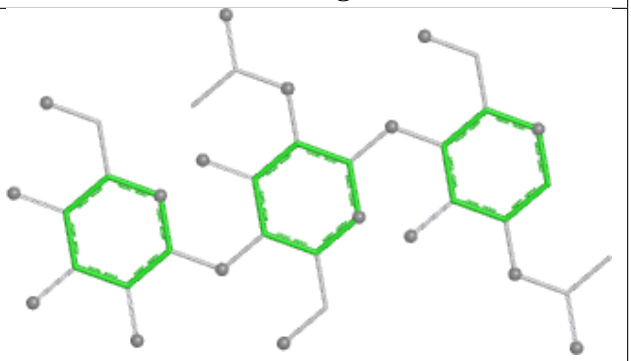
Bond lengths



Bond angles

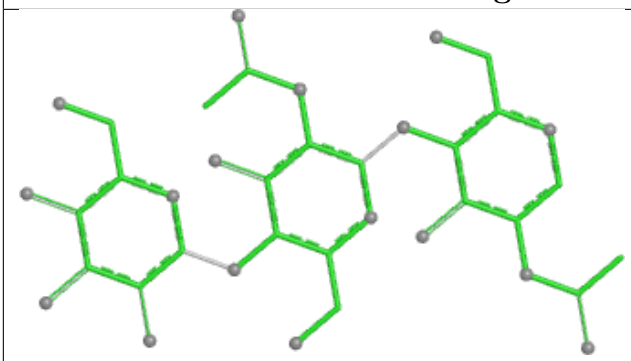


Torsions

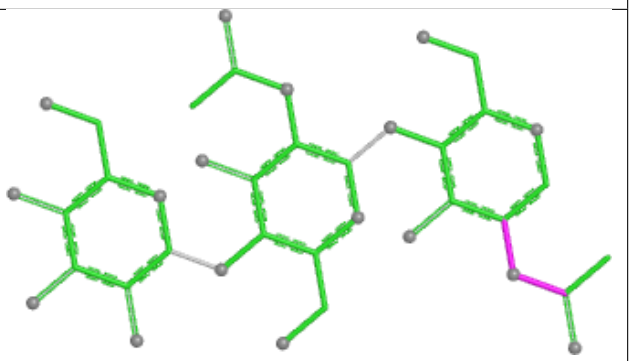


Rings

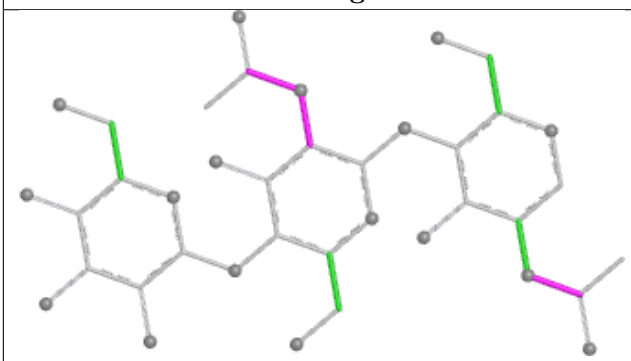
Oligosaccharide Chain K



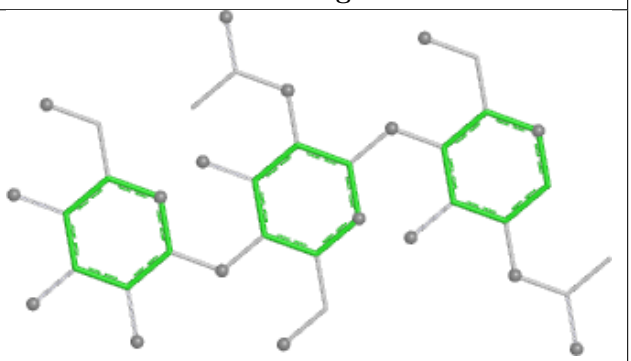
Bond lengths



Bond angles

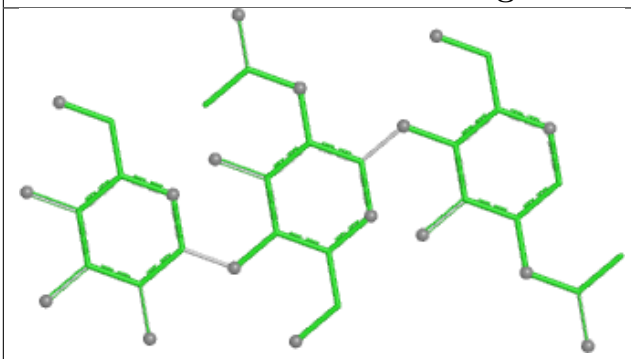


Torsions

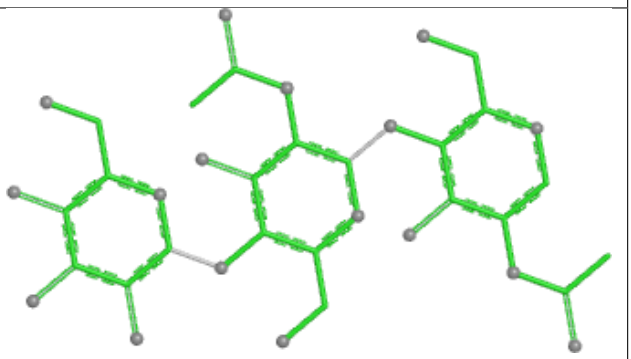


Rings

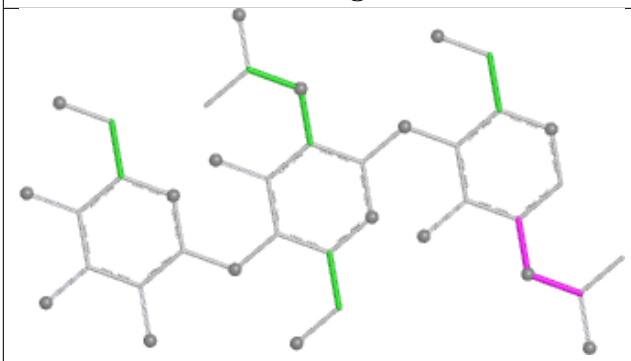
Oligosaccharide Chain L



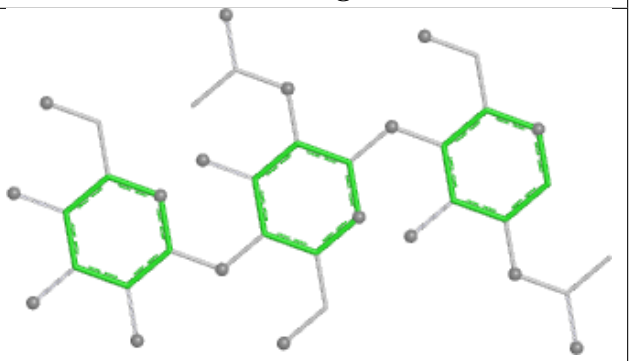
Bond lengths



Bond angles

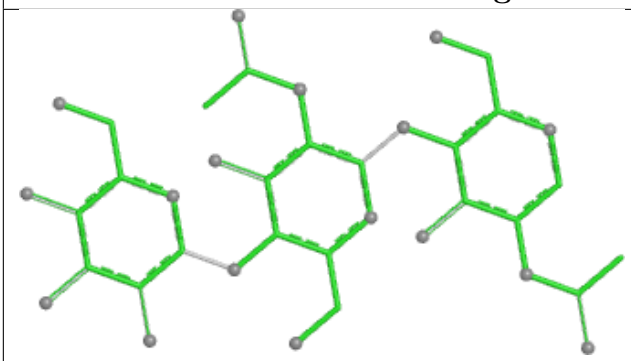


Torsions

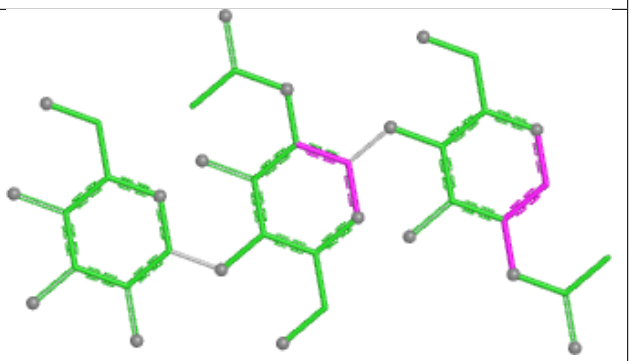


Rings

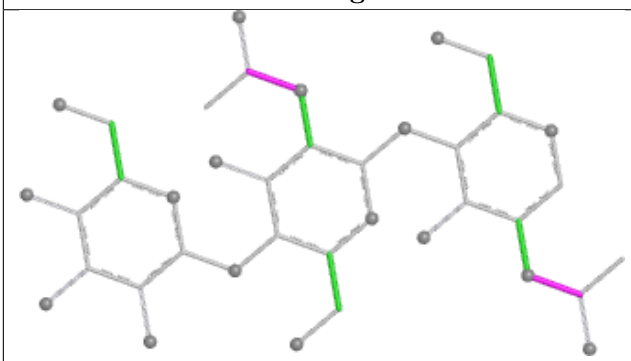
Oligosaccharide Chain N



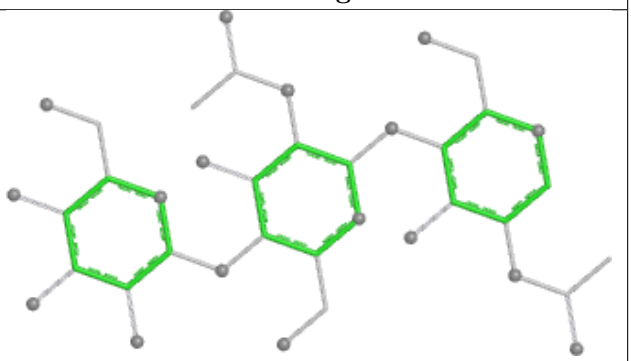
Bond lengths



Bond angles

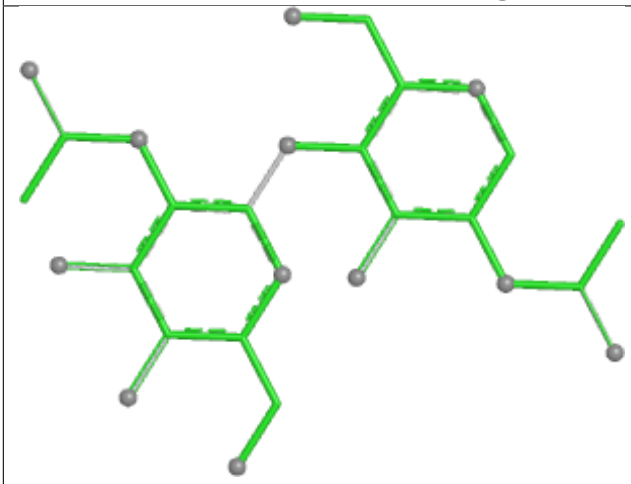


Torsions

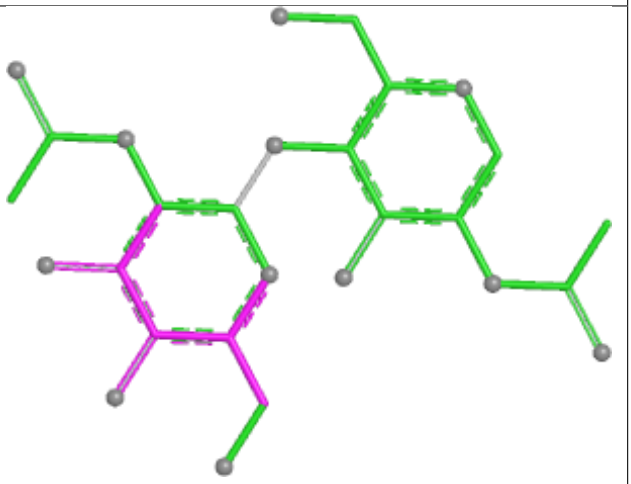


Rings

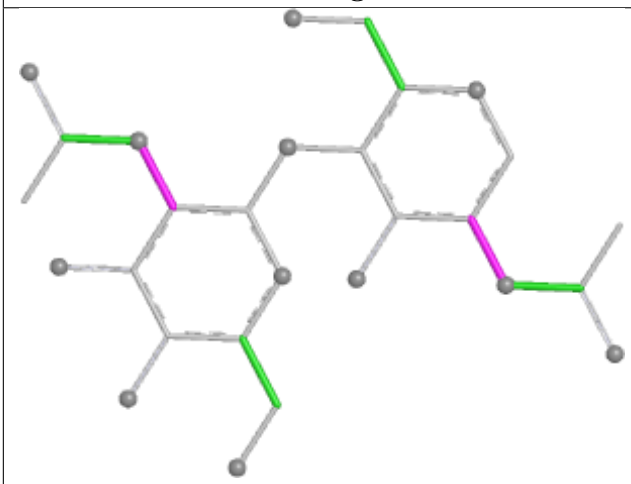
Oligosaccharide Chain G



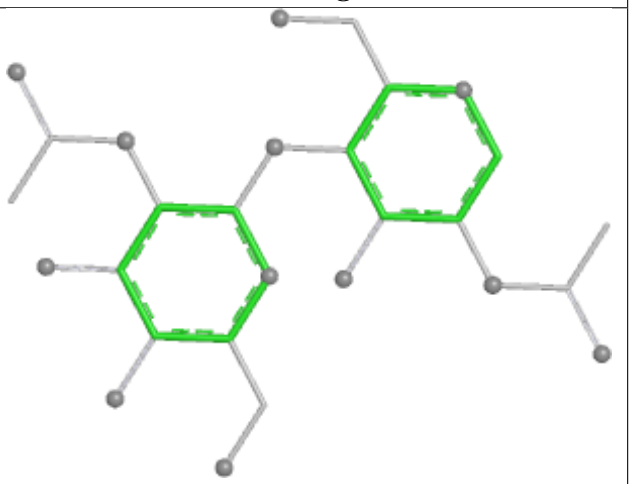
Bond lengths



Bond angles

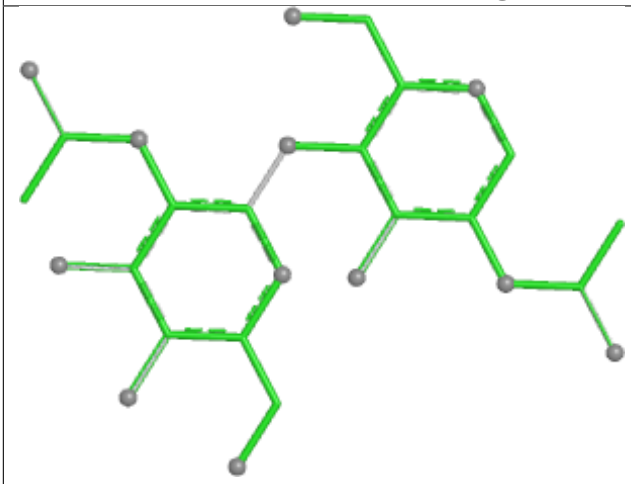


Torsions

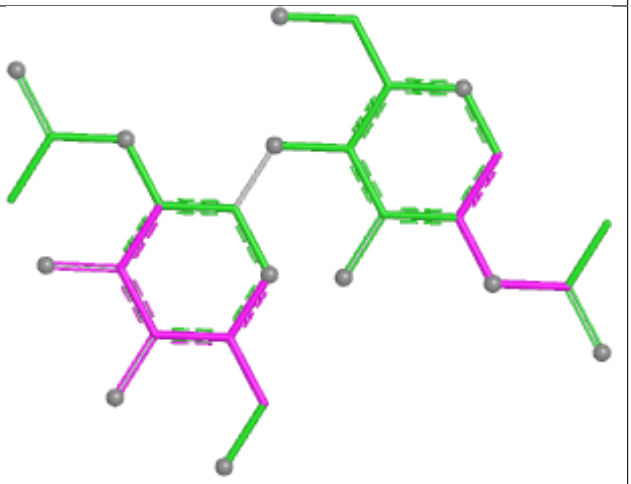


Rings

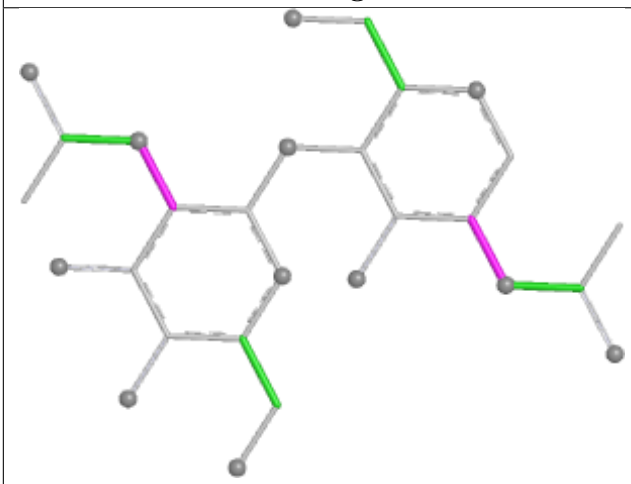
Oligosaccharide Chain H



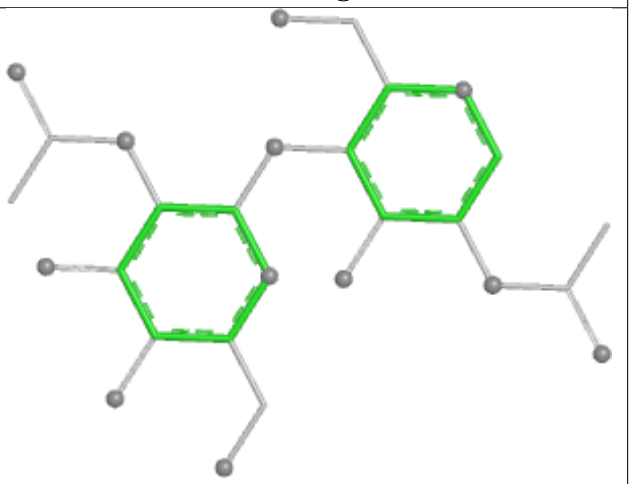
Bond lengths



Bond angles

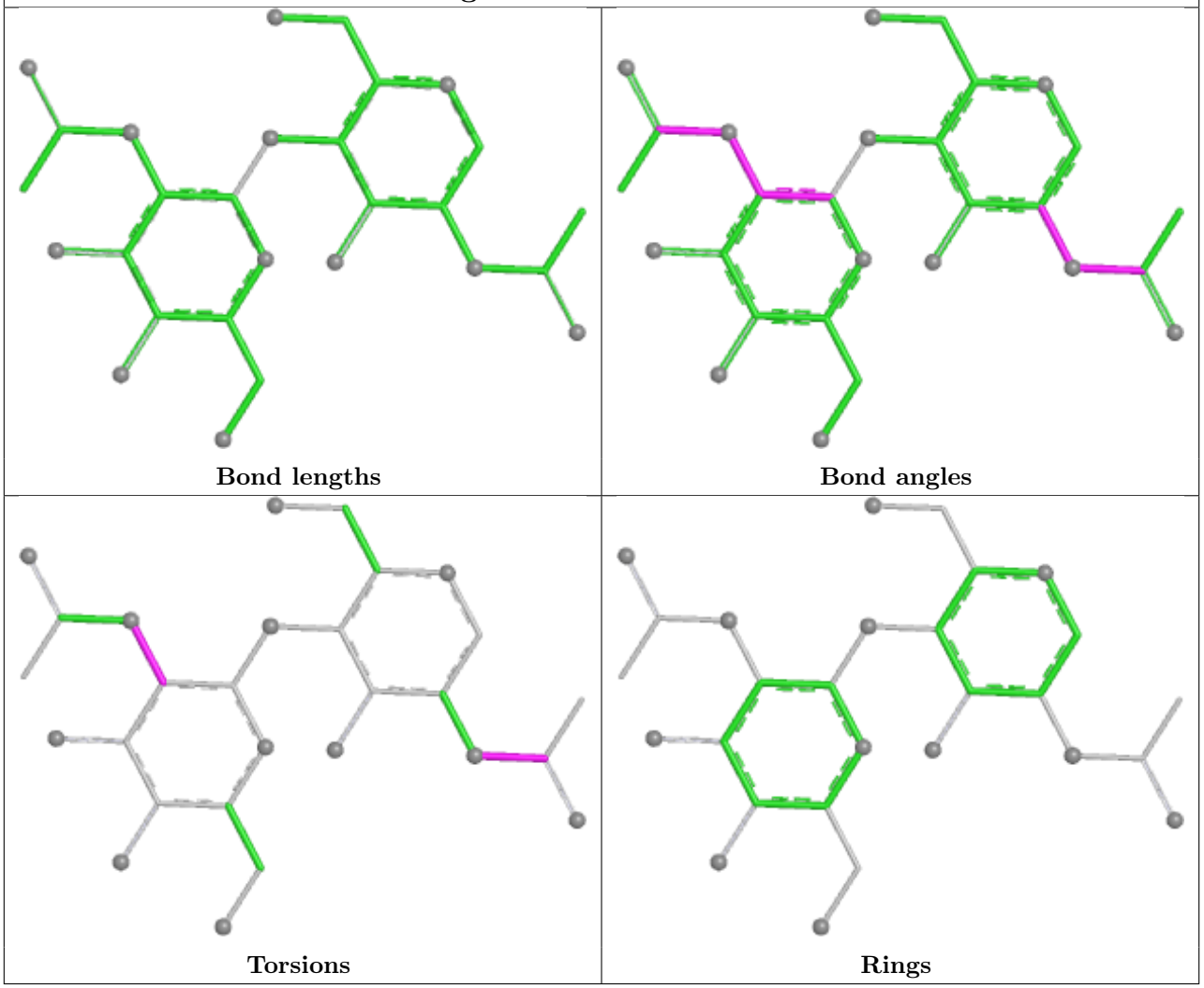


Torsions



Rings

Oligosaccharide Chain M



5.6 Ligand geometry (i)

23 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
4	NAG	B	4709	1	14,14,15	0.28	0	17,19,21	0.64	0
4	NAG	A	4703	1	14,14,15	0.28	0	17,19,21	0.66	0
4	NAG	B	4705	1	14,14,15	0.28	0	17,19,21	0.61	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
4	NAG	A	4707	1	14,14,15	0.26	0	17,19,21	0.67	0
4	NAG	B	4708	1	14,14,15	0.36	0	17,19,21	0.99	1 (5%)
4	NAG	A	4706	1	14,14,15	0.28	0	17,19,21	0.64	0
4	NAG	A	4712	1	14,14,15	0.39	0	17,19,21	0.79	1 (5%)
4	NAG	B	4703	1	14,14,15	0.30	0	17,19,21	0.68	0
4	NAG	B	4702	1	14,14,15	0.27	0	17,19,21	0.71	0
4	NAG	B	4704	1	14,14,15	0.27	0	17,19,21	0.74	0
4	NAG	A	4701	1	14,14,15	0.28	0	17,19,21	0.61	0
4	NAG	A	4708	1	14,14,15	0.37	0	17,19,21	0.76	1 (5%)
4	NAG	B	4710	1	14,14,15	0.28	0	17,19,21	0.64	0
4	NAG	B	4711	1	14,14,15	0.38	0	17,19,21	0.48	0
4	NAG	A	4702	1	14,14,15	0.29	0	17,19,21	0.75	0
4	NAG	A	4709	1	14,14,15	0.27	0	17,19,21	0.69	0
4	NAG	B	4706	1	14,14,15	0.27	0	17,19,21	0.67	0
4	NAG	A	4705	1	14,14,15	0.27	0	17,19,21	0.66	0
4	NAG	A	4711	1	14,14,15	0.38	0	17,19,21	0.50	0
4	NAG	A	4710	1	14,14,15	0.26	0	17,19,21	0.52	0
4	NAG	B	4701	1	14,14,15	0.26	0	17,19,21	0.67	0
4	NAG	B	4707	1	14,14,15	0.26	0	17,19,21	0.67	0
4	NAG	A	4704	1	14,14,15	0.28	0	17,19,21	0.60	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	NAG	B	4709	1	-	0/6/23/26	0/1/1/1
4	NAG	A	4703	1	-	3/6/23/26	0/1/1/1
4	NAG	B	4705	1	-	0/6/23/26	0/1/1/1
4	NAG	A	4707	1	-	3/6/23/26	0/1/1/1
4	NAG	B	4708	1	-	3/6/23/26	0/1/1/1
4	NAG	A	4706	1	-	2/6/23/26	0/1/1/1
4	NAG	A	4712	1	-	1/6/23/26	0/1/1/1
4	NAG	B	4703	1	-	2/6/23/26	0/1/1/1
4	NAG	B	4702	1	-	2/6/23/26	0/1/1/1
4	NAG	B	4704	1	-	2/6/23/26	0/1/1/1
4	NAG	A	4701	1	-	0/6/23/26	0/1/1/1
4	NAG	A	4708	1	-	1/6/23/26	0/1/1/1
4	NAG	B	4710	1	-	0/6/23/26	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	NAG	B	4711	1	-	0/6/23/26	0/1/1/1
4	NAG	A	4702	1	-	2/6/23/26	0/1/1/1
4	NAG	A	4709	1	-	2/6/23/26	0/1/1/1
4	NAG	B	4706	1	-	0/6/23/26	0/1/1/1
4	NAG	A	4705	1	-	0/6/23/26	0/1/1/1
4	NAG	A	4711	1	-	0/6/23/26	0/1/1/1
4	NAG	A	4710	1	-	3/6/23/26	0/1/1/1
4	NAG	B	4701	1	-	0/6/23/26	0/1/1/1
4	NAG	B	4707	1	-	3/6/23/26	0/1/1/1
4	NAG	A	4704	1	-	0/6/23/26	0/1/1/1

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	B	4708	NAG	C2-N2-C7	3.44	127.50	122.90
4	A	4712	NAG	C2-N2-C7	2.43	126.15	122.90
4	A	4708	NAG	C2-N2-C7	2.26	125.92	122.90

There are no chirality outliers.

All (29) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	4707	NAG	C8-C7-N2-C2
4	A	4707	NAG	O7-C7-N2-C2
4	A	4710	NAG	C1-C2-N2-C7
4	A	4710	NAG	C8-C7-N2-C2
4	A	4710	NAG	O7-C7-N2-C2
4	B	4704	NAG	C8-C7-N2-C2
4	B	4704	NAG	O7-C7-N2-C2
4	B	4707	NAG	C3-C2-N2-C7
4	B	4707	NAG	C8-C7-N2-C2
4	B	4707	NAG	O7-C7-N2-C2
4	B	4708	NAG	C3-C2-N2-C7
4	B	4708	NAG	C8-C7-N2-C2
4	B	4708	NAG	O7-C7-N2-C2
4	A	4702	NAG	C8-C7-N2-C2
4	A	4702	NAG	O7-C7-N2-C2
4	B	4702	NAG	C8-C7-N2-C2
4	A	4706	NAG	C8-C7-N2-C2

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Mol	Chain	Res	Type	Atoms
4	B	4703	NAG	C8-C7-N2-C2
4	A	4703	NAG	C8-C7-N2-C2
4	A	4706	NAG	O7-C7-N2-C2
4	B	4702	NAG	O7-C7-N2-C2
4	B	4703	NAG	O7-C7-N2-C2
4	A	4703	NAG	O7-C7-N2-C2
4	A	4709	NAG	C8-C7-N2-C2
4	A	4707	NAG	C3-C2-N2-C7
4	A	4709	NAG	O7-C7-N2-C2
4	A	4708	NAG	C3-C2-N2-C7
4	A	4712	NAG	C3-C2-N2-C7
4	A	4703	NAG	C1-C2-N2-C7

There are no ring outliers.

3 monomers are involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	B	4703	NAG	1	0
4	A	4702	NAG	1	0
4	B	4701	NAG	1	0

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

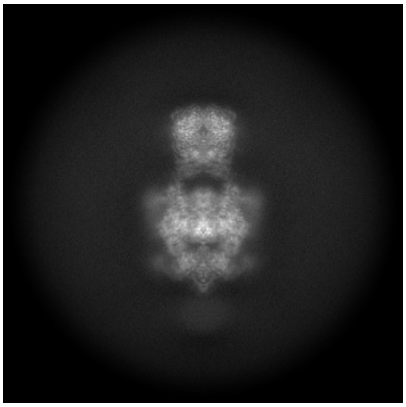
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-45967. These allow visual inspection of the internal detail of the map and identification of artifacts.

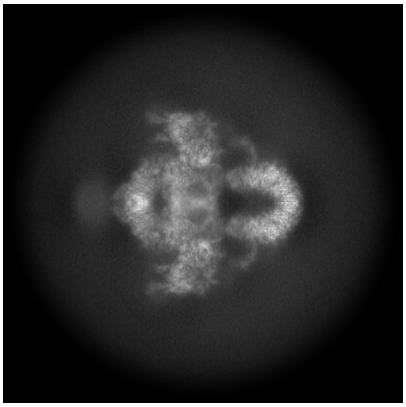
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

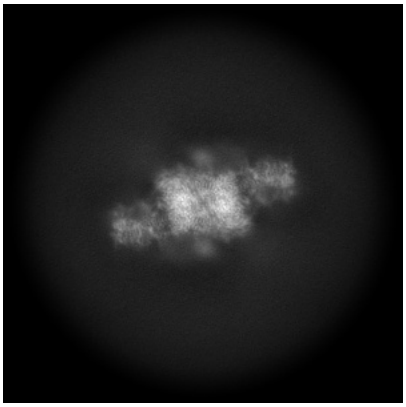
6.1.1 Primary map



X



Y



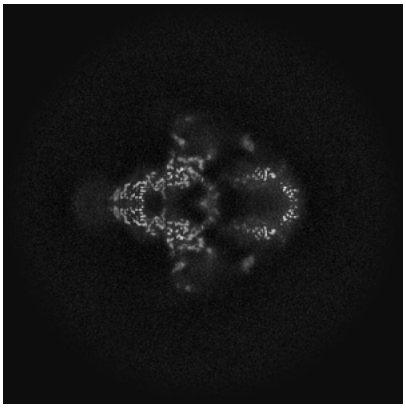
Z

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

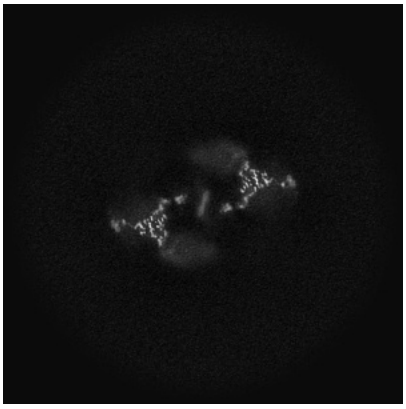
6.2 Central slices

6.2.1 Primary map

X Index: 256



Y Index: 256

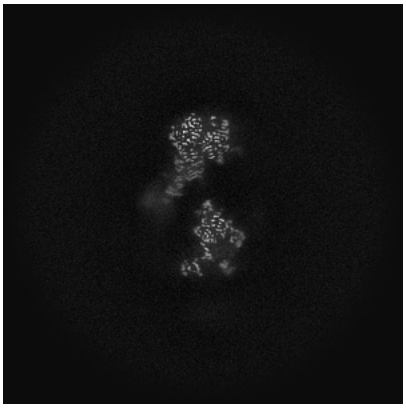


Z Index: 256

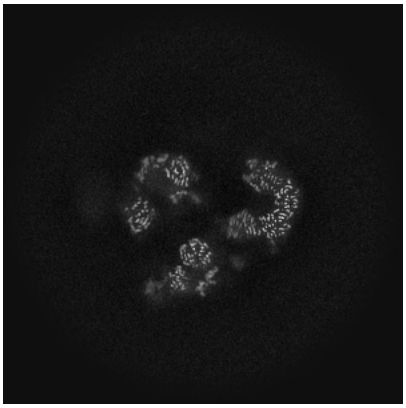
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

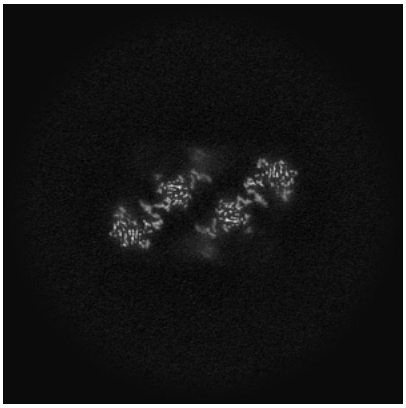
6.3.1 Primary map



X Index: 224



Y Index: 233

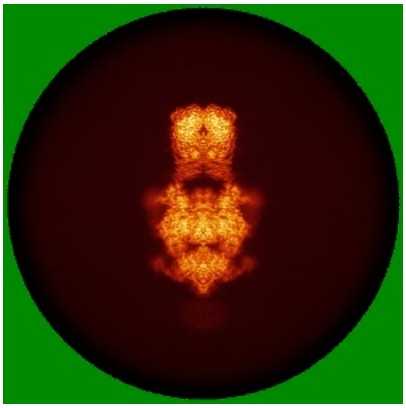


Z Index: 231

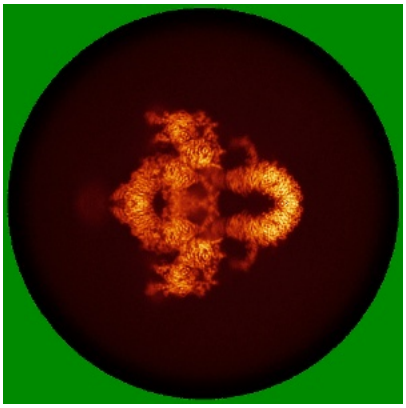
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

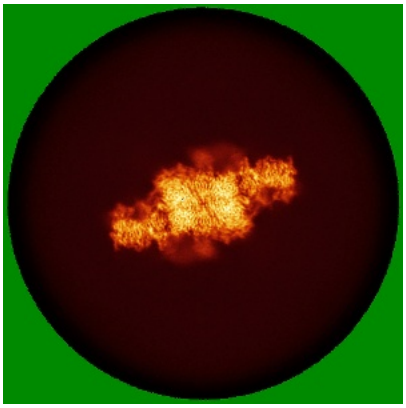
6.4.1 Primary map



X



Y

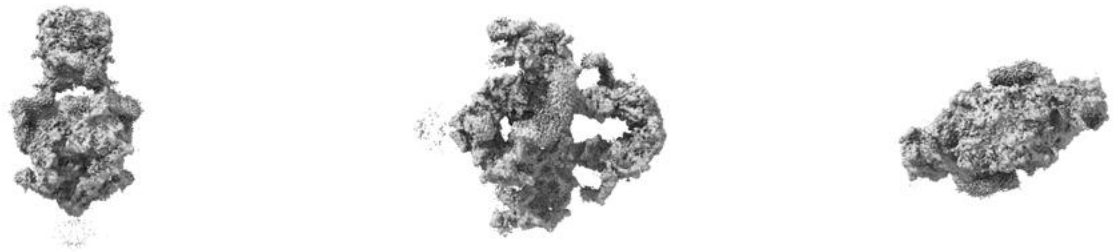


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.1. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

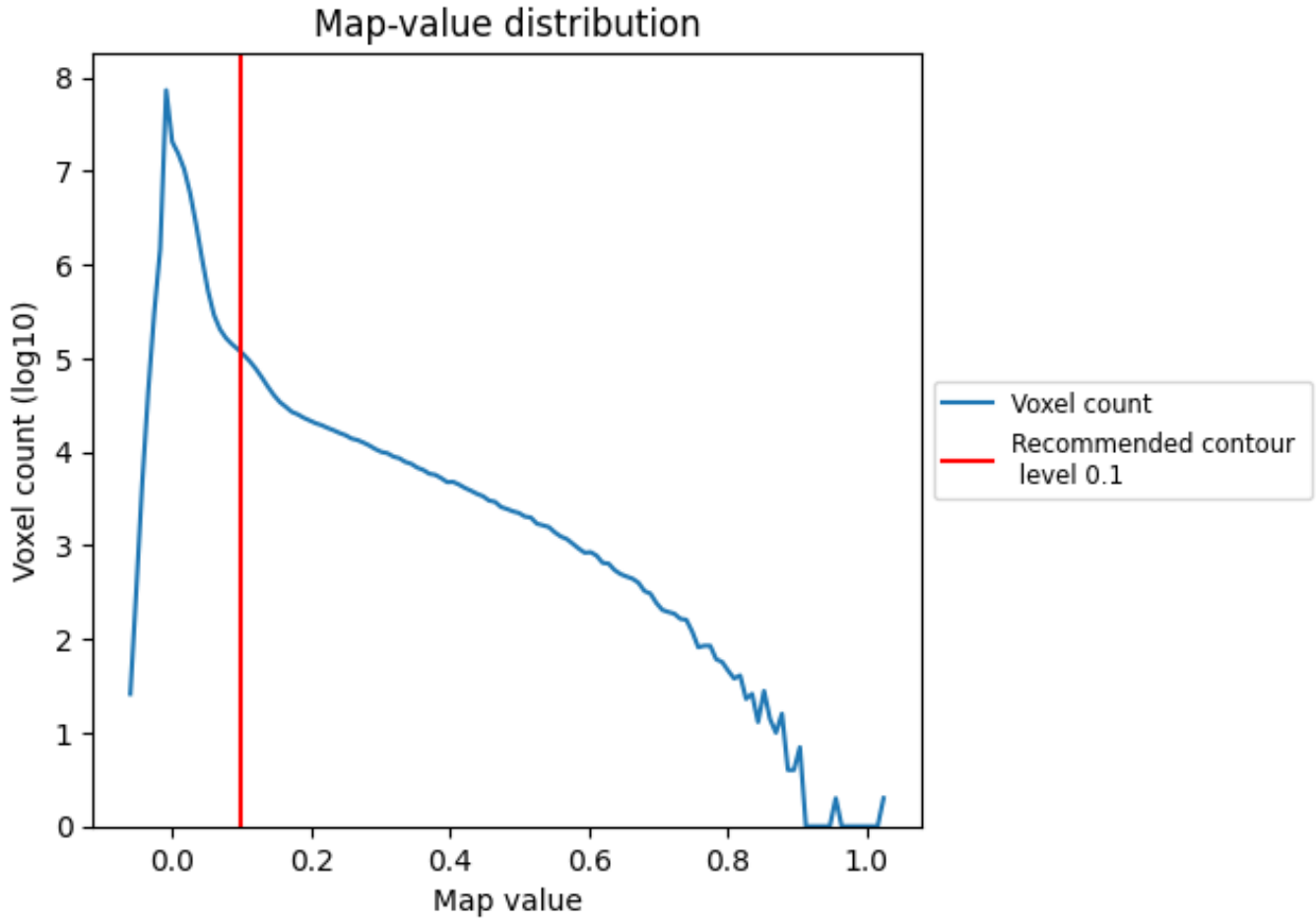
6.6 Mask visualisation (i)

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

7 Map analysis

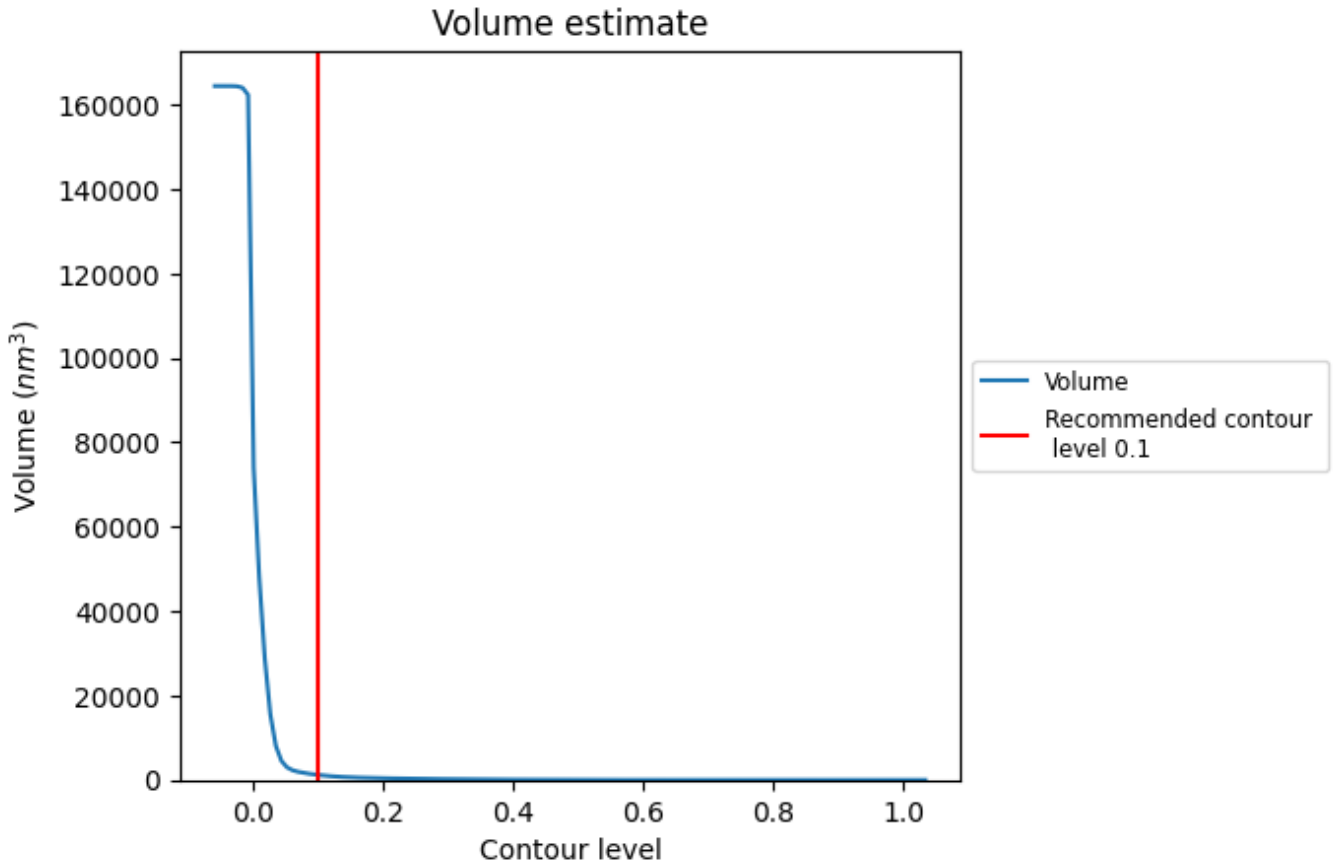
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

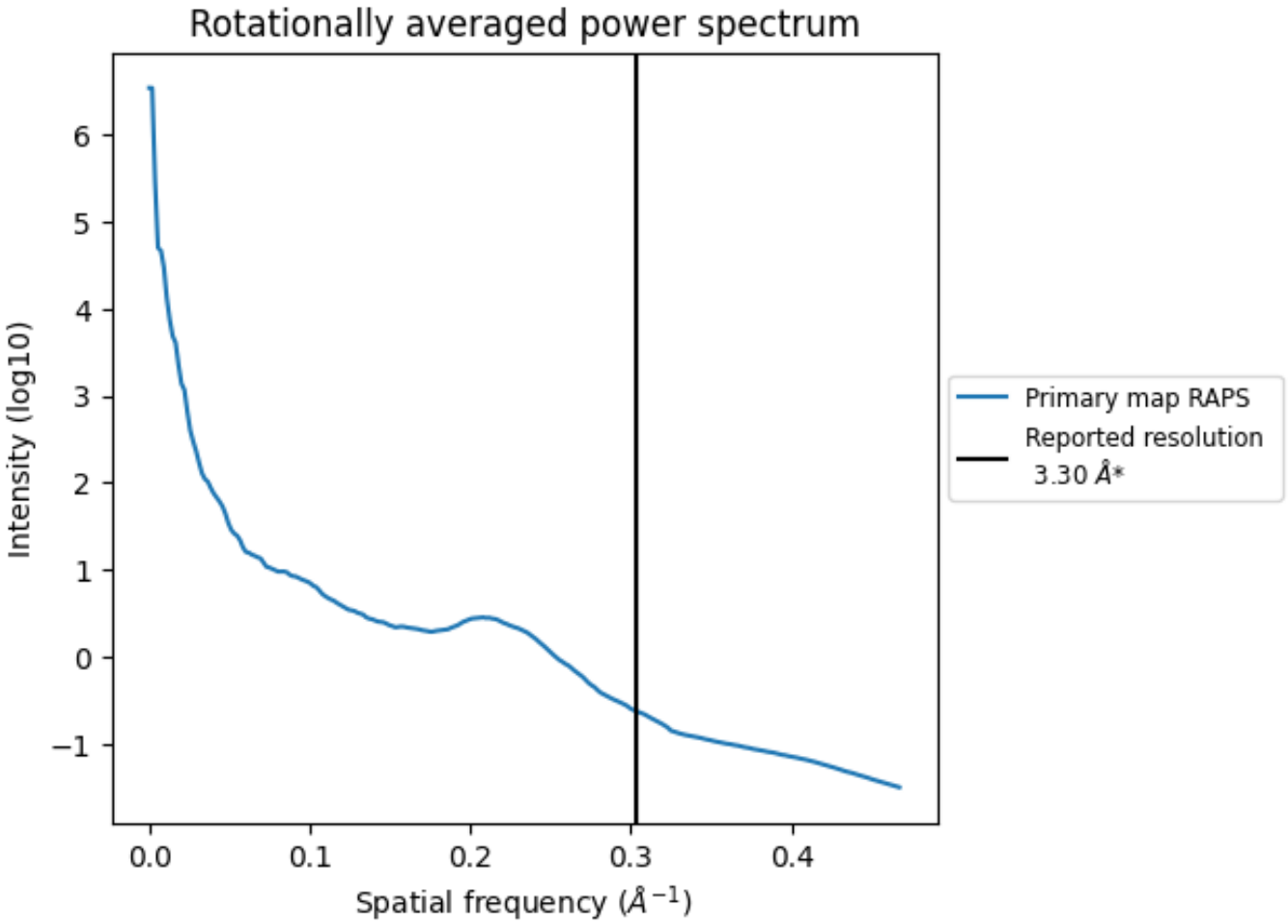
7.2 Volume estimate



The volume at the recommended contour level is 1187 nm^3; this corresponds to an approximate mass of 1072 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.303 Å^{-1}

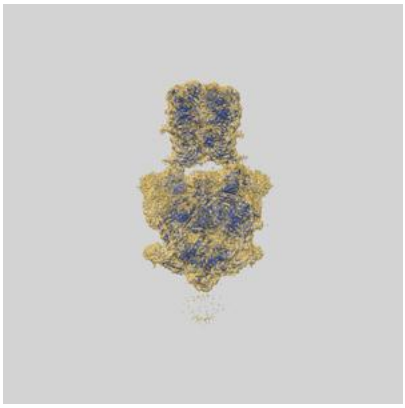
8 Fourier-Shell correlation (i)

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

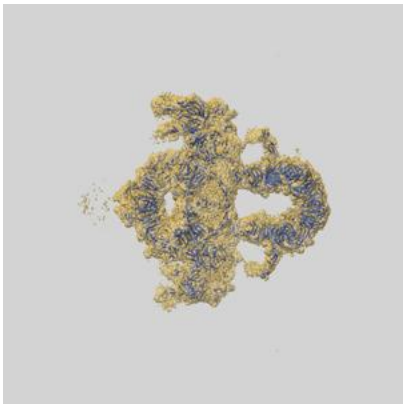
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-45967 and PDB model 9CWM. Per-residue inclusion information can be found in section 3 on page 7.

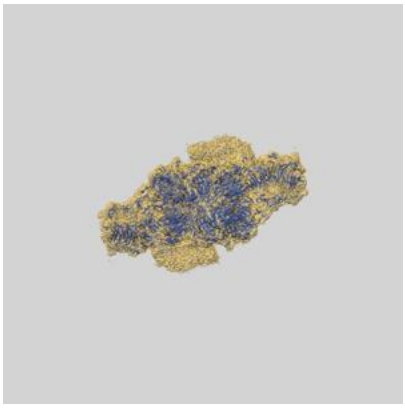
9.1 Map-model overlay



X



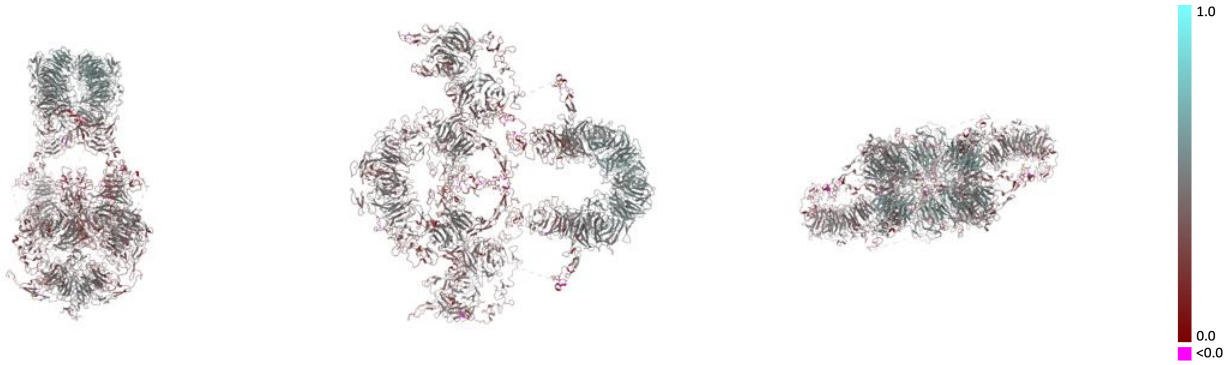
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.1 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

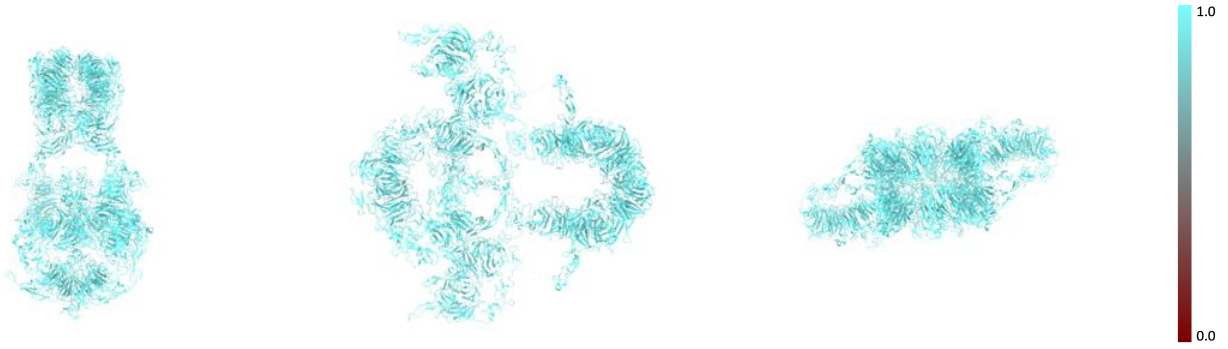
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

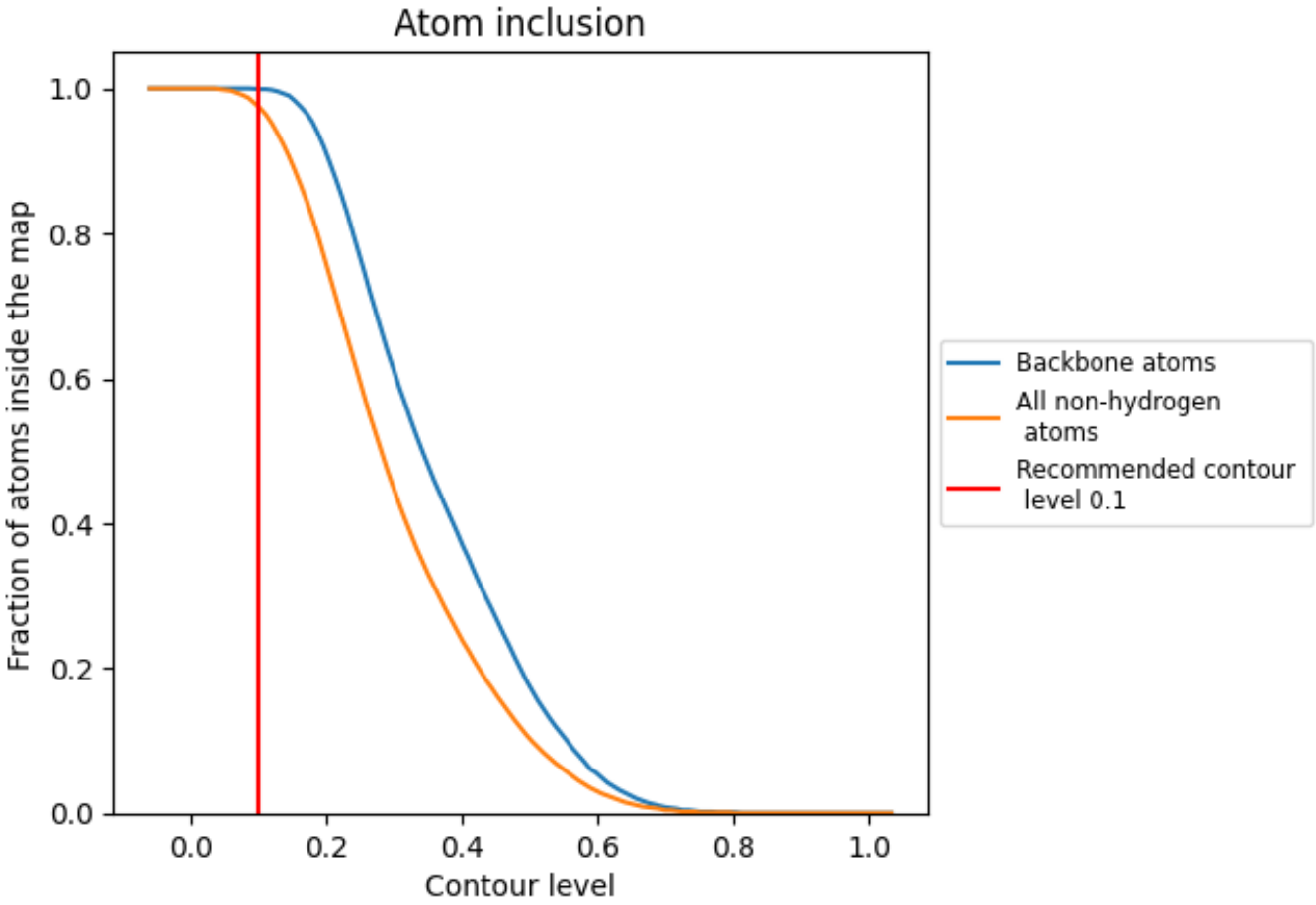
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.1).

9.4 Atom inclusion (i)



At the recommended contour level, 100% of all backbone atoms, 98% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.1) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9750	0.4030
A	0.9760	0.4050
B	0.9750	0.4010
C	0.9490	0.4310
D	0.9490	0.3520
E	1.0000	0.4100
F	0.8970	0.1850
G	0.8930	0.3650
H	1.0000	0.4200
I	0.9740	0.4470
J	0.9490	0.3580
K	1.0000	0.4160
L	0.8970	0.2190
M	0.9640	0.3420
N	0.8210	0.1740