Full wwPDB EM Validation Report ⓘ

Oct 16, 2025 – 01:51 pm BST

PDB ID	:	9SZR / pdb_00009szr
EMDB ID	:	EMD-55382
Title	:	shutdown state non-muscle myosin 2A heads region
Authors	:	Peckham, M.; Carrington, G.
Deposited on	:	2025-10-15
Resolution	:	6.30 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:

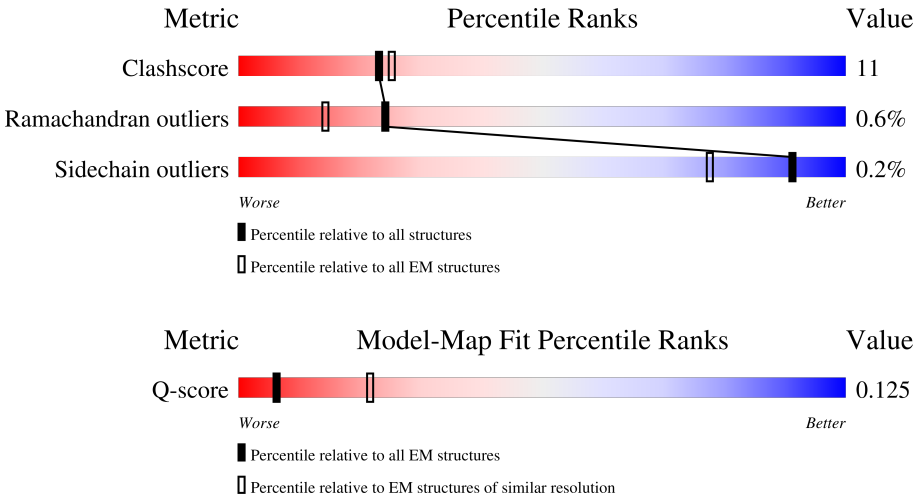
EMDB validation analysis	:	0.0.1.dev129
Mogul	:	1.8.4, CSD as541be (2020)
MolProbity	:	4-5-2 with Phenix2.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.46

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 6.30 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)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
Q-score	-	25397	550 (5.80 - 6.80)

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	1960	22% 76% 23%
1	B	1960	22% 76% 23%
2	C	151	87% 12%
2	D	151	87% 11%

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Mol	Chain	Length	Quality of chain
3	E	172	
3	F	172	

2 Entry composition (i)

There are 6 unique types of molecules in this entry. The entry contains 36487 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 Isoform 1 of Myosin-9.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	1947	Total	C	N	O	S	0	0
			15790	9772	2822	3125	71		
1	B	1945	Total	C	N	O	S	0	0
			15770	9761	2816	3122	71		

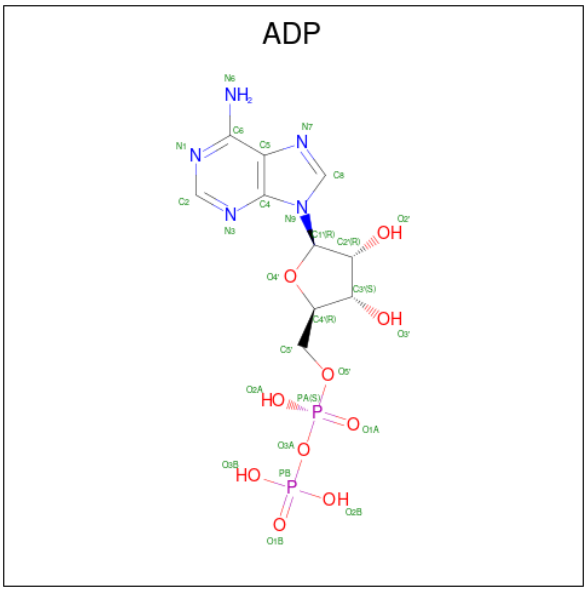
- Molecule 2 is a protein called Isoform 1 of Myosin light polypeptide 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	C	150	Total	C	N	O	S	0	0
			1174	729	195	238	12		
2	D	150	Total	C	N	O	S	0	0
			1175	729	195	239	12		

- Molecule 3 is a protein called Myosin regulatory light polypeptide 9.

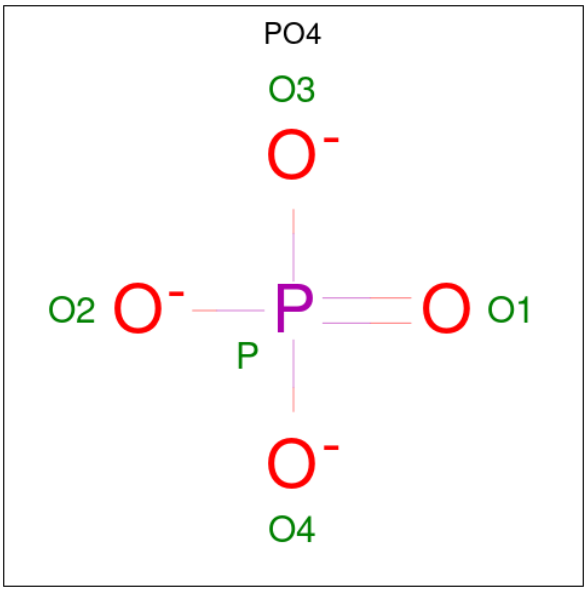
Mol	Chain	Residues	Atoms					AltConf	Trace
3	E	152	Total	C	N	O	S	0	0
			1229	771	200	249	9		
3	F	158	Total	C	N	O	S	0	0
			1281	803	212	257	9		

- Molecule 4 is ADENOSINE-5'-DIPHOSPHATE (CCD ID: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
4	A	1	Total	C	N	O	P	0
			27	10	5	10	2	
4	B	1	Total	C	N	O	P	0
			27	10	5	10	2	

- Molecule 5 is PHOSPHATE ION (CCD ID: PO4) (formula: O_4P) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
5	A	1	Total	O	P	0
			5	4	1	

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Mol	Chain	Residues	Atoms	AltConf
5	B	1	Total O P 5 4 1	0

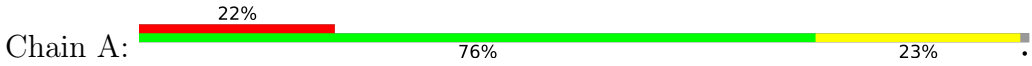
- Molecule 6 is MAGNESIUM ION (CCD ID: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

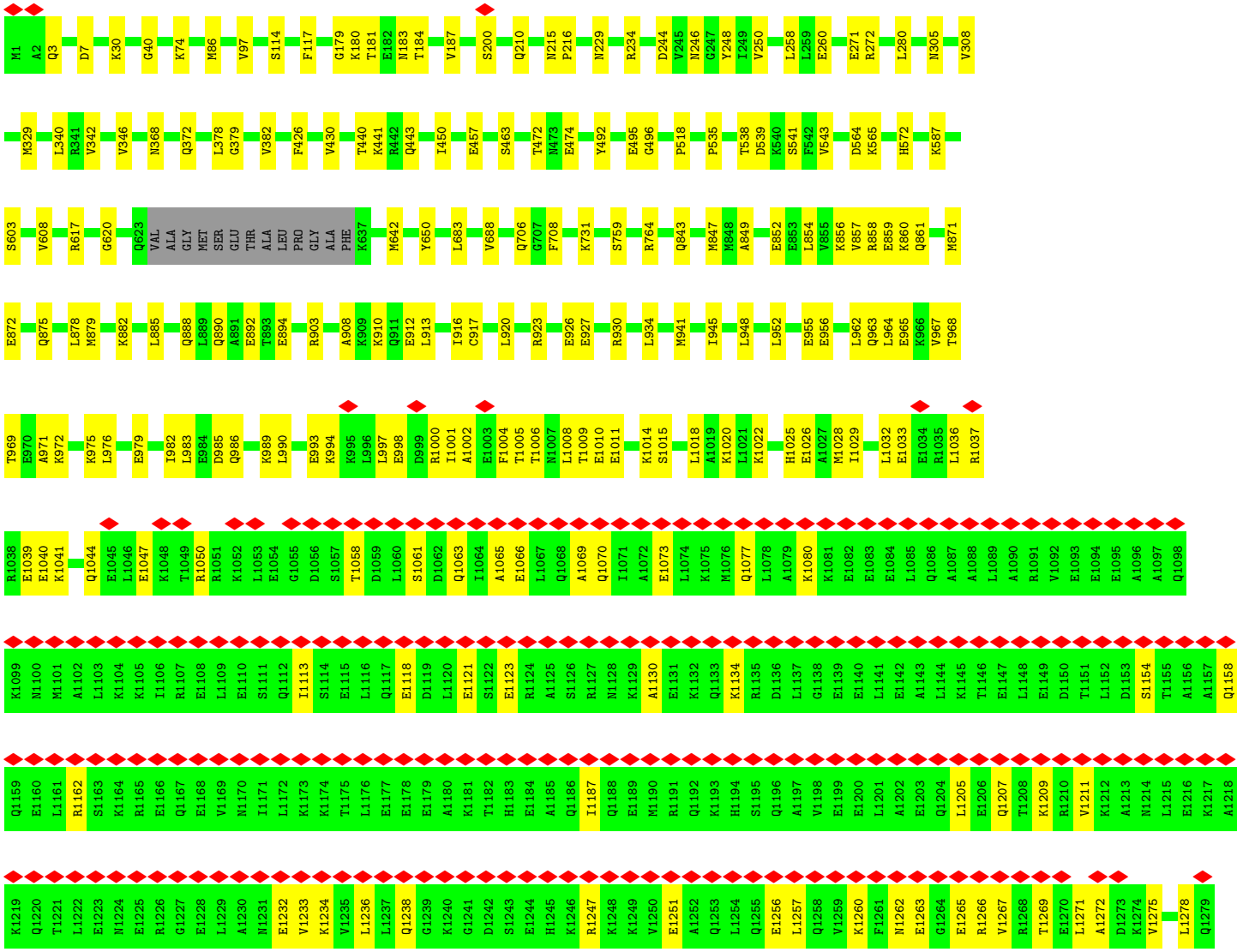
Mol	Chain	Residues	Atoms	AltConf
6	A	1	Total Mg 1 1	0
6	B	1	Total Mg 1 1	0
6	E	1	Total Mg 1 1	0
6	F	1	Total Mg 1 1	0

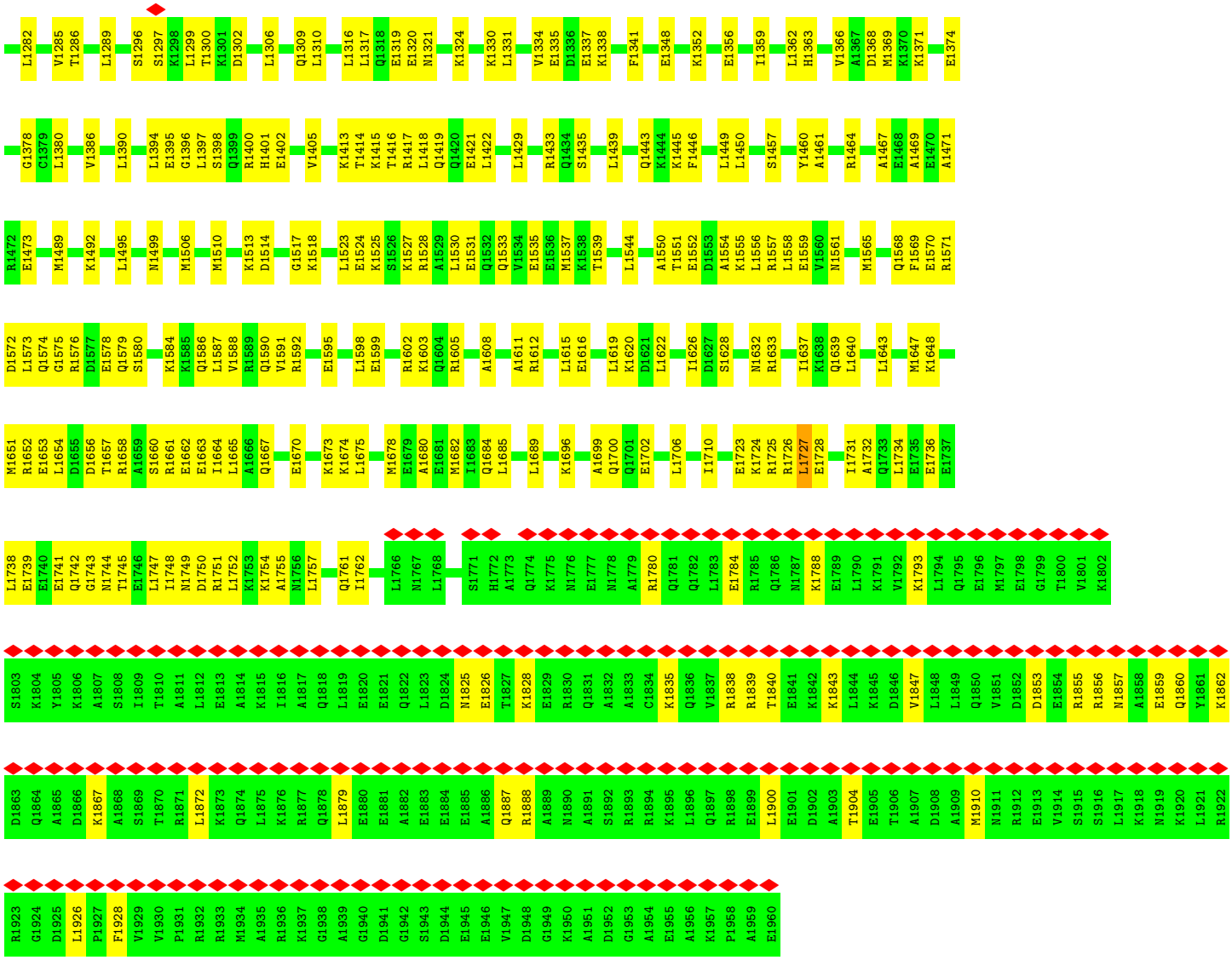
3 Residue-property plots (i)

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: Isoform 1 of Myosin-9

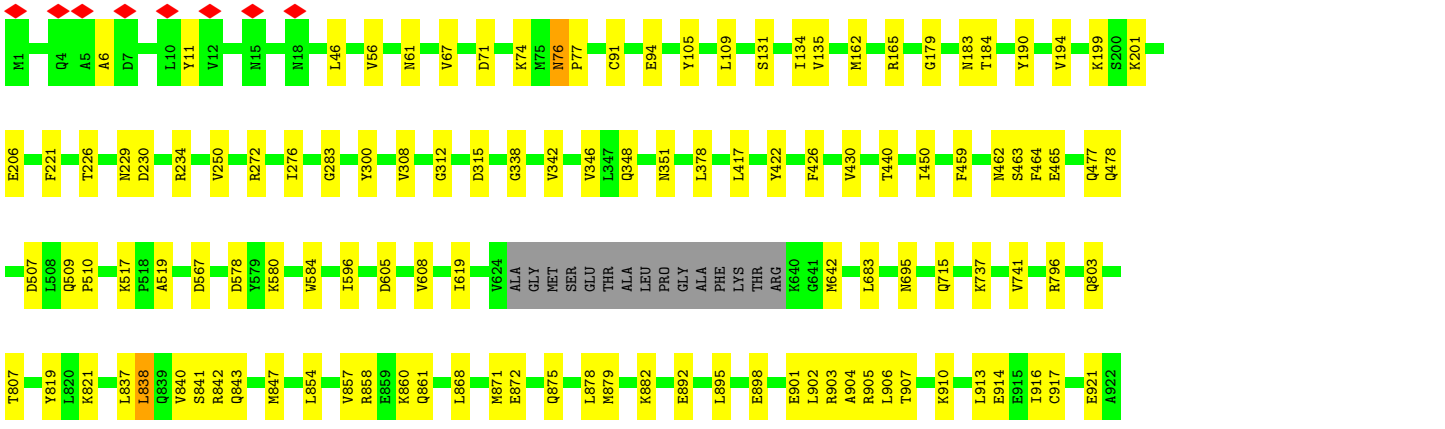


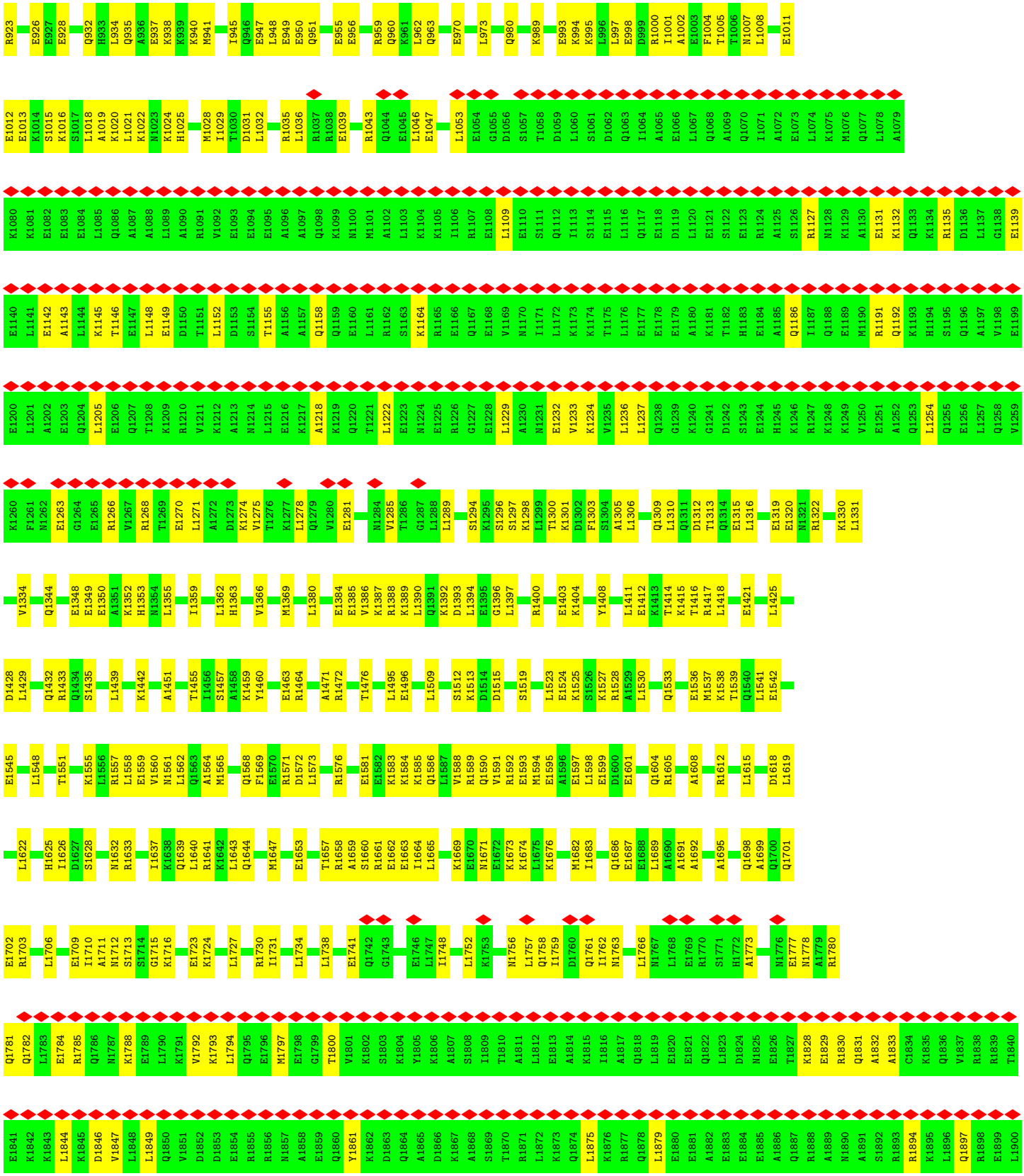


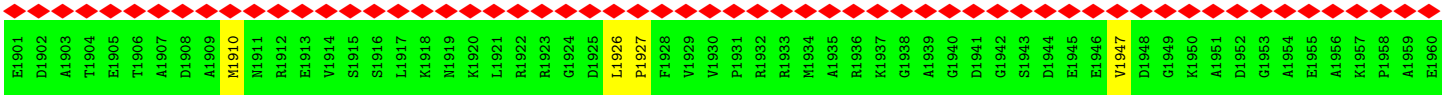


• Molecule 1: Isoform 1 of Myosin-9

Chain B:

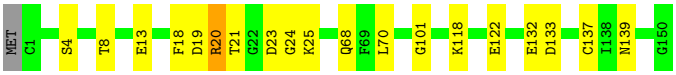



R923 E926 E927 E928 Q932 H933 L934 Q935 A936 E937 K938 K939 K940 M941 I945 Q946 E947 L948 E949 E950 Q951 E955 E956 R959 Q960 K961 L962 Q963 E970 L973 Q980 K989 E993 K994 K995 L996 L997 E998 D999 R1000 I1001 A1002 E1003 F1004 T1005 T1006 N1007 L1008 E1011
E1012 E1013 K1014 S1015 K1016 S1017 L1018 A1019 K1020 L1021 K1022 N1023 K1024 H1025 M1028 I1029 T1030 D1031 L1032 R1035 L1036 R1037 R1038 E1039 R1043 Q1044 E1045 L1046 E1047 L1053 E1054 G1055 D1056 S1057 T1058 D1059 L1060 S1061 D1062 Q1063 I1064 A1065 E1066 L1067 Q1068 A1069 Q1070 I1071 A1072 A1073 L1074 K1075 M1076 Q1077 L1078 A1079
K1080 K1081 E1082 E1083 E1084 L1085 Q1086 A1087 A1088 L1089 A1090 R1091 V1092 E1093 E1094 E1095 A1096 A1097 Q1098 K1099 N1100 M1101 A1102 L1103 K1104 K1105 I1106 R1107 E1108 L1109 E1110 S1111 Q1112 I1113 S1114 E1115 L1116 Q1117 E1118 D1119 L1120 E1121 S1122 E1123 R1124 A1125 S1126 R1127 N1128 K1129 A1130 E1131 K1132 Q1133 K1134 R1135 D1136 L1137 G1138 E1139
E1140 L1141 E1142 A1143 L1144 K1145 T1146 E1147 L1148 E1149 D1150 T1151 L1152 D1153 S1154 T1155 A1156 A1157 Q1158 Q1159 E1160 L1161 R1162 S1163 K1164 R1165 E1166 Q1167 E1168 V1169 N1170 I1171 L1172 K1173 K1174 T1175 L1176 E1177 E1178 E1179 A1180 K1181 T1182 H1183 E1184 A1185 Q1186 T1187 Q1188 E1189 M1190 R1191 Q1192 K1193 H1194 S1195 Q1196 A1197 V1198 E1199
E1200 L1201 A1202 E1203 Q1204 L1205 E1206 Q1207 T1208 K1209 R1210 V1211 K1212 A1213 N1214 L1215 E1216 K1217 A1218 K1219 Q1220 T1221 L1222 E1223 N1224 E1225 R1226 G1227 E1228 L1229 A1230 N1231 E1232 V1233 K1234 V1235 L1236 L1237 Q1238 G1239 K1240 G1241 D1242 S1243 E1244 H1245 K1246 R1247 K1248 K1249 V1250 E1251 A1252 Q1253 L1254 Q1255 E1256 L1257 Q1258 V1259
K1260 F1261 N1262 E1263 G1264 E1265 R1266 V1267 R1268 T1269 E1270 L1271 A1272 D1273 K1274 V1275 T1276 K1277 L1278 Q1279 V1280 E1281 N1284 V1285 T1286 G1287 L1288 L1289 S1294 K1295 S1296 S1297 K1298 L1299 T1300 K1301 D1302 F1303 S1304 A1305 L1306 Q1309 L1310 Q1311 D1312 T1313 Q1314 E1315 L1316 E1319 E1320 N1321 R1322 K1330 L1331
V1334 Q1344 E1348 E1349 E1350 A1351 K1352 H1353 N1354 L1355 I1359 L1362 H1363 V1366 M1369 L1380 E1384 E1385 V1386 K1387 R1388 K1389 L1390 Q1391 K1392 D1393 L1394 E1395 G1396 L1397 R1400 E1403 K1404 Y1408 L1411 E1412 K1413 T1414 K1415 T1416 R1417 L1418 E1421 L1425
D1428 L1429 Q1432 R1433 Q1434 S1435 L1439 K1442 A1451 T1455 T1456 S1457 A1458 K1459 Y1460 E1463 R1464 A1471 R1472 T1476 L1495 E1496 L1509 S1512 K1513 D1514 D1515 S1519 L1523 E1524 K1525 S1526 K1527 R1528 A1529 L1530 Q1533 E1536 M1537 K1538 T1539 Q1540 L1541 E1542
E1545 L1548 T1551 K1555 L1556 R1557 L1558 E1559 V1560 N1561 L1562 Q1563 A1564 M1565 Q1568 F1569 E1570 R1571 D1572 L1573 R1576 E1581 E1582 K1583 K1584 K1585 Q1586 L1587 V1588 R1589 Q1590 V1591 R1592 E1593 M1594 E1595 A1596 E1597 L1598 E1599 D1600 E1601 Q1604 R1605 A1608 R1612 L1615 D1618 L1619
L1622 H1625 I1626 D1627 S1628 N1632 R1633 I1637 K1638 Q1639 L1640 R1641 K1642 L1643 Q1644 M1647 E1653 T1657 R1658 A1659 S1660 R1661 E1662 E1663 I1664 L1665 K1669 E1670 N1671 E1672 K1673 K1674 L1675 K1676 M1682 I1683 Q1686 E1687 E1688 L1689 A1690 A1691 A1692 A1695 Q1698 A1699 Q1700 Q1701
E1702 R1703 L1706 E1709 I1710 A1711 N1712 S1713 S1714 G1715 K1716 E1723 K1724 L1727 R1730 I1731 L1734 L1738 E1741 Q1742 G1743 E1746 L1747 I1748 L1752 K1753 N1756 L1757 Q1758 I1759 D1760 Q1761 I1762 N1763 L1766 N1767 L1768 E1769 R1770 S1771 H1772 A1773 N1776 E1777 N1778 A1779 R1780
Q1781 Q1782 L1783 E1784 R1785 Q1786 N1787 K1788 E1789 L1790 K1791 V1792 K1793 L1794 Q1795 E1796 M1797 E1798 G1799 T1800 V1801 K1802 S1803 K1804 Y1805 K1806 A1807 S1808 I1809 T1810 A1811 L1812 E1813 A1814 K1815 I1816 A1817 Q1818 L1819 E1820 E1821 Q1822 L1823 D1824 N1825 E1826 T1827 K1828 E1829 R1830 Q1831 A1832 A1833 C1834 K1835 Q1836 V1837 R1838 R1839 T1840
E1841 K1842 K1843 L1844 K1845 D1846 V1847 L1848 L1849 Q1850 V1851 D1852 D1853 E1854 R1855 R1856 N1857 A1858 E1859 Q1860 Y1861 K1862 D1863 Q1864 A1865 D1866 K1867 A1868 S1869 T1870 R1871 L1872 K1873 Q1874 L1875 K1876 R1877 Q1878 L1879 E1880 E1881 A1882 E1883 E1884 E1885 A1886 Q1887 R1888 A1889 N1890 A1891 S1892 R1893 R1894 K1895 L1896 Q1897 R1898 E1899 L1900



• Molecule 2: Isoform 1 of Myosin light polypeptide 6

Chain C:

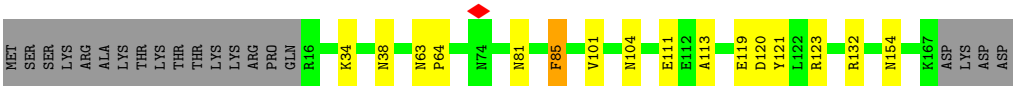


• Molecule 2: Isoform 1 of Myosin light polypeptide 6

Chain D:

• Molecule 3: Myosin regulatory light polypeptide 9

Chain E:



• Molecule 3: Myosin regulatory light polypeptide 9

Chain F:

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	15167	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	36.94	Depositor
Minimum defocus (nm)	900	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	96000	Depositor
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	1.051	Depositor
Minimum map value	-0.432	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.016	Depositor
Recommended contour level	0.1	Depositor
Map size (Å)	839.68, 839.68, 839.68	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.64, 1.64, 1.64	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: PO4, MG, ADP

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	0.06	0/15951	0.14	0/21339
1	B	0.06	0/15930	0.14	0/21311
2	C	0.09	0/1189	0.19	0/1594
2	D	0.10	0/1190	0.21	0/1594
3	E	0.07	0/1252	0.18	0/1685
3	F	0.07	0/1305	0.18	0/1755
All	All	0.06	0/36817	0.15	0/49278

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	15790	0	15952	532	0
1	B	15770	0	15927	539	0
2	C	1174	0	1138	11	0
2	D	1175	0	1138	10	0
3	E	1229	0	1154	13	0
3	F	1281	0	1215	12	0
4	A	27	0	12	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	B	27	0	12	1	0
5	A	5	0	0	1	0
5	B	5	0	0	1	0
6	A	1	0	0	0	0
6	B	1	0	0	0	0
6	E	1	0	0	0	0
6	F	1	0	0	0	0
All	All	36487	0	36548	794	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 11.

All (794) 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:1570:GLU:HA	1:A:1574:GLN:HB2	1.44	0.96
1:A:971:ALA:HB2	1:B:1687:GLU:HG3	1.49	0.94
1:A:1595:GLU:HG2	1:B:1594:MET:HG3	1.53	0.90
1:A:847:MET:HE1	1:B:843:GLN:HB3	1.52	0.90
1:A:1317:LEU:HD13	1:B:1316:LEU:HD23	1.52	0.89
1:A:1573:LEU:HD11	1:B:1569:PHE:HA	1.53	0.89
1:A:1415:LYS:HE2	1:B:1411:LEU:HD22	1.54	0.89
1:A:1446:PHE:HA	1:A:1450:LEU:HD13	1.58	0.85
1:B:131:SER:O	1:B:135:VAL:HG23	1.76	0.85
1:A:1665:LEU:HD22	1:B:1664:ILE:HB	1.59	0.84
1:A:1334:VAL:HG12	1:B:1334:VAL:HG12	1.59	0.83
1:B:131:SER:HA	1:B:134:ILE:HG12	1.60	0.83
1:A:1665:LEU:HD21	1:B:1661:ARG:HA	1.59	0.83
1:A:1080:LYS:HE2	1:B:1800:THR:HB	1.61	0.82
1:A:1523:LEU:HD13	1:B:1524:GLU:HG3	1.62	0.80
1:A:916:ILE:HG22	1:B:917:CYS:HB2	1.64	0.79
1:A:857:VAL:HG12	1:B:857:VAL:HG12	1.64	0.79
1:A:1706:LEU:HD12	1:B:1706:LEU:HB2	1.63	0.78
1:A:1647:MET:HE1	1:B:1643:LEU:HD22	1.66	0.77
1:A:1066:GLU:HB3	1:B:1788:LYS:HD3	1.67	0.77
1:B:1829:GLU:HA	1:B:1832:ALA:HB3	1.66	0.77
1:A:1338:LYS:HD3	1:B:1334:VAL:HG13	1.68	0.74
1:A:1591:VAL:HA	1:B:1591:VAL:HG21	1.69	0.74
1:A:1727:LEU:HD12	1:B:1724:LYS:HG2	1.70	0.73
1:B:1439:LEU:HD23	1:B:1442:LYS:HE2	1.71	0.73
1:A:913:LEU:HD13	1:B:914:GLU:HB2	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1008:LEU:HA	1:B:1008:LEU:HD13	1.71	0.73
1:A:1661:ARG:HA	1:A:1664:ILE:HG12	1.70	0.72
1:B:1349:GLU:OE1	1:B:1352:LYS:NZ	2.23	0.72
1:A:180:LYS:N	4:A:2001:ADP:O3B	2.23	0.72
1:A:1665:LEU:HD13	1:B:1664:ILE:HD12	1.71	0.72
1:A:1006:THR:HG22	1:B:1301:LYS:HG2	1.72	0.72
1:B:1671:ASN:HA	1:B:1674:LYS:HE2	1.72	0.72
2:C:19:ASP:OD2	3:E:132:ARG:NH1	2.23	0.72
1:A:1706:LEU:HG	1:B:1703:ARG:HA	1.70	0.72
1:B:948:LEU:HD21	1:B:1669:LYS:HD3	1.70	0.72
1:A:229:ASN:ND2	4:A:2001:ADP:O2A	2.23	0.71
1:A:1073:GLU:HG3	1:B:1792:VAL:HG13	1.71	0.71
1:B:1592:ARG:NH1	1:B:1595:GLU:OE1	2.22	0.71
1:A:114:SER:OG	1:A:117:PHE:O	2.08	0.71
1:B:1588:VAL:HA	1:B:1591:VAL:HG12	1.72	0.71
1:A:989:LYS:HD2	1:A:1710:ILE:HG23	1.73	0.70
1:A:843:GLN:HB3	1:A:847:MET:HG3	1.74	0.70
1:B:229:ASN:ND2	4:B:2001:ADP:O2A	2.24	0.70
1:A:941:MET:HE1	1:B:938:LYS:HD3	1.74	0.69
1:B:517:LYS:NZ	1:B:519:ALA:O	2.26	0.69
1:A:910:LYS:HA	1:B:910:LYS:HG3	1.73	0.69
1:A:1026:GLU:HA	1:A:1029:ILE:HG22	1.73	0.69
1:B:819:TYR:OH	3:F:94:ASN:O	2.09	0.69
2:C:4:SER:O	2:C:8:THR:OG1	2.09	0.69
1:B:840:VAL:HG23	3:F:39:MET:HE1	1.74	0.69
1:B:959:ARG:NH1	1:B:963:GLN:OE1	2.26	0.68
1:A:1317:LEU:HD11	1:B:1313:THR:HA	1.75	0.68
1:A:917:CYS:HB2	1:B:916:ILE:HG22	1.75	0.68
1:B:821:LYS:NZ	3:F:137:GLU:OE1	2.27	0.68
1:A:923:ARG:HA	1:A:926:GLU:HG2	1.76	0.67
1:A:1015:SER:HB2	1:B:1018:LEU:HD12	1.74	0.67
1:B:1018:LEU:HA	1:B:1021:LEU:HD12	1.76	0.67
1:B:642:MET:SD	1:B:642:MET:N	2.67	0.67
3:E:119:GLU:OE1	3:E:123:ARG:NH2	2.27	0.67
1:A:1702:GLU:HB3	1:B:1703:ARG:HD3	1.77	0.67
1:B:1000:ARG:HH22	1:B:1315:GLU:HB2	1.58	0.67
1:A:1578:GLU:OE2	1:A:1579:GLN:NE2	2.27	0.67
1:A:1723:GLU:OE2	1:A:1726:ARG:NH1	2.27	0.67
1:A:1751:ARG:HG3	1:B:1028:MET:HE1	1.77	0.67
1:B:74:LYS:NZ	1:B:91:CYS:SG	2.68	0.66
1:A:1464:ARG:HG2	1:B:1460:TYR:HB3	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1586:GLN:O	1:B:1590:GLN:NE2	2.28	0.66
1:B:250:VAL:O	1:B:440:THR:OG1	2.13	0.65
1:A:1256:GLU:OE1	1:A:1260:LYS:NZ	2.30	0.65
1:B:272:ARG:NE	1:B:308:VAL:O	2.30	0.65
1:B:1594:MET:O	1:B:1598:LEU:HB2	1.97	0.65
1:A:1247:ARG:NH1	1:A:1251:GLU:OE2	2.28	0.65
1:A:1398:SER:OG	1:A:1402:GLU:OE2	2.10	0.65
1:A:1366:VAL:HG13	1:B:1369:MET:HE1	1.79	0.64
1:A:472:THR:OG1	1:A:650:TYR:OH	2.08	0.64
1:A:1415:LYS:NZ	1:A:1419:GLN:OE1	2.27	0.64
1:A:1867:LYS:HZ1	1:B:1143:ALA:HA	1.61	0.64
2:C:19:ASP:O	2:C:21:THR:N	2.30	0.64
1:A:997:LEU:HB3	1:B:997:LEU:HB3	1.79	0.64
1:A:975:LYS:HE2	1:B:1695:ALA:HB2	1.78	0.64
1:A:1555:LYS:HD2	1:B:1551:THR:HB	1.79	0.63
1:B:803:GLN:O	1:B:807:THR:OG1	2.11	0.63
1:B:1557:ARG:O	1:B:1561:ASN:ND2	2.26	0.63
1:A:916:ILE:HG22	1:A:920:LEU:HD12	1.81	0.63
1:A:1620:LYS:NZ	1:B:901:GLU:OE2	2.31	0.63
1:A:1011:GLU:HB2	1:B:1011:GLU:HG3	1.81	0.63
1:A:1738:LEU:HD22	1:B:1734:LEU:HD23	1.79	0.63
1:A:847:MET:HE2	1:B:847:MET:HB2	1.81	0.63
1:A:1065:ALA:HB2	1:B:1785:ARG:HG2	1.81	0.63
1:A:1282:LEU:HD12	1:B:1285:VAL:HG11	1.81	0.63
1:A:181:THR:OG1	4:A:2001:ADP:O1B	2.07	0.63
1:A:1123:GLU:OE2	1:B:1127:ARG:NE	2.32	0.63
1:A:1555:LYS:HB3	1:B:1555:LYS:HE2	1.81	0.63
1:B:904:ALA:O	1:B:907:THR:OG1	2.16	0.62
1:A:1286:THR:HA	1:A:1289:LEU:HD21	1.82	0.62
1:A:250:VAL:O	1:A:440:THR:OG1	2.17	0.62
1:B:1894:ARG:NH2	1:B:1897:GLN:OE1	2.32	0.62
1:B:131:SER:CA	1:B:134:ILE:HG12	2.28	0.62
1:B:1660:SER:HB2	1:B:1664:ILE:HD12	1.81	0.62
1:A:1306:LEU:HB3	1:B:1306:LEU:HB3	1.81	0.62
1:A:875:GLN:HG2	1:B:878:LEU:HD12	1.80	0.62
1:A:1262:ASN:OD1	1:A:1266:ARG:NE	2.28	0.62
1:A:1362:LEU:HB3	1:B:1362:LEU:HB3	1.80	0.62
1:A:1510:MET:HE1	1:A:1525:LYS:HB2	1.81	0.62
1:A:1853:ASP:OD1	1:A:1856:ARG:NH2	2.27	0.62
1:B:1759:ILE:O	1:B:1763:ASN:ND2	2.30	0.62
1:A:1591:VAL:HG12	1:B:1591:VAL:HG11	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1754:LYS:HZ3	1:B:1032:LEU:HD21	1.65	0.61
1:A:975:LYS:HD3	1:B:1691:ALA:HB1	1.82	0.61
1:A:913:LEU:HD22	1:B:914:GLU:HG3	1.83	0.61
1:A:1633:ARG:HB2	1:B:1633:ARG:HB2	1.82	0.61
1:B:567:ASP:OD2	1:B:580:LYS:NZ	2.34	0.61
1:A:964:LEU:HD11	1:B:1686:GLN:HG3	1.82	0.61
1:A:1640:LEU:HD11	1:B:1643:LEU:HD12	1.82	0.61
1:B:1384:GLU:HA	1:B:1387:LYS:HG2	1.83	0.61
1:A:1605:ARG:HG3	1:B:1601:GLU:HB3	1.82	0.60
1:A:1044:GLN:NE2	1:A:1761:GLN:OE1	2.34	0.60
1:A:1602:ARG:HG3	1:B:1598:LEU:HD22	1.82	0.60
1:B:838:LEU:CB	1:B:841:SER:HB3	2.31	0.60
1:A:1011:GLU:HG3	1:B:1012:GLU:HA	1.83	0.60
1:B:1589:ARG:NH1	1:B:1593:GLU:OE2	2.30	0.60
1:A:234:ARG:NE	1:A:260:GLU:OE1	2.35	0.60
1:B:1571:ARG:NH2	3:E:111:GLU:O	2.32	0.60
1:B:1601:GLU:O	1:B:1605:ARG:N	2.28	0.60
2:C:101:GLY:O	2:C:139:ASN:ND2	2.33	0.60
1:A:1706:LEU:HD21	1:B:1703:ARG:HD2	1.84	0.60
1:B:1412:GLU:O	1:B:1416:THR:HG23	2.01	0.60
1:A:1661:ARG:HG2	1:B:1661:ARG:HD3	1.84	0.59
1:B:1316:LEU:O	1:B:1320:GLU:HG2	2.02	0.59
1:A:969:THR:HG21	1:B:970:GLU:HG2	1.83	0.59
1:A:1272:ALA:HB2	1:B:1271:LEU:HD13	1.85	0.59
1:A:1670:GLU:HA	1:A:1673:LYS:HE3	1.84	0.59
1:A:1738:LEU:HA	1:B:1738:LEU:HD21	1.85	0.59
1:A:964:LEU:HD13	1:B:1683:ILE:HA	1.83	0.59
1:A:1551:THR:HG21	1:B:1548:LEU:CD1	2.33	0.59
1:A:1569:PHE:CD1	1:A:1573:LEU:HD12	2.38	0.59
1:B:1538:LYS:NZ	1:B:1542:GLU:OE2	2.26	0.59
1:A:1316:LEU:HD23	1:A:1319:GLU:OE2	2.03	0.59
1:A:1401:HIS:O	1:A:1405:VAL:HG23	2.02	0.59
1:A:1535:GLU:O	1:A:1539:THR:HG23	2.03	0.59
1:A:1633:ARG:HH11	1:A:1637:ILE:HD12	1.67	0.59
1:A:271:GLU:O	1:A:305:ASN:ND2	2.36	0.58
1:A:910:LYS:HD2	1:B:913:LEU:HD12	1.85	0.58
1:A:1445:LYS:O	1:A:1449:LEU:N	2.36	0.58
1:A:1446:PHE:O	1:A:1450:LEU:HB2	2.03	0.58
1:A:1825:ASN:HA	1:A:1828:LYS:HE2	1.85	0.58
1:B:994:LYS:CE	1:B:1713:SER:HB3	2.34	0.58
1:A:1320:GLU:OE1	1:A:1324:LYS:NZ	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1536:GLU:O	1:B:1539:THR:OG1	2.16	0.58
1:A:1233:VAL:HA	1:A:1236:LEU:CD2	2.34	0.58
1:A:1565:MET:SD	1:A:1568:GLN:NE2	2.77	0.58
1:A:1745:THR:O	1:A:1749:ASN:ND2	2.26	0.58
1:B:1564:ALA:HB1	3:E:104:ASN:HD22	1.68	0.58
1:B:234:ARG:NH2	5:B:2002:PO4:O3	2.37	0.58
1:A:997:LEU:HB2	1:B:997:LEU:HD13	1.85	0.58
1:A:1568:GLN:HB3	1:A:1572:ASP:OD2	2.04	0.57
1:B:993:GLU:HG2	1:B:1316:LEU:HD22	1.86	0.57
1:A:1495:LEU:HB3	1:B:1495:LEU:HB3	1.85	0.57
1:A:1558:LEU:HD22	1:B:1559:GLU:HG2	1.86	0.57
1:A:1397:LEU:HA	1:A:1400:ARG:HH11	1.70	0.57
1:A:847:MET:CE	1:B:847:MET:HB2	2.34	0.57
1:B:459:PHE:O	1:B:462:ASN:ND2	2.37	0.57
1:A:872:GLU:HG2	1:B:871:MET:HE3	1.85	0.57
1:A:1555:LYS:NZ	1:A:1559:GLU:OE2	2.29	0.57
1:A:1728:GLU:HA	1:A:1731:ILE:HG22	1.85	0.57
1:A:379:GLY:O	1:A:603:SER:OG	2.18	0.57
1:A:1565:MET:HB3	1:B:1565:MET:HE1	1.84	0.57
1:A:1619:LEU:HD22	1:B:1615:LEU:HD22	1.87	0.57
1:B:995:LYS:HE3	1:B:1712:ASN:ND2	2.19	0.57
1:A:1571:ARG:O	1:A:1575:GLY:HA3	2.05	0.57
1:A:1887:GLN:OE1	1:A:1888:ARG:NH1	2.37	0.57
1:B:94:GLU:N	1:B:94:GLU:OE1	2.37	0.57
1:B:898:GLU:HA	1:B:901:GLU:HG2	1.86	0.57
1:A:1471:ALA:HA	1:B:1471:ALA:HB2	1.87	0.57
1:A:910:LYS:HG3	1:B:910:LYS:HA	1.86	0.56
1:B:463:SER:OG	1:B:584:TRP:NE1	2.37	0.56
1:A:857:VAL:HG21	1:B:854:LEU:HD11	1.87	0.56
1:A:879:MET:O	1:A:882:LYS:HG3	2.05	0.56
1:A:1573:LEU:HD22	1:B:1572:ASP:HB2	1.87	0.56
1:A:1793:LYS:HE3	1:B:1794:LEU:HD21	1.87	0.56
1:A:871:MET:HE1	1:B:868:LEU:HD21	1.86	0.56
1:A:1926:LEU:HB2	1:A:1928:PHE:CE2	2.40	0.56
1:A:948:LEU:HD11	1:B:945:ILE:HG23	1.86	0.56
1:A:964:LEU:HB2	1:B:1683:ILE:HG12	1.86	0.56
1:A:1205:LEU:HD11	1:A:1209:LYS:HE3	1.88	0.56
1:A:1005:THR:HG22	1:B:1004:PHE:CD2	2.41	0.56
1:A:1544:LEU:CD1	1:B:1541:LEU:HG	2.36	0.56
1:B:838:LEU:HB2	1:B:841:SER:HB3	1.88	0.56
1:A:1033:GLU:OE2	1:A:1754:LYS:NZ	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1278:LEU:HD13	1:B:1278:LEU:HB2	1.88	0.56
1:A:1738:LEU:CD2	1:B:1734:LEU:HD23	2.35	0.56
1:A:1628:SER:O	1:A:1632:ASN:ND2	2.36	0.56
1:A:1368:ASP:O	1:A:1371:LYS:HG3	2.06	0.56
1:A:1584:LYS:HA	1:A:1587:LEU:HD12	1.87	0.56
1:B:1263:GLU:OE1	1:B:1266:ARG:NH2	2.34	0.56
1:A:683:LEU:HD11	1:A:688:VAL:HG21	1.87	0.55
1:A:1544:LEU:HD11	1:B:1541:LEU:HG	1.87	0.55
1:A:1552:GLU:O	1:A:1556:LEU:HG	2.07	0.55
1:A:1570:GLU:O	1:A:1575:GLY:N	2.39	0.55
1:A:1599:GLU:OE2	1:A:1602:ARG:NH2	2.39	0.55
1:B:1412:GLU:O	1:B:1415:LYS:HG2	2.06	0.55
1:A:972:LYS:O	1:A:976:LEU:N	2.32	0.55
1:A:1366:VAL:HG23	1:B:1366:VAL:HG23	1.86	0.55
1:A:1855:ARG:NH2	1:B:1132:LYS:HD3	2.21	0.55
1:A:1571:ARG:O	1:A:1571:ARG:NH1	2.33	0.55
1:B:1319:GLU:OE2	1:B:1322:ARG:NH1	2.36	0.55
1:A:955:GLU:OE1	1:B:959:ARG:NE	2.32	0.55
1:B:1604:GLN:O	1:B:1608:ALA:N	2.38	0.55
1:A:234:ARG:NH2	1:A:457:GLU:OE2	2.39	0.55
1:B:105:TYR:O	1:B:109:LEU:N	2.37	0.55
1:A:1533:GLN:O	1:A:1537:MET:HG2	2.07	0.55
1:A:1696:LYS:HD2	1:B:1692:ALA:HA	1.88	0.55
1:B:951:GLN:O	1:B:955:GLU:HG2	2.06	0.55
1:B:1031:ASP:OD2	1:B:1035:ARG:NH1	2.28	0.55
1:B:1533:GLN:O	1:B:1537:MET:HG2	2.07	0.55
1:A:1010:GLU:OE2	1:A:1014:LYS:HE3	2.07	0.55
1:A:1467:ALA:CB	1:B:1464:ARG:HG2	2.37	0.55
1:A:1724:LYS:HB3	1:A:1725:ARG:NH1	2.22	0.55
1:B:1145:LYS:O	1:B:1149:GLU:HG3	2.07	0.55
1:A:1495:LEU:HD11	1:B:1496:GLU:HG3	1.88	0.55
1:A:945:ILE:HG13	1:B:945:ILE:HG13	1.89	0.54
1:A:1286:THR:HA	1:A:1289:LEU:CD2	2.36	0.54
1:A:1696:LYS:O	1:A:1700:GLN:HG2	2.07	0.54
1:A:875:GLN:HE21	1:B:878:LEU:HD11	1.72	0.54
1:A:1415:LYS:CE	1:B:1411:LEU:HD22	2.33	0.54
1:B:1594:MET:HB3	1:B:1598:LEU:HD12	1.88	0.54
1:A:1233:VAL:HA	1:A:1236:LEU:HD21	1.89	0.54
1:A:1296:SER:O	1:A:1300:THR:HG23	2.07	0.54
1:B:348:GLN:OE1	1:B:351:ASN:ND2	2.41	0.54
1:A:538:THR:H	1:A:541:SER:HG	1.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:847:MET:CE	1:B:843:GLN:HB3	2.34	0.54
1:A:1398:SER:HA	1:A:1401:HIS:CD2	2.42	0.54
1:A:1460:TYR:HB3	1:B:1460:TYR:HB2	1.88	0.54
1:A:1661:ARG:HA	1:A:1664:ILE:CG1	2.38	0.54
1:A:1879:LEU:HD13	1:B:1879:LEU:HD22	1.88	0.54
1:B:206:GLU:OE1	1:B:206:GLU:N	2.40	0.54
1:B:1281:GLU:O	1:B:1285:VAL:HG23	2.07	0.54
1:A:706:GLN:O	1:A:764:ARG:NH1	2.40	0.54
1:A:1015:SER:HB2	1:B:1018:LEU:CD1	2.37	0.54
1:A:1727:LEU:HG	1:B:1724:LYS:HE2	1.90	0.54
1:A:463:SER:OG	1:A:587:LYS:NZ	2.39	0.54
1:A:1018:LEU:HD13	1:B:1019:ALA:HA	1.90	0.54
1:A:1706:LEU:CD2	1:B:1703:ARG:HD2	2.38	0.54
1:B:928:GLU:O	1:B:932:GLN:HG2	2.06	0.54
1:B:956:GLU:OE2	1:B:960:GLN:NE2	2.41	0.54
1:B:1155:THR:HG22	1:B:1158:GLN:HG2	1.88	0.54
1:A:1513:LYS:HA	1:B:1513:LYS:HE2	1.88	0.54
1:A:1685:LEU:HD12	1:B:1682:MET:HG2	1.90	0.54
1:A:1706:LEU:HD12	1:B:1706:LEU:CB	2.34	0.54
1:B:76:ASN:N	1:B:77:PRO:HA	2.22	0.54
1:B:199:LYS:O	1:B:201:LYS:N	2.40	0.54
1:A:975:LYS:HG3	1:B:1698:GLN:HE22	1.72	0.54
1:A:1011:GLU:HB3	1:B:1015:SER:HB3	1.90	0.54
1:A:1699:ALA:HB1	1:B:1699:ALA:CB	2.38	0.54
1:B:1712:ASN:O	1:B:1716:LYS:HB2	2.08	0.54
1:A:1530:LEU:CD1	1:B:1527:LYS:HD3	2.39	0.53
1:B:1349:GLU:O	1:B:1352:LYS:HG2	2.08	0.53
1:B:1641:ARG:O	1:B:1644:GLN:HG3	2.09	0.53
3:F:57:LEU:HD13	3:F:64:PRO:HB3	1.89	0.53
1:A:1394:LEU:HG	1:B:1394:LEU:HG	1.90	0.53
1:A:1643:LEU:HG	1:B:1640:LEU:HD11	1.88	0.53
1:A:1734:LEU:CD1	1:B:1731:ILE:HG23	2.37	0.53
1:A:474:GLU:OE1	1:A:572:HIS:ND1	2.41	0.53
1:A:857:VAL:HG11	1:B:858:ARG:HG3	1.89	0.53
1:A:1047:GLU:HG2	1:B:1046:LEU:HD13	1.89	0.53
1:A:1576:ARG:O	1:A:1580:SER:N	2.20	0.53
1:A:885:LEU:CD1	1:B:882:LYS:HG3	2.38	0.53
1:A:1022:LYS:HE2	1:B:1025:HIS:NE2	2.23	0.53
1:A:1233:VAL:HG21	1:B:1229:LEU:HD11	1.90	0.53
1:A:1744:ASN:HB3	1:A:1748:ILE:HD12	1.89	0.53
1:A:983:LEU:HD12	1:B:980:GLN:HG2	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1867:LYS:NZ	1:B:1143:ALA:HA	2.23	0.53
1:B:1618:ASP:O	1:B:1622:LEU:HG	2.08	0.53
1:B:1731:ILE:HA	1:B:1734:LEU:HD12	1.91	0.53
1:B:1846:ASP:HA	1:B:1849:LEU:CD2	2.39	0.53
1:A:250:VAL:HG21	1:A:443:GLN:O	2.09	0.53
1:B:46:LEU:HA	1:B:56:VAL:HG12	1.90	0.53
1:A:1495:LEU:O	1:A:1499:ASN:ND2	2.37	0.53
1:A:1857:ASN:HA	1:A:1860:GLN:HG2	1.91	0.53
1:B:932:GLN:O	1:B:935:GLN:HG3	2.08	0.53
1:A:74:LYS:NZ	1:A:1421:GLU:OE1	2.31	0.53
1:A:1366:VAL:HG13	1:B:1369:MET:CE	2.38	0.53
1:A:1742:GLN:NE2	1:B:1741:GLU:OE2	2.41	0.53
1:B:956:GLU:HG2	1:B:959:ARG:HH21	1.74	0.53
1:A:1422:LEU:HD22	1:B:1418:LEU:CD1	2.39	0.52
1:B:1585:LYS:O	1:B:1589:ARG:HB2	2.09	0.52
1:A:1414:THR:HA	1:A:1417:ARG:HG2	1.89	0.52
1:A:1602:ARG:HG3	1:B:1598:LEU:CD2	2.39	0.52
1:B:605:ASP:OD2	1:B:608:VAL:HG23	2.09	0.52
1:B:1523:LEU:O	1:B:1527:LYS:HG2	2.09	0.52
1:B:1846:ASP:O	1:B:1849:LEU:HG	2.09	0.52
1:A:1257:LEU:HD12	1:B:1254:LEU:HD11	1.90	0.52
1:A:1510:MET:SD	1:A:1525:LYS:HD3	2.49	0.52
1:A:903:ARG:HG3	1:B:903:ARG:HA	1.90	0.52
1:A:1573:LEU:CD1	1:B:1569:PHE:HA	2.34	0.52
1:A:888:GLN:O	1:A:892:GLU:HG2	2.09	0.52
1:A:976:LEU:HG	1:B:973:LEU:HG	1.92	0.52
1:B:1234:LYS:HA	1:B:1237:LEU:HD21	1.90	0.52
1:A:200:SER:OG	2:C:122:GLU:OE2	2.22	0.52
1:A:1608:ALA:CB	1:B:1605:ARG:HG3	2.39	0.52
1:B:934:LEU:HD23	1:B:937:GLU:OE2	2.09	0.52
1:A:1374:GLU:O	1:A:1378:GLY:N	2.37	0.52
1:A:1665:LEU:HD22	1:B:1664:ILE:CB	2.35	0.52
1:B:1830:ARG:O	1:B:1831:GLN:N	2.43	0.52
3:F:81:ASN:ND2	3:F:84:MET:SD	2.82	0.52
1:A:1278:LEU:HD13	1:B:1278:LEU:CB	2.40	0.52
1:A:1352:LYS:HE2	1:A:1356:GLU:OE2	2.10	0.52
1:A:1626:ILE:HG12	1:B:1626:ILE:HG13	1.92	0.52
1:A:1647:MET:HE3	1:A:1648:LYS:HE3	1.92	0.52
1:A:1741:GLU:O	1:A:1745:THR:HG23	2.10	0.52
1:B:1581:GLU:O	1:B:1584:LYS:HG2	2.10	0.52
1:A:920:LEU:HD12	1:B:917:CYS:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1829:GLU:HA	1:B:1832:ALA:CB	2.39	0.52
1:A:1282:LEU:CD1	1:B:1285:VAL:HG11	2.40	0.52
1:A:1657:THR:O	1:A:1661:ARG:N	2.37	0.52
1:A:1840:THR:HG23	1:B:1844:LEU:HD22	1.92	0.52
1:B:1564:ALA:HB2	3:E:101:VAL:HG23	1.91	0.52
1:A:1348:GLU:OE1	1:B:1352:LYS:HD3	2.11	0.51
1:A:1359:ILE:HG23	1:B:1362:LEU:CD1	2.40	0.51
1:A:1445:LYS:HB3	1:A:1449:LEU:CD1	2.40	0.51
1:B:1557:ARG:O	1:B:1560:VAL:HG12	2.10	0.51
1:A:1275:VAL:HG13	1:B:1278:LEU:HD11	1.92	0.51
1:A:1872:LEU:HG	1:B:1875:LEU:CD1	2.40	0.51
1:B:1846:ASP:HA	1:B:1849:LEU:HD21	1.91	0.51
1:A:1551:THR:HG21	1:B:1548:LEU:HD13	1.93	0.51
1:A:1633:ARG:HA	1:B:1633:ARG:HG3	1.92	0.51
1:B:162:MET:O	1:B:165:ARG:NH1	2.42	0.51
1:A:1598:LEU:HD11	1:B:1595:GLU:CG	2.41	0.51
1:A:882:LYS:HE2	1:B:878:LEU:HD22	1.93	0.51
1:A:1073:GLU:CG	1:B:1792:VAL:HG13	2.41	0.51
1:A:1464:ARG:HB3	1:B:1460:TYR:O	2.10	0.51
1:A:1587:LEU:O	1:A:1591:VAL:HG13	2.11	0.51
1:B:1583:LYS:HA	1:B:1583:LYS:HE2	1.92	0.51
1:A:1443:GLN:HA	1:A:1446:PHE:CD2	2.45	0.51
1:A:1732:ALA:HB1	1:B:1016:LYS:HD3	1.91	0.51
1:A:378:LEU:O	1:A:608:VAL:HG21	2.09	0.51
1:B:417:LEU:HD21	1:B:596:ILE:HG21	1.93	0.51
1:A:1028:MET:CE	1:B:1029:ILE:HD13	2.40	0.51
1:A:1233:VAL:HG22	1:B:1233:VAL:HG22	1.91	0.51
1:A:1394:LEU:CD2	1:B:1394:LEU:HG	2.41	0.51
1:A:1467:ALA:HB2	1:B:1464:ARG:HG2	1.92	0.51
1:A:1862:LYS:HE2	1:B:1861:TYR:CZ	2.46	0.51
1:A:1523:LEU:HD13	1:B:1524:GLU:CG	2.39	0.51
1:A:1910:MET:SD	1:B:1910:MET:HE2	2.51	0.51
1:B:998:GLU:OE1	1:B:1712:ASN:HB3	2.11	0.51
1:A:1263:GLU:O	1:A:1267:VAL:HG23	2.11	0.50
1:A:1640:LEU:HA	1:B:1640:LEU:HD13	1.92	0.50
1:B:1581:GLU:HA	1:B:1584:LYS:HG2	1.93	0.50
1:B:1660:SER:HB2	1:B:1664:ILE:CD1	2.41	0.50
1:A:1154:SER:O	1:A:1158:GLN:HG3	2.12	0.50
1:A:1640:LEU:CD1	1:B:1643:LEU:HD12	2.41	0.50
1:A:1648:LYS:HE2	1:A:1648:LYS:HA	1.93	0.50
1:A:1744:ASN:HB3	1:A:1748:ILE:CD1	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1622:LEU:HD12	1:B:1619:LEU:HG	1.92	0.50
1:A:1591:VAL:HG12	1:B:1591:VAL:CG1	2.40	0.50
1:A:1741:GLU:HB3	1:B:1741:GLU:HB3	1.94	0.50
1:A:1856:ARG:HH11	1:B:1135:ARG:HD3	1.77	0.50
1:A:1080:LYS:HE2	1:B:1800:THR:CB	2.38	0.50
1:A:1362:LEU:HD11	1:B:1359:ILE:HG23	1.93	0.50
1:A:1648:LYS:HB3	1:A:1652:ARG:CZ	2.42	0.50
1:A:1660:SER:O	1:A:1664:ILE:HG12	2.12	0.50
1:A:1755:ALA:HB1	1:B:1759:ILE:HD11	1.92	0.50
1:B:1270:GLU:OE1	1:B:1274:LYS:NZ	2.44	0.50
1:B:1559:GLU:O	1:B:1562:LEU:HG	2.12	0.50
1:A:967:VAL:CG1	1:B:1687:GLU:HB2	2.41	0.50
1:A:1622:LEU:HD12	1:B:1619:LEU:CD1	2.41	0.50
1:B:478:GLN:NE2	1:B:507:ASP:OD1	2.45	0.50
1:B:947:GLU:O	1:B:950:GLU:HG2	2.11	0.50
1:B:1000:ARG:HH12	1:B:1315:GLU:HB3	1.76	0.50
1:B:1797:MET:HA	1:B:1800:THR:HG22	1.94	0.50
1:A:849:ALA:O	1:A:852:GLU:HG3	2.12	0.50
1:A:1598:LEU:HD11	1:B:1595:GLU:HG2	1.94	0.50
1:B:1234:LYS:HA	1:B:1237:LEU:CD2	2.42	0.50
1:B:1926:LEU:HB3	1:B:1927:PRO:HD2	1.94	0.50
1:A:861:GLN:NE2	1:B:860:LYS:HB3	2.27	0.50
1:A:871:MET:SD	1:B:868:LEU:HG	2.52	0.50
1:A:878:LEU:HD13	1:B:879:MET:HB2	1.93	0.50
1:A:1020:LYS:HD3	1:B:1289:LEU:HG	1.94	0.50
1:A:1573:LEU:HD13	1:B:1572:ASP:HB2	1.93	0.50
1:A:1598:LEU:CD2	1:B:1599:GLU:HG2	2.42	0.50
1:B:1389:LYS:HA	1:B:1389:LYS:HE2	1.94	0.49
1:A:1706:LEU:HB3	1:B:1706:LEU:HD12	1.94	0.49
1:B:1386:VAL:O	1:B:1390:LEU:HG	2.12	0.49
1:A:1069:ALA:O	1:B:1792:VAL:HG11	2.13	0.49
1:A:1380:LEU:HA	1:B:1380:LEU:HD13	1.93	0.49
1:A:1530:LEU:HD12	1:B:1527:LYS:HD3	1.93	0.49
1:A:1633:ARG:CB	1:B:1633:ARG:HB2	2.42	0.49
1:B:956:GLU:HG2	1:B:959:ARG:NH2	2.28	0.49
1:A:983:LEU:HD21	1:B:1701:GLN:OE1	2.12	0.49
1:A:1061:SER:OG	1:B:1781:GLN:NE2	2.45	0.49
1:A:1573:LEU:HD22	1:B:1572:ASP:CB	2.42	0.49
1:A:1734:LEU:HD13	1:B:1731:ILE:HG23	1.95	0.49
1:B:1830:ARG:C	1:B:1833:ALA:HB3	2.38	0.49
1:A:1316:LEU:HA	1:A:1319:GLU:HG2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1738:LEU:HA	1:B:1738:LEU:CD2	2.42	0.49
1:A:1847:VAL:HG12	1:B:1847:VAL:HG12	1.95	0.49
1:A:368:ASN:ND2	1:B:715:GLN:OE1	2.46	0.48
1:A:1506:MET:CE	1:B:1509:LEU:HD11	2.43	0.48
1:A:1736:GLU:HG2	1:B:1016:LYS:O	2.13	0.48
1:A:1748:ILE:HG22	1:B:1748:ILE:HG22	1.94	0.48
1:A:1643:LEU:CD1	1:B:1647:MET:HE2	2.42	0.48
1:B:1657:THR:HA	1:B:1660:SER:OG	2.12	0.48
1:A:882:LYS:HE2	1:B:878:LEU:CD2	2.44	0.48
1:A:1429:LEU:HD11	1:A:1433:ARG:HD3	1.95	0.48
1:A:1653:GLU:HA	1:A:1656:ASP:OD2	2.13	0.48
1:B:837:LEU:O	1:B:842:ARG:HG3	2.13	0.48
1:A:184:THR:HG23	1:A:450:ILE:HG21	1.95	0.48
1:A:1015:SER:HB3	1:B:1015:SER:HA	1.95	0.48
1:A:1559:GLU:HG3	1:B:1558:LEU:HD13	1.94	0.48
2:D:43:THR:O	2:D:47:VAL:HG23	2.13	0.48
1:B:417:LEU:HD21	1:B:596:ILE:CG2	2.42	0.48
1:B:1569:PHE:CZ	1:B:1573:LEU:HD11	2.48	0.48
1:A:964:LEU:CD1	1:B:1683:ILE:HA	2.43	0.48
1:A:1330:LYS:O	1:A:1334:VAL:HG23	2.13	0.48
1:A:1359:ILE:HD11	1:B:1355:LEU:O	2.14	0.48
2:D:85:PHE:O	2:D:89:VAL:HG23	2.14	0.48
1:A:1286:THR:O	1:A:1289:LEU:HG	2.14	0.48
1:A:1843:LYS:O	1:A:1847:VAL:HG23	2.14	0.48
1:B:463:SER:O	1:B:465:GLU:N	2.47	0.48
1:A:1879:LEU:HB2	1:B:1879:LEU:HD21	1.95	0.48
1:B:1551:THR:O	1:B:1555:LYS:HB2	2.14	0.48
1:B:1758:GLN:HB3	1:B:1762:ILE:CD1	2.44	0.48
2:D:50:VAL:HG11	2:D:76:ILE:HG13	1.96	0.48
1:A:1647:MET:CE	1:B:1643:LEU:HD22	2.39	0.48
1:B:1164:LYS:HE2	1:B:1164:LYS:HA	1.96	0.48
1:A:963:GLN:HB2	1:B:962:LEU:HD13	1.96	0.48
1:A:1306:LEU:CD2	1:B:1310:LEU:HD22	2.44	0.48
1:B:1043:ARG:O	1:B:1047:GLU:HG3	2.13	0.48
1:B:1229:LEU:O	1:B:1233:VAL:HG23	2.14	0.48
1:A:941:MET:HB3	1:B:941:MET:HB3	1.95	0.47
1:A:1020:LYS:HB3	1:B:1289:LEU:CD2	2.44	0.47
1:B:1294:SER:O	1:B:1298:LYS:HB2	2.14	0.47
1:B:229:ASN:OD1	1:B:230:ASP:N	2.47	0.47
1:B:1400:ARG:NH2	1:B:1403:GLU:OE1	2.41	0.47
1:A:878:LEU:HD12	1:B:875:GLN:HG3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:179:GLY:O	1:B:183:ASN:ND2	2.48	0.47
1:A:1025:HIS:CD2	1:B:1022:LYS:HE2	2.50	0.47
1:A:1130:ALA:O	1:A:1134:LYS:HG3	2.14	0.47
1:A:1362:LEU:CD1	1:B:1359:ILE:HG23	2.45	0.47
1:A:1657:THR:HG22	1:A:1661:ARG:HE	1.79	0.47
1:A:857:VAL:HG21	1:B:854:LEU:CD1	2.43	0.47
1:A:1445:LYS:HB3	1:A:1449:LEU:HD12	1.97	0.47
1:B:840:VAL:HG11	3:F:35:GLU:OE1	2.14	0.47
1:A:183:ASN:O	1:A:187:VAL:HG23	2.14	0.47
1:A:272:ARG:NH1	1:A:308:VAL:O	2.44	0.47
1:A:1233:VAL:HA	1:A:1236:LEU:HG	1.97	0.47
1:B:1758:GLN:HB3	1:B:1762:ILE:HD12	1.96	0.47
1:A:964:LEU:CB	1:B:1683:ILE:HG12	2.45	0.47
1:A:1026:GLU:CA	1:A:1029:ILE:HG22	2.43	0.47
1:A:1309:GLN:HB2	1:B:1310:LEU:HD21	1.97	0.47
1:A:1654:LEU:HD12	1:B:1653:GLU:HB3	1.96	0.47
1:A:859:GLU:OE2	1:A:860:LYS:HG2	2.15	0.47
1:A:1233:VAL:O	1:A:1236:LEU:HG	2.14	0.47
1:A:1369:MET:HB3	1:B:1369:MET:HB3	1.97	0.47
1:A:1398:SER:HA	1:A:1401:HIS:NE2	2.30	0.47
1:A:1418:LEU:HB3	1:B:1418:LEU:HD21	1.97	0.47
3:F:48:ILE:N	3:F:80:ILE:O	2.47	0.47
1:A:1039:GLU:HG3	1:B:1036:LEU:HD11	1.97	0.47
1:A:1275:VAL:HG23	1:B:1275:VAL:HG23	1.97	0.47
1:A:1573:LEU:HD13	1:B:1572:ASP:CB	2.44	0.47
1:A:1524:GLU:OE2	1:B:1512:SER:HB2	2.15	0.46
1:A:1754:LYS:NZ	1:B:1032:LEU:HD21	2.29	0.46
1:A:1780:ARG:NH1	1:A:1784:GLU:OE2	2.48	0.46
1:A:1835:LYS:O	1:A:1838:ARG:HG2	2.15	0.46
1:B:913:LEU:HA	1:B:916:ILE:HD12	1.95	0.46
1:A:872:GLU:HG2	1:B:871:MET:CE	2.45	0.46
1:B:1584:LYS:HB2	1:B:1588:VAL:CG2	2.46	0.46
1:A:856:LYS:O	1:A:859:GLU:HG3	2.15	0.46
1:A:986:GLN:OE1	1:B:1702:GLU:HB2	2.15	0.46
1:A:1063:GLN:O	1:A:1066:GLU:HG2	2.15	0.46
1:A:1588:VAL:O	1:A:1592:ARG:HG2	2.15	0.46
1:B:838:LEU:O	1:B:842:ARG:HG3	2.16	0.46
1:B:1388:ARG:O	1:B:1392:LYS:HG2	2.15	0.46
1:B:1421:GLU:O	1:B:1425:LEU:HD23	2.16	0.46
1:B:1711:ALA:O	1:B:1715:GLY:HA3	2.16	0.46
1:A:244:ASP:OD1	1:A:248:TYR:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1461:ALA:O	1:A:1464:ARG:HG3	2.15	0.46
1:A:1573:LEU:HD13	1:B:1572:ASP:OD2	2.15	0.46
1:B:796:ARG:NH1	2:D:150:GLY:OXT	2.47	0.46
1:B:1639:GLN:O	1:B:1643:LEU:HG	2.15	0.46
2:C:23:ASP:O	2:C:25:LYS:N	2.48	0.46
3:F:42:GLN:NE2	3:F:55:ASP:OD2	2.48	0.46
1:A:1506:MET:HE3	1:B:1509:LEU:HD11	1.97	0.46
1:B:221:PHE:O	1:B:422:TYR:OH	2.33	0.46
1:B:1305:ALA:O	1:B:1309:GLN:HG3	2.16	0.46
1:B:1778:ASN:O	1:B:1782:GLN:HG3	2.16	0.46
1:A:923:ARG:CA	1:A:926:GLU:HG2	2.45	0.46
1:A:923:ARG:O	1:A:926:GLU:HG2	2.16	0.46
1:A:1446:PHE:HA	1:A:1450:LEU:CD1	2.38	0.46
1:A:1615:LEU:HD23	1:B:1612:ARG:HD2	1.96	0.46
1:A:1689:LEU:HD13	1:B:1689:LEU:N	2.30	0.46
1:A:1302:ASP:HB3	1:B:1303:PHE:CE1	2.51	0.46
1:A:1022:LYS:NZ	1:A:1026:GLU:OE2	2.43	0.46
1:A:1435:SER:O	1:A:1439:LEU:HG	2.16	0.46
1:A:1682:MET:HA	1:B:1682:MET:HG2	1.98	0.46
1:A:1751:ARG:HG2	1:B:1035:ARG:NH2	2.31	0.46
1:B:578:ASP:OD1	1:B:578:ASP:N	2.49	0.46
1:B:1127:ARG:NH1	1:B:1131:GLU:OE2	2.49	0.46
1:B:1699:ALA:O	1:B:1703:ARG:N	2.40	0.46
1:A:1033:GLU:HB3	1:A:1037:ARG:NH1	2.31	0.46
1:A:1359:ILE:HG23	1:B:1362:LEU:HD11	1.97	0.46
1:B:1296:SER:O	1:B:1300:THR:HG23	2.15	0.46
1:B:1647:MET:HE3	1:B:1647:MET:HB3	1.88	0.46
3:E:120:ASP:OD1	3:E:121:TYR:N	2.48	0.46
3:F:160:ARG:O	3:F:164:HIS:N	2.49	0.46
1:A:1066:GLU:O	1:A:1070:GLN:HG3	2.16	0.46
1:A:1661:ARG:HD3	1:B:1657:THR:HB	1.97	0.46
1:B:1527:LYS:HE2	1:B:1530:LEU:HD12	1.97	0.46
3:F:120:ASP:OD1	3:F:121:TYR:N	2.49	0.46
1:A:885:LEU:HD11	1:B:882:LYS:HG3	1.98	0.45
1:A:923:ARG:HA	1:A:926:GLU:CG	2.46	0.45
1:A:1205:LEU:HD13	1:B:1205:LEU:HD12	1.98	0.45
1:B:76:ASN:OD1	1:B:76:ASN:C	2.58	0.45
1:B:1396:GLY:O	1:B:1400:ARG:HG2	2.16	0.45
1:A:908:ALA:O	1:A:912:GLU:HG2	2.16	0.45
1:A:1118:GLU:OE1	1:B:1192:GLN:NE2	2.49	0.45
1:A:1309:GLN:CB	1:B:1310:LEU:HD21	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1587:LEU:O	1:A:1591:VAL:HG22	2.16	0.45
1:A:1670:GLU:O	1:A:1674:LYS:HG3	2.16	0.45
1:A:1674:LYS:O	1:A:1678:MET:HG2	2.16	0.45
1:B:338:GLY:O	1:B:342:VAL:HG23	2.16	0.45
1:B:426:PHE:O	1:B:430:VAL:HG23	2.16	0.45
1:A:1271:LEU:HD12	1:B:1268:ARG:HG3	1.97	0.45
1:A:1359:ILE:HG13	1:B:1359:ILE:CG1	2.45	0.45
1:A:1559:GLU:CG	1:B:1558:LEU:HD13	2.46	0.45
1:A:1675:LEU:HD22	1:B:1674:LYS:CB	2.46	0.45
1:A:1748:ILE:CG2	1:B:1748:ILE:HG22	2.46	0.45
1:B:1393:ASP:O	1:B:1397:LEU:HG	2.17	0.45
1:A:993:GLU:CB	1:B:994:LYS:HD2	2.47	0.45
1:A:1390:LEU:O	1:A:1394:LEU:N	2.44	0.45
1:A:1469:ALA:O	1:A:1473:GLU:HG2	2.16	0.45
1:B:840:VAL:H	3:F:39:MET:HE2	1.82	0.45
1:B:1020:LYS:O	1:B:1024:LYS:HG3	2.16	0.45
1:B:1633:ARG:HH11	1:B:1637:ILE:HD12	1.81	0.45
1:B:1723:GLU:O	1:B:1727:LEU:HG	2.17	0.45
2:D:124:VAL:HG12	2:D:128:VAL:HG23	1.98	0.45
1:A:210:GLN:NE2	1:A:329:MET:O	2.47	0.45
1:A:979:GLU:HA	1:B:1698:GLN:HG2	1.99	0.45
1:A:1611:ALA:O	1:A:1615:LEU:HD23	2.16	0.45
1:B:1572:ASP:O	1:B:1576:ARG:HG2	2.16	0.45
1:B:1659:ALA:O	1:B:1663:GLU:HG2	2.16	0.45
1:A:1317:LEU:CD1	1:B:1316:LEU:HD23	2.35	0.45
3:F:26:ASP:OD1	3:F:27:GLN:N	2.48	0.45
1:B:892:GLU:HA	1:B:895:LEU:HD12	1.98	0.45
1:B:1588:VAL:CA	1:B:1591:VAL:HG12	2.45	0.45
2:C:18:PHE:O	2:C:20:ARG:N	2.46	0.45
1:A:1158:GLN:OE1	1:A:1162:ARG:NH2	2.47	0.45
1:A:1331:LEU:HD11	1:B:1330:LYS:HB3	1.99	0.45
1:A:1571:ARG:NH1	1:A:1579:GLN:HE22	2.14	0.45
1:A:1050:ARG:HG3	1:B:1053:LEU:HD12	1.97	0.45
1:A:1058:THR:HA	1:B:1781:GLN:NE2	2.31	0.45
1:A:1586:GLN:O	1:A:1590:GLN:N	2.44	0.45
1:A:1826:GLU:OE1	1:B:1830:ARG:HD2	2.16	0.45
1:B:1515:ASP:OD2	1:B:1519:SER:OG	2.35	0.45
1:A:1310:LEU:HB2	1:B:1310:LEU:CD1	2.47	0.45
1:A:1401:HIS:CE1	1:A:1402:GLU:HG3	2.52	0.45
1:B:67:VAL:HG12	1:B:71:ASP:HB2	1.99	0.45
1:B:940:LYS:HE3	1:B:1662:GLU:OE2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1451:ALA:O	1:B:1455:THR:HG23	2.17	0.45
1:A:1040:GLU:HG2	1:B:1039:GLU:HG3	1.99	0.44
1:A:1457:SER:HA	1:B:1457:SER:HB2	1.99	0.44
1:A:1835:LYS:O	1:A:1839:ARG:HG3	2.16	0.44
1:A:1036:LEU:HA	1:B:1036:LEU:CD1	2.47	0.44
1:B:1780:ARG:NH1	1:B:1784:GLU:OE2	2.50	0.44
3:E:119:GLU:OE2	3:E:123:ARG:NH1	2.49	0.44
1:A:372:GLN:HG2	1:A:382:VAL:HG11	1.98	0.44
1:A:843:GLN:HB3	1:A:847:MET:CG	2.46	0.44
1:A:854:LEU:HD12	1:A:858:ARG:HG3	1.98	0.44
1:A:1289:LEU:N	1:B:1289:LEU:HD13	2.32	0.44
1:A:1362:LEU:HD22	1:B:1363:HIS:HA	1.99	0.44
1:A:1363:HIS:HA	1:B:1362:LEU:HD22	1.99	0.44
1:A:1065:ALA:CB	1:B:1785:ARG:HG2	2.44	0.44
1:A:1285:VAL:HG12	1:B:1285:VAL:HG12	2.00	0.44
1:B:917:CYS:O	1:B:921:GLU:HG2	2.17	0.44
1:A:1008:LEU:CA	1:B:1008:LEU:HD13	2.46	0.44
1:A:1289:LEU:HB3	1:B:1289:LEU:HA	2.00	0.44
1:A:1445:LYS:HB3	1:A:1449:LEU:HG	1.98	0.44
1:B:1310:LEU:HA	1:B:1313:THR:OG1	2.17	0.44
1:B:1428:ASP:O	1:B:1432:GLN:HG2	2.17	0.44
1:A:913:LEU:HD22	1:B:914:GLU:CG	2.48	0.44
1:A:1386:VAL:CG1	1:B:1387:LYS:HE3	2.47	0.44
1:B:843:GLN:O	1:B:847:MET:N	2.39	0.44
1:B:1148:LEU:O	1:B:1152:LEU:HG	2.17	0.44
1:B:1459:LYS:O	1:B:1463:GLU:HG2	2.17	0.44
1:A:495:GLU:OE2	1:A:759:SER:OG	2.25	0.44
1:A:617:ARG:NH1	1:A:642:MET:SD	2.91	0.44
1:B:1294:SER:HA	1:B:1297:SER:OG	2.17	0.44
1:B:1344:GLN:O	1:B:1348:GLU:HG2	2.18	0.44
2:D:28:TYR:OH	2:D:47:VAL:O	2.36	0.44
1:A:843:GLN:O	1:A:847:MET:HB2	2.17	0.44
1:A:1296:SER:HA	1:A:1299:LEU:HD12	1.99	0.44
1:B:901:GLU:O	1:B:905:ARG:HG3	2.18	0.44
1:B:1545:GLU:OE1	1:B:1548:LEU:HD23	2.18	0.44
1:B:1588:VAL:HA	1:B:1591:VAL:CG1	2.45	0.44
1:A:1234:LYS:O	1:A:1238:GLN:HB2	2.18	0.44
1:A:1386:VAL:O	1:A:1390:LEU:HG	2.18	0.44
1:A:1569:PHE:CE1	1:A:1573:LEU:HD12	2.53	0.44
1:B:61:ASN:ND2	1:B:61:ASN:O	2.50	0.44
1:B:1414:THR:O	1:B:1417:ARG:HD3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:985:ASP:OD1	1:A:989:LYS:HE2	2.18	0.43
1:A:1066:GLU:CB	1:B:1788:LYS:HD3	2.43	0.43
1:A:1317:LEU:HD23	1:B:1320:GLU:HG3	1.98	0.43
1:A:1550:ALA:O	1:A:1554:ALA:N	2.43	0.43
1:A:1595:GLU:O	1:A:1599:GLU:HB2	2.17	0.43
1:A:1663:GLU:O	1:A:1667:GLN:HG3	2.18	0.43
1:B:796:ARG:NE	2:D:37:ALA:O	2.48	0.43
1:B:1476:THR:HG21	2:C:68:GLN:NE2	2.32	0.43
1:A:1321:ASN:OD1	1:B:989:LYS:HG2	2.18	0.43
1:A:1337:GLU:O	1:A:1341:PHE:HB2	2.18	0.43
1:A:1599:GLU:OE1	1:A:1603:LYS:NZ	2.27	0.43
1:B:932:GLN:HA	1:B:935:GLN:CG	2.48	0.43
2:D:109:ARG:NH2	2:D:125:GLU:OE1	2.47	0.43
1:A:426:PHE:O	1:A:430:VAL:HG23	2.19	0.43
1:A:1011:GLU:CB	1:B:1011:GLU:HG3	2.48	0.43
1:A:1557:ARG:O	1:A:1561:ASN:ND2	2.31	0.43
1:A:1657:THR:HB	1:A:1661:ARG:HD2	2.00	0.43
3:E:81:ASN:O	3:E:85:PHE:N	2.40	0.43
1:A:3:GLN:NE2	1:A:7:ASP:OD2	2.49	0.43
1:A:1612:ARG:O	1:A:1616:GLU:HG3	2.18	0.43
1:A:1657:THR:CG2	1:A:1661:ARG:HE	2.31	0.43
1:B:1432:GLN:HA	1:B:1435:SER:HG	1.83	0.43
1:A:1558:LEU:HD12	1:B:1555:LYS:HD3	2.00	0.43
1:B:1568:GLN:OE1	3:E:104:ASN:ND2	2.52	0.43
1:B:1752:LEU:HG	1:B:1756:ASN:ND2	2.33	0.43
1:A:968:THR:HG22	1:B:1686:GLN:HB3	2.01	0.43
1:A:1297:SER:O	1:A:1300:THR:OG1	2.34	0.43
1:A:1514:ASP:O	1:A:1518:LYS:HB2	2.18	0.43
1:A:1528:ARG:NH2	1:B:1509:LEU:HD21	2.34	0.43
1:A:1745:THR:O	1:A:1749:ASN:HB2	2.18	0.43
1:A:998:GLU:HG3	1:B:997:LEU:HD11	2.01	0.43
1:A:1002:ALA:O	1:A:1006:THR:HG23	2.19	0.43
1:A:1331:LEU:O	1:A:1335:GLU:HG3	2.19	0.43
1:A:1527:LYS:O	1:A:1531:GLU:HG2	2.18	0.43
1:A:1660:SER:O	1:A:1664:ILE:HG23	2.19	0.43
1:B:1525:LYS:O	1:B:1528:ARG:HG2	2.19	0.43
1:B:1759:ILE:O	1:B:1763:ASN:HB2	2.19	0.43
1:B:1875:LEU:O	1:B:1879:LEU:HD23	2.18	0.43
1:A:923:ARG:O	1:A:927:GLU:HG2	2.18	0.43
1:A:962:LEU:HD22	1:B:963:GLN:HG2	2.01	0.43
1:A:1413:LYS:HA	1:A:1416:THR:HG1	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1675:LEU:HD22	1:B:1674:LYS:HB3	2.01	0.43
1:A:1900:LEU:O	1:A:1904:THR:HG23	2.19	0.43
1:B:1013:GLU:OE2	1:B:1730:ARG:NH1	2.52	0.43
1:B:1142:GLU:O	1:B:1146:THR:HG23	2.18	0.43
1:A:443:GLN:CD	1:B:1592:ARG:HE	2.27	0.43
1:A:564:ASP:OD1	1:A:565:LYS:N	2.52	0.43
1:B:6:ALA:O	1:B:11:TYR:N	2.52	0.43
1:B:131:SER:HB2	1:B:134:ILE:HD11	2.00	0.43
1:B:934:LEU:O	1:B:937:GLU:HG2	2.19	0.43
1:B:1527:LYS:HE2	1:B:1527:LYS:HA	2.01	0.43
1:A:1026:GLU:HA	1:A:1029:ILE:CG2	2.45	0.43
1:A:1619:LEU:HD22	1:B:1615:LEU:CD2	2.49	0.43
1:A:1825:ASN:HA	1:A:1828:LYS:CE	2.47	0.43
1:B:1472:ARG:O	1:B:1476:THR:HG23	2.18	0.43
1:A:280:LEU:HD13	1:A:340:LEU:HD22	2.01	0.42
1:A:890:GLN:O	1:A:894:GLU:HG2	2.18	0.42
1:A:903:ARG:HG3	1:B:906:LEU:HD12	2.01	0.42
1:A:930:ARG:HH21	1:A:934:LEU:HD11	1.84	0.42
1:A:1762:ILE:HG23	1:B:1766:LEU:HD22	2.01	0.42
1:B:342:VAL:O	1:B:346:VAL:HG23	2.18	0.42
1:A:492:TYR:OH	1:A:708:PHE:N	2.49	0.42
1:A:1187:ILE:HD13	1:B:1186:GLN:OE1	2.19	0.42
1:A:1739:GLU:HB2	1:B:1020:LYS:HG2	2.01	0.42
1:B:737:LYS:O	1:B:741:VAL:HG23	2.18	0.42
1:B:1404:LYS:O	1:B:1408:TYR:N	2.41	0.42
1:B:1597:GLU:HG2	1:B:1598:LEU:N	2.33	0.42
1:A:1330:LYS:CB	1:B:1331:LEU:HD11	2.50	0.42
1:A:1788:LYS:HE2	1:A:1788:LYS:HA	2.01	0.42
1:A:539:ASP:O	1:A:543:VAL:HG23	2.19	0.42
1:A:1008:LEU:HD13	1:B:1008:LEU:HA	2.01	0.42
1:A:1275:VAL:HG23	1:B:1275:VAL:CG2	2.49	0.42
1:A:1552:GLU:O	1:A:1555:LYS:HG2	2.19	0.42
1:A:1665:LEU:HD13	1:B:1664:ILE:CD1	2.47	0.42
1:B:995:LYS:HG2	1:B:1712:ASN:CG	2.44	0.42
1:B:1002:ALA:HA	1:B:1005:THR:OG1	2.19	0.42
1:B:1233:VAL:O	1:B:1237:LEU:HD23	2.20	0.42
1:B:1828:LYS:O	1:B:1831:GLN:N	2.52	0.42
1:A:440:THR:OG1	1:A:441:LYS:N	2.49	0.42
1:A:1296:SER:HB3	1:B:1296:SER:HB3	2.00	0.42
1:A:1710:ILE:CG2	1:B:1706:LEU:HD13	2.50	0.42
1:B:838:LEU:HB3	1:B:841:SER:HB3	1.99	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1588:VAL:O	1:B:1592:ARG:HB2	2.20	0.42
2:D:75:THR:O	2:D:79:ASN:ND2	2.52	0.42
1:A:1006:THR:HA	1:B:1301:LYS:HG3	2.01	0.42
1:A:1037:ARG:O	1:A:1041:LYS:HG2	2.19	0.42
1:A:1113:ILE:CD1	1:B:1109:LEU:HG	2.49	0.42
1:A:1739:GLU:OE1	1:B:1024:LYS:NZ	2.42	0.42
1:B:868:LEU:O	1:B:872:GLU:HG3	2.18	0.42
1:B:1557:ARG:HA	1:B:1560:VAL:HG12	2.00	0.42
2:C:133:ASP:OD1	2:C:137:CYS:N	2.53	0.42
3:E:34:LYS:O	3:E:38:ASN:ND2	2.53	0.42
1:A:1233:VAL:HA	1:A:1236:LEU:CG	2.50	0.42
1:A:1302:ASP:O	1:A:1306:LEU:HG	2.20	0.42
1:A:1661:ARG:CA	1:A:1664:ILE:HG12	2.45	0.42
1:A:234:ARG:NH1	1:A:457:GLU:OE1	2.52	0.42
1:A:1285:VAL:CG1	1:B:1285:VAL:HG12	2.49	0.42
1:A:1626:ILE:HD12	1:B:1622:LEU:HD22	2.02	0.42
1:B:184:THR:HG23	1:B:450:ILE:HG21	2.00	0.42
2:D:30:GLN:O	2:D:34:VAL:HG23	2.20	0.42
3:E:63:ASN:N	3:E:64:PRO:CD	2.82	0.42
1:B:477:GLN:NE2	1:B:695:ASN:O	2.53	0.42
1:B:1429:LEU:HD13	1:B:1433:ARG:NH2	2.34	0.42
1:B:1706:LEU:O	1:B:1710:ILE:N	2.49	0.42
1:A:86:MET:SD	1:A:97:VAL:HG13	2.60	0.42
1:A:1032:LEU:HD13	1:B:1032:LEU:HB2	2.02	0.42
1:A:1232:GLU:O	1:A:1236:LEU:HD23	2.19	0.42
1:A:1320:GLU:HB3	1:A:1324:LYS:NZ	2.35	0.42
1:A:1622:LEU:CD1	1:B:1619:LEU:HG	2.50	0.42
1:A:1680:ALA:O	1:A:1684:GLN:HG2	2.20	0.42
1:B:1595:GLU:HA	1:B:1599:GLU:HG2	2.02	0.42
1:A:965:GLU:HA	1:A:968:THR:OG1	2.20	0.41
1:A:990:LEU:CD2	1:B:1709:GLU:HG3	2.49	0.41
1:B:190:TYR:O	1:B:194:VAL:HG23	2.20	0.41
1:A:215:ASN:HB2	1:A:216:PRO:HD3	2.01	0.41
1:A:234:ARG:NH1	5:A:2002:PO4:O3	2.53	0.41
1:A:854:LEU:CD1	1:A:858:ARG:HG3	2.50	0.41
1:A:1857:ASN:O	1:A:1860:GLN:HG2	2.20	0.41
1:B:1673:LYS:HA	1:B:1676:LYS:HE3	2.02	0.41
1:A:1394:LEU:CD1	1:B:1390:LEU:HD22	2.50	0.41
1:A:1859:GLU:HB3	1:B:1139:GLU:OE1	2.20	0.41
1:B:1641:ARG:HA	1:B:1644:GLN:HG2	2.02	0.41
1:A:903:ARG:CG	1:B:906:LEU:HD12	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1272:ALA:HB2	1:B:1271:LEU:CD1	2.50	0.41
1:A:246:ASN:ND2	2:C:132:GLU:OE2	2.54	0.41
1:A:903:ARG:HD2	1:B:902:LEU:CB	2.50	0.41
1:A:982:ILE:HG23	1:B:1702:GLU:OE1	2.20	0.41
1:A:1207:GLN:O	1:A:1211:VAL:HG23	2.21	0.41
1:A:1626:ILE:CD1	1:B:1622:LEU:HD22	2.51	0.41
1:A:1658:ARG:O	1:A:1662:GLU:HB2	2.19	0.41
1:B:1571:ARG:HH12	3:E:113:ALA:CB	2.34	0.41
1:A:975:LYS:O	1:B:1698:GLN:NE2	2.53	0.41
1:A:1489:MET:HG2	1:A:1492:LYS:HE3	2.03	0.41
1:A:1664:ILE:HG13	1:A:1665:LEU:N	2.35	0.41
1:A:1752:LEU:HD21	1:B:1752:LEU:HA	2.03	0.41
1:A:1757:LEU:O	1:A:1761:GLN:NE2	2.53	0.41
1:B:1537:MET:N	1:B:1537:MET:HE2	2.36	0.41
1:B:1660:SER:O	1:B:1664:ILE:N	2.37	0.41
1:B:1661:ARG:O	1:B:1665:LEU:HB2	2.20	0.41
1:A:179:GLY:O	1:A:183:ASN:ND2	2.52	0.41
1:A:1121:GLU:OE1	1:B:1191:ARG:NH1	2.50	0.41
1:A:1622:LEU:O	1:A:1626:ILE:HG13	2.21	0.41
1:B:1218:ALA:O	1:B:1222:LEU:HD23	2.21	0.41
1:B:1773:ALA:O	1:B:1777:GLU:HG2	2.21	0.41
1:A:1008:LEU:HD13	1:B:1007:ASN:C	2.46	0.41
1:A:1415:LYS:HG2	1:A:1419:GLN:OE1	2.21	0.41
1:B:898:GLU:O	1:B:901:GLU:HG2	2.20	0.41
1:B:1350:GLU:HA	1:B:1353:HIS:CD2	2.55	0.41
1:B:1584:LYS:HB2	1:B:1588:VAL:HG21	2.01	0.41
1:A:952:LEU:O	1:A:956:GLU:HB2	2.21	0.41
1:A:1001:ILE:HD13	1:B:1001:ILE:CG1	2.51	0.41
1:A:1366:VAL:HG23	1:B:1366:VAL:CG2	2.49	0.41
1:A:1368:ASP:OD1	1:A:1371:LYS:HE3	2.21	0.41
1:A:1390:LEU:HD22	1:B:1394:LEU:HD12	2.03	0.41
1:A:1445:LYS:HD3	1:A:1449:LEU:HD11	2.02	0.41
1:A:1699:ALA:HB1	1:B:1699:ALA:HB2	2.03	0.41
1:B:131:SER:CB	1:B:134:ILE:HD11	2.50	0.41
1:B:923:ARG:HH21	1:B:926:GLU:HG3	1.86	0.41
1:B:1385:GLU:O	1:B:1389:LYS:HG2	2.20	0.41
1:B:1589:ARG:O	1:B:1593:GLU:HG2	2.21	0.41
1:B:1625:HIS:HA	1:B:1628:SER:OG	2.21	0.41
1:B:1793:LYS:O	1:B:1797:MET:HG2	2.21	0.41
1:A:857:VAL:HG12	1:B:857:VAL:CG1	2.43	0.41
1:A:861:GLN:HA	1:B:861:GLN:OE1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:994:LYS:HE2	1:A:998:GLU:OE2	2.21	0.41
1:A:998:GLU:O	1:A:1001:ILE:HG22	2.21	0.41
1:A:1000:ARG:HB3	1:A:1004:PHE:CE2	2.56	0.41
1:A:1647:MET:HG2	1:A:1651:MET:SD	2.60	0.41
1:A:1661:ARG:HH12	1:B:1658:ARG:HA	1.85	0.41
1:B:837:LEU:HD23	1:B:838:LEU:N	2.35	0.41
1:A:1009:THR:OG1	1:B:1301:LYS:HG3	2.20	0.40
1:A:1265:GLU:O	1:A:1269:THR:HG23	2.22	0.40
1:A:1457:SER:HB3	1:B:1457:SER:HB3	2.03	0.40
1:A:1576:ARG:NE	1:A:1579:GLN:OE1	2.39	0.40
1:A:1743:GLY:O	1:A:1747:LEU:HG	2.21	0.40
1:A:1750:ASP:HB3	1:B:1028:MET:HE2	2.03	0.40
1:B:1232:GLU:O	1:B:1236:LEU:HD13	2.21	0.40
1:A:1077:GLN:HA	1:A:1080:LYS:HD2	2.03	0.40
1:B:509:GLN:N	1:B:510:PRO:CD	2.84	0.40
1:B:1571:ARG:HH12	3:E:113:ALA:HB2	1.86	0.40
1:B:1628:SER:O	1:B:1632:ASN:ND2	2.51	0.40
1:B:1757:LEU:O	1:B:1761:GLN:N	2.50	0.40
1:A:342:VAL:O	1:A:346:VAL:HG23	2.20	0.40
1:A:1395:GLU:HG3	1:A:1396:GLY:N	2.35	0.40
1:A:1527:LYS:HG3	1:B:1527:LYS:NZ	2.37	0.40
1:B:226:THR:N	1:B:229:ASN:O	2.49	0.40
1:B:945:ILE:O	1:B:949:GLU:HG2	2.21	0.40
1:B:1330:LYS:O	1:B:1334:VAL:HG23	2.21	0.40
1:B:1362:LEU:O	1:B:1366:VAL:HG23	2.22	0.40
1:A:1029:ILE:HD11	1:B:1028:MET:HB3	2.03	0.40
1:A:1586:GLN:HB3	1:A:1590:GLN:OE1	2.22	0.40
1:A:1639:GLN:O	1:A:1643:LEU:HD23	2.21	0.40
1:B:997:LEU:HD23	1:B:1312:ASP:OD2	2.21	0.40
1:B:1476:THR:HG21	2:C:68:GLN:HE22	1.87	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	1943/1960 (99%)	1865 (96%)	69 (4%)	9 (0%)	25 64
1	B	1939/1960 (99%)	1850 (95%)	81 (4%)	8 (0%)	30 68
2	C	148/151 (98%)	134 (90%)	11 (7%)	3 (2%)	6 31
2	D	148/151 (98%)	134 (90%)	12 (8%)	2 (1%)	9 40
3	E	150/172 (87%)	130 (87%)	19 (13%)	1 (1%)	19 57
3	F	156/172 (91%)	133 (85%)	18 (12%)	5 (3%)	3 21
All	All	4484/4566 (98%)	4246 (95%)	210 (5%)	28 (1%)	24 60

All (28) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	276	ILE
2	C	20	ARG
1	B	838	LEU
3	E	154	ASN
3	F	16	ARG
1	A	535	PRO
1	B	464	PHE
2	D	118	LYS
3	F	146	PRO
1	A	258	LEU
1	A	731	LYS
1	B	315	ASP
2	C	118	LYS
1	A	30	LYS
1	A	40	GLY
1	B	283	GLY
1	B	378	LEU
1	B	1947	VAL
3	F	24	MET
2	C	24	GLY
3	F	79	PRO
1	A	518	PRO
3	F	14	PRO
1	A	496	GLY
1	A	620	GLY
1	A	1517	GLY
1	B	312	GLY

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Mol	Chain	Res	Type
2	D	128	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	1708/1716 (100%)	1707 (100%)	1 (0%)	92 95
1	B	1706/1716 (99%)	1702 (100%)	4 (0%)	92 94
2	C	129/130 (99%)	127 (98%)	2 (2%)	58 73
2	D	129/130 (99%)	129 (100%)	0	100 100
3	E	132/151 (87%)	131 (99%)	1 (1%)	79 85
3	F	138/151 (91%)	138 (100%)	0	100 100
All	All	3942/3994 (99%)	3934 (100%)	8 (0%)	91 94

All (8) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1727	LEU
1	B	76	ASN
1	B	300	TYR
1	B	619	ILE
1	B	683	LEU
2	C	13	GLU
2	C	70	LEU
3	E	85	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (48) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	99	HIS
1	A	100	ASN
1	A	246	ASN
1	A	493	GLN

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Mol	Chain	Res	Type
1	A	665	ASN
1	A	667	ASN
1	A	676	HIS
1	A	710	ASN
1	A	875	GLN
1	A	886	GLN
1	A	918	HIS
1	A	942	GLN
1	A	951	GLN
1	A	1432	GLN
1	A	1491	GLN
1	A	1501	GLN
1	A	1700	GLN
1	B	19	ASN
1	B	100	ASN
1	B	126	ASN
1	B	665	ASN
1	B	875	GLN
1	B	886	GLN
1	B	918	HIS
1	B	942	GLN
1	B	943	GLN
1	B	980	GLN
1	B	1042	GLN
1	B	1311	GLN
1	B	1353	HIS
1	B	1365	GLN
1	B	1431	HIS
1	B	1501	GLN
1	B	1521	HIS
1	B	1563	GLN
1	B	1686	GLN
1	B	1698	GLN
1	B	1758	GLN
1	B	1781	GLN
1	B	1795	GLN
1	B	1864	GLN
2	C	7	GLN
2	C	68	GLN
2	D	131	HIS
3	E	38	ASN
3	E	104	ASN

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Mol	Chain	Res	Type
3	F	31	GLN
3	F	38	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)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 8 ligands modelled in this entry, 4 are monoatomic - leaving 4 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
4	ADP	B	2001	-	24,29,29	0.96	1 (4%)	29,45,45	1.53	5 (17%)
5	PO4	A	2002	6	4,4,4	1.52	1 (25%)	6,6,6	0.45	0
5	PO4	B	2002	6	4,4,4	1.50	1 (25%)	6,6,6	0.46	0
4	ADP	A	2001	6	24,29,29	0.96	1 (4%)	29,45,45	1.52	4 (13%)

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	ADP	B	2001	-	-	2/12/32/32	0/3/3/3
4	ADP	A	2001	6	-	2/12/32/32	0/3/3/3

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	A	2002	PO4	P-O1	2.61	1.57	1.50
5	B	2002	PO4	P-O1	2.59	1.56	1.50
4	B	2001	ADP	C5-C4	2.41	1.47	1.40
4	A	2001	ADP	C5-C4	2.40	1.47	1.40

All (9) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	B	2001	ADP	PA-O3A-PB	-3.76	119.91	132.83
4	A	2001	ADP	PA-O3A-PB	-3.69	120.15	132.83
4	B	2001	ADP	N3-C2-N1	-3.66	122.96	128.68
4	A	2001	ADP	N3-C2-N1	-3.65	122.97	128.68
4	B	2001	ADP	C3'-C2'-C1'	3.30	105.95	100.98
4	A	2001	ADP	C3'-C2'-C1'	3.27	105.91	100.98
4	A	2001	ADP	C4-C5-N7	-2.82	106.47	109.40
4	B	2001	ADP	C4-C5-N7	-2.79	106.49	109.40
4	B	2001	ADP	C2-N1-C6	2.03	122.22	118.75

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	2001	ADP	C5'-O5'-PA-O1A
4	A	2001	ADP	C5'-O5'-PA-O3A
4	B	2001	ADP	C5'-O5'-PA-O3A
4	B	2001	ADP	C5'-O5'-PA-O1A

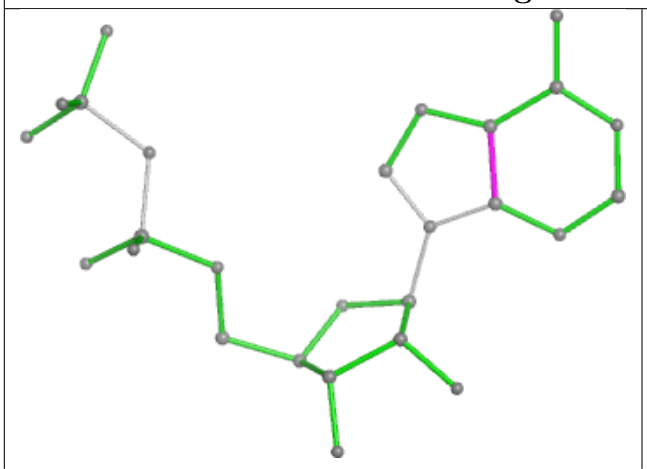
There are no ring outliers.

4 monomers are involved in 6 short contacts:

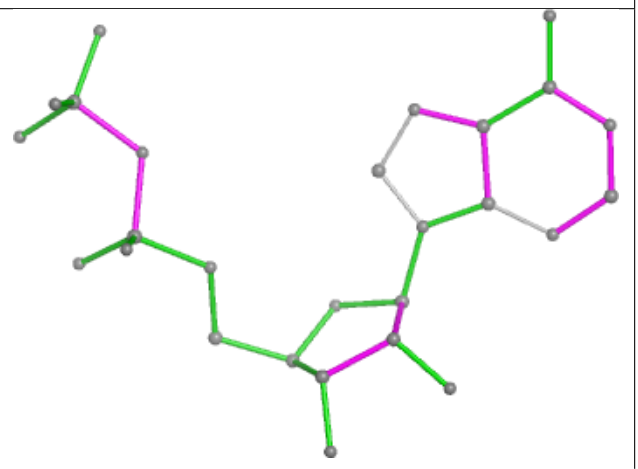
Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	B	2001	ADP	1	0
5	A	2002	PO4	1	0
5	B	2002	PO4	1	0
4	A	2001	ADP	3	0

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

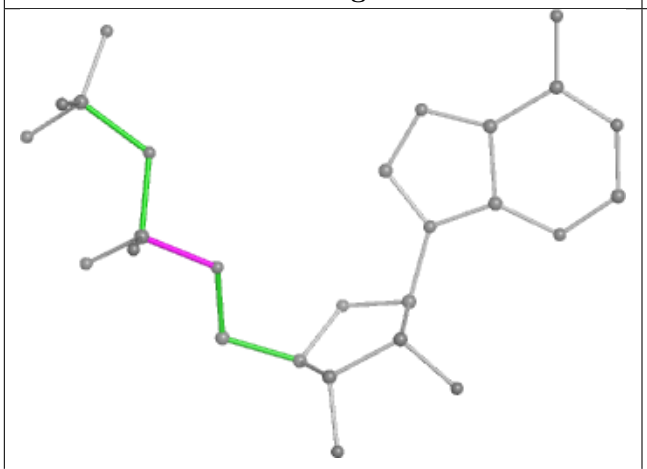
Ligand ADP B 2001



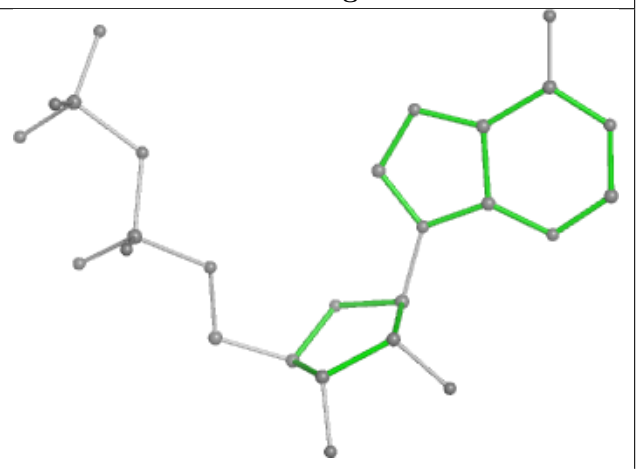
Bond lengths



Bond angles

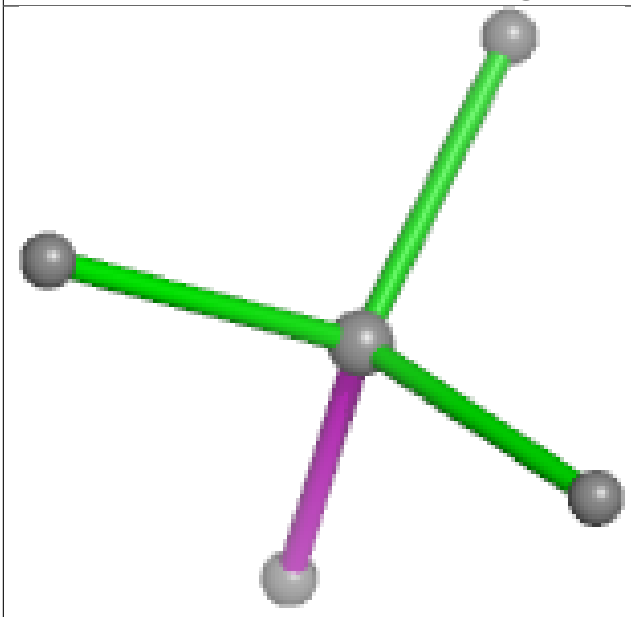


Torsions

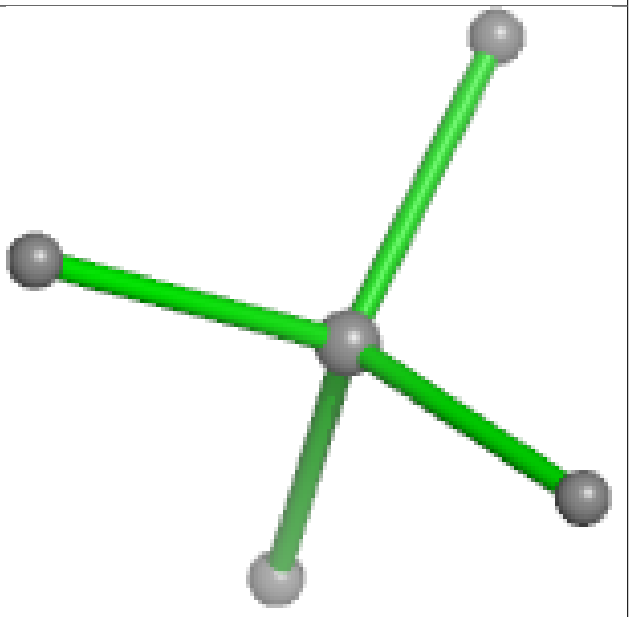


Rings

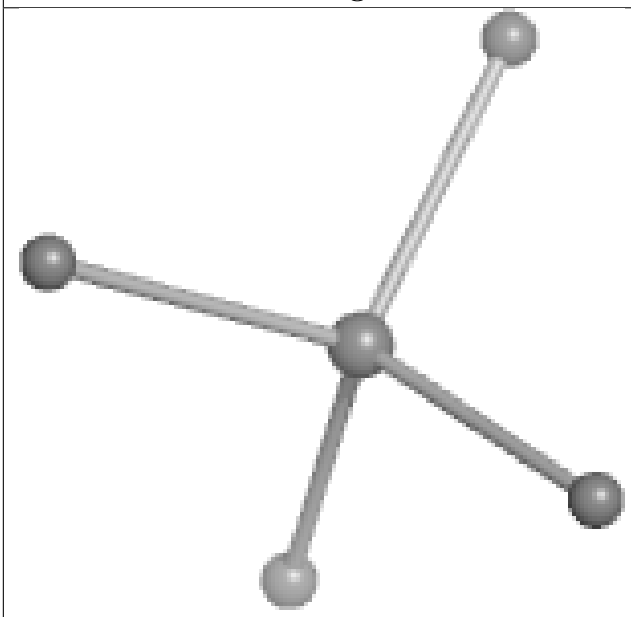
Ligand PO4 A 2002



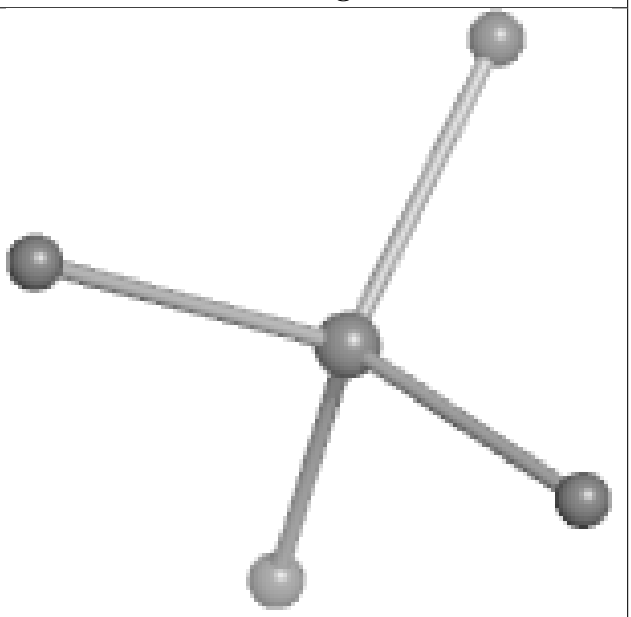
Bond lengths



Bond angles

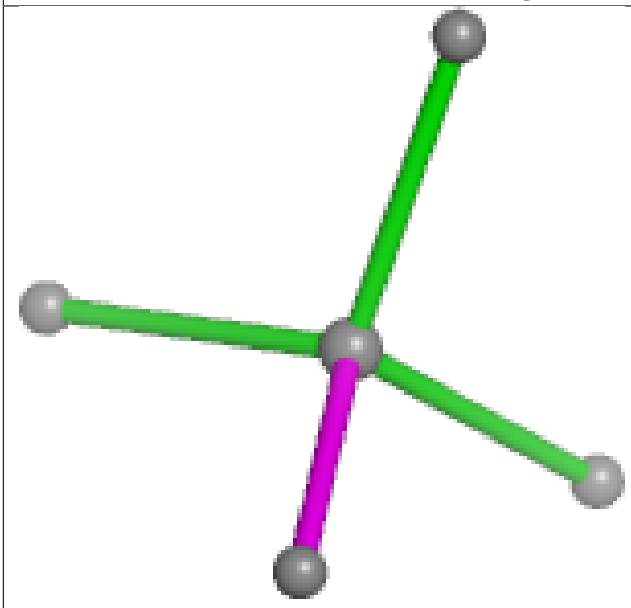


Torsions

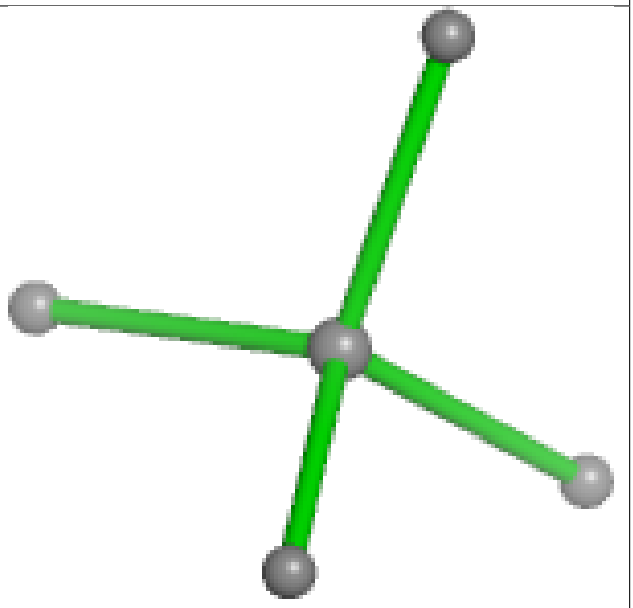


Rings

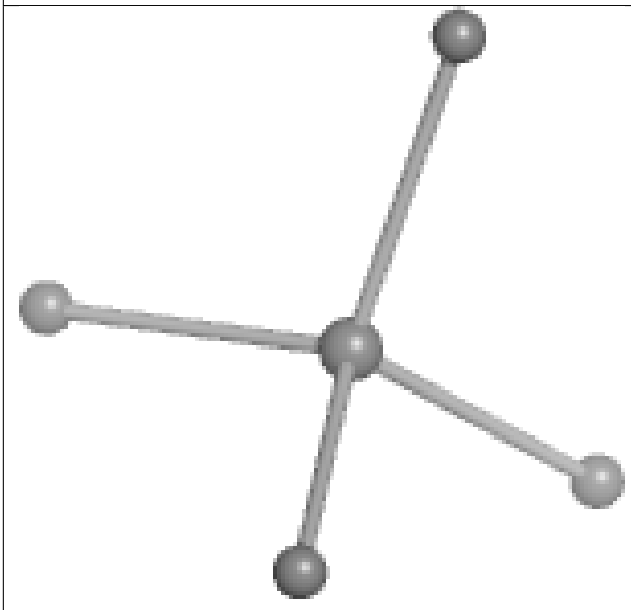
Ligand PO4 B 2002



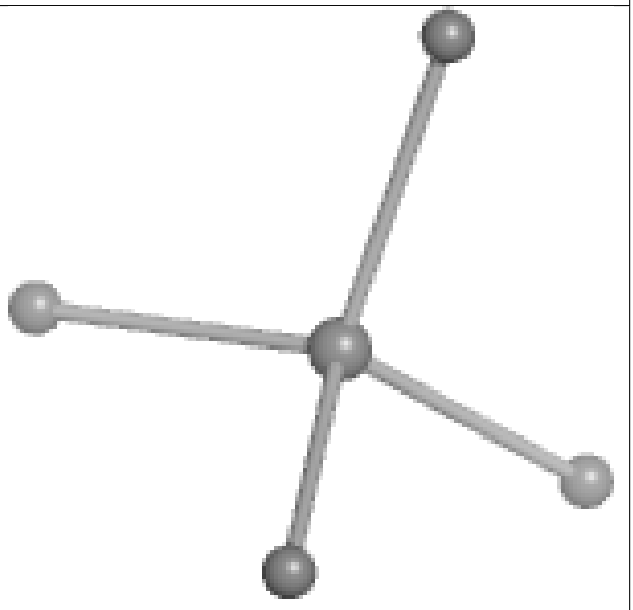
Bond lengths



Bond angles

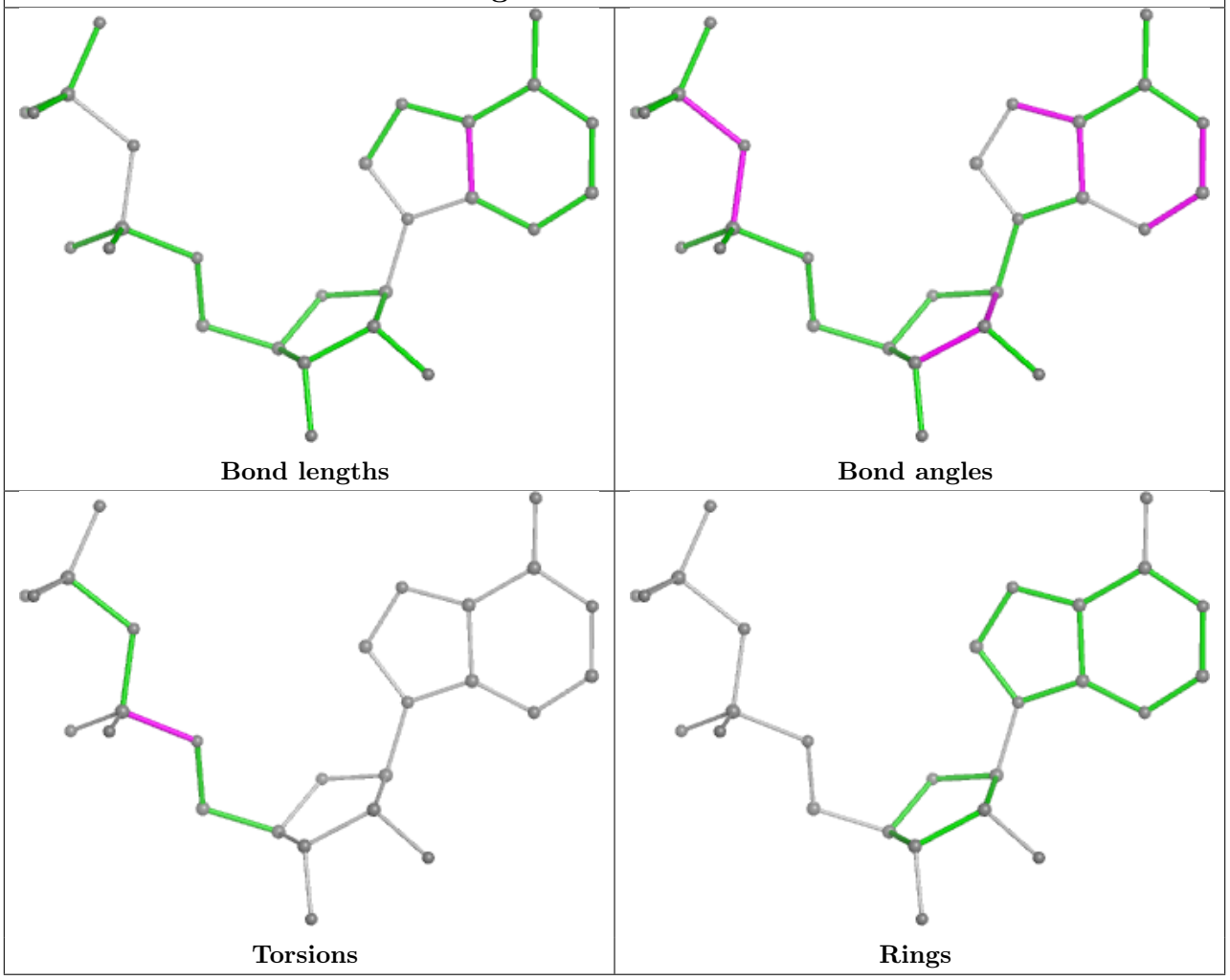


Torsions



Rings

Ligand ADP A 2001



5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	B	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B	1830:ARG	C	1831:GLN	N	3.54

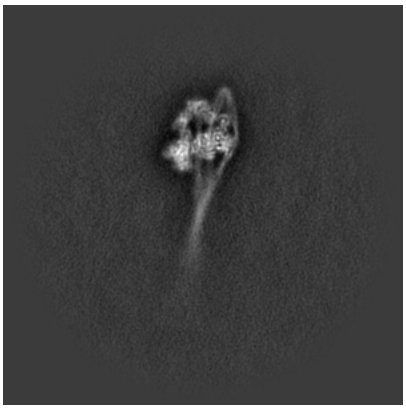
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-55382. These allow visual inspection of the internal detail of the map and identification of artifacts.

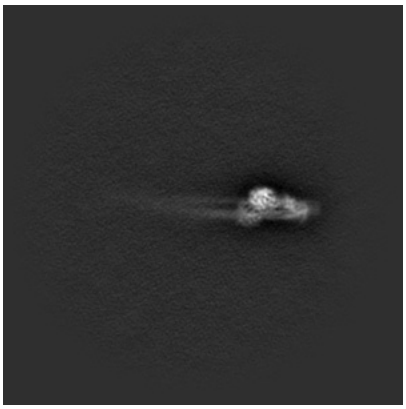
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

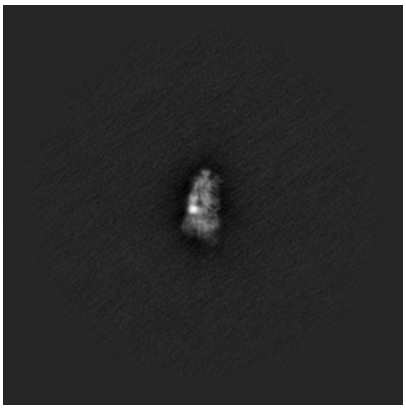
6.1.1 Primary map



X

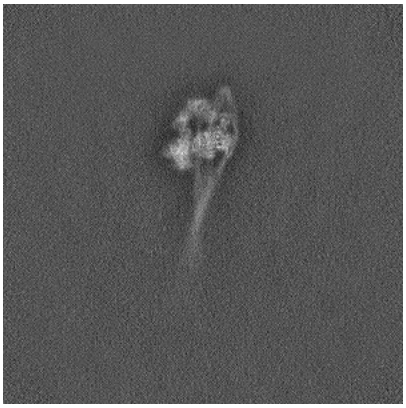


Y

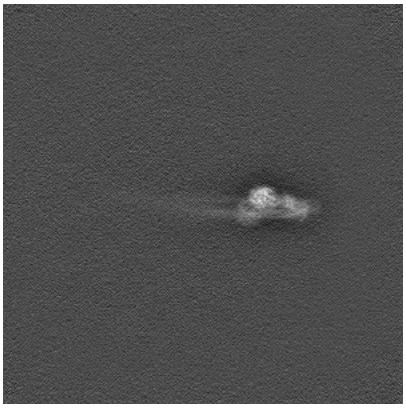


Z

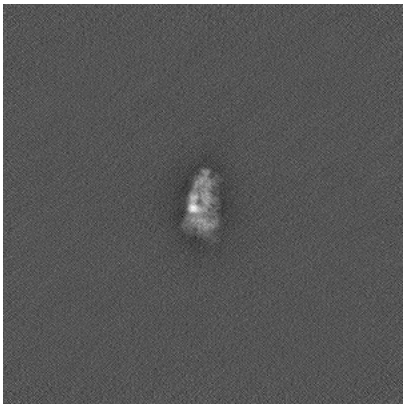
6.1.2 Raw map



X



Y

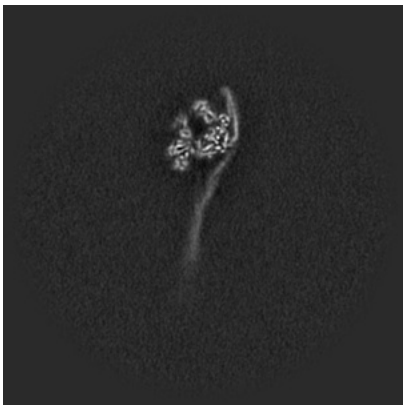


Z

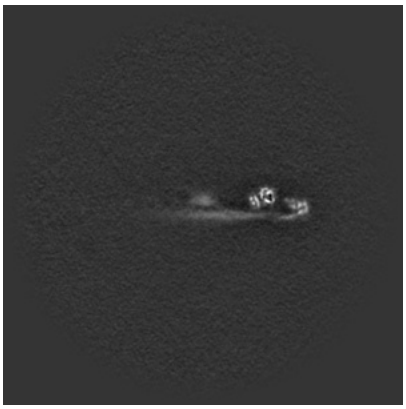
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

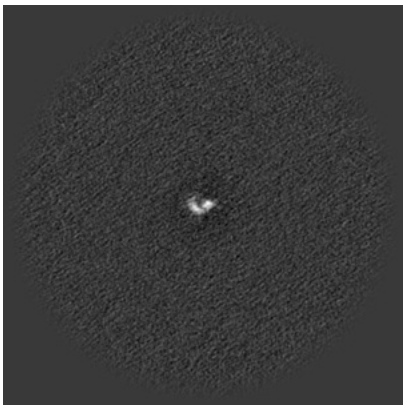
6.2.1 Primary map



X Index: 256



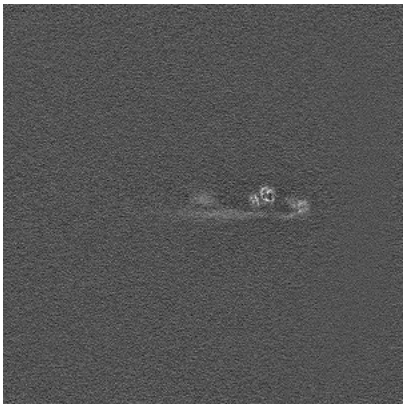
Y Index: 256



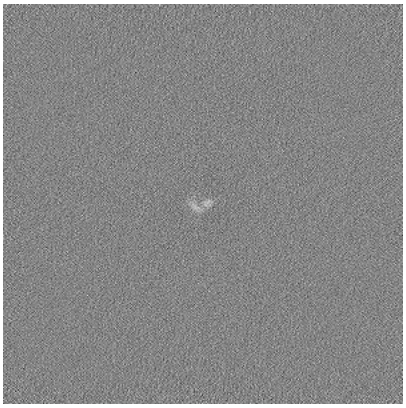
Z Index: 256

6.2.2 Raw map

X Index: 256



Y Index: 256

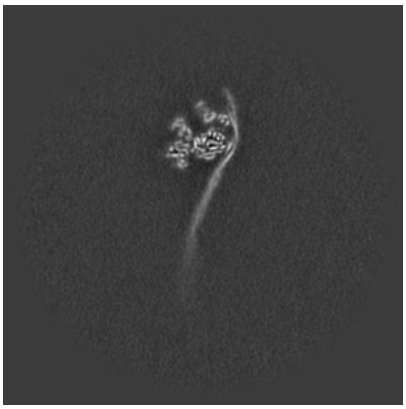


Z Index: 256

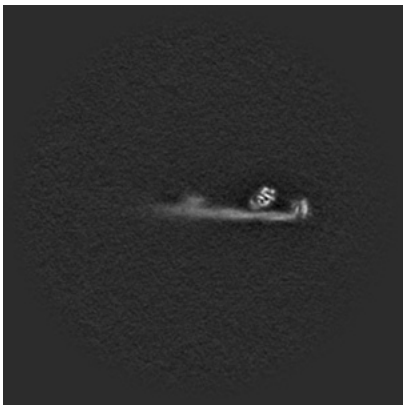
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

6.3.1 Primary map



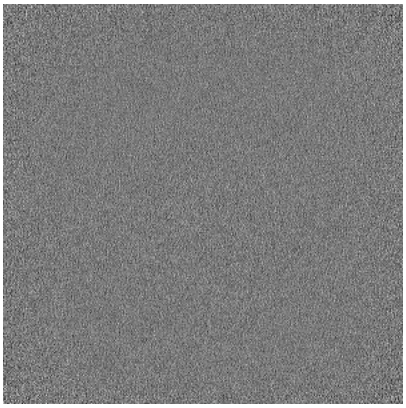
X Index: 260



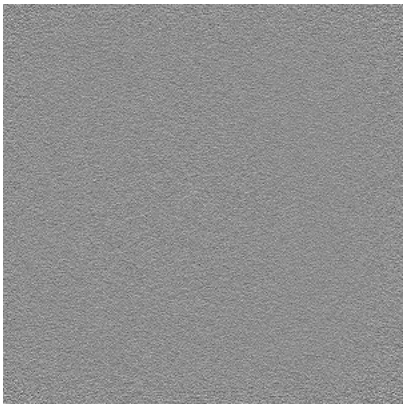
Y Index: 251

Z Index: 328

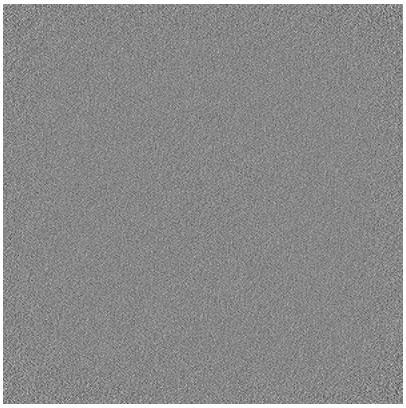
6.3.2 Raw map



X Index: 0



Y Index: 0

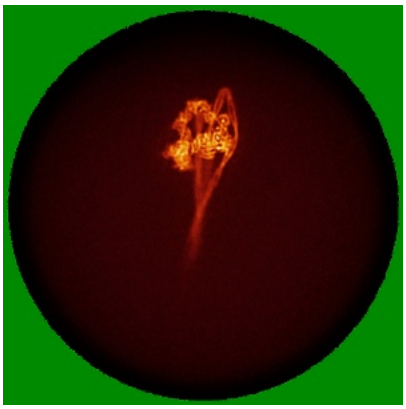


Z Index: 511

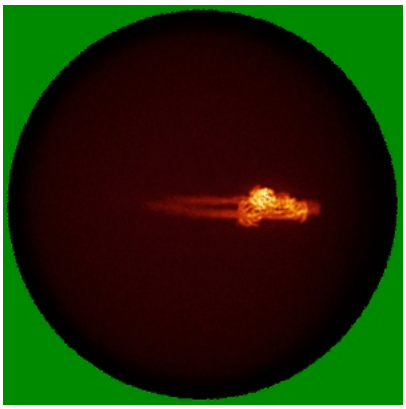
The images above show the largest variance slices of the map in three orthogonal directions.

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

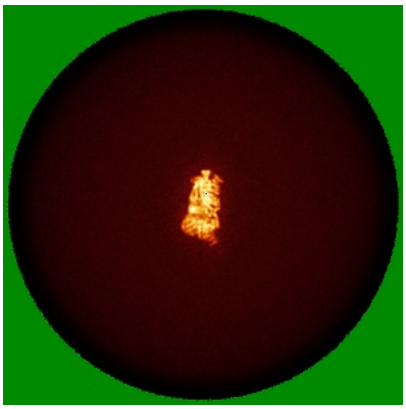
6.4.1 Primary map



X

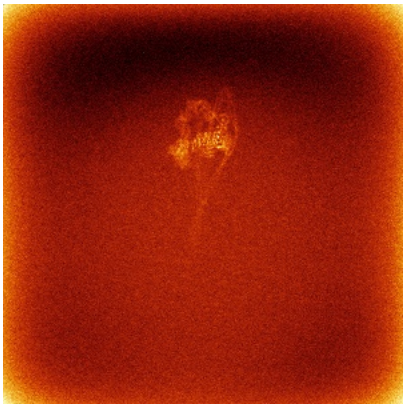


Y

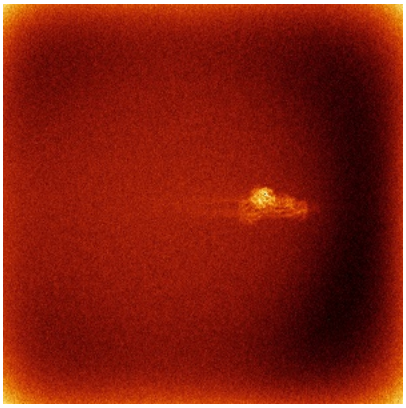


Z

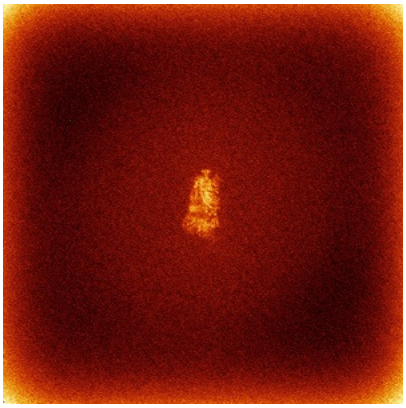
6.4.2 Raw map



X



Y

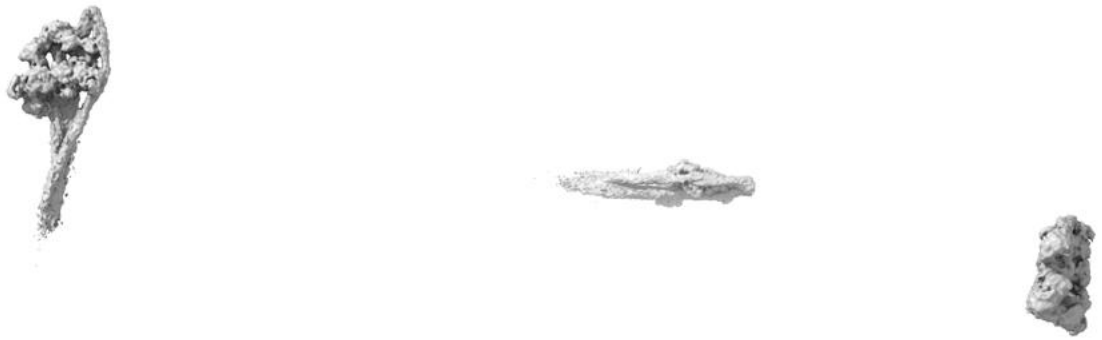


Z

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.

6.5.2 Raw map

X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

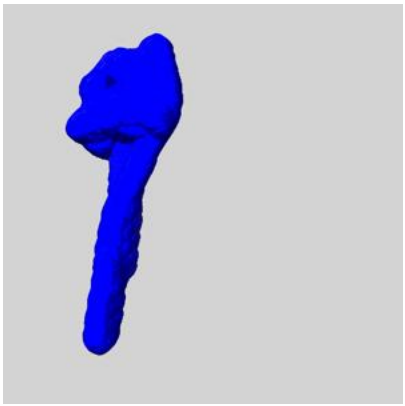
6.6 Mask visualisation (i)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

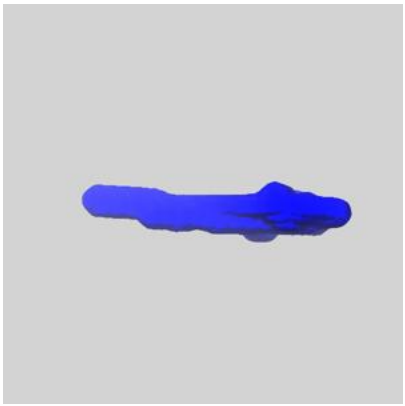
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

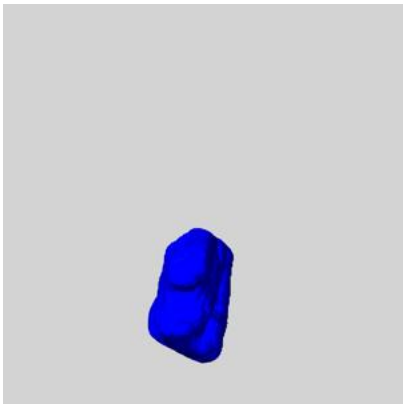
6.6.1 emd_55382_msk_1.map (i)



X



Y

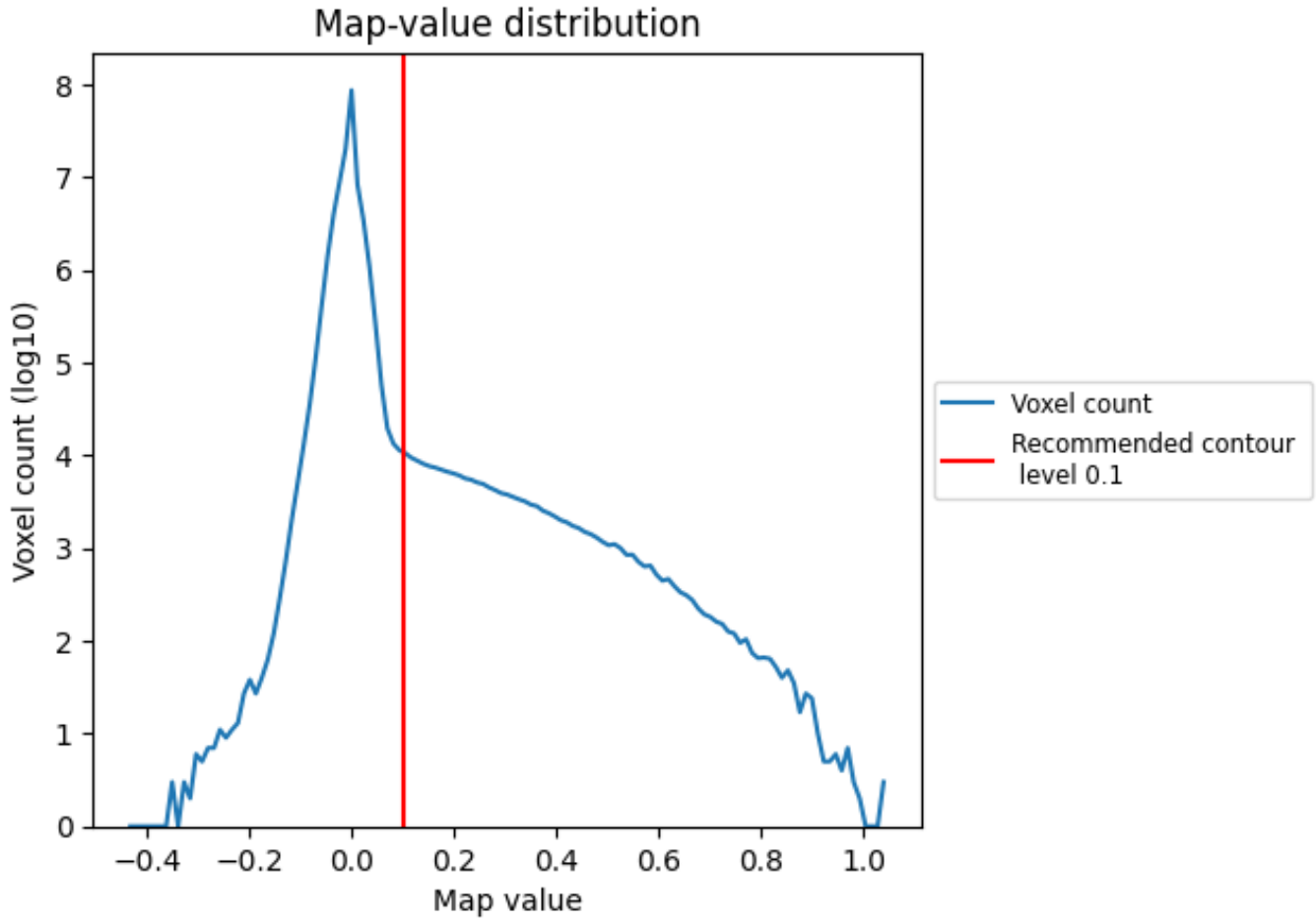


Z

7 Map analysis

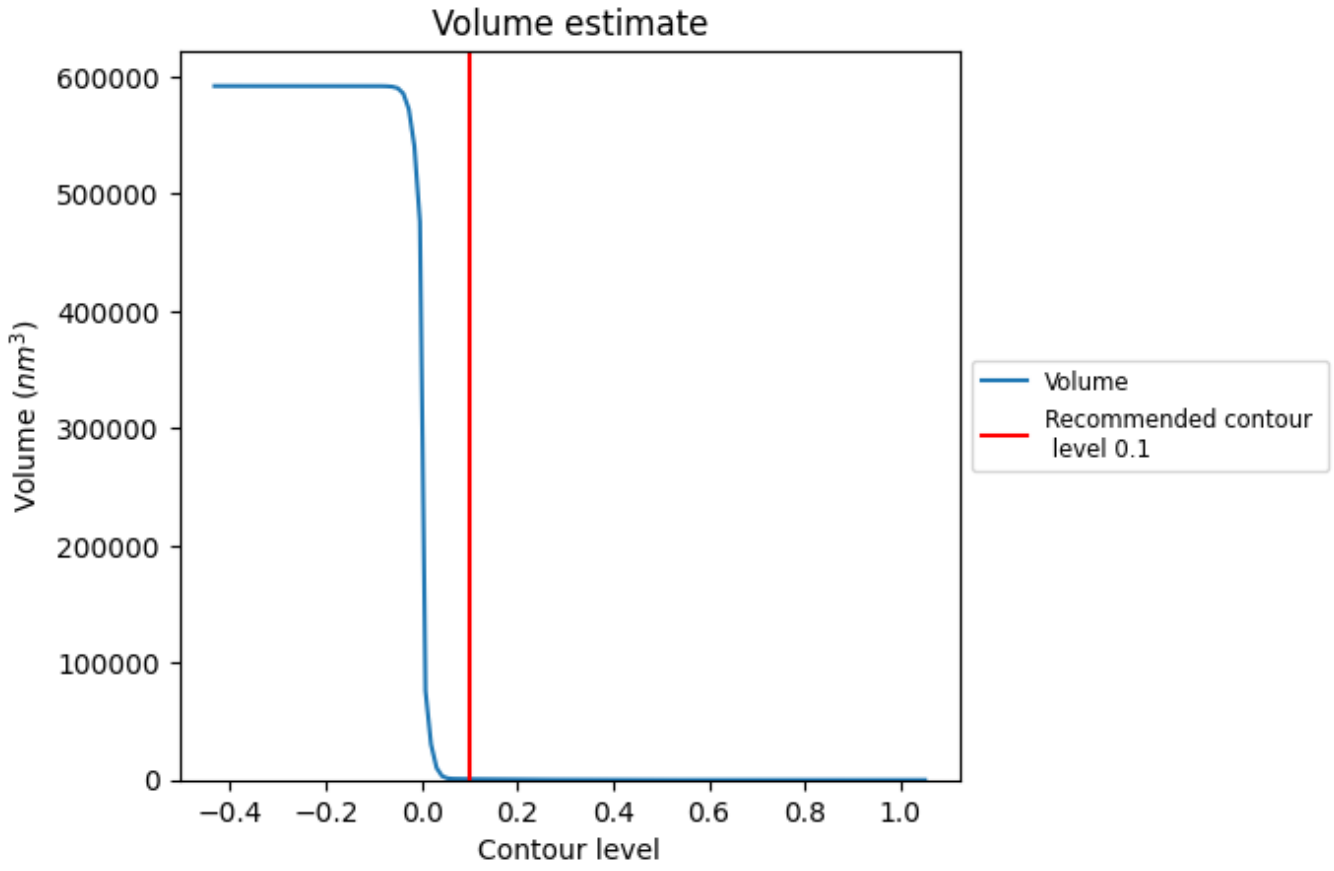
This section contains the results of statistical analysis of the map.

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.

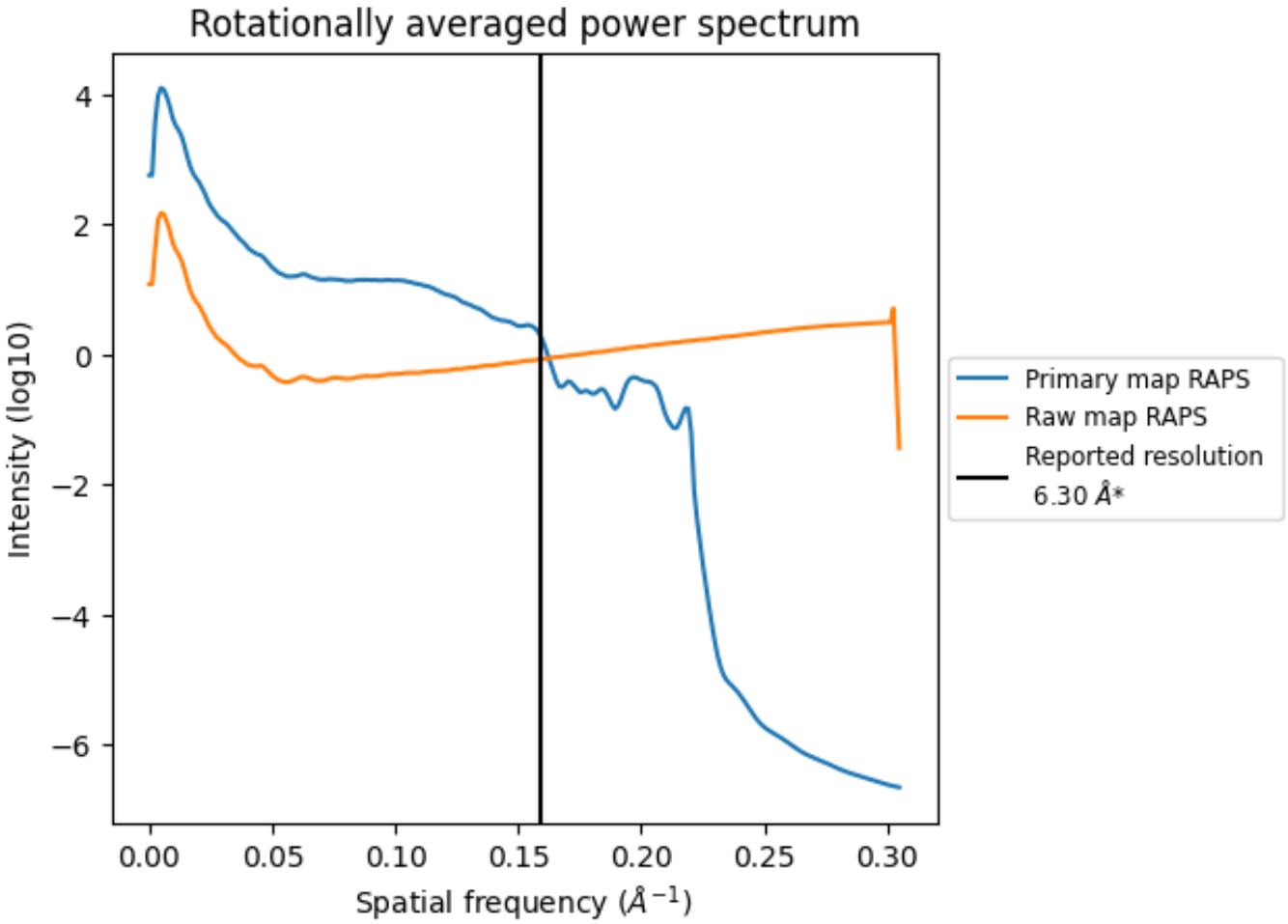
7.2 Volume estimate (i)



The volume at the recommended contour level is 737 nm^3; this corresponds to an approximate mass of 666 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)

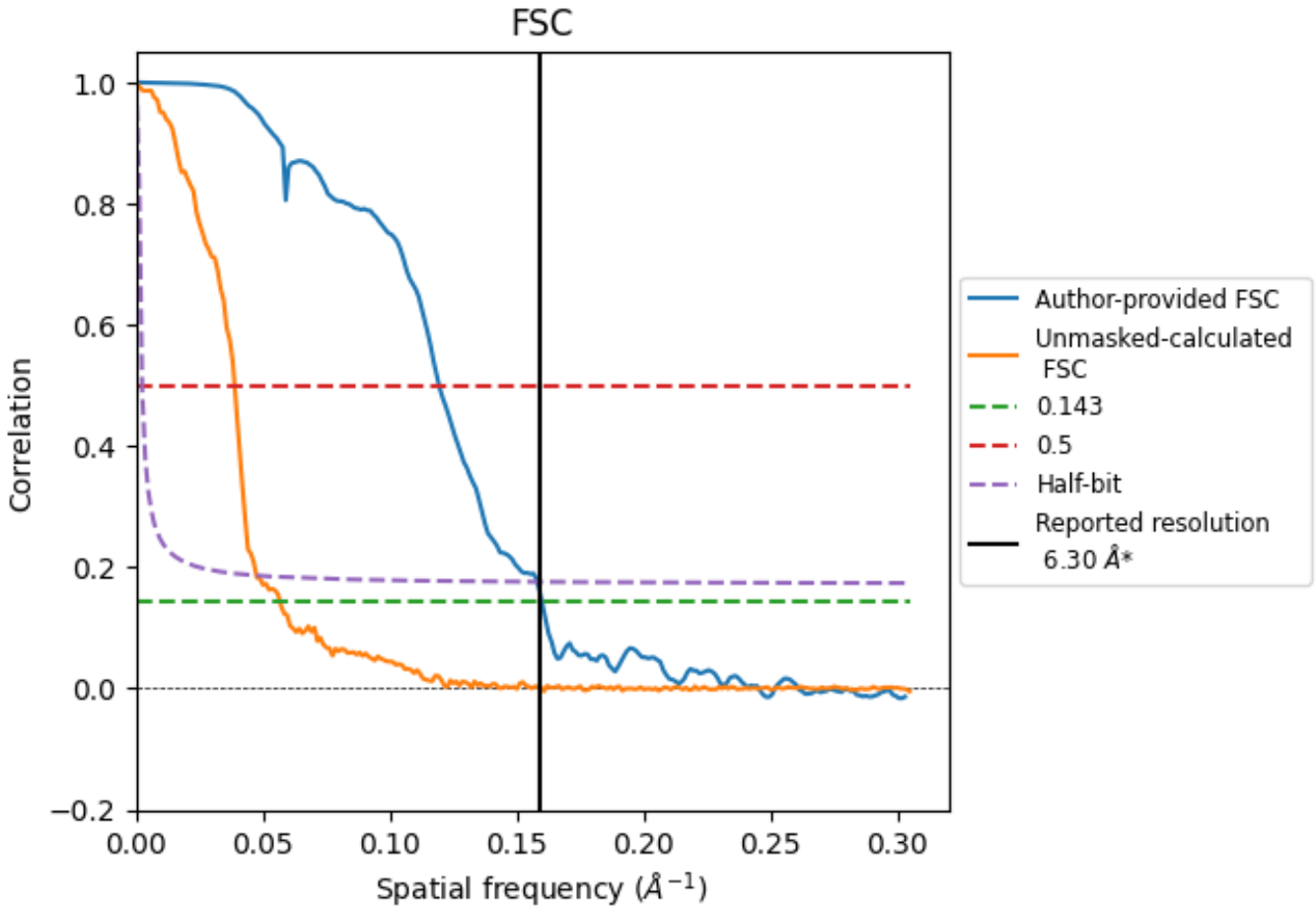


*Reported resolution corresponds to spatial frequency of 0.159 Å^{-1}

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.159 Å^{-1}

8.2 Resolution estimates (i)

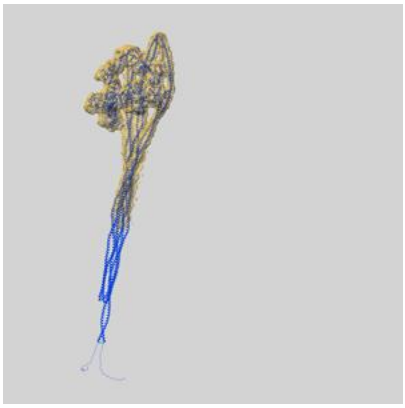
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	6.30	-	-
Author-provided FSC curve	6.25	8.38	6.33
Unmasked-calculated*	17.64	25.77	21.05

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 17.64 differs from the reported value 6.3 by more than 10 %

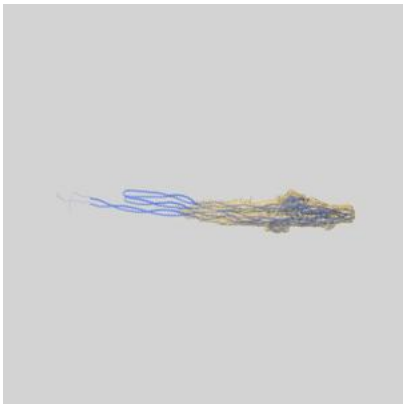
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-55382 and PDB model 9SZR. Per-residue inclusion information can be found in section 3 on page 7.

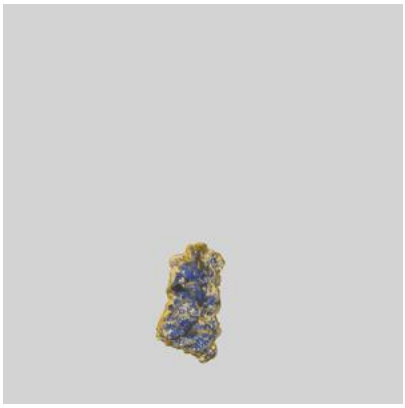
9.1 Map-model overlay



X



Y



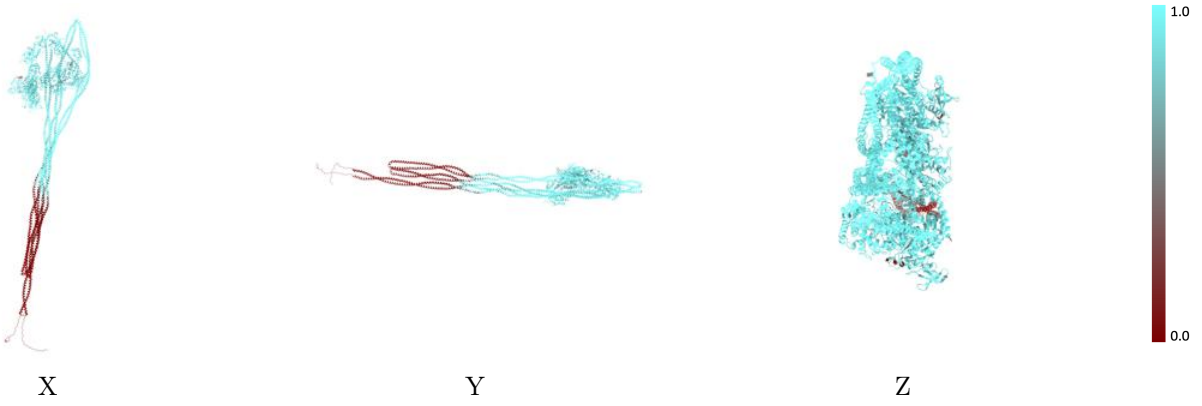
Z

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

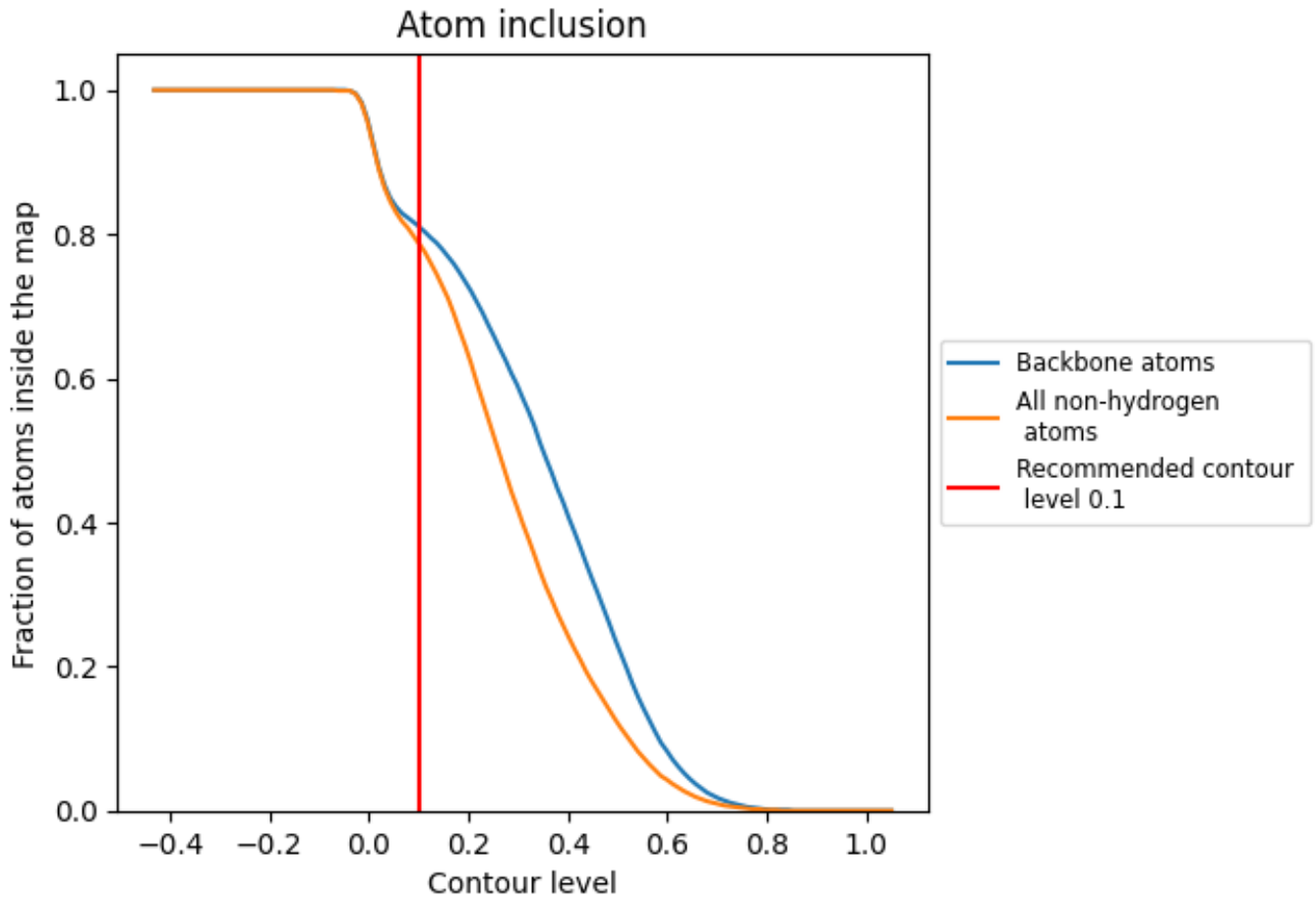
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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



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, 81% of all backbone atoms, 79% 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	0.7870	0.1250
A	0.7570	0.1240
B	0.7610	0.1180
C	0.9710	0.1800
D	0.9530	0.1540
E	0.9720	0.1440
F	0.9890	0.1340