



## Full wwPDB EM Validation Report ⓘ

Nov 27, 2022 – 06:02 AM EST

PDB ID : 6O9M  
EMDB ID : EMD-3802  
Title : Structure of the human apo TFIIH  
Authors : Yan, C.L.; Dodd, T.; He, Y.; Tainer, J.A.; Tsutakawa, S.E.; Ivanov, I.  
Deposited on : 2019-03-14  
Resolution : 4.40 Å (reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

---

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

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

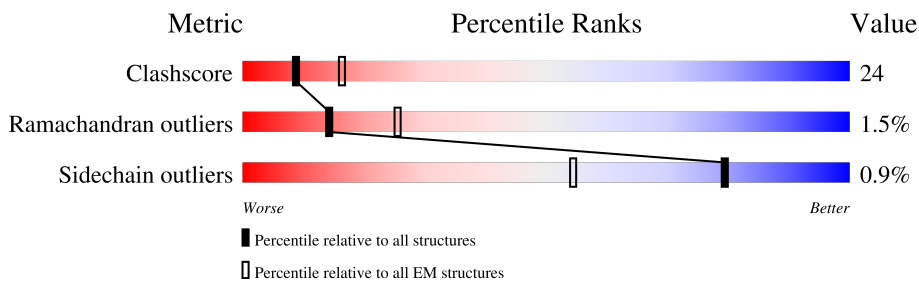
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 4.40 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	0	760	
2	1	548	
3	2	462	
4	3	309	
5	4	308	
6	5	71	
7	6	395	
8	7	782	

## 2 Entry composition [i](#)

There are 10 unique types of molecules in this entry. The entry contains 25785 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 TFIID basal transcription factor complex helicase XPD subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	0	732	5861	3742	1023	1068	28	0	0

- Molecule 2 is a protein called General transcription factor IIF subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	1	433	3436	2153	602	664	17	0	0

- Molecule 3 is a protein called General transcription factor IIF subunit 4, p52.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	2	453	3613	2323	634	642	14	0	0

- Molecule 4 is a protein called CDK-activating kinase assembly factor MAT1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	3	212	1754	1091	309	343	11	0	0

- Molecule 5 is a protein called General transcription factor IIF subunit 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	4	295	2306	1477	384	426	19	0	0

- Molecule 6 is a protein called General transcription factor IIF subunit 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	5	66	522	336	83	100	3	0	0

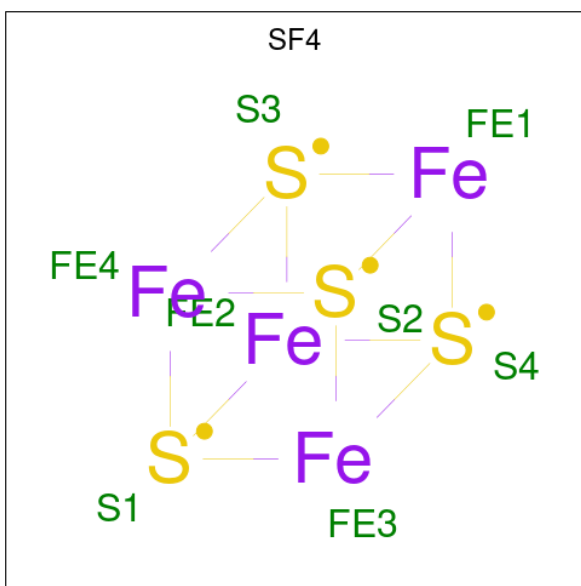
- Molecule 7 is a protein called General transcription factor IIIH subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	6	385	3024	1909	524	564	27	0	0

- Molecule 8 is a protein called TFIIH basal transcription factor complex helicase XPB subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	7	652	5255	3345	898	980	32	0	0

- Molecule 9 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe<sub>4</sub>S<sub>4</sub>).



Mol	Chain	Residues	Atoms			AltConf
			Total	Fe	S	
9	0	1	8	4	4	0

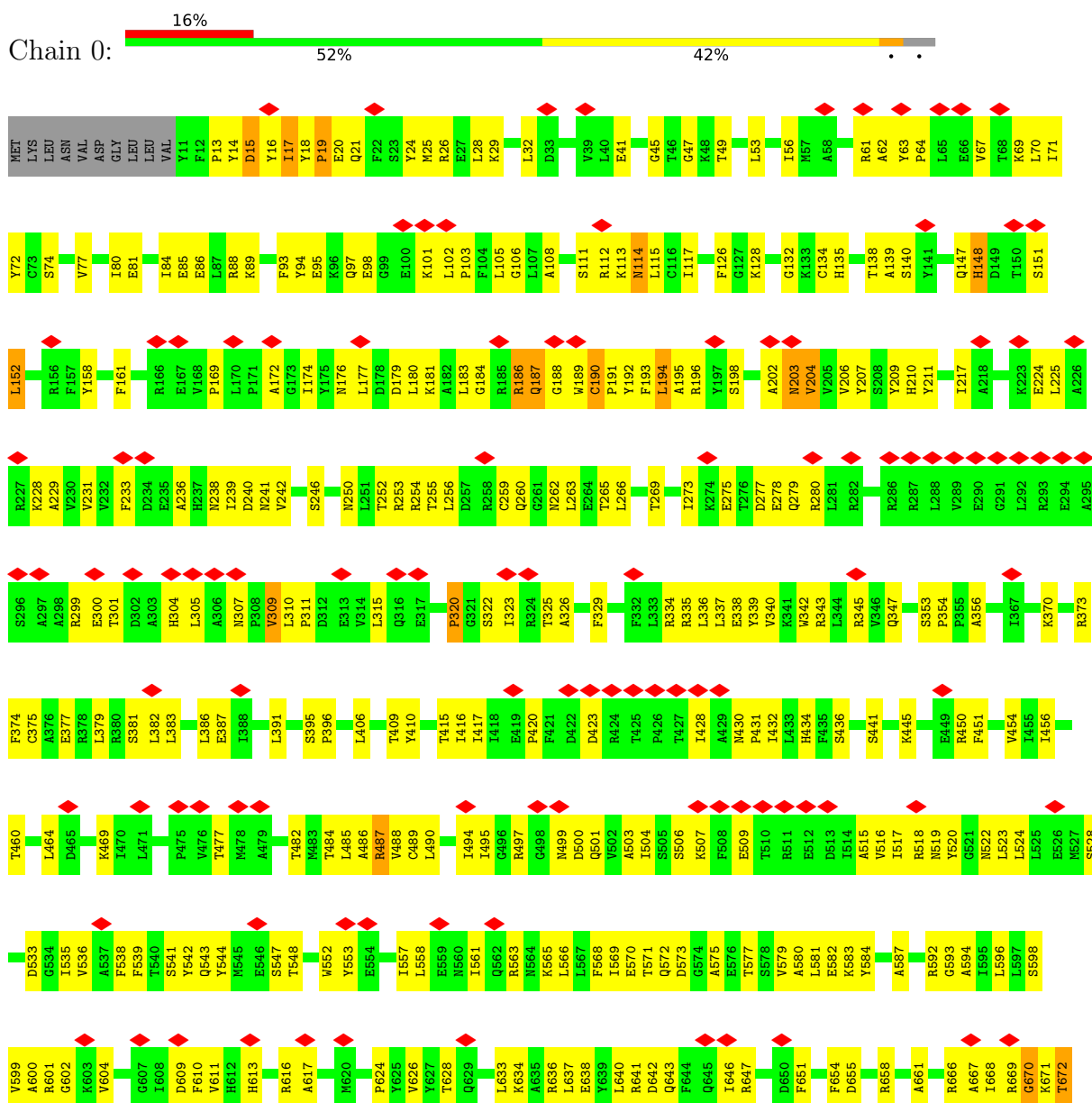
- Molecule 10 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
			Total	Zn	
10	3	2	2	2	0
10	4	1	1	1	0
10	6	3	3	3	0

### 3 Residue-property plots

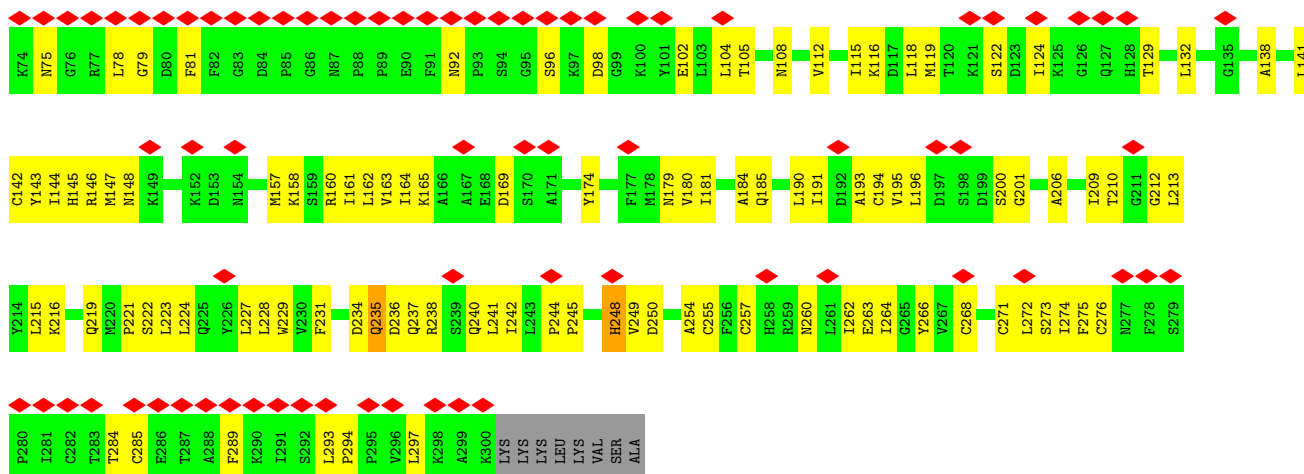
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

- Molecule 1: TFIIH basal transcription factor complex helicase XPD subunit

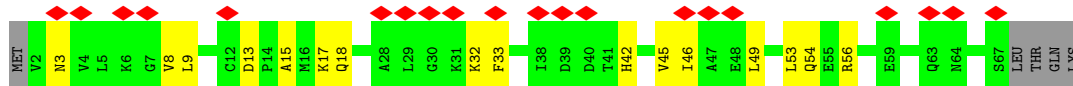




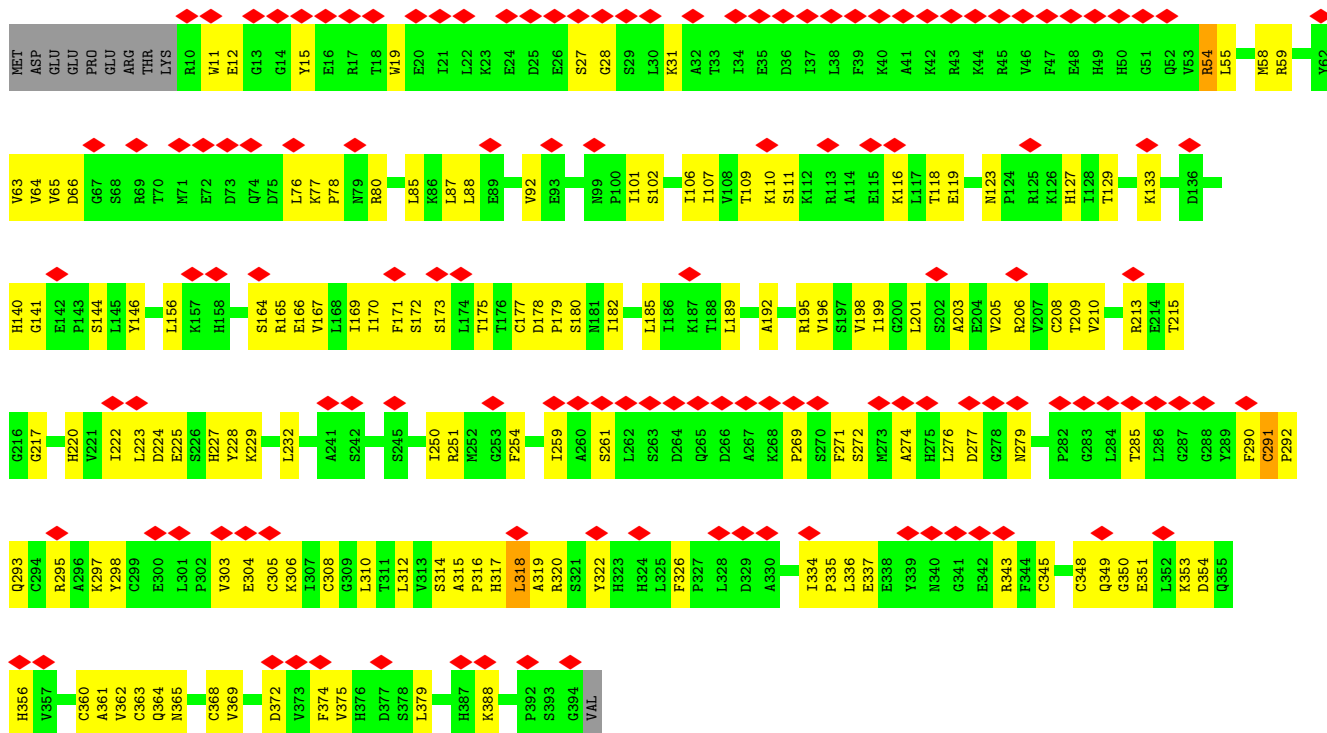




• Molecule 6: General transcription factor IIH subunit 5



• Molecule 7: General transcription factor IIH subunit 2



• Molecule 8: TFIIH basal transcription factor complex helicase XPB subunit





PRO	LEU	PHE	LYS	ARG	PHE	ARG	ARG	LYS	VAL	V728	V727	E726	V655	V656	V655	V656	F659	V660	S661	S661	S664	Q665	D666	Q666	Q668	E669	M670	A671	Y672	S673	R676	F679	D682	Q683	G684	Y685	S686	F687	K688	V689	I690	L693	A694	G695	M696	E697	E698	I626	S627	S628	D700	L701	A702	F703	K706	Q709	Q710	A715	A718	A719	L722	D723	A724	E725	P578	E653	E654	Y681	G582	Q586	R589	I592	F596	K597	H598	K601	I602	N603	F606	K609	V610	G611	D612	T613	S614	F615	D616	L617	P618	E619	A620	N621	I624	Q625	I626	S627	S628	H629	R633	R634	A637	Q638	E473	D474	D479	L480	M481	I484	K487	L488	Y489	E495	L496	Q497	M498	S420	M421	E422	R425	E428	Q432	Q433	E434	W435	G436	L437	M438	I439	L440	D441	E442	H444	T445	A448	F451	R452	L455	T456	A460	H461	C462	K463	L464	I389	L465	T467	A468	A562	D563	R564	V565	K397	D398	C403	A406	I407	S408	L413	G414	H415	T416	T417	K418	R419	S420	S347	L348	V349	G350	A353	A354	C355	K359	R360	C361	L362	V363	L364	G365	N366	E372	K375	Q376	Q377	F378	K379	M380	V381	S382	S383	I384	D385	V315	L316	P317	P318	Y319	Q320	E321	K322	S323	L324	R325	K326	M327	E259	E260	E261	E262	E263	E264	T265	Q266	Q267	T267	V268	S269	F270	P271	V272	E277	M276	I285	H286	L287	E288	Y289	P290	L291	L292	A293	E294	Y295	D296	F297	R298	N299	D300	D305	I308	D309	L310	K311	P312	T313	A314	V315	L316	P317	P318	Y319	Q320	E321	K322	S323	L324	R325	K326	E246	D247	L248	F249	D250	F251	Y252	E253	Q254	M255	D256	K257	D258	E133	S134	D135	E136	T137	E138	Y139	L140	R141	K142	L143	S144	K145	R146	L147	W148	G151	I152	M153	F154	L155	K157	L158	C159	I160	S161	G164	K165	L168	V169	L170	K171	H172	M173	R174	Y175	F176	V177	E178	S179	C180	D183	V184	I185	Q186	H187	L188	D191	I194	R195	C197	R198	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115	Y116	K117	L118	T119	Y121	S122	L123	Y124	S128	V129	G130	L131	Q132	M65	P66	L67	K68	D69	D70	H71	T72	S73	R74	P75	L76	W77	V78	A79	I84	F85	L86	E87	P91	V92	Y93	K94	Y95	A96	Q97	D98	F99	L100	V101	I103	A104	E105	P106	R109	H112	V113	H114	E115
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------

## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	122900	Depositor
Resolution determination method	Not provided	
CTF correction method	NONE	Depositor
Microscope	FEI TITAN	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	40	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.129	Depositor
Minimum map value	-0.075	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.004	Depositor
Recommended contour level	0.03	Depositor
Map size ( $\text{\AA}$ )	337.92, 337.92, 337.92	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles ( $^\circ$ )	90.0, 90.0, 90.0	wwPDB
Pixel spacing ( $\text{\AA}$ )	1.32, 1.32, 1.32	Depositor

## 5 Model quality [i](#)

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

Bond lengths and bond angles in the following residue types are not validated in this section: SF4, ZN

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	0	0.45	0/5984	0.70	0/8104
2	1	0.32	0/3502	0.63	0/4731
3	2	0.40	0/3697	0.70	0/5011
4	3	0.36	0/1774	0.69	0/2378
5	4	0.43	0/2353	0.74	0/3187
6	5	0.35	0/528	0.56	0/713
7	6	0.42	0/3094	0.67	0/4188
8	7	0.40	0/5365	0.68	0/7247
All	All	0.40	0/26297	0.68	0/35559

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

### 5.2 Too-close contacts [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	0	5861	0	5869	376	0
2	1	3436	0	3403	162	0
3	2	3613	0	3657	193	0
4	3	1754	0	1771	79	0
5	4	2306	0	2332	114	0

*Continued on next page...*

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	5	522	0	528	14	0
7	6	3024	0	2991	117	0
8	7	5255	0	5247	278	0
9	0	8	0	0	1	0
10	3	2	0	0	0	0
10	4	1	0	0	0	0
10	6	3	0	0	0	0
All	All	25785	0	25798	1212	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 24.

All (1212) 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)
3:2:338:PHE:CZ	8:7:79:ALA:HB2	1.35	1.60
1:0:111:SER:HB2	1:0:192:TYR:CE1	1.40	1.52
3:2:338:PHE:HB2	3:2:339:PRO:CD	1.20	1.50
1:0:111:SER:CB	1:0:192:TYR:CE1	1.91	1.50
1:0:111:SER:CB	1:0:192:TYR:HE1	1.26	1.44
1:0:726:GLN:CB	1:0:727:PRO:CD	1.99	1.40
1:0:135:HIS:CE1	1:0:299:ARG:HG3	1.57	1.36
1:0:111:SER:HB2	1:0:192:TYR:CZ	1.58	1.35
3:2:338:PHE:CB	3:2:339:PRO:HD2	1.55	1.35
1:0:726:GLN:CB	1:0:727:PRO:HD2	1.42	1.31
2:1:187:ASN:HB2	2:1:191:ASP:CB	1.63	1.29
1:0:62:ALA:O	1:0:64:PRO:HD3	1.20	1.27
1:0:189:TRP:O	1:0:194:LEU:HB2	1.22	1.25
1:0:134:CYS:SG	1:0:299:ARG:NH2	2.09	1.23
2:1:483:THR:OG1	2:1:484:PRO:HD3	1.38	1.22
1:0:726:GLN:HB3	1:0:727:PRO:CD	1.62	1.22
1:0:158:TYR:CE1	1:0:193:PHE:CZ	2.28	1.21
1:0:20:GLU:OE1	1:0:482:THR:HG22	1.41	1.19
1:0:158:TYR:CD1	1:0:193:PHE:CZ	2.30	1.19
3:2:338:PHE:CZ	8:7:79:ALA:CB	2.26	1.18
3:2:338:PHE:CB	3:2:339:PRO:CD	2.00	1.18
8:7:289:TYR:H	8:7:290:PRO:HD3	1.07	1.18
8:7:472:ARG:HG3	8:7:473:GLU:HG3	1.27	1.14
8:7:314:ALA:CB	8:7:381:TRP:HD1	1.60	1.14
1:0:189:TRP:O	1:0:194:LEU:CB	1.97	1.13
1:0:158:TYR:HE1	1:0:193:PHE:CE1	1.67	1.11

Continued on next page...

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:112:ARG:CD	2:1:271:ALA:HB1	1.81	1.11
1:0:111:SER:HB3	1:0:192:TYR:CE1	1.87	1.10
1:0:112:ARG:HD3	2:1:271:ALA:HB1	1.13	1.09
3:2:338:PHE:HB2	3:2:339:PRO:HD3	1.09	1.08
8:7:359:LYS:NZ	8:7:436:GLY:HA2	1.68	1.08
1:0:726:GLN:HB3	1:0:727:PRO:HD3	1.21	1.08
2:1:187:ASN:HB2	2:1:191:ASP:HB3	1.06	1.06
1:0:45:GLY:O	1:0:670:GLY:O	1.73	1.05
1:0:135:HIS:CE1	1:0:299:ARG:C	2.30	1.05
2:1:187:ASN:CB	2:1:191:ASP:HB3	1.86	1.05
3:2:49:PRO:O	3:2:53:LYS:HG3	1.58	1.04
3:2:338:PHE:CG	3:2:339:PRO:HD2	1.92	1.04
1:0:158:TYR:CE1	1:0:193:PHE:CE1	2.46	1.03
1:0:183:LEU:HB3	1:0:188:GLY:H	1.18	1.03
8:7:62:ARG:HA	8:7:73:SER:HB2	1.34	1.03
3:2:317:ALA:HA	3:2:340:ASN:O	1.60	1.02
1:0:111:SER:CA	1:0:192:TYR:HE1	1.73	1.02
1:0:62:ALA:O	1:0:64:PRO:CD	2.07	1.01
3:2:338:PHE:CD2	3:2:339:PRO:HD2	1.96	1.01
4:3:209:GLU:OE1	4:3:210:MET:CE	2.09	0.99
8:7:314:ALA:CB	8:7:381:TRP:CD1	2.45	0.99
1:0:668:ILE:HG13	1:0:673:ASP:HB2	1.42	0.99
1:0:135:HIS:ND1	1:0:299:ARG:HG3	1.77	0.98
1:0:726:GLN:HB2	1:0:727:PRO:CD	1.73	0.98
8:7:314:ALA:HB1	8:7:381:TRP:CD1	1.98	0.98
1:0:158:TYR:HD1	1:0:193:PHE:CE2	1.81	0.98
1:0:135:HIS:HE1	1:0:299:ARG:C	1.67	0.97
1:0:16:TYR:CE1	1:0:18:TYR:HE1	1.82	0.97
1:0:183:LEU:HB3	1:0:188:GLY:N	1.77	0.97
1:0:135:HIS:NE2	1:0:300:GLU:HA	1.78	0.96
1:0:111:SER:HB3	1:0:192:TYR:HE1	1.25	0.94
1:0:581:LEU:HD21	2:1:263:LYS:O	1.65	0.94
2:1:483:THR:OG1	2:1:484:PRO:CD	2.15	0.94
1:0:487:ARG:HH22	1:0:728:PHE:HB3	1.31	0.94
1:0:705:ASN:HB2	1:0:708:LEU:HD11	1.48	0.94
1:0:126:PHE:HB3	2:1:274:ASP:OD2	1.66	0.93
1:0:16:TYR:HE1	1:0:18:TYR:CE1	1.86	0.92
1:0:112:ARG:HD3	2:1:271:ALA:CB	2.00	0.92
1:0:16:TYR:CE1	1:0:18:TYR:CE1	2.58	0.91
1:0:203:ASN:O	1:0:204:VAL:HG23	1.70	0.91
8:7:289:TYR:H	8:7:290:PRO:CD	1.82	0.91

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7:62:ARG:HD3	8:7:75:PRO:CD	2.00	0.91
1:0:111:SER:O	1:0:192:TYR:OH	1.86	0.91
8:7:62:ARG:HD3	8:7:75:PRO:HD2	1.51	0.90
1:0:135:HIS:CE1	1:0:299:ARG:CG	2.52	0.90
3:2:338:PHE:HZ	8:7:79:ALA:HB2	1.20	0.90
8:7:289:TYR:N	8:7:290:PRO:HD3	1.86	0.90
1:0:114:ASN:ND2	1:0:177:LEU:HD13	1.88	0.89
8:7:314:ALA:HB2	8:7:381:TRP:HD1	1.37	0.88
4:3:194:VAL:HG12	4:3:198:LEU:HD13	1.56	0.88
1:0:135:HIS:CE1	1:0:299:ARG:O	2.24	0.87
4:3:209:GLU:OE1	4:3:210:MET:HE1	1.72	0.87
3:2:100:LEU:C	3:2:101:LEU:HD12	1.93	0.87
3:2:338:PHE:HB2	3:2:339:PRO:HD2	0.91	0.87
8:7:91:PRO:HB2	8:7:96:ALA:HB2	1.56	0.86
3:2:100:LEU:O	3:2:101:LEU:HD12	1.73	0.86
4:3:192:LEU:HD22	4:3:196:LEU:O	1.75	0.86
1:0:18:TYR:CE2	1:0:671:LYS:HB3	2.11	0.85
1:0:487:ARG:NH2	1:0:728:PHE:HB3	1.91	0.85
8:7:359:LYS:NZ	8:7:436:GLY:CA	2.40	0.85
1:0:135:HIS:HE2	1:0:300:GLU:HA	1.40	0.85
1:0:158:TYR:HE1	1:0:193:PHE:CZ	1.80	0.85
4:3:188:GLU:HB2	8:7:188:LEU:CD2	2.05	0.85
8:7:35:GLN:CD	8:7:159:CYS:HB3	1.98	0.84
8:7:289:TYR:N	8:7:290:PRO:CD	2.40	0.84
1:0:111:SER:HB2	1:0:192:TYR:OH	1.76	0.84
1:0:611:VAL:HG22	1:0:669:ARG:HD2	1.58	0.84
2:1:414:TYR:C	2:1:416:PRO:HD3	1.98	0.84
1:0:519:ASN:HA	1:0:522:ASN:HD22	1.44	0.82
8:7:359:LYS:HZ1	8:7:436:GLY:HA2	1.39	0.82
3:2:314:ARG:O	3:2:316:TYR:HD2	1.63	0.82
8:7:472:ARG:CG	8:7:473:GLU:HG3	2.07	0.82
1:0:114:ASN:HD22	1:0:177:LEU:HD13	1.42	0.81
8:7:309:ASP:O	8:7:310:LEU:HG	1.80	0.81
8:7:359:LYS:HZ1	8:7:436:GLY:CA	1.93	0.81
4:3:209:GLU:OE1	4:3:210:MET:HE2	1.78	0.81
1:0:726:GLN:HB2	1:0:727:PRO:HD2	0.82	0.81
2:1:187:ASN:CB	2:1:191:ASP:CB	2.51	0.81
1:0:111:SER:CA	1:0:192:TYR:CE1	2.56	0.81
1:0:158:TYR:HD1	1:0:193:PHE:CZ	1.86	0.81
4:3:183:PHE:CZ	4:3:200:GLN:HG3	2.16	0.81
1:0:616:ARG:NH2	1:0:674:TYR:CD2	2.49	0.80

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2:339:PRO:O	8:7:77:TRP:CZ3	2.34	0.80
5:4:237:GLN:O	5:4:241:LEU:HB3	1.80	0.80
1:0:20:GLU:OE1	1:0:482:THR:CG2	2.26	0.80
1:0:189:TRP:O	1:0:190:CYS:O	2.00	0.79
1:0:106:GLY:HA3	1:0:174:ILE:HD12	1.65	0.79
1:0:135:HIS:CE1	1:0:300:GLU:N	2.51	0.79
1:0:190:CYS:O	1:0:194:LEU:HB3	1.83	0.79
1:0:135:HIS:HE1	1:0:299:ARG:HG3	1.36	0.79
3:2:338:PHE:CE2	8:7:79:ALA:HB2	2.15	0.79
1:0:16:TYR:HE1	1:0:18:TYR:HE1	1.18	0.78
4:3:185:ASP:OD1	4:3:188:GLU:HB3	1.82	0.78
1:0:183:LEU:HB3	1:0:188:GLY:CA	2.12	0.78
5:4:224:LEU:O	5:4:228:LEU:HG	1.84	0.78
2:1:166:ILE:HD11	2:1:170:PHE:H	1.49	0.78
1:0:183:LEU:O	1:0:187:GLN:N	2.17	0.77
1:0:139:ALA:HB1	1:0:300:GLU:OE2	1.85	0.77
1:0:106:GLY:O	1:0:174:ILE:HG13	1.85	0.77
2:1:163:ASP:OD2	7:6:179:PRO:CD	2.33	0.77
1:0:518:ARG:NH2	8:7:310:LEU:HD22	2.01	0.76
1:0:147:GLN:O	1:0:148:HIS:HB2	1.86	0.76
3:2:262:LEU:CD2	3:2:265:LEU:HD12	2.15	0.76
1:0:193:PHE:C	1:0:195:ALA:H	1.87	0.76
3:2:245:LEU:HG	3:2:280:ARG:HE	1.50	0.75
1:0:563:ARG:HA	2:1:172:ALA:HB1	1.68	0.75
3:2:338:PHE:CB	3:2:339:PRO:HD3	1.86	0.75
1:0:61:ARG:HH12	1:0:98:GLU:HG3	1.50	0.75
2:1:475:PHE:HE1	2:1:484:PRO:O	1.70	0.75
1:0:135:HIS:HE1	1:0:300:GLU:N	1.83	0.75
2:1:483:THR:H	2:1:484:PRO:HD2	1.52	0.75
3:2:338:PHE:CE1	8:7:79:ALA:HB2	2.16	0.75
4:3:183:PHE:CE1	4:3:200:GLN:HG3	2.23	0.74
7:6:291:CYS:O	7:6:295:ARG:HA	1.87	0.74
1:0:486:ALA:O	1:0:487:ARG:HB2	1.87	0.73
8:7:472:ARG:HG3	8:7:473:GLU:CG	2.14	0.73
4:3:192:LEU:HD21	4:3:200:GLN:CB	2.18	0.73
2:1:483:THR:HG1	2:1:484:PRO:HD3	1.53	0.73
3:2:262:LEU:HD22	3:2:265:LEU:HD12	1.70	0.72
4:3:188:GLU:HB2	8:7:188:LEU:HD21	1.72	0.72
2:1:181:CYS:SG	2:1:182:ASN:N	2.63	0.71
3:2:307:ILE:HG22	3:2:316:TYR:CB	2.21	0.71
1:0:69:LYS:HD2	1:0:229:ALA:HA	1.71	0.71

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:158:TYR:CD1	1:0:193:PHE:CE2	2.66	0.71
1:0:738:LEU:O	1:0:738:LEU:HD12	1.90	0.71
3:2:338:PHE:HD1	3:2:338:PHE:H	1.36	0.71
8:7:359:LYS:HZ2	8:7:436:GLY:HA2	1.51	0.71
1:0:114:ASN:ND2	1:0:177:LEU:HD22	2.06	0.71
1:0:106:GLY:CA	1:0:174:ILE:HD12	2.20	0.71
1:0:132:GLY:HA2	1:0:391:LEU:HD12	1.73	0.71
1:0:180:LEU:C	1:0:180:LEU:HD12	2.11	0.70
3:2:208:THR:HG23	3:2:210:ALA:H	1.56	0.70
8:7:35:GLN:HB3	8:7:159:CYS:SG	2.31	0.70
1:0:106:GLY:C	1:0:174:ILE:HD12	2.11	0.70
3:2:317:ALA:CA	3:2:340:ASN:O	2.38	0.70
8:7:312:PRO:HG3	8:7:383:THR:HG23	1.74	0.70
4:3:187:LEU:HD22	8:7:188:LEU:HB3	1.74	0.70
8:7:35:GLN:OE1	8:7:159:CYS:HB3	1.92	0.69
3:2:314:ARG:O	3:2:316:TYR:CD2	2.45	0.69
5:4:257:CYS:HB2	5:4:275:PHE:HB3	1.74	0.69
1:0:88:ARG:HH11	1:0:174:ILE:HG22	1.57	0.69
7:6:272:SER:HB3	7:6:285:THR:HG22	1.75	0.69
3:2:316:TYR:CE2	3:2:371:ARG:HD3	2.28	0.69
8:7:472:ARG:HH11	8:7:473:GLU:H	1.36	0.69
8:7:158:LEU:HD11	8:7:161:VAL:HG22	1.75	0.69
1:0:111:SER:HA	1:0:192:TYR:CE1	2.27	0.68
7:6:54:ARG:HG2	7:6:55:LEU:HD12	1.76	0.68
1:0:102:LEU:HB3	1:0:103:PRO:HD2	1.75	0.68
1:0:135:HIS:CE1	1:0:300:GLU:HA	2.27	0.68
8:7:633:ARG:HD2	8:7:679:PHE:CD1	2.28	0.68
2:1:458:GLN:HA	2:1:461:LEU:HB3	1.75	0.68
3:2:339:PRO:O	8:7:77:TRP:HZ3	1.76	0.68
1:0:111:SER:HA	1:0:192:TYR:HE1	1.57	0.68
8:7:435:TRP:HB3	8:7:461:HIS:ND1	2.08	0.68
8:7:314:ALA:HB2	8:7:381:TRP:CD1	2.21	0.68
1:0:487:ARG:NH1	1:0:487:ARG:HG3	2.08	0.68
1:0:611:VAL:HG22	1:0:669:ARG:CD	2.23	0.67
3:2:304:PRO:CG	3:2:372:ALA:HA	2.24	0.67
1:0:135:HIS:ND1	1:0:299:ARG:CG	2.54	0.67
1:0:106:GLY:O	1:0:174:ILE:CG1	2.43	0.67
8:7:415:HIS:HB2	8:7:418:LYS:HB2	1.76	0.67
8:7:472:ARG:NH1	8:7:473:GLU:HA	2.09	0.67
1:0:158:TYR:CE1	1:0:193:PHE:HZ	2.11	0.66
1:0:183:LEU:HB3	1:0:188:GLY:HA3	1.75	0.66

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:726:GLN:O	1:0:728:PHE:HD1	1.78	0.66
7:6:182:ILE:HG13	7:6:185:LEU:HD12	1.78	0.66
1:0:487:ARG:HG3	1:0:487:ARG:HH11	1.60	0.66
3:2:49:PRO:O	3:2:53:LYS:CG	2.41	0.66
1:0:114:ASN:HD21	1:0:177:LEU:HD22	1.61	0.66
2:1:444:GLY:HA2	7:6:269:PRO:HB3	1.77	0.66
4:3:208:LEU:HD12	4:3:209:GLU:N	2.10	0.66
1:0:739:LEU:O	1:0:741:LEU:N	2.22	0.66
2:1:187:ASN:HD22	2:1:191:ASP:HB2	1.59	0.66
5:4:248:HIS:O	5:4:248:HIS:ND1	2.29	0.66
5:4:297:LEU:HB2	7:6:250:ILE:HD13	1.76	0.65
8:7:504:LYS:HB2	8:7:655:TYR:HA	1.76	0.65
8:7:326:LYS:HD2	8:7:489:TYR:HB2	1.79	0.65
1:0:739:LEU:C	1:0:741:LEU:H	1.99	0.65
8:7:330:ASN:HD21	8:7:334:ARG:HB2	1.60	0.65
1:0:128:LYS:HD2	2:1:274:ASP:O	1.95	0.65
4:3:4:GLN:O	4:3:4:GLN:HG2	1.96	0.65
7:6:343:ARG:HG3	7:6:351:GLU:HG3	1.79	0.65
3:2:58:ARG:NH1	3:2:59:MET:SD	2.70	0.65
4:3:192:LEU:HD21	4:3:200:GLN:HB2	1.76	0.65
3:2:44:VAL:O	3:2:53:LYS:NZ	2.30	0.65
8:7:285:ILE:O	8:7:290:PRO:HG2	1.96	0.65
1:0:18:TYR:CD2	1:0:671:LYS:HB3	2.32	0.64
3:2:300:THR:HG23	3:2:373:HIS:HB3	1.77	0.64
8:7:361:CYS:SG	8:7:362:LEU:N	2.70	0.64
1:0:203:ASN:O	1:0:204:VAL:CG2	2.43	0.64
3:2:338:PHE:CE1	8:7:79:ALA:CB	2.79	0.64
5:4:165:LYS:HE2	5:4:200:SER:HB2	1.78	0.64
1:0:191:PRO:O	1:0:195:ALA:HB2	1.98	0.64
3:2:262:LEU:HD13	3:2:271:VAL:HG11	1.78	0.64
8:7:79:ALA:H	8:7:84:ILE:HG22	1.62	0.64
2:1:461:LEU:HD21	2:1:504:LYS:CD	2.28	0.64
1:0:88:ARG:HD3	1:0:174:ILE:CG2	2.27	0.64
5:4:266:TYR:HB2	7:6:250:ILE:HG12	1.79	0.64
1:0:180:LEU:O	1:0:184:GLY:N	2.30	0.64
1:0:88:ARG:NH1	1:0:174:ILE:HG22	2.12	0.64
1:0:415:THR:HG1	1:0:436:SER:HG	1.44	0.64
8:7:419:ARG:HB3	8:7:422:GLU:HB3	1.79	0.64
2:1:497:LEU:HD11	2:1:536:LEU:HD22	1.79	0.63
8:7:309:ASP:O	8:7:310:LEU:CG	2.46	0.63
2:1:513:ARG:HG3	2:1:514:ARG:HG3	1.81	0.63

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:12:VAL:HB	5:4:161:ILE:HA	1.79	0.63
3:2:239:GLN:HA	3:2:287:ALA:HB1	1.80	0.63
5:4:174:TYR:OH	7:6:320:ARG:NH2	2.31	0.63
8:7:372:GLU:HA	8:7:375:LYS:HE3	1.81	0.63
1:0:152:LEU:O	1:0:152:LEU:HD23	1.98	0.63
3:2:304:PRO:HG2	3:2:372:ALA:HA	1.80	0.63
7:6:304:GLU:HA	7:6:312:LEU:H	1.63	0.63
8:7:62:ARG:HB2	8:7:75:PRO:HD3	1.81	0.63
1:0:15:ASP:O	1:0:17:ILE:HG13	1.97	0.63
2:1:415:THR:N	2:1:416:PRO:HD3	2.14	0.63
1:0:334:ARG:HE	4:3:74:ILE:HD13	1.63	0.63
2:1:417:LYS:HG2	5:4:224:LEU:HD21	1.80	0.63
4:3:204:ARG:HD2	8:7:266:GLN:CG	2.29	0.62
7:6:195:ARG:HE	7:6:217:GLY:HA2	1.62	0.62
8:7:507:CYS:HA	8:7:659:PHE:HB3	1.82	0.62
2:1:478:CYS:CB	2:1:484:PRO:HG3	2.29	0.62
5:4:15:VAL:HA	5:4:164:ILE:HB	1.79	0.62
2:1:161:LYS:O	2:1:162:GLN:HB2	1.99	0.62
5:4:48:HIS:O	5:4:55:ASN:ND2	2.32	0.62
7:6:224:ASP:H	7:6:227:HIS:HB3	1.63	0.62
8:7:514:MET:HG2	8:7:665:GLN:HE21	1.63	0.62
4:3:192:LEU:HD21	4:3:200:GLN:HB3	1.80	0.62
5:4:146:ARG:NH2	7:6:348:CYS:O	2.32	0.62
5:4:289:PHE:HB2	5:4:294:PRO:HG2	1.82	0.62
3:2:411:GLN:OE1	6:5:3:ASN:ND2	2.32	0.62
5:4:196:LEU:HD21	5:4:223:LEU:HD22	1.82	0.62
1:0:460:THR:HG23	1:0:661:ALA:HB3	1.81	0.62
2:1:454:PRO:HB2	7:6:274:ALA:HB3	1.80	0.62
3:2:377:LEU:HD23	3:2:378:LYS:HG3	1.82	0.62
5:4:60:ILE:HG12	5:4:69:PHE:HA	1.82	0.62
1:0:705:ASN:HA	1:0:708:LEU:HD21	1.82	0.61
1:0:18:TYR:CE2	1:0:671:LYS:CB	2.83	0.61
1:0:489:CYS:SG	1:0:490:LEU:N	2.73	0.61
2:1:175:ARG:HH21	2:1:310:HIS:HB2	1.65	0.61
2:1:369:VAL:HA	2:1:374:LEU:HB2	1.82	0.61
8:7:76:LEU:HD23	8:7:87:GLU:HG2	1.81	0.61
1:0:16:TYR:OH	2:1:339:SER:HA	1.99	0.61
1:0:581:LEU:HD23	2:1:264:ASN:OD1	2.00	0.61
3:2:15:GLN:OE1	3:2:46:ARG:NH1	2.32	0.61
8:7:164:GLY:HA2	8:7:293:ALA:HB3	1.83	0.61
7:6:363:CYS:SG	7:6:365:ASN:ND2	2.73	0.61

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:497:ARG:HH11	1:0:710:VAL:HB	1.64	0.61
3:2:364:ILE:HG21	3:2:391:ILE:HD13	1.82	0.61
5:4:237:GLN:O	5:4:241:LEU:CB	2.48	0.61
8:7:472:ARG:HH11	8:7:473:GLU:N	1.97	0.61
3:2:415:GLN:HG2	3:2:439:ARG:HD3	1.82	0.61
6:5:15:ALA:HA	8:7:516:PRO:HB3	1.81	0.61
4:3:183:PHE:CZ	4:3:200:GLN:CG	2.83	0.61
1:0:18:TYR:CD2	1:0:671:LYS:CB	2.83	0.61
8:7:425:ARG:HA	8:7:428:GLU:HG2	1.81	0.61
1:0:315:LEU:HD23	1:0:373:ARG:HH21	1.65	0.60
2:1:187:ASN:HB2	2:1:191:ASP:HB2	1.72	0.60
3:2:304:PRO:HG2	3:2:373:HIS:H	1.64	0.60
3:2:307:ILE:HG22	3:2:316:TYR:HB3	1.83	0.60
3:2:338:PHE:HD2	3:2:339:PRO:HD2	1.60	0.60
4:3:199:ALA:HA	4:3:202:LYS:HB2	1.83	0.60
8:7:62:ARG:HD3	8:7:75:PRO:HD3	1.80	0.60
8:7:198:ARG:HB2	8:7:271:GLU:HB3	1.83	0.60
1:0:193:PHE:C	1:0:195:ALA:N	2.52	0.60
1:0:229:ALA:HB3	1:0:451:PHE:HA	1.83	0.60
2:1:187:ASN:CA	2:1:191:ASP:HB3	2.30	0.60
3:2:46:ARG:NH2	3:2:290:LEU:O	2.34	0.60
4:3:193:PRO:HG2	4:3:199:ALA:HB2	1.82	0.60
5:4:190:LEU:HB2	5:4:235:GLN:HE21	1.66	0.60
8:7:158:LEU:HD11	8:7:161:VAL:HA	1.83	0.60
8:7:538:PRO:HA	8:7:541:PHE:HB3	1.83	0.60
1:0:67:VAL:HB	1:0:228:LYS:HD2	1.83	0.60
3:2:406:GLY:HA2	3:2:445:PRO:HD3	1.82	0.60
8:7:184:VAL:HA	8:7:187:HIS:HB3	1.84	0.60
1:0:16:TYR:CD1	1:0:18:TYR:CE1	2.89	0.60
1:0:482:THR:OG1	1:0:695:ARG:NE	2.35	0.60
1:0:495:ILE:O	1:0:708:LEU:N	2.35	0.60
4:3:198:LEU:HD23	4:3:199:ALA:N	2.17	0.60
7:6:63:VAL:HB	7:6:106:ILE:HA	1.82	0.60
8:7:52:LYS:O	8:7:56:TYR:N	2.33	0.60
1:0:726:GLN:O	1:0:728:PHE:CD1	2.55	0.60
2:1:483:THR:N	2:1:484:PRO:HD2	2.17	0.60
4:3:200:GLN:O	4:3:204:ARG:NH1	2.34	0.60
1:0:70:LEU:HD23	1:0:204:VAL:HG13	1.84	0.60
1:0:566:LEU:H	1:0:594:ALA:HA	1.65	0.60
1:0:582:GLU:HB2	2:1:257:MET:SD	2.42	0.60
8:7:62:ARG:CA	8:7:73:SER:HB2	2.22	0.60

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:12:VAL:HA	5:4:58:ALA:HB3	1.83	0.60
8:7:625:GLN:NE2	8:7:627:SER:O	2.35	0.59
1:0:180:LEU:HD12	1:0:181:LYS:N	2.17	0.59
2:1:491:VAL:HG23	2:1:494:LYS:HD2	1.84	0.59
8:7:497:GLN:HE21	8:7:504:LYS:HA	1.68	0.59
4:3:188:GLU:HB2	8:7:188:LEU:HD22	1.83	0.59
3:2:364:ILE:O	3:2:368:LEU:N	2.33	0.59
2:1:188:LEU:H	2:1:191:ASP:HB3	1.66	0.59
3:2:15:GLN:OE1	3:2:18:ASN:ND2	2.36	0.59
3:2:224:GLN:OE1	3:2:226:ARG:NH2	2.35	0.59
8:7:266:GLN:O	8:7:268:VAL:N	2.33	0.59
1:0:135:HIS:CE1	1:0:300:GLU:CA	2.85	0.59
1:0:599:VAL:HG12	1:0:602:GLY:H	1.67	0.59
2:1:481:VAL:HG12	2:1:483:THR:HG23	1.85	0.59
1:0:106:GLY:O	1:0:174:ILE:CD1	2.51	0.59
1:0:112:ARG:HD2	2:1:271:ALA:HB1	1.79	0.59
2:1:360:TYR:O	2:1:364:GLY:N	2.36	0.59
3:2:71:VAL:HA	3:2:74:TRP:HB2	1.84	0.59
3:2:346:VAL:HG12	3:2:348:ARG:H	1.68	0.59
5:4:104:LEU:O	5:4:108:ASN:N	2.36	0.59
8:7:633:ARG:HD2	8:7:679:PHE:CG	2.38	0.58
2:1:166:ILE:HG23	2:1:166:ILE:O	2.03	0.58
5:4:213:LEU:HD11	5:4:245:PRO:HG2	1.84	0.58
1:0:273:ILE:HG22	1:0:278:GLU:HG2	1.85	0.58
2:1:417:LYS:NZ	5:4:43:VAL:HG21	2.18	0.58
7:6:111:SER:HA	7:6:141:GLY:HA3	1.86	0.58
8:7:76:LEU:HD22	8:7:86:LEU:HA	1.85	0.58
1:0:183:LEU:CB	1:0:188:GLY:H	2.06	0.58
1:0:487:ARG:HH22	1:0:728:PHE:CB	2.10	0.58
4:3:78:VAL:O	4:3:83:ASN:N	2.33	0.58
1:0:53:LEU:HA	1:0:56:ILE:HB	1.84	0.58
2:1:478:CYS:HB3	2:1:484:PRO:HG3	1.84	0.58
2:1:496:ASN:HA	2:1:499:ARG:HB2	1.84	0.58
3:2:392:ARG:O	3:2:396:LEU:N	2.34	0.58
7:6:334:ILE:HG12	7:6:336:LEU:H	1.69	0.58
8:7:91:PRO:O	8:7:94:LYS:HG2	2.04	0.58
2:1:410:GLU:HA	2:1:413:ALA:HB3	1.86	0.58
3:2:384:PRO:HB3	3:2:387:ILE:HB	1.85	0.58
1:0:523:LEU:HD12	1:0:523:LEU:C	2.23	0.58
4:3:81:ILE:HD12	4:3:84:LYS:HD3	1.86	0.58
1:0:705:ASN:CB	1:0:708:LEU:HD11	2.27	0.58

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:387:THR:OG1	2:1:393:GLN:NE2	2.37	0.57
8:7:153:MET:O	8:7:156:ILE:HG22	2.03	0.57
1:0:616:ARG:CZ	1:0:674:TYR:HD2	2.17	0.57
3:2:278:SER:OG	3:2:279:ARG:N	2.37	0.57
5:4:263:GLU:HG3	5:4:264:ILE:HG12	1.86	0.57
2:1:163:ASP:OD2	7:6:179:PRO:HD3	2.04	0.57
7:6:335:PRO:O	7:6:353:LYS:NZ	2.35	0.57
1:0:13:PRO:O	1:0:17:ILE:HG12	2.04	0.57
7:6:305:CYS:SG	7:6:306:LYS:N	2.76	0.57
8:7:625:GLN:OE1	8:7:676:ARG:NH2	2.37	0.57
7:6:116:LYS:HE2	7:6:119:GLU:HA	1.86	0.57
8:7:337:VAL:H	8:7:488:LEU:HD13	1.69	0.57
1:0:74:SER:O	1:0:209:TYR:N	2.35	0.57
2:1:165:GLY:O	7:6:179:PRO:CB	2.52	0.57
3:2:342:VAL:HG13	3:2:342:VAL:O	2.02	0.57
1:0:193:PHE:O	1:0:195:ALA:N	2.38	0.57
5:4:293:LEU:HG	7:6:250:ILE:HD12	1.87	0.57
6:5:33:PHE:HA	6:5:45:VAL:HG13	1.86	0.57
1:0:189:TRP:O	1:0:194:LEU:HB3	2.01	0.57
1:0:24:TYR:OH	1:0:41:GLU:O	2.20	0.57
4:3:204:ARG:HD2	8:7:266:GLN:HG2	1.86	0.57
1:0:111:SER:CB	1:0:192:TYR:CZ	2.49	0.57
1:0:535:ILE:HG12	1:0:617:ALA:HB3	1.86	0.57
2:1:387:THR:HG23	2:1:388:PRO:HD3	1.85	0.57
2:1:516:TYR:HA	2:1:519:THR:HG22	1.86	0.57
5:4:78:LEU:HA	5:4:81:PHE:HB3	1.86	0.57
7:6:166:GLU:HG2	7:6:195:ARG:HB3	1.86	0.57
6:5:18:GLN:HE21	8:7:520:ARG:HE	1.52	0.56
1:0:190:CYS:O	1:0:194:LEU:CB	2.51	0.56
1:0:343:ARG:NH2	1:0:431:PRO:O	2.38	0.56
2:1:165:GLY:O	7:6:179:PRO:HB2	2.05	0.56
3:2:245:LEU:HD23	3:2:246:GLY:O	2.05	0.56
4:3:21:LEU:HB2	4:3:62:LEU:HD11	1.86	0.56
8:7:59:LYS:HG3	8:7:62:ARG:NH2	2.21	0.56
1:0:111:SER:CB	1:0:192:TYR:OH	2.52	0.56
1:0:273:ILE:HG21	1:0:277:ASP:HB2	1.87	0.56
1:0:487:ARG:HH11	1:0:487:ARG:CG	2.18	0.56
2:1:314:VAL:O	2:1:318:GLY:N	2.38	0.56
2:1:408:ARG:HD3	5:4:116:LYS:HB2	1.87	0.56
5:4:255:CYS:HB2	5:4:260:ASN:HD21	1.70	0.56
7:6:77:LYS:HE3	7:6:78:PRO:HD2	1.87	0.56

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2:200:GLY:O	3:2:204:LEU:N	2.33	0.56
4:3:187:LEU:HD21	8:7:185:ILE:HA	1.88	0.56
7:6:259:ILE:HG13	7:6:261:SER:H	1.70	0.56
8:7:359:LYS:HZ2	8:7:436:GLY:CA	2.13	0.56
4:3:3:ASP:H	4:3:13:LYS:HZ3	1.54	0.56
4:3:199:ALA:HA	4:3:202:LYS:CB	2.36	0.56
1:0:517:ILE:HA	1:0:520:TYR:HD2	1.71	0.56
1:0:542:TYR:HB3	1:0:572:GLN:HE21	1.71	0.56
1:0:741:LEU:HD12	1:0:741:LEU:O	2.06	0.56
3:2:60:LEU:HA	3:2:119:ARG:HE	1.71	0.56
3:2:254:MET:HA	3:2:258:LEU:HD22	1.87	0.56
6:5:13:ASP:OD1	6:5:13:ASP:N	2.39	0.55
3:2:295:SER:OG	3:2:369:ARG:NH1	2.39	0.55
8:7:481:ASN:OD1	8:7:487:LYS:NZ	2.37	0.55
2:1:408:ARG:HG2	5:4:112:VAL:HB	1.89	0.55
3:2:63:GLU:OE1	3:2:64:GLN:NE2	2.38	0.55
4:3:194:VAL:HG22	4:3:194:VAL:O	2.06	0.55
1:0:501:GLN:OE1	8:7:299:ASN:ND2	2.40	0.55
8:7:582:GLY:O	8:7:589:ARG:NH2	2.39	0.55
5:4:25:GLN:NE2	5:4:32:PHE:O	2.38	0.55
8:7:444:HIS:HD2	8:7:467:THR:HG23	1.71	0.55
1:0:255:THR:HG23	1:0:396:PRO:HB3	1.87	0.55
7:6:196:VAL:H	7:6:215:THR:HG21	1.71	0.55
8:7:363:VAL:HA	8:7:439:ILE:HB	1.89	0.55
2:1:355:GLN:NE2	5:4:285:CYS:SG	2.80	0.55
1:0:18:TYR:CG	1:0:671:LYS:HD3	2.41	0.55
1:0:161:PHE:HD1	1:0:189:TRP:HE1	1.54	0.55
3:2:304:PRO:CG	3:2:373:HIS:H	2.20	0.55
8:7:693:LEU:HD12	8:7:696:MET:HG2	1.88	0.55
1:0:18:TYR:CD2	1:0:671:LYS:HD3	2.42	0.55
1:0:224:GLU:HG2	1:0:450:ARG:HG3	1.89	0.55
3:2:130:SER:O	3:2:131:ASP:OD1	2.24	0.55
2:1:187:ASN:HB2	2:1:191:ASP:CA	2.35	0.55
2:1:199:THR:HG23	2:1:317:ALA:HB2	1.89	0.55
3:2:17:ARG:HA	3:2:20:GLN:HB3	1.89	0.55
5:4:14:VAL:O	5:4:164:ILE:N	2.38	0.55
1:0:538:PHE:HB3	1:0:600:ALA:HB2	1.89	0.54
3:2:155:ARG:HA	3:2:158:VAL:HG12	1.90	0.54
7:6:123:ASN:O	7:6:127:HIS:ND1	2.37	0.54
7:6:156:LEU:HD11	7:6:165:ARG:HG2	1.88	0.54
7:6:199:ILE:HG12	7:6:220:HIS:HB2	1.90	0.54

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:128:LYS:CD	2:1:274:ASP:O	2.55	0.54
1:0:582:GLU:CB	2:1:257:MET:SD	2.96	0.54
5:4:191:ILE:HB	5:4:210:THR:HG21	1.89	0.54
1:0:506:SER:HB3	1:0:509:GLU:HA	1.88	0.54
1:0:582:GLU:HG3	2:1:257:MET:SD	2.47	0.54
2:1:390:GLN:O	2:1:394:TYR:N	2.37	0.54
3:2:405:GLU:HG2	6:5:8:VAL:HG22	1.89	0.54
2:1:321:LYS:HG2	7:6:180:SER:H	1.73	0.54
3:2:59:MET:HA	3:2:62:LEU:HB2	1.89	0.54
4:3:97:ASP:OD1	4:3:97:ASP:N	2.40	0.54
1:0:242:VAL:O	1:0:246:SER:N	2.41	0.54
8:7:309:ASP:HA	8:7:384:ILE:HD11	1.88	0.54
1:0:106:GLY:O	1:0:174:ILE:HD12	2.06	0.54
1:0:277:ASP:HA	1:0:280:ARG:HD2	1.90	0.54
1:0:705:ASN:CA	1:0:708:LEU:HD21	2.38	0.54
8:7:62:ARG:HG3	8:7:74:ARG:HA	1.89	0.54
1:0:275:GLU:HA	1:0:278:GLU:HB2	1.90	0.54
1:0:507:LYS:NZ	8:7:300:ASP:O	2.40	0.54
2:1:461:LEU:HD21	2:1:504:LYS:HD2	1.90	0.54
8:7:35:GLN:OE1	8:7:159:CYS:CB	2.55	0.54
1:0:523:LEU:HB2	1:0:710:VAL:HG21	1.90	0.54
1:0:553:TYR:OH	2:1:229:TYR:O	2.23	0.54
1:0:345:ARG:NH2	4:3:61:GLN:OE1	2.41	0.54
1:0:601:ARG:HH12	1:0:626:VAL:HG22	1.73	0.54
5:4:263:GLU:O	7:6:254:PHE:N	2.39	0.54
8:7:472:ARG:HG3	8:7:473:GLU:N	2.23	0.54
8:7:556:ASP:OD2	8:7:647:LYS:NZ	2.34	0.54
1:0:49:THR:O	1:0:53:LEU:N	2.41	0.53
2:1:533:TYR:O	2:1:537:HIS:N	2.36	0.53
4:3:93:ARG:NE	4:3:95:TYR:O	2.39	0.53
8:7:413:LEU:HD22	8:7:418:LYS:HG2	1.88	0.53
8:7:472:ARG:NH1	8:7:473:GLU:CA	2.71	0.53
4:3:24:ASN:ND2	4:3:46:CYS:SG	2.82	0.53
4:3:188:GLU:CB	8:7:188:LEU:CD2	2.83	0.53
1:0:464:LEU:HD13	1:0:477:THR:HG22	1.90	0.53
2:1:359:GLU:O	2:1:363:LEU:N	2.36	0.53
3:2:338:PHE:CD1	3:2:338:PHE:N	2.77	0.53
7:6:110:LYS:HE3	7:6:140:HIS:H	1.73	0.53
2:1:132:VAL:O	2:1:135:GLN:NE2	2.41	0.53
3:2:50:SER:O	3:2:54:ASN:ND2	2.41	0.53
5:4:145:HIS:HA	5:4:148:ASN:HD22	1.72	0.53

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:240:ASP:OD2	1:0:636:ARG:NH2	2.31	0.53
1:0:16:TYR:CD1	1:0:18:TYR:HE1	2.24	0.53
5:4:180:VAL:O	5:4:184:ALA:N	2.39	0.53
5:4:250:ASP:OD1	5:4:250:ASP:N	2.39	0.53
1:0:503:ALA:HA	1:0:682:LYS:HD2	1.90	0.53
1:0:582:GLU:CG	2:1:257:MET:SD	2.97	0.53
1:0:672:THR:OG1	1:0:731:GLU:OE1	2.27	0.53
1:0:726:GLN:O	1:0:728:PHE:N	2.39	0.53
2:1:163:ASP:OD2	7:6:179:PRO:HD2	2.07	0.53
2:1:368:SER:HB3	2:1:373:ALA:HB1	1.90	0.53
3:2:408:LEU:HD11	3:2:440:LEU:HB3	1.91	0.53
8:7:175:TYR:HB2	8:7:270:PHE:HB2	1.91	0.53
8:7:324:LEU:O	8:7:328:PHE:N	2.41	0.53
1:0:579:VAL:HG22	2:1:257:MET:HG3	1.91	0.53
2:1:372:ILE:HG21	5:4:201:GLY:HA3	1.91	0.53
3:2:304:PRO:HG3	3:2:372:ALA:HA	1.91	0.53
3:2:307:ILE:HD13	3:2:371:ARG:HB3	1.91	0.53
3:2:339:PRO:HG3	8:7:52:LYS:HD3	1.91	0.53
3:2:435:ASN:HB3	3:2:440:LEU:HB2	1.91	0.53
8:7:197:CYS:SG	8:7:198:ARG:N	2.82	0.53
8:7:557:LYS:HA	8:7:603:ASN:HB2	1.89	0.53
1:0:519:ASN:HD22	1:0:522:ASN:ND2	2.07	0.53
3:2:26:LEU:O	3:2:94:ARG:NH1	2.38	0.53
3:2:322:GLU:HA	3:2:325:ILE:HD12	1.91	0.53
3:2:360:THR:O	3:2:364:ILE:N	2.37	0.53
4:3:28:HIS:ND1	4:3:46:CYS:SG	2.78	0.53
7:6:167:VAL:HB	7:6:196:VAL:HA	1.91	0.53
2:1:130:ASP:HA	2:1:133:VAL:HB	1.90	0.52
3:2:308:VAL:HG11	8:7:115:GLU:HG3	1.91	0.52
3:2:328:ILE:HA	3:2:331:PHE:HB3	1.89	0.52
5:4:21:TRP:O	5:4:25:GLN:N	2.38	0.52
5:4:112:VAL:HA	5:4:115:ILE:HG22	1.91	0.52
8:7:153:MET:HA	8:7:156:ILE:HG22	1.91	0.52
8:7:390:CYS:HB2	8:7:406:ALA:HA	1.89	0.52
8:7:565:VAL:O	8:7:569:LYS:N	2.37	0.52
1:0:140:SER:HA	1:0:387:GLU:OE2	2.10	0.52
1:0:684:PHE:O	1:0:689:LYS:NZ	2.40	0.52
2:1:169:ALA:HA	7:6:177:CYS:HB3	1.92	0.52
1:0:673:ASP:O	1:0:674:TYR:HB2	2.10	0.52
3:2:304:PRO:HG2	3:2:372:ALA:CA	2.39	0.52
3:2:310:GLU:HB3	3:2:315:LEU:HD22	1.91	0.52

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7:497:GLN:HG2	8:7:504:LYS:HG2	1.91	0.52
1:0:138:THR:CG2	1:0:299:ARG:HD3	2.40	0.52
1:0:262:ASN:HA	1:0:265:THR:HB	1.91	0.52
1:0:277:ASP:OD1	1:0:280:ARG:NH1	2.43	0.52
5:4:48:HIS:NE2	5:4:56:LYS:O	2.43	0.52
5:4:236:ASP:O	5:4:240:GLN:HB2	2.09	0.52
5:4:263:GLU:HB2	7:6:292:PRO:HB3	1.91	0.52
8:7:65:MET:HB2	8:7:73:SER:HB3	1.91	0.52
8:7:324:LEU:HD12	8:7:327:MET:HB3	1.92	0.52
8:7:575:LEU:O	8:7:577:LYS:NZ	2.35	0.52
3:2:145:VAL:HG13	3:2:146:PRO:HD3	1.92	0.52
3:2:231:VAL:O	3:2:235:SER:N	2.41	0.52
4:3:209:GLU:CD	4:3:209:GLU:O	2.48	0.52
7:6:59:ARG:HA	7:6:164:SER:HB2	1.91	0.52
7:6:19:TRP:CG	8:7:101:VAL:HG11	2.45	0.52
7:6:87:LEU:HD13	7:6:229:LYS:HD3	1.90	0.52
1:0:81:GLU:HA	1:0:84:ILE:HD12	1.92	0.52
1:0:88:ARG:NH1	1:0:174:ILE:H	2.08	0.52
1:0:575:ALA:HA	2:1:266:LEU:HD22	1.90	0.52
5:4:31:GLN:O	5:4:36:LYS:NZ	2.33	0.52
8:7:672:TYR:HE2	8:7:676:ARG:HH11	1.58	0.52
8:7:688:LYS:NZ	8:7:689:VAL:O	2.33	0.52
1:0:420:PRO:HB2	1:0:428:ILE:HD11	1.92	0.52
3:2:209:PRO:HA	3:2:212:LEU:HD13	1.92	0.52
7:6:229:LYS:HA	7:6:232:LEU:HD12	1.92	0.52
3:2:397:GLU:OE2	3:2:400:ARG:NH2	2.43	0.52
8:7:132:GLN:HG3	8:7:134:SER:H	1.74	0.52
8:7:360:ARG:NH1	8:7:432:THR:O	2.41	0.52
1:0:343:ARG:HG2	1:0:347:GLN:HE21	1.75	0.52
1:0:583:LYS:O	1:0:587:ALA:N	2.36	0.52
3:2:245:LEU:CG	3:2:280:ARG:HE	2.21	0.52
4:3:194:VAL:CG1	4:3:198:LEU:HD13	2.36	0.52
7:6:87:LEU:HB2	7:6:228:TYR:HE2	1.74	0.52
7:6:277:ASP:N	7:6:277:ASP:OD1	2.43	0.52
1:0:391:LEU:O	1:0:395:SER:N	2.43	0.51
2:1:360:TYR:HA	2:1:363:LEU:HB3	1.92	0.51
2:1:463:HIS:HA	2:1:466:VAL:HG22	1.92	0.51
2:1:497:LEU:C	2:1:497:LEU:HD23	2.31	0.51
4:3:75:ARG:HA	4:3:79:LEU:HD13	1.91	0.51
8:7:105:GLU:HA	8:7:124:TYR:HB2	1.91	0.51
8:7:299:ASN:HB3	8:7:332:ARG:HD3	1.90	0.51

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:523:LEU:HA	1:0:710:VAL:HG11	1.92	0.51
2:1:260:LEU:HG	2:1:328:GLN:HB3	1.92	0.51
7:6:172:SER:HA	7:6:201:LEU:HB3	1.91	0.51
1:0:195:ALA:HA	1:0:198:SER:OG	2.10	0.51
1:0:487:ARG:HD2	1:0:724:MET:SD	2.50	0.51
3:2:48:LEU:HG	3:2:48:LEU:O	2.10	0.51
4:3:13:LYS:HD2	4:3:21:LEU:HD11	1.91	0.51
5:4:13:ILE:HA	5:4:162:LEU:HB3	1.92	0.51
8:7:55:GLU:OE2	8:7:62:ARG:NH1	2.42	0.51
8:7:194:ILE:HG22	8:7:195:ARG:HG2	1.92	0.51
8:7:532:LEU:HD12	8:7:724:ALA:HB2	1.93	0.51
1:0:85:GLU:OE2	2:1:334:ASN:ND2	2.44	0.51
1:0:183:LEU:CB	1:0:188:GLY:HA3	2.40	0.51
1:0:441:SER:O	1:0:445:LYS:N	2.32	0.51
4:3:22:MET:HB3	4:3:58:PHE:HB3	1.91	0.51
5:4:13:ILE:HB	5:4:59:VAL:HG22	1.92	0.51
8:7:91:PRO:HB2	8:7:96:ALA:CB	2.33	0.51
8:7:435:TRP:CB	8:7:461:HIS:ND1	2.72	0.51
1:0:191:PRO:O	1:0:195:ALA:CB	2.58	0.51
7:6:129:THR:O	7:6:133:LYS:N	2.43	0.51
8:7:62:ARG:NH2	8:7:77:TRP:CZ3	2.79	0.51
2:1:423:SER:O	2:1:427:ALA:N	2.41	0.51
8:7:113:VAL:O	8:7:115:GLU:N	2.44	0.51
8:7:151:GLY:HA2	8:7:154:GLN:HB2	1.93	0.51
8:7:625:GLN:N	8:7:660:TYR:O	2.39	0.51
8:7:665:GLN:O	8:7:667:THR:OG1	2.22	0.51
1:0:697:ILE:HG22	1:0:701:LEU:HD22	1.92	0.51
3:2:328:ILE:O	3:2:332:SER:N	2.32	0.51
8:7:316:LEU:HB3	8:7:320:GLN:HE21	1.75	0.51
8:7:360:ARG:NH2	8:7:403:CYS:SG	2.83	0.51
1:0:722:ARG:HD3	7:6:223:LEU:HA	1.92	0.51
4:3:22:MET:HG2	4:3:60:VAL:HB	1.93	0.51
8:7:137:THR:HG21	8:7:154:GLN:HE22	1.76	0.51
1:0:697:ILE:HA	1:0:701:LEU:HB3	1.92	0.51
7:6:76:LEU:HD22	7:6:225:GLU:HG3	1.92	0.51
8:7:688:LYS:HZ1	8:7:690:ILE:HG12	1.76	0.51
1:0:135:HIS:ND1	1:0:299:ARG:NE	2.59	0.51
1:0:262:ASN:C	1:0:262:ASN:OD1	2.49	0.51
1:0:610:PHE:HB2	1:0:667:ALA:HA	1.91	0.51
5:4:146:ARG:HH12	7:6:350:GLY:HA3	1.76	0.51
8:7:175:TYR:CZ	8:7:272:VAL:HA	2.46	0.51

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7:377:GLN:HB3	8:7:381:TRP:CZ3	2.46	0.51
1:0:309:VAL:HG11	1:0:409:THR:HB	1.93	0.50
1:0:423:ASP:HB2	2:1:285:SER:HA	1.93	0.50
2:1:417:LYS:HZ2	5:4:43:VAL:HG21	1.74	0.50
4:3:107:PHE:O	4:3:111:ASN:ND2	2.43	0.50
5:4:147:MET:HG3	5:4:157:MET:HE1	1.92	0.50
8:7:191:ASP:O	8:7:195:ARG:N	2.37	0.50
8:7:394:SER:O	8:7:394:SER:OG	2.29	0.50
8:7:438:MET:HB2	8:7:463:LYS:HA	1.93	0.50
1:0:114:ASN:ND2	1:0:177:LEU:CD1	2.68	0.50
1:0:311:PRO:HD2	1:0:410:TYR:HE2	1.75	0.50
1:0:571:THR:HG22	1:0:573:ASP:H	1.76	0.50
8:7:165:LYS:HB2	8:7:294:GLU:HA	1.93	0.50
1:0:377:GLU:O	1:0:381:SER:N	2.37	0.50
2:1:509:GLN:HG2	2:1:512:ILE:HD11	1.91	0.50
3:2:7:ARG:NH2	6:5:54:GLN:OE1	2.44	0.50
2:1:475:PHE:CE1	2:1:484:PRO:O	2.58	0.50
2:1:478:CYS:HB2	2:1:484:PRO:HG3	1.93	0.50
3:2:71:VAL:O	3:2:83:GLN:NE2	2.45	0.50
5:4:272:LEU:HD11	7:6:319:ALA:HA	1.93	0.50
8:7:62:ARG:HH11	8:7:75:PRO:HG3	1.76	0.50
2:1:398:GLN:O	2:1:402:ASN:N	2.44	0.50
3:2:308:VAL:HG13	3:2:310:GLU:H	1.75	0.50
1:0:640:LEU:HD12	1:0:643:GLN:HB2	1.93	0.50
2:1:187:ASN:N	2:1:191:ASP:CB	2.74	0.50
5:4:8:LEU:HD11	5:4:157:MET:HG3	1.92	0.50
5:4:219:GLN:HG2	5:4:221:PRO:HD2	1.92	0.50
7:6:19:TRP:NE1	8:7:98:ASP:OD1	2.45	0.50
2:1:447:GLN:HB3	7:6:269:PRO:HB2	1.93	0.50
3:2:96:TRP:HD1	3:2:110:LEU:HA	1.77	0.50
3:2:264:HIS:ND1	3:2:267:GLU:OE1	2.42	0.50
3:2:348:ARG:O	3:2:352:GLN:N	2.40	0.50
8:7:570:GLU:OE2	8:7:715:LYS:NZ	2.38	0.50
8:7:313:THR:O	8:7:313:THR:HG23	2.12	0.50
1:0:616:ARG:CZ	1:0:674:TYR:CD2	2.94	0.50
5:4:124:ILE:HD11	5:4:129:THR:H	1.77	0.50
1:0:354:PRO:HG3	1:0:415:THR:HA	1.94	0.49
2:1:187:ASN:H	2:1:191:ASP:HB2	1.77	0.49
2:1:262:VAL:HG11	2:1:330:SER:HB2	1.93	0.49
3:2:300:THR:HG22	3:2:300:THR:O	2.12	0.49
8:7:184:VAL:HG12	8:7:188:LEU:HB2	1.93	0.49

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:101:LYS:O	1:0:101:LYS:HG3	2.11	0.49
1:0:482:THR:H	1:0:695:ARG:HG3	1.77	0.49
3:2:75:VAL:HG22	5:4:241:LEU:HA	1.94	0.49
3:2:114:PHE:O	3:2:118:LEU:N	2.41	0.49
1:0:18:TYR:CD2	1:0:671:LYS:CD	2.95	0.49
2:1:237:THR:HA	2:1:240:LYS:HB3	1.94	0.49
2:1:372:ILE:HD13	5:4:201:GLY:H	1.77	0.49
4:3:134:GLN:O	4:3:138:LEU:N	2.43	0.49
8:7:634:ARG:O	8:7:638:GLN:N	2.44	0.49
5:4:219:GLN:HB3	5:4:222:SER:HB3	1.93	0.49
8:7:339:VAL:N	8:7:489:TYR:O	2.42	0.49
8:7:508:ALA:O	8:7:661:SER:N	2.41	0.49
1:0:69:LYS:NZ	1:0:225:LEU:O	2.37	0.49
1:0:117:ILE:HD13	1:0:184:GLY:HA3	1.95	0.49
3:2:350:SER:HA	3:2:353:GLN:HB2	1.94	0.49
1:0:89:LYS:O	1:0:93:PHE:N	2.45	0.49
1:0:581:LEU:CD2	2:1:264:ASN:OD1	2.60	0.49
3:2:425:ALA:O	3:2:429:GLY:N	2.43	0.49
2:1:461:LEU:CD2	2:1:504:LYS:HE3	2.42	0.49
3:2:58:ARG:HD3	5:4:229:TRP:HZ2	1.76	0.49
4:3:116:ASP:O	4:3:120:LYS:N	2.38	0.49
8:7:103:ILE:HG23	8:7:106:PRO:HB2	1.95	0.49
8:7:667:THR:H	8:7:670:MET:HB3	1.78	0.49
8:7:62:ARG:NE	8:7:77:TRP:CH2	2.81	0.49
1:0:552:TRP:HA	1:0:557:ILE:HD13	1.95	0.49
2:1:166:ILE:HA	7:6:179:PRO:HG3	1.95	0.49
8:7:433:GLN:O	8:7:434:GLU:HB2	2.13	0.49
3:2:309:VAL:HG22	3:2:312:ASN:HA	1.94	0.49
7:6:290:PHE:CE1	7:6:295:ARG:HB3	2.47	0.49
1:0:72:TYR:HB3	1:0:206:VAL:HG22	1.94	0.48
1:0:565:LYS:HE3	1:0:593:GLY:HA3	1.94	0.48
3:2:310:GLU:HG3	3:2:311:THR:HG23	1.94	0.48
5:4:14:VAL:N	5:4:162:LEU:O	2.40	0.48
6:5:49:LEU:HD13	6:5:56:ARG:HH22	1.77	0.48
1:0:194:LEU:HG	1:0:194:LEU:O	2.12	0.48
1:0:370:LYS:HD3	1:0:374:PHE:HE2	1.78	0.48
1:0:484:THR:OG1	1:0:695:ARG:NH2	2.45	0.48
1:0:539:PHE:HB2	1:0:599:VAL:HG22	1.95	0.48
3:2:260:ASN:O	3:2:263:GLN:HB2	2.13	0.48
8:7:532:LEU:HD11	8:7:723:ASP:HB2	1.95	0.48
2:1:307:PHE:O	2:1:311:SER:N	2.44	0.48

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2:98:THR:HA	3:2:108:LEU:HG	1.95	0.48
3:2:307:ILE:HG21	3:2:371:ARG:HD2	1.95	0.48
5:4:257:CYS:HB3	5:4:276:CYS:HB2	1.94	0.48
8:7:309:ASP:O	8:7:309:ASP:OD1	2.31	0.48
8:7:375:LYS:O	8:7:379:LYS:N	2.38	0.48
8:7:664:SER:N	8:7:669:GLU:OE1	2.43	0.48
1:0:217:ILE:HG12	1:0:305:LEU:HA	1.95	0.48
2:1:396:THR:O	2:1:400:ILE:N	2.39	0.48
3:2:143:ARG:HD3	3:2:148:LEU:HD21	1.95	0.48
4:3:84:LYS:HA	4:3:136:ASN:HD21	1.78	0.48
5:4:235:GLN:HA	5:4:238:ARG:HG2	1.95	0.48
1:0:325:THR:HG23	1:0:382:LEU:HD13	1.96	0.48
1:0:375:CYS:O	1:0:379:LEU:N	2.39	0.48
2:1:302:ALA:O	2:1:306:ARG:N	2.46	0.48
5:4:13:ILE:N	5:4:58:ALA:O	2.35	0.48
8:7:128:SER:HB2	8:7:131:LEU:HD21	1.95	0.48
1:0:338:GLU:HG3	1:0:342:TRP:CD1	2.48	0.48
1:0:485:LEU:HB2	1:0:732:ASP:HB2	1.94	0.48
1:0:634:LYS:HA	1:0:637:LEU:HD12	1.96	0.48
1:0:638:GLU:O	1:0:642:ASP:N	2.46	0.48
3:2:304:PRO:HG2	3:2:373:HIS:N	2.28	0.48
7:6:360:CYS:SG	7:6:361:ALA:N	2.87	0.48
8:7:570:GLU:HA	8:7:573:ILE:HB	1.95	0.48
8:7:673:SER:HA	8:7:676:ARG:HB3	1.96	0.48
1:0:192:TYR:O	1:0:196:ARG:HG2	2.14	0.48
2:1:150:ASN:HA	2:1:153:ASP:HB2	1.94	0.48
2:1:350:LYS:HG3	2:1:353:LYS:HB3	1.96	0.48
3:2:220:LEU:HD11	3:2:226:ARG:H	1.79	0.48
4:3:188:GLU:CA	8:7:188:LEU:HD22	2.43	0.48
8:7:75:PRO:HA	8:7:144:SER:HA	1.94	0.48
8:7:442:GLU:N	8:7:466:LEU:O	2.45	0.48
1:0:102:LEU:CB	1:0:103:PRO:HD2	2.42	0.48
1:0:337:LEU:HD13	4:3:68:VAL:HG11	1.96	0.48
1:0:516:VAL:HG12	1:0:520:TYR:HE2	1.77	0.48
1:0:646:ILE:O	1:0:647:ARG:NH1	2.43	0.48
2:1:233:ASP:OD1	2:1:233:ASP:N	2.47	0.48
3:2:48:LEU:N	3:2:49:PRO:CD	2.77	0.48
3:2:148:LEU:HA	3:2:151:TYR:HD2	1.78	0.48
3:2:300:THR:HG23	3:2:373:HIS:CB	2.43	0.48
3:2:357:SER:OG	3:2:358:GLY:O	2.32	0.48
5:4:14:VAL:HB	5:4:163:VAL:HA	1.96	0.48

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7:288:GLU:HB2	8:7:290:PRO:HD3	1.96	0.48
1:0:132:GLY:CA	1:0:391:LEU:HD12	2.42	0.48
1:0:238:ASN:HB3	1:0:241:ASN:HD22	1.78	0.48
1:0:252:THR:HG23	1:0:430:ASN:HD21	1.79	0.48
1:0:570:GLU:HB3	1:0:577:THR:HG23	1.95	0.48
5:4:43:VAL:O	5:4:47:SER:N	2.46	0.48
5:4:266:TYR:H	5:4:274:ILE:HG23	1.78	0.48
6:5:32:LYS:HB3	6:5:46:ILE:HB	1.95	0.48
2:1:419:THR:HG22	2:1:422:LEU:H	1.79	0.48
2:1:483:THR:C	2:1:485:PHE:H	2.16	0.48
4:3:99:LEU:O	4:3:103:GLU:N	2.47	0.48
4:3:167:LYS:O	4:3:171:LEU:N	2.46	0.48
5:4:195:VAL:HG22	5:4:216:LYS:HA	1.96	0.48
1:0:26:ARG:HD3	1:0:29:LYS:HD3	1.95	0.47
1:0:335:ARG:O	1:0:339:TYR:N	2.46	0.47
3:2:79:PHE:HB3	3:2:82:ALA:HB3	1.96	0.47
8:7:624:ILE:HA	8:7:660:TYR:HB2	1.96	0.47
1:0:581:LEU:CD2	2:1:264:ASN:HA	2.44	0.47
7:6:171:PHE:HE2	7:6:205:VAL:HG21	1.80	0.47
8:7:296:ASP:OD1	8:7:296:ASP:N	2.44	0.47
8:7:496:LEU:HB3	8:7:502:ILE:HD12	1.96	0.47
1:0:112:ARG:HH22	1:0:211:TYR:HB2	1.78	0.47
1:0:417:ILE:HG23	1:0:434:HIS:HB2	1.96	0.47
1:0:541:SER:H	1:0:544:TYR:HB3	1.79	0.47
1:0:670:GLY:HA3	2:1:338:ASN:HD22	1.79	0.47
7:6:205:VAL:HG12	7:6:208:CYS:H	1.80	0.47
8:7:104:ALA:H	8:7:106:PRO:HD2	1.79	0.47
8:7:105:GLU:HG2	8:7:121:TYR:HE1	1.78	0.47
1:0:499:ASN:HA	8:7:324:LEU:HD23	1.96	0.47
3:2:76:LYS:H	5:4:242:ILE:HB	1.78	0.47
3:2:230:LEU:HD21	3:2:258:LEU:HB2	1.96	0.47
8:7:337:VAL:O	8:7:488:LEU:N	2.35	0.47
8:7:363:VAL:HG22	8:7:439:ILE:HD12	1.95	0.47
8:7:472:ARG:HH11	8:7:473:GLU:CA	2.27	0.47
1:0:311:PRO:O	1:0:410:TYR:OH	2.32	0.47
1:0:524:LEU:O	1:0:528:SER:N	2.40	0.47
3:2:141:HIS:HD2	5:4:92:ASN:HD21	1.61	0.47
8:7:439:ILE:HG12	8:7:464:LEU:HD23	1.97	0.47
1:0:135:HIS:NE2	1:0:300:GLU:CA	2.65	0.47
1:0:203:ASN:C	1:0:204:VAL:HG23	2.33	0.47
1:0:692:LYS:HB3	1:0:697:ILE:HG23	1.97	0.47

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2:38:PRO:HG3	3:2:129:TRP:CD1	2.49	0.47
3:2:342:VAL:O	3:2:342:VAL:HG22	2.15	0.47
3:2:389:ASP:HA	3:2:392:ARG:HB2	1.96	0.47
4:3:193:PRO:CG	4:3:199:ALA:HB2	2.45	0.47
5:4:181:ILE:O	5:4:185:GLN:N	2.46	0.47
5:4:194:CYS:HA	5:4:215:LEU:HB3	1.95	0.47
7:6:210:VAL:HA	7:6:213:ARG:HG2	1.95	0.47
7:6:316:PRO:HD2	7:6:317:HIS:CE1	2.49	0.47
8:7:123:LEU:HD23	8:7:479:ASP:HB3	1.97	0.47
8:7:581:TYR:O	8:7:589:ARG:NH2	2.43	0.47
8:7:621:ASN:ND2	8:7:646:ALA:O	2.48	0.47
8:7:656:ASN:OD1	8:7:656:ASN:N	2.47	0.47
1:0:253:ARG:HB2	1:0:343:ARG:HH21	1.80	0.47
1:0:266:LEU:O	1:0:269:THR:OG1	2.25	0.47
1:0:340:VAL:HA	1:0:343:ARG:HB3	1.97	0.47
4:3:30:LEU:HD22	4:3:47:PRO:HG3	1.95	0.47
5:4:115:ILE:HD12	5:4:118:LEU:HB2	1.96	0.47
1:0:152:LEU:HD23	1:0:152:LEU:C	2.35	0.47
1:0:354:PRO:HA	1:0:416:ILE:HD12	1.97	0.47
3:2:340:ASN:OD1	3:2:340:ASN:N	2.47	0.47
6:5:53:LEU:HD23	6:5:56:ARG:HB3	1.96	0.47
1:0:21:GLN:O	1:0:25:MET:N	2.48	0.47
2:1:522:VAL:HA	2:1:525:ILE:HG22	1.97	0.47
3:2:338:PHE:CE2	8:7:79:ALA:CB	2.89	0.47
5:4:249:VAL:HG13	5:4:249:VAL:O	2.14	0.47
8:7:174:ARG:HG2	8:7:269:SER:HB2	1.97	0.47
1:0:18:TYR:HA	1:0:19:PRO:HD2	1.68	0.46
3:2:262:LEU:CD1	3:2:271:VAL:HG11	2.45	0.46
4:3:174:ILE:HA	4:3:177:ARG:HB2	1.98	0.46
4:3:188:GLU:O	4:3:189:SER:OG	2.26	0.46
7:6:80:ARG:HD3	7:6:201:LEU:HD21	1.97	0.46
8:7:703:PHE:O	8:7:709:GLN:NE2	2.40	0.46
2:1:399:ASP:HA	2:1:402:ASN:HB2	1.97	0.46
3:2:201:PHE:HA	3:2:204:LEU:HD12	1.97	0.46
3:2:226:ARG:HD2	3:2:257:SER:HB3	1.97	0.46
3:2:239:GLN:OE1	3:2:291:SER:OG	2.22	0.46
7:6:271:PHE:N	7:6:285:THR:O	2.48	0.46
8:7:471:VAL:O	8:7:634:ARG:NH1	2.39	0.46
8:7:562:ALA:HA	8:7:626:ILE:HB	1.96	0.46
1:0:148:HIS:CE1	1:0:151:SER:H	2.33	0.46
1:0:568:PHE:HB2	1:0:596:LEU:HA	1.98	0.46

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:683:ARG:HH12	1:0:687:GLY:H	1.63	0.46
3:2:244:THR:HB	5:4:96:SER:OG	2.14	0.46
5:4:165:LYS:NZ	5:4:169:ASP:OD1	2.43	0.46
8:7:139:TYR:HA	8:7:142:LYS:HB3	1.97	0.46
8:7:286:HIS:HA	8:7:290:PRO:O	2.14	0.46
8:7:554:ARG:HB3	8:7:647:LYS:HZ1	1.81	0.46
8:7:634:ARG:HA	8:7:637:ALA:HB3	1.97	0.46
1:0:539:PHE:N	1:0:598:SER:O	2.43	0.46
1:0:598:SER:HB2	1:0:604:VAL:HG21	1.98	0.46
2:1:188:LEU:N	2:1:191:ASP:HB3	2.31	0.46
3:2:151:TYR:HA	3:2:154:GLU:HG2	1.97	0.46
5:4:213:LEU:HD11	5:4:245:PRO:CG	2.45	0.46
7:6:189:LEU:HA	7:6:192:ALA:HB3	1.97	0.46
8:7:578:PRO:O	8:7:606:PHE:N	2.45	0.46
2:1:187:ASN:H	2:1:191:ASP:CB	2.29	0.46
3:2:12:VAL:HB	3:2:202:GLN:HE21	1.80	0.46
3:2:433:PHE:O	3:2:442:VAL:N	2.43	0.46
4:3:188:GLU:CB	8:7:188:LEU:HD22	2.45	0.46
1:0:236:ALA:HB1	1:0:239:ILE:HD11	1.97	0.46
1:0:326:ALA:HA	1:0:329:PHE:HB3	1.98	0.46
2:1:136:VAL:HG12	2:1:137:ILE:HG23	1.98	0.46
3:2:421:LEU:HA	3:2:424:HIS:HB3	1.97	0.46
5:4:102:GLU:HA	5:4:105:THR:HG22	1.97	0.46
7:6:279:ASN:N	7:6:298:TYR:HB3	2.31	0.46
8:7:73:SER:HA	8:7:145:LYS:HG3	1.98	0.46
8:7:359:LYS:HZ2	8:7:436:GLY:C	2.18	0.46
3:2:307:ILE:HG22	3:2:316:TYR:HB2	1.96	0.46
3:2:330:LEU:HD12	3:2:331:PHE:HB2	1.97	0.46
3:2:354:ALA:O	3:2:358:GLY:N	2.47	0.46
4:3:87:GLU:HA	4:3:90:PRO:HD2	1.97	0.46
4:3:88:ASP:O	4:3:91:SER:OG	2.33	0.46
5:4:272:LEU:HD21	7:6:319:ALA:HB1	1.98	0.46
1:0:236:ALA:HB3	1:0:456:ILE:HG13	1.97	0.46
1:0:240:ASP:N	1:0:240:ASP:OD1	2.48	0.46
1:0:705:ASN:HB2	1:0:708:LEU:CD1	2.33	0.46
2:1:222:THR:O	2:1:226:GLN:N	2.49	0.46
3:2:280:ARG:HH12	3:2:282:TYR:HB2	1.80	0.46
4:3:178:LYS:O	4:3:182:ALA:N	2.37	0.46
5:4:32:PHE:HA	5:4:36:LYS:HD3	1.96	0.46
7:6:293:GLN:HB2	7:6:308:CYS:HB2	1.97	0.46
8:7:112:HIS:HD2	8:7:117:LYS:HG3	1.81	0.46

*Continued on next page...*



*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:134:CYS:SG	1:0:299:ARG:CZ	2.98	0.46
2:1:519:THR:HA	2:1:522:VAL:HG22	1.97	0.46
3:2:90:LEU:HD12	3:2:93:LEU:HD12	1.96	0.46
4:3:180:LYS:O	4:3:184:LEU:N	2.45	0.46
7:6:109:THR:HG21	7:6:144:SER:H	1.81	0.46
8:7:178:GLU:HG3	8:7:180:CYS:H	1.80	0.46
1:0:28:LEU:HG	1:0:32:LEU:HD13	1.97	0.46
1:0:544:TYR:O	1:0:548:THR:N	2.47	0.46
2:1:248:LYS:O	2:1:252:LYS:N	2.44	0.46
3:2:88:GLY:O	3:2:92:GLY:N	2.46	0.46
5:4:12:VAL:N	5:4:160:ARG:O	2.40	0.46
8:7:62:ARG:CZ	8:7:77:TRP:CZ3	2.99	0.46
8:7:360:ARG:O	8:7:433:GLN:NE2	2.49	0.46
8:7:579:TYR:HA	8:7:606:PHE:HB2	1.97	0.46
1:0:683:ARG:NH1	1:0:687:GLY:H	2.14	0.45
3:2:349:GLU:O	3:2:353:GLN:N	2.47	0.45
5:4:10:LEU:N	5:4:158:LYS:O	2.48	0.45
7:6:374:PHE:O	7:6:379:LEU:N	2.49	0.45
8:7:309:ASP:HA	8:7:384:ILE:CD1	2.46	0.45
8:7:696:MET:HB3	8:7:701:LEU:HD11	1.98	0.45
1:0:77:VAL:HA	1:0:80:ILE:HD12	1.97	0.45
3:2:238:PHE:CZ	3:2:270:LEU:HB2	2.50	0.45
7:6:59:ARG:N	7:6:102:SER:OG	2.49	0.45
7:6:276:LEU:HD21	7:6:297:LYS:HB2	1.97	0.45
7:6:303:VAL:HG12	7:6:304:GLU:HG2	1.98	0.45
1:0:263:LEU:HD11	1:0:336:LEU:HD23	1.97	0.45
1:0:441:SER:HB2	1:0:445:LYS:HE3	1.97	0.45
1:0:515:ALA:HA	1:0:518:ARG:HG2	1.99	0.45
2:1:304:ILE:O	2:1:308:ASN:ND2	2.50	0.45
7:6:290:PHE:HE1	7:6:295:ARG:HB3	1.81	0.45
1:0:86:GLU:O	1:0:86:GLU:HG2	2.15	0.45
1:0:613:HIS:CE1	7:6:206:ARG:HH21	2.34	0.45
2:1:187:ASN:ND2	2:1:191:ASP:HB2	2.29	0.45
3:2:144:ASP:O	3:2:147:SER:OG	2.30	0.45
7:6:375:VAL:HA	7:6:379:LEU:HB3	1.97	0.45
8:7:254:GLN:O	8:7:258:ASP:N	2.47	0.45
8:7:309:ASP:O	8:7:310:LEU:CD2	2.65	0.45
8:7:700:ASP:OD1	8:7:700:ASP:N	2.47	0.45
1:0:323:ILE:HD12	4:3:100:GLU:HB3	1.98	0.45
1:0:494:ILE:HA	1:0:679:PHE:HB2	1.98	0.45
2:1:350:LYS:HG3	2:1:353:LYS:HD3	1.99	0.45

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6:201:LEU:HA	7:6:222:ILE:HD12	1.99	0.45
7:6:318:LEU:H	7:6:318:LEU:HG	1.61	0.45
8:7:109:ARG:HH22	8:7:471:VAL:HG23	1.82	0.45
8:7:463:LYS:HD2	8:7:484:ILE:HA	1.97	0.45
8:7:506:GLN:OE1	8:7:686:SER:OG	2.28	0.45
1:0:301:THR:HA	1:0:304:HIS:HB3	1.98	0.45
2:1:294:SER:O	2:1:298:ASN:ND2	2.49	0.45
3:2:418:PHE:CZ	3:2:441:MET:HG3	2.51	0.45
3:2:28:PRO:HA	3:2:31:LEU:HG	1.98	0.45
1:0:486:ALA:O	1:0:487:ARG:CB	2.61	0.45
1:0:670:GLY:HA3	2:1:338:ASN:ND2	2.32	0.45
2:1:296:LYS:HA	2:1:299:SER:HB2	1.99	0.45
3:2:83:GLN:O	3:2:87:THR:OG1	2.29	0.45
7:6:106:ILE:HB	7:6:118:THR:HB	1.99	0.45
1:0:353:SER:HB2	1:0:356:ALA:HB3	1.99	0.45
1:0:710:VAL:O	1:0:714:VAL:N	2.49	0.45
2:1:370:LYS:HA	5:4:254:ALA:HB3	1.98	0.45
3:2:179:LEU:HD22	3:2:184:LEU:HD12	1.98	0.45
7:6:156:LEU:HD21	7:6:165:ARG:HB3	1.99	0.45
8:7:51:THR:OG1	8:7:52:LYS:N	2.49	0.45
2:1:167:SER:OG	2:1:317:ALA:O	2.35	0.45
3:2:332:SER:C	3:2:343:VAL:HG11	2.37	0.45
5:4:63:HIS:ND1	5:4:65:GLN:HG2	2.31	0.45
6:5:9:LEU:HD21	6:5:42:HIS:HD2	1.81	0.45
7:6:314:SER:H	7:6:318:LEU:HD21	1.82	0.45
8:7:66:PRO:HB3	8:7:71:HIS:HA	1.99	0.45
8:7:337:VAL:HG21	8:7:484:ILE:HB	1.99	0.45
8:7:601:LYS:HG3	8:7:602:ILE:HG13	1.98	0.45
1:0:726:GLN:HE22	7:6:223:LEU:HB2	1.82	0.44
8:7:296:ASP:OD1	8:7:334:ARG:N	2.49	0.44
8:7:350:GLY:O	8:7:354:ALA:N	2.49	0.44
1:0:580:ALA:O	1:0:583:LYS:HB2	2.17	0.44
1:0:609:ASP:OD1	1:0:666:ARG:NH1	2.46	0.44
2:1:527:GLU:OE2	2:1:531:THR:OG1	2.34	0.44
3:2:145:VAL:O	3:2:149:ASP:N	2.46	0.44
5:4:262:ILE:HG12	5:4:264:ILE:H	1.82	0.44
7:6:65:VAL:HG22	7:6:170:ILE:HD12	1.99	0.44
8:7:318:PRO:HA	8:7:321:GLU:HB2	1.99	0.44
1:0:730:ARG:CZ	1:0:733:GLN:H	2.30	0.44
1:0:739:LEU:C	1:0:741:LEU:N	2.65	0.44
7:6:169:ILE:HD12	7:6:198:VAL:HG22	1.98	0.44

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:38:ILE:O	5:4:42:MET:N	2.41	0.44
7:6:58:MET:HG2	7:6:101:ILE:HB	1.98	0.44
7:6:107:ILE:HG12	7:6:116:LYS:HG3	2.00	0.44
7:6:337:GLU:HG3	7:6:353:LYS:HE3	1.99	0.44
1:0:114:ASN:ND2	1:0:177:LEU:CD2	2.80	0.44
1:0:210:HIS:HE1	2:1:275:LYS:HD3	1.83	0.44
2:1:210:ASN:HA	2:1:213:HIS:HB3	1.99	0.44
7:6:251:ARG:HB3	7:6:310:LEU:HD13	1.98	0.44
1:0:71:ILE:HB	1:0:231:VAL:HG13	1.98	0.44
1:0:95:GLU:HG3	1:0:101:LYS:HB3	2.00	0.44
1:0:169:PRO:HG3	1:0:189:TRP:HH2	1.82	0.44
1:0:309:VAL:HG13	1:0:406:LEU:HD23	2.00	0.44
5:4:64:ILE:HD13	5:4:124:ILE:HB	1.99	0.44
5:4:75:ASN:O	5:4:79:GLY:N	2.40	0.44
1:0:504:ILE:HD13	1:0:680:ALA:HB1	1.99	0.44
1:0:543:GLN:O	1:0:547:SER:N	2.43	0.44
2:1:130:ASP:OD2	2:1:461:LEU:HD12	2.18	0.44
2:1:136:VAL:HG13	2:1:503:THR:HG21	1.98	0.44
4:3:204:ARG:HD2	8:7:266:GLN:HG3	2.00	0.44
8:7:385:ASP:N	8:7:385:ASP:OD1	2.51	0.44
1:0:176:ASN:H	1:0:179:ASP:HB2	1.83	0.44
2:1:487:GLU:HA	2:1:490:VAL:HG12	2.00	0.44
2:1:495:SER:OG	2:1:496:ASN:N	2.50	0.44
3:2:245:LEU:HG	3:2:280:ARG:NE	2.27	0.44
4:3:183:PHE:HZ	4:3:200:GLN:CG	2.30	0.44
5:4:271:CYS:SG	5:4:284:THR:OG1	2.76	0.44
7:6:88:LEU:O	7:6:92:VAL:N	2.43	0.44
8:7:156:ILE:O	8:7:156:ILE:HG23	2.16	0.44
8:7:187:HIS:O	8:7:191:ASP:N	2.39	0.44
8:7:363:VAL:O	8:7:408:SER:N	2.37	0.44
1:0:95:GLU:OE2	1:0:101:LYS:HD3	2.18	0.44
1:0:111:SER:C	1:0:192:TYR:OH	2.54	0.44
1:0:299:ARG:NH1	9:0:801:SF4:S1	2.91	0.44
3:2:314:ARG:NH2	3:2:346:VAL:H	2.15	0.44
5:4:51:MET:HB2	5:4:55:ASN:HD21	1.83	0.44
7:6:146:TYR:N	7:6:178:ASP:OD2	2.51	0.44
8:7:136:ILE:O	8:7:140:LEU:N	2.32	0.44
8:7:310:LEU:O	8:7:312:PRO:HD3	2.17	0.44
1:0:14:TYR:O	1:0:15:ASP:HB2	2.17	0.43
2:1:530:GLN:HG3	2:1:534:ASN:ND2	2.33	0.43
3:2:45:PHE:HE1	5:4:52:ASN:HA	1.82	0.43

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2:231:VAL:HG13	3:2:232:GLU:HG3	2.00	0.43
5:4:190:LEU:HD11	5:4:212:GLY:HA2	2.00	0.43
7:6:11:TRP:O	7:6:15:TYR:N	2.38	0.43
7:6:31:LYS:HB2	8:7:145:LYS:HD2	2.00	0.43
8:7:363:VAL:HB	8:7:407:ILE:HA	2.00	0.43
8:7:504:LYS:NZ	8:7:653:GLU:O	2.42	0.43
2:1:483:THR:N	2:1:484:PRO:CD	2.81	0.43
3:2:42:LEU:HD11	3:2:236:PHE:HB2	1.99	0.43
3:2:323:LEU:O	3:2:327:LEU:N	2.48	0.43
4:3:193:PRO:HD3	4:3:199:ALA:HB3	2.00	0.43
7:6:64:VAL:HB	7:6:169:ILE:HA	1.99	0.43
8:7:359:LYS:HZ1	8:7:436:GLY:N	2.14	0.43
8:7:472:ARG:NH1	8:7:473:GLU:CG	2.81	0.43
8:7:509:GLU:H	8:7:687:PHE:HE1	1.66	0.43
1:0:536:VAL:HG22	1:0:596:LEU:HB3	2.01	0.43
1:0:569:ILE:HG21	2:1:304:ILE:HG23	2.00	0.43
3:2:380:THR:HG22	3:2:382:VAL:H	1.83	0.43
4:3:203:ASP:O	4:3:207:GLN:HG2	2.18	0.43
5:4:144:ILE:O	5:4:148:ASN:N	2.39	0.43
5:4:206:ALA:HA	5:4:209:ILE:HD12	2.00	0.43
1:0:180:LEU:HA	1:0:183:LEU:HB2	2.01	0.43
1:0:210:HIS:CE1	2:1:275:LYS:HD3	2.53	0.43
2:1:335:MET:O	2:1:337:GLY:N	2.51	0.43
3:2:27:SER:HB2	3:2:30:VAL:HG23	2.01	0.43
3:2:309:VAL:HG23	3:2:314:ARG:HA	2.00	0.43
4:3:100:GLU:HA	4:3:103:GLU:HB3	2.00	0.43
1:0:252:THR:HG22	1:0:254:ARG:H	1.84	0.43
3:2:365:ILE:HA	3:2:368:LEU:HD12	2.00	0.43
8:7:141:ARG:HH12	8:7:148:VAL:HG23	1.83	0.43
8:7:183:ASP:OD1	8:7:183:ASP:N	2.50	0.43
8:7:442:GLU:HB3	8:7:444:HIS:NE2	2.33	0.43
1:0:135:HIS:CE1	1:0:139:ALA:HB3	2.54	0.43
5:4:115:ILE:O	5:4:119:MET:N	2.41	0.43
8:7:168:LEU:HD13	8:7:174:ARG:HD3	2.01	0.43
8:7:455:LEU:H	8:7:455:LEU:HG	1.69	0.43
1:0:250:ASN:HB2	1:0:432:ILE:HD11	1.99	0.43
2:1:461:LEU:O	2:1:464:LEU:HB2	2.18	0.43
3:2:420:LEU:O	3:2:424:HIS:N	2.42	0.43
5:4:263:GLU:HA	7:6:254:PHE:HB2	2.00	0.43
1:0:469:LYS:HD3	1:0:640:LEU:HD22	2.00	0.43
2:1:166:ILE:CD1	2:1:169:ALA:HB3	2.48	0.43

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:413:ALA:HA	2:1:416:PRO:HG3	2.01	0.43
3:2:75:VAL:HG13	5:4:242:ILE:HG12	2.00	0.43
3:2:78:GLU:HB3	5:4:242:ILE:HD11	2.00	0.43
4:3:162:ARG:HA	4:3:165:ILE:HD12	2.00	0.43
8:7:472:ARG:CG	8:7:473:GLU:N	2.81	0.43
1:0:638:GLU:HA	1:0:641:ARG:HB2	2.01	0.43
1:0:655:ASP:HA	1:0:658:ARG:HG2	2.01	0.43
2:1:535:LYS:HA	2:1:538:THR:HG22	2.00	0.43
3:2:17:ARG:O	3:2:21:GLU:N	2.50	0.43
8:7:95:TYR:O	8:7:99:PHE:N	2.52	0.43
8:7:375:LYS:HE2	8:7:391:ARG:HH11	1.83	0.43
1:0:672:THR:HG22	1:0:672:THR:O	2.18	0.43
7:6:173:SER:HB3	7:6:203:ALA:HB3	2.00	0.43
8:7:309:ASP:OD1	8:7:309:ASP:C	2.55	0.43
1:0:102:LEU:HB3	1:0:103:PRO:CD	2.48	0.42
2:1:177:GLN:C	2:1:192:ILE:HD11	2.39	0.42
3:2:178:LEU:O	3:2:182:ALA:N	2.51	0.42
3:2:306:PHE:CD2	3:2:375:VAL:HA	2.55	0.42
3:2:316:TYR:CZ	3:2:371:ARG:HD3	2.54	0.42
5:4:266:TYR:OH	5:4:276:CYS:O	2.26	0.42
7:6:362:VAL:HG12	7:6:388:LYS:HE3	2.01	0.42
8:7:92:VAL:HB	8:7:94:LYS:NZ	2.34	0.42
8:7:343:GLY:H	8:7:346:LYS:HZ2	1.66	0.42
1:0:207:TYR:HD2	1:0:211:TYR:HB3	1.84	0.42
1:0:320:PRO:O	1:0:322:SER:N	2.50	0.42
1:0:497:ARG:HG2	1:0:709:THR:HA	2.01	0.42
1:0:592:ARG:HA	7:6:175:THR:HG23	2.01	0.42
2:1:125:PHE:O	2:1:129:LYS:N	2.52	0.42
3:2:370:THR:HG22	3:2:373:HIS:HE2	1.83	0.42
7:6:66:ASP:HB2	7:6:171:PHE:HA	2.00	0.42
8:7:38:VAL:HB	8:7:156:ILE:HG12	2.00	0.42
8:7:113:VAL:HG23	8:7:115:GLU:HG2	2.00	0.42
8:7:309:ASP:C	8:7:310:LEU:HG	2.38	0.42
8:7:339:VAL:HG13	8:7:468:ALA:HA	2.00	0.42
8:7:441:ASP:HA	8:7:466:LEU:HB2	2.01	0.42
1:0:533:ASP:HB2	1:0:616:ARG:HD3	2.00	0.42
2:1:404:PHE:O	2:1:408:ARG:NH1	2.52	0.42
5:4:98:ASP:HA	5:4:102:GLU:HB2	2.01	0.42
5:4:234:ASP:C	5:4:236:ASP:H	2.22	0.42
7:6:205:VAL:O	7:6:209:THR:N	2.47	0.42
7:6:363:CYS:HA	7:6:388:LYS:HE2	2.01	0.42

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7:58:ALA:HB1	8:7:75:PRO:HG3	2.00	0.42
8:7:184:VAL:HG21	8:7:268:VAL:HG11	2.01	0.42
5:4:12:VAL:O	5:4:162:LEU:N	2.40	0.42
5:4:227:LEU:HD12	5:4:231:PHE:HB2	2.01	0.42
7:6:224:ASP:O	7:6:228:TYR:N	2.44	0.42
8:7:444:HIS:HB2	8:7:472:ARG:HD3	2.00	0.42
1:0:233:PHE:HE2	1:0:454:VAL:HB	1.84	0.42
1:0:628:THR:HA	2:1:287:PRO:HG3	2.02	0.42
3:2:23:LEU:HG	3:2:31:LEU:HD22	2.02	0.42
4:3:208:LEU:HD12	4:3:208:LEU:C	2.40	0.42
5:4:165:LYS:HB3	5:4:195:VAL:HA	2.01	0.42
7:6:314:SER:O	7:6:317:HIS:ND1	2.32	0.42
8:7:316:LEU:HD22	8:7:348:LEU:HD13	2.01	0.42
8:7:435:TRP:HD1	8:7:460:ALA:HA	1.84	0.42
1:0:420:PRO:HA	1:0:431:PRO:HA	2.02	0.42
7:6:27:SER:HA	7:6:31:LYS:HG2	2.02	0.42
1:0:640:LEU:HG	1:0:647:ARG:HG3	2.02	0.42
2:1:398:GLN:HG3	2:1:402:ASN:HD21	1.85	0.42
3:2:184:LEU:HA	3:2:199:ALA:HB3	2.01	0.42
3:2:449:SER:HA	3:2:452:LYS:HB3	2.01	0.42
5:4:181:ILE:H	5:4:181:ILE:HG13	1.59	0.42
8:7:74:ARG:O	8:7:95:TYR:OH	2.36	0.42
8:7:305:ASP:OD1	8:7:305:ASP:N	2.52	0.42
1:0:233:PHE:HB2	1:0:456:ILE:HA	2.02	0.42
1:0:638:GLU:OE1	1:0:641:ARG:NH1	2.51	0.42
3:2:185:MET:HG2	3:2:196:ILE:HD13	2.01	0.42
3:2:245:LEU:HG	3:2:280:ARG:HB2	2.01	0.42
3:2:360:THR:HB	3:2:363:GLN:HB2	2.01	0.42
5:4:193:ALA:O	5:4:215:LEU:N	2.53	0.42
8:7:62:ARG:HH11	8:7:75:PRO:CG	2.33	0.42
1:0:18:TYR:HB3	1:0:671:LYS:CD	2.50	0.42
1:0:94:TYR:HA	1:0:97:GLN:HB2	2.02	0.42
1:0:580:ALA:O	1:0:584:TYR:N	2.51	0.42
3:2:109:ILE:HG12	3:2:115:ARG:HH22	1.85	0.42
6:5:49:LEU:O	6:5:53:LEU:N	2.43	0.42
8:7:365:GLY:N	8:7:408:SER:O	2.40	0.42
8:7:582:GLY:HA2	8:7:610:VAL:HG21	2.01	0.42
1:0:192:TYR:O	1:0:195:ALA:HB3	2.20	0.42
1:0:507:LYS:NZ	8:7:300:ASP:OD1	2.51	0.42
1:0:569:ILE:HD13	2:1:304:ILE:HA	2.00	0.42
1:0:668:ILE:HG13	1:0:673:ASP:CB	2.30	0.42

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2:18:ASN:OD1	3:2:19:LEU:N	2.52	0.42
5:4:248:HIS:O	5:4:248:HIS:CG	2.73	0.42
7:6:54:ARG:HB3	7:6:55:LEU:H	1.51	0.42
2:1:211:VAL:HA	2:1:212:PRO:HA	1.82	0.41
1:0:70:LEU:HB3	1:0:204:VAL:HG22	2.02	0.41
1:0:148:HIS:CG	1:0:151:SER:HG	2.38	0.41
1:0:259:CYS:HA	1:0:262:ASN:ND2	2.35	0.41
2:1:404:PHE:CZ	5:4:116:LYS:HG3	2.56	0.41
7:6:64:VAL:HB	7:6:169:ILE:HG12	2.02	0.41
7:6:85:LEU:HA	7:6:88:LEU:HD12	2.03	0.41
8:7:448:ALA:HA	8:7:451:PHE:HB2	2.02	0.41
1:0:70:LEU:HA	1:0:70:LEU:HD12	1.82	0.41
3:2:255:SER:H	3:2:258:LEU:HB3	1.85	0.41
7:6:12:GLU:OE2	8:7:129:VAL:N	2.49	0.41
8:7:706:LYS:O	8:7:710:GLN:N	2.48	0.41
1:0:256:LEU:O	1:0:260:GLN:N	2.47	0.41
2:1:472:LEU:HD21	2:1:496:ASN:HD21	1.85	0.41
4:3:191:ASP:O	4:3:192:LEU:O	2.39	0.41
5:4:11:LEU:HB2	5:4:48:HIS:CE1	2.56	0.41
8:7:390:CYS:HB3	8:7:392:PHE:CE2	2.55	0.41
8:7:547:LEU:HA	8:7:550:PHE:HB3	2.02	0.41
3:2:313:TYR:HA	3:2:345:GLN:HB3	2.02	0.41
3:2:404:THR:O	6:5:9:LEU:N	2.52	0.41
3:2:434:GLU:HA	3:2:441:MET:HA	2.02	0.41
8:7:154:GLN:C	8:7:156:ILE:H	2.23	0.41
1:0:105:LEU:HD21	1:0:198:SER:HB2	2.03	0.41
1:0:108:ALA:HA	1:0:206:VAL:O	2.20	0.41
1:0:198:SER:O	1:0:202:ALA:HB2	2.20	0.41
1:0:518:ARG:NH1	8:7:310:LEU:HB3	2.36	0.41
3:2:234:LEU:HA	3:2:237:LEU:HB3	2.02	0.41
8:7:338:ILE:HG23	8:7:489:TYR:HB3	2.02	0.41
1:0:115:LEU:HA	1:0:191:PRO:HG3	2.03	0.41
1:0:189:TRP:N	1:0:194:LEU:HD22	2.35	0.41
2:1:349:VAL:HB	7:6:54:ARG:NH2	2.35	0.41
2:1:422:LEU:HD23	5:4:222:SER:HB2	2.03	0.41
3:2:322:GLU:O	3:2:326:ALA:N	2.46	0.41
4:3:93:ARG:HB2	4:3:98:PHE:HB2	2.03	0.41
4:3:133:ILE:O	4:3:137:LYS:N	2.46	0.41
8:7:62:ARG:CZ	8:7:77:TRP:CH2	3.04	0.41
8:7:92:VAL:HB	8:7:94:LYS:HZ2	1.85	0.41
8:7:317:ARG:HB2	8:7:319:TYR:CE1	2.55	0.41

*Continued on next page...*

*Continued from previous page...*

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:7:563:ASP:HA	8:7:627:SER:HB2	2.02	0.41
1:0:112:ARG:HD3	2:1:271:ALA:O	2.21	0.41
1:0:240:ASP:OD2	1:0:658:ARG:NH2	2.53	0.41
1:0:275:GLU:OE1	1:0:279:GLN:NE2	2.54	0.41
1:0:523:LEU:HD12	1:0:523:LEU:O	2.21	0.41
2:1:333:SER:O	2:1:334:ASN:C	2.58	0.41
2:1:400:ILE:HG21	5:4:122:SER:HB3	2.02	0.41
3:2:407:VAL:HG11	3:2:448:HIS:HB2	2.02	0.41
7:6:354:ASP:HB3	7:6:356:HIS:HD2	1.86	0.41
8:7:279:GLU:O	8:7:283:ARG:NE	2.51	0.41
8:7:562:ALA:HB3	8:7:568:LEU:HD22	2.02	0.41
1:0:500:ASP:OD1	8:7:311:LYS:NZ	2.54	0.41
2:1:180:GLY:HA3	2:1:184:LEU:HD13	2.03	0.41
2:1:461:LEU:HD21	2:1:504:LYS:HE3	2.03	0.41
3:2:11:ARG:O	3:2:11:ARG:HG3	2.21	0.41
3:2:52:ALA:HB1	3:2:90:LEU:HD22	2.03	0.41
3:2:304:PRO:HD2	3:2:373:HIS:HB2	2.03	0.41
3:2:393:LEU:HA	3:2:396:LEU:HB2	2.02	0.41
4:3:194:VAL:HG12	4:3:198:LEU:CD1	2.37	0.41
6:5:17:LYS:NZ	6:5:42:HIS:H	2.19	0.41
7:6:345:CYS:H	7:6:349:GLN:HA	1.86	0.41
8:7:62:ARG:HG3	8:7:74:ARG:H	1.85	0.41
8:7:76:LEU:HA	8:7:87:GLU:HG2	2.03	0.41
8:7:106:PRO:HB3	8:7:119:THR:HG21	2.03	0.41
8:7:112:HIS:CD2	8:7:117:LYS:HA	2.56	0.41
8:7:586:GLN:HA	8:7:589:ARG:HD2	2.02	0.41
1:0:231:VAL:H	1:0:454:VAL:HG12	1.86	0.41
1:0:539:PHE:H	1:0:599:VAL:HA	1.86	0.41
1:0:626:VAL:HG12	1:0:628:THR:H	1.86	0.41
3:2:28:PRO:O	3:2:32:ASP:N	2.52	0.41
4:3:140:LEU:HA	4:3:143:GLU:HG2	2.03	0.41
4:3:159:GLU:HA	4:3:162:ARG:HG2	2.02	0.41
8:7:133:THR:OG1	8:7:158:LEU:HB2	2.21	0.41
1:0:383:LEU:HD12	1:0:386:LEU:HD12	2.02	0.40
1:0:601:ARG:NH2	1:0:624:PRO:O	2.54	0.40
1:0:633:LEU:O	1:0:637:LEU:N	2.36	0.40
3:2:58:ARG:O	3:2:62:LEU:N	2.52	0.40
3:2:212:LEU:HD23	3:2:268:PHE:HD1	1.85	0.40
3:2:383:LEU:HA	3:2:383:LEU:HD23	1.87	0.40
5:4:223:LEU:O	5:4:223:LEU:HG	2.21	0.40
7:6:322:TYR:CZ	7:6:326:PHE:HB3	2.56	0.40

*Continued on next page...*



Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:6:345:CYS:HB3	7:6:349:GLN:H	1.85	0.40
7:6:360:CYS:HB3	7:6:364:GLN:H	1.85	0.40
8:7:177:VAL:HG23	8:7:268:VAL:O	2.20	0.40
1:0:262:ASN:HA	1:0:265:THR:CB	2.49	0.40
1:0:651:PHE:O	1:0:654:PHE:N	2.54	0.40
2:1:497:LEU:HD21	2:1:501:GLN:NE2	2.35	0.40
4:3:68:VAL:HG22	4:3:71:GLU:H	1.86	0.40
5:4:138:ALA:HA	5:4:141:LEU:HD12	2.04	0.40
8:7:160:THR:HG21	8:7:291:LEU:HD22	2.04	0.40
1:0:307:ASN:ND2	1:0:310:LEU:HA	2.36	0.40
1:0:580:ALA:HA	1:0:583:LYS:HD2	2.03	0.40
2:1:459:SER:HA	2:1:462:LYS:HZ2	1.86	0.40
2:1:491:VAL:O	2:1:495:SER:N	2.55	0.40
3:2:314:ARG:NH1	3:2:345:GLN:HB2	2.37	0.40
4:3:73:GLU:HA	4:3:76:LYS:HB3	2.03	0.40
7:6:27:SER:OG	7:6:28:GLY:N	2.53	0.40
7:6:315:ALA:HB1	7:6:320:ARG:NH1	2.36	0.40
8:7:71:HIS:CE1	8:7:95:TYR:HE2	2.38	0.40
8:7:117:LYS:HE3	8:7:117:LYS:HB2	1.89	0.40
2:1:351:ARG:HG2	7:6:54:ARG:HG3	2.03	0.40
3:2:95:ILE:O	3:2:111:ASN:N	2.40	0.40
3:2:407:VAL:HG13	3:2:443:VAL:HB	2.03	0.40
4:3:83:ASN:N	4:3:83:ASN:OD1	2.55	0.40
5:4:22:TRP:CD2	5:4:34:LEU:HD13	2.56	0.40
5:4:268:CYS:N	5:4:273:SER:O	2.46	0.40
7:6:356:HIS:CE1	7:6:369:VAL:HG23	2.57	0.40
7:6:368:CYS:O	7:6:372:ASP:N	2.52	0.40
8:7:349:VAL:O	8:7:353:ALA:N	2.41	0.40
8:7:592:ILE:O	8:7:596:PHE:N	2.54	0.40
1:0:558:LEU:HA	1:0:561:ILE:HB	2.04	0.40
3:2:236:PHE:O	3:2:239:GLN:N	2.53	0.40
3:2:251:VAL:HA	3:2:254:MET:HB3	2.03	0.40
4:3:209:GLU:HA	4:3:212:LEU:HB2	2.03	0.40
5:4:142:CYS:SG	5:4:143:TYR:N	2.93	0.40
5:4:179:ASN:OD1	5:4:179:ASN:N	2.52	0.40
5:4:257:CYS:H	5:4:276:CYS:H	1.69	0.40
8:7:52:LYS:HB2	8:7:55:GLU:HB3	2.04	0.40
8:7:442:GLU:HA	8:7:467:THR:HA	2.03	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles

### 5.3.1 Protein backbone

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	0	730/760 (96%)	590 (81%)	121 (17%)	19 (3%)	5	35
2	1	431/548 (79%)	352 (82%)	72 (17%)	7 (2%)	9	45
3	2	451/462 (98%)	371 (82%)	72 (16%)	8 (2%)	8	42
4	3	210/309 (68%)	171 (81%)	35 (17%)	4 (2%)	8	41
5	4	293/308 (95%)	239 (82%)	51 (17%)	3 (1%)	15	54
6	5	64/71 (90%)	57 (89%)	7 (11%)	0	100	100
7	6	383/395 (97%)	313 (82%)	70 (18%)	0	100	100
8	7	648/782 (83%)	518 (80%)	123 (19%)	7 (1%)	14	52
All	All	3210/3635 (88%)	2611 (81%)	551 (17%)	48 (2%)	14	46

All (48) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	0	19	PRO
1	0	63	TYR
1	0	190	CYS
1	0	726	GLN
1	0	727	PRO
2	1	191	ASP
3	2	338	PHE
8	7	267	THR
1	0	15	ASP
1	0	148	HIS
1	0	186	ARG
1	0	194	LEU
1	0	704	ALA
1	0	739	LEU
2	1	148	ASN
2	1	163	ASP
2	1	187	ASN

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
2	1	192	ILE
2	1	336	ASP
2	1	418	LEU
3	2	301	VAL
3	2	339	PRO
4	3	4	GLN
8	7	92	VAL
1	0	672	THR
3	2	242	PHE
3	2	340	ASN
5	4	244	PRO
8	7	289	TYR
1	0	487	ARG
3	2	241	SER
4	3	198	LEU
5	4	235	GLN
5	4	248	HIS
8	7	266	GLN
8	7	397	LYS
1	0	172	ALA
1	0	740	SER
3	2	304	PRO
8	7	114	HIS
8	7	434	GLU
1	0	47	GLY
3	2	138	PRO
4	3	192	LEU
1	0	204	VAL
1	0	670	GLY
1	0	320	PRO
4	3	193	PRO

### 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.

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	0	630/664 (95%)	618 (98%)	12 (2%)	57	75
2	1	384/484 (79%)	381 (99%)	3 (1%)	81	89
3	2	390/399 (98%)	386 (99%)	4 (1%)	76	86
4	3	202/283 (71%)	202 (100%)	0	100	100
5	4	259/272 (95%)	258 (100%)	1 (0%)	91	94
6	5	59/64 (92%)	59 (100%)	0	100	100
7	6	342/352 (97%)	339 (99%)	3 (1%)	78	88
8	7	576/688 (84%)	573 (100%)	3 (0%)	88	93
All	All	2842/3206 (89%)	2816 (99%)	26 (1%)	79	88

All (26) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	0	17	ILE
1	0	113	LYS
1	0	114	ASN
1	0	152	LEU
1	0	186	ARG
1	0	187	GLN
1	0	203	ASN
1	0	309	VAL
1	0	488	VAL
1	0	705	ASN
1	0	741	LEU
1	0	742	GLU
2	1	188	LEU
2	1	191	ASP
2	1	461	LEU
3	2	145	VAL
3	2	262	LEU
3	2	338	PHE
3	2	402	ARG
5	4	132	LEU
7	6	54	ARG
7	6	291	CYS
7	6	318	LEU
8	7	154	GLN

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
8	7	170	LEU
8	7	267	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (37) such sidechains are listed below:

Mol	Chain	Res	Type
1	0	114	ASN
1	0	241	ASN
1	0	347	GLN
1	0	522	ASN
1	0	613	HIS
1	0	726	GLN
2	1	187	ASN
2	1	298	ASN
2	1	300	ASN
2	1	328	GLN
2	1	338	ASN
2	1	384	HIS
2	1	393	GLN
2	1	501	GLN
2	1	520	ASN
2	1	534	ASN
3	2	54	ASN
3	2	64	GLN
3	2	117	ASN
3	2	211	GLN
3	2	273	GLN
5	4	92	ASN
5	4	148	ASN
5	4	235	GLN
5	4	237	GLN
6	5	64	ASN
7	6	49	HIS
7	6	234	HIS
7	6	275	HIS
7	6	323	HIS
7	6	365	ASN
7	6	376	HIS
8	7	320	GLN
8	7	330	ASN
8	7	433	GLN
8	7	497	GLN

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type
8	7	665	GLN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 7 ligands modelled in this entry, 6 are monoatomic - leaving 1 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
9	SF4	0	801	1	0,12,12	-	-	-		

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
9	SF4	0	801	1	-	-	0/6/5/5

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
9	0	801	SF4	1	0

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

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

There are no chain breaks in this entry.

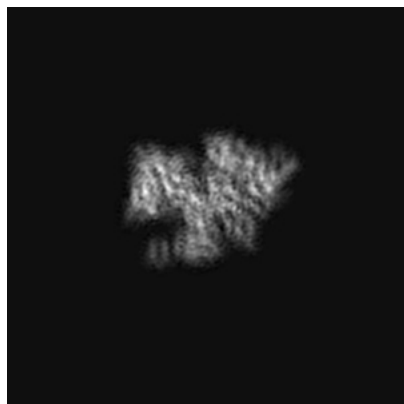
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-3802. These allow visual inspection of the internal detail of the map and identification of artifacts.

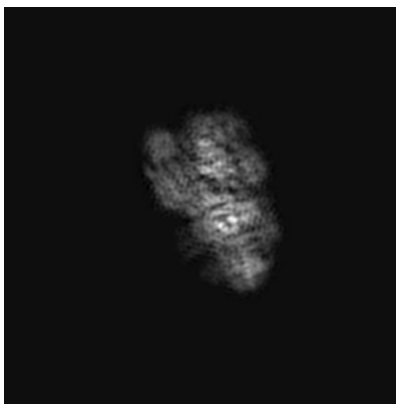
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

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

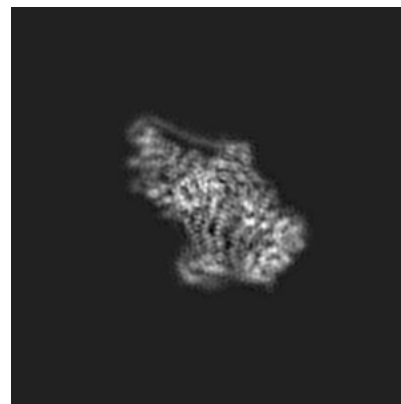
#### 6.1.1 Primary map



X

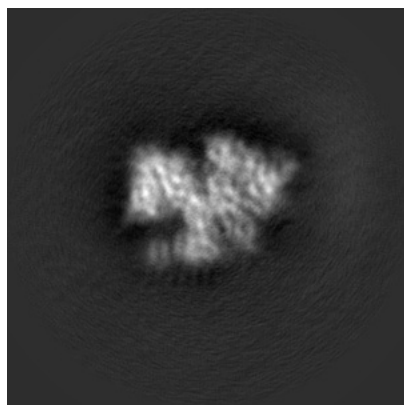


Y

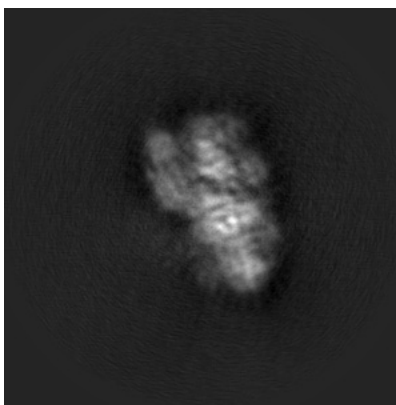


Z

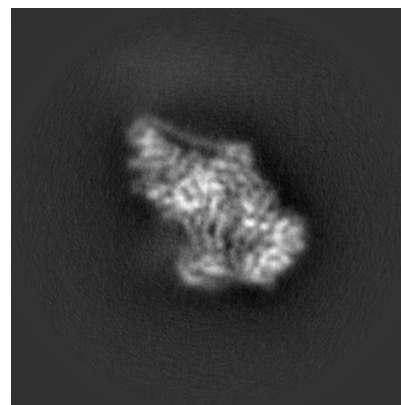
#### 6.1.2 Raw map



X



Y



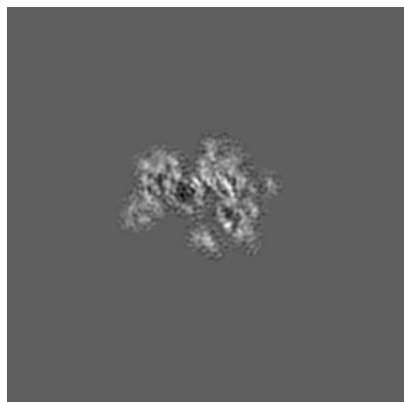
Z

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

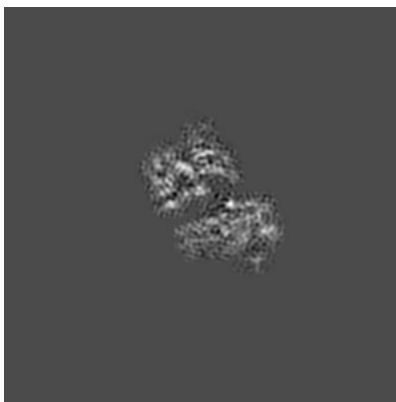


## 6.2 Central slices [i](#)

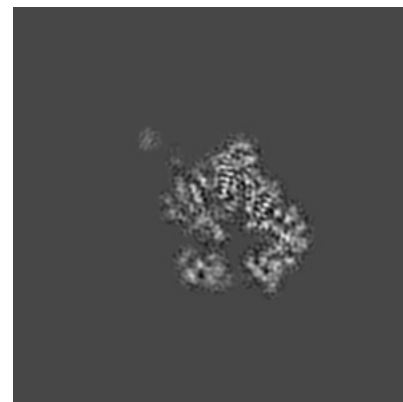
### 6.2.1 Primary map



X Index: 128

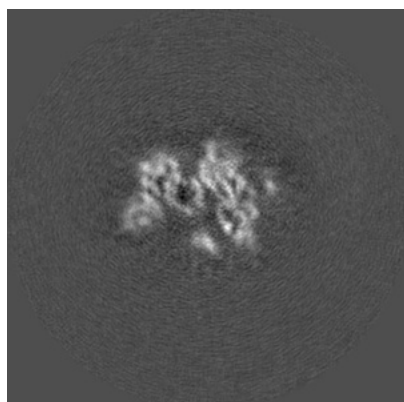


Y Index: 128

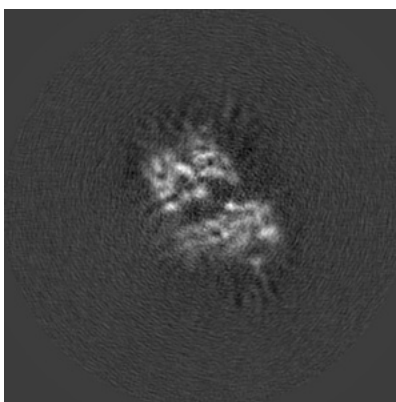


Z Index: 128

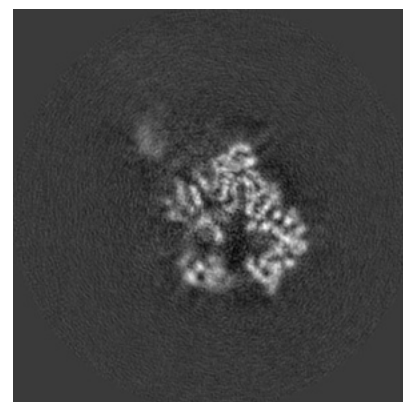
### 6.2.2 Raw map



X Index: 128



Y Index: 128

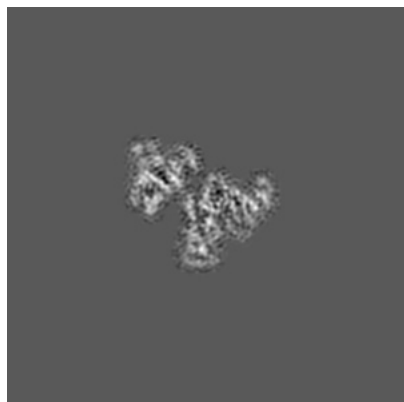


Z Index: 128

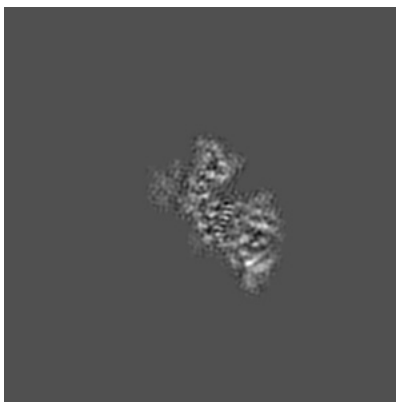
The images above show central slices of the map in three orthogonal directions.

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

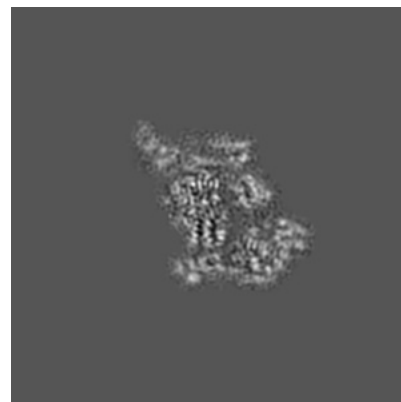
### 6.3.1 Primary map



X Index: 151

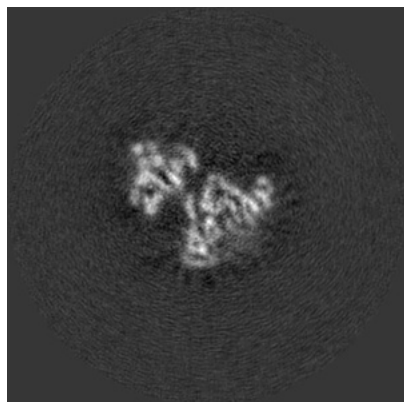


Y Index: 138

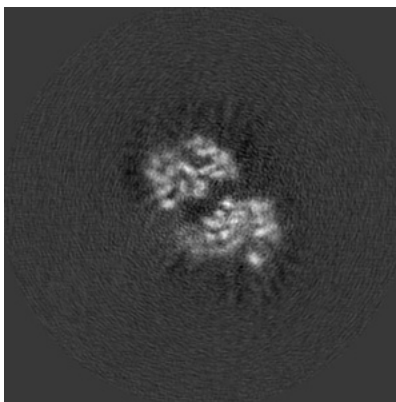


Z Index: 138

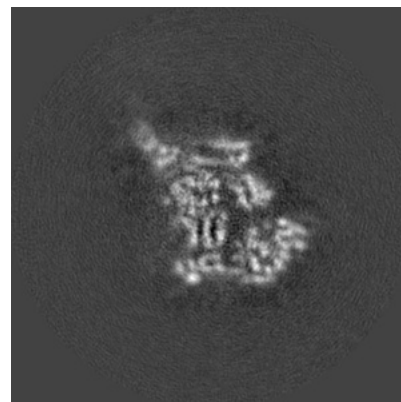
### 6.3.2 Raw map



X Index: 151



Y Index: 130

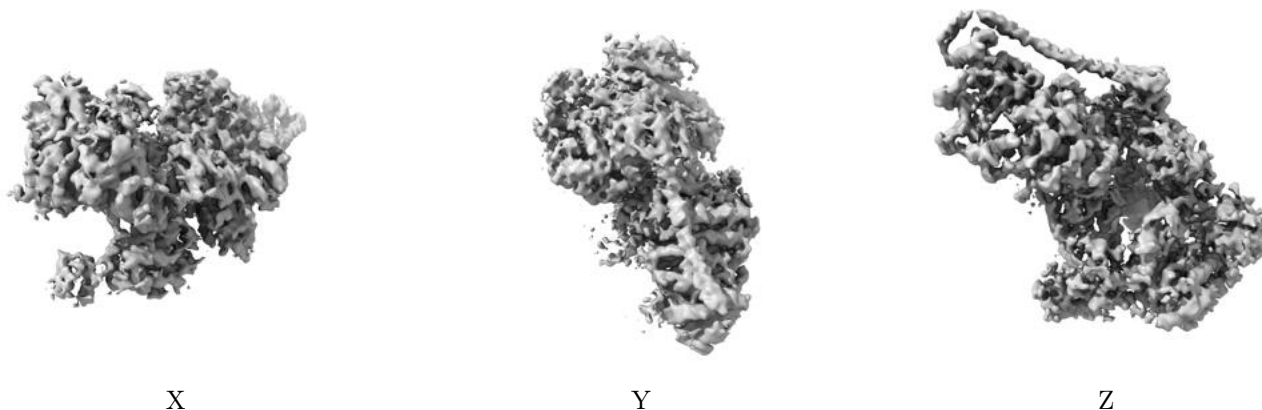


Z Index: 138

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

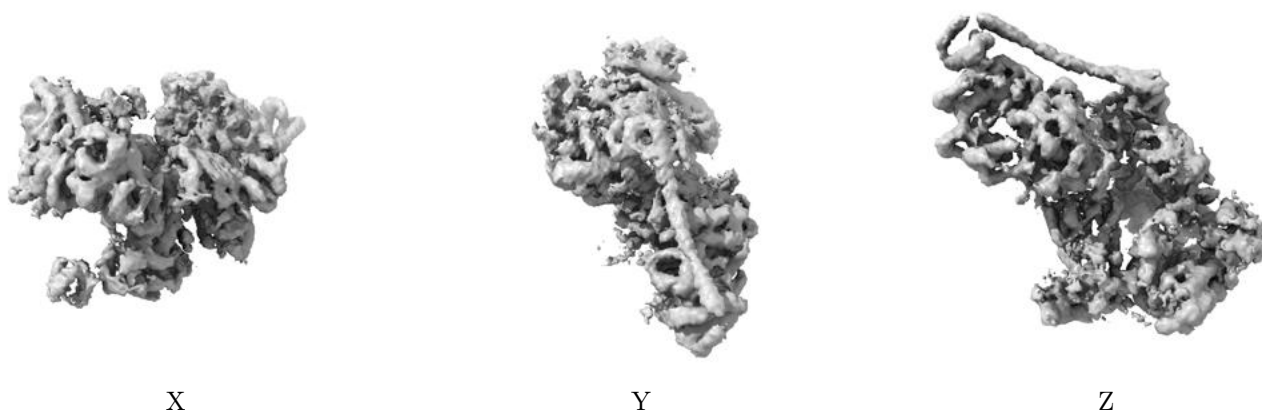
## 6.4 Orthogonal surface views [i](#)

### 6.4.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.03. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

### 6.4.2 Raw map



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

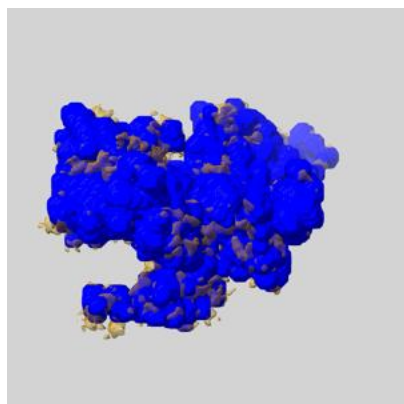
## 6.5 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

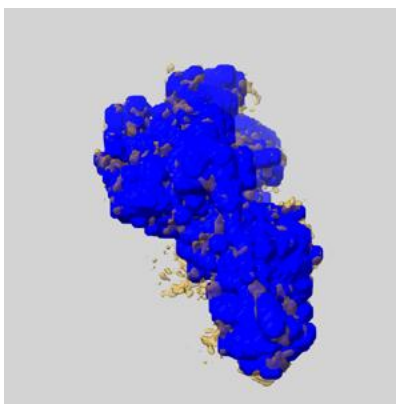
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

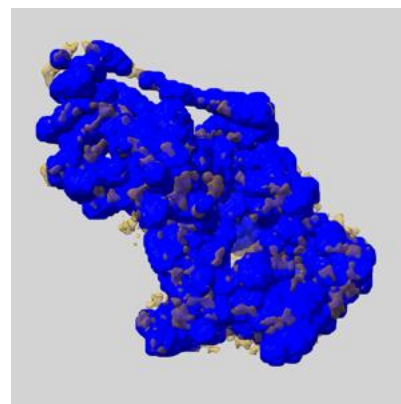
### 6.5.1 emd\_3802\_msk\_1.map [i](#)



X



Y

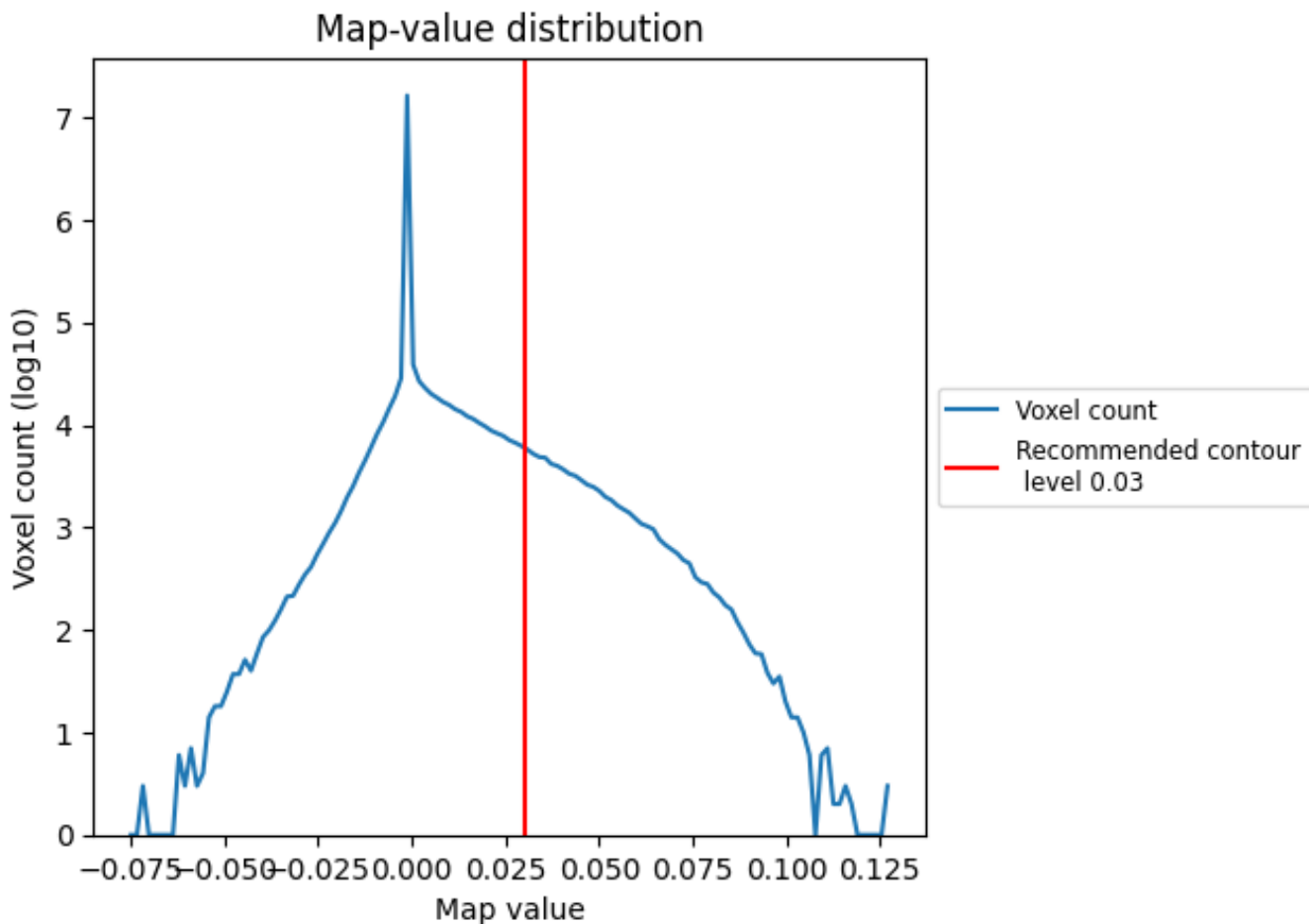


Z

## 7 Map analysis [i](#)

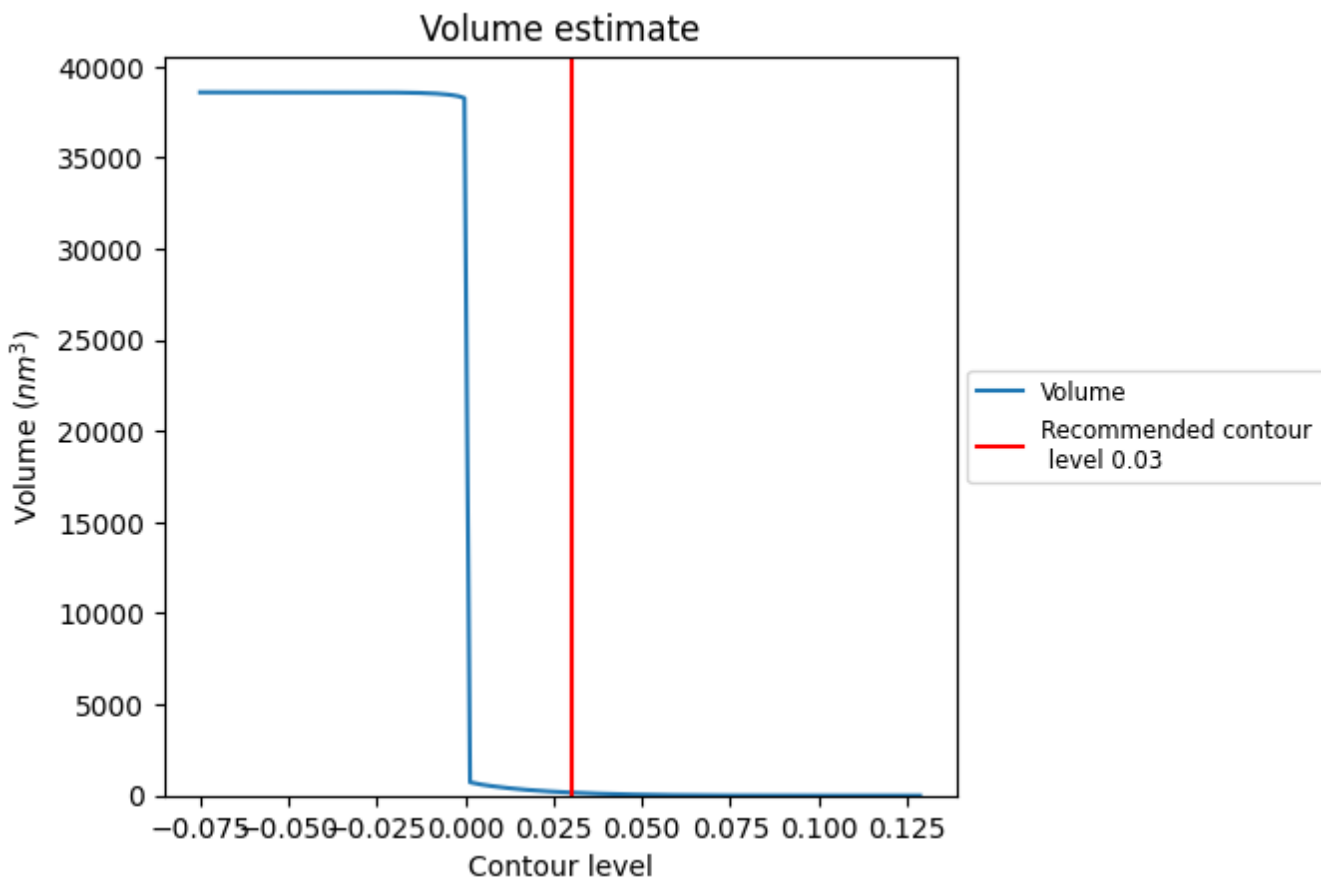
This section contains the results of statistical analysis of the map.

### 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.

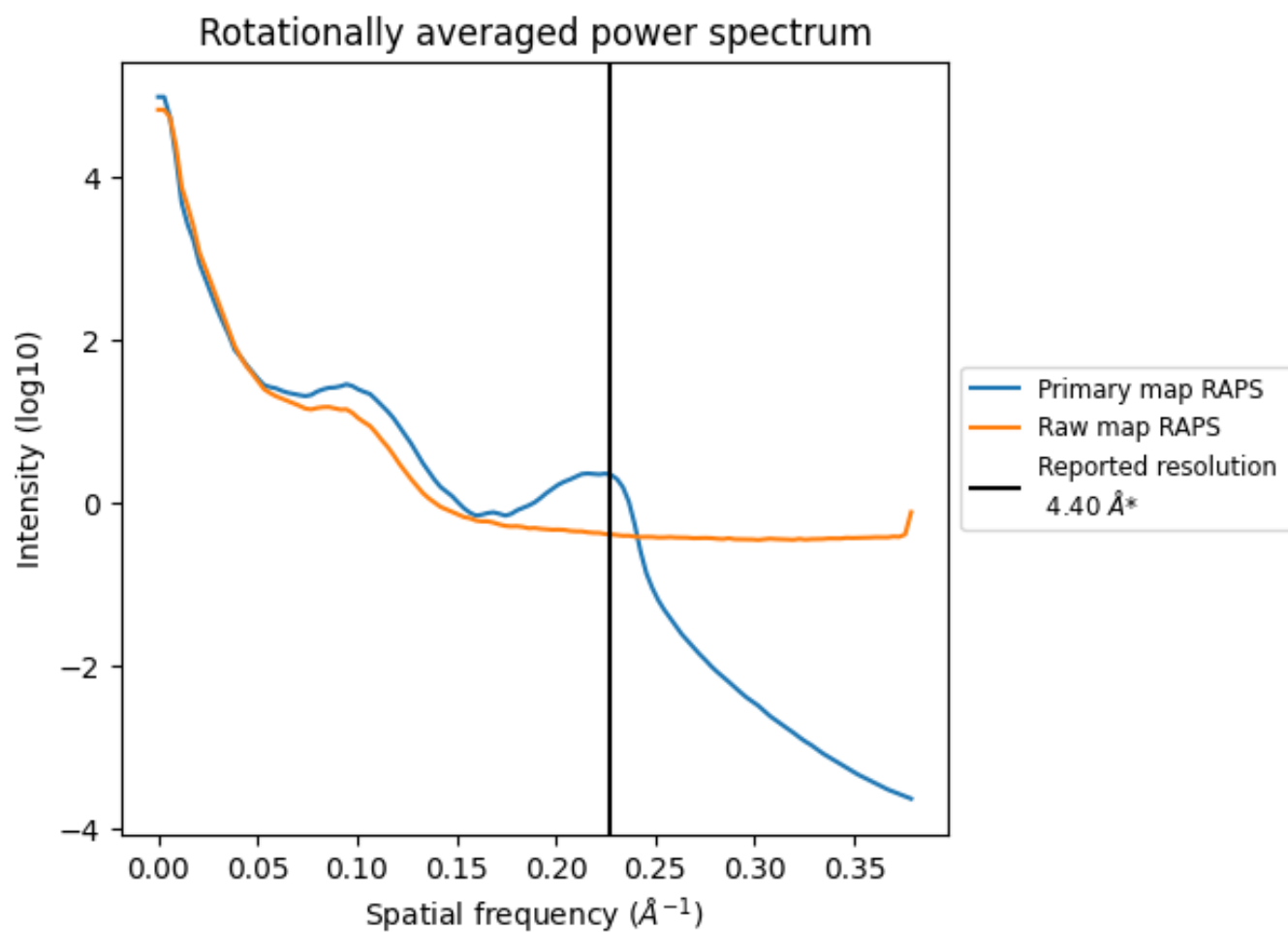
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 163 nm<sup>3</sup>; this corresponds to an approximate mass of 147 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

### 7.3 Rotationally averaged power spectrum i

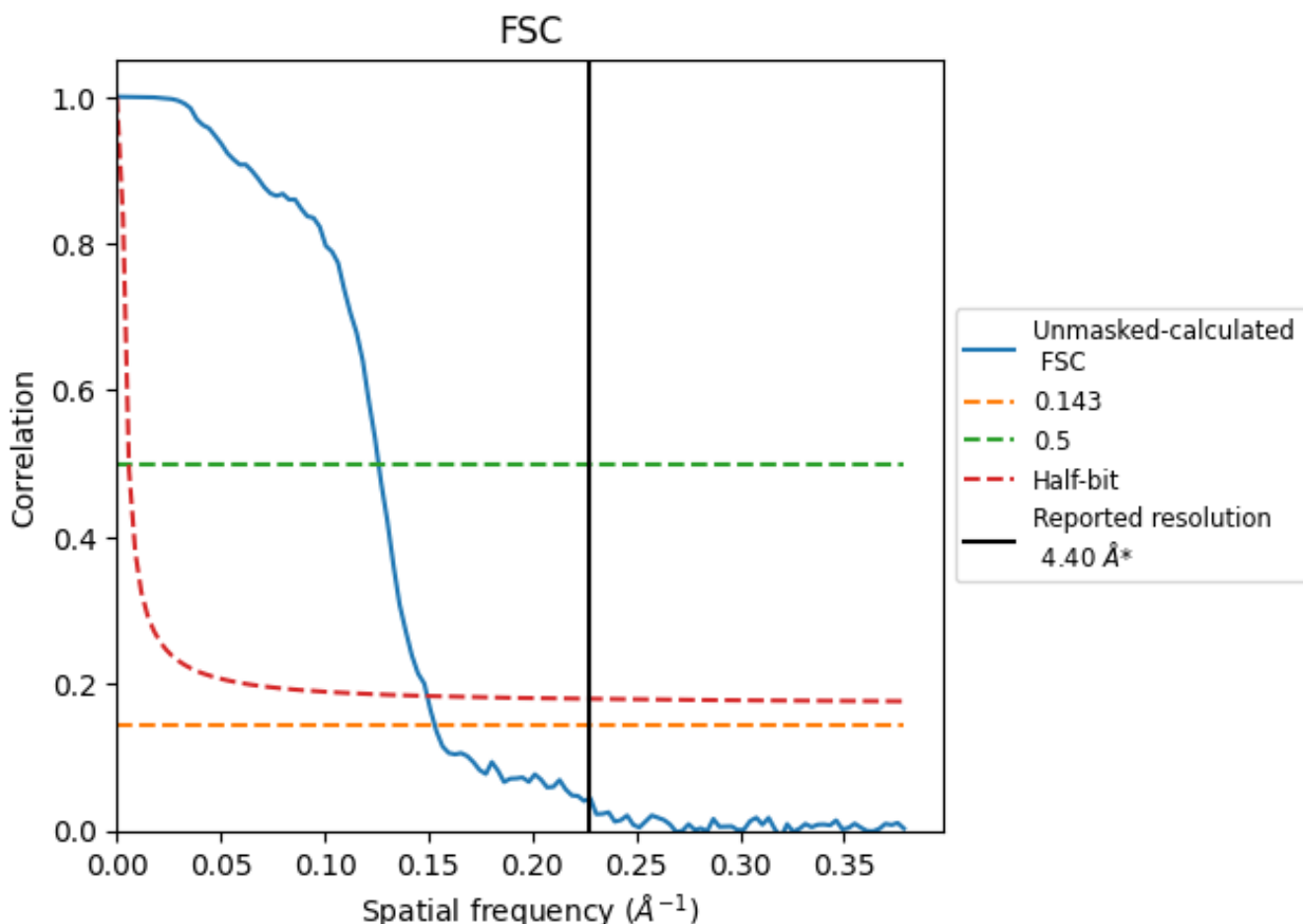


\*Reported resolution corresponds to spatial frequency of 0.227 Å<sup>-1</sup>

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

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

### 8.1 FSC [i](#)



\*Reported resolution corresponds to spatial frequency of 0.227 Å<sup>-1</sup>



## 8.2 Resolution estimates [i](#)

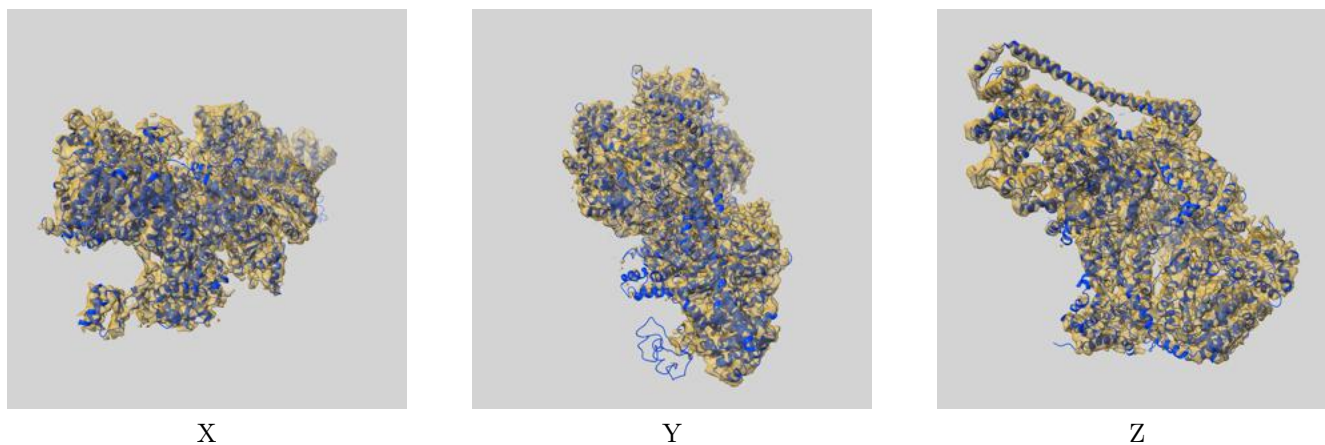
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	-	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	6.53	7.94	6.69

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

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

This section contains information regarding the fit between EMDB map EMD-3802 and PDB model 6O9M. Per-residue inclusion information can be found in section 3 on page 5.

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



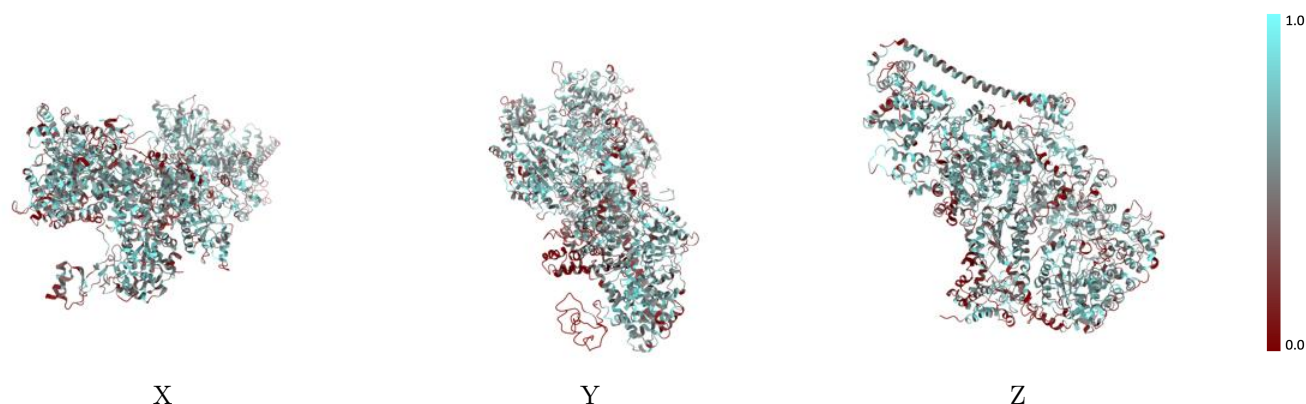
The images above show the 3D surface view of the map at the recommended contour level 0.03 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



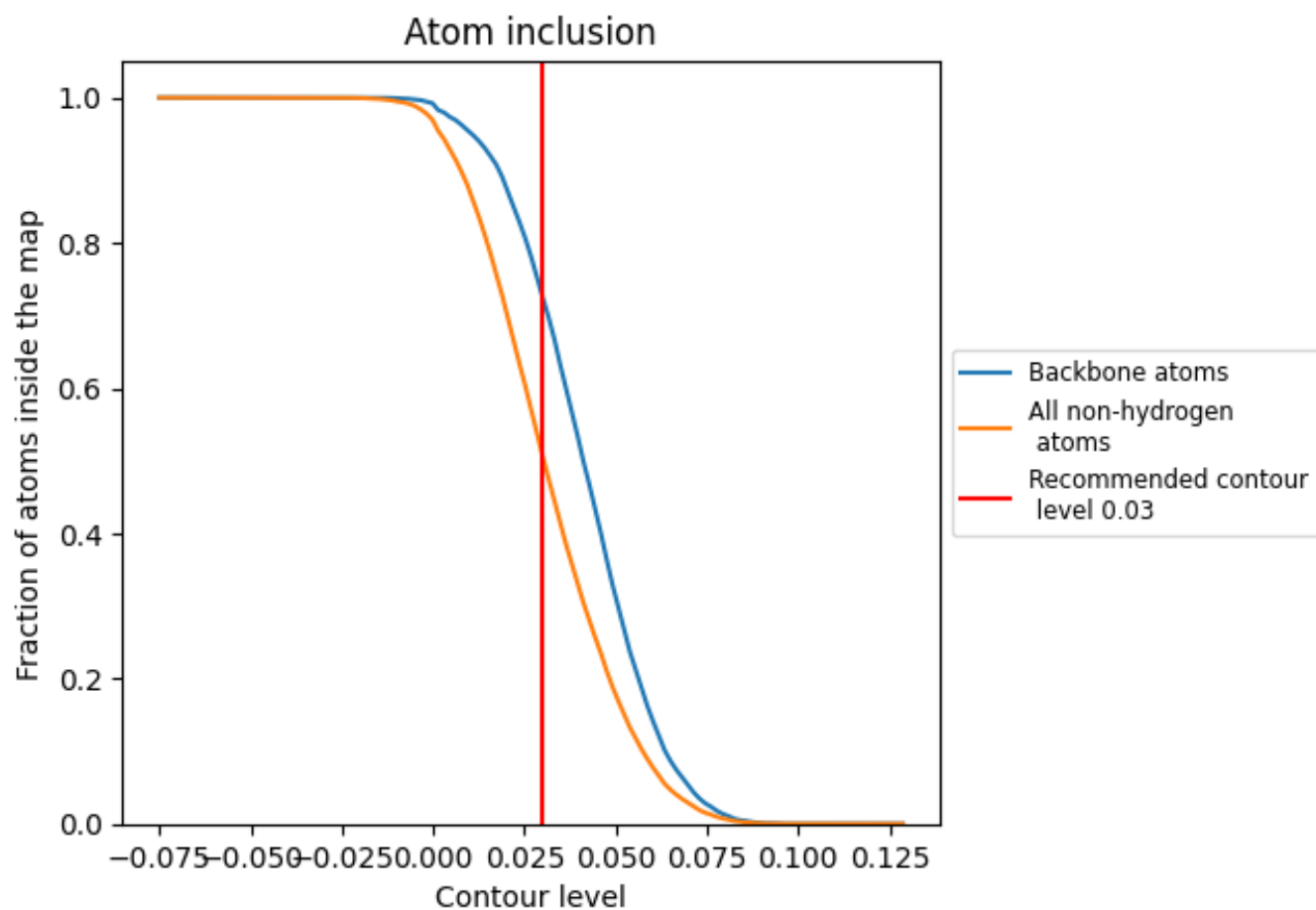
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

## 9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.03).



















## 9.4 Atom inclusion [i](#)



At the recommended contour level, 73% of all backbone atoms, 51% of all non-hydrogen atoms, are inside the map.

## 9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.03) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.5059	 0.1900
0	 0.6113	 0.2310
1	 0.2728	 0.1260
2	 0.5367	 0.1740
3	 0.3811	 0.1340
4	 0.5175	 0.1730
5	 0.4817	 0.2000
6	 0.5106	 0.2190
7	 0.5569	 0.2040

