



Full wwPDB EM Validation Report ⓘ

Nov 10, 2024 – 05:57 am GMT

PDB ID : 8C8R
EMDB ID : EMD-16492
Title : In situ structure of the Nitrosopumilus maritimus S-layer - Composite map between C2 and C6
Authors : von Kuegelgen, A.; Bharat, T.
Deposited on : 2023-01-20
Resolution : 3.50 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

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

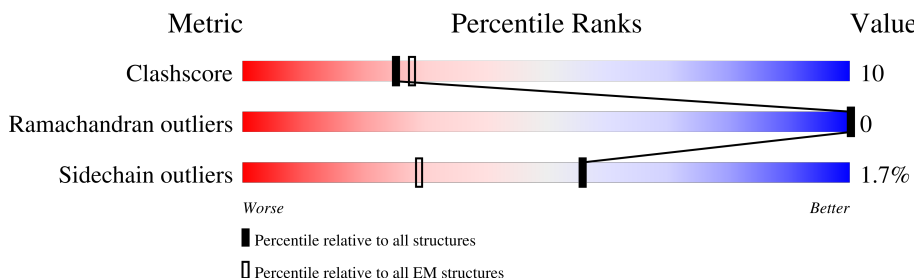
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.50 Å.

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



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

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. 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	1734	<div> <div>7%</div> <div>66%</div> <div>18%</div> <div>•</div> <div>16%</div> </div>
1	B	1734	<div> <div>7%</div> <div>67%</div> <div>17%</div> <div></div> <div>16%</div> </div>
1	C	1734	<div> <div>7%</div> <div>66%</div> <div>18%</div> <div></div> <div>16%</div> </div>
1	D	1734	<div> <div>7%</div> <div>67%</div> <div>17%</div> <div></div> <div>16%</div> </div>
1	E	1734	<div> <div>7%</div> <div>67%</div> <div>17%</div> <div>•</div> <div>16%</div> </div>
1	F	1734	<div> <div>7%</div> <div>66%</div> <div>18%</div> <div>•</div> <div>16%</div> </div>

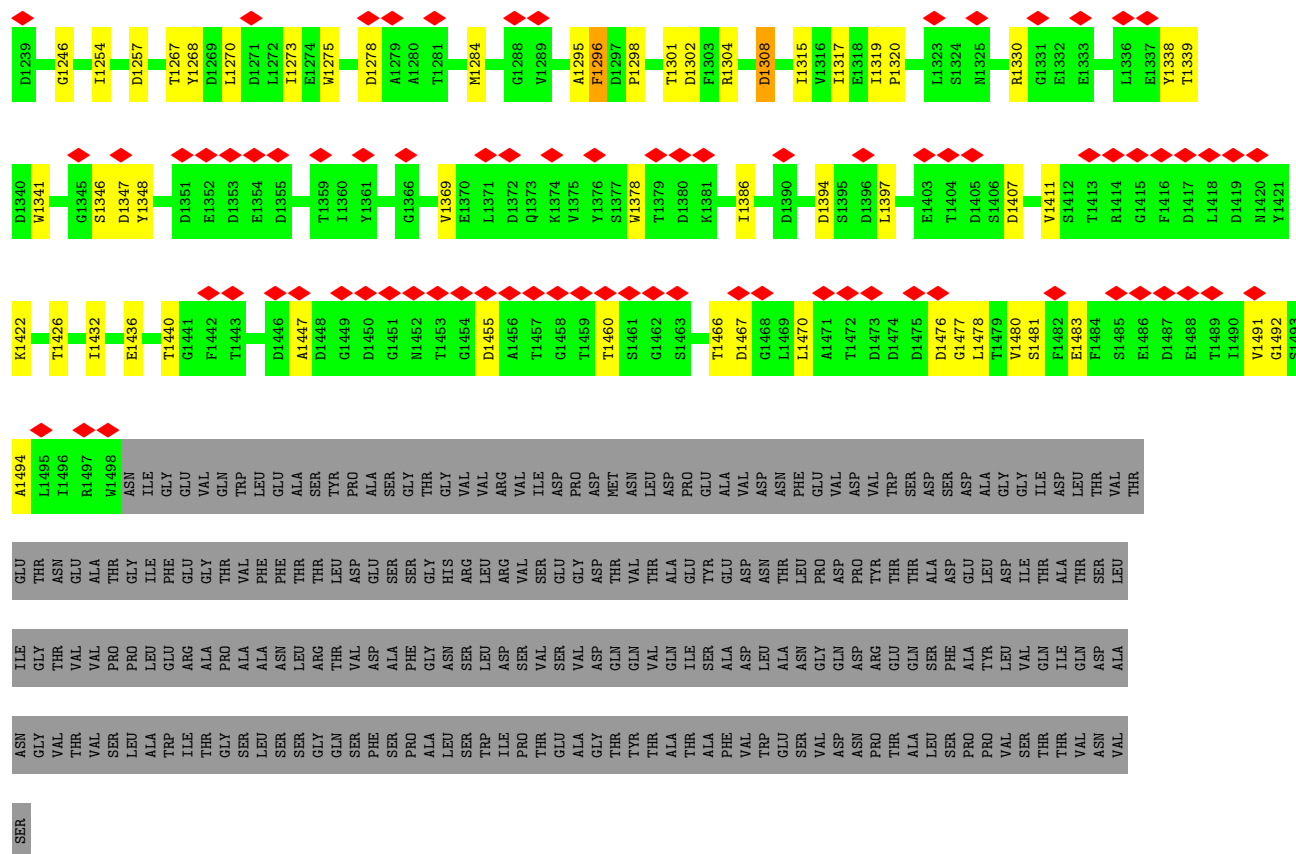
2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 65154 atoms, of which 0 are hydrogens and 0 are deuteriums.

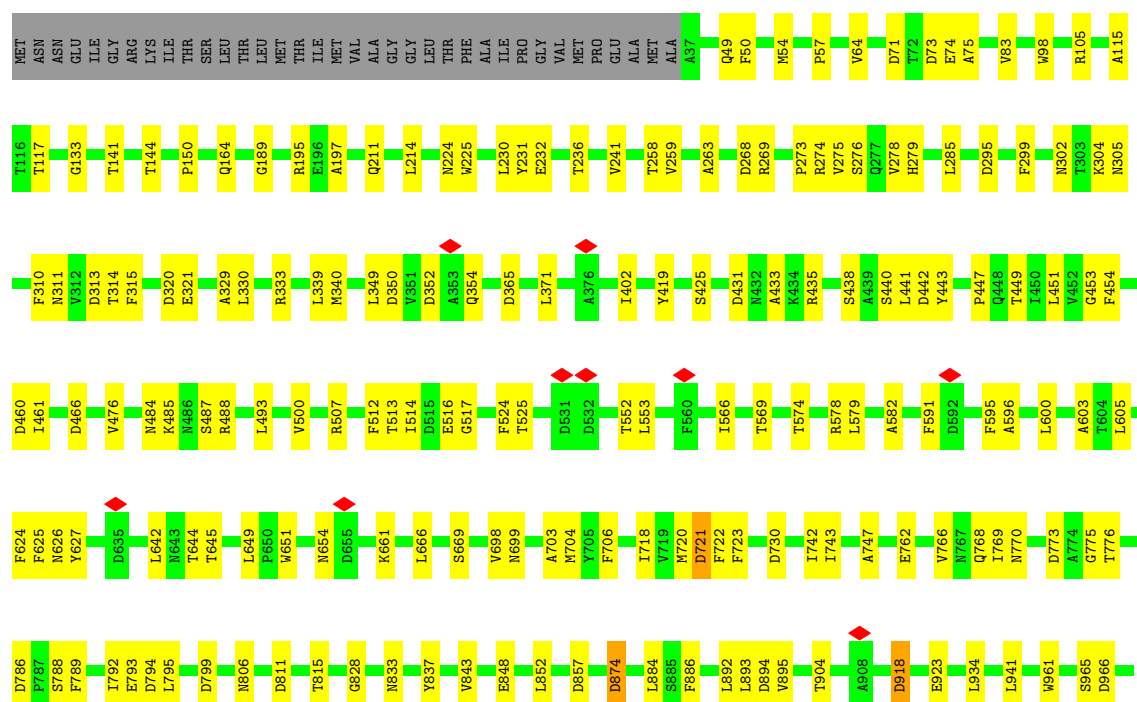
In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

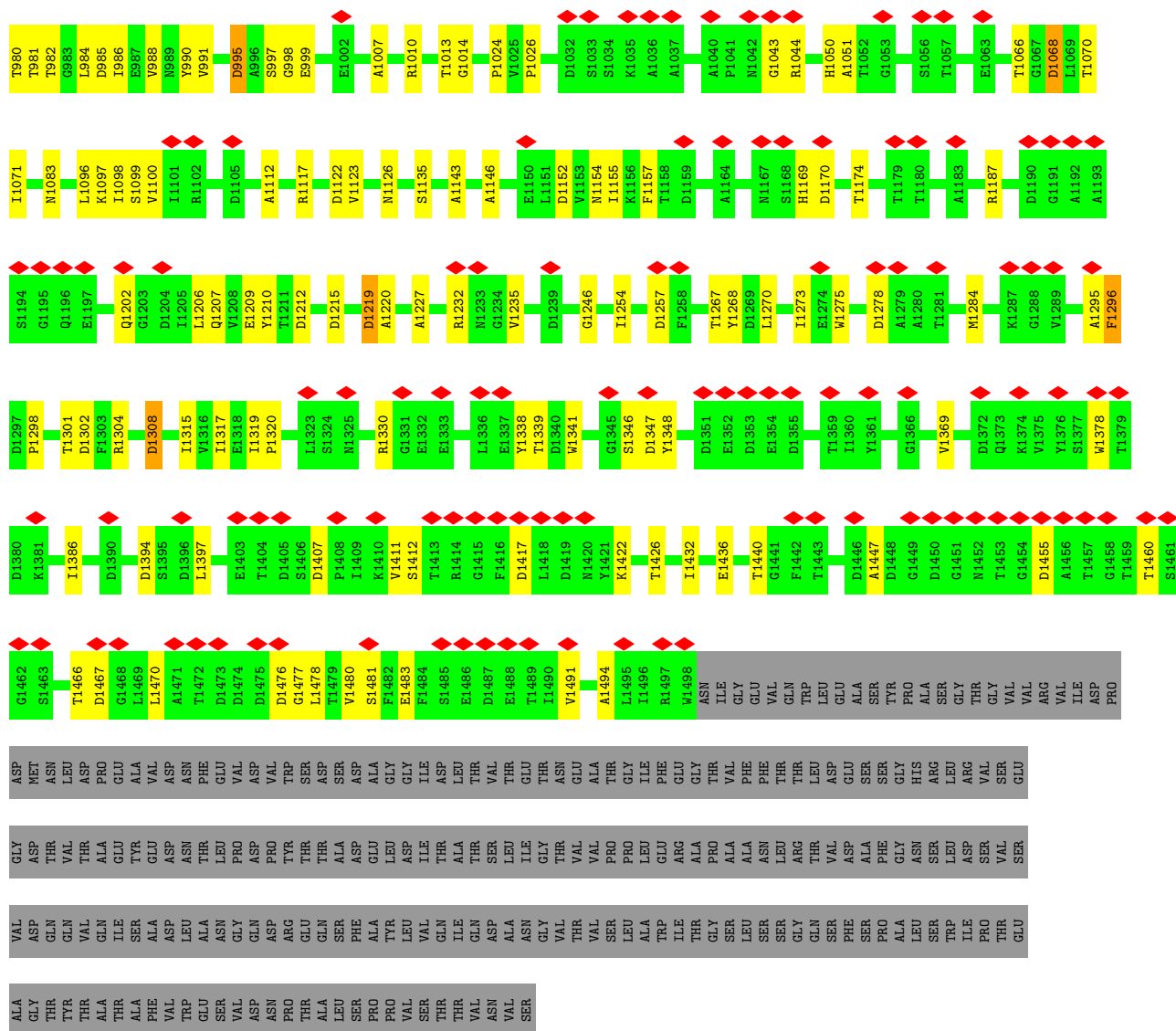
- Molecule 1 is a protein called Cell surface protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	1462	Total 10859	C 6683	N 1751	O 2407	S 18	0	0
1	B	1462	Total 10859	C 6683	N 1751	O 2407	S 18	0	0
1	C	1462	Total 10859	C 6683	N 1751	O 2407	S 18	0	0
1	D	1462	Total 10859	C 6683	N 1751	O 2407	S 18	0	0
1	E	1462	Total 10859	C 6683	N 1751	O 2407	S 18	0	0
1	F	1462	Total 10859	C 6683	N 1751	O 2407	S 18	0	0

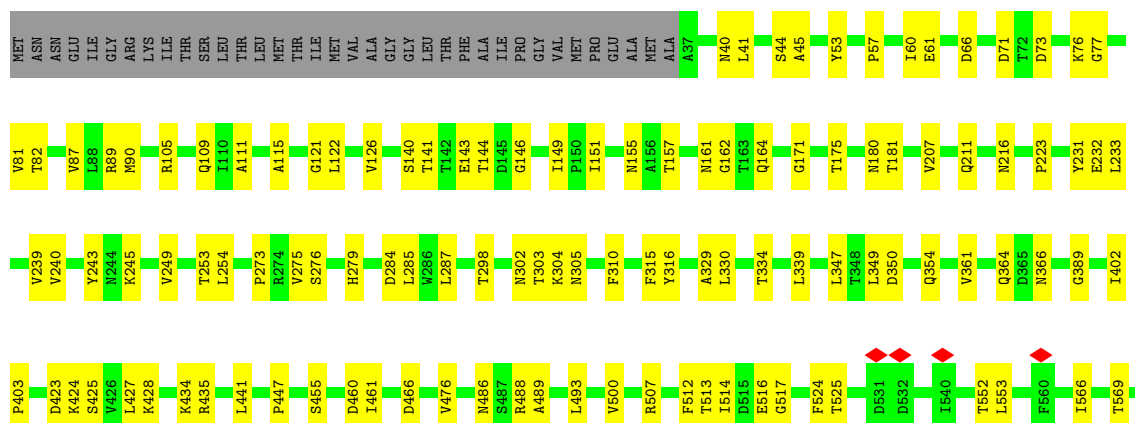


• Molecule 1: Cell surface protein





• Molecule 1: Cell surface protein







LEU	ARG	THR	VAL	ASP	ALA	PHE	GLY	SER	SER	LEU	ASP	SER	VAL	SER	ASP	GLN	GLN	VAL	GLN	VAL	GLN	ILE	THR	ALA	SER	GLY	ALA	ASP	LEU	TRP	PHE	ALA	ASP	LEU	ALA	ASN	PRO	GLY	GLN	ASP	ASN	PRO	GLU	GLY	VAL	GLN	THR	ILE	GLN	ASP	ALA	ASN	GLY	THR	THR	VAL	SER	LEU	TRP	ILE	THR	GLY	LEU	SER
SER	GLY	GLN	SER	PHE	SER	PRO	ALA	ALA	LEU	SER	SER	TRP	ILE	PRO	THR	GLU	SER	VAL	THR	GLN	VAL	ALA	THR	GLY	ALA	SER	PHE	VAL	TRP	ALA	TRP	GLU	SER	PRO	GLY	VAL	GLN	ASP	ASN	PRO	GLU	GLY	VAL	GLN	THR	ILE	GLN	ASP	ALA	ASN	GLY	THR	THR	VAL	SER	LEU	TRP	ILE	THR	GLY	LEU	SER		

● Molecule 1: Cell surface protein



MET	ASN	ASN	GLU	ILE	GLY	ARG	LYS	ILE	THR	SER	LEU	THR	LEU	LEU	MET	THR	ILE	ASP	THR	TYR	THR	ALA	GLY	LEU	THR	PHE	ALA	ALA	ILE	ALA	ILE	PRO	GLY	GLN	ASP	ASN	PRO	GLU	GLY	VAL	GLN	THR	ILE	GLN	ASP	ALA	ASN	GLY	THR	THR	VAL	SER	LEU	TRP	ILE	THR	GLY	LEU	SER																																								
V81	T82	V87	L88	R89	H90	A93	Q109	A115	G121	V126	S140	T141	T142	E143	T144	D145	G146	I149	P150	I151	N155	A156	N161	G162	T163	Q164	G171	T175	K198	V207	Q211	Y231	E232	L233	V239	V240	V241	Q242	K245	V249	T253	D257	T258	L265	D268	R269	P273	R274	V275	S276	Q277	V278	H279	T282	T283	D284	L285	V286	L287	T298	I151	N155	A156	N161	G162	T163	Q164	G171	T175	K198	V207	Q211	Y231	E232	L233	V239	V240	V241	Q242	K245																			
V426	L427	K428	A433	K434	R435	Y443	P447	D460	L461	D466	V476	V477	L478	M486	S487	R488	A489	L493	V500	R507	F512	T513	L514	D515	E516	G517	G518	P520	F524	T525	D531	D532	T540	T552	L553	G389	P403	D423	K424	S425	V426	T253	D257	T258	L265	D268	R269	P273	R274	V275	S276	Q277	V278	H279	T282	T283	D284	L285	V286	L287	T298	I151	N155	A156	N161	G162	T163	Q164	G171	T175	K198	V207	Q211	Y231	E232	L233	V239	V240	V241	Q242	K245																		
R578	L579	A582	R586	F591	D592	F595	A596	L600	A603	T604	L605	F624	P625	M626	Y627	L642	M643	T644	T645	L649	P650	M651	N654	D655	P660	K661	L666	S669	N673	V698	N699	F702	A703	M704	F706	L718	M719	K720	F721	F722	R578	L579	A582	R586	F591	D592	F595	A596	L600	A603	T604	L605	F624	P625	M626	Y627	L642	M643	T644	T645	L649	P650	M651	N654	D655	P660	K661	L666	S669	N673	V698	N699	F702	A703	M704	F706	L718	M719	K720	F721	F722																		
F723	D730	G731	E736	I742	I743	A747	F757	E762	V766	M767	G768	I769	N770	D773	A774	G775	T776	D786	F787	S788	F789	I792	E793	D794	L795	D799	N806	B811	G812	T815	S825	G828	N833	Y837	V843	E848	L852	D857	L858	I859	I861	D874	L884	F885	L892	L893	D894	V895	S903	T904	A908	N909	D918	E923	G938	L941	W961	S965	D966	P971	Y974	T980	T981	G983	L984	D985	L986	E987	V988	N989	Y990	V991	D995	A996	S997	G998	E999	A1007																					
R1010	G1014	P1024	V1025	P1026	D1032	S1033	K1034	K1035	A1036	A1037	A1040	P1041	N1042	G1043	R1044	H1050	A1051	T1052	G1053	S1056	T1057	E1063	T1066	G1067	D1068	L1069	T1070	I1071	N1083	Q1092	L1096	K1097	I1098	S1099	V1100	I1101	R1102	D1105	A1112	R1117	D1122	V1123	R1010	G1014	P1024	V1025	P1026	D1032	S1033	K1034	K1035	A1036	A1037	A1040	P1041	N1042	G1043	R1044	H1050	A1051	T1052	G1053	S1056	T1057	E1063	T1066	G1067	D1068	L1069	T1070	I1071	N1083	Q1092	L1096	K1097	I1098	S1099	V1100	I1101	R1102	D1105	A1112	R1117	D1122	V1123														
N1126	S1135	A1143	A1146	D1152	V1153	N1154	I1155	K1156	F1157	S1163	A1164	N1167	S1168	H1169	D1170	T1174	T1179	T1180	A1183	R1187	D1190	G1191	A1192	A1193	S1194	G1196	E1197	G1203	D1204	I1205	L1206	Q1207	V1208	E1209	Y1210	T1211	D1212	P1213	D1219	A1220	A1227	R1232	N1233	N1126	S1135	A1143	A1146	D1152	V1153	N1154	I1155	K1156	F1157	S1163	A1164	N1167	S1168	H1169	D1170	T1174	T1179	T1180	A1183	R1187	D1190	G1191	A1192	A1193	S1194	G1196	E1197	G1203	D1204	I1205	L1206	Q1207	V1208	E1209	Y1210	T1211	D1212	P1213	D1219	A1220	A1227	R1232	N1233												
G1234	V1235	D1239	I1254	E1255	P1256	D1257	F1258	T1267	Y1268	D1269	L1270	I1273	E1274	W1275	D1278	A1279	A1280	T1281	M1284	G1288	V1289	A1295	F1296	D1297	P1298	T1301	D1302	F1303	R1304	D1308	I1315	V1316	I1317	P1320	L1323	S1324	N1325	R1330	E1333	L1336	E1337	Y1338	T1339	G1234	V1235	D1239	I1254	E1255	P1256	D1257	F1258	T1267	Y1268	D1269	L1270	I1273	E1274	W1275	D1278	A1279	A1280	T1281	M1284	G1288	V1289	A1295	F1296	D1297	P1298	T1301	D1302	F1303	R1304	D1308	I1315	V1316	I1317	P1320	L1323	S1324	N1325	R1330	E1333	L1336	E1337	Y1338	T1339												
D1340	W1341	G1345	S1346	D1347	Y1348	D1361	E1362	D1363	E1364	D1365	T1369	I1360	Y1361	G1366	V1369	D1372	Q1373	K1374	V1375	I1376	S1377	V1378	T1379	D1380	K1381	I1386	D1390	D1394	S1395	D1396	L1397	E1403	T1404	D1405	S1406	D1407	P1408	I1409	V1410	V1411	S1412	T1413	R1414	G1415	F1416	D1417	L1418	D1419	N1420	D1340	W1341	G1345	S1346	D1347	Y1348	D1361	E1362	D1363	E1364	D1365	T1369	I1360	Y1361	G1366	V1369	D1372	Q1373	K1374	V1375	I1376	S1377	V1378	T1379	D1380	K1381	I1386	D1390	D1394	S1395	D1396	L1397	E1403	T1404	D1405	S1406	D1407	P1408	I1409	V1410	V1411	S1412	T1413	R1414	G1415	F1416	D1417	L1418	D1419	N1420



4 Experimental information

Property	Value	Source
EM reconstruction method	SUBTOMOGRAM AVERAGING	Depositor
Imposed symmetry	POINT, Not provided	
Number of subtomograms used	108621	Depositor
Resolution determination method	OTHER	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION; PseudoSubtomograms as described in Zivanov 2022 (https://elifesciences.org/articles/83724)	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	121	Depositor
Minimum defocus (nm)	2000	Depositor
Maximum defocus (nm)	5000	Depositor
Magnification	105000	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	12.055	Depositor
Minimum map value	-6.789	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.582	Depositor
Recommended contour level	1.45621	Depositor
Map size (Å)	265.4, 265.4, 265.4	wwPDB
Map dimensions	200, 200, 200	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.327, 1.327, 1.327	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.25	0/11032	0.49	0/15089
1	B	0.25	0/11032	0.49	0/15089
1	C	0.25	0/11032	0.49	0/15089
1	D	0.25	0/11032	0.49	0/15089
1	E	0.25	0/11032	0.49	0/15089
1	F	0.25	0/11032	0.49	0/15089
All	All	0.25	0/66192	0.49	0/90534

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	10859	0	10131	260	0
1	B	10859	0	10136	203	0
1	C	10859	0	10136	234	0
1	D	10859	0	10130	247	0
1	E	10859	0	10135	217	0
1	F	10859	0	10136	236	0
All	All	65154	0	60804	1279	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 10.

All (1279) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:269:ARG:HH12	1:A:485:LYS:C	0.98	1.48
1:C:435:ARG:NH1	1:C:812:GLY:HA3	1.24	1.44
1:A:269:ARG:HH12	1:A:486:ASN:N	1.17	1.38
1:A:269:ARG:NH1	1:A:485:LYS:C	1.76	1.37
1:B:354:GLN:NE2	1:C:861:ILE:HD11	1.37	1.36
1:E:354:GLN:NE2	1:F:861:ILE:HD11	1.42	1.32
1:F:435:ARG:NH1	1:F:812:GLY:CA	1.88	1.32
1:F:435:ARG:NH1	1:F:812:GLY:HA3	0.97	1.28
1:A:276:SER:HB2	1:A:485:LYS:O	1.34	1.25
1:D:435:ARG:NH2	1:D:811:ASP:O	1.73	1.21
1:D:276:SER:HB2	1:D:485:LYS:O	1.45	1.15
1:A:435:ARG:NH2	1:A:811:ASP:O	1.79	1.14
1:C:435:ARG:NH1	1:C:812:GLY:CA	2.10	1.14
1:D:268:ASP:OD2	1:D:488:ARG:NH1	1.81	1.13
1:A:269:ARG:NH1	1:A:486:ASN:N	1.90	1.10
1:D:269:ARG:HG3	1:D:487:SER:HB3	1.31	1.10
1:F:435:ARG:HH12	1:F:812:GLY:CA	1.50	1.10
1:B:275:VAL:HG12	1:B:485:LYS:HD3	1.33	1.06
1:F:423:ASP:OD2	1:F:486:ASN:ND2	1.88	1.05
1:E:275:VAL:HG12	1:E:485:LYS:HD3	1.36	1.04
1:A:435:ARG:NH1	1:A:812:GLY:HA3	1.74	1.01
1:C:435:ARG:CZ	1:C:812:GLY:HA3	1.92	0.99
1:B:354:GLN:NE2	1:C:861:ILE:CD1	2.27	0.97
1:D:273:PRO:CG	1:D:485:LYS:HG2	1.95	0.97
1:F:435:ARG:HH11	1:F:812:GLY:HA3	1.23	0.96
1:E:268:ASP:OD2	1:E:488:ARG:NH1	1.99	0.96
1:F:279:HIS:CD2	1:F:488:ARG:HH22	1.83	0.95
1:B:449:THR:CG2	1:C:858:LEU:HG	1.96	0.95
1:C:435:ARG:HH12	1:C:812:GLY:HA3	1.23	0.94
1:A:273:PRO:CG	1:A:485:LYS:HG2	1.99	0.93
1:A:435:ARG:HH12	1:A:812:GLY:HA3	1.34	0.93
1:A:279:HIS:H	1:A:488:ARG:HH22	1.16	0.92
1:E:354:GLN:NE2	1:F:861:ILE:CD1	2.33	0.91
1:E:275:VAL:CG1	1:E:485:LYS:HD3	2.01	0.91
1:A:276:SER:CB	1:A:485:LYS:O	2.20	0.90
1:D:273:PRO:HG2	1:D:485:LYS:HG2	1.53	0.90
1:B:449:THR:HG22	1:C:858:LEU:HG	1.55	0.89
1:A:863:THR:HG21	1:F:354:GLN:CD	1.93	0.89
1:B:268:ASP:OD2	1:B:488:ARG:NH1	2.05	0.88
1:F:435:ARG:CZ	1:F:812:GLY:HA3	2.02	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:435:ARG:HH12	1:C:812:GLY:CA	1.77	0.88
1:D:268:ASP:CG	1:D:488:ARG:NH1	2.28	0.87
1:E:449:THR:CG2	1:F:858:LEU:HG	2.05	0.87
1:A:858:LEU:HD11	1:F:447:PRO:O	1.75	0.86
1:B:354:GLN:HE22	1:C:861:ILE:HD11	1.38	0.86
1:D:279:HIS:H	1:D:488:ARG:HH22	1.19	0.85
1:C:279:HIS:CD2	1:C:488:ARG:HH22	1.94	0.85
1:E:354:GLN:HE22	1:F:861:ILE:HD11	1.36	0.85
1:B:275:VAL:CG1	1:B:485:LYS:HD3	2.05	0.85
1:C:435:ARG:HG3	1:D:938:GLY:HA3	1.59	0.85
1:A:935:GLY:O	1:F:434:LYS:NZ	2.10	0.85
1:C:423:ASP:OD2	1:C:486:ASN:ND2	2.09	0.85
1:A:273:PRO:HG2	1:A:485:LYS:HG2	1.55	0.84
1:E:435:ARG:NH2	1:E:811:ASP:O	2.12	0.83
1:E:275:VAL:HG12	1:E:485:LYS:CD	2.09	0.83
1:B:105:ARG:HA	1:B:230:LEU:HD12	1.60	0.83
1:B:275:VAL:HG12	1:B:485:LYS:CD	2.08	0.83
1:F:279:HIS:CD2	1:F:488:ARG:NH2	2.46	0.83
1:A:269:ARG:NH1	1:A:485:LYS:O	2.10	0.82
1:E:105:ARG:HA	1:E:230:LEU:HD12	1.60	0.81
1:A:435:ARG:CZ	1:A:811:ASP:O	2.27	0.81
1:A:938:GLY:HA3	1:F:435:ARG:HG3	1.62	0.81
1:A:435:ARG:NH1	1:A:812:GLY:CA	2.44	0.80
1:A:269:ARG:NH1	1:A:486:ASN:CA	2.44	0.80
1:D:999:GLU:OE1	1:E:1304:ARG:NH1	2.15	0.80
1:A:268:ASP:OD2	1:A:488:ARG:NH1	2.15	0.80
1:A:279:HIS:N	1:A:488:ARG:NH2	2.24	0.80
1:B:268:ASP:OD2	1:B:487:SER:OG	2.01	0.79
1:C:434:LYS:NZ	1:D:935:GLY:O	2.13	0.79
1:D:279:HIS:N	1:D:488:ARG:HH22	1.78	0.79
1:D:273:PRO:HB2	1:D:485:LYS:NZ	1.98	0.79
1:E:449:THR:HG22	1:F:858:LEU:HG	1.62	0.79
1:A:279:HIS:N	1:A:488:ARG:HH22	1.77	0.79
1:A:999:GLU:OE1	1:B:1304:ARG:NH1	2.16	0.78
1:B:999:GLU:OE1	1:C:1304:ARG:NH1	2.17	0.78
1:C:999:GLU:OE1	1:D:1304:ARG:NH1	2.17	0.78
1:A:1304:ARG:NH1	1:F:999:GLU:OE1	2.17	0.78
1:E:999:GLU:OE1	1:F:1304:ARG:NH1	2.17	0.78
1:C:447:PRO:O	1:D:858:LEU:HD11	1.84	0.77
1:E:268:ASP:OD2	1:E:487:SER:OG	2.02	0.77
1:A:276:SER:CB	1:A:485:LYS:HB3	2.15	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:273:PRO:HG2	1:A:485:LYS:HA	1.68	0.76
1:A:273:PRO:HB2	1:A:485:LYS:NZ	2.01	0.76
1:F:435:ARG:HH12	1:F:812:GLY:HA3	0.97	0.75
1:F:435:ARG:HH12	1:F:812:GLY:N	1.85	0.75
1:A:276:SER:HB3	1:A:485:LYS:HB3	1.70	0.74
1:B:768:GLN:HE21	1:B:991:VAL:HG12	1.53	0.74
1:D:105:ARG:HA	1:D:230:LEU:HD12	1.70	0.74
1:C:279:HIS:CD2	1:C:488:ARG:NH2	2.56	0.74
1:C:354:GLN:CD	1:D:863:THR:HG21	2.08	0.74
1:A:302:ASN:HB2	1:A:402:ILE:H	1.53	0.73
1:A:768:GLN:HE21	1:A:991:VAL:HG12	1.53	0.73
1:E:768:GLN:HE21	1:E:991:VAL:HG12	1.53	0.73
1:A:672:THR:HG21	1:F:334:THR:HG22	1.69	0.73
1:C:768:GLN:HE21	1:C:991:VAL:HG12	1.53	0.73
1:D:768:GLN:HE21	1:D:991:VAL:HG12	1.53	0.73
1:D:273:PRO:HB2	1:D:485:LYS:HZ2	1.51	0.73
1:F:768:GLN:HE21	1:F:991:VAL:HG12	1.53	0.72
1:A:863:THR:HG21	1:F:354:GLN:CG	2.18	0.72
1:D:302:ASN:HB2	1:D:402:ILE:H	1.53	0.72
1:D:269:ARG:NH1	1:D:485:LYS:CA	2.43	0.72
1:A:276:SER:CA	1:A:485:LYS:HB3	2.18	0.72
1:C:354:GLN:HG2	1:D:863:THR:HG21	1.70	0.72
1:D:276:SER:CB	1:D:485:LYS:HB3	2.19	0.71
1:B:274:ARG:NH1	1:B:433:ALA:O	2.24	0.71
1:C:155:ASN:O	1:C:161:ASN:ND2	2.24	0.71
1:E:269:ARG:NH2	1:E:484:ASN:O	2.24	0.71
1:A:863:THR:HG21	1:F:354:GLN:HG2	1.72	0.71
1:D:276:SER:CB	1:D:485:LYS:O	2.34	0.70
1:D:279:HIS:N	1:D:488:ARG:NH2	2.28	0.70
1:E:275:VAL:CG1	1:E:485:LYS:CD	2.68	0.70
1:C:334:THR:HG22	1:D:672:THR:HG21	1.71	0.70
1:A:863:THR:OG1	1:F:354:GLN:HG2	1.91	0.70
1:D:276:SER:CA	1:D:485:LYS:HB3	2.22	0.70
1:A:105:ARG:HA	1:A:230:LEU:HD12	1.74	0.70
1:F:155:ASN:O	1:F:161:ASN:ND2	2.25	0.69
1:D:273:PRO:HG2	1:D:485:LYS:HA	1.75	0.69
1:B:236:THR:OG1	1:C:489:ALA:HB2	1.93	0.69
1:A:863:THR:HG23	1:F:354:GLN:NE2	2.07	0.69
1:D:265:LEU:O	1:D:448:GLN:NE2	2.26	0.69
1:B:259:VAL:HG11	1:B:285:LEU:HD22	1.75	0.68
1:C:273:PRO:HG2	1:C:276:SER:HB2	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:105:ARG:NH2	1:E:232:GLU:OE2	2.27	0.68
1:B:435:ARG:NH1	1:B:811:ASP:O	2.27	0.68
1:A:279:HIS:NE2	1:A:486:ASN:ND2	2.42	0.67
1:A:411:PRO:HG2	1:F:249:VAL:HG11	1.76	0.67
1:D:269:ARG:CG	1:D:487:SER:HB3	2.18	0.67
1:D:273:PRO:HG2	1:D:276:SER:HB3	1.75	0.67
1:D:279:HIS:NE2	1:D:486:ASN:ND2	2.42	0.67
1:A:273:PRO:HG2	1:A:276:SER:HB3	1.76	0.67
1:A:276:SER:HB2	1:A:485:LYS:C	2.14	0.67
1:C:354:GLN:CG	1:D:863:THR:HG21	2.24	0.67
1:A:273:PRO:CG	1:A:485:LYS:HA	2.24	0.67
1:E:259:VAL:HG11	1:E:285:LEU:HD22	1.76	0.67
1:E:743:ILE:HG13	1:E:789:PHE:HB3	1.77	0.67
1:D:743:ILE:HG13	1:D:789:PHE:HB3	1.77	0.67
1:B:574:THR:OG1	1:B:806:ASN:ND2	2.29	0.66
1:C:574:THR:OG1	1:C:806:ASN:ND2	2.29	0.66
1:C:354:GLN:NE2	1:D:863:THR:HG23	2.09	0.66
1:D:574:THR:OG1	1:D:806:ASN:ND2	2.29	0.66
1:E:574:THR:OG1	1:E:806:ASN:ND2	2.29	0.66
1:F:574:THR:OG1	1:F:806:ASN:ND2	2.29	0.66
1:F:743:ILE:HG13	1:F:789:PHE:HB3	1.77	0.66
1:C:743:ILE:HG13	1:C:789:PHE:HB3	1.77	0.66
1:D:1220:ALA:O	1:E:1466:THR:OG1	2.13	0.66
1:A:863:THR:CG2	1:F:354:GLN:NE2	2.59	0.66
1:F:240:VAL:HG22	1:F:253:THR:HG22	1.78	0.66
1:A:273:PRO:HB2	1:A:485:LYS:HZ2	1.61	0.66
1:A:276:SER:HB3	1:A:485:LYS:CB	2.25	0.66
1:A:574:THR:OG1	1:A:806:ASN:ND2	2.29	0.66
1:D:294:GLU:HB2	1:D:408:GLU:HB3	1.77	0.66
1:A:1220:ALA:O	1:B:1466:THR:OG1	2.13	0.66
1:A:743:ILE:HG13	1:A:789:PHE:HB3	1.77	0.65
1:C:354:GLN:NE2	1:D:863:THR:CG2	2.59	0.65
1:B:743:ILE:HG13	1:B:789:PHE:HB3	1.77	0.65
1:B:766:VAL:HG11	1:B:792:ILE:HD12	1.78	0.65
1:A:1097:LYS:HB3	1:A:1209:GLU:HB3	1.79	0.65
1:B:1097:LYS:HB3	1:B:1209:GLU:HB3	1.79	0.65
1:C:364:GLN:OE1	1:C:364:GLN:N	2.29	0.65
1:C:766:VAL:HG11	1:C:792:ILE:HD12	1.78	0.65
1:A:373:GLN:HE22	1:A:387:ALA:HB1	1.61	0.65
1:D:276:SER:HA	1:D:485:LYS:HB3	1.78	0.65
1:E:236:THR:OG1	1:F:489:ALA:HB2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1097:LYS:HB3	1:C:1209:GLU:HB3	1.79	0.65
1:D:454:PHE:HA	1:D:482:ASP:OD1	1.97	0.65
1:F:1097:LYS:HB3	1:F:1209:GLU:HB3	1.79	0.65
1:E:1394:ASP:HB3	1:E:1397:LEU:HB3	1.79	0.64
1:A:1394:ASP:HB3	1:A:1397:LEU:HB3	1.79	0.64
1:E:512:PHE:HB3	1:E:722:PHE:HB2	1.80	0.64
1:D:71:ASP:OD2	1:D:76:LYS:NZ	2.30	0.64
1:D:269:ARG:NH1	1:D:486:ASN:N	2.35	0.64
1:F:512:PHE:HB3	1:F:722:PHE:HB2	1.80	0.64
1:A:766:VAL:HG11	1:A:792:ILE:HD12	1.78	0.64
1:B:269:ARG:NH2	1:B:484:ASN:O	2.31	0.64
1:B:1394:ASP:HB3	1:B:1397:LEU:HB3	1.79	0.64
1:C:249:VAL:HG11	1:D:411:PRO:HG2	1.80	0.64
1:D:273:PRO:HG2	1:D:485:LYS:CG	2.26	0.64
1:D:1097:LYS:HB3	1:D:1209:GLU:HB3	1.79	0.64
1:E:1097:LYS:HB3	1:E:1209:GLU:HB3	1.79	0.64
1:F:1394:ASP:HB3	1:F:1397:LEU:HB3	1.79	0.64
1:F:766:VAL:HG11	1:F:792:ILE:HD12	1.78	0.64
1:D:1394:ASP:HB3	1:D:1397:LEU:HB3	1.80	0.64
1:A:276:SER:HA	1:A:485:LYS:HB3	1.80	0.64
1:D:512:PHE:HB3	1:D:722:PHE:HB2	1.80	0.64
1:A:55:SER:O	1:A:58:GLN:NE2	2.28	0.64
1:A:265:LEU:O	1:A:448:GLN:NE2	2.31	0.64
1:A:273:PRO:HG2	1:A:485:LYS:CG	2.28	0.64
1:D:268:ASP:CG	1:D:488:ARG:HH12	1.97	0.64
1:A:331:THR:HG22	1:A:396:LYS:HE2	1.80	0.64
1:D:766:VAL:HG11	1:D:792:ILE:HD12	1.78	0.64
1:A:512:PHE:HB3	1:A:722:PHE:HB2	1.80	0.63
1:C:1394:ASP:HB3	1:C:1397:LEU:HB3	1.79	0.63
1:D:273:PRO:CG	1:D:485:LYS:HA	2.29	0.63
1:E:766:VAL:HG11	1:E:792:ILE:HD12	1.78	0.63
1:E:1220:ALA:O	1:F:1466:THR:OG1	2.16	0.63
1:A:455:SER:N	1:A:482:ASP:OD1	2.30	0.63
1:C:435:ARG:CG	1:D:938:GLY:HA3	2.29	0.63
1:C:512:PHE:HB3	1:C:722:PHE:HB2	1.80	0.63
1:D:268:ASP:OD2	1:D:488:ARG:CZ	2.46	0.63
1:C:1220:ALA:O	1:D:1466:THR:OG1	2.17	0.63
1:D:276:SER:HB3	1:D:485:LYS:HB3	1.80	0.63
1:E:1050:HIS:HD2	1:E:1051:ALA:N	1.97	0.63
1:D:1050:HIS:HD2	1:D:1051:ALA:N	1.97	0.62
1:B:1295:ALA:HB1	1:B:1320:PRO:HB3	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1050:HIS:HD2	1:C:1051:ALA:N	1.97	0.62
1:F:1050:HIS:HD2	1:F:1051:ALA:N	1.97	0.62
1:A:1050:HIS:HD2	1:A:1051:ALA:N	1.97	0.62
1:B:269:ARG:NH1	1:B:276:SER:OG	2.32	0.62
1:B:273:PRO:HG2	1:B:276:SER:HB2	1.82	0.62
1:B:512:PHE:HB3	1:B:722:PHE:HB2	1.80	0.62
1:B:1050:HIS:HD2	1:B:1051:ALA:N	1.97	0.62
1:F:366:ASN:ND2	1:F:424:LYS:O	2.32	0.62
1:A:268:ASP:CG	1:A:488:ARG:NH1	2.53	0.62
1:C:354:GLN:HG2	1:D:863:THR:OG1	1.99	0.62
1:C:1295:ALA:HB1	1:C:1320:PRO:HB3	1.81	0.62
1:B:1436:GLU:N	1:B:1436:GLU:OE2	2.33	0.62
1:A:1295:ALA:HB1	1:A:1320:PRO:HB3	1.81	0.62
1:B:449:THR:HG21	1:C:859:ILE:H	1.64	0.62
1:F:1436:GLU:OE2	1:F:1436:GLU:N	2.33	0.62
1:A:1436:GLU:OE2	1:A:1436:GLU:N	2.33	0.62
1:E:1436:GLU:OE2	1:E:1436:GLU:N	2.33	0.62
1:C:1066:THR:OG1	1:C:1068:ASP:OD1	2.17	0.61
1:A:71:ASP:OD2	1:A:76:LYS:NZ	2.32	0.61
1:A:863:THR:CB	1:F:354:GLN:HG2	2.31	0.61
1:A:257:ASP:OD1	1:A:258:THR:N	2.33	0.61
1:A:863:THR:CG2	1:F:354:GLN:HG2	2.30	0.61
1:C:1436:GLU:OE2	1:C:1436:GLU:N	2.33	0.61
1:C:87:VAL:O	1:C:231:TYR:OH	2.19	0.61
1:A:886:PHE:HA	1:B:1301:THR:HG21	1.83	0.61
1:D:1295:ALA:HB1	1:D:1320:PRO:HB3	1.81	0.61
1:E:886:PHE:HA	1:F:1301:THR:HG21	1.82	0.61
1:E:1476:ASP:OD1	1:E:1477:GLY:N	2.31	0.61
1:B:1066:THR:OG1	1:B:1068:ASP:OD1	2.17	0.61
1:C:1476:ASP:OD1	1:C:1477:GLY:N	2.31	0.61
1:D:1122:ASP:OD1	1:D:1126:ASN:ND2	2.34	0.61
1:F:1295:ALA:HB1	1:F:1320:PRO:HB3	1.81	0.61
1:C:126:VAL:HG22	1:C:164:GLN:HA	1.83	0.60
1:D:1436:GLU:N	1:D:1436:GLU:OE2	2.33	0.60
1:D:1481:SER:HB3	1:D:1491:VAL:HG12	1.83	0.60
1:E:449:THR:HG21	1:F:859:ILE:H	1.64	0.60
1:E:115:ALA:HA	1:E:330:LEU:HD13	1.83	0.60
1:E:1066:THR:OG1	1:E:1068:ASP:OD1	2.17	0.60
1:D:87:VAL:O	1:D:231:TYR:OH	2.19	0.60
1:E:1122:ASP:OD1	1:E:1126:ASN:ND2	2.34	0.60
1:B:886:PHE:HA	1:C:1301:THR:HG21	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1122:ASP:OD1	1:C:1126:ASN:ND2	2.34	0.60
1:F:126:VAL:HG22	1:F:164:GLN:HA	1.82	0.60
1:E:1295:ALA:HB1	1:E:1320:PRO:HB3	1.81	0.60
1:A:90:MET:HB3	1:A:98:TRP:HB3	1.82	0.60
1:A:284:ASP:OD1	1:A:286:TRP:N	2.33	0.60
1:A:1466:THR:OG1	1:F:1220:ALA:O	2.18	0.60
1:B:354:GLN:CD	1:C:861:ILE:HD11	2.19	0.60
1:B:1481:SER:HB3	1:B:1491:VAL:HG12	1.83	0.60
1:E:1481:SER:HB3	1:E:1491:VAL:HG12	1.83	0.60
1:C:354:GLN:HG2	1:D:863:THR:CG2	2.32	0.60
1:C:240:VAL:HG22	1:C:253:THR:HG22	1.82	0.60
1:A:863:THR:CG2	1:F:354:GLN:CD	2.68	0.60
1:A:1122:ASP:OD1	1:A:1126:ASN:ND2	2.34	0.60
1:A:858:LEU:HD21	1:F:447:PRO:HB2	1.84	0.60
1:C:1481:SER:HB3	1:C:1491:VAL:HG12	1.82	0.60
1:F:144:THR:HG23	1:F:146:GLY:H	1.67	0.59
1:A:273:PRO:CB	1:A:485:LYS:HG2	2.31	0.59
1:C:303:THR:HG23	1:C:304:LYS:HG3	1.84	0.59
1:D:886:PHE:HA	1:E:1301:THR:HG21	1.83	0.59
1:F:435:ARG:HH12	1:F:811:ASP:C	1.97	0.59
1:F:1122:ASP:OD1	1:F:1126:ASN:ND2	2.34	0.59
1:D:273:PRO:CB	1:D:485:LYS:HG2	2.32	0.59
1:D:279:HIS:HD1	1:D:425:SER:HB2	1.67	0.59
1:B:1220:ALA:O	1:C:1466:THR:OG1	2.16	0.59
1:C:886:PHE:HA	1:D:1301:THR:HG21	1.84	0.59
1:F:1481:SER:HB3	1:F:1491:VAL:HG12	1.82	0.59
1:B:1122:ASP:OD1	1:B:1126:ASN:ND2	2.34	0.59
1:A:1481:SER:HB3	1:A:1491:VAL:HG12	1.83	0.59
1:E:273:PRO:HG2	1:E:276:SER:HB2	1.85	0.59
1:F:1476:ASP:OD1	1:F:1477:GLY:N	2.31	0.59
1:E:364:GLN:HE21	1:E:428:LYS:HB2	1.68	0.59
1:C:625:PHE:HE1	1:C:627:TYR:HB3	1.69	0.58
1:E:74:GLU:O	1:E:211:GLN:NE2	2.36	0.58
1:B:1476:ASP:OD1	1:B:1477:GLY:N	2.31	0.58
1:D:625:PHE:HE1	1:D:627:TYR:HB3	1.69	0.58
1:F:569:THR:HB	1:F:582:ALA:HB3	1.86	0.58
1:A:273:PRO:HG2	1:A:485:LYS:CA	2.34	0.58
1:D:57:PRO:HG3	1:D:339:LEU:HD22	1.85	0.58
1:A:569:THR:HB	1:A:582:ALA:HB3	1.85	0.58
1:A:937:THR:O	1:F:435:ARG:NE	2.37	0.58
1:A:1301:THR:HG21	1:F:886:PHE:HA	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:625:PHE:HE1	1:B:627:TYR:HB3	1.69	0.58
1:F:257:ASP:OD1	1:F:258:THR:N	2.36	0.58
1:A:1066:THR:OG1	1:A:1068:ASP:OD1	2.17	0.58
1:D:257:ASP:OD1	1:D:258:THR:N	2.37	0.58
1:F:89:ARG:NH1	1:F:140:SER:O	2.36	0.58
1:E:569:THR:HB	1:E:582:ALA:HB3	1.85	0.58
1:F:109:GLN:NE2	1:F:171:GLY:O	2.31	0.58
1:A:1308:ASP:OD1	1:A:1308:ASP:N	2.37	0.58
1:A:1476:ASP:OD1	1:A:1477:GLY:N	2.31	0.57
1:D:569:THR:HB	1:D:582:ALA:HB3	1.85	0.57
1:E:625:PHE:HE1	1:E:627:TYR:HB3	1.69	0.57
1:F:87:VAL:O	1:F:231:TYR:OH	2.21	0.57
1:F:278:VAL:HB	1:F:427:LEU:HB2	1.86	0.57
1:E:1206:LEU:N	1:E:1227:ALA:O	2.32	0.57
1:D:279:HIS:ND1	1:D:425:SER:HB2	2.19	0.57
1:A:625:PHE:HE1	1:A:627:TYR:HB3	1.68	0.57
1:D:260:ASP:HA	1:D:344:ASN:HD22	1.70	0.57
1:A:80:ASP:OD2	1:A:244:ASN:ND2	2.35	0.57
1:E:624:PHE:HB2	1:E:723:PHE:HB2	1.87	0.57
1:B:214:LEU:HD22	1:B:224:ASN:HB3	1.85	0.57
1:C:1308:ASP:N	1:C:1308:ASP:OD1	2.37	0.57
1:B:569:THR:HB	1:B:582:ALA:HB3	1.85	0.57
1:D:624:PHE:HB2	1:D:723:PHE:HB2	1.87	0.57
1:D:995:ASP:OD2	1:D:997:SER:N	2.38	0.57
1:A:279:HIS:HD1	1:A:425:SER:HB2	1.69	0.57
1:C:995:ASP:OD2	1:C:997:SER:N	2.38	0.57
1:D:304:LYS:NZ	1:D:350:ASP:OD2	2.37	0.57
1:F:1308:ASP:OD1	1:F:1308:ASP:N	2.37	0.57
1:B:236:THR:HG21	1:C:489:ALA:HB1	1.86	0.56
1:C:569:THR:HB	1:C:582:ALA:HB3	1.85	0.56
1:A:276:SER:HB3	1:A:485:LYS:CA	2.35	0.56
1:A:524:PHE:HB2	1:A:566:ILE:HB	1.88	0.56
1:E:995:ASP:OD2	1:E:997:SER:N	2.38	0.56
1:A:442:ASP:HA	1:A:447:PRO:HA	1.86	0.56
1:C:524:PHE:HB2	1:C:566:ILE:HB	1.88	0.56
1:D:442:ASP:HA	1:D:447:PRO:HA	1.86	0.56
1:F:624:PHE:HB2	1:F:723:PHE:HB2	1.87	0.56
1:F:995:ASP:OD2	1:F:997:SER:N	2.38	0.56
1:F:273:PRO:HG2	1:F:276:SER:HB2	1.88	0.56
1:B:524:PHE:HB2	1:B:566:ILE:HB	1.88	0.56
1:B:624:PHE:HB2	1:B:723:PHE:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:144:THR:HG23	1:C:146:GLY:H	1.68	0.56
1:D:524:PHE:HB2	1:D:566:ILE:HB	1.88	0.56
1:F:524:PHE:HB2	1:F:566:ILE:HB	1.88	0.56
1:B:1206:LEU:N	1:B:1227:ALA:O	2.32	0.56
1:F:625:PHE:HE1	1:F:627:TYR:HB3	1.68	0.56
1:B:995:ASP:OD2	1:B:997:SER:N	2.38	0.56
1:C:105:ARG:NH2	1:C:232:GLU:OE2	2.38	0.56
1:D:1066:THR:OG1	1:D:1068:ASP:OD1	2.17	0.56
1:A:995:ASP:OD2	1:A:997:SER:N	2.38	0.56
1:A:1206:LEU:N	1:A:1227:ALA:O	2.32	0.56
1:D:1206:LEU:N	1:D:1227:ALA:O	2.32	0.56
1:E:195:ARG:NH2	1:E:295:ASP:OD1	2.36	0.56
1:F:837:TYR:O	1:F:1010:ARG:N	2.39	0.56
1:F:1206:LEU:N	1:F:1227:ALA:O	2.32	0.56
1:C:624:PHE:HB2	1:C:723:PHE:HB2	1.87	0.55
1:E:524:PHE:HB2	1:E:566:ILE:HB	1.88	0.55
1:F:45:ALA:HB2	1:F:60:ILE:HD12	1.87	0.55
1:B:837:TYR:O	1:B:1010:ARG:N	2.40	0.55
1:C:89:ARG:NH1	1:C:140:SER:O	2.39	0.55
1:F:1066:THR:OG1	1:F:1068:ASP:OD1	2.17	0.55
1:B:83:VAL:HG12	1:B:241:VAL:HG22	1.89	0.55
1:E:302:ASN:HB2	1:E:402:ILE:H	1.71	0.55
1:E:1308:ASP:N	1:E:1308:ASP:OD1	2.37	0.55
1:B:275:VAL:CG1	1:B:485:LYS:CD	2.76	0.55
1:B:313:ASP:OD1	1:B:314:THR:N	2.39	0.55
1:B:1308:ASP:OD1	1:B:1308:ASP:N	2.37	0.55
1:D:1308:ASP:OD1	1:D:1308:ASP:N	2.37	0.55
1:A:624:PHE:HB2	1:A:723:PHE:HB2	1.87	0.55
1:B:236:THR:OG1	1:C:489:ALA:CB	2.55	0.55
1:E:313:ASP:OD1	1:E:314:THR:N	2.40	0.55
1:A:279:HIS:ND1	1:A:425:SER:HB2	2.21	0.55
1:C:435:ARG:NE	1:D:937:THR:O	2.40	0.55
1:D:837:TYR:O	1:D:1010:ARG:N	2.39	0.55
1:A:150:PRO:HB2	1:A:189:GLY:HA2	1.89	0.54
1:A:837:TYR:O	1:A:1010:ARG:N	2.40	0.54
1:B:195:ARG:NH2	1:B:295:ASP:OD1	2.35	0.54
1:E:277:GLN:HE22	1:E:364:GLN:HE22	1.56	0.54
1:B:117:THR:HG22	1:B:330:LEU:HD21	1.89	0.54
1:B:449:THR:HG23	1:C:858:LEU:HG	1.86	0.54
1:D:360:VAL:HB	1:D:439:ALA:HB2	1.90	0.54
1:E:105:ARG:NH1	1:E:106:ASP:OD1	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1096:LEU:HB3	1:E:1112:ALA:HB3	1.89	0.54
1:A:938:GLY:HA3	1:F:435:ARG:CG	2.34	0.54
1:C:1096:LEU:HB3	1:C:1112:ALA:HB3	1.89	0.54
1:F:284:ASP:OD2	1:F:443:TYR:OH	2.16	0.54
1:C:837:TYR:O	1:C:1010:ARG:N	2.40	0.54
1:D:1476:ASP:OD1	1:D:1477:GLY:N	2.31	0.54
1:C:966:ASP:OD1	1:C:966:ASP:N	2.41	0.54
1:E:965:SER:OG	1:E:966:ASP:OD1	2.26	0.54
1:C:354:GLN:HG2	1:D:863:THR:CB	2.38	0.54
1:D:150:PRO:HB2	1:D:189:GLY:HA2	1.89	0.54
1:D:419:TYR:HA	1:D:425:SER:HA	1.90	0.54
1:A:1096:LEU:HB3	1:A:1112:ALA:HB3	1.89	0.53
1:B:1096:LEU:HB3	1:B:1112:ALA:HB3	1.89	0.53
1:A:966:ASP:OD1	1:A:966:ASP:N	2.41	0.53
1:C:45:ALA:HB2	1:C:60:ILE:HD12	1.89	0.53
1:F:966:ASP:OD1	1:F:966:ASP:N	2.41	0.53
1:E:214:LEU:HD22	1:E:224:ASN:HB3	1.89	0.53
1:E:1050:HIS:CD2	1:E:1051:ALA:N	2.77	0.53
1:F:1044:ARG:HA	1:F:1169:HIS:HB3	1.91	0.53
1:A:1044:ARG:HA	1:A:1169:HIS:HB3	1.91	0.53
1:B:320:ASP:OD1	1:B:321:GLU:N	2.42	0.53
1:B:500:VAL:O	1:B:578:ARG:NH2	2.40	0.53
1:C:144:THR:HA	1:C:231:TYR:HE1	1.73	0.53
1:C:1206:LEU:N	1:C:1227:ALA:O	2.32	0.53
1:D:642:LEU:HD11	1:D:703:ALA:HB2	1.91	0.53
1:F:1096:LEU:HB3	1:F:1112:ALA:HB3	1.89	0.53
1:C:447:PRO:HB2	1:D:858:LEU:HD21	1.90	0.53
1:C:642:LEU:HD11	1:C:703:ALA:HB2	1.91	0.53
1:D:966:ASP:OD1	1:D:966:ASP:N	2.41	0.53
1:E:83:VAL:HG12	1:E:241:VAL:HG22	1.90	0.53
1:E:837:TYR:O	1:E:1010:ARG:N	2.39	0.53
1:E:1296:PHE:HB3	1:E:1317:ILE:HG23	1.91	0.53
1:A:1098:ILE:HD11	1:A:1206:LEU:HD11	1.91	0.53
1:B:642:LEU:HD11	1:B:703:ALA:HB2	1.91	0.53
1:C:1098:ILE:HD11	1:C:1206:LEU:HD11	1.91	0.53
1:D:269:ARG:HH12	1:D:486:ASN:N	2.06	0.53
1:D:769:ILE:HD11	1:D:892:LEU:HB2	1.91	0.53
1:D:1050:HIS:CD2	1:D:1051:ALA:N	2.77	0.53
1:D:1096:LEU:HB3	1:D:1112:ALA:HB3	1.89	0.53
1:A:769:ILE:HD11	1:A:892:LEU:HB2	1.91	0.53
1:C:109:GLN:NE2	1:C:171:GLY:O	2.36	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1478:LEU:HB3	1:C:1494:ALA:HB3	1.91	0.53
1:A:642:LEU:HD11	1:A:703:ALA:HB2	1.91	0.53
1:B:596:ALA:HB3	1:B:704:MET:HB2	1.91	0.53
1:D:815:THR:OG1	1:E:1083:ASN:OD1	2.27	0.53
1:E:1044:ARG:HA	1:E:1169:HIS:HB3	1.91	0.53
1:A:269:ARG:NH1	1:A:485:LYS:CA	2.68	0.53
1:B:236:THR:CB	1:C:489:ALA:HA	2.39	0.53
1:E:236:THR:HG21	1:F:489:ALA:HB1	1.91	0.53
1:E:435:ARG:CZ	1:E:811:ASP:O	2.57	0.53
1:E:500:VAL:O	1:E:578:ARG:NH2	2.40	0.53
1:F:666:LEU:HD21	1:F:669:SER:HB2	1.91	0.53
1:F:1050:HIS:CD2	1:F:1051:ALA:N	2.77	0.53
1:A:419:TYR:HA	1:A:425:SER:HA	1.91	0.52
1:A:645:THR:HA	1:A:698:VAL:HA	1.91	0.52
1:A:768:GLN:NE2	1:A:991:VAL:HG12	2.23	0.52
1:A:1296:PHE:HB3	1:A:1317:ILE:HG23	1.91	0.52
1:B:1044:ARG:HA	1:B:1169:HIS:HB3	1.91	0.52
1:C:645:THR:HA	1:C:698:VAL:HA	1.92	0.52
1:D:109:GLN:NE2	1:D:171:GLY:O	2.38	0.52
1:D:273:PRO:HG2	1:D:485:LYS:CA	2.39	0.52
1:E:596:ALA:HB3	1:E:704:MET:HB2	1.91	0.52
1:F:596:ALA:HB3	1:F:704:MET:HB2	1.91	0.52
1:B:1478:LEU:HB3	1:B:1494:ALA:HB3	1.91	0.52
1:C:389:GLY:HA2	1:C:403:PRO:HG3	1.91	0.52
1:C:1050:HIS:CD2	1:C:1051:ALA:N	2.77	0.52
1:E:642:LEU:HD11	1:E:703:ALA:HB2	1.91	0.52
1:E:966:ASP:OD1	1:E:966:ASP:N	2.41	0.52
1:B:302:ASN:HB2	1:B:402:ILE:H	1.73	0.52
1:B:769:ILE:HD11	1:B:892:LEU:HB2	1.91	0.52
1:B:1296:PHE:HB3	1:B:1317:ILE:HG23	1.91	0.52
1:C:1296:PHE:HB3	1:C:1317:ILE:HG23	1.91	0.52
1:D:965:SER:OG	1:D:966:ASP:OD1	2.26	0.52
1:D:1478:LEU:HB3	1:D:1494:ALA:HB3	1.91	0.52
1:E:311:ASN:ND2	1:E:333:ARG:HD3	2.24	0.52
1:F:1296:PHE:HB3	1:F:1317:ILE:HG23	1.91	0.52
1:A:294:GLU:OE2	1:F:242:GLN:NE2	2.42	0.52
1:B:645:THR:HA	1:B:698:VAL:HA	1.92	0.52
1:E:769:ILE:HD11	1:E:892:LEU:HB2	1.91	0.52
1:A:1440:THR:N	1:A:1470:LEU:O	2.40	0.52
1:C:769:ILE:HD11	1:C:892:LEU:HB2	1.91	0.52
1:D:207:VAL:HG13	1:D:211:GLN:HG2	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:642:LEU:HD11	1:F:703:ALA:HB2	1.91	0.52
1:A:1050:HIS:CD2	1:A:1051:ALA:N	2.77	0.52
1:B:966:ASP:N	1:B:966:ASP:OD1	2.41	0.52
1:F:1478:LEU:HB3	1:F:1494:ALA:HB3	1.91	0.52
1:A:965:SER:OG	1:A:966:ASP:OD1	2.26	0.52
1:B:768:GLN:NE2	1:B:991:VAL:HG12	2.23	0.52
1:B:1050:HIS:CD2	1:B:1051:ALA:N	2.77	0.52
1:C:82:THR:HG22	1:C:87:VAL:HA	1.91	0.52
1:E:961:TRP:CD1	1:E:981:THR:HG22	2.45	0.52
1:E:1478:LEU:HB3	1:E:1494:ALA:HB3	1.91	0.52
1:F:1098:ILE:HD11	1:F:1206:LEU:HD11	1.91	0.52
1:A:596:ALA:HB3	1:A:704:MET:HB2	1.91	0.52
1:B:1098:ILE:HD11	1:B:1206:LEU:HD11	1.91	0.52
1:C:596:ALA:HB3	1:C:704:MET:HB2	1.91	0.52
1:C:961:TRP:CD1	1:C:981:THR:HG22	2.45	0.52
1:C:1044:ARG:HA	1:C:1169:HIS:HB3	1.91	0.52
1:D:645:THR:HA	1:D:698:VAL:HA	1.92	0.52
1:D:1044:ARG:HA	1:D:1169:HIS:HB3	1.91	0.52
1:F:768:GLN:NE2	1:F:991:VAL:HG12	2.23	0.52
1:A:72:THR:OG1	1:F:74:GLU:OE1	2.26	0.52
1:A:267:LEU:HD21	1:A:450:ILE:HG12	1.91	0.52
1:A:273:PRO:HB2	1:A:485:LYS:HZ3	1.73	0.52
1:A:454:PHE:HA	1:A:482:ASP:OD1	2.10	0.52
1:A:1467:ASP:OD1	1:A:1467:ASP:N	2.43	0.52
1:B:815:THR:OG1	1:C:1083:ASN:OD1	2.28	0.52
1:B:1050:HIS:HD2	1:B:1051:ALA:H	1.58	0.52
1:B:1235:VAL:HG13	1:B:1254:ILE:HG23	1.92	0.52
1:D:596:ALA:HB3	1:D:704:MET:HB2	1.91	0.52
1:D:1050:HIS:HD2	1:D:1051:ALA:H	1.58	0.52
1:D:1296:PHE:HB3	1:D:1317:ILE:HG23	1.91	0.52
1:E:1174:THR:OG1	1:E:1187:ARG:NH1	2.43	0.52
1:F:769:ILE:HD11	1:F:892:LEU:HB2	1.91	0.52
1:C:40:ASN:OD1	1:C:245:LYS:NZ	2.40	0.52
1:C:815:THR:OG1	1:D:1083:ASN:OD1	2.28	0.52
1:D:666:LEU:HD21	1:D:669:SER:HB2	1.91	0.52
1:F:645:THR:HA	1:F:698:VAL:HA	1.91	0.52
1:F:961:TRP:CD1	1:F:981:THR:HG22	2.45	0.52
1:A:273:PRO:HB2	1:A:485:LYS:HG2	1.91	0.51
1:A:666:LEU:HD21	1:A:669:SER:HB2	1.91	0.51
1:B:1174:THR:OG1	1:B:1187:ARG:NH1	2.43	0.51
1:F:466:ASP:OD2	1:F:466:ASP:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:961:TRP:CD1	1:A:981:THR:HG22	2.45	0.51
1:B:64:VAL:HB	1:B:98:TRP:HB2	1.92	0.51
1:B:517:GLY:HA3	1:B:603:ALA:HB2	1.93	0.51
1:D:961:TRP:CD1	1:D:981:THR:HG22	2.45	0.51
1:D:1098:ILE:HD11	1:D:1206:LEU:HD11	1.91	0.51
1:E:349:LEU:HD13	1:E:441:LEU:HD13	1.91	0.51
1:E:645:THR:HA	1:E:698:VAL:HA	1.91	0.51
1:E:666:LEU:HD21	1:E:669:SER:HB2	1.91	0.51
1:A:1174:THR:OG1	1:A:1187:ARG:NH1	2.43	0.51
1:C:1174:THR:OG1	1:C:1187:ARG:NH1	2.43	0.51
1:F:517:GLY:HA3	1:F:603:ALA:HB2	1.93	0.51
1:F:1467:ASP:OD1	1:F:1467:ASP:N	2.43	0.51
1:A:517:GLY:HA3	1:A:603:ALA:HB2	1.93	0.51
1:B:1467:ASP:OD1	1:B:1467:ASP:N	2.43	0.51
1:D:276:SER:HB2	1:D:485:LYS:C	2.25	0.51
1:D:276:SER:HB3	1:D:485:LYS:CB	2.39	0.51
1:F:1235:VAL:HG13	1:F:1254:ILE:HG23	1.92	0.51
1:B:961:TRP:CD1	1:B:981:THR:HG22	2.45	0.51
1:C:768:GLN:NE2	1:C:991:VAL:HG12	2.23	0.51
1:D:500:VAL:O	1:D:578:ARG:NH2	2.40	0.51
1:E:815:THR:OG1	1:F:1083:ASN:OD1	2.27	0.51
1:A:1478:LEU:HB3	1:A:1494:ALA:HB3	1.91	0.51
1:E:435:ARG:NH1	1:F:938:GLY:O	2.43	0.51
1:F:1174:THR:OG1	1:F:1187:ARG:NH1	2.43	0.51
1:C:284:ASP:HB3	1:C:287:LEU:HD12	1.93	0.51
1:C:666:LEU:HD21	1:C:669:SER:HB2	1.91	0.51
1:E:1071:ILE:HG12	1:E:1155:ILE:HD11	1.93	0.51
1:E:1098:ILE:HD11	1:E:1206:LEU:HD11	1.91	0.51
1:F:284:ASP:HB3	1:F:287:LEU:HD12	1.92	0.51
1:B:1071:ILE:HG12	1:B:1155:ILE:HD11	1.93	0.51
1:D:1219:ASP:OD2	1:E:1422:LYS:NZ	2.34	0.51
1:E:315:PHE:CD2	1:E:329:ALA:HB1	2.46	0.51
1:B:965:SER:OG	1:B:966:ASP:OD1	2.26	0.51
1:C:435:ARG:HD3	1:D:937:THR:O	2.11	0.51
1:D:903:SER:HG	1:D:974:TYR:HH	1.56	0.51
1:E:768:GLN:NE2	1:E:991:VAL:HG12	2.23	0.51
1:F:40:ASN:OD1	1:F:245:LYS:NZ	2.40	0.51
1:F:1050:HIS:HD2	1:F:1051:ALA:H	1.58	0.51
1:A:260:ASP:HA	1:A:344:ASN:HD22	1.77	0.50
1:A:269:ARG:NH1	1:A:486:ASN:HA	2.26	0.50
1:B:666:LEU:HD21	1:B:669:SER:HB2	1.91	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:517:GLY:HA3	1:C:603:ALA:HB2	1.93	0.50
1:C:965:SER:OG	1:C:966:ASP:OD1	2.26	0.50
1:C:1467:ASP:N	1:C:1467:ASP:OD1	2.43	0.50
1:D:768:GLN:NE2	1:D:991:VAL:HG12	2.23	0.50
1:F:1071:ILE:HG12	1:F:1155:ILE:HD11	1.93	0.50
1:A:1235:VAL:HG13	1:A:1254:ILE:HG23	1.92	0.50
1:C:121:GLY:HA3	1:C:330:LEU:HD12	1.92	0.50
1:E:236:THR:CB	1:F:489:ALA:HA	2.42	0.50
1:E:517:GLY:HA3	1:E:603:ALA:HB2	1.93	0.50
1:E:1235:VAL:HG13	1:E:1254:ILE:HG23	1.92	0.50
1:E:1467:ASP:N	1:E:1467:ASP:OD1	2.43	0.50
1:B:105:ARG:NH1	1:B:232:GLU:OE2	2.42	0.50
1:C:57:PRO:HG3	1:C:339:LEU:HD22	1.93	0.50
1:C:115:ALA:HA	1:C:330:LEU:HD13	1.93	0.50
1:C:1235:VAL:HG13	1:C:1254:ILE:HG23	1.92	0.50
1:D:1235:VAL:HG13	1:D:1254:ILE:HG23	1.92	0.50
1:D:1467:ASP:OD1	1:D:1467:ASP:N	2.43	0.50
1:A:360:VAL:HB	1:A:439:ALA:HB2	1.94	0.50
1:C:354:GLN:NE2	1:D:863:THR:HG21	2.26	0.50
1:D:1174:THR:OG1	1:D:1187:ARG:NH1	2.43	0.50
1:E:197:ALA:HB1	1:E:225:TRP:NE1	2.27	0.50
1:E:236:THR:OG1	1:F:489:ALA:CB	2.58	0.50
1:F:82:THR:HG22	1:F:87:VAL:HA	1.94	0.50
1:A:276:SER:CB	1:A:485:LYS:CA	2.90	0.50
1:A:277:GLN:OE1	1:A:364:GLN:NE2	2.43	0.50
1:A:1050:HIS:HD2	1:A:1051:ALA:H	1.58	0.50
1:C:918:ASP:HB3	1:C:923:GLU:HG3	1.94	0.50
1:C:1050:HIS:HD2	1:C:1051:ALA:H	1.58	0.50
1:C:1071:ILE:HG12	1:C:1155:ILE:HD11	1.93	0.50
1:D:517:GLY:HA3	1:D:603:ALA:HB2	1.93	0.50
1:F:121:GLY:HA3	1:F:330:LEU:HD12	1.94	0.50
1:A:500:VAL:O	1:A:578:ARG:NH2	2.40	0.50
1:D:277:GLN:OE1	1:D:364:GLN:NE2	2.45	0.50
1:B:349:LEU:HD13	1:B:441:LEU:HD13	1.94	0.50
1:E:1050:HIS:HD2	1:E:1051:ALA:H	1.58	0.50
1:F:57:PRO:HG3	1:F:339:LEU:HD22	1.94	0.50
1:D:1071:ILE:HG12	1:D:1155:ILE:HD11	1.93	0.50
1:D:1440:THR:N	1:D:1470:LEU:O	2.40	0.50
1:E:1440:THR:N	1:E:1470:LEU:O	2.40	0.50
1:A:937:THR:O	1:F:435:ARG:HD3	2.11	0.49
1:C:1298:PRO:HB2	1:C:1301:THR:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:513:THR:OG1	1:D:514:ILE:N	2.45	0.49
1:F:918:ASP:HB3	1:F:923:GLU:HG3	1.94	0.49
1:A:642:LEU:HD22	1:A:651:TRP:CZ2	2.47	0.49
1:A:1071:ILE:HG12	1:A:1155:ILE:HD11	1.93	0.49
1:B:642:LEU:HD22	1:B:651:TRP:CZ2	2.47	0.49
1:C:1440:THR:N	1:C:1470:LEU:O	2.40	0.49
1:D:642:LEU:HD22	1:D:651:TRP:CZ2	2.47	0.49
1:D:1339:THR:OG1	1:D:1341:TRP:NE1	2.46	0.49
1:E:513:THR:OG1	1:E:514:ILE:N	2.45	0.49
1:E:918:ASP:HB3	1:E:923:GLU:HG3	1.94	0.49
1:F:513:THR:OG1	1:F:514:ILE:N	2.45	0.49
1:A:373:GLN:NE2	1:A:375:ASN:O	2.42	0.49
1:A:1298:PRO:HB2	1:A:1301:THR:HA	1.94	0.49
1:A:1339:THR:OG1	1:A:1341:TRP:NE1	2.46	0.49
1:D:466:ASP:OD2	1:D:466:ASP:N	2.44	0.49
1:D:80:ASP:HB3	1:D:244:ASN:HB2	1.94	0.49
1:E:466:ASP:OD2	1:E:466:ASP:N	2.44	0.49
1:B:1298:PRO:HB2	1:B:1301:THR:HA	1.94	0.49
1:C:513:THR:OG1	1:C:514:ILE:N	2.45	0.49
1:D:1298:PRO:HB2	1:D:1301:THR:HA	1.94	0.49
1:F:157:THR:H	1:F:161:ASN:HD22	1.60	0.49
1:F:642:LEU:HD22	1:F:651:TRP:CZ2	2.47	0.49
1:F:1339:THR:OG1	1:F:1341:TRP:NE1	2.46	0.49
1:C:207:VAL:HG13	1:C:211:GLN:HG2	1.95	0.49
1:C:1270:LEU:HD12	1:C:1315:ILE:HD13	1.95	0.49
1:D:312:VAL:HG11	1:D:348:THR:HG22	1.94	0.49
1:D:918:ASP:HB3	1:D:923:GLU:HG3	1.94	0.49
1:F:1270:LEU:HD12	1:F:1315:ILE:HD13	1.95	0.49
1:A:980:THR:HG22	1:A:982:THR:H	1.78	0.49
1:A:995:ASP:N	1:A:999:GLU:O	2.45	0.49
1:B:315:PHE:CD2	1:B:329:ALA:HB1	2.48	0.49
1:C:435:ARG:NH1	1:C:812:GLY:C	2.64	0.49
1:C:893:LEU:HD23	1:C:941:LEU:HD21	1.95	0.49
1:A:513:THR:OG1	1:A:514:ILE:N	2.45	0.49
1:A:815:THR:OG1	1:B:1083:ASN:OD1	2.28	0.49
1:A:984:LEU:HA	1:B:1397:LEU:HD13	1.94	0.49
1:B:980:THR:HG22	1:B:982:THR:H	1.78	0.49
1:B:1339:THR:OG1	1:B:1341:TRP:NE1	2.46	0.49
1:C:1339:THR:OG1	1:C:1341:TRP:NE1	2.46	0.49
1:E:642:LEU:HD22	1:E:651:TRP:CZ2	2.47	0.49
1:E:893:LEU:HD23	1:E:941:LEU:HD21	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:980:THR:HG22	1:F:982:THR:H	1.78	0.49
1:A:837:TYR:CZ	1:A:843:VAL:HG23	2.48	0.49
1:A:1270:LEU:HD12	1:A:1315:ILE:HD13	1.95	0.49
1:B:918:ASP:HB3	1:B:923:GLU:HG3	1.94	0.49
1:F:965:SER:OG	1:F:966:ASP:OD1	2.26	0.49
1:A:1083:ASN:OD1	1:F:815:THR:OG1	2.28	0.48
1:D:893:LEU:HD23	1:D:941:LEU:HD21	1.95	0.48
1:D:1270:LEU:HD12	1:D:1315:ILE:HD13	1.95	0.48
1:E:1339:THR:OG1	1:E:1341:TRP:NE1	2.46	0.48
1:A:67:SER:HA	1:A:70:ASN:ND2	2.29	0.48
1:A:918:ASP:HB3	1:A:923:GLU:HG3	1.94	0.48
1:B:75:ALA:HA	1:B:211:GLN:HE22	1.78	0.48
1:C:642:LEU:HD22	1:C:651:TRP:CZ2	2.47	0.48
1:C:980:THR:HG22	1:C:982:THR:H	1.78	0.48
1:A:109:GLN:NE2	1:A:171:GLY:O	2.38	0.48
1:A:278:VAL:O	1:A:425:SER:OG	2.24	0.48
1:B:513:THR:OG1	1:B:514:ILE:N	2.45	0.48
1:B:837:TYR:CZ	1:B:843:VAL:HG23	2.48	0.48
1:B:893:LEU:HD23	1:B:941:LEU:HD21	1.95	0.48
1:B:1270:LEU:HD12	1:B:1315:ILE:HD13	1.95	0.48
1:C:1117:ARG:HG2	1:C:1135:SER:HB3	1.95	0.48
1:E:1117:ARG:HG2	1:E:1135:SER:HB3	1.95	0.48
1:E:1270:LEU:HD12	1:E:1315:ILE:HD13	1.95	0.48
1:E:1298:PRO:HB2	1:E:1301:THR:HA	1.94	0.48
1:F:903:SER:HG	1:F:974:TYR:HH	1.60	0.48
1:F:1298:PRO:HB2	1:F:1301:THR:HA	1.94	0.48
1:A:268:ASP:CG	1:A:488:ARG:HH12	2.17	0.48
1:A:273:PRO:HG2	1:A:485:LYS:CB	2.43	0.48
1:A:893:LEU:HD23	1:A:941:LEU:HD21	1.95	0.48
1:B:164:GLN:O	1:B:164:GLN:NE2	2.46	0.48
1:B:274:ARG:HD2	1:B:431:ASP:O	2.14	0.48
1:E:837:TYR:CZ	1:E:843:VAL:HG23	2.48	0.48
1:E:274:ARG:HG2	1:E:454:PHE:HE1	1.78	0.48
1:B:833:ASN:OD1	1:B:833:ASN:N	2.46	0.48
1:B:1275:TRP:HB2	1:B:1284:MET:HG2	1.96	0.48
1:C:435:ARG:CZ	1:D:937:THR:O	2.62	0.48
1:C:837:TYR:CZ	1:C:843:VAL:HG23	2.48	0.48
1:D:273:PRO:HG2	1:D:485:LYS:CB	2.44	0.48
1:D:1407:ASP:HA	1:D:1483:GLU:OE2	2.14	0.48
1:E:279:HIS:CE1	1:E:488:ARG:NE	2.62	0.48
1:F:837:TYR:CZ	1:F:843:VAL:HG23	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:893:LEU:HD23	1:F:941:LEU:HD21	1.95	0.48
1:A:276:SER:HB3	1:A:485:LYS:HA	1.96	0.48
1:C:1275:TRP:HB2	1:C:1284:MET:HG2	1.96	0.48
1:D:273:PRO:HB2	1:D:485:LYS:HZ3	1.77	0.48
1:D:837:TYR:CZ	1:D:843:VAL:HG23	2.48	0.48
1:E:1407:ASP:HA	1:E:1483:GLU:OE2	2.14	0.48
1:F:1407:ASP:HA	1:F:1483:GLU:OE2	2.14	0.48
1:A:512:PHE:HA	1:A:516:GLU:HG3	1.96	0.48
1:C:1407:ASP:HA	1:C:1483:GLU:OE2	2.14	0.48
1:D:980:THR:HG22	1:D:982:THR:H	1.78	0.48
1:D:1117:ARG:HG2	1:D:1135:SER:HB3	1.95	0.48
1:E:980:THR:HG22	1:E:982:THR:H	1.78	0.48
1:F:207:VAL:HG13	1:F:211:GLN:HG2	1.96	0.48
1:F:1275:TRP:HB2	1:F:1284:MET:HG2	1.96	0.48
1:A:1407:ASP:HA	1:A:1483:GLU:OE2	2.14	0.48
1:B:1440:THR:N	1:B:1470:LEU:O	2.40	0.48
1:C:512:PHE:HA	1:C:516:GLU:HG3	1.96	0.48
1:D:66:ASP:HB3	1:D:69:ILE:HG12	1.96	0.48
1:A:863:THR:CG2	1:F:354:GLN:CG	2.89	0.47
1:A:1275:TRP:HB2	1:A:1284:MET:HG2	1.96	0.47
1:B:512:PHE:HA	1:B:516:GLU:HG3	1.96	0.47
1:B:1407:ASP:HA	1:B:1483:GLU:OE2	2.14	0.47
1:C:466:ASP:N	1:C:466:ASP:OD2	2.43	0.47
1:C:500:VAL:O	1:C:578:ARG:NH2	2.40	0.47
1:D:984:LEU:HA	1:E:1397:LEU:HD13	1.94	0.47
1:D:995:ASP:N	1:D:999:GLU:O	2.45	0.47
1:F:552:THR:HG22	1:F:654:ASN:H	1.79	0.47
1:A:644:THR:O	1:A:699:ASN:N	2.45	0.47
1:F:1440:THR:N	1:F:1470:LEU:O	2.40	0.47
1:A:207:VAL:HG13	1:A:211:GLN:HG2	1.96	0.47
1:A:552:THR:HG22	1:A:654:ASN:H	1.79	0.47
1:B:1117:ARG:HG2	1:B:1135:SER:HB3	1.95	0.47
1:C:833:ASN:OD1	1:C:833:ASN:N	2.46	0.47
1:E:203:ALA:HB2	1:E:209:VAL:HG23	1.96	0.47
1:E:365:ASP:HB2	1:E:371:LEU:HB3	1.96	0.47
1:E:984:LEU:HA	1:F:1397:LEU:HD13	1.96	0.47
1:F:512:PHE:HA	1:F:516:GLU:HG3	1.96	0.47
1:A:312:VAL:HG11	1:A:348:THR:HG22	1.95	0.47
1:B:644:THR:O	1:B:699:ASN:N	2.45	0.47
1:F:87:VAL:HG12	1:F:143:GLU:HB2	1.96	0.47
1:A:833:ASN:OD1	1:A:833:ASN:N	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:80:ASP:OD2	1:D:244:ASN:ND2	2.41	0.47
1:D:512:PHE:HA	1:D:516:GLU:HG3	1.96	0.47
1:E:121:GLY:HA3	1:E:330:LEU:HD12	1.97	0.47
1:F:704:MET:HB3	1:F:706:PHE:CE2	2.50	0.47
1:A:75:ALA:HB3	1:B:73:ASP:HB3	1.97	0.47
1:A:863:THR:OG1	1:F:354:GLN:CG	2.59	0.47
1:A:1117:ARG:HG2	1:A:1135:SER:HB3	1.95	0.47
1:B:236:THR:HB	1:C:489:ALA:HA	1.97	0.47
1:B:1447:ALA:N	1:B:1455:ASP:OD2	2.48	0.47
1:C:40:ASN:HD22	1:C:66:ASP:HA	1.80	0.47
1:C:44:SER:OG	1:C:61:GLU:HB3	2.14	0.47
1:D:67:SER:HA	1:D:70:ASN:ND2	2.30	0.47
1:D:164:GLN:O	1:D:164:GLN:NE2	2.46	0.47
1:E:1099:SER:OG	1:E:1207:GLN:NE2	2.46	0.47
1:F:1044:ARG:HG2	1:F:1169:HIS:HB3	1.97	0.47
1:A:335:THR:HG22	1:A:339:LEU:HG	1.97	0.47
1:B:1043:GLY:O	1:B:1348:TYR:OH	2.31	0.47
1:D:1447:ALA:N	1:D:1455:ASP:OD2	2.48	0.47
1:E:1044:ARG:HG2	1:E:1169:HIS:HB3	1.97	0.47
1:E:1447:ALA:N	1:E:1455:ASP:OD2	2.48	0.47
1:F:1099:SER:OG	1:F:1207:GLN:NE2	2.46	0.47
1:A:45:ALA:HB2	1:A:60:ILE:HD12	1.97	0.47
1:A:704:MET:HB3	1:A:706:PHE:CE2	2.50	0.47
1:A:1447:ALA:N	1:A:1455:ASP:OD2	2.48	0.47
1:B:704:MET:HB3	1:B:706:PHE:CE2	2.50	0.47
1:C:1044:ARG:HG2	1:C:1169:HIS:HB3	1.97	0.47
1:D:360:VAL:HG12	1:D:361:VAL:HG13	1.96	0.47
1:F:1447:ALA:N	1:F:1455:ASP:OD2	2.48	0.47
1:A:269:ARG:CZ	1:A:486:ASN:N	2.70	0.47
1:C:1447:ALA:N	1:C:1455:ASP:OD2	2.48	0.47
1:D:279:HIS:HD1	1:D:419:TYR:HB3	1.80	0.47
1:E:258:THR:HG22	1:E:340:MET:HB3	1.97	0.47
1:E:552:THR:HG22	1:E:654:ASN:H	1.79	0.47
1:E:1275:TRP:HB2	1:E:1284:MET:HG2	1.96	0.47
1:F:303:THR:HG23	1:F:304:LYS:HG3	1.97	0.47
1:B:552:THR:HG22	1:B:654:ASN:H	1.79	0.46
1:E:442:ASP:HA	1:E:447:PRO:HA	1.96	0.46
1:F:1117:ARG:HG2	1:F:1135:SER:HB3	1.95	0.46
1:B:1044:ARG:HG2	1:B:1169:HIS:HB3	1.97	0.46
1:D:1099:SER:OG	1:D:1207:GLN:NE2	2.46	0.46
1:E:512:PHE:HA	1:E:516:GLU:HG3	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:274:ARG:NH1	1:F:433:ALA:O	2.49	0.46
1:A:57:PRO:HG3	1:A:339:LEU:HD22	1.97	0.46
1:A:279:HIS:HD1	1:A:419:TYR:HB3	1.79	0.46
1:A:1099:SER:OG	1:A:1207:GLN:NE2	2.46	0.46
1:C:786:ASP:OD1	1:C:786:ASP:N	2.49	0.46
1:E:625:PHE:CE1	1:E:627:TYR:HB3	2.50	0.46
1:F:358:THR:HG21	1:F:434:LYS:H	1.79	0.46
1:B:995:ASP:N	1:B:999:GLU:O	2.45	0.46
1:D:704:MET:HB3	1:D:706:PHE:CE2	2.50	0.46
1:D:1044:ARG:HG2	1:D:1169:HIS:HB3	1.97	0.46
1:D:1275:TRP:HB2	1:D:1284:MET:HG2	1.96	0.46
1:E:786:ASP:N	1:E:786:ASP:OD1	2.49	0.46
1:E:794:ASP:OD1	1:E:998:GLY:HA3	2.16	0.46
1:F:1270:LEU:HD21	1:F:1284:MET:HB2	1.98	0.46
1:A:360:VAL:HG12	1:A:361:VAL:HG13	1.98	0.46
1:B:133:GLY:HA3	1:B:141:THR:HG22	1.98	0.46
1:B:626:ASN:O	1:B:720:MET:HA	2.16	0.46
1:C:773:ASP:OD2	1:C:775:GLY:N	2.43	0.46
1:E:995:ASP:N	1:E:999:GLU:O	2.45	0.46
1:E:1050:HIS:CD2	1:E:1051:ALA:H	2.33	0.46
1:E:1238:SER:HG	1:E:1243:TYR:HH	1.60	0.46
1:F:500:VAL:O	1:F:578:ARG:NH2	2.40	0.46
1:F:605:LEU:HD13	1:F:698:VAL:HG13	1.98	0.46
1:A:66:ASP:HB3	1:A:69:ILE:HG12	1.97	0.46
1:A:1397:LEU:HD13	1:F:984:LEU:HA	1.98	0.46
1:B:625:PHE:CE1	1:B:627:TYR:HB3	2.50	0.46
1:C:704:MET:HB3	1:C:706:PHE:CE2	2.50	0.46
1:D:1050:HIS:CD2	1:D:1051:ALA:H	2.34	0.46
1:E:1270:LEU:HD21	1:E:1284:MET:HB2	1.98	0.46
1:A:770:ASN:HB2	1:A:776:THR:HG21	1.98	0.46
1:C:71:ASP:OD1	1:C:76:LYS:HE2	2.16	0.46
1:C:552:THR:HG22	1:C:654:ASN:H	1.79	0.46
1:C:644:THR:O	1:C:699:ASN:N	2.45	0.46
1:D:552:THR:HG22	1:D:654:ASN:H	1.79	0.46
1:E:449:THR:HG23	1:F:858:LEU:HG	1.93	0.46
1:F:1050:HIS:CD2	1:F:1051:ALA:H	2.33	0.46
1:A:1050:HIS:CD2	1:A:1051:ALA:H	2.33	0.46
1:B:730:ASP:HA	1:B:884:LEU:HD23	1.98	0.46
1:C:77:GLY:H	1:D:94:VAL:HG21	1.81	0.46
1:C:626:ASN:O	1:C:720:MET:HA	2.16	0.46
1:D:90:MET:HB3	1:D:98:TRP:HB3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:704:MET:HB3	1:E:706:PHE:CE2	2.50	0.46
1:F:389:GLY:HA2	1:F:403:PRO:HG3	1.98	0.46
1:F:644:THR:O	1:F:699:ASN:N	2.45	0.46
1:A:269:ARG:CZ	1:A:485:LYS:C	2.72	0.46
1:A:1044:ARG:HG2	1:A:1169:HIS:HB3	1.97	0.46
1:B:984:LEU:HA	1:C:1397:LEU:HD13	1.97	0.46
1:C:180:ASN:OD1	1:C:181:THR:N	2.49	0.46
1:C:730:ASP:HA	1:C:884:LEU:HD23	1.98	0.46
1:C:1050:HIS:CD2	1:C:1051:ALA:H	2.33	0.46
1:D:136:ALA:O	1:D:182:LEU:HD11	2.16	0.46
1:D:143:GLU:HB2	1:E:196:GLU:OE2	2.16	0.46
1:E:605:LEU:HD13	1:E:698:VAL:HG13	1.98	0.46
1:A:626:ASN:O	1:A:720:MET:HA	2.16	0.45
1:B:786:ASP:OD1	1:B:786:ASP:N	2.49	0.45
1:C:81:VAL:HG11	1:C:90:MET:HE2	1.98	0.45
1:C:1369:VAL:HG22	1:C:1386:ILE:HG12	1.98	0.45
1:D:895:VAL:HG12	1:D:988:VAL:HG12	1.98	0.45
1:F:115:ALA:HA	1:F:330:LEU:HD13	1.98	0.45
1:F:794:ASP:OD1	1:F:998:GLY:HA3	2.16	0.45
1:A:1206:LEU:O	1:A:1227:ALA:N	2.40	0.45
1:B:299:PHE:CE1	1:B:314:THR:HG23	2.51	0.45
1:C:275:VAL:HG12	1:C:275:VAL:O	2.16	0.45
1:D:794:ASP:OD1	1:D:998:GLY:HA3	2.16	0.45
1:E:626:ASN:O	1:E:720:MET:HA	2.16	0.45
1:C:794:ASP:OD1	1:C:998:GLY:HA3	2.16	0.45
1:C:984:LEU:HA	1:D:1397:LEU:HD13	1.97	0.45
1:D:1043:GLY:O	1:D:1348:TYR:OH	2.31	0.45
1:E:92:GLN:OE1	1:E:211:GLN:HG3	2.17	0.45
1:A:794:ASP:OD1	1:A:998:GLY:HA3	2.16	0.45
1:B:794:ASP:OD1	1:B:998:GLY:HA3	2.16	0.45
1:B:795:LEU:HB3	1:B:799:ASP:O	2.17	0.45
1:B:1270:LEU:HD21	1:B:1284:MET:HB2	1.98	0.45
1:C:1270:LEU:HD21	1:C:1284:MET:HB2	1.98	0.45
1:E:439:ALA:HB3	1:E:450:ILE:HD12	1.98	0.45
1:F:315:PHE:CD2	1:F:329:ALA:HB1	2.52	0.45
1:F:833:ASN:OD1	1:F:833:ASN:N	2.46	0.45
1:A:605:LEU:HD13	1:A:698:VAL:HG13	1.98	0.45
1:B:723:PHE:HE1	1:B:742:ILE:HG22	1.82	0.45
1:B:770:ASN:HB2	1:B:776:THR:HG21	1.98	0.45
1:B:1050:HIS:CD2	1:B:1051:ALA:H	2.33	0.45
1:C:770:ASN:HB2	1:C:776:THR:HG21	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:75:ALA:HA	1:E:211:GLN:HE22	1.82	0.45
1:E:299:PHE:CE1	1:E:314:THR:HG23	2.51	0.45
1:E:723:PHE:HE1	1:E:742:ILE:HG22	1.82	0.45
1:E:773:ASP:OD2	1:E:775:GLY:N	2.43	0.45
1:F:69:ILE:HA	1:F:76:LYS:HE3	1.97	0.45
1:F:625:PHE:CE1	1:F:627:TYR:HB3	2.50	0.45
1:A:363:ILE:HD11	1:A:388:PHE:HB2	1.97	0.45
1:B:1014:GLY:N	1:B:1212:ASP:OD2	2.50	0.45
1:C:848:GLU:O	1:C:848:GLU:HG3	2.17	0.45
1:D:273:PRO:HB2	1:D:485:LYS:HG2	1.97	0.45
1:D:605:LEU:HD13	1:D:698:VAL:HG13	1.98	0.45
1:D:770:ASN:HB2	1:D:776:THR:HG21	1.98	0.45
1:D:848:GLU:HG3	1:D:848:GLU:O	2.17	0.45
1:E:278:VAL:O	1:E:425:SER:OG	2.22	0.45
1:F:461:ILE:HG12	1:F:476:VAL:HG22	1.98	0.45
1:A:1270:LEU:O	1:A:1273:ILE:HG22	2.17	0.45
1:C:53:TYR:O	1:C:285:LEU:HD11	2.17	0.45
1:D:1014:GLY:N	1:D:1212:ASP:OD2	2.50	0.45
1:D:1369:VAL:HG22	1:D:1386:ILE:HG12	1.98	0.45
1:E:1369:VAL:HG22	1:E:1386:ILE:HG12	1.98	0.45
1:F:302:ASN:ND2	1:F:305:ASN:HB2	2.32	0.45
1:F:1369:VAL:HG22	1:F:1386:ILE:HG12	1.98	0.45
1:A:272:PHE:HB3	1:A:429:ILE:HG13	1.99	0.45
1:B:311:ASN:ND2	1:B:333:ARG:HD3	2.31	0.45
1:C:354:GLN:HE21	1:D:863:THR:HG23	1.79	0.45
1:C:895:VAL:HG12	1:C:988:VAL:HG12	1.98	0.45
1:D:1270:LEU:HD21	1:D:1284:MET:HB2	1.98	0.45
1:E:895:VAL:HG12	1:E:988:VAL:HG12	1.98	0.45
1:E:1043:GLY:O	1:E:1348:TYR:OH	2.31	0.45
1:F:1270:LEU:O	1:F:1273:ILE:HG22	2.17	0.45
1:A:625:PHE:CE1	1:A:627:TYR:HB3	2.50	0.45
1:A:1369:VAL:HG22	1:A:1386:ILE:HG12	1.98	0.45
1:B:258:THR:HG22	1:B:340:MET:HB3	1.99	0.45
1:B:466:ASP:OD2	1:B:466:ASP:N	2.43	0.45
1:B:605:LEU:HD13	1:B:698:VAL:HG13	1.98	0.45
1:C:304:LYS:NZ	1:C:350:ASP:OD1	2.49	0.45
1:C:315:PHE:CD2	1:C:329:ALA:HB1	2.52	0.45
1:C:795:LEU:HB3	1:C:799:ASP:O	2.17	0.45
1:C:1068:ASP:OD2	1:C:1156:LYS:NZ	2.34	0.45
1:D:67:SER:HA	1:D:70:ASN:HD21	1.82	0.45
1:D:626:ASN:O	1:D:720:MET:HA	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:92:GLN:HE21	1:E:96:GLY:HA2	1.82	0.45
1:F:786:ASP:OD1	1:F:786:ASP:N	2.49	0.45
1:A:723:PHE:HE1	1:A:742:ILE:HG22	1.82	0.45
1:A:795:LEU:HB3	1:A:799:ASP:O	2.17	0.45
1:B:115:ALA:HA	1:B:330:LEU:HD22	1.99	0.45
1:C:366:ASN:ND2	1:C:424:LYS:O	2.50	0.45
1:E:104:ASP:OD1	1:E:105:ARG:N	2.50	0.45
1:F:626:ASN:O	1:F:720:MET:HA	2.16	0.45
1:A:730:ASP:HA	1:A:884:LEU:HD23	1.98	0.44
1:A:903:SER:OG	1:A:974:TYR:OH	2.29	0.44
1:B:1369:VAL:HG22	1:B:1386:ILE:HG12	1.98	0.44
1:C:723:PHE:HE1	1:C:742:ILE:HG22	1.82	0.44
1:D:1270:LEU:O	1:D:1273:ILE:HG22	2.17	0.44
1:E:133:GLY:HA3	1:E:141:THR:HG22	1.99	0.44
1:C:302:ASN:ND2	1:C:305:ASN:HB2	2.32	0.44
1:C:460:ASP:OD2	1:C:461:ILE:N	2.50	0.44
1:C:1099:SER:OG	1:C:1207:GLN:NE2	2.46	0.44
1:C:1270:LEU:O	1:C:1273:ILE:HG22	2.17	0.44
1:D:723:PHE:HE1	1:D:742:ILE:HG22	1.82	0.44
1:E:461:ILE:HG12	1:E:476:VAL:HG22	1.99	0.44
1:F:44:SER:OG	1:F:61:GLU:HB3	2.16	0.44
1:C:605:LEU:HD13	1:C:698:VAL:HG13	1.98	0.44
1:C:903:SER:OG	1:C:974:TYR:OH	2.29	0.44
1:D:730:ASP:HA	1:D:884:LEU:HD23	1.98	0.44
1:E:57:PRO:HG3	1:E:339:LEU:HD22	1.99	0.44
1:E:848:GLU:O	1:E:848:GLU:HG3	2.17	0.44
1:F:848:GLU:O	1:F:848:GLU:HG3	2.17	0.44
1:A:461:ILE:HG12	1:A:476:VAL:HG22	1.98	0.44
1:A:786:ASP:OD1	1:A:786:ASP:N	2.49	0.44
1:A:1270:LEU:HD21	1:A:1284:MET:HB2	1.98	0.44
1:B:1270:LEU:O	1:B:1273:ILE:HG22	2.17	0.44
1:C:1014:GLY:N	1:C:1212:ASP:OD2	2.50	0.44
1:D:47:ASN:N	1:D:52:ASN:OD1	2.49	0.44
1:A:258:THR:HG22	1:A:340:MET:HG2	1.99	0.44
1:B:57:PRO:HG3	1:B:339:LEU:HD22	1.99	0.44
1:B:1273:ILE:HD12	1:B:1273:ILE:HA	1.85	0.44
1:C:162:GLY:HA2	1:C:175:THR:HB	2.00	0.44
1:D:269:ARG:NH1	1:D:485:LYS:HA	2.32	0.44
1:D:460:ASP:OD2	1:D:461:ILE:N	2.51	0.44
1:E:770:ASN:HB2	1:E:776:THR:HG21	1.98	0.44
1:E:1270:LEU:O	1:E:1273:ILE:HG22	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:730:ASP:HA	1:F:884:LEU:HD23	1.98	0.44
1:A:848:GLU:O	1:A:848:GLU:HG3	2.17	0.44
1:A:937:THR:O	1:F:435:ARG:CD	2.65	0.44
1:C:233:LEU:HD13	1:C:239:VAL:HG21	2.00	0.44
1:D:795:LEU:HB3	1:D:799:ASP:O	2.17	0.44
1:E:730:ASP:HA	1:E:884:LEU:HD23	1.98	0.44
1:A:55:SER:H	1:A:58:GLN:NE2	2.16	0.44
1:A:136:ALA:O	1:A:182:LEU:HD11	2.17	0.44
1:A:1026:PRO:HG2	1:A:1157:PHE:HA	2.00	0.44
1:B:848:GLU:HG3	1:B:848:GLU:O	2.17	0.44
1:C:157:THR:H	1:C:161:ASN:HD22	1.64	0.44
1:C:1143:ALA:HB3	1:C:1146:ALA:HB2	2.00	0.44
1:D:390:ILE:HD12	1:D:397:LEU:HD13	2.00	0.44
1:E:795:LEU:HB3	1:E:799:ASP:O	2.17	0.44
1:E:1096:LEU:HD12	1:E:1210:TYR:HB2	2.00	0.44
1:F:770:ASN:HB2	1:F:776:THR:HG21	1.98	0.44
1:A:1267:THR:HB	1:A:1304:ARG:HH12	1.83	0.44
1:B:1026:PRO:HG2	1:B:1157:PHE:HA	2.00	0.44
1:D:343:ASP:HB2	1:D:445:GLU:CD	2.39	0.44
1:E:644:THR:O	1:E:699:ASN:N	2.45	0.44
1:E:1014:GLY:N	1:E:1212:ASP:OD2	2.50	0.44
1:A:390:ILE:HD12	1:A:397:LEU:HD13	2.00	0.44
1:B:460:ASP:OD2	1:B:461:ILE:N	2.50	0.44
1:C:239:VAL:N	1:C:254:LEU:O	2.28	0.44
1:D:88:LEU:HD13	1:D:231:TYR:HE2	1.83	0.44
1:D:644:THR:O	1:D:699:ASN:N	2.45	0.44
1:E:460:ASP:OD2	1:E:461:ILE:N	2.50	0.44
1:F:460:ASP:OD2	1:F:461:ILE:N	2.50	0.44
1:F:1267:THR:HB	1:F:1304:ARG:HH12	1.83	0.44
1:C:41:LEU:HD13	1:C:243:TYR:HB2	2.00	0.43
1:C:461:ILE:HG12	1:C:476:VAL:HG22	1.99	0.43
1:D:1143:ALA:HB3	1:D:1146:ALA:HB2	2.00	0.43
1:E:493:LEU:HD22	1:E:747:ALA:HB3	2.00	0.43
1:F:723:PHE:HE1	1:F:742:ILE:HG22	1.82	0.43
1:F:1026:PRO:HG2	1:F:1157:PHE:HA	2.00	0.43
1:B:442:ASP:HA	1:B:447:PRO:HA	1.99	0.43
1:B:447:PRO:HB2	1:C:858:LEU:HD11	2.00	0.43
1:B:895:VAL:HG12	1:B:988:VAL:HG12	1.98	0.43
1:B:1143:ALA:HB3	1:B:1146:ALA:HB2	2.00	0.43
1:D:461:ILE:HG12	1:D:476:VAL:HG22	1.99	0.43
1:D:786:ASP:OD1	1:D:786:ASP:N	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:493:LEU:HD22	1:F:747:ALA:HB3	2.00	0.43
1:F:795:LEU:HB3	1:F:799:ASP:O	2.17	0.43
1:F:895:VAL:HG12	1:F:988:VAL:HG12	1.98	0.43
1:A:451:LEU:HD23	1:A:452:VAL:O	2.18	0.43
1:A:1096:LEU:HD12	1:A:1210:TYR:HB2	2.00	0.43
1:A:1422:LYS:NZ	1:F:1219:ASP:OD2	2.33	0.43
1:E:75:ALA:HB3	1:F:73:ASP:HB3	1.99	0.43
1:E:164:GLN:O	1:E:164:GLN:NE2	2.48	0.43
1:E:447:PRO:HB2	1:F:858:LEU:HD11	2.01	0.43
1:E:1267:THR:HB	1:E:1304:ARG:HH12	1.83	0.43
1:F:1143:ALA:HB3	1:F:1146:ALA:HB2	2.00	0.43
1:A:1122:ASP:OD1	1:A:1123:VAL:N	2.52	0.43
1:B:461:ILE:HG12	1:B:476:VAL:HG22	1.99	0.43
1:C:349:LEU:HD23	1:C:402:ILE:HG21	2.00	0.43
1:C:1206:LEU:O	1:C:1227:ALA:N	2.40	0.43
1:D:269:ARG:NH2	1:D:276:SER:HB2	2.31	0.43
1:E:149:ILE:HG13	1:E:151:ILE:HG12	2.01	0.43
1:F:233:LEU:HD13	1:F:239:VAL:HG21	2.00	0.43
1:F:1014:GLY:N	1:F:1212:ASP:OD2	2.50	0.43
1:A:460:ASP:OD2	1:A:461:ILE:N	2.50	0.43
1:B:493:LEU:HD22	1:B:747:ALA:HB3	2.00	0.43
1:B:1267:THR:HB	1:B:1304:ARG:HH12	1.83	0.43
1:C:435:ARG:CD	1:D:937:THR:O	2.67	0.43
1:E:268:ASP:CG	1:E:487:SER:OG	2.57	0.43
1:F:1273:ILE:HD12	1:F:1273:ILE:HA	1.85	0.43
1:A:47:ASN:N	1:A:52:ASN:OD1	2.51	0.43
1:A:117:THR:HG23	1:A:120:SER:HB2	1.99	0.43
1:A:1014:GLY:N	1:A:1212:ASP:OD2	2.50	0.43
1:C:435:ARG:CD	1:D:938:GLY:HA3	2.48	0.43
1:C:1026:PRO:HG2	1:C:1157:PHE:HA	2.00	0.43
1:E:269:ARG:NH1	1:E:276:SER:OG	2.52	0.43
1:E:279:HIS:ND1	1:E:425:SER:HB2	2.33	0.43
1:E:1026:PRO:HG2	1:E:1157:PHE:HA	2.00	0.43
1:F:162:GLY:HA2	1:F:175:THR:HB	2.00	0.43
1:F:1122:ASP:OD1	1:F:1123:VAL:N	2.52	0.43
1:B:75:ALA:HB3	1:C:73:ASP:HB3	2.00	0.43
1:C:493:LEU:HD22	1:C:747:ALA:HB3	2.00	0.43
1:C:1219:ASP:OD2	1:D:1422:LYS:NZ	2.33	0.43
1:D:1096:LEU:HD12	1:D:1210:TYR:HB2	2.00	0.43
1:E:333:ARG:NH2	1:F:673:ASN:OD1	2.51	0.43
1:A:895:VAL:HG12	1:A:988:VAL:HG12	1.98	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:986:ILE:N	1:B:1007:ALA:O	2.52	0.43
1:B:1096:LEU:HD12	1:B:1210:TYR:HB2	2.00	0.43
1:C:141:THR:O	1:C:144:THR:HG22	2.19	0.43
1:D:104:ASP:OD1	1:D:105:ARG:N	2.52	0.43
1:F:995:ASP:N	1:F:999:GLU:O	2.45	0.43
1:D:442:ASP:HB2	1:D:447:PRO:HB3	2.01	0.43
1:D:986:ILE:N	1:D:1007:ALA:O	2.52	0.43
1:E:833:ASN:OD1	1:E:833:ASN:N	2.46	0.43
1:F:93:ALA:HB1	1:F:198:LYS:HB3	2.01	0.43
1:F:265:LEU:HD12	1:F:282:ILE:HG12	2.00	0.43
1:A:1143:ALA:HB3	1:A:1146:ALA:HB2	2.00	0.43
1:B:985:ASP:OD1	1:B:985:ASP:N	2.49	0.43
1:B:1122:ASP:OD1	1:B:1123:VAL:N	2.52	0.43
1:E:209:VAL:HG12	1:E:214:LEU:HB2	2.00	0.43
1:E:986:ILE:N	1:E:1007:ALA:O	2.52	0.43
1:F:275:VAL:HG12	1:F:275:VAL:O	2.19	0.43
1:F:986:ILE:N	1:F:1007:ALA:O	2.52	0.43
1:F:1480:VAL:O	1:F:1492:GLY:N	2.42	0.43
1:C:361:VAL:HG11	1:C:427:LEU:HD23	2.00	0.42
1:C:1024:PRO:HB3	1:C:1257:ASP:HA	2.01	0.42
1:C:1096:LEU:HD12	1:C:1210:TYR:HB2	2.00	0.42
1:D:1122:ASP:OD1	1:D:1123:VAL:N	2.52	0.42
1:E:236:THR:HB	1:F:489:ALA:HA	2.00	0.42
1:E:874:ASP:OD2	1:E:904:THR:HG22	2.20	0.42
1:F:363:ILE:HA	1:F:426:VAL:O	2.19	0.42
1:A:466:ASP:OD2	1:A:466:ASP:N	2.44	0.42
1:A:986:ILE:N	1:A:1007:ALA:O	2.52	0.42
1:B:71:ASP:OD1	1:B:74:GLU:HB2	2.19	0.42
1:C:122:LEU:HD23	1:C:316:TYR:CD2	2.54	0.42
1:C:874:ASP:OD2	1:C:904:THR:HG22	2.19	0.42
1:C:1436:GLU:OE1	1:C:1466:THR:HG22	2.19	0.42
1:F:1096:LEU:HD12	1:F:1210:TYR:HB2	2.00	0.42
1:A:279:HIS:H	1:A:488:ARG:NH2	1.83	0.42
1:C:111:ALA:HB1	1:C:122:LEU:HB3	2.00	0.42
1:C:1122:ASP:OD1	1:C:1123:VAL:N	2.52	0.42
1:D:1024:PRO:HB3	1:D:1257:ASP:HA	2.01	0.42
1:D:1267:THR:HB	1:D:1304:ARG:HH12	1.83	0.42
1:E:1143:ALA:HB3	1:E:1146:ALA:HB2	2.00	0.42
1:F:773:ASP:OD2	1:F:775:GLY:N	2.43	0.42
1:A:259:VAL:HG21	1:A:285:LEU:HB2	2.01	0.42
1:A:371:LEU:HD12	1:A:371:LEU:HA	1.91	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1024:PRO:HB3	1:A:1257:ASP:HA	2.01	0.42
1:A:1268:TYR:O	1:A:1302:ASP:HB3	2.20	0.42
1:B:1024:PRO:HB3	1:B:1257:ASP:HA	2.01	0.42
1:B:1436:GLU:OE1	1:B:1466:THR:HG22	2.19	0.42
1:C:347:LEU:HD11	1:C:441:LEU:HD21	2.02	0.42
1:D:420:ASP:OD2	1:D:422:SER:OG	2.38	0.42
1:F:1024:PRO:HB3	1:F:1257:ASP:HA	2.01	0.42
1:A:94:VAL:HG21	1:F:77:GLY:H	1.85	0.42
1:A:269:ARG:NH2	1:A:485:LYS:CA	2.82	0.42
1:A:493:LEU:HD22	1:A:747:ALA:HB3	2.00	0.42
1:B:305:ASN:HB3	1:B:310:PHE:CE2	2.54	0.42
1:B:419:TYR:HA	1:B:425:SER:HA	2.00	0.42
1:B:874:ASP:OD2	1:B:904:THR:HG22	2.19	0.42
1:C:249:VAL:HG21	1:D:411:PRO:HD2	2.02	0.42
1:D:1268:TYR:O	1:D:1302:ASP:HB3	2.20	0.42
1:E:45:ALA:HB2	1:E:60:ILE:HD12	2.01	0.42
1:E:1122:ASP:OD1	1:E:1123:VAL:N	2.52	0.42
1:F:81:VAL:HG21	1:F:90:MET:HE2	2.00	0.42
1:F:1268:TYR:O	1:F:1302:ASP:HB3	2.20	0.42
1:A:239:VAL:O	1:A:254:LEU:N	2.48	0.42
1:B:721:ASP:N	1:B:721:ASP:OD1	2.53	0.42
1:B:1099:SER:OG	1:B:1207:GLN:NE2	2.46	0.42
1:C:298:THR:HB	1:C:315:PHE:HB2	2.01	0.42
1:C:364:GLN:NE2	1:C:428:LYS:HD2	2.34	0.42
1:C:995:ASP:N	1:C:999:GLU:O	2.45	0.42
1:D:493:LEU:HD22	1:D:747:ALA:HB3	2.00	0.42
1:D:514:ILE:O	1:D:600:LEU:HD12	2.20	0.42
1:D:1026:PRO:HG2	1:D:1157:PHE:HA	2.00	0.42
1:E:435:ARG:HB3	1:E:454:PHE:HE2	1.84	0.42
1:E:1268:TYR:O	1:E:1302:ASP:HB3	2.20	0.42
1:F:435:ARG:NH1	1:F:812:GLY:C	2.67	0.42
1:F:909:ASN:ND2	1:F:971:PRO:O	2.46	0.42
1:A:514:ILE:O	1:A:600:LEU:HD12	2.20	0.42
1:B:278:VAL:O	1:B:425:SER:OG	2.23	0.42
1:B:579:LEU:HD22	1:B:718:ILE:HB	2.02	0.42
1:B:773:ASP:OD2	1:B:775:GLY:N	2.43	0.42
1:C:305:ASN:HB3	1:C:310:PHE:CE2	2.54	0.42
1:C:579:LEU:HD22	1:C:718:ILE:HB	2.02	0.42
1:D:104:ASP:HA	1:D:231:TYR:O	2.20	0.42
1:D:833:ASN:OD1	1:D:833:ASN:N	2.46	0.42
1:E:50:PHE:CD2	1:E:285:LEU:HD12	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:514:ILE:O	1:F:600:LEU:HD12	2.20	0.42
1:F:721:ASP:OD1	1:F:721:ASP:N	2.53	0.42
1:A:874:ASP:OD2	1:A:904:THR:HG22	2.20	0.42
1:C:514:ILE:O	1:C:600:LEU:HD12	2.20	0.42
1:C:595:PHE:N	1:C:595:PHE:CD2	2.88	0.42
1:C:1267:THR:HB	1:C:1304:ARG:HH12	1.83	0.42
1:E:453:GLY:C	1:E:454:PHE:CG	2.93	0.42
1:F:305:ASN:HB3	1:F:310:PHE:CE2	2.55	0.42
1:F:762:GLU:O	1:F:788:SER:HA	2.20	0.42
1:F:1255:GLU:HA	1:F:1256:PRO:HD3	1.89	0.42
1:A:852:LEU:HD11	1:A:990:TYR:OH	2.20	0.42
1:A:1273:ILE:HD12	1:A:1273:ILE:HA	1.85	0.42
1:B:54:MET:HA	1:B:285:LEU:HD21	2.01	0.42
1:B:279:HIS:ND1	1:B:425:SER:HB2	2.34	0.42
1:C:364:GLN:NE2	1:C:425:SER:O	2.53	0.42
1:C:986:ILE:N	1:C:1007:ALA:O	2.52	0.42
1:C:1268:TYR:O	1:C:1302:ASP:HB3	2.20	0.42
1:D:278:VAL:O	1:D:425:SER:OG	2.26	0.42
1:D:721:ASP:OD1	1:D:721:ASP:N	2.53	0.42
1:D:893:LEU:HD12	1:D:894:ASP:N	2.35	0.42
1:E:54:MET:HA	1:E:285:LEU:HD21	2.02	0.42
1:F:874:ASP:OD2	1:F:904:THR:HG22	2.19	0.42
1:A:273:PRO:HB3	1:A:482:ASP:O	2.20	0.42
1:A:595:PHE:N	1:A:595:PHE:CD2	2.88	0.42
1:A:762:GLU:O	1:A:788:SER:HA	2.20	0.42
1:A:828:GLY:HA3	1:A:990:TYR:HE2	1.85	0.42
1:A:1100:VAL:HG22	1:A:1206:LEU:HD13	2.02	0.42
1:B:595:PHE:N	1:B:595:PHE:CD2	2.88	0.42
1:B:893:LEU:HD12	1:B:894:ASP:N	2.35	0.42
1:C:893:LEU:HD12	1:C:894:ASP:N	2.35	0.42
1:D:276:SER:CB	1:D:485:LYS:CB	2.94	0.42
1:E:595:PHE:N	1:E:595:PHE:CD2	2.88	0.42
1:D:371:LEU:HD12	1:D:371:LEU:HA	1.92	0.41
1:D:1436:GLU:OE1	1:D:1466:THR:HG22	2.19	0.41
1:A:1043:GLY:O	1:A:1348:TYR:OH	2.31	0.41
1:B:197:ALA:HB1	1:B:225:TRP:NE1	2.35	0.41
1:B:304:LYS:NZ	1:B:352:ASP:O	2.53	0.41
1:B:453:GLY:C	1:B:454:PHE:CG	2.93	0.41
1:B:1268:TYR:O	1:B:1302:ASP:HB3	2.20	0.41
1:C:1070:THR:HG22	1:C:1154:ASN:HB3	2.02	0.41
1:D:625:PHE:CE1	1:D:627:TYR:HB3	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:874:ASP:OD2	1:D:904:THR:HG22	2.19	0.41
1:D:1100:VAL:HG22	1:D:1206:LEU:HD13	2.02	0.41
1:E:721:ASP:OD1	1:E:721:ASP:N	2.53	0.41
1:D:595:PHE:CD2	1:D:595:PHE:N	2.88	0.41
1:D:1070:THR:HG22	1:D:1154:ASN:HB3	2.02	0.41
1:E:762:GLU:O	1:E:788:SER:HA	2.20	0.41
1:E:852:LEU:HD11	1:E:990:TYR:OH	2.20	0.41
1:E:893:LEU:HD12	1:E:894:ASP:N	2.35	0.41
1:E:1100:VAL:HG22	1:E:1206:LEU:HD13	2.02	0.41
1:F:277:GLN:OE1	1:F:428:LYS:HG2	2.20	0.41
1:F:852:LEU:HD11	1:F:990:TYR:OH	2.20	0.41
1:A:104:ASP:HA	1:A:231:TYR:O	2.20	0.41
1:B:50:PHE:CD2	1:B:285:LEU:HD12	2.55	0.41
1:B:365:ASP:HB2	1:B:371:LEU:HB3	2.01	0.41
1:B:762:GLU:O	1:B:788:SER:HA	2.20	0.41
1:C:149:ILE:HG13	1:C:151:ILE:HG12	2.02	0.41
1:C:852:LEU:HD11	1:C:990:TYR:OH	2.20	0.41
1:D:117:THR:HG23	1:D:120:SER:HB2	2.03	0.41
1:E:1436:GLU:OE1	1:E:1466:THR:HG22	2.20	0.41
1:F:50:PHE:O	1:F:53:TYR:HD1	2.03	0.41
1:F:519:THR:HA	1:F:520:PRO:HD3	1.94	0.41
1:A:893:LEU:HD12	1:A:894:ASP:N	2.35	0.41
1:B:144:THR:HA	1:B:231:TYR:HE2	1.86	0.41
1:B:514:ILE:O	1:B:600:LEU:HD12	2.20	0.41
1:B:828:GLY:HA3	1:B:990:TYR:HE2	1.85	0.41
1:C:895:VAL:HG22	1:C:934:LEU:HD22	2.03	0.41
1:C:1100:VAL:HG22	1:C:1206:LEU:HD13	2.02	0.41
1:D:361:VAL:HG12	1:D:429:ILE:HD13	2.03	0.41
1:D:852:LEU:HD11	1:D:990:TYR:OH	2.20	0.41
1:D:895:VAL:HG22	1:D:934:LEU:HD22	2.03	0.41
1:E:73:ASP:OD1	1:E:73:ASP:N	2.45	0.41
1:F:268:ASP:OD1	1:F:269:ARG:N	2.54	0.41
1:F:277:GLN:HB3	1:F:425:SER:HB3	2.02	0.41
1:F:595:PHE:N	1:F:595:PHE:CD2	2.88	0.41
1:A:225:TRP:CE3	1:A:226:PRO:HA	2.56	0.41
1:A:373:GLN:HE21	1:A:375:ASN:C	2.23	0.41
1:A:525:THR:HB	1:A:595:PHE:HB2	2.03	0.41
1:A:1219:ASP:OD2	1:B:1422:LYS:NZ	2.35	0.41
1:A:1436:GLU:OE1	1:A:1466:THR:HG22	2.20	0.41
1:C:553:LEU:HB2	1:C:595:PHE:HE1	1.85	0.41
1:C:721:ASP:OD1	1:C:721:ASP:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1077:ASP:OD2	1:D:1210:TYR:OH	2.38	0.41
1:E:514:ILE:O	1:E:600:LEU:HD12	2.20	0.41
1:E:828:GLY:HA3	1:E:990:TYR:HE2	1.85	0.41
1:F:1043:GLY:O	1:F:1348:TYR:OH	2.31	0.41
1:B:49:GLN:HG2	1:B:50:PHE:CE1	2.56	0.41
1:B:354:GLN:HE21	1:C:861:ILE:CD1	2.26	0.41
1:C:525:THR:HB	1:C:595:PHE:HB2	2.03	0.41
1:C:1412:SER:HA	1:C:1417:ASP:HA	2.03	0.41
1:D:825:SER:HB3	1:D:995:ASP:O	2.21	0.41
1:D:828:GLY:HA3	1:D:990:TYR:HE2	1.85	0.41
1:E:845:ILE:N	1:E:953:GLY:O	2.35	0.41
1:E:1068:ASP:OD2	1:E:1156:LYS:NZ	2.34	0.41
1:E:1480:VAL:O	1:E:1492:GLY:N	2.42	0.41
1:F:149:ILE:HG13	1:F:151:ILE:HG12	2.01	0.41
1:F:1460:THR:HG23	1:F:1470:LEU:HD12	2.02	0.41
1:B:1070:THR:HG22	1:B:1154:ASN:HB3	2.02	0.41
1:C:1077:ASP:OD2	1:C:1210:TYR:OH	2.38	0.41
1:D:335:THR:HG22	1:D:339:LEU:HG	2.03	0.41
1:D:363:ILE:HD11	1:D:388:PHE:HB2	2.02	0.41
1:D:363:ILE:HD13	1:D:402:ILE:HG23	2.02	0.41
1:D:553:LEU:HB2	1:D:595:PHE:HE1	1.86	0.41
1:D:1092:GLN:NE2	1:D:1213:PRO:HB3	2.36	0.41
1:F:478:ILE:O	1:F:757:PHE:N	2.44	0.41
1:F:828:GLY:HA3	1:F:990:TYR:HE2	1.85	0.41
1:F:1100:VAL:HG22	1:F:1206:LEU:HD13	2.02	0.41
1:F:1436:GLU:OE1	1:F:1466:THR:HG22	2.20	0.41
1:A:305:ASN:HB3	1:A:310:PHE:CD2	2.56	0.41
1:A:586:ASN:HB3	1:A:591:PHE:CE1	2.56	0.41
1:A:721:ASP:OD1	1:A:721:ASP:N	2.53	0.41
1:A:773:ASP:OD2	1:A:775:GLY:N	2.43	0.41
1:A:793:GLU:O	1:A:795:LEU:N	2.54	0.41
1:A:1480:VAL:O	1:A:1492:GLY:N	2.43	0.41
1:B:279:HIS:CE1	1:B:425:SER:HB2	2.56	0.41
1:B:525:THR:HB	1:B:595:PHE:HB2	2.03	0.41
1:B:793:GLU:O	1:B:795:LEU:N	2.54	0.41
1:B:852:LEU:HD11	1:B:990:TYR:OH	2.20	0.41
1:B:1412:SER:HA	1:B:1417:ASP:HA	2.03	0.41
1:B:1460:THR:HG23	1:B:1470:LEU:HD12	2.02	0.41
1:C:1013:THR:HG22	1:C:1215:ASP:HB2	2.03	0.41
1:D:525:THR:HB	1:D:595:PHE:HB2	2.03	0.41
1:D:762:GLU:O	1:D:788:SER:HA	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1013:THR:HG22	1:D:1215:ASP:HB2	2.03	0.41
1:D:1460:THR:HG23	1:D:1470:LEU:HD12	2.02	0.41
1:E:150:PRO:HB2	1:E:189:GLY:HA2	2.02	0.41
1:E:279:HIS:CE1	1:E:425:SER:HB2	2.56	0.41
1:E:586:ASN:HB3	1:E:591:PHE:CE1	2.56	0.41
1:E:825:SER:HB3	1:E:995:ASP:O	2.21	0.41
1:E:903:SER:OG	1:E:974:TYR:OH	2.29	0.41
1:E:1024:PRO:HB3	1:E:1257:ASP:HA	2.01	0.41
1:E:1092:GLN:NE2	1:E:1213:PRO:HB3	2.36	0.41
1:E:1255:GLU:HA	1:E:1256:PRO:HD3	1.89	0.41
1:F:141:THR:O	1:F:144:THR:HG22	2.21	0.41
1:F:579:LEU:HD22	1:F:718:ILE:HB	2.02	0.41
1:F:586:ASN:HB3	1:F:591:PHE:CE1	2.56	0.41
1:F:793:GLU:O	1:F:795:LEU:N	2.54	0.41
1:F:893:LEU:HD12	1:F:894:ASP:N	2.35	0.41
1:F:1070:THR:HG22	1:F:1154:ASN:HB3	2.02	0.41
1:B:263:ALA:HB1	1:B:443:TYR:HE2	1.86	0.41
1:B:1100:VAL:HG22	1:B:1206:LEU:HD13	2.02	0.41
1:B:1219:ASP:OD2	1:C:1422:LYS:NZ	2.35	0.41
1:B:1411:VAL:HG23	1:B:1480:VAL:HG22	2.03	0.41
1:C:87:VAL:HG12	1:C:143:GLU:HB2	2.03	0.41
1:C:762:GLU:O	1:C:788:SER:HA	2.20	0.41
1:C:828:GLY:HA3	1:C:990:TYR:HE2	1.85	0.41
1:D:225:TRP:CE3	1:D:226:PRO:HA	2.56	0.41
1:D:305:ASN:HB3	1:D:310:PHE:CD2	2.56	0.41
1:D:793:GLU:O	1:D:795:LEU:N	2.54	0.41
1:D:1335:ILE:HD13	1:D:1335:ILE:HA	1.93	0.41
1:D:1411:VAL:HG23	1:D:1480:VAL:HG22	2.03	0.41
1:E:438:SER:HB3	1:E:451:LEU:HD12	2.03	0.41
1:F:525:THR:HB	1:F:595:PHE:HB2	2.03	0.41
1:F:553:LEU:HB2	1:F:595:PHE:HE1	1.85	0.41
1:A:1426:THR:HG22	1:A:1432:ILE:O	2.22	0.40
1:C:216:ASN:HB3	1:C:223:PRO:HD2	2.02	0.40
1:C:793:GLU:O	1:C:795:LEU:N	2.54	0.40
1:D:1246:GLY:H	1:D:1319:ILE:HB	1.86	0.40
1:E:312:VAL:O	1:E:333:ARG:HD2	2.21	0.40
1:E:540:ILE:HD13	1:E:540:ILE:HA	1.84	0.40
1:E:1070:THR:HG22	1:E:1154:ASN:HB3	2.02	0.40
1:E:1246:GLY:H	1:E:1319:ILE:HB	1.86	0.40
1:E:1412:SER:HA	1:E:1417:ASP:HA	2.03	0.40
1:E:1460:THR:HG23	1:E:1470:LEU:HD12	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:731:GLY:HA2	1:F:736:GLU:HG3	2.03	0.40
1:A:579:LEU:HD22	1:A:718:ILE:HB	2.02	0.40
1:A:1246:GLY:H	1:A:1319:ILE:HB	1.86	0.40
1:A:1460:THR:HG23	1:A:1470:LEU:HD12	2.02	0.40
1:B:150:PRO:HB2	1:B:189:GLY:HA2	2.02	0.40
1:B:438:SER:HB3	1:B:451:LEU:HD12	2.03	0.40
1:B:553:LEU:HB2	1:B:595:PHE:HE1	1.86	0.40
1:B:1013:THR:HG22	1:B:1215:ASP:HB2	2.03	0.40
1:B:1202:GLN:NE2	1:B:1346:SER:O	2.54	0.40
1:C:731:GLY:HA2	1:C:736:GLU:HG3	2.03	0.40
1:D:731:GLY:HA2	1:D:736:GLU:HG3	2.03	0.40
1:D:1390:ASP:N	1:D:1390:ASP:OD1	2.54	0.40
1:E:579:LEU:HD22	1:E:718:ILE:HB	2.02	0.40
1:E:895:VAL:HG22	1:E:934:LEU:HD22	2.03	0.40
1:E:1219:ASP:OD2	1:F:1422:LYS:NZ	2.34	0.40
1:F:53:TYR:O	1:F:285:LEU:HD11	2.20	0.40
1:F:298:THR:HB	1:F:315:PHE:HB2	2.02	0.40
1:F:1092:GLN:NE2	1:F:1213:PRO:HB3	2.36	0.40
1:B:895:VAL:HG22	1:B:934:LEU:HD22	2.03	0.40
1:B:1246:GLY:H	1:B:1319:ILE:HB	1.86	0.40
1:B:1346:SER:OG	1:B:1348:TYR:O	2.38	0.40
1:C:825:SER:HB3	1:C:995:ASP:O	2.21	0.40
1:C:1411:VAL:HG23	1:C:1480:VAL:HG22	2.03	0.40
1:E:117:THR:HG23	1:E:120:SER:HB2	2.03	0.40
1:F:1412:SER:HA	1:F:1417:ASP:HA	2.03	0.40
1:A:81:VAL:HG13	1:A:88:LEU:HB3	2.04	0.40
1:A:343:ASP:HB2	1:A:445:GLU:CD	2.41	0.40
1:A:731:GLY:HA2	1:A:736:GLU:HG3	2.03	0.40
1:A:1070:THR:HG22	1:A:1154:ASN:HB3	2.02	0.40
1:B:350:ASP:HB3	1:B:440:SER:OG	2.21	0.40
1:B:1426:THR:HG22	1:B:1432:ILE:O	2.22	0.40
1:C:1092:GLN:NE2	1:C:1213:PRO:HB3	2.36	0.40
1:D:736:GLU:H	1:D:736:GLU:HG2	1.65	0.40
1:E:245:LYS:HE3	1:E:245:LYS:HB2	1.93	0.40
1:E:478:ILE:O	1:E:757:PHE:N	2.44	0.40
1:E:1273:ILE:HD12	1:E:1273:ILE:HA	1.85	0.40
1:F:702:PHE:CZ	1:F:722:PHE:HE2	2.40	0.40
1:A:442:ASP:HB2	1:A:447:PRO:HB3	2.03	0.40
1:A:1346:SER:OG	1:A:1348:TYR:O	2.38	0.40
1:A:1411:VAL:HG23	1:A:1480:VAL:HG22	2.03	0.40
1:C:625:PHE:CE1	1:C:627:TYR:HB3	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1411:VAL:CG1	1:C:1418:LEU:HB2	2.52	0.40
1:C:1421:TYR:CZ	1:C:1437:VAL:HG22	2.57	0.40
1:D:216:ASN:HB3	1:D:223:PRO:HD2	2.02	0.40
1:D:934:LEU:HD12	1:D:934:LEU:HA	1.92	0.40
1:E:525:THR:HB	1:E:595:PHE:HB2	2.03	0.40
1:E:793:GLU:O	1:E:795:LEU:N	2.54	0.40
1:E:995:ASP:OD2	1:E:995:ASP:C	2.60	0.40
1:F:825:SER:HB3	1:F:995:ASP:O	2.21	0.40
1:F:995:ASP:OD2	1:F:995:ASP:C	2.60	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	1460/1734 (84%)	1418 (97%)	42 (3%)	0	100	100
1	B	1460/1734 (84%)	1415 (97%)	45 (3%)	0	100	100
1	C	1460/1734 (84%)	1414 (97%)	46 (3%)	0	100	100
1	D	1460/1734 (84%)	1421 (97%)	39 (3%)	0	100	100
1	E	1460/1734 (84%)	1414 (97%)	46 (3%)	0	100	100
1	F	1460/1734 (84%)	1412 (97%)	48 (3%)	0	100	100
All	All	8760/10404 (84%)	8494 (97%)	266 (3%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	1212/1438 (84%)	1191 (98%)	21 (2%)	56	75
1	B	1212/1438 (84%)	1191 (98%)	21 (2%)	56	75
1	C	1212/1438 (84%)	1190 (98%)	22 (2%)	54	74
1	D	1212/1438 (84%)	1191 (98%)	21 (2%)	56	75
1	E	1212/1438 (84%)	1191 (98%)	21 (2%)	56	75
1	F	1212/1438 (84%)	1191 (98%)	21 (2%)	56	75
All	All	7272/8628 (84%)	7145 (98%)	127 (2%)	56	75

All (127) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	507	ARG
1	A	591	PHE
1	A	649	LEU
1	A	661	LYS
1	A	721	ASP
1	A	857	ASP
1	A	874	ASP
1	A	918	ASP
1	A	995	ASP
1	A	1068	ASP
1	A	1152	ASP
1	A	1170	ASP
1	A	1219	ASP
1	A	1232	ARG
1	A	1278	ASP
1	A	1296	PHE
1	A	1308	ASP
1	A	1330	ARG
1	A	1338	TYR
1	A	1347	ASP
1	A	1378	TRP
1	B	507	ARG
1	B	591	PHE
1	B	649	LEU
1	B	661	LYS
1	B	721	ASP
1	B	857	ASP

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Mol	Chain	Res	Type
1	B	874	ASP
1	B	918	ASP
1	B	995	ASP
1	B	1068	ASP
1	B	1152	ASP
1	B	1170	ASP
1	B	1219	ASP
1	B	1232	ARG
1	B	1278	ASP
1	B	1296	PHE
1	B	1308	ASP
1	B	1330	ARG
1	B	1338	TYR
1	B	1347	ASP
1	B	1378	TRP
1	C	455	SER
1	C	507	ARG
1	C	591	PHE
1	C	649	LEU
1	C	661	LYS
1	C	721	ASP
1	C	857	ASP
1	C	874	ASP
1	C	918	ASP
1	C	995	ASP
1	C	1068	ASP
1	C	1152	ASP
1	C	1170	ASP
1	C	1219	ASP
1	C	1232	ARG
1	C	1278	ASP
1	C	1296	PHE
1	C	1308	ASP
1	C	1330	ARG
1	C	1338	TYR
1	C	1347	ASP
1	C	1378	TRP
1	D	507	ARG
1	D	591	PHE
1	D	649	LEU
1	D	661	LYS
1	D	721	ASP

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Mol	Chain	Res	Type
1	D	857	ASP
1	D	874	ASP
1	D	918	ASP
1	D	995	ASP
1	D	1068	ASP
1	D	1152	ASP
1	D	1170	ASP
1	D	1219	ASP
1	D	1232	ARG
1	D	1278	ASP
1	D	1296	PHE
1	D	1308	ASP
1	D	1330	ARG
1	D	1338	TYR
1	D	1347	ASP
1	D	1378	TRP
1	E	507	ARG
1	E	591	PHE
1	E	649	LEU
1	E	661	LYS
1	E	721	ASP
1	E	857	ASP
1	E	874	ASP
1	E	918	ASP
1	E	995	ASP
1	E	1068	ASP
1	E	1152	ASP
1	E	1170	ASP
1	E	1219	ASP
1	E	1232	ARG
1	E	1278	ASP
1	E	1296	PHE
1	E	1308	ASP
1	E	1330	ARG
1	E	1338	TYR
1	E	1347	ASP
1	E	1378	TRP
1	F	507	ARG
1	F	591	PHE
1	F	649	LEU
1	F	661	LYS
1	F	721	ASP

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Mol	Chain	Res	Type
1	F	857	ASP
1	F	874	ASP
1	F	918	ASP
1	F	995	ASP
1	F	1068	ASP
1	F	1152	ASP
1	F	1170	ASP
1	F	1219	ASP
1	F	1232	ARG
1	F	1278	ASP
1	F	1296	PHE
1	F	1308	ASP
1	F	1330	ARG
1	F	1338	TYR
1	F	1347	ASP
1	F	1378	TRP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (18) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	373	GLN
1	A	806	ASN
1	A	1050	HIS
1	B	806	ASN
1	B	1050	HIS
1	C	279	HIS
1	C	366	ASN
1	C	806	ASN
1	C	1050	HIS
1	D	806	ASN
1	D	1050	HIS
1	E	277	GLN
1	E	806	ASN
1	E	1050	HIS
1	F	242	GLN
1	F	279	HIS
1	F	806	ASN
1	F	1050	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

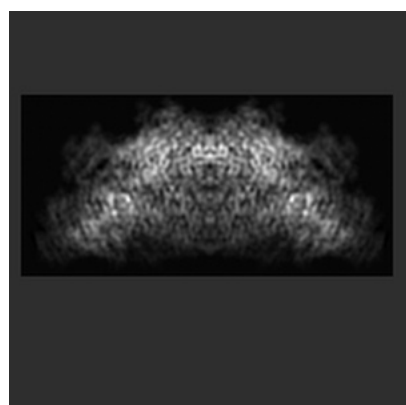
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-16492. These allow visual inspection of the internal detail of the map and identification of artifacts.

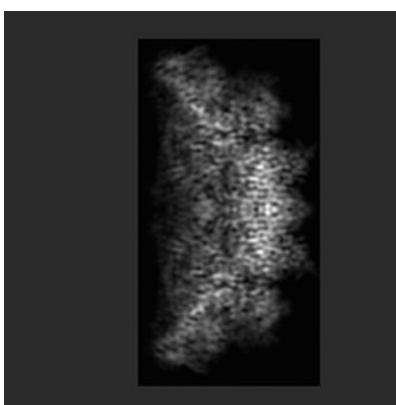
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

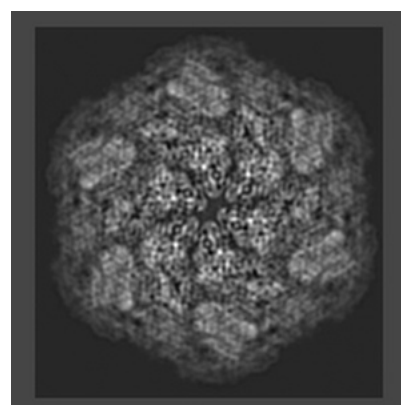
6.1.1 Primary map



X



Y



Z

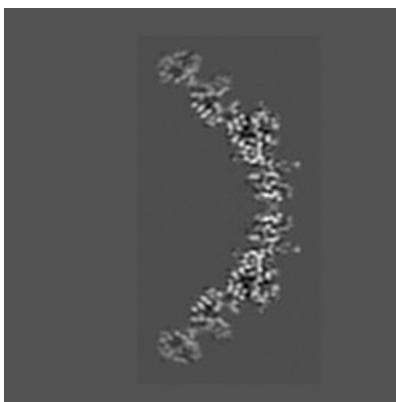
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

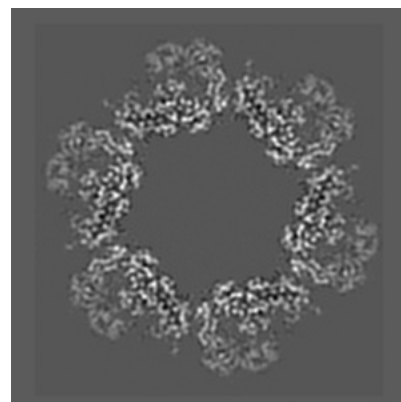
6.2.1 Primary map



X Index: 100



Y Index: 100

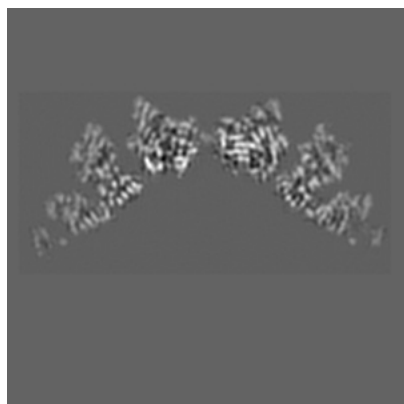


Z Index: 100

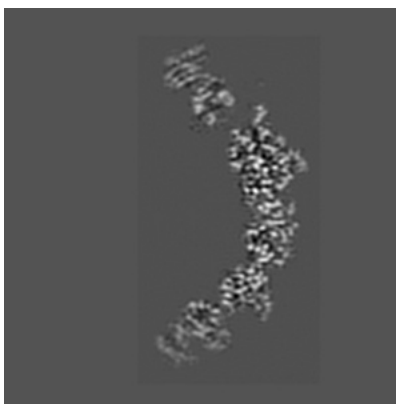
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

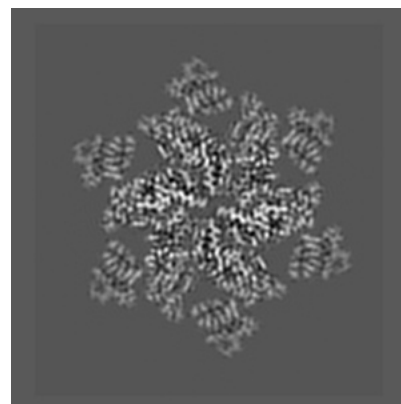
6.3.1 Primary map



X Index: 99



Y Index: 92

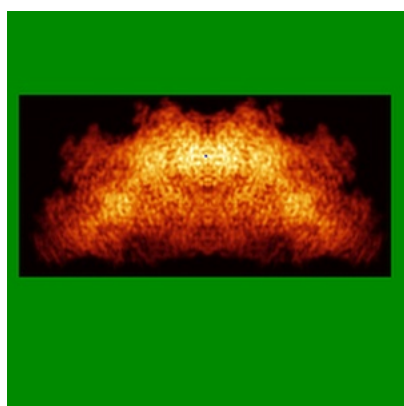


Z Index: 127

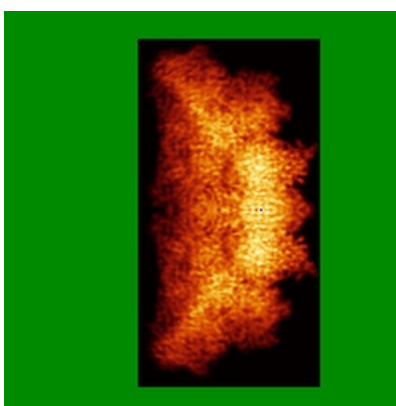
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

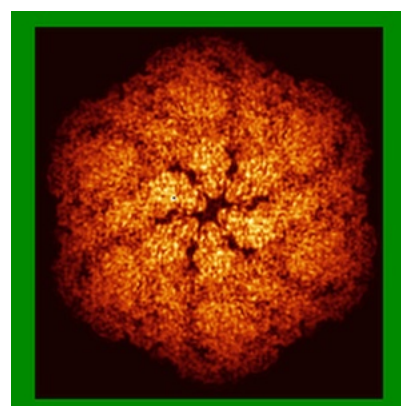
6.4.1 Primary map



X



Y

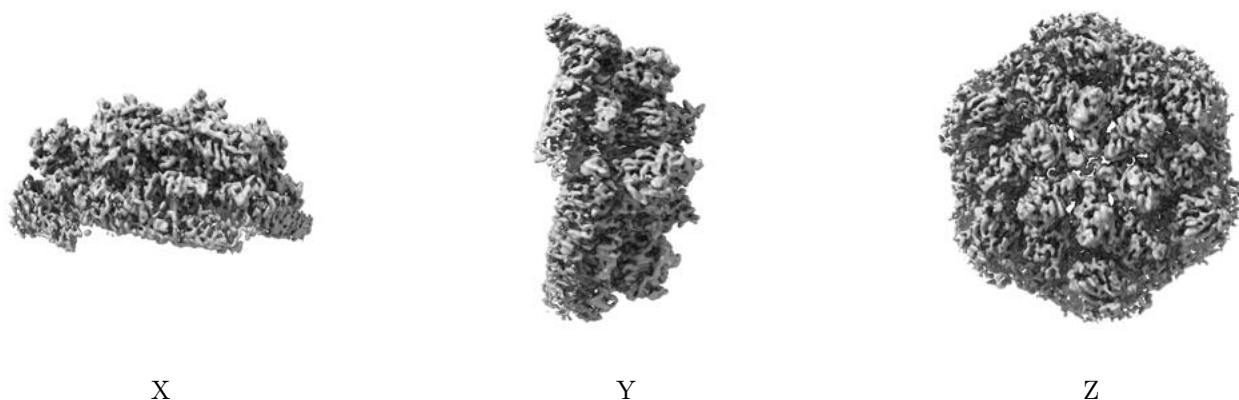


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 1.45621. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

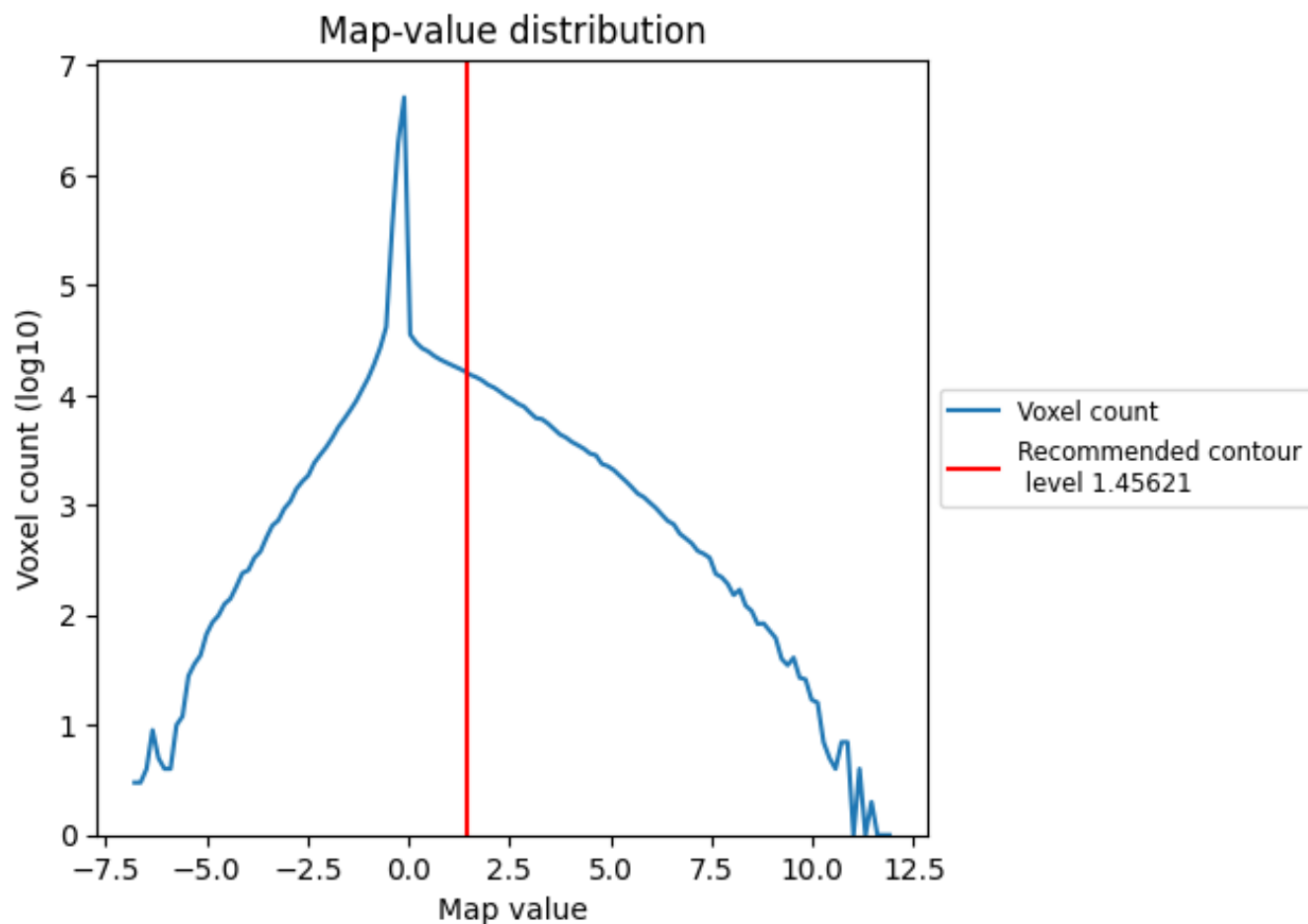
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

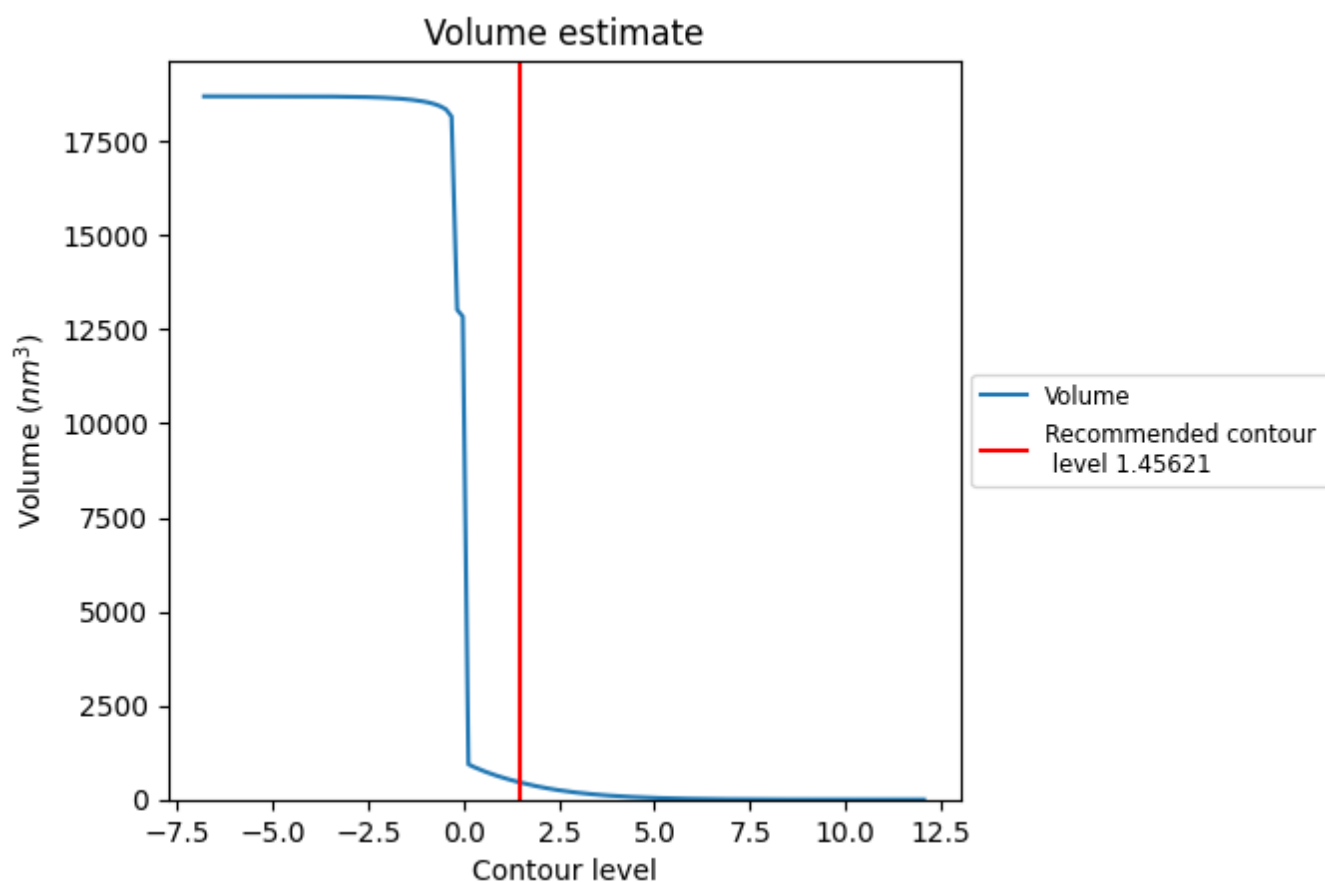
This section contains the results of statistical analysis of the map.

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.

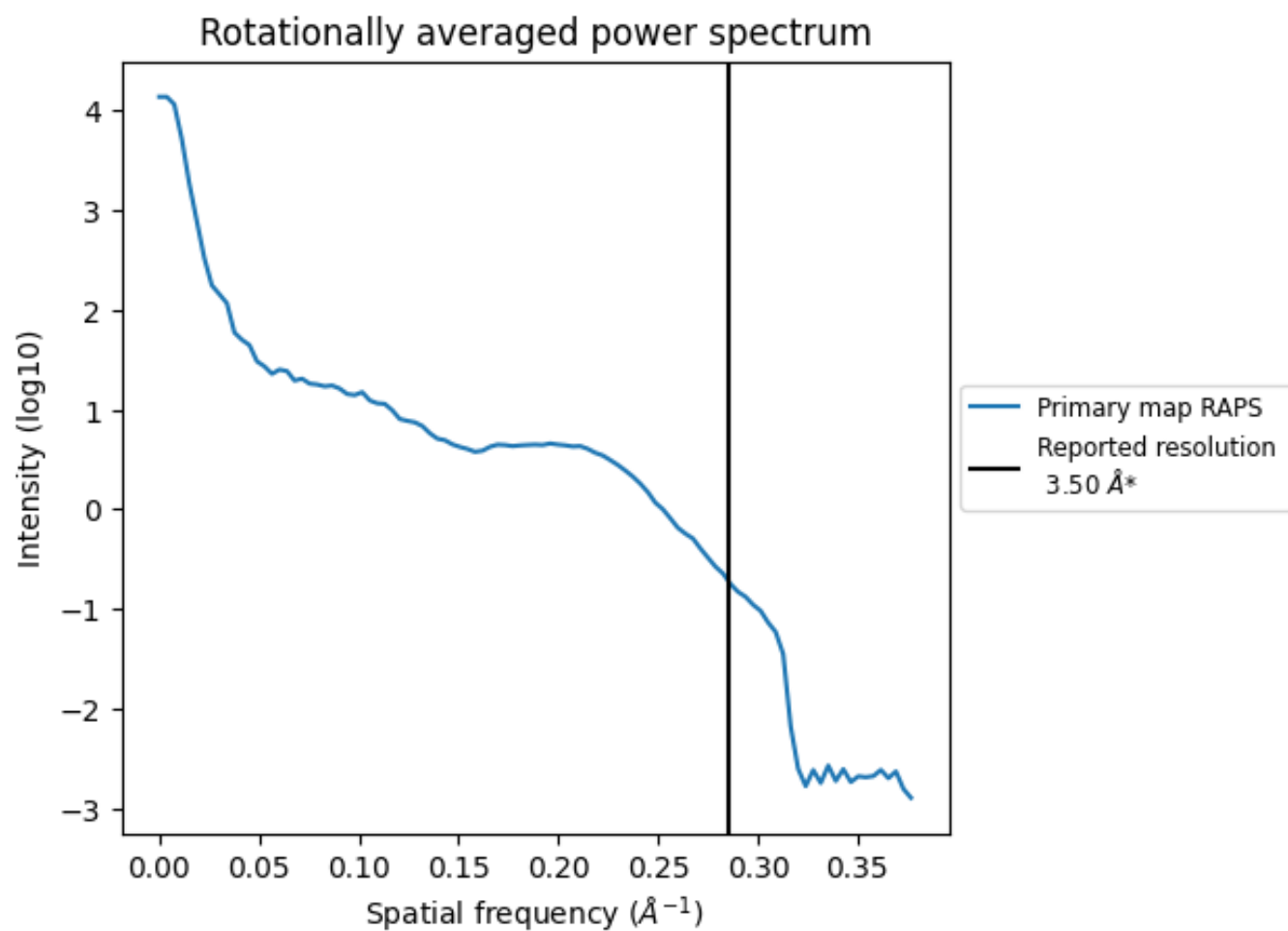
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 462 nm³; this corresponds to an approximate mass of 417 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 ⓘ



*Reported resolution corresponds to spatial frequency of 0.286 Å⁻¹

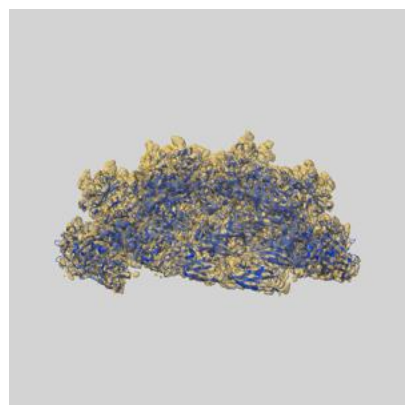
8 Fourier-Shell correlation ⓘ

This section was not generated. No FSC curve or half-maps provided.

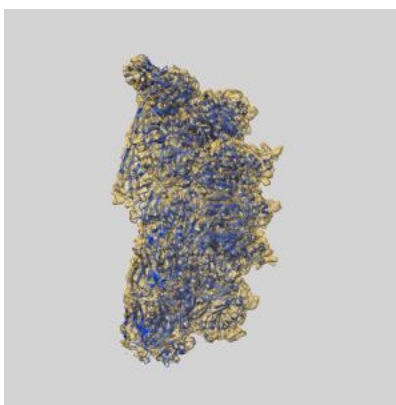
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-16492 and PDB model 8C8R. Per-residue inclusion information can be found in section [3](#) on page [4](#).

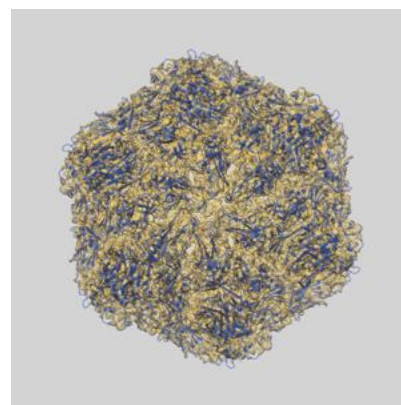
9.1 Map-model overlay [i](#)



X



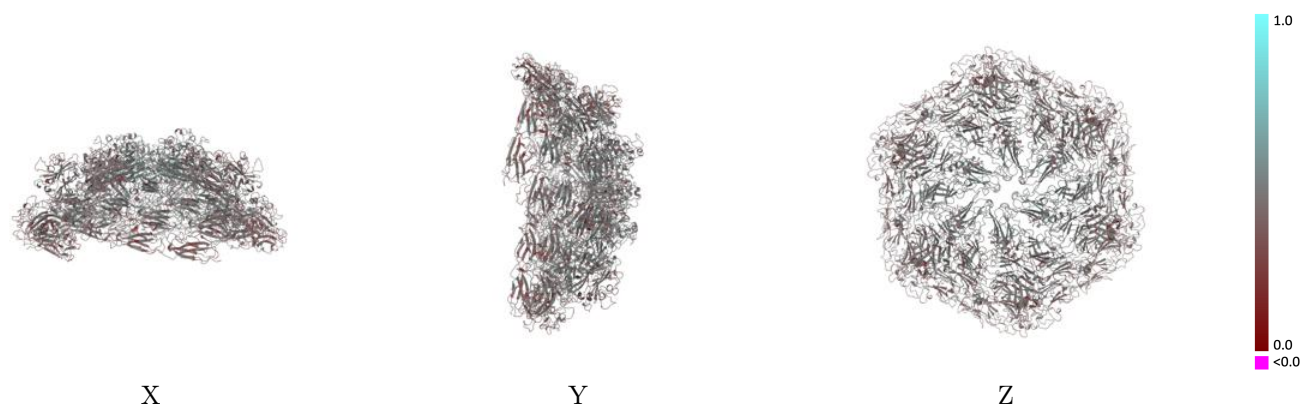
Y



Z

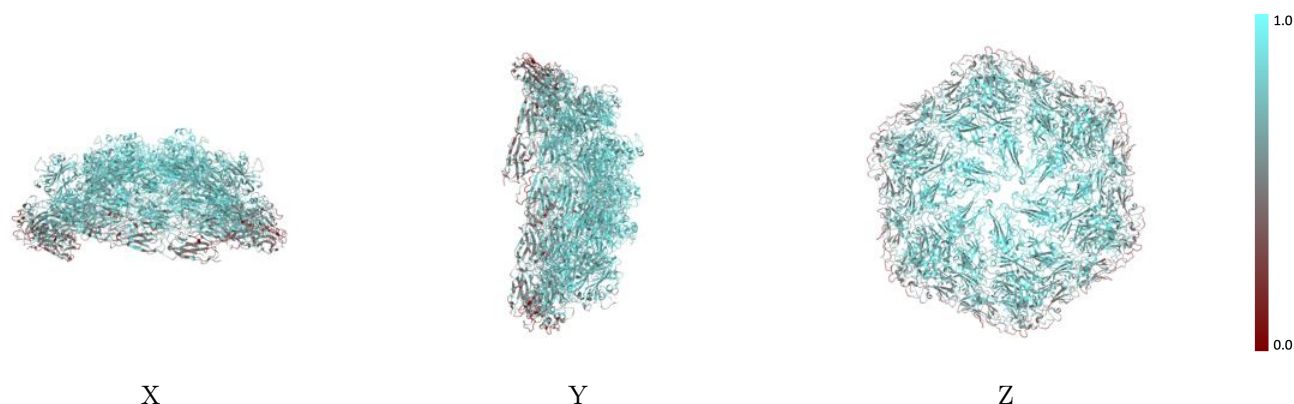
The images above show the 3D surface view of the map at the recommended contour level 1.45621 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



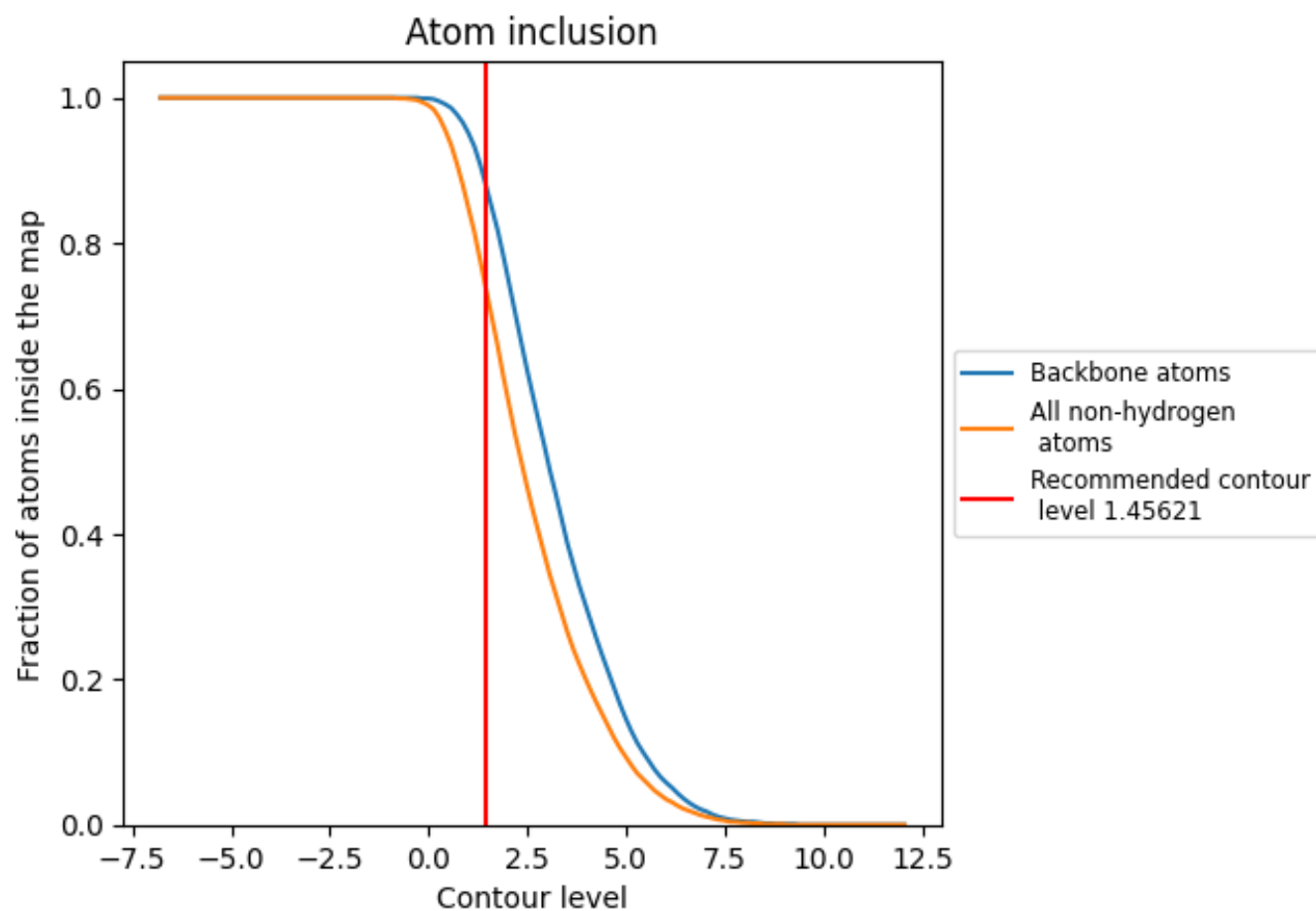
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (1.45621).

9.4 Atom inclusion [i](#)



At the recommended contour level, 88% of all backbone atoms, 74% 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 (1.45621) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	<div></div> 0.7360	<div></div> 0.4380
A	<div></div> 0.7430	<div></div> 0.4440
B	<div></div> 0.7370	<div></div> 0.4350
C	<div></div> 0.7300	<div></div> 0.4350
D	<div></div> 0.7430	<div></div> 0.4440
E	<div></div> 0.7340	<div></div> 0.4360
F	<div></div> 0.7290	<div></div> 0.4350

