Full wwPDB EM Validation Report ⓘ

Nov 8, 2022 – 07:36 AM JST

PDB ID	:	5YWB
EMDB ID	:	EMD-6851
Title	:	Structure of pancreatic ATP-sensitive potassium channel bound with Mg-ADP (CTD class2 at 5.2A)
Authors	:	Chen, L.; Wu, J.X.
Deposited on	:	2017-11-29
Resolution	:	5.20 Å(reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

The following versions of software and data (see references ⓘ) were used in the production of this report:

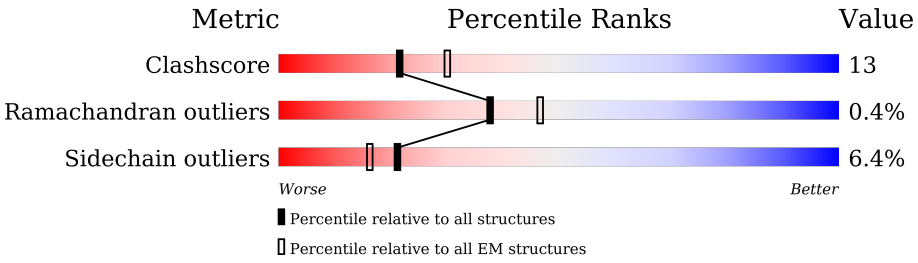
EMDB validation analysis	:	0.0.1.dev43
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.2

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 5.20 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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

Mol	Chain	Length	Quality of chain
1	A	390	7% 54% 26% • 17%
1	C	390	7% 53% 26% • 17%
1	E	390	7% 54% 25% • 17%
1	G	390	7% 53% 26% • 17%
2	B	1582	26% 61% 21% • 16%
2	D	1582	26% 61% 21% • 16%
2	F	1582	26% 61% 21% • 16%
2	H	1582	26% 61% 21% • 16%

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 50928 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.

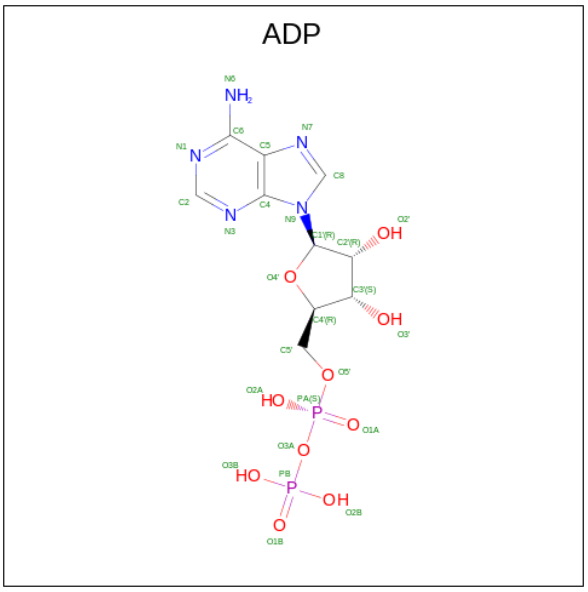
- Molecule 1 is a protein called ATP-sensitive inward rectifier potassium channel 11.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	325	Total	C	N	O	S	0	0
			2424	1565	417	427	15		
1	C	325	Total	C	N	O	S	0	0
			2424	1565	417	427	15		
1	E	325	Total	C	N	O	S	0	0
			2424	1565	417	427	15		
1	G	325	Total	C	N	O	S	0	0
			2424	1565	417	427	15		

- Molecule 2 is a protein called ATP-binding cassette sub-family C member 8 isoform X2.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	1322	Total	C	N	O	S	0	0
			10225	6658	1727	1787	53		
2	D	1322	Total	C	N	O	S	0	0
			10225	6658	1727	1787	53		
2	F	1322	Total	C	N	O	S	0	0
			10225	6658	1727	1787	53		
2	H	1322	Total	C	N	O	S	0	0
			10225	6658	1727	1787	53		

- Molecule 3 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$).



Mol	Chain	Residues	Atoms					AltConf
3	A	1	Total	C	N	O	P	0
			27	10	5	10	2	
3	B	1	Total	C	N	O	P	0
			54	20	10	20	4	
3	B	1	Total	C	N	O	P	0
			54	20	10	20	4	
3	C	1	Total	C	N	O	P	0
			27	10	5	10	2	
3	D	1	Total	C	N	O	P	0
			54	20	10	20	4	
3	D	1	Total	C	N	O	P	0
			54	20	10	20	4	
3	E	1	Total	C	N	O	P	0
			27	10	5	10	2	
3	F	1	Total	C	N	O	P	0
			54	20	10	20	4	
3	F	1	Total	C	N	O	P	0
			54	20	10	20	4	
3	G	1	Total	C	N	O	P	0
			27	10	5	10	2	
3	H	1	Total	C	N	O	P	0
			54	20	10	20	4	
3	H	1	Total	C	N	O	P	0
			54	20	10	20	4	

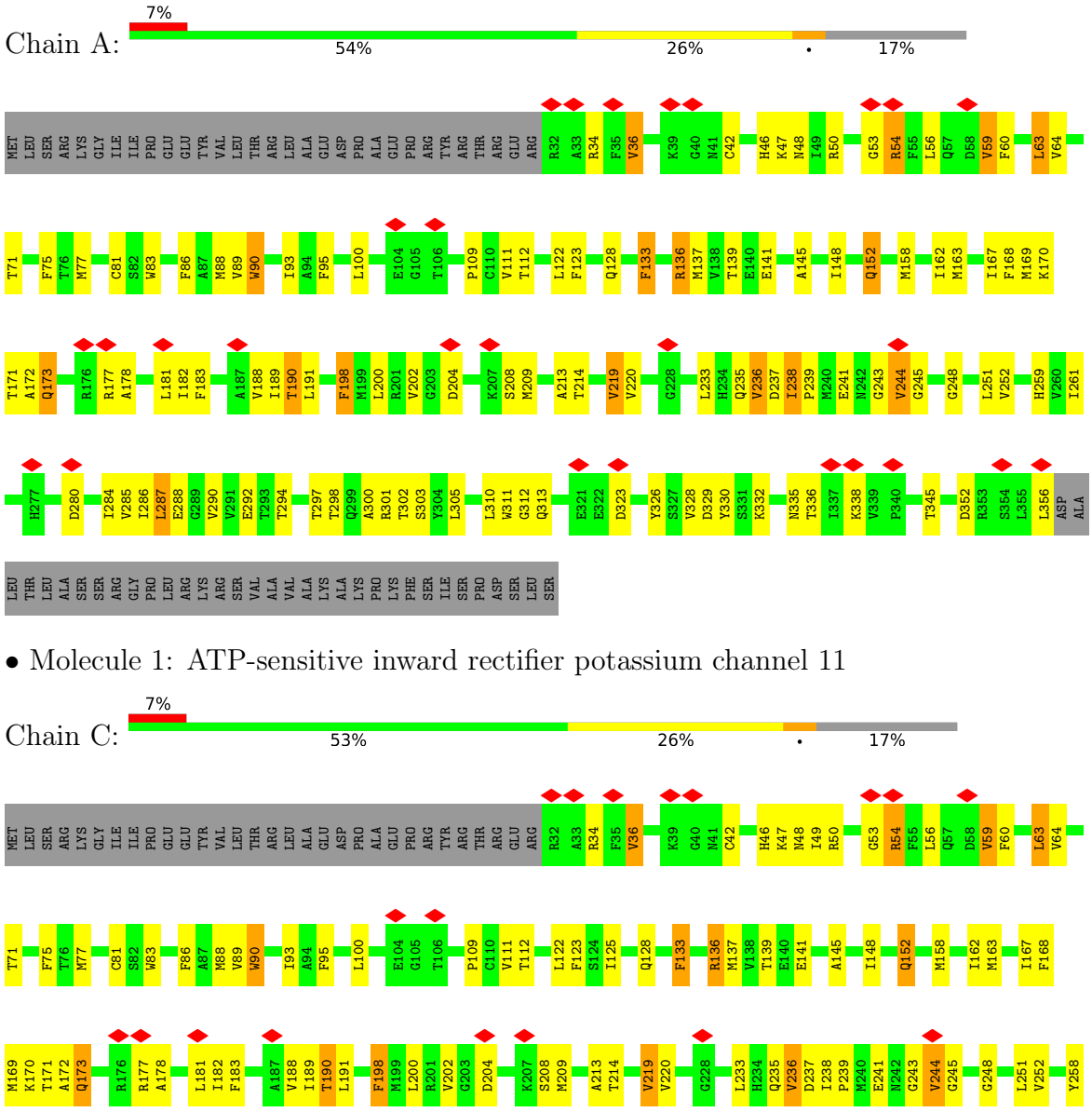
- Molecule 4 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	AltConf
4	B	2	Total Mg 2 2	0
4	D	2	Total Mg 2 2	0
4	F	2	Total Mg 2 2	0
4	H	2	Total Mg 2 2	0

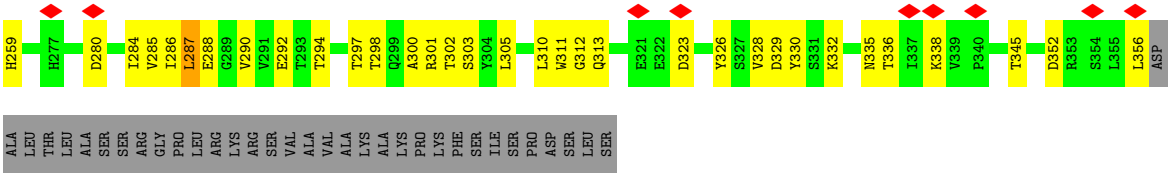
3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

• Molecule 1: ATP-sensitive inward rectifier potassium channel 11

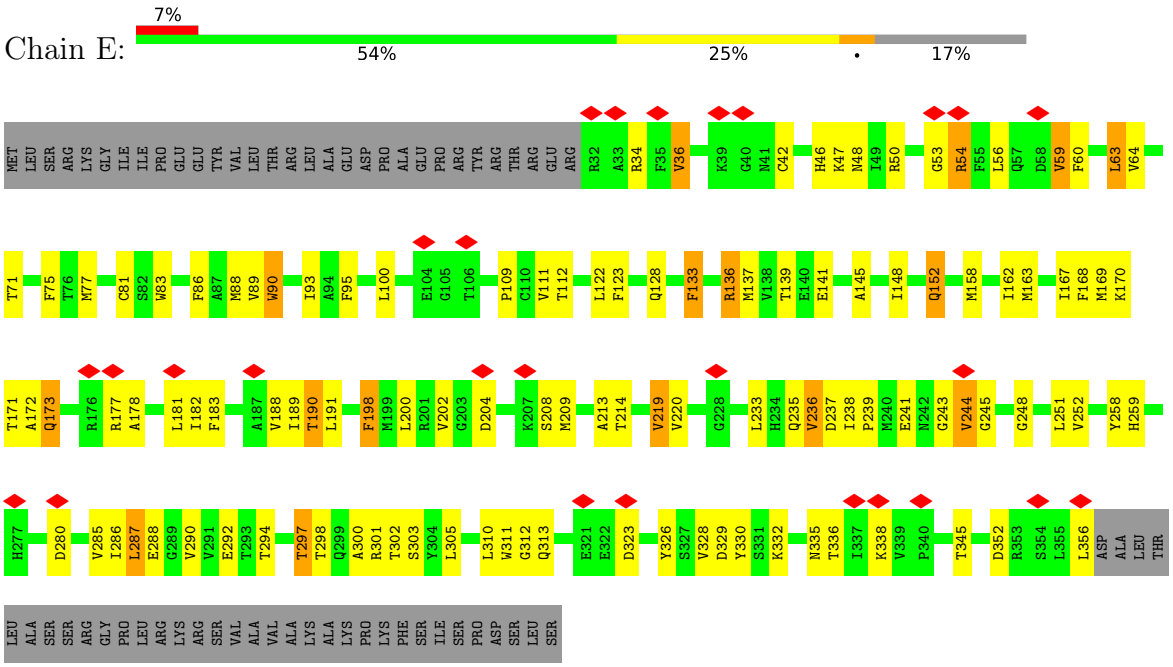


• Molecule 1: ATP-sensitive inward rectifier potassium channel 11



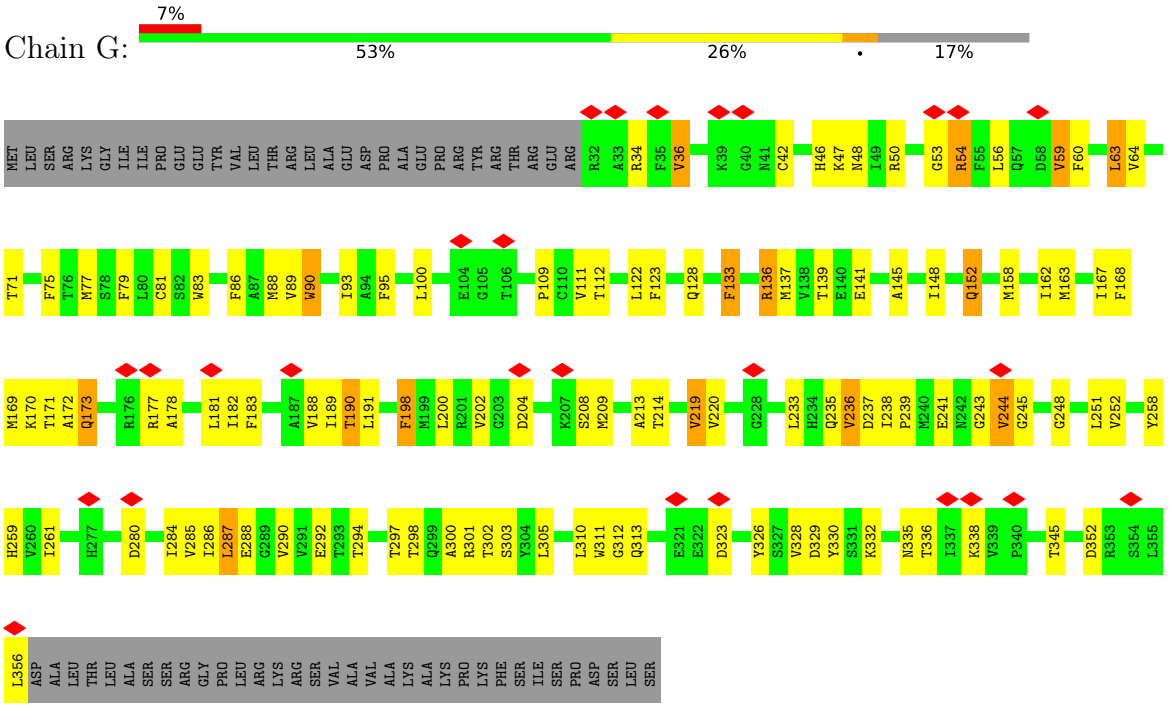
• Molecule 1: ATP-sensitive inward rectifier potassium channel 11

Chain E:



• Molecule 1: ATP-sensitive inward rectifier potassium channel 11

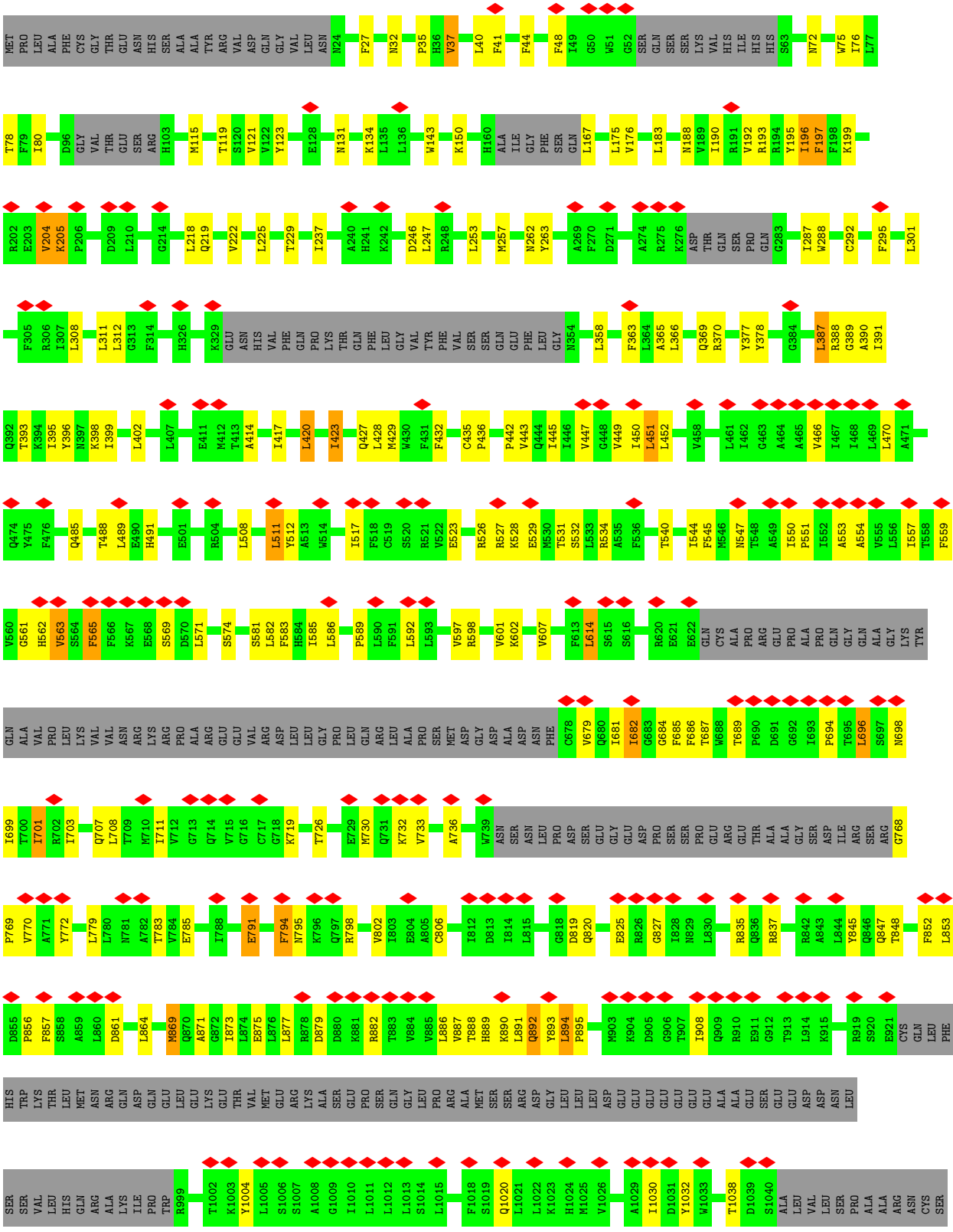
Chain G:

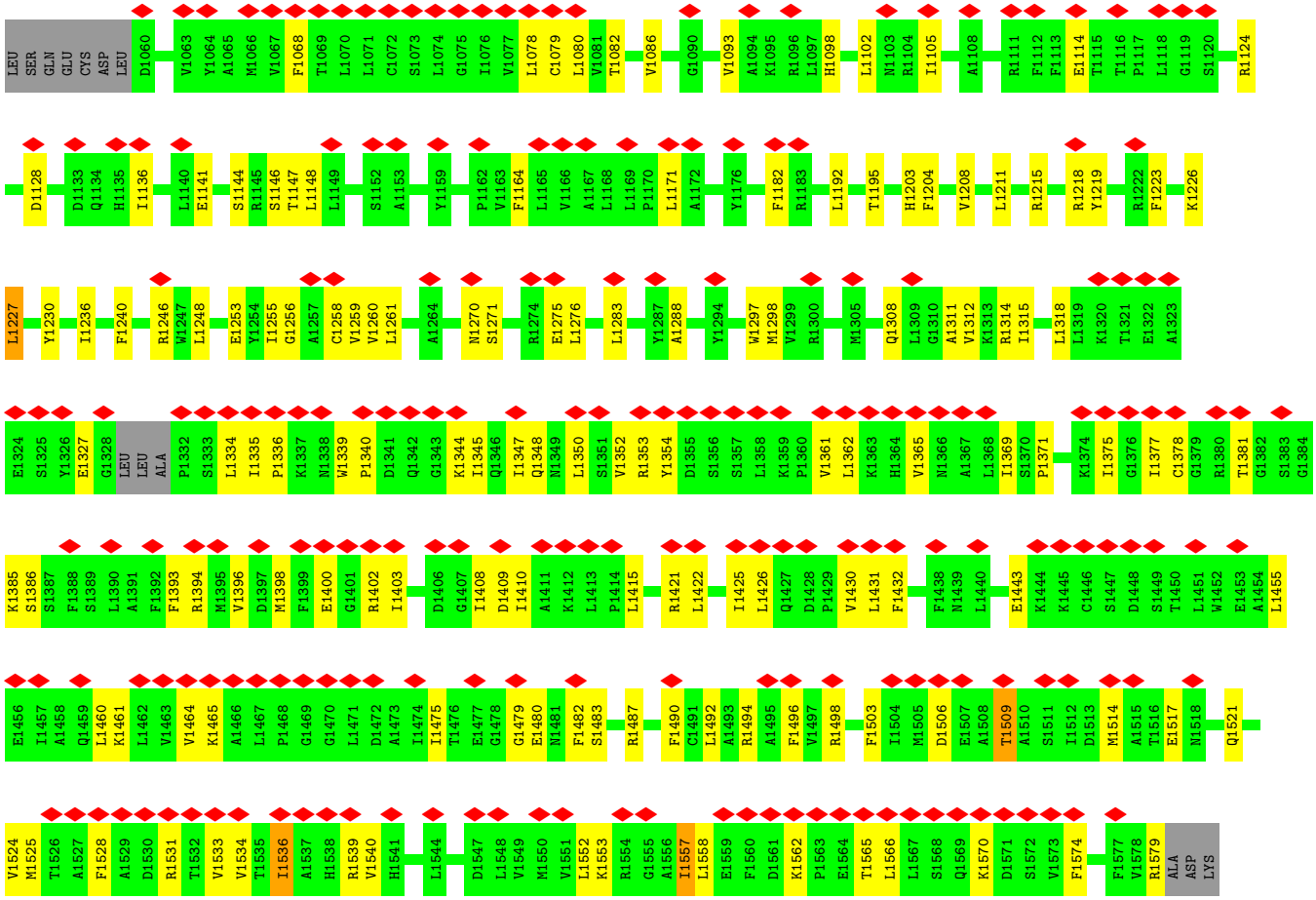


• Molecule 2: ATP-binding cassette sub-family C member 8 isoform X2

Chain B:

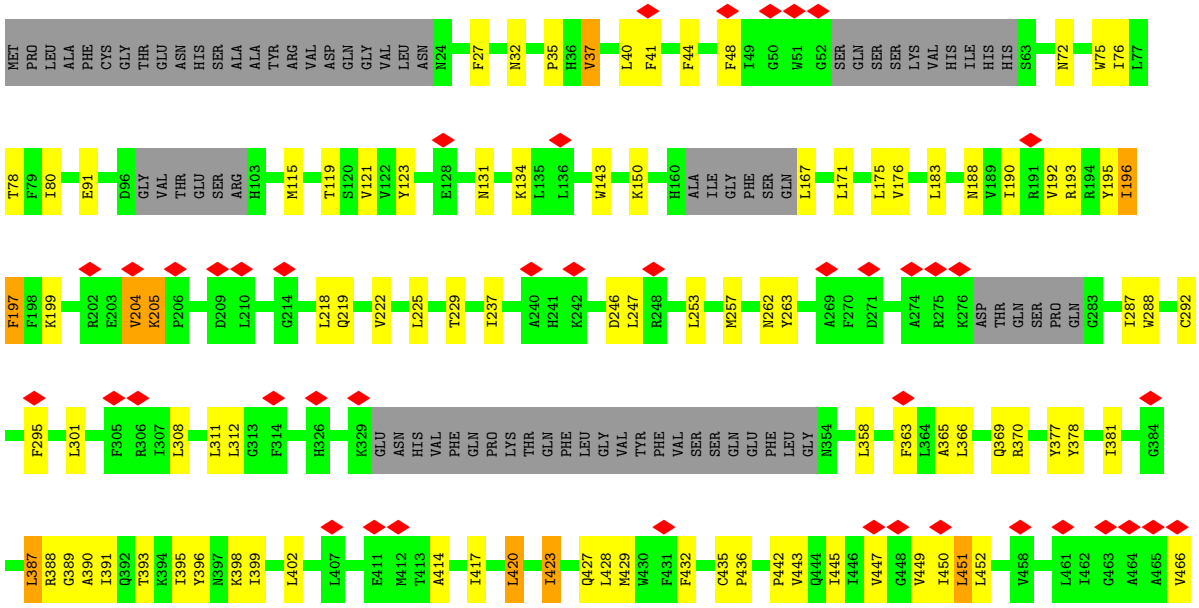

26%
61%
21%
16%

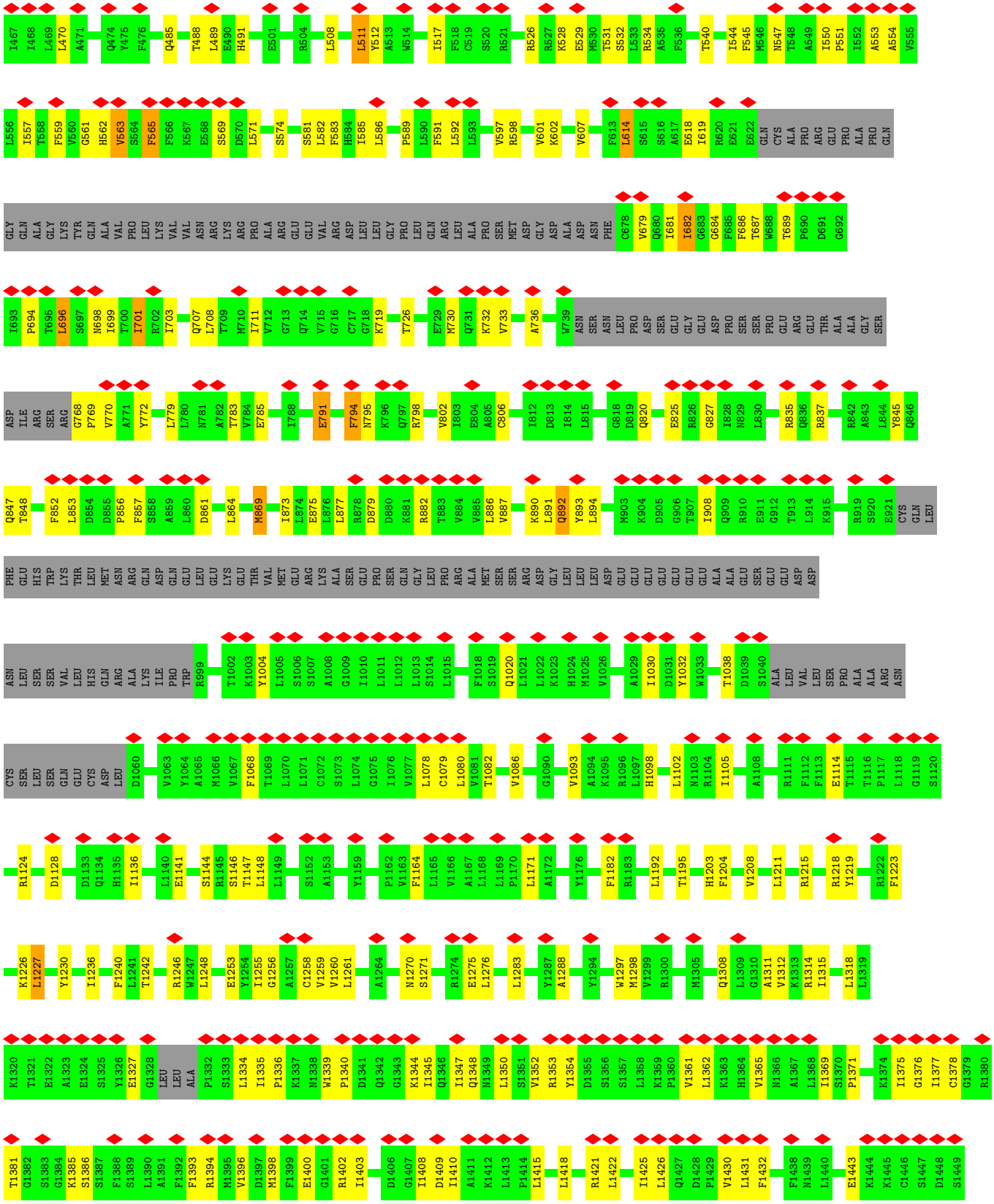

MET PRO LEU ALA PHE CYS GLY THR GLU ASN HIS SER ALA ALA TYR ARG VAL ASP GLN GLY VAL LEU ASN N24 F27 N32 P35 H36 V37 L40 F41 F44 F48 I49 G50 W51 G52 SER GLN SER SER LYS VAL HIS ILE HIS HIS S63 N72 W75 I76 L77
T78 F79 I80 D96 GLY VAL THR GLU SER ARG H103 M115 T119 S120 V121 V122 Y123 E128 N131 K134 L135 L136 W143 K150 H160 ALA ILE GLY PHE SER GLN L167 L175 V176 L183 N188 V189 I190 R191 V192 R193 R194 Y195 I196 F197 F198 K199
R202 E203 V204 K205 P206 D209 L210 G214 L218 Q219 V222 L225 T229 I237 A240 H241 K242 D246 L247 R248 L253 M257 N262 Y263 A269 F270 D271 A274 R275 K276 ASP THR GLN SER PRO GLN G283 I287 W288 C292 F295 L301
F305 R306 I307 L308 L311 L312 G313 F314 H326 K329 GLU ASN HIS VAL PHE GLN PRO LYS THR GLN PHE LEU GLY VAL TYR PHE VAL SER SER GLN GLU PHE LEU GLY N354 L358 F363 L364 A365 L366 Q369 R370 Y377 Y378 G384 L387 R388 G389 A390 I391
Q392 T393 K394 I395 Y396 N397 K398 I399 L402 L407 E411 M412 T413 A414 I417 L420 I423 Q427 L428 M429 W430 F431 F432 C435 P436 P442 V443 Q444 I445 I446 V447 G448 V449 I450 L451 L452 V458 L461 I462 G463 A464 A465 V466 I467 I468 L469 L470 A471
Q474 Y475 F476 Q485 T488 L489 E490 H491 E501 R504 L508 L511 Y512 A513 W514 I517 F518 C519 S520 R521 V522 E523 R526 R527 K528 E529 M530 T531 S532 L533 R534 A535 F536 T540 I544 F545 W546 N547 T548 A549 I550 P551 I552 A553 A554 V555 L556 I557 T558 F559
V560 G561 H562 V563 S564 F565 F566 K567 E568 S569 D570 L571 S574 S581 L582 F583 H584 I585 L586 P589 L590 F591 L592 L593 V597 R598 V601 K602 V607 F613 L614 S615 S616 R620 E621 E622 GLN CYS ALA PRO ARG GLU PRO ALA PRO GLN GLY GLN ALA GLY LYS TYR
GLN ALA VAL PRO LEU LYS VAL VAL ASN ARG LYS ARG PRO ALA ARG GLU GLU VAL ARG ASP LEU LEU GLY PRO LEU GLN ARG LEU ALA PRO SER MET ASP GLY ASP ALA ASP ASN PHE C678 V679 Q680 I681 I682 G683 G684 F685 F686 T687 W688 T689 P690 D691 G692 I693 P694 T695 L696 S697 N698
I699 T700 I701 R702 I703 Q707 L708 T709 W710 I711 V712 G713 Q714 V715 G716 C717 G718 K719 T726 E729 W730 Q731 K732 V733 A736 W739 ASN SER ASN LEU PRO ASP SER GLU GLY GLU ASP PRO SER SER PRO GLU ARG GLU THR ALA ALA GLY SER ASP ILE ARG SER ARG G768
P769 V770 A771 Y772 L779 L780 N781 A782 T783 V784 E785 I788 E791 F794 N795 K796 Q797 R798 V802 I803 E804 A805 C806 I812 D813 I814 L815 G818 D819 Q820 E825 R826 G827 I828 N829 L830 R835 Q836 R837 R842 A843 L844 Y845 Q846 Q847 T848 F852 L853 D854
D855 P856 F857 S858 A859 L860 D861 L864 M869 Q870 A871 G872 I873 L874 E875 L876 L877 R878 D879 D880 K881 R882 T883 V884 V885 L886 V887 T888 H889 K890 L891 Q892 Y893 L894 P895 M903 K904 D905 G906 T907 I908 Q909 R910 E911 G912 T913 L914 K915 R919 S920 E921 CYS GLN LEU PHE GLU
HIS TRP LYS THR LEU MET ASN ARG GLN ASP GLN GLU GLU LEU GLU LYS GLU THR VAL MET GLU ARG LYS ALA SER GLU PRO SER GLN GLY LEU PRO ARG ALA MET SER SER ARG ASP GLY LEU LEU LEU ASP GLU GLU GLU GLU GLU GLU GLU ALA ALA GLU SER GLU GLU ASP ASP ASN LEU
SER SER VAL LEU HIS GLN ARG ALA LYS ILE PRO TRP R999 T1002 K1003 Y1004 L1005 S1006 S1007 A1008 G1009 I1010 L1011 L1012 L1013 S1014 L1015 F1018 S1019 Q1020 L1021 L1022 K1023 H1024 M1025 V1026 A1029 I1030 D1031 Y1032 W1033 T1038 D1039 S1040 ALA LEU VAL LEU SER PRO ALA ALA ARG ASN CYS SER

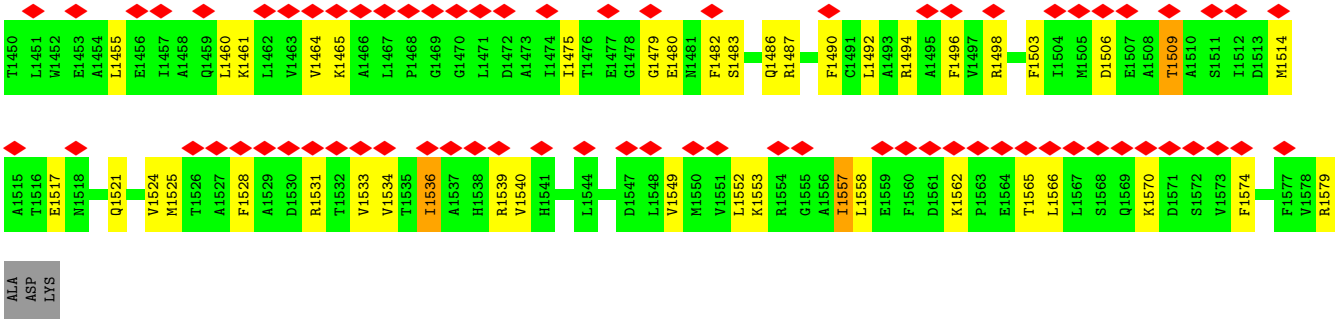


• Molecule 2: ATP-binding cassette sub-family C member 8 isoform X2

Chain D:

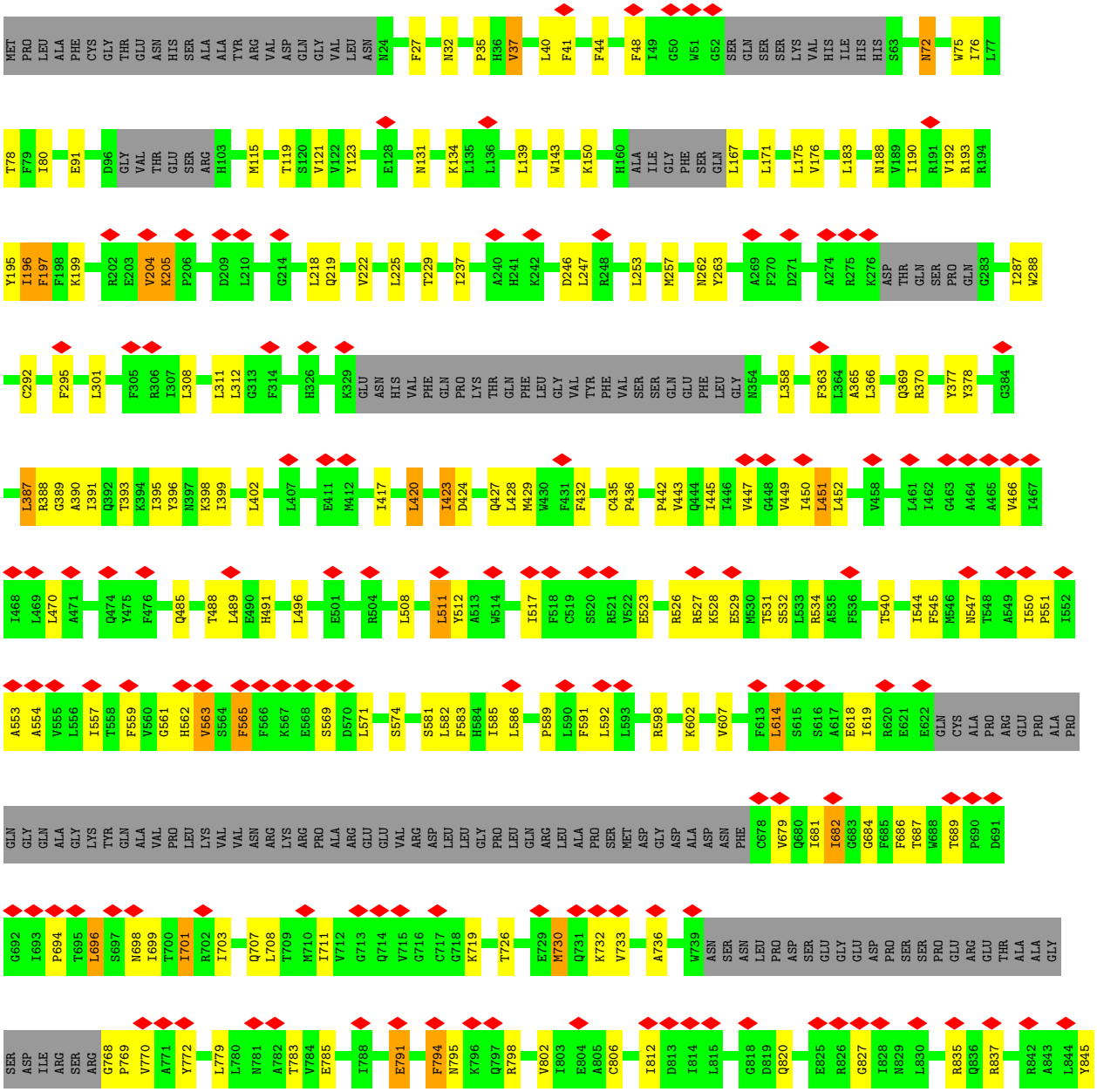


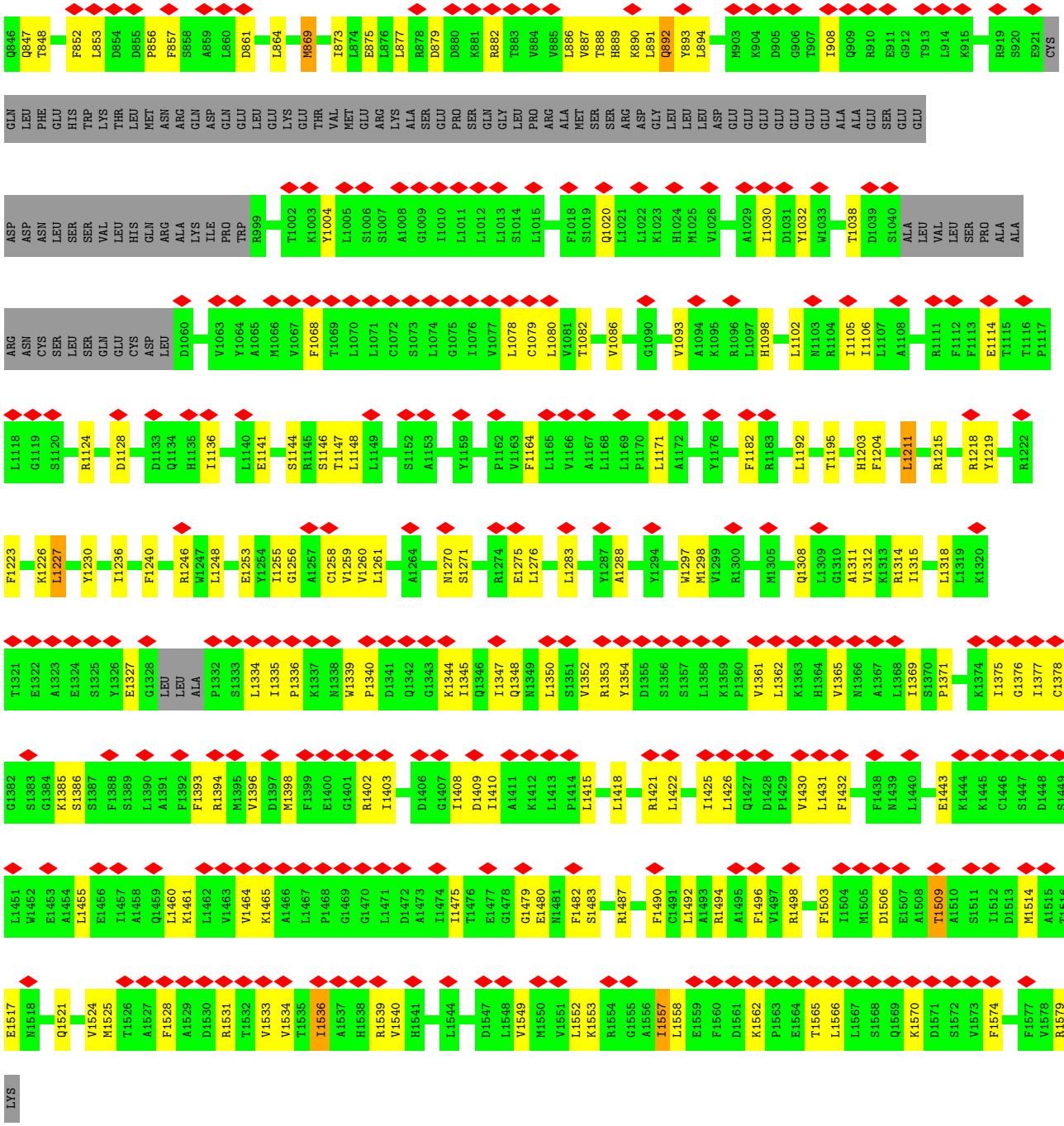

I467 I468 L469 L470 A471 Q474 Y475 F476 Q485 T488 L489 E490 H491 E501 R504 L508 L511 Y512 A513 W514 I517 F518 C519 S520 R521 R526 R527 K528 E529 M530 T531 S532 L533 R534 A535 F536 T540 I544 F545 M546 N547 T548 A549 I550 P551 I552 A553 A554 V555
L556 I557 T558 F559 V560 G561 H562 V563 S564 F565 F566 K567 E568 S569 D570 L571 S574 S581 L582 F583 H584 I585 L586 P589 L590 F591 L592 L593 V597 R598 V601 K602 V607 F613 L614 S615 S616 A617 E618 I619 R620 E621 E622 GLN CYS ALA PRO ARG GLU PRO ALA PRO GLN
GLY GLN ALA GLY LYS TYR GLN ALA VAL PRO LEU LYS VAL VAL ASN ARG LYS ARG PRO ALA ARG GLU GLU VAL ARG ASP LEU LEU GLY PRO LEU GLN ARG LEU ALA PRO SER MET ASP GLY ASP ALA ASP ASN PHE C678 V679 Q680 I681 I682 G683 G684 F685 F686 T687 W688 T689 P690 D691 G692
I693 P694 T695 L696 S697 N698 I699 T700 I701 R702 I703 Q707 L708 T709 M710 I711 V712 G713 Q714 V715 G716 C717 G718 K719 T726 E729 M730 Q731 K732 V733 A736 W739 ASN SER ASN LEU PRO ASP SER GLU GLY GLU ASP PRO SER SER PRO GLU ARG GLU THR ALA ALA GLY SER
ASP ILE ARG SER ARG G768 P769 V770 A771 Y772 L779 L780 N781 A782 T783 V784 E785 I788 E791 F794 N795 K796 Q797 R798 V802 I803 E804 A805 C806 I812 D813 I814 L815 G818 D819 Q820 E825 R826 G827 I828 N829 L830 R835 Q836 R837 R842 A843 L844 Y845 Q846
Q847 T848 F852 L853 D854 D855 P856 F857 S858 A859 L860 D861 L864 M869 I873 L874 E875 L876 L877 R878 D879 D880 K881 R882 T883 V884 V885 L886 V887 K890 L891 Q892 Y893 L894 M903 K904 D905 G906 T907 I908 Q909 R910 E911 G912 T913 L914 K915 R919 S920 E921 CYS GLN LEU
PHE GLU HIS TRP LYS THR LEU MET ASN ARG GLN ASP GLN GLU LEU GLU LYS GLU THR VAL MET GLU ARG LYS ALA SER GLU PRO SER GLN GLY LEU PRO ARG ALA MET SER SER ARG ASP GLY LEU LEU LEU ASP GLU GLU GLU GLU GLU GLU GLU GLU ALA ALA GLU SER GLU GLU ASP ASP
ASN LEU SER SER VAL LEU HIS GLN ARG ALA LYS ILE PRO TRP R999 T1002 K1003 Y1004 L1005 S1006 S1007 A1008 G1009 I1010 L1011 L1012 L1013 S1014 L1015 F1018 S1019 Q1020 L1021 L1022 K1023 H1024 M1025 V1026 A1029 I1030 D1031 Y1032 W1033 T1038 D1039 S1040 ALA LEU VAL LEU SER PRO ALA ALA ARG ASN
CYS SER LEU SER GLN GLU CYS ASP LEU D1060 V1063 Y1064 A1065 M1066 V1067 F1068 T1069 L1070 L1071 C1072 S1073 L1074 G1075 I1076 V1077 L1078 C1079 L1080 V1081 T1082 V1086 G1090 V1093 A1094 K1095 R1096 L1097 H1098 L1102 N1103 R1104 I1105 A1108 R1111 F1112 F1113 E1114 T1115 T1116 P1117 L1118 G1119 S1120
R1124 D1128 D1133 Q1134 H1135 I1136 L1140 E1141 S1144 R1145 S1146 T1147 L1148 L1149 S1152 A1153 Y1159 P1162 V1163 F1164 L1165 V1166 A1167 L1168 L1169 P1170 L1171 A1172 Y1176 F1182 R1183 L1192 T1195 H1203 F1204 V1208 L1211 R1215 R1218 Y1219 R1222 F1223
K1226 L1227 Y1230 I1236 F1240 L1241 T1242 R1246 W1247 L1248 E1253 Y1254 I1255 G1256 A1257 C1258 V1259 V1260 L1261 A1264 N1270 S1271 R1274 E1275 L1276 L1283 Y1287 A1288 Y1294 W1297 M1298 V1299 R1300 M1305 Q1308 L1309 G1310 A1311 V1312 K1313 R1314 I1315 L1318 L1319
K1320 T1321 E1322 A1323 E1324 S1325 Y1326 E1327 G1328 LEU LEU ALA P1332 S1333 L1334 I1335 P1336 K1337 N1338 W1339 P1340 D1341 Q1342 G1343 K1344 I1345 Q1346 I1347 Q1348 N1349 L1350 S1351 V1352 R1353 Y1354 D1355 S1356 S1357 L1358 K1359 P1360 V1361 L1362 K1363 H1364 V1365 N1366 A1367 L1368 I1369 S1370 P1371 K1374 I1375 G1376 I1377 C1378 G1379 R1380
T1381 G1382 S1383 G1384 K1385 S1386 S1387 F1388 S1389 L1390 A1391 F1392 F1393 R1394 M1395 V1396 D1397 M1398 F1399 E1400 G1401 R1402 I1403 D1406 G1407 I1408 D1409 I1410 A1411 K1412 L1413 P1414 L1415 L1418 R1421 L1422 I1425 L1426 Q1427 D1428 P1429 V1430 L1431 F1432 F1438 N1439 L1440 E1443 K1444 K1445 C1446 S1447 D1448 S1449



• Molecule 2: ATP-binding cassette sub-family C member 8 isoform X2

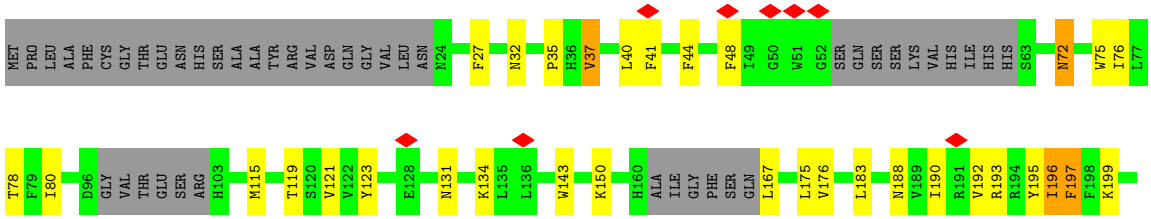
Chain F:

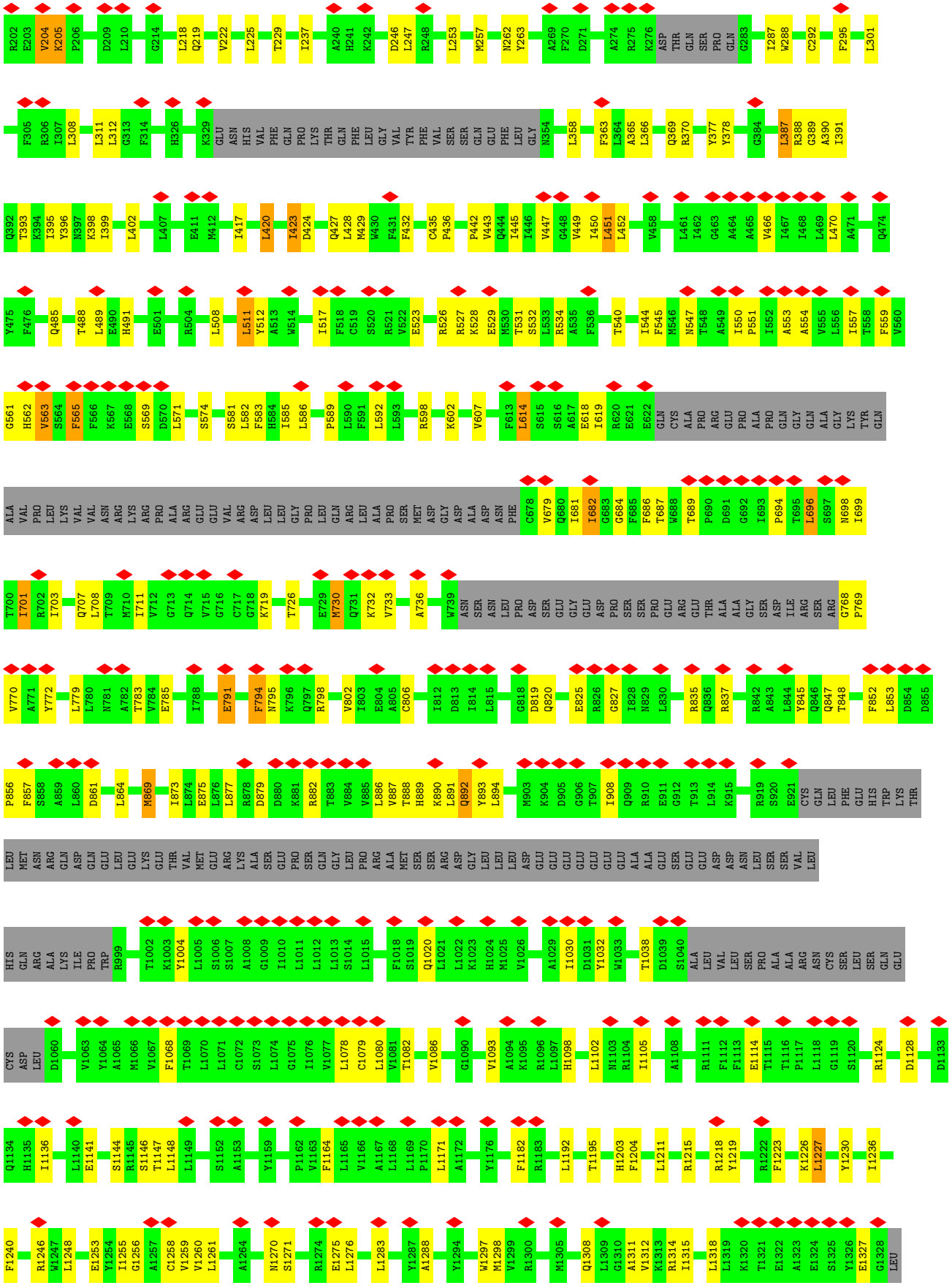


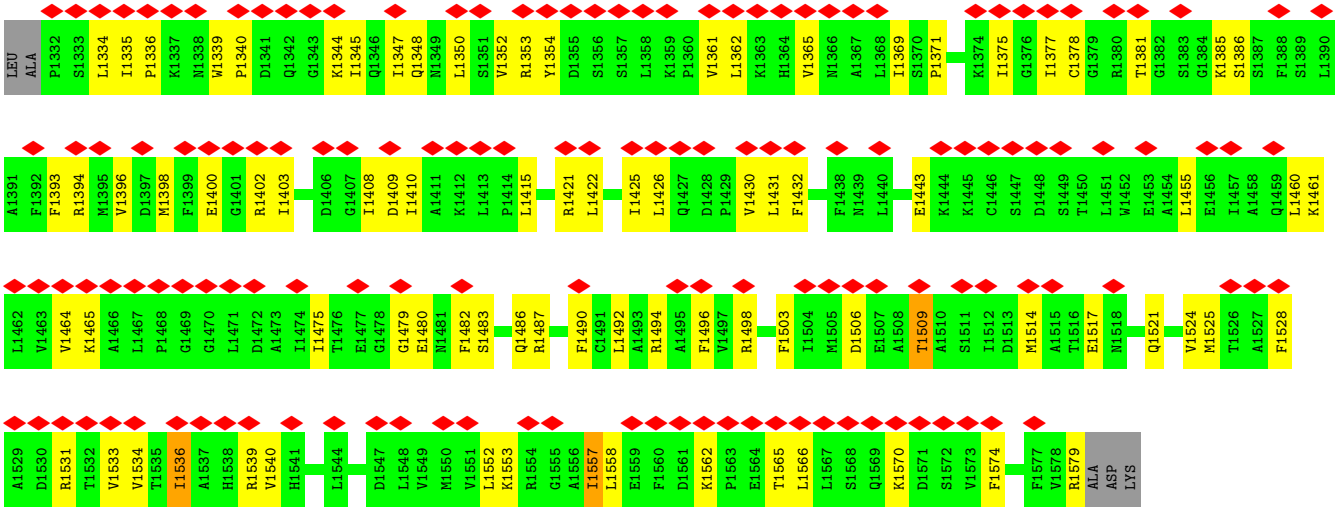


• Molecule 2: ATP-binding cassette sub-family C member 8 isoform X2

Chain H:






LEU ALA P1332 S1333 L1334 I1335 P1336 K1337 N1338 W1339 P1340 D1341 Q1342 G1343 K1344 I1345 Q1346 I1347 Q1348 N1349 L1350 S1351 V1352 R1353 Y1354 D1355 S1356 S1357 L1358 K1359 P1360 V1361 L1362 K1363 H1364 V1365 N1366 A1367 L1368 I1369 S1370 P1371 K1374 I1375 G1376 I1377 C1378 G1379 R1380 T1381 G1382 S1383 G1384 K1385 S1386 S1387 F1388 S1389 L1390 A1391 F1392 F1393 R1394 M1395 V1396 D1397 M1398 F1399 E1400 G1401 R1402 I1403 D1406 G1407 I1408 D1409 I1410 A1411 K1412 L1413 P1414 L1415 R1421 L1422 I1425 L1426 Q1427 D1428 P1429 V1430 L1431 F1432 F1438 N1439 L1440 E1443 K1444 K1445 C1446 S1447 D1448 S1449 T1450 L1451 W1452 E1453 A1454 L1455 E1456 I1457 A1458 Q1459 L1460 K1461 L1462 V1463 V1464 K1465 A1466 L1467 P1468 G1469 G1470 L1471 D1472 A1473 I1474 I1475 T1476 E1477 G1478 G1479 E1480 N1481 F1482 S1483 Q1486 R1487 F1490 C1491 L1492 A1493 R1494 A1495 F1496 V1497 R1498 F1503 I1504 M1505 D1506 E1507 A1508 T1509 A1510 S1511 I1512 D1513 M1514 A1515 T1516 E1517 N1518 Q1521 V1524 M1525 T1526 A1527 F1528 A1529 D1530 R1531 T1532 V1533 V1534 T1535 I1536 A1537 H1538 R1539 V1540 H1541 L1544 D1547 L1548 V1549 M1550 V1551 L1552 K1553 R1554 G1555 A1556 I1557 L1558 E1559 F1560 D1561 K1562 P1563 E1564 T1565 L1566 L1567 S1568 Q1569 K1570 D1571 S1572 V1573 F1574 F1577 V1578 R1579 ALA ASP LYS

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	56433	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	50	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 QUANTUM (4k x 4k)	Depositor
Maximum map value	0.080	Depositor
Minimum map value	-0.030	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.005	Depositor
Recommended contour level	0.025	Depositor
Map size (Å)	329.15997, 329.15997, 329.15997	wwPDB
Map dimensions	312, 312, 312	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.055, 1.055, 1.055	Depositor

5 Model quality

5.1 Standard geometry

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

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	0.27	0/2477	0.48	0/3380
1	C	0.27	0/2477	0.48	0/3380
1	E	0.27	0/2477	0.48	0/3380
1	G	0.27	0/2477	0.48	0/3380
2	B	0.29	0/10430	0.46	0/14168
2	D	0.29	0/10430	0.46	0/14168
2	F	0.29	0/10430	0.46	0/14168
2	H	0.29	0/10430	0.46	0/14168
All	All	0.29	0/51628	0.47	0/70192

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	2424	0	2383	105	0
1	C	2424	0	2383	105	0
1	E	2424	0	2383	104	0
1	G	2424	0	2383	105	0
2	B	10225	0	10456	245	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	D	10225	0	10456	248	0
2	F	10225	0	10456	250	0
2	H	10225	0	10456	242	0
3	A	27	0	12	0	0
3	B	54	0	24	4	0
3	C	27	0	12	0	0
3	D	54	0	24	3	0
3	E	27	0	12	0	0
3	F	54	0	24	3	0
3	G	27	0	12	0	0
3	H	54	0	24	4	0
4	B	2	0	0	0	0
4	D	2	0	0	0	0
4	F	2	0	0	0	0
4	H	2	0	0	0	0
All	All	50928	0	51500	1335	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 13.

All (1335) 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)
2:D:190:ILE:HG13	2:D:195:TYR:CB	1.79	1.13
2:F:190:ILE:HG13	2:F:195:TYR:CB	1.79	1.13
2:H:190:ILE:HG13	2:H:195:TYR:CB	1.79	1.12
2:B:190:ILE:HG13	2:B:195:TYR:CB	1.79	1.11
1:A:172:ALA:HA	1:G:169:MET:HE1	1.34	1.05
1:E:169:MET:HE1	1:G:172:ALA:HA	1.42	1.00
1:C:169:MET:HE1	1:E:172:ALA:HA	1.44	0.99
1:A:169:MET:HE1	1:C:172:ALA:HA	1.39	0.98
2:H:295:PHE:CZ	2:H:387:LEU:HB2	2.01	0.96
2:D:190:ILE:CG1	2:D:195:TYR:CB	2.44	0.95
2:D:295:PHE:CZ	2:D:387:LEU:HB2	2.01	0.94
2:F:190:ILE:CG1	2:F:195:TYR:CB	2.44	0.94
2:H:190:ILE:CG1	2:H:195:TYR:CB	2.44	0.94
2:B:295:PHE:CZ	2:B:387:LEU:HB2	2.01	0.94
2:F:295:PHE:CZ	2:F:387:LEU:HB2	2.01	0.94
2:B:190:ILE:CG1	2:B:195:TYR:CB	2.44	0.94
1:E:169:MET:CE	1:G:172:ALA:HA	2.02	0.90
1:A:169:MET:CE	1:C:172:ALA:HA	2.02	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:172:ALA:HA	1:G:169:MET:CE	2.02	0.89
1:C:169:MET:CE	1:E:172:ALA:HA	2.02	0.89
2:D:91:GLU:CD	2:D:171:LEU:HD12	1.96	0.85
1:E:168:PHE:O	1:E:171:THR:CG2	2.25	0.85
1:G:168:PHE:O	1:G:171:THR:CG2	2.25	0.85
1:A:168:PHE:O	1:A:171:THR:CG2	2.25	0.84
1:C:168:PHE:O	1:C:171:THR:CG2	2.25	0.84
1:A:172:ALA:CA	1:G:169:MET:HE1	2.08	0.82
1:A:243:GLY:HA3	1:G:237:ASP:HB3	1.62	0.81
1:A:182:ILE:HD12	1:A:182:ILE:O	1.81	0.81
1:E:237:ASP:HB3	1:G:243:GLY:HA3	1.62	0.81
1:C:237:ASP:HB3	1:E:243:GLY:HA3	1.62	0.81
1:C:182:ILE:HD12	1:C:182:ILE:O	1.81	0.81
1:G:182:ILE:HD12	1:G:182:ILE:O	1.81	0.81
1:A:237:ASP:HB3	1:C:243:GLY:HA3	1.62	0.80
1:E:182:ILE:HD12	1:E:182:ILE:O	1.81	0.80
1:G:168:PHE:HA	1:G:171:THR:CG2	2.12	0.80
1:G:168:PHE:O	1:G:171:THR:HG23	1.81	0.80
1:C:168:PHE:O	1:C:171:THR:HG23	1.81	0.80
1:C:168:PHE:HA	1:C:171:THR:CG2	2.12	0.80
1:A:168:PHE:HA	1:A:171:THR:CG2	2.12	0.80
1:E:168:PHE:HA	1:E:171:THR:CG2	2.12	0.79
1:A:169:MET:HE1	1:C:172:ALA:CA	2.13	0.79
1:E:168:PHE:O	1:E:171:THR:HG23	1.81	0.79
2:D:1124:ARG:HH11	2:D:1314:ARG:HD3	1.49	0.78
2:D:1271:SER:HA	2:D:1275:GLU:HB3	1.66	0.78
2:F:1271:SER:HA	2:F:1275:GLU:HB3	1.66	0.78
1:A:168:PHE:O	1:A:171:THR:HG23	1.81	0.78
2:F:1124:ARG:HH11	2:F:1314:ARG:HD3	1.49	0.78
1:G:214:THR:HA	1:G:248:GLY:HA2	1.65	0.78
1:E:214:THR:HA	1:E:248:GLY:HA2	1.65	0.78
2:B:204:VAL:O	2:B:205:LYS:HB3	1.83	0.77
2:D:204:VAL:O	2:D:205:LYS:HB3	1.83	0.77
2:H:1271:SER:HA	2:H:1275:GLU:HB3	1.66	0.77
1:C:214:THR:HA	1:C:248:GLY:HA2	1.65	0.77
2:B:1271:SER:HA	2:B:1275:GLU:HB3	1.66	0.77
2:B:1421:ARG:HG3	2:B:1422:LEU:HG	1.67	0.77
2:B:196:ILE:O	2:B:197:PHE:O	2.03	0.77
1:A:214:THR:HA	1:A:248:GLY:HA2	1.65	0.76
2:D:1421:ARG:HG3	2:D:1422:LEU:HG	1.67	0.76
2:F:204:VAL:O	2:F:205:LYS:HB3	1.83	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:169:MET:HE1	1:G:172:ALA:CA	2.15	0.76
2:B:150:LYS:HB3	2:B:176:VAL:HG22	1.67	0.76
2:H:204:VAL:O	2:H:205:LYS:HB3	1.83	0.76
2:B:150:LYS:HE3	2:B:175:LEU:HD13	1.67	0.76
2:F:1421:ARG:HG3	2:F:1422:LEU:HG	1.67	0.76
2:H:1124:ARG:HH11	2:H:1314:ARG:HD3	1.49	0.76
2:H:150:LYS:HB3	2:H:176:VAL:HG22	1.67	0.76
2:B:1124:ARG:HH11	2:B:1314:ARG:HD3	1.49	0.76
2:D:150:LYS:HE3	2:D:175:LEU:HD13	1.67	0.76
2:D:196:ILE:O	2:D:197:PHE:O	2.03	0.76
2:H:1421:ARG:HG3	2:H:1422:LEU:HG	1.67	0.75
1:A:177:ARG:HH22	1:A:208:SER:HB2	1.51	0.75
2:D:150:LYS:HB3	2:D:176:VAL:HG22	1.67	0.75
2:F:196:ILE:O	2:F:197:PHE:O	2.03	0.75
1:G:177:ARG:HH22	1:G:208:SER:HB2	1.51	0.75
2:H:150:LYS:HE3	2:H:175:LEU:HD13	1.67	0.75
2:H:196:ILE:O	2:H:197:PHE:O	2.03	0.75
2:F:150:LYS:HE3	2:F:175:LEU:HD13	1.67	0.75
1:C:169:MET:HE1	1:E:172:ALA:CA	2.17	0.74
1:C:177:ARG:HH22	1:C:208:SER:HB2	1.51	0.74
2:D:387:LEU:HD21	2:D:428:LEU:HB3	1.69	0.74
2:F:150:LYS:HB3	2:F:176:VAL:HG22	1.67	0.74
1:E:177:ARG:HH22	1:E:208:SER:HB2	1.51	0.73
2:B:387:LEU:HD21	2:B:428:LEU:HB3	1.69	0.73
2:H:387:LEU:HD21	2:H:428:LEU:HB3	1.69	0.73
2:F:387:LEU:HD21	2:F:428:LEU:HB3	1.69	0.72
2:H:1334:LEU:HD13	2:H:1408:ILE:HG23	1.72	0.72
1:E:177:ARG:NH2	1:E:208:SER:HB2	2.05	0.72
1:G:177:ARG:NH2	1:G:208:SER:HB2	2.05	0.72
1:C:219:VAL:HG13	1:C:236:VAL:HG23	1.72	0.71
2:B:150:LYS:CE	2:B:175:LEU:HD13	2.21	0.71
1:E:219:VAL:HG13	1:E:236:VAL:HG23	1.72	0.71
2:B:1334:LEU:HD13	2:B:1408:ILE:HG23	1.72	0.71
1:E:36:VAL:HG12	1:E:42:CYS:HA	1.72	0.71
1:G:36:VAL:HG12	1:G:42:CYS:HA	1.72	0.71
2:F:1334:LEU:HD13	2:F:1408:ILE:HG23	1.72	0.71
2:D:150:LYS:CE	2:D:175:LEU:HD13	2.21	0.71
1:A:36:VAL:HG12	1:A:42:CYS:HA	1.72	0.71
1:A:219:VAL:HG13	1:A:236:VAL:HG23	1.72	0.71
2:H:150:LYS:CE	2:H:175:LEU:HD13	2.21	0.70
2:F:682:ILE:HG23	2:F:736:ALA:HB3	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:177:ARG:NH2	1:C:208:SER:HB2	2.05	0.70
1:G:219:VAL:HG13	1:G:236:VAL:HG23	1.72	0.70
2:D:682:ILE:HG23	2:D:736:ALA:HB3	1.73	0.70
1:A:177:ARG:NH2	1:A:208:SER:HB2	2.05	0.70
2:D:204:VAL:O	2:D:205:LYS:CB	2.39	0.70
2:D:1334:LEU:HD13	2:D:1408:ILE:HG23	1.72	0.70
2:F:204:VAL:O	2:F:205:LYS:CB	2.39	0.70
2:B:682:ILE:HG23	2:B:736:ALA:HB3	1.73	0.70
2:F:150:LYS:CE	2:F:175:LEU:HD13	2.21	0.69
2:H:1394:ARG:HD2	2:H:1410:ILE:HG21	1.73	0.69
2:D:1394:ARG:HD2	2:D:1410:ILE:HG21	1.73	0.69
1:C:168:PHE:O	1:C:171:THR:HG22	1.92	0.69
2:B:562:HIS:NE2	2:B:569:SER:O	2.26	0.69
1:C:36:VAL:HG12	1:C:42:CYS:HA	1.72	0.69
2:D:287:ILE:HD11	2:D:607:VAL:HG13	1.74	0.69
2:B:1394:ARG:HD2	2:B:1410:ILE:HG21	1.73	0.69
2:F:287:ILE:HD11	2:F:607:VAL:HG13	1.74	0.68
2:H:562:HIS:NE2	2:H:569:SER:O	2.26	0.68
2:H:682:ILE:HG23	2:H:736:ALA:HB3	1.73	0.68
2:B:287:ILE:HD11	2:B:607:VAL:HG13	1.74	0.68
1:C:183:PHE:CD2	1:C:202:VAL:HG12	2.29	0.68
1:A:168:PHE:O	1:A:171:THR:HG22	1.92	0.68
1:A:168:PHE:HA	1:A:171:THR:HG22	1.76	0.68
2:D:562:HIS:NE2	2:D:569:SER:O	2.26	0.68
1:A:183:PHE:CD2	1:A:202:VAL:HG12	2.29	0.68
2:F:562:HIS:NE2	2:F:569:SER:O	2.26	0.68
1:E:168:PHE:O	1:E:171:THR:HG22	1.92	0.68
2:B:869:MET:HA	2:B:873:ILE:HD12	1.75	0.68
2:F:1394:ARG:HD2	2:F:1410:ILE:HG21	1.73	0.68
2:H:287:ILE:HD11	2:H:607:VAL:HG13	1.74	0.68
1:G:168:PHE:O	1:G:171:THR:HG22	1.92	0.67
1:E:167:ILE:O	1:E:171:THR:HG22	1.94	0.67
1:C:168:PHE:HA	1:C:171:THR:HG22	1.76	0.67
1:A:53:GLY:O	1:A:54:ARG:CB	2.43	0.67
1:E:168:PHE:HA	1:E:171:THR:HG22	1.76	0.67
1:G:168:PHE:HA	1:G:171:THR:HG22	1.76	0.67
2:B:204:VAL:O	2:B:205:LYS:CB	2.39	0.67
1:C:167:ILE:O	1:C:171:THR:HG22	1.94	0.67
2:B:873:ILE:HA	2:B:877:LEU:HD12	1.77	0.67
2:D:873:ILE:HA	2:D:877:LEU:HD12	1.77	0.67
1:E:183:PHE:CD2	1:E:202:VAL:HG12	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:551:PRO:HB3	2:F:583:PHE:CZ	2.30	0.67
2:F:869:MET:HA	2:F:873:ILE:HD12	1.75	0.67
2:F:873:ILE:HA	2:F:877:LEU:HD12	1.77	0.67
1:G:53:GLY:O	1:G:54:ARG:CB	2.43	0.67
1:G:183:PHE:CD2	1:G:202:VAL:HG12	2.29	0.67
2:H:869:MET:HA	2:H:873:ILE:HD12	1.75	0.67
2:H:873:ILE:HA	2:H:877:LEU:HD12	1.77	0.67
2:H:551:PRO:HB3	2:H:583:PHE:CZ	2.30	0.67
2:D:869:MET:HA	2:D:873:ILE:HD12	1.75	0.66
2:D:466:VAL:HG11	2:D:554:ALA:HB2	1.76	0.66
1:G:167:ILE:O	1:G:171:THR:HG22	1.94	0.66
2:H:466:VAL:HG11	2:H:554:ALA:HB2	1.76	0.66
1:A:167:ILE:O	1:A:171:THR:HG22	1.94	0.66
1:G:168:PHE:CA	1:G:171:THR:HG22	2.26	0.66
2:H:204:VAL:O	2:H:205:LYS:CB	2.39	0.66
2:B:466:VAL:HG11	2:B:554:ALA:HB2	1.76	0.66
2:B:551:PRO:HB3	2:B:583:PHE:CZ	2.30	0.66
1:C:53:GLY:O	1:C:54:ARG:CB	2.43	0.66
2:D:551:PRO:HB3	2:D:583:PHE:CZ	2.30	0.66
2:H:301:LEU:C	2:H:301:LEU:HD23	2.17	0.66
1:A:168:PHE:CA	1:A:171:THR:HG22	2.26	0.66
2:F:466:VAL:HG11	2:F:554:ALA:HB2	1.76	0.66
1:G:123:PHE:HD2	1:G:136:ARG:HG3	1.61	0.66
1:E:53:GLY:O	1:E:54:ARG:CB	2.43	0.65
1:E:123:PHE:HD2	1:E:136:ARG:HG3	1.61	0.65
2:B:301:LEU:C	2:B:301:LEU:HD23	2.17	0.65
1:A:168:PHE:C	1:A:171:THR:HG22	2.17	0.65
1:C:181:LEU:N	1:C:181:LEU:HD22	2.12	0.65
1:G:168:PHE:C	1:G:171:THR:HG22	2.17	0.65
1:A:181:LEU:N	1:A:181:LEU:HD22	2.12	0.65
2:B:1509:THR:HG23	2:B:1517:GLU:HG2	1.79	0.65
2:D:301:LEU:HD23	2:D:301:LEU:C	2.17	0.65
1:E:168:PHE:CA	1:E:171:THR:HG22	2.26	0.65
1:A:123:PHE:HD2	1:A:136:ARG:HG3	1.61	0.65
2:D:511:LEU:HD23	2:D:1426:LEU:HD21	1.79	0.65
2:F:511:LEU:HD23	2:F:1426:LEU:HD21	1.79	0.65
2:D:1509:THR:HG23	2:D:1517:GLU:HG2	1.79	0.65
2:F:301:LEU:C	2:F:301:LEU:HD23	2.17	0.65
2:H:1509:THR:HG23	2:H:1517:GLU:HG2	1.79	0.65
1:C:123:PHE:HD2	1:C:136:ARG:HG3	1.61	0.64
1:C:168:PHE:CA	1:C:171:THR:HG22	2.26	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:168:PHE:C	1:C:171:THR:HG22	2.17	0.64
1:G:183:PHE:HZ	1:G:287:LEU:HD23	1.62	0.64
2:D:1480:GLU:OE1	3:D:2501:ADP:N6	2.30	0.64
2:H:1480:GLU:OE1	3:H:2501:ADP:N6	2.30	0.64
2:F:1480:GLU:OE1	3:F:2501:ADP:N6	2.30	0.64
1:E:181:LEU:HD22	1:E:181:LEU:N	2.12	0.64
2:B:1032:TYR:HA	2:B:1283:LEU:HD11	1.80	0.64
2:F:150:LYS:NZ	2:F:175:LEU:HD13	2.13	0.64
2:H:365:ALA:O	2:H:369:GLN:HG3	1.98	0.64
2:H:681:ILE:HB	2:H:701:ILE:HG23	1.79	0.64
2:B:1480:GLU:OE1	3:B:2501:ADP:N6	2.30	0.64
2:D:365:ALA:O	2:D:369:GLN:HG3	1.98	0.64
2:D:1032:TYR:HA	2:D:1283:LEU:HD11	1.80	0.64
1:E:168:PHE:C	1:E:171:THR:HG22	2.17	0.64
2:D:1506:ASP:HA	2:D:1536:ILE:HG13	1.80	0.64
2:B:365:ALA:O	2:B:369:GLN:HG3	1.98	0.63
2:D:681:ILE:HB	2:D:701:ILE:HG23	1.79	0.63
2:B:190:ILE:CB	2:B:195:TYR:CB	2.77	0.63
2:B:783:THR:HB	2:B:820:GLN:HA	1.80	0.63
1:G:181:LEU:N	1:G:181:LEU:HD22	2.12	0.63
2:D:190:ILE:CB	2:D:195:TYR:CB	2.77	0.63
2:D:592:LEU:HD11	2:D:1297:TRP:HH2	1.63	0.63
2:F:1347:ILE:HG23	2:F:1403:ILE:HG12	1.80	0.63
2:H:190:ILE:CB	2:H:195:TYR:CB	2.77	0.63
1:A:183:PHE:HZ	1:A:287:LEU:HD23	1.62	0.63
1:E:109:PRO:HG2	1:E:112:THR:HA	1.81	0.63
1:E:183:PHE:HZ	1:E:287:LEU:HD23	1.62	0.63
2:F:1509:THR:HG23	2:F:1517:GLU:HG2	1.79	0.63
2:B:1506:ASP:HA	2:B:1536:ILE:HG13	1.80	0.63
2:H:1506:ASP:HA	2:H:1536:ILE:HG13	1.80	0.63
2:B:511:LEU:HD23	2:B:1426:LEU:HD21	1.79	0.63
1:C:109:PRO:HG2	1:C:112:THR:HA	1.81	0.63
2:D:1347:ILE:HG23	2:D:1403:ILE:HG12	1.80	0.63
2:H:150:LYS:NZ	2:H:175:LEU:HD13	2.13	0.63
2:F:681:ILE:HB	2:F:701:ILE:HG23	1.79	0.63
2:H:511:LEU:HD23	2:H:1426:LEU:HD21	1.79	0.63
2:H:551:PRO:HB3	2:H:583:PHE:HZ	1.64	0.63
2:B:592:LEU:HD11	2:B:1297:TRP:HH2	1.63	0.63
2:F:295:PHE:HZ	2:F:387:LEU:HB2	1.63	0.63
2:B:150:LYS:NZ	2:B:175:LEU:HD13	2.13	0.62
2:D:295:PHE:HZ	2:D:387:LEU:HB2	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:365:ALA:O	2:F:369:GLN:HG3	1.98	0.62
2:F:1506:ASP:HA	2:F:1536:ILE:HG13	1.80	0.62
2:H:783:THR:HB	2:H:820:GLN:HA	1.80	0.62
2:D:150:LYS:NZ	2:D:175:LEU:HD13	2.13	0.62
2:F:783:THR:HB	2:F:820:GLN:HA	1.80	0.62
1:C:183:PHE:HZ	1:C:287:LEU:HD23	1.62	0.62
2:D:551:PRO:HB3	2:D:583:PHE:HZ	1.64	0.62
2:F:1032:TYR:HA	2:F:1283:LEU:HD11	1.80	0.62
2:H:592:LEU:HD11	2:H:1297:TRP:HH2	1.63	0.62
2:H:369:GLN:HB2	2:H:370:ARG:NH2	2.15	0.62
2:D:783:THR:HB	2:D:820:GLN:HA	1.80	0.62
2:H:1032:TYR:HA	2:H:1283:LEU:HD11	1.80	0.62
2:B:681:ILE:HB	2:B:701:ILE:HG23	1.79	0.61
2:D:561:GLY:HA2	2:D:565:PHE:HB3	1.82	0.61
2:H:1347:ILE:HG23	2:H:1403:ILE:HG12	1.80	0.61
2:B:551:PRO:HB3	2:B:583:PHE:HZ	1.64	0.61
2:F:190:ILE:CB	2:F:195:TYR:CB	2.77	0.61
2:F:592:LEU:HD11	2:F:1297:TRP:HH2	1.63	0.61
2:B:369:GLN:HB2	2:B:370:ARG:NH2	2.15	0.61
2:F:369:GLN:HB2	2:F:370:ARG:NH2	2.15	0.61
1:G:109:PRO:HG2	1:G:112:THR:HA	1.81	0.61
1:A:213:ALA:HA	1:A:288:GLU:O	2.01	0.61
2:B:561:GLY:HA2	2:B:565:PHE:HB3	1.82	0.61
2:B:1347:ILE:HG23	2:B:1403:ILE:HG12	1.80	0.61
1:A:109:PRO:HG2	1:A:112:THR:HA	1.81	0.61
1:C:237:ASP:HB3	1:E:243:GLY:CA	2.31	0.61
2:D:369:GLN:HB2	2:D:370:ARG:NH2	2.15	0.61
2:F:551:PRO:HB3	2:F:583:PHE:HZ	1.64	0.61
2:H:699:ILE:HG23	2:H:908:ILE:HD11	1.82	0.61
2:D:301:LEU:HD23	2:D:301:LEU:O	2.01	0.61
2:D:1350:LEU:HB3	2:D:1365:VAL:HB	1.83	0.61
2:D:699:ILE:HG23	2:D:908:ILE:HD11	1.82	0.61
1:E:183:PHE:CE2	1:E:202:VAL:HG12	2.36	0.61
2:F:301:LEU:HD23	2:F:301:LEU:O	2.01	0.61
2:B:1350:LEU:HB3	2:B:1365:VAL:HB	1.83	0.60
1:C:181:LEU:HD22	1:C:181:LEU:H	1.66	0.60
2:D:1362:LEU:HD13	2:D:1365:VAL:HG21	1.84	0.60
2:F:561:GLY:HA2	2:F:565:PHE:HB3	1.82	0.60
2:B:1171:LEU:HD11	2:B:1255:ILE:HG23	1.84	0.60
1:C:183:PHE:CE2	1:C:202:VAL:HG12	2.36	0.60
1:C:213:ALA:HA	1:C:288:GLU:O	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:699:ILE:HG23	2:F:908:ILE:HD11	1.82	0.60
2:H:1171:LEU:HD11	2:H:1255:ILE:HG23	1.84	0.60
1:E:213:ALA:HA	1:E:288:GLU:O	2.01	0.60
1:G:312:GLY:O	1:G:313:GLN:NE2	2.35	0.60
2:H:389:GLY:O	2:H:393:THR:HG22	2.02	0.60
2:H:561:GLY:HA2	2:H:565:PHE:HB3	1.82	0.60
1:A:183:PHE:CE2	1:A:202:VAL:HG12	2.36	0.60
1:C:170:LYS:O	1:C:173:GLN:NE2	2.35	0.60
2:H:295:PHE:HZ	2:H:387:LEU:HB2	1.63	0.60
1:A:168:PHE:HA	1:A:171:THR:HG21	1.84	0.60
2:D:1171:LEU:HD11	2:D:1255:ILE:HG23	1.84	0.60
2:F:1171:LEU:HD11	2:F:1255:ILE:HG23	1.84	0.60
1:G:183:PHE:CE2	1:G:202:VAL:HG12	2.36	0.60
2:H:301:LEU:HD23	2:H:301:LEU:O	2.01	0.60
2:F:1362:LEU:HD13	2:F:1365:VAL:HG21	1.84	0.60
1:A:312:GLY:O	1:A:313:GLN:NE2	2.35	0.60
2:B:190:ILE:HB	2:B:195:TYR:CB	2.32	0.60
2:B:295:PHE:HZ	2:B:387:LEU:HB2	1.63	0.60
2:B:301:LEU:HD23	2:B:301:LEU:O	2.01	0.60
1:C:168:PHE:HA	1:C:171:THR:HG21	1.84	0.60
2:D:190:ILE:HB	2:D:195:TYR:CB	2.32	0.60
2:D:312:LEU:HB2	2:D:369:GLN:HG2	1.84	0.60
2:D:389:GLY:O	2:D:393:THR:HG22	2.02	0.60
1:E:95:PHE:HD1	1:E:100:LEU:HD23	1.67	0.60
1:E:181:LEU:HD22	1:E:181:LEU:H	1.66	0.60
1:G:213:ALA:HA	1:G:288:GLU:O	2.01	0.60
1:A:95:PHE:HD1	1:A:100:LEU:HD23	1.67	0.59
2:F:389:GLY:O	2:F:393:THR:HG22	2.02	0.59
2:F:1350:LEU:HB3	2:F:1365:VAL:HB	1.83	0.59
1:G:183:PHE:CZ	1:G:287:LEU:HD23	2.37	0.59
2:H:190:ILE:HB	2:H:195:TYR:CB	2.32	0.59
2:H:785:GLU:HB3	2:H:794:PHE:HZ	1.67	0.59
1:E:312:GLY:O	1:E:313:GLN:NE2	2.35	0.59
2:F:190:ILE:HB	2:F:195:TYR:CB	2.32	0.59
2:H:1362:LEU:HD13	2:H:1365:VAL:HG21	1.84	0.59
2:B:785:GLU:HB3	2:B:794:PHE:HZ	1.67	0.59
2:B:1553:LYS:HE3	2:B:1558:LEU:HB2	1.83	0.59
2:F:785:GLU:HB3	2:F:794:PHE:HZ	1.67	0.59
1:G:95:PHE:HD1	1:G:100:LEU:HD23	1.67	0.59
1:G:168:PHE:HA	1:G:171:THR:HG21	1.84	0.59
1:G:181:LEU:HD22	1:G:181:LEU:H	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1350:LEU:HB3	2:H:1365:VAL:HB	1.83	0.59
1:E:168:PHE:HA	1:E:171:THR:HG21	1.84	0.59
2:F:312:LEU:HB2	2:F:369:GLN:HG2	1.84	0.59
2:H:1553:LYS:HE3	2:H:1558:LEU:HB2	1.83	0.59
1:C:95:PHE:HD1	1:C:100:LEU:HD23	1.67	0.59
2:D:785:GLU:HB3	2:D:794:PHE:HZ	1.67	0.59
1:E:170:LYS:O	1:E:173:GLN:NE2	2.35	0.59
1:A:170:LYS:O	1:A:173:GLN:NE2	2.35	0.59
2:B:699:ILE:HG23	2:B:908:ILE:HD11	1.82	0.59
2:D:1377:ILE:HB	2:D:1536:ILE:HG23	1.85	0.59
2:D:1553:LYS:HE3	2:D:1558:LEU:HB2	1.83	0.59
1:G:170:LYS:O	1:G:173:GLN:NE2	2.35	0.59
2:B:389:GLY:O	2:B:393:THR:HG22	2.02	0.59
1:A:243:GLY:CA	1:G:237:ASP:HB3	2.31	0.59
1:A:183:PHE:CZ	1:A:287:LEU:HD23	2.37	0.58
1:C:312:GLY:O	1:C:313:GLN:NE2	2.35	0.58
2:H:312:LEU:HB2	2:H:369:GLN:HG2	1.84	0.58
2:F:1553:LYS:HE3	2:F:1558:LEU:HB2	1.83	0.58
2:B:1362:LEU:HD13	2:B:1365:VAL:HG21	1.84	0.58
1:C:183:PHE:CZ	1:C:287:LEU:HD23	2.37	0.58
1:A:181:LEU:HD22	1:A:181:LEU:H	1.66	0.58
2:B:312:LEU:HB2	2:B:369:GLN:HG2	1.84	0.58
2:D:75:TRP:CZ3	2:D:225:LEU:CB	2.87	0.58
1:E:183:PHE:CZ	1:E:287:LEU:HD23	2.37	0.58
2:H:545:PHE:HB2	2:H:1080:LEU:HD13	1.86	0.58
2:B:686:PHE:H	2:B:696:LEU:HB3	1.69	0.58
2:H:1377:ILE:HB	2:H:1536:ILE:HG23	1.85	0.58
2:D:366:LEU:O	2:D:370:ARG:HG2	2.04	0.58
2:F:1344:LYS:HB2	2:F:1371:PRO:HG3	1.85	0.58
2:F:1377:ILE:HB	2:F:1536:ILE:HG23	1.85	0.58
2:B:75:TRP:CZ3	2:B:225:LEU:CB	2.87	0.58
2:H:75:TRP:CZ3	2:H:225:LEU:CB	2.87	0.58
2:B:1377:ILE:HB	2:B:1536:ILE:HG23	1.85	0.58
2:H:686:PHE:H	2:H:696:LEU:HB3	1.69	0.58
1:A:237:ASP:HB3	1:C:243:GLY:CA	2.31	0.57
2:F:686:PHE:H	2:F:696:LEU:HB3	1.69	0.57
2:H:366:LEU:O	2:H:370:ARG:HG2	2.04	0.57
2:D:686:PHE:H	2:D:696:LEU:HB3	1.69	0.57
1:E:237:ASP:HB3	1:G:243:GLY:CA	2.31	0.57
2:F:1385:LYS:HB2	2:F:1536:ILE:HG21	1.86	0.57
2:B:681:ILE:HD11	2:B:726:THR:HG22	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1344:LYS:HB2	2:B:1371:PRO:HG3	1.85	0.57
2:H:681:ILE:HD11	2:H:726:THR:HG22	1.87	0.57
2:B:366:LEU:O	2:B:370:ARG:HG2	2.04	0.57
2:B:377:TYR:HB3	2:B:1246:ARG:HE	1.70	0.57
2:B:545:PHE:HB2	2:B:1080:LEU:HD13	1.86	0.57
2:F:75:TRP:CZ3	2:F:225:LEU:CB	2.87	0.57
2:F:366:LEU:O	2:F:370:ARG:HG2	2.04	0.57
2:H:1344:LYS:HB2	2:H:1371:PRO:HG3	1.85	0.57
2:D:545:PHE:HB2	2:D:1080:LEU:HD13	1.86	0.57
2:D:681:ILE:HD11	2:D:726:THR:HG22	1.87	0.57
2:F:545:PHE:HB2	2:F:1080:LEU:HD13	1.86	0.57
2:D:1344:LYS:HB2	2:D:1371:PRO:HG3	1.85	0.57
2:B:466:VAL:HG13	2:B:550:ILE:HG22	1.87	0.56
2:D:91:GLU:OE2	2:D:171:LEU:HD12	2.04	0.56
2:F:377:TYR:HB3	2:F:1246:ARG:HE	1.70	0.56
1:E:352:ASP:O	1:E:356:LEU:N	2.39	0.56
2:F:681:ILE:HD11	2:F:726:THR:HG22	1.87	0.56
1:A:352:ASP:O	1:A:356:LEU:N	2.39	0.56
2:B:1385:LYS:HB2	2:B:1536:ILE:HG21	1.86	0.56
2:D:466:VAL:HG13	2:D:550:ILE:HG22	1.87	0.56
2:D:1475:ILE:HD12	2:D:1482:PHE:HE2	1.71	0.56
2:B:1475:ILE:HD12	2:B:1482:PHE:HE2	1.71	0.56
2:H:1475:ILE:HD12	2:H:1482:PHE:HE2	1.71	0.56
1:C:168:PHE:CA	1:C:171:THR:CG2	2.83	0.56
1:C:352:ASP:O	1:C:356:LEU:N	2.39	0.56
2:D:377:TYR:HB3	2:D:1246:ARG:HE	1.70	0.56
2:F:466:VAL:HG13	2:F:550:ILE:HG22	1.87	0.56
1:G:181:LEU:H	1:G:181:LEU:CD2	2.19	0.56
2:H:377:TYR:HB3	2:H:1246:ARG:HE	1.70	0.56
2:H:466:VAL:HG13	2:H:550:ILE:HG22	1.87	0.56
1:A:34:ARG:HG2	1:A:305:LEU:HD21	1.88	0.56
2:D:1385:LYS:HB2	2:D:1536:ILE:HG21	1.86	0.56
1:E:34:ARG:HG2	1:E:305:LEU:HD21	1.88	0.56
2:H:1385:LYS:HB2	2:H:1536:ILE:HG21	1.86	0.56
2:H:1528:PHE:HD1	2:H:1531:ARG:HD2	1.71	0.56
1:A:168:PHE:CA	1:A:171:THR:CG2	2.83	0.55
2:B:1528:PHE:HD1	2:B:1531:ARG:HD2	1.71	0.55
2:B:1540:VAL:HG11	2:B:1579:ARG:HA	1.88	0.55
2:D:1540:VAL:HG11	2:D:1579:ARG:HA	1.88	0.55
2:H:1455:LEU:HD13	2:H:1464:VAL:HG21	1.88	0.55
2:B:686:PHE:HD1	2:B:733:VAL:HG23	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:352:ASP:O	1:G:356:LEU:N	2.39	0.55
2:B:1086:VAL:HG11	2:B:1141:GLU:HB2	1.89	0.55
1:E:181:LEU:H	1:E:181:LEU:CD2	2.19	0.55
1:C:34:ARG:HG2	1:C:305:LEU:HD21	1.88	0.55
2:F:1475:ILE:HD12	2:F:1482:PHE:HE2	1.71	0.55
2:D:1086:VAL:HG11	2:D:1141:GLU:HB2	1.89	0.55
2:D:1455:LEU:HD13	2:D:1464:VAL:HG21	1.88	0.55
1:G:168:PHE:CA	1:G:171:THR:CG2	2.83	0.55
1:A:181:LEU:H	1:A:181:LEU:CD2	2.19	0.55
2:D:686:PHE:HD1	2:D:733:VAL:HG23	1.71	0.55
2:F:1455:LEU:HD13	2:F:1464:VAL:HG21	1.88	0.55
2:B:363:PHE:HB2	2:B:1261:LEU:HD13	1.90	0.55
2:H:686:PHE:HD1	2:H:733:VAL:HG23	1.71	0.55
2:H:1226:LYS:HG2	2:H:1230:TYR:HE1	1.72	0.55
2:B:1226:LYS:HG2	2:B:1230:TYR:HE1	1.72	0.54
1:E:83:TRP:CD1	1:E:128:GLN:HG2	2.43	0.54
2:F:686:PHE:HD1	2:F:733:VAL:HG23	1.71	0.54
2:F:1086:VAL:HG11	2:F:1141:GLU:HB2	1.89	0.54
1:C:83:TRP:CD1	1:C:128:GLN:HG2	2.43	0.54
2:D:526:ARG:HE	2:D:1098:HIS:CG	2.25	0.54
2:H:363:PHE:HB2	2:H:1261:LEU:HD13	1.90	0.54
2:B:1455:LEU:HD13	2:B:1464:VAL:HG21	1.88	0.54
2:F:1562:LYS:HB3	2:F:1565:THR:HB	1.89	0.54
1:G:83:TRP:CD1	1:G:128:GLN:HG2	2.43	0.54
2:H:1086:VAL:HG11	2:H:1141:GLU:HB2	1.89	0.54
1:A:83:TRP:CD1	1:A:128:GLN:HG2	2.43	0.54
1:C:181:LEU:H	1:C:181:LEU:CD2	2.19	0.54
2:D:1562:LYS:HB3	2:D:1565:THR:HB	1.89	0.54
2:F:1528:PHE:HD1	2:F:1531:ARG:HD2	1.71	0.54
1:G:34:ARG:HG2	1:G:305:LEU:HD21	1.88	0.54
2:D:1528:PHE:HD1	2:D:1531:ARG:HD2	1.71	0.54
2:F:526:ARG:HE	2:F:1098:HIS:CG	2.25	0.54
2:B:1311:ALA:O	2:B:1314:ARG:HG2	2.08	0.54
2:F:366:LEU:HD23	2:F:1260:VAL:HG11	1.89	0.54
2:F:719:LYS:HB3	2:F:887:VAL:HG11	1.90	0.54
2:F:791:GLU:HB3	2:F:1219:TYR:HE2	1.73	0.54
2:H:1562:LYS:HB3	2:H:1565:THR:HB	1.89	0.54
2:D:363:PHE:HB2	2:D:1261:LEU:HD13	1.90	0.54
2:D:366:LEU:HD23	2:D:1260:VAL:HG11	1.89	0.54
2:F:1311:ALA:O	2:F:1314:ARG:HG2	2.08	0.54
2:F:1540:VAL:HG11	2:F:1579:ARG:HA	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:1540:VAL:HG11	2:H:1579:ARG:HA	1.88	0.54
2:B:719:LYS:HB3	2:B:887:VAL:HG11	1.90	0.54
2:B:366:LEU:HD23	2:B:1260:VAL:HG11	1.89	0.53
2:B:526:ARG:HE	2:B:1098:HIS:CG	2.25	0.53
2:B:442:PRO:O	2:B:445:ILE:HG13	2.08	0.53
2:D:1226:LYS:HG2	2:D:1230:TYR:HE1	1.72	0.53
2:F:1226:LYS:HG2	2:F:1230:TYR:HE1	1.72	0.53
2:D:791:GLU:HB3	2:D:1219:TYR:HE2	1.73	0.53
2:H:366:LEU:HD23	2:H:1260:VAL:HG11	1.89	0.53
2:H:562:HIS:CD2	2:H:571:LEU:HD23	2.44	0.53
2:H:1311:ALA:O	2:H:1314:ARG:HG2	2.08	0.53
2:B:1562:LYS:HB3	2:B:1565:THR:HB	1.89	0.53
2:F:363:PHE:HB2	2:F:1261:LEU:HD13	1.90	0.53
2:H:526:ARG:HE	2:H:1098:HIS:CG	2.25	0.53
2:B:517:ILE:HD11	2:B:1443:GLU:HG2	1.91	0.53
2:F:827:GLY:O	2:F:835:ARG:NH2	2.42	0.53
2:H:791:GLU:HB3	2:H:1219:TYR:HE2	1.73	0.53
2:H:827:GLY:O	2:H:835:ARG:NH2	2.42	0.53
2:B:562:HIS:CD2	2:B:571:LEU:HD23	2.44	0.53
2:D:719:LYS:HB3	2:D:887:VAL:HG11	1.90	0.53
2:D:1311:ALA:O	2:D:1314:ARG:HG2	2.08	0.53
2:D:517:ILE:HD11	2:D:1443:GLU:HG2	1.91	0.53
2:D:1124:ARG:NH1	2:D:1314:ARG:HD3	2.22	0.53
1:E:168:PHE:CA	1:E:171:THR:CG2	2.83	0.53
2:F:442:PRO:O	2:F:445:ILE:HG13	2.08	0.53
2:B:1393:PHE:CZ	2:B:1422:LEU:HB2	2.44	0.53
2:D:442:PRO:O	2:D:445:ILE:HG13	2.08	0.53
2:H:442:PRO:O	2:H:445:ILE:HG13	2.08	0.53
2:H:719:LYS:HB3	2:H:887:VAL:HG11	1.90	0.53
2:B:559:PHE:O	2:B:563:VAL:HG22	2.10	0.52
2:B:827:GLY:O	2:B:835:ARG:NH2	2.42	0.52
2:D:562:HIS:CD2	2:D:571:LEU:HD23	2.44	0.52
2:H:1393:PHE:CZ	2:H:1422:LEU:HB2	2.44	0.52
2:B:791:GLU:HB3	2:B:1219:TYR:HE2	1.73	0.52
2:F:517:ILE:HD11	2:F:1443:GLU:HG2	1.91	0.52
2:F:1393:PHE:CZ	2:F:1422:LEU:HB2	2.44	0.52
2:H:559:PHE:O	2:H:563:VAL:HG22	2.10	0.52
2:F:562:HIS:CD2	2:F:571:LEU:HD23	2.44	0.52
2:H:1528:PHE:CD1	2:H:1531:ARG:HD2	2.45	0.52
2:H:517:ILE:HD11	2:H:1443:GLU:HG2	1.91	0.52
2:F:1124:ARG:NH1	2:F:1314:ARG:HD3	2.22	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:150:LYS:NZ	2:B:175:LEU:CD1	2.73	0.52
2:B:1528:PHE:CD1	2:B:1531:ARG:HD2	2.45	0.52
2:D:1393:PHE:CZ	2:D:1422:LEU:HB2	2.44	0.52
2:F:150:LYS:NZ	2:F:175:LEU:CD1	2.73	0.52
2:H:779:LEU:HD11	2:H:835:ARG:HG2	1.92	0.52
2:D:91:GLU:CD	2:D:171:LEU:CD1	2.76	0.52
2:D:779:LEU:HD11	2:D:835:ARG:HG2	1.92	0.52
2:B:143:TRP:HB3	2:B:183:LEU:HG	1.92	0.52
2:F:559:PHE:O	2:F:563:VAL:HG22	2.10	0.52
2:D:827:GLY:O	2:D:835:ARG:NH2	2.42	0.52
2:H:687:THR:HB	2:H:694:PRO:HA	1.92	0.52
2:H:1455:LEU:HD22	2:H:1460:LEU:HD23	1.92	0.52
2:B:679:VAL:HB	2:B:703:ILE:HD12	1.92	0.51
2:D:308:LEU:O	2:D:311:LEU:HG	2.11	0.51
2:F:1528:PHE:CD1	2:F:1531:ARG:HD2	2.45	0.51
2:B:1124:ARG:NH1	2:B:1314:ARG:HD3	2.22	0.51
2:F:679:VAL:HB	2:F:703:ILE:HD12	1.92	0.51
2:F:779:LEU:HD11	2:F:835:ARG:HG2	1.92	0.51
2:F:1455:LEU:HD22	2:F:1460:LEU:HD23	1.92	0.51
2:H:150:LYS:NZ	2:H:175:LEU:CD1	2.73	0.51
2:H:423:ILE:O	2:H:427:GLN:HG2	2.11	0.51
2:H:1124:ARG:NH1	2:H:1314:ARG:HD3	2.22	0.51
2:H:308:LEU:O	2:H:311:LEU:HG	2.11	0.51
2:H:679:VAL:HB	2:H:703:ILE:HD12	1.92	0.51
2:B:779:LEU:HD11	2:B:835:ARG:HG2	1.92	0.51
2:F:687:THR:HB	2:F:694:PRO:HA	1.92	0.51
2:H:686:PHE:HB2	2:H:732:LYS:HA	1.93	0.51
2:D:423:ILE:O	2:D:427:GLN:HG2	2.11	0.51
2:D:679:VAL:HB	2:D:703:ILE:HD12	1.92	0.51
2:F:768:GLY:O	2:F:1218:ARG:NH2	2.44	0.51
2:H:143:TRP:HB3	2:H:183:LEU:HG	1.92	0.51
2:H:295:PHE:CE1	2:H:387:LEU:HB2	2.46	0.51
2:D:150:LYS:NZ	2:D:175:LEU:CD1	2.73	0.51
2:D:559:PHE:O	2:D:563:VAL:HG22	2.10	0.51
1:E:169:MET:CE	1:G:172:ALA:CA	2.79	0.51
2:F:143:TRP:HB3	2:F:183:LEU:HG	1.92	0.51
2:H:686:PHE:CD1	2:H:733:VAL:HG23	2.46	0.51
2:D:687:THR:HB	2:D:694:PRO:HA	1.92	0.51
2:F:308:LEU:O	2:F:311:LEU:HG	2.11	0.51
2:F:847:GLN:HA	2:F:882:ARG:HH12	1.76	0.51
1:A:239:PRO:HG3	1:C:244:VAL:CB	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:285:VAL:HG22	1:A:302:THR:HG22	1.93	0.51
2:B:768:GLY:O	2:B:1218:ARG:NH2	2.44	0.51
1:C:239:PRO:HG3	1:E:244:VAL:CB	2.41	0.51
2:D:1528:PHE:CD1	2:D:1531:ARG:HD2	2.45	0.51
2:F:686:PHE:HB2	2:F:732:LYS:HA	1.93	0.51
1:C:285:VAL:HG22	1:C:302:THR:HG22	1.93	0.50
2:D:768:GLY:O	2:D:1218:ARG:NH2	2.44	0.50
2:B:686:PHE:CD1	2:B:733:VAL:HG23	2.46	0.50
1:C:202:VAL:HG23	1:C:251:LEU:HD21	1.94	0.50
2:D:1455:LEU:HD22	2:D:1460:LEU:HD23	1.92	0.50
1:E:285:VAL:HG22	1:E:302:THR:HG22	1.93	0.50
2:F:76:ILE:O	2:F:80:ILE:HG13	2.12	0.50
2:H:76:ILE:O	2:H:80:ILE:HG13	2.12	0.50
2:B:686:PHE:HB2	2:B:732:LYS:HA	1.93	0.50
2:D:686:PHE:CD1	2:D:733:VAL:HG23	2.46	0.50
2:H:768:GLY:O	2:H:1218:ARG:NH2	2.44	0.50
2:H:798:ARG:NH2	2:H:847:GLN:OE1	2.45	0.50
2:B:769:PRO:O	2:B:848:THR:OG1	2.26	0.50
2:D:76:ILE:O	2:D:80:ILE:HG13	2.12	0.50
2:D:143:TRP:HB3	2:D:183:LEU:HG	1.92	0.50
2:D:847:GLN:HA	2:D:882:ARG:HH12	1.76	0.50
1:E:239:PRO:HG3	1:G:244:VAL:CB	2.41	0.50
1:A:202:VAL:HG23	1:A:251:LEU:HD21	1.94	0.50
2:B:423:ILE:O	2:B:427:GLN:HG2	2.11	0.50
2:B:798:ARG:NH2	2:B:847:GLN:OE1	2.45	0.50
2:D:402:LEU:O	2:D:1215:ARG:NH1	2.45	0.50
2:D:864:LEU:HD11	2:D:1381:THR:HG21	1.94	0.50
2:F:295:PHE:CE1	2:F:387:LEU:HB2	2.46	0.50
1:G:202:VAL:HG23	1:G:251:LEU:HD21	1.94	0.50
1:A:244:VAL:CB	1:G:239:PRO:HG3	2.41	0.50
2:B:308:LEU:O	2:B:311:LEU:HG	2.11	0.50
2:B:402:LEU:O	2:B:1215:ARG:NH1	2.45	0.50
2:B:847:GLN:HA	2:B:882:ARG:HH12	1.76	0.50
1:G:47:LYS:HG3	1:G:48:ASN:ND2	2.27	0.50
2:H:769:PRO:O	2:H:848:THR:OG1	2.26	0.50
1:A:46:HIS:HA	1:C:328:VAL:CG2	2.42	0.50
2:B:508:LEU:HD13	2:B:1430:VAL:HG12	1.94	0.50
2:B:1455:LEU:HD22	2:B:1460:LEU:HD23	1.92	0.50
1:E:202:VAL:HG23	1:E:251:LEU:HD21	1.94	0.50
2:F:423:ILE:O	2:F:427:GLN:HG2	2.11	0.50
1:G:285:VAL:HG22	1:G:302:THR:HG22	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:847:GLN:HA	2:H:882:ARG:HH12	1.76	0.50
1:A:47:LYS:HG3	1:A:48:ASN:ND2	2.27	0.50
2:D:1004:TYR:HE1	2:D:1093:VAL:HG11	1.77	0.50
1:E:46:HIS:HA	1:G:328:VAL:CG2	2.42	0.50
2:F:798:ARG:NH2	2:F:847:GLN:OE1	2.45	0.50
2:F:1004:TYR:HE1	2:F:1093:VAL:HG11	1.77	0.50
2:H:508:LEU:HD13	2:H:1430:VAL:HG12	1.94	0.50
1:A:328:VAL:CG2	1:G:46:HIS:HA	2.42	0.50
2:B:1496:PHE:HA	2:B:1528:PHE:HZ	1.77	0.50
1:E:47:LYS:HG3	1:E:48:ASN:ND2	2.27	0.50
1:E:198:PHE:HE1	1:E:200:LEU:HB2	1.77	0.50
2:B:687:THR:HB	2:B:694:PRO:HA	1.92	0.49
1:C:169:MET:CE	1:E:172:ALA:CA	2.79	0.49
2:D:686:PHE:HB2	2:D:732:LYS:HA	1.93	0.49
2:F:508:LEU:HD13	2:F:1430:VAL:HG12	1.94	0.49
1:A:172:ALA:CA	1:G:169:MET:CE	2.79	0.49
1:C:36:VAL:HG23	1:C:303:SER:OG	2.13	0.49
2:D:1347:ILE:HG21	2:D:1350:LEU:HD22	1.93	0.49
2:F:864:LEU:HD11	2:F:1381:THR:HG21	1.94	0.49
1:A:198:PHE:HE1	1:A:200:LEU:HB2	1.77	0.49
1:A:220:VAL:HG12	1:A:235:GLN:HG2	1.95	0.49
2:B:1004:TYR:HE1	2:B:1093:VAL:HG11	1.77	0.49
2:F:686:PHE:CD1	2:F:733:VAL:HG23	2.46	0.49
2:F:1347:ILE:HG21	2:F:1350:LEU:HD22	1.93	0.49
2:B:76:ILE:O	2:B:80:ILE:HG13	2.12	0.49
2:H:1353:ARG:HE	2:H:1398:MET:HB3	1.77	0.49
1:C:220:VAL:HG12	1:C:235:GLN:HG2	1.95	0.49
2:D:1570:LYS:HD3	2:D:1574:PHE:HB2	1.95	0.49
2:F:1496:PHE:HA	2:F:1528:PHE:HZ	1.77	0.49
1:A:328:VAL:HG23	1:G:46:HIS:HA	1.94	0.49
2:D:798:ARG:NH2	2:D:847:GLN:OE1	2.45	0.49
1:E:36:VAL:HG23	1:E:303:SER:OG	2.13	0.49
1:G:198:PHE:HE1	1:G:200:LEU:HB2	1.77	0.49
2:H:131:ASN:OD1	2:H:131:ASN:N	2.43	0.49
2:B:1353:ARG:HE	2:B:1398:MET:HB3	1.77	0.49
2:B:1553:LYS:HZ1	2:B:1558:LEU:HD13	1.77	0.49
1:C:46:HIS:HA	1:E:328:VAL:CG2	2.42	0.49
1:C:243:GLY:O	1:C:245:GLY:N	2.46	0.49
2:D:508:LEU:HD13	2:D:1430:VAL:HG12	1.94	0.49
2:H:864:LEU:HD11	2:H:1381:THR:HG21	1.94	0.49
1:A:46:HIS:HA	1:C:328:VAL:HG23	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1182:PHE:CD2	2:B:1248:LEU:HD22	2.48	0.49
2:B:1347:ILE:HG21	2:B:1350:LEU:HD22	1.93	0.49
2:D:295:PHE:CE1	2:D:387:LEU:HB2	2.46	0.49
1:E:220:VAL:HG12	1:E:235:GLN:HG2	1.95	0.49
2:F:402:LEU:O	2:F:1215:ARG:NH1	2.45	0.49
2:F:785:GLU:OE1	2:F:820:GLN:NE2	2.41	0.49
2:F:1339:TRP:CD2	2:F:1340:PRO:HD2	2.48	0.49
1:A:36:VAL:HG23	1:A:303:SER:OG	2.13	0.49
2:B:864:LEU:HD11	2:B:1381:THR:HG21	1.94	0.49
2:B:1570:LYS:HD3	2:B:1574:PHE:HB2	1.95	0.49
1:C:47:LYS:HG3	1:C:48:ASN:ND2	2.27	0.49
1:G:243:GLY:O	1:G:245:GLY:N	2.46	0.49
2:H:1182:PHE:CD2	2:H:1248:LEU:HD22	2.48	0.49
2:B:363:PHE:CD1	2:B:1261:LEU:HB2	2.48	0.49
2:B:526:ARG:NH1	2:B:529:GLU:OE1	2.46	0.49
1:C:139:THR:HG23	1:C:141:GLU:H	1.77	0.49
2:D:1353:ARG:HE	2:D:1398:MET:HB3	1.77	0.49
2:F:363:PHE:CD1	2:F:1261:LEU:HB2	2.48	0.49
1:G:139:THR:HG23	1:G:141:GLU:H	1.77	0.49
2:H:526:ARG:NH1	2:H:529:GLU:OE1	2.46	0.49
2:H:1004:TYR:HE1	2:H:1093:VAL:HG11	1.77	0.49
2:B:1339:TRP:CD2	2:B:1340:PRO:HD2	2.48	0.48
2:D:253:LEU:HD13	2:D:1236:ILE:HB	1.95	0.48
1:G:220:VAL:HG12	1:G:235:GLN:HG2	1.95	0.48
2:H:402:LEU:O	2:H:1215:ARG:NH1	2.45	0.48
2:H:1347:ILE:HG21	2:H:1350:LEU:HD22	1.93	0.48
2:H:1496:PHE:HA	2:H:1528:PHE:HZ	1.77	0.48
1:A:139:THR:HG23	1:A:141:GLU:H	1.77	0.48
2:B:795:ASN:HB2	2:B:798:ARG:HB3	1.95	0.48
2:D:795:ASN:HB2	2:D:798:ARG:HB3	1.95	0.48
2:D:1182:PHE:CD2	2:D:1248:LEU:HD22	2.48	0.48
2:F:253:LEU:HD13	2:F:1236:ILE:HB	1.95	0.48
1:A:169:MET:CE	1:C:172:ALA:CA	2.79	0.48
2:B:1461:LYS:HE2	2:B:1465:LYS:HE2	1.95	0.48
2:D:526:ARG:NH1	2:D:529:GLU:OE1	2.46	0.48
2:D:1553:LYS:HZ1	2:D:1558:LEU:HD13	1.78	0.48
2:F:449:VAL:HA	2:F:452:LEU:HG	1.96	0.48
2:F:526:ARG:NH1	2:F:529:GLU:OE1	2.46	0.48
2:F:1353:ARG:HE	2:F:1398:MET:HB3	1.77	0.48
2:F:1570:LYS:HD3	2:F:1574:PHE:HB2	1.95	0.48
1:A:181:LEU:N	1:A:181:LEU:CD2	2.76	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:581:SER:O	2:D:585:ILE:HG12	2.14	0.48
1:E:46:HIS:HA	1:G:328:VAL:HG23	1.94	0.48
2:F:1182:PHE:CD2	2:F:1248:LEU:HD22	2.48	0.48
2:F:1553:LYS:HZ1	2:F:1558:LEU:HD13	1.78	0.48
2:H:449:VAL:HA	2:H:452:LEU:HG	1.96	0.48
2:H:1226:LYS:HG2	2:H:1230:TYR:CE1	2.48	0.48
2:H:1339:TRP:CD2	2:H:1340:PRO:HD2	2.48	0.48
2:B:449:VAL:HA	2:B:452:LEU:HG	1.96	0.48
1:C:198:PHE:HE1	1:C:200:LEU:HB2	1.77	0.48
2:D:363:PHE:CD1	2:D:1261:LEU:HB2	2.48	0.48
2:D:449:VAL:HA	2:D:452:LEU:HG	1.96	0.48
2:D:1496:PHE:HA	2:D:1528:PHE:HZ	1.77	0.48
1:E:181:LEU:N	1:E:181:LEU:CD2	2.76	0.48
2:H:32:ASN:O	2:H:35:PRO:HD2	2.14	0.48
1:A:243:GLY:O	1:A:245:GLY:N	2.46	0.48
2:B:32:ASN:O	2:B:35:PRO:HD2	2.14	0.48
2:D:711:ILE:HB	2:D:887:VAL:HG13	1.96	0.48
1:E:77:MET:HG2	2:F:48:PHE:CE2	2.48	0.48
2:F:581:SER:O	2:F:585:ILE:HG12	2.14	0.48
2:F:1461:LYS:HE2	2:F:1465:LYS:HE2	1.95	0.48
1:G:36:VAL:HG23	1:G:303:SER:OG	2.13	0.48
2:H:526:ARG:HE	2:H:1098:HIS:CD2	2.32	0.48
2:H:1570:LYS:HD3	2:H:1574:PHE:HB2	1.95	0.48
2:B:1226:LYS:HG2	2:B:1230:TYR:CE1	2.48	0.48
2:D:526:ARG:HE	2:D:1098:HIS:CD2	2.32	0.48
2:D:1339:TRP:CD2	2:D:1340:PRO:HD2	2.48	0.48
1:E:243:GLY:O	1:E:245:GLY:N	2.46	0.48
2:H:363:PHE:CD1	2:H:1261:LEU:HB2	2.48	0.48
2:H:1128:ASP:OD1	2:H:1311:ALA:HB1	2.14	0.48
2:H:1553:LYS:HZ1	2:H:1558:LEU:HD13	1.78	0.48
1:C:46:HIS:HA	1:E:328:VAL:HG23	1.94	0.48
2:H:488:THR:OG1	2:H:532:SER:HB3	2.14	0.48
2:B:253:LEU:HD13	2:B:1236:ILE:HB	1.95	0.48
2:B:550:ILE:HB	2:B:551:PRO:HD3	1.96	0.48
2:D:1079:CYS:O	2:D:1082:THR:OG1	2.27	0.48
1:G:168:PHE:C	1:G:171:THR:CG2	2.81	0.48
2:H:581:SER:O	2:H:585:ILE:HG12	2.14	0.48
1:A:64:VAL:HG13	1:A:170:LYS:CB	2.44	0.47
1:C:77:MET:HG2	2:D:48:PHE:CE2	2.48	0.47
1:C:128:GLN:NE2	1:C:152:GLN:OE1	2.47	0.47
2:D:32:ASN:O	2:D:35:PRO:HD2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:128:GLN:NE2	1:E:152:GLN:OE1	2.47	0.47
1:G:77:MET:HG2	2:H:48:PHE:CE2	2.48	0.47
2:H:553:ALA:O	2:H:557:ILE:HG12	2.15	0.47
2:D:550:ILE:HB	2:D:551:PRO:HD3	1.96	0.47
2:D:1246:ARG:HA	2:D:1246:ARG:HD3	1.65	0.47
1:E:139:THR:HG23	1:E:141:GLU:H	1.77	0.47
2:B:396:TYR:CD1	2:B:1227:LEU:HD13	2.50	0.47
2:B:1128:ASP:OD1	2:B:1311:ALA:HB1	2.14	0.47
2:D:1078:LEU:O	2:D:1082:THR:HG23	2.15	0.47
1:E:46:HIS:HD2	1:G:330:TYR:OH	1.98	0.47
2:F:526:ARG:HE	2:F:1098:HIS:CD2	2.32	0.47
1:G:181:LEU:N	1:G:181:LEU:CD2	2.76	0.47
2:B:1078:LEU:O	2:B:1082:THR:HG23	2.15	0.47
2:D:396:TYR:CD1	2:D:1227:LEU:HD13	2.50	0.47
1:E:95:PHE:HE2	2:F:27:PHE:HB2	1.80	0.47
2:F:711:ILE:HB	2:F:887:VAL:HG13	1.96	0.47
2:F:1375:ILE:HB	2:F:1534:VAL:HG22	1.97	0.47
2:H:550:ILE:HB	2:H:551:PRO:HD3	1.96	0.47
2:H:802:VAL:HG11	2:H:845:TYR:HB2	1.97	0.47
2:H:1078:LEU:O	2:H:1082:THR:HG23	2.15	0.47
2:H:1461:LYS:HE2	2:H:1465:LYS:HE2	1.95	0.47
1:A:128:GLN:NE2	1:A:152:GLN:OE1	2.47	0.47
2:B:131:ASN:OD1	2:B:131:ASN:N	2.43	0.47
2:D:553:ALA:O	2:D:557:ILE:HG12	2.15	0.47
2:D:785:GLU:OE1	2:D:820:GLN:NE2	2.41	0.47
2:F:550:ILE:HB	2:F:551:PRO:HD3	1.96	0.47
2:F:1425:ILE:HD13	2:F:1492:LEU:HD12	1.97	0.47
1:G:64:VAL:HG13	1:G:170:LYS:CB	2.44	0.47
1:G:95:PHE:HE2	2:H:27:PHE:HB2	1.80	0.47
1:A:46:HIS:HD2	1:C:330:TYR:OH	1.98	0.47
1:A:77:MET:HG2	2:B:48:PHE:CE2	2.48	0.47
1:A:330:TYR:OH	1:G:46:HIS:HD2	1.98	0.47
2:B:526:ARG:HE	2:B:1098:HIS:CD2	2.32	0.47
2:D:1425:ILE:HD13	2:D:1492:LEU:HD12	1.97	0.47
2:F:795:ASN:HB2	2:F:798:ARG:HB3	1.95	0.47
2:H:253:LEU:HD13	2:H:1236:ILE:HB	1.95	0.47
2:B:581:SER:O	2:B:585:ILE:HG12	2.14	0.47
1:C:46:HIS:HD2	1:E:330:TYR:OH	1.98	0.47
2:D:488:THR:OG1	2:D:532:SER:HB3	2.14	0.47
2:F:32:ASN:O	2:F:35:PRO:HD2	2.14	0.47
2:F:485:GLN:HE22	2:F:598:ARG:HG3	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:592:LEU:HD11	2:F:1297:TRP:CH2	2.48	0.47
2:F:1128:ASP:OD1	2:F:1311:ALA:HB1	2.14	0.47
2:F:1226:LYS:HG2	2:F:1230:TYR:CE1	2.48	0.47
2:F:1345:ILE:HD11	2:F:1369:ILE:HD12	1.97	0.47
2:H:396:TYR:CD1	2:H:1227:LEU:HD13	2.50	0.47
2:H:711:ILE:HB	2:H:887:VAL:HG13	1.96	0.47
2:H:795:ASN:HB2	2:H:798:ARG:HB3	1.95	0.47
2:H:1345:ILE:HD11	2:H:1369:ILE:HD12	1.97	0.47
2:B:553:ALA:O	2:B:557:ILE:HG12	2.15	0.47
1:E:181:LEU:HG	1:E:300:ALA:HB2	1.97	0.47
2:F:488:THR:OG1	2:F:532:SER:HB3	2.14	0.47
1:A:95:PHE:HE2	2:B:27:PHE:HB2	1.80	0.47
2:B:488:THR:OG1	2:B:532:SER:HB3	2.14	0.47
2:B:853:LEU:HB2	2:B:886:LEU:HG	1.97	0.47
2:B:1425:ILE:HD13	2:B:1492:LEU:HD12	1.97	0.47
2:D:853:LEU:HB2	2:D:886:LEU:HG	1.97	0.47
2:D:1128:ASP:OD1	2:D:1311:ALA:HB1	2.14	0.47
2:F:396:TYR:OH	2:F:1223:PHE:HB3	2.15	0.47
2:F:489:LEU:HD11	2:F:602:LYS:HE3	1.97	0.47
2:B:1375:ILE:HB	2:B:1534:VAL:HG22	1.97	0.47
1:G:128:GLN:NE2	1:G:152:GLN:OE1	2.47	0.47
1:A:280:ASP:N	1:A:280:ASP:OD1	2.48	0.46
2:B:1503:PHE:HB2	2:B:1533:VAL:HG22	1.97	0.46
1:C:64:VAL:HG13	1:C:170:LYS:CB	2.44	0.46
2:D:769:PRO:O	2:D:848:THR:OG1	2.26	0.46
2:F:388:ARG:HD3	2:F:429:MET:SD	2.55	0.46
2:D:1345:ILE:HD11	2:D:1369:ILE:HD12	1.97	0.46
2:F:91:GLU:CD	2:F:171:LEU:HD12	2.36	0.46
2:F:853:LEU:HB2	2:F:886:LEU:HG	1.97	0.46
2:H:190:ILE:CD1	2:H:195:TYR:CB	2.94	0.46
2:H:398:LYS:HE3	2:H:398:LYS:HB3	1.81	0.46
2:H:447:VAL:HA	2:H:450:ILE:HG22	1.98	0.46
2:H:1375:ILE:HB	2:H:1534:VAL:HG22	1.97	0.46
2:H:1503:PHE:HB2	2:H:1533:VAL:HG22	1.97	0.46
2:B:396:TYR:OH	2:B:1223:PHE:HB3	2.15	0.46
2:B:785:GLU:OE1	2:B:820:GLN:NE2	2.41	0.46
1:C:95:PHE:HE2	2:D:27:PHE:HB2	1.80	0.46
2:D:1375:ILE:HB	2:D:1534:VAL:HG22	1.97	0.46
2:D:1503:PHE:HB2	2:D:1533:VAL:HG22	1.97	0.46
2:F:553:ALA:O	2:F:557:ILE:HG12	2.15	0.46
2:H:1352:VAL:HG13	2:H:1361:VAL:HB	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:150:LYS:HB3	2:B:176:VAL:CG2	2.41	0.46
2:B:711:ILE:HB	2:B:887:VAL:HG13	1.96	0.46
2:D:150:LYS:HB3	2:D:176:VAL:CG2	2.41	0.46
2:D:388:ARG:HD3	2:D:429:MET:SD	2.55	0.46
2:D:396:TYR:OH	2:D:1223:PHE:HB3	2.15	0.46
2:D:701:ILE:HD11	2:D:703:ILE:HD11	1.98	0.46
2:D:1226:LYS:HG2	2:D:1230:TYR:CE1	2.48	0.46
2:D:1260:VAL:HG23	2:D:1288:ALA:HB1	1.98	0.46
1:E:177:ARG:HH22	1:E:208:SER:CB	2.25	0.46
2:H:701:ILE:HD11	2:H:703:ILE:HD11	1.98	0.46
2:B:1345:ILE:HD11	2:B:1369:ILE:HD12	1.97	0.46
2:D:489:LEU:HD11	2:D:602:LYS:HE3	1.97	0.46
2:D:802:VAL:HG11	2:D:845:TYR:HB2	1.97	0.46
2:F:398:LYS:CD	2:F:614:LEU:HA	2.45	0.46
2:F:1490:PHE:O	2:F:1494:ARG:HG3	2.16	0.46
2:H:396:TYR:OH	2:H:1223:PHE:HB3	2.15	0.46
1:A:181:LEU:HG	1:A:300:ALA:HB2	1.97	0.46
2:B:190:ILE:CD1	2:B:195:TYR:CB	2.94	0.46
2:B:701:ILE:HD11	2:B:703:ILE:HD11	1.98	0.46
2:B:1514:MET:HG2	2:B:1539:ARG:NH2	2.31	0.46
2:D:1461:LYS:HE2	2:D:1465:LYS:HE2	1.95	0.46
2:F:396:TYR:CD1	2:F:1227:LEU:HD13	2.50	0.46
2:F:802:VAL:HG11	2:F:845:TYR:HB2	1.97	0.46
2:F:1514:MET:HG2	2:F:1539:ARG:NH2	2.31	0.46
2:H:489:LEU:HD11	2:H:602:LYS:HE3	1.97	0.46
2:H:853:LEU:HB2	2:H:886:LEU:HG	1.97	0.46
2:B:388:ARG:HD3	2:B:429:MET:SD	2.55	0.46
2:B:398:LYS:CD	2:B:614:LEU:HA	2.45	0.46
2:B:485:GLN:HE22	2:B:598:ARG:HG3	1.80	0.46
2:B:802:VAL:HG11	2:B:845:TYR:HB2	1.97	0.46
2:D:263:TYR:HB2	2:D:393:THR:HG21	1.98	0.46
2:D:398:LYS:CD	2:D:614:LEU:HA	2.45	0.46
2:D:1352:VAL:HG13	2:D:1361:VAL:HB	1.97	0.46
2:F:1260:VAL:HG23	2:F:1288:ALA:HB1	1.98	0.46
1:G:190:THR:HG22	1:G:191:LEU:H	1.81	0.46
1:A:190:THR:HG22	1:A:191:LEU:H	1.81	0.46
2:B:1260:VAL:HG23	2:B:1288:ALA:HB1	1.98	0.46
2:B:1490:PHE:O	2:B:1494:ARG:HG3	2.16	0.46
1:C:181:LEU:HG	1:C:300:ALA:HB2	1.97	0.46
1:E:190:THR:HG22	1:E:191:LEU:H	1.81	0.46
1:E:280:ASP:OD1	1:E:280:ASP:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:1078:LEU:O	2:F:1082:THR:HG23	2.15	0.46
1:G:181:LEU:HG	1:G:300:ALA:HB2	1.97	0.46
1:G:280:ASP:OD1	1:G:280:ASP:N	2.48	0.46
2:H:253:LEU:HG	2:H:257:MET:HB3	1.98	0.46
2:H:388:ARG:HD3	2:H:429:MET:SD	2.55	0.46
2:H:398:LYS:CD	2:H:614:LEU:HA	2.45	0.46
2:B:253:LEU:HG	2:B:257:MET:HB3	1.98	0.46
1:C:90:TRP:HA	1:C:93:ILE:HG22	1.98	0.46
1:C:178:ALA:O	1:C:181:LEU:CD2	2.64	0.46
1:E:168:PHE:C	1:E:171:THR:CG2	2.81	0.46
2:F:701:ILE:HD11	2:F:703:ILE:HD11	1.98	0.46
2:F:1352:VAL:HG13	2:F:1361:VAL:HB	1.97	0.46
2:F:1503:PHE:HB2	2:F:1533:VAL:HG22	1.97	0.46
1:G:313:GLN:HB3	1:G:336:THR:CG2	2.46	0.46
2:H:485:GLN:HE22	2:H:598:ARG:HG3	1.80	0.46
2:H:1425:ILE:HD13	2:H:1492:LEU:HD12	1.97	0.46
1:A:178:ALA:O	1:A:181:LEU:CD2	2.64	0.46
1:A:261:ILE:H	1:A:261:ILE:HG13	1.61	0.46
2:B:447:VAL:HA	2:B:450:ILE:HG22	1.98	0.46
2:B:1352:VAL:HG13	2:B:1361:VAL:HB	1.97	0.46
1:C:177:ARG:HH22	1:C:208:SER:CB	2.25	0.46
2:D:253:LEU:HG	2:D:257:MET:HB3	1.98	0.46
1:E:64:VAL:HG13	1:E:170:LYS:CB	2.44	0.46
1:E:178:ALA:O	1:E:181:LEU:CD2	2.64	0.46
2:D:447:VAL:HA	2:D:450:ILE:HG22	1.98	0.45
2:D:1102:LEU:HD23	2:D:1102:LEU:HA	1.76	0.45
1:E:90:TRP:HA	1:E:93:ILE:HG22	1.98	0.45
2:F:190:ILE:CD1	2:F:195:TYR:CB	2.94	0.45
2:H:1327:GLU:HB3	2:H:1415:LEU:H	1.82	0.45
2:B:196:ILE:C	2:B:197:PHE:O	2.55	0.45
1:C:280:ASP:N	1:C:280:ASP:OD1	2.48	0.45
2:F:263:TYR:HB2	2:F:393:THR:HG21	1.98	0.45
2:F:447:VAL:HA	2:F:450:ILE:HG22	1.98	0.45
1:G:313:GLN:HE22	1:G:338:LYS:HD2	1.82	0.45
1:A:313:GLN:HE22	1:A:338:LYS:HD2	1.82	0.45
1:C:190:THR:HG22	1:C:191:LEU:H	1.81	0.45
2:D:485:GLN:HE22	2:D:598:ARG:HG3	1.80	0.45
2:D:511:LEU:HD12	2:D:511:LEU:HA	1.73	0.45
2:D:1514:MET:HG2	2:D:1539:ARG:NH2	2.31	0.45
1:G:90:TRP:HA	1:G:93:ILE:HG22	1.98	0.45
2:H:196:ILE:C	2:H:197:PHE:O	2.55	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:313:GLN:HB3	1:A:336:THR:CG2	2.46	0.45
2:B:489:LEU:HD11	2:B:602:LYS:HE3	1.97	0.45
1:C:313:GLN:HE22	1:C:338:LYS:HD2	1.82	0.45
2:D:190:ILE:CD1	2:D:195:TYR:CB	2.94	0.45
2:D:398:LYS:HE3	2:D:398:LYS:HB3	1.81	0.45
2:F:150:LYS:CB	2:F:176:VAL:HG22	2.44	0.45
2:F:892:GLN:H	2:F:892:GLN:HG3	1.41	0.45
2:F:1079:CYS:O	2:F:1082:THR:OG1	2.27	0.45
1:G:177:ARG:HH22	1:G:208:SER:CB	2.25	0.45
1:G:178:ALA:O	1:G:181:LEU:CD2	2.64	0.45
2:H:785:GLU:OE1	2:H:820:GLN:NE2	2.41	0.45
2:H:1260:VAL:HG23	2:H:1288:ALA:HB1	1.98	0.45
2:B:246:ASP:OD1	2:B:247:LEU:N	2.49	0.45
2:B:288:TRP:CE3	2:B:607:VAL:HG11	2.52	0.45
2:B:312:LEU:CB	2:B:369:GLN:HG2	2.47	0.45
2:B:1327:GLU:HB3	2:B:1415:LEU:H	1.82	0.45
1:C:313:GLN:HB3	1:C:336:THR:CG2	2.46	0.45
2:D:1327:GLU:HB3	2:D:1415:LEU:H	1.82	0.45
2:D:1490:PHE:O	2:D:1494:ARG:HG3	2.16	0.45
1:E:56:LEU:O	1:E:59:VAL:HG22	2.17	0.45
2:F:37:VAL:HG13	2:F:41:PHE:CE2	2.52	0.45
2:F:769:PRO:O	2:F:848:THR:OG1	2.26	0.45
2:F:1353:ARG:O	2:F:1398:MET:HB2	2.17	0.45
2:H:1030:ILE:HD11	2:H:1068:PHE:CE1	2.52	0.45
2:H:1102:LEU:HD23	2:H:1102:LEU:HA	1.76	0.45
2:H:1490:PHE:O	2:H:1494:ARG:HG3	2.16	0.45
2:H:1514:MET:HG2	2:H:1539:ARG:NH2	2.31	0.45
2:D:196:ILE:C	2:D:197:PHE:O	2.55	0.45
1:E:313:GLN:HB3	1:E:336:THR:CG2	2.46	0.45
2:F:253:LEU:HG	2:F:257:MET:HB3	1.98	0.45
2:H:37:VAL:HG13	2:H:41:PHE:CE2	2.52	0.45
1:A:90:TRP:HA	1:A:93:ILE:HG22	1.98	0.45
2:D:37:VAL:HG13	2:D:41:PHE:CE2	2.52	0.45
2:D:540:THR:O	2:D:544:ILE:HG12	2.17	0.45
1:E:313:GLN:HE22	1:E:338:LYS:HD2	1.82	0.45
2:F:196:ILE:C	2:F:197:PHE:O	2.55	0.45
2:F:511:LEU:HD12	2:F:511:LEU:HA	1.73	0.45
1:G:56:LEU:O	1:G:59:VAL:HG22	2.17	0.45
2:D:288:TRP:CE3	2:D:607:VAL:HG11	2.52	0.45
2:F:540:THR:O	2:F:544:ILE:HG12	2.17	0.45
2:H:1353:ARG:O	2:H:1398:MET:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:56:LEU:O	1:A:59:VAL:HG22	2.17	0.45
1:A:177:ARG:HH22	1:A:208:SER:CB	2.25	0.45
2:B:1246:ARG:HA	2:B:1246:ARG:HD3	1.65	0.45
1:C:56:LEU:O	1:C:59:VAL:HG22	2.17	0.45
2:D:592:LEU:HD21	2:D:1297:TRP:CH2	2.52	0.45
2:D:853:LEU:HD23	2:D:856:PRO:HG3	1.99	0.45
2:F:288:TRP:CE3	2:F:607:VAL:HG11	2.52	0.45
2:F:312:LEU:CB	2:F:369:GLN:HG2	2.47	0.45
2:H:592:LEU:HD11	2:H:1297:TRP:CH2	2.48	0.45
2:H:1460:LEU:HD21	2:H:1490:PHE:CE1	2.52	0.45
2:B:592:LEU:HD21	2:B:1297:TRP:CH2	2.52	0.45
2:B:1030:ILE:HD11	2:B:1068:PHE:CE1	2.52	0.45
2:D:312:LEU:CB	2:D:369:GLN:HG2	2.47	0.45
2:D:395:ILE:O	2:D:399:ILE:HG13	2.17	0.45
2:F:219:GLN:HG2	2:F:378:TYR:CZ	2.52	0.45
2:H:263:TYR:HB2	2:H:393:THR:HG21	1.98	0.45
2:H:540:THR:O	2:H:544:ILE:HG12	2.17	0.45
2:B:37:VAL:HG13	2:B:41:PHE:CE2	2.52	0.44
2:B:1020:GLN:HB3	2:B:1148:LEU:HD11	1.99	0.44
2:D:246:ASP:OD1	2:D:247:LEU:N	2.49	0.44
2:F:592:LEU:HD21	2:F:1297:TRP:CH2	2.52	0.44
2:H:288:TRP:CE3	2:H:607:VAL:HG11	2.52	0.44
2:H:551:PRO:CB	2:H:583:PHE:HZ	2.30	0.44
2:H:853:LEU:HD23	2:H:856:PRO:HG3	1.99	0.44
1:A:34:ARG:O	1:C:326:TYR:HE1	2.00	0.44
1:A:60:PHE:HA	1:A:63:LEU:HD23	1.99	0.44
1:A:241:GLU:HG3	1:A:259:HIS:HD2	1.82	0.44
2:D:1353:ARG:O	2:D:1398:MET:HB2	2.17	0.44
2:H:312:LEU:CB	2:H:369:GLN:HG2	2.47	0.44
2:H:395:ILE:O	2:H:399:ILE:HG13	2.17	0.44
2:B:853:LEU:HD23	2:B:856:PRO:HG3	1.99	0.44
2:D:1004:TYR:CE1	2:D:1093:VAL:HG11	2.53	0.44
2:H:301:LEU:C	2:H:301:LEU:CD2	2.85	0.44
2:B:219:GLN:HG2	2:B:378:TYR:CZ	2.52	0.44
2:B:1256:GLY:O	2:B:1260:VAL:HG12	2.18	0.44
2:B:1353:ARG:O	2:B:1398:MET:HB2	2.17	0.44
2:D:1020:GLN:HB3	2:D:1148:LEU:HD11	1.99	0.44
2:D:1256:GLY:O	2:D:1260:VAL:HG12	2.18	0.44
2:D:1460:LEU:HD21	2:D:1490:PHE:CE1	2.52	0.44
2:F:395:ILE:O	2:F:399:ILE:HG13	2.17	0.44
2:F:853:LEU:HD23	2:F:856:PRO:HG3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:1256:GLY:O	2:F:1260:VAL:HG12	2.18	0.44
2:F:1460:LEU:HD21	2:F:1490:PHE:CE1	2.52	0.44
2:B:1483:SER:O	2:B:1487:ARG:HG3	2.18	0.44
2:D:219:GLN:HG2	2:D:378:TYR:CZ	2.52	0.44
2:F:1369:ILE:HD13	2:F:1375:ILE:HG13	2.00	0.44
2:F:1509:THR:HG21	2:F:1539:ARG:HB2	2.00	0.44
1:G:60:PHE:HA	1:G:63:LEU:HD23	1.99	0.44
2:H:219:GLN:HG2	2:H:378:TYR:CZ	2.52	0.44
2:H:491:HIS:CE1	2:H:528:LYS:HB3	2.53	0.44
2:H:1004:TYR:CE1	2:H:1093:VAL:HG11	2.53	0.44
2:B:263:TYR:HB2	2:B:393:THR:HG21	1.98	0.44
2:B:295:PHE:CE1	2:B:387:LEU:HB2	2.46	0.44
2:B:391:ILE:O	2:B:395:ILE:HG23	2.18	0.44
2:D:1030:ILE:HD11	2:D:1068:PHE:CE1	2.52	0.44
2:D:1369:ILE:HD13	2:D:1375:ILE:HG13	2.00	0.44
2:F:40:LEU:O	2:F:44:PHE:HD2	2.01	0.44
2:H:246:ASP:OD1	2:H:247:LEU:N	2.49	0.44
2:H:819:ASP:OD1	2:H:820:GLN:N	2.41	0.44
2:D:391:ILE:O	2:D:395:ILE:HG23	2.18	0.44
2:D:1479:GLY:O	2:D:1487:ARG:NH1	2.51	0.44
2:D:1509:THR:HG21	2:D:1539:ARG:HB2	2.00	0.44
2:F:1030:ILE:HD11	2:F:1068:PHE:CE1	2.52	0.44
2:F:1483:SER:O	2:F:1487:ARG:HG3	2.18	0.44
2:H:40:LEU:O	2:H:44:PHE:HD2	2.01	0.44
2:H:684:GLY:O	2:H:698:ASN:N	2.51	0.44
2:H:1431:LEU:HD12	2:H:1487:ARG:HG2	2.00	0.44
2:B:491:HIS:CE1	2:B:528:LYS:HB3	2.53	0.44
2:B:540:THR:O	2:B:544:ILE:HG12	2.17	0.44
2:B:1460:LEU:HD21	2:B:1490:PHE:CE1	2.52	0.44
2:D:91:GLU:OE1	2:D:171:LEU:HD12	2.18	0.44
2:D:253:LEU:HD12	2:D:253:LEU:HA	1.77	0.44
1:E:241:GLU:HG3	1:E:259:HIS:HD2	1.82	0.44
2:F:684:GLY:O	2:F:698:ASN:N	2.51	0.44
2:F:1192:LEU:HA	2:F:1195:THR:HG22	2.00	0.44
2:F:1327:GLU:HB3	2:F:1415:LEU:H	1.82	0.44
2:B:1004:TYR:CE1	2:B:1093:VAL:HG11	2.53	0.44
2:D:40:LEU:O	2:D:44:PHE:HD2	2.01	0.44
2:D:1386:SER:OG	3:D:2502:ADP:O1A	2.36	0.44
2:F:288:TRP:HE3	2:F:607:VAL:HG11	1.83	0.44
2:F:730:MET:HE3	2:F:730:MET:HB3	1.82	0.44
2:F:1105:ILE:HD11	2:F:1318:LEU:HD21	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:806:CYS:O	2:H:837:ARG:HD2	2.18	0.44
2:H:1256:GLY:O	2:H:1260:VAL:HG12	2.18	0.44
2:H:1345:ILE:HG12	2:H:1369:ILE:HB	2.00	0.44
2:B:40:LEU:O	2:B:44:PHE:HD2	2.01	0.43
2:B:150:LYS:CB	2:B:176:VAL:HG22	2.44	0.43
2:B:395:ILE:O	2:B:399:ILE:HG13	2.17	0.43
1:C:241:GLU:HG3	1:C:259:HIS:HD2	1.82	0.43
2:D:825:GLU:OE1	2:D:825:GLU:N	2.48	0.43
2:D:1255:ILE:HD13	2:D:1255:ILE:HA	1.93	0.43
2:F:1386:SER:OG	3:F:2502:ADP:O1A	2.36	0.43
2:F:1479:GLY:O	2:F:1487:ARG:NH1	2.51	0.43
2:H:1479:GLY:O	2:H:1487:ARG:NH1	2.51	0.43
2:B:295:PHE:HZ	2:B:387:LEU:CD1	2.30	0.43
2:B:398:LYS:HE3	2:B:398:LYS:HB3	1.81	0.43
2:D:772:TYR:HD1	2:D:852:PHE:HB2	1.83	0.43
2:D:892:GLN:H	2:D:892:GLN:HG3	1.41	0.43
1:E:332:LYS:HD3	1:E:335:ASN:OD1	2.18	0.43
1:A:46:HIS:CD2	1:C:330:TYR:OH	2.72	0.43
2:B:806:CYS:O	2:B:837:ARG:HD2	2.18	0.43
2:B:1105:ILE:HD11	2:B:1318:LEU:HD21	2.00	0.43
2:B:1479:GLY:O	2:B:1487:ARG:NH1	2.51	0.43
2:D:592:LEU:HD11	2:D:1297:TRP:CH2	2.48	0.43
2:D:592:LEU:HD21	2:D:1297:TRP:CZ2	2.54	0.43
2:D:806:CYS:O	2:D:837:ARG:HD2	2.18	0.43
2:D:1105:ILE:HD11	2:D:1318:LEU:HD21	2.00	0.43
2:D:1483:SER:O	2:D:1487:ARG:HG3	2.18	0.43
1:E:60:PHE:HA	1:E:63:LEU:HD23	1.99	0.43
2:F:1020:GLN:HB3	2:F:1148:LEU:HD11	1.99	0.43
2:H:1105:ILE:HD11	2:H:1318:LEU:HD21	2.00	0.43
2:H:1386:SER:OG	3:H:2502:ADP:O1A	2.36	0.43
2:B:1354:TYR:HA	2:B:1396:VAL:HG13	2.00	0.43
1:C:34:ARG:O	1:E:326:TYR:HE1	2.00	0.43
1:C:60:PHE:HA	1:C:63:LEU:HD23	1.99	0.43
2:D:295:PHE:HZ	2:D:387:LEU:CD1	2.30	0.43
1:E:34:ARG:O	1:G:326:TYR:HE1	2.00	0.43
2:F:491:HIS:CE1	2:F:528:LYS:HB3	2.53	0.43
2:F:592:LEU:HD21	2:F:1297:TRP:CZ2	2.54	0.43
2:H:150:LYS:HB3	2:H:176:VAL:CG2	2.41	0.43
2:H:892:GLN:H	2:H:892:GLN:HG3	1.41	0.43
2:H:1114:GLU:OE1	3:H:2502:ADP:N6	2.52	0.43
1:C:332:LYS:HD3	1:C:335:ASN:OD1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:684:GLY:O	2:D:698:ASN:N	2.51	0.43
2:F:262:ASN:HB3	2:F:390:ALA:HB2	2.00	0.43
2:H:150:LYS:CB	2:H:176:VAL:HG22	2.44	0.43
2:H:592:LEU:HD21	2:H:1297:TRP:CZ2	2.54	0.43
2:H:592:LEU:HD21	2:H:1297:TRP:CH2	2.52	0.43
2:H:1192:LEU:HA	2:H:1195:THR:HG22	2.00	0.43
1:A:326:TYR:HE1	1:G:34:ARG:O	2.00	0.43
2:B:262:ASN:HB3	2:B:390:ALA:HB2	2.00	0.43
2:B:819:ASP:OD1	2:B:820:GLN:N	2.41	0.43
2:B:1431:LEU:HD12	2:B:1487:ARG:HG2	2.00	0.43
2:D:301:LEU:C	2:D:301:LEU:CD2	2.85	0.43
2:D:1353:ARG:NH1	2:D:1400:GLU:OE2	2.45	0.43
2:D:1354:TYR:HA	2:D:1396:VAL:HG13	2.00	0.43
1:E:46:HIS:CD2	1:G:330:TYR:OH	2.72	0.43
2:F:301:LEU:C	2:F:301:LEU:CD2	2.85	0.43
2:F:551:PRO:CB	2:F:583:PHE:HZ	2.30	0.43
2:H:288:TRP:HE3	2:H:607:VAL:HG11	1.83	0.43
2:H:391:ILE:O	2:H:395:ILE:HG23	2.18	0.43
2:H:586:LEU:O	2:H:589:PRO:HD2	2.19	0.43
2:H:825:GLU:OE1	2:H:825:GLU:N	2.48	0.43
2:H:1020:GLN:HB3	2:H:1148:LEU:HD11	1.99	0.43
2:H:1369:ILE:HD13	2:H:1375:ILE:HG13	2.00	0.43
1:C:46:HIS:CD2	1:E:330:TYR:OH	2.72	0.43
2:D:219:GLN:HG2	2:D:378:TYR:OH	2.19	0.43
2:D:491:HIS:CE1	2:D:528:LYS:HB3	2.53	0.43
2:D:1431:LEU:HD12	2:D:1487:ARG:HG2	2.00	0.43
2:F:131:ASN:OD1	2:F:131:ASN:N	2.43	0.43
2:F:295:PHE:HZ	2:F:387:LEU:CD1	2.30	0.43
2:H:219:GLN:HG2	2:H:378:TYR:OH	2.19	0.43
2:H:263:TYR:HB2	2:H:393:THR:CG2	2.49	0.43
2:H:295:PHE:HZ	2:H:387:LEU:CD1	2.30	0.43
2:H:1079:CYS:O	2:H:1082:THR:OG1	2.27	0.43
2:H:1353:ARG:NH1	2:H:1400:GLU:OE2	2.45	0.43
2:B:253:LEU:HA	2:B:253:LEU:HD12	1.77	0.43
2:B:263:TYR:HB2	2:B:393:THR:CG2	2.49	0.43
2:B:592:LEU:HD21	2:B:1297:TRP:CZ2	2.54	0.43
2:B:1369:ILE:HD13	2:B:1375:ILE:HG13	2.00	0.43
1:C:168:PHE:C	1:C:171:THR:CG2	2.81	0.43
2:D:1192:LEU:HA	2:D:1195:THR:HG22	2.00	0.43
2:F:391:ILE:O	2:F:395:ILE:HG23	2.18	0.43
2:F:586:LEU:O	2:F:589:PRO:HD2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:772:TYR:HD1	2:F:852:PHE:HB2	1.83	0.43
1:G:241:GLU:HG3	1:G:259:HIS:HD2	1.82	0.43
2:H:1483:SER:O	2:H:1487:ARG:HG3	2.18	0.43
2:B:684:GLY:O	2:B:698:ASN:N	2.51	0.43
2:D:262:ASN:HB3	2:D:390:ALA:HB2	2.00	0.43
2:F:150:LYS:HB3	2:F:176:VAL:CG2	2.41	0.43
2:F:1102:LEU:HD23	2:F:1102:LEU:HA	1.76	0.43
2:F:1106:ILE:HD13	2:F:1106:ILE:HA	1.89	0.43
2:F:1431:LEU:HD12	2:F:1487:ARG:HG2	2.00	0.43
2:H:262:ASN:HB3	2:H:390:ALA:HB2	2.00	0.43
2:H:1494:ARG:O	2:H:1498:ARG:HG3	2.19	0.43
2:B:1114:GLU:OE1	3:B:2502:ADP:N6	2.52	0.43
2:B:1203:HIS:CD2	2:B:1227:LEU:HD12	2.54	0.43
2:F:806:CYS:O	2:F:837:ARG:HD2	2.18	0.43
1:G:332:LYS:HD3	1:G:335:ASN:OD1	2.18	0.43
2:H:772:TYR:HD1	2:H:852:PHE:HB2	1.83	0.43
2:B:288:TRP:HE3	2:B:607:VAL:HG11	1.83	0.42
2:D:1114:GLU:OE1	3:D:2502:ADP:N6	2.52	0.42
2:F:1004:TYR:CE1	2:F:1093:VAL:HG11	2.53	0.42
1:A:178:ALA:O	1:A:181:LEU:HD23	2.20	0.42
1:A:330:TYR:OH	1:G:46:HIS:CD2	2.72	0.42
2:B:586:LEU:O	2:B:589:PRO:HD2	2.19	0.42
2:B:1386:SER:OG	3:B:2502:ADP:O1A	2.36	0.42
2:D:263:TYR:HB2	2:D:393:THR:CG2	2.49	0.42
2:D:1494:ARG:O	2:D:1498:ARG:HG3	2.19	0.42
2:F:44:PHE:HD1	2:F:48:PHE:CE2	2.37	0.42
2:F:1345:ILE:HG12	2:F:1369:ILE:HB	2.00	0.42
2:H:1509:THR:HG21	2:H:1539:ARG:HB2	2.00	0.42
1:A:332:LYS:HD3	1:A:335:ASN:OD1	2.18	0.42
2:B:772:TYR:HD1	2:B:852:PHE:HB2	1.83	0.42
2:B:1509:THR:HG21	2:B:1539:ARG:HB2	2.00	0.42
2:F:263:TYR:HB2	2:F:393:THR:CG2	2.49	0.42
2:F:875:GLU:O	2:F:879:ASP:HB2	2.20	0.42
2:H:78:THR:HG21	2:H:121:VAL:HG23	2.01	0.42
2:H:1521:GLN:HA	2:H:1524:VAL:HG12	2.01	0.42
2:B:370:ARG:HD2	2:B:1253:GLU:CD	2.40	0.42
2:B:1345:ILE:HG12	2:B:1369:ILE:HB	2.00	0.42
2:D:586:LEU:O	2:D:589:PRO:HD2	2.19	0.42
2:F:78:THR:HG21	2:F:121:VAL:HG23	2.01	0.42
2:F:1494:ARG:O	2:F:1498:ARG:HG3	2.19	0.42
2:H:370:ARG:HD2	2:H:1253:GLU:CD	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:78:THR:HG21	2:D:121:VAL:HG23	2.01	0.42
2:D:288:TRP:HE3	2:D:607:VAL:HG11	1.83	0.42
2:D:370:ARG:HD2	2:D:1253:GLU:CD	2.40	0.42
2:D:875:GLU:O	2:D:879:ASP:HB2	2.20	0.42
2:D:1345:ILE:HG12	2:D:1369:ILE:HB	2.00	0.42
2:F:1256:GLY:HA2	2:F:1259:VAL:HG12	2.02	0.42
2:F:1354:TYR:HA	2:F:1396:VAL:HG13	2.00	0.42
1:A:86:PHE:HA	1:A:89:VAL:HG12	2.02	0.42
2:B:592:LEU:HD11	2:B:1297:TRP:CH2	2.48	0.42
2:B:1192:LEU:HA	2:B:1195:THR:HG22	2.00	0.42
2:D:1020:GLN:HB3	2:D:1148:LEU:CD1	2.50	0.42
2:D:1256:GLY:HA2	2:D:1259:VAL:HG12	2.02	0.42
2:D:1521:GLN:O	2:D:1525:MET:HG2	2.20	0.42
2:F:1146:SER:HB3	2:F:1298:MET:HB2	2.02	0.42
1:G:86:PHE:HA	1:G:89:VAL:HG12	2.02	0.42
1:A:286:ILE:HD12	1:A:301:ARG:HG2	2.02	0.42
2:B:219:GLN:HG2	2:B:378:TYR:OH	2.19	0.42
2:B:1020:GLN:HB3	2:B:1148:LEU:CD1	2.50	0.42
2:B:1079:CYS:O	2:B:1082:THR:OG1	2.27	0.42
2:B:1308:GLN:O	2:B:1312:VAL:HG23	2.20	0.42
1:C:188:VAL:HG12	1:C:310:LEU:HD11	2.02	0.42
2:D:1335:ILE:N	2:D:1336:PRO:HD2	2.35	0.42
2:D:1521:GLN:HA	2:D:1524:VAL:HG12	2.01	0.42
2:F:370:ARG:HD2	2:F:1253:GLU:CD	2.40	0.42
2:F:571:LEU:O	2:F:571:LEU:HD12	2.20	0.42
2:F:1521:GLN:HA	2:F:1524:VAL:HG12	2.01	0.42
1:G:286:ILE:HD12	1:G:301:ARG:HG2	2.02	0.42
2:H:44:PHE:HD1	2:H:48:PHE:CE2	2.37	0.42
2:H:1335:ILE:N	2:H:1336:PRO:HD2	2.35	0.42
1:A:209:MET:HB2	1:A:292:GLU:OE2	2.20	0.42
2:D:1164:PHE:HZ	2:D:1259:VAL:HG23	1.85	0.42
1:E:145:ALA:HA	1:E:148:ILE:HG22	2.02	0.42
1:E:178:ALA:O	1:E:181:LEU:HD23	2.20	0.42
2:F:219:GLN:HG2	2:F:378:TYR:OH	2.19	0.42
1:G:79:PHE:HD1	1:G:79:PHE:HA	1.74	0.42
1:G:178:ALA:O	1:G:181:LEU:HD23	2.20	0.42
2:H:531:THR:O	2:H:534:ARG:HG2	2.20	0.42
2:H:571:LEU:HD12	2:H:571:LEU:O	2.20	0.42
2:H:1020:GLN:HB3	2:H:1148:LEU:CD1	2.50	0.42
1:A:137:MET:SD	1:C:133:PHE:HB3	2.60	0.42
2:B:511:LEU:HA	2:B:511:LEU:HD12	1.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:857:PHE:HE2	2:B:886:LEU:HD21	1.85	0.42
2:B:875:GLU:O	2:B:879:ASP:HB2	2.20	0.42
2:B:1353:ARG:NH1	2:B:1400:GLU:OE2	2.45	0.42
2:D:44:PHE:HD1	2:D:48:PHE:CE2	2.37	0.42
2:D:1308:GLN:O	2:D:1312:VAL:HG23	2.20	0.42
2:F:1203:HIS:CD2	2:F:1227:LEU:HD12	2.54	0.42
2:H:1226:LYS:O	2:H:1230:TYR:HD1	2.03	0.42
2:B:44:PHE:HD1	2:B:48:PHE:CE2	2.37	0.42
2:B:1335:ILE:N	2:B:1336:PRO:HD2	2.35	0.42
2:B:1494:ARG:O	2:B:1498:ARG:HG3	2.19	0.42
1:C:145:ALA:HA	1:C:148:ILE:HG22	2.02	0.42
2:D:857:PHE:HE2	2:D:886:LEU:HD21	1.85	0.42
2:D:1203:HIS:CD2	2:D:1227:LEU:HD12	2.54	0.42
2:D:1226:LYS:O	2:D:1230:TYR:HD1	2.03	0.42
1:E:220:VAL:HB	1:E:233:LEU:HG	2.02	0.42
1:E:338:LYS:HB3	1:E:338:LYS:HE3	1.87	0.42
2:F:188:ASN:O	2:F:192:VAL:HG23	2.20	0.42
2:F:417:ILE:O	2:F:420:LEU:HB3	2.20	0.42
2:H:451:LEU:HD13	2:H:582:LEU:HD21	2.01	0.42
2:H:1146:SER:HB3	2:H:1298:MET:HB2	2.02	0.42
2:H:1246:ARG:HA	2:H:1246:ARG:HD3	1.65	0.42
2:H:1354:TYR:HA	2:H:1396:VAL:HG13	2.00	0.42
2:B:435:CYS:HB3	2:B:436:PRO:HD3	2.02	0.41
2:B:531:THR:O	2:B:534:ARG:HG2	2.20	0.41
2:B:825:GLU:OE1	2:B:825:GLU:N	2.48	0.41
1:C:49:ILE:H	1:C:49:ILE:HG13	1.58	0.41
1:C:338:LYS:HE3	1:C:338:LYS:HB3	1.87	0.41
2:D:435:CYS:HB3	2:D:436:PRO:HD3	2.02	0.41
1:E:148:ILE:HD12	1:E:148:ILE:HA	1.91	0.41
2:F:531:THR:O	2:F:534:ARG:HG2	2.20	0.41
2:F:857:PHE:HE2	2:F:886:LEU:HD21	1.85	0.41
2:F:1020:GLN:HB3	2:F:1148:LEU:CD1	2.50	0.41
2:F:1255:ILE:HD13	2:F:1255:ILE:HA	1.93	0.41
2:H:888:THR:OG1	2:H:889:HIS:N	2.53	0.41
1:A:329:ASP:OD1	1:G:48:ASN:ND2	2.53	0.41
2:B:892:GLN:H	2:B:892:GLN:HG3	1.41	0.41
2:B:1521:GLN:O	2:B:1525:MET:HG2	2.20	0.41
1:C:137:MET:SD	1:E:133:PHE:HB3	2.60	0.41
1:C:286:ILE:HG23	1:C:301:ARG:HG2	2.02	0.41
2:D:451:LEU:HD13	2:D:582:LEU:HD21	2.01	0.41
1:G:145:ALA:HA	1:G:148:ILE:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:435:CYS:HB3	2:H:436:PRO:HD3	2.02	0.41
2:H:1203:HIS:CD2	2:H:1227:LEU:HD12	2.54	0.41
1:A:48:ASN:ND2	1:C:329:ASP:OD1	2.53	0.41
1:A:286:ILE:HG23	1:A:301:ARG:HG2	2.02	0.41
1:C:220:VAL:HB	1:C:233:LEU:HG	2.02	0.41
2:D:571:LEU:HD12	2:D:571:LEU:O	2.20	0.41
2:D:1348:GLN:CG	2:D:1402:ARG:HB2	2.51	0.41
1:E:209:MET:HB2	1:E:292:GLU:OE2	2.20	0.41
2:F:812:ILE:HD13	2:F:812:ILE:HA	1.91	0.41
2:F:1164:PHE:HZ	2:F:1259:VAL:HG23	1.85	0.41
2:H:188:ASN:O	2:H:192:VAL:HG23	2.20	0.41
2:H:417:ILE:O	2:H:420:LEU:HB3	2.20	0.41
2:H:1124:ARG:O	2:H:1128:ASP:HB2	2.21	0.41
1:A:133:PHE:HB3	1:G:137:MET:SD	2.60	0.41
1:A:145:ALA:HA	1:A:148:ILE:HG22	2.02	0.41
1:A:188:VAL:HG12	1:A:310:LEU:HD11	2.02	0.41
2:B:547:ASN:O	2:B:551:PRO:HG2	2.21	0.41
2:B:888:THR:OG1	2:B:889:HIS:N	2.53	0.41
2:B:1553:LYS:CE	2:B:1558:LEU:HB2	2.50	0.41
2:D:40:LEU:HD11	2:D:115:MET:HB2	2.03	0.41
2:D:417:ILE:O	2:D:420:LEU:HB3	2.20	0.41
1:E:137:MET:SD	1:G:133:PHE:HB3	2.60	0.41
2:F:1144:SER:O	2:F:1147:THR:HG22	2.21	0.41
2:F:1521:GLN:O	2:F:1525:MET:HG2	2.20	0.41
1:G:158:MET:O	1:G:162:ILE:HG22	2.20	0.41
2:H:730:MET:HE3	2:H:730:MET:HB3	1.92	0.41
2:H:890:LYS:HB2	2:H:893:TYR:CE2	2.55	0.41
2:B:571:LEU:HD12	2:B:571:LEU:O	2.20	0.41
2:B:1124:ARG:O	2:B:1128:ASP:HB2	2.21	0.41
2:B:1144:SER:O	2:B:1147:THR:HG22	2.21	0.41
2:B:1521:GLN:HA	2:B:1524:VAL:HG12	2.01	0.41
2:D:427:GLN:OE1	2:D:602:LYS:HD3	2.21	0.41
2:D:1146:SER:HB3	2:D:1298:MET:HB2	2.02	0.41
2:F:1246:ARG:HA	2:F:1246:ARG:HD3	1.65	0.41
2:F:1394:ARG:HE	2:F:1415:LEU:HD11	1.86	0.41
1:G:209:MET:HB2	1:G:292:GLU:OE2	2.20	0.41
2:H:1308:GLN:O	2:H:1312:VAL:HG23	2.20	0.41
2:B:78:THR:HG21	2:B:121:VAL:HG23	2.01	0.41
2:B:188:ASN:O	2:B:192:VAL:HG23	2.20	0.41
2:B:427:GLN:OE1	2:B:602:LYS:HD3	2.21	0.41
1:C:158:MET:O	1:C:162:ILE:HG22	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:890:LYS:HB2	2:D:893:TYR:CE2	2.55	0.41
2:F:435:CYS:HB3	2:F:436:PRO:HD3	2.02	0.41
2:F:1335:ILE:N	2:F:1336:PRO:HD2	2.35	0.41
2:F:1552:LEU:HD23	2:F:1557:ILE:HG12	2.03	0.41
2:H:875:GLU:O	2:H:879:ASP:HB2	2.20	0.41
2:H:1256:GLY:HA2	2:H:1259:VAL:HG12	2.02	0.41
2:B:40:LEU:HD11	2:B:115:MET:HB2	2.03	0.41
2:B:1552:LEU:HD23	2:B:1557:ILE:HG12	2.03	0.41
1:C:48:ASN:ND2	1:E:329:ASP:OD1	2.53	0.41
1:C:178:ALA:O	1:C:181:LEU:HD23	2.20	0.41
1:C:241:GLU:HB2	1:C:258:TYR:O	2.21	0.41
2:D:188:ASN:O	2:D:192:VAL:HG23	2.20	0.41
2:D:547:ASN:O	2:D:551:PRO:HG2	2.21	0.41
2:D:1394:ARG:HE	2:D:1415:LEU:HD11	1.86	0.41
1:E:86:PHE:HA	1:E:89:VAL:HG12	2.02	0.41
1:E:241:GLU:HB2	1:E:258:TYR:O	2.21	0.41
2:F:1308:GLN:O	2:F:1312:VAL:HG23	2.20	0.41
1:G:286:ILE:HG23	1:G:301:ARG:HG2	2.02	0.41
2:H:1144:SER:O	2:H:1147:THR:HG22	2.21	0.41
1:A:158:MET:O	1:A:162:ILE:HG22	2.20	0.41
2:B:451:LEU:HD13	2:B:582:LEU:HD21	2.01	0.41
2:B:1226:LYS:O	2:B:1230:TYR:HD1	2.03	0.41
2:B:1256:GLY:HA2	2:B:1259:VAL:HG12	2.02	0.41
2:D:531:THR:O	2:D:534:ARG:HG2	2.20	0.41
1:E:158:MET:O	1:E:162:ILE:HG22	2.20	0.41
1:E:297:THR:O	1:E:297:THR:OG1	2.37	0.41
2:F:253:LEU:HD12	2:F:253:LEU:HA	1.77	0.41
2:F:496:LEU:HD23	2:F:496:LEU:HA	1.88	0.41
2:F:1114:GLU:OE1	3:F:2502:ADP:N6	2.52	0.41
1:G:220:VAL:HB	1:G:233:LEU:HG	2.02	0.41
1:G:241:GLU:HB2	1:G:258:TYR:O	2.21	0.41
2:H:253:LEU:HD12	2:H:253:LEU:HA	1.77	0.41
2:H:1164:PHE:HZ	2:H:1259:VAL:HG23	1.85	0.41
1:A:75:PHE:HB3	1:A:163:MET:SD	2.61	0.41
1:A:168:PHE:C	1:A:171:THR:CG2	2.81	0.41
1:A:238:ILE:HA	1:A:239:PRO:HD3	1.96	0.41
2:B:523:GLU:O	2:B:527:ARG:HG3	2.21	0.41
2:B:890:LYS:HB2	2:B:893:TYR:CE2	2.55	0.41
2:B:1102:LEU:HD23	2:B:1102:LEU:HA	1.76	0.41
2:B:1146:SER:HB3	2:B:1298:MET:HB2	2.02	0.41
2:B:1348:GLN:CG	2:B:1402:ARG:HB2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1394:ARG:HE	2:B:1415:LEU:HD11	1.86	0.41
1:C:86:PHE:HA	1:C:89:VAL:HG12	2.02	0.41
2:D:150:LYS:CB	2:D:176:VAL:HG22	2.44	0.41
2:D:414:ALA:HA	2:D:1208:VAL:HG11	2.03	0.41
2:D:1144:SER:O	2:D:1147:THR:HG22	2.21	0.41
2:D:1552:LEU:HD23	2:D:1557:ILE:HG12	2.03	0.41
1:E:75:PHE:HB3	1:E:163:MET:SD	2.61	0.41
1:E:188:VAL:HG12	1:E:310:LEU:HD11	2.02	0.41
1:E:286:ILE:HG23	1:E:301:ARG:HG2	2.02	0.41
2:F:72:ASN:OD1	2:F:72:ASN:N	2.54	0.41
2:F:592:LEU:HD23	2:F:592:LEU:HA	1.89	0.41
2:F:888:THR:OG1	2:F:889:HIS:N	2.53	0.41
2:F:1348:GLN:CG	2:F:1402:ARG:HB2	2.51	0.41
2:F:1553:LYS:CE	2:F:1558:LEU:HB2	2.50	0.41
1:G:75:PHE:HB3	1:G:163:MET:SD	2.61	0.41
1:G:284:ILE:HA	1:G:302:THR:O	2.21	0.41
2:H:547:ASN:O	2:H:551:PRO:HG2	2.21	0.41
1:A:220:VAL:HB	1:A:233:LEU:HG	2.02	0.41
2:B:1164:PHE:HZ	2:B:1259:VAL:HG23	1.85	0.41
1:C:189:ILE:HD11	1:C:311:TRP:CE2	2.56	0.41
1:E:48:ASN:ND2	1:G:329:ASP:OD1	2.53	0.41
2:F:427:GLN:OE1	2:F:602:LYS:HD3	2.21	0.41
2:F:451:LEU:HD13	2:F:582:LEU:HD21	2.01	0.41
2:F:1226:LYS:O	2:F:1230:TYR:HD1	2.03	0.41
2:F:1376:GLY:O	2:F:1549:VAL:HA	2.21	0.41
2:F:1415:LEU:HA	2:F:1418:LEU:HD12	2.03	0.41
2:H:40:LEU:HD11	2:H:115:MET:HB2	2.03	0.41
2:H:423:ILE:HG13	2:H:424:ASP:N	2.36	0.41
2:H:489:LEU:HD21	2:H:602:LYS:HG2	2.03	0.41
2:H:1348:GLN:CG	2:H:1402:ARG:HB2	2.51	0.41
2:H:1521:GLN:O	2:H:1525:MET:HG2	2.20	0.41
1:A:148:ILE:HD12	1:A:148:ILE:HA	1.91	0.40
1:A:189:ILE:HD11	1:A:311:TRP:CE2	2.56	0.40
2:B:597:VAL:O	2:B:601:VAL:HG12	2.21	0.40
2:D:1376:GLY:O	2:D:1549:VAL:HA	2.21	0.40
2:F:246:ASP:OD1	2:F:247:LEU:N	2.49	0.40
2:F:423:ILE:HG13	2:F:424:ASP:N	2.36	0.40
1:G:188:VAL:HG12	1:G:310:LEU:HD11	2.02	0.40
2:H:857:PHE:HE2	2:H:886:LEU:HD21	1.85	0.40
1:A:284:ILE:HA	1:A:302:THR:O	2.21	0.40
2:B:417:ILE:O	2:B:420:LEU:HB3	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:894:LEU:HB2	2:B:895:PRO:HD3	2.03	0.40
1:C:284:ILE:HA	1:C:302:THR:O	2.21	0.40
1:C:286:ILE:HD12	1:C:301:ARG:HG2	2.02	0.40
2:D:544:ILE:HD12	2:D:591:PHE:CE2	2.56	0.40
2:D:618:GLU:HG2	2:D:619:ILE:H	1.87	0.40
2:D:1415:LEU:HA	2:D:1418:LEU:HD12	2.03	0.40
1:E:286:ILE:HD12	1:E:301:ARG:HG2	2.02	0.40
2:F:890:LYS:HB2	2:F:893:TYR:CE2	2.55	0.40
2:F:1211:LEU:HD13	2:F:1211:LEU:HA	1.91	0.40
2:H:72:ASN:OD1	2:H:72:ASN:N	2.54	0.40
2:H:1480:GLU:HB2	3:H:2501:ADP:C6	2.57	0.40
2:H:1552:LEU:HD23	2:H:1557:ILE:HG12	2.03	0.40
1:A:169:MET:HE1	1:C:172:ALA:N	2.37	0.40
2:B:489:LEU:HD21	2:B:602:LYS:HG2	2.03	0.40
2:B:871:ALA:O	2:B:875:GLU:HB2	2.22	0.40
2:B:1480:GLU:HB2	3:B:2501:ADP:C6	2.57	0.40
1:C:209:MET:HB2	1:C:292:GLU:OE2	2.20	0.40
2:D:489:LEU:HD21	2:D:602:LYS:HG2	2.03	0.40
2:D:597:VAL:O	2:D:601:VAL:HG12	2.21	0.40
2:D:1486:GLN:O	2:D:1490:PHE:HD1	2.05	0.40
1:E:237:ASP:HB3	1:G:243:GLY:H	1.86	0.40
2:F:139:LEU:HD23	2:F:139:LEU:HA	1.94	0.40
2:F:489:LEU:HD21	2:F:602:LYS:HG2	2.03	0.40
1:A:237:ASP:HB3	1:C:243:GLY:H	1.86	0.40
1:A:243:GLY:H	1:G:237:ASP:HB3	1.86	0.40
2:B:414:ALA:HA	2:B:1208:VAL:HG11	2.03	0.40
1:C:75:PHE:HB3	1:C:163:MET:SD	2.61	0.40
1:C:125:ILE:HD12	1:C:125:ILE:HA	1.95	0.40
1:C:169:MET:HE2	1:E:172:ALA:CB	2.52	0.40
2:D:196:ILE:O	2:D:197:PHE:C	2.60	0.40
2:D:381:ILE:HG21	2:D:1242:THR:HG21	2.04	0.40
1:E:189:ILE:HD11	1:E:311:TRP:CE2	2.56	0.40
2:F:40:LEU:HD11	2:F:115:MET:HB2	2.03	0.40
2:F:618:GLU:HG2	2:F:619:ILE:H	1.87	0.40
1:G:136:ARG:H	1:G:136:ARG:HG2	1.73	0.40
2:H:1486:GLN:O	2:H:1490:PHE:HD1	2.05	0.40
2:B:485:GLN:NE2	2:B:598:ARG:HG3	2.37	0.40
2:B:685:PHE:O	2:B:732:LYS:HB3	2.22	0.40
2:D:131:ASN:OD1	2:D:131:ASN:N	2.43	0.40
2:F:523:GLU:O	2:F:527:ARG:HG3	2.21	0.40
2:F:544:ILE:HD12	2:F:591:PHE:CE2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:547:ASN:O	2:F:551:PRO:HG2	2.21	0.40
1:G:189:ILE:HD11	1:G:311:TRP:CE2	2.56	0.40
1:G:261:ILE:H	1:G:261:ILE:HG13	1.61	0.40
2:H:523:GLU:O	2:H:527:ARG:HG3	2.21	0.40
2:H:618:GLU:HG2	2:H:619:ILE:H	1.87	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	323/390 (83%)	305 (94%)	15 (5%)	3 (1%)	17	56
1	C	323/390 (83%)	305 (94%)	15 (5%)	3 (1%)	17	56
1	E	323/390 (83%)	305 (94%)	15 (5%)	3 (1%)	17	56
1	G	323/390 (83%)	305 (94%)	15 (5%)	3 (1%)	17	56
2	B	1300/1582 (82%)	1245 (96%)	51 (4%)	4 (0%)	41	76
2	D	1300/1582 (82%)	1245 (96%)	51 (4%)	4 (0%)	41	76
2	F	1300/1582 (82%)	1245 (96%)	51 (4%)	4 (0%)	41	76
2	H	1300/1582 (82%)	1245 (96%)	51 (4%)	4 (0%)	41	76
All	All	6492/7888 (82%)	6200 (96%)	264 (4%)	28 (0%)	38	72

All (28) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	50	ARG
1	A	54	ARG
2	B	197	PHE
2	B	199	LYS
1	C	50	ARG

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Mol	Chain	Res	Type
1	C	54	ARG
2	D	197	PHE
2	D	199	LYS
1	E	50	ARG
1	E	54	ARG
2	F	197	PHE
2	F	199	LYS
1	G	50	ARG
1	G	54	ARG
2	H	197	PHE
2	H	199	LYS
2	B	205	LYS
2	D	205	LYS
2	F	205	LYS
2	H	205	LYS
1	A	244	VAL
1	C	244	VAL
1	E	244	VAL
1	G	244	VAL
2	B	196	ILE
2	D	196	ILE
2	F	196	ILE
2	H	196	ILE

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	250/339 (74%)	223 (89%)	27 (11%)	6 25
1	C	250/339 (74%)	223 (89%)	27 (11%)	6 25
1	E	250/339 (74%)	223 (89%)	27 (11%)	6 25
1	G	250/339 (74%)	223 (89%)	27 (11%)	6 25
2	B	1095/1371 (80%)	1036 (95%)	59 (5%)	22 48
2	D	1095/1371 (80%)	1036 (95%)	59 (5%)	22 48

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	F	1095/1371 (80%)	1036 (95%)	59 (5%)	22 48
2	H	1095/1371 (80%)	1036 (95%)	59 (5%)	22 48
All	All	5380/6840 (79%)	5036 (94%)	344 (6%)	21 44

All (344) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	36	VAL
1	A	59	VAL
1	A	63	LEU
1	A	71	THR
1	A	81	CYS
1	A	88	MET
1	A	90	TRP
1	A	111	VAL
1	A	122	LEU
1	A	133	PHE
1	A	136	ARG
1	A	152	GLN
1	A	173	GLN
1	A	190	THR
1	A	198	PHE
1	A	204	ASP
1	A	219	VAL
1	A	236	VAL
1	A	238	ILE
1	A	252	VAL
1	A	287	LEU
1	A	290	VAL
1	A	294	THR
1	A	297	THR
1	A	298	THR
1	A	323	ASP
1	A	345	THR
2	B	37	VAL
2	B	72	ASN
2	B	119	THR
2	B	123	TYR
2	B	134	LYS
2	B	167	LEU
2	B	193	ARG

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Mol	Chain	Res	Type
2	B	204	VAL
2	B	218	LEU
2	B	222	VAL
2	B	229	THR
2	B	237	ILE
2	B	292	CYS
2	B	358	LEU
2	B	387	LEU
2	B	420	LEU
2	B	423	ILE
2	B	432	PHE
2	B	443	VAL
2	B	451	LEU
2	B	470	LEU
2	B	511	LEU
2	B	512	TYR
2	B	563	VAL
2	B	565	PHE
2	B	574	SER
2	B	614	LEU
2	B	682	ILE
2	B	689	THR
2	B	696	LEU
2	B	701	ILE
2	B	707	GLN
2	B	708	LEU
2	B	730	MET
2	B	770	VAL
2	B	791	GLU
2	B	794	PHE
2	B	861	ASP
2	B	869	MET
2	B	891	LEU
2	B	892	GLN
2	B	894	LEU
2	B	1038	THR
2	B	1136	ILE
2	B	1204	PHE
2	B	1211	LEU
2	B	1227	LEU
2	B	1240	PHE
2	B	1258	CYS

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Mol	Chain	Res	Type
2	B	1270	ASN
2	B	1276	LEU
2	B	1315	ILE
2	B	1378	CYS
2	B	1409	ASP
2	B	1432	PHE
2	B	1509	THR
2	B	1536	ILE
2	B	1557	ILE
2	B	1566	LEU
1	C	36	VAL
1	C	59	VAL
1	C	63	LEU
1	C	71	THR
1	C	81	CYS
1	C	88	MET
1	C	90	TRP
1	C	111	VAL
1	C	122	LEU
1	C	133	PHE
1	C	136	ARG
1	C	152	GLN
1	C	173	GLN
1	C	190	THR
1	C	198	PHE
1	C	204	ASP
1	C	219	VAL
1	C	236	VAL
1	C	238	ILE
1	C	252	VAL
1	C	287	LEU
1	C	290	VAL
1	C	294	THR
1	C	297	THR
1	C	298	THR
1	C	323	ASP
1	C	345	THR
2	D	37	VAL
2	D	72	ASN
2	D	119	THR
2	D	123	TYR
2	D	134	LYS

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Mol	Chain	Res	Type
2	D	167	LEU
2	D	193	ARG
2	D	204	VAL
2	D	218	LEU
2	D	222	VAL
2	D	229	THR
2	D	237	ILE
2	D	292	CYS
2	D	358	LEU
2	D	387	LEU
2	D	420	LEU
2	D	423	ILE
2	D	432	PHE
2	D	443	VAL
2	D	451	LEU
2	D	470	LEU
2	D	511	LEU
2	D	512	TYR
2	D	563	VAL
2	D	565	PHE
2	D	574	SER
2	D	614	LEU
2	D	682	ILE
2	D	689	THR
2	D	696	LEU
2	D	701	ILE
2	D	707	GLN
2	D	708	LEU
2	D	730	MET
2	D	770	VAL
2	D	791	GLU
2	D	794	PHE
2	D	861	ASP
2	D	869	MET
2	D	891	LEU
2	D	892	GLN
2	D	894	LEU
2	D	1038	THR
2	D	1136	ILE
2	D	1204	PHE
2	D	1211	LEU
2	D	1227	LEU

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Mol	Chain	Res	Type
2	D	1240	PHE
2	D	1258	CYS
2	D	1270	ASN
2	D	1276	LEU
2	D	1315	ILE
2	D	1378	CYS
2	D	1409	ASP
2	D	1432	PHE
2	D	1509	THR
2	D	1536	ILE
2	D	1557	ILE
2	D	1566	LEU
1	E	36	VAL
1	E	59	VAL
1	E	63	LEU
1	E	71	THR
1	E	81	CYS
1	E	88	MET
1	E	90	TRP
1	E	111	VAL
1	E	122	LEU
1	E	133	PHE
1	E	136	ARG
1	E	152	GLN
1	E	173	GLN
1	E	190	THR
1	E	198	PHE
1	E	204	ASP
1	E	219	VAL
1	E	236	VAL
1	E	238	ILE
1	E	252	VAL
1	E	287	LEU
1	E	290	VAL
1	E	294	THR
1	E	297	THR
1	E	298	THR
1	E	323	ASP
1	E	345	THR
2	F	37	VAL
2	F	72	ASN
2	F	119	THR

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Mol	Chain	Res	Type
2	F	123	TYR
2	F	134	LYS
2	F	167	LEU
2	F	193	ARG
2	F	204	VAL
2	F	218	LEU
2	F	222	VAL
2	F	229	THR
2	F	237	ILE
2	F	292	CYS
2	F	358	LEU
2	F	387	LEU
2	F	420	LEU
2	F	423	ILE
2	F	432	PHE
2	F	443	VAL
2	F	451	LEU
2	F	470	LEU
2	F	511	LEU
2	F	512	TYR
2	F	563	VAL
2	F	565	PHE
2	F	574	SER
2	F	614	LEU
2	F	682	ILE
2	F	689	THR
2	F	696	LEU
2	F	701	ILE
2	F	707	GLN
2	F	708	LEU
2	F	730	MET
2	F	770	VAL
2	F	791	GLU
2	F	794	PHE
2	F	861	ASP
2	F	869	MET
2	F	891	LEU
2	F	892	GLN
2	F	894	LEU
2	F	1038	THR
2	F	1136	ILE
2	F	1204	PHE

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Mol	Chain	Res	Type
2	F	1211	LEU
2	F	1227	LEU
2	F	1240	PHE
2	F	1258	CYS
2	F	1270	ASN
2	F	1276	LEU
2	F	1315	ILE
2	F	1378	CYS
2	F	1409	ASP
2	F	1432	PHE
2	F	1509	THR
2	F	1536	ILE
2	F	1557	ILE
2	F	1566	LEU
1	G	36	VAL
1	G	59	VAL
1	G	63	LEU
1	G	71	THR
1	G	81	CYS
1	G	88	MET
1	G	90	TRP
1	G	111	VAL
1	G	122	LEU
1	G	133	PHE
1	G	136	ARG
1	G	152	GLN
1	G	173	GLN
1	G	190	THR
1	G	198	PHE
1	G	204	ASP
1	G	219	VAL
1	G	236	VAL
1	G	238	ILE
1	G	252	VAL
1	G	287	LEU
1	G	290	VAL
1	G	294	THR
1	G	297	THR
1	G	298	THR
1	G	323	ASP
1	G	345	THR
2	H	37	VAL

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Mol	Chain	Res	Type
2	H	72	ASN
2	H	119	THR
2	H	123	TYR
2	H	134	LYS
2	H	167	LEU
2	H	193	ARG
2	H	204	VAL
2	H	218	LEU
2	H	222	VAL
2	H	229	THR
2	H	237	ILE
2	H	292	CYS
2	H	358	LEU
2	H	387	LEU
2	H	420	LEU
2	H	423	ILE
2	H	432	PHE
2	H	443	VAL
2	H	451	LEU
2	H	470	LEU
2	H	511	LEU
2	H	512	TYR
2	H	563	VAL
2	H	565	PHE
2	H	574	SER
2	H	614	LEU
2	H	682	ILE
2	H	689	THR
2	H	696	LEU
2	H	701	ILE
2	H	707	GLN
2	H	708	LEU
2	H	730	MET
2	H	770	VAL
2	H	791	GLU
2	H	794	PHE
2	H	861	ASP
2	H	869	MET
2	H	891	LEU
2	H	892	GLN
2	H	894	LEU
2	H	1038	THR

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Mol	Chain	Res	Type
2	H	1136	ILE
2	H	1204	PHE
2	H	1211	LEU
2	H	1227	LEU
2	H	1240	PHE
2	H	1258	CYS
2	H	1270	ASN
2	H	1276	LEU
2	H	1315	ILE
2	H	1378	CYS
2	H	1409	ASP
2	H	1432	PHE
2	H	1509	THR
2	H	1536	ILE
2	H	1557	ILE
2	H	1566	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (30) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	46	HIS
1	A	48	ASN
1	A	128	GLN
1	A	173	GLN
1	A	193	HIS
1	A	259	HIS
2	B	474	GLN
2	B	1203	HIS
1	C	46	HIS
1	C	48	ASN
1	C	128	GLN
1	C	173	GLN
1	C	193	HIS
1	C	259	HIS
2	D	474	GLN
1	E	46	HIS
1	E	48	ASN
1	E	128	GLN
1	E	173	GLN
1	E	193	HIS
1	E	259	HIS
2	F	474	GLN

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Mol	Chain	Res	Type
1	G	46	HIS
1	G	48	ASN
1	G	128	GLN
1	G	173	GLN
1	G	193	HIS
1	G	259	HIS
2	H	474	GLN
2	H	1203	HIS

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 20 ligands modelled in this entry, 8 are monoatomic - leaving 12 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
3	ADP	C	401	-	24,29,29	0.99	1 (4%)	29,45,45	1.45	4 (13%)
3	ADP	D	2502	4	24,29,29	0.93	1 (4%)	29,45,45	1.33	4 (13%)
3	ADP	H	2501	4	24,29,29	0.92	1 (4%)	29,45,45	1.37	4 (13%)
3	ADP	B	2501	4	24,29,29	0.92	1 (4%)	29,45,45	1.37	4 (13%)
3	ADP	A	401	-	24,29,29	0.99	1 (4%)	29,45,45	1.45	4 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
3	ADP	F	2502	4	24,29,29	0.93	1 (4%)	29,45,45	1.33	4 (13%)
3	ADP	D	2501	4	24,29,29	0.92	1 (4%)	29,45,45	1.37	4 (13%)
3	ADP	G	401	-	24,29,29	0.99	1 (4%)	29,45,45	1.45	4 (13%)
3	ADP	H	2502	4	24,29,29	0.93	1 (4%)	29,45,45	1.33	4 (13%)
3	ADP	F	2501	4	24,29,29	0.92	1 (4%)	29,45,45	1.37	4 (13%)
3	ADP	B	2502	4	24,29,29	0.93	1 (4%)	29,45,45	1.33	4 (13%)
3	ADP	E	401	-	24,29,29	0.99	1 (4%)	29,45,45	1.45	4 (13%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	ADP	C	401	-	-	4/12/32/32	0/3/3/3
3	ADP	D	2502	4	-	4/12/32/32	0/3/3/3
3	ADP	H	2501	4	-	2/12/32/32	0/3/3/3
3	ADP	B	2501	4	-	2/12/32/32	0/3/3/3
3	ADP	A	401	-	-	4/12/32/32	0/3/3/3
3	ADP	F	2502	4	-	4/12/32/32	0/3/3/3
3	ADP	D	2501	4	-	2/12/32/32	0/3/3/3
3	ADP	G	401	-	-	4/12/32/32	0/3/3/3
3	ADP	H	2502	4	-	4/12/32/32	0/3/3/3
3	ADP	F	2501	4	-	2/12/32/32	0/3/3/3
3	ADP	B	2502	4	-	4/12/32/32	0/3/3/3
3	ADP	E	401	-	-	4/12/32/32	0/3/3/3

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	401	ADP	C5-C4	2.46	1.47	1.40
3	C	401	ADP	C5-C4	2.46	1.47	1.40
3	E	401	ADP	C5-C4	2.46	1.47	1.40
3	G	401	ADP	C5-C4	2.46	1.47	1.40
3	B	2502	ADP	C5-C4	2.44	1.47	1.40
3	D	2502	ADP	C5-C4	2.44	1.47	1.40
3	F	2502	ADP	C5-C4	2.44	1.47	1.40
3	H	2502	ADP	C5-C4	2.44	1.47	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	B	2501	ADP	C5-C4	2.37	1.47	1.40
3	D	2501	ADP	C5-C4	2.37	1.47	1.40
3	F	2501	ADP	C5-C4	2.37	1.47	1.40
3	H	2501	ADP	C5-C4	2.37	1.47	1.40

All (48) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	A	401	ADP	PA-O3A-PB	-4.01	119.06	132.83
3	C	401	ADP	PA-O3A-PB	-4.01	119.06	132.83
3	E	401	ADP	PA-O3A-PB	-4.01	119.06	132.83
3	G	401	ADP	PA-O3A-PB	-4.01	119.06	132.83
3	A	401	ADP	C3'-C2'-C1'	3.40	106.09	100.98
3	C	401	ADP	C3'-C2'-C1'	3.40	106.09	100.98
3	E	401	ADP	C3'-C2'-C1'	3.40	106.09	100.98
3	G	401	ADP	C3'-C2'-C1'	3.40	106.09	100.98
3	B	2502	ADP	PA-O3A-PB	-3.38	121.24	132.83
3	D	2502	ADP	PA-O3A-PB	-3.38	121.24	132.83
3	F	2502	ADP	PA-O3A-PB	-3.38	121.24	132.83
3	H	2502	ADP	PA-O3A-PB	-3.38	121.24	132.83
3	B	2501	ADP	C3'-C2'-C1'	3.33	105.99	100.98
3	D	2501	ADP	C3'-C2'-C1'	3.33	105.99	100.98
3	F	2501	ADP	C3'-C2'-C1'	3.33	105.99	100.98
3	H	2501	ADP	C3'-C2'-C1'	3.33	105.99	100.98
3	B	2501	ADP	N3-C2-N1	-3.26	123.58	128.68
3	D	2501	ADP	N3-C2-N1	-3.26	123.58	128.68
3	F	2501	ADP	N3-C2-N1	-3.26	123.58	128.68
3	H	2501	ADP	N3-C2-N1	-3.26	123.58	128.68
3	B	2502	ADP	N3-C2-N1	-3.19	123.69	128.68
3	D	2502	ADP	N3-C2-N1	-3.19	123.69	128.68
3	F	2502	ADP	N3-C2-N1	-3.19	123.69	128.68
3	H	2502	ADP	N3-C2-N1	-3.19	123.69	128.68
3	A	401	ADP	N3-C2-N1	-3.15	123.75	128.68
3	C	401	ADP	N3-C2-N1	-3.15	123.75	128.68
3	E	401	ADP	N3-C2-N1	-3.15	123.75	128.68
3	G	401	ADP	N3-C2-N1	-3.15	123.75	128.68
3	B	2501	ADP	PA-O3A-PB	-2.79	123.27	132.83
3	D	2501	ADP	PA-O3A-PB	-2.79	123.27	132.83
3	F	2501	ADP	PA-O3A-PB	-2.79	123.27	132.83
3	H	2501	ADP	PA-O3A-PB	-2.79	123.27	132.83
3	B	2502	ADP	C3'-C2'-C1'	2.65	104.96	100.98
3	D	2502	ADP	C3'-C2'-C1'	2.65	104.96	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	F	2502	ADP	C3'-C2'-C1'	2.65	104.96	100.98
3	H	2502	ADP	C3'-C2'-C1'	2.65	104.96	100.98
3	A	401	ADP	C4-C5-N7	-2.61	106.67	109.40
3	C	401	ADP	C4-C5-N7	-2.61	106.67	109.40
3	E	401	ADP	C4-C5-N7	-2.61	106.67	109.40
3	G	401	ADP	C4-C5-N7	-2.61	106.67	109.40
3	B	2501	ADP	C4-C5-N7	-2.56	106.73	109.40
3	D	2501	ADP	C4-C5-N7	-2.56	106.73	109.40
3	F	2501	ADP	C4-C5-N7	-2.56	106.73	109.40
3	H	2501	ADP	C4-C5-N7	-2.56	106.73	109.40
3	B	2502	ADP	C4-C5-N7	-2.52	106.78	109.40
3	D	2502	ADP	C4-C5-N7	-2.52	106.78	109.40
3	F	2502	ADP	C4-C5-N7	-2.52	106.78	109.40
3	H	2502	ADP	C4-C5-N7	-2.52	106.78	109.40

There are no chirality outliers.

All (40) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	401	ADP	O4'-C4'-C5'-O5'
3	B	2502	ADP	C5'-O5'-PA-O3A
3	B	2502	ADP	O4'-C4'-C5'-O5'
3	B	2502	ADP	C3'-C4'-C5'-O5'
3	C	401	ADP	O4'-C4'-C5'-O5'
3	D	2502	ADP	C5'-O5'-PA-O3A
3	D	2502	ADP	O4'-C4'-C5'-O5'
3	D	2502	ADP	C3'-C4'-C5'-O5'
3	E	401	ADP	O4'-C4'-C5'-O5'
3	F	2502	ADP	C5'-O5'-PA-O3A
3	F	2502	ADP	O4'-C4'-C5'-O5'
3	F	2502	ADP	C3'-C4'-C5'-O5'
3	G	401	ADP	O4'-C4'-C5'-O5'
3	H	2502	ADP	C5'-O5'-PA-O3A
3	H	2502	ADP	O4'-C4'-C5'-O5'
3	H	2502	ADP	C3'-C4'-C5'-O5'
3	A	401	ADP	PB-O3A-PA-O1A
3	C	401	ADP	PB-O3A-PA-O1A
3	E	401	ADP	PB-O3A-PA-O1A
3	G	401	ADP	PB-O3A-PA-O1A
3	B	2502	ADP	C5'-O5'-PA-O2A
3	D	2502	ADP	C5'-O5'-PA-O2A
3	F	2502	ADP	C5'-O5'-PA-O2A

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Mol	Chain	Res	Type	Atoms
3	H	2502	ADP	C5'-O5'-PA-O2A
3	A	401	ADP	PB-O3A-PA-O2A
3	C	401	ADP	PB-O3A-PA-O2A
3	E	401	ADP	PB-O3A-PA-O2A
3	G	401	ADP	PB-O3A-PA-O2A
3	B	2501	ADP	C5'-O5'-PA-O1A
3	D	2501	ADP	C5'-O5'-PA-O1A
3	F	2501	ADP	C5'-O5'-PA-O1A
3	H	2501	ADP	C5'-O5'-PA-O1A
3	B	2501	ADP	O4'-C4'-C5'-O5'
3	D	2501	ADP	O4'-C4'-C5'-O5'
3	F	2501	ADP	O4'-C4'-C5'-O5'
3	H	2501	ADP	O4'-C4'-C5'-O5'
3	A	401	ADP	C3'-C4'-C5'-O5'
3	C	401	ADP	C3'-C4'-C5'-O5'
3	E	401	ADP	C3'-C4'-C5'-O5'
3	G	401	ADP	C3'-C4'-C5'-O5'

There are no ring outliers.

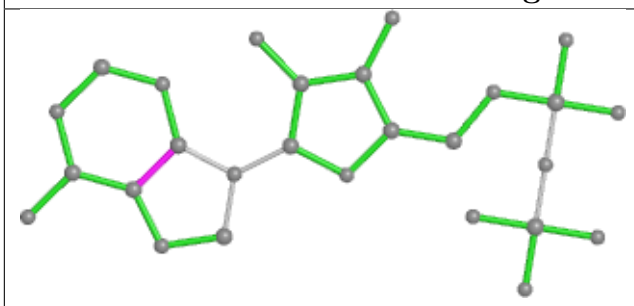
8 monomers are involved in 14 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	D	2502	ADP	2	0
3	H	2501	ADP	2	0
3	B	2501	ADP	2	0
3	F	2502	ADP	2	0
3	D	2501	ADP	1	0
3	H	2502	ADP	2	0
3	F	2501	ADP	1	0
3	B	2502	ADP	2	0

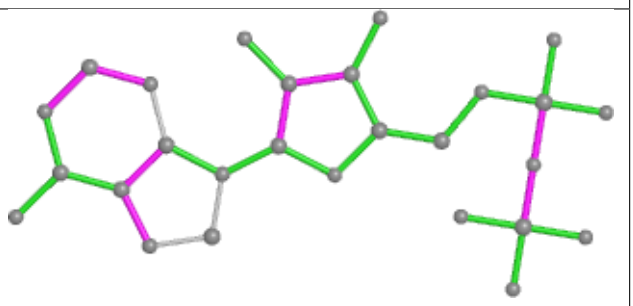
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

equivalents in the CSD to analyse the geometry.

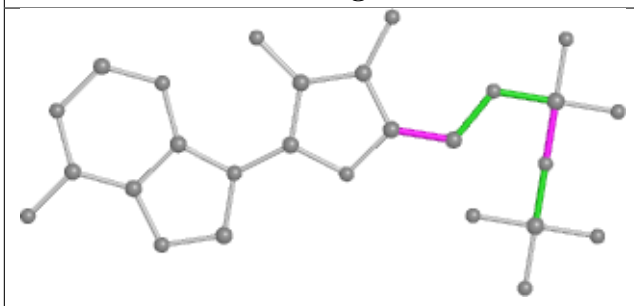
Ligand ADP C 401



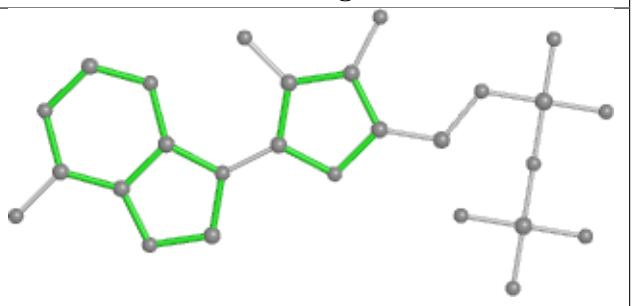
Bond lengths



Bond angles

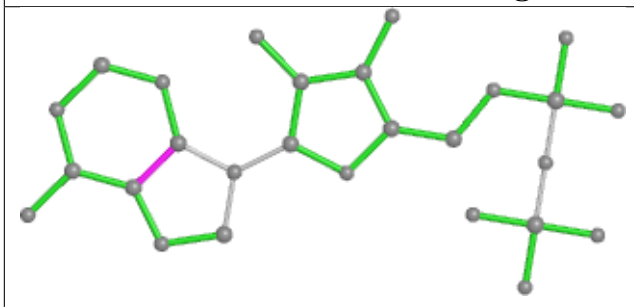


Torsions

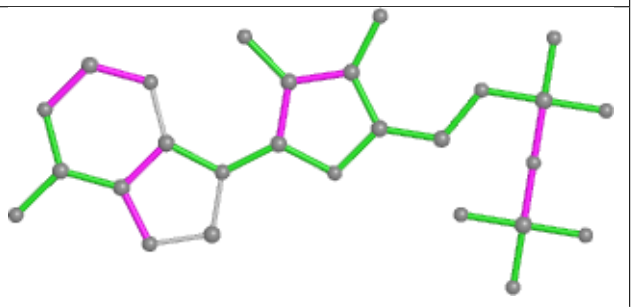


Rings

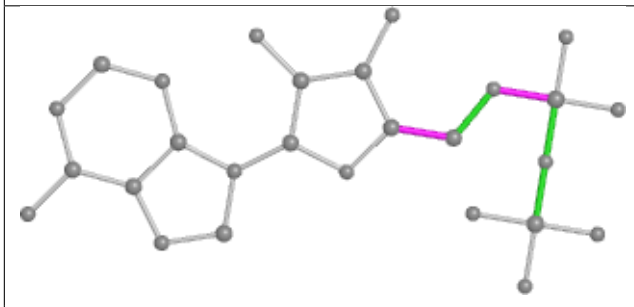
Ligand ADP D 2502



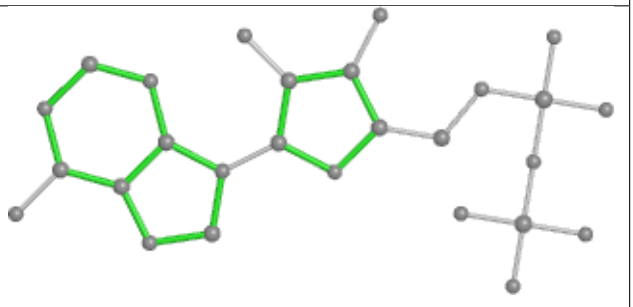
Bond lengths



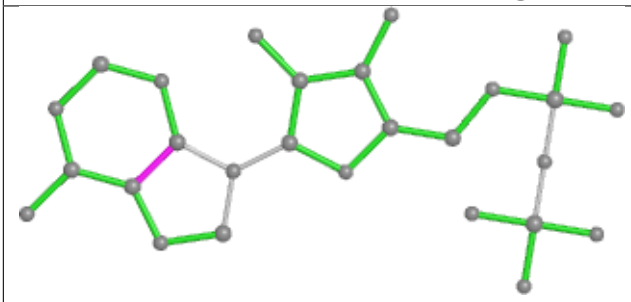
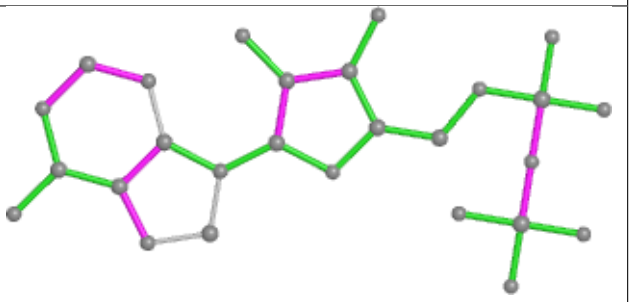
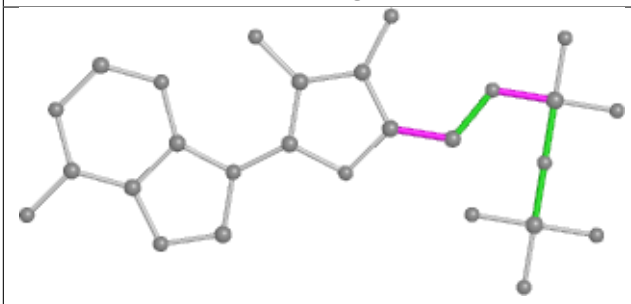
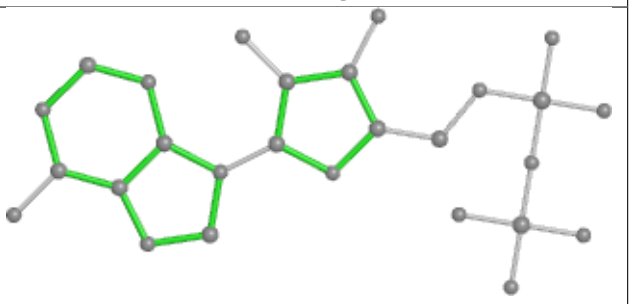
Bond angles

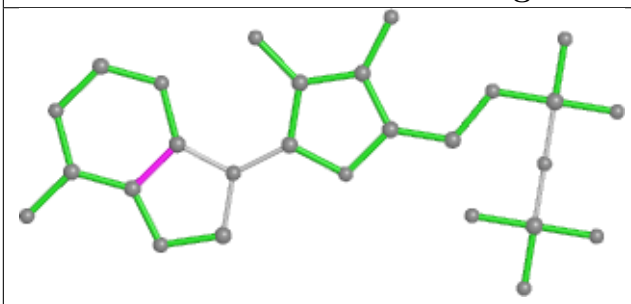
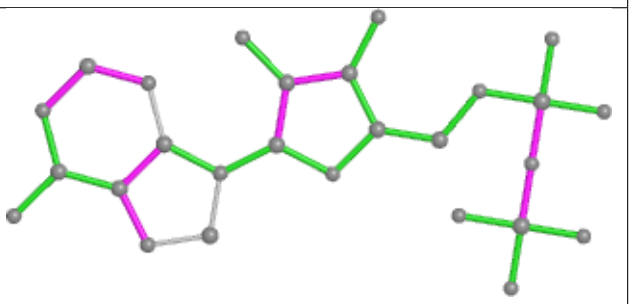
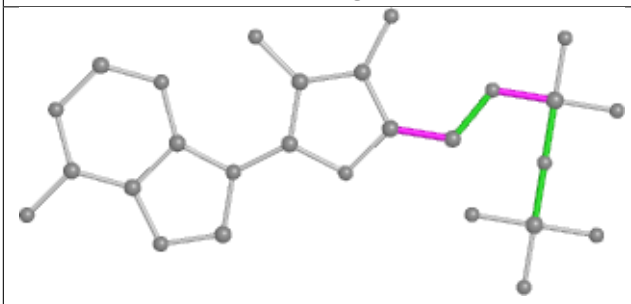
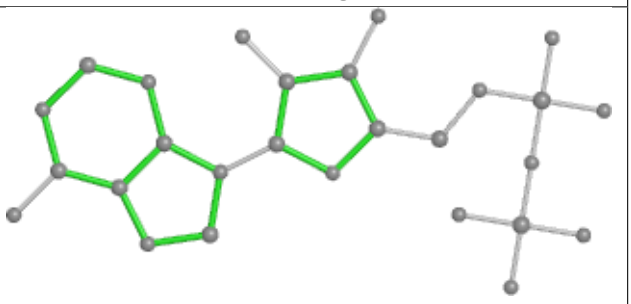


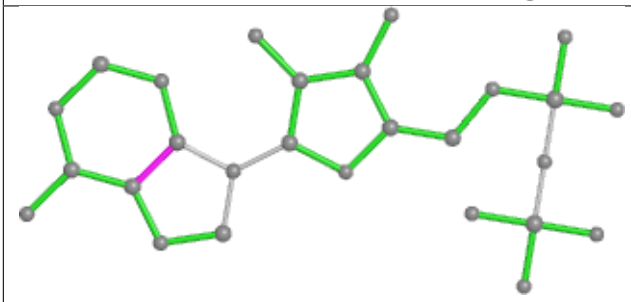
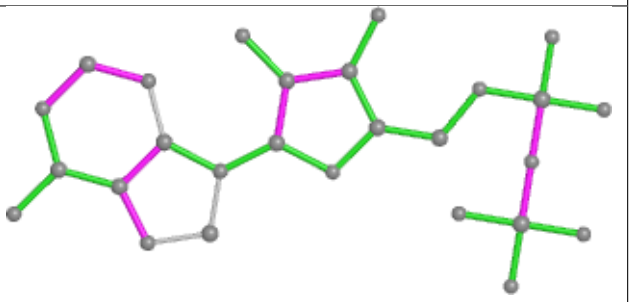
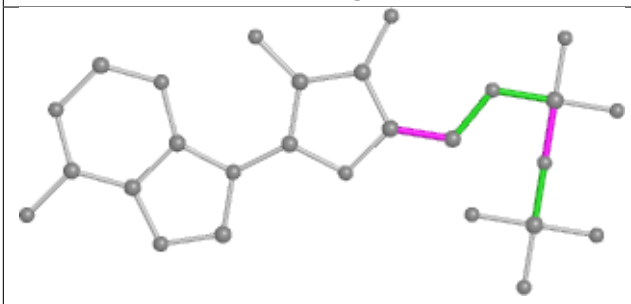
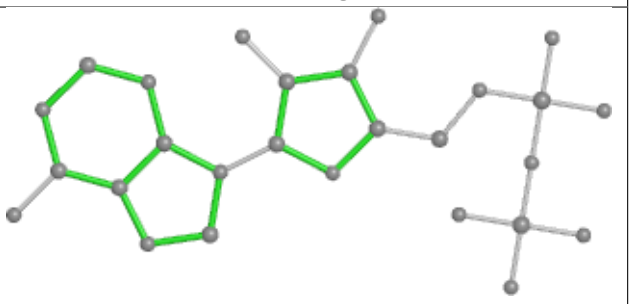
Torsions

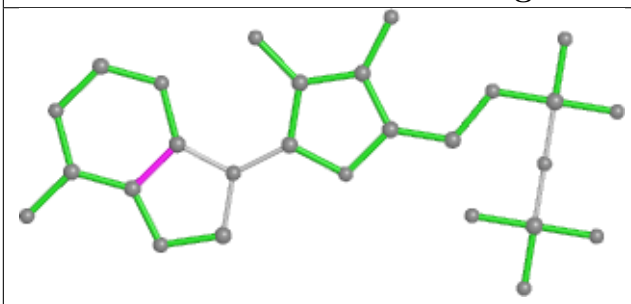
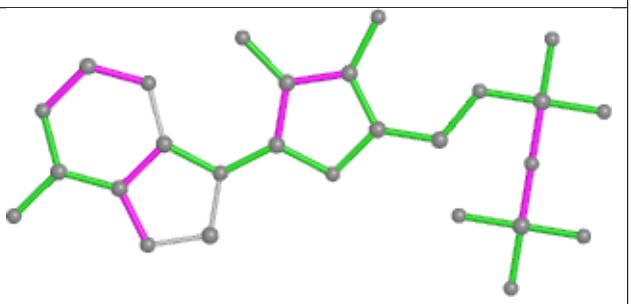
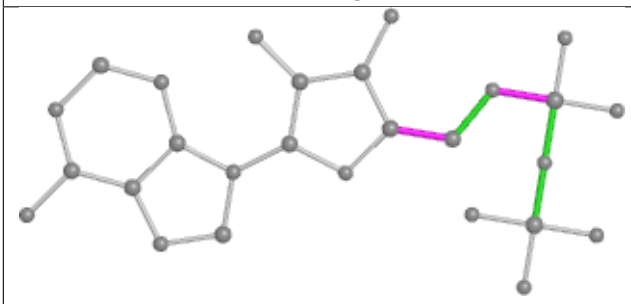
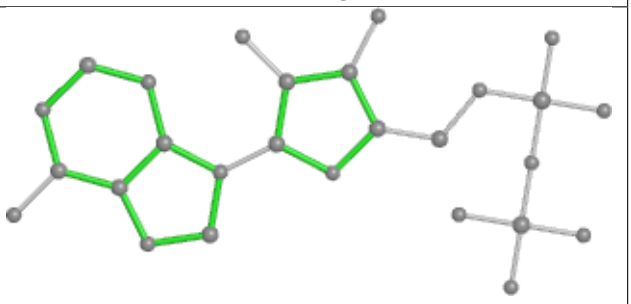


Rings

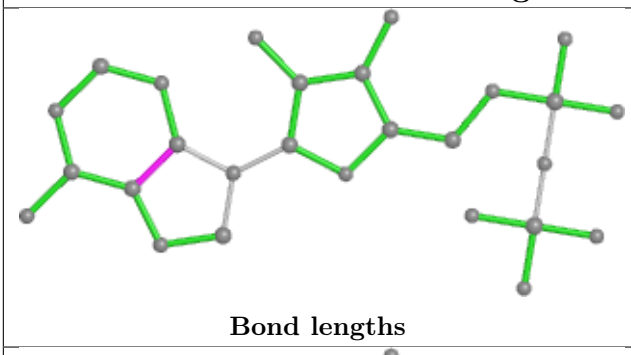
Ligand ADP H 2501	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand ADP B 2501	
 Bond lengths	 Bond angles
 Torsions	 Rings

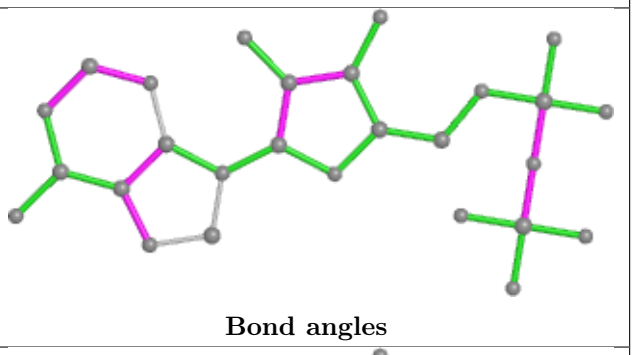
Ligand ADP A 401	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand ADP F 2502	
 Bond lengths	 Bond angles
 Torsions	 Rings

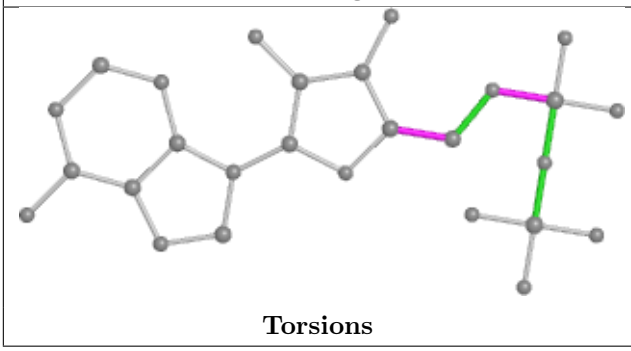
Ligand ADP D 2501



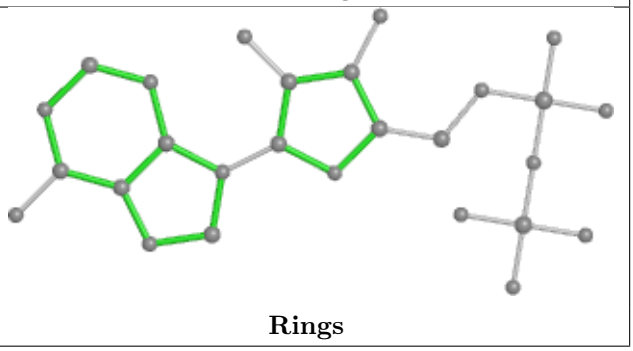
Bond lengths



Bond angles

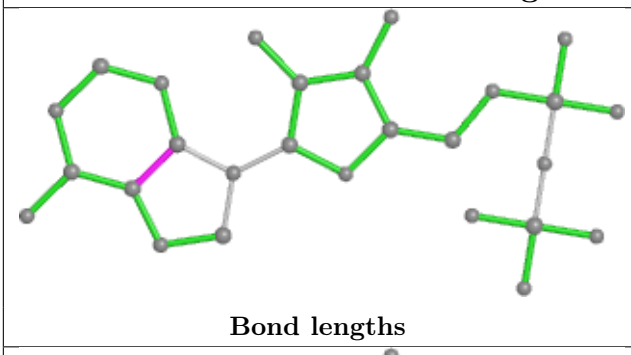


Torsions

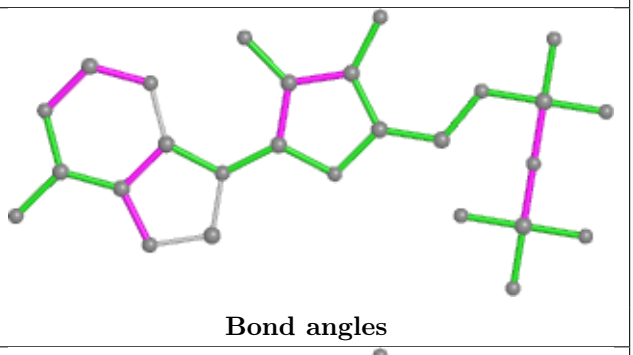


Rings

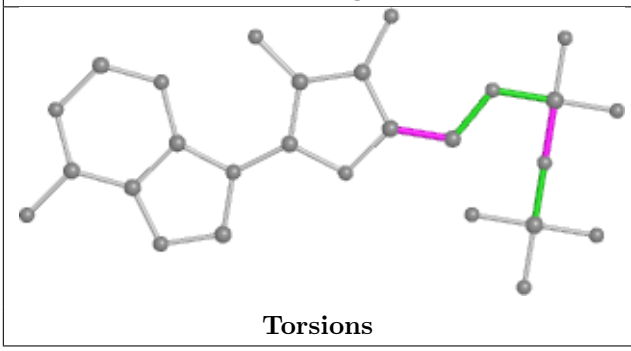
Ligand ADP G 401



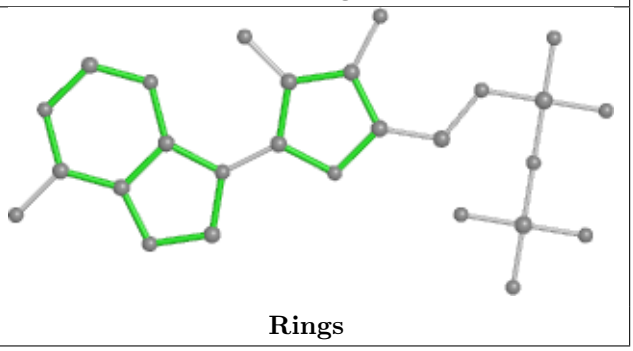
Bond lengths



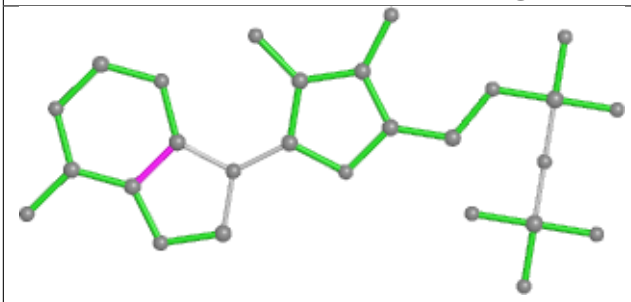
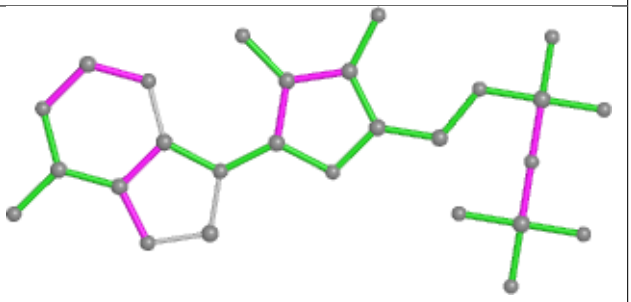
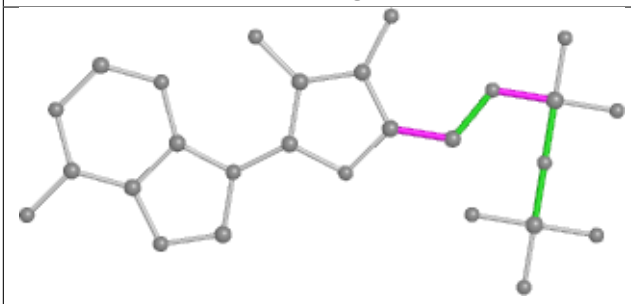
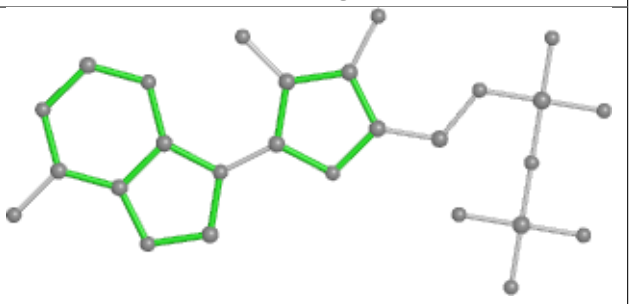
Bond angles

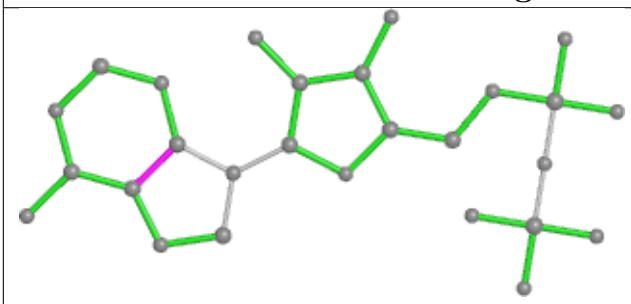
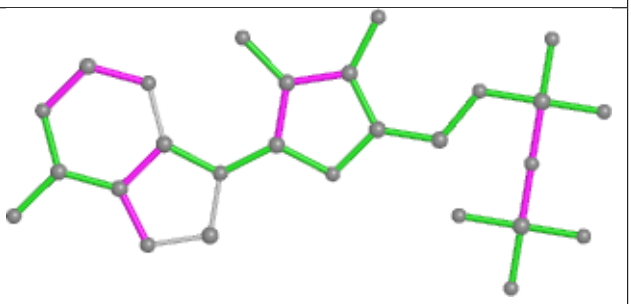
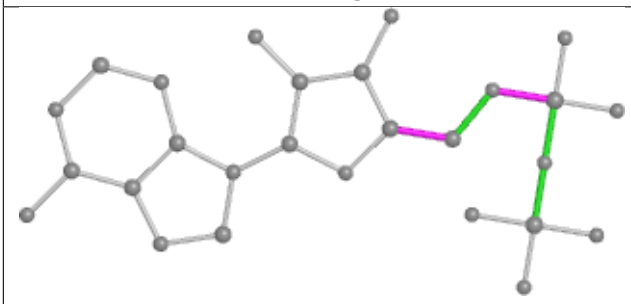
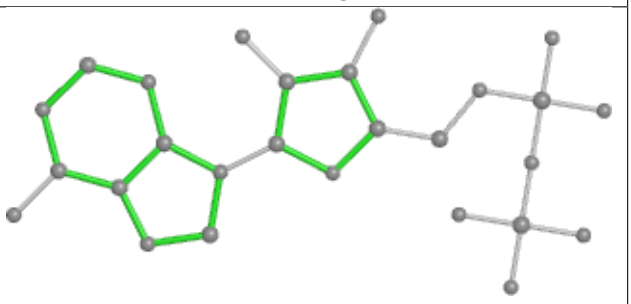


Torsions

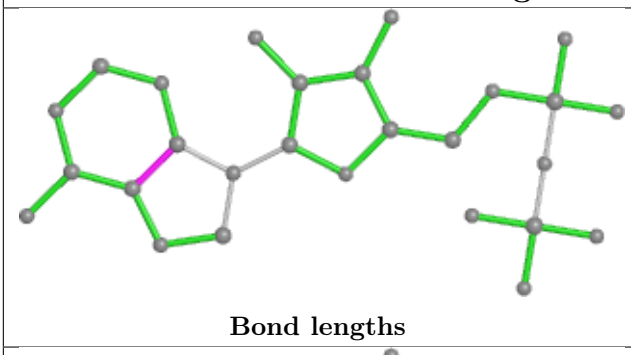


Rings

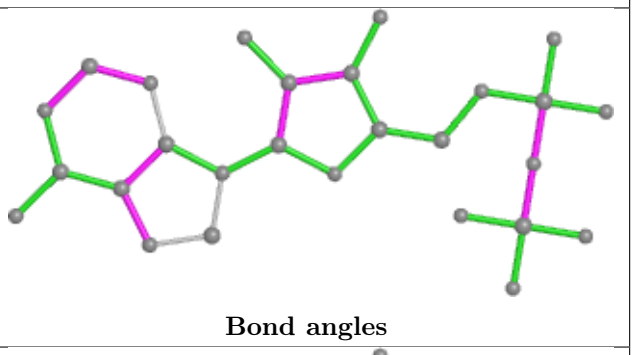
Ligand ADP H 2502	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand ADP F 2501	
 Bond lengths	 Bond angles
 Torsions	 Rings

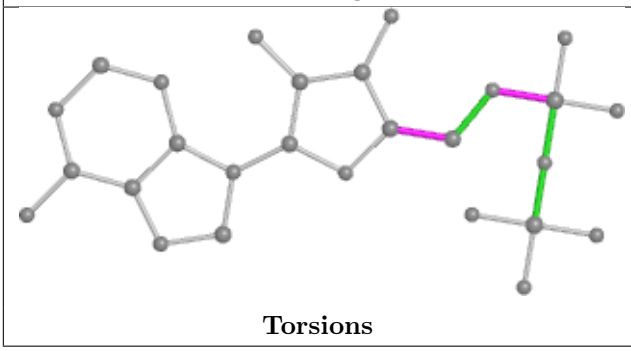
Ligand ADP B 2502



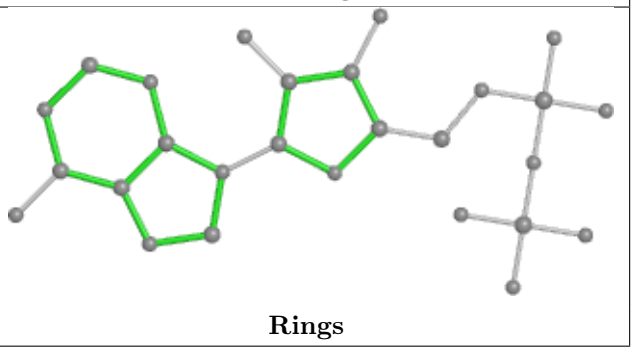
Bond lengths



Bond angles

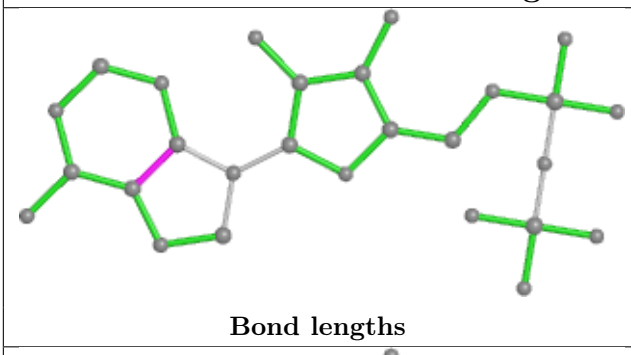


Torsions

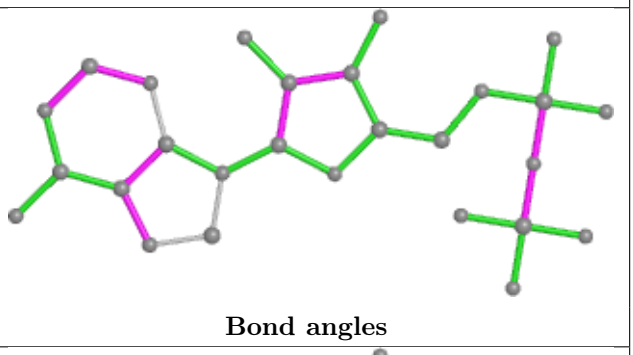


Rings

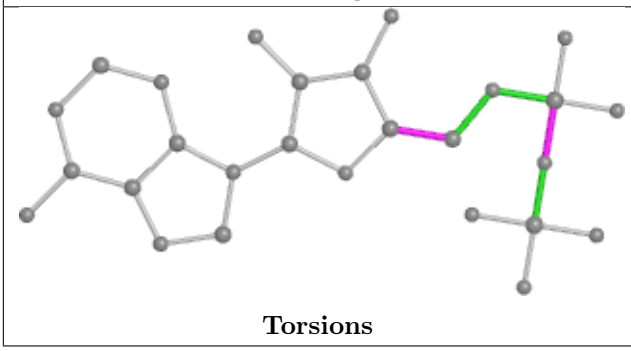
Ligand ADP E 401



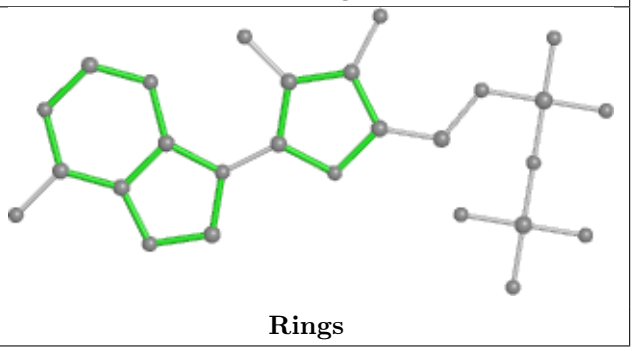
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

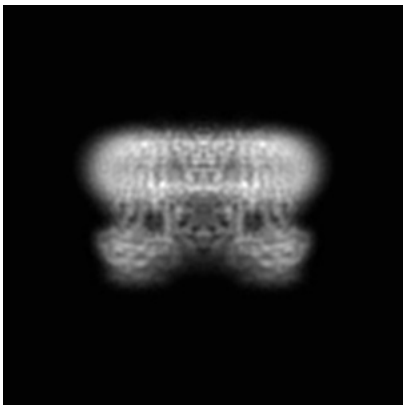
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-6851. These allow visual inspection of the internal detail of the map and identification of artifacts.

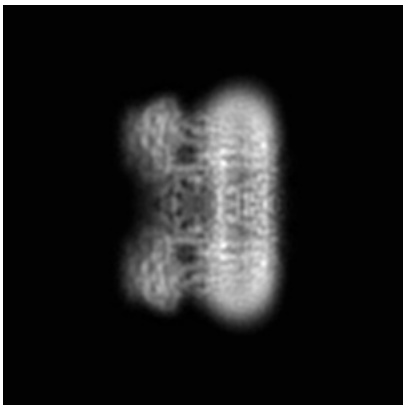
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

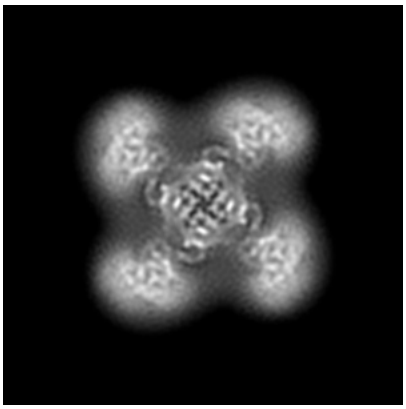
6.1.1 Primary map



X

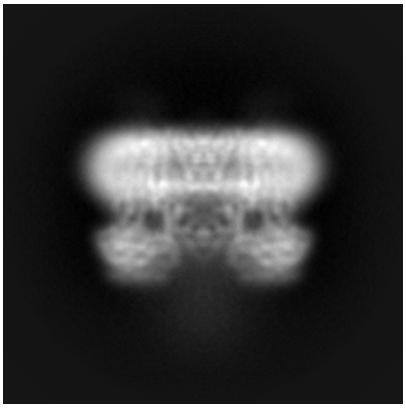


Y

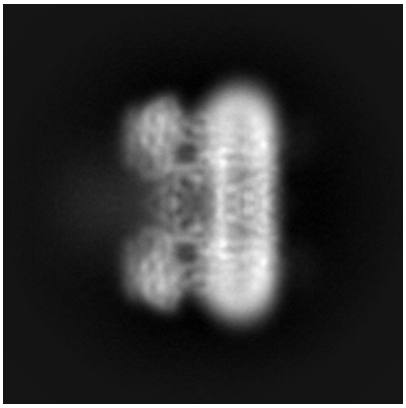


Z

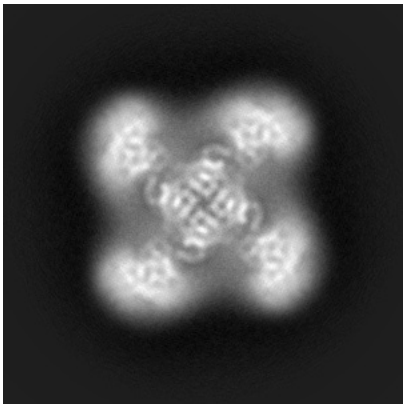
6.1.2 Raw map



X



Y



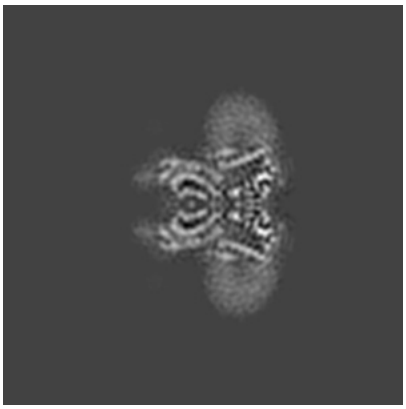
Z

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

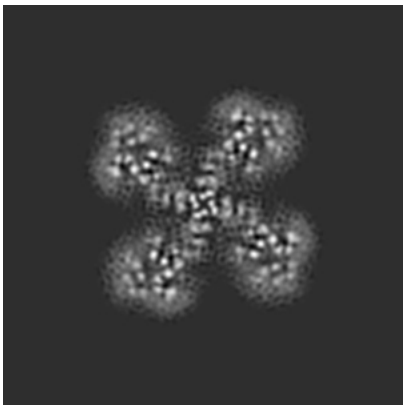
6.2 Central slices (i)

6.2.1 Primary map

X Index: 156

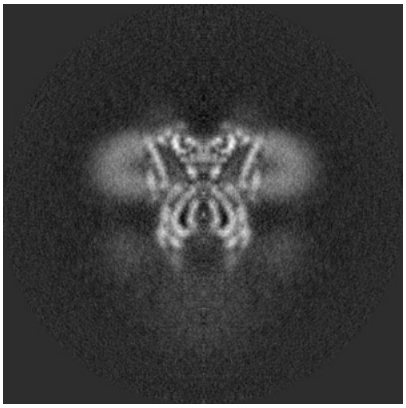


Y Index: 156

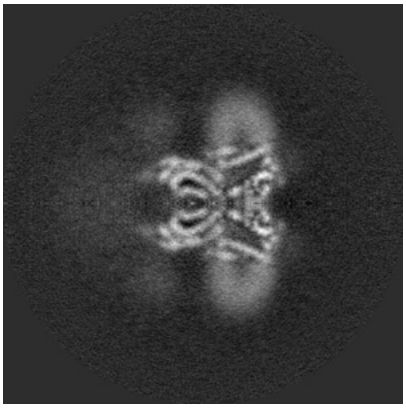


Z Index: 156

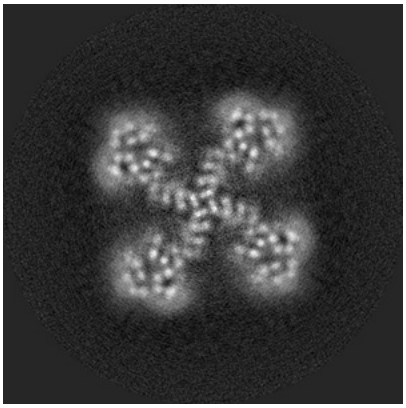
6.2.2 Raw map



X Index: 156



Y Index: 156

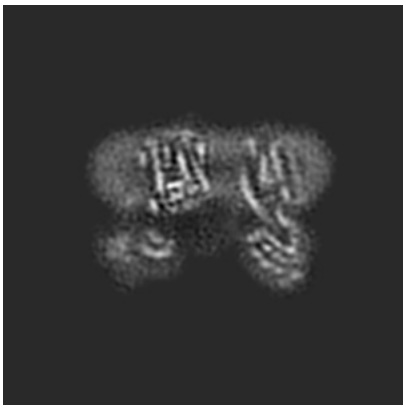


Z Index: 156

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

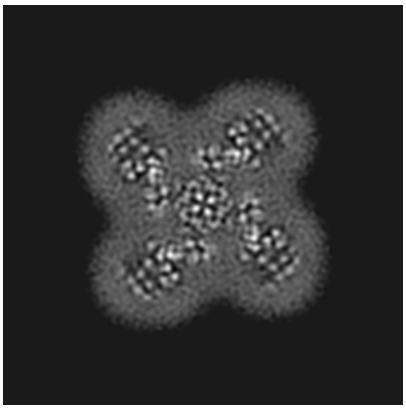
6.3 Largest variance slices (i)

6.3.1 Primary map



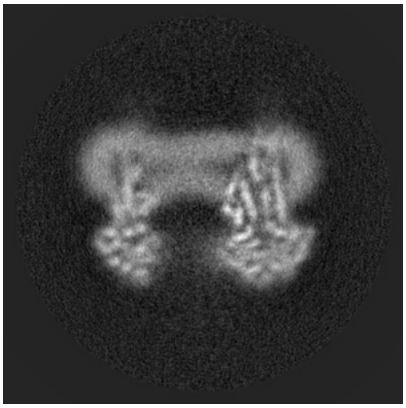
X Index: 196

Y Index: 116

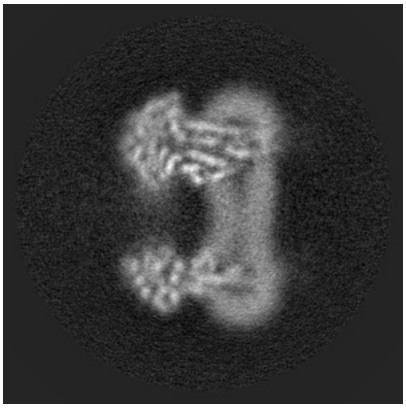


Z Index: 170

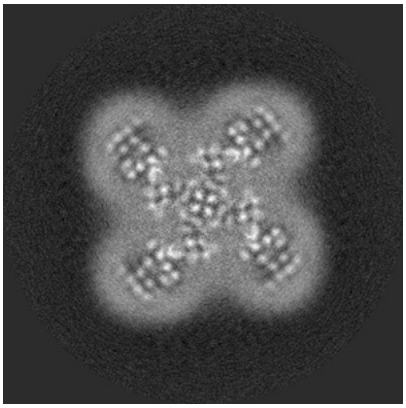
6.3.2 Raw map



X Index: 98



Y Index: 214

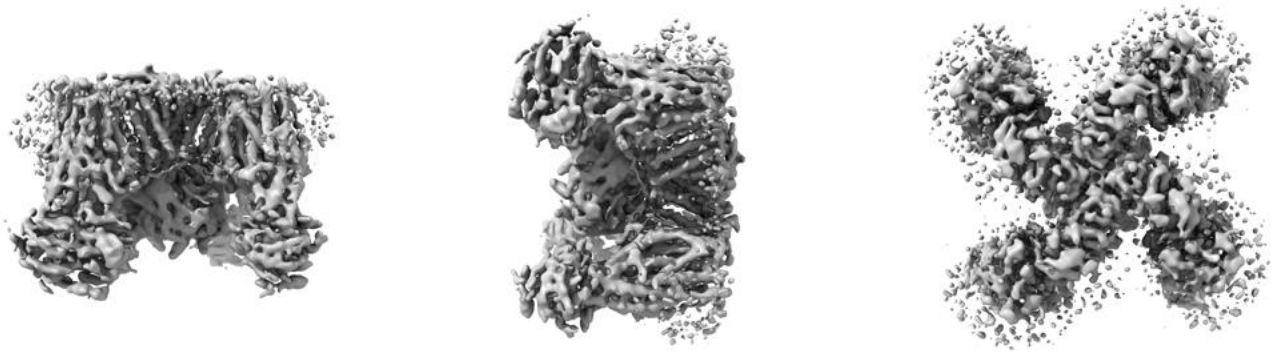


Z Index: 170

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

6.4 Orthogonal surface views (i)

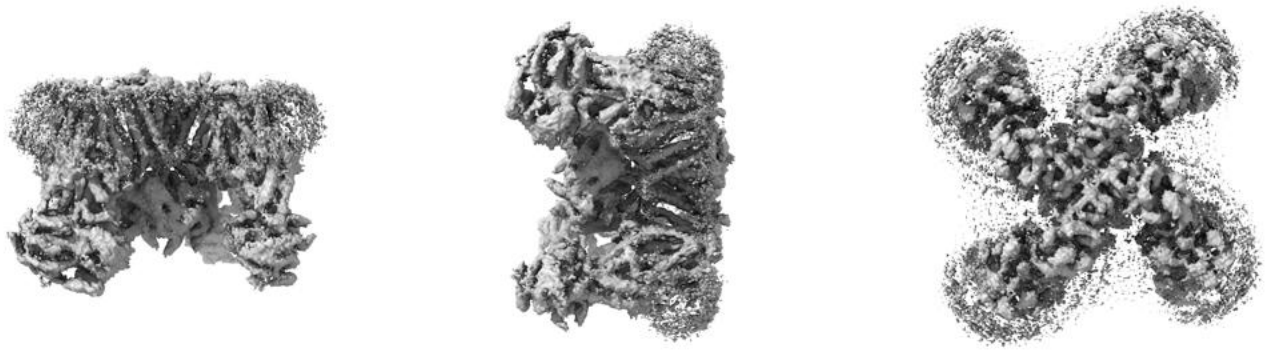
6.4.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.025. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.4.2 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.

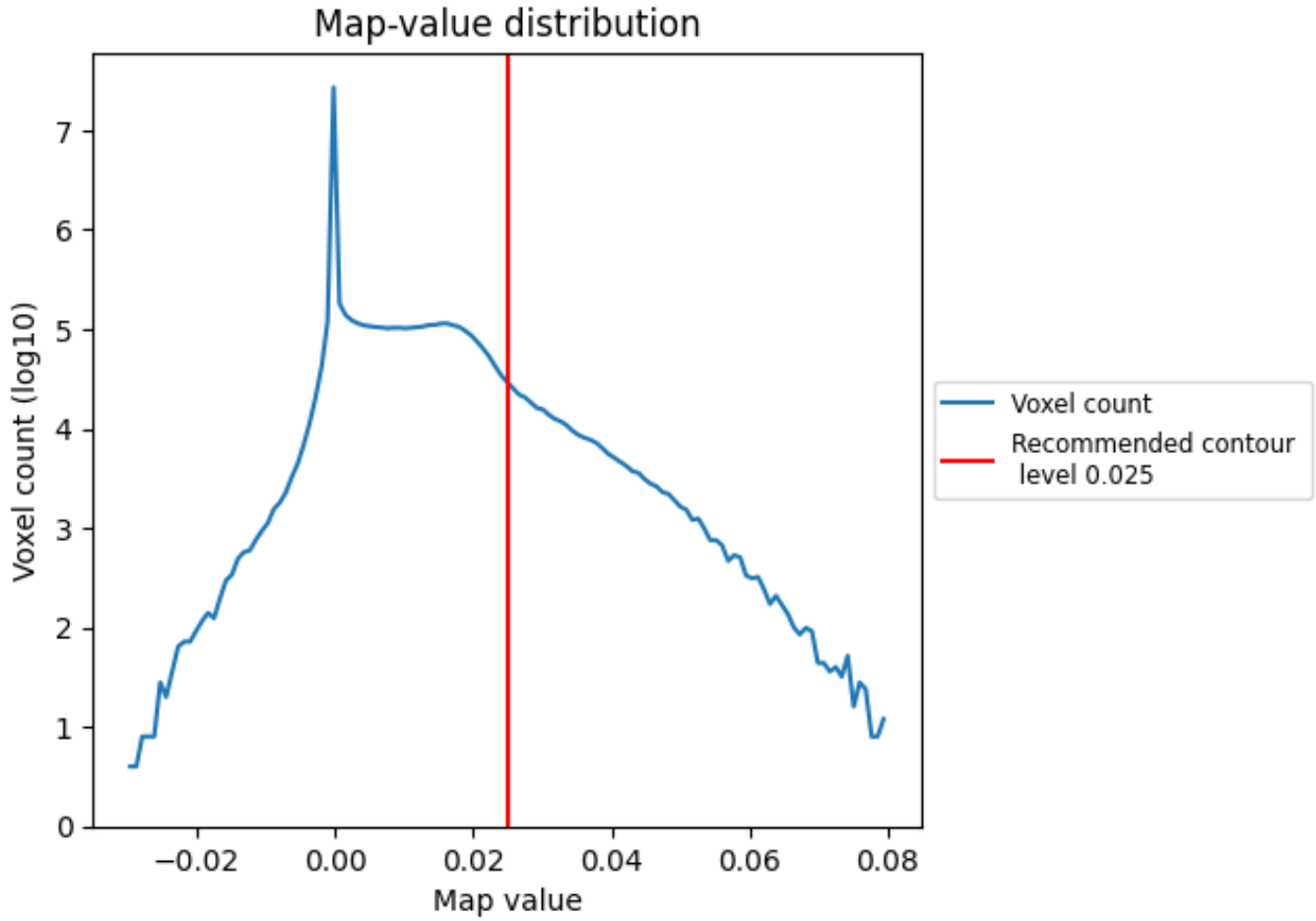
6.5 Mask visualisation (i)

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

7 Map analysis

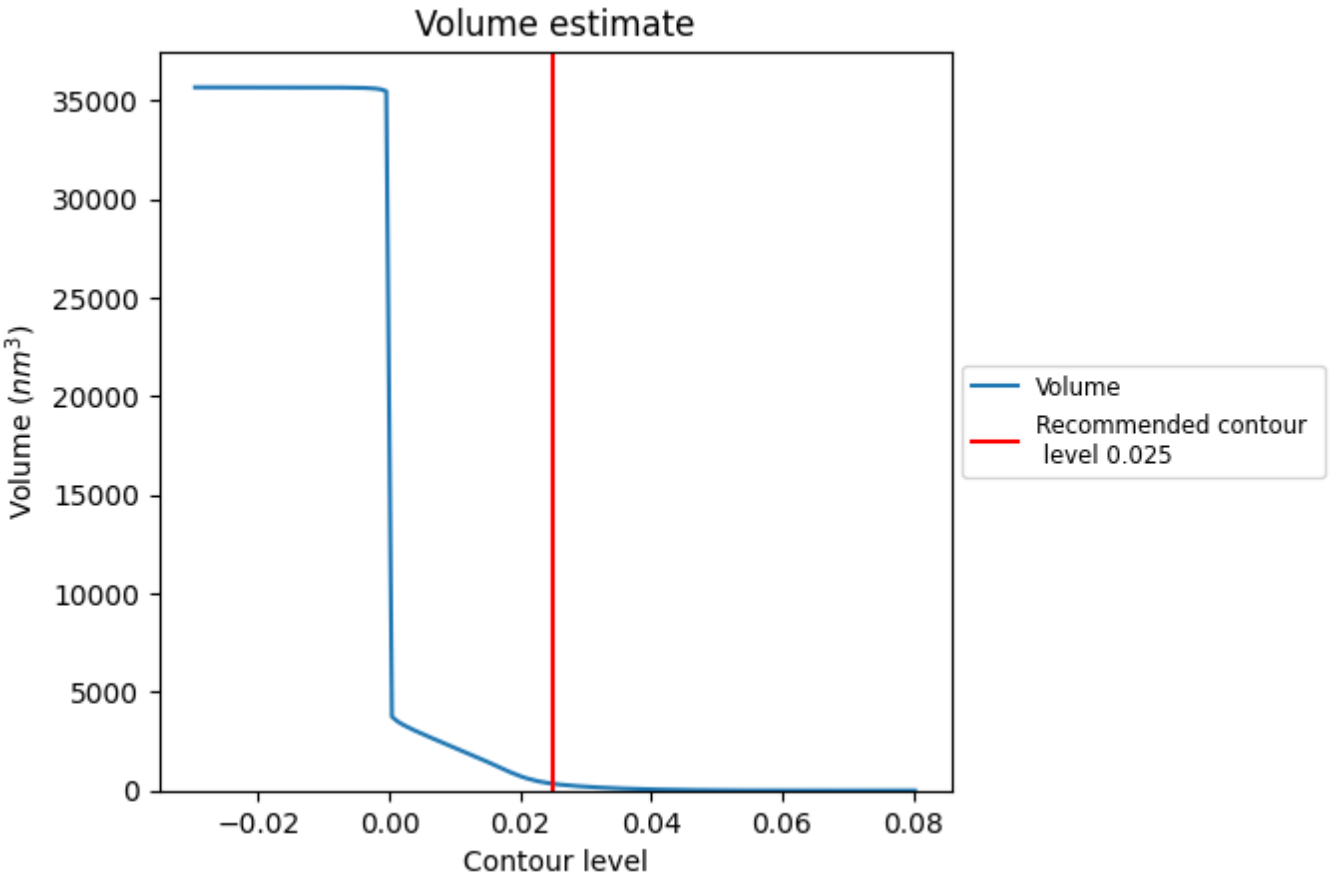
This section contains the results of statistical analysis of the map.

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.

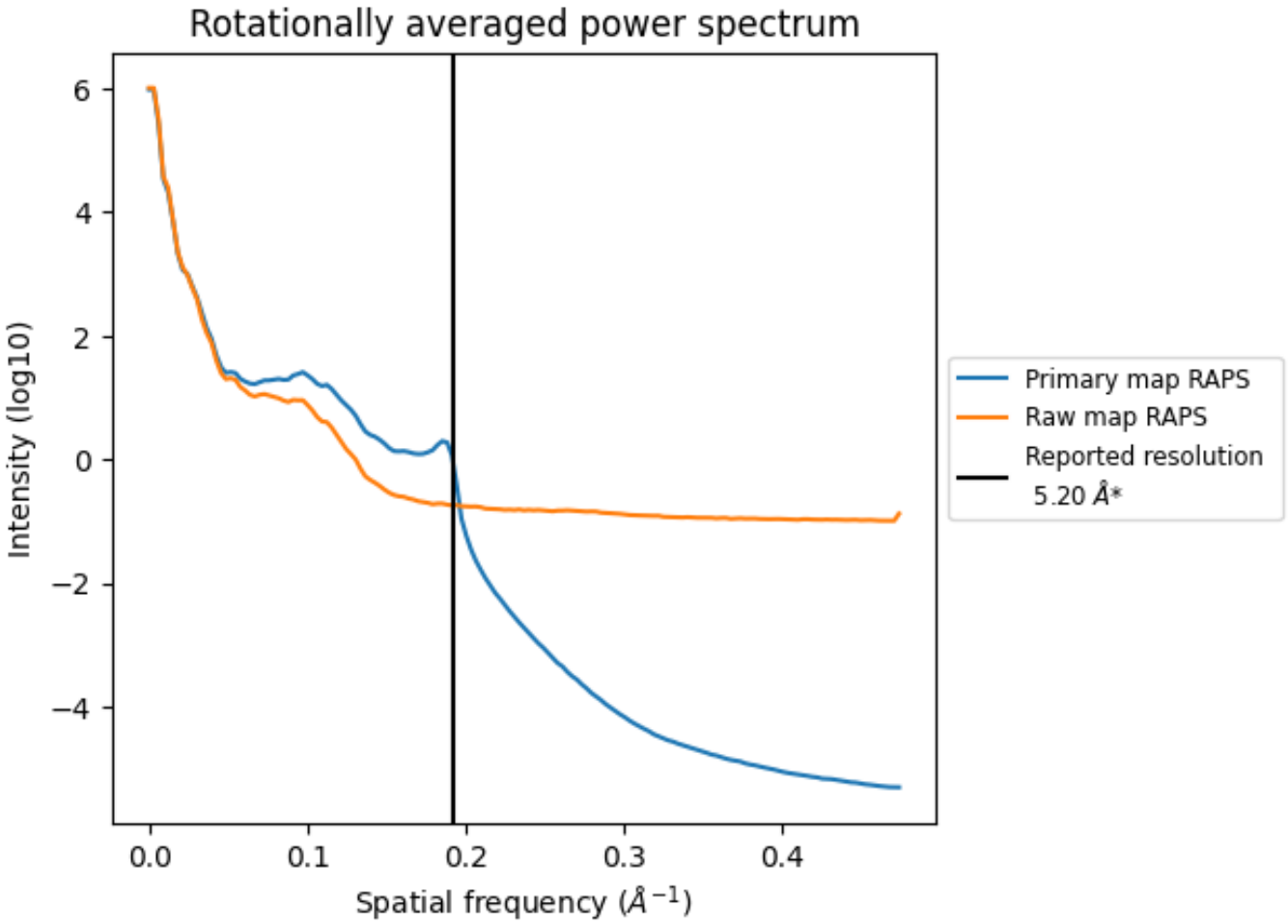
7.2 Volume estimate



The volume at the recommended contour level is 347 nm^3; this corresponds to an approximate mass of 314 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)

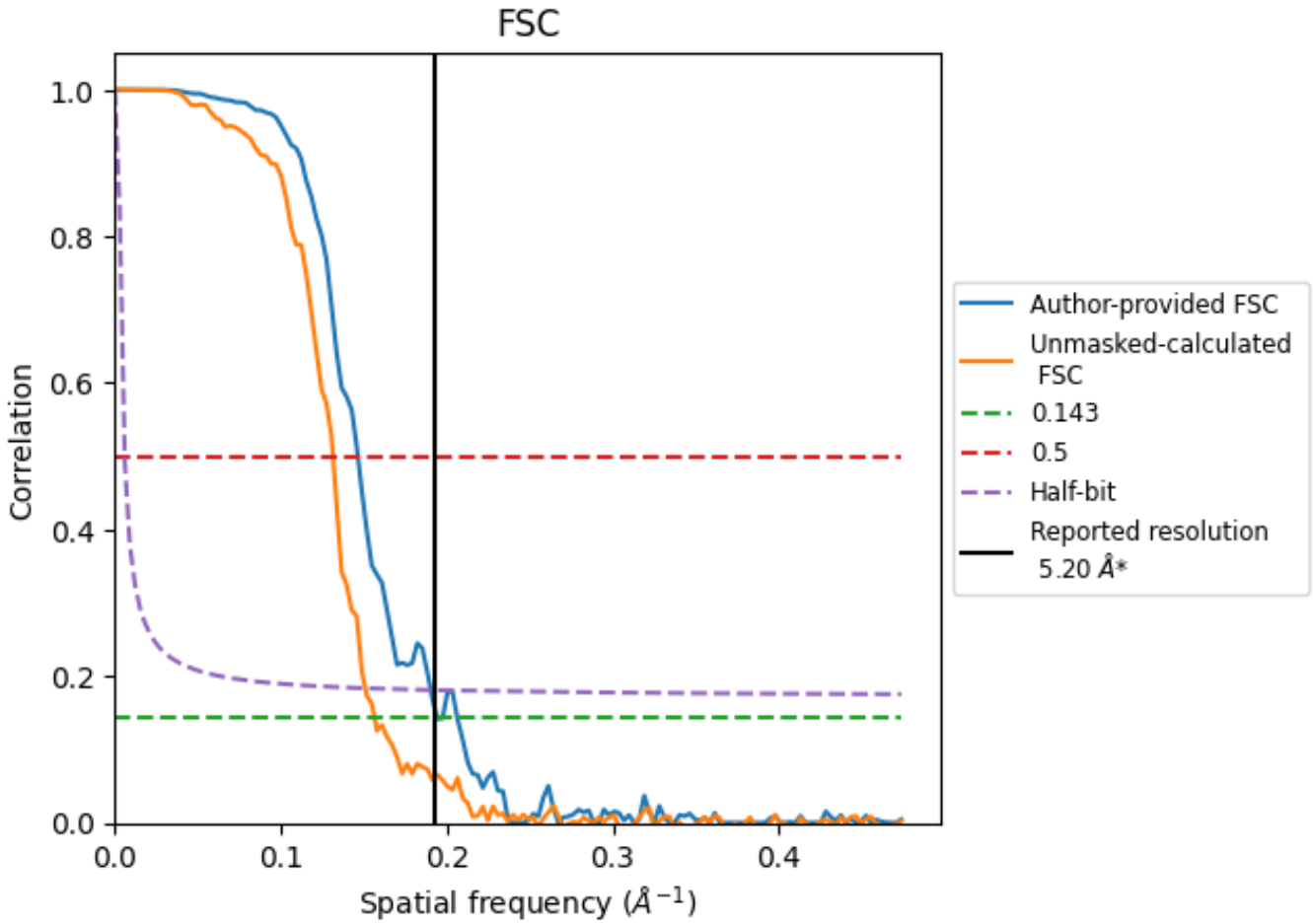


*Reported resolution corresponds to spatial frequency of 0.192 $Å^{-1}$

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 0.192 Å^{-1}

8.2 Resolution estimates (i)

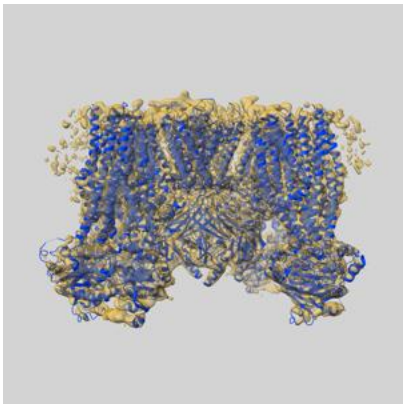
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	5.20	-	-
Author-provided FSC curve	5.15	6.83	5.25
Unmasked-calculated*	6.39	7.60	6.62

*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 6.39 differs from the reported value 5.2 by more than 10 %

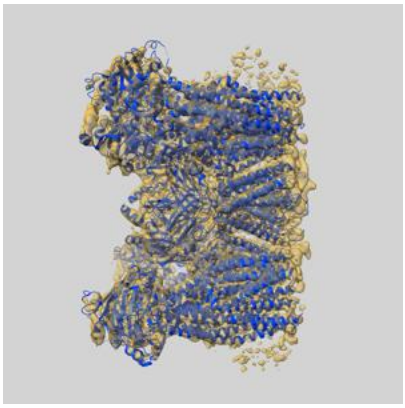
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-6851 and PDB model 5YWB. Per-residue inclusion information can be found in section 3 on page 6.

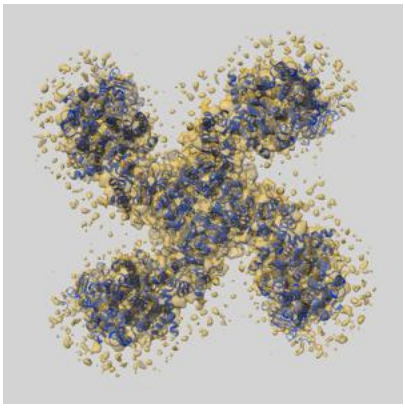
9.1 Map-model overlay



X



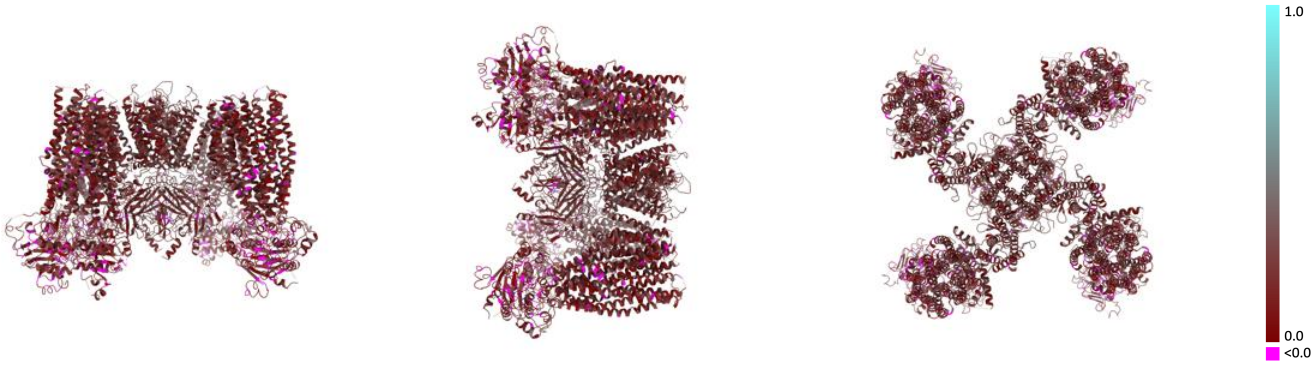
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.025 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.

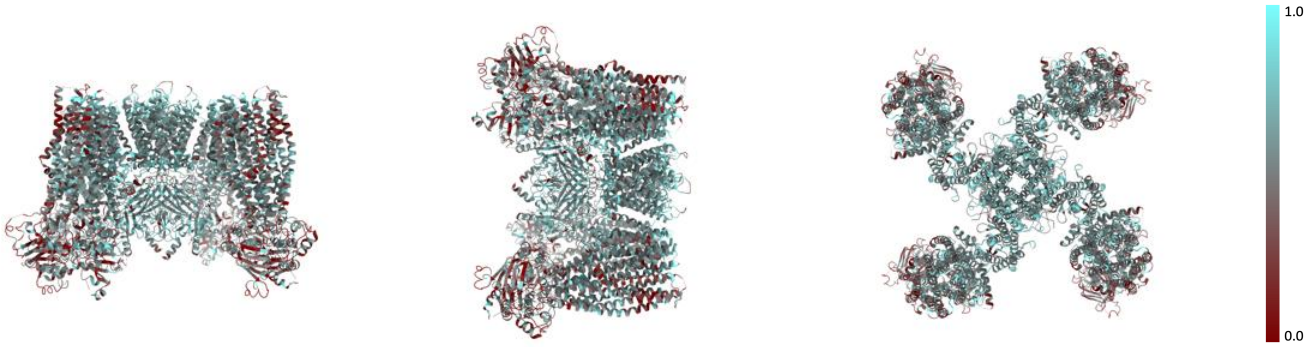
9.2 Q-score mapped to coordinate model (i)



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.

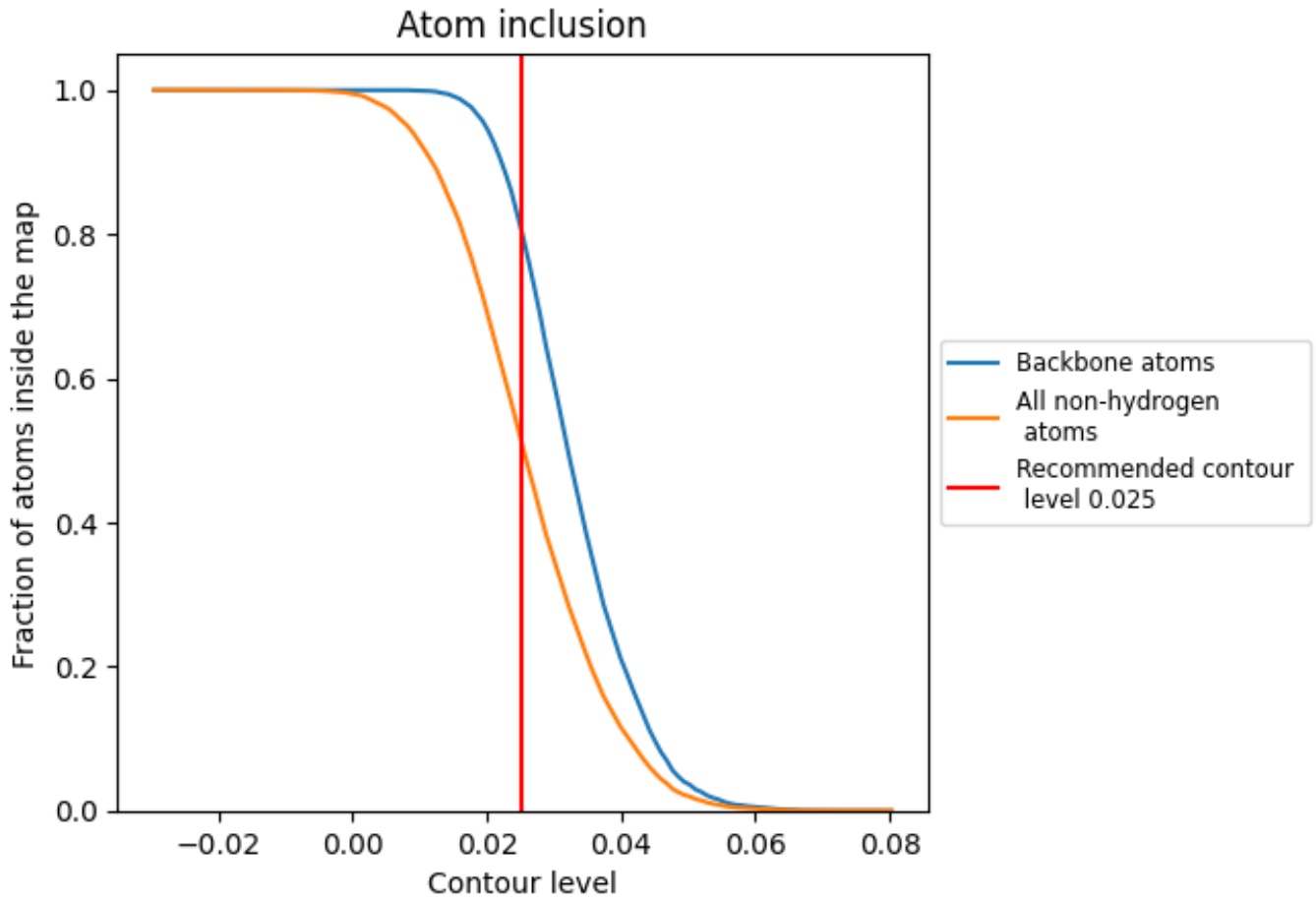
9.3 Atom inclusion mapped to coordinate model (i)



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 (0.025).

9.4 Atom inclusion (i)



At the recommended contour level, 81% of all backbone atoms, 52% 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 (0.025) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5156	0.1930
A	0.6261	0.2330
B	0.4892	0.1840
C	0.6265	0.2350
D	0.4892	0.1830
E	0.6265	0.2340
F	0.4892	0.1830
G	0.6265	0.2320
H	0.4892	0.1830