Full wwPDB X-ray Structure Validation Report ⓘ

Aug 30, 2023 – 06:21 AM EDT

PDB ID	:	3MPQ
Title	:	I204R1 mutant of LeuT
Authors	:	Kroncke, B.M.
Deposited on	:	2010-04-27
Resolution	:	2.25 Å(reported)

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

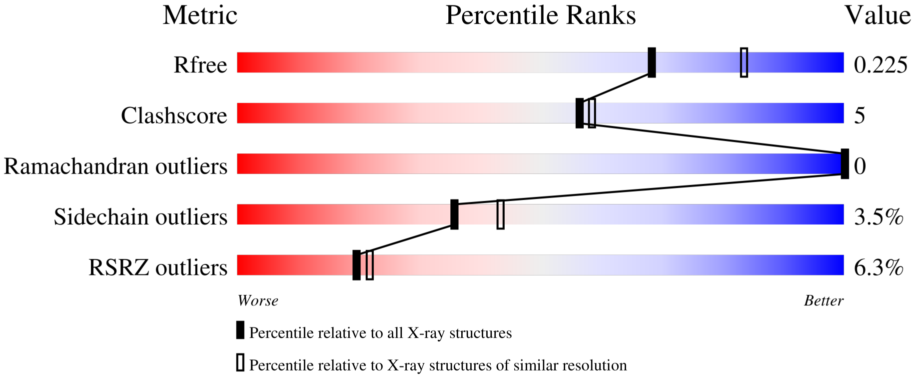
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.35
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35

1 Overall quality at a glance ⓘ

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

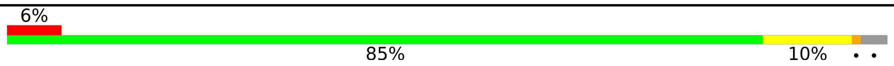
The reported resolution of this entry is 2.25 Å.

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}	130704	1377 (2.26-2.26)
Clashscore	141614	1487 (2.26-2.26)
Ramachandran outliers	138981	1449 (2.26-2.26)
Sidechain outliers	138945	1450 (2.26-2.26)
RSRZ outliers	127900	1356 (2.26-2.26)

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	507	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	BOG	A	704	-	-	-	X

2 Entry composition ⓘ

There are 7 unique types of molecules in this entry. The entry contains 4016 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.

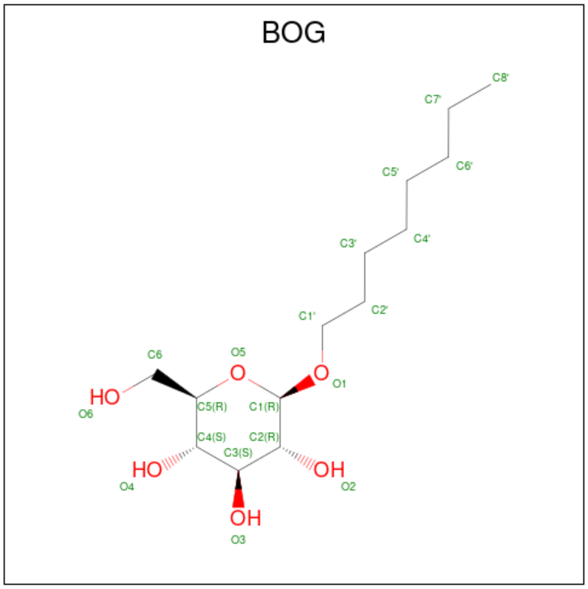
- Molecule 1 is a protein called Transporter.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	490	3890	2638	611	629	12	0	0	0

There is a discrepancy between the modelled and reference sequences:

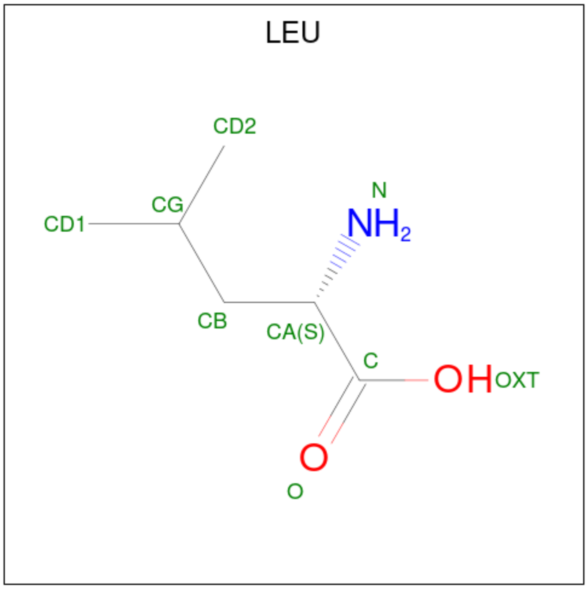
Chain	Residue	Modelled	Actual	Comment	Reference
A	204	CYS	ILE	engineered mutation	UNP O67854

- Molecule 2 is octyl beta-D-glucopyranoside (three-letter code: BOG) (formula: $C_{14}H_{28}O_6$).



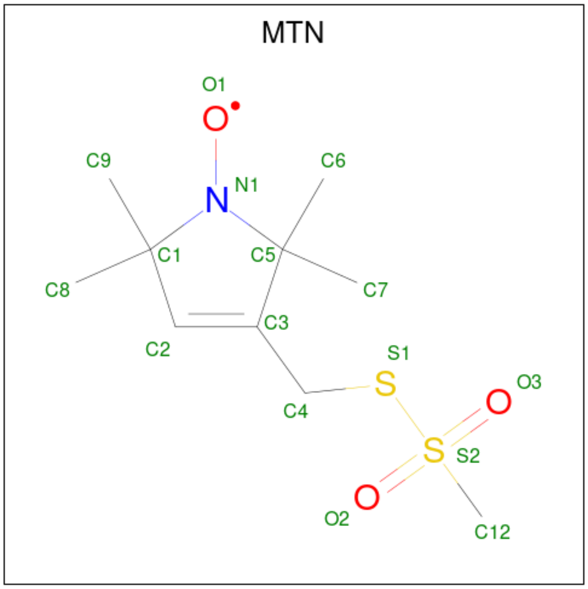
Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
			Total	C	O		
2	A	1	20	14	6	0	0
2	A	1	20	14	6	0	0
2	A	1	20	14	6	0	0

- Molecule 3 is LEUCINE (three-letter code: LEU) (formula: $C_6H_{13}NO_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total C N O 9 6 1 2	0	0

- Molecule 4 is S-[(1-oxyl-2,2,5,5-tetramethyl-2,5-dihydro-1H-pyrrol-3-yl)methyl] methanesulfonothioate (three-letter code: MTN) (formula: $C_{10}H_{18}NO_3S_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	1	Total C N O S 12 9 1 1 1	0	0

- Molecule 5 is SODIUM ION (three-letter code: NA) (formula: Na).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	2	Total Na 2 2	0	0

- Molecule 6 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	A	1	Total Cl 1 1	0	0

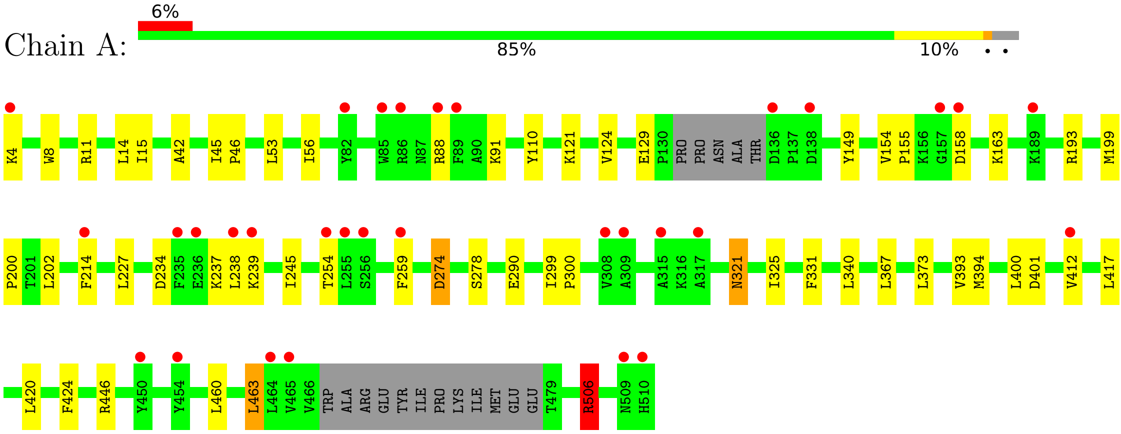
- Molecule 7 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	A	42	Total O 42 42	0	0

3 Residue-property plots ⓘ

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and 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: Transporter



4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	87.70Å 86.71Å 80.87Å 90.00° 95.26° 90.00°	Depositor
Resolution (Å)	43.67 – 2.25 43.67 – 2.25	Depositor EDS
% Data completeness (in resolution range)	97.6 (43.67-2.25) 97.6 (43.67-2.25)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.09	Depositor
$< I/\sigma(I) >$ [1]	3.80 (at 2.24Å)	Xtriage
Refinement program	REFMAC 5.5.0088	Depositor
R, R_{free}	0.185 , 0.223 0.188 , 0.225	Depositor DCC
R_{free} test set	1412 reflections (5.07%)	wwPDB-VP
Wilson B-factor (Å^2)	42.1	Xtriage
Anisotropy	0.213	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.41 , 62.6	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	0.95	EDS
Total number of atoms	4016	wwPDB-VP
Average B, all atoms (Å^2)	43.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.45% of the height of the origin peak. No significant pseudotranslation is detected.*

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[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: MTN, NA, CL, BOG

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	1.02	3/4010 (0.1%)	0.82	2/5457 (0.0%)

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	149	TYR	CD1-CE1	6.26	1.48	1.39
1	A	393	VAL	CB-CG1	-5.77	1.40	1.52
1	A	393	VAL	CB-CG2	5.04	1.63	1.52

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	400	LEU	CB-CG-CD1	-6.85	99.35	111.00
1	A	506	ARG	NE-CZ-NH1	6.22	123.41	120.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

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	3890	0	3982	40	0
2	A	60	0	84	4	0
3	A	9	0	10	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	A	12	0	15	0	0
5	A	2	0	0	0	0
6	A	1	0	0	0	0
7	A	42	0	0	1	0
All	All	4016	0	4091	40	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 5.

All (40) 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:11:ARG:CZ	1:A:278:SER:OG	2.26	0.83
1:A:420:LEU:HD23	1:A:420:LEU:O	1.92	0.69
1:A:214:PHE:CZ	1:A:227:LEU:HD11	2.29	0.68
1:A:53:LEU:HD23	2:A:701:BOG:H8'1	1.77	0.67
1:A:420:LEU:HD23	1:A:420:LEU:C	2.15	0.67
1:A:367:LEU:HB3	1:A:373:LEU:HD22	1.77	0.66
1:A:245:ILE:HG12	1:A:463:LEU:HD12	1.79	0.63
1:A:42:ALA:HB1	1:A:237:LYS:HB2	1.80	0.62
1:A:53:LEU:HD23	2:A:701:BOG:C8'	2.30	0.61
1:A:154:VAL:HG13	1:A:155:PRO:HD2	1.83	0.61
1:A:121:LYS:NZ	7:A:528:HOH:O	2.35	0.60
1:A:124:VAL:O	1:A:124:VAL:HG12	2.02	0.57
1:A:11:ARG:NH2	1:A:278:SER:OG	2.37	0.56
1:A:42:ALA:HB2	1:A:234:ASP:HB3	1.90	0.54
1:A:506:ARG:HG2	1:A:506:ARG:HH11	1.73	0.53
1:A:124:VAL:O	1:A:124:VAL:CG1	2.57	0.53
1:A:11:ARG:NH2	1:A:274:ASP:OD2	2.31	0.52
1:A:202:LEU:C	1:A:202:LEU:HD23	2.29	0.52
1:A:88:ARG:HD3	1:A:91:LYS:HE3	1.90	0.52
1:A:259:PHE:CZ	1:A:412:VAL:HG11	2.45	0.51
1:A:254:THR:OG1	1:A:290:GLU:OE2	2.30	0.49
1:A:420:LEU:C	1:A:420:LEU:CD2	2.82	0.48
1:A:15:ILE:HD11	1:A:278:SER:CB	2.43	0.48
1:A:15:ILE:HD11	1:A:278:SER:HA	1.95	0.48
1:A:53:LEU:CD2	2:A:701:BOG:H8'1	2.41	0.48
1:A:45:ILE:HB	1:A:46:PRO:HD3	1.96	0.47
1:A:42:ALA:HB1	1:A:237:LYS:CB	2.44	0.47
1:A:299:ILE:HB	1:A:300:PRO:HD3	1.95	0.47
1:A:417:LEU:HD13	1:A:460:LEU:HB2	1.97	0.47

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Atom-1	**Atom-2**	**Interatomic distance (Å)**	**Clash overlap (Å)**
1:A:8:TRP:CD1	1:A:14:LEU:HD13	2.50	0.46
1:A:110:TYR:CZ	1:A:394:MET:HG2	2.52	0.44
1:A:245:ILE:HG12	1:A:463:LEU:CD1	2.46	0.44
1:A:331:PHE:CD1	1:A:340:LEU:HD23	2.53	0.44
1:A:53:LEU:CD2	2:A:701:BOG:C8’	2.95	0.44
1:A:214:PHE:CE2	1:A:227:LEU:HD11	2.54	0.43
1:A:56:ILE:HD12	1:A:56:ILE:HG23	1.73	0.42
1:A:56:ILE:HD13	1:A:56:ILE:HA	1.82	0.41
1:A:506:ARG:HG2	1:A:506:ARG:NH1	2.33	0.41
1:A:199:MET:HB2	1:A:200:PRO:HD3	2.03	0.40
1:A:321:ASN:O	1:A:325:ILE:HB	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	484/507 (96%)	471 (97%)	13 (3%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains ⓘ

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	395/410 (96%)	381 (96%)	14 (4%)	36	43

All (14) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	4	LYS
1	A	129	GLU
1	A	158	ASP
1	A	163	LYS
1	A	193	ARG
1	A	238	LEU
1	A	239	LYS
1	A	274	ASP
1	A	321	ASN
1	A	401	ASP
1	A	424	PHE
1	A	446	ARG
1	A	463	LEU
1	A	506	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

5.6 Ligand geometry ⓘ

Of 8 ligands modelled in this entry, 3 are monoatomic - leaving 5 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	$\#\|Z\|>2$
2	BOG	A	703	-	20,20,20	0.93	1 (5%)	25,25,25	1.44	3 (12%)
2	BOG	A	701	-	20,20,20	0.67	0	25,25,25	1.33	3 (12%)
3	LEU	A	601	5	7,8,8	1.10	1 (14%)	9,10,10	1.02	0
4	MTN	A	801	1	9,12,16	1.99	3 (33%)	9,20,27	3.01	4 (44%)
2	BOG	A	704	-	20,20,20	1.03	1 (5%)	25,25,25	1.96	4 (16%)

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**
2	BOG	A	703	-	-	4/11/31/31	0/1/1/1
2	BOG	A	701	-	-	4/11/31/31	0/1/1/1
3	LEU	A	601	5	-	1/8/8/8	-
4	MTN	A	801	1	-	0/0/25/29	0/1/1/1
2	BOG	A	704	-	-	6/11/31/31	0/1/1/1

All (6) bond length outliers are listed below:

Mol	**Chain**	**Res**	**Type**	**Atoms**	**Z**	**Observed(Å)**	**Ideal(Å)**
4	A	801	MTN	C5-C3	4.33	1.57	1.51
2	A	704	BOG	O1-C1	3.34	1.45	1.40
2	A	703	BOG	O1-C1	2.87	1.45	1.40
4	A	801	MTN	C1-C2	2.68	1.54	1.50
3	A	601	LEU	OXT-C	-2.51	1.22	1.30
4	A	801	MTN	C2-C3	2.13	1.34	1.32

All (14) bond angle outliers are listed below:

Mol	**Chain**	**Res**	**Type**	**Atoms**	**Z**	**Observed(^{o})**	**Ideal(^{o})**
2	A	704	BOG	O1-C1-C2	6.65	118.68	108.30
4	A	801	MTN	C9-C1-C2	-6.03	106.64	112.79
4	A	801	MTN	C2-C1-N1	4.40	102.76	99.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	704	BOG	C3-C4-C5	4.40	118.08	110.24
2	A	703	BOG	C1'-O1-C1	3.94	120.38	113.84
2	A	701	BOG	O5-C5-C4	-3.74	102.90	109.69
4	A	801	MTN	C1-C2-C3	-3.57	110.84	113.64
2	A	704	BOG	O5-C1-C2	-3.45	103.04	110.35
4	A	801	MTN	C8-C1-N1	2.93	113.74	110.00
2	A	701	BOG	O5-C5-C6	2.68	113.09	106.44
2	A	704	BOG	O5-C5-C4	2.63	114.47	109.69
2	A	701	BOG	O1-C1-C2	2.57	112.32	108.30
2	A	703	BOG	O3-C3-C4	-2.41	104.77	110.35
2	A	703	BOG	O2-C2-C3	-2.30	105.02	110.35

There are no chirality outliers.

All (15) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	704	BOG	C4-C5-C6-O6
2	A	704	BOG	C4'-C5'-C6'-C7'
2	A	704	BOG	O1-C1'-C2'-C3'
2	A	703	BOG	C4'-C5'-C6'-C7'
2	A	704	BOG	C5'-C6'-C7'-C8'
2	A	704	BOG	O5-C5-C6-O6
2	A	703	BOG	C2'-C3'-C4'-C5'
2	A	701	BOG	C3'-C4'-C5'-C6'
2	A	704	BOG	O5-C1-O1-C1'
2	A	703	BOG	C3'-C4'-C5'-C6'
2	A	701	BOG	C5'-C6'-C7'-C8'
2	A	701	BOG	C4'-C5'-C6'-C7'
3	A	601	LEU	O-C-CA-N
2	A	703	BOG	O1-C1'-C2'-C3'
2	A	701	BOG	O1-C1'-C2'-C3'

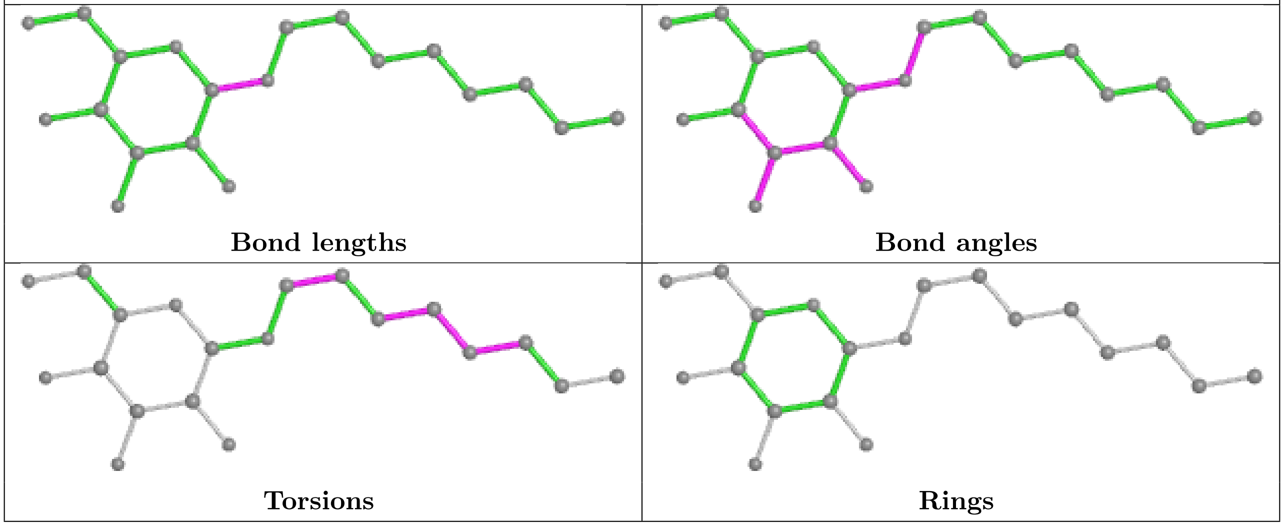
There are no ring outliers.

1 monomer is involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	701	BOG	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 BOG A 703



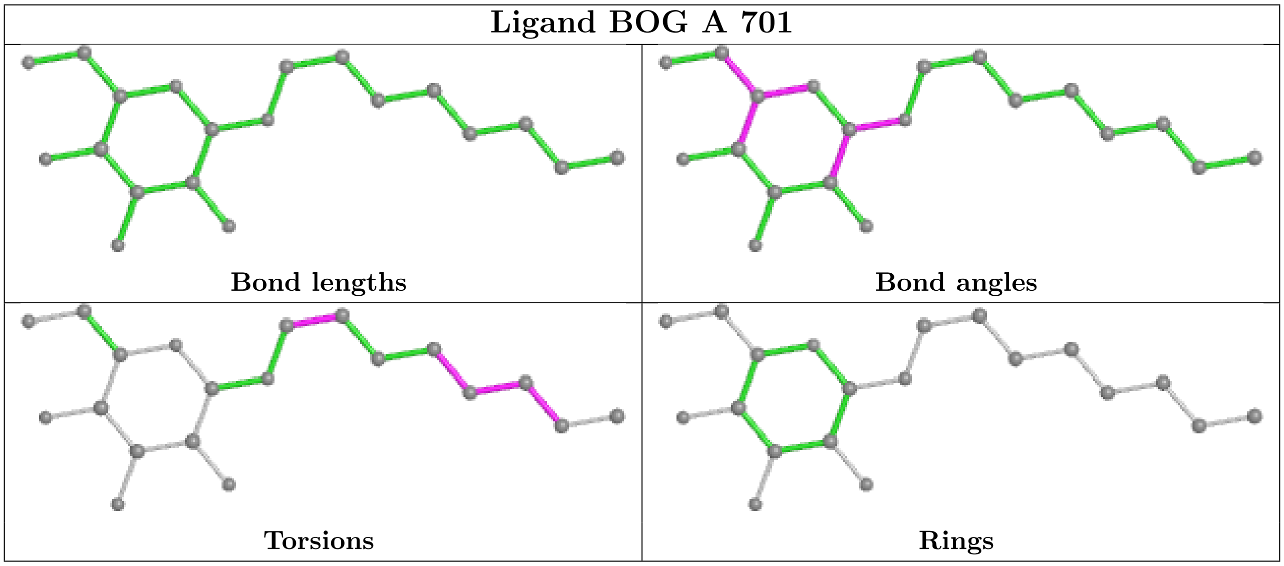
Bond lengths

Bond angles

Torsions

Rings

Ligand BOG A 701



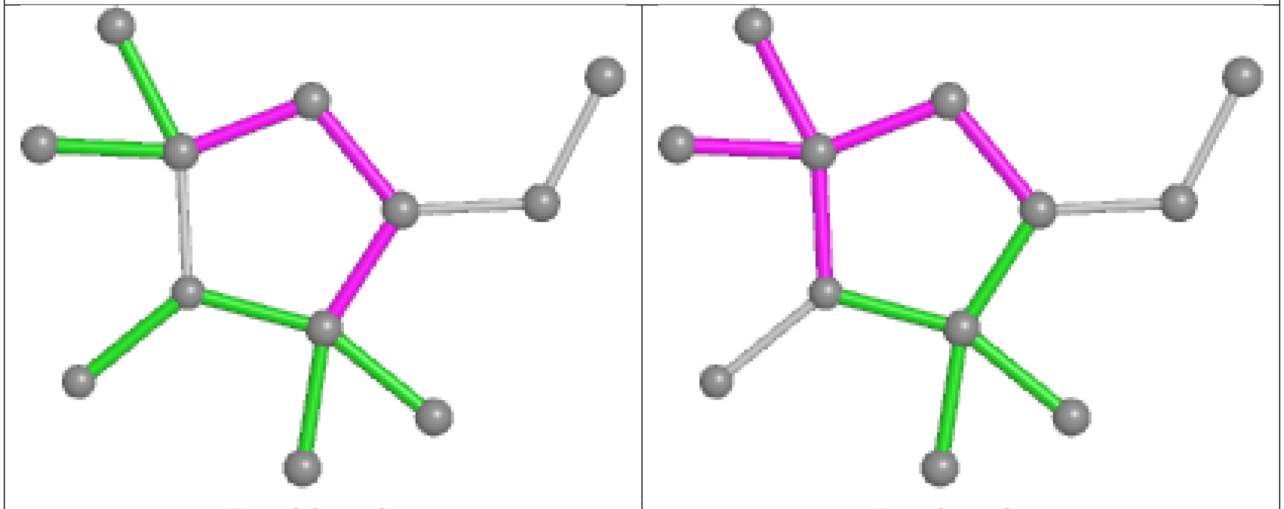
Bond lengths

Bond angles

Torsions

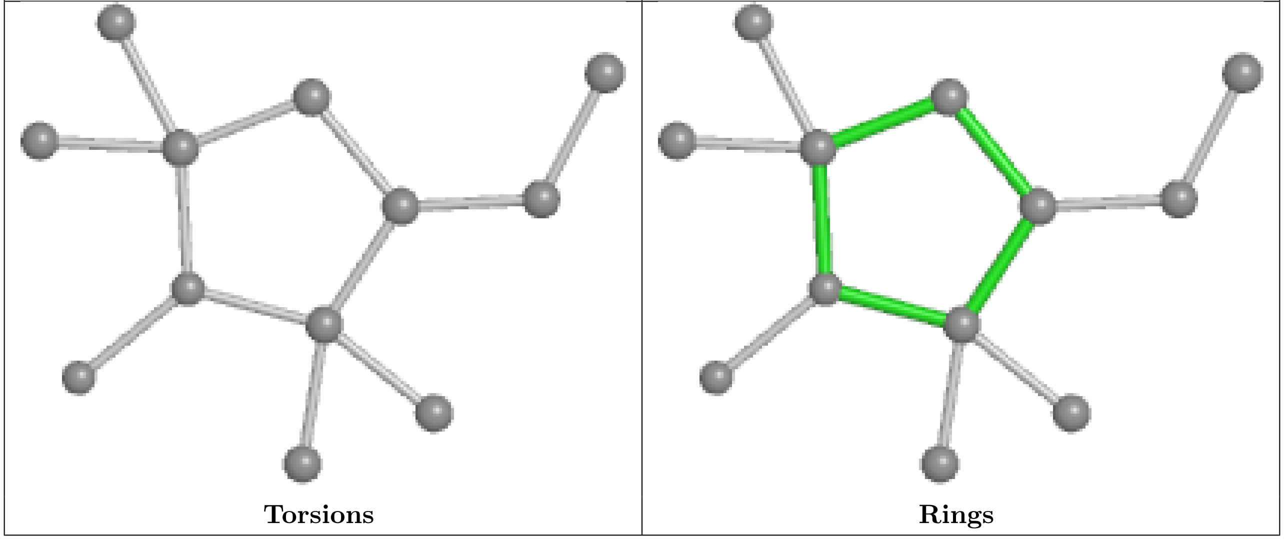
Rings

Ligand MTN A 801



Bond lengths

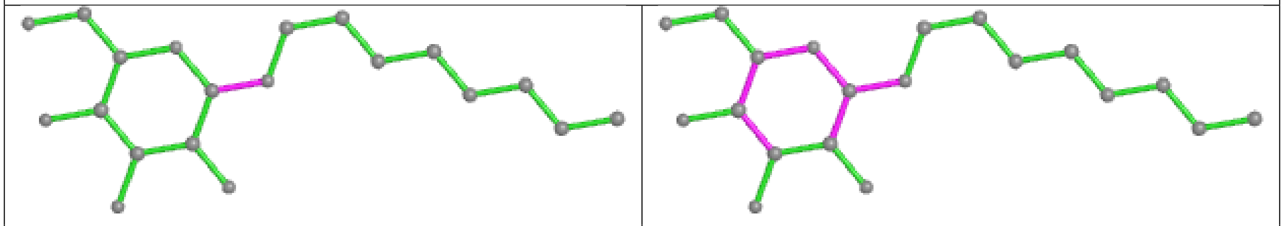
Bond angles



Torsions

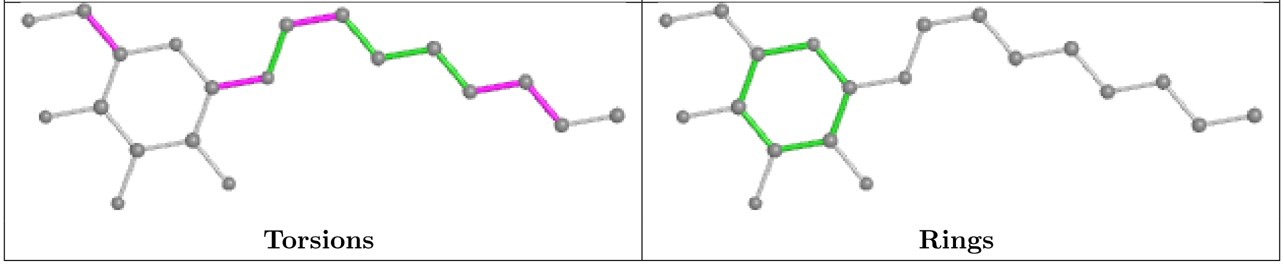
Rings

Ligand BOG A 704



Bond lengths

Bond angles



Torsions

Rings

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, 95th 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	490/507 (96%)	0.10	31 (6%)	20	22	27, 40, 64, 89	0

All (31) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	239	LYS	5.7
1	A	136	ASP	5.5
1	A	509	ASN	5.4
1	A	510	HIS	4.4
1	A	238	LEU	4.0
1	A	236	GLU	3.4
1	A	89	PHE	3.3
1	A	138	ASP	3.3
1	A	158	ASP	2.9
1	A	235	PHE	2.8
1	A	88	ARG	2.8
1	A	317	ALA	2.8
1	A	465	VAL	2.7
1	A	308	VAL	2.7
1	A	309	ALA	2.6
1	A	85	TRP	2.5
1	A	259	PHE	2.5
1	A	454	TYR	2.5
1	A	450	TYR	2.5
1	A	255	LEU	2.4
1	A	4	LYS	2.4
1	A	214	PHE	2.4
1	A	412	VAL	2.4
1	A	189	LYS	2.3
1	A	254	THR	2.2
1	A	82	TYR	2.1
1	A	464	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	315	ALA	2.1
1	A	86	ARG	2.1
1	A	157	GLY	2.0
1	A	256	SER	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 monosaccharides in this entry.

6.4 Ligands (i)

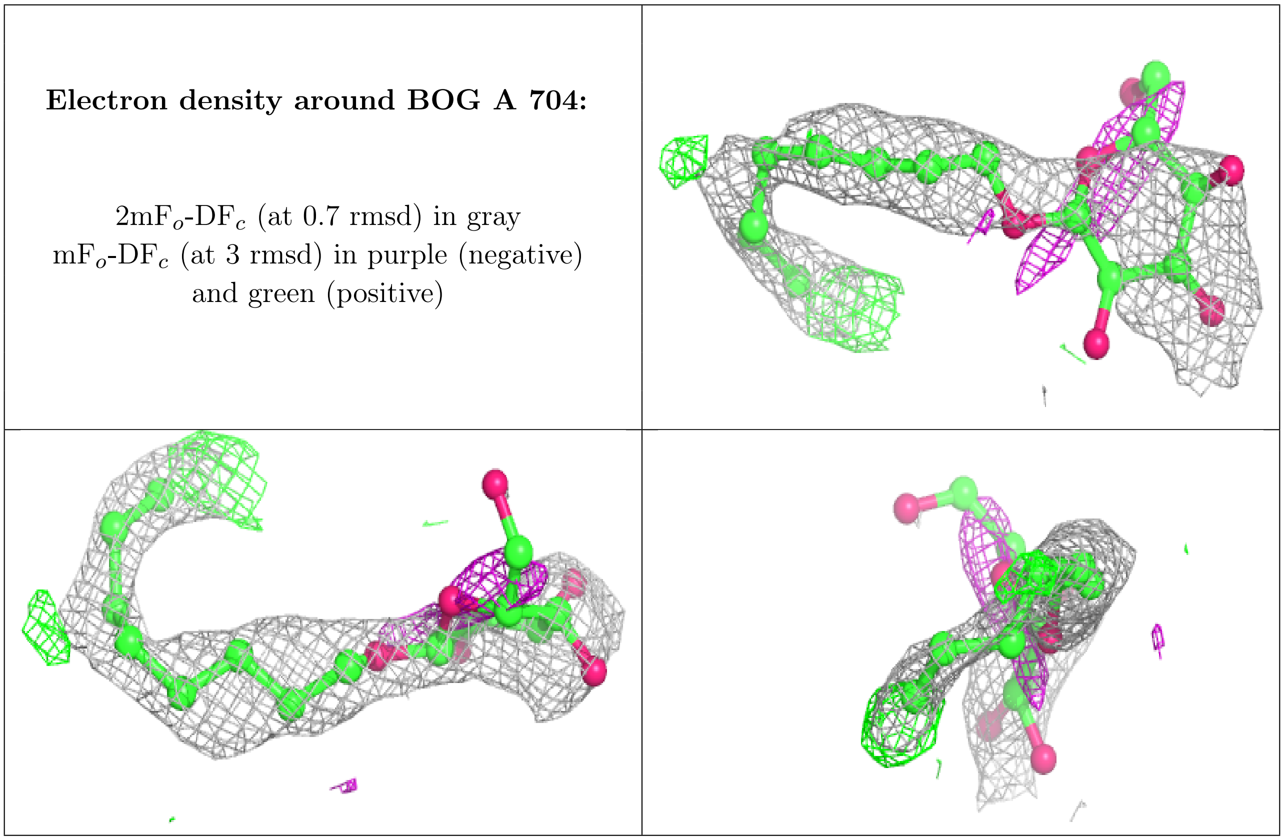
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' 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
2	BOG	A	704	20/20	0.38	0.42	55,84,88,88	0
2	BOG	A	701	20/20	0.77	0.25	60,68,72,73	0
2	BOG	A	703	20/20	0.87	0.31	53,62,76,76	0
4	MTN	A	801	12/16	0.89	0.34	78,87,88,89	0
6	CL	A	753	1/1	0.95	0.12	56,56,56,56	0
5	NA	A	752	1/1	0.98	0.14	27,27,27,27	0
3	LEU	A	601	9/9	0.98	0.30	27,30,31,31	0
5	NA	A	751	1/1	0.99	0.17	32,32,32,32	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.

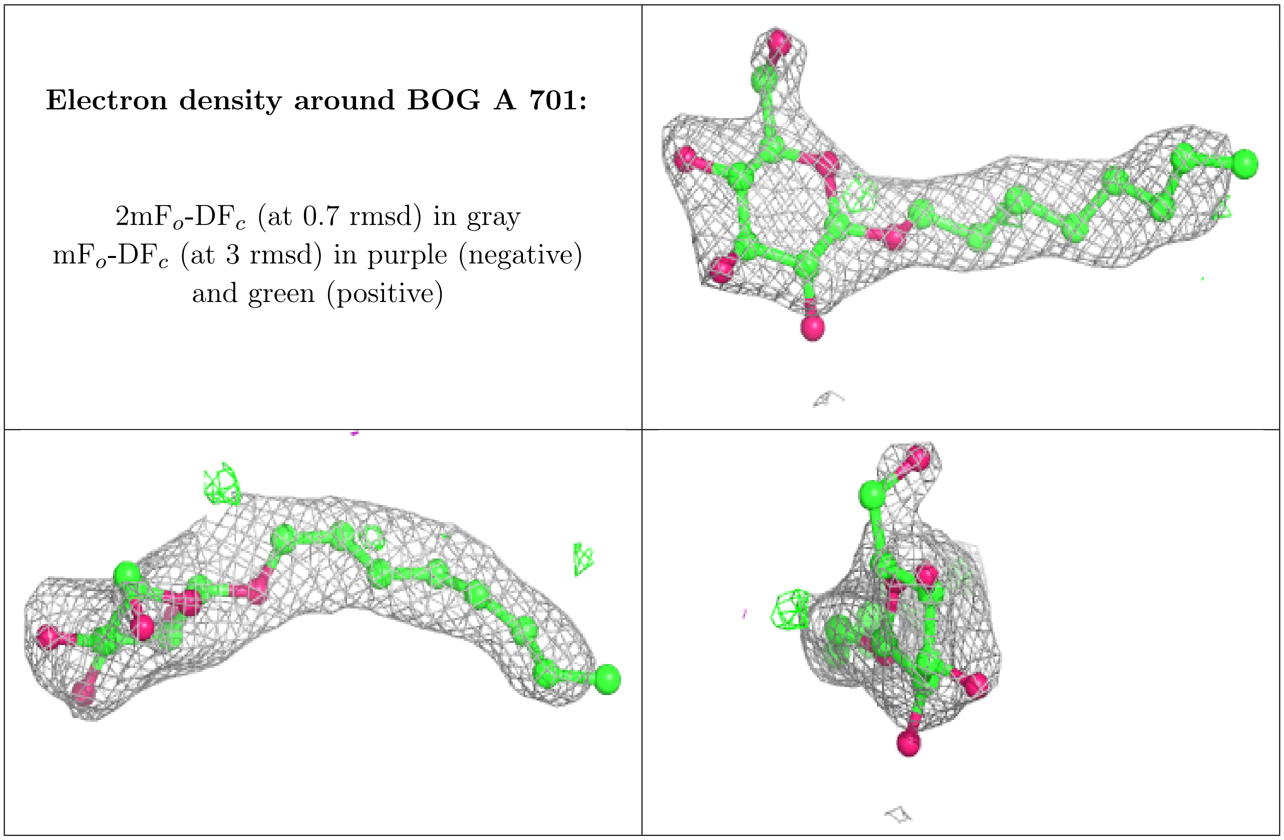
Electron density around BOG A 704:

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 BOG A 701:

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 BOG A 703:

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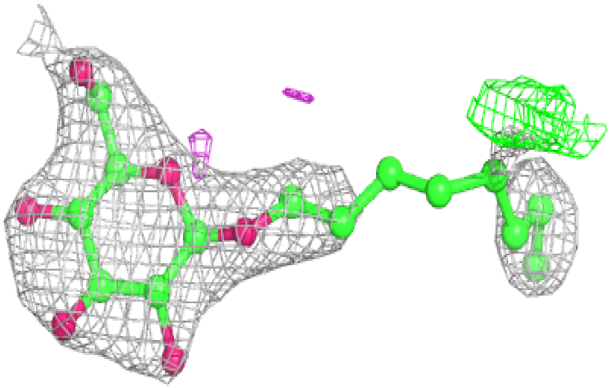
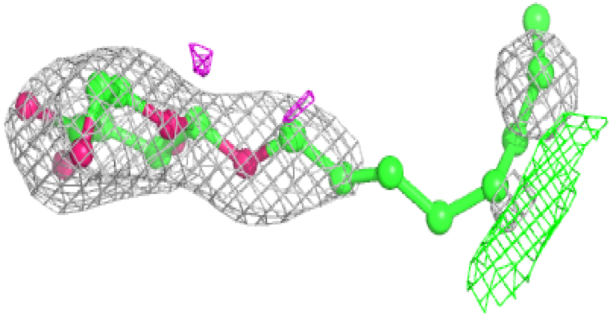
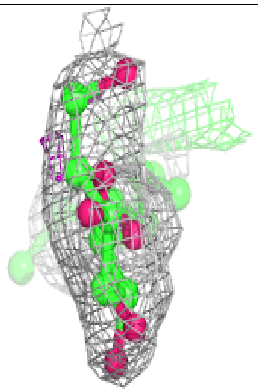
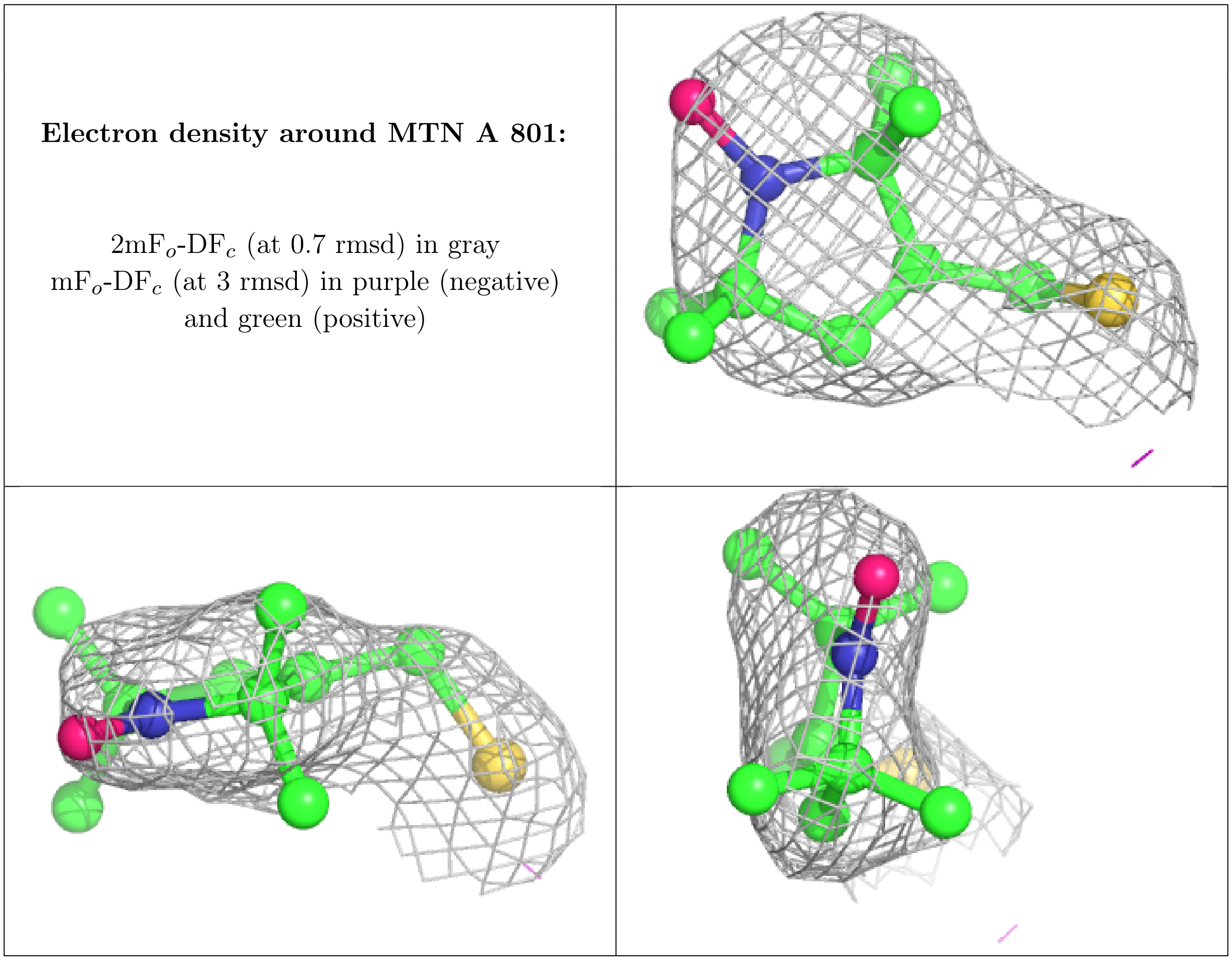
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)









Electron density around MTN A 801:

$2mF_o$-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 ⓘ

There are no such residues in this entry.