



Full wwPDB EM Validation Report ⓘ

Apr 3, 2024 – 01:54 pm BST

PDB ID : 8C8M
EMDB ID : EMD-16484
Title : In vitro structure of the Nitrosopumilus maritimus S-layer - Composite map between two and six-fold symmetrised
Authors : von Kuegelgen, A.; Bharat, T.
Deposited on : 2023-01-20
Resolution : 2.87 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.dev92
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

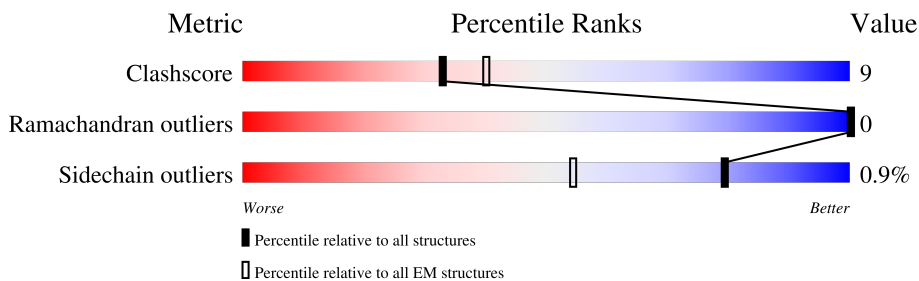
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 2.87 Å.

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



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

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. 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	72% 18% 9%
1	B	1734	73% 18% 9%
1	C	1734	73% 18% 9%
1	D	1734	73% 18% 9%
1	E	1734	73% 18% 9%
1	F	1734	72% 18% 9%

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 70506 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
			Total	C	N	O	S		
1	A	1580	11751	7234	1888	2610	19	0	0
1	B	1580	11751	7234	1888	2610	19	0	0
1	C	1580	11751	7234	1888	2610	19	0	0
1	D	1580	11751	7234	1888	2610	19	0	0
1	E	1580	11751	7234	1888	2610	19	0	0
1	F	1580	11751	7234	1888	2610	19	0	0

MET	ASN	ASN	ASN	GLU	ILE	GLY	ARG	LYS	THR	SER	LEU	THR	LEU	LEU	MET	THR	THR	ILE	MET	VAL	ALA	GLY	LEU	THR	PHE	ALA	ILE	PRO	GLY	VAL	VAL	PRO	GLU	ALA	ALA	ALA	A37	F42	F50	P57	Q58	I65	D66	S67	D68	I69	V87	L88	R89	V94	W98	D104																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
R105	I110	A111	D112	S113	T114	A115	D123	A136	S140	E143	T144	D145	P150	I153	Q164	L182	I191	A197	P226	Q229	L230	Y231	E232	D268	R269	P273	R274	V275	S276	H279	L285	D290	D293	E294	N302	F310	D313	T314	N322	L330	T331	L332	L336	L339	D343	N344	I363	S401	I402	P411	Y419	E421	S422	D431	N432	R435	Q436	N444	T469	Q472	N484	R488	L495	L502	I503	H279	E516	T525	S533	I534	I540																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
Q547	V548	G549	N550	F551	T552	I555	N565	R578	L579	I580	L605	E606	T607	E610	V613	V620	N623	V629	N654	D655	L680	A683	V684	D685	S696	M704	F886	V717	D721	S724	F725	G726	D730	G731	V732	Q733	E736	A739	N740	V548	G549	N550	F551	T552	I555	N565	R578	L579	I580	L605	E606	T607	E610	V613	V620	N623	V629	N654	D655	L680	A683	V684	D685	S696	M704	F886	V717	D721	S724	F725	G726	D730	G731	V732	Q733	E736	A739	N740																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
Q741	R744	I745	E749	T750	G751	N753	L761	I782	N804	N806	D807	L808	V813	P816	S825	H826	Y837	V843	N853	L858	I859	D860	V864	T881	F886	G887	E888	L889	L893	W902	S903	T904	P905	D906	Q733	N909	E923	G935	R744	I745	E749	T750	G751	N753	L761	I782	N804	N806	D807	L808	V813	P816	S825	H826	Y837	V843	N853	L858	I859	D860	V864	T881	F886	G887	E888	L889	L893	W902	S903	T904	P905	D906	Q733	N909	E923	G935																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
L936	T937	L941	D954	F955	Q956	I957	P958	D966	T969	T973	G976	G983	L984	D985	D995	E999	D1005	S1006	D1019	Y1023	F1027	M1038	A1039	V1046	F1047	P1048	I1049	H1050	A1051	I1054	T1055	E1062	D1068	H1072	I1075	N1083	E1087	L941	D954	F955	Q956	I957	P958	D966	T969	T973	G976	G983	L984	D985	D995	E999	D1005	S1006	D1019	Y1023	F1027	M1038	A1039	V1046	F1047	P1048	I1049	H1050	A1051	I1054	T1055	E1062	D1068	H1072	I1075	N1083	E1087																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Q1092	I1098	R1102	G1103	S1104	D1105	S1106	D1122	I1133	R1134	F1136	M1139	A1143	A1146	D1152	V1153	M1154	P1161	A1162	S1163	A1164	Q1165	L1176	L1201	Q1202	G1203	I1204	I1205	Q1207	V1208	P1213	S1217	G1218	D1219	A1220	T1222	V1223	T1224	D1225	S1226	D1230	L1231	Q1092	I1098	R1102	G1103	S1104	D1105	S1106	D1122	I1133	R1134	F1136	M1139	A1143	A1146	D1152	V1153	M1154	P1161	A1162	S1163	A1164	Q1165	L1176	L1201	Q1202	G1203	I1204	I1205	Q1207	V1208	P1213	S1217	G1218	D1219	A1220	T1222	V1223	T1224	D1225	S1226	D1230	L1231																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D1308	S1309	I1315	E1321	S1322	K1327	L1328	E1329	R1330	E1337	D1340	W1341	G1345	S1346	D1239	K1240	Y1243	I1244	I1245	D1257	F1258	N1261	N1262	D1263	S1264	A1265	E1266	Y1268	D1289	D1270	D1271	E1274	W1275	D1276	T1281	D1297	P1298	E1299	T1301	E1305	D130

I1098	E1266	D1390	S1641	LEU
R1102	I1267	F1393	L1560	ASP
D1105	Y1268	F1551	T1561	SER
S1106	D1269	V1552	V1552	THR
D1122	D1270	E1403	T1553	GLU
I1133	D1271	T1404	E1554	VAL
R1134	E1274	I1409	T1555	ASP
S1136	W1275	K1410	A1558	GLN
F1136	D1276	V1411	T1559	THR
M1139	T1281	R1414	G1560	ALA
A1143	D1297	K1422	F1561	THR
A1146	P1298	L1423	F1562	ALA
F1149	E1299	T1434	E1563	VAL
D1152	P1300	I1438	G1564	ASP
V1153	T1301	L1439	T1565	THR
W1154	R1304	D1446	F1566	GLU
P1161	E1305	T1453	F1567	ALA
A1162	D1308	P1465	S1574	ASP
A1164	S1309	L1469	S1575	ASN
Q1165	I1315	D1473	G1576	THR
L1176	L1315	D1474	H1577	GLU
P1161	E1321	V1480	L1578	THR
A1162	E1329	I1490	R1580	ALA
A1164	R1330	V1491	D1585	THR
Q1165	E1337	M1499	M1594	VAL
L1176	D1340	I1500	T1595	GLN
L1201	W1341	V1503	L1596	THR
Q1202	S1346	E1507	P1597	VAL
D1204	D1347	Y1510	E1605	ASP
V1208	Y1348	ALA	T1616	ALA
P1213	V1349	ALA	VAL	THR
D1230	E1352	ALA	VAL	VAL
L1231	D1353	LEU	VAL	THR
D1239	F1365	ALA	THR	VAL
K1240	V1369	ALA	SER	VAL
I1245	D1372	ALA	ASP	THR
D1257	Y1376	LEU	LEU	GLY
F1258	S1377	THR	GLN	THR
T1379	W1378	VAL	SER	SER
D1261	T1379	ASP	PHE	PHE
N1262	D1261	ALA	ALA	PRO
S1264	N1262	GLY	PHE	ALA
A1265	I1383	ASN	ALA	LEU
	I1384	SER	ASN	SER
	T1385	SER	SER	

● Molecule 1: Cell surface protein



MET	D104	N302	I534	N740	G935	E1087	L1231
ASN	R105	F310	I540	R744	A936	Q1092	D1239
GLU	I110	D313	Q547	I745	T937	I1098	K1240
ILE	A111	T314	V548	E749	L941	R1102	I1245
ARG	D112	D112	G548	T750	D954	G1103	D1257
LYS	S113	S113	N550	G751	G955	S1104	F1258
THR	T114	T114	F951	D752	P956	D1105	D1261
GLN	A115	A115	T952	N753	P957	S1106	D1263
THR	D123	D123	I555	L761	D966	D1122	S1264
ALA	S130	S130	T331	E762	T969	I1133	A1265
SER	A136	A136	R578	S788	T973	R1134	E1266
ALA	L336	L336	L579	I792	T973	F1135	T1267
VAL	S140	S140	I580	N804	G976	F1136	Y1268
ALA	E143	E143	T607	N806	G983	M1139	D1269
GLY	T144	T144	E610	N807	L984	A1143	L1270
ASP	D145	D145	V613	L808	D985	A1146	D1271
ASN	P150	P150	V620	V813	D995	D1152	E1274
GLN	I153	I153	N623	T814	E999	V1153	W1275
PHE	Q164	Q164	N623	P815	D1005	N1154	D1276
ALA	L182	L182	V629	P816	S1006	P1161	T1281
ILE	I191	I191	S401	S825	A1162	P1297	D1297
PRO	A197	A197	I402	H826	A1163	E1299	P1298
ALA	D431	D431	N432	Y837	A1164	E1300	P1300
ALA	N432	N432	L680	V843	Q1165	Q1165	T1301
ALA	P226	P226	A683	V843	L1176	L1176	D1308
ALA	Q229	Q229	V684	N853	L1201	L1201	S1309
THR	L230	L230	V684	L858	Q1202	Q1202	I1315
THR	E232	E232	D695	I859	A1039	G1203	E1321
THR	S251	S251	S696	D860	V1046	D1204	S1322
THR	F50	F50	M704	V864	F1047	I1205	E1329
THR	Q58	Q58	V717	F886	P1048	L1206	R1330
THR	T65	T65	D721	L889	H1049	Q1207	D1308
THR	D66	D66	S724	L893	A1051	V1208	E1337
THR	D68	D68	F725	L893	I1054	P1213	D1340
THR	I69	I69	G726	N902	E1062	S1217	W1341
THR	V67	V67	L502	S903	D1068	D1219	G1345
THR	L88	L88	I503	T904	L1069	A1220	S1346
THR	R89	R89	F512	P905	H1072	N1221	D1347
THR	Y94	Y94	E516	D906	H1072	V1223	Y1348
THR	N97	N97	T525	N909	I1075	T1224	V1349
THR	N98	N98	A739	E923	M1083	D1285	E1352
THR						S1226	D1353
THR						D1230	

V1369	ASN
D1372	LEU
Y1376	GLY
W1378	ARG
T1379	THR
V1382	VAL
Y1383	ASP
I1384	ALA
T1385	ALA
F1393	PHE
D1399	GLY
E1403	ASN
T1404	SER
I1409	TRP
K1410	ILE
V1411	THR
R1414	ALA
K1422	PHE
L1423	ALA
T1434	VAL
I1438	ASP
L1439	ASN
D1446	PRO
T1463	THR
P1465	THR
L1469	SER
D1473	THR
D1474	VAL
V1480	ASN
I1490	VAL
V1491	THR
N1499	VAL
I1500	SER
V1503	LEU
E1507	ALA
Y1510	TRP
G1516	ILE
V1517	THR
V1520	THR
D1524	VAL
P1529	VAL
V1532	GLY
V1537	ASN
S1541	SER
L1550	SER
T1551	GLU
V1552	ALA
T1553	GLY
E1554	THR
T1555	TYR
A1558	THR
T1559	ALA
G1560	ALA
L1561	PHE
F1562	VAL
E1563	TRP
G1564	GLU
T1565	SER
V1566	VAL
F1567	ASP
S1574	ASN
R1578	PRO
L1579	THR
R1580	THR
D1585	ALA
M1594	LEU
T1595	VAL
L1596	THR
P1597	THR
E1605	VAL
T1618	ASN
VAL	GLY
VAL	VAL
PRO	THR
PRO	SER
LEU	LEU
ALA	ALA
TRP	ALA
ILE	TRP
THR	ILE
GLY	THR
ALA	GLY
ALA	SER
ALA	LEU

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SER
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PRO
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SER
THR
THR
THR
VAL
ASN
VAL
SER

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	354860	Depositor
Resolution determination method	OTHER	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION; RELION refinement with in-built CTF correction. The function is similar to a Wiener filter, so amplitude correction included.	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	48.5	Depositor
Minimum defocus (nm)	2000	Depositor
Maximum defocus (nm)	5000	Depositor
Magnification	81000	Depositor
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	10.250	Depositor
Minimum map value	-4.662	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.422	Depositor
Recommended contour level	1.05514	Depositor
Map size (\AA)	349.44, 349.44, 349.44	wwPDB
Map dimensions	320, 320, 320	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.092, 1.092, 1.092	Depositor

5 Model quality i

5.1 Standard geometry i

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	0.75	9/11941 (0.1%)	0.81	18/16339 (0.1%)
1	B	0.69	2/11941 (0.0%)	0.77	8/16339 (0.0%)
1	C	0.69	2/11941 (0.0%)	0.77	6/16339 (0.0%)
1	D	0.68	1/11941 (0.0%)	0.76	7/16339 (0.0%)
1	E	0.69	2/11941 (0.0%)	0.77	7/16339 (0.0%)
1	F	0.70	3/11941 (0.0%)	0.77	5/16339 (0.0%)
All	All	0.70	19/71646 (0.0%)	0.77	51/98034 (0.1%)

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	2
1	B	0	1
All	All	0	3

All (19) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	793	GLU	CD-OE2	16.03	1.43	1.25
1	A	1255	GLU	CD-OE1	-15.38	1.08	1.25
1	A	793	GLU	CD-OE1	-13.35	1.10	1.25
1	A	196	GLU	CD-OE1	-10.86	1.13	1.25
1	A	1299	GLU	CD-OE1	-9.95	1.14	1.25
1	F	858	LEU	C-O	-8.47	1.07	1.23
1	C	858	LEU	C-O	-8.44	1.07	1.23
1	D	858	LEU	C-O	-7.86	1.08	1.23
1	A	858	LEU	C-O	-7.75	1.08	1.23
1	B	858	LEU	C-O	-7.45	1.09	1.23
1	E	858	LEU	C-O	-7.41	1.09	1.23
1	C	808	LEU	C-O	-5.62	1.12	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	F	808	LEU	C-O	-5.55	1.12	1.23
1	F	1399	ASP	CG-OD1	-5.41	1.12	1.25
1	A	1329	GLU	CD-OE2	-5.38	1.19	1.25
1	A	1425	GLU	CD-OE1	5.15	1.31	1.25
1	E	808	LEU	C-O	-5.12	1.13	1.23
1	B	808	LEU	C-O	-5.07	1.13	1.23
1	A	1299	GLU	CD-OE2	-5.04	1.20	1.25

All (51) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	729	ASP	CB-CG-OD1	15.40	132.16	118.30
1	A	123	ASP	CB-CG-OD1	11.60	128.74	118.30
1	A	794	ASP	CB-CG-OD2	10.58	127.82	118.30
1	A	729	ASP	CB-CG-OD2	-9.00	110.20	118.30
1	E	1257	ASP	CB-CG-OD1	-8.15	110.96	118.30
1	A	793	GLU	CG-CD-OE2	8.12	134.55	118.30
1	B	1257	ASP	CB-CG-OD1	-8.12	110.99	118.30
1	A	729	ASP	CA-CB-CG	7.90	130.77	113.40
1	D	1257	ASP	CB-CG-OD1	-7.82	111.27	118.30
1	F	1257	ASP	CB-CG-OD1	-7.71	111.36	118.30
1	A	794	ASP	CB-CG-OD1	-7.66	111.41	118.30
1	D	58	GLN	CB-CA-C	-7.20	96.00	110.40
1	A	58	GLN	CB-CA-C	-7.18	96.03	110.40
1	C	58	GLN	CB-CA-C	-7.10	96.20	110.40
1	F	38	ASN	CB-CA-C	6.91	124.22	110.40
1	B	58	GLN	CB-CA-C	-6.70	97.01	110.40
1	E	58	GLN	CB-CA-C	-6.31	97.78	110.40
1	A	793	GLU	CG-CD-OE1	-6.26	105.78	118.30
1	D	1340	ASP	CB-CG-OD2	-6.24	112.69	118.30
1	A	1299	GLU	OE1-CD-OE2	-6.20	115.86	123.30
1	A	1255	GLU	OE1-CD-OE2	-6.10	115.98	123.30
1	C	1257	ASP	CB-CG-OD1	-6.05	112.86	118.30
1	E	1340	ASP	CB-CG-OD2	-6.02	112.88	118.30
1	B	1340	ASP	CB-CG-OD2	-5.97	112.93	118.30
1	A	1257	ASP	CB-CG-OD2	5.93	123.64	118.30
1	A	730	ASP	CB-CG-OD2	5.86	123.58	118.30
1	B	744	ARG	NE-CZ-NH1	5.85	123.22	120.30
1	C	1340	ASP	CB-CG-OD2	-5.85	113.04	118.30
1	A	729	ASP	OD1-CG-OD2	-5.75	112.38	123.30
1	F	1340	ASP	CB-CG-OD2	-5.68	113.19	118.30
1	E	744	ARG	NE-CZ-NH1	5.68	123.14	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	510	ASP	CB-CG-OD2	5.54	123.28	118.30
1	B	1578	ARG	CG-CD-NE	-5.37	100.52	111.80
1	B	730	ASP	CB-CG-OD2	5.30	123.07	118.30
1	C	550	ASN	CB-CA-C	5.21	120.83	110.40
1	D	1578	ARG	CG-CD-NE	-5.21	100.85	111.80
1	F	550	ASN	CB-CA-C	5.21	120.82	110.40
1	A	1578	ARG	CG-CD-NE	-5.19	100.89	111.80
1	E	730	ASP	CB-CG-OD2	5.18	122.97	118.30
1	D	550	ASN	CB-CA-C	5.17	120.73	110.40
1	A	550	ASN	CB-CA-C	5.16	120.71	110.40
1	A	744	ARG	NE-CZ-NH1	5.11	122.86	120.30
1	B	550	ASN	CB-CA-C	5.11	120.62	110.40
1	E	123	ASP	CB-CG-OD1	5.11	122.89	118.30
1	E	550	ASN	CB-CA-C	5.10	120.60	110.40
1	D	744	ARG	NE-CZ-NH1	5.08	122.84	120.30
1	D	730	ASP	CB-CG-OD2	5.07	122.86	118.30
1	C	123	ASP	CB-CG-OD1	5.05	122.85	118.30
1	F	123	ASP	CB-CG-OD1	5.03	122.83	118.30
1	C	730	ASP	CB-CG-OD2	5.01	122.81	118.30
1	B	123	ASP	CB-CG-OD1	5.01	122.81	118.30

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	196	GLU	Sidechain
1	A	729	ASP	Sidechain
1	B	55	SER	Mainchain

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	11751	0	10951	245	0
1	B	11751	0	10951	221	0
1	C	11751	0	10951	248	0
1	D	11751	0	10951	252	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	E	11751	0	10949	221	0
1	F	11751	0	10951	248	0
All	All	70506	0	65704	1252	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 9.

All (1252) 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:C:1217:SER:CB	1:D:1424:VAL:HG21	1.65	1.25
1:A:1424:VAL:HG21	1:F:1217:SER:CB	1.65	1.24
1:C:816:PRO:HD2	1:D:1083:ASN:HD21	1.01	1.14
1:A:1424:VAL:CG2	1:F:1217:SER:HB2	1.82	1.09
1:C:1217:SER:HB2	1:D:1424:VAL:CG2	1.83	1.08
1:D:1330:ARG:HB2	1:D:1364:ASN:OD1	1.53	1.06
1:C:816:PRO:HD2	1:D:1083:ASN:ND2	1.72	1.03
1:C:816:PRO:CD	1:D:1083:ASN:HD21	1.75	1.00
1:A:1329:GLU:OE1	1:A:1486:GLU:OE2	1.78	0.99
1:D:1321:GLU:OE1	1:D:1393:PHE:CZ	2.16	0.99
1:C:1217:SER:HB2	1:D:1424:VAL:HG21	1.01	0.98
1:D:1363:SER:HB3	1:D:1390:ASP:OD1	1.62	0.98
1:A:1424:VAL:HG21	1:F:1217:SER:HB2	0.99	0.96
1:C:985:ASP:OD1	1:D:1394:ASP:OD2	1.85	0.94
1:A:1329:GLU:OE1	1:A:1486:GLU:CD	2.06	0.93
1:B:1567:PHE:HD2	1:B:1578:ARG:HG3	1.32	0.93
1:A:1394:ASP:OD2	1:F:985:ASP:OD1	1.87	0.92
1:D:57:PRO:HG3	1:D:339:LEU:HD22	1.54	0.90
1:C:57:PRO:HG3	1:C:339:LEU:HD22	1.53	0.90
1:C:886:PHE:O	1:D:1301:THR:HG21	1.71	0.90
1:A:57:PRO:HG3	1:A:339:LEU:HD22	1.54	0.90
1:B:57:PRO:HG3	1:B:339:LEU:HD22	1.54	0.90
1:A:1301:THR:HG21	1:F:886:PHE:O	1.72	0.89
1:E:57:PRO:HG3	1:E:339:LEU:HD22	1.54	0.88
1:D:886:PHE:O	1:E:1301:THR:HG21	1.76	0.86
1:D:1321:GLU:OE1	1:D:1393:PHE:CE1	2.28	0.86
1:E:1567:PHE:HD2	1:E:1578:ARG:HG2	1.41	0.85
1:A:1329:GLU:OE1	1:A:1486:GLU:OE1	1.93	0.84
1:A:1567:PHE:HD2	1:A:1578:ARG:HG2	1.42	0.84
1:A:886:PHE:O	1:B:1301:THR:HG21	1.76	0.84
1:D:1567:PHE:HD2	1:D:1578:ARG:HG2	1.42	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1261:ASP:O	1:C:1266:GLU:OE2	1.98	0.82
1:F:1261:ASP:O	1:F:1266:GLU:OE2	1.98	0.82
1:E:1567:PHE:CD2	1:E:1578:ARG:HG2	2.15	0.81
1:A:1261:ASP:O	1:A:1266:GLU:OE2	1.99	0.81
1:B:1261:ASP:O	1:B:1266:GLU:OE2	1.99	0.81
1:E:1261:ASP:O	1:E:1266:GLU:OE2	1.99	0.81
1:C:1068:ASP:HB3	1:C:1154:ASN:HD21	1.46	0.80
1:F:1068:ASP:HB3	1:F:1154:ASN:HD21	1.46	0.80
1:B:363:ILE:HD13	1:B:402:ILE:HG23	1.64	0.80
1:D:1261:ASP:O	1:D:1266:GLU:OE2	1.98	0.80
1:D:1567:PHE:CD2	1:D:1578:ARG:HG2	2.16	0.80
1:C:363:ILE:HD13	1:C:402:ILE:HG23	1.63	0.80
1:A:1567:PHE:CD2	1:A:1578:ARG:HG2	2.16	0.80
1:E:1068:ASP:HB3	1:E:1154:ASN:HD21	1.47	0.80
1:A:1352:GLU:OE2	1:B:1578:ARG:CZ	2.30	0.79
1:B:234:ASN:CB	1:C:422:SER:HB3	2.12	0.79
1:F:363:ILE:HD13	1:F:402:ILE:HG23	1.63	0.79
1:D:1068:ASP:HB3	1:D:1154:ASN:HD21	1.48	0.79
1:B:1068:ASP:HB3	1:B:1154:ASN:HD21	1.47	0.79
1:E:363:ILE:HD13	1:E:402:ILE:HG23	1.63	0.79
1:E:234:ASN:CB	1:F:422:SER:HB3	2.13	0.78
1:A:1397:LEU:HD12	1:F:985:ASP:H	1.48	0.78
1:A:1068:ASP:HB3	1:A:1154:ASN:HD21	1.48	0.78
1:C:985:ASP:H	1:D:1397:LEU:HD12	1.49	0.78
1:D:1345:GLY:CA	1:E:1578:ARG:HG3	2.14	0.78
1:A:1330:ARG:HB3	1:A:1364:ASN:HA	1.65	0.77
1:A:363:ILE:HD13	1:A:402:ILE:HG23	1.65	0.77
1:D:363:ILE:HD13	1:D:402:ILE:HG23	1.65	0.77
1:D:1321:GLU:OE2	1:D:1393:PHE:CG	2.37	0.77
1:A:956:GLN:NE2	1:F:813:VAL:HG11	2.01	0.76
1:F:1567:PHE:CD2	1:F:1578:ARG:HG2	2.21	0.76
1:B:449:THR:HG21	1:C:859:ILE:HB	1.68	0.75
1:E:449:THR:HG21	1:F:859:ILE:HB	1.68	0.75
1:B:886:PHE:O	1:C:1301:THR:HG21	1.88	0.74
1:E:886:PHE:O	1:F:1301:THR:HG21	1.86	0.74
1:D:1330:ARG:CB	1:D:1364:ASN:OD1	2.34	0.74
1:F:1567:PHE:HD2	1:F:1578:ARG:HG2	1.52	0.73
1:F:1046:VAL:HG23	1:F:1048:PRO:HD3	1.71	0.73
1:A:815:THR:HG23	1:B:1083:ASN:OD1	1.89	0.73
1:C:813:VAL:HG11	1:D:956:GLN:NE2	2.03	0.73
1:D:825:SER:OG	1:D:995:ASP:O	2.07	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:825:SER:OG	1:F:995:ASP:O	2.06	0.73
1:A:1532:VAL:HB	1:F:1226:SER:OG	1.89	0.72
1:C:816:PRO:CD	1:D:1083:ASN:ND2	2.41	0.72
1:C:825:SER:OG	1:C:995:ASP:O	2.06	0.72
1:C:1046:VAL:HG23	1:C:1048:PRO:HD3	1.71	0.72
1:D:815:THR:HG23	1:E:1083:ASN:OD1	1.89	0.72
1:E:825:SER:OG	1:E:995:ASP:O	2.07	0.72
1:C:1226:SER:OG	1:D:1532:VAL:HB	1.89	0.72
1:D:1596:LEU:HD12	1:D:1597:PRO:HD2	1.72	0.72
1:A:1083:ASN:ND2	1:F:816:PRO:HD2	2.05	0.72
1:B:1046:VAL:HG23	1:B:1048:PRO:HD3	1.72	0.72
1:C:1596:LEU:HD12	1:C:1597:PRO:HD2	1.72	0.72
1:F:1596:LEU:HD12	1:F:1597:PRO:HD2	1.72	0.72
1:B:816:PRO:HD2	1:C:1083:ASN:ND2	2.05	0.72
1:B:1596:LEU:HD12	1:B:1597:PRO:HD2	1.72	0.72
1:A:1596:LEU:HD12	1:A:1597:PRO:HD2	1.72	0.72
1:E:1596:LEU:HD12	1:E:1597:PRO:HD2	1.72	0.72
1:B:825:SER:OG	1:B:995:ASP:O	2.07	0.71
1:A:825:SER:OG	1:A:995:ASP:O	2.07	0.71
1:E:816:PRO:HD2	1:F:1083:ASN:ND2	2.05	0.71
1:D:816:PRO:HD2	1:E:1083:ASN:ND2	2.06	0.71
1:D:1244:ILE:HA	1:D:1363:SER:OG	1.90	0.70
1:A:1046:VAL:HG23	1:A:1048:PRO:HD3	1.72	0.70
1:A:1424:VAL:CG2	1:F:1217:SER:CB	2.54	0.70
1:C:985:ASP:HB3	1:D:1396:ASP:O	1.91	0.70
1:D:1330:ARG:HB3	1:D:1364:ASN:HA	1.71	0.70
1:A:816:PRO:HD2	1:B:1083:ASN:ND2	2.06	0.70
1:A:1297:ASP:OD2	1:A:1299:GLU:OE2	2.09	0.69
1:E:1046:VAL:HG23	1:E:1048:PRO:HD3	1.72	0.69
1:B:435:ARG:NH1	1:C:937:THR:O	2.26	0.69
1:C:816:PRO:HG2	1:D:1083:ASN:ND2	2.07	0.69
1:D:1046:VAL:HG23	1:D:1048:PRO:HD3	1.72	0.69
1:E:435:ARG:NH1	1:F:937:THR:O	2.25	0.69
1:E:1517:VAL:HG22	1:E:1565:THR:HG22	1.74	0.69
1:B:1567:PHE:CD2	1:B:1578:ARG:HG3	2.23	0.69
1:F:1517:VAL:HG22	1:F:1565:THR:HG22	1.75	0.69
1:A:1517:VAL:HG22	1:A:1565:THR:HG22	1.74	0.69
1:A:1396:ASP:O	1:F:985:ASP:HB3	1.93	0.69
1:C:1217:SER:CB	1:D:1424:VAL:CG2	2.54	0.69
1:D:1517:VAL:HG22	1:D:1565:THR:HG22	1.74	0.69
1:E:813:VAL:HG11	1:F:956:GLN:NE2	2.09	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1398:VAL:HG22	1:F:983:GLY:CA	2.23	0.68
1:B:813:VAL:HG11	1:C:956:GLN:NE2	2.08	0.68
1:C:1345:GLY:HA3	1:D:1578:ARG:HE	1.58	0.68
1:D:1363:SER:CB	1:D:1390:ASP:OD1	2.39	0.68
1:A:1530:GLU:O	1:F:1224:THR:HB	1.94	0.68
1:B:343:ASP:O	1:B:444:ASN:HA	1.94	0.68
1:D:1072:HIS:ND1	1:D:1152:ASP:OD1	2.27	0.68
1:E:721:ASP:OD2	1:E:744:ARG:NH2	2.27	0.68
1:B:721:ASP:OD2	1:B:744:ARG:NH2	2.27	0.68
1:C:983:GLY:CA	1:D:1398:VAL:HG22	2.22	0.67
1:B:1517:VAL:HG22	1:B:1565:THR:HG22	1.75	0.67
1:C:1517:VAL:HG22	1:C:1565:THR:HG22	1.75	0.67
1:E:343:ASP:O	1:E:444:ASN:HA	1.94	0.67
1:E:816:PRO:HD2	1:F:1083:ASN:HD21	1.60	0.67
1:C:1224:THR:HB	1:D:1530:GLU:O	1.94	0.67
1:C:1345:GLY:O	1:D:1576:GLY:HA3	1.95	0.67
1:D:721:ASP:OD2	1:D:744:ARG:NH2	2.27	0.67
1:A:1531:ALA:CB	1:F:1207:GLN:OE1	2.44	0.66
1:E:1072:HIS:ND1	1:E:1152:ASP:OD1	2.28	0.66
1:A:1072:HIS:ND1	1:A:1152:ASP:OD1	2.27	0.66
1:F:721:ASP:OD2	1:F:744:ARG:NH2	2.28	0.66
1:F:1072:HIS:ND1	1:F:1152:ASP:OD1	2.28	0.66
1:B:84:ASN:HD22	1:C:421:GLU:CB	2.09	0.66
1:C:1072:HIS:ND1	1:C:1152:ASP:OD1	2.28	0.66
1:D:1345:GLY:HA3	1:E:1578:ARG:HG3	1.78	0.66
1:B:886:PHE:HA	1:C:1301:THR:HG21	1.77	0.66
1:A:343:ASP:O	1:A:444:ASN:HA	1.96	0.66
1:A:1578:ARG:HE	1:F:1345:GLY:HA3	1.59	0.66
1:B:1072:HIS:ND1	1:B:1152:ASP:OD1	2.28	0.66
1:A:721:ASP:OD2	1:A:744:ARG:NH2	2.27	0.66
1:B:816:PRO:HD2	1:C:1083:ASN:HD21	1.60	0.65
1:B:923:GLU:OE1	1:B:976:GLY:O	2.15	0.65
1:C:721:ASP:OD2	1:C:744:ARG:NH2	2.28	0.65
1:C:923:GLU:OE1	1:C:976:GLY:O	2.15	0.65
1:E:886:PHE:HA	1:F:1301:THR:HG21	1.78	0.65
1:C:343:ASP:O	1:C:444:ASN:HA	1.96	0.65
1:C:1207:GLN:OE1	1:D:1531:ALA:CB	2.44	0.65
1:C:864:VAL:HG11	1:C:935:GLY:HA2	1.79	0.65
1:F:343:ASP:O	1:F:444:ASN:HA	1.96	0.65
1:F:923:GLU:OE1	1:F:976:GLY:O	2.15	0.65
1:A:923:GLU:OE1	1:A:976:GLY:O	2.15	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:84:ASN:HD22	1:F:421:GLU:CB	2.09	0.65
1:A:1576:GLY:HA3	1:F:1345:GLY:O	1.96	0.65
1:D:105:ARG:HA	1:D:230:LEU:HD12	1.78	0.65
1:E:923:GLU:OE1	1:E:976:GLY:O	2.15	0.65
1:A:105:ARG:HA	1:A:230:LEU:HD12	1.78	0.65
1:F:864:VAL:HG11	1:F:935:GLY:HA2	1.79	0.65
1:A:275:VAL:HG12	1:A:275:VAL:O	1.97	0.65
1:B:105:ARG:HA	1:B:230:LEU:HD12	1.79	0.65
1:C:1550:LEU:HD21	1:C:1564:GLY:HA3	1.79	0.65
1:B:275:VAL:HG12	1:B:275:VAL:O	1.97	0.64
1:D:1550:LEU:HD21	1:D:1564:GLY:HA3	1.80	0.64
1:A:1531:ALA:HB2	1:F:1207:GLN:OE1	1.98	0.64
1:B:1550:LEU:HD21	1:B:1564:GLY:HA3	1.79	0.64
1:F:1550:LEU:HD21	1:F:1564:GLY:HA3	1.79	0.64
1:C:1207:GLN:OE1	1:D:1531:ALA:HB2	1.98	0.64
1:D:275:VAL:HG12	1:D:275:VAL:O	1.97	0.64
1:D:343:ASP:O	1:D:444:ASN:HA	1.96	0.64
1:D:923:GLU:OE1	1:D:976:GLY:O	2.15	0.64
1:A:1550:LEU:HD21	1:A:1564:GLY:HA3	1.80	0.64
1:C:105:ARG:HA	1:C:230:LEU:HD12	1.80	0.64
1:E:105:ARG:HA	1:E:230:LEU:HD12	1.80	0.64
1:E:1550:LEU:HD21	1:E:1564:GLY:HA3	1.80	0.64
1:E:275:VAL:O	1:E:275:VAL:HG12	1.97	0.63
1:A:145:ASP:OD2	1:A:232:GLU:N	2.31	0.63
1:E:145:ASP:OD2	1:E:232:GLU:N	2.32	0.63
1:F:909:ASN:HB3	1:F:973:THR:HG22	1.81	0.63
1:A:813:VAL:HG11	1:B:956:GLN:NE2	2.14	0.63
1:A:864:VAL:HG11	1:A:935:GLY:HA2	1.80	0.63
1:C:495:LEU:HD12	1:C:503:ILE:HD13	1.81	0.63
1:B:86:LYS:HG2	1:C:322:ASN:HB2	1.80	0.63
1:B:909:ASN:HB3	1:B:973:THR:HG22	1.81	0.63
1:B:864:VAL:HG11	1:B:935:GLY:HA2	1.81	0.63
1:C:275:VAL:HG12	1:C:275:VAL:O	1.99	0.63
1:D:864:VAL:HG11	1:D:935:GLY:HA2	1.80	0.63
1:C:909:ASN:HB3	1:C:973:THR:HG22	1.81	0.63
1:E:864:VAL:HG11	1:E:935:GLY:HA2	1.81	0.63
1:E:86:LYS:HG2	1:F:322:ASN:HB2	1.80	0.62
1:D:613:VAL:HG22	1:D:623:ASN:HD21	1.64	0.62
1:F:275:VAL:HG12	1:F:275:VAL:O	1.99	0.62
1:A:909:ASN:HB3	1:A:973:THR:HG22	1.81	0.62
1:D:813:VAL:HG11	1:E:956:GLN:NE2	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:105:ARG:HA	1:F:230:LEU:HD12	1.80	0.62
1:C:816:PRO:CG	1:D:1083:ASN:ND2	2.62	0.62
1:D:1345:GLY:O	1:E:1576:GLY:HA3	2.00	0.62
1:A:1329:GLU:HG3	1:A:1485:SER:HB2	1.81	0.62
1:A:1083:ASN:OD1	1:F:815:THR:HG23	1.99	0.62
1:D:1329:GLU:HG3	1:D:1485:SER:HB2	1.81	0.62
1:A:613:VAL:HG22	1:A:623:ASN:HD21	1.64	0.61
1:B:145:ASP:OD2	1:B:232:GLU:N	2.32	0.61
1:D:495:LEU:HD12	1:D:503:ILE:HD13	1.81	0.61
1:D:1330:ARG:HB3	1:D:1363:SER:O	1.99	0.61
1:A:1466:THR:OG1	1:F:1220:ALA:O	2.18	0.61
1:E:234:ASN:HB2	1:F:422:SER:HB3	1.83	0.61
1:E:909:ASN:HB3	1:E:973:THR:HG22	1.81	0.61
1:A:495:LEU:HD12	1:A:503:ILE:HD13	1.81	0.61
1:F:613:VAL:HG22	1:F:623:ASN:HD21	1.66	0.61
1:C:1104:SER:CB	1:D:1455:ASP:OD1	2.48	0.61
1:F:495:LEU:HD12	1:F:503:ILE:HD13	1.81	0.61
1:D:909:ASN:HB3	1:D:973:THR:HG22	1.81	0.61
1:F:1341:TRP:CZ3	1:F:1353:ASP:HB3	2.36	0.61
1:B:1341:TRP:CZ3	1:B:1353:ASP:HB3	2.36	0.60
1:D:145:ASP:OD2	1:D:232:GLU:N	2.31	0.60
1:E:613:VAL:HG22	1:E:623:ASN:HD21	1.66	0.60
1:B:495:LEU:HD12	1:B:503:ILE:HD13	1.83	0.60
1:C:145:ASP:OD2	1:C:232:GLU:N	2.32	0.60
1:E:1341:TRP:CZ3	1:E:1353:ASP:HB3	2.36	0.60
1:A:1341:TRP:CZ3	1:A:1353:ASP:HB3	2.36	0.60
1:C:1341:TRP:CZ3	1:C:1353:ASP:HB3	2.36	0.60
1:C:613:VAL:HG22	1:C:623:ASN:HD21	1.66	0.60
1:E:495:LEU:HD12	1:E:503:ILE:HD13	1.83	0.60
1:D:1341:TRP:CZ3	1:D:1353:ASP:HB3	2.36	0.60
1:B:234:ASN:HB2	1:C:422:SER:HB3	1.83	0.60
1:C:1220:ALA:O	1:D:1466:THR:OG1	2.18	0.60
1:B:87:VAL:HG12	1:B:143:GLU:HB2	1.84	0.60
1:B:1567:PHE:HD2	1:B:1578:ARG:CG	2.11	0.59
1:F:145:ASP:OD2	1:F:232:GLU:N	2.31	0.59
1:F:1269:ASP:OD2	1:F:1271:ASP:OD2	2.21	0.59
1:B:613:VAL:HG22	1:B:623:ASN:HD21	1.67	0.59
1:E:1269:ASP:OD2	1:E:1271:ASP:OD2	2.21	0.59
1:A:1269:ASP:OD2	1:A:1271:ASP:OD2	2.21	0.59
1:B:1269:ASP:OD2	1:B:1271:ASP:OD2	2.21	0.59
1:A:1455:ASP:OD1	1:F:1104:SER:CB	2.51	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1352:GLU:OE2	1:F:1578:ARG:NH2	2.35	0.59
1:D:1269:ASP:OD2	1:D:1271:ASP:OD2	2.21	0.58
1:E:87:VAL:HG12	1:E:143:GLU:HB2	1.84	0.58
1:B:739:ALA:HB2	1:B:792:ILE:CG1	2.34	0.58
1:C:1201:LEU:HD12	1:C:1347:ASP:HB3	1.86	0.58
1:C:1269:ASP:OD2	1:C:1271:ASP:OD2	2.21	0.58
1:B:1102:ARG:NH2	1:B:1161:PRO:O	2.37	0.58
1:F:1102:ARG:NH2	1:F:1161:PRO:O	2.37	0.58
1:F:1201:LEU:HD12	1:F:1347:ASP:HB3	1.85	0.58
1:C:1438:ILE:HB	1:C:1469:LEU:HD23	1.85	0.58
1:A:1102:ARG:NH2	1:A:1161:PRO:O	2.37	0.58
1:B:1438:ILE:HB	1:B:1469:LEU:HD23	1.85	0.58
1:C:302:ASN:HB2	1:C:402:ILE:HD12	1.86	0.58
1:F:302:ASN:HB2	1:F:402:ILE:HD12	1.86	0.58
1:B:540:ILE:HA	1:B:547:GLN:OE1	2.04	0.58
1:D:1321:GLU:OE1	1:D:1393:PHE:CE2	2.55	0.58
1:D:540:ILE:HA	1:D:547:GLN:OE1	2.04	0.58
1:A:540:ILE:HA	1:A:547:GLN:OE1	2.04	0.57
1:B:1201:LEU:HD12	1:B:1347:ASP:HB3	1.86	0.57
1:E:77:GLY:H	1:F:94:VAL:HG21	1.69	0.57
1:F:1019:ASP:OD1	1:F:1262:ASN:ND2	2.37	0.57
1:E:1102:ARG:NH2	1:E:1161:PRO:O	2.37	0.57
1:F:540:ILE:HA	1:F:547:GLN:OE1	2.04	0.57
1:D:302:ASN:HB2	1:D:402:ILE:HD12	1.85	0.57
1:E:1201:LEU:HD12	1:E:1347:ASP:HB3	1.86	0.57
1:C:1102:ARG:NH2	1:C:1161:PRO:O	2.37	0.57
1:D:1438:ILE:HB	1:D:1469:LEU:HD23	1.85	0.57
1:C:739:ALA:HB2	1:C:792:ILE:CG1	2.35	0.57
1:A:302:ASN:HB2	1:A:402:ILE:HD12	1.85	0.57
1:A:816:PRO:HD2	1:B:1083:ASN:HD21	1.69	0.57
1:C:1019:ASP:OD1	1:C:1262:ASN:ND2	2.37	0.57
1:E:302:ASN:HB2	1:E:402:ILE:HD12	1.87	0.57
1:F:279:HIS:CE1	1:F:488:ARG:HD3	2.40	0.57
1:F:1092:GLN:HG2	1:F:1213:PRO:HG3	1.87	0.57
1:A:1019:ASP:OD1	1:A:1262:ASN:ND2	2.38	0.57
1:A:1201:LEU:HD12	1:A:1347:ASP:HB3	1.86	0.57
1:A:1438:ILE:HB	1:A:1469:LEU:HD23	1.86	0.57
1:C:1499:ASN:N	1:C:1524:ASP:OD2	2.35	0.57
1:D:1102:ARG:NH2	1:D:1161:PRO:O	2.37	0.57
1:D:1537:VAL:O	1:D:1550:LEU:N	2.38	0.57
1:F:1438:ILE:HB	1:F:1469:LEU:HD23	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:739:ALA:HB2	1:A:792:ILE:CG1	2.35	0.56
1:B:1019:ASP:OD1	1:B:1262:ASN:ND2	2.38	0.56
1:E:540:ILE:HA	1:E:547:GLN:OE1	2.04	0.56
1:B:77:GLY:H	1:C:94:VAL:HG21	1.69	0.56
1:B:302:ASN:HB2	1:B:402:ILE:HD12	1.86	0.56
1:C:1537:VAL:O	1:C:1550:LEU:N	2.38	0.56
1:D:739:ALA:HB2	1:D:792:ILE:CG1	2.35	0.56
1:E:1537:VAL:O	1:E:1550:LEU:N	2.38	0.56
1:F:1537:VAL:O	1:F:1550:LEU:N	2.38	0.56
1:C:540:ILE:HA	1:C:547:GLN:OE1	2.04	0.56
1:F:739:ALA:HB2	1:F:792:ILE:CG1	2.35	0.56
1:A:1092:GLN:HG2	1:A:1213:PRO:HG3	1.87	0.56
1:A:1537:VAL:O	1:A:1550:LEU:N	2.38	0.56
1:E:739:ALA:HB2	1:E:792:ILE:CG1	2.34	0.56
1:B:886:PHE:CA	1:C:1301:THR:HG21	2.36	0.56
1:E:1438:ILE:HB	1:E:1469:LEU:HD23	1.85	0.56
1:D:1019:ASP:OD1	1:D:1262:ASN:ND2	2.38	0.56
1:E:1092:GLN:HG2	1:E:1213:PRO:HG3	1.88	0.56
1:C:1092:GLN:HG2	1:C:1213:PRO:HG3	1.87	0.56
1:E:1019:ASP:OD1	1:E:1262:ASN:ND2	2.37	0.56
1:E:1376:TYR:CE1	1:E:1382:VAL:HG12	2.41	0.56
1:D:1201:LEU:HD12	1:D:1347:ASP:HB3	1.86	0.56
1:D:1369:VAL:HG23	1:D:1490:ILE:HD12	1.87	0.56
1:A:1376:TYR:CE1	1:A:1382:VAL:HG12	2.41	0.56
1:B:1019:ASP:HB3	1:B:1023:TYR:OH	2.06	0.56
1:B:1376:TYR:CE1	1:B:1382:VAL:HG12	2.41	0.56
1:F:1376:TYR:CE1	1:F:1382:VAL:HG12	2.41	0.56
1:B:1499:ASN:N	1:B:1524:ASP:OD2	2.34	0.56
1:F:1019:ASP:HB3	1:F:1023:TYR:OH	2.06	0.56
1:D:1376:TYR:CE1	1:D:1382:VAL:HG12	2.41	0.55
1:D:1499:ASN:N	1:D:1524:ASP:OD2	2.35	0.55
1:E:1019:ASP:HB3	1:E:1023:TYR:OH	2.06	0.55
1:F:1369:VAL:HG23	1:F:1490:ILE:HD12	1.88	0.55
1:C:1376:TYR:CE1	1:C:1382:VAL:HG12	2.41	0.55
1:E:435:ARG:NH2	1:F:954:ASP:O	2.37	0.55
1:F:1098:ILE:HG13	1:F:1208:VAL:HG12	1.88	0.55
1:E:886:PHE:CA	1:F:1301:THR:HG21	2.36	0.55
1:E:1098:ILE:HG13	1:E:1208:VAL:HG12	1.88	0.55
1:C:279:HIS:CE1	1:C:488:ARG:HD3	2.40	0.55
1:C:1019:ASP:HB3	1:C:1023:TYR:OH	2.06	0.55
1:B:1369:VAL:HG23	1:B:1490:ILE:HD12	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:816:PRO:HD2	1:E:1083:ASN:HD21	1.69	0.55
1:B:1098:ILE:HG13	1:B:1208:VAL:HG12	1.88	0.55
1:D:1321:GLU:OE2	1:D:1393:PHE:CD2	2.59	0.55
1:A:1098:ILE:HG13	1:A:1208:VAL:HG12	1.88	0.55
1:D:1019:ASP:HB3	1:D:1023:TYR:OH	2.06	0.55
1:B:1092:GLN:HG2	1:B:1213:PRO:HG3	1.88	0.55
1:B:1537:VAL:O	1:B:1550:LEU:N	2.38	0.55
1:C:1098:ILE:HG13	1:C:1208:VAL:HG12	1.88	0.55
1:B:435:ARG:NH2	1:C:954:ASP:O	2.37	0.55
1:C:1369:VAL:HG23	1:C:1490:ILE:HD12	1.88	0.55
1:A:1369:VAL:HG23	1:A:1490:ILE:HD12	1.89	0.54
1:B:534:ILE:HD13	1:B:549:GLY:HA3	1.89	0.54
1:D:1092:GLN:HG2	1:D:1213:PRO:HG3	1.87	0.54
1:E:1369:VAL:HG23	1:E:1490:ILE:HD12	1.88	0.54
1:A:1019:ASP:HB3	1:A:1023:TYR:OH	2.06	0.54
1:C:150:PRO:HB3	1:C:191:ILE:HG13	1.89	0.54
1:D:1098:ILE:HG13	1:D:1208:VAL:HG12	1.88	0.54
1:D:1269:ASP:OD1	1:D:1270:LEU:N	2.41	0.54
1:C:1269:ASP:OD1	1:C:1270:LEU:N	2.40	0.54
1:A:1269:ASP:OD1	1:A:1270:LEU:N	2.41	0.54
1:C:1297:ASP:OD2	1:C:1299:GLU:OE2	2.26	0.54
1:D:969:THR:HG21	1:D:973:THR:HG23	1.89	0.54
1:A:534:ILE:HD13	1:A:549:GLY:HA3	1.90	0.54
1:B:1269:ASP:OD1	1:B:1270:LEU:N	2.40	0.54
1:F:533:SER:OG	1:F:552:THR:O	2.25	0.54
1:A:1422:LYS:O	1:A:1423:LEU:HD12	2.08	0.54
1:B:547:GLN:HG3	1:B:683:ALA:HB3	1.90	0.54
1:B:1422:LYS:O	1:B:1423:LEU:HD12	2.08	0.54
1:E:534:ILE:HD13	1:E:549:GLY:HA3	1.89	0.54
1:B:150:PRO:HB3	1:B:191:ILE:HG13	1.90	0.54
1:D:1297:ASP:OD2	1:D:1299:GLU:OE2	2.26	0.54
1:D:1422:LYS:O	1:D:1423:LEU:HD12	2.08	0.54
1:C:1422:LYS:O	1:C:1423:LEU:HD12	2.08	0.54
1:E:533:SER:OG	1:E:552:THR:O	2.25	0.54
1:E:1269:ASP:OD1	1:E:1270:LEU:N	2.40	0.54
1:F:150:PRO:HB3	1:F:191:ILE:HG13	1.89	0.54
1:A:1398:VAL:HG22	1:F:983:GLY:HA3	1.91	0.53
1:B:1297:ASP:OD2	1:B:1299:GLU:OE2	2.26	0.53
1:E:1265:ALA:HA	1:E:1305:GLU:OE2	2.08	0.53
1:F:534:ILE:HD13	1:F:549:GLY:HA3	1.90	0.53
1:F:1422:LYS:O	1:F:1423:LEU:HD12	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1499:ASN:N	1:A:1524:ASP:OD2	2.35	0.53
1:F:1269:ASP:OD1	1:F:1270:LEU:N	2.40	0.53
1:D:436:GLY:O	1:E:861:ILE:HD13	2.08	0.53
1:E:1422:LYS:O	1:E:1423:LEU:HD12	2.08	0.53
1:B:1573:GLU:O	1:B:1578:ARG:NH1	2.42	0.53
1:C:525:THR:HG21	1:C:555:ILE:HD13	1.91	0.53
1:E:249:VAL:HG11	1:F:411:PRO:HG2	1.90	0.53
1:E:813:VAL:HG13	1:E:815:THR:HG23	1.91	0.53
1:E:1297:ASP:OD2	1:E:1299:GLU:OE2	2.26	0.53
1:B:1372:ASP:OD2	1:B:1383:TYR:HD2	1.92	0.53
1:C:534:ILE:HD13	1:C:549:GLY:HA3	1.90	0.53
1:D:534:ILE:HD13	1:D:549:GLY:HA3	1.90	0.53
1:E:1499:ASN:N	1:E:1524:ASP:OD2	2.35	0.53
1:C:969:THR:HG21	1:C:973:THR:HG23	1.90	0.53
1:D:1265:ALA:HA	1:D:1305:GLU:OE2	2.08	0.53
1:D:1321:GLU:CD	1:D:1393:PHE:CD1	2.82	0.53
1:F:969:THR:HG21	1:F:973:THR:HG23	1.90	0.53
1:A:969:THR:HG21	1:A:973:THR:HG23	1.89	0.53
1:B:813:VAL:HG13	1:B:815:THR:HG23	1.91	0.53
1:B:1532:VAL:HG13	1:B:1554:GLU:HB3	1.91	0.53
1:C:1163:SER:OG	1:C:1165:GLN:OE1	2.21	0.53
1:C:1265:ALA:HA	1:C:1305:GLU:OE2	2.08	0.53
1:C:1372:ASP:OD2	1:C:1383:TYR:HD2	1.92	0.53
1:D:1345:GLY:HA2	1:E:1578:ARG:HG3	1.88	0.53
1:E:150:PRO:HB3	1:E:191:ILE:HG13	1.90	0.53
1:F:1499:ASN:N	1:F:1524:ASP:OD2	2.34	0.53
1:A:1345:GLY:O	1:B:1576:GLY:HA3	2.08	0.53
1:B:249:VAL:HG11	1:C:411:PRO:HG2	1.90	0.53
1:C:436:GLY:O	1:D:861:ILE:HD13	2.09	0.53
1:A:533:SER:OG	1:A:552:THR:O	2.25	0.53
1:A:1102:ARG:NH1	1:A:1204:ASP:OD2	2.42	0.53
1:B:1102:ARG:NH1	1:B:1204:ASP:OD2	2.42	0.53
1:C:401:SER:O	1:C:401:SER:OG	2.22	0.53
1:C:1532:VAL:HG13	1:C:1554:GLU:HB3	1.90	0.53
1:D:1262:ASN:HB2	1:D:1309:SER:OG	2.09	0.53
1:D:1321:GLU:CD	1:D:1393:PHE:CG	2.81	0.53
1:D:1372:ASP:OD2	1:D:1383:TYR:HD2	1.92	0.53
1:E:1532:VAL:HG13	1:E:1554:GLU:HB3	1.91	0.53
1:A:436:GLY:O	1:B:861:ILE:HD13	2.08	0.52
1:A:1083:ASN:HD21	1:F:816:PRO:HD2	1.73	0.52
1:A:1372:ASP:OD2	1:A:1383:TYR:HD2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:739:ALA:HB2	1:B:792:ILE:HG13	1.91	0.52
1:D:1102:ARG:NH1	1:D:1204:ASP:OD2	2.42	0.52
1:D:1510:TYR:CE1	1:D:1516:GLY:HA2	2.45	0.52
1:E:401:SER:O	1:E:401:SER:OG	2.23	0.52
1:E:547:GLN:HG3	1:E:683:ALA:HB3	1.90	0.52
1:A:1262:ASN:HB2	1:A:1309:SER:OG	2.09	0.52
1:B:1265:ALA:HA	1:B:1305:GLU:OE2	2.08	0.52
1:C:435:ARG:NH1	1:D:937:THR:O	2.42	0.52
1:E:1510:TYR:CE1	1:E:1516:GLY:HA2	2.44	0.52
1:F:1102:ARG:NH1	1:F:1204:ASP:OD2	2.42	0.52
1:F:1574:SER:OG	1:F:1580:ARG:N	2.26	0.52
1:A:999:GLU:HB3	1:B:1304:ARG:NH1	2.25	0.52
1:C:1102:ARG:NH1	1:C:1204:ASP:OD2	2.42	0.52
1:C:1104:SER:HB3	1:D:1455:ASP:OD1	2.08	0.52
1:C:1503:VAL:HG22	1:C:1520:VAL:HG23	1.91	0.52
1:D:533:SER:OG	1:D:552:THR:O	2.25	0.52
1:D:1503:VAL:HG22	1:D:1520:VAL:HG23	1.91	0.52
1:F:1297:ASP:OD2	1:F:1299:GLU:OE2	2.26	0.52
1:B:76:LYS:HD2	1:C:94:VAL:O	2.10	0.52
1:C:322:ASN:OD1	1:C:322:ASN:C	2.48	0.52
1:C:1262:ASN:HB2	1:C:1309:SER:OG	2.10	0.52
1:A:150:PRO:HB3	1:A:191:ILE:HG13	1.90	0.52
1:A:937:THR:O	1:F:435:ARG:NH1	2.42	0.52
1:A:1265:ALA:HA	1:A:1305:GLU:OE2	2.08	0.52
1:A:1465:PRO:CG	1:F:1219:ASP:HB2	2.39	0.52
1:C:1510:TYR:CE1	1:C:1516:GLY:HA2	2.44	0.52
1:D:150:PRO:HB3	1:D:191:ILE:HG13	1.90	0.52
1:F:322:ASN:C	1:F:322:ASN:OD1	2.48	0.52
1:A:547:GLN:HG3	1:A:683:ALA:HB3	1.91	0.52
1:A:1532:VAL:HG13	1:A:1554:GLU:HB3	1.91	0.52
1:B:969:THR:HG21	1:B:973:THR:HG23	1.91	0.52
1:E:502:LEU:HD13	1:E:806:ASN:O	2.10	0.52
1:E:807:ASP:OD1	1:E:808:LEU:N	2.43	0.52
1:E:969:THR:HG21	1:E:973:THR:HG23	1.91	0.52
1:E:1262:ASN:HB2	1:E:1309:SER:OG	2.10	0.52
1:A:1503:VAL:HG22	1:A:1520:VAL:HG23	1.91	0.52
1:C:547:GLN:HG3	1:C:683:ALA:HB3	1.92	0.52
1:E:1372:ASP:OD2	1:E:1383:TYR:HD2	1.92	0.52
1:A:112:ASP:OD1	1:A:123:ASP:OD2	2.28	0.52
1:B:1411:VAL:HG12	1:B:1480:VAL:HG22	1.92	0.52
1:C:807:ASP:OD1	1:C:808:LEU:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:739:ALA:HB2	1:D:792:ILE:HG13	1.92	0.52
1:F:525:THR:HG21	1:F:555:ILE:HD13	1.91	0.52
1:F:1262:ASN:HB2	1:F:1309:SER:OG	2.10	0.52
1:F:1510:TYR:CE1	1:F:1516:GLY:HA2	2.44	0.52
1:A:739:ALA:HB2	1:A:792:ILE:HG13	1.92	0.52
1:E:739:ALA:HB2	1:E:792:ILE:HG13	1.92	0.52
1:F:1372:ASP:OD2	1:F:1383:TYR:HD2	1.92	0.52
1:F:1503:VAL:HG22	1:F:1520:VAL:HG23	1.91	0.52
1:B:807:ASP:OD1	1:B:808:LEU:N	2.43	0.52
1:B:1510:TYR:CE1	1:B:1516:GLY:HA2	2.45	0.52
1:C:1510:TYR:HE1	1:C:1516:GLY:HA2	1.75	0.52
1:E:1102:ARG:NH1	1:E:1204:ASP:OD2	2.42	0.52
1:F:807:ASP:OD1	1:F:808:LEU:N	2.43	0.52
1:C:1219:ASP:HB2	1:D:1465:PRO:CG	2.39	0.51
1:C:1411:VAL:HG12	1:C:1480:VAL:HG22	1.92	0.51
1:C:1473:ASP:OD1	1:C:1474:ASP:N	2.42	0.51
1:E:525:THR:HG21	1:E:555:ILE:HD13	1.92	0.51
1:F:1532:VAL:HG13	1:F:1554:GLU:HB3	1.90	0.51
1:A:695:ASP:OD2	1:A:696:SER:N	2.43	0.51
1:A:861:ILE:HD13	1:F:436:GLY:O	2.10	0.51
1:B:502:LEU:HD13	1:B:806:ASN:O	2.10	0.51
1:C:816:PRO:CG	1:D:1083:ASN:HD21	2.18	0.51
1:C:1055:THR:OG1	1:C:1062:GLU:OE2	2.22	0.51
1:A:1083:ASN:ND2	1:F:816:PRO:HG2	2.25	0.51
1:D:547:GLN:HG3	1:D:683:ALA:HB3	1.92	0.51
1:E:1163:SER:OG	1:E:1165:GLN:OE1	2.22	0.51
1:B:88:LEU:HD12	1:B:229:GLN:OE1	2.10	0.51
1:B:1503:VAL:HG22	1:B:1520:VAL:HG23	1.91	0.51
1:D:1532:VAL:HG13	1:D:1554:GLU:HB3	1.91	0.51
1:A:1446:ASP:OD1	1:A:1453:THR:HA	2.11	0.51
1:A:1578:ARG:HG3	1:F:1345:GLY:CA	2.40	0.51
1:A:724:SER:OG	1:A:740:ASN:ND2	2.44	0.51
1:A:807:ASP:OD1	1:A:808:LEU:N	2.44	0.51
1:A:1411:VAL:HG12	1:A:1480:VAL:HG22	1.92	0.51
1:A:1510:TYR:CE1	1:A:1516:GLY:HA2	2.44	0.51
1:A:1532:VAL:CG2	1:F:1226:SER:HB3	2.41	0.51
1:D:1446:ASP:OD1	1:D:1453:THR:HA	2.11	0.51
1:F:547:GLN:HG3	1:F:683:ALA:HB3	1.92	0.51
1:B:401:SER:O	1:B:401:SER:OG	2.23	0.51
1:B:533:SER:OG	1:B:552:THR:O	2.25	0.51
1:C:739:ALA:HB2	1:C:792:ILE:HG13	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1262:ASN:O	1:E:1308:ASP:HB3	2.11	0.51
1:E:1446:ASP:OD1	1:E:1453:THR:HA	2.11	0.51
1:F:695:ASP:OD2	1:F:696:SER:N	2.44	0.51
1:B:525:THR:HG21	1:B:555:ILE:HD13	1.92	0.51
1:B:1262:ASN:HB2	1:B:1309:SER:OG	2.10	0.51
1:D:502:LEU:HD13	1:D:806:ASN:O	2.11	0.51
1:D:695:ASP:OD2	1:D:696:SER:N	2.43	0.51
1:D:1510:TYR:HE1	1:D:1516:GLY:HA2	1.76	0.51
1:D:1574:SER:OG	1:D:1580:ARG:N	2.26	0.51
1:E:76:LYS:HD2	1:F:94:VAL:O	2.10	0.51
1:E:88:LEU:HD12	1:E:229:GLN:OE1	2.10	0.51
1:E:1503:VAL:HG22	1:E:1520:VAL:HG23	1.91	0.51
1:E:1574:SER:OG	1:E:1580:ARG:N	2.26	0.51
1:F:88:LEU:HD12	1:F:229:GLN:OE1	2.11	0.51
1:A:525:THR:HG21	1:A:555:ILE:HD13	1.93	0.51
1:A:1345:GLY:HA2	1:B:1578:ARG:HB2	1.92	0.51
1:B:695:ASP:OD2	1:B:696:SER:N	2.43	0.51
1:C:695:ASP:OD2	1:C:696:SER:N	2.44	0.51
1:C:1345:GLY:CA	1:D:1578:ARG:HG3	2.41	0.51
1:D:807:ASP:OD1	1:D:808:LEU:N	2.44	0.51
1:D:893:LEU:HD13	1:D:941:LEU:HD11	1.93	0.51
1:F:739:ALA:HB2	1:F:792:ILE:HG13	1.92	0.51
1:F:1411:VAL:HG12	1:F:1480:VAL:HG22	1.92	0.51
1:C:1446:ASP:OD1	1:C:1453:THR:HA	2.11	0.51
1:F:37:ALA:HB2	1:F:251:SER:O	2.11	0.51
1:F:1262:ASN:O	1:F:1308:ASP:HB3	2.11	0.51
1:D:525:THR:HG21	1:D:555:ILE:HD13	1.94	0.50
1:D:1262:ASN:O	1:D:1308:ASP:HB3	2.11	0.50
1:E:695:ASP:OD2	1:E:696:SER:N	2.43	0.50
1:A:88:LEU:HD12	1:A:229:GLN:OE1	2.11	0.50
1:A:502:LEU:HD13	1:A:806:ASN:O	2.11	0.50
1:D:1411:VAL:HG12	1:D:1480:VAL:HG22	1.92	0.50
1:F:1050:HIS:NE2	1:F:1274:GLU:OE1	2.45	0.50
1:B:1446:ASP:OD1	1:B:1453:THR:HA	2.11	0.50
1:E:1050:HIS:NE2	1:E:1274:GLU:OE1	2.45	0.50
1:F:1446:ASP:OD1	1:F:1453:THR:HA	2.11	0.50
1:F:1510:TYR:HE1	1:F:1516:GLY:HA2	1.75	0.50
1:C:1262:ASN:O	1:C:1308:ASP:HB3	2.11	0.50
1:F:502:LEU:HD13	1:F:806:ASN:O	2.12	0.50
1:A:1050:HIS:NE2	1:A:1274:GLU:OE1	2.45	0.50
1:A:1473:ASP:OD1	1:A:1474:ASP:N	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1262:ASN:O	1:B:1308:ASP:HB3	2.10	0.50
1:C:1050:HIS:NE2	1:C:1274:GLU:OE1	2.45	0.50
1:D:724:SER:OG	1:D:740:ASN:ND2	2.44	0.50
1:D:1050:HIS:NE2	1:D:1274:GLU:OE1	2.45	0.50
1:A:1163:SER:OG	1:A:1165:GLN:OE1	2.21	0.50
1:A:1262:ASN:O	1:A:1308:ASP:HB3	2.11	0.50
1:B:724:SER:OG	1:B:740:ASN:ND2	2.45	0.50
1:B:1050:HIS:NE2	1:B:1274:GLU:OE1	2.45	0.50
1:C:88:LEU:HD12	1:C:229:GLN:OE1	2.11	0.50
1:C:1385:THR:HG22	1:C:1434:THR:HG22	1.94	0.50
1:D:999:GLU:HG2	1:E:1304:ARG:NH1	2.27	0.50
1:E:1510:TYR:HE1	1:E:1516:GLY:HA2	1.75	0.50
1:F:724:SER:OG	1:F:740:ASN:ND2	2.44	0.50
1:A:1510:TYR:HE1	1:A:1516:GLY:HA2	1.76	0.50
1:B:1385:THR:HG22	1:B:1434:THR:HG22	1.94	0.50
1:C:502:LEU:HD13	1:C:806:ASN:O	2.12	0.50
1:E:1411:VAL:HG12	1:E:1480:VAL:HG22	1.92	0.50
1:C:724:SER:OG	1:C:740:ASN:ND2	2.44	0.50
1:C:1226:SER:HB3	1:D:1532:VAL:CG2	2.41	0.50
1:D:88:LEU:HD12	1:D:229:GLN:OE1	2.11	0.50
1:E:1473:ASP:OD1	1:E:1474:ASP:N	2.42	0.50
1:C:1226:SER:HB3	1:D:1532:VAL:HG23	1.94	0.49
1:C:533:SER:OG	1:C:552:THR:O	2.25	0.49
1:D:1385:THR:HG22	1:D:1434:THR:HG22	1.94	0.49
1:E:84:ASN:ND2	1:F:421:GLU:HB3	2.27	0.49
1:F:1438:ILE:HD12	1:F:1529:PRO:HG2	1.95	0.49
1:A:1574:SER:OG	1:A:1580:ARG:N	2.27	0.49
1:B:1163:SER:OG	1:B:1165:GLN:OE1	2.21	0.49
1:B:1510:TYR:HE1	1:B:1516:GLY:HA2	1.76	0.49
1:E:893:LEU:HD13	1:E:941:LEU:HD11	1.95	0.49
1:B:84:ASN:ND2	1:C:421:GLU:CB	2.75	0.49
1:B:1276:ASP:HB3	1:B:1281:THR:HG23	1.95	0.49
1:B:1438:ILE:HD12	1:B:1529:PRO:HG2	1.95	0.49
1:C:983:GLY:HA3	1:D:1398:VAL:HG22	1.91	0.49
1:C:1438:ILE:HD12	1:C:1529:PRO:HG2	1.94	0.49
1:E:724:SER:OG	1:E:740:ASN:ND2	2.45	0.49
1:F:1276:ASP:HB3	1:F:1281:THR:HG23	1.95	0.49
1:A:745:ILE:HD11	1:A:761:LEU:HD21	1.94	0.49
1:A:1385:THR:HG22	1:A:1434:THR:HG22	1.94	0.49
1:A:1455:ASP:OD1	1:F:1104:SER:HB3	2.12	0.49
1:A:1578:ARG:CZ	1:F:1352:GLU:OE2	2.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:512:PHE:HA	1:E:516:GLU:HG3	1.95	0.49
1:E:745:ILE:HD11	1:E:761:LEU:HD21	1.94	0.49
1:A:512:PHE:HA	1:A:516:GLU:HG3	1.94	0.49
1:B:112:ASP:OD1	1:B:123:ASP:OD2	2.31	0.49
1:C:1122:ASP:HB2	1:C:1133:ILE:HD12	1.95	0.49
1:A:275:VAL:HB	1:A:485:LYS:HE3	1.94	0.49
1:A:893:LEU:HD13	1:A:941:LEU:HD11	1.93	0.49
1:A:1122:ASP:HB2	1:A:1133:ILE:HD12	1.95	0.49
1:B:275:VAL:HB	1:B:485:LYS:HE3	1.95	0.49
1:B:512:PHE:HA	1:B:516:GLU:HG3	1.95	0.49
1:B:745:ILE:HD11	1:B:761:LEU:HD21	1.94	0.49
1:C:512:PHE:HA	1:C:516:GLU:HG3	1.95	0.49
1:C:1276:ASP:HB3	1:C:1281:THR:HG23	1.95	0.49
1:D:512:PHE:HA	1:D:516:GLU:HG3	1.94	0.49
1:D:745:ILE:HD11	1:D:761:LEU:HD21	1.94	0.49
1:F:512:PHE:HA	1:F:516:GLU:HG3	1.95	0.49
1:E:84:ASN:ND2	1:F:421:GLU:CB	2.75	0.49
1:E:730:ASP:HB2	1:E:732:VAL:HG23	1.95	0.49
1:E:813:VAL:HG11	1:F:956:GLN:CD	2.33	0.49
1:B:1051:ALA:HA	1:B:1054:ILE:HD12	1.95	0.49
1:A:804:ASN:HD21	1:B:1087:GLU:HG3	1.78	0.49
1:A:1276:ASP:HB3	1:A:1281:THR:HG23	1.95	0.49
1:A:1532:VAL:HG23	1:F:1226:SER:HB3	1.94	0.49
1:B:84:ASN:ND2	1:C:421:GLU:HB3	2.27	0.49
1:B:1122:ASP:HB2	1:B:1133:ILE:HD12	1.95	0.49
1:D:1122:ASP:HB2	1:D:1133:ILE:HD12	1.95	0.49
1:D:275:VAL:HB	1:D:485:LYS:HE3	1.94	0.48
1:D:804:ASN:HD21	1:E:1087:GLU:HG3	1.77	0.48
1:E:902:TRP:CZ2	1:E:958:PRO:HG3	2.48	0.48
1:E:1239:ASP:OD1	1:E:1240:LYS:N	2.46	0.48
1:A:1051:ALA:HA	1:A:1054:ILE:HD12	1.95	0.48
1:B:813:VAL:HG11	1:C:956:GLN:CD	2.33	0.48
1:D:112:ASP:OD1	1:D:123:ASP:OD2	2.30	0.48
1:E:1051:ALA:HA	1:E:1054:ILE:HD12	1.95	0.48
1:E:1385:THR:HG22	1:E:1434:THR:HG22	1.94	0.48
1:E:1438:ILE:HD12	1:E:1529:PRO:HG2	1.94	0.48
1:A:354:GLN:NE2	1:B:861:ILE:HD12	2.28	0.48
1:B:1075:ILE:HD12	1:B:1139:MET:CE	2.43	0.48
1:E:1276:ASP:HB3	1:E:1281:THR:HG23	1.95	0.48
1:E:1346:SER:OG	1:E:1348:TYR:O	2.30	0.48
1:F:89:ARG:NH1	1:F:140:SER:O	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1385:THR:HG22	1:F:1434:THR:HG22	1.94	0.48
1:B:293:ASP:OD1	1:B:294:GLU:OE1	2.31	0.48
1:B:902:TRP:CZ2	1:B:958:PRO:HG3	2.48	0.48
1:A:1438:ILE:HD12	1:A:1529:PRO:HG2	1.95	0.48
1:D:730:ASP:HB2	1:D:732:VAL:HG23	1.95	0.48
1:D:1163:SER:OG	1:D:1165:GLN:OE1	2.21	0.48
1:D:1346:SER:OG	1:D:1348:TYR:O	2.30	0.48
1:E:275:VAL:HB	1:E:485:LYS:HE3	1.95	0.48
1:E:1075:ILE:HD12	1:E:1139:MET:CE	2.43	0.48
1:F:110:ILE:O	1:F:113:SER:OG	2.31	0.48
1:F:112:ASP:OD1	1:F:123:ASP:OD2	2.31	0.48
1:F:1239:ASP:OD1	1:F:1240:LYS:N	2.46	0.48
1:A:273:PRO:HG2	1:A:276:SER:OG	2.14	0.48
1:B:1559:THR:HG23	1:B:1561:ILE:H	1.78	0.48
1:C:89:ARG:NH1	1:C:140:SER:O	2.46	0.48
1:E:112:ASP:OD1	1:E:123:ASP:OD2	2.31	0.48
1:A:1087:GLU:HG3	1:F:804:ASN:HD21	1.79	0.48
1:A:1143:ALA:HB3	1:A:1146:ALA:HB2	1.96	0.48
1:A:1559:THR:HG23	1:A:1561:ILE:H	1.78	0.48
1:F:275:VAL:O	1:F:275:VAL:CG1	2.62	0.48
1:F:1143:ALA:HB3	1:F:1146:ALA:HB2	1.96	0.48
1:F:1346:SER:OG	1:F:1348:TYR:O	2.30	0.48
1:F:1559:THR:HG23	1:F:1561:ILE:H	1.78	0.48
1:A:629:VAL:HG11	1:A:704:MET:HE3	1.96	0.48
1:B:893:LEU:HD13	1:B:941:LEU:HD11	1.95	0.48
1:B:1258:PHE:HB3	1:B:1268:TYR:CE2	2.49	0.48
1:C:273:PRO:HG2	1:C:276:SER:OG	2.14	0.48
1:C:902:TRP:CZ2	1:C:958:PRO:HG3	2.49	0.48
1:C:1352:GLU:OE2	1:D:1578:ARG:CZ	2.62	0.48
1:C:1559:THR:HG23	1:C:1561:ILE:H	1.78	0.48
1:D:354:GLN:NE2	1:E:861:ILE:HD12	2.28	0.48
1:D:902:TRP:CZ2	1:D:958:PRO:HG3	2.49	0.48
1:D:1269:ASP:CG	1:D:1271:ASP:OD2	2.52	0.48
1:D:1559:THR:HG23	1:D:1561:ILE:H	1.78	0.48
1:E:804:ASN:HD21	1:F:1087:GLU:HG3	1.79	0.48
1:F:902:TRP:CZ2	1:F:958:PRO:HG3	2.49	0.48
1:A:275:VAL:O	1:A:275:VAL:CG1	2.62	0.48
1:A:902:TRP:CZ2	1:A:958:PRO:HG3	2.49	0.48
1:A:1269:ASP:CG	1:A:1271:ASP:OD2	2.52	0.48
1:B:730:ASP:HB2	1:B:732:VAL:HG23	1.95	0.48
1:C:112:ASP:OD1	1:C:123:ASP:OD2	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:110:ILE:O	1:D:113:SER:OG	2.30	0.48
1:D:273:PRO:HG2	1:D:276:SER:OG	2.14	0.48
1:D:1473:ASP:OD1	1:D:1474:ASP:N	2.42	0.48
1:E:89:ARG:NH1	1:E:140:SER:O	2.47	0.48
1:E:1245:ILE:HD12	1:E:1245:ILE:H	1.79	0.48
1:E:1269:ASP:CG	1:E:1271:ASP:OD2	2.52	0.48
1:F:1122:ASP:HB2	1:F:1133:ILE:HD12	1.95	0.48
1:C:804:ASN:HD21	1:D:1087:GLU:HG3	1.78	0.48
1:C:1258:PHE:HB3	1:C:1268:TYR:CE2	2.49	0.48
1:D:1051:ALA:HA	1:D:1054:ILE:HD12	1.95	0.48
1:A:730:ASP:HB2	1:A:732:VAL:HG23	1.94	0.47
1:B:1143:ALA:HB3	1:B:1146:ALA:HB2	1.95	0.47
1:B:1245:ILE:HD12	1:B:1245:ILE:H	1.79	0.47
1:C:730:ASP:HB2	1:C:732:VAL:HG23	1.95	0.47
1:C:1269:ASP:CG	1:C:1271:ASP:OD2	2.52	0.47
1:D:1239:ASP:OD1	1:D:1240:LYS:N	2.46	0.47
1:E:293:ASP:OD1	1:E:294:GLU:OE1	2.31	0.47
1:E:1559:THR:HG23	1:E:1561:ILE:H	1.78	0.47
1:F:1048:PRO:HD2	1:F:1341:TRP:CD1	2.49	0.47
1:C:275:VAL:O	1:C:275:VAL:CG1	2.62	0.47
1:C:1239:ASP:OD1	1:C:1240:LYS:N	2.46	0.47
1:D:1438:ILE:HD12	1:D:1529:PRO:HG2	1.95	0.47
1:D:1555:THR:OG1	1:D:1559:THR:HG21	2.14	0.47
1:F:293:ASP:OD1	1:F:294:GLU:OE1	2.32	0.47
1:B:275:VAL:O	1:B:275:VAL:CG1	2.62	0.47
1:B:290:ASP:OD2	1:B:293:ASP:N	2.46	0.47
1:F:273:PRO:HG2	1:F:276:SER:OG	2.14	0.47
1:A:293:ASP:OD1	1:A:294:GLU:OE1	2.32	0.47
1:A:1075:ILE:HD12	1:A:1139:MET:HE3	1.96	0.47
1:A:1239:ASP:OD1	1:A:1240:LYS:N	2.46	0.47
1:A:1534:ASN:CG	1:F:1205:ILE:HG12	2.34	0.47
1:B:1269:ASP:CG	1:B:1271:ASP:OD2	2.52	0.47
1:B:1473:ASP:OD1	1:B:1474:ASP:N	2.42	0.47
1:D:1276:ASP:HB3	1:D:1281:THR:HG23	1.95	0.47
1:D:1403:GLU:HG2	1:D:1404:THR:HG23	1.97	0.47
1:E:1122:ASP:HB2	1:E:1133:ILE:HD12	1.95	0.47
1:F:730:ASP:HB2	1:F:732:VAL:HG23	1.96	0.47
1:F:1051:ALA:HA	1:F:1054:ILE:HD12	1.96	0.47
1:A:89:ARG:NH1	1:A:140:SER:O	2.47	0.47
1:A:104:ASP:OD2	1:A:105:ARG:N	2.48	0.47
1:B:89:ARG:NH1	1:B:140:SER:O	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1507:GLU:HB2	1:C:1510:TYR:CE2	2.50	0.47
1:D:1507:GLU:HB2	1:D:1510:TYR:CE2	2.50	0.47
1:E:275:VAL:O	1:E:275:VAL:CG1	2.62	0.47
1:E:1403:GLU:HG2	1:E:1404:THR:HG23	1.97	0.47
1:E:1555:THR:OG1	1:E:1559:THR:HG21	2.14	0.47
1:F:1258:PHE:HB3	1:F:1268:TYR:CE2	2.49	0.47
1:F:1555:THR:OG1	1:F:1559:THR:HG21	2.14	0.47
1:A:1258:PHE:HB3	1:A:1268:TYR:CE2	2.50	0.47
1:B:1239:ASP:OD1	1:B:1240:LYS:N	2.46	0.47
1:C:104:ASP:OD2	1:C:105:ARG:N	2.48	0.47
1:C:629:VAL:HG11	1:C:704:MET:HE3	1.97	0.47
1:C:1048:PRO:HD2	1:C:1341:TRP:CD1	2.49	0.47
1:C:1245:ILE:HD12	1:C:1245:ILE:H	1.79	0.47
1:C:1555:THR:OG1	1:C:1559:THR:HG21	2.14	0.47
1:D:1075:ILE:HD12	1:D:1139:MET:CE	2.45	0.47
1:F:104:ASP:OD2	1:F:105:ARG:N	2.48	0.47
1:F:290:ASP:OD2	1:F:293:ASP:N	2.47	0.47
1:A:1069:LEU:O	1:A:1154:ASN:ND2	2.47	0.47
1:B:1048:PRO:HD2	1:B:1341:TRP:CD1	2.49	0.47
1:C:525:THR:HG21	1:C:555:ILE:CD1	2.45	0.47
1:C:733:GLN:HB2	1:C:736:GLU:OE2	2.15	0.47
1:C:1143:ALA:HB3	1:C:1146:ALA:HB2	1.96	0.47
1:C:1205:ILE:HG12	1:D:1534:ASN:ND2	2.29	0.47
1:C:1205:ILE:HG12	1:D:1534:ASN:CG	2.34	0.47
1:D:1143:ALA:HB3	1:D:1146:ALA:HB2	1.96	0.47
1:D:1596:LEU:HD12	1:D:1597:PRO:CD	2.44	0.47
1:E:234:ASN:HB3	1:F:422:SER:HB3	1.94	0.47
1:E:1507:GLU:HB2	1:E:1510:TYR:CE2	2.50	0.47
1:F:1507:GLU:HB2	1:F:1510:TYR:CE2	2.50	0.47
1:A:607:THR:O	1:A:610:GLU:HG2	2.15	0.47
1:B:234:ASN:HB3	1:C:422:SER:HB3	1.94	0.47
1:B:484:ASN:HD21	1:B:753:ASN:HA	1.80	0.47
1:B:1069:LEU:O	1:B:1154:ASN:ND2	2.47	0.47
1:C:1051:ALA:HA	1:C:1054:ILE:HD12	1.96	0.47
1:D:89:ARG:NH1	1:D:140:SER:O	2.47	0.47
1:D:1048:PRO:HD2	1:D:1341:TRP:CD1	2.49	0.47
1:D:1322:SER:HB2	1:D:1327:LYS:HG2	1.96	0.47
1:E:273:PRO:HG2	1:E:276:SER:OG	2.15	0.47
1:B:804:ASN:HD21	1:C:1087:GLU:HG3	1.79	0.47
1:D:104:ASP:OD2	1:D:105:ARG:N	2.48	0.47
1:D:293:ASP:OD1	1:D:294:GLU:OE1	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1258:PHE:HB3	1:D:1268:TYR:CE2	2.50	0.47
1:E:886:PHE:C	1:F:1301:THR:HG21	2.36	0.47
1:E:1048:PRO:HD2	1:E:1341:TRP:CD1	2.50	0.47
1:E:1258:PHE:HB3	1:E:1268:TYR:CE2	2.49	0.47
1:C:290:ASP:OD2	1:C:293:ASP:N	2.47	0.47
1:C:293:ASP:OD1	1:C:294:GLU:OE1	2.32	0.47
1:C:1322:SER:HB2	1:C:1327:LYS:HG2	1.97	0.47
1:E:607:THR:O	1:E:610:GLU:HG2	2.15	0.47
1:F:1269:ASP:CG	1:F:1271:ASP:OD2	2.53	0.47
1:A:290:ASP:OD2	1:A:293:ASP:N	2.46	0.46
1:A:1048:PRO:HD2	1:A:1341:TRP:CD1	2.50	0.46
1:A:1534:ASN:ND2	1:F:1205:ILE:HG12	2.30	0.46
1:B:607:THR:O	1:B:610:GLU:HG2	2.15	0.46
1:B:1507:GLU:HB2	1:B:1510:TYR:CE2	2.50	0.46
1:B:1555:THR:OG1	1:B:1559:THR:HG21	2.14	0.46
1:D:290:ASP:OD2	1:D:293:ASP:N	2.46	0.46
1:E:84:ASN:HD22	1:F:421:GLU:HB3	1.80	0.46
1:E:104:ASP:OD2	1:E:105:ARG:N	2.48	0.46
1:E:1409:ILE:CD1	1:E:1423:LEU:HD13	2.46	0.46
1:F:525:THR:HG21	1:F:555:ILE:CD1	2.45	0.46
1:F:1403:GLU:HG2	1:F:1404:THR:HG23	1.97	0.46
1:A:956:GLN:CD	1:F:813:VAL:HG11	2.35	0.46
1:A:1507:GLU:HB2	1:A:1510:TYR:CE2	2.50	0.46
1:B:733:GLN:HB2	1:B:736:GLU:OE2	2.15	0.46
1:C:1403:GLU:HG2	1:C:1404:THR:HG23	1.97	0.46
1:E:733:GLN:HB2	1:E:736:GLU:OE2	2.15	0.46
1:E:1143:ALA:HB3	1:E:1146:ALA:HB2	1.95	0.46
1:F:607:THR:O	1:F:610:GLU:HG2	2.16	0.46
1:A:733:GLN:HB2	1:A:736:GLU:OE2	2.16	0.46
1:A:1409:ILE:CD1	1:A:1423:LEU:HD13	2.45	0.46
1:B:273:PRO:HG2	1:B:276:SER:OG	2.15	0.46
1:C:484:ASN:HD21	1:C:753:ASN:HA	1.80	0.46
1:C:1596:LEU:HD12	1:C:1597:PRO:CD	2.44	0.46
1:F:401:SER:O	1:F:401:SER:OG	2.22	0.46
1:F:484:ASN:HD21	1:F:753:ASN:HA	1.80	0.46
1:F:1075:ILE:HD12	1:F:1139:MET:CE	2.45	0.46
1:A:1075:ILE:HD12	1:A:1139:MET:CE	2.45	0.46
1:A:1555:THR:OG1	1:A:1559:THR:HG21	2.14	0.46
1:B:104:ASP:OD2	1:B:105:ARG:N	2.48	0.46
1:B:680:LEU:HD13	1:B:684:VAL:HG11	1.98	0.46
1:D:733:GLN:HB2	1:D:736:GLU:OE2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1245:ILE:HD12	1:F:1245:ILE:H	1.79	0.46
1:B:1346:SER:OG	1:B:1348:TYR:O	2.31	0.46
1:F:733:GLN:HB2	1:F:736:GLU:OE2	2.14	0.46
1:A:1578:ARG:NH2	1:F:1352:GLU:OE2	2.49	0.46
1:C:607:THR:O	1:C:610:GLU:HG2	2.16	0.46
1:C:1075:ILE:HD12	1:C:1139:MET:CE	2.45	0.46
1:C:1352:GLU:OE2	1:D:1578:ARG:NH2	2.49	0.46
1:D:275:VAL:O	1:D:275:VAL:CG1	2.62	0.46
1:E:484:ASN:HD21	1:E:753:ASN:HA	1.80	0.46
1:F:1409:ILE:CD1	1:F:1423:LEU:HD13	2.46	0.46
1:B:739:ALA:HB2	1:B:792:ILE:HG12	1.97	0.46
1:B:1300:PRO:O	1:B:1315:ILE:HD11	2.16	0.46
1:B:1403:GLU:HG2	1:B:1404:THR:HG23	1.97	0.46
1:C:1104:SER:HB2	1:D:1455:ASP:OD1	2.16	0.46
1:C:1574:SER:OG	1:C:1580:ARG:N	2.27	0.46
1:D:87:VAL:HG12	1:D:143:GLU:HB3	1.98	0.46
1:D:1409:ILE:CD1	1:D:1423:LEU:HD13	2.45	0.46
1:F:1300:PRO:O	1:F:1315:ILE:HD11	2.16	0.46
1:F:1322:SER:HB2	1:F:1327:LYS:HG2	1.97	0.46
1:A:1403:GLU:HG2	1:A:1404:THR:HG23	1.97	0.46
1:C:1075:ILE:HD12	1:C:1139:MET:HE3	1.97	0.46
1:D:484:ASN:HD21	1:D:753:ASN:HA	1.81	0.46
1:D:739:ALA:HB2	1:D:792:ILE:HG12	1.98	0.46
1:D:1300:PRO:O	1:D:1315:ILE:HD11	2.16	0.46
1:E:1069:LEU:O	1:E:1154:ASN:ND2	2.47	0.46
1:F:1027:PHE:HB3	1:F:1349:VAL:HB	1.98	0.46
1:A:1269:ASP:OD1	1:A:1271:ASP:OD2	2.34	0.46
1:B:525:THR:HG21	1:B:555:ILE:CD1	2.46	0.46
1:D:1269:ASP:OD1	1:D:1271:ASP:OD2	2.34	0.46
1:F:893:LEU:HD13	1:F:941:LEU:HD11	1.98	0.46
1:B:84:ASN:HD22	1:C:421:GLU:HB3	1.80	0.46
1:E:290:ASP:OD2	1:E:293:ASP:N	2.46	0.46
1:E:1596:LEU:HD12	1:E:1597:PRO:CD	2.44	0.46
1:A:1300:PRO:O	1:A:1315:ILE:HD11	2.16	0.45
1:B:502:LEU:HD22	1:B:806:ASN:HB3	1.98	0.45
1:C:739:ALA:HB2	1:C:792:ILE:HG12	1.98	0.45
1:C:1300:PRO:O	1:C:1315:ILE:HD11	2.16	0.45
1:D:680:LEU:HD13	1:D:684:VAL:HG11	1.98	0.45
1:F:745:ILE:HD11	1:F:761:LEU:HD21	1.98	0.45
1:F:1596:LEU:HD12	1:F:1597:PRO:CD	2.44	0.45
1:A:110:ILE:O	1:A:113:SER:OG	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:904:THR:OG1	1:A:906:ASP:OD2	2.34	0.45
1:A:1027:PHE:HB3	1:A:1349:VAL:HB	1.98	0.45
1:A:1346:SER:OG	1:A:1348:TYR:O	2.30	0.45
1:B:1575:SER:HB3	1:B:1578:ARG:HH21	1.81	0.45
1:C:1409:ILE:CD1	1:C:1423:LEU:HD13	2.46	0.45
1:E:66:ASP:OD1	1:E:67:SER:N	2.50	0.45
1:E:1300:PRO:O	1:E:1315:ILE:HD11	2.16	0.45
1:A:680:LEU:HD13	1:A:684:VAL:HG11	1.97	0.45
1:B:904:THR:OG1	1:B:906:ASP:OD2	2.35	0.45
1:C:893:LEU:HD13	1:C:941:LEU:HD11	1.98	0.45
1:C:1269:ASP:OD1	1:C:1271:ASP:OD2	2.35	0.45
1:D:607:THR:O	1:D:610:GLU:HG2	2.15	0.45
1:F:629:VAL:HG11	1:F:704:MET:HE3	1.98	0.45
1:B:66:ASP:OD1	1:B:67:SER:N	2.50	0.45
1:C:66:ASP:OD1	1:C:67:SER:N	2.49	0.45
1:C:87:VAL:HG12	1:C:143:GLU:HB3	1.99	0.45
1:D:66:ASP:OD1	1:D:67:SER:N	2.50	0.45
1:B:1409:ILE:CD1	1:B:1423:LEU:HD13	2.46	0.45
1:C:1222:THR:O	1:D:1530:GLU:OE1	2.35	0.45
1:D:1027:PHE:HB3	1:D:1349:VAL:HB	1.99	0.45
1:D:1330:ARG:CB	1:D:1364:ASN:HA	2.43	0.45
1:F:1473:ASP:OD1	1:F:1474:ASP:N	2.42	0.45
1:A:87:VAL:HG12	1:A:143:GLU:HB3	1.98	0.45
1:C:904:THR:OG1	1:C:906:ASP:OD2	2.35	0.45
1:C:1346:SER:OG	1:C:1348:TYR:O	2.30	0.45
1:D:1245:ILE:H	1:D:1245:ILE:HD12	1.81	0.45
1:E:525:THR:HG21	1:E:555:ILE:CD1	2.46	0.45
1:A:739:ALA:HB2	1:A:792:ILE:HG12	1.98	0.45
1:C:502:LEU:HD22	1:C:806:ASN:HB3	1.98	0.45
1:C:1027:PHE:HB3	1:C:1349:VAL:HB	1.98	0.45
1:D:1345:GLY:HA3	1:E:1578:ARG:CG	2.45	0.45
1:E:680:LEU:HD13	1:E:684:VAL:HG11	1.98	0.45
1:F:654:ASN:OD1	1:F:655:ASP:N	2.50	0.45
1:F:1069:LEU:O	1:F:1154:ASN:ND2	2.47	0.45
1:B:837:TYR:CZ	1:B:843:VAL:HG23	2.52	0.45
1:B:1027:PHE:HB3	1:B:1349:VAL:HB	1.99	0.45
1:B:1269:ASP:OD1	1:B:1271:ASP:OD2	2.35	0.45
1:C:816:PRO:HG2	1:D:1083:ASN:HD22	1.79	0.45
1:E:654:ASN:OD1	1:E:655:ASP:N	2.50	0.45
1:E:837:TYR:CZ	1:E:843:VAL:HG23	2.52	0.45
1:F:66:ASP:OD1	1:F:67:SER:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:739:ALA:HB2	1:F:792:ILE:HG12	1.98	0.45
1:C:813:VAL:HG11	1:D:956:GLN:CD	2.37	0.45
1:E:999:GLU:OE1	1:F:1265:ALA:HB3	2.17	0.45
1:F:837:TYR:CZ	1:F:843:VAL:HG23	2.52	0.45
1:A:502:LEU:HD22	1:A:806:ASN:HB3	1.99	0.45
1:A:654:ASN:OD1	1:A:655:ASP:N	2.50	0.45
1:B:1075:ILE:HD12	1:B:1139:MET:HE3	1.99	0.45
1:C:745:ILE:HD11	1:C:761:LEU:HD21	1.98	0.45
1:C:837:TYR:CZ	1:C:843:VAL:HG23	2.52	0.45
1:C:881:THR:OG1	1:C:888:GLU:OE2	2.25	0.45
1:D:629:VAL:HG11	1:D:704:MET:HE3	1.99	0.45
1:A:66:ASP:OD1	1:A:67:SER:N	2.50	0.44
1:A:484:ASN:HD21	1:A:753:ASN:HA	1.81	0.44
1:A:1530:GLU:OE1	1:F:1222:THR:O	2.35	0.44
1:C:110:ILE:O	1:C:113:SER:OG	2.31	0.44
1:D:1075:ILE:HD12	1:D:1139:MET:HE3	1.99	0.44
1:F:1269:ASP:OD1	1:F:1271:ASP:OD2	2.35	0.44
1:A:313:ASP:OD1	1:A:314:THR:N	2.47	0.44
1:A:525:THR:HG21	1:A:555:ILE:CD1	2.47	0.44
1:A:1534:ASN:O	1:F:1103:GLY:HA2	2.18	0.44
1:A:1596:LEU:HD12	1:A:1597:PRO:CD	2.44	0.44
1:B:1274:GLU:HB3	1:B:1337:GLU:HB3	2.00	0.44
1:C:313:ASP:OD1	1:C:314:THR:N	2.47	0.44
1:D:904:THR:OG1	1:D:906:ASP:OD2	2.35	0.44
1:E:110:ILE:O	1:E:113:SER:OG	2.30	0.44
1:E:739:ALA:HB2	1:E:792:ILE:HG12	1.97	0.44
1:E:1027:PHE:HB3	1:E:1349:VAL:HB	1.99	0.44
1:B:654:ASN:OD1	1:B:655:ASP:N	2.50	0.44
1:D:502:LEU:HD22	1:D:806:ASN:HB3	1.99	0.44
1:F:1163:SER:OG	1:F:1165:GLN:OE1	2.21	0.44
1:A:1005:ASP:OD2	1:A:1006:SER:N	2.51	0.44
1:B:1005:ASP:OD2	1:B:1006:SER:N	2.51	0.44
1:C:1202:GLN:HG2	1:C:1230:ASP:HA	1.99	0.44
1:E:447:PRO:HG2	1:F:858:LEU:HG	2.00	0.44
1:E:1202:GLN:HG2	1:E:1230:ASP:HA	1.99	0.44
1:F:313:ASP:OD1	1:F:314:THR:N	2.47	0.44
1:A:1202:GLN:HG2	1:A:1230:ASP:HA	1.99	0.44
1:C:1005:ASP:OD2	1:C:1006:SER:N	2.51	0.44
1:F:904:THR:OG1	1:F:906:ASP:OD2	2.35	0.44
1:A:130:SER:OG	1:A:144:THR:O	2.27	0.44
1:A:153:ILE:HD13	1:A:164:GLN:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:837:TYR:CZ	1:A:843:VAL:HG23	2.52	0.44
1:A:1274:GLU:HB3	1:A:1337:GLU:HB3	1.99	0.44
1:D:401:SER:O	1:D:401:SER:OG	2.23	0.44
1:E:1269:ASP:OD1	1:E:1271:ASP:OD2	2.35	0.44
1:B:886:PHE:C	1:C:1301:THR:HG21	2.37	0.44
1:B:1596:LEU:HD12	1:B:1597:PRO:CD	2.44	0.44
1:C:1594:ASN:HA	1:C:1605:GLU:OE1	2.18	0.44
1:D:837:TYR:CZ	1:D:843:VAL:HG23	2.52	0.44
1:D:1594:ASN:HA	1:D:1605:GLU:OE1	2.18	0.44
1:F:502:LEU:HD22	1:F:806:ASN:HB3	1.98	0.44
1:B:344:ASN:HB3	1:B:444:ASN:OD1	2.18	0.44
1:B:1594:ASN:HA	1:B:1605:GLU:OE1	2.18	0.44
1:C:469:THR:HG22	1:C:826:HIS:CE1	2.53	0.44
1:E:904:THR:OG1	1:E:906:ASP:OD2	2.35	0.44
1:A:1352:GLU:OE2	1:B:1578:ARG:NH1	2.51	0.44
1:C:654:ASN:OD1	1:C:655:ASP:N	2.50	0.44
1:C:1321:GLU:OE1	1:C:1393:PHE:CE1	2.71	0.44
1:A:1465:PRO:CD	1:F:1219:ASP:CB	2.96	0.43
1:B:313:ASP:OD1	1:B:314:THR:N	2.47	0.43
1:E:344:ASN:HB3	1:E:444:ASN:OD1	2.18	0.43
1:E:620:VAL:O	1:E:726:GLY:HA3	2.18	0.43
1:E:1274:GLU:HB3	1:E:1337:GLU:HB3	2.00	0.43
1:F:1005:ASP:OD2	1:F:1006:SER:N	2.51	0.43
1:A:629:VAL:HG11	1:A:704:MET:CE	2.49	0.43
1:A:1345:GLY:CA	1:B:1578:ARG:HB2	2.49	0.43
1:A:1532:VAL:HB	1:F:1226:SER:CB	2.49	0.43
1:B:1202:GLN:HG2	1:B:1230:ASP:HA	2.00	0.43
1:D:153:ILE:HD13	1:D:164:GLN:HB2	2.00	0.43
1:B:1379:THR:HA	1:B:1439:LEU:O	2.19	0.43
1:C:1103:GLY:HA2	1:D:1534:ASN:O	2.18	0.43
1:C:1572:ASP:HB3	1:C:1578:ARG:HH12	1.83	0.43
1:E:313:ASP:OD1	1:E:314:THR:N	2.47	0.43
1:E:502:LEU:HD22	1:E:806:ASN:HB3	1.98	0.43
1:F:1321:GLU:OE1	1:F:1393:PHE:CE1	2.71	0.43
1:F:1517:VAL:HA	1:F:1564:GLY:O	2.18	0.43
1:A:1352:GLU:CD	1:B:1578:ARG:CZ	2.85	0.43
1:A:1594:ASN:HA	1:A:1605:GLU:OE1	2.18	0.43
1:C:1379:THR:HA	1:C:1439:LEU:O	2.19	0.43
1:D:130:SER:OG	1:D:144:THR:O	2.27	0.43
1:D:654:ASN:OD1	1:D:655:ASP:N	2.50	0.43
1:D:1005:ASP:OD2	1:D:1006:SER:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1202:GLN:HG2	1:D:1230:ASP:HA	1.99	0.43
1:D:1379:THR:HA	1:D:1439:LEU:O	2.19	0.43
1:E:1005:ASP:OD2	1:E:1006:SER:N	2.51	0.43
1:E:1379:THR:HA	1:E:1439:LEU:O	2.19	0.43
1:F:629:VAL:HG11	1:F:704:MET:CE	2.48	0.43
1:F:1541:SER:OG	1:F:1585:ASP:OD1	2.37	0.43
1:A:813:VAL:HG11	1:B:956:GLN:CD	2.39	0.43
1:B:1574:SER:OG	1:B:1580:ARG:N	2.27	0.43
1:C:629:VAL:HG11	1:C:704:MET:CE	2.48	0.43
1:D:431:ASP:OD1	1:D:432:ASN:N	2.52	0.43
1:D:1262:ASN:OD1	1:D:1263:ASP:N	2.52	0.43
1:E:1329:GLU:N	1:E:1329:GLU:OE2	2.52	0.43
1:A:115:ALA:HA	1:A:330:LEU:HD13	2.00	0.43
1:B:447:PRO:HG2	1:C:858:LEU:HG	2.00	0.43
1:C:1207:GLN:OE1	1:D:1531:ALA:HB1	2.18	0.43
1:C:1230:ASP:OD1	1:C:1231:LEU:N	2.52	0.43
1:D:136:ALA:O	1:D:182:LEU:HD11	2.19	0.43
1:F:1202:GLN:HG2	1:F:1230:ASP:HA	1.99	0.43
1:F:1567:PHE:HB3	1:F:1578:ARG:HG2	1.99	0.43
1:F:1594:ASN:HA	1:F:1605:GLU:OE1	2.18	0.43
1:A:1455:ASP:OD1	1:F:1104:SER:HB2	2.19	0.43
1:A:1517:VAL:HA	1:A:1564:GLY:O	2.18	0.43
1:C:605:LEU:HD23	1:C:605:LEU:HA	1.89	0.43
1:C:1226:SER:CB	1:D:1532:VAL:HB	2.49	0.43
1:D:471:GLY:O	1:D:856:SER:HB3	2.19	0.43
1:D:813:VAL:HG11	1:E:956:GLN:CD	2.39	0.43
1:E:1262:ASN:OD1	1:E:1263:ASP:N	2.52	0.43
1:E:1517:VAL:HA	1:E:1564:GLY:O	2.18	0.43
1:F:620:VAL:O	1:F:726:GLY:HA3	2.19	0.43
1:A:471:GLY:O	1:A:856:SER:HB3	2.19	0.43
1:B:1422:LYS:O	1:B:1465:PRO:HA	2.19	0.43
1:C:431:ASP:OD1	1:C:432:ASN:N	2.52	0.43
1:D:1274:GLU:HB3	1:D:1337:GLU:HB3	2.00	0.43
1:F:42:PHE:CE1	1:F:65:ILE:HD12	2.54	0.43
1:F:431:ASP:OD1	1:F:432:ASN:N	2.52	0.43
1:F:1379:THR:HA	1:F:1439:LEU:O	2.19	0.43
1:A:620:VAL:O	1:A:726:GLY:HA3	2.19	0.43
1:A:1245:ILE:HD12	1:A:1245:ILE:H	1.83	0.43
1:B:471:GLY:O	1:B:856:SER:HB3	2.19	0.43
1:B:620:VAL:O	1:B:726:GLY:HA3	2.18	0.43
1:E:1541:SER:OG	1:E:1585:ASP:OD1	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1230:ASP:OD1	1:A:1231:LEU:N	2.52	0.43
1:B:1262:ASN:OD1	1:B:1263:ASP:N	2.52	0.43
1:B:1329:GLU:N	1:B:1329:GLU:OE2	2.52	0.43
1:B:1550:LEU:HD22	1:B:1552:VAL:HG13	2.01	0.43
1:C:886:PHE:HZ	1:C:889:LEU:HD13	1.84	0.43
1:C:1219:ASP:CB	1:D:1465:PRO:CD	2.96	0.43
1:C:1262:ASN:OD1	1:C:1263:ASP:N	2.52	0.43
1:C:1541:SER:OG	1:C:1585:ASP:OD1	2.37	0.43
1:D:313:ASP:OD1	1:D:314:THR:N	2.47	0.43
1:D:525:THR:HG21	1:D:555:ILE:CD1	2.48	0.43
1:D:886:PHE:HZ	1:D:889:LEU:HD13	1.84	0.43
1:F:469:THR:HG22	1:F:826:HIS:CE1	2.53	0.43
1:F:1134:ARG:HH11	1:F:1176:LEU:HD21	1.84	0.43
1:A:431:ASP:OD1	1:A:432:ASN:N	2.52	0.42
1:A:1537:VAL:N	1:A:1550:LEU:O	2.47	0.42
1:A:1550:LEU:HD22	1:A:1552:VAL:HG13	2.01	0.42
1:B:431:ASP:OD1	1:B:432:ASN:N	2.52	0.42
1:B:1230:ASP:OD1	1:B:1231:LEU:N	2.52	0.42
1:C:50:PHE:HB3	1:C:285:LEU:HD12	2.00	0.42
1:D:115:ALA:HA	1:D:330:LEU:HD13	2.00	0.42
1:D:629:VAL:HG11	1:D:704:MET:CE	2.49	0.42
1:D:1517:VAL:HA	1:D:1564:GLY:O	2.18	0.42
1:E:886:PHE:HZ	1:E:889:LEU:HD13	1.84	0.42
1:F:87:VAL:HG12	1:F:143:GLU:HB3	2.01	0.42
1:C:1274:GLU:HB3	1:C:1337:GLU:HB3	2.01	0.42
1:D:469:THR:HG22	1:D:826:HIS:CE1	2.55	0.42
1:D:620:VAL:O	1:D:726:GLY:HA3	2.19	0.42
1:E:431:ASP:OD1	1:E:432:ASN:N	2.52	0.42
1:E:629:VAL:HG11	1:E:704:MET:CE	2.49	0.42
1:E:1134:ARG:HH11	1:E:1176:LEU:HD21	1.84	0.42
1:E:1594:ASN:HA	1:E:1605:GLU:OE1	2.18	0.42
1:F:1262:ASN:OD1	1:F:1263:ASP:N	2.52	0.42
1:A:1379:THR:HA	1:A:1439:LEU:O	2.19	0.42
1:A:1422:LYS:O	1:A:1465:PRO:HA	2.19	0.42
1:A:1541:SER:OG	1:A:1585:ASP:OD1	2.37	0.42
1:B:110:ILE:O	1:B:113:SER:OG	2.30	0.42
1:B:886:PHE:O	1:C:1301:THR:CG2	2.64	0.42
1:B:1541:SER:OG	1:B:1585:ASP:OD1	2.37	0.42
1:C:999:GLU:HG2	1:D:1304:ARG:NH1	2.34	0.42
1:F:1274:GLU:HB3	1:F:1337:GLU:HB3	2.01	0.42
1:A:136:ALA:O	1:A:182:LEU:HD11	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:886:PHE:HZ	1:A:889:LEU:HD13	1.84	0.42
1:A:1134:ARG:HH11	1:A:1176:LEU:HD21	1.85	0.42
1:B:1321:GLU:OE1	1:B:1393:PHE:CE1	2.72	0.42
1:C:136:ALA:O	1:C:182:LEU:HD11	2.19	0.42
1:D:1134:ARG:HH11	1:D:1176:LEU:HD21	1.85	0.42
1:E:469:THR:HG22	1:E:826:HIS:CE1	2.54	0.42
1:E:1230:ASP:OD1	1:E:1231:LEU:N	2.52	0.42
1:A:1304:ARG:NH1	1:F:999:GLU:HB3	2.34	0.42
1:B:130:SER:OG	1:B:144:THR:O	2.28	0.42
1:B:886:PHE:HZ	1:B:889:LEU:HD13	1.84	0.42
1:C:1038:ASN:OD1	1:C:1039:ALA:N	2.53	0.42
1:C:1517:VAL:HA	1:C:1564:GLY:O	2.19	0.42
1:C:1550:LEU:HD22	1:C:1552:VAL:HG13	2.01	0.42
1:D:1038:ASN:OD1	1:D:1039:ALA:N	2.53	0.42
1:E:153:ILE:HD13	1:E:164:GLN:HB2	2.02	0.42
1:E:629:VAL:HG11	1:E:704:MET:HE3	2.02	0.42
1:E:1422:LYS:O	1:E:1465:PRO:HA	2.19	0.42
1:A:1038:ASN:OD1	1:A:1039:ALA:N	2.53	0.42
1:A:1262:ASN:OD1	1:A:1263:ASP:N	2.52	0.42
1:B:114:THR:HG21	1:B:332:LEU:HD23	2.02	0.42
1:B:268:ASP:OD1	1:B:268:ASP:N	2.52	0.42
1:B:629:VAL:HG11	1:B:704:MET:HE3	2.02	0.42
1:B:1134:ARG:HH11	1:B:1176:LEU:HD21	1.84	0.42
1:C:344:ASN:HB3	1:C:444:ASN:OD1	2.19	0.42
1:C:680:LEU:HD13	1:C:684:VAL:HG11	2.01	0.42
1:D:1230:ASP:OD1	1:D:1231:LEU:N	2.52	0.42
1:E:471:GLY:O	1:E:856:SER:HB3	2.19	0.42
1:E:1054:ILE:HG23	1:E:1062:GLU:OE1	2.20	0.42
1:F:268:ASP:OD1	1:F:268:ASP:N	2.53	0.42
1:F:886:PHE:HZ	1:F:889:LEU:HD13	1.84	0.42
1:A:1105:ASP:OD2	1:A:1106:SER:N	2.53	0.42
1:B:153:ILE:HD13	1:B:164:GLN:HB2	2.02	0.42
1:B:629:VAL:HG11	1:B:704:MET:CE	2.49	0.42
1:D:1054:ILE:HG23	1:D:1062:GLU:OE1	2.20	0.42
1:D:1422:LYS:O	1:D:1465:PRO:HA	2.19	0.42
1:F:580:ILE:HG12	1:F:717:VAL:HG12	2.02	0.42
1:A:1321:GLU:OE1	1:A:1321:GLU:N	2.52	0.42
1:B:55:SER:HB2	1:B:257:ASP:O	2.20	0.42
1:B:966:ASP:HB3	1:B:973:THR:OG1	2.20	0.42
1:C:1422:LYS:O	1:C:1465:PRO:HA	2.19	0.42
1:E:1038:ASN:OD1	1:E:1039:ALA:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1517:VAL:HA	1:B:1564:GLY:O	2.18	0.42
1:C:620:VAL:O	1:C:726:GLY:HA3	2.19	0.42
1:C:1134:ARG:HH11	1:C:1176:LEU:HD21	1.84	0.42
1:D:344:ASN:HB3	1:D:444:ASN:OD1	2.20	0.42
1:E:69:ILE:HD12	1:E:98:TRP:NE1	2.35	0.42
1:E:268:ASP:OD1	1:E:268:ASP:N	2.52	0.42
1:F:1038:ASN:OD1	1:F:1039:ALA:N	2.53	0.42
1:F:1054:ILE:HG23	1:F:1062:GLU:OE1	2.20	0.42
1:F:1230:ASP:OD1	1:F:1231:LEU:N	2.52	0.42
1:F:1422:LYS:O	1:F:1465:PRO:HA	2.19	0.42
1:A:995:ASP:OD2	1:A:999:GLU:N	2.48	0.42
1:B:136:ALA:O	1:B:182:LEU:HD11	2.19	0.42
1:C:966:ASP:HB3	1:C:973:THR:OG1	2.20	0.42
1:D:1098:ILE:HD13	1:D:1136:PHE:CE1	2.55	0.42
1:E:136:ALA:O	1:E:182:LEU:HD11	2.19	0.42
1:E:1105:ASP:OD2	1:E:1106:SER:N	2.53	0.42
1:F:680:LEU:HD13	1:F:684:VAL:HG11	2.01	0.42
1:F:966:ASP:HB3	1:F:973:THR:OG1	2.20	0.42
1:F:1105:ASP:OD2	1:F:1106:SER:N	2.53	0.42
1:A:114:THR:HG21	1:A:332:LEU:HD23	2.01	0.41
1:A:268:ASP:OD1	1:A:268:ASP:N	2.52	0.41
1:A:344:ASN:HB3	1:A:444:ASN:OD1	2.19	0.41
1:A:469:THR:HG22	1:A:826:HIS:CE1	2.54	0.41
1:A:1329:GLU:OE2	1:A:1329:GLU:N	2.52	0.41
1:A:1500:ILE:HG22	1:A:1596:LEU:CD1	2.50	0.41
1:B:469:THR:HG22	1:B:826:HIS:CE1	2.55	0.41
1:C:42:PHE:CE1	1:C:65:ILE:HD12	2.55	0.41
1:D:966:ASP:HB3	1:D:973:THR:OG1	2.20	0.41
1:D:1541:SER:OG	1:D:1585:ASP:OD1	2.37	0.41
1:D:1553:THR:O	1:D:1562:PHE:HA	2.20	0.41
1:E:1550:LEU:HD22	1:E:1552:VAL:HG13	2.01	0.41
1:F:153:ILE:HD13	1:F:164:GLN:HB2	2.02	0.41
1:F:344:ASN:HB3	1:F:444:ASN:OD1	2.20	0.41
1:F:1500:ILE:HG22	1:F:1596:LEU:CD1	2.50	0.41
1:F:1550:LEU:HD22	1:F:1552:VAL:HG13	2.02	0.41
1:B:1105:ASP:OD2	1:B:1106:SER:N	2.53	0.41
1:B:1321:GLU:OE1	1:B:1393:PHE:CD1	2.73	0.41
1:C:268:ASP:OD1	1:C:268:ASP:N	2.53	0.41
1:C:332:LEU:O	1:C:336:LEU:HG	2.20	0.41
1:D:268:ASP:OD1	1:D:268:ASP:N	2.52	0.41
1:E:1321:GLU:OE1	1:E:1393:PHE:CD1	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1553:THR:O	1:E:1562:PHE:HA	2.20	0.41
1:F:50:PHE:HB3	1:F:285:LEU:HD12	2.00	0.41
1:A:332:LEU:O	1:A:336:LEU:HG	2.20	0.41
1:B:84:ASN:HD22	1:C:421:GLU:HG2	1.85	0.41
1:B:1038:ASN:OD1	1:B:1039:ALA:N	2.53	0.41
1:B:1098:ILE:HD13	1:B:1136:PHE:CE1	2.55	0.41
1:C:983:GLY:HA2	1:D:1398:VAL:HG22	2.00	0.41
1:C:1105:ASP:OD2	1:C:1106:SER:N	2.53	0.41
1:C:1329:GLU:N	1:C:1329:GLU:OE2	2.52	0.41
1:D:1480:VAL:O	1:D:1491:VAL:HA	2.21	0.41
1:D:1550:LEU:HD22	1:D:1552:VAL:HG13	2.01	0.41
1:E:84:ASN:HD22	1:F:421:GLU:HG2	1.85	0.41
1:E:1098:ILE:HD13	1:E:1136:PHE:CE1	2.55	0.41
1:E:1537:VAL:N	1:E:1550:LEU:O	2.48	0.41
1:F:197:ALA:HB2	1:F:226:PRO:HG3	2.03	0.41
1:F:310:PHE:CE2	1:F:401:SER:HB2	2.56	0.41
1:A:1098:ILE:HD13	1:A:1136:PHE:CE1	2.55	0.41
1:B:50:PHE:HB3	1:B:285:LEU:HD12	2.02	0.41
1:C:1239:ASP:OD1	1:C:1243:TYR:OH	2.25	0.41
1:D:1329:GLU:OE2	1:D:1329:GLU:N	2.53	0.41
1:E:114:THR:HG21	1:E:332:LEU:HD23	2.02	0.41
1:E:313:ASP:OD2	1:E:331:THR:HG23	2.21	0.41
1:E:966:ASP:HB3	1:E:973:THR:OG1	2.20	0.41
1:E:1075:ILE:HD12	1:E:1139:MET:HE1	2.03	0.41
1:E:1321:GLU:OE1	1:E:1393:PHE:CE1	2.72	0.41
1:E:1500:ILE:HG22	1:E:1596:LEU:CD1	2.51	0.41
1:F:136:ALA:O	1:F:182:LEU:HD11	2.19	0.41
1:B:65:ILE:HG12	1:B:97:ASN:CG	2.41	0.41
1:B:1038:ASN:OD1	1:B:1040:ALA:N	2.45	0.41
1:D:114:THR:HG21	1:D:332:LEU:HD23	2.01	0.41
1:D:1105:ASP:OD2	1:D:1106:SER:N	2.53	0.41
1:D:1500:ILE:HG22	1:D:1596:LEU:CD1	2.50	0.41
1:A:42:PHE:CE1	1:A:65:ILE:HD12	2.56	0.41
1:A:966:ASP:HB3	1:A:973:THR:OG1	2.20	0.41
1:A:1553:THR:O	1:A:1562:PHE:HA	2.20	0.41
1:B:244:ASN:HA	1:B:249:VAL:HG12	2.03	0.41
1:C:69:ILE:HD12	1:C:98:TRP:NE1	2.36	0.41
1:C:749:GLU:HG2	1:C:751:GLY:O	2.21	0.41
1:C:1224:THR:CB	1:D:1530:GLU:O	2.66	0.41
1:D:853:ASN:HA	1:D:860:ASP:OD2	2.21	0.41
1:E:310:PHE:CE2	1:E:401:SER:HB2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:853:ASN:HA	1:E:860:ASP:OD2	2.20	0.41
1:F:65:ILE:HG12	1:F:97:ASN:CG	2.41	0.41
1:F:115:ALA:HA	1:F:330:LEU:HD13	2.02	0.41
1:F:1480:VAL:O	1:F:1491:VAL:HA	2.21	0.41
1:F:1553:THR:O	1:F:1562:PHE:HA	2.20	0.41
1:A:65:ILE:HG12	1:A:97:ASN:CG	2.41	0.41
1:A:230:LEU:HD13	1:A:230:LEU:HA	1.94	0.41
1:A:762:GLU:O	1:A:788:SER:HA	2.21	0.41
1:A:1529:PRO:O	1:A:1558:ALA:HB2	2.21	0.41
1:B:310:PHE:CE2	1:B:401:SER:HB2	2.56	0.41
1:B:313:ASP:OD2	1:B:331:THR:HG23	2.21	0.41
1:B:1365:PHE:N	1:B:1390:ASP:OD2	2.53	0.41
1:C:310:PHE:CE2	1:C:401:SER:HB2	2.56	0.41
1:C:1537:VAL:N	1:C:1550:LEU:O	2.47	0.41
1:D:508:THR:OG1	1:D:741:GLN:HG2	2.21	0.41
1:E:1365:PHE:N	1:E:1390:ASP:OD2	2.53	0.41
1:F:762:GLU:O	1:F:788:SER:HA	2.21	0.41
1:A:55:SER:HB2	1:A:257:ASP:O	2.21	0.41
1:B:69:ILE:HD12	1:B:98:TRP:NE1	2.35	0.41
1:B:469:THR:OG1	1:B:472:GLN:OE1	2.39	0.41
1:B:1054:ILE:HG23	1:B:1062:GLU:OE1	2.20	0.41
1:B:1553:THR:O	1:B:1562:PHE:HA	2.20	0.41
1:C:197:ALA:HB2	1:C:226:PRO:HG3	2.03	0.41
1:C:1553:THR:O	1:C:1562:PHE:HA	2.20	0.41
1:D:69:ILE:HD12	1:D:98:TRP:NE1	2.36	0.41
1:D:1069:LEU:O	1:D:1154:ASN:ND2	2.47	0.41
1:E:50:PHE:HB3	1:E:285:LEU:HD12	2.02	0.41
1:E:130:SER:OG	1:E:144:THR:O	2.28	0.41
1:E:332:LEU:O	1:E:336:LEU:HG	2.20	0.41
1:F:469:THR:OG1	1:F:472:GLN:OE1	2.39	0.41
1:F:1529:PRO:O	1:F:1558:ALA:HB2	2.21	0.41
1:A:50:PHE:HB3	1:A:285:LEU:HD12	2.02	0.41
1:A:244:ASN:HA	1:A:249:VAL:HG12	2.03	0.41
1:A:360:VAL:HG12	1:A:361:VAL:HG23	2.03	0.41
1:A:508:THR:OG1	1:A:741:GLN:HG2	2.21	0.41
1:A:1398:VAL:HG22	1:F:983:GLY:HA2	2.02	0.41
1:A:1576:GLY:CA	1:F:1345:GLY:O	2.68	0.41
1:B:54:MET:HA	1:B:285:LEU:HD21	2.03	0.41
1:C:115:ALA:HA	1:C:330:LEU:HD13	2.02	0.41
1:C:313:ASP:OD2	1:C:331:THR:HG23	2.21	0.41
1:C:580:ILE:HG12	1:C:717:VAL:HG12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1098:ILE:HD13	1:C:1136:PHE:CE1	2.55	0.41
1:C:1480:VAL:O	1:C:1491:VAL:HA	2.21	0.41
1:D:55:SER:HB2	1:D:257:ASP:O	2.21	0.41
1:D:332:LEU:O	1:D:336:LEU:HG	2.20	0.41
1:D:469:THR:OG1	1:D:472:GLN:OE1	2.39	0.41
1:F:1098:ILE:HD13	1:F:1136:PHE:CE1	2.55	0.41
1:F:1341:TRP:CE3	1:F:1353:ASP:HB3	2.56	0.41
1:A:313:ASP:OD2	1:A:331:THR:HG23	2.21	0.41
1:A:469:THR:OG1	1:A:472:GLN:OE1	2.39	0.41
1:B:1529:PRO:O	1:B:1558:ALA:HB2	2.21	0.41
1:C:853:ASN:HA	1:C:860:ASP:OD2	2.21	0.41
1:C:1054:ILE:HG23	1:C:1062:GLU:OE1	2.20	0.41
1:E:55:SER:HB2	1:E:257:ASP:O	2.21	0.41
1:F:114:THR:HG21	1:F:332:LEU:HD23	2.02	0.41
1:F:313:ASP:OD2	1:F:331:THR:HG23	2.21	0.41
1:A:1087:GLU:CG	1:F:804:ASN:HD21	2.34	0.40
1:B:508:THR:OG1	1:B:741:GLN:HG2	2.21	0.40
1:C:153:ILE:HD13	1:C:164:GLN:HB2	2.02	0.40
1:C:469:THR:OG1	1:C:472:GLN:OE1	2.39	0.40
1:D:605:LEU:HD23	1:D:605:LEU:HA	1.88	0.40
1:E:383:ASN:ND2	1:E:432:ASN:OD1	2.55	0.40
1:E:1038:ASN:OD1	1:E:1040:ALA:N	2.45	0.40
1:E:1529:PRO:O	1:E:1558:ALA:HB2	2.21	0.40
1:F:69:ILE:HD12	1:F:98:TRP:NE1	2.36	0.40
1:F:749:GLU:HG2	1:F:751:GLY:O	2.21	0.40
1:A:383:ASN:ND2	1:A:432:ASN:OD1	2.55	0.40
1:A:1074:ARG:HA	1:A:1149:PHE:O	2.21	0.40
1:A:1341:TRP:CE3	1:A:1353:ASP:HB3	2.56	0.40
1:B:1341:TRP:CE3	1:B:1353:ASP:HB3	2.56	0.40
1:D:42:PHE:CE1	1:D:65:ILE:HD12	2.56	0.40
1:D:61:GLU:HG3	1:D:101:TYR:CE1	2.57	0.40
1:D:65:ILE:HG12	1:D:97:ASN:CG	2.41	0.40
1:D:313:ASP:OD2	1:D:331:THR:HG23	2.21	0.40
1:D:1409:ILE:HD13	1:D:1423:LEU:HD13	2.04	0.40
1:E:1074:ARG:HA	1:E:1149:PHE:O	2.22	0.40
1:E:1341:TRP:CE3	1:E:1353:ASP:HB3	2.56	0.40
1:F:332:LEU:O	1:F:336:LEU:HG	2.20	0.40
1:A:69:ILE:HD12	1:A:98:TRP:NE1	2.36	0.40
1:A:853:ASN:HA	1:A:860:ASP:OD2	2.21	0.40
1:A:1480:VAL:O	1:A:1491:VAL:HA	2.21	0.40
1:A:1530:GLU:OE2	1:F:1222:THR:O	2.40	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:115:ALA:HA	1:B:330:LEU:HD13	2.03	0.40
1:B:1205:ILE:CD1	1:B:1228:THR:HG22	2.52	0.40
1:C:114:THR:HG21	1:C:332:LEU:HD23	2.02	0.40
1:C:1500:ILE:HG22	1:C:1596:LEU:CD1	2.50	0.40
1:C:1529:PRO:O	1:C:1558:ALA:HB2	2.21	0.40
1:D:50:PHE:HB3	1:D:285:LEU:HD12	2.02	0.40
1:D:1341:TRP:CE3	1:D:1353:ASP:HB3	2.56	0.40
1:E:54:MET:HA	1:E:285:LEU:HD21	2.03	0.40
1:E:508:THR:OG1	1:E:741:GLN:HG2	2.21	0.40
1:E:762:GLU:O	1:E:788:SER:HA	2.21	0.40
1:F:130:SER:OG	1:F:144:THR:O	2.28	0.40
1:A:61:GLU:HG3	1:A:101:TYR:CE1	2.57	0.40
1:A:1054:ILE:HG23	1:A:1062:GLU:OE1	2.20	0.40
1:A:1530:GLU:O	1:F:1224:THR:CB	2.66	0.40
1:A:1531:ALA:HB1	1:F:1207:GLN:OE1	2.18	0.40
1:B:624:PHE:HB2	1:B:723:PHE:HB2	2.02	0.40
1:B:858:LEU:HD23	1:B:858:LEU:HA	1.93	0.40
1:C:508:THR:OG1	1:C:741:GLN:HG2	2.22	0.40
1:D:1529:PRO:O	1:D:1558:ALA:HB2	2.21	0.40
1:E:65:ILE:HG12	1:E:97:ASN:CG	2.41	0.40
1:E:624:PHE:HB2	1:E:723:PHE:HB2	2.02	0.40
1:E:886:PHE:O	1:F:1301:THR:CG2	2.63	0.40
1:E:1409:ILE:HD13	1:E:1423:LEU:HD13	2.04	0.40
1:E:1480:VAL:O	1:E:1491:VAL:HA	2.21	0.40
1:F:333:ARG:HG3	1:F:334:THR:HG23	2.03	0.40
1:F:1019:ASP:OD2	1:F:1072:HIS:HD2	2.05	0.40
1:B:61:GLU:HG3	1:B:101:TYR:CE1	2.57	0.40
1:B:853:ASN:HA	1:B:860:ASP:OD2	2.21	0.40
1:B:1480:VAL:O	1:B:1491:VAL:HA	2.21	0.40
1:C:1217:SER:HB2	1:D:1424:VAL:CB	2.48	0.40
1:E:244:ASN:HA	1:E:249:VAL:HG12	2.03	0.40
1:F:853:ASN:HA	1:F:860:ASP:OD2	2.21	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	1578/1734 (91%)	1517 (96%)	61 (4%)	0	100	100
1	B	1578/1734 (91%)	1518 (96%)	60 (4%)	0	100	100
1	C	1578/1734 (91%)	1520 (96%)	58 (4%)	0	100	100
1	D	1578/1734 (91%)	1518 (96%)	60 (4%)	0	100	100
1	E	1578/1734 (91%)	1518 (96%)	60 (4%)	0	100	100
1	F	1578/1734 (91%)	1520 (96%)	58 (4%)	0	100	100
All	All	9468/10404 (91%)	9111 (96%)	357 (4%)	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	1312/1438 (91%)	1300 (99%)	12 (1%)	78	92
1	B	1312/1438 (91%)	1301 (99%)	11 (1%)	81	93
1	C	1312/1438 (91%)	1302 (99%)	10 (1%)	81	93
1	D	1312/1438 (91%)	1300 (99%)	12 (1%)	78	92
1	E	1312/1438 (91%)	1300 (99%)	12 (1%)	78	92
1	F	1312/1438 (91%)	1300 (99%)	12 (1%)	78	92
All	All	7872/8628 (91%)	7803 (99%)	69 (1%)	79	92

All (69) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	269	ARG
1	A	419	TYR
1	A	422	SER

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Mol	Chain	Res	Type
1	A	495	LEU
1	A	499	ASP
1	A	565	ASN
1	A	578	ARG
1	A	1047	PHE
1	A	1330	ARG
1	A	1378	TRP
1	A	1414	ARG
1	A	1575	SER
1	B	269	ARG
1	B	419	TYR
1	B	422	SER
1	B	495	LEU
1	B	501	THR
1	B	565	ASN
1	B	578	ARG
1	B	1047	PHE
1	B	1330	ARG
1	B	1378	TRP
1	B	1414	ARG
1	C	269	ARG
1	C	274	ARG
1	C	419	TYR
1	C	495	LEU
1	C	565	ASN
1	C	578	ARG
1	C	1047	PHE
1	C	1330	ARG
1	C	1378	TRP
1	C	1414	ARG
1	D	269	ARG
1	D	422	SER
1	D	495	LEU
1	D	499	ASP
1	D	501	THR
1	D	565	ASN
1	D	578	ARG
1	D	1047	PHE
1	D	1330	ARG
1	D	1378	TRP
1	D	1414	ARG
1	D	1575	SER

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Mol	Chain	Res	Type
1	E	269	ARG
1	E	419	TYR
1	E	422	SER
1	E	495	LEU
1	E	501	THR
1	E	565	ASN
1	E	578	ARG
1	E	999	GLU
1	E	1047	PHE
1	E	1330	ARG
1	E	1378	TRP
1	E	1414	ARG
1	F	38	ASN
1	F	58	GLN
1	F	269	ARG
1	F	274	ARG
1	F	419	TYR
1	F	495	LEU
1	F	565	ASN
1	F	578	ARG
1	F	1047	PHE
1	F	1330	ARG
1	F	1378	TRP
1	F	1414	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (75) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	58	GLN
1	A	92	GLN
1	A	97	ASN
1	A	211	GLN
1	A	623	ASN
1	A	682	ASN
1	A	733	GLN
1	A	740	ASN
1	A	804	ASN
1	A	956	GLN
1	A	1154	ASN
1	B	58	GLN
1	B	84	ASN
1	B	92	GLN

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Mol	Chain	Res	Type
1	B	97	ASN
1	B	211	GLN
1	B	484	ASN
1	B	623	ASN
1	B	733	GLN
1	B	740	ASN
1	B	804	ASN
1	B	853	ASN
1	B	956	GLN
1	B	1083	ASN
1	B	1154	ASN
1	C	58	GLN
1	C	92	GLN
1	C	97	ASN
1	C	211	GLN
1	C	484	ASN
1	C	623	ASN
1	C	733	GLN
1	C	740	ASN
1	C	804	ASN
1	C	956	GLN
1	C	1083	ASN
1	C	1154	ASN
1	C	1577	HIS
1	D	58	GLN
1	D	92	GLN
1	D	97	ASN
1	D	211	GLN
1	D	623	ASN
1	D	733	GLN
1	D	740	ASN
1	D	804	ASN
1	D	956	GLN
1	D	1083	ASN
1	D	1154	ASN
1	E	58	GLN
1	E	84	ASN
1	E	92	GLN
1	E	97	ASN
1	E	211	GLN
1	E	484	ASN
1	E	623	ASN

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Mol	Chain	Res	Type
1	E	733	GLN
1	E	740	ASN
1	E	804	ASN
1	E	853	ASN
1	E	956	GLN
1	E	1083	ASN
1	E	1154	ASN
1	F	58	GLN
1	F	92	GLN
1	F	97	ASN
1	F	211	GLN
1	F	623	ASN
1	F	733	GLN
1	F	740	ASN
1	F	804	ASN
1	F	956	GLN
1	F	1083	ASN
1	F	1154	ASN
1	F	1577	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

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

There are no chain breaks in this entry.

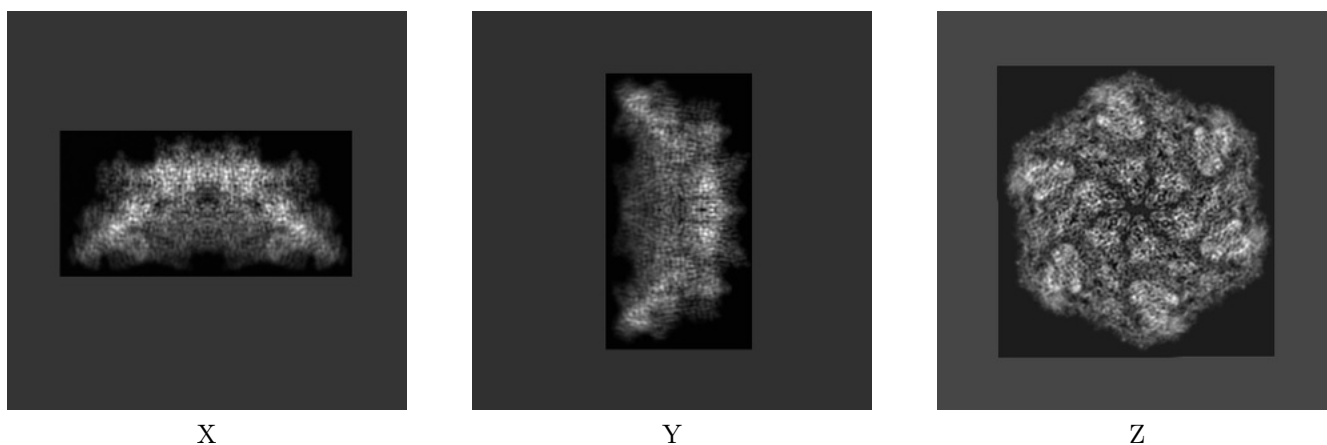
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-16484. 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](#)

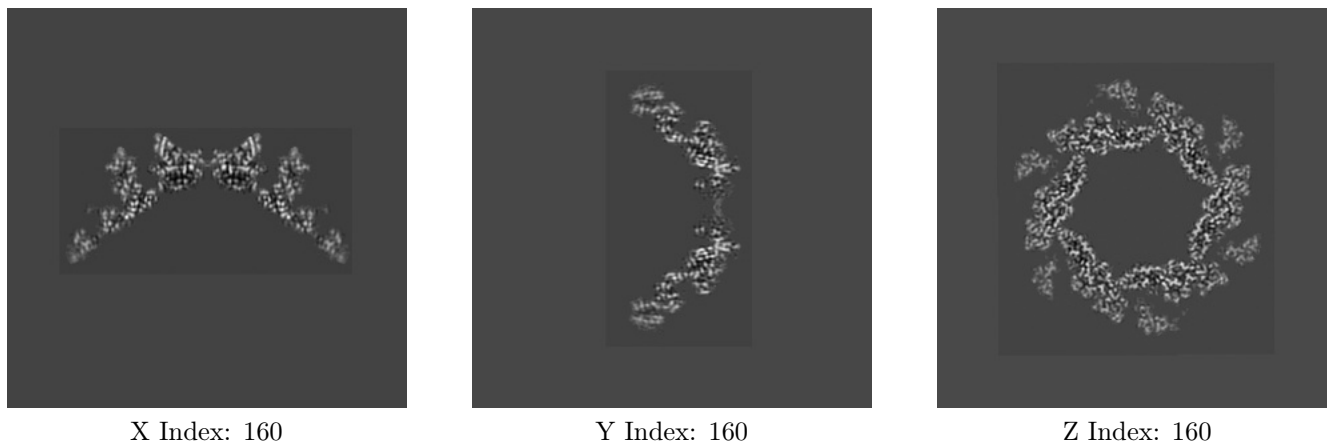
6.1.1 Primary map



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

6.2 Central slices [i](#)

6.2.1 Primary map



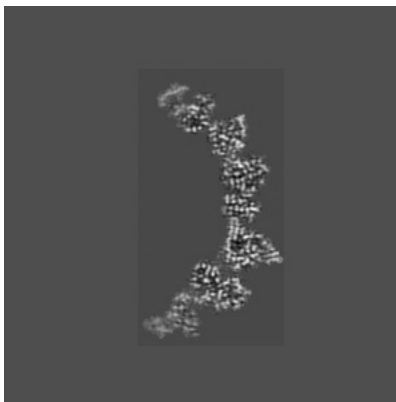
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

6.3.1 Primary map



X Index: 156



Y Index: 175

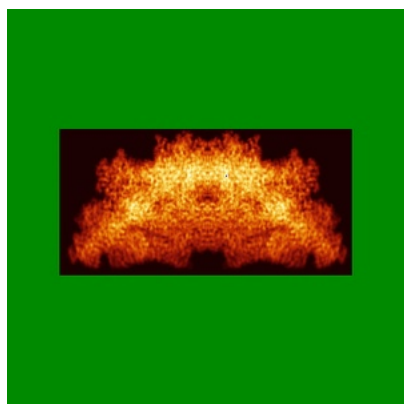


Z Index: 186

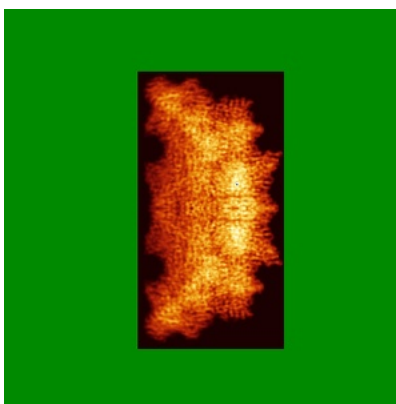
The images above show the largest variance slices of the map in three orthogonal directions.

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

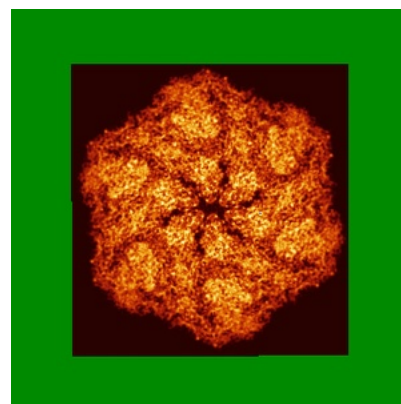
6.4.1 Primary map



X



Y

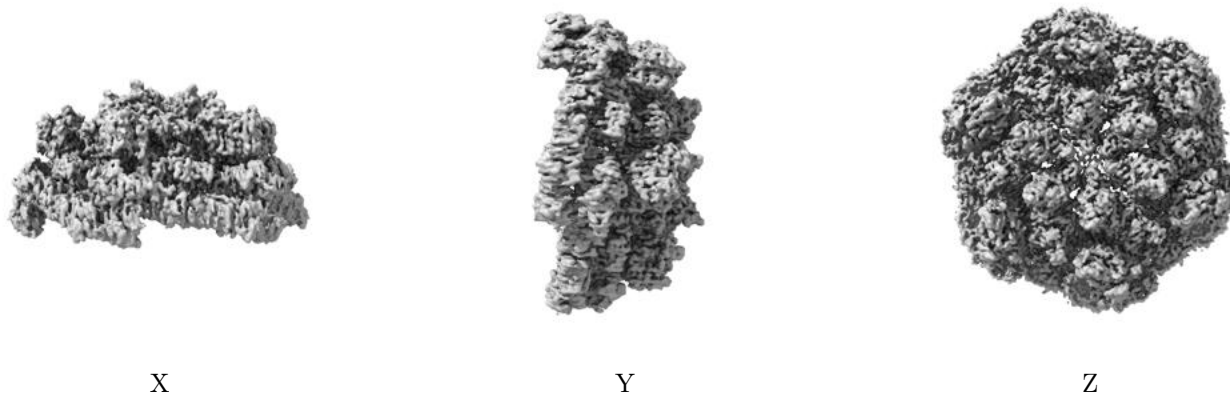


Z

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 1.05514. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

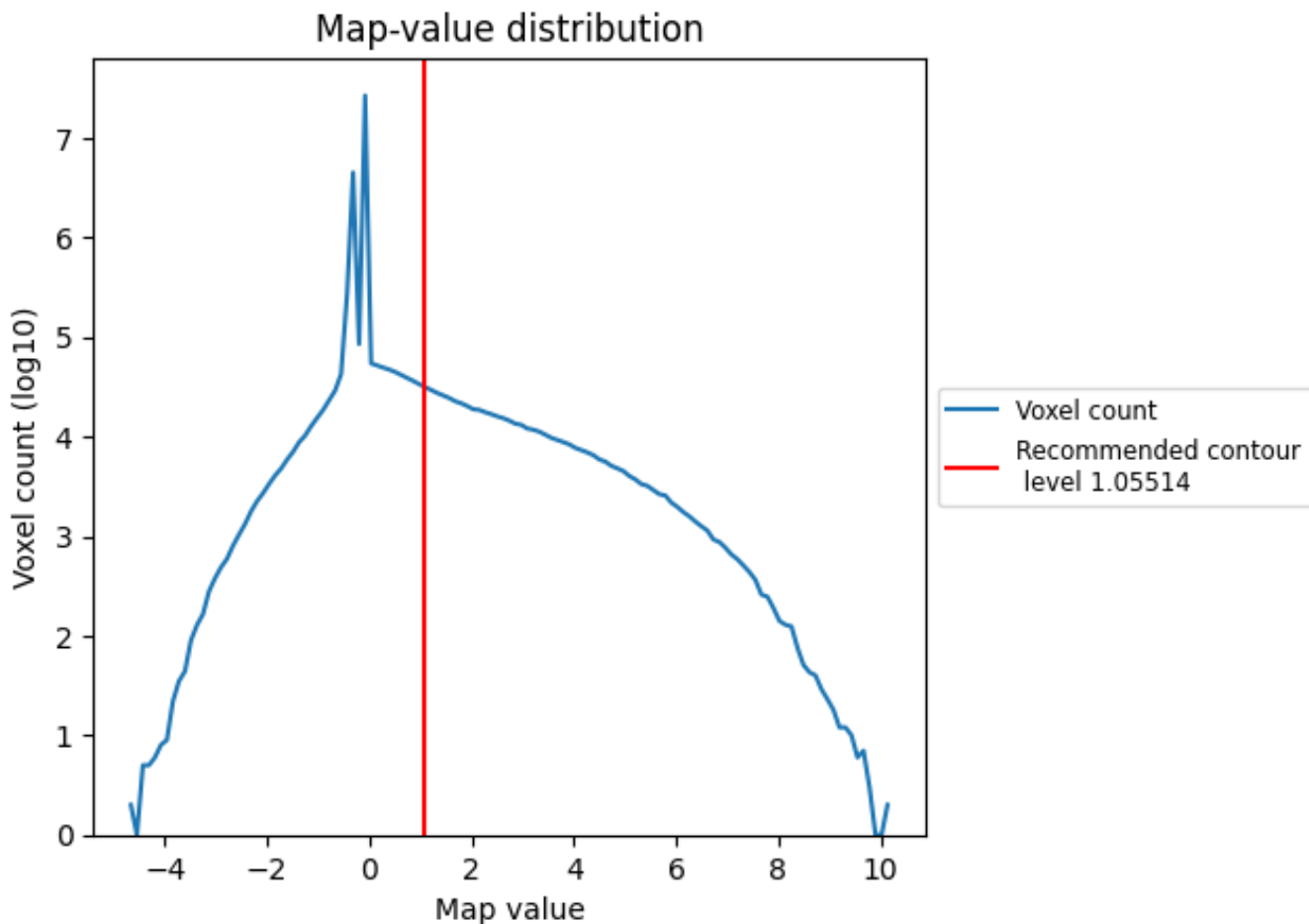
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

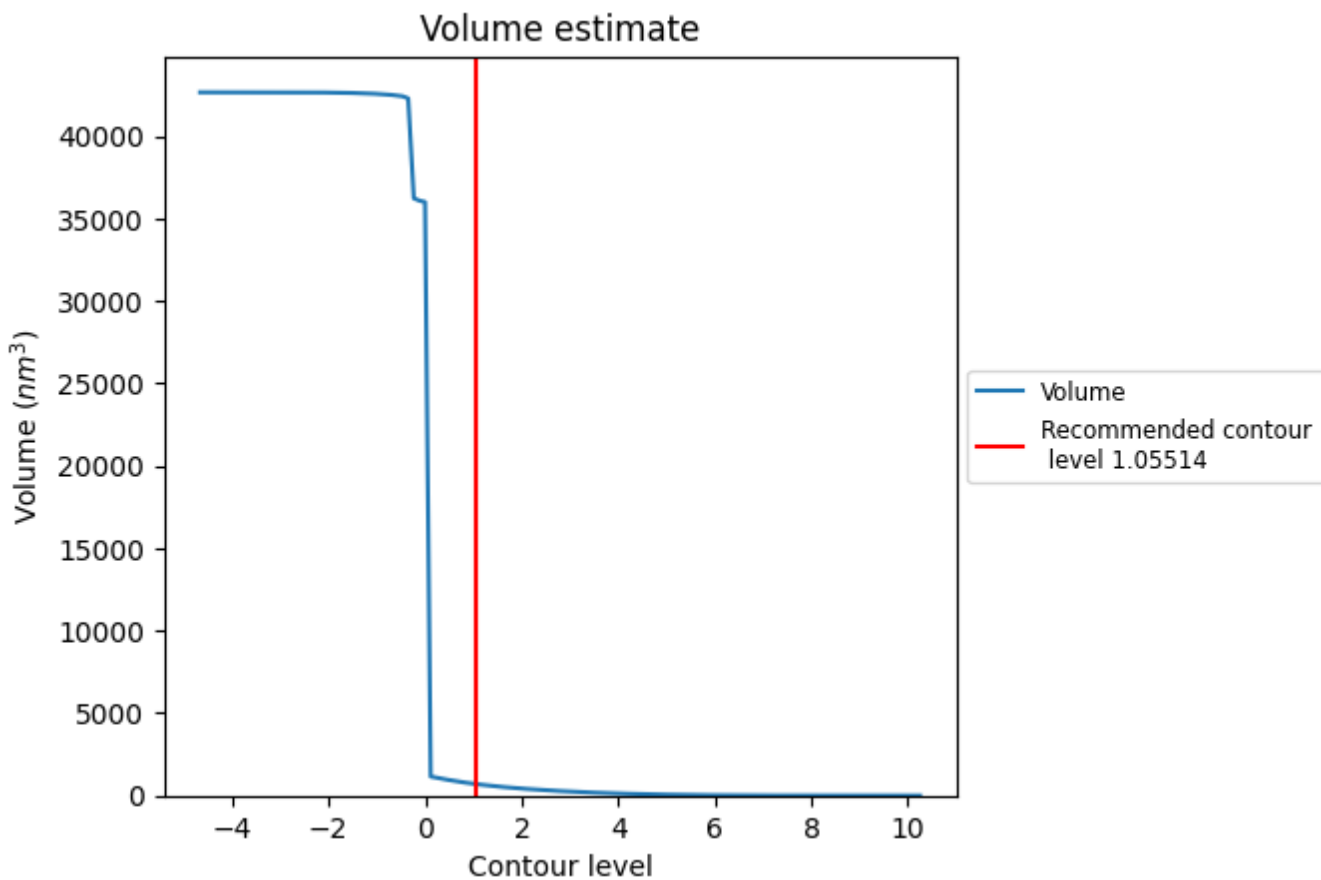
This section contains the results of statistical analysis of the map.

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.

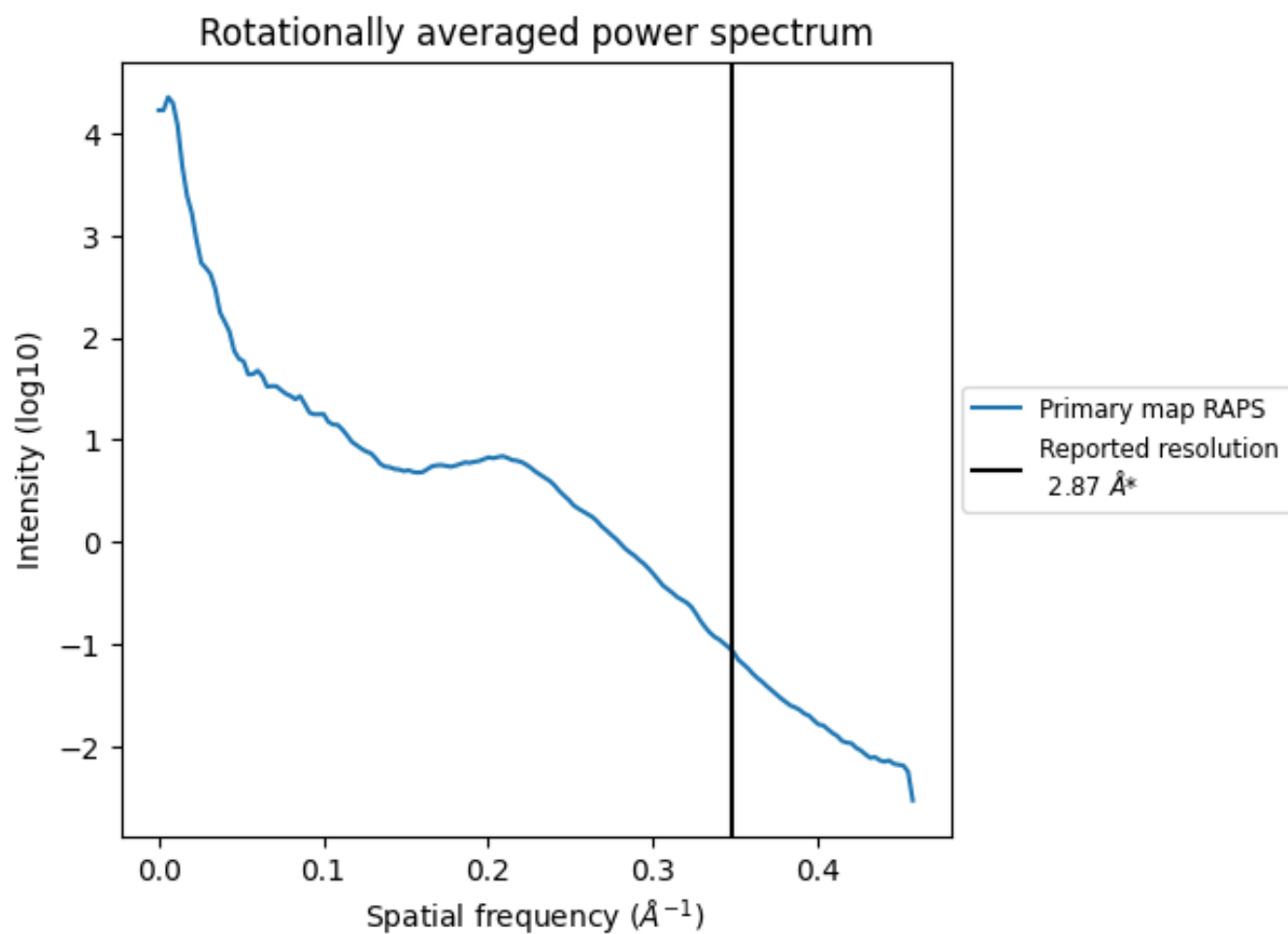
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 697 nm³; this corresponds to an approximate mass of 630 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 0.348 Å⁻¹

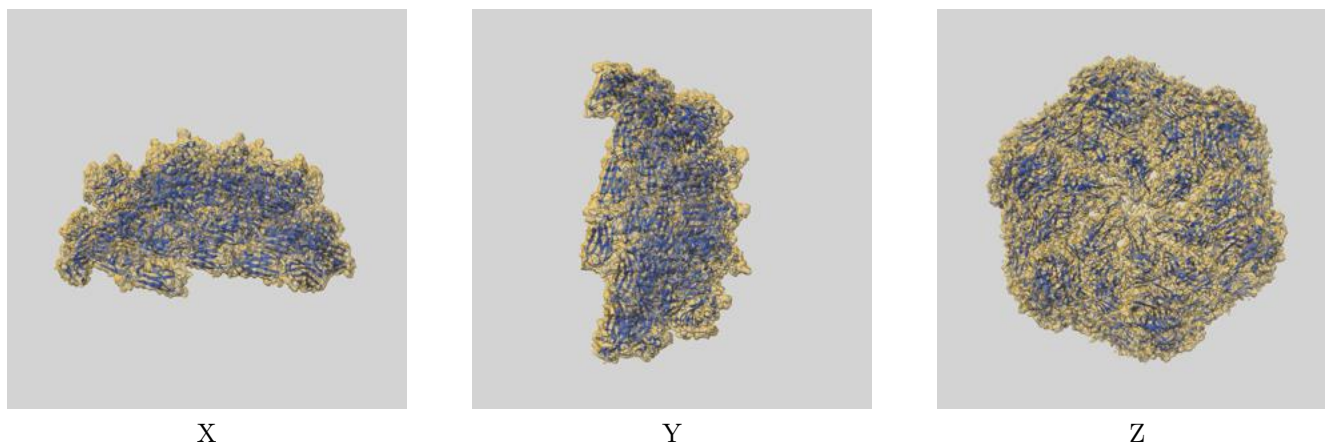
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

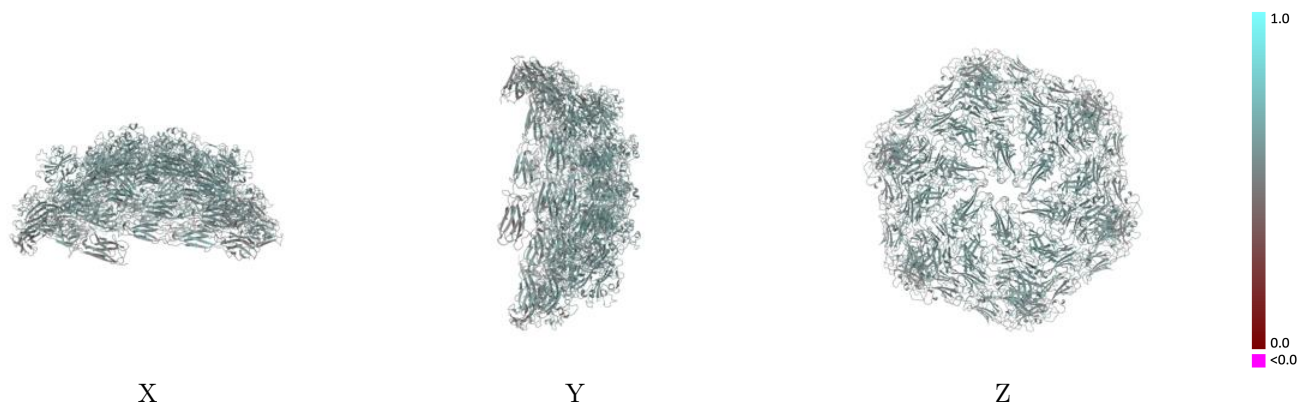
This section contains information regarding the fit between EMDB map EMD-16484 and PDB model 8C8M. Per-residue inclusion information can be found in section 3 on page 4.

9.1 Map-model overlay [i](#)



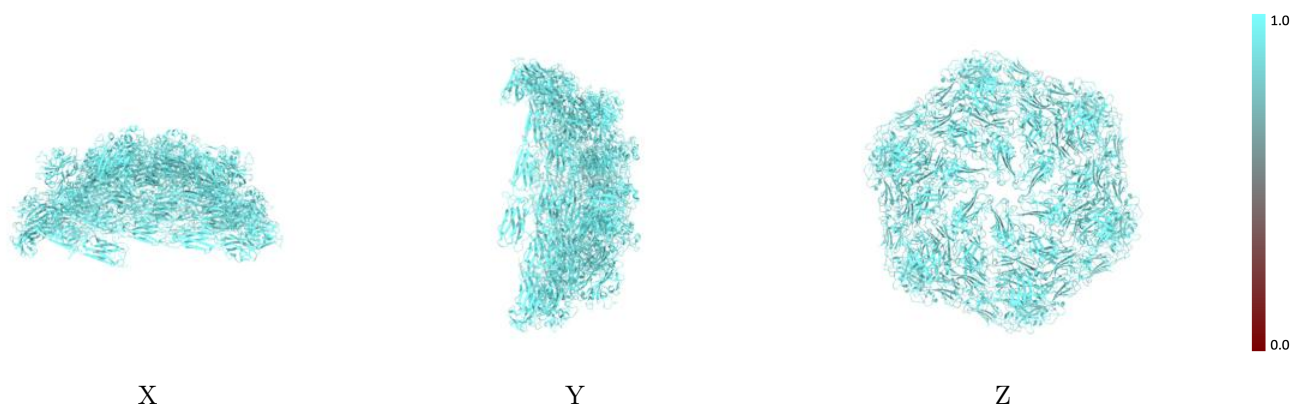
The images above show the 3D surface view of the map at the recommended contour level 1.05514 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



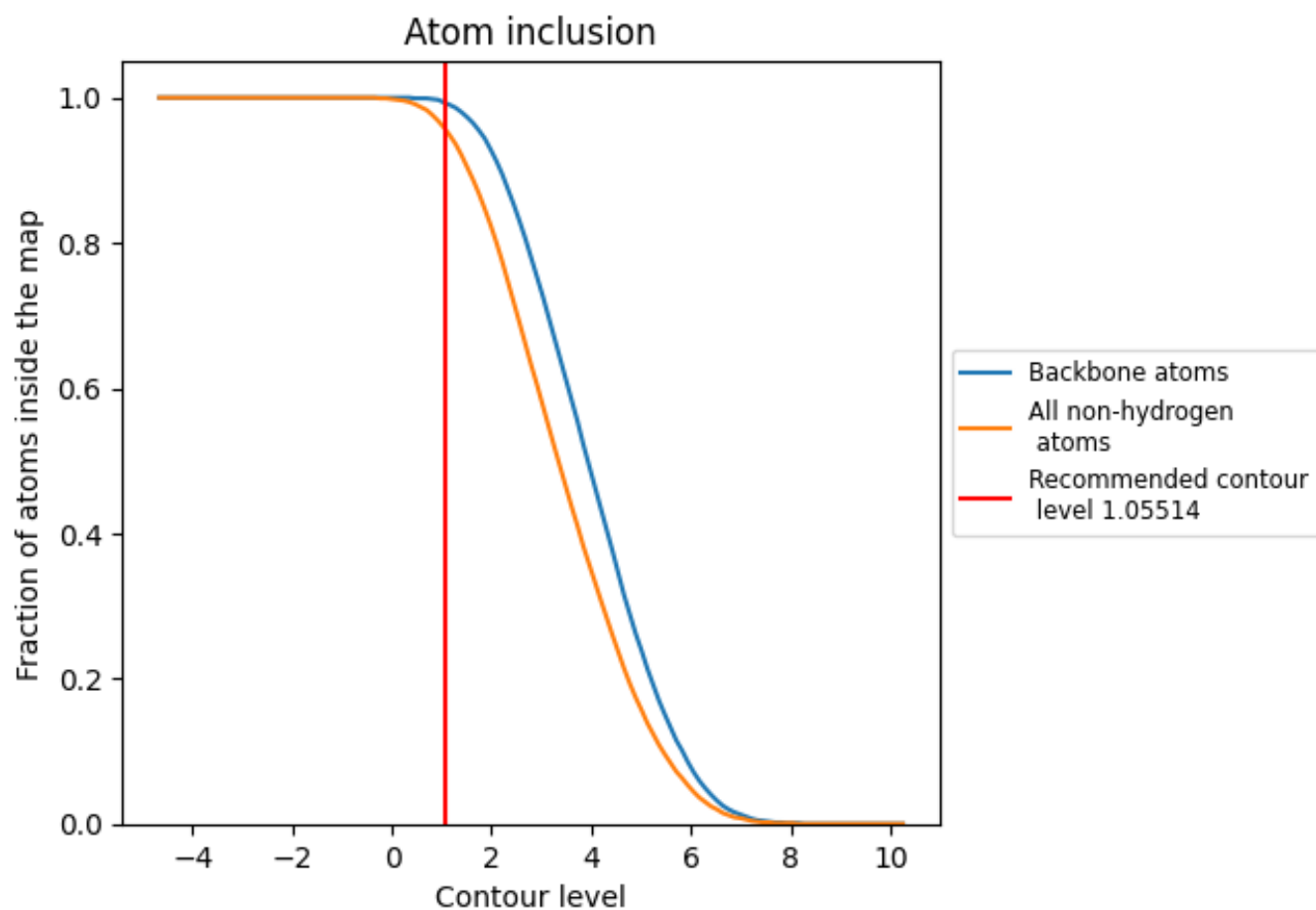
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (1.05514).















9.4 Atom inclusion [i](#)



At the recommended contour level, 99% of all backbone atoms, 96% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary [i](#)

The table lists the average atom inclusion at the recommended contour level (1.05514) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9580	 0.5560
A	 0.9620	 0.5630
B	 0.9580	 0.5530
C	 0.9530	 0.5520
D	 0.9630	 0.5620
E	 0.9580	 0.5530
F	 0.9540	 0.5520

