Full wwPDB EM Validation Report

Jun 3, 2024 – 08:03 PM EDT

PDB ID	:	8E2I
EMDB ID	:	EMD-27837
Title	:	Cryo-EM structure of BIRC6/Smac
Authors	:	Hunkeler, M.; Fischer, E.S.
Deposited on	:	2022-08-15
Resolution	:	3.04 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:

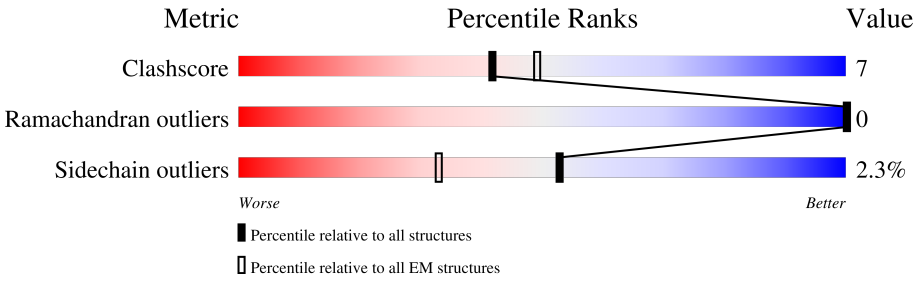
EMDB validation analysis	:	0.0.1.dev92
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36.2

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 3.04 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	4888	22% 45% 11% 44%
1	B	4888	21% 45% 11% 44%
2	E	194	39% 72% 15% • 11%
2	F	194	43% 76% 13% • 11%
3	C	57	37% 98% •
3	D	57	39% 96% •

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 93130 atoms, of which 46956 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 Baculoviral IAP repeat-containing protein 6.

Mol	Chain	Residues	Atoms						AltConf	Trace
1	A	2745	Total	C	H	N	O	S	23	0
			43333	13715	21905	3644	3919	150		
1	B	2745	Total	C	H	N	O	S	23	0
			43331	13715	21903	3644	3919	150		

There are 64 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-30	MET	-	expression tag	UNP Q9NR09
A	-29	ASP	-	expression tag	UNP Q9NR09
A	-28	TYR	-	expression tag	UNP Q9NR09
A	-27	LYS	-	expression tag	UNP Q9NR09
A	-26	ASP	-	expression tag	UNP Q9NR09
A	-25	ASP	-	expression tag	UNP Q9NR09
A	-24	ASP	-	expression tag	UNP Q9NR09
A	-23	ASP	-	expression tag	UNP Q9NR09
A	-22	LYS	-	expression tag	UNP Q9NR09
A	-21	LEU	-	expression tag	UNP Q9NR09
A	-20	ALA	-	expression tag	UNP Q9NR09
A	-19	ALA	-	expression tag	UNP Q9NR09
A	-18	ALA	-	expression tag	UNP Q9NR09
A	-17	ASN	-	expression tag	UNP Q9NR09
A	-16	SER	-	expression tag	UNP Q9NR09
A	-15	SER	-	expression tag	UNP Q9NR09
A	-14	ILE	-	expression tag	UNP Q9NR09
A	-13	ASP	-	expression tag	UNP Q9NR09
A	-12	LEU	-	expression tag	UNP Q9NR09
A	-11	ILE	-	expression tag	UNP Q9NR09
A	-10	SER	-	expression tag	UNP Q9NR09
A	-9	THR	-	expression tag	UNP Q9NR09
A	-8	SER	-	expression tag	UNP Q9NR09
A	-7	LEU	-	expression tag	UNP Q9NR09
A	-6	TYR	-	expression tag	UNP Q9NR09
A	-5	LYS	-	expression tag	UNP Q9NR09

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
A	-4	LYS	-	expression tag	UNP Q9NR09
A	-3	ALA	-	expression tag	UNP Q9NR09
A	-2	GLY	-	expression tag	UNP Q9NR09
A	-1	LEU	-	expression tag	UNP Q9NR09
A	0	THR	-	expression tag	UNP Q9NR09
A	1332	VAL	LEU	conflict	UNP Q9NR09
B	-30	MET	-	expression tag	UNP Q9NR09
B	-29	ASP	-	expression tag	UNP Q9NR09
B	-28	TYR	-	expression tag	UNP Q9NR09
B	-27	LYS	-	expression tag	UNP Q9NR09
B	-26	ASP	-	expression tag	UNP Q9NR09
B	-25	ASP	-	expression tag	UNP Q9NR09
B	-24	ASP	-	expression tag	UNP Q9NR09
B	-23	ASP	-	expression tag	UNP Q9NR09
B	-22	LYS	-	expression tag	UNP Q9NR09
B	-21	LEU	-	expression tag	UNP Q9NR09
B	-20	ALA	-	expression tag	UNP Q9NR09
B	-19	ALA	-	expression tag	UNP Q9NR09
B	-18	ALA	-	expression tag	UNP Q9NR09
B	-17	ASN	-	expression tag	UNP Q9NR09
B	-16	SER	-	expression tag	UNP Q9NR09
B	-15	SER	-	expression tag	UNP Q9NR09
B	-14	ILE	-	expression tag	UNP Q9NR09
B	-13	ASP	-	expression tag	UNP Q9NR09
B	-12	LEU	-	expression tag	UNP Q9NR09
B	-11	ILE	-	expression tag	UNP Q9NR09
B	-10	SER	-	expression tag	UNP Q9NR09
B	-9	THR	-	expression tag	UNP Q9NR09
B	-8	SER	-	expression tag	UNP Q9NR09
B	-7	LEU	-	expression tag	UNP Q9NR09
B	-6	TYR	-	expression tag	UNP Q9NR09
B	-5	LYS	-	expression tag	UNP Q9NR09
B	-4	LYS	-	expression tag	UNP Q9NR09
B	-3	ALA	-	expression tag	UNP Q9NR09
B	-2	GLY	-	expression tag	UNP Q9NR09
B	-1	LEU	-	expression tag	UNP Q9NR09
B	0	THR	-	expression tag	UNP Q9NR09
B	1332	VAL	LEU	conflict	UNP Q9NR09

- Molecule 2 is a protein called Diablo IAP-binding mitochondrial protein.

Mol	Chain	Residues	Atoms						AltConf	Trace
2	F	173	Total	C	H	N	O	S	0	0
			2721	849	1347	231	289	5		
2	E	173	Total	C	H	N	O	S	0	0
			2721	849	1347	231	289	5		

There are 20 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
F	0	MET	-	initiating methionine	UNP Q9NR28
F	185	HIS	-	expression tag	UNP Q9NR28
F	186	HIS	-	expression tag	UNP Q9NR28
F	187	HIS	-	expression tag	UNP Q9NR28
F	188	HIS	-	expression tag	UNP Q9NR28
F	189	HIS	-	expression tag	UNP Q9NR28
F	190	HIS	-	expression tag	UNP Q9NR28
F	191	HIS	-	expression tag	UNP Q9NR28
F	192	HIS	-	expression tag	UNP Q9NR28
F	193	HIS	-	expression tag	UNP Q9NR28
E	0	MET	-	initiating methionine	UNP Q9NR28
E	185	HIS	-	expression tag	UNP Q9NR28
E	186	HIS	-	expression tag	UNP Q9NR28
E	187	HIS	-	expression tag	UNP Q9NR28
E	188	HIS	-	expression tag	UNP Q9NR28
E	189	HIS	-	expression tag	UNP Q9NR28
E	190	HIS	-	expression tag	UNP Q9NR28
E	191	HIS	-	expression tag	UNP Q9NR28
E	192	HIS	-	expression tag	UNP Q9NR28
E	193	HIS	-	expression tag	UNP Q9NR28

- Molecule 3 is a protein called Baculoviral IAP repeat-containing protein 6.

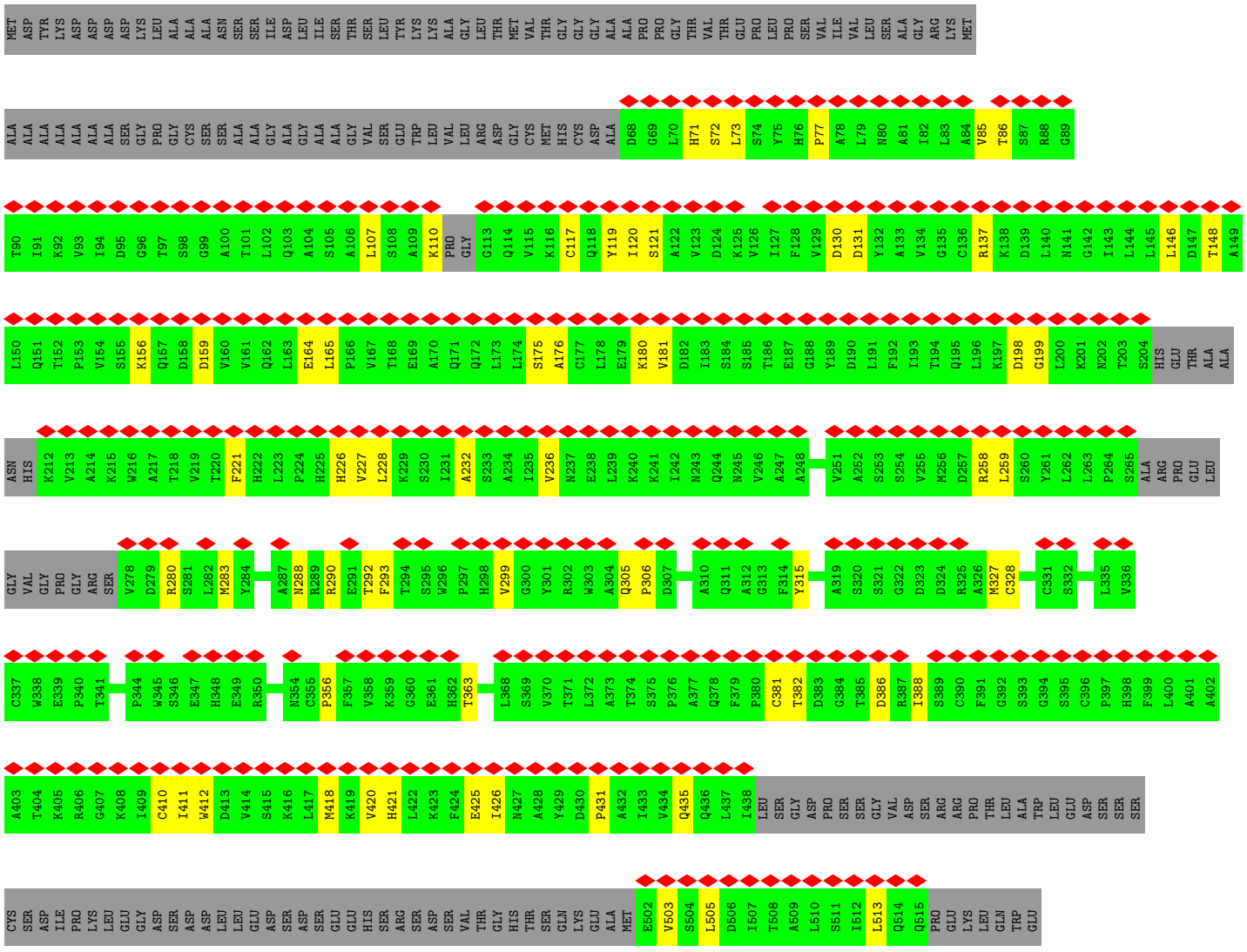
Mol	Chain	Residues	Atoms					AltConf	Trace
3	C	57	Total	C	H	N	O	0	0
			512	171	227	57	57		
3	D	57	Total	C	H	N	O	0	0
			512	171	227	57	57		

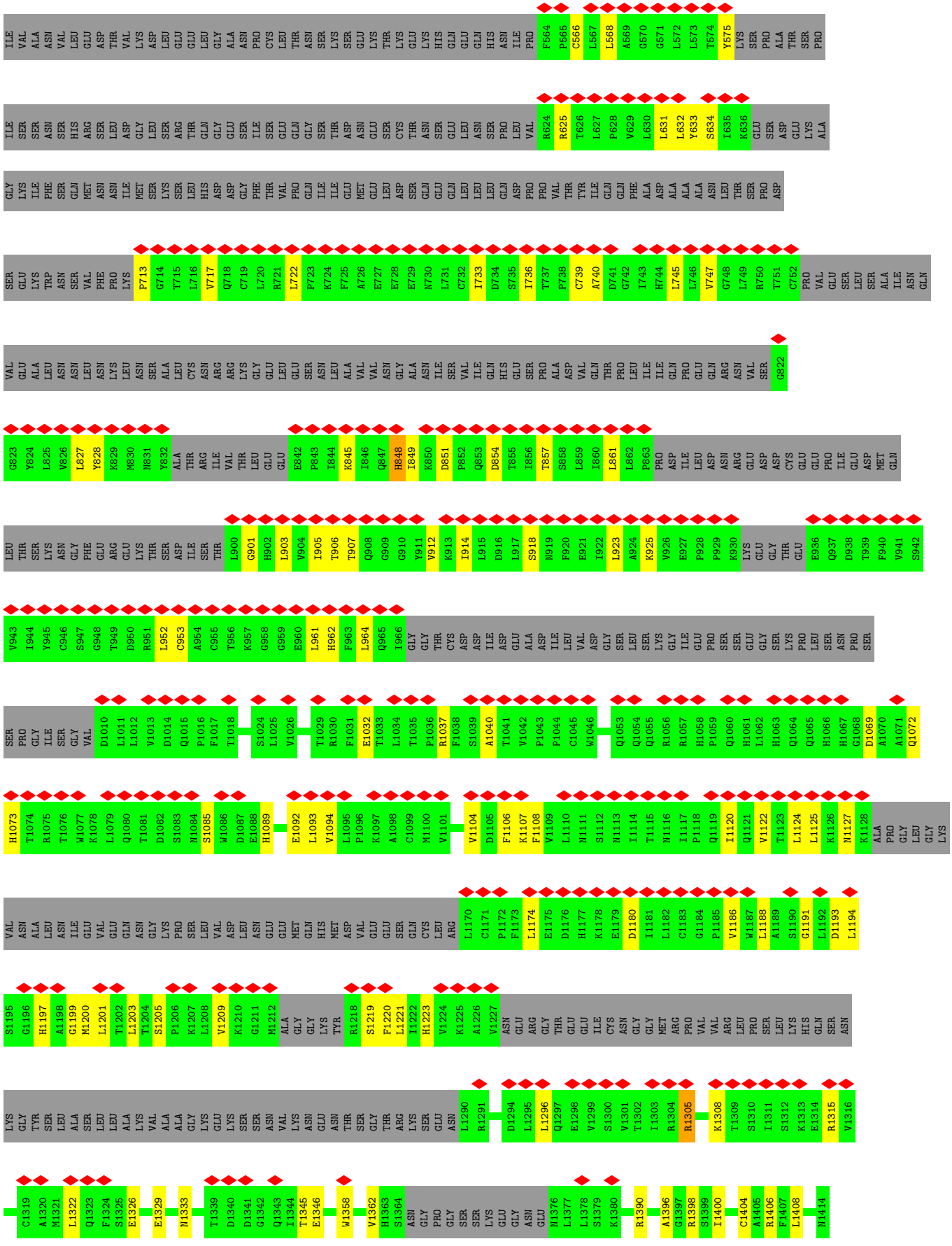
3 Residue-property plots (i)

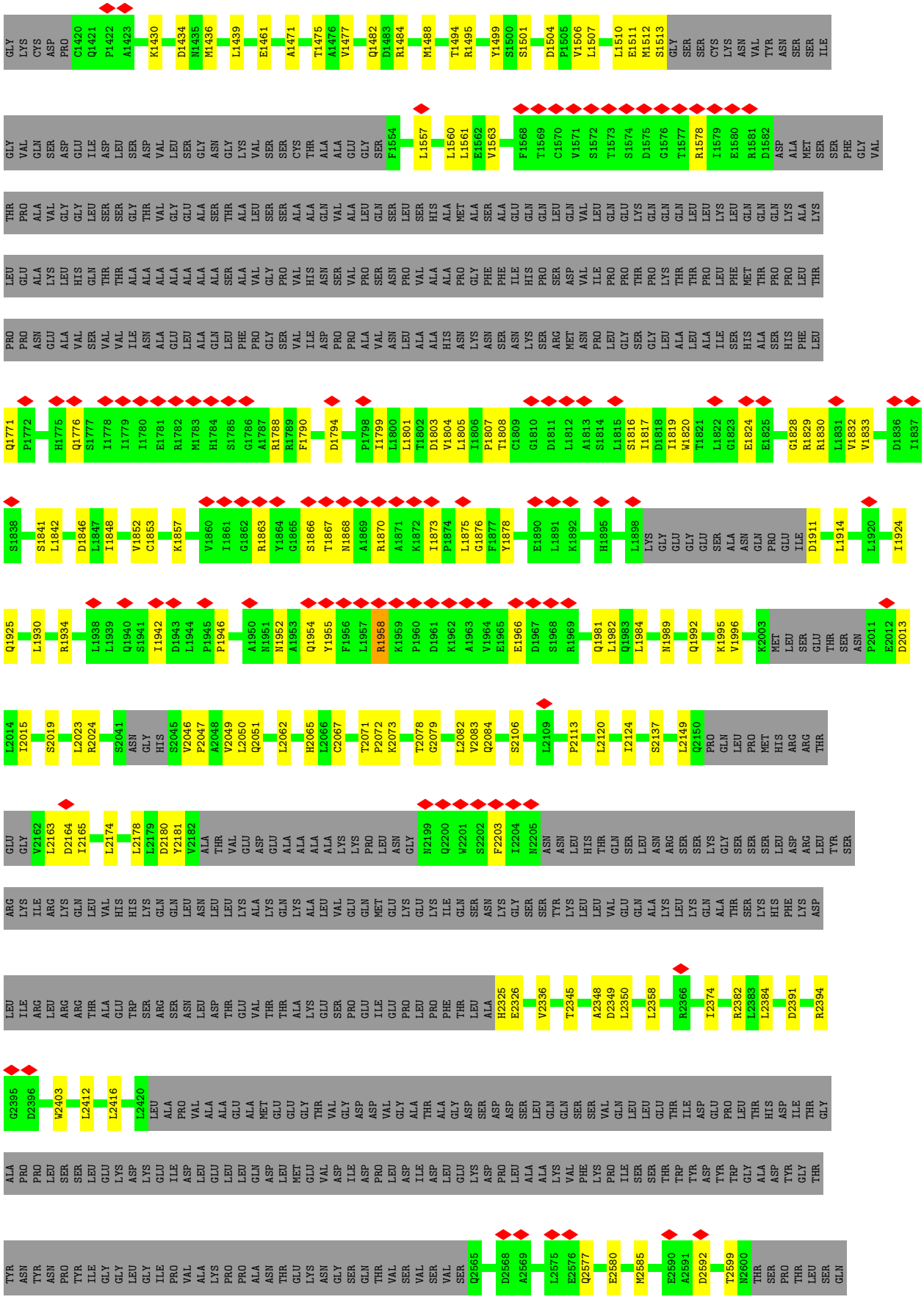
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

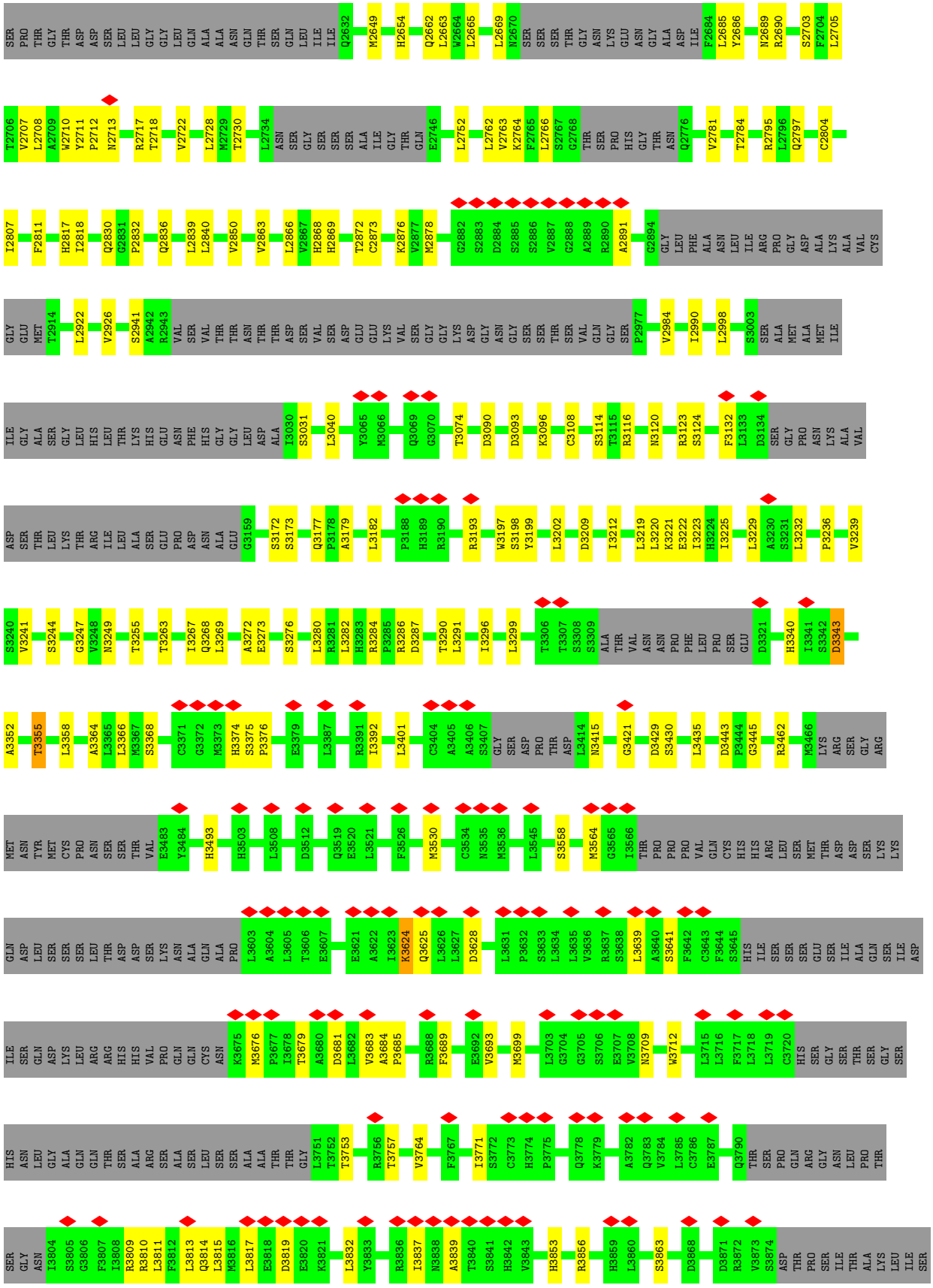
• Molecule 1: Baculoviral IAP repeat-containing protein 6

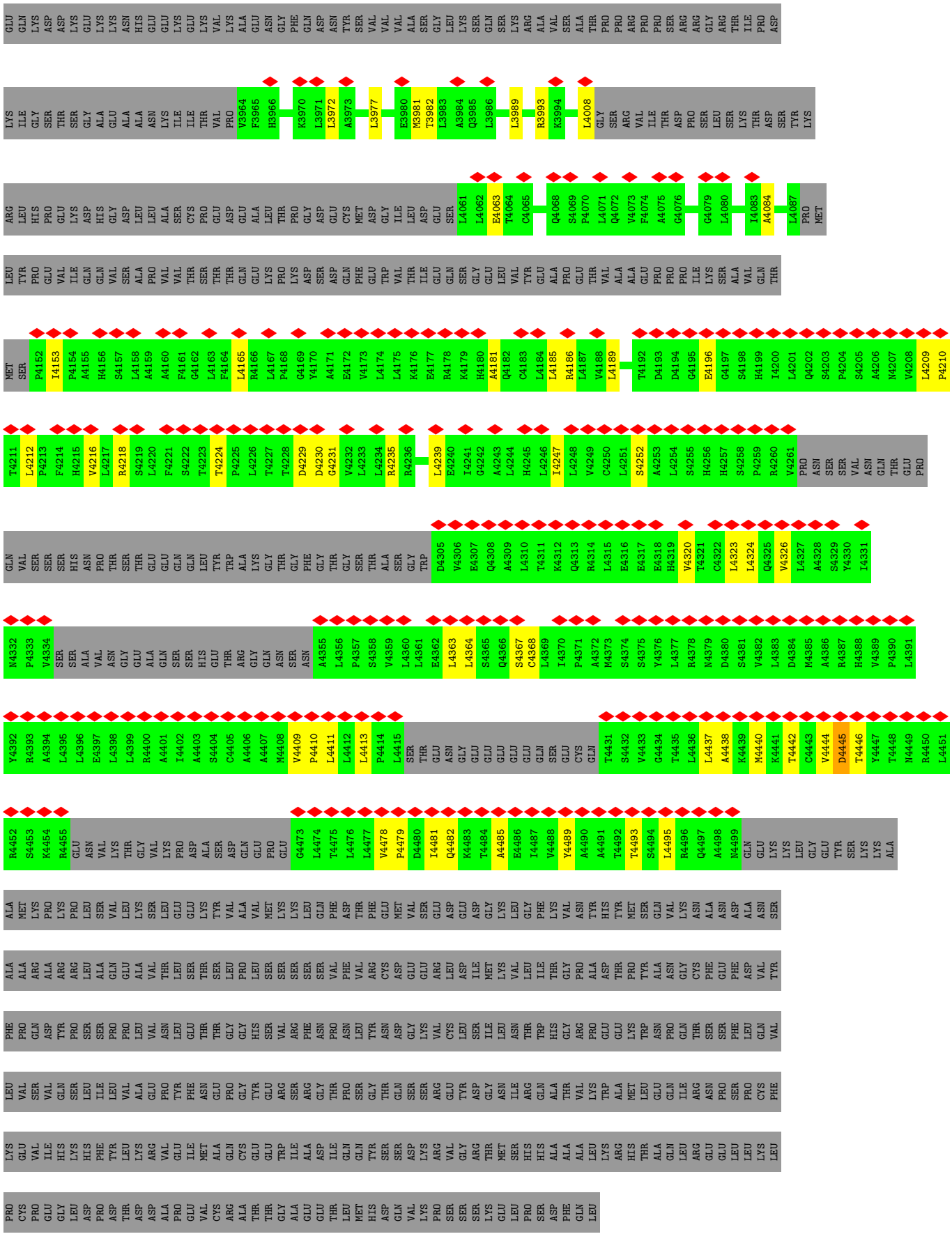
Chain A:




ILE VAL ALA ASN VAL LEU GLU ASP THR VAL LYS ASP LEU GLU GLU LEU GLY ALA ASN PRO CYS LEU THR ASN SER LYS SER GLU LYS THR LYS GLU LYS HIS GLN GLU GLN GLN HIS ASN ILE PRO
F564 P565 C566 L567 L568 A569 G570 G571 L572 L573 T574 Y575 LYS SER PRO ALA THR SER PRO
ILE SER SER ASN SER HIS ARG SER LEU ASP GLY LEU SER ARG THR GLN GLY GLU SER ILE SER GLU GLN GLY SER THR ASP ASN GLU SER CYS THR ASN SER GLU GLN LEU ASN SER PRO LEU VAL
R624 R625 T626 L627 P628 V629 L630 L631 L632 Y633 S634 I635 K636 GLU SER ASP GLU LYS ALA
GLY LYS ILE PHE SER GLN MET ASN ASN ILE MET SER LYS SER LEU HIS ASP ASP GLY PHE THR VAL PRO GLN ILE ILE GLU MET GLU LEU ASP SER GLN GLU GLN LEU LEU LEU GLN ASP PRO PRO VAL THR TYR ILE GLN GLN PHE ALA ASP ALA ALA ALA ASN LEU THR SER PRO ASP
SER GLU LYS TRP ASN SER VAL PHE PRO LYS
P713 G714 T715 L716 V717 Q718 C719 L720 R721 L722 P723 K724 F725 A726 E727 E728 E729 N730 L731 C732 I733 D734 S735 I736 T737 P738 C739 A740 D741 G742 I743 H744 L745 L746 V747 G748 L749 R750 T751 C752 PRO VAL GLU SER LEU SER ALA ILE ASN GLN
VAL GLU ALA LEU ASN ASN LEU ASN ASN LYS LEU ASN SER ALA LEU CYS ASN ARG ARG LYS GLY GLU LEU GLU SER ASN LEU ALA VAL VAL ASN GLY ALA ASN ILE SER VAL ILE GLN HIS GLU SER PRO ALA ASP VAL GLN THR PRO LEU ILE ILE GLN PRO PRO GLU GLN ARG ASN VAL SER
G822
G823 Y824 L825 V826 L827 Y828 K829 M830 N831 Y832 ALA THR ARG ILE VAL THR LEU GLU GLU E842 P843 I844 K845 I846 Q847 H848 I849 K850 D851 P852 Q853 D854 T855 I856 T857 S858 L859 I860 L861 L862 P863 PRO ASP ILE LEU ASP ASN ARG GLU ASP ASP CYS GLU GLU PRO ILE GLU ASP MET GLN
LEU THR SER LYS ASN GLY PHE GLU ARG GLU LYS THR SER ASP ILE SER THR L900 G901 H902 L903 V904 I905 T906 T907 Q908 G909 G910 Y911 V912 K913 I914 L915 D916 L917 S918 N919 F920 E921 I922 L923 A924 K925 V926 E927 P928 P929 K930 LYS GLU GLY THR GLU E936 Q937 D938 T939 F940 V941 S942
V943 I944 Y945 C946 S947 G948 T949 D950 R951 L952 C953 A954 C955 T956 K957 G958 G959 E960 L961 H962 F963 L964 Q965 I966 GLY GLY THR CYS ASP ASP ILE ASP GLU ALA ASP ILE LEU LEU VAL ASP GLY SER LEU SER LYS GLY ILE GLU PRO SER SER GLU GLY SER LYS PRO LEU SER ASN PRO SER
SER PRO GLY ILE SER GLY VAL D1010 L1011 L1012 V1013 D1014 Q1015 P1016 F1017 T1018 S1024 L1025 V1026 T1029 R1030 F1031 E1032 T1033 L1034 T1035 P1036 R1037 F1038 S1039 A1040 T1041 V1042 P1043 P1044 C1045 W1046 Q1053 Q1054 Q1055 R1056 R1057 H1058 P1059 Q1060 H1061 L1062 H1063 Q1064 Q1065 H1066 H1067 G1068 D1069 A1070 A1071 Q1072
H1073 T1074 R1075 T1076 W1077 K1078 L1079 Q1080 T1081 D1082 S1083 N1084 S1085 W1086 D1087 E1088 H1089 E1092 L1093 V1094 L1095 P1096 K1097 A1098 C1099 M1100 V1101 V1104 D1105 F1106 K1107 F1108 V1109 L1110 N1111 S1112 N1113 I1114 T1115 N1116 I1117 P1118 Q1119 I1120 Q1121 V1122 T1123 L1124 L1125 K1126 N1127 K1128 ALA PRO GLY LEU GLY LYS
VAL ASN ALA LEU ASN ILE GLU VAL GLU GLN ASN GLY LYS PRO SER LEU VAL ASP LEU ASN GLU GLU MET GLN HIS MET ASP VAL GLU GLU SER GLN CYS LEU ARG L1170 C1171 P1172 F1173 L1174 E1175 D1176 H1177 K1178 E1179 D1180 I1181 L1182 C1183 G1184 P1185 V1186 W1187 L1188 A1189 S1190 G1191 L1192 D1193 L1194
S1195 G1196 H1197 A1198 G1199 M1200 L1201 T1202 L1203 T1204 S1205 P1206 K1207 L1208 V1209 K1210 G1211 M1212 ALA GLY GLY LYS TYR R1218 S1219 F1220 L1221 I1222 H1223 V1224 K1225 A1226 V1227 ASN GLU ARG GLY THR GLU GLU ILE CYS ASN GLY GLY MET ARG PRO VAL VAL ARG LEU PRO SER LEU LYS HIS GLN SER ASN
LYS GLY TYR SER LEU ALA SER LEU LEU ALA LYS VAL ALA ALA GLY LYS GLU LYS SER SER ASN VAL LYS ASN GLU ASN THR SER GLY THR ARG LYS SER GLU ASN L1290 R1291 D1294 L1295 L1296 Q1297 E1298 V1299 S1300 V1301 T1302 I1303 R1304 R1305 K1308 T1309 S1310 I1311 S1312 K1313 E1314 R1315 V1316
C1319 A1320 M1321 L1322 Q1323 F1324 S1325 E1326 E1329 N1333 T1339 D1340 D1341 G1342 Q1343 T1344 T1345 E1346 W1358 V1362 H1363 S1364 ASN GLY PRO GLY SER SER LYS GLU GLY ASN GLU N1376 L1377 L1378 S1379 K1380 R1390 A1396 G1397 R1398 S1399 I1400 C1404 A1405 R1406 F1407 L1408 N1414

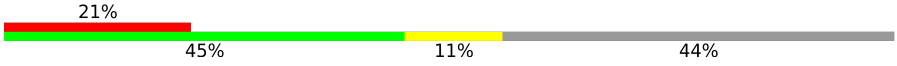


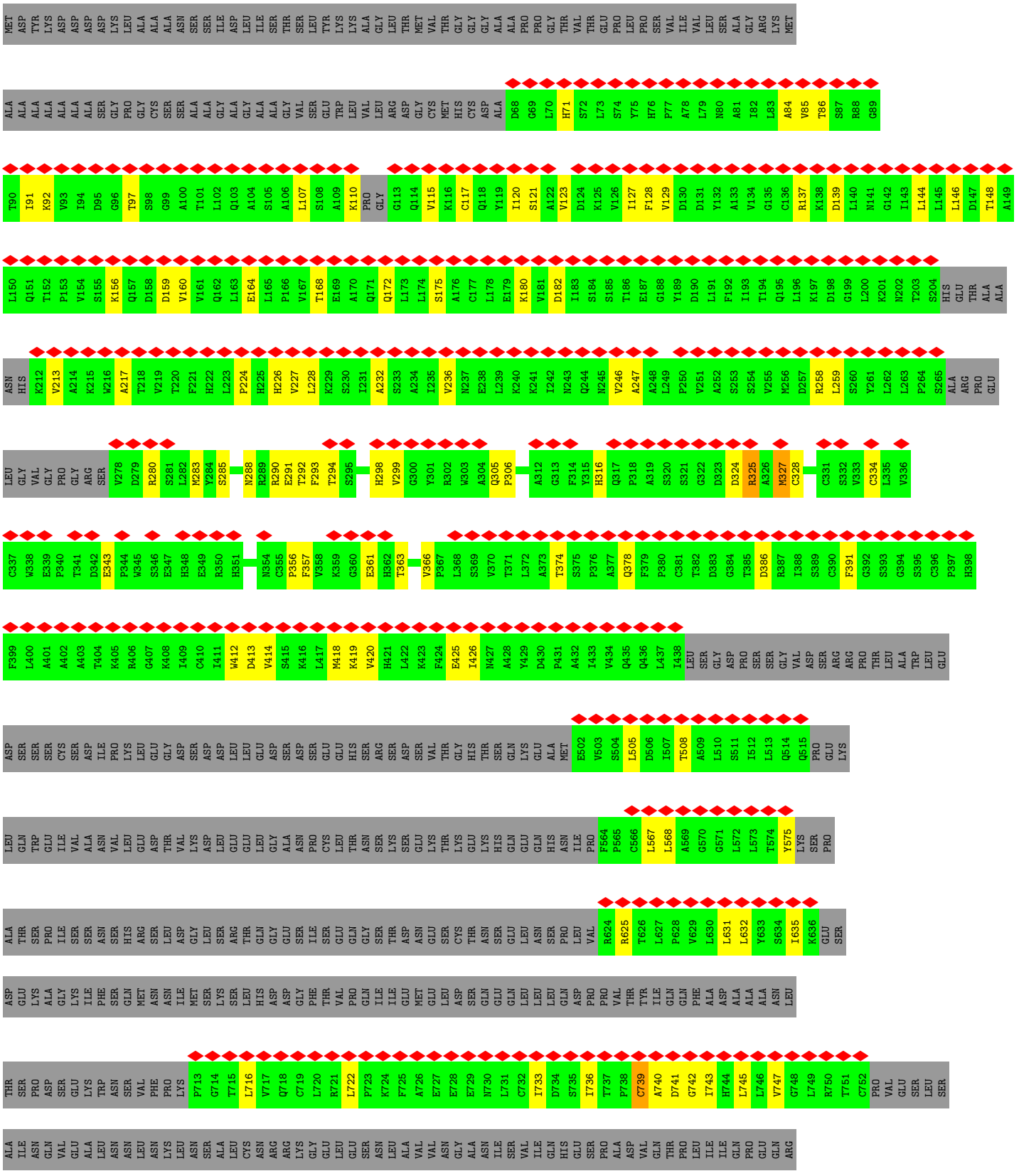


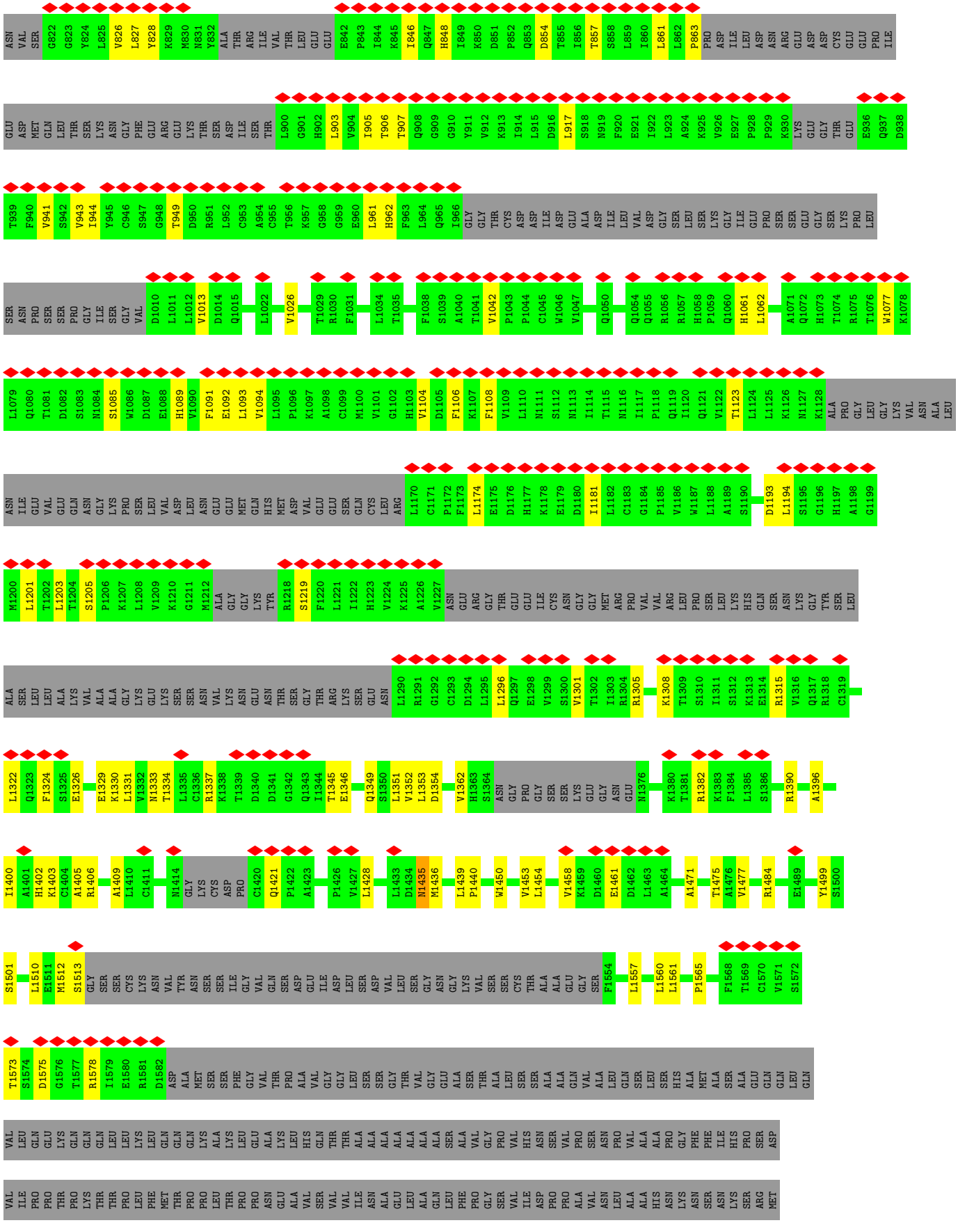


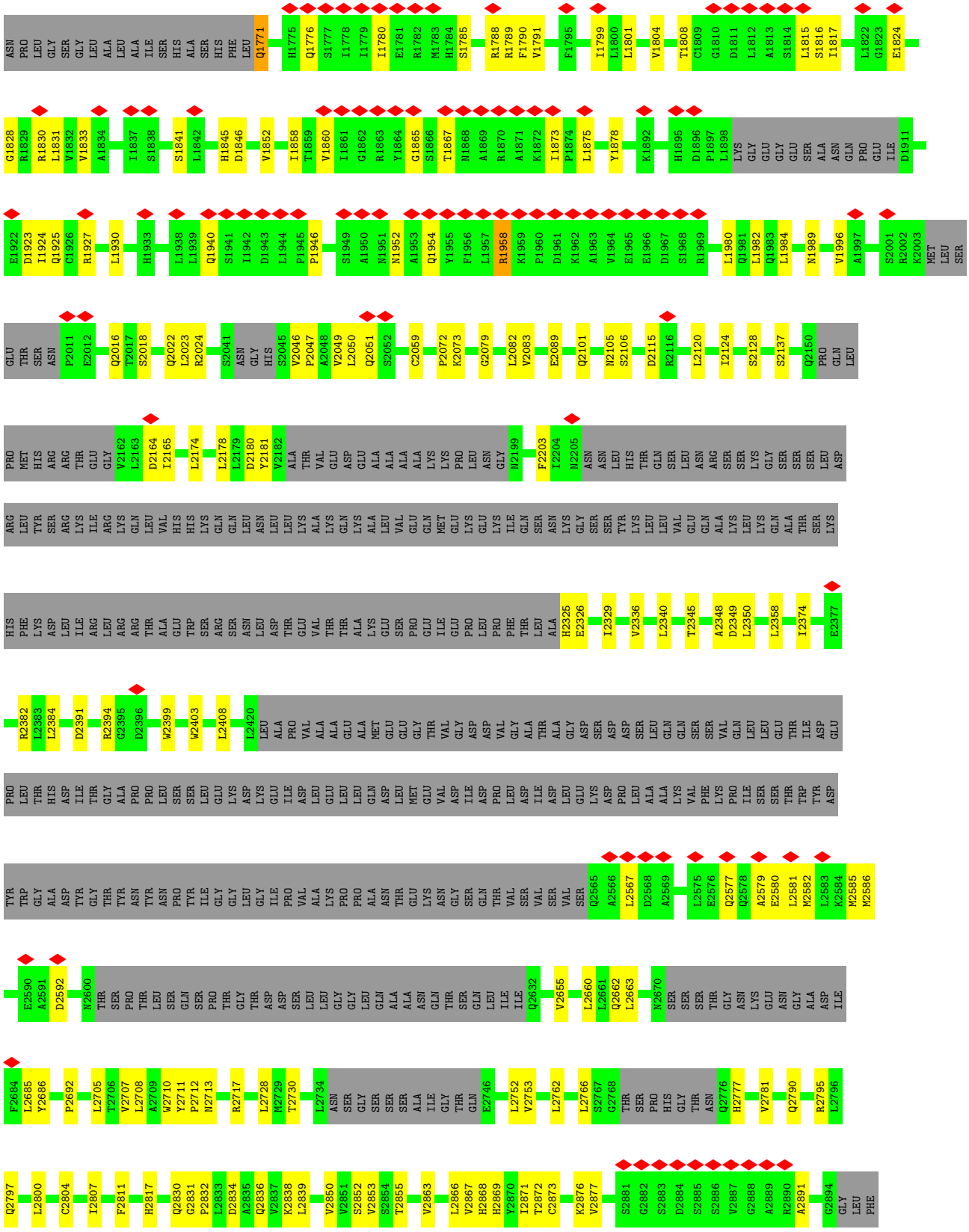
• Molecule 1: Baculoviral IAP repeat-containing protein 6

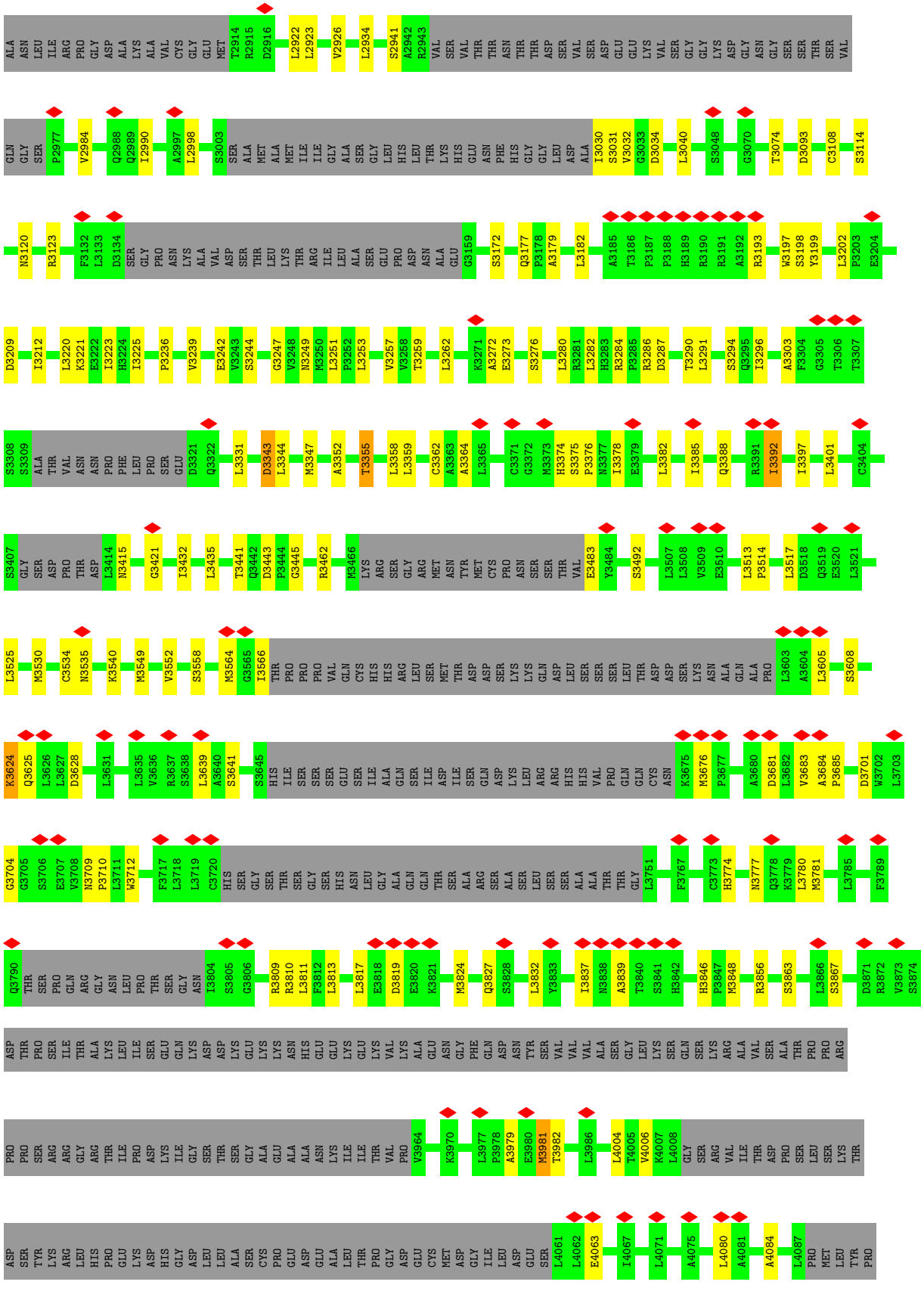
Chain B:

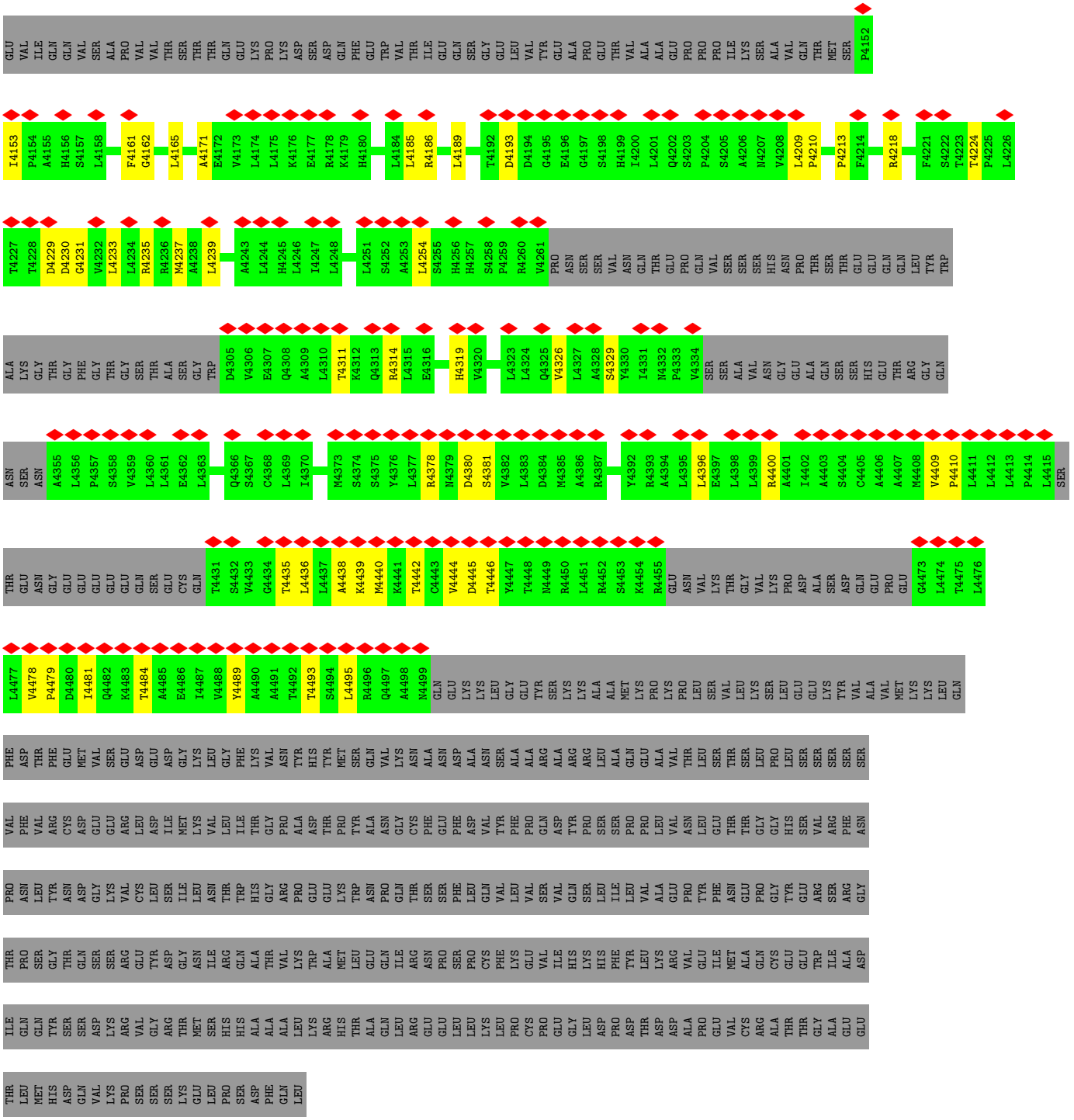





ASN VAL SER G822 G823 Y824 L825 V826 L827 Y828 K829 M830 N831 Y832 ALA THR ARG ILE VAL THR LEU GLU GLU E842 P843 I844 K845 I846 Q847 H848 I849 K850 D851 P852 Q853 D854 T855 I856 T857 S858 L859 I860 L861 L862 P863 PRO ASP ILE LEU ASP ASN ARG GLU ASP ASP CYS GLU GLU PRO ILE
GLU ASP MET GLN LEU THR SER LYS ASN GLY PHE GLU ARG GLU LYS THR SER ASP ILE SER THR L900 G901 H902 L903 V904 I905 T906 T907 Q908 G909 G910 Y911 V912 K913 I914 L915 D916 L917 S918 N919 F920 E921 I922 L923 A924 K925 V926 E927 P928 P929 K930 LYS GLU GLY THR GLU E936 Q937 D938
T939 F940 V941 S942 V943 I944 Y945 C946 S947 G948 T949 D950 R951 L952 C953 A954 C955 T956 K957 G958 G959 E960 L961 H962 F963 L964 Q965 I966 GLY GLY THR CYS ASP ASP ILE ASP GLU ALA ASP ILE LEU VAL ASP GLY SER LEU SER LYS GLY ILE GLU PRO SER SER GLU GLY SER LYS PRO LEU
SER ASN PRO SER SER PRO GLY ILE SER GLY VAL D1010 L1011 L1012 V1013 D1014 Q1015 L1022 V1026 T1029 R1030 F1031 L1034 T1035 F1038 S1039 A1040 T1041 V1042 P1043 P1044 C1045 W1046 V1047 Q1050 Q1054 Q1055 R1056 R1057 H1058 P1059 Q1060 H1061 L1062 A1071 Q1072 H1073 T1074 R1075 T1076 W1077 K1078
L1079 Q1080 T1081 D1082 S1083 N1084 S1085 W1086 D1087 E1088 H1089 V1090 F1091 E1092 L1093 V1094 L1095 P1096 K1097 A1098 C1099 M1100 V1101 G1102 H1103 V1104 D1105 F1106 K1107 F1108 V1109 L1110 N1111 S1112 N1113 I1114 T1115 N1116 I1117 P1118 Q1119 I1120 Q1121 V1122 T1123 L1124 L1125 K1126 N1127 K1128 ALA PRO GLY LEU GLY LYS VAL ASN ALA LEU
ASN ILE GLU VAL GLU GLN ASN GLY LYS PRO SER LEU VAL ASP LEU ASN GLU GLU MET GLN HIS MET ASP VAL GLU GLU SER GLN CYS LEU ARG L1170 C1171 P1172 F1173 L1174 E1175 D1176 H1177 K1178 E1179 D1180 I1181 L1182 C1183 G1184 P1185 V1186 W1187 L1188 A1189 S1190 D1193 L1194 S1195 G1196 H1197 A1198 G1199
M1200 L1201 T1202 L1203 T1204 S1205 P1206 K1207 L1208 V1209 K1210 G1211 M1212 ALA GLY GLY LYS TYR R1218 S1219 F1220 L1221 I1222 H1223 V1224 K1225 A1226 V1227 ASN GLU ARG GLY THR GLU GLU ILE CYS ASN GLY GLY MET ARG PRO VAL VAL ARG LEU PRO SER LEU LYS HIS GLN SER ASN LYS GLY TYR SER LEU
ALA SER LEU LEU ALA LYS VAL ALA ALA GLY LYS GLU LYS SER SER ASN VAL LYS ASN GLU ASN THR SER GLY THR ARG LYS SER GLU ASN L1290 R1291 G1292 C1293 D1294 L1295 L1296 Q1297 E1298 V1299 S1300 V1301 T1302 I1303 R1304 R1305 K1308 T1309 S1310 I1311 S1312 K1313 E1314 R1315 V1316 Q1317 R1318 C1319
L1322 Q1323 F1324 S1325 E1326 E1329 K1330 L1331 V1332 N1333 T1334 L1335 C1336 R1337 K1338 T1339 D1340 D1341 G1342 Q1343 T1344 T1345 E1346 Q1349 S1350 L1351 V1352 L1353 D1354 V1362 H1363 S1364 ASN GLY PRO GLY SER SER LYS GLU GLY ASN GLU N1376 K1380 T1381 R1382 K1383 F1384 L1385 S1386 R1390 A1396
I1400 A1401 H1402 K1403 C1404 A1405 R1406 A1409 L1410 C1411 N1414 GLY LYS CYS ASP PRO C1420 Q1421 P1422 A1423 P1426 V1427 L1428 L1433 D1434 N1435 M1436 L1439 P1440 W1450 V1453 L1454 V1458 K1459 D1460 E1461 D1462 L1463 A1464 A1471 T1475 A1476 V1477 R1484 E1489 Y1499 S1500
S1501 L1510 E1511 M1512 S1513 GLY SER SER CYS LYS ASN VAL TYR ASN SER SER ILE GLY VAL GLN SER ASP GLU ILE ASP LEU SER ASP VAL LEU SER GLY ASN GLY LYS VAL SER SER CYS THR ALA ALA GLU GLY SER F1554 L1557 L1560 L1561 P1565 F1568 T1569 C1570 V1571 S1572
T1573 S1574 D1575 G1576 T1577 R1578 I1579 E1580 R1581 D1582 ASP ALA MET SER SER PHE GLY VAL THR PRO ALA VAL GLY GLY LEU SER ASP VAL LEU GLY THR VAL GLY GLU ALA SER THR ALA LEU SER SER ALA ALA GLN VAL ALA LEU GLN SER LEU SER HIS ALA MET ALA SER ALA GLU GLN GLN LEU GLN
VAL LEU GLN GLU LYS GLN GLN LEU LEU LYS LEU GLN GLN LYS ALA LYS LEU GLU ALA LYS LEU HIS GLN THR THR ALA ALA ALA ALA ALA SER ALA ALA VAL GLY PRO VAL HIS ASN SER VAL PRO SER ASN PRO VAL ALA ALA PRO GLY PHE PHE ILE HIS PRO SER ASP
VAL ILE PRO PRO THR PRO LYS THR THR PRO LEU PHE MET THR PRO PRO LEU THR PRO PRO ASN GLU ALA VAL SER VAL VAL ILE ALA LEU GLU LEU ALA GLN LEU PHE PRO GLY SER VAL ILE ASP PRO PRO ALA VAL ASN LEU ALA ALA HIS ASN LYS ASN SER ASN LYS SER ARG MET

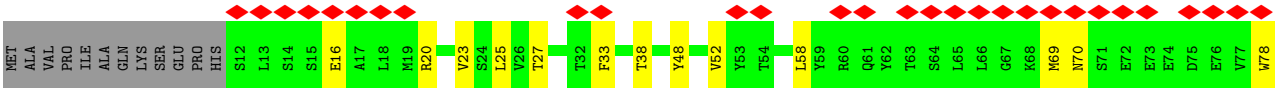

ASN PRO LEU GLY SER GLY LEU ALA LEU ALA ILE SER HIS ALA SER HIS PHE LEU Q1771 H1775 Q1776 S1777 I1778 I1779 I1780 E1781 R1782 M1783 H1784 S1785 R1788 R1789 F1790 V1791 F1795 I1799 L1800 L1801 V1804 T1808 C1809 G1810 D1811 L1812 A1813 S1814 L1815 S1816 I1817 L1822 G1823 E1824
G1828 R1829 R1830 L1831 V1832 V1833 A1834 T1837 S1838 S1841 L1842 H1845 D1846 V1852 I1858 T1859 V1860 I1861 G1862 R1863 Y1864 G1865 S1866 T1867 N1868 A1869 R1870 A1871 K1872 I1873 P1874 L1875 Y1878 K1892 H1895 D1896 P1897 L1898 LYS GLY GLU GLY GLU SER ALA ASN GLN PRO GLU ILE D1911
E1922 D1923 I1924 Q1925 C1926 R1927 L1930 H1933 L1938 L1939 Q1940 S1941 I1942 D1943 L1944 P1945 P1946 S1949 A1950 N1951 N1952 A1953 Q1954 Y1955 F1956 L1957 R1958 K1959 P1960 D1961 K1962 A1963 V1964 E1965 E1966 D1967 S1968 R1969 L1980 Q1981 L1982 Q1983 L1984 N1989 V1996 A1997 S2001 R2002 K2003 MET LEU SER
GLU THR SER ASN P2011 E2012 Q2016 T2017 S2018 Q2022 L2023 R2024 S2041 ASN GLY HIS S2045 V2046 P2047 A2048 V2049 L2050 Q2051 S2052 C2059 P2072 K2073 G2079 L2082 V2083 E2089 Q2101 N2105 S2106 D2115 R2116 L2120 I2124 S2128 S2137 Q2150 PRO GLN LEU
PRO MET HIS ARG ARG THR GLU GLY V2162 L2163 D2164 I2165 L2174 L2178 L2179 D2180 Y2181 V2182 ALA THR VAL GLU GLY ASP GLU ALA ALA ALA ALA LYS LYS PRO LEU ASN GLY N2199 F2203 I2204 N2205 ASN ASN LEU HIS THR GLN SER LEU ASN ARG SER SER LYS GLY SER SER SER LEU ASP
ARG LEU TYR SER ARG LYS ILE ARG LYS GLN LEU VAL HIS HIS LYS GLN GLN LEU ASN LEU LEU LYS ALA LYS GLN LYS ALA LEU VAL GLU GLN MET GLU LYS GLU LYS ILE GLN SER ASN LYS GLY SER SER TYR LYS LEU LEU VAL GLU GLN GLN ALA ALA LYS LEU LYS GLN ALA THR SER LYS
HIS PHE LYS ASP LEU ILE ARG LEU LEU ARG ARG THR ALA GLU TRP SER ARG SER ASN LEU ASP THR GLU VAL VAL THR THR ALA LYS GLU SER PRO GLU ILE GLU PRO LEU PRO PHE THR LEU ALA H2325 E2326 I2329 V2336 L2340 T2345 A2348 D2349 L2350 L2358 I2374 E2377
R2382 L2383 L2384 D2391 R2394 G2395 D2396 W2399 W2403 L2408 L2420 LEU ALA PRO VAL ALA ALA GLU ALA MET GLU GLU GLY THR VAL GLY ASP ASP VAL GLY ALA THR ALA GLY ASP SER ASP ASP SER LEU GLN GLN SER SER VAL GLN LEU LEU GLU THR ILE ASP
PRO LEU THR HIS ASP ILE THR GLY ALA PRO PRO LEU SER SER LEU GLU LYS ASP LYS GLU ILE ASP LEU LEU GLU LEU GLN LEU GLN ASP LEU MET GLU VAL ASP ILE ASP PRO LEU ASP ILE ASP LEU GLU GLU LYS ASP PRO ALA ALA LYS VAL PHE LYS PRO ILE SER SER THR TRP TYR ASP
TYR TRP GLY ALA ASP TYR GLY THR TYR ASN TYR ASN PRO TYR ILE GLY GLY LEU GLY ILE PRO VAL ALA LYS PRO PRO ALA ASN THR GLU LYS ASN GLY SER GLN THR VAL SER VAL SER VAL SER Q2565 A2566 L2567 D2568 A2569 L2575 E2576 Q2577 Q2578 A2579 E2580 L2581 M2582 L2583 K2584 M2585 M2586
E2590 A2591 D2592 N2600 THR SER PRO THR LEU SER GLN SER PRO THR GLY THR ASP ASP SER LEU LEU GLY GLY LEU GLN ALA ALA ASN GLN THR SER GLN LEU ILE ILE Q2632 V2655 L2660 L2661 Q2662 L2663 N2670 SER SER SER THR GLY ASN LYS GLU ASN GLY ALA ASP ILE
F2684 L2685 Y2686 P2692 L2705 T2706 V2707 L2708 A2709 W2710 Y2711 P2712 N2713 R2717 L2728 W2729 T2730 L2734 ASN SER GLY SER SER SER ALA ILE GLY THR GLN E2746 L2752 V2753 L2762 L2766 S2767 G2768 THR SER PRO HIS GLY THR ASN Q2776 H2777 V2781 Q2790 R2795 L2796
Q2797 L2800 C2804 I2807 F2811 H2817 Q2830 G2831 P2832 L2833 D2834 A2835 Q2836 V2837 K2838 L2839 V2850 V2851 S2852 V2853 S2854 T2855 V2863 L2866 V2867 H2868 H2869 Y2870 I2871 T2872 C2873 K2876 V2877 S2881 G2882 S2883 D2884 S2885 S2886 V2887 G2888 A2889 R2890 A2891 G2894 GLY LEU PHE

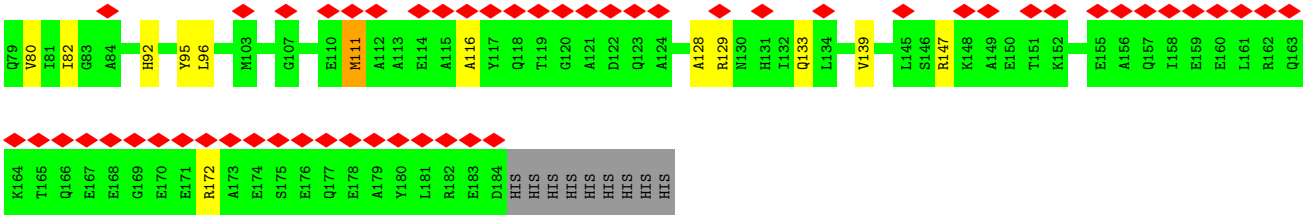




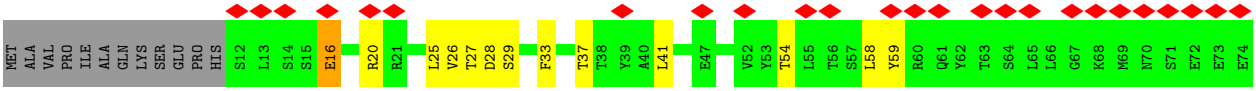
• Molecule 2: Diablo IAP-binding mitochondrial protein

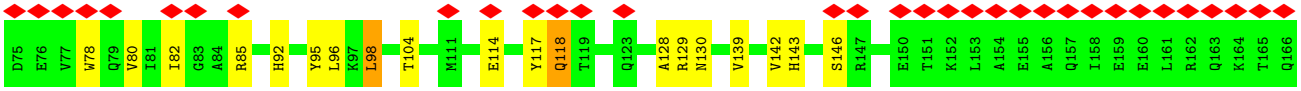
Chain F:

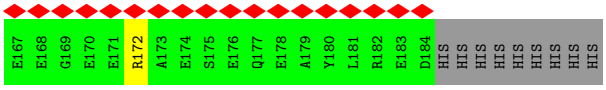




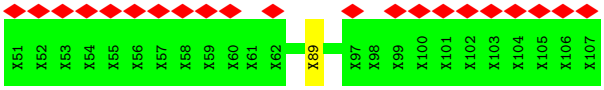
• Molecule 2: Diablo IAP-binding mitochondrial protein



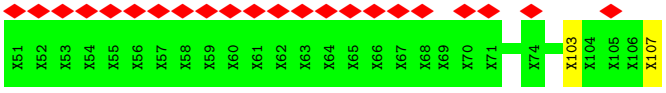




• Molecule 3: Baculoviral IAP repeat-containing protein 6



• Molecule 3: Baculoviral IAP repeat-containing protein 6



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	192025	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 ($e^-/Å^2$)	56.379	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	105000	Depositor
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	1.614	Depositor
Minimum map value	-0.931	Depositor
Average map value	-0.001	Depositor
Map value standard deviation	0.049	Depositor
Recommended contour level	0.284	Depositor
Map size (Å)	422.224, 422.224, 422.224	wwPDB
Map dimensions	352, 352, 352	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.1995, 1.1995, 1.1995	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	0.28	0/21907	0.49	0/29741
1	B	0.28	0/21907	0.49	0/29741
2	E	0.26	0/1389	0.48	0/1876
2	F	0.25	0/1389	0.47	0/1876
All	All	0.28	0/46592	0.49	0/63234

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	21428	21905	21819	329	0
1	B	21428	21903	21819	349	0
2	E	1374	1347	1347	24	0
2	F	1374	1347	1347	15	0
3	C	285	227	59	1	0
3	D	285	227	59	1	0
All	All	46174	46956	46450	677	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 7.

All (677) 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:B:280:ARG:NH2	1:B:328:CYS:O	2.03	0.91
1:B:1946:PRO:O	1:B:1952:ASN:ND2	2.09	0.85
1:A:3172:SER:OG	1:A:3209:ASP:OD2	1.92	0.84
1:B:3172:SER:OG	1:B:3209:ASP:OD2	1.93	0.84
1:A:164:GLU:OE1	1:A:258:ARG:NH2	2.12	0.82
1:A:857:THR:OG1	1:A:906:THR:O	1.98	0.81
1:B:137:ARG:NH2	1:B:148:THR:O	2.14	0.81
1:B:1329:GLU:OE2	1:B:1333:ASN:ND2	2.15	0.80
1:A:1946:PRO:O	1:A:1952:ASN:ND2	2.14	0.80
1:A:3981:MET:O	1:A:3982:THR:OG1	2.00	0.80
1:B:3193:ARG:NH1	2:E:114:GLU:O	2.14	0.79
1:B:3981:MET:O	1:B:3982:THR:OG1	1.99	0.79
1:A:3193:ARG:HH21	2:E:114:GLU:HB2	1.48	0.78
1:A:2784:THR:OG1	1:B:3242:GLU:OE2	2.02	0.78
1:B:343:GLU:OE1	1:B:1061:HIS:NE2	2.16	0.77
1:B:2079:GLY:O	1:B:2083:VAL:HG23	1.85	0.77
1:A:131:ASP:O	1:A:388:ILE:N	2.19	0.76
1:A:3813:LEU:HD23	1:A:3817:LEU:HD12	1.68	0.76
1:A:1461:GLU:N	1:A:1461:GLU:OE1	2.19	0.76
2:E:129:ARG:NH1	2:E:130:ASN:OD1	2.18	0.75
1:A:1484:ARG:NH2	1:A:2015:ILE:O	2.20	0.74
1:B:228:LEU:HG	1:B:259:LEU:HD11	1.67	0.74
1:A:1504:ASP:O	1:A:1981:GLN:NE2	2.20	0.73
1:A:1799:ILE:HD12	1:A:1799:ILE:O	1.88	0.73
1:B:1461:GLU:N	1:B:1461:GLU:OE1	2.20	0.73
1:B:3809:ARG:NH1	1:B:4189:LEU:O	2.20	0.73
1:B:164:GLU:OE1	1:B:258:ARG:NH2	2.22	0.73
1:B:4440:MET:O	1:B:4444:VAL:HG23	1.88	0.72
1:B:1501:SER:OG	1:B:2024:ARG:NH2	2.23	0.72
1:A:288:ASN:O	1:A:292:THR:HG23	1.90	0.71
1:A:2079:GLY:O	1:A:2083:VAL:HG23	1.90	0.71
1:B:3535:ASN:O	1:B:3540:LYS:NZ	2.17	0.71
1:A:952:LEU:N	1:A:964:LEU:O	2.24	0.71
1:B:228:LEU:HD23	1:B:259:LEU:HD21	1.73	0.70
1:A:3177:GLN:O	1:A:3197:TRP:NE1	2.25	0.69
1:A:1501:SER:OG	1:A:2024:ARG:NH2	2.25	0.69
1:A:156:LYS:N	1:A:159:ASP:OD2	2.24	0.69
1:A:4444:VAL:HG21	1:A:4481:ILE:HD13	1.75	0.69
1:B:3517:LEU:HD12	1:B:3552:VAL:HG11	1.74	0.69
1:B:2781:VAL:HG13	1:B:2832:PRO:HB3	1.75	0.69
1:A:2711:TYR:O	1:A:2764:LYS:NZ	2.25	0.68
1:A:3679:THR:OG1	1:A:3681:ASP:OD1	2.11	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:857:THR:OG1	1:B:906:THR:O	2.09	0.68
1:A:226:HIS:CE1	1:A:227:VAL:HG23	2.28	0.67
1:B:1799:ILE:HD12	1:B:1799:ILE:O	1.94	0.67
1:A:1495:ARG:NH1	1:A:1955:TYR:OH	2.28	0.66
1:B:1575:ASP:OD2	1:B:1789:ARG:NH2	2.28	0.66
1:B:2083:VAL:HG22	1:B:2124:ILE:HG23	1.77	0.65
1:A:3558:SER:OG	1:A:3625:GLN:OE1	2.15	0.64
1:A:1925:GLN:HG2	1:A:1984:LEU:HD21	1.79	0.64
1:A:2998:LEU:HD22	1:A:3040:LEU:HD12	1.77	0.64
1:A:2705:LEU:HD11	1:A:2752:LEU:HD23	1.79	0.64
1:B:226:HIS:CE1	1:B:227:VAL:HG23	2.32	0.64
1:B:3701:ASP:OD1	1:B:3774:HIS:NE2	2.30	0.64
1:B:4080:LEU:HD12	1:B:4171:ALA:HB1	1.80	0.64
1:A:2781:VAL:HG13	1:A:2832:PRO:HB3	1.78	0.64
1:A:4181:ALA:O	1:A:4185:LEU:HD12	1.97	0.64
1:A:137:ARG:NH2	1:A:148:THR:O	2.31	0.63
1:A:1942:ILE:HD11	1:A:1966:GLU:HB3	1.80	0.63
1:A:3124:SER:N	1:B:2349:ASP:OD2	2.28	0.63
1:B:4063:GLU:OE1	1:B:4063:GLU:N	2.30	0.62
1:A:2662:GLN:OE1	1:A:2717:ARG:NH2	2.33	0.62
1:B:356:PRO:HB2	1:B:363:THR:HG22	1.82	0.62
1:B:413:ASP:N	1:B:419:LYS:O	2.29	0.62
1:A:903:LEU:HD21	1:A:905:ILE:HG23	1.82	0.61
1:A:1557:LEU:HB3	1:A:1560:LEU:HD21	1.81	0.61
1:A:2083:VAL:HG22	1:A:2124:ILE:HG23	1.80	0.61
1:A:3809:ARG:NH1	1:A:4189:LEU:O	2.32	0.61
1:B:1477:VAL:HG13	1:B:2023:LEU:HD22	1.82	0.61
1:B:1484:ARG:NH2	1:B:2016:GLN:O	2.33	0.61
1:B:3193:ARG:HH11	2:E:118:GLN:CD	2.03	0.61
1:A:1106:PHE:N	1:A:1201:LEU:O	2.31	0.61
1:A:3639:LEU:HD11	1:A:3683:VAL:HG13	1.81	0.61
1:B:2984:VAL:HG13	1:B:2990:ILE:HG21	1.82	0.61
1:A:4489:TYR:O	1:A:4493:THR:HG23	2.01	0.61
1:B:3221:LYS:HE2	1:B:3272:ALA:HB2	1.81	0.61
1:B:85:VAL:HG21	1:B:115:VAL:O	2.00	0.61
1:A:4230:ASP:OD1	1:A:4231:GLY:N	2.34	0.61
2:F:25:LEU:HD21	3:C:89:UNK:CB	2.31	0.61
1:B:232:ALA:O	1:B:236:VAL:HG23	2.01	0.61
1:A:283:MET:HE3	1:A:283:MET:HA	1.83	0.60
1:A:3236:PRO:HB3	1:A:3291:LEU:HD11	1.81	0.60
1:A:736:ILE:HG23	1:A:747:VAL:HG22	1.83	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2686:TYR:N	1:B:3249:ASN:OD1	2.31	0.60
1:A:634:SER:HG	1:A:713:PRO:N	1.99	0.60
1:B:288:ASN:O	1:B:292:THR:HG23	2.02	0.60
1:A:4224:THR:O	1:A:4235:ARG:NH1	2.35	0.60
1:A:1032:GLU:O	1:A:1305:ARG:N	2.35	0.59
1:A:3074[A]:THR:O	1:B:2394:ARG:NH2	2.35	0.59
1:A:3352:ALA:O	1:A:3355:THR:HG22	2.02	0.59
1:B:3832:LEU:O	1:B:3856:ARG:NH2	2.35	0.59
1:B:3352:ALA:O	1:B:3355:THR:HG22	2.01	0.59
1:A:1406:ARG:NH2	1:A:2580:GLU:OE1	2.35	0.59
1:A:2349:ASP:OD1	1:A:2350:LEU:N	2.36	0.59
1:B:2349:ASP:OD1	1:B:2350:LEU:N	2.36	0.59
1:B:1925:GLN:HG2	1:B:1984:LEU:HD21	1.84	0.58
1:A:3249:ASN:OD1	1:B:2686:TYR:N	2.31	0.58
1:B:4230:ASP:OD1	1:B:4231:GLY:N	2.37	0.58
1:A:1346:GLU:HG3	1:A:1996:VAL:HG13	1.84	0.58
1:A:3624:LYS:NZ	1:A:3628:ASP:OD2	2.36	0.58
1:B:3813:LEU:HD23	1:B:3817:LEU:HD12	1.85	0.58
1:A:228:LEU:HG	1:A:259:LEU:HD11	1.86	0.58
1:B:2124:ILE:O	1:B:2128:SER:OG	2.22	0.58
1:B:414:VAL:HG22	1:B:418:MET:HE1	1.86	0.58
1:B:4311:THR:OG1	1:B:4314:ARG:NH1	2.35	0.58
1:B:412:TRP:CD1	1:B:420:VAL:HG22	2.39	0.57
1:B:1104:VAL:O	1:B:1203:LEU:N	2.37	0.57
1:B:3837:ILE:HG22	1:B:3839:ALA:H	1.69	0.57
1:B:2850:VAL:N	1:B:2941:SER:OG	2.37	0.57
1:A:4438:ALA:O	1:A:4442:THR:HG23	2.05	0.57
1:B:2998:LEU:HD22	1:B:3040:LEU:HD12	1.85	0.57
1:B:3827:GLN:O	1:B:4006:VAL:N	2.28	0.57
1:A:1930:LEU:HD11	1:B:3813:LEU:HD13	1.86	0.57
1:A:3693:VAL:HG23	1:A:3699:MET:HG2	1.87	0.57
1:B:4489:TYR:O	1:B:4493:THR:HG23	2.05	0.57
1:A:426:ILE:HG23	1:A:505:LEU:HD23	1.86	0.57
1:A:914:ILE:O	1:A:923:LEU:N	2.35	0.57
1:A:1193:ASP:OD1	1:A:1194:LEU:N	2.34	0.57
1:B:1406:ARG:NH2	1:B:2580:GLU:OE1	2.38	0.57
1:A:1329:GLU:OE2	1:A:1333:ASN:ND2	2.38	0.56
1:B:745:LEU:O	1:B:828:TYR:N	2.33	0.56
1:A:3415:ASN:OD1	1:B:2382:ARG:NH2	2.38	0.56
1:B:3867:SER:N	1:B:3979:ALA:O	2.38	0.56
1:A:568:LEU:CD2	1:A:736:ILE:HG21	2.35	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1804:VAL:HG13	1:A:1878:TYR:CD1	2.41	0.56
1:B:1958:ARG:O	1:B:1958:ARG:NE	2.36	0.56
1:A:2106:SER:OG	1:A:2164:ASP:OD1	2.23	0.56
1:B:1382:ARG:NH2	1:B:1421:GLN:OE1	2.38	0.56
1:A:3530:MET:HE3	1:A:3530:MET:HA	1.86	0.56
1:B:3534:CYS:SG	1:B:3608:SER:OG	2.61	0.56
1:B:1337:ARG:NE	1:B:1349:GLN:OE1	2.39	0.56
1:A:3202:LEU:O	1:A:3284:ARG:NH2	2.39	0.55
1:B:2325:HIS:N	1:B:2326:GLU:OE1	2.40	0.55
1:A:1510:LEU:HD22	1:A:1982:LEU:HD11	1.88	0.55
1:B:3220:LEU:HD21	1:B:3223:ILE:HD11	1.88	0.55
1:A:3837:ILE:HG22	1:A:3839:ALA:H	1.70	0.55
1:B:2336:VAL:HG23	1:B:2358:LEU:HD11	1.89	0.55
1:A:232:ALA:O	1:A:236:VAL:HG23	2.07	0.55
1:A:1104:VAL:O	1:A:1203:LEU:N	2.40	0.55
1:A:1512:MET:O	1:A:1513:SER:OG	2.24	0.55
1:A:3225:ILE:HD11	1:A:3280:LEU:HD13	1.88	0.55
1:B:85:VAL:HG23	1:B:117:CYS:SG	2.47	0.55
1:B:740:ALA:HB2	1:B:861:LEU:CD1	2.37	0.55
1:A:2891:ALA:O	1:A:3031:SER:OG	2.22	0.54
1:A:2868:HIS:O	1:A:2872:THR:HG23	2.07	0.54
1:B:2804:CYS:SG	1:B:2807:ILE:HG23	2.47	0.54
1:B:1808:THR:OG1	1:B:1841:SER:N	2.41	0.54
1:B:4233:LEU:HD12	1:B:4237:MET:CE	2.38	0.54
1:B:745:LEU:O	1:B:827:LEU:HD12	2.08	0.54
1:B:156:LYS:N	1:B:159:ASP:OD2	2.34	0.54
1:A:736:ILE:CG2	1:A:745:LEU:HD11	2.37	0.54
1:B:1484:ARG:NH1	1:B:2018:SER:O	2.41	0.54
1:B:2707:VAL:O	1:B:2711:TYR:N	2.41	0.54
1:A:315:TYR:OH	1:A:327:MET:SD	2.62	0.54
1:A:961:LEU:HD23	1:A:962:HIS:N	2.22	0.54
1:A:4063:GLU:OE1	1:A:4063:GLU:N	2.35	0.54
1:B:3236:PRO:HB3	1:B:3291:LEU:HD11	1.90	0.54
1:B:3525:LEU:HD12	1:B:3549:MET:SD	2.48	0.54
2:F:27:THR:HG23	2:F:128:ALA:HB2	1.90	0.54
1:A:3989:LEU:O	1:A:3993:ARG:N	2.39	0.54
1:A:3120:ASN:O	1:B:2348:ALA:N	2.38	0.53
1:B:3709:ASN:HB2	1:B:3780:LEU:HD11	1.90	0.53
1:A:2804:CYS:SG	1:A:2807:ILE:HG23	2.48	0.53
1:A:3401:LEU:HD21	1:A:3435:LEU:HD11	1.89	0.53
1:A:3689:PHE:O	1:A:3693:VAL:HG22	2.08	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2013:ASP:OD1	1:A:2013:ASP:N	2.40	0.53
1:B:1396:ALA:CB	1:B:1400:ILE:HG21	2.38	0.53
1:B:568:LEU:CD2	1:B:736:ILE:HG21	2.38	0.53
1:B:2662:GLN:OE1	1:B:2717:ARG:NH2	2.42	0.53
1:B:3225:ILE:HD11	1:B:3280:LEU:HD13	1.91	0.53
1:A:3832:LEU:O	1:A:3856:ARG:NH2	2.41	0.53
1:A:2394:ARG:NH2	1:B:3074[A]:THR:O	2.39	0.53
1:B:3202:LEU:O	1:B:3284:ARG:NH2	2.42	0.53
1:A:3221:LYS:HE2	1:A:3272:ALA:HB2	1.91	0.52
1:B:1440:PRO:O	1:B:2022:GLN:NE2	2.43	0.52
1:A:3771:ILE:HD11	1:A:3815:LEU:HD11	1.91	0.52
2:E:78:TRP:O	2:E:82:ILE:HG12	2.09	0.52
1:A:745:LEU:O	1:A:827:LEU:HD12	2.10	0.52
1:A:1914:LEU:HD11	1:A:1995:LYS:HG2	1.92	0.52
1:B:3212:ILE:HD11	1:B:3296:ILE:HG21	1.91	0.52
1:A:2866:LEU:HD23	1:A:2922:LEU:HD13	1.90	0.52
1:A:2326:GLU:OE1	1:A:2326:GLU:N	2.39	0.52
1:A:4364:LEU:HB2	1:A:4411:LEU:HD11	1.92	0.52
1:B:2705:LEU:HD11	1:B:2752:LEU:HD23	1.91	0.52
1:B:2326:GLU:OE1	1:B:2326:GLU:N	2.40	0.52
1:B:2692:PRO:HG3	1:B:2728:LEU:HB3	1.92	0.52
1:B:3624:LYS:NZ	1:B:3628:ASP:OD2	2.40	0.52
1:A:1471:ALA:O	1:A:1475:THR:HG23	2.10	0.52
1:A:2062:LEU:HD23	1:A:2082:LEU:HD21	1.92	0.52
1:B:2762:LEU:HD12	1:B:2811:PHE:HZ	1.75	0.52
1:B:3108:CYS:HB3	1:B:3355:THR:HG21	1.92	0.52
1:A:1803:ASP:OD1	1:A:1846:ASP:N	2.35	0.51
1:B:4400:ARG:NH1	1:B:4484:THR:OG1	2.43	0.51
1:A:110:LYS:HD3	1:A:110:LYS:N	2.25	0.51
1:B:139:ASP:HA	1:B:144:LEU:HD23	1.91	0.51
1:B:3558:SER:OG	1:B:3625:GLN:OE1	2.27	0.51
1:A:1085:SER:O	1:A:1089:HIS:NE2	2.44	0.51
1:A:3229:LEU:HD22	1:A:3229:LEU:H	1.75	0.51
1:A:299:VAL:O	1:A:305:GLN:NE2	2.44	0.51
1:A:3811:LEU:C	1:A:3811:LEU:HD23	2.30	0.51
1:B:3530:MET:HE3	1:B:3530:MET:HA	1.92	0.51
2:F:23:VAL:HG11	2:F:116:ALA:HA	1.91	0.51
1:A:4440:MET:O	1:A:4444:VAL:HG23	2.10	0.51
1:A:3421:GLY:HA2	1:B:2165:ILE:HG13	1.92	0.51
1:B:2180:ASP:OD1	1:B:2181:TYR:N	2.43	0.51
1:B:2891:ALA:O	1:B:3031:SER:OG	2.26	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:228:LEU:HD23	1:A:259:LEU:HD21	1.93	0.51
1:A:3355:THR:HG23	1:A:3358:LEU:HB2	1.93	0.51
1:B:2868:HIS:O	1:B:2872:THR:HG23	2.11	0.51
1:B:1776:GLN:HB3	1:B:1875:LEU:HD12	1.93	0.51
1:B:2336:VAL:HG21	1:B:2374:ILE:CG2	2.40	0.51
1:A:740:ALA:HB2	1:A:861:LEU:CD1	2.40	0.50
1:A:1477:VAL:HG13	1:A:2023:LEU:HD22	1.93	0.50
1:A:4084:ALA:HB2	1:A:4165:LEU:HB3	1.93	0.50
1:B:3824:MET:SD	1:B:4004:LEU:HD12	2.51	0.50
1:A:2984:VAL:HG13	1:A:2990:ILE:HG21	1.93	0.50
1:A:3116:ARG:NH2	1:B:2340:LEU:O	2.40	0.50
1:B:1123:THR:HG21	1:B:1174:LEU:HD21	1.93	0.50
1:A:740:ALA:HB3	1:A:901:GLY:HA3	1.92	0.50
1:B:283:MET:HE3	1:B:283:MET:HA	1.92	0.50
1:B:1830:ARG:HD3	1:B:1833:VAL:HG23	1.91	0.50
1:B:2049:VAL:HG22	1:B:2050:LEU:H	1.75	0.50
1:B:3177:GLN:O	1:B:3197:TRP:NE1	2.39	0.50
1:A:2165:ILE:HG13	1:B:3421:GLY:HA2	1.94	0.50
1:B:1940:GLN:OE1	1:B:1940:GLN:HA	2.11	0.50
1:B:2106:SER:OG	1:B:2164:ASP:OD1	2.28	0.50
1:A:3813:LEU:HD13	1:B:1930:LEU:HD11	1.93	0.50
1:A:3239:VAL:HG22	1:A:3282:LEU:HD23	1.93	0.50
1:B:1804:VAL:HG13	1:B:1878:TYR:CD2	2.47	0.50
2:F:78:TRP:O	2:F:82:ILE:HG12	2.12	0.50
1:B:1785:SER:OG	1:B:1865:GLY:N	2.45	0.50
2:E:27:THR:CG2	2:E:128:ALA:HB2	2.42	0.50
1:A:848:HIS:HD1	1:A:849:ILE:N	2.09	0.49
1:A:2830:GLN:OE1	1:B:2830:GLN:HG3	2.12	0.49
1:A:2850:VAL:N	1:A:2941:SER:OG	2.44	0.49
1:A:280:ARG:NH2	1:A:328:CYS:O	2.45	0.49
1:A:1992:GLN:O	1:A:1996:VAL:HG23	2.12	0.49
1:B:1409:ALA:HB1	1:B:2582:MET:SD	2.52	0.49
1:A:1776:GLN:HB3	1:A:1875:LEU:HD12	1.94	0.49
1:A:3090:ASP:O	1:A:3340:HIS:NE2	2.45	0.49
1:B:2046:VAL:N	1:B:2047:PRO:CD	2.75	0.49
1:A:2394:ARG:NH2	1:B:3074[A]:THR:HG23	2.28	0.49
1:B:3639:LEU:HD11	1:B:3683:VAL:HG13	1.94	0.49
1:A:356:PRO:HB2	1:A:363:THR:HG22	1.94	0.49
1:A:1069:ASP:O	1:A:1073:HIS:NE2	2.46	0.49
1:B:2336:VAL:CG2	1:B:2358:LEU:HD11	2.43	0.49
2:E:59:TYR:OH	2:E:85:ARG:NE	2.41	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:845:LYS:NZ	1:A:918:SER:O	2.46	0.49
1:A:1805:LEU:HA	1:A:1842:LEU:O	2.12	0.49
1:A:3212:ILE:HD11	1:A:3296:ILE:HG21	1.94	0.49
1:B:1193:ASP:OD1	1:B:1194:LEU:N	2.38	0.49
1:B:903:LEU:HD21	1:B:905:ILE:HG12	1.95	0.49
1:A:513:LEU:HD23	1:A:566:CYS:SG	2.53	0.48
1:A:2046:VAL:N	1:A:2047:PRO:CD	2.76	0.48
1:B:1436:MET:HG3	1:B:1439:LEU:HD12	1.95	0.48
1:B:2866:LEU:HD23	1:B:2922:LEU:HD13	1.94	0.48
1:B:3811:LEU:C	1:B:3811:LEU:HD23	2.33	0.48
1:A:1094:VAL:HG22	1:A:1219:SER:HB2	1.95	0.48
1:A:3074[B]:THR:O	1:B:2394:ARG:NH2	2.46	0.48
1:A:3123:ARG:O	1:B:1954:GLN:NE2	2.47	0.48
1:A:3366:LEU:HD11	1:A:3430:SER:HB3	1.94	0.48
1:A:3813:LEU:CD2	1:A:3817:LEU:HD12	2.40	0.48
1:B:961:LEU:HD23	1:B:962:HIS:N	2.28	0.48
1:A:2599:THR:O	1:A:2599:THR:HG22	2.13	0.48
1:A:4442:THR:O	1:A:4446:THR:HG23	2.13	0.48
1:B:357:PHE:HB2	1:B:363:THR:HG21	1.96	0.48
1:B:1390:ARG:N	1:B:1435:ASN:OD1	2.45	0.48
1:A:3809:ARG:NH2	1:B:1923:ASP:OD1	2.40	0.48
1:B:1354:ASP:OD1	1:B:1403:LYS:NZ	2.30	0.48
2:F:33:PHE:HB2	2:E:26:VAL:CG2	2.44	0.48
1:A:2079:GLY:HA3	1:A:2120:LEU:HD11	1.96	0.48
1:A:3817:LEU:O	1:A:4186:ARG:NH1	2.47	0.48
1:B:1013:VAL:HG11	1:B:1324:PHE:HD2	1.79	0.48
1:A:568:LEU:HD22	1:A:736:ILE:HG21	1.95	0.48
1:A:1499:TYR:CG	1:A:2072:PRO:HD3	2.48	0.48
1:A:1868:ASN:ND2	1:A:1870:ARG:O	2.47	0.48
1:A:3198:SER:HA	1:A:3291:LEU:O	2.14	0.48
1:A:3263:THR:N	1:B:3287:ASP:OD2	2.43	0.48
1:B:1402:HIS:ND1	1:B:1846:ASP:OD2	2.33	0.48
1:B:1801:LEU:HD11	1:B:1804:VAL:HG23	1.96	0.48
1:B:3199:TYR:O	1:B:3290:THR:HA	2.13	0.48
1:A:2180:ASP:OD1	1:A:2181:TYR:N	2.47	0.48
1:B:1092:GLU:OE2	1:B:1094:VAL:HG23	2.13	0.48
1:B:2871:ILE:HD11	1:B:3032:VAL:HG12	1.96	0.48
1:A:85:VAL:HG12	1:A:86:THR:N	2.28	0.48
1:A:1808:THR:OG1	1:A:1841:SER:N	2.47	0.48
1:B:3709:ASN:N	1:B:3710:PRO:CD	2.77	0.48
1:B:71:HIS:HA	1:B:941:VAL:HG11	1.96	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:325:ARG:NH1	1:B:334:CYS:SG	2.87	0.48
1:B:3123:ARG:NH2	1:B:3303:ALA:O	2.46	0.48
1:A:3819:ASP:OD2	1:A:3863:SER:OG	2.22	0.47
1:B:285:SER:HA	1:B:366:VAL:HB	1.96	0.47
1:A:736:ILE:HG22	1:A:745:LEU:HD11	1.94	0.47
1:A:2336:VAL:HG21	1:A:2374:ILE:CG2	2.43	0.47
1:B:3244:SER:OG	1:B:3247:GLY:N	2.48	0.47
1:B:85:VAL:HG12	1:B:86:THR:N	2.29	0.47
1:B:1510:LEU:HD22	1:B:1982:LEU:HD11	1.95	0.47
1:A:2049:VAL:HG22	1:A:2050:LEU:H	1.78	0.47
1:B:3443:ASP:OD1	1:B:3445:GLY:N	2.47	0.47
2:E:27:THR:HG23	2:E:128:ALA:HB2	1.97	0.47
1:B:2707:VAL:HA	1:B:2710:TRP:NE1	2.28	0.47
1:B:3712:TRP:HZ3	1:B:3781:MET:HB2	1.80	0.47
1:A:1499:TYR:HB3	1:A:2071:THR:HG22	1.97	0.47
1:A:2348:ALA:N	1:B:3120:ASN:O	2.43	0.47
1:A:2762:LEU:HD12	1:A:2811:PHE:HZ	1.79	0.47
1:B:1557:LEU:HB3	1:B:1560:LEU:HD21	1.97	0.47
1:A:3179:ALA:HB1	1:A:3182:LEU:HD12	1.97	0.47
1:B:1428:LEU:HD23	1:B:1458:VAL:HG11	1.97	0.47
1:B:2059:CYS:SG	1:B:2082:LEU:HD22	2.55	0.47
1:A:85:VAL:HG23	1:A:117:CYS:SG	2.54	0.47
1:A:2391:ASP:OD1	1:A:2391:ASP:N	2.46	0.47
1:A:3429:ASP:HB3	1:A:3853:HIS:NE2	2.30	0.47
1:A:3435:LEU:HD12	1:A:3493:HIS:CD2	2.50	0.47
1:A:3199:TYR:O	1:A:3290:THR:HA	2.15	0.47
1:B:3819:ASP:OD2	1:B:3863:SER:OG	2.16	0.47
1:A:2873:CYS:HA	1:B:2713:ASN:OD1	2.14	0.46
1:B:1867:THR:O	1:B:1867:THR:HG22	2.16	0.46
3:D:103:UNK:O	3:D:107:UNK:N	2.48	0.46
1:A:1867:THR:HG22	1:A:1867:THR:O	2.15	0.46
1:A:2713:ASN:OD1	1:B:2873:CYS:HA	2.16	0.46
1:A:4409:VAL:N	1:A:4410:PRO:HD2	2.30	0.46
1:B:110:LYS:HD3	1:B:110:LYS:N	2.30	0.46
1:B:2567:LEU:HD11	1:B:2581:LEU:HG	1.97	0.46
1:A:2649:MET:HB3	1:A:2654:HIS:HB2	1.96	0.46
1:B:1106:PHE:N	1:B:1201:LEU:O	2.36	0.46
1:B:2863:VAL:HG11	1:B:2926:VAL:HG23	1.97	0.46
1:B:4084:ALA:HB1	1:B:4162:GLY:O	2.15	0.46
1:A:3108:CYS:HB3	1:A:3355:THR:HG21	1.97	0.46
1:B:3355:THR:HG23	1:B:3358:LEU:HB2	1.97	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:165:LEU:HD12	1:A:221:PHE:HE2	1.80	0.46
1:A:2840:LEU:HD11	1:A:2922:LEU:HD23	1.98	0.46
1:B:1565:PRO:HB2	1:B:1771:GLN:O	2.15	0.46
1:B:2120:LEU:O	1:B:2124:ILE:HG12	2.16	0.46
1:A:120:ILE:HD12	1:A:120:ILE:N	2.31	0.46
1:A:2325:HIS:N	1:A:2326:GLU:OE1	2.49	0.46
1:A:2665:LEU:HD23	1:A:2728:LEU:HD12	1.98	0.46
1:A:3241:VAL:HG21	1:A:3267:ILE:HD13	1.96	0.46
1:A:3364:ALA:O	1:A:3368[A]:SER:OG	2.29	0.46
1:B:1093:LEU:CD2	1:B:1301:VAL:HG11	2.46	0.46
1:B:3198:SER:HA	1:B:3291:LEU:O	2.16	0.46
1:B:4209:LEU:N	1:B:4210:PRO:HD2	2.30	0.46
1:A:632:LEU:O	1:A:717:VAL:N	2.48	0.46
1:A:3219:LEU:HG	1:A:3272:ALA:HB1	1.96	0.46
1:B:722:LEU:HD11	1:B:733:ILE:HD11	1.98	0.46
1:B:1042:VAL:HG12	1:B:1091:PHE:CD2	2.51	0.46
1:B:1789:ARG:O	1:B:1860:VAL:N	2.43	0.46
1:B:3343:ASP:OD1	1:B:3343:ASP:N	2.49	0.46
1:A:912:VAL:O	1:A:925:LYS:HA	2.16	0.45
1:A:1924:ILE:HG22	1:A:1984:LEU:HD23	1.97	0.45
1:A:3811:LEU:HD23	1:A:3811:LEU:O	2.16	0.45
1:B:1322:LEU:HD21	1:B:1362:VAL:HG11	1.98	0.45
1:B:4442:THR:O	1:B:4446:THR:HG23	2.16	0.45
1:A:953:CYS:SG	1:A:961:LEU:HD21	2.56	0.45
1:A:2712:PRO:HB2	1:B:2869:HIS:CD2	2.51	0.45
1:B:123:VAL:HG21	1:B:414:VAL:HG11	1.97	0.45
1:B:2083:VAL:CG2	1:B:2124:ILE:HD12	2.45	0.45
1:A:2863:VAL:HG11	1:A:2926:VAL:HG23	1.98	0.45
1:A:3193:ARG:HH21	2:E:114:GLU:CB	2.23	0.45
1:A:3220:LEU:HD21	1:A:3223:ILE:HD11	1.97	0.45
1:B:298:HIS:NE2	1:B:324:ASP:OD2	2.43	0.45
1:B:1450:TRP:CZ2	1:B:1845:HIS:CE1	3.04	0.45
1:B:2830:GLN:O	1:B:2836:GLN:NE2	2.43	0.45
1:A:1494:THR:HG23	1:A:2113:PRO:HA	1.99	0.45
1:B:1042:VAL:HG11	1:B:1077:TRP:NE1	2.31	0.45
1:B:1353:LEU:HD13	1:B:1403:LYS:HB2	1.98	0.45
1:A:72:SER:O	1:A:73:LEU:HD12	2.17	0.45
1:A:1125:LEU:HA	1:A:1180:ASP:O	2.17	0.45
1:A:2869:HIS:CD2	1:B:2712:PRO:HB2	2.51	0.45
1:A:3255:THR:O	1:B:2777:HIS:ND1	2.43	0.45
1:B:1094:VAL:HG22	1:B:1219:SER:HB2	1.99	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:111:MET:SD	2:E:104:THR:HG23	2.57	0.45
1:A:410:CYS:SG	1:A:420:VAL:HG13	2.57	0.45
1:A:1092:GLU:HG3	1:A:1127:ASN:HD21	1.82	0.45
1:A:1430:LYS:NZ	1:A:1434:ASP:OD2	2.40	0.45
1:A:1801:LEU:HD11	1:A:1804:VAL:HG23	1.99	0.45
1:A:3220:LEU:HD12	1:A:3299:LEU:O	2.17	0.45
1:A:4413:LEU:CD2	1:A:4495:LEU:HD22	2.47	0.45
1:B:299:VAL:O	1:B:305:GLN:NE2	2.49	0.45
1:B:3344:LEU:HD22	1:B:3347:MET:HE2	1.98	0.45
1:B:1345:THR:HG22	1:B:1346:GLU:N	2.32	0.45
1:B:4080:LEU:CD2	1:B:4185:LEU:HD21	2.47	0.45
1:A:1093:LEU:O	1:A:1220:PHE:N	2.47	0.45
1:A:1816:SER:HB2	1:A:1833:VAL:HG22	1.98	0.45
1:B:740:ALA:HB2	1:B:861:LEU:HD12	1.98	0.45
1:B:1322:LEU:CD2	1:B:1362:VAL:HG11	2.47	0.45
2:E:92:HIS:NE2	2:E:96:LEU:HD11	2.32	0.45
1:B:226:HIS:ND1	1:B:227:VAL:N	2.65	0.45
1:B:3709:ASN:C	1:B:3709:ASN:OD1	2.55	0.45
1:A:4363:LEU:O	1:A:4367:SER:HB3	2.16	0.44
1:B:91:ILE:HD12	1:B:107:LEU:HD11	1.99	0.44
1:B:505:LEU:HD21	1:B:631:LEU:HD21	1.98	0.44
1:B:1026:VAL:HG21	1:B:1351:LEU:CD2	2.47	0.44
1:B:1331:LEU:HD22	1:B:1352:VAL:HG13	1.99	0.44
1:B:4224:THR:HG22	1:B:4231:GLY:CA	2.47	0.44
1:A:226:HIS:ND1	1:A:227:VAL:HG23	2.32	0.44
1:B:736:ILE:HG12	1:B:747:VAL:HG13	1.99	0.44
1:B:2867:VAL:HG11	1:B:2923:LEU:HD21	1.99	0.44
1:B:3432:ILE:HD11	1:B:3492:SER:HB3	1.99	0.44
2:F:33:PHE:CD2	2:E:26:VAL:HG21	2.52	0.44
1:A:4478:VAL:N	1:A:4479:PRO:CD	2.81	0.44
1:B:1085:SER:O	1:B:1089:HIS:NE2	2.48	0.44
1:B:2174:LEU:O	1:B:2178:LEU:HG	2.16	0.44
1:A:2149:LEU:HG	1:A:2163:LEU:HD11	2.00	0.44
1:A:3244:SER:OG	1:A:3247:GLY:N	2.50	0.44
1:A:3972:LEU:HD12	1:A:3977:LEU:HD21	1.99	0.44
1:A:4196:GLU:HG2	1:A:4196:GLU:O	2.17	0.44
1:A:4212:LEU:O	1:A:4216:VAL:HG23	2.17	0.44
1:B:740:ALA:HB1	1:B:863:PRO:HA	1.99	0.44
1:B:861:LEU:HD13	1:B:917:LEU:HD11	1.98	0.44
1:B:1790:PHE:HA	1:B:1858:ILE:O	2.18	0.44
1:A:851:ASP:HB3	1:A:854:ASP:HB2	1.99	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2180:ASP:OD1	1:B:2180:ASP:C	2.55	0.44
1:B:2876:LYS:NZ	1:B:3273:GLU:OE2	2.49	0.44
1:B:3193:ARG:CZ	2:E:114:GLU:CD	2.86	0.44
1:A:736:ILE:HG12	1:A:747:VAL:HG13	2.00	0.44
1:A:2382:ARG:NH2	1:B:3415:ASN:OD1	2.51	0.44
1:A:3132:PHE:CD2	1:B:2115:ASP:HB3	2.53	0.44
1:B:3566:ILE:HD11	1:B:3605:LEU:HD21	1.99	0.44
1:B:3684:ALA:HB3	1:B:3685:PRO:HD3	2.00	0.44
1:B:4435:THR:O	1:B:4439:LYS:HG3	2.17	0.44
1:B:4478:VAL:N	1:B:4479:PRO:CD	2.79	0.44
2:F:69:MET:SD	2:F:70:ASN:N	2.91	0.44
1:A:1830:ARG:HD3	1:A:1833:VAL:HG23	1.99	0.44
1:B:567:LEU:HB2	1:B:635:ILE:HD11	2.00	0.44
1:B:1512:MET:O	1:B:1513:SER:OG	2.23	0.44
1:B:3397:ILE:HG23	1:B:3401:LEU:HD12	1.99	0.44
1:B:3846:HIS:CE1	1:B:3848:MET:HE2	2.53	0.44
2:E:139:VAL:O	2:E:142:VAL:HG22	2.17	0.44
1:A:1191:GLY:O	1:A:1199:GLY:HA3	2.18	0.44
1:A:2120:LEU:O	1:A:2124:ILE:HG12	2.17	0.44
1:B:1780:ILE:HD12	1:B:1873:ILE:HD11	2.00	0.44
2:E:16:GLU:OE2	2:E:20:ARG:NE	2.46	0.44
2:E:28:ASP:OD1	2:E:29:SER:N	2.51	0.44
1:A:1346:GLU:CG	1:A:1996:VAL:HG13	2.46	0.44
1:A:1396:ALA:CB	1:A:1400:ILE:HG21	2.48	0.44
1:A:2878:MET:N	1:A:3268:GLN:O	2.49	0.44
1:A:3443:ASP:OD1	1:A:3445:GLY:N	2.51	0.44
1:B:632:LEU:O	1:B:716:LEU:HD12	2.18	0.44
1:B:3362:CYS:HB2	1:B:3382:LEU:HD21	2.00	0.44
1:A:2345:THR:HG22	1:B:3364:ALA:HB1	1.99	0.43
1:B:168:THR:O	1:B:172:GLN:HG2	2.18	0.43
1:B:1817:ILE:O	1:B:1831:LEU:N	2.50	0.43
1:B:2049:VAL:HG22	1:B:2050:LEU:N	2.33	0.43
1:A:1507:LEU:HD11	1:A:1981:GLN:OE1	2.18	0.43
1:A:3364:ALA:HB1	1:B:2345:THR:HG22	1.99	0.43
1:B:97:THR:HG22	1:B:949:THR:HG22	1.99	0.43
1:B:1026:VAL:HG21	1:B:1351:LEU:HD22	2.00	0.43
1:B:2051:GLN:OE1	1:B:2051:GLN:HA	2.18	0.43
1:A:740:ALA:HB2	1:A:861:LEU:HD12	2.00	0.43
1:B:854:ASP:HA	1:B:907:THR:HB	2.00	0.43
1:B:1061:HIS:CE1	1:B:1062:LEU:HG	2.54	0.43
1:B:1924:ILE:HG21	1:B:1984:LEU:HA	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:54:THR:O	2:E:58:LEU:HD13	2.19	0.43
1:A:1790:PHE:CD1	1:A:1790:PHE:C	2.91	0.43
1:A:2180:ASP:OD1	1:A:2180:ASP:C	2.56	0.43
1:B:1824:GLU:O	1:B:1828:GLY:HA3	2.18	0.43
1:B:4153:ILE:HG23	1:B:4153:ILE:O	2.18	0.43
1:B:4186:ARG:NE	1:B:4193:ASP:O	2.45	0.43
1:A:107:LEU:HD23	1:A:146:LEU:O	2.18	0.43
1:A:854:ASP:HA	1:A:907:THR:HB	2.00	0.43
1:A:2707:VAL:HA	1:A:2710:TRP:NE1	2.34	0.43
1:A:2717:ARG:HE	1:B:3251:LEU:HD23	1.83	0.43
1:A:4445:ASP:OD1	1:A:4482:GLN:NE2	2.51	0.43
1:B:120:ILE:HD12	1:B:120:ILE:N	2.33	0.43
1:B:327:MET:HE2	1:B:327:MET:N	2.33	0.43
1:B:3030:ILE:HG23	1:B:3034:ASP:CB	2.48	0.43
1:A:503:VAL:HA	1:A:575:TYR:HA	1.99	0.43
1:A:3225:ILE:CD1	1:A:3280:LEU:HD13	2.48	0.43
1:B:120:ILE:HD13	1:B:127:ILE:CG1	2.49	0.43
1:B:575:TYR:N	1:B:575:TYR:CD1	2.85	0.43
1:B:4254:LEU:HD13	1:B:4319:HIS:HB3	1.99	0.43
1:A:1817:ILE:HD12	1:A:1832:VAL:CG1	2.48	0.43
1:A:2174:LEU:O	1:A:2178:LEU:HG	2.18	0.43
1:A:2703[A]:SER:O	1:A:2707:VAL:HG23	2.19	0.43
1:A:3753:THR:O	1:A:3757:THR:OG1	2.30	0.43
1:B:1042:VAL:HG11	1:B:1077:TRP:CE2	2.53	0.43
1:B:3401:LEU:HD21	1:B:3435:LEU:HD11	2.00	0.43
1:B:4409:VAL:N	1:B:4410:PRO:HD2	2.33	0.43
1:A:722:LEU:HD11	1:A:733:ILE:HD11	2.01	0.43
1:A:1820:TRP:CZ3	1:A:1857:LYS:HB2	2.54	0.43
1:B:2877:VAL:CG1	1:B:3253:LEU:HB3	2.49	0.43
2:E:33:PHE:CE1	2:E:37:THR:OG1	2.71	0.43
1:A:176:ALA:O	1:A:181:VAL:HG22	2.19	0.43
1:A:226:HIS:ND1	1:A:227:VAL:N	2.67	0.43
1:A:2412:LEU:O	1:A:2416:LEU:HG	2.19	0.43
1:B:325:ARG:HG2	1:B:327:MET:SD	2.58	0.43
1:B:1353:LEU:CD1	1:B:1400:ILE:HA	2.48	0.43
1:B:1406:ARG:HG2	1:B:2579:ALA:HB1	2.00	0.43
1:B:2018:SER:HB2	1:B:2023:LEU:HD21	2.01	0.43
1:B:3193:ARG:CZ	2:E:114:GLU:OE2	2.67	0.43
1:B:4224:THR:HG22	1:B:4231:GLY:HA2	1.99	0.43
1:A:2763:VAL:HG21	1:A:2818:ILE:HG21	2.01	0.43
1:A:2876:LYS:NZ	1:A:3273:GLU:OE2	2.52	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4437:LEU:HD22	1:A:4485:ALA:HB2	2.01	0.43
1:A:1107:LYS:HG2	1:A:1200:MET:HB2	2.00	0.42
1:A:4153:ILE:HG23	1:A:4153:ILE:O	2.19	0.42
1:B:1873:ILE:HD12	1:B:1873:ILE:N	2.34	0.42
1:B:2853:VAL:HG21	1:B:2934:LEU:HD22	2.01	0.42
1:A:198:ASP:OD1	1:A:199:GLY:N	2.52	0.42
1:A:2067:CYS:SG	1:A:2078:THR:HB	2.59	0.42
1:A:3343:ASP:OD1	1:A:3343:ASP:N	2.51	0.42
1:A:4218:ARG:HB2	1:A:4326:VAL:HG22	2.01	0.42
1:B:505:LEU:HD21	1:B:631:LEU:CD2	2.49	0.42
1:B:1471:ALA:O	1:B:1475:THR:HG23	2.18	0.42
1:B:1499:TYR:CG	1:B:2072:PRO:HD3	2.54	0.42
1:B:2325:HIS:NE2	1:B:2329:ILE:HD11	2.34	0.42
1:B:2685:LEU:HD12	1:B:2686:TYR:N	2.34	0.42
1:B:3179:ALA:HB1	1:B:3182:LEU:HD12	2.00	0.42
1:B:4235:ARG:NH2	1:B:4329:SER:O	2.52	0.42
2:F:58:LEU:HD21	2:F:80:VAL:HG12	2.01	0.42
1:A:412:TRP:CD1	1:A:420:VAL:HG22	2.54	0.42
1:A:1108:PHE:HB2	1:A:1296:LEU:CD2	2.50	0.42
1:B:4218:ARG:HB2	1:B:4326:VAL:HG22	2.00	0.42
1:A:431:PRO:O	1:A:435:GLN:HG2	2.19	0.42
1:A:1390:ARG:HB2	1:A:1390:ARG:NH1	2.34	0.42
1:A:1404:CYS:O	1:A:1408:LEU:HD23	2.20	0.42
1:A:1958:ARG:O	1:A:1958:ARG:NE	2.39	0.42
1:B:2384:LEU:HD22	1:B:2663:LEU:HD21	2.01	0.42
1:B:3344:LEU:HD22	1:B:3347:MET:CE	2.49	0.42
1:A:2051:GLN:HA	1:A:2051:GLN:OE1	2.20	0.42
1:A:2669:LEU:HD21	1:A:2728:LEU:HD11	2.02	0.42
1:A:4209:LEU:N	1:A:4210:PRO:HD2	2.34	0.42
1:B:293:PHE:CD1	1:B:316:HIS:HB2	2.55	0.42
1:B:426:ILE:CG2	1:B:505:LEU:HD23	2.49	0.42
1:B:2790:GLN:HG3	1:B:2838:LYS:HD2	2.01	0.42
2:F:38:THR:HG23	2:F:139:VAL:CG2	2.50	0.42
1:A:426:ILE:CG2	1:A:505:LEU:HD23	2.50	0.42
1:A:1040:ALA:HA	1:A:1092:GLU:O	2.19	0.42
1:A:1807:PRO:HD3	1:A:1876:GLY:HA2	2.02	0.42
1:A:3374:HIS:HB3	1:A:3376:PRO:HD2	2.00	0.42
1:B:742:GLY:O	1:B:743:ILE:HG22	2.20	0.42
2:F:48:TYR:O	2:F:52:VAL:HG23	2.20	0.42
1:A:1482:GLN:HG3	1:A:2065:HIS:HA	2.02	0.42
1:A:2866:LEU:HD23	1:A:2922:LEU:CD1	2.49	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3074[A]:THR:HG21	1:A:3114:SER:HB3	2.01	0.42
1:B:1091:PHE:CD1	1:B:1091:PHE:N	2.88	0.42
1:B:3513:LEU:HB3	1:B:3514:PRO:HD3	2.02	0.42
1:A:575:TYR:N	1:A:575:TYR:CD1	2.88	0.42
1:A:2203:PHE:CD2	1:A:2403:TRP:CZ3	3.08	0.42
1:A:2830:GLN:O	1:A:2836:GLN:NE2	2.42	0.42
1:A:3764:VAL:HG11	1:A:3814:GLN:NE2	2.35	0.42
1:B:826:VAL:HG12	1:B:846:ILE:HG13	2.01	0.42
1:B:1815:LEU:HD21	1:B:1858:ILE:HG23	2.01	0.42
1:B:3388:GLN:HG3	1:B:3392[B]:ILE:HD11	2.02	0.42
1:B:3388:GLN:HG3	1:B:3392[A]:ILE:HD11	2.02	0.42
2:F:92:HIS:NE2	2:F:96:LEU:HD11	2.35	0.42
1:A:411:ILE:O	1:A:421:HIS:N	2.48	0.42
1:A:1107:LYS:HA	1:A:1200:MET:HA	2.01	0.42
1:A:1120:ILE:HB	1:A:1188:LEU:HB2	2.01	0.42
1:A:1848:ILE:HD13	1:A:1848:ILE:HA	1.91	0.42
1:A:2336:VAL:HG23	1:A:2358:LEU:HD11	2.01	0.42
1:A:2766:LEU:CD1	1:A:2839:LEU:HD22	2.50	0.42
1:A:3817:LEU:CD1	1:A:4189:LEU:HD12	2.50	0.42
1:B:293:PHE:CB	1:B:306:PRO:HB3	2.50	0.42
1:B:2203:PHE:CD2	1:B:2403:TRP:CZ3	3.08	0.42
1:A:1122:VAL:O	1:A:1186:VAL:N	2.45	0.41
1:A:1174:LEU:HD21	1:A:1223:HIS:CG	2.55	0.41
1:A:1506:VAL:HG13	1:A:2019:SER:HB2	2.02	0.41
1:A:2718:THR:O	1:A:2722:VAL:HG23	2.20	0.41
1:A:3269:LEU:HD12	1:A:3269:LEU:N	2.35	0.41
1:B:2984:VAL:HG13	1:B:2990:ILE:CG2	2.49	0.41
1:A:85:VAL:CG1	1:A:86:THR:N	2.83	0.41
1:A:3684:ALA:HB3	1:A:3685:PRO:HD3	2.00	0.41
1:B:213:VAL:O	1:B:217:ALA:N	2.54	0.41
1:B:3704:GLY:HA3	1:B:3777:ASN:OD1	2.21	0.41
1:A:631:LEU:HB3	1:A:633:TYR:CE2	2.55	0.41
1:A:2703[B]:SER:O	1:A:2707:VAL:HG23	2.20	0.41
1:B:1405:ALA:HA	1:B:1454:LEU:HD11	2.03	0.41
1:B:1817:ILE:HG23	1:B:1858:ILE:HD13	2.03	0.41
1:B:3182:LEU:HD23	1:B:3294:SER:O	2.20	0.41
1:A:130:ASP:OD1	1:A:131:ASP:N	2.50	0.41
1:A:2685:LEU:HD12	1:A:2686:TYR:N	2.36	0.41
1:B:129:VAL:HG21	1:B:391:PHE:HB2	2.02	0.41
1:B:356:PRO:O	1:B:361:GLU:N	2.44	0.41
1:B:3236:PRO:HB3	1:B:3282:LEU:HB3	2.01	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3239:VAL:HG22	1:B:3282:LEU:HD23	2.02	0.41
1:B:3331:LEU:HD21	1:B:3378:ILE:HG12	2.02	0.41
1:B:4438:ALA:O	1:B:4442:THR:HG23	2.20	0.41
1:A:293:PHE:CB	1:A:306:PRO:HB3	2.51	0.41
1:A:1436:MET:HG3	1:A:1439:LEU:HD12	2.03	0.41
1:A:1819:ILE:HG13	1:A:1829:ARG:HB2	2.03	0.41
1:A:3709:ASN:HA	1:A:3712:TRP:CD1	2.55	0.41
1:B:129:VAL:HG21	1:B:391:PHE:CB	2.50	0.41
1:B:258:ARG:CZ	1:B:374:THR:HG21	2.51	0.41
1:B:1561:LEU:HB3	1:B:1989:ASN:OD1	2.21	0.41
1:A:1358:TRP:CE2	1:A:1362:VAL:HG21	2.55	0.41
1:A:1398:ARG:HH22	1:A:1563:VAL:HG11	1.85	0.41
1:B:2753[A]:VAL:HG21	1:B:2800:LEU:HD11	2.03	0.41
1:B:2753[B]:VAL:HG21	1:B:2800:LEU:HD11	2.03	0.41
1:B:4396:LEU:HD11	1:B:4481:ILE:HG13	2.02	0.41
1:A:745:LEU:N	1:A:828:TYR:O	2.46	0.41
1:A:1037:ARG:HB2	1:A:1072:GLN:O	2.21	0.41
1:A:1561:LEU:HB3	1:A:1989:ASN:OD1	2.20	0.41
1:B:84:ALA:O	1:B:92:LYS:N	2.51	0.41
1:B:1816:SER:HB2	1:B:1833:VAL:HG22	2.02	0.41
1:B:3074[A]:THR:HG21	1:B:3114:SER:HB3	2.03	0.41
2:F:23:VAL:HG22	2:E:33:PHE:CE1	2.56	0.41
1:A:1852:VAL:HG12	1:A:1852:VAL:O	2.21	0.41
1:A:4410:PRO:HA	1:A:4413:LEU:HG	2.03	0.41
1:B:85:VAL:CG1	1:B:86:THR:N	2.83	0.41
1:B:2101:GLN:O	1:B:2105:ASN:HB3	2.21	0.41
1:B:2391:ASP:OD1	1:B:2391:ASP:N	2.47	0.41
1:B:2834:ASP:N	1:B:2834:ASP:OD1	2.54	0.41
1:B:3257[A]:VAL:HG23	1:B:3259:THR:HG23	2.03	0.41
1:A:71:HIS:O	1:A:71:HIS:CG	2.73	0.41
1:A:381:CYS:SG	1:A:382:THR:N	2.93	0.41
1:A:1197:HIS:O	1:A:1197:HIS:ND1	2.52	0.41
1:A:1209:VAL:HG11	1:A:1322:LEU:HD11	2.02	0.41
1:A:1863:ARG:O	1:A:1866:SER:OG	2.31	0.41
1:A:2149:LEU:CG	1:A:2163:LEU:HD11	2.51	0.41
1:A:3221:LYS:HG3	1:A:3222:GLU:HG3	2.03	0.41
1:A:4247:ILE:HG23	1:A:4323:LEU:HD22	2.03	0.41
1:A:4252:SER:HB2	1:A:4368:CYS:SG	2.60	0.41
1:B:182:ASP:OD1	1:B:182:ASP:O	2.39	0.41
1:B:1573:THR:HG22	1:B:1791:VAL:HG23	2.03	0.41
1:B:1852:VAL:O	1:B:1852:VAL:HG12	2.21	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2336:VAL:HG21	1:B:2374:ILE:HG21	2.03	0.41
1:B:2399:TRP:HZ3	1:B:2408:LEU:HD11	1.86	0.41
1:B:4495:LEU:C	1:B:4495:LEU:HD23	2.41	0.41
1:A:412:TRP:NE1	1:A:420:VAL:HG22	2.36	0.41
1:A:1124:LEU:HA	1:A:1221:LEU:O	2.21	0.41
1:A:1820:TRP:HB3	1:A:1828:GLY:HA2	2.02	0.41
1:A:4437:LEU:O	1:A:4437:LEU:HD23	2.21	0.41
1:B:291:GLU:O	1:B:294:THR:HG23	2.21	0.41
1:B:2852:SER:O	1:B:2855:THR:HG22	2.20	0.41
1:B:3566:ILE:HD12	1:B:3566:ILE:N	2.36	0.41
1:A:77:PRO:HD2	1:A:119:TYR:CE1	2.56	0.40
1:A:4008:LEU:HD23	1:A:4008:LEU:N	2.36	0.40
1:B:128:PHE:CZ	1:B:146:LEU:HD22	2.56	0.40
1:B:1108:PHE:HB2	1:B:1296:LEU:CD2	2.52	0.40
1:B:1174:LEU:HB3	1:B:1181:ILE:HD11	2.02	0.40
1:B:1330:LYS:O	1:B:1334:THR:HG22	2.21	0.40
1:B:4084:ALA:HB2	1:B:4165:LEU:HB3	2.03	0.40
1:B:4378:ARG:HG2	1:B:4436:LEU:HD22	2.03	0.40
1:A:1873:ILE:N	1:A:1873:ILE:HD12	2.37	0.40
1:A:3269:LEU:HD23	1:A:3273:GLU:HG3	2.02	0.40
1:B:246:VAL:HG22	1:B:247:ALA:N	2.36	0.40
1:B:739:CYS:SG	1:B:741:ASP:N	2.95	0.40
1:B:3374:HIS:HB3	1:B:3376:PRO:HD2	2.03	0.40
1:B:4161:PHE:HB2	1:B:4213:PRO:CG	2.51	0.40
2:F:16:GLU:OE1	2:F:20:ARG:NE	2.40	0.40
2:F:38:THR:HG23	2:F:139:VAL:HG22	2.03	0.40
2:E:117:TYR:C	2:E:117:TYR:CD1	2.94	0.40
1:A:1808:THR:N	1:A:1841:SER:OG	2.53	0.40
1:A:2336:VAL:HG21	1:A:2374:ILE:HG22	2.03	0.40
1:A:2384:LEU:HD22	1:A:2663:LEU:HD21	2.03	0.40
1:B:137:ARG:CZ	1:B:374:THR:HA	2.50	0.40
1:B:508:THR:O	1:B:508:THR:HG22	2.21	0.40
1:B:1499:TYR:CD1	1:B:2072:PRO:HD3	2.56	0.40
1:B:1927:ARG:HB2	1:B:1980:LEU:HD12	2.03	0.40
1:B:2655:VAL:HG11	1:B:2660:LEU:HD22	2.04	0.40
1:B:2766:LEU:CD1	1:B:2839:LEU:HD22	2.49	0.40
1:B:3359:LEU:HD21	1:B:3385:ILE:CG2	2.52	0.40
2:E:58:LEU:HD21	2:E:80:VAL:HG12	2.02	0.40
1:A:1094:VAL:HA	1:A:1219:SER:HA	2.02	0.40
1:A:3287:ASP:HB2	1:B:3262:LEU:HA	2.03	0.40
1:A:4320:VAL:O	1:A:4324:LEU:HG	2.21	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:160:VAL:HA	1:B:224:PRO:HA	2.02	0.40
1:B:508:THR:HG21	1:B:733:ILE:O	2.21	0.40
1:B:943:VAL:HG12	1:B:944:ILE:N	2.37	0.40
1:B:1453:VAL:HG13	1:B:2586:MET:HB3	2.03	0.40
1:B:2863:VAL:HG11	1:B:2926:VAL:CG2	2.50	0.40
1:B:4380:ASP:OD1	1:B:4380:ASP:N	2.44	0.40
1:A:1345:THR:HG22	1:A:1346:GLU:N	2.36	0.40
1:A:1824:GLU:O	1:A:1828:GLY:HA3	2.22	0.40
1:A:3989:LEU:O	1:A:3993:ARG:HG2	2.21	0.40
1:B:378:GLN:OE1	1:B:420:VAL:HG23	2.22	0.40
1:B:2766:LEU:O	1:B:2831:GLY:HA3	2.22	0.40
2:E:41:LEU:HA	2:E:98:LEU:HD13	2.04	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	2670/4888 (55%)	2620 (98%)	50 (2%)	0	100	100
1	B	2670/4888 (55%)	2624 (98%)	46 (2%)	0	100	100
2	E	171/194 (88%)	167 (98%)	4 (2%)	0	100	100
2	F	171/194 (88%)	167 (98%)	4 (2%)	0	100	100
All	All	5682/10164 (56%)	5578 (98%)	104 (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	2442/4242 (58%)	2387 (98%)	55 (2%)	50	78
1	B	2442/4242 (58%)	2391 (98%)	51 (2%)	53	80
2	E	148/167 (89%)	140 (95%)	8 (5%)	22	55
2	F	148/167 (89%)	142 (96%)	6 (4%)	30	65
All	All	5180/8818 (59%)	5060 (98%)	120 (2%)	53	78

All (120) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	121	SER
1	A	175	SER
1	A	180	LYS
1	A	290	ARG
1	A	386	ASP
1	A	418	MET
1	A	425	GLU
1	A	625	ARG
1	A	739	CYS
1	A	848	HIS
1	A	1205	SER
1	A	1305	ARG
1	A	1308	LYS
1	A	1315	ARG
1	A	1326	GLU
1	A	1488	MET
1	A	1511	GLU
1	A	1578	ARG
1	A	1771	GLN
1	A	1788	ARG
1	A	1794	ASP
1	A	1853	CYS
1	A	1911	ASP
1	A	1934	ARG
1	A	1954	GLN
1	A	1958	ARG
1	A	2073	LYS
1	A	2084	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	2137	SER
1	A	2577	GLN
1	A	2585	MET
1	A	2592	ASP
1	A	2689	ASN
1	A	2690	ARG
1	A	2795	ARG
1	A	2797	GLN
1	A	3093	ASP
1	A	3096	LYS
1	A	3173	SER
1	A	3232	LEU
1	A	3276	SER
1	A	3343	ASP
1	A	3355	THR
1	A	3375	SER
1	A	3392[A]	ILE
1	A	3392[B]	ILE
1	A	3462	ARG
1	A	3564	MET
1	A	3624	LYS
1	A	3641	SER
1	A	3676	MET
1	A	3810	ARG
1	A	4229	ASP
1	A	4239	LEU
1	A	4445	ASP
1	B	121	SER
1	B	175	SER
1	B	180	LYS
1	B	290	ARG
1	B	325	ARG
1	B	327	MET
1	B	386	ASP
1	B	425	GLU
1	B	625	ARG
1	B	739	CYS
1	B	848	HIS
1	B	1205	SER
1	B	1305	ARG
1	B	1308	LYS
1	B	1315	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	1326	GLU
1	B	1435	ASN
1	B	1578	ARG
1	B	1771	GLN
1	B	1788	ARG
1	B	1958	ARG
1	B	1996	VAL
1	B	2073	LYS
1	B	2089	GLU
1	B	2137	SER
1	B	2577	GLN
1	B	2585	MET
1	B	2592	ASP
1	B	2795	ARG
1	B	2797	GLN
1	B	3093	ASP
1	B	3276	SER
1	B	3343	ASP
1	B	3355	THR
1	B	3375	SER
1	B	3392[A]	ILE
1	B	3392[B]	ILE
1	B	3441	THR
1	B	3462	ARG
1	B	3483	GLU
1	B	3564	MET
1	B	3624	LYS
1	B	3641	SER
1	B	3676	MET
1	B	3681	ASP
1	B	3810	ARG
1	B	3981	MET
1	B	4229	ASP
1	B	4239	LEU
1	B	4381	SER
1	B	4445	ASP
2	F	95	TYR
2	F	111	MET
2	F	129	ARG
2	F	133	GLN
2	F	147	ARG
2	F	172	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	E	16	GLU
2	E	25	LEU
2	E	95	TYR
2	E	98	LEU
2	E	118	GLN
2	E	143	HIS
2	E	146	SER
2	E	172	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (27) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	348	HIS
1	A	351	HIS
1	A	902	HIS
1	A	1323	GLN
1	A	1456	ASN
1	A	1845	HIS
1	A	1895	HIS
1	A	2670	ASN
1	A	2806	GLN
1	A	2931	GLN
1	A	3283	HIS
1	A	3322	GLN
1	A	3495	HIS
1	A	3761	ASN
1	B	244	GLN
1	B	348	HIS
1	B	351	HIS
1	B	1067	HIS
1	B	1845	HIS
1	B	2077	HIS
1	B	2084	GLN
1	B	2578	GLN
1	B	2806	GLN
1	B	2869	HIS
1	B	3283	HIS
1	B	3495	HIS
1	B	4319	HIS

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

There are no monosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

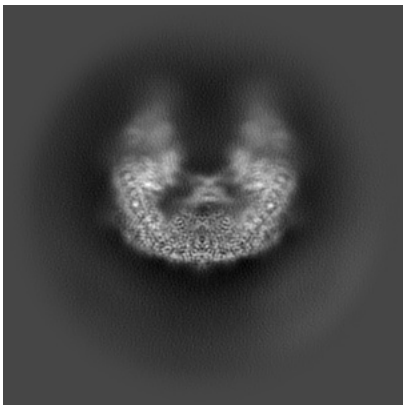
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-27837. These allow visual inspection of the internal detail of the map and identification of artifacts.

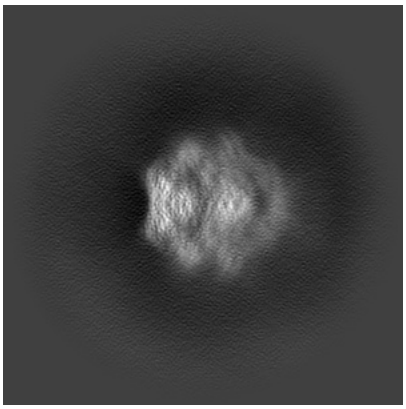
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

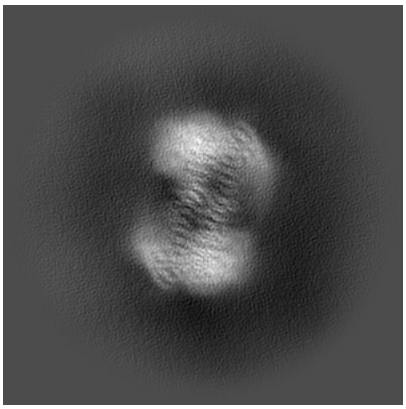
6.1.1 Primary map



X

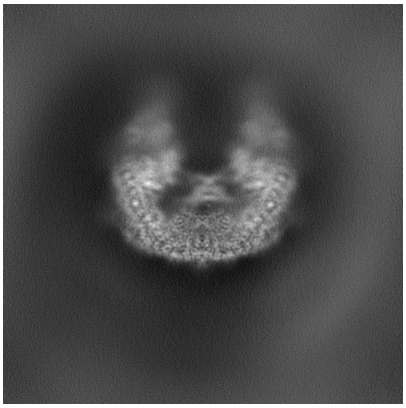


Y

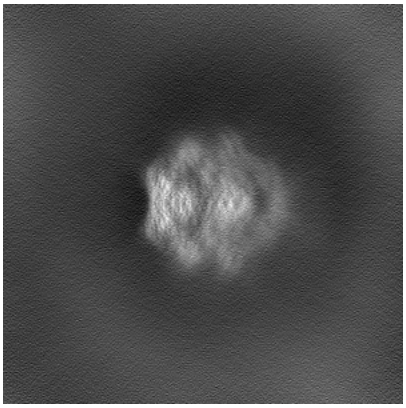


Z

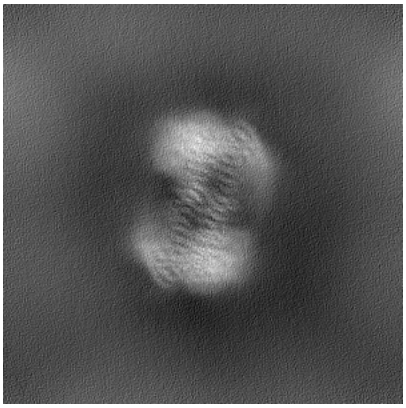
6.1.2 Raw map



X



Y

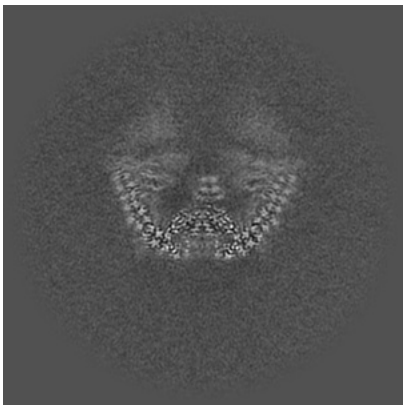


Z

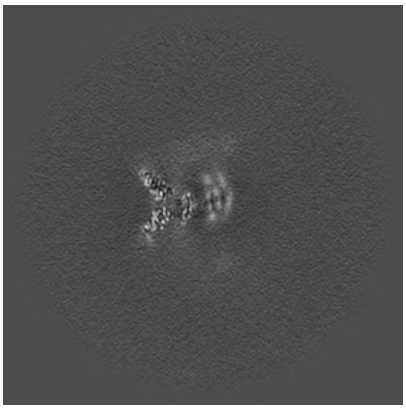
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

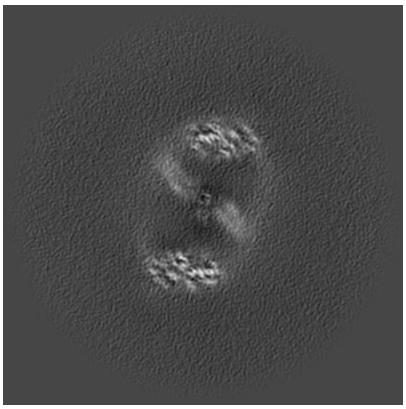
6.2.1 Primary map



X Index: 176

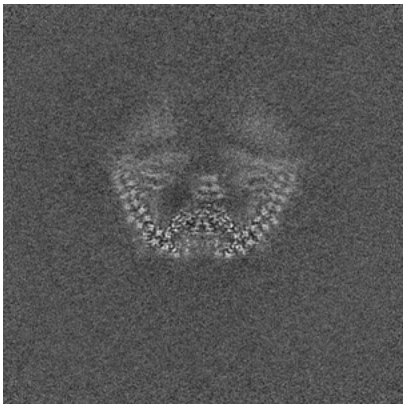


Y Index: 176

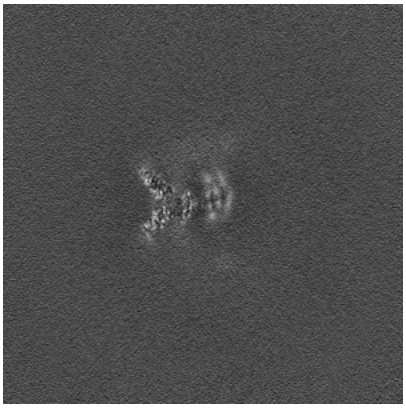


Z Index: 176

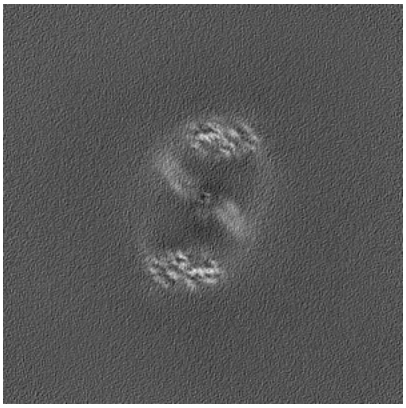
6.2.2 Raw map



X Index: 176



Y Index: 176

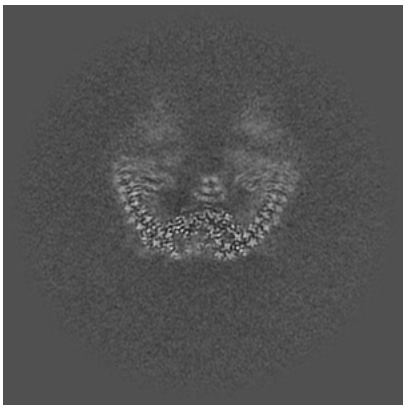


Z Index: 176

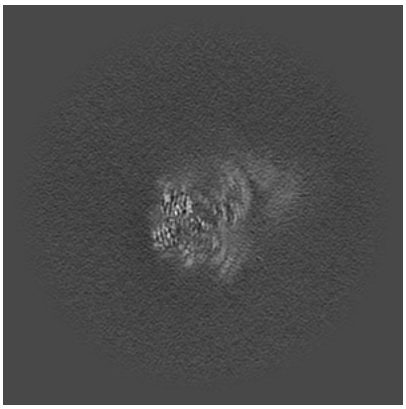
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

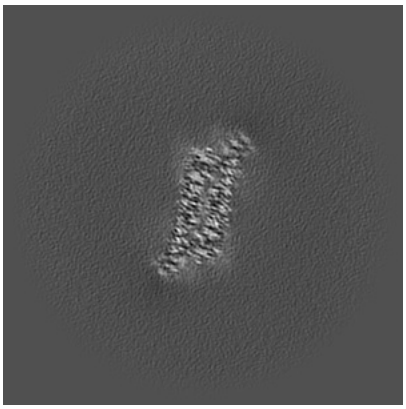
6.3.1 Primary map



X Index: 174

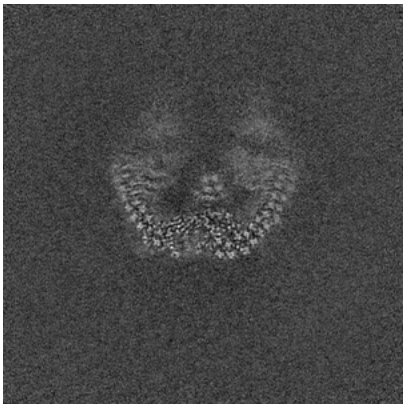


Y Index: 128

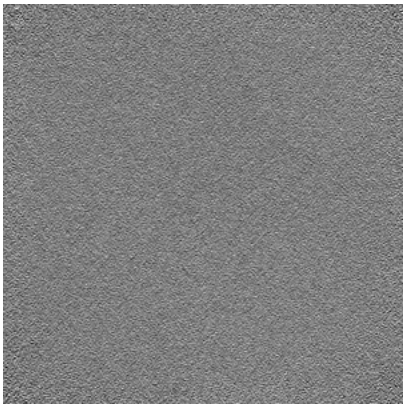


Z Index: 141

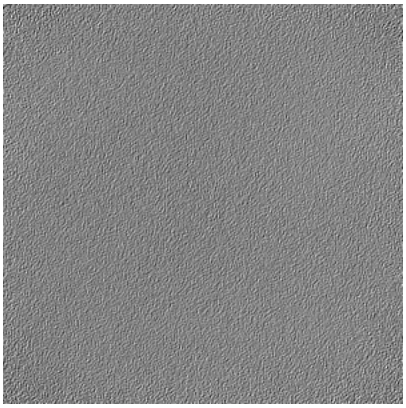
6.3.2 Raw map



X Index: 173



Y Index: 0

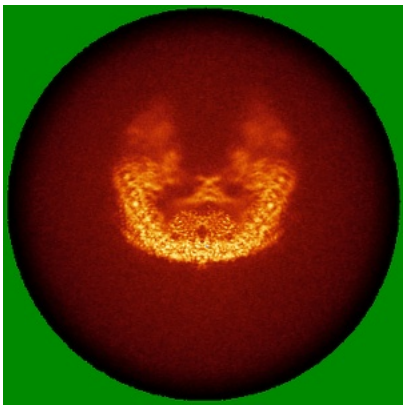


Z Index: 0

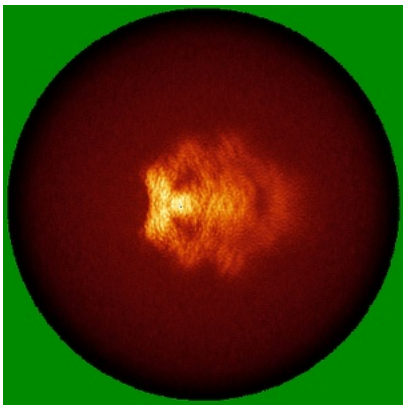
The images above show the largest variance slices of the map in three orthogonal directions.

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

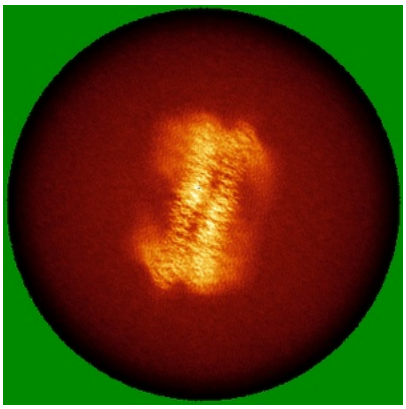
6.4.1 Primary map



X

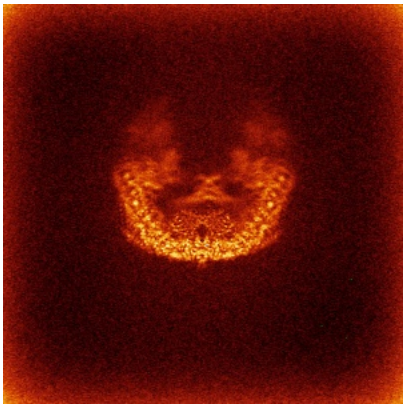


Y

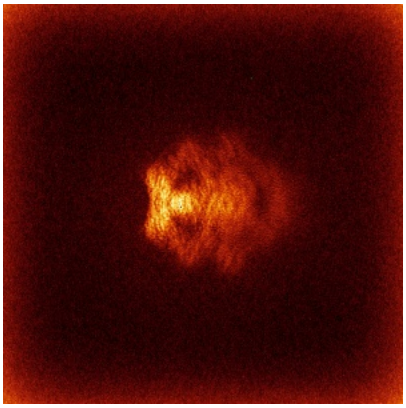


Z

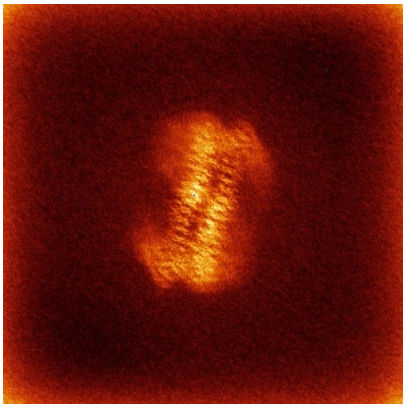
6.4.2 Raw map



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 0.284. 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.

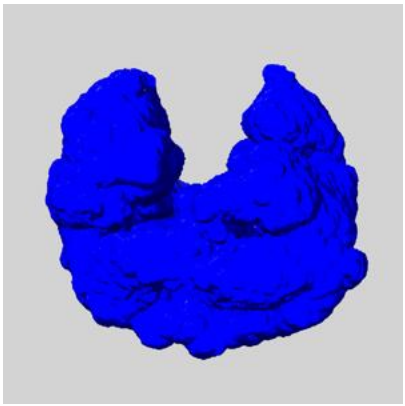
6.6 Mask visualisation

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

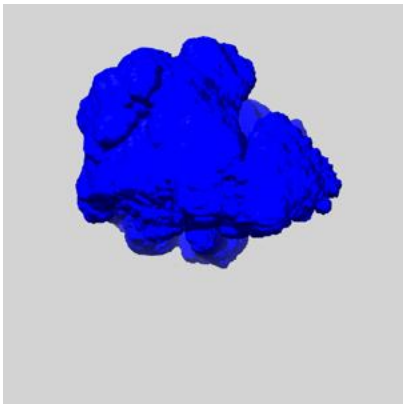
A mask typically either:

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

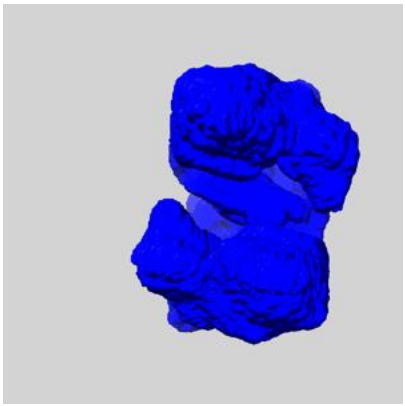
6.6.1 emd_27837_msk_1.map



X



Y

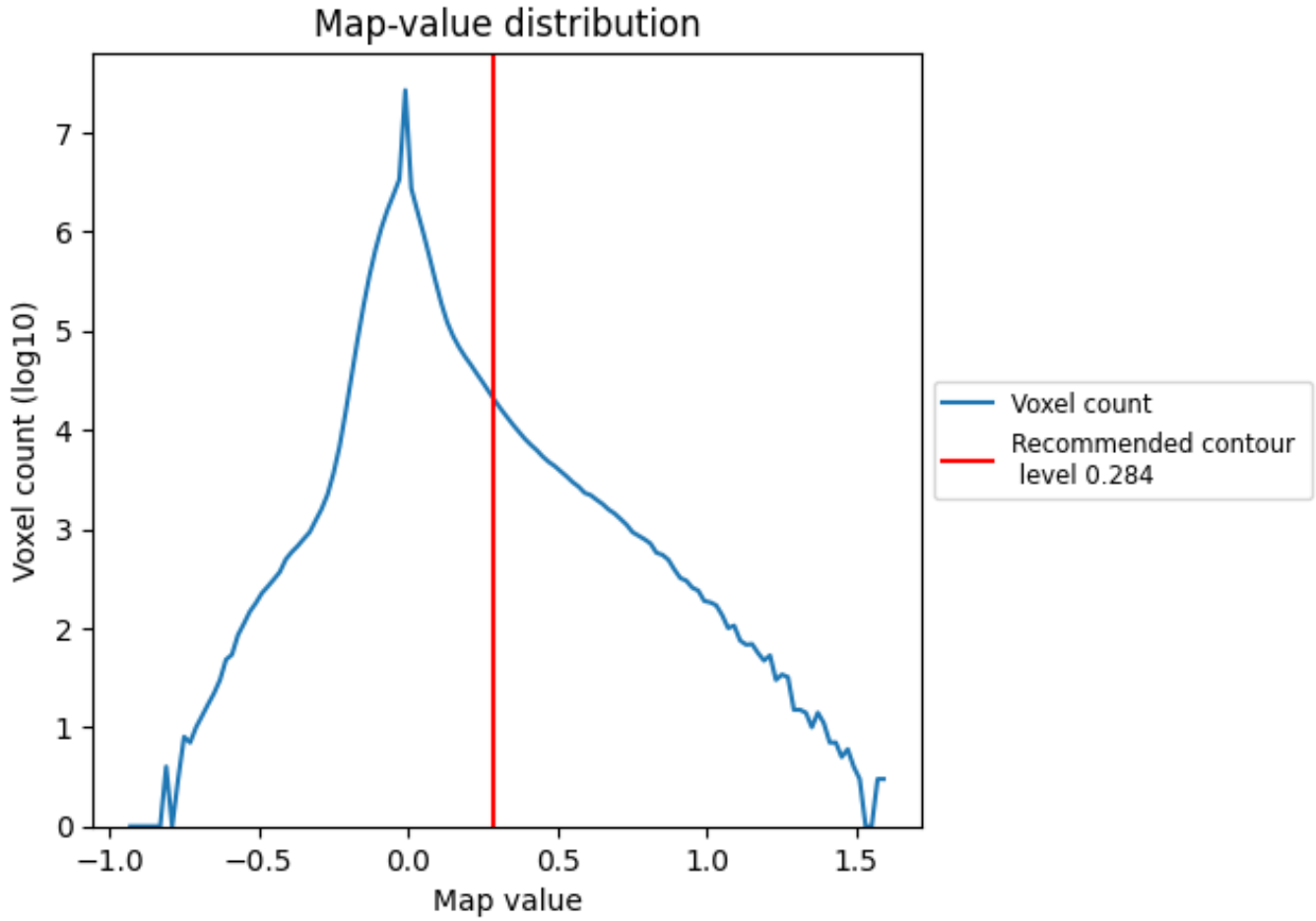


Z

7 Map analysis

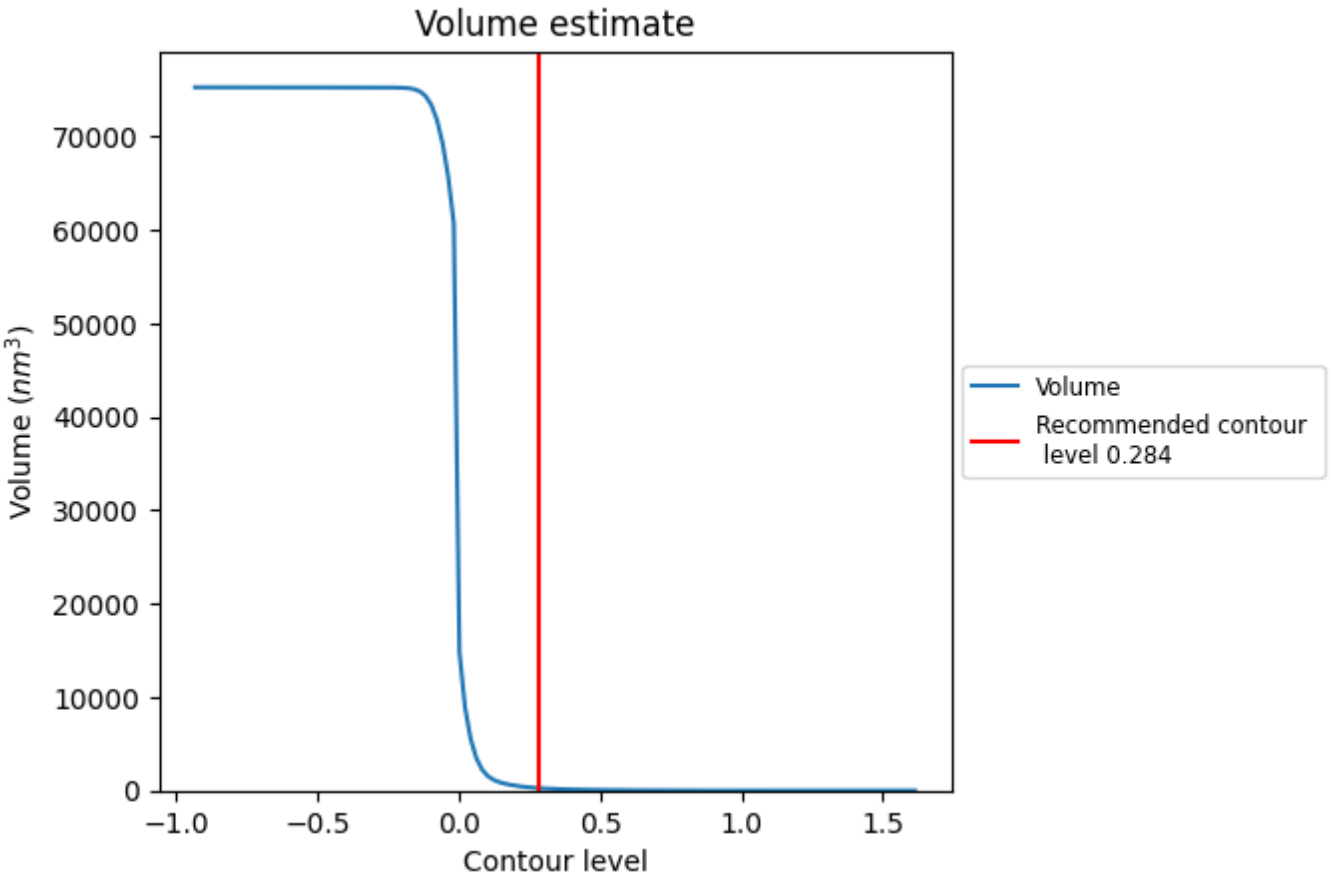
This section contains the results of statistical analysis of the map.

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.

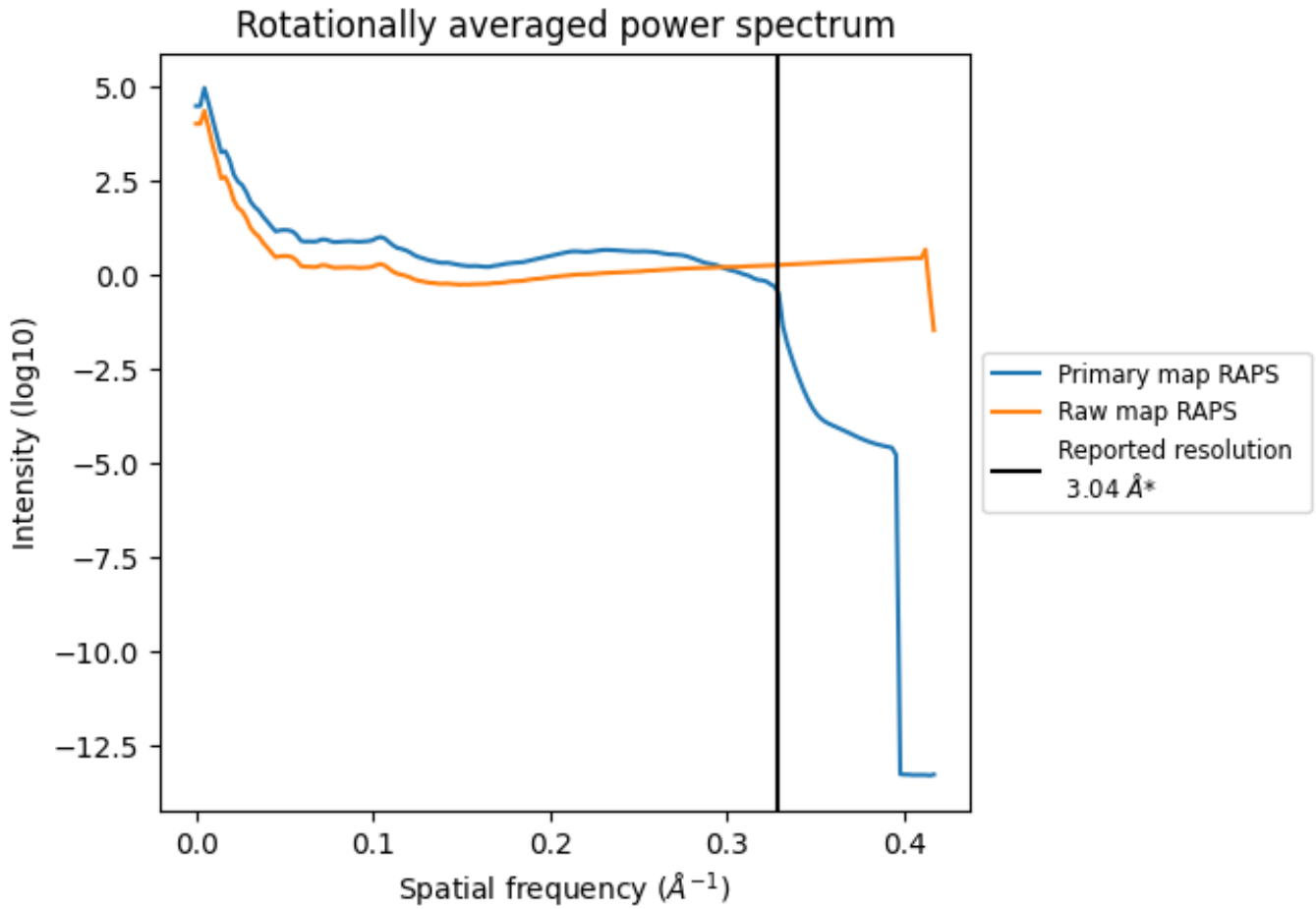
7.2 Volume estimate



The volume at the recommended contour level is 257 nm^3; this corresponds to an approximate mass of 232 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)

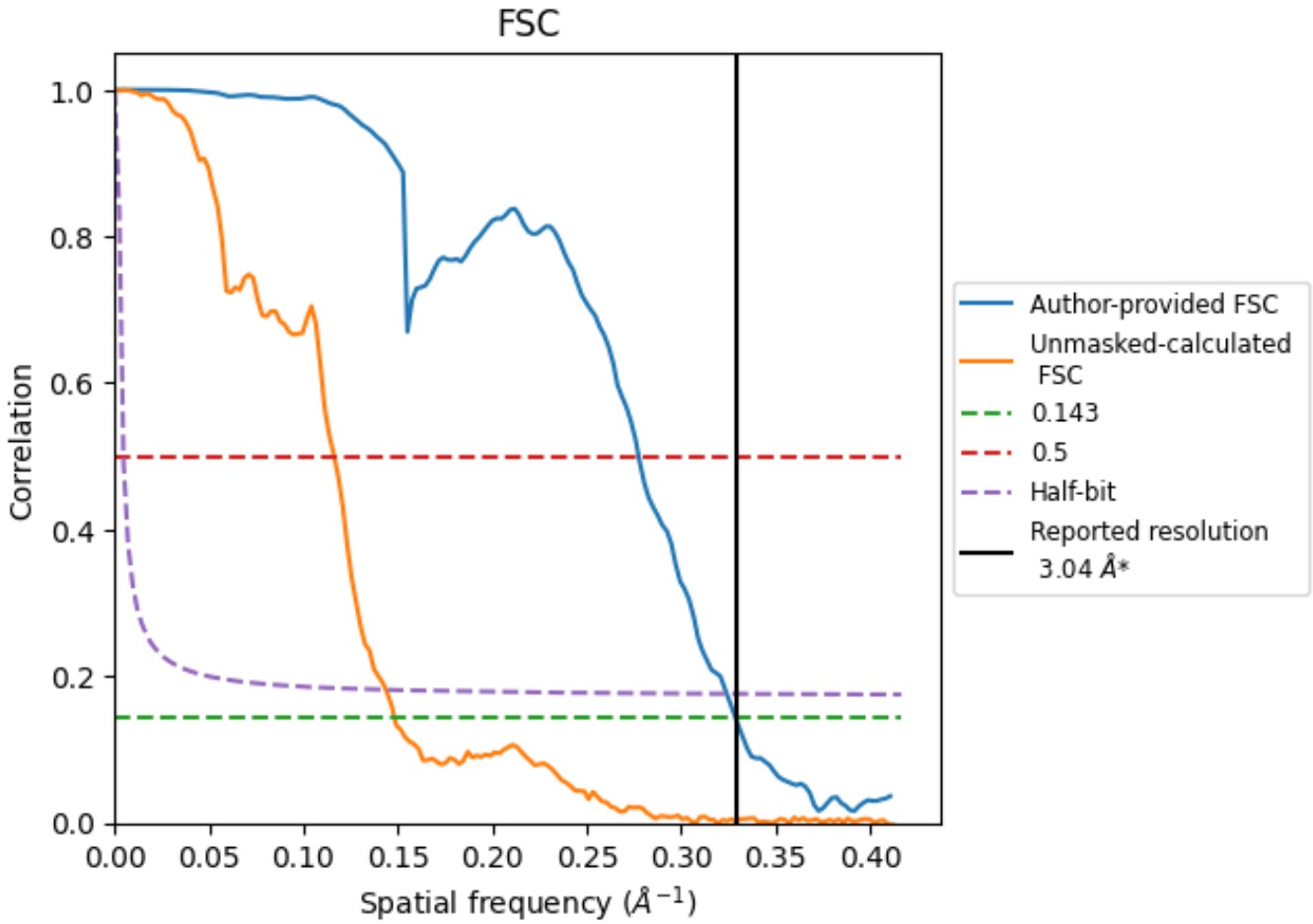


*Reported resolution corresponds to spatial frequency of 0.329 $Å^{-1}$

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 0.329 Å^{-1}

8.2 Resolution estimates (i)

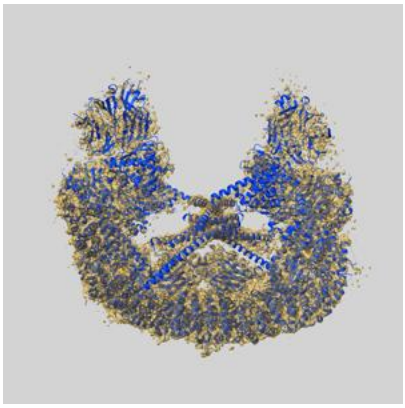
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.04	-	-
Author-provided FSC curve	3.04	3.60	3.08
Unmasked-calculated*	6.74	8.61	6.96

*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 6.74 differs from the reported value 3.04 by more than 10 %

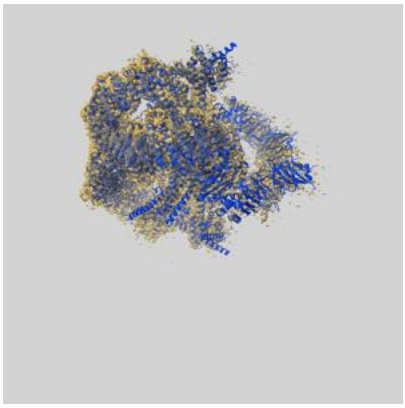
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-27837 and PDB model 8E2I. Per-residue inclusion information can be found in section 3 on page 6.

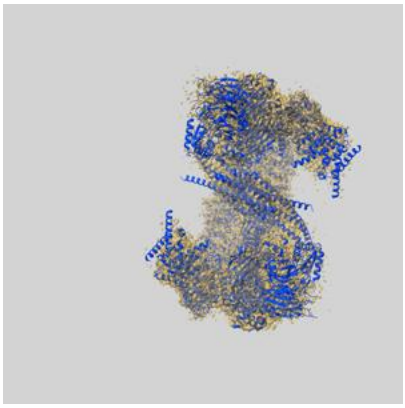
9.1 Map-model overlay



X



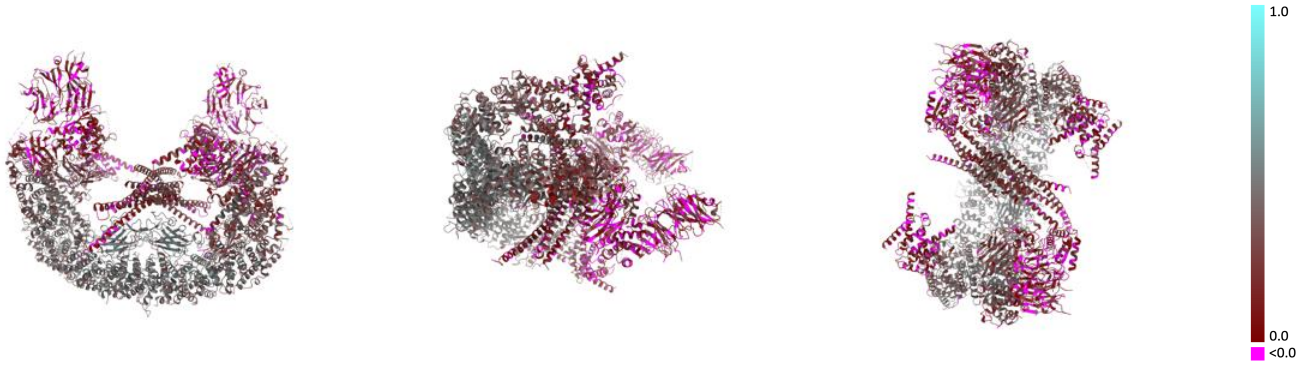
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.284 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.

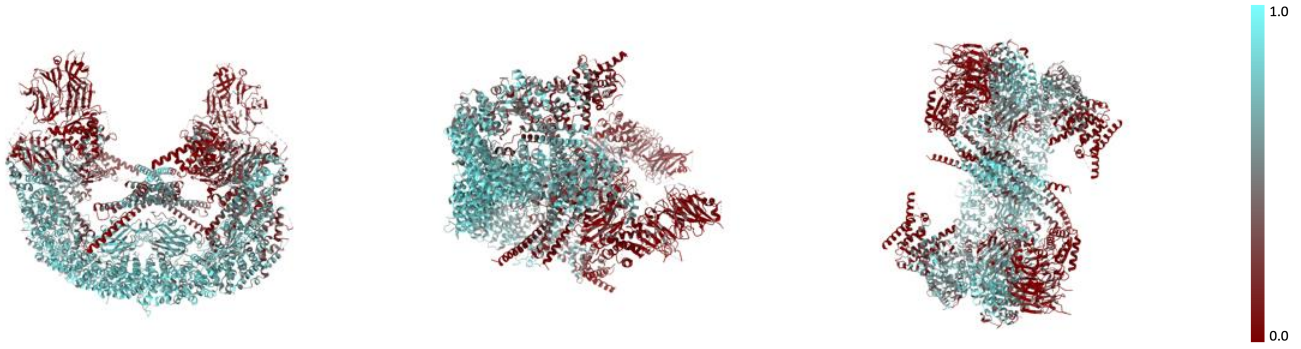
9.2 Q-score mapped to coordinate model



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.

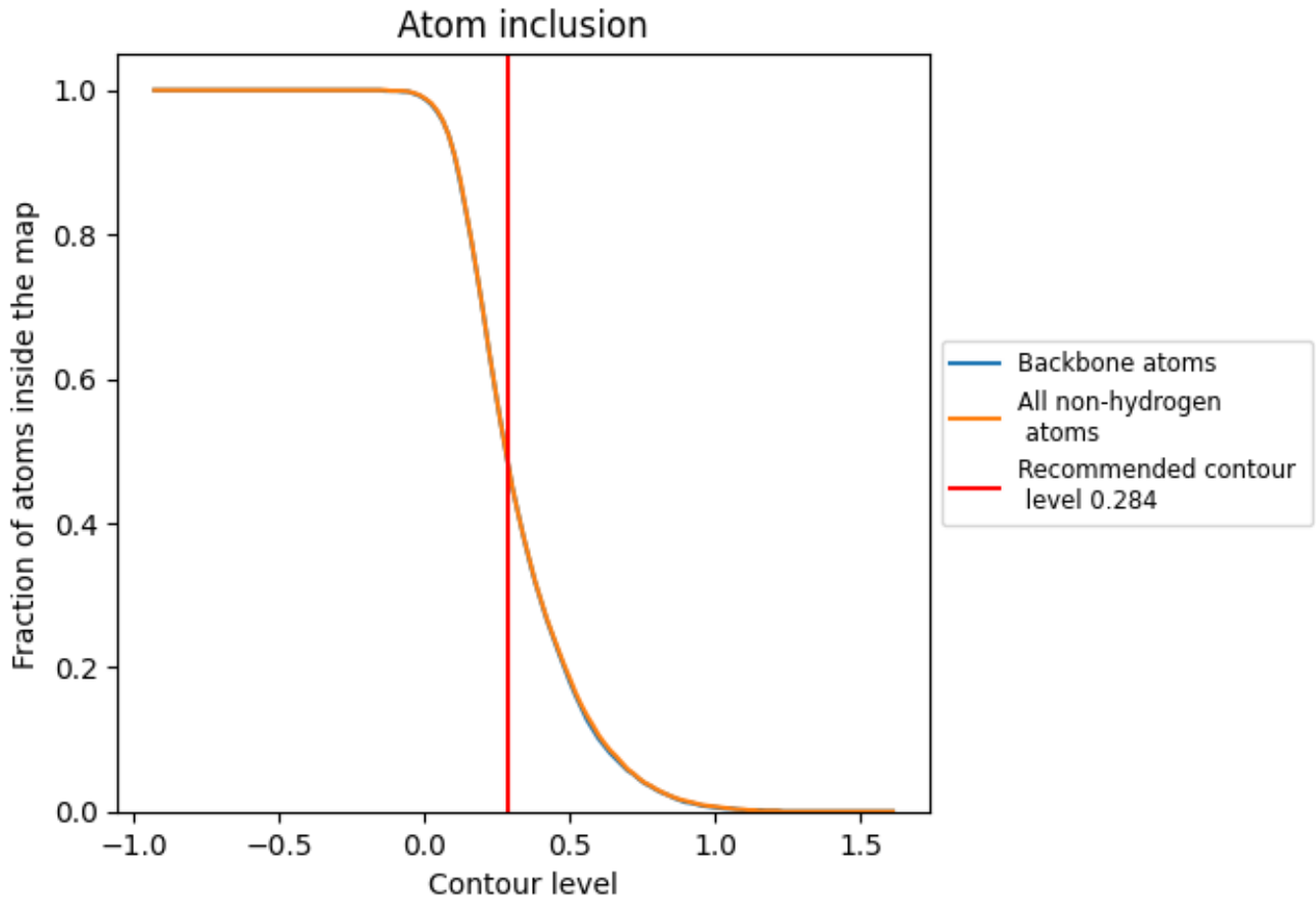
9.3 Atom inclusion mapped to coordinate model



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 (0.284).

9.4 Atom inclusion (i)



At the recommended contour level, 49% of all backbone atoms, 49% 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 (0.284) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.4910	0.2900
A	0.5010	0.3040
B	0.5080	0.2940
C	0.5510	0.2120
D	0.5230	0.2010
E	0.4290	0.1880
F	0.3970	0.1590