Full wwPDB EM Validation Report ⓘ

Mar 4, 2024 – 05:05 pm GMT

PDB ID	:	8CQ0
EMDB ID	:	EMD-16792
Title	:	Photorhabdus luminescens TcdA1 prepore-to-pore intermediate, K567W K2008W mutant
Authors	:	Nganga, P.N.; Roderer, D.; Belyy, A.; Prumbaum, D.; Raunser, S.
Deposited on	:	2023-03-03
Resolution	:	3.20 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:

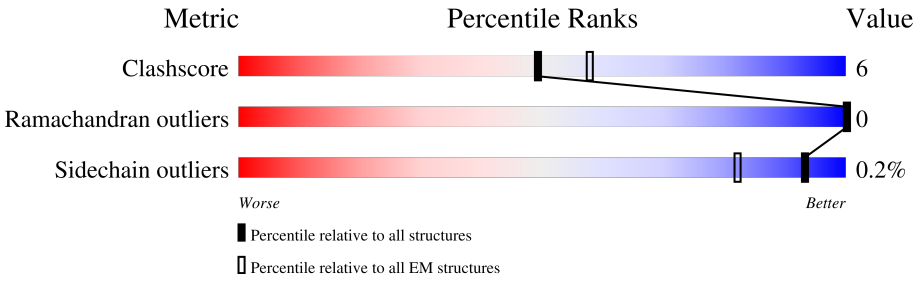
EMDB validation analysis	:	0.0.1.dev70
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.20 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	2535	71% 13% 16%
1	B	2535	71% 13% 16%
1	C	2535	70% 13% 16%
1	D	2535	71% 13% 16%
1	E	2535	71% 13% 16%

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 84445 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 TcdA1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	2122	Total	C	N	O	S	0	0
			16889	10704	2868	3262	55		
1	B	2122	Total	C	N	O	S	0	0
			16889	10704	2868	3262	55		
1	C	2122	Total	C	N	O	S	0	0
			16889	10704	2868	3262	55		
1	D	2122	Total	C	N	O	S	0	0
			16889	10704	2868	3262	55		
1	E	2122	Total	C	N	O	S	0	0
			16889	10704	2868	3262	55		

There are 105 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-18	MET	-	initiating methionine	UNP Q9RN43
A	-17	ALA	-	expression tag	UNP Q9RN43
A	-16	HIS	-	expression tag	UNP Q9RN43
A	-15	HIS	-	expression tag	UNP Q9RN43
A	-14	HIS	-	expression tag	UNP Q9RN43
A	-13	HIS	-	expression tag	UNP Q9RN43
A	-12	HIS	-	expression tag	UNP Q9RN43
A	-11	HIS	-	expression tag	UNP Q9RN43
A	-10	SER	-	expression tag	UNP Q9RN43
A	-9	SER	-	expression tag	UNP Q9RN43
A	-8	GLY	-	expression tag	UNP Q9RN43
A	-7	LEU	-	expression tag	UNP Q9RN43
A	-6	GLU	-	expression tag	UNP Q9RN43
A	-5	VAL	-	expression tag	UNP Q9RN43
A	-4	LEU	-	expression tag	UNP Q9RN43
A	-3	PHE	-	expression tag	UNP Q9RN43
A	-2	GLN	-	expression tag	UNP Q9RN43
A	-1	GLY	-	expression tag	UNP Q9RN43
A	0	PRO	-	expression tag	UNP Q9RN43
A	567	TRP	LYS	engineered mutation	UNP Q9RN43

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Chain	Residue	Modelled	Actual	Comment	Reference
A	2008	TRP	LYS	engineered mutation	UNP Q9RN43
B	-18	MET	-	initiating methionine	UNP Q9RN43
B	-17	ALA	-	expression tag	UNP Q9RN43
B	-16	HIS	-	expression tag	UNP Q9RN43
B	-15	HIS	-	expression tag	UNP Q9RN43
B	-14	HIS	-	expression tag	UNP Q9RN43
B	-13	HIS	-	expression tag	UNP Q9RN43
B	-12	HIS	-	expression tag	UNP Q9RN43
B	-11	HIS	-	expression tag	UNP Q9RN43
B	-10	SER	-	expression tag	UNP Q9RN43
B	-9	SER	-	expression tag	UNP Q9RN43
B	-8	GLY	-	expression tag	UNP Q9RN43
B	-7	LEU	-	expression tag	UNP Q9RN43
B	-6	GLU	-	expression tag	UNP Q9RN43
B	-5	VAL	-	expression tag	UNP Q9RN43
B	-4	LEU	-	expression tag	UNP Q9RN43
B	-3	PHE	-	expression tag	UNP Q9RN43
B	-2	GLN	-	expression tag	UNP Q9RN43
B	-1	GLY	-	expression tag	UNP Q9RN43
B	0	PRO	-	expression tag	UNP Q9RN43
B	567	TRP	LYS	engineered mutation	UNP Q9RN43
B	2008	TRP	LYS	engineered mutation	UNP Q9RN43
C	-18	MET	-	initiating methionine	UNP Q9RN43
C	-17	ALA	-	expression tag	UNP Q9RN43
C	-16	HIS	-	expression tag	UNP Q9RN43
C	-15	HIS	-	expression tag	UNP Q9RN43
C	-14	HIS	-	expression tag	UNP Q9RN43
C	-13	HIS	-	expression tag	UNP Q9RN43
C	-12	HIS	-	expression tag	UNP Q9RN43
C	-11	HIS	-	expression tag	UNP Q9RN43
C	-10	SER	-	expression tag	UNP Q9RN43
C	-9	SER	-	expression tag	UNP Q9RN43
C	-8	GLY	-	expression tag	UNP Q9RN43
C	-7	LEU	-	expression tag	UNP Q9RN43
C	-6	GLU	-	expression tag	UNP Q9RN43
C	-5	VAL	-	expression tag	UNP Q9RN43
C	-4	LEU	-	expression tag	UNP Q9RN43
C	-3	PHE	-	expression tag	UNP Q9RN43
C	-2	GLN	-	expression tag	UNP Q9RN43
C	-1	GLY	-	expression tag	UNP Q9RN43
C	0	PRO	-	expression tag	UNP Q9RN43
C	567	TRP	LYS	engineered mutation	UNP Q9RN43

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Chain	Residue	Modelled	Actual	Comment	Reference
C	2008	TRP	LYS	engineered mutation	UNP Q9RN43
D	-18	MET	-	initiating methionine	UNP Q9RN43
D	-17	ALA	-	expression tag	UNP Q9RN43
D	-16	HIS	-	expression tag	UNP Q9RN43
D	-15	HIS	-	expression tag	UNP Q9RN43
D	-14	HIS	-	expression tag	UNP Q9RN43
D	-13	HIS	-	expression tag	UNP Q9RN43
D	-12	HIS	-	expression tag	UNP Q9RN43
D	-11	HIS	-	expression tag	UNP Q9RN43
D	-10	SER	-	expression tag	UNP Q9RN43
D	-9	SER	-	expression tag	UNP Q9RN43
D	-8	GLY	-	expression tag	UNP Q9RN43
D	-7	LEU	-	expression tag	UNP Q9RN43
D	-6	GLU	-	expression tag	UNP Q9RN43
D	-5	VAL	-	expression tag	UNP Q9RN43
D	-4	LEU	-	expression tag	UNP Q9RN43
D	-3	PHE	-	expression tag	UNP Q9RN43
D	-2	GLN	-	expression tag	UNP Q9RN43
D	-1	GLY	-	expression tag	UNP Q9RN43
D	0	PRO	-	expression tag	UNP Q9RN43
D	567	TRP	LYS	engineered mutation	UNP Q9RN43
D	2008	TRP	LYS	engineered mutation	UNP Q9RN43
E	-18	MET	-	initiating methionine	UNP Q9RN43
E	-17	ALA	-	expression tag	UNP Q9RN43
E	-16	HIS	-	expression tag	UNP Q9RN43
E	-15	HIS	-	expression tag	UNP Q9RN43
E	-14	HIS	-	expression tag	UNP Q9RN43
E	-13	HIS	-	expression tag	UNP Q9RN43
E	-12	HIS	-	expression tag	UNP Q9RN43
E	-11	HIS	-	expression tag	UNP Q9RN43
E	-10	SER	-	expression tag	UNP Q9RN43
E	-9	SER	-	expression tag	UNP Q9RN43
E	-8	GLY	-	expression tag	UNP Q9RN43
E	-7	LEU	-	expression tag	UNP Q9RN43
E	-6	GLU	-	expression tag	UNP Q9RN43
E	-5	VAL	-	expression tag	UNP Q9RN43
E	-4	LEU	-	expression tag	UNP Q9RN43
E	-3	PHE	-	expression tag	UNP Q9RN43
E	-2	GLN	-	expression tag	UNP Q9RN43
E	-1	GLY	-	expression tag	UNP Q9RN43
E	0	PRO	-	expression tag	UNP Q9RN43
E	567	TRP	LYS	engineered mutation	UNP Q9RN43

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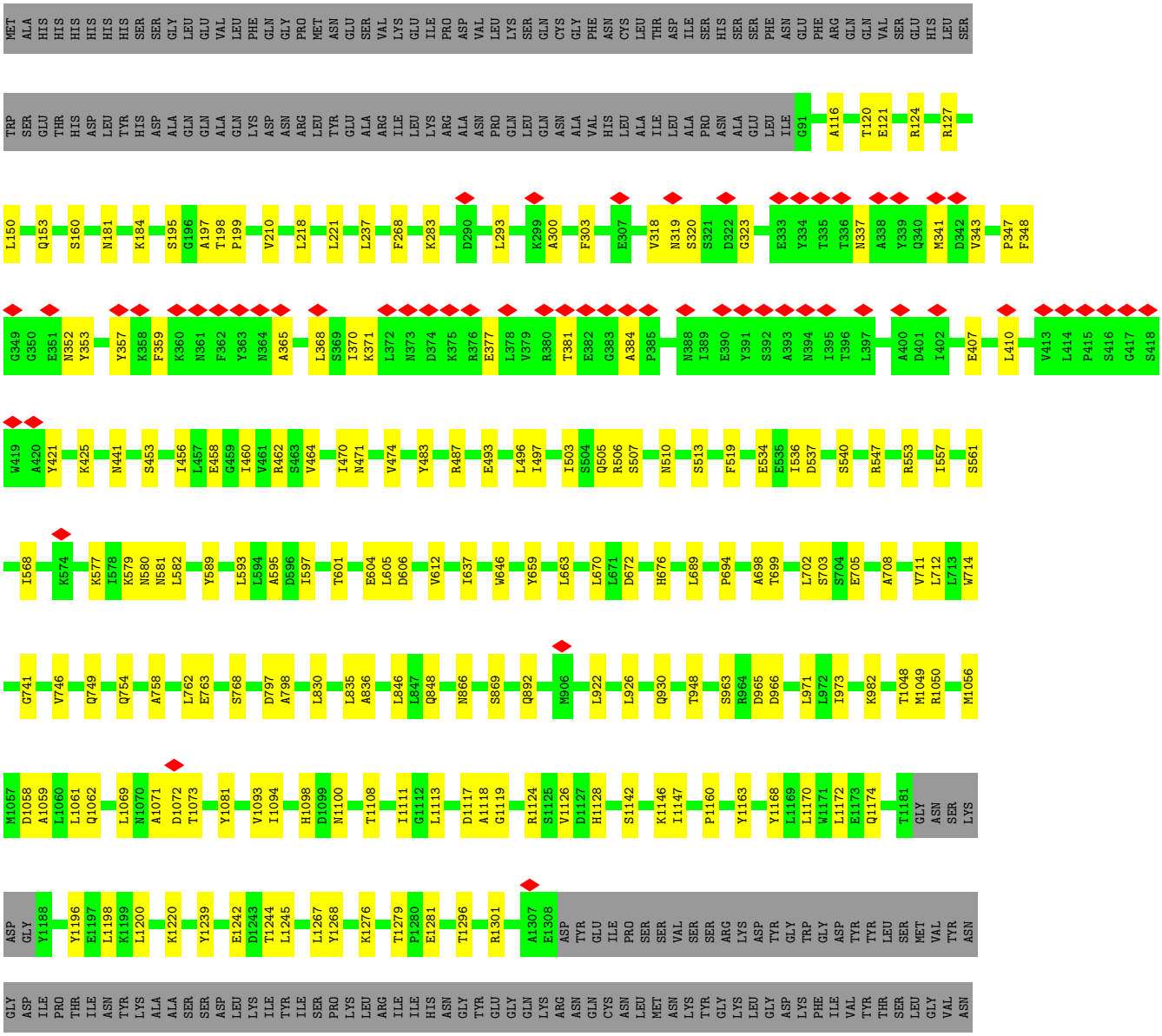
Chain	Residue	Modelled	Actual	Comment	Reference
E	2008	TRP	LYS	engineered mutation	UNP Q9RN43

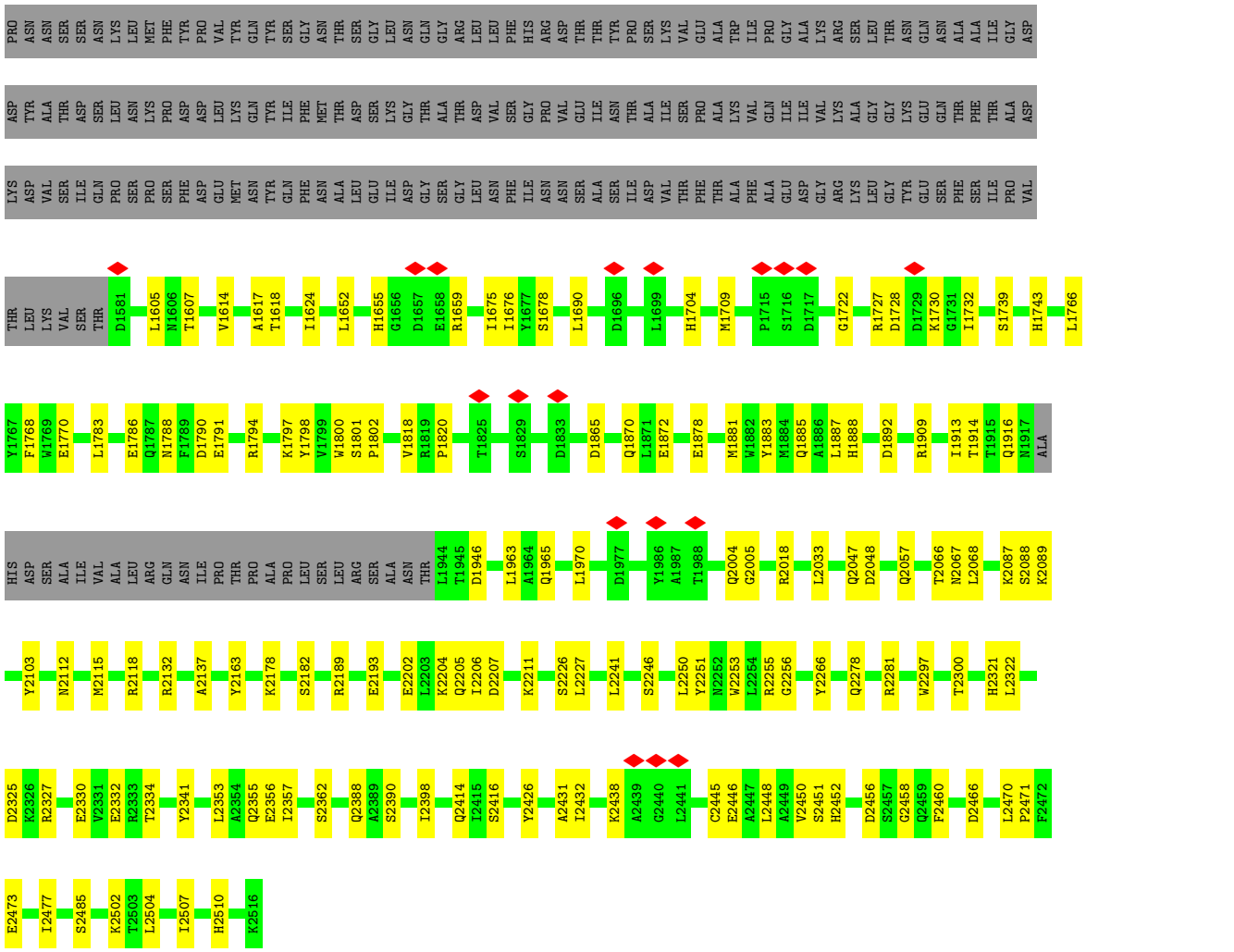
3 Residue-property plots (i)

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: TcdA1

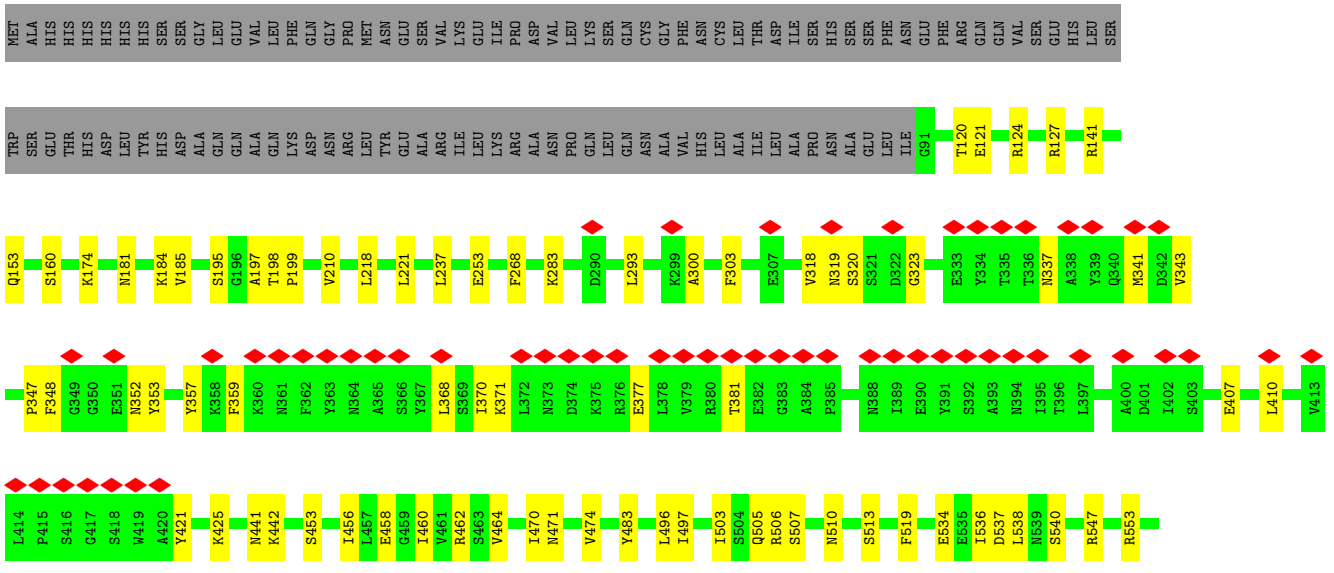
Chain A:

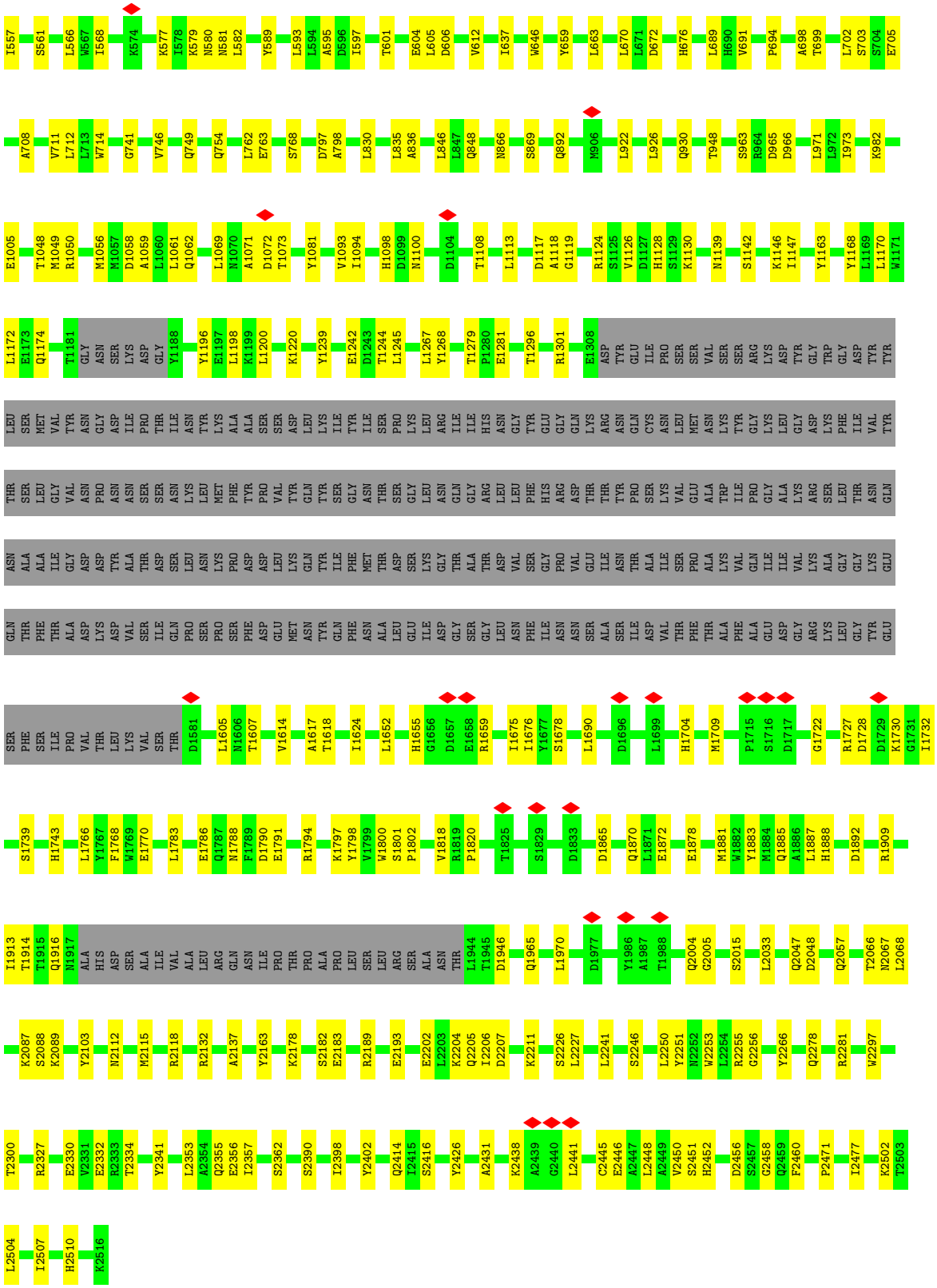




• Molecule 1: TcdA1

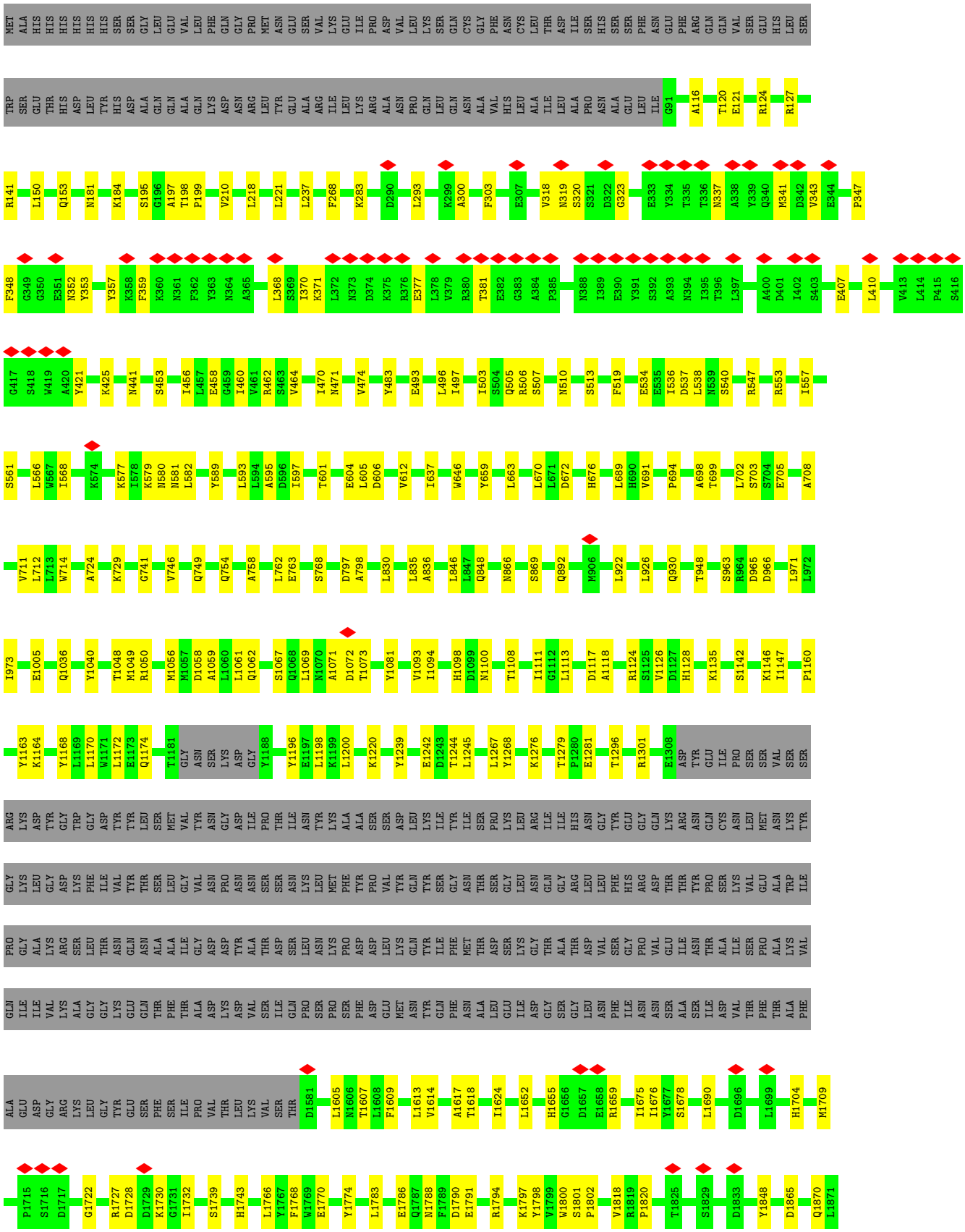
Chain B:

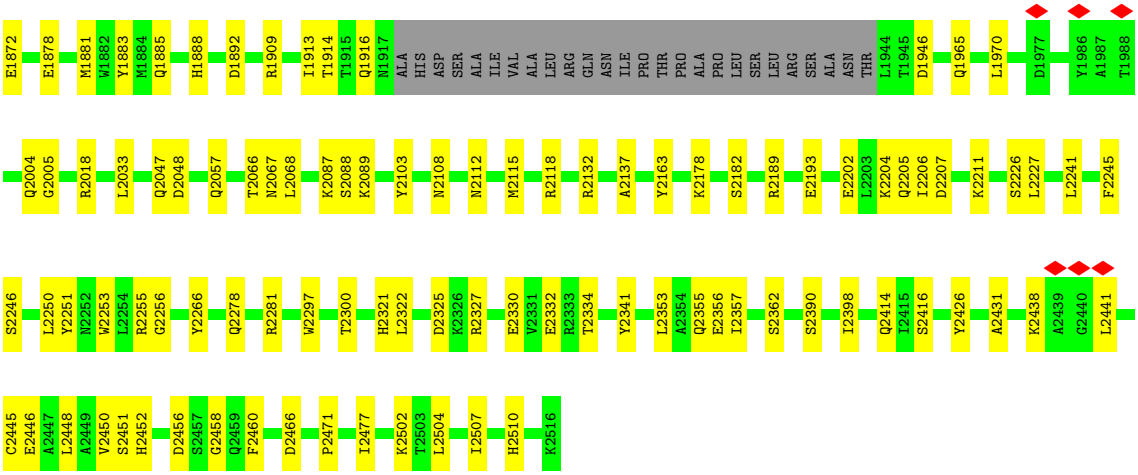




- Molecule 1: TcdA1

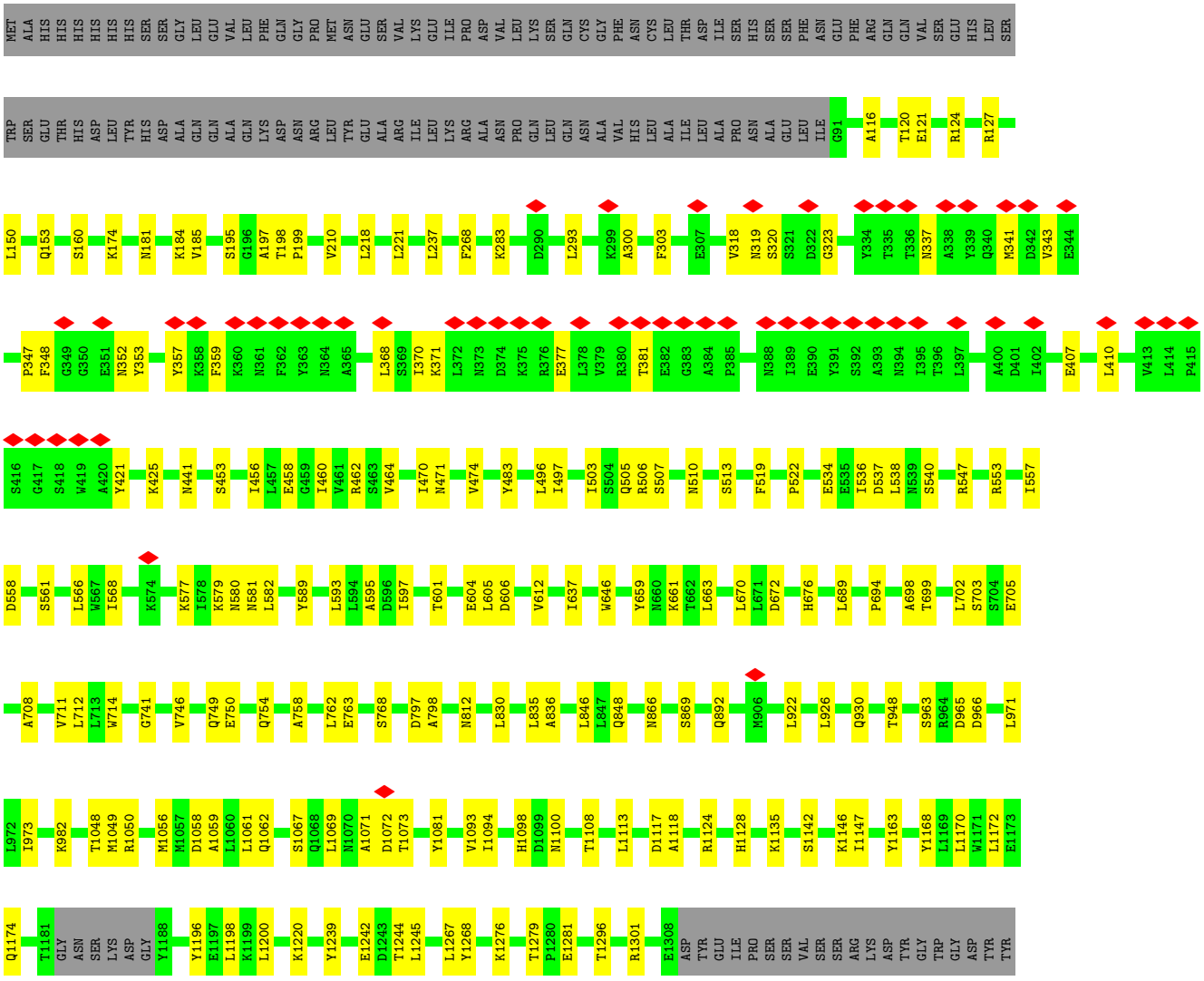
Chain C:

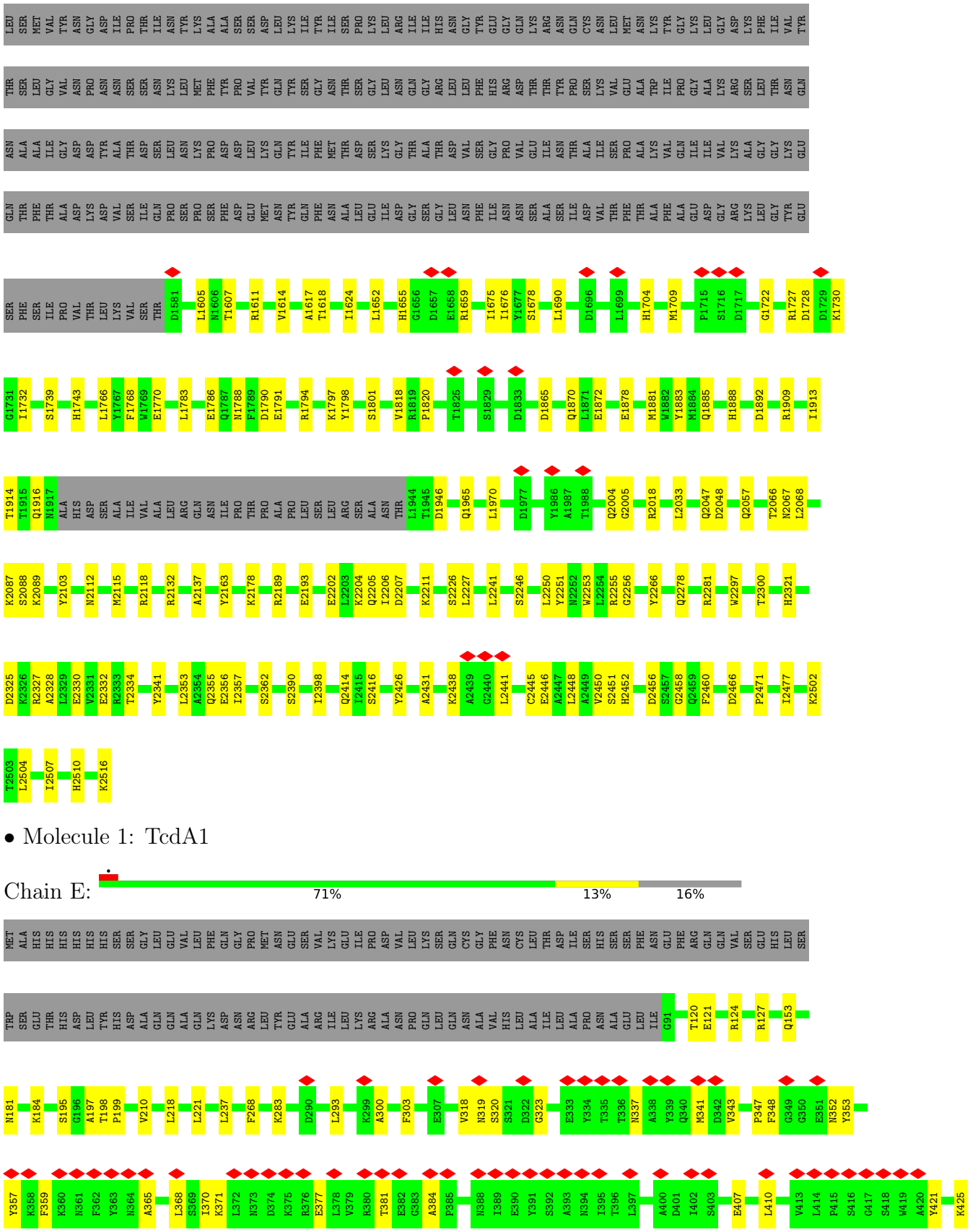

MET ALA HIS HIS HIS HIS HIS SER SER GLY LEU GLU VAL LEU PHE GLN GLY PRO MET ASN GLU SER VAL LYS GLU ILE PRO ASP VAL LEU LYS SER GLN CYS GLY PHE ASN CYS LEU THR ASP ILE SER HIS SER SER PHE ASN GLU PHE ARG GLN GLN VAL SER GLU HIS LEU SER
TRP SER GLU THR HIS ASP LEU TYR HIS ASP ALA GLN GLN ALA GLN LYS ASP ASN ARG LEU TYR GLU ALA ARG ILE LEU LYS ARG ALA ASN PRO GLN LEU GLN ASN ALA VAL HIS LEU ALA ILE LEU ALA PRO ASN ALA GLU LEU ILE G91 A116 T120 E121 R124 R127
R141 L150 Q153 N181 K184 S195 G196 A197 T198 P199 V210 L218 L221 L237 F268 K283 D290 L293 K299 A300 F303 E307 V318 N319 S320 S321 D322 G323 E333 Y334 T335 T336 N337 A338 Y339 Q340 M341 D342 Y343 E344 P347
F348 G349 G350 E351 N352 Y353 Y357 K358 F359 K360 N361 F362 Y363 N364 A365 L368 S369 I370 K371 L372 N373 D374 K375 R376 E377 L378 V379 R380 T381 E382 G383 A384 P385 N388 I389 E390 Y391 S392 A393 N394 I395 T396 L397 A400 D401 I402 S403 E407 L410 V413 L414 P415 S416
G417 S418 W419 A420 Y421 K425 N441 S453 I456 L457 E458 G459 I460 V461 R462 S463 V464 I470 N471 V474 Y483 E493 L496 I497 I503 S504 Q505 R506 S507 N510 S513 F519 E534 E535 I536 D537 L538 N539 S540 R547 R553 I557
S561 L566 W567 I568 K574 K577 I578 K579 N580 N581 L582 Y589 L593 L594 A595 D596 I597 T601 E604 L605 D606 V612 I637 W646 Y659 L663 L670 L671 D672 H676 L689 H690 V691 P694 A698 T699 L702 S703 S704 E705 A708
V711 L712 L713 W714 A724 K729 G741 V746 Q749 Q754 A758 L762 E763 S768 D797 A798 L830 L835 A836 L846 L847 Q848 N866 S869 Q892 M906 L922 L926 Q930 T948 S963 R964 D965 D966 L971 L972
I973 E1005 Q1036 Y1040 T1048 M1049 R1050 M1056 M1057 D1058 A1059 L1060 L1061 Q1062 S1067 Q1068 L1069 N1070 A1071 D1072 T1073 Y1081 V1093 I1094 H1098 D1099 N1100 T1108 I1111 G1112 L1113 D1117 A1118 R1124 S1125 V1126 D1127 H1128 K1135 S1142 K1146 I1147 P1160
Y1163 K1164 Y1168 L1169 L1170 W1171 L1172 E1173 Q1174 T1181 GLY ASN SER LYS ASP GLY Y1188 Y1196 E1197 L1198 K1199 L1200 K1220 Y1239 E1242 D1243 T1244 L1245 L1267 Y1268 K1276 T1279 P1280 E1281 T1296 R1301 E1308 ASP TYR GLU ILE PRO SER SER VAL SER SER
ARG LYS ASP TYR GLY TRP GLY ASP TYR TYR LEU SER MET VAL TYR ASN GLY ASP ILE PRO THR ILE ASN TYR LYS ALA ALA SER SER ASP LEU LYS ILE TYR ILE SER PRO LYS LEU ARG ILE ILE HIS ASN GLY TYR GLU GLY GLN LYS ARG ASN GLN CYS ASN LEU MET ASN LYS TYR
GLY LYS LEU GLY ASP LYS PHE ILE VAL TYR THR THR SER LEU GLY VAL ASN PRO ASN ASN SER SER ASN LYS LEU MET PHE TYR PRO VAL TYR GLN TYR SER GLY ASN THR SER GLY LEU ASN GLN GLY ARG LEU LEU PHE HIS ARG ASP THR THR THR TYR PRO SER LYS VAL GLU ALA TRP ILE
PRO GLY ALA LYS ARG SER LEU THR ASN GLN ASN ALA ALA ILE GLY ASP ASP TYR ALA THR ASP SER LEU ASN LYS PRO ASP ASP LEU LYS GLN TYR ILE PHE MET THR ASP SER LYS GLY THR ALA THR ASP VAL SER GLY PRO VAL GLU ILE ASN THR ALA ILE SER PRO ALA LYS VAL
GLN ILE ILE VAL LYS ALA GLY LYS GLU GLN THR PHE THR ALA ASP LYS ASP VAL SER ILE GLN PRO SER PRO SER PHE ASP GLU MET ASN TYR GLN PHE ASN ALA LEU GLU ILE ASP GLY SER GLY LEU ASN PHE ILE ASN ASN SER ALA SER ILE ASP VAL THR PHE THR ALA PHE
ALA GLU ASP GLY ARG LYS LEU GLY TYR GLU SER PHE SER ILE PRO VAL THR LEU LYS VAL SER THR D1581 L1605 N1606 T1607 L1608 F1609 L1613 V1614 A1617 T1618 I1624 L1652 H1655 G1656 D1657 E1658 R1659 I1675 I1676 Y1677 S1678 L1690 D1696 L1699 H1704 M1709
P1715 S1716 D1717 G1722 R1727 D1728 D1729 K1730 G1731 I1732 S1739 H1743 L1766 Y1767 F1768 W1769 E1770 Y1774 L1783 E1786 Q1787 N1788 F1789 D1790 E1791 R1794 K1797 Y1798 V1799 W1800 S1801 P1802 V1818 R1819 P1820 T1825 S1829 D1833 Y1848 D1865 Q1870 L1871



• Molecule 1: TcdA1

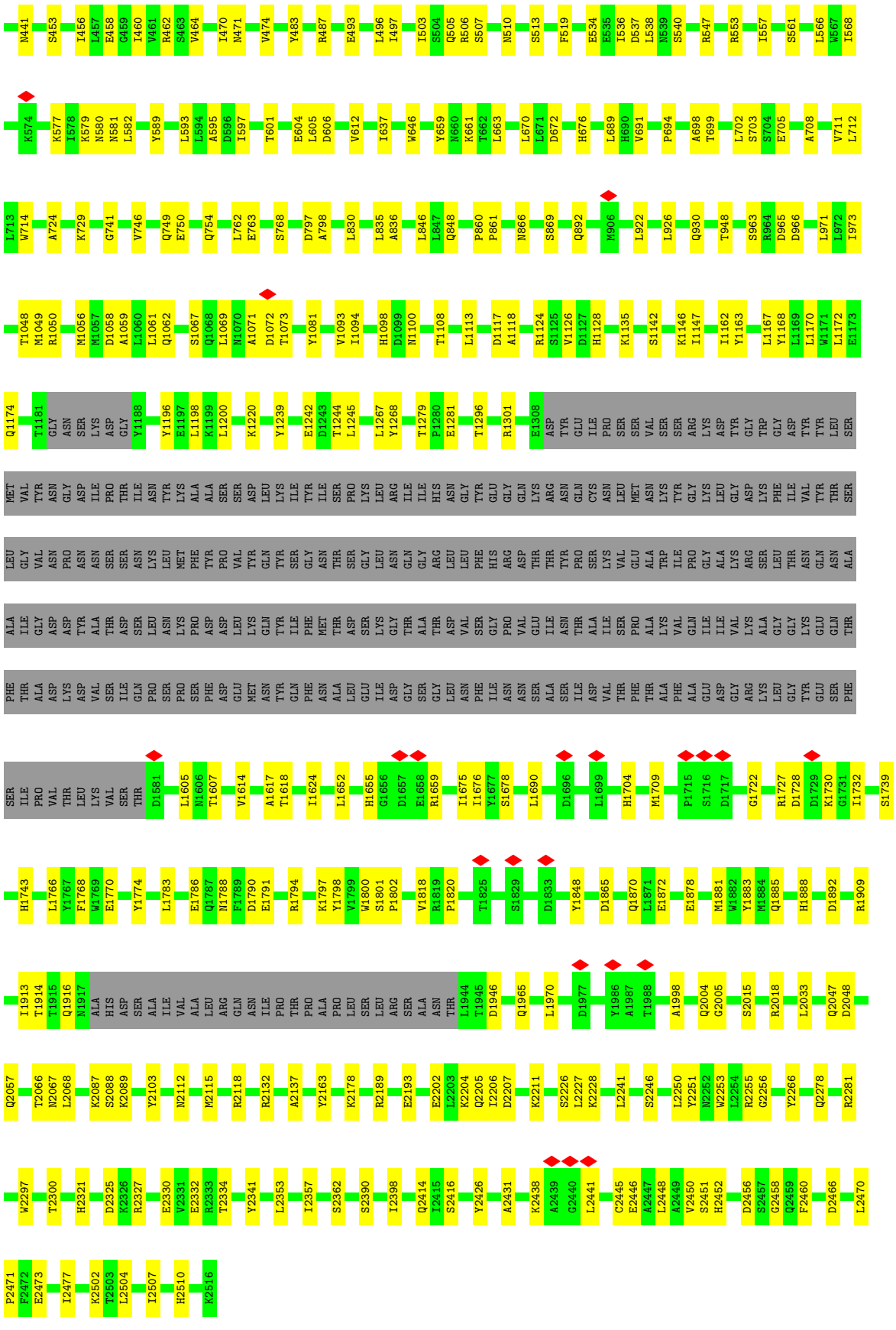
Chain D:





• Molecule 1: TcdA1

Chain E:


M441 S453 I456 L457 E458 G459 I460 V461 R462 S463 V464 I470 N471 V474 Y483 R487 E493 L496 I497 I503 S504 Q505 R506 S507 N510 S513 F519 E534 E535 I536 D537 L538 N539 S540 R547 R553 I557 S561 L566 W567 I568
K574 K577 I578 K579 N580 N581 L582 Y589 L593 L594 A595 D596 I597 T601 E604 L605 D606 V612 I637 W646 Y659 N660 K661 T662 L663 L670 L671 D672 H676 L689 H690 V691 P694 A698 T699 L702 S703 S704 E705 A708 V711 L712
L713 W714 A724 K729 G741 V746 Q749 E750 Q754 L762 E763 S768 D797 A798 L830 L835 A836 L846 L847 Q848 P860 P861 N866 S869 Q892 M906 L922 L926 Q930 T948 S963 R964 D965 D966 L971 L972 I973
T1048 M1049 R1050 M1056 M1057 D1058 A1059 L1060 L1061 Q1062 S1067 Q1068 L1069 N1070 A1071 D1072 T1073 Y1081 V1093 I1094 H1098 D1099 N1100 T1108 L1113 D1117 A1118 R1124 S1125 V1126 D1127 H1128 K1135 S1142 K1146 I1147 I1162 Y1163 L1167 Y1168 L1169 L1170 W1171 L1172 E1173
Q1174 T1181 GLY ASN SER LYS ASP GLY Y1188 Y1196 E1197 L1198 K1199 L1200 K1220 Y1239 E1242 D1243 T1244 L1245 L1267 Y1268 T1279 P1280 E1281 T1296 R1301 E1308 ASP TYR GLU ILE PRO SER SER VAL SER SER ARG LYS ASP TYR GLY TRP GLY ASP TYR TYR LEU SER
MET VAL TYR ASN GLY ASP ILE PRO THR ILE ASN TYR LYS ALA ALA SER SER ASP LEU LYS ILE TYR ILE SER PRO LYS LEU ARG ILE ILE HIS ASN GLY TYR GLU GLY GLN LYS ARG ASN GLN CYS ASN LEU MET ASN LYS TYR GLY LYS LEU GLY ASP LYS PHE ILE VAL TYR THR SER
LEU GLY VAL ASN PRO ASN ASN SER SER ASN LYS LEU MET PHE TYR PRO VAL TYR GLN TYR SER GLY ASN THR SER GLY LEU ASN GLN GLY ARG LEU LEU PHE HIS ARG ASP THR THR TYR PRO SER LYS VAL GLU ALA LYS ARG SER LEU THR ASN GLN ASN ALA
ALA ILE GLY ASP ASP TYR ALA THR ASP SER LEU ASN LYS PRO ASP ASP LEU LYS GLN TYR ILE PHE MET THR ASP SER LYS GLY THR ALA THR ASP VAL GLU ILE ASN THR ALA ILE SER VAL THR PHE THR ALA PHE ALA GLU ASP GLY GLY ARG LYS LEU GLY GLY LYS GLU GLN THR
PHE THR ALA ASP LYS ASP VAL SER ILE GLN PRO SER PRO SER PHE ASP GLU MET ASN TYR GLN PHE ASN ALA LEU GLU ILE ASP GLY SER GLY LEU ASN PHE ILE ASN ASN SER ALA SER ILE ASP VAL THR PHE THR ALA PHE ALA GLU ASP GLY ARG LYS LEU GLY TYR GLU SER PHE
SER ILE PRO VAL THR LEU LYS VAL SER THR D1581 L1605 N1606 T1607 V1614 A1617 T1618 I1624 L1652 H1655 G1656 D1657 E1658 R1659 I1675 I1676 Y1677 S1678 L1690 D1696 L1699 H1704 M1709 P1715 S1716 D1717 G1722 R1727 D1728 D1729 K1730 G1731 I1732 S1739
H1743 L1766 Y1767 F1768 W1769 E1770 Y1774 L1783 E1786 Q1787 N1788 F1789 D1790 E1791 R1794 K1797 Y1798 V1799 W1800 S1801 P1802 V1818 R1819 P1820 T1825 S1829 D1833 Y1848 D1865 Q1870 L1871 E1872 E1878 M1881 W1882 Y1883 M1884 Q1885 H1888 D1892 R1909
I1913 T1914 T1915 Q1916 N1917 ALA HIS ASP SER ALA ILE VAL ALA LEU ARG GLN ASN ILE PRO THR PRO ALA PRO LEU SER LEU ARG SER ALA ASN THR L1944 T1945 D1946 Q1965 L1970 D1977 Y1986 A1987 T1988 A1998 Q2004 G2005 S2015 R2018 L2033 Q2047 D2048
Q2057 T2066 N2067 L2068 K2087 S2088 K2089 Y2103 N2112 M2115 R2118 R2132 A2137 Y2163 K2178 R2189 E2193 E2202 L2203 K2204 Q2205 I2206 D2207 K2211 S2226 L2227 K2228 L2241 S2246 L2250 Y2251 N2252 W2253 L2254 R2255 G2256 Y2266 Q2278 R2281
W2297 T2300 H2321 D2325 K2326 R2327 E2330 Y2331 E2332 R2333 T2334 Y2341 L2353 I2357 S2362 S2390 I2398 Q2414 I2415 S2416 Y2426 A2431 K2438 A2439 G2440 L2441 C2445 E2446 A2447 L2448 A2449 V2450 S2451 H2452 D2456 S2457 G2458 Q2459 F2460 D2466 L2470
P2471 F2472 E2473 I2477 K2502 T2503 L2504 I2507 H2510 K2516

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C5	Depositor
Number of particles used	13356	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 ($e^-/Å^2$)	57	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	81000	Depositor
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.121	Depositor
Minimum map value	-0.051	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.003	Depositor
Recommended contour level	0.015	Depositor
Map size (Å)	492.8, 492.8, 492.8	wwPDB
Map dimensions	560, 560, 560	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.88, 0.88, 0.88	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
1	A	0.26	0/17254	0.51	0/23440
1	B	0.26	0/17254	0.51	0/23440
1	C	0.26	0/17254	0.51	0/23440
1	D	0.26	0/17254	0.51	0/23440
1	E	0.26	0/17254	0.51	0/23440
All	All	0.26	0/86270	0.51	0/117200

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	16889	0	16504	227	0
1	B	16889	0	16504	221	0
1	C	16889	0	16504	232	0
1	D	16889	0	16504	223	0
1	E	16889	0	16504	225	0
All	All	84445	0	82520	1013	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 6.

All (1013) 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:C:1108:THR:HG1	1:C:1128:HIS:HE2	1.23	0.83
1:B:1108:THR:HG1	1:B:1128:HIS:HE2	1.26	0.80
1:C:1797:LYS:HG3	1:C:1801:SER:HB2	1.64	0.80
1:E:1108:THR:HG1	1:E:1128:HIS:HE2	1.29	0.79
1:A:1797:LYS:HG3	1:A:1801:SER:HB2	1.65	0.79
1:D:1797:LYS:HG3	1:D:1801:SER:HB2	1.65	0.79
1:B:1797:LYS:HG3	1:B:1801:SER:HB2	1.65	0.78
1:E:1797:LYS:HG3	1:E:1801:SER:HB2	1.64	0.78
1:B:689:LEU:HD11	1:B:712:LEU:HB3	1.67	0.78
1:A:689:LEU:HD11	1:A:712:LEU:HB3	1.66	0.77
1:C:689:LEU:HD11	1:C:712:LEU:HB3	1.66	0.77
1:D:689:LEU:HD11	1:D:712:LEU:HB3	1.66	0.76
1:E:689:LEU:HD11	1:E:712:LEU:HB3	1.66	0.75
1:D:460:ILE:HG12	1:D:496:LEU:HD21	1.71	0.73
1:C:2089:LYS:HB2	1:C:2206:ILE:HG21	1.70	0.73
1:E:2089:LYS:HB2	1:E:2206:ILE:HG21	1.71	0.73
1:D:2089:LYS:HB2	1:D:2206:ILE:HG21	1.70	0.72
1:B:460:ILE:HG12	1:B:496:LEU:HD21	1.70	0.72
1:E:460:ILE:HG12	1:E:496:LEU:HD21	1.72	0.72
1:C:1093:VAL:HG21	1:C:1605:LEU:HD23	1.72	0.72
1:B:2089:LYS:HB2	1:B:2206:ILE:HG21	1.70	0.72
1:C:460:ILE:HG12	1:C:496:LEU:HD21	1.71	0.71
1:C:2204:LYS:O	1:D:2087:LYS:NZ	2.24	0.71
1:A:2089:LYS:HB2	1:A:2206:ILE:HG21	1.72	0.71
1:A:2204:LYS:O	1:B:2087:LYS:NZ	2.24	0.71
1:D:2204:LYS:O	1:E:2087:LYS:NZ	2.24	0.71
1:A:1059:ALA:HA	1:A:1062:GLN:HE21	1.56	0.70
1:D:1093:VAL:HG21	1:D:1605:LEU:HD23	1.73	0.70
1:A:460:ILE:HG12	1:A:496:LEU:HD21	1.71	0.70
1:E:1059:ALA:HA	1:E:1062:GLN:HE21	1.56	0.70
1:A:1093:VAL:HG21	1:A:1605:LEU:HD23	1.74	0.70
1:E:1093:VAL:HG21	1:E:1605:LEU:HD23	1.73	0.69
1:B:1093:VAL:HG21	1:B:1605:LEU:HD23	1.74	0.69
1:B:1059:ALA:HA	1:B:1062:GLN:HE21	1.57	0.69
1:A:2087:LYS:NZ	1:E:2204:LYS:O	2.24	0.69
1:D:1146:LYS:NZ	1:D:1147:ILE:O	2.26	0.69
1:D:1059:ALA:HA	1:D:1062:GLN:HE21	1.57	0.69
1:A:1146:LYS:NZ	1:A:1147:ILE:O	2.26	0.68
1:E:1916:GLN:NE2	1:E:1946:ASP:OD2	2.26	0.68
1:C:612:VAL:HG22	1:C:637:ILE:HD12	1.76	0.68
1:C:1059:ALA:HA	1:C:1062:GLN:HE21	1.57	0.68
1:E:237:LEU:HD11	1:E:483:TYR:HB2	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:237:LEU:HD11	1:B:483:TYR:HB2	1.75	0.68
1:A:237:LEU:HD11	1:A:483:TYR:HB2	1.76	0.67
1:C:237:LEU:HD11	1:C:483:TYR:HB2	1.76	0.67
1:E:1146:LYS:NZ	1:E:1147:ILE:O	2.25	0.67
1:D:237:LEU:HD11	1:D:483:TYR:HB2	1.77	0.67
1:C:1916:GLN:NE2	1:C:1946:ASP:OD2	2.28	0.67
1:A:2047:GLN:HB3	1:A:2251:TYR:HB3	1.77	0.67
1:A:2087:LYS:HD3	1:E:2204:LYS:HG2	1.77	0.67
1:A:2426:TYR:HB3	1:B:2334:THR:HG21	1.75	0.67
1:D:2426:TYR:HB3	1:E:2334:THR:HG21	1.77	0.67
1:A:300:ALA:HA	1:A:303:PHE:CD2	2.30	0.67
1:B:2047:GLN:HB3	1:B:2251:TYR:HB3	1.77	0.67
1:C:1146:LYS:NZ	1:C:1147:ILE:O	2.26	0.67
1:B:1916:GLN:NE2	1:B:1946:ASP:OD2	2.27	0.67
1:C:300:ALA:HA	1:C:303:PHE:CD2	2.30	0.67
1:A:612:VAL:HG22	1:A:637:ILE:HD12	1.76	0.66
1:D:300:ALA:HA	1:D:303:PHE:CD2	2.30	0.66
1:C:2204:LYS:HG2	1:D:2087:LYS:HD3	1.78	0.66
1:E:612:VAL:HG22	1:E:637:ILE:HD12	1.76	0.66
1:B:1146:LYS:NZ	1:B:1147:ILE:O	2.26	0.66
1:D:2204:LYS:HG2	1:E:2087:LYS:HD3	1.77	0.66
1:A:2205:GLN:OE1	1:B:2088:SER:OG	2.13	0.66
1:D:2205:GLN:OE1	1:E:2088:SER:OG	2.13	0.66
1:B:612:VAL:HG22	1:B:637:ILE:HD12	1.77	0.66
1:E:300:ALA:HA	1:E:303:PHE:CD2	2.31	0.66
1:E:2047:GLN:HB3	1:E:2251:TYR:HB3	1.77	0.66
1:A:2204:LYS:HG2	1:B:2087:LYS:HD3	1.77	0.66
1:B:121:GLU:HG2	1:B:124:ARG:HH21	1.60	0.66
1:D:1916:GLN:NE2	1:D:1946:ASP:OD2	2.28	0.66
1:C:830:LEU:HD21	1:C:835:LEU:HD12	1.78	0.65
1:C:963:SER:OG	1:C:965:ASP:OD1	2.14	0.65
1:B:300:ALA:HA	1:B:303:PHE:CD2	2.31	0.65
1:E:2438:LYS:HG3	1:E:2446:GLU:HG3	1.78	0.65
1:D:612:VAL:HG22	1:D:637:ILE:HD12	1.77	0.65
1:A:1916:GLN:NE2	1:A:1946:ASP:OD2	2.28	0.65
1:B:2204:LYS:O	1:C:2087:LYS:NZ	2.23	0.65
1:C:2047:GLN:HB3	1:C:2251:TYR:HB3	1.77	0.65
1:A:2334:THR:HG21	1:E:2426:TYR:HB3	1.79	0.65
1:D:963:SER:OG	1:D:965:ASP:OD1	2.15	0.65
1:D:2047:GLN:HB3	1:D:2251:TYR:HB3	1.77	0.65
1:A:121:GLU:HG2	1:A:124:ARG:HH21	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:830:LEU:HD21	1:B:835:LEU:HD12	1.79	0.64
1:E:963:SER:OG	1:E:965:ASP:OD1	2.14	0.64
1:C:1069:LEU:HD23	1:C:1786:GLU:HG3	1.80	0.64
1:A:963:SER:OG	1:A:965:ASP:OD1	2.14	0.64
1:B:2204:LYS:HG2	1:C:2087:LYS:HD3	1.77	0.64
1:A:368:LEU:N	1:A:381:THR:O	2.28	0.64
1:C:2205:GLN:OE1	1:D:2088:SER:OG	2.12	0.64
1:B:1069:LEU:HD23	1:B:1786:GLU:HG3	1.80	0.64
1:C:2182:SER:OG	1:E:1067:SER:OG	2.12	0.64
1:C:2451:SER:HB3	1:D:2332:GLU:HG2	1.80	0.64
1:D:830:LEU:HD21	1:D:835:LEU:HD12	1.79	0.64
1:B:963:SER:OG	1:B:965:ASP:OD1	2.15	0.64
1:D:121:GLU:HG2	1:D:124:ARG:HH21	1.63	0.64
1:A:210:VAL:HG11	1:A:922:LEU:HB3	1.81	0.63
1:A:2438:LYS:HG3	1:A:2446:GLU:HG3	1.78	0.63
1:D:1069:LEU:HD23	1:D:1786:GLU:HG3	1.80	0.63
1:C:121:GLU:HG2	1:C:124:ARG:HH21	1.61	0.63
1:E:121:GLU:HG2	1:E:124:ARG:HH21	1.63	0.63
1:E:1069:LEU:HD23	1:E:1786:GLU:HG3	1.80	0.63
1:A:1069:LEU:HD23	1:A:1786:GLU:HG3	1.80	0.63
1:B:2438:LYS:HG3	1:B:2446:GLU:HG3	1.81	0.63
1:D:210:VAL:HG11	1:D:922:LEU:HB3	1.79	0.63
1:E:830:LEU:HD21	1:E:835:LEU:HD12	1.79	0.63
1:C:210:VAL:HG11	1:C:922:LEU:HB3	1.81	0.63
1:D:2438:LYS:HG3	1:D:2446:GLU:HG3	1.79	0.63
1:A:2255:ARG:NH2	1:E:703:SER:O	2.25	0.62
1:E:210:VAL:HG11	1:E:922:LEU:HB3	1.80	0.62
1:A:830:LEU:HD21	1:A:835:LEU:HD12	1.80	0.62
1:B:2451:SER:HB3	1:C:2332:GLU:HG2	1.79	0.62
1:B:2205:GLN:OE1	1:C:2088:SER:OG	2.12	0.62
1:B:337:ASN:ND2	1:B:421:TYR:O	2.25	0.62
1:D:2451:SER:HB3	1:E:2332:GLU:HG2	1.81	0.62
1:B:659:TYR:HB2	1:B:754:GLN:HG2	1.82	0.62
1:E:368:LEU:N	1:E:381:THR:O	2.28	0.62
1:C:659:TYR:HB2	1:C:754:GLN:HG2	1.83	0.61
1:C:1239:TYR:CD2	1:C:1242:GLU:HB3	2.36	0.61
1:B:2460:PHE:CE1	1:C:2330:GLU:HB3	2.36	0.61
1:C:2438:LYS:HG3	1:C:2446:GLU:HG3	1.82	0.61
1:A:2332:GLU:HG2	1:E:2451:SER:HB3	1.81	0.61
1:A:2451:SER:HB3	1:B:2332:GLU:HG2	1.81	0.61
1:B:210:VAL:HG11	1:B:922:LEU:HB3	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:368:LEU:N	1:C:381:THR:O	2.28	0.61
1:B:1239:TYR:CD2	1:B:1242:GLU:HB3	2.36	0.61
1:C:2460:PHE:CE1	1:D:2330:GLU:HB3	2.35	0.61
1:D:659:TYR:HB2	1:D:754:GLN:HG2	1.83	0.61
1:D:1239:TYR:CD2	1:D:1242:GLU:HB3	2.36	0.61
1:A:2088:SER:OG	1:E:2205:GLN:OE1	2.13	0.61
1:D:2460:PHE:CE1	1:E:2330:GLU:HB3	2.36	0.61
1:E:1220:LYS:HE2	1:E:1267:LEU:HB3	1.83	0.60
1:D:1220:LYS:HE2	1:D:1267:LEU:HB3	1.84	0.60
1:A:337:ASN:ND2	1:A:421:TYR:O	2.25	0.60
1:A:540:SER:HB2	1:B:848:GLN:HE22	1.67	0.60
1:A:703:SER:O	1:B:2255:ARG:NH2	2.25	0.60
1:A:2460:PHE:CE1	1:B:2330:GLU:HB3	2.36	0.60
1:A:848:GLN:HE22	1:E:540:SER:HB2	1.67	0.60
1:D:124:ARG:HD3	1:D:1914:THR:HB	1.84	0.60
1:E:1239:TYR:CD2	1:E:1242:GLU:HB3	2.36	0.60
1:B:540:SER:HB2	1:C:848:GLN:HE22	1.67	0.60
1:A:659:TYR:HB2	1:A:754:GLN:HG2	1.83	0.60
1:A:2137:ALA:HB2	1:C:1118:ALA:HB2	1.82	0.59
1:A:2330:GLU:HB3	1:E:2460:PHE:CE1	2.36	0.59
1:C:337:ASN:ND2	1:C:421:TYR:O	2.25	0.59
1:A:1239:TYR:CD2	1:A:1242:GLU:HB3	2.36	0.59
1:B:2426:TYR:HB3	1:C:2334:THR:HG21	1.84	0.59
1:D:368:LEU:N	1:D:381:THR:O	2.29	0.59
1:D:540:SER:HB2	1:E:848:GLN:HE22	1.67	0.59
1:E:337:ASN:ND2	1:E:421:TYR:O	2.25	0.59
1:D:746:VAL:HB	1:D:749:GLN:HB2	1.85	0.59
1:A:1220:LYS:HE2	1:A:1267:LEU:HB3	1.85	0.59
1:B:1296:THR:HG23	1:B:1301:ARG:HH12	1.68	0.59
1:C:2137:ALA:HB2	1:E:1118:ALA:HB2	1.83	0.59
1:E:659:TYR:HB2	1:E:754:GLN:HG2	1.84	0.59
1:B:1220:LYS:HE2	1:B:1267:LEU:HB3	1.84	0.59
1:D:703:SER:O	1:E:2255:ARG:NH2	2.24	0.59
1:D:2103:TYR:CE1	1:D:2189:ARG:HG2	2.38	0.59
1:A:797:ASP:OD1	1:A:798:ALA:N	2.36	0.58
1:B:746:VAL:HB	1:B:749:GLN:HB2	1.85	0.58
1:C:746:VAL:HB	1:C:749:GLN:HB2	1.84	0.58
1:B:124:ARG:HD3	1:B:1914:THR:HB	1.85	0.58
1:D:2504:LEU:HD21	1:D:2507:ILE:HD11	1.86	0.58
1:E:124:ARG:HD3	1:E:1914:THR:HB	1.85	0.58
1:C:1774:TYR:OH	1:C:1848:TYR:OH	2.21	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1296:THR:HG23	1:D:1301:ARG:HH12	1.68	0.58
1:E:1296:THR:HG23	1:E:1301:ARG:HH12	1.67	0.58
1:A:124:ARG:HD3	1:A:1914:THR:HB	1.85	0.58
1:A:1296:THR:HG23	1:A:1301:ARG:HH12	1.68	0.58
1:D:2103:TYR:CE1	1:D:2193:GLU:HG2	2.38	0.58
1:A:2327:ARG:NH1	1:E:2445:CYS:SG	2.76	0.58
1:B:458:GLU:OE2	1:B:506:ARG:NH1	2.33	0.58
1:B:2103:TYR:CE1	1:B:2193:GLU:HG2	2.39	0.58
1:B:797:ASP:OD1	1:B:798:ALA:N	2.37	0.58
1:B:2137:ALA:HB2	1:D:1118:ALA:HB2	1.84	0.58
1:C:1296:THR:HG23	1:C:1301:ARG:HH12	1.69	0.58
1:E:2103:TYR:CE1	1:E:2189:ARG:HG2	2.39	0.58
1:D:337:ASN:ND2	1:D:421:TYR:O	2.25	0.58
1:E:2103:TYR:CE1	1:E:2193:GLU:HG2	2.38	0.58
1:A:2103:TYR:CE1	1:A:2193:GLU:HG2	2.39	0.58
1:C:1220:LYS:HE2	1:C:1267:LEU:HB3	1.86	0.58
1:D:797:ASP:OD1	1:D:798:ALA:N	2.37	0.58
1:B:703:SER:O	1:C:2255:ARG:NH2	2.25	0.57
1:C:124:ARG:HD3	1:C:1914:THR:HB	1.86	0.57
1:C:2103:TYR:CE1	1:C:2189:ARG:HG2	2.40	0.57
1:D:510:ASN:OD1	1:E:153:GLN:NE2	2.37	0.57
1:D:1865:ASP:OD1	1:D:1883:TYR:OH	2.21	0.57
1:E:746:VAL:HB	1:E:749:GLN:HB2	1.84	0.57
1:A:153:GLN:NE2	1:E:510:ASN:OD1	2.38	0.57
1:A:1865:ASP:OD1	1:A:1883:TYR:OH	2.20	0.57
1:B:519:PHE:O	1:B:553:ARG:NH2	2.38	0.57
1:A:519:PHE:O	1:A:553:ARG:NH2	2.38	0.57
1:A:1783:LEU:HD12	1:A:1788:ASN:HB3	1.87	0.57
1:B:2103:TYR:CE1	1:B:2189:ARG:HG2	2.39	0.57
1:C:2504:LEU:HD21	1:C:2507:ILE:HD11	1.86	0.57
1:E:797:ASP:OD1	1:E:798:ALA:N	2.37	0.57
1:A:746:VAL:HB	1:A:749:GLN:HB2	1.85	0.57
1:C:703:SER:O	1:D:2255:ARG:NH2	2.24	0.57
1:C:1774:TYR:HH	1:C:1848:TYR:HH	1.49	0.57
1:C:540:SER:HB2	1:D:848:GLN:HE22	1.68	0.57
1:C:2103:TYR:CE1	1:C:2193:GLU:HG2	2.39	0.57
1:C:2426:TYR:HB3	1:D:2334:THR:HG21	1.86	0.57
1:E:519:PHE:O	1:E:553:ARG:NH2	2.38	0.57
1:A:2445:CYS:SG	1:B:2327:ARG:NH1	2.78	0.57
1:B:2057:GLN:HG3	1:B:2241:LEU:HD12	1.85	0.57
1:E:2504:LEU:HD21	1:E:2507:ILE:HD11	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1072:ASP:OD1	1:E:1073:THR:N	2.38	0.57
1:B:1072:ASP:OD1	1:B:1073:THR:N	2.38	0.56
1:C:1783:LEU:HD12	1:C:1788:ASN:HB3	1.87	0.56
1:B:1655:HIS:NE2	1:B:1659:ARG:HA	2.20	0.56
1:C:797:ASP:OD1	1:C:798:ALA:N	2.37	0.56
1:A:1072:ASP:OD1	1:A:1073:THR:N	2.38	0.56
1:A:1655:HIS:NE2	1:A:1659:ARG:HA	2.20	0.56
1:B:510:ASN:OD1	1:C:153:GLN:NE2	2.38	0.56
1:C:510:ASN:OD1	1:D:153:GLN:NE2	2.38	0.56
1:E:1865:ASP:OD1	1:E:1883:TYR:OH	2.20	0.56
1:C:519:PHE:O	1:C:553:ARG:NH2	2.37	0.56
1:A:1722:GLY:O	1:A:1739:SER:HB2	2.06	0.56
1:A:2103:TYR:CE1	1:A:2189:ARG:HG2	2.40	0.56
1:C:458:GLU:OE2	1:C:506:ARG:NH1	2.35	0.56
1:C:1655:HIS:NE2	1:C:1659:ARG:HA	2.20	0.56
1:C:2057:GLN:HG3	1:C:2241:LEU:HD12	1.87	0.56
1:D:1655:HIS:NE2	1:D:1659:ARG:HA	2.20	0.56
1:E:1655:HIS:NE2	1:E:1659:ARG:HA	2.20	0.56
1:B:1783:LEU:HD12	1:B:1788:ASN:HB3	1.88	0.56
1:C:1072:ASP:OD1	1:C:1073:THR:N	2.38	0.56
1:A:2504:LEU:HD21	1:A:2507:ILE:HD11	1.87	0.56
1:D:519:PHE:O	1:D:553:ARG:NH2	2.38	0.56
1:D:1072:ASP:OD1	1:D:1073:THR:N	2.38	0.55
1:E:458:GLU:OE2	1:E:506:ARG:NH1	2.34	0.55
1:B:2504:LEU:HD21	1:B:2507:ILE:HD11	1.87	0.55
1:B:1722:GLY:O	1:B:1739:SER:HB2	2.06	0.55
1:C:1722:GLY:O	1:C:1739:SER:HB2	2.07	0.55
1:D:2057:GLN:HG3	1:D:2241:LEU:HD12	1.88	0.55
1:E:1722:GLY:O	1:E:1739:SER:HB2	2.06	0.55
1:E:1783:LEU:HD12	1:E:1788:ASN:HB3	1.87	0.55
1:E:368:LEU:HG	1:E:370:ILE:HD11	1.88	0.55
1:B:1885:GLN:HA	1:B:1888:HIS:CE1	2.42	0.55
1:C:503:ILE:HB	1:C:582:LEU:HD11	1.89	0.55
1:B:368:LEU:HG	1:B:370:ILE:HD11	1.88	0.55
1:C:1728:ASP:OD2	1:C:1730:LYS:NZ	2.40	0.55
1:A:1794:ARG:NH2	1:A:1798:TYR:OH	2.40	0.54
1:A:407:GLU:HA	1:A:425:LYS:HA	1.88	0.54
1:D:407:GLU:HA	1:D:425:LYS:HA	1.89	0.54
1:A:368:LEU:HG	1:A:370:ILE:HD11	1.88	0.54
1:A:1885:GLN:HA	1:A:1888:HIS:CE1	2.42	0.54
1:B:1865:ASP:OD1	1:B:1883:TYR:OH	2.20	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2182:SER:HG	1:E:1067:SER:HG	1.49	0.54
1:D:1722:GLY:O	1:D:1739:SER:HB2	2.07	0.54
1:B:503:ILE:HB	1:B:582:LEU:HD11	1.90	0.54
1:D:1783:LEU:HD12	1:D:1788:ASN:HB3	1.87	0.54
1:E:2033:LEU:HD11	1:E:2266:TYR:HA	1.90	0.54
1:E:2448:LEU:HD23	1:E:2471:PRO:HB2	1.90	0.54
1:A:503:ILE:HB	1:A:582:LEU:HD11	1.90	0.54
1:A:2448:LEU:HD23	1:A:2471:PRO:HB2	1.89	0.54
1:E:503:ILE:HB	1:E:582:LEU:HD11	1.90	0.54
1:D:1885:GLN:HA	1:D:1888:HIS:CE1	2.43	0.54
1:D:1728:ASP:OD2	1:D:1730:LYS:NZ	2.41	0.54
1:B:1794:ARG:NH2	1:B:1798:TYR:OH	2.41	0.54
1:D:368:LEU:HG	1:D:370:ILE:HD11	1.89	0.54
1:B:341:MET:HE1	1:B:359:PHE:CE1	2.43	0.54
1:C:407:GLU:HA	1:C:425:LYS:HA	1.89	0.54
1:C:1865:ASP:OD1	1:C:1883:TYR:OH	2.19	0.54
1:D:1790:ASP:OD1	1:D:1791:GLU:N	2.42	0.54
1:E:1790:ASP:OD1	1:E:1791:GLU:N	2.41	0.54
1:E:1885:GLN:HA	1:E:1888:HIS:CE1	2.42	0.54
1:A:2057:GLN:HG3	1:A:2241:LEU:HD12	1.90	0.53
1:C:368:LEU:HG	1:C:370:ILE:HD11	1.88	0.53
1:C:1885:GLN:HA	1:C:1888:HIS:CE1	2.43	0.53
1:E:866:ASN:HA	1:E:869:SER:HB3	1.91	0.53
1:A:510:ASN:OD1	1:B:153:GLN:NE2	2.39	0.53
1:E:2057:GLN:HG3	1:E:2241:LEU:HD12	1.89	0.53
1:A:2087:LYS:HZ2	1:E:2205:GLN:HA	1.73	0.53
1:B:407:GLU:HA	1:B:425:LYS:HA	1.89	0.53
1:C:341:MET:HE1	1:C:359:PHE:CE1	2.43	0.53
1:C:1790:ASP:OD1	1:C:1791:GLU:N	2.41	0.53
1:D:503:ILE:HB	1:D:582:LEU:HD11	1.90	0.53
1:D:2353:LEU:HD23	1:D:2357:ILE:HD11	1.90	0.53
1:D:458:GLU:OE2	1:D:506:ARG:NH1	2.34	0.53
1:A:341:MET:HE2	1:A:359:PHE:CE1	2.43	0.53
1:A:2353:LEU:HD23	1:A:2357:ILE:HD11	1.90	0.53
1:B:2205:GLN:HA	1:C:2087:LYS:HZ2	1.72	0.53
1:C:866:ASN:HA	1:C:869:SER:HB3	1.90	0.53
1:D:670:LEU:HA	1:D:699:THR:HG21	1.91	0.53
1:A:1790:ASP:OD1	1:A:1791:GLU:N	2.42	0.53
1:C:2353:LEU:HD23	1:C:2357:ILE:HD11	1.90	0.53
1:D:2033:LEU:HD11	1:D:2266:TYR:HA	1.91	0.53
1:E:1794:ARG:NH2	1:E:1798:TYR:OH	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:368:LEU:N	1:B:381:THR:O	2.28	0.53
1:B:2266:TYR:CZ	1:B:2297:TRP:HB2	2.43	0.53
1:B:2445:CYS:SG	1:C:2327:ARG:NH1	2.81	0.53
1:D:2448:LEU:HD23	1:D:2471:PRO:HB2	1.91	0.53
1:D:341:MET:HE1	1:D:359:PHE:CE1	2.43	0.53
1:E:341:MET:HE1	1:E:359:PHE:CE1	2.43	0.53
1:E:2266:TYR:CZ	1:E:2297:TRP:HB2	2.44	0.53
1:A:866:ASN:HA	1:A:869:SER:HB3	1.90	0.53
1:A:2266:TYR:CZ	1:A:2297:TRP:HB2	2.44	0.53
1:C:2266:TYR:CZ	1:C:2297:TRP:HB2	2.44	0.53
1:D:2341:TYR:OH	1:D:2390:SER:O	2.19	0.53
1:A:2033:LEU:HD11	1:A:2266:TYR:HA	1.90	0.52
1:B:2353:LEU:HD23	1:B:2357:ILE:HD11	1.90	0.52
1:D:866:ASN:HA	1:D:869:SER:HB3	1.91	0.52
1:E:407:GLU:HA	1:E:425:LYS:HA	1.90	0.52
1:A:497:ILE:HG21	1:A:589:TYR:HD2	1.74	0.52
1:A:1117:ASP:OD1	1:A:1118:ALA:N	2.40	0.52
1:B:1709:MET:HB3	1:B:1743:HIS:CE1	2.45	0.52
1:C:497:ILE:HG21	1:C:589:TYR:HD2	1.73	0.52
1:D:1794:ARG:NH2	1:D:1798:TYR:OH	2.43	0.52
1:B:497:ILE:HG21	1:B:589:TYR:HD2	1.74	0.52
1:D:698:ALA:HB1	1:E:2253:TRP:HA	1.90	0.52
1:D:2266:TYR:CZ	1:D:2297:TRP:HB2	2.44	0.52
1:E:1728:ASP:OD2	1:E:1730:LYS:NZ	2.41	0.52
1:A:670:LEU:HA	1:A:699:THR:HG21	1.92	0.52
1:A:1709:MET:HB3	1:A:1743:HIS:CE1	2.45	0.52
1:A:2253:TRP:HA	1:E:698:ALA:HB1	1.91	0.52
1:B:1118:ALA:HB2	1:E:2137:ALA:HB2	1.92	0.52
1:A:2068:LEU:HD22	1:A:2227:LEU:HG	1.92	0.52
1:C:1709:MET:HB3	1:C:1743:HIS:CE1	2.45	0.52
1:C:2033:LEU:HD11	1:C:2266:TYR:HA	1.91	0.52
1:D:540:SER:HB2	1:E:848:GLN:NE2	2.25	0.52
1:E:1709:MET:HB3	1:E:1743:HIS:CE1	2.44	0.52
1:A:1239:TYR:HD2	1:A:1242:GLU:HB3	1.75	0.52
1:A:1728:ASP:OD2	1:A:1730:LYS:NZ	2.41	0.52
1:B:670:LEU:HA	1:B:699:THR:HG21	1.92	0.52
1:C:1794:ARG:NH2	1:C:1798:TYR:OH	2.43	0.52
1:D:1117:ASP:OD1	1:D:1118:ALA:N	2.40	0.52
1:C:698:ALA:HB1	1:D:2253:TRP:HA	1.91	0.52
1:A:698:ALA:HB1	1:B:2253:TRP:HA	1.91	0.51
1:A:2205:GLN:HA	1:B:2087:LYS:HZ2	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:568:ILE:HD11	1:B:606:ASP:HB2	1.92	0.51
1:B:1790:ASP:OD1	1:B:1791:GLU:N	2.41	0.51
1:B:2033:LEU:HD11	1:B:2266:TYR:HA	1.91	0.51
1:E:1117:ASP:OD1	1:E:1118:ALA:N	2.40	0.51
1:E:1239:TYR:HD2	1:E:1242:GLU:HB3	1.75	0.51
1:A:343:VAL:HG23	1:A:357:TYR:HB3	1.92	0.51
1:A:848:GLN:NE2	1:E:540:SER:HB2	2.26	0.51
1:C:300:ALA:HA	1:C:303:PHE:HD2	1.76	0.51
1:C:343:VAL:HG23	1:C:357:TYR:HB3	1.93	0.51
1:D:1709:MET:HB3	1:D:1743:HIS:CE1	2.45	0.51
1:E:497:ILE:HG21	1:E:589:TYR:HD2	1.74	0.51
1:E:2353:LEU:HD23	1:E:2357:ILE:HD11	1.91	0.51
1:B:698:ALA:HB1	1:C:2253:TRP:HA	1.91	0.51
1:B:866:ASN:HA	1:B:869:SER:HB3	1.91	0.51
1:E:471:ASN:H	1:E:474:VAL:HG12	1.76	0.51
1:A:540:SER:HB2	1:B:848:GLN:NE2	2.25	0.51
1:A:2087:LYS:NZ	1:E:2205:GLN:HA	2.26	0.51
1:B:2205:GLN:HA	1:C:2087:LYS:NZ	2.26	0.51
1:B:2341:TYR:OH	1:B:2390:SER:O	2.19	0.51
1:C:2068:LEU:HD22	1:C:2227:LEU:HG	1.93	0.51
1:D:2068:LEU:HD22	1:D:2227:LEU:HG	1.92	0.51
1:C:1239:TYR:HD2	1:C:1242:GLU:HB3	1.75	0.51
1:A:1118:ALA:HB2	1:D:2137:ALA:HB2	1.93	0.51
1:E:670:LEU:HA	1:E:699:THR:HG21	1.92	0.51
1:E:470:ILE:HA	1:E:474:VAL:HG11	1.93	0.51
1:B:557:ILE:HB	1:B:561:SER:OG	2.11	0.51
1:C:471:ASN:H	1:C:474:VAL:HG12	1.76	0.51
1:C:2448:LEU:HD23	1:C:2471:PRO:HB2	1.92	0.51
1:D:497:ILE:HG21	1:D:589:TYR:HD2	1.75	0.51
1:E:343:VAL:HG23	1:E:357:TYR:HB3	1.92	0.51
1:B:540:SER:HB2	1:C:848:GLN:NE2	2.26	0.51
1:B:2068:LEU:HD22	1:B:2227:LEU:HG	1.93	0.51
1:A:568:ILE:HD11	1:A:606:ASP:HB2	1.93	0.50
1:C:670:LEU:HA	1:C:699:THR:HG21	1.92	0.50
1:C:1614:VAL:O	1:C:1618:THR:HG23	2.11	0.50
1:D:1108:THR:OG1	1:D:1128:HIS:NE2	2.36	0.50
1:D:1239:TYR:HD2	1:D:1242:GLU:HB3	1.75	0.50
1:B:120:THR:O	1:B:124:ARG:HG3	2.11	0.50
1:B:343:VAL:HG23	1:B:357:TYR:HB3	1.93	0.50
1:D:343:VAL:HG23	1:D:357:TYR:HB3	1.93	0.50
1:E:2341:TYR:OH	1:E:2390:SER:O	2.19	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2205:GLN:HA	1:B:2087:LYS:NZ	2.26	0.50
1:B:1117:ASP:OD1	1:B:1118:ALA:N	2.40	0.50
1:C:540:SER:HB2	1:D:848:GLN:NE2	2.25	0.50
1:C:2047:GLN:NE2	1:C:2048:ASP:OD1	2.44	0.50
1:D:471:ASN:H	1:D:474:VAL:HG12	1.76	0.50
1:D:2205:GLN:HA	1:E:2087:LYS:NZ	2.26	0.50
1:E:2068:LEU:HD22	1:E:2227:LEU:HG	1.92	0.50
1:B:471:ASN:H	1:B:474:VAL:HG12	1.76	0.50
1:D:2205:GLN:HA	1:E:2087:LYS:HZ2	1.75	0.50
1:C:462:ARG:HH11	1:C:506:ARG:HH11	1.60	0.50
1:E:120:THR:O	1:E:124:ARG:HG3	2.12	0.50
1:A:300:ALA:HA	1:A:303:PHE:HD2	1.75	0.50
1:A:471:ASN:H	1:A:474:VAL:HG12	1.76	0.50
1:C:120:THR:O	1:C:124:ARG:HG3	2.11	0.50
1:C:2341:TYR:OH	1:C:2390:SER:O	2.19	0.50
1:D:120:THR:O	1:D:124:ARG:HG3	2.12	0.50
1:D:470:ILE:HA	1:D:474:VAL:HG11	1.94	0.50
1:B:1168:TYR:HB3	1:B:1200:LEU:HD11	1.93	0.50
1:B:2047:GLN:NE2	1:B:2048:ASP:OD1	2.45	0.50
1:C:507:SER:HB3	1:C:513:SER:HB2	1.93	0.50
1:D:1614:VAL:O	1:D:1618:THR:HG23	2.11	0.50
1:E:1614:VAL:O	1:E:1618:THR:HG23	2.11	0.50
1:A:557:ILE:HB	1:A:561:SER:OG	2.11	0.50
1:A:1883:TYR:HD2	1:A:1970:LEU:HD11	1.77	0.50
1:B:1239:TYR:HD2	1:B:1242:GLU:HB3	1.76	0.50
1:C:2204:LYS:C	1:D:2087:LYS:HZ3	2.13	0.50
1:E:1774:TYR:OH	1:E:1848:TYR:OH	2.21	0.50
1:C:836:ALA:HB2	1:C:846:LEU:HD12	1.94	0.49
1:D:300:ALA:HA	1:D:303:PHE:HD2	1.76	0.49
1:E:300:ALA:HA	1:E:303:PHE:HD2	1.76	0.49
1:A:120:THR:O	1:A:124:ARG:HG3	2.12	0.49
1:B:698:ALA:HB2	1:C:2256:GLY:HA3	1.94	0.49
1:C:1168:TYR:HB3	1:C:1200:LEU:HD11	1.93	0.49
1:E:1883:TYR:HD2	1:E:1970:LEU:HD11	1.77	0.49
1:A:1614:VAL:O	1:A:1618:THR:HG23	2.11	0.49
1:A:2005:GLY:HA2	1:D:741:GLY:HA2	1.94	0.49
1:A:2047:GLN:NE2	1:A:2048:ASP:OD1	2.45	0.49
1:B:300:ALA:HA	1:B:303:PHE:HD2	1.76	0.49
1:B:1617:ALA:HA	1:B:1624:ILE:HD11	1.93	0.49
1:B:2448:LEU:HD23	1:B:2471:PRO:HB2	1.92	0.49
1:C:568:ILE:HD11	1:C:606:ASP:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:836:ALA:HB2	1:D:846:LEU:HD12	1.94	0.49
1:B:1614:VAL:O	1:B:1618:THR:HG23	2.11	0.49
1:B:1728:ASP:OD2	1:B:1730:LYS:NZ	2.41	0.49
1:B:2246:SER:HA	1:B:2250:LEU:HD23	1.94	0.49
1:C:557:ILE:HB	1:C:561:SER:OG	2.12	0.49
1:C:2004:GLN:H	1:C:2300:THR:HG22	1.76	0.49
1:C:2205:GLN:HA	1:D:2087:LYS:NZ	2.26	0.49
1:D:1617:ALA:HA	1:D:1624:ILE:HD11	1.94	0.49
1:E:1168:TYR:HB3	1:E:1200:LEU:HD11	1.93	0.49
1:A:197:ALA:N	1:A:948:THR:HG21	2.28	0.49
1:B:197:ALA:N	1:B:948:THR:HG21	2.27	0.49
1:D:2047:GLN:NE2	1:D:2048:ASP:OD1	2.45	0.49
1:E:2047:GLN:NE2	1:E:2048:ASP:OD1	2.46	0.49
1:A:1878:GLU:HA	1:A:1881:MET:HG3	1.94	0.49
1:A:2057:GLN:HG3	1:A:2241:LEU:CD1	2.42	0.49
1:E:347:PRO:HA	1:E:353:TYR:HA	1.95	0.49
1:A:348:PHE:CE1	1:A:352:ASN:HB3	2.48	0.49
1:B:507:SER:HB3	1:B:513:SER:HB2	1.94	0.49
1:C:1878:GLU:HA	1:C:1881:MET:HG3	1.94	0.49
1:E:348:PHE:CE1	1:E:352:ASN:HB3	2.48	0.49
1:A:470:ILE:HA	1:A:474:VAL:HG11	1.94	0.49
1:A:507:SER:HB3	1:A:513:SER:HB2	1.94	0.49
1:A:836:ALA:HB2	1:A:846:LEU:HD12	1.93	0.49
1:A:1617:ALA:HA	1:A:1624:ILE:HD11	1.94	0.49
1:A:2246:SER:HA	1:A:2250:LEU:HD23	1.94	0.49
1:D:1168:TYR:HB3	1:D:1200:LEU:HD11	1.94	0.49
1:E:568:ILE:HD11	1:E:606:ASP:HB2	1.93	0.49
1:B:348:PHE:CE1	1:B:352:ASN:HB3	2.48	0.49
1:B:836:ALA:HB2	1:B:846:LEU:HD12	1.94	0.49
1:C:197:ALA:N	1:C:948:THR:HG21	2.28	0.49
1:C:1617:ALA:HA	1:C:1624:ILE:HD11	1.94	0.49
1:D:2246:SER:HA	1:D:2250:LEU:HD23	1.94	0.49
1:E:557:ILE:HB	1:E:561:SER:OG	2.11	0.49
1:E:2057:GLN:HG3	1:E:2241:LEU:CD1	2.43	0.49
1:E:2246:SER:HA	1:E:2250:LEU:HD23	1.94	0.49
1:B:470:ILE:HA	1:B:474:VAL:HG11	1.94	0.49
1:E:197:ALA:N	1:E:948:THR:HG21	2.28	0.49
1:E:672:ASP:O	1:E:676:HIS:ND1	2.46	0.49
1:C:198:THR:HB	1:C:199:PRO:HA	1.95	0.48
1:C:371:LYS:HG2	1:C:377:GLU:HA	1.95	0.48
1:D:557:ILE:HB	1:D:561:SER:OG	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:2118:ARG:HG2	1:E:2178:LYS:HB2	1.94	0.48
1:B:1870:GLN:HB3	1:B:1872:GLU:OE1	2.14	0.48
1:C:348:PHE:CE1	1:C:352:ASN:HB3	2.48	0.48
1:C:1124:ARG:NE	1:C:1142:SER:O	2.47	0.48
1:A:195:SER:HB3	1:A:198:THR:OG1	2.13	0.48
1:B:2118:ARG:HG2	1:B:2178:LYS:HB2	1.95	0.48
1:C:470:ILE:HA	1:C:474:VAL:HG11	1.93	0.48
1:C:2057:GLN:HG3	1:C:2241:LEU:CD1	2.43	0.48
1:D:348:PHE:CE1	1:D:352:ASN:HB3	2.48	0.48
1:B:347:PRO:HA	1:B:353:TYR:HA	1.95	0.48
1:B:1878:GLU:HA	1:B:1881:MET:HG3	1.95	0.48
1:C:2118:ARG:HG2	1:C:2178:LYS:HB2	1.96	0.48
1:D:198:THR:HB	1:D:199:PRO:HA	1.95	0.48
1:D:1878:GLU:HA	1:D:1881:MET:HG3	1.95	0.48
1:B:195:SER:HB3	1:B:198:THR:OG1	2.14	0.48
1:D:2057:GLN:HG3	1:D:2241:LEU:CD1	2.43	0.48
1:E:507:SER:HB3	1:E:513:SER:HB2	1.95	0.48
1:E:1172:LEU:HD11	1:E:1196:TYR:HB3	1.95	0.48
1:A:458:GLU:OE2	1:A:506:ARG:NH1	2.35	0.48
1:A:462:ARG:HH11	1:A:506:ARG:HH11	1.61	0.48
1:A:1870:GLN:HB3	1:A:1872:GLU:OE1	2.13	0.48
1:D:672:ASP:O	1:D:676:HIS:ND1	2.46	0.48
1:D:1909:ARG:HH11	1:D:1913:ILE:HD12	1.79	0.48
1:D:2204:LYS:C	1:E:2087:LYS:HZ3	2.14	0.48
1:A:1058:ASP:O	1:A:1062:GLN:HG3	2.14	0.48
1:B:462:ARG:HH11	1:B:506:ARG:HH11	1.62	0.48
1:C:1870:GLN:HB3	1:C:1872:GLU:OE1	2.14	0.48
1:D:197:ALA:N	1:D:948:THR:HG21	2.28	0.48
1:D:347:PRO:HA	1:D:353:TYR:HA	1.96	0.48
1:A:318:VAL:HG23	1:A:319:ASN:H	1.79	0.48
1:A:2182:SER:HG	1:C:1067:SER:HG	1.53	0.48
1:B:2067:ASN:HB3	1:B:2227:LEU:HD21	1.95	0.48
1:D:195:SER:HB3	1:D:198:THR:OG1	2.14	0.48
1:D:568:ILE:HD11	1:D:606:ASP:HB2	1.94	0.48
1:B:741:GLY:HA2	1:D:2005:GLY:HA2	1.95	0.48
1:D:371:LYS:HG2	1:D:377:GLU:HA	1.96	0.48
1:A:347:PRO:HA	1:A:353:TYR:HA	1.96	0.48
1:C:694:PRO:HA	1:C:705:GLU:OE1	2.14	0.48
1:C:741:GLY:HA2	1:E:2005:GLY:HA2	1.96	0.48
1:C:2246:SER:HA	1:C:2250:LEU:HD23	1.94	0.48
1:D:1124:ARG:NE	1:D:1142:SER:O	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1870:GLN:HB3	1:D:1872:GLU:OE1	2.14	0.48
1:D:2445:CYS:SG	1:E:2327:ARG:NH1	2.87	0.48
1:E:283:LYS:HB2	1:E:293:LEU:HD22	1.96	0.48
1:E:1617:ALA:HA	1:E:1624:ILE:HD11	1.94	0.48
1:A:2341:TYR:OH	1:A:2390:SER:O	2.19	0.47
1:C:181:ASN:HD21	1:C:184:LYS:HG2	1.79	0.47
1:E:198:THR:HB	1:E:199:PRO:HA	1.95	0.47
1:A:198:THR:HB	1:A:199:PRO:HA	1.96	0.47
1:A:2256:GLY:HA3	1:E:698:ALA:HB2	1.96	0.47
1:B:198:THR:HB	1:B:199:PRO:HA	1.95	0.47
1:B:2004:GLN:H	1:B:2300:THR:HG22	1.78	0.47
1:C:672:ASP:O	1:C:676:HIS:ND1	2.46	0.47
1:E:836:ALA:HB2	1:E:846:LEU:HD12	1.94	0.47
1:E:1730:LYS:HZ3	1:E:1732:ILE:HD12	1.78	0.47
1:A:1108:THR:OG1	1:A:1128:HIS:NE2	2.38	0.47
1:A:1168:TYR:HB3	1:A:1200:LEU:HD11	1.95	0.47
1:C:283:LYS:HB2	1:C:293:LEU:HD22	1.96	0.47
1:C:1909:ARG:HH11	1:C:1913:ILE:HD12	1.79	0.47
1:C:2018:ARG:NH1	1:C:2466:ASP:O	2.46	0.47
1:D:2004:GLN:H	1:D:2300:THR:HG22	1.77	0.47
1:E:195:SER:HB3	1:E:198:THR:OG1	2.14	0.47
1:E:1058:ASP:O	1:E:1062:GLN:HG3	2.15	0.47
1:E:1124:ARG:NE	1:E:1142:SER:O	2.46	0.47
1:A:371:LYS:HG2	1:A:377:GLU:HA	1.95	0.47
1:A:2004:GLN:H	1:A:2300:THR:HG22	1.79	0.47
1:B:1730:LYS:HZ3	1:B:1732:ILE:HD12	1.78	0.47
1:D:181:ASN:HD21	1:D:184:LYS:HG2	1.79	0.47
1:D:507:SER:HB3	1:D:513:SER:HB2	1.95	0.47
1:E:646:TRP:CZ2	1:E:768:SER:HB3	2.50	0.47
1:E:1878:GLU:HA	1:E:1881:MET:HG3	1.95	0.47
1:A:694:PRO:HA	1:A:705:GLU:OE1	2.15	0.47
1:A:741:GLY:HA2	1:C:2005:GLY:HA2	1.95	0.47
1:A:1730:LYS:HZ3	1:A:1732:ILE:HD12	1.79	0.47
1:B:1124:ARG:NE	1:B:1142:SER:O	2.47	0.47
1:B:1909:ARG:HH11	1:B:1913:ILE:HD12	1.79	0.47
1:C:318:VAL:HG23	1:C:319:ASN:H	1.79	0.47
1:D:462:ARG:HH11	1:D:506:ARG:HH11	1.62	0.47
1:D:698:ALA:HB2	1:E:2256:GLY:HA3	1.97	0.47
1:E:2004:GLN:H	1:E:2300:THR:HG22	1.79	0.47
1:B:672:ASP:O	1:B:676:HIS:ND1	2.47	0.47
1:B:702:LEU:HD22	1:B:708:ALA:HB2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2204:LYS:C	1:C:2087:LYS:HZ3	2.15	0.47
1:C:195:SER:HB3	1:C:198:THR:OG1	2.14	0.47
1:C:2067:ASN:HB3	1:C:2227:LEU:HD21	1.97	0.47
1:A:672:ASP:O	1:A:676:HIS:ND1	2.47	0.47
1:B:505:GLN:HE22	1:B:582:LEU:HD13	1.79	0.47
1:C:646:TRP:CZ2	1:C:768:SER:HB3	2.50	0.47
1:C:702:LEU:HD22	1:C:708:ALA:HB2	1.96	0.47
1:C:1117:ASP:OD1	1:C:1118:ALA:N	2.40	0.47
1:C:1883:TYR:HD2	1:C:1970:LEU:HD11	1.80	0.47
1:D:646:TRP:CZ2	1:D:768:SER:HB3	2.50	0.47
1:D:1058:ASP:O	1:D:1062:GLN:HG3	2.15	0.47
1:D:1883:TYR:HD2	1:D:1970:LEU:HD11	1.79	0.47
1:E:462:ARG:HH11	1:E:506:ARG:HH11	1.63	0.47
1:E:1909:ARG:HH11	1:E:1913:ILE:HD12	1.80	0.47
1:A:698:ALA:HB2	1:B:2256:GLY:HA3	1.96	0.47
1:A:1909:ARG:HH11	1:A:1913:ILE:HD12	1.79	0.47
1:A:2118:ARG:HG2	1:A:2178:LYS:HB2	1.95	0.47
1:B:2005:GLY:HA2	1:E:741:GLY:HA2	1.97	0.47
1:A:536:ILE:HD13	1:A:547:ARG:HB2	1.96	0.47
1:C:347:PRO:HA	1:C:353:TYR:HA	1.96	0.47
1:D:702:LEU:HD22	1:D:708:ALA:HB2	1.96	0.47
1:D:1168:TYR:HD2	1:D:1200:LEU:HD11	1.80	0.47
1:E:1870:GLN:HB3	1:E:1872:GLU:OE1	2.14	0.47
1:A:127:ARG:HG3	1:A:127:ARG:HH11	1.80	0.47
1:A:1098:HIS:HE1	1:A:1100:ASN:HB3	1.81	0.47
1:B:181:ASN:HD21	1:B:184:LYS:HG2	1.79	0.47
1:B:318:VAL:HG23	1:B:319:ASN:H	1.79	0.47
1:B:1883:TYR:HD2	1:B:1970:LEU:HD11	1.80	0.47
1:D:127:ARG:HG3	1:D:127:ARG:HH11	1.80	0.47
1:D:505:GLN:HE22	1:D:582:LEU:HD13	1.79	0.47
1:E:505:GLN:HE22	1:E:582:LEU:HD13	1.80	0.47
1:A:1172:LEU:HD11	1:A:1196:TYR:HB3	1.96	0.46
1:B:694:PRO:HA	1:B:705:GLU:OE1	2.15	0.46
1:B:1058:ASP:O	1:B:1062:GLN:HG3	2.15	0.46
1:C:127:ARG:HG3	1:C:127:ARG:HH11	1.80	0.46
1:C:1058:ASP:O	1:C:1062:GLN:HG3	2.15	0.46
1:E:127:ARG:HG3	1:E:127:ARG:HH11	1.80	0.46
1:A:702:LEU:HD22	1:A:708:ALA:HB2	1.96	0.46
1:B:283:LYS:HB2	1:B:293:LEU:HD22	1.96	0.46
1:B:2183:GLU:OE1	1:C:2108:ASN:ND2	2.42	0.46
1:C:505:GLN:HE22	1:C:582:LEU:HD13	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:318:VAL:HG23	1:D:319:ASN:H	1.79	0.46
1:E:694:PRO:HA	1:E:705:GLU:OE1	2.15	0.46
1:A:646:TRP:CZ2	1:A:768:SER:HB3	2.51	0.46
1:D:2018:ARG:NH1	1:D:2466:ASP:O	2.47	0.46
1:D:2067:ASN:HB3	1:D:2227:LEU:HD21	1.97	0.46
1:A:1124:ARG:NE	1:A:1142:SER:O	2.47	0.46
1:B:1098:HIS:HE1	1:B:1100:ASN:HB3	1.80	0.46
1:D:283:LYS:HB2	1:D:293:LEU:HD22	1.96	0.46
1:E:318:VAL:HG23	1:E:319:ASN:H	1.79	0.46
1:E:318:VAL:HG23	1:E:319:ASN:N	2.30	0.46
1:A:1892:ASP:OD1	1:A:1892:ASP:N	2.49	0.46
1:B:127:ARG:HG3	1:B:127:ARG:HH11	1.81	0.46
1:D:1892:ASP:OD1	1:D:1892:ASP:N	2.49	0.46
1:E:1892:ASP:OD1	1:E:1892:ASP:N	2.49	0.46
1:A:2067:ASN:HB3	1:A:2227:LEU:HD21	1.96	0.46
1:B:537:ASP:HA	1:B:577:LYS:HA	1.98	0.46
1:C:1172:LEU:HD11	1:C:1196:TYR:HB3	1.96	0.46
1:D:694:PRO:HA	1:D:705:GLU:OE1	2.15	0.46
1:E:702:LEU:HD22	1:E:708:ALA:HB2	1.96	0.46
1:A:318:VAL:HG23	1:A:319:ASN:N	2.31	0.46
1:A:505:GLN:HE22	1:A:582:LEU:HD13	1.80	0.46
1:B:371:LYS:HG2	1:B:377:GLU:HA	1.96	0.46
1:D:1172:LEU:HD11	1:D:1196:TYR:HB3	1.97	0.46
1:A:711:VAL:HG11	1:A:763:GLU:OE2	2.16	0.46
1:B:646:TRP:CZ2	1:B:768:SER:HB3	2.50	0.46
1:B:2362:SER:OG	1:B:2502:LYS:NZ	2.47	0.46
1:D:536:ILE:HD13	1:D:547:ARG:HB2	1.97	0.46
1:E:371:LYS:HG2	1:E:377:GLU:HA	1.96	0.46
1:B:341:MET:HE3	1:B:410:LEU:HD22	1.98	0.46
1:B:2057:GLN:HG3	1:B:2241:LEU:CD1	2.44	0.46
1:C:370:ILE:HG13	1:C:410:LEU:HG	1.98	0.46
1:C:698:ALA:HB2	1:D:2256:GLY:HA3	1.98	0.46
1:D:318:VAL:HG23	1:D:319:ASN:N	2.31	0.46
1:D:1730:LYS:HZ3	1:D:1732:ILE:HD12	1.80	0.46
1:D:341:MET:CE	1:D:410:LEU:HD22	2.46	0.46
1:A:1168:TYR:HD2	1:A:1200:LEU:HD11	1.80	0.45
1:B:536:ILE:HD13	1:B:547:ARG:HB2	1.97	0.45
1:D:1676:ILE:HD12	1:D:1690:LEU:HD13	1.98	0.45
1:E:181:ASN:HD21	1:E:184:LYS:HG2	1.80	0.45
1:B:370:ILE:HG13	1:B:410:LEU:HG	1.98	0.45
1:B:711:VAL:HG11	1:B:763:GLU:OE2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:505:GLN:NE2	1:D:582:LEU:HD13	2.32	0.45
1:D:711:VAL:HG11	1:D:763:GLU:OE2	2.16	0.45
1:D:1071:ALA:HB2	1:D:1791:GLU:OE2	2.17	0.45
1:D:2118:ARG:HG2	1:D:2178:LYS:HB2	1.97	0.45
1:E:341:MET:CE	1:E:410:LEU:HD22	2.46	0.45
1:A:197:ALA:H	1:A:948:THR:HG21	1.82	0.45
1:A:2278:GLN:OE1	1:A:2281:ARG:NH2	2.50	0.45
1:C:505:GLN:NE2	1:C:582:LEU:HD13	2.31	0.45
1:D:370:ILE:HG13	1:D:410:LEU:HG	1.98	0.45
1:E:536:ILE:HD13	1:E:547:ARG:HB2	1.97	0.45
1:E:1098:HIS:HE1	1:E:1100:ASN:HB3	1.81	0.45
1:E:2018:ARG:NH1	1:E:2466:ASP:O	2.49	0.45
1:A:181:ASN:HD21	1:A:184:LYS:HG2	1.80	0.45
1:A:2018:ARG:NH1	1:A:2466:ASP:O	2.46	0.45
1:A:2204:LYS:C	1:B:2087:LYS:HZ3	2.14	0.45
1:B:318:VAL:HG23	1:B:319:ASN:N	2.31	0.45
1:B:1168:TYR:HD2	1:B:1200:LEU:HD11	1.81	0.45
1:C:2205:GLN:HA	1:D:2087:LYS:HZ2	1.82	0.45
1:A:341:MET:CE	1:A:410:LEU:HD22	2.46	0.45
1:A:534:GLU:OE2	1:A:580:ASN:ND2	2.49	0.45
1:C:197:ALA:H	1:C:948:THR:HG21	1.82	0.45
1:C:318:VAL:HG23	1:C:319:ASN:N	2.31	0.45
1:C:1098:HIS:HE1	1:C:1100:ASN:HB3	1.81	0.45
1:A:1056:MET:HG3	1:A:1081:TYR:HE1	1.82	0.45
1:B:1056:MET:HG3	1:B:1081:TYR:HE1	1.82	0.45
1:E:370:ILE:HG13	1:E:410:LEU:HG	1.99	0.45
1:A:283:LYS:HB2	1:A:293:LEU:HD22	1.98	0.45
1:A:505:GLN:NE2	1:A:582:LEU:HD13	2.32	0.45
1:A:1676:ILE:HD12	1:A:1690:LEU:HD13	1.98	0.45
1:B:341:MET:CE	1:B:410:LEU:HD22	2.47	0.45
1:B:1172:LEU:HD11	1:B:1196:TYR:HB3	1.97	0.45
1:C:341:MET:CE	1:C:410:LEU:HD22	2.46	0.45
1:D:1098:HIS:HE1	1:D:1100:ASN:HB3	1.81	0.45
1:D:2132:ARG:HH11	1:D:2163:TYR:HB3	1.82	0.45
1:E:210:VAL:HG22	1:E:926:LEU:HD11	1.99	0.45
1:E:1163:TYR:CD1	1:E:1245:LEU:HD22	2.52	0.45
1:E:1168:TYR:HD2	1:E:1200:LEU:HD11	1.81	0.45
1:B:197:ALA:H	1:B:948:THR:HG21	1.81	0.45
1:D:2362:SER:OG	1:D:2502:LYS:NZ	2.47	0.45
1:E:464:VAL:HG21	1:E:474:VAL:HA	1.98	0.45
1:E:505:GLN:NE2	1:E:582:LEU:HD13	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:971:LEU:O	1:A:973:ILE:HG12	2.17	0.45
1:B:505:GLN:NE2	1:B:582:LEU:HD13	2.32	0.45
1:C:1163:TYR:CD1	1:C:1245:LEU:HD22	2.52	0.45
1:C:1268:TYR:N	1:C:1276:LYS:O	2.48	0.45
1:C:2132:ARG:HH11	1:C:2163:TYR:HB3	1.81	0.45
1:B:1676:ILE:HD12	1:B:1690:LEU:HD13	1.98	0.45
1:C:1168:TYR:HD2	1:C:1200:LEU:HD11	1.81	0.45
1:C:2445:CYS:SG	1:D:2327:ARG:NH1	2.90	0.45
1:D:601:THR:HG22	1:D:604:GLU:OE1	2.17	0.45
1:D:971:LEU:O	1:D:973:ILE:HG12	2.17	0.45
1:E:2067:ASN:HB3	1:E:2227:LEU:HD21	1.98	0.45
1:A:370:ILE:HG13	1:A:410:LEU:HG	1.99	0.44
1:A:1071:ALA:HB2	1:A:1791:GLU:OE2	2.17	0.44
1:B:1892:ASP:OD1	1:B:1892:ASP:N	2.49	0.44
1:C:711:VAL:HG11	1:C:763:GLU:OE2	2.16	0.44
1:D:2416:SER:HB2	1:D:2510:HIS:HB2	1.99	0.44
1:E:197:ALA:H	1:E:948:THR:HG21	1.82	0.44
1:E:534:GLU:OE2	1:E:580:ASN:ND2	2.50	0.44
1:E:1071:ALA:HB2	1:E:1791:GLU:OE2	2.16	0.44
1:E:1676:ILE:HD12	1:E:1690:LEU:HD13	1.99	0.44
1:E:2398:ILE:HB	1:E:2477:ILE:HG21	1.99	0.44
1:A:2087:LYS:HZ3	1:E:2204:LYS:C	2.15	0.44
1:C:2398:ILE:HB	1:C:2477:ILE:HG21	1.99	0.44
1:D:341:MET:HE3	1:D:410:LEU:HD22	1.98	0.44
1:D:453:SER:HB3	1:D:456:ILE:HG12	1.99	0.44
1:E:663:LEU:HD22	1:E:749:GLN:NE2	2.33	0.44
1:E:1056:MET:HG3	1:E:1081:TYR:HE1	1.82	0.44
1:A:487:ARG:O	1:A:487:ARG:NH1	2.46	0.44
1:B:971:LEU:O	1:B:973:ILE:HG12	2.17	0.44
1:B:1071:ALA:HB2	1:B:1791:GLU:OE2	2.17	0.44
1:E:711:VAL:HG11	1:E:763:GLU:OE2	2.16	0.44
1:A:1887:LEU:HD12	1:A:1887:LEU:HA	1.88	0.44
1:A:2398:ILE:HB	1:A:2477:ILE:HG21	2.00	0.44
1:C:536:ILE:HD13	1:C:547:ARG:HB2	1.98	0.44
1:D:464:VAL:HG21	1:D:474:VAL:HA	2.00	0.44
1:D:1163:TYR:CD1	1:D:1245:LEU:HD22	2.52	0.44
1:E:1094:ILE:HD11	1:E:1113:LEU:HB2	2.00	0.44
1:C:462:ARG:NH1	1:C:506:ARG:HH11	2.16	0.44
1:C:534:GLU:OE2	1:C:580:ASN:ND2	2.50	0.44
1:C:724:ALA:O	1:C:729:LYS:NZ	2.35	0.44
1:D:197:ALA:H	1:D:948:THR:HG21	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1056:MET:HG3	1:D:1081:TYR:CE1	2.53	0.44
1:E:971:LEU:O	1:E:973:ILE:HG12	2.18	0.44
1:A:1163:TYR:CD1	1:A:1245:LEU:HD22	2.52	0.44
1:B:464:VAL:HG21	1:B:474:VAL:HA	2.00	0.44
1:B:534:GLU:OE2	1:B:580:ASN:ND2	2.50	0.44
1:C:971:LEU:O	1:C:973:ILE:HG12	2.17	0.44
1:D:1056:MET:HG3	1:D:1081:TYR:HE1	1.82	0.44
1:A:1094:ILE:HD11	1:A:1113:LEU:HB2	2.00	0.44
1:B:1094:ILE:HD11	1:B:1113:LEU:HB2	2.00	0.44
1:C:1071:ALA:HB2	1:C:1791:GLU:OE2	2.17	0.44
1:C:2362:SER:OG	1:C:2502:LYS:NZ	2.50	0.44
1:D:210:VAL:HG22	1:D:926:LEU:HD11	2.00	0.44
1:D:1094:ILE:HD11	1:D:1113:LEU:HB2	2.00	0.44
1:E:2278:GLN:OE1	1:E:2281:ARG:NH2	2.50	0.44
1:A:1050:ARG:NH2	1:A:1770:GLU:OE1	2.51	0.44
1:B:1163:TYR:CD1	1:B:1245:LEU:HD22	2.52	0.44
1:E:1056:MET:HG3	1:E:1081:TYR:CE1	2.53	0.44
1:E:1675:ILE:HD11	1:E:1678:SER:HB2	2.00	0.44
1:A:210:VAL:HG22	1:A:926:LEU:HD11	1.99	0.44
1:A:464:VAL:HG21	1:A:474:VAL:HA	1.99	0.44
1:A:1048:THR:HG23	1:A:1061:LEU:HD11	2.00	0.44
1:A:663:LEU:HD22	1:A:749:GLN:NE2	2.33	0.43
1:A:2066:THR:HG21	1:E:2226:SER:HB2	1.99	0.43
1:B:453:SER:HB3	1:B:456:ILE:HG12	2.00	0.43
1:B:1048:THR:HG23	1:B:1061:LEU:HD11	2.00	0.43
1:C:595:ALA:HB2	1:C:605:LEU:HD22	1.99	0.43
1:C:1676:ILE:HD12	1:C:1690:LEU:HD13	1.99	0.43
1:D:1135:LYS:HA	1:D:1135:LYS:HD3	1.82	0.43
1:E:2132:ARG:HH11	1:E:2163:TYR:HB3	1.83	0.43
1:B:1056:MET:HG3	1:B:1081:TYR:CE1	2.53	0.43
1:C:210:VAL:HG22	1:C:926:LEU:HD11	2.00	0.43
1:C:2458:GLY:O	1:D:2330:GLU:HB2	2.19	0.43
1:A:1056:MET:HG3	1:A:1081:TYR:CE1	2.53	0.43
1:B:2458:GLY:O	1:C:2330:GLU:HB2	2.18	0.43
1:C:601:THR:HG22	1:C:604:GLU:OE1	2.18	0.43
1:D:1652:LEU:HA	1:D:1655:HIS:HB3	2.00	0.43
1:A:601:THR:HG22	1:A:604:GLU:OE1	2.18	0.43
1:A:1268:TYR:N	1:A:1276:LYS:O	2.48	0.43
1:A:1963:LEU:HD23	1:A:1963:LEU:HA	1.93	0.43
1:B:579:LYS:HG3	1:B:581:ASN:H	1.84	0.43
1:C:453:SER:HB3	1:C:456:ILE:HG12	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:464:VAL:HG21	1:C:474:VAL:HA	2.01	0.43
1:C:1730:LYS:HZ3	1:C:1732:ILE:HD12	1.84	0.43
1:E:601:THR:HG22	1:E:604:GLU:OE1	2.18	0.43
1:E:1048:THR:HG23	1:E:1061:LEU:HD11	2.00	0.43
1:B:1652:LEU:HA	1:B:1655:HIS:HB3	2.01	0.43
1:C:320:SER:HB2	1:C:323:GLY:HA2	2.01	0.43
1:E:462:ARG:NH1	1:E:506:ARG:HH11	2.17	0.43
1:A:1652:LEU:HA	1:A:1655:HIS:HB3	2.00	0.43
1:B:210:VAL:HG22	1:B:926:LEU:HD11	2.00	0.43
1:C:579:LYS:HG3	1:C:581:ASN:H	1.84	0.43
1:D:534:GLU:OE2	1:D:580:ASN:ND2	2.51	0.43
1:D:595:ALA:HB2	1:D:605:LEU:HD22	2.00	0.43
1:D:1050:ARG:NH2	1:D:1770:GLU:OE1	2.51	0.43
1:A:341:MET:HE1	1:A:410:LEU:HD22	2.01	0.43
1:A:2458:GLY:O	1:B:2330:GLU:HB2	2.19	0.43
1:B:320:SER:HB2	1:B:323:GLY:HA2	2.01	0.43
1:B:2112:ASN:HA	1:B:2115:MET:HG2	2.01	0.43
1:C:537:ASP:HA	1:C:577:LYS:HA	2.00	0.43
1:C:965:ASP:OD1	1:C:966:ASP:N	2.52	0.43
1:C:1056:MET:HG3	1:C:1081:TYR:CE1	2.54	0.43
1:C:1094:ILE:HD11	1:C:1113:LEU:HB2	2.01	0.43
1:D:558:ASP:OD1	1:D:558:ASP:N	2.48	0.43
1:D:2398:ILE:HB	1:D:2477:ILE:HG21	2.00	0.43
1:A:714:TRP:CZ3	1:A:762:LEU:HD22	2.54	0.43
1:B:601:THR:HG22	1:B:604:GLU:OE1	2.19	0.43
1:B:965:ASP:OD1	1:B:966:ASP:N	2.52	0.43
1:C:116:ALA:HB1	1:C:150:LEU:HD22	2.01	0.43
1:C:848:GLN:OE1	1:C:892:GLN:NE2	2.52	0.43
1:C:1048:THR:HG23	1:C:1061:LEU:HD11	2.00	0.43
1:D:320:SER:HB2	1:D:323:GLY:HA2	2.01	0.43
1:E:2416:SER:HB2	1:E:2510:HIS:HB2	2.01	0.43
1:E:2452:HIS:CE1	1:E:2456:ASP:HB2	2.54	0.43
1:A:462:ARG:NH1	1:A:506:ARG:HH11	2.16	0.43
1:B:595:ALA:HB2	1:B:605:LEU:HD22	2.00	0.43
1:B:663:LEU:HD22	1:B:749:GLN:NE2	2.34	0.43
1:B:1766:LEU:O	1:B:1770:GLU:HB2	2.19	0.43
1:C:714:TRP:CZ3	1:C:762:LEU:HD22	2.54	0.43
1:C:1607:THR:HG21	1:C:1768:PHE:HZ	1.83	0.43
1:C:1675:ILE:HD11	1:C:1678:SER:HB2	2.01	0.43
1:D:537:ASP:HA	1:D:577:LYS:HA	2.01	0.43
1:D:1048:THR:HG23	1:D:1061:LEU:HD11	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:453:SER:HB3	1:E:456:ILE:HG12	1.99	0.43
1:A:2416:SER:HB2	1:A:2510:HIS:HB2	2.00	0.43
1:B:2226:SER:HB2	1:C:2066:THR:HG21	2.01	0.43
1:C:1652:LEU:HA	1:C:1655:HIS:HB3	2.01	0.43
1:C:1892:ASP:OD1	1:C:1892:ASP:N	2.49	0.43
1:D:2226:SER:HB2	1:E:2066:THR:HG21	2.01	0.43
1:E:595:ALA:HB2	1:E:605:LEU:HD22	2.00	0.43
1:E:714:TRP:CZ3	1:E:762:LEU:HD22	2.54	0.43
1:E:1050:ARG:NH2	1:E:1770:GLU:OE1	2.52	0.43
1:A:2330:GLU:HB2	1:E:2458:GLY:O	2.18	0.42
1:B:1050:ARG:NH2	1:B:1770:GLU:OE1	2.52	0.42
1:B:1704:HIS:CE1	1:B:1727:ARG:H	2.37	0.42
1:D:462:ARG:NH1	1:D:506:ARG:HH11	2.17	0.42
1:D:663:LEU:HD22	1:D:749:GLN:NE2	2.34	0.42
1:D:1675:ILE:HD11	1:D:1678:SER:HB2	2.01	0.42
1:D:2452:HIS:CE1	1:D:2456:ASP:HB2	2.54	0.42
1:E:368:LEU:HG	1:E:370:ILE:CD1	2.50	0.42
1:A:1766:LEU:O	1:A:1770:GLU:HB2	2.20	0.42
1:B:2398:ILE:HB	1:B:2477:ILE:HG21	2.00	0.42
1:C:663:LEU:HD22	1:C:749:GLN:NE2	2.34	0.42
1:C:1056:MET:HG3	1:C:1081:TYR:HE1	1.83	0.42
1:C:1135:LYS:HA	1:C:1135:LYS:HD3	1.82	0.42
1:D:1268:TYR:N	1:D:1276:LYS:O	2.49	0.42
1:E:1652:LEU:HA	1:E:1655:HIS:HB3	2.00	0.42
1:A:368:LEU:HG	1:A:370:ILE:CD1	2.50	0.42
1:A:453:SER:HB3	1:A:456:ILE:HG12	2.00	0.42
1:A:497:ILE:HG21	1:A:589:TYR:CD2	2.54	0.42
1:A:1675:ILE:HD11	1:A:1678:SER:HB2	2.00	0.42
1:B:253:GLU:O	1:B:442:LYS:NZ	2.38	0.42
1:C:2112:ASN:HA	1:C:2115:MET:HG2	2.01	0.42
1:C:2226:SER:HB2	1:D:2066:THR:HG21	2.00	0.42
1:C:2278:GLN:OE1	1:C:2281:ARG:NH2	2.51	0.42
1:D:1170:LEU:HD22	1:D:1198:LEU:HD11	2.01	0.42
1:A:2132:ARG:HH11	1:A:2163:TYR:HB3	1.82	0.42
1:B:368:LEU:HG	1:B:370:ILE:CD1	2.49	0.42
1:B:2441:LEU:HG	1:B:2445:CYS:HB2	2.02	0.42
1:D:368:LEU:HG	1:D:370:ILE:CD1	2.50	0.42
1:D:1766:LEU:O	1:D:1770:GLU:HB2	2.19	0.42
1:A:595:ALA:HB2	1:A:605:LEU:HD22	2.01	0.42
1:A:1607:THR:HG21	1:A:1768:PHE:HZ	1.84	0.42
1:A:2226:SER:HB2	1:B:2066:THR:HG21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:848:GLN:OE1	1:B:892:GLN:NE2	2.53	0.42
1:C:341:MET:HE3	1:C:410:LEU:HD22	2.01	0.42
1:C:1050:ARG:NH2	1:C:1770:GLU:OE1	2.53	0.42
1:C:1766:LEU:O	1:C:1770:GLU:HB2	2.19	0.42
1:D:2458:GLY:O	1:E:2330:GLU:HB2	2.19	0.42
1:E:1170:LEU:HD22	1:E:1198:LEU:HD11	2.01	0.42
1:E:1704:HIS:CE1	1:E:1727:ARG:H	2.38	0.42
1:A:926:LEU:HD22	1:A:930:GLN:HB3	2.02	0.42
1:A:2431:ALA:O	1:A:2450:VAL:HG12	2.20	0.42
1:B:174:LYS:HG2	1:B:185:VAL:HG21	2.02	0.42
1:B:2202:GLU:O	1:B:2205:GLN:HG2	2.20	0.42
1:C:926:LEU:HD22	1:C:930:GLN:HB3	2.02	0.42
1:C:2416:SER:HB2	1:C:2510:HIS:HB2	2.01	0.42
1:D:593:LEU:O	1:D:597:ILE:HG12	2.20	0.42
1:D:812:ASN:HA	1:E:1998:ALA:HB2	2.02	0.42
1:D:1607:THR:HG21	1:D:1768:PHE:HZ	1.84	0.42
1:E:537:ASP:HA	1:E:577:LYS:HA	2.01	0.42
1:A:579:LYS:HG3	1:A:581:ASN:H	1.85	0.42
1:B:462:ARG:NH1	1:B:506:ARG:HH11	2.16	0.42
1:B:1607:THR:HG21	1:B:1768:PHE:HZ	1.85	0.42
1:B:2278:GLN:OE1	1:B:2281:ARG:NH2	2.51	0.42
1:B:1113:LEU:HD11	1:B:1119:GLY:HA3	2.01	0.42
1:C:218:LEU:HB3	1:C:221:LEU:HB2	2.02	0.42
1:D:2033:LEU:CD1	1:D:2266:TYR:HA	2.50	0.42
1:E:320:SER:HB2	1:E:323:GLY:HA2	2.00	0.42
1:E:860:PRO:HA	1:E:861:PRO:HD3	1.97	0.42
1:B:218:LEU:HB3	1:B:221:LEU:HB2	2.02	0.42
1:B:593:LEU:O	1:B:597:ILE:HG12	2.20	0.42
1:B:926:LEU:HD22	1:B:930:GLN:HB3	2.02	0.42
1:B:2452:HIS:CE1	1:B:2456:ASP:HB2	2.54	0.42
1:C:1036:GLN:O	1:C:1040:TYR:N	2.41	0.42
1:D:965:ASP:OD1	1:D:966:ASP:N	2.52	0.42
1:E:579:LYS:HG3	1:E:581:ASN:H	1.84	0.42
1:E:724:ALA:O	1:E:729:LYS:NZ	2.35	0.42
1:B:2033:LEU:CD1	1:B:2266:TYR:HA	2.50	0.42
1:C:2033:LEU:CD1	1:C:2266:TYR:HA	2.50	0.42
1:D:2207:ASP:O	1:D:2211:LYS:HG2	2.20	0.42
1:E:593:LEU:O	1:E:597:ILE:HG12	2.20	0.42
1:E:1818:VAL:HG12	1:E:1820:PRO:HD2	2.02	0.42
1:E:2441:LEU:HG	1:E:2445:CYS:HB2	2.02	0.42
1:A:537:ASP:HA	1:A:577:LYS:HA	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1818:VAL:HG12	1:A:1820:PRO:HD2	2.02	0.41
1:B:371:LYS:HA	1:B:377:GLU:HA	2.02	0.41
1:C:2202:GLU:O	1:C:2205:GLN:HG2	2.20	0.41
1:C:2355:GLN:HG2	1:C:2356:GLU:OE1	2.20	0.41
1:D:1818:VAL:HG12	1:D:1820:PRO:HD2	2.02	0.41
1:A:2202:GLU:O	1:A:2205:GLN:HG2	2.20	0.41
1:A:2330:GLU:HB3	1:E:2460:PHE:CZ	2.55	0.41
1:B:1279:THR:HG22	1:B:1281:GLU:H	1.86	0.41
1:B:1675:ILE:HD11	1:B:1678:SER:HB2	2.01	0.41
1:B:1887:LEU:HD12	1:B:1887:LEU:HA	1.88	0.41
1:C:593:LEU:O	1:C:597:ILE:HG12	2.20	0.41
1:C:2441:LEU:HG	1:C:2445:CYS:HB2	2.02	0.41
1:C:2452:HIS:CE1	1:C:2456:ASP:HB2	2.55	0.41
1:C:2460:PHE:CZ	1:D:2330:GLU:HB3	2.55	0.41
1:D:160:SER:HA	1:D:982:LYS:HA	2.03	0.41
1:E:926:LEU:HD22	1:E:930:GLN:HB3	2.02	0.41
1:E:965:ASP:OD1	1:E:966:ASP:N	2.52	0.41
1:E:1135:LYS:HA	1:E:1135:LYS:HD3	1.82	0.41
1:A:848:GLN:OE1	1:A:892:GLN:NE2	2.53	0.41
1:A:2452:HIS:CE1	1:A:2456:ASP:HB2	2.54	0.41
1:A:2460:PHE:CZ	1:B:2330:GLU:HB3	2.56	0.41
1:C:1800:TRP:CZ2	1:C:1802:PRO:HG3	2.55	0.41
1:C:2431:ALA:O	1:C:2450:VAL:HG12	2.21	0.41
1:D:218:LEU:HB3	1:D:221:LEU:HB2	2.02	0.41
1:E:2112:ASN:HA	1:E:2115:MET:HG2	2.03	0.41
1:E:2431:ALA:O	1:E:2450:VAL:HG12	2.20	0.41
1:A:2112:ASN:HA	1:A:2115:MET:HG2	2.02	0.41
1:A:2207:ASP:O	1:A:2211:LYS:HG2	2.21	0.41
1:A:2470:LEU:N	1:A:2473:GLU:OE1	2.52	0.41
1:C:268:PHE:HZ	1:C:441:ASN:HB2	1.85	0.41
1:D:2441:LEU:HG	1:D:2445:CYS:HB2	2.02	0.41
1:E:661:LYS:HB2	1:E:750:GLU:HB2	2.03	0.41
1:E:2341:TYR:CD2	1:E:2353:LEU:HD11	2.55	0.41
1:A:320:SER:HB2	1:A:323:GLY:HA2	2.01	0.41
1:A:1111:ILE:HG13	1:A:1160:PRO:HD3	2.03	0.41
1:B:2416:SER:HB2	1:B:2510:HIS:HB2	2.02	0.41
1:C:538:LEU:HD12	1:C:566:LEU:HD22	2.02	0.41
1:A:218:LEU:HB3	1:A:221:LEU:HB2	2.02	0.41
1:B:2182:SER:OG	1:D:1067:SER:N	2.54	0.41
1:C:1244:THR:HG21	1:C:1268:TYR:CD1	2.55	0.41
1:C:2341:TYR:CD2	1:C:2353:LEU:HD11	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:174:LYS:HG2	1:D:185:VAL:HG21	2.03	0.41
1:D:926:LEU:HD22	1:D:930:GLN:HB3	2.02	0.41
1:D:1279:THR:HG22	1:D:1281:GLU:H	1.85	0.41
1:E:538:LEU:HD12	1:E:566:LEU:HD22	2.03	0.41
1:A:116:ALA:HB1	1:A:150:LEU:HD22	2.02	0.41
1:A:965:ASP:OD1	1:A:966:ASP:N	2.52	0.41
1:A:2182:SER:OG	1:C:1067:SER:N	2.54	0.41
1:A:2362:SER:OG	1:A:2502:LYS:NZ	2.49	0.41
1:B:691:VAL:O	1:B:694:PRO:HD2	2.21	0.41
1:B:2355:GLN:HG2	1:B:2356:GLU:OE1	2.21	0.41
1:C:2207:ASP:O	1:C:2211:LYS:HG2	2.21	0.41
1:D:2278:GLN:OE1	1:D:2281:ARG:NH2	2.52	0.41
1:D:2321:HIS:NE2	1:D:2325:ASP:OD2	2.53	0.41
1:E:218:LEU:HB3	1:E:221:LEU:HB2	2.02	0.41
1:E:2207:ASP:O	1:E:2211:LYS:HG2	2.20	0.41
1:A:268:PHE:HZ	1:A:441:ASN:HB2	1.86	0.41
1:A:365:ALA:HB3	1:A:384:ALA:HA	2.02	0.41
1:A:593:LEU:O	1:A:597:ILE:HG12	2.20	0.41
1:A:2033:LEU:CD1	1:A:2266:TYR:HA	2.50	0.41
1:B:714:TRP:CZ3	1:B:762:LEU:HD22	2.55	0.41
1:B:1108:THR:HB	1:B:1126:VAL:HG12	2.03	0.41
1:B:1170:LEU:HD22	1:B:1198:LEU:HD11	2.02	0.41
1:B:2207:ASP:O	1:B:2211:LYS:HG2	2.20	0.41
1:B:2460:PHE:CZ	1:C:2330:GLU:HB3	2.56	0.41
1:C:2087:LYS:HE3	1:C:2087:LYS:HB3	1.87	0.41
1:D:371:LYS:HA	1:D:377:GLU:HA	2.02	0.41
1:D:579:LYS:HG3	1:D:581:ASN:H	1.85	0.41
1:E:487:ARG:O	1:E:487:ARG:NH1	2.47	0.41
1:E:1244:THR:HG21	1:E:1268:TYR:CD1	2.56	0.41
1:A:659:TYR:CE2	1:A:758:ALA:HB2	2.56	0.41
1:A:1704:HIS:CE1	1:A:1727:ARG:H	2.39	0.41
1:A:1800:TRP:CZ2	1:A:1802:PRO:HG3	2.56	0.41
1:A:2355:GLN:HG2	1:A:2356:GLU:OE1	2.21	0.41
1:B:141:ARG:HH22	1:B:1005:GLU:CD	2.24	0.41
1:B:2132:ARG:HH11	1:B:2163:TYR:HB3	1.85	0.41
1:C:368:LEU:HG	1:C:370:ILE:CD1	2.50	0.41
1:C:2245:PHE:O	1:C:2246:SER:OG	2.39	0.41
1:D:522:PRO:O	1:D:553:ARG:NH1	2.53	0.41
1:D:1244:THR:HG21	1:D:1268:TYR:CD1	2.56	0.41
1:D:2112:ASN:HA	1:D:2115:MET:HG2	2.02	0.41
1:D:2202:GLU:O	1:D:2205:GLN:HG2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:268:PHE:HZ	1:E:441:ASN:HB2	1.86	0.41
1:E:371:LYS:HA	1:E:377:GLU:HA	2.03	0.41
1:E:691:VAL:O	1:E:694:PRO:HD2	2.21	0.41
1:E:1607:THR:HG21	1:E:1768:PHE:HZ	1.85	0.41
1:E:1766:LEU:O	1:E:1770:GLU:HB2	2.20	0.41
1:E:2228:LYS:HE3	1:E:2228:LYS:HB2	1.82	0.41
1:A:160:SER:HA	1:A:982:LYS:HA	2.03	0.41
1:A:1244:THR:HG21	1:A:1268:TYR:CD1	2.56	0.41
1:B:538:LEU:HD12	1:B:566:LEU:HD22	2.03	0.41
1:B:1818:VAL:HG12	1:B:1820:PRO:HD2	2.02	0.41
1:B:2015:SER:HB2	1:C:2322:LEU:HD21	2.03	0.41
1:B:2431:ALA:O	1:B:2450:VAL:HG12	2.21	0.41
1:C:141:ARG:HH22	1:C:1005:GLU:CD	2.24	0.41
1:C:691:VAL:O	1:C:694:PRO:HD2	2.21	0.41
1:C:1164:LYS:HE2	1:D:1611:ARG:HG2	2.03	0.41
1:C:1170:LEU:HD22	1:C:1198:LEU:HD11	2.03	0.41
1:C:1818:VAL:HG12	1:C:1820:PRO:HD2	2.02	0.41
1:C:2321:HIS:NE2	1:C:2325:ASP:OD2	2.54	0.41
1:D:1704:HIS:CE1	1:D:1727:ARG:H	2.38	0.41
1:D:2431:ALA:O	1:D:2450:VAL:HG12	2.21	0.41
1:E:365:ALA:HB3	1:E:384:ALA:HA	2.03	0.41
1:E:2033:LEU:CD1	1:E:2266:TYR:HA	2.50	0.41
1:A:1279:THR:HG22	1:A:1281:GLU:H	1.86	0.40
1:A:2322:LEU:HD21	1:E:2015:SER:HB2	2.03	0.40
1:A:2432:ILE:HD11	1:B:2402:TYR:CE1	2.56	0.40
1:B:160:SER:HA	1:B:982:LYS:HA	2.02	0.40
1:B:1130:LYS:HZ3	1:B:1139:ASN:C	2.25	0.40
1:C:1704:HIS:CE1	1:C:1727:ARG:H	2.39	0.40
1:D:538:LEU:HD12	1:D:566:LEU:HD22	2.04	0.40
1:D:2355:GLN:HG2	1:D:2356:GLU:OE1	2.21	0.40
1:E:341:MET:HE3	1:E:410:LEU:HD22	2.03	0.40
1:E:1279:THR:HG22	1:E:1281:GLU:H	1.86	0.40
1:A:689:LEU:HD12	1:A:689:LEU:HA	1.91	0.40
1:A:1108:THR:HB	1:A:1126:VAL:HG12	2.03	0.40
1:A:2321:HIS:NE2	1:A:2325:ASP:OD2	2.54	0.40
1:A:2388:GLN:HA	1:A:2485:SER:HA	2.03	0.40
1:C:493:GLU:O	1:C:497:ILE:HG12	2.21	0.40
1:C:1108:THR:HB	1:C:1126:VAL:HG12	2.02	0.40
1:C:1111:ILE:HG13	1:C:1160:PRO:HD3	2.04	0.40
1:C:1279:THR:HG22	1:C:1281:GLU:H	1.85	0.40
1:C:1609:PHE:CZ	1:C:1613:LEU:HD13	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:538:LEU:HB2	1:D:566:LEU:HD22	2.03	0.40
1:D:661:LYS:HB2	1:D:750:GLU:HB2	2.04	0.40
1:E:1162:ILE:HD13	1:E:1167:LEU:HA	2.04	0.40
1:E:1800:TRP:CZ2	1:E:1802:PRO:HG3	2.57	0.40
1:E:2362:SER:OG	1:E:2502:LYS:NZ	2.51	0.40
1:B:268:PHE:HZ	1:B:441:ASN:HB2	1.85	0.40
1:B:1800:TRP:CZ2	1:B:1802:PRO:HG3	2.56	0.40
1:D:116:ALA:HB1	1:D:150:LEU:HD22	2.02	0.40
1:D:2328:ALA:HB2	1:D:2516:LYS:HB3	2.03	0.40
1:E:1108:THR:HB	1:E:1126:VAL:HG12	2.02	0.40
1:E:2202:GLU:O	1:E:2205:GLN:HG2	2.21	0.40
1:A:1113:LEU:HD11	1:A:1119:GLY:HA3	2.04	0.40
1:A:2341:TYR:CD2	1:A:2353:LEU:HD11	2.57	0.40
1:B:497:ILE:HG21	1:B:589:TYR:CD2	2.54	0.40
1:B:1244:THR:HG21	1:B:1268:TYR:CD1	2.56	0.40
1:C:659:TYR:CE2	1:C:758:ALA:HB2	2.56	0.40
1:D:268:PHE:HZ	1:D:441:ASN:HB2	1.87	0.40
1:D:714:TRP:CZ3	1:D:762:LEU:HD22	2.56	0.40
1:E:848:GLN:OE1	1:E:892:GLN:NE2	2.53	0.40
1:E:2470:LEU:N	1:E:2473:GLU:OE1	2.53	0.40
1:A:493:GLU:O	1:A:497:ILE:HG12	2.21	0.40
1:A:1170:LEU:HD22	1:A:1198:LEU:HD11	2.01	0.40
1:D:195:SER:OG	1:D:948:THR:HG22	2.22	0.40
1:D:659:TYR:CE2	1:D:758:ALA:HB2	2.57	0.40
1:D:689:LEU:HA	1:D:689:LEU:HD12	1.92	0.40
1:D:848:GLN:OE1	1:D:892:GLN:NE2	2.54	0.40
1:E:493:GLU:O	1:E:497:ILE:HG12	2.22	0.40
1:E:2321:HIS:NE2	1:E:2325:ASP:OD2	2.55	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	2114/2535 (83%)	2069 (98%)	45 (2%)	0	100	100
1	B	2114/2535 (83%)	2071 (98%)	43 (2%)	0	100	100
1	C	2114/2535 (83%)	2072 (98%)	42 (2%)	0	100	100
1	D	2114/2535 (83%)	2070 (98%)	44 (2%)	0	100	100
1	E	2114/2535 (83%)	2071 (98%)	43 (2%)	0	100	100
All	All	10570/12675 (83%)	10353 (98%)	217 (2%)	0	100	100

There are no Ramachandran outliers to report.

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	1816/2173 (84%)	1812 (100%)	4 (0%)	93	98
1	B	1816/2173 (84%)	1812 (100%)	4 (0%)	93	98
1	C	1816/2173 (84%)	1812 (100%)	4 (0%)	93	98
1	D	1816/2173 (84%)	1812 (100%)	4 (0%)	93	98
1	E	1816/2173 (84%)	1812 (100%)	4 (0%)	93	98
All	All	9080/10865 (84%)	9060 (100%)	20 (0%)	93	98

All (20) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1049	MET
1	A	1174	GLN
1	A	1965	GLN
1	A	2414	GLN
1	B	1049	MET
1	B	1174	GLN
1	B	1965	GLN
1	B	2414	GLN
1	C	1049	MET
1	C	1174	GLN

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Mol	Chain	Res	Type
1	C	1965	GLN
1	C	2414	GLN
1	D	1049	MET
1	D	1174	GLN
1	D	1965	GLN
1	D	2414	GLN
1	E	1049	MET
1	E	1174	GLN
1	E	1965	GLN
1	E	2414	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (15) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	852	GLN
1	A	892	GLN
1	A	969	GLN
1	B	852	GLN
1	B	892	GLN
1	B	969	GLN
1	C	852	GLN
1	C	892	GLN
1	C	969	GLN
1	D	852	GLN
1	D	892	GLN
1	D	969	GLN
1	E	852	GLN
1	E	892	GLN
1	E	969	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains

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)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

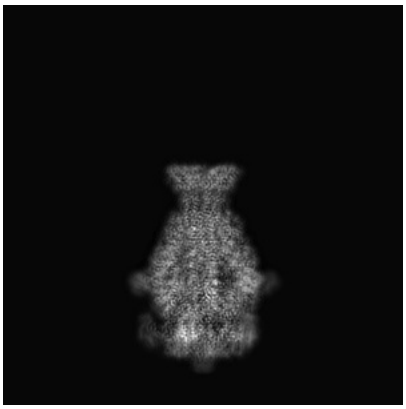
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-16792. These allow visual inspection of the internal detail of the map and identification of artifacts.

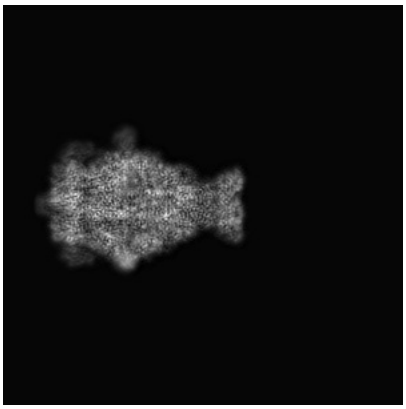
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

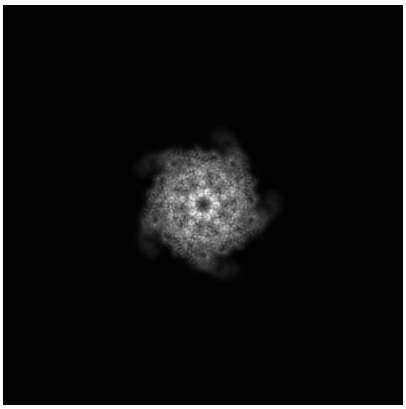
6.1.1 Primary map



X

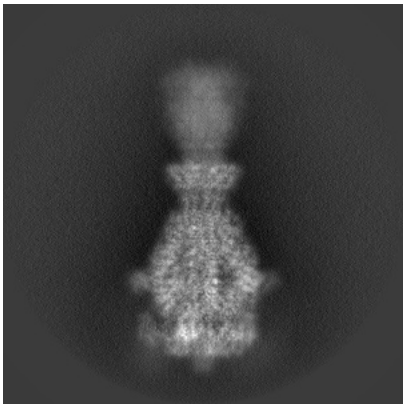


Y

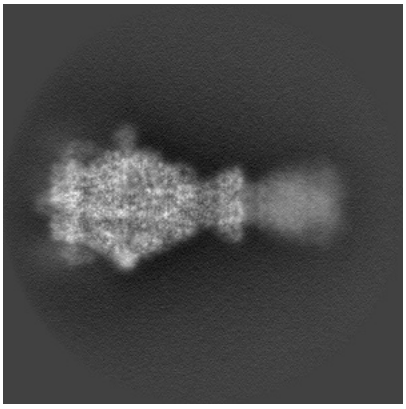


Z

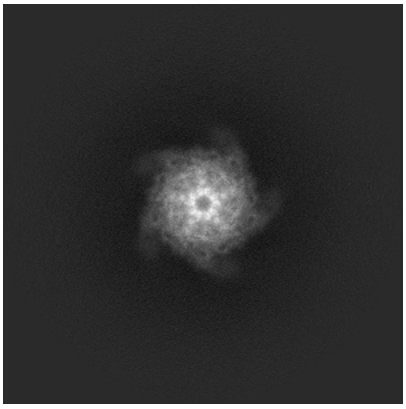
6.1.2 Raw map



X



Y



Z

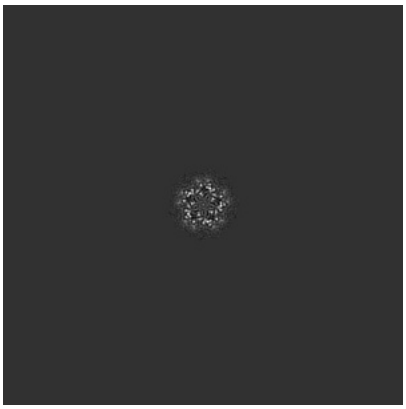
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

6.2.1 Primary map

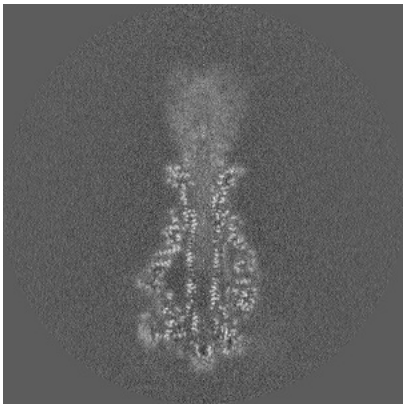
X Index: 280

Y Index: 280

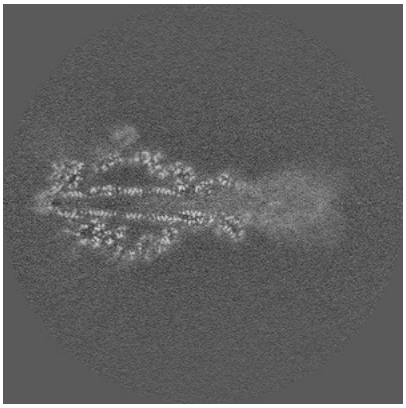


Z Index: 280

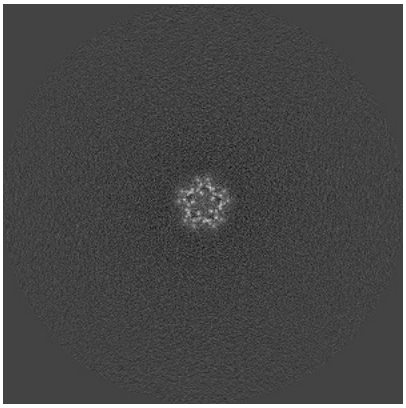
6.2.2 Raw map



X Index: 280



Y Index: 280

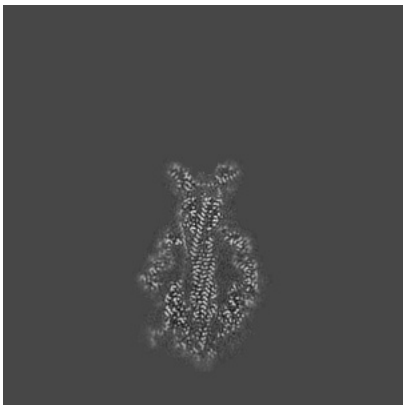


Z Index: 280

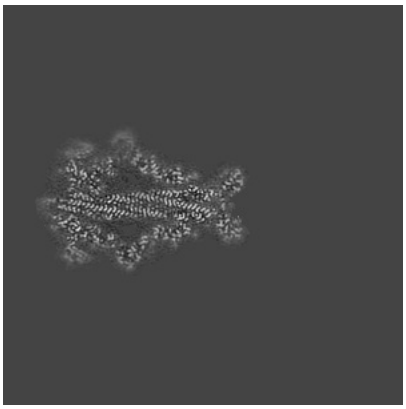
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

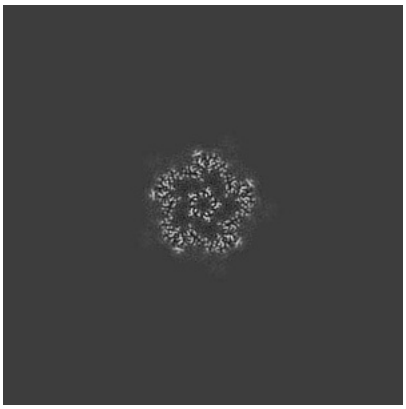
6.3.1 Primary map



X Index: 265

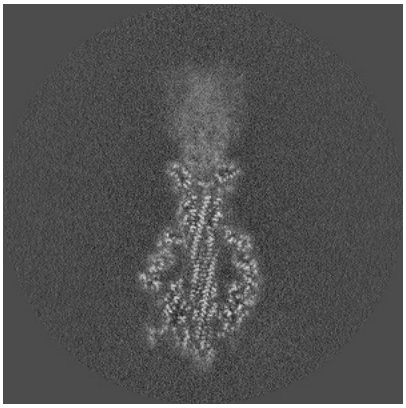


Y Index: 266

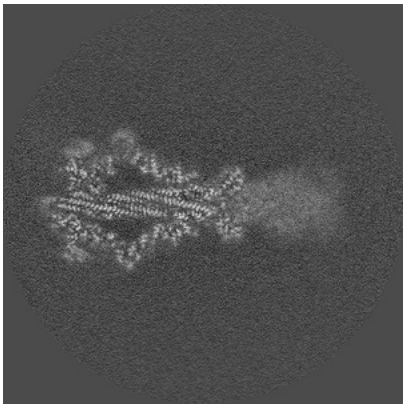


Z Index: 150

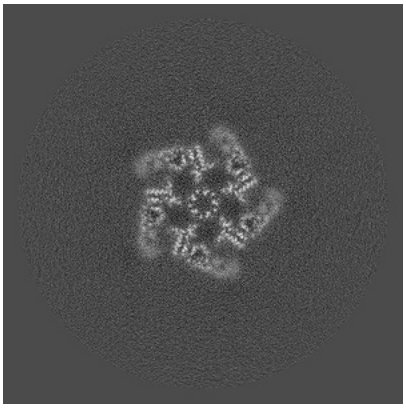
6.3.2 Raw map



X Index: 266



Y Index: 266

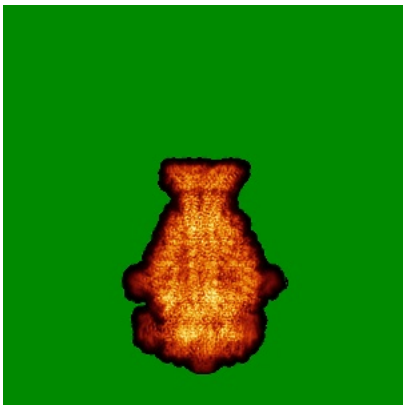


Z Index: 170

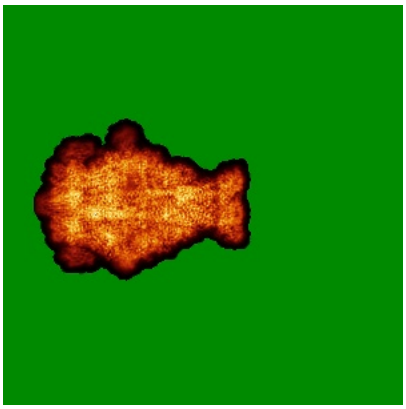
The images above show the largest variance slices of the map in three orthogonal directions.

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

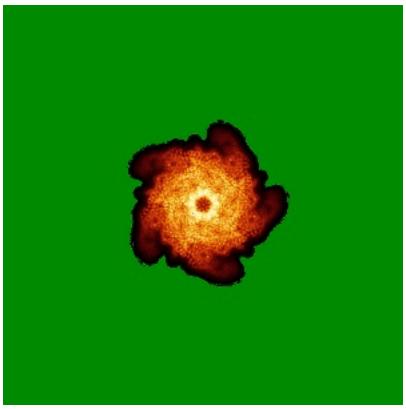
6.4.1 Primary map



X

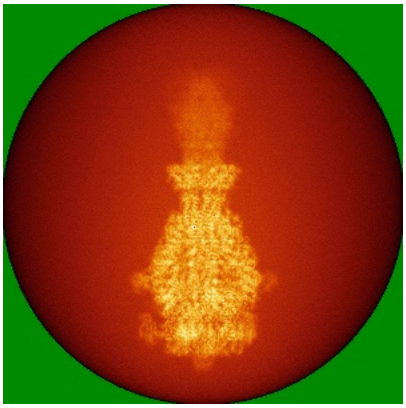


Y

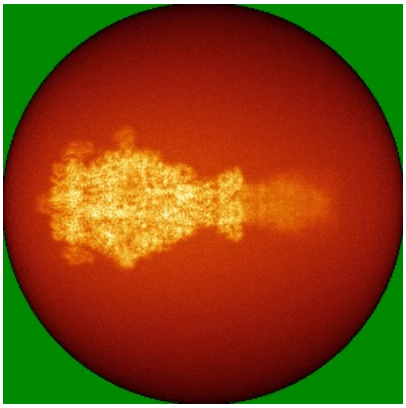


Z

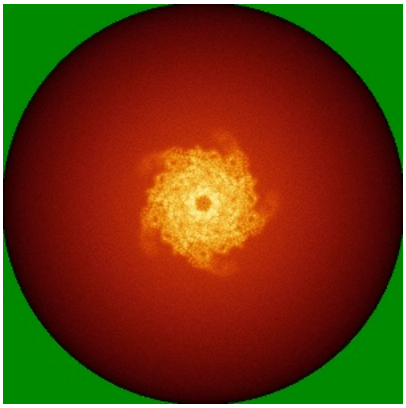
6.4.2 Raw map



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 0.015. 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.

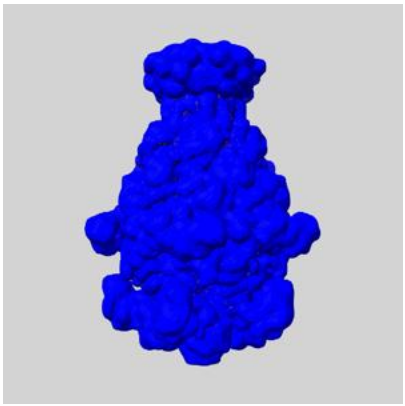
6.6 Mask visualisation (i)

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

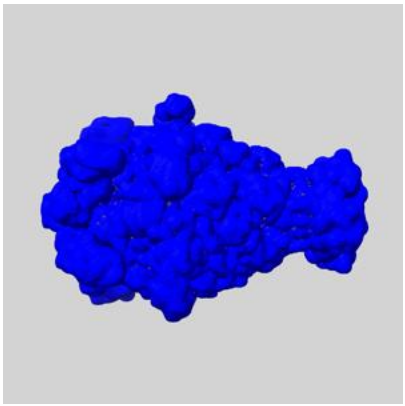
A mask typically either:

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

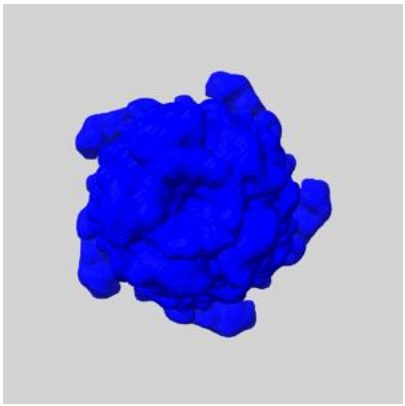
6.6.1 emd_16792_msk_1.map (i)



X



Y

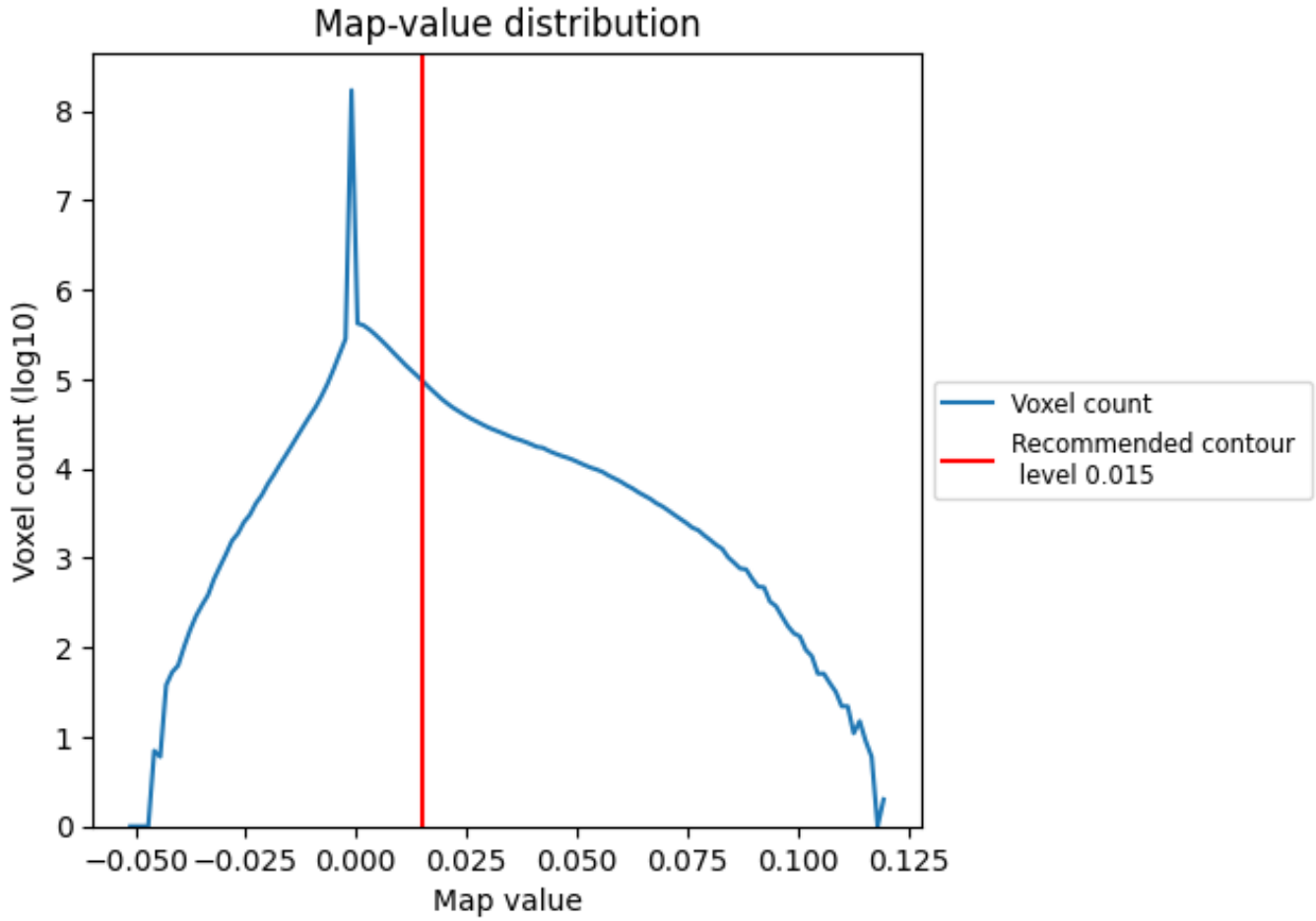


Z

7 Map analysis

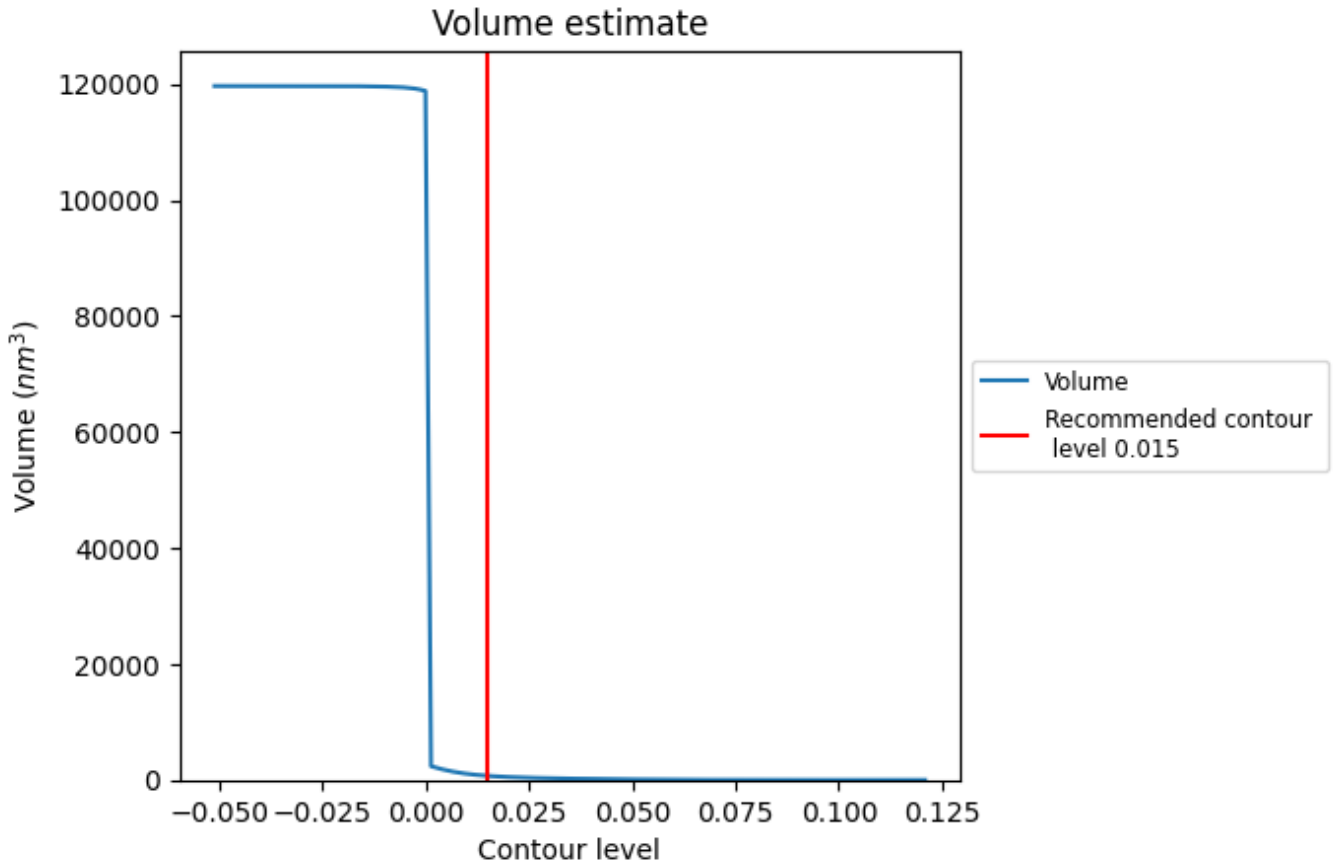
This section contains the results of statistical analysis of the map.

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.

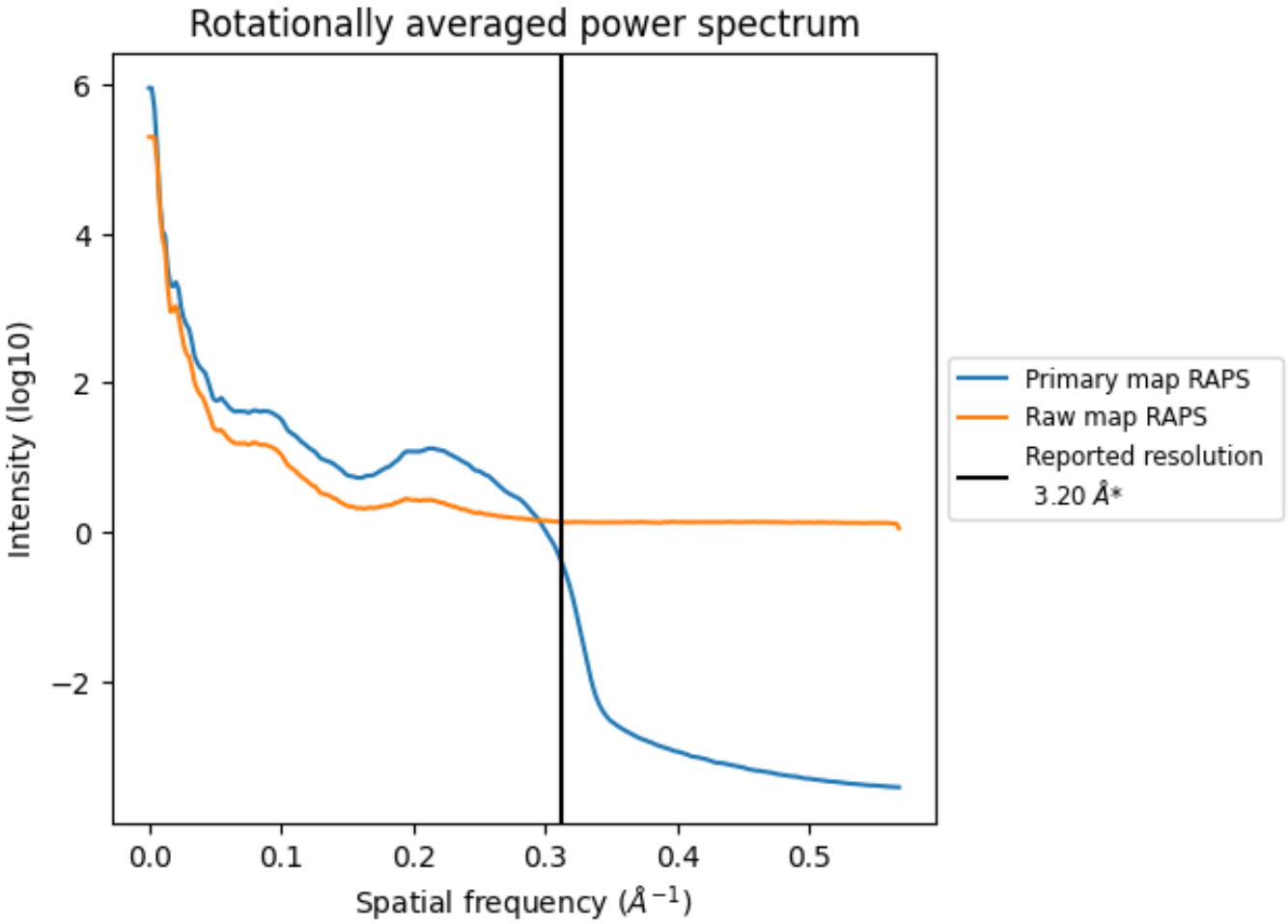
7.2 Volume estimate



The volume at the recommended contour level is 710 nm^3; this corresponds to an approximate mass of 641 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)

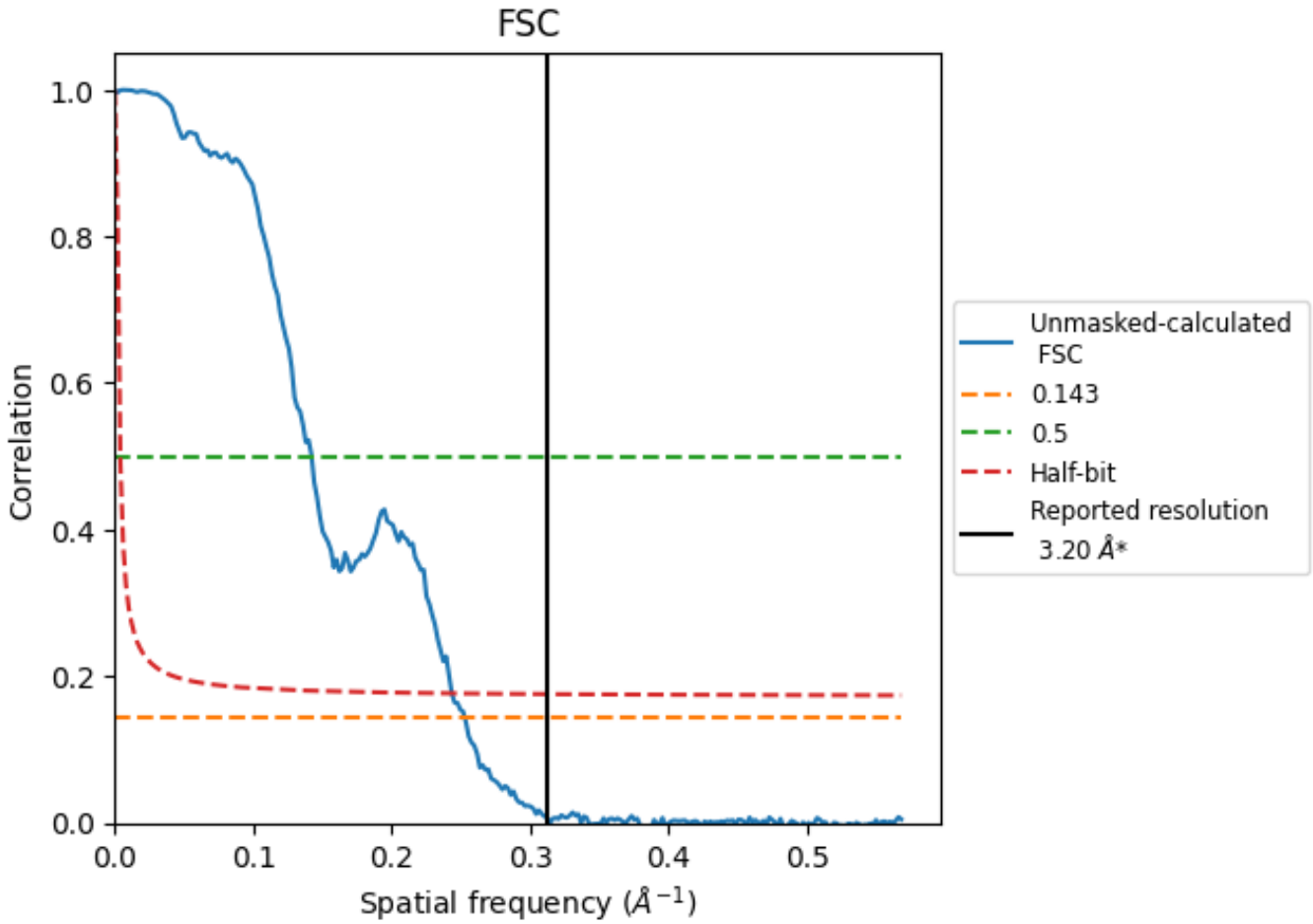


*Reported resolution corresponds to spatial frequency of 0.312 Å^{-1}

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 0.312 Å^{-1}

8.2 Resolution estimates (i)

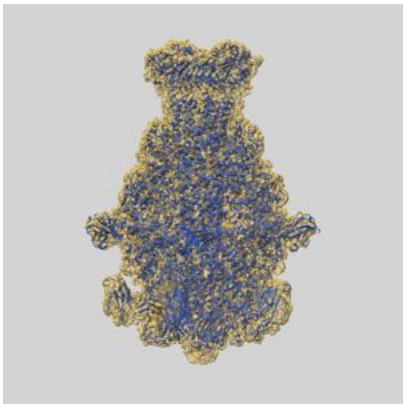
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.20	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.96	7.03	4.11

*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 3.96 differs from the reported value 3.2 by more than 10 %

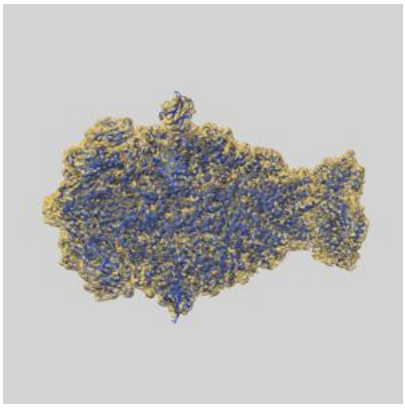
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-16792 and PDB model 8CQ0. Per-residue inclusion information can be found in section 3 on page 7.

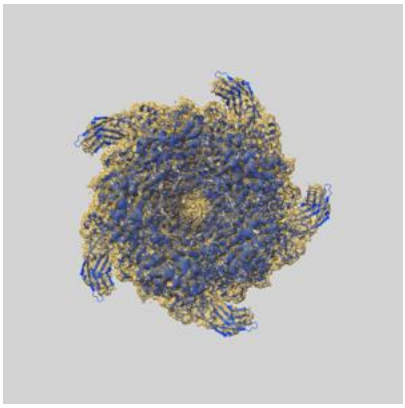
9.1 Map-model overlay



X



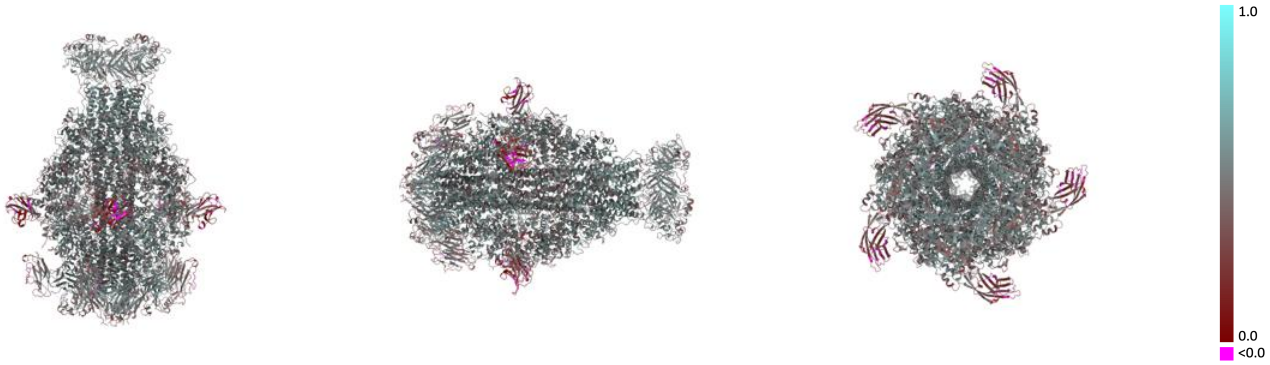
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.015 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.

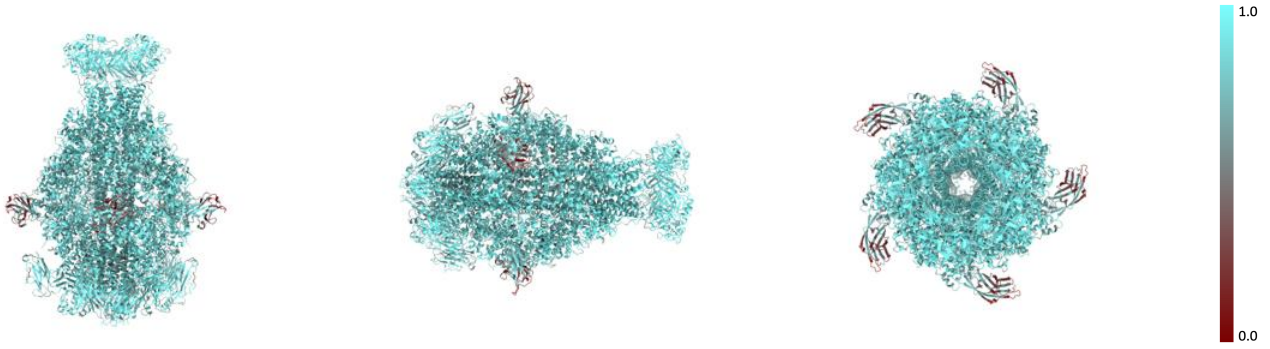
9.2 Q-score mapped to coordinate model



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.

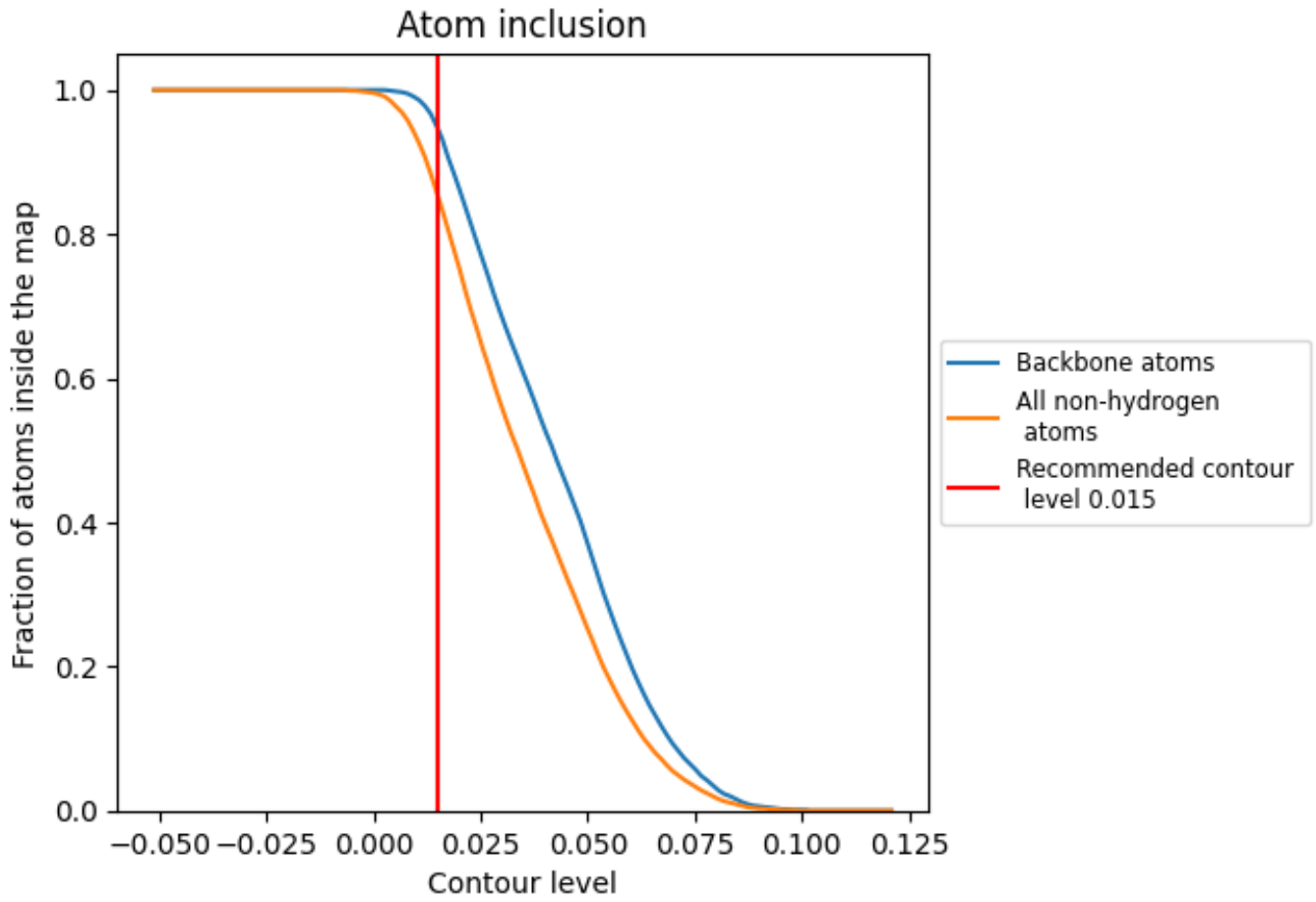
9.3 Atom inclusion mapped to coordinate model



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 (0.015).

9.4 Atom inclusion (i)



At the recommended contour level, 95% of all backbone atoms, 85% 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 (0.015) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8540	0.4660
A	0.8540	0.4660
B	0.8540	0.4660
C	0.8540	0.4670
D	0.8550	0.4670
E	0.8550	0.4650