Full wwPDB EM Validation Report ⓘ

Jul 7, 2024 – 06:55 pm BST

PDB ID	:	7OTV
EMDB ID	:	EMD-13067
Title	:	DNA-PKcs in complex with wortmannin
Authors	:	Liang, S.; Thomas, S.E.; Blundell, T.L.
Deposited on	:	2021-06-10
Resolution	:	3.24 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:

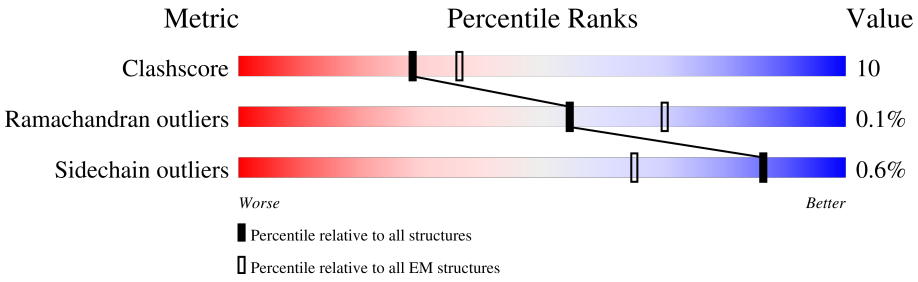
EMDB validation analysis	:	0.0.1.dev92
Mogul	:	1.8.4, CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

1 Overall quality at a glance

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

The reported resolution of this entry is 3.24 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	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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	4148	8% 69% 19% 12%

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
2	KWT	A	6101	-	-	X	-

2 Entry composition

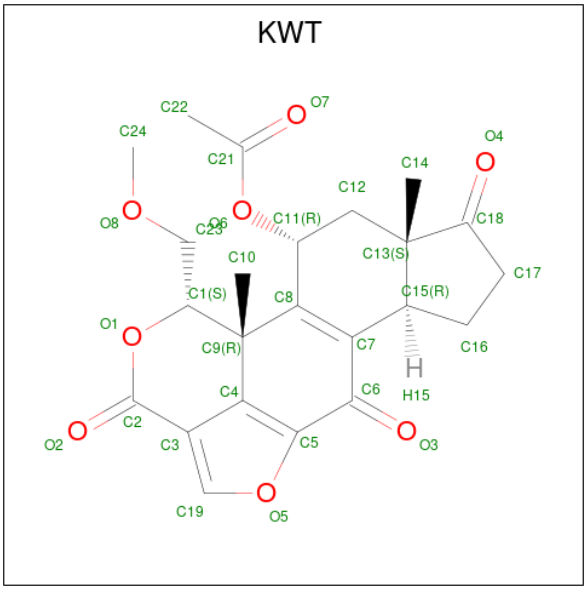
There are 2 unique types of molecules in this entry. The entry contains 29041 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 DNA-dependent protein kinase catalytic subunit,DNA-dependent protein kinase catalytic subunit,DNA-PKcs.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	3656	29010	18609	4903	5307	191	0	0

- Molecule 2 is (1S,6BR,9AS,11R,11BR)-9A,11B-DIMETHYL-1-[(METHYLOXY)METHYL]-3,6,9-TRIOXO-1,6,6B,7,8,9,9A,10,11,11B-DECAHYDRO-3H-FURO[4, 3,2-DE]INDENO[4,5-H][2]BENZOPYRAN-11-YL ACETATE (three-letter code: KWT) (formula: $C_{23}H_{24}O_8$) (labeled as "Ligand of Interest" by depositor).



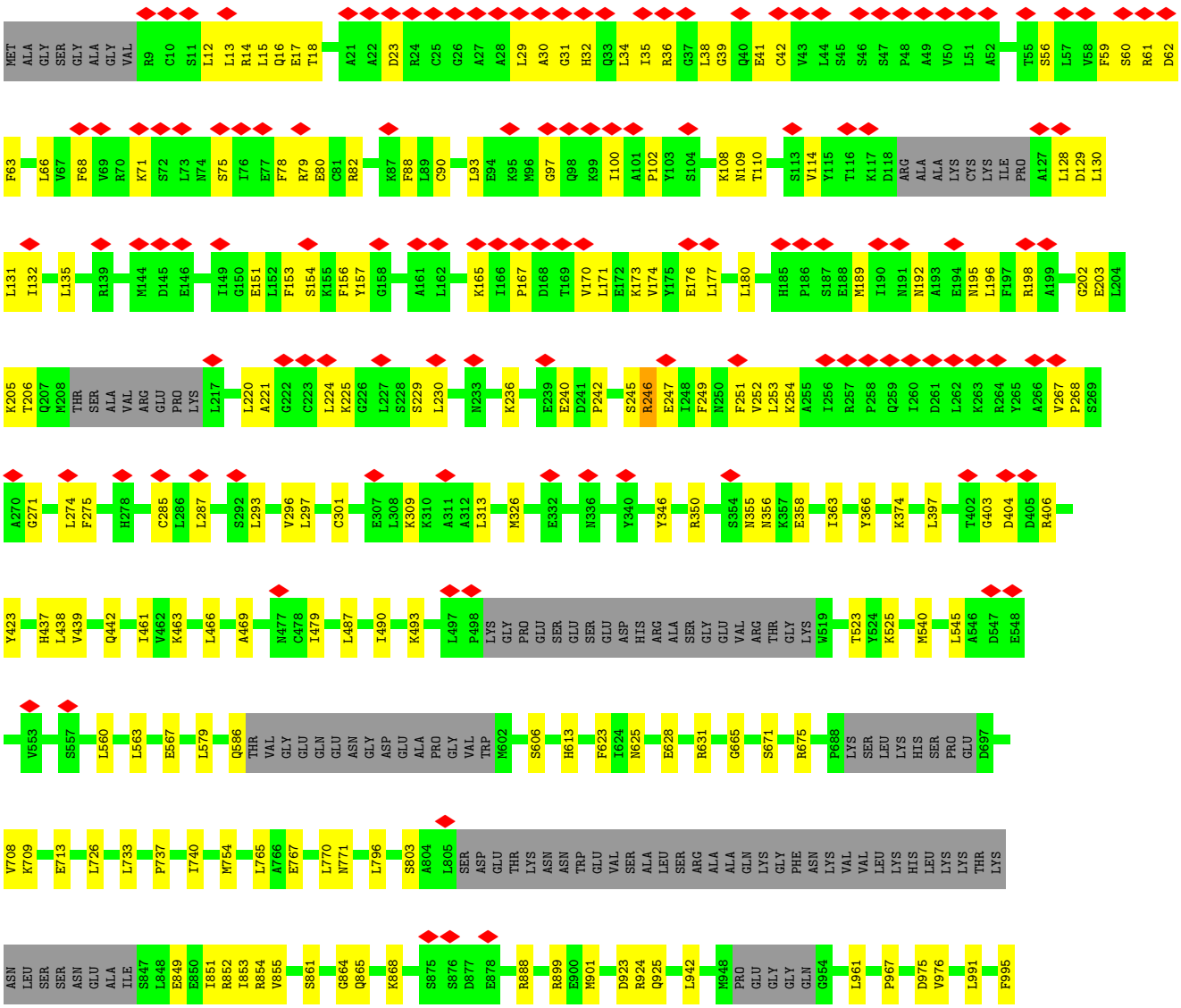
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
2	A	1	31	23	8	0

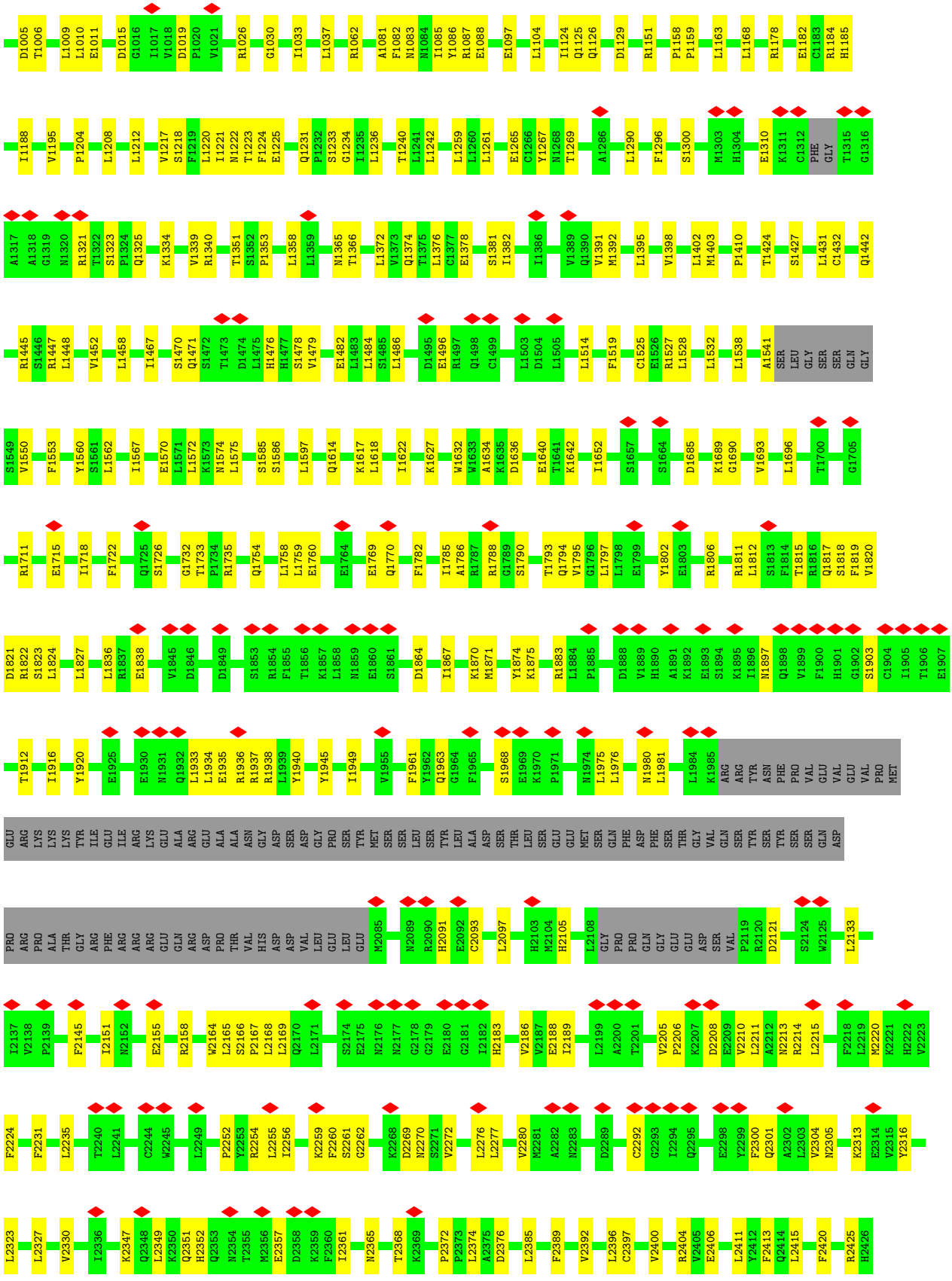
3 Residue-property plots (i)

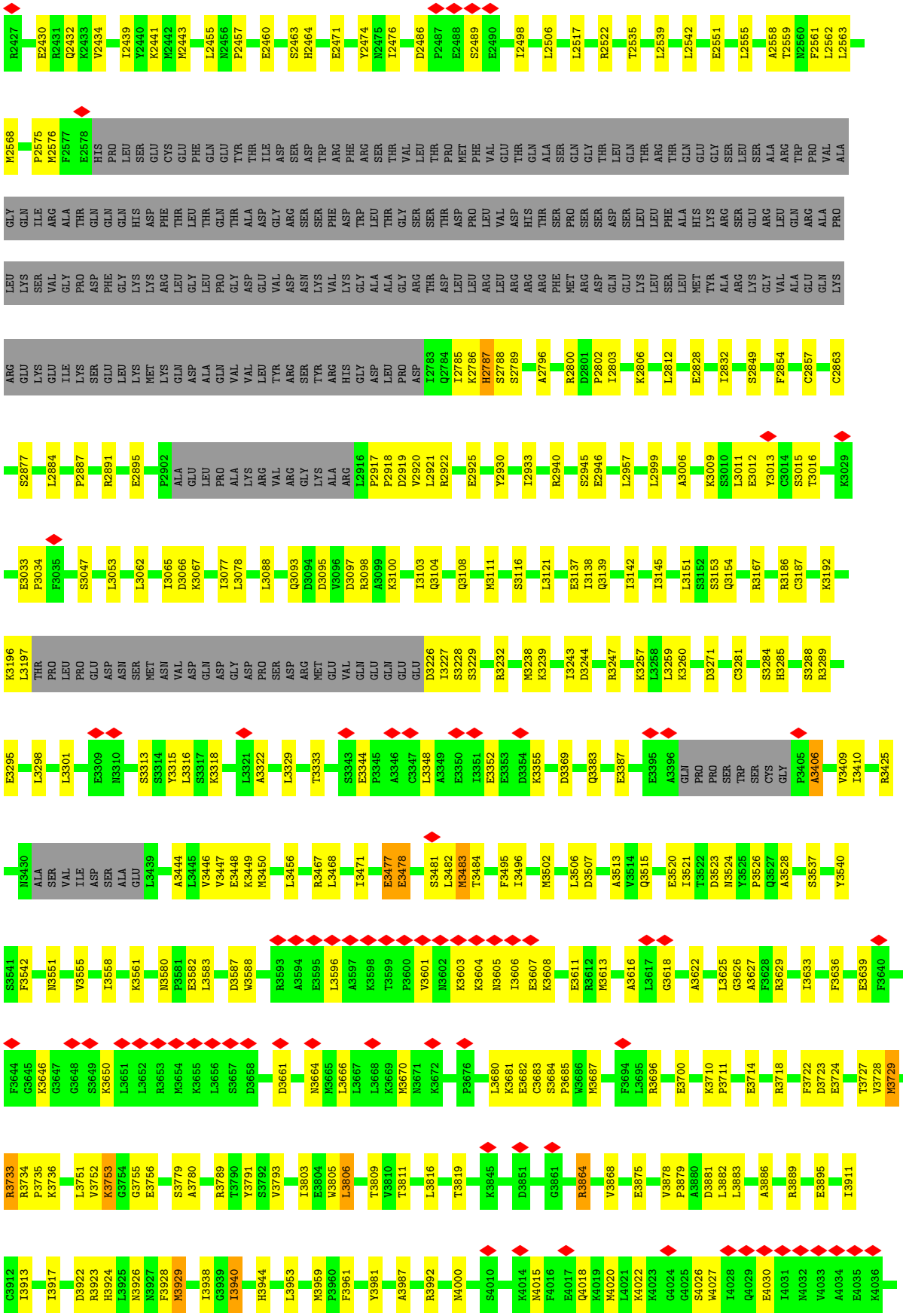
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

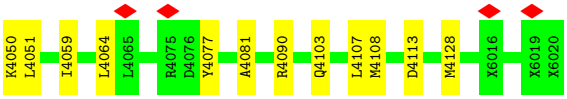
• Molecule 1: DNA-dependent protein kinase catalytic subunit,DNA-dependent protein kinase catalytic subunit,DNA-PKcs

Chain A:




D1005 T1006 L1009 L1010 E1011 D1015 G1016 I1017 V1018 D1019 P1020 V1021 R1026 G1030 I1033 L1037 R1062 A1081 F1082 N1083 N1084 I1085 Y1086 R1087 E1088 E1097 L1104 I1124 Q1125 Q1126 D1129 R1151 P1158 P1159 L1163 L1168 R1178 E1182 C1183 R1184 H1185
I1188 V1195 P1204 L1208 L1212 V1217 S1218 F1219 L1220 I1221 N1222 T1223 F1224 E1225 Q1231 P1232 S1233 G1234 I1235 L1236 T1240 L1241 L1242 L1259 L1260 L1261 E1265 C1266 Y1267 N1268 T1269 A1286 L1290 F1296 S1300 M1303 H1304 E1310 K1311 C1312 PHE GLY T1315 G1316
A1317 A1318 G1319 N1320 R1321 T1322 S1323 P1324 Q1325 K1334 V1339 R1340 T1351 S1352 P1353 L1358 L1359 N1365 T1366 L1372 V1373 Q1374 T1375 L1376 C1377 E1378 S1381 I1382 I1386 V1389 Q1390 V1391 M1392 L1395 V1398 L1402 M1403 P1410 T1424 S1427 L1431 C1432 Q1442
R1445 S1446 R1447 L1448 V1452 L1458 I1467 S1470 Q1471 S1472 T1473 D1474 L1475 H1476 H1477 S1478 V1479 E1482 L1483 L1484 S1485 L1486 D1495 E1496 R1497 Q1498 C1499 L1503 D1504 L1505 L1514 F1519 C1525 E1526 R1527 L1528 L1532 L1538 A1541 SER LEU GLY SER SER GLN GLY
S1549 V1550 F1553 Y1560 S1561 L1562 I1567 E1570 L1571 L1572 K1573 N1574 L1575 S1585 S1586 L1597 Q1614 K1617 L1618 I1622 K1627 W1632 W1633 A1634 K1635 D1636 E1640 T1641 K1642 I1652 S1657 S1664 D1685 K1689 G1690 V1693 L1696 T1700 G1705
R1711 E1715 I1718 F1722 Q1725 S1726 G1732 T1733 P1734 R1735 Q1754 L1758 L1759 E1760 E1764 E1769 Q1770 F1782 I1785 A1786 R1787 R1788 G1789 S1790 T1793 Q1794 V1795 G1796 L1797 L1798 E1799 Y1802 E1803 R1806 R1811 L1812 S1813 F1814 T1815 R1816 Q1817 S1818 F1819 V1820
D1821 R1822 S1823 L1824 L1827 L1836 R1837 E1838 V1845 D1846 D1849 S1853 R1854 F1855 T1856 K1857 L1858 N1859 E1860 S1861 D1864 I1867 K1870 M1871 Y1874 K1875 R1883 L1884 P1885 D1888 V1889 H1890 A1891 K1892 E1893 S1894 K1895 I1896 N1897 Q1898 V1899 F1900 H1901 G1902 S1903 C1904 I1905 T1906 E1907
T1912 I1916 Y1920 E1925 E1930 N1931 Q1932 L1933 L1934 E1935 R1936 R1937 R1938 L1939 Y1940 Y1945 I1949 V1955 F1961 Y1962 Q1963 G1964 F1965 S1968 E1969 K1970 P1971 M1974 L1975 L1976 N1980 L1981 L1984 K1985 ARG ARG TYR ASN PHE PRO VAL GLU VAL GLU VAL PRO MET
GLU ARG LYS LYS LYS TYR ILE GLU ILE ARG LYS GLU ALA ARG GLU ALA ALA ASN GLY ASP SER ASP GLY PRO SER TYR MET SER SER LEU SER TYR LEU ALA ASP SER THR LEU SER GLU GLU MET SER GLN PHE ASP PHE SER THR GLY VAL GLN SER TYR SER SER GLN ASP
PRO ARG PRO PHE ARG ARG ARG GLU GLN ARG ASP PRO THR VAL HIS ASP ASP VAL LEU GLU LEU GLU M2085 N2089 R2090 H2091 E2092 C2093 L2097 H2103 M2104 H2105 L2108 GLY PRO PRO GLN GLY GLU GLU ASP SER VAL P2119 R2120 D2121 S2124 W2125 L2133
I2137 V2138 P2139 F2145 I2151 W2152 E2155 R2158 W2164 L2165 S2166 P2167 L2168 L2169 Q2170 L2171 S2174 E2175 N2176 N2177 G2178 G2179 E2180 G2181 I2182 H2183 V2186 Y2187 E2188 I2189 L2199 A2200 T2201 V2205 P2206 K2207 D2208 E2209 V2210 L2211 A2212 M2213 R2214 L2215 F2218 L2219 M2220 K2221 H2222 V2223
F2224 F2231 L2235 T2240 L2241 C2244 W2245 L2249 P2252 Y2253 R2254 L2255 I2256 K2259 F2260 S2261 G2262 K2268 D2269 N2270 S2271 V2272 L2276 L2277 V2280 M2281 A2282 N2283 D2289 C2292 G2293 I2294 Q2295 E2298 Y2299 F2300 Q2301 A2302 L2303 V2304 N2305 K2313 E2314 V2315 Y2316
L2323 L2327 V2330 I2336 K2347 Q2348 L2349 K2350 Q2351 H2352 Q2353 N2354 T2355 M2356 E2357 D2358 K2359 F2360 I2361 N2365 T2368 K2369 P2372 P2373 L2374 A2375 D2376 L2385 F2389 V2392 L2396 C2397 V2400 R2404 V2405 E2406 L2411 Y2412 F2413 Q2414 L2415 F2420 R2425 H2426




K4050
L4051
I4059
L4064
L4065
R4075
D4076
Y4077
A4081
R4090
Q4103
L4107
M4108
D4113
M4128
X6016
X6019
X6020

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	64179	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 ($e^-/Å^2$)	47.9	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	2.589	Depositor
Minimum map value	-1.600	Depositor
Average map value	0.002	Depositor
Map value standard deviation	0.058	Depositor
Recommended contour level	0.22	Depositor
Map size (Å)	339.04, 339.04, 339.04	wwPDB
Map dimensions	260, 260, 260	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.304, 1.304, 1.304	Depositor

5 Model quality

5.1 Standard geometry

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

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	0.33	0/29502	0.46	0/39893

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	29010	0	29193	572	0
2	A	31	0	23	23	0
All	All	29041	0	29216	572	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 10.

All (572) 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:3809:THR:CB	1:A:3929:MET:HE1	1.66	1.25
1:A:3809:THR:CB	1:A:3929:MET:CE	2.16	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3751:LEU:HD13	2:A:6101:KWT:H143	1.15	1.09
1:A:3809:THR:HB	1:A:3929:MET:HE3	1.26	1.08
1:A:3809:THR:CG2	1:A:3929:MET:HE1	1.83	1.07
1:A:3809:THR:HB	1:A:3929:MET:CE	1.82	1.03
1:A:3809:THR:OG1	1:A:3929:MET:HE1	1.59	1.02
1:A:3809:THR:OG1	1:A:3929:MET:CE	2.09	1.01
1:A:3811:THR:HG21	2:A:6101:KWT:H223	1.42	1.00
1:A:3751:LEU:CD1	2:A:6101:KWT:H143	1.90	1.00
1:A:3809:THR:HG21	1:A:3929:MET:HE1	1.45	0.98
1:A:3809:THR:CB	1:A:3929:MET:HE3	1.92	0.93
1:A:3444:ALA:HA	1:A:3482:LEU:CD2	1.99	0.93
1:A:3805:TRP:CE3	2:A:6101:KWT:H141	2.04	0.92
1:A:3811:THR:CG2	2:A:6101:KWT:H223	2.00	0.91
1:A:3803:ILE:CD1	2:A:6101:KWT:C6	2.51	0.88
1:A:3751:LEU:HD13	2:A:6101:KWT:C14	2.04	0.85
1:A:3728:VAL:HG22	1:A:3736:LYS:CD	2.07	0.83
1:A:3803:ILE:HD12	2:A:6101:KWT:O3	1.78	0.83
1:A:3728:VAL:HG22	1:A:3736:LYS:HD2	1.60	0.82
1:A:3618:GLY:H	1:A:3633:ILE:HD12	1.46	0.79
1:A:403:GLY:H	1:A:406:ARG:HH12	1.29	0.78
1:A:3444:ALA:O	1:A:3482:LEU:HD21	1.83	0.78
1:A:3751:LEU:HD12	1:A:3805:TRP:CE3	2.18	0.78
1:A:899:ARG:HE	1:A:2568:MET:HB2	1.48	0.78
1:A:3751:LEU:HD21	2:A:6101:KWT:H101	1.67	0.75
1:A:1212:LEU:HD11	1:A:1217:VAL:HA	1.69	0.74
1:A:2796:ALA:O	1:A:2800:ARG:NH1	2.21	0.74
1:A:3298:LEU:HD12	1:A:3333:THR:HG23	1.69	0.73
1:A:3751:LEU:HD12	1:A:3805:TRP:HE3	1.51	0.73
1:A:3288:SER:O	1:A:3289:ARG:NH1	2.20	0.72
1:A:3444:ALA:CA	1:A:3482:LEU:CD2	2.67	0.72
1:A:4050:LYS:HE3	1:A:4059:ILE:HG21	1.71	0.72
1:A:1933:LEU:HD13	1:A:1936:ARG:HB3	1.72	0.71
1:A:3803:ILE:HD12	2:A:6101:KWT:C6	2.19	0.71
1:A:356:ASN:ND2	1:A:404:ASP:O	2.24	0.70
1:A:3444:ALA:HB1	1:A:3482:LEU:HD22	1.73	0.70
1:A:3809:THR:HG21	1:A:3929:MET:CE	2.19	0.70
1:A:3444:ALA:CB	1:A:3482:LEU:HD22	2.21	0.70
1:A:1240:THR:HG22	1:A:1242:LEU:H	1.56	0.70
1:A:1484:LEU:HD11	1:A:1527:ARG:HH12	1.56	0.70
1:A:2151:ILE:HG21	1:A:2188:GLU:HG2	1.73	0.70
1:A:3187:CYS:SG	1:A:3239:LYS:NZ	2.63	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3186:ARG:HD3	1:A:3238:MET:HE3	1.74	0.70
1:A:3520:GLU:OE2	1:A:3524:ASN:ND2	2.25	0.69
1:A:1097:GLU:OE2	1:A:1151:ARG:NH2	2.25	0.69
1:A:3580:ASN:ND2	1:A:3734:ARG:HB2	2.08	0.69
1:A:899:ARG:NH2	1:A:2568:MET:SD	2.65	0.69
1:A:3803:ILE:CD1	2:A:6101:KWT:O3	2.40	0.69
1:A:3281:CYS:HB2	1:A:3329:LEU:HD23	1.75	0.68
1:A:75:SER:H	1:A:78:PHE:HB3	1.59	0.68
1:A:709:LYS:NZ	1:A:713:GLU:OE2	2.27	0.68
1:A:767:GLU:HG2	1:A:851:ILE:HD11	1.75	0.68
1:A:1083:ASN:ND2	1:A:1126:GLN:OE1	2.26	0.68
1:A:3145:ILE:HD11	1:A:3196:LYS:HD2	1.74	0.68
1:A:1185:HIS:NE2	1:A:1265:GLU:OE2	2.26	0.67
1:A:1225:GLU:HB3	1:A:1236:LEU:HB2	1.76	0.67
1:A:3811:THR:HG21	2:A:6101:KWT:C22	2.23	0.67
1:A:16:GLN:NE2	1:A:17:GLU:OE2	2.27	0.67
1:A:38:LEU:O	1:A:41:GLU:HB3	1.95	0.67
1:A:247:GLU:HG2	1:A:285:CYS:HB3	1.76	0.67
1:A:1334:LYS:NZ	1:A:1382:ILE:O	2.28	0.66
1:A:4064:LEU:HD13	1:A:4077:TYR:HB3	1.78	0.66
1:A:3751:LEU:CD2	2:A:6101:KWT:H101	2.26	0.65
1:A:2365:ASN:HD22	1:A:2396:LEU:HD13	1.63	0.64
1:A:3911:ILE:HD12	1:A:3928:PHE:HE1	1.62	0.64
1:A:3495:PHE:HB3	1:A:3502:MET:HE3	1.77	0.64
1:A:90:CYS:O	1:A:93:LEU:HB3	1.98	0.64
1:A:2169:LEU:HD11	1:A:2215:LEU:HD22	1.80	0.64
1:A:1897:ASN:HB3	1:A:1903:SER:HB2	1.81	0.63
1:A:3448:GLU:HB3	1:A:3482:LEU:HD11	1.81	0.63
1:A:3924:HIS:ND1	1:A:3926:ASN:OD1	2.29	0.63
1:A:463:LYS:HD3	1:A:545:LEU:HD22	1.80	0.63
1:A:1151:ARG:NH1	1:A:1163:LEU:O	2.31	0.63
1:A:3009:LYS:O	1:A:3013:TYR:HB3	1.98	0.63
1:A:2563:LEU:HD13	1:A:2812:LEU:HD11	1.80	0.63
1:A:1432:CYS:HB3	1:A:1486:LEU:HD11	1.79	0.62
1:A:3580:ASN:HD21	1:A:3734:ARG:HB2	1.63	0.62
1:A:3992:ARG:NH1	1:A:4103:GLN:OE1	2.33	0.62
1:A:173:LYS:HA	1:A:176:GLU:HG3	1.81	0.62
1:A:3580:ASN:HD21	1:A:3734:ARG:CB	2.11	0.62
1:A:374:LYS:HD2	1:A:423:TYR:HB3	1.82	0.62
1:A:1754:GLN:HA	1:A:1785:ILE:HD11	1.81	0.62
1:A:2439:ILE:O	1:A:2443:MET:HG3	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3515:GLN:NE2	1:A:3551:ASN:OD1	2.34	0.61
1:A:3477:GLU:HA	1:A:3477:GLU:OE1	2.01	0.61
1:A:93:LEU:O	1:A:97:GLY:N	2.25	0.61
1:A:2155:GLU:OE2	1:A:2158:ARG:NH2	2.34	0.60
1:A:3666:LEU:O	1:A:3670:MET:HG3	2.01	0.60
1:A:3444:ALA:HA	1:A:3482:LEU:HD21	1.82	0.60
1:A:1358:LEU:HD11	1:A:1410:PRO:HG2	1.84	0.60
1:A:3425:ARG:NH1	1:A:4000:ASN:OD1	2.35	0.60
1:A:3723:ASP:OD1	1:A:3724:GLU:N	2.35	0.60
1:A:3864:ARG:NH1	1:A:3868:VAL:HG21	2.17	0.60
1:A:3284:SER:HB3	1:A:3301:LEU:HD12	1.84	0.59
1:A:3295:GLU:OE2	1:A:3295:GLU:N	2.33	0.59
1:A:3444:ALA:CA	1:A:3482:LEU:HD21	2.32	0.59
1:A:3728:VAL:HG22	1:A:3736:LYS:HD3	1.83	0.59
1:A:108:LYS:HZ2	1:A:156:PHE:HZ	1.51	0.59
1:A:203:GLU:O	1:A:206:THR:OG1	2.20	0.59
1:A:2091:HIS:CE1	1:A:2093:CYS:SG	2.96	0.58
1:A:3154:GLN:OE1	1:A:3226:ASP:N	2.36	0.58
1:A:3444:ALA:HB2	1:A:3478:GLU:HG2	1.85	0.58
1:A:1733:THR:HG22	1:A:1735:ARG:H	1.67	0.58
1:A:1819:PHE:O	1:A:1823:SER:OG	2.22	0.58
1:A:1267:TYR:CD2	1:A:1290:LEU:HD22	2.39	0.58
1:A:2357:GLU:HB3	1:A:2385:LEU:HD21	1.85	0.58
1:A:4081:ALA:O	1:A:4090:ARG:NH1	2.36	0.58
1:A:1871:MET:HG2	1:A:1940:TYR:HA	1.84	0.58
1:A:3646:LYS:H	1:A:3650:LYS:HB3	1.68	0.58
1:A:3684:SER:HB2	1:A:3685:PRO:HD3	1.85	0.58
1:A:1104:LEU:HD23	1:A:1168:LEU:HD21	1.86	0.58
1:A:628:GLU:OE2	1:A:631:ARG:NH2	2.37	0.57
1:A:3929:MET:HG3	1:A:3940:ILE:CD1	2.34	0.57
1:A:4090:ARG:NH2	1:A:4113:ASP:OD2	2.37	0.57
1:A:205:LYS:HG2	1:A:249:PHE:HZ	1.70	0.57
1:A:2361:ILE:HD12	1:A:2389:PHE:HE2	1.67	0.57
1:A:3244:ASP:OD1	1:A:3247:ARG:NH1	2.37	0.57
1:A:2224:PHE:HB2	1:A:2272:VAL:HG11	1.87	0.57
1:A:2347:LYS:O	1:A:2351:GLN:NE2	2.37	0.57
1:A:606:SER:OG	1:A:1026:ARG:NH2	2.37	0.57
1:A:3751:LEU:CD1	2:A:6101:KWT:C14	2.73	0.57
1:A:1541:ALA:HB2	1:A:1550:VAL:HG12	1.87	0.57
1:A:1769:GLU:O	1:A:1822:ARG:NH2	2.24	0.57
1:A:1975:LEU:HD12	1:A:1976:LEU:HD12	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1125:GLN:NE2	1:A:1129:ASP:OD2	2.37	0.56
1:A:3961:PHE:HE2	1:A:4107:LEU:HD13	1.70	0.56
1:A:1525:CYS:SG	1:A:1574:ASN:ND2	2.78	0.56
1:A:1011:GLU:O	1:A:1015:ASP:N	2.38	0.56
1:A:2406:GLU:OE1	1:A:2441:LYS:NZ	2.34	0.56
1:A:2443:MET:SD	1:A:2476:ILE:HG23	2.46	0.56
1:A:131:LEU:HD22	1:A:173:LYS:HD2	1.85	0.56
1:A:1867:ILE:O	1:A:1871:MET:HG3	2.06	0.56
1:A:3596:LEU:HD12	1:A:3601:VAL:HA	1.88	0.56
1:A:2254:ARG:NH1	1:A:2292:CYS:O	2.39	0.56
1:A:2260:PHE:O	1:A:2270:ASN:ND2	2.38	0.56
1:A:229:SER:HA	1:A:274:LEU:HD13	1.88	0.56
1:A:1754:GLN:HG3	1:A:1785:ILE:HG13	1.88	0.56
1:A:2919:ASP:OD1	1:A:2920:VAL:N	2.38	0.56
1:A:3751:LEU:HD11	2:A:6101:KWT:H101	1.86	0.56
1:A:3803:ILE:HD11	2:A:6101:KWT:C6	2.34	0.56
1:A:1224:PHE:HD2	1:A:1267:TYR:HE1	1.54	0.55
1:A:3406:ALA:O	1:A:3409:VAL:HG12	2.06	0.55
1:A:205:LYS:HG2	1:A:249:PHE:CZ	2.41	0.55
1:A:771:ASN:OD1	1:A:854:ARG:NH2	2.40	0.55
1:A:56:SER:HA	1:A:59:PHE:CD2	2.42	0.55
1:A:1874:TYR:HE2	1:A:1940:TYR:HE1	1.54	0.55
1:A:3710:LYS:HB2	1:A:3711:PRO:HD2	1.88	0.55
1:A:3639:GLU:O	1:A:3643:HIS:N	2.28	0.55
1:A:3680:LEU:HD23	1:A:3682:GLU:H	1.71	0.55
1:A:3751:LEU:HD22	1:A:3803:ILE:HD11	1.88	0.55
1:A:3097:ASP:OD1	1:A:3098:ARG:N	2.37	0.55
1:A:2168:LEU:HD22	1:A:2189:ILE:HD11	1.89	0.55
1:A:13:LEU:HD23	1:A:14:ARG:HE	1.70	0.55
1:A:1812:LEU:O	1:A:1815:THR:N	2.36	0.55
1:A:1442:GLN:HG3	1:A:1445:ARG:HH12	1.71	0.54
1:A:1920:TYR:HE1	1:A:1963:GLN:CB	2.20	0.54
1:A:1961:PHE:O	1:A:1961:PHE:CD1	2.59	0.54
1:A:3735:PRO:HG3	2:A:6101:KWT:H102	1.89	0.54
1:A:4027:TRP:HE3	1:A:4030:GLU:HB3	1.72	0.54
1:A:1267:TYR:HD2	1:A:1290:LEU:HD22	1.72	0.54
1:A:1815:THR:O	1:A:1818:SER:OG	2.25	0.54
1:A:3137:GLU:OE1	1:A:3186:ARG:NH2	2.35	0.54
1:A:3661:ASP:HA	1:A:3664:ASN:HD21	1.72	0.54
1:A:129:ASP:OD1	1:A:129:ASP:N	2.40	0.54
1:A:849:GLU:OE1	1:A:3108:GLN:NE2	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3605:ASN:OD1	1:A:3606:ILE:N	2.40	0.54
1:A:3608:LYS:O	1:A:3611:GLU:HG3	2.07	0.54
1:A:1351:THR:HG22	1:A:1353:PRO:HD2	1.90	0.54
1:A:901:MET:SD	1:A:2535:THR:OG1	2.64	0.54
1:A:1920:TYR:CE1	1:A:1963:GLN:CB	2.91	0.54
1:A:1759:LEU:HD12	1:A:1785:ILE:HD13	1.88	0.54
1:A:3495:PHE:HB3	1:A:3502:MET:CE	2.38	0.54
1:A:56:SER:HA	1:A:59:PHE:HD2	1.73	0.53
1:A:59:PHE:HA	1:A:62:ASP:HB2	1.91	0.53
1:A:2999:LEU:HD21	1:A:3015:SER:O	2.09	0.53
1:A:2474:TYR:HD2	1:A:2517:LEU:HD12	1.74	0.53
1:A:2918:PRO:HB2	1:A:2922:ARG:HH22	1.73	0.53
1:A:1634:ALA:O	1:A:1642:LYS:NZ	2.29	0.53
1:A:79:ARG:HA	1:A:82:ARG:HB2	1.90	0.53
1:A:2411:LEU:HD11	1:A:2415:LEU:HD23	1.90	0.53
1:A:2091:HIS:HE1	1:A:2093:CYS:SG	2.32	0.53
1:A:355:ASN:HB3	1:A:358:GLU:HG2	1.90	0.53
1:A:1528:LEU:HD21	1:A:1567:ILE:HG23	1.90	0.53
1:A:131:LEU:O	1:A:135:LEU:HG	2.08	0.53
1:A:301:CYS:O	1:A:309:LYS:NZ	2.38	0.53
1:A:3661:ASP:HA	1:A:3664:ASN:ND2	2.24	0.53
1:A:796:LEU:HD23	1:A:855:VAL:HG13	1.90	0.52
1:A:3033:GLU:HG3	1:A:3034:PRO:HD3	1.91	0.52
1:A:170:VAL:O	1:A:171:LEU:HD22	2.10	0.52
1:A:267:VAL:HG23	1:A:268:PRO:HD3	1.90	0.52
1:A:1484:LEU:HD11	1:A:1527:ARG:NH1	2.22	0.52
1:A:1685:ASP:OD1	1:A:1685:ASP:N	2.42	0.52
1:A:1378:GLU:HG2	1:A:1378:GLU:O	2.10	0.52
1:A:3627:ALA:HB3	1:A:3683:CYS:HB2	1.91	0.52
1:A:3348:LEU:O	1:A:3352:GLU:HG2	2.09	0.52
1:A:3496:ILE:HD11	1:A:3521:ILE:HD11	1.92	0.52
1:A:3791:TYR:CE1	1:A:3940:ILE:HG22	2.45	0.52
1:A:13:LEU:O	1:A:14:ARG:NE	2.43	0.52
1:A:2933:ILE:HD11	1:A:3121:LEU:HD22	1.91	0.52
1:A:3751:LEU:HD11	2:A:6101:KWT:C10	2.39	0.51
1:A:1086:TYR:O	1:A:1087:ARG:HB2	2.11	0.51
1:A:2457:PRO:O	1:A:2460:GLU:HG2	2.10	0.51
1:A:3646:LYS:N	1:A:3650:LYS:HB3	2.25	0.51
1:A:1374:GLN:HE22	1:A:1381:SER:HB3	1.76	0.51
1:A:1575:LEU:H	1:A:1575:LEU:HD23	1.76	0.51
1:A:2205:VAL:HB	1:A:2208:ASP:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2555:LEU:HD11	1:A:2854:PHE:HA	1.91	0.51
1:A:3507:ASP:HB3	1:A:3540:TYR:CD1	2.45	0.51
1:A:1519:PHE:CG	1:A:1570:GLU:HG3	2.45	0.51
1:A:2522:ARG:HG2	1:A:2561:PHE:HE1	1.76	0.51
1:A:967:PRO:HD3	1:A:1010:LEU:HD12	1.93	0.51
1:A:3622:ALA:HB3	1:A:3625:LEU:HB2	1.92	0.51
1:A:2806:LYS:HG3	1:A:2857:CYS:HB2	1.93	0.51
1:A:36:ARG:HH21	1:A:39:GLY:HA3	1.76	0.51
1:A:708:VAL:HG22	1:A:740:ILE:HG23	1.92	0.51
1:A:3053:LEU:HD11	1:A:3088:LEU:HD13	1.92	0.51
1:A:1037:LEU:HD23	1:A:1085:ILE:HB	1.93	0.50
1:A:3243:ILE:HD13	1:A:3259:LEU:HD13	1.92	0.50
1:A:3944:HIS:NE2	1:A:4020:MET:SD	2.84	0.50
1:A:1224:PHE:HD2	1:A:1267:TYR:CE1	2.28	0.50
1:A:2256:ILE:HG22	1:A:2260:PHE:HE2	1.76	0.50
1:A:242:PRO:O	1:A:245:SER:OG	2.24	0.50
1:A:2091:HIS:CE1	1:A:2093:CYS:HG	2.30	0.50
1:A:2828:GLU:O	1:A:2832:ILE:HG12	2.11	0.50
1:A:3629:ARG:O	1:A:3633:ILE:HG12	2.11	0.50
1:A:1818:SER:HA	1:A:1821:ASP:HB3	1.94	0.50
1:A:3596:LEU:HB2	1:A:3601:VAL:HG22	1.94	0.50
1:A:403:GLY:O	1:A:406:ARG:NH1	2.45	0.49
1:A:1782:PHE:HA	1:A:1785:ILE:HG22	1.94	0.49
1:A:23:ASP:HA	1:A:30:ALA:HB1	1.93	0.49
1:A:1234:GLY:HA2	1:A:1259:LEU:HD22	1.93	0.49
1:A:2376:ASP:OD1	1:A:2404:ARG:NE	2.41	0.49
1:A:3751:LEU:CD1	2:A:6101:KWT:H101	2.42	0.49
1:A:3227:ILE:HD12	1:A:3227:ILE:H	1.78	0.49
1:A:3791:TYR:CZ	1:A:3940:ILE:HG22	2.47	0.49
1:A:2097:LEU:HD12	1:A:2145:PHE:HZ	1.77	0.49
1:A:1726:SER:O	1:A:1726:SER:OG	2.27	0.49
1:A:2365:ASN:ND2	1:A:2396:LEU:HD13	2.27	0.49
1:A:3809:THR:CG2	1:A:3929:MET:CE	2.62	0.49
1:A:3911:ILE:CD1	1:A:3928:PHE:HE1	2.25	0.49
1:A:975:ASP:OD1	1:A:976:VAL:N	2.45	0.49
1:A:3929:MET:SD	2:A:6101:KWT:O4	2.70	0.49
1:A:1006:THR:HG22	1:A:1009:LEU:HB2	1.94	0.49
1:A:1339:VAL:HG23	1:A:1398:VAL:HG21	1.95	0.49
1:A:3805:TRP:CE3	2:A:6101:KWT:C14	2.88	0.49
1:A:1864:ASP:HA	1:A:1867:ILE:HG12	1.95	0.49
1:A:3062:LEU:HD13	1:A:3093:GLN:NE2	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1208:LEU:HD21	1:A:1220:LEU:HD11	1.94	0.49
1:A:1532:LEU:HD11	1:A:1560:TYR:HB2	1.94	0.49
1:A:1817:GLN:OE1	1:A:1936:ARG:NH2	2.41	0.49
1:A:2269:ASP:OD1	1:A:2269:ASP:N	2.46	0.49
1:A:2313:LYS:HA	1:A:2316:TYR:CE2	2.48	0.49
1:A:2368:THR:HG23	1:A:2372:PRO:HA	1.93	0.49
1:A:2415:LEU:HD12	1:A:2420:PHE:CD1	2.48	0.49
1:A:3151:LEU:HD21	1:A:3197:LEU:HA	1.95	0.49
1:A:59:PHE:HB3	1:A:63:PHE:CE1	2.47	0.48
1:A:3444:ALA:HA	1:A:3482:LEU:HD23	1.92	0.48
1:A:346:TYR:HB3	1:A:350:ARG:HH12	1.78	0.48
1:A:1586:SER:O	1:A:1632:TRP:NE1	2.43	0.48
1:A:1470:SER:HB3	1:A:1476:HIS:CD2	2.48	0.48
1:A:2940:ARG:HG2	1:A:2957:LEU:HD22	1.95	0.48
1:A:3104:GLN:OE1	1:A:3139:GLN:NE2	2.46	0.48
1:A:3444:ALA:C	1:A:3482:LEU:HD21	2.33	0.48
1:A:1933:LEU:HD12	1:A:1937:ARG:HG3	1.95	0.48
1:A:3616:ALA:O	1:A:3629:ARG:NH2	2.47	0.48
1:A:1871:MET:HE1	1:A:1936:ARG:HH21	1.79	0.48
1:A:2259:LYS:HB3	1:A:2272:VAL:HG23	1.94	0.48
1:A:253:LEU:HD11	1:A:271:GLY:HA3	1.95	0.48
1:A:1082:PHE:HA	1:A:1085:ILE:HG12	1.94	0.48
1:A:2304:VAL:HG12	1:A:2323:LEU:HD11	1.96	0.48
1:A:2786:LYS:O	1:A:2788:SER:N	2.47	0.48
1:A:3587:ASP:OD2	1:A:3733:ARG:NH1	2.45	0.48
1:A:2261:SER:OG	1:A:2262:GLY:N	2.46	0.48
1:A:2301:GLN:OE1	1:A:2305:ASN:ND2	2.46	0.48
1:A:2877:SER:OG	1:A:2925:GLU:HB3	2.13	0.48
1:A:3446:VAL:O	1:A:3450:MET:HG2	2.13	0.48
1:A:3728:VAL:HG12	1:A:3734:ARG:HD3	1.96	0.48
1:A:1009:LEU:HD21	1:A:1062:ARG:NH1	2.29	0.47
1:A:1471:GLN:N	1:A:1471:GLN:OE1	2.48	0.47
1:A:2542:LEU:HD21	1:A:2558:ALA:HA	1.95	0.47
1:A:1934:LEU:O	1:A:1938:ARG:N	2.43	0.47
1:A:2206:PRO:O	1:A:2210:VAL:HG23	2.14	0.47
1:A:2432:GLN:OE1	1:A:2464:HIS:NE2	2.45	0.47
1:A:2551:GLU:OE2	1:A:2849:SER:OG	2.28	0.47
1:A:3753:LYS:HD2	1:A:3753:LYS:HA	1.56	0.47
1:A:397:LEU:HD21	1:A:438:LEU:HD22	1.95	0.47
1:A:195:ASN:O	1:A:198:ARG:HG3	2.15	0.47
1:A:540:MET:SD	1:A:540:MET:N	2.88	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1572:LEU:HD21	1:A:1618:LEU:HD22	1.96	0.47
1:A:1912:THR:O	1:A:1916:ILE:HG12	2.14	0.47
1:A:3444:ALA:HB2	1:A:3478:GLU:CG	2.44	0.47
1:A:439:VAL:O	1:A:442:GLN:HB3	2.15	0.47
1:A:3729:MET:SD	1:A:3729:MET:N	2.87	0.47
1:A:3733:ARG:HH21	1:A:3755:GLY:C	2.18	0.47
1:A:1323:SER:O	1:A:1325:GLN:N	2.48	0.47
1:A:3809:THR:OG1	1:A:3929:MET:SD	2.73	0.47
1:A:12:LEU:O	1:A:16:GLN:HG2	2.14	0.47
1:A:726:LEU:HD21	1:A:754:MET:SD	2.55	0.47
1:A:1689:LYS:O	1:A:1693:VAL:HG13	2.15	0.47
1:A:2121:ASP:OD1	1:A:2121:ASP:N	2.43	0.47
1:A:3344:GLU:OE2	1:A:3348:LEU:HD23	2.15	0.47
1:A:3803:ILE:CD1	2:A:6101:KWT:C5	2.92	0.47
1:A:63:PHE:O	1:A:66:LEU:HB2	2.15	0.46
1:A:3186:ARG:HD3	1:A:3238:MET:CE	2.44	0.46
1:A:180:LEU:HA	1:A:230:LEU:HD21	1.98	0.46
1:A:3137:GLU:CD	1:A:3186:ARG:HE	2.19	0.46
1:A:3789:ARG:NH2	1:A:3806:LEU:HD11	2.31	0.46
1:A:14:ARG:O	1:A:18:THR:HG23	2.15	0.46
1:A:1793:THR:O	1:A:1797:LEU:HG	2.15	0.46
1:A:2539:LEU:HD13	1:A:2562:LEU:HD11	1.97	0.46
1:A:3066:ASP:OD1	1:A:3067:LYS:N	2.48	0.46
1:A:1300:SER:O	1:A:1300:SER:OG	2.32	0.46
1:A:2785:ILE:O	1:A:2789:SER:HB2	2.16	0.46
1:A:2884:LEU:HD12	1:A:3116:SER:HB2	1.96	0.46
1:A:942:LEU:HD11	1:A:991:LEU:HD21	1.97	0.46
1:A:1711:ARG:NH2	1:A:1760:GLU:OE1	2.48	0.46
1:A:3410:ILE:HD11	1:A:3456:LEU:HB3	1.98	0.46
1:A:3959:MET:HE3	1:A:3959:MET:H	1.81	0.46
1:A:1372:LEU:HD13	1:A:1402:LEU:HD23	1.98	0.46
1:A:1586:SER:O	1:A:1586:SER:OG	2.34	0.46
1:A:2213:ASN:OD1	1:A:2214:ARG:N	2.48	0.46
1:A:586:GLN:HB2	1:A:613:HIS:CD2	2.51	0.46
1:A:1715:GLU:HA	1:A:1718:ILE:HG12	1.98	0.46
1:A:3313:SER:HA	1:A:3316:LEU:HB2	1.96	0.46
1:A:242:PRO:C	1:A:246:ARG:HE	2.20	0.45
1:A:1478:SER:O	1:A:1482:GLU:HG3	2.17	0.45
1:A:1572:LEU:HB3	1:A:1614:GLN:HE21	1.81	0.45
1:A:2183:HIS:CE1	1:A:2186:VAL:HG23	2.52	0.45
1:A:3447:VAL:HG22	1:A:3468:LEU:HD22	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3369:ASP:OD1	1:A:3369:ASP:N	2.49	0.45
1:A:3484:THR:HG23	1:A:3513:ALA:HA	1.97	0.45
1:A:1496:GLU:OE1	1:A:1496:GLU:N	2.42	0.45
1:A:225:LYS:HZ3	1:A:253:LEU:HD13	1.81	0.45
1:A:2471:GLU:HA	1:A:2517:LEU:HD11	1.98	0.45
1:A:3636:PHE:CE2	1:A:3670:MET:HG2	2.52	0.45
1:A:189:MET:SD	1:A:189:MET:N	2.90	0.45
1:A:1484:LEU:HD21	1:A:1527:ARG:HH22	1.80	0.45
1:A:2576:MET:HB3	1:A:2787:HIS:CD2	2.52	0.45
1:A:861:SER:O	1:A:3167:ARG:NH1	2.46	0.45
1:A:1188:ILE:HD13	1:A:1269:THR:HG21	1.98	0.45
1:A:1538:LEU:HD12	1:A:1553:PHE:CE1	2.52	0.45
1:A:1935:GLU:OE2	1:A:1938:ARG:NE	2.34	0.45
1:A:154:SER:HA	1:A:157:TYR:HD2	1.82	0.45
1:A:1221:ILE:HD12	1:A:1221:ILE:H	1.82	0.45
1:A:2327:LEU:HA	1:A:2330:VAL:HG12	1.99	0.45
1:A:2930:TYR:HA	1:A:2933:ILE:HG22	1.98	0.45
1:A:100:ILE:HB	1:A:102:PRO:HD3	1.98	0.45
1:A:1158:PRO:N	1:A:1159:PRO:HD2	2.31	0.45
1:A:2361:ILE:HD12	1:A:2389:PHE:CE2	2.51	0.45
1:A:2863:CYS:SG	1:A:2895:GLU:HG3	2.57	0.45
1:A:487:LEU:HD12	1:A:490:ILE:HD11	1.99	0.45
1:A:2372:PRO:O	1:A:2374:LEU:N	2.50	0.45
1:A:3751:LEU:HD21	2:A:6101:KWT:C10	2.42	0.45
1:A:3603:LYS:HB3	1:A:3606:ILE:HG22	1.98	0.44
1:A:849:GLU:OE2	1:A:852:ARG:NH1	2.50	0.44
1:A:3467:ARG:O	1:A:3471:ILE:HG12	2.17	0.44
1:A:3779:SER:OG	1:A:3780:ALA:N	2.50	0.44
1:A:3878:VAL:HG21	1:A:4128:MET:HB3	1.98	0.44
1:A:346:TYR:HD1	1:A:366:TYR:HH	1.63	0.44
1:A:1786:ALA:HB2	1:A:1827:LEU:HD23	1.99	0.44
1:A:221:ALA:O	1:A:225:LYS:HE3	2.18	0.44
1:A:404:ASP:HB2	1:A:1732:GLY:O	2.17	0.44
1:A:1696:LEU:HA	1:A:1696:LEU:HD23	1.81	0.44
1:A:1864:ASP:N	1:A:1864:ASP:OD1	2.50	0.44
1:A:2522:ARG:HG2	1:A:2561:PHE:CE1	2.52	0.44
1:A:2559:THR:O	1:A:2563:LEU:HB2	2.16	0.44
1:A:3088:LEU:HD23	1:A:3088:LEU:HA	1.74	0.44
1:A:3383:GLN:O	1:A:3387:GLU:HG3	2.17	0.44
1:A:3604:LYS:HA	1:A:3607:GLU:HG2	2.00	0.44
1:A:114:VAL:HG12	1:A:130:LEU:HD21	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:151:GLU:HB3	1:A:153:PHE:CE1	2.53	0.44
1:A:493:LYS:O	1:A:625:ASN:ND2	2.51	0.44
1:A:2463:SER:O	1:A:2463:SER:OG	2.31	0.44
1:A:2575:PRO:HA	1:A:2786:LYS:H	1.83	0.44
1:A:3588:TRP:CD1	1:A:3613:MET:HB2	2.52	0.44
1:A:1231:GLN:O	1:A:1233:SER:N	2.47	0.44
1:A:1427:SER:O	1:A:1431:LEU:HD23	2.18	0.44
1:A:1770:GLN:N	1:A:1770:GLN:OE1	2.51	0.44
1:A:1458:LEU:HD13	1:A:1467:ILE:HD11	2.00	0.44
1:A:3229:SER:OG	1:A:3232:ARG:NH1	2.43	0.44
1:A:225:LYS:HZ3	1:A:253:LEU:HD22	1.82	0.43
1:A:275:PHE:CZ	1:A:293:LEU:HD21	2.52	0.43
1:A:1019:ASP:HA	1:A:1026:ARG:HH11	1.82	0.43
1:A:1124:ILE:HG23	1:A:1182:GLU:HG2	2.00	0.43
1:A:1690:GLY:HA2	1:A:1693:VAL:HG22	2.00	0.43
1:A:2506:LEU:HD23	1:A:2506:LEU:HA	1.83	0.43
1:A:3285:HIS:HD2	1:A:3298:LEU:HD11	1.83	0.43
1:A:3793:VAL:HG13	1:A:3803:ILE:HG22	1.99	0.43
1:A:3881:ASP:OD1	1:A:3881:ASP:N	2.50	0.43
1:A:3981:TYR:HD1	1:A:4108:MET:HE2	1.83	0.43
1:A:671:SER:O	1:A:675:ARG:HG3	2.18	0.43
1:A:1365:ASN:OD1	1:A:1366:THR:N	2.51	0.43
1:A:1448:LEU:HD21	1:A:1514:LEU:HD11	1.99	0.43
1:A:1585:SER:O	1:A:1585:SER:OG	2.27	0.43
1:A:2945:SER:HB2	1:A:2946:GLU:OE1	2.17	0.43
1:A:59:PHE:O	1:A:63:PHE:N	2.52	0.43
1:A:864:GLY:O	1:A:868:LYS:NZ	2.43	0.43
1:A:1376:LEU:HD13	1:A:1403:MET:HE1	2.00	0.43
1:A:2415:LEU:HD12	1:A:2420:PHE:CG	2.53	0.43
1:A:2877:SER:HG	1:A:2925:GLU:HB3	1.84	0.43
1:A:3095:ASP:N	1:A:3095:ASP:OD1	2.52	0.43
1:A:3587:ASP:CG	1:A:3733:ARG:HH12	2.21	0.43
1:A:923:ASP:C	1:A:925:GLN:H	2.21	0.43
1:A:1802:TYR:O	1:A:1806:ARG:HG2	2.19	0.43
1:A:3714:GLU:N	1:A:3714:GLU:OE1	2.51	0.43
1:A:3789:ARG:HG2	1:A:3938:ILE:HG12	2.01	0.43
1:A:1622:ILE:HG21	1:A:1652:ILE:HD11	2.00	0.43
1:A:1636:ASP:N	1:A:1636:ASP:OD1	2.50	0.43
1:A:3626:GLY:HA3	1:A:3684:SER:O	2.19	0.43
1:A:355:ASN:OD1	1:A:356:ASN:N	2.52	0.43
1:A:770:LEU:HD12	1:A:770:LEU:HA	1.89	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1242:LEU:HA	1:A:1310:GLU:HB2	2.01	0.43
1:A:3449:LYS:HA	1:A:3449:LYS:HD3	1.72	0.43
1:A:12:LEU:HA	1:A:15:LEU:HB3	2.00	0.43
1:A:1086:TYR:C	1:A:1088:GLU:H	2.22	0.43
1:A:1640:GLU:OE1	1:A:1640:GLU:N	2.50	0.43
1:A:2921:LEU:O	1:A:2925:GLU:HG2	2.19	0.43
1:A:3077:ILE:HG13	1:A:3078:LEU:N	2.34	0.43
1:A:3727:THR:HG22	1:A:3729:MET:SD	2.59	0.43
1:A:579:LEU:HD23	1:A:579:LEU:HA	1.88	0.43
1:A:991:LEU:HD23	1:A:991:LEU:HA	1.85	0.43
1:A:1225:GLU:OE2	1:A:1267:TYR:OH	2.27	0.43
1:A:3444:ALA:CA	1:A:3482:LEU:HD22	2.42	0.43
1:A:79:ARG:O	1:A:82:ARG:HB2	2.19	0.42
1:A:131:LEU:HD12	1:A:132:ILE:N	2.33	0.42
1:A:253:LEU:HD12	1:A:254:LYS:N	2.34	0.42
1:A:737:PRO:HD2	1:A:740:ILE:HD12	2.01	0.42
1:A:1195:VAL:HG11	1:A:1204:PRO:HA	2.00	0.42
1:A:1476:HIS:HB3	1:A:1479:VAL:HG22	2.01	0.42
1:A:2887:PRO:HB2	1:A:3895:GLU:HG3	2.00	0.42
1:A:3700:GLU:HA	1:A:3718:ARG:HA	2.00	0.42
1:A:3875:GLU:O	1:A:3878:VAL:HG12	2.19	0.42
1:A:192:ASN:N	1:A:192:ASN:OD1	2.52	0.42
1:A:1627:LYS:HD2	1:A:1627:LYS:HA	1.84	0.42
1:A:236:LYS:HD3	1:A:246:ARG:HH12	1.84	0.42
1:A:466:LEU:HB3	1:A:560:LEU:HD22	2.01	0.42
1:A:1391:VAL:HG13	1:A:1392:MET:SD	2.59	0.42
1:A:3681:LYS:O	1:A:3685:PRO:HD2	2.19	0.42
1:A:3816:LEU:HD21	1:A:3883:LEU:HD13	2.01	0.42
1:A:251:PHE:HA	1:A:254:LYS:HZ2	1.84	0.42
1:A:287:LEU:HG	1:A:326:MET:SD	2.59	0.42
1:A:563:LEU:O	1:A:567:GLU:HG2	2.19	0.42
1:A:1820:VAL:HG12	1:A:1824:LEU:HD23	2.00	0.42
1:A:3065:ILE:HD13	1:A:3065:ILE:HA	1.91	0.42
1:A:3260:LYS:HA	1:A:3260:LYS:HD2	1.83	0.42
1:A:3483:MET:O	1:A:3483:MET:HG3	2.16	0.42
1:A:3582:GLU:HG2	1:A:3583:LEU:N	2.34	0.42
1:A:1358:LEU:HD21	1:A:1410:PRO:HB2	2.01	0.42
1:A:2486:ASP:HB3	1:A:2489:SER:HB2	2.01	0.42
1:A:3012:GLU:HB2	1:A:3047:SER:HB2	2.02	0.42
1:A:3913:ILE:HG21	1:A:3987:ALA:HB3	2.02	0.42
1:A:174:VAL:O	1:A:177:LEU:HG	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:195:ASN:OD1	1:A:196:LEU:N	2.52	0.42
1:A:1395:LEU:O	1:A:1398:VAL:HG22	2.20	0.42
1:A:3227:ILE:O	1:A:3228:SER:HB3	2.19	0.42
1:A:3819:THR:HG21	1:A:3886:ALA:HB2	2.00	0.42
1:A:3879:PRO:HB2	1:A:3882:LEU:HG	2.01	0.42
1:A:60:SER:OG	1:A:61:ARG:N	2.53	0.42
1:A:1424:THR:HG23	1:A:1427:SER:H	1.85	0.42
1:A:2220:MET:HB3	1:A:2255:LEU:HD22	2.01	0.42
1:A:2576:MET:HB3	1:A:2787:HIS:NE2	2.34	0.42
1:A:3318:LYS:O	1:A:3322:ALA:HB3	2.19	0.42
1:A:3917:ILE:HD13	1:A:4051:LEU:HD21	2.01	0.42
1:A:3922:ASP:O	1:A:3923:ARG:NE	2.49	0.42
1:A:29:LEU:HD13	1:A:32:HIS:HB3	2.02	0.42
1:A:202:GLY:HA2	1:A:205:LYS:HE2	2.02	0.42
1:A:275:PHE:HZ	1:A:293:LEU:HD21	1.84	0.42
1:A:469:ALA:HB2	1:A:479:ILE:HD11	2.02	0.42
1:A:1218:SER:O	1:A:1222:ASN:ND2	2.52	0.42
1:A:1718:ILE:O	1:A:1722:PHE:HB2	2.20	0.42
1:A:42:CYS:HA	1:A:88:PHE:CE1	2.55	0.42
1:A:3542:PHE:HZ	1:A:3555:VAL:HG11	1.84	0.42
1:A:3751:LEU:HD12	1:A:3805:TRP:CZ3	2.52	0.42
1:A:523:THR:HG23	1:A:525:LYS:H	1.85	0.42
1:A:1030:GLY:O	1:A:1033:ILE:HG22	2.20	0.42
1:A:1448:LEU:O	1:A:1452:VAL:HG13	2.20	0.42
1:A:2917:PRO:HB2	1:A:2919:ASP:OD1	2.20	0.42
1:A:3138:ILE:O	1:A:3142:ILE:HG12	2.20	0.42
1:A:3537:SER:HA	1:A:3540:TYR:CE2	2.55	0.42
1:A:4107:LEU:HD23	1:A:4107:LEU:HA	1.79	0.42
1:A:251:PHE:HA	1:A:254:LYS:NZ	2.35	0.41
1:A:2349:LEU:HA	1:A:2352:HIS:CE1	2.56	0.41
1:A:3100:LYS:O	1:A:3103:ILE:HG22	2.20	0.41
1:A:3506:LEU:HD23	1:A:3506:LEU:HA	1.81	0.41
1:A:3929:MET:HE2	1:A:3929:MET:HB3	1.95	0.41
1:A:31:GLY:HA2	1:A:34:LEU:HB2	2.03	0.41
1:A:35:ILE:HG21	1:A:80:GLU:HB3	2.02	0.41
1:A:438:LEU:O	1:A:442:GLN:N	2.49	0.41
1:A:765:LEU:HA	1:A:765:LEU:HD23	1.72	0.41
1:A:853:ILE:HA	1:A:3111:MET:HE1	2.00	0.41
1:A:995:PHE:HB3	1:A:1005:ASP:OD1	2.19	0.41
1:A:1178:ARG:O	1:A:1184:ARG:NH2	2.51	0.41
1:A:2411:LEU:HA	1:A:2411:LEU:HD12	1.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2455:LEU:HD22	1:A:2498:ILE:HG23	2.01	0.41
1:A:109:ASN:OD1	1:A:110:THR:N	2.53	0.41
1:A:296:VAL:HG23	1:A:297:LEU:HD12	2.03	0.41
1:A:2166:SER:OG	1:A:2167:PRO:HD3	2.20	0.41
1:A:2397:CYS:O	1:A:2400:VAL:HG12	2.20	0.41
1:A:36:ARG:NE	1:A:36:ARG:HA	2.36	0.41
1:A:68:PHE:O	1:A:71:LYS:HB2	2.20	0.41
1:A:623:PHE:CE2	1:A:665:GLY:HA3	2.54	0.41
1:A:733:LEU:HD12	1:A:733:LEU:HA	1.85	0.41
1:A:2802:PRO:HG2	1:A:2803:ILE:HD12	2.02	0.41
1:A:3911:ILE:CD1	1:A:3928:PHE:CE1	3.03	0.41
1:A:803:SER:HB3	1:A:852:ARG:HE	1.86	0.41
1:A:2097:LEU:HD23	1:A:2097:LEU:HA	1.81	0.41
1:A:3006:ALA:HB3	1:A:3257:LYS:HE2	2.01	0.41
1:A:2252:PRO:C	1:A:2254:ARG:H	2.23	0.41
1:A:3271:ASP:HB2	1:A:3315:TYR:CE2	2.55	0.41
1:A:220:LEU:O	1:A:224:LEU:HG	2.21	0.41
1:A:240:GLU:HB3	1:A:242:PRO:HD2	2.01	0.41
1:A:1758:LEU:HD23	1:A:1758:LEU:HA	1.84	0.41
1:A:3687:MET:HB3	1:A:3722:PHE:CD1	2.56	0.41
1:A:128:LEU:HD13	1:A:131:LEU:HD21	2.02	0.41
1:A:3953:LEU:HD22	1:A:4026:SER:HB3	2.02	0.41
1:A:363:ILE:HD13	1:A:363:ILE:HA	1.97	0.41
1:A:442:GLN:HG3	1:A:461:ILE:HD11	2.02	0.41
1:A:1081:ALA:O	1:A:1085:ILE:HG23	2.21	0.41
1:A:1220:LEU:O	1:A:1223:THR:OG1	2.27	0.41
1:A:1240:THR:HG23	1:A:1296:PHE:CG	2.56	0.41
1:A:1261:LEU:CD1	1:A:1340:ARG:HG3	2.51	0.41
1:A:1431:LEU:HD11	1:A:1447:ARG:NH2	2.35	0.41
1:A:1795:VAL:HG21	1:A:1838:GLU:HG3	2.03	0.41
1:A:1836:LEU:HD21	1:A:1883:ARG:HH21	1.85	0.41
1:A:2276:LEU:HD23	1:A:2276:LEU:HA	1.92	0.41
1:A:2277:LEU:O	1:A:2280:VAL:HG12	2.21	0.41
1:A:2411:LEU:C	1:A:2413:PHE:H	2.24	0.41
1:A:2425:ARG:HG2	1:A:2460:GLU:OE2	2.21	0.41
1:A:2891:ARG:HD2	1:A:2891:ARG:HA	1.85	0.41
1:A:3011:LEU:O	1:A:3016:THR:OG1	2.21	0.41
1:A:3523:ASP:OD1	1:A:3561:LYS:NZ	2.31	0.41
1:A:3526:PRO:C	1:A:3528:ALA:H	2.23	0.41
1:A:4015:ASN:O	1:A:4018:GLN:HG3	2.20	0.41
1:A:1754:GLN:HE22	1:A:1788:ARG:HD2	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1871:MET:O	1:A:1875:LYS:HG3	2.20	0.41
1:A:2133:LEU:HD23	1:A:2164:TRP:CZ3	2.56	0.41
1:A:2392:VAL:O	1:A:2396:LEU:HD23	2.21	0.41
1:A:3728:VAL:CG1	1:A:3734:ARG:HD3	2.51	0.41
1:A:865:GLN:H	1:A:865:GLN:HG2	1.73	0.40
1:A:1374:GLN:HE22	1:A:1381:SER:CB	2.33	0.40
1:A:1980:ASN:OD1	1:A:1981:LEU:N	2.49	0.40
1:A:2165:LEU:HD12	1:A:2165:LEU:HA	1.81	0.40
1:A:2211:LEU:HA	1:A:2214:ARG:HG2	2.02	0.40
1:A:2300:PHE:O	1:A:2304:VAL:HG13	2.21	0.40
1:A:3192:LYS:HE2	1:A:3192:LYS:HB2	1.90	0.40
1:A:313:LEU:HA	1:A:313:LEU:HD23	1.86	0.40
1:A:888:ARG:HB3	1:A:3889:ARG:HH21	1.85	0.40
1:A:1867:ILE:HA	1:A:1870:LYS:HE3	2.03	0.40
1:A:1945:TYR:O	1:A:1949:ILE:HG12	2.21	0.40
1:A:2164:TRP:C	1:A:2167:PRO:HD2	2.42	0.40
1:A:2392:VAL:HG12	1:A:2396:LEU:HD23	2.03	0.40
1:A:3227:ILE:HG22	1:A:3228:SER:N	2.36	0.40
1:A:3521:ILE:HD12	1:A:3521:ILE:HA	1.91	0.40
1:A:3558:ILE:HD13	1:A:3558:ILE:HA	1.96	0.40
1:A:249:PHE:O	1:A:252:VAL:HG12	2.21	0.40
1:A:346:TYR:HB3	1:A:350:ARG:NH1	2.36	0.40
1:A:3153:SER:OG	1:A:3154:GLN:N	2.55	0.40
1:A:165:LYS:HB2	1:A:167:PRO:HD2	2.03	0.40
1:A:1086:TYR:CE2	1:A:1087:ARG:HG3	2.56	0.40
1:A:1575:LEU:HD11	1:A:1617:LYS:HG3	2.03	0.40
1:A:1790:SER:O	1:A:1794:GLN:HG3	2.21	0.40
1:A:2231:PHE:O	1:A:2235:LEU:HD23	2.21	0.40
1:A:2430:GLU:O	1:A:2434:VAL:HG22	2.21	0.40
1:A:2785:ILE:HD12	1:A:2785:ILE:HA	1.96	0.40
1:A:3259:LEU:HD12	1:A:3259:LEU:HA	1.92	0.40
1:A:3756:GLU:HA	1:A:4022:LYS:NZ	2.37	0.40
1:A:3816:LEU:HA	1:A:3816:LEU:HD23	1.86	0.40
1:A:397:LEU:HD22	1:A:437:HIS:HB3	2.03	0.40
1:A:961:LEU:HD23	1:A:961:LEU:HA	1.94	0.40
1:A:1562:LEU:HD23	1:A:1562:LEU:HA	1.85	0.40
1:A:1597:LEU:HD23	1:A:1597:LEU:HA	1.95	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	3602/4148 (87%)	3293 (91%)	305 (8%)	4 (0%)	51 83

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	3481	SER
1	A	2787	HIS
1	A	3406	ALA
1	A	1968	SER

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	3196/3671 (87%)	3178 (99%)	18 (1%)	86 93

All (18) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	246	ARG
1	A	924	ARG
1	A	1321	ARG
1	A	1811	ARG
1	A	2105	HIS
1	A	3355	LYS
1	A	3477	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	3478	GLU
1	A	3483	MET
1	A	3696	ARG
1	A	3729	MET
1	A	3733	ARG
1	A	3752	VAL
1	A	3753	LYS
1	A	3806	LEU
1	A	3864	ARG
1	A	3929	MET
1	A	3940	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (10) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	1083	ASN
1	A	1374	GLN
1	A	1574	ASN
1	A	2091	HIS
1	A	2305	ASN
1	A	2351	GLN
1	A	2365	ASN
1	A	3139	GLN
1	A	3515	GLN
1	A	3580	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 monosaccharides in this entry.

5.6 Ligand geometry (i)

1 ligand is 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	KWT	A	6101	-	30,35,35	3.76	14 (46%)	35,57,57	8.34	13 (37%)

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	KWT	A	6101	-	-	0/7/75/75	0/5/5/5

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	6101	KWT	C9-C4	12.13	1.64	1.53
2	A	6101	KWT	C9-C8	10.58	1.63	1.53
2	A	6101	KWT	O1-C2	5.41	1.43	1.35
2	A	6101	KWT	C15-C7	4.96	1.59	1.52
2	A	6101	KWT	C5-C6	4.19	1.54	1.49
2	A	6101	KWT	C3-C2	3.81	1.58	1.49
2	A	6101	KWT	C10-C9	3.35	1.58	1.53
2	A	6101	KWT	C3-C4	3.27	1.42	1.38
2	A	6101	KWT	C7-C6	3.27	1.54	1.47
2	A	6101	KWT	C8-C7	2.88	1.41	1.35
2	A	6101	KWT	O6-C21	2.71	1.41	1.35
2	A	6101	KWT	C23-C1	2.52	1.56	1.50
2	A	6101	KWT	C12-C11	2.40	1.57	1.52
2	A	6101	KWT	C12-C13	2.16	1.57	1.54

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	6101	KWT	C5-C4-C3	46.16	124.83	107.42
2	A	6101	KWT	C19-C3-C4	13.01	132.11	110.89
2	A	6101	KWT	C12-C13-C15	-5.07	102.98	109.34
2	A	6101	KWT	C11-O6-C21	3.98	123.10	117.06
2	A	6101	KWT	C16-C17-C18	-3.45	102.23	105.70
2	A	6101	KWT	C5-C6-C7	3.02	119.90	118.14
2	A	6101	KWT	C4-C9-C8	3.01	116.45	110.28
2	A	6101	KWT	C14-C13-C15	2.80	117.25	112.08
2	A	6101	KWT	C14-C13-C18	2.54	109.86	105.18
2	A	6101	KWT	C1-O1-C2	2.40	125.86	119.35
2	A	6101	KWT	C17-C18-C13	2.35	110.91	108.59
2	A	6101	KWT	O1-C2-O2	2.30	120.16	117.60
2	A	6101	KWT	O3-C6-C5	-2.22	117.54	121.37

There are no chirality outliers.

There are no torsion outliers.

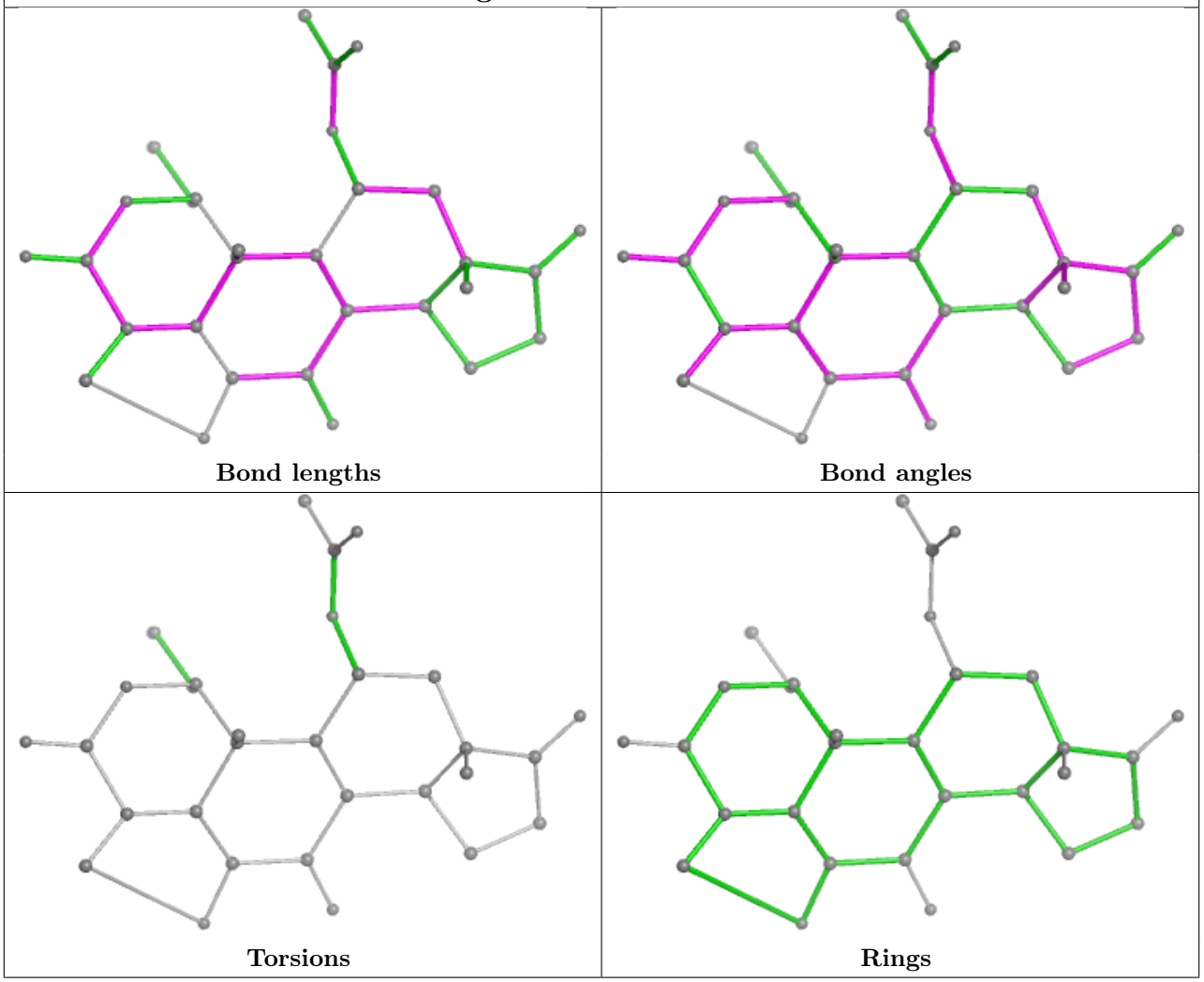
There are no ring outliers.

1 monomer is involved in 23 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	6101	KWT	23	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 KWT A 6101



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	A	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	4128:MET	C	6001:UNK	N	84.17

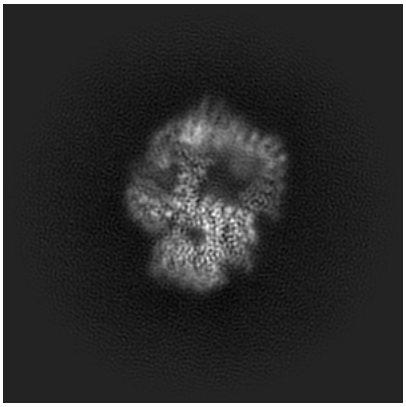
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-13067. These allow visual inspection of the internal detail of the map and identification of artifacts.

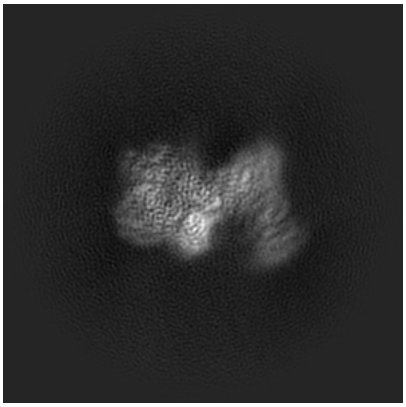
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

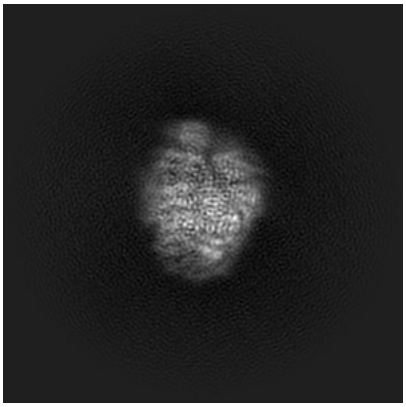
6.1.1 Primary map



X



Y

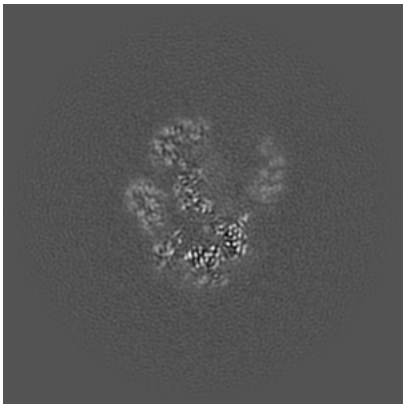


Z

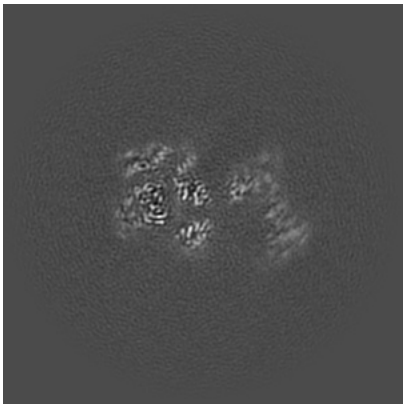
The images above show the map projected in three orthogonal directions.

6.2 Central slices

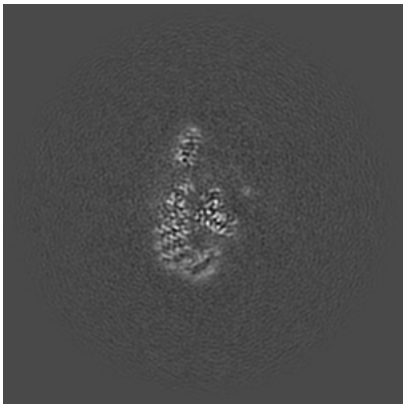
6.2.1 Primary map



X Index: 130



Y Index: 130

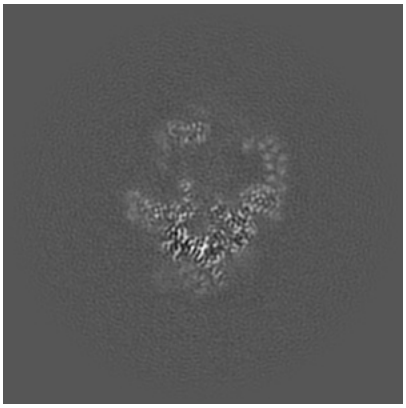


Z Index: 130

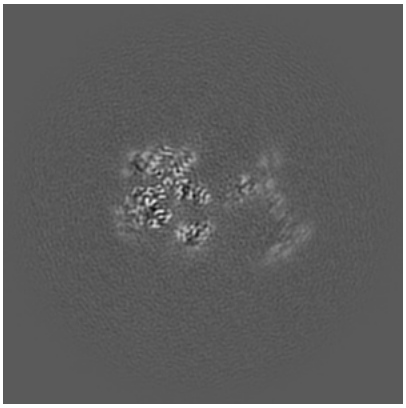
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

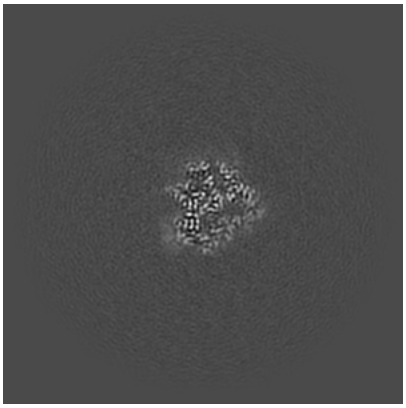
6.3.1 Primary map



X Index: 121



Y Index: 132

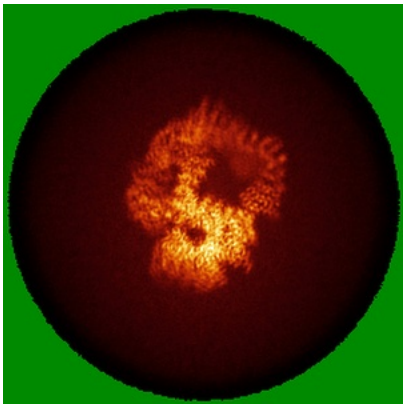


Z Index: 101

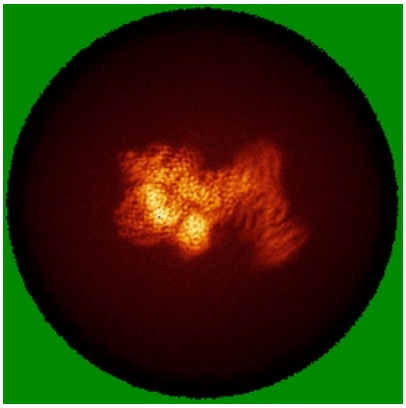
The images above show the largest variance slices of the map in three orthogonal directions.

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

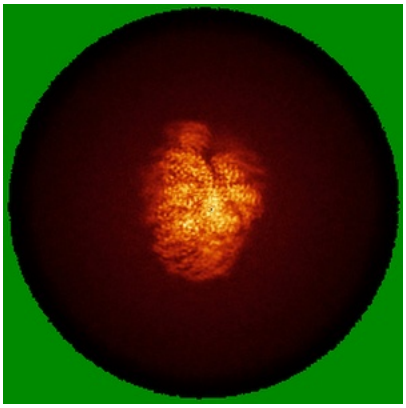
6.4.1 Primary map



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 0.22. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

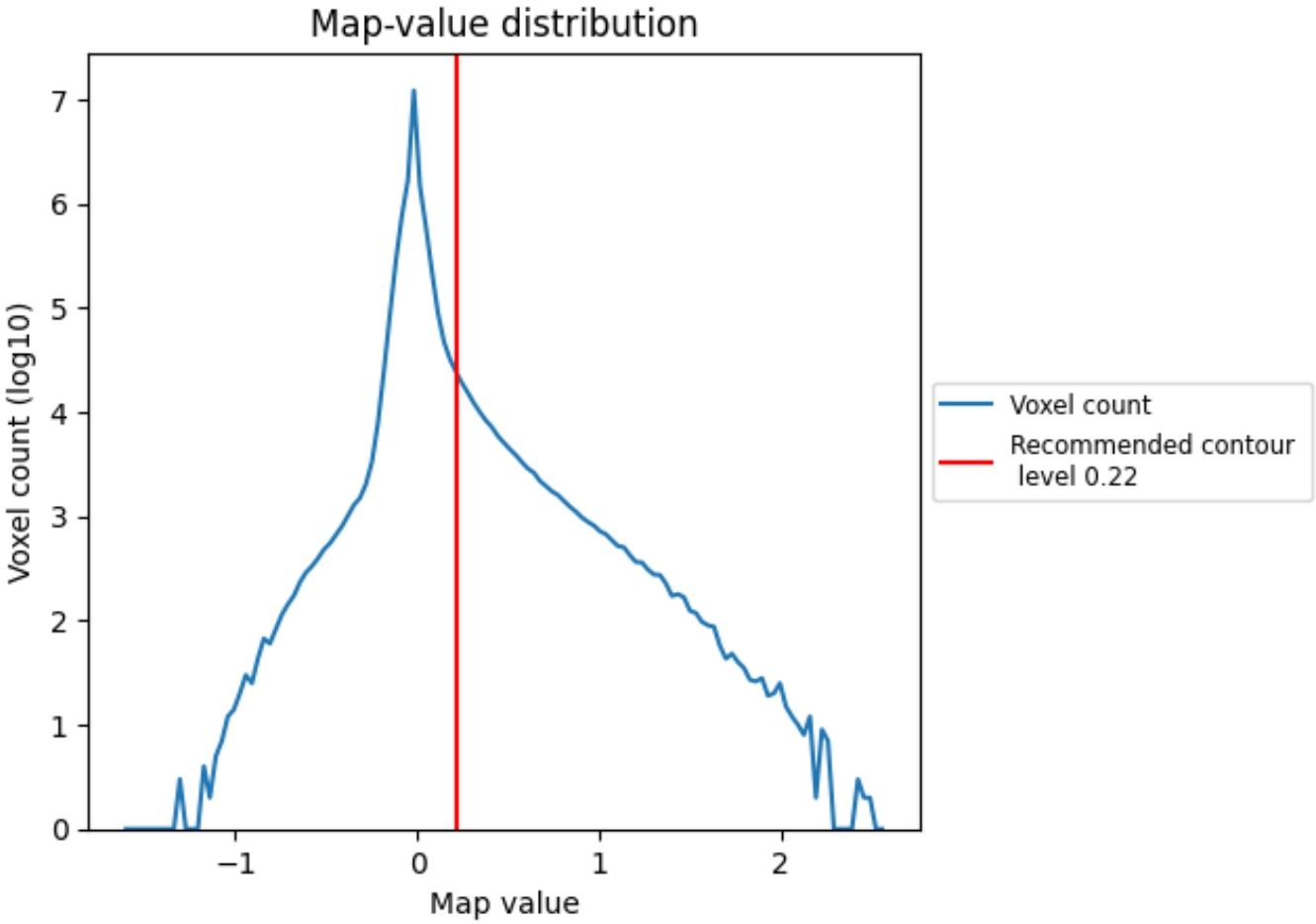
6.6 Mask visualisation (i)

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

7 Map analysis

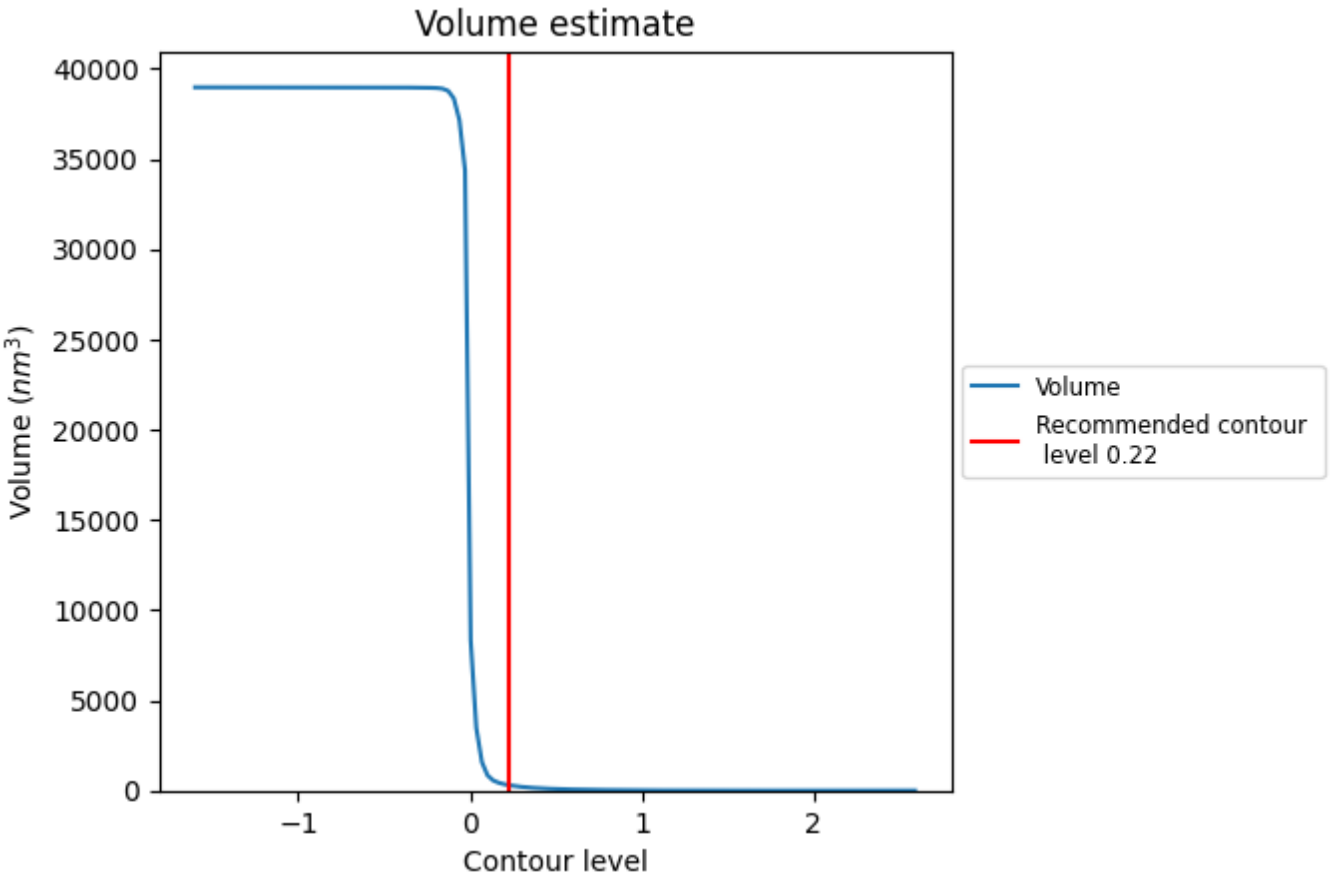
This section contains the results of statistical analysis of the map.

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.

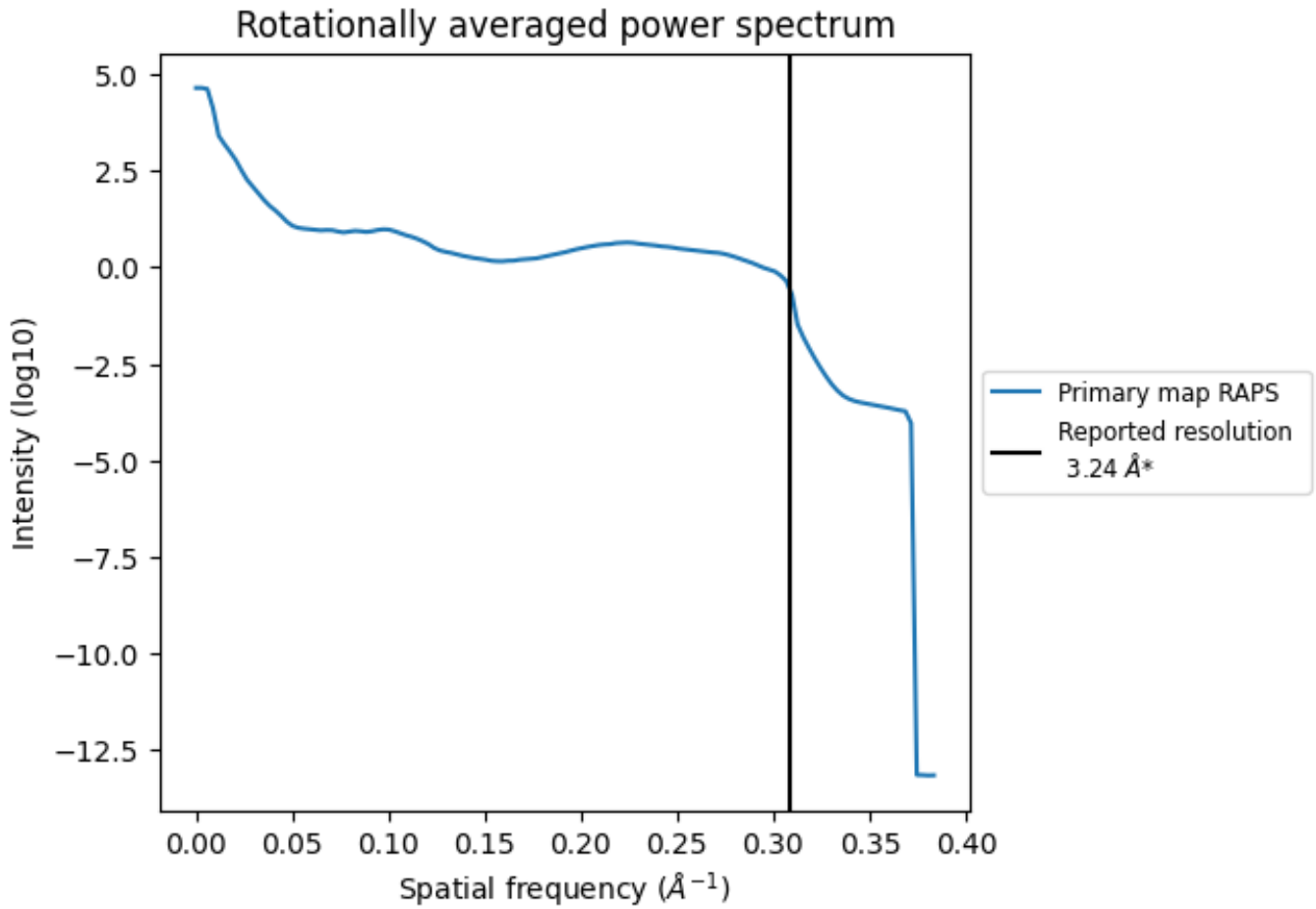
7.2 Volume estimate



The volume at the recommended contour level is 311 nm^3; this corresponds to an approximate mass of 281 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 0.309 $Å^{-1}$

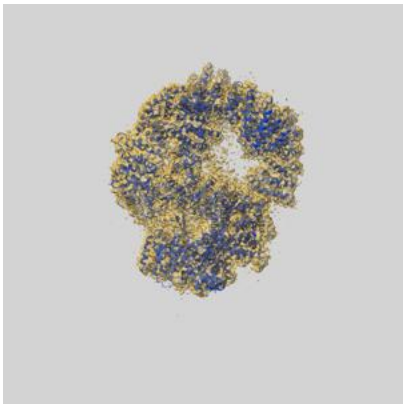
8 Fourier-Shell correlation

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

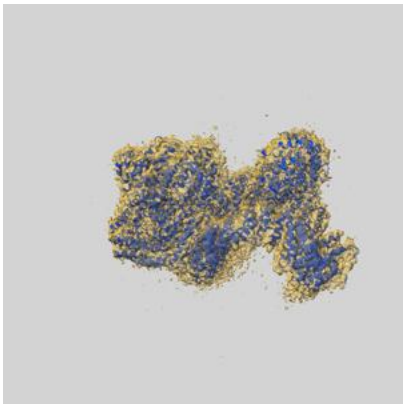
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-13067 and PDB model 7OTV. Per-residue inclusion information can be found in section 3 on page 4.

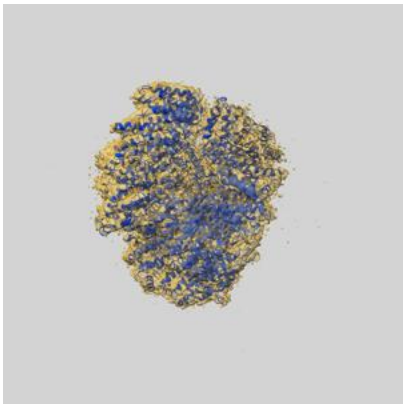
9.1 Map-model overlay



X



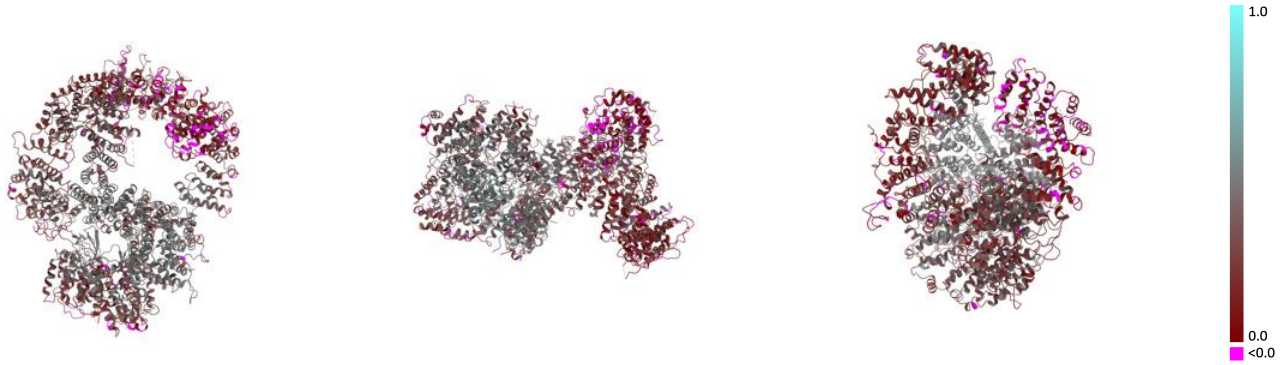
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.22 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.

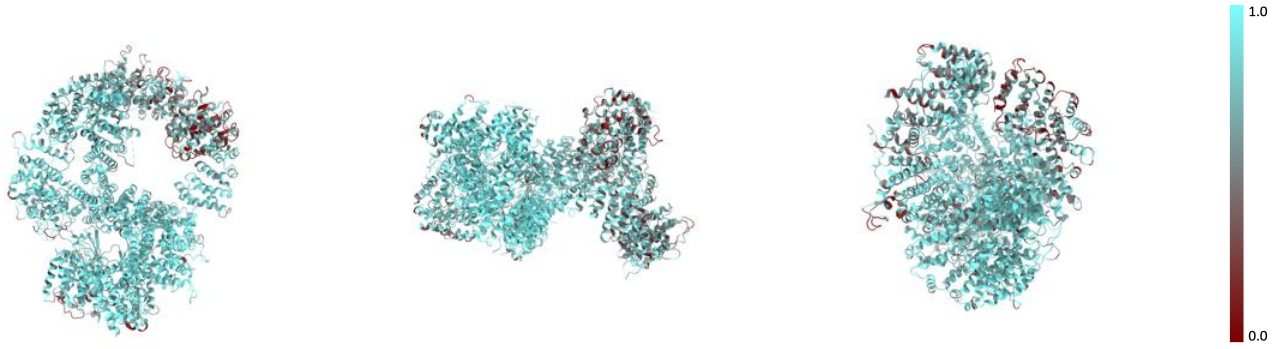
9.2 Q-score mapped to coordinate model (i)



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.

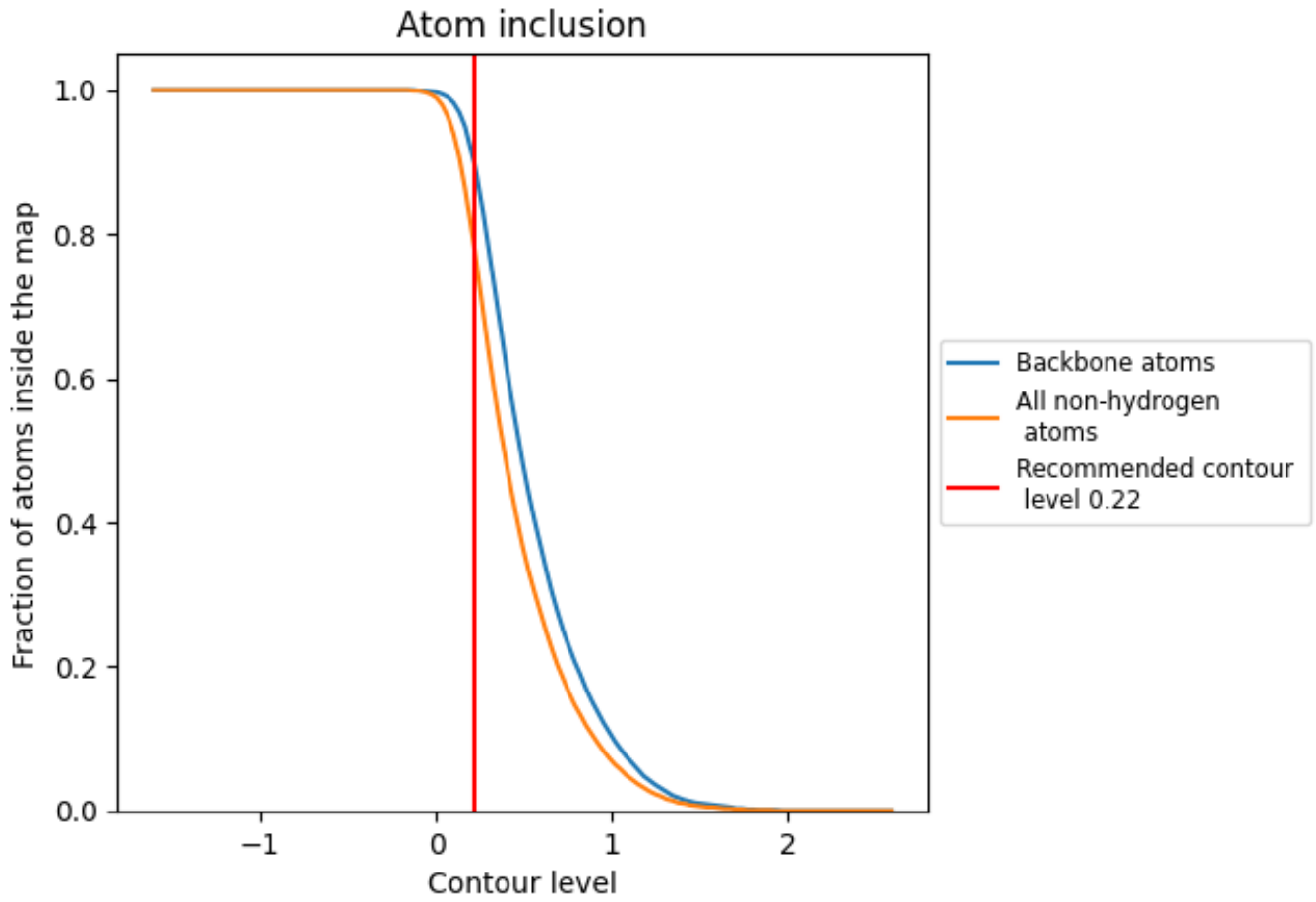
9.3 Atom inclusion mapped to coordinate model (i)



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 (0.22).

9.4 Atom inclusion (i)



At the recommended contour level, 90% of all backbone atoms, 78% 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 (0.22) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7790	0.3080
A	0.7790	0.3080