Full wwPDB EM Validation Report

Jul 13, 2025 – 06:51 PM EDT

PDB ID	:	9PC6 / pdb_00009pc6
EMDB ID	:	EMD-71497
Title	:	Antibody (1B2) Bound Crosslinked Rifamycin Synthetase Module 1 with a C-terminal Type II Thioesterase
Authors	:	Cogan, D.P.; Liu, C.; West, R.C.; Chen, M.
Deposited on	:	2025-06-27
Resolution	:	3.96 Å(reported)
Based on initial model	:	.

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 (i) 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 (i)) were used in the production of this report:

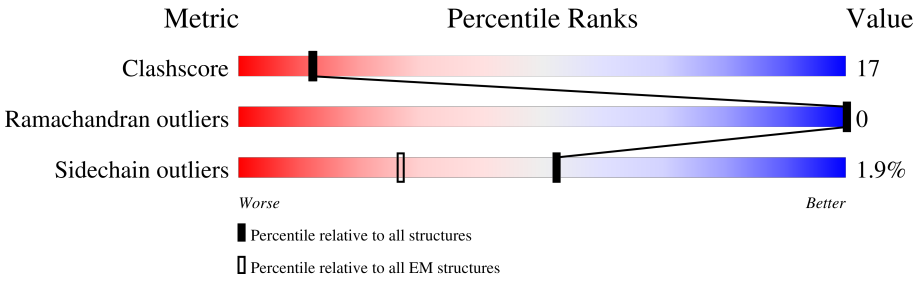
EMDB validation analysis	:	0.0.1.dev118
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0rc1
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.44

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 3.96 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	1869	26% 53% 31% • 16%
1	B	1869	25% 55% 28% • 16%
2	J	249	16% 55% 28% 18%
2	K	249	12% 51% 31% 18%
3	I	236	11% 57% 31% 11%
3	L	236	10% 56% 31% • 11%

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 29408 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 6-deoxyerythronolide-B synthase,RifR.

Mol	Chain	Residues	Atoms						AltConf	Trace
1	A	1576	Total	C	N	O	P	S	0	0
			11580	7228	2093	2231	1	27		
1	B	1573	Total	C	N	O	P	S	0	0
			11558	7216	2090	2224	1	27		

There are 122 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1	MET	-	expression tag	UNP O54666
A	2	ALA	-	expression tag	UNP O54666
A	3	SER	-	expression tag	UNP O54666
A	4	THR	-	expression tag	UNP O54666
A	5	ASP	-	expression tag	UNP O54666
A	6	SER	-	expression tag	UNP O54666
A	7	GLU	-	expression tag	UNP O54666
A	8	LYS	-	expression tag	UNP O54666
A	9	VAL	-	expression tag	UNP O54666
A	10	ALA	-	expression tag	UNP O54666
A	11	GLU	-	expression tag	UNP O54666
A	12	TYR	-	expression tag	UNP O54666
A	13	LEU	-	expression tag	UNP O54666
A	14	ARG	-	expression tag	UNP O54666
A	15	ARG	-	expression tag	UNP O54666
A	16	ALA	-	expression tag	UNP O54666
A	17	THR	-	expression tag	UNP O54666
A	18	LEU	-	expression tag	UNP O54666
A	19	ASP	-	expression tag	UNP O54666
A	20	LEU	-	expression tag	UNP O54666
A	21	ARG	-	expression tag	UNP O54666
A	22	ALA	-	expression tag	UNP O54666
A	23	ALA	-	expression tag	UNP O54666
A	24	ARG	-	expression tag	UNP O54666
A	25	GLN	-	expression tag	UNP O54666
A	26	ARG	-	expression tag	UNP O54666

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Chain	Residue	Modelled	Actual	Comment	Reference
A	27	ILE	-	expression tag	UNP O54666
A	28	ARG	-	expression tag	UNP O54666
A	29	GLU	-	expression tag	UNP O54666
A	30	LEU	-	expression tag	UNP O54666
A	31	GLU	-	expression tag	UNP O54666
A	1582	GLY	-	linker	UNP O54666
A	1583	GLY	-	linker	UNP O54666
A	1584	GLY	-	linker	UNP O54666
A	1585	GLY	-	linker	UNP O54666
A	1586	SER	-	linker	UNP O54666
A	1587	GLY	-	linker	UNP O54666
A	1588	GLY	-	linker	UNP O54666
A	1589	GLY	-	linker	UNP O54666
A	1590	GLY	-	linker	UNP O54666
A	1591	SER	-	linker	UNP O54666
A	1850	GLY	-	expression tag	UNP Q7BUF9
A	1851	ASN	-	expression tag	UNP Q7BUF9
A	1852	SER	-	expression tag	UNP Q7BUF9
A	1853	SER	-	expression tag	UNP Q7BUF9
A	1854	SER	-	expression tag	UNP Q7BUF9
A	1855	VAL	-	expression tag	UNP Q7BUF9
A	1856	ASP	-	expression tag	UNP Q7BUF9
A	1857	LYS	-	expression tag	UNP Q7BUF9
A	1858	LEU	-	expression tag	UNP Q7BUF9
A	1859	ALA	-	expression tag	UNP Q7BUF9
A	1860	ALA	-	expression tag	UNP Q7BUF9
A	1861	ALA	-	expression tag	UNP Q7BUF9
A	1862	LEU	-	expression tag	UNP Q7BUF9
A	1863	GLU	-	expression tag	UNP Q7BUF9
A	1864	HIS	-	expression tag	UNP Q7BUF9
A	1865	HIS	-	expression tag	UNP Q7BUF9
A	1866	HIS	-	expression tag	UNP Q7BUF9
A	1867	HIS	-	expression tag	UNP Q7BUF9
A	1868	HIS	-	expression tag	UNP Q7BUF9
A	1869	HIS	-	expression tag	UNP Q7BUF9
B	1	MET	-	expression tag	UNP O54666
B	2	ALA	-	expression tag	UNP O54666
B	3	SER	-	expression tag	UNP O54666
B	4	THR	-	expression tag	UNP O54666
B	5	ASP	-	expression tag	UNP O54666
B	6	SER	-	expression tag	UNP O54666
B	7	GLU	-	expression tag	UNP O54666

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Chain	Residue	Modelled	Actual	Comment	Reference
B	8	LYS	-	expression tag	UNP O54666
B	9	VAL	-	expression tag	UNP O54666
B	10	ALA	-	expression tag	UNP O54666
B	11	GLU	-	expression tag	UNP O54666
B	12	TYR	-	expression tag	UNP O54666
B	13	LEU	-	expression tag	UNP O54666
B	14	ARG	-	expression tag	UNP O54666
B	15	ARG	-	expression tag	UNP O54666
B	16	ALA	-	expression tag	UNP O54666
B	17	THR	-	expression tag	UNP O54666
B	18	LEU	-	expression tag	UNP O54666
B	19	ASP	-	expression tag	UNP O54666
B	20	LEU	-	expression tag	UNP O54666
B	21	ARG	-	expression tag	UNP O54666
B	22	ALA	-	expression tag	UNP O54666
B	23	ALA	-	expression tag	UNP O54666
B	24	ARG	-	expression tag	UNP O54666
B	25	GLN	-	expression tag	UNP O54666
B	26	ARG	-	expression tag	UNP O54666
B	27	ILE	-	expression tag	UNP O54666
B	28	ARG	-	expression tag	UNP O54666
B	29	GLU	-	expression tag	UNP O54666
B	30	LEU	-	expression tag	UNP O54666
B	31	GLU	-	expression tag	UNP O54666
B	1582	GLY	-	linker	UNP O54666
B	1583	GLY	-	linker	UNP O54666
B	1584	GLY	-	linker	UNP O54666
B	1585	GLY	-	linker	UNP O54666
B	1586	SER	-	linker	UNP O54666
B	1587	GLY	-	linker	UNP O54666
B	1588	GLY	-	linker	UNP O54666
B	1589	GLY	-	linker	UNP O54666
B	1590	GLY	-	linker	UNP O54666
B	1591	SER	-	linker	UNP O54666
B	1850	GLY	-	expression tag	UNP Q7BUF9
B	1851	ASN	-	expression tag	UNP Q7BUF9
B	1852	SER	-	expression tag	UNP Q7BUF9
B	1853	SER	-	expression tag	UNP Q7BUF9
B	1854	SER	-	expression tag	UNP Q7BUF9
B	1855	VAL	-	expression tag	UNP Q7BUF9
B	1856	ASP	-	expression tag	UNP Q7BUF9
B	1857	LYS	-	expression tag	UNP Q7BUF9

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Chain	Residue	Modelled	Actual	Comment	Reference
B	1858	LEU	-	expression tag	UNP Q7BUF9
B	1859	ALA	-	expression tag	UNP Q7BUF9
B	1860	ALA	-	expression tag	UNP Q7BUF9
B	1861	ALA	-	expression tag	UNP Q7BUF9
B	1862	LEU	-	expression tag	UNP Q7BUF9
B	1863	GLU	-	expression tag	UNP Q7BUF9
B	1864	HIS	-	expression tag	UNP Q7BUF9
B	1865	HIS	-	expression tag	UNP Q7BUF9
B	1866	HIS	-	expression tag	UNP Q7BUF9
B	1867	HIS	-	expression tag	UNP Q7BUF9
B	1868	HIS	-	expression tag	UNP Q7BUF9
B	1869	HIS	-	expression tag	UNP Q7BUF9

- Molecule 2 is a protein called Antibody Fragment 1B2 Heavy Chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	J	205	Total	C	N	O	S	0	0
			1539	978	257	298	6		
2	K	205	Total	C	N	O	S	0	0
			1539	978	257	298	6		

- Molecule 3 is a protein called Antibody Fragment 1B2 Light Chain.

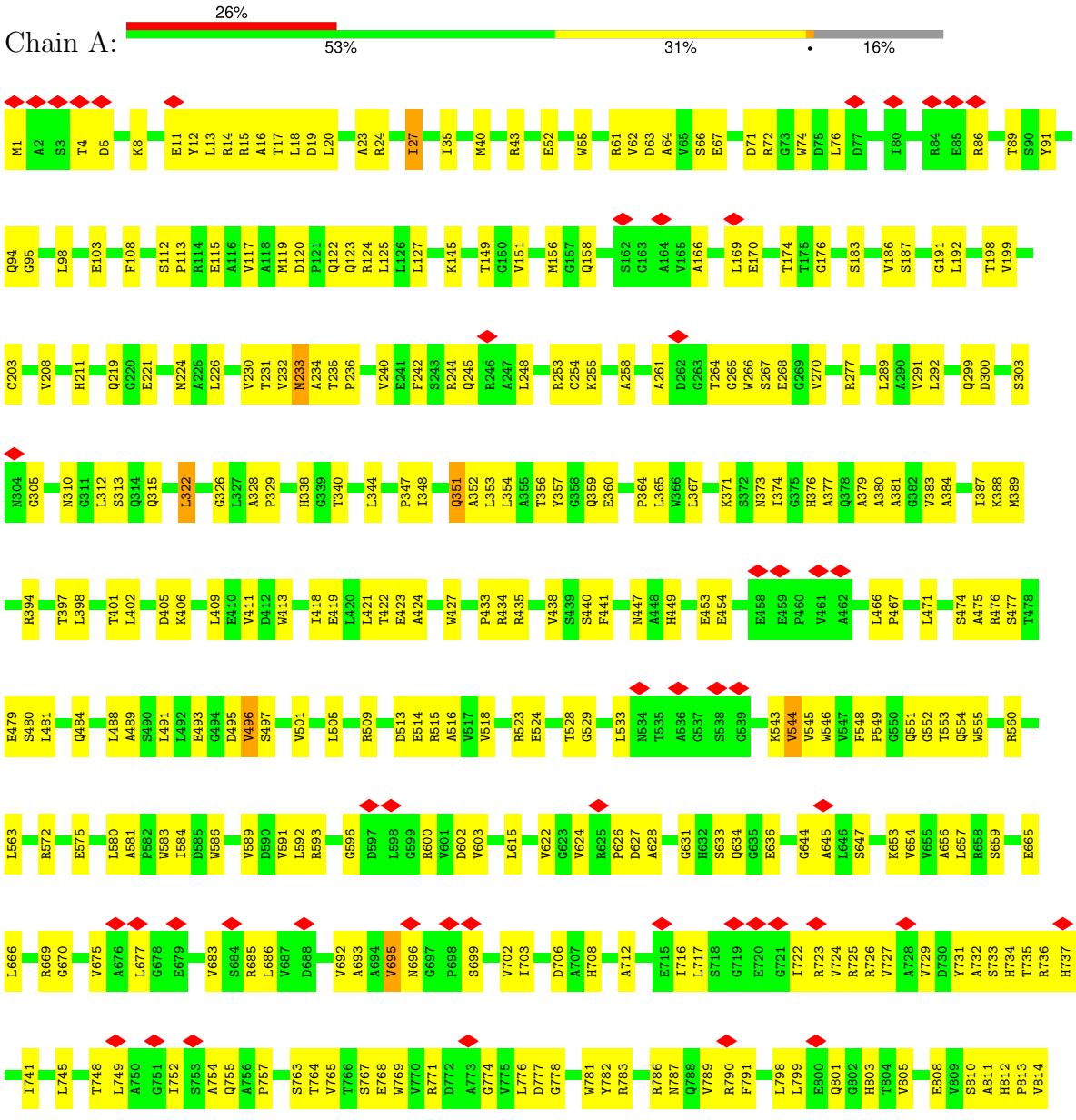
Mol	Chain	Residues	Atoms					AltConf	Trace
3	I	209	Total	C	N	O	S	0	0
			1596	1001	269	320	6		
3	L	209	Total	C	N	O	S	0	0
			1596	1001	269	320	6		

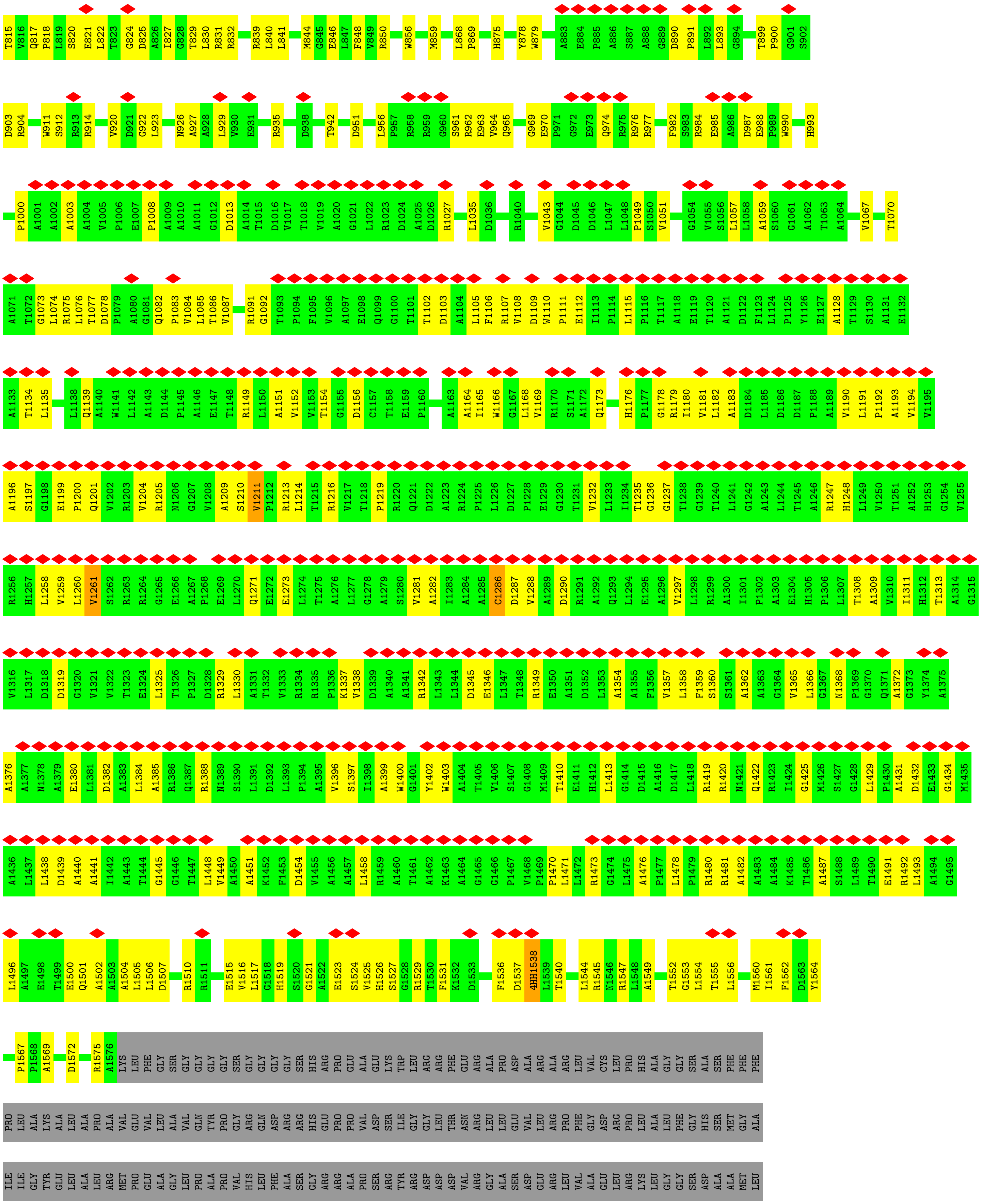
3 Residue-property plots (i)

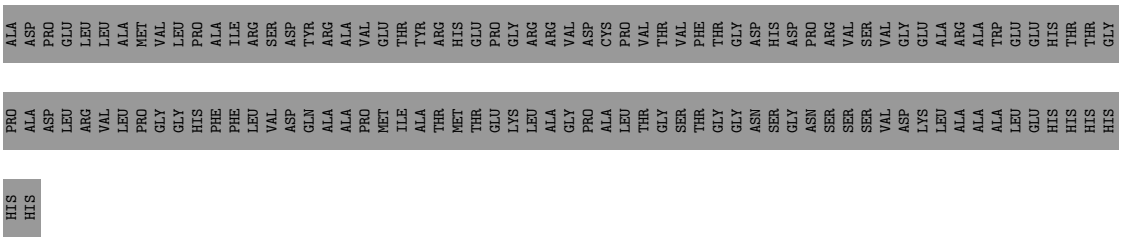
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: 6-deoxyerythronolide-B synthase,RifR

Chain A:

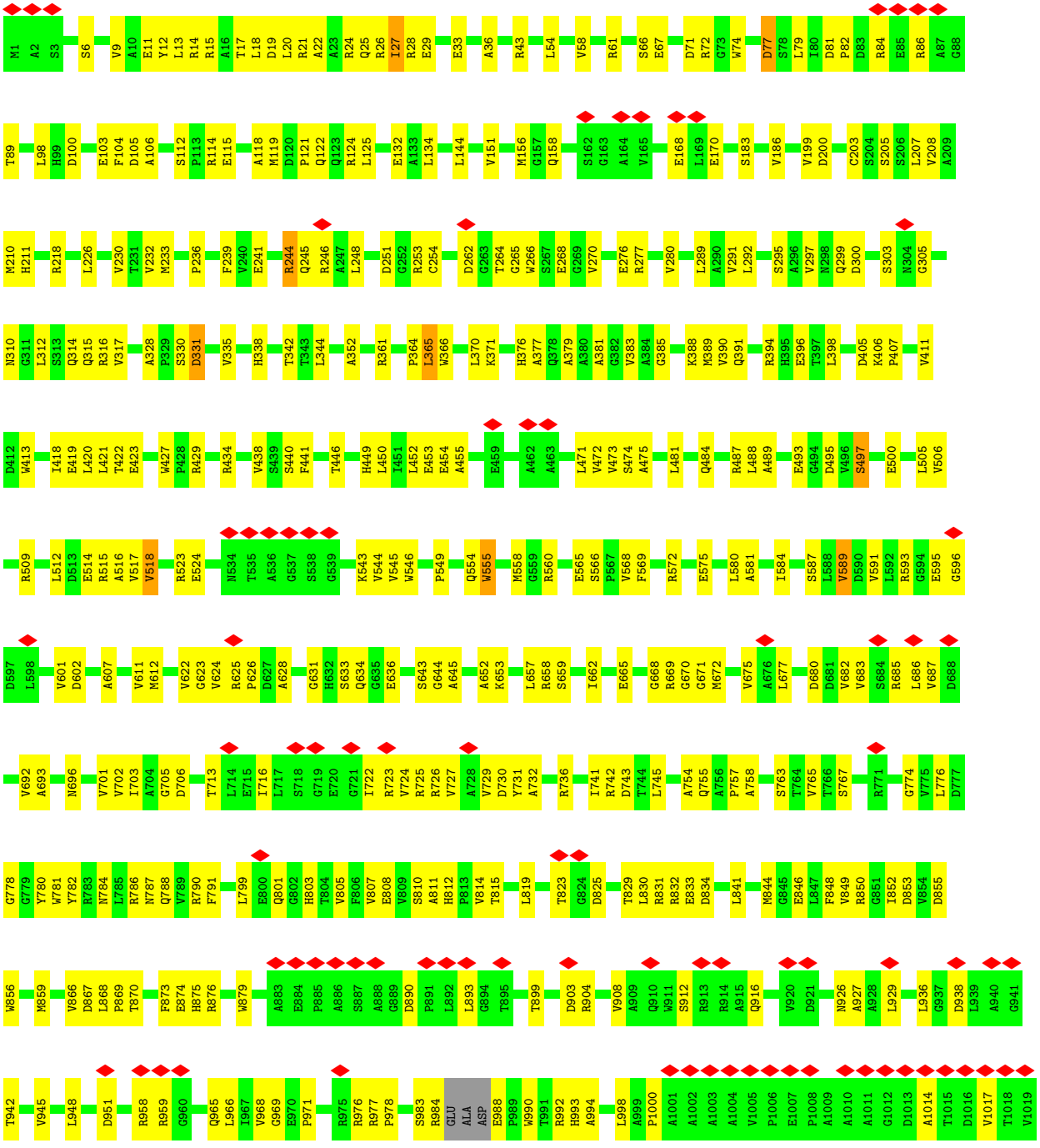


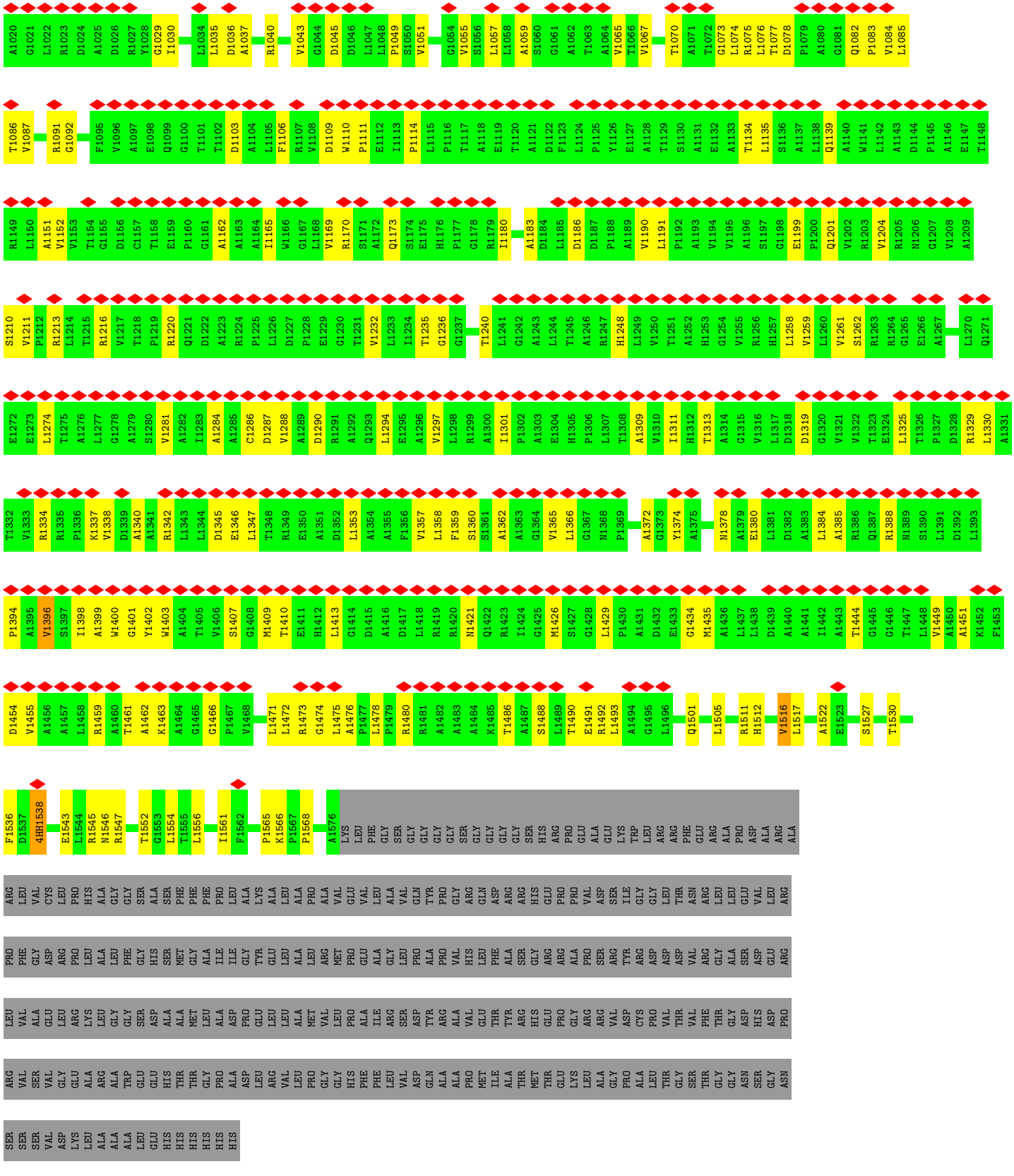

T815 V816 Q817 P818 L819 S820 E821 L822 T823 G824 D825 A826 I827 G828 T829 L830 R831 R832 R839 L840 L841 M844 G845 E846 L847 F848 V849 R850 W856 M859 L868 P869 H875 Y878 W879 A883 E884 P885 A886 S887 A888 G889 D890 P891 L892 L893 G894 T899 P900 G901 S902
D903 R904 W911 S912 R913 R914 V920 D921 G922 L923 N926 A927 A928 L929 V930 E931 R935 D938 T942 D951 L956 P957 R958 R959 G960 S961 R962 E963 V964 Q965 G969 E970 P971 G972 E973 Q974 R975 R976 R977 F982 S983 R984 E985 A986 D987 E988 P989 W990 H993
P1000 A1001 A1002 A1003 A1004 V1005 P1006 E1007 P1008 A1009 A1010 A1011 G1012 D1013 A1014 T1015 D1016 V1017 T1018 V1019 A1020 G1021 L1022 R1023 D1024 A1025 D1026 R1027 L1035 D1036 R1040 V1043 G1044 D1045 D1046 L1047 L1048 P1049 S1050 V1051 G1054 V1055 S1056 L1057 L1058 A1059 S1060 G1061 A1062 T1063 A1064 V1067 T1070
A1071 T1072 G1073 L1074 R1075 L1076 T1077 D1078 P1079 A1080 G1081 Q1082 P1083 V1084 L1085 T1086 V1087 R1091 G1092 T1093 P1094 F1095 V1096 A1097 E1098 Q1099 G1100 T1101 T1102 D1103 A1104 L1105 F1106 R1107 V1108 D1109 W1110 P1111 E1112 I1113 P1114 L1115 P1116 T1117 A1118 E1119 T1120 A1121 D1122 F1123 L1124 P1125 Y1126 E1127 A1128 T1129 S1130 A1131 E1132
A1133 T1134 L1135 L1138 Q1139 A1140 W1141 L1142 A1143 D1144 P1145 A1146 E1147 T1148 R1149 L1150 A1151 V1152 V1153 T1154 G1155 D1156 C1157 T1158 E1159 P1160 A1163 A1164 I1165 W1166 G1167 L1168 V1169 R1170 S1171 A1172 Q1173 H1176 P1177 G1178 R1179 I1180 V1181 L1182 A1183 D1184 L1185 D1186 D1187 P1188 A1189 V1190 L1191 P1192 A1193 V1194 V1195
A1196 S1197 G1198 E1199 P1200 Q1201 V1202 R1203 V1204 R1205 N1206 G1207 V1208 A1209 S1210 V1211 P1212 R1213 L1214 T1215 R1216 V1217 T1218 P1219 R1220 Q1221 D1222 A1223 R1224 P1225 L1226 D1227 P1228 E1229 G1230 T1231 V1232 L1233 I1234 T1235 G1236 G1237 T1238 G1239 T1240 L1241 G1242 A1243 L1244 T1245 A1246 R1247 H1248 L1249 V1250 T1251 A1252 H1253 G1254 V1255
R1256 H1257 L1258 V1259 L1260 V1261 S1262 R1263 R1264 G1265 E1266 A1267 P1268 E1269 L1270 Q1271 E1272 E1273 L1274 T1275 A1276 L1277 G1278 A1279 S1280 V1281 A1282 I1283 A1284 A1285 C1286 D1287 V1288 A1289 D1290 R1291 A1292 Q1293 L1294 E1295 A1296 V1297 L1298 R1299 A1300 I1301 P1302 A1303 E1304 H1305 P1306 L1307 T1308 A1309 V1310 I1311 H1312 T1313 A1314 G1315
V1316 L1317 D1318 D1319 G1320 V1321 V1322 T1323 E1324 L1325 T1326 P1327 D1328 R1329 L1330 A1331 T1332 V1333 R1334 R1335 P1336 K1337 V1338 D1339 A1340 A1341 R1342 L1343 L1344 D1345 E1346 L1347 T1348 R1349 E1350 A1351 D1352 L1353 A1354 A1355 F1356 V1357 L1358 F1359 S1360 S1361 A1362 A1363 G1364 V1365 L1366 G1367 N1368 P1369 G1370 Q1371 A1372 G1373 Y1374 A1375
A1376 A1377 N1378 A1379 E1380 L1381 D1382 A1383 L1384 A1385 R1386 Q1387 R1388 N1389 S1390 L1391 D1392 L1393 P1394 A1395 V1396 S1397 I1398 A1399 W1400 G1401 Y1402 W1403 A1404 T1405 V1406 S1407 G1408 M1409 T1410 E1411 H1412 L1413 G1414 D1415 A1416 D1417 L1418 R1419 R1420 N1421 Q1422 R1423 I1424 G1425 M1426 S1427 G1428 L1429 P1430 A1431 D1432 E1433 G1434 M1435
A1436 L1437 L1438 D1439 A1440 A1441 I1442 A1443 T1444 G1445 G1446 T1447 L1448 V1449 A1450 A1451 K1452 F1453 D1454 V1455 A1456 A1457 L1458 R1459 A1460 T1461 A1462 K1463 A1464 G1465 G1466 P1467 V1468 P1469 P1470 L1471 L1472 R1473 G1474 L1475 A1476 P1477 L1478 P1479 R1480 R1481 A1482 A1483 A1484 K1485 T1486 A1487 S1488 L1489 T1490 E1491 R1492 L1493 A1494 G1495
L1496 A1497 E1498 T1499 E1500 Q1501 A1502 A1503 A1504 L1505 L1506 D1507 R1510 R1511 E1515 V1516 L1517 G1518 H1519 S1520 G1521 A1522 E1523 S1524 V1525 H1526 S1527 G1528 R1529 T1530 F1531 K1532 D1533 F1536 D1537 4HH1538 L1539 T1540 L1544 R1545 N1546 R1547 L1548 A1549 T1552 G1553 L1554 T1555 L1556 M1560 I1561 F1562 D1563 Y1564
P1567 P1568 A1569 D1572 R1575 A1576 LYS LEU PHE GLY SER GLY GLY GLY GLY SER GLY GLY GLY GLY SER HIS ARG PRO GLU ALA GLU LYS TRP LEU ARG ARG PHE GLU ARG ALA PRO ASP ALA ARG ALA ARG LEU VAL CYS LEU PRO HIS ALA GLY GLY SER ALA SER PHE PHE PHE
PRO LEU ALA LYS ALA LEU ALA PRO ALA VAL GLU VAL LEU ALA ALA VAL GLN TYR PRO GLY ARG GLN ASP ARG ARG HIS GLU PRO PRO VAL ASP SER ILE GLY GLY LEU THR ASN ARG LEU LEU GLU VAL LEU ARG PRO PHE GLY ASP ARG PRO LEU ALA LEU PHE GLY HIS SER MET GLY ALA
ILE ILE GLY TYR GLU LEU ALA LEU ARG MET PRO GLU ALA GLY LEU PRO ALA PRO VAL HIS LEU PHE ALA SER GLY ARG ARG ALA PRO SER ARG TYR ARG ASP ASP SER VAL ARG GLY ALA SER ASP GLU ARG LEU VAL ALA GLU LEU ARG LYS LEU GLY GLY SER ASP ALA ALA MET LEU



• Molecule 1: 6-deoxyerythronolide-B synthase,RifR

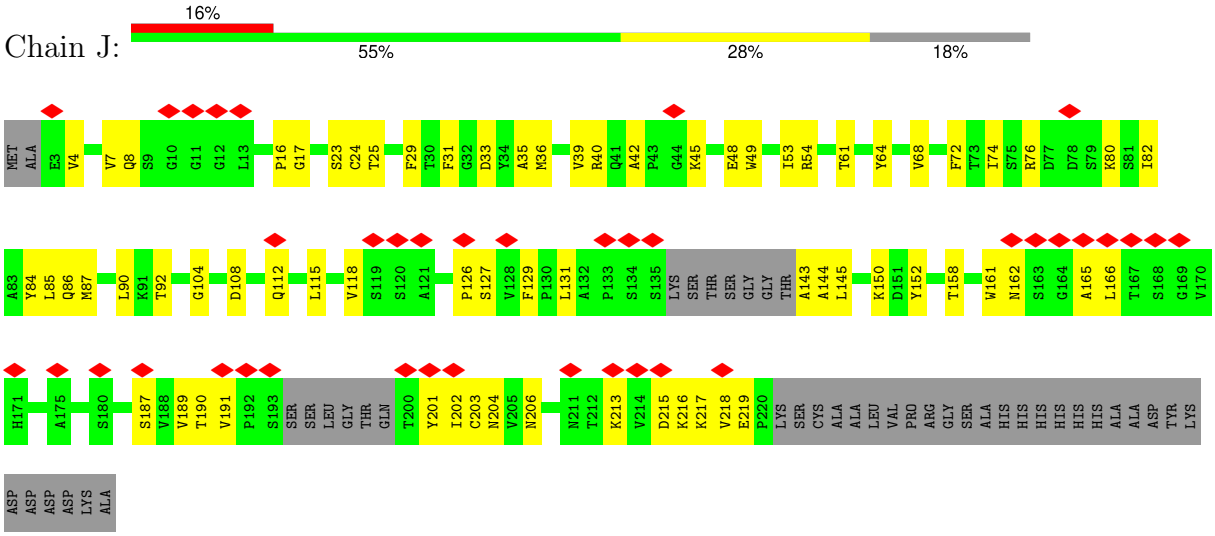
Chain B:





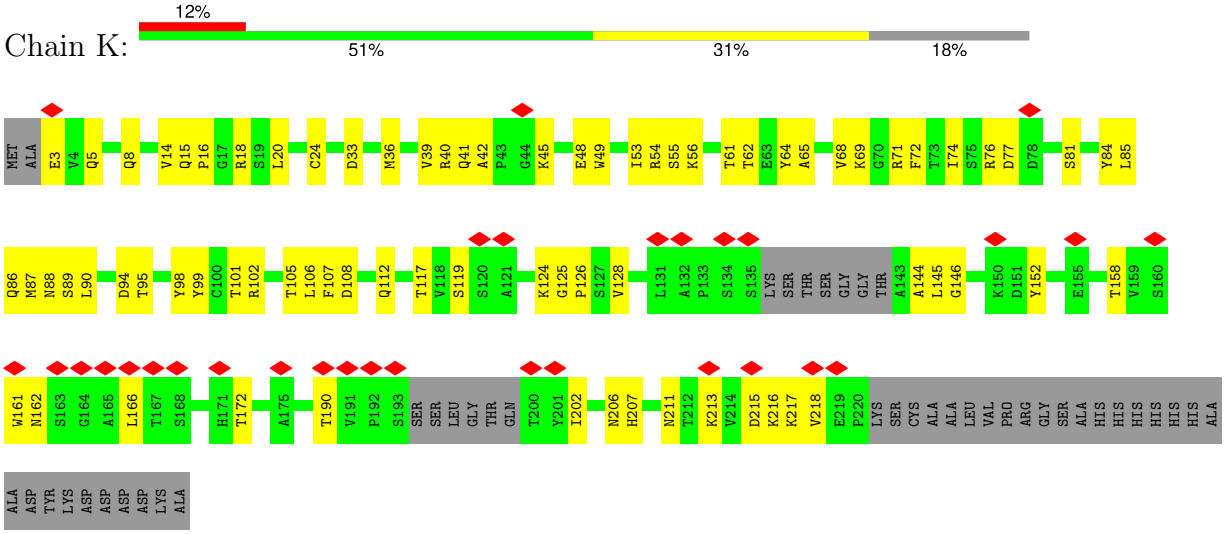
• Molecule 2: Antibody Fragment 1B2 Heavy Chain

Chain J:



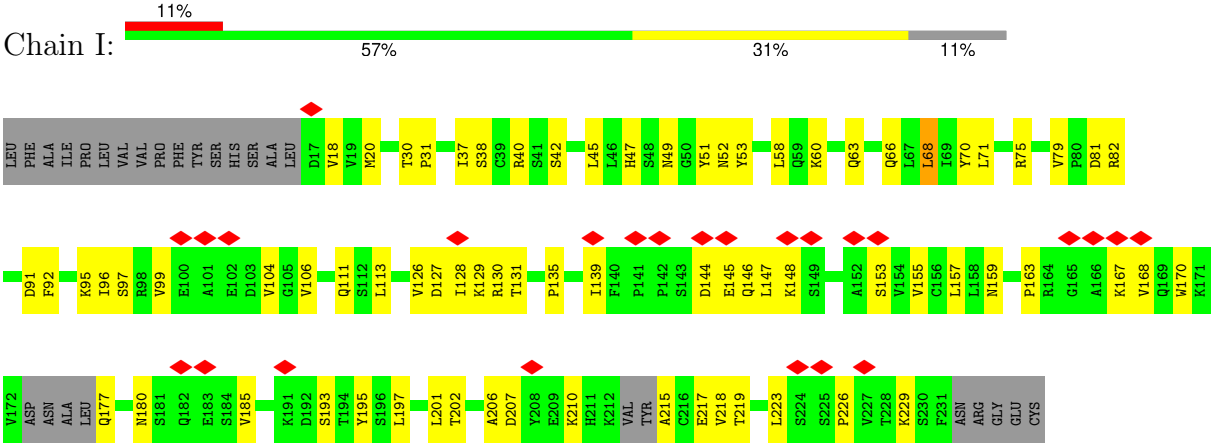
• Molecule 2: Antibody Fragment 1B2 Heavy Chain

Chain K:



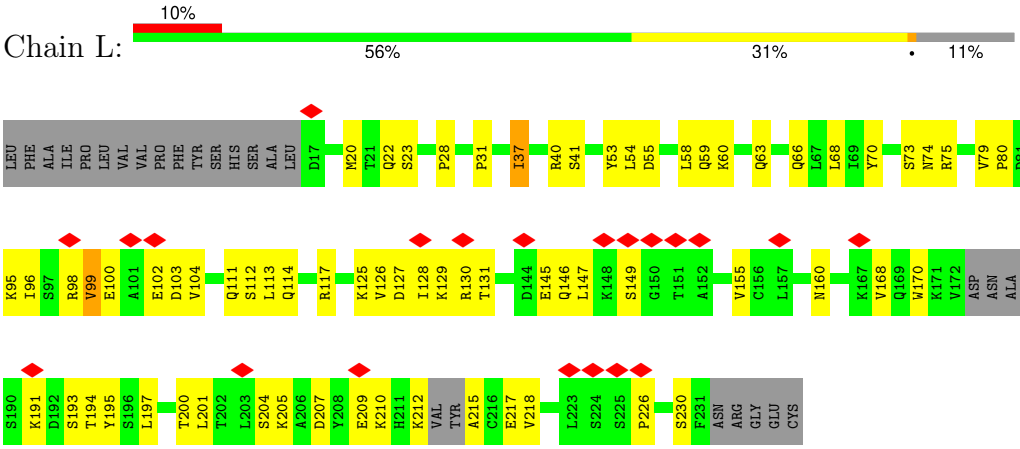
• Molecule 3: Antibody Fragment 1B2 Light Chain

Chain I:



• Molecule 3: Antibody Fragment 1B2 Light Chain

Chain L:


10%
56%
31%
11%
LEU PHE ALA ILE PRO LEU VAL VAL PRO PHE TYR SER HIS SER ALA LEU D17 M20 T21 Q22 S23 P28 P31 I37 R40 S41 Y53 L54 D55 L58 Q59 K60 Q63 Q66 L67 L68 I69 Y70 S73 N74 R75 V79 P80 D81 R82 F92 T93 L94
K95 I96 S97 R98 V99 E100 A101 E102 D103 V104 Q111 S112 L113 Q114 R117 K125 V126 D127 I128 K129 R130 T131 D144 E145 Q146 L147 K148 S149 G150 T151 A152 V155 C156 L157 N160 K167 V168 Q169 W170 K171 V172 ASP ASN ALA LEU Q177 S178 G179 V185 Q188 D189
S190 K191 D192 S193 T194 Y195 S196 L197 T200 L201 T202 L203 S204 K205 A206 D207 Y208 E209 K210 H211 K212 VAL TYR A215 C216 E217 V218 L223 S224 S225 P226 S230 F231 ASN ARG GLY GLU CYS

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	91575	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS GLACIOS	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/Å^2$)	50	Depositor
Minimum defocus (nm)	100	Depositor
Maximum defocus (nm)	3677	Depositor
Magnification	Not provided	
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	0.145	Depositor
Minimum map value	-0.051	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.005	Depositor
Recommended contour level	0.0502	Depositor
Map size (Å)	438.0, 438.0, 438.0	wwPDB
Map dimensions	600, 600, 600	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.73, 0.73, 0.73	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 4HH

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	0.12	0/11769	0.30	0/16083
1	B	0.12	0/11746	0.30	0/16050
2	J	0.12	0/1575	0.31	0/2141
2	K	0.11	0/1575	0.27	0/2141
3	I	0.11	0/1630	0.30	0/2212
3	L	0.13	0/1630	0.35	0/2212
All	All	0.12	0/29925	0.30	0/40839

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	11580	0	11559	431	0
1	B	11558	0	11543	378	0
2	J	1539	0	1513	50	0
2	K	1539	0	1513	57	0
3	I	1596	0	1561	53	0
3	L	1596	0	1561	59	0
All	All	29408	0	29250	989	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 17.

All (989) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:13:LEU:HD21	1:B:13:LEU:HD11	1.49	0.93
1:B:211:HIS:HD1	1:B:295:SER:HG	1.17	0.90
1:B:1014:ALA:HA	1:B:1067:VAL:O	1.72	0.90
1:B:683:VAL:HA	1:B:686:LEU:HD23	1.63	0.81
1:A:15:ARG:HD3	2:J:108:ASP:HB2	1.64	0.79
1:B:685:ARG:HH21	1:B:716:ILE:HB	1.46	0.79
3:I:51:TYR:HB3	3:I:71:LEU:HD11	1.62	0.79
1:A:1473:ARG:HH21	1:A:1478:LEU:H	1.32	0.77
1:B:685:ARG:O	1:B:685:ARG:NH1	2.15	0.77
1:A:158:GLN:HE22	1:A:235:THR:H	1.33	0.76
1:A:35:ILE:HG22	1:A:292:LEU:HB2	1.67	0.75
2:J:85:LEU:HG	2:J:87:MET:HE1	1.68	0.75
1:A:1073:GLY:HA3	1:A:1087:VAL:O	1.89	0.73
1:B:1337:LYS:NZ	1:B:1359:PHE:O	2.22	0.73
1:B:545:VAL:HG22	1:B:628:ALA:HB3	1.71	0.72
1:A:233:MET:HE1	1:A:266:TRP:HB3	1.70	0.72
1:B:233:MET:HE1	1:B:266:TRP:HB3	1.69	0.72
1:B:1073:GLY:HA3	1:B:1087:VAL:O	1.89	0.72
1:A:1400:TRP:HH2	1:A:1438:LEU:HB2	1.55	0.71
1:B:1109:ASP:OD1	1:B:1110:TRP:N	2.23	0.71
1:A:677:LEU:HD21	1:A:722:ILE:HG21	1.73	0.71
1:A:119:MET:SD	1:A:120:ASP:N	2.64	0.71
1:A:170:GLU:OE1	1:B:244:ARG:NH1	2.23	0.71
1:A:156:MET:SD	1:A:156:MET:N	2.63	0.70
1:A:545:VAL:HG22	1:A:628:ALA:HB3	1.72	0.70
3:L:102:GLU:N	3:L:102:GLU:OE1	2.24	0.70
1:B:342:THR:HG22	1:B:344:LEU:H	1.56	0.70
1:A:14:ARG:NH1	2:J:33:ASP:O	2.25	0.70
2:K:53:ILE:HB	2:K:74:ILE:HD13	1.73	0.70
1:A:544:VAL:HG13	1:A:627:ASP:H	1.57	0.69
2:J:23:SER:HB2	2:J:82:ILE:HD11	1.73	0.69
1:A:103:GLU:HB3	1:A:875:HIS:HB3	1.74	0.69
1:B:670:GLY:HA3	1:B:732:ALA:HB2	1.75	0.69
1:B:958:ARG:HG3	1:B:959:ARG:HD2	1.74	0.69
1:A:61:ARG:NH2	1:A:422:THR:O	2.25	0.69
1:B:103:GLU:HB3	1:B:875:HIS:HB3	1.73	0.69
1:A:1043:VAL:HG21	1:A:1049:PRO:HB3	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1552:THR:HG23	1:A:1554:LEU:H	1.58	0.68
1:B:799:LEU:HD11	1:B:823:THR:HG22	1.74	0.68
1:A:1135:LEU:HD22	1:A:1330:LEU:HD11	1.75	0.68
3:I:31:PRO:HD3	3:I:128:ILE:HD11	1.75	0.68
1:B:543:LYS:HB2	1:B:803:HIS:HA	1.75	0.68
2:J:39:VAL:HG22	2:J:49:TRP:HA	1.75	0.68
3:I:75:ARG:NH1	3:I:79:VAL:O	2.27	0.68
3:L:170:TRP:O	3:L:177:GLN:N	2.27	0.68
3:L:93:THR:O	3:L:95:LYS:NZ	2.27	0.67
1:A:745:LEU:HD22	1:A:782:TYR:HB2	1.76	0.67
1:B:475:ALA:O	1:B:514:GLU:HB2	1.94	0.67
3:I:130:ARG:NH1	3:I:131:THR:O	2.27	0.67
1:B:781:TRP:HA	1:B:784:ASN:HD22	1.60	0.67
3:L:130:ARG:NH1	3:L:131:THR:O	2.27	0.67
1:B:1338:VAL:HG13	1:B:1384:LEU:HD11	1.76	0.67
1:A:1109:ASP:OD1	1:A:1110:TRP:N	2.27	0.67
1:B:61:ARG:NH2	1:B:422:THR:O	2.28	0.67
1:B:156:MET:HE3	1:B:156:MET:HA	1.76	0.66
1:A:1458:LEU:HB3	1:A:1476:ALA:HB2	1.78	0.66
3:L:58:LEU:HB3	3:L:68:LEU:HD11	1.75	0.66
3:L:125:LYS:HE2	3:L:127:ASP:HB3	1.78	0.66
1:B:471:LEU:HD12	1:B:505:LEU:HD21	1.78	0.66
1:B:841:LEU:HA	1:B:844:MET:SD	2.35	0.66
1:A:912:SER:HB2	1:A:914:ARG:HH21	1.61	0.66
2:K:41:GLN:NE2	2:K:42:ALA:O	2.26	0.66
3:I:135:PRO:HD2	3:I:223:LEU:HG	1.79	0.65
1:A:471:LEU:HD12	1:A:505:LEU:HD21	1.77	0.65
1:A:927:ALA:HB1	1:A:1035:LEU:HB3	1.79	0.65
1:B:515:ARG:NH1	1:B:852:ILE:O	2.28	0.65
1:B:1059:ALA:HB3	1:B:1084:VAL:HG13	1.78	0.65
1:B:406:LYS:NZ	1:B:407:PRO:O	2.29	0.65
2:K:71:ARG:NH1	2:K:89:SER:O	2.29	0.65
1:B:312:LEU:HB3	1:B:316:ARG:HH12	1.62	0.65
1:B:427:TRP:O	1:B:434:ARG:NH1	2.30	0.65
3:I:111:GLN:OE1	3:I:113:LEU:N	2.30	0.65
1:A:591:VAL:HG12	1:A:596:GLY:HA3	1.79	0.65
1:B:1545:ARG:NH2	1:B:1546:ASN:OD1	2.30	0.65
1:B:509:ARG:NH2	1:B:869:PRO:O	2.26	0.64
1:B:1261:VAL:HG11	1:B:1297:VAL:HG11	1.79	0.64
1:A:1105:LEU:HD12	1:A:1219:PRO:HG3	1.80	0.64
3:L:68:LEU:HA	3:L:79:VAL:HG21	1.77	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1527:SER:O	1:B:1566:LYS:NZ	2.28	0.64
1:A:427:TRP:O	1:A:434:ARG:NH1	2.31	0.64
1:A:1311:ILE:HG23	1:A:1357:VAL:HB	1.78	0.64
2:J:74:ILE:HG23	2:J:85:LEU:HD13	1.78	0.64
1:A:840:LEU:HG	1:A:844:MET:HE1	1.79	0.64
1:B:1486:THR:OG1	1:B:1492:ARG:NH2	2.31	0.64
1:A:831:ARG:HB2	1:A:839:ARG:HE	1.63	0.63
1:A:1492:ARG:O	1:A:1496:LEU:N	2.25	0.63
1:B:81:ASP:OD2	1:B:86:ARG:NH1	2.30	0.63
1:B:1213:ARG:HD2	1:B:1474:GLY:H	1.62	0.63
1:A:232:VAL:HA	1:A:268:GLU:HG2	1.80	0.63
2:J:87:MET:N	2:J:87:MET:HE2	2.12	0.63
3:L:59:GLN:NE2	3:L:63:GLN:O	2.31	0.63
1:A:98:LEU:N	1:A:268:GLU:OE1	2.28	0.63
1:A:602:ASP:HA	1:A:659:SER:HB2	1.79	0.63
1:A:1156:ASP:OD1	1:A:1205:ARG:NH2	2.31	0.63
1:A:484:GLN:O	1:A:488:LEU:HD22	1.99	0.63
1:B:1399:ALA:HB3	1:B:1449:VAL:HG22	1.80	0.63
1:B:754:ALA:O	1:B:774:GLY:N	2.32	0.62
3:L:209:GLU:O	3:L:212:LYS:NZ	2.32	0.62
1:A:1396:VAL:HG21	1:A:1441:ALA:HB1	1.81	0.62
1:A:1149:ARG:NH1	1:A:1178:GLY:O	2.33	0.62
1:A:1151:ALA:HB1	1:A:1191:LEU:HD11	1.80	0.62
1:B:1319:ASP:O	1:B:1329:ARG:NH2	2.32	0.62
1:A:12:TYR:CZ	3:I:71:LEU:HD23	2.34	0.62
1:B:119:MET:O	1:B:124:ARG:NH2	2.27	0.62
1:B:874:GLU:O	1:B:876:ARG:NH1	2.31	0.62
1:B:903:ASP:O	1:B:977:ARG:NH2	2.32	0.62
2:J:54:ARG:NH1	2:J:61:THR:OG1	2.33	0.62
1:A:1168:LEU:HG	1:A:1372:ALA:HB1	1.80	0.62
1:B:291:VAL:HG23	1:B:453:GLU:HB3	1.82	0.62
1:B:832:ARG:HG2	1:B:833:GLU:HG3	1.79	0.62
1:B:969:GLY:HA3	1:B:978:PRO:HG2	1.82	0.62
1:B:1402:TYR:HB2	1:B:1413:LEU:HD11	1.82	0.62
1:A:124:ARG:HA	1:A:127:LEU:HD12	1.82	0.62
1:A:1556:LEU:HD12	1:A:1560:MET:HE2	1.80	0.61
2:J:8:GLN:H	2:J:112:GLN:HE22	1.47	0.61
3:I:218:VAL:O	3:I:226:PRO:HA	2.00	0.61
1:A:12:TYR:OH	3:I:71:LEU:HD23	2.00	0.61
1:A:12:TYR:HD1	1:A:13:LEU:HD23	1.65	0.61
3:I:45:LEU:HD13	3:I:92:PHE:HE1	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:199:VAL:HG12	1:B:199:VAL:HG12	1.82	0.61
1:A:224:MET:SD	1:A:224:MET:N	2.72	0.61
1:A:1531:PHE:HD2	1:A:1561:ILE:HG13	1.65	0.61
1:B:509:ARG:HH21	1:B:868:LEU:HB3	1.64	0.61
1:A:1176:HIS:HB3	1:A:1179:ARG:HD3	1.83	0.61
3:L:168:VAL:HG22	3:L:218:VAL:HG22	1.81	0.61
1:A:15:ARG:NH2	3:I:70:TYR:OH	2.33	0.61
1:B:1103:ASP:O	1:B:1216:ARG:NH1	2.31	0.61
2:K:16:PRO:O	2:K:18:ARG:NH1	2.32	0.61
2:K:87:MET:HB2	2:K:90:LEU:HD21	1.83	0.61
1:A:43:ARG:HB2	1:A:270:VAL:HB	1.83	0.61
1:B:74:TRP:CD2	1:B:236:PRO:HG3	2.36	0.61
1:B:484:GLN:O	1:B:488:LEU:HD12	2.00	0.61
1:B:515:ARG:NH1	1:B:848:PHE:O	2.34	0.61
2:K:145:LEU:HD12	2:K:218:VAL:HB	1.81	0.61
1:A:515:ARG:NH1	1:A:848:PHE:O	2.34	0.61
1:A:1481:ARG:NH1	1:A:1482:ALA:O	2.34	0.60
1:B:696:ASN:HA	1:B:791:PHE:HB3	1.83	0.60
1:A:119:MET:HG3	1:A:124:ARG:HG2	1.83	0.60
1:A:548:PHE:HB2	1:A:631:GLY:HA2	1.82	0.60
1:A:1366:LEU:HG	1:A:1471:LEU:HD23	1.82	0.60
1:A:1403:TRP:HA	1:A:1429:LEU:HB2	1.83	0.60
1:B:230:VAL:HG23	1:B:270:VAL:HG22	1.82	0.60
1:B:1530:THR:HB	1:B:1565:PRO:HB2	1.83	0.60
1:B:389:MET:HE3	1:B:389:MET:HA	1.83	0.60
1:B:668:GLY:N	1:B:730:ASP:O	2.30	0.60
1:B:693:ALA:N	1:B:702:VAL:O	2.35	0.60
1:B:1388:ARG:NE	1:B:1394:PRO:O	2.32	0.60
2:J:42:ALA:HB3	2:J:45:LYS:HB2	1.83	0.60
1:A:1128:ALA:HB3	1:A:1154:THR:HG22	1.84	0.60
1:B:555:TRP:CE2	1:B:832:ARG:HA	2.36	0.60
1:A:786:ARG:O	1:A:786:ARG:NH1	2.35	0.60
3:I:144:ASP:HA	3:I:147:LEU:HD12	1.84	0.60
3:I:60:LYS:HB2	3:I:63:GLN:HB2	1.82	0.60
3:L:111:GLN:NE2	3:L:114:GLN:O	2.35	0.60
1:B:14:ARG:NH2	2:K:33:ASP:OD2	2.33	0.60
1:B:289:LEU:HD13	1:B:394:ARG:HH22	1.66	0.60
3:I:38:SER:HB2	3:I:40:ARG:HH22	1.66	0.60
1:B:780:TYR:O	1:B:784:ASN:ND2	2.36	0.59
1:A:1235:THR:HA	1:A:1261:VAL:HG13	1.85	0.59
1:A:1259:VAL:HG22	1:A:1282:ALA:HB3	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:124:LYS:NZ	2:K:125:GLY:O	2.35	0.59
3:L:100:GLU:N	3:L:100:GLU:OE1	2.36	0.59
3:L:130:ARG:HD2	3:L:193:SER:HB2	1.84	0.59
1:A:723:ARG:HH12	1:A:725:ARG:HB2	1.68	0.59
1:B:1552:THR:HG23	1:B:1554:LEU:H	1.66	0.59
1:A:1237:GLY:HA3	1:A:1260:LEU:HB3	1.83	0.59
1:B:315:GLN:NE2	1:B:352:ALA:O	2.36	0.59
1:B:672:MET:HE3	1:B:729:VAL:HG11	1.83	0.59
2:J:217:LYS:NZ	2:J:219:GLU:OE2	2.33	0.59
1:A:328:ALA:HB2	3:L:98:ARG:HH12	1.68	0.59
1:A:398:LEU:HB3	1:A:421:LEU:HD21	1.85	0.59
1:B:106:ALA:H	1:B:876:ARG:HH22	1.51	0.59
1:A:859:MET:HE3	1:A:859:MET:H	1.68	0.59
1:B:1258:LEU:HB2	1:B:1281:VAL:HG22	1.84	0.59
1:A:776:LEU:H	1:A:776:LEU:HD23	1.67	0.59
1:A:1077:THR:HG22	1:A:1083:PRO:HA	1.84	0.59
1:A:1235:THR:HB	1:A:1288:VAL:HG11	1.84	0.59
1:B:151:VAL:HG12	1:B:226:LEU:HB2	1.85	0.59
1:A:1078:ASP:OD1	1:A:1082:GLN:N	2.36	0.58
1:B:677:LEU:HD11	1:B:722:ILE:HD13	1.86	0.58
2:K:14:VAL:HG11	2:K:90:LEU:HD12	1.83	0.58
1:A:377:ALA:H	1:A:381:ALA:HB2	1.68	0.58
1:A:814:VAL:HG23	1:A:815:THR:HG23	1.86	0.58
1:A:738:VAL:HB	1:A:786:ARG:HD2	1.85	0.58
1:A:811:ALA:HA	1:A:830:LEU:HB2	1.84	0.58
1:A:890:ASP:HB3	1:A:893:LEU:HB2	1.86	0.58
1:A:543:LYS:HB2	1:A:803:HIS:HA	1.86	0.58
3:I:40:ARG:HE	3:I:91:ASP:HA	1.69	0.58
3:I:104:VAL:HA	3:I:126:VAL:HG13	1.85	0.58
1:A:326:GLY:O	3:L:98:ARG:NH2	2.37	0.58
1:A:1337:LYS:NZ	1:A:1359:PHE:O	2.37	0.58
1:B:644:GLY:O	1:B:755:GLN:NE2	2.37	0.58
1:B:723:ARG:HH22	1:B:725:ARG:HD3	1.69	0.58
1:A:1110:TRP:HB3	1:A:1210:SER:HB2	1.84	0.57
1:A:74:TRP:NE1	1:A:234:ALA:O	2.31	0.57
1:A:985:GLU:H	1:A:988:GLU:HG2	1.69	0.57
1:B:602:ASP:HA	1:B:659:SER:HB2	1.86	0.57
1:B:786:ARG:O	1:B:786:ARG:NH1	2.35	0.57
1:A:829:THR:HG22	1:A:830:LEU:HG	1.86	0.57
1:B:958:ARG:HD3	1:B:959:ARG:HH11	1.70	0.57
1:A:825:ASP:OD1	1:A:850:ARG:NH1	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:353:LEU:HA	1:A:356:THR:HG22	1.85	0.57
1:A:1368:ASN:OD1	1:A:1420:ARG:NH1	2.37	0.57
1:A:1399:ALA:HB3	1:A:1449:VAL:HA	1.85	0.57
1:B:1106:PHE:O	1:B:1449:VAL:N	2.28	0.57
1:B:1311:ILE:HG23	1:B:1357:VAL:HB	1.87	0.57
2:K:39:VAL:HG23	2:K:49:TRP:HA	1.87	0.57
1:A:409:LEU:HD23	1:A:409:LEU:H	1.70	0.57
1:A:693:ALA:H	1:A:703:ILE:HA	1.68	0.57
1:A:725:ARG:NH1	1:A:726:ARG:O	2.38	0.57
3:L:31:PRO:HD3	3:L:128:ILE:HD11	1.87	0.57
1:A:1105:LEU:HD13	1:A:1448:LEU:HD13	1.87	0.57
1:B:1151:ALA:HB1	1:B:1191:LEU:HD11	1.87	0.57
1:B:1358:LEU:HD12	1:B:1385:ALA:HB2	1.86	0.57
1:A:516:ALA:HB1	1:A:533:LEU:HD21	1.86	0.57
1:A:841:LEU:HA	1:A:844:MET:SD	2.45	0.57
1:B:208:VAL:HG23	1:B:297:VAL:HG21	1.87	0.57
3:I:20:MET:H	3:I:42:SER:HG	1.51	0.57
1:A:1382:ASP:OD1	1:A:1397:SER:OG	2.21	0.57
3:L:100:GLU:N	3:L:103:ASP:OD2	2.38	0.57
1:A:1385:ALA:HB3	1:A:1397:SER:HB2	1.87	0.57
1:B:1190:VAL:HG21	1:B:1204:VAL:HG11	1.86	0.57
2:K:36:MET:HE2	2:K:36:MET:H	1.68	0.57
1:A:338:HIS:CD2	1:A:441:PHE:H	2.23	0.56
1:A:1106:PHE:HB2	1:A:1449:VAL:HB	1.87	0.56
1:B:1029:GLY:O	1:B:1030:ILE:HD13	2.05	0.56
1:A:1271:GLN:HG3	1:A:1281:VAL:HB	1.87	0.56
1:A:1319:ASP:O	1:A:1329:ARG:NH2	2.38	0.56
3:L:147:LEU:HB3	3:L:205:LYS:HE2	1.88	0.56
1:A:776:LEU:HB2	1:A:781:TRP:CH2	2.40	0.56
1:B:251:ASP:O	1:B:253:ARG:NH1	2.39	0.56
1:B:811:ALA:HA	1:B:830:LEU:HB2	1.86	0.56
3:L:73:SER:O	3:L:74:ASN:ND2	2.37	0.56
1:B:685:ARG:HH12	1:B:687:VAL:HG13	1.71	0.56
1:B:988:GLU:N	1:B:988:GLU:OE1	2.38	0.56
2:K:126:PRO:HB3	2:K:152:TYR:HB3	1.88	0.56
3:I:127:ASP:N	3:I:127:ASP:OD1	2.38	0.56
3:L:146:GLN:O	3:L:149:SER:OG	2.23	0.56
1:A:1139:GLN:NE2	1:A:1325:LEU:O	2.36	0.56
1:A:1190:VAL:HG21	1:A:1204:VAL:HG11	1.87	0.56
1:B:778:GLY:HA2	1:B:781:TRP:CD1	2.39	0.56
1:B:1261:VAL:HG12	1:B:1284:ALA:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:66:SER:OG	1:B:67:GLU:N	2.38	0.56
1:B:591:VAL:HG12	1:B:596:GLY:HA3	1.86	0.56
1:B:1403:TRP:HZ3	1:B:1434:GLY:HA3	1.70	0.56
2:J:92:THR:HA	2:J:118:VAL:HB	1.86	0.56
1:A:174:THR:HG21	1:B:241:GLU:HG2	1.87	0.56
1:A:230:VAL:HG12	1:A:270:VAL:HG13	1.88	0.56
3:L:23:SER:HB2	3:L:37:ILE:HD11	1.87	0.56
1:A:156:MET:HE1	1:A:379:ALA:HB2	1.87	0.56
1:A:589:VAL:HG22	1:A:593:ARG:HE	1.71	0.56
1:A:1134:THR:HG21	1:A:1165:ILE:HG23	1.87	0.56
1:A:1106:PHE:O	1:A:1449:VAL:N	2.33	0.56
1:B:1511:ARG:HH12	1:B:1512:HIS:CE1	2.23	0.56
1:A:1213:ARG:HH21	1:A:1473:ARG:HH11	1.54	0.56
1:A:1358:LEU:HD12	1:A:1385:ALA:HB2	1.86	0.56
1:A:1432:ASP:OD1	1:A:1432:ASP:N	2.39	0.56
1:B:745:LEU:HD11	1:B:782:TYR:HB2	1.88	0.56
2:K:15:GLN:NE2	2:K:119:SER:O	2.39	0.56
3:L:205:LYS:NZ	3:L:209:GLU:OE2	2.37	0.56
1:A:427:TRP:CZ2	1:A:434:ARG:HB3	2.41	0.55
1:B:1259:VAL:HG21	1:B:1301:ILE:HG12	1.88	0.55
3:I:52:ASN:O	3:I:71:LEU:HD13	2.07	0.55
1:A:727:VAL:HG12	1:A:729:VAL:HG23	1.88	0.55
1:B:1232:VAL:HG22	1:B:1309:ALA:HB3	1.87	0.55
3:L:125:LYS:HD2	3:L:126:VAL:N	2.21	0.55
1:A:732:ALA:O	1:A:735:THR:OG1	2.24	0.55
1:A:1075:ARG:HG2	1:A:1086:THR:HG22	1.89	0.55
1:B:43:ARG:NH2	1:B:132:GLU:OE2	2.39	0.55
1:B:365:LEU:HB2	1:B:418:ILE:HG13	1.87	0.55
1:B:581:ALA:HA	1:B:584:ILE:HG12	1.87	0.55
1:B:825:ASP:OD1	1:B:850:ARG:NH1	2.40	0.55
1:A:654:VAL:HG22	1:A:749:LEU:HD22	1.89	0.55
1:B:114:ARG:NH2	1:B:168:GLU:O	2.36	0.55
1:B:558:MET:HA	1:B:558:MET:HE3	1.88	0.55
1:B:976:ARG:HA	1:B:998:LEU:O	2.05	0.55
1:B:1077:THR:HG22	1:B:1083:PRO:HA	1.87	0.55
3:L:70:TYR:CZ	3:L:74:ASN:HB3	2.41	0.55
1:A:1560:MET:SD	1:A:1560:MET:N	2.70	0.55
1:B:544:VAL:HA	1:B:805:VAL:HB	1.88	0.55
1:A:1051:VAL:HB	1:A:1091:ARG:HB2	1.89	0.55
1:B:112:SER:OG	1:B:1517:LEU:O	2.23	0.55
1:B:1051:VAL:HG11	1:B:1091:ARG:HH21	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:63:ASP:OD1	1:A:64:ALA:N	2.40	0.55
1:A:987:ASP:OD1	1:A:987:ASP:N	2.35	0.55
1:A:1091:ARG:NH1	1:A:1092:GLY:O	2.40	0.55
1:A:1106:PHE:HB3	1:A:1214:LEU:HD22	1.88	0.55
1:B:210:MET:SD	1:B:210:MET:N	2.80	0.55
2:J:162:ASN:HB2	2:J:165:ALA:HB3	1.89	0.55
1:A:670:GLY:HA3	1:A:732:ALA:HB2	1.89	0.54
1:B:645:ALA:HB2	1:B:757:PRO:HB3	1.88	0.54
1:B:767:SER:OG	1:B:790:ARG:NH1	2.40	0.54
1:B:814:VAL:HG23	1:B:815:THR:HG23	1.88	0.54
1:A:1308:THR:O	1:A:1354:ALA:N	2.32	0.54
2:K:40:ARG:NH2	2:K:98:TYR:OH	2.40	0.54
1:B:1313:THR:HA	1:B:1359:PHE:HB2	1.89	0.54
1:A:125:LEU:HD11	1:A:270:VAL:HG21	1.89	0.54
1:B:1078:ASP:OD1	1:B:1082:GLN:N	2.41	0.54
2:J:158:THR:HG23	2:J:206:ASN:HB3	1.90	0.54
1:A:40:MET:HE1	1:A:387:ILE:HA	1.88	0.54
1:B:787:ASN:OD1	1:B:788:GLN:N	2.40	0.54
1:B:338:HIS:O	1:B:371:LYS:NZ	2.33	0.54
1:B:361:ARG:HH12	1:B:365:LEU:HG	1.72	0.54
1:B:1353:LEU:HD12	1:B:1388:ARG:HH22	1.73	0.54
2:K:202:ILE:HG22	2:K:217:LYS:HG2	1.89	0.54
1:A:12:TYR:CE2	3:I:70:TYR:HB2	2.43	0.54
1:A:903:ASP:HB3	1:A:970:GLU:HG2	1.90	0.54
1:B:292:LEU:HD22	1:B:450:LEU:HD12	1.90	0.54
1:B:546:TRP:CD2	1:B:626:PRO:HB3	2.42	0.54
2:K:55:SER:HA	2:K:76:ARG:HH22	1.73	0.54
1:A:1561:ILE:HG23	1:A:1562:PHE:HD1	1.73	0.54
1:B:1410:THR:HB	1:B:1413:LEU:HD12	1.90	0.54
2:J:8:GLN:O	2:J:112:GLN:NE2	2.40	0.54
1:B:1036:ASP:OD1	1:B:1037:ALA:N	2.41	0.53
1:A:1135:LEU:HD13	1:A:1168:LEU:HD11	1.89	0.53
1:A:255:LYS:HB2	1:A:261:ALA:HA	1.89	0.53
1:A:338:HIS:ND1	1:A:340:THR:OG1	2.37	0.53
1:B:472:VAL:HG12	1:B:517:VAL:HG12	1.89	0.53
1:B:1462:ALA:HB2	1:B:1476:ALA:HB1	1.90	0.53
1:A:509:ARG:HH21	1:A:868:LEU:HB2	1.73	0.53
1:A:1480:ARG:NH2	1:B:938:ASP:OD1	2.40	0.53
1:B:612:MET:HE1	1:B:810:SER:HA	1.89	0.53
3:I:68:LEU:HA	3:I:79:VAL:HG21	1.90	0.53
1:A:974:GLN:OE1	1:A:976:ARG:NE	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1549:ALA:O	1:A:1553:GLY:N	2.42	0.53
2:K:94:ASP:O	2:K:98:TYR:OH	2.22	0.53
1:A:151:VAL:HG12	1:A:226:LEU:HB2	1.91	0.53
1:A:338:HIS:O	1:A:371:LYS:NZ	2.34	0.53
1:A:35:ILE:HD12	1:A:277:ARG:HA	1.91	0.53
1:A:951:ASP:N	1:A:993:HIS:O	2.42	0.53
1:A:1057:LEU:HD12	1:A:1085:LEU:HB2	1.90	0.53
1:B:13:LEU:O	1:B:17:THR:HG23	2.08	0.53
1:A:74:TRP:CD2	1:A:236:PRO:HG3	2.44	0.53
1:A:752:ILE:HD11	1:A:777:ASP:HA	1.89	0.53
1:A:856:TRP:HA	1:A:859:MET:HE1	1.91	0.53
1:B:338:HIS:CD2	1:B:441:PHE:H	2.26	0.53
1:B:515:ARG:HB2	1:B:849:VAL:HG23	1.90	0.53
1:B:1075:ARG:HG2	1:B:1086:THR:HG22	1.90	0.53
3:I:167:LYS:HD2	3:I:168:VAL:N	2.24	0.53
1:A:1313:THR:HA	1:A:1359:PHE:HB2	1.91	0.53
1:B:1152:VAL:HG11	1:B:1169:VAL:HG21	1.90	0.53
1:A:572:ARG:NH1	1:A:575:GLU:OE1	2.41	0.52
1:B:112:SER:HB2	1:B:1517:LEU:HG	1.91	0.52
3:I:130:ARG:HD2	3:I:193:SER:HB2	1.90	0.52
1:B:890:ASP:HB3	1:B:893:LEU:HB2	1.90	0.52
1:A:112:SER:HB2	1:A:1517:LEU:HB3	1.91	0.52
1:A:827:ILE:HD11	1:A:846:GLU:HB3	1.92	0.52
1:A:1193:ALA:O	1:A:1197:SER:N	2.43	0.52
1:B:11:GLU:CD	2:K:105:THR:H	2.18	0.52
1:B:560:ARG:HA	1:B:593:ARG:HG2	1.92	0.52
1:B:1288:VAL:HG22	1:B:1340:ALA:HB1	1.92	0.52
1:A:13:LEU:O	1:A:17:THR:HG22	2.09	0.52
1:A:329:PRO:HB3	1:A:357:TYR:HD1	1.73	0.52
1:A:1425:GLY:O	1:A:1454:ASP:N	2.29	0.52
1:B:1490:THR:HA	1:B:1493:LEU:HD12	1.91	0.52
2:K:128:VAL:O	2:K:216:LYS:NZ	2.42	0.52
1:B:438:VAL:O	1:B:449:HIS:ND1	2.43	0.52
1:B:1057:LEU:HD13	1:B:1085:LEU:HD12	1.91	0.52
2:K:87:MET:SD	2:K:87:MET:N	2.81	0.52
3:L:102:GLU:H	3:L:102:GLU:CD	2.15	0.52
1:A:388:LYS:HG3	1:A:389:MET:SD	2.49	0.52
1:B:1040:ARG:HH11	1:B:1045:ASP:HA	1.74	0.52
1:A:496:VAL:O	1:A:523:ARG:NH2	2.41	0.52
1:A:1527:SER:HA	1:A:1567:PRO:HG2	1.91	0.52
1:B:819:LEU:O	1:B:823:THR:N	2.31	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:754:ALA:O	1:A:774:GLY:N	2.43	0.52
1:A:1236:GLY:N	1:A:1261:VAL:O	2.37	0.52
1:B:1472:LEU:HD22	1:B:1475:LEU:HD12	1.92	0.52
2:K:36:MET:HE3	2:K:76:ARG:HD2	1.92	0.52
2:K:74:ILE:HG23	2:K:85:LEU:HD13	1.92	0.52
1:A:1261:VAL:HG23	1:A:1286:CYS:HB3	1.92	0.52
3:I:58:LEU:O	3:I:66:GLN:N	2.43	0.52
3:I:177:GLN:HG2	3:I:201:LEU:HD21	1.91	0.52
1:A:810:SER:OG	1:A:812:HIS:O	2.26	0.52
1:B:245:GLN:N	1:B:245:GLN:OE1	2.43	0.52
1:B:427:TRP:CZ2	1:B:434:ARG:HB3	2.45	0.52
1:B:831:ARG:HB3	1:B:834:ASP:HB3	1.93	0.51
2:J:72:PHE:HA	2:J:86:GLN:O	2.09	0.51
1:A:66:SER:OG	1:A:67:GLU:N	2.43	0.51
1:A:645:ALA:HB2	1:A:757:PRO:HB3	1.93	0.51
1:B:580:LEU:HG	1:B:652:ALA:HB1	1.93	0.51
1:B:927:ALA:HB1	1:B:1035:LEU:HB3	1.93	0.51
1:B:1421:ASN:O	1:B:1426:MET:N	2.43	0.51
1:B:1235:THR:O	1:B:1313:THR:OG1	2.23	0.51
2:J:129:PHE:HD1	3:I:145:GLU:OE1	1.94	0.51
2:K:55:SER:HA	2:K:76:ARG:HH12	1.74	0.51
2:K:95:THR:HG23	2:K:117:THR:HA	1.93	0.51
1:B:398:LEU:HB3	1:B:421:LEU:HD21	1.93	0.51
1:B:908:VAL:HG22	1:B:965:GLN:HG2	1.93	0.51
1:B:685:ARG:HH22	1:B:713:THR:HA	1.75	0.51
3:I:185:VAL:HG22	3:I:197:LEU:HD13	1.91	0.51
1:A:62:VAL:O	1:A:373:ASN:ND2	2.44	0.51
1:A:622:VAL:HG23	1:A:624:VAL:HG23	1.93	0.51
1:A:1538:4HH:OM	1:B:245:GLN:NE2	2.44	0.51
1:B:390:VAL:O	1:B:394:ARG:N	2.43	0.51
2:K:207:HIS:O	2:K:211:ASN:N	2.44	0.51
3:I:47:HIS:HB3	3:I:49:ASN:OD1	2.09	0.51
3:L:40:ARG:NH2	3:L:41:SER:O	2.44	0.51
1:A:900:PRO:HA	1:B:990:TRP:CD1	2.46	0.51
1:A:119:MET:SD	1:A:123:GLN:HB3	2.50	0.51
1:A:754:ALA:HB3	1:A:774:GLY:HA2	1.93	0.51
1:A:904:ARG:HH22	1:B:899:THR:HG23	1.76	0.51
1:A:1103:ASP:HB2	1:A:1216:ARG:HH11	1.76	0.51
1:A:1487:ALA:HB1	1:A:1491:GLU:HB2	1.92	0.51
1:B:726:ARG:HE	1:B:727:VAL:H	1.59	0.51
2:K:64:TYR:CE2	2:K:74:ILE:HG13	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:5:ASP:OD1	3:I:53:TYR:OH	2.21	0.51
1:B:100:ASP:OD1	1:B:100:ASP:N	2.34	0.51
1:B:254:CYS:SG	1:B:265:GLY:N	2.83	0.51
2:J:4:VAL:HG22	2:J:29:PHE:HB3	1.93	0.51
1:A:546:TRP:CE2	1:A:626:PRO:HB3	2.46	0.50
1:A:665:GLU:HG3	1:A:741:ILE:HG21	1.93	0.50
1:A:745:LEU:HD13	1:A:782:TYR:HD1	1.76	0.50
1:B:71:ASP:OD1	1:B:71:ASP:N	2.44	0.50
1:A:1076:LEU:HD12	1:A:1085:LEU:HD23	1.92	0.50
1:B:125:LEU:HB3	1:B:270:VAL:HG21	1.92	0.50
1:B:643:SER:O	1:B:758:ALA:N	2.43	0.50
1:B:1455:VAL:O	1:B:1459:ARG:HG2	2.10	0.50
3:I:30:THR:HG23	3:I:129:LYS:HB3	1.93	0.50
2:J:72:PHE:CD1	2:J:87:MET:HA	2.46	0.50
2:J:161:TRP:NE1	2:J:187:SER:OG	2.41	0.50
1:A:12:TYR:HE2	3:I:70:TYR:HB2	1.76	0.50
1:A:244:ARG:NH1	1:B:170:GLU:OE1	2.45	0.50
1:A:1500:GLU:OE1	1:A:1504:ALA:N	2.33	0.50
2:J:85:LEU:HD12	2:J:86:GLN:H	1.76	0.50
1:A:466:LEU:HD13	1:A:467:PRO:HD2	1.93	0.50
1:A:524:GLU:OE2	1:A:528:THR:OG1	2.29	0.50
1:A:695:VAL:HG13	1:A:790:ARG:HA	1.93	0.50
1:A:1232:VAL:HB	1:A:1258:LEU:HD23	1.94	0.50
1:A:1493:LEU:HD23	1:A:1496:LEU:HD12	1.93	0.50
1:B:330:SER:HA	1:B:361:ARG:HD3	1.93	0.50
1:B:543:LYS:NZ	1:B:801:GLN:O	2.33	0.50
1:A:91:TYR:OH	1:A:248:LEU:O	2.20	0.50
1:A:783:ARG:O	1:A:787:ASN:N	2.34	0.50
1:A:1516:VAL:HG12	1:A:1517:LEU:HD23	1.94	0.50
1:B:105:ASP:HA	1:B:876:ARG:HH12	1.76	0.50
1:B:1043:VAL:HG21	1:B:1049:PRO:HB3	1.93	0.50
1:B:1488:SER:O	1:B:1492:ARG:NE	2.42	0.50
1:A:1059:ALA:HB3	1:A:1084:VAL:HG13	1.94	0.50
1:B:82:PRO:HA	1:B:84:ARG:HH22	1.75	0.50
1:B:622:VAL:HG23	1:B:624:VAL:HG23	1.94	0.50
1:A:764:THR:HG21	1:A:789:VAL:HG13	1.92	0.50
3:L:58:LEU:HG	3:L:66:GLN:HB3	1.94	0.50
1:A:1219:PRO:HB3	1:A:1440:ALA:HB1	1.93	0.49
1:A:1338:VAL:HG13	1:A:1384:LEU:HD11	1.92	0.49
1:B:26:ARG:O	1:B:29:GLU:HG3	2.12	0.49
1:B:589:VAL:HG22	1:B:593:ARG:HE	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1435:MET:HE3	1:B:1435:MET:HA	1.94	0.49
3:I:215:ALA:HA	3:I:229:LYS:O	2.12	0.49
1:A:553:THR:HA	1:A:812:HIS:HB3	1.94	0.49
1:B:86:ARG:O	1:B:89:THR:OG1	2.28	0.49
1:B:1067:VAL:HG22	1:B:1076:LEU:HD22	1.93	0.49
1:B:1342:ARG:NH2	1:B:1380:GLU:OE2	2.45	0.49
1:A:859:MET:HE3	1:A:859:MET:N	2.27	0.49
1:A:1345:ASP:OD1	1:A:1388:ARG:NH1	2.37	0.49
2:K:101:THR:HG21	2:K:107:PHE:HB3	1.94	0.49
1:A:338:HIS:HD2	1:A:440:SER:HA	1.76	0.49
1:A:1515:GLU:HG2	1:A:1547:ARG:HH22	1.77	0.49
1:B:22:ALA:O	1:B:25:GLN:HG3	2.13	0.49
2:J:64:TYR:CE2	2:J:74:ILE:HG12	2.47	0.49
2:J:126:PRO:HA	2:J:152:TYR:HB3	1.94	0.49
1:A:509:ARG:NH2	1:A:869:PRO:O	2.31	0.49
1:A:529:GLY:O	1:A:533:LEU:N	2.46	0.49
1:A:1192:PRO:O	1:A:1196:ALA:N	2.37	0.49
1:B:61:ARG:HH21	1:B:423:GLU:HA	1.76	0.49
1:B:487:ARG:NH2	1:B:870:THR:O	2.37	0.49
1:A:683:VAL:HA	1:A:686:LEU:HD12	1.93	0.49
1:A:1049:PRO:HA	1:A:1092:GLY:HA2	1.94	0.49
1:B:1135:LEU:HD22	1:B:1330:LEU:HD11	1.95	0.49
2:J:85:LEU:HG	2:J:87:MET:CE	2.39	0.49
2:K:39:VAL:HG12	2:K:99:TYR:HB2	1.94	0.49
1:A:984:ARG:HB2	1:A:988:GLU:HG3	1.95	0.49
1:A:1152:VAL:O	1:A:1183:ALA:N	2.42	0.49
2:J:80:LYS:HB2	2:J:82:ILE:HG22	1.94	0.49
2:K:8:GLN:H	2:K:112:GLN:HE22	1.58	0.49
2:K:20:LEU:O	2:K:86:GLN:NE2	2.45	0.49
1:A:555:TRP:CD1	1:A:832:ARG:HG2	2.47	0.49
1:A:778:GLY:HA2	1:A:781:TRP:CD1	2.47	0.49
1:A:348:ILE:HA	1:A:351:GLN:NE2	2.28	0.49
1:A:922:GLY:HA2	1:A:956:LEU:HB2	1.95	0.49
1:B:1220:ARG:HD2	1:B:1444:THR:HA	1.94	0.49
2:J:35:ALA:C	2:J:36:MET:HE2	2.38	0.49
3:L:111:GLN:O	3:L:117:ARG:NH1	2.43	0.49
1:A:692:VAL:HA	1:A:703:ILE:HG22	1.95	0.48
1:A:982:PHE:HB3	1:A:990:TRP:CE3	2.48	0.48
1:A:1204:VAL:O	1:A:1205:ARG:NH1	2.38	0.48
1:B:104:PHE:CD1	1:B:124:ARG:HB3	2.47	0.48
1:A:1429:LEU:HD11	1:A:1451:ALA:HA	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:25:GLN:HB2	1:B:28:ARG:HH22	1.77	0.48
1:B:971:PRO:HA	1:B:977:ARG:HG2	1.94	0.48
2:J:203:CYS:SG	2:J:216:LYS:HB2	2.53	0.48
1:A:1505:LEU:HD12	1:A:1505:LEU:H	1.78	0.48
1:A:1538:4HH:HL3	1:A:1538:4HH:HO3	1.63	0.48
2:K:86:GLN:NE2	2:K:87:MET:O	2.46	0.48
3:L:111:GLN:OE1	3:L:113:LEU:N	2.46	0.48
1:A:381:ALA:O	1:A:384:ALA:HB3	2.12	0.48
1:A:1213:ARG:NH1	1:A:1470:PRO:O	2.47	0.48
1:B:665:GLU:HG3	1:B:741:ILE:HG21	1.94	0.48
3:I:180:ASN:OD1	3:I:180:ASN:N	2.46	0.48
3:L:188:GLN:HB2	3:L:195:TYR:CE2	2.49	0.48
1:A:903:ASP:O	1:A:977:ARG:NH2	2.36	0.48
1:B:926:ASN:HA	1:B:929:LEU:HD23	1.94	0.48
1:B:18:LEU:HD12	1:B:19:ASP:N	2.28	0.48
1:A:231:THR:HG21	1:A:379:ALA:H	1.78	0.48
1:A:820:SER:O	1:A:824:GLY:N	2.47	0.48
1:B:14:ARG:HB3	3:I:51:TYR:OH	2.14	0.48
1:B:633:SER:OG	1:B:634:GLN:N	2.43	0.48
1:B:859:MET:SD	1:B:859:MET:N	2.73	0.48
1:A:291:VAL:HG23	1:A:453:GLU:HB3	1.96	0.48
1:A:920:VAL:O	1:A:923:LEU:N	2.47	0.48
1:A:1182:LEU:N	1:A:1200:PRO:O	2.34	0.48
1:B:1338:VAL:HG21	1:B:1380:GLU:HB3	1.94	0.48
1:A:1247:ARG:NE	1:A:1273:GLU:OE1	2.47	0.48
1:B:398:LEU:HG	1:B:427:TRP:HB2	1.96	0.48
1:B:904:ARG:HA	1:B:968:VAL:O	2.14	0.48
1:A:24:ARG:NH1	3:L:75:ARG:O	2.41	0.47
1:A:71:ASP:N	1:A:71:ASP:OD1	2.41	0.47
1:B:658:ARG:HH12	1:B:782:TYR:HA	1.79	0.47
1:B:1473:ARG:NE	1:B:1478:LEU:H	2.12	0.47
2:J:166:LEU:HD21	2:J:189:VAL:HG21	1.96	0.47
1:B:115:GLU:O	1:B:118:ALA:N	2.40	0.47
1:B:1170:ARG:NE	1:B:1201:GLN:OE1	2.46	0.47
2:K:77:ASP:O	2:K:81:SER:N	2.47	0.47
1:A:926:ASN:HA	1:A:929:LEU:HD23	1.96	0.47
1:A:1402:TYR:HB2	1:A:1413:LEU:HD11	1.96	0.47
1:B:239:PHE:HE1	1:B:266:TRP:HB2	1.79	0.47
2:J:36:MET:HE2	2:J:36:MET:N	2.28	0.47
3:I:145:GLU:HA	3:I:148:LYS:HD3	1.97	0.47
1:B:25:GLN:HB2	1:B:28:ARG:NH2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1111:PRO:HD2	1:B:1211:VAL:O	2.14	0.47
1:B:1274:LEU:HD13	1:B:1281:VAL:HG21	1.97	0.47
1:A:401:THR:OG1	1:A:402:LEU:N	2.47	0.47
1:A:1519:HIS:HD2	1:A:1524:SER:HB2	1.80	0.47
1:B:232:VAL:HA	1:B:268:GLU:HG2	1.95	0.47
1:B:1325:LEU:HD12	1:B:1372:ALA:HB3	1.97	0.47
3:I:207:ASP:OD1	3:I:210:LYS:NZ	2.36	0.47
1:A:76:LEU:HD23	1:A:76:LEU:H	1.80	0.47
1:A:513:ASP:OD1	1:A:513:ASP:N	2.45	0.47
1:A:1342:ARG:HE	1:A:1384:LEU:HD21	1.80	0.47
1:B:560:ARG:NH2	1:B:595:GLU:OE2	2.48	0.47
1:B:672:MET:N	1:B:672:MET:HE2	2.29	0.47
1:B:1334:ARG:HE	1:B:1380:GLU:CD	2.23	0.47
1:B:1501:GLN:O	1:B:1505:LEU:HG	2.14	0.47
2:J:127:SER:HB2	2:J:150:LYS:O	2.15	0.47
2:J:129:PHE:CD1	3:I:146:GLN:HB2	2.50	0.47
3:L:147:LEU:O	3:L:205:LYS:HD2	2.15	0.47
1:A:615:LEU:HD13	1:A:829:THR:HG21	1.96	0.47
1:A:666:LEU:O	1:A:731:TYR:HB3	2.15	0.47
1:A:717:LEU:HD13	1:A:722:ILE:HD12	1.97	0.47
1:A:733:SER:OG	1:A:734:HIS:ND1	2.33	0.47
1:A:817:GLN:OE1	1:A:817:GLN:N	2.32	0.47
1:A:1199:GLU:HG3	1:A:1201:GLN:H	1.79	0.47
1:A:1506:LEU:HD23	1:A:1506:LEU:HA	1.80	0.47
1:A:1521:GLY:O	1:A:1524:SER:OG	2.32	0.47
1:B:303:SER:OG	1:B:305:GLY:O	2.32	0.47
1:B:377:ALA:H	1:B:381:ALA:HB2	1.80	0.47
1:A:723:ARG:NH1	1:A:725:ARG:HB2	2.29	0.47
1:A:1199:GLU:HG2	1:A:1211:VAL:HG22	1.97	0.47
1:A:1362:ALA:N	1:A:1400:TRP:O	2.39	0.47
1:B:72:ARG:HD2	1:B:879:TRP:CZ2	2.49	0.47
1:B:665:GLU:O	1:B:669:ARG:NH1	2.48	0.47
1:B:867:ASP:OD1	1:B:867:ASP:N	2.48	0.47
1:A:310:ASN:HD21	1:A:312:LEU:HB3	1.80	0.47
1:A:749:LEU:HD13	1:A:781:TRP:HD1	1.80	0.47
1:B:1017:VAL:HB	1:B:1065:VAL:HG23	1.97	0.47
1:B:1139:GLN:NE2	1:B:1325:LEU:O	2.48	0.47
1:A:203:CYS:HB3	1:A:376:HIS:HE1	1.80	0.47
1:A:706:ASP:OD2	1:A:736:ARG:NH2	2.48	0.47
1:B:846:GLU:OE2	1:B:850:ARG:NH2	2.48	0.47
3:L:20:MET:SD	3:L:20:MET:N	2.87	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:633:SER:OG	1:A:634:GLN:N	2.44	0.46
1:B:1040:ARG:NH1	1:B:1045:ASP:O	2.48	0.46
1:B:1362:ALA:HB1	1:B:1366:LEU:HD12	1.97	0.46
2:J:143:ALA:O	2:J:191:VAL:N	2.48	0.46
2:K:98:TYR:C	2:K:99:TYR:HD1	2.23	0.46
2:K:102:ARG:NH2	2:K:108:ASP:OD2	2.41	0.46
2:K:213:LYS:HA	2:K:213:LYS:HD2	1.64	0.46
1:A:423:GLU:OE2	1:A:424:ALA:N	2.47	0.46
1:B:473:VAL:HG22	1:B:516:ALA:HB3	1.96	0.46
1:B:1365:VAL:HG12	1:B:1471:LEU:HD21	1.96	0.46
2:K:213:LYS:NZ	2:K:215:ASP:OD1	2.48	0.46
3:L:60:LYS:HB2	3:L:63:GLN:HB3	1.97	0.46
1:A:15:ARG:NH1	1:A:19:ASP:HB2	2.30	0.46
1:A:115:GLU:O	1:A:119:MET:N	2.49	0.46
1:B:680:ASP:HA	1:B:683:VAL:HB	1.97	0.46
1:B:942:THR:HA	1:B:1000:PRO:HA	1.96	0.46
1:B:1134:THR:HG21	1:B:1165:ILE:HG23	1.98	0.46
1:B:1337:LYS:HE3	1:B:1374:TYR:HE1	1.81	0.46
1:A:4:THR:HB	1:A:8:LYS:HE2	1.96	0.46
1:A:696:ASN:HA	1:A:791:PHE:HB3	1.97	0.46
1:A:1502:ALA:N	1:A:1575:ARG:HH12	2.14	0.46
1:A:489:ALA:O	1:A:493:GLU:HG2	2.15	0.46
1:A:495:ASP:HA	1:A:523:ARG:NH1	2.30	0.46
1:A:657:LEU:HD13	1:A:748:THR:HB	1.95	0.46
1:A:1473:ARG:HE	1:A:1478:LEU:HG	1.81	0.46
1:B:230:VAL:HB	1:B:270:VAL:HG13	1.96	0.46
1:B:671:GLY:C	1:B:672:MET:HE2	2.40	0.46
2:K:54:ARG:O	2:K:76:ARG:NH1	2.48	0.46
1:A:549:PRO:HG3	1:A:808:GLU:HG2	1.98	0.46
1:A:1164:ALA:HB1	1:A:1376:ALA:HB1	1.98	0.46
1:B:156:MET:HE1	1:B:200:ASP:HB2	1.98	0.46
3:L:145:GLU:CD	3:L:145:GLU:H	2.24	0.46
3:L:170:TRP:CG	3:L:201:LEU:HD13	2.51	0.46
1:A:125:LEU:HD21	1:A:270:VAL:HG22	1.97	0.46
1:A:583:TRP:CZ2	1:A:653:LYS:HE3	2.51	0.46
1:A:820:SER:HA	1:A:824:GLY:H	1.80	0.46
1:B:500:GLU:HG3	1:B:866:VAL:HG21	1.98	0.46
3:I:217:GLU:OE2	3:I:219:THR:OG1	2.33	0.46
1:A:18:LEU:HD12	1:A:19:ASP:N	2.30	0.45
1:A:1057:LEU:O	1:B:1480:ARG:NE	2.49	0.45
1:B:693:ALA:H	1:B:703:ILE:HA	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:829:THR:HG22	1:B:830:LEU:HG	1.99	0.45
1:B:984:ARG:HD3	1:B:990:TRP:CE2	2.51	0.45
2:J:53:ILE:HB	2:J:74:ILE:HD12	1.98	0.45
2:K:65:ALA:HB3	2:K:68:VAL:HG22	1.97	0.45
1:A:219:GLN:HB3	1:A:221:GLU:OE1	2.16	0.45
1:A:969:GLY:O	1:A:977:ARG:NE	2.39	0.45
1:B:21:ARG:HH12	1:B:25:GLN:HG2	1.81	0.45
1:B:612:MET:SD	1:B:612:MET:N	2.89	0.45
1:A:13:LEU:HB2	1:A:16:ALA:HB3	1.98	0.45
1:A:23:ALA:O	1:A:27:ILE:HG23	2.16	0.45
1:A:66:SER:O	1:A:95:GLY:N	2.50	0.45
1:A:891:PRO:HD3	1:A:1027:ARG:NH2	2.31	0.45
1:A:1492:ARG:O	1:A:1496:LEU:HG	2.17	0.45
1:B:1294:LEU:HD23	1:B:1347:LEU:HD12	1.97	0.45
1:A:187:SER:O	1:A:191:GLY:N	2.49	0.45
1:B:391:GLN:HE21	1:B:391:GLN:HA	1.81	0.45
1:B:497:SER:HB3	1:B:500:GLU:OE1	2.17	0.45
1:B:1287:ASP:HB3	1:B:1290:ASP:HB2	1.99	0.45
2:J:162:ASN:N	2:J:202:ILE:O	2.44	0.45
2:K:172:THR:O	2:K:172:THR:OG1	2.34	0.45
1:A:55:TRP:HH2	1:A:397:THR:HB	1.81	0.45
1:A:166:ALA:HB3	1:A:169:LEU:HD22	1.97	0.45
1:A:183:SER:HA	1:A:186:VAL:HG12	1.99	0.45
1:B:33:GLU:O	1:B:218:ARG:NH2	2.49	0.45
1:A:1008:PRO:HB2	1:A:1070:THR:HB	1.97	0.45
2:J:7:VAL:O	2:J:24:CYS:HA	2.17	0.45
1:A:72:ARG:HD2	1:A:879:TRP:CZ2	2.51	0.45
1:A:117:VAL:HG12	1:A:878:TYR:HB3	1.99	0.45
1:A:815:THR:C	1:A:818:PRO:HD2	2.42	0.45
1:A:1111:PRO:HD2	1:A:1211:VAL:O	2.17	0.45
1:A:1538:4HH:HS2	1:B:266:TRP:HH2	1.81	0.45
2:J:144:ALA:HA	2:J:190:THR:HA	1.98	0.45
1:A:712:ALA:O	1:A:716:ILE:HG13	2.17	0.45
1:A:1287:ASP:HB3	1:A:1290:ASP:HB2	1.99	0.45
1:B:15:ARG:HE	1:B:15:ARG:HB3	1.53	0.45
1:B:122:GLN:CD	1:B:232:VAL:HG22	2.42	0.45
1:B:299:GLN:OE1	1:B:300:ASP:N	2.50	0.45
1:B:742:ARG:HG2	1:B:782:TYR:CE1	2.52	0.45
3:I:153:SER:HA	3:I:201:LEU:O	2.16	0.45
1:A:1166:TRP:CZ3	1:A:1201:GLN:HB3	2.52	0.45
1:B:361:ARG:HH22	1:B:365:LEU:HA	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:213:LYS:HD2	2:J:213:LYS:HA	1.80	0.45
1:B:936:LEU:HD23	1:B:966:LEU:HG	1.99	0.45
1:A:52:GLU:OE1	1:A:52:GLU:N	2.42	0.44
1:A:254:CYS:SG	1:A:265:GLY:N	2.90	0.44
1:A:1360:SER:O	1:A:1400:TRP:HD1	2.00	0.44
1:A:1510:ARG:HH21	1:A:1523:GLU:HA	1.82	0.44
1:B:1345:ASP:OD1	1:B:1346:GLU:N	2.50	0.44
1:B:1488:SER:HB3	1:B:1491:GLU:CD	2.42	0.44
1:A:12:TYR:CD1	1:A:13:LEU:HB3	2.52	0.44
1:A:364:PRO:HB2	1:A:419:GLU:OE1	2.17	0.44
1:A:911:TRP:CE3	1:A:964:VAL:HG21	2.53	0.44
1:A:1504:ALA:HA	1:A:1507:ASP:OD2	2.17	0.44
1:B:300:ASP:OD2	1:B:310:ASN:N	2.50	0.44
1:B:706:ASP:OD2	1:B:736:ARG:NH2	2.50	0.44
2:J:145:LEU:HB2	2:J:218:VAL:HG11	1.98	0.44
1:A:899:THR:HG23	1:B:904:ARG:HH22	1.82	0.44
1:A:1359:PHE:HA	1:A:1400:TRP:HE1	1.83	0.44
1:B:134:LEU:HD11	1:B:144:LEU:HD12	1.97	0.44
1:B:338:HIS:HD2	1:B:440:SER:HA	1.82	0.44
1:B:1538:4HH:HO3	1:B:1538:4HH:HL13	2.00	0.44
1:A:328:ALA:HB2	3:L:98:ARG:NH1	2.31	0.44
1:A:434:ARG:NE	1:A:454:GLU:OE1	2.35	0.44
1:A:1108:VAL:HG13	1:A:1471:LEU:HD11	2.00	0.44
1:B:364:PRO:HB2	1:B:419:GLU:OE1	2.16	0.44
1:B:474:SER:HB2	1:B:512:LEU:H	1.82	0.44
1:B:662:ILE:HD11	1:B:731:TYR:CD2	2.52	0.44
1:B:742:ARG:HG2	1:B:782:TYR:CZ	2.51	0.44
3:L:155:VAL:HG22	3:L:200:THR:HG23	1.98	0.44
1:A:289:LEU:HD13	1:A:394:ARG:HH22	1.83	0.44
1:A:491:LEU:HG	1:A:869:PRO:HD3	1.99	0.44
1:A:631:GLY:HA3	1:A:636:GLU:HA	1.99	0.44
1:A:1102:THR:OG1	1:A:1219:PRO:HG2	2.17	0.44
1:A:1248:HIS:NE2	1:A:1439:ASP:OD2	2.33	0.44
1:B:1374:TYR:O	1:B:1378:ASN:ND2	2.51	0.44
2:J:115:LEU:H	2:J:115:LEU:HD23	1.81	0.44
3:I:139:ILE:HG22	3:I:229:LYS:HE3	1.99	0.44
3:I:168:VAL:HG12	3:I:218:VAL:HG22	1.99	0.44
1:B:314:GLN:HA	1:B:317:VAL:HG12	2.00	0.44
1:B:489:ALA:O	1:B:493:GLU:HG2	2.17	0.44
1:B:524:GLU:H	1:B:524:GLU:CD	2.26	0.44
1:A:359:GLN:C	1:A:360:GLU:HG3	2.43	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:543:LYS:NZ	1:A:801:GLN:O	2.32	0.44
1:A:546:TRP:CD2	1:A:626:PRO:HB3	2.53	0.44
1:A:1003:ALA:O	1:B:1114:PRO:HB3	2.18	0.44
1:A:1067:VAL:HG22	1:A:1076:LEU:HD22	2.00	0.44
1:A:1115:LEU:HD23	1:A:1115:LEU:HA	1.90	0.44
1:A:1214:LEU:HD23	1:A:1214:LEU:HA	1.76	0.44
1:A:1564:TYR:HD2	1:A:1569:ALA:HB1	1.82	0.44
1:B:776:LEU:HD12	1:B:781:TRP:CH2	2.53	0.44
1:B:1110:TRP:HA	1:B:1211:VAL:O	2.17	0.44
1:A:1419:ARG:O	1:A:1422:GLN:HG3	2.17	0.44
1:A:1108:VAL:HG21	1:A:1365:VAL:HG11	1.99	0.44
1:A:1286:CYS:SG	1:A:1287:ASP:N	2.91	0.44
1:B:158:GLN:HG3	1:B:232:VAL:O	2.18	0.44
1:B:729:VAL:HG13	1:B:731:TYR:CE1	2.53	0.44
1:B:778:GLY:HA2	1:B:781:TRP:HD1	1.82	0.44
1:B:1262:SER:O	1:B:1286:CYS:N	2.43	0.44
1:B:1516:VAL:HG23	1:B:1547:ARG:HH21	1.83	0.44
3:L:55:ASP:OD2	3:L:55:ASP:C	2.61	0.44
1:A:300:ASP:OD2	1:A:310:ASN:N	2.49	0.43
1:A:433:PRO:O	1:A:435:ARG:NH1	2.51	0.43
1:A:552:GLY:H	1:A:554:GLN:HE22	1.66	0.43
1:A:644:GLY:O	1:A:755:GLN:NE2	2.50	0.43
1:A:685:ARG:HH22	1:A:716:ILE:HB	1.83	0.43
1:A:1342:ARG:NH2	1:A:1380:GLU:OE2	2.50	0.43
1:B:300:ASP:OD1	1:B:310:ASN:HB2	2.18	0.43
3:L:160:ASN:HA	3:L:194:THR:OG1	2.18	0.43
1:A:145:LYS:HE2	1:A:145:LYS:HB2	1.83	0.43
1:A:497:SER:O	1:A:501:VAL:HG12	2.18	0.43
1:A:580:LEU:HD11	1:A:656:ALA:HB2	1.99	0.43
1:A:1194:VAL:O	1:A:1197:SER:OG	2.25	0.43
1:B:572:ARG:NH1	1:B:575:GLU:OE1	2.33	0.43
1:B:1173:GLN:HE21	1:B:1180:ILE:C	2.26	0.43
1:A:11:GLU:OE1	2:J:104:GLY:N	2.51	0.43
1:A:405:ASP:OD1	1:A:406:LYS:N	2.47	0.43
1:A:475:ALA:O	1:A:514:GLU:HB2	2.17	0.43
1:A:799:LEU:HD23	1:A:799:LEU:HA	1.88	0.43
1:A:962:ARG:NH1	1:A:988:GLU:OE2	2.48	0.43
1:B:276:GLU:OE2	1:B:280:VAL:HB	2.18	0.43
1:B:328:ALA:N	1:B:331:ASP:OD2	2.43	0.43
1:B:546:TRP:CG	1:B:626:PRO:HB3	2.53	0.43
1:B:549:PRO:HG3	1:B:808:GLU:HG3	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:951:ASP:N	1:B:993:HIS:O	2.52	0.43
1:B:1236:GLY:N	1:B:1261:VAL:O	2.49	0.43
2:J:131:LEU:HD11	3:I:155:VAL:HG21	2.00	0.43
3:L:82:ARG:NH1	3:L:100:GLU:OE1	2.51	0.43
3:L:207:ASP:HA	3:L:210:LYS:HG3	2.00	0.43
1:A:303:SER:OG	1:A:305:GLY:O	2.36	0.43
1:A:942:THR:HA	1:A:1000:PRO:HA	1.99	0.43
1:B:506:VAL:HG21	1:B:856:TRP:HB2	2.01	0.43
1:B:692:VAL:HG23	1:B:701:VAL:HG13	2.00	0.43
1:B:1070:THR:HG23	1:B:1074:LEU:HA	2.00	0.43
1:A:380:ALA:O	1:A:383:VAL:HG12	2.19	0.43
1:B:6:SER:HA	1:B:9:VAL:HB	2.01	0.43
1:B:1029:GLY:C	1:B:1030:ILE:HD13	2.43	0.43
1:B:1162:ALA:HA	1:B:1165:ILE:HD12	2.00	0.43
1:B:1199:GLU:HG3	1:B:1211:VAL:HG11	2.00	0.43
2:K:8:GLN:HG2	2:K:24:CYS:SG	2.59	0.43
1:A:351:GLN:HA	1:A:354:LEU:HB2	2.00	0.43
1:A:963:GLU:OE2	1:A:965:GLN:NE2	2.44	0.43
1:A:1441:ALA:O	1:A:1445:GLY:N	2.39	0.43
1:B:205:SER:HB2	1:B:379:ALA:HB1	2.01	0.43
1:B:361:ARG:NH1	1:B:365:LEU:HG	2.34	0.43
1:B:370:LEU:HD12	1:B:385:GLY:HA2	2.01	0.43
1:B:983:SER:HG	1:B:993:HIS:CD2	2.32	0.43
1:B:958:ARG:HD3	1:B:959:ARG:NH1	2.34	0.43
2:J:150:LYS:NZ	3:I:202:THR:HG21	2.33	0.43
2:K:56:LYS:NZ	2:K:76:ARG:HH21	2.16	0.43
1:A:344:LEU:O	1:A:347:PRO:HD2	2.19	0.43
1:A:1569:ALA:HA	1:A:1572:ASP:OD2	2.18	0.43
1:B:1288:VAL:HA	1:B:1294:LEU:HD13	2.00	0.43
2:J:40:ARG:NE	2:J:48:GLU:OE1	2.41	0.43
3:L:218:VAL:O	3:L:226:PRO:HA	2.19	0.43
1:B:24:ARG:O	1:B:27:ILE:HG23	2.19	0.43
1:B:682:VAL:O	1:B:686:LEU:N	2.51	0.43
1:B:852:ILE:HD12	1:B:852:ILE:HA	1.90	0.43
1:B:1043:VAL:HG13	1:B:1092:GLY:HA3	2.00	0.43
1:A:586:TRP:HE1	1:A:591:VAL:HG21	1.84	0.43
1:A:634:GLN:CD	1:A:634:GLN:H	2.26	0.43
1:A:812:HIS:ND1	1:A:832:ARG:HG3	2.34	0.43
1:A:1517:LEU:HD11	1:A:1536:PHE:CE1	2.53	0.43
1:B:98:LEU:HD13	1:B:98:LEU:HA	1.87	0.43
1:B:742:ARG:H	1:B:742:ARG:HG3	1.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:62:THR:HB	2:K:74:ILE:HD11	2.01	0.43
2:K:72:PHE:HB3	2:K:85:LEU:HD11	2.00	0.43
3:L:60:LYS:NZ	3:L:104:VAL:O	2.32	0.43
3:L:74:ASN:HD22	3:L:74:ASN:HA	1.59	0.43
1:A:441:PHE:HD1	1:A:447:ASN:HB3	1.84	0.42
1:A:560:ARG:NE	1:A:593:ARG:O	2.48	0.42
1:A:765:VAL:O	1:A:790:ARG:NH2	2.52	0.42
1:A:912:SER:HB3	1:A:961:SER:HB3	2.01	0.42
1:A:1538:4HH:HR	1:A:1538:4HH:HO2	1.43	0.42
2:K:86:GLN:NE2	2:K:88:ASN:OD1	2.51	0.42
1:A:669:ARG:NH2	1:A:737:HIS:HB3	2.34	0.42
1:A:1107:ARG:HD2	1:A:1108:VAL:H	1.83	0.42
1:B:203:CYS:HB3	1:B:376:HIS:CE1	2.55	0.42
1:B:312:LEU:HB3	1:B:316:ARG:NH1	2.31	0.42
1:B:396:GLU:HG2	1:B:434:ARG:HH12	1.84	0.42
2:J:68:VAL:HB	2:J:72:PHE:HD2	1.83	0.42
2:K:146:GLY:HA2	2:K:161:TRP:CZ2	2.55	0.42
1:A:365:LEU:O	1:A:418:ILE:HD12	2.19	0.42
1:A:383:VAL:O	1:A:387:ILE:HG12	2.19	0.42
1:A:572:ARG:HD2	1:A:572:ARG:HA	1.90	0.42
1:B:33:GLU:OE1	1:B:277:ARG:NH2	2.41	0.42
2:K:77:ASP:HB2	2:K:84:TYR:HE2	1.84	0.42
1:A:89:THR:C	1:A:240:VAL:HG12	2.45	0.42
1:A:477:SER:O	1:A:480:SER:OG	2.31	0.42
1:A:1152:VAL:HG11	1:A:1169:VAL:HG21	2.01	0.42
1:B:670:GLY:CA	1:B:705:GLY:O	2.67	0.42
1:B:1248:HIS:CD2	1:B:1435:MET:HB3	2.54	0.42
1:B:1407:SER:HB2	1:B:1409:MET:HE2	2.01	0.42
2:K:162:ASN:HA	2:K:202:ILE:HG12	2.01	0.42
3:I:170:TRP:CG	3:I:201:LEU:HD22	2.54	0.42
3:L:215:ALA:HA	3:L:230:SER:HA	2.01	0.42
1:A:1214:LEU:HD21	1:A:1449:VAL:HG21	2.00	0.42
1:B:183:SER:HA	1:B:186:VAL:HG12	2.00	0.42
1:B:729:VAL:HG13	1:B:731:TYR:CD1	2.55	0.42
1:B:848:PHE:HA	1:B:852:ILE:HG22	2.02	0.42
1:B:1337:LYS:HE3	1:B:1374:TYR:CE1	2.54	0.42
1:B:1401:GLY:HA3	1:B:1426:MET:HE2	2.01	0.42
3:L:191:LYS:HA	3:L:191:LYS:HE3	2.02	0.42
1:A:242:PHE:HA	1:A:245:GLN:OE1	2.19	0.42
1:A:248:LEU:HA	1:A:264:THR:H	1.85	0.42
1:A:299:GLN:OE1	1:A:300:ASP:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:310:ASN:O	1:A:313:SER:OG	2.37	0.42
1:A:312:LEU:HD12	1:A:312:LEU:HA	1.89	0.42
1:A:409:LEU:H	1:A:409:LEU:CD2	2.33	0.42
1:A:1235:THR:OG1	1:A:1313:THR:N	2.52	0.42
1:B:11:GLU:OE2	2:K:105:THR:N	2.41	0.42
1:B:105:ASP:HB2	1:B:873:PHE:HB3	2.01	0.42
1:B:144:LEU:HD23	1:B:144:LEU:HA	1.85	0.42
1:B:405:ASP:OD1	1:B:406:LYS:N	2.52	0.42
1:B:434:ARG:NE	1:B:454:GLU:OE1	2.34	0.42
1:B:607:ALA:O	1:B:611:VAL:HG23	2.19	0.42
1:A:20:LEU:HG	1:B:20:LEU:HB3	2.02	0.42
1:A:198:THR:OG1	1:B:200:ASP:OD1	2.38	0.42
1:A:411:VAL:HB	1:A:413:TRP:CE2	2.55	0.42
1:B:1492:ARG:H	1:B:1492:ARG:HG3	1.68	0.42
1:B:1527:SER:HB2	1:B:1568:PRO:HD3	2.02	0.42
2:J:16:PRO:HG3	2:J:118:VAL:HG12	2.01	0.42
3:I:82:ARG:HG3	3:I:96:ILE:HD11	2.00	0.42
1:A:122:GLN:NE2	1:A:232:VAL:H	2.18	0.42
1:A:495:ASP:OD1	1:A:495:ASP:C	2.62	0.42
1:A:891:PRO:HD3	1:A:1027:ARG:HH21	1.84	0.42
1:A:1385:ALA:CB	1:A:1397:SER:HB2	2.49	0.42
1:B:495:ASP:HA	1:B:523:ARG:CZ	2.50	0.42
1:B:675:VAL:HG13	1:B:724:VAL:HG12	2.00	0.42
1:B:1511:ARG:HA	1:B:1522:ALA:HB2	2.02	0.42
2:K:3:GLU:OE2	2:K:5:GLN:HB3	2.19	0.42
1:A:300:ASP:OD1	1:A:310:ASN:HB3	2.20	0.42
1:A:438:VAL:O	1:A:449:HIS:ND1	2.53	0.42
1:A:812:HIS:ND1	1:A:813:PRO:HD2	2.33	0.42
1:A:813:PRO:HD3	1:A:830:LEU:O	2.20	0.42
1:B:122:GLN:OE1	1:B:230:VAL:HG22	2.20	0.42
2:J:202:ILE:HG23	2:J:215:ASP:OD1	2.20	0.42
3:L:37:ILE:HG23	3:L:94:LEU:HB3	2.02	0.42
1:A:208:VAL:O	1:A:211:HIS:HB3	2.20	0.42
1:A:481:LEU:HD23	1:A:481:LEU:HA	1.87	0.42
1:A:551:GLN:H	1:A:551:GLN:CD	2.28	0.42
1:A:769:TRP:HB3	1:A:771:ARG:CZ	2.50	0.42
1:A:1403:TRP:CZ3	1:A:1434:GLY:HA3	2.55	0.42
1:A:1410:THR:HG22	1:A:1413:LEU:HD12	2.02	0.42
1:B:623:GLY:HA2	1:B:625:ARG:HH12	1.85	0.42
1:B:948:LEU:HD11	1:B:994:ALA:HB1	2.02	0.42
1:B:1357:VAL:HA	1:B:1396:VAL:HG13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1403:TRP:CD2	1:B:1409:MET:HE3	2.54	0.42
1:B:1543:GLU:O	1:B:1547:ARG:HG3	2.19	0.42
2:J:201:TYR:O	2:J:217:LYS:HD2	2.20	0.42
1:B:1152:VAL:O	1:B:1183:ALA:N	2.48	0.41
1:B:1345:ASP:HB2	1:B:1388:ARG:HD2	2.02	0.41
3:I:40:ARG:HH21	3:I:92:PHE:H	1.68	0.41
1:A:230:VAL:CG1	1:A:270:VAL:HG13	2.49	0.41
1:A:821:GLU:OE1	1:A:822:LEU:N	2.53	0.41
1:A:8:LYS:O	1:A:11:GLU:HG3	2.20	0.41
1:A:322:LEU:HD12	1:A:322:LEU:HA	1.82	0.41
1:A:586:TRP:CE2	1:A:603:VAL:HG22	2.55	0.41
1:B:554:GLN:N	1:B:554:GLN:OE1	2.52	0.41
1:B:853:ASP:OD1	1:B:853:ASP:N	2.51	0.41
2:K:161:TRP:HB3	2:K:166:LEU:HB3	2.03	0.41
3:I:157:LEU:HD21	3:I:159:ASN:HB2	2.02	0.41
1:A:267:SER:N	1:A:376:HIS:O	2.53	0.41
1:A:600:ARG:HD3	1:A:602:ASP:OD1	2.20	0.41
1:A:798:LEU:HD12	1:A:803:HIS:CG	2.56	0.41
1:B:385:GLY:O	1:B:388:LYS:HG2	2.20	0.41
2:J:17:GLY:N	2:J:90:LEU:O	2.36	0.41
3:L:28:PRO:HB2	3:L:129:LYS:HD3	2.02	0.41
1:A:113:PRO:O	1:A:117:VAL:HG22	2.21	0.41
1:A:371:LYS:HE2	1:A:376:HIS:CD2	2.55	0.41
1:B:246:ARG:N	1:B:246:ARG:HH11	2.18	0.41
1:B:810:SER:OG	1:B:812:HIS:O	2.38	0.41
1:B:945:VAL:HB	1:B:1055:VAL:HB	2.02	0.41
1:B:1359:PHE:CE1	1:B:1398:ILE:HD11	2.56	0.41
1:B:1473:ARG:CZ	1:B:1478:LEU:H	2.34	0.41
3:L:185:VAL:HG22	3:L:197:LEU:HD12	2.02	0.41
1:A:149:THR:HG23	1:A:192:LEU:HD13	2.02	0.41
1:A:474:SER:HA	1:A:514:GLU:O	2.21	0.41
1:A:859:MET:H	1:A:859:MET:CE	2.32	0.41
1:A:1173:GLN:HE21	1:A:1180:ILE:C	2.28	0.41
1:A:1173:GLN:NE2	1:A:1180:ILE:O	2.51	0.41
1:A:1346:GLU:HA	1:A:1349:ARG:HD2	2.02	0.41
1:A:1473:ARG:HH21	1:A:1478:LEU:N	2.09	0.41
1:A:1501:GLN:HA	1:A:1575:ARG:HH22	1.84	0.41
1:B:262:ASP:OD1	1:B:262:ASP:N	2.53	0.41
1:B:1461:THR:HG23	1:B:1466:GLY:HA3	2.02	0.41
1:B:1463:LYS:HD2	1:B:1463:LYS:HA	1.84	0.41
2:J:31:PHE:HZ	2:J:76:ARG:HB2	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:158:THR:OG1	2:K:206:ASN:HB3	2.21	0.41
3:L:168:VAL:HA	3:L:217:GLU:O	2.21	0.41
3:L:204:SER:OG	3:L:207:ASP:OD2	2.39	0.41
1:A:119:MET:CE	1:A:176:GLY:HA2	2.51	0.41
1:A:315:GLN:NE2	1:A:352:ALA:O	2.50	0.41
1:A:1362:ALA:HA	1:A:1399:ALA:HB1	2.03	0.41
1:A:1403:TRP:CZ3	1:A:1431:ALA:HA	2.55	0.41
1:B:121:PRO:O	1:B:124:ARG:N	2.53	0.41
1:B:631:GLY:HA3	1:B:636:GLU:HA	2.02	0.41
1:B:912:SER:O	1:B:916:GLN:N	2.50	0.41
2:J:68:VAL:HB	2:J:72:PHE:CD2	2.55	0.41
3:L:80:PRO:HB2	3:L:82:ARG:HG2	2.02	0.41
1:A:94:GLN:CD	1:A:253:ARG:HH12	2.29	0.41
1:A:367:LEU:HB2	1:A:418:ILE:HD11	2.03	0.41
1:B:560:ARG:HB3	1:B:593:ARG:HA	2.03	0.41
1:B:1110:TRP:HB3	1:B:1210:SER:HB2	2.03	0.41
1:B:1426:MET:SD	1:B:1451:ALA:HB1	2.61	0.41
2:K:40:ARG:HG3	2:K:48:GLU:HB3	2.02	0.41
1:A:1:MET:HE1	3:I:18:VAL:HA	2.02	0.41
1:A:20:LEU:CG	1:B:20:LEU:HB3	2.51	0.41
1:A:479:GLU:OE1	1:A:479:GLU:N	2.38	0.41
1:A:675:VAL:HA	1:A:724:VAL:HG12	2.03	0.41
1:A:768:GLU:HG2	1:A:769:TRP:N	2.36	0.41
1:A:1013:ASP:OD1	1:A:1013:ASP:N	2.53	0.41
1:A:1181:VAL:HG13	1:A:1200:PRO:HA	2.03	0.41
1:A:1526:HIS:HB3	1:A:1529:ARG:HH12	1.85	0.41
1:B:12:TYR:HA	2:K:106:LEU:HD11	2.02	0.41
1:B:54:LEU:O	1:B:58:VAL:HG23	2.20	0.41
1:B:82:PRO:HA	1:B:84:ARG:NH2	2.35	0.41
1:B:391:GLN:O	1:B:394:ARG:HB3	2.20	0.41
1:B:566:SER:OG	1:B:569:PHE:HB3	2.21	0.41
1:B:951:ASP:CG	1:B:992:ARG:HH21	2.29	0.41
1:B:1051:VAL:HB	1:B:1091:ARG:HB2	2.03	0.41
1:B:1186:ASP:OD1	1:B:1186:ASP:N	2.54	0.41
1:B:1353:LEU:O	1:B:1394:PRO:HG3	2.21	0.41
2:K:36:MET:HE2	2:K:36:MET:N	2.35	0.41
3:I:95:LYS:NZ	3:I:97:SER:HB3	2.35	0.41
3:I:96:ILE:HD12	3:I:96:ILE:HA	1.91	0.41
3:L:53:TYR:O	3:L:112:SER:N	2.53	0.41
1:A:108:PHE:HA	1:A:476:ARG:HD2	2.03	0.41
1:A:123:GLN:HE21	1:A:123:GLN:HB2	1.58	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:398:LEU:HG	1:A:427:TRP:HB2	2.03	0.41
1:A:581:ALA:HA	1:A:584:ILE:HG12	2.03	0.41
1:A:763:SER:O	1:A:767:SER:N	2.54	0.41
1:B:580:LEU:HD23	1:B:580:LEU:HA	1.77	0.41
1:B:1360:SER:O	1:B:1400:TRP:NE1	2.54	0.41
2:K:144:ALA:HB2	2:K:190:THR:HG22	2.02	0.41
3:I:31:PRO:HA	3:I:99:VAL:HB	2.03	0.41
1:A:693:ALA:N	1:A:702:VAL:O	2.53	0.40
1:A:1232:VAL:HG22	1:A:1309:ALA:HB3	2.03	0.40
1:A:1549:ALA:HA	1:A:1552:THR:HG22	2.02	0.40
1:B:36:ALA:N	1:B:276:GLU:O	2.53	0.40
1:B:1545:ARG:HG3	1:B:1556:LEU:HB2	2.03	0.40
1:A:24:ARG:O	1:A:27:ILE:HG12	2.20	0.40
1:A:119:MET:HE2	1:A:176:GLY:HA2	2.03	0.40
1:B:299:GLN:HA	1:B:446:THR:HA	2.03	0.40
1:B:366:TRP:HE3	1:B:421:LEU:HD13	1.85	0.40
1:B:471:LEU:HB2	1:B:518:VAL:HG13	2.03	0.40
1:B:473:VAL:HG23	1:B:481:LEU:HD11	2.03	0.40
1:B:855:ASP:OD1	1:B:855:ASP:N	2.48	0.40
2:K:41:GLN:HE22	2:K:45:LYS:C	2.28	0.40
1:A:86:ARG:O	1:A:89:THR:OG1	2.39	0.40
1:A:125:LEU:HD21	1:A:270:VAL:CG2	2.52	0.40
1:A:255:LYS:HB3	1:A:258:ALA:HB3	2.03	0.40
1:A:1112:GLU:HA	1:A:1209:ALA:O	2.21	0.40
1:A:1400:TRP:CD1	1:A:1400:TRP:H	2.38	0.40
1:A:1537:ASP:H	1:A:1540:THR:HG1	1.68	0.40
1:B:248:LEU:HA	1:B:264:THR:H	1.86	0.40
1:B:365:LEU:HA	1:B:365:LEU:HD23	1.81	0.40
1:B:429:ARG:NH2	1:B:455:ALA:O	2.54	0.40
2:K:65:ALA:O	2:K:69:LYS:N	2.55	0.40
3:I:163:PRO:HA	3:I:195:TYR:HE2	1.86	0.40
3:L:31:PRO:HA	3:L:99:VAL:HG13	2.03	0.40
1:A:267:SER:O	1:A:377:ALA:HA	2.22	0.40
1:A:563:LEU:HD22	1:A:592:LEU:HD11	2.03	0.40
1:A:769:TRP:HB3	1:A:771:ARG:NH1	2.36	0.40
1:A:893:LEU:HD11	1:A:935:ARG:HB3	2.03	0.40
1:B:524:GLU:OE1	1:B:524:GLU:N	2.46	0.40
1:B:555:TRP:CG	1:B:832:ARG:HG3	2.57	0.40
1:B:763:SER:O	1:B:767:SER:N	2.54	0.40
3:L:22:GLN:OE1	3:L:22:GLN:N	2.54	0.40
3:L:54:LEU:HD22	3:L:92:PHE:CG	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L:82:ARG:HG2	3:L:82:ARG:H	1.53	0.40
1:A:699:SER:O	1:A:699:SER:OG	2.39	0.40
1:B:77:ASP:OD1	1:B:77:ASP:N	2.54	0.40
1:B:411:VAL:HB	1:B:413:TRP:CE2	2.57	0.40
1:B:452:LEU:HD23	1:B:452:LEU:HA	1.84	0.40
1:B:653:LYS:HE2	1:B:657:LEU:HD11	2.03	0.40
1:B:1517:LEU:HB2	1:B:1536:PHE:CE1	2.57	0.40
3:I:206:ALA:O	3:I:210:LYS:N	2.55	0.40
3:L:82:ARG:HH11	3:L:96:ILE:HD11	1.86	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	1573/1869 (84%)	1533 (98%)	40 (2%)	0	100	100
1	B	1568/1869 (84%)	1523 (97%)	45 (3%)	0	100	100
2	J	199/249 (80%)	196 (98%)	3 (2%)	0	100	100
2	K	199/249 (80%)	194 (98%)	5 (2%)	0	100	100
3	I	203/236 (86%)	198 (98%)	5 (2%)	0	100	100
3	L	203/236 (86%)	196 (97%)	7 (3%)	0	100	100
All	All	3945/4708 (84%)	3840 (97%)	105 (3%)	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	1167/1389 (84%)	1146 (98%)	21 (2%)	54	71
1	B	1165/1389 (84%)	1138 (98%)	27 (2%)	45	63
2	J	170/203 (84%)	167 (98%)	3 (2%)	54	71
2	K	170/203 (84%)	169 (99%)	1 (1%)	84	88
3	I	185/208 (89%)	181 (98%)	4 (2%)	47	65
3	L	185/208 (89%)	183 (99%)	2 (1%)	70	79
All	All	3042/3600 (84%)	2984 (98%)	58 (2%)	52	69

All (58) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	27	ILE
1	A	233	MET
1	A	322	LEU
1	A	351	GLN
1	A	374	ILE
1	A	496	VAL
1	A	518	VAL
1	A	544	VAL
1	A	647	SER
1	A	695	VAL
1	A	708	HIS
1	A	805	VAL
1	A	1074	LEU
1	A	1211	VAL
1	A	1261	VAL
1	A	1286	CYS
1	A	1297	VAL
1	A	1525	VAL
1	A	1544	LEU
1	A	1545	ARG
1	A	1555	THR
1	B	27	ILE
1	B	77	ASP
1	B	79	LEU
1	B	207	LEU
1	B	244	ARG
1	B	331	ASP

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Mol	Chain	Res	Type
1	B	335	VAL
1	B	365	LEU
1	B	383	VAL
1	B	420	LEU
1	B	497	SER
1	B	518	VAL
1	B	555	TRP
1	B	565	GLU
1	B	568	VAL
1	B	587	SER
1	B	589	VAL
1	B	601	VAL
1	B	743	ASP
1	B	765	VAL
1	B	807	VAL
1	B	1240	THR
1	B	1396	VAL
1	B	1429	LEU
1	B	1454	ASP
1	B	1516	VAL
1	B	1561	ILE
2	J	25	THR
2	J	84	TYR
2	J	204	ASN
2	K	61	THR
3	I	37	ILE
3	I	68	LEU
3	I	81	ASP
3	I	106	VAL
3	L	37	ILE
3	L	99	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (17) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	534	ASN
1	A	696	ASN
1	A	1519	HIS
1	B	310	ASN
1	B	315	GLN
1	B	391	GLN
1	B	447	ASN

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Mol	Chain	Res	Type
1	B	784	ASN
1	B	877	HIS
1	B	1082	GLN
1	B	1501	GLN
2	J	171	HIS
2	K	86	GLN
2	K	211	ASN
3	I	52	ASN
3	I	177	GLN
3	L	74	ASN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains (i)

2 non-standard protein/DNA/RNA residues are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
1	4HH	B	1538	1	22,26,27	1.22	1 (4%)	27,35,37	0.97	2 (7%)
1	4HH	A	1538	1	22,26,27	1.21	1 (4%)	27,35,37	0.92	1 (3%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	4HH	B	1538	1	-	18/33/35/37	-
1	4HH	A	1538	1	-	20/33/35/37	-

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	1538	4HH	CL3-NN	2.41	1.39	1.33
1	A	1538	4HH	CL3-NN	2.32	1.39	1.33

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	1538	4HH	O1P-P-O2P	2.24	122.85	112.44
1	A	1538	4HH	O1P-P-O2P	2.23	122.84	112.44
1	B	1538	4HH	CO-CP-CQ	-2.01	109.04	112.39

There are no chirality outliers.

All (38) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	A	1538	4HH	CA-CB-OG-P
1	A	1538	4HH	CB-OG-P-O1P
1	A	1538	4HH	CB-OG-P-O3P
1	A	1538	4HH	O3P-CJ-CK-CL1
1	A	1538	4HH	O3P-CJ-CK-CL2
1	A	1538	4HH	O3P-CJ-CK-CM
1	A	1538	4HH	CJ-CK-CM-CL3
1	A	1538	4HH	CM-CL3-NN-CO
1	A	1538	4HH	CJ-O3P-P-OG
1	A	1538	4HH	CJ-O3P-P-O1P
1	A	1538	4HH	NN-CO-CP-CQ
1	B	1538	4HH	CA-CB-OG-P
1	B	1538	4HH	CB-OG-P-O2P
1	B	1538	4HH	CB-OG-P-O3P
1	B	1538	4HH	O3P-CJ-CK-CL1
1	B	1538	4HH	O3P-CJ-CK-CL2
1	B	1538	4HH	O3P-CJ-CK-CM
1	B	1538	4HH	CJ-CK-CM-CL3
1	B	1538	4HH	CJ-CK-CM-OM
1	B	1538	4HH	CL1-CK-CM-CL3
1	B	1538	4HH	CL1-CK-CM-OM
1	B	1538	4HH	CL2-CK-CM-CL3
1	B	1538	4HH	CL2-CK-CM-OM
1	B	1538	4HH	CM-CL3-NN-CO
1	B	1538	4HH	CP-CQ-NR-CS
1	A	1538	4HH	ON-CL3-NN-CO
1	B	1538	4HH	ON-CL3-NN-CO

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Mol	Chain	Res	Type	Atoms
1	B	1538	4HH	OR-CQ-NR-CS
1	A	1538	4HH	CO-CP-CQ-OR
1	A	1538	4HH	CO-CP-CQ-NR
1	A	1538	4HH	CL2-CK-CM-CL3
1	A	1538	4HH	ON-CL3-CM-OM
1	A	1538	4HH	CJ-O3P-P-O2P
1	B	1538	4HH	CB-OG-P-O1P
1	B	1538	4HH	NN-CO-CP-CQ
1	A	1538	4HH	CL1-CK-CM-OM
1	A	1538	4HH	CL1-CK-CM-CL3
1	A	1538	4HH	NN-CL3-CM-OM

There are no ring outliers.

2 monomers are involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	B	1538	4HH	1	0
1	A	1538	4HH	4	0

5.5 Carbohydrates (i)

There are no oligosaccharides 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.

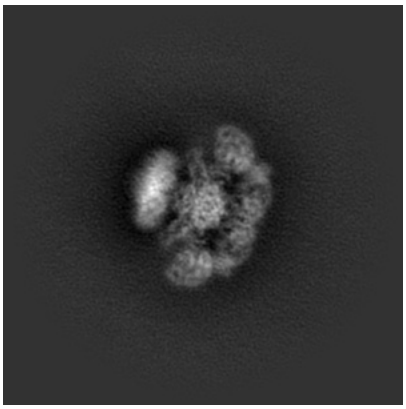
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-71497. These allow visual inspection of the internal detail of the map and identification of artifacts.

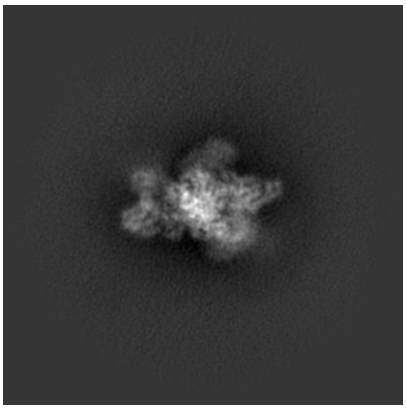
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

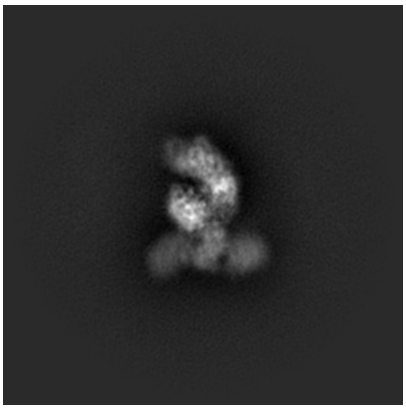
6.1.1 Primary map



X

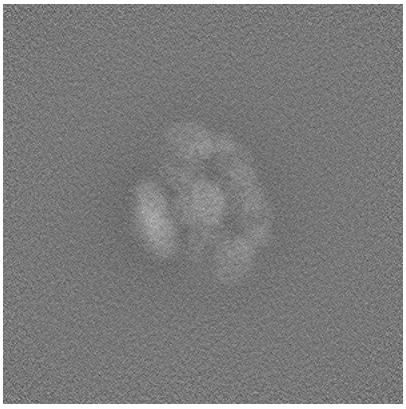


Y

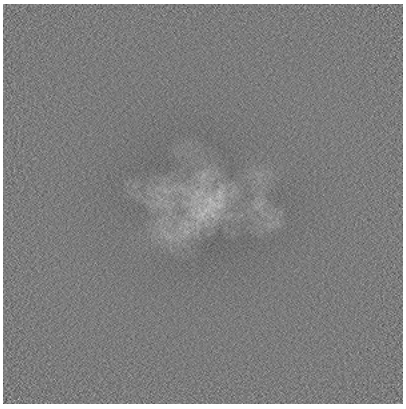


Z

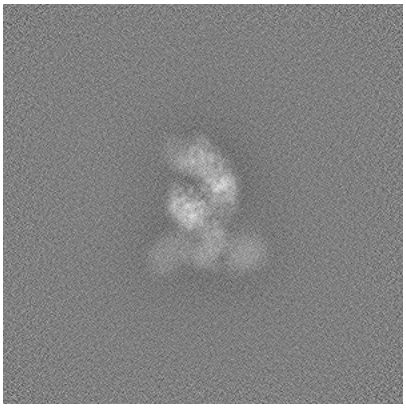
6.1.2 Raw map



X



Y

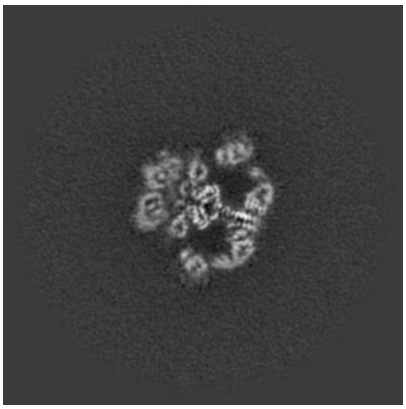


Z

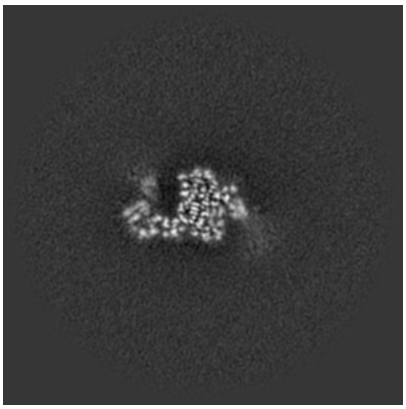
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

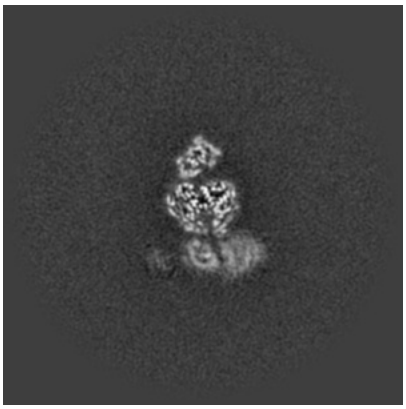
6.2.1 Primary map



X Index: 300

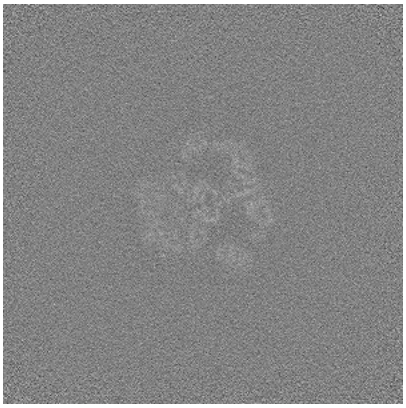


Y Index: 300

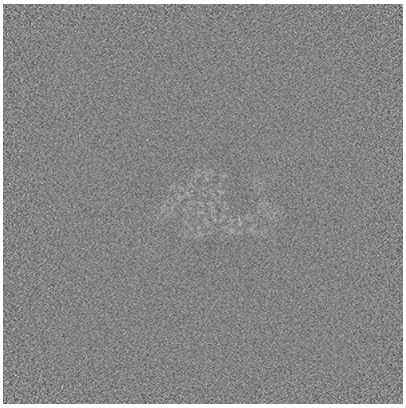


Z Index: 300

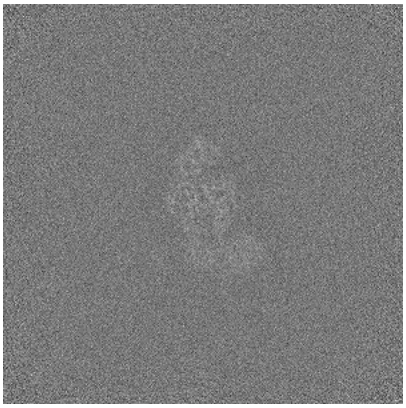
6.2.2 Raw map



X Index: 300



Y Index: 300

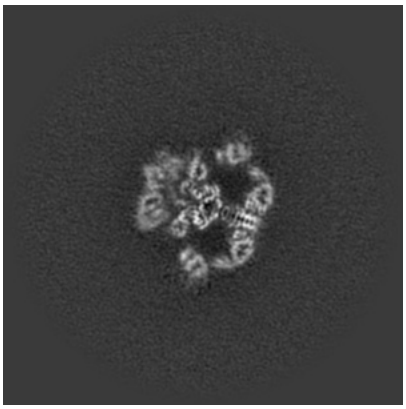


Z Index: 300

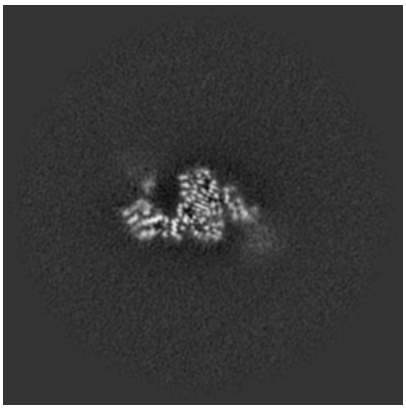
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

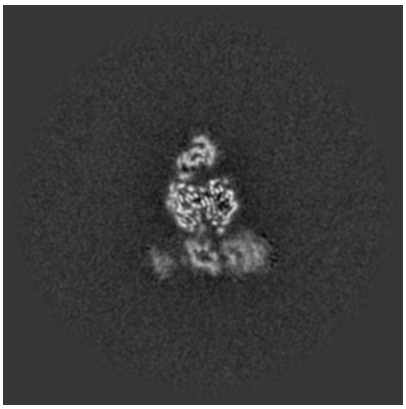
6.3.1 Primary map



X Index: 298

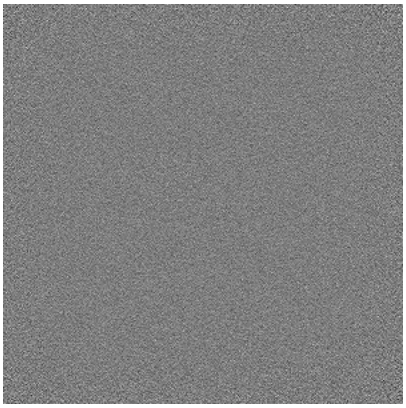


Y Index: 297

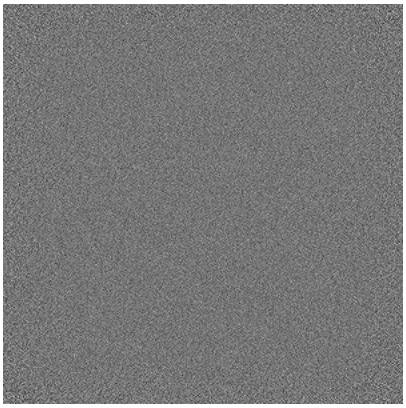


Z Index: 306

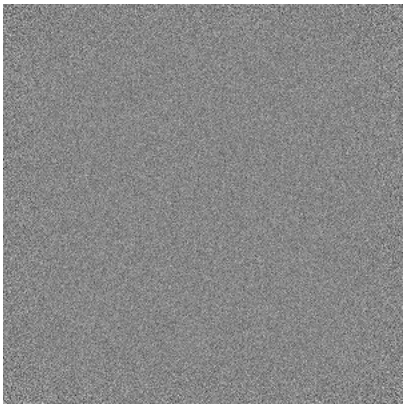
6.3.2 Raw map



X Index: 0



Y Index: 0

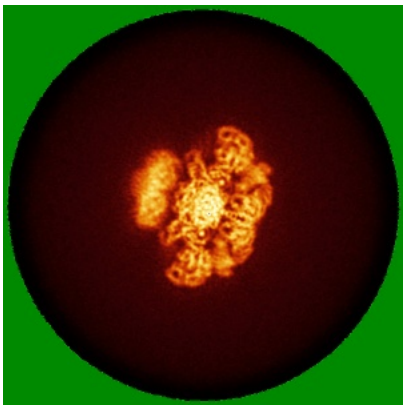


Z Index: 0

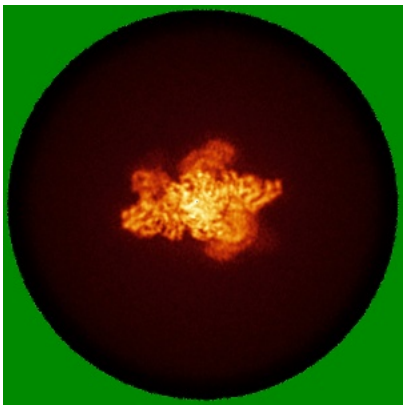
The images above show the largest variance slices of the map in three orthogonal directions.

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

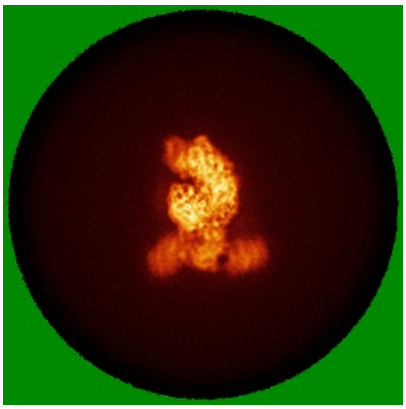
6.4.1 Primary map



X

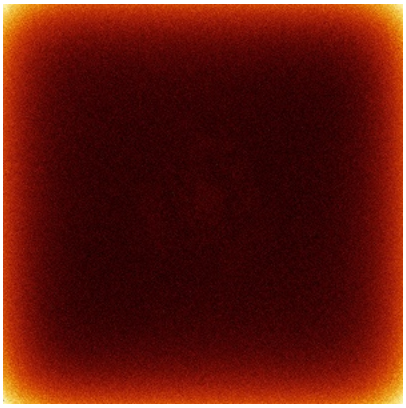


Y

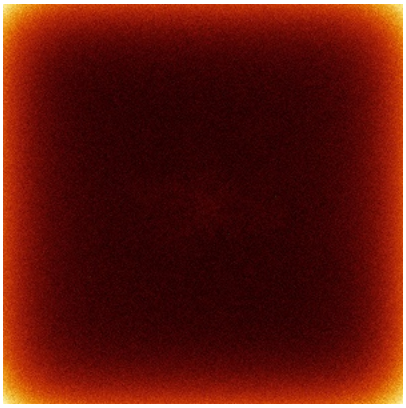


Z

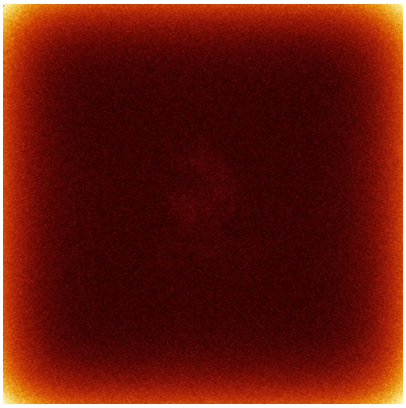
6.4.2 Raw map



X



Y

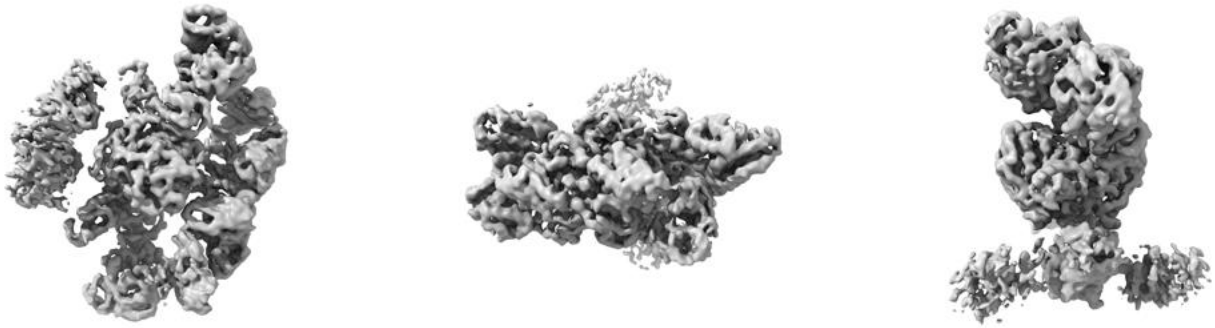


Z

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)

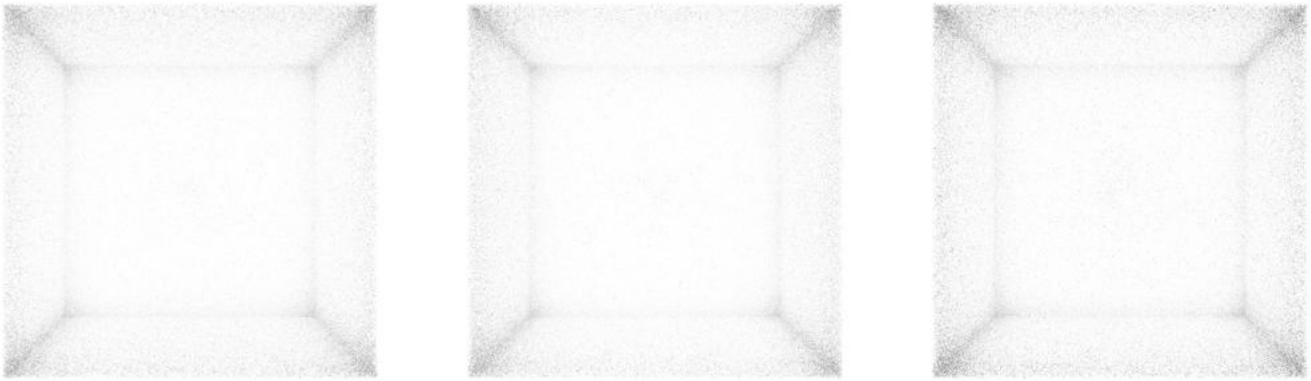
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.0502. 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.

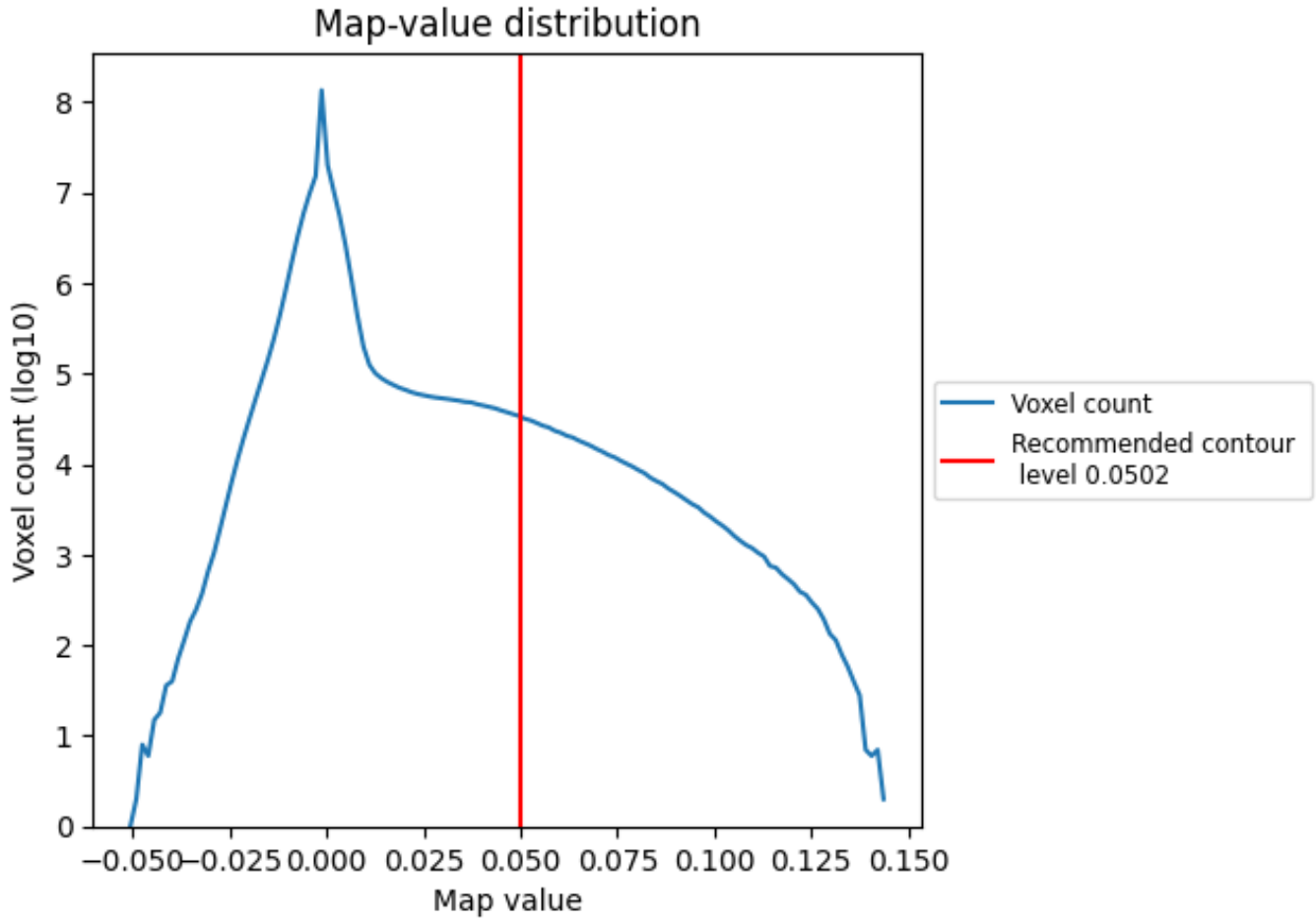
6.6 Mask visualisation (i)

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

7 Map analysis

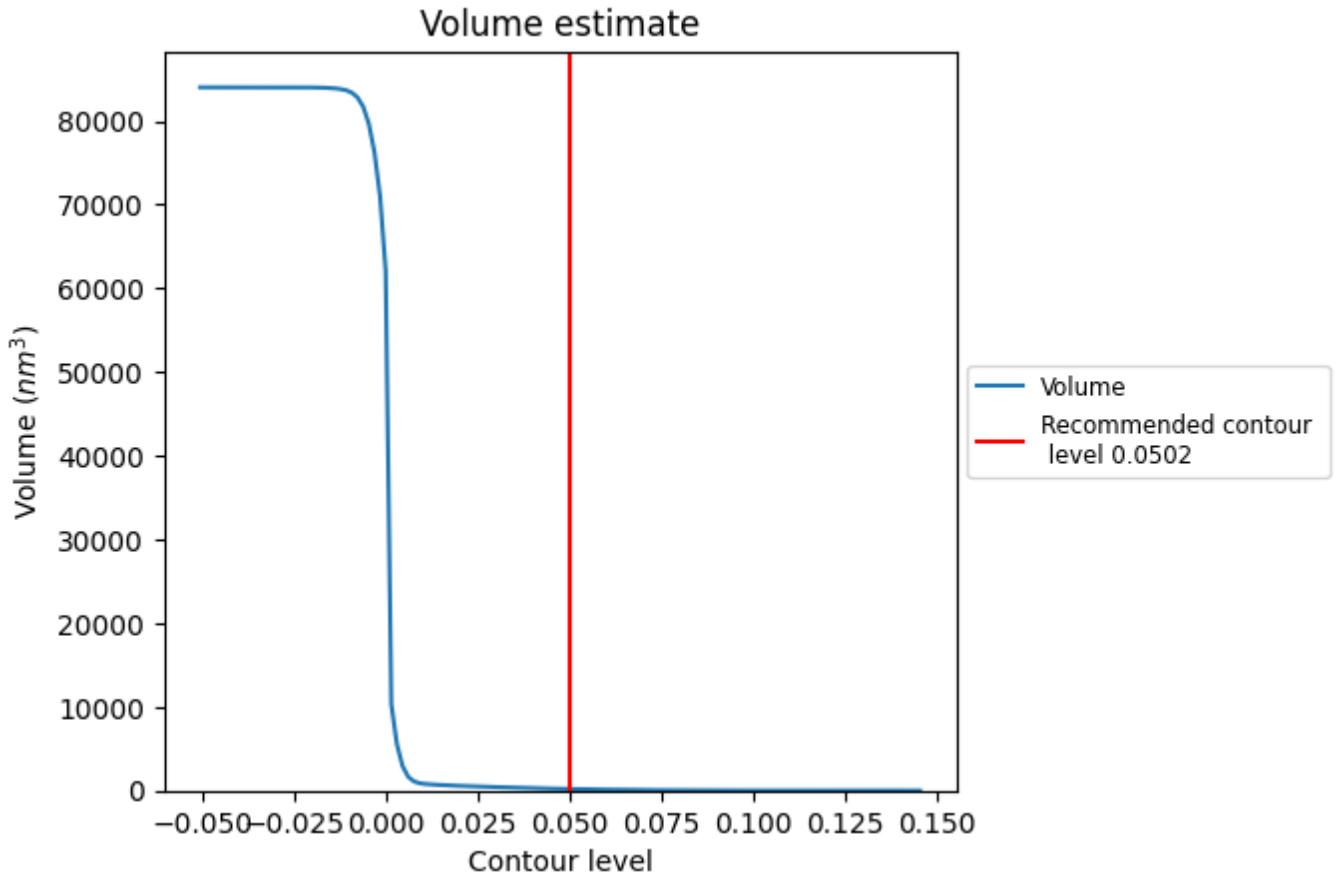
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

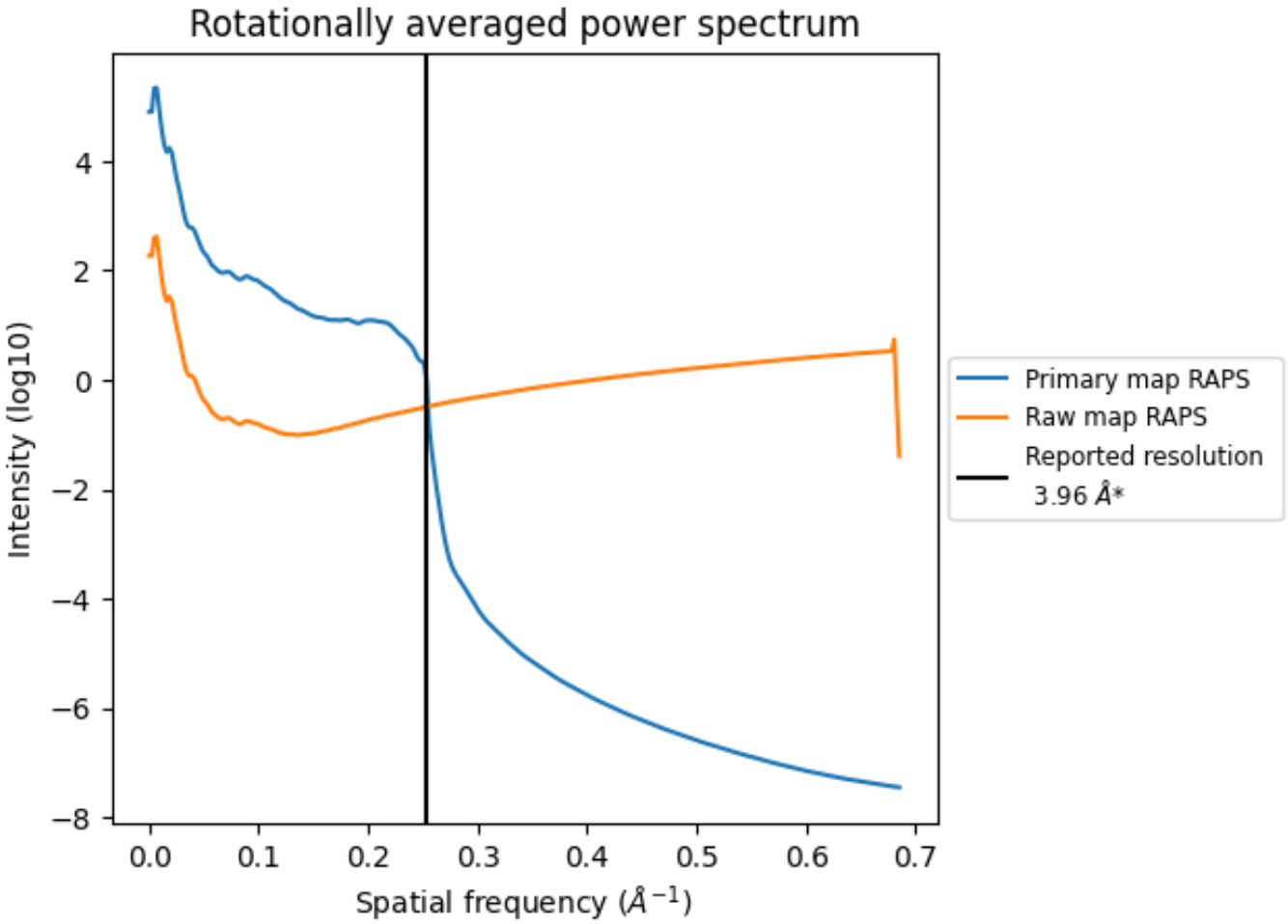
7.2 Volume estimate



The volume at the recommended contour level is 183 nm^3; this corresponds to an approximate mass of 165 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)

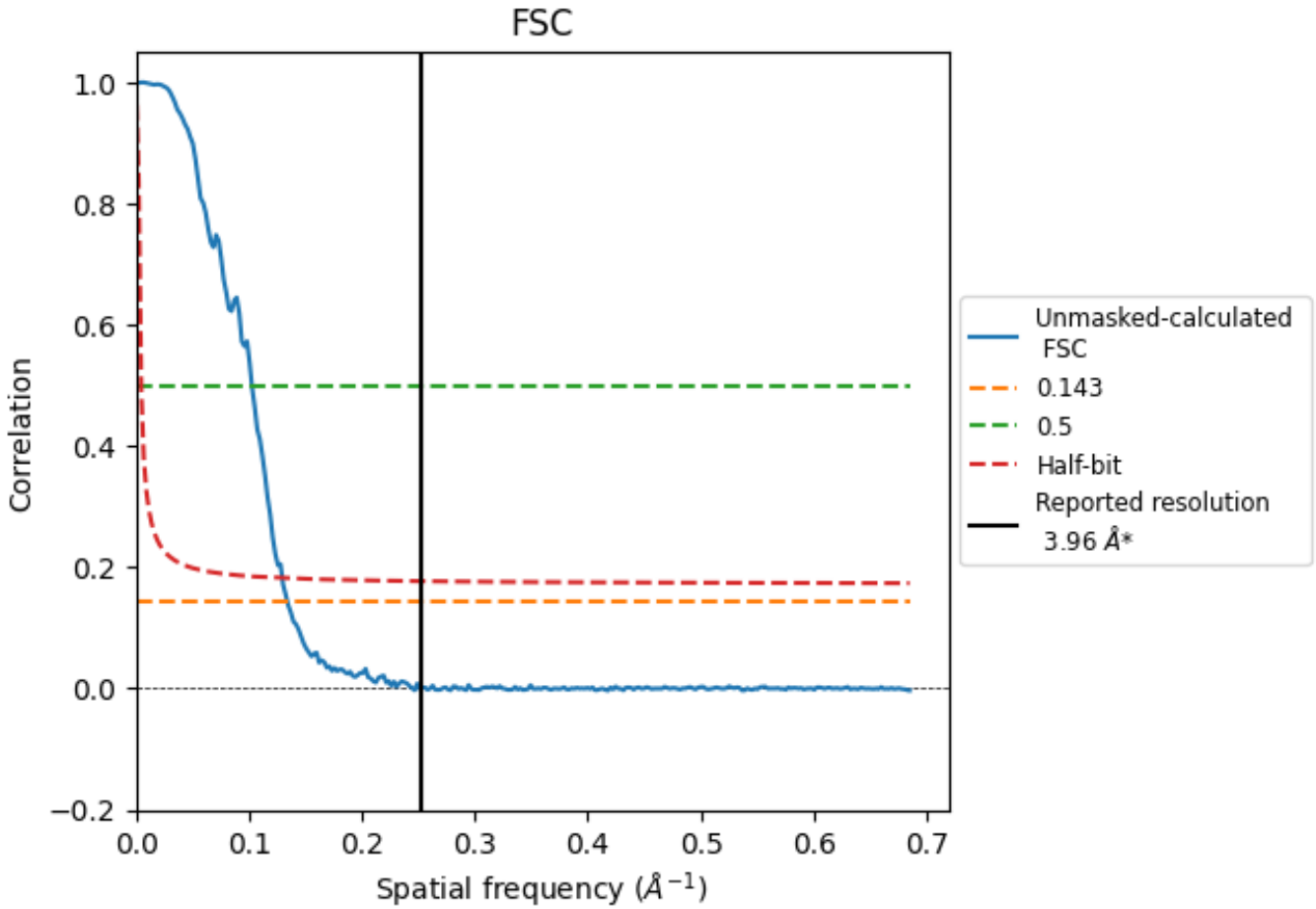


*Reported resolution corresponds to spatial frequency of 0.253 Å^{-1}

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 0.253 Å^{-1}

8.2 Resolution estimates (i)

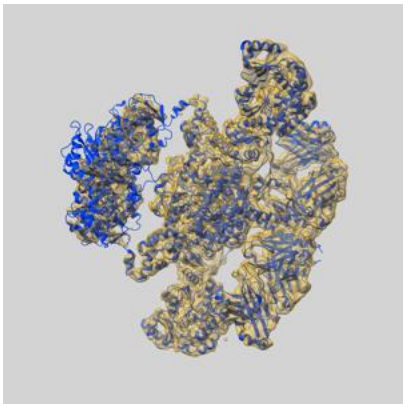
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.96	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	7.46	9.76	7.73

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

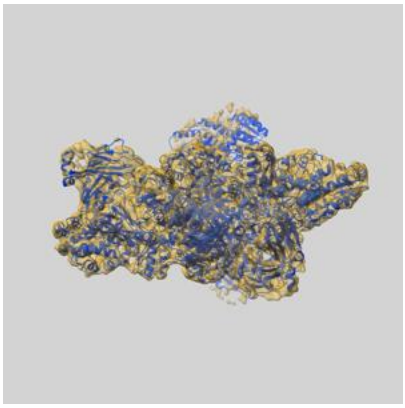
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-71497 and PDB model 9PC6. Per-residue inclusion information can be found in section 3 on page 7.

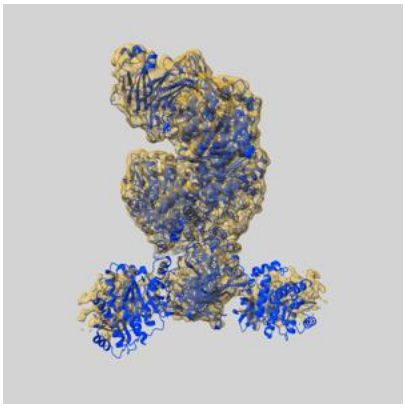
9.1 Map-model overlay



X



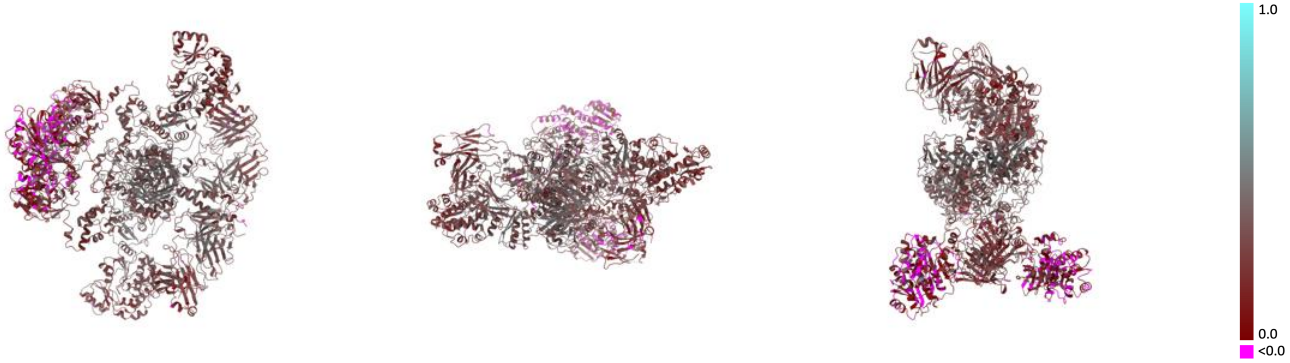
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0502 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

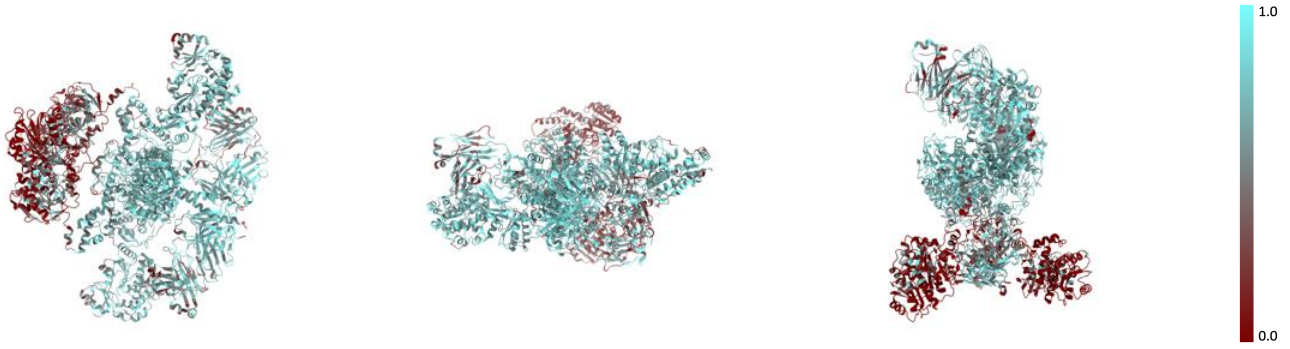
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

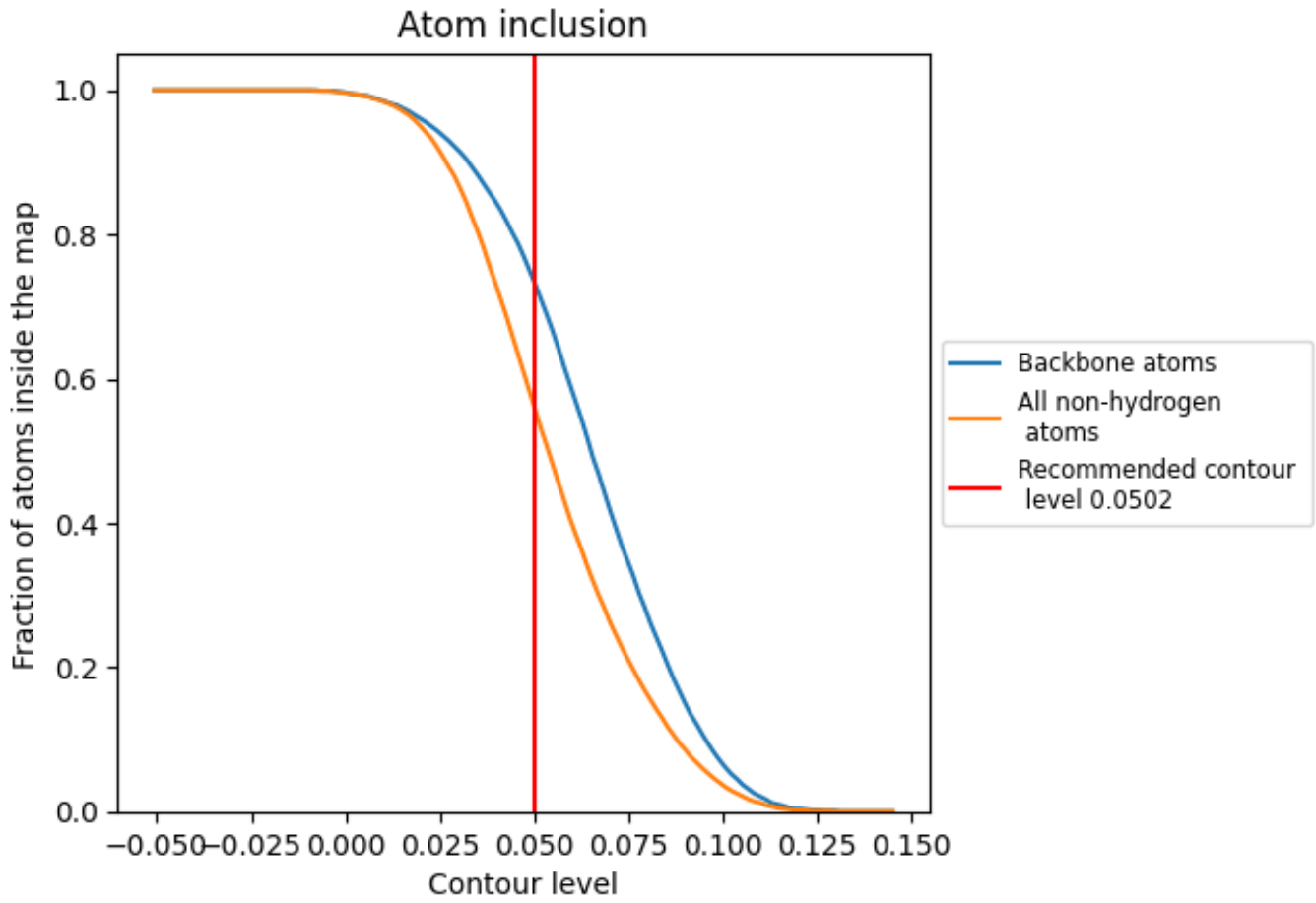
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.0502).

9.4 Atom inclusion (i)



At the recommended contour level, 73% of all backbone atoms, 56% 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 (0.0502) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5590	0.2800
A	0.5230	0.2650
B	0.5400	0.2730
I	0.6690	0.3110
J	0.6470	0.3150
K	0.6430	0.3280
L	0.6690	0.3240