Full wwPDB EM Validation Report

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PDB ID	:	9F16
EMDB ID	:	EMD-50123
Title	:	Structure of a homomeric LRRC8C point mutation disease mutant
Authors	:	Rutz, S.; Quinodoz, M.; Peter, V.; Garavelli, L.; Innes, M.A.; Kellenberger, S.; Peng, Z.; Barone, A.; Campos-Xavier, B.; Unger, S.; Rivolta, C.; Dutzler, R.; Superti-Furga, A.
Deposited on	:	2024-04-18
Resolution	:	4.40 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 (i) symbol.

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

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

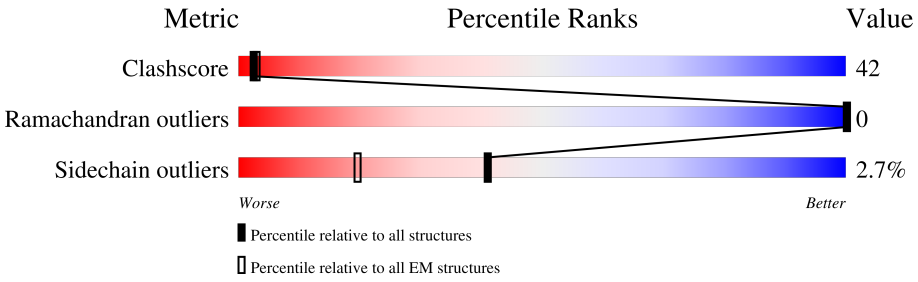
EMDB validation analysis	:	0.0.1.dev113
MolProbity	:	4.02b-467
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.39

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 4.40 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	811	8% 9% 5% 85%
1	B	811	41% 25% 25% · 49%
1	C	811	41% 28% 27% · 44%
1	D	811	7% 8% 5% 87%
1	E	811	36% 40% 44% · 15%
1	F	811	28% 41% 42% · 15%
1	G	811	8% 8% 6% 86%

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 21285 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 Volume-regulated anion channel subunit LRRC8C.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	122	Total	C	N	O	S	0	0
			992	650	157	172	13		
1	B	414	Total	C	N	O	S	0	0
			3424	2248	549	601	26		
1	C	458	Total	C	N	O	S	0	0
			3753	2455	609	662	27		
1	D	108	Total	C	N	O	S	0	0
			885	575	143	156	11		
1	E	692	Total	C	N	O	S	0	0
			5642	3676	926	1004	36		
1	F	692	Total	C	N	O	S	0	0
			5642	3676	926	1004	36		
1	G	116	Total	C	N	O	S	0	0
			947	620	151	164	12		

There are 91 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	0	MET	-	initiating methionine	UNP Q8TDW0
A	1	SER	-	expression tag	UNP Q8TDW0
A	205	GLY	ASP	conflict	UNP Q8TDW0
A	390	LEU	VAL	engineered mutation	UNP Q8TDW0
A	802	ALA	-	expression tag	UNP Q8TDW0
A	803	ASP	-	expression tag	UNP Q8TDW0
A	804	ALA	-	expression tag	UNP Q8TDW0
A	805	LEU	-	expression tag	UNP Q8TDW0
A	806	GLU	-	expression tag	UNP Q8TDW0
A	807	VAL	-	expression tag	UNP Q8TDW0
A	808	LEU	-	expression tag	UNP Q8TDW0
A	809	PHE	-	expression tag	UNP Q8TDW0
A	810	GLN	-	expression tag	UNP Q8TDW0
B	0	MET	-	initiating methionine	UNP Q8TDW0
B	1	SER	-	expression tag	UNP Q8TDW0
B	205	GLY	ASP	conflict	UNP Q8TDW0

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Chain	Residue	Modelled	Actual	Comment	Reference
B	390	LEU	VAL	engineered mutation	UNP Q8TDW0
B	802	ALA	-	expression tag	UNP Q8TDW0
B	803	ASP	-	expression tag	UNP Q8TDW0
B	804	ALA	-	expression tag	UNP Q8TDW0
B	805	LEU	-	expression tag	UNP Q8TDW0
B	806	GLU	-	expression tag	UNP Q8TDW0
B	807	VAL	-	expression tag	UNP Q8TDW0
B	808	LEU	-	expression tag	UNP Q8TDW0
B	809	PHE	-	expression tag	UNP Q8TDW0
B	810	GLN	-	expression tag	UNP Q8TDW0
C	0	MET	-	initiating methionine	UNP Q8TDW0
C	1	SER	-	expression tag	UNP Q8TDW0
C	205	GLY	ASP	conflict	UNP Q8TDW0
C	390	LEU	VAL	engineered mutation	UNP Q8TDW0
C	802	ALA	-	expression tag	UNP Q8TDW0
C	803	ASP	-	expression tag	UNP Q8TDW0
C	804	ALA	-	expression tag	UNP Q8TDW0
C	805	LEU	-	expression tag	UNP Q8TDW0
C	806	GLU	-	expression tag	UNP Q8TDW0
C	807	VAL	-	expression tag	UNP Q8TDW0
C	808	LEU	-	expression tag	UNP Q8TDW0
C	809	PHE	-	expression tag	UNP Q8TDW0
C	810	GLN	-	expression tag	UNP Q8TDW0
D	0	MET	-	initiating methionine	UNP Q8TDW0
D	1	SER	-	expression tag	UNP Q8TDW0
D	205	GLY	ASP	conflict	UNP Q8TDW0
D	390	LEU	VAL	engineered mutation	UNP Q8TDW0
D	802	ALA	-	expression tag	UNP Q8TDW0
D	803	ASP	-	expression tag	UNP Q8TDW0
D	804	ALA	-	expression tag	UNP Q8TDW0
D	805	LEU	-	expression tag	UNP Q8TDW0
D	806	GLU	-	expression tag	UNP Q8TDW0
D	807	VAL	-	expression tag	UNP Q8TDW0
D	808	LEU	-	expression tag	UNP Q8TDW0
D	809	PHE	-	expression tag	UNP Q8TDW0
D	810	GLN	-	expression tag	UNP Q8TDW0
E	0	MET	-	initiating methionine	UNP Q8TDW0
E	1	SER	-	expression tag	UNP Q8TDW0
E	205	GLY	ASP	conflict	UNP Q8TDW0
E	390	LEU	VAL	engineered mutation	UNP Q8TDW0
E	802	ALA	-	expression tag	UNP Q8TDW0
E	803	ASP	-	expression tag	UNP Q8TDW0

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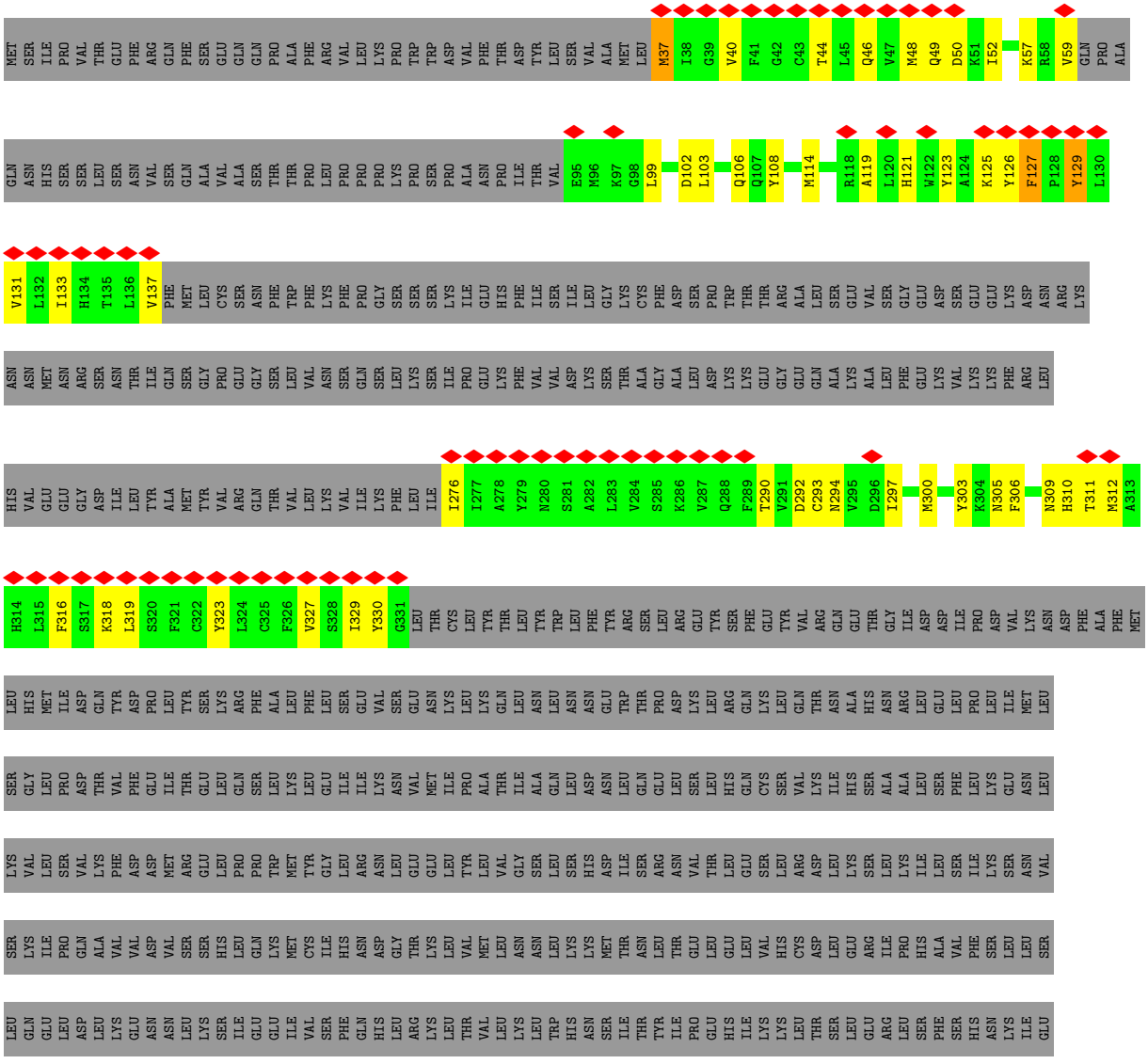
Chain	Residue	Modelled	Actual	Comment	Reference
E	804	ALA	-	expression tag	UNP Q8TDW0
E	805	LEU	-	expression tag	UNP Q8TDW0
E	806	GLU	-	expression tag	UNP Q8TDW0
E	807	VAL	-	expression tag	UNP Q8TDW0
E	808	LEU	-	expression tag	UNP Q8TDW0
E	809	PHE	-	expression tag	UNP Q8TDW0
E	810	GLN	-	expression tag	UNP Q8TDW0
F	0	MET	-	initiating methionine	UNP Q8TDW0
F	1	SER	-	expression tag	UNP Q8TDW0
F	205	GLY	ASP	conflict	UNP Q8TDW0
F	390	LEU	VAL	engineered mutation	UNP Q8TDW0
F	802	ALA	-	expression tag	UNP Q8TDW0
F	803	ASP	-	expression tag	UNP Q8TDW0
F	804	ALA	-	expression tag	UNP Q8TDW0
F	805	LEU	-	expression tag	UNP Q8TDW0
F	806	GLU	-	expression tag	UNP Q8TDW0
F	807	VAL	-	expression tag	UNP Q8TDW0
F	808	LEU	-	expression tag	UNP Q8TDW0
F	809	PHE	-	expression tag	UNP Q8TDW0
F	810	GLN	-	expression tag	UNP Q8TDW0
G	0	MET	-	initiating methionine	UNP Q8TDW0
G	1	SER	-	expression tag	UNP Q8TDW0
G	205	GLY	ASP	conflict	UNP Q8TDW0
G	390	LEU	VAL	engineered mutation	UNP Q8TDW0
G	802	ALA	-	expression tag	UNP Q8TDW0
G	803	ASP	-	expression tag	UNP Q8TDW0
G	804	ALA	-	expression tag	UNP Q8TDW0
G	805	LEU	-	expression tag	UNP Q8TDW0
G	806	GLU	-	expression tag	UNP Q8TDW0
G	807	VAL	-	expression tag	UNP Q8TDW0
G	808	LEU	-	expression tag	UNP Q8TDW0
G	809	PHE	-	expression tag	UNP Q8TDW0
G	810	GLN	-	expression tag	UNP Q8TDW0

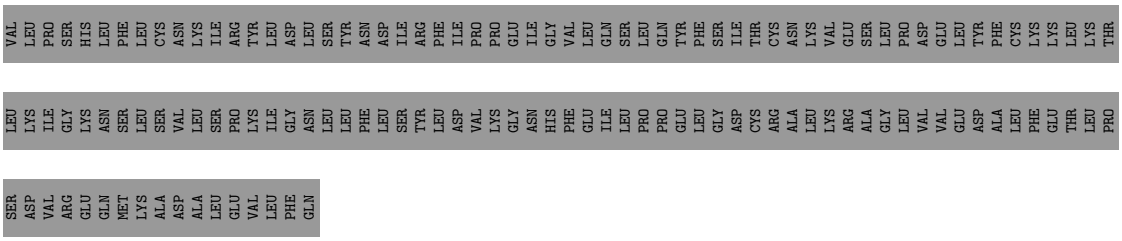
3 Residue-property plots (i)

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: Volume-regulated anion channel subunit LRRC8C

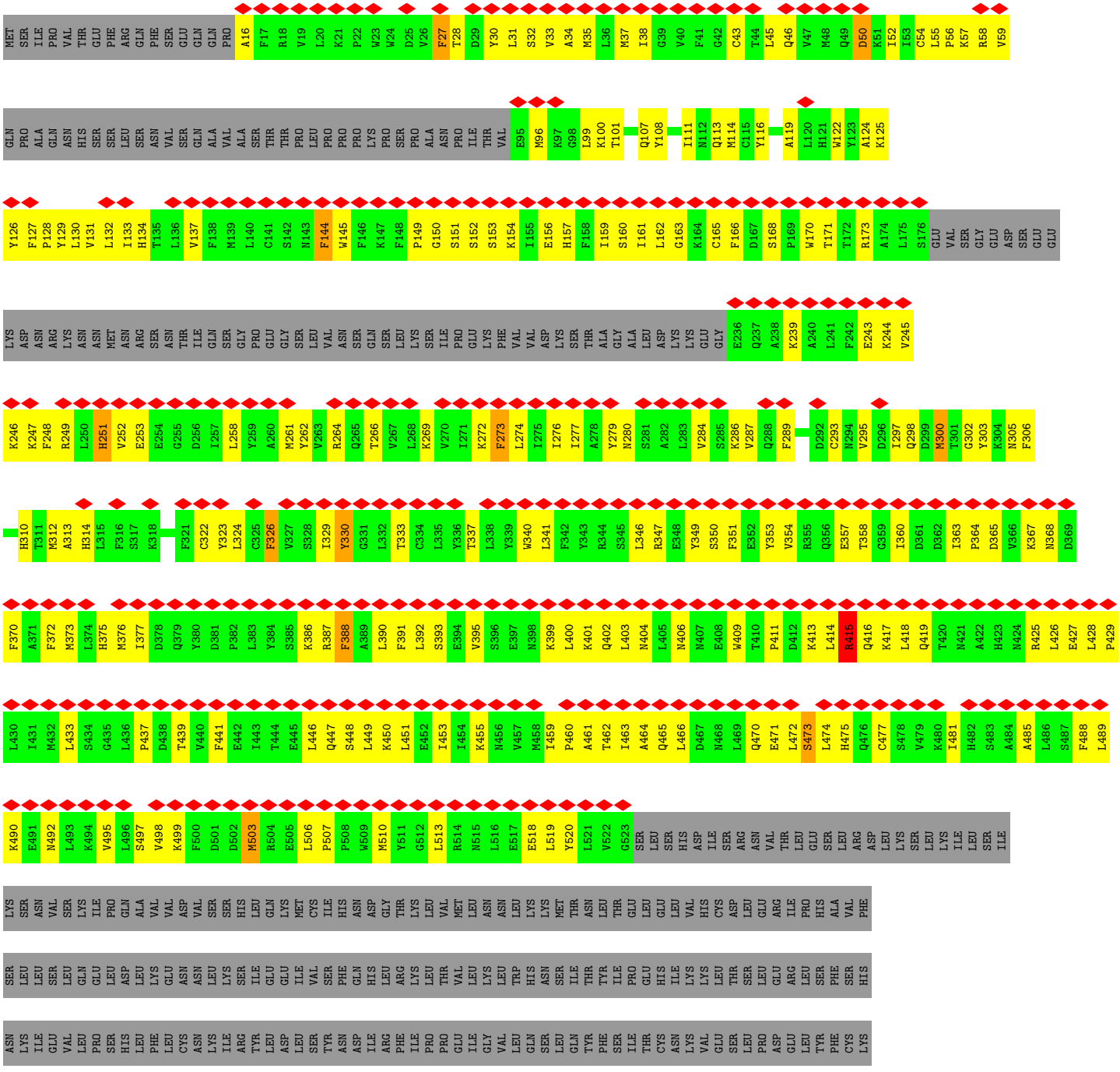
Chain A:

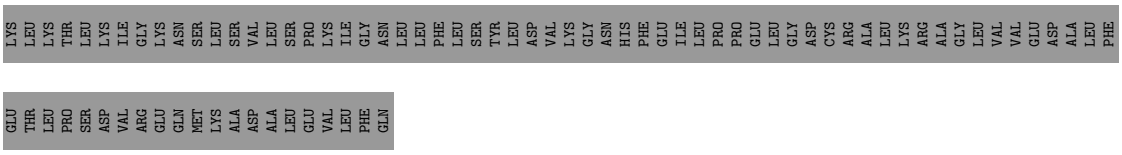




• Molecule 1: Volume-regulated anion channel subunit LRRC8C

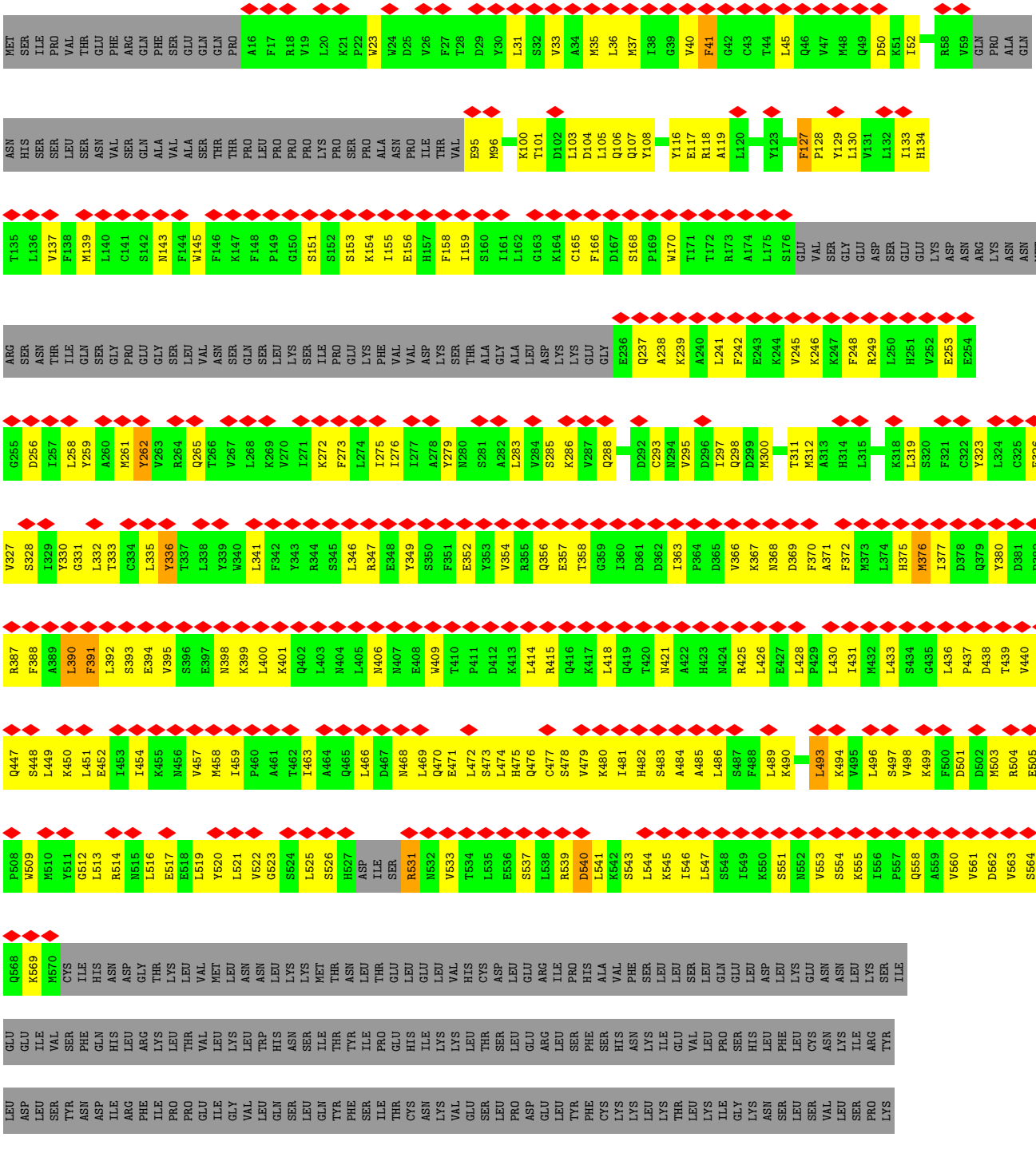
Chain B:

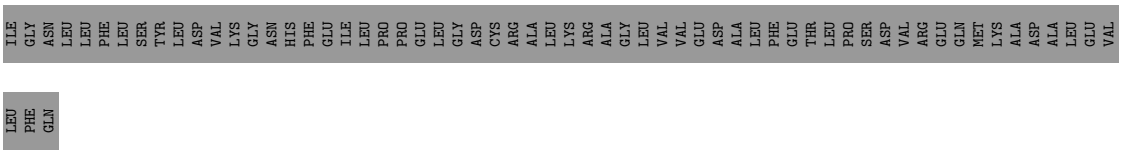




• Molecule 1: Volume-regulated anion channel subunit LRRC8C

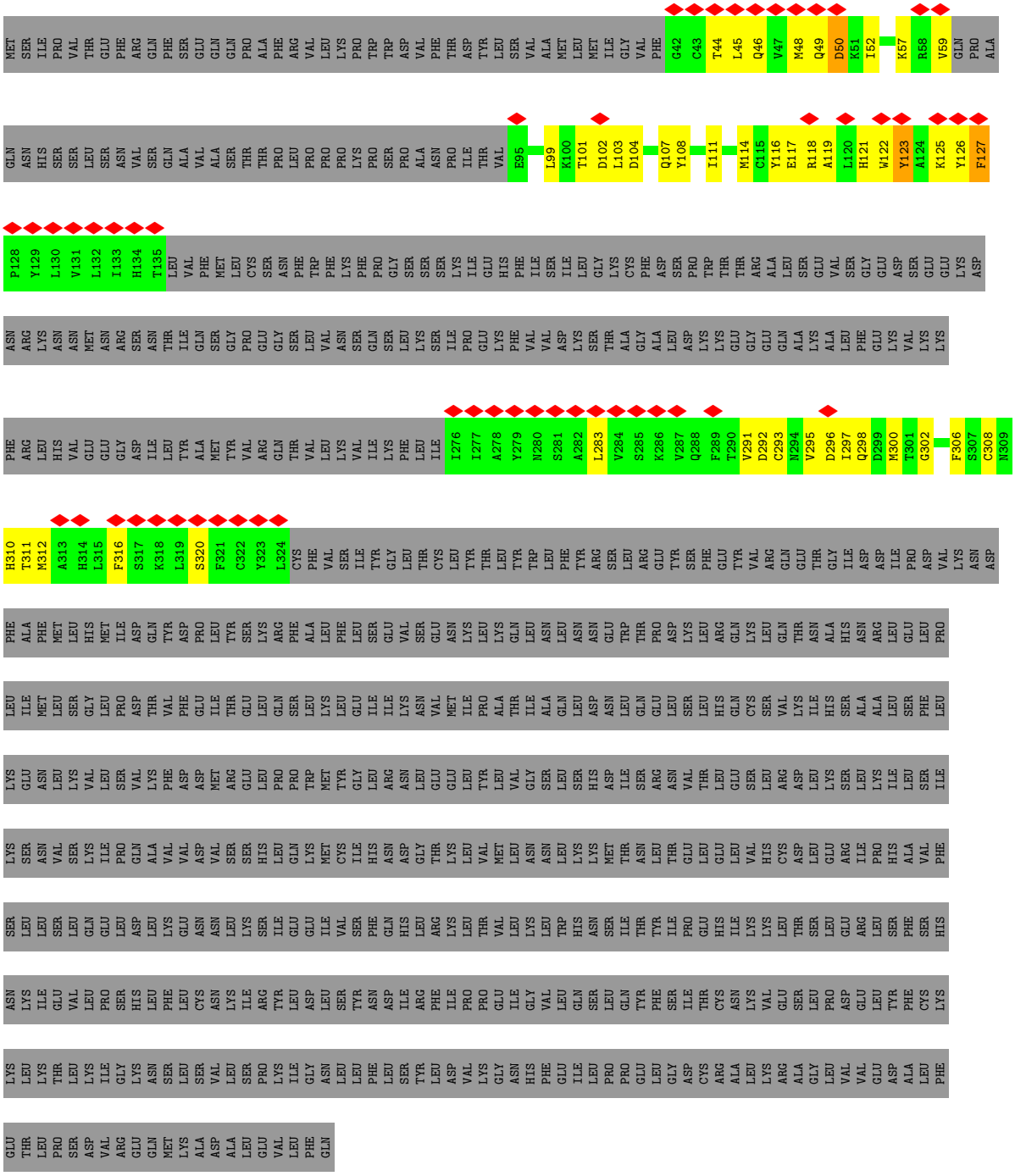
Chain C:





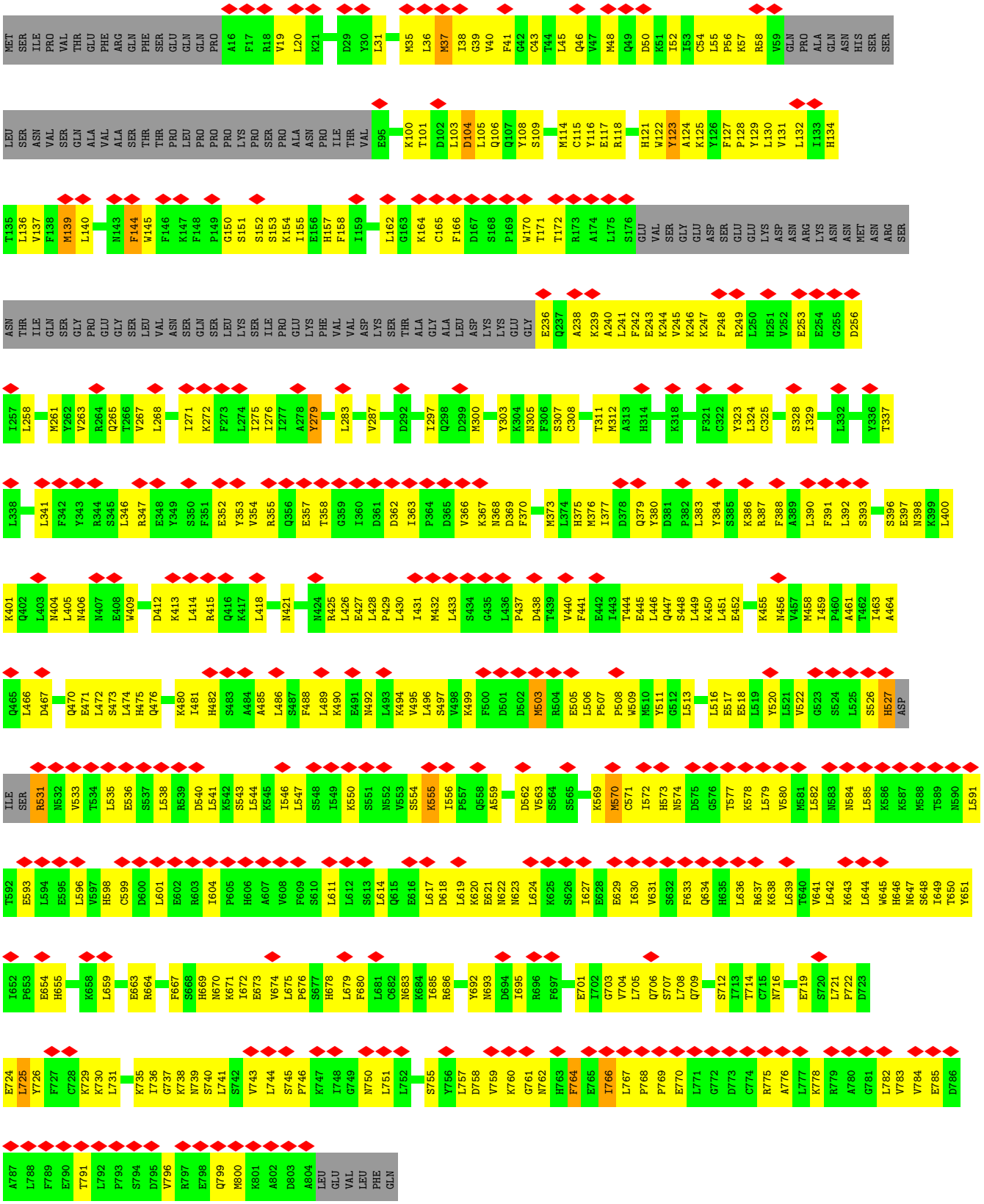
• Molecule 1: Volume-regulated anion channel subunit LRRC8C

Chain D:

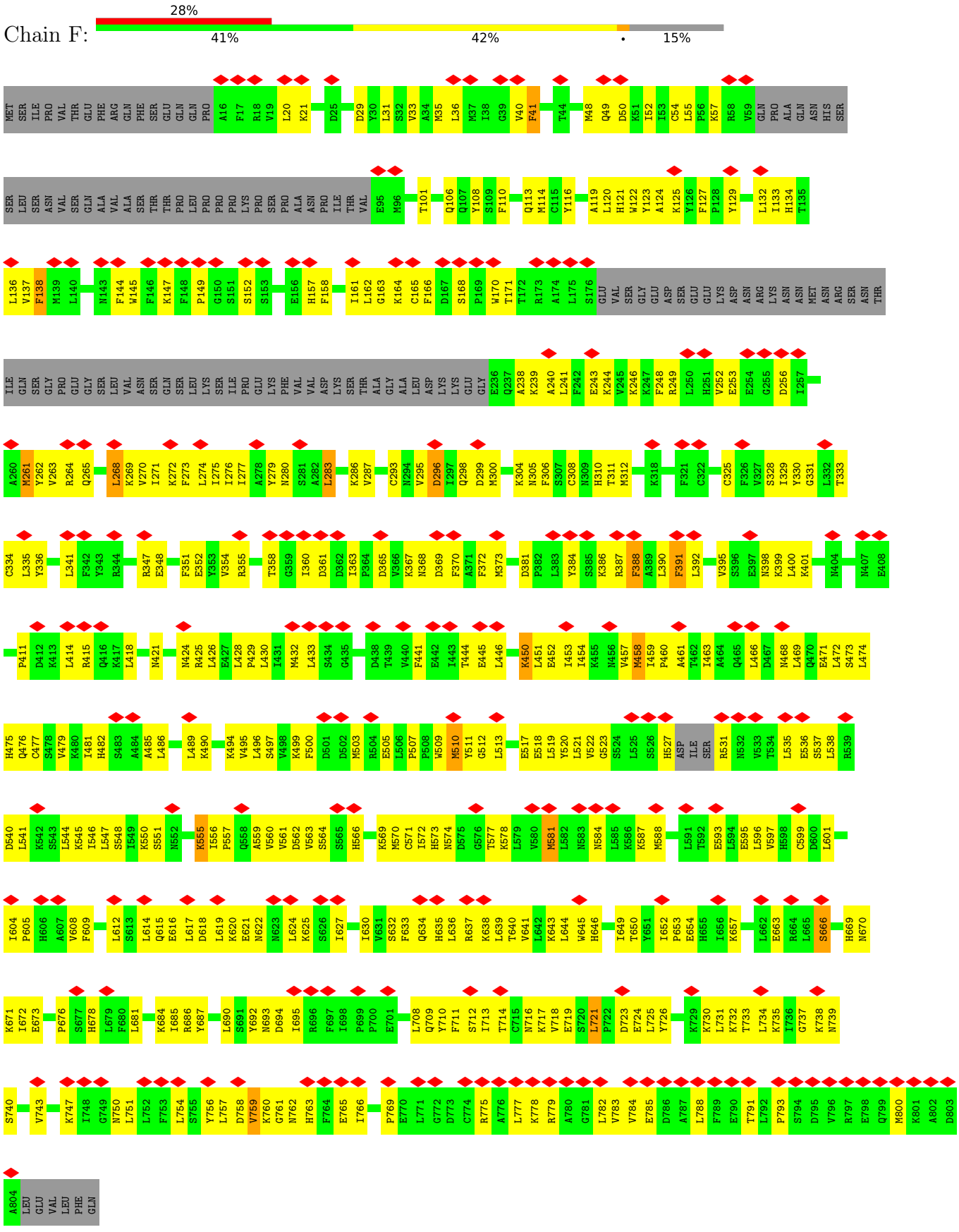


• Molecule 1: Volume-regulated anion channel subunit LRRC8C

Chain E:



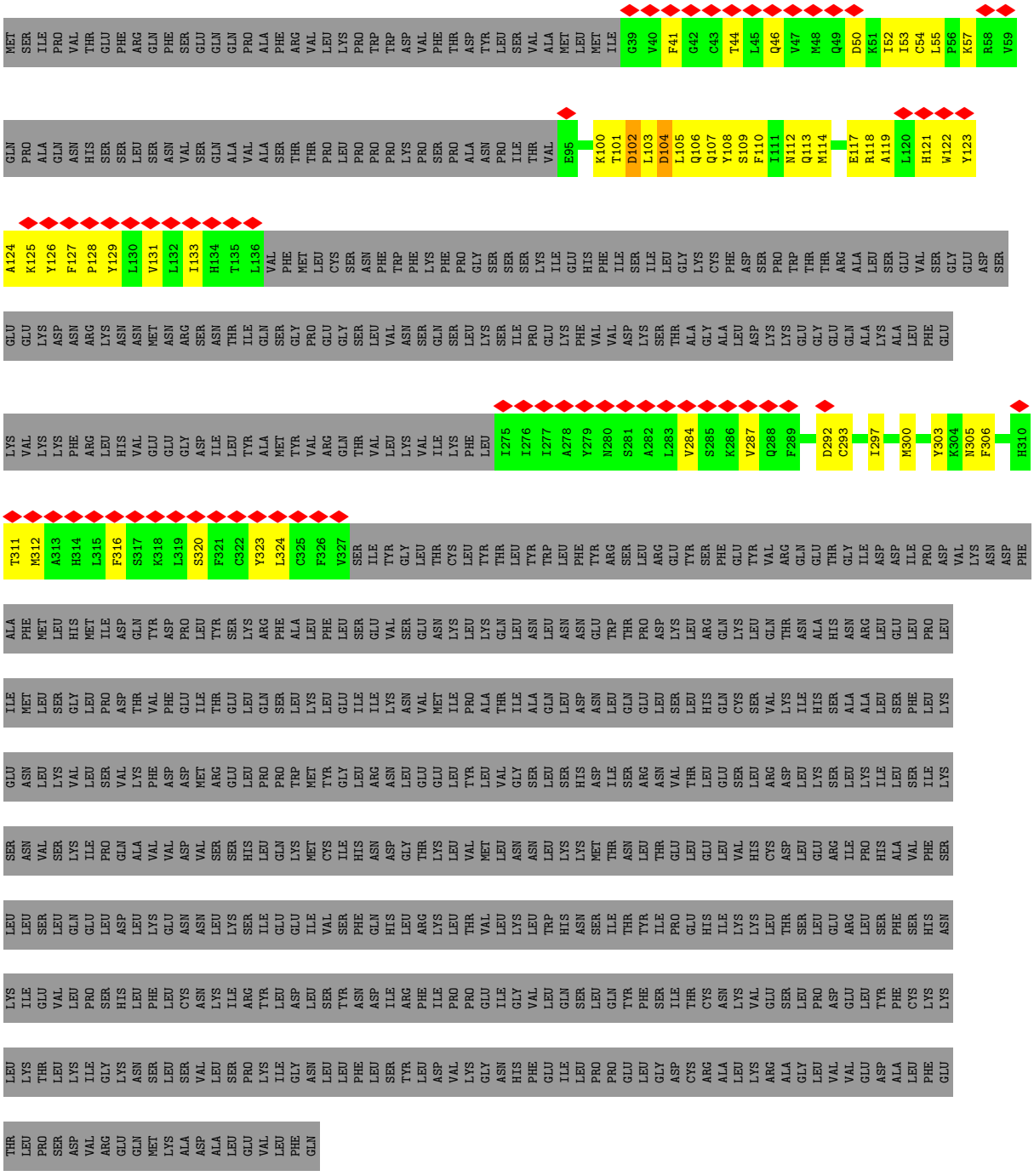
• Molecule 1: Volume-regulated anion channel subunit LRRC8C



• Molecule 1: Volume-regulated anion channel subunit LRRC8C

Chain G:


8%
8%
6%
86%


MET SER ILE PRO VAL THR GLU PHE ARG GLN PHE SER GLU GLN GLN PRO ALA PHE ARG VAL LEU LYS PRO TRP TRP ASP VAL PHE THR ASP TYR LEU SER VAL ALA MET LEU MET ILE G39 V40 F41 G42 C43 T44 L45 Q46 V47 M48 Q49 D50 K51 I52 I53 C54 L55 P56 K57 R58 V59
GLN PRO ALA GLN ASN HIS SER SER LEU SER ASN VAL SER GLN ALA VAL ALA SER THR THR PRO LEU PRO PRO PRO LYS PRO SER PRO ALA ASN PRO ILE THR VAL E96 K100 T101 D102 L103 D104 L105 Q106 Q107 Y108 S109 F110 I111 N112 Q113 M114 E117 R118 A119 L120 H121 W122 Y123
A124 K125 Y126 F127 P128 Y129 L130 V131 L132 I133 H134 T135 L136 VAL PHE MET LEU CYS SER ASN PHE TRP PHE LYS PHE PRO GLY SER SER SER LYS ILE GLU HIS PHE ILE SER ILE LEU GLY LYS CYS PHE ASP SER PRO TRP THR THR ARG ALA LEU SER GLU VAL SER GLY GLU ASP SER
GLU GLU LYS ASP ASN ARG LYS ASN ASN MET ASN ARG SER ASN THR ILE GLN SER GLY PRO GLU GLY SER LEU VAL ASN SER GLN SER LEU LYS SER ILE PRO GLU LYS PHE VAL VAL ASP LYS SER THR ALA GLY ALA LEU ASP LYS LYS GLU GLY GLU GLN ALA LYS ALA LEU PHE GLU
LYS VAL LYS LYS PHE ARG LEU HIS VAL GLU GLU GLY ASP ILE LEU TYR ALA MET TYR VAL ARG GLN THR VAL LEU LYS VAL ILE LYS PHE LEU I275 I276 I277 A278 Y279 N280 S281 A282 L283 V284 S285 K286 V287 Q288 F289 D292 C293 I297 M300 Y303 K304 N305 F306 H310
T311 M312 A313 H314 L315 F316 S317 K318 L319 S320 F321 C322 Y323 L324 C325 F326 V327 SER ILE TYR GLY LEU THR CYS LEU TYR THR LEU TYR TRP LEU PHE TYR ARG SER LEU ARG GLU TYR SER PHE GLU TYR VAL ARG GLN GLU THR GLY ILE ASP ASP ILE PRO ASP VAL LYS ASN ASP PHE
ALA PHE MET LEU HIS MET ILE ASP GLN TYR ASP PRO LEU TYR SER LYS ARG PHE ALA LEU PHE LEU SER GLU VAL SER GLU ASN LYS LYS LEU LYS GLN LEU ASN LEU ASN ASN GLU TRP THR PRO ASP LYS LEU ARG GLN LYS LEU GLN THR ASN ALA HIS ASN ARG LEU GLU LEU PRO LEU
ILE MET LEU SER GLY LEU PRO ASP THR VAL PHE GLU ILE THR GLU LEU GLN SER LEU LYS LEU GLU ILE ILE LYS ASN VAL MET ILE ILE PRO ALA THR ILE ALA GLN LEU ASP ASN LEU GLN GLU LEU SER LEU HIS GLN CYS SER VAL LYS ILE HIS SER ALA ALA LEU SER PHE LEU LYS
GLU ASN LEU LYS VAL LEU SER VAL LYS PHE ASP ASP MET ARG GLU LEU PRO PRO TRP MET TYR GLY LEU ARG ASN LEU GLU GLU LEU TYR LEU VAL GLY SER LEU SER HIS ASP ILE SER ARG ASN VAL THR LEU GLU SER LEU ARG ASP LEU LYS SER LEU LYS ILE LEU SER ILE LYS
SER ASN VAL SER LYS ILE PRO GLN ALA VAL VAL ASP VAL SER SER HIS LEU GLN LYS MET CYS ILE HIS ASN ASP GLY THR LYS LEU VAL MET LEU ASN ASN LEU LYS LYS MET THR ASN LEU THR GLU LEU GLU LEU VAL HIS CYS ASP LEU GLU ARG ILE PRO HIS ALA VAL PHE SER
LEU LEU SER LEU GLN GLU ASP LEU LYS GLU ASN ASN LEU LYS SER ILE GLU GLU ILE VAL SER PHE GLN HIS LEU ARG LYS LEU THR VAL LEU LYS LEU TRP HIS ASN SER ILE THR TYR ILE PRO GLU HIS ILE LYS LYS LEU THR SER LEU GLU ARG LEU SER PHE SER HIS ASN
LYS ILE GLU VAL LEU PRO SER HIS LEU PHE LEU CYS ASN LYS ILE ARG TYR LEU ASP LEU SER TYR ASN ASP ILE ARG PHE ILE PRO PRO GLU ILE GLY VAL LEU GLN SER LEU GLN TYR PHE SER ILE THR CYS ASN LYS VAL GLU SER LEU GLY PRO ASP GLU LEU TYR PHE CYS LYS LYS
LEU LYS THR LEU LYS ILE GLY SER LEU SER VAL LEU SER LEU PRO PHE LEU SER TYR LEU ASP VAL LYS GLY ASN HIS PHE GLU ILE LEU PRO PRO GLU LEU GLY ASP CYS ARG ALA LEU LYS ARG ALA GLY LEU VAL VAL GLU ASP ALA LEU PHE GLU
THR LEU PRO SER ASP VAL ARG GLU GLN MET LYS ALA ASP ALA LEU GLU VAL LEU PHE GLN

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	180735	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	65	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2400	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	2.676	Depositor
Minimum map value	-1.557	Depositor
Average map value	0.002	Depositor
Map value standard deviation	0.065	Depositor
Recommended contour level	0.811	Depositor
Map size (Å)	437.47202, 437.47202, 437.47202	wwPDB
Map dimensions	336, 336, 336	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.302, 1.302, 1.302	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.29	0/1014	0.45	0/1367
1	B	0.31	0/3509	0.49	0/4745
1	C	0.29	0/3839	0.50	0/5187
1	D	0.29	0/904	0.45	0/1218
1	E	0.31	0/5765	0.51	2/7791 (0.0%)
1	F	0.31	0/5765	0.52	2/7791 (0.0%)
1	G	0.31	0/968	0.51	0/1305
All	All	0.30	0/21764	0.50	4/29404 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	B	0	1
1	C	0	1
1	E	0	1
All	All	0	3

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	E	527	HIS	CB-CA-C	-7.49	95.42	110.40
1	F	527	HIS	CB-CA-C	-7.37	95.66	110.40
1	F	721	LEU	CA-CB-CG	5.53	128.02	115.30
1	E	503	MET	CA-CB-CG	5.29	122.29	113.30

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	415	ARG	Sidechain
1	C	531	ARG	Sidechain
1	E	531	ARG	Sidechain

5.2 Too-close contacts (i)

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	992	0	988	42	0
1	B	3424	0	3453	393	0
1	C	3753	0	3803	359	0
1	D	885	0	876	41	0
1	E	5642	0	5768	464	0
1	F	5642	0	5768	479	0
1	G	947	0	942	75	0
All	All	21285	0	21598	1816	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 42.

All (1816) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:145:TRP:CZ3	1:B:262:TYR:CD1	1.80	1.67
1:B:27:PHE:CE2	1:B:333:THR:HG21	1.15	1.61
1:B:145:TRP:CZ3	1:B:262:TYR:CE1	1.89	1.58
1:C:418:LEU:CD2	1:C:428:LEU:HD13	1.32	1.57
1:B:162:LEU:CA	1:B:388:PHE:CE1	1.86	1.56
1:B:27:PHE:CE2	1:B:333:THR:CG2	1.81	1.55
1:F:555:LYS:CB	1:F:581:MET:HE3	1.35	1.53
1:B:27:PHE:HE2	1:B:333:THR:CG2	1.08	1.50
1:B:297:ILE:HA	1:B:300:MET:CE	1.36	1.50
1:E:744:LEU:HB2	1:E:764:PHE:CE2	1.44	1.48
1:F:778:LYS:HA	1:F:800:MET:SD	1.51	1.48
1:C:478:SER:C	1:C:480:LYS:HZ1	1.10	1.46
1:B:145:TRP:CH2	1:B:262:TYR:CG	2.04	1.46
1:F:555:LYS:CB	1:F:581:MET:CE	1.84	1.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:744:LEU:HB2	1:E:764:PHE:CZ	1.51	1.44
1:E:799:GLN:CG	1:E:800:MET:HE1	1.44	1.44
1:B:162:LEU:HA	1:B:388:PHE:CE1	0.90	1.43
1:B:415:ARG:NH2	1:B:416:GLN:HA	1.25	1.43
1:F:132:LEU:O	1:F:136:LEU:CD2	1.66	1.41
1:B:145:TRP:CE3	1:B:262:TYR:CD1	2.10	1.40
1:B:297:ILE:CA	1:B:300:MET:CE	2.01	1.36
1:F:555:LYS:HB2	1:F:581:MET:CE	0.89	1.36
1:F:778:LYS:CA	1:F:800:MET:SD	2.14	1.34
1:B:145:TRP:CZ2	1:B:262:TYR:HB2	1.63	1.34
1:E:130:LEU:HD11	1:E:279:TYR:OH	1.16	1.33
1:B:303:TYR:HA	1:C:96:MET:CE	1.58	1.33
1:B:415:ARG:HH21	1:B:416:GLN:CA	1.41	1.32
1:G:54:CYS:O	1:G:55:LEU:HD23	1.22	1.29
1:C:443:ILE:HG23	1:C:445:GLU:OE2	1.18	1.29
1:B:297:ILE:CA	1:B:300:MET:HE1	1.59	1.25
1:C:489:LEU:HA	1:C:493:LEU:CD1	1.64	1.25
1:B:302:GLY:O	1:C:96:MET:HE2	1.32	1.24
1:B:31:LEU:HB2	1:B:330:TYR:CE1	1.72	1.24
1:F:778:LYS:C	1:F:800:MET:SD	2.17	1.23
1:B:162:LEU:HA	1:B:388:PHE:CZ	1.72	1.23
1:C:478:SER:C	1:C:480:LYS:NZ	1.90	1.23
1:B:297:ILE:C	1:B:300:MET:CE	2.07	1.22
1:F:138:PHE:HE2	1:F:330:TYR:CE1	1.56	1.22
1:B:323:TYR:HA	1:B:326:PHE:CD2	1.75	1.22
1:F:271:ILE:HD12	1:F:272:LYS:N	1.54	1.21
1:C:41:PHE:HE1	1:C:319:LEU:CD1	1.53	1.20
1:E:458:MET:SD	1:E:481:ILE:C	2.19	1.20
1:G:57:LYS:HD3	1:G:305:ASN:OD1	1.39	1.20
1:E:130:LEU:CD1	1:E:279:TYR:OH	1.88	1.19
1:B:145:TRP:CH2	1:B:262:TYR:CD1	2.27	1.19
1:C:376:MET:HE3	1:C:377:ILE:CG1	1.73	1.19
1:F:555:LYS:HB2	1:F:581:MET:HE2	1.25	1.18
1:E:128:PRO:O	1:E:132:LEU:HD22	1.42	1.18
1:G:113:GLN:OE1	1:G:114:MET:CE	1.90	1.18
1:C:478:SER:CA	1:C:480:LYS:HZ1	1.54	1.17
1:E:144:PHE:CD2	1:E:265:GLN:NE2	2.11	1.17
1:F:507:PRO:O	1:F:510:MET:SD	2.02	1.17
1:F:555:LYS:HB2	1:F:581:MET:HE1	1.26	1.17
1:C:346:LEU:CD1	1:C:372:PHE:HB2	1.72	1.16
1:F:48:MET:HG3	1:F:49:GLN:HG2	1.25	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:323:TYR:HA	1:B:326:PHE:CE2	1.80	1.15
1:E:760:LYS:HG3	1:E:783:VAL:HG12	1.25	1.15
1:F:430:LEU:HD12	1:F:451:LEU:CD1	1.74	1.15
1:E:744:LEU:CB	1:E:764:PHE:CZ	2.29	1.15
1:B:409:TRP:CE3	1:B:437:PRO:HG3	1.80	1.15
1:F:564:SER:CB	1:F:588:MET:CE	2.23	1.14
1:F:48:MET:SD	1:F:49:GLN:NE2	2.20	1.14
1:C:23:TRP:CZ2	1:C:336:TYR:CE1	2.34	1.14
1:C:418:LEU:HD23	1:C:428:LEU:CD1	1.79	1.13
1:C:346:LEU:HD13	1:C:372:PHE:HA	1.14	1.13
1:B:302:GLY:O	1:C:96:MET:CE	1.96	1.13
1:C:346:LEU:HD11	1:C:372:PHE:HB2	1.13	1.13
1:C:482:HIS:CE1	1:C:484:ALA:H	1.66	1.13
1:F:564:SER:HB3	1:F:588:MET:CE	1.76	1.13
1:F:114:MET:CE	1:F:295:VAL:HG11	1.78	1.13
1:B:503:MET:HE1	1:B:506:LEU:HD13	1.16	1.12
1:E:128:PRO:O	1:E:132:LEU:CD2	1.95	1.12
1:B:145:TRP:CZ2	1:B:262:TYR:CB	2.32	1.12
1:G:129:TYR:O	1:G:133:ILE:HG13	1.47	1.12
1:C:376:MET:HE3	1:C:377:ILE:HG12	1.24	1.12
1:C:512:GLY:O	1:C:540:ASP:OD2	1.66	1.12
1:F:777:LEU:O	1:F:800:MET:HE1	1.49	1.12
1:E:144:PHE:HD2	1:E:265:GLN:NE2	1.45	1.11
1:B:297:ILE:C	1:B:300:MET:HE1	1.66	1.10
1:B:370:PHE:HA	1:B:373:MET:HE3	1.32	1.10
1:C:418:LEU:CD2	1:C:428:LEU:CD1	2.28	1.10
1:E:743:VAL:C	1:E:764:PHE:CE1	2.23	1.10
1:E:458:MET:SD	1:E:481:ILE:O	2.09	1.09
1:C:41:PHE:HE1	1:C:319:LEU:HD11	1.11	1.09
1:C:418:LEU:CG	1:C:428:LEU:HD13	1.82	1.09
1:C:443:ILE:CG2	1:C:445:GLU:OE2	1.99	1.09
1:F:564:SER:HB3	1:F:588:MET:HE1	1.13	1.09
1:C:525:LEU:HD23	1:C:553:VAL:HG22	1.32	1.08
1:B:298:GLN:O	1:B:300:MET:SD	2.09	1.08
1:E:376:MET:HE3	1:E:377:ILE:HG12	1.30	1.08
1:F:132:LEU:O	1:F:136:LEU:HD22	0.91	1.08
1:C:525:LEU:HD23	1:C:553:VAL:CG2	1.82	1.08
1:B:28:THR:O	1:B:330:TYR:OH	1.69	1.08
1:B:303:TYR:CA	1:C:96:MET:HE3	1.84	1.08
1:F:138:PHE:CE2	1:F:330:TYR:CE1	2.41	1.07
1:F:240:ALA:O	1:F:243:GLU:OE2	1.71	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:126:TYR:HA	1:A:129:TYR:CD2	1.89	1.07
1:C:376:MET:CE	1:C:377:ILE:CD1	2.32	1.07
1:E:744:LEU:CB	1:E:764:PHE:CE2	2.38	1.07
1:C:531:ARG:HD2	1:C:554:SER:HB3	1.28	1.07
1:F:635:HIS:CE1	1:F:636:LEU:HD21	1.91	1.06
1:B:303:TYR:HA	1:C:96:MET:HE3	1.08	1.06
1:E:799:GLN:HG2	1:E:800:MET:CE	1.85	1.06
1:E:725:LEU:HD12	1:E:726:TYR:N	1.70	1.06
1:C:311:THR:OG1	1:C:312:MET:SD	2.12	1.06
1:C:346:LEU:HD13	1:C:372:PHE:CA	1.85	1.05
1:C:258:LEU:HD12	1:C:261:MET:HE3	1.36	1.04
1:E:376:MET:HE3	1:E:377:ILE:CG1	1.88	1.04
1:F:430:LEU:HD12	1:F:451:LEU:HD11	1.07	1.04
1:G:54:CYS:C	1:G:55:LEU:HD23	1.79	1.04
1:E:725:LEU:HD11	1:E:726:TYR:CE2	1.93	1.03
1:B:145:TRP:CH2	1:B:262:TYR:CD2	2.46	1.03
1:B:415:ARG:NH2	1:B:416:GLN:CA	2.08	1.03
1:B:297:ILE:O	1:B:300:MET:HE2	1.59	1.03
1:B:31:LEU:O	1:B:35:MET:HE3	1.57	1.02
1:B:162:LEU:CA	1:B:388:PHE:CZ	2.34	1.02
1:C:41:PHE:CE1	1:C:319:LEU:HD11	1.94	1.02
1:E:376:MET:CE	1:E:377:ILE:CD1	2.37	1.02
1:E:472:LEU:HD12	1:E:473:SER:H	1.20	1.02
1:B:31:LEU:CB	1:B:330:TYR:CE1	2.43	1.02
1:F:472:LEU:HD12	1:F:473:SER:N	1.73	1.02
1:B:145:TRP:CZ2	1:B:262:TYR:CG	2.48	1.02
1:C:258:LEU:HD12	1:C:261:MET:CE	1.89	1.02
1:C:489:LEU:CA	1:C:493:LEU:CD1	2.37	1.02
1:F:271:ILE:HD12	1:F:272:LYS:H	1.14	1.02
1:F:635:HIS:CE1	1:F:636:LEU:CD2	2.41	1.02
1:F:132:LEU:HD23	1:F:136:LEU:HD21	1.38	1.01
1:F:485:ALA:O	1:F:489:LEU:HG	1.59	1.01
1:B:273:PHE:O	1:B:277:ILE:HG12	1.58	1.01
1:C:376:MET:CE	1:C:377:ILE:HD13	1.89	1.01
1:E:796:VAL:O	1:E:800:MET:HE2	1.60	1.01
1:B:503:MET:CE	1:B:506:LEU:HD13	1.91	1.00
1:E:799:GLN:CG	1:E:800:MET:CE	2.38	1.00
1:C:418:LEU:HD23	1:C:428:LEU:HD13	1.01	1.00
1:B:27:PHE:CE2	1:B:333:THR:HG22	1.94	1.00
1:B:297:ILE:HA	1:B:300:MET:HE3	1.36	1.00
1:C:41:PHE:CE1	1:C:319:LEU:CD1	2.44	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:463:ILE:CD1	1:E:489:LEU:HD21	1.93	0.99
1:F:296:ASP:O	1:F:296:ASP:OD2	1.79	0.99
1:B:128:PRO:O	1:B:132:LEU:HD22	1.60	0.99
1:B:474:LEU:HD23	1:B:498:VAL:HG12	1.43	0.99
1:B:297:ILE:CA	1:B:300:MET:HE2	1.91	0.99
1:F:265:GLN:O	1:F:268:LEU:HD12	1.60	0.99
1:F:452:GLU:HG3	1:F:475:HIS:HB2	1.45	0.99
1:F:472:LEU:HD12	1:F:473:SER:H	1.23	0.99
1:C:489:LEU:CA	1:C:493:LEU:HD11	1.91	0.99
1:B:31:LEU:HB2	1:B:330:TYR:HE1	1.08	0.98
1:E:744:LEU:N	1:E:764:PHE:CZ	2.31	0.98
1:F:779:ARG:NH2	1:F:782:LEU:HG	1.78	0.98
1:B:145:TRP:CE2	1:B:262:TYR:HB2	1.98	0.98
1:C:418:LEU:CG	1:C:428:LEU:CD1	2.42	0.98
1:F:452:GLU:CG	1:F:475:HIS:HB2	1.93	0.98
1:C:489:LEU:HA	1:C:493:LEU:HD11	0.98	0.97
1:B:165:CYS:HB3	1:B:388:PHE:CE1	1.99	0.97
1:E:485:ALA:O	1:E:489:LEU:HG	1.63	0.97
1:A:126:TYR:HA	1:A:129:TYR:CE2	1.98	0.97
1:C:33:VAL:HA	1:C:36:LEU:HD23	1.45	0.97
1:E:376:MET:HE1	1:E:377:ILE:CD1	1.93	0.97
1:B:134:HIS:CE1	1:B:276:ILE:CD1	2.47	0.97
1:F:635:HIS:ND1	1:F:636:LEU:CD2	2.28	0.97
1:C:346:LEU:CD1	1:C:372:PHE:CB	2.43	0.97
1:G:113:GLN:OE1	1:G:114:MET:HE1	1.65	0.96
1:B:409:TRP:HE3	1:B:437:PRO:HG3	1.30	0.96
1:E:376:MET:CE	1:E:377:ILE:HD13	1.94	0.96
1:C:418:LEU:HG	1:C:428:LEU:CD1	1.94	0.96
1:B:145:TRP:CE3	1:B:262:TYR:CE1	2.40	0.96
1:E:743:VAL:C	1:E:764:PHE:HE1	1.68	0.96
1:F:779:ARG:N	1:F:800:MET:SD	2.38	0.96
1:B:145:TRP:CE3	1:B:262:TYR:HD1	1.82	0.96
1:B:297:ILE:C	1:B:300:MET:HE2	1.79	0.96
1:F:114:MET:HE2	1:F:295:VAL:HG11	1.48	0.96
1:E:41:PHE:CD1	1:E:45:LEU:HD21	2.01	0.95
1:B:162:LEU:N	1:B:388:PHE:CZ	2.34	0.95
1:E:123:TYR:CE2	1:E:283:LEU:O	2.19	0.95
1:F:123:TYR:CG	1:F:283:LEU:HD13	2.01	0.95
1:B:323:TYR:CA	1:B:326:PHE:CE2	2.49	0.95
1:C:238:ALA:HA	1:C:241:LEU:HG	1.46	0.95
1:C:479:VAL:N	1:C:480:LYS:NZ	2.14	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:41:PHE:CD1	1:E:45:LEU:CD2	2.49	0.95
1:C:376:MET:HE1	1:C:377:ILE:CD1	1.94	0.95
1:E:721:LEU:HB3	1:E:725:LEU:HD21	1.44	0.95
1:C:418:LEU:HG	1:C:428:LEU:HD11	1.49	0.95
1:C:489:LEU:O	1:C:493:LEU:CD1	2.13	0.95
1:C:489:LEU:O	1:C:493:LEU:HD12	1.67	0.94
1:B:31:LEU:CB	1:B:330:TYR:HE1	1.80	0.94
1:B:27:PHE:CD2	1:B:333:THR:HG21	2.00	0.94
1:B:145:TRP:CZ3	1:B:262:TYR:CG	2.44	0.94
1:E:300:MET:HE3	1:F:57:LYS:HA	1.50	0.94
1:E:799:GLN:HG2	1:E:800:MET:HE1	0.96	0.94
1:C:346:LEU:HD12	1:C:346:LEU:O	1.68	0.94
1:B:43:CYS:SG	1:B:132:LEU:HD21	2.06	0.93
1:E:744:LEU:HB2	1:E:764:PHE:HE2	1.26	0.93
1:C:145:TRP:HD1	1:C:261:MET:SD	1.90	0.93
1:F:672:ILE:HG23	1:F:695:ILE:HD11	1.49	0.93
1:C:514:ARG:HA	1:C:541:LEU:HA	1.50	0.93
1:F:564:SER:CB	1:F:588:MET:HE1	1.92	0.93
1:C:376:MET:CE	1:C:377:ILE:HG12	1.98	0.93
1:C:479:VAL:C	1:C:480:LYS:HD3	1.89	0.93
1:F:114:MET:CE	1:F:295:VAL:CG1	2.47	0.93
1:B:261:MET:HE1	1:B:264:ARG:HD2	1.47	0.93
1:F:452:GLU:OE2	1:F:475:HIS:ND1	2.02	0.93
1:B:145:TRP:CZ3	1:B:262:TYR:CZ	2.57	0.93
1:C:445:GLU:OE1	1:C:445:GLU:N	2.02	0.93
1:C:478:SER:CA	1:C:480:LYS:NZ	2.28	0.93
1:E:744:LEU:CA	1:E:764:PHE:HZ	1.82	0.92
1:C:482:HIS:ND1	1:C:484:ALA:N	2.17	0.92
1:E:151:SER:O	1:E:155:ILE:HG12	1.69	0.92
1:B:409:TRP:CH2	1:B:433:LEU:HD22	2.04	0.92
1:B:126:TYR:O	1:B:130:LEU:HG	1.67	0.92
1:B:162:LEU:HA	1:B:388:PHE:CD1	2.01	0.92
1:B:322:CYS:HB2	1:B:326:PHE:CZ	2.06	0.91
1:B:35:MET:HE3	1:B:35:MET:N	1.85	0.91
1:E:744:LEU:CA	1:E:764:PHE:CZ	2.53	0.91
1:F:564:SER:CB	1:F:588:MET:HE2	1.98	0.91
1:E:129:TYR:HA	1:E:132:LEU:HD23	1.52	0.91
1:C:23:TRP:HZ2	1:C:336:TYR:CE1	1.77	0.91
1:E:130:LEU:HD11	1:E:279:TYR:CZ	2.05	0.91
1:F:430:LEU:CD1	1:F:451:LEU:HD11	2.00	0.91
1:E:472:LEU:HD12	1:E:473:SER:N	1.84	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:725:LEU:HD11	1:E:726:TYR:CD2	2.06	0.91
1:B:165:CYS:HB3	1:B:388:PHE:CD1	2.06	0.91
1:G:54:CYS:O	1:G:55:LEU:CD2	2.16	0.90
1:B:370:PHE:CA	1:B:373:MET:HE3	2.01	0.90
1:E:130:LEU:HD11	1:E:279:TYR:HH	1.34	0.90
1:A:311:THR:OG1	1:A:312:MET:SD	2.30	0.89
1:E:104:ASP:OD1	1:E:106:GLN:N	2.04	0.89
1:F:29:ASP:O	1:F:33:VAL:HG23	1.73	0.89
1:B:162:LEU:HD12	1:B:388:PHE:CZ	2.07	0.89
1:E:131:VAL:HG22	1:E:323:TYR:CE2	2.07	0.88
1:F:133:ILE:HA	1:F:136:LEU:HD23	1.55	0.88
1:B:409:TRP:CH2	1:B:433:LEU:CD2	2.57	0.88
1:C:145:TRP:CD1	1:C:261:MET:SD	2.66	0.88
1:B:162:LEU:HD12	1:B:388:PHE:CE2	2.09	0.88
1:D:48:MET:HG3	1:D:49:GLN:HG2	1.54	0.88
1:F:132:LEU:C	1:F:136:LEU:CD2	2.42	0.88
1:F:474:LEU:HD12	1:F:477:CYS:HB2	1.55	0.88
1:F:635:HIS:ND1	1:F:636:LEU:HD23	1.87	0.88
1:E:744:LEU:HB2	1:E:764:PHE:HZ	1.40	0.87
1:B:498:VAL:CG2	1:B:519:LEU:HD11	2.05	0.87
1:E:123:TYR:HE1	1:E:127:PHE:HD2	1.21	0.87
1:F:507:PRO:HG2	1:F:510:MET:HG3	1.55	0.87
1:C:376:MET:CE	1:C:377:ILE:CG1	2.50	0.87
1:G:117:GLU:OE1	1:G:118:ARG:HG2	1.74	0.87
1:B:503:MET:HE1	1:B:506:LEU:CD1	2.03	0.87
1:C:346:LEU:HD11	1:C:372:PHE:CB	2.02	0.87
1:B:134:HIS:CE1	1:B:276:ILE:HD11	2.10	0.86
1:E:123:TYR:CE1	1:E:127:PHE:HD2	1.92	0.86
1:F:555:LYS:CA	1:F:581:MET:HE3	2.04	0.86
1:F:132:LEU:HD23	1:F:136:LEU:CD2	2.04	0.86
1:B:415:ARG:HH22	1:B:416:GLN:HA	1.40	0.86
1:F:778:LYS:HA	1:F:800:MET:CE	2.05	0.86
1:B:162:LEU:CD1	1:B:388:PHE:CE2	2.59	0.86
1:B:297:ILE:HA	1:B:300:MET:HE1	1.26	0.86
1:C:346:LEU:CD1	1:C:372:PHE:HA	2.04	0.85
1:E:743:VAL:CA	1:E:764:PHE:CE1	2.59	0.85
1:F:555:LYS:CB	1:F:581:MET:HE1	1.90	0.85
1:B:473:SER:HA	1:B:497:SER:HB2	1.57	0.85
1:C:452:GLU:HA	1:C:475:HIS:HB2	1.56	0.85
1:B:162:LEU:HG	1:B:388:PHE:CG	2.12	0.85
1:F:120:LEU:HD21	1:F:310:HIS:CD2	2.12	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:132:LEU:CD2	1:F:136:LEU:HD21	2.06	0.85
1:B:409:TRP:CZ2	1:B:433:LEU:CD2	2.60	0.84
1:E:300:MET:CE	1:F:57:LYS:HA	2.07	0.84
1:E:760:LYS:HE3	1:E:785:GLU:N	1.92	0.84
1:C:363:ILE:HA	1:C:392:LEU:CD2	2.07	0.84
1:E:757:LEU:O	1:E:757:LEU:HD23	1.77	0.84
1:E:799:GLN:CD	1:E:800:MET:HE1	1.97	0.84
1:C:328:SER:O	1:C:332:LEU:CD2	2.24	0.84
1:E:41:PHE:CE1	1:E:45:LEU:HD21	2.13	0.84
1:B:498:VAL:HG22	1:B:519:LEU:HD11	1.58	0.84
1:F:52:ILE:HG21	1:F:116:TYR:HB2	1.60	0.84
1:C:376:MET:HE3	1:C:377:ILE:CD1	2.02	0.84
1:F:138:PHE:CE2	1:F:330:TYR:CZ	2.66	0.84
1:C:418:LEU:HD21	1:C:428:LEU:HD13	1.56	0.84
1:F:782:LEU:CD1	1:F:784:VAL:HG13	2.08	0.84
1:B:145:TRP:HZ3	1:B:262:TYR:CE1	1.59	0.83
1:E:449:LEU:HD12	1:E:450:LYS:N	1.93	0.83
1:B:162:LEU:CA	1:B:388:PHE:HE1	1.54	0.83
1:F:261:MET:SD	1:F:262:TYR:N	2.51	0.83
1:F:473:SER:O	1:F:474:LEU:HD22	1.78	0.83
1:B:31:LEU:O	1:B:35:MET:CE	2.25	0.83
1:E:37:MET:HE3	1:E:38:ILE:N	1.94	0.83
1:F:265:GLN:O	1:F:268:LEU:CD1	2.26	0.83
1:C:346:LEU:CD1	1:C:372:PHE:CA	2.56	0.83
1:F:564:SER:HB2	1:F:588:MET:CE	2.06	0.82
1:B:503:MET:HE3	1:B:506:LEU:HB3	1.61	0.82
1:F:372:PHE:HB3	1:F:373:MET:CE	2.08	0.82
1:B:162:LEU:HG	1:B:388:PHE:CD1	2.14	0.82
1:F:114:MET:HE1	1:F:295:VAL:CG1	2.08	0.82
1:B:145:TRP:HZ3	1:B:262:TYR:CZ	1.93	0.82
1:B:323:TYR:CA	1:B:326:PHE:CD2	2.61	0.82
1:F:271:ILE:CD1	1:F:272:LYS:N	2.40	0.82
1:F:372:PHE:CG	1:F:373:MET:HE1	2.15	0.82
1:B:322:CYS:C	1:B:326:PHE:CE2	2.53	0.81
1:E:41:PHE:HD1	1:E:45:LEU:CD2	1.92	0.81
1:E:757:LEU:HD21	1:E:759:VAL:HG22	1.60	0.81
1:F:624:LEU:HD12	1:F:627:ILE:HG22	1.60	0.81
1:F:635:HIS:CE1	1:F:636:LEU:HD23	2.15	0.81
1:B:28:THR:C	1:B:330:TYR:OH	2.19	0.81
1:E:463:ILE:CD1	1:E:489:LEU:CD2	2.59	0.81
1:F:138:PHE:HE2	1:F:330:TYR:CD1	1.99	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:372:PHE:HB3	1:F:373:MET:HE2	1.62	0.81
1:B:33:VAL:O	1:B:37:MET:SD	2.39	0.81
1:B:161:ILE:C	1:B:388:PHE:HZ	1.84	0.81
1:B:323:TYR:N	1:B:326:PHE:CE2	2.48	0.81
1:B:322:CYS:HB2	1:B:326:PHE:HZ	1.45	0.81
1:E:41:PHE:O	1:E:45:LEU:CD2	2.28	0.81
1:B:134:HIS:CE1	1:B:276:ILE:HD12	2.14	0.81
1:B:171:THR:HA	1:B:390:LEU:HD23	1.61	0.81
1:E:376:MET:HE1	1:E:377:ILE:HD11	1.61	0.81
1:F:123:TYR:CB	1:F:283:LEU:HD13	2.10	0.81
1:G:117:GLU:OE1	1:G:118:ARG:N	2.13	0.81
1:E:130:LEU:HD21	1:E:279:TYR:OH	1.80	0.80
1:E:136:LEU:O	1:E:139:MET:HE3	1.80	0.80
1:E:475:HIS:HA	1:E:499:LYS:HB2	1.62	0.80
1:C:376:MET:C	1:C:376:MET:SD	2.60	0.80
1:C:447:GLN:HA	1:C:469:LEU:HA	1.62	0.80
1:E:41:PHE:O	1:E:45:LEU:HD22	1.81	0.80
1:E:570:MET:SD	1:E:571:CYS:N	2.55	0.80
1:B:453:ILE:O	1:B:453:ILE:HG22	1.80	0.80
1:B:460:PRO:HB2	1:B:462:THR:HG23	1.62	0.80
1:F:123:TYR:HB2	1:F:283:LEU:HD13	1.62	0.80
1:B:303:TYR:CA	1:C:96:MET:CE	2.50	0.80
1:C:475:HIS:HA	1:C:499:LYS:HB2	1.61	0.80
1:E:760:LYS:NZ	1:E:785:GLU:HA	1.96	0.80
1:F:486:LEU:HA	1:F:489:LEU:HD12	1.64	0.80
1:F:612:LEU:HG	1:F:635:HIS:CE1	2.17	0.80
1:F:481:ILE:HD12	1:F:486:LEU:HB2	1.64	0.79
1:E:376:MET:HE3	1:E:377:ILE:CD1	2.10	0.79
1:B:322:CYS:C	1:B:326:PHE:CZ	2.55	0.79
1:E:799:GLN:CB	1:E:800:MET:HE1	2.11	0.79
1:C:328:SER:O	1:C:332:LEU:HD22	1.82	0.79
1:C:445:GLU:H	1:C:445:GLU:CD	1.85	0.79
1:F:123:TYR:HB2	1:F:283:LEU:CD1	2.13	0.79
1:E:707:SER:HA	1:E:730:LYS:HD2	1.65	0.79
1:E:725:LEU:CD1	1:E:726:TYR:CD2	2.66	0.79
1:F:777:LEU:O	1:F:800:MET:CE	2.31	0.79
1:B:35:MET:N	1:B:35:MET:CE	2.46	0.78
1:C:363:ILE:HG12	1:C:392:LEU:HD22	1.64	0.78
1:F:239:LYS:O	1:F:243:GLU:OE1	2.01	0.78
1:C:41:PHE:HE1	1:C:319:LEU:HD12	1.48	0.78
1:B:43:CYS:SG	1:B:132:LEU:CD2	2.72	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:564:SER:HB2	1:F:588:MET:HE2	1.64	0.78
1:B:31:LEU:CB	1:B:330:TYR:CD1	2.66	0.78
1:F:458:MET:O	1:F:458:MET:HE3	1.84	0.78
1:B:32:SER:HA	1:B:35:MET:HG2	1.63	0.78
1:F:48:MET:CG	1:F:49:GLN:HG2	2.10	0.78
1:C:23:TRP:CZ2	1:C:336:TYR:HE1	1.95	0.77
1:E:743:VAL:C	1:E:764:PHE:CZ	2.56	0.77
1:F:652:ILE:HG13	1:F:672:ILE:HG12	1.66	0.77
1:C:458:MET:HA	1:C:458:MET:HE3	1.64	0.77
1:E:52:ILE:HD11	1:E:308:CYS:HB3	1.65	0.77
1:E:144:PHE:HD2	1:E:265:GLN:HE21	0.84	0.77
1:E:651:TYR:HA	1:E:672:ILE:HD12	1.65	0.77
1:C:238:ALA:HA	1:C:241:LEU:CG	2.14	0.77
1:B:165:CYS:CB	1:B:388:PHE:CE1	2.67	0.77
1:E:758:ASP:HA	1:E:783:VAL:HB	1.66	0.77
1:E:796:VAL:O	1:E:800:MET:CE	2.33	0.77
1:E:376:MET:CE	1:E:377:ILE:HG12	2.14	0.77
1:E:376:MET:SD	1:E:376:MET:C	2.63	0.77
1:F:557:PRO:HG2	1:F:560:VAL:HG13	1.67	0.77
1:D:52:ILE:HG21	1:D:116:TYR:HB2	1.64	0.77
1:E:725:LEU:HD11	1:E:726:TYR:CZ	2.18	0.77
1:F:452:GLU:OE2	1:F:475:HIS:CE1	2.38	0.77
1:F:779:ARG:HH22	1:F:782:LEU:HG	1.49	0.77
1:B:35:MET:HE3	1:B:35:MET:H	1.48	0.77
1:F:778:LYS:CA	1:F:800:MET:CE	2.62	0.77
1:B:161:ILE:C	1:B:388:PHE:CZ	2.59	0.76
1:B:162:LEU:HG	1:B:388:PHE:CD2	2.19	0.76
1:C:474:LEU:HD12	1:C:498:VAL:HG22	1.67	0.76
1:E:130:LEU:CD2	1:E:279:TYR:OH	2.33	0.76
1:D:50:ASP:O	1:D:50:ASP:OD2	2.03	0.76
1:E:171:THR:HG22	1:E:390:LEU:HD22	1.68	0.76
1:E:311:THR:OG1	1:E:312:MET:SD	2.44	0.76
1:F:36:LEU:O	1:F:40:VAL:HG12	1.85	0.76
1:B:171:THR:HA	1:B:390:LEU:CD2	2.14	0.76
1:F:114:MET:HE2	1:F:295:VAL:CG1	2.12	0.76
1:C:376:MET:HE1	1:C:377:ILE:HD11	1.65	0.76
1:C:468:ASN:O	1:C:468:ASN:OD1	2.02	0.76
1:F:458:MET:HE3	1:F:459:ILE:C	2.05	0.76
1:F:138:PHE:HE2	1:F:330:TYR:CZ	2.02	0.76
1:B:31:LEU:O	1:B:35:MET:HG2	1.84	0.76
1:F:672:ILE:CG2	1:F:695:ILE:HD11	2.16	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:297:ILE:HD12	1:B:300:MET:HE3	1.66	0.76
1:E:538:LEU:H	1:E:559:ALA:HB1	1.50	0.76
1:F:510:MET:SD	1:F:511:TYR:CD1	2.79	0.76
1:C:23:TRP:HZ2	1:C:336:TYR:CZ	2.03	0.76
1:F:452:GLU:HG2	1:F:475:HIS:HB2	1.68	0.76
1:B:145:TRP:CD2	1:B:262:TYR:CD1	2.73	0.76
1:B:119:ALA:HB2	1:B:293:CYS:HB3	1.68	0.75
1:F:253:GLU:HG2	1:F:367:LYS:HB2	1.67	0.75
1:F:510:MET:CE	1:F:511:TYR:CE1	2.69	0.75
1:C:560:VAL:HA	1:C:563:VAL:HB	1.68	0.75
1:E:122:TRP:HA	1:E:125:LYS:HE2	1.67	0.75
1:F:672:ILE:HG23	1:F:695:ILE:CD1	2.15	0.75
1:E:572:ILE:HG23	1:E:596:LEU:HD23	1.67	0.75
1:B:31:LEU:CD1	1:B:330:TYR:CD1	2.70	0.75
1:E:170:TRP:CZ3	1:E:390:LEU:HD21	2.22	0.75
1:B:27:PHE:CZ	1:B:31:LEU:HD11	2.22	0.75
1:C:479:VAL:N	1:C:480:LYS:HZ3	1.83	0.75
1:E:572:ILE:HG23	1:E:596:LEU:CD2	2.17	0.75
1:E:743:VAL:CA	1:E:764:PHE:HE1	1.98	0.75
1:F:510:MET:HE3	1:F:511:TYR:CE1	2.22	0.75
1:B:411:PRO:HD3	1:B:439:THR:HG21	1.68	0.75
1:B:31:LEU:HB3	1:B:330:TYR:CD1	2.23	0.74
1:E:123:TYR:HE2	1:E:283:LEU:O	1.64	0.74
1:E:526:SER:CB	1:E:531:ARG:HE	2.00	0.74
1:E:721:LEU:HB3	1:E:725:LEU:CD2	2.18	0.74
1:C:478:SER:HB3	1:C:480:LYS:NZ	2.02	0.74
1:E:437:PRO:HB2	1:E:440:VAL:HG23	1.68	0.74
1:B:475:HIS:HA	1:B:499:LYS:HB3	1.67	0.74
1:C:383:LEU:HD12	1:C:383:LEU:O	1.87	0.74
1:C:418:LEU:HA	1:C:428:LEU:HD12	1.69	0.74
1:C:531:ARG:HH11	1:C:554:SER:CB	2.00	0.74
1:E:41:PHE:CD1	1:E:45:LEU:HD23	2.21	0.74
1:F:769:PRO:HG3	1:F:793:PRO:HG2	1.70	0.74
1:F:555:LYS:CD	1:F:581:MET:HE1	2.18	0.74
1:B:46:GLN:HA	1:B:312:MET:HE1	1.70	0.73
1:C:525:LEU:HD23	1:C:553:VAL:HG21	1.70	0.73
1:F:520:TYR:HA	1:F:548:SER:HB3	1.70	0.73
1:C:363:ILE:HA	1:C:392:LEU:HD21	1.69	0.73
1:C:489:LEU:C	1:C:493:LEU:CD1	2.57	0.73
1:E:463:ILE:HD13	1:E:489:LEU:HD21	1.69	0.73
1:C:390:LEU:HD23	1:C:391:PHE:H	1.54	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:43:CYS:SG	1:E:132:LEU:HD21	2.28	0.73
1:F:421:ASN:OD1	1:F:425:ARG:N	2.22	0.73
1:B:162:LEU:CB	1:B:388:PHE:CE1	2.72	0.73
1:B:261:MET:CE	1:B:264:ARG:HD2	2.19	0.73
1:B:449:LEU:HB3	1:B:472:LEU:CD1	2.18	0.73
1:B:300:MET:SD	1:B:300:MET:N	2.61	0.73
1:E:153:SER:OG	1:E:154:LYS:NZ	2.22	0.73
1:E:458:MET:SD	1:E:481:ILE:CA	2.77	0.73
1:E:686:ARG:HA	1:E:708:LEU:HA	1.70	0.73
1:G:52:ILE:C	1:G:53:ILE:HD13	2.09	0.73
1:E:490:LYS:HG2	1:E:513:LEU:HD23	1.70	0.73
1:F:240:ALA:C	1:F:243:GLU:OE2	2.26	0.73
1:C:489:LEU:O	1:C:493:LEU:HD13	1.87	0.72
1:C:531:ARG:CD	1:C:554:SER:HB3	2.14	0.72
1:F:268:LEU:HD12	1:F:269:LYS:H	1.54	0.72
1:E:104:ASP:OD1	1:E:104:ASP:C	2.28	0.72
1:C:33:VAL:HA	1:C:36:LEU:CD2	2.19	0.72
1:F:782:LEU:HD11	1:F:784:VAL:HG13	1.71	0.72
1:B:415:ARG:HH21	1:B:416:GLN:N	1.86	0.72
1:F:766:ILE:HG13	1:F:791:THR:HG21	1.70	0.72
1:C:262:TYR:HE2	1:C:341:LEU:HD11	1.53	0.72
1:C:418:LEU:HA	1:C:428:LEU:CD1	2.20	0.72
1:E:242:PHE:HE2	1:E:400:LEU:HD23	1.55	0.72
1:E:799:GLN:CB	1:E:800:MET:CE	2.68	0.72
1:F:119:ALA:HB2	1:F:293:CYS:HB3	1.70	0.72
1:F:243:GLU:CD	1:F:243:GLU:H	1.92	0.72
1:F:472:LEU:O	1:F:496:LEU:HD12	1.89	0.72
1:C:262:TYR:CE2	1:C:341:LEU:HD11	2.25	0.72
1:B:409:TRP:CZ2	1:B:433:LEU:HD23	2.23	0.72
1:B:441:PHE:CG	1:B:462:THR:OG1	2.42	0.71
1:E:800:MET:HE2	1:E:800:MET:N	2.05	0.71
1:G:57:LYS:CD	1:G:305:ASN:OD1	2.30	0.71
1:F:510:MET:CE	1:F:511:TYR:CD1	2.72	0.71
1:F:429:PRO:HA	1:F:450:LYS:HE3	1.72	0.71
1:B:173:ARG:HH11	1:B:403:LEU:HD21	1.55	0.71
1:B:303:TYR:HA	1:C:96:MET:HE1	1.67	0.71
1:C:436:LEU:HB2	1:C:457:VAL:HG13	1.73	0.71
1:C:480:LYS:HD3	1:C:480:LYS:N	2.04	0.71
1:F:785:GLU:HB2	1:F:788:LEU:HD13	1.72	0.71
1:G:113:GLN:OE1	1:G:114:MET:HE2	1.91	0.71
1:G:312:MET:HB3	1:G:316:PHE:HE1	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:363:ILE:HG23	1:E:392:LEU:HD23	1.73	0.71
1:F:428:LEU:HD12	1:F:429:PRO:N	2.06	0.71
1:F:775:ARG:NH1	1:F:775:ARG:O	2.21	0.71
1:A:40:VAL:O	1:A:44:THR:OG1	2.09	0.70
1:B:162:LEU:N	1:B:388:PHE:HZ	1.82	0.70
1:C:165:CYS:O	1:C:387:ARG:NH1	2.24	0.70
1:C:496:LEU:CB	1:C:516:LEU:HD21	2.21	0.70
1:E:651:TYR:HA	1:E:672:ILE:CD1	2.21	0.70
1:F:441:PHE:HA	1:F:466:LEU:HD21	1.72	0.70
1:F:555:LYS:CA	1:F:581:MET:CE	2.64	0.70
1:E:725:LEU:CD1	1:E:726:TYR:CG	2.74	0.70
1:B:297:ILE:O	1:B:300:MET:CE	2.27	0.70
1:B:449:LEU:HD12	1:B:450:LYS:N	2.06	0.70
1:C:519:LEU:HD22	1:C:547:LEU:HD12	1.71	0.70
1:G:41:PHE:O	1:G:44:THR:CG2	2.39	0.70
1:B:28:THR:O	1:B:330:TYR:CZ	2.44	0.70
1:B:297:ILE:HD12	1:B:300:MET:CE	2.21	0.70
1:B:415:ARG:HH21	1:B:416:GLN:HA	0.79	0.70
1:C:129:TYR:O	1:C:133:ILE:HG23	1.91	0.70
1:E:572:ILE:CG2	1:E:596:LEU:CD2	2.70	0.70
1:G:119:ALA:HB2	1:G:293:CYS:HB3	1.74	0.70
1:B:323:TYR:HD2	1:B:324:LEU:HD22	1.56	0.70
1:C:478:SER:CB	1:C:480:LYS:NZ	2.54	0.70
1:C:482:HIS:CE1	1:C:484:ALA:N	2.52	0.70
1:B:415:ARG:HA	1:B:418:LEU:HD12	1.73	0.69
1:E:144:PHE:CZ	1:E:261:MET:CE	2.75	0.69
1:C:285:SER:O	1:C:288:GLN:NE2	2.25	0.69
1:C:376:MET:SD	1:C:377:ILE:HD13	2.31	0.69
1:F:458:MET:CE	1:F:458:MET:C	2.61	0.69
1:G:117:GLU:OE1	1:G:118:ARG:CG	2.38	0.69
1:B:376:MET:CE	1:B:377:ILE:HD13	2.23	0.69
1:C:119:ALA:HB2	1:C:293:CYS:HB3	1.75	0.69
1:F:268:LEU:O	1:F:271:ILE:CD1	2.41	0.69
1:F:555:LYS:HB2	1:F:581:MET:HE3	0.70	0.69
1:B:43:CYS:SG	1:B:129:TYR:HD1	2.16	0.69
1:B:449:LEU:HG	1:B:451:LEU:HD11	1.73	0.69
1:E:650:THR:O	1:E:672:ILE:HA	1.91	0.69
1:F:121:HIS:CE1	1:F:283:LEU:HD21	2.27	0.69
1:F:574:ASN:ND2	1:F:577:THR:O	2.25	0.69
1:G:104:ASP:C	1:G:104:ASP:OD2	2.29	0.69
1:E:37:MET:HE1	1:E:38:ILE:HA	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:369:ASP:O	1:E:373:MET:HG2	1.92	0.69
1:C:52:ILE:HG21	1:C:116:TYR:HB2	1.73	0.69
1:F:271:ILE:O	1:F:275:ILE:HG22	1.93	0.69
1:B:43:CYS:SG	1:B:129:TYR:CD1	2.84	0.69
1:E:618:ASP:HA	1:E:643:LYS:HB2	1.73	0.69
1:C:406:ASN:HD21	1:C:438:ASP:H	1.39	0.69
1:C:478:SER:CB	1:C:480:LYS:HZ1	2.05	0.69
1:D:119:ALA:HB2	1:D:293:CYS:HB3	1.74	0.69
1:B:162:LEU:HG	1:B:388:PHE:CE1	2.27	0.68
1:C:363:ILE:HA	1:C:392:LEU:HD22	1.73	0.68
1:C:445:GLU:HA	1:C:468:ASN:ND2	2.07	0.68
1:C:539:ARG:O	1:C:539:ARG:NH1	2.21	0.68
1:E:41:PHE:CE1	1:E:45:LEU:CD2	2.74	0.68
1:F:684:LYS:O	1:F:686:ARG:NH1	2.25	0.68
1:F:268:LEU:HD12	1:F:269:LYS:N	2.09	0.68
1:C:457:VAL:HB	1:C:479:VAL:HG22	1.74	0.68
1:F:458:MET:SD	1:F:459:ILE:O	2.51	0.68
1:F:747:LYS:O	1:F:750:ASN:HB2	1.94	0.68
1:E:36:LEU:O	1:E:40:VAL:HG12	1.94	0.68
1:E:155:ILE:HD11	1:E:258:LEU:HD11	1.75	0.68
1:B:323:TYR:HA	1:B:326:PHE:HD2	1.52	0.68
1:E:574:ASN:ND2	1:E:577:THR:O	2.26	0.68
1:E:641:VAL:HG13	1:E:664:ARG:HB2	1.74	0.68
1:E:800:MET:HE2	1:E:800:MET:H	1.59	0.68
1:E:114:MET:HG2	1:E:297:ILE:HD11	1.75	0.68
1:E:760:LYS:HZ1	1:E:785:GLU:HA	1.57	0.68
1:G:113:GLN:OE1	1:G:114:MET:HE3	1.92	0.68
1:C:253:GLU:HG2	1:C:367:LYS:HB2	1.75	0.68
1:E:570:MET:HA	1:E:570:MET:HE2	1.76	0.68
1:F:635:HIS:HE1	1:F:636:LEU:HD21	1.53	0.68
1:C:156:GLU:HA	1:C:159:ILE:HD11	1.76	0.67
1:C:523:GLY:O	1:C:551:SER:OG	2.11	0.67
1:G:46:GLN:NE2	1:G:125:LYS:O	2.27	0.67
1:C:482:HIS:ND1	1:C:483:SER:N	2.42	0.67
1:E:170:TRP:HZ3	1:E:390:LEU:HD21	1.57	0.67
1:E:775:ARG:HH21	1:E:778:LYS:HG2	1.59	0.67
1:E:760:LYS:HE2	1:E:785:GLU:OE2	1.95	0.67
1:B:33:VAL:O	1:B:37:MET:HG2	1.95	0.67
1:F:138:PHE:CD2	1:F:330:TYR:CZ	2.82	0.67
1:G:297:ILE:HD13	1:G:306:PHE:HE1	1.60	0.67
1:B:134:HIS:ND1	1:B:276:ILE:HD12	2.08	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:31:LEU:HD12	1:B:330:TYR:CD1	2.29	0.67
1:D:44:THR:C	1:D:48:MET:HE2	2.15	0.67
1:E:650:THR:O	1:E:672:ILE:HD12	1.95	0.67
1:B:127:PHE:HA	1:B:130:LEU:HD12	1.76	0.67
1:B:503:MET:CE	1:B:506:LEU:HB3	2.25	0.67
1:C:346:LEU:HD13	1:C:372:PHE:CB	2.17	0.67
1:E:744:LEU:CB	1:E:764:PHE:HZ	1.88	0.67
1:F:452:GLU:HG3	1:F:475:HIS:CB	2.24	0.67
1:F:635:HIS:ND1	1:F:636:LEU:HD21	2.00	0.67
1:B:162:LEU:CD1	1:B:388:PHE:CZ	2.77	0.67
1:C:541:LEU:HD22	1:C:544:LEU:HB2	1.77	0.67
1:F:261:MET:SD	1:F:261:MET:C	2.73	0.67
1:F:621:GLU:HA	1:F:646:HIS:HB3	1.76	0.67
1:F:555:LYS:CD	1:F:581:MET:CE	2.73	0.66
1:C:376:MET:HE3	1:C:377:ILE:N	2.10	0.66
1:E:757:LEU:HD22	1:E:782:LEU:HD12	1.76	0.66
1:F:166:PHE:O	1:F:387:ARG:NH1	2.29	0.66
1:A:126:TYR:HD1	1:A:129:TYR:CE2	2.14	0.66
1:D:45:LEU:HD23	1:D:48:MET:CE	2.25	0.66
1:F:609:PHE:HA	1:F:636:LEU:HD11	1.77	0.66
1:B:367:LYS:HE3	1:B:368:ASN:H	1.59	0.66
1:E:503:MET:HG2	1:E:506:LEU:HD23	1.78	0.66
1:F:735:LYS:HA	1:F:758:ASP:HB3	1.77	0.66
1:B:243:GLU:HA	1:B:246:LYS:HG2	1.78	0.66
1:C:458:MET:HA	1:C:458:MET:CE	2.25	0.66
1:A:126:TYR:CA	1:A:129:TYR:CD2	2.73	0.66
1:B:166:PHE:HB2	1:B:387:ARG:HD3	1.77	0.66
1:B:453:ILE:HD13	1:B:455:LYS:NZ	2.11	0.66
1:C:458:MET:HE1	1:C:480:LYS:HB2	1.76	0.66
1:B:46:GLN:NE2	1:B:129:TYR:OH	2.29	0.66
1:B:128:PRO:O	1:B:132:LEU:CD2	2.41	0.66
1:B:376:MET:HE1	1:B:377:ILE:HD13	1.77	0.66
1:E:481:ILE:HD12	1:E:486:LEU:HB2	1.78	0.66
1:E:667:PHE:HB3	1:E:693:ASN:HD21	1.61	0.66
1:F:123:TYR:CE2	1:F:127:PHE:HD2	2.13	0.66
1:B:322:CYS:CB	1:B:326:PHE:CZ	2.79	0.66
1:E:37:MET:SD	1:E:37:MET:O	2.54	0.66
1:F:458:MET:HE3	1:F:458:MET:C	2.17	0.66
1:D:59:VAL:HG21	1:D:99:LEU:HD21	1.78	0.66
1:E:55:LEU:CD1	1:E:56:PRO:HD2	2.26	0.66
1:E:37:MET:HE3	1:E:37:MET:C	2.16	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:163:GLY:HA2	1:F:166:PHE:CE2	2.31	0.65
1:F:444:THR:HG22	1:F:466:LEU:HD23	1.77	0.65
1:F:458:MET:O	1:F:458:MET:CE	2.43	0.65
1:B:37:MET:SD	1:B:37:MET:N	2.69	0.65
1:C:33:VAL:O	1:C:36:LEU:HG	1.95	0.65
1:E:130:LEU:CG	1:E:279:TYR:OH	2.44	0.65
1:F:517:GLU:O	1:F:546:ILE:N	2.29	0.65
1:F:782:LEU:HD11	1:F:784:VAL:CG1	2.27	0.65
1:C:421:ASN:OD1	1:C:425:ARG:N	2.30	0.65
1:G:101:THR:OG1	1:G:108:TYR:OH	2.15	0.65
1:E:572:ILE:CG2	1:E:596:LEU:HD23	2.27	0.65
1:G:57:LYS:HG3	1:G:306:PHE:CA	2.25	0.65
1:E:729:LYS:HA	1:E:751:LEU:HD22	1.79	0.65
1:F:296:ASP:OD2	1:F:296:ASP:C	2.32	0.65
1:E:725:LEU:HD12	1:E:726:TYR:CG	2.31	0.65
1:A:119:ALA:HB2	1:A:293:CYS:HB3	1.78	0.65
1:B:239:LYS:HE3	1:B:401:LYS:HG2	1.78	0.65
1:D:45:LEU:HD23	1:D:48:MET:HE3	1.79	0.65
1:F:782:LEU:HD12	1:F:784:VAL:HG13	1.78	0.65
1:C:258:LEU:HD12	1:C:261:MET:HE1	1.78	0.65
1:C:474:LEU:HG	1:C:497:SER:O	1.97	0.65
1:E:604:ILE:HD12	1:E:629:GLU:HB2	1.79	0.65
1:B:134:HIS:ND1	1:B:276:ILE:CD1	2.59	0.64
1:B:145:TRP:HH2	1:B:262:TYR:CD2	2.11	0.64
1:B:162:LEU:HG	1:B:388:PHE:CE2	2.32	0.64
1:F:372:PHE:CG	1:F:373:MET:CE	2.80	0.64
1:F:535:LEU:HD11	1:F:538:LEU:HD21	1.79	0.64
1:B:46:GLN:CD	1:B:129:TYR:OH	2.36	0.64
1:E:144:PHE:CE2	1:E:261:MET:HE2	2.31	0.64
1:E:325:CYS:O	1:E:328:SER:OG	2.14	0.64
1:F:564:SER:HG	1:F:587:LYS:HZ2	1.45	0.64
1:C:499:LYS:HG2	1:C:522:VAL:HB	1.77	0.64
1:G:57:LYS:HG3	1:G:306:PHE:HA	1.80	0.64
1:D:44:THR:O	1:D:48:MET:HE2	1.97	0.64
1:E:123:TYR:HE1	1:E:127:PHE:CD2	2.11	0.64
1:B:27:PHE:CZ	1:B:333:THR:CG2	2.72	0.64
1:B:145:TRP:CD2	1:B:262:TYR:HD1	2.13	0.64
1:C:332:LEU:HD13	1:C:335:LEU:HD12	1.78	0.64
1:E:37:MET:SD	1:E:37:MET:C	2.76	0.64
1:E:744:LEU:CD1	1:E:764:PHE:HE2	2.11	0.64
1:F:555:LYS:CG	1:F:581:MET:CE	2.74	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:121:HIS:CD2	1:G:123:TYR:HB3	2.32	0.64
1:E:300:MET:HE3	1:F:57:LYS:CA	2.27	0.64
1:F:372:PHE:CB	1:F:373:MET:CE	2.76	0.64
1:F:758:ASP:HA	1:F:783:VAL:HB	1.78	0.64
1:C:458:MET:HE3	1:C:480:LYS:O	1.98	0.64
1:C:544:LEU:HB3	1:C:566:HIS:HD2	1.61	0.64
1:E:101:THR:OG1	1:E:108:TYR:OH	2.16	0.64
1:E:744:LEU:N	1:E:764:PHE:CE1	2.58	0.64
1:B:162:LEU:CG	1:B:388:PHE:CZ	2.81	0.63
1:D:311:THR:OG1	1:D:312:MET:SD	2.56	0.63
1:E:238:ALA:HA	1:E:241:LEU:HD13	1.80	0.63
1:E:499:LYS:HA	1:E:522:VAL:HB	1.79	0.63
1:C:439:THR:O	1:C:442:GLU:HG3	1.99	0.63
1:C:494:LYS:C	1:C:516:LEU:HD12	2.18	0.63
1:E:240:ALA:O	1:E:244:LYS:NZ	2.30	0.63
1:F:544:LEU:HD23	1:F:563:VAL:HG21	1.81	0.63
1:B:27:PHE:CD2	1:B:333:THR:CG2	2.71	0.63
1:B:498:VAL:HG22	1:B:519:LEU:CD1	2.26	0.63
1:C:347:ARG:O	1:C:368:ASN:ND2	2.29	0.63
1:C:474:LEU:CD1	1:C:498:VAL:HG22	2.28	0.63
1:C:474:LEU:O	1:C:499:LYS:N	2.30	0.63
1:E:139:MET:C	1:E:139:MET:SD	2.76	0.63
1:E:144:PHE:CZ	1:E:261:MET:HE3	2.33	0.63
1:F:458:MET:SD	1:F:481:ILE:C	2.76	0.63
1:F:475:HIS:HA	1:F:499:LYS:HB2	1.79	0.63
1:F:599:CYS:N	1:F:622:ASN:OD1	2.31	0.63
1:F:490:LYS:HA	1:F:513:LEU:HD13	1.80	0.63
1:B:490:LYS:HG2	1:B:513:LEU:HA	1.80	0.63
1:C:390:LEU:HD23	1:C:391:PHE:N	2.13	0.63
1:E:363:ILE:HD11	1:E:393:SER:HB2	1.81	0.63
1:E:463:ILE:HD12	1:E:489:LEU:CD2	2.27	0.63
1:F:166:PHE:HA	1:F:387:ARG:HG2	1.81	0.63
1:F:264:ARG:O	1:F:268:LEU:HG	1.99	0.63
1:F:510:MET:HA	1:F:513:LEU:HD23	1.81	0.63
1:C:330:TYR:O	1:C:333:THR:OG1	2.16	0.63
1:E:139:MET:SD	1:E:140:LEU:N	2.72	0.63
1:B:129:TYR:HA	1:B:132:LEU:HD23	1.81	0.63
1:F:632:SER:O	1:F:635:HIS:HB3	1.99	0.63
1:E:725:LEU:HD12	1:E:725:LEU:C	2.18	0.63
1:F:548:SER:HA	1:F:571:CYS:HB2	1.81	0.63
1:F:782:LEU:HD11	1:F:784:VAL:HG22	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:663:GLU:HA	1:F:685:ILE:HA	1.80	0.63
1:F:546:ILE:HG12	1:F:569:LYS:HB3	1.81	0.62
1:F:693:ASN:N	1:F:716:ASN:OD1	2.28	0.62
1:B:133:ILE:HG23	1:B:134:HIS:HD2	1.63	0.62
1:E:37:MET:C	1:E:37:MET:CE	2.67	0.62
1:E:458:MET:HG2	1:E:480:LYS:CB	2.30	0.62
1:C:496:LEU:HB2	1:C:516:LEU:HD21	1.81	0.62
1:E:41:PHE:O	1:E:45:LEU:HD23	1.99	0.62
1:E:300:MET:HE3	1:F:57:LYS:HD2	1.80	0.62
1:E:547:LEU:HB3	1:E:570:MET:HE2	1.81	0.62
1:F:556:ILE:HG22	1:F:581:MET:SD	2.39	0.62
1:F:709:GLN:HG2	1:F:730:LYS:HB3	1.81	0.62
1:C:238:ALA:CA	1:C:241:LEU:HG	2.27	0.62
1:C:450:LYS:HA	1:C:473:SER:HB3	1.80	0.62
1:C:478:SER:HB3	1:C:480:LYS:HZ2	1.63	0.62
1:E:366:VAL:HB	1:E:370:PHE:HB3	1.81	0.62
1:F:458:MET:CE	1:F:459:ILE:C	2.68	0.62
1:F:709:GLN:HA	1:F:731:LEU:HA	1.81	0.62
1:F:48:MET:HE2	1:F:48:MET:HA	1.81	0.62
1:B:31:LEU:HB3	1:B:330:TYR:CE1	2.33	0.62
1:E:719:GLU:HG2	1:E:740:SER:HB3	1.81	0.62
1:E:735:LYS:HA	1:E:758:ASP:HB3	1.81	0.62
1:E:799:GLN:HB3	1:E:800:MET:CE	2.29	0.62
1:F:569:LYS:HD3	1:F:593:GLU:HB2	1.81	0.62
1:B:162:LEU:HA	1:B:388:PHE:HE1	0.79	0.62
1:C:363:ILE:CG1	1:C:392:LEU:HD22	2.30	0.62
1:C:478:SER:C	1:C:480:LYS:CE	2.68	0.62
1:C:519:LEU:HD21	1:C:521:LEU:HD13	1.81	0.62
1:D:296:ASP:C	1:D:296:ASP:OD1	2.37	0.62
1:E:721:LEU:HD11	1:E:741:LEU:HD21	1.81	0.62
1:C:259:TYR:OH	1:C:347:ARG:NH2	2.33	0.62
1:C:468:ASN:O	1:C:468:ASN:CG	2.38	0.62
1:F:347:ARG:O	1:F:368:ASN:ND2	2.30	0.62
1:E:421:ASN:OD1	1:E:425:ARG:N	2.33	0.62
1:F:537:SER:OG	1:F:562:ASP:OD2	2.18	0.62
1:F:757:LEU:HG	1:F:759:VAL:HG22	1.81	0.62
1:B:419:GLN:HE21	1:B:429:PRO:HG2	1.64	0.61
1:C:431:ILE:HA	1:C:452:GLU:HB2	1.81	0.61
1:E:132:LEU:HD22	1:E:132:LEU:H	1.65	0.61
1:F:268:LEU:O	1:F:271:ILE:HD12	2.00	0.61
1:F:452:GLU:CG	1:F:475:HIS:CB	2.76	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:517:GLU:HA	1:F:544:LEU:HA	1.80	0.61
1:C:449:LEU:O	1:C:473:SER:N	2.30	0.61
1:E:144:PHE:CZ	1:E:261:MET:HE2	2.35	0.61
1:E:243:GLU:HA	1:E:246:LYS:HG2	1.80	0.61
1:A:103:LEU:HB2	1:A:108:TYR:CE2	2.35	0.61
1:C:363:ILE:HG23	1:C:392:LEU:HD22	1.82	0.61
1:G:312:MET:HB3	1:G:316:PHE:CE1	2.36	0.61
1:B:52:ILE:HG21	1:B:116:TYR:HB2	1.82	0.61
1:C:328:SER:O	1:C:332:LEU:HD23	1.99	0.61
1:C:547:LEU:HD22	1:C:563:VAL:HG11	1.81	0.61
1:B:162:LEU:HG	1:B:388:PHE:CZ	2.36	0.61
1:B:354:VAL:HA	1:B:357:GLU:HG3	1.83	0.61
1:C:470:GLN:OE1	1:C:494:LYS:N	2.33	0.61
1:E:669:HIS:H	1:E:692:TYR:HB2	1.64	0.61
1:F:330:TYR:O	1:F:333:THR:OG1	2.18	0.61
1:B:27:PHE:CE2	1:B:333:THR:HG23	2.20	0.61
1:B:127:PHE:HA	1:B:130:LEU:CD1	2.31	0.61
1:C:153:SER:OG	1:C:154:LYS:NZ	2.33	0.61
1:E:157:HIS:CE1	1:E:248:PHE:HD1	2.19	0.61
1:E:760:LYS:HE3	1:E:784:VAL:C	2.20	0.61
1:F:686:ARG:HA	1:F:708:LEU:HA	1.83	0.61
1:E:743:VAL:N	1:E:764:PHE:HE1	1.99	0.61
1:F:460:PRO:O	1:F:463:ILE:HG22	2.01	0.61
1:C:482:HIS:H	1:C:485:ALA:HB3	1.65	0.61
1:C:531:ARG:HH11	1:C:554:SER:HB2	1.64	0.61
1:F:137:VAL:HG12	1:F:272:LYS:HZ2	1.66	0.61
1:F:657:LYS:HB2	1:F:681:LEU:HB2	1.82	0.60
1:F:134:HIS:CE1	1:F:276:ILE:HD11	2.36	0.60
1:A:290:THR:HA	1:A:309:ASN:HB3	1.82	0.60
1:F:557:PRO:HG2	1:F:560:VAL:CG1	2.30	0.60
1:B:323:TYR:CD2	1:B:324:LEU:HD22	2.36	0.60
1:B:363:ILE:HG23	1:B:392:LEU:HD22	1.82	0.60
1:G:129:TYR:O	1:G:133:ILE:CG1	2.37	0.60
1:B:503:MET:HE3	1:B:503:MET:HA	1.82	0.60
1:F:381:ASP:HB3	1:F:384:TYR:HD2	1.67	0.60
1:G:41:PHE:O	1:G:44:THR:HG22	2.00	0.60
1:D:103:LEU:HB2	1:D:108:TYR:CZ	2.37	0.60
1:F:617:LEU:HB2	1:F:639:LEU:HD11	1.81	0.60
1:F:766:ILE:HG23	1:F:791:THR:HB	1.84	0.60
1:B:46:GLN:HA	1:B:312:MET:CE	2.32	0.60
1:C:363:ILE:HG12	1:C:392:LEU:CD2	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:429:PRO:HA	1:E:450:LYS:HG3	1.84	0.60
1:E:796:VAL:O	1:E:800:MET:HG2	2.02	0.60
1:B:503:MET:HE3	1:B:506:LEU:CB	2.31	0.60
1:F:738:LYS:HG3	1:F:761:GLY:HA3	1.84	0.60
1:E:373:MET:N	1:E:373:MET:SD	2.75	0.60
1:F:555:LYS:HD3	1:F:581:MET:CE	2.32	0.60
1:C:531:ARG:HH11	1:C:554:SER:HB3	1.67	0.59
1:E:239:LYS:HA	1:E:242:PHE:HD2	1.66	0.59
1:B:323:TYR:HA	1:B:326:PHE:HE2	1.62	0.59
1:B:507:PRO:HG2	1:B:510:MET:HG2	1.84	0.59
1:B:503:MET:CE	1:B:503:MET:HA	2.32	0.59
1:E:128:PRO:O	1:E:132:LEU:HD23	1.95	0.59
1:E:144:PHE:CE1	1:E:261:MET:HE3	2.37	0.59
1:E:623:ASN:HA	1:E:647:ASN:HA	1.85	0.59
1:F:652:ILE:HD12	1:F:676:PRO:HD2	1.83	0.59
1:C:541:LEU:CD2	1:C:544:LEU:HB2	2.33	0.59
1:E:430:LEU:HB2	1:E:451:LEU:HA	1.84	0.59
1:E:518:GLU:HG2	1:E:546:ILE:HB	1.83	0.59
1:E:123:TYR:CD2	1:E:283:LEU:O	2.54	0.59
1:F:777:LEU:C	1:F:800:MET:CE	2.71	0.59
1:B:162:LEU:C	1:B:388:PHE:HE1	2.06	0.59
1:B:249:ARG:HA	1:B:370:PHE:CZ	2.37	0.59
1:C:276:ILE:HG21	1:C:327:VAL:HG11	1.85	0.59
1:C:354:VAL:O	1:C:358:THR:OG1	2.20	0.59
1:C:418:LEU:HD21	1:C:446:LEU:HD13	1.84	0.59
1:F:50:ASP:C	1:F:50:ASP:OD2	2.41	0.59
1:F:510:MET:HE1	1:F:511:TYR:CD1	2.38	0.59
1:G:128:PRO:HG3	1:G:316:PHE:HE2	1.68	0.59
1:C:168:SER:O	1:C:387:ARG:NH2	2.28	0.59
1:E:170:TRP:HH2	1:E:396:SER:HB2	1.68	0.59
1:B:31:LEU:HB3	1:B:330:TYR:HD1	1.68	0.59
1:E:746:PRO:HB3	1:E:770:GLU:HG3	1.84	0.59
1:E:800:MET:CE	1:E:800:MET:N	2.65	0.59
1:F:428:LEU:HD12	1:F:428:LEU:C	2.22	0.59
1:F:782:LEU:HD11	1:F:784:VAL:CG2	2.33	0.59
1:E:41:PHE:HD1	1:E:45:LEU:HD21	1.51	0.59
1:E:449:LEU:HD12	1:E:450:LYS:H	1.66	0.59
1:E:455:LYS:NZ	1:E:476:GLN:O	2.28	0.59
1:F:538:LEU:HG	1:F:559:ALA:HB1	1.84	0.59
1:F:766:ILE:HG13	1:F:791:THR:CG2	2.31	0.59
1:B:134:HIS:HE1	1:B:276:ILE:CD1	2.08	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:722:PRO:O	1:E:725:LEU:HG	2.03	0.58
1:E:764:PHE:HD2	1:E:767:LEU:CD2	2.16	0.58
1:C:531:ARG:N	1:C:554:SER:HG	2.00	0.58
1:C:537:SER:OG	1:C:562:ASP:OD2	2.20	0.58
1:F:145:TRP:HD1	1:F:261:MET:CE	2.16	0.58
1:F:723:ASP:HB3	1:F:747:LYS:HD2	1.84	0.58
1:B:122:TRP:HA	1:B:125:LYS:HE2	1.85	0.58
1:B:322:CYS:O	1:B:326:PHE:CE2	2.57	0.58
1:E:591:LEU:HD23	1:E:611:LEU:HD13	1.85	0.58
1:E:663:GLU:HA	1:E:685:ILE:HA	1.84	0.58
1:C:45:LEU:O	1:C:312:MET:HE1	2.03	0.58
1:E:151:SER:O	1:E:155:ILE:CG1	2.48	0.58
1:E:405:LEU:HG	1:E:409:TRP:HD1	1.68	0.58
1:B:150:GLY:O	1:B:154:LYS:NZ	2.35	0.58
1:E:369:ASP:O	1:E:373:MET:SD	2.61	0.58
1:E:236:GLU:O	1:E:404:ASN:ND2	2.36	0.58
1:B:449:LEU:HD12	1:B:450:LYS:H	1.68	0.58
1:E:412:ASP:OD1	1:E:413:LYS:N	2.37	0.58
1:E:604:ILE:HD13	1:E:633:PHE:HE2	1.68	0.58
1:B:162:LEU:CG	1:B:388:PHE:CE1	2.86	0.58
1:C:41:PHE:CE1	1:C:319:LEU:HD12	2.28	0.58
1:B:32:SER:HA	1:B:35:MET:CG	2.30	0.58
1:C:366:VAL:HB	1:C:370:PHE:HB3	1.86	0.58
1:E:249:ARG:HA	1:E:370:PHE:HZ	1.69	0.58
1:F:458:MET:C	1:F:458:MET:SD	2.82	0.58
1:F:779:ARG:NH2	1:F:782:LEU:CG	2.61	0.58
1:B:28:THR:HB	1:B:330:TYR:CZ	2.39	0.58
1:B:170:TRP:CZ2	1:B:400:LEU:HB2	2.38	0.58
1:B:302:GLY:C	1:C:96:MET:CE	2.72	0.58
1:B:409:TRP:CZ3	1:B:433:LEU:HD22	2.39	0.58
1:C:426:LEU:HB3	1:C:446:LEU:HA	1.86	0.58
1:B:31:LEU:HD13	1:B:330:TYR:HD1	1.69	0.57
1:B:33:VAL:O	1:B:37:MET:CG	2.52	0.57
1:E:495:VAL:HG13	1:E:518:GLU:HB2	1.86	0.57
1:A:309:ASN:HD21	1:G:114:MET:CE	2.17	0.57
1:B:354:VAL:HG22	1:B:386:LYS:HE2	1.86	0.57
1:C:392:LEU:C	1:C:392:LEU:HD23	2.24	0.57
1:D:45:LEU:HA	1:D:48:MET:HE3	1.85	0.57
1:C:31:LEU:O	1:C:35:MET:HG3	2.04	0.57
1:C:409:TRP:HE1	1:C:433:LEU:HD21	1.69	0.57
1:C:418:LEU:CA	1:C:428:LEU:CD1	2.83	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:249:ARG:HA	1:E:370:PHE:CZ	2.39	0.57
1:E:470:GLN:O	1:E:495:VAL:N	2.33	0.57
1:F:555:LYS:C	1:F:581:MET:HE1	2.25	0.57
1:B:165:CYS:SG	1:B:388:PHE:HA	2.44	0.57
1:F:325:CYS:O	1:F:329:ILE:HG12	2.04	0.57
1:G:41:PHE:O	1:G:44:THR:HG23	2.03	0.57
1:B:453:ILE:O	1:B:453:ILE:CG2	2.53	0.57
1:B:470:GLN:O	1:B:495:VAL:N	2.34	0.57
1:E:757:LEU:HD23	1:E:757:LEU:C	2.24	0.57
1:F:133:ILE:CA	1:F:136:LEU:HD23	2.32	0.57
1:G:117:GLU:C	1:G:117:GLU:CD	2.63	0.57
1:G:101:THR:C	1:G:102:ASP:OD1	2.43	0.57
1:E:245:VAL:HG21	1:E:391:PHE:HB3	1.87	0.57
1:F:137:VAL:HG12	1:F:272:LYS:NZ	2.19	0.57
1:F:276:ILE:O	1:F:280:ASN:ND2	2.31	0.57
1:A:114:MET:HG2	1:A:297:ILE:HD11	1.87	0.57
1:E:571:CYS:HB3	1:E:573:HIS:CE1	2.38	0.57
1:F:673:GLU:O	1:F:695:ILE:HA	2.04	0.57
1:G:52:ILE:O	1:G:53:ILE:HD13	2.04	0.57
1:B:16:ALA:HA	1:B:159:ILE:HD13	1.87	0.57
1:C:273:PHE:HE1	1:C:328:SER:HA	1.68	0.57
1:E:430:LEU:HD12	1:E:451:LEU:HG	1.87	0.57
1:E:799:GLN:CD	1:E:800:MET:CE	2.72	0.57
1:B:272:LYS:O	1:B:276:ILE:HG12	2.04	0.56
1:B:302:GLY:O	1:C:96:MET:HE3	1.99	0.56
1:B:322:CYS:O	1:B:326:PHE:CZ	2.58	0.56
1:C:563:VAL:HG12	1:C:567:LEU:HB2	1.86	0.56
1:F:253:GLU:HB3	1:F:367:LYS:HG3	1.87	0.56
1:C:363:ILE:CA	1:C:392:LEU:HD22	2.35	0.56
1:E:130:LEU:HD21	1:E:279:TYR:HH	1.68	0.56
1:F:555:LYS:HD3	1:F:581:MET:HE2	1.86	0.56
1:B:31:LEU:CD1	1:B:330:TYR:HD1	2.16	0.56
1:B:406:ASN:HD22	1:B:437:PRO:HA	1.71	0.56
1:C:478:SER:O	1:C:480:LYS:HE2	2.05	0.56
1:E:535:LEU:HD11	1:E:538:LEU:HD21	1.86	0.56
1:F:759:VAL:O	1:F:762:ASN:ND2	2.37	0.56
1:C:394:GLU:O	1:C:398:ASN:ND2	2.39	0.56
1:C:479:VAL:O	1:C:480:LYS:HD3	2.06	0.56
1:E:129:TYR:CA	1:E:132:LEU:HD23	2.31	0.56
1:E:376:MET:SD	1:E:377:ILE:HD13	2.46	0.56
1:F:123:TYR:HE2	1:F:127:PHE:HD2	1.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:541:LEU:O	1:F:566:HIS:NE2	2.33	0.56
1:G:109:SER:HA	1:G:112:ASN:HD22	1.70	0.56
1:B:370:PHE:HA	1:B:373:MET:CE	2.22	0.56
1:C:323:TYR:O	1:C:327:VAL:HG23	2.06	0.56
1:E:55:LEU:HD12	1:E:56:PRO:HD2	1.86	0.56
1:D:114:MET:HG2	1:D:297:ILE:HD11	1.87	0.56
1:E:736:ILE:O	1:E:739:ASN:ND2	2.38	0.56
1:F:430:LEU:HD12	1:F:451:LEU:HD12	1.80	0.56
1:F:673:GLU:HG3	1:F:694:ASP:HB2	1.87	0.56
1:F:739:ASN:N	1:F:761:GLY:O	2.29	0.56
1:A:126:TYR:HD1	1:A:129:TYR:HE2	1.53	0.56
1:B:415:ARG:NH2	1:B:416:GLN:N	2.49	0.56
1:C:50:ASP:HA	1:C:312:MET:SD	2.46	0.56
1:F:114:MET:HE1	1:F:295:VAL:HG11	1.67	0.56
1:B:28:THR:O	1:B:330:TYR:CE1	2.59	0.56
1:D:296:ASP:OD1	1:D:296:ASP:O	2.24	0.56
1:B:245:VAL:HG21	1:B:391:PHE:HB3	1.88	0.56
1:B:449:LEU:HG	1:B:451:LEU:CD1	2.34	0.56
1:C:117:GLU:OE1	1:C:118:ARG:NE	2.32	0.56
1:C:363:ILE:CB	1:C:392:LEU:HD22	2.36	0.56
1:E:425:ARG:NH1	1:E:471:GLU:OE1	2.36	0.56
1:E:437:PRO:HB2	1:E:440:VAL:CG2	2.36	0.56
1:F:354:VAL:O	1:F:358:THR:OG1	2.23	0.56
1:F:458:MET:SD	1:F:459:ILE:N	2.79	0.55
1:F:564:SER:HB2	1:F:588:MET:SD	2.45	0.55
1:F:634:GLN:OE1	1:F:637:ARG:NH1	2.39	0.55
1:C:493:LEU:HD12	1:C:493:LEU:H	1.70	0.55
1:E:52:ILE:HG21	1:E:116:TYR:HB2	1.88	0.55
1:F:325:CYS:O	1:F:328:SER:OG	2.16	0.55
1:F:500:PHE:HD2	1:F:503:MET:H	1.53	0.55
1:C:447:GLN:O	1:C:471:GLU:N	2.34	0.55
1:C:563:VAL:HA	1:C:566:HIS:CE1	2.41	0.55
1:E:570:MET:SD	1:E:570:MET:C	2.85	0.55
1:E:507:PRO:HB2	1:E:509:TRP:NE1	2.21	0.55
1:A:46:GLN:HA	1:A:50:ASP:HB2	1.87	0.55
1:C:156:GLU:HA	1:C:159:ILE:CD1	2.37	0.55
1:C:489:LEU:C	1:C:493:LEU:HD12	2.25	0.55
1:F:271:ILE:HD12	1:F:271:ILE:C	2.25	0.55
1:B:303:TYR:N	1:C:96:MET:HE3	2.21	0.55
1:C:166:PHE:HD1	1:C:387:ARG:HD3	1.72	0.55
1:C:516:LEU:HB3	1:C:541:LEU:HD11	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:58:ARG:HH11	1:E:305:ASN:ND2	2.04	0.55
1:E:323:TYR:HD1	1:E:324:LEU:HD22	1.71	0.55
1:E:352:GLU:OE1	1:E:355:ARG:NH2	2.40	0.55
1:F:122:TRP:HA	1:F:125:LYS:HE2	1.87	0.55
1:B:46:GLN:O	1:B:50:ASP:HB3	2.07	0.55
1:B:162:LEU:CG	1:B:388:PHE:CE2	2.90	0.55
1:F:499:LYS:HG2	1:F:522:VAL:HB	1.87	0.55
1:F:425:ARG:NH1	1:F:471:GLU:OE1	2.39	0.55
1:F:676:PRO:HB2	1:F:678:HIS:CE1	2.42	0.55
1:G:117:GLU:OE1	1:G:118:ARG:CA	2.55	0.55
1:E:300:MET:CE	1:F:57:LYS:O	2.55	0.55
1:E:624:LEU:O	1:E:648:SER:N	2.40	0.55
1:F:367:LYS:HE3	1:F:368:ASN:H	1.71	0.55
1:F:596:LEU:O	1:F:620:LYS:N	2.40	0.55
1:B:506:LEU:HD23	1:B:506:LEU:C	2.27	0.55
1:F:41:PHE:CD1	1:F:41:PHE:C	2.78	0.55
1:F:751:LEU:HB3	1:F:754:LEU:HB2	1.88	0.55
1:G:103:LEU:HB3	1:G:107:GLN:HE21	1.72	0.55
1:C:496:LEU:HB3	1:C:516:LEU:HD21	1.89	0.54
1:G:53:ILE:HD13	1:G:53:ILE:N	2.22	0.54
1:B:151:SER:HB2	1:B:258:LEU:HD13	1.89	0.54
1:B:165:CYS:CB	1:B:388:PHE:CD1	2.84	0.54
1:C:242:PHE:CD1	1:C:391:PHE:CD2	2.95	0.54
1:E:31:LEU:HD21	1:E:329:ILE:HD11	1.88	0.54
1:E:311:THR:HG1	1:E:312:MET:N	2.03	0.54
1:E:680:PHE:HA	1:E:705:LEU:HD11	1.90	0.54
1:B:302:GLY:C	1:C:96:MET:HE3	2.27	0.54
1:B:503:MET:CE	1:B:503:MET:CA	2.85	0.54
1:E:52:ILE:HD11	1:E:308:CYS:CB	2.34	0.54
1:E:459:ILE:HG22	1:E:481:ILE:HA	1.89	0.54
1:F:120:LEU:HD21	1:F:310:HIS:HD2	1.71	0.54
1:F:372:PHE:CB	1:F:373:MET:HE1	2.37	0.54
1:C:480:LYS:N	1:C:480:LYS:CD	2.69	0.54
1:E:267:VAL:O	1:E:271:ILE:HG12	2.07	0.54
1:F:106:GLN:NE2	1:G:108:TYR:HB3	2.22	0.54
1:F:158:PHE:HB2	1:F:248:PHE:CZ	2.43	0.54
1:F:270:VAL:HG22	1:F:334:CYS:HB3	1.89	0.54
1:F:573:HIS:HB3	1:F:597:VAL:HB	1.88	0.54
1:B:261:MET:CE	1:B:261:MET:HA	2.38	0.54
1:B:474:LEU:N	1:B:497:SER:O	2.38	0.54
1:C:421:ASN:ND2	1:C:471:GLU:OE1	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:458:MET:CE	1:C:480:LYS:HB2	2.38	0.54
1:E:172:THR:OG1	1:E:387:ARG:NH1	2.34	0.54
1:C:237:GLN:O	1:C:241:LEU:HG	2.08	0.54
1:E:150:GLY:O	1:E:154:LYS:NZ	2.28	0.54
1:F:523:GLY:O	1:F:551:SER:OG	2.20	0.54
1:B:322:CYS:CB	1:B:326:PHE:HZ	2.16	0.54
1:E:505:GLU:O	1:E:507:PRO:HD3	2.07	0.54
1:F:604:ILE:HD11	1:F:627:ILE:HB	1.90	0.54
1:E:162:LEU:HD13	1:E:388:PHE:CD1	2.43	0.54
1:E:337:THR:O	1:E:341:LEU:N	2.41	0.54
1:E:547:LEU:HB3	1:E:570:MET:CE	2.37	0.54
1:B:337:THR:O	1:B:341:LEU:N	2.40	0.54
1:E:369:ASP:O	1:E:373:MET:CG	2.56	0.54
1:F:31:LEU:O	1:F:35:MET:HG3	2.08	0.54
1:F:57:LYS:HB3	1:F:305:ASN:HB3	1.90	0.54
1:F:123:TYR:HB2	1:F:283:LEU:HD11	1.89	0.54
1:F:430:LEU:HB2	1:F:451:LEU:HD12	1.90	0.54
1:F:486:LEU:HA	1:F:489:LEU:CD1	2.37	0.54
1:C:482:HIS:CG	1:C:483:SER:N	2.76	0.54
1:E:376:MET:HE3	1:E:377:ILE:N	2.23	0.54
1:F:390:LEU:HD12	1:F:391:PHE:N	2.23	0.54
1:B:429:PRO:HA	1:B:450:LYS:HB3	1.90	0.53
1:B:461:ALA:HA	1:B:485:ALA:HB2	1.90	0.53
1:C:376:MET:SD	1:C:377:ILE:N	2.81	0.53
1:C:503:MET:HA	1:C:506:LEU:HB3	1.90	0.53
1:E:472:LEU:HG	1:E:496:LEU:HD13	1.90	0.53
1:E:757:LEU:HD21	1:E:759:VAL:CG2	2.34	0.53
1:F:296:ASP:O	1:F:296:ASP:CG	2.47	0.53
1:A:126:TYR:HA	1:A:129:TYR:HD2	1.60	0.53
1:B:32:SER:CA	1:B:35:MET:HG2	2.35	0.53
1:C:376:MET:CE	1:C:377:ILE:N	2.71	0.53
1:D:104:ASP:H	1:D:107:GLN:HE22	1.56	0.53
1:F:351:PHE:HB3	1:F:354:VAL:HG22	1.90	0.53
1:C:238:ALA:HA	1:C:241:LEU:CD1	2.38	0.53
1:F:510:MET:SD	1:F:511:TYR:CE1	3.01	0.53
1:F:555:LYS:HB3	1:F:581:MET:HE3	1.69	0.53
1:C:474:LEU:N	1:C:497:SER:O	2.39	0.53
1:C:514:ARG:O	1:C:541:LEU:HG	2.08	0.53
1:D:316:PHE:O	1:D:320:SER:N	2.32	0.53
1:E:488:PHE:O	1:E:492:ASN:HB2	2.08	0.53
1:B:45:LEU:O	1:B:312:MET:HE1	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:104:ASP:H	1:D:107:GLN:NE2	2.07	0.53
1:D:121:HIS:CE1	1:D:123:TYR:HB3	2.43	0.53
1:E:37:MET:CE	1:E:38:ILE:N	2.67	0.53
1:E:244:LYS:HG2	1:E:247:LYS:NZ	2.24	0.53
1:F:615:GLN:O	1:F:640:THR:N	2.41	0.53
1:B:28:THR:HB	1:B:330:TYR:OH	2.08	0.53
1:B:276:ILE:HD13	1:B:279:TYR:HE2	1.73	0.53
1:B:453:ILE:HD13	1:B:455:LYS:HZ3	1.72	0.53
1:B:503:MET:CE	1:B:506:LEU:CD1	2.75	0.53
1:G:104:ASP:OD2	1:G:105:LEU:N	2.42	0.53
1:B:163:GLY:HA2	1:B:166:PHE:CE2	2.43	0.53
1:E:472:LEU:CD1	1:E:473:SER:N	2.67	0.53
1:F:101:THR:OG1	1:F:108:TYR:OH	2.24	0.53
1:B:38:ILE:CD1	1:B:326:PHE:CE2	2.92	0.53
1:B:96:MET:N	1:B:96:MET:SD	2.82	0.53
1:B:124:ALA:HB2	1:B:287:VAL:HG12	1.91	0.53
1:B:346:LEU:HB3	1:B:375:HIS:CD2	2.43	0.53
1:B:474:LEU:CD2	1:B:498:VAL:HG12	2.28	0.53
1:C:430:LEU:HB2	1:C:451:LEU:HA	1.90	0.53
1:E:268:LEU:HA	1:E:271:ILE:HD11	1.90	0.53
1:F:263:VAL:HG22	1:F:341:LEU:HD21	1.91	0.53
1:F:372:PHE:CD1	1:F:373:MET:CE	2.91	0.53
1:A:59:VAL:HG11	1:A:99:LEU:HD21	1.91	0.53
1:C:376:MET:HE3	1:C:377:ILE:CA	2.39	0.53
1:C:481:ILE:HD12	1:C:486:LEU:HB2	1.91	0.53
1:G:117:GLU:OE1	1:G:117:GLU:C	2.48	0.53
1:B:276:ILE:HA	1:B:279:TYR:CE2	2.44	0.53
1:B:413:LYS:O	1:B:417:LYS:HG2	2.09	0.53
1:E:631:VAL:O	1:E:634:GLN:HB2	2.08	0.53
1:G:126:TYR:HA	1:G:129:TYR:HD2	1.74	0.53
1:F:612:LEU:HA	1:F:636:LEU:HD22	1.91	0.52
1:B:131:VAL:HG22	1:B:323:TYR:CE1	2.44	0.52
1:E:158:PHE:O	1:E:162:LEU:HD23	2.09	0.52
1:E:164:LYS:NZ	1:E:244:LYS:HE3	2.23	0.52
1:E:511:TYR:O	1:E:540:ASP:HB2	2.09	0.52
1:F:256:ASP:HA	1:F:369:ASP:HB3	1.90	0.52
1:F:612:LEU:CG	1:F:635:HIS:CE1	2.91	0.52
1:B:31:LEU:HD13	1:B:330:TYR:CD1	2.43	0.52
1:B:395:VAL:HG12	1:B:399:LYS:HE3	1.90	0.52
1:C:134:HIS:CE1	1:C:276:ILE:HD11	2.43	0.52
1:E:685:ILE:O	1:E:707:SER:OG	2.28	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:495:VAL:HG22	1:F:518:GLU:HB2	1.90	0.52
1:F:595:GLU:HB2	1:F:618:ASP:HB3	1.91	0.52
1:F:687:TYR:HA	1:F:710:TYR:HB3	1.90	0.52
1:C:170:TRP:CZ2	1:C:400:LEU:HB2	2.43	0.52
1:C:367:LYS:O	1:C:371:ALA:N	2.33	0.52
1:E:415:ARG:NE	1:E:445:GLU:OE2	2.34	0.52
1:E:744:LEU:HA	1:E:764:PHE:HZ	1.73	0.52
1:F:138:PHE:CE2	1:F:330:TYR:CD1	2.89	0.52
1:F:276:ILE:HD13	1:F:279:TYR:HE2	1.74	0.52
1:B:27:PHE:CZ	1:B:31:LEU:CD1	2.92	0.52
1:B:28:THR:CA	1:B:330:TYR:CZ	2.93	0.52
1:E:743:VAL:N	1:E:764:PHE:CE1	2.76	0.52
1:C:23:TRP:CH2	1:C:336:TYR:CE1	2.94	0.52
1:C:133:ILE:HG13	1:C:134:HIS:N	2.23	0.52
1:E:367:LYS:HD3	1:E:368:ASN:H	1.74	0.52
1:E:533:VAL:H	1:E:555:LYS:HE3	1.74	0.52
1:E:617:LEU:HD21	1:E:619:LEU:HG	1.91	0.52
1:F:507:PRO:HG2	1:F:510:MET:CG	2.33	0.52
1:F:733:THR:HG23	1:F:756:TYR:CD1	2.45	0.52
1:G:57:LYS:HD2	1:G:306:PHE:O	2.09	0.52
1:B:273:PHE:CD2	1:B:274:LEU:N	2.78	0.52
1:B:462:THR:O	1:B:465:GLN:HB2	2.10	0.52
1:E:139:MET:HE3	1:E:140:LEU:N	2.25	0.52
1:B:446:LEU:HD11	1:B:466:LEU:HD13	1.92	0.52
1:C:490:LYS:HE3	1:C:513:LEU:HD23	1.91	0.52
1:D:123:TYR:HE2	1:D:283:LEU:O	1.93	0.52
1:E:128:PRO:C	1:E:132:LEU:CD2	2.75	0.52
1:E:527:HIS:O	1:E:531:ARG:HD2	2.09	0.52
1:E:769:PRO:HB3	1:E:796:VAL:HG21	1.91	0.52
1:F:124:ALA:HB2	1:F:287:VAL:HG12	1.92	0.52
1:B:145:TRP:CZ2	1:B:262:TYR:CD1	2.87	0.52
1:B:453:ILE:CD1	1:B:455:LYS:HZ3	2.22	0.52
1:C:139:MET:SD	1:C:143:ASN:ND2	2.83	0.52
1:C:249:ARG:HA	1:C:370:PHE:CZ	2.45	0.52
1:F:145:TRP:N	1:F:265:GLN:HE22	2.08	0.52
1:B:159:ILE:HG13	1:B:160:SER:N	2.25	0.51
1:C:454:ILE:N	1:C:477:CYS:SG	2.69	0.51
1:C:525:LEU:HD21	1:C:533:VAL:CB	2.40	0.51
1:E:458:MET:HG2	1:E:480:LYS:HB3	1.90	0.51
1:E:744:LEU:HD12	1:E:764:PHE:HE2	1.73	0.51
1:F:454:ILE:HG22	1:F:457:VAL:HG21	1.90	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:303:TYR:HB3	1:G:306:PHE:HE2	1.74	0.51
1:C:104:ASP:OD2	1:C:107:GLN:NE2	2.39	0.51
1:E:145:TRP:N	1:E:265:GLN:HE22	2.08	0.51
1:E:764:PHE:CD2	1:E:767:LEU:CD2	2.94	0.51
1:F:372:PHE:CD1	1:F:373:MET:HE3	2.45	0.51
1:F:597:VAL:HG13	1:F:620:LYS:HG2	1.92	0.51
1:G:121:HIS:HD2	1:G:123:TYR:HB3	1.75	0.51
1:D:59:VAL:HG11	1:D:99:LEU:HD11	1.91	0.51
1:E:123:TYR:CE1	1:E:127:PHE:CD2	2.85	0.51
1:E:166:PHE:CD1	1:E:387:ARG:HD2	2.46	0.51
1:F:253:GLU:HG3	1:F:370:PHE:CZ	2.45	0.51
1:A:305:ASN:OD1	1:A:306:PHE:N	2.43	0.51
1:B:246:LYS:HA	1:B:249:ARG:HG2	1.92	0.51
1:C:490:LYS:HB3	1:C:514:ARG:HG2	1.91	0.51
1:E:134:HIS:CG	1:E:276:ILE:HD11	2.45	0.51
1:F:248:PHE:CE2	1:F:252:VAL:HG21	2.45	0.51
1:B:59:VAL:HG11	1:B:99:LEU:HD21	1.91	0.51
1:B:113:GLN:HE21	1:C:311:THR:HG22	1.75	0.51
1:B:126:TYR:HB3	1:B:130:LEU:HD21	1.92	0.51
1:B:363:ILE:HD11	1:B:393:SER:HB2	1.92	0.51
1:D:101:THR:OG1	1:D:108:TYR:OH	2.26	0.51
1:E:406:ASN:ND2	1:E:438:ASP:OD2	2.44	0.51
1:F:564:SER:CB	1:F:588:MET:SD	2.97	0.51
1:C:165:CYS:SG	1:C:388:PHE:HA	2.50	0.51
1:A:108:TYR:CG	1:G:106:GLN:OE1	2.64	0.51
1:C:415:ARG:HD2	1:C:418:LEU:HD12	1.93	0.51
1:F:373:MET:CE	1:F:373:MET:N	2.74	0.51
1:F:724:GLU:OE1	1:F:724:GLU:N	2.34	0.51
1:F:777:LEU:C	1:F:800:MET:HE1	2.25	0.51
1:E:709:GLN:HA	1:E:731:LEU:HA	1.93	0.51
1:E:743:VAL:HA	1:E:764:PHE:CE1	2.46	0.51
1:F:458:MET:HE3	1:F:460:PRO:N	2.26	0.51
1:B:31:LEU:HD21	1:B:329:ILE:HD11	1.93	0.50
1:B:52:ILE:HD12	1:B:310:HIS:HB3	1.93	0.50
1:B:149:PRO:HA	1:B:152:SER:HB3	1.92	0.50
1:B:474:LEU:HD23	1:B:498:VAL:CG1	2.29	0.50
1:C:504:ARG:HG3	1:C:505:GLU:H	1.76	0.50
1:E:472:LEU:O	1:E:496:LEU:HA	2.11	0.50
1:C:272:LYS:O	1:C:276:ILE:HG12	2.09	0.50
1:E:725:LEU:HD12	1:E:726:TYR:CD2	2.45	0.50
1:F:276:ILE:HD13	1:F:279:TYR:CE2	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:477:CYS:N	1:F:505:GLU:HG2	2.27	0.50
1:B:114:MET:HG2	1:B:295:VAL:HG11	1.94	0.50
1:B:244:LYS:HA	1:B:247:LYS:HE3	1.93	0.50
1:D:45:LEU:HA	1:D:48:MET:CE	2.41	0.50
1:E:55:LEU:HD13	1:E:56:PRO:HD2	1.92	0.50
1:E:458:MET:SD	1:E:481:ILE:N	2.85	0.50
1:E:599:CYS:N	1:E:622:ASN:OD1	2.43	0.50
1:E:634:GLN:OE1	1:E:637:ARG:NH1	2.44	0.50
1:F:556:ILE:CG2	1:F:581:MET:SD	2.99	0.50
1:G:110:PHE:O	1:G:114:MET:HG2	2.11	0.50
1:E:279:TYR:C	1:E:279:TYR:CD2	2.84	0.50
1:E:729:LYS:NZ	1:E:750:ASN:O	2.39	0.50
1:F:123:TYR:CD1	1:F:283:LEU:HD22	2.46	0.50
1:F:474:LEU:CD1	1:F:477:CYS:HB2	2.35	0.50
1:B:419:GLN:NE2	1:B:429:PRO:HG2	2.26	0.50
1:E:458:MET:HE1	1:E:482:HIS:HB2	1.94	0.50
1:F:643:LYS:HB3	1:F:645:TRP:CD1	2.47	0.50
1:C:258:LEU:HA	1:C:261:MET:HE3	1.94	0.50
1:E:121:HIS:ND1	1:E:123:TYR:HB3	2.26	0.50
1:F:578:LYS:HG3	1:F:601:LEU:HD23	1.94	0.50
1:C:238:ALA:HB1	1:C:391:PHE:HZ	1.77	0.50
1:E:579:LEU:HD23	1:E:596:LEU:HD11	1.92	0.50
1:F:273:PHE:CD2	1:F:274:LEU:HD22	2.47	0.50
1:C:470:GLN:OE1	1:C:494:LYS:HG2	2.11	0.50
1:G:57:LYS:HD2	1:G:306:PHE:C	2.32	0.50
1:G:104:ASP:OD2	1:G:106:GLN:N	2.38	0.50
1:B:498:VAL:HG21	1:B:519:LEU:HD11	1.88	0.50
1:B:510:MET:SD	1:B:513:LEU:HD11	2.52	0.50
1:E:347:ARG:O	1:E:368:ASN:HA	2.12	0.50
1:F:268:LEU:HA	1:F:271:ILE:HG13	1.92	0.50
1:B:46:GLN:CA	1:B:312:MET:HE1	2.42	0.49
1:B:161:ILE:O	1:B:388:PHE:CE1	2.65	0.49
1:F:246:LYS:O	1:F:249:ARG:HG2	2.11	0.49
1:F:450:LYS:NZ	1:F:452:GLU:OE1	2.25	0.49
1:G:124:ALA:HB2	1:G:287:VAL:HG11	1.94	0.49
1:C:246:LYS:HA	1:C:249:ARG:HG2	1.93	0.49
1:E:19:VAL:HG12	1:E:380:TYR:CE2	2.47	0.49
1:E:31:LEU:O	1:E:35:MET:HG2	2.11	0.49
1:F:556:ILE:N	1:F:581:MET:HE1	2.26	0.49
1:A:125:LYS:O	1:A:129:TYR:CE2	2.66	0.49
1:C:35:MET:HE1	1:C:326:PHE:HB3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:242:PHE:CD1	1:C:391:PHE:HD2	2.30	0.49
1:C:478:SER:HA	1:C:480:LYS:NZ	2.24	0.49
1:E:494:LYS:HA	1:E:516:LEU:HA	1.94	0.49
1:F:165:CYS:SG	1:F:388:PHE:HA	2.53	0.49
1:B:370:PHE:N	1:B:373:MET:HE3	2.26	0.49
1:C:363:ILE:HD11	1:C:393:SER:HB2	1.93	0.49
1:C:414:LEU:O	1:C:428:LEU:HD11	2.12	0.49
1:A:312:MET:SD	1:A:312:MET:N	2.84	0.49
1:D:298:GLN:HG3	1:D:302:GLY:HA2	1.95	0.49
1:E:268:LEU:HA	1:E:271:ILE:CG1	2.42	0.49
1:E:426:LEU:O	1:E:447:GLN:N	2.45	0.49
1:E:631:VAL:HA	1:E:634:GLN:HG2	1.94	0.49
1:F:652:ILE:CG1	1:F:672:ILE:HG12	2.39	0.49
1:B:34:ALA:HA	1:B:37:MET:HG2	1.94	0.49
1:C:415:ARG:HA	1:C:418:LEU:HD12	1.95	0.49
1:E:516:LEU:HB3	1:E:541:LEU:HD11	1.93	0.49
1:E:725:LEU:CD1	1:E:725:LEU:C	2.81	0.49
1:A:310:HIS:ND1	1:A:312:MET:HG2	2.27	0.49
1:C:101:THR:O	1:C:103:LEU:HG	2.13	0.49
1:C:245:VAL:HG11	1:C:391:PHE:HB3	1.95	0.49
1:E:246:LYS:HA	1:E:249:ARG:HG2	1.95	0.49
1:E:714:THR:HA	1:E:737:GLY:HA3	1.94	0.49
1:E:743:VAL:O	1:E:764:PHE:HE1	1.96	0.49
1:F:717:LYS:O	1:F:719:GLU:HG3	2.13	0.49
1:F:760:LYS:HB2	1:F:783:VAL:HG12	1.95	0.49
1:B:27:PHE:HE2	1:B:333:THR:HG21	0.35	0.49
1:B:449:LEU:CG	1:B:451:LEU:HD11	2.43	0.49
1:B:474:LEU:CD1	1:B:477:CYS:HB2	2.42	0.49
1:C:497:SER:HA	1:C:520:TYR:HB2	1.95	0.49
1:E:463:ILE:HD12	1:E:489:LEU:HD23	1.94	0.49
1:F:20:LEU:HB2	1:F:21:LYS:NZ	2.27	0.49
1:B:133:ILE:HG23	1:B:134:HIS:CD2	2.46	0.49
1:B:145:TRP:CH2	1:B:262:TYR:CE2	3.01	0.49
1:E:405:LEU:HG	1:E:409:TRP:CD1	2.48	0.49
1:F:20:LEU:HB2	1:F:21:LYS:HZ2	1.78	0.49
1:C:312:MET:SD	1:C:312:MET:N	2.86	0.48
1:C:352:GLU:O	1:C:356:GLN:NE2	2.46	0.48
1:F:354:VAL:HG12	1:F:386:LYS:HE2	1.93	0.48
1:F:779:ARG:NH2	1:F:782:LEU:O	2.44	0.48
1:B:323:TYR:CD2	1:B:323:TYR:C	2.86	0.48
1:C:331:GLY:O	1:C:335:LEU:HG	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:766:ILE:HD12	1:E:791:THR:HB	1.95	0.48
1:F:363:ILE:HA	1:F:392:LEU:HD22	1.95	0.48
1:B:280:ASN:O	1:B:284:VAL:HG23	2.13	0.48
1:B:376:MET:HE3	1:B:377:ILE:HD13	1.94	0.48
1:C:433:LEU:HB2	1:C:454:ILE:HD13	1.94	0.48
1:C:476:GLN:NE2	1:C:501:ASP:OD1	2.47	0.48
1:C:526:SER:HA	1:C:533:VAL:HA	1.94	0.48
1:F:253:GLU:O	1:F:367:LYS:HE2	2.13	0.48
1:B:323:TYR:CA	1:B:326:PHE:HE2	2.20	0.48
1:B:350:SER:OG	1:B:365:ASP:OD1	2.19	0.48
1:E:639:LEU:HD23	1:E:659:LEU:HD13	1.94	0.48
1:F:114:MET:SD	1:F:295:VAL:HG11	2.52	0.48
1:F:241:LEU:HD12	1:F:244:LYS:HE2	1.95	0.48
1:F:726:TYR:CD2	1:F:747:LYS:HB2	2.48	0.48
1:B:28:THR:HB	1:B:330:TYR:CE2	2.49	0.48
1:B:390:LEU:HD12	1:B:390:LEU:O	2.14	0.48
1:C:498:VAL:HB	1:C:521:LEU:HD12	1.95	0.48
1:F:457:VAL:HB	1:F:479:VAL:HG22	1.95	0.48
1:F:604:ILE:HD13	1:F:633:PHE:HE2	1.79	0.48
1:C:406:ASN:ND2	1:C:438:ASP:H	2.10	0.48
1:D:295:VAL:HG23	1:D:297:ILE:HG12	1.94	0.48
1:F:670:ASN:O	1:F:693:ASN:HA	2.13	0.48
1:B:459:ILE:HD12	1:B:481:ILE:HG12	1.95	0.48
1:C:347:ARG:O	1:C:368:ASN:HA	2.14	0.48
1:C:558:GLN:O	1:C:561:VAL:HB	2.14	0.48
1:E:725:LEU:HD12	1:E:726:TYR:H	1.65	0.48
1:F:518:GLU:HG2	1:F:546:ILE:HB	1.95	0.48
1:F:544:LEU:HD12	1:F:545:LYS:N	2.29	0.48
1:F:630:ILE:HA	1:F:633:PHE:HD2	1.78	0.48
1:A:103:LEU:HD11	1:A:303:TYR:HE2	1.79	0.48
1:A:127:PHE:CZ	1:A:319:LEU:HD23	2.49	0.48
1:E:162:LEU:HD22	1:E:388:PHE:CE1	2.48	0.48
1:G:105:LEU:N	1:G:105:LEU:CD1	2.76	0.48
1:B:310:HIS:NE2	1:B:313:ALA:HB2	2.29	0.48
1:C:238:ALA:HB1	1:C:391:PHE:CZ	2.48	0.48
1:E:152:SER:HA	1:E:155:ILE:HG12	1.95	0.48
1:E:170:TRP:CZ2	1:E:400:LEU:HB2	2.48	0.48
1:E:472:LEU:HG	1:E:496:LEU:CD1	2.44	0.48
1:E:473:SER:HA	1:E:497:SER:O	2.14	0.48
1:C:134:HIS:ND1	1:C:276:ILE:HD11	2.28	0.48
1:E:123:TYR:CD2	1:E:283:LEU:HB3	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:238:ALA:HB1	1:E:391:PHE:HZ	1.78	0.48
1:E:409:TRP:HE1	1:E:433:LEU:HD21	1.78	0.48
1:E:683:ASN:HA	1:E:705:LEU:HD22	1.95	0.48
1:G:316:PHE:O	1:G:320:SER:N	2.32	0.48
1:C:430:LEU:O	1:C:452:GLU:N	2.47	0.47
1:E:104:ASP:OD1	1:E:105:LEU:N	2.46	0.47
1:F:445:GLU:OE1	1:F:445:GLU:N	2.46	0.47
1:F:605:PRO:HG2	1:F:608:VAL:HG23	1.96	0.47
1:F:690:LEU:O	1:F:693:ASN:ND2	2.47	0.47
1:A:48:MET:HB3	1:A:49:GLN:HE21	1.79	0.47
1:A:121:HIS:CE1	1:A:123:TYR:HB3	2.49	0.47
1:C:297:ILE:HG22	1:C:300:MET:HB3	1.95	0.47
1:E:52:ILE:CG2	1:E:116:TYR:HB2	2.44	0.47
1:E:494:LYS:O	1:E:517:GLU:N	2.37	0.47
1:F:149:PRO:HA	1:F:152:SER:HB3	1.96	0.47
1:F:171:THR:HB	1:F:390:LEU:HD21	1.94	0.47
1:G:101:THR:O	1:G:103:LEU:HG	2.14	0.47
1:A:294:ASN:OD1	1:A:305:ASN:ND2	2.47	0.47
1:D:122:TRP:HA	1:D:125:LYS:HE3	1.96	0.47
1:F:452:GLU:HG2	1:F:475:HIS:CB	2.41	0.47
1:F:510:MET:HE3	1:F:511:TYR:CZ	2.48	0.47
1:F:612:LEU:HD11	1:F:635:HIS:HE2	1.79	0.47
1:F:625:LYS:HA	1:F:649:ILE:HA	1.96	0.47
1:B:34:ALA:HB3	1:B:35:MET:CE	2.45	0.47
1:B:475:HIS:ND1	1:B:499:LYS:HE2	2.29	0.47
1:C:367:LYS:HE3	1:C:368:ASN:H	1.79	0.47
1:E:117:GLU:C	1:E:117:GLU:OE1	2.53	0.47
1:B:297:ILE:HA	1:B:300:MET:HE2	1.54	0.47
1:F:132:LEU:O	1:F:136:LEU:HD23	1.92	0.47
1:F:133:ILE:HG13	1:F:134:HIS:N	2.28	0.47
1:F:466:LEU:HB3	1:F:469:LEU:HD13	1.96	0.47
1:F:511:TYR:CZ	1:F:536:GLU:HB2	2.49	0.47
1:B:45:LEU:C	1:B:312:MET:HE1	2.34	0.47
1:B:449:LEU:HB3	1:B:472:LEU:HD13	1.96	0.47
1:C:127:PHE:CD2	1:C:128:PRO:N	2.83	0.47
1:C:145:TRP:N	1:C:265:GLN:HE22	2.13	0.47
1:C:239:LYS:HD2	1:C:401:LYS:HA	1.97	0.47
1:E:415:ARG:HG2	1:E:418:LEU:HD12	1.96	0.47
1:F:123:TYR:CB	1:F:283:LEU:CD1	2.82	0.47
1:F:133:ILE:O	1:F:137:VAL:HG23	2.14	0.47
1:F:145:TRP:CD1	1:F:261:MET:SD	3.08	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:428:LEU:HD12	1:F:429:PRO:CD	2.43	0.47
1:F:643:LYS:HA	1:F:666:SER:HB2	1.96	0.47
1:A:126:TYR:CA	1:A:129:TYR:HD2	2.22	0.47
1:A:276:ILE:HG21	1:A:327:VAL:HG11	1.95	0.47
1:B:27:PHE:CE1	1:B:31:LEU:HD11	2.49	0.47
1:B:101:THR:HG1	1:B:108:TYR:HH	1.49	0.47
1:B:448:SER:HA	1:B:471:GLU:O	2.15	0.47
1:C:253:GLU:HG3	1:C:370:PHE:CD1	2.49	0.47
1:C:431:ILE:N	1:C:431:ILE:HD12	2.30	0.47
1:E:37:MET:CE	1:E:38:ILE:HA	2.42	0.47
1:E:124:ALA:HB2	1:E:287:VAL:HG12	1.96	0.47
1:E:130:LEU:CD1	1:E:279:TYR:HH	2.07	0.47
1:E:139:MET:HE3	1:E:140:LEU:H	1.79	0.47
1:E:170:TRP:CH2	1:E:396:SER:HB2	2.49	0.47
1:E:427:GLU:HB2	1:E:448:SER:HB3	1.97	0.47
1:E:496:LEU:HB3	1:E:516:LEU:HD11	1.97	0.47
1:E:569:LYS:NZ	1:E:593:GLU:OE1	2.37	0.47
1:E:654:GLU:HG3	1:E:678:HIS:CG	2.49	0.47
1:E:725:LEU:CD1	1:E:726:TYR:CD1	2.97	0.47
1:F:243:GLU:CD	1:F:243:GLU:N	2.65	0.47
1:F:352:GLU:HA	1:F:355:ARG:HH21	1.78	0.47
1:F:597:VAL:HG22	1:F:620:LYS:HB3	1.96	0.47
1:A:292:ASP:OD1	1:A:293:CYS:N	2.48	0.47
1:B:461:ALA:O	1:B:464:ALA:HB3	2.15	0.47
1:E:263:VAL:HG22	1:E:341:LEU:HD13	1.96	0.47
1:F:373:MET:HE2	1:F:373:MET:N	2.29	0.47
1:E:36:LEU:O	1:E:36:LEU:HD12	2.15	0.47
1:E:725:LEU:HD11	1:E:726:TYR:CG	2.44	0.47
1:F:627:ILE:HG13	1:F:653:PRO:HG2	1.97	0.47
1:F:650:THR:HA	1:F:672:ILE:N	2.29	0.47
1:C:166:PHE:HA	1:C:387:ARG:NH1	2.30	0.47
1:C:376:MET:HE3	1:C:377:ILE:HD13	1.77	0.47
1:C:472:LEU:HG	1:C:474:LEU:HD21	1.96	0.47
1:E:103:LEU:HD11	1:E:303:TYR:HE2	1.79	0.47
1:E:630:ILE:HB	1:E:655:HIS:HB2	1.97	0.47
1:E:703:GLY:HA3	1:E:724:GLU:HB3	1.96	0.47
1:B:126:TYR:C	1:B:130:LEU:HG	2.34	0.46
1:B:518:GLU:OE1	1:B:520:TYR:OH	2.22	0.46
1:C:463:ILE:HD12	1:C:466:LEU:HD12	1.98	0.46
1:C:517:GLU:O	1:C:545:LYS:N	2.39	0.46
1:F:129:TYR:O	1:F:133:ILE:HG23	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:252:VAL:HB	1:B:370:PHE:CZ	2.50	0.46
1:B:415:ARG:NH2	1:B:415:ARG:C	2.69	0.46
1:E:376:MET:SD	1:E:377:ILE:N	2.88	0.46
1:F:161:ILE:HG13	1:F:162:LEU:N	2.30	0.46
1:F:535:LEU:HD21	1:F:538:LEU:HD11	1.97	0.46
1:F:779:ARG:CZ	1:F:782:LEU:HD23	2.46	0.46
1:B:503:MET:SD	1:B:506:LEU:HD13	2.55	0.46
1:C:564:SER:HA	1:C:567:LEU:HB3	1.96	0.46
1:D:46:GLN:O	1:D:50:ASP:HB3	2.15	0.46
1:D:52:ILE:HD11	1:D:308:CYS:HB3	1.95	0.46
1:E:764:PHE:HD2	1:E:767:LEU:HD21	1.80	0.46
1:G:54:CYS:C	1:G:55:LEU:CD2	2.68	0.46
1:B:370:PHE:HA	1:B:373:MET:HG2	1.98	0.46
1:E:414:LEU:HD22	1:E:428:LEU:HD21	1.97	0.46
1:E:639:LEU:HD21	1:E:642:LEU:HD12	1.97	0.46
1:F:52:ILE:HD11	1:F:308:CYS:HB3	1.97	0.46
1:F:395:VAL:HG12	1:F:399:LYS:HE3	1.98	0.46
1:B:425:ARG:NH1	1:B:471:GLU:HB2	2.30	0.46
1:C:473:SER:C	1:C:474:LEU:HD23	2.36	0.46
1:D:52:ILE:CG2	1:D:116:TYR:HB2	2.42	0.46
1:E:644:LEU:HD13	1:E:649:ILE:HD13	1.97	0.46
1:F:311:THR:OG1	1:F:312:MET:SD	2.66	0.46
1:F:461:ALA:HB2	1:F:482:HIS:ND1	2.30	0.46
1:F:473:SER:C	1:F:474:LEU:HD22	2.36	0.46
1:B:145:TRP:CE2	1:B:262:TYR:CD1	3.04	0.46
1:F:113:GLN:OE1	1:G:311:THR:HG22	2.15	0.46
1:F:432:MET:HA	1:F:432:MET:CE	2.44	0.46
1:B:162:LEU:N	1:B:388:PHE:CE1	2.62	0.46
1:B:266:THR:HA	1:B:269:LYS:HD2	1.98	0.46
1:C:279:TYR:HD1	1:C:283:LEU:HD12	1.81	0.46
1:C:376:MET:HE3	1:C:377:ILE:CB	2.43	0.46
1:D:127:PHE:C	1:D:127:PHE:CD2	2.89	0.46
1:F:298:GLN:HB2	1:F:304:LYS:HB2	1.97	0.46
1:G:312:MET:O	1:G:316:PHE:HD1	1.98	0.46
1:A:57:LYS:HA	1:G:300:MET:CE	2.45	0.46
1:C:489:LEU:CA	1:C:493:LEU:HD13	2.40	0.46
1:C:560:VAL:O	1:C:564:SER:N	2.32	0.46
1:F:390:LEU:HD12	1:F:390:LEU:C	2.36	0.46
1:B:161:ILE:HG13	1:B:162:LEU:HD12	1.98	0.46
1:B:346:LEU:HD22	1:B:375:HIS:CE1	2.51	0.46
1:B:409:TRP:CZ3	1:B:433:LEU:CD2	2.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:242:PHE:CG	1:C:391:PHE:CE2	3.04	0.46
1:E:559:ALA:O	1:E:562:ASP:HB2	2.16	0.46
1:F:263:VAL:HG22	1:F:341:LEU:HD11	1.98	0.46
1:A:297:ILE:O	1:A:300:MET:HB2	2.16	0.46
1:C:103:LEU:HB2	1:C:108:TYR:CZ	2.51	0.46
1:C:395:VAL:HG12	1:C:399:LYS:HE3	1.98	0.46
1:C:446:LEU:HG	1:C:469:LEU:HD12	1.98	0.46
1:E:19:VAL:HG23	1:E:20:LEU:HD22	1.97	0.46
1:E:354:VAL:O	1:E:358:THR:OG1	2.27	0.46
1:F:265:GLN:HA	1:F:268:LEU:HD11	1.97	0.46
1:F:398:ASN:HA	1:F:401:LYS:HE2	1.97	0.46
1:F:433:LEU:O	1:F:454:ILE:HG23	2.16	0.46
1:F:507:PRO:HB2	1:F:509:TRP:CE2	2.51	0.46
1:G:123:TYR:O	1:G:127:PHE:N	2.49	0.46
1:E:437:PRO:O	1:E:440:VAL:HG23	2.16	0.45
1:E:693:ASN:N	1:E:716:ASN:OD1	2.40	0.45
1:F:555:LYS:HD2	1:F:581:MET:HE1	1.94	0.45
1:C:332:LEU:HD22	1:C:332:LEU:H	1.81	0.45
1:C:531:ARG:NH1	1:C:554:SER:HB2	2.30	0.45
1:C:544:LEU:HB3	1:C:566:HIS:CD2	2.47	0.45
1:D:117:GLU:OE1	1:D:118:ARG:NE	2.46	0.45
1:E:511:TYR:CE2	1:E:536:GLU:HB2	2.51	0.45
1:B:303:TYR:CD1	1:C:96:MET:CE	3.00	0.45
1:C:346:LEU:CD1	1:C:346:LEU:O	2.53	0.45
1:C:479:VAL:C	1:C:480:LYS:CD	2.76	0.45
1:D:297:ILE:O	1:D:300:MET:HB2	2.16	0.45
1:E:570:MET:HA	1:E:570:MET:CE	2.46	0.45
1:F:272:LYS:HA	1:F:275:ILE:CG2	2.46	0.45
1:F:555:LYS:CG	1:F:581:MET:HE1	2.44	0.45
1:F:616:GLU:HA	1:F:641:VAL:HB	1.98	0.45
1:G:57:LYS:CG	1:G:306:PHE:C	2.85	0.45
1:A:131:VAL:HG23	1:A:323:TYR:CZ	2.51	0.45
1:B:144:PHE:CD2	1:B:144:PHE:O	2.70	0.45
1:B:322:CYS:O	1:B:326:PHE:CD2	2.70	0.45
1:B:418:LEU:HG	1:B:428:LEU:HD13	1.98	0.45
1:C:170:TRP:CD1	1:C:400:LEU:HD13	2.52	0.45
1:C:392:LEU:HD23	1:C:392:LEU:O	2.16	0.45
1:E:46:GLN:O	1:E:50:ASP:HB3	2.16	0.45
1:E:431:ILE:O	1:E:432:MET:SD	2.75	0.45
1:F:268:LEU:O	1:F:271:ILE:HD11	2.14	0.45
1:F:430:LEU:CD1	1:F:451:LEU:CD1	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:521:LEU:N	1:F:548:SER:O	2.48	0.45
1:F:538:LEU:HB3	1:F:541:LEU:HD12	1.97	0.45
1:B:411:PRO:CD	1:B:439:THR:HG21	2.42	0.45
1:E:397:GLU:HG2	1:E:401:LYS:HZ3	1.81	0.45
1:E:757:LEU:CD2	1:E:759:VAL:HG22	2.38	0.45
1:F:411:PRO:HA	1:F:414:LEU:HD12	1.99	0.45
1:F:550:LYS:NZ	1:F:573:HIS:HB2	2.32	0.45
1:F:614:LEU:HD11	1:F:616:GLU:O	2.16	0.45
1:E:106:GLN:NE2	1:F:108:TYR:HB3	2.32	0.45
1:E:132:LEU:HD22	1:E:132:LEU:N	2.30	0.45
1:E:238:ALA:HB3	1:E:400:LEU:HD21	1.98	0.45
1:F:510:MET:HE1	1:F:511:TYR:CG	2.51	0.45
1:B:28:THR:HA	1:B:330:TYR:CZ	2.52	0.45
1:B:161:ILE:O	1:B:388:PHE:CZ	2.69	0.45
1:B:239:LYS:HD3	1:B:404:ASN:HD22	1.82	0.45
1:B:414:LEU:HD22	1:B:428:LEU:HD21	1.99	0.45
1:C:449:LEU:HB2	1:C:469:LEU:HD11	1.97	0.45
1:E:241:LEU:HA	1:E:244:LYS:NZ	2.32	0.45
1:E:544:LEU:HB3	1:E:563:VAL:HG21	1.98	0.45
1:F:300:MET:HG2	1:G:57:LYS:HA	1.98	0.45
1:F:507:PRO:O	1:F:510:MET:CG	2.64	0.45
1:F:638:LYS:HD3	1:F:638:LYS:HA	1.79	0.45
1:F:650:THR:HA	1:F:672:ILE:CA	2.47	0.45
1:A:37:MET:N	1:A:37:MET:SD	2.90	0.45
1:B:57:LYS:HB3	1:B:305:ASN:HB3	1.98	0.45
1:B:251:HIS:C	1:B:251:HIS:ND1	2.69	0.45
1:C:151:SER:HB2	1:C:258:LEU:HD13	1.99	0.45
1:C:472:LEU:O	1:C:497:SER:N	2.38	0.45
1:C:513:LEU:O	1:C:541:LEU:HB2	2.17	0.45
1:D:111:ILE:CD1	1:D:297:ILE:HG21	2.47	0.45
1:D:123:TYR:CE2	1:D:283:LEU:O	2.70	0.45
1:E:166:PHE:CE1	1:E:387:ARG:HD2	2.51	0.45
1:E:238:ALA:HB1	1:E:391:PHE:CZ	2.51	0.45
1:E:485:ALA:O	1:E:489:LEU:CG	2.49	0.45
1:E:634:GLN:NE2	1:E:659:LEU:HG	2.31	0.45
1:E:759:VAL:O	1:E:762:ASN:ND2	2.50	0.45
1:B:503:MET:HE3	1:B:503:MET:CA	2.47	0.45
1:C:242:PHE:CD2	1:C:391:PHE:CE2	3.04	0.45
1:C:297:ILE:O	1:C:300:MET:HB3	2.17	0.45
1:C:437:PRO:HB2	1:C:440:VAL:HG23	1.98	0.45
1:C:490:LYS:HG2	1:C:513:LEU:HA	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:461:ALA:HB2	1:E:482:HIS:ND1	2.32	0.45
1:E:712:SER:HA	1:E:735:LYS:HB2	1.98	0.45
1:F:123:TYR:HD1	1:F:283:LEU:HD22	1.82	0.45
1:F:348:GLU:OE2	1:F:365:ASP:HB3	2.17	0.45
1:F:426:LEU:HB3	1:F:446:LEU:HA	1.97	0.45
1:B:153:SER:OG	1:B:154:LYS:NZ	2.40	0.45
1:B:503:MET:CE	1:B:506:LEU:CB	2.93	0.45
1:C:363:ILE:CG2	1:C:392:LEU:HD22	2.44	0.45
1:C:390:LEU:O	1:C:393:SER:N	2.49	0.45
1:E:463:ILE:HD11	1:E:489:LEU:HD21	1.90	0.45
1:E:554:SER:HB2	1:E:580:VAL:HG22	1.99	0.45
1:F:459:ILE:HG22	1:F:481:ILE:HA	1.98	0.45
1:F:557:PRO:O	1:F:584:ASN:ND2	2.50	0.45
1:C:37:MET:HA	1:C:40:VAL:HG12	1.99	0.44
1:E:121:HIS:CE1	1:E:123:TYR:HB3	2.53	0.44
1:E:341:LEU:HA	1:E:341:LEU:HD23	1.83	0.44
1:F:726:TYR:HD1	1:F:751:LEU:HD23	1.82	0.44
1:B:43:CYS:SG	1:B:132:LEU:HD23	2.57	0.44
1:B:137:VAL:HB	1:B:272:LYS:NZ	2.32	0.44
1:B:252:VAL:HB	1:B:370:PHE:CE2	2.51	0.44
1:B:409:TRP:CE2	1:B:433:LEU:HD21	2.52	0.44
1:C:300:MET:HE3	1:D:57:LYS:HA	1.99	0.44
1:F:273:PHE:HD2	1:F:274:LEU:HD22	1.80	0.44
1:F:721:LEU:HB2	1:F:725:LEU:HD21	1.99	0.44
1:B:297:ILE:CG1	1:B:300:MET:HE2	2.48	0.44
1:B:425:ARG:HG2	1:B:447:GLN:HG2	2.00	0.44
1:B:472:LEU:O	1:B:497:SER:N	2.44	0.44
1:F:271:ILE:CD1	1:F:271:ILE:C	2.83	0.44
1:F:458:MET:SD	1:F:481:ILE:O	2.76	0.44
1:F:740:SER:HA	1:F:763:HIS:ND1	2.33	0.44
1:E:246:LYS:O	1:E:249:ARG:HG2	2.17	0.44
1:E:497:SER:HA	1:E:520:TYR:HB2	1.99	0.44
1:F:132:LEU:C	1:F:136:LEU:HD23	2.34	0.44
1:E:452:GLU:HG2	1:E:475:HIS:HB2	1.99	0.44
1:F:121:HIS:ND1	1:F:123:TYR:HB3	2.33	0.44
1:F:157:HIS:ND1	1:F:248:PHE:HD2	2.16	0.44
1:F:283:LEU:HD23	1:F:283:LEU:HA	1.84	0.44
1:G:57:LYS:HD2	1:G:292:ASP:OD2	2.18	0.44
1:G:100:LYS:HG3	1:G:100:LYS:O	2.17	0.44
1:G:297:ILE:O	1:G:297:ILE:HG22	2.17	0.44
1:A:318:LYS:HA	1:A:318:LYS:HD3	1.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:58:ARG:NH2	1:B:305:ASN:OD1	2.51	0.44
1:B:363:ILE:N	1:B:364:PRO:HD3	2.32	0.44
1:E:738:LYS:HA	1:E:761:GLY:HA3	2.00	0.44
1:F:120:LEU:HD12	1:F:120:LEU:HA	1.81	0.44
1:F:452:GLU:HG3	1:F:475:HIS:CG	2.53	0.44
1:F:671:LYS:O	1:F:694:ASP:OD2	2.35	0.44
1:G:57:LYS:NZ	1:G:57:LYS:HB3	2.33	0.44
1:A:309:ASN:HD21	1:G:114:MET:HE1	1.82	0.44
1:B:441:PHE:HA	1:B:466:LEU:HD21	2.00	0.44
1:C:376:MET:SD	1:C:376:MET:O	2.75	0.44
1:E:768:PRO:HA	1:E:769:PRO:HD3	1.92	0.44
1:F:360:ILE:HG13	1:F:360:ILE:O	2.18	0.44
1:B:54:CYS:O	1:B:55:LEU:HD12	2.17	0.44
1:B:157:HIS:CE1	1:B:248:PHE:HB2	2.53	0.44
1:C:425:ARG:HE	1:C:470:GLN:HB3	1.82	0.44
1:F:263:VAL:HG13	1:F:341:LEU:HD21	2.00	0.44
1:B:145:TRP:CZ3	1:B:262:TYR:CE2	3.04	0.44
1:C:452:GLU:O	1:C:454:ILE:HG13	2.18	0.44
1:C:478:SER:O	1:C:480:LYS:CE	2.65	0.44
1:C:525:LEU:CD2	1:C:533:VAL:CB	2.95	0.44
1:E:165:CYS:SG	1:E:388:PHE:HA	2.57	0.44
1:E:427:GLU:HA	1:E:448:SER:O	2.18	0.44
1:E:725:LEU:HD11	1:E:726:TYR:CE1	2.53	0.44
1:G:57:LYS:CD	1:G:306:PHE:C	2.87	0.44
1:B:370:PHE:CD1	1:B:373:MET:CE	3.01	0.43
1:C:127:PHE:HD2	1:C:128:PRO:CD	2.31	0.43
1:C:357:GLU:HG2	1:C:358:THR:N	2.32	0.43
1:E:249:ARG:O	1:E:253:GLU:HG3	2.18	0.43
1:E:507:PRO:HA	1:E:508:PRO:HD3	1.88	0.43
1:F:732:LYS:HA	1:F:754:LEU:HA	2.00	0.43
1:G:122:TRP:HA	1:G:125:LYS:HE2	2.00	0.43
1:B:38:ILE:HD11	1:B:326:PHE:CE2	2.53	0.43
1:B:157:HIS:CE1	1:B:161:ILE:HG21	2.53	0.43
1:B:286:LYS:HA	1:B:286:LYS:HD2	1.78	0.43
1:C:394:GLU:HG3	1:C:398:ASN:HD21	1.83	0.43
1:C:490:LYS:O	1:C:514:ARG:HG3	2.17	0.43
1:F:138:PHE:HD2	1:F:330:TYR:CZ	2.35	0.43
1:G:131:VAL:HG13	1:G:323:TYR:CZ	2.54	0.43
1:C:458:MET:SD	1:C:480:LYS:HB2	2.57	0.43
1:E:103:LEU:HD11	1:E:303:TYR:CE2	2.53	0.43
1:E:430:LEU:O	1:E:452:GLU:N	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:335:LEU:HD23	1:F:336:TYR:N	2.33	0.43
1:F:721:LEU:HD21	1:F:743:VAL:O	2.17	0.43
1:B:357:GLU:CD	1:B:358:THR:HG23	2.38	0.43
1:C:104:ASP:N	1:C:107:GLN:OE1	2.51	0.43
1:C:127:PHE:CD2	1:C:127:PHE:C	2.92	0.43
1:E:353:TYR:O	1:E:357:GLU:N	2.31	0.43
1:E:449:LEU:HD21	1:E:451:LEU:HD11	1.99	0.43
1:F:714:THR:HA	1:F:737:GLY:HA3	2.01	0.43
1:B:289:PHE:HD2	1:B:314:HIS:HB2	1.84	0.43
1:B:297:ILE:N	1:B:300:MET:HE1	2.26	0.43
1:C:100:LYS:HE3	1:C:100:LYS:HB2	1.78	0.43
1:C:395:VAL:HA	1:C:398:ASN:HD22	1.84	0.43
1:D:122:TRP:HB2	1:D:126:TYR:CE2	2.54	0.43
1:E:464:ALA:HA	1:E:488:PHE:CE1	2.53	0.43
1:F:669:HIS:HA	1:F:692:TYR:HB2	2.01	0.43
1:C:459:ILE:HB	1:C:481:ILE:HG22	2.00	0.43
1:C:546:ILE:HG12	1:C:569:LYS:HB3	2.00	0.43
1:E:39:GLY:CA	1:E:131:VAL:HG11	2.48	0.43
1:E:362:ASP:OD2	1:E:393:SER:OG	2.21	0.43
1:E:426:LEU:HB3	1:E:447:GLN:H	1.83	0.43
1:E:651:TYR:HE1	1:E:674:VAL:H	1.66	0.43
1:F:476:GLN:N	1:F:499:LYS:O	2.48	0.43
1:F:499:LYS:HA	1:F:522:VAL:HB	1.99	0.43
1:A:52:ILE:HD11	1:A:309:ASN:HA	2.01	0.43
1:B:354:VAL:HG12	1:B:360:ILE:HD11	2.00	0.43
1:C:262:TYR:HE2	1:C:341:LEU:CD1	2.26	0.43
1:F:48:MET:SD	1:F:48:MET:O	2.77	0.43
1:F:110:PHE:CD2	1:G:55:LEU:HD11	2.53	0.43
1:F:369:ASP:O	1:F:373:MET:HE2	2.18	0.43
1:F:432:MET:SD	1:F:453:ILE:O	2.76	0.43
1:A:127:PHE:CD2	1:A:127:PHE:C	2.92	0.43
1:B:46:GLN:NE2	1:B:129:TYR:CZ	2.87	0.43
1:B:481:ILE:HD13	1:B:489:LEU:HD12	2.01	0.43
1:C:494:LYS:C	1:C:516:LEU:CD1	2.87	0.43
1:E:268:LEU:HA	1:E:271:ILE:CD1	2.49	0.43
1:E:268:LEU:HA	1:E:271:ILE:HG12	1.99	0.43
1:E:367:LYS:HD3	1:E:368:ASN:N	2.32	0.43
1:F:158:PHE:HA	1:F:161:ILE:HG12	2.01	0.43
1:F:444:THR:O	1:F:468:ASN:HB3	2.18	0.43
1:F:472:LEU:O	1:F:496:LEU:CD1	2.64	0.43
1:B:170:TRP:NE1	1:B:400:LEU:HD13	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:277:ILE:HD13	1:B:277:ILE:N	2.34	0.43
1:B:419:GLN:O	1:B:427:GLU:N	2.37	0.43
1:C:272:LYS:HA	1:C:275:ILE:HG12	2.01	0.43
1:C:363:ILE:CA	1:C:392:LEU:CD2	2.86	0.43
1:C:509:TRP:CE3	1:C:513:LEU:HD21	2.54	0.43
1:E:701:GLU:O	1:E:704:VAL:HG22	2.18	0.43
1:F:240:ALA:CA	1:F:243:GLU:OE2	2.67	0.43
1:F:496:LEU:HD12	1:F:497:SER:H	1.84	0.43
1:B:273:PHE:CD2	1:B:273:PHE:C	2.92	0.43
1:B:441:PHE:CD1	1:B:462:THR:OG1	2.72	0.43
1:C:155:ILE:O	1:C:159:ILE:HG12	2.19	0.43
1:E:782:LEU:HD12	1:E:782:LEU:HA	1.87	0.43
1:F:246:LYS:HB3	1:F:246:LYS:HE2	1.82	0.43
1:F:293:CYS:SG	1:F:306:PHE:HB2	2.59	0.43
1:F:347:ARG:HB3	1:F:368:ASN:ND2	2.33	0.43
1:F:363:ILE:HG12	1:F:392:LEU:HD22	2.01	0.43
1:F:713:ILE:HD12	1:F:718:VAL:HG21	2.00	0.43
1:B:28:THR:CB	1:B:330:TYR:CZ	3.02	0.42
1:B:156:GLU:HA	1:B:159:ILE:HG12	2.00	0.42
1:C:293:CYS:HB2	1:C:295:VAL:HG23	2.01	0.42
1:E:155:ILE:HD13	1:E:155:ILE:N	2.34	0.42
1:E:486:LEU:O	1:E:490:LYS:HG3	2.19	0.42
1:F:329:ILE:HD13	1:F:329:ILE:N	2.34	0.42
1:F:618:ASP:CB	1:F:643:LYS:HB2	2.49	0.42
1:B:113:GLN:NE2	1:C:311:THR:HG22	2.33	0.42
1:C:367:LYS:HE3	1:C:367:LYS:HB3	1.84	0.42
1:C:475:HIS:CD2	1:C:499:LYS:HG3	2.54	0.42
1:E:134:HIS:CE1	1:E:276:ILE:HD11	2.53	0.42
1:E:376:MET:SD	1:E:376:MET:O	2.77	0.42
1:E:415:ARG:HA	1:E:418:LEU:HD12	2.01	0.42
1:F:114:MET:CE	1:F:295:VAL:HG12	2.43	0.42
1:F:164:LYS:HE2	1:F:241:LEU:HD13	2.01	0.42
1:F:249:ARG:HA	1:F:370:PHE:CZ	2.54	0.42
1:F:494:LYS:HB3	1:F:517:GLU:OE1	2.19	0.42
1:G:127:PHE:CD2	1:G:316:PHE:HD2	2.36	0.42
1:C:137:VAL:HG11	1:C:272:LYS:HD2	2.00	0.42
1:E:37:MET:CE	1:E:38:ILE:CA	2.97	0.42
1:E:244:LYS:HA	1:E:247:LYS:HG2	2.01	0.42
1:E:376:MET:HE1	1:E:377:ILE:HD13	1.68	0.42
1:E:627:ILE:O	1:E:630:ILE:HG12	2.19	0.42
1:E:631:VAL:HG13	1:E:655:HIS:CD2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:48:MET:HA	1:F:48:MET:CE	2.48	0.42
1:F:388:PHE:CD2	1:F:388:PHE:C	2.91	0.42
1:F:759:VAL:HG23	1:F:784:VAL:HG12	2.01	0.42
1:F:777:LEU:C	1:F:800:MET:HE3	2.40	0.42
1:A:102:ASP:HB2	1:B:100:LYS:HE2	2.01	0.42
1:C:35:MET:CE	1:C:326:PHE:HB3	2.49	0.42
1:C:545:LYS:O	1:C:569:LYS:N	2.52	0.42
1:E:647:ASN:HB2	1:E:670:ASN:HD21	1.85	0.42
1:E:743:VAL:O	1:E:764:PHE:CE1	2.65	0.42
1:F:381:ASP:HB3	1:F:384:TYR:CD2	2.51	0.42
1:F:555:LYS:CA	1:F:581:MET:HE1	2.43	0.42
1:F:571:CYS:HB3	1:F:573:HIS:NE2	2.34	0.42
1:F:708:LEU:HB3	1:F:731:LEU:HD21	2.00	0.42
1:F:721:LEU:O	1:F:721:LEU:HD12	2.19	0.42
1:C:101:THR:OG1	1:C:108:TYR:OH	2.37	0.42
1:F:347:ARG:O	1:F:368:ASN:HA	2.20	0.42
1:F:654:GLU:HG3	1:F:678:HIS:CD2	2.54	0.42
1:B:406:ASN:ND2	1:B:437:PRO:HA	2.35	0.42
1:C:253:GLU:HB3	1:C:367:LYS:HG3	2.02	0.42
1:C:256:ASP:HA	1:C:369:ASP:HB2	2.02	0.42
1:E:744:LEU:HD12	1:E:764:PHE:CE2	2.53	0.42
1:F:168:SER:O	1:F:171:THR:OG1	2.25	0.42
1:F:240:ALA:HA	1:F:243:GLU:OE2	2.20	0.42
1:F:300:MET:CE	1:G:55:LEU:HD12	2.49	0.42
1:B:402:GLN:OE1	1:B:406:ASN:ND2	2.52	0.42
1:E:130:LEU:CG	1:E:279:TYR:HH	2.30	0.42
1:E:449:LEU:HD12	1:E:449:LEU:C	2.38	0.42
1:E:503:MET:SD	1:E:503:MET:O	2.77	0.42
1:F:429:PRO:CA	1:F:450:LYS:HE3	2.44	0.42
1:F:561:VAL:HG13	1:F:587:LYS:HD2	2.01	0.42
1:F:588:MET:CE	1:F:588:MET:HA	2.50	0.42
1:G:46:GLN:HA	1:G:50:ASP:HB2	2.02	0.42
1:B:488:PHE:O	1:B:492:ASN:HB2	2.20	0.42
1:C:158:PHE:HB2	1:C:248:PHE:CZ	2.55	0.42
1:D:102:ASP:HB2	1:E:100:LYS:HE3	2.02	0.42
1:E:375:HIS:O	1:E:379:GLN:HG2	2.20	0.42
1:E:620:LYS:HA	1:E:645:TRP:HB2	2.02	0.42
1:F:50:ASP:OD2	1:F:50:ASP:O	2.37	0.42
1:A:329:ILE:HG13	1:A:330:TYR:N	2.33	0.42
1:B:170:TRP:CZ3	1:B:390:LEU:HD11	2.55	0.42
1:B:322:CYS:O	1:B:326:PHE:CE1	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:349:TYR:HD2	1:B:375:HIS:CE1	2.37	0.42
1:E:54:CYS:SG	1:E:115:CYS:HB3	2.60	0.42
1:E:578:LYS:HA	1:E:599:CYS:O	2.20	0.42
1:E:676:PRO:HG2	1:E:679:LEU:HD23	2.00	0.42
1:B:56:PRO:HB3	1:B:303:TYR:CG	2.55	0.42
1:B:453:ILE:HD13	1:B:455:LYS:HZ1	1.84	0.42
1:C:428:LEU:HD12	1:C:428:LEU:HA	1.71	0.42
1:E:106:GLN:O	1:E:109:SER:OG	2.32	0.42
1:E:256:ASP:H	1:E:369:ASP:HB3	1.85	0.42
1:E:458:MET:HG2	1:E:480:LYS:HB2	2.01	0.42
1:E:550:LYS:HD2	1:E:550:LYS:HA	1.92	0.42
1:E:760:LYS:HZ2	1:E:785:GLU:HA	1.82	0.42
1:F:170:TRP:CE2	1:F:400:LEU:HD13	2.54	0.42
1:F:432:MET:CE	1:F:432:MET:CA	2.97	0.42
1:F:556:ILE:O	1:F:584:ASN:ND2	2.53	0.42
1:B:289:PHE:CD2	1:B:314:HIS:HB2	2.55	0.41
1:E:41:PHE:HE1	1:E:45:LEU:HD21	1.76	0.41
1:E:778:LYS:O	1:E:782:LEU:N	2.48	0.41
1:F:54:CYS:O	1:F:55:LEU:HD12	2.20	0.41
1:F:145:TRP:CD1	1:F:261:MET:CE	3.00	0.41
1:F:570:MET:HE3	1:F:572:ILE:HG12	2.02	0.41
1:F:634:GLN:O	1:F:637:ARG:NE	2.53	0.41
1:F:711:PHE:HB3	1:F:734:LEU:HD12	2.01	0.41
1:B:50:ASP:HA	1:B:312:MET:SD	2.60	0.41
1:B:107:GLN:O	1:B:111:ILE:HG12	2.20	0.41
1:B:251:HIS:ND1	1:B:251:HIS:O	2.54	0.41
1:C:441:PHE:HA	1:C:466:LEU:HD21	2.02	0.41
1:D:111:ILE:HD11	1:D:306:PHE:CZ	2.54	0.41
1:E:137:VAL:HB	1:E:272:LYS:HZ1	1.84	0.41
1:E:614:LEU:HB3	1:E:636:LEU:HD13	2.01	0.41
1:E:659:LEU:HD23	1:E:659:LEU:HA	1.96	0.41
1:F:355:ARG:HG3	1:F:361:ASP:HA	2.02	0.41
1:F:672:ILE:HD12	1:F:672:ILE:HA	1.84	0.41
1:G:102:ASP:OD1	1:G:102:ASP:N	2.53	0.41
1:G:117:GLU:OE1	1:G:118:ARG:CD	2.67	0.41
1:A:309:ASN:OD1	1:G:113:GLN:OE1	2.38	0.41
1:C:101:THR:HG1	1:C:108:TYR:HH	1.67	0.41
1:C:106:GLN:OE1	1:D:108:TYR:CG	2.73	0.41
1:C:262:TYR:CD2	1:C:262:TYR:C	2.94	0.41
1:C:349:TYR:HD1	1:C:375:HIS:CE1	2.38	0.41
1:E:57:LYS:HD3	1:E:307:SER:OG	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:132:LEU:CD2	1:E:132:LEU:H	2.33	0.41
1:E:398:ASN:HA	1:E:401:LYS:HE2	2.01	0.41
1:E:426:LEU:HB3	1:E:446:LEU:HA	2.01	0.41
1:E:526:SER:CB	1:E:531:ARG:NE	2.77	0.41
1:F:511:TYR:CE2	1:F:536:GLU:HB2	2.55	0.41
1:F:538:LEU:HD12	1:F:560:VAL:HA	2.02	0.41
1:B:165:CYS:HB2	1:B:388:PHE:CE1	2.53	0.41
1:D:291:VAL:HG23	1:D:308:CYS:HB2	2.03	0.41
1:E:383:LEU:HA	1:E:386:LYS:HB3	2.02	0.41
1:E:507:PRO:HB2	1:E:509:TRP:CE2	2.55	0.41
1:F:569:LYS:NZ	1:F:595:GLU:OE1	2.52	0.41
1:B:293:CYS:SG	1:B:306:PHE:HB2	2.60	0.41
1:E:272:LYS:O	1:E:275:ILE:HG12	2.21	0.41
1:E:346:LEU:HB3	1:E:375:HIS:CD2	2.56	0.41
1:E:646:HIS:HA	1:E:669:HIS:O	2.20	0.41
1:B:134:HIS:ND1	1:B:276:ILE:HD11	2.29	0.41
1:B:168:SER:O	1:B:171:THR:OG1	2.30	0.41
1:B:425:ARG:HD2	1:B:471:GLU:OE1	2.21	0.41
1:C:286:LYS:HA	1:C:286:LYS:HD2	1.82	0.41
1:C:473:SER:HA	1:C:497:SER:HB3	2.02	0.41
1:C:563:VAL:O	1:C:566:HIS:N	2.45	0.41
1:E:467:ASP:HA	1:E:488:PHE:HZ	1.85	0.41
1:E:675:LEU:H	1:E:675:LEU:HD23	1.85	0.41
1:E:726:TYR:CZ	1:E:745:SER:HB3	2.55	0.41
1:F:597:VAL:HA	1:F:620:LYS:HB3	2.01	0.41
1:B:337:THR:HA	1:B:340:TRP:HB3	2.03	0.41
1:B:347:ARG:O	1:B:368:ASN:HA	2.20	0.41
1:B:463:ILE:HD12	1:B:466:LEU:HD12	2.02	0.41
1:E:58:ARG:HD2	1:E:305:ASN:ND2	2.36	0.41
1:E:130:LEU:CD2	1:E:279:TYR:HH	2.30	0.41
1:E:170:TRP:CD2	1:E:400:LEU:HD22	2.56	0.41
1:E:474:LEU:HD23	1:E:474:LEU:HA	1.90	0.41
1:E:511:TYR:CD2	1:E:536:GLU:HB2	2.56	0.41
1:F:238:ALA:HB1	1:F:391:PHE:HZ	1.85	0.41
1:F:643:LYS:HB3	1:F:645:TRP:HD1	1.84	0.41
1:A:127:PHE:CD2	1:A:316:PHE:CE2	3.09	0.41
1:B:346:LEU:HD22	1:B:375:HIS:CD2	2.55	0.41
1:C:158:PHE:HB2	1:C:248:PHE:HZ	1.86	0.41
1:E:242:PHE:CE2	1:E:400:LEU:HD23	2.44	0.41
1:E:444:THR:HA	1:E:466:LEU:HG	2.03	0.41
1:E:654:GLU:HA	1:E:678:HIS:CD2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:106:GLN:NE2	1:B:108:TYR:HB3	2.36	0.41
1:B:130:LEU:O	1:B:133:ILE:HG22	2.21	0.41
1:B:418:LEU:HD22	1:B:426:LEU:HG	2.03	0.41
1:B:425:ARG:HH11	1:B:471:GLU:HB2	1.86	0.41
1:B:453:ILE:HD13	1:B:453:ILE:HA	1.85	0.41
1:C:41:PHE:CD2	1:C:45:LEU:HD13	2.56	0.41
1:C:239:LYS:HE3	1:C:401:LYS:HG2	2.02	0.41
1:C:517:GLU:HA	1:C:543:SER:O	2.21	0.41
1:E:164:LYS:HZ3	1:E:244:LYS:HE3	1.85	0.41
1:E:543:SER:O	1:E:543:SER:OG	2.35	0.41
1:E:578:LYS:NZ	1:E:601:LEU:O	2.52	0.41
1:E:582:LEU:HD23	1:E:585:LEU:HD23	2.01	0.41
1:F:48:MET:SD	1:F:48:MET:C	2.99	0.41
1:F:273:PHE:CZ	1:F:331:GLY:HA3	2.56	0.41
1:F:618:ASP:OD1	1:F:619:LEU:N	2.54	0.41
1:F:644:LEU:HD23	1:F:644:LEU:HA	1.83	0.41
1:B:149:PRO:HB2	1:C:380:TYR:CE1	2.56	0.41
1:B:171:THR:HA	1:B:390:LEU:HD21	2.01	0.41
1:C:95:GLU:HG2	1:C:96:MET:N	2.36	0.41
1:C:298:GLN:C	1:C:300:MET:H	2.22	0.41
1:C:433:LEU:HD23	1:C:433:LEU:HA	1.98	0.41
1:C:448:SER:HA	1:C:471:GLU:O	2.21	0.41
1:C:474:LEU:HB2	1:C:498:VAL:HA	2.02	0.41
1:E:433:LEU:HD23	1:E:433:LEU:HA	1.89	0.41
1:E:646:HIS:HD2	1:E:669:HIS:HB2	1.86	0.41
1:E:673:GLU:O	1:E:695:ILE:HD13	2.21	0.41
1:F:276:ILE:HA	1:F:279:TYR:CE2	2.56	0.41
1:F:782:LEU:CD1	1:F:784:VAL:CG1	2.86	0.41
1:G:284:VAL:HG21	1:G:324:LEU:HD11	2.03	0.41
1:A:133:ILE:O	1:A:137:VAL:HG13	2.21	0.40
1:B:376:MET:CE	1:B:377:ILE:CD1	2.97	0.40
1:C:137:VAL:HB	1:C:272:LYS:HZ2	1.86	0.40
1:C:425:ARG:NE	1:C:470:GLN:HB3	2.36	0.40
1:E:54:CYS:O	1:E:55:LEU:HD22	2.21	0.40
1:E:127:PHE:HB3	1:E:128:PRO:HD3	2.03	0.40
1:E:683:ASN:O	1:E:707:SER:OG	2.23	0.40
1:E:766:ILE:HA	1:E:791:THR:HG21	2.02	0.40
1:F:367:LYS:HE3	1:F:367:LYS:HB3	1.88	0.40
1:F:424:ASN:O	1:F:424:ASN:ND2	2.54	0.40
1:F:461:ALA:HB2	1:F:482:HIS:CE1	2.56	0.40
1:F:712:SER:HA	1:F:735:LYS:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:30:TYR:HD1	1:B:30:TYR:HA	1.74	0.40
1:B:126:TYR:CB	1:B:130:LEU:HD21	2.51	0.40
1:B:253:GLU:HG2	1:B:367:LYS:HB2	2.03	0.40
1:B:303:TYR:CD1	1:C:96:MET:HE1	2.56	0.40
1:E:463:ILE:CD1	1:E:489:LEU:HD23	2.48	0.40
1:E:663:GLU:CD	1:E:686:ARG:HH12	2.24	0.40
1:F:277:ILE:HD13	1:F:277:ILE:HA	1.93	0.40
1:F:654:GLU:HG3	1:F:678:HIS:NE2	2.36	0.40
1:B:351:PHE:C	1:B:353:TYR:H	2.25	0.40
1:D:310:HIS:CE1	1:D:312:MET:H	2.39	0.40
1:E:117:GLU:OE1	1:E:118:ARG:HA	2.21	0.40
1:E:380:TYR:HE2	1:E:384:TYR:CE2	2.39	0.40
1:E:598:HIS:ND1	1:E:621:GLU:OE1	2.54	0.40
1:E:673:GLU:C	1:E:695:ILE:HD13	2.42	0.40
1:E:735:LYS:HE2	1:E:735:LYS:HB3	1.85	0.40
1:F:246:LYS:HA	1:F:249:ARG:HG2	2.03	0.40
1:F:286:LYS:HA	1:F:286:LYS:HD2	1.79	0.40
1:F:512:GLY:HA2	1:F:540:ASP:OD2	2.21	0.40
1:B:297:ILE:HD12	1:B:300:MET:HE2	2.00	0.40
1:C:105:LEU:HD12	1:C:106:GLN:N	2.37	0.40
1:C:421:ASN:HD21	1:C:425:ARG:HB2	1.87	0.40
1:E:441:PHE:HA	1:E:466:LEU:HD11	2.04	0.40
1:E:556:ILE:HG23	1:E:584:ASN:HB2	2.03	0.40
1:E:638:LYS:HA	1:E:638:LYS:HD3	1.92	0.40
1:E:706:GLN:NE2	1:E:729:LYS:H	2.20	0.40
1:F:144:PHE:HA	1:F:147:LYS:HB2	2.04	0.40
1:F:415:ARG:HA	1:F:418:LEU:HD12	2.03	0.40
1:F:547:LEU:O	1:F:571:CYS:N	2.54	0.40
1:F:625:LYS:HE3	1:F:625:LYS:HB2	1.85	0.40
1:C:127:PHE:O	1:C:130:LEU:HG	2.22	0.40
1:C:506:LEU:HD12	1:C:507:PRO:HD2	2.04	0.40
1:E:458:MET:SD	1:E:482:HIS:N	2.88	0.40
1:E:755:SER:HB3	1:E:776:ALA:HB1	2.03	0.40
1:F:136:LEU:HD22	1:F:136:LEU:H	1.87	0.40
1:F:519:LEU:O	1:F:548:SER:N	2.53	0.40
1:F:569:LYS:HZ3	1:F:593:GLU:HB3	1.87	0.40
1:F:673:GLU:HA	1:F:694:ASP:C	2.41	0.40
1:F:726:TYR:HA	1:F:751:LEU:HD21	2.04	0.40
1:F:778:LYS:N	1:F:800:MET:CE	2.84	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	116/811 (14%)	109 (94%)	7 (6%)	0	100	100
1	B	408/811 (50%)	383 (94%)	25 (6%)	0	100	100
1	C	450/811 (56%)	418 (93%)	32 (7%)	0	100	100
1	D	102/811 (13%)	97 (95%)	5 (5%)	0	100	100
1	E	684/811 (84%)	640 (94%)	44 (6%)	0	100	100
1	F	684/811 (84%)	629 (92%)	55 (8%)	0	100	100
1	G	110/811 (14%)	104 (94%)	6 (6%)	0	100	100
All	All	2554/5677 (45%)	2380 (93%)	174 (7%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	112/756 (15%)	109 (97%)	3 (3%)	40	60
1	B	384/756 (51%)	371 (97%)	13 (3%)	32	53
1	C	422/756 (56%)	412 (98%)	10 (2%)	44	63
1	D	100/756 (13%)	96 (96%)	4 (4%)	27	48
1	E	642/756 (85%)	628 (98%)	14 (2%)	47	66
1	F	642/756 (85%)	624 (97%)	18 (3%)	38	59
1	G	107/756 (14%)	105 (98%)	2 (2%)	52	70

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
All	All	2409/5292 (46%)	2345 (97%)	64 (3%)	41 60

All (64) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	37	MET
1	A	127	PHE
1	A	129	TYR
1	B	27	PHE
1	B	50	ASP
1	B	144	PHE
1	B	251	HIS
1	B	273	PHE
1	B	300	MET
1	B	326	PHE
1	B	330	TYR
1	B	372	PHE
1	B	388	PHE
1	B	415	ARG
1	B	473	SER
1	B	503	MET
1	C	41	PHE
1	C	127	PHE
1	C	262	TYR
1	C	336	TYR
1	C	376	MET
1	C	390	LEU
1	C	391	PHE
1	C	493	LEU
1	C	540	ASP
1	C	555	LYS
1	D	50	ASP
1	D	123	TYR
1	D	127	PHE
1	D	292	ASP
1	E	37	MET
1	E	48	MET
1	E	104	ASP
1	E	123	TYR
1	E	139	MET
1	E	144	PHE
1	E	279	TYR

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Mol	Chain	Res	Type
1	E	456	ASN
1	E	555	LYS
1	E	570	MET
1	E	671	LYS
1	E	725	LEU
1	E	764	PHE
1	E	766	ILE
1	F	41	PHE
1	F	138	PHE
1	F	261	MET
1	F	268	LEU
1	F	283	LEU
1	F	296	ASP
1	F	299	ASP
1	F	388	PHE
1	F	391	PHE
1	F	450	LYS
1	F	458	MET
1	F	510	MET
1	F	531	ARG
1	F	555	LYS
1	F	581	MET
1	F	666	SER
1	F	759	VAL
1	F	765	GLU
1	G	102	ASP
1	G	104	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (19) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	46	GLN
1	B	134	HIS
1	B	375	HIS
1	B	404	ASN
1	B	419	GLN
1	C	288	GLN
1	C	398	ASN
1	C	406	ASN
1	C	566	HIS
1	E	375	HIS
1	E	670	ASN

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Mol	Chain	Res	Type
1	E	678	HIS
1	F	106	GLN
1	F	310	HIS
1	F	492	ASN
1	F	678	HIS
1	G	106	GLN
1	G	112	ASN
1	G	121	HIS

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

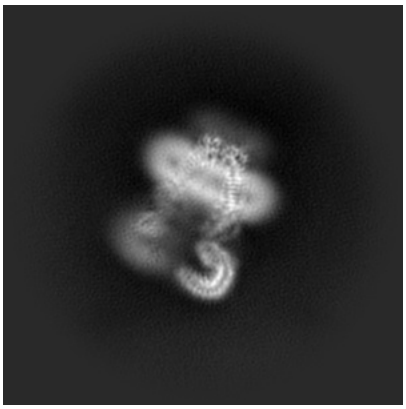
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-50123. These allow visual inspection of the internal detail of the map and identification of artifacts.

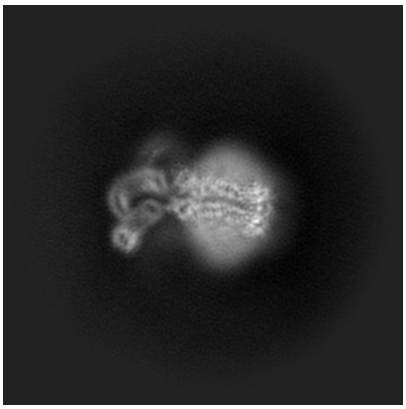
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

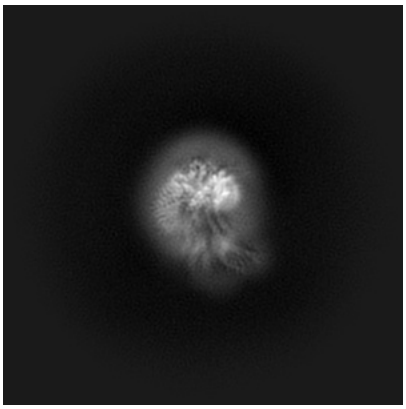
6.1.1 Primary map



X

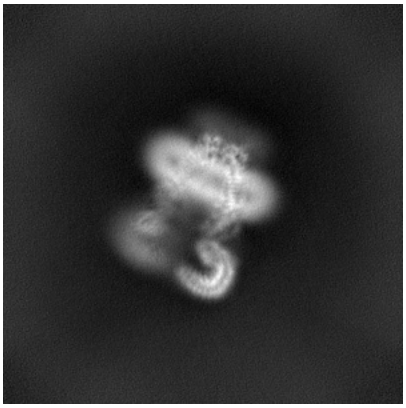


Y

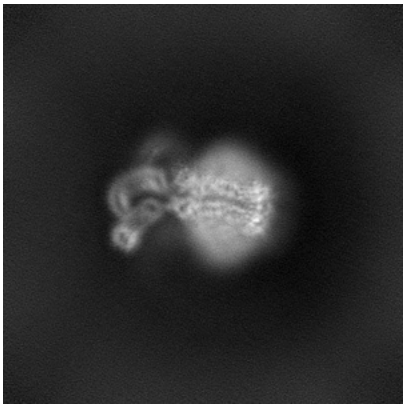


Z

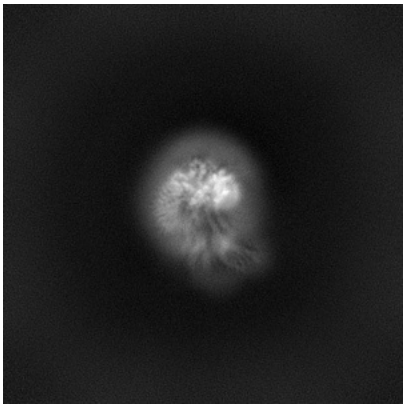
6.1.2 Raw map



X



Y

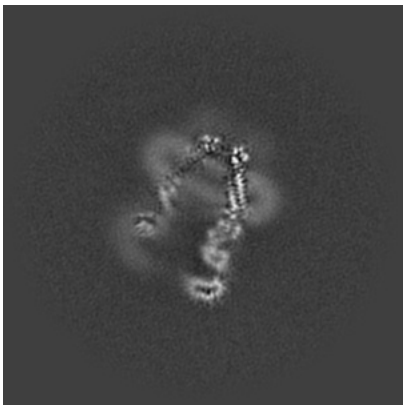


Z

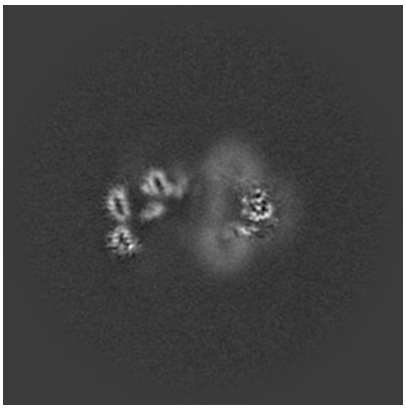
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

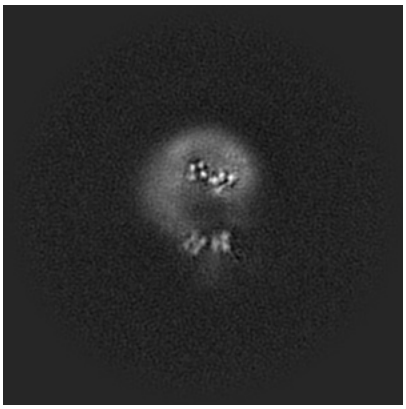
6.2.1 Primary map



X Index: 168

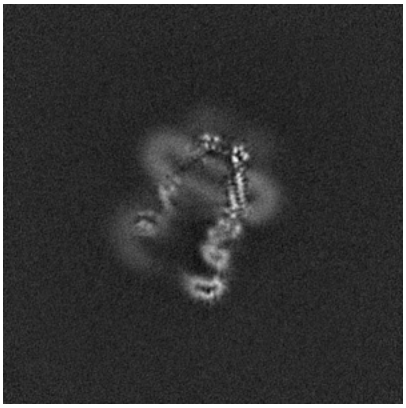


Y Index: 168

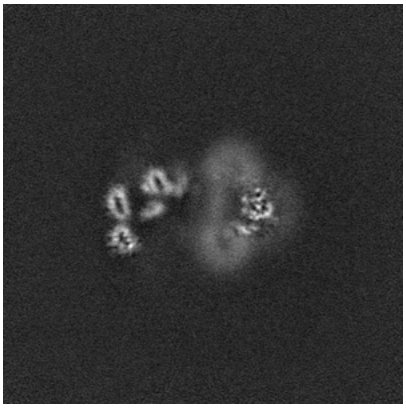


Z Index: 168

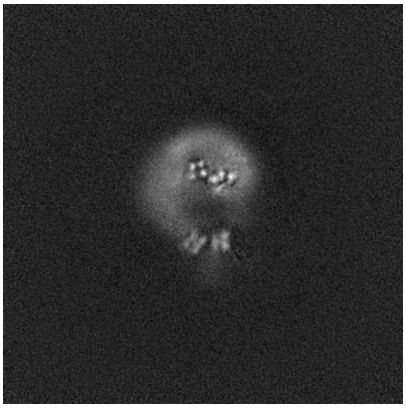
6.2.2 Raw map



X Index: 168



Y Index: 168

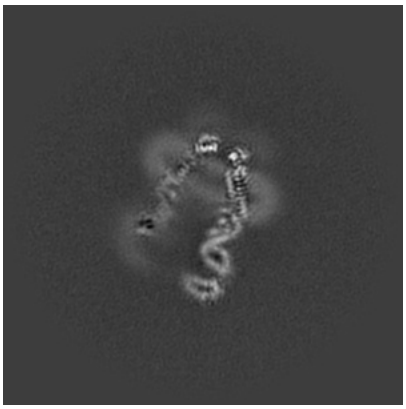


Z Index: 168

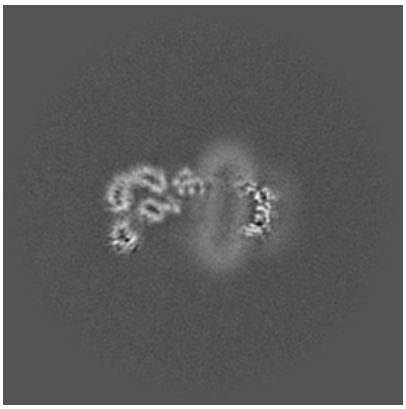
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

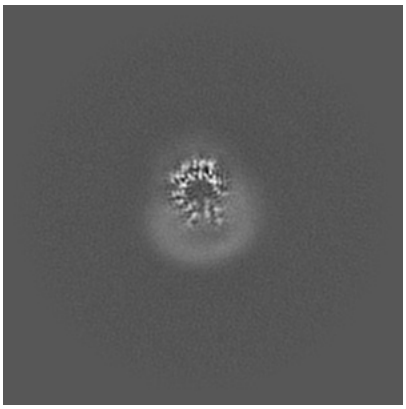
6.3.1 Primary map



X Index: 165

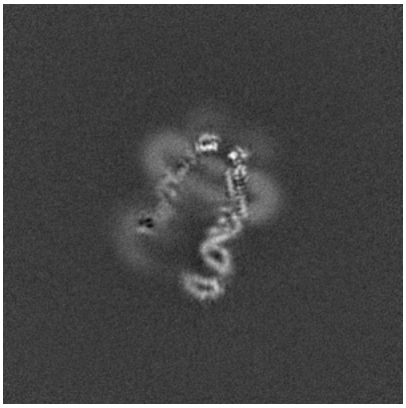


Y Index: 178

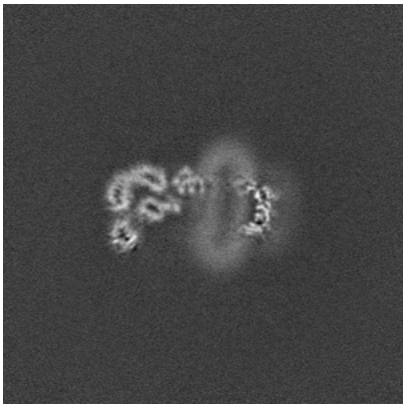


Z Index: 208

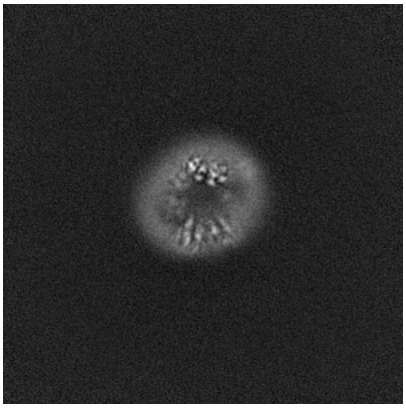
6.3.2 Raw map



X Index: 165



Y Index: 178

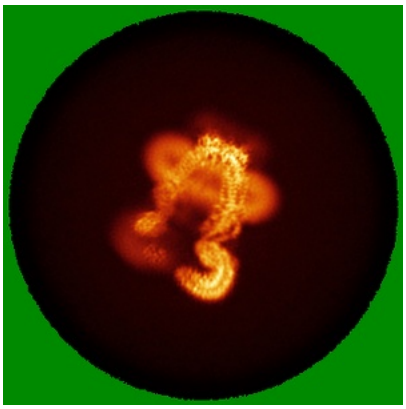


Z Index: 190

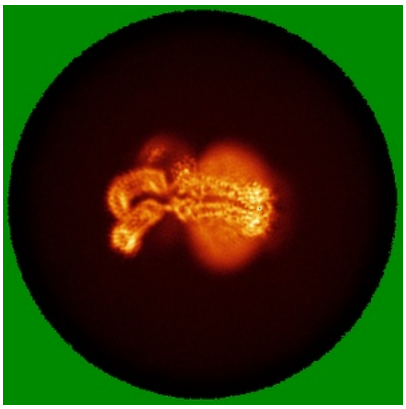
The images above show the largest variance slices of the map in three orthogonal directions.

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

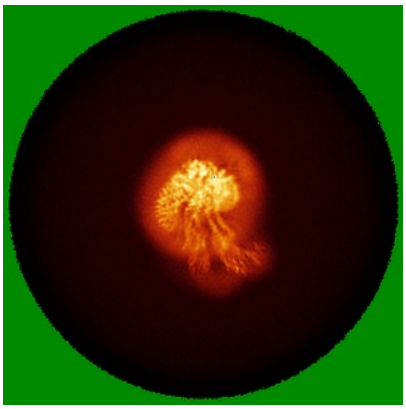
6.4.1 Primary map



X

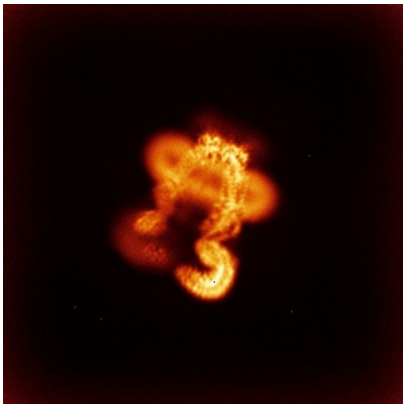


Y

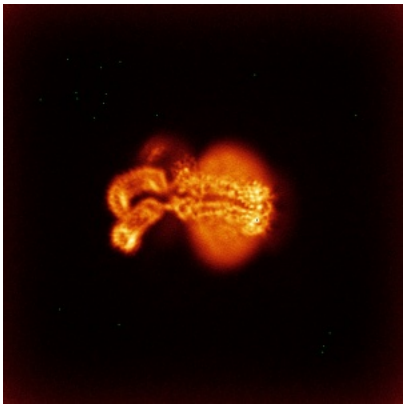


Z

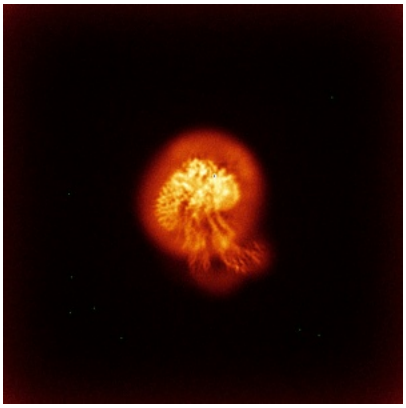
6.4.2 Raw map



X



Y



Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.811. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map

X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

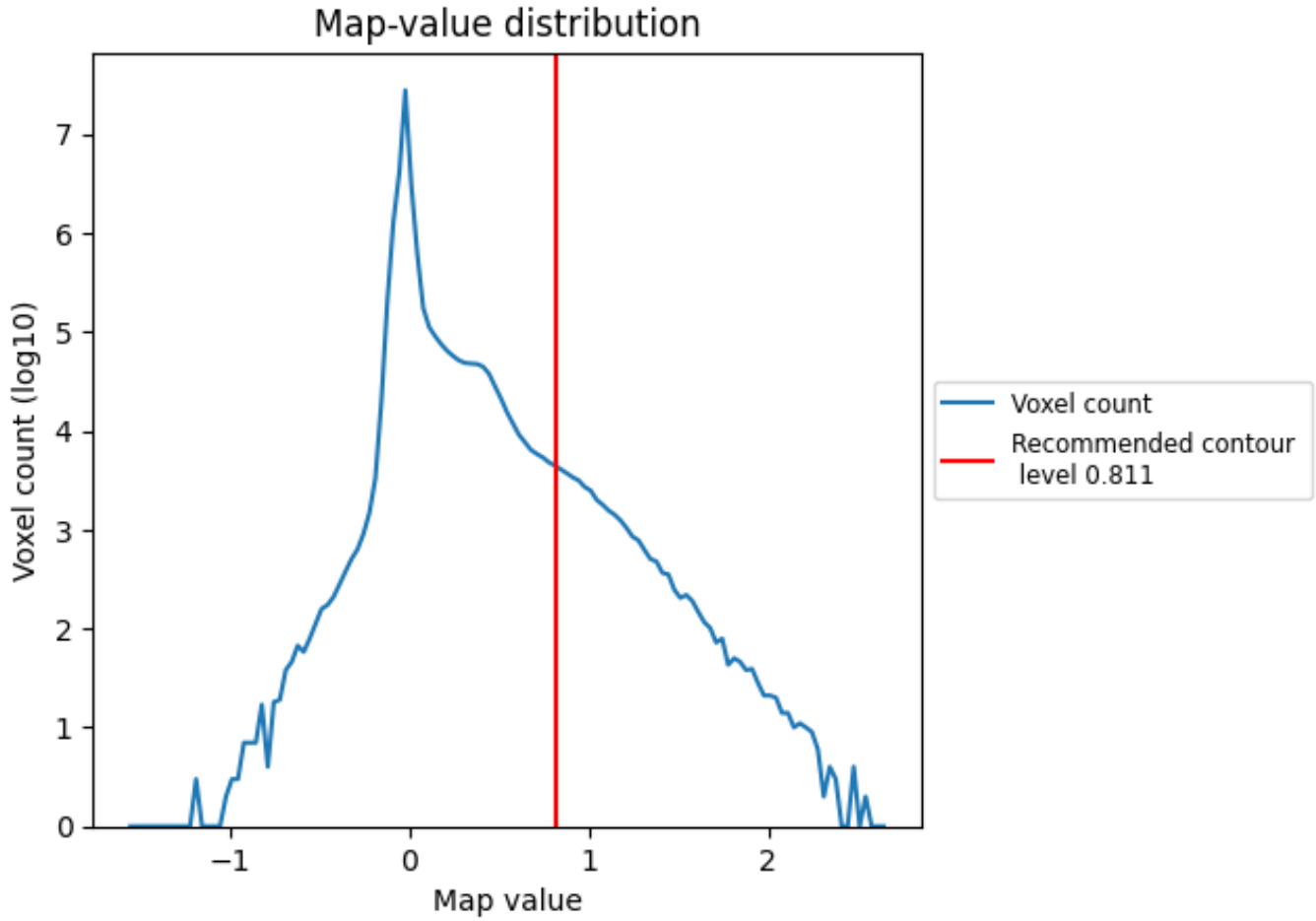
6.6 Mask visualisation (i)

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

7 Map analysis

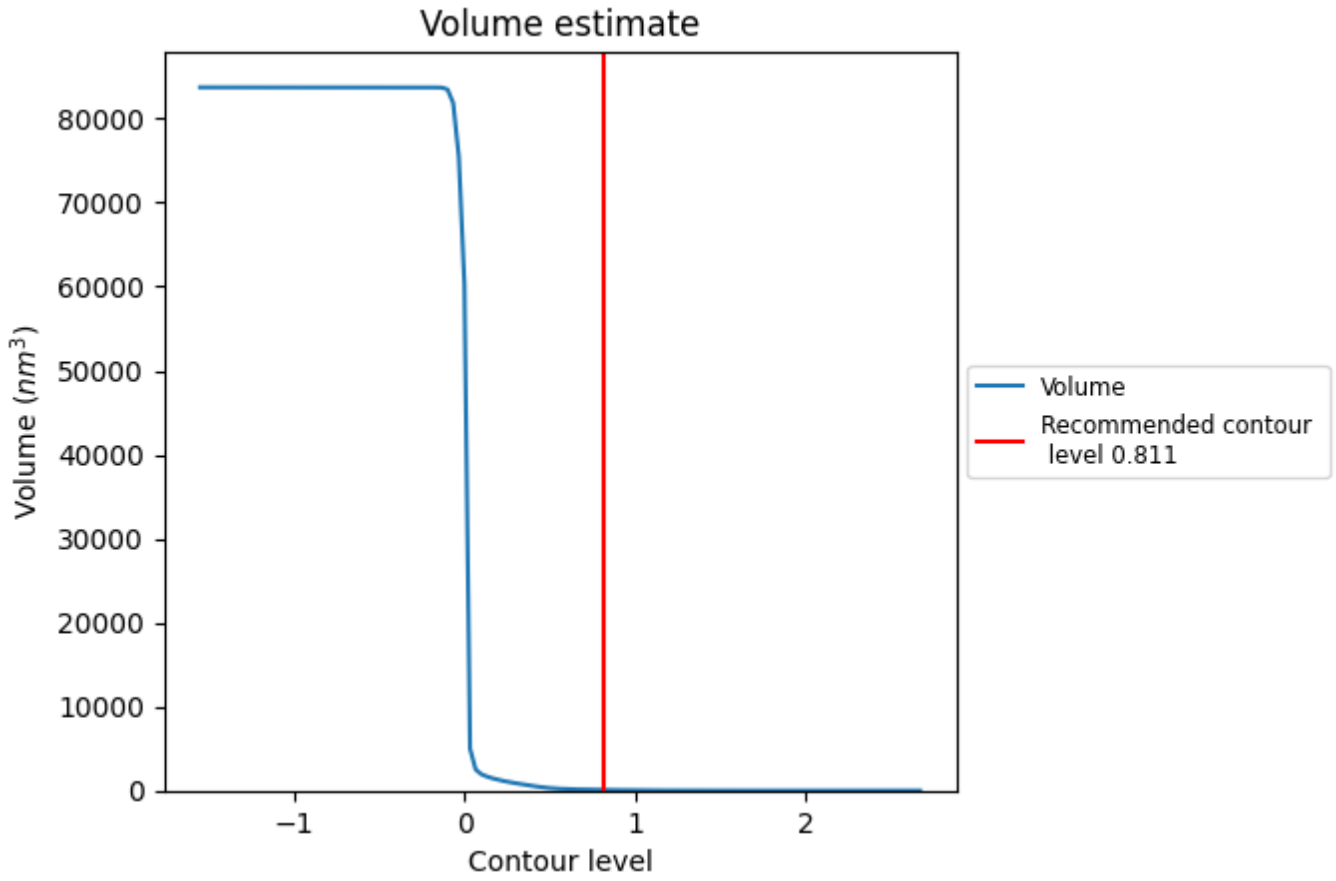
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

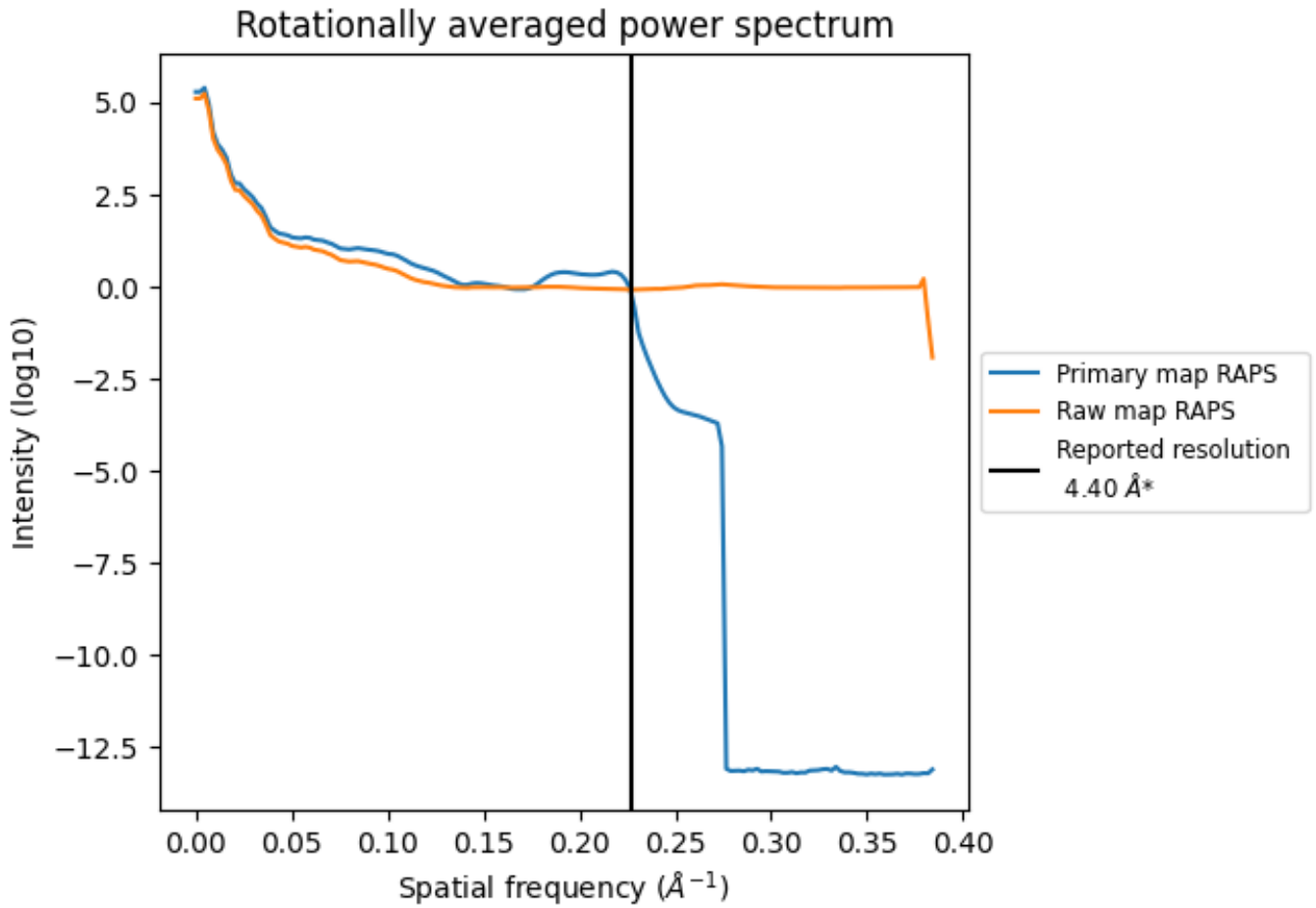
7.2 Volume estimate (i)



The volume at the recommended contour level is 85 nm^3; this corresponds to an approximate mass of 77 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)

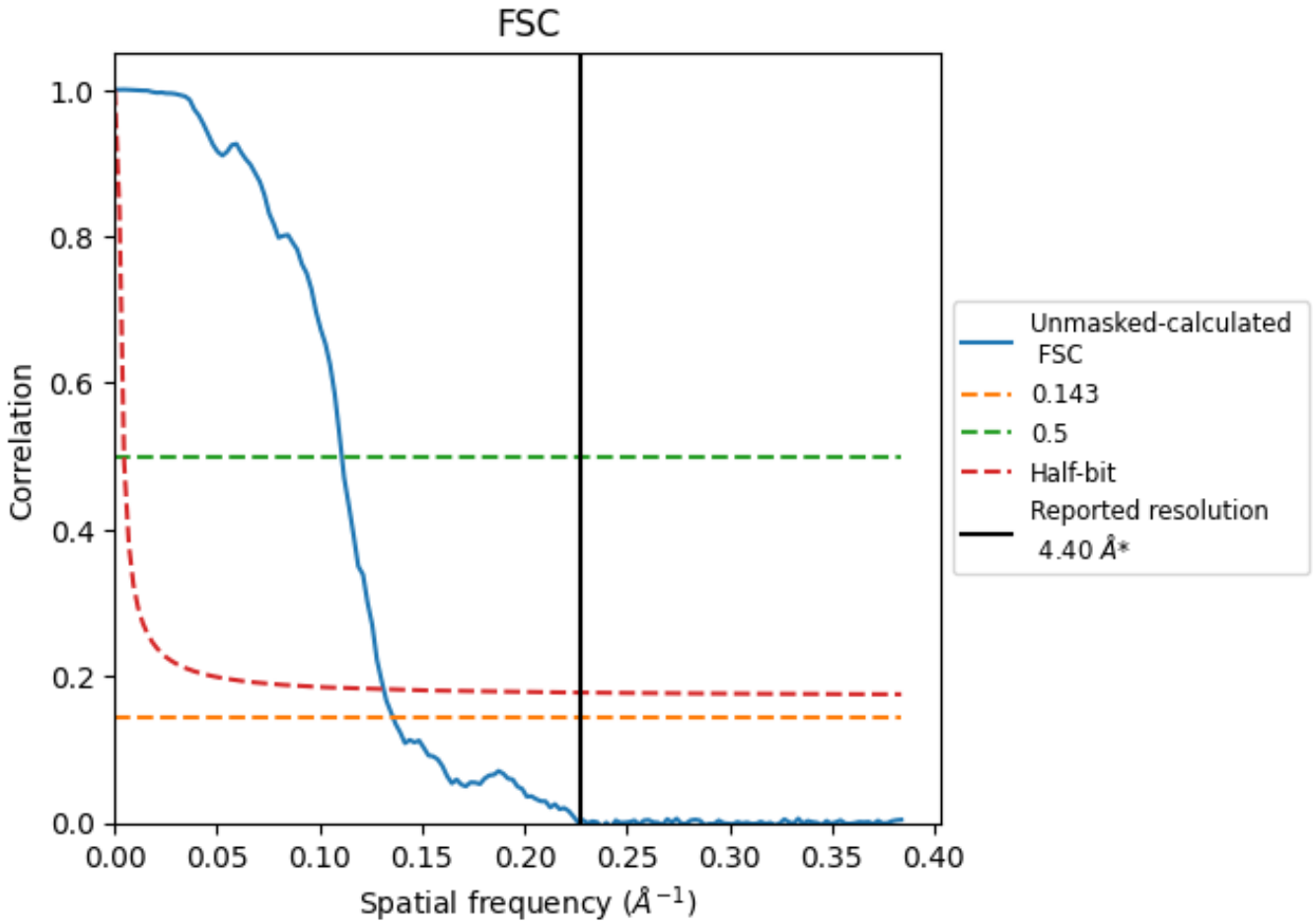


*Reported resolution corresponds to spatial frequency of 0.227 Å^{-1}

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 0.227 Å^{-1}

8.2 Resolution estimates (i)

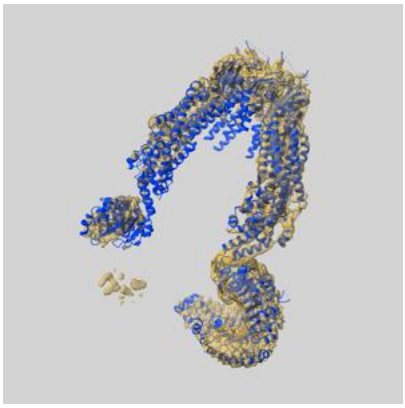
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.40	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	7.36	9.02	7.62

*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 7.36 differs from the reported value 4.4 by more than 10 %

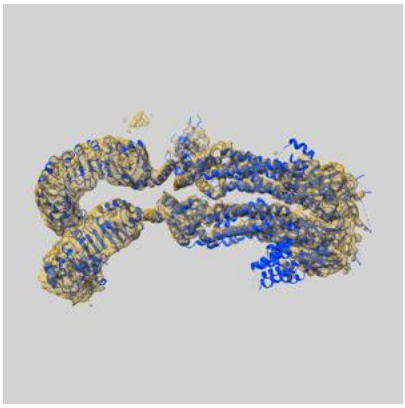
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-50123 and PDB model 9F16. Per-residue inclusion information can be found in section 3 on page 6.

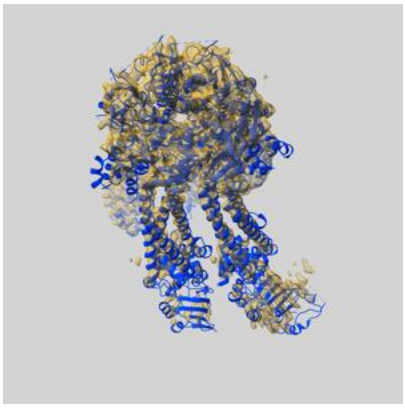
9.1 Map-model overlay



X



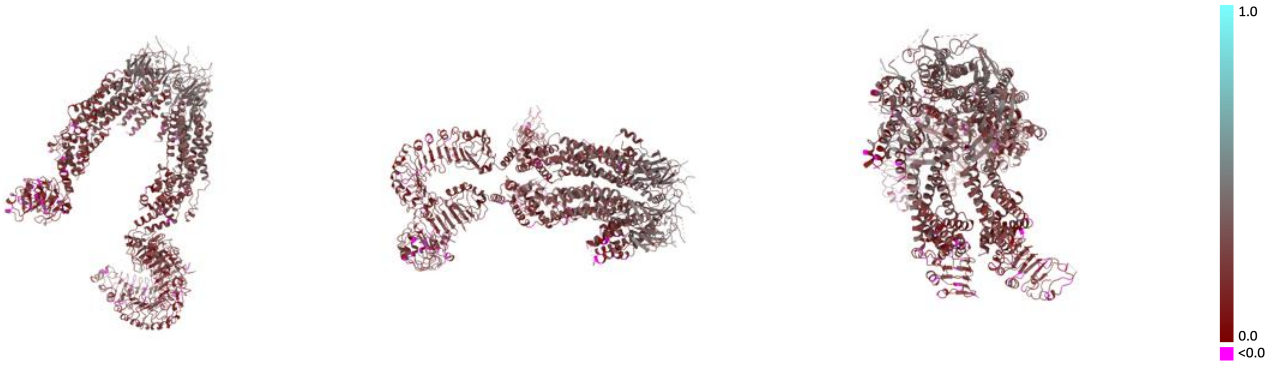
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.811 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.

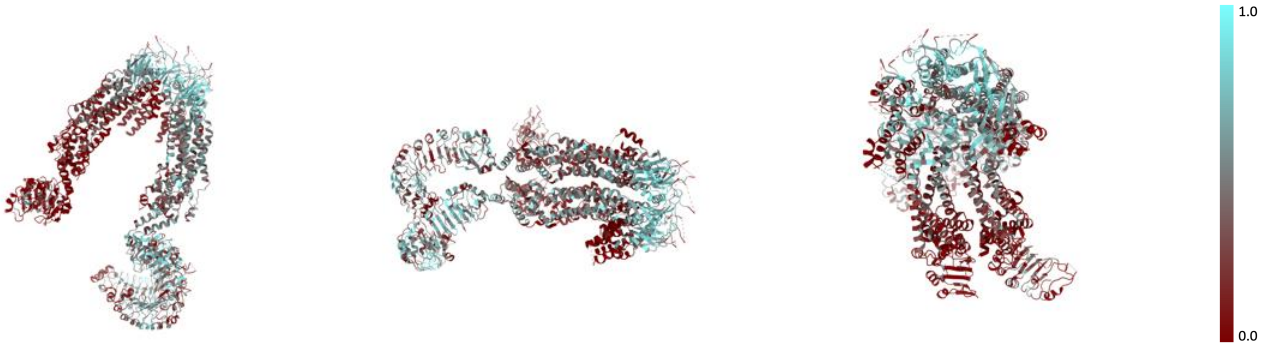
9.2 Q-score mapped to coordinate model (i)



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.

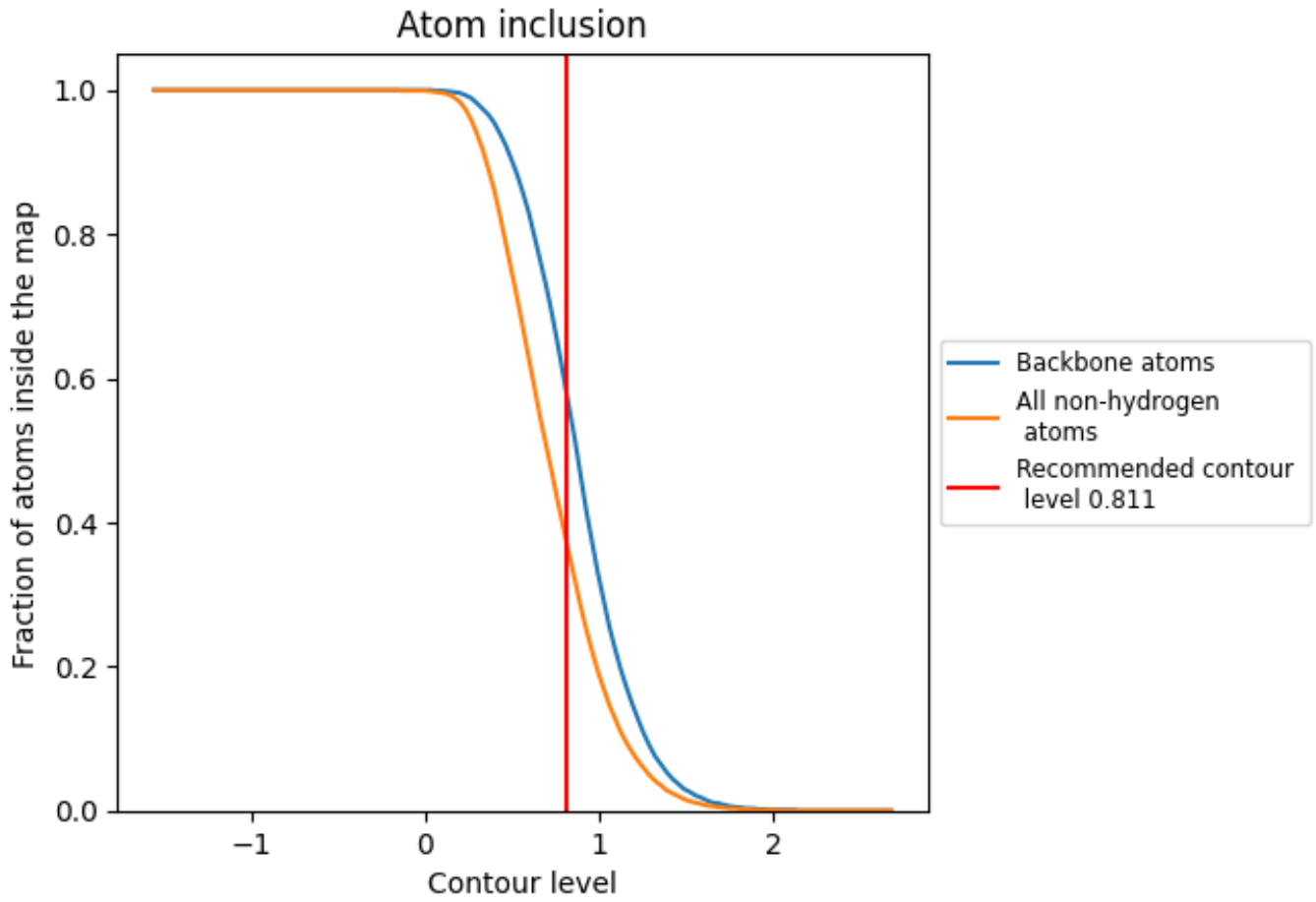
9.3 Atom inclusion mapped to coordinate model (i)



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 (0.811).

9.4 Atom inclusion (i)



At the recommended contour level, 58% of all backbone atoms, 37% 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 (0.811) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.3710	0.2510
A	0.3310	0.2870
B	0.1950	0.2370
C	0.2420	0.2350
D	0.3750	0.3210
E	0.4480	0.2450
F	0.5020	0.2560
G	0.3230	0.2710