



Full wwPDB EM Validation Report ⓘ

Mar 23, 2026 – 01:32 PM EDT

PDB ID : 9NOQ / pdb_00009noq
EMDB ID : EMD-49604
Title : CCT G beta 5 R269E complex state 5
Authors : Mack, D.C.; Shen, P.S.
Deposited on : 2025-03-10
Resolution : 2.90 Å (reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

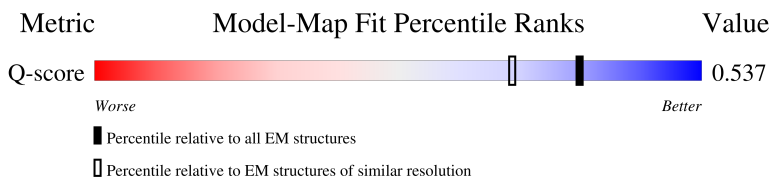
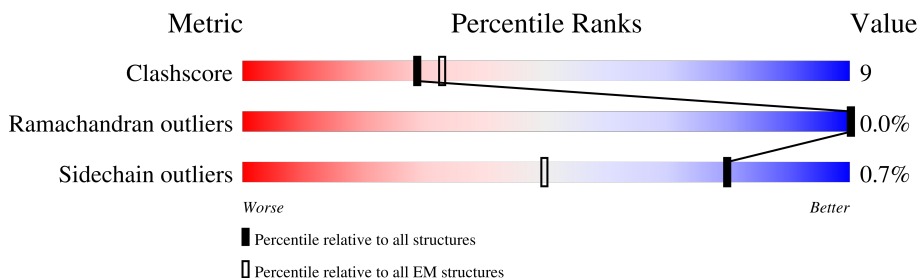
EMDB validation analysis : 0.0.1.dev132
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.48.1

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 2.90 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)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
Q-score	-	25397	13054 (2.40 - 3.40)

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

Mol	Chain	Length	Quality of chain
1	N	441	 10% • 88%
2	P	326	 44% 22% • 33%
3	A	556	 76% 21% •
3	a	556	 71% 25% •

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
4	B	535	 83% 15% .
4	b	535	 76% 22% .
5	D	539	 78% 18% .
5	d	539	 73% 23% .
6	E	541	 77% 21% ..
6	e	541	 76% 23% .
7	G	545	 73% 24% .
7	g	545	 74% 22% .
8	H	543	 79% 18% .
8	h	543	 75% 21% .
9	Q	548	 80% 18% .
9	q	548	 76% 21% .
10	Z	531	 77% 22% .
10	z	531	 79% 21% .

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
13	AF3	A	603	-	-	X	-
13	AF3	Z	603	-	-	X	-
13	AF3	d	603	-	-	X	-
13	AF3	g	603	-	-	X	-
13	AF3	h	603	-	-	X	-
13	AF3	z	603	-	-	X	-

2 Entry composition [i](#)

There are 14 unique types of molecules in this entry. The entry contains 67278 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 Guanine nucleotide-binding protein subunit beta-5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	N	53	417	264	70	79	4	0	0

There are 47 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
N	-31	MET	-	initiating methionine	UNP O14775
N	-30	TRP	-	expression tag	UNP O14775
N	-29	SER	-	expression tag	UNP O14775
N	-28	HIS	-	expression tag	UNP O14775
N	-27	PRO	-	expression tag	UNP O14775
N	-26	GLN	-	expression tag	UNP O14775
N	-25	PHE	-	expression tag	UNP O14775
N	-24	GLU	-	expression tag	UNP O14775
N	-23	LYS	-	expression tag	UNP O14775
N	-22	GLY	-	expression tag	UNP O14775
N	-21	GLY	-	expression tag	UNP O14775
N	-20	GLY	-	expression tag	UNP O14775
N	-19	SER	-	expression tag	UNP O14775
N	-18	GLY	-	expression tag	UNP O14775
N	-17	GLY	-	expression tag	UNP O14775
N	-16	GLY	-	expression tag	UNP O14775
N	-15	SER	-	expression tag	UNP O14775
N	-14	GLY	-	expression tag	UNP O14775
N	-13	GLY	-	expression tag	UNP O14775
N	-12	SER	-	expression tag	UNP O14775
N	-11	SER	-	expression tag	UNP O14775
N	-10	ALA	-	expression tag	UNP O14775
N	-9	TRP	-	expression tag	UNP O14775
N	-8	SER	-	expression tag	UNP O14775
N	-7	HIS	-	expression tag	UNP O14775
N	-6	PRO	-	expression tag	UNP O14775
N	-5	GLN	-	expression tag	UNP O14775
N	-4	PHE	-	expression tag	UNP O14775

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
N	-3	GLU	-	expression tag	UNP O14775
N	-2	LYS	-	expression tag	UNP O14775
N	-1	ALA	-	expression tag	UNP O14775
N	0	ALA	-	expression tag	UNP O14775
N	269	GLU	ARG	engineered mutation	UNP O14775
N	396	GLY	-	expression tag	UNP O14775
N	397	GLY	-	expression tag	UNP O14775
N	398	GLU	-	expression tag	UNP O14775
N	399	ASP	-	expression tag	UNP O14775
N	400	GLN	-	expression tag	UNP O14775
N	401	VAL	-	expression tag	UNP O14775
N	402	ASP	-	expression tag	UNP O14775
N	403	PRO	-	expression tag	UNP O14775
N	404	ARG	-	expression tag	UNP O14775
N	405	LEU	-	expression tag	UNP O14775
N	406	ILE	-	expression tag	UNP O14775
N	407	ASP	-	expression tag	UNP O14775
N	408	GLY	-	expression tag	UNP O14775
N	409	LYS	-	expression tag	UNP O14775

- Molecule 2 is a protein called Phosducin-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	P	218	1727	1083	292	339	13	0	0

There are 25 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
P	302	ALA	-	expression tag	UNP Q13371
P	303	LEU	-	expression tag	UNP Q13371
P	304	GLU	-	expression tag	UNP Q13371
P	305	GLY	-	expression tag	UNP Q13371
P	306	PRO	-	expression tag	UNP Q13371
P	307	ARG	-	expression tag	UNP Q13371
P	308	PHE	-	expression tag	UNP Q13371
P	309	GLU	-	expression tag	UNP Q13371
P	310	GLN	-	expression tag	UNP Q13371
P	311	LYS	-	expression tag	UNP Q13371
P	312	LEU	-	expression tag	UNP Q13371
P	313	ILE	-	expression tag	UNP Q13371
P	314	SER	-	expression tag	UNP Q13371

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
P	315	GLU	-	expression tag	UNP Q13371
P	316	GLU	-	expression tag	UNP Q13371
P	317	ASP	-	expression tag	UNP Q13371
P	318	LEU	-	expression tag	UNP Q13371
P	319	ASN	-	expression tag	UNP Q13371
P	320	MET	-	expression tag	UNP Q13371
P	321	HIS	-	expression tag	UNP Q13371
P	322	HIS	-	expression tag	UNP Q13371
P	323	HIS	-	expression tag	UNP Q13371
P	324	HIS	-	expression tag	UNP Q13371
P	325	HIS	-	expression tag	UNP Q13371
P	326	HIS	-	expression tag	UNP Q13371

- Molecule 3 is a protein called T-complex protein 1 subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	A	536	Total	C	N	O	S	0	0
			4069	2548	711	787	23		
3	a	532	Total	C	N	O	S	0	0
			4041	2533	707	778	23		

- Molecule 4 is a protein called T-complex protein 1 subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	B	526	Total	C	N	O	S	0	0
			3952	2473	696	764	19		
4	b	525	Total	C	N	O	S	0	0
			3943	2467	694	763	19		

- Molecule 5 is a protein called T-complex protein 1 subunit delta.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	D	520	Total	C	N	O	S	0	0
			3923	2453	683	764	23		
5	d	520	Total	C	N	O	S	0	0
			3917	2450	680	764	23		

- Molecule 6 is a protein called T-complex protein 1 subunit epsilon.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	E	535	Total	C	N	O	S	1	0
			4132	2590	719	792	31		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	e	540	4169	2610	724	804	31	1	0

- Molecule 7 is a protein called T-complex protein 1 subunit gamma.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	G	526	4089	2548	726	785	30	0	0
7	g	526	4088	2548	725	785	30	0	0

- Molecule 8 is a protein called T-complex protein 1 subunit eta.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	H	528	4054	2561	699	769	25	0	0
8	h	525	4032	2548	696	763	25	0	0

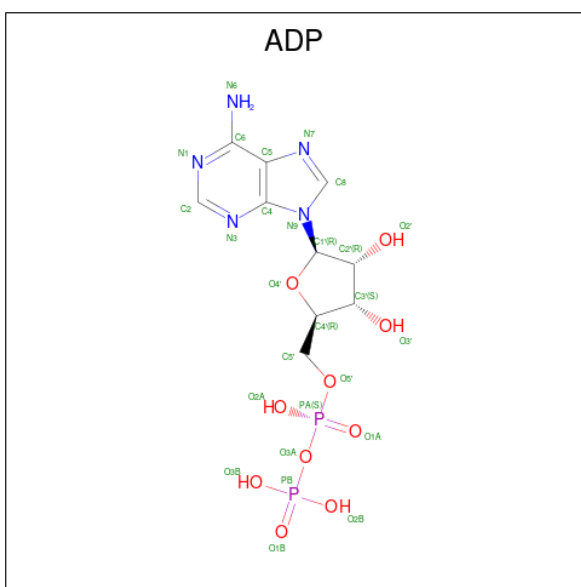
- Molecule 9 is a protein called T-complex protein 1 subunit theta.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	Q	538	4086	2579	696	784	27	0	0
9	q	533	4053	2558	690	778	27	0	0

- Molecule 10 is a protein called T-complex protein 1 subunit zeta.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	Z	525	4022	2528	704	769	21	0	0
10	z	527	4033	2534	706	772	21	0	0

- Molecule 11 is ADENOSINE-5'-DIPHOSPHATE (CCD ID: ADP) (formula: C₁₀H₁₅N₅O₁₀P₂).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
11	A	1	Total	C	N	O	P	0
			27	10	5	10	2	
11	B	1	Total	C	N	O	P	0
			27	10	5	10	2	
11	D	1	Total	C	N	O	P	0
			27	10	5	10	2	
11	E	1	Total	C	N	O	P	0
			27	10	5	10	2	
11	G	1	Total	C	N	O	P	0
			27	10	5	10	2	
11	H	1	Total	C	N	O	P	0
			27	10	5	10	2	
11	Q	1	Total	C	N	O	P	0
			27	10	5	10	2	
11	Z	1	Total	C	N	O	P	0
			27	10	5	10	2	
11	a	1	Total	C	N	O	P	0
			27	10	5	10	2	
11	b	1	Total	C	N	O	P	0
			27	10	5	10	2	
11	d	1	Total	C	N	O	P	0
			27	10	5	10	2	
11	e	1	Total	C	N	O	P	0
			27	10	5	10	2	
11	g	1	Total	C	N	O	P	0
			27	10	5	10	2	
11	h	1	Total	C	N	O	P	0
			27	10	5	10	2	

Continued on next page...

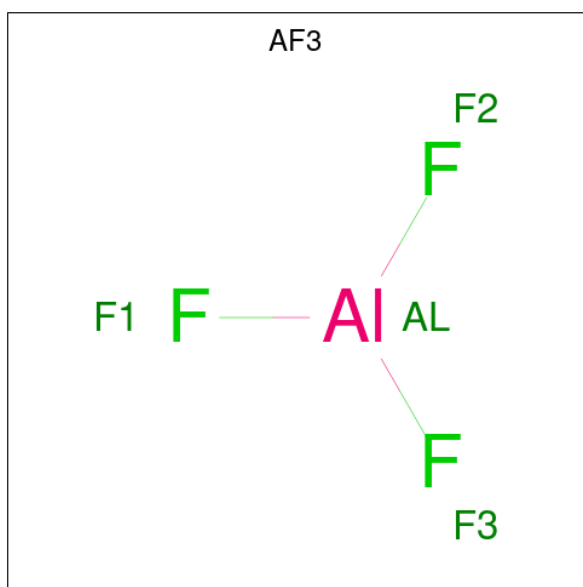
Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf
11	q	1	Total	C	N	O	P	0
			27	10	5	10	2	
11	z	1	Total	C	N	O	P	0
			27	10	5	10	2	

- Molecule 12 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
12	A	1	Total	Mg	0
			1	1	
12	B	1	Total	Mg	0
			1	1	
12	D	1	Total	Mg	0
			1	1	
12	E	1	Total	Mg	0
			1	1	
12	G	1	Total	Mg	0
			1	1	
12	H	1	Total	Mg	0
			1	1	
12	Q	1	Total	Mg	0
			1	1	
12	Z	1	Total	Mg	0
			1	1	
12	a	1	Total	Mg	0
			1	1	
12	b	1	Total	Mg	0
			1	1	
12	d	1	Total	Mg	0
			1	1	
12	e	1	Total	Mg	0
			1	1	
12	g	1	Total	Mg	0
			1	1	
12	h	1	Total	Mg	0
			1	1	
12	q	1	Total	Mg	0
			1	1	
12	z	1	Total	Mg	0
			1	1	

- Molecule 13 is ALUMINUM FLUORIDE (CCD ID: AF3) (formula: AlF₃).



Mol	Chain	Residues	Atoms			AltConf
			Total	Al	F	
13	A	1	4	1	3	0
13	B	1	4	1	3	0
13	D	1	4	1	3	0
13	E	1	4	1	3	0
13	G	1	4	1	3	0
13	H	1	4	1	3	0
13	Q	1	4	1	3	0
13	Z	1	4	1	3	0
13	a	1	4	1	3	0
13	b	1	4	1	3	0
13	d	1	4	1	3	0
13	e	1	4	1	3	0
13	g	1	4	1	3	0
13	h	1	4	1	3	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms			AltConf
			Total	Al	F	
13	q	1	4	1	3	0
13	z	1	4	1	3	0

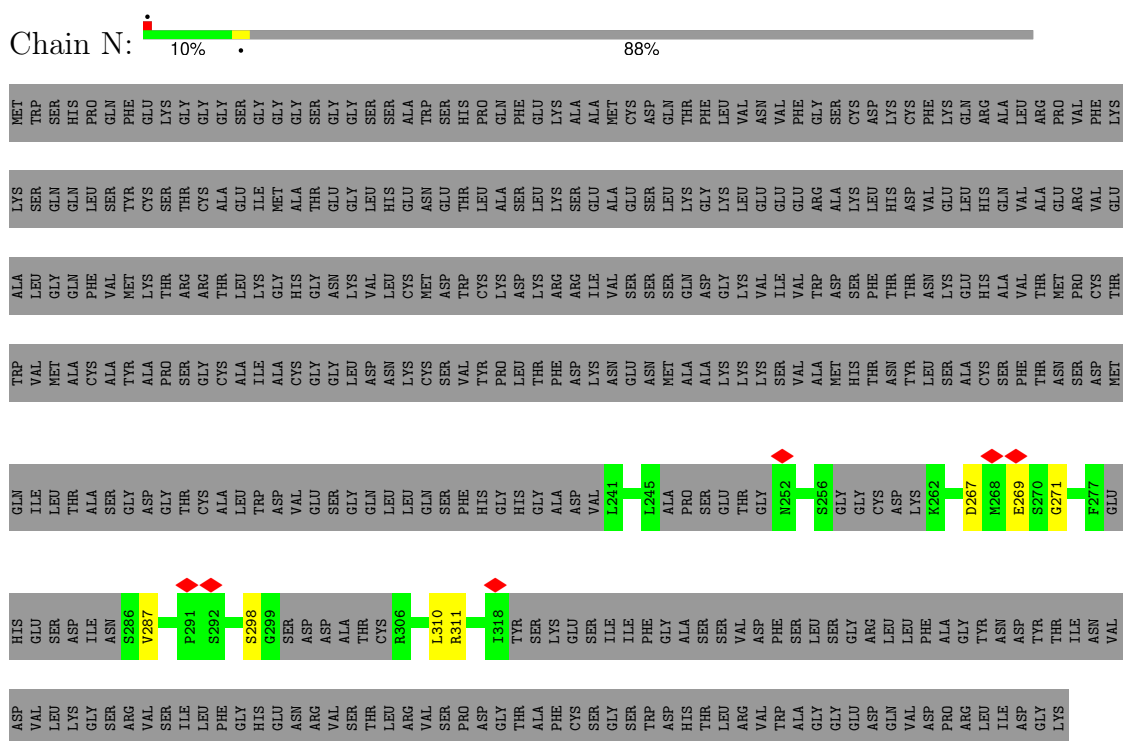
- Molecule 14 is water.

Mol	Chain	Residues	Atoms		AltConf
			Total	O	
14	A	2	2	2	0
14	B	2	2	2	0
14	D	1	1	1	0
14	E	1	1	1	0
14	G	1	1	1	0
14	H	1	1	1	0
14	Q	1	1	1	0
14	Z	1	1	1	0
14	a	2	2	2	0
14	b	1	1	1	0
14	d	1	1	1	0
14	e	1	1	1	0
14	g	1	1	1	0
14	h	1	1	1	0
14	q	1	1	1	0
14	z	1	1	1	0

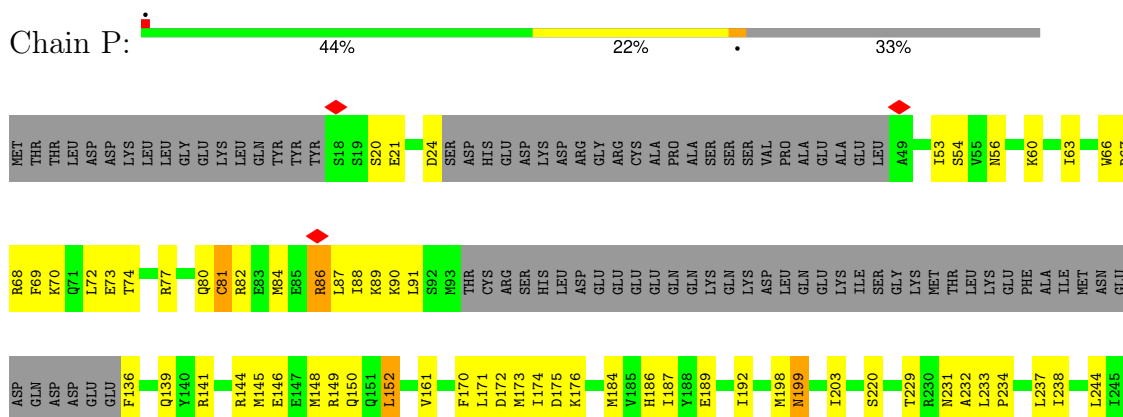
3 Residue-property plots

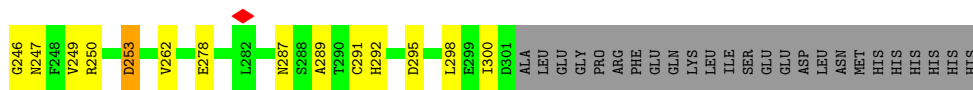
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: Guanine nucleotide-binding protein subunit beta-5

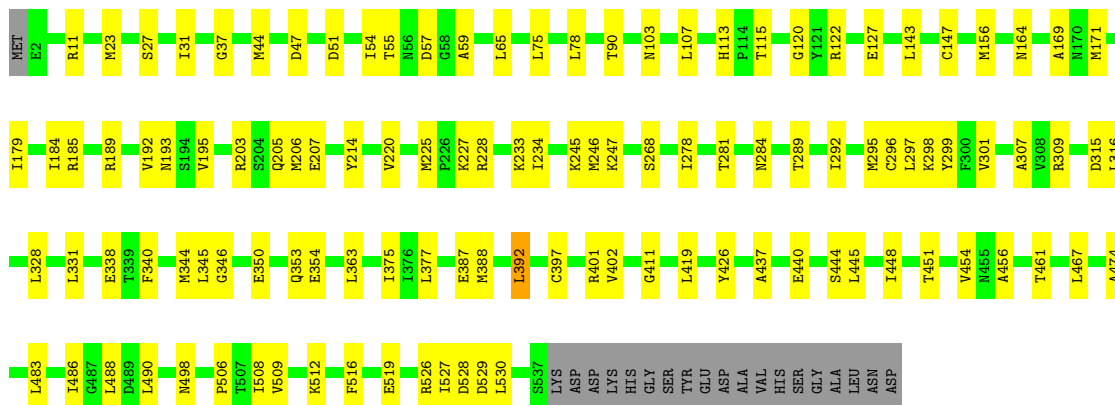


- Molecule 2: Phosducin-like protein

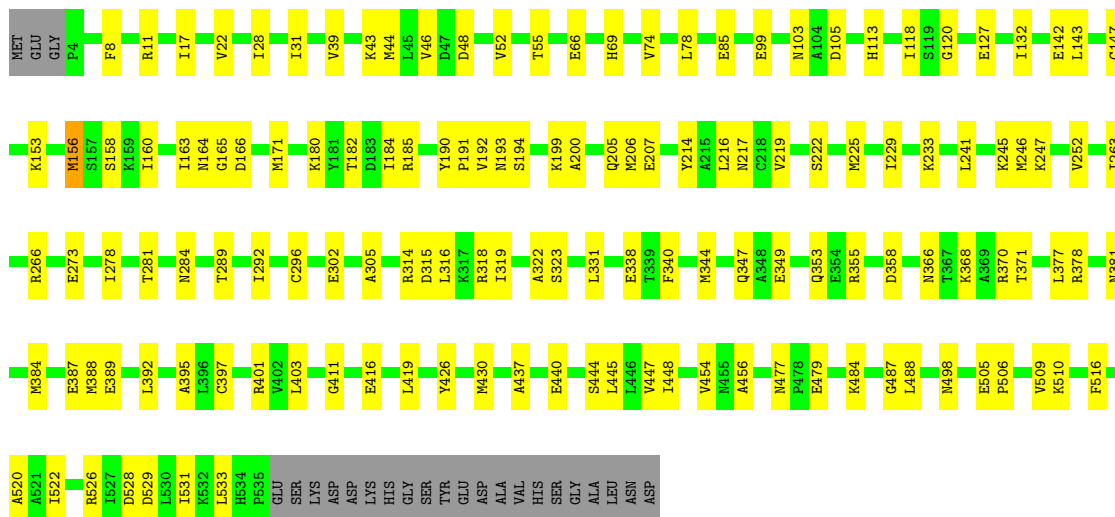




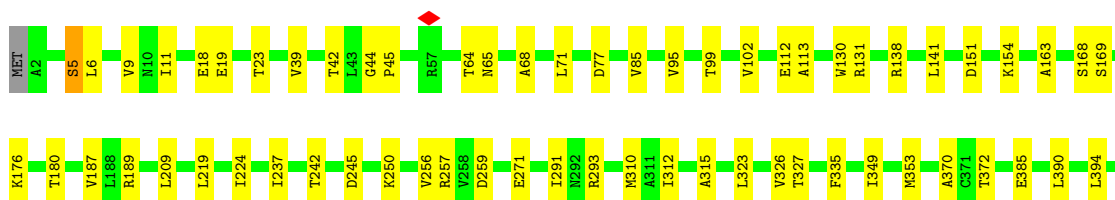
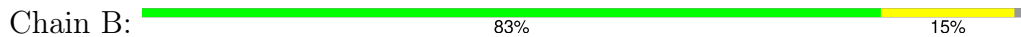
• Molecule 3: T-complex protein 1 subunit alpha

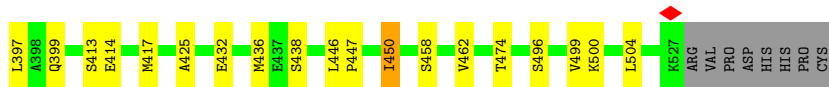


• Molecule 3: T-complex protein 1 subunit alpha

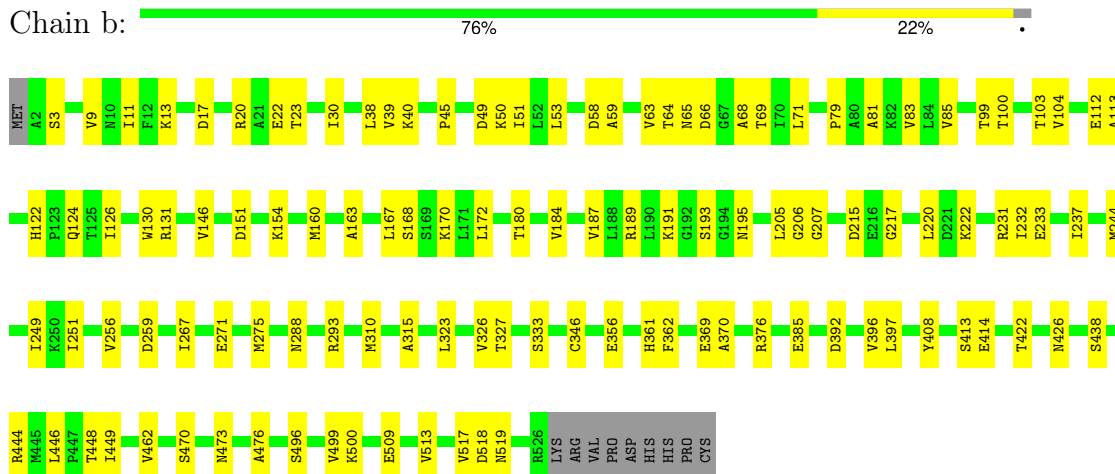


• Molecule 4: T-complex protein 1 subunit beta

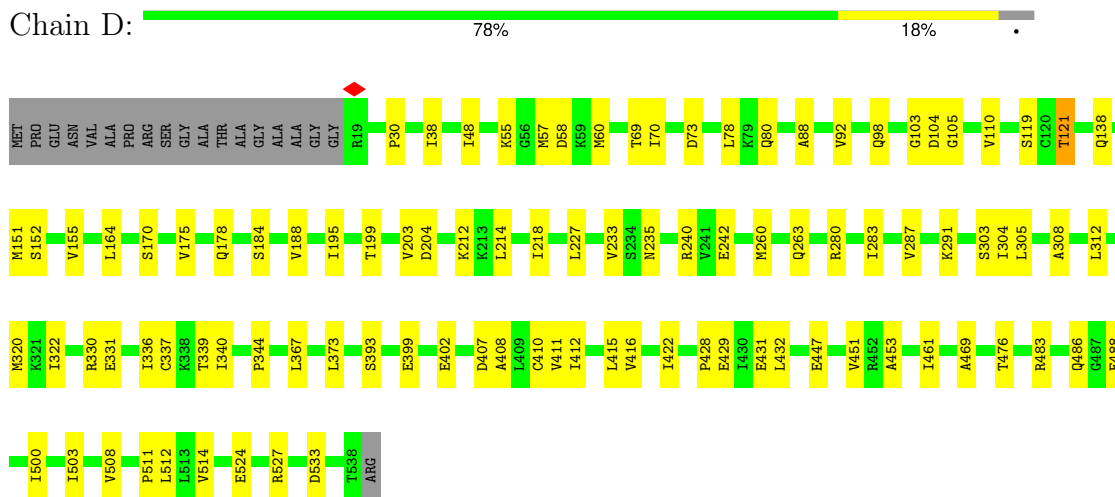




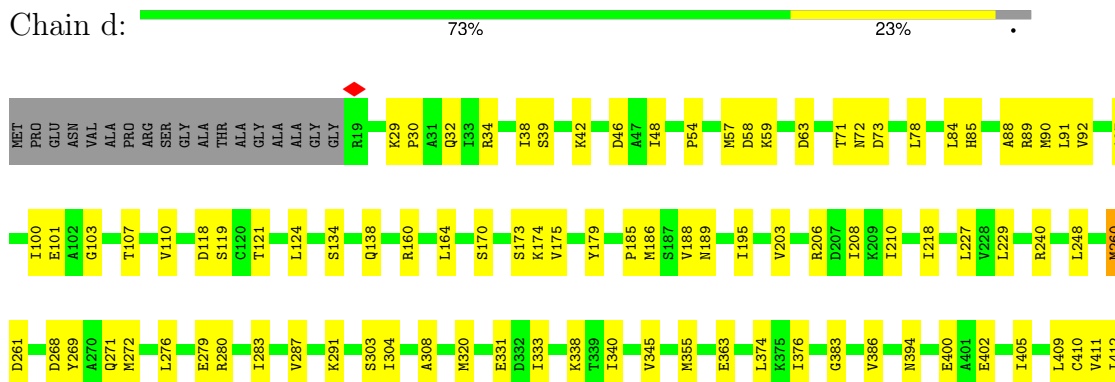
• Molecule 4: T-complex protein 1 subunit beta



• Molecule 5: T-complex protein 1 subunit delta

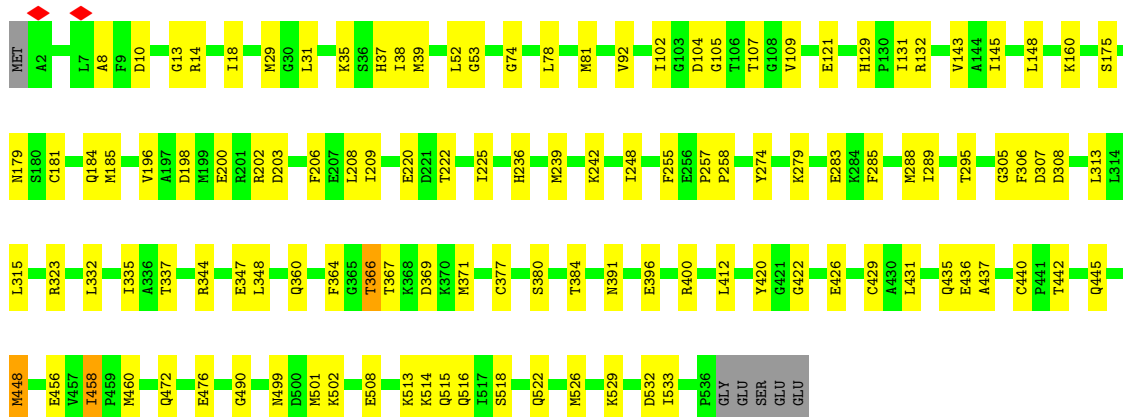


• Molecule 5: T-complex protein 1 subunit delta

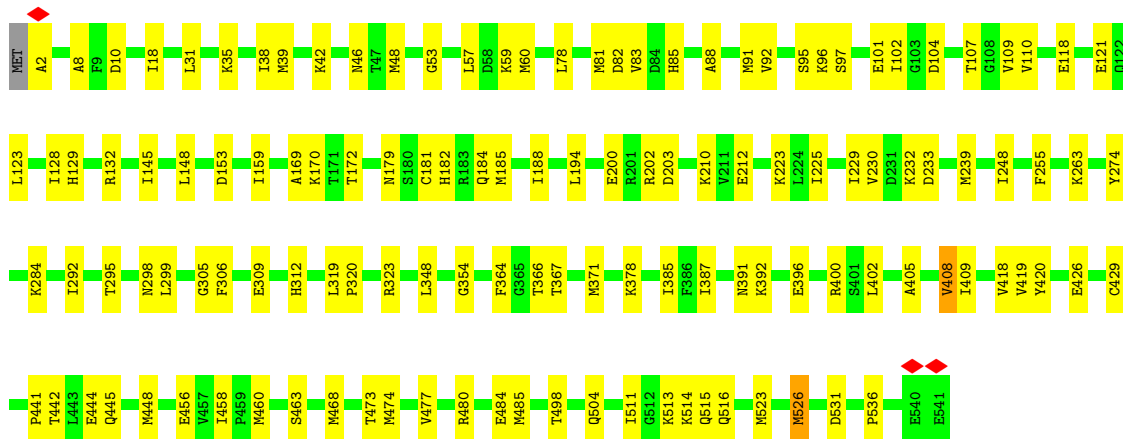




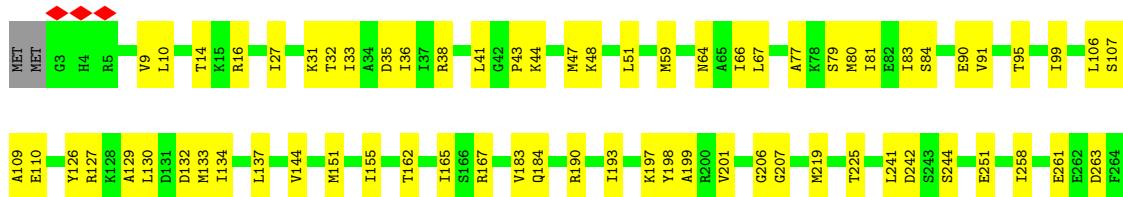
• Molecule 6: T-complex protein 1 subunit epsilon



• Molecule 6: T-complex protein 1 subunit epsilon

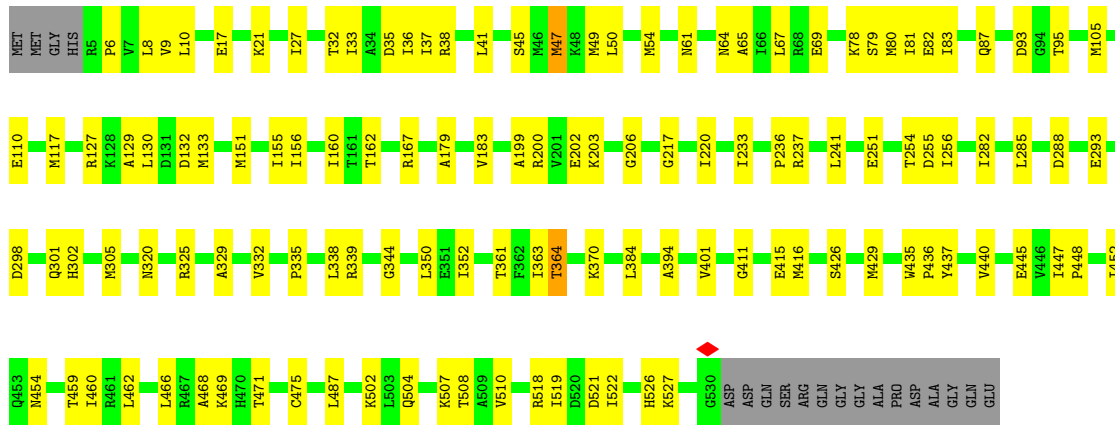


• Molecule 7: T-complex protein 1 subunit gamma

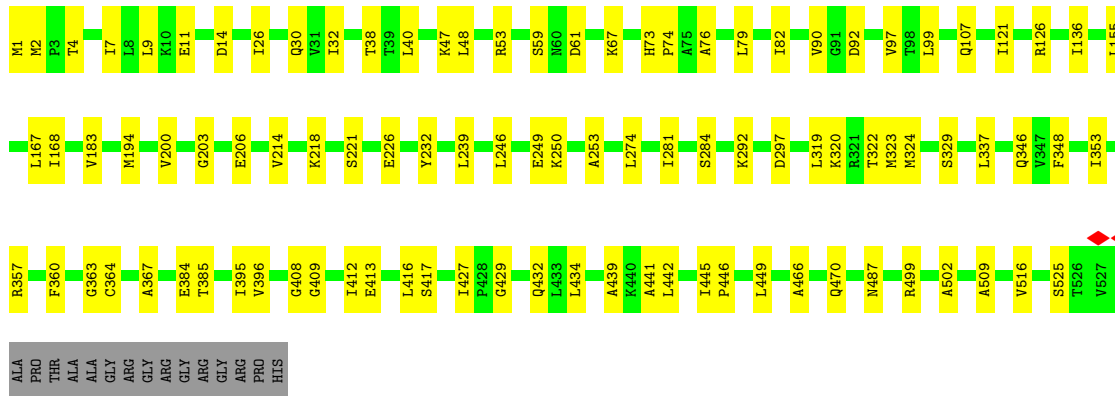
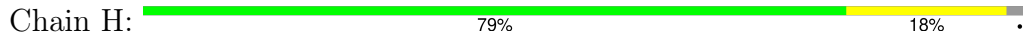




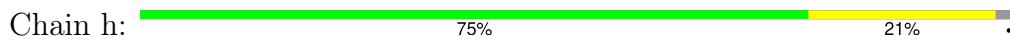
• Molecule 7: T-complex protein 1 subunit gamma

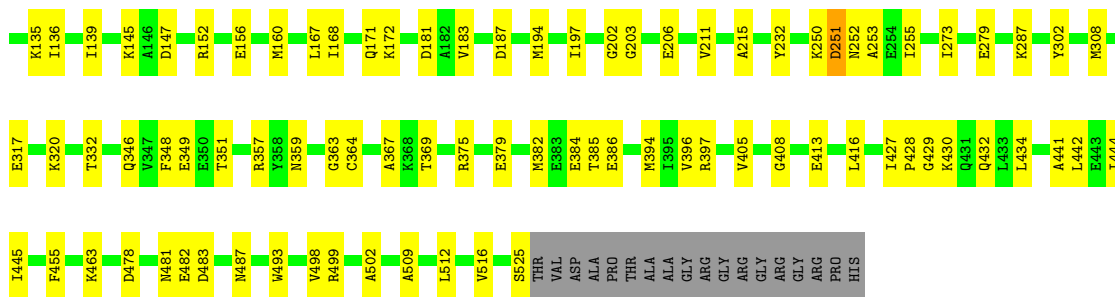


• Molecule 8: T-complex protein 1 subunit eta

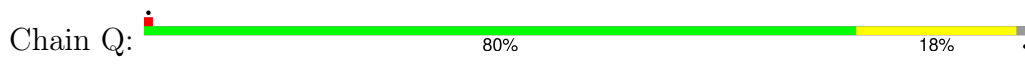


• Molecule 8: T-complex protein 1 subunit eta

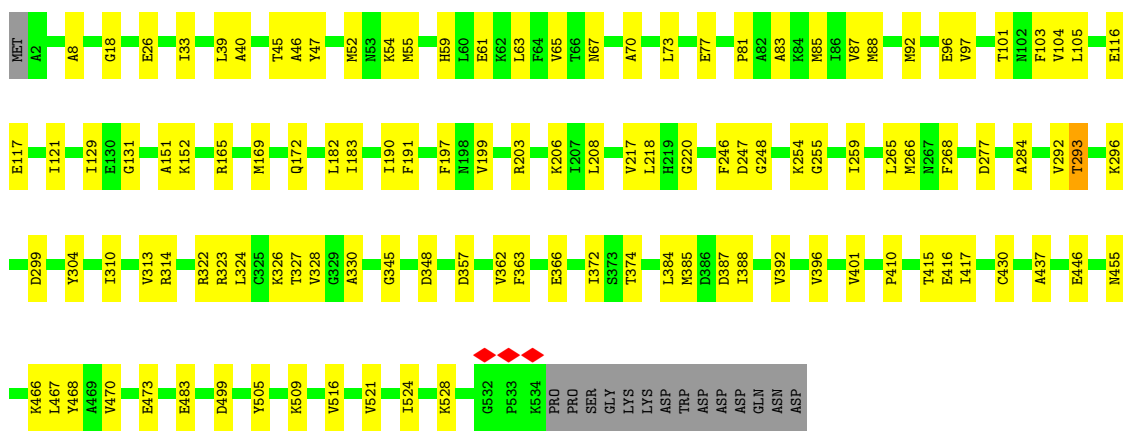
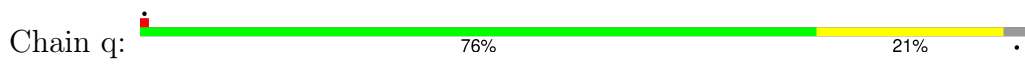




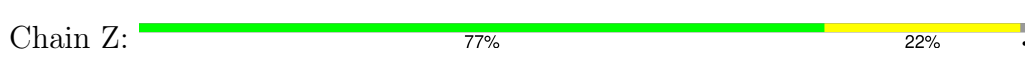
• Molecule 9: T-complex protein 1 subunit theta

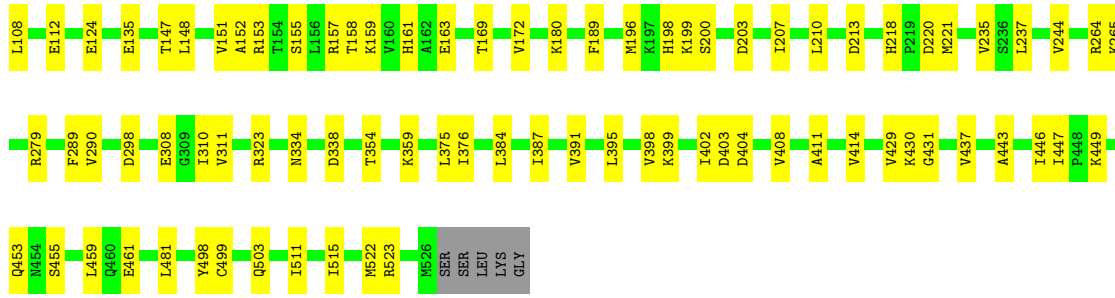


• Molecule 9: T-complex protein 1 subunit theta

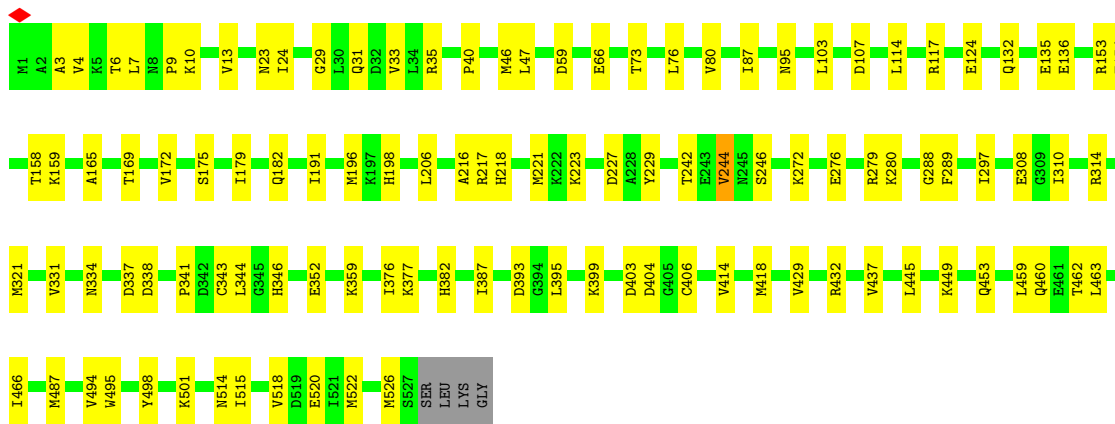
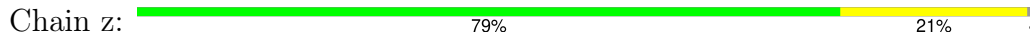


• Molecule 10: T-complex protein 1 subunit zeta





● Molecule 10: T-complex protein 1 subunit zeta



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	64345	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	43.7	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	1200	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.953	Depositor
Minimum map value	-0.346	Depositor
Average map value	0.003	Depositor
Map value standard deviation	0.047	Depositor
Recommended contour level	0.1	Depositor
Map size (\AA)	317.4, 317.4, 317.4	wwPDB
Map dimensions	300, 300, 300	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.058, 1.058, 1.058	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: MG, AF3, ADP

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	N	0.08	0/421	0.25	0/562
2	P	0.20	0/1751	0.54	0/2346
3	A	0.13	0/4109	0.30	0/5548
3	a	0.14	0/4081	0.34	0/5510
4	B	0.13	0/3995	0.28	0/5386
4	b	0.13	0/3986	0.30	0/5375
5	D	0.13	0/3955	0.31	0/5338
5	d	0.13	0/3949	0.33	0/5331
6	E	0.14	0/4183	0.34	1/5635 (0.0%)
6	e	0.13	0/4220	0.30	0/5684
7	G	0.14	0/4136	0.31	0/5579
7	g	0.14	0/4134	0.32	0/5575
8	H	0.14	0/4111	0.32	0/5550
8	h	0.14	0/4089	0.31	0/5519
9	Q	0.13	0/4147	0.32	0/5606
9	q	0.13	0/4112	0.31	0/5558
10	Z	0.13	0/4069	0.31	0/5486
10	z	0.13	0/4080	0.31	0/5501
All	All	0.14	0/67528	0.32	1/91089 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	E	308	ASP	N-CA-C	-5.44	105.43	111.36

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	N	417	0	395	5	0
2	P	1727	0	1701	69	0
3	A	4069	0	4224	93	0
3	a	4041	0	4205	105	0
4	B	3952	0	4070	54	0
4	b	3943	0	4057	81	0
5	D	3923	0	4131	63	0
5	d	3917	0	4120	93	0
6	E	4132	0	4246	86	0
6	e	4169	0	4272	98	0
7	G	4089	0	4224	96	0
7	g	4088	0	4230	94	0
8	H	4054	0	4160	69	0
8	h	4032	0	4140	81	0
9	Q	4086	0	4160	69	0
9	q	4053	0	4125	79	0
10	Z	4022	0	4161	81	0
10	z	4033	0	4171	86	0
11	A	27	0	12	2	0
11	B	27	0	12	4	0
11	D	27	0	12	1	0
11	E	27	0	12	6	0
11	G	27	0	12	3	0
11	H	27	0	12	1	0
11	Q	27	0	12	1	0
11	Z	27	0	12	2	0
11	a	27	0	12	2	0
11	b	27	0	12	2	0
11	d	27	0	12	2	0
11	e	27	0	12	1	0
11	g	27	0	12	3	0
11	h	27	0	12	2	0
11	q	27	0	12	2	0
11	z	27	0	12	1	0
12	A	1	0	0	0	0
12	B	1	0	0	0	0
12	D	1	0	0	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
12	E	1	0	0	0	0
12	G	1	0	0	0	0
12	H	1	0	0	0	0
12	Q	1	0	0	0	0
12	Z	1	0	0	0	0
12	a	1	0	0	0	0
12	b	1	0	0	0	0
12	d	1	0	0	0	0
12	e	1	0	0	0	0
12	g	1	0	0	0	0
12	h	1	0	0	0	0
12	q	1	0	0	0	0
12	z	1	0	0	0	0
13	A	4	0	0	2	0
13	B	4	0	0	0	0
13	D	4	0	0	1	0
13	E	4	0	0	1	0
13	G	4	0	0	1	0
13	H	4	0	0	1	0
13	Q	4	0	0	0	0
13	Z	4	0	0	2	0
13	a	4	0	0	1	0
13	b	4	0	0	0	0
13	d	4	0	0	2	0
13	e	4	0	0	1	0
13	g	4	0	0	2	0
13	h	4	0	0	2	0
13	q	4	0	0	1	0
13	z	4	0	0	3	0
14	A	2	0	0	0	0
14	B	2	0	0	0	0
14	D	1	0	0	0	0
14	E	1	0	0	0	0
14	G	1	0	0	0	0
14	H	1	0	0	0	0
14	Q	1	0	0	0	0
14	Z	1	0	0	0	0
14	a	2	0	0	0	0
14	b	1	0	0	0	0
14	d	1	0	0	0	0
14	e	1	0	0	0	0
14	g	1	0	0	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
14	h	1	0	0	0	0
14	q	1	0	0	0	0
14	z	1	0	0	0	0
All	All	67278	0	68984	1258	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 9.

All (1258) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:84:MET:HA	2:P:87:LEU:HB3	1.56	0.87
7:g:27:ILE:HD13	7:g:110:GLU:HB2	1.63	0.81
2:P:238:ILE:HB	2:P:246:GLY:HA3	1.63	0.81
9:q:169:MET:HE3	11:q:601:ADP:HN61	1.46	0.81
10:z:242:THR:HG22	10:z:244:VAL:H	1.47	0.79
7:G:206:GLY:HA3	10:Z:87:ILE:HG13	1.66	0.77
9:Q:81:PRO:HB2	10:Z:46:MET:HE1	1.65	0.77
2:P:91:LEU:HD13	2:P:232:ALA:HB2	1.65	0.76
6:E:200:GLU:HG2	6:E:202:ARG:HG3	1.66	0.76
7:g:332:VAL:HG21	7:g:338:LEU:HD13	1.68	0.76
3:a:263:ILE:HG23	5:d:272:MET:HE1	1.68	0.75
7:g:36:ILE:HG22	7:g:37:ILE:HG23	1.67	0.75
3:a:43:LYS:HG2	7:g:521:ASP:HB3	1.68	0.75
2:P:67:ARG:NH1	2:P:67:ARG:HA	2.01	0.75
6:e:305:GLY:HA2	6:e:323:ARG:HB2	1.66	0.75
2:P:20:SER:O	3:A:189:ARG:NH2	2.19	0.75
6:E:364:PHE:HE2	6:E:371:MET:HG3	1.52	0.74
6:E:305:GLY:HA2	6:E:323:ARG:HB2	1.69	0.74
6:e:426:GLU:N	6:e:426:GLU:OE1	2.21	0.73
6:E:129:HIS:HB3	6:E:132:ARG:HG3	1.70	0.73
3:A:474:ALA:HB2	3:A:483:LEU:HB2	1.71	0.73
8:h:429:GLY:HA2	8:h:432:GLN:HB3	1.69	0.73
8:H:82:ILE:HG21	8:H:509:ALA:HB2	1.71	0.72
10:Z:189:PHE:O	10:Z:323:ARG:NH1	2.21	0.72
4:B:353:MET:HE1	5:D:204:ASP:HB2	1.72	0.72
7:g:21:LYS:H	7:g:21:LYS:HD2	1.53	0.72
9:q:172:GLN:NE2	9:q:387:ASP:OD2	2.22	0.72
8:h:346:GLN:HB2	8:h:363:GLY:HA3	1.71	0.72
7:G:198:TYR:HE2	7:G:325:ARG:HG3	1.55	0.72
6:E:285:PHE:HA	6:E:288:MET:HE3	1.71	0.71

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:d:429:GLU:OE2	5:d:429:GLU:N	2.23	0.71
4:b:519:ASN:HB3	6:e:59:LYS:HG3	1.70	0.71
2:P:89:LYS:HZ2	2:P:90:LYS:HB2	1.53	0.71
9:q:247:ASP:OD2	9:q:248:GLY:N	2.23	0.71
3:A:44:MET:HE3	7:G:519:ILE:HG21	1.73	0.71
7:g:151:MET:HE2	7:g:151:MET:HA	1.71	0.71
10:Z:449:LYS:HB3	10:Z:459:LEU:HD23	1.72	0.70
7:G:301:GLN:O	7:G:305:MET:HG3	1.92	0.70
5:d:30:PRO:HB3	5:d:533:ASP:HB2	1.71	0.70
9:q:182:LEU:HD22	9:q:217:VAL:HG23	1.74	0.70
9:q:55:MET:HG2	9:q:63:LEU:HD11	1.71	0.70
2:P:250:ARG:CZ	2:P:250:ARG:HA	2.22	0.69
8:H:413:GLU:OE2	8:H:499:ARG:NH1	2.23	0.69
5:d:119:SER:HB2	5:d:453:ALA:HB1	1.74	0.69
6:e:48:MET:HG3	6:e:107:THR:HG23	1.73	0.69
3:A:268:SER:HB2	3:A:295:MET:HE1	1.72	0.69
7:G:198:TYR:CE2	7:G:325:ARG:HG3	2.26	0.69
7:g:35:ASP:OD1	7:g:38:ARG:NH1	2.26	0.69
9:Q:33:ILE:HG21	9:Q:116:GLU:HB2	1.75	0.69
3:A:59:ALA:HB2	3:A:90:THR:HG21	1.75	0.69
6:E:10:ASP:OD2	6:E:14:ARG:N	2.26	0.69
7:g:285:LEU:HD22	7:g:338:LEU:HG	1.74	0.69
4:B:44:GLY:H	11:B:601:ADP:H5'1	1.58	0.68
5:d:38:ILE:HG21	5:d:121:THR:HB	1.75	0.68
3:a:132:ILE:HD11	3:a:419:LEU:HD11	1.74	0.68
3:a:222:SER:H	3:a:225:MET:HE2	1.58	0.68
5:D:304:ILE:HG22	5:D:305:LEU:HD12	1.74	0.68
9:Q:73:LEU:HD11	9:Q:105:LEU:HD22	1.76	0.68
4:b:39:VAL:HG22	4:b:100:THR:HG23	1.76	0.68
8:h:82:ILE:HG21	8:h:509:ALA:HB2	1.74	0.68
7:g:105:MET:HG2	7:g:440:VAL:HG23	1.76	0.68
4:B:65:ASN:ND2	4:B:169:SER:O	2.26	0.68
8:h:2:MET:HE3	8:h:3:PRO:HD2	1.76	0.68
9:q:327:THR:HG22	9:q:372:ILE:HB	1.76	0.67
7:g:302:HIS:HB2	10:z:334:ASN:HB2	1.74	0.67
8:H:11:GLU:OE2	8:H:11:GLU:N	2.21	0.67
7:g:183:VAL:HG21	7:g:199:ALA:HB2	1.75	0.67
8:H:1:MET:HG3	8:H:2:MET:H	1.59	0.67
6:E:10:ASP:OD2	6:E:13:GLY:N	2.26	0.66
7:g:41:LEU:O	7:g:454:ASN:ND2	2.26	0.66
8:h:38:THR:OG1	8:h:47:LYS:NZ	2.25	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:z:196:MET:HB2	10:z:377:LYS:HG2	1.76	0.66
7:G:132:ASP:OD2	7:G:437:TYR:OH	2.14	0.66
5:d:138:GLN:OE1	5:d:527:ARG:NH1	2.29	0.66
6:E:198:ASP:HB3	6:E:202:ARG:HB2	1.78	0.65
9:Q:393:ASP:O	9:Q:397:ASN:ND2	2.29	0.65
7:g:233:ILE:HD12	7:g:350:LEU:HD12	1.77	0.65
5:D:429:GLU:N	5:D:429:GLU:OE1	2.30	0.65
5:d:227:LEU:HD22	5:d:340:ILE:HD11	1.78	0.65
3:a:207:GLU:OE2	7:g:507:LYS:NZ	2.29	0.65
3:a:245:LYS:HE2	7:g:251:GLU:HB2	1.79	0.65
7:g:129:ALA:O	7:g:133:MET:HG3	1.96	0.65
2:P:189:GLU:N	2:P:233:LEU:HD11	2.12	0.65
3:A:292:ILE:O	3:A:309:ARG:NH1	2.29	0.65
7:G:32:THR:HG23	10:Z:3:ALA:HB1	1.78	0.65
6:E:145:ILE:HG23	6:E:514:LYS:HD2	1.79	0.65
5:d:48:ILE:HG13	5:d:48:ILE:O	1.97	0.65
6:E:38:ILE:HG21	6:E:121:GLU:HB2	1.78	0.65
5:D:291:LYS:HD3	5:D:322:ILE:HD11	1.79	0.65
6:E:236:HIS:HB3	6:E:239:MET:HG3	1.78	0.65
5:D:280:ARG:HG2	5:D:312:LEU:HD21	1.79	0.64
9:Q:73:LEU:HD13	9:Q:87:VAL:HG22	1.79	0.64
7:g:17:GLU:N	7:g:17:GLU:OE2	2.30	0.64
5:D:119:SER:HB3	5:D:453:ALA:HB1	1.79	0.64
8:H:206:GLU:OE2	8:H:206:GLU:N	2.25	0.64
3:A:122:ARG:HG3	5:D:178:GLN:HG3	1.80	0.64
3:a:103:ASN:HB3	3:a:440:GLU:HG3	1.79	0.64
2:P:148:MET:HE2	2:P:152:LEU:HD23	1.79	0.64
8:H:346:GLN:HB2	8:H:363:GLY:HA3	1.80	0.64
7:G:313:ARG:HG2	7:G:314:ARG:HG3	1.80	0.64
3:A:289:THR:HG23	3:A:316:LEU:HD22	1.80	0.64
6:E:367:THR:HG23	6:E:369:ASP:H	1.63	0.64
10:Z:35:ARG:HE	10:Z:453:GLN:HE22	1.45	0.64
3:A:353:GLN:O	7:G:190:ARG:NH1	2.31	0.64
6:E:196:VAL:HG21	6:E:208:LEU:HB2	1.80	0.64
4:b:50:LYS:HD3	5:d:534:ASP:HB3	1.79	0.64
5:D:30:PRO:HB3	5:D:533:ASP:HB2	1.79	0.63
5:d:268:ASP:HB3	5:d:271:GLN:HG3	1.79	0.63
7:g:155:ILE:HG21	7:g:401:VAL:HG21	1.80	0.63
2:P:233:LEU:HB3	2:P:234:PRO:HD3	1.80	0.63
3:A:246:MET:HE2	3:A:246:MET:HA	1.80	0.63
7:G:35:ASP:OD1	7:G:38:ARG:NH1	2.32	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:a:349:GLU:HB2	3:a:366:ASN:HB2	1.80	0.63
4:B:209:LEU:N	5:D:524:GLU:OE2	2.29	0.63
4:B:151:ASP:HB3	4:B:154:LYS:HB2	1.80	0.63
4:b:376:ARG:NH2	5:d:101:GLU:OE2	2.31	0.63
3:a:164:ASN:ND2	3:a:206:MET:SD	2.72	0.62
8:h:516:VAL:HG21	9:q:55:MET:HE3	1.81	0.62
6:E:255:PHE:HB2	6:E:306:PHE:HB3	1.80	0.62
3:a:505:GLU:OE1	3:a:510:LYS:NZ	2.32	0.62
2:P:66:TRP:HA	2:P:69:PHE:CE1	2.34	0.62
6:e:129:HIS:HB3	6:e:132:ARG:HG2	1.82	0.62
7:g:325:ARG:HG2	7:g:370:LYS:HB2	1.81	0.62
4:B:112:GLU:HB3	4:B:438:SER:HB3	1.81	0.62
3:a:526:ARG:HG3	5:d:175:VAL:HG23	1.80	0.62
1:N:269:GLU:O	5:D:330:ARG:NH1	2.32	0.62
2:P:148:MET:HE2	2:P:152:LEU:CD2	2.29	0.62
7:g:200:ARG:NH1	7:g:202:GLU:OE2	2.33	0.62
8:h:499:ARG:NH2	11:h:601:ADP:O3'	2.33	0.62
6:e:78:LEU:HB3	6:e:92:VAL:HG22	1.81	0.62
5:d:57:MET:HE3	5:d:57:MET:HA	1.83	0.61
8:h:103:GLU:HG2	8:h:444:ILE:HB	1.82	0.61
10:Z:103:LEU:HD21	10:Z:515:ILE:HG21	1.81	0.61
10:Z:408:VAL:HG13	10:Z:414:VAL:HG21	1.81	0.61
9:q:246:PHE:HB2	9:q:293:THR:HG21	1.82	0.61
3:A:411:GLY:O	3:A:498:ASN:ND2	2.34	0.61
4:B:458:SER:O	4:B:462:VAL:HG22	2.00	0.61
6:E:78:LEU:HB3	6:E:92:VAL:HG22	1.81	0.61
7:G:67:LEU:HB3	7:G:81:ILE:HD12	1.82	0.61
2:P:136:PHE:O	2:P:141:ARG:NH2	2.33	0.61
3:A:526:ARG:HG3	5:D:175:VAL:HG23	1.82	0.61
7:G:289:VAL:HG12	7:G:310:THR:HB	1.83	0.61
6:e:225:ILE:HD13	6:e:229:ILE:HD11	1.82	0.61
3:A:54:ILE:HD13	7:G:515:LEU:HD11	1.81	0.61
10:Z:73:THR:O	10:Z:77:ILE:HG12	2.00	0.61
3:a:266:ARG:HG3	5:d:269:TYR:HB2	1.82	0.61
6:e:364:PHE:HB2	6:e:367:THR:HG21	1.83	0.61
8:H:525:SER:HB3	9:Q:59:HIS:HB2	1.83	0.61
2:P:295:ASP:HB2	3:a:318:ARG:HH21	1.66	0.60
4:B:219:LEU:HB2	4:B:372:THR:HG21	1.83	0.60
5:D:476:THR:HG23	5:D:500:ILE:HD11	1.82	0.60
3:a:153:LYS:HE3	3:a:165:GLY:HA3	1.83	0.60
3:a:526:ARG:NH2	5:d:58:ASP:OD1	2.34	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:d:78:LEU:HD12	5:d:92:VAL:HG22	1.82	0.60
4:B:414:GLU:OE2	4:B:500:LYS:NZ	2.34	0.60
7:g:54:MET:HE3	7:g:54:MET:N	2.17	0.60
6:E:431:LEU:O	6:E:435:GLN:HG2	2.01	0.60
6:E:515:GLN:HE22	8:H:203:GLY:H	1.48	0.60
8:H:32:ILE:HG13	8:H:76:ALA:HB1	1.84	0.60
9:q:81:PRO:O	9:q:85:MET:HG3	2.02	0.60
10:z:196:MET:HA	10:z:196:MET:HE2	1.84	0.60
8:H:194:MET:HE2	8:H:194:MET:HA	1.84	0.60
10:Z:112:GLU:OE1	10:z:460:GLN:NE2	2.34	0.60
7:G:201:VAL:HG11	7:G:388:GLU:HG3	1.83	0.60
7:G:207:GLY:O	10:Z:503:GLN:NE2	2.31	0.60
7:g:64:ASN:HB2	7:g:95:THR:HG21	1.84	0.60
9:q:70:ALA:HB2	9:q:101:THR:HG21	1.83	0.60
6:E:526:MET:HG3	8:H:167:LEU:HD21	1.84	0.60
7:G:27:ILE:HD13	7:G:110:GLU:HB2	1.84	0.60
7:g:364:THR:O	7:g:364:THR:OG1	2.19	0.60
8:h:525:SER:HB2	9:q:59:HIS:HB2	1.83	0.60
4:b:414:GLU:OE2	4:b:500:LYS:NZ	2.34	0.60
9:q:220:GLY:O	9:q:374:THR:OG1	2.18	0.59
9:Q:364:LYS:NZ	9:Q:366:GLU:OE2	2.35	0.59
7:g:203:LYS:HB2	7:g:384:LEU:HD13	1.84	0.59
8:h:32:ILE:HG13	8:h:76:ALA:HB1	1.84	0.59
2:P:68:ARG:HH21	2:P:72:LEU:HB2	1.66	0.59
2:P:87:LEU:HG	2:P:88:ILE:HG12	1.83	0.59
6:E:364:PHE:CE2	6:E:371:MET:HG3	2.36	0.59
7:G:302:HIS:HB2	10:Z:334:ASN:HB2	1.85	0.59
8:H:323:MET:HE3	8:H:329:SER:HA	1.85	0.59
5:d:480:LEU:HD21	5:d:492:GLY:HA2	1.85	0.59
7:g:87:GLN:NE2	7:g:93:ASP:O	2.34	0.59
1:N:311:ARG:NE	6:E:307:ASP:OD1	2.35	0.58
8:H:73:HIS:HB3	8:H:76:ALA:HB3	1.85	0.58
4:b:122:HIS:CD2	4:b:124:GLN:HB2	2.37	0.58
6:e:255:PHE:HB2	6:e:306:PHE:HB3	1.84	0.58
8:h:23:VAL:HG13	8:h:109:LYS:HE3	1.84	0.58
9:q:117:GLU:O	9:q:121:ILE:HG23	2.03	0.58
9:q:521:VAL:HG21	10:z:46:MET:HE3	1.85	0.58
9:Q:17:GLU:OE2	9:Q:17:GLU:N	2.36	0.58
3:a:103:ASN:ND2	3:a:444:SER:OG	2.27	0.58
5:D:235:ASN:ND2	5:D:322:ILE:O	2.36	0.58
3:a:246:MET:HE2	3:a:246:MET:HA	1.86	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:240:ARG:NH1	5:D:242:GLU:OE2	2.30	0.58
7:G:289:VAL:HG11	7:G:350:LEU:HD22	1.84	0.58
9:Q:190:ILE:HG22	9:Q:191:PHE:H	1.69	0.58
6:e:102:ILE:HG22	6:e:104:ASP:H	1.68	0.58
7:G:527:LYS:HD2	7:G:527:LYS:N	2.19	0.58
10:Z:153:ARG:O	10:Z:157:ARG:HG2	2.03	0.58
6:e:101:GLU:OE1	8:h:375:ARG:NH2	2.36	0.58
10:z:80:VAL:HG12	10:z:95:ASN:HD21	1.68	0.58
3:A:203:ARG:NH1	3:A:207:GLU:OE1	2.36	0.58
3:a:184:ILE:HG13	3:a:185:ARG:HD2	1.86	0.58
3:a:160:ILE:HD12	7:g:518:ARG:HD3	1.85	0.58
5:d:447:GLU:OE1	5:d:447:GLU:N	2.21	0.58
2:P:24:ASP:OD1	2:P:24:ASP:N	2.37	0.58
2:P:192:ILE:HG21	2:P:234:PRO:HD3	1.86	0.57
2:P:300:ILE:HD11	3:a:182:THR:HG22	1.85	0.57
6:E:248:ILE:HD12	6:E:337:THR:HG21	1.86	0.57
4:b:51:ILE:HB	5:d:535:VAL:HG22	1.84	0.57
6:E:518:SER:O	6:E:522:GLN:HG2	2.04	0.57
7:G:415:GLU:OE2	7:G:502:LYS:NZ	2.31	0.57
11:G:601:ADP:O2B	13:G:603:AF3:F1	2.13	0.57
8:H:136:ILE:HG12	8:H:412:ILE:HD11	1.86	0.57
3:a:416:GLU:HG3	3:a:448:ILE:HB	1.84	0.57
4:b:49:ASP:HB2	5:d:531:LYS:O	2.04	0.57
5:d:240:ARG:NH1	5:d:363:GLU:OE2	2.37	0.57
5:d:279:GLU:O	5:d:283:ILE:HG12	2.04	0.57
6:e:42:LYS:HD2	6:e:118:GLU:HG3	1.85	0.57
2:P:287:ASN:HB2	3:a:217:ASN:HD22	1.69	0.57
5:D:78:LEU:HD12	5:D:92:VAL:HG22	1.85	0.57
6:E:426:GLU:OE1	6:E:513:LYS:NZ	2.22	0.57
3:a:247:LYS:HE3	3:a:247:LYS:HA	1.85	0.57
3:A:299:TYR:OH	7:G:337:GLU:OE2	2.18	0.57
8:H:53:ARG:HD2	8:H:53:ARG:N	2.20	0.57
3:a:44:MET:HE3	7:g:519:ILE:HD13	1.86	0.57
7:G:155:ILE:HG21	7:G:401:VAL:HG21	1.85	0.57
9:Q:152:LYS:NZ	9:Q:159:GLU:OE2	2.32	0.57
3:a:266:ARG:NH1	3:a:273:GLU:OE2	2.34	0.57
9:q:206:LYS:HB3	9:q:385:MET:HE3	1.86	0.57
4:B:189:ARG:NH2	4:B:370:ALA:O	2.38	0.57
5:d:210:ILE:HG21	5:d:402:GLU:HG3	1.87	0.57
3:a:17:ILE:HG21	3:a:529:ASP:HA	1.87	0.56
3:A:354:GLU:HG3	3:A:363:LEU:HD12	1.87	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:Q:117:GLU:O	9:Q:121:ILE:HG23	2.05	0.56
9:Q:70:ALA:HB2	9:Q:101:THR:HG21	1.86	0.56
4:b:168:SER:OG	11:b:601:ADP:N7	2.36	0.56
5:d:195:ILE:HG21	5:d:203:VAL:HG22	1.87	0.56
6:e:485:MET:SD	6:e:485:MET:N	2.79	0.56
7:g:50:LEU:HD13	10:z:522:MET:HB3	1.86	0.56
8:h:317:GLU:OE1	8:h:317:GLU:N	2.26	0.56
9:q:284:ALA:HB2	9:q:310:ILE:HD11	1.87	0.56
2:P:278:GLU:N	2:P:278:GLU:OE2	2.38	0.56
10:z:279:ARG:NH1	10:z:308:GLU:OE2	2.38	0.56
3:A:519:GLU:OE1	5:D:393:SER:OG	2.17	0.56
4:B:68:ALA:HB2	4:B:99:THR:HG21	1.88	0.56
3:A:528:ASP:OD2	5:D:57:MET:HB2	2.06	0.56
10:Z:218:HIS:HB3	10:Z:221:MET:HG3	1.87	0.56
10:Z:61:ASN:HB2	10:Z:92:THR:HG21	1.88	0.56
5:d:511:PRO:HG2	5:d:514:VAL:HG23	1.87	0.56
7:g:179:ALA:O	7:g:183:VAL:HG23	2.06	0.56
10:z:289:PHE:HB3	10:z:310:ILE:HG12	1.88	0.56
7:G:16:ARG:HG3	7:G:523:VAL:HG22	1.87	0.56
9:Q:139:ALA:HB2	9:Q:423:ILE:HD11	1.87	0.56
10:Z:180:LYS:HD3	10:Z:402:ILE:HD13	1.87	0.56
5:d:118:ASP:O	5:d:121:THR:HG22	2.06	0.56
3:A:179:ILE:HG21	3:A:195:VAL:HG22	1.88	0.56
3:A:461:THR:OG1	8:h:114:GLU:OE1	2.17	0.56
7:G:31:LYS:HD3	7:G:107:SER:HB2	1.88	0.56
7:g:468:ALA:O	7:g:471:THR:OG1	2.24	0.56
2:P:199:ASN:HD22	2:P:199:ASN:C	2.14	0.56
6:E:279:LYS:O	6:E:283:GLU:HG2	2.06	0.56
8:H:74:PRO:HB2	9:Q:55:MET:SD	2.45	0.56
8:h:118:PRO:HG2	9:q:52:MET:HE1	1.88	0.56
10:z:9:PRO:HG2	10:z:10:LYS:HD3	1.87	0.56
6:E:37:HIS:CE1	6:E:533:ILE:HD11	2.41	0.55
8:H:246:LEU:HG	8:H:274:LEU:HD22	1.88	0.55
4:b:38:LEU:O	4:b:50:LYS:NZ	2.35	0.55
5:d:185:PRO:O	5:d:189:ASN:ND2	2.39	0.55
6:e:203:ASP:OD2	8:h:357:ARG:NH2	2.34	0.55
7:g:237:ARG:H	7:g:288:ASP:HB2	1.72	0.55
8:H:107:GLN:HG3	8:H:441:ALA:HB2	1.87	0.55
10:Z:40:PRO:HA	10:Z:158:THR:HA	1.88	0.55
3:A:225:MET:HE1	3:A:307:ALA:H	1.71	0.55
4:B:326:VAL:HG13	4:B:327:THR:HG23	1.87	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:429:GLY:HA2	8:H:432:GLN:HB3	1.87	0.55
9:Q:39:LEU:HD23	9:Q:105:LEU:HD11	1.88	0.55
5:d:303:SER:HB3	5:d:308:ALA:HB2	1.89	0.55
4:B:5:SER:OG	4:B:18:GLU:OE2	2.24	0.55
3:a:281:THR:HG21	3:a:340:PHE:CE2	2.42	0.55
4:b:207:GLY:H	5:d:101:GLU:HG3	1.70	0.55
6:e:248:ILE:N	6:e:354:GLY:O	2.36	0.55
7:G:130:LEU:HB2	7:G:510:VAL:HG11	1.87	0.55
7:g:65:ALA:O	7:g:69:GLU:HG2	2.07	0.55
10:z:462:THR:O	10:z:466:ILE:HG12	2.07	0.55
5:D:331:GLU:OE2	5:D:331:GLU:N	2.36	0.55
5:d:480:LEU:HG	5:d:500:ILE:HD12	1.88	0.55
2:P:53:ILE:HD12	2:P:54:SER:N	2.22	0.55
7:G:167:ARG:HE	7:G:167:ARG:HA	1.72	0.55
7:G:183:VAL:HG21	7:G:199:ALA:HB2	1.89	0.55
7:G:332:VAL:HG21	7:G:338:LEU:HD13	1.89	0.55
8:H:250:LYS:HB2	8:H:253:ALA:HB2	1.89	0.55
10:z:227:ASP:OD1	10:z:346:HIS:NE2	2.40	0.55
10:z:449:LYS:HD3	10:z:459:LEU:HD21	1.89	0.54
6:E:10:ASP:CG	6:E:13:GLY:H	2.14	0.54
9:q:33:ILE:HD13	9:q:116:GLU:HB2	1.88	0.54
8:H:466:ALA:O	8:H:470:GLN:HG3	2.07	0.54
11:g:601:ADP:O1B	13:g:603:AF3:F3	2.15	0.54
2:P:74:THR:HA	2:P:77:ARG:HG2	1.89	0.54
3:A:107:LEU:HG	3:A:440:GLU:HG3	1.88	0.54
4:B:9:VAL:HG13	4:B:11:ILE:HD11	1.90	0.54
9:Q:37:LYS:HG2	9:Q:38:GLU:OE2	2.08	0.54
9:Q:318:LYS:HD2	9:Q:318:LYS:O	2.06	0.54
4:b:215:ASP:OD2	4:b:361:HIS:NE2	2.41	0.54
10:z:196:MET:HB3	10:z:198:HIS:CD2	2.43	0.54
6:E:377:CYS:HB2	6:E:380:SER:HB3	1.90	0.54
6:e:531:ASP:HB3	8:h:45:MET:HE3	1.89	0.54
2:P:60:LYS:O	2:P:60:LYS:NZ	2.27	0.54
5:D:227:LEU:HB2	5:D:339:THR:HG21	1.89	0.54
6:E:532:ASP:HB3	8:H:47:LYS:HD2	1.89	0.54
9:Q:34:GLN:O	9:Q:37:LYS:N	2.40	0.54
7:g:45:SER:O	10:z:117:ARG:NH2	2.34	0.54
6:E:53:GLY:H	11:E:601:ADP:H5'1	1.72	0.54
6:E:74:GLY:HA3	6:E:107:THR:HG22	1.90	0.54
4:b:231:ARG:NH1	4:b:233:GLU:OE2	2.41	0.54
8:h:455:PHE:CE1	8:h:482:GLU:HG2	2.43	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:z:227:ASP:O	10:z:288:GLY:N	2.39	0.54
2:P:172:ASP:OD1	2:P:173:MET:N	2.41	0.54
4:B:176:LYS:O	4:B:180:THR:OG1	2.20	0.54
5:D:164:LEU:HD23	5:D:188:VAL:HG21	1.90	0.54
3:a:411:GLY:O	3:a:498:ASN:ND2	2.33	0.54
3:a:533:LEU:HD12	5:d:63:ASP:HA	1.90	0.54
6:e:145:ILE:HG23	6:e:514:LYS:HD2	1.90	0.54
3:a:278:ILE:O	3:a:281:THR:HG22	2.08	0.54
5:d:88:ALA:O	5:d:92:VAL:HG23	2.08	0.54
6:e:81:MET:HG2	6:e:83:VAL:HG13	1.90	0.54
9:q:254:LYS:HB3	9:q:254:LYS:NZ	2.23	0.54
4:B:138:ARG:NH2	6:E:220:GLU:OE2	2.26	0.53
7:G:261:GLU:N	7:G:261:GLU:OE1	2.39	0.53
9:Q:277:ASP:HB2	9:Q:304:TYR:CZ	2.43	0.53
10:Z:101:GLU:HG2	10:Z:446:ILE:HB	1.91	0.53
3:a:163:ILE:HB	7:g:127:ARG:HD2	1.91	0.53
5:d:73:ASP:OD1	13:d:603:AF3:F2	2.15	0.53
5:d:208:ILE:HG23	5:d:386:VAL:HG23	1.89	0.53
3:A:44:MET:HB2	7:G:522:ILE:HG12	1.88	0.53
3:A:78:LEU:HD11	3:A:516:PHE:HB3	1.89	0.53
9:q:190:ILE:HG22	9:q:191:PHE:H	1.73	0.53
7:G:162:THR:HG21	11:G:601:ADP:H5'2	1.90	0.53
10:Z:354:THR:HG23	10:Z:359:LYS:HG2	1.89	0.53
11:a:601:ADP:O2B	13:a:603:AF3:F3	2.16	0.53
5:d:412:ILE:O	5:d:416:VAL:HG23	2.08	0.53
6:e:515:GLN:HE22	8:h:203:GLY:HA2	1.73	0.53
8:h:34:GLU:HA	8:h:37:ARG:HG3	1.90	0.53
4:b:122:HIS:HD2	4:b:124:GLN:HB2	1.71	0.53
6:e:498:THR:O	6:e:504:GLN:NE2	2.41	0.53
2:P:237:LEU:HG	2:P:244:LEU:HD21	1.90	0.53
5:D:428:PRO:HG2	5:D:429:GLU:OE1	2.08	0.53
4:b:68:ALA:HB2	4:b:99:THR:HG21	1.90	0.53
4:b:112:GLU:HB3	4:b:438:SER:HB3	1.91	0.53
5:D:422:ILE:HD11	5:D:428:PRO:HB3	1.91	0.53
3:a:143:LEU:HB3	3:a:147:CYS:HB2	1.90	0.53
7:g:47:MET:HE3	7:g:47:MET:HA	1.90	0.53
9:q:61:GLU:N	9:q:61:GLU:OE2	2.41	0.53
2:P:91:LEU:HD13	2:P:232:ALA:CB	2.36	0.53
2:P:144:ARG:N	2:P:144:ARG:HD3	2.24	0.53
5:D:88:ALA:O	5:D:92:VAL:HG23	2.09	0.53
10:Z:455:SER:OG	10:Z:481:LEU:O	2.24	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:a:132:ILE:HG13	3:a:419:LEU:HD21	1.91	0.53
5:d:291:LYS:HG2	5:d:320:MET:HE2	1.91	0.53
8:h:168:ILE:HG21	8:h:385:THR:HG23	1.90	0.53
11:q:601:ADP:O1B	13:q:603:AF3:F2	2.17	0.53
3:A:220:VAL:HB	3:A:225:MET:HE2	1.90	0.53
3:a:118:ILE:HG12	3:a:522:ILE:HG12	1.91	0.53
4:b:422:THR:OG1	4:b:444:ARG:NH2	2.41	0.53
6:e:169:ALA:HB2	6:e:409:ILE:HD11	1.90	0.53
3:a:55:THR:HA	3:a:387:GLU:OE1	2.10	0.53
3:a:205:GLN:HE22	7:g:127:ARG:NH2	2.06	0.53
5:d:276:LEU:HD12	5:d:280:ARG:HH21	1.74	0.53
8:h:171:GLN:NE2	8:h:206:GLU:OE2	2.34	0.53
9:q:524:ILE:HG23	10:z:46:MET:HG2	1.90	0.53
2:P:186:HIS:CE1	2:P:198:MET:HG2	2.44	0.52
3:A:292:ILE:HG23	3:A:296:CYS:HB2	1.92	0.52
4:B:131:ARG:NH2	6:E:179:ASN:OD1	2.42	0.52
10:Z:279:ARG:NH2	10:Z:308:GLU:OE2	2.39	0.52
2:P:60:LYS:HE3	5:d:85:HIS:CD2	2.44	0.52
6:e:42:LYS:O	6:e:46:ASN:ND2	2.35	0.52
11:z:601:ADP:O3B	13:z:603:AF3:F3	2.17	0.52
8:H:297:ASP:N	8:H:297:ASP:OD1	2.43	0.52
10:Z:289:PHE:HB3	10:Z:310:ILE:HG12	1.90	0.52
3:a:78:LEU:HD11	3:a:516:PHE:HB3	1.91	0.52
4:b:422:THR:O	4:b:426:ASN:ND2	2.42	0.52
5:d:34:ARG:HD2	5:d:124:LEU:HD21	1.90	0.52
6:e:38:ILE:HG21	6:e:121:GLU:HB2	1.92	0.52
7:G:41:LEU:O	7:G:454:ASN:ND2	2.36	0.52
9:Q:164:LEU:O	9:Q:168:ILE:HG12	2.08	0.52
10:Z:399:LYS:NZ	10:Z:403:ASP:OD2	2.40	0.52
4:b:58:ASP:OD1	4:b:58:ASP:N	2.41	0.52
6:e:123:LEU:HD22	6:e:128:ILE:HD12	1.91	0.52
6:E:102:ILE:HG22	6:E:104:ASP:H	1.75	0.52
7:G:527:LYS:HD2	7:G:527:LYS:H	1.73	0.52
8:H:97:VAL:HG12	8:H:502:ALA:HA	1.91	0.52
9:q:384:LEU:O	9:q:388:ILE:HG12	2.09	0.52
9:Q:239:ILE:HD12	9:Q:328:VAL:HG11	1.91	0.52
3:A:103:ASN:ND2	3:A:444:SER:OG	2.28	0.52
3:A:508:ILE:HD11	3:A:512:LYS:HE3	1.91	0.52
10:Z:67:MET:HB3	10:Z:69:ILE:HG12	1.90	0.52
4:b:113:ALA:HB2	4:b:130:TRP:CH2	2.45	0.52
5:d:494:ASN:HB3	5:d:497:LYS:HG2	1.90	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:g:236:PRO:HG3	7:g:350:LEU:HB2	1.92	0.52
10:z:196:MET:N	10:z:376:ILE:O	2.43	0.52
6:E:107:THR:OG1	11:E:601:ADP:O1B	2.22	0.52
8:H:249:GLU:HA	8:H:249:GLU:OE2	2.10	0.52
9:q:203:ARG:HD2	9:q:323:ARG:HD3	1.92	0.52
4:B:113:ALA:HB2	4:B:130:TRP:CH2	2.44	0.52
6:E:200:GLU:OE1	6:E:200:GLU:N	2.31	0.52
6:e:444:GLU:O	6:e:448:MET:HG3	2.10	0.52
7:g:416:MET:HE3	7:g:416:MET:HA	1.91	0.52
7:G:77:ALA:O	7:G:81:ILE:HG12	2.10	0.52
4:b:271:GLU:HG2	6:e:274:TYR:CZ	2.45	0.52
6:e:255:PHE:HB2	6:e:306:PHE:CB	2.40	0.52
8:h:121:ILE:HA	8:h:434:LEU:HD13	1.92	0.52
9:q:191:PHE:HB2	9:q:197:PHE:HD1	1.75	0.52
11:A:601:ADP:O2B	13:A:603:AF3:F3	2.18	0.51
10:Z:153:ARG:HG3	10:Z:157:ARG:HE	1.74	0.51
3:a:39:VAL:HG21	3:a:456:ALA:HB2	1.92	0.51
5:d:170:SER:HB2	5:d:411:VAL:HG21	1.91	0.51
10:z:31:GLN:O	10:z:35:ARG:HG3	2.10	0.51
11:Z:601:ADP:O2B	13:Z:603:AF3:F1	2.17	0.51
4:B:163:ALA:HB3	4:B:180:THR:HG23	1.92	0.51
5:D:367:LEU:HD11	5:D:373:LEU:HG	1.93	0.51
6:E:335:ILE:HD11	8:H:226:GLU:HB2	1.92	0.51
10:Z:12:GLU:OE2	10:Z:523:ARG:NH1	2.41	0.51
6:e:239:MET:SD	6:e:320:PRO:HA	2.50	0.51
7:g:415:GLU:OE2	7:g:502:LYS:NZ	2.26	0.51
10:Z:200:SER:OG	10:Z:203:ASP:OD2	2.27	0.51
8:h:107:GLN:HG3	8:h:441:ALA:HB2	1.91	0.51
10:z:47:LEU:HD13	10:z:66:GLU:HB2	1.93	0.51
5:D:447:GLU:O	5:D:451:VAL:HG23	2.10	0.51
6:E:181:CYS:O	6:E:185:MET:HG2	2.10	0.51
3:a:8:PHE:HB2	5:d:84:LEU:HD11	1.91	0.51
10:Z:29:GLY:O	10:Z:33:VAL:HG23	2.11	0.51
10:Z:76:LEU:O	10:Z:80:VAL:HG23	2.11	0.51
7:g:206:GLY:HA3	10:z:87:ILE:HG13	1.92	0.51
10:z:23:ASN:OD1	10:z:73:THR:OG1	2.27	0.51
2:P:139:GLN:HB2	2:P:141:ARG:NH1	2.26	0.51
4:B:413:SER:O	4:B:417:MET:HG3	2.10	0.51
6:E:52:LEU:HD21	6:E:458:ILE:HG23	1.91	0.51
3:a:528:ASP:HB3	5:d:57:MET:HB3	1.93	0.51
9:q:83:ALA:O	9:q:87:VAL:HG23	2.11	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:143:LEU:HB2	3:A:147:CYS:HB2	1.93	0.51
3:a:292:ILE:HG23	3:a:296:CYS:HB2	1.91	0.51
4:b:323:LEU:O	4:b:327:THR:OG1	2.25	0.51
7:g:416:MET:HG3	7:g:466:LEU:HG	1.93	0.51
4:B:168:SER:OG	11:B:601:ADP:N7	2.36	0.51
4:B:447:PRO:HA	4:B:450:ILE:HB	1.93	0.51
6:E:206:PHE:HD1	6:E:209:ILE:HD12	1.76	0.51
8:H:136:ILE:HD11	8:H:416:LEU:HD11	1.93	0.51
8:H:167:LEU:HD13	8:H:384:GLU:HG2	1.92	0.51
10:Z:37:ASN:O	10:Z:58:LYS:NZ	2.43	0.51
3:a:229:ILE:HD13	3:a:284:ASN:HB3	1.93	0.51
9:q:165:ARG:O	9:q:169:MET:N	2.43	0.51
3:A:298:LYS:NZ	7:G:242:ASP:OD2	2.39	0.51
4:B:45:PRO:HG3	11:B:601:ADP:C5	2.46	0.51
6:E:344:ARG:HG3	6:E:347:GLU:HG3	1.94	0.51
10:Z:135:GLU:OE2	10:Z:498:TYR:OH	2.19	0.51
11:g:601:ADP:O1B	13:g:603:AF3:F1	2.18	0.51
8:h:408:GLY:O	8:h:487:ASN:ND2	2.36	0.51
2:P:184:MET:HG2	2:P:238:ILE:HG13	1.93	0.50
7:G:258:ILE:HG23	7:G:263:ASP:HB2	1.92	0.50
9:Q:39:LEU:HD13	9:Q:83:ALA:HB1	1.92	0.50
4:b:163:ALA:HB2	4:b:397:LEU:HD21	1.93	0.50
5:d:476:THR:HG23	5:d:500:ILE:HD11	1.91	0.50
7:g:469:LYS:NZ	7:g:475:CYS:SG	2.84	0.50
9:q:417:ILE:HG13	9:q:467:LEU:HD13	1.93	0.50
2:P:175:ASP:N	2:P:175:ASP:OD1	2.42	0.50
2:P:253:ASP:OD1	2:P:253:ASP:N	2.43	0.50
3:A:54:ILE:HG23	7:G:519:ILE:HD11	1.93	0.50
6:E:143:VAL:HG21	6:E:436:GLU:HG2	1.93	0.50
4:b:151:ASP:HB3	4:b:154:LYS:HB2	1.92	0.50
7:g:302:HIS:NE2	10:z:337:ASP:OD2	2.42	0.50
8:h:136:ILE:HD11	8:h:416:LEU:HD11	1.93	0.50
3:A:47:ASP:HB3	3:A:51:ASP:HB2	1.91	0.50
7:G:449:ARG:HB2	7:G:463:LEU:HD11	1.94	0.50
10:Z:264:ARG:NH2	10:Z:298:ASP:OD2	2.41	0.50
5:D:170:SER:HB2	5:D:411:VAL:HG21	1.93	0.50
5:d:428:PRO:HG2	5:d:429:GLU:OE2	2.12	0.50
7:g:426:SER:HA	7:g:429:MET:HG3	1.93	0.50
8:h:279:GLU:OE1	8:h:302:TYR:OH	2.27	0.50
2:P:67:ARG:HH12	2:P:70:LYS:CG	2.25	0.50
4:b:232:ILE:HD13	4:b:288:ASN:HB3	1.93	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:h:252:ASN:ND2	9:q:255:GLY:O	2.41	0.50
8:h:478:ASP:OD2	8:h:481:ASN:ND2	2.36	0.50
3:A:192:VAL:HG12	3:A:193:ASN:H	1.76	0.50
6:E:533:ILE:HG23	8:H:48:LEU:HD22	1.93	0.50
4:b:79:PRO:O	4:b:83:VAL:HG23	2.12	0.50
9:Q:333:LEU:HD11	9:Q:339:PRO:HB3	1.93	0.50
5:d:91:LEU:HD23	5:d:110:VAL:HG13	1.93	0.50
4:B:432:GLU:O	4:B:436:MET:HG3	2.12	0.50
7:G:490:MET:HE1	7:G:493:LEU:HD23	1.93	0.50
3:a:48:ASP:N	3:a:48:ASP:OD1	2.43	0.50
8:h:18:GLY:O	8:h:21:GLN:HG3	2.12	0.50
3:a:426:TYR:OH	3:a:430:MET:SD	2.56	0.50
4:b:131:ARG:NH2	6:e:179:ASN:OD1	2.45	0.50
4:b:189:ARG:NH2	4:b:370:ALA:O	2.43	0.50
8:h:30:GLN:NE2	8:h:106:LYS:HB2	2.26	0.50
8:h:413:GLU:OE2	8:h:499:ARG:NE	2.44	0.50
5:D:212:LYS:HD3	5:D:402:GLU:OE1	2.11	0.49
7:g:67:LEU:HB3	7:g:81:ILE:HG13	1.94	0.49
8:h:160:MET:HE3	8:h:172:LYS:HG3	1.94	0.49
8:h:167:LEU:HD22	8:h:384:GLU:HG3	1.93	0.49
10:z:404:ASP:OD1	10:z:404:ASP:N	2.45	0.49
3:A:156:MET:HE1	3:A:169:ALA:N	2.27	0.49
4:B:224:ILE:HD13	4:B:310:MET:HE2	1.94	0.49
6:E:78:LEU:HD23	6:E:81:MET:HE3	1.94	0.49
6:E:175:SER:OG	11:E:601:ADP:O2A	2.27	0.49
7:G:165:ILE:HD12	7:G:387:VAL:HG13	1.94	0.49
7:G:219:MET:H	7:G:373:THR:HG21	1.77	0.49
4:B:256:VAL:HG23	5:D:260:MET:HE2	1.94	0.49
5:D:195:ILE:HG21	5:D:203:VAL:HG22	1.94	0.49
5:D:503:ILE:HG13	5:D:508:VAL:HB	1.94	0.49
7:g:132:ASP:OD2	7:g:437:TYR:OH	2.22	0.49
6:E:456:GLU:O	6:E:460:MET:HG3	2.12	0.49
6:E:490:GLY:O	6:E:499:ASN:ND2	2.39	0.49
8:H:7:ILE:HD13	8:H:9:LEU:O	2.12	0.49
3:a:302:GLU:OE1	7:g:339:ARG:NH1	2.45	0.49
4:b:517:VAL:HG11	6:e:60:MET:HE3	1.94	0.49
9:q:26:GLU:OE1	9:q:26:GLU:N	2.45	0.49
2:P:145:MET:C	2:P:145:MET:HE2	2.38	0.49
10:Z:213:ASP:N	10:Z:213:ASP:OD1	2.43	0.49
5:d:467:GLU:HG2	5:d:473:PRO:HG3	1.94	0.49
6:E:18:ILE:HA	8:H:73:HIS:HB2	1.93	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:b:509:GLU:O	4:b:513:VAL:HG12	2.12	0.49
8:h:463:LYS:NZ	8:h:483:ASP:OD1	2.32	0.49
9:q:55:MET:HG3	9:q:65:VAL:HG22	1.94	0.49
2:P:82:ARG:HH11	2:P:82:ARG:HG2	1.78	0.49
2:P:291:CYS:O	2:P:292:HIS:ND1	2.45	0.49
3:A:225:MET:HG2	3:A:301:VAL:HG22	1.95	0.49
5:D:511:PRO:HG2	5:D:514:VAL:HG23	1.94	0.49
7:G:396:GLN:O	7:G:400:ASN:ND2	2.46	0.49
7:G:468:ALA:O	7:G:471:THR:OG1	2.30	0.49
9:Q:136:CYS:HB2	9:Q:512:THR:HG21	1.93	0.49
10:Z:31:GLN:O	10:Z:35:ARG:HG3	2.12	0.49
4:b:45:PRO:HG3	11:b:601:ADP:C5	2.47	0.49
5:d:103:GLY:HA3	5:d:410:CYS:HB3	1.94	0.49
7:g:33:ILE:HG21	7:g:80:MET:HB3	1.95	0.49
10:z:29:GLY:O	10:z:33:VAL:HG23	2.13	0.49
7:G:382:GLU:OE1	7:G:382:GLU:N	2.41	0.49
8:H:281:ILE:O	8:H:284:SER:OG	2.29	0.49
10:Z:429:VAL:HG21	10:Z:437:VAL:HG21	1.94	0.49
8:h:405:VAL:HG21	8:h:493:TRP:HB3	1.95	0.49
2:P:73:GLU:O	2:P:77:ARG:HG2	2.13	0.49
3:A:451:THR:HA	3:A:454:VAL:HG12	1.94	0.49
3:A:519:GLU:OE2	5:D:218:ILE:HG13	2.11	0.49
4:B:414:GLU:HG2	4:B:446:LEU:HD23	1.95	0.49
7:G:278:LEU:HD22	7:G:335:PRO:HG2	1.95	0.49
8:H:168:ILE:HG21	8:H:385:THR:HG23	1.94	0.49
8:H:320:LYS:O	8:H:324:MET:HG2	2.12	0.49
2:P:149:ARG:NH1	2:P:150:GLN:HG3	2.28	0.49
7:G:36:ILE:HG12	10:Z:4:VAL:HG22	1.95	0.49
7:G:48:LYS:HD2	7:G:66:ILE:HD13	1.94	0.49
10:Z:148:LEU:HD22	10:Z:398:VAL:HG13	1.95	0.49
3:a:46:VAL:HG22	3:a:52:VAL:HG22	1.94	0.49
6:e:233:ASP:OD1	6:e:233:ASP:N	2.46	0.49
7:g:504:GLN:NE2	7:g:508:THR:OG1	2.46	0.49
8:h:197:ILE:HG21	8:h:386:GLU:HG3	1.94	0.49
9:q:39:LEU:HD11	9:q:73:LEU:HD11	1.94	0.49
3:a:44:MET:HB3	7:g:522:ILE:HG12	1.93	0.48
8:h:394:MET:SD	8:h:397:ARG:NH1	2.86	0.48
10:z:289:PHE:CE1	10:z:344:LEU:HD21	2.48	0.48
7:G:84:SER:HB2	7:G:99:ILE:HD11	1.95	0.48
8:H:194:MET:SD	8:H:324:MET:HG3	2.53	0.48
4:b:187:VAL:HG21	4:b:397:LEU:HB2	1.95	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:g:352:ILE:HG12	7:g:361:THR:HA	1.95	0.48
3:A:220:VAL:HG13	3:A:353:GLN:HE21	1.78	0.48
8:H:61:ASP:OD1	13:H:603:AF3:F3	2.21	0.48
3:a:120:GLY:HA3	3:a:437:ALA:HB3	1.95	0.48
3:A:227:LYS:HB3	3:A:353:GLN:HB3	1.94	0.48
8:H:417:SER:OG	8:H:439:ALA:O	2.25	0.48
3:A:281:THR:HG23	3:A:345:LEU:HD11	1.95	0.48
9:Q:318:LYS:HD2	9:Q:318:LYS:C	2.39	0.48
4:b:206:GLY:HA2	5:d:97:ALA:HB1	1.95	0.48
5:d:430:ILE:HD11	5:d:481:ARG:HG3	1.96	0.48
8:h:156:GLU:O	8:h:160:MET:HG3	2.13	0.48
10:z:35:ARG:NH2	10:z:453:GLN:OE1	2.32	0.48
4:B:95:VAL:HG12	4:B:399:GLN:HG3	1.95	0.48
7:G:9:VAL:HG13	7:G:10:LEU:HD12	1.94	0.48
8:h:194:MET:O	8:h:369:THR:OG1	2.19	0.48
3:A:278:ILE:O	3:A:281:THR:HG22	2.14	0.48
5:D:55:LYS:HG3	5:D:469:ALA:HA	1.94	0.48
9:Q:417:ILE:HG13	9:Q:467:LEU:HD13	1.96	0.48
4:b:356:GLU:O	5:d:206:ARG:NH2	2.45	0.48
5:d:160:ARG:NH2	5:d:189:ASN:OD1	2.42	0.48
10:z:59:ASP:OD2	13:z:603:AF3:F2	2.22	0.48
7:G:265:THR:HG21	10:Z:265:LYS:HB3	1.96	0.48
3:a:506:PRO:HB2	3:a:509:VAL:HG23	1.96	0.48
6:e:536:PRO:HD3	8:h:50:VAL:HB	1.95	0.48
7:g:329:ALA:HB2	7:g:344:GLY:HA3	1.96	0.48
3:A:397:CYS:O	3:A:401:ARG:HG2	2.14	0.48
10:Z:18:ALA:O	10:Z:22:VAL:HG13	2.13	0.48
4:b:293:ARG:HA	4:b:315:ALA:O	2.14	0.48
6:e:473:THR:O	6:e:477:VAL:HG23	2.14	0.48
8:h:145:LYS:HE2	8:h:147:ASP:HB2	1.95	0.48
8:h:413:GLU:OE1	8:h:445:ILE:HB	2.13	0.48
3:A:247:LYS:HD2	3:A:247:LYS:N	2.29	0.48
3:a:191:PRO:O	3:a:194:SER:OG	2.19	0.48
3:a:370:ARG:NH1	3:a:371:THR:O	2.47	0.48
8:h:73:HIS:HB3	8:h:76:ALA:HB3	1.95	0.48
11:h:601:ADP:O3B	13:h:603:AF3:F3	2.22	0.48
3:A:281:THR:HG21	3:A:340:PHE:CE1	2.49	0.47
4:B:250:LYS:HB2	6:E:257:PRO:HG2	1.95	0.47
6:E:160:LYS:HA	6:E:160:LYS:HD3	1.72	0.47
8:H:155:LEU:HD22	8:H:396:VAL:HG13	1.95	0.47
9:Q:43:THR:HG21	9:Q:105:LEU:HD23	1.95	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:d:429:GLU:HG2	5:d:461:ILE:HB	1.96	0.47
7:g:282:ILE:HG12	7:g:335:PRO:HB3	1.96	0.47
3:A:483:LEU:HA	3:A:486:ILE:HD13	1.96	0.47
9:Q:33:ILE:HD13	9:Q:116:GLU:HB2	1.96	0.47
10:Z:461:GLU:OE2	10:z:432:ARG:NH2	2.46	0.47
4:b:232:ILE:HD12	4:b:310:MET:HE3	1.95	0.47
5:d:72:ASN:ND2	5:d:173:SER:O	2.46	0.47
7:g:447:ILE:HB	7:g:448:PRO:HD3	1.95	0.47
6:E:105:GLY:HA2	11:E:601:ADP:O2B	2.15	0.47
2:P:56:ASN:HB3	5:d:29:LYS:HZ1	1.79	0.47
9:Q:155:ARG:NH1	9:Q:191:PHE:O	2.47	0.47
4:b:79:PRO:HB2	6:e:60:MET:SD	2.54	0.47
9:q:292:VAL:HG22	9:q:313:VAL:HB	1.97	0.47
9:q:499:ASP:OD1	9:q:499:ASP:N	2.47	0.47
6:E:515:GLN:HE22	8:H:203:GLY:N	2.11	0.47
8:H:200:VAL:HG11	8:H:353:ILE:HG22	1.95	0.47
9:Q:47:TYR:O	9:Q:455:ASN:ND2	2.41	0.47
10:Z:80:VAL:HG21	10:Z:511:ILE:HG12	1.96	0.47
10:Z:147:THR:O	10:Z:151:VAL:HG23	2.14	0.47
3:a:241:LEU:HB2	3:a:292:ILE:HG12	1.95	0.47
8:h:94:THR:OG1	13:h:603:AF3:F2	2.22	0.47
8:h:255:ILE:HG12	9:q:259:ILE:HB	1.96	0.47
2:P:189:GLU:HB2	2:P:233:LEU:HD11	1.95	0.47
3:A:65:LEU:HD21	7:G:523:VAL:HG11	1.97	0.47
4:B:39:VAL:O	4:B:42:THR:OG1	2.30	0.47
4:B:237:ILE:HD11	4:B:349:ILE:HD11	1.97	0.47
4:B:257:ARG:NH2	5:D:263:GLN:OE1	2.37	0.47
7:G:197:LYS:HB2	7:G:198:TYR:HD1	1.80	0.47
8:H:516:VAL:HG11	9:Q:55:MET:HE2	1.97	0.47
9:Q:131:GLY:HA3	9:Q:437:ALA:HB3	1.96	0.47
4:b:40:LYS:HD2	4:b:449:ILE:HD13	1.96	0.47
6:e:405:ALA:O	6:e:409:ILE:HG12	2.15	0.47
8:h:97:VAL:HG12	8:h:502:ALA:HA	1.96	0.47
8:h:512:LEU:HD11	9:q:65:VAL:HG11	1.97	0.47
10:z:135:GLU:OE1	10:z:498:TYR:OH	2.28	0.47
10:z:159:LYS:HA	10:z:159:LYS:HD3	1.45	0.47
2:P:80:GLN:HG3	2:P:84:MET:SD	2.55	0.47
2:P:89:LYS:NZ	2:P:247:ASN:OD1	2.47	0.47
2:P:139:GLN:HB2	2:P:141:ARG:HH12	1.79	0.47
3:A:526:ARG:NH2	5:D:58:ASP:OD1	2.46	0.47
4:B:242:THR:HG21	4:B:335:PHE:CE2	2.50	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:450:ILE:HD11	11:B:601:ADP:H4'	1.97	0.47
6:E:396:GLU:O	6:E:400:ARG:HG2	2.14	0.47
6:E:420:TYR:CE1	6:E:502:LYS:HD2	2.49	0.47
7:G:9:VAL:HG13	7:G:10:LEU:H	1.79	0.47
8:H:121:ILE:HA	8:H:434:LEU:HD13	1.97	0.47
9:Q:82:ALA:O	9:Q:86:ILE:HG12	2.15	0.47
10:Z:101:GLU:HG3	10:Z:443:ALA:HA	1.96	0.47
5:d:331:GLU:OE1	5:d:331:GLU:N	2.41	0.47
7:g:130:LEU:HB2	7:g:510:VAL:HG11	1.97	0.47
8:h:183:VAL:HG11	8:h:396:VAL:HG12	1.95	0.47
9:q:206:LYS:HD2	9:q:385:MET:HB3	1.96	0.47
10:z:3:ALA:HA	10:z:6:THR:HG22	1.97	0.47
10:z:393:ASP:OD1	13:z:603:AF3:F2	2.23	0.47
3:A:184:ILE:O	3:A:185:ARG:HG2	2.15	0.47
9:Q:11:PHE:HE2	9:Q:21:HIS:CG	2.33	0.47
10:Z:459:LEU:HD12	10:Z:459:LEU:H	1.80	0.47
8:h:332:THR:HG21	9:q:299:ASP:HB3	1.97	0.47
9:Q:11:PHE:CE1	10:Z:69:ILE:HD11	2.49	0.47
3:a:322:ALA:HA	3:a:370:ARG:HB3	1.96	0.47
5:d:345:VAL:HG22	5:d:355:MET:HE2	1.97	0.47
7:g:167:ARG:NH2	10:z:124:GLU:OE1	2.44	0.47
8:h:273:ILE:HD11	9:q:266:MET:HA	1.97	0.47
6:E:412:LEU:HD23	6:E:412:LEU:HA	1.77	0.47
10:Z:2:ALA:HB3	10:Z:5:LYS:HD2	1.97	0.47
6:e:53:GLY:H	11:e:601:ADP:H5'1	1.79	0.47
7:g:502:LYS:HD2	7:g:502:LYS:HA	1.69	0.47
8:h:317:GLU:H	8:h:317:GLU:CD	2.17	0.47
2:P:81:CYS:SG	2:P:82:ARG:N	2.88	0.46
3:A:127:GLU:HG3	3:A:426:TYR:CZ	2.49	0.46
4:B:259:ASP:OD1	4:B:259:ASP:N	2.47	0.46
7:G:151:MET:HA	7:G:151:MET:HE3	1.97	0.46
8:H:232:TYR:HD1	8:H:348:PHE:HD2	1.63	0.46
4:b:333:SER:H	6:e:312:HIS:CG	2.33	0.46
5:d:229:LEU:HD12	5:d:374:LEU:HD23	1.96	0.46
6:e:456:GLU:O	6:e:460:MET:HG3	2.16	0.46
9:q:97:VAL:HG13	9:q:401:VAL:HG21	1.97	0.46
8:H:409:GLY:N	11:H:601:ADP:O2'	2.43	0.46
9:Q:206:LYS:O	9:Q:224:LYS:NZ	2.44	0.46
10:Z:218:HIS:CE1	10:Z:220:ASP:HB2	2.50	0.46
4:b:392:ASP:O	4:b:396:VAL:HG23	2.15	0.46
6:e:426:GLU:HG2	6:e:458:ILE:HB	1.97	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:d:415:LEU:HD23	5:d:511:PRO:HB3	1.97	0.46
6:e:385:ILE:HG21	6:e:402:LEU:HD13	1.97	0.46
6:e:396:GLU:O	6:e:400:ARG:HG2	2.14	0.46
7:g:452:ILE:HG21	7:g:459:THR:HA	1.97	0.46
9:q:33:ILE:HG21	9:q:116:GLU:HB2	1.96	0.46
10:z:445:LEU:HD22	10:z:463:LEU:HD11	1.97	0.46
2:P:81:CYS:HA	2:P:84:MET:HE2	1.97	0.46
3:a:74:VAL:HG13	5:d:394:ASN:HD22	1.79	0.46
3:a:127:GLU:HG3	3:a:426:TYR:CZ	2.50	0.46
4:b:71:LEU:HD11	4:b:103:THR:HG21	1.98	0.46
5:d:283:ILE:O	5:d:287:VAL:HG23	2.16	0.46
7:g:32:THR:HG23	10:z:3:ALA:HB1	1.97	0.46
4:b:191:LYS:HD2	4:b:369:GLU:HG2	1.96	0.46
4:B:242:THR:HG21	4:B:335:PHE:HE2	1.81	0.46
5:D:38:ILE:HG21	5:D:121:THR:OG1	2.15	0.46
7:G:266:ARG:O	7:G:270:MET:HG3	2.14	0.46
3:a:347:GLN:HB2	3:a:368:LYS:HE3	1.98	0.46
3:a:488:LEU:HD23	3:a:488:LEU:HA	1.82	0.46
10:z:179:ILE:HD13	10:z:191:ILE:HG13	1.98	0.46
5:D:233:VAL:HG12	5:D:235:ASN:H	1.81	0.46
5:D:337:CYS:SG	5:D:344:PRO:HD3	2.56	0.46
9:Q:168:ILE:HD11	9:Q:395:GLY:HA3	1.97	0.46
10:Z:244:VAL:HG12	10:Z:244:VAL:O	2.16	0.46
10:Z:411:ALA:N	11:Z:601:ADP:O2'	2.45	0.46
3:a:66:GLU:HG2	7:g:526:HIS:HB2	1.98	0.46
3:a:190:TYR:CE1	3:a:403:LEU:HD13	2.51	0.46
4:b:167:LEU:HD22	4:b:172:LEU:HD12	1.98	0.46
5:D:412:ILE:O	5:D:416:VAL:HG23	2.15	0.46
10:Z:159:LYS:HA	10:Z:159:LYS:HD3	1.68	0.46
3:A:456:ALA:HB2	3:A:490:LEU:HD12	1.97	0.46
10:Z:68:GLN:C	10:Z:69:ILE:HD13	2.41	0.46
10:Z:196:MET:HG3	10:Z:375:LEU:HD11	1.98	0.46
4:b:193:SER:OG	4:b:195:ASN:OD1	2.31	0.46
8:h:287:LYS:HE3	8:h:308:MET:HG2	1.98	0.46
10:z:132:GLN:O	10:z:136:GLU:HG3	2.16	0.46
2:P:66:TRP:O	2:P:70:LYS:HB3	2.16	0.46
2:P:70:LYS:O	2:P:74:THR:HG22	2.15	0.46
3:A:47:ASP:CG	3:A:47:ASP:O	2.59	0.46
6:E:366:THR:O	6:E:366:THR:OG1	2.34	0.46
6:E:442:THR:HA	6:E:445:GLN:HE21	1.79	0.46
7:G:51:LEU:HB2	10:Z:522:MET:O	2.15	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:462:LEU:HD23	7:G:462:LEU:HA	1.80	0.46
10:z:487:MET:HE1	10:z:494:VAL:HG21	1.98	0.46
5:D:407:ASP:O	5:D:411:VAL:HG23	2.15	0.45
9:Q:324:LEU:HA	9:Q:327:THR:HG22	1.98	0.45
4:b:180:THR:O	4:b:184:VAL:HG23	2.16	0.45
5:d:195:ILE:HD12	5:d:195:ILE:O	2.15	0.45
7:g:298:ASP:HB3	10:z:334:ASN:HD22	1.80	0.45
9:q:131:GLY:HA3	9:q:437:ALA:HB3	1.98	0.45
7:G:108:VAL:HG11	7:G:443:ALA:HB2	1.97	0.45
7:G:415:GLU:HG2	7:G:447:ILE:HB	1.98	0.45
8:H:218:LYS:HE3	8:H:221:SER:HB2	1.96	0.45
9:Q:412:GLY:N	11:Q:601:ADP:O2'	2.45	0.45
6:e:31:LEU:O	6:e:35:LYS:HG2	2.15	0.45
6:e:184:GLN:O	6:e:188:ILE:HG23	2.15	0.45
9:q:410:PRO:O	9:q:415:THR:OG1	2.29	0.45
6:E:515:GLN:NE2	8:H:203:GLY:H	2.10	0.45
9:Q:248:GLY:H	9:Q:276:MET:HE1	1.81	0.45
10:Z:172:VAL:HG13	10:Z:395:LEU:HD23	1.98	0.45
10:z:218:HIS:HB3	10:z:221:MET:HG3	1.98	0.45
6:E:255:PHE:HB2	6:E:306:PHE:CB	2.44	0.45
6:E:391:ASN:OD1	6:E:391:ASN:N	2.49	0.45
6:E:426:GLU:OE2	6:E:458:ILE:HB	2.15	0.45
5:d:173:SER:OG	5:d:174:LYS:NZ	2.49	0.45
6:e:441:PRO:O	6:e:445:GLN:HG3	2.17	0.45
8:H:413:GLU:OE1	8:H:445:ILE:HB	2.17	0.45
10:Z:24:ILE:HD13	10:Z:107:ASP:HB2	1.97	0.45
10:Z:101:GLU:OE2	10:Z:101:GLU:HA	2.17	0.45
4:b:163:ALA:HB3	4:b:180:THR:HG23	1.98	0.45
6:e:366:THR:O	6:e:366:THR:OG1	2.34	0.45
9:q:183:ILE:HD11	9:q:392:VAL:HG22	1.99	0.45
3:A:467:LEU:HD11	3:A:488:LEU:HG	1.99	0.45
6:E:437:ALA:HA	6:E:440:CYS:HB3	1.99	0.45
7:G:44:LYS:HE3	7:G:483:GLU:HA	1.99	0.45
8:H:183:VAL:HG11	8:H:396:VAL:HG12	1.99	0.45
7:g:521:ASP:OD2	7:g:522:ILE:N	2.49	0.45
10:z:46:MET:HE3	10:z:46:MET:HB2	1.91	0.45
10:z:337:ASP:OD1	10:z:337:ASP:N	2.49	0.45
5:D:486:GLN:HA	5:D:486:GLN:OE1	2.16	0.45
9:Q:67:ASN:OD1	9:Q:67:ASN:N	2.48	0.45
10:Z:92:THR:N	13:Z:603:AF3:F3	2.31	0.45
3:a:355:ARG:HE	3:a:358:ASP:HA	1.82	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:b:256:VAL:HG23	5:d:260:MET:HE2	1.99	0.45
5:d:338:LYS:O	5:d:383:GLY:HA3	2.17	0.45
6:e:18:ILE:HA	8:h:73:HIS:HB2	1.99	0.45
6:e:210:LYS:NZ	6:e:212:GLU:OE1	2.48	0.45
9:q:416:GLU:OE1	9:q:416:GLU:N	2.39	0.45
3:A:164:ASN:HB3	3:A:206:MET:HE1	1.98	0.45
5:D:48:ILE:HD11	5:D:110:VAL:HB	1.99	0.45
5:D:432:LEU:HD23	5:D:432:LEU:HA	1.75	0.45
7:G:14:THR:HG23	7:G:14:THR:O	2.17	0.45
3:a:377:LEU:HD21	3:a:392:LEU:HD22	1.98	0.45
4:b:13:LYS:NZ	6:e:82:ASP:OD1	2.44	0.45
4:b:22:GLU:HG2	4:b:23:THR:N	2.32	0.45
5:d:248:LEU:HD21	5:d:333:ILE:HD12	1.99	0.45
6:e:298:ASN:O	6:e:320:PRO:HD2	2.17	0.45
2:P:86:ARG:HH22	2:P:249:VAL:HG21	1.82	0.45
3:A:51:ASP:OD2	3:A:51:ASP:N	2.49	0.45
3:A:113:HIS:ND1	3:A:115:THR:OG1	2.36	0.45
7:G:33:ILE:HG21	7:G:80:MET:HB3	1.97	0.45
10:Z:152:ALA:HB3	10:Z:169:THR:HG23	1.99	0.45
3:a:252:VAL:HB	7:g:254:THR:HA	1.98	0.45
9:q:46:ALA:HB1	9:q:67:ASN:HB2	1.99	0.45
9:q:92:MET:HE3	9:q:96:GLU:HB2	1.99	0.45
9:q:296:LYS:HA	9:q:314:ARG:HE	1.82	0.45
3:A:402:VAL:HG23	3:A:506:PRO:HG3	1.99	0.45
7:G:436:PRO:O	7:G:440:VAL:HG23	2.17	0.45
3:a:163:ILE:HB	7:g:127:ARG:HH11	1.82	0.45
3:a:487:GLY:HA3	3:a:498:ASN:ND2	2.31	0.45
7:g:217:GLY:HA3	7:g:363:ILE:O	2.17	0.45
8:h:79:LEU:HA	8:h:82:ILE:HG12	1.97	0.45
2:P:21:GLU:OE1	3:A:189:ARG:NH2	2.49	0.44
3:A:220:VAL:HG13	3:A:353:GLN:NE2	2.31	0.44
4:B:19:GLU:HB3	4:B:23:THR:HB	1.99	0.44
5:D:152:SER:HB3	5:D:512:LEU:HD13	1.99	0.44
10:Z:38:LEU:HD21	10:Z:447:ILE:HG23	1.98	0.44
3:a:31:ILE:HD11	7:g:10:LEU:HD11	1.99	0.44
6:e:295:THR:HG21	6:e:348:LEU:HG	1.98	0.44
8:h:10:LYS:NZ	9:q:77:GLU:OE1	2.41	0.44
10:z:526:MET:HE3	10:z:526:MET:HB3	1.74	0.44
2:P:68:ARG:O	2:P:68:ARG:NE	2.50	0.44
3:A:227:LYS:HD3	3:A:353:GLN:HG2	1.99	0.44
4:B:291:ILE:HG13	4:B:312:ILE:HB	1.99	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:Z:4:VAL:HG21	10:Z:522:MET:HE1	1.98	0.44
3:a:158:SER:OG	11:a:601:ADP:O1A	2.30	0.44
3:a:180:LYS:HB2	3:a:190:TYR:CE1	2.53	0.44
4:b:237:ILE:HD11	4:b:346:CYS:SG	2.58	0.44
4:b:496:SER:HB3	4:b:499:VAL:HG23	2.00	0.44
6:e:468:MET:H	6:e:468:MET:HG2	1.59	0.44
9:q:446:GLU:OE2	9:q:468:TYR:OH	2.25	0.44
9:q:505:TYR:OH	9:q:509:LYS:NZ	2.43	0.44
10:z:449:LYS:HB3	10:z:459:LEU:HD11	1.99	0.44
5:D:138:GLN:OE1	5:D:527:ARG:NH1	2.51	0.44
10:Z:376:ILE:HG22	10:Z:384:LEU:HD23	2.00	0.44
3:a:319:ILE:O	3:a:323:SER:OG	2.31	0.44
4:b:65:ASN:HD22	4:b:170:LYS:HD3	1.82	0.44
6:e:292:ILE:HG22	6:e:319:LEU:HD21	2.00	0.44
6:e:526:MET:HE2	6:e:526:MET:HB3	1.77	0.44
2:P:136:PHE:HB3	2:P:141:ARG:NH2	2.33	0.44
3:A:214:TYR:OH	3:A:315:ASP:OD1	2.25	0.44
3:A:225:MET:CE	3:A:307:ALA:H	2.30	0.44
4:B:390:LEU:HD23	4:B:390:LEU:HA	1.75	0.44
6:E:53:GLY:N	11:E:601:ADP:H5*1	2.32	0.44
8:H:26:ILE:O	8:H:30:GLN:HG2	2.17	0.44
8:H:126:ARG:NH1	9:Q:174:GLY:HA3	2.32	0.44
9:Q:288:ALA:HB2	9:Q:344:MET:HE1	1.99	0.44
3:a:281:THR:HG21	3:a:340:PHE:HE2	1.83	0.44
9:q:218:LEU:HD21	9:q:362:VAL:HG13	2.00	0.44
9:q:323:ARG:O	9:q:327:THR:HG23	2.17	0.44
4:B:64:THR:HA	4:B:385:GLU:OE1	2.16	0.44
5:D:105:GLY:HA2	11:D:601:ADP:O3B	2.17	0.44
5:D:429:GLU:HG2	5:D:461:ILE:HB	1.99	0.44
6:E:131:ILE:HD11	6:E:529:LYS:HG3	1.99	0.44
7:G:90:GLU:HG3	7:G:91:VAL:HG13	2.00	0.44
10:Z:4:VAL:HG11	10:Z:522:MET:HE3	2.00	0.44
3:a:214:TYR:OH	3:a:315:ASP:OD1	2.26	0.44
8:h:442:LEU:HD23	8:h:442:LEU:HA	1.86	0.44
6:E:242:LYS:HB2	6:E:360:GLN:HG3	1.99	0.44
9:Q:225:LYS:NZ	9:Q:316:ASN:H	2.16	0.44
10:Z:23:ASN:OD1	10:Z:73:THR:OG1	2.36	0.44
3:a:216:LEU:HD12	3:a:216:LEU:HA	1.85	0.44
5:d:482:ASN:O	5:d:486:GLN:HG2	2.18	0.44
8:h:10:LYS:HB2	8:h:10:LYS:HE3	1.78	0.44
2:P:63:ILE:HD12	2:P:63:ILE:HA	1.83	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:161:VAL:HG23	2:P:203:ILE:HG13	1.99	0.44
3:A:57:ASP:OD1	13:A:603:AF3:F2	2.26	0.44
4:B:496:SER:HB3	4:B:499:VAL:HG23	1.99	0.44
7:G:129:ALA:O	7:G:133:MET:HG3	2.18	0.44
8:H:292:LYS:HB2	8:H:319:LEU:HD12	1.99	0.44
9:Q:339:PRO:HG2	9:Q:344:MET:HE3	1.99	0.44
3:a:200:ALA:O	3:a:378:ARG:HA	2.18	0.44
3:a:397:CYS:O	3:a:401:ARG:HG2	2.18	0.44
4:b:11:ILE:O	4:b:11:ILE:HG13	2.18	0.44
6:e:132:ARG:NH2	6:e:444:GLU:OE2	2.45	0.44
6:e:248:ILE:HD12	6:e:299:LEU:HD23	2.00	0.44
8:h:250:LYS:HB2	8:h:253:ALA:HB2	2.00	0.44
9:q:322:ARG:HH21	9:q:326:LYS:NZ	2.16	0.44
10:z:223:LYS:HD2	10:z:352:GLU:OE1	2.18	0.44
10:z:229:TYR:CD2	10:z:344:LEU:HD23	2.53	0.44
10:z:520:GLU:OE2	10:z:522:MET:HE2	2.17	0.44
3:A:44:MET:HE3	7:G:519:ILE:HG13	2.00	0.44
3:A:234:ILE:N	3:A:346:GLY:O	2.50	0.44
3:A:527:ILE:HD11	5:D:70:ILE:HD13	2.00	0.44
6:E:472:GLN:O	6:E:476:GLU:HG3	2.17	0.44
7:G:409:PRO:HB2	7:G:413:ALA:HB3	1.98	0.44
9:Q:416:GLU:OE1	9:Q:416:GLU:N	2.51	0.44
4:b:326:VAL:HB	4:b:370:ALA:HB3	2.00	0.44
5:d:486:GLN:OE1	5:d:486:GLN:HA	2.18	0.44
6:e:153:ASP:O	6:e:418:VAL:N	2.31	0.44
7:g:301:GLN:O	7:g:305:MET:HB2	2.18	0.44
7:g:350:LEU:HD23	7:g:363:ILE:HG12	1.99	0.44
10:z:429:VAL:HG21	10:z:437:VAL:HG21	2.00	0.44
1:N:310:LEU:HD22	1:N:310:LEU:H	1.83	0.44
2:P:63:ILE:HD12	2:P:66:TRP:HB3	1.99	0.44
3:A:233:LYS:H	3:A:284:ASN:HB2	1.82	0.44
6:E:184:GLN:NE2	6:E:222:THR:O	2.51	0.44
3:a:192:VAL:HG12	3:a:193:ASN:H	1.83	0.44
3:a:289:THR:HG23	3:a:316:LEU:HD22	2.00	0.44
5:d:160:ARG:HH22	5:d:189:ASN:CG	2.26	0.44
6:e:97:SER:HB3	8:h:202:GLY:HA2	2.00	0.44
6:e:102:ILE:HD11	6:e:511:ILE:HG22	1.99	0.44
6:e:159:ILE:HG13	6:e:194:LEU:HD13	1.98	0.44
6:e:284:LYS:HD2	6:e:284:LYS:HA	1.71	0.44
3:A:171:MET:HE2	3:A:171:MET:HB2	1.92	0.43
3:A:245:LYS:HB3	7:G:251:GLU:HB3	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:417:MET:HE2	4:B:504:LEU:HD22	2.00	0.43
5:D:336:ILE:O	5:D:340:ILE:HG12	2.18	0.43
5:D:483:ARG:NE	5:D:488:GLU:OE2	2.33	0.43
6:E:422:GLY:HA3	6:E:501:MET:HE2	1.99	0.43
7:G:64:ASN:HB2	7:G:95:THR:HG21	1.99	0.43
9:Q:436:TYR:CE2	7:g:460:ILE:HD11	2.53	0.43
10:Z:387:ILE:O	10:Z:391:VAL:HG13	2.17	0.43
3:a:99:GLU:HG2	3:a:447:VAL:HB	2.00	0.43
4:b:59:ALA:O	5:d:89:ARG:NH2	2.48	0.43
5:d:261:ASP:OD1	5:d:261:ASP:N	2.51	0.43
6:e:170:LYS:O	6:e:182:HIS:NE2	2.46	0.43
6:e:391:ASN:OD1	6:e:391:ASN:N	2.49	0.43
10:z:376:ILE:HD12	10:z:387:ILE:HG22	2.00	0.43
5:D:283:ILE:O	5:D:287:VAL:HG23	2.18	0.43
3:a:22:VAL:HG21	3:a:105:ASP:CB	2.48	0.43
3:a:69:HIS:HB2	7:g:9:VAL:HA	1.99	0.43
4:b:408:TYR:O	4:b:413:SER:OG	2.36	0.43
6:e:442:THR:O	6:e:445:GLN:HB2	2.17	0.43
7:g:160:ILE:HG21	7:g:394:ALA:HB2	2.00	0.43
8:h:499:ARG:HD3	8:h:499:ARG:HA	1.81	0.43
3:A:529:ASP:OD2	3:A:530:LEU:N	2.51	0.43
5:D:98:GLN:NE2	5:D:104:ASP:O	2.39	0.43
7:G:497:GLU:OE2	7:G:502:LYS:HD3	2.18	0.43
10:Z:22:VAL:HG12	9:q:8:ALA:HA	2.00	0.43
10:Z:155:SER:O	10:Z:158:THR:HG22	2.18	0.43
10:Z:338:ASP:OD1	10:Z:338:ASP:N	2.50	0.43
4:b:64:THR:HA	4:b:385:GLU:OE1	2.18	0.43
8:h:427:ILE:HB	8:h:428:PRO:HD2	2.00	0.43
10:z:114:LEU:HD11	10:z:432:ARG:HD2	2.00	0.43
3:A:23:MET:HE2	6:e:8:ALA:HA	1.99	0.43
6:E:109:VAL:HG12	6:E:516:GLN:HA	2.00	0.43
7:G:137:LEU:HD23	7:G:137:LEU:HA	1.83	0.43
9:Q:190:ILE:HD13	9:Q:201:ASN:HB3	2.01	0.43
10:Z:290:VAL:HG22	10:Z:311:VAL:HB	2.00	0.43
3:a:331:LEU:O	3:a:338:GLU:HA	2.17	0.43
6:e:181:CYS:O	6:e:185:MET:HG2	2.17	0.43
6:e:263:LYS:HB2	6:e:263:LYS:HE3	1.81	0.43
8:h:90:VAL:HG11	8:h:498:VAL:HG22	2.00	0.43
8:h:187:ASP:OD1	8:h:187:ASP:N	2.48	0.43
3:A:377:LEU:HD22	3:A:388:MET:HE2	1.99	0.43
6:E:37:HIS:NE2	6:E:533:ILE:HD11	2.33	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:289:ILE:HG13	6:E:313:LEU:HB3	2.00	0.43
8:H:79:LEU:HA	8:H:82:ILE:HG12	2.00	0.43
9:Q:284:ALA:HB2	9:Q:310:ILE:HD11	2.00	0.43
7:g:411:GLY:N	11:g:601:ADP:O2'	2.37	0.43
8:h:320:LYS:HE3	8:h:320:LYS:HB2	1.81	0.43
8:h:379:GLU:HA	8:h:382:MET:HE2	1.98	0.43
4:B:293:ARG:HA	4:B:315:ALA:O	2.19	0.43
6:E:440:CYS:SG	6:E:448:MET:HE3	2.59	0.43
8:H:427:ILE:HD11	8:H:432:GLN:HA	2.01	0.43
8:H:442:LEU:HD23	8:H:442:LEU:HA	1.85	0.43
9:Q:348:ASP:OD2	9:Q:366:GLU:N	2.43	0.43
6:e:109:VAL:HG13	6:e:516:GLN:HG2	2.01	0.43
10:z:414:VAL:HG22	10:z:418:MET:HE2	2.01	0.43
2:P:56:ASN:HD22	5:d:29:LYS:NZ	2.17	0.43
2:P:231:ASN:OD1	2:P:231:ASN:N	2.50	0.43
5:D:155:VAL:HG11	5:D:415:LEU:HD11	2.01	0.43
7:G:79:SER:O	7:G:83:ILE:HG23	2.19	0.43
7:G:83:ILE:HG13	7:G:84:SER:N	2.33	0.43
9:Q:220:GLY:O	9:Q:374:THR:OG1	2.31	0.43
9:Q:227:THR:HG21	9:Q:311:MET:HE3	1.99	0.43
9:Q:463:VAL:HG11	9:Q:480:LEU:HD13	2.00	0.43
10:Z:37:ASN:HD21	10:Z:63:LEU:HD22	1.84	0.43
3:a:78:LEU:HD13	3:a:520:ALA:HB2	2.01	0.43
3:a:529:ASP:OD1	5:d:59:LYS:HG2	2.19	0.43
6:e:480:ARG:O	6:e:484:GLU:HG2	2.18	0.43
7:g:254:THR:HG22	7:g:254:THR:O	2.19	0.43
7:g:256:ILE:HB	10:z:246:SER:HA	2.01	0.43
7:g:429:MET:HE2	7:g:429:MET:HB3	1.78	0.43
8:h:66:LEU:HD11	8:h:98:THR:HG21	2.01	0.43
8:h:364:CYS:HB2	8:h:367:ALA:HB2	2.01	0.43
10:z:399:LYS:NZ	10:z:403:ASP:OD2	2.52	0.43
7:G:197:LYS:HB2	7:G:198:TYR:CD1	2.54	0.43
10:Z:196:MET:HE2	10:Z:196:MET:HB3	1.82	0.43
4:b:81:ALA:O	4:b:85:VAL:HG23	2.18	0.43
9:q:191:PHE:HB2	9:q:197:PHE:CD1	2.51	0.43
2:P:146:GLU:HG2	2:P:262:VAL:HG12	2.00	0.43
3:A:37:GLY:N	11:A:601:ADP:H5'1	2.34	0.43
3:A:228:ARG:NE	3:A:350:GLU:OE2	2.41	0.43
3:a:28:ILE:HD13	3:a:28:ILE:HA	1.92	0.43
6:e:523:MET:HE2	6:e:523:MET:HA	2.01	0.43
3:A:328:LEU:HD11	3:A:344:MET:SD	2.58	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:425:ALA:HB2	4:B:436:MET:HB2	2.01	0.43
3:a:219:VAL:HB	3:a:353:GLN:HE22	1.84	0.43
4:b:414:GLU:HG2	4:b:446:LEU:HD23	2.01	0.43
4:b:448:THR:OG1	4:b:462:VAL:HG21	2.19	0.43
5:d:48:ILE:HD12	5:d:107:THR:HG23	2.00	0.43
5:d:355:MET:HE3	5:d:355:MET:HB3	1.84	0.43
7:g:117:MET:HE3	7:g:117:MET:HB2	1.74	0.43
10:z:175:SER:HB3	10:z:206:LEU:HD13	2.00	0.43
5:D:151:MET:HE2	5:D:431:GLU:HG2	2.00	0.42
6:E:29:MET:HE3	6:E:29:MET:HB3	1.68	0.42
5:d:54:PRO:HD3	11:d:601:ADP:C4	2.53	0.42
7:g:130:LEU:HD13	7:g:510:VAL:HG21	2.01	0.42
7:g:293:GLU:HG3	7:g:320:ASN:HD22	1.84	0.42
10:z:103:LEU:HD11	10:z:515:ILE:HG21	2.01	0.42
10:z:172:VAL:HG13	10:z:395:LEU:HD23	2.01	0.42
10:z:196:MET:HG3	10:z:377:LYS:HE2	2.01	0.42
7:G:480:VAL:O	11:G:601:ADP:H2	2.02	0.42
8:H:214:VAL:HG11	8:H:322:THR:HA	2.01	0.42
3:a:113:HIS:NE2	5:d:468:ASN:O	2.50	0.42
9:q:220:GLY:HA3	9:q:363:PHE:O	2.19	0.42
10:z:24:ILE:CD1	10:z:107:ASP:HB2	2.49	0.42
10:z:40:PRO:HA	10:z:158:THR:HA	2.00	0.42
2:P:171:LEU:O	2:P:175:ASP:OD1	2.37	0.42
3:A:54:ILE:HG12	7:G:519:ILE:HD11	2.01	0.42
3:A:375:ILE:HD12	3:A:392:LEU:HD11	2.00	0.42
4:B:6:LEU:HD23	5:d:32:GLN:HB3	2.00	0.42
4:B:353:MET:HE2	4:B:353:MET:HB2	1.76	0.42
6:E:39:MET:HE2	6:E:39:MET:HB2	1.93	0.42
7:G:144:VAL:HG21	7:G:155:ILE:HD11	2.01	0.42
8:H:14:ASP:OD1	8:H:14:ASP:C	2.61	0.42
8:H:408:GLY:O	8:H:487:ASN:ND2	2.42	0.42
10:Z:237:LEU:HD23	10:Z:237:LEU:HA	1.91	0.42
4:b:3:SER:HB2	4:b:20:ARG:HD2	2.00	0.42
8:h:152:ARG:NH2	8:h:181:ASP:OD1	2.52	0.42
9:q:45:THR:HG1	9:q:54:LYS:HZ1	1.58	0.42
3:A:55:THR:HA	3:A:387:GLU:OE1	2.19	0.42
3:A:205:GLN:OE1	7:G:127:ARG:NH2	2.42	0.42
9:Q:193:ASP:OD2	9:Q:194:SER:N	2.52	0.42
9:Q:535:PRO:HG3	10:Z:51:ALA:HB1	2.00	0.42
3:a:384:MET:O	3:a:388:MET:HG3	2.18	0.42
6:e:223:LYS:HE3	6:e:225:ILE:HD11	2.00	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:g:241:LEU:HD23	7:g:332:VAL:HG23	2.01	0.42
8:h:103:GLU:HA	8:h:103:GLU:OE1	2.20	0.42
9:q:40:ALA:HA	9:q:105:LEU:CD2	2.50	0.42
10:z:153:ARG:HG3	10:z:153:ARG:HH11	1.84	0.42
10:z:501:LYS:HA	10:z:501:LYS:HD3	1.89	0.42
2:P:298:LEU:HD12	2:P:298:LEU:HA	1.91	0.42
3:a:171:MET:HE3	3:a:171:MET:HB2	1.84	0.42
3:a:477:ASN:OD1	3:a:479:GLU:HG3	2.20	0.42
3:a:484:LYS:HE3	3:a:484:LYS:HB2	1.87	0.42
4:b:100:THR:O	4:b:104:VAL:HG23	2.20	0.42
5:d:446:MET:HA	5:d:449:TYR:CD2	2.54	0.42
8:h:135:LYS:O	8:h:139:ILE:HG12	2.19	0.42
8:h:251:ASP:OD1	8:h:251:ASP:N	2.43	0.42
10:z:272:LYS:O	10:z:276:GLU:HG2	2.20	0.42
10:z:321:MET:HE2	10:z:321:MET:HA	2.01	0.42
3:A:23:MET:HE2	6:e:8:ALA:O	2.20	0.42
4:b:9:VAL:HB	6:e:39:MET:HE3	2.01	0.42
5:d:405:ILE:O	5:d:409:LEU:HG	2.20	0.42
2:P:149:ARG:HH11	2:P:150:GLN:HG3	1.85	0.42
4:B:323:LEU:HA	4:B:326:VAL:HG12	2.02	0.42
6:E:225:ILE:HB	6:E:384:THR:HG23	2.01	0.42
8:H:90:VAL:HG12	8:H:92:ASP:H	1.84	0.42
3:a:430:MET:HE2	3:a:430:MET:HB3	1.87	0.42
4:b:122:HIS:O	4:b:126:ILE:HG13	2.19	0.42
9:q:470:VAL:HA	9:q:473:GLU:OE2	2.19	0.42
10:z:103:LEU:HD23	10:z:103:LEU:HA	1.82	0.42
4:B:71:LEU:HD22	4:B:85:VAL:HG22	2.01	0.42
7:G:452:ILE:HG21	7:G:459:THR:HA	2.02	0.42
7:G:489:ASP:O	7:G:492:GLU:HG2	2.18	0.42
8:h:250:LYS:HG3	9:q:268:PHE:HE2	1.85	0.42
9:q:129:ILE:HG12	9:q:516:VAL:HG13	2.02	0.42
5:D:69:THR:HG21	5:D:80:GLN:HG3	2.02	0.42
5:D:73:ASP:OD1	13:D:603:AF3:F3	2.27	0.42
7:G:106:LEU:HD21	7:G:513:ALA:HA	2.01	0.42
7:G:109:ALA:HB2	7:G:126:TYR:OH	2.20	0.42
8:H:337:LEU:HD23	8:H:337:LEU:HA	1.91	0.42
9:Q:262:ALA:O	9:Q:266:MET:HG3	2.20	0.42
3:a:11:ARG:HG3	3:a:531:ILE:HG13	2.02	0.42
3:a:160:ILE:HB	3:a:387:GLU:HG3	2.00	0.42
5:d:164:LEU:HD23	5:d:188:VAL:HG21	2.02	0.42
7:g:220:ILE:HG13	7:g:361:THR:HB	2.02	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:z:182:GLN:OE1	10:z:182:GLN:N	2.53	0.42
10:z:331:VAL:HB	10:z:343:CYS:HB2	2.01	0.42
2:P:187:ILE:O	2:P:234:PRO:HA	2.19	0.42
2:P:229:THR:O	2:P:233:LEU:HB2	2.19	0.42
5:D:103:GLY:HA3	5:D:410:CYS:HB3	2.02	0.42
7:G:519:ILE:HD13	7:G:519:ILE:HA	1.89	0.42
9:Q:165:ARG:O	9:Q:169:MET:HB2	2.20	0.42
10:Z:210:LEU:HD11	10:Z:323:ARG:HD2	2.02	0.42
3:a:233:LYS:H	3:a:284:ASN:HB2	1.85	0.42
4:b:17:ASP:OD2	4:b:17:ASP:C	2.63	0.42
4:b:205:LEU:HB3	5:d:100:ILE:HD12	2.02	0.42
4:b:237:ILE:HD12	4:b:327:THR:HG21	2.01	0.42
6:e:513:LYS:HA	6:e:513:LYS:HD3	1.74	0.42
7:g:61:ASN:OD1	7:g:61:ASN:N	2.43	0.42
9:q:40:ALA:HA	9:q:105:LEU:HD21	2.01	0.42
9:q:348:ASP:OD2	9:q:366:GLU:N	2.49	0.42
10:z:73:THR:HA	10:z:76:LEU:HD12	2.01	0.42
10:z:297:ILE:H	10:z:314:ARG:HD2	1.85	0.42
5:D:184:SER:O	5:D:188:VAL:HG23	2.20	0.41
5:D:408:ALA:O	5:D:412:ILE:HG12	2.19	0.41
7:G:266:ARG:HA	7:G:266:ARG:HD2	1.79	0.41
7:G:367:LYS:HE3	7:G:367:LYS:HB2	1.77	0.41
8:H:4:THR:HG23	8:H:4:THR:O	2.20	0.41
10:Z:430:LYS:HG2	10:Z:431:GLY:N	2.35	0.41
7:g:36:ILE:HG13	10:z:4:VAL:HG22	2.02	0.41
7:g:156:ILE:O	7:g:160:ILE:HG12	2.20	0.41
8:h:85:SER:HA	9:q:208:LEU:HD21	2.02	0.41
10:z:13:VAL:HG12	10:z:522:MET:HG3	2.02	0.41
7:G:293:GLU:OE1	7:G:317:LYS:HA	2.20	0.41
8:H:40:LEU:HD13	8:H:99:LEU:HD12	2.02	0.41
9:Q:81:PRO:HA	9:Q:84:LYS:HB2	2.01	0.41
9:Q:154:LEU:HD13	9:Q:403:THR:HG22	2.02	0.41
6:e:78:LEU:HD12	6:e:95:SER:OG	2.20	0.41
6:e:96:LYS:HB2	6:e:96:LYS:HE2	1.83	0.41
6:e:378:LYS:HB2	6:e:378:LYS:HE2	1.73	0.41
6:e:387:ILE:HD11	6:e:402:LEU:HD12	2.01	0.41
9:q:330:ALA:HB2	9:q:345:GLY:HA3	2.02	0.41
10:z:359:LYS:HE2	10:z:359:LYS:HB2	1.88	0.41
6:E:508:GLU:OE2	6:E:513:LYS:HD3	2.19	0.41
9:Q:114:LEU:HD23	9:Q:114:LEU:HA	1.87	0.41
3:a:199:LYS:HD3	3:a:389:GLU:HB2	2.02	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:b:11:ILE:HB	6:e:85:HIS:HB2	2.01	0.41
4:b:160:MET:HE3	4:b:180:THR:HG22	2.01	0.41
4:b:259:ASP:OD1	4:b:259:ASP:N	2.52	0.41
4:b:326:VAL:HG13	4:b:327:THR:HG23	2.02	0.41
6:e:148:LEU:HG	6:e:429:CYS:SG	2.60	0.41
8:h:116:LEU:HD11	8:h:430:LYS:HD2	2.02	0.41
8:h:232:TYR:HD1	8:h:348:PHE:HD2	1.67	0.41
10:z:404:ASP:C	10:z:406:CYS:H	2.29	0.41
2:P:289:ALA:HB3	3:a:314:ARG:NH2	2.35	0.41
3:A:27:SER:O	3:A:31:ILE:HG13	2.20	0.41
3:A:419:LEU:HD23	3:A:419:LEU:HA	1.91	0.41
3:A:506:PRO:HB2	3:A:509:VAL:HG23	2.03	0.41
4:B:187:VAL:HG21	4:B:397:LEU:HB2	2.02	0.41
6:E:332:LEU:HD23	6:E:332:LEU:HA	1.88	0.41
7:G:130:LEU:O	7:G:134:ILE:HG12	2.19	0.41
9:Q:27:GLU:O	9:Q:31:ARG:HG3	2.19	0.41
9:Q:148:CYS:HB2	9:Q:493:LEU:HD23	2.03	0.41
9:Q:151:ALA:O	9:Q:152:LYS:HG2	2.20	0.41
3:a:85:GLU:O	3:a:401:ARG:NH2	2.53	0.41
3:a:266:ARG:HD2	3:a:266:ARG:HA	1.84	0.41
3:a:445:LEU:HD23	3:a:445:LEU:HA	1.87	0.41
5:d:134:SER:HG	5:d:527:ARG:HE	1.60	0.41
7:g:527:LYS:HE2	7:g:527:LYS:HB2	1.92	0.41
9:q:466:LYS:O	9:q:470:VAL:HG23	2.20	0.41
10:z:216:ALA:HB1	10:z:221:MET:SD	2.61	0.41
4:B:271:GLU:HG2	6:E:274:TYR:CZ	2.56	0.41
7:G:502:LYS:HA	7:G:502:LYS:HD2	1.72	0.41
6:e:38:ILE:HG22	6:e:42:LYS:HD3	2.01	0.41
6:e:78:LEU:HD23	6:e:78:LEU:HA	1.87	0.41
7:g:79:SER:O	7:g:83:ILE:HD13	2.20	0.41
7:g:435:TRP:HB2	7:g:436:PRO:HD3	2.01	0.41
8:h:202:GLY:O	8:h:375:ARG:NH2	2.53	0.41
10:z:338:ASP:N	10:z:338:ASP:OD1	2.54	0.41
6:E:295:THR:HG21	6:E:348:LEU:HG	2.02	0.41
7:G:167:ARG:NH2	10:Z:124:GLU:OE1	2.53	0.41
10:Z:404:ASP:OD2	10:Z:499:CYS:HB3	2.20	0.41
3:a:526:ARG:HD2	5:d:57:MET:HE1	2.03	0.41
4:b:11:ILE:HD12	6:e:88:ALA:HB2	2.02	0.41
6:e:148:LEU:HD22	6:e:419:VAL:HG11	2.01	0.41
6:e:420:TYR:N	6:e:420:TYR:CD2	2.89	0.41
6:e:463:SER:HB2	6:e:468:MET:HG3	2.01	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:h:382:MET:HE3	8:h:382:MET:HB2	1.86	0.41
9:q:18:GLY:HA3	9:q:528:LYS:HD3	2.03	0.41
3:A:11:ARG:O	6:e:2:ALA:N	2.54	0.41
3:A:120:GLY:HA3	3:A:437:ALA:HB3	2.01	0.41
4:B:187:VAL:HG23	4:B:394:LEU:HD23	2.03	0.41
6:E:148:LEU:HG	6:E:429:CYS:SG	2.60	0.41
10:Z:161:HIS:NE2	10:Z:163:GLU:HB3	2.36	0.41
3:a:344:MET:HB3	3:a:344:MET:HE2	1.78	0.41
3:a:381:ASN:HB3	7:g:83:ILE:HD12	2.03	0.41
5:d:467:GLU:C	5:d:469:ALA:H	2.28	0.41
9:q:151:ALA:O	9:q:152:LYS:HG2	2.20	0.41
9:q:324:LEU:O	9:q:328:VAL:HG22	2.20	0.41
9:q:348:ASP:HB3	9:q:366:GLU:HG2	2.01	0.41
10:z:514:ASN:O	10:z:518:VAL:HG23	2.21	0.41
3:A:75:LEU:HD23	3:A:75:LEU:HA	1.85	0.41
3:A:445:LEU:HD23	3:A:445:LEU:HA	1.89	0.41
3:A:527:ILE:HD13	5:D:60:MET:HE2	2.02	0.41
5:D:212:LYS:NZ	5:D:399:GLU:OE2	2.40	0.41
6:E:257:PRO:HA	6:E:258:PRO:HD3	1.94	0.41
8:H:38:THR:OG1	8:H:47:LYS:NZ	2.33	0.41
8:H:446:PRO:HA	8:H:449:LEU:HD12	2.02	0.41
9:Q:266:MET:HE2	9:Q:266:MET:HB3	1.75	0.41
10:Z:198:HIS:CE1	10:Z:199:LYS:HG3	2.56	0.41
4:b:267:ILE:O	4:b:271:GLU:HG3	2.20	0.41
5:d:227:LEU:HD23	5:d:376:ILE:HB	2.03	0.41
11:d:601:ADP:O1B	13:d:603:AF3:F3	2.28	0.41
6:e:230:VAL:HG12	6:e:232:LYS:H	1.86	0.41
6:e:309:GLU:OE1	6:e:309:GLU:N	2.46	0.41
7:g:384:LEU:HD23	7:g:384:LEU:HA	1.85	0.41
1:N:287:VAL:HG23	1:N:298:SER:HB3	2.03	0.41
2:P:148:MET:O	2:P:152:LEU:HD23	2.21	0.41
2:P:172:ASP:O	2:P:176:LYS:HB2	2.21	0.41
3:A:225:MET:HE1	3:A:307:ALA:O	2.21	0.41
3:A:527:ILE:HG21	5:D:60:MET:HE2	2.03	0.41
4:B:77:ASP:OD1	4:B:77:ASP:N	2.53	0.41
4:B:99:THR:O	4:B:102:VAL:HG12	2.21	0.41
6:E:203:ASP:OD2	8:H:357:ARG:NH2	2.50	0.41
7:G:225:THR:HG22	7:G:313:ARG:HB2	2.03	0.41
8:H:92:ASP:HB3	8:H:395:ILE:HD11	2.02	0.41
9:Q:81:PRO:HB2	10:Z:46:MET:CE	2.43	0.41
9:Q:138:LYS:HD2	9:Q:138:LYS:HA	1.83	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:Q:176:GLU:OE1	9:Q:176:GLU:N	2.47	0.41
4:b:63:VAL:HG21	5:d:90:MET:HE1	2.02	0.41
4:b:244:MET:HA	4:b:275:MET:HE1	2.01	0.41
5:d:42:LYS:HE2	5:d:46:ASP:OD1	2.21	0.41
5:d:435:ARG:HA	5:d:435:ARG:HD3	1.80	0.41
6:e:91:MET:HE3	6:e:110:VAL:HG13	2.03	0.41
6:e:104:ASP:OD1	13:e:603:AF3:F1	2.29	0.41
7:g:78:LYS:O	7:g:82:GLU:HG2	2.21	0.41
7:g:445:GLU:C	7:g:448:PRO:HD2	2.45	0.41
9:q:199:VAL:HG12	9:q:396:VAL:HG12	2.02	0.41
10:z:154:THR:HG21	10:z:495:TRP:O	2.20	0.41
2:P:170:PHE:O	2:P:174:ILE:HG22	2.20	0.41
4:B:141:LEU:HD22	4:B:417:MET:HE3	2.01	0.41
6:E:236:HIS:CE1	6:E:315:LEU:HD22	2.56	0.41
3:a:156:MET:HG3	3:a:395:ALA:HB2	2.03	0.41
4:b:249:ILE:HG22	4:b:251:ILE:HG12	2.03	0.41
5:d:248:LEU:HD21	5:d:333:ILE:HG23	2.03	0.41
6:e:299:LEU:HD12	6:e:320:PRO:O	2.21	0.41
8:h:215:ALA:HA	8:h:359:ASN:O	2.21	0.41
9:q:73:LEU:HD13	9:q:73:LEU:HA	1.85	0.41
10:z:7:LEU:HD23	10:z:7:LEU:HA	1.92	0.41
5:D:303:SER:HB3	5:D:308:ALA:HB2	2.03	0.40
7:G:133:MET:HE3	7:G:506:TYR:CD2	2.55	0.40
7:G:184:GLN:HG3	7:G:193:ILE:HG12	2.03	0.40
8:H:364:CYS:HB2	8:H:367:ALA:HB2	2.02	0.40
10:Z:7:LEU:HD23	10:Z:7:LEU:HA	1.86	0.40
3:a:225:MET:HB2	3:a:305:ALA:O	2.20	0.40
4:b:66:ASP:HB3	4:b:69:THR:OG1	2.21	0.40
7:g:47:MET:HB3	10:z:518:VAL:HA	2.03	0.40
10:z:217:ARG:HA	10:z:217:ARG:HD2	1.86	0.40
3:A:31:ILE:HG21	3:A:65:LEU:HD11	2.03	0.40
6:E:31:LEU:O	6:E:35:LYS:HG2	2.21	0.40
6:E:460:MET:HE3	6:E:460:MET:HB3	1.84	0.40
11:E:601:ADP:O3B	13:E:603:AF3:F3	2.29	0.40
7:G:43:PRO:HA	7:G:162:THR:HA	2.03	0.40
8:H:239:LEU:HD12	8:H:319:LEU:HD22	2.03	0.40
3:a:156:MET:HB2	3:a:156:MET:HE2	1.80	0.40
3:a:160:ILE:HG21	3:a:388:MET:HG2	2.03	0.40
6:e:364:PHE:HE2	6:e:371:MET:HB2	1.85	0.40
6:e:474:MET:HE3	6:e:474:MET:HB3	1.94	0.40
7:g:6:PRO:HG2	7:g:8:LEU:HG	2.03	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:g:462:LEU:HD22	7:g:487:LEU:HD13	2.03	0.40
8:h:30:GLN:HE22	8:h:106:LYS:HB2	1.86	0.40
9:q:88:MET:HE1	10:z:382:HIS:CD2	2.56	0.40
9:q:277:ASP:HB2	9:q:304:TYR:CE2	2.56	0.40
10:z:154:THR:O	10:z:158:THR:HG23	2.21	0.40
10:z:280:LYS:HE3	10:z:341:PRO:HG3	2.04	0.40
3:A:292:ILE:HG22	3:A:297:LEU:HG	2.04	0.40
3:A:331:LEU:O	3:A:338:GLU:HA	2.21	0.40
9:Q:34:GLN:O	9:Q:38:GLU:OE2	2.39	0.40
10:Z:104:LYS:O	10:Z:108:LEU:HG	2.20	0.40
3:a:142:GLU:HG2	3:a:143:LEU:HD22	2.03	0.40
4:b:217:GLY:HA3	4:b:362:PHE:O	2.22	0.40
4:b:473:ASN:ND2	4:b:476:ALA:HB2	2.35	0.40
5:d:186:MET:HE3	5:d:186:MET:HB2	1.73	0.40
6:e:172:THR:OG1	6:e:408:VAL:HG21	2.20	0.40
6:e:200:GLU:HB2	6:e:202:ARG:HG3	2.02	0.40
6:e:392:LYS:O	6:e:396:GLU:HG2	2.21	0.40
9:q:47:TYR:O	9:q:455:ASN:ND2	2.41	0.40
9:q:259:ILE:HG21	9:q:265:LEU:HB2	2.03	0.40
1:N:267:ASP:O	1:N:271:GLY:N	2.49	0.40
3:A:448:ILE:HD13	3:A:448:ILE:HA	1.95	0.40
7:G:47:MET:HE2	7:G:59:MET:HG2	2.03	0.40
4:b:518:ASP:HB3	6:e:57:LEU:HD13	2.03	0.40
6:e:118:GLU:O	6:e:121:GLU:HB3	2.21	0.40
9:q:103:PHE:O	9:q:104:VAL:C	2.64	0.40
10:z:165:ALA:O	10:z:169:THR:HG23	2.22	0.40
7:G:241:LEU:HB2	7:G:292:THR:HB	2.03	0.40
7:G:516:LEU:HD23	7:G:516:LEU:HA	1.86	0.40
8:H:59:SER:HA	8:H:384:GLU:OE1	2.21	0.40
8:H:353:ILE:HD11	8:H:360:PHE:HZ	1.85	0.40
9:Q:247:ASP:OD1	9:Q:248:GLY:N	2.53	0.40
4:b:220:LEU:HG	4:b:222:LYS:HG2	2.04	0.40
5:d:71:THR:HA	5:d:400:GLU:OE1	2.22	0.40
5:d:179:TYR:CE2	5:d:218:ILE:HD12	2.56	0.40
7:g:49:MET:HE3	10:z:518:VAL:HG11	2.03	0.40
8:h:349:GLU:HG2	8:h:351:THR:HG23	2.03	0.40
9:q:357:ASP:OD2	9:q:357:ASP:C	2.64	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	N	43/441 (10%)	42 (98%)	1 (2%)	0	100	100
2	P	212/326 (65%)	196 (92%)	16 (8%)	0	100	100
3	A	534/556 (96%)	516 (97%)	18 (3%)	0	100	100
3	a	530/556 (95%)	513 (97%)	17 (3%)	0	100	100
4	B	524/535 (98%)	508 (97%)	16 (3%)	0	100	100
4	b	523/535 (98%)	507 (97%)	16 (3%)	0	100	100
5	D	518/539 (96%)	510 (98%)	8 (2%)	0	100	100
5	d	518/539 (96%)	500 (96%)	18 (4%)	0	100	100
6	E	534/541 (99%)	519 (97%)	15 (3%)	0	100	100
6	e	539/541 (100%)	528 (98%)	10 (2%)	1 (0%)	44	73
7	G	524/545 (96%)	510 (97%)	14 (3%)	0	100	100
7	g	524/545 (96%)	507 (97%)	17 (3%)	0	100	100
8	H	526/543 (97%)	507 (96%)	19 (4%)	0	100	100
8	h	523/543 (96%)	502 (96%)	21 (4%)	0	100	100
9	Q	536/548 (98%)	517 (96%)	19 (4%)	0	100	100
9	q	531/548 (97%)	514 (97%)	17 (3%)	0	100	100
10	Z	523/531 (98%)	509 (97%)	14 (3%)	0	100	100
10	z	525/531 (99%)	511 (97%)	14 (3%)	0	100	100
All	All	8687/9443 (92%)	8416 (97%)	270 (3%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
6	e	10	ASP

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	N	44/366 (12%)	44 (100%)	0	100	100
2	P	191/289 (66%)	185 (97%)	6 (3%)	35	70
3	A	447/463 (96%)	446 (100%)	1 (0%)	92	98
3	a	444/463 (96%)	441 (99%)	3 (1%)	81	94
4	B	418/427 (98%)	414 (99%)	4 (1%)	73	91
4	b	417/427 (98%)	413 (99%)	4 (1%)	73	91
5	D	442/452 (98%)	438 (99%)	4 (1%)	75	92
5	d	441/452 (98%)	438 (99%)	3 (1%)	81	94
6	E	452/456 (99%)	449 (99%)	3 (1%)	81	94
6	e	456/456 (100%)	454 (100%)	2 (0%)	89	97
7	G	456/469 (97%)	455 (100%)	1 (0%)	92	98
7	g	456/469 (97%)	452 (99%)	4 (1%)	75	92
8	H	435/443 (98%)	434 (100%)	1 (0%)	92	98
8	h	432/443 (98%)	428 (99%)	4 (1%)	75	92
9	Q	442/452 (98%)	440 (100%)	2 (0%)	86	96
9	q	438/452 (97%)	435 (99%)	3 (1%)	81	94
10	Z	437/442 (99%)	435 (100%)	2 (0%)	86	96
10	z	438/442 (99%)	437 (100%)	1 (0%)	92	98
All	All	7286/7863 (93%)	7238 (99%)	48 (1%)	80	94

All (48) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	P	81	CYS
2	P	86	ARG
2	P	152	LEU
2	P	199	ASN
2	P	220	SER
2	P	253	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	A	392	LEU
4	B	5	SER
4	B	245	ASP
4	B	450	ILE
4	B	474	THR
5	D	121	THR
5	D	199	THR
5	D	214	LEU
5	D	320	MET
6	E	366	THR
6	E	448	MET
6	E	458	ILE
7	G	244	SER
8	H	67	LYS
9	Q	148	CYS
9	Q	430	CYS
10	Z	207	ILE
10	Z	235	VAL
3	a	156	MET
3	a	166	ASP
3	a	454	VAL
4	b	30	ILE
4	b	53	LEU
4	b	146	VAL
4	b	470	SER
5	d	39	SER
5	d	260	MET
5	d	304	ILE
6	e	408	VAL
6	e	526	MET
7	g	47	MET
7	g	162	THR
7	g	255	ASP
7	g	364	THR
8	h	1	MET
8	h	10	LYS
8	h	211	VAL
8	h	251	ASP
9	q	293	THR
9	q	430	CYS
9	q	483	GLU
10	z	244	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (71) such sidechains are listed below:

Mol	Chain	Res	Type
2	P	56	ASN
2	P	71	GLN
3	A	170	ASN
3	A	193	ASN
3	A	223	GLN
3	A	231	ASN
3	A	262	GLN
3	A	393	HIS
4	B	288	ASN
4	B	464	GLN
5	D	289	GLN
6	E	504	GLN
6	E	515	GLN
7	G	116	GLN
7	G	390	ASN
7	G	420	HIS
8	H	119	GLN
8	H	283	HIS
8	H	331	GLN
8	H	359	ASN
9	Q	32	ASN
9	Q	93	GLN
9	Q	95	GLN
9	Q	102	ASN
9	Q	172	GLN
9	Q	303	HIS
9	Q	359	GLN
9	Q	477	ASN
10	Z	453	GLN
10	Z	482	ASN
3	a	20	GLN
3	a	103	ASN
3	a	205	GLN
3	a	217	ASN
4	b	65	ASN
4	b	73	ASN
4	b	174	HIS
4	b	269	HIS
4	b	285	HIS
4	b	292	ASN
4	b	380	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	b	426	ASN
5	d	82	GLN
5	d	250	GLN
5	d	301	GLN
5	d	494	ASN
6	e	278	GLN
6	e	316	GLN
6	e	504	GLN
6	e	515	GLN
7	g	64	ASN
7	g	111	HIS
7	g	235	ASN
7	g	277	GLN
7	g	301	GLN
7	g	400	ASN
8	h	30	GLN
8	h	60	ASN
8	h	73	HIS
8	h	130	GLN
8	h	283	HIS
8	h	331	GLN
8	h	380	GLN
8	h	431	GLN
8	h	448	GLN
9	q	80	HIS
9	q	219	HIS
9	q	303	HIS
9	q	397	ASN
10	z	61	ASN
10	z	294	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 oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 48 ligands modelled in this entry, 16 are monoatomic - leaving 32 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
11	ADP	z	601	12,13	24,29,29	0.91	0	29,45,45	1.22	2 (6%)
13	AF3	D	603	11	0,3,3	-	-	-		
13	AF3	Z	603	10,11	0,3,3	-	-	-		
13	AF3	g	603	7,11	0,3,3	-	-	-		
11	ADP	a	601	12,13	24,29,29	0.89	0	29,45,45	1.35	4 (13%)
13	AF3	H	603	11	0,3,3	-	-	-		
11	ADP	Z	601	12,13	24,29,29	0.87	0	29,45,45	1.24	2 (6%)
13	AF3	A	603	11	0,3,3	-	-	-		
11	ADP	A	601	12,13	24,29,29	0.86	0	29,45,45	1.29	4 (13%)
11	ADP	h	601	12,13	24,29,29	0.88	0	29,45,45	1.26	2 (6%)
13	AF3	d	603	11	0,3,3	-	-	-		
11	ADP	E	601	12,13	24,29,29	0.88	0	29,45,45	1.16	2 (6%)
13	AF3	Q	603	9,11	0,3,3	-	-	-		
11	ADP	Q	601	12,13	24,29,29	0.88	0	29,45,45	1.26	2 (6%)
11	ADP	B	601	12	24,29,29	0.86	0	29,45,45	1.18	2 (6%)
11	ADP	H	601	12,13	24,29,29	0.88	0	29,45,45	1.22	2 (6%)
13	AF3	e	603	11	0,3,3	-	-	-		
13	AF3	E	603	11	0,3,3	-	-	-		
11	ADP	D	601	12,13	24,29,29	0.89	0	29,45,45	1.16	2 (6%)
11	ADP	d	601	12,13	24,29,29	0.90	1 (4%)	29,45,45	1.29	3 (10%)
11	ADP	g	601	12,13	24,29,29	0.87	0	29,45,45	1.40	4 (13%)
13	AF3	h	603	11	0,3,3	-	-	-		
11	ADP	e	601	12,13	24,29,29	0.89	0	29,45,45	1.31	3 (10%)
13	AF3	G	603	7,11	0,3,3	-	-	-		

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
13	AF3	a	603	11	0,3,3	-	-	-		
13	AF3	b	603	11	0,3,3	-	-	-		
13	AF3	q	603	11	0,3,3	-	-	-		
13	AF3	B	603	-	0,3,3	-	-	-		
13	AF3	z	603	11	0,3,3	-	-	-		
11	ADP	G	601	12,13	24,29,29	0.84	0	29,45,45	1.21	2 (6%)
11	ADP	q	601	12,13	24,29,29	0.90	0	29,45,45	1.51	4 (13%)
11	ADP	b	601	12,13	24,29,29	0.89	0	29,45,45	1.24	3 (10%)

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
11	ADP	z	601	12,13	-	6/12/32/32	0/3/3/3
11	ADP	H	601	12,13	-	3/12/32/32	0/3/3/3
11	ADP	A	601	12,13	-	6/12/32/32	0/3/3/3
11	ADP	h	601	12,13	-	1/12/32/32	0/3/3/3
11	ADP	a	601	12,13	-	2/12/32/32	0/3/3/3
11	ADP	E	601	12,13	-	5/12/32/32	0/3/3/3
11	ADP	D	601	12,13	-	6/12/32/32	0/3/3/3
11	ADP	d	601	12,13	-	4/12/32/32	0/3/3/3
11	ADP	G	601	12,13	-	1/12/32/32	0/3/3/3
11	ADP	Q	601	12,13	-	5/12/32/32	0/3/3/3
11	ADP	g	601	12,13	-	7/12/32/32	0/3/3/3
11	ADP	q	601	12,13	-	6/12/32/32	0/3/3/3
11	ADP	b	601	12,13	-	1/12/32/32	0/3/3/3
11	ADP	e	601	12,13	-	0/12/32/32	0/3/3/3
11	ADP	Z	601	12,13	-	6/12/32/32	0/3/3/3
11	ADP	B	601	12	-	2/12/32/32	0/3/3/3

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	d	601	ADP	PA-O3A	2.03	1.61	1.59

All (43) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
11	q	601	ADP	N3-C2-N1	-3.89	123.39	128.67
11	Q	601	ADP	N3-C2-N1	-3.80	123.51	128.67
11	D	601	ADP	N3-C2-N1	-3.80	123.52	128.67
11	d	601	ADP	N3-C2-N1	-3.79	123.52	128.67
11	e	601	ADP	N3-C2-N1	-3.77	123.55	128.67
11	B	601	ADP	N3-C2-N1	-3.75	123.58	128.67
11	h	601	ADP	N3-C2-N1	-3.75	123.58	128.67
11	b	601	ADP	N3-C2-N1	-3.75	123.59	128.67
11	A	601	ADP	N3-C2-N1	-3.74	123.59	128.67
11	g	601	ADP	N3-C2-N1	-3.73	123.61	128.67
11	H	601	ADP	N3-C2-N1	-3.72	123.62	128.67
11	E	601	ADP	N3-C2-N1	-3.72	123.62	128.67
11	a	601	ADP	N3-C2-N1	-3.72	123.62	128.67
11	Z	601	ADP	N3-C2-N1	-3.66	123.71	128.67
11	z	601	ADP	N3-C2-N1	-3.65	123.71	128.67
11	q	601	ADP	C4'-O4'-C1'	-3.54	106.68	109.92
11	G	601	ADP	N3-C2-N1	-3.32	124.17	128.67
11	q	601	ADP	O4'-C1'-N9	3.10	112.86	108.75
11	g	601	ADP	C4'-O4'-C1'	-3.03	107.15	109.92
11	a	601	ADP	O4'-C1'-N9	2.95	112.65	108.75
11	q	601	ADP	C4-C5-N7	-2.85	106.32	109.34
11	Q	601	ADP	C4-C5-N7	-2.83	106.35	109.34
11	e	601	ADP	O4'-C1'-N9	2.76	112.40	108.75
11	g	601	ADP	C4-C5-N7	-2.61	106.58	109.34
11	a	601	ADP	C4-C5-N7	-2.60	106.59	109.34
11	G	601	ADP	C4-C5-N7	-2.59	106.60	109.34
11	e	601	ADP	C4-C5-N7	-2.58	106.61	109.34
11	d	601	ADP	C4-C5-N7	-2.57	106.62	109.34
11	A	601	ADP	C4-C5-N7	-2.53	106.66	109.34
11	h	601	ADP	C4-C5-N7	-2.53	106.67	109.34
11	Z	601	ADP	C4-C5-N7	-2.52	106.67	109.34
11	D	601	ADP	C4-C5-N7	-2.51	106.68	109.34
11	b	601	ADP	C4-C5-N7	-2.50	106.69	109.34
11	B	601	ADP	C4-C5-N7	-2.50	106.69	109.34
11	z	601	ADP	C4-C5-N7	-2.49	106.70	109.34
11	H	601	ADP	C4-C5-N7	-2.48	106.72	109.34
11	E	601	ADP	C4-C5-N7	-2.47	106.73	109.34
11	g	601	ADP	O4'-C1'-N9	2.41	111.94	108.75
11	d	601	ADP	C4'-O4'-C1'	-2.26	107.85	109.92
11	a	601	ADP	C4'-O4'-C1'	-2.18	107.93	109.92
11	b	601	ADP	O4'-C1'-N9	2.13	111.57	108.75
11	A	601	ADP	C4'-O4'-C1'	-2.12	107.99	109.92
11	A	601	ADP	O4'-C1'-N9	2.08	111.51	108.75

There are no chirality outliers.

All (61) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
11	A	601	ADP	C5'-O5'-PA-O1A
11	A	601	ADP	C5'-O5'-PA-O2A
11	A	601	ADP	C5'-O5'-PA-O3A
11	D	601	ADP	C5'-O5'-PA-O1A
11	D	601	ADP	C5'-O5'-PA-O3A
11	E	601	ADP	C5'-O5'-PA-O1A
11	E	601	ADP	C5'-O5'-PA-O3A
11	H	601	ADP	PA-O3A-PB-O2B
11	Q	601	ADP	C5'-O5'-PA-O2A
11	Q	601	ADP	C5'-O5'-PA-O3A
11	Z	601	ADP	C5'-O5'-PA-O2A
11	Z	601	ADP	C5'-O5'-PA-O3A
11	d	601	ADP	PA-O3A-PB-O2B
11	d	601	ADP	PB-O3A-PA-O5'
11	g	601	ADP	C5'-O5'-PA-O1A
11	g	601	ADP	C5'-O5'-PA-O2A
11	g	601	ADP	C5'-O5'-PA-O3A
11	g	601	ADP	O4'-C4'-C5'-O5'
11	q	601	ADP	C5'-O5'-PA-O2A
11	q	601	ADP	O4'-C4'-C5'-O5'
11	z	601	ADP	PA-O3A-PB-O3B
11	z	601	ADP	C5'-O5'-PA-O1A
11	z	601	ADP	C5'-O5'-PA-O2A
11	z	601	ADP	C5'-O5'-PA-O3A
11	Q	601	ADP	C3'-C4'-C5'-O5'
11	q	601	ADP	C3'-C4'-C5'-O5'
11	Z	601	ADP	C3'-C4'-C5'-O5'
11	a	601	ADP	O4'-C4'-C5'-O5'
11	g	601	ADP	C3'-C4'-C5'-O5'
11	H	601	ADP	C3'-C4'-C5'-O5'
11	z	601	ADP	O4'-C4'-C5'-O5'
11	Q	601	ADP	O4'-C4'-C5'-O5'
11	D	601	ADP	O4'-C4'-C5'-O5'
11	Z	601	ADP	O4'-C4'-C5'-O5'
11	a	601	ADP	C3'-C4'-C5'-O5'
11	b	601	ADP	PB-O3A-PA-O5'
11	h	601	ADP	PB-O3A-PA-O5'
11	z	601	ADP	C3'-C4'-C5'-O5'
11	D	601	ADP	C3'-C4'-C5'-O5'
11	B	601	ADP	PB-O3A-PA-O1A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
11	g	601	ADP	PB-O3A-PA-O1A
11	A	601	ADP	O4'-C4'-C5'-O5'
11	D	601	ADP	C5'-O5'-PA-O2A
11	E	601	ADP	C5'-O5'-PA-O2A
11	Q	601	ADP	C5'-O5'-PA-O1A
11	Z	601	ADP	C5'-O5'-PA-O1A
11	q	601	ADP	C5'-O5'-PA-O1A
11	q	601	ADP	C5'-O5'-PA-O3A
11	H	601	ADP	O4'-C4'-C5'-O5'
11	G	601	ADP	C3'-C4'-C5'-O5'
11	A	601	ADP	C3'-C4'-C5'-O5'
11	E	601	ADP	PA-O3A-PB-O1B
11	D	601	ADP	PA-O3A-PB-O2B
11	E	601	ADP	PA-O3A-PB-O3B
11	d	601	ADP	PA-O3A-PB-O3B
11	B	601	ADP	PB-O3A-PA-O2A
11	g	601	ADP	PB-O3A-PA-O2A
11	q	601	ADP	PB-O3A-PA-O2A
11	d	601	ADP	PA-O3A-PB-O1B
11	A	601	ADP	PB-O3A-PA-O2A
11	Z	601	ADP	PB-O3A-PA-O1A

There are no ring outliers.

29 monomers are involved in 44 short contacts:

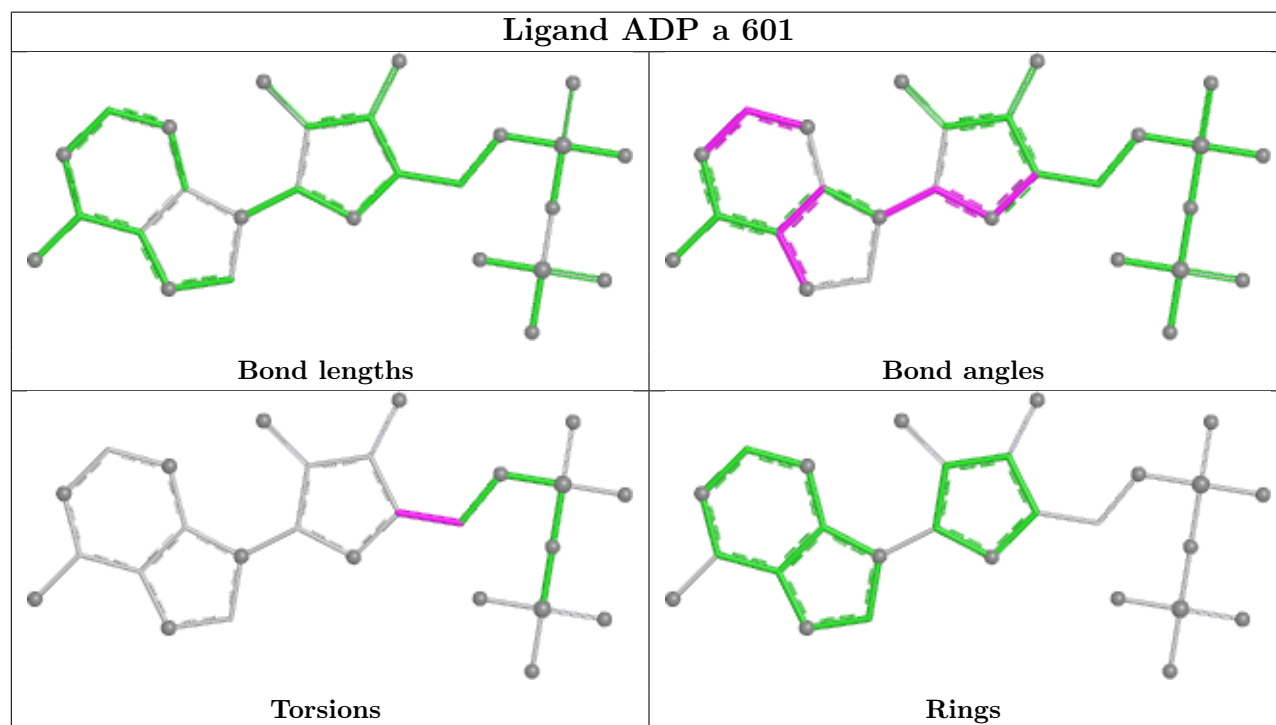
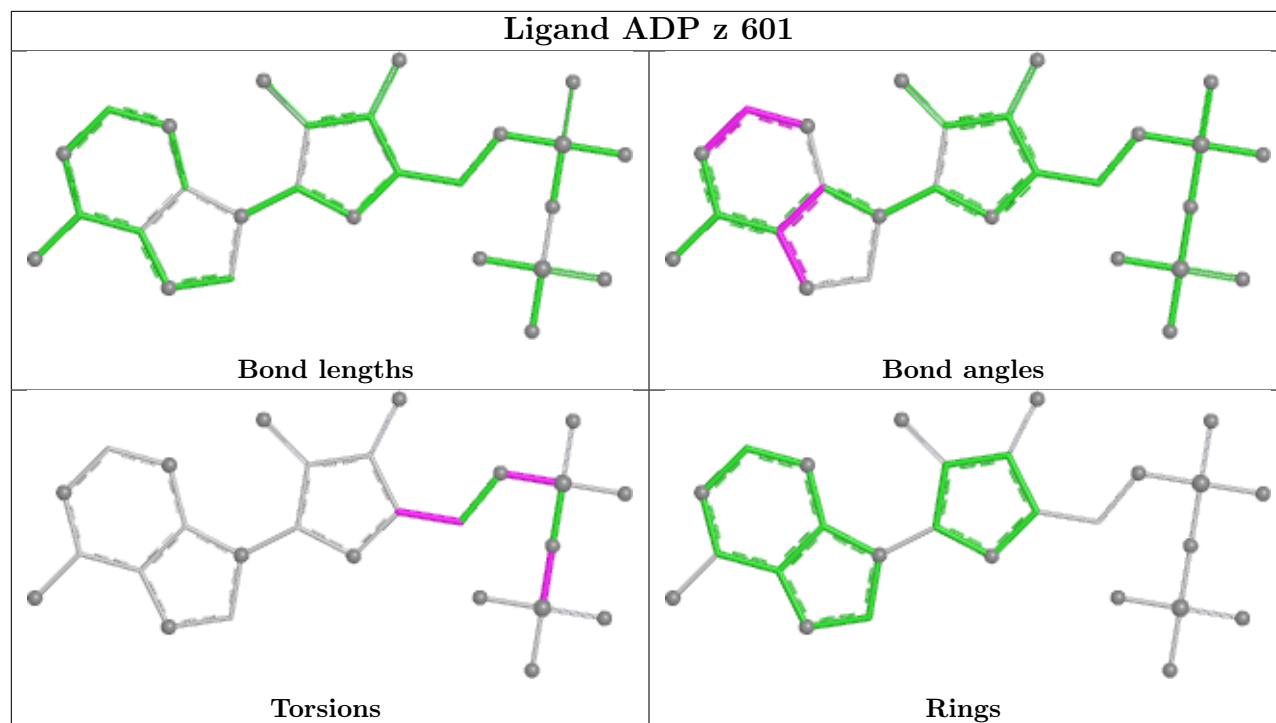
Mol	Chain	Res	Type	Clashes	Symm-Clashes
11	z	601	ADP	1	0
13	D	603	AF3	1	0
13	Z	603	AF3	2	0
13	g	603	AF3	2	0
11	a	601	ADP	2	0
13	H	603	AF3	1	0
11	Z	601	ADP	2	0
13	A	603	AF3	2	0
11	A	601	ADP	2	0
11	h	601	ADP	2	0
13	d	603	AF3	2	0
11	E	601	ADP	6	0
11	Q	601	ADP	1	0
11	B	601	ADP	4	0
11	H	601	ADP	1	0
13	e	603	AF3	1	0

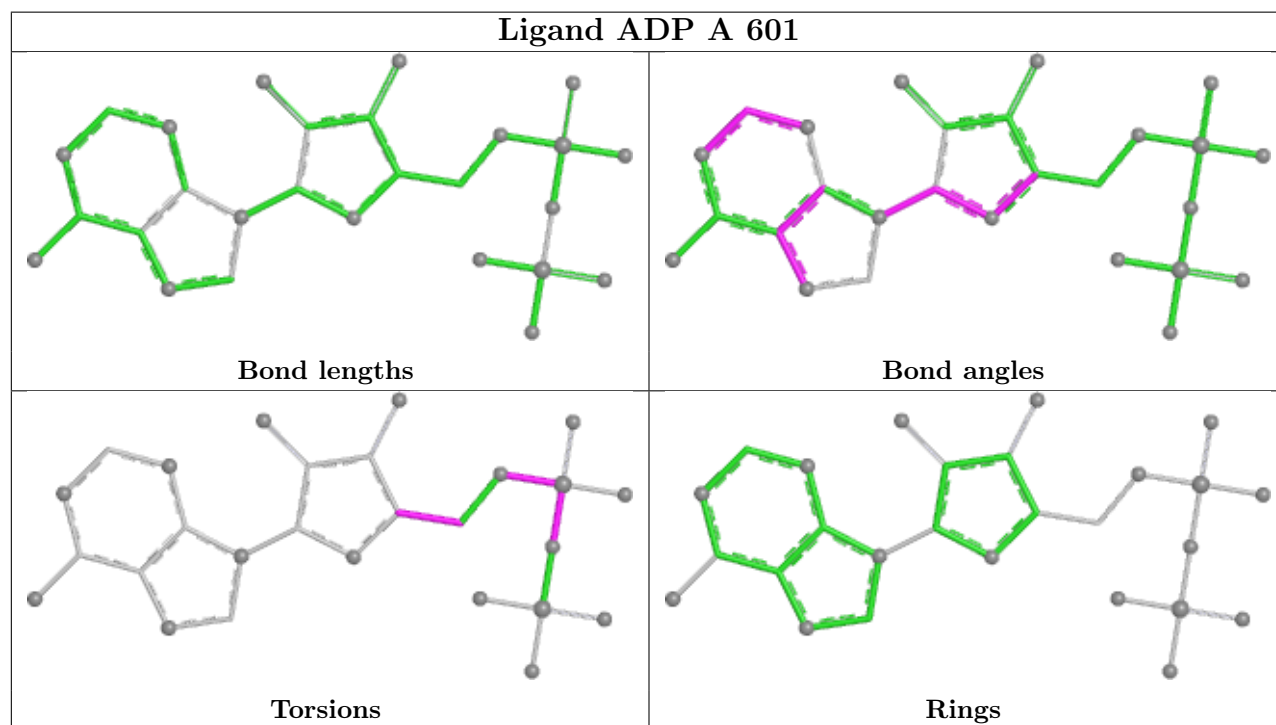
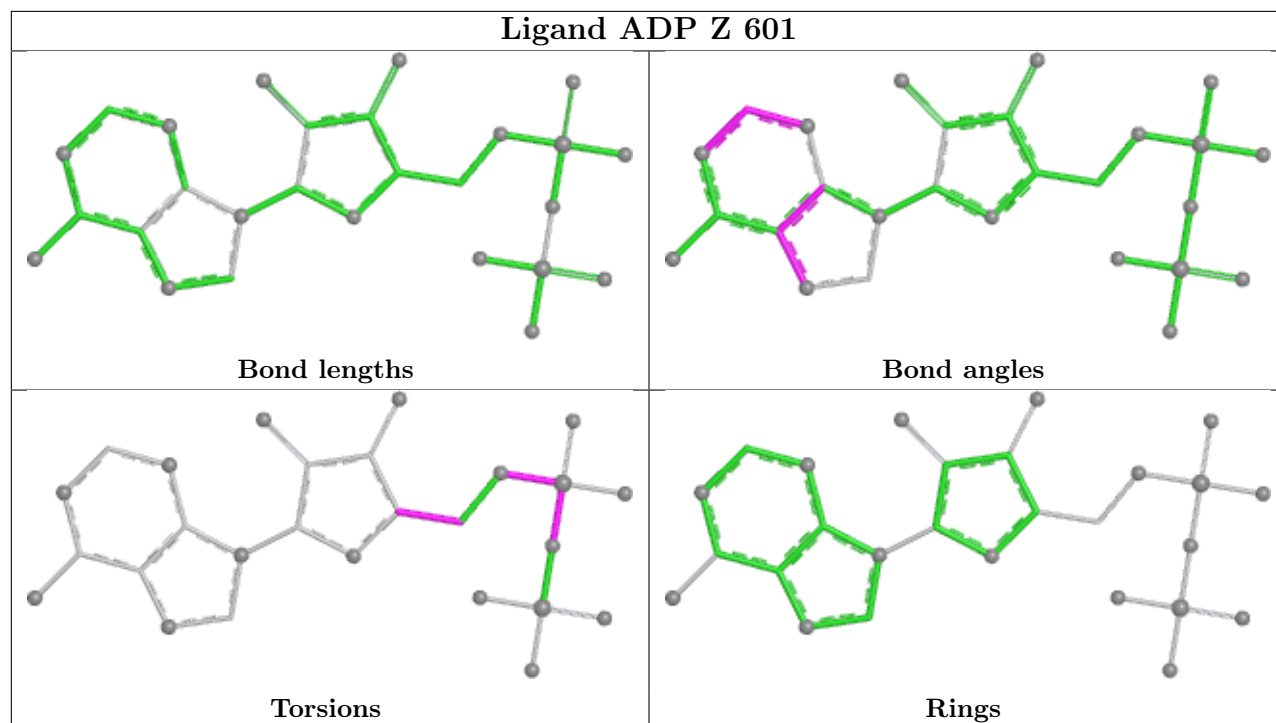
Continued on next page...

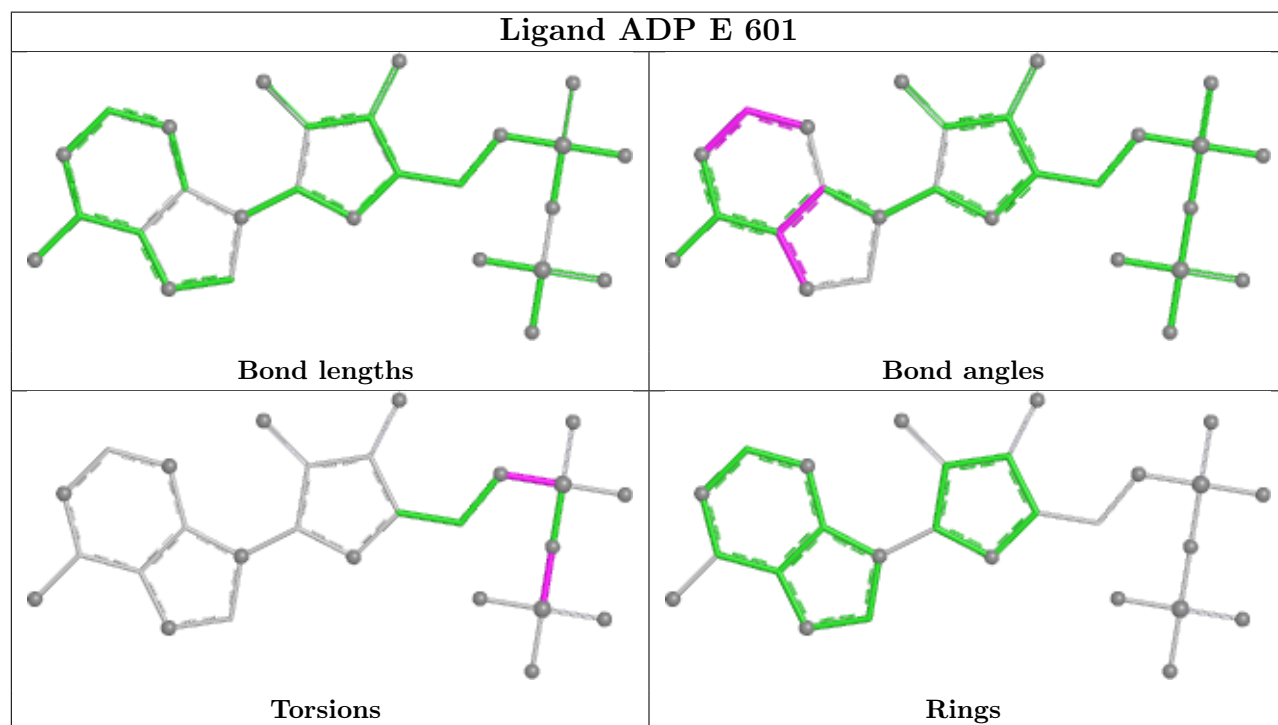
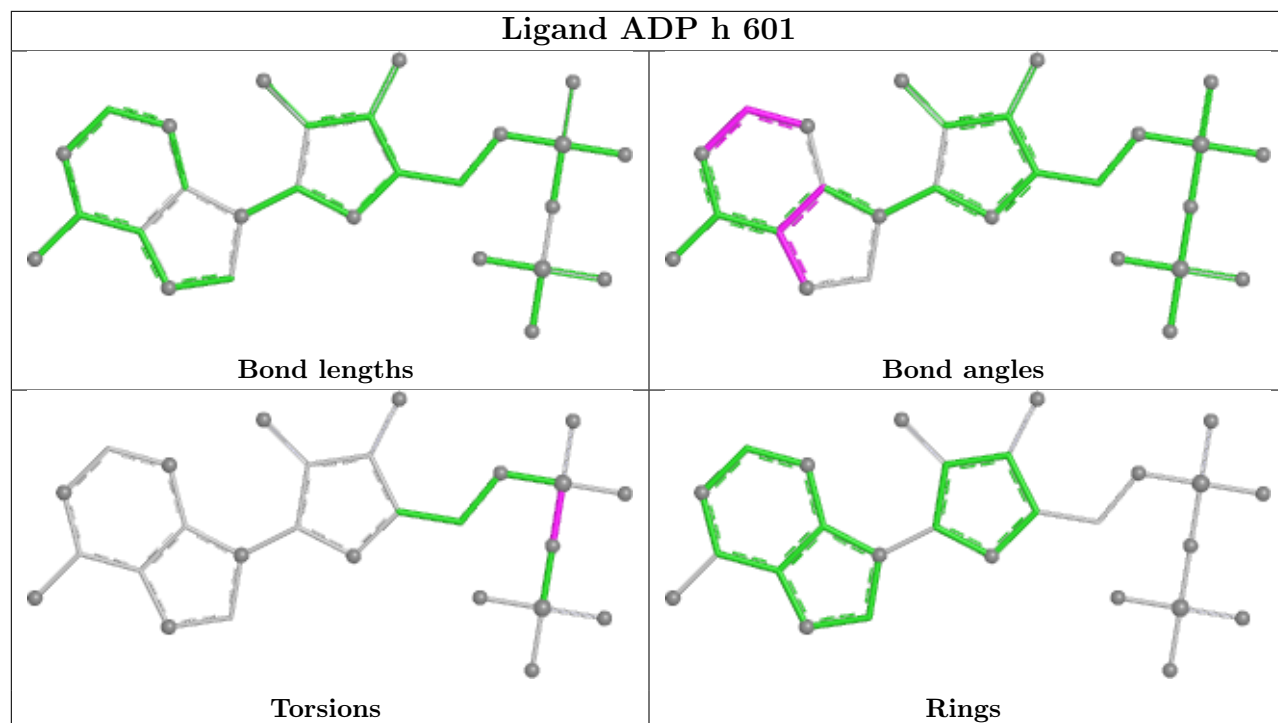
Continued from previous page...

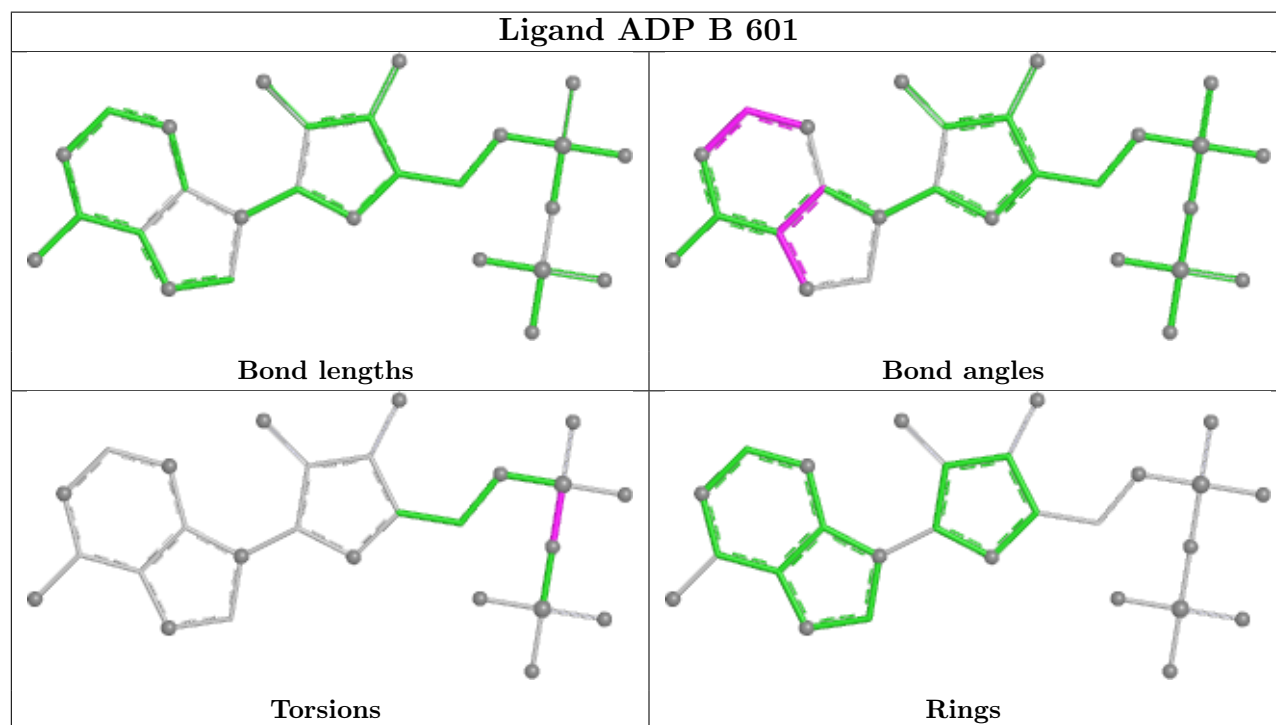
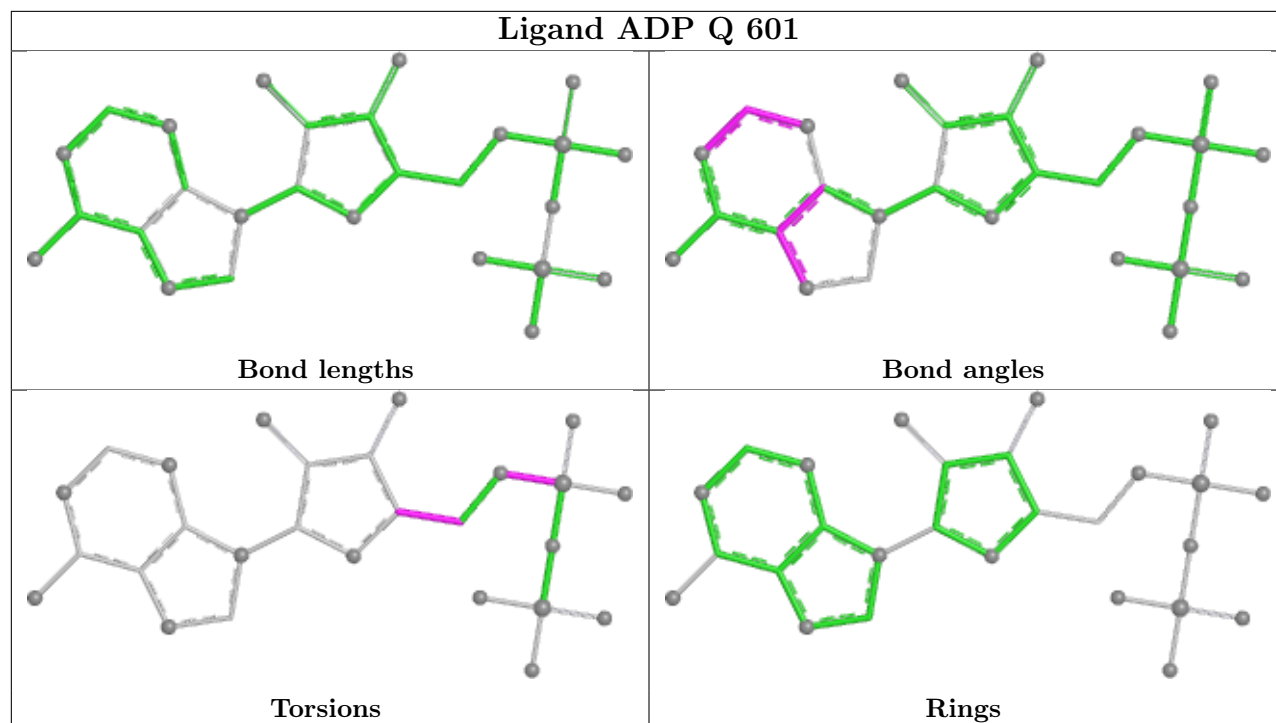
Mol	Chain	Res	Type	Clashes	Symm-Clashes
13	E	603	AF3	1	0
11	D	601	ADP	1	0
11	d	601	ADP	2	0
11	g	601	ADP	3	0
13	h	603	AF3	2	0
11	e	601	ADP	1	0
13	G	603	AF3	1	0
13	a	603	AF3	1	0
13	q	603	AF3	1	0
13	z	603	AF3	3	0
11	G	601	ADP	3	0
11	q	601	ADP	2	0
11	b	601	ADP	2	0

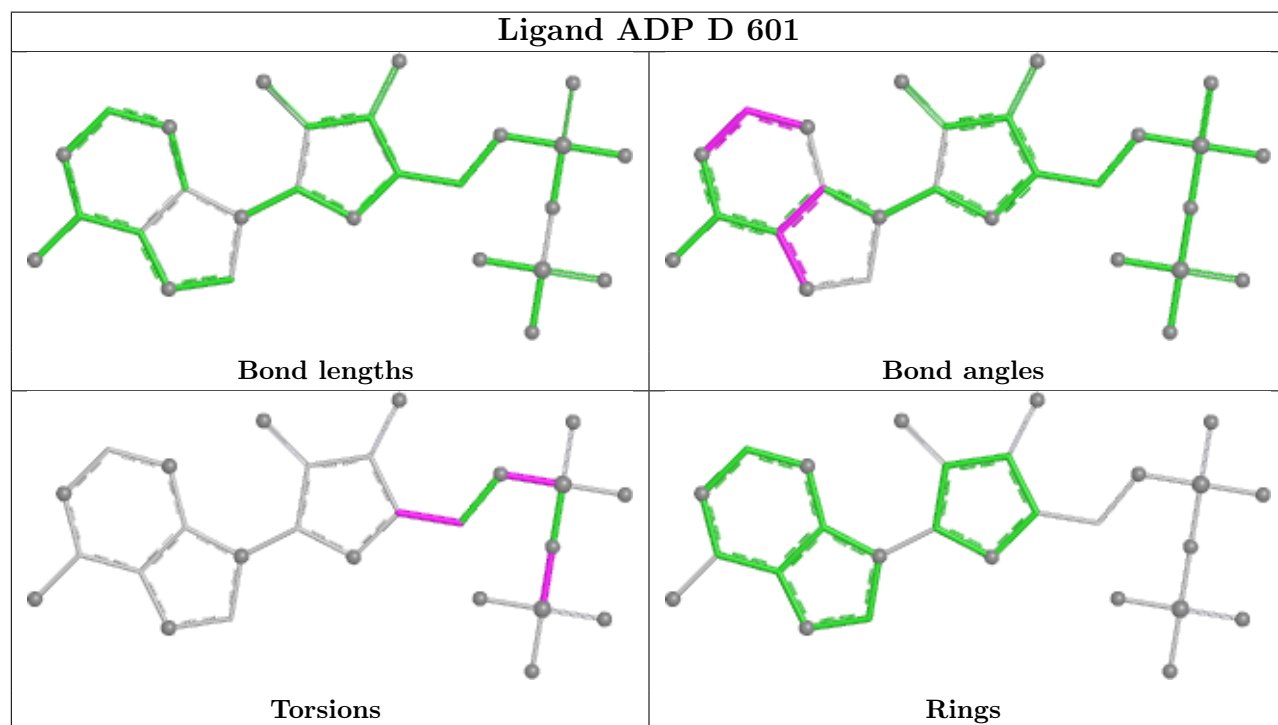
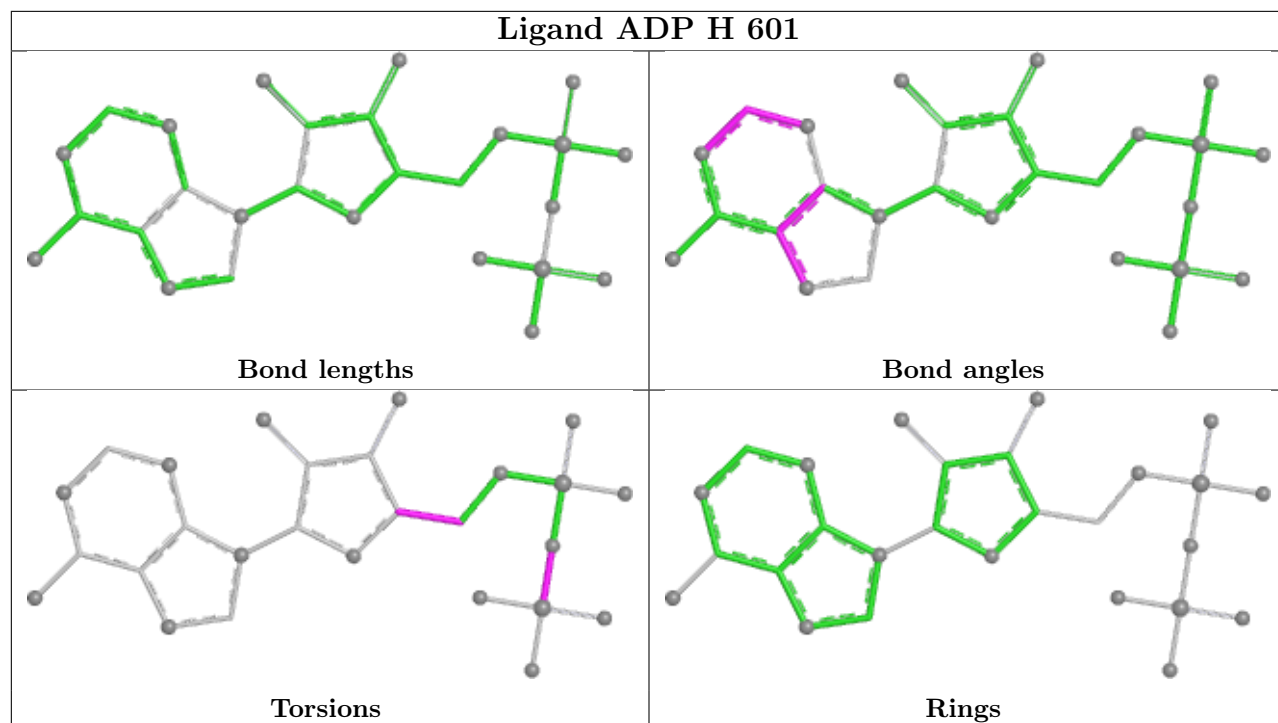
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

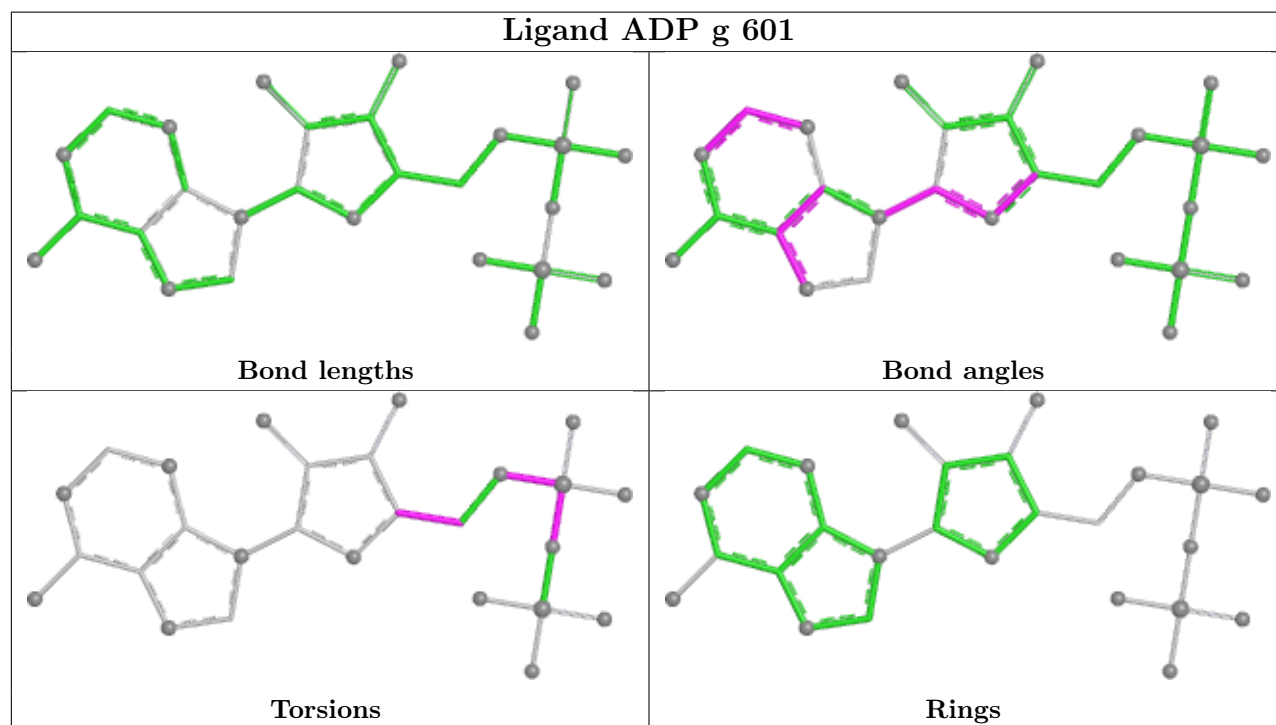
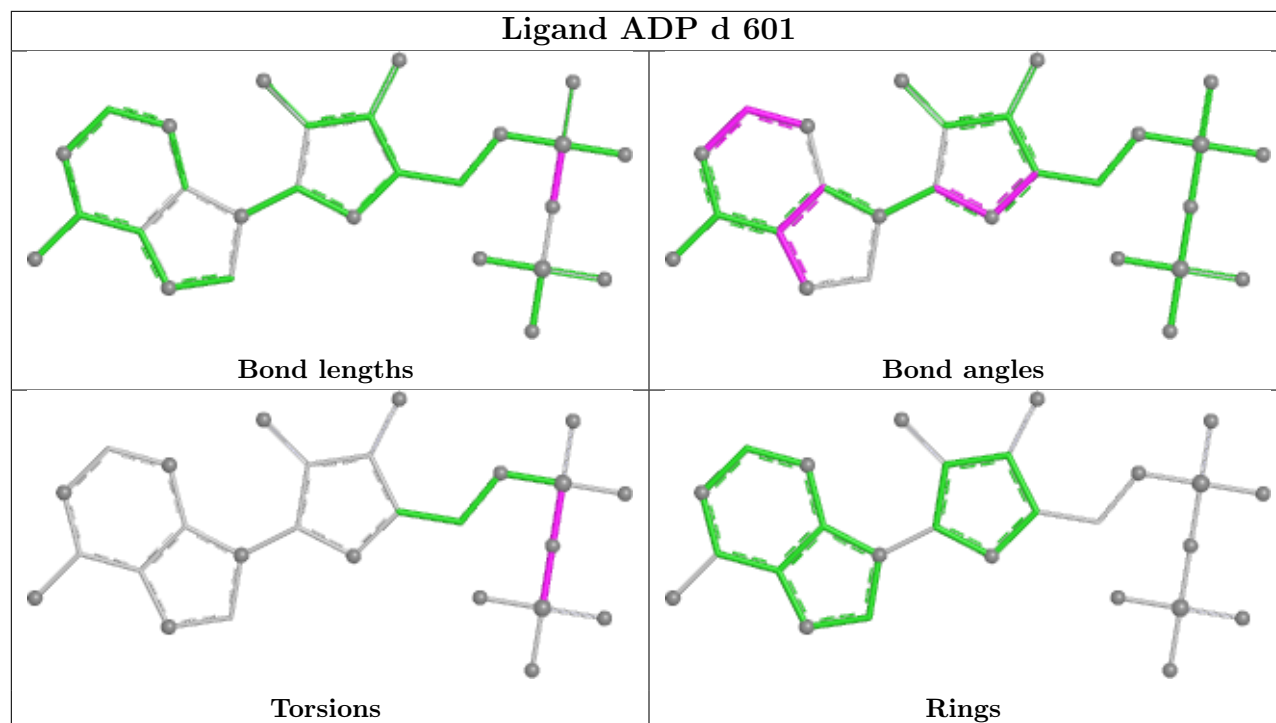


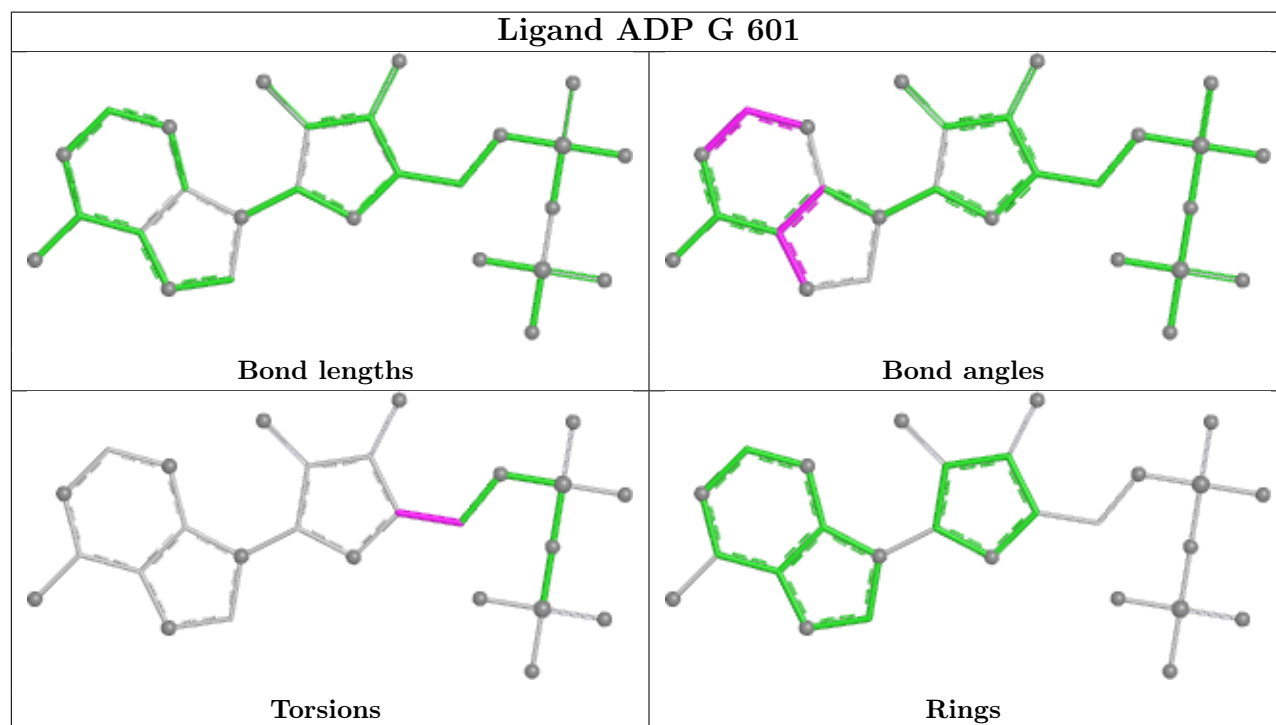
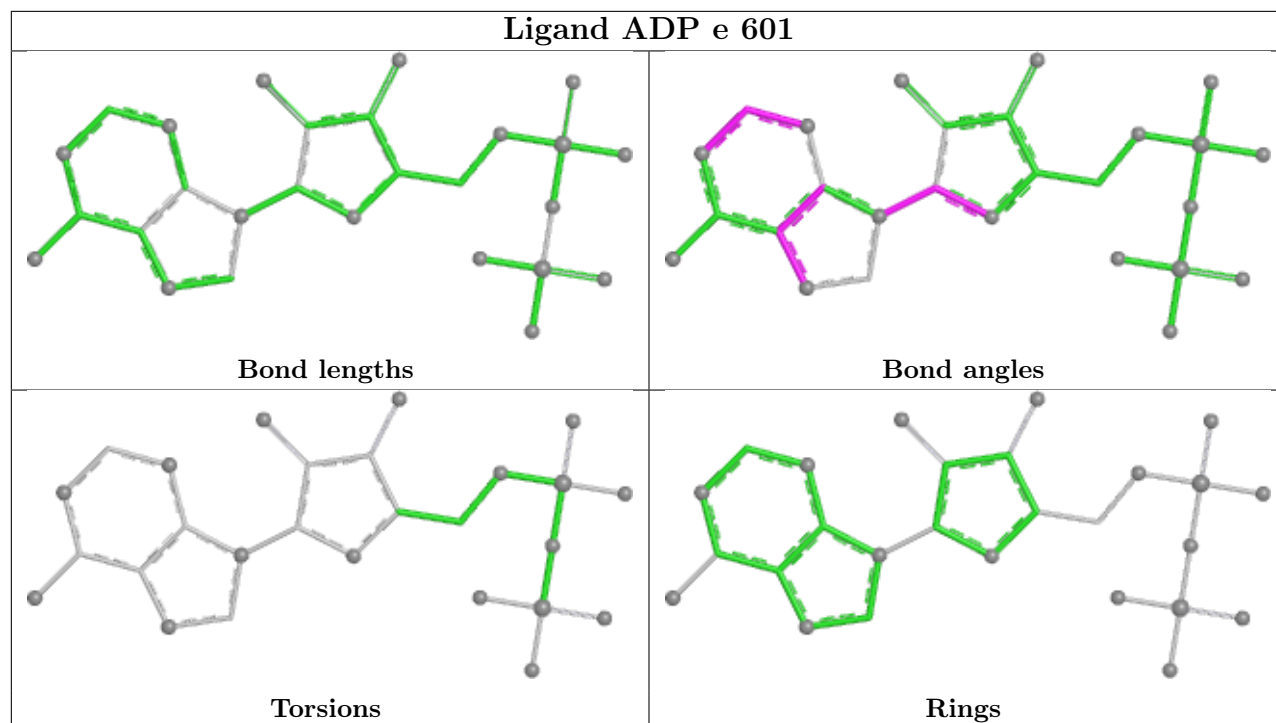


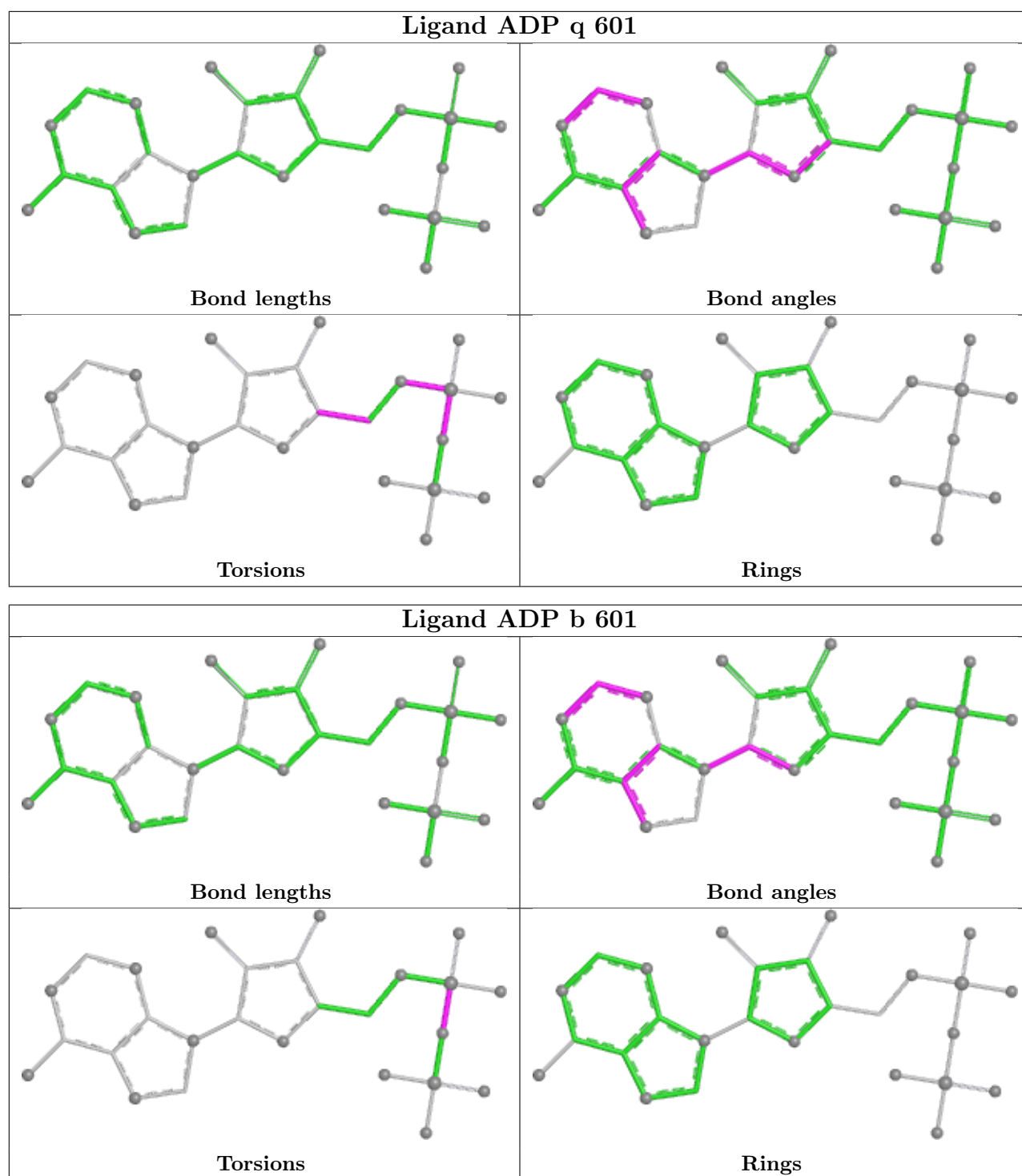












5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

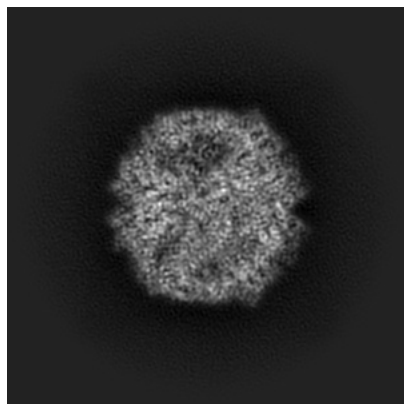
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-49604. These allow visual inspection of the internal detail of the map and identification of artifacts.

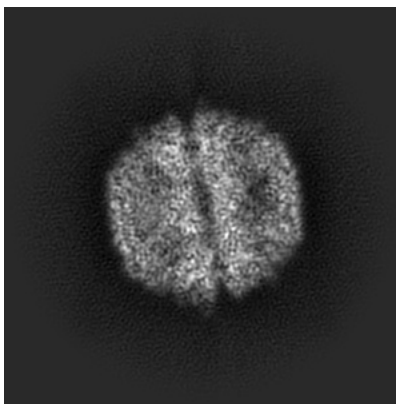
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

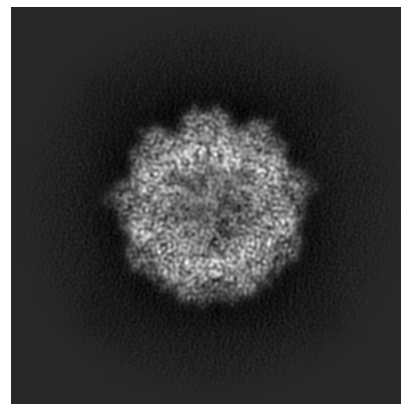
6.1.1 Primary map



X

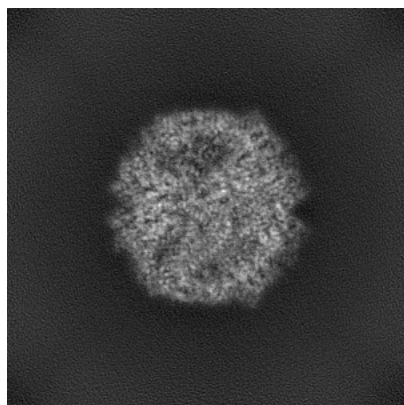


Y

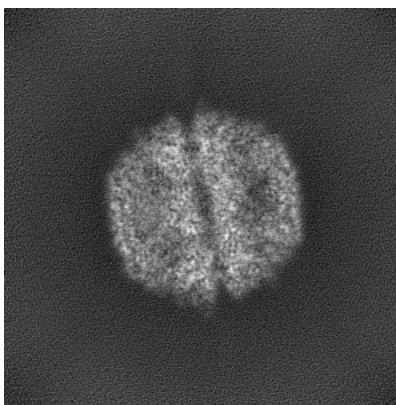


Z

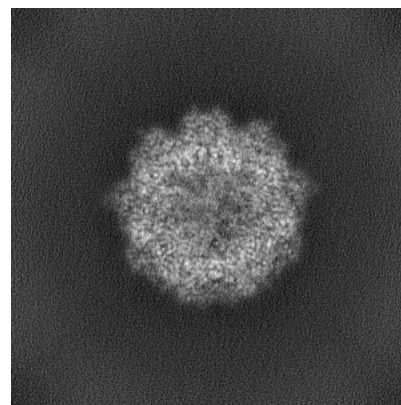
6.1.2 Raw map



X



Y

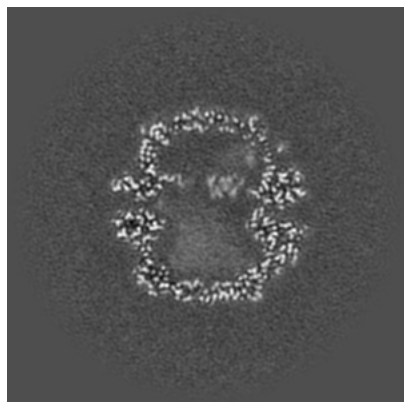


Z

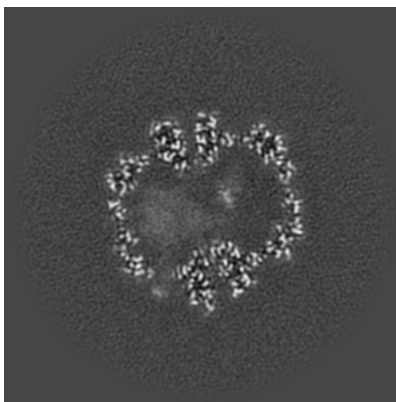
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

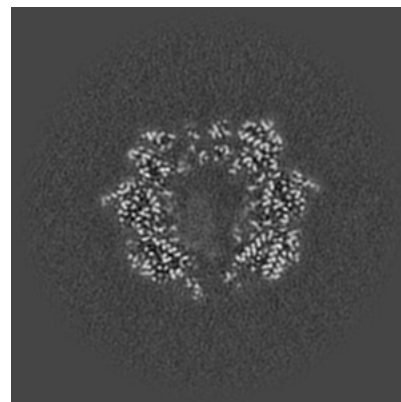
6.2.1 Primary map



X Index: 150

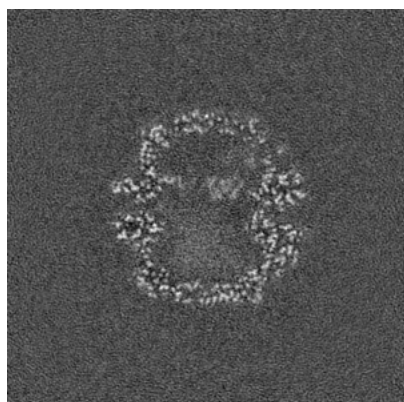


Y Index: 150

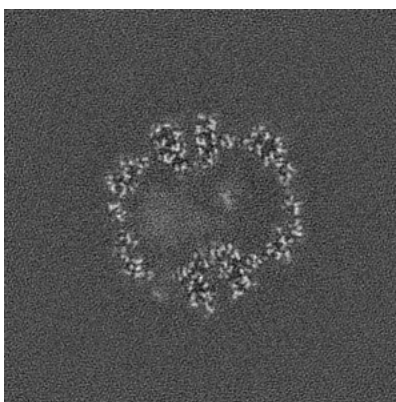


Z Index: 150

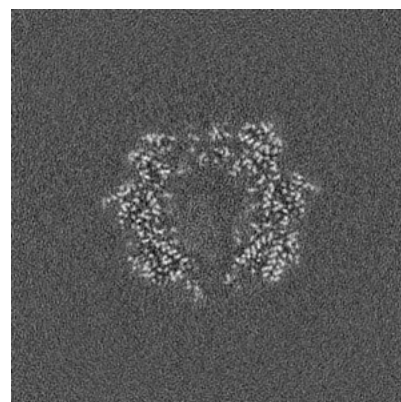
6.2.2 Raw map



X Index: 150



Y Index: 150

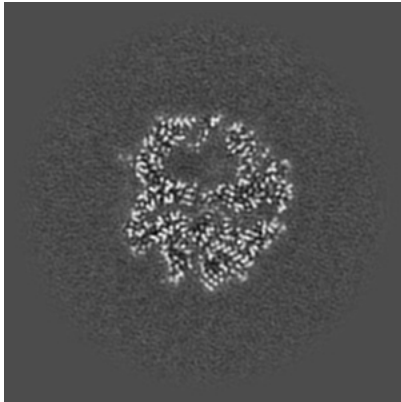


Z Index: 150

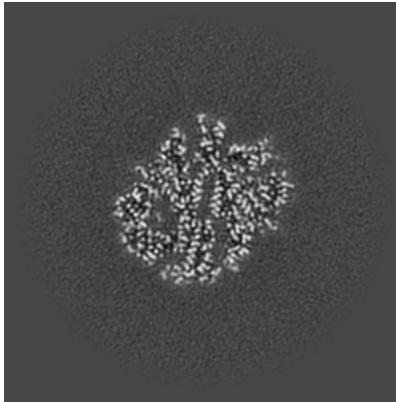
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

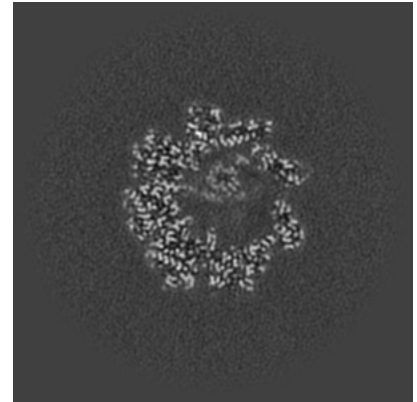
6.3.1 Primary map



X Index: 185

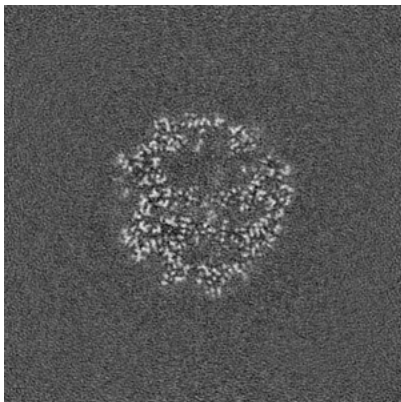


Y Index: 109

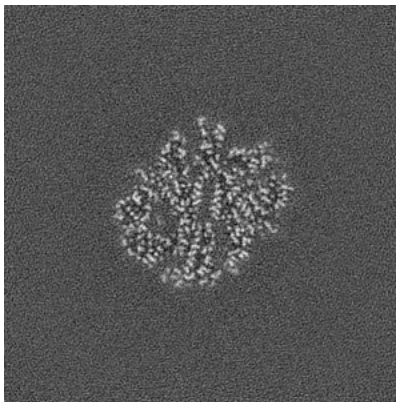


Z Index: 171

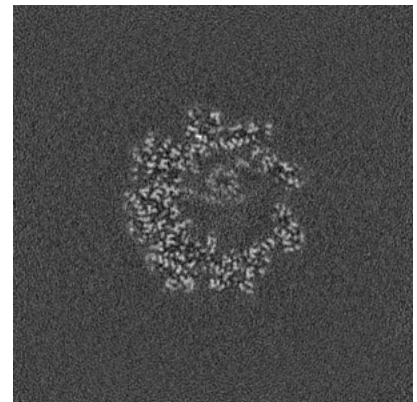
6.3.2 Raw map



X Index: 181



Y Index: 109

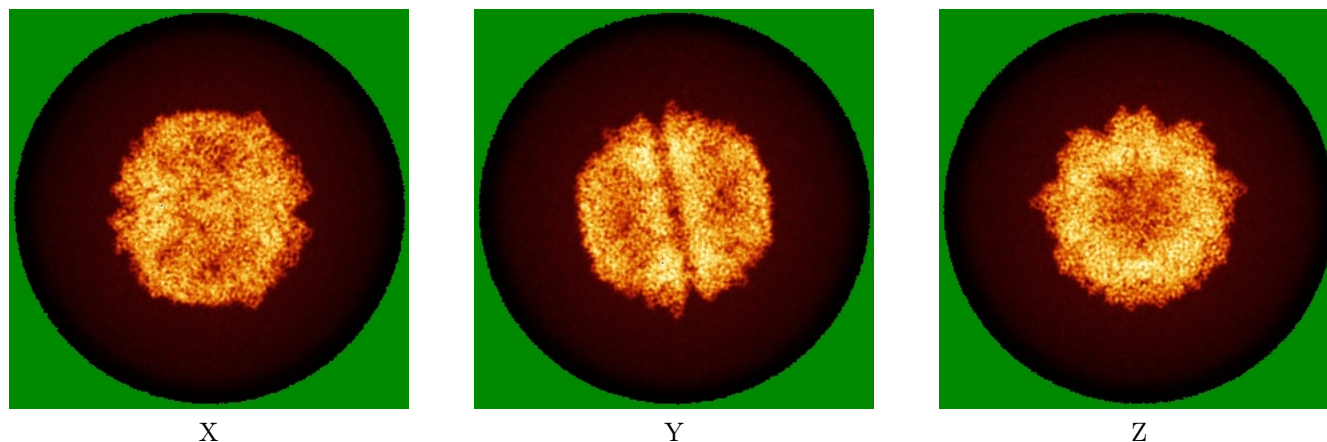


Z Index: 171

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

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

6.4.1 Primary map

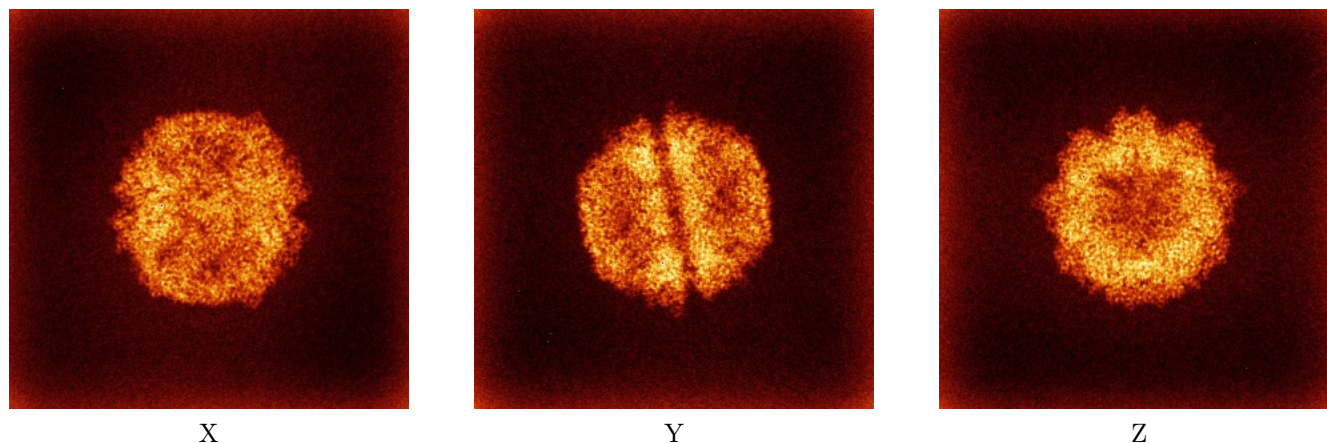


X

Y

Z

6.4.2 Raw map



X

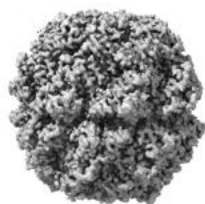
Y

Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



X



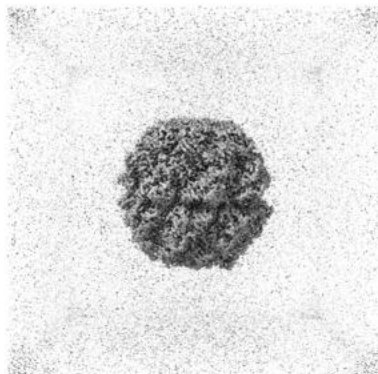
Y



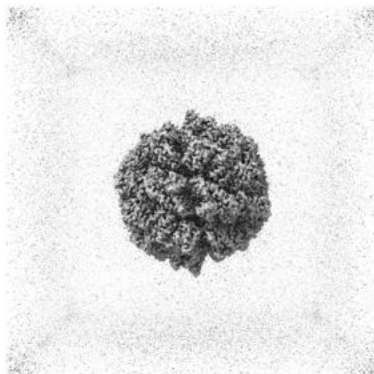
Z

The images above show the 3D surface view of the map at the recommended contour level 0.1. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

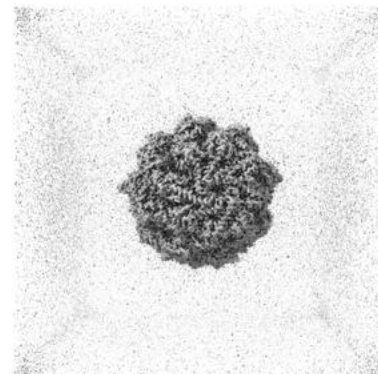
6.5.2 Raw map



X



Y



Z

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

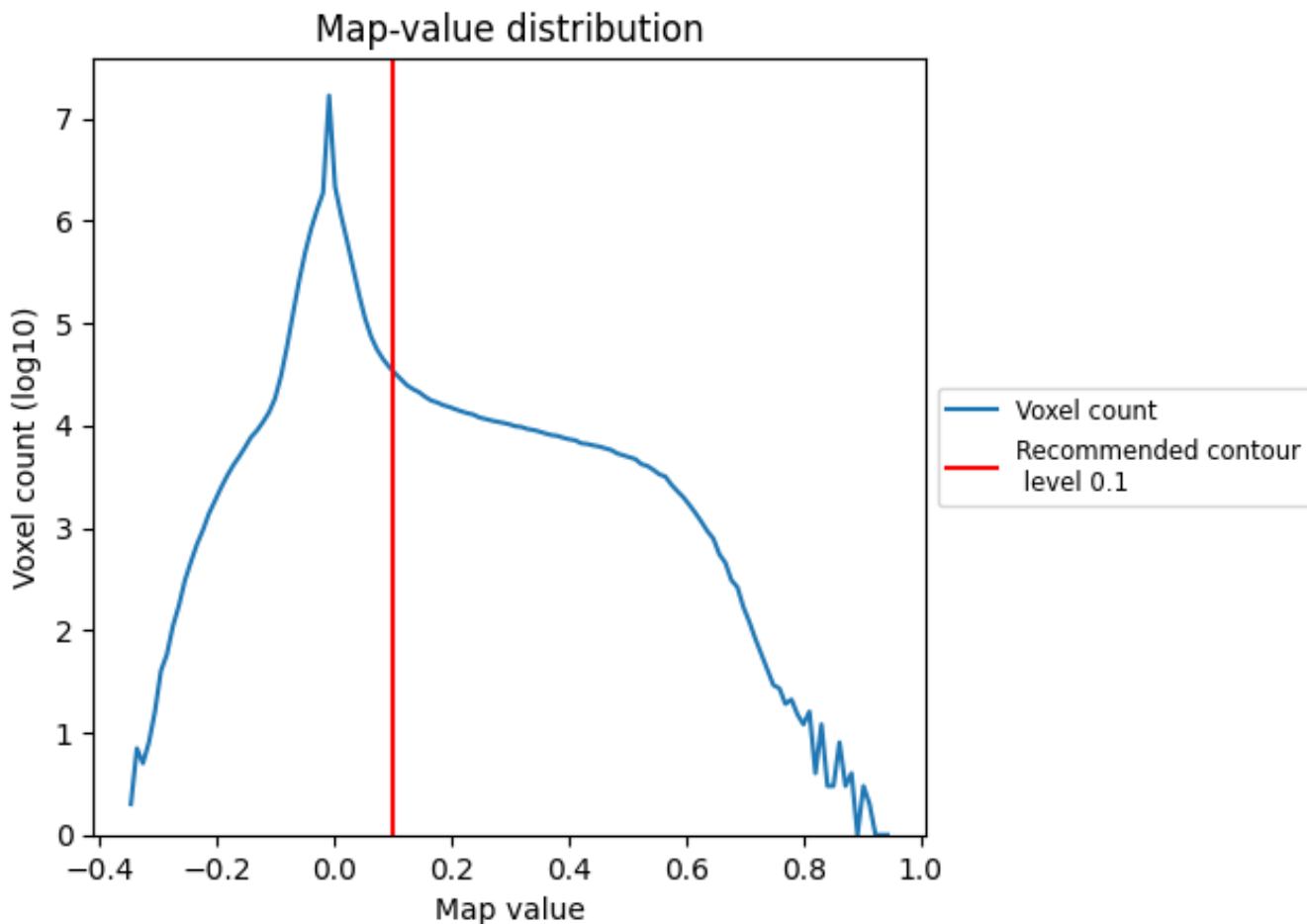
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

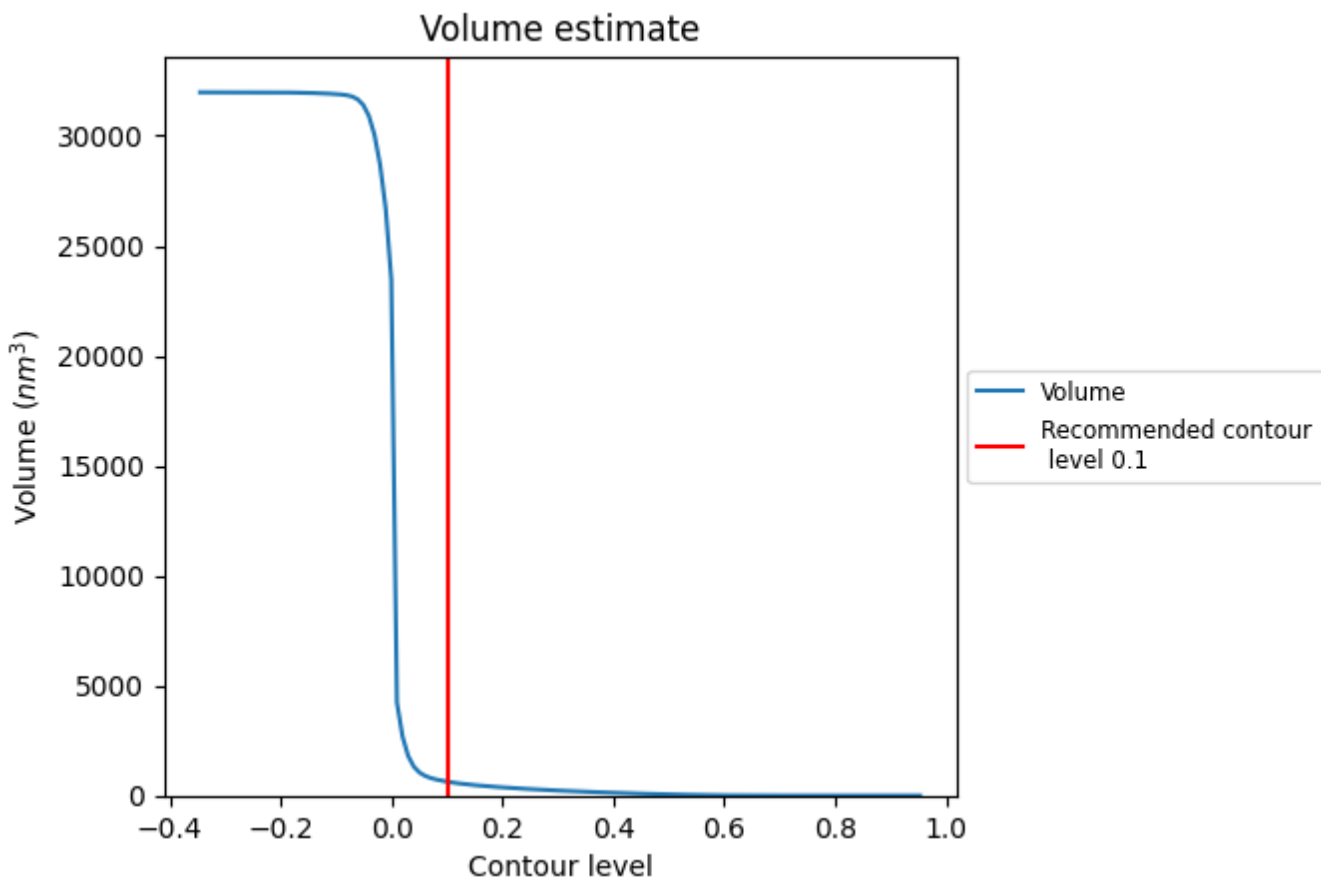
This section contains the results of statistical analysis of the map.

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.

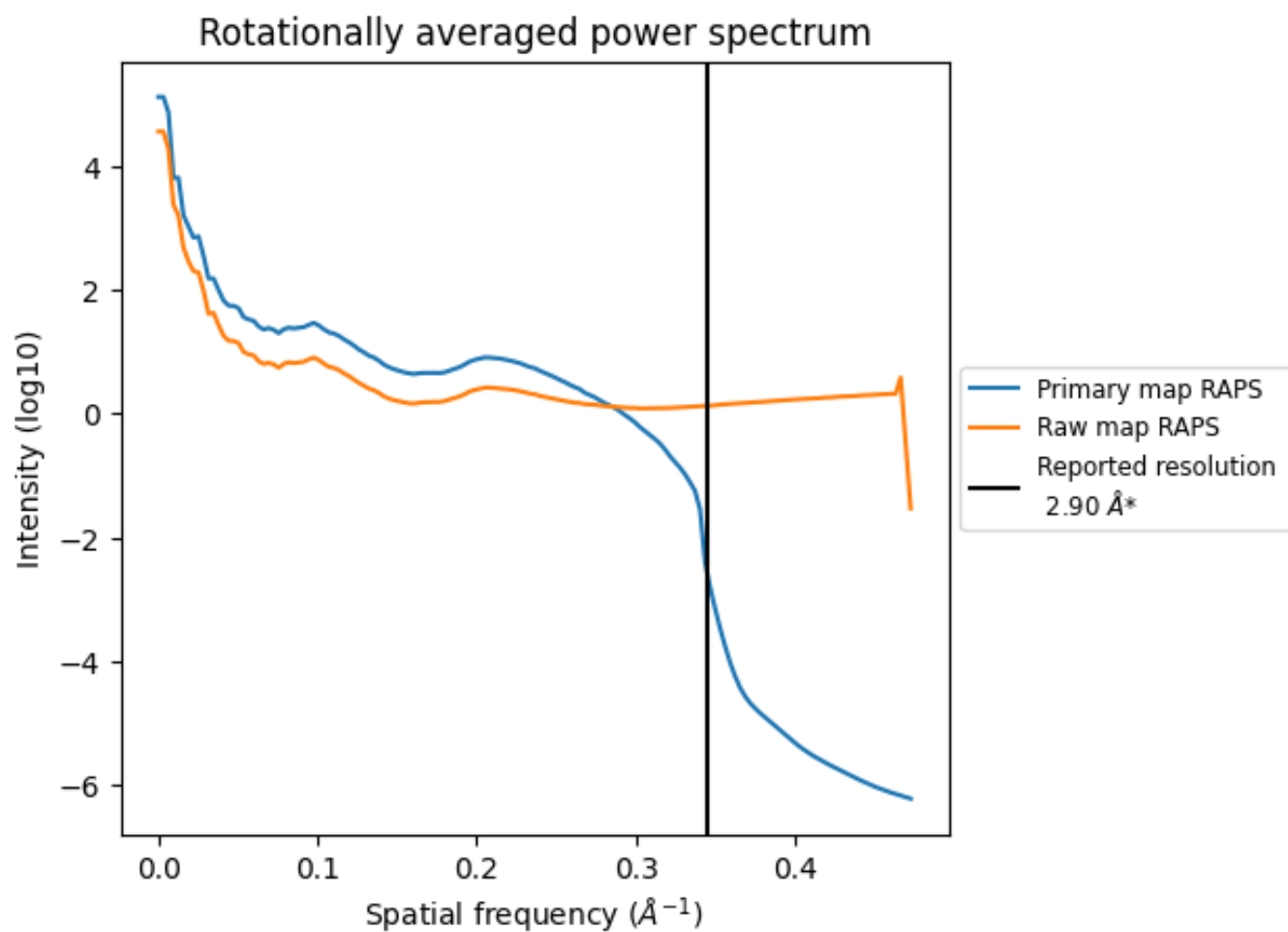
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 630 nm³; this corresponds to an approximate mass of 569 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

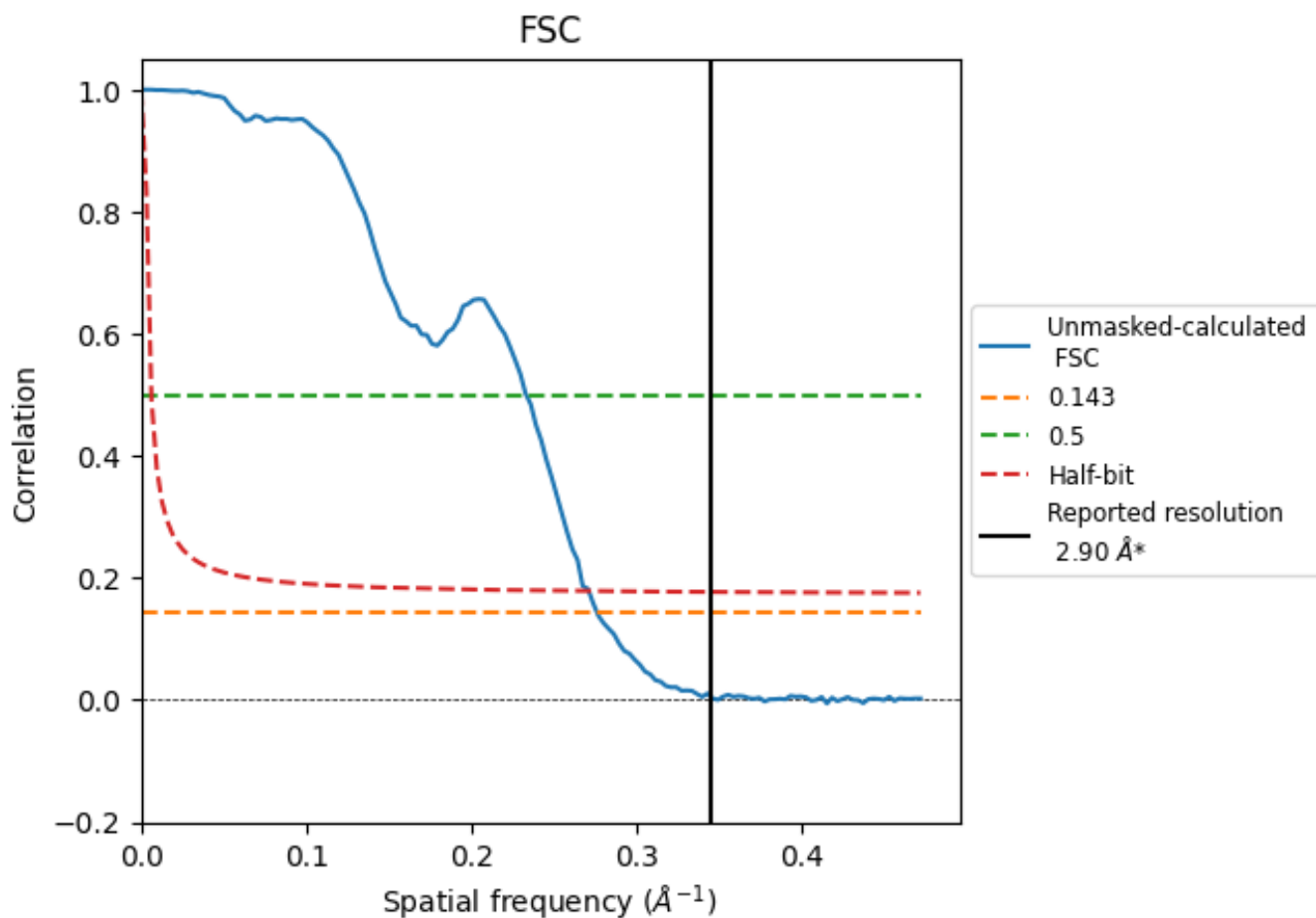


*Reported resolution corresponds to spatial frequency of 0.345 Å⁻¹

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 0.345 Å⁻¹

8.2 Resolution estimates [i](#)

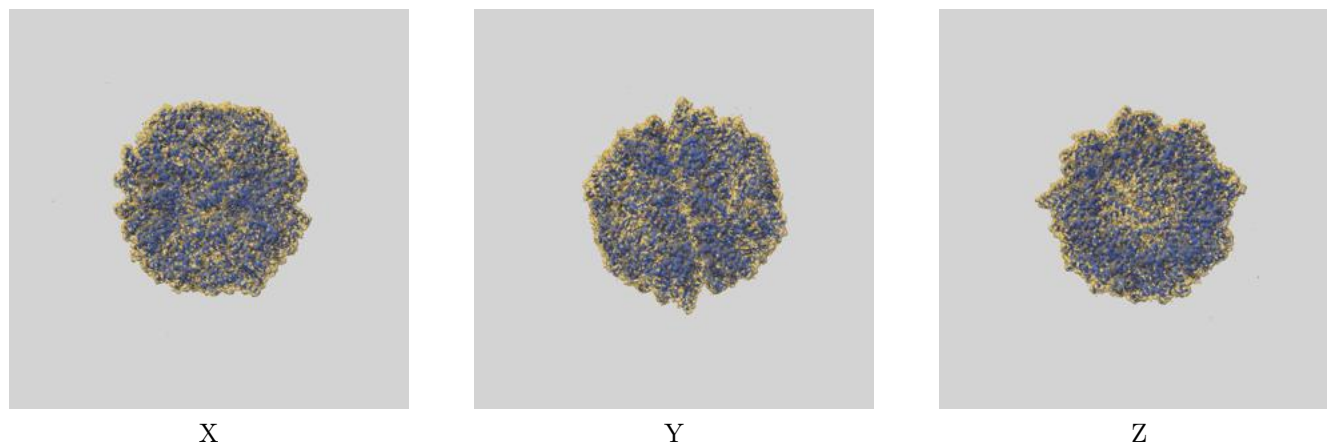
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.90	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.62	4.28	3.68

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.62 differs from the reported value 2.9 by more than 10 %

9 Map-model fit [i](#)

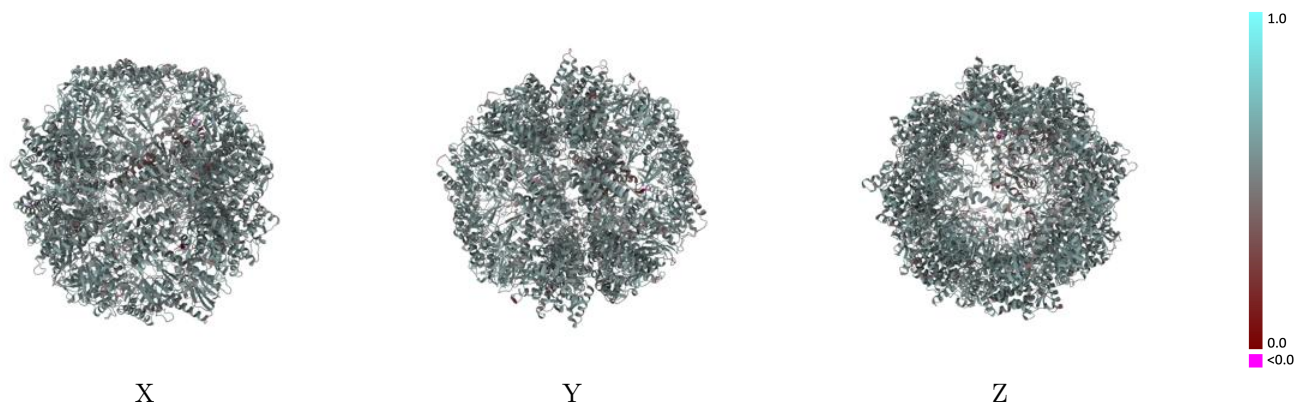
This section contains information regarding the fit between EMDB map EMD-49604 and PDB model 9NOQ. Per-residue inclusion information can be found in section [3](#) on page [12](#).

9.1 Map-model overlay [i](#)



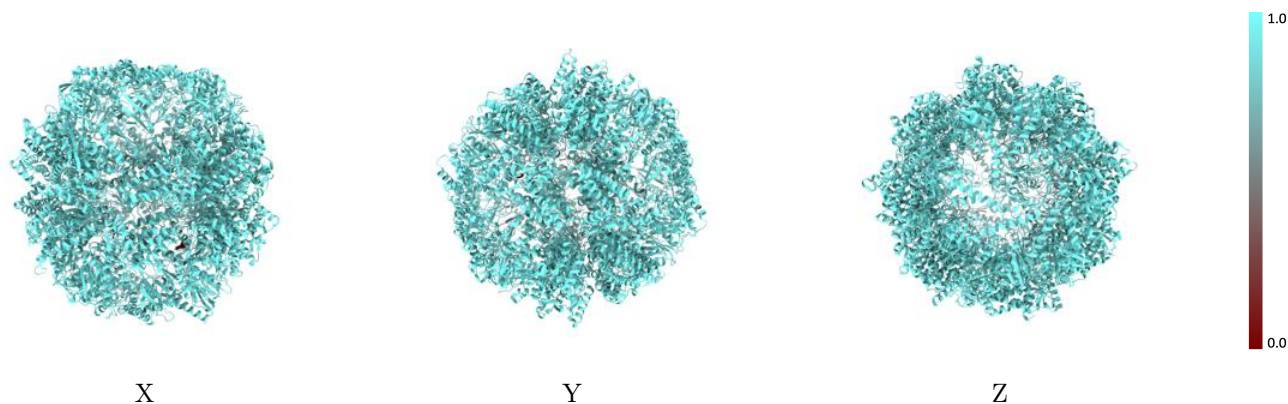
The images above show the 3D surface view of the map at the recommended contour level 0.1 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



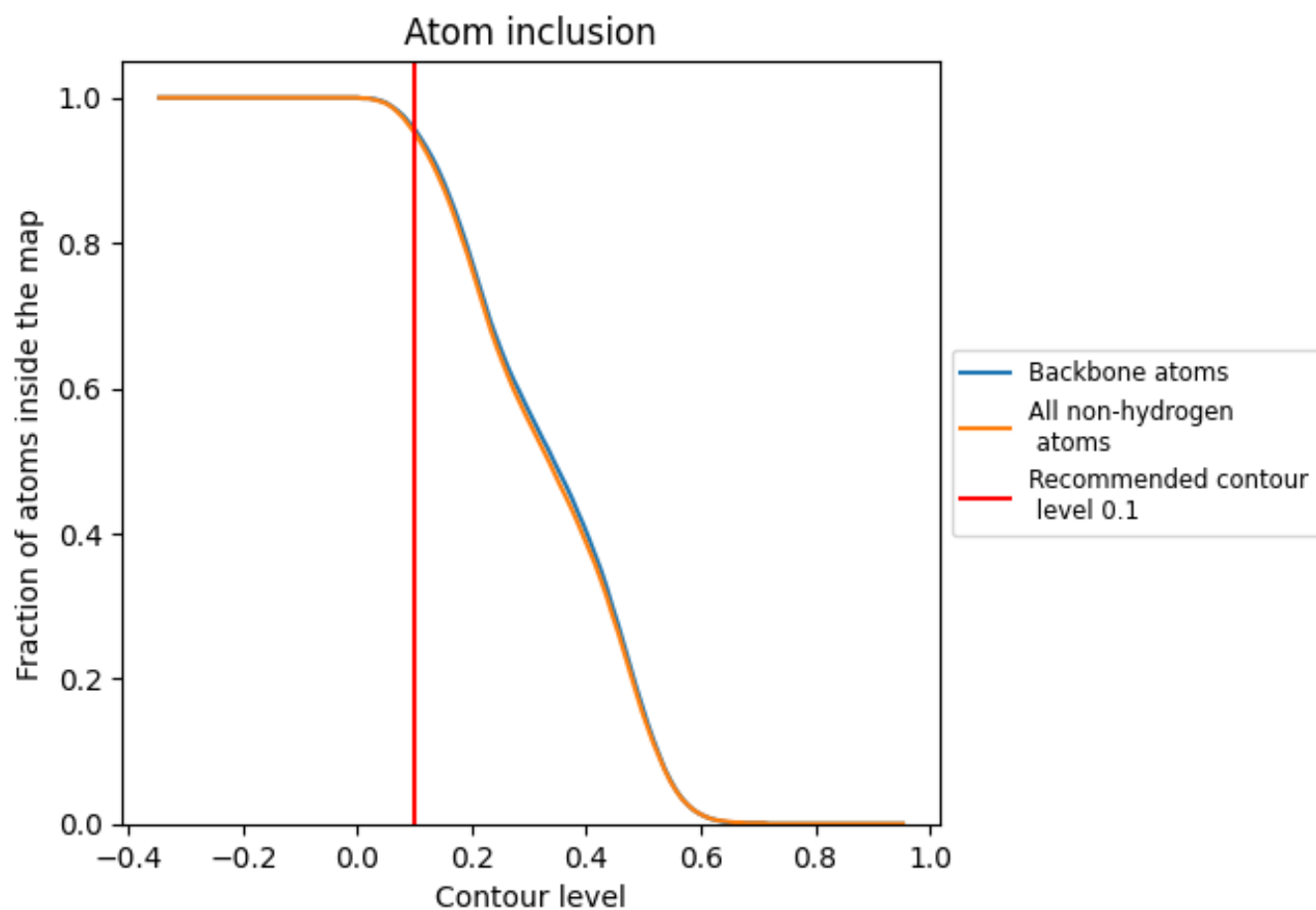
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.1).







































9.4 Atom inclusion [i](#)



At the recommended contour level, 96% of all backbone atoms, 95% 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 (0.1) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9520	 0.5370
A	 0.9560	 0.5400
B	 0.9640	 0.5470
D	 0.9580	 0.5440
E	 0.9550	 0.5400
G	 0.9550	 0.5420
H	 0.9590	 0.5430
N	 0.6570	 0.3900
P	 0.8490	 0.3940
Q	 0.9470	 0.5370
Z	 0.9580	 0.5410
a	 0.9570	 0.5390
b	 0.9630	 0.5460
d	 0.9580	 0.5410
e	 0.9520	 0.5390
g	 0.9600	 0.5420
h	 0.9640	 0.5480
q	 0.9530	 0.5380
z	 0.9540	 0.5390

