



Full wwPDB EM Validation Report ⓘ

Sep 28, 2024 – 01:22 PM EDT

PDB ID : 6WIV
EMDB ID : EMD-21685
Title : Structure of human GABA(B) receptor in an inactive state
Authors : Park, J.; Fu, Z.; Frangaj, A.; Liu, J.; Mosyak, L.; Shen, T.; Slavkovich, V.N.; Ray, K.M.; Taura, J.; Cao, B.; Geng, Y.; Zuo, H.; Kou, Y.; Grassucci, R.; Chen, S.; Liu, Z.; Lin, X.; Williams, J.P.; Rice, W.J.; Eng, E.T.; Huang, R.K.; Soni, R.K.; Kloss, B.; Yu, Z.; Javitch, J.A.; Hendrickson, W.A.; Slesinger, P.A.; Quick, M.; Graziano, J.; Yu, H.; Fiehn, O.; Clarke, O.B.; Frank, J.; Fan, Q.R.
Deposited on : 2020-04-10
Resolution : 3.30 Å (reported)
Based on initial model : 4MQE

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev113
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)

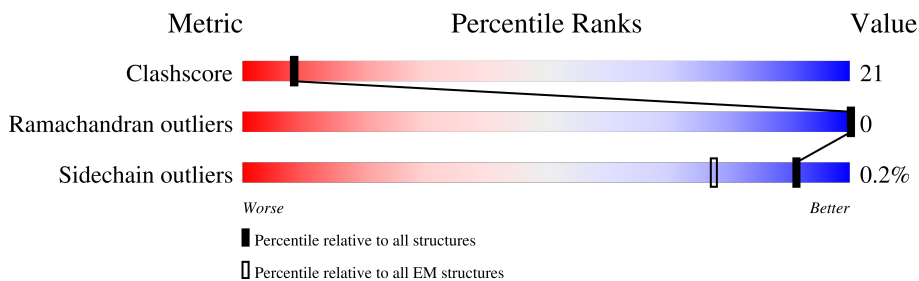
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.30 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	810	
2	B	827	

Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.39

2 Entry composition

There are 7 unique types of molecules in this entry. The entry contains 11206 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 Gamma-aminobutyric acid type B receptor subunit 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	681	5427	3514	903	985	25	0	0

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	803	ASP	-	expression tag	UNP Q9UBS5
A	804	TYR	-	expression tag	UNP Q9UBS5
A	805	LYS	-	expression tag	UNP Q9UBS5
A	806	ASP	-	expression tag	UNP Q9UBS5
A	807	ASP	-	expression tag	UNP Q9UBS5
A	808	ASP	-	expression tag	UNP Q9UBS5
A	809	ASP	-	expression tag	UNP Q9UBS5
A	810	LYS	-	expression tag	UNP Q9UBS5

- Molecule 2 is a protein called Gamma-aminobutyric acid type B receptor subunit 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	671	5333	3456	882	959	36	0	0

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	820	ASP	-	expression tag	UNP O75899
B	821	TYR	-	expression tag	UNP O75899
B	822	LYS	-	expression tag	UNP O75899
B	823	ASP	-	expression tag	UNP O75899
B	824	ASP	-	expression tag	UNP O75899
B	825	ASP	-	expression tag	UNP O75899
B	826	ASP	-	expression tag	UNP O75899
B	827	LYS	-	expression tag	UNP O75899

- Molecule 3 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$) (labeled as "Ligand of Interest" by depositor).

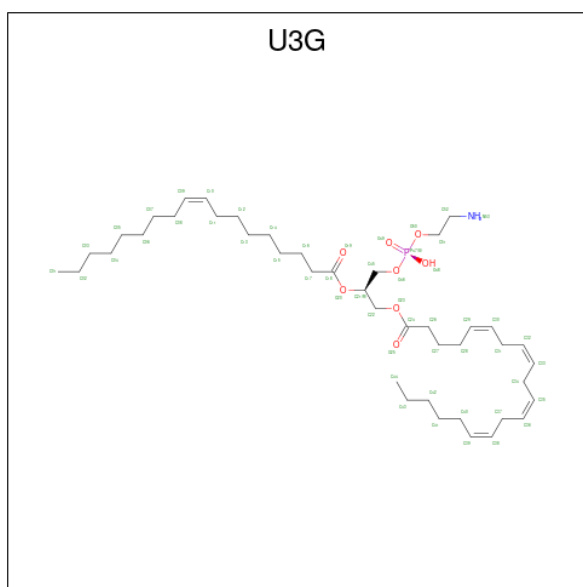


Mol	Chain	Residues	Atoms				AltConf
			Total	C	N	O	
3	A	1	Total	C	N	O	0
			14	8	1	5	
3	A	1	Total	C	N	O	0
			14	8	1	5	
3	A	1	Total	C	N	O	0
			14	8	1	5	
3	B	1	Total	C	N	O	0
			14	8	1	5	

- Molecule 4 is CALCIUM ION (three-letter code: CA) (formula: Ca) (labeled as "Ligand of Interest" by depositor).

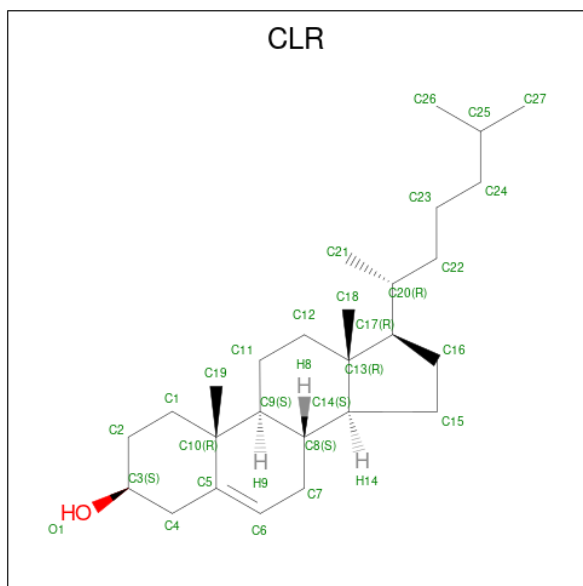
Mol	Chain	Residues	Atoms		AltConf
			Total	Ca	
4	A	1	Total	Ca	0
			1	1	

- Molecule 5 is (2R)-3-{[(S)-(2-aminoethoxy)(hydroxy)phosphoryl]oxy}-2-{[(9Z)-octadec-9-enoyl]oxy}propyl (5Z,8Z,11Z,14Z)-icosa-5,8,11,14-tetraenoate (three-letter code: U3G) (formula: $C_{43}H_{76}NO_8P$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
5	A	1	53	43	1	8	1	0

- Molecule 6 is CHOLESTEROL (three-letter code: CLR) (formula: $C_{27}H_{46}O$) (labeled as "Ligand of Interest" by depositor).



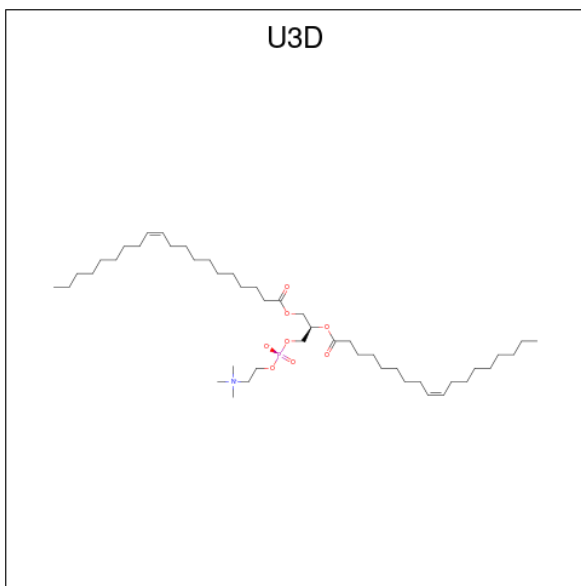
Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
6	A	1	28	27	1	0
6	A	1	28	27	1	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms			AltConf
			Total	C	O	
6	A	1	28	27	1	0
6	A	1	28	27	1	0
6	B	1	28	27	1	0
6	B	1	28	27	1	0
6	B	1	28	27	1	0
6	B	1	28	27	1	0
6	B	1	28	27	1	0
6	B	1	28	27	1	0

- Molecule 7 is [(2R)-3-[(Z)-icos-11-enoyl]oxy-2-[(Z)-octadec-9-enoyl]oxypropyl] 2-(trimethylazaniumyl)ethyl phosphate (three-letter code: U3D) (formula: C₄₆H₈₈NO₈P) (labeled as "Ligand of Interest" by depositor).

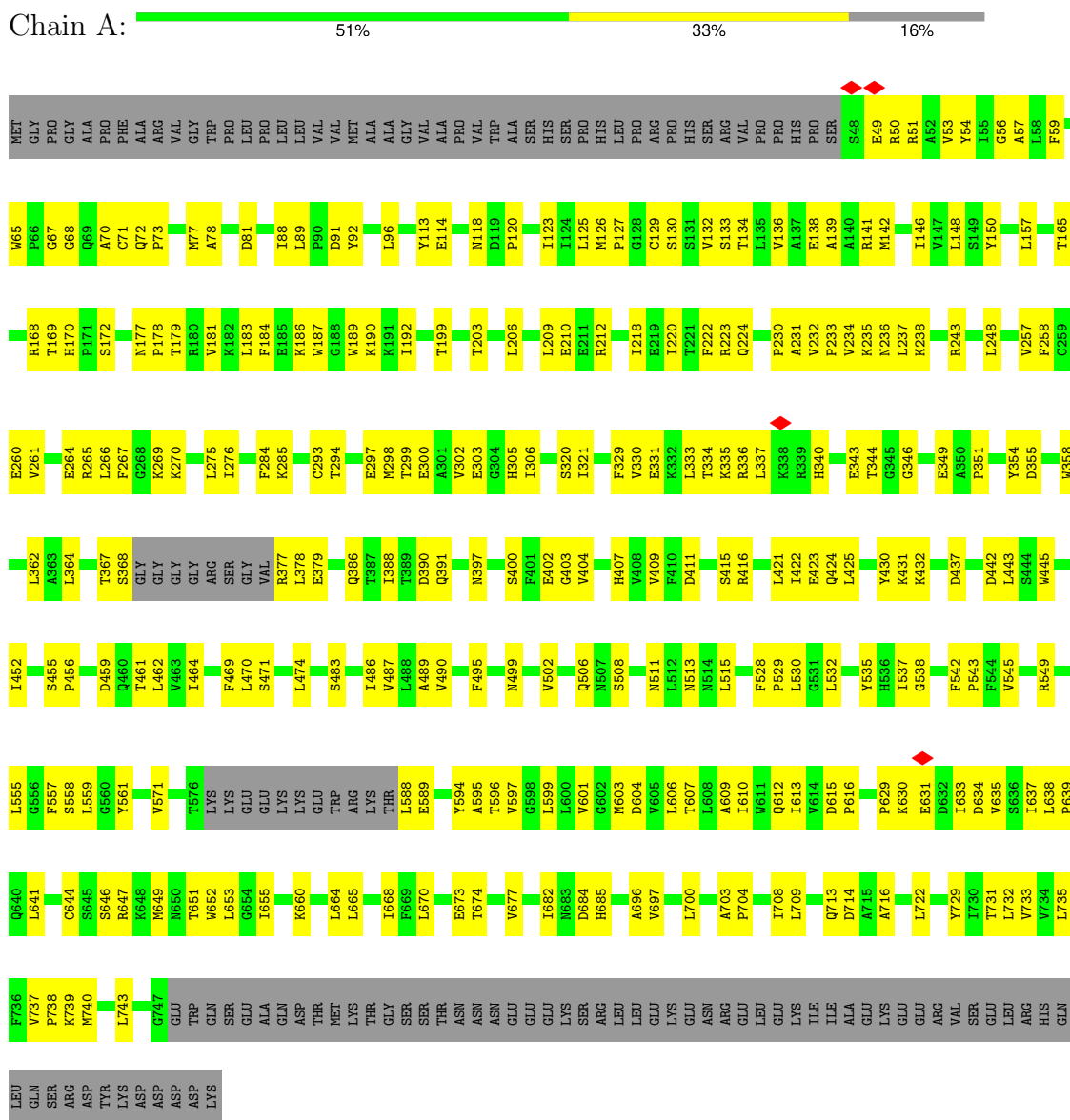


Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
7	B	1	56	46	1	8	1	0

3 Residue-property plots [i](#)

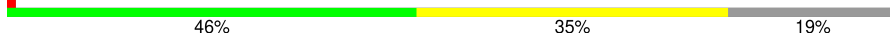
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: Gamma-aminobutyric acid type B receptor subunit 1



- Molecule 2: Gamma-aminobutyric acid type B receptor subunit 2

Chain B:



MET	L61	C937	L307	I398	H493	H579	M650	L744	LEU
ALA	M62	T238	L308	I407	L500	M584	T651	L747	ASP
SER	P63	S239	M311	M407	N503	VAL	M652	R748	LYS
PRO	L64	V240	G312	T412	N503	LYS	T654	T749	ASP
ARG	T65	K241	G313	G413	M512	MET	I655	ASN	GLU
SER	K66	K242	Y314	Q414	S516	LYS	T659	PRO	GLU
SER	E67	K244	E320	R422	M519	LYS	Y663	ALA	THR
GLY	V68	Q245	P321	T425	L523	ILE	K664	ALA	THR
GLN	G74	N246	L322	T426	L524	ILE	G665	THR	GLN
PRO	V77	D247	L322	K427	L525	LYS	L666	GLN	LEU
PRO	V81	V248	K325	F428	G526	ASP	G666	ASN	GLN
PRO	V81	R249	Q326	T429	F531	ASP	T678	ARG	ASP
PRO	V81	K250	I327	F429	A532	GLU	R679	THR	THR
PRO	A84	F255	K328	T429	S533	LEU	M680	PHE	ASP
PRO	I85	D256	K328	Q430	L534	LEU	N680	GLN	ASP
PRO	I85	Q257	K333	Q430	L535	LEU	G681	LYS	ASP
PRO	E86	N258	T334	F431	F536	LEU	V681	PHE	ASP
PRO	Q87	M259	T334	Q432	L537	LEU	G681	THR	ASP
ALA	I88	K260	Q337	D433	F537	LEU	A685	THR	ASP
ALA	R89	A260	E341	K438	D540	LEU	L686	ASN	ASP
ARG	N90	F263	E341	V439	S545	LEU	I692	GLN	ASP
ARG	E91	F264	E341	V439	E546	LEU	G693	LYS	ASP
LEU	S92	F264	R346	Y442	K547	LEU	V696	GLY	LYS
LEU	L93	C265	S347	M443	T548	LEU	V696	GLU	
LEU	L94	C266	S347	A444	F550	LEU	V696	ASP	
LEU	R95	A267	P351	A444	T551	LEU	V699	SER	
LEU	P96	Y268	H355	L449	L552	LEU	G700	LYS	
LEU	Y87	E269	H355	L449	V555	LEU	I701	THR	
PRO	F98	E270	Y359	E450	R556	LEU	M702	SER	
LEU	L99	N271	G361	I451	T557	LEU	C703	THR	
LEU	D100	M272	Y360	I456	M558	LEU	C703	SER	
LEU	L101	S275	G362	I456	L560	LEU	I704	VAL	
LEU	R102	Q278	H363	Q459	L561	LEU	I705	THR	
LEU	L103	Q278	V364	G460	T561	LEU	V709	THR	
ALA	Y104	I281	I365	K465	V555	LEU	D715	VAL	
PRO	D109	Y285	T368	D466	R556	LEU	Q716	VAL	
GLY	N110	E286	T368	K467	T557	LEU	P717	ALA	
ALA	A111	P287	Q370	T468	T557	LEU	G626	ALA	
TRP	L114	S288	R371	I469	M558	LEU	K627	THR	
TRP	L114	M289	T375	L470	L560	LEU	Y628	SER	
ALA	F117	Y290	T375	L471	L560	LEU	E631	ARG	
GLY	Y118	E291	L376	E472	V562	LEU	P632	LEU	
ALA	I121	F294	HIS	L472	G563	LEU	G636	GLY	
ARG	I121	THR	ALA	Q473	V564	LEU	R637	LEU	
PRO	M126	GLU	SER	L474	T566	LEU	D638	LEU	
PRO	H127	GLU	SER	R475	T566	LEU	I639	LEU	
PRO	L128	ALA	ARG	I477	T566	LEU	S640	LEU	
SER	M129	ALA	HIS	S478	A567	LEU	I641	LEU	
SER	V130	SER	HIS	L479	F568	LEU	R642	LEU	
SER	F131	SER	ARG	P480	M571	LEU	L738	ARG	
SER	G132	ARG	GLN	L484	F572	LEU	V739	ARG	
P54	G133	C302	I385	L485	A573	LEU	F740	MET	
P55	L134	L303	Q386	S486	K574	LEU	V741	LYS	
L56	F332	R304	D387	S486	R577	LEU	K743	ILE	
S87	S233	K305	F388	I490	V578	LEU		THR	
I58	P236	N306	T394			LEU		GLU	
M59						LEU			
G60						LEU			

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	233737	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 ($e^-/\text{\AA}^2$)	85	Depositor
Minimum defocus (nm)	-500	Depositor
Maximum defocus (nm)	-2000	Depositor
Magnification	130000	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	5.170	Depositor
Minimum map value	-0.294	Depositor
Average map value	0.017	Depositor
Map value standard deviation	0.080	Depositor
Recommended contour level	0.5	Depositor
Map size (\AA)	281.6, 281.6, 281.6	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.1, 1.1, 1.1	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: CA, U3D, U3G, NAG, CLR

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.30	0/5562	0.42	0/7554
2	B	0.29	0/5452	0.42	0/7386
All	All	0.29	0/11014	0.42	0/14940

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	5427	0	5425	221	0
2	B	5333	0	5401	253	0
3	A	42	0	39	2	0
3	B	14	0	13	0	0
4	A	1	0	0	0	0
5	A	53	0	0	1	0
6	A	112	0	184	12	0
6	B	168	0	276	6	0
7	B	56	0	0	1	0
All	All	11206	0	11338	475	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 21.

All (475) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:628:TYR:HB2	2:B:643:PRO:HG2	1.45	0.97
2:B:526:GLY:HA3	2:B:567:ALA:HB2	1.48	0.96
1:A:146:ILE:HD13	1:A:165:THR:HB	1.48	0.94
2:B:198:VAL:HG12	2:B:250:ILE:HB	1.51	0.92
2:B:522:LEU:HD21	2:B:601:VAL:HG11	1.54	0.90
1:A:529:PRO:HB2	1:A:549:ARG:HG3	1.52	0.89
2:B:270:GLU:HB2	2:B:272:MET:HG3	1.55	0.87
1:A:664:LEU:HD23	1:A:696:ALA:HA	1.58	0.84
2:B:250:ILE:HD12	2:B:278:GLN:HB3	1.58	0.84
2:B:631:GLU:HG2	2:B:632:PRO:HD3	1.65	0.79
2:B:313:GLY:HA2	2:B:430:GLN:HE21	1.47	0.79
1:A:588:LEU:HD12	1:A:589:GLU:HG3	1.66	0.78
2:B:206:GLN:HE21	2:B:210:GLU:HG2	1.48	0.78
1:A:65:TRP:HZ2	1:A:349:GLU:HG3	1.48	0.77
1:A:134:THR:HG22	1:A:157:LEU:HD21	1.66	0.76
2:B:61:LEU:HD23	2:B:104:TYR:HB2	1.67	0.76
1:A:532:LEU:HD11	1:A:545:VAL:HG11	1.68	0.76
1:A:81:ASP:OD2	1:A:354:TYR:OH	2.04	0.75
2:B:566:THR:HG22	2:B:605:LEU:HD21	1.68	0.75
1:A:557:PHE:HZ	1:A:664:LEU:HD11	1.52	0.74
2:B:578:VAL:HG23	2:B:686:LEU:HD12	1.69	0.74
1:A:703:ALA:HB3	1:A:704:PRO:HD3	1.70	0.74
2:B:240:VAL:HG12	2:B:270:GLU:HG3	1.70	0.74
1:A:733:VAL:HG13	1:A:737:VAL:HG21	1.70	0.73
2:B:56:LEU:HD22	2:B:128:LEU:HD11	1.72	0.72
2:B:709:VAL:HG11	2:B:723:ILE:HG21	1.71	0.72
2:B:704:ILE:HG13	6:B:908:CLR:H261	1.72	0.72
2:B:619:ASP:O	2:B:650:ASN:ND2	2.22	0.71
2:B:503:ASN:ND2	2:B:521:ASN:OD1	2.24	0.71
1:A:141:ARG:NH2	2:B:109:ASP:OD1	2.23	0.71
2:B:65:THR:HG22	2:B:67:GLU:H	1.55	0.69
2:B:407:ASN:OD1	2:B:414:GLN:NE2	2.24	0.69
2:B:191:LYS:HE2	2:B:224:ILE:HD11	1.72	0.69
1:A:248:LEU:HA	1:A:276:ILE:HD11	1.74	0.69
1:A:261:VAL:HG13	1:A:266:LEU:HB2	1.75	0.69
1:A:571:VAL:HG12	1:A:674:THR:HG21	1.74	0.68
2:B:699:VAL:HG23	2:B:735:THR:HG21	1.74	0.68
2:B:531:TYR:O	2:B:534:ILE:HG22	1.94	0.68

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:556:ARG:HA	2:B:559:ILE:HG22	1.76	0.67
1:A:50:ARG:HA	1:A:91:ASP:O	1.95	0.66
1:A:528:PHE:HB2	1:A:529:PRO:HD3	1.77	0.66
1:A:388:ILE:HD11	3:A:902:NAG:H82	1.77	0.66
1:A:682:ILE:HG22	1:A:685:HIS:HB3	1.78	0.66
1:A:190:LYS:HA	1:A:218:ILE:HG23	1.76	0.66
1:A:713:GLN:OE1	1:A:713:GLN:N	2.28	0.66
1:A:206:LEU:O	1:A:210:GLU:HG2	1.96	0.66
2:B:304:ARG:HH11	2:B:308:LEU:HD12	1.61	0.65
1:A:92:TYR:OH	1:A:379:GLU:OE1	2.11	0.65
2:B:639:ILE:HG22	2:B:641:ILE:HD11	1.79	0.65
1:A:53:VAL:HG11	1:A:378:LEU:HD21	1.79	0.65
2:B:520:ASN:O	2:B:524:ILE:HD12	1.97	0.65
1:A:486:ILE:O	1:A:490:VAL:HG23	1.97	0.64
2:B:486:SER:O	2:B:490:ILE:HG13	1.97	0.64
2:B:89:ARG:NH2	2:B:99:LEU:O	2.30	0.64
2:B:58:ILE:HD11	2:B:99:LEU:HD11	1.80	0.64
2:B:154:LEU:HD11	2:B:175:THR:HG23	1.80	0.63
2:B:143:ALA:HA	2:B:146:LEU:HD12	1.81	0.63
1:A:130:SER:O	1:A:134:THR:HG23	1.99	0.63
1:A:596:THR:HA	6:A:909:CLR:H72	1.79	0.63
1:A:499:ASN:O	1:A:502:VAL:HG12	1.99	0.63
1:A:483:SER:O	1:A:487:VAL:HG23	1.99	0.63
2:B:485:LEU:HD13	2:B:725:ALA:HB3	1.81	0.63
1:A:68:GLY:HA2	1:A:71:CYS:HB2	1.80	0.62
1:A:113:TYR:HB2	2:B:118:TYR:CE1	2.34	0.62
1:A:423:GLU:HG2	1:A:432:LYS:HA	1.80	0.62
1:A:232:VAL:HG12	1:A:233:PRO:HD3	1.81	0.62
2:B:259:MET:O	2:B:263:VAL:HG23	1.99	0.62
2:B:87:GLN:OE1	2:B:359:TYR:OH	2.14	0.62
2:B:236:PRO:O	2:B:240:VAL:HG23	2.00	0.62
2:B:731:CYS:O	2:B:735:THR:HG23	2.00	0.61
2:B:465:LYS:NZ	2:B:468:THR:HA	2.15	0.61
1:A:729:TYR:O	1:A:733:VAL:HG23	1.99	0.61
1:A:542:PHE:HE2	1:A:644:CYS:HB3	1.66	0.61
1:A:329:PHE:HE2	1:A:351:PRO:HG3	1.65	0.61
2:B:364:VAL:O	2:B:368:THR:OG1	2.11	0.60
1:A:571:VAL:CG1	1:A:674:THR:HG21	2.31	0.60
2:B:143:ALA:HA	2:B:146:LEU:CD1	2.31	0.60
1:A:638:LEU:HD12	1:A:639:PRO:HD2	1.83	0.60
2:B:465:LYS:HE2	2:B:469:ILE:H	1.66	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:479:LEU:HB3	2:B:480:PRO:HD3	1.84	0.60
1:A:386:GLN:HG2	1:A:390:ASP:OD1	2.01	0.60
2:B:64:LEU:HD11	2:B:103:LEU:HG	1.83	0.60
1:A:421:LEU:HD11	1:A:432:LYS:HB3	1.82	0.60
1:A:558:SER:HB2	1:A:604:ASP:OD1	2.01	0.60
2:B:574:LYS:HD3	2:B:692:ILE:HD13	1.84	0.60
2:B:550:GLU:OE2	2:B:622:ARG:HG2	2.02	0.59
1:A:330:VAL:O	1:A:334:THR:HG23	2.02	0.59
2:B:596:LYS:O	2:B:600:ILE:HG13	2.01	0.59
2:B:650:ASN:H	2:B:653:MET:HB2	1.66	0.59
2:B:655:ILE:O	2:B:659:ILE:HG23	2.02	0.59
1:A:737:VAL:HB	1:A:738:PRO:HD3	1.85	0.59
2:B:626:GLU:OE1	2:B:627:LYS:N	2.35	0.59
1:A:588:LEU:CD1	1:A:589:GLU:HG3	2.33	0.59
1:A:437:ASP:HB3	1:A:442:ASP:OD1	2.03	0.58
2:B:536:LEU:CD1	2:B:552:LEU:HD12	2.33	0.58
1:A:187:TRP:CD1	1:A:456:PRO:HG3	2.37	0.58
2:B:477:ILE:N	2:B:540:ASP:OD1	2.36	0.58
1:A:555:LEU:O	1:A:559:LEU:HG	2.04	0.58
2:B:685:ALA:O	2:B:686:LEU:HD23	2.03	0.58
2:B:562:VAL:HA	2:B:565:THR:HG22	1.86	0.58
1:A:284:PHE:CE2	1:A:285:LYS:HE3	2.39	0.58
1:A:258:PHE:CD1	1:A:302:VAL:HG12	2.39	0.58
2:B:439:VAL:HB	2:B:456:ILE:CG2	2.34	0.58
2:B:566:THR:CG2	2:B:605:LEU:HD21	2.33	0.58
2:B:85:ILE:HD13	2:B:362:ILE:HG21	1.86	0.57
1:A:513:ASN:HD22	1:A:735:LEU:HD23	1.69	0.57
2:B:63:PRO:O	2:B:74:GLY:HA3	2.03	0.57
2:B:741:VAL:O	2:B:744:LEU:HG	2.05	0.57
1:A:258:PHE:CZ	1:A:275:LEU:HD11	2.40	0.57
2:B:470:ILE:HG22	2:B:640:SER:OG	2.04	0.57
2:B:534:ILE:HD11	2:B:725:ALA:CA	2.34	0.57
1:A:430:TYR:O	1:A:431:LYS:HD3	2.05	0.57
1:A:615:ASP:OD2	1:A:647:ARG:HG2	2.04	0.57
1:A:231:ALA:O	1:A:235:LYS:HG3	2.05	0.57
2:B:394:THR:O	2:B:398:ILE:HG13	2.04	0.57
2:B:536:LEU:HD11	2:B:552:LEU:HD12	1.86	0.57
2:B:534:ILE:HD11	2:B:725:ALA:HA	1.87	0.57
2:B:603:GLY:O	2:B:607:ILE:HG13	2.05	0.57
1:A:557:PHE:CZ	1:A:664:LEU:HD11	2.38	0.56
2:B:215:LEU:O	2:B:219:LEU:HG	2.05	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:240:VAL:HG21	2:B:266:CYS:HB3	1.87	0.56
2:B:709:VAL:CG1	2:B:723:ILE:HG21	2.35	0.56
2:B:204:ASP:OD1	2:B:231:SER:HB3	2.04	0.56
1:A:57:ALA:CB	1:A:96:LEU:HD11	2.35	0.56
2:B:175:THR:O	2:B:422:ARG:NH1	2.37	0.56
1:A:320:SER:HB2	1:A:403:GLY:HA2	1.87	0.56
1:A:529:PRO:O	1:A:549:ARG:HD2	2.06	0.56
2:B:412:THR:OG1	2:B:422:ARG:NH2	2.36	0.56
2:B:520:ASN:HB3	2:B:740:PHE:CZ	2.41	0.56
1:A:537:ILE:HG22	1:A:538:GLY:O	2.05	0.56
1:A:513:ASN:ND2	1:A:735:LEU:HD23	2.19	0.56
2:B:95:ARG:HG3	2:B:96:PRO:HA	1.88	0.56
1:A:651:THR:HA	6:A:906:CLR:C19	2.35	0.56
2:B:564:TYR:CE2	2:B:664:LYS:HD3	2.40	0.56
1:A:474:LEU:HD13	1:A:714:ASP:OD1	2.06	0.56
1:A:609:ALA:O	1:A:613:ILE:HG12	2.05	0.55
2:B:304:ARG:NH1	2:B:308:LEU:HD12	2.21	0.55
1:A:150:TYR:O	1:A:170:HIS:HB2	2.06	0.55
1:A:298:MET:O	1:A:302:VAL:HG22	2.06	0.55
1:A:731:THR:HG21	5:A:905:U3G:C01	2.36	0.55
2:B:81:VAL:O	2:B:85:ILE:HG12	2.05	0.55
2:B:117:PHE:CZ	2:B:121:ILE:HD11	2.41	0.55
2:B:519:MET:HB2	2:B:574:LYS:HE2	1.87	0.55
2:B:678:THR:O	2:B:681:VAL:HG12	2.07	0.55
1:A:542:PHE:CE2	1:A:644:CYS:HB3	2.41	0.55
1:A:65:TRP:CH2	1:A:67:GLY:HA3	2.42	0.55
2:B:578:VAL:CG2	2:B:686:LEU:HD12	2.36	0.55
2:B:161:PRO:HB3	2:B:180:ASN:ND2	2.21	0.55
2:B:627:LYS:HG2	2:B:644:LEU:HD13	1.89	0.55
1:A:67:GLY:HA2	1:A:346:GLY:HA3	1.89	0.55
1:A:340:HIS:HB2	1:A:343:GLU:OE1	2.06	0.54
1:A:532:LEU:HD13	1:A:537:ILE:HG12	1.88	0.54
2:B:346:ARG:NH1	2:B:351:PRO:HD3	2.23	0.54
1:A:561:TYR:OH	1:A:664:LEU:HA	2.08	0.54
2:B:490:ILE:HG12	2:B:535:PHE:HZ	1.73	0.54
2:B:579:HIS:HB2	2:B:678:THR:HG21	1.90	0.54
2:B:715:ASP:OD2	2:B:716:GLN:HG3	2.07	0.54
1:A:123:ILE:HD11	1:A:364:LEU:HD11	1.89	0.54
2:B:524:ILE:HG13	2:B:736:LEU:HD11	1.89	0.54
2:B:512:ILE:HD13	2:B:743:LYS:HD3	1.90	0.54
1:A:532:LEU:HD11	1:A:545:VAL:CG1	2.37	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:57:ALA:HB2	1:A:96:LEU:HD11	1.90	0.53
1:A:192:ILE:HD13	1:A:218:ILE:HG21	1.89	0.53
2:B:609:LEU:O	2:B:613:ILE:HG22	2.08	0.53
2:B:228:ASP:OD1	2:B:246:ASN:ND2	2.40	0.53
2:B:236:PRO:CB	2:B:263:VAL:HG22	2.38	0.53
2:B:244:LYS:HD2	2:B:270:GLU:HB3	1.90	0.53
2:B:314:TYR:CE1	2:B:431:PHE:HB2	2.44	0.53
1:A:599:LEU:O	1:A:603:MET:HG3	2.07	0.53
1:A:649:MET:HG2	1:A:653:LEU:HD23	1.90	0.53
1:A:230:PRO:O	1:A:233:PRO:HD2	2.09	0.53
1:A:595:ALA:O	1:A:599:LEU:HD23	2.09	0.53
2:B:55:PRO:HB3	2:B:98:PHE:CZ	2.43	0.53
2:B:425:THR:O	2:B:426:ILE:HD13	2.08	0.53
2:B:465:LYS:HZ1	2:B:468:THR:HA	1.72	0.53
1:A:230:PRO:O	1:A:234:VAL:HG13	2.08	0.53
1:A:248:LEU:HD23	1:A:276:ILE:HD11	1.90	0.53
1:A:615:ASP:OD2	1:A:646:SER:HB2	2.09	0.53
2:B:240:VAL:CG1	2:B:270:GLU:HG3	2.38	0.53
2:B:557:THR:OG1	7:B:902:U3D:O21	2.27	0.53
2:B:477:ILE:HB	2:B:540:ASP:HB2	1.91	0.52
2:B:516:SER:OG	2:B:519:MET:HG2	2.09	0.52
2:B:577:ARG:HG3	2:B:597:LEU:HD21	1.90	0.52
1:A:532:LEU:HD13	1:A:537:ILE:CG1	2.40	0.52
2:B:574:LYS:HD3	2:B:692:ILE:CD1	2.39	0.52
2:B:548:THR:O	2:B:552:LEU:HD23	2.09	0.52
1:A:53:VAL:HG13	1:A:123:ILE:HG21	1.91	0.52
1:A:665:LEU:HD22	6:A:907:CLR:H25	1.91	0.52
2:B:607:ILE:O	2:B:611:ILE:HG13	2.10	0.52
2:B:240:VAL:HG21	2:B:266:CYS:CB	2.40	0.51
1:A:267:PHE:CE2	1:A:300:GLU:HG2	2.45	0.51
2:B:91:GLU:HB2	2:B:93:LEU:CD1	2.41	0.51
2:B:533:SER:OG	2:B:560:LEU:HB2	2.09	0.51
2:B:701:ILE:O	2:B:705:ILE:HG12	2.10	0.51
2:B:500:LEU:HB2	2:B:524:ILE:HG21	1.92	0.51
2:B:474:LEU:HD23	2:B:475:ARG:O	2.11	0.51
2:B:480:PRO:O	2:B:484:ILE:HG22	2.10	0.51
1:A:231:ALA:O	1:A:234:VAL:HG22	2.11	0.51
1:A:238:LYS:NZ	1:A:264:GLU:O	2.25	0.51
2:B:737:CYS:SG	2:B:741:VAL:HG21	2.51	0.51
1:A:59:PHE:HD1	1:A:150:TYR:HH	1.58	0.51
1:A:402:GLU:OE2	1:A:407:HIS:ND1	2.41	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:177:ASN:OD1	1:A:209:LEU:HD13	2.11	0.51
1:A:223:ARG:O	1:A:224:GLN:NE2	2.40	0.51
1:A:610:ILE:HG22	1:A:652:TRP:HH2	1.75	0.50
2:B:485:LEU:HD13	2:B:725:ALA:CB	2.41	0.50
1:A:49:GLU:HG3	1:A:51:ARG:CZ	2.40	0.50
1:A:123:ILE:CD1	1:A:364:LEU:HD11	2.40	0.50
1:A:230:PRO:C	1:A:233:PRO:HD2	2.32	0.50
2:B:493:MET:HE2	2:B:531:TYR:HB3	1.93	0.50
1:A:78:ALA:HB2	1:A:354:TYR:CD1	2.46	0.50
1:A:303:GLU:HA	1:A:425:LEU:HD23	1.94	0.50
2:B:58:ILE:CD1	2:B:99:LEU:HD11	2.41	0.50
1:A:53:VAL:CG1	1:A:123:ILE:HD13	2.42	0.50
2:B:204:ASP:OD2	2:B:233:SER:OG	2.23	0.50
2:B:546:GLU:OE1	2:B:623:ARG:NE	2.45	0.50
1:A:530:LEU:HD23	1:A:530:LEU:O	2.12	0.50
2:B:545:SER:OG	2:B:546:GLU:N	2.43	0.50
2:B:649:GLU:HB2	2:B:653:MET:CE	2.41	0.50
2:B:439:VAL:HB	2:B:456:ILE:HG22	1.94	0.50
2:B:551:THR:O	2:B:555:VAL:HG23	2.12	0.50
1:A:70:ALA:HB2	1:A:344:THR:CG2	2.41	0.50
1:A:127:PRO:HG3	1:A:136:VAL:HG21	1.94	0.50
1:A:294:THR:HG22	1:A:297:GLU:CD	2.31	0.50
1:A:615:ASP:CG	1:A:646:SER:HB2	2.31	0.50
2:B:328:LYS:HZ1	2:B:333:LYS:HA	1.75	0.50
1:A:179:THR:CG2	1:A:422:ILE:HD11	2.42	0.49
1:A:192:ILE:O	1:A:220:ILE:HA	2.12	0.49
1:A:443:LEU:HD21	1:A:445:TRP:CE3	2.47	0.49
1:A:511:ASN:ND2	1:A:594:TYR:OH	2.31	0.49
1:A:606:LEU:O	1:A:610:ILE:HG12	2.12	0.49
2:B:522:LEU:CD2	2:B:601:VAL:HG11	2.34	0.49
2:B:623:ARG:NH1	2:B:646:GLU:OE2	2.45	0.49
2:B:65:THR:O	2:B:68:VAL:HG12	2.12	0.49
2:B:126:ASN:ND2	2:B:388:PHE:O	2.45	0.49
1:A:269:LYS:HA	1:A:452:ILE:HD12	1.94	0.49
2:B:142:ILE:O	2:B:146:LEU:HG	2.12	0.49
1:A:299:THR:O	1:A:303:GLU:HB2	2.13	0.49
2:B:321:PRO:O	2:B:322:LEU:HD23	2.12	0.49
2:B:470:ILE:HG22	2:B:640:SER:HG	1.78	0.49
2:B:605:LEU:O	2:B:609:LEU:HD13	2.12	0.49
1:A:77:MET:HE2	1:A:336:ARG:HD3	1.95	0.49
1:A:302:VAL:HG23	1:A:425:LEU:CD2	2.43	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:329:PHE:CE2	1:A:351:PRO:HG3	2.46	0.49
2:B:573:ALA:HB1	2:B:597:LEU:HD23	1.94	0.49
2:B:524:ILE:HD11	2:B:740:PHE:CE2	2.48	0.49
2:B:532:ALA:O	2:B:536:LEU:HD23	2.12	0.49
2:B:534:ILE:HA	2:B:537:PHE:CE1	2.47	0.49
1:A:270:LYS:HE2	1:A:634:ASP:CG	2.33	0.49
2:B:474:LEU:HD11	2:B:646:GLU:OE1	2.13	0.49
1:A:629:PRO:HG3	1:A:637:ILE:CD1	2.43	0.49
2:B:346:ARG:HD2	2:B:346:ARG:O	2.13	0.49
2:B:568:PHE:CE1	2:B:696:VAL:HG23	2.48	0.49
1:A:537:ILE:HG13	1:A:545:VAL:HG21	1.94	0.48
1:A:655:ILE:HG22	6:A:906:CLR:H183	1.95	0.48
2:B:250:ILE:CD1	2:B:278:GLN:HB3	2.38	0.48
1:A:355:ASP:OD1	1:A:404:VAL:HG22	2.13	0.48
2:B:693:GLY:O	2:B:696:VAL:HG12	2.13	0.48
1:A:129:CYS:O	1:A:133:SER:HB2	2.12	0.48
2:B:129:MET:HG3	2:B:152:VAL:HG13	1.93	0.48
1:A:169:THR:O	1:A:416:ARG:HD3	2.14	0.48
1:A:333:LEU:HG	1:A:337:LEU:HD13	1.96	0.48
1:A:134:THR:HG22	1:A:157:LEU:CD2	2.39	0.48
1:A:508:SER:OG	1:A:684:ASP:OD1	2.13	0.48
1:A:641:LEU:HD11	1:A:713:GLN:HB3	1.95	0.48
2:B:243:LEU:O	2:B:248:VAL:HG22	2.14	0.48
2:B:247:ASP:OD1	2:B:249:ARG:NH2	2.44	0.48
2:B:255:PHE:CE2	2:B:260:ALA:HA	2.49	0.48
2:B:466:ASP:OD1	2:B:466:ASP:N	2.46	0.48
1:A:704:PRO:O	1:A:708:ILE:HG12	2.13	0.48
2:B:449:LEU:HG	2:B:451:ILE:HD11	1.94	0.48
2:B:639:ILE:CG2	2:B:641:ILE:HD11	2.43	0.48
1:A:132:VAL:O	1:A:136:VAL:HG13	2.14	0.48
2:B:334:THR:HG23	2:B:337:GLN:H	1.78	0.48
1:A:178:PRO:HG3	1:A:212:ARG:CZ	2.43	0.48
1:A:199:THR:O	1:A:203:THR:OG1	2.22	0.48
1:A:673:GLU:OE2	2:B:579:HIS:NE2	2.29	0.48
2:B:663:TYR:HA	6:B:903:CLR:H271	1.96	0.48
2:B:523:ILE:HD11	2:B:571:MET:HG3	1.96	0.48
2:B:62:MET:SD	2:B:103:LEU:HD11	2.54	0.47
2:B:290:TRP:CD1	2:B:291:GLU:HG3	2.49	0.47
2:B:154:LEU:HD11	2:B:175:THR:CG2	2.43	0.47
2:B:470:ILE:O	2:B:470:ILE:HG13	2.14	0.47
1:A:222:PHE:HD2	1:A:237:LEU:HD23	1.80	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:377:ARG:N	1:A:379:GLU:OE1	2.47	0.47
1:A:397:ASN:OD1	3:A:903:NAG:N2	2.47	0.47
2:B:62:MET:CG	2:B:103:LEU:HD11	2.45	0.47
2:B:183:ASN:HB2	2:B:184:PRO:HD3	1.97	0.47
1:A:179:THR:HG23	1:A:422:ILE:HD11	1.97	0.47
1:A:400:SER:OG	1:A:409:VAL:HG12	2.15	0.47
1:A:469:PHE:CD1	1:A:535:TYR:HB2	2.49	0.47
1:A:649:MET:O	1:A:653:LEU:HG	2.15	0.47
2:B:95:ARG:CG	2:B:96:PRO:HA	2.45	0.47
2:B:114:LEU:HG	2:B:118:TYR:CE2	2.49	0.47
2:B:136:PRO:HA	2:B:139:THR:HG22	1.96	0.47
6:A:907:CLR:H261	2:B:666:LEU:HD13	1.96	0.47
6:A:909:CLR:H183	6:A:909:CLR:H212	1.97	0.47
2:B:61:LEU:CD1	2:B:142:ILE:HD13	2.45	0.47
1:A:72:GLN:HB3	1:A:73:PRO:HD3	1.97	0.47
1:A:411:ASP:OD1	1:A:415:SER:N	2.48	0.47
1:A:571:VAL:HG23	1:A:682:ILE:HD12	1.97	0.47
2:B:129:MET:HG3	2:B:152:VAL:O	2.15	0.47
2:B:371:ARG:O	2:B:375:THR:HG23	2.15	0.47
1:A:651:THR:HA	6:A:906:CLR:H192	1.97	0.46
2:B:602:GLY:O	2:B:606:LEU:HD23	2.15	0.46
1:A:603:MET:O	1:A:607:THR:HG23	2.14	0.46
2:B:60:GLY:HA2	2:B:131:PHE:O	2.15	0.46
1:A:232:VAL:CG1	1:A:233:PRO:HD3	2.43	0.46
2:B:631:GLU:HG2	2:B:632:PRO:CD	2.40	0.46
1:A:735:LEU:O	1:A:739:LYS:HE2	2.15	0.46
2:B:700:GLY:O	2:B:704:ILE:HG12	2.16	0.46
2:B:290:TRP:HB3	2:B:311:MET:HE3	1.98	0.46
1:A:56:GLY:O	1:A:125:LEU:HA	2.16	0.46
2:B:699:VAL:CG2	2:B:735:THR:HG21	2.43	0.46
1:A:358:TRP:O	1:A:362:LEU:HG	2.16	0.46
1:A:630:LYS:HG3	1:A:631:GLU:H	1.79	0.46
1:A:697:VAL:HG22	6:A:908:CLR:H161	1.98	0.46
1:A:495:PHE:CZ	1:A:740:MET:HA	2.51	0.46
2:B:360:ASP:O	2:B:364:VAL:HG23	2.15	0.46
1:A:59:PHE:HE2	1:A:96:LEU:HD21	1.81	0.46
2:B:238:THR:O	2:B:241:LYS:HG2	2.15	0.46
1:A:65:TRP:CZ3	1:A:67:GLY:HA3	2.52	0.45
1:A:459:ASP:OD1	1:A:459:ASP:N	2.50	0.45
1:A:660:LYS:O	1:A:664:LEU:HD13	2.17	0.45
1:A:114:GLU:O	1:A:118:ASN:HB2	2.16	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:668:ILE:HD11	1:A:696:ALA:HB3	1.99	0.45
2:B:429:THR:HG22	2:B:438:LYS:HA	1.97	0.45
2:B:290:TRP:HB3	2:B:311:MET:CE	2.46	0.45
2:B:303:LEU:HB2	2:B:306:ASN:HD22	1.82	0.45
2:B:650:ASN:N	2:B:653:MET:HB2	2.31	0.45
2:B:134:VAL:HG22	2:B:157:ALA:HB3	1.98	0.45
6:B:904:CLR:H183	6:B:904:CLR:H212	1.98	0.45
2:B:275:SER:N	2:B:459:GLN:OE1	2.50	0.45
2:B:325:LYS:HD3	2:B:327:ILE:HD11	1.99	0.45
2:B:387:ASP:OD1	2:B:387:ASP:N	2.50	0.45
1:A:183:LEU:HD11	1:A:422:ILE:HG21	1.97	0.45
2:B:520:ASN:HB3	2:B:740:PHE:HZ	1.81	0.45
2:B:729:ILE:O	2:B:733:THR:HG22	2.17	0.45
1:A:275:LEU:HD12	1:A:305:HIS:CE1	2.51	0.44
2:B:166:LYS:HA	2:B:166:LYS:HD3	1.74	0.44
6:B:903:CLR:H183	6:B:903:CLR:H212	1.98	0.44
2:B:84:ALA:HB2	2:B:359:TYR:CD1	2.52	0.44
2:B:449:LEU:HG	2:B:451:ILE:CD1	2.47	0.44
2:B:320:GLU:OE1	2:B:427:LYS:HB2	2.18	0.44
1:A:377:ARG:NH2	1:A:391:GLN:HE22	2.15	0.44
1:A:127:PRO:HG3	1:A:136:VAL:CG2	2.47	0.44
6:A:907:CLR:H183	6:A:907:CLR:H212	2.00	0.44
2:B:214:ASP:O	2:B:218:VAL:HG23	2.18	0.44
1:A:53:VAL:HG21	1:A:378:LEU:HD21	1.98	0.44
1:A:321:ILE:HG12	1:A:402:GLU:O	2.17	0.44
1:A:511:ASN:O	1:A:515:LEU:HG	2.18	0.44
1:A:629:PRO:HG3	1:A:637:ILE:HD12	1.99	0.44
2:B:465:LYS:HE3	2:B:638:ASP:CG	2.38	0.44
2:B:743:LYS:O	2:B:747:LEU:HD23	2.18	0.44
6:B:907:CLR:H121	6:B:907:CLR:H212	1.99	0.44
1:A:222:PHE:CZ	1:A:236:ASN:HB3	2.52	0.44
1:A:183:LEU:HD23	1:A:183:LEU:HA	1.90	0.44
1:A:294:THR:HG22	1:A:297:GLU:OE1	2.18	0.44
2:B:573:ALA:HB1	2:B:597:LEU:CD2	2.48	0.44
2:B:627:LYS:HG2	2:B:644:LEU:CD1	2.48	0.44
2:B:701:ILE:HG22	2:B:702:MET:CE	2.48	0.44
1:A:722:LEU:HA	1:A:722:LEU:HD23	1.67	0.43
2:B:503:ASN:HB2	2:B:740:PHE:HE1	1.83	0.43
2:B:536:LEU:HB3	2:B:556:ARG:HB2	2.00	0.43
1:A:532:LEU:CD1	1:A:545:VAL:HG11	2.43	0.43
1:A:674:THR:CG2	1:A:677:VAL:HB	2.48	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:100:ASP:OD2	2:B:102:ARG:NH1	2.51	0.43
2:B:163:LEU:HD13	2:B:172:PHE:CE2	2.52	0.43
1:A:270:LYS:HE2	1:A:634:ASP:OD2	2.18	0.43
1:A:400:SER:HA	1:A:409:VAL:HG12	1.99	0.43
1:A:502:VAL:O	1:A:506:GLN:HB2	2.17	0.43
1:A:612:GLN:O	1:A:616:PRO:HG3	2.18	0.43
2:B:615:TRP:HE1	2:B:650:ASN:HD22	1.66	0.43
1:A:222:PHE:CD2	1:A:237:LEU:HD23	2.53	0.43
1:A:260:GLU:O	1:A:264:GLU:HG2	2.18	0.43
1:A:455:SER:HB2	1:A:456:PRO:HD2	2.00	0.43
1:A:470:LEU:HD12	1:A:471:SER:H	1.84	0.43
2:B:230:GLU:OE2	2:B:242:LYS:HB3	2.18	0.43
2:B:472:GLU:O	2:B:472:GLU:HG3	2.18	0.43
2:B:442:TYR:CZ	2:B:444:ALA:HA	2.54	0.43
2:B:449:LEU:CD2	2:B:451:ILE:HD11	2.49	0.43
1:A:186:LYS:O	1:A:186:LYS:HG3	2.18	0.43
2:B:152:VAL:HG23	2:B:171:TYR:O	2.19	0.43
2:B:163:LEU:HD13	2:B:172:PHE:CZ	2.53	0.43
2:B:473:GLN:HG2	2:B:641:ILE:HG21	1.99	0.43
2:B:534:ILE:CD1	2:B:729:ILE:HG13	2.49	0.43
1:A:70:ALA:HB2	1:A:344:THR:HG21	1.99	0.43
2:B:132:GLY:HA2	2:B:156:PHE:CE2	2.54	0.43
2:B:228:ASP:OD2	2:B:230:GLU:HG2	2.19	0.43
2:B:288:SER:HA	2:B:290:TRP:CH2	2.53	0.43
2:B:473:GLN:HG2	2:B:641:ILE:CG2	2.49	0.43
2:B:534:ILE:HD11	2:B:725:ALA:HB1	2.01	0.43
1:A:367:THR:OG1	1:A:368:SER:N	2.52	0.43
2:B:93:LEU:HB3	2:B:370:GLN:NE2	2.33	0.43
2:B:456:ILE:O	2:B:456:ILE:HG13	2.18	0.43
2:B:639:ILE:HG22	2:B:641:ILE:CD1	2.48	0.43
2:B:649:GLU:HB2	2:B:653:MET:HE2	2.01	0.43
1:A:177:ASN:HB2	1:A:178:PRO:HD3	2.00	0.43
2:B:465:LYS:HG2	2:B:638:ASP:OD2	2.18	0.43
1:A:597:VAL:O	1:A:601:VAL:HG23	2.19	0.42
1:A:571:VAL:CG2	1:A:682:ILE:HD12	2.49	0.42
2:B:56:LEU:HD22	2:B:128:LEU:CD1	2.45	0.42
1:A:168:ARG:NH2	1:A:172:SER:HB2	2.34	0.42
2:B:328:LYS:HZ2	2:B:334:THR:H	1.65	0.42
1:A:635:VAL:O	1:A:635:VAL:HG23	2.20	0.42
1:A:139:ALA:CB	2:B:114:LEU:HD23	2.50	0.42
1:A:142:MET:HG2	2:B:111:ALA:HB1	2.01	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:294:THR:HG22	1:A:297:GLU:CG	2.49	0.42
1:A:630:LYS:HA	1:A:630:LYS:HD2	1.81	0.42
2:B:146:LEU:HD11	2:B:153:GLN:HB2	2.02	0.42
2:B:325:LYS:HB3	2:B:327:ILE:HG13	2.02	0.42
1:A:123:ILE:HG21	1:A:378:LEU:HD11	2.02	0.42
1:A:138:GLU:OE2	2:B:110:ASN:ND2	2.52	0.42
1:A:709:LEU:O	1:A:716:ALA:HB2	2.20	0.42
1:A:88:ILE:HG23	1:A:89:LEU:H	1.84	0.42
1:A:489:ALA:HB2	1:A:732:LEU:HD11	2.02	0.42
2:B:313:GLY:HA2	2:B:430:GLN:NE2	2.26	0.42
2:B:333:LYS:HD3	2:B:341:GLU:OE2	2.20	0.42
2:B:524:ILE:HD11	2:B:740:PHE:CZ	2.55	0.42
1:A:54:TYR:CZ	1:A:120:PRO:HG3	2.55	0.42
6:A:906:CLR:H121	6:A:906:CLR:H212	2.02	0.42
2:B:735:THR:O	2:B:739:VAL:HG23	2.20	0.42
1:A:224:GLN:HB3	1:A:233:PRO:HB3	2.02	0.42
1:A:230:PRO:CB	1:A:257:VAL:HG22	2.50	0.42
1:A:243:ARG:HH21	1:A:461:THR:CG2	2.33	0.42
1:A:364:LEU:O	1:A:368:SER:N	2.52	0.42
2:B:679:ARG:H	2:B:679:ARG:HG3	1.74	0.42
2:B:77:VAL:HG12	2:B:355:HIS:HA	2.02	0.41
2:B:412:THR:CB	2:B:422:ARG:HH22	2.32	0.41
2:B:475:ARG:HD2	2:B:717:PRO:HG3	2.02	0.41
1:A:306:ILE:HD13	1:A:424:GLN:HG3	2.00	0.41
2:B:307:LEU:HD12	2:B:307:LEU:HA	1.86	0.41
2:B:493:MET:HE2	2:B:531:TYR:CB	2.51	0.41
2:B:702:MET:CB	2:B:731:CYS:HB2	2.51	0.41
6:B:906:CLR:H121	6:B:906:CLR:H212	2.01	0.41
2:B:202:THR:HG22	2:B:203:GLN:O	2.21	0.41
1:A:123:ILE:HD12	1:A:364:LEU:HD21	2.02	0.41
1:A:462:LEU:CD1	1:A:464:ILE:HG13	2.50	0.41
1:A:696:ALA:O	1:A:700:LEU:HG	2.20	0.41
2:B:264:PHE:CE1	2:B:311:MET:HA	2.55	0.41
1:A:65:TRP:CZ2	1:A:349:GLU:HG3	2.40	0.41
1:A:633:ILE:O	1:A:635:VAL:N	2.54	0.41
1:A:651:THR:HA	6:A:906:CLR:H193	2.02	0.41
2:B:257:GLN:NE2	2:B:286:GLU:OE1	2.53	0.41
2:B:136:PRO:HA	2:B:139:THR:CG2	2.51	0.41
2:B:652:HIS:O	2:B:655:ILE:HG22	2.21	0.41
1:A:674:THR:HG22	1:A:674:THR:O	2.21	0.41
2:B:61:LEU:HD13	2:B:142:ILE:HD13	2.03	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:534:ILE:HD11	2:B:725:ALA:CB	2.51	0.41
1:A:53:VAL:HG21	1:A:378:LEU:CD2	2.51	0.41
1:A:181:VAL:HA	1:A:184:PHE:CD2	2.56	0.41
1:A:189:TRP:HA	1:A:459:ASP:HB3	2.03	0.41
2:B:58:ILE:O	2:B:101:LEU:HD12	2.20	0.41
2:B:130:VAL:O	2:B:153:GLN:HA	2.21	0.41
2:B:136:PRO:HB3	2:B:160:THR:HG21	2.03	0.41
2:B:281:ILE:HD12	2:B:285:TYR:HE2	1.85	0.41
1:A:126:MET:HA	1:A:148:LEU:O	2.21	0.41
1:A:261:VAL:O	1:A:265:ARG:N	2.53	0.41
2:B:167:LYS:HD3	2:B:167:LYS:HA	1.92	0.41
1:A:542:PHE:N	1:A:543:PRO:HD2	2.35	0.40
2:B:287:PRO:O	2:B:288:SER:OG	2.36	0.40
1:A:599:LEU:HG	6:A:909:CLR:H71	2.03	0.40
2:B:230:GLU:HG3	2:B:243:LEU:HG	2.03	0.40
2:B:365:ILE:O	2:B:368:THR:HB	2.21	0.40
2:B:442:TYR:CE2	2:B:444:ALA:HB2	2.56	0.40
1:A:331:GLU:OE2	1:A:335:LYS:HG2	2.21	0.40
1:A:670:LEU:HD23	1:A:670:LEU:HA	1.89	0.40
1:A:682:ILE:CG2	1:A:685:HIS:HB3	2.48	0.40
1:A:743:LEU:HA	1:A:743:LEU:HD23	1.77	0.40
2:B:649:GLU:HB2	2:B:653:MET:HE3	2.03	0.40
1:A:555:LEU:HD23	1:A:555:LEU:HA	1.78	0.40
2:B:621:LEU:H	2:B:621:LEU:HD12	1.87	0.40
1:A:178:PRO:HG3	1:A:212:ARG:NH1	2.37	0.40
2:B:268:TYR:CZ	2:B:306:ASN:HB3	2.57	0.40
2:B:477:ILE:HG12	2:B:540:ASP:OD1	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	675/810 (83%)	653 (97%)	22 (3%)	0	100	100
2	B	663/827 (80%)	643 (97%)	20 (3%)	0	100	100
All	All	1338/1637 (82%)	1296 (97%)	42 (3%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	592/703 (84%)	591 (100%)	1 (0%)	92	95
2	B	586/725 (81%)	585 (100%)	1 (0%)	92	95
All	All	1178/1428 (82%)	1176 (100%)	2 (0%)	91	95

All (2) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	293	CYS
2	B	547	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (17) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	72	GLN
1	A	144	ASN
1	A	159	ASN
1	A	196	GLN
1	A	391	GLN
1	A	499	ASN
1	A	513	ASN
1	A	514	ASN
2	B	206	GLN
2	B	246	ASN
2	B	278	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	B	414	GLN
2	B	453	ASN
2	B	503	ASN
2	B	616	GLN
2	B	687	ASN
2	B	698	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 17 ligands modelled in this entry, 1 is monoatomic - leaving 16 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	$\# Z > 2$
6	CLR	B	908	-	31,31,31	0.84	0	48,48,48	1.09	4 (8%)
5	U3G	A	905	-	52,52,52	1.16	3 (5%)	55,57,57	0.82	2 (3%)
6	CLR	B	906	-	31,31,31	0.84	1 (3%)	48,48,48	1.22	5 (10%)
6	CLR	B	903	-	31,31,31	0.72	0	48,48,48	1.15	4 (8%)
6	CLR	A	907	-	31,31,31	0.78	0	48,48,48	1.11	3 (6%)
6	CLR	A	909	-	31,31,31	0.74	1 (3%)	48,48,48	1.08	1 (2%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
6	CLR	B	904	-	31,31,31	0.74	0	48,48,48	1.05	3 (6%)
6	CLR	A	906	-	31,31,31	0.83	1 (3%)	48,48,48	1.27	5 (10%)
7	U3D	B	902	-	55,55,55	1.41	8 (14%)	61,63,63	0.88	3 (4%)
3	NAG	A	902	1	14,14,15	0.21	0	17,19,21	0.51	0
6	CLR	A	908	-	31,31,31	0.68	0	48,48,48	1.04	3 (6%)
3	NAG	A	903	1	14,14,15	0.38	0	17,19,21	0.48	0
3	NAG	A	901	1	14,14,15	0.22	0	17,19,21	0.47	0
6	CLR	B	905	-	31,31,31	0.68	0	48,48,48	1.06	2 (4%)
3	NAG	B	901	2	14,14,15	0.17	0	17,19,21	0.40	0
6	CLR	B	907	-	31,31,31	0.82	1 (3%)	48,48,48	1.24	4 (8%)

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
6	CLR	B	908	-	-	3/10/68/68	0/4/4/4
5	U3G	A	905	-	-	22/56/56/56	-
6	CLR	B	906	-	-	0/10/68/68	0/4/4/4
6	CLR	B	903	-	-	1/10/68/68	0/4/4/4
6	CLR	A	907	-	-	3/10/68/68	0/4/4/4
6	CLR	A	909	-	-	0/10/68/68	0/4/4/4
6	CLR	B	904	-	-	1/10/68/68	0/4/4/4
6	CLR	A	906	-	-	0/10/68/68	0/4/4/4
7	U3D	B	902	-	-	27/59/59/59	-
3	NAG	A	902	1	-	2/6/23/26	0/1/1/1
6	CLR	A	908	-	-	3/10/68/68	0/4/4/4
3	NAG	A	903	1	-	2/6/23/26	0/1/1/1
3	NAG	A	901	1	-	2/6/23/26	0/1/1/1
6	CLR	B	905	-	-	0/10/68/68	0/4/4/4
3	NAG	B	901	2	-	4/6/23/26	0/1/1/1
6	CLR	B	907	-	-	2/10/68/68	0/4/4/4

All (15) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	B	902	U3D	O37-C38	3.93	1.45	1.34
7	B	902	U3D	O22-C20	3.50	1.43	1.33

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	A	905	U3G	O23-C24	3.25	1.42	1.33
5	A	905	U3G	O20-C21	-3.02	1.39	1.46
7	B	902	U3D	C40-C38	2.91	1.59	1.50
5	A	905	U3G	O20-C18	2.84	1.42	1.34
7	B	902	U3D	C41-C40	2.65	1.61	1.52
7	B	902	U3D	O37-C24	-2.52	1.40	1.46
6	A	906	CLR	C20-C17	2.38	1.58	1.54
6	B	907	CLR	C18-C13	2.27	1.58	1.54
7	B	902	U3D	P27-O30	2.17	1.67	1.59
6	B	906	CLR	C20-C17	2.11	1.58	1.54
7	B	902	U3D	C32-C31	2.08	1.57	1.51
7	B	902	U3D	P27-O26	2.05	1.67	1.59
6	A	909	CLR	C10-C9	2.01	1.59	1.56

All (39) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	902	U3D	O37-C38-C40	4.10	120.34	111.48
5	A	905	U3G	O20-C18-C17	3.33	118.68	111.48
6	A	906	CLR	C8-C7-C6	-3.19	108.35	112.76
6	B	907	CLR	C8-C7-C6	-3.15	108.39	112.76
6	A	906	CLR	C10-C9-C8	-3.06	108.24	112.71
6	B	903	CLR	C7-C8-C9	3.01	113.20	109.72
6	A	907	CLR	C4-C5-C6	-2.90	116.64	120.57
6	B	907	CLR	C10-C9-C8	-2.82	108.59	112.71
6	B	903	CLR	C14-C8-C9	-2.74	105.50	109.09
6	B	906	CLR	C10-C9-C8	-2.64	108.85	112.71
7	B	902	U3D	O22-C20-C19	2.63	119.85	111.83
6	A	909	CLR	C8-C7-C6	-2.60	109.17	112.76
5	A	905	U3G	O23-C24-C26	2.59	119.74	111.83
6	B	908	CLR	C8-C7-C6	-2.54	109.25	112.76
6	A	906	CLR	C13-C17-C20	-2.50	115.63	119.50
6	B	906	CLR	C8-C7-C6	-2.48	109.33	112.76
6	B	906	CLR	C13-C17-C20	-2.47	115.68	119.50
6	B	906	CLR	C23-C22-C20	-2.44	108.25	115.08
6	A	906	CLR	C11-C9-C8	2.42	115.16	111.78
6	A	906	CLR	C23-C22-C20	-2.42	108.32	115.08
6	B	903	CLR	C4-C5-C6	-2.41	117.30	120.57
6	B	905	CLR	C4-C5-C6	-2.37	117.36	120.57
6	B	905	CLR	C2-C3-C4	-2.35	106.99	110.29
6	B	904	CLR	C21-C20-C22	-2.34	106.71	110.34
6	A	908	CLR	C8-C7-C6	-2.34	109.52	112.76

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	B	907	CLR	C23-C22-C20	-2.33	108.56	115.08
6	A	907	CLR	C10-C9-C8	-2.30	109.35	112.71
6	B	904	CLR	C10-C9-C8	-2.27	109.40	112.71
6	B	908	CLR	C4-C5-C6	-2.24	117.53	120.57
6	B	903	CLR	C11-C9-C8	-2.23	108.66	111.78
6	A	908	CLR	C10-C9-C8	-2.22	109.46	112.71
6	A	907	CLR	C7-C8-C14	-2.21	107.80	110.93
6	B	906	CLR	C11-C9-C8	2.21	114.87	111.78
6	B	904	CLR	C8-C7-C6	-2.16	109.77	112.76
6	B	907	CLR	C4-C5-C6	-2.14	117.67	120.57
7	B	902	U3D	C24-O37-C38	-2.11	112.74	117.80
6	A	908	CLR	C2-C3-C4	-2.10	107.33	110.29
6	B	908	CLR	C10-C9-C8	-2.09	109.66	112.71
6	B	908	CLR	C13-C17-C20	-2.04	116.35	119.50

There are no chirality outliers.

All (72) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	A	905	U3G	C45-O46-P47-O49
7	B	902	U3D	C25-O26-P27-O29
7	B	902	U3D	C31-O30-P27-O26
7	B	902	U3D	C31-O30-P27-O28
5	A	905	U3G	O25-C24-O23-C22
5	A	905	U3G	C26-C24-O23-C22
3	B	901	NAG	O5-C5-C6-O6
7	B	902	U3D	C19-C20-O22-C23
3	A	901	NAG	C4-C5-C6-O6
3	B	901	NAG	C4-C5-C6-O6
3	A	901	NAG	O5-C5-C6-O6
6	A	907	CLR	C17-C20-C22-C23
6	B	908	CLR	C17-C20-C22-C23
7	B	902	U3D	O21-C20-O22-C23
6	B	908	CLR	C21-C20-C22-C23
3	A	903	NAG	C4-C5-C6-O6
6	A	908	CLR	C17-C20-C22-C23
6	A	907	CLR	C21-C20-C22-C23
3	B	901	NAG	C8-C7-N2-C2
3	B	901	NAG	O7-C7-N2-C2
6	A	907	CLR	C22-C23-C24-C25
6	A	908	CLR	C21-C20-C22-C23
6	B	908	CLR	C22-C23-C24-C25

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
3	A	903	NAG	O5-C5-C6-O6
6	B	907	CLR	C17-C20-C22-C23
5	A	905	U3G	C14-C15-C16-C17
6	B	907	CLR	C21-C20-C22-C23
5	A	905	U3G	C24-C26-C27-C28
5	A	905	U3G	C39-C40-C41-C42
7	B	902	U3D	C13-C14-C15-C16
7	B	902	U3D	C51-C52-C53-C54
5	A	905	U3G	C11-C12-C13-C14
7	B	902	U3D	C40-C38-O37-C24
5	A	905	U3G	C41-C42-C43-C44
5	A	905	U3G	C26-C27-C28-C29
7	B	902	U3D	C42-C43-C44-C45
5	A	905	U3G	C04-C05-C06-C07
7	B	902	U3D	C11-C12-C13-C14
7	B	902	U3D	O39-C38-O37-C24
7	B	902	U3D	C50-C51-C52-C53
7	B	902	U3D	C04-C05-C06-C07
5	A	905	U3G	O20-C21-C22-O23
7	B	902	U3D	C48-C49-C50-C51
3	A	902	NAG	C4-C5-C6-O6
7	B	902	U3D	C41-C42-C43-C44
7	B	902	U3D	O22-C23-C24-O37
5	A	905	U3G	C32-C33-C34-C35
5	A	905	U3G	C33-C34-C35-C36
3	A	902	NAG	O5-C5-C6-O6
5	A	905	U3G	C15-C16-C17-C18
7	B	902	U3D	C15-C16-C17-C18
7	B	902	U3D	O30-C31-C32-N33
6	B	903	CLR	C20-C22-C23-C24
5	A	905	U3G	C05-C06-C07-C08
5	A	905	U3G	C45-C21-C22-O23
6	B	904	CLR	C16-C17-C20-C22
7	B	902	U3D	C45-C46-C47-C48
6	A	908	CLR	C22-C23-C24-C25
7	B	902	U3D	C43-C44-C45-C46
7	B	902	U3D	C09-C10-C11-C12
5	A	905	U3G	C29-C30-C31-C32
5	A	905	U3G	C35-C36-C37-C38
7	B	902	U3D	C40-C41-C42-C43
5	A	905	U3G	C09-C10-C11-C12
7	B	902	U3D	C07-C08-C09-C10

Continued on next page...

Continued from previous page...

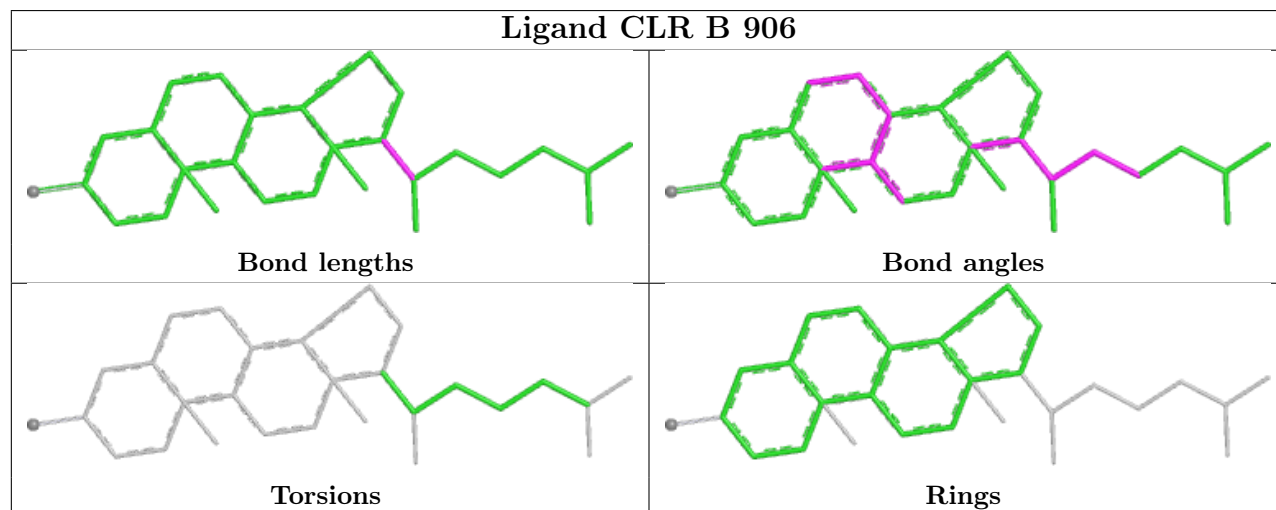
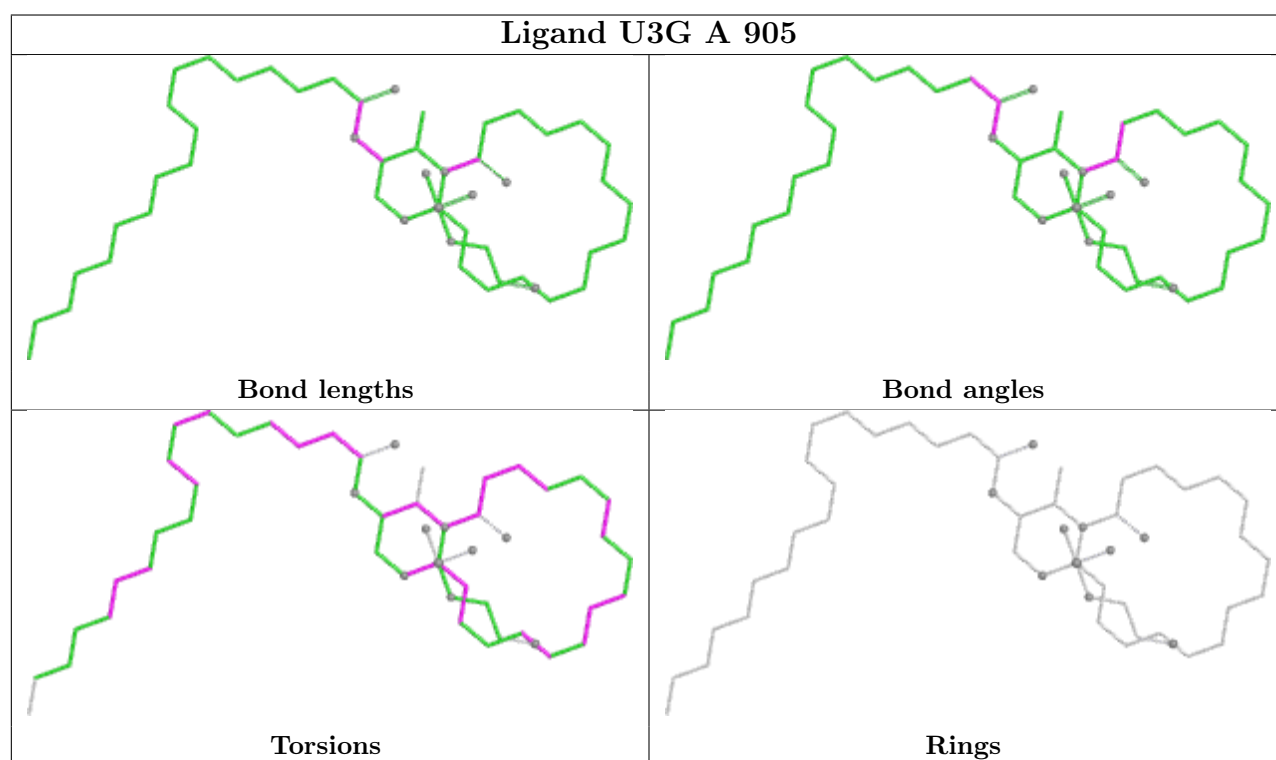
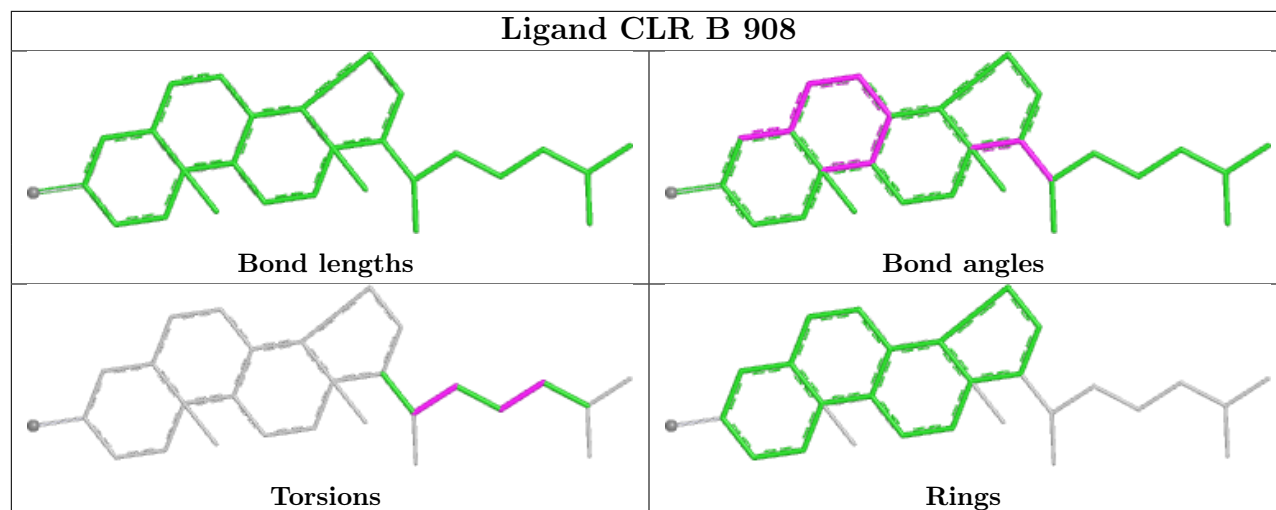
Mol	Chain	Res	Type	Atoms
7	B	902	U3D	O22-C23-C24-C25
5	A	905	U3G	C38-C39-C40-C41
7	B	902	U3D	C18-C19-C20-O22
5	A	905	U3G	C16-C17-C18-O20
7	B	902	U3D	C18-C19-C20-O21
7	B	902	U3D	C14-C15-C16-C17
5	A	905	U3G	O23-C24-C26-C27

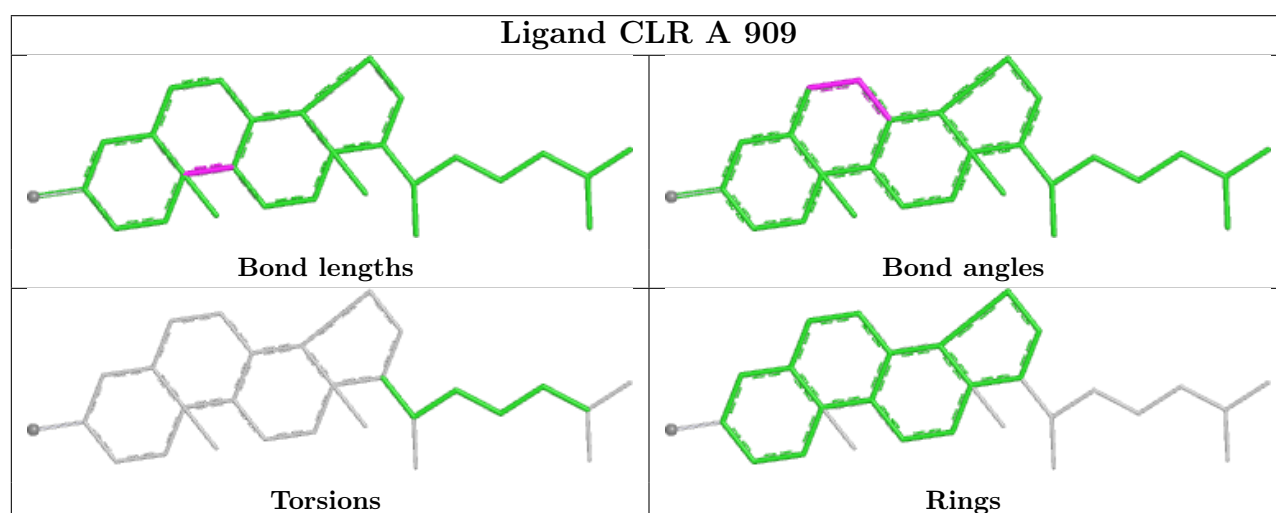
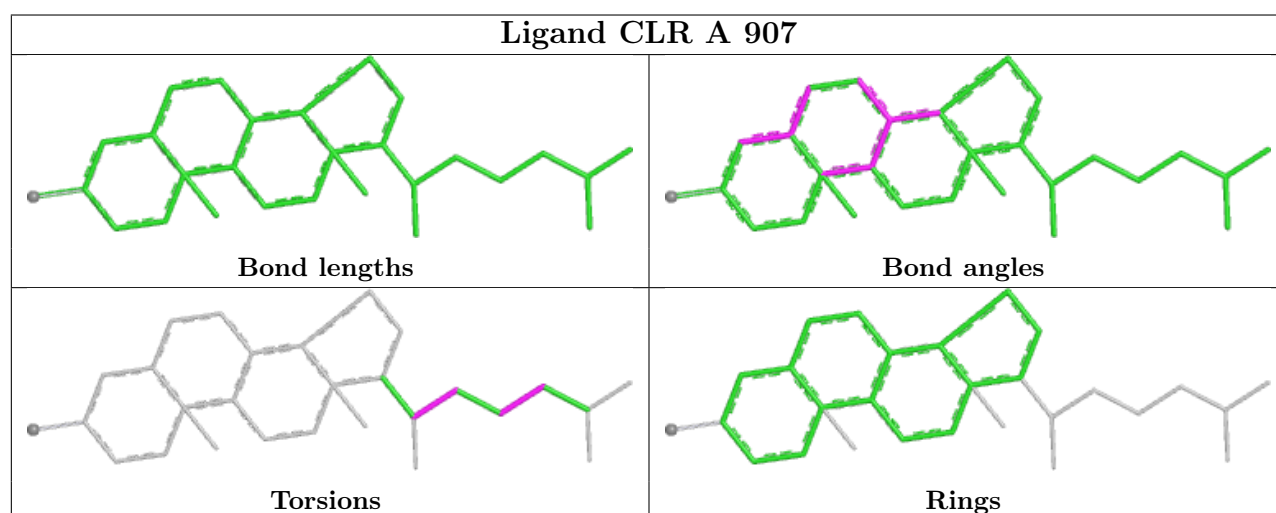
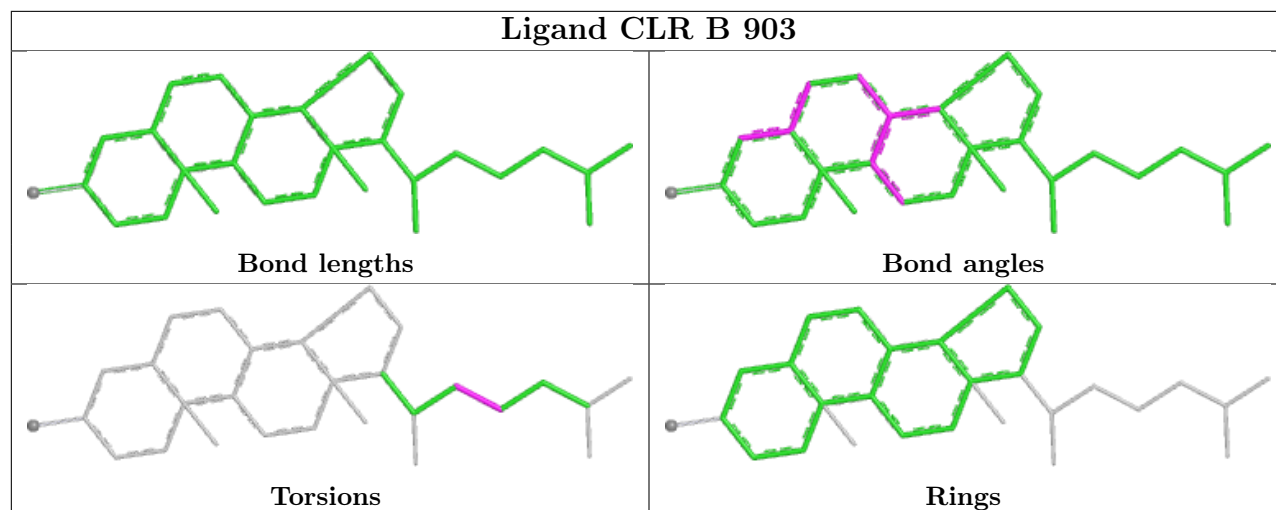
There are no ring outliers.

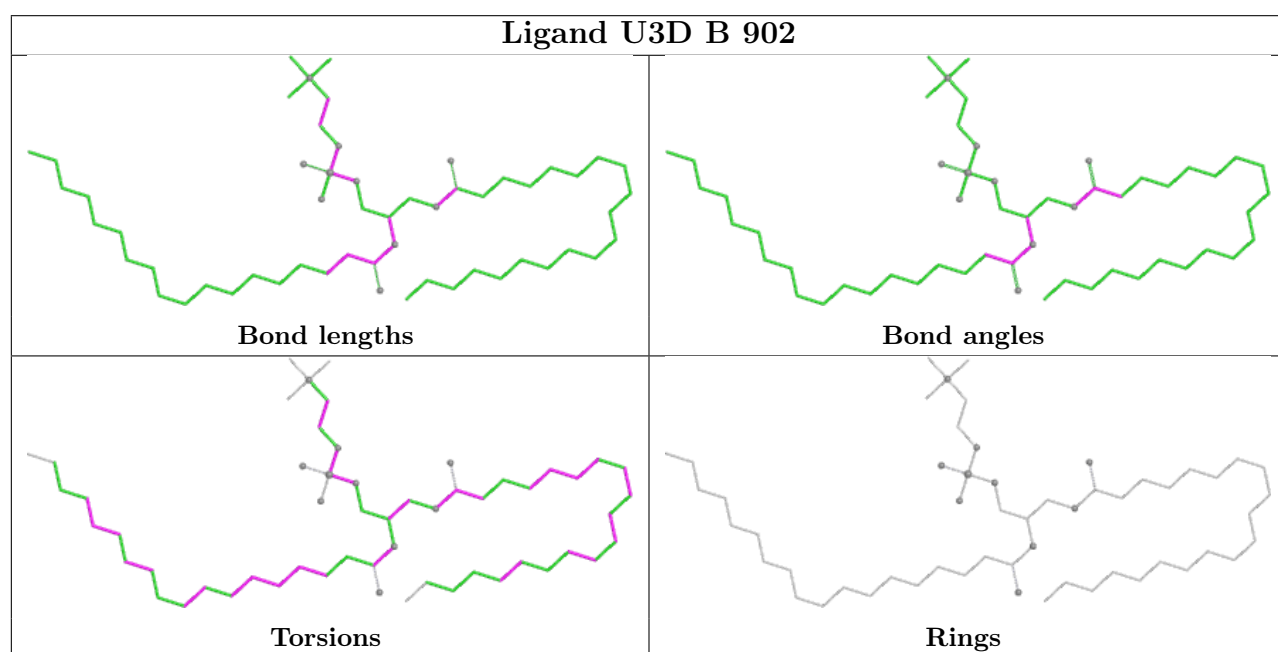
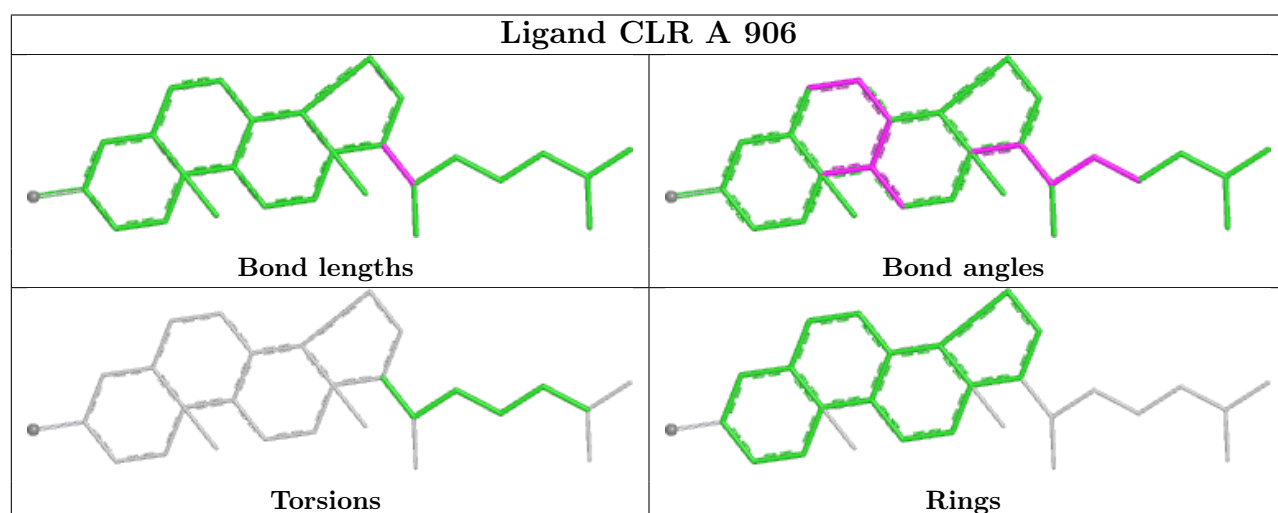
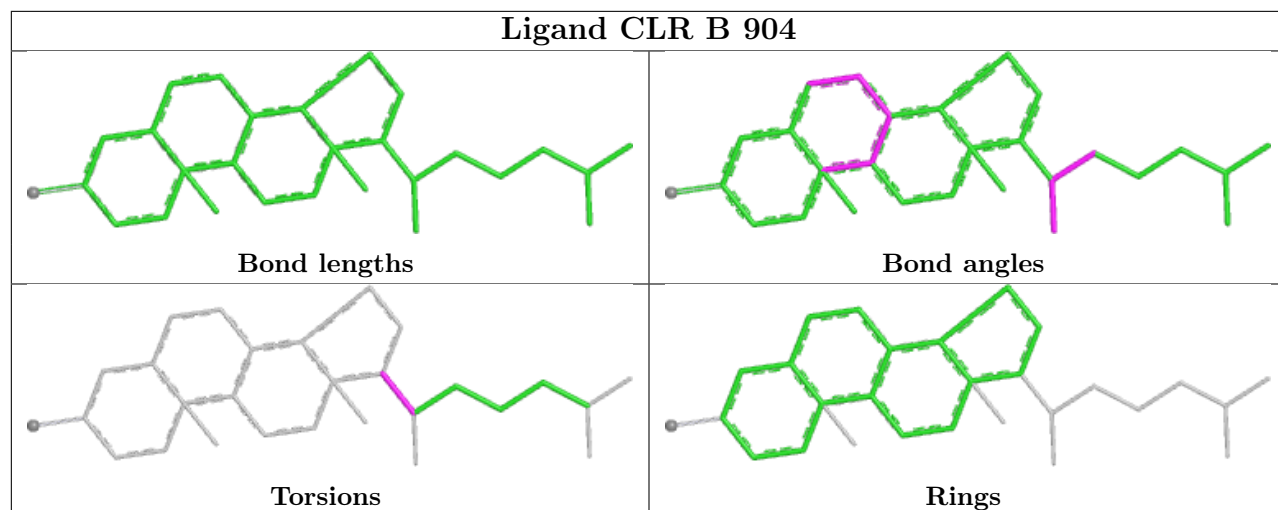
13 monomers are involved in 22 short contacts:

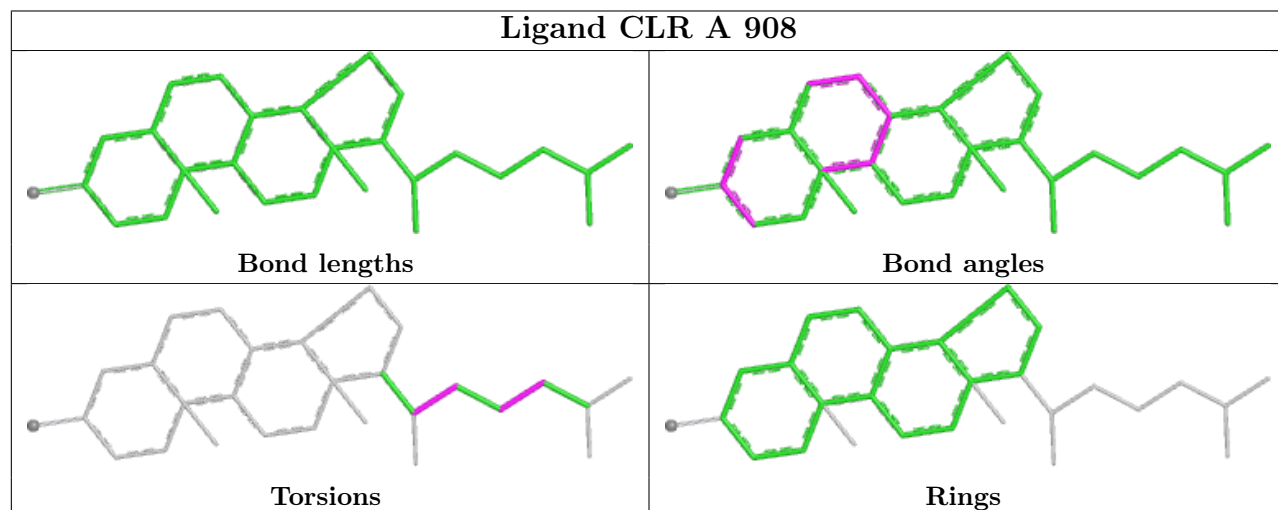
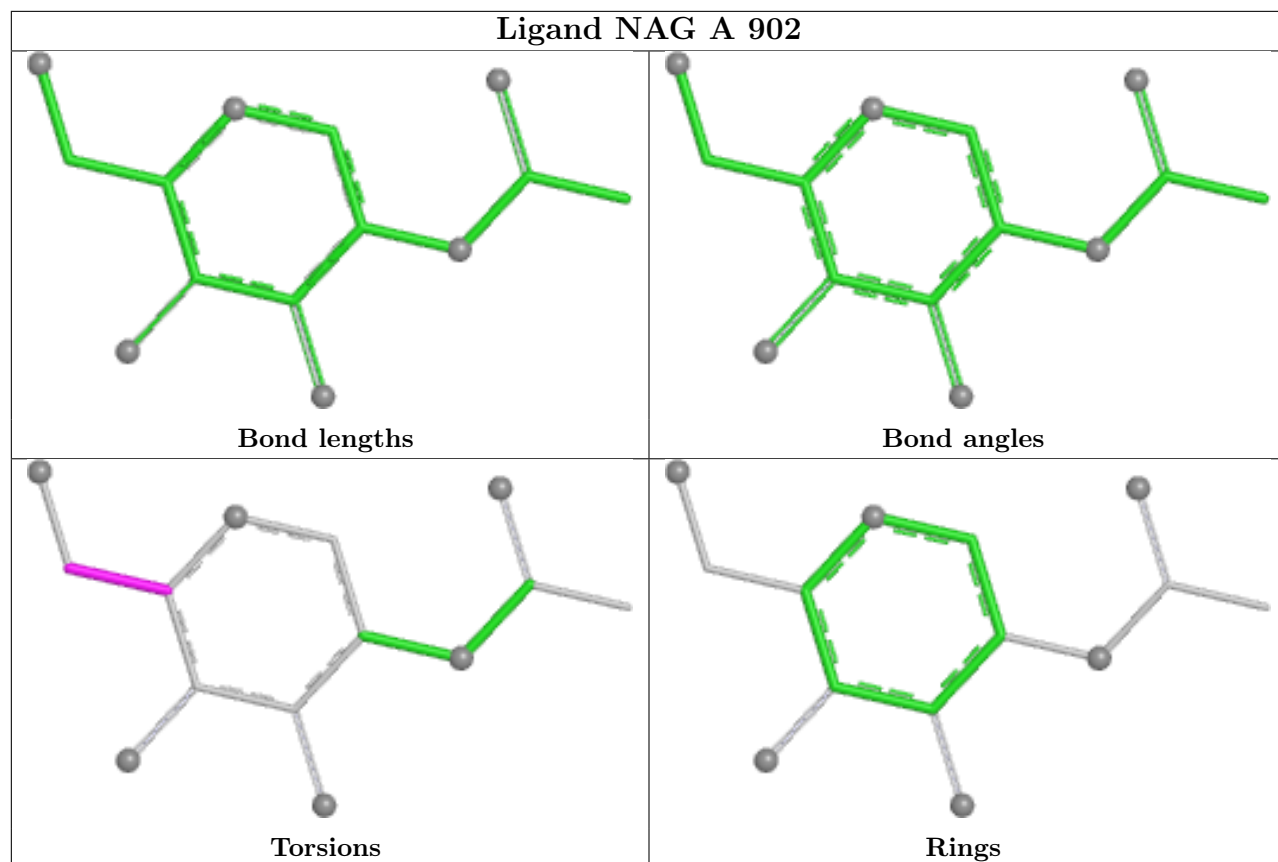
Mol	Chain	Res	Type	Clashes	Symm-Clashes
6	B	908	CLR	1	0
5	A	905	U3G	1	0
6	B	906	CLR	1	0
6	B	903	CLR	2	0
6	A	907	CLR	3	0
6	A	909	CLR	3	0
6	B	904	CLR	1	0
6	A	906	CLR	5	0
7	B	902	U3D	1	0
3	A	902	NAG	1	0
6	A	908	CLR	1	0
3	A	903	NAG	1	0
6	B	907	CLR	1	0

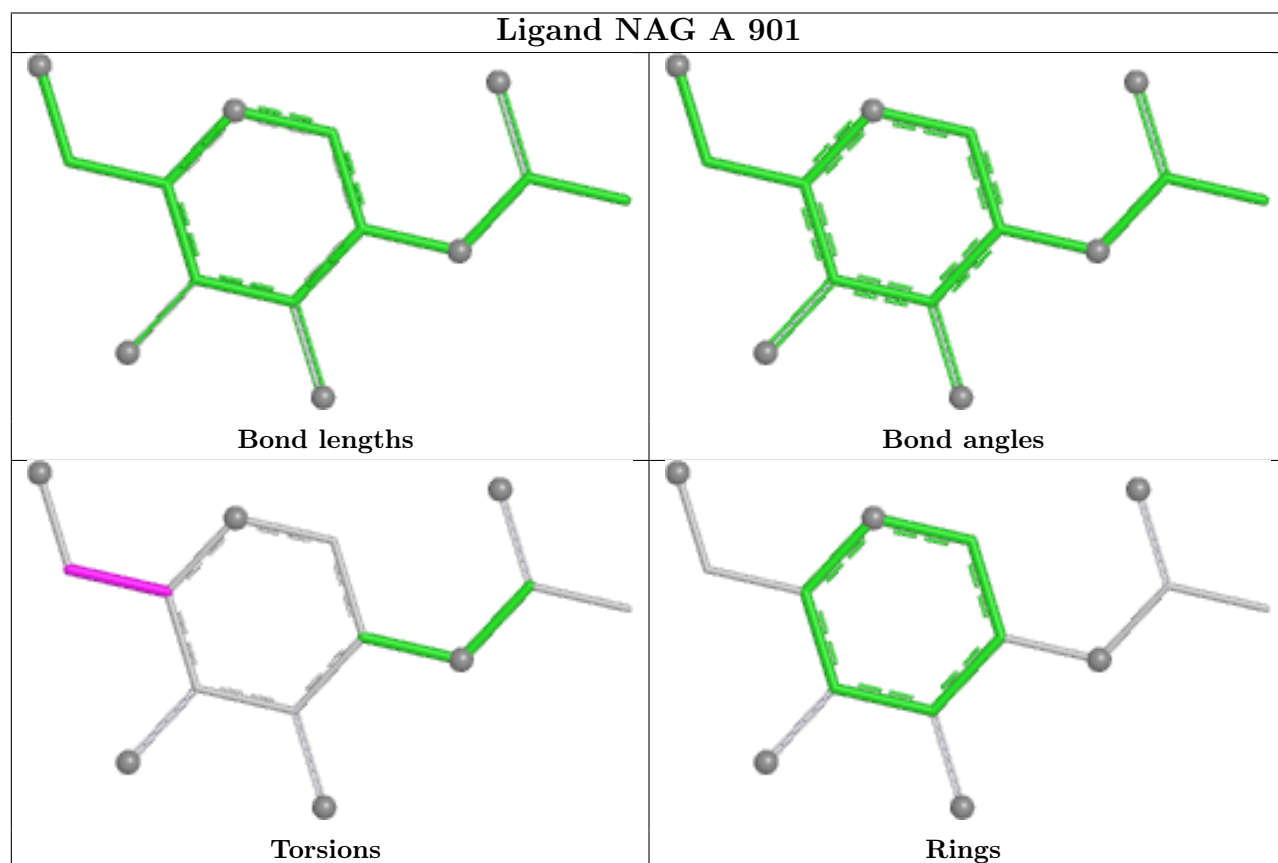
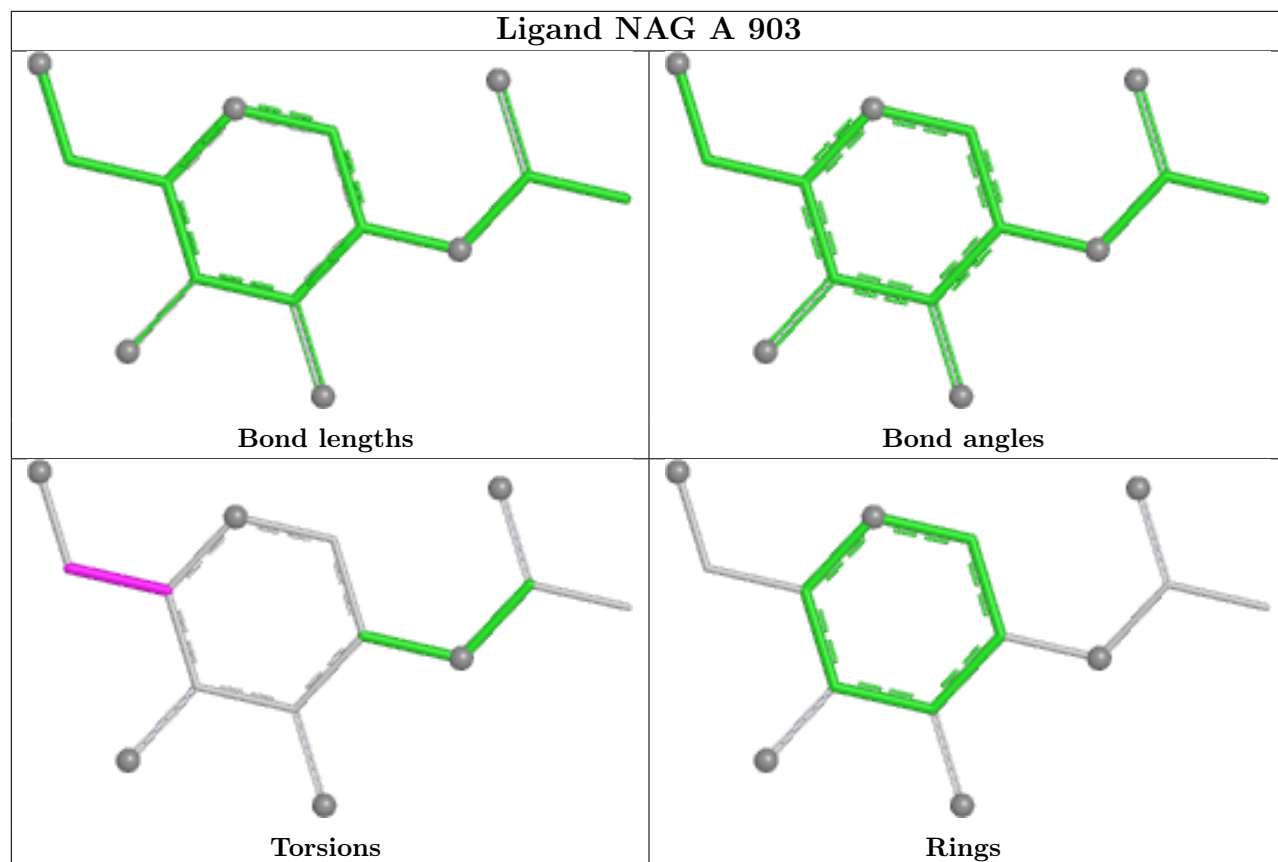
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

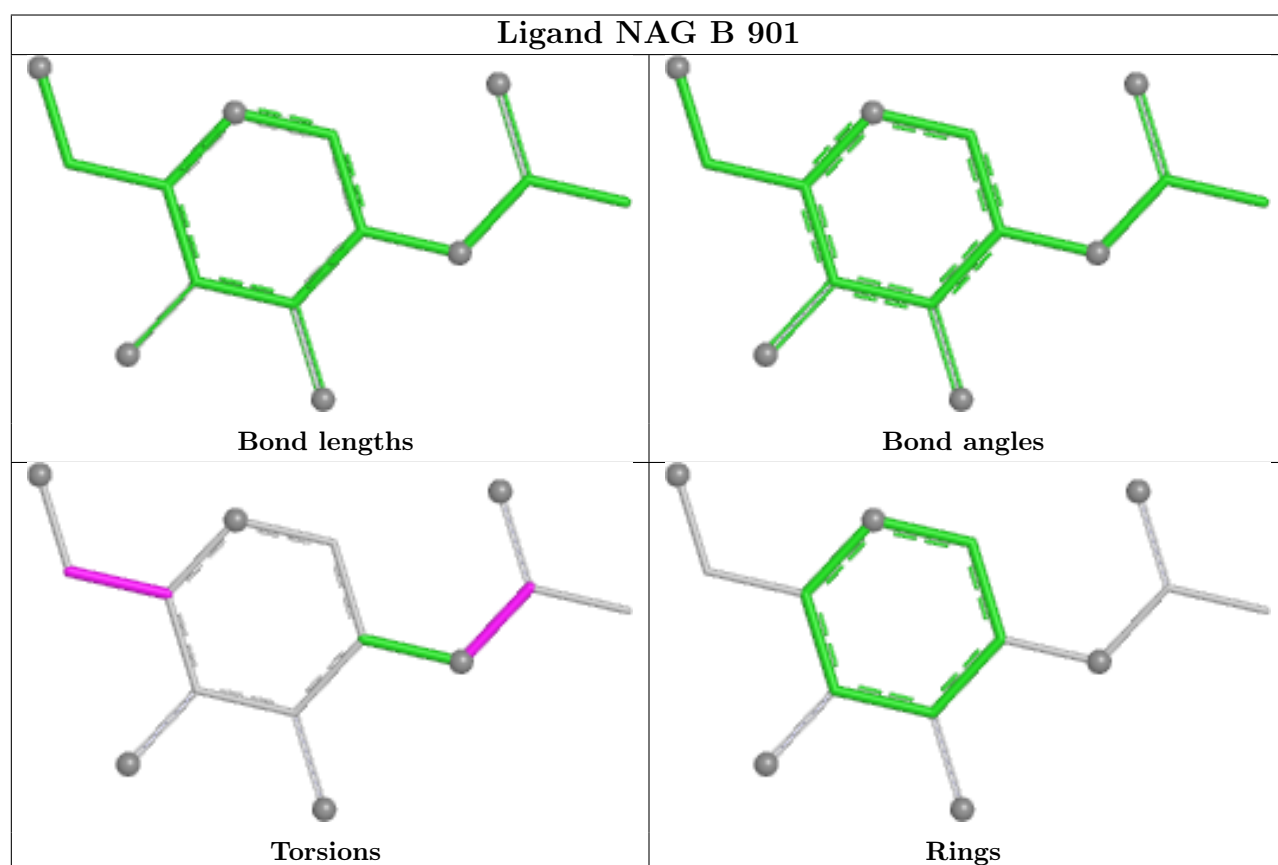
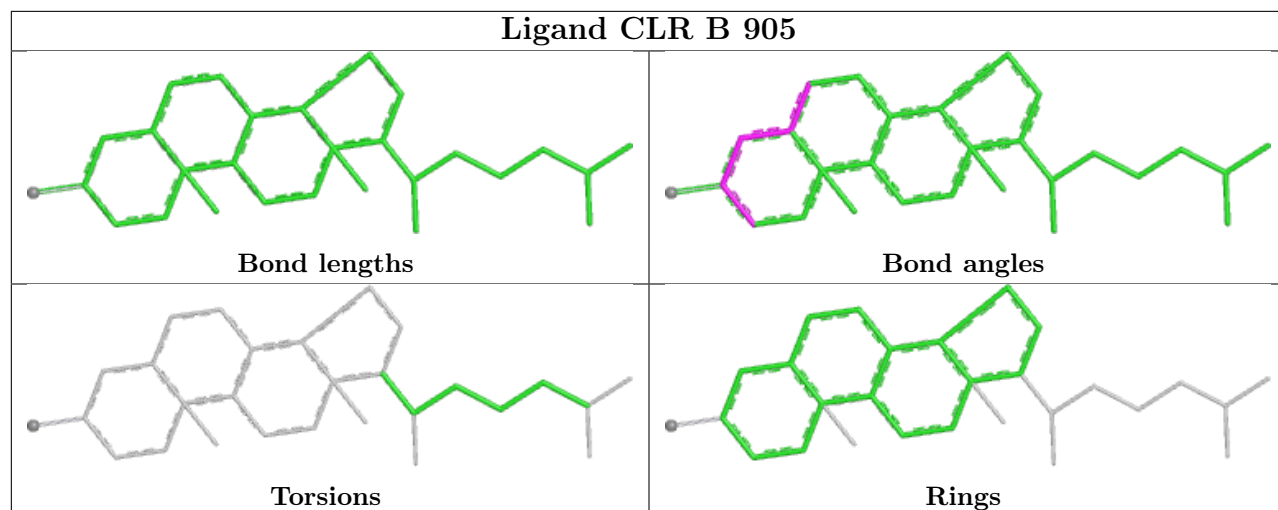


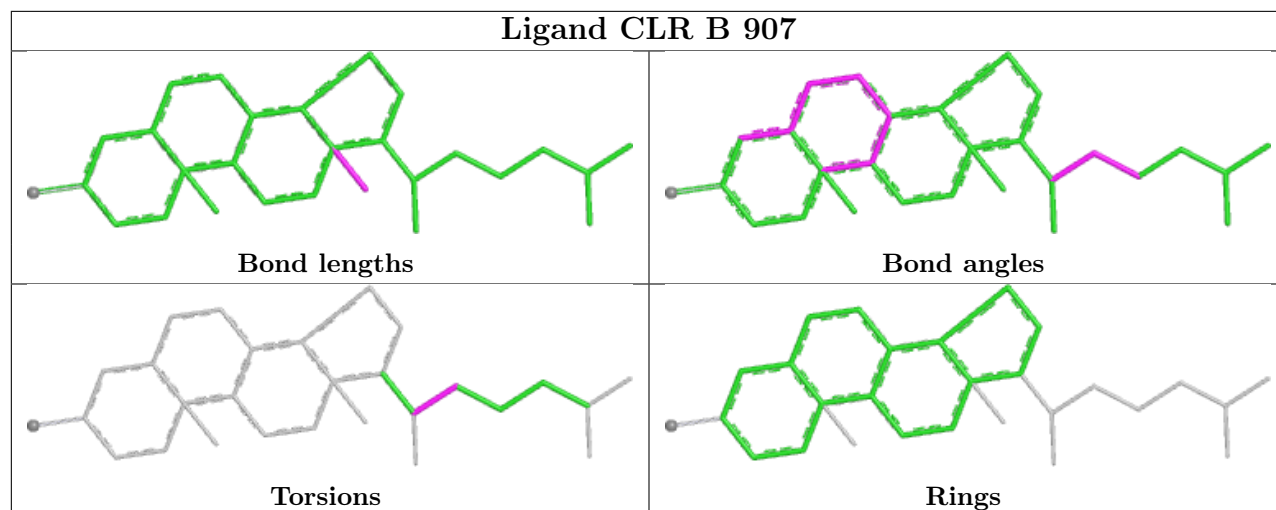












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

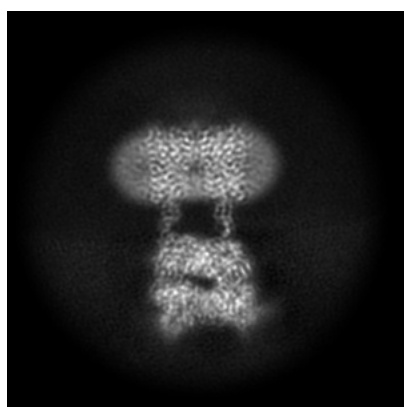
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-21685. These allow visual inspection of the internal detail of the map and identification of artifacts.

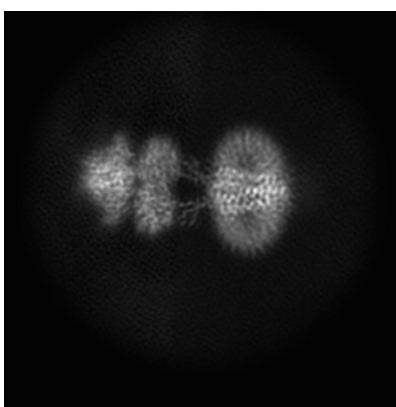
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

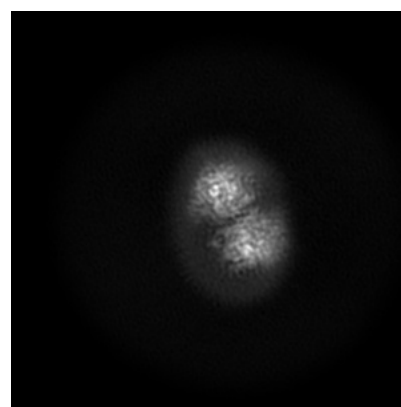
6.1.1 Primary map



X



Y



Z

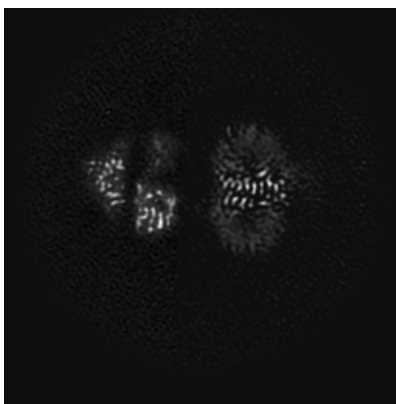
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

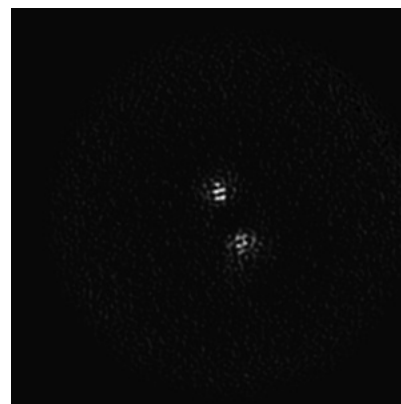
6.2.1 Primary map



X Index: 128



Y Index: 128

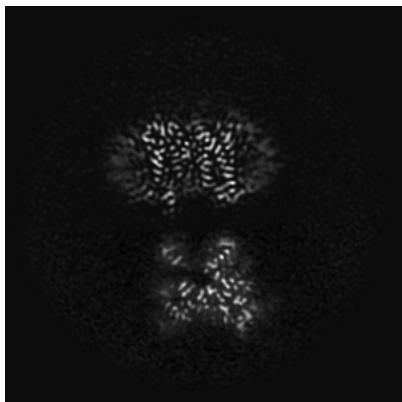


Z Index: 128

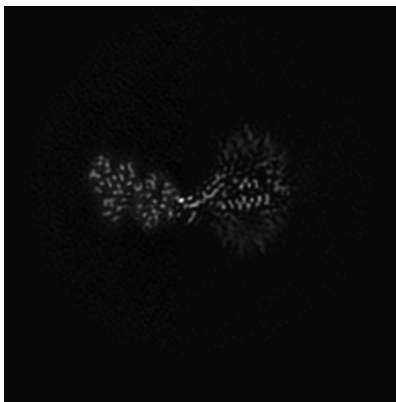
The images above show central slices of the map in three orthogonal directions.

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

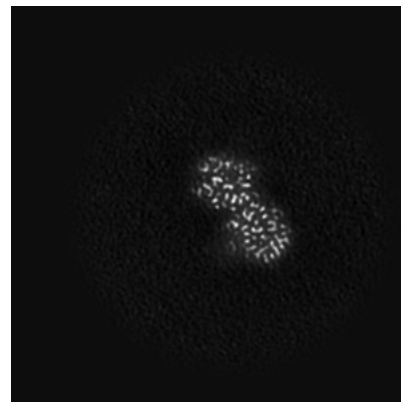
6.3.1 Primary map



X Index: 142



Y Index: 139

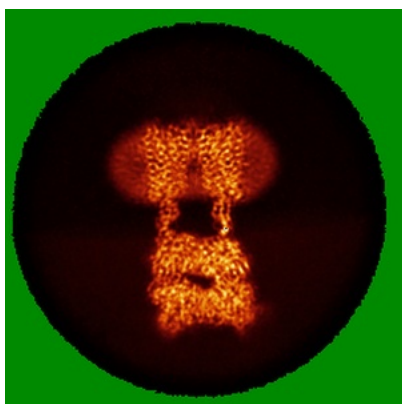


Z Index: 73

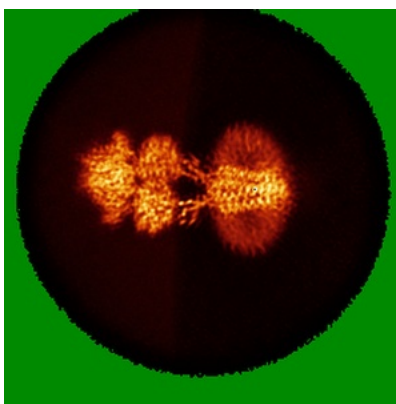
The images above show the largest variance slices of the map in three orthogonal directions.

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

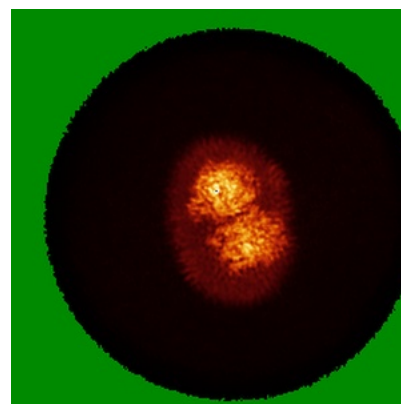
6.4.1 Primary map



X



Y

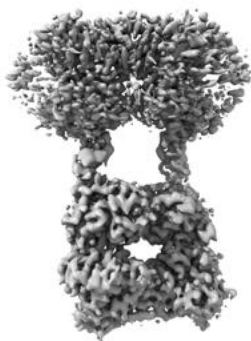


Z

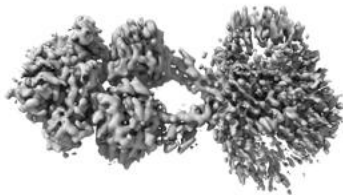
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

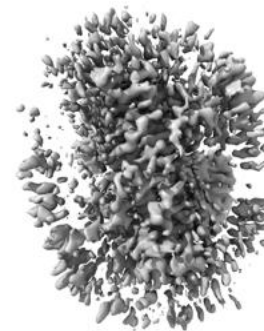
6.5.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.5. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

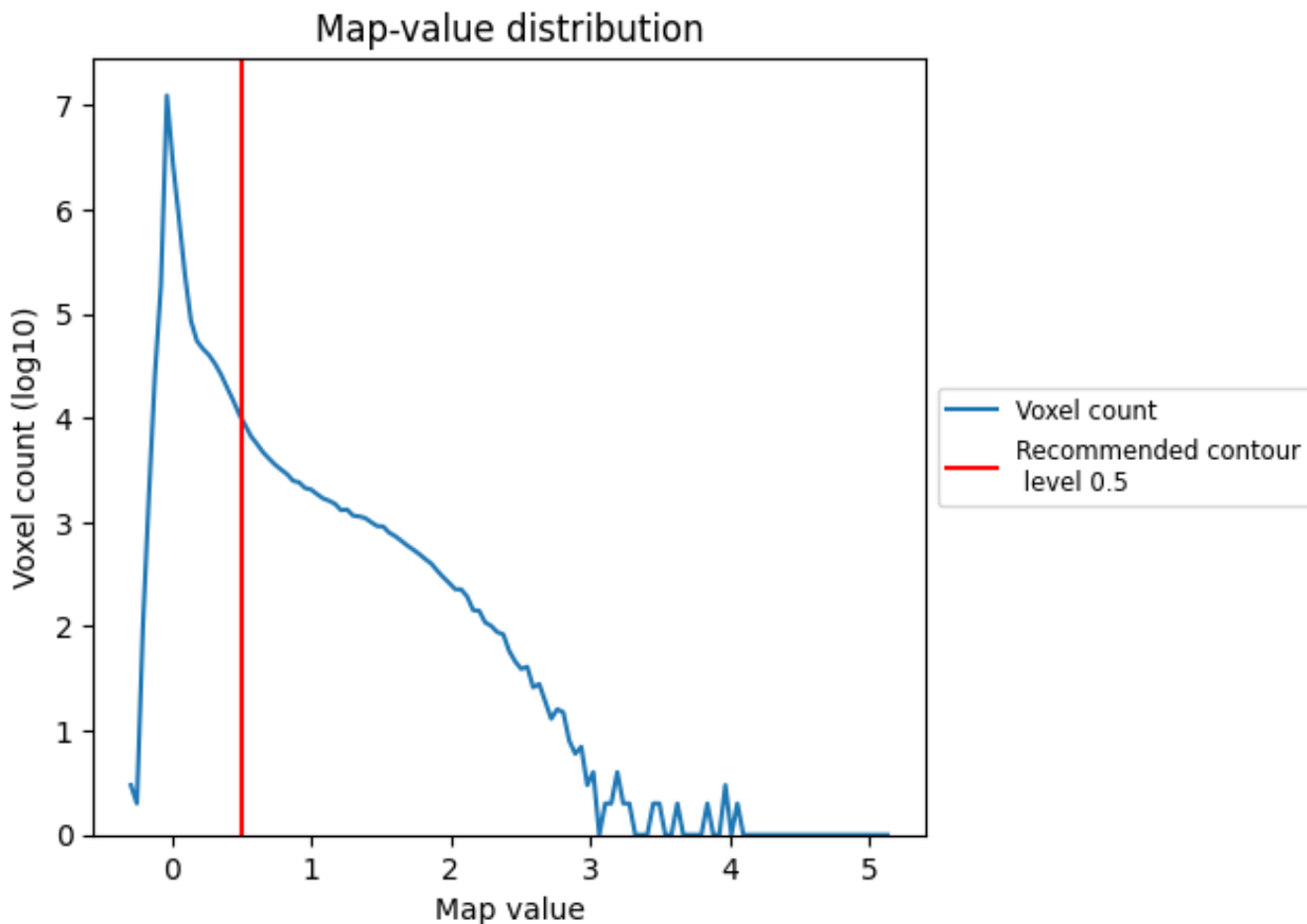
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

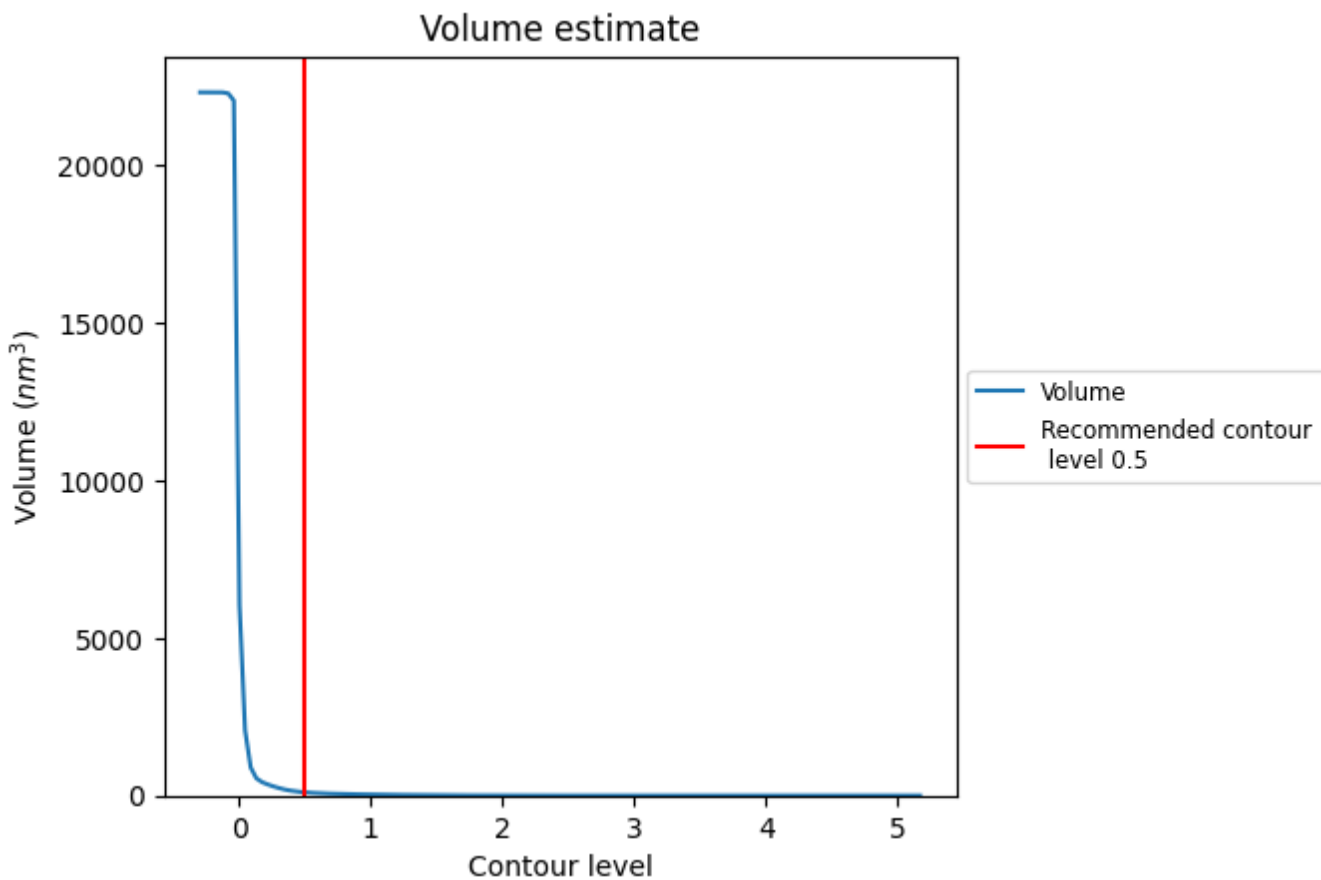
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

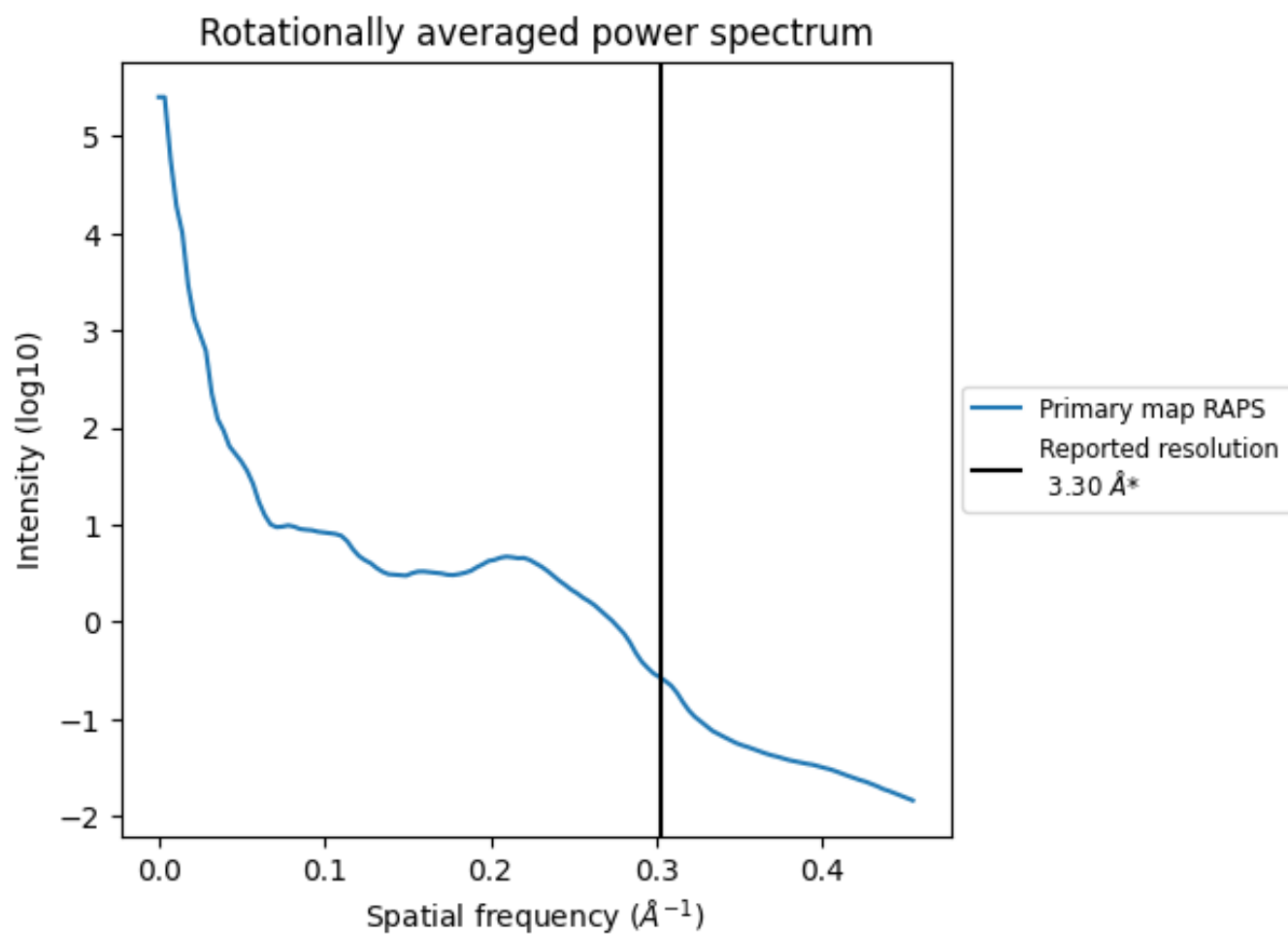
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 103 nm^3 ; this corresponds to an approximate mass of 93 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 0.303 Å⁻¹

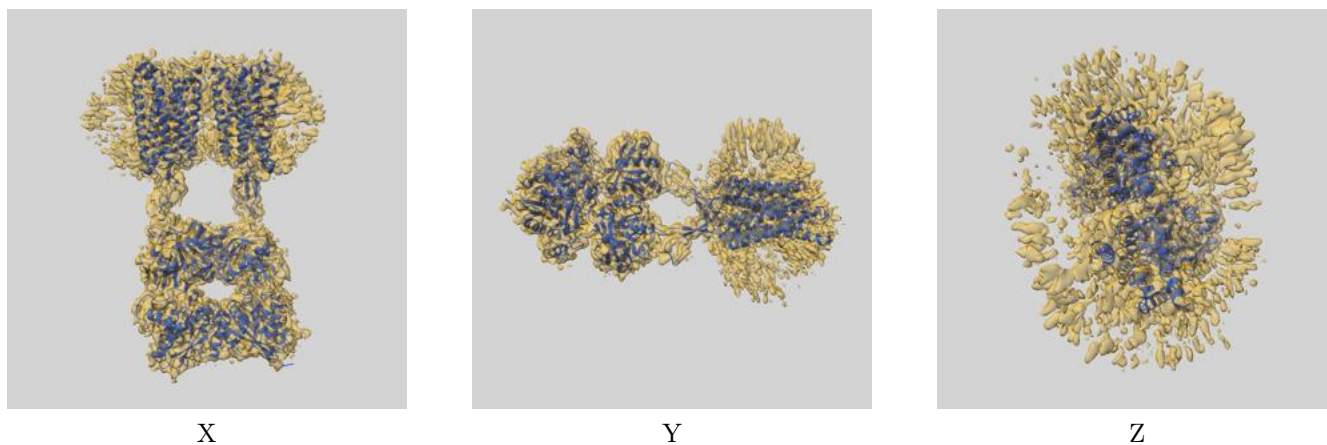
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

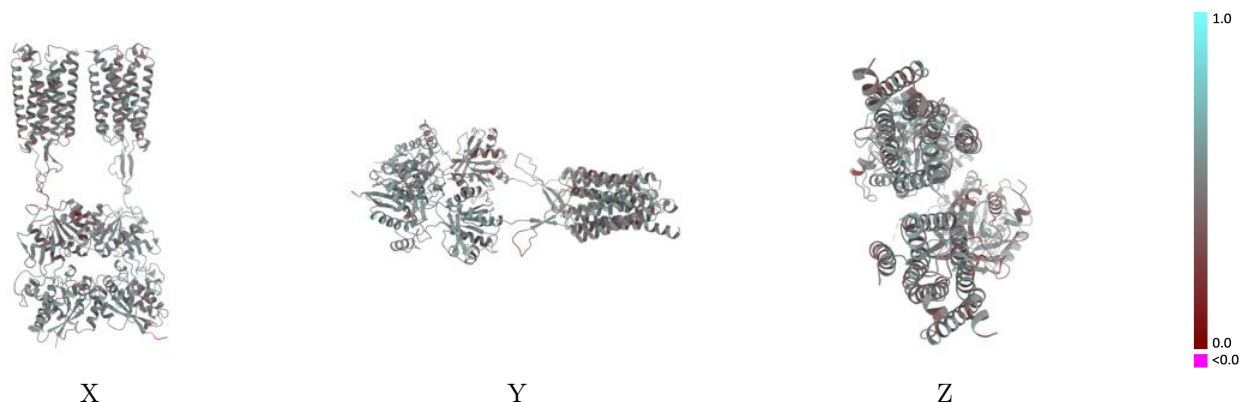
This section contains information regarding the fit between EMDB map EMD-21685 and PDB model 6WIV. Per-residue inclusion information can be found in section 3 on page 7.

9.1 Map-model overlay [i](#)



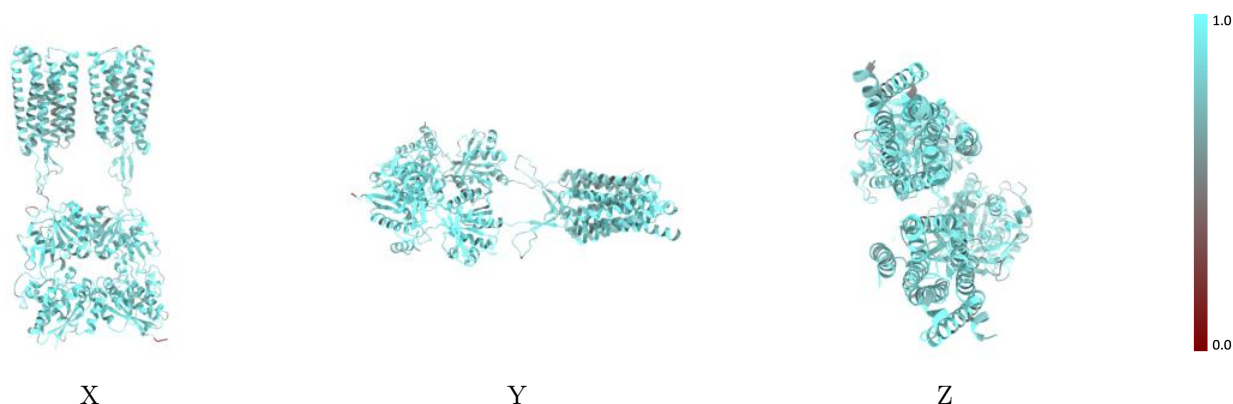
The images above show the 3D surface view of the map at the recommended contour level 0.5 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



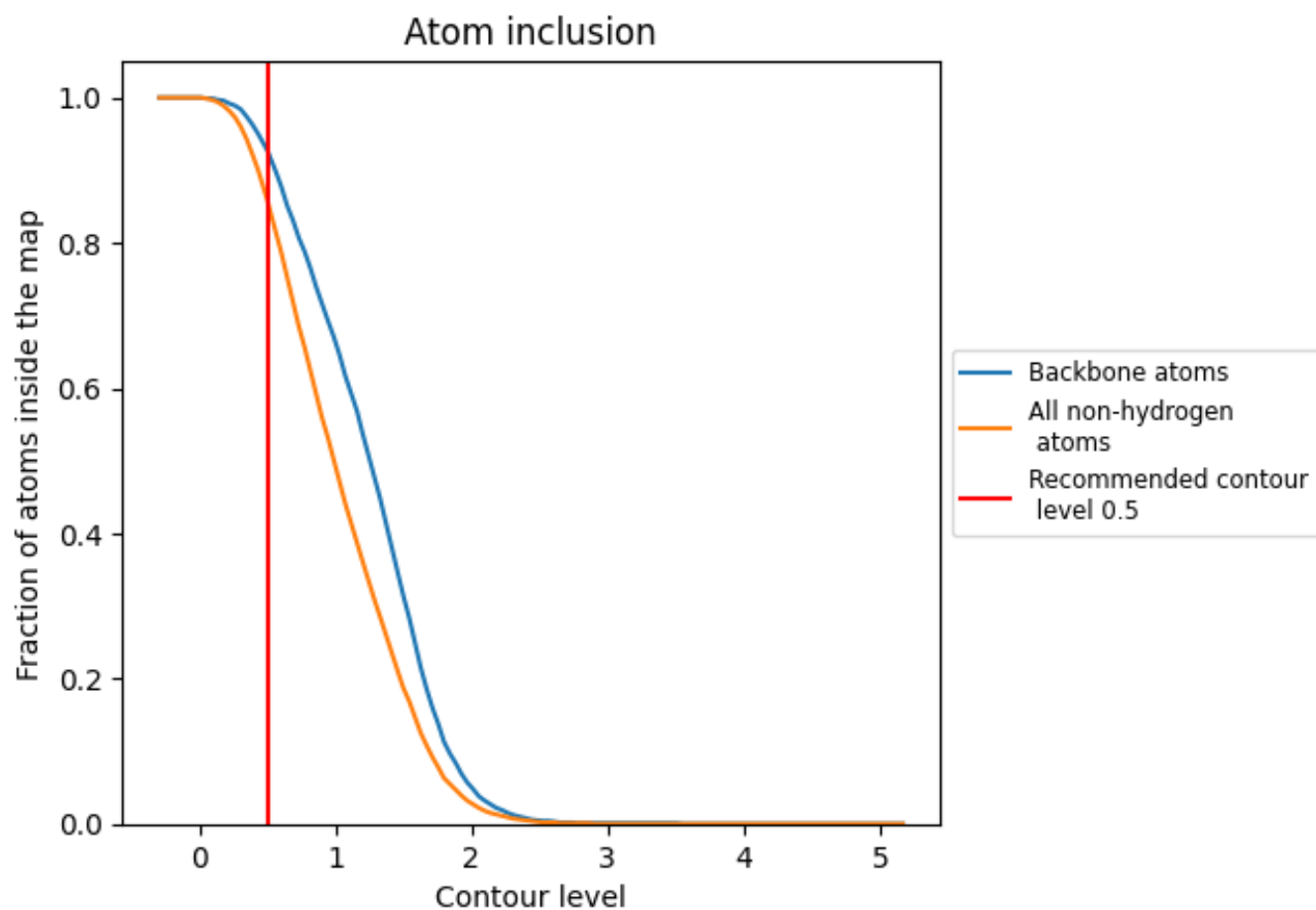
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.5).


9.4 Atom inclusion [i](#)



At the recommended contour level, 93% of all backbone atoms, 86% of all non-hydrogen atoms, are inside the map.

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

The table lists the average atom inclusion at the recommended contour level (0.5) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8580	 0.4860
A	 0.8730	 0.4960
B	 0.8420	 0.4750

