



## Full wwPDB EM Validation Report ⓘ

Nov 19, 2022 – 11:35 am GMT

PDB ID : 5M3M  
EMDB ID : EMD-4148  
Title : Free monomeric RNA polymerase I at 4.0A resolution  
Authors : Neyer, S.; Kunz, M.; Geiss, C.; Hantsche, M.; Hodirnau, V.-V.; Seybert, A.; Engel, C.; Scheffer, M.P.; Cramer, P.; Frangakis, A.S.  
Deposited on : 2016-10-15  
Resolution : 4.00 Å(reported)

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We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

EMDB validation analysis : 0.0.1.dev43  
Mogul : 1.8.4, CSD as541be (2020)  
MolProbity : 4.02b-467  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
MapQ : 1.9.9  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.31.2

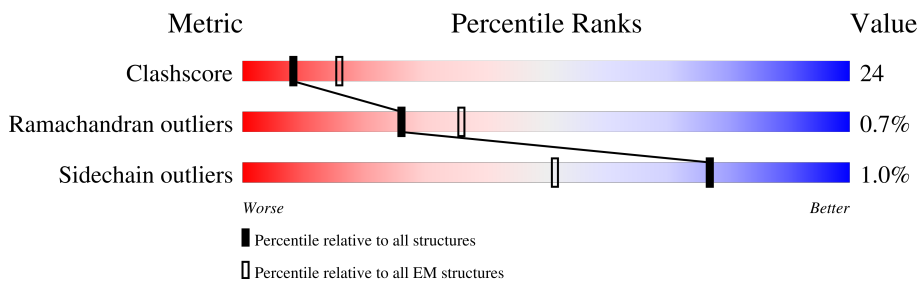
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 4.00 Å.

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



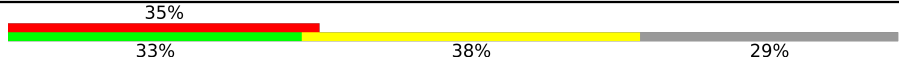
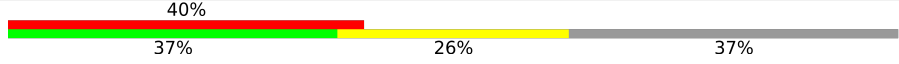

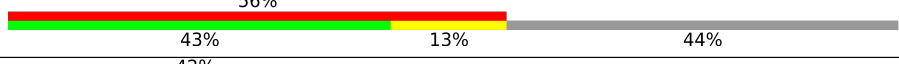

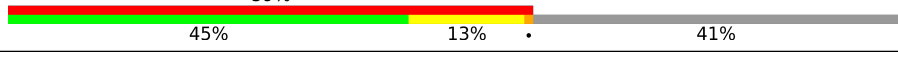
Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 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  $\leq 5\%$ . 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	1664	61% (Poor fit) 44% (0 outliers), 43% (1 outlier), 12% (2+ outliers), 1% (Not modelled)
2	B	1203	51% (Poor fit) 49% (0 outliers), 48% (1 outlier), 1% (2+ outliers), 1% (Not modelled)
3	C	335	52% (Poor fit) 41% (0 outliers), 49% (1 outlier), 9% (2+ outliers), 1% (Not modelled)
4	E	215	87% (Poor fit) 44% (0 outliers), 54% (1 outlier), 1% (2+ outliers), 1% (Not modelled)
5	F	155	52% (Poor fit) 32% (0 outliers), 31% (1 outlier), 37% (2+ outliers), 1% (Not modelled)
6	H	146	52% (Poor fit) 48% (0 outliers), 42% (1 outlier), 10% (2+ outliers), 1% (Not modelled)
7	I	125	91% (Poor fit) 46% (0 outliers), 46% (1 outlier), 7% (2+ outliers), 1% (Not modelled)
8	J	70	40% (Poor fit) 44% (0 outliers), 54% (1 outlier), 1% (2+ outliers), 1% (Not modelled)

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Mol	Chain	Length	Quality of chain
9	K	142	
10	L	70	
11	M	415	
12	N	233	
13	D	137	
14	G	326	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
16	SO4	B	1301	-	-	X	-

## 2 Entry composition

There are 16 unique types of molecules in this entry. The entry contains 33233 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 DNA-directed RNA polymerase I subunit RPA190.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	1462	11558	7304	2006	2187	61	0	0

- Molecule 2 is a protein called DNA-directed RNA polymerase I subunit RPA135.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	1166	9266	5864	1617	1734	51	0	0

- Molecule 3 is a protein called DNA-directed RNA polymerases I and III subunit RPAC1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	305	2423	1539	416	460	8	0	0

- Molecule 4 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	E	212	1735	1102	306	316	11	0	0

- Molecule 5 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	F	98	807	512	142	150	3	0	0

- Molecule 6 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	H	131	1052	664	176	208	4	0	0

- Molecule 7 is a protein called DNA-directed RNA polymerase I subunit RPA12.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	I	116	883	550	148	176	9	0	0

- Molecule 8 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	J	69	569	362	101	100	6	0	0

- Molecule 9 is a protein called DNA-directed RNA polymerases I and III subunit RPAC2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	K	101	793	496	130	162	5	0	0

- Molecule 10 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	L	44	352	217	70	61	4	0	0

- Molecule 11 is a protein called DNA-directed RNA polymerase I subunit RPA49.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
11	M	97	771	490	124	157	0	0

- Molecule 12 is a protein called DNA-directed RNA polymerase I subunit RPA34.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	N	131	1035	660	171	200	4	0	0

- Molecule 13 is a protein called DNA-directed RNA polymerase I subunit RPA14.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
13	D	58	459	289	78	92	0	0

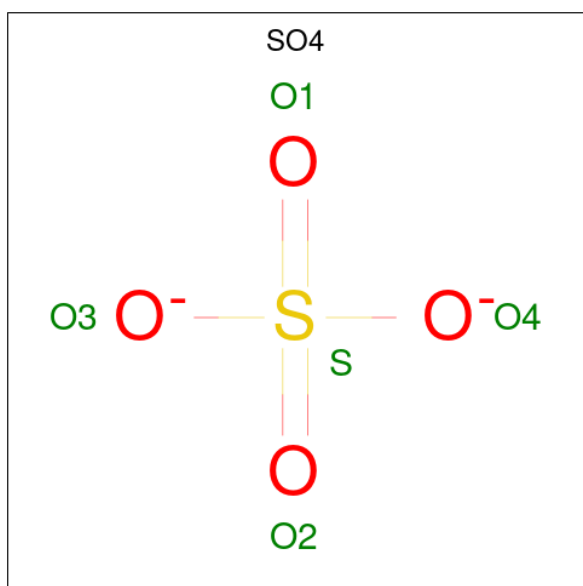
- Molecule 14 is a protein called DNA-directed RNA polymerase I subunit RPA43.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	G	192	1518	979	261	273	5	0	0

- Molecule 15 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
15	A	2	Total	Zn	0
			2	2	
15	B	1	Total	Zn	0
			1	1	
15	I	2	Total	Zn	0
			2	2	
15	J	1	Total	Zn	0
			1	1	
15	L	1	Total	Zn	0
			1	1	

- Molecule 16 is SULFATE ION (three-letter code: SO4) (formula: O<sub>4</sub>S).



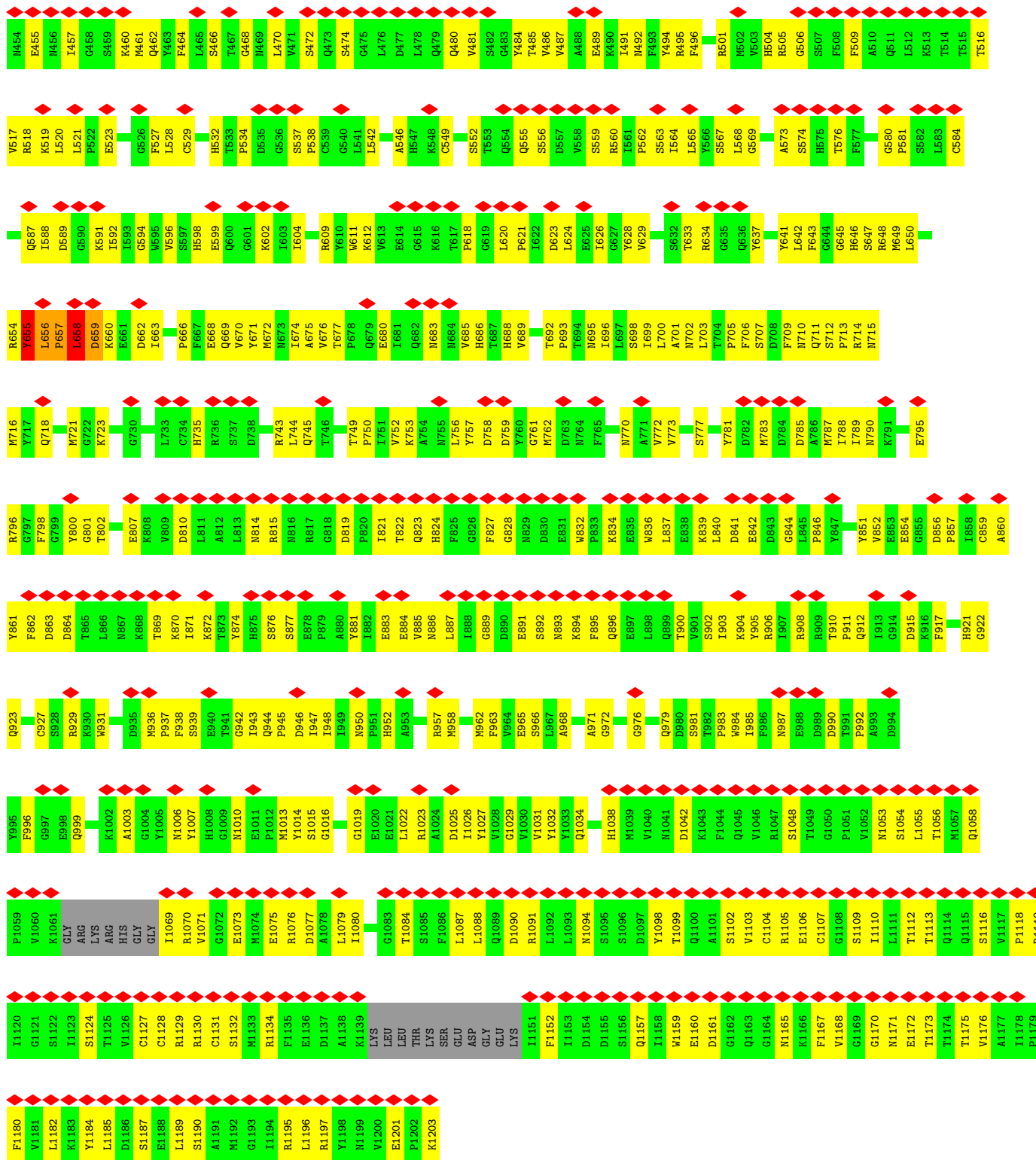
Mol	Chain	Residues	Atoms			AltConf
16	B	1	Total	O	S	0
			5	4	1	



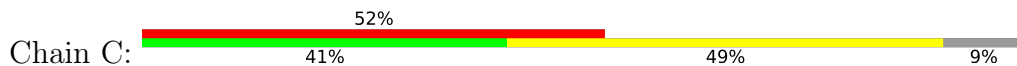
PRO	S1289	A1229	K1096	G1029	R956	R878	L810	T740	Q671	R606	S545
ARG	Y1290	S1230	Y1097	V1030	M960	L879	S811	P741	D672	V607	L646
LEU	V1291	A1231	S1098	H1031	V961	Q880	Y812	P742	D675	M610	I547
GLN	I1292	A1232	K1099	Y1034	S962	I882	R815	D743	S675	E811	G648
THR	H1293	I1233	T1100	D1035	G963	L883	T824	P744	A676	K612	M549
ASP	I1294	K1164	L1102	H1036	K964	L884	R825	D745	T681	L614	S650
VAL	A1295	K1165	L1103	R1039	T965	D885	A826	G746	S882	L615	V551
ALA	R1167	F1166	K1104	D1040	L966	P967	R826	I747	G883	R616	E552
ASN	R1172	R1167	Y1105	A1041	S967	N877	T827	N748	D684	L616	Q553
LYS	L1172	R1167	K1106	D1042	L966	N887	C828	L749	S885	R617	R554
ARG	Y1174	R1167	K1107	G1043	S968	K888	G829	I750	Y618	Y618	Q554
ASN	M1175	R1167	H1108	L1044	S969	S889	M830	S751	A619	A619	K555
SER	R1176	R1167	K1109	L1045	T974	G890	D832	K752	M620	M620	A556
LYS	E1183	R1167	S1109	V1046	D975	L891	L833	N753	T621	T621	L557
GLY	E1184	R1167	K1110	Q1047	A976	G894	R834	G623	G622	G622	M558
ASN	V1185	R1167	P1112	Q1048	M977	E895	L835	A623	A623	A623	M559
ASP	V1186	R1167	H1113	F1048	A978	E896	T836	Y624	Y624	Y624	Q560
GLU	G1186	R1167	H1114	M1049	G979	K899	A837	M625	M625	M625	L561
GLU	I1187	R1167	Y1114	Y1050	G980	A902	E838	A626	A626	A626	L562
GLN	I1188	R1167	K1115	G1051	Y981	I903	G839	D627	D627	D627	T563
SER	A1189	R1167	Q1116	G1052	V982	T904	M840	F628	F628	F628	P564
HIS	S1190	R1167	S1117	D1053	K983	S905	K941	D629	D629	D629	S665
LYS	Q1191	R1167	S1118	A1054	G984	Q906	W842	G630	G630	G630	S666
THR	S1192	R1167	V1118	L1055	R985	V907	R843	D631	D631	D631	M667
LYS	V1193	R1167	K1119	D1056	F986	V908	T844	D704	D704	D704	M667
GLN	G1194	R1167	Y1120	I1057	S987	S909	D845	G705	G705	G705	V568
ALA	E1195	R1167	D1121	I1058	Y988	K910	L846	H706	H706	H706	S669
VAL	P1196	R1167	L1124	K1059	E994	P913	L847	T707	T707	T707	T570
SER	S1197	R1167	A1125	E1060	Y995	D914	K948	T708	T708	T708	H571
TYR	T1198	R1167	K1126	S1061	Y996	G915	T849	R709	R709	R709	T572
ASP	Q1199	R1167	Y1127	H1062	M1000	T916	V851	S710	S710	S710	L573
GLU	M1200	R1167	N1128	M1063	G1005	K918	T853	I712	I712	I712	M574
ASP	T1201	R1167	P1129	T1064	L1006	F920	G854	A643	A643	A643	K575
GLU	L1202	R1167	A1130	Q1065	L1007	P921	R855	R644	R644	R644	K576
ILE	T1204	R1167	K1131	E1067	D1008	S924	E856	A645	A645	A645	V577
GLU	F1205	R1167	Y1132	L1070	T1009	S924	A857	E646	E646	E646	Y578
THR	H1205	R1167	L1133	Y1074	A1010	L930	A858	A647	A647	A647	H580
MET	PHE	R1167	G1134	VAL	VAL	L930	A859	L648	L648	L648	I581
ARG	ALA	R1167	S1135	K1078	THR	S936	E860	M649	M649	M649	K582
GLU	GLY	R1167	V1136	K1079	SER	N937	T862	L650	L650	L650	M683
ALA	HIS	R1167	S1137	Y1080	ARG	V938	N863	M651	M651	M651	R584
GLU	GLY	R1167	E1138	M1081	SER	S941	L864	M652	M652	M652	D585
LYS	A1213	R1167	N1139	P1082	G1017	Q942	L865	L726	L726	L726	V587
SER	M1214	R1167	F1140	S1083	Y1018	T943	K866	D654	D654	D654	L588
ASP	V1215	R1167	Q1141	A1084	L1019	M944	D867	S655	S655	S655	M589
GLU	T1216	R1167	D1142	A1084	Q1020	C945	T868	Q856	Q856	Q856	M590
GLY	L1217	R1167	L1085	L1085	Q1020	L946	S868	R729	R729	R729	Q591
THR	R1221	R1167	S1146	I1086	R1021	P869	P869	L658	L658	L658	R592
ASN	L1222	R1167	F1147	E1087	C1022	Q949	A870	T659	T659	T659	P593
THR	L1223	R1167	L1148	H1088	L1023	Q950	D871	T733	T733	T733	T594
ALA	E1224	R1167	D1149	L1089	T1024	D871	V805	G663	G663	G663	L595
GLY	I1225	R1167	K1150	D1090	K1025	D872	A806	S664	S664	S664	H596
GLY	V1226	R1167	N1151	V1091	E1028	P873	A807	P665	P665	P665	K597
ASN	M1227	R1167	S1152	E1092	E1028	E874	L875	V666	V666	V666	A598
ILE	A1286	R1167	K1153	S1093	E1028	L876	L876	G668	G668	G668	S599
VAL	A1287	R1167	L1154	A1094	E1028	L876	L876	L669	L669	L669	M601
ALA	R1288	R1167	F1155	L1095	E1028	L876	L876	L670	L670	L670	K604
VAL		R1167	K1156		E1028	L876	L876				V605
VAL		R1167	S1157		E1028	L876	L876				
VAL		R1167	S1158		E1028	L876	L876				

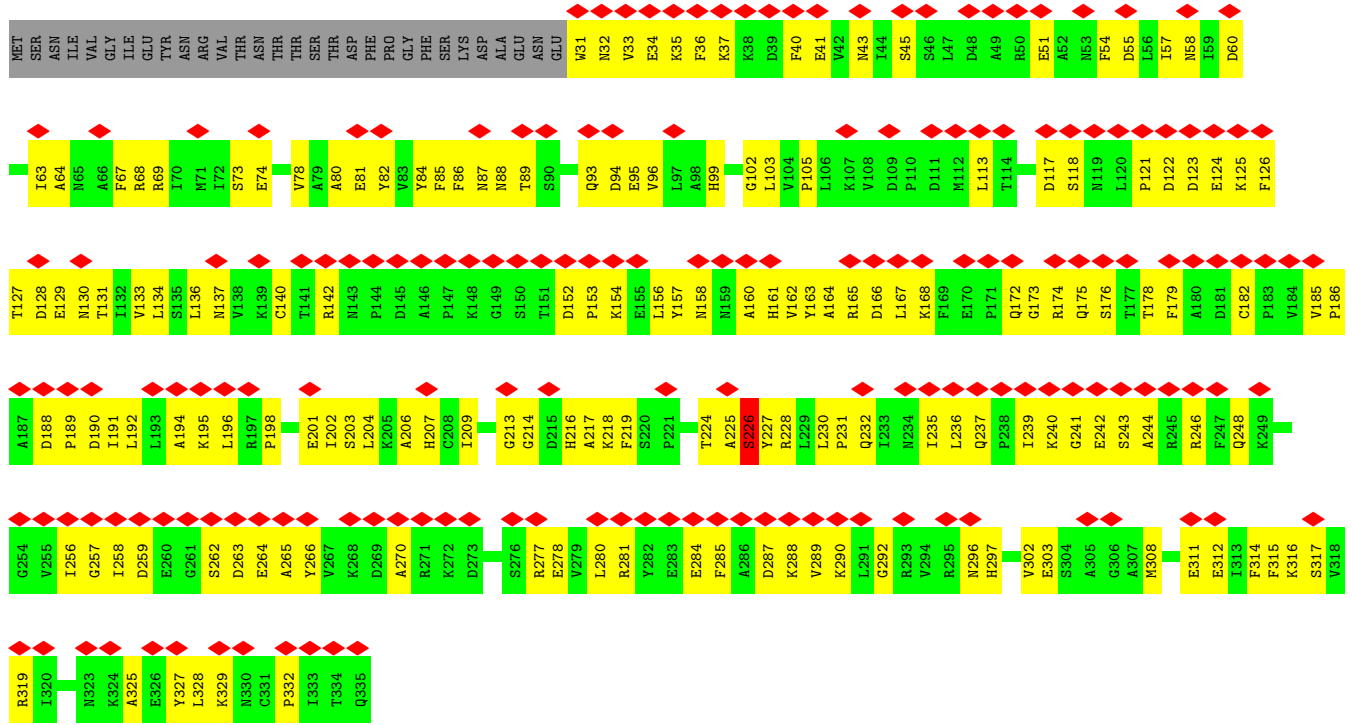




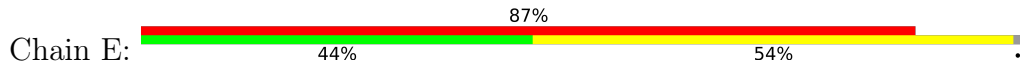


● Molecule 3: DNA-directed RNA polymerases I and III subunit RPAC1

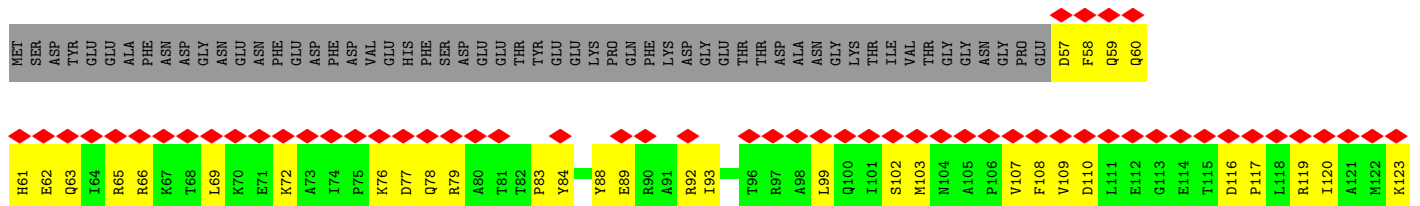


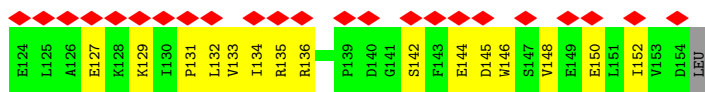


• Molecule 4: DNA-directed RNA polymerases I, II, and III subunit RPABC1

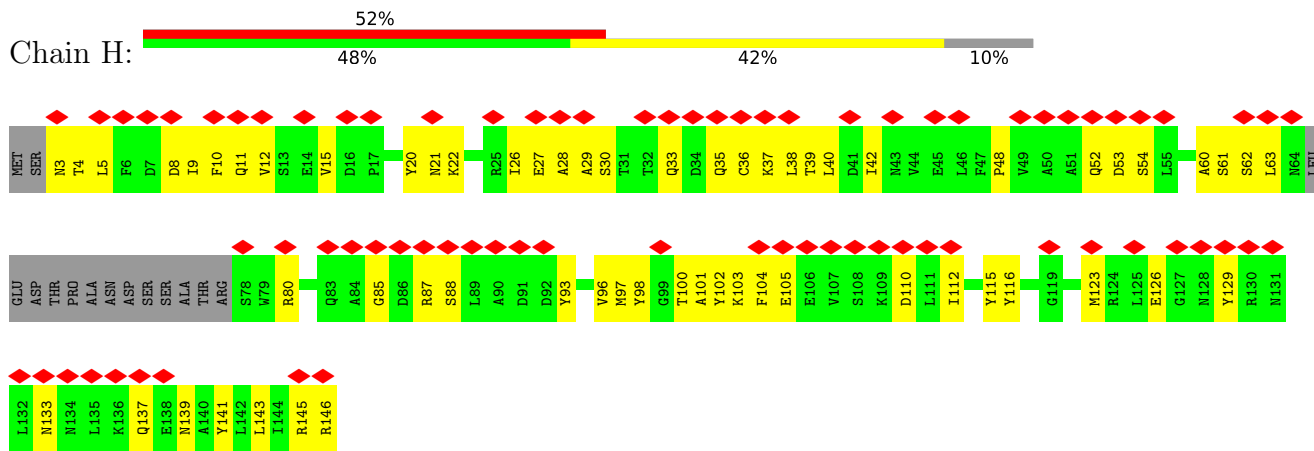


• Molecule 5: DNA-directed RNA polymerases I, II, and III subunit RPABC2

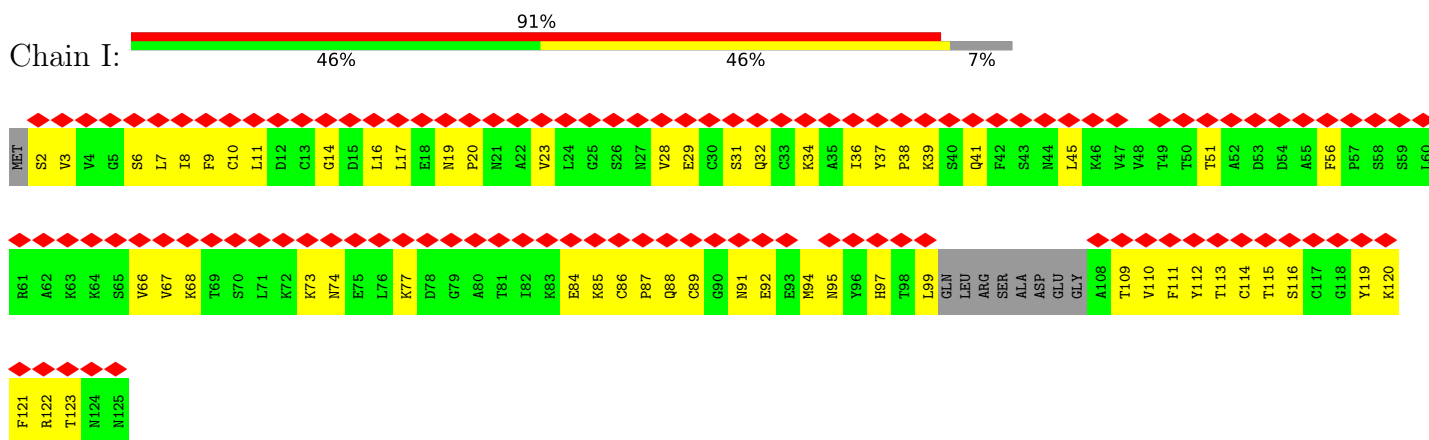




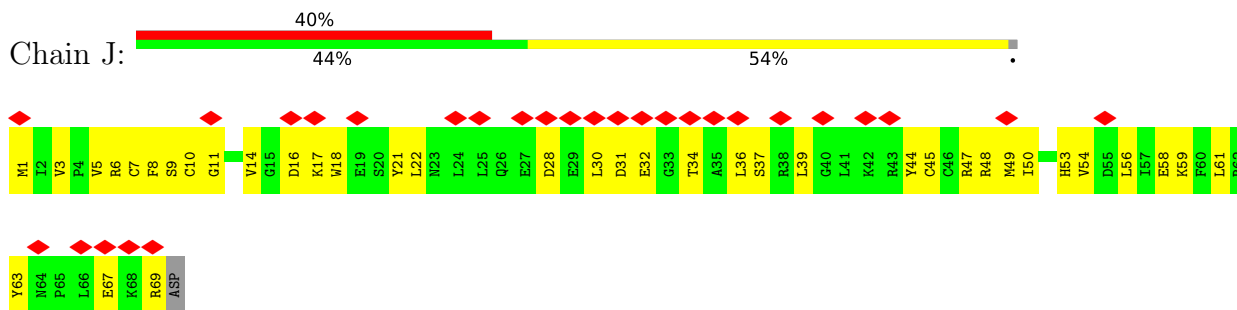
- Molecule 6: DNA-directed RNA polymerases I, II, and III subunit RPABC3



- Molecule 7: DNA-directed RNA polymerase I subunit RPA12



- Molecule 8: DNA-directed RNA polymerases I, II, and III subunit RPABC5



- Molecule 9: DNA-directed RNA polymerases I and III subunit RPAC2







## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	94000	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	56	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 QUANTUM (4k x 4k)	Depositor
Maximum map value	0.152	Depositor
Minimum map value	-0.094	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.007	Depositor
Recommended contour level	0.04	Depositor
Map size (Å)	241.49998, 241.49998, 241.49998	wwPDB
Map dimensions	230, 230, 230	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.05, 1.05, 1.05	Depositor

## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, SO4

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	0.40	0/11770	0.51	0/15895
2	B	0.45	0/9471	0.53	0/12805
3	C	0.45	0/2475	0.51	0/3354
4	E	0.40	0/1771	0.50	0/2383
5	F	0.37	0/821	0.48	0/1106
6	H	0.46	0/1070	0.54	0/1449
7	I	0.38	0/895	0.49	0/1205
8	J	0.50	0/578	0.53	0/775
9	K	0.45	0/804	0.55	0/1083
10	L	0.40	0/354	0.53	0/468
11	M	0.40	0/786	0.55	0/1057
12	N	0.39	0/1052	0.55	0/1418
13	D	0.40	0/465	0.58	0/630
14	G	0.37	0/1555	0.66	3/2113 (0.1%)
All	All	0.42	0/33867	0.53	3/45741 (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	A	0	1

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	G	241	ARG	NE-CZ-NH1	11.80	126.20	120.30
14	G	241	ARG	NE-CZ-NH2	-11.62	114.49	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	G	241	ARG	CD-NE-CZ	6.08	132.12	123.60

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1649	VAL	Peptide

## 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	11558	0	11642	651	0
2	B	9266	0	9151	558	0
3	C	2423	0	2412	156	0
4	E	1735	0	1764	98	0
5	F	807	0	827	45	0
6	H	1052	0	1021	47	0
7	I	883	0	879	60	0
8	J	569	0	585	36	0
9	K	793	0	790	56	0
10	L	352	0	374	20	0
11	M	771	0	755	11	0
12	N	1035	0	1069	29	0
13	D	459	0	462	8	0
14	G	1518	0	1528	31	0
15	A	2	0	0	0	0
15	B	1	0	0	0	0
15	I	2	0	0	0	0
15	J	1	0	0	0	0
15	L	1	0	0	0	0
16	B	5	0	0	8	0
All	All	33233	0	33259	1613	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 24.

All (1613) close contacts within the same asymmetric unit are listed below, sorted by their clash

magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:656:LEU:O	12:N:153:VAL:HG11	1.62	0.97
3:C:225:ALA:O	3:C:226:SER:HB2	1.63	0.95
1:A:1501:ILE:HG22	1:A:1502:PRO:HD2	1.49	0.94
2:B:894:LYS:HG2	10:L:54:ARG:HH21	1.33	0.94
5:F:66:ARG:HA	5:F:69:LEU:HD12	1.50	0.93
1:A:15:ASP:HB2	2:B:1197:ARG:HB3	1.52	0.92
2:B:121:VAL:O	2:B:133:TYR:HE1	1.52	0.90
2:B:711:GLN:HG2	2:B:713:PRO:HD2	1.51	0.90
2:B:844:GLY:HA2	2:B:860:ALA:HB3	1.54	0.89
7:I:94:MET:HG2	7:I:114:CYS:HA	1.53	0.89
3:C:165:ARG:HB3	3:C:189:PRO:HB3	1.54	0.89
2:B:656:LEU:H	2:B:657:PRO:HD2	1.38	0.89
1:A:1258:ILE:O	1:A:1501:ILE:HG13	1.73	0.88
2:B:211:ARG:HH12	2:B:647:SER:HB2	1.37	0.88
2:B:894:LYS:CG	10:L:54:ARG:HH21	1.87	0.88
2:B:107:PRO:O	2:B:171:HIS:NE2	2.08	0.87
1:A:907:VAL:HG12	1:A:945:CYS:SG	2.15	0.86
1:A:675:SER:HG	2:B:952:HIS:HE2	1.18	0.86
2:B:657:PRO:O	2:B:659:ASP:N	2.09	0.86
2:B:894:LYS:HG2	10:L:54:ARG:NH2	1.89	0.86
1:A:846:ILE:HD13	1:A:906:GLN:HB3	1.54	0.86
2:B:1006:ASN:ND2	2:B:1010:ASN:O	2.08	0.85
1:A:109:ARG:NH1	1:A:230:ARG:O	2.09	0.85
1:A:908:VAL:HA	1:A:945:CYS:SG	2.16	0.84
1:A:842:TRP:CE2	1:A:910:LYS:NZ	2.45	0.84
2:B:745:GLN:HG2	2:B:800:TYR:HD2	1.43	0.84
1:A:666:VAL:HG23	1:A:667:ARG:HG3	1.59	0.83
5:F:103:MET:SD	14:G:112:PRO:CG	2.66	0.83
1:A:1655:ASP:HB2	5:F:135:ARG:HB3	1.60	0.83
1:A:526:GLY:HA3	1:A:554:ARG:HH11	1.42	0.83
2:B:655:TYR:HE1	2:B:688:HIS:HE2	1.26	0.83
2:B:70:GLU:HG2	2:B:98:SER:HB3	1.61	0.83
1:A:862:THR:O	1:A:878:ARG:NH1	2.11	0.82
6:H:116:TYR:HB2	6:H:123:MET:HB3	1.60	0.82
1:A:1006:LEU:CD1	2:B:716:MET:SD	2.67	0.82
3:C:68:ARG:HD2	3:C:227:TYR:CD2	2.15	0.82
4:E:110:PHE:HB3	4:E:134:THR:HG22	1.61	0.82
1:A:440:SER:H	1:A:458:GLN:HE22	1.27	0.81
2:B:504:HIS:HB3	2:B:542:LEU:HD23	1.62	0.81
1:A:1263:LEU:HA	1:A:1498:ILE:HD11	1.60	0.81
1:A:943:ILE:HD11	2:B:958:MET:HB3	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:88:ASN:ND2	3:C:94:ASP:OD1	2.13	0.81
1:A:568:VAL:O	1:A:571:HIS:ND1	2.12	0.81
2:B:94:LYS:HB3	2:B:146:ASN:HA	1.63	0.81
2:B:209:GLN:NE2	2:B:215:MET:SD	2.53	0.81
10:L:48:CYS:HB3	10:L:52:GLY:H	1.44	0.81
2:B:501:ARG:NH2	2:B:546:ALA:O	2.13	0.81
1:A:594:THR:HG23	1:A:599:SER:HB2	1.63	0.81
5:F:62:GLU:OE2	14:G:90:LEU:CD1	2.28	0.81
1:A:943:ILE:HG23	1:A:986:PHE:HB2	1.63	0.80
1:A:1501:ILE:HB	1:A:1504:ILE:HB	1.61	0.80
1:A:719:ILE:HG12	6:H:97:MET:HG2	1.61	0.80
1:A:1262:LEU:HD22	1:A:1496:SER:O	1.81	0.80
1:A:101:SER:HA	1:A:108:PHE:HA	1.64	0.80
3:C:165:ARG:NH1	3:C:190:ASP:OD1	2.15	0.79
1:A:964:LYS:NZ	2:B:672:MET:O	2.15	0.79
1:A:936:SER:OG	1:A:938:VAL:HG23	1.81	0.79
1:A:945:CYS:O	1:A:946:LEU:CB	2.30	0.79
2:B:785:ASP:OD2	2:B:957:ARG:NH2	2.15	0.78
3:C:127:THR:H	3:C:130:ASN:HB2	1.47	0.78
2:B:201:LYS:HE2	2:B:487:VAL:HG22	1.66	0.78
1:A:546:LEU:HD22	1:A:554:ARG:HG2	1.64	0.78
1:A:1608:SER:O	1:A:1612:LYS:NZ	2.17	0.78
2:B:823:GLN:HG2	2:B:863:ASP:HA	1.65	0.77
14:G:22:LYS:HD3	14:G:128:GLN:HG2	1.65	0.77
7:I:99:LEU:HB2	7:I:109:THR:HB	1.64	0.77
9:K:88:PHE:HB3	9:K:106:GLN:HB2	1.66	0.77
5:F:103:MET:SD	14:G:112:PRO:HG2	2.25	0.77
2:B:534:PRO:HG3	2:B:542:LEU:HB2	1.66	0.77
2:B:1103:VAL:HG12	2:B:1110:ILE:HG22	1.66	0.77
1:A:1302:TYR:HA	1:A:1305:GLU:HB2	1.67	0.76
1:A:1006:LEU:HD13	2:B:716:MET:SD	2.24	0.76
2:B:13:THR:HG21	12:N:163:VAL:HG21	1.66	0.76
2:B:807:GLU:OE1	2:B:905:TYR:OH	2.01	0.76
3:C:258:ILE:HA	3:C:265:ALA:HA	1.66	0.76
2:B:612:LYS:NZ	2:B:624:LEU:O	2.18	0.76
2:B:1157:GLN:HB3	2:B:1168:VAL:HG13	1.66	0.76
8:J:9:SER:HB2	8:J:45:CYS:SG	2.26	0.76
1:A:1317:ILE:HA	1:A:1321:PHE:HB3	1.66	0.76
2:B:211:ARG:NH1	2:B:646:HIS:O	2.19	0.76
2:B:145:VAL:HB	2:B:150:GLU:HB3	1.66	0.76
2:B:168:ASN:HA	2:B:173:ASN:HD22	1.48	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:107:VAL:HG12	5:F:109:VAL:H	1.48	0.75
2:B:144:SER:HA	2:B:151:ASN:HA	1.68	0.75
3:C:284:GLU:O	3:C:288:LYS:NZ	2.19	0.75
1:A:1050:TYR:HB3	1:A:1054:ALA:HA	1.66	0.75
1:A:620:ASN:OD1	1:A:667:ARG:NH2	2.19	0.75
1:A:363:PRO:O	1:A:368:ARG:NE	2.19	0.74
1:A:824:THR:HB	2:B:1023:ARG:HB2	1.69	0.74
1:A:339:PHE:O	1:A:1629:ASN:ND2	2.20	0.74
1:A:690:GLU:HB3	9:K:77:ARG:HH22	1.50	0.74
2:B:1104:CYS:HA	2:B:1173:THR:HG22	1.69	0.74
2:B:655:TYR:HE1	2:B:688:HIS:NE2	1.85	0.74
2:B:745:GLN:NE2	8:J:1:MET:SD	2.60	0.74
3:C:68:ARG:HD2	3:C:227:TYR:HD2	1.53	0.74
1:A:1319:ASN:O	1:A:1323:HIS:ND1	2.13	0.73
1:A:636:HIS:CG	2:B:1091:ARG:HH22	2.05	0.73
2:B:122:TYR:CZ	2:B:183:HIS:CD2	2.76	0.73
2:B:1090:ASP:HA	2:B:1094:ASN:HB2	1.69	0.73
2:B:655:TYR:CE1	2:B:688:HIS:NE2	2.55	0.73
1:A:689:ARG:NH2	9:K:87:GLU:O	2.20	0.73
1:A:1006:LEU:CD1	2:B:716:MET:CE	2.66	0.73
1:A:1242:ILE:HG22	1:A:1536:ILE:HG22	1.69	0.73
2:B:58:GLY:O	2:B:62:ASN:ND2	2.21	0.73
2:B:20:GLU:HG2	2:B:24:ARG:HH12	1.53	0.73
9:K:87:GLU:H	9:K:107:THR:HA	1.54	0.73
3:C:172:GLN:H	3:C:175:GLN:HB2	1.53	0.73
1:A:945:CYS:O	1:A:946:LEU:CG	2.36	0.73
2:B:75:ASP:OD1	2:B:93:ASN:N	2.20	0.72
4:E:26:ARG:NH2	4:E:186:LEU:O	2.22	0.72
6:H:29:ALA:HA	6:H:37:LYS:HA	1.71	0.72
5:F:62:GLU:OE2	14:G:90:LEU:HD11	1.90	0.72
12:N:148:ILE:O	12:N:150:TYR:CD1	2.42	0.72
3:C:153:PRO:HA	3:C:156:LEU:HB2	1.72	0.72
1:A:1246:VAL:O	1:A:1517:ARG:NH2	2.23	0.72
2:B:795:GLU:OE1	3:C:217:ALA:N	2.19	0.72
1:A:487:ASP:OD1	1:A:489:ASN:ND2	2.23	0.72
3:C:43:ASN:HB2	3:C:55:ASP:HB2	1.72	0.72
2:B:1025:ASP:OD2	3:C:277:ARG:NH1	2.22	0.71
2:B:13:THR:HG21	12:N:163:VAL:CG2	2.20	0.71
7:I:97:HIS:HB2	7:I:111:PHE:HD2	1.55	0.71
2:B:239:VAL:HA	2:B:245:SER:HA	1.72	0.71
1:A:1274:GLU:OE2	1:A:1288:ARG:NH1	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:815:ARG:NH2	2:B:819:ASP:O	2.22	0.71
2:B:1127:CYS:SG	2:B:1171:ASN:ND2	2.64	0.71
1:A:842:TRP:CZ2	1:A:910:LYS:NZ	2.58	0.71
7:I:23:VAL:HG21	7:I:28:VAL:HG22	1.73	0.71
6:H:63:LEU:HB3	6:H:88:SER:HB2	1.71	0.71
11:M:38:PHE:HB3	11:M:53:LEU:HD11	1.73	0.71
2:B:122:TYR:CE2	2:B:183:HIS:HD2	2.09	0.70
2:B:186:GLU:HB3	2:B:189:GLU:HB2	1.73	0.70
6:H:102:TYR:CZ	6:H:115:TYR:HB3	2.25	0.70
1:A:757:ASN:OD1	1:A:767:ASN:N	2.20	0.70
7:I:97:HIS:HB2	7:I:111:PHE:CD2	2.27	0.70
1:A:103:LEU:HD12	1:A:241:PRO:HD2	1.72	0.70
6:H:3:ASN:N	6:H:61:SER:HG	1.89	0.70
2:B:874:TYR:CZ	2:B:876:SER:HB3	2.26	0.70
2:B:122:TYR:CE2	2:B:183:HIS:CD2	2.80	0.70
2:B:657:PRO:C	2:B:659:ASP:H	1.94	0.70
1:A:908:VAL:HG22	1:A:945:CYS:HB2	1.74	0.70
2:B:915:ASP:H	2:B:927:CYS:HB3	1.57	0.70
2:B:658:LEU:O	2:B:659:ASP:C	2.31	0.69
1:A:497:VAL:HB	1:A:607:VAL:HA	1.74	0.69
1:A:782:ASP:OD1	1:A:783:LYS:N	2.24	0.69
2:B:883:GLU:OE1	2:B:906:ARG:NH1	2.24	0.69
13:D:99:LEU:HB3	13:D:100:PRO:CD	2.22	0.69
2:B:645:GLY:O	2:B:648:ARG:NE	2.22	0.69
2:B:280:LEU:O	2:B:323:ARG:NH2	2.20	0.69
4:E:100:ILE:HG23	4:E:105:PHE:HB2	1.75	0.69
1:A:945:CYS:O	1:A:946:LEU:HB3	1.91	0.69
2:B:161:LEU:HD12	2:B:162:PRO:HD2	1.74	0.69
2:B:884:GLU:H	2:B:904:LYS:HB3	1.58	0.69
1:A:130:ILE:O	1:A:133:SER:OG	2.09	0.69
1:A:1105:ARG:HH12	1:A:1138:GLU:HB3	1.56	0.69
1:A:1251:ALA:O	1:A:1255:CYS:N	2.22	0.69
2:B:122:TYR:CZ	2:B:183:HIS:HD2	2.11	0.69
1:A:956:ARG:HH21	1:A:979:GLY:HA3	1.58	0.69
2:B:504:HIS:CD2	2:B:506:GLY:H	2.11	0.69
2:B:699:ILE:N	16:B:1301:SO4:O3	2.26	0.69
2:B:609:ARG:HH21	2:B:626:ILE:HB	1.58	0.68
2:B:714:ARG:HE	2:B:957:ARG:HB3	1.58	0.68
2:B:1015:SER:HB2	2:B:1022:LEU:HD21	1.73	0.68
1:A:1573:TYR:HB3	7:I:122:ARG:HH12	1.57	0.68
2:B:700:LEU:N	16:B:1301:SO4:O4	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:234:ILE:HG12	2:B:381:LEU:HD13	1.76	0.68
2:B:143:TRP:O	2:B:152:LEU:N	2.25	0.68
2:B:457:ILE:HG22	2:B:461:MET:HG2	1.75	0.68
2:B:921:HIS:NE2	2:B:965:GLU:OE1	2.26	0.68
7:I:97:HIS:H	7:I:111:PHE:HB2	1.58	0.68
2:B:505:ARG:HB3	2:B:509:PHE:HD2	1.58	0.68
2:B:658:LEU:HD13	2:B:658:LEU:N	2.07	0.68
3:C:160:ALA:O	3:C:196:LEU:N	2.27	0.68
9:K:86:VAL:HA	9:K:107:THR:HG22	1.75	0.68
5:F:79:ARG:NH1	5:F:145:ASP:O	2.27	0.68
1:A:1006:LEU:HD11	2:B:716:MET:SD	2.31	0.68
1:A:1263:LEU:HB3	1:A:1496:SER:HB2	1.74	0.68
2:B:894:LYS:CG	10:L:54:ARG:NH2	2.53	0.68
2:B:1201:GLU:HG2	2:B:1203:LYS:HG2	1.76	0.68
5:F:65:ARG:O	5:F:69:LEU:HG	1.94	0.68
1:A:1501:ILE:CG2	1:A:1502:PRO:HD2	2.24	0.68
1:A:1573:TYR:O	7:I:122:ARG:NH1	2.27	0.68
7:I:3:VAL:HG22	7:I:8:ILE:HG12	1.75	0.68
1:A:6:PRO:O	13:D:15:THR:OG1	2.07	0.68
1:A:1275:THR:OG1	1:A:1289:SER:OG	2.12	0.68
1:A:1040:ASP:OD1	1:A:1041:ALA:N	2.26	0.67
1:A:1504:ILE:HD13	1:A:1529:MET:HE3	1.76	0.67
6:H:8:ASP:OD1	6:H:9:ILE:N	2.26	0.67
1:A:1573:TYR:HA	7:I:122:ARG:HH22	1.60	0.67
3:C:314:PHE:O	3:C:317:SER:OG	2.09	0.67
1:A:486:PRO:O	1:A:615:ARG:NH2	2.27	0.67
2:B:752:VAL:HG22	2:B:979:GLN:HB2	1.75	0.67
4:E:37:LEU:HD11	4:E:41:ASP:HB2	1.76	0.67
1:A:475:ARG:HA	2:B:1070:ARG:HA	1.77	0.67
1:A:830:MET:SD	2:B:963:PHE:HB3	2.33	0.67
3:C:230:LEU:HD12	3:C:231:PRO:HD2	1.77	0.67
4:E:55:ARG:HB3	4:E:82:PHE:HB2	1.77	0.67
1:A:874:GLU:OE2	1:A:878:ARG:NE	2.24	0.67
1:A:366:ARG:HA	1:A:369:LEU:HG	1.76	0.67
1:A:509:GLU:N	1:A:577:VAL:O	2.28	0.67
1:A:1288:ARG:NE	1:A:1480:THR:O	2.27	0.67
3:C:88:ASN:O	10:L:60:ARG:NH1	2.28	0.67
3:C:240:LYS:HB3	3:C:264:GLU:HG2	1.77	0.67
1:A:209:THR:H	1:A:212:VAL:HB	1.58	0.67
1:A:1262:LEU:CD2	1:A:1496:SER:O	2.43	0.67
1:A:1447:GLN:HE21	1:A:1459:LYS:HA	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:79:ILE:N	1:A:360:LEU:O	2.29	0.66
1:A:54:LEU:HD22	1:A:76:GLN:HA	1.76	0.66
1:A:1490:GLU:HA	7:I:56:PHE:HZ	1.59	0.66
3:C:73:SER:O	3:C:214:GLY:N	2.27	0.66
7:I:20:PRO:HB3	7:I:39:LYS:HG3	1.78	0.66
1:A:537:GLN:HE21	1:A:541:GLY:HA2	1.59	0.66
1:A:584:ARG:HD2	5:F:116:ASP:HB2	1.76	0.66
2:B:862:PHE:HA	2:B:869:THR:HA	1.77	0.66
1:A:588:LEU:HB3	1:A:636:HIS:HB2	1.76	0.66
1:A:1053:ASP:OD2	1:A:1580:ARG:NH2	2.21	0.66
1:A:826:PHE:CE1	1:A:924:SER:OG	2.45	0.66
1:A:862:THR:HA	7:I:67:VAL:HG12	1.78	0.66
5:F:99:LEU:O	5:F:102:SER:OG	2.14	0.66
1:A:131:ASP:HA	1:A:134:TYR:HD2	1.60	0.66
1:A:747:ILE:HG22	1:A:774:GLY:HA2	1.78	0.66
1:A:826:PHE:CZ	1:A:924:SER:HB3	2.30	0.66
3:C:329:LYS:HE3	9:K:122:LYS:HB2	1.77	0.66
1:A:321:LYS:HB2	1:A:356:PHE:HE2	1.60	0.66
1:A:16:PHE:HB3	1:A:1626:VAL:HG22	1.77	0.65
2:B:264:TRP:CD1	2:B:265:ARG:HG2	2.30	0.65
2:B:379:ARG:HE	2:B:580:GLY:HA2	1.60	0.65
1:A:17:GLY:O	2:B:1195:ARG:N	2.24	0.65
1:A:1315:ASN:OD1	1:A:1319:ASN:ND2	2.28	0.65
1:A:1059:LYS:NZ	1:A:1176:ARG:O	2.26	0.65
1:A:1105:ARG:NH1	1:A:1138:GLU:OE1	2.29	0.65
2:B:121:VAL:O	2:B:133:TYR:CE1	2.43	0.65
1:A:1138:GLU:O	1:A:1142:ASP:N	2.25	0.65
2:B:94:LYS:N	2:B:146:ASN:OD1	2.24	0.65
2:B:335:ARG:NH2	2:B:344:GLN:O	2.28	0.65
2:B:449:VAL:HA	2:B:452:ARG:HH21	1.60	0.65
2:B:94:LYS:O	2:B:146:ASN:N	2.26	0.65
2:B:1071:VAL:HG21	2:B:1091:ARG:HD2	1.78	0.65
3:C:128:ASP:O	3:C:175:GLN:NE2	2.30	0.65
1:A:694:GLN:NE2	9:K:91:TYR:O	2.29	0.65
2:B:434:ARG:NH2	2:B:436:MET:SD	2.69	0.65
3:C:257:GLY:O	3:C:266:TYR:N	2.24	0.65
5:F:84:TYR:HA	5:F:152:ILE:HB	1.78	0.65
1:A:1242:ILE:HA	1:A:1536:ILE:HA	1.79	0.65
2:B:841:ASP:OD1	2:B:842:GLU:N	2.29	0.65
1:A:1461:ASN:OD1	1:A:1462:PHE:N	2.28	0.65
1:A:1615:TYR:CD2	1:A:1616:GLU:HG3	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:873:PRO:O	1:A:877:LYS:N	2.26	0.65
2:B:1187:SER:O	2:B:1190:SER:OG	2.15	0.65
7:I:91:ASN:OD1	7:I:92:GLU:N	2.30	0.65
1:A:383:ASN:HA	1:A:386:LEU:HD12	1.79	0.65
1:A:492:THR:O	1:A:620:ASN:ND2	2.28	0.64
13:D:99:LEU:HB3	13:D:100:PRO:HD3	1.78	0.64
2:B:662:ASP:OD1	2:B:663:ILE:N	2.30	0.64
6:H:3:ASN:OD1	6:H:4:THR:N	2.30	0.64
9:K:88:PHE:O	9:K:106:GLN:N	2.28	0.64
2:B:13:THR:CG2	12:N:163:VAL:CG2	2.75	0.64
2:B:705:PRO:HA	2:B:981:SER:HB2	1.77	0.64
4:E:176:PRO:HB2	4:E:212:ARG:HD3	1.79	0.64
1:A:316:LEU:HD22	1:A:427:PHE:HE2	1.61	0.64
1:A:704:ASP:HB3	1:A:706:HIS:ND1	2.11	0.64
2:B:946:ASP:OD1	8:J:9:SER:OG	2.16	0.64
1:A:713:VAL:HG12	1:A:737:LEU:HD21	1.79	0.64
2:B:1016:GLY:O	3:C:69:ARG:NH2	2.31	0.64
1:A:550:SER:N	1:A:553:GLN:OE1	2.20	0.64
1:A:1654:PHE:HB2	5:F:89:GLU:HG2	1.79	0.64
3:C:225:ALA:HA	3:C:302:VAL:HA	1.79	0.64
1:A:718:THR:OG1	1:A:730:GLN:NE2	2.31	0.64
2:B:656:LEU:H	2:B:657:PRO:CD	2.11	0.64
2:B:718:GLN:HE22	2:B:1034:GLN:HE22	1.43	0.64
3:C:95:GLU:OE1	3:C:95:GLU:N	2.29	0.64
1:A:943:ILE:HD11	2:B:958:MET:CB	2.28	0.63
2:B:564:ILE:O	2:B:567:SER:OG	2.12	0.63
3:C:32:ASN:OD1	3:C:33:VAL:N	2.30	0.63
1:A:1186:GLY:O	1:A:1190:SER:N	2.31	0.63
2:B:894:LYS:O	2:B:895:PHE:CG	2.50	0.63
3:C:163:TYR:N	3:C:166:ASP:OD2	2.26	0.63
2:B:353:VAL:HG13	2:B:357:ILE:HD12	1.79	0.63
8:J:44:TYR:HA	8:J:47:ARG:HD3	1.78	0.63
1:A:1000:MET:HG2	2:B:520:LEU:HB3	1.80	0.63
2:B:938:PHE:HZ	3:C:227:TYR:CE2	2.16	0.63
7:I:28:VAL:O	7:I:37:TYR:N	2.30	0.63
1:A:1501:ILE:HG22	1:A:1502:PRO:CD	2.27	0.63
1:A:1635:ASP:OD1	1:A:1636:SER:N	2.32	0.63
1:A:1185:VAL:O	1:A:1189:ALA:N	2.28	0.63
4:E:62:ALA:HB3	4:E:78:LEU:HB3	1.79	0.63
2:B:211:ARG:NH1	2:B:401:GLU:OE1	2.32	0.63
7:I:114:CYS:N	7:I:119:TYR:O	2.27	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1101:THR:HG22	1:A:1120:TYR:HB3	1.80	0.62
2:B:676:VAL:N	2:B:680:GLU:OE1	2.31	0.62
2:B:1038:HIS:NE2	2:B:1042:ASP:OD2	2.27	0.62
3:C:216:HIS:ND1	3:C:218:LYS:HG2	2.14	0.62
6:H:3:ASN:N	6:H:61:SER:OG	2.33	0.62
1:A:399:LEU:HD21	1:A:422:ARG:HB3	1.80	0.62
1:A:943:ILE:HD11	2:B:958:MET:CG	2.30	0.62
2:B:286:ARG:HD3	7:I:9:PHE:CD1	2.35	0.62
2:B:576:THR:HG21	12:N:95:ILE:CG2	2.29	0.62
2:B:629:VAL:HG22	2:B:671:TYR:HE2	1.65	0.62
3:C:278:GLU:OE2	3:C:281:ARG:NH1	2.30	0.62
1:A:949:GLN:HA	1:A:981:TYR:HA	1.80	0.62
1:A:949:GLN:HB2	1:A:981:TYR:HD1	1.64	0.62
1:A:245:LYS:HA	1:A:251:ILE:HA	1.81	0.62
1:A:93:GLN:HA	1:A:96:ILE:HD12	1.81	0.62
1:A:535:GLN:HG2	1:A:545:SER:HA	1.82	0.62
2:B:51:ALA:HA	2:B:54:GLU:HB2	1.81	0.62
2:B:480:GLN:O	2:B:484:TYR:OH	2.10	0.62
2:B:757:TYR:CE2	2:B:762:MET:HB2	2.34	0.62
1:A:325:ASP:HB3	1:A:329:ARG:HH12	1.65	0.62
1:A:560:GLN:O	1:A:575:LYS:NZ	2.33	0.62
3:C:122:ASP:HA	3:C:125:LYS:HB3	1.81	0.62
4:E:26:ARG:HH21	4:E:187:TYR:C	2.03	0.62
4:E:155:ARG:HA	4:E:196:VAL:HG12	1.82	0.62
5:F:103:MET:SD	14:G:112:PRO:HG3	2.39	0.62
1:A:54:LEU:O	1:A:75:HIS:N	2.31	0.62
1:A:908:VAL:HG22	1:A:945:CYS:CB	2.30	0.62
1:A:1497:ILE:HG23	1:A:1500:GLN:HB3	1.82	0.62
4:E:41:ASP:O	4:E:45:LYS:N	2.33	0.62
6:H:21:ASN:OD1	6:H:22:LYS:N	2.33	0.62
9:K:54:THR:HA	9:K:61:ALA:HA	1.81	0.62
7:I:113:THR:OG1	7:I:120:LYS:NZ	2.28	0.61
1:A:834:ARG:HH12	2:B:1007:TYR:HE2	1.45	0.61
1:A:1299:ASN:HA	1:A:1302:TYR:CE2	2.36	0.61
2:B:96:SER:HB2	2:B:144:SER:HB3	1.80	0.61
1:A:196:ALA:HA	1:A:201:ARG:HH21	1.64	0.61
1:A:584:ARG:HG2	1:A:644:ARG:HH22	1.65	0.61
1:A:841:LYS:O	1:A:844:THR:OG1	2.18	0.61
1:A:527:PRO:HG2	1:A:547:ILE:HA	1.81	0.61
1:A:1559:ARG:HA	1:A:1562:ILE:HD12	1.82	0.61
3:C:81:GLU:HG3	3:C:82:TYR:CD2	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:236:LEU:N	3:C:288:LYS:O	2.28	0.61
4:E:165:LEU:O	4:E:169:ARG:N	2.33	0.61
6:H:11:GLN:NE2	6:H:52:GLN:OE1	2.34	0.61
7:I:91:ASN:HD22	7:I:116:SER:H	1.46	0.61
8:J:5:VAL:HG12	8:J:6:ARG:HG3	1.82	0.61
1:A:669:LEU:HG	1:A:810:LEU:HD11	1.83	0.61
1:A:1651:THR:HB	5:F:92:ARG:NH1	2.15	0.61
2:B:265:ARG:O	2:B:267:ASN:ND2	2.33	0.61
1:A:264:ASN:O	1:A:268:GLY:N	2.33	0.61
1:A:1243:TRP:NE1	1:A:1533:GLU:O	2.31	0.61
4:E:183:PRO:O	4:E:187:TYR:N	2.33	0.61
2:B:1161:ASP:OD1	2:B:1165:ASN:N	2.34	0.61
1:A:1056:ASP:OD1	1:A:1057:ILE:N	2.34	0.61
1:A:1624:LYS:HA	1:A:1627:LEU:HD12	1.81	0.61
2:B:609:ARG:NH2	2:B:626:ILE:HB	2.15	0.61
2:B:714:ARG:HH21	2:B:957:ARG:HA	1.66	0.61
2:B:110:ASN:N	2:B:118:GLU:HG2	2.15	0.60
2:B:369:ASP:OD1	2:B:372:ARG:NH1	2.33	0.60
2:B:655:TYR:CD2	2:B:657:PRO:HD2	2.35	0.60
8:J:31:ASP:OD1	8:J:34:THR:N	2.33	0.60
2:B:626:ILE:N	2:B:668:GLU:OE1	2.34	0.60
7:I:6:SER:HA	7:I:45:LEU:HD22	1.83	0.60
1:A:973:GLU:HG3	1:A:975:ASP:H	1.67	0.60
1:A:1272:VAL:HG11	1:A:1485:MET:HG2	1.82	0.60
2:B:168:ASN:OD1	2:B:169:ARG:N	2.35	0.60
2:B:552:SER:OG	2:B:648:ARG:N	2.34	0.60
5:F:108:PHE:HE2	5:F:131:PRO:HG3	1.65	0.60
1:A:244:ARG:HH22	1:A:312:SER:HB3	1.65	0.60
1:A:385:LEU:HD13	1:A:437:PHE:HA	1.83	0.60
1:A:538:ASN:HA	1:A:575:LYS:HG2	1.83	0.60
1:A:943:ILE:HD11	2:B:958:MET:SD	2.40	0.60
1:A:945:CYS:O	1:A:946:LEU:HD23	2.01	0.60
1:A:539:GLU:HB3	1:A:570:THR:HB	1.83	0.60
6:H:105:GLU:O	6:H:112:ILE:HG23	2.00	0.60
1:A:643:ALA:HB1	2:B:1087:LEU:HD23	1.83	0.60
3:C:87:ASN:H	3:C:203:SER:HB3	1.66	0.60
4:E:155:ARG:HD3	4:E:190:LEU:HD22	1.83	0.60
1:A:36:THR:HG22	1:A:45:VAL:HG21	1.84	0.60
2:B:184:LYS:HD2	2:B:735:HIS:NE2	2.17	0.60
2:B:249:VAL:HG11	2:B:261:ARG:HH21	1.67	0.60
3:C:134:LEU:O	3:C:206:ALA:N	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:72:LYS:HB3	5:F:142:SER:HA	1.84	0.60
1:A:37:VAL:HG12	1:A:38:LEU:HG	1.83	0.60
1:A:1497:ILE:CG2	1:A:1500:GLN:HB3	2.31	0.60
1:A:244:ARG:O	1:A:252:PHE:N	2.32	0.60
1:A:1263:LEU:HB3	1:A:1496:SER:CB	2.32	0.60
1:A:509:GLU:HB2	1:A:577:VAL:HB	1.83	0.60
1:A:615:ARG:HH12	2:B:929:ARG:HH21	1.50	0.60
2:B:698:SER:H	2:B:701:ALA:HB3	1.66	0.60
1:A:36:THR:HB	1:A:45:VAL:HG11	1.84	0.59
1:A:1049:MET:HB3	4:E:208:TYR:HE1	1.67	0.59
2:B:444:ARG:O	2:B:448:ARG:N	2.28	0.59
2:B:588:ILE:HG12	2:B:642:LEU:HD12	1.82	0.59
2:B:796:ARG:NH2	8:J:9:SER:O	2.35	0.59
3:C:164:ALA:HB2	3:C:191:ILE:HB	1.82	0.59
3:C:277:ARG:HB3	3:C:280:LEU:HD12	1.84	0.59
4:E:114:ASN:OD1	4:E:115:ASN:N	2.35	0.59
7:I:8:ILE:HG22	7:I:17:LEU:HD12	1.84	0.59
8:J:69:ARG:NH2	10:L:33:GLU:OE2	2.35	0.59
9:K:50:LEU:O	9:K:54:THR:HG23	2.03	0.59
9:K:87:GLU:N	9:K:106:GLN:O	2.34	0.59
1:A:497:VAL:HG21	1:A:605:VAL:HG13	1.84	0.59
1:A:1603:MET:HG2	1:A:1612:LYS:HG2	1.84	0.59
2:B:341:SER:OG	2:B:343:ASP:OD1	2.12	0.59
2:B:521:LEU:HB3	2:B:523:GLU:OE1	2.02	0.59
2:B:609:ARG:HG3	2:B:655:TYR:OH	2.01	0.59
1:A:621:THR:O	1:A:625:ASN:N	2.35	0.59
1:A:1646:LEU:HD22	14:G:109:PRO:HB3	1.84	0.59
1:A:1648:ASN:HB3	1:A:1649:VAL:HG23	1.83	0.59
2:B:261:ARG:NH1	2:B:268:GLU:OE2	2.35	0.59
2:B:50:ASN:HB3	2:B:54:GLU:OE1	2.02	0.59
2:B:745:GLN:HB3	2:B:800:TYR:HB3	1.83	0.59
12:N:89:ILE:HG12	12:N:139:VAL:HG22	1.85	0.59
2:B:150:GLU:HB2	2:B:441:LYS:HE2	1.85	0.59
2:B:887:LEU:HB2	10:L:56:LEU:HB2	1.84	0.59
2:B:1128:CYS:H	2:B:1170:GLY:HA3	1.68	0.59
9:K:116:ALA:HA	9:K:119:LYS:HB3	1.85	0.59
1:A:417:ARG:O	1:A:421:SER:N	2.35	0.59
1:A:1578:SER:HB3	1:A:1581:HIS:CD2	2.38	0.59
1:A:1640:ARG:NE	1:A:1646:LEU:O	2.34	0.59
2:B:912:GLN:N	2:B:915:ASP:OD2	2.26	0.59
6:H:93:TYR:HA	6:H:145:ARG:HB3	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:117:ARG:HH21	1:A:137:ASP:CG	2.07	0.59
2:B:839:LYS:HG3	2:B:857:PRO:HD2	1.85	0.59
2:B:884:GLU:O	2:B:904:LYS:N	2.30	0.59
1:A:641:GLU:O	1:A:645:ALA:N	2.30	0.59
1:A:1640:ARG:O	1:A:1645:LYS:N	2.35	0.59
2:B:944:GLN:N	2:B:944:GLN:OE1	2.36	0.59
2:B:1128:CYS:HB3	2:B:1131:CYS:HB2	1.84	0.59
3:C:68:ARG:HD2	3:C:227:TYR:CE2	2.37	0.59
3:C:87:ASN:O	3:C:203:SER:N	2.33	0.59
4:E:177:ARG:HG3	4:E:215:MET:HG3	1.84	0.59
1:A:1053:ASP:OD1	1:A:1054:ALA:N	2.34	0.58
2:B:15:ASP:OD1	2:B:16:PHE:N	2.35	0.58
2:B:1013:MET:HB2	2:B:1022:LEU:HD12	1.84	0.58
2:B:996:PHE:O	2:B:999:GLN:N	2.36	0.58
9:K:122:LYS:NZ	9:K:126:ASP:OD2	2.31	0.58
1:A:267:LYS:HG2	1:A:270:ILE:HD12	1.85	0.58
2:B:698:SER:O	2:B:702:ASN:ND2	2.36	0.58
2:B:1128:CYS:O	2:B:1132:SER:N	2.36	0.58
4:E:20:LYS:NZ	4:E:34:GLU:O	2.30	0.58
11:M:10:ILE:HB	12:N:70:LEU:HB3	1.86	0.58
1:A:481:ARG:HE	1:A:632:GLU:HB2	1.68	0.58
1:A:468:ARG:HA	1:A:472:MET:HB2	1.84	0.58
1:A:1486:VAL:HG23	7:I:51:THR:HG22	1.86	0.58
1:A:1656:VAL:HG11	14:G:107:ILE:HB	1.84	0.58
2:B:523:GLU:OE1	2:B:523:GLU:N	2.34	0.58
3:C:242:GLU:HG3	3:C:246:ARG:NE	2.18	0.58
12:N:69:SER:OG	12:N:70:LEU:N	2.37	0.58
1:A:596:HIS:CD2	1:A:598:ALA:HB3	2.38	0.58
1:A:1443:GLN:O	1:A:1447:GLN:N	2.27	0.58
3:C:32:ASN:H	3:C:35:LYS:HD2	1.67	0.58
14:G:30:GLU:HA	14:G:32:ASN:N	2.18	0.58
1:A:659:THR:OG1	1:A:664:SER:N	2.33	0.58
1:A:846:ILE:HD13	1:A:906:GLN:CB	2.29	0.58
6:H:103:LYS:HD2	6:H:115:TYR:CD2	2.38	0.58
10:L:27:LEU:HA	10:L:39:SER:HB2	1.85	0.58
1:A:590:ASN:OD1	1:A:591:ARG:N	2.37	0.58
2:B:13:THR:CG2	12:N:163:VAL:HG22	2.33	0.58
2:B:164:MET:HB2	2:B:194:PHE:HE1	1.68	0.58
2:B:576:THR:CG2	12:N:95:ILE:HG22	2.34	0.58
4:E:83:CYS:N	4:E:111:VAL:O	2.36	0.58
1:A:320:VAL:HA	1:A:323:ILE:HD12	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:435:ASN:ND2	1:A:442:LYS:O	2.37	0.58
1:A:1101:THR:HA	1:A:1104:TYR:HD2	1.68	0.58
1:A:1154:LEU:O	1:A:1158:SER:N	2.37	0.58
1:A:1497:ILE:HG22	1:A:1497:ILE:O	2.04	0.58
2:B:796:ARG:NH2	8:J:8:PHE:O	2.36	0.58
2:B:832:TRP:HH2	2:B:837:LEU:HG	1.68	0.58
4:E:147:HIS:HB3	4:E:150:VAL:HG23	1.85	0.58
1:A:659:THR:O	1:A:663:GLY:N	2.33	0.57
1:A:956:ARG:NH2	1:A:979:GLY:HA3	2.19	0.57
1:A:1287:ALA:HA	1:A:1478:ALA:HB2	1.86	0.57
2:B:658:LEU:O	2:B:660:LYS:HG3	2.03	0.57
1:A:341:SER:N	1:A:1628:ASP:O	2.35	0.57
3:C:325:ALA:HA	3:C:328:LEU:HB3	1.86	0.57
1:A:236:CYS:HB2	1:A:271:ARG:HD2	1.86	0.57
1:A:1315:ASN:HA	1:A:1318:SER:HB2	1.85	0.57
2:B:894:LYS:HG3	10:L:54:ARG:HH21	1.69	0.57
2:B:1105:ARG:HB3	2:B:1172:GLU:HB3	1.87	0.57
1:A:522:ALA:O	1:A:526:GLY:N	2.38	0.57
1:A:697:TYR:CE1	9:K:104:ARG:HG3	2.39	0.57
2:B:42:VAL:HG21	2:B:190:ILE:HD12	1.87	0.57
2:B:757:TYR:CZ	2:B:762:MET:HB2	2.40	0.57
6:H:103:LYS:HB3	6:H:115:TYR:HB2	1.86	0.57
8:J:3:VAL:HG21	8:J:18:TRP:CG	2.39	0.57
2:B:972:GLY:O	2:B:976:GLY:N	2.38	0.57
1:A:2:ASP:HB3	1:A:5:LYS:HD3	1.87	0.57
1:A:826:PHE:HZ	1:A:924:SER:HB3	1.68	0.57
6:H:38:LEU:HD11	6:H:123:MET:HG3	1.86	0.57
14:G:56:ASN:HB3	14:G:59:GLN:HB3	1.87	0.57
1:A:208:PHE:HA	1:A:212:VAL:HG11	1.87	0.57
1:A:975:ASP:OD2	1:A:977:MET:HB3	2.04	0.57
4:E:17:ARG:NH1	4:E:35:VAL:O	2.38	0.57
12:N:148:ILE:O	12:N:150:TYR:N	2.38	0.57
2:B:489:GLU:HG3	2:B:495:ARG:HE	1.70	0.56
4:E:110:PHE:N	4:E:133:GLU:O	2.28	0.56
2:B:656:LEU:O	12:N:153:VAL:CG1	2.46	0.56
2:B:745:GLN:HG2	2:B:800:TYR:CD2	2.33	0.56
1:A:7:VAL:HG11	2:B:1176:VAL:HA	1.86	0.56
1:A:11:ILE:HD11	2:B:1176:VAL:HG21	1.86	0.56
1:A:675:SER:OG	2:B:952:HIS:NE2	2.24	0.56
2:B:320:LEU:HD13	2:B:326:VAL:HA	1.86	0.56
2:B:801:GLY:O	2:B:802:THR:OG1	2.23	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:257:GLY:HA3	3:C:266:TYR:CZ	2.40	0.56
1:A:836:THR:HG23	1:A:839:GLY:H	1.71	0.56
2:B:832:TRP:CH2	2:B:837:LEU:HG	2.41	0.56
6:H:85:GLY:O	6:H:87:ARG:NH1	2.38	0.56
7:I:29:GLU:HB2	7:I:36:ILE:HG13	1.87	0.56
3:C:126:PHE:HD2	3:C:131:THR:HG1	1.54	0.56
7:I:89:CYS:SG	7:I:116:SER:OG	2.59	0.56
1:A:592:GLN:NE2	2:B:1075:GLU:OE2	2.39	0.56
1:A:966:LEU:HB3	1:A:969:PHE:HD2	1.70	0.56
1:A:1082:PRO:HA	1:A:1085:LEU:HD12	1.87	0.56
2:B:852:VAL:HG13	2:B:856:ASP:HB2	1.88	0.56
2:B:893:ASN:ND2	2:B:895:PHE:CD2	2.69	0.56
3:C:236:LEU:HD11	3:C:290:LYS:HG3	1.86	0.56
1:A:95:TYR:CG	1:A:245:LYS:HD3	2.40	0.56
1:A:365:THR:O	1:A:369:LEU:N	2.38	0.56
1:A:846:ILE:CD1	1:A:906:GLN:HB3	2.31	0.56
1:A:1454:HIS:HB2	1:A:1457:ILE:HD12	1.88	0.56
1:A:683:LYS:HD2	6:H:20:TYR:CE2	2.41	0.56
1:A:828:CYS:SG	1:A:829:GLY:N	2.78	0.56
3:C:259:ASP:N	3:C:264:GLU:O	2.39	0.56
1:A:1649:VAL:HG12	1:A:1650:GLY:N	2.21	0.56
2:B:815:ARG:HE	2:B:821:ILE:HA	1.71	0.56
2:B:815:ARG:NE	2:B:821:ILE:HA	2.21	0.56
3:C:121:PRO:O	3:C:125:LYS:N	2.33	0.56
4:E:96:PHE:HE2	4:E:132:ILE:HG23	1.70	0.56
2:B:462:GLN:O	2:B:466:SER:N	2.29	0.56
2:B:750:PRO:HB3	2:B:1032:TYR:CG	2.41	0.56
2:B:787:MET:SD	2:B:917:PHE:HB2	2.46	0.56
7:I:10:CYS:HB2	7:I:17:LEU:HD21	1.88	0.56
1:A:372:LYS:HB3	1:A:377:VAL:HA	1.88	0.55
1:A:606:ARG:NH2	9:K:98:GLU:OE2	2.39	0.55
1:A:1242:ILE:HD11	1:A:1517:ARG:NE	2.20	0.55
2:B:654:ARG:NH2	2:B:659:ASP:OD2	2.37	0.55
2:B:659:ASP:O	2:B:660:LYS:HG3	2.06	0.55
2:B:987:ASN:OD1	2:B:990:ASP:N	2.35	0.55
2:B:492:ASN:OD1	2:B:495:ARG:N	2.29	0.55
8:J:32:GLU:N	8:J:32:GLU:OE1	2.38	0.55
2:B:492:ASN:HD21	2:B:723:LYS:HA	1.71	0.55
3:C:117:ASP:OD1	3:C:118:SER:N	2.39	0.55
1:A:885:ASP:OD1	1:A:887:ASN:N	2.39	0.55
2:B:218:ILE:HG23	2:B:231:HIS:HD2	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:H:5:LEU:H	6:H:60:ALA:HA	1.70	0.55
7:I:66:VAL:HG23	7:I:67:VAL:HG13	1.89	0.55
9:K:68:GLU:H	9:K:99:ASN:HB3	1.70	0.55
1:A:316:LEU:HD22	1:A:427:PHE:CE2	2.41	0.55
2:B:700:LEU:N	16:B:1301:SO4:S	2.73	0.55
2:B:783:MET:HA	2:B:950:ASN:HD22	1.71	0.55
3:C:87:ASN:ND2	3:C:201:GLU:OE2	2.39	0.55
2:B:387:GLY:O	2:B:634:ARG:NH1	2.40	0.55
1:A:885:ASP:OD2	1:A:888:LYS:HG3	2.07	0.55
2:B:23:SER:O	2:B:27:ASN:N	2.32	0.55
2:B:190:ILE:HD11	2:B:496:PHE:HE2	1.72	0.55
2:B:362:LEU:HD12	2:B:370:LYS:HG2	1.89	0.55
3:C:179:PHE:HA	3:C:182:CYS:SG	2.47	0.55
9:K:77:ARG:HD2	9:K:91:TYR:HE1	1.71	0.55
11:M:15:VAL:HG22	11:M:90:LEU:HB2	1.88	0.55
1:A:908:VAL:CA	1:A:945:CYS:SG	2.92	0.55
1:A:1449:ALA:O	1:A:1452:SER:OG	2.13	0.55
1:A:1648:ASN:H	1:A:1649:VAL:HB	1.71	0.55
2:B:1077:ASP:HA	2:B:1080:ILE:HD12	1.89	0.55
9:K:50:LEU:HD21	9:K:64:GLN:HB2	1.88	0.55
1:A:829:GLY:N	1:A:832:ASP:OD2	2.40	0.55
9:K:63:PHE:HB2	9:K:103:ILE:HB	1.89	0.55
1:A:503:VAL:HA	1:A:580:HIS:CE1	2.42	0.55
1:A:945:CYS:C	1:A:946:LEU:HG	2.27	0.55
2:B:177:PRO:HA	2:B:180:LEU:HD12	1.89	0.55
2:B:529:CYS:SG	2:B:532:HIS:N	2.73	0.55
3:C:89:THR:OG1	3:C:201:GLU:N	2.29	0.55
2:B:675:ALA:O	2:B:689:VAL:HA	2.06	0.54
2:B:718:GLN:OE1	2:B:922:GLY:N	2.40	0.54
14:G:229:LEU:HD12	14:G:230:ARG:H	1.72	0.54
1:A:1549:VAL:O	1:A:1553:TYR:N	2.34	0.54
2:B:504:HIS:CB	2:B:542:LEU:HD23	2.36	0.54
2:B:609:ARG:HE	2:B:626:ILE:HD12	1.72	0.54
1:A:1651:THR:O	1:A:1654:PHE:N	2.39	0.54
2:B:132:SER:OG	2:B:196:VAL:HA	2.07	0.54
2:B:584:CYS:N	2:B:596:VAL:O	2.41	0.54
2:B:743:ARG:NH2	8:J:1:MET:SD	2.80	0.54
9:K:134:LYS:O	9:K:138:LYS:HG2	2.07	0.54
1:A:883:LEU:HD22	1:A:972:TYR:HE1	1.72	0.54
1:A:1105:ARG:NH2	1:A:1142:ASP:OD1	2.40	0.54
2:B:700:LEU:N	16:B:1301:SO4:O1	2.27	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:113:VAL:HA	1:A:182:LYS:HD3	1.90	0.54
1:A:657:TYR:O	1:A:666:VAL:HG22	2.08	0.54
1:A:771:PHE:HE1	1:A:776:LEU:HD13	1.72	0.54
2:B:54:GLU:OE2	2:B:168:ASN:ND2	2.39	0.54
2:B:505:ARG:HB3	2:B:509:PHE:CD2	2.41	0.54
1:A:1204:THR:HG22	1:A:1205:PHE:H	1.73	0.54
1:A:1310:LYS:O	1:A:1314:GLN:N	2.28	0.54
4:E:143:ASN:OD1	4:E:145:THR:N	2.41	0.54
1:A:535:GLN:HB2	1:A:578:TYR:HD2	1.73	0.54
1:A:1289:SER:HA	1:A:1475:GLU:HA	1.89	0.54
2:B:656:LEU:HB3	2:B:657:PRO:HD3	1.89	0.54
5:F:117:PRO:HA	5:F:120:ILE:HD12	1.90	0.54
1:A:472:MET:HB3	2:B:1073:GLU:HG2	1.90	0.54
2:B:57:ASP:OD1	2:B:59:GLY:N	2.39	0.54
3:C:311:GLU:OE1	3:C:311:GLU:N	2.30	0.54
10:L:46:VAL:HG13	10:L:56:LEU:HD12	1.90	0.54
11:M:12:ILE:HD12	12:N:67:LEU:HB2	1.90	0.54
1:A:916:THR:O	1:A:919:LYS:NZ	2.40	0.54
1:A:1111:GLU:O	1:A:1116:GLN:NE2	2.41	0.54
1:A:1533:GLU:OE2	4:E:14:ARG:NH2	2.39	0.54
3:C:152:ASP:OD2	3:C:154:LYS:HB2	2.08	0.54
3:C:248:GLN:HG3	3:C:256:ILE:HB	1.89	0.54
4:E:83:CYS:HB2	4:E:110:PHE:CZ	2.42	0.54
1:A:368:ARG:O	1:A:383:ASN:ND2	2.38	0.54
1:A:583:ASN:OD1	1:A:606:ARG:HA	2.08	0.54
2:B:21:ARG:NH2	8:J:53:HIS:O	2.41	0.54
2:B:840:LEU:HA	2:B:846:PRO:HA	1.90	0.54
6:H:103:LYS:HD2	6:H:115:TYR:HD2	1.73	0.54
7:I:31:SER:O	7:I:34:LYS:NZ	2.32	0.54
2:B:379:ARG:HE	2:B:580:GLY:CA	2.21	0.53
6:H:112:ILE:HD12	6:H:129:TYR:HB3	1.90	0.53
1:A:27:LEU:HA	2:B:1129:ARG:HG2	1.91	0.53
1:A:467:PHE:O	1:A:471:MET:HB2	2.08	0.53
2:B:274:VAL:HA	2:B:277:LEU:HD12	1.90	0.53
6:H:36:CYS:HA	6:H:126:GLU:O	2.08	0.53
7:I:74:ASN:O	7:I:77:LYS:HG2	2.09	0.53
1:A:53:ALA:HA	1:A:63:SER:HB2	1.89	0.53
1:A:327:VAL:O	1:A:331:GLU:N	2.35	0.53
1:A:494:GLU:HG2	1:A:604:LYS:HB2	1.90	0.53
1:A:579:ARG:HH22	1:A:585:ASP:CG	2.11	0.53
1:A:1200:MET:HG2	1:A:1573:TYR:CD1	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1298:ASP:HB2	1:A:1301:GLU:CD	2.29	0.53
1:A:1559:ARG:NH2	4:E:200:ARG:HD3	2.24	0.53
3:C:213:GLY:HA2	3:C:219:PHE:HB2	1.89	0.53
1:A:32:ILE:HG21	1:A:49:LEU:HD23	1.90	0.53
2:B:1134:ARG:HD3	2:B:1167:PHE:HE1	1.72	0.53
14:G:20:HIS:O	14:G:20:HIS:ND1	2.38	0.53
1:A:1524:VAL:HG21	1:A:1545:ASP:HB2	1.91	0.53
2:B:1107:CYS:O	2:B:1197:ARG:NH1	2.42	0.53
3:C:43:ASN:O	3:C:55:ASP:N	2.39	0.53
1:A:39:ASP:OD1	1:A:43:HIS:N	2.41	0.53
1:A:211:THR:HG23	4:E:177:ARG:NH1	2.23	0.53
1:A:728:GLY:HA2	1:A:731:ILE:HD12	1.91	0.53
1:A:1031:HIS:CE1	1:A:1039:ARG:HB2	2.43	0.53
1:A:1542:THR:HG22	4:E:149:LEU:HD11	1.90	0.53
2:B:560:ARG:O	2:B:563:SER:OG	2.19	0.53
1:A:752:LYS:HG2	1:A:768:GLU:HA	1.89	0.53
2:B:560:ARG:NH1	2:B:618:PRO:HB2	2.23	0.53
7:I:91:ASN:HD21	7:I:115:THR:HB	1.74	0.53
1:A:477:ASN:HB3	2:B:1048:SER:O	2.09	0.53
1:A:572:THR:HA	14:G:52:MET:HE1	1.91	0.53
1:A:783:LYS:HG3	1:A:787:GLY:HA3	1.89	0.53
1:A:1153:LYS:HA	1:A:1156:LYS:NZ	2.23	0.53
1:A:1530:TRP:CG	4:E:142:VAL:HG21	2.44	0.53
4:E:180:ARG:N	4:E:215:MET:OXT	2.41	0.53
5:F:83:PRO:O	5:F:152:ILE:N	2.31	0.53
14:G:132:VAL:HG22	14:G:232:THR:HG22	1.90	0.53
2:B:134:ARG:HG2	2:B:162:PRO:HA	1.91	0.53
4:E:64:PRO:HG3	4:E:75:MET:HG2	1.91	0.53
1:A:17:GLY:N	2:B:1195:ARG:O	2.40	0.53
1:A:1260:LYS:HE3	1:A:1500:GLN:HB2	1.90	0.53
1:A:1657:LEU:HD11	5:F:135:ARG:CB	2.39	0.53
2:B:983:PRO:HB2	2:B:984:TRP:CE3	2.44	0.53
1:A:244:ARG:N	1:A:252:PHE:O	2.33	0.52
2:B:798:PHE:HA	8:J:8:PHE:CZ	2.44	0.52
4:E:6:GLU:HA	4:E:9:ILE:HD12	1.92	0.52
4:E:48:ASP:OD1	4:E:52:ARG:N	2.24	0.52
4:E:90:VAL:HG13	4:E:123:LEU:HD11	1.89	0.52
6:H:30:SER:HB3	6:H:33:GLN:O	2.09	0.52
1:A:648:LEU:O	1:A:652:ASN:ND2	2.42	0.52
2:B:72:VAL:HG22	2:B:96:SER:HA	1.91	0.52
2:B:238:SER:O	2:B:246:GLN:N	2.31	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:29:PRO:HB2	2:B:177:PRO:HG2	1.92	0.52
2:B:832:TRP:HZ3	2:B:836:TRP:HB2	1.74	0.52
6:H:101:ALA:HB2	6:H:116:TYR:CE2	2.43	0.52
1:A:488:PRO:HD3	1:A:618:TYR:HE2	1.75	0.52
2:B:773:VAL:HG22	2:B:947:ILE:HB	1.92	0.52
1:A:16:PHE:CE2	1:A:1625:ALA:HB1	2.45	0.52
1:A:1301:GLU:O	1:A:1305:GLU:N	2.27	0.52
2:B:516:THR:HG22	2:B:519:LYS:HE2	1.91	0.52
2:B:757:TYR:O	2:B:761:GLY:N	2.43	0.52
2:B:832:TRP:CZ3	2:B:834:LYS:HA	2.44	0.52
2:B:1014:TYR:HE2	3:C:228:ARG:HA	1.75	0.52
3:C:84:TYR:HE2	3:C:207:HIS:HE2	1.57	0.52
3:C:121:PRO:HD2	3:C:124:GLU:OE1	2.10	0.52
1:A:945:CYS:O	1:A:946:LEU:HG	2.09	0.52
1:A:1023:LEU:HD21	1:A:1226:VAL:HG11	1.92	0.52
3:C:165:ARG:NH1	3:C:190:ASP:HA	2.25	0.52
7:I:87:PRO:HG2	7:I:119:TYR:CE2	2.43	0.52
1:A:50:TYR:OH	1:A:383:ASN:ND2	2.43	0.52
9:K:59:THR:O	9:K:106:GLN:HA	2.10	0.52
1:A:861:VAL:HA	7:I:68:LYS:HD3	1.92	0.52
1:A:943:ILE:HG22	1:A:943:ILE:O	2.09	0.52
1:A:1582:LEU:O	1:A:1586:ALA:N	2.35	0.52
2:B:1106:GLU:HB2	2:B:1172:GLU:HB2	1.90	0.52
7:I:23:VAL:HB	7:I:39:LYS:HZ1	1.75	0.52
13:D:48:GLU:OE2	13:D:90:LYS:NZ	2.43	0.52
1:A:945:CYS:O	1:A:946:LEU:CD2	2.57	0.52
1:A:1056:ASP:OD2	1:A:1058:THR:OG1	2.28	0.52
1:A:1254:PHE:O	1:A:1257:SER:OG	2.18	0.52
2:B:23:SER:HA	2:B:26:ILE:HB	1.92	0.52
3:C:232:GLN:HB3	3:C:292:GLY:C	2.30	0.52
1:A:879:LEU:O	1:A:883:LEU:N	2.30	0.51
1:A:1034:TYR:CE1	5:F:136:ARG:HD3	2.44	0.51
2:B:143:TRP:HB3	2:B:152:LEU:HB2	1.92	0.51
11:M:75:GLN:HB2	12:N:60:SER:HA	1.91	0.51
1:A:236:CYS:HB3	1:A:271:ARG:HH11	1.73	0.51
1:A:1114:TYR:HE1	1:A:1115:LYS:HE3	1.75	0.51
2:B:745:GLN:HB3	2:B:800:TYR:O	2.09	0.51
3:C:153:PRO:O	3:C:157:TYR:N	2.43	0.51
3:C:188:ASP:HB2	3:C:191:ILE:HG13	1.93	0.51
4:E:107:THR:HG23	4:E:131:THR:HG23	1.92	0.51
1:A:1238:MET:HB2	1:A:1521:THR:OG1	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1264:SER:HB2	7:I:56:PHE:HD1	1.75	0.51
1:A:1310:LYS:HA	1:A:1313:LEU:HB3	1.92	0.51
2:B:404:LEU:HD12	2:B:407:PHE:CE2	2.46	0.51
2:B:576:THR:HG23	12:N:95:ILE:HG22	1.92	0.51
2:B:602:LYS:HB2	2:B:628:TYR:CZ	2.46	0.51
4:E:17:ARG:HG2	4:E:21:GLU:OE2	2.11	0.51
7:I:86:CYS:HB3	7:I:91:ASN:H	1.76	0.51
2:B:397:THR:HA	2:B:400:GLN:OE1	2.10	0.51
2:B:788:ILE:HB	2:B:948:ILE:HB	1.92	0.51
1:A:379:GLU:OE2	1:A:384:GLN:NE2	2.26	0.51
1:A:509:GLU:OE2	1:A:579:ARG:NE	2.43	0.51
1:A:1050:TYR:CE2	1:A:1580:ARG:HD3	2.46	0.51
1:A:1100:LYS:HG2	1:A:1104:TYR:HE2	1.76	0.51
2:B:74:PHE:HE2	2:B:343:ASP:HB3	1.74	0.51
2:B:335:ARG:NH2	2:B:342:PRO:O	2.44	0.51
2:B:527:PHE:O	2:B:546:ALA:N	2.29	0.51
6:H:129:TYR:O	6:H:133:ASN:N	2.43	0.51
14:G:30:GLU:HA	14:G:32:ASN:H	1.74	0.51
1:A:804:GLU:H	1:A:804:GLU:CD	2.14	0.51
1:A:1193:VAL:O	1:A:1196:PRO:HD2	2.10	0.51
1:A:1647:ASN:HB3	1:A:1650:GLY:H	1.75	0.51
2:B:167:SER:OG	2:B:170:CYS:N	2.43	0.51
2:B:589:ASP:OD1	2:B:643:PHE:HA	2.11	0.51
2:B:938:PHE:CZ	3:C:227:TYR:CE2	2.98	0.51
3:C:87:ASN:OD1	3:C:88:ASN:N	2.44	0.51
3:C:236:LEU:HD12	3:C:287:ASP:O	2.11	0.51
1:A:352:ALA:HA	1:A:355:PHE:HD2	1.75	0.51
1:A:949:GLN:HG3	1:A:950:GLN:O	2.11	0.51
1:A:1303:SER:HA	1:A:1308:VAL:H	1.75	0.51
2:B:573:ALA:HB2	2:B:594:GLY:HA2	1.92	0.51
2:B:584:CYS:HB3	2:B:596:VAL:HG23	1.93	0.51
2:B:1118:PRO:HD3	2:B:1124:SER:HB2	1.92	0.51
3:C:161:HIS:HB2	3:C:163:TYR:CE1	2.45	0.51
7:I:84:GLU:N	7:I:92:GLU:O	2.40	0.51
1:A:675:SER:HG	2:B:952:HIS:CE1	2.28	0.51
1:A:1609:SER:O	1:A:1612:LYS:N	2.44	0.51
2:B:136:LYS:HA	2:B:160:GLY:HA2	1.92	0.51
2:B:145:VAL:N	2:B:150:GLU:O	2.41	0.51
6:H:35:GLN:HE22	6:H:110:ASP:HB3	1.75	0.51
1:A:126:GLN:HB3	1:A:343:PRO:HG3	1.92	0.51
1:A:806:ALA:HA	1:A:809:VAL:HB	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:346:ASP:HA	2:B:349:VAL:HB	1.93	0.51
2:B:677:THR:H	2:B:680:GLU:CD	2.14	0.51
5:F:127:GLU:HB3	5:F:129:LYS:HG2	1.93	0.51
12:N:63:ASP:OD2	12:N:66:LYS:NZ	2.35	0.51
1:A:21:ALA:HA	1:A:24:ILE:HB	1.91	0.50
1:A:208:PHE:CE2	1:A:1607:THR:HG23	2.47	0.50
1:A:321:LYS:HB2	1:A:356:PHE:CE2	2.44	0.50
3:C:174:ARG:O	3:C:178:THR:N	2.38	0.50
1:A:368:ARG:HA	1:A:380:ASN:ND2	2.27	0.50
1:A:723:TYR:CD1	1:A:724:PRO:HD2	2.47	0.50
2:B:322:ASN:HB3	2:B:325:GLN:HG3	1.93	0.50
9:K:54:THR:HG22	9:K:62:SER:H	1.77	0.50
1:A:119:ALA:HA	1:A:122:LEU:HD12	1.93	0.50
1:A:381:SER:HB2	1:A:453:ILE:HG23	1.93	0.50
1:A:826:PHE:CZ	1:A:924:SER:CB	2.95	0.50
1:A:962:SER:HB3	2:B:670:VAL:HG12	1.92	0.50
2:B:72:VAL:HG11	2:B:94:LYS:HG3	1.94	0.50
2:B:599:GLU:H	2:B:599:GLU:CD	2.15	0.50
3:C:45:SER:H	3:C:54:PHE:HA	1.76	0.50
3:C:332:PRO:HD3	9:K:42:PRO:HB2	1.94	0.50
4:E:28:TYR:HE1	4:E:64:PRO:HG3	1.76	0.50
4:E:145:THR:HG21	4:E:187:TYR:CE2	2.47	0.50
1:A:49:LEU:HB3	1:A:368:ARG:HH12	1.75	0.50
1:A:91:PHE:CE2	1:A:245:LYS:HD2	2.46	0.50
1:A:526:GLY:HA3	1:A:554:ARG:NH1	2.20	0.50
1:A:551:VAL:HG22	1:A:554:ARG:HH21	1.76	0.50
1:A:1516:LYS:HG3	1:A:1518:VAL:HG23	1.94	0.50
2:B:326:VAL:O	2:B:330:LEU:HG	2.11	0.50
2:B:559:SER:O	2:B:562:PRO:HD2	2.12	0.50
2:B:1131:CYS:HB2	2:B:1170:GLY:HA2	1.92	0.50
3:C:142:ARG:NH2	8:J:67:GLU:OE2	2.44	0.50
1:A:324:LEU:HA	1:A:327:VAL:HB	1.93	0.50
2:B:20:GLU:HG2	2:B:24:ARG:NH1	2.23	0.50
2:B:517:VAL:HG23	2:B:518:ARG:HG3	1.92	0.50
1:A:248:PHE:CE2	1:A:444:GLN:HG2	2.46	0.50
1:A:487:ASP:O	1:A:617:HIS:HA	2.12	0.50
1:A:496:GLY:HA3	1:A:615:ARG:HB2	1.94	0.50
1:A:551:VAL:HA	1:A:554:ARG:HH21	1.76	0.50
1:A:1025:LYS:HE3	1:A:1611:MET:HG3	1.93	0.50
2:B:76:GLY:H	2:B:92:GLY:HA3	1.76	0.50
3:C:87:ASN:N	3:C:203:SER:HB3	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:H:102:TYR:CE1	6:H:115:TYR:HB3	2.47	0.50
8:J:31:ASP:CG	8:J:34:THR:H	2.14	0.50
1:A:538:ASN:HB2	1:A:540:ASP:OD1	2.10	0.50
1:A:651:ALA:O	1:A:656:GLN:NE2	2.45	0.50
1:A:652:ASN:CG	1:A:653:THR:H	2.15	0.50
1:A:1138:GLU:HA	1:A:1141:GLN:HB3	1.92	0.50
1:A:1530:TRP:CD2	4:E:142:VAL:HG21	2.47	0.50
2:B:150:GLU:HG2	2:B:441:LYS:HG2	1.93	0.50
2:B:655:TYR:CD1	2:B:688:HIS:CD2	3.00	0.50
2:B:923:GLN:HE22	2:B:957:ARG:HD2	1.77	0.50
3:C:133:VAL:HG22	3:C:207:HIS:ND1	2.26	0.50
4:E:113:GLN:HG2	4:E:137:GLU:OE2	2.12	0.50
1:A:1288:ARG:O	1:A:1476:LEU:N	2.40	0.50
2:B:352:GLU:OE2	2:B:356:ARG:NE	2.42	0.50
1:A:488:PRO:HD2	2:B:781:TYR:CE1	2.47	0.50
1:A:618:TYR:CZ	2:B:783:MET:HB2	2.46	0.50
1:A:721:LYS:HB3	6:H:96:VAL:HB	1.93	0.50
1:A:937:ASN:O	1:A:941:SER:HB3	2.12	0.50
2:B:368:GLN:HG3	2:B:372:ARG:NH1	2.27	0.50
2:B:393:ASN:HD22	2:B:396:ALA:HB2	1.77	0.50
4:E:46:TYR:O	4:E:53:PRO:HA	2.12	0.50
14:G:47:VAL:HB	14:G:65:HIS:CD2	2.47	0.50
1:A:887:ASN:O	1:A:891:ILE:HG12	2.12	0.49
1:A:1074:TYR:O	1:A:1078:LYS:HG2	2.12	0.49
1:A:1224:GLU:O	1:A:1228:THR:OG1	2.27	0.49
2:B:74:PHE:HA	2:B:93:ASN:O	2.12	0.49
2:B:211:ARG:NH1	2:B:647:SER:HB2	2.18	0.49
6:H:28:ALA:N	6:H:38:LEU:O	2.40	0.49
2:B:25:PHE:CD1	8:J:59:LYS:HD2	2.48	0.49
2:B:443:LYS:HA	2:B:446:MET:HB3	1.94	0.49
2:B:966:SER:OG	2:B:1029:GLY:HA3	2.12	0.49
3:C:99:HIS:CE1	3:C:103:LEU:HD11	2.47	0.49
6:H:101:ALA:HB2	6:H:116:TYR:CZ	2.47	0.49
1:A:102:CYS:HB2	1:A:109:ARG:HG2	1.92	0.49
1:A:672:ASP:HA	1:A:675:SER:HB2	1.93	0.49
1:A:713:VAL:O	1:A:738:ASN:ND2	2.38	0.49
2:B:752:VAL:HA	2:B:979:GLN:O	2.12	0.49
8:J:8:PHE:HB2	8:J:48:ARG:HH22	1.77	0.49
9:K:91:TYR:CD2	9:K:101:LEU:HD11	2.46	0.49
1:A:717:PRO:HG2	1:A:720:PHE:CD1	2.47	0.49
1:A:1299:ASN:HA	1:A:1302:TYR:CZ	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1300:ASN:O	1:A:1304:GLU:N	2.35	0.49
1:A:1462:PHE:HD1	1:A:1470:CYS:HB2	1.77	0.49
1:A:1568:ASN:HA	1:A:1571:SER:HB2	1.94	0.49
4:E:54:GLN:O	4:E:58:MET:HG3	2.13	0.49
11:M:65:TYR:CE1	11:M:97:VAL:HB	2.48	0.49
1:A:363:PRO:HD2	1:A:368:ARG:HD3	1.94	0.49
1:A:1545:ASP:O	1:A:1548:ALA:N	2.44	0.49
2:B:753:LYS:O	2:B:981:SER:N	2.38	0.49
2:B:854:GLU:HG3	2:B:874:TYR:O	2.13	0.49
3:C:51:GLU:HA	3:C:303:GLU:HA	1.94	0.49
1:A:1643:VAL:HB	1:A:1645:LYS:HG2	1.95	0.49
2:B:827:PHE:CD1	2:B:869:THR:HG21	2.48	0.49
2:B:828:GLY:HA3	2:B:862:PHE:CD1	2.48	0.49
4:E:48:ASP:OD1	4:E:51:GLY:N	2.45	0.49
1:A:250:LYS:HD3	1:A:428:VAL:HG22	1.94	0.49
1:A:631:ASP:OD1	1:A:631:ASP:N	2.43	0.49
1:A:1066:PHE:O	1:A:1070:LEU:N	2.43	0.49
1:A:1263:LEU:HG	1:A:1267:ILE:HD11	1.95	0.49
3:C:41:GLU:HB3	3:C:57:ILE:HB	1.95	0.49
1:A:942:GLN:HA	1:A:946:LEU:O	2.12	0.49
1:A:1129:PRO:HA	1:A:1135:SER:HB3	1.94	0.49
1:A:1504:ILE:CD1	1:A:1529:MET:HE3	2.42	0.49
2:B:417:ILE:O	2:B:421:LEU:HG	2.11	0.49
2:B:658:LEU:O	2:B:659:ASP:O	2.30	0.49
2:B:894:LYS:C	2:B:896:GLN:H	2.16	0.49
3:C:86:PHE:HB2	3:C:203:SER:OG	2.13	0.49
6:H:62:SER:OG	6:H:63:LEU:N	2.42	0.49
1:A:219:LEU:O	1:A:223:PHE:N	2.27	0.49
1:A:636:HIS:CB	2:B:1091:ARG:HH22	2.26	0.49
2:B:371:PHE:O	2:B:375:LEU:HG	2.13	0.49
3:C:125:LYS:O	3:C:130:ASN:ND2	2.45	0.49
4:E:82:PHE:HA	4:E:111:VAL:HB	1.95	0.49
1:A:690:GLU:OE1	1:A:690:GLU:N	2.31	0.49
1:A:756:LYS:O	1:A:759:TYR:HD2	1.95	0.49
2:B:851:TYR:HB2	2:B:881:TYR:CE2	2.48	0.49
4:E:78:LEU:HD12	4:E:107:THR:O	2.12	0.49
2:B:311:ARG:HE	7:I:16:LEU:HD21	1.78	0.48
3:C:241:GLY:N	3:C:263:ASP:OD2	2.46	0.48
7:I:95:ASN:O	7:I:113:THR:N	2.45	0.48
8:J:58:GLU:O	8:J:61:LEU:N	2.44	0.48
1:A:614:LEU:O	1:A:615:ARG:HD2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:576:THR:CG2	12:N:95:ILE:CG2	2.91	0.48
4:E:96:PHE:CZ	4:E:110:PHE:HB2	2.48	0.48
4:E:110:PHE:O	4:E:134:THR:HA	2.12	0.48
7:I:114:CYS:HB3	7:I:119:TYR:N	2.28	0.48
1:A:117:ARG:HB3	1:A:185:ARG:CZ	2.43	0.48
1:A:831:ASP:HB2	1:A:917:MET:CE	2.43	0.48
2:B:985:ILE:O	12:N:160:VAL:HG21	2.12	0.48
4:E:46:TYR:CE1	4:E:58:MET:HA	2.48	0.48
4:E:177:ARG:NE	4:E:179:GLN:HE22	2.11	0.48
7:I:2:SER:HB2	7:I:11:LEU:HD21	1.95	0.48
12:N:111:VAL:HG13	12:N:122:ALA:HB2	1.96	0.48
1:A:659:THR:OG1	1:A:663:GLY:N	2.46	0.48
1:A:1127:TYR:HB3	1:A:1132:TYR:HD2	1.77	0.48
2:B:527:PHE:CE1	2:B:666:PRO:HG3	2.48	0.48
2:B:568:LEU:HD13	2:B:604:ILE:HG23	1.95	0.48
2:B:1104:CYS:N	2:B:1109:SER:O	2.37	0.48
3:C:64:ALA:O	3:C:67:PHE:N	2.45	0.48
11:M:11:GLU:N	11:M:86:LYS:O	2.36	0.48
1:A:94:LEU:HD12	1:A:355:PHE:HB3	1.95	0.48
1:A:827:THR:HG21	2:B:1026:ILE:HA	1.95	0.48
1:A:1603:MET:SD	1:A:1612:LYS:HA	2.54	0.48
2:B:103:SER:OG	2:B:138:LEU:HB2	2.13	0.48
2:B:168:ASN:OD1	2:B:169:ARG:HG2	2.13	0.48
2:B:176:SER:O	2:B:180:LEU:HG	2.13	0.48
2:B:655:TYR:HD1	2:B:688:HIS:CD2	2.32	0.48
3:C:60:ASP:OD2	3:C:63:ILE:N	2.45	0.48
3:C:237:GLN:HE21	3:C:288:LYS:HG2	1.78	0.48
4:E:98:ILE:O	4:E:102:GLU:N	2.42	0.48
1:A:950:GLN:HE21	1:A:982:VAL:HG21	1.78	0.48
1:A:1189:ALA:HA	1:A:1581:HIS:ND1	2.29	0.48
1:A:1654:PHE:CD2	5:F:92:ARG:HD3	2.49	0.48
2:B:212:ASN:OD1	2:B:238:SER:HA	2.14	0.48
2:B:341:SER:N	2:B:344:GLN:OE1	2.47	0.48
3:C:315:PHE:HB3	3:C:319:ARG:HH12	1.79	0.48
1:A:464:GLU:O	1:A:468:ARG:HD3	2.14	0.48
1:A:884:ARG:NH2	2:B:633:THR:O	2.43	0.48
1:A:1636:SER:O	1:A:1640:ARG:HG2	2.13	0.48
2:B:21:ARG:HA	2:B:24:ARG:HH11	1.78	0.48
2:B:388:GLU:O	2:B:634:ARG:HA	2.13	0.48
2:B:587:GLN:HG2	2:B:592:ILE:HG12	1.94	0.48
3:C:248:GLN:NE2	3:C:256:ILE:O	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:H:26:ILE:HD12	6:H:42:ILE:HD12	1.96	0.48
9:K:50:LEU:HB2	9:K:62:SER:HB2	1.95	0.48
1:A:855:ARG:NH1	1:A:868:THR:O	2.45	0.48
1:A:968:SER:HA	2:B:674:ILE:O	2.13	0.48
1:A:1648:ASN:N	1:A:1649:VAL:HB	2.28	0.48
2:B:156:ARG:NE	2:B:455:GLU:OE2	2.36	0.48
3:C:185:VAL:HG12	3:C:186:PRO:O	2.14	0.48
8:J:5:VAL:O	8:J:14:VAL:N	2.44	0.48
1:A:257:ASN:O	1:A:261:ILE:HD12	2.14	0.48
1:A:368:ARG:HA	1:A:380:ASN:HD22	1.78	0.48
1:A:830:MET:HG2	2:B:1027:TYR:CE1	2.49	0.48
1:A:1172:LEU:O	1:A:1176:ARG:N	2.34	0.48
2:B:449:VAL:HG22	2:B:452:ARG:HH21	1.79	0.48
1:A:1052:GLY:HA2	4:E:208:TYR:CE1	2.49	0.48
1:A:1336:GLN:NE2	1:A:1483:LEU:HD21	2.29	0.48
2:B:18:THR:O	2:B:22:GLU:HG2	2.12	0.48
2:B:173:ASN:OD1	2:B:174:LYS:HG3	2.14	0.48
2:B:641:TYR:HB3	2:B:643:PHE:CE2	2.49	0.48
3:C:235:ILE:HA	3:C:289:VAL:HG22	1.95	0.48
1:A:591:ARG:HB2	1:A:633:MET:HE3	1.96	0.47
1:A:717:PRO:HG2	1:A:720:PHE:CE1	2.49	0.47
1:A:1256:LYS:O	1:A:1259:SER:HB2	2.13	0.47
1:A:1258:ILE:O	1:A:1501:ILE:CG1	2.53	0.47
1:A:1638:SER:O	1:A:1642:VAL:HG23	2.14	0.47
2:B:827:PHE:HE2	2:B:842:GLU:HA	1.79	0.47
2:B:939:SER:OG	2:B:942:GLY:N	2.47	0.47
3:C:34:GLU:OE1	3:C:37:LYS:HD3	2.14	0.47
3:C:154:LYS:HZ3	3:C:161:HIS:H	1.62	0.47
1:A:220:VAL:HA	1:A:223:PHE:HB3	1.95	0.47
1:A:457:LYS:HG3	1:A:1619:CYS:SG	2.54	0.47
1:A:1183:GLU:HA	5:F:88:TYR:OH	2.14	0.47
1:A:1501:ILE:HB	1:A:1504:ILE:CB	2.38	0.47
2:B:13:THR:HG23	12:N:163:VAL:HG22	1.96	0.47
2:B:135:GLY:O	2:B:161:LEU:N	2.36	0.47
2:B:832:TRP:CZ3	2:B:836:TRP:HB2	2.49	0.47
2:B:937:PRO:HB2	2:B:1013:MET:HE2	1.97	0.47
2:B:1019:GLY:O	3:C:227:TYR:OH	2.32	0.47
8:J:36:LEU:HD21	8:J:50:ILE:HG21	1.95	0.47
1:A:253:GLU:N	1:A:313:THR:O	2.38	0.47
1:A:516:ILE:O	1:A:520:ARG:HG3	2.14	0.47
1:A:848:LYS:O	1:A:851:VAL:HG23	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1451:ILE:HG12	1:A:1457:ILE:HG22	1.96	0.47
1:A:1656:VAL:C	1:A:1657:LEU:HD12	2.35	0.47
2:B:758:ASP:C	2:B:761:GLY:H	2.17	0.47
3:C:40:PHE:CE2	9:K:131:VAL:HG22	2.50	0.47
3:C:86:PHE:HB3	10:L:62:LYS:HE3	1.95	0.47
5:F:110:ASP:O	5:F:123:LYS:NZ	2.33	0.47
9:K:54:THR:HG22	9:K:61:ALA:HA	1.96	0.47
1:A:977:MET:HB2	1:A:983:LYS:NZ	2.29	0.47
1:A:1034:TYR:CZ	5:F:136:ARG:HB3	2.49	0.47
1:A:1317:ILE:O	1:A:1322:ILE:HG12	2.14	0.47
1:A:1326:GLU:OE2	1:A:1457:ILE:HG13	2.14	0.47
2:B:641:TYR:HB3	2:B:643:PHE:HE2	1.80	0.47
2:B:800:TYR:HE2	3:C:96:VAL:HG22	1.79	0.47
2:B:824:HIS:NE2	2:B:864:ASP:OD2	2.46	0.47
3:C:113:LEU:HD11	3:C:131:THR:N	2.29	0.47
2:B:284:SER:HB2	7:I:14:GLY:HA3	1.95	0.47
2:B:421:LEU:HA	2:B:424:ILE:HD12	1.97	0.47
4:E:13:TRP:CD1	4:E:39:LEU:HA	2.49	0.47
6:H:93:TYR:CD2	6:H:143:LEU:HD23	2.49	0.47
6:H:100:THR:OG1	6:H:139:ASN:OD1	2.22	0.47
10:L:29:TYR:HD1	10:L:58:LYS:HA	1.79	0.47
10:L:41:SER:N	10:L:44:ASP:OD2	2.25	0.47
1:A:523:VAL:HG21	1:A:561:LEU:HD11	1.97	0.47
1:A:1256:LYS:HD3	1:A:1305:GLU:O	2.14	0.47
2:B:335:ARG:HG3	2:B:340:ALA:HB3	1.96	0.47
2:B:449:VAL:HG22	2:B:452:ARG:NH2	2.30	0.47
3:C:154:LYS:HZ3	3:C:161:HIS:N	2.12	0.47
4:E:124:VAL:HB	4:E:125:PRO:HD3	1.97	0.47
1:A:49:LEU:HD22	1:A:386:LEU:HD13	1.94	0.47
1:A:114:GLU:OE1	1:A:117:ARG:HD3	2.14	0.47
1:A:380:ASN:HB3	1:A:383:ASN:ND2	2.29	0.47
1:A:437:PHE:HD2	1:A:438:ILE:HG13	1.79	0.47
1:A:517:ALA:HA	1:A:520:ARG:HD3	1.96	0.47
1:A:1049:MET:HB3	4:E:208:TYR:CE1	2.47	0.47
1:A:1482:LYS:HB3	2:B:308:LEU:HD21	1.96	0.47
1:A:1545:ASP:O	1:A:1547:ALA:N	2.48	0.47
2:B:382:TYR:O	2:B:386:ALA:N	2.29	0.47
2:B:745:GLN:CB	2:B:800:TYR:HB3	2.45	0.47
2:B:810:ASP:HB2	2:B:900:THR:HG23	1.95	0.47
2:B:861:TYR:CE2	2:B:870:LYS:HB2	2.50	0.47
2:B:943:ILE:O	2:B:945:PRO:HD3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1105:ARG:N	2:B:1172:GLU:O	2.47	0.47
2:B:1152:PHE:HZ	14:G:235:ASN:OD1	1.97	0.47
3:C:162:VAL:N	3:C:194:ALA:O	2.47	0.47
3:C:232:GLN:O	3:C:292:GLY:N	2.47	0.47
3:C:284:GLU:HG3	3:C:285:PHE:N	2.29	0.47
9:K:72:LEU:O	9:K:76:LEU:N	2.34	0.47
1:A:476:VAL:N	2:B:1069:ILE:O	2.41	0.47
1:A:852:ASP:OD2	1:A:855:ARG:NH2	2.47	0.47
2:B:172:LEU:HA	2:B:175:MET:SD	2.55	0.47
2:B:286:ARG:HD3	7:I:9:PHE:CG	2.49	0.47
2:B:472:SER:OG	2:B:474:SER:O	2.33	0.47
2:B:1053:ASN:OD1	2:B:1055:LEU:N	2.47	0.47
3:C:60:ASP:HB2	9:K:78:TYR:CZ	2.50	0.47
7:I:38:PRO:HD2	7:I:41:GLN:OE1	2.15	0.47
14:G:137:ILE:HG13	14:G:227:GLY:O	2.13	0.47
1:A:51:ASP:OD1	1:A:52:LEU:N	2.48	0.47
1:A:838:GLU:HA	1:A:841:LYS:HB3	1.97	0.47
2:B:146:ASN:HB2	2:B:149:GLU:HB3	1.96	0.47
2:B:648:ARG:O	2:B:650:LEU:HG	2.15	0.47
2:B:894:LYS:O	2:B:895:PHE:CD2	2.68	0.47
1:A:24:ILE:HG21	1:A:359:VAL:HG21	1.97	0.47
1:A:512:THR:OG1	1:A:515:ASN:OD1	2.20	0.47
1:A:1243:TRP:HD1	1:A:1535:PHE:C	2.19	0.47
2:B:103:SER:O	2:B:137:LEU:HD12	2.15	0.47
2:B:228:SER:O	2:B:254:ASN:N	2.33	0.47
2:B:399:HIS:O	2:B:400:GLN:HG3	2.15	0.47
2:B:859:CYS:SG	2:B:860:ALA:N	2.88	0.47
2:B:921:HIS:NE2	2:B:962:MET:HA	2.29	0.47
3:C:231:PRO:HG2	3:C:270:ALA:HB1	1.96	0.47
6:H:10:PHE:HB3	6:H:28:ALA:HB1	1.96	0.47
7:I:2:SER:O	7:I:8:ILE:HA	2.15	0.47
13:D:46:GLU:OE1	13:D:47:LYS:HE2	2.15	0.47
1:A:175:SER:HA	1:A:178:LEU:HD12	1.97	0.46
1:A:781:LEU:HB3	1:A:786:TYR:HE2	1.79	0.46
1:A:1094:ALA:O	1:A:1098:SER:N	2.36	0.46
2:B:1119:ARG:NH2	2:B:1160:GLU:OE2	2.48	0.46
2:B:1152:PHE:CE2	14:G:129:VAL:HG21	2.51	0.46
3:C:78:VAL:HA	3:C:209:ILE:O	2.16	0.46
3:C:161:HIS:CD2	3:C:195:LYS:HG2	2.50	0.46
3:C:262:SER:O	3:C:264:GLU:HG3	2.15	0.46
4:E:118:PRO:O	4:E:121:MET:HB2	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:K:91:TYR:HD2	9:K:101:LEU:HD11	1.80	0.46
1:A:332:GLN:HE22	1:A:350:VAL:N	2.13	0.46
1:A:440:SER:H	1:A:458:GLN:NE2	2.03	0.46
1:A:672:ASP:O	1:A:676:ALA:N	2.46	0.46
1:A:681:THR:HG21	1:A:781:LEU:HG	1.97	0.46
1:A:1034:TYR:CE2	5:F:136:ARG:HB3	2.51	0.46
1:A:1539:ASP:HA	4:E:147:HIS:CD2	2.50	0.46
2:B:822:THR:HG22	2:B:823:GLN:HG3	1.97	0.46
2:B:929:ARG:HG2	2:B:931:TRP:HE3	1.80	0.46
3:C:136:LEU:HB3	3:C:204:LEU:HD11	1.98	0.46
3:C:137:ASN:HA	3:C:202:ILE:O	2.14	0.46
9:K:66:VAL:HG12	9:K:67:GLU:N	2.31	0.46
1:A:641:GLU:OE1	1:A:644:ARG:HD3	2.15	0.46
1:A:781:LEU:HB3	1:A:786:TYR:CE2	2.50	0.46
5:F:57:ASP:O	5:F:61:HIS:N	2.34	0.46
8:J:18:TRP:CH2	8:J:22:LEU:HD21	2.51	0.46
1:A:91:PHE:HE2	1:A:245:LYS:HD2	1.80	0.46
1:A:261:ILE:O	1:A:265:ARG:HG2	2.15	0.46
1:A:267:LYS:HA	1:A:270:ILE:HD12	1.97	0.46
1:A:487:ASP:HA	2:B:781:TYR:HE1	1.80	0.46
1:A:943:ILE:HG12	1:A:986:PHE:CD2	2.51	0.46
1:A:1113:HIS:HA	1:A:1116:GLN:HG2	1.97	0.46
2:B:677:THR:OG1	2:B:680:GLU:HG3	2.15	0.46
2:B:693:PRO:O	2:B:696:ILE:HG12	2.15	0.46
3:C:308:MET:SD	3:C:316:LYS:NZ	2.86	0.46
4:E:90:VAL:O	4:E:94:LYS:N	2.35	0.46
4:E:163:GLU:O	4:E:167:ARG:N	2.44	0.46
4:E:197:LYS:HA	4:E:211:TYR:CE1	2.50	0.46
8:J:34:THR:HA	8:J:37:SER:HB2	1.96	0.46
1:A:108:PHE:CE2	1:A:331:GLU:HG3	2.50	0.46
1:A:129:LEU:HB3	1:A:132:GLU:CD	2.36	0.46
1:A:842:TRP:CD2	1:A:910:LYS:NZ	2.74	0.46
1:A:842:TRP:CE3	1:A:910:LYS:HG2	2.50	0.46
1:A:1272:VAL:HG22	1:A:1292:ILE:HG23	1.98	0.46
2:B:65:VAL:HA	2:B:68:ILE:HD12	1.97	0.46
2:B:190:ILE:HD11	2:B:496:PHE:CE2	2.51	0.46
2:B:202:LEU:O	2:B:486:VAL:HG12	2.15	0.46
2:B:377:MET:O	2:B:381:LEU:N	2.35	0.46
3:C:131:THR:O	3:C:175:GLN:NE2	2.47	0.46
7:I:91:ASN:HD22	7:I:116:SER:N	2.13	0.46
1:A:64:THR:HB	1:A:75:HIS:CD2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1311:GLU:O	1:A:1315:ASN:N	2.29	0.46
1:A:1311:GLU:OE1	1:A:1311:GLU:N	2.38	0.46
1:A:1322:ILE:O	1:A:1325:LEU:N	2.46	0.46
2:B:246:GLN:NE2	2:B:247:THR:H	2.14	0.46
2:B:489:GLU:HB3	2:B:491:ILE:HG12	1.98	0.46
3:C:162:VAL:O	3:C:192:LEU:HD12	2.15	0.46
3:C:167:LEU:C	3:C:168:LYS:HD2	2.36	0.46
13:D:33:THR:HG23	13:D:96:PHE:HD1	1.80	0.46
1:A:135:LYS:HA	1:A:138:GLU:CD	2.36	0.46
1:A:551:VAL:HG22	1:A:554:ARG:NH2	2.31	0.46
1:A:694:GLN:O	1:A:698:GLY:N	2.39	0.46
1:A:1100:LYS:HG2	1:A:1104:TYR:CE2	2.51	0.46
2:B:102:VAL:HA	2:B:139:LEU:HD23	1.97	0.46
2:B:322:ASN:OD1	2:B:323:ARG:N	2.49	0.46
2:B:749:THR:O	2:B:770:ASN:ND2	2.48	0.46
3:C:57:ILE:HG22	3:C:58:ASN:ND2	2.30	0.46
4:E:93:MET:HG2	4:E:120:ALA:HB1	1.98	0.46
1:A:141:LEU:HD21	1:A:184:LYS:HZ2	1.80	0.46
1:A:719:ILE:HG12	6:H:97:MET:CG	2.40	0.46
1:A:756:LYS:HB2	1:A:759:TYR:CE2	2.50	0.46
1:A:831:ASP:N	1:A:831:ASP:OD1	2.49	0.46
1:A:1229:ALA:CB	1:A:1597:ALA:HB2	2.46	0.46
1:A:1312:GLU:O	1:A:1316:VAL:N	2.26	0.46
1:A:1570:PHE:O	1:A:1574:ALA:N	2.49	0.46
2:B:321:GLN:HB3	7:I:32:GLN:NE2	2.31	0.46
2:B:889:GLY:HA3	10:L:54:ARG:HB3	1.96	0.46
4:E:113:GLN:HA	4:E:137:GLU:CD	2.36	0.46
8:J:16:ASP:OD1	8:J:17:LYS:N	2.48	0.46
1:A:478:TYR:CE1	2:B:1048:SER:HB2	2.51	0.46
1:A:880:GLN:HE22	2:B:633:THR:H	1.63	0.46
1:A:1657:LEU:HD11	5:F:135:ARG:HB2	1.98	0.46
2:B:445:TYR:HA	2:B:448:ARG:NH1	2.31	0.46
2:B:712:SER:N	2:B:713:PRO:HD2	2.30	0.46
4:E:136:ASN:HB3	4:E:139:ALA:HB3	1.98	0.46
1:A:131:ASP:HA	1:A:134:TYR:CD2	2.47	0.46
1:A:907:VAL:HG12	1:A:945:CYS:HG	1.80	0.46
1:A:1504:ILE:HD13	1:A:1529:MET:CE	2.45	0.46
2:B:28:PRO:HG2	2:B:178:TYR:HD1	1.80	0.46
2:B:668:GLU:HG3	2:B:672:MET:HE3	1.98	0.46
2:B:699:ILE:N	16:B:1301:SO4:S	2.88	0.46
2:B:1110:ILE:O	2:B:1113:THR:OG1	2.19	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:314:TYR:CE2	1:A:316:LEU:HA	2.50	0.45
1:A:435:ASN:O	1:A:439:ASP:N	2.48	0.45
1:A:985:ARG:HG3	1:A:988:SER:H	1.81	0.45
1:A:1039:ARG:HD2	1:A:1043:GLY:O	2.17	0.45
2:B:322:ASN:HB3	2:B:325:GLN:CG	2.46	0.45
2:B:501:ARG:HH22	2:B:549:CYS:HB3	1.82	0.45
2:B:576:THR:HG21	12:N:95:ILE:HG22	1.98	0.45
5:F:109:VAL:HG22	5:F:110:ASP:H	1.82	0.45
11:M:65:TYR:HE1	11:M:97:VAL:HB	1.81	0.45
1:A:741:PRO:HA	1:A:742:PRO:HD3	1.86	0.45
1:A:943:ILE:CD1	2:B:958:MET:HB3	2.42	0.45
2:B:658:LEU:HD13	2:B:658:LEU:H	1.79	0.45
2:B:814:ASN:OD1	2:B:815:ARG:N	2.50	0.45
3:C:31:TRP:CH2	3:C:33:VAL:HA	2.52	0.45
3:C:325:ALA:O	3:C:329:LYS:N	2.25	0.45
8:J:17:LYS:HD3	8:J:39:LEU:HB3	1.97	0.45
11:M:26:PHE:CE1	11:M:98:SER:HB2	2.51	0.45
1:A:324:LEU:O	1:A:328:PHE:N	2.27	0.45
1:A:367:PHE:CD1	2:B:1184:TYR:HD1	2.34	0.45
1:A:1550:LEU:HA	1:A:1554:GLY:O	2.16	0.45
2:B:301:PHE:O	2:B:305:ARG:HG2	2.16	0.45
2:B:756:LEU:HD23	2:B:759:ASP:OD2	2.15	0.45
2:B:857:PRO:HB3	2:B:871:ILE:HD11	1.99	0.45
5:F:77:ASP:OD1	5:F:78:GLN:N	2.50	0.45
1:A:588:LEU:HD11	1:A:600:MET:HG2	1.99	0.45
1:A:826:PHE:HA	2:B:1023:ARG:HH22	1.82	0.45
1:A:1302:TYR:O	1:A:1306:TYR:N	2.48	0.45
2:B:307:GLU:OE1	7:I:7:LEU:HD11	2.17	0.45
2:B:556:SER:OG	2:B:623:ASP:OD2	2.32	0.45
2:B:1099:THR:OG1	2:B:1180:PHE:HB2	2.16	0.45
2:B:1105:ARG:NH1	2:B:1172:GLU:OE1	2.49	0.45
9:K:77:ARG:HD2	9:K:91:TYR:CE1	2.52	0.45
9:K:92:SER:O	9:K:101:LEU:HD12	2.17	0.45
1:A:460:LEU:HB3	1:A:1618:THR:HG21	1.97	0.45
2:B:286:ARG:O	2:B:290:ASP:N	2.26	0.45
2:B:649:MET:O	2:B:666:PRO:HD3	2.17	0.45
2:B:657:PRO:C	2:B:659:ASP:N	2.59	0.45
2:B:921:HIS:CD2	2:B:962:MET:HA	2.51	0.45
2:B:1053:ASN:OD1	2:B:1054:SER:N	2.49	0.45
3:C:93:GLN:H	3:C:93:GLN:CD	2.20	0.45
4:E:29:PHE:HB2	4:E:65:THR:HG22	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:57:ASP:HA	5:F:60:GLN:HB3	1.98	0.45
1:A:706:HIS:CD2	1:A:808:LYS:HD3	2.51	0.45
1:A:1061:SER:OG	1:A:1062:HIS:N	2.49	0.45
2:B:468:GLY:HA2	2:B:485:THR:HG23	1.98	0.45
3:C:152:ASP:O	3:C:156:LEU:HG	2.16	0.45
3:C:154:LYS:HE2	3:C:161:HIS:CE1	2.51	0.45
6:H:80:ARG:HG3	9:K:108:TYR:CZ	2.52	0.45
1:A:23:GLU:O	1:A:27:LEU:HG	2.17	0.45
2:B:31:ASP:OD1	2:B:32:LYS:N	2.43	0.45
2:B:263:SER:HA	2:B:268:GLU:HA	1.98	0.45
2:B:527:PHE:CZ	2:B:666:PRO:HG3	2.51	0.45
2:B:968:ALA:HA	2:B:971:ALA:HB3	1.99	0.45
3:C:315:PHE:HE1	9:K:136:THR:HG1	1.64	0.45
4:E:79:TRP:HB2	4:E:105:PHE:CE1	2.51	0.45
8:J:7:CYS:HA	8:J:49:MET:HG3	1.98	0.45
1:A:418:VAL:O	1:A:422:ARG:HG2	2.17	0.45
1:A:855:ARG:NH1	1:A:866:LYS:O	2.50	0.45
1:A:1024:THR:HG22	1:A:1190:SER:HB3	1.99	0.45
1:A:1124:LEU:HD23	1:A:1135:SER:OG	2.17	0.45
2:B:96:SER:N	2:B:144:SER:O	2.44	0.45
2:B:427:GLN:HG2	2:B:449:VAL:HG13	1.99	0.45
2:B:443:LYS:O	2:B:446:MET:HB3	2.17	0.45
2:B:772:VAL:O	2:B:946:ASP:HB2	2.17	0.45
2:B:1182:LEU:HA	2:B:1185:LEU:HB3	1.98	0.45
3:C:239:ILE:HD11	3:C:288:LYS:HB2	1.99	0.45
5:F:108:PHE:CE2	5:F:131:PRO:HG3	2.49	0.45
6:H:40:LEU:HD23	6:H:42:ILE:HD11	1.98	0.45
1:A:15:ASP:N	2:B:1197:ARG:O	2.30	0.45
1:A:316:LEU:HB2	1:A:319:GLU:HG3	1.98	0.45
1:A:475:ARG:NH2	2:B:1070:ARG:HH22	2.15	0.45
1:A:1654:PHE:HE1	5:F:134:ILE:HG12	1.81	0.45
2:B:128:GLN:NE2	2:B:735:HIS:O	2.50	0.45
2:B:537:SER:N	2:B:538:PRO:HD2	2.32	0.45
2:B:1112:THR:OG1	2:B:1128:CYS:SG	2.55	0.45
3:C:240:LYS:HB3	3:C:264:GLU:CG	2.46	0.45
1:A:92:ASN:O	1:A:96:ILE:HG13	2.17	0.45
1:A:424:MET:O	1:A:428:VAL:HG23	2.17	0.45
1:A:1580:ARG:NH2	4:E:204:THR:HG21	2.31	0.45
2:B:46:ILE:HD12	2:B:46:ILE:H	1.82	0.45
2:B:750:PRO:HB3	2:B:1032:TYR:CD1	2.52	0.45
7:I:2:SER:HA	7:I:9:PHE:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:208:PHE:HE2	1:A:1607:THR:HG23	1.80	0.44
1:A:1187:ILE:HG13	2:B:1080:ILE:HG22	1.99	0.44
2:B:30:LYS:HG2	2:B:178:TYR:CG	2.52	0.44
2:B:555:GLN:HB2	2:B:646:HIS:CE1	2.51	0.44
2:B:827:PHE:HD1	2:B:869:THR:HG21	1.82	0.44
3:C:58:ASN:HA	3:C:296:ASN:HB3	1.99	0.44
8:J:18:TRP:CE2	8:J:22:LEU:HD11	2.52	0.44
9:K:66:VAL:O	9:K:68:GLU:HG2	2.17	0.44
1:A:106:HIS:HB2	1:A:330:LYS:HE3	1.99	0.44
1:A:753:ASN:ND2	1:A:766:GLU:O	2.50	0.44
1:A:1040:ASP:HB3	1:A:1042:ASP:OD1	2.17	0.44
5:F:66:ARG:HA	5:F:69:LEU:CD1	2.34	0.44
5:F:144:GLU:OE1	5:F:146:TRP:NE1	2.40	0.44
6:H:98:TYR:HD1	6:H:141:TYR:CD1	2.35	0.44
1:A:920:PHE:CD1	1:A:921:PRO:HA	2.52	0.44
2:B:106:LYS:HE2	2:B:168:ASN:O	2.17	0.44
2:B:371:PHE:CE2	2:B:375:LEU:HD11	2.53	0.44
2:B:372:ARG:HH21	2:B:574:SER:HA	1.83	0.44
2:B:692:THR:H	2:B:695:ASN:ND2	2.16	0.44
2:B:709:PHE:CE2	2:B:992:PRO:HG2	2.52	0.44
2:B:938:PHE:CZ	2:B:1014:TYR:HB2	2.51	0.44
3:C:36:PHE:CE1	3:C:40:PHE:HB2	2.52	0.44
3:C:319:ARG:NH2	9:K:132:GLU:OE2	2.51	0.44
4:E:88:VAL:HB	4:E:116:ILE:HA	1.99	0.44
9:K:116:ALA:O	9:K:120:GLY:N	2.36	0.44
1:A:659:THR:HG23	1:A:664:SER:O	2.17	0.44
1:A:945:CYS:C	1:A:946:LEU:CG	2.85	0.44
2:B:218:ILE:HA	2:B:231:HIS:O	2.17	0.44
2:B:286:ARG:HD2	2:B:286:ARG:HA	1.75	0.44
2:B:854:GLU:OE1	2:B:877:SER:HA	2.17	0.44
2:B:999:GLN:O	2:B:1003:ALA:N	2.46	0.44
1:A:39:ASP:OD2	1:A:43:HIS:HB2	2.17	0.44
1:A:79:ILE:HB	1:A:360:LEU:HB2	1.99	0.44
1:A:771:PHE:CD1	1:A:776:LEU:HA	2.52	0.44
1:A:1000:MET:HG3	2:B:520:LEU:HD23	1.98	0.44
1:A:1158:SER:OG	1:A:1159:ASP:N	2.50	0.44
2:B:968:ALA:HB2	2:B:996:PHE:CE1	2.52	0.44
4:E:17:ARG:HH12	4:E:36:GLU:HA	1.82	0.44
4:E:112:TYR:CD2	4:E:116:ILE:HD11	2.52	0.44
6:H:48:PRO:O	6:H:146:ARG:NH2	2.50	0.44
1:A:21:ALA:HA	1:A:24:ILE:HD12	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1233:ILE:HD11	1:A:1236:PRO:HA	1.99	0.44
2:B:228:SER:O	2:B:254:ASN:ND2	2.50	0.44
2:B:442:ASP:HB3	2:B:445:TYR:HB3	1.99	0.44
2:B:705:PRO:HB2	2:B:706:PHE:HD2	1.82	0.44
3:C:332:PRO:HG2	9:K:44:ARG:HA	1.99	0.44
8:J:28:ASP:HB3	8:J:30:LEU:HG	2.00	0.44
1:A:237:GLY:HA3	1:A:267:LYS:HE2	1.99	0.44
1:A:507:TYR:O	1:A:578:TYR:HA	2.18	0.44
1:A:1316:VAL:HG13	1:A:1320:GLN:HE21	1.82	0.44
2:B:683:ASN:O	2:B:685:VAL:HG23	2.17	0.44
2:B:1152:PHE:CZ	14:G:235:ASN:OD1	2.71	0.44
2:B:1159:TRP:CE2	2:B:1167:PHE:HB2	2.53	0.44
9:K:50:LEU:HB2	9:K:62:SER:CB	2.47	0.44
9:K:133:SER:O	9:K:137:GLU:HG3	2.17	0.44
10:L:33:GLU:HB3	10:L:53:HIS:CD2	2.52	0.44
1:A:552:GLU:HA	1:A:555:LYS:HB2	1.98	0.44
1:A:842:TRP:CE3	1:A:910:LYS:CG	3.00	0.44
1:A:842:TRP:O	1:A:845:ASP:N	2.51	0.44
2:B:104:ILE:O	2:B:169:ARG:NE	2.51	0.44
2:B:275:MET:SD	2:B:330:LEU:HD21	2.58	0.44
2:B:428:VAL:O	2:B:431:ASP:HB2	2.17	0.44
3:C:68:ARG:CD	3:C:227:TYR:CE2	3.00	0.44
3:C:123:ASP:N	3:C:123:ASP:OD1	2.49	0.44
9:K:83:ASN:OD1	9:K:85:ASP:N	2.51	0.44
1:A:336:GLN:O	1:A:340:HIS:ND1	2.50	0.44
2:B:35:PHE:CE1	2:B:761:GLY:HA3	2.53	0.44
2:B:861:TYR:CE1	2:B:872:LYS:HE2	2.53	0.44
2:B:908:ARG:HD2	3:C:95:GLU:HG3	1.99	0.44
3:C:57:ILE:HG13	3:C:297:HIS:CD2	2.53	0.44
8:J:18:TRP:CZ2	8:J:22:LEU:HD21	2.53	0.44
9:K:69:ASP:N	9:K:69:ASP:OD1	2.51	0.44
1:A:95:TYR:CD2	1:A:245:LYS:HD3	2.53	0.43
1:A:960:MET:HG2	2:B:523:GLU:OE2	2.18	0.43
3:C:73:SER:OG	3:C:74:GLU:HG3	2.18	0.43
3:C:95:GLU:O	3:C:99:HIS:N	2.36	0.43
3:C:140:CYS:HA	3:C:158:ASN:O	2.18	0.43
4:E:177:ARG:CZ	4:E:179:GLN:HE22	2.31	0.43
1:A:117:ARG:NH2	1:A:137:ASP:OD2	2.49	0.43
1:A:525:ASN:ND2	1:A:531:PRO:O	2.45	0.43
1:A:996:TYR:CZ	2:B:520:LEU:HD21	2.53	0.43
1:A:1537:ASP:OD1	1:A:1538:VAL:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:676:VAL:HB	2:B:680:GLU:OE2	2.18	0.43
2:B:1056:THR:O	2:B:1058:GLN:HG3	2.18	0.43
2:B:1102:SER:OG	2:B:1175:THR:HG22	2.17	0.43
3:C:243:SER:N	3:C:246:ARG:HH21	2.15	0.43
4:E:20:LYS:NZ	4:E:34:GLU:HG2	2.33	0.43
6:H:12:VAL:HG11	6:H:15:VAL:HG23	1.99	0.43
8:J:17:LYS:O	8:J:21:TYR:N	2.40	0.43
14:G:163:PRO:HG2	14:G:166:TRP:CD1	2.52	0.43
1:A:31:GLN:HB2	1:A:78:HIS:CE1	2.53	0.43
1:A:32:ILE:HD12	1:A:48:GLY:O	2.18	0.43
1:A:352:ALA:HA	1:A:355:PHE:CD2	2.52	0.43
1:A:440:SER:N	1:A:458:GLN:HE22	2.06	0.43
3:C:311:GLU:HG2	3:C:312:GLU:N	2.33	0.43
4:E:67:GLU:HA	4:E:70:SER:OG	2.18	0.43
7:I:19:ASN:O	7:I:23:VAL:HG23	2.18	0.43
11:M:8:SER:O	12:N:71:PRO:HA	2.19	0.43
1:A:389:VAL:HG22	1:A:433:ASP:HB3	2.00	0.43
1:A:711:LYS:NZ	9:K:60:SER:HB2	2.33	0.43
2:B:840:LEU:HD13	2:B:860:ALA:HB2	2.01	0.43
3:C:216:HIS:CD2	10:L:70:ARG:HE	2.36	0.43
1:A:27:LEU:O	2:B:1129:ARG:HD2	2.18	0.43
1:A:506:THR:HA	1:A:579:ARG:O	2.19	0.43
2:B:208:VAL:O	2:B:401:GLU:N	2.41	0.43
3:C:173:GLY:O	3:C:176:SER:OG	2.19	0.43
6:H:26:ILE:O	6:H:40:LEU:N	2.37	0.43
1:A:732:ILE:O	1:A:735:VAL:HB	2.17	0.43
1:A:1195:GLU:HB3	1:A:1196:PRO:HD3	2.00	0.43
2:B:222:PHE:HB2	2:B:231:HIS:HA	1.99	0.43
2:B:361:HIS:CE1	2:B:362:LEU:HG	2.54	0.43
2:B:464:PHE:O	2:B:468:GLY:N	2.50	0.43
2:B:587:GLN:HE21	2:B:592:ILE:HG12	1.84	0.43
2:B:698:SER:HB2	16:B:1301:SO4:O3	2.18	0.43
3:C:240:LYS:HA	3:C:244:ALA:HB2	1.99	0.43
4:E:42:PHE:O	4:E:46:TYR:N	2.50	0.43
4:E:55:ARG:HD2	4:E:82:PHE:HB3	1.99	0.43
4:E:79:TRP:HE1	4:E:81:GLU:HB2	1.83	0.43
1:A:507:TYR:CD1	1:A:508:PRO:HD2	2.54	0.43
1:A:1162:ASN:ND2	1:A:1164:LYS:HB2	2.34	0.43
2:B:181:VAL:HG13	8:J:63:TYR:HE1	1.83	0.43
2:B:315:LYS:HE3	2:B:315:LYS:HB3	1.83	0.43
2:B:343:ASP:OD1	2:B:344:GLN:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:650:LEU:HD22	2:B:663:ILE:HG22	2.00	0.43
4:E:40:GLU:HA	4:E:43:LYS:CE	2.49	0.43
5:F:146:TRP:HA	5:F:150:GLU:OE2	2.18	0.43
9:K:63:PHE:O	9:K:102:ASN:HA	2.19	0.43
1:A:589:MET:SD	1:A:635:MET:HA	2.59	0.43
1:A:975:ASP:OD1	1:A:977:MET:N	2.48	0.43
1:A:1303:SER:O	1:A:1307:ASP:HA	2.18	0.43
1:A:1501:ILE:CG2	1:A:1502:PRO:CD	2.94	0.43
2:B:1073:GLU:HB3	2:B:1076:ARG:HH21	1.83	0.43
2:B:1128:CYS:SG	2:B:1130:ARG:HB3	2.59	0.43
4:E:78:LEU:HD21	4:E:109:ILE:HD12	2.00	0.43
1:A:446:ARG:NH2	1:A:450:LYS:HB3	2.33	0.43
2:B:718:GLN:O	2:B:721:MET:N	2.52	0.43
2:B:1134:ARG:HD3	2:B:1167:PHE:CE1	2.52	0.43
3:C:60:ASP:HB3	3:C:63:ILE:CD1	2.49	0.43
1:A:12:THR:O	1:A:1634:LEU:HD12	2.18	0.43
1:A:735:VAL:O	1:A:739:VAL:HG22	2.19	0.43
1:A:1108:HIS:O	1:A:1111:GLU:HG2	2.18	0.43
1:A:1148:LEU:HB3	1:A:1163:GLU:OE2	2.18	0.43
1:A:1148:LEU:HD22	1:A:1163:GLU:HG3	2.01	0.43
1:A:1263:LEU:CB	1:A:1496:SER:CB	2.97	0.43
2:B:57:ASP:HB2	2:B:63:LEU:HD11	2.01	0.43
2:B:552:SER:O	2:B:647:SER:N	2.40	0.43
2:B:910:THR:HB	2:B:911:PRO:HD2	2.00	0.43
3:C:123:ASP:OD1	3:C:124:GLU:N	2.49	0.43
4:E:99:HIS:HA	4:E:102:GLU:CD	2.39	0.43
12:N:81:THR:HG22	12:N:86:ASP:HB3	2.01	0.43
1:A:510:PRO:HA	1:A:576:LYS:HG2	2.01	0.42
1:A:522:ALA:HA	1:A:525:ASN:HB2	2.01	0.42
1:A:805:VAL:O	1:A:809:VAL:HG23	2.19	0.42
1:A:1463:ASP:HB2	1:A:1469:TRP:CD1	2.54	0.42
1:A:1510:PRO:HG3	1:A:1520:VAL:HG23	2.01	0.42
1:A:1511:GLU:OE1	7:I:73:LYS:HD2	2.20	0.42
2:B:345:SER:O	2:B:349:VAL:HG23	2.19	0.42
2:B:501:ARG:NH2	2:B:549:CYS:HB3	2.34	0.42
2:B:700:LEU:HD13	16:B:1301:SO4:O1	2.19	0.42
4:E:159:ASP:HA	4:E:162:ARG:HG2	2.00	0.42
8:J:7:CYS:HB3	8:J:10:CYS:HB2	1.99	0.42
1:A:731:ILE:O	1:A:735:VAL:HG23	2.19	0.42
1:A:950:GLN:HE21	1:A:982:VAL:CG2	2.32	0.42
1:A:1504:ILE:CD1	1:A:1529:MET:CE	2.97	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1657:LEU:HB2	5:F:133:VAL:O	2.20	0.42
2:B:156:ARG:CZ	2:B:450:LEU:HD13	2.49	0.42
2:B:282:HIS:N	2:B:323:ARG:HD2	2.34	0.42
2:B:698:SER:OG	16:B:1301:SO4:O4	2.23	0.42
3:C:37:LYS:HG3	9:K:130:VAL:HG13	2.00	0.42
3:C:60:ASP:HB3	3:C:63:ILE:HD12	2.01	0.42
3:C:137:ASN:OD1	3:C:203:SER:HA	2.19	0.42
3:C:213:GLY:HA2	3:C:216:HIS:O	2.19	0.42
4:E:68:SER:HB3	4:E:75:MET:SD	2.59	0.42
5:F:57:ASP:OD1	5:F:58:PHE:N	2.47	0.42
14:G:160:ASN:OD1	14:G:160:ASN:N	2.52	0.42
1:A:875:LEU:O	1:A:879:LEU:HG	2.19	0.42
1:A:908:VAL:CG1	1:A:941:SER:HB2	2.49	0.42
1:A:1442:VAL:O	1:A:1446:ARG:N	2.29	0.42
1:A:1559:ARG:HG3	1:A:1586:ALA:HB1	2.01	0.42
2:B:407:PHE:O	2:B:411:MET:HG3	2.19	0.42
2:B:611:TRP:C	2:B:620:LEU:HD21	2.40	0.42
2:B:789:ILE:HD12	2:B:927:CYS:SG	2.58	0.42
4:E:182:ASP:OD2	4:E:184:VAL:HB	2.19	0.42
7:I:84:GLU:HG2	7:I:94:MET:HB2	2.01	0.42
9:K:55:SER:N	9:K:60:SER:O	2.37	0.42
12:N:78:THR:HB	12:N:79:THR:H	1.56	0.42
1:A:254:THR:HA	1:A:312:SER:N	2.34	0.42
1:A:824:THR:HB	2:B:1023:ARG:HH11	1.83	0.42
1:A:946:LEU:HA	1:A:984:GLY:O	2.19	0.42
1:A:1573:TYR:HA	7:I:122:ARG:NH2	2.31	0.42
2:B:107:PRO:HG2	2:B:133:TYR:CE2	2.54	0.42
4:E:16:PHE:CZ	4:E:20:LYS:HE3	2.55	0.42
5:F:76:LYS:HG3	5:F:79:ARG:CZ	2.50	0.42
8:J:45:CYS:O	8:J:48:ARG:HG2	2.20	0.42
12:N:94:ASP:HB3	12:N:99:LEU:HG	2.00	0.42
1:A:54:LEU:HA	1:A:75:HIS:HB2	2.00	0.42
1:A:586:VAL:HB	1:A:648:LEU:HD21	2.01	0.42
1:A:648:LEU:HD23	1:A:648:LEU:HA	1.86	0.42
1:A:826:PHE:CG	1:A:827:THR:N	2.88	0.42
1:A:885:ASP:CG	1:A:888:LYS:H	2.22	0.42
1:A:1005:GLY:HA2	1:A:1008:ASP:HB2	2.02	0.42
2:B:314:LYS:O	2:B:315:LYS:HB3	2.19	0.42
2:B:528:LEU:HA	2:B:528:LEU:HD23	1.76	0.42
2:B:534:PRO:HB2	2:B:538:PRO:HG2	2.01	0.42
2:B:893:ASN:O	2:B:895:PHE:HD2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:894:LYS:O	2:B:896:GLN:N	2.53	0.42
2:B:936:MET:HA	2:B:937:PRO:HD2	1.87	0.42
3:C:31:TRP:HA	3:C:35:LYS:NZ	2.35	0.42
3:C:31:TRP:CE3	9:K:82:LYS:HD2	2.53	0.42
4:E:98:ILE:O	4:E:102:GLU:HG3	2.19	0.42
1:A:465:GLY:O	1:A:469:LYS:N	2.32	0.42
1:A:618:TYR:CE1	2:B:783:MET:HB2	2.55	0.42
1:A:844:THR:O	1:A:848:LYS:HG3	2.19	0.42
1:A:967:PRO:HB3	2:B:674:ILE:HD12	2.02	0.42
1:A:1204:THR:HG22	1:A:1205:PHE:N	2.34	0.42
2:B:143:TRP:CD1	2:B:152:LEU:HD12	2.54	0.42
2:B:327:LEU:HD23	2:B:330:LEU:HD12	2.01	0.42
2:B:1105:ARG:H	2:B:1173:THR:HA	1.84	0.42
3:C:128:ASP:OD1	3:C:129:GLU:N	2.52	0.42
1:A:652:ASN:OD1	1:A:652:ASN:N	2.53	0.42
2:B:343:ASP:OD1	2:B:344:GLN:N	2.53	0.42
2:B:675:ALA:HB2	2:B:686:HIS:CG	2.54	0.42
4:E:55:ARG:HG3	4:E:84:ASP:HA	2.01	0.42
9:K:134:LYS:HA	9:K:137:GLU:OE1	2.20	0.42
1:A:372:LYS:HD2	1:A:374:GLY:O	2.20	0.42
1:A:711:LYS:HG3	9:K:106:GLN:NE2	2.35	0.42
1:A:1055:ILE:HD11	1:A:1174:TYR:CE1	2.54	0.42
4:E:53:PRO:HG2	4:E:55:ARG:HH12	1.85	0.42
5:F:59:GLN:O	5:F:63:GLN:HG3	2.19	0.42
8:J:54:VAL:HG12	8:J:56:LEU:H	1.84	0.42
1:A:253:GLU:O	1:A:312:SER:N	2.53	0.42
1:A:428:VAL:O	1:A:432:ASN:N	2.51	0.42
1:A:733:THR:O	1:A:737:LEU:N	2.47	0.42
1:A:836:THR:CG2	1:A:839:GLY:H	2.33	0.42
1:A:908:VAL:HG11	1:A:941:SER:HB2	2.02	0.42
1:A:1188:ILE:O	1:A:1192:SER:OG	2.25	0.42
1:A:1456:PHE:CD1	1:A:1476:LEU:HD23	2.54	0.42
2:B:527:PHE:HE2	2:B:669:GLN:OE1	2.02	0.42
2:B:1031:VAL:HG12	2:B:1032:TYR:O	2.19	0.42
4:E:151:PRO:HG2	4:E:153:HIS:CE1	2.54	0.42
6:H:10:PHE:O	6:H:54:SER:HA	2.20	0.42
6:H:104:PHE:CE2	6:H:137:GLN:HB2	2.54	0.42
1:A:579:ARG:NH1	1:A:582:LYS:HG2	2.34	0.42
1:A:636:HIS:HB3	2:B:1091:ARG:HH22	1.85	0.42
1:A:1112:PRO:HG2	1:A:1115:LYS:HG2	2.01	0.42
1:A:1162:ASN:HB3	1:A:1165:LYS:HD3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1215:VAL:HG22	1:A:1216:THR:N	2.35	0.42
2:B:240:ARG:HH11	2:B:360:VAL:HG21	1.85	0.42
2:B:1152:PHE:HZ	14:G:235:ASN:CG	2.22	0.42
4:E:24:LYS:HE2	4:E:32:GLN:HE22	1.85	0.42
9:K:111:THR:HB	9:K:115:ASP:OD2	2.19	0.42
1:A:125:LEU:C	1:A:128:GLY:H	2.24	0.41
1:A:572:THR:HA	14:G:52:MET:CE	2.49	0.41
1:A:744:MET:HG3	1:A:745:PRO:HD2	2.01	0.41
1:A:1006:LEU:CD1	2:B:716:MET:HE3	2.50	0.41
1:A:1588:MET:O	1:A:1591:ARG:NH1	2.49	0.41
2:B:361:HIS:NE2	2:B:362:LEU:HG	2.34	0.41
2:B:714:ARG:HH21	2:B:957:ARG:HG2	1.85	0.41
2:B:894:LYS:C	2:B:896:GLN:N	2.72	0.41
2:B:939:SER:OG	2:B:943:ILE:N	2.51	0.41
4:E:26:ARG:HE	4:E:188:LEU:HA	1.85	0.41
5:F:132:LEU:O	5:F:148:VAL:HG23	2.19	0.41
1:A:116:HIS:HB3	1:A:185:ARG:NH1	2.35	0.41
1:A:749:LEU:O	1:A:770:LEU:HD12	2.21	0.41
1:A:812:VAL:HG22	1:A:815:ARG:HH21	1.84	0.41
1:A:1240:LEU:O	1:A:1519:LEU:N	2.37	0.41
1:A:1293:HIS:ND1	1:A:1471:GLU:OE1	2.53	0.41
2:B:74:PHE:CE2	2:B:343:ASP:HB3	2.55	0.41
2:B:556:SER:HB3	2:B:621:PRO:HG3	2.02	0.41
3:C:105:PRO:HG3	8:J:6:ARG:NH2	2.34	0.41
3:C:165:ARG:HB3	3:C:189:PRO:CB	2.37	0.41
7:I:20:PRO:O	7:I:39:LYS:NZ	2.52	0.41
7:I:112:TYR:N	7:I:121:PHE:O	2.54	0.41
12:N:148:ILE:HD13	12:N:150:TYR:OH	2.20	0.41
1:A:734:THR:O	1:A:737:LEU:HB3	2.20	0.41
1:A:751:SER:OG	1:A:752:LYS:N	2.53	0.41
1:A:793:ILE:O	1:A:797:LEU:HG	2.20	0.41
2:B:349:VAL:O	2:B:352:GLU:HB3	2.19	0.41
2:B:372:ARG:NH2	2:B:574:SER:HA	2.36	0.41
2:B:470:LEU:N	2:B:481:VAL:O	2.28	0.41
2:B:828:GLY:N	2:B:869:THR:OG1	2.36	0.41
2:B:894:LYS:HB3	10:L:45:ALA:HB1	2.02	0.41
2:B:1107:CYS:HB2	2:B:1195:ARG:NH2	2.35	0.41
3:C:80:ALA:HB3	3:C:102:GLY:HA2	2.02	0.41
4:E:13:TRP:NE1	4:E:39:LEU:HA	2.35	0.41
1:A:1:MET:HA	2:B:1098:TYR:CE2	2.55	0.41
1:A:126:GLN:HB3	1:A:343:PRO:CD	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:476:VAL:HG22	2:B:1069:ILE:O	2.20	0.41
1:A:596:HIS:NE2	1:A:598:ALA:HB3	2.34	0.41
1:A:747:ILE:HG13	1:A:748:ASN:N	2.36	0.41
1:A:1020:GLN:NE2	1:A:1191:GLN:HA	2.35	0.41
1:A:1268:ASP:H	1:A:1296:PHE:HA	1.85	0.41
1:A:1483:LEU:HA	1:A:1483:LEU:HD23	1.86	0.41
1:A:1600:ARG:HB2	1:A:1616:GLU:OE2	2.20	0.41
2:B:325:GLN:HA	2:B:328:GLN:OE1	2.20	0.41
2:B:712:SER:O	2:B:715:ASN:N	2.53	0.41
2:B:743:ARG:HG2	2:B:744:LEU:O	2.21	0.41
4:E:48:ASP:CG	4:E:50:MET:HB3	2.41	0.41
1:A:248:PHE:O	1:A:249:THR:OG1	2.32	0.41
2:B:1189:LEU:HD12	2:B:1196:LEU:HD11	2.03	0.41
4:E:24:LYS:HE2	4:E:32:GLN:NE2	2.36	0.41
5:F:77:ASP:OD1	5:F:78:GLN:HG3	2.21	0.41
5:F:116:ASP:OD2	5:F:119:ARG:HG2	2.20	0.41
7:I:23:VAL:HB	7:I:39:LYS:NZ	2.34	0.41
7:I:88:GLN:OE1	7:I:119:TYR:HB2	2.21	0.41
8:J:7:CYS:O	8:J:11:GLY:N	2.48	0.41
14:G:29:ASP:OD1	14:G:30:GLU:N	2.52	0.41
14:G:106:LYS:HE3	14:G:106:LYS:HB2	1.82	0.41
1:A:407:GLN:O	1:A:411:VAL:HG23	2.21	0.41
1:A:485:SER:HB2	1:A:615:ARG:NE	2.36	0.41
1:A:618:TYR:OH	2:B:783:MET:HB2	2.21	0.41
1:A:1031:HIS:HA	1:A:1184:ALA:HA	2.03	0.41
1:A:1154:LEU:HA	1:A:1157:SER:OG	2.20	0.41
1:A:1245:ASP:OD1	1:A:1246:VAL:N	2.53	0.41
1:A:1643:VAL:HG12	1:A:1643:VAL:O	2.20	0.41
2:B:253:LEU:HD22	2:B:257:GLN:HB2	2.01	0.41
2:B:323:ARG:O	2:B:327:LEU:HG	2.20	0.41
3:C:140:CYS:O	3:C:198:PRO:HA	2.20	0.41
3:C:230:LEU:HD22	3:C:297:HIS:ND1	2.35	0.41
4:E:147:HIS:HB3	4:E:150:VAL:CG2	2.50	0.41
7:I:110:VAL:O	7:I:123:THR:N	2.37	0.41
9:K:89:CYS:SG	9:K:90:GLY:N	2.94	0.41
13:D:82:LEU:O	13:D:86:ILE:HG23	2.20	0.41
1:A:440:SER:OG	1:A:458:GLN:NE2	2.54	0.41
2:B:555:GLN:HB2	2:B:646:HIS:HE1	1.85	0.41
2:B:584:CYS:HB2	2:B:598:HIS:HA	2.02	0.41
2:B:915:ASP:H	2:B:927:CYS:CB	2.29	0.41
3:C:327:TYR:HE2	9:K:46:LYS:HE2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:89:GLU:O	5:F:93:ILE:HG12	2.20	0.41
1:A:693:GLN:HE22	9:K:88:PHE:HA	1.85	0.41
1:A:1268:ASP:HA	1:A:1297:PHE:CZ	2.56	0.41
1:A:1300:ASN:OD1	1:A:1301:GLU:N	2.53	0.41
2:B:307:GLU:HG3	7:I:7:LEU:HD21	2.02	0.41
2:B:457:ILE:O	2:B:460:LYS:N	2.54	0.41
2:B:699:ILE:O	2:B:703:LEU:HG	2.20	0.41
3:C:85:PHE:HB2	10:L:65:VAL:HB	2.02	0.41
3:C:216:HIS:HB3	3:C:219:PHE:CD2	2.56	0.41
4:E:33:GLU:OE1	4:E:33:GLU:N	2.40	0.41
4:E:165:LEU:HD22	4:E:170:LEU:O	2.21	0.41
6:H:12:VAL:N	6:H:53:ASP:O	2.49	0.41
1:A:76:GLN:HB2	1:A:362:VAL:O	2.20	0.41
1:A:233:CYS:SG	1:A:235:ASN:HB2	2.61	0.41
1:A:399:LEU:HD11	1:A:422:ARG:HD2	2.03	0.41
1:A:697:TYR:HE2	9:K:91:TYR:C	2.24	0.41
1:A:717:PRO:HB3	1:A:726:TRP:CE2	2.55	0.41
1:A:736:LEU:HD23	1:A:736:LEU:HA	1.81	0.41
1:A:800:VAL:O	1:A:1079:LYS:HD2	2.21	0.41
1:A:826:PHE:HB3	2:B:777:SER:HB2	2.03	0.41
1:A:878:ARG:O	1:A:882:ILE:N	2.33	0.41
2:B:225:ARG:HB2	2:B:229:TYR:CD2	2.56	0.41
2:B:252:TYR:CE1	2:B:256:GLY:HA2	2.56	0.41
2:B:285:ASP:O	2:B:289:PHE:N	2.40	0.41
2:B:790:ASN:HD21	2:B:944:GLN:HB3	1.85	0.41
2:B:1079:LEU:HD12	2:B:1088:LEU:HD13	2.03	0.41
2:B:1116:SER:O	2:B:1124:SER:OG	2.21	0.41
3:C:84:TYR:O	3:C:204:LEU:HA	2.21	0.41
4:E:109:ILE:HG12	4:E:133:GLU:HB2	2.03	0.41
4:E:158:SER:O	4:E:161:LYS:HB3	2.21	0.41
6:H:15:VAL:HG13	6:H:26:ILE:HG12	2.03	0.41
7:I:85:LYS:HA	7:I:91:ASN:O	2.21	0.41
9:K:133:SER:OG	9:K:137:GLU:OE2	2.35	0.41
1:A:487:ASP:OD2	1:A:489:ASN:HB2	2.21	0.41
1:A:1263:LEU:C	1:A:1265:GLU:N	2.74	0.41
2:B:581:PRO:HB3	2:B:637:TYR:CE1	2.56	0.41
2:B:706:PHE:HE2	2:B:752:VAL:HG11	1.85	0.41
2:B:707:SER:O	2:B:710:ASN:N	2.43	0.41
4:E:127:ILE:HD11	4:E:132:ILE:HD11	2.02	0.41
7:I:120:LYS:HE3	7:I:120:LYS:HB3	1.90	0.41
10:L:48:CYS:HB3	10:L:52:GLY:N	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:244:ARG:HH21	1:A:252:PHE:HD2	1.68	0.40
1:A:706:HIS:CG	1:A:808:LYS:HE2	2.55	0.40
1:A:1317:ILE:HA	1:A:1321:PHE:CB	2.44	0.40
1:A:1648:ASN:O	1:A:1652:GLY:HA3	2.19	0.40
2:B:161:LEU:O	2:B:163:VAL:HG23	2.20	0.40
2:B:885:VAL:HG22	2:B:903:ILE:HG23	2.02	0.40
2:B:1084:THR:HB	2:B:1087:LEU:HD12	2.03	0.40
3:C:165:ARG:HH12	3:C:190:ASP:HA	1.85	0.40
1:A:8:GLY:CA	14:G:115:PHE:CZ	3.05	0.40
1:A:102:CYS:SG	1:A:104:PHE:HD2	2.45	0.40
1:A:141:LEU:HD13	1:A:181:LEU:HD13	2.03	0.40
1:A:396:ILE:HG12	1:A:426:ALA:HB1	2.03	0.40
1:A:402:ASP:O	1:A:406:LEU:HG	2.21	0.40
1:A:803:PRO:O	1:A:807:ALA:N	2.30	0.40
1:A:808:LYS:NZ	1:A:815:ARG:HH22	2.19	0.40
1:A:1459:LYS:HB2	1:A:1473:LYS:HB3	2.02	0.40
2:B:359:LEU:HD22	2:B:361:HIS:HE1	1.85	0.40
2:B:445:TYR:O	2:B:449:VAL:HG23	2.21	0.40
2:B:538:PRO:HB2	2:B:542:LEU:HD12	2.03	0.40
2:B:886:ASN:HB2	2:B:902:SER:OG	2.22	0.40
7:I:8:ILE:O	7:I:16:LEU:HD12	2.21	0.40
12:N:70:LEU:HA	12:N:71:PRO:HD3	1.84	0.40
1:A:885:ASP:HB3	1:A:888:LYS:HB2	2.02	0.40
1:A:904:THR:C	1:A:906:GLN:H	2.25	0.40
2:B:306:LEU:O	2:B:309:LEU:HB3	2.21	0.40
2:B:492:ASN:OD1	2:B:494:TYR:N	2.54	0.40
2:B:1152:PHE:CZ	14:G:129:VAL:HG21	2.56	0.40
3:C:224:THR:HG23	3:C:225:ALA:N	2.36	0.40
4:E:48:ASP:OD2	4:E:50:MET:HB3	2.21	0.40
4:E:195:VAL:HG13	4:E:212:ARG:O	2.21	0.40
11:M:11:GLU:O	11:M:87:SER:HA	2.22	0.40
14:G:35:SER:OG	14:G:132:VAL:N	2.46	0.40
14:G:50:ALA:HA	14:G:113:PHE:CD2	2.56	0.40
1:A:25:ARG:NH2	1:A:80:GLU:OE1	2.52	0.40
1:A:557:LEU:O	1:A:561:LEU:HG	2.20	0.40
1:A:854:GLY:HA3	1:A:974:THR:O	2.22	0.40
1:A:1246:VAL:HG12	1:A:1247:SER:O	2.21	0.40
1:A:1316:VAL:HG13	1:A:1320:GLN:NE2	2.36	0.40
2:B:330:LEU:HD23	2:B:330:LEU:HA	1.87	0.40
2:B:331:GLY:O	2:B:335:ARG:HB2	2.20	0.40
2:B:569:GLY:HA3	12:N:90:MET:HE1	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:319:ARG:CZ	3:C:319:ARG:HB2	2.52	0.40
6:H:27:GLU:HA	6:H:39:THR:HA	2.04	0.40
14:G:73:TYR:CZ	14:G:238:THR:HG21	2.57	0.40
1:A:110:LEU:HD12	1:A:111:LYS:H	1.86	0.40
1:A:493:ASN:HA	1:A:653:THR:HG21	2.02	0.40
1:A:495:ILE:HD12	1:A:615:ARG:O	2.21	0.40
1:A:1148:LEU:HD21	1:A:1166:PHE:CD2	2.56	0.40
1:A:1250:GLN:O	1:A:1254:PHE:N	2.39	0.40
1:A:1615:TYR:CE2	1:A:1616:GLU:HG3	2.57	0.40
2:B:61:LEU:H	2:B:61:LEU:HG	1.70	0.40
2:B:562:PRO:HA	2:B:565:LEU:HD12	2.04	0.40
2:B:588:ILE:O	2:B:591:LYS:N	2.54	0.40
3:C:88:ASN:OD1	3:C:202:ILE:HG12	2.20	0.40
13:D:37:LEU:HD23	13:D:37:LEU:HA	1.88	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	1448/1664 (87%)	1364 (94%)	75 (5%)	9 (1%)	25	63
2	B	1158/1203 (96%)	1110 (96%)	41 (4%)	7 (1%)	25	63
3	C	303/335 (90%)	283 (93%)	19 (6%)	1 (0%)	41	75
4	E	210/215 (98%)	202 (96%)	8 (4%)	0	100	100
5	F	96/155 (62%)	94 (98%)	2 (2%)	0	100	100
6	H	127/146 (87%)	124 (98%)	3 (2%)	0	100	100
7	I	112/125 (90%)	108 (96%)	4 (4%)	0	100	100
8	J	67/70 (96%)	61 (91%)	6 (9%)	0	100	100
9	K	99/142 (70%)	95 (96%)	4 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
10	L	42/70 (60%)	38 (90%)	4 (10%)	0	100	100
11	M	95/415 (23%)	86 (90%)	7 (7%)	2 (2%)	7	39
12	N	125/233 (54%)	108 (86%)	13 (10%)	4 (3%)	4	31
13	D	54/137 (39%)	50 (93%)	2 (4%)	2 (4%)	3	28
14	G	186/326 (57%)	171 (92%)	13 (7%)	2 (1%)	14	51
All	All	4122/5236 (79%)	3894 (94%)	201 (5%)	27 (1%)	26	61

All (27) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	946	LEU
2	B	657	PRO
2	B	658	LEU
2	B	659	ASP
3	C	226	SER
12	N	149	ASP
13	D	99	LEU
2	B	891	GLU
13	D	98	GLY
1	A	652	ASN
1	A	1649	VAL
2	B	892	SER
11	M	85	LYS
14	G	99	ASP
2	B	656	LEU
11	M	36	THR
12	N	115	SER
14	G	100	THR
1	A	905	SER
1	A	1264	SER
2	B	655	TYR
1	A	1050	TYR
1	A	1061	SER
12	N	70	LEU
1	A	1225	ILE
12	N	39	PRO
1	A	1569	VAL

### 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	1292/1465 (88%)	1288 (100%)	4 (0%)	92	95
2	B	1022/1053 (97%)	1020 (100%)	2 (0%)	93	96
3	C	269/296 (91%)	268 (100%)	1 (0%)	91	94
4	E	194/197 (98%)	194 (100%)	0	100	100
5	F	88/137 (64%)	88 (100%)	0	100	100
6	H	115/128 (90%)	115 (100%)	0	100	100
7	I	103/110 (94%)	103 (100%)	0	100	100
8	J	64/65 (98%)	64 (100%)	0	100	100
9	K	91/130 (70%)	91 (100%)	0	100	100
10	L	39/57 (68%)	39 (100%)	0	100	100
11	M	88/371 (24%)	79 (90%)	9 (10%)	7	28
12	N	124/220 (56%)	120 (97%)	4 (3%)	39	62
13	D	55/116 (47%)	49 (89%)	6 (11%)	6	26
14	G	170/291 (58%)	158 (93%)	12 (7%)	14	42
All	All	3714/4636 (80%)	3676 (99%)	38 (1%)	77	86

All (38) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	905	SER
1	A	942	GLN
1	A	944	MET
1	A	1499	ARG
2	B	655	TYR
2	B	658	LEU
3	C	226	SER
11	M	17	ASP
11	M	18	GLN
11	M	31	ARG
11	M	44	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
11	M	48	LYS
11	M	65	TYR
11	M	77	VAL
11	M	84	GLU
11	M	98	SER
12	N	51	GLN
12	N	124	THR
12	N	135	LYS
12	N	145	ILE
13	D	15	THR
13	D	29	GLN
13	D	38	GLN
13	D	46	GLU
13	D	80	THR
13	D	99	LEU
14	G	18	LYS
14	G	24	VAL
14	G	35	SER
14	G	39	VAL
14	G	139	ILE
14	G	147	LEU
14	G	167	THR
14	G	169	VAL
14	G	223	GLU
14	G	230	ARG
14	G	239	THR
14	G	243	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (50) such sidechains are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	31	GLN
1	A	224	HIS
1	A	263	ASN
1	A	378	HIS
1	A	458	GLN
1	A	489	ASN
1	A	537	GLN
1	A	730	GLN
1	A	880	GLN
1	A	942	GLN
1	A	950	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	1031	HIS
1	A	1108	HIS
1	A	1116	GLN
1	A	1315	ASN
1	A	1319	ASN
1	A	1320	GLN
1	A	1447	GLN
2	B	27	ASN
2	B	43	GLN
2	B	183	HIS
2	B	246	GLN
2	B	248	ASN
2	B	254	ASN
2	B	267	ASN
2	B	427	GLN
2	B	504	HIS
2	B	547	HIS
2	B	587	GLN
2	B	686	HIS
2	B	695	ASN
2	B	893	ASN
2	B	1008	HIS
2	B	1034	GLN
2	B	1171	ASN
3	C	58	ASN
3	C	99	HIS
3	C	130	ASN
3	C	172	GLN
3	C	237	GLN
3	C	297	HIS
4	E	5	ASN
4	E	32	GLN
4	E	146	HIS
4	E	179	GLN
6	H	11	GLN
6	H	35	GLN
6	H	52	GLN
7	I	32	GLN
9	K	99	ASN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 8 ligands modelled in this entry, 7 are monoatomic - leaving 1 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z  > 2$	Counts	RMSZ	$\# Z  > 2$
16	SO4	B	1301	-	4,4,4	0.20	0	6,6,6	0.35	0

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 8 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
16	B	1301	SO4	8	0

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

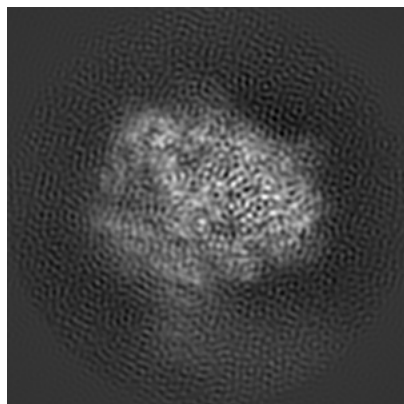
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-4148. These allow visual inspection of the internal detail of the map and identification of artifacts.

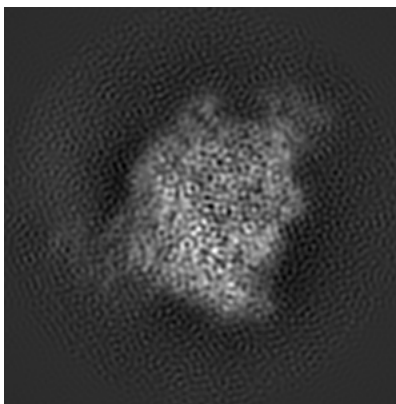
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

### 6.1 Orthogonal projections [i](#)

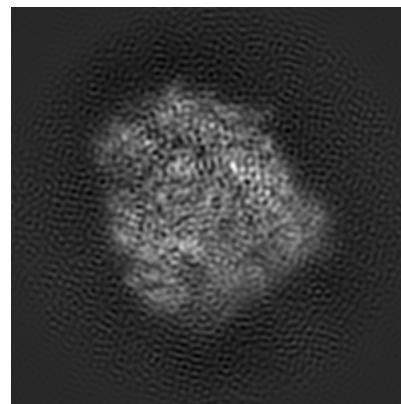
#### 6.1.1 Primary map



X

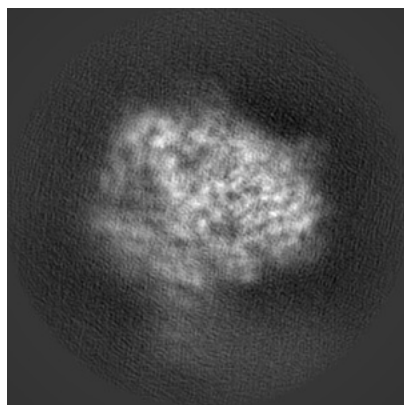


Y

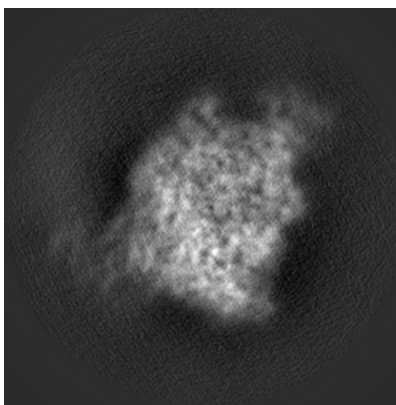


Z

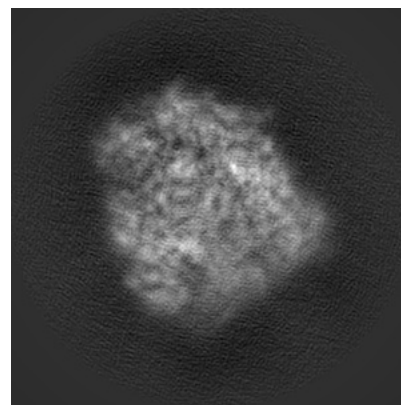
#### 6.1.2 Raw map



X



Y



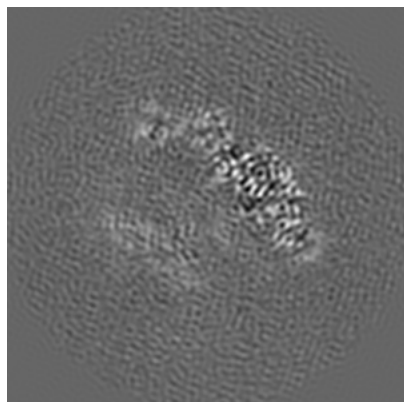
Z

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

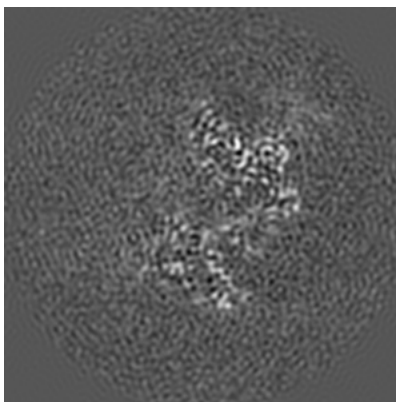


## 6.2 Central slices [i](#)

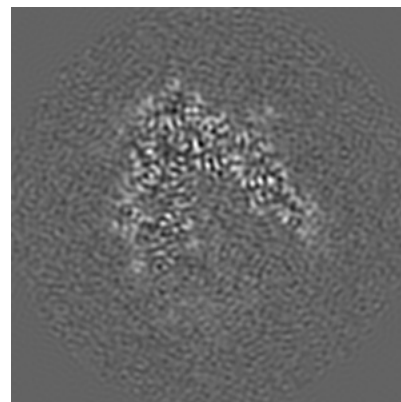
### 6.2.1 Primary map



X Index: 115

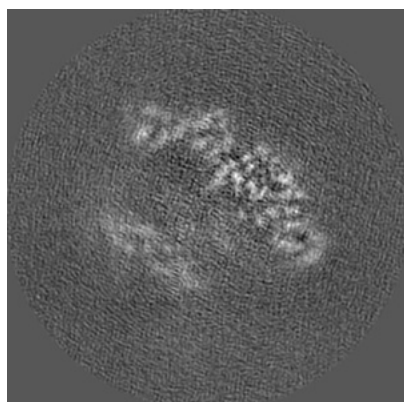


Y Index: 115

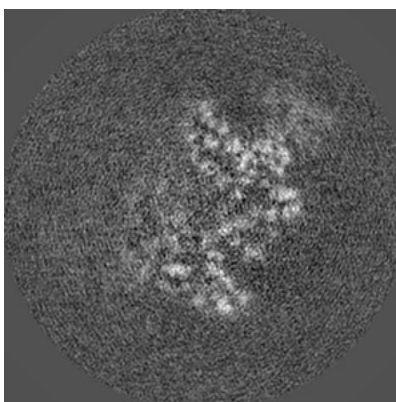


Z Index: 115

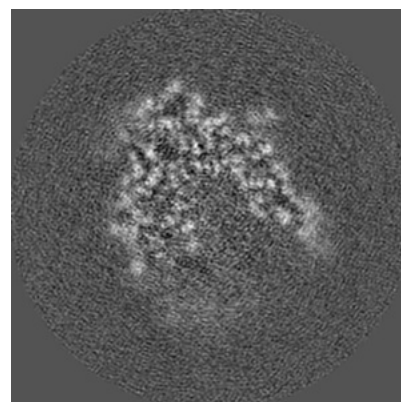
### 6.2.2 Raw map



X Index: 115



Y Index: 115

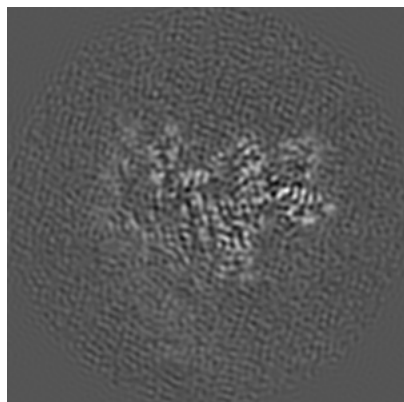


Z Index: 115

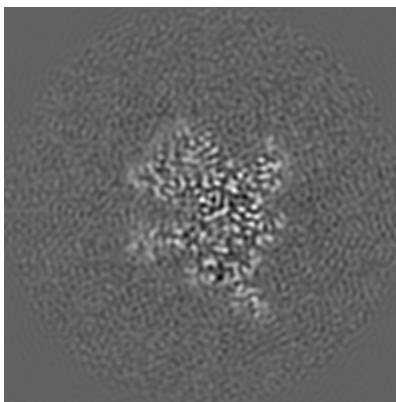
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

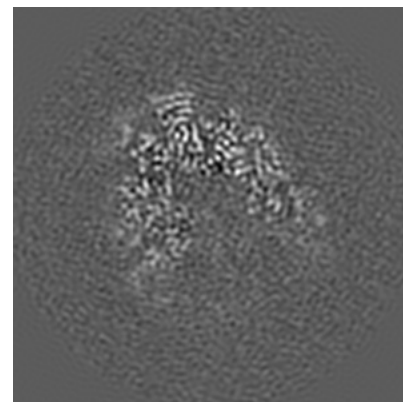
### 6.3.1 Primary map



X Index: 95

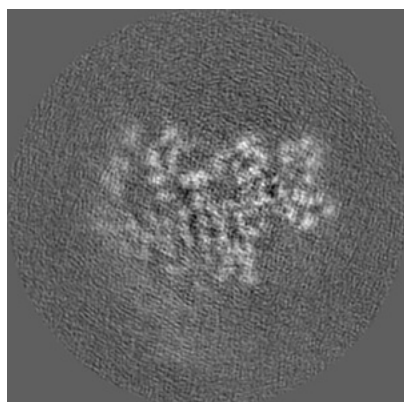


Y Index: 137

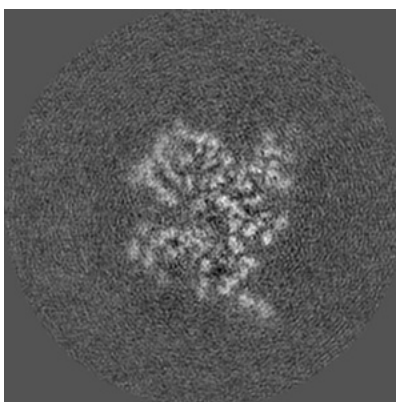


Z Index: 120

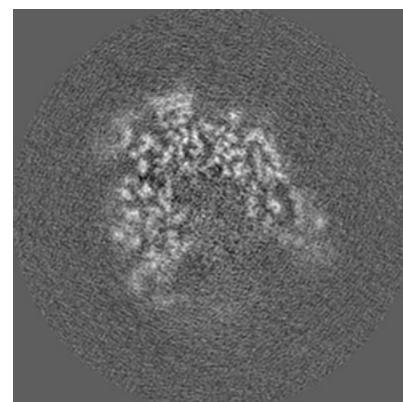
### 6.3.2 Raw map



X Index: 96



Y Index: 134

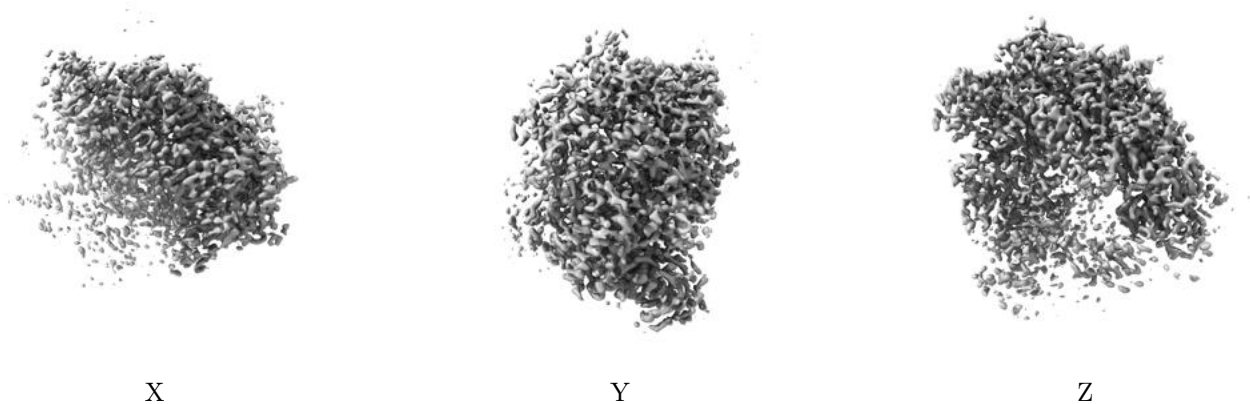


Z Index: 120

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

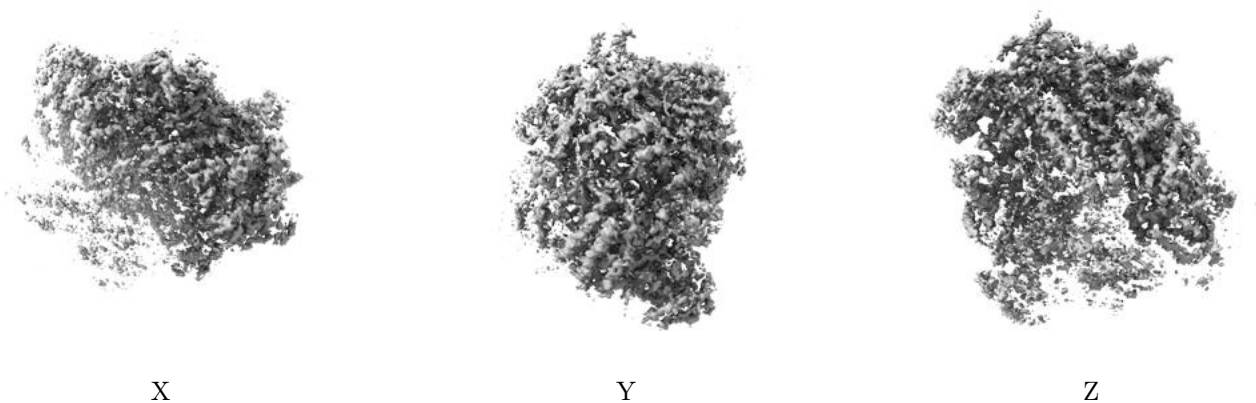
## 6.4 Orthogonal surface views [i](#)

### 6.4.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.04. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

### 6.4.2 Raw map



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

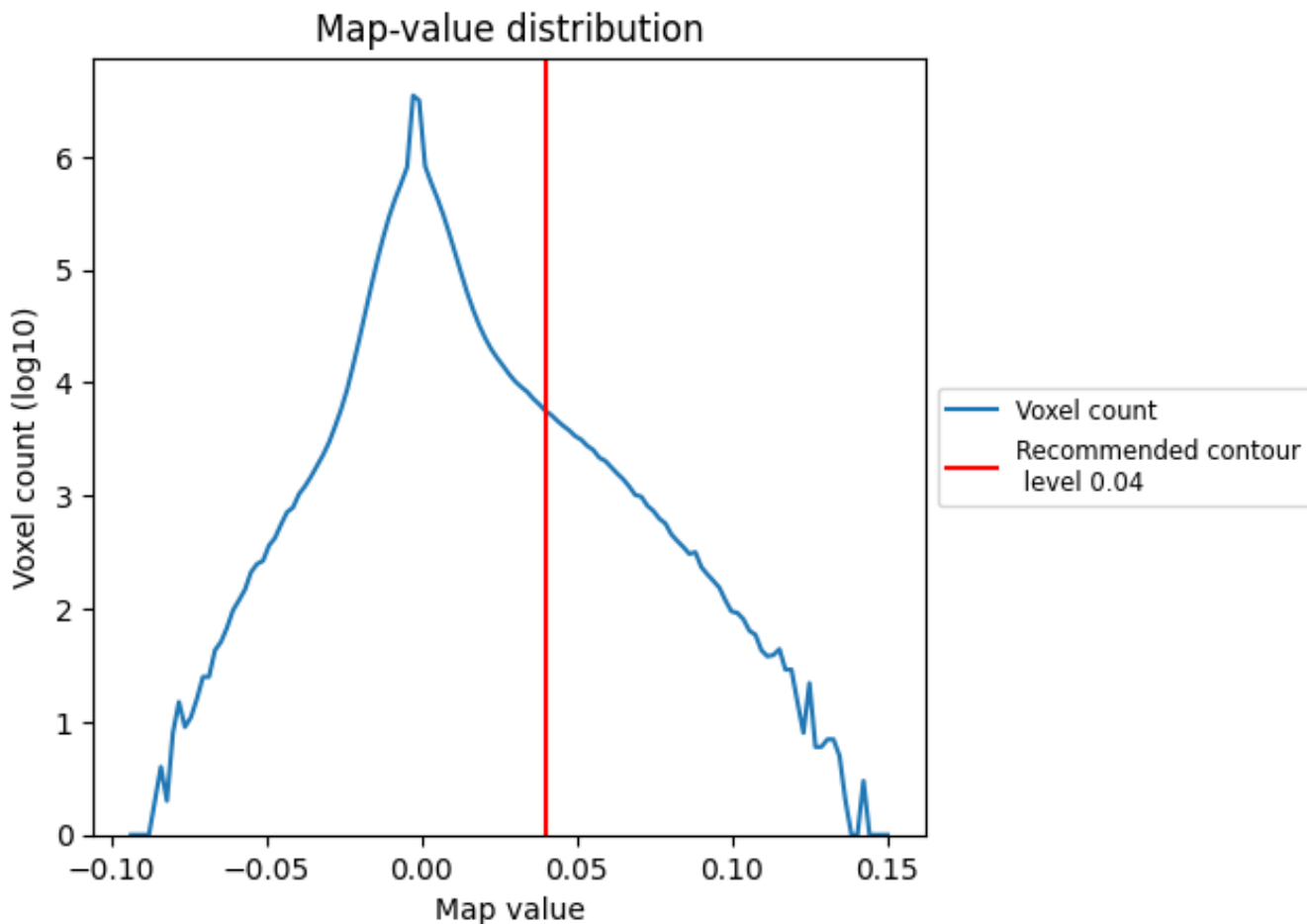
## 6.5 Mask visualisation [i](#)

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

## 7 Map analysis [i](#)

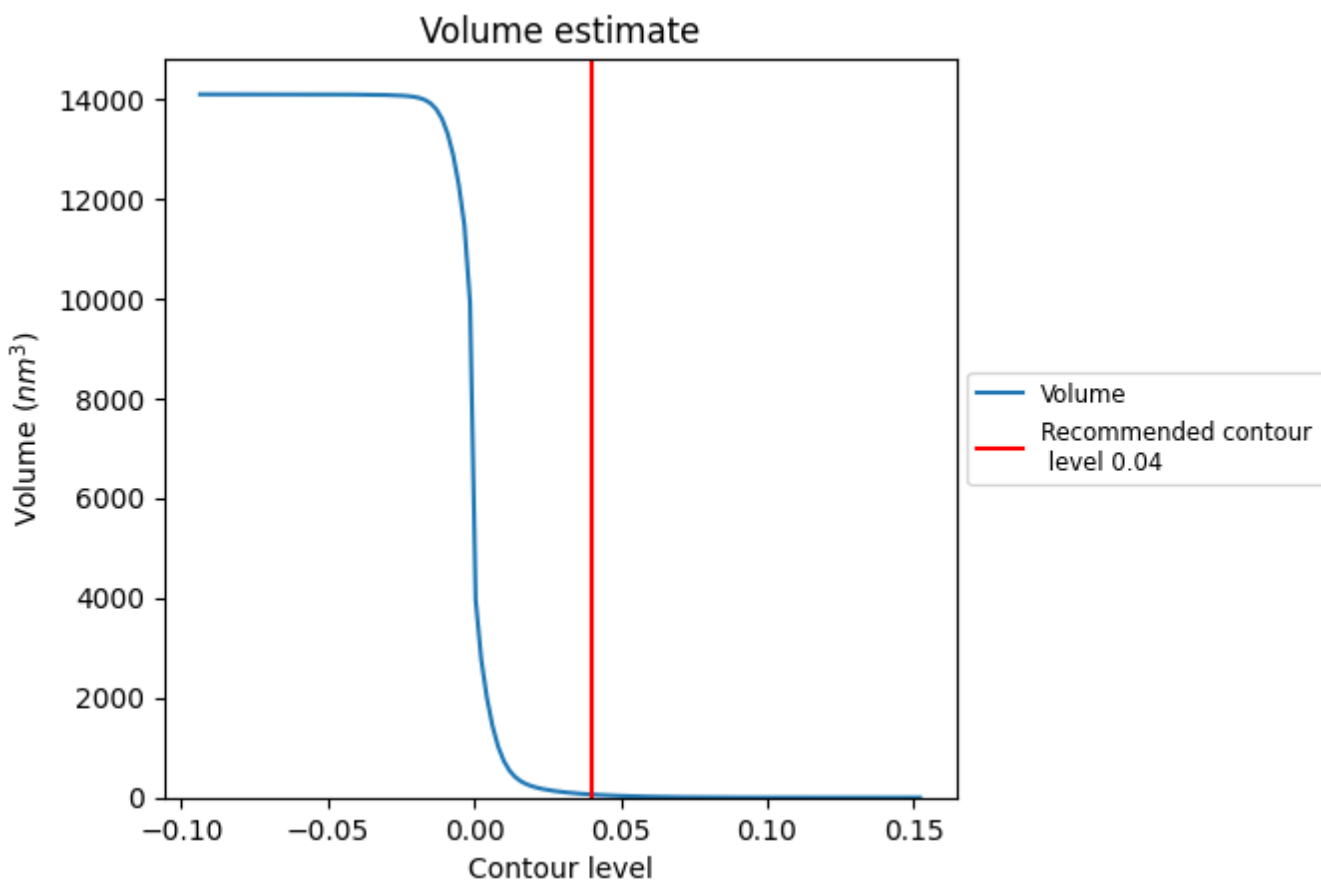
This section contains the results of statistical analysis of the map.

### 7.1 Map-value distribution [i](#)



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.

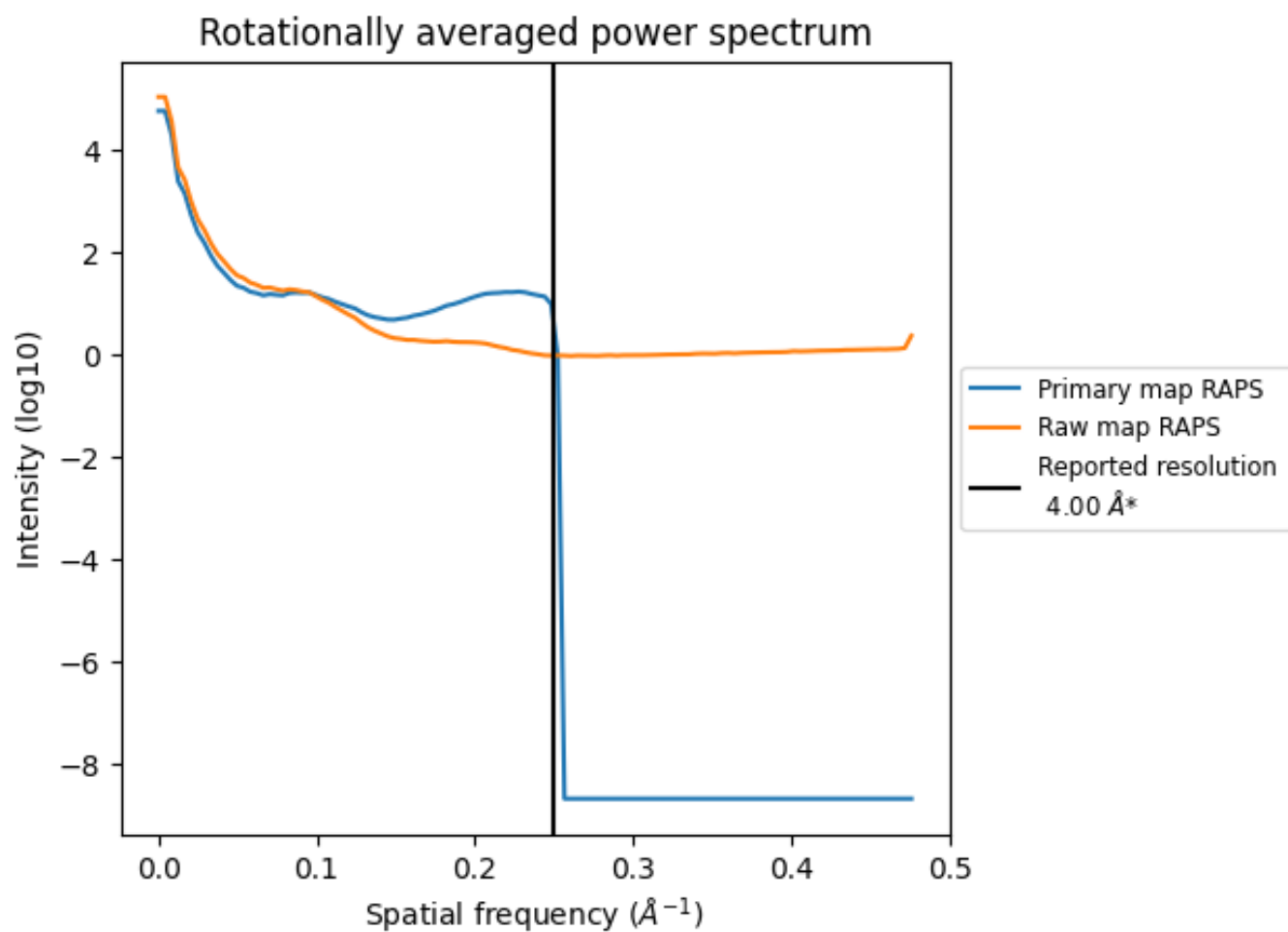
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 62 nm<sup>3</sup>; this corresponds to an approximate mass of 56 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](#)

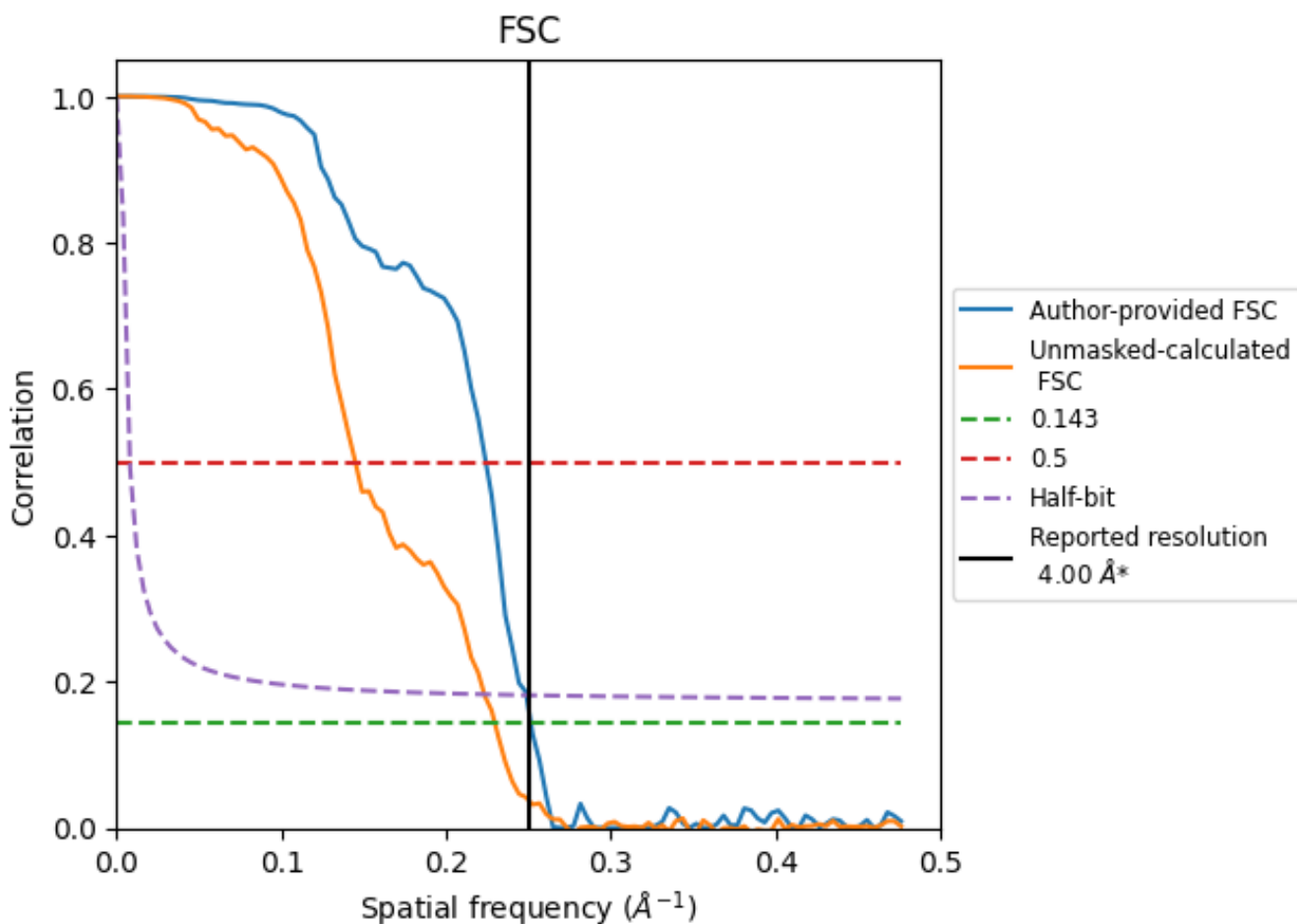


\*Reported resolution corresponds to spatial frequency of 0.250 Å<sup>-1</sup>

## 8 Fourier-Shell correlation [i](#)

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 [i](#)



\*Reported resolution corresponds to spatial frequency of 0.250 Å<sup>-1</sup>

## 8.2 Resolution estimates [i](#)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.00	-	-
Author-provided FSC curve	3.98	4.46	4.02
Unmasked-calculated*	4.35	6.89	4.48

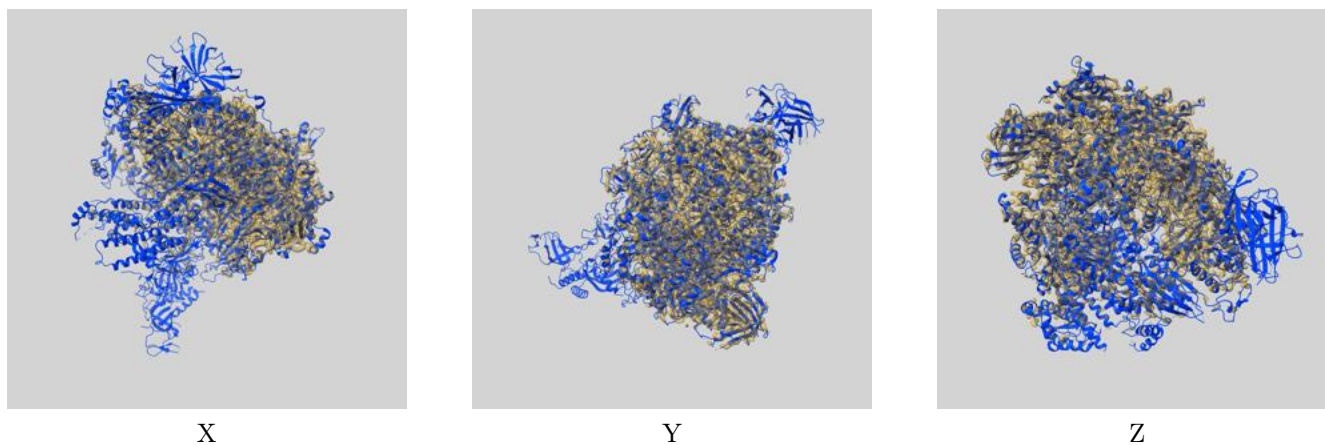
\*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.



## 9 Map-model fit [i](#)

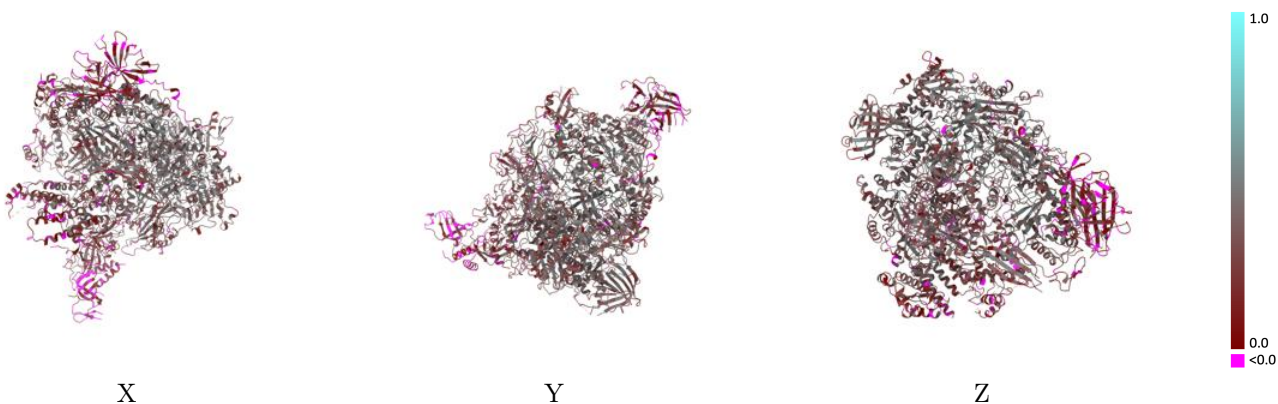
This section contains information regarding the fit between EMDB map EMD-4148 and PDB model 5M3M. Per-residue inclusion information can be found in section [3](#) on page [7](#).

### 9.1 Map-model overlay [i](#)



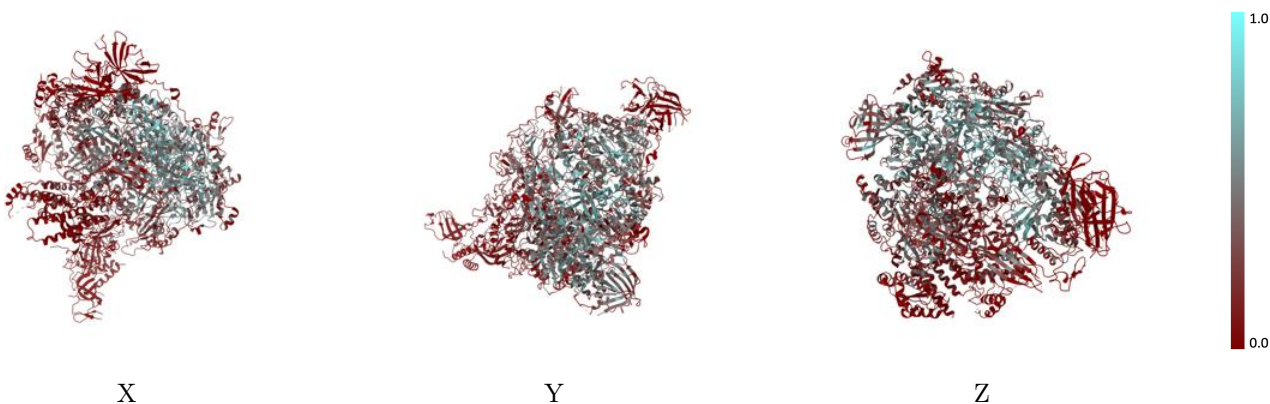
The images above show the 3D surface view of the map at the recommended contour level 0.04 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

## 9.2 Q-score mapped to coordinate model [i](#)



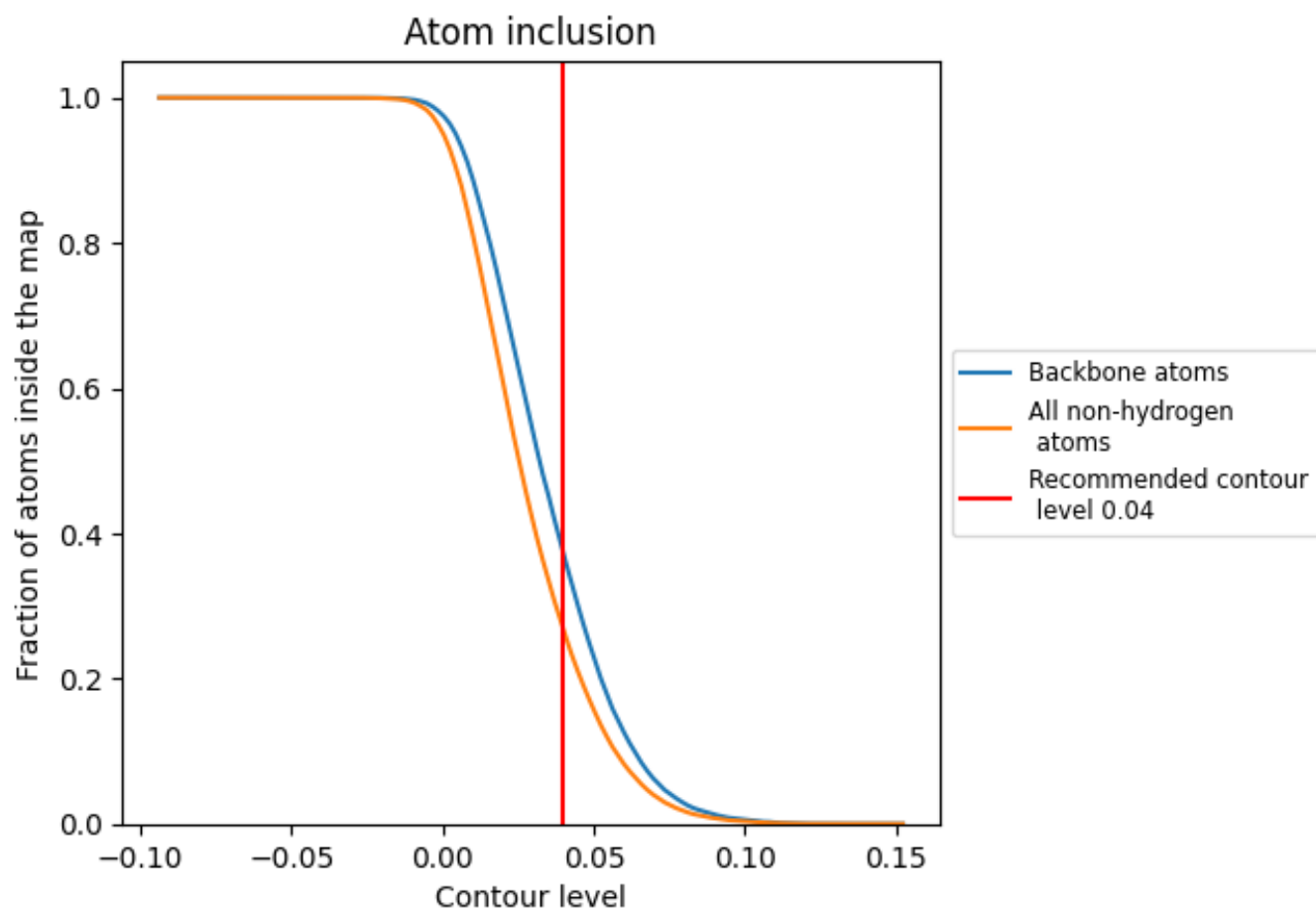
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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](#)



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 (0.04).































## 9.4 Atom inclusion [i](#)



At the recommended contour level, 37% of all backbone atoms, 27% 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 (0.04) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.2669	 0.3090
A	 0.2526	 0.3180
B	 0.3859	 0.3650
C	 0.3501	 0.3600
D	 0.0044	 0.0810
E	 0.1454	 0.2700
F	 0.1924	 0.2950
G	 0.0080	 0.1250
H	 0.3411	 0.3680
I	 0.0627	 0.2470
J	 0.4728	 0.3920
K	 0.3929	 0.3660
L	 0.3353	 0.3610
M	 0.0026	 0.1250
N	 0.0000	 0.0710

