Full wwPDB EM Validation Report ⓘ

Apr 20, 2024 – 01:33 PM EDT

PDB ID	:	8F29
EMDB ID	:	EMD-28809
Title	:	Yeast ATP synthase in conformation-1 at pH 6
Authors	:	Sharma, S.; Patel, H.; Luo, M.; Mueller, D.M.; Liao, M.
Deposited on	:	2022-11-07
Resolution	:	4.00 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

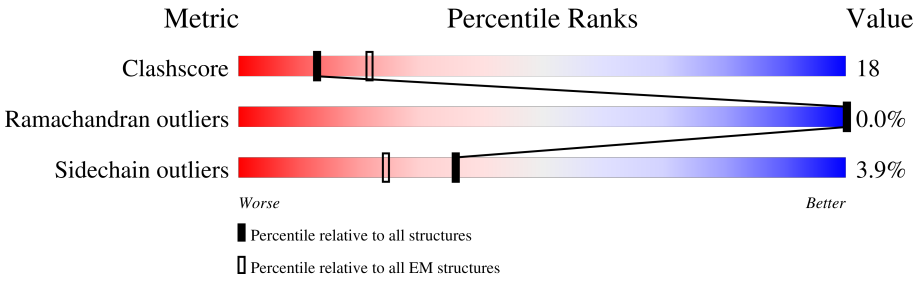
EMDB validation analysis	:	0.0.1.dev92
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36.2

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 4.00 Å.

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



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

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=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 <=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	Y	187	7% 66% 33% ·
2	G	261	34% 62% 36% ·
3	H	132	58% 65% 34% ·
4	I	59	53% 92% 8%
5	Z	155	27% 70% 28% ·
6	7	171	39% 61% 35% ·
7	6	89	66% 60% 37% ·
8	U	85	68% 66% 34%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
9	K	75	56% 43% 56%
9	L	75	57% 49% 44% 5%
9	M	75	37% 51% 45%
9	N	75	37% 55% 41%
9	O	75	45% 49% 47%
9	P	75	36% 40% 57%
9	Q	75	24% 29% 64% 5%
9	R	75	49% 39% 55% 5%
9	S	75	48% 45% 52%
9	T	75	44% 48% 47%
10	8	41	20% 46% 49%
11	X	224	45% 46% 47% 5%
12	J	37	43% 86% 14%
13	A	507	10% 64% 35%
13	B	507	16% 60% 38%
13	C	507	69% 30%
14	D	473	12% 65% 35%
14	E	473	20% 65% 34%
14	F	473	70% 29%

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
17	PO4	D	503	-	-	X	-

2 Entry composition

There are 17 unique types of molecules in this entry. The entry contains 38906 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 ATP synthase subunit 5, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	Y	187	Total	C	N	O	S	0	0
			1414	900	242	271	1		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Y	168	LEU	ILE	conflict	UNP P09457
Y	188	ILE	ASN	conflict	UNP P09457

- Molecule 2 is a protein called ATP synthase subunit gamma, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	G	261	Total	C	N	O	S	0	0
			2028	1273	352	393	10		

There are 11 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
G	14	ASN	LYS	conflict	UNP P38077
G	15	ALA	ASN	conflict	UNP P38077
G	?	-	VAL	deletion	UNP P38077
G	?	-	GLU	deletion	UNP P38077
G	?	-	ALA	deletion	UNP P38077
G	?	-	THR	deletion	UNP P38077
G	?	-	GLU	deletion	UNP P38077
G	?	-	THR	deletion	UNP P38077
G	?	-	GLY	deletion	UNP P38077
G	?	-	ALA	deletion	UNP P38077
G	?	-	PRO	deletion	UNP P38077

- Molecule 3 is a protein called ATP synthase subunit delta, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	H	132	Total	C	N	O	S	0	0
			990	624	165	199	2		

- Molecule 4 is a protein called ATP synthase subunit epsilon, mitochondrial.

Mol	Chain	Residues	Atoms				AltConf	Trace
4	I	59	Total	C	N	O	0	0
			392	243	71	78		

- Molecule 5 is a protein called ATP synthase subunit 4, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	Z	155	Total	C	N	O	S	0	0
			1231	777	211	242	1		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Z	177	VAL	ILE	conflict	UNP P05626

- Molecule 6 is a protein called ATP synthase subunit d, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	7	171	Total	C	N	O	S	0	0
			1363	856	236	268	3		

- Molecule 7 is a protein called ATP synthase subunit H, mitochondrial.

Mol	Chain	Residues	Atoms				AltConf	Trace
7	6	89	Total	C	N	O	0	0
			710	441	114	155		

- Molecule 8 is a protein called ATP synthase subunit f, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	U	85	Total	C	N	O	S	0	0
			639	420	109	109	1		

- Molecule 9 is a protein called ATP synthase subunit 9, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	S	74	Total	C	N	O	S	0	0
			533	357	82	90	4		
9	T	74	Total	C	N	O	S	0	0
			533	357	82	90	4		
9	K	75	Total	C	N	O	S	0	0
			537	359	83	91	4		
9	L	74	Total	C	N	O	S	0	0
			533	357	82	90	4		
9	M	74	Total	C	N	O	S	0	0
			533	357	82	90	4		
9	N	74	Total	C	N	O	S	0	0
			533	357	82	90	4		
9	O	74	Total	C	N	O	S	0	0
			533	357	82	90	4		
9	P	75	Total	C	N	O	S	0	0
			537	359	83	91	4		
9	Q	74	Total	C	N	O	S	0	0
			533	357	82	90	4		
9	R	74	Total	C	N	O	S	0	0
			533	357	82	90	4		

- Molecule 10 is a protein called ATP synthase protein 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	8	41	Total	C	N	O	S	0	0
			356	250	51	52	3		

- Molecule 11 is a protein called ATP synthase subunit a.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	X	221	Total	C	N	O	S	0	0
			1750	1196	262	282	10		

- Molecule 12 is a protein called ATP synthase subunit J, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	J	37	Total	C	N	O	S	0	0
			292	197	45	48	2		

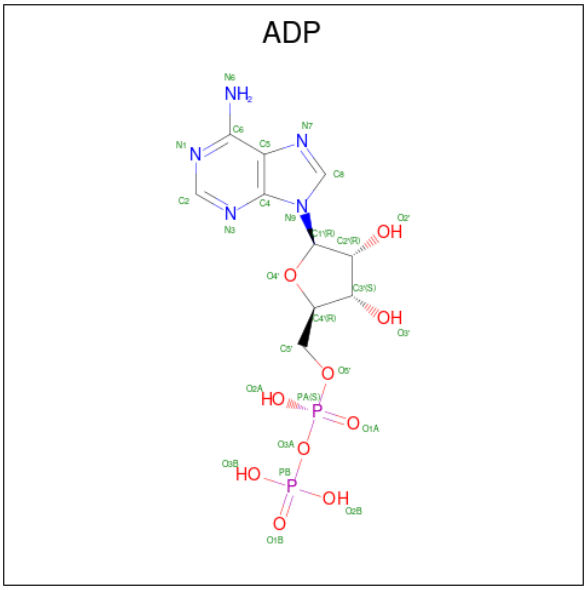
- Molecule 13 is a protein called ATP synthase subunit alpha, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	A	507	Total	C	N	O	S	0	0
			3858	2435	679	741	3		
13	B	506	Total	C	N	O	S	0	0
			3846	2426	678	739	3		
13	C	505	Total	C	N	O	S	0	0
			3844	2426	676	739	3		

- Molecule 14 is a protein called ATP synthase subunit beta, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	D	473	Total	C	N	O	S	0	0
			3572	2262	608	696	6		
14	E	473	Total	C	N	O	S	0	0
			3572	2262	608	696	6		
14	F	472	Total	C	N	O	S	0	0
			3566	2259	607	694	6		

- Molecule 15 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
15	A	1	Total	C	N	O	P	0
			27	10	5	10	2	
15	B	1	Total	C	N	O	P	0
			27	10	5	10	2	
15	C	1	Total	C	N	O	P	0
			27	10	5	10	2	

Continued on next page...

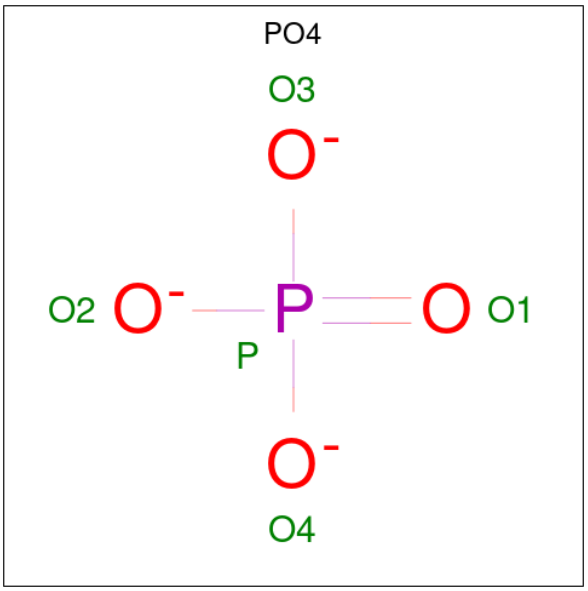
Continued from previous page...

Mol	Chain	Residues	Atoms	AltConf
15	D	1	Total C N O P 27 10 5 10 2	0
15	F	1	Total C N O P 27 10 5 10 2	0

- Molecule 16 is MAGNESIUM ION (three-letter code: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms	AltConf
16	A	1	Total Mg 1 1	0
16	B	1	Total Mg 1 1	0
16	C	1	Total Mg 1 1	0
16	D	1	Total Mg 1 1	0
16	F	1	Total Mg 1 1	0

- Molecule 17 is PHOSPHATE ION (three-letter code: PO4) (formula: O_4P) (labeled as "Ligand of Interest" by depositor).



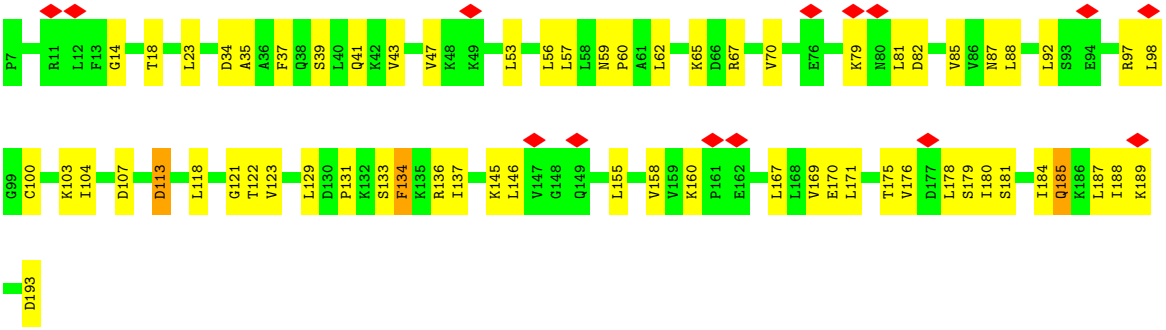
Mol	Chain	Residues	Atoms	AltConf
17	D	1	Total O P 5 4 1	0

3 Residue-property plots (i)

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.

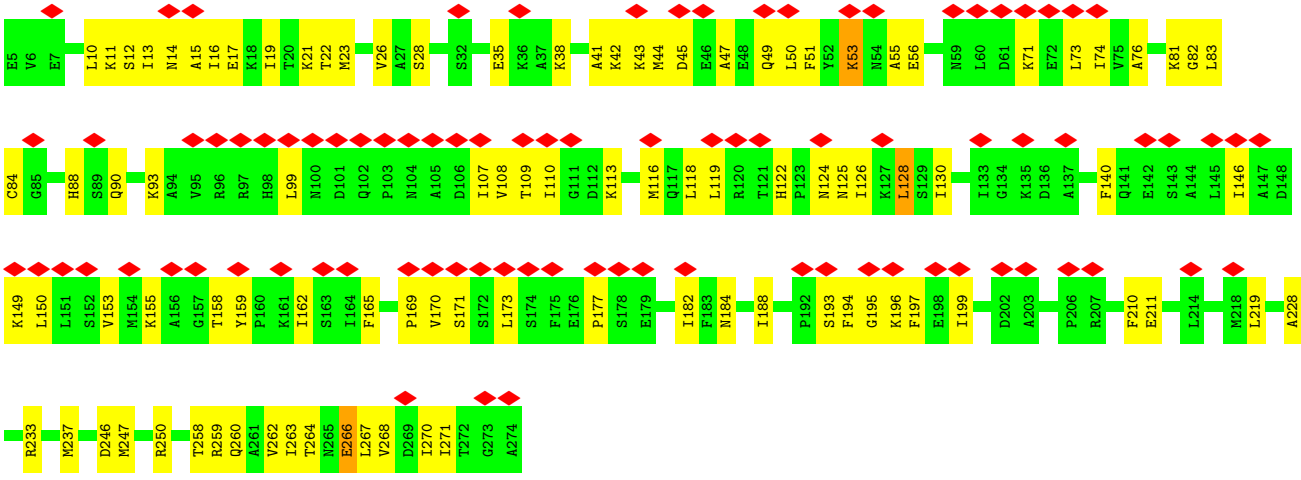
• Molecule 1: ATP synthase subunit 5, mitochondrial

Chain Y:



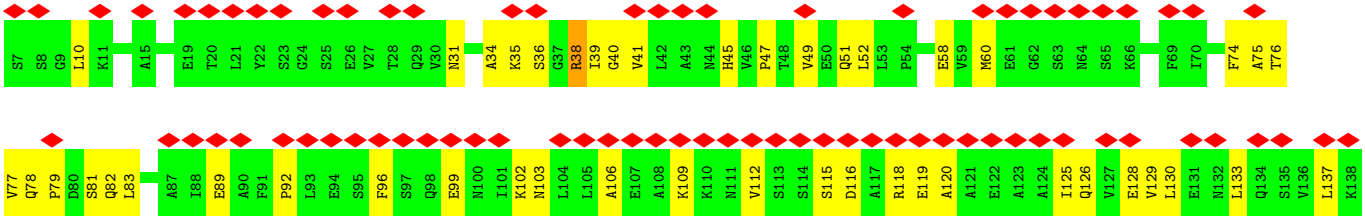
• Molecule 2: ATP synthase subunit gamma, mitochondrial

Chain G:



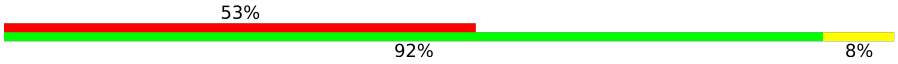
• Molecule 3: ATP synthase subunit delta, mitochondrial

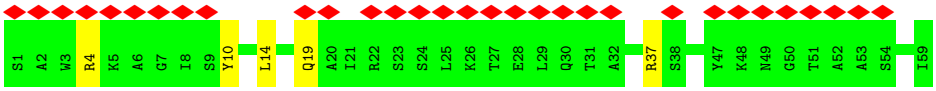
Chain H:



• Molecule 4: ATP synthase subunit epsilon, mitochondrial

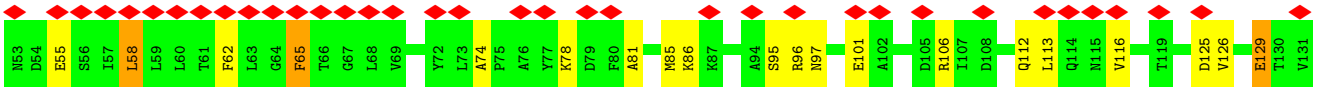
Chain I:

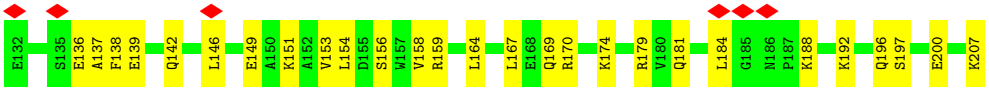




• Molecule 5: ATP synthase subunit 4, mitochondrial

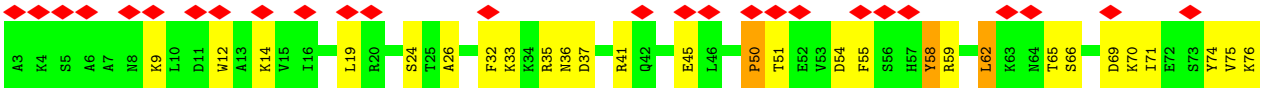
Chain Z:

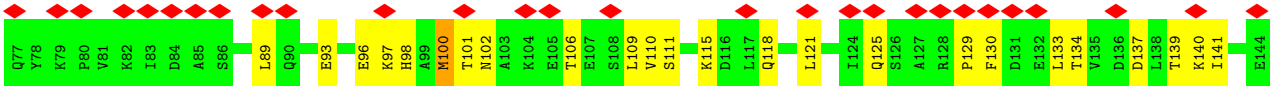


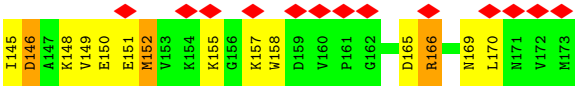


• Molecule 6: ATP synthase subunit d, mitochondrial

Chain 7:

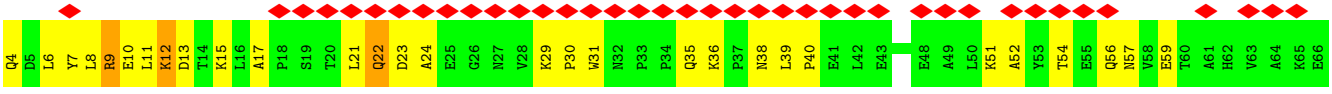


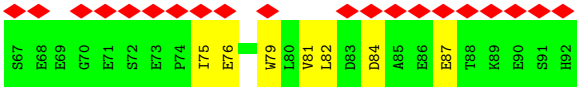




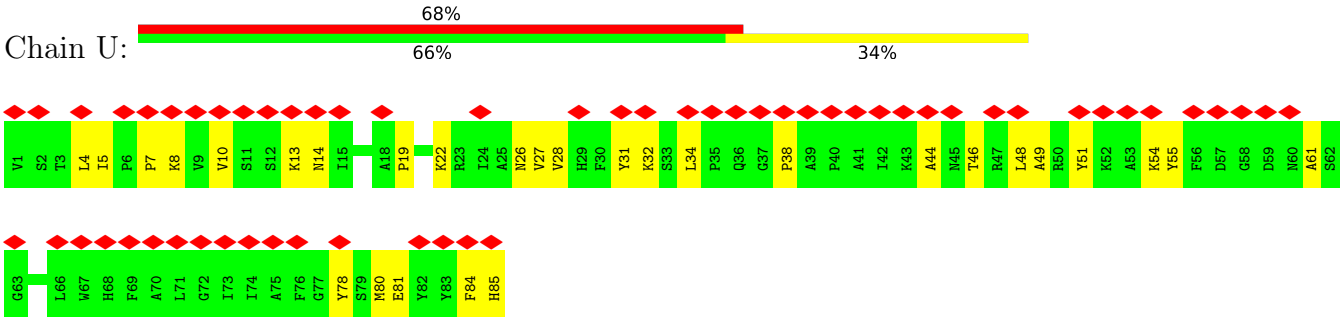
• Molecule 7: ATP synthase subunit H, mitochondrial

Chain 6:

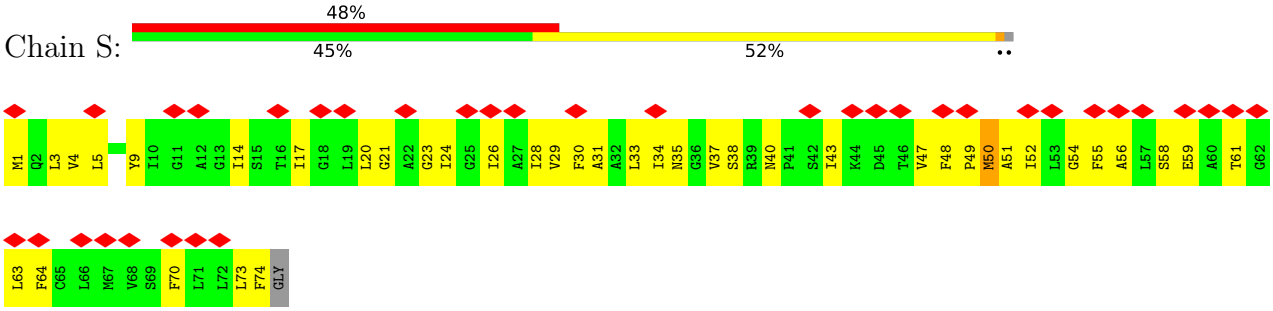




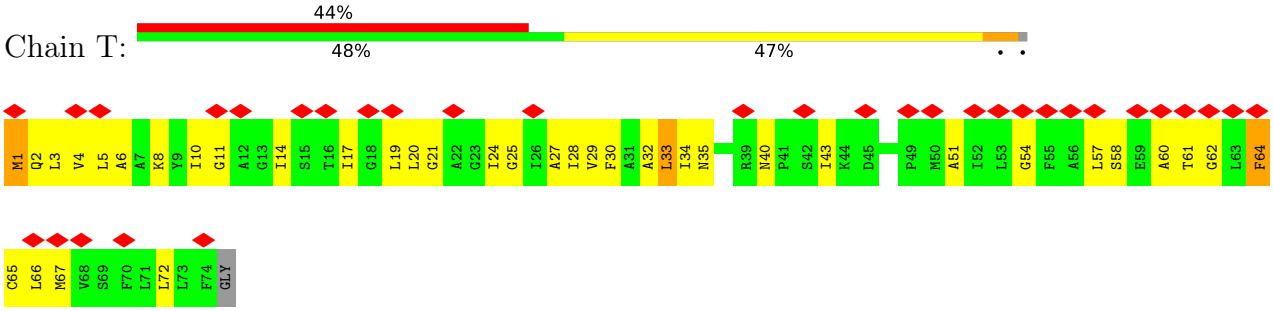
• Molecule 8: ATP synthase subunit f, mitochondrial



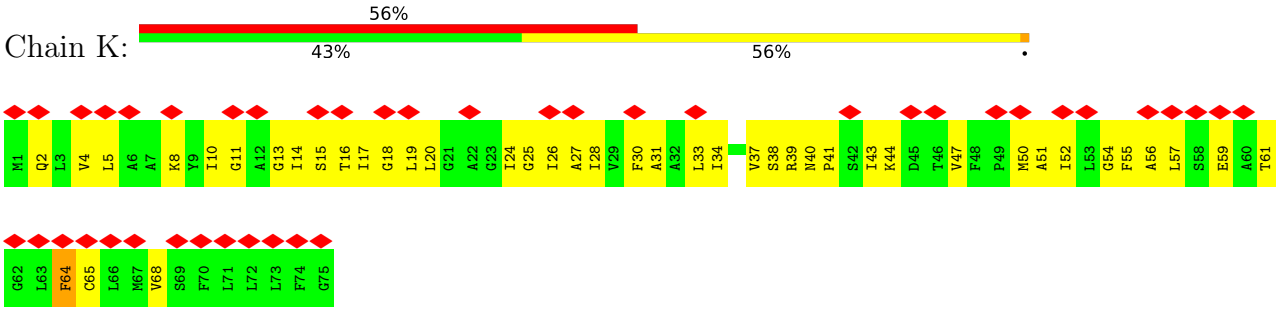
• Molecule 9: ATP synthase subunit 9, mitochondrial



• Molecule 9: ATP synthase subunit 9, mitochondrial

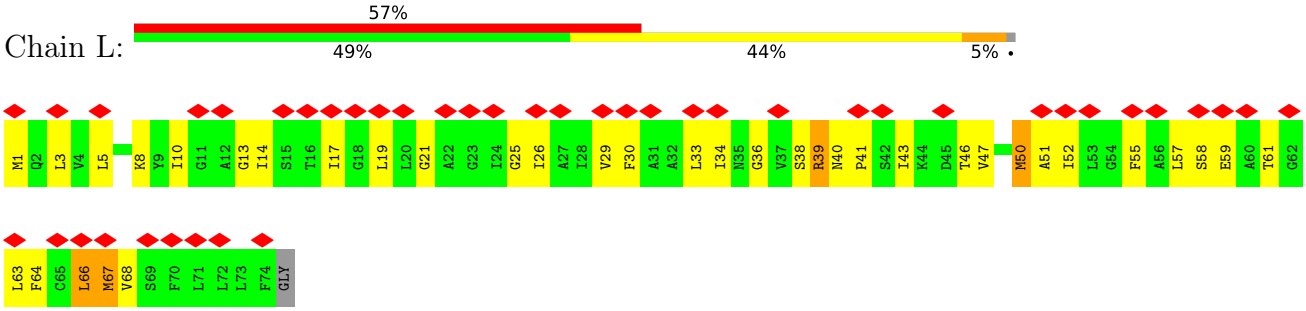


• Molecule 9: ATP synthase subunit 9, mitochondrial



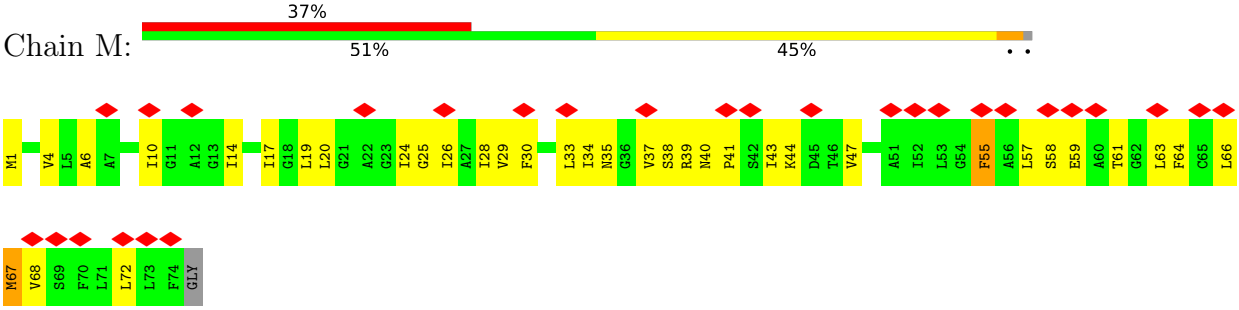
• Molecule 9: ATP synthase subunit 9, mitochondrial

Chain L:



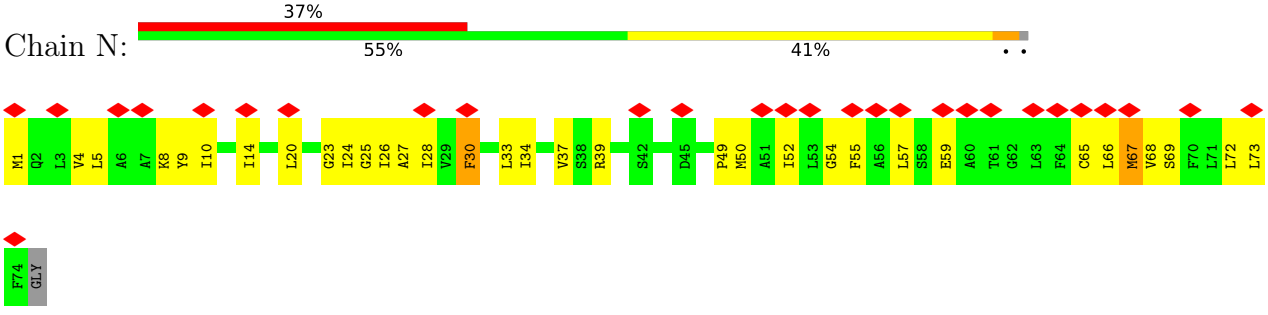
• Molecule 9: ATP synthase subunit 9, mitochondrial

Chain M:



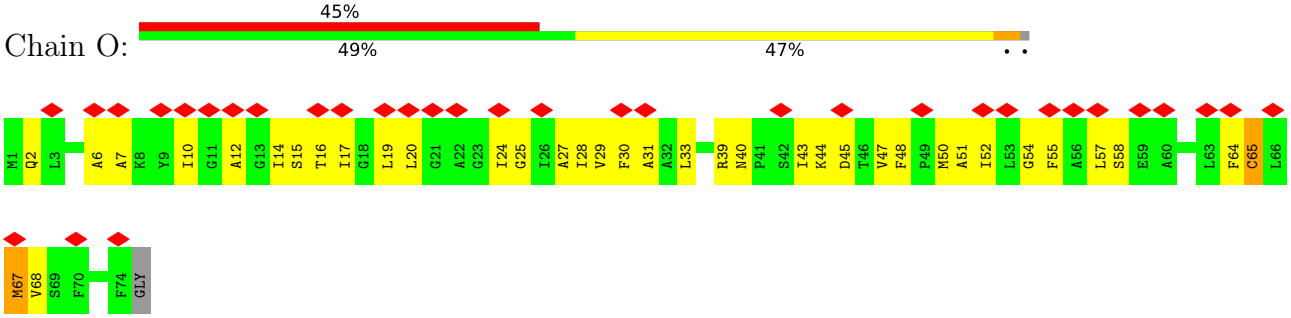
• Molecule 9: ATP synthase subunit 9, mitochondrial

Chain N:



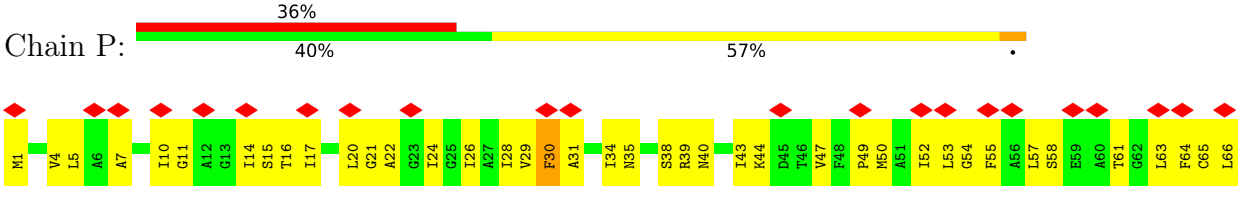
• Molecule 9: ATP synthase subunit 9, mitochondrial

Chain O:



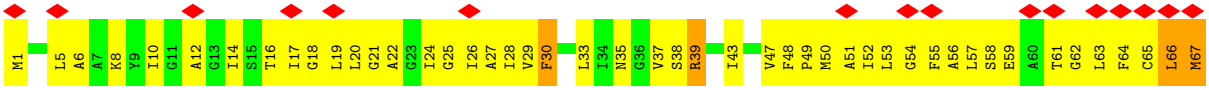
• Molecule 9: ATP synthase subunit 9, mitochondrial

Chain P:



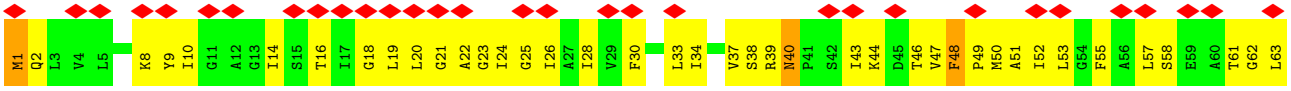
• Molecule 9: ATP synthase subunit 9, mitochondrial

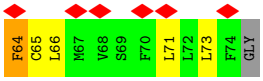
Chain Q:



• Molecule 9: ATP synthase subunit 9, mitochondrial

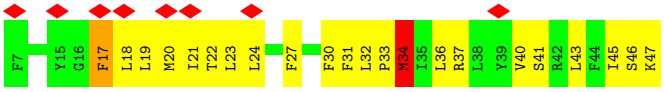
Chain R:





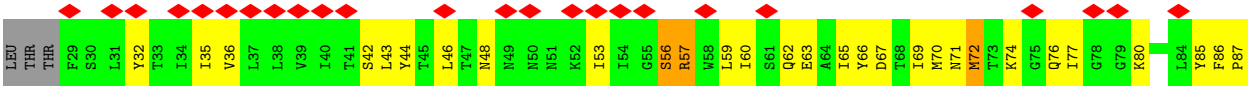
• Molecule 10: ATP synthase protein 8

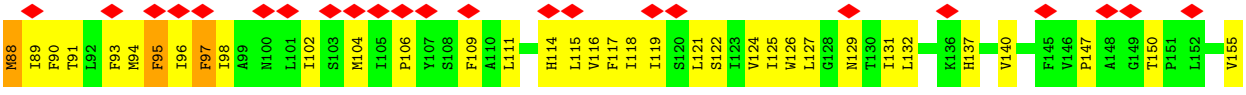
Chain 8:

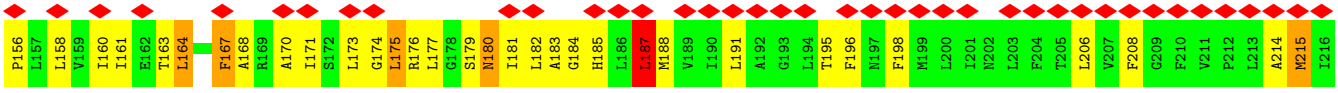


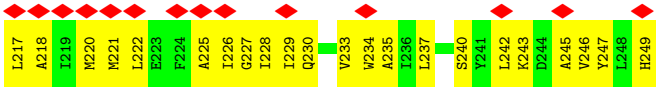
• Molecule 11: ATP synthase subunit a

Chain X:



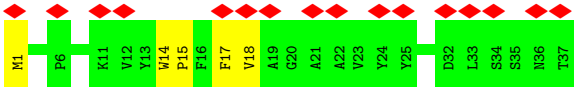






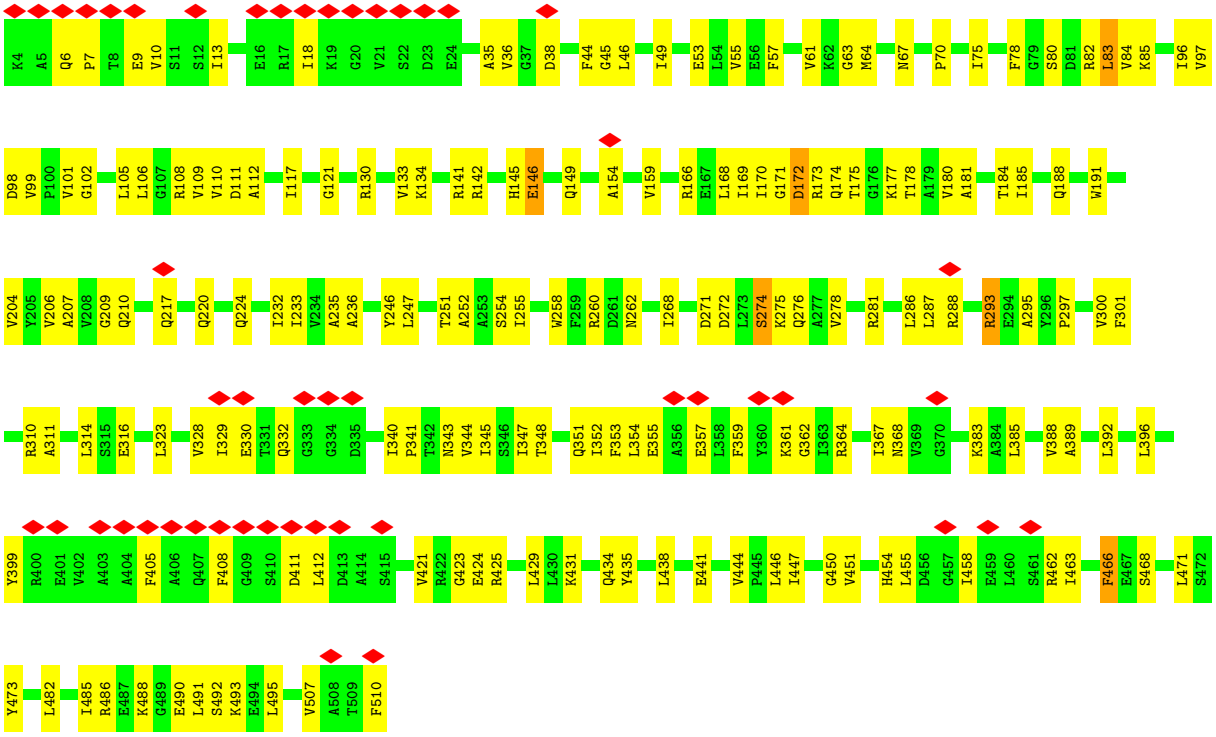
• Molecule 12: ATP synthase subunit J, mitochondrial

Chain J:



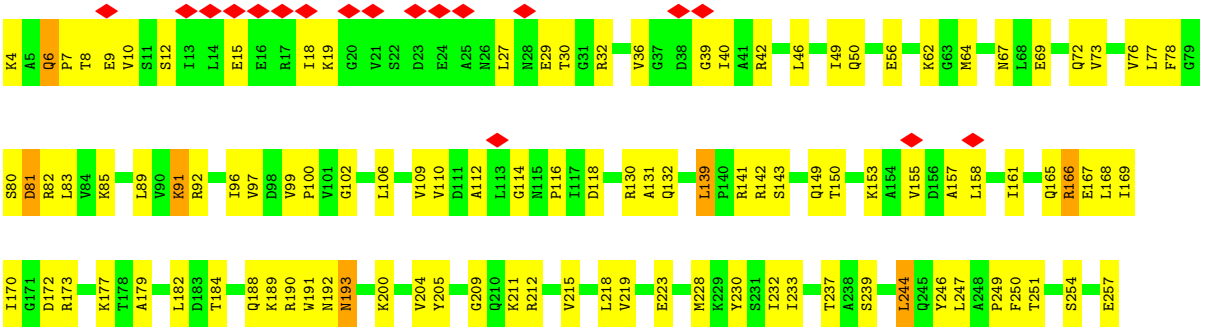
• Molecule 13: ATP synthase subunit alpha, mitochondrial

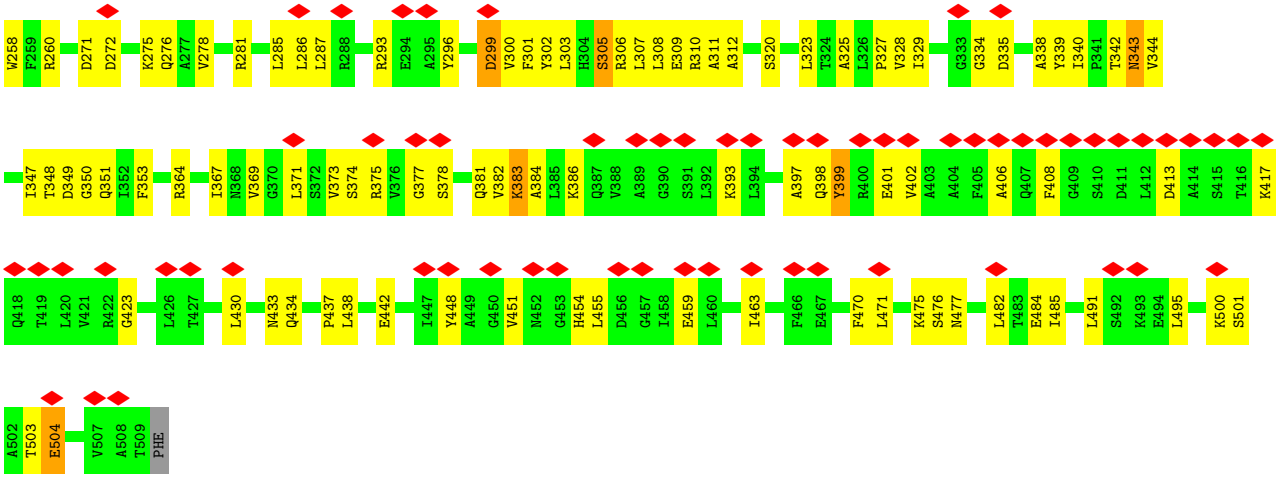
Chain A:



• Molecule 13: ATP synthase subunit alpha, mitochondrial

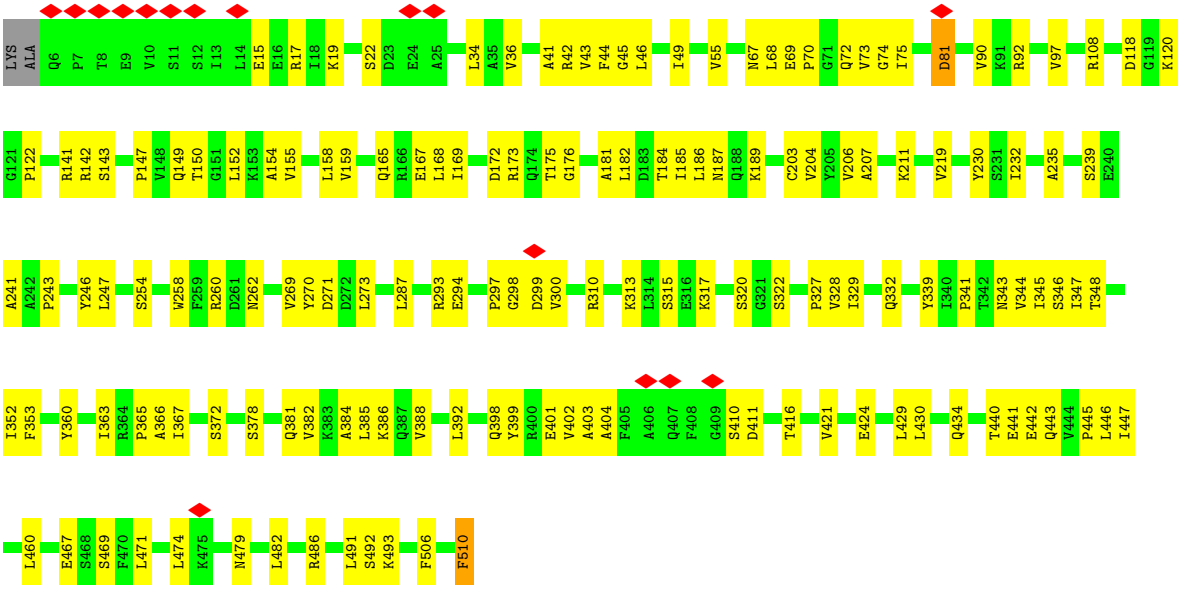
Chain B:





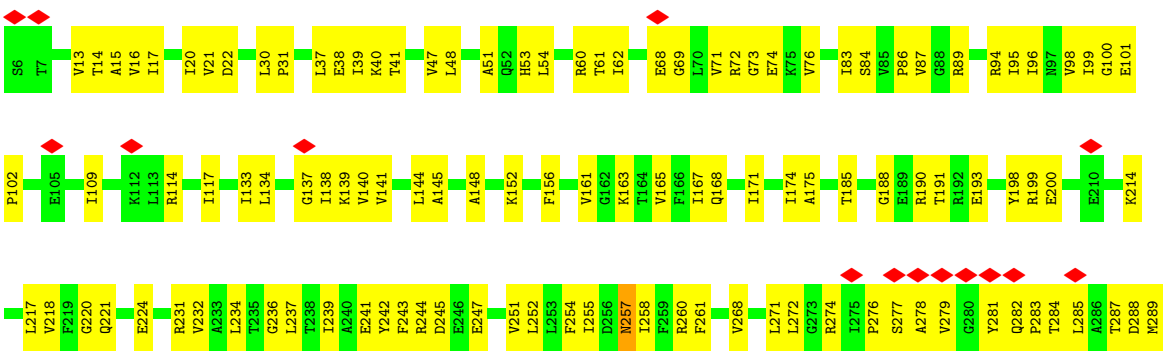
• Molecule 13: ATP synthase subunit alpha, mitochondrial

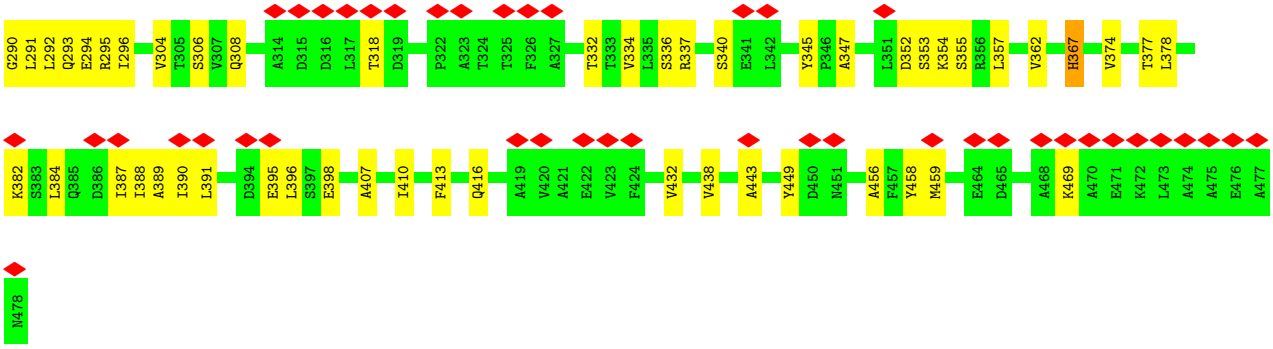
Chain C:



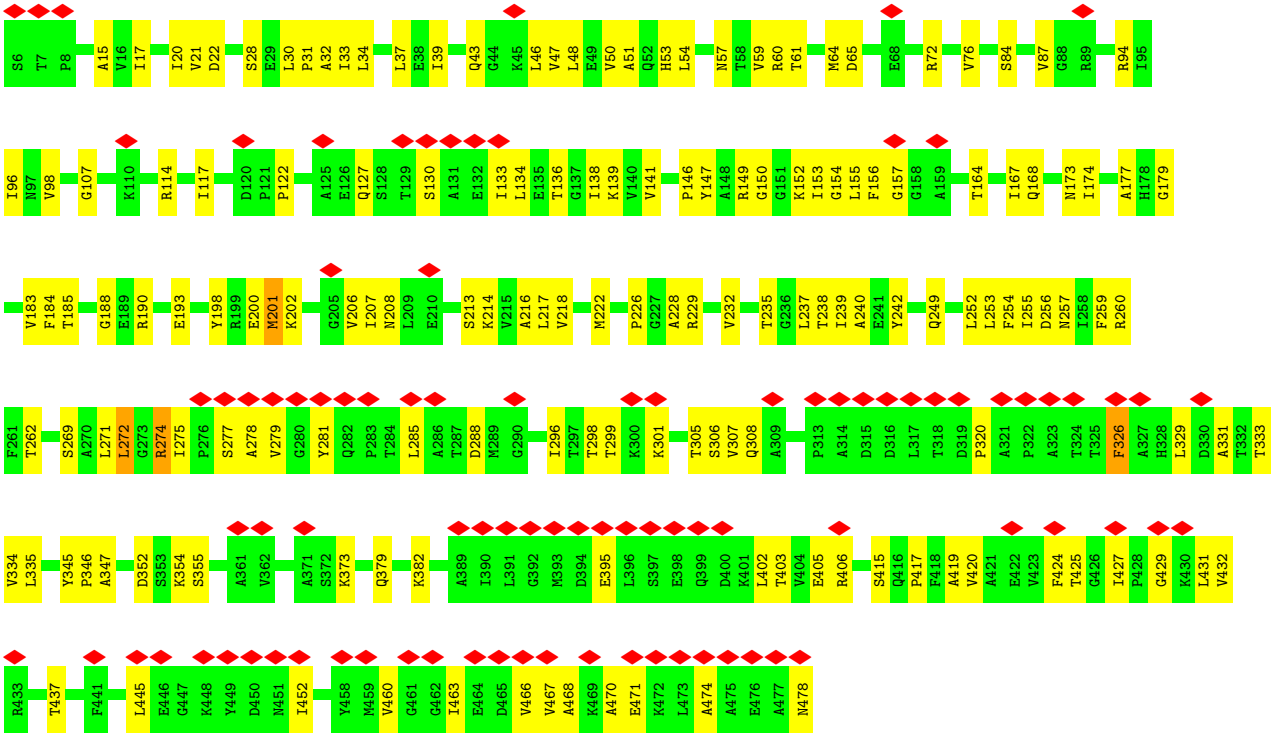
• Molecule 14: ATP synthase subunit beta, mitochondrial

Chain D:

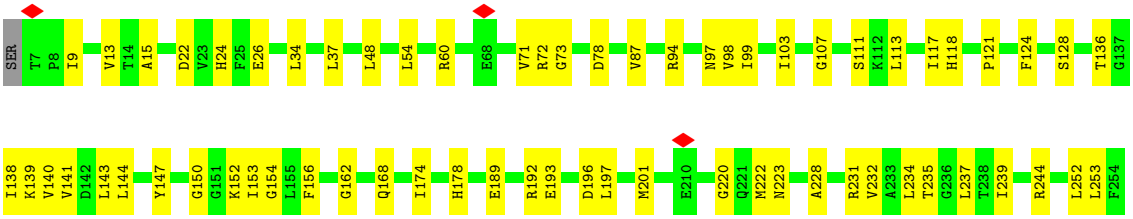


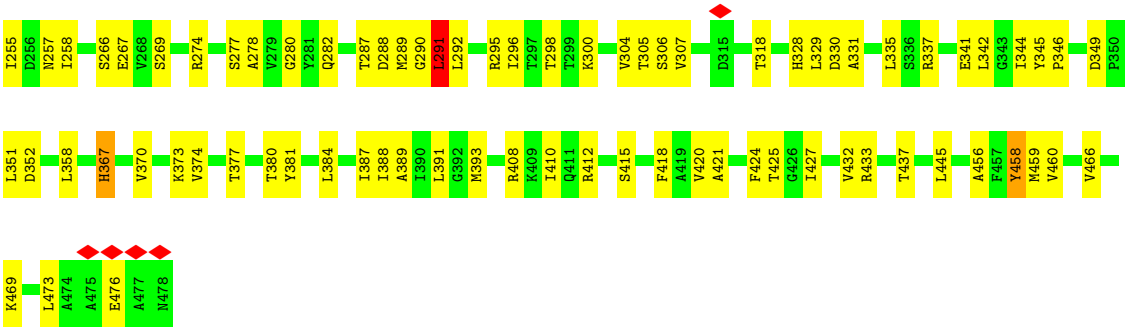


• Molecule 14: ATP synthase subunit beta, mitochondrial



• Molecule 14: ATP synthase subunit beta, mitochondrial




I255 D256 N257 I258 S266 E267 V268 S269 R274 S277 A278 V279 G280 Y281 Q282 T287 D288 M289 G290 L291 L292 R295 I296 T297 T298 T299 K300 V304 T305 S306 V307 D315 T318 H328 L329 D330 A331 L335 S336 R337 E341 L342 G343 I344 Y345 P346 D349 P350
L351 D352 L358 H367 V370 K373 V374 T377 T380 Y381 L384 I387 I388 A389 I390 L391 G392 M393 R408 K409 I410 Q411 R412 S415 F418 A419 V420 A421 F424 T425 G426 I427 V432 R433 T437 L445 A456 F457 Y458 M459 V460 V466
K469 L473 A474 A475 E476 A477 N478

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	146826	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	52	Depositor
Minimum defocus (nm)	700	Depositor
Maximum defocus (nm)	1500	Depositor
Magnification	Not provided	
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	0.075	Depositor
Minimum map value	-0.024	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.004	Depositor
Recommended contour level	0.014	Depositor
Map size (Å)	256.0, 256.0, 256.0	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.0, 1.0, 1.0	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, ADP, PO4

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	Y	0.24	0/1432	0.49	0/1932
2	G	0.25	0/2053	0.49	0/2763
3	H	0.25	0/1004	0.46	0/1359
4	I	0.24	0/398	0.46	0/547
5	Z	0.25	0/1245	0.53	1/1677 (0.1%)
6	7	0.36	2/1382 (0.1%)	0.69	4/1858 (0.2%)
7	6	0.24	0/725	0.52	0/988
8	U	0.26	0/659	0.47	0/895
9	K	0.28	0/545	0.55	0/737
9	L	0.32	0/541	0.69	1/732 (0.1%)
9	M	0.29	0/541	0.62	0/732
9	N	0.27	0/541	0.57	0/732
9	O	0.29	0/541	0.58	0/732
9	P	0.31	0/545	0.74	1/737 (0.1%)
9	Q	0.30	0/541	0.72	0/732
9	R	0.33	0/541	0.66	0/732
9	S	0.29	0/541	0.59	0/732
9	T	0.32	0/541	0.57	1/732 (0.1%)
10	8	0.27	0/366	0.65	1/492 (0.2%)
11	X	0.26	0/1798	0.63	1/2452 (0.0%)
12	J	0.26	0/302	0.46	0/410
13	A	0.25	0/3916	0.54	0/5298
13	B	0.25	0/3903	0.56	0/5282
13	C	0.25	0/3902	0.50	0/5280
14	D	0.25	0/3628	0.52	0/4919
14	E	0.25	0/3628	0.51	0/4919
14	F	0.25	0/3622	0.51	1/4911 (0.0%)
All	All	0.26	2/39381 (0.0%)	0.55	11/53312 (0.0%)

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	7	50	PRO	CG-CD	-7.80	1.25	1.50
6	7	50	PRO	N-CD	5.17	1.55	1.47

All (11) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	7	50	PRO	N-CD-CG	-11.99	85.22	103.20
6	7	50	PRO	CA-N-CD	-11.95	94.77	111.50
11	X	187	LEU	CA-CB-CG	8.51	134.87	115.30
6	7	50	PRO	CA-CB-CG	-7.33	90.07	104.00
5	Z	58	LEU	CB-CG-CD1	6.35	121.80	111.00
14	F	291	LEU	CA-CB-CG	5.94	128.96	115.30
9	P	67	MET	CA-CB-CG	5.78	123.13	113.30
6	7	100	MET	CA-CB-CG	5.64	122.89	113.30
9	T	33	LEU	CA-CB-CG	5.31	127.51	115.30
9	L	66	LEU	CA-CB-CG	5.31	127.50	115.30
10	8	34	MET	CA-CB-CG	5.22	122.17	113.30

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	Y	1414	0	1488	48	0
2	G	2028	0	2085	69	0
3	H	990	0	999	43	0
4	I	392	0	306	6	0
5	Z	1231	0	1254	45	0
6	7	1363	0	1389	60	0
7	6	710	0	668	25	0
8	U	639	0	615	29	0
9	K	537	0	582	56	0
9	L	533	0	579	47	0
9	M	533	0	579	45	0
9	N	533	0	579	36	0
9	O	533	0	579	38	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	P	537	0	582	56	0
9	Q	533	0	579	70	0
9	R	533	0	579	52	0
9	S	533	0	579	47	0
9	T	533	0	579	59	0
10	8	356	0	379	17	0
11	X	1750	0	1848	119	0
12	J	292	0	298	7	0
13	A	3858	0	3941	139	0
13	B	3846	0	3932	174	0
13	C	3844	0	3923	104	0
14	D	3572	0	3638	123	0
14	E	3572	0	3638	113	0
14	F	3566	0	3633	101	0
15	A	27	0	12	5	0
15	B	27	0	12	2	0
15	C	27	0	12	2	0
15	D	27	0	12	1	0
15	F	27	0	12	3	0
16	A	1	0	0	0	0
16	B	1	0	0	0	0
16	C	1	0	0	0	0
16	D	1	0	0	0	0
16	F	1	0	0	0	0
17	D	5	0	0	2	0
All	All	38906	0	39890	1455	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 18.

All (1455) 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)
14:E:226:PRO:HA	14:E:229:ARG:HE	1.33	0.92
9:Q:39:ARG:HH22	9:R:39:ARG:HA	1.38	0.87
9:L:36:GLY:HA2	9:L:39:ARG:HE	1.41	0.86
9:M:25:GLY:HA2	9:N:27:ALA:HB2	1.59	0.85
13:B:305:SER:HA	13:B:347:ILE:HD11	1.61	0.82
9:S:26:ILE:HD12	9:R:57:LEU:HD12	1.61	0.81
6:7:102:ASN:HB3	8:U:8:LYS:HZ2	1.42	0.81
13:A:169:ILE:HG23	13:A:328:VAL:HG12	1.61	0.81

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Y:185:GLN:HA	1:Y:188:ILE:HD12	1.64	0.80
9:S:51:ALA:HA	9:T:30:PHE:HZ	1.45	0.80
9:K:57:LEU:HD11	9:L:26:ILE:HG21	1.65	0.79
13:C:172:ASP:OD2	13:C:173:ARG:N	2.15	0.79
7:6:17:ALA:O	7:6:21:LEU:HB2	1.83	0.78
1:Y:158:VAL:HG12	1:Y:160:LYS:HD3	1.66	0.77
9:K:14:ILE:HD12	9:L:14:ILE:HG23	1.64	0.77
9:O:47:VAL:HB	9:P:34:ILE:HD11	1.65	0.77
6:7:26:ALA:H	8:U:4:LEU:HD11	1.48	0.77
14:E:168:GLN:HG2	14:E:201:MET:HE1	1.65	0.76
14:E:150:GLY:H	14:E:305:THR:HG22	1.50	0.76
13:B:309:GLU:HG2	14:F:223:ASN:HB3	1.67	0.76
9:S:49:PRO:HA	9:S:52:ILE:HD12	1.68	0.76
13:A:272:ASP:H	13:A:328:VAL:HG22	1.50	0.76
3:H:77:VAL:HG22	3:H:83:LEU:HD13	1.69	0.74
9:S:51:ALA:HA	9:T:30:PHE:CZ	2.21	0.74
13:B:347:ILE:HD12	14:F:222:MET:HE3	1.70	0.74
9:M:63:LEU:HA	9:M:66:LEU:HD12	1.69	0.74
9:P:57:LEU:HB2	9:Q:55:PHE:HE2	1.53	0.74
13:C:270:TYR:HB2	13:C:327:PRO:HA	1.70	0.74
9:M:26:ILE:HG13	9:M:58:SER:HB3	1.68	0.74
9:N:25:GLY:HA2	9:O:27:ALA:HB2	1.70	0.73
10:8:32:LEU:HG	10:8:33:PRO:HD3	1.70	0.73
6:7:98:HIS:O	8:U:8:LYS:NZ	2.21	0.73
9:P:52:ILE:HA	9:P:55:PHE:CE2	2.24	0.73
9:Q:58:SER:O	9:Q:61:THR:OG1	2.07	0.73
14:E:150:GLY:HA3	14:E:298:THR:HG22	1.71	0.72
5:Z:113:LEU:HD22	8:U:7:PRO:HB3	1.71	0.72
13:B:307:LEU:HD23	13:B:308:LEU:HG	1.72	0.72
2:G:26:VAL:HG23	14:D:391:LEU:HD12	1.72	0.72
9:S:61:THR:HB	9:T:19:LEU:HD21	1.72	0.72
13:A:55:VAL:HG11	13:A:75:ILE:HD13	1.70	0.72
14:E:96:ILE:HG23	14:E:218:VAL:HG23	1.72	0.71
13:A:46:LEU:HB3	13:A:49:ILE:HB	1.71	0.71
13:B:209:GLY:HA3	13:B:275:LYS:HG3	1.73	0.71
2:G:211:GLU:HG3	4:I:4:ARG:HH22	1.56	0.71
14:E:417:PRO:HB2	14:E:429:GLY:HA2	1.71	0.71
2:G:270:ILE:HD13	14:D:276:PRO:HD2	1.73	0.71
2:G:19:ILE:HD13	13:C:404:ALA:HB1	1.73	0.71
3:H:49:VAL:HG12	3:H:76:THR:HG22	1.71	0.71
14:E:43:GLN:N	14:E:43:GLN:OE1	2.24	0.71

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:P:7:ALA:HB1	9:Q:10:ILE:HD11	1.73	0.70
9:K:43:ILE:HD13	9:L:38:SER:HA	1.70	0.70
3:H:38:ARG:HH21	9:L:43:ILE:HD13	1.56	0.70
9:S:26:ILE:HD11	9:R:58:SER:HA	1.74	0.70
6:7:50:PRO:HD2	6:7:50:PRO:O	1.90	0.70
13:A:389:ALA:HA	13:A:392:LEU:HD13	1.73	0.69
14:E:188:GLY:HA3	14:E:260:ARG:HG2	1.74	0.69
13:A:112:ALA:HB1	13:A:247:LEU:HB3	1.74	0.69
9:O:54:GLY:HA2	9:O:57:LEU:HD12	1.73	0.69
14:D:51:ALA:HB2	14:D:62:ILE:HD11	1.75	0.69
14:D:279:VAL:HG21	14:D:285:LEU:HD13	1.74	0.69
13:C:271:ASP:HA	13:C:328:VAL:HB	1.75	0.69
13:C:70:PRO:HD3	14:D:15:ALA:HB2	1.75	0.68
14:D:289:MET:O	14:D:293:GLN:NE2	2.26	0.68
9:T:28:ILE:HG21	9:K:28:ILE:HG22	1.75	0.68
13:A:340:ILE:HG23	13:A:341:PRO:HD3	1.73	0.68
14:E:31:PRO:HG3	14:E:37:LEU:HD21	1.76	0.68
13:C:45:GLY:O	14:D:72:ARG:NH2	2.26	0.68
3:H:35:LYS:HG3	3:H:51:GLN:HB3	1.76	0.67
6:7:9:LYS:NZ	13:B:477:ASN:O	2.28	0.67
9:T:4:VAL:HG22	9:K:5:LEU:HD11	1.75	0.67
11:X:104:MET:HE3	11:X:104:MET:O	1.94	0.67
13:A:177:LYS:HD2	13:A:328:VAL:HB	1.76	0.67
9:S:17:ILE:HB	9:T:17:ILE:HD13	1.77	0.67
9:S:38:SER:HA	9:R:43:ILE:HD13	1.76	0.67
2:G:247:MET:SD	2:G:250:ARG:NH2	2.68	0.67
11:X:230:GLN:HA	11:X:233:VAL:HG12	1.76	0.67
14:D:285:LEU:O	14:D:289:MET:HB2	1.95	0.67
13:B:302:TYR:O	13:B:306:ARG:HG2	1.95	0.67
9:T:21:GLY:H	9:K:20:LEU:HD12	1.60	0.67
14:D:185:THR:HA	14:D:218:VAL:HB	1.76	0.67
5:Z:153:VAL:HG11	7:6:57:ASN:HA	1.77	0.66
11:X:91:THR:HA	11:X:94:MET:HE2	1.77	0.66
13:B:150:THR:HA	13:B:184:THR:HG23	1.77	0.66
5:Z:112:GLN:HG3	6:7:19:LEU:HD12	1.78	0.66
9:L:30:PHE:HE1	9:L:51:ALA:HB1	1.61	0.66
13:C:42:ARG:HB3	13:C:72:GLN:HG3	1.77	0.66
1:Y:39:SER:HB2	1:Y:81:LEU:HB3	1.77	0.66
13:A:97:VAL:HG21	13:A:247:LEU:HD21	1.77	0.66
13:A:252:ALA:HB1	13:A:268:ILE:HD11	1.75	0.66
13:B:212:ARG:HH11	14:E:127:GLN:HB2	1.60	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:C:168:LEU:O	13:C:352:ILE:N	2.25	0.66
13:B:329:ILE:HG13	13:B:344:VAL:HG11	1.78	0.65
5:Z:58:LEU:HD13	11:X:106:PRO:CB	2.26	0.65
13:B:329:ILE:HD11	13:B:344:VAL:HG21	1.79	0.65
9:K:64:PHE:HD2	9:L:19:LEU:HD11	1.62	0.65
11:X:176:ARG:O	11:X:180:ASN:ND2	2.30	0.65
13:B:69:GLU:N	13:B:69:GLU:OE1	2.29	0.65
13:B:165:GLN:HG3	13:B:349:ASP:HB2	1.78	0.65
3:H:34:ALA:HB2	3:H:39:ILE:HG12	1.79	0.65
9:K:4:VAL:HG22	9:L:5:LEU:HD11	1.79	0.65
9:P:14:ILE:HG13	9:Q:17:ILE:HD11	1.79	0.65
13:A:210:GLN:NE2	13:A:272:ASP:OD2	2.31	0.65
13:A:260:ARG:NH1	13:A:310:ARG:O	2.30	0.65
9:S:20:LEU:HD23	9:R:18:GLY:HA2	1.79	0.64
9:M:64:PHE:O	9:M:68:VAL:HG23	1.97	0.64
3:H:38:ARG:H	3:H:38:ARG:HD3	1.62	0.64
11:X:234:TRP:HD1	11:X:237:LEU:HD12	1.63	0.64
13:B:27:LEU:HD12	13:B:91:LYS:HB2	1.78	0.64
1:Y:113:ASP:HB3	1:Y:118:LEU:HB2	1.79	0.64
9:M:30:PHE:HA	9:M:33:LEU:HB3	1.80	0.64
9:O:33:LEU:HA	9:P:34:ILE:HG12	1.80	0.64
13:B:46:LEU:O	14:F:72:ARG:NH2	2.28	0.64
9:M:64:PHE:HA	9:M:67:MET:SD	2.38	0.64
5:Z:58:LEU:HD13	11:X:106:PRO:HB3	1.79	0.63
9:T:29:VAL:HG21	9:K:30:PHE:CZ	2.33	0.63
11:X:94:MET:HA	11:X:97:PHE:CD2	2.34	0.63
13:B:168:LEU:HG	13:B:170:ILE:HG23	1.80	0.63
14:E:222:MET:HB2	14:E:229:ARG:HH11	1.63	0.63
9:Q:57:LEU:HD22	9:R:55:PHE:CE1	2.34	0.63
14:F:388:ILE:HG23	14:F:393:MET:HB2	1.78	0.63
13:B:340:ILE:O	13:B:344:VAL:HG12	1.97	0.63
14:D:221:GLN:O	14:D:224:GLU:HG2	1.99	0.63
13:C:260:ARG:NH1	13:C:310:ARG:O	2.31	0.63
9:O:6:ALA:O	9:O:10:ILE:HD12	1.98	0.63
11:X:44:TYR:O	11:X:48:ASN:ND2	2.32	0.63
13:A:99:VAL:HG11	13:A:251:THR:HG23	1.79	0.63
11:X:220:MET:HE3	11:X:220:MET:HA	1.81	0.63
13:A:108:ARG:NH1	13:A:121:GLY:O	2.32	0.63
7:6:76:GLU:HA	7:6:79:TRP:NE1	2.14	0.63
13:A:293:ARG:HH12	14:E:278:ALA:HA	1.61	0.63
13:B:56:GLU:N	13:B:91:LYS:O	2.28	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:O:25:GLY:O	9:O:29:VAL:HG12	1.99	0.63
11:X:132:LEU:HD12	12:J:15:PRO:HG2	1.81	0.63
14:D:220:GLY:HA2	14:D:232:VAL:HG11	1.81	0.63
6:7:14:LYS:O	6:7:14:LYS:NZ	2.30	0.62
7:6:4:GLN:HE21	7:6:6:LEU:HB3	1.64	0.62
9:L:30:PHE:CE1	9:L:51:ALA:HB1	2.34	0.62
13:A:207:ALA:HB3	13:A:235:ALA:HA	1.81	0.62
9:P:17:ILE:HB	9:Q:17:ILE:HG23	1.80	0.62
7:6:39:LEU:HG	7:6:40:PRO:HD3	1.81	0.62
14:E:33:ILE:HA	14:E:50:VAL:HB	1.80	0.62
14:E:256:ASP:OD2	14:E:260:ARG:NH2	2.32	0.62
13:C:181:ALA:O	13:C:185:ILE:HG12	2.00	0.62
3:H:89:GLU:OE1	4:I:37:ARG:NH1	2.32	0.62
6:7:102:ASN:HB3	8:U:8:LYS:NZ	2.15	0.62
13:A:109:VAL:HG23	13:A:233:ILE:HG23	1.80	0.62
14:F:374:VAL:HG23	14:F:410:ILE:HG21	1.81	0.62
9:M:34:ILE:HD12	9:M:35:ASN:N	2.15	0.62
14:D:188:GLY:O	14:D:260:ARG:NE	2.32	0.62
14:F:139:LYS:HG3	14:F:432:VAL:HG21	1.80	0.62
7:6:11:LEU:HD11	13:B:12:SER:HB3	1.82	0.62
9:S:54:GLY:HA3	9:T:30:PHE:CE2	2.33	0.62
9:R:19:LEU:HB3	9:R:65:CYS:SG	2.40	0.62
11:X:176:ARG:O	11:X:179:SER:OG	2.16	0.62
2:G:99:LEU:HD21	2:G:107:ILE:HD11	1.82	0.62
3:H:74:PHE:HB3	3:H:76:THR:HG23	1.81	0.62
9:K:34:ILE:HA	9:K:37:VAL:HG12	1.80	0.62
13:A:357:GLU:O	13:A:361:LYS:HG2	2.00	0.62
2:G:10:LEU:HD23	2:G:13:ILE:HD11	1.82	0.62
13:B:132:GLN:HB3	13:B:306:ARG:HH21	1.65	0.62
13:B:237:THR:HG23	13:B:239:SER:H	1.65	0.62
1:Y:133:SER:HA	1:Y:136:ARG:HD3	1.82	0.61
13:A:141:ARG:HH22	13:A:166:ARG:HH12	1.48	0.61
14:D:138:ILE:HB	14:D:141:VAL:HG12	1.82	0.61
14:E:87:VAL:HG12	14:E:239:ILE:HD13	1.82	0.61
9:M:43:ILE:O	9:M:47:VAL:HG12	2.00	0.61
11:X:60:ILE:HA	11:X:63:GLU:HG3	1.82	0.61
9:L:61:THR:HG22	9:M:19:LEU:HD13	1.81	0.61
13:B:340:ILE:HD12	13:B:340:ILE:H	1.62	0.61
13:B:344:VAL:O	13:B:347:ILE:HG22	2.00	0.61
14:E:15:ALA:HB3	14:E:22:ASP:HB2	1.82	0.61
14:F:387:ILE:HG23	14:F:391:LEU:HD23	1.82	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:7:109:LEU:HD11	8:U:10:VAL:HG13	1.82	0.61
9:M:25:GLY:HA2	9:N:27:ALA:CB	2.30	0.61
9:N:33:LEU:O	9:N:37:VAL:HG23	2.01	0.61
9:T:57:LEU:HD11	9:K:55:PHE:CZ	2.35	0.61
5:Z:62:PHE:CD2	11:X:106:PRO:HD3	2.35	0.61
9:T:20:LEU:O	9:T:24:ILE:HG12	2.00	0.61
13:A:450:GLY:HA2	13:A:455:LEU:HD23	1.81	0.61
9:M:33:LEU:HA	9:N:34:ILE:HG21	1.81	0.61
9:O:15:SER:HA	9:P:16:THR:HG21	1.83	0.61
9:S:26:ILE:HG21	9:S:59:GLU:HG2	1.82	0.61
13:A:177:LYS:NZ	15:A:601:ADP:O1B	2.34	0.61
13:B:275:LYS:HA	13:B:278:VAL:HG22	1.81	0.61
9:M:61:THR:HA	9:M:64:PHE:CD2	2.36	0.61
13:C:34:LEU:HD21	13:C:44:PHE:HB3	1.82	0.61
11:X:88:MET:H	11:X:88:MET:CE	2.14	0.60
13:A:146:GLU:N	13:A:146:GLU:OE2	2.32	0.60
14:F:425:THR:HG23	14:F:427:ILE:H	1.67	0.60
5:Z:95:SER:HB2	10:8:46:SER:HA	1.83	0.60
6:7:146:ASP:O	6:7:150:GLU:HG2	2.00	0.60
9:L:52:ILE:HA	9:L:55:PHE:CD1	2.36	0.60
10:8:24:LEU:HA	11:X:91:THR:HG21	1.81	0.60
13:B:212:ARG:NH2	14:E:122:PRO:O	2.29	0.60
14:E:153:ILE:HD11	14:E:307:VAL:HG22	1.84	0.60
14:F:277:SER:OG	14:F:278:ALA:N	2.34	0.60
9:R:53:LEU:HD22	11:X:249:HIS:HD2	1.67	0.60
14:D:39:ILE:HB	14:D:76:VAL:HG22	1.83	0.60
3:H:36:SER:O	9:M:39:ARG:NH1	2.35	0.60
13:A:405:PHE:HB3	13:A:408:PHE:HB2	1.82	0.60
9:T:30:PHE:HA	9:T:33:LEU:HD23	1.82	0.60
9:N:10:ILE:O	9:N:14:ILE:HG22	2.01	0.60
9:O:7:ALA:HB1	9:P:10:ILE:HG12	1.84	0.60
9:Q:47:VAL:HG13	9:R:34:ILE:HD12	1.84	0.60
5:Z:139:GLU:HA	5:Z:142:GLN:HE21	1.65	0.60
9:T:33:LEU:HD21	9:T:51:ALA:HB1	1.83	0.60
13:A:209:GLY:N	13:A:236:ALA:O	2.34	0.60
9:L:36:GLY:HA2	9:L:39:ARG:NE	2.14	0.60
13:B:132:GLN:HB3	13:B:306:ARG:NH2	2.17	0.60
14:D:391:LEU:HD21	14:D:395:GLU:HB3	1.82	0.60
14:F:154:GLY:HA3	14:F:329:LEU:HD21	1.84	0.59
9:K:14:ILE:HA	9:K:17:ILE:HG12	1.84	0.59
9:L:52:ILE:HA	9:L:55:PHE:HD1	1.66	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:O:54:GLY:HA3	9:P:30:PHE:CD2	2.37	0.59
14:D:15:ALA:HB3	14:D:22:ASP:HB2	1.84	0.59
14:E:373:LYS:HG2	14:E:445:LEU:HD22	1.85	0.59
3:H:38:ARG:HH12	9:L:39:ARG:HD2	1.66	0.59
9:S:52:ILE:HA	9:S:55:PHE:CZ	2.38	0.59
9:R:24:ILE:O	9:R:28:ILE:HG23	2.01	0.59
3:H:52:LEU:HD21	3:H:75:ALA:HB2	1.84	0.59
6:7:111:SER:O	6:7:115:LYS:HG2	2.02	0.59
9:P:65:CYS:HB3	9:Q:19:LEU:HD21	1.85	0.59
11:X:80:LYS:O	11:X:247:TYR:OH	2.19	0.59
9:T:3:LEU:HD21	9:K:2:GLN:HB2	1.84	0.59
11:X:173:LEU:HD23	11:X:234:TRP:HE1	1.68	0.59
14:D:378:LEU:O	14:D:382:LYS:HD2	2.02	0.59
3:H:102:LYS:HD2	3:H:137:LEU:HD11	1.85	0.59
9:P:49:PRO:HG2	9:P:50:MET:HE1	1.85	0.59
13:A:169:ILE:HG12	13:A:180:VAL:HG21	1.84	0.59
9:Q:61:THR:HG21	9:R:23:GLY:HA2	1.83	0.59
13:A:246:TYR:HA	13:A:276:GLN:HE22	1.68	0.59
14:F:370:VAL:O	14:F:374:VAL:HG12	2.02	0.59
2:G:173:LEU:HB2	13:A:411:ASP:HB2	1.84	0.59
11:X:173:LEU:HD12	11:X:173:LEU:H	1.68	0.59
13:B:384:ALA:HA	13:B:491:LEU:HD22	1.84	0.59
13:A:272:ASP:H	13:A:328:VAL:CG2	2.16	0.58
13:B:402:VAL:O	13:B:406:ALA:N	2.32	0.58
13:C:108:ARG:NH1	13:C:122:PRO:O	2.36	0.58
6:7:71:ILE:O	6:7:75:VAL:HG23	2.02	0.58
9:Q:25:GLY:O	9:Q:29:VAL:HG22	2.04	0.58
13:C:143:SER:OG	14:D:199:ARG:NH1	2.36	0.58
13:C:152:LEU:HB2	13:C:155:VAL:HG12	1.83	0.58
13:C:254:SER:OG	13:C:310:ARG:NH2	2.36	0.58
9:S:34:ILE:HA	9:S:37:VAL:HG12	1.86	0.58
9:M:47:VAL:HG23	9:N:34:ILE:HG12	1.85	0.58
9:P:65:CYS:O	9:P:68:VAL:HG12	2.03	0.58
14:D:377:THR:HG22	14:D:407:ALA:HB2	1.85	0.58
9:M:14:ILE:HG12	9:N:14:ILE:HA	1.85	0.58
13:A:429:LEU:HD11	13:A:446:LEU:HB3	1.86	0.58
13:B:157:ALA:O	13:B:381:GLN:NE2	2.36	0.58
13:C:97:VAL:HG11	13:C:247:LEU:HD21	1.84	0.58
14:F:288:ASP:OD1	14:F:289:MET:N	2.37	0.58
2:G:267:LEU:O	2:G:271:ILE:HG13	2.02	0.58
11:X:222:LEU:O	11:X:226:ILE:HG22	2.03	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:C:154:ALA:HB3	13:C:367:ILE:HD13	1.85	0.58
13:A:106:LEU:HD23	13:A:232:ILE:HG13	1.84	0.58
6:7:98:HIS:HE1	7:6:82:LEU:HD21	1.68	0.58
9:K:51:ALA:HB2	9:L:34:ILE:HG21	1.83	0.58
13:B:100:PRO:HD2	13:B:114:GLY:HA3	1.84	0.58
9:N:54:GLY:HA2	9:O:30:PHE:CD1	2.38	0.58
9:Q:43:ILE:HG12	9:R:38:SER:HA	1.85	0.58
13:A:45:GLY:O	14:E:72:ARG:NH2	2.36	0.58
13:A:105:LEU:HD23	13:A:110:VAL:HG11	1.86	0.58
13:A:454:HIS:HB3	13:A:507:VAL:HG11	1.84	0.58
13:B:165:GLN:NE2	13:B:349:ASP:O	2.36	0.58
14:F:346:PRO:HG2	14:F:415:SER:HA	1.86	0.58
9:N:50:MET:SD	9:N:50:MET:N	2.77	0.58
11:X:118:ILE:HG22	11:X:174:GLY:HA2	1.85	0.58
13:A:341:PRO:O	13:A:345:ILE:HG12	2.02	0.58
13:B:190:ARG:NH2	13:B:437:PRO:O	2.36	0.58
14:D:54:LEU:HD21	14:D:60:ARG:HE	1.69	0.58
14:E:164:THR:O	14:E:168:GLN:HG3	2.03	0.58
9:S:24:ILE:HB	9:T:24:ILE:HD12	1.86	0.58
9:O:45:ASP:OD1	9:O:45:ASP:N	2.37	0.58
9:O:24:ILE:O	9:O:28:ILE:HG22	2.04	0.57
9:R:63:LEU:HD22	11:X:168:ALA:HB1	1.86	0.57
13:A:70:PRO:HD3	14:E:15:ALA:HB2	1.85	0.57
14:E:17:ILE:N	14:E:20:ILE:O	2.37	0.57
9:L:10:ILE:O	9:L:14:ILE:HG12	2.04	0.57
9:N:25:GLY:HA2	9:O:27:ALA:CB	2.35	0.57
13:A:275:LYS:HA	13:A:278:VAL:HG22	1.86	0.57
14:E:237:LEU:HD11	14:E:296:ILE:HG12	1.86	0.57
14:F:287:THR:O	14:F:291:LEU:HD12	2.03	0.57
14:D:167:ILE:O	14:D:171:ILE:HG13	2.04	0.57
14:E:183:VAL:HG21	14:E:240:ALA:HB2	1.87	0.57
14:F:252:LEU:HD23	14:F:305:THR:HB	1.86	0.57
9:T:62:GLY:O	9:T:66:LEU:HG	2.05	0.57
13:B:293:ARG:HG2	14:F:280:GLY:HA3	1.86	0.57
1:Y:123:VAL:HG13	1:Y:155:LEU:HD22	1.87	0.57
3:H:34:ALA:H	3:H:38:ARG:HA	1.68	0.57
13:B:398:GLN:HG2	14:F:458:TYR:HE2	1.70	0.57
14:D:89:ARG:NH2	14:D:247:GLU:OE1	2.38	0.57
2:G:23:MET:HA	2:G:26:VAL:HG12	1.87	0.57
8:U:44:ALA:HB1	8:U:49:ALA:HB1	1.85	0.57
9:O:58:SER:HA	9:P:26:ILE:HD11	1.87	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:7:133:LEU:HB3	11:X:53:ILE:HD12	1.87	0.57
9:T:43:ILE:HD13	9:K:41:PRO:HG3	1.87	0.57
13:B:168:LEU:HD12	13:B:169:ILE:H	1.70	0.57
13:B:172:ASP:OD1	13:B:334:GLY:N	2.37	0.57
13:C:149:GLN:O	13:C:187:ASN:ND2	2.38	0.57
14:D:243:PHE:HB3	14:D:251:VAL:HG11	1.86	0.56
9:Q:61:THR:HA	9:Q:64:PHE:CZ	2.40	0.56
10:8:18:LEU:O	10:8:22:THR:HG23	2.04	0.56
11:X:137:HIS:HB3	11:X:140:VAL:HB	1.86	0.56
13:A:149:GLN:H	13:A:191:TRP:HH2	1.53	0.56
14:D:139:LYS:HG3	14:D:432:VAL:HG21	1.88	0.56
14:D:161:VAL:HG12	14:D:337:ARG:HB2	1.86	0.56
2:G:196:LYS:HA	9:S:40:ASN:HD21	1.70	0.56
7:6:7:TYR:O	7:6:11:LEU:HD23	2.04	0.56
9:R:30:PHE:O	9:R:34:ILE:HG23	2.04	0.56
14:D:199:ARG:NH2	14:D:200:GLU:OE2	2.38	0.56
14:D:268:VAL:HA	14:D:271:LEU:HD23	1.87	0.56
1:Y:87:ASN:HB3	13:C:22:SER:HB2	1.88	0.56
3:H:40:GLY:HA3	9:L:40:ASN:HD22	1.71	0.56
9:P:52:ILE:HA	9:P:55:PHE:CD2	2.40	0.56
9:Q:49:PRO:O	9:Q:53:LEU:HG	2.05	0.56
13:B:192:ASN:HA	13:B:200:LYS:HG2	1.88	0.56
13:B:375:ARG:NH2	15:F:501:ADP:O2A	2.39	0.56
13:C:467:GLU:O	13:C:471:LEU:HD22	2.06	0.56
14:D:163:LYS:O	14:D:167:ILE:HG13	2.05	0.56
8:U:27:VAL:HG13	8:U:28:VAL:HG13	1.86	0.56
9:Q:54:GLY:HA2	9:Q:57:LEU:HD21	1.88	0.56
9:R:40:ASN:HB2	9:R:43:ILE:HG22	1.86	0.56
13:C:169:ILE:HB	13:C:328:VAL:HG22	1.87	0.56
2:G:267:LEU:O	2:G:270:ILE:HG13	2.06	0.56
9:T:30:PHE:O	9:T:33:LEU:HB2	2.06	0.56
9:L:30:PHE:HA	9:L:33:LEU:HB3	1.88	0.56
9:P:63:LEU:HA	9:P:66:LEU:HG	1.86	0.56
13:B:172:ASP:O	13:B:177:LYS:NZ	2.39	0.56
13:C:172:ASP:O	13:C:175:THR:OG1	2.20	0.56
14:D:257:ASN:ND2	17:D:503:PO4:O2	2.39	0.56
14:F:162:GLY:N	15:F:501:ADP:O1A	2.37	0.56
8:U:5:ILE:HB	8:U:8:LYS:HB3	1.86	0.56
12:J:14:TRP:CG	12:J:15:PRO:HD3	2.41	0.56
2:G:170:VAL:HG23	2:G:171:SER:H	1.71	0.56
6:7:65:THR:OG1	6:7:66:SER:N	2.39	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:P:11:GLY:HA2	9:P:14:ILE:HG22	1.87	0.56
9:Q:63:LEU:HB3	11:X:179:SER:HB2	1.88	0.56
14:F:94:ARG:NH2	14:F:107:GLY:O	2.39	0.56
14:F:152:LYS:HB3	14:F:329:LEU:HD12	1.88	0.56
3:H:130:LEU:HA	3:H:133:LEU:HD12	1.87	0.56
9:Q:55:PHE:CE1	9:Q:59:GLU:HG3	2.41	0.56
2:G:169:PRO:HD3	2:G:228:ALA:HB2	1.88	0.56
13:B:39:GLY:O	13:B:77:LEU:N	2.33	0.56
6:7:41:ARG:O	6:7:45:GLU:HG2	2.07	0.55
11:X:114:HIS:HD2	11:X:116:VAL:HG22	1.70	0.55
13:C:70:PRO:HG3	14:D:14:THR:HB	1.88	0.55
3:H:31:ASN:HB3	3:H:58:GLU:HB2	1.88	0.55
5:Z:167:LEU:HA	5:Z:170:ARG:HG2	1.89	0.55
9:T:65:CYS:HB3	9:K:19:LEU:HD23	1.87	0.55
9:P:21:GLY:HA3	9:Q:20:LEU:HA	1.88	0.55
13:A:181:ALA:O	13:A:185:ILE:HG12	2.06	0.55
14:E:326:PHE:HA	14:E:329:LEU:HB2	1.88	0.55
14:F:9:ILE:HB	14:F:78:ASP:HB3	1.87	0.55
14:F:153:ILE:HB	14:F:307:VAL:HA	1.89	0.55
3:H:106:ALA:HA	3:H:130:LEU:HD13	1.87	0.55
11:X:233:VAL:O	11:X:237:LEU:HG	2.05	0.55
13:B:15:GLU:O	13:B:19:LYS:HG2	2.06	0.55
13:B:205:TYR:OH	13:B:271:ASP:OD2	2.22	0.55
13:B:375:ARG:NE	14:F:193:GLU:OE2	2.39	0.55
14:E:84:SER:HB2	14:E:114:ARG:HB3	1.88	0.55
13:A:142:ARG:HH21	13:A:145:HIS:CE1	2.24	0.55
13:B:347:ILE:HD12	14:F:222:MET:CE	2.36	0.55
13:C:185:ILE:HD12	13:C:203:CYS:HB3	1.89	0.55
9:R:43:ILE:O	9:R:47:VAL:HG12	2.06	0.55
13:B:484:GLU:HB3	13:B:495:LEU:HD21	1.87	0.55
13:C:46:LEU:HD13	13:C:49:ILE:HD12	1.89	0.55
14:E:222:MET:HA	14:E:229:ARG:HD2	1.89	0.55
14:F:231:ARG:HD2	14:F:234:LEU:HD12	1.88	0.55
7:6:52:ALA:HB3	7:6:56:GLN:HB3	1.87	0.55
9:T:21:GLY:N	9:K:20:LEU:HD12	2.22	0.55
9:O:44:LYS:HA	9:O:47:VAL:HG22	1.89	0.55
3:H:51:GLN:NE2	3:H:52:LEU:O	2.40	0.55
13:A:293:ARG:NE	13:A:293:ARG:HA	2.22	0.55
13:A:385:LEU:HA	13:A:388:VAL:HG12	1.88	0.55
14:E:20:ILE:HG21	14:E:60:ARG:HH11	1.72	0.55
5:Z:154:LEU:O	5:Z:158:VAL:HG13	2.07	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:7:35:ARG:HH22	13:B:475:LYS:HE2	1.72	0.55
9:M:4:VAL:HG13	9:N:9:TYR:HE2	1.72	0.55
9:Q:65:CYS:HB2	9:R:19:LEU:HD11	1.89	0.55
13:B:476:SER:OG	13:B:477:ASN:OD1	2.24	0.55
6:7:69:ASP:N	6:7:69:ASP:OD1	2.38	0.55
5:Z:164:LEU:HD23	5:Z:167:LEU:HD21	1.88	0.54
13:A:38:ASP:OD2	14:D:274:ARG:NE	2.40	0.54
13:B:170:ILE:HG13	13:B:353:PHE:HA	1.88	0.54
12:J:14:TRP:CD1	12:J:15:PRO:HD3	2.43	0.54
14:E:257:ASN:HD22	14:E:260:ARG:HD3	1.72	0.54
2:G:76:ALA:HB3	2:G:109:THR:HA	1.89	0.54
3:H:116:ASP:O	3:H:120:ALA:N	2.38	0.54
13:C:332:GLN:HB3	14:F:318:THR:HB	1.89	0.54
6:7:37:ASP:O	6:7:41:ARG:HG2	2.08	0.54
7:6:15:LYS:HE2	13:B:8:THR:HG21	1.89	0.54
9:M:1:MET:HA	9:M:4:VAL:HB	1.89	0.54
13:C:429:LEU:HD11	13:C:446:LEU:HB3	1.90	0.54
14:E:154:GLY:HA2	14:E:308:GLN:H	1.72	0.54
14:F:37:LEU:HB2	14:F:48:LEU:HB2	1.88	0.54
5:Z:65:PHE:HE1	11:X:217:LEU:HA	1.72	0.54
9:T:57:LEU:HD11	9:K:55:PHE:HZ	1.72	0.54
9:M:20:LEU:O	9:M:24:ILE:HG12	2.07	0.54
11:X:36:VAL:HG12	11:X:102:ILE:HG21	1.89	0.54
13:B:401:GLU:HG3	14:F:342:LEU:HA	1.89	0.54
14:F:140:VAL:HG23	14:F:144:LEU:HD12	1.90	0.54
1:Y:176:VAL:HB	1:Y:178:LEU:HD23	1.90	0.54
5:Z:81:ALA:O	5:Z:85:MET:HG2	2.08	0.54
5:Z:136:GLU:OE1	6:7:41:ARG:NH1	2.41	0.54
9:K:24:ILE:O	9:K:28:ILE:HG23	2.08	0.54
10:8:34:MET:HA	10:8:37:ARG:HB2	1.88	0.54
14:E:183:VAL:HG12	14:E:216:ALA:HB3	1.89	0.54
1:Y:62:LEU:HD23	1:Y:67:ARG:HG2	1.90	0.54
13:B:168:LEU:HA	13:B:327:PRO:HG2	1.89	0.54
13:B:301:PHE:HD1	13:B:343:ASN:HB3	1.73	0.54
13:C:469:SER:HB2	13:C:506:PHE:HZ	1.73	0.54
13:A:46:LEU:HD12	13:A:49:ILE:HD13	1.89	0.54
13:B:81:ASP:OD1	13:B:81:ASP:N	2.35	0.54
13:B:166:ARG:O	13:B:348:THR:OG1	2.24	0.54
13:C:384:ALA:O	13:C:388:VAL:HG22	2.08	0.54
14:D:152:LYS:NZ	14:D:293:GLN:O	2.37	0.54
14:D:175:ALA:HB1	14:D:214:LYS:HE2	1.89	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:Q:5:LEU:HA	9:Q:8:LYS:HD3	1.90	0.54
13:C:258:TRP:O	13:C:262:ASN:ND2	2.39	0.54
13:A:493:LYS:H	13:A:493:LYS:HD2	1.71	0.54
5:Z:158:VAL:HG12	6:7:62:LEU:HG	1.90	0.53
6:7:62:LEU:HB2	6:7:65:THR:HG22	1.89	0.53
11:X:115:LEU:HD13	11:X:182:LEU:HD22	1.90	0.53
13:B:109:VAL:HG13	13:B:233:ILE:HB	1.89	0.53
14:F:373:LYS:HB3	14:F:445:LEU:HD13	1.90	0.53
6:7:141:ILE:HG12	8:U:32:LYS:HG3	1.91	0.53
13:B:260:ARG:NH1	13:B:310:ARG:O	2.42	0.53
14:E:335:LEU:HD23	14:E:347:ALA:HB3	1.90	0.53
2:G:260:GLN:O	2:G:264:THR:HG23	2.07	0.53
11:X:114:HIS:CD2	11:X:116:VAL:HG22	2.44	0.53
11:X:206:LEU:HG	11:X:208:PHE:H	1.72	0.53
12:J:14:TRP:HA	12:J:17:PHE:HD2	1.73	0.53
14:D:96:ILE:HD11	14:D:100:GLY:HA2	1.90	0.53
6:7:148:LYS:HA	6:7:151:GLU:HG2	1.89	0.53
7:6:9:ARG:O	7:6:12:LYS:HG3	2.08	0.53
13:A:362:GLY:O	13:A:431:LYS:NZ	2.37	0.53
13:B:413:ASP:HA	13:B:417:LYS:HG2	1.90	0.53
14:D:378:LEU:HB3	14:D:382:LYS:NZ	2.23	0.53
14:E:285:LEU:H	14:E:285:LEU:HD23	1.73	0.53
9:L:43:ILE:HG22	9:L:46:THR:HB	1.90	0.53
11:X:69:ILE:HA	11:X:72:MET:SD	2.48	0.53
11:X:76:GLN:OE1	11:X:77:ILE:HG23	2.08	0.53
13:A:281:ARG:NH2	14:D:277:SER:O	2.42	0.53
13:A:399:TYR:CG	13:A:423:GLY:HA3	2.42	0.53
13:B:42:ARG:NH1	13:B:72:GLN:OE1	2.42	0.53
9:N:67:MET:SD	9:N:68:VAL:N	2.81	0.53
9:P:57:LEU:HD22	9:Q:55:PHE:CD2	2.44	0.53
11:X:125:ILE:O	11:X:129:ASN:ND2	2.41	0.53
13:B:272:ASP:H	13:B:328:VAL:HB	1.74	0.53
13:B:442:GLU:HG3	13:B:482:LEU:HD11	1.91	0.53
14:E:425:THR:HG23	14:E:427:ILE:HG12	1.90	0.53
1:Y:14:GLY:O	1:Y:18:THR:OG1	2.25	0.53
9:T:29:VAL:HG23	9:K:31:ALA:HA	1.90	0.53
9:P:49:PRO:O	9:P:52:ILE:HG12	2.09	0.53
14:E:253:LEU:O	14:E:307:VAL:N	2.38	0.53
14:F:98:VAL:HG21	14:F:228:ALA:HB1	1.91	0.53
3:H:78:GLN:NE2	3:H:82:GLN:O	2.42	0.53
9:S:4:VAL:HG23	9:S:5:LEU:HD22	1.90	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:L:50:MET:SD	9:L:50:MET:N	2.78	0.53
10:8:17:PHE:O	10:8:21:ILE:HG12	2.08	0.53
14:D:388:ILE:HD11	14:D:396:LEU:HD22	1.90	0.53
14:F:290:GLY:HA2	14:F:328:HIS:CE1	2.44	0.53
3:H:38:ARG:HD3	3:H:38:ARG:N	2.23	0.53
9:Q:71:LEU:HD21	9:R:73:LEU:HG	1.91	0.53
9:R:48:PHE:O	9:R:52:ILE:HG13	2.09	0.53
13:B:85:LYS:HE2	14:E:32:ALA:HB2	1.89	0.53
14:E:155:LEU:HD23	14:E:333:THR:HB	1.91	0.53
13:A:209:GLY:HA3	13:A:275:LYS:HD3	1.91	0.53
14:D:357:LEU:HB2	14:D:362:VAL:HG11	1.90	0.53
1:Y:167:LEU:HB2	1:Y:178:LEU:HD11	1.90	0.52
6:7:97:LYS:O	6:7:101:THR:HG23	2.09	0.52
14:E:30:LEU:HD23	14:E:59:VAL:HG13	1.90	0.52
2:G:35:GLU:OE2	2:G:38:LYS:NZ	2.37	0.52
2:G:118:LEU:HB3	2:G:126:ILE:HG21	1.90	0.52
5:Z:170:ARG:O	5:Z:174:LYS:HG2	2.09	0.52
9:O:64:PHE:O	9:O:68:VAL:HG12	2.09	0.52
9:P:14:ILE:O	9:P:17:ILE:HG12	2.09	0.52
14:D:165:VAL:HG11	15:D:501:ADP:C8	2.45	0.52
9:P:43:ILE:HG12	9:Q:38:SER:HA	1.91	0.52
9:P:54:GLY:O	9:P:57:LEU:HG	2.09	0.52
14:D:378:LEU:HB3	14:D:382:LYS:HZ2	1.75	0.52
2:G:263:ILE:HA	2:G:266:GLU:HG2	1.92	0.52
6:7:102:ASN:CB	8:U:8:LYS:HZ2	2.18	0.52
9:K:15:SER:HB3	9:K:68:VAL:HG13	1.90	0.52
9:N:5:LEU:HA	9:N:8:LYS:HD2	1.91	0.52
12:J:14:TRP:O	12:J:18:VAL:HG23	2.08	0.52
14:E:168:GLN:HB2	14:E:420:VAL:HG21	1.91	0.52
3:H:34:ALA:HA	3:H:52:LEU:HD23	1.91	0.52
9:P:57:LEU:HB2	9:Q:55:PHE:CE2	2.40	0.52
13:A:175:THR:OG1	13:A:177:LYS:NZ	2.38	0.52
14:E:134:LEU:HD11	14:E:149:ARG:HA	1.92	0.52
6:7:89:LEU:HA	6:7:93:GLU:HG2	1.90	0.52
9:S:3:LEU:HD23	9:S:3:LEU:H	1.75	0.52
11:X:177:LEU:O	11:X:181:ILE:HG12	2.10	0.52
13:A:340:ILE:CG2	13:A:341:PRO:HD3	2.40	0.52
13:A:392:LEU:O	13:A:396:LEU:HG	2.10	0.52
13:B:375:ARG:HG2	14:F:192:ARG:HH12	1.75	0.52
14:D:231:ARG:HA	14:D:234:LEU:HD12	1.92	0.52
14:E:269:SER:HB3	14:E:274:ARG:HE	1.75	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:T:11:GLY:HA2	9:T:14:ILE:HG22	1.90	0.52
9:M:10:ILE:O	9:M:14:ILE:HG22	2.10	0.52
9:Q:6:ALA:O	9:Q:10:ILE:HG12	2.10	0.52
13:C:55:VAL:HG11	13:C:75:ILE:HD12	1.90	0.52
2:G:74:ILE:HG23	2:G:165:PHE:HE2	1.73	0.52
9:S:20:LEU:HD12	9:T:20:LEU:HD11	1.91	0.52
9:R:34:ILE:HA	9:R:37:VAL:HG12	1.90	0.52
13:A:6:GLN:NE2	13:A:9:GLU:OE1	2.43	0.52
13:B:484:GLU:HG3	13:B:495:LEU:HD11	1.91	0.52
13:B:501:SER:HA	13:B:504:GLU:OE2	2.10	0.52
14:D:137:GLY:O	14:D:416:GLN:NE2	2.32	0.52
14:D:284:THR:O	14:D:287:THR:N	2.42	0.52
14:E:185:THR:OG1	14:E:255:ILE:HA	2.10	0.52
9:Q:18:GLY:HA3	9:Q:65:CYS:SG	2.50	0.52
9:Q:35:ASN:O	9:Q:39:ARG:HG2	2.10	0.52
13:C:150:THR:HA	13:C:184:THR:HG23	1.91	0.52
14:F:13:VAL:O	14:F:73:GLY:N	2.40	0.52
14:F:117:ILE:HG21	14:F:235:THR:HG22	1.91	0.52
9:N:24:ILE:O	9:N:28:ILE:HG22	2.10	0.52
9:R:1:MET:SD	9:R:2:GLN:N	2.83	0.52
11:X:155:VAL:HA	11:X:158:LEU:HG	1.91	0.52
14:D:218:VAL:HG12	14:D:218:VAL:O	2.10	0.52
14:E:157:GLY:HA3	14:E:335:LEU:HB2	1.92	0.52
5:Z:181:GLN:HA	5:Z:184:LEU:HD12	1.92	0.51
9:Q:39:ARG:NH2	9:R:39:ARG:HA	2.17	0.51
13:C:313:LYS:HD2	13:C:322:SER:HB3	1.92	0.51
14:E:334:VAL:HG21	14:E:352:ASP:HB2	1.92	0.51
8:U:22:LYS:O	8:U:26:ASN:ND2	2.43	0.51
9:N:26:ILE:O	9:N:30:PHE:HD2	1.93	0.51
10:8:19:LEU:O	10:8:23:LEU:HD22	2.10	0.51
11:X:218:ALA:O	11:X:221:MET:HG3	2.10	0.51
13:A:130:ARG:HB3	13:A:133:VAL:HG12	1.92	0.51
13:B:109:VAL:HB	13:B:118:ASP:HB3	1.93	0.51
1:Y:180:ILE:HD12	1:Y:181:SER:N	2.25	0.51
6:7:165:ASP:OD1	6:7:165:ASP:N	2.41	0.51
9:N:23:GLY:O	9:N:26:ILE:HG13	2.10	0.51
9:P:50:MET:SD	9:P:50:MET:N	2.83	0.51
9:Q:68:VAL:O	9:Q:72:LEU:HD23	2.10	0.51
5:Z:106:ARG:HH12	8:U:26:ASN:HD21	1.57	0.51
9:S:64:PHE:HE2	9:T:66:LEU:HD22	1.76	0.51
9:N:69:SER:O	9:N:73:LEU:N	2.35	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Y:37:PHE:O	1:Y:41:GLN:HG2	2.11	0.51
6:7:134:THR:HG23	6:7:137:ASP:H	1.74	0.51
9:R:22:ALA:HB2	9:R:61:THR:HG23	1.92	0.51
11:X:42:SER:HB2	11:X:46:LEU:HB2	1.93	0.51
11:X:91:THR:HA	11:X:94:MET:CE	2.40	0.51
13:B:301:PHE:HB2	13:B:343:ASN:HD22	1.75	0.51
14:D:332:THR:HG23	14:D:353:SER:HA	1.93	0.51
9:K:18:GLY:HA3	9:K:65:CYS:SG	2.51	0.51
9:N:28:ILE:HG12	9:O:31:ALA:CB	2.40	0.51
9:R:49:PRO:HA	9:R:52:ILE:HD12	1.92	0.51
13:B:139:LEU:HD12	13:B:139:LEU:H	1.76	0.51
13:B:339:TYR:O	13:B:342:THR:OG1	2.24	0.51
9:N:65:CYS:SG	9:N:66:LEU:N	2.84	0.51
13:A:311:ALA:HA	13:A:323:LEU:HB3	1.91	0.51
13:B:168:LEU:HB2	13:B:348:THR:HG21	1.92	0.51
14:D:165:VAL:HA	14:D:168:GLN:HG2	1.92	0.51
14:D:357:LEU:H	14:D:357:LEU:HD23	1.76	0.51
14:E:237:LEU:HD22	14:E:253:LEU:HD11	1.93	0.51
5:Z:96:ARG:HG3	6:7:130:PHE:CZ	2.46	0.51
9:Q:33:LEU:O	9:Q:37:VAL:HG12	2.11	0.51
11:X:131:ILE:HB	12:J:15:PRO:HB3	1.91	0.51
13:B:50:GLN:HA	14:F:71:VAL:HG12	1.93	0.51
14:F:111:SER:OG	14:F:113:LEU:O	2.28	0.51
9:T:11:GLY:HA3	9:T:72:LEU:HD12	1.91	0.51
9:T:14:ILE:HD12	9:T:17:ILE:HG21	1.93	0.51
13:A:297:PRO:O	13:A:300:VAL:HG22	2.10	0.51
4:I:10:TYR:CZ	4:I:14:LEU:HD21	2.46	0.50
8:U:54:LYS:HG2	8:U:55:TYR:HD1	1.76	0.50
11:X:56:SER:H	11:X:59:LEU:HD12	1.76	0.50
13:A:96:ILE:HB	13:A:130:ARG:HE	1.76	0.50
13:A:385:LEU:HD12	13:A:385:LEU:H	1.76	0.50
13:B:4:LYS:HE3	13:B:6:GLN:HE22	1.77	0.50
13:B:247:LEU:HD12	13:B:250:PHE:HB2	1.92	0.50
13:C:315:SER:OG	13:C:317:LYS:NZ	2.43	0.50
13:C:343:ASN:O	13:C:347:ILE:HG13	2.11	0.50
2:G:122:HIS:ND1	2:G:125:ASN:OD1	2.37	0.50
6:7:145:ILE:O	6:7:149:VAL:HG23	2.11	0.50
9:L:14:ILE:O	9:L:17:ILE:HG12	2.10	0.50
9:L:63:LEU:HA	9:L:66:LEU:HG	1.92	0.50
11:X:184:GLY:O	11:X:187:LEU:HD12	2.12	0.50
13:A:297:PRO:HG2	13:A:300:VAL:HG13	1.91	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:F:87:VAL:HG12	14:F:239:ILE:HD13	1.91	0.50
1:Y:123:VAL:HG11	1:Y:137:ILE:HG21	1.92	0.50
9:R:43:ILE:HG13	9:R:46:THR:HG23	1.92	0.50
14:E:39:ILE:HG23	14:E:76:VAL:HG13	1.92	0.50
9:S:64:PHE:CE2	9:T:66:LEU:HD22	2.47	0.50
9:R:53:LEU:HD22	11:X:249:HIS:CD2	2.45	0.50
13:C:385:LEU:HD22	13:C:440:THR:HG22	1.93	0.50
14:E:164:THR:HA	14:E:167:ILE:HD12	1.94	0.50
5:Z:62:PHE:HA	5:Z:65:PHE:CD2	2.47	0.50
9:K:30:PHE:O	9:K:34:ILE:HG23	2.11	0.50
11:X:89:ILE:HD11	11:X:242:LEU:HD12	1.94	0.50
13:B:141:ARG:HG3	13:B:312:ALA:HB1	1.94	0.50
14:D:37:LEU:HD22	14:D:61:THR:HG21	1.94	0.50
14:E:184:PHE:HB3	14:E:217:LEU:HD13	1.93	0.50
14:E:190:ARG:O	14:E:193:GLU:HG3	2.12	0.50
1:Y:34:ASP:OD2	1:Y:35:ALA:N	2.45	0.50
1:Y:59:ASN:OD1	1:Y:62:LEU:N	2.44	0.50
14:F:352:ASP:OD1	14:F:352:ASP:N	2.44	0.50
9:T:25:GLY:HA2	9:T:28:ILE:HG22	1.92	0.50
9:T:29:VAL:HA	9:K:31:ALA:HB2	1.93	0.50
9:Q:24:ILE:HB	9:R:24:ILE:HG22	1.92	0.50
11:X:117:PHE:O	11:X:121:LEU:HG	2.12	0.50
13:A:177:LYS:HB3	13:A:328:VAL:HG11	1.93	0.50
13:C:81:ASP:OD1	13:C:81:ASP:N	2.35	0.50
14:D:340:SER:HB3	14:D:347:ALA:HB2	1.93	0.50
14:F:15:ALA:HB3	14:F:22:ASP:HB2	1.94	0.50
1:Y:189:LYS:H	1:Y:189:LYS:HD3	1.75	0.50
2:G:19:ILE:HA	2:G:22:THR:HG22	1.93	0.50
10:8:43:LEU:O	10:8:47:LYS:HG2	2.11	0.50
14:D:13:VAL:HG12	14:D:72:ARG:HA	1.93	0.50
1:Y:189:LYS:HD3	1:Y:189:LYS:N	2.27	0.50
9:Q:53:LEU:O	9:Q:57:LEU:HD23	2.12	0.50
14:D:99:ILE:HD12	14:D:101:GLU:HB3	1.94	0.50
2:G:73:LEU:HD23	2:G:162:ILE:HG12	1.94	0.49
9:T:24:ILE:HB	9:K:24:ILE:CD1	2.42	0.49
13:B:249:PRO:HB2	13:B:307:LEU:HD11	1.94	0.49
14:F:197:LEU:O	14:F:201:MET:HG3	2.12	0.49
3:H:38:ARG:NH2	9:L:43:ILE:HD13	2.25	0.49
9:S:9:TYR:CG	9:R:8:LYS:HD3	2.48	0.49
9:T:32:ALA:HA	9:T:35:ASN:HD21	1.76	0.49
9:P:21:GLY:HA2	9:Q:24:ILE:HD11	1.94	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:8:31:PHE:CE2	11:X:44:TYR:HB3	2.47	0.49
11:X:102:ILE:HD12	11:X:109:PHE:HB3	1.94	0.49
14:E:155:LEU:HD22	14:E:335:LEU:HD11	1.94	0.49
14:F:269:SER:HB2	14:F:274:ARG:HD3	1.94	0.49
3:H:47:PRO:HG3	3:H:79:PRO:HG3	1.95	0.49
9:M:20:LEU:HB3	9:N:20:LEU:HD11	1.94	0.49
9:Q:14:ILE:HA	9:Q:17:ILE:HG12	1.95	0.49
13:A:258:TRP:O	13:A:262:ASN:ND2	2.44	0.49
13:A:463:ILE:HA	13:A:466:PHE:HB3	1.94	0.49
13:B:149:GLN:O	13:B:188:GLN:NE2	2.45	0.49
13:C:392:LEU:HD21	13:C:430:LEU:HD21	1.94	0.49
14:F:418:PHE:HB2	14:F:421:ALA:HB3	1.94	0.49
5:Z:55:GLU:HA	5:Z:58:LEU:CD2	2.42	0.49
9:S:14:ILE:HG13	9:R:14:ILE:HD11	1.93	0.49
9:S:56:ALA:HA	11:X:161:ILE:HG21	1.93	0.49
13:B:335:ASP:OD1	13:B:338:ALA:N	2.45	0.49
13:B:369:VAL:O	13:B:393:LYS:NZ	2.42	0.49
14:D:285:LEU:O	14:D:289:MET:CB	2.60	0.49
14:E:117:ILE:HA	14:E:238:THR:OG1	2.12	0.49
14:F:150:GLY:O	14:F:298:THR:OG1	2.30	0.49
11:X:158:LEU:HA	11:X:161:ILE:HB	1.93	0.49
13:A:168:LEU:HD22	13:A:344:VAL:HG12	1.93	0.49
14:E:133:ILE:HD12	14:E:146:PRO:HB2	1.94	0.49
14:F:37:LEU:O	14:F:48:LEU:N	2.40	0.49
13:B:64:MET:HB3	13:B:78:PHE:CE2	2.47	0.49
14:D:87:VAL:HG12	14:D:239:ILE:HD13	1.93	0.49
3:H:58:GLU:HB3	3:H:60:MET:HE3	1.94	0.49
9:S:73:LEU:HD22	9:R:71:LEU:HD21	1.95	0.49
9:L:57:LEU:HD13	9:M:26:ILE:HG22	1.94	0.49
13:B:272:ASP:OD1	13:B:275:LYS:HG2	2.13	0.49
14:F:387:ILE:HD12	14:F:391:LEU:HD23	1.95	0.49
9:L:59:GLU:O	9:L:63:LEU:HD23	2.13	0.49
13:B:278:VAL:HA	13:B:281:ARG:HD3	1.95	0.49
13:C:168:LEU:HD11	13:C:329:ILE:HG12	1.93	0.49
14:D:37:LEU:N	14:D:48:LEU:O	2.39	0.49
14:D:384:LEU:O	14:D:388:ILE:HG12	2.13	0.49
5:Z:137:ALA:HB2	6:7:41:ARG:CZ	2.42	0.49
11:X:150:THR:HB	11:X:158:LEU:HD21	1.93	0.49
13:B:106:LEU:HD22	13:B:230:TYR:HA	1.95	0.49
13:B:142:ARG:NH1	13:B:143:SER:OG	2.46	0.49
13:C:239:SER:HB2	14:F:121:PRO:HG2	1.94	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:D:443:ALA:HB1	14:D:449:TYR:HE1	1.77	0.49
14:F:138:ILE:HB	14:F:141:VAL:HG22	1.95	0.49
2:G:84:CYS:HB2	2:G:233:ARG:HA	1.95	0.49
9:K:13:GLY:O	9:K:16:THR:HG22	2.13	0.49
9:L:36:GLY:CA	9:L:39:ARG:HE	2.21	0.49
9:M:14:ILE:O	9:M:17:ILE:HG12	2.12	0.49
9:Q:26:ILE:HG21	9:Q:59:GLU:HG2	1.94	0.49
10:8:20:MET:HA	10:8:23:LEU:HD23	1.94	0.49
11:X:48:ASN:HB3	11:X:59:LEU:HD11	1.94	0.49
13:B:364:ARG:HH11	13:B:364:ARG:HA	1.77	0.49
1:Y:160:LYS:HE3	14:E:28:SER:HB3	1.95	0.48
2:G:107:ILE:HB	2:G:126:ILE:HG22	1.94	0.48
2:G:110:ILE:HD11	2:G:146:ILE:HG21	1.94	0.48
9:S:29:VAL:HG23	9:T:27:ALA:HB1	1.93	0.48
9:S:31:ALA:O	9:S:34:ILE:HD12	2.13	0.48
13:A:172:ASP:H	13:A:175:THR:HG21	1.77	0.48
13:A:286:LEU:HA	13:A:288:ARG:HH22	1.78	0.48
13:B:69:GLU:O	14:F:72:ARG:NH1	2.46	0.48
14:E:37:LEU:HD12	14:E:61:THR:HG21	1.95	0.48
9:T:14:ILE:HG23	9:K:13:GLY:HA3	1.95	0.48
13:A:85:LYS:NZ	14:D:30:LEU:O	2.33	0.48
13:B:112:ALA:HB3	13:B:244:LEU:HD13	1.94	0.48
13:B:155:VAL:HG11	13:B:369:VAL:HG22	1.95	0.48
13:B:408:PHE:CG	14:F:389:ALA:HA	2.47	0.48
14:D:38:GLU:HA	14:D:47:VAL:HA	1.95	0.48
14:D:288:ASP:OD2	14:D:288:ASP:N	2.41	0.48
6:7:158:TRP:HE3	10:8:36:LEU:HD13	1.78	0.48
9:T:21:GLY:H	9:K:20:LEU:CD1	2.25	0.48
13:A:343:ASN:O	13:A:347:ILE:HG22	2.13	0.48
14:E:373:LYS:HE3	14:E:445:LEU:HB3	1.94	0.48
14:F:156:PHE:O	14:F:335:LEU:N	2.40	0.48
2:G:258:THR:O	2:G:262:VAL:HG23	2.13	0.48
9:K:44:LYS:HA	9:K:47:VAL:HG22	1.94	0.48
9:L:67:MET:SD	9:L:68:VAL:HG23	2.52	0.48
9:M:43:ILE:HD11	9:N:37:VAL:HG12	1.94	0.48
9:P:44:LYS:HA	9:P:47:VAL:HG22	1.95	0.48
13:A:260:ARG:HE	13:A:314:LEU:HD11	1.78	0.48
14:F:296:ILE:HG21	14:F:306:SER:HB3	1.95	0.48
9:L:57:LEU:HD12	9:L:58:SER:N	2.28	0.48
11:X:122:SER:HB2	11:X:173:LEU:HB2	1.95	0.48
11:X:214:ALA:O	11:X:217:LEU:HG	2.13	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:A:101:VAL:HG12	13:A:255:ILE:HD13	1.95	0.48
13:C:294:GLU:N	13:C:294:GLU:OE1	2.47	0.48
1:Y:39:SER:O	1:Y:43:VAL:HG23	2.14	0.48
2:G:51:PHE:CZ	3:H:78:GLN:HG3	2.49	0.48
5:Z:97:ASN:O	5:Z:101:GLU:HG2	2.13	0.48
9:O:54:GLY:HA3	9:P:30:PHE:HD2	1.78	0.48
13:B:153:LYS:HG3	13:B:438:LEU:HD23	1.95	0.48
14:D:86:PRO:HG3	14:D:109:ILE:HD13	1.95	0.48
14:F:266:SER:HA	14:F:282:GLN:HB3	1.95	0.48
1:Y:100:CYS:O	1:Y:104:ILE:HG12	2.13	0.48
1:Y:169:VAL:O	1:Y:175:THR:HA	2.14	0.48
3:H:35:LYS:HE2	3:H:51:GLN:H	1.78	0.48
9:K:65:CYS:HA	9:K:68:VAL:HG12	1.94	0.48
11:X:36:VAL:HG11	11:X:102:ILE:HD13	1.96	0.48
11:X:163:THR:HB	11:X:167:PHE:CE1	2.49	0.48
13:C:69:GLU:OE1	13:C:72:GLN:NE2	2.46	0.48
13:C:141:ARG:NH1	14:D:191:THR:HB	2.29	0.48
14:D:140:VAL:HG23	14:D:144:LEU:HD12	1.95	0.48
14:E:139:LYS:HB3	14:E:437:THR:HG23	1.94	0.48
14:E:201:MET:HG3	14:E:207:ILE:HD13	1.96	0.48
1:Y:146:LEU:HB3	1:Y:171:LEU:HD22	1.95	0.48
9:T:33:LEU:HD22	9:K:34:ILE:CD1	2.43	0.48
9:R:37:VAL:HG21	9:R:44:LYS:HE3	1.96	0.48
13:A:434:GLN:HB3	15:A:601:ADP:C6	2.48	0.48
13:B:99:VAL:HG21	13:B:251:THR:HB	1.95	0.48
13:B:212:ARG:HA	13:B:215:VAL:HG12	1.96	0.48
13:C:424:GLU:HG3	13:C:460:LEU:HD21	1.96	0.48
9:M:72:LEU:HD23	9:M:72:LEU:HA	1.74	0.48
13:A:67:ASN:HB2	13:A:287:LEU:HD22	1.96	0.48
13:B:168:LEU:HB3	13:B:351:GLN:HA	1.95	0.48
13:B:442:GLU:HB3	13:B:471:LEU:HD22	1.95	0.48
13:C:118:ASP:HB3	13:C:120:LYS:HG2	1.96	0.48
14:D:260:ARG:NH1	17:D:503:PO4:O4	2.33	0.48
14:D:367:HIS:CD2	14:D:438:VAL:HG21	2.49	0.48
13:B:6:GLN:CD	13:B:6:GLN:H	2.16	0.48
14:E:167:ILE:HG12	14:E:254:PHE:CE1	2.49	0.48
9:K:17:ILE:O	9:K:19:LEU:N	2.47	0.47
9:K:39:ARG:CZ	9:L:39:ARG:HB2	2.44	0.47
9:O:43:ILE:HD13	9:P:38:SER:HA	1.96	0.47
11:X:185:HIS:HA	11:X:188:MET:HE2	1.96	0.47
13:A:246:TYR:HA	13:A:276:GLN:NE2	2.29	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:A:429:LEU:HD21	13:A:447:ILE:HA	1.95	0.47
13:B:62:LYS:HB2	13:B:78:PHE:HB2	1.95	0.47
13:C:46:LEU:HD12	13:C:73:VAL:HG11	1.95	0.47
13:C:168:LEU:HA	13:C:327:PRO:HG2	1.94	0.47
14:D:290:GLY:O	14:D:294:GLU:HB2	2.13	0.47
6:7:93:GLU:O	6:7:97:LYS:HG2	2.14	0.47
9:Q:12:ALA:O	9:Q:16:THR:HG22	2.14	0.47
9:Q:67:MET:CE	11:X:179:SER:HA	2.44	0.47
13:C:360:TYR:CZ	14:F:351:LEU:HB3	2.50	0.47
14:E:138:ILE:HB	14:E:141:VAL:HG12	1.96	0.47
14:F:384:LEU:O	14:F:388:ILE:HG12	2.14	0.47
2:G:267:LEU:HD12	13:A:295:ALA:HB3	1.96	0.47
9:L:17:ILE:HB	9:M:17:ILE:HG23	1.96	0.47
9:L:30:PHE:CZ	9:L:55:PHE:CZ	3.02	0.47
9:P:29:VAL:HG22	9:Q:30:PHE:CD1	2.49	0.47
9:Q:1:MET:HE3	9:Q:1:MET:HA	1.97	0.47
13:B:40:ILE:HD13	13:B:286:LEU:HB2	1.97	0.47
13:C:313:LYS:NZ	13:C:320:SER:O	2.45	0.47
14:F:244:ARG:HD3	14:F:304:VAL:HG13	1.96	0.47
2:G:193:SER:HB2	2:G:196:LYS:HD2	1.97	0.47
6:7:149:VAL:HA	6:7:152:MET:SD	2.53	0.47
9:Q:22:ALA:O	9:Q:26:ILE:HG12	2.15	0.47
11:X:98:ILE:O	11:X:102:ILE:HG12	2.14	0.47
13:A:251:THR:O	13:A:255:ILE:HG12	2.14	0.47
13:B:168:LEU:HD11	13:B:329:ILE:HG12	1.95	0.47
13:B:219:VAL:O	13:B:223:GLU:HG3	2.14	0.47
14:D:277:SER:H	14:D:283:PRO:HB3	1.79	0.47
6:7:70:LYS:NZ	7:6:57:ASN:O	2.48	0.47
9:T:40:ASN:ND2	9:K:38:SER:O	2.33	0.47
9:K:52:ILE:HA	9:K:55:PHE:HB3	1.96	0.47
9:M:28:ILE:HG12	9:N:27:ALA:HB1	1.96	0.47
13:A:36:VAL:H	14:D:53:HIS:HB2	1.78	0.47
13:B:204:VAL:HG23	13:B:232:ILE:HB	1.95	0.47
13:C:411:ASP:OD1	13:C:411:ASP:N	2.42	0.47
14:E:452:ILE:HG23	14:E:470:ALA:HB2	1.94	0.47
8:U:61:ALA:HB3	11:X:57:ARG:HG2	1.97	0.47
9:Q:10:ILE:O	9:Q:14:ILE:HG22	2.14	0.47
9:R:50:MET:O	9:R:53:LEU:HG	2.15	0.47
11:X:119:ILE:HD12	11:X:119:ILE:H	1.80	0.47
11:X:121:LEU:HA	11:X:124:VAL:HB	1.96	0.47
13:A:174:GLN:HG3	13:A:359:PHE:HE2	1.80	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:C:147:PRO:HB3	13:C:381:GLN:HA	1.95	0.47
13:C:152:LEU:HD13	13:C:365:PRO:HG2	1.95	0.47
13:C:293:ARG:HB3	13:C:294:GLU:OE1	2.14	0.47
14:E:168:GLN:HG2	14:E:201:MET:CE	2.42	0.47
5:Z:78:LYS:HA	11:X:57:ARG:HH22	1.79	0.47
5:Z:106:ARG:HD2	8:U:19:PRO:HB3	1.97	0.47
6:7:139:THR:HA	6:7:145:ILE:HD11	1.97	0.47
8:U:48:LEU:HD23	11:X:46:LEU:HD11	1.96	0.47
9:O:33:LEU:HD12	9:O:55:PHE:HZ	1.79	0.47
11:X:76:GLN:NE2	11:X:240:SER:HA	2.30	0.47
11:X:90:PHE:O	11:X:94:MET:SD	2.72	0.47
13:A:441:GLU:HB2	13:A:482:LEU:HB2	1.96	0.47
13:B:46:LEU:HD13	13:B:49:ILE:HD12	1.95	0.47
13:B:344:VAL:HA	13:B:347:ILE:HG22	1.97	0.47
13:B:350:GLY:HA3	13:B:374:SER:HA	1.96	0.47
13:B:377:GLY:H	14:F:424:PHE:HE2	1.62	0.47
13:B:485:ILE:HG13	13:B:495:LEU:HD22	1.97	0.47
13:C:382:VAL:HG21	13:C:440:THR:HG21	1.96	0.47
14:D:102:PRO:HB3	14:D:109:ILE:HD11	1.96	0.47
14:D:387:ILE:HA	14:D:390:ILE:HG22	1.96	0.47
14:E:299:THR:HG23	14:E:301:LYS:H	1.79	0.47
2:G:42:LYS:HA	2:G:45:ASP:HB2	1.96	0.47
3:H:99:GLU:O	3:H:103:ASN:ND2	2.43	0.47
5:Z:149:GLU:O	5:Z:153:VAL:HG22	2.15	0.47
9:O:50:MET:SD	9:O:50:MET:N	2.87	0.47
9:P:15:SER:HB3	9:P:72:LEU:HD23	1.95	0.47
9:P:65:CYS:HB3	9:Q:19:LEU:HD11	1.97	0.47
11:X:132:LEU:HB3	11:X:245:ALA:HB1	1.97	0.47
13:A:385:LEU:HG	13:A:444:VAL:HG22	1.97	0.47
13:B:29:GLU:HB2	13:B:92:ARG:HD3	1.96	0.47
9:N:49:PRO:O	9:N:52:ILE:HG13	2.15	0.47
9:P:22:ALA:O	9:P:26:ILE:HG23	2.14	0.47
9:Q:59:GLU:O	9:Q:63:LEU:HD22	2.15	0.47
11:X:32:TYR:HA	11:X:35:ILE:HD12	1.96	0.47
13:A:493:LYS:HD2	13:A:493:LYS:N	2.30	0.47
13:B:83:LEU:H	13:B:83:LEU:HD22	1.80	0.47
14:F:136:THR:HG21	14:F:147:TYR:CD1	2.50	0.47
6:7:33:LYS:HA	6:7:36:ASN:HD21	1.79	0.47
9:T:61:THR:HA	9:T:64:PHE:CD2	2.50	0.47
9:L:43:ILE:O	9:L:47:VAL:HG13	2.15	0.47
9:M:58:SER:O	9:M:61:THR:OG1	2.28	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:A:10:VAL:HA	13:A:13:ILE:HG12	1.96	0.47
13:A:111:ASP:HB3	13:A:117:ILE:HD11	1.97	0.47
13:A:174:GLN:HG3	13:A:359:PHE:CE2	2.50	0.47
13:A:468:SER:O	13:A:471:LEU:HG	2.15	0.47
13:A:482:LEU:HA	13:A:485:ILE:HG12	1.96	0.47
13:A:488:LYS:HG2	13:A:490:GLU:H	1.80	0.47
13:B:382:VAL:O	13:B:383:LYS:HB2	2.14	0.47
13:C:185:ILE:O	13:C:230:TYR:OH	2.22	0.47
14:D:252:LEU:HB3	14:D:254:PHE:CE2	2.49	0.47
14:D:334:VAL:HG11	14:D:352:ASP:HB3	1.96	0.47
14:E:30:LEU:HD21	14:E:57:ASN:HA	1.96	0.47
3:H:109:LYS:HA	3:H:112:VAL:HG22	1.97	0.46
9:T:5:LEU:HA	9:T:8:LYS:HB2	1.96	0.46
9:L:3:LEU:HD23	9:L:3:LEU:H	1.80	0.46
9:M:30:PHE:CD1	9:M:30:PHE:N	2.83	0.46
11:X:171:ILE:O	11:X:175:LEU:HG	2.15	0.46
13:C:353:PHE:HD1	13:C:372:SER:HA	1.80	0.46
9:S:33:LEU:HA	9:T:34:ILE:HG21	1.98	0.46
9:Q:72:LEU:HD13	9:R:9:TYR:CD2	2.51	0.46
13:B:500:LYS:HA	13:B:503:THR:HG22	1.97	0.46
13:C:15:GLU:HG3	13:C:17:ARG:H	1.79	0.46
9:T:33:LEU:HD22	9:K:34:ILE:HD13	1.96	0.46
1:Y:82:ASP:HB3	1:Y:85:VAL:HG22	1.97	0.46
2:G:73:LEU:HD21	2:G:150:LEU:HD21	1.97	0.46
2:G:140:PHE:HD1	2:G:219:LEU:HD22	1.79	0.46
5:Z:113:LEU:HD12	6:7:110:VAL:HG11	1.96	0.46
7:6:81:VAL:HA	7:6:84:ASP:OD2	2.15	0.46
9:M:34:ILE:HA	9:M:37:VAL:HG12	1.97	0.46
9:O:48:PHE:O	9:O:52:ILE:HG13	2.16	0.46
11:X:225:ALA:O	11:X:228:ILE:HG13	2.15	0.46
13:C:398:GLN:O	13:C:402:VAL:HG23	2.15	0.46
14:E:54:LEU:HD21	14:E:60:ARG:HE	1.80	0.46
14:F:344:ILE:H	14:F:344:ILE:HD12	1.80	0.46
1:Y:47:VAL:HA	1:Y:53:LEU:HD23	1.98	0.46
2:G:108:VAL:HG22	2:G:128:LEU:HB3	1.98	0.46
4:I:10:TYR:O	4:I:14:LEU:HD22	2.15	0.46
5:Z:151:LYS:NZ	6:7:54:ASP:OD1	2.49	0.46
9:K:27:ALA:HA	9:K:30:PHE:CE1	2.50	0.46
9:O:20:LEU:O	9:O:24:ILE:HD12	2.15	0.46
9:P:40:ASN:ND2	9:Q:38:SER:O	2.49	0.46
10:8:41:SER:O	10:8:45:ILE:HG22	2.16	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:D:98:VAL:HG21	14:D:231:ARG:HB2	1.98	0.46
14:D:458:TYR:CE2	14:D:459:MET:HG2	2.51	0.46
14:E:20:ILE:HD11	14:E:271:LEU:HB3	1.98	0.46
1:Y:185:GLN:O	1:Y:189:LYS:NZ	2.46	0.46
2:G:15:ALA:O	2:G:19:ILE:HD11	2.15	0.46
9:S:24:ILE:O	9:S:28:ILE:HG23	2.16	0.46
9:T:33:LEU:HD21	9:T:51:ALA:CB	2.44	0.46
9:O:19:LEU:HG	9:O:65:CYS:SG	2.56	0.46
13:A:171:GLY:HA3	13:A:354:LEU:HB2	1.98	0.46
13:B:205:TYR:CZ	13:B:218:LEU:HD11	2.51	0.46
13:C:182:LEU:O	13:C:186:LEU:HG	2.16	0.46
14:D:84:SER:HB2	14:D:114:ARG:HB3	1.98	0.46
14:E:474:ALA:HA	14:E:478:ASN:HB3	1.97	0.46
6:7:155:LYS:HG3	6:7:157:LYS:HG2	1.97	0.46
11:X:185:HIS:HA	11:X:188:MET:CE	2.46	0.46
13:A:36:VAL:HG11	13:A:84:VAL:HG22	1.98	0.46
14:E:331:ALA:HA	14:E:355:SER:HA	1.96	0.46
2:G:184:ASN:O	2:G:188:ILE:HG12	2.16	0.46
6:7:26:ALA:H	8:U:4:LEU:CD1	2.26	0.46
6:7:51:THR:O	6:7:75:VAL:HG11	2.16	0.46
6:7:96:GLU:O	6:7:100:MET:SD	2.74	0.46
13:B:97:VAL:HG11	13:B:247:LEU:HD21	1.97	0.46
13:C:17:ARG:HH21	13:C:19:LYS:HB3	1.81	0.46
9:N:68:VAL:O	9:N:72:LEU:N	2.49	0.46
13:A:78:PHE:CZ	13:A:247:LEU:HD22	2.50	0.46
13:C:384:ALA:HB1	13:C:491:LEU:HG	1.97	0.46
14:E:468:ALA:O	14:E:471:GLU:HG3	2.15	0.46
5:Z:58:LEU:HD13	11:X:106:PRO:HB2	1.96	0.46
9:Q:52:ILE:HG13	11:X:229:ILE:HG23	1.98	0.46
14:D:30:LEU:HD12	14:D:53:HIS:HE2	1.80	0.46
14:E:232:VAL:HA	14:E:235:THR:HG22	1.97	0.46
2:G:81:LYS:HZ3	2:G:82:GLY:H	1.64	0.45
6:7:166:ARG:NH1	10:8:46:SER:OG	2.43	0.45
8:U:34:LEU:HD12	8:U:38:PRO:N	2.31	0.45
11:X:66:TYR:O	11:X:70:MET:HG2	2.16	0.45
11:X:164:LEU:HA	11:X:167:PHE:CD1	2.51	0.45
13:B:102:GLY:HA2	13:B:258:TRP:CZ2	2.51	0.45
13:C:155:VAL:HA	13:C:159:VAL:HG23	1.96	0.45
13:C:207:ALA:HB3	13:C:235:ALA:HA	1.98	0.45
14:E:50:VAL:HG22	14:E:61:THR:HG22	1.97	0.45
14:F:253:LEU:HD11	14:F:255:ILE:HG13	1.97	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:F:412:ARG:HD2	14:F:412:ARG:HA	1.81	0.45
1:Y:65:LYS:HD3	1:Y:65:LYS:HA	1.66	0.45
1:Y:122:THR:HB	1:Y:158:VAL:HG21	1.98	0.45
3:H:38:ARG:HH12	9:L:39:ARG:CD	2.30	0.45
9:M:57:LEU:HD13	9:N:55:PHE:CZ	2.51	0.45
9:Q:54:GLY:HA2	9:Q:57:LEU:CD2	2.47	0.45
13:A:159:VAL:HG11	13:A:352:ILE:HG12	1.97	0.45
13:A:178:THR:OG1	15:A:601:ADP:O1A	2.34	0.45
13:C:363:ILE:HB	13:C:366:ALA:HA	1.99	0.45
14:D:174:ILE:HD13	14:D:252:LEU:HG	1.97	0.45
14:F:189:GLU:HG2	14:F:257:ASN:HD22	1.82	0.45
1:Y:193:ASP:N	5:Z:169:GLN:OE1	2.50	0.45
9:P:4:VAL:HG23	9:Q:5:LEU:HD11	1.98	0.45
11:X:160:ILE:O	11:X:164:LEU:HD22	2.16	0.45
11:X:220:MET:HA	11:X:220:MET:CE	2.46	0.45
13:B:39:GLY:HA2	13:B:77:LEU:HB2	1.98	0.45
13:C:46:LEU:HD22	13:C:92:ARG:HG3	1.99	0.45
14:D:134:LEU:HD23	14:D:134:LEU:HA	1.80	0.45
14:E:188:GLY:O	14:E:260:ARG:NE	2.50	0.45
1:Y:175:THR:H	13:B:27:LEU:HD22	1.80	0.45
2:G:155:LYS:HG3	2:G:158:THR:HG23	1.99	0.45
7:6:79:TRP:HA	7:6:82:LEU:HD12	1.98	0.45
9:S:23:GLY:HA3	9:R:61:THR:HG21	1.98	0.45
9:K:10:ILE:O	9:K:14:ILE:HG12	2.16	0.45
9:O:51:ALA:HA	9:P:30:PHE:CE2	2.52	0.45
13:A:288:ARG:HH11	13:A:288:ARG:HG2	1.82	0.45
13:B:131:ALA:HB1	13:B:247:LEU:HD11	1.98	0.45
13:B:311:ALA:HA	13:B:323:LEU:HD22	1.97	0.45
1:Y:121:GLY:HA3	1:Y:155:LEU:HD23	1.98	0.45
2:G:184:ASN:HA	2:G:210:PHE:CD1	2.52	0.45
2:G:260:GLN:HA	2:G:263:ILE:HG12	1.99	0.45
6:7:121:LEU:O	6:7:125:GLN:HG3	2.17	0.45
9:S:20:LEU:CD1	9:T:20:LEU:HD11	2.46	0.45
13:C:206:VAL:HG22	13:C:269:VAL:O	2.17	0.45
14:E:94:ARG:NH2	14:E:107:GLY:O	2.37	0.45
14:F:97:ASN:HD22	14:F:99:ILE:HG12	1.80	0.45
9:K:5:LEU:HA	9:K:8:LYS:HB2	1.97	0.45
14:E:51:ALA:HB3	14:E:272:LEU:HD11	1.98	0.45
14:F:456:ALA:HA	14:F:469:LYS:HG2	1.99	0.45
2:G:81:LYS:HA	2:G:81:LYS:HD2	1.85	0.45
2:G:233:ARG:O	2:G:237:MET:HG2	2.17	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:K:55:PHE:O	9:K:59:GLU:HG2	2.17	0.45
9:M:33:LEU:O	9:M:37:VAL:HG12	2.16	0.45
9:M:59:GLU:O	9:M:63:LEU:HG	2.16	0.45
9:P:58:SER:O	9:P:61:THR:HG22	2.17	0.45
11:X:44:TYR:OH	12:J:1:MET:O	2.24	0.45
13:A:64:MET:HB2	13:A:78:PHE:CE2	2.51	0.45
13:B:40:ILE:HA	13:B:76:VAL:HA	1.99	0.45
13:B:320:SER:O	13:B:320:SER:OG	2.27	0.45
14:D:16:VAL:HG23	14:D:21:VAL:HG22	1.99	0.45
14:E:253:LEU:HB3	14:E:306:SER:HA	1.98	0.45
5:Z:78:LYS:HA	11:X:57:ARG:NH2	2.32	0.45
6:7:158:TRP:CE3	10:8:36:LEU:HD13	2.51	0.45
13:A:61:VAL:HB	13:A:83:LEU:HD21	1.99	0.45
14:E:46:LEU:HD13	14:E:65:ASP:HB3	1.98	0.45
14:F:412:ARG:O	14:F:415:SER:OG	2.33	0.45
1:Y:57:LEU:HD22	1:Y:98:LEU:HD12	1.98	0.45
5:Z:65:PHE:CE1	11:X:217:LEU:HA	2.52	0.45
9:R:50:MET:SD	9:R:51:ALA:N	2.90	0.45
13:A:109:VAL:HG13	13:A:117:ILE:H	1.82	0.45
13:A:274:SER:O	13:A:278:VAL:HG13	2.17	0.45
13:B:18:ILE:HG22	13:B:19:LYS:HE3	1.99	0.45
13:B:155:VAL:HG13	13:B:430:LEU:HD13	1.99	0.45
13:B:166:ARG:NE	13:B:349:ASP:OD2	2.49	0.45
13:B:173:ARG:NH1	14:E:320:PRO:O	2.50	0.45
13:C:416:THR:HG21	14:D:389:ALA:HA	1.98	0.45
14:F:153:ILE:HD13	14:F:331:ALA:HB3	1.99	0.45
14:F:192:ARG:HD2	14:F:196:ASP:OD2	2.16	0.45
14:F:349:ASP:HB3	14:F:352:ASP:OD1	2.17	0.45
2:G:195:GLY:HA3	9:S:40:ASN:H	1.81	0.45
3:H:10:LEU:HD23	3:H:81:SER:HB2	1.98	0.45
9:L:30:PHE:CE1	9:L:33:LEU:HD22	2.51	0.45
9:L:30:PHE:O	9:L:34:ILE:HG12	2.18	0.45
9:M:6:ALA:O	9:M:10:ILE:HG12	2.17	0.45
13:A:359:PHE:HD1	13:A:364:ARG:HA	1.82	0.45
13:B:347:ILE:HA	14:F:222:MET:HE1	1.99	0.45
14:D:72:ARG:H	14:D:72:ARG:HG2	1.62	0.45
14:D:156:PHE:CD1	14:D:156:PHE:N	2.84	0.45
1:Y:23:LEU:HD22	1:Y:88:LEU:HD13	1.98	0.44
1:Y:79:LYS:HD2	1:Y:79:LYS:O	2.16	0.44
2:G:71:LYS:HG3	2:G:159:TYR:HA	1.98	0.44
7:6:29:LYS:HG3	7:6:30:PRO:HD3	1.99	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:A:102:GLY:HA2	13:A:258:TRP:CE2	2.52	0.44
13:B:383:LYS:HA	13:B:386:LYS:HE3	1.99	0.44
13:C:67:ASN:O	13:C:74:GLY:N	2.42	0.44
13:C:168:LEU:HD22	13:C:344:VAL:HG12	1.99	0.44
14:D:190:ARG:HB2	14:D:193:GLU:HB2	1.98	0.44
14:E:37:LEU:N	14:E:48:LEU:O	2.50	0.44
14:F:162:GLY:HA2	15:F:501:ADP:H5'2	1.99	0.44
2:G:12:SER:HA	2:G:16:ILE:HG22	1.99	0.44
2:G:45:ASP:O	2:G:49:GLN:HG2	2.16	0.44
11:X:226:ILE:HG12	11:X:230:GLN:NE2	2.33	0.44
13:C:204:VAL:HG12	13:C:232:ILE:HB	2.00	0.44
14:E:179:GLY:O	14:E:249:GLN:NE2	2.45	0.44
14:F:143:LEU:HA	14:F:367:HIS:HE1	1.81	0.44
7:6:84:ASP:HA	7:6:87:GLU:HG3	1.99	0.44
13:A:154:ALA:HB1	13:A:367:ILE:HB	1.99	0.44
13:B:6:GLN:OE1	13:B:7:PRO:HD3	2.18	0.44
13:B:353:PHE:HB2	13:B:371:LEU:HD22	2.00	0.44
14:D:17:ILE:N	14:D:20:ILE:O	2.50	0.44
14:E:156:PHE:HB2	14:E:334:VAL:HG12	1.98	0.44
2:G:110:ILE:HG12	2:G:130:ILE:HD12	2.00	0.44
9:K:25:GLY:HA2	9:K:28:ILE:HG12	2.00	0.44
9:P:31:ALA:O	9:P:34:ILE:HG22	2.17	0.44
9:P:63:LEU:HD12	9:P:66:LEU:HD11	1.99	0.44
9:Q:57:LEU:HD22	9:R:55:PHE:CZ	2.52	0.44
11:X:70:MET:O	11:X:74:LYS:HG2	2.17	0.44
13:A:447:ILE:O	13:A:451:VAL:HG22	2.17	0.44
13:B:168:LEU:HD22	13:B:344:VAL:HG22	1.99	0.44
14:D:87:VAL:HB	14:D:242:TYR:CD2	2.53	0.44
14:E:21:VAL:HB	14:E:48:LEU:HD22	1.99	0.44
2:G:124:ASN:OD1	2:G:124:ASN:N	2.50	0.44
7:6:15:LYS:HD3	7:6:15:LYS:HA	1.74	0.44
9:N:26:ILE:HB	9:N:30:PHE:HE2	1.82	0.44
13:A:173:ARG:HH11	13:A:173:ARG:C	2.21	0.44
13:B:351:GLN:NE2	13:B:371:LEU:O	2.50	0.44
14:D:95:ILE:HD11	14:D:198:TYR:CD1	2.52	0.44
14:D:296:ILE:HD12	14:D:296:ILE:H	1.83	0.44
14:F:373:LYS:HA	14:F:373:LYS:HD3	1.77	0.44
3:H:125:ILE:O	3:H:128:GLU:HG2	2.17	0.44
9:P:24:ILE:O	9:P:28:ILE:HG22	2.18	0.44
11:X:173:LEU:HB3	11:X:234:TRP:NE1	2.33	0.44
13:B:399:TYR:CG	13:B:423:GLY:HA3	2.53	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:C:273:LEU:HB2	13:C:329:ILE:HG22	1.99	0.44
13:C:346:SER:O	14:D:190:ARG:NH2	2.51	0.44
14:F:460:VAL:HG21	14:F:466:VAL:HG22	1.99	0.44
6:7:169:ASN:OD1	11:X:71:ASN:ND2	2.45	0.44
9:M:35:ASN:O	9:M:39:ARG:HG2	2.18	0.44
9:Q:57:LEU:HD13	9:R:55:PHE:CZ	2.53	0.44
9:R:40:ASN:O	9:R:43:ILE:HG22	2.18	0.44
11:X:183:ALA:O	11:X:187:LEU:HG	2.17	0.44
11:X:191:LEU:O	11:X:195:THR:OG1	2.31	0.44
13:A:168:LEU:O	13:A:352:ILE:N	2.39	0.44
13:A:455:LEU:HD11	13:A:466:PHE:CE2	2.52	0.44
13:B:110:VAL:HG12	13:B:116:PRO:HA	2.00	0.44
13:C:43:VAL:HG11	13:C:90:VAL:HG11	1.99	0.44
14:E:152:LYS:HE3	14:E:296:ILE:HD12	1.99	0.44
14:E:201:MET:HG3	14:E:207:ILE:CD1	2.48	0.44
14:F:252:LEU:HD23	14:F:252:LEU:HA	1.83	0.44
1:Y:60:PRO:HD2	13:A:44:PHE:CD2	2.53	0.44
2:G:55:ALA:HB2	2:G:197:PHE:CE1	2.53	0.44
2:G:162:ILE:HB	2:G:182:ILE:HB	1.99	0.44
2:G:260:GLN:NE2	13:A:332:GLN:OE1	2.35	0.44
9:K:57:LEU:O	9:K:61:THR:HG23	2.17	0.44
11:X:95:PHE:CE2	11:X:121:LEU:HD21	2.53	0.44
13:A:293:ARG:NH1	14:E:277:SER:O	2.50	0.44
13:A:383:LYS:HE2	13:A:490:GLU:HB2	2.00	0.44
13:B:285:LEU:HD21	14:E:275:ILE:HG22	1.98	0.44
13:B:300:VAL:O	13:B:303:LEU:HG	2.18	0.44
14:E:185:THR:OG1	14:E:255:ILE:HD13	2.18	0.44
2:G:74:ILE:HB	2:G:107:ILE:HG12	1.99	0.44
5:Z:179:ARG:CZ	7:6:13:ASP:HA	2.48	0.44
8:U:81:GLU:O	8:U:85:HIS:N	2.50	0.44
9:S:21:GLY:HA2	9:T:24:ILE:HD11	2.00	0.44
9:Q:28:ILE:HD12	9:Q:29:VAL:N	2.32	0.44
11:X:114:HIS:CG	11:X:115:LEU:N	2.85	0.44
11:X:242:LEU:O	11:X:246:VAL:HG22	2.18	0.44
13:B:155:VAL:HA	13:B:158:LEU:HG	1.99	0.44
13:B:254:SER:HA	13:B:257:GLU:OE2	2.18	0.44
13:C:398:GLN:O	13:C:401:GLU:HG3	2.18	0.44
14:D:83:ILE:HG23	14:D:117:ILE:HD11	1.99	0.44
14:E:402:LEU:O	14:E:405:GLU:HG3	2.18	0.44
2:G:81:LYS:HZ3	2:G:82:GLY:N	2.15	0.43
9:S:50:MET:CE	9:T:30:PHE:HE1	2.30	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:S:59:GLU:O	9:S:63:LEU:HG	2.17	0.43
9:O:24:ILE:O	9:O:27:ALA:HB3	2.18	0.43
9:R:30:PHE:HA	9:R:33:LEU:HB3	2.00	0.43
14:E:98:VAL:HG21	14:E:228:ALA:HB1	1.99	0.43
1:Y:131:PRO:HA	1:Y:134:PHE:HB2	2.01	0.43
3:H:126:GLN:HA	3:H:129:VAL:HG12	2.00	0.43
5:Z:188:LYS:HD2	5:Z:188:LYS:HA	1.87	0.43
11:X:126:TRP:HE3	11:X:127:LEU:HD22	1.82	0.43
13:B:296:TYR:CE1	13:B:340:ILE:HD11	2.54	0.43
1:Y:100:CYS:HB3	1:Y:103:LYS:HD2	2.01	0.43
3:H:38:ARG:NE	9:M:38:SER:O	2.52	0.43
6:7:102:ASN:HB3	8:U:8:LYS:CE	2.49	0.43
9:S:20:LEU:HB2	9:R:21:GLY:HA3	1.99	0.43
9:T:29:VAL:HG21	9:K:30:PHE:CE2	2.52	0.43
9:L:46:THR:HG23	9:M:44:LYS:NZ	2.33	0.43
9:Q:61:THR:HA	9:Q:64:PHE:CE2	2.53	0.43
11:X:111:LEU:HB3	11:X:114:HIS:CE1	2.53	0.43
13:A:355:GLU:OE1	13:A:368:ASN:ND2	2.51	0.43
13:B:353:PHE:O	13:B:367:ILE:HA	2.19	0.43
13:B:433:ASN:HA	15:B:601:ADP:HN62	1.82	0.43
13:B:459:GLU:O	13:B:463:ILE:HG12	2.18	0.43
14:E:177:ALA:HB2	14:E:431:LEU:HD21	2.00	0.43
3:H:106:ALA:HB2	3:H:130:LEU:HD22	2.00	0.43
9:L:43:ILE:CG2	9:L:46:THR:HB	2.48	0.43
9:R:61:THR:HA	9:R:64:PHE:CD1	2.54	0.43
13:B:27:LEU:HD11	13:B:30:THR:HB	2.01	0.43
14:D:13:VAL:O	14:D:73:GLY:N	2.49	0.43
14:D:40:LYS:NZ	14:D:41:THR:O	2.48	0.43
14:D:117:ILE:HD12	14:D:117:ILE:H	1.83	0.43
2:G:268:VAL:HA	2:G:271:ILE:HD11	2.00	0.43
9:S:28:ILE:HG22	9:R:28:ILE:HD11	1.99	0.43
9:M:39:ARG:NH2	9:N:39:ARG:HA	2.33	0.43
9:N:26:ILE:HG22	9:N:55:PHE:HD1	1.82	0.43
11:X:94:MET:O	11:X:98:ILE:HD12	2.19	0.43
11:X:227:GLY:O	11:X:230:GLN:HG2	2.18	0.43
13:A:130:ARG:O	13:A:254:SER:OG	2.36	0.43
13:A:170:ILE:HD12	13:A:329:ILE:HB	2.00	0.43
13:B:155:VAL:HG12	13:B:158:LEU:HD21	2.01	0.43
14:E:403:THR:HG22	14:E:406:ARG:HH21	1.83	0.43
9:T:32:ALA:HA	9:T:35:ASN:ND2	2.34	0.43
9:N:57:LEU:HD12	9:O:30:PHE:CE1	2.53	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:O:12:ALA:O	9:O:16:THR:HG23	2.19	0.43
9:O:51:ALA:HB1	9:O:55:PHE:CZ	2.54	0.43
9:Q:26:ILE:HG13	9:Q:27:ALA:H	1.84	0.43
10:8:37:ARG:HA	10:8:40:VAL:HG22	2.00	0.43
13:A:184:THR:O	13:A:188:GLN:HG2	2.18	0.43
13:B:397:ALA:O	13:B:401:GLU:HG2	2.18	0.43
14:D:171:ILE:HG12	14:D:254:PHE:CE2	2.53	0.43
14:E:207:ILE:HA	14:E:213:SER:HA	2.00	0.43
14:F:237:LEU:HD21	14:F:295:ARG:HB3	2.00	0.43
3:H:41:VAL:HG13	3:H:45:HIS:HB2	2.01	0.43
11:X:234:TRP:CD1	11:X:237:LEU:HD12	2.48	0.43
13:A:421:VAL:HA	13:A:424:GLU:OE1	2.19	0.43
13:B:281:ARG:O	13:B:285:LEU:HD13	2.19	0.43
13:C:441:GLU:HB3	13:C:486:ARG:HB2	2.01	0.43
14:D:234:LEU:HG	14:D:292:LEU:HD13	2.00	0.43
14:D:255:ILE:HB	14:D:308:GLN:HA	1.99	0.43
14:F:344:ILE:HG23	14:F:415:SER:HB3	2.00	0.43
1:Y:56:LEU:HD23	1:Y:70:VAL:HG22	2.00	0.43
2:G:90:GLN:O	2:G:93:LYS:HG2	2.19	0.43
5:Z:74:ALA:O	5:Z:78:LYS:HB2	2.19	0.43
6:7:76:LYS:HA	6:7:76:LYS:HD3	1.86	0.43
7:6:22:GLN:NE2	7:6:23:ASP:OD2	2.52	0.43
9:L:21:GLY:HA2	9:M:24:ILE:HD13	2.00	0.43
9:O:20:LEU:HB2	9:P:20:LEU:HD11	2.01	0.43
9:O:47:VAL:HB	9:P:34:ILE:CD1	2.44	0.43
11:X:77:ILE:HG22	11:X:243:LYS:HB2	2.00	0.43
13:A:7:PRO:HA	13:A:10:VAL:HG12	2.01	0.43
13:A:98:ASP:OD1	13:A:98:ASP:N	2.52	0.43
14:E:168:GLN:HE22	14:E:200:GLU:HG2	1.84	0.43
14:E:277:SER:OG	14:E:281:TYR:HB3	2.19	0.43
14:E:345:TYR:HB3	14:E:346:PRO:HD3	1.99	0.43
3:H:126:GLN:NE2	4:I:19:GLN:OE1	2.52	0.43
7:6:22:GLN:O	7:6:24:ALA:N	2.51	0.43
9:S:4:VAL:HG13	9:T:2:GLN:HG2	2.01	0.43
9:P:64:PHE:CZ	9:Q:66:LEU:HD21	2.54	0.43
13:A:364:ARG:HD3	15:A:601:ADP:C2	2.54	0.43
13:B:67:ASN:HB2	13:B:287:LEU:HD11	2.01	0.43
13:B:168:LEU:CD2	13:B:344:VAL:HG22	2.49	0.43
13:C:298:GLY:HA3	14:D:271:LEU:HD13	2.01	0.43
13:C:344:VAL:O	13:C:348:THR:HG23	2.19	0.43
14:D:84:SER:O	14:D:114:ARG:NH1	2.51	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:D:272:LEU:HD13	14:D:274:ARG:NH2	2.34	0.43
14:D:282:GLN:HB3	14:D:285:LEU:HB2	2.01	0.43
9:S:30:PHE:O	9:S:34:ILE:HG13	2.19	0.43
9:S:58:SER:O	9:S:61:THR:OG1	2.31	0.43
9:T:57:LEU:HA	9:T:60:ALA:HB3	2.00	0.43
9:K:56:ALA:HA	9:K:59:GLU:HG2	2.01	0.43
13:A:57:PHE:HE1	13:A:63:GLY:HA3	1.84	0.43
13:B:211:LYS:H	13:B:211:LYS:HG3	1.62	0.43
14:D:272:LEU:HD13	14:D:274:ARG:HH22	1.83	0.43
14:E:174:ILE:HG13	14:E:252:LEU:HD22	2.00	0.43
14:E:206:VAL:HB	14:E:214:LYS:HD2	2.01	0.43
14:F:258:ILE:HD11	14:F:292:LEU:HD21	2.01	0.43
1:Y:92:LEU:HD22	1:Y:97:ARG:HB3	2.01	0.42
2:G:83:LEU:HG	2:G:88:HIS:HB2	2.00	0.42
5:Z:139:GLU:HA	5:Z:142:GLN:NE2	2.34	0.42
9:S:48:PHE:CE2	9:S:52:ILE:HD11	2.54	0.42
9:Q:56:ALA:HB2	11:X:229:ILE:HG22	2.01	0.42
13:B:179:ALA:O	13:B:182:LEU:HG	2.19	0.42
13:C:392:LEU:HD22	13:C:447:ILE:HG23	2.00	0.42
14:F:290:GLY:HA2	14:F:328:HIS:HE1	1.81	0.42
14:F:415:SER:HB2	14:F:459:MET:SD	2.59	0.42
2:G:17:GLU:O	2:G:21:LYS:HD3	2.19	0.42
3:H:40:GLY:CA	9:L:40:ASN:HD22	2.32	0.42
9:Q:68:VAL:HG11	9:R:16:THR:HB	2.01	0.42
13:A:351:GLN:OE1	13:A:351:GLN:N	2.51	0.42
13:C:36:VAL:HA	13:C:41:ALA:HA	2.01	0.42
5:Z:207:LYS:HB3	5:Z:207:LYS:HE2	1.78	0.42
9:M:30:PHE:HZ	9:M:55:PHE:HB2	1.84	0.42
11:X:65:ILE:O	11:X:69:ILE:HG12	2.19	0.42
13:A:35:ALA:HB1	14:D:53:HIS:O	2.19	0.42
13:B:36:VAL:HG22	14:E:53:HIS:HB2	2.02	0.42
13:B:166:ARG:HA	13:B:325:ALA:HB3	2.02	0.42
13:B:383:LYS:HG2	13:B:386:LYS:HE3	2.00	0.42
13:B:434:GLN:H	15:B:601:ADP:N6	2.17	0.42
13:C:378:SER:HB3	13:C:386:LYS:HD3	2.00	0.42
3:H:92:PRO:HG2	3:H:96:PHE:HB2	2.01	0.42
9:Q:39:ARG:HH12	9:R:39:ARG:N	2.17	0.42
11:X:87:PRO:O	11:X:91:THR:HG23	2.19	0.42
13:B:276:GLN:HE22	13:B:307:LEU:HD13	1.84	0.42
13:B:373:VAL:HG12	13:B:393:LYS:HE3	2.01	0.42
13:C:211:LYS:NZ	14:F:330:ASP:OD1	2.52	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:E:47:VAL:O	14:E:64:MET:HG2	2.19	0.42
14:F:97:ASN:HB2	14:F:103:ILE:HG13	2.02	0.42
14:F:220:GLY:HA3	14:F:232:VAL:HG11	2.01	0.42
1:Y:129:LEU:HD23	1:Y:134:PHE:CG	2.55	0.42
5:Z:86:LYS:HA	5:Z:86:LYS:HD2	1.77	0.42
9:L:25:GLY:O	9:L:29:VAL:HG13	2.19	0.42
9:M:40:ASN:HA	9:M:41:PRO:HD3	1.92	0.42
9:Q:24:ILE:O	9:Q:28:ILE:HG23	2.19	0.42
9:Q:48:PHE:O	9:Q:52:ILE:HG23	2.19	0.42
13:B:417:LYS:HD3	13:B:417:LYS:HA	1.83	0.42
13:C:69:GLU:OE2	13:C:69:GLU:N	2.29	0.42
14:E:257:ASN:ND2	14:E:260:ARG:HD3	2.34	0.42
14:E:460:VAL:HG21	14:E:466:VAL:HG22	2.01	0.42
14:F:168:GLN:HB3	14:F:420:VAL:HG21	2.01	0.42
9:S:3:LEU:HG	9:T:2:GLN:NE2	2.34	0.42
11:X:69:ILE:HG21	11:X:90:PHE:CD1	2.54	0.42
11:X:227:GLY:HA2	11:X:230:GLN:NE2	2.34	0.42
13:A:268:ILE:HD12	13:A:268:ILE:HA	1.79	0.42
13:A:492:SER:H	13:A:495:LEU:HB2	1.84	0.42
13:C:474:LEU:HD13	13:C:482:LEU:HD21	2.02	0.42
14:D:258:ILE:HD12	14:D:261:PHE:HB3	2.02	0.42
14:F:358:LEU:HD23	14:F:358:LEU:HA	1.83	0.42
1:Y:122:THR:O	1:Y:122:THR:OG1	2.36	0.42
1:Y:175:THR:HG21	13:B:89:LEU:HG	2.01	0.42
1:Y:187:LEU:HD12	7:6:10:GLU:HG3	2.02	0.42
9:P:26:ILE:HG22	9:P:58:SER:OG	2.19	0.42
9:R:62:GLY:O	9:R:66:LEU:HD22	2.19	0.42
13:A:53:GLU:HA	13:A:96:ILE:HA	2.01	0.42
9:Q:33:LEU:HB2	9:Q:51:ALA:HB2	2.00	0.42
11:X:96:ILE:HG21	11:X:234:TRP:CE3	2.54	0.42
13:B:46:LEU:HB2	13:B:73:VAL:HG21	2.02	0.42
13:B:69:GLU:HB2	13:B:72:GLN:HG2	2.02	0.42
13:C:297:PRO:HG2	13:C:300:VAL:HB	2.01	0.42
14:E:147:TYR:CZ	14:E:153:ILE:HD13	2.55	0.42
9:S:63:LEU:HD12	11:X:161:ILE:HD13	2.02	0.42
9:K:43:ILE:HD11	9:L:41:PRO:HB3	2.02	0.42
13:A:412:LEU:HD23	13:A:412:LEU:HA	1.94	0.42
13:A:458:ILE:HD12	13:A:462:ARG:HH21	1.84	0.42
13:A:493:LYS:H	13:A:493:LYS:CD	2.33	0.42
13:B:454:HIS:NE2	13:B:500:LYS:HE2	2.35	0.42
14:D:244:ARG:NE	14:D:245:ASP:OD1	2.44	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Y:37:PHE:O	1:Y:41:GLN:NE2	2.38	0.42
2:G:194:PHE:CZ	2:G:199:ILE:HG21	2.55	0.42
5:Z:146:LEU:HD12	7:6:59:GLU:HB3	2.02	0.42
5:Z:197:SER:O	5:Z:200:GLU:HG3	2.20	0.42
6:7:55:PHE:HB2	6:7:59:ARG:HE	1.84	0.42
9:S:63:LEU:HD11	11:X:164:LEU:HD21	2.02	0.42
11:X:60:ILE:HA	11:X:63:GLU:CG	2.49	0.42
13:A:180:VAL:O	13:A:184:THR:HG23	2.19	0.42
14:D:71:VAL:O	14:D:74:GLU:HG2	2.20	0.42
14:D:156:PHE:HB2	14:D:334:VAL:HA	2.02	0.42
14:D:374:VAL:HG13	14:D:410:ILE:HG21	2.01	0.42
14:E:136:THR:O	14:E:173:ASN:HB3	2.19	0.42
3:H:115:SER:HB2	3:H:119:GLU:HB3	2.01	0.41
5:Z:156:SER:O	5:Z:159:ARG:HG3	2.19	0.41
6:7:26:ALA:N	8:U:4:LEU:HD11	2.27	0.41
13:A:170:ILE:O	13:A:354:LEU:N	2.52	0.41
13:B:161:ILE:HD12	13:B:167:GLU:HG2	2.01	0.41
14:E:198:TYR:CE2	14:E:202:LYS:HD2	2.55	0.41
1:Y:179:SER:HG	1:Y:181:SER:HG	1.66	0.41
3:H:99:GLU:HG3	3:H:137:LEU:HD13	2.01	0.41
9:T:30:PHE:O	9:T:30:PHE:CD1	2.74	0.41
9:T:58:SER:HA	9:K:26:ILE:HD11	2.01	0.41
9:K:11:GLY:HA2	9:K:14:ILE:HG12	2.02	0.41
9:L:19:LEU:HD23	9:L:19:LEU:HA	1.87	0.41
9:P:21:GLY:HA2	9:Q:24:ILE:CD1	2.50	0.41
9:P:63:LEU:HD11	11:X:215:MET:SD	2.60	0.41
9:P:64:PHE:CZ	9:Q:66:LEU:HD11	2.54	0.41
9:R:10:ILE:O	9:R:14:ILE:HG22	2.20	0.41
13:A:364:ARG:HH21	15:A:601:ADP:H1'	1.85	0.41
13:B:500:LYS:O	13:B:504:GLU:HG3	2.20	0.41
13:C:186:LEU:O	13:C:189:LYS:HG2	2.19	0.41
14:D:257:ASN:HB3	14:D:260:ARG:HG3	2.01	0.41
5:Z:158:VAL:HG11	6:7:58:TYR:HE1	1.84	0.41
9:T:3:LEU:HA	9:T:6:ALA:HB3	2.01	0.41
9:N:39:ARG:HH12	9:O:39:ARG:HD2	1.85	0.41
9:P:63:LEU:HA	9:P:66:LEU:CG	2.48	0.41
13:A:134:LYS:HE3	13:A:134:LYS:HB3	1.73	0.41
13:A:353:PHE:O	13:A:354:LEU:HD23	2.20	0.41
13:B:275:LYS:HG2	13:B:275:LYS:H	1.62	0.41
13:C:67:ASN:HB2	13:C:287:LEU:HD22	2.02	0.41
13:C:176:GLY:HA3	15:C:601:ADP:H8	1.85	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:D:148:ALA:HB2	14:D:357:LEU:HD22	2.02	0.41
14:D:237:LEU:HD13	14:D:296:ILE:HG13	2.02	0.41
14:D:278:ALA:H	14:D:283:PRO:HA	1.85	0.41
14:E:259:PHE:O	14:E:262:THR:HG22	2.20	0.41
14:F:34:LEU:HD13	14:F:118:HIS:CG	2.55	0.41
14:F:34:LEU:HD22	14:F:118:HIS:CE1	2.55	0.41
14:F:174:ILE:O	14:F:178:HIS:N	2.53	0.41
5:Z:125:ASP:OD1	5:Z:126:VAL:N	2.53	0.41
5:Z:126:VAL:O	5:Z:129:GLU:HG3	2.20	0.41
9:T:29:VAL:HG23	9:K:31:ALA:CA	2.51	0.41
9:M:29:VAL:HG12	9:M:30:PHE:HD1	1.84	0.41
9:Q:62:GLY:O	9:Q:66:LEU:HD22	2.20	0.41
11:X:62:GLN:O	11:X:65:ILE:HG12	2.21	0.41
11:X:122:SER:OG	11:X:170:ALA:O	2.29	0.41
14:D:133:ILE:HD13	14:D:357:LEU:HD12	2.02	0.41
14:D:244:ARG:HD3	14:D:304:VAL:HG23	2.03	0.41
14:F:473:LEU:HA	14:F:476:GLU:HG2	2.03	0.41
2:G:56:GLU:N	2:G:193:SER:OG	2.53	0.41
2:G:246:ASP:OD1	2:G:247:MET:N	2.53	0.41
9:S:48:PHE:HB3	9:S:49:PRO:HD3	2.01	0.41
9:K:17:ILE:N	9:K:17:ILE:HD13	2.36	0.41
9:K:30:PHE:HA	9:K:33:LEU:HB2	2.01	0.41
9:O:14:ILE:HG12	9:P:17:ILE:HD11	2.02	0.41
9:Q:21:GLY:H	9:R:20:LEU:HD12	1.86	0.41
9:Q:69:SER:O	9:Q:73:LEU:N	2.43	0.41
11:X:155:VAL:HG13	11:X:156:PRO:HD3	2.01	0.41
13:A:67:ASN:CB	13:A:287:LEU:HD22	2.50	0.41
13:B:96:ILE:HG13	13:B:130:ARG:CZ	2.50	0.41
13:C:68:LEU:O	14:D:15:ALA:HA	2.20	0.41
13:C:443:GLN:O	13:C:447:ILE:HG12	2.20	0.41
13:C:479:ASN:OD1	13:C:479:ASN:N	2.53	0.41
14:F:381:TYR:OH	14:F:408:ARG:NH1	2.53	0.41
2:G:50:LEU:HA	2:G:53:LYS:HG3	2.03	0.41
6:7:24:SER:HB2	8:U:4:LEU:HD13	2.03	0.41
8:U:4:LEU:H	8:U:4:LEU:HD12	1.86	0.41
9:S:43:ILE:HG22	9:S:47:VAL:HG13	2.03	0.41
9:T:1:MET:SD	9:T:1:MET:N	2.75	0.41
11:X:164:LEU:HA	11:X:167:PHE:HD1	1.86	0.41
13:B:189:LYS:O	13:B:193:ASN:HB2	2.21	0.41
13:C:167:GLU:OE2	13:C:352:ILE:HG13	2.21	0.41
14:D:68:GLU:OE2	14:D:69:GLY:N	2.54	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:D:456:ALA:HA	14:D:469:LYS:HG2	2.01	0.41
14:E:346:PRO:HD2	14:E:415:SER:HA	2.02	0.41
14:F:296:ILE:HG23	14:F:304:VAL:HG23	2.01	0.41
5:Z:113:LEU:HA	5:Z:116:VAL:HG12	2.02	0.41
6:7:35:ARG:NH2	13:B:475:LYS:HE2	2.35	0.41
7:6:35:GLN:HA	7:6:38:ASN:HB2	2.02	0.41
9:K:14:ILE:HG13	9:L:13:GLY:HA3	2.02	0.41
9:O:14:ILE:HA	9:O:17:ILE:HG12	2.02	0.41
9:P:52:ILE:HA	9:P:55:PHE:HE2	1.78	0.41
11:X:85:TYR:CD2	11:X:242:LEU:HD21	2.55	0.41
13:A:204:VAL:HB	13:A:268:ILE:HD13	2.02	0.41
13:B:82:ARG:HE	14:E:34:LEU:HD12	1.84	0.41
13:B:448:TYR:HA	13:B:451:VAL:HG12	2.03	0.41
13:C:399:TYR:O	13:C:403:ALA:N	2.53	0.41
2:G:149:LYS:O	2:G:153:VAL:HG12	2.21	0.41
8:U:48:LEU:HB3	11:X:46:LEU:HD21	2.02	0.41
9:S:52:ILE:HD13	11:X:147:PRO:HB2	2.03	0.41
9:R:26:ILE:HD12	9:R:55:PHE:CZ	2.56	0.41
11:X:43:LEU:HD12	11:X:43:LEU:O	2.20	0.41
11:X:195:THR:HG22	11:X:198:PHE:CD1	2.55	0.41
13:A:462:ARG:NH2	13:A:510:PHE:OXT	2.53	0.41
13:B:281:ARG:HD2	13:B:296:TYR:CZ	2.55	0.41
13:B:455:LEU:HD13	13:B:463:ILE:HD12	2.03	0.41
14:E:87:VAL:HB	14:E:242:TYR:CD2	2.56	0.41
14:F:337:ARG:O	14:F:341:GLU:HG3	2.21	0.41
2:G:41:ALA:O	2:G:44:MET:HG2	2.20	0.41
2:G:88:HIS:CE1	2:G:113:LYS:HB3	2.55	0.41
2:G:90:GLN:HE22	2:G:177:PRO:HD3	1.86	0.41
2:G:116:MET:HA	2:G:119:LEU:HD12	2.03	0.41
3:H:31:ASN:HA	3:H:39:ILE:O	2.21	0.41
3:H:78:GLN:CD	3:H:82:GLN:HB2	2.41	0.41
6:7:54:ASP:OD1	6:7:54:ASP:N	2.48	0.41
6:7:106:THR:HG21	8:U:8:LYS:O	2.21	0.41
6:7:129:PRO:O	6:7:133:LEU:HG	2.21	0.41
7:6:75:ILE:HD13	7:6:75:ILE:HA	1.94	0.41
8:U:32:LYS:H	8:U:32:LYS:HG2	1.70	0.41
9:T:54:GLY:HA3	9:K:30:PHE:CE2	2.55	0.41
9:N:55:PHE:CE1	9:N:59:GLU:HG3	2.56	0.41
9:P:1:MET:H2	9:P:5:LEU:HD22	1.85	0.41
9:Q:12:ALA:HA	9:Q:69:SER:HA	2.02	0.41
9:R:19:LEU:HD22	9:R:66:LEU:HD21	2.02	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:R:20:LEU:HD13	9:R:20:LEU:HA	1.94	0.41
11:X:155:VAL:N	11:X:156:PRO:HD2	2.36	0.41
13:A:53:GLU:HB2	13:A:96:ILE:HD13	2.01	0.41
13:A:106:LEU:HD23	13:A:106:LEU:HA	1.92	0.41
13:B:149:GLN:HG3	13:B:191:TRP:CE2	2.56	0.41
13:C:241:ALA:HB1	13:C:243:PRO:HD2	2.03	0.41
13:C:341:PRO:O	13:C:345:ILE:HD12	2.20	0.41
13:C:421:VAL:O	13:C:424:GLU:HG2	2.21	0.41
13:C:441:GLU:OE1	13:C:486:ARG:NH1	2.44	0.41
14:D:218:VAL:HG21	14:D:236:GLY:HA2	2.02	0.41
14:E:17:ILE:O	14:E:20:ILE:N	2.54	0.41
14:E:419:ALA:HA	14:E:429:GLY:HA3	2.03	0.41
14:F:24:HIS:HE1	14:F:26:GLU:HG3	1.86	0.41
14:F:220:GLY:N	14:F:232:VAL:HG21	2.36	0.41
14:F:377:THR:O	14:F:380:THR:OG1	2.30	0.41
1:Y:170:GLU:OE1	1:Y:171:LEU:N	2.54	0.41
9:K:54:GLY:HA2	9:K:57:LEU:HG	2.03	0.41
9:M:72:LEU:HD21	9:N:9:TYR:CD1	2.56	0.41
9:R:33:LEU:HD21	9:R:48:PHE:CE1	2.56	0.41
10:8:30:PHE:O	10:8:34:MET:HG3	2.21	0.41
13:B:15:GLU:HB2	13:B:19:LYS:HZ1	1.86	0.41
13:B:77:LEU:HD12	13:B:81:ASP:HB3	2.02	0.41
13:B:165:GLN:HG2	13:B:167:GLU:H	1.86	0.41
13:C:165:GLN:NE2	13:C:167:GLU:OE1	2.54	0.41
14:D:145:ALA:HA	14:D:355:SER:HB2	2.03	0.41
4:I:10:TYR:CE2	4:I:14:LEU:HD21	2.56	0.40
9:T:10:ILE:O	9:T:14:ILE:HG22	2.21	0.40
9:K:64:PHE:CD2	9:L:19:LEU:HD11	2.50	0.40
9:N:30:PHE:HA	9:N:33:LEU:HB2	2.03	0.40
9:O:67:MET:SD	9:O:68:VAL:N	2.94	0.40
9:P:35:ASN:O	9:P:39:ARG:HG2	2.21	0.40
9:Q:26:ILE:HG22	9:Q:55:PHE:HA	2.03	0.40
11:X:243:LYS:HD3	11:X:247:TYR:HD2	1.86	0.40
13:A:177:LYS:HE3	13:A:330:GLU:HG2	2.03	0.40
13:A:206:VAL:HG22	13:A:271:ASP:H	1.86	0.40
13:A:220:GLN:O	13:A:224:GLN:HG2	2.21	0.40
13:B:165:GLN:HG2	13:B:167:GLU:N	2.36	0.40
13:B:219:VAL:HG23	13:B:228:MET:SD	2.61	0.40
13:C:204:VAL:HG12	13:C:232:ILE:HD12	2.02	0.40
13:C:442:GLU:O	13:C:445:PRO:HD2	2.21	0.40
14:D:367:HIS:CG	14:D:438:VAL:HG21	2.56	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:E:139:LYS:HG2	14:E:432:VAL:HG21	2.02	0.40
1:Y:56:LEU:HD21	13:A:18:ILE:HG21	2.02	0.40
2:G:71:LYS:HD3	2:G:71:LYS:HA	1.89	0.40
9:T:43:ILE:HG21	9:K:41:PRO:HB3	2.03	0.40
9:M:61:THR:HA	9:M:64:PHE:HD2	1.85	0.40
9:O:39:ARG:CZ	9:O:39:ARG:HA	2.52	0.40
9:Q:68:VAL:HG22	9:Q:72:LEU:HD23	2.04	0.40
9:R:25:GLY:HA2	9:R:28:ILE:HG12	2.02	0.40
13:A:168:LEU:HB2	13:A:348:THR:HG21	2.04	0.40
13:B:299:ASP:HA	14:F:267:GLU:OE2	2.21	0.40
14:E:198:TYR:CZ	14:E:202:LYS:HD2	2.57	0.40
14:E:379:GLN:O	14:E:382:LYS:HG3	2.20	0.40
14:F:54:LEU:HD21	14:F:60:ARG:HB2	2.03	0.40
14:F:433:ARG:O	14:F:437:THR:HG23	2.21	0.40
2:G:259:ARG:HB3	14:D:318:THR:HG21	2.03	0.40
7:6:54:THR:N	7:6:57:ASN:OD1	2.53	0.40
8:U:46:THR:O	8:U:48:LEU:N	2.54	0.40
9:O:15:SER:HA	9:P:16:THR:CG2	2.50	0.40
9:P:53:LEU:HD12	9:P:57:LEU:HD23	2.03	0.40
9:P:70:PHE:HA	9:P:73:LEU:HD23	2.03	0.40
10:8:20:MET:SD	10:8:21:ILE:HD13	2.61	0.40
11:X:93:PHE:HD2	11:X:235:ALA:HB2	1.87	0.40
11:X:126:TRP:CZ2	11:X:167:PHE:HA	2.56	0.40
14:D:95:ILE:HG13	14:D:217:LEU:HB2	2.03	0.40
14:D:292:LEU:HD23	14:D:293:GLN:OE1	2.21	0.40
14:E:463:ILE:O	14:E:467:VAL:HG22	2.21	0.40
1:Y:180:ILE:O	1:Y:184:ILE:HG23	2.22	0.40
2:G:47:ALA:O	2:G:50:LEU:HG	2.21	0.40
6:7:32:PHE:O	6:7:36:ASN:ND2	2.54	0.40
6:7:140:LYS:NZ	8:U:32:LYS:O	2.53	0.40
9:T:43:ILE:HD11	9:K:38:SER:HA	2.02	0.40
9:L:67:MET:SD	9:L:68:VAL:N	2.94	0.40
9:N:4:VAL:HG23	9:O:2:GLN:HB2	2.02	0.40
13:B:9:GLU:OE2	13:B:10:VAL:HG23	2.21	0.40
13:B:328:VAL:O	13:B:329:ILE:HD13	2.22	0.40
13:C:34:LEU:HD11	13:C:44:PHE:HB2	2.03	0.40
13:C:219:VAL:HG11	14:F:124:PHE:HZ	1.86	0.40
13:C:492:SER:OG	13:C:493:LYS:N	2.54	0.40
14:D:237:LEU:HD11	14:D:295:ARG:HB3	2.03	0.40
14:D:241:GLU:OE1	14:D:295:ARG:NH2	2.54	0.40
14:F:231:ARG:O	14:F:235:THR:HG23	2.21	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:F:235:THR:O	14:F:239:ILE:HG12	2.21	0.40
9:S:34:ILE:HD12	9:S:35:ASN:N	2.36	0.40
9:L:26:ILE:HA	9:L:29:VAL:HG22	2.02	0.40
9:M:26:ILE:HG13	9:M:58:SER:CB	2.46	0.40
9:M:39:ARG:NH1	9:N:39:ARG:HG2	2.36	0.40
9:P:29:VAL:HG13	9:Q:30:PHE:CE1	2.56	0.40
9:Q:50:MET:HA	9:Q:53:LEU:HG	2.02	0.40
13:A:421:VAL:O	13:A:425:ARG:HG2	2.21	0.40
13:C:434:GLN:HG3	15:C:601:ADP:C5	2.56	0.40
13:C:506:PHE:O	13:C:510:PHE:N	2.55	0.40
14:D:20:ILE:HG21	14:D:60:ARG:HH11	1.86	0.40
14:F:128:SER:HB2	14:F:300:LYS:HD3	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	Y	185/187 (99%)	177 (96%)	8 (4%)	0	100	100
2	G	257/261 (98%)	241 (94%)	16 (6%)	0	100	100
3	H	130/132 (98%)	122 (94%)	8 (6%)	0	100	100
4	I	57/59 (97%)	53 (93%)	4 (7%)	0	100	100
5	Z	153/155 (99%)	149 (97%)	4 (3%)	0	100	100
6	7	169/171 (99%)	157 (93%)	12 (7%)	0	100	100
7	6	87/89 (98%)	68 (78%)	19 (22%)	0	100	100
8	U	83/85 (98%)	71 (86%)	12 (14%)	0	100	100
9	K	73/75 (97%)	70 (96%)	3 (4%)	0	100	100
9	L	72/75 (96%)	70 (97%)	2 (3%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
9	M	72/75 (96%)	70 (97%)	2 (3%)	0	100	100
9	N	72/75 (96%)	70 (97%)	2 (3%)	0	100	100
9	O	72/75 (96%)	71 (99%)	1 (1%)	0	100	100
9	P	73/75 (97%)	72 (99%)	1 (1%)	0	100	100
9	Q	72/75 (96%)	71 (99%)	1 (1%)	0	100	100
9	R	72/75 (96%)	69 (96%)	3 (4%)	0	100	100
9	S	72/75 (96%)	67 (93%)	5 (7%)	0	100	100
9	T	72/75 (96%)	68 (94%)	4 (6%)	0	100	100
10	8	39/41 (95%)	38 (97%)	1 (3%)	0	100	100
11	X	219/224 (98%)	212 (97%)	7 (3%)	0	100	100
12	J	35/37 (95%)	34 (97%)	1 (3%)	0	100	100
13	A	505/507 (100%)	489 (97%)	16 (3%)	0	100	100
13	B	504/507 (99%)	473 (94%)	30 (6%)	1 (0%)	47	79
13	C	503/507 (99%)	489 (97%)	14 (3%)	0	100	100
14	D	471/473 (100%)	447 (95%)	24 (5%)	0	100	100
14	E	471/473 (100%)	447 (95%)	23 (5%)	1 (0%)	47	79
14	F	470/473 (99%)	456 (97%)	14 (3%)	0	100	100
All	All	5060/5131 (99%)	4821 (95%)	237 (5%)	2 (0%)	100	100

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
13	B	383	LYS
14	E	279	VAL

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	Y	159/160 (99%)	154 (97%)	5 (3%)	40	63

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	G	223/223 (100%)	216 (97%)	7 (3%)	40	63
3	H	111/111 (100%)	109 (98%)	2 (2%)	59	77
4	I	25/46 (54%)	25 (100%)	0	100	100
5	Z	137/138 (99%)	132 (96%)	5 (4%)	35	61
6	7	154/156 (99%)	145 (94%)	9 (6%)	20	48
7	6	79/79 (100%)	72 (91%)	7 (9%)	9	34
8	U	60/68 (88%)	53 (88%)	7 (12%)	5	24
9	K	55/55 (100%)	52 (94%)	3 (6%)	21	50
9	L	55/55 (100%)	49 (89%)	6 (11%)	6	26
9	M	55/55 (100%)	53 (96%)	2 (4%)	35	61
9	N	55/55 (100%)	52 (94%)	3 (6%)	21	50
9	O	55/55 (100%)	52 (94%)	3 (6%)	21	50
9	P	55/55 (100%)	53 (96%)	2 (4%)	35	61
9	Q	55/55 (100%)	51 (93%)	4 (7%)	14	42
9	R	55/55 (100%)	51 (93%)	4 (7%)	14	42
9	S	55/55 (100%)	51 (93%)	4 (7%)	14	42
9	T	55/55 (100%)	52 (94%)	3 (6%)	21	50
10	8	40/40 (100%)	37 (92%)	3 (8%)	13	41
11	X	190/193 (98%)	175 (92%)	15 (8%)	12	39
12	J	30/30 (100%)	30 (100%)	0	100	100
13	A	410/410 (100%)	394 (96%)	16 (4%)	32	58
13	B	409/410 (100%)	392 (96%)	17 (4%)	30	56
13	C	409/410 (100%)	401 (98%)	8 (2%)	55	73
14	D	382/382 (100%)	370 (97%)	12 (3%)	40	63
14	E	382/382 (100%)	372 (97%)	10 (3%)	46	67
14	F	381/382 (100%)	377 (99%)	4 (1%)	76	86
All	All	4131/4170 (99%)	3970 (96%)	161 (4%)	36	58

All (161) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	Y	107	ASP
1	Y	113	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	Y	134	PHE
1	Y	145	LYS
1	Y	185	GLN
2	G	11	LYS
2	G	14	ASN
2	G	28	SER
2	G	43	LYS
2	G	53	LYS
2	G	128	LEU
2	G	266	GLU
3	H	38	ARG
3	H	118	ARG
5	Z	65	PHE
5	Z	129	GLU
5	Z	138	PHE
5	Z	192	LYS
5	Z	196	GLN
6	7	12	TRP
6	7	58	TYR
6	7	62	LEU
6	7	74	TYR
6	7	118	GLN
6	7	146	ASP
6	7	152	MET
6	7	166	ARG
6	7	170	LEU
7	6	8	LEU
7	6	9	ARG
7	6	12	LYS
7	6	22	GLN
7	6	31	TRP
7	6	36	LYS
7	6	51	LYS
8	U	13	LYS
8	U	14	ASN
8	U	31	TYR
8	U	51	TYR
8	U	78	TYR
8	U	80	MET
8	U	84	PHE
9	S	1	MET
9	S	50	MET

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
9	S	70	PHE
9	S	74	PHE
9	T	1	MET
9	T	64	PHE
9	T	67	MET
9	K	40	ASN
9	K	50	MET
9	K	64	PHE
9	L	1	MET
9	L	8	LYS
9	L	39	ARG
9	L	50	MET
9	L	64	PHE
9	L	67	MET
9	M	55	PHE
9	M	67	MET
9	N	1	MET
9	N	30	PHE
9	N	67	MET
9	O	40	ASN
9	O	65	CYS
9	O	67	MET
9	P	30	PHE
9	P	67	MET
9	Q	30	PHE
9	Q	39	ARG
9	Q	66	LEU
9	Q	67	MET
9	R	1	MET
9	R	40	ASN
9	R	48	PHE
9	R	64	PHE
10	8	17	PHE
10	8	27	PHE
10	8	34	MET
11	X	56	SER
11	X	57	ARG
11	X	67	ASP
11	X	72	MET
11	X	86	PHE
11	X	88	MET
11	X	95	PHE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
11	X	97	PHE
11	X	164	LEU
11	X	167	PHE
11	X	175	LEU
11	X	180	ASN
11	X	187	LEU
11	X	196	PHE
11	X	215	MET
13	A	80	SER
13	A	82	ARG
13	A	83	LEU
13	A	146	GLU
13	A	172	ASP
13	A	217	GLN
13	A	274	SER
13	A	293	ARG
13	A	301	PHE
13	A	316	GLU
13	A	435	TYR
13	A	438	LEU
13	A	466	PHE
13	A	473	TYR
13	A	486	ARG
13	A	491	LEU
13	B	6	GLN
13	B	32	ARG
13	B	80	SER
13	B	81	ASP
13	B	91	LYS
13	B	139	LEU
13	B	166	ARG
13	B	193	ASN
13	B	244	LEU
13	B	246	TYR
13	B	299	ASP
13	B	305	SER
13	B	343	ASN
13	B	378	SER
13	B	399	TYR
13	B	470	PHE
13	B	504	GLU
13	C	81	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
13	C	142	ARG
13	C	158	LEU
13	C	246	TYR
13	C	299	ASP
13	C	339	TYR
13	C	410	SER
13	C	510	PHE
14	D	31	PRO
14	D	94	ARG
14	D	257	ASN
14	D	281	TYR
14	D	291	LEU
14	D	306	SER
14	D	336	SER
14	D	345	TYR
14	D	354	LYS
14	D	367	HIS
14	D	398	GLU
14	D	413	PHE
14	E	130	SER
14	E	201	MET
14	E	208	ASN
14	E	272	LEU
14	E	274	ARG
14	E	288	ASP
14	E	326	PHE
14	E	354	LYS
14	E	395	GLU
14	E	424	PHE
14	F	291	LEU
14	F	345	TYR
14	F	367	HIS
14	F	458	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (14) such sidechains are listed below:

Mol	Chain	Res	Type
3	H	51	GLN
3	H	78	GLN
6	7	98	HIS
7	6	4	GLN
8	U	26	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
11	X	249	HIS
13	A	6	GLN
13	B	165	GLN
13	C	432	GLN
14	E	168	GLN
14	F	118	HIS
14	F	293	GLN
14	F	308	GLN
14	F	328	HIS

5.3.3 RNA

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

Of 11 ligands modelled in this entry, 5 are monoatomic - leaving 6 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	$\#\|Z\| > 2$
15	ADP	B	601	16	24,29,29	0.96	1 (4%)	29,45,45	1.41	4 (13%)
15	ADP	C	601	16	24,29,29	0.97	1 (4%)	29,45,45	1.47	4 (13%)
15	ADP	A	601	16	24,29,29	0.96	1 (4%)	29,45,45	1.47	4 (13%)
15	ADP	D	501	-	24,29,29	0.95	1 (4%)	29,45,45	1.43	4 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
15	ADP	F	501	16	24,29,29	0.97	1 (4%)	29,45,45	1.50	4 (13%)
17	PO4	D	503	16	4,4,4	0.92	0	6,6,6	0.46	0

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
15	ADP	B	601	16	-	2/12/32/32	0/3/3/3
15	ADP	C	601	16	-	4/12/32/32	0/3/3/3
15	ADP	A	601	16	-	3/12/32/32	0/3/3/3
15	ADP	D	501	-	-	1/12/32/32	0/3/3/3
15	ADP	F	501	16	-	4/12/32/32	0/3/3/3

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	A	601	ADP	C5-C4	2.53	1.47	1.40
15	C	601	ADP	C5-C4	2.53	1.47	1.40
15	D	501	ADP	C5-C4	2.52	1.47	1.40
15	F	501	ADP	C5-C4	2.51	1.47	1.40
15	B	601	ADP	C5-C4	2.49	1.47	1.40

All (20) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	F	501	ADP	PA-O3A-PB	-3.71	120.11	132.83
15	C	601	ADP	PA-O3A-PB	-3.66	120.26	132.83
15	A	601	ADP	PA-O3A-PB	-3.58	120.55	132.83
15	D	501	ADP	C3'-C2'-C1'	3.50	106.25	100.98
15	B	601	ADP	PA-O3A-PB	-3.48	120.87	132.83
15	F	501	ADP	C3'-C2'-C1'	3.46	106.19	100.98
15	A	601	ADP	C3'-C2'-C1'	3.42	106.13	100.98
15	C	601	ADP	C3'-C2'-C1'	3.27	105.90	100.98
15	D	501	ADP	PA-O3A-PB	-3.18	121.90	132.83
15	F	501	ADP	N3-C2-N1	-3.16	123.75	128.68
15	B	601	ADP	N3-C2-N1	-3.14	123.76	128.68
15	A	601	ADP	N3-C2-N1	-3.13	123.79	128.68
15	C	601	ADP	N3-C2-N1	-3.07	123.88	128.68
15	B	601	ADP	C3'-C2'-C1'	3.07	105.60	100.98

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
15	D	501	ADP	N3-C2-N1	-3.00	123.99	128.68
15	C	601	ADP	C4-C5-N7	-2.69	106.60	109.40
15	D	501	ADP	C4-C5-N7	-2.67	106.62	109.40
15	A	601	ADP	C4-C5-N7	-2.63	106.66	109.40
15	B	601	ADP	C4-C5-N7	-2.58	106.71	109.40
15	F	501	ADP	C4-C5-N7	-2.57	106.72	109.40

There are no chirality outliers.

All (14) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
15	C	601	ADP	C5'-O5'-PA-O1A
15	F	501	ADP	C5'-O5'-PA-O3A
15	F	501	ADP	C3'-C4'-C5'-O5'
15	B	601	ADP	O4'-C4'-C5'-O5'
15	B	601	ADP	C3'-C4'-C5'-O5'
15	D	501	ADP	O4'-C4'-C5'-O5'
15	C	601	ADP	C3'-C4'-C5'-O5'
15	F	501	ADP	O4'-C4'-C5'-O5'
15	F	501	ADP	C5'-O5'-PA-O1A
15	A	601	ADP	C3'-C4'-C5'-O5'
15	A	601	ADP	O4'-C4'-C5'-O5'
15	C	601	ADP	O4'-C4'-C5'-O5'
15	C	601	ADP	C5'-O5'-PA-O3A
15	A	601	ADP	C5'-O5'-PA-O1A

There are no ring outliers.

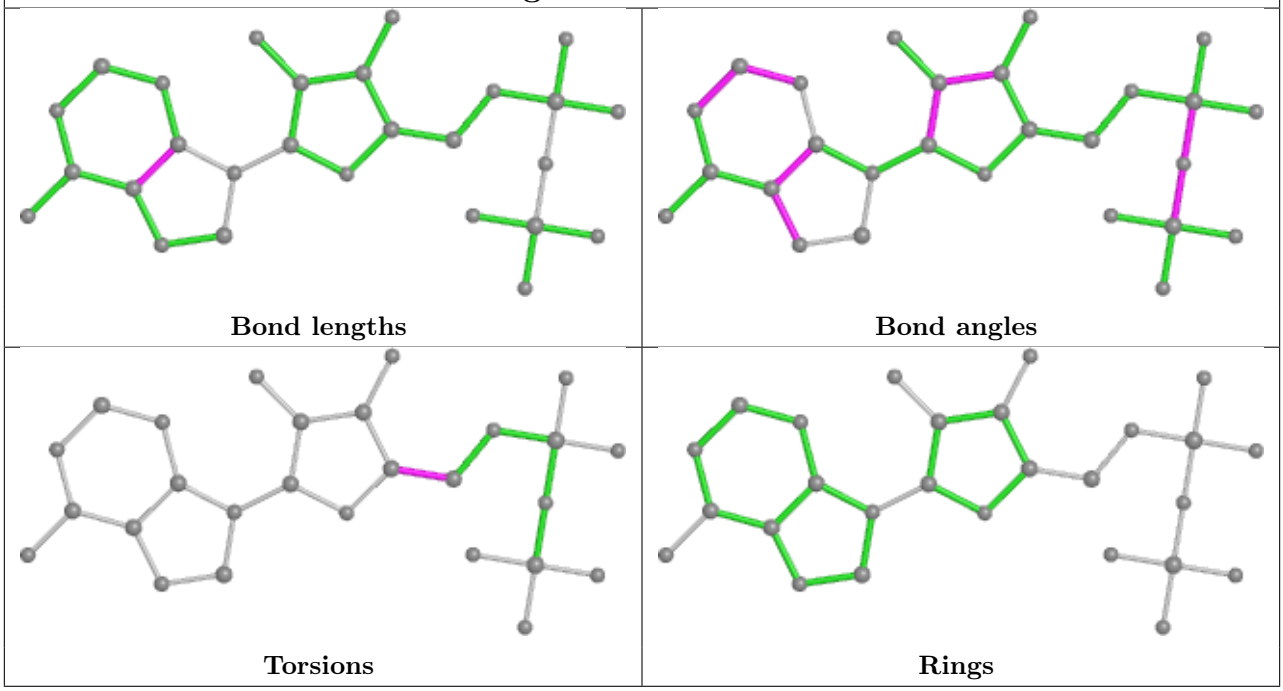
6 monomers are involved in 15 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
15	B	601	ADP	2	0
15	C	601	ADP	2	0
15	A	601	ADP	5	0
15	D	501	ADP	1	0
15	F	501	ADP	3	0
17	D	503	PO4	2	0

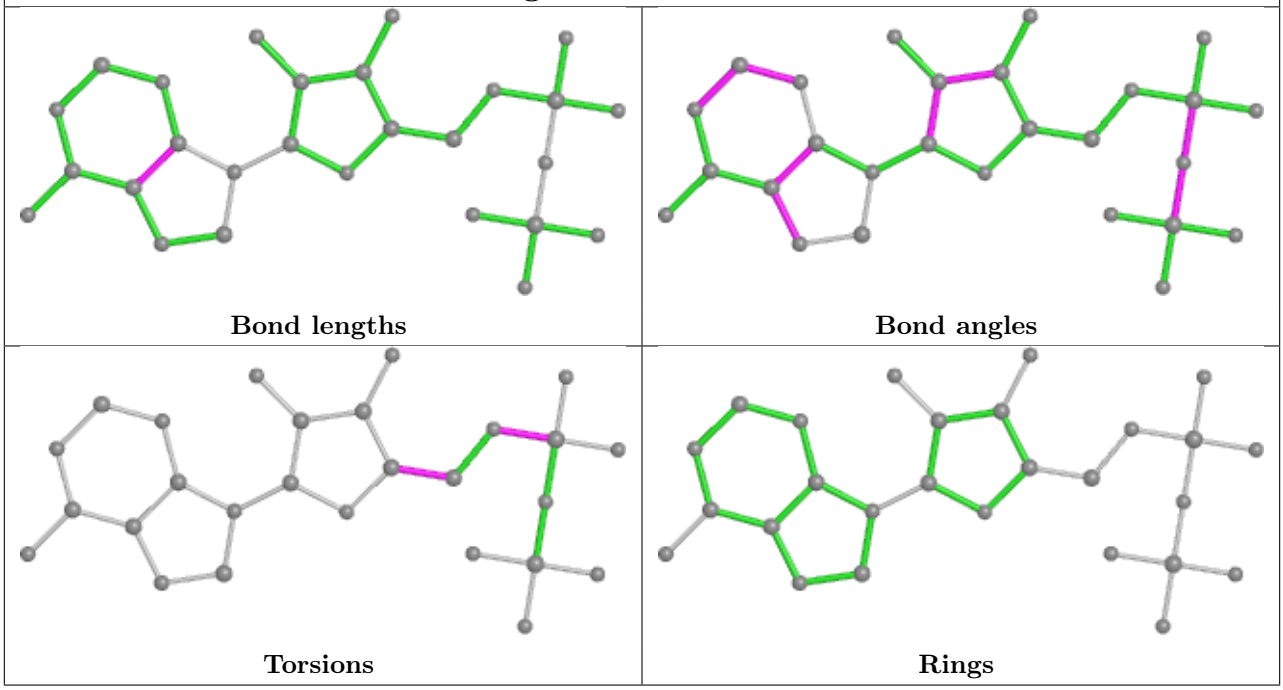
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 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.

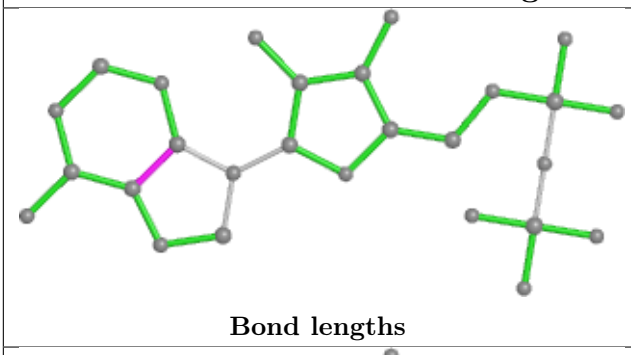
Ligand ADP B 601



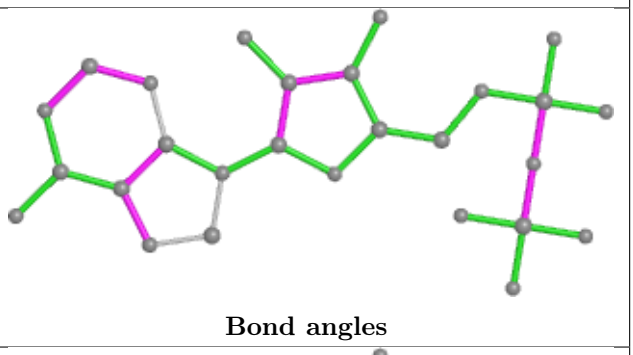
Ligand ADP C 601



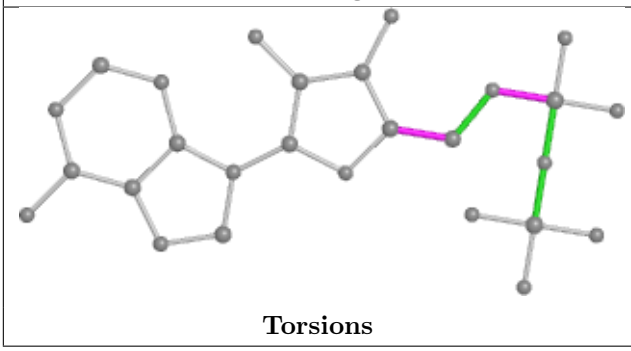
Ligand ADP A 601



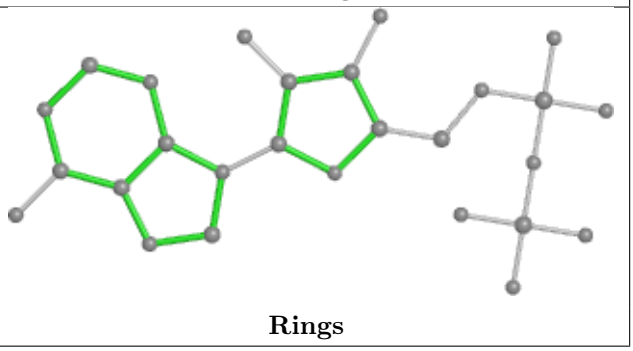
Bond lengths



Bond angles

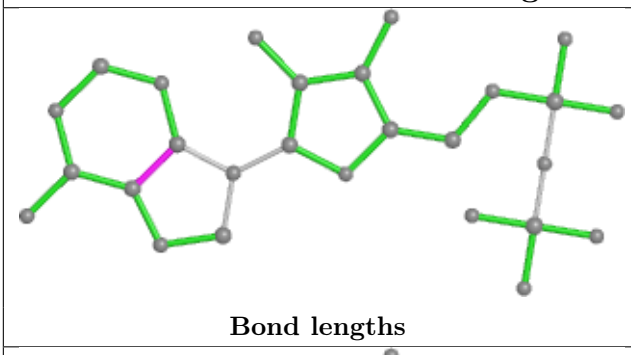


Torsions

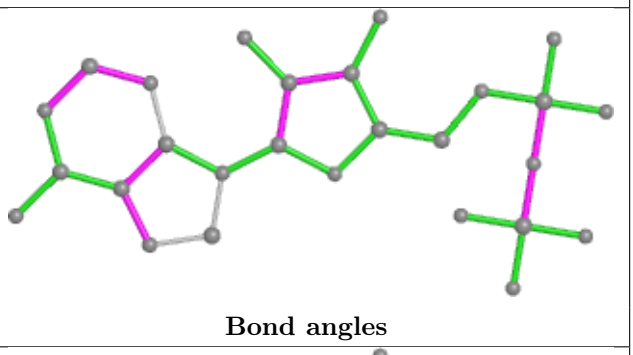


Rings

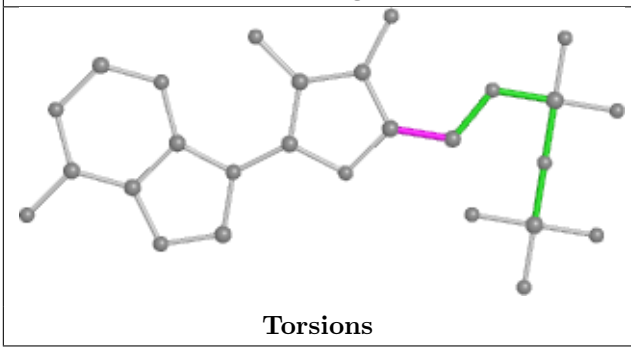
Ligand ADP D 501



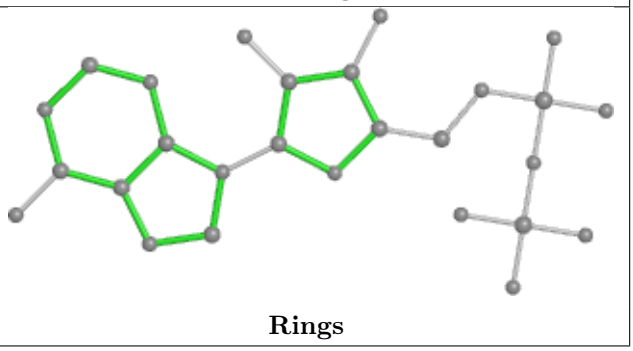
Bond lengths



Bond angles

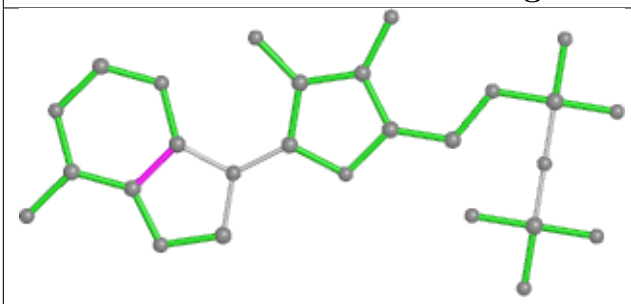


Torsions

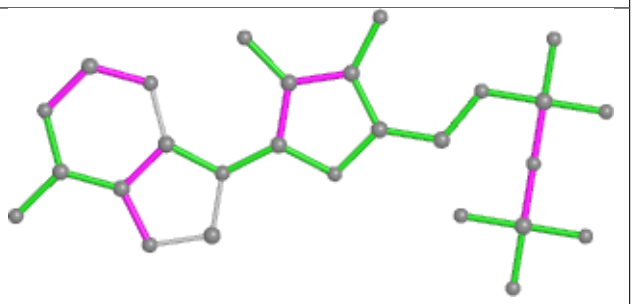


Rings

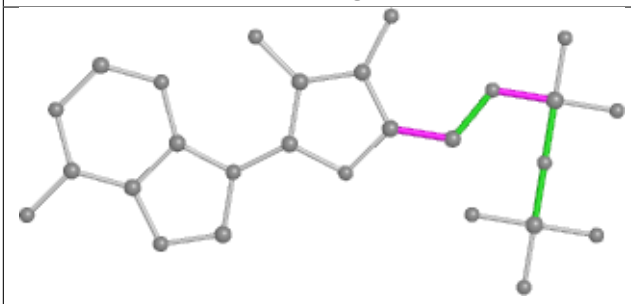
Ligand ADP F 501



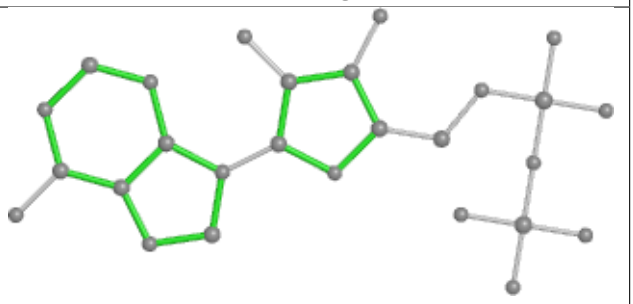
Bond lengths



Bond angles

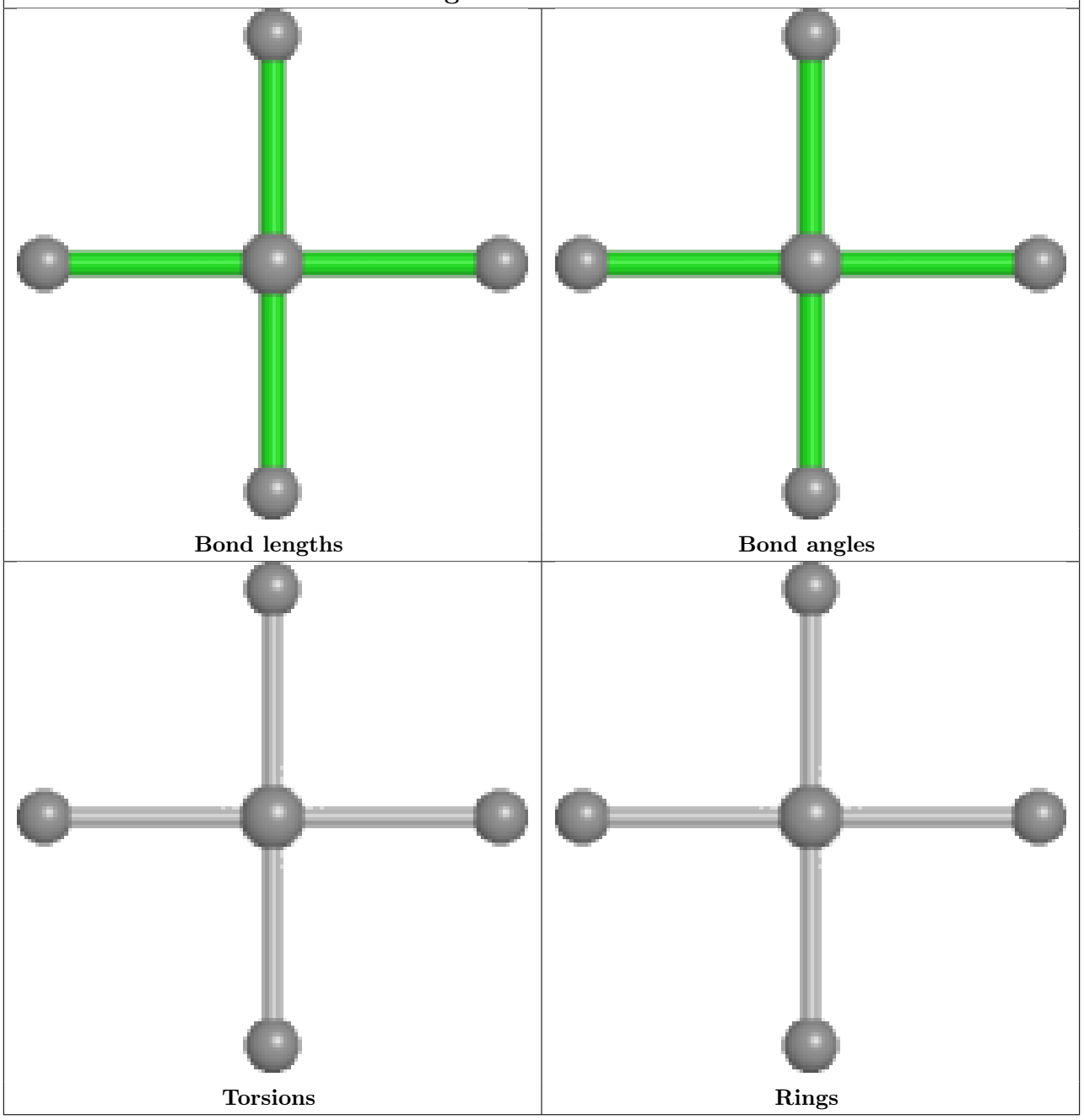


Torsions



Rings

Ligand PO4 D 503



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
2	G	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	G	61:ASP	C	71:LYS	N	9.29

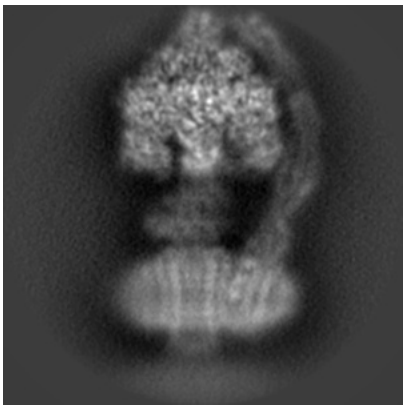
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-28809. These allow visual inspection of the internal detail of the map and identification of artifacts.

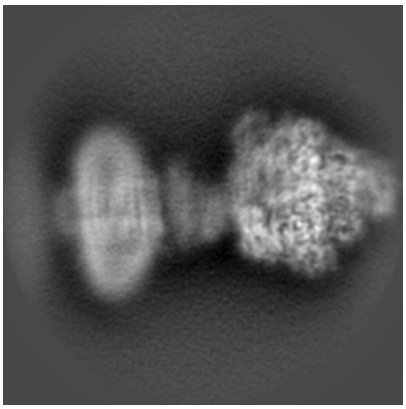
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

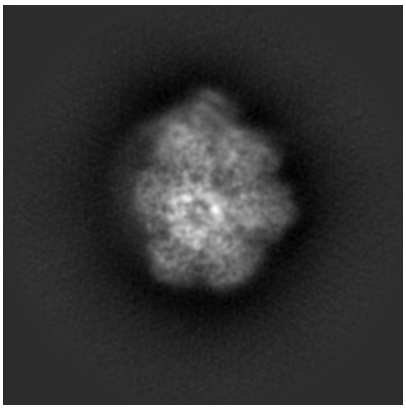
6.1.1 Primary map



X

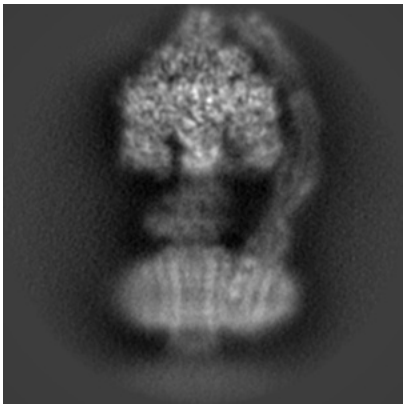


Y

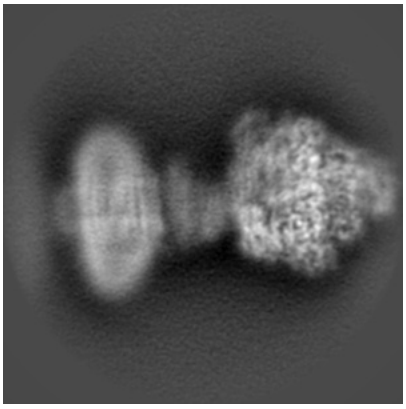


Z

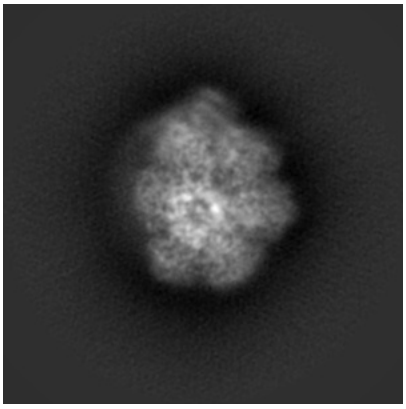
6.1.2 Raw map



X



Y

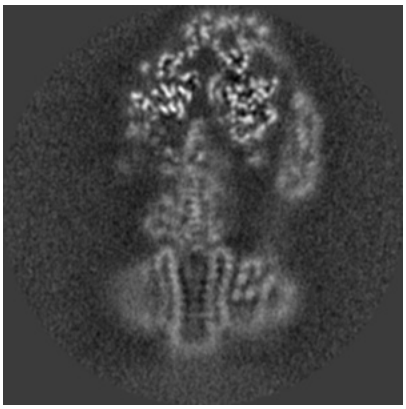


Z

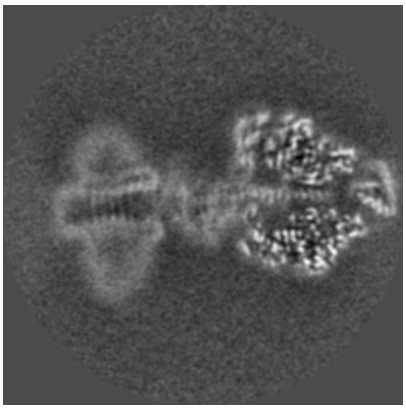
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

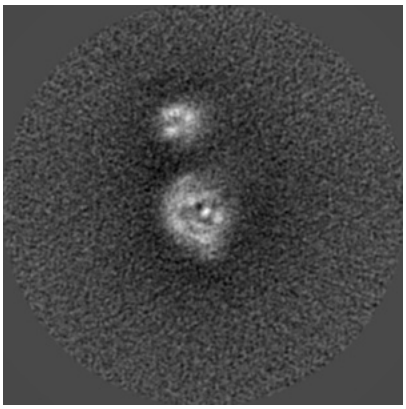
6.2.1 Primary map



X Index: 128

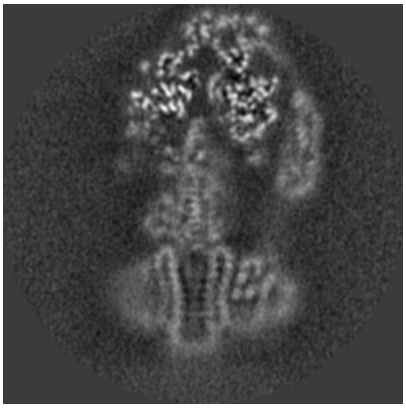


Y Index: 128

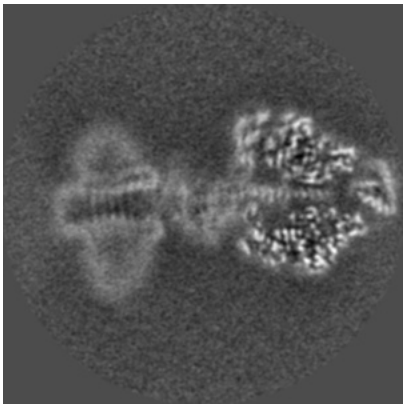


Z Index: 128

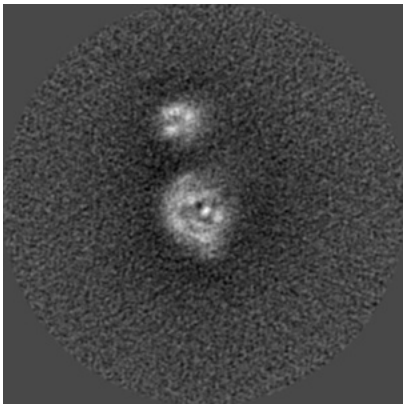
6.2.2 Raw map



X Index: 128



Y Index: 128

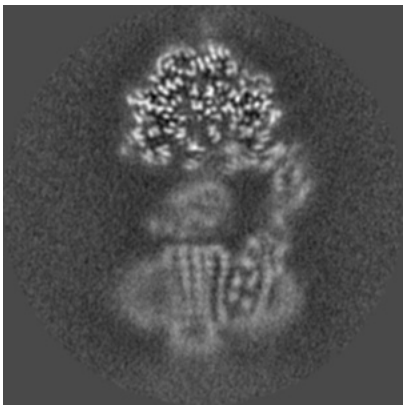


Z Index: 128

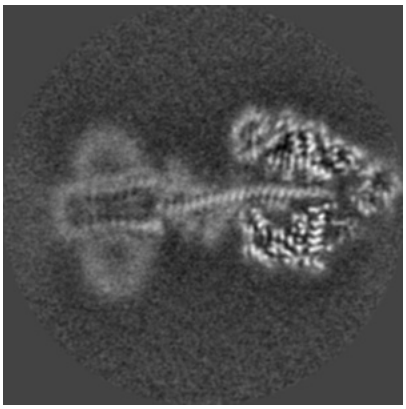
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

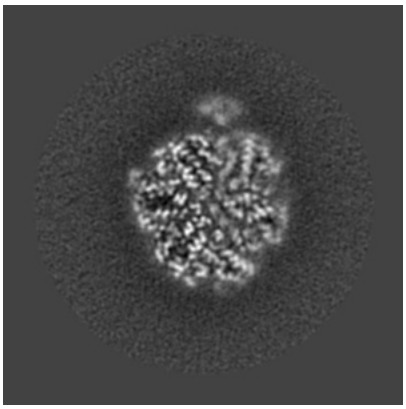
6.3.1 Primary map



X Index: 115

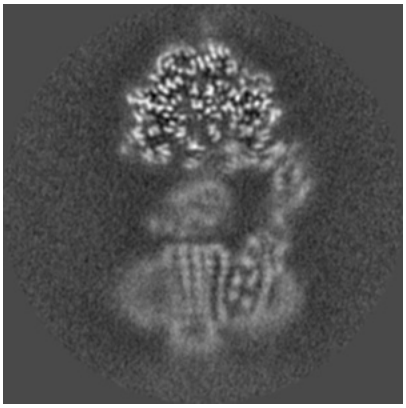


Y Index: 123

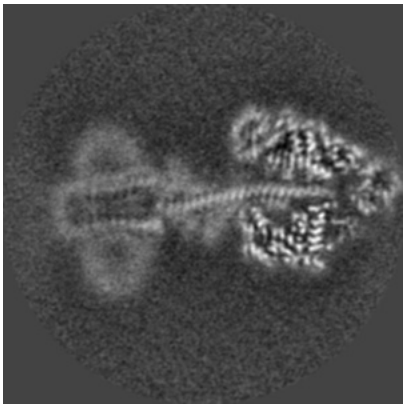


Z Index: 198

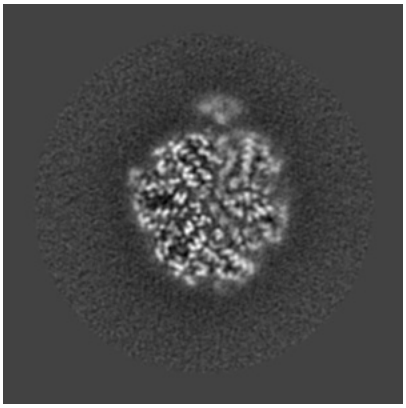
6.3.2 Raw map



X Index: 115



Y Index: 123

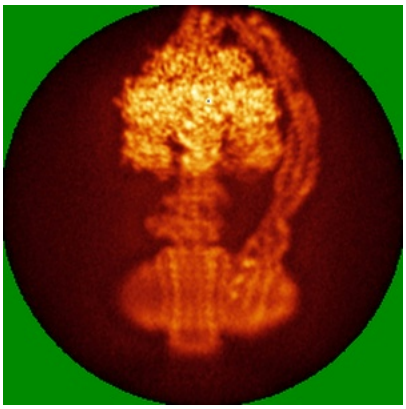


Z Index: 198

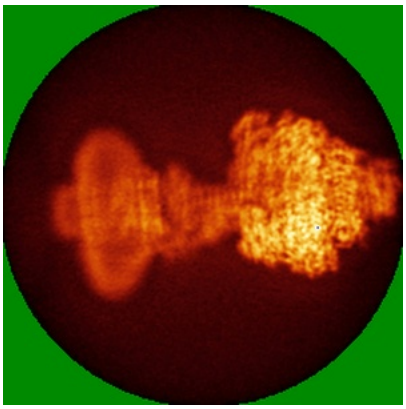
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

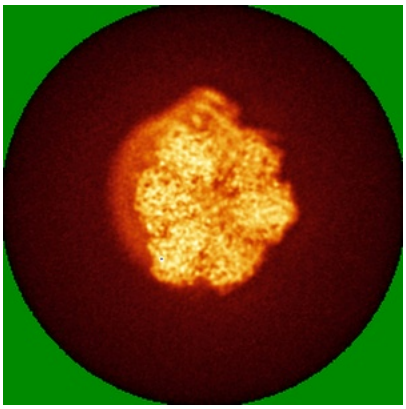
6.4.1 Primary map



X

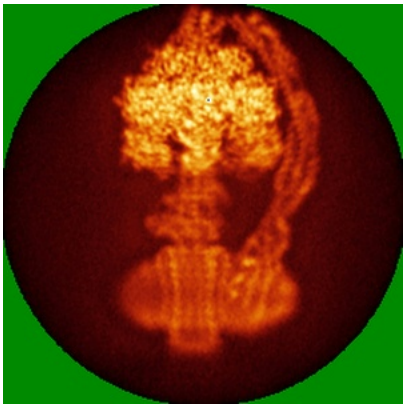


Y

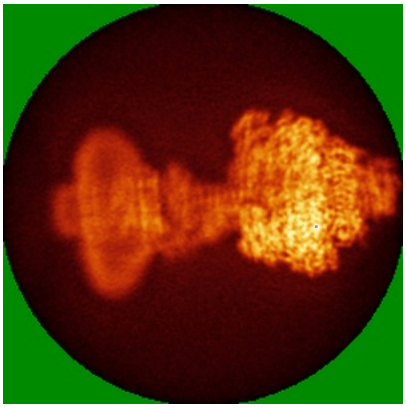


Z

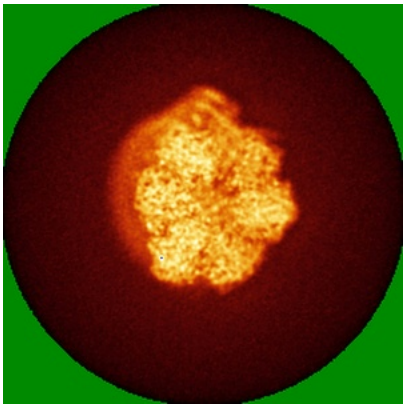
6.4.2 Raw map



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 0.014. 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.

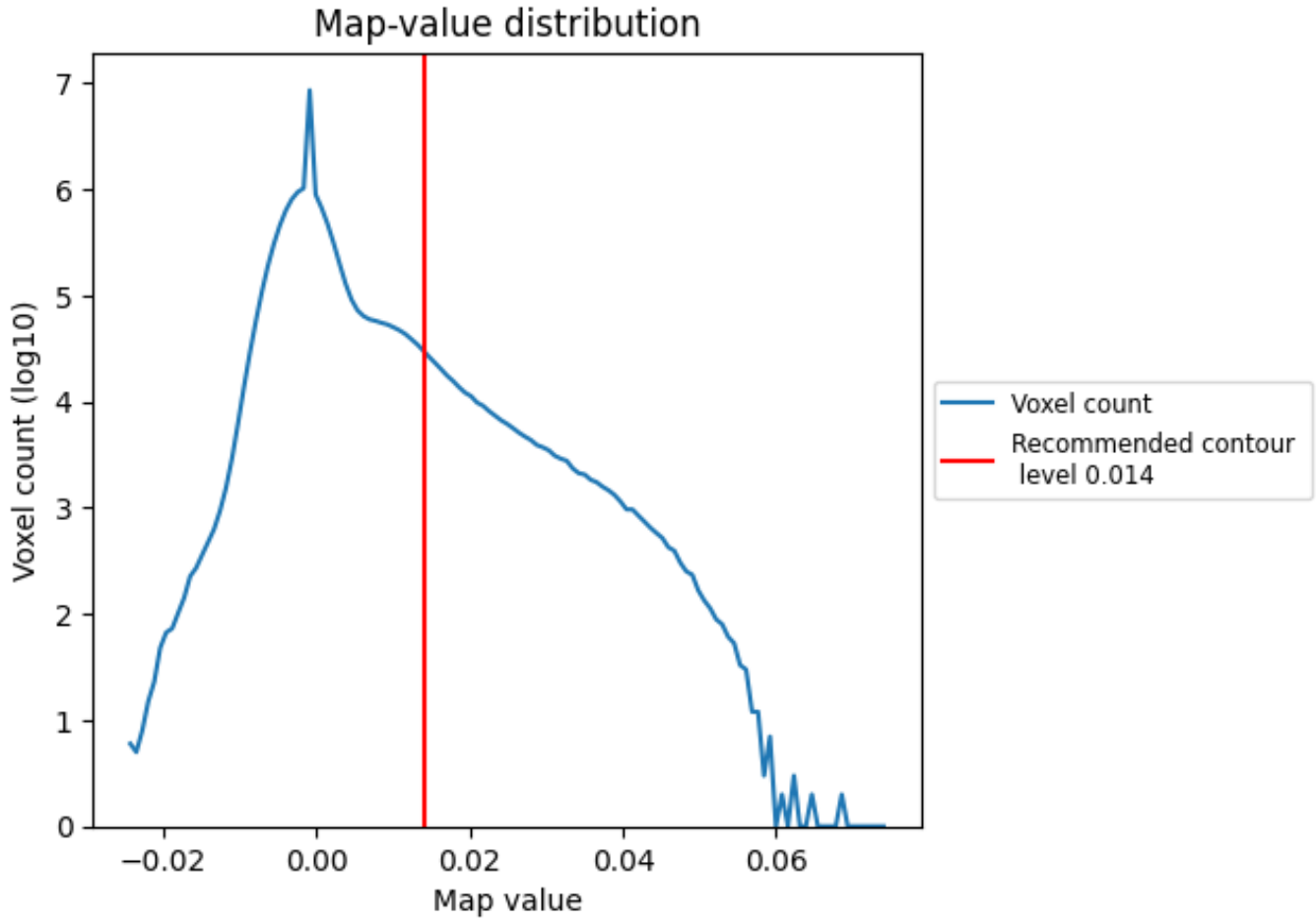
6.6 Mask visualisation (i)

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

7 Map analysis

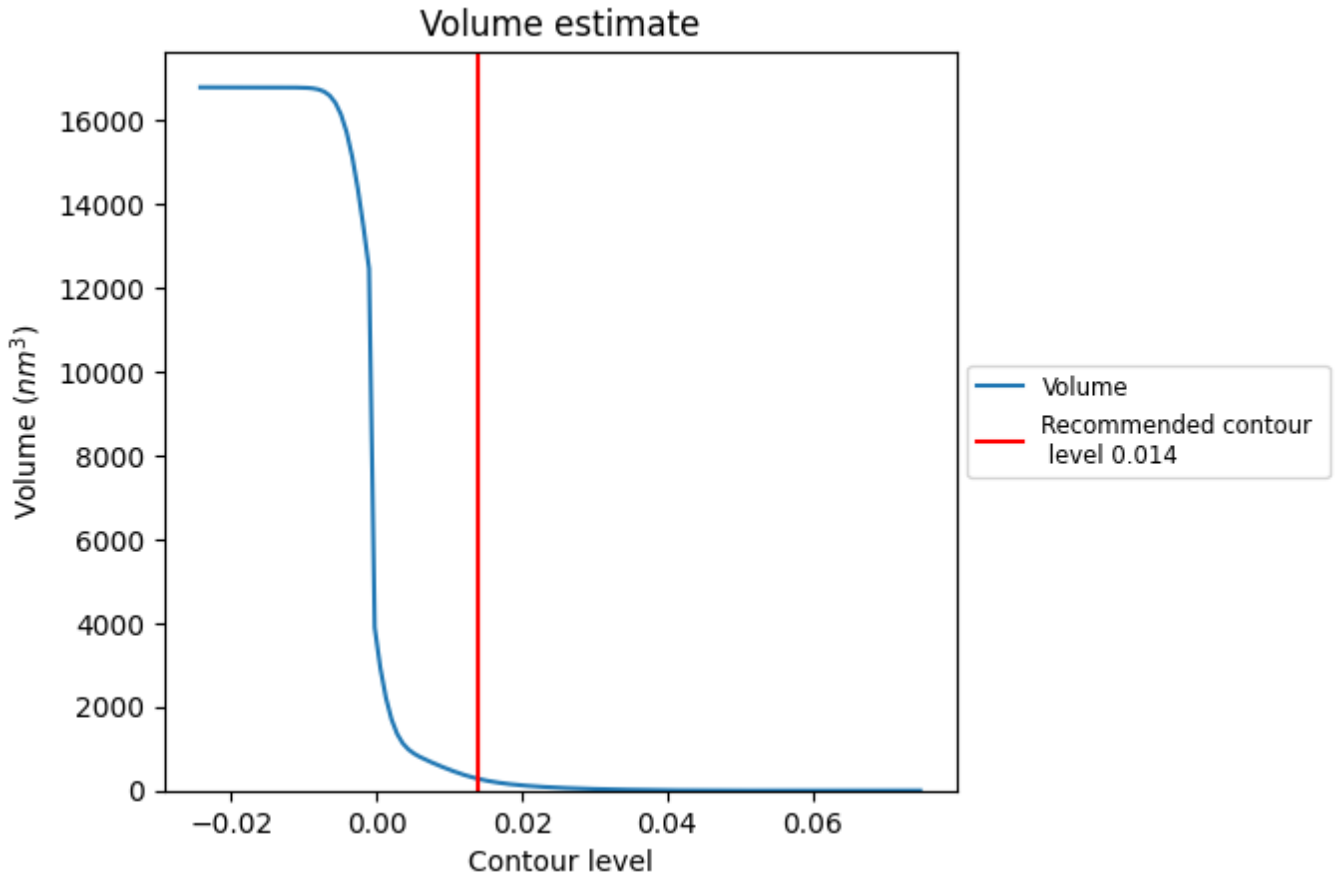
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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.

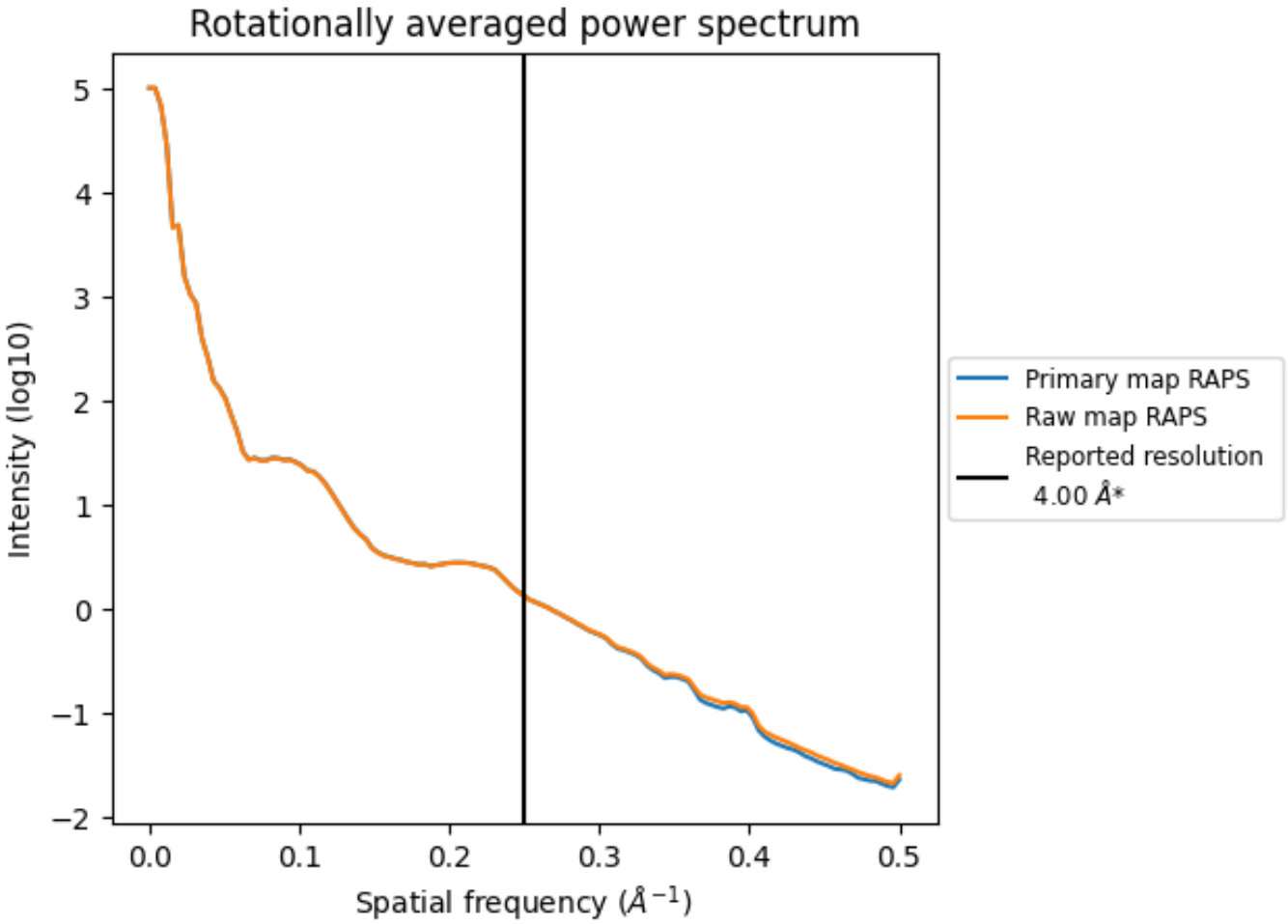
7.2 Volume estimate



The volume at the recommended contour level is 280 nm^3; this corresponds to an approximate mass of 253 kDa.

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

7.3 Rotationally averaged power spectrum (i)

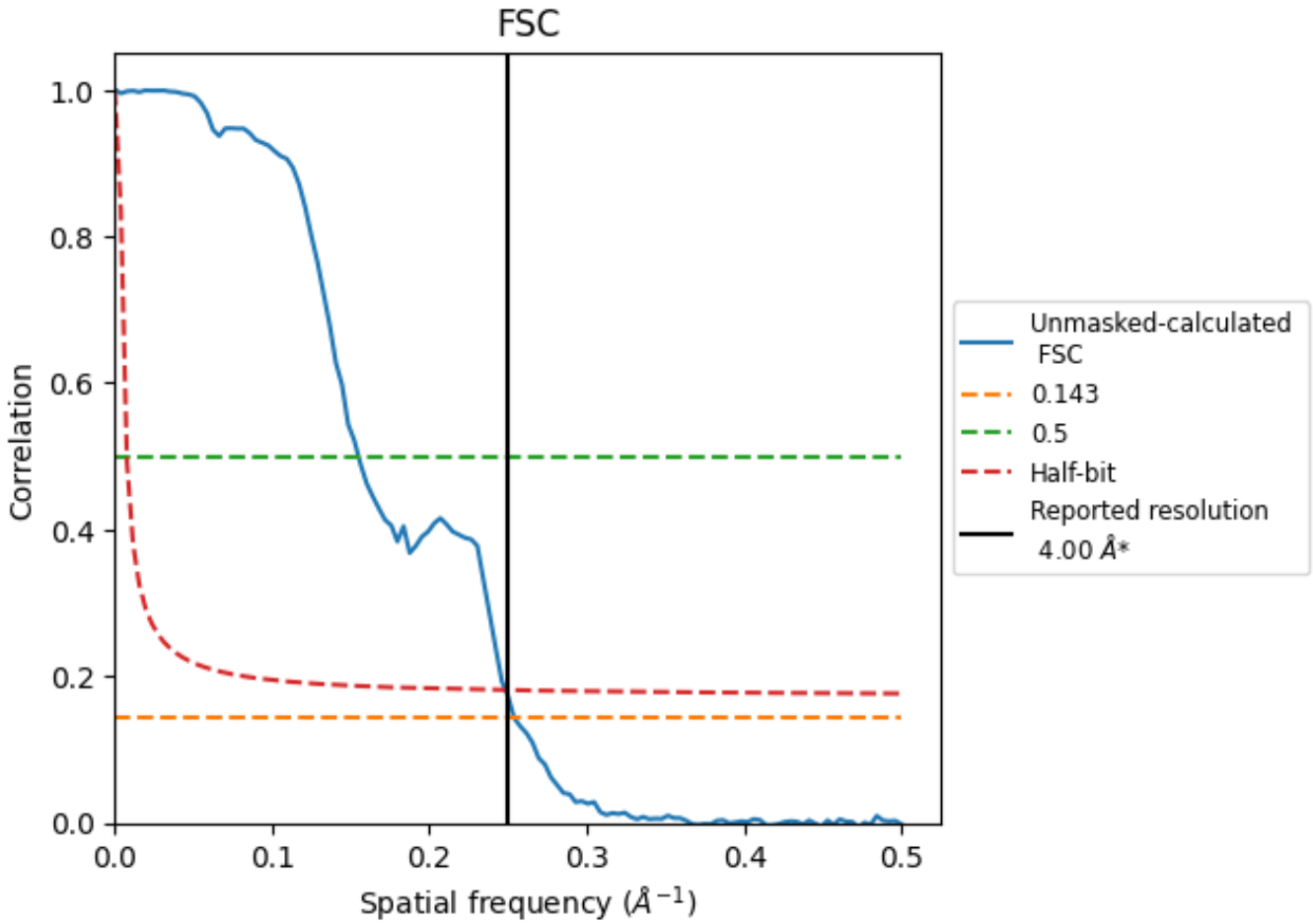


*Reported resolution corresponds to spatial frequency of 0.250 Å^{-1}

8 Fourier-Shell correlation

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



*Reported resolution corresponds to spatial frequency of 0.250 Å^{-1}

8.2 Resolution estimates (i)

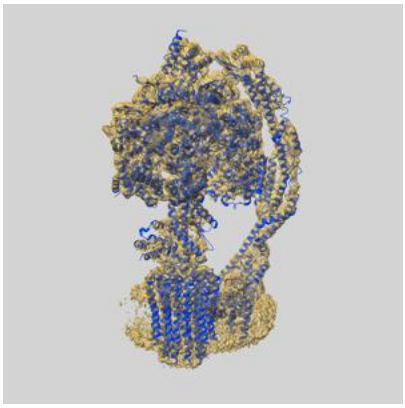
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.00	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.94	6.45	4.03

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

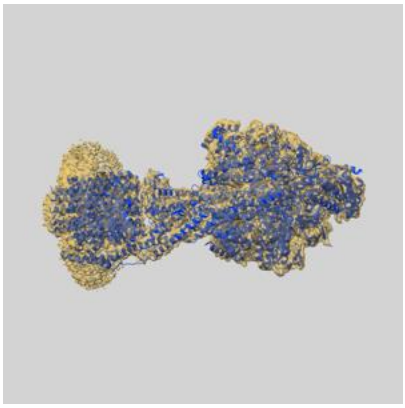
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-28809 and PDB model 8F29. Per-residue inclusion information can be found in section 3 on page 9.

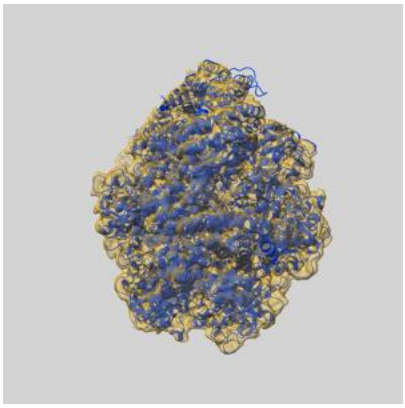
9.1 Map-model overlay



X



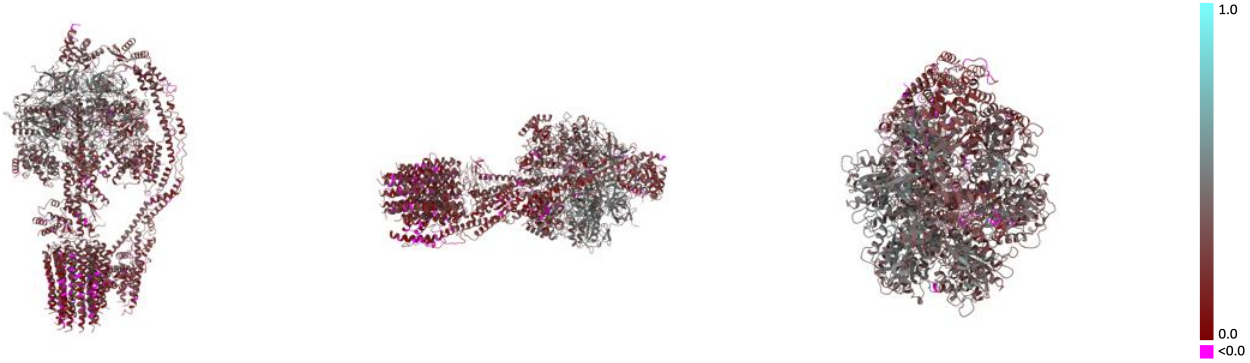
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.014 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.

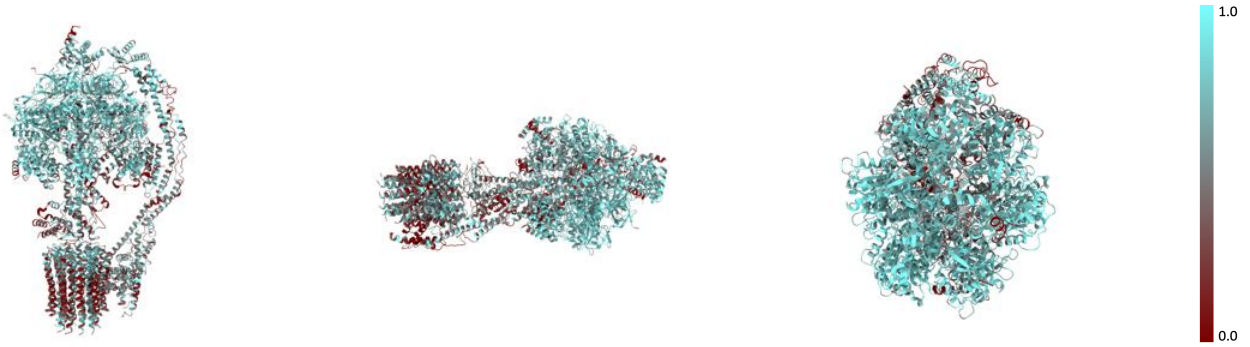
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according 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.

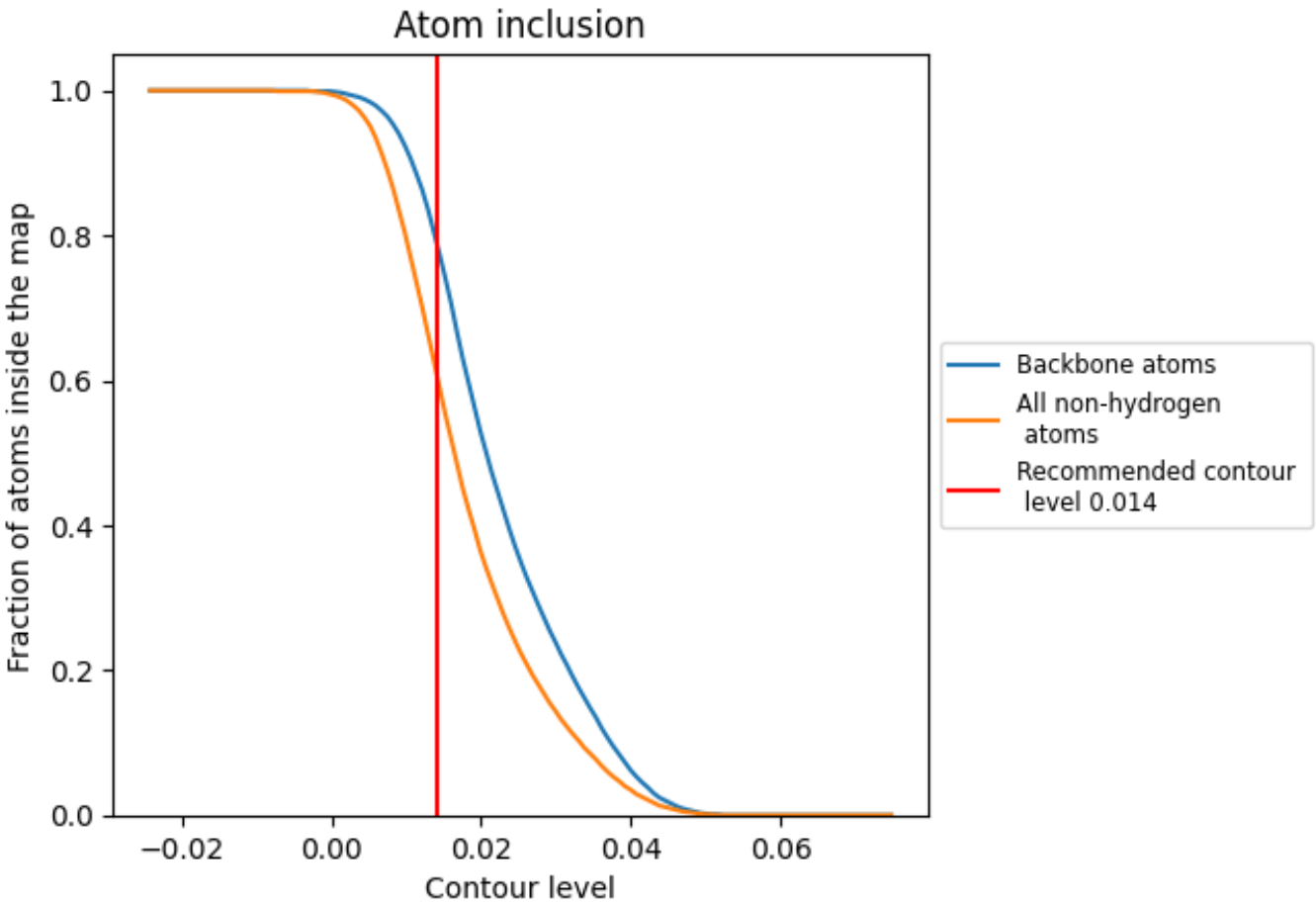
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

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 (0.014).

9.4 Atom inclusion (i)



At the recommended contour level, 79% of all backbone atoms, 61% 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 (0.014) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6110	0.3010
6	0.3050	0.1610
7	0.4780	0.1930
8	0.5500	0.1920
A	0.7170	0.3420
B	0.6830	0.3550
C	0.7890	0.4270
D	0.6850	0.3660
E	0.6160	0.3130
F	0.7920	0.4340
G	0.5100	0.2340
H	0.3570	0.1980
I	0.4070	0.2180
J	0.5030	0.1820
K	0.3410	0.1420
L	0.3580	0.1420
M	0.5230	0.1880
N	0.5110	0.2100
O	0.4260	0.2160
P	0.4980	0.2160
Q	0.5580	0.2470
R	0.4040	0.1990
S	0.4240	0.1760
T	0.4260	0.1920
U	0.3410	0.0990
X	0.4270	0.1690
Y	0.6820	0.3110
Z	0.5710	0.2240