Full wwPDB X-ray Structure Validation Report (i)

Sep 24, 2025 – 06:14 am BST

PDB ID	:	6SLN / pdb_00006sln
Title	:	Structure of the RagAB peptide transporter
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Deposited on	:	2019-08-20
Resolution	:	2.61 Å(reported)

This is a Full wwPDB X-ray Structure 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/XrayValidationReportHelp
with specific help available everywhere you see the (i) 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 (i)) were used in the production of this report:

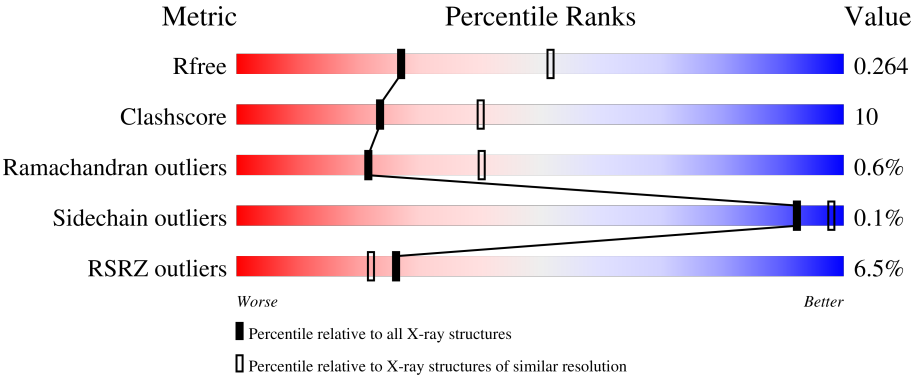
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.46

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.61 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)	Similar resolution (#Entries, resolution range(Å))
R_{free}	164625	4623 (2.64-2.60)
Clashscore	180529	5071 (2.64-2.60)
Ramachandran outliers	177936	5006 (2.64-2.60)
Sidechain outliers	177891	5006 (2.64-2.60)
RSRZ outliers	164620	4622 (2.64-2.60)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower 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 electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	997	8% 68% 22% 9%
1	B	997	6% 68% 22% 10%
2	C	488	3% 77% 21% .
2	D	488	3% 81% 18% .
3	P	13	92% 38% 46% 15%

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Mol	Chain	Length	Quality of chain
3	Q	13	

2 Entry composition (i)

There are 8 unique types of molecules in this entry. The entry contains 22773 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 RagA protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	903	Total	C	N	O	S	0	0	0
			7068	4476	1183	1377	32			
1	B	902	Total	C	N	O	S	0	0	0
			7064	4474	1182	1376	32			

- Molecule 2 is a protein called Lipoprotein RagB.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	C	481	Total	C	N	O	S	0	0	0
			3834	2434	655	736	9			
2	D	482	Total	C	N	O	S	0	0	0
			3842	2440	656	737	9			

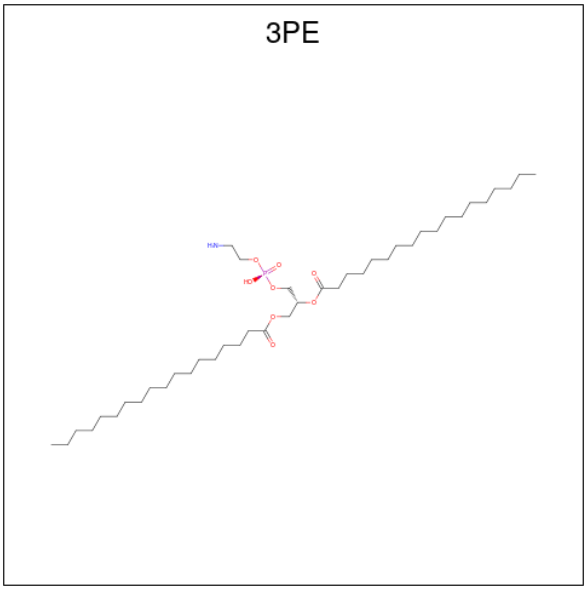
There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	502	HIS	-	expression tag	UNP F5H948
C	503	HIS	-	expression tag	UNP F5H948
C	504	HIS	-	expression tag	UNP F5H948
C	505	HIS	-	expression tag	UNP F5H948
C	506	HIS	-	expression tag	UNP F5H948
C	507	HIS	-	expression tag	UNP F5H948
D	502	HIS	-	expression tag	UNP F5H948
D	503	HIS	-	expression tag	UNP F5H948
D	504	HIS	-	expression tag	UNP F5H948
D	505	HIS	-	expression tag	UNP F5H948
D	506	HIS	-	expression tag	UNP F5H948
D	507	HIS	-	expression tag	UNP F5H948

- Molecule 3 is a protein called GLN-THR-ALA-GLY-ALA-ASN-SER-GLN-ARG-GLY-SER-ALA-GLY.

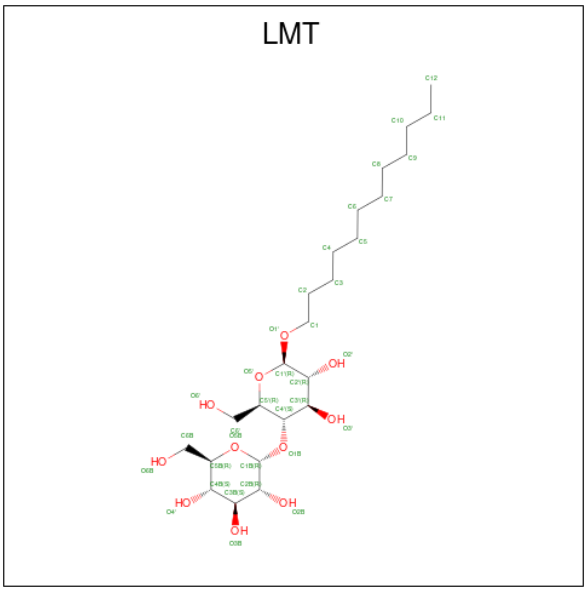
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
3	P	13	Total	C	N	O	0	0	0
			83	45	19	19			
3	Q	13	Total	C	N	O	0	0	0
			83	45	19	19			

- Molecule 4 is 1,2-Distearoyl-sn-glycerophosphoethanolamine (CCD ID: 3PE) (formula: $C_{41}H_{82}NO_8P$).



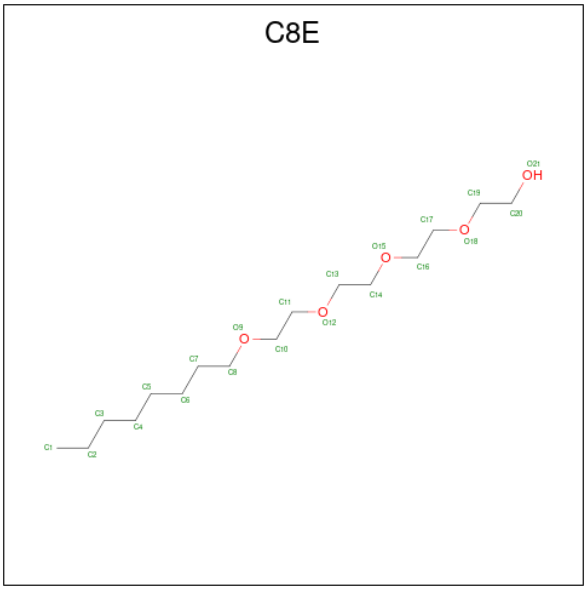
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	A	1	Total	C	O	0	0
			31	27	4		
4	B	1	Total	C	O	0	0
			32	28	4		

- Molecule 5 is DODECYL-BETA-D-MALTOSIDE (CCD ID: LMT) (formula: $C_{24}H_{46}O_{11}$).



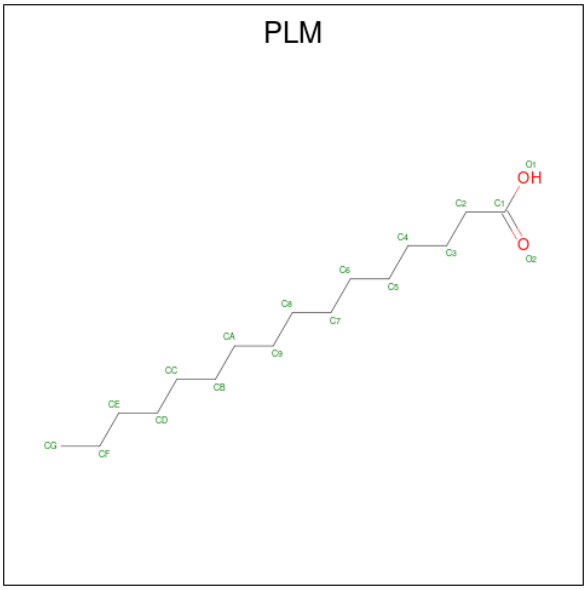
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	1	Total C O 35 24 11	0	0
5	B	1	Total C O 35 24 11	0	0
5	C	1	Total C O 33 22 11	0	0
5	D	1	Total C O 33 22 11	0	0

- Molecule 6 is (HYDROXYETHYLOXY)TRI(ETHYLOXY)OCTANE (CCD ID: C8E) (formula: $C_{16}H_{34}O_5$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	A	1	Total C O 21 16 5	0	0
6	A	1	Total C O 21 16 5	0	0
6	B	1	Total C O 7 5 2	0	0

- Molecule 7 is PALMITIC ACID (CCD ID: PLM) (formula: $C_{16}H_{32}O_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	C	1	Total C O 14 13 1	0	0
7	D	1	Total C O 15 14 1	0	0

- Molecule 8 is water.

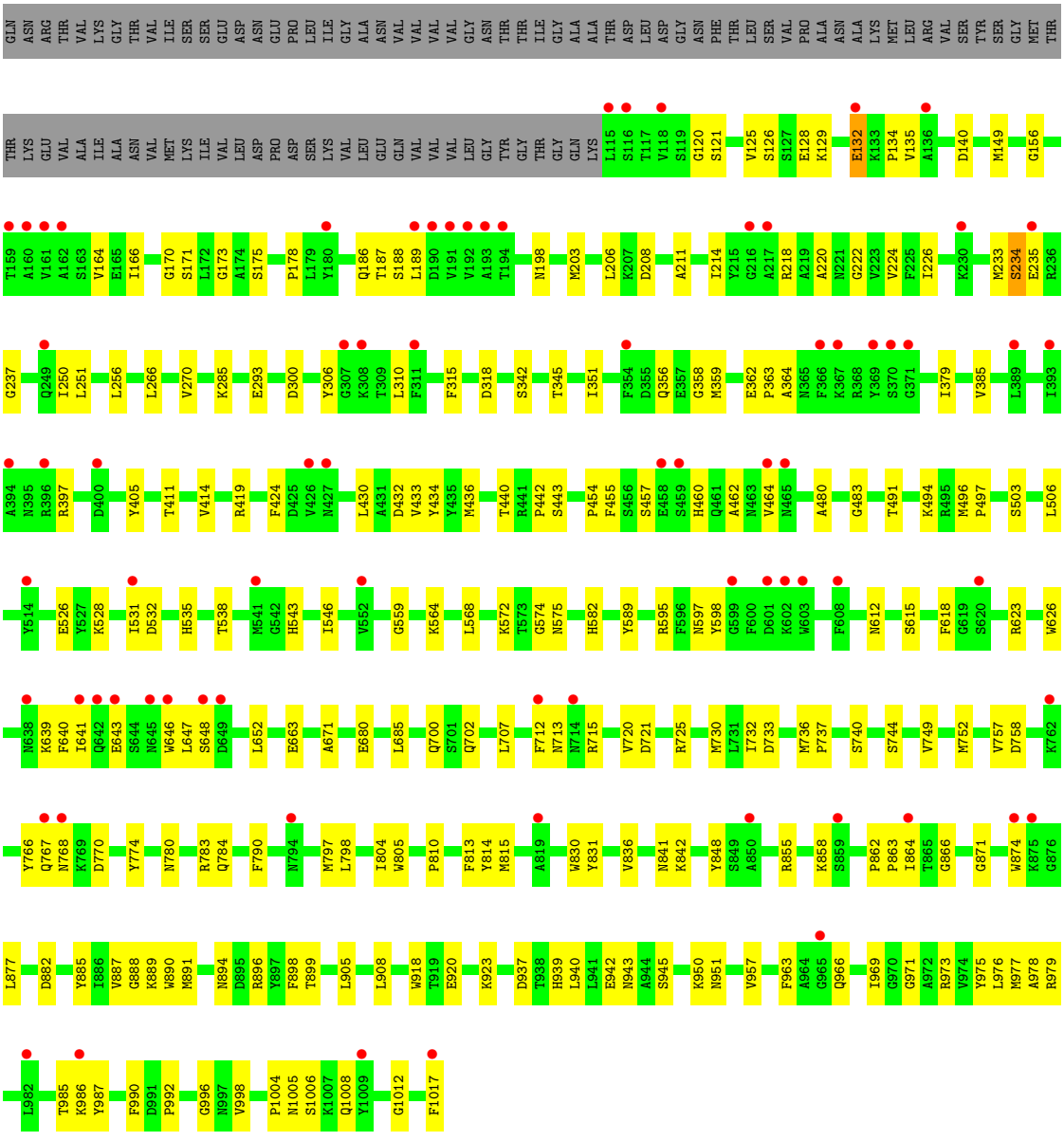
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
8	A	146	Total O 146 146	0	0
8	B	165	Total O 165 165	0	0
8	C	103	Total O 103 103	0	0
8	D	108	Total O 108 108	0	0

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 electron 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 dot above a residue indicates a poor fit to the electron density (RSRZ > 2). 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.

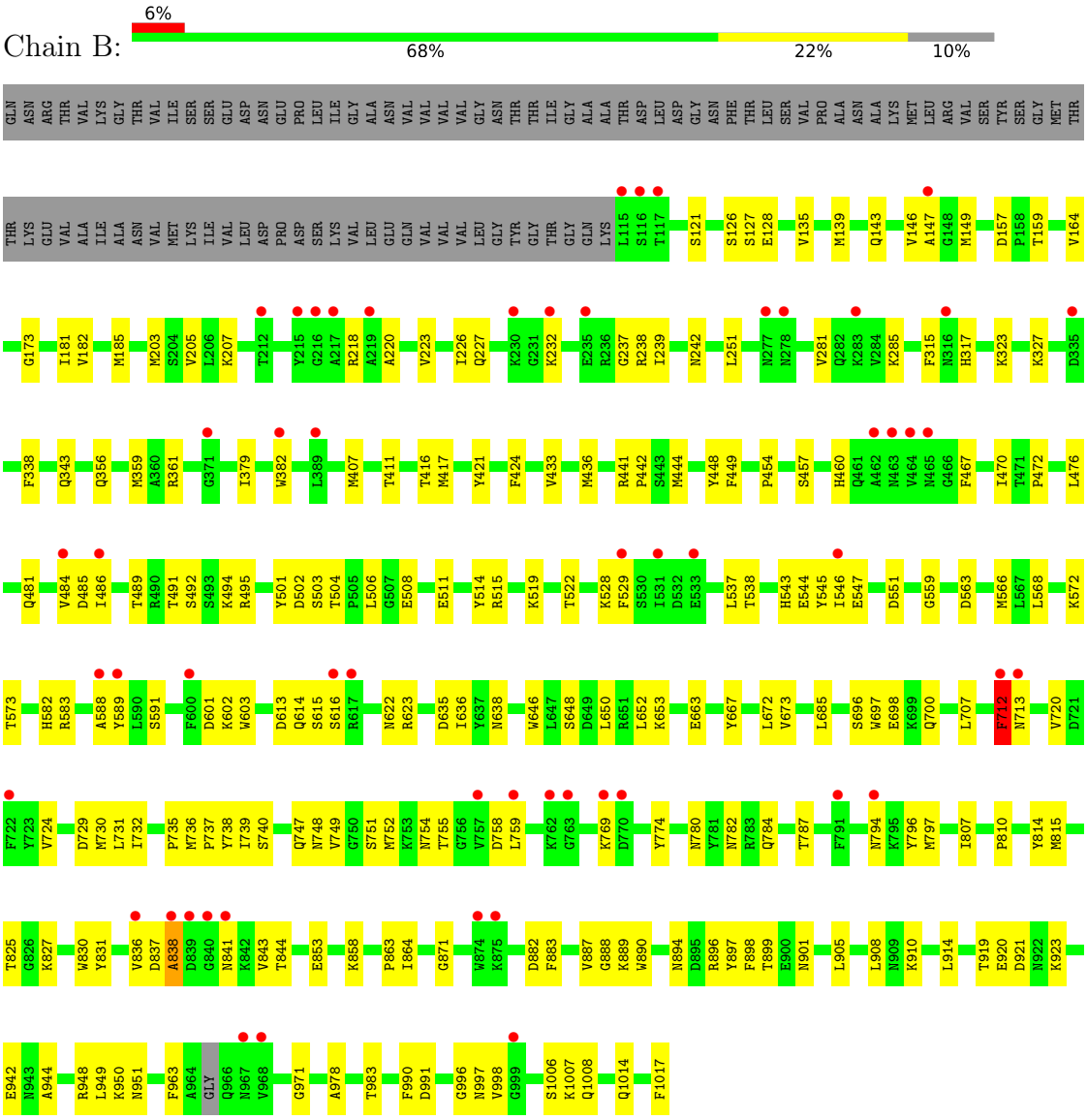
- Molecule 1: RagA protein

Chain A:



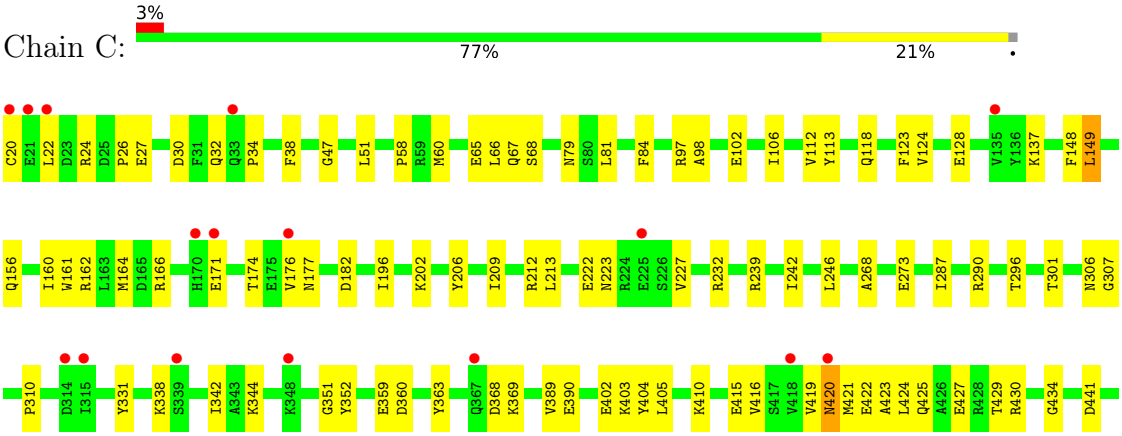
• Molecule 1: RagA protein

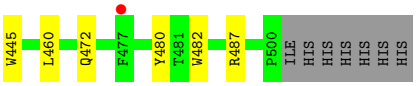
Chain B:



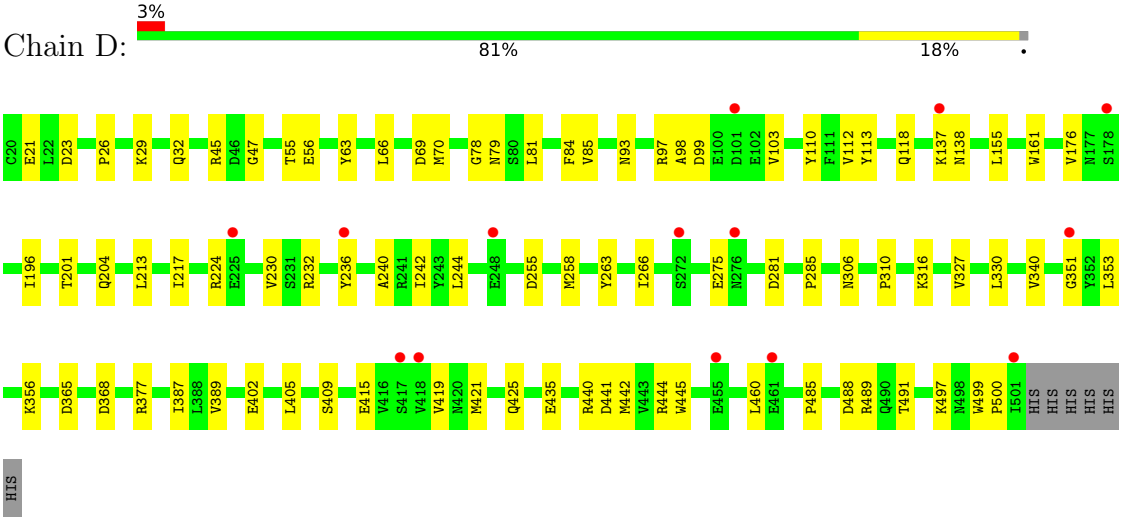
• Molecule 2: Lipoprotein RagB

Chain C:

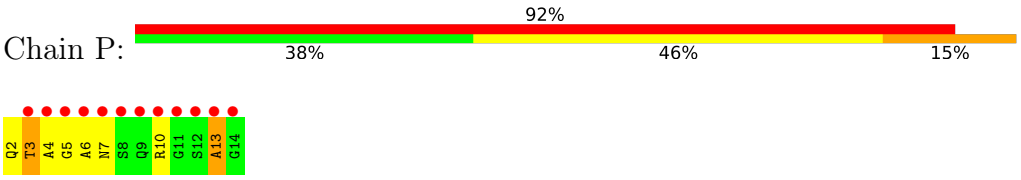




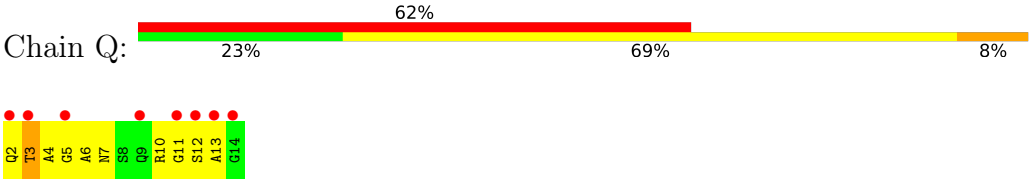
• Molecule 2: Lipoprotein RagB



• Molecule 3: GLN-THR-ALA-GLY-ALA-ASN-SER-GLN-ARG-GLY-SER-ALA-GLY



• Molecule 3: GLN-THR-ALA-GLY-ALA-ASN-SER-GLN-ARG-GLY-SER-ALA-GLY



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	129.78Å 142.73Å 250.05Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	123.96 – 2.61 123.96 – 2.61	Depositor EDS
% Data completeness (in resolution range)	99.7 (123.96-2.61) 99.8 (123.96-2.61)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.56 (at 2.62Å)	Xtriage
Refinement program	PHENIX 1.15.2_3472, PHENIX 1.15.2_3472	Depositor
R, R_{free}	0.207 , 0.264 0.208 , 0.264	Depositor DCC
R_{free} test set	6906 reflections (4.89%)	wwPDB-VP
Wilson B-factor (Å^2)	41.3	Xtriage
Anisotropy	0.876	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.33 , 46.4	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	22773	wwPDB-VP
Average B, all atoms (Å^2)	54.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.75% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 3PE, C8E, LMT, PLM

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	0.37	0/7232	0.61	0/9783
1	B	0.37	0/7227	0.61	0/9775
2	C	0.34	0/3920	0.54	0/5320
2	D	0.37	0/3928	0.56	0/5331
3	P	0.62	0/82	1.14	1/108 (0.9%)
3	Q	0.53	0/82	1.01	0/108
All	All	0.37	0/22471	0.59	1/30425 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1
1	B	0	1
2	C	0	1
All	All	0	3

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	P	13	ALA	N-CA-C	-5.16	99.80	110.80

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	432	ASP	Peptide
1	B	712	PHE	Peptide
2	C	359	GLU	Peptide

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	7068	0	6806	170	0
1	B	7064	0	6802	156	0
2	C	3834	0	3728	75	0
2	D	3842	0	3739	53	0
3	P	83	0	75	7	0
3	Q	83	0	75	9	0
4	A	31	0	43	2	0
4	B	32	0	45	4	0
5	A	35	0	46	2	0
5	B	35	0	46	2	0
5	C	33	0	38	4	0
5	D	33	0	37	0	0
6	A	42	0	68	4	0
6	B	7	0	6	0	0
7	C	14	0	22	1	0
7	D	15	0	24	0	0
8	A	146	0	0	5	0
8	B	165	0	0	10	0
8	C	103	0	0	6	0
8	D	108	0	0	2	0
All	All	22773	0	21600	440	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 10.

All (440) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:715:ARG:HD2	1:A:767:GLN:NE2	1.63	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:715:ARG:HD2	1:A:767:GLN:HE22	0.99	1.07
1:A:715:ARG:CD	1:A:767:GLN:HE22	1.70	1.03
1:A:250:ILE:HB	1:A:359:MET:HE1	1.41	1.01
1:A:318:ASP:HB2	1:A:419:ARG:HB3	1.47	0.97
1:B:919:THR:HG22	1:B:921:ASP:H	1.30	0.95
1:A:250:ILE:CB	1:A:359:MET:HE1	1.97	0.95
1:A:950:LYS:NZ	8:A:1201:HOH:O	1.99	0.94
1:B:157:ASP:OD1	1:B:159:THR:HG22	1.73	0.88
1:B:227:GLN:NE2	8:B:1201:HOH:O	2.08	0.87
2:C:79:ASN:HB3	3:P:5:GLY:HA2	1.56	0.84
2:C:97:ARG:HH21	2:C:102:GLU:HB3	1.42	0.84
1:A:623:ARG:NH2	2:D:23:ASP:OD1	2.11	0.83
1:A:434:TYR:HE1	1:A:436:MET:HE2	1.46	0.81
1:A:218:ARG:HD3	1:A:663:GLU:HG2	1.60	0.81
1:B:794:ASN:HA	1:B:807:ILE:HD12	1.62	0.80
2:C:20:CYS:N	5:C:602:LMT:H6'	1.77	0.80
2:C:124:VAL:HG11	2:C:212:ARG:HH22	1.48	0.78
1:B:433:VAL:CG2	1:B:442:PRO:HB2	2.14	0.77
1:B:503:SER:HB2	2:C:310:PRO:HG2	1.66	0.77
1:B:737:PRO:HB2	1:B:739:ILE:HG12	1.65	0.77
2:C:124:VAL:HG11	2:C:212:ARG:NH2	2.00	0.77
1:A:969:ILE:HA	1:A:1017:PHE:HB3	1.66	0.76
1:A:506:LEU:HB3	1:A:559:GLY:HA2	1.67	0.76
1:A:342:SER:OG	1:B:343:GLN:NE2	2.16	0.75
2:D:402:GLU:HA	2:D:419:VAL:HG21	1.69	0.75
1:B:948:ARG:NH2	1:B:991:ASP:OD1	2.20	0.75
1:B:147:ALA:HB1	1:B:758:ASP:HB2	1.67	0.74
1:A:140:ASP:OD2	1:A:979:ARG:NH1	2.20	0.74
1:A:218:ARG:HD3	1:A:663:GLU:CG	2.18	0.74
1:A:618:PHE:O	1:A:623:ARG:NH1	2.21	0.74
1:A:457:SER:HB2	1:A:491:THR:HG22	1.69	0.73
1:B:135:VAL:HG12	1:B:356:GLN:HE22	1.53	0.73
2:D:79:ASN:HD22	3:Q:5:GLY:HA3	1.52	0.73
1:A:250:ILE:HB	1:A:359:MET:CE	2.16	0.73
1:B:416:THR:HB	1:B:908:LEU:HD22	1.69	0.73
1:A:460:HIS:HB3	6:A:1103:C8E:H131	1.71	0.73
1:A:749:VAL:HG11	1:A:790:PHE:HB3	1.73	0.71
1:A:937:ASP:OD1	1:A:939:HIS:ND1	2.25	0.69
1:B:433:VAL:HG22	1:B:442:PRO:HB2	1.74	0.69
1:A:379:ILE:HD11	1:A:385:VAL:HG22	1.75	0.68
2:C:331:TYR:HB2	2:C:338:LYS:HD3	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:121:SER:N	1:A:208:ASP:OD1	2.26	0.67
1:A:203:MET:HE2	1:A:226:ILE:HG12	1.74	0.67
1:B:948:ARG:NH1	1:B:983:THR:OG1	2.26	0.67
1:B:317:HIS:NE2	8:B:1207:HOH:O	2.27	0.67
1:B:724:VAL:HG22	1:B:755:THR:HG23	1.77	0.67
1:B:239:ILE:HG23	1:B:1017:PHE:HB2	1.78	0.66
1:B:1006:SER:OG	1:B:1008:GLN:NE2	2.29	0.65
1:A:920:GLU:N	8:A:1202:HOH:O	2.14	0.65
1:B:504:THR:HG22	1:B:506:LEU:H	1.62	0.65
3:Q:10:ARG:HB2	3:Q:13:ALA:HB3	1.77	0.65
1:B:495:ARG:HB2	1:B:508:GLU:HB3	1.80	0.64
1:B:698:GLU:HG3	1:B:730:MET:HA	1.79	0.64
2:D:85:VAL:O	8:D:701:HOH:O	2.15	0.64
1:B:858:LYS:HG2	1:B:890:TRP:CE2	2.32	0.64
1:A:234:SER:HB3	1:A:235:GLU:OE2	1.98	0.64
1:A:715:ARG:NH1	1:A:767:GLN:OE1	2.30	0.64
1:A:171:SER:HA	1:A:730:MET:HE2	1.81	0.63
1:B:323:LYS:HD3	1:B:424:PHE:CE2	2.33	0.63
1:A:300:ASP:OD2	8:A:1203:HOH:O	2.15	0.63
1:B:433:VAL:HG21	1:B:442:PRO:HB2	1.80	0.63
1:A:918:TRP:NE1	1:A:923:LYS:HG2	2.13	0.62
1:B:758:ASP:HB3	1:B:780:ASN:HD22	1.65	0.62
2:C:227:VAL:HG22	2:C:290:ARG:HG2	1.81	0.62
1:A:766:TYR:HE2	1:A:768:ASN:HD22	1.48	0.62
1:B:519:LYS:NZ	8:B:1210:HOH:O	2.32	0.61
1:A:503:SER:HB2	2:D:310:PRO:HG2	1.81	0.61
1:A:250:ILE:CA	1:A:359:MET:HE1	2.31	0.61
1:B:457:SER:HB2	1:B:491:THR:HG22	1.81	0.60
1:B:472:PRO:HG2	1:B:476:LEU:HD23	1.83	0.60
1:A:433:VAL:CG2	1:A:442:PRO:HB2	2.31	0.60
1:B:529:PHE:CE1	1:B:537:LEU:HD12	2.37	0.60
1:B:522:THR:HG22	1:B:544:GLU:HG3	1.85	0.59
1:A:318:ASP:CB	1:A:419:ARG:HB3	2.29	0.59
1:B:622:ASN:HB3	1:B:696:SER:HB2	1.85	0.58
1:A:685:LEU:O	2:D:47:GLY:HA3	2.03	0.58
1:B:495:ARG:NH2	8:B:1211:HOH:O	2.34	0.58
2:D:97:ARG:NH1	2:D:99:ASP:OD2	2.37	0.58
1:A:434:TYR:CE1	1:A:436:MET:HE2	2.34	0.58
1:A:943:ASN:HB3	1:A:986:LYS:HE2	1.86	0.58
1:A:957:VAL:HG22	1:A:973:ARG:HG2	1.85	0.58
2:C:402:GLU:HA	2:C:419:VAL:HG11	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:515:ARG:HB3	1:B:551:ASP:HB3	1.85	0.58
1:B:407:MET:HE3	8:B:1242:HOH:O	2.03	0.58
2:C:287:ILE:HG21	2:C:290:ARG:HD3	1.85	0.57
2:D:440:ARG:O	2:D:444:ARG:HG3	2.04	0.57
1:A:715:ARG:NE	1:A:767:GLN:HE22	2.03	0.57
1:B:467:PHE:HB3	1:B:481:GLN:HG3	1.87	0.57
1:B:492:SER:OG	1:B:511:GLU:OE2	2.22	0.57
1:B:139:MET:HE1	1:B:203:MET:SD	2.45	0.57
3:Q:2:GLN:O	3:Q:4:ALA:N	2.38	0.56
6:A:1103:C8E:H161	1:B:460:HIS:HB3	1.87	0.56
1:B:327:LYS:HD2	1:B:361:ARG:NH1	2.20	0.56
1:A:351:ILE:HB	6:A:1103:C8E:H31	1.86	0.56
5:A:1102:LMT:H6'2	2:D:21:GLU:HB3	1.88	0.56
2:C:128:GLU:HG3	2:C:149:LEU:HD11	1.87	0.56
1:A:882:ASP:HB2	1:A:951:ASN:HB3	1.86	0.56
2:C:38:PHE:H	2:C:137:LYS:HZ1	1.54	0.56
1:B:506:LEU:HB3	1:B:559:GLY:HA2	1.88	0.56
2:D:45:ARG:HD3	8:D:702:HOH:O	2.05	0.56
3:P:2:GLN:O	3:P:4:ALA:N	2.38	0.56
1:B:864:ILE:HB	1:B:887:VAL:HB	1.88	0.55
1:A:639:LYS:HG3	1:A:640:PHE:CE1	2.41	0.55
1:A:730:MET:HG2	1:A:732:ILE:HG13	1.88	0.55
1:A:783:ARG:HH11	1:A:783:ARG:HG3	1.72	0.55
1:B:589:TYR:CE1	1:B:615:SER:HB2	2.41	0.55
1:A:454:PRO:HG2	1:A:494:LYS:HB2	1.88	0.55
2:C:20:CYS:N	5:C:602:LMT:O6'	2.39	0.55
1:B:232:LYS:HB2	1:B:238:ARG:HH21	1.71	0.55
1:B:559:GLY:HA3	1:B:572:LYS:HG3	1.89	0.55
1:B:754:ASN:OD1	1:B:782:ASN:ND2	2.36	0.55
1:B:898:PHE:HE1	3:P:5:GLY:H	1.54	0.55
1:A:894:ASN:HB2	1:A:998:VAL:CG2	2.37	0.54
1:B:128:GLU:CD	1:B:128:GLU:H	2.15	0.54
1:B:730:MET:SD	1:B:752:MET:HE2	2.46	0.54
1:B:149:MET:HE2	1:B:164:VAL:HG11	1.89	0.54
2:C:360:ASP:HB3	2:C:363:TYR:CD2	2.42	0.54
2:C:410:LYS:HB2	2:C:415:GLU:HB2	1.89	0.54
1:A:963:PHE:CE2	1:A:971:GLY:HA2	2.42	0.54
2:D:489:ARG:HE	2:D:497:LYS:HD3	1.73	0.54
2:C:338:LYS:HD2	2:C:342:ILE:HD11	1.90	0.54
1:A:784:GLN:HB3	1:A:810:PRO:HB3	1.90	0.53
1:A:214:ILE:HD13	1:A:595:ARG:HH21	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:176:VAL:HA	2:D:500:PRO:HG3	1.89	0.53
1:B:797:MET:HG3	1:B:814:TYR:CD1	2.44	0.53
1:A:220:ALA:HB1	1:A:700:GLN:CD	2.34	0.53
3:Q:3:THR:O	3:Q:3:THR:OG1	2.23	0.53
2:D:356:LYS:NZ	2:D:435:GLU:OE1	2.29	0.53
1:B:863:PRO:HD2	1:B:888:GLY:HA3	1.91	0.52
1:A:702:GLN:HG3	1:A:725:ARG:HB2	1.92	0.52
1:B:614:GLN:HA	1:B:623:ARG:O	2.09	0.52
2:C:166:ARG:NH2	2:C:480:TYR:O	2.36	0.52
1:A:589:TYR:CE1	1:A:615:SER:HB2	2.45	0.52
2:C:223:ASN:O	8:C:701:HOH:O	2.19	0.52
1:B:882:ASP:HB2	1:B:951:ASN:HB3	1.91	0.52
2:D:78:GLY:HA3	3:Q:3:THR:HB	1.91	0.52
1:A:135:VAL:HG12	1:A:356:GLN:NE2	2.25	0.52
1:A:532:ASP:HB2	1:A:535:HIS:HB2	1.92	0.52
1:B:382:TRP:HD1	1:B:470:ILE:HG23	1.75	0.52
1:B:454:PRO:HG2	1:B:494:LYS:HB2	1.92	0.52
1:B:996:GLY:O	1:B:997:ASN:HB3	2.10	0.52
1:B:698:GLU:HB2	1:B:731:LEU:HD12	1.91	0.52
2:C:368:ASP:HB3	2:C:369:LYS:HE3	1.91	0.52
2:D:70:MET:HB3	2:D:327:VAL:HG21	1.92	0.52
1:B:444:MET:HE3	1:B:448:TYR:CD2	2.45	0.52
2:D:69:ASP:HB3	2:D:442:MET:HE1	1.93	0.52
1:B:667:TYR:CD2	2:C:26:PRO:HB3	2.45	0.51
2:C:113:TYR:CE1	2:C:162:ARG:HG3	2.46	0.51
2:C:390:GLU:HB2	2:C:424:LEU:HD11	1.92	0.51
1:B:896:ARG:NH1	1:B:942:GLU:OE2	2.36	0.51
2:C:351:GLY:HA3	2:C:460:LEU:HD21	1.92	0.51
1:B:685:LEU:O	2:C:47:GLY:HA3	2.11	0.51
1:A:715:ARG:CZ	1:A:767:GLN:OE1	2.59	0.51
1:B:182:VAL:HG22	1:B:226:ILE:HB	1.92	0.51
1:B:545:TYR:OH	1:B:547:GLU:OE1	2.24	0.51
1:A:582:HIS:HB2	1:B:568:LEU:HB2	1.92	0.51
1:B:218:ARG:NH1	1:B:663:GLU:OE1	2.43	0.51
2:C:331:TYR:CB	2:C:338:LYS:HD3	2.41	0.51
1:B:601:ASP:HB3	1:B:603:TRP:HD1	1.75	0.51
1:A:134:PRO:HD3	1:A:977:MET:HE1	1.93	0.51
1:B:251:LEU:HA	1:B:1007:LYS:HE3	1.93	0.50
2:C:160:ILE:HG22	2:C:209:ILE:HD11	1.92	0.50
1:A:433:VAL:HG22	1:A:442:PRO:HB2	1.92	0.50
1:B:648:SER:OG	1:B:713:ASN:HA	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:389:VAL:HG11	2:C:405:LEU:HD13	1.93	0.50
1:B:232:LYS:HB2	1:B:238:ARG:NH2	2.26	0.50
1:B:896:ARG:HA	1:B:899:THR:OG1	2.11	0.50
2:C:420:ASN:O	2:C:422:GLU:N	2.43	0.50
2:D:224:ARG:NH1	2:D:263:TYR:HE2	2.10	0.50
1:A:433:VAL:HG21	1:A:442:PRO:HB2	1.93	0.50
1:B:736:MET:O	2:C:487:ARG:HD2	2.12	0.50
1:B:502:ASP:OD1	1:B:503:SER:N	2.44	0.50
1:A:379:ILE:HG23	1:B:237:GLY:HA3	1.94	0.50
1:A:543:HIS:CE1	4:A:1101:3PE:H331	2.47	0.50
2:C:427:GLU:OE1	2:C:430:ARG:NH2	2.32	0.50
1:B:740:SER:O	2:C:118:GLN:HG3	2.12	0.49
1:B:836:VAL:HG23	1:B:841:ASN:HB2	1.93	0.49
1:A:526:GLU:OE1	1:A:528:LYS:NZ	2.38	0.49
1:A:996:GLY:HA3	3:Q:13:ALA:HB2	1.93	0.49
1:B:635:ASP:CG	1:B:638:ASN:HD22	2.20	0.49
2:C:213:LEU:HD13	2:C:239:ARG:HG3	1.94	0.49
1:B:242:ASN:OD1	1:B:1014:GLN:HG3	2.12	0.49
1:B:544:GLU:OE1	1:B:546:ILE:HD11	2.12	0.49
1:B:774:TYR:CE2	1:B:871:GLY:HA3	2.47	0.49
1:A:405:TYR:HB2	3:Q:4:ALA:HB2	1.93	0.49
1:A:797:MET:HG3	1:A:814:TYR:CD1	2.48	0.49
2:C:34:PRO:HB3	8:C:798:HOH:O	2.13	0.49
1:B:239:ILE:HD12	1:B:338:PHE:HE2	1.77	0.49
2:C:97:ARG:HH21	2:C:102:GLU:CB	2.19	0.49
1:A:170:GLY:HA3	1:A:725:ARG:NH2	2.28	0.49
1:B:411:THR:HB	1:B:990:PHE:CE2	2.48	0.49
1:B:825:THR:HB	1:B:827:LYS:HG3	1.94	0.49
2:C:156:GLN:OE1	2:C:212:ARG:NH2	2.40	0.49
1:B:157:ASP:CG	1:B:159:THR:HG22	2.37	0.48
1:B:646:TRP:O	1:B:712:PHE:N	2.40	0.48
1:A:149:MET:HE2	1:A:164:VAL:HG11	1.95	0.48
1:A:1006:SER:OG	1:A:1008:GLN:NE2	2.46	0.48
1:A:440:THR:HB	2:D:316:LYS:HB3	1.95	0.48
1:A:680:GLU:O	1:B:572:LYS:HD3	2.13	0.48
2:C:79:ASN:HB3	3:P:5:GLY:CA	2.37	0.48
2:D:93:ASN:HB2	2:D:499:TRP:CZ3	2.48	0.48
1:B:489:THR:HB	1:B:514:TYR:HB2	1.95	0.48
2:C:123:PHE:HZ	2:C:148:PHE:HB3	1.79	0.48
7:C:601:PLM:H51	5:C:602:LMT:H32	1.95	0.48
1:A:531:ILE:HG23	1:A:532:ASP:OD2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:646:TRP:O	1:A:712:PHE:N	2.43	0.48
1:A:405:TYR:OH	1:A:894:ASN:HB3	2.13	0.48
1:A:858:LYS:HB3	1:A:890:TRP:CD1	2.48	0.48
1:B:573:THR:HG23	8:B:1326:HOH:O	2.12	0.48
2:D:351:GLY:HA3	2:D:460:LEU:HD21	1.95	0.48
2:D:441:ASP:HB3	2:D:445:TRP:CZ3	2.48	0.48
1:B:650:LEU:HD11	1:B:707:LEU:HD21	1.95	0.48
1:A:733:ASP:OD1	1:A:744:SER:OG	2.31	0.48
1:B:836:VAL:HG22	1:B:837:ASP:H	1.79	0.48
3:P:10:ARG:H	3:P:10:ARG:HD3	1.78	0.48
2:C:67:GLN:HA	2:C:84:PHE:O	2.14	0.47
2:D:55:THR:HG23	2:D:112:VAL:HG23	1.96	0.47
1:B:285:LYS:HB3	1:B:315:PHE:CE2	2.48	0.47
1:B:920:GLU:HA	1:B:923:LYS:HE2	1.95	0.47
2:C:60:MET:HE3	2:C:112:VAL:HG21	1.96	0.47
2:C:425:GLN:O	2:C:429:THR:OG1	2.25	0.47
1:B:185:MET:HE3	1:B:485:ASP:OD1	2.13	0.47
1:B:359:MET:HG2	8:B:1269:HOH:O	2.14	0.47
1:B:815:MET:HA	1:B:853:GLU:HG2	1.95	0.47
1:A:266:LEU:O	1:A:270:VAL:HG23	2.15	0.47
1:B:281:VAL:O	1:B:285:LYS:HG2	2.13	0.47
1:A:424:PHE:CE2	1:A:430:LEU:HD13	2.50	0.47
1:B:146:VAL:HG21	1:B:205:VAL:HG21	1.97	0.47
1:B:508:GLU:OE2	8:B:1202:HOH:O	2.20	0.47
1:A:641:ILE:O	1:A:643:GLU:N	2.44	0.47
1:A:237:GLY:HA3	1:B:379:ILE:HG23	1.96	0.47
1:A:612:ASN:HB2	1:A:626:TRP:CE3	2.50	0.47
1:B:181:ILE:HD12	1:B:223:VAL:HG13	1.97	0.47
1:B:635:ASP:OD2	1:B:638:ASN:ND2	2.41	0.47
1:B:831:TYR:HA	1:B:843:VAL:O	2.14	0.47
2:D:236:TYR:CZ	2:D:258:MET:HG2	2.50	0.47
1:B:747:GLN:HB3	1:B:749:VAL:HG13	1.96	0.47
2:D:63:TYR:HB3	2:D:84:PHE:CE2	2.50	0.47
2:D:201:THR:OG1	2:D:204:GLN:HG3	2.15	0.47
1:A:652:LEU:HD23	1:A:707:LEU:HD13	1.97	0.47
1:A:546:ILE:HG12	1:A:589:TYR:HB2	1.96	0.47
1:B:636:ILE:HG21	1:B:650:LEU:HD23	1.96	0.47
2:C:301:THR:O	8:C:702:HOH:O	2.21	0.47
1:A:293:GLU:OE2	8:A:1204:HOH:O	2.21	0.46
1:A:866:GLY:HA3	1:A:885:TYR:CZ	2.49	0.46
1:A:894:ASN:OD1	3:Q:7:ASN:HA	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:66:LEU:HD13	2:C:81:LEU:HD22	1.98	0.46
1:B:126:SER:OG	1:B:127:SER:N	2.48	0.46
2:C:472:GLN:NE2	8:C:705:HOH:O	2.47	0.46
2:D:110:TYR:CD2	2:D:485:PRO:HG2	2.51	0.46
3:Q:11:GLY:O	3:Q:12:SER:HB3	2.15	0.46
1:A:564:LYS:HE2	2:C:30:ASP:OD2	2.16	0.46
1:B:963:PHE:CE2	1:B:971:GLY:HA2	2.50	0.46
1:A:250:ILE:CG1	1:A:359:MET:HE1	2.45	0.46
1:A:411:THR:HB	1:A:990:PHE:CE1	2.51	0.46
1:A:918:TRP:HE1	1:A:923:LYS:HG2	1.80	0.46
2:C:106:ILE:HG23	2:C:482:TRP:CE3	2.50	0.46
2:C:344:LYS:HD2	2:C:352:TYR:CE1	2.50	0.46
1:A:233:MET:HE1	1:A:345:THR:H	1.80	0.46
1:A:464:VAL:O	1:A:483:GLY:HA2	2.16	0.46
1:A:730:MET:HG2	1:A:732:ILE:CG1	2.46	0.46
1:A:757:VAL:O	1:A:780:ASN:ND2	2.49	0.46
2:C:106:ILE:HD13	2:C:482:TRP:CG	2.50	0.46
1:A:132:GLU:HG2	1:A:198:ASN:OD1	2.16	0.46
1:A:134:PRO:HG2	1:A:1008:GLN:OE1	2.15	0.46
1:A:804:ILE:HG21	1:A:855:ARG:HG3	1.97	0.46
1:A:977:MET:HE2	1:A:977:MET:HB3	1.83	0.46
1:B:327:LYS:HD2	1:B:361:ARG:HH12	1.81	0.46
1:B:730:MET:HE3	1:B:732:ILE:HD11	1.98	0.46
1:B:484:VAL:HG22	1:B:486:ILE:HG13	1.98	0.46
1:A:740:SER:O	2:D:118:GLN:HG3	2.16	0.45
5:A:1102:LMT:H12	5:A:1102:LMT:O2'	2.14	0.45
1:B:910:LYS:HB3	1:B:914:LEU:HD12	1.98	0.45
2:D:244:LEU:HD22	2:D:387:ILE:HG12	1.98	0.45
1:A:187:THR:HG22	1:A:188:SER:O	2.16	0.45
1:A:218:ARG:HD3	1:A:663:GLU:HG3	1.97	0.45
1:B:588:ALA:H	1:B:616:SER:HB3	1.80	0.45
1:B:652:LEU:HD12	1:B:652:LEU:HA	1.81	0.45
1:B:444:MET:CE	1:B:449:PHE:HA	2.47	0.45
1:B:735:PRO:HG2	1:B:796:TYR:CE2	2.52	0.45
1:B:905:LEU:HB3	1:B:908:LEU:HD12	1.97	0.45
1:B:281:VAL:HG12	1:B:285:LYS:HE2	1.98	0.45
2:D:155:LEU:HD13	2:D:230:VAL:HG21	1.98	0.45
3:P:3:THR:O	3:P:3:THR:OG1	2.24	0.45
1:A:251:LEU:HG	1:A:1005:ASN:O	2.17	0.45
1:A:813:PHE:HB3	1:A:815:MET:HE3	1.99	0.45
1:A:120:GLY:HA3	1:A:211:ALA:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:538:THR:HB	1:A:597:ASN:HB2	1.98	0.45
1:A:574:GLY:HA2	2:C:296:THR:HG21	1.97	0.45
1:A:206:LEU:HD13	1:A:211:ALA:O	2.17	0.45
1:A:862:PRO:HA	1:A:863:PRO:HD3	1.87	0.45
2:C:206:TYR:CE1	2:C:246:LEU:HD21	2.51	0.45
1:A:214:ILE:HD13	1:A:595:ARG:NH2	2.32	0.45
1:A:978:ALA:HA	1:A:1008:GLN:O	2.18	0.44
2:C:58:PRO:HD3	8:C:729:HOH:O	2.17	0.44
2:C:403:LYS:HG2	2:C:404:TYR:CD1	2.52	0.44
1:A:783:ARG:NH1	1:A:810:PRO:HD3	2.32	0.44
1:A:896:ARG:HD3	1:A:942:GLU:OE2	2.18	0.44
1:B:883:PHE:CZ	1:B:949:LEU:HD13	2.52	0.44
1:B:601:ASP:HB3	1:B:602:LYS:H	1.64	0.44
1:B:738:TYR:CZ	2:C:98:ALA:HB3	2.52	0.44
2:D:161:TRP:CD1	2:D:242:ILE:HG12	2.52	0.44
2:D:217:ILE:HG23	2:D:232:ARG:HD3	2.00	0.44
1:B:696:SER:OG	1:B:697:TRP:N	2.49	0.44
1:B:239:ILE:HD12	1:B:338:PHE:CE2	2.51	0.44
1:B:815:MET:HE2	1:B:815:MET:HB3	1.85	0.44
1:A:648:SER:OG	1:A:713:ASN:O	2.33	0.44
1:A:877:LEU:HD12	1:A:877:LEU:HA	1.74	0.44
1:B:407:MET:HG2	1:B:436:MET:HE1	1.99	0.44
2:C:176:VAL:HG23	2:C:177:ASN:O	2.17	0.44
1:A:178:PRO:HB2	1:A:224:VAL:HG23	2.00	0.44
1:A:250:ILE:HA	1:A:359:MET:HE1	2.00	0.44
1:A:831:TYR:CG	1:A:842:LYS:HE3	2.53	0.43
2:C:268:ALA:HB1	2:C:273:GLU:HB3	2.00	0.43
2:D:240:ALA:HB2	2:D:255:ASP:HB2	1.99	0.43
1:A:125:VAL:HG13	1:A:129:LYS:HD3	2.00	0.43
1:A:496:MET:HE3	1:A:497:PRO:HD2	2.00	0.43
1:A:575:ASN:HB3	2:D:365:ASP:HA	2.00	0.43
1:A:397:ARG:HG3	1:A:455:PHE:CD1	2.53	0.43
1:B:591:SER:OG	1:B:613:ASP:OD1	2.24	0.43
1:B:673:VAL:HG23	2:C:32:GLN:HG3	1.99	0.43
1:B:836:VAL:CG2	1:B:841:ASN:HB2	2.48	0.43
2:D:98:ALA:HA	2:D:103:VAL:HG22	1.99	0.43
1:A:730:MET:HE1	1:A:752:MET:SD	2.59	0.43
1:B:784:GLN:HB3	1:B:810:PRO:HB3	2.00	0.43
2:C:137:LYS:HD3	2:C:137:LYS:N	2.34	0.43
1:A:186:GLN:NE2	1:A:546:ILE:HD13	2.34	0.43
1:A:736:MET:HE3	1:A:736:MET:HB3	1.92	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:774:TYR:CE2	1:A:871:GLY:HA3	2.54	0.43
1:B:601:ASP:HB3	1:B:603:TRP:CD1	2.52	0.43
1:A:721:ASP:HB2	1:A:758:ASP:HB2	2.01	0.43
2:C:212:ARG:HA	2:C:212:ARG:HD2	1.76	0.43
1:A:896:ARG:HA	1:A:899:THR:OG1	2.17	0.43
1:A:985:THR:HG21	1:A:992:PRO:HG3	2.01	0.43
2:C:206:TYR:CZ	2:C:246:LEU:HD21	2.53	0.43
1:A:898:PHE:CD1	1:A:905:LEU:HD13	2.54	0.43
1:A:966:GLN:NE2	1:A:969:ILE:O	2.51	0.43
2:D:137:LYS:HG3	2:D:138:ASN:HD22	1.83	0.43
2:C:22:LEU:HA	2:C:22:LEU:HD23	1.75	0.43
2:C:27:GLU:OE1	8:C:703:HOH:O	2.22	0.43
2:C:441:ASP:HB3	2:C:445:TRP:CZ3	2.53	0.43
1:A:175:SER:HB3	1:A:663:GLU:HB3	2.01	0.42
1:A:293:GLU:HB3	1:A:306:TYR:CE1	2.54	0.42
1:A:531:ILE:HD12	1:A:531:ILE:HA	1.87	0.42
1:A:976:LEU:HD12	1:A:976:LEU:HA	1.80	0.42
1:B:121:SER:HB3	1:B:207:LYS:HB2	2.00	0.42
1:A:166:ILE:HD12	1:A:222:GLY:HA3	2.01	0.42
1:A:358:GLY:N	1:A:364:ALA:O	2.50	0.42
1:B:737:PRO:HG3	2:C:196:ILE:HG12	2.01	0.42
1:B:889:LYS:HG2	1:B:944:ALA:HB3	2.00	0.42
2:C:416:VAL:HG21	2:C:423:ALA:HB1	2.02	0.42
1:A:568:LEU:HB2	1:B:582:HIS:HB2	2.02	0.42
1:A:720:VAL:HA	1:A:758:ASP:O	2.20	0.42
1:B:185:MET:SD	8:B:1344:HOH:O	2.61	0.42
1:B:441:ARG:HD2	1:B:501:TYR:O	2.19	0.42
2:D:275:GLU:HB2	2:D:340:VAL:HG22	2.00	0.42
1:A:864:ILE:HB	1:A:887:VAL:HB	2.01	0.42
5:B:1102:LMT:H6'1	2:C:24:ARG:CZ	2.50	0.42
1:A:905:LEU:HD22	1:A:908:LEU:HD11	2.02	0.42
1:B:740:SER:C	2:C:118:GLN:HG3	2.45	0.42
2:C:164:MET:HE1	2:C:202:LYS:HG2	2.02	0.42
2:D:327:VAL:O	2:D:330:LEU:HB2	2.20	0.42
1:A:433:VAL:HA	1:A:443:SER:O	2.20	0.42
2:C:306:ASN:OD1	2:C:307:GLY:N	2.53	0.42
2:D:213:LEU:HD23	2:D:213:LEU:HA	1.93	0.42
1:A:639:LYS:HG3	1:A:640:PHE:CZ	2.54	0.42
1:A:891:MET:HE3	1:A:987:TYR:CZ	2.55	0.42
2:C:421:MET:O	2:C:425:GLN:HG3	2.19	0.42
2:D:66:LEU:HD13	2:D:81:LEU:HD22	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:155:LEU:CD1	2:D:230:VAL:HG21	2.49	0.42
1:A:889:LYS:HE3	1:A:992:PRO:O	2.20	0.42
1:B:894:ASN:OD1	3:P:7:ASN:HA	2.19	0.41
2:C:182:ASP:HA	2:C:202:LYS:HD3	2.01	0.41
2:C:222:GLU:HA	2:C:232:ARG:HD2	2.02	0.41
2:D:421:MET:O	2:D:425:GLN:HG3	2.20	0.41
1:A:189:LEU:HD23	1:A:189:LEU:HA	1.79	0.41
1:A:362:GLU:HA	1:A:363:PRO:HD3	1.94	0.41
2:D:56:GLU:OE1	2:D:113:TYR:OH	2.36	0.41
2:D:409:SER:OG	2:D:415:GLU:HA	2.20	0.41
1:A:256:LEU:HD21	1:A:414:VAL:CG1	2.50	0.41
1:A:863:PRO:HD2	1:A:888:GLY:HA3	2.02	0.41
1:A:975:TYR:CZ	1:A:1012:GLY:HA3	2.55	0.41
4:B:1101:3PE:H222	4:B:1101:3PE:H31	2.02	0.41
1:A:737:PRO:HG3	2:D:196:ILE:HG12	2.02	0.41
1:A:285:LYS:HG2	1:A:315:PHE:CD2	2.56	0.41
1:B:837:ASP:CG	1:B:838:ALA:H	2.20	0.41
1:A:233:MET:O	1:A:234:SER:HB2	2.21	0.41
2:D:306:ASN:HB2	2:D:353:LEU:HD13	2.02	0.41
5:C:602:LMT:O3'	5:C:602:LMT:H1B	2.20	0.41
1:A:126:SER:OG	1:A:128:GLU:OE2	2.39	0.41
1:A:462:ALA:HB2	6:A:1103:C8E:H141	2.03	0.41
1:A:798:LEU:HD11	1:A:805:TRP:CE2	2.56	0.41
1:A:612:ASN:HB2	1:A:626:TRP:CZ3	2.56	0.41
1:A:646:TRP:CH2	1:A:647:LEU:HD12	2.56	0.41
1:A:836:VAL:HG13	1:A:841:ASN:O	2.21	0.41
1:B:143:GLN:OE1	1:B:950:LYS:NZ	2.25	0.41
1:B:830:TRP:O	1:B:844:THR:HA	2.20	0.41
1:B:894:ASN:HB2	1:B:998:VAL:CG2	2.51	0.41
2:C:161:TRP:CD1	2:C:242:ILE:HG12	2.56	0.41
2:C:405:LEU:HD12	2:C:405:LEU:HA	1.91	0.41
1:A:595:ARG:NH1	8:A:1215:HOH:O	2.38	0.41
1:B:407:MET:HE2	1:B:417:MET:SD	2.60	0.41
1:B:729:ASP:HB3	1:B:748:ASN:HB3	2.01	0.41
2:C:171:GLU:OE2	2:C:171:GLU:N	2.47	0.41
2:D:389:VAL:HG11	2:D:405:LEU:HB2	2.03	0.41
1:A:233:MET:HE1	1:A:345:THR:N	2.36	0.40
1:A:830:TRP:CZ3	1:A:848:TYR:HB2	2.56	0.40
1:B:220:ALA:HB1	1:B:700:GLN:CD	2.47	0.40
4:B:1101:3PE:H271	5:B:1102:LMT:H101	2.02	0.40
1:A:156:GLY:HA3	1:A:1004:PRO:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:671:ALA:C	2:D:32:GLN:HG3	2.46	0.40
1:A:939:HIS:O	1:A:940:LEU:HB2	2.22	0.40
1:B:421:TYR:CE2	1:B:436:MET:HG2	2.56	0.40
1:B:528:LYS:HG2	1:B:538:THR:HG22	2.02	0.40
1:B:672:LEU:HD23	1:B:672:LEU:HA	1.92	0.40
1:A:480:ALA:HB1	4:A:1101:3PE:H292	2.03	0.40
1:A:559:GLY:HA3	1:A:572:LYS:HG3	2.02	0.40
1:A:887:VAL:HA	1:A:945:SER:HB3	2.02	0.40
1:B:543:HIS:NE2	4:B:1101:3PE:H321	2.37	0.40
1:B:751:SER:OG	1:B:787:THR:OG1	2.32	0.40
2:C:51:LEU:HD12	2:C:51:LEU:HA	1.96	0.40
2:C:65:GLU:OE2	2:C:434:GLY:N	2.41	0.40
2:D:45:ARG:HD3	2:D:45:ARG:HH11	1.75	0.40
2:D:266:ILE:HG12	2:D:285:PRO:HD2	2.04	0.40
2:D:488:ASP:HA	2:D:491:THR:HG22	2.04	0.40
1:A:310:LEU:HD23	1:A:310:LEU:HA	1.89	0.40
1:A:737:PRO:HB3	2:D:491:THR:HG21	2.04	0.40
1:B:220:ALA:HB1	1:B:700:GLN:OE1	2.22	0.40
1:B:563:ASP:O	1:B:566:MET:HE2	2.21	0.40
1:B:769:LYS:HA	1:B:769:LYS:HD2	1.92	0.40
1:B:897:TYR:O	1:B:901:ASN:HB2	2.22	0.40
2:D:26:PRO:HG2	2:D:29:LYS:HB2	2.02	0.40
2:D:281:ASP:OD1	2:D:377:ARG:NH2	2.52	0.40
1:A:535:HIS:CE1	1:A:598:TYR:HH	2.36	0.40
1:B:543:HIS:CE1	4:B:1101:3PE:H332	2.57	0.40
1:B:583:ARG:HD2	8:B:1351:HOH:O	2.20	0.40
1:B:653:LYS:HE2	1:B:653:LYS:HB2	1.61	0.40
1:B:720:VAL:HG23	1:B:759:LEU:HB3	2.04	0.40
1:B:978:ALA:HA	1:B:1008:GLN:O	2.22	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 X-ray entries followed by that with respect to entries of similar resolution.

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	901/997 (90%)	836 (93%)	60 (7%)	5 (1%)	22 40
1	B	898/997 (90%)	844 (94%)	51 (6%)	3 (0%)	37 57
2	C	479/488 (98%)	453 (95%)	23 (5%)	3 (1%)	22 40
2	D	480/488 (98%)	460 (96%)	20 (4%)	0	100 100
3	P	11/13 (85%)	7 (64%)	1 (9%)	3 (27%)	0 0
3	Q	11/13 (85%)	7 (64%)	2 (18%)	2 (18%)	0 0
All	All	2780/2996 (93%)	2607 (94%)	157 (6%)	16 (1%)	22 40

All (16) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	Q	3	THR
1	A	234	SER
3	P	3	THR
3	P	6	ALA
3	Q	6	ALA
1	A	132	GLU
1	A	173	GLY
1	A	770	ASP
1	B	838	ALA
3	P	13	ALA
1	B	712	PHE
2	C	68	SER
2	C	174	THR
2	C	420	ASN
1	A	874	TRP
1	B	173	GLY

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 X-ray entries followed by that with respect to entries of similar resolution.

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	754/832 (91%)	754 (100%)	0	100 100
1	B	754/832 (91%)	754 (100%)	0	100 100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	C	401/408 (98%)	400 (100%)	1 (0%)	92 98
2	D	402/408 (98%)	401 (100%)	1 (0%)	92 98
3	P	7/7 (100%)	7 (100%)	0	100 100
3	Q	7/7 (100%)	7 (100%)	0	100 100
All	All	2325/2494 (93%)	2323 (100%)	2 (0%)	92 98

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

Mol	Chain	Res	Type
2	C	149	LEU
2	D	368	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (29) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	221	ASN
1	A	269	GLN
1	A	481	GLN
1	A	523	ASN
1	A	543	HIS
1	A	692	ASN
1	A	702	GLN
1	A	714	ASN
1	B	198	ASN
1	B	249	GLN
1	B	333	GLN
1	B	356	GLN
1	B	388	ASN
1	B	614	GLN
1	B	692	ASN
1	B	713	ASN
1	B	768	ASN
1	B	922	ASN
1	B	960	ASN
2	C	32	GLN
2	C	276	ASN
2	C	472	GLN
2	C	486	GLN
2	D	79	ASN
2	D	86	ASN

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Mol	Chain	Res	Type
2	D	117	ASN
2	D	192	ASN
2	D	223	ASN
3	P	9	GLN

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 oligosaccharides in this entry.

5.6 Ligand geometry

11 ligands are modelled in this entry.

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	$\#\|Z\| > 2$
5	LMT	A	1102	-	36,36,36	1.01	3 (8%)	47,47,47	1.70	7 (14%)
5	LMT	C	602	-	34,34,36	1.18	4 (11%)	45,45,47	1.15	3 (6%)
6	C8E	A	1103	-	20,20,20	0.53	0	19,19,19	0.51	0
7	PLM	C	601	2	13,13,17	0.89	0	12,12,17	0.49	0
5	LMT	B	1102	-	36,36,36	1.06	2 (5%)	47,47,47	1.21	4 (8%)
5	LMT	D	602	-	34,34,36	1.17	5 (14%)	45,45,47	1.14	3 (6%)
4	3PE	A	1101	-	30,30,50	1.17	3 (10%)	32,32,55	1.45	3 (9%)
4	3PE	B	1101	-	31,31,50	1.18	4 (12%)	33,33,55	1.46	3 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
6	C8E	B	1103	-	6,6,20	0.58	0	5,5,19	0.57	0
7	PLM	D	601	2	14,14,17	0.54	0	13,13,17	0.59	0
6	C8E	A	1104	-	20,20,20	0.50	0	19,19,19	0.40	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
5	LMT	A	1102	-	-	10/21/61/61	0/2/2/2
5	LMT	C	602	-	-	9/19/59/61	0/2/2/2
6	C8E	A	1103	-	-	11/18/18/18	-
7	PLM	C	601	2	-	5/10/11/15	-
5	LMT	B	1102	-	-	14/21/61/61	0/2/2/2
5	LMT	D	602	-	-	9/19/59/61	0/2/2/2
4	3PE	A	1101	-	-	12/31/31/54	-
4	3PE	B	1101	-	-	12/32/32/54	-
6	C8E	B	1103	-	-	4/4/4/18	-
7	PLM	D	601	2	-	3/11/12/15	-
6	C8E	A	1104	-	-	10/18/18/18	-

All (21) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	1101	3PE	O21-C2	-3.37	1.41	1.47
4	B	1101	3PE	O31-C31	3.27	1.42	1.33
5	C	602	LMT	O3'-C3'	-3.24	1.35	1.43
4	B	1101	3PE	O21-C2	-3.14	1.41	1.47
5	D	602	LMT	O3'-C3'	-2.92	1.36	1.43
4	A	1101	3PE	O31-C31	2.64	1.41	1.33
4	B	1101	3PE	O21-C21	2.59	1.41	1.34
4	A	1101	3PE	O21-C21	2.49	1.41	1.34
5	B	1102	LMT	O2B-C2B	-2.40	1.37	1.43
5	D	602	LMT	O3B-C3B	-2.39	1.37	1.43
5	C	602	LMT	O4'-C4B	-2.36	1.37	1.43
5	C	602	LMT	O2B-C2B	-2.29	1.37	1.43
5	A	1102	LMT	C1B-C2B	2.25	1.59	1.52
4	B	1101	3PE	O31-C3	-2.24	1.40	1.45
5	B	1102	LMT	O3'-C3'	-2.24	1.37	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	A	1102	LMT	O3B-C3B	-2.20	1.37	1.43
5	D	602	LMT	O2'-C2'	-2.17	1.37	1.43
5	D	602	LMT	O2B-C2B	-2.14	1.37	1.43
5	D	602	LMT	O1'-C1'	-2.08	1.36	1.40
5	C	602	LMT	O3B-C3B	-2.02	1.38	1.43
5	A	1102	LMT	C4'-C5'	2.02	1.58	1.52

All (23) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	A	1102	LMT	O1'-C1'-C2'	5.24	116.48	108.30
5	A	1102	LMT	C1-O1'-C1'	5.13	122.34	113.84
4	A	1101	3PE	O21-C21-C22	4.61	121.45	111.50
4	B	1101	3PE	O21-C21-C22	4.50	121.19	111.50
4	B	1101	3PE	O31-C31-C32	4.46	125.92	111.91
5	A	1102	LMT	C3B-C4B-C5B	-4.37	102.44	110.24
5	A	1102	LMT	O5'-C5'-C4'	3.58	117.29	109.75
4	A	1101	3PE	O21-C2-C3	3.57	114.41	106.13
5	C	602	LMT	C1'-O5'-C5'	-3.56	106.71	113.69
5	C	602	LMT	C1-O1'-C1'	3.33	119.36	113.84
5	B	1102	LMT	C3'-C4'-C5'	-3.09	103.84	110.93
5	D	602	LMT	C3'-C4'-C5'	-3.03	103.98	110.93
5	B	1102	LMT	O1'-C1'-C2'	2.94	112.90	108.30
5	B	1102	LMT	O5B-C5B-C6B	2.79	113.37	106.44
4	A	1101	3PE	O31-C31-C32	2.73	120.49	111.91
5	A	1102	LMT	O5B-C5B-C6B	2.70	113.15	106.44
5	A	1102	LMT	C1'-C2'-C3'	-2.61	104.55	110.00
5	A	1102	LMT	O5B-C1B-C2B	2.53	115.70	110.35
5	D	602	LMT	O5B-C5B-C4B	2.36	113.98	109.69
4	B	1101	3PE	O31-C31-O32	-2.30	117.80	123.59
5	D	602	LMT	C1B-O5B-C5B	2.18	117.97	113.69
5	B	1102	LMT	O5B-C5B-C4B	2.02	113.37	109.69
5	C	602	LMT	O1'-C1-C2	-2.01	102.53	109.56

There are no chirality outliers.

All (99) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	1101	3PE	C22-C21-O21-C2
4	B	1101	3PE	C22-C21-O21-C2
5	A	1102	LMT	C2'-C1'-O1'-C1
5	B	1102	LMT	O5B-C1B-O1B-C4'

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Mol	Chain	Res	Type	Atoms
5	C	602	LMT	O5'-C1'-O1'-C1
5	B	1102	LMT	C4B-C5B-C6B-O6B
5	A	1102	LMT	C4'-C5'-C6'-O6'
4	B	1101	3PE	O32-C31-O31-C3
4	A	1101	3PE	O22-C21-O21-C2
4	B	1101	3PE	O22-C21-O21-C2
4	B	1101	3PE	C32-C31-O31-C3
5	C	602	LMT	O5B-C5B-C6B-O6B
5	A	1102	LMT	C4B-C5B-C6B-O6B
5	D	602	LMT	O5B-C5B-C6B-O6B
7	C	601	PLM	C7-C8-C9-CA
5	A	1102	LMT	O5B-C5B-C6B-O6B
5	A	1102	LMT	O5'-C5'-C6'-O6'
5	B	1102	LMT	O5B-C5B-C6B-O6B
6	A	1104	C8E	O12-C13-C14-O15
6	A	1103	C8E	C17-C16-O15-C14
5	C	602	LMT	C4B-C5B-C6B-O6B
5	B	1102	LMT	O5'-C5'-C6'-O6'
4	A	1101	3PE	C21-C22-C23-C24
4	B	1101	3PE	C31-C32-C33-C34
7	C	601	PLM	C5-C6-C7-C8
5	C	602	LMT	O1'-C1-C2-C3
5	D	602	LMT	O1'-C1-C2-C3
7	C	601	PLM	C9-CA-CB-CC
5	B	1102	LMT	C5'-C4'-O1B-C1B
6	A	1104	C8E	C6-C7-C8-O9
5	B	1102	LMT	O1'-C1-C2-C3
4	B	1101	3PE	C33-C34-C35-C36
4	B	1101	3PE	C32-C33-C34-C35
7	D	601	PLM	C4-C5-C6-C7
7	D	601	PLM	C6-C7-C8-C9
4	A	1101	3PE	C22-C23-C24-C25
5	A	1102	LMT	O5'-C1'-O1'-C1
4	A	1101	3PE	C32-C33-C34-C35
7	D	601	PLM	C3-C4-C5-C6
5	D	602	LMT	C1-C2-C3-C4
6	A	1104	C8E	O18-C19-C20-O21
5	D	602	LMT	C3-C4-C5-C6
4	B	1101	3PE	C34-C35-C36-C37
5	A	1102	LMT	C2-C3-C4-C5
5	A	1102	LMT	C3-C4-C5-C6
5	D	602	LMT	C7-C8-C9-C10

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Mol	Chain	Res	Type	Atoms
6	A	1104	C8E	O9-C10-C11-O12
4	A	1101	3PE	C28-C29-C2A-C2B
5	B	1102	LMT	C9-C10-C11-C12
5	B	1102	LMT	C3'-C4'-O1B-C1B
4	A	1101	3PE	C29-C2A-C2B-C2C
5	C	602	LMT	C5'-C4'-O1B-C1B
5	B	1102	LMT	C1-C2-C3-C4
6	A	1103	C8E	O12-C13-C14-O15
4	A	1101	3PE	C33-C34-C35-C36
5	D	602	LMT	C4B-C5B-C6B-O6B
6	A	1103	C8E	C3-C4-C5-C6
4	A	1101	3PE	C27-C28-C29-C2A
5	D	602	LMT	C2-C3-C4-C5
6	A	1103	C8E	C13-C14-O15-C16
6	A	1104	C8E	C11-C10-O9-C8
6	A	1104	C8E	C10-C11-O12-C13
6	A	1103	C8E	C5-C6-C7-C8
6	A	1104	C8E	C16-C17-O18-C19
7	C	601	PLM	C4-C5-C6-C7
5	D	602	LMT	C4-C5-C6-C7
5	C	602	LMT	C2-C3-C4-C5
6	B	1103	C8E	C17-C16-O15-C14
5	B	1102	LMT	C4'-C5'-C6'-O6'
5	C	602	LMT	C3'-C4'-O1B-C1B
6	A	1103	C8E	C1-C2-C3-C4
4	B	1101	3PE	C35-C36-C37-C38
5	A	1102	LMT	C1-C2-C3-C4
6	A	1103	C8E	C2-C3-C4-C5
6	A	1104	C8E	C20-C19-O18-C17
6	A	1103	C8E	C7-C8-O9-C10
6	A	1103	C8E	O15-C16-C17-O18
4	A	1101	3PE	C34-C35-C36-C37
7	C	601	PLM	C8-C9-CA-CB
5	C	602	LMT	C7-C8-C9-C10
5	B	1102	LMT	C7-C8-C9-C10
6	A	1103	C8E	C6-C7-C8-O9
6	A	1104	C8E	C17-C16-O15-C14
5	B	1102	LMT	C3-C4-C5-C6
5	B	1102	LMT	C6-C7-C8-C9
5	D	602	LMT	C5'-C4'-O1B-C1B
5	C	602	LMT	C3-C4-C5-C6
6	B	1103	C8E	C20-C19-O18-C17

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Mol	Chain	Res	Type	Atoms
4	B	1101	3PE	O31-C31-C32-C33
4	A	1101	3PE	O31-C31-C32-C33
6	B	1103	C8E	C16-C17-O18-C19
6	A	1104	C8E	O15-C16-C17-O18
4	A	1101	3PE	O32-C31-C32-C33
6	A	1103	C8E	O9-C10-C11-O12
4	B	1101	3PE	O32-C31-C32-C33
4	B	1101	3PE	C37-C38-C39-C3A
5	A	1102	LMT	C2-C1-O1'-C1'
5	B	1102	LMT	C2-C1-O1'-C1'
6	B	1103	C8E	O15-C16-C17-O18

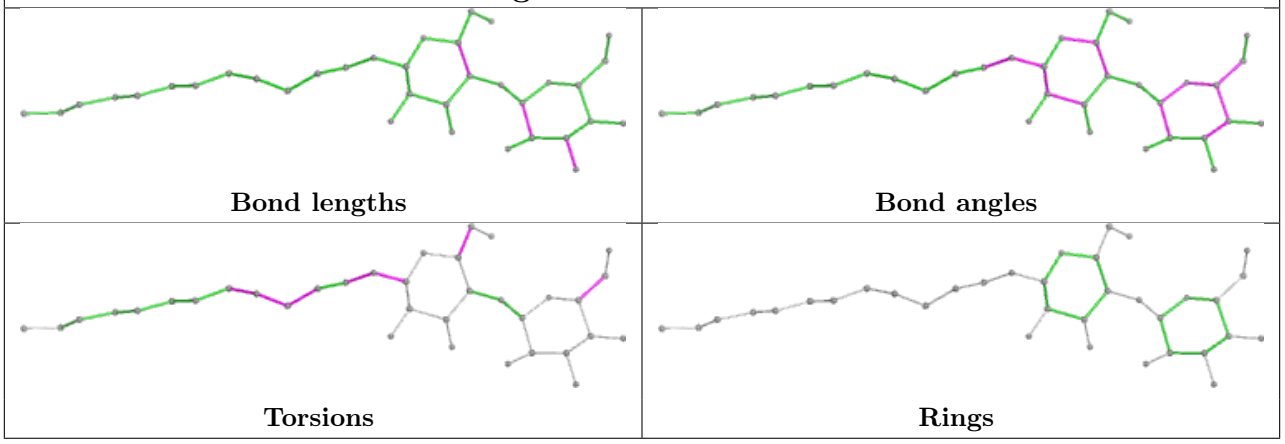
There are no ring outliers.

7 monomers are involved in 17 short contacts:

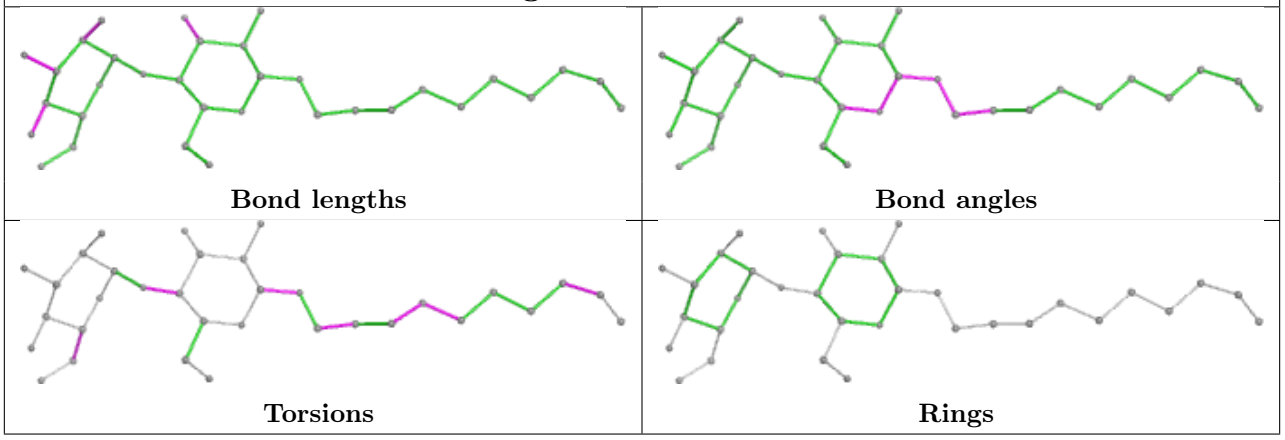
Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	A	1102	LMT	2	0
5	C	602	LMT	4	0
6	A	1103	C8E	4	0
7	C	601	PLM	1	0
5	B	1102	LMT	2	0
4	A	1101	3PE	2	0
4	B	1101	3PE	4	0

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.

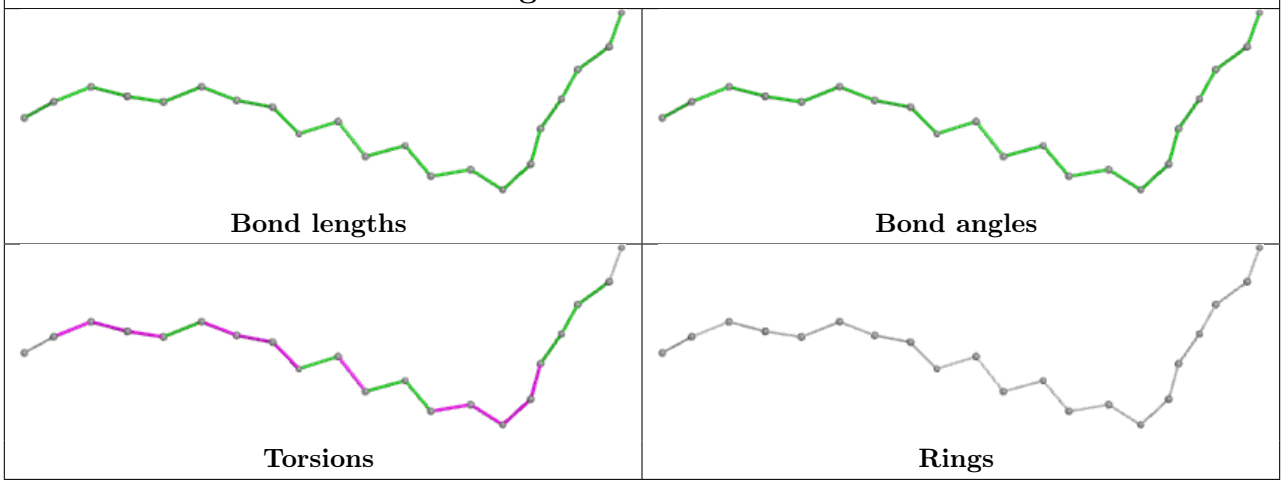
Ligand LMT A 1102



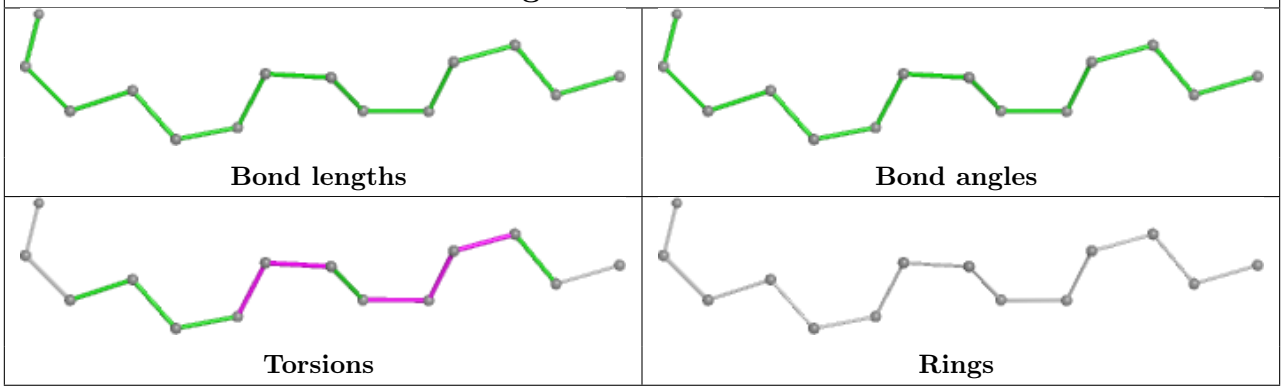
Ligand LMT C 602



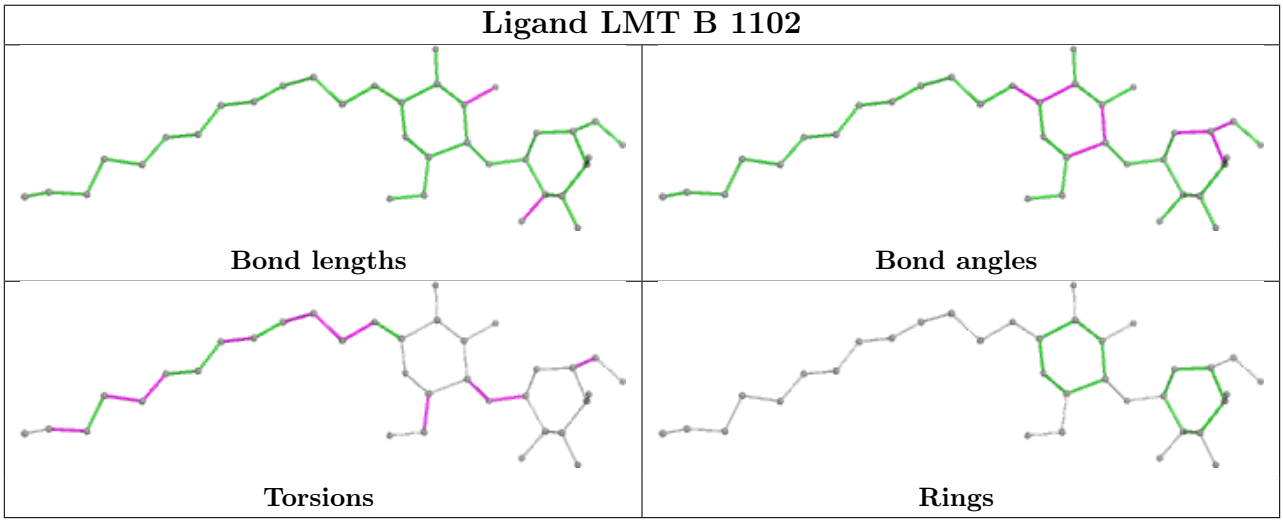
Ligand C8E A 1103



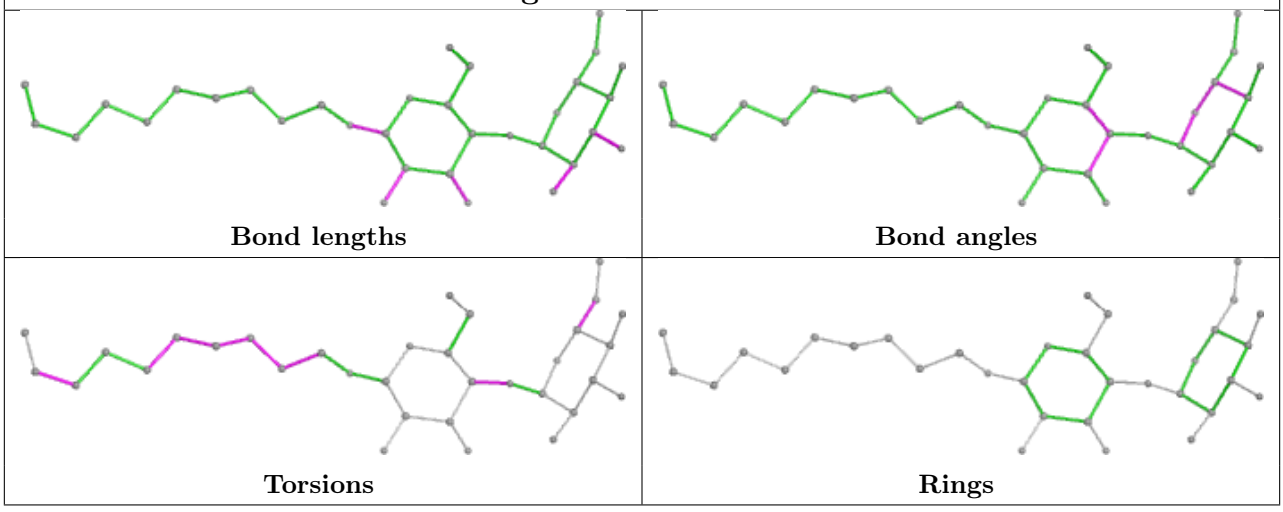
Ligand PLM C 601



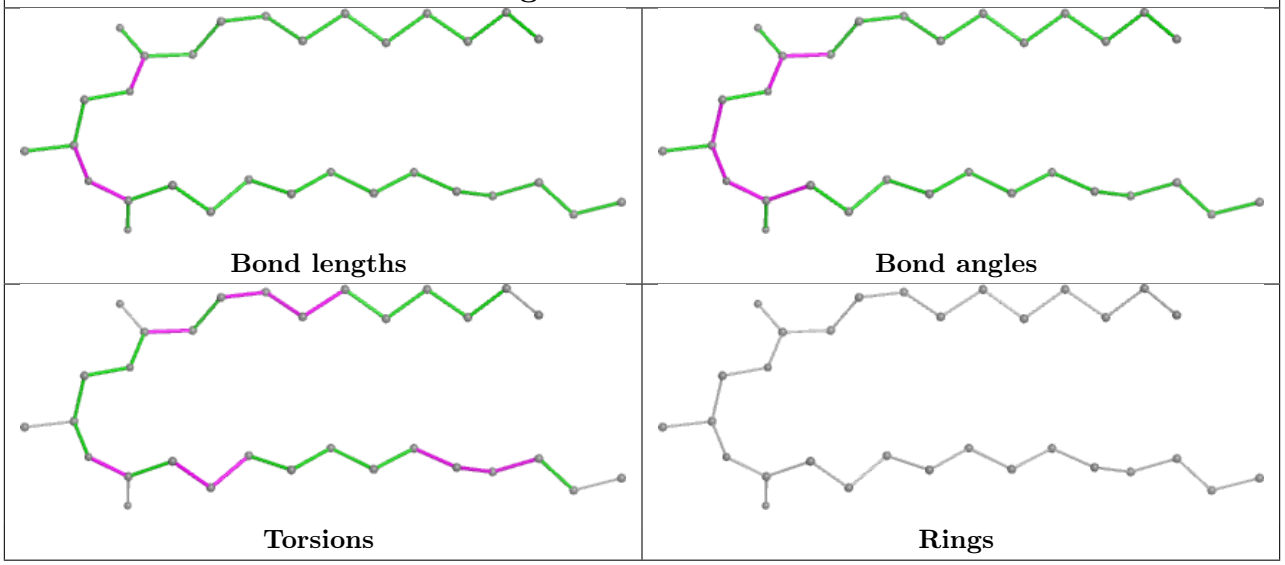
Ligand LMT B 1102



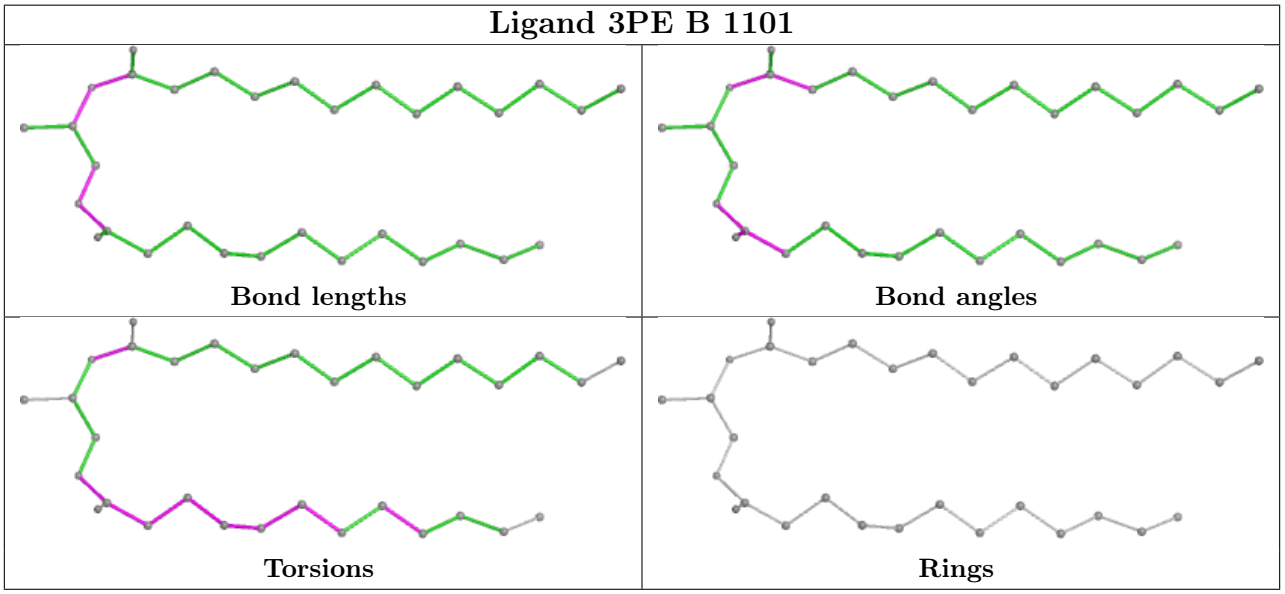
Ligand LMT D 602



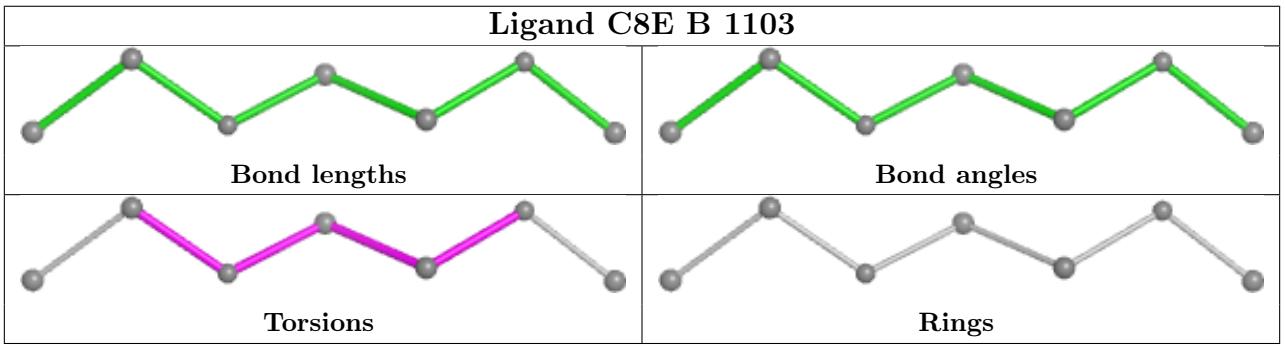
Ligand 3PE A 1101

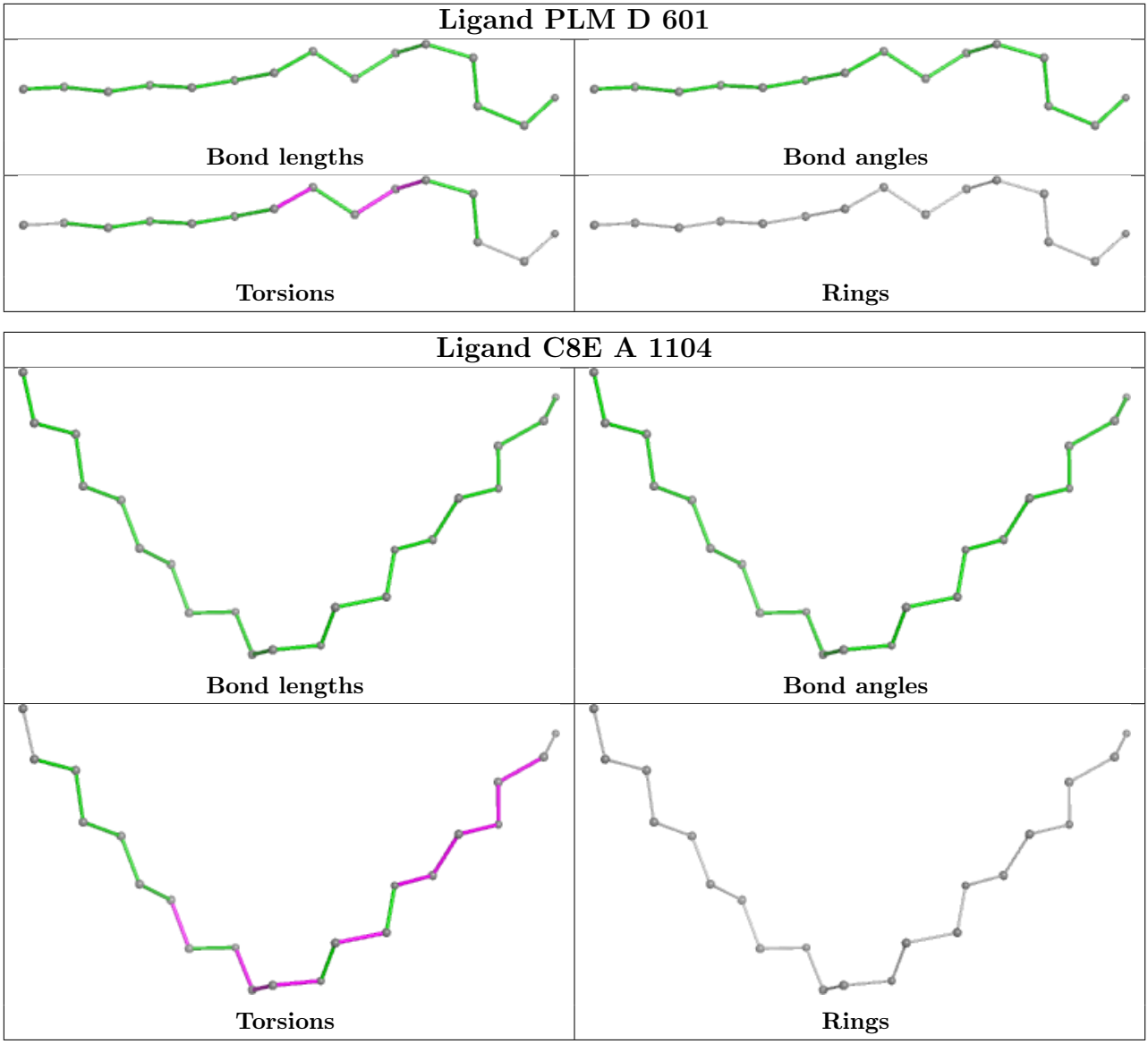


Ligand 3PE B 1101



Ligand C8E B 1103





5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	903/997 (90%)	0.33	76 (8%)	18	16	27, 52, 96, 161	0
1	B	902/997 (90%)	0.28	56 (6%)	28	23	29, 51, 94, 153	0
2	C	481/488 (98%)	0.04	17 (3%)	47	42	33, 48, 70, 95	0
2	D	482/488 (98%)	0.03	14 (2%)	54	49	32, 48, 69, 82	0
3	P	13/13 (100%)	3.08	12 (92%)	0	0	68, 73, 87, 96	0
3	Q	13/13 (100%)	3.06	8 (61%)	0	0	51, 77, 117, 120	0
All	All	2794/2996 (93%)	0.24	183 (6%)	26	22	27, 50, 87, 161	0

All (183) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	643	GLU	6.8
3	Q	12	SER	6.3
1	B	464	VAL	5.9
1	B	278	ASN	5.5
1	B	462	ALA	5.3
1	A	161	VAL	5.3
1	A	638	ASN	4.9
3	Q	3	THR	4.9
1	A	459	SER	4.7
3	Q	5	GLY	4.7
2	C	22	LEU	4.5
3	Q	9	GLN	4.4
3	P	9	GLN	4.3
1	A	307	GLY	4.3
1	B	371	GLY	4.3
2	D	501	ILE	4.3
1	B	762	LYS	4.2
3	P	12	SER	4.2
3	P	10	ARG	4.2

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Mol	Chain	Res	Type	RSRZ
1	A	115	LEU	4.1
1	A	192	VAL	4.1
3	Q	13	ALA	4.0
3	P	3	THR	3.8
1	B	533	GLU	3.8
1	A	426	VAL	3.7
1	B	115	LEU	3.7
1	A	642	GLN	3.6
1	A	465	ASN	3.5
1	A	249	GLN	3.5
2	C	225	GLU	3.5
3	Q	14	GLY	3.5
1	B	839	ASP	3.5
1	A	194	THR	3.4
1	A	160	ALA	3.4
1	B	316	ASN	3.4
1	A	193	ALA	3.4
1	A	116	SER	3.4
1	A	136	ALA	3.4
2	C	418	VAL	3.4
1	A	767	GLN	3.3
1	B	217	ALA	3.3
3	P	8	SER	3.3
1	A	217	ALA	3.3
1	B	600	PHE	3.3
1	A	541	MET	3.2
1	A	369	TYR	3.2
1	A	371	GLY	3.2
1	B	794	ASN	3.2
2	D	418	VAL	3.2
1	B	486	ILE	3.2
3	P	11	GLY	3.2
1	B	770	ASP	3.2
2	C	21	GLU	3.1
1	A	308	LYS	3.1
1	B	838	ALA	3.1
1	A	396	ARG	3.1
1	A	235	GLU	3.1
1	B	484	VAL	3.1
2	C	20	CYS	3.1
1	B	215	TYR	3.1
1	B	588	ALA	3.0

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Mol	Chain	Res	Type	RSRZ
1	A	864	ILE	3.0
1	B	769	LYS	3.0
1	A	531	ILE	3.0
1	B	463	ASN	3.0
3	P	13	ALA	3.0
3	P	5	GLY	3.0
1	B	616	SER	3.0
2	D	417	SER	3.0
1	A	190	ASP	2.9
1	A	768	ASN	2.9
1	B	230	LYS	2.9
1	B	277	ASN	2.9
1	A	1017	PHE	2.9
1	A	986	LYS	2.9
1	B	757	VAL	2.9
1	A	464	VAL	2.8
1	A	189	LEU	2.8
1	A	648	SER	2.8
1	A	645	ASN	2.8
3	P	7	ASN	2.8
1	B	235	GLU	2.7
1	A	191	VAL	2.7
2	C	170	HIS	2.7
1	A	427	ASN	2.7
2	C	33	GLN	2.7
3	P	4	ALA	2.7
1	A	180	TYR	2.7
2	D	101	ASP	2.7
2	D	455	GLU	2.7
1	A	602	LYS	2.7
1	B	874	TRP	2.7
1	B	531	ILE	2.7
1	B	713	ASN	2.7
1	A	875	LYS	2.7
2	D	178	SER	2.7
2	C	314	ASP	2.6
1	A	394	ALA	2.6
1	A	216	GLY	2.6
2	D	272	SER	2.6
1	A	514	TYR	2.6
1	A	819	ALA	2.6
1	A	874	TRP	2.6

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Mol	Chain	Res	Type	RSRZ
2	C	315	ILE	2.6
3	Q	2	GLN	2.6
1	A	311	PHE	2.6
1	A	714	ASN	2.5
1	B	967	ASN	2.5
2	D	276	ASN	2.5
1	B	722	PHE	2.5
1	A	608	PHE	2.5
1	A	393	ILE	2.5
1	A	641	ILE	2.5
2	D	248	GLU	2.5
1	A	370	SER	2.5
1	A	859	SER	2.5
1	B	968	VAL	2.5
1	B	712	PHE	2.5
2	D	461	GLU	2.5
2	C	477	PHE	2.5
1	A	458	GLU	2.4
1	A	389	LEU	2.4
1	B	875	LYS	2.4
1	A	646	TRP	2.4
1	B	116	SER	2.4
1	A	552	VAL	2.4
1	B	232	LYS	2.4
3	P	14	GLY	2.4
3	Q	11	GLY	2.4
1	A	132	GLU	2.4
1	B	216	GLY	2.4
1	B	389	LEU	2.3
1	A	603	TRP	2.3
1	B	791	PHE	2.3
1	B	763	GLY	2.3
1	B	546	ILE	2.3
1	B	335	ASP	2.3
1	B	617	ARG	2.3
1	A	712	PHE	2.3
2	C	367	GLN	2.3
1	B	840	GLY	2.3
2	D	137	LYS	2.2
1	B	117	THR	2.2
1	A	354	PHE	2.2
1	A	162	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
1	A	230	LYS	2.2
1	A	965	GLY	2.2
2	D	225	GLU	2.2
2	C	420	ASN	2.2
1	A	366	PHE	2.2
1	A	599	GLY	2.2
1	A	1009	TYR	2.2
1	B	465	ASN	2.2
1	A	367	LYS	2.2
1	B	999	GLY	2.2
1	B	589	TYR	2.2
2	D	236	TYR	2.2
1	A	118	VAL	2.2
1	B	836	VAL	2.2
1	B	283	LYS	2.2
1	B	841	ASN	2.1
1	B	529	PHE	2.1
3	P	6	ALA	2.1
1	B	382	TRP	2.1
1	A	601	ASP	2.1
1	B	219	ALA	2.1
2	C	171	GLU	2.1
1	A	159	THR	2.1
1	B	212	THR	2.1
1	A	982	LEU	2.1
1	A	762	LYS	2.1
2	C	339	SER	2.1
1	B	759	LEU	2.1
1	A	400	ASP	2.1
2	C	348	LYS	2.0
2	C	135	VAL	2.0
2	C	176	VAL	2.0
1	A	794	ASN	2.0
1	A	649	ASP	2.0
1	B	147	ALA	2.0
2	D	351	GLY	2.0
1	A	620	SER	2.0
1	A	850	ALA	2.0

6.2 Non-standard residues in protein, DNA, RNA chains (i)

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

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

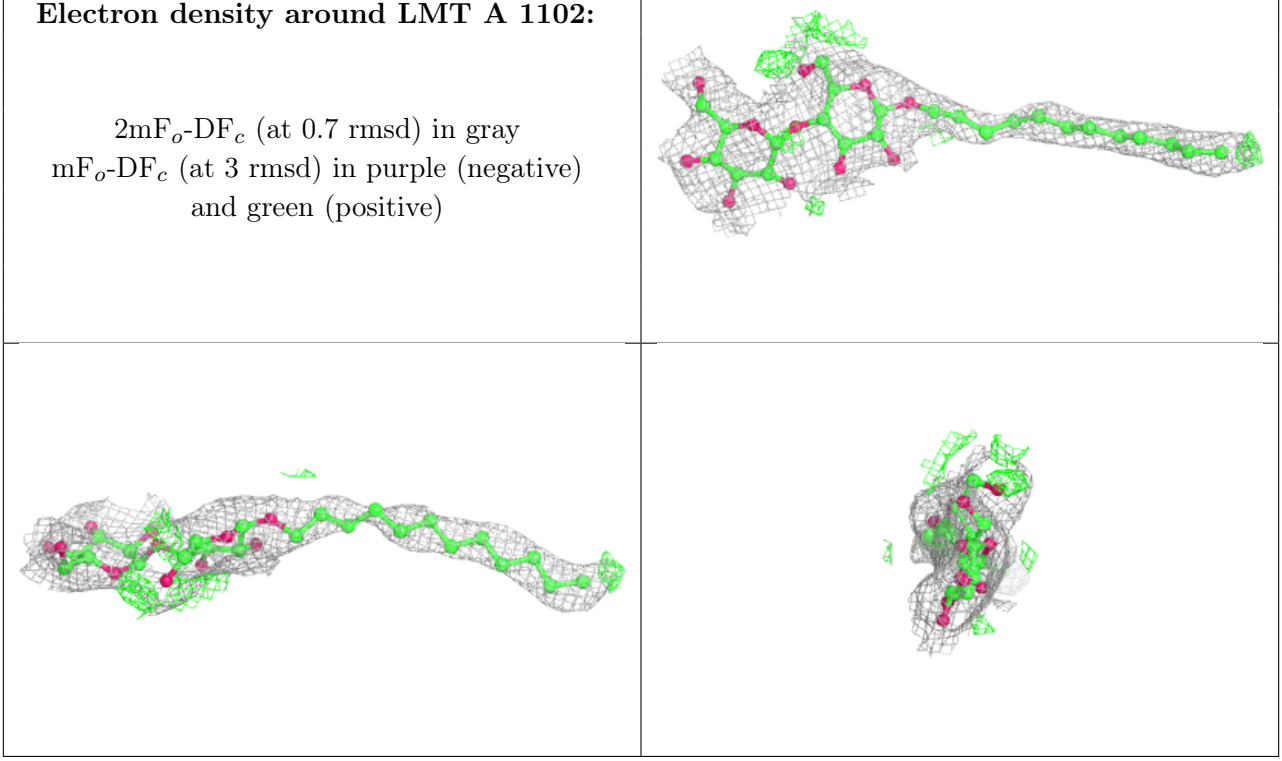
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
5	LMT	A	1102	35/35	0.77	0.18	53,90,105,107	0
6	C8E	B	1103	7/21	0.78	0.28	51,65,73,75	0
5	LMT	B	1102	35/35	0.82	0.18	51,90,117,120	0
5	LMT	C	602	33/35	0.86	0.16	54,64,80,83	0
7	PLM	C	601	14/18	0.86	0.18	42,49,59,62	0
6	C8E	A	1103	21/21	0.88	0.18	41,62,82,86	0
6	C8E	A	1104	21/21	0.88	0.17	35,60,65,66	0
5	LMT	D	602	33/35	0.89	0.15	61,71,88,90	0
4	3PE	A	1101	31/51	0.90	0.16	36,51,77,92	0
4	3PE	B	1101	32/51	0.92	0.14	34,49,60,73	0
7	PLM	D	601	15/18	0.92	0.13	34,50,59,61	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

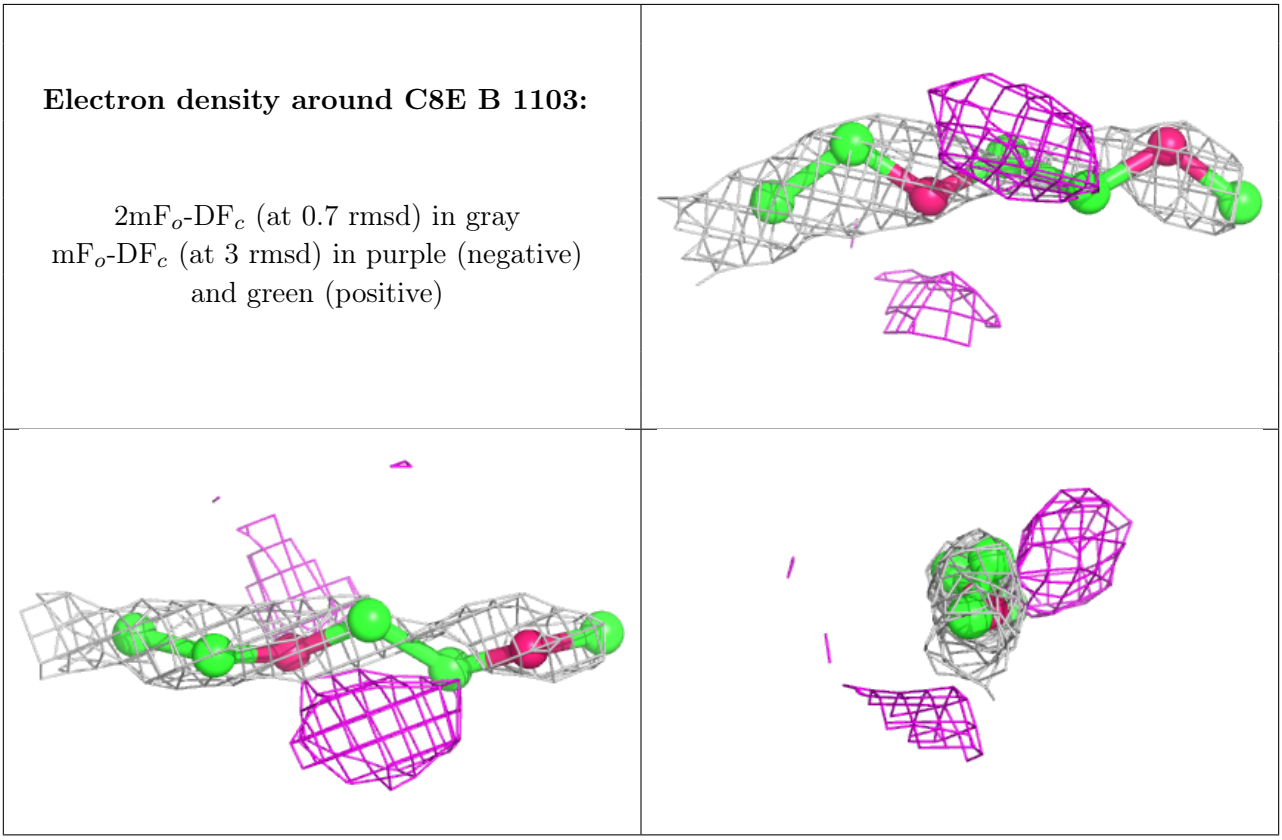
Electron density around LMT A 1102:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



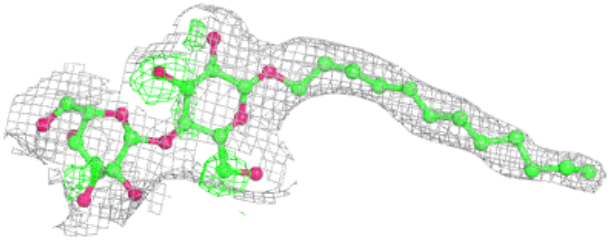
Electron density around C8E B 1103:

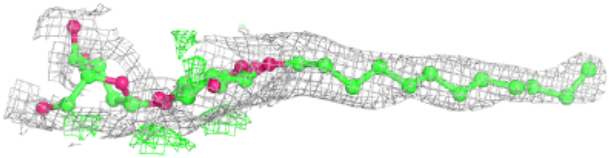
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

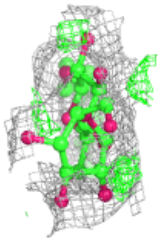


Electron density around LMT B 1102:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

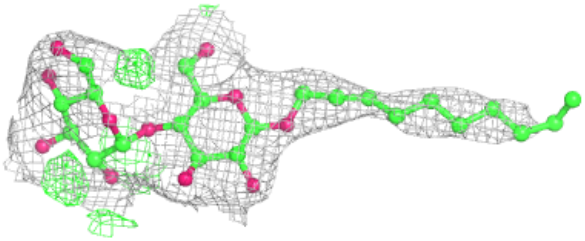


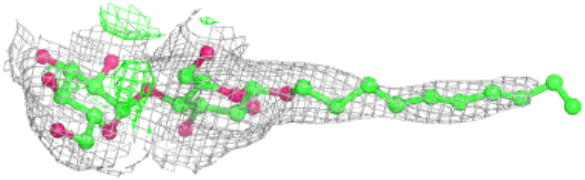


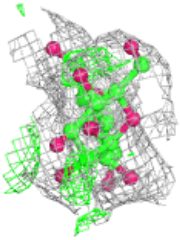


Electron density around LMT C 602:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

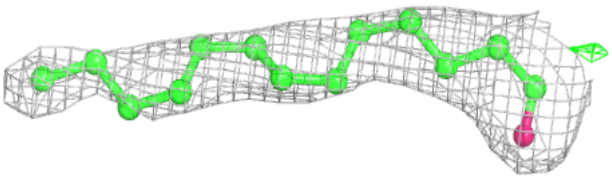


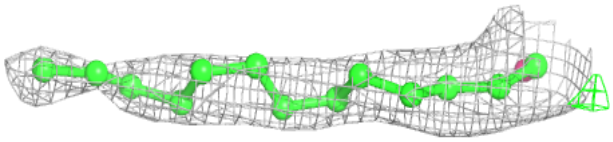


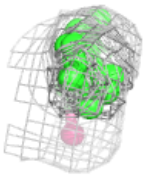


Electron density around PLM C 601:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

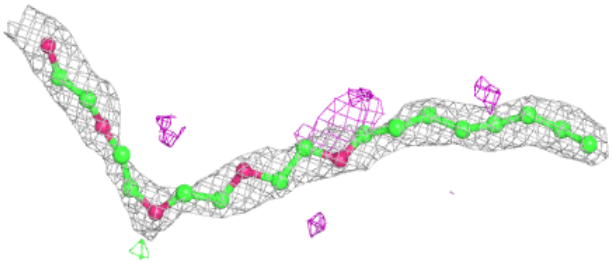


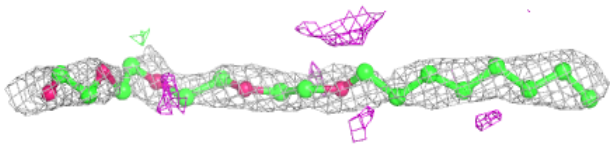


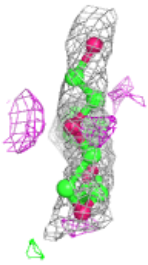


Electron density around C8E A 1103:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

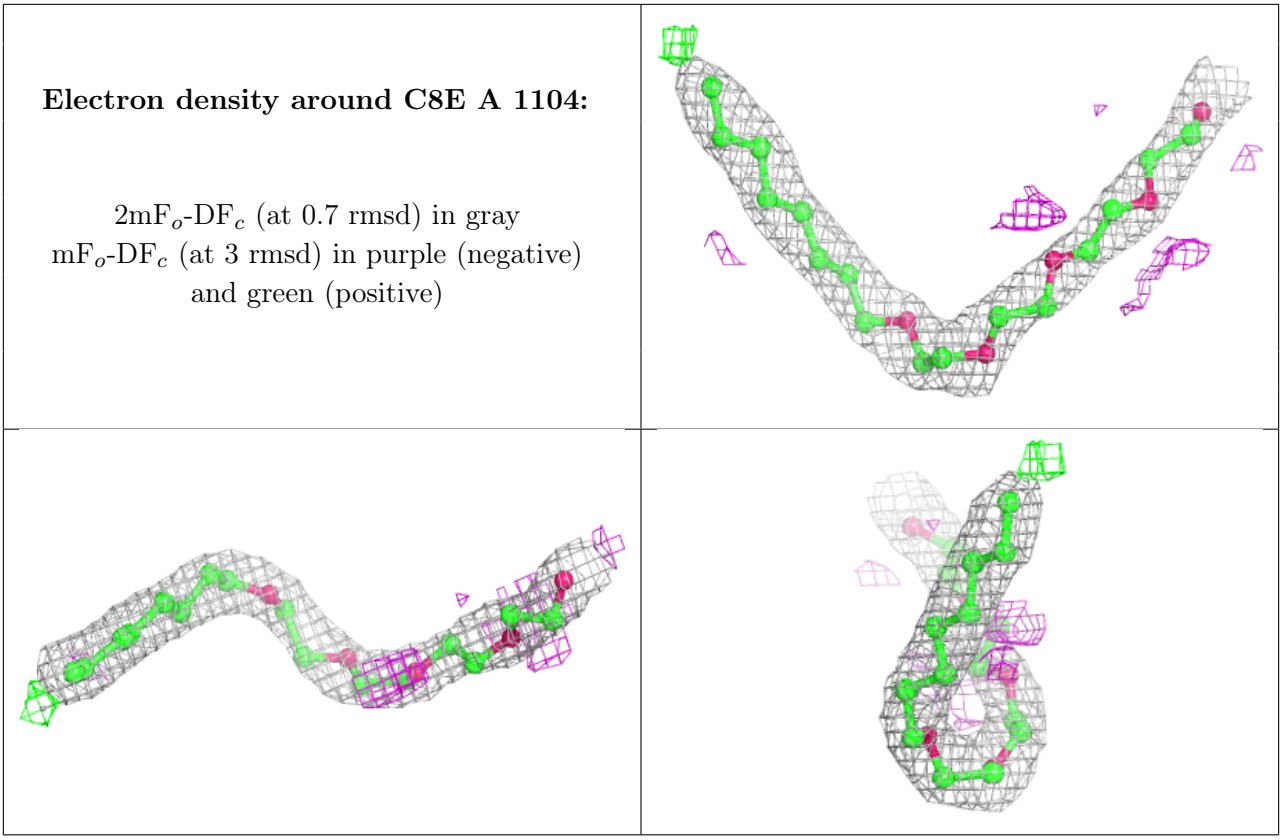






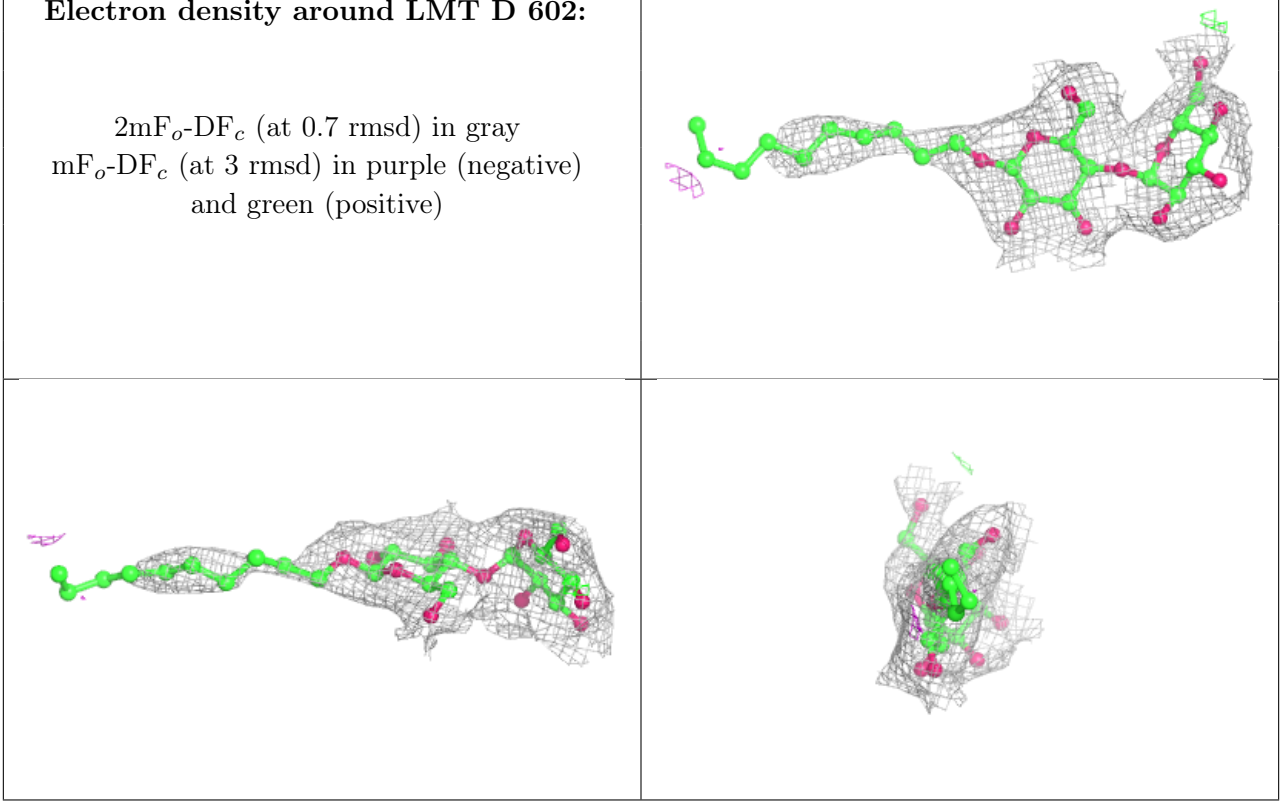
Electron density around C8E A 1104:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



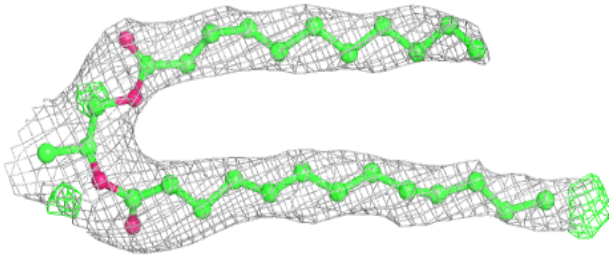
Electron density around LMT D 602:

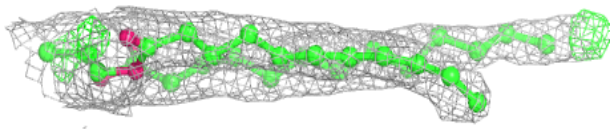
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

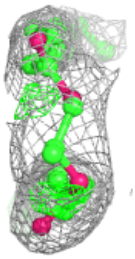


Electron density around 3PE A 1101:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

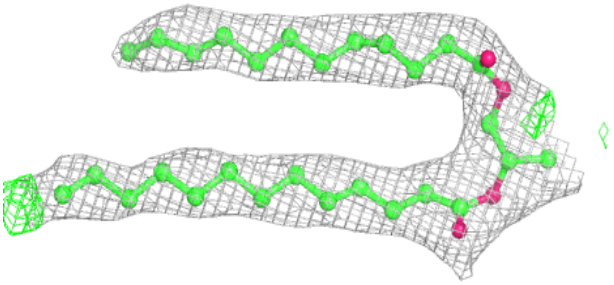


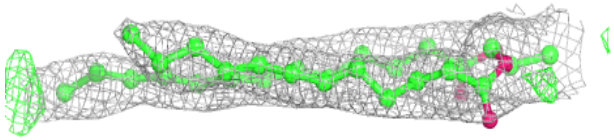


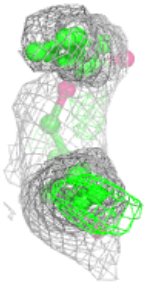


Electron density around 3PE B 1101:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

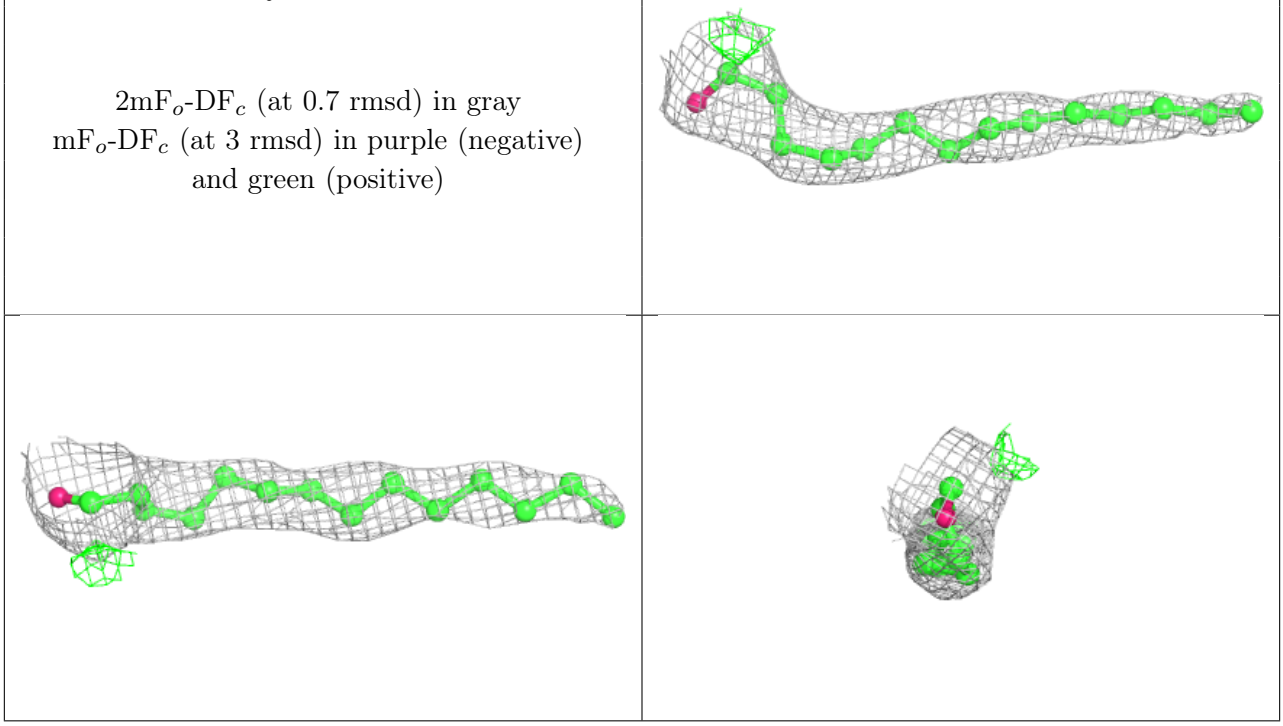






Electron density around PLM D 601:

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)



6.5 Other polymers (i)

There are no such residues in this entry.