



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 6, 2026 – 10:58 AM UTC

PDB ID : 7OOK / pdb_00007ook
Title : Bacteriophage PRD1 Major Capsid Protein P3 in complex with CPZ
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Deposited on : 2021-05-27
Resolution : 2.23 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 ⓘ 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:

MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
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)	:	2.49

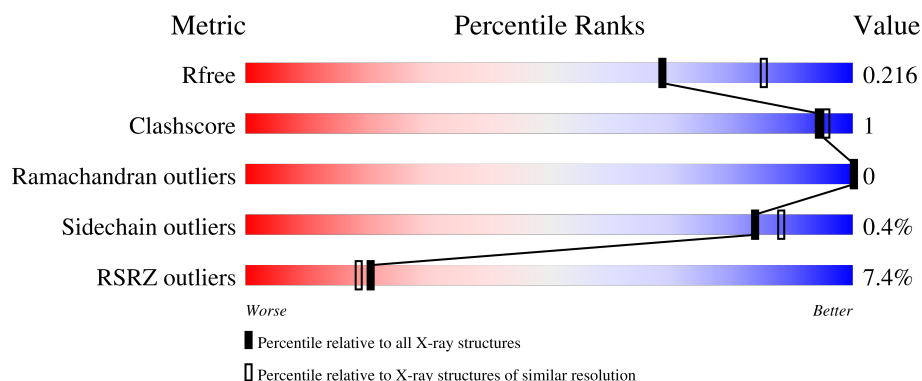
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.23 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}	180053	3416 (2.26-2.22)
Clashscore	190562	3556 (2.26-2.22)
Ramachandran outliers	187476	3500 (2.26-2.22)
Sidechain outliers	187428	3501 (2.26-2.22)
RSRZ outliers	180081	3415 (2.26-2.22)

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 $\leq 5\%$. 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	395	7% 91% 6%
1	B	395	8% 92% 6%
1	C	395	6% 90% 6%

2 Entry composition

There are 6 unique types of molecules in this entry. The entry contains 17977 atoms, of which 8669 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 Major capsid protein P3.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	C	373	Total	C	H	N	O	S	0	7	0
			5736	1848	2819	498	564	7			
1	B	373	Total	C	H	N	O	S	0	7	0
			5746	1851	2828	498	562	7			
1	A	373	Total	C	H	N	O	S	0	4	0
			5733	1847	2825	495	559	7			

- Molecule 2 is SODIUM ION (CCD ID: NA) (formula: Na).

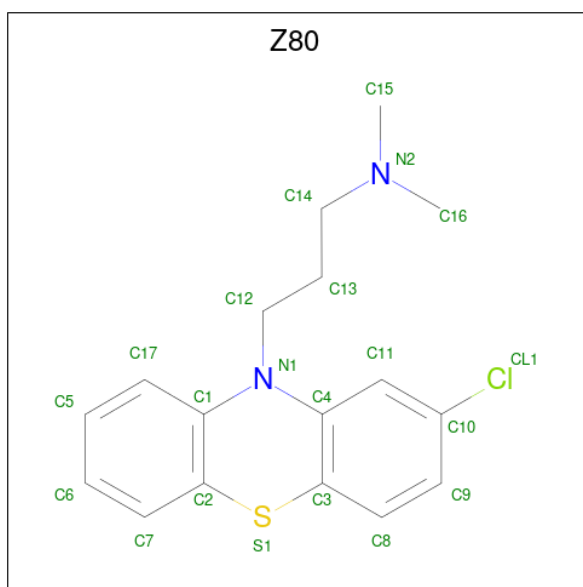
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	C	1	Total	Na	0	0
			1	1		
2	B	2	Total	Na	0	0
			2	2		
2	A	2	Total	Na	0	0
			2	2		

- Molecule 3 is (4S)-2-METHYL-2,4-PENTANEDIOL (CCD ID: MPD) (formula: C₆H₁₄O₂).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	C	1	Total	C	H	O	0	0
			22	6	14	2		
3	C	1	Total	C	H	O	0	0
			22	6	14	2		
3	B	1	Total	C	H	O	0	0
			22	6	14	2		
3	B	1	Total	C	H	O	0	0
			22	6	14	2		
3	B	1	Total	C	H	O	0	0
			22	6	14	2		
3	B	1	Total	C	H	O	0	0
			22	6	14	2		
3	A	1	Total	C	H	O	0	0
			22	6	14	2		
3	A	1	Total	C	H	O	0	0
			22	6	14	2		
3	A	1	Total	C	H	O	0	0
			22	6	14	2		

- Molecule 4 is 3-(2-chloro-10H-phenothiazin-10-yl)-N,N-dimethylpropan-1-amine (CCD ID: Z80) (formula: C₁₇H₁₉ClN₂S) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
4	B	1	Total	C	Cl	H	N	S	0	0
			40	17	1	19	2	1		
4	A	1	Total	C	Cl	H	N	S	0	0
			40	17	1	19	2	1		
4	A	1	Total	C	Cl	H	N	S	0	0
			40	17	1	19	2	1		

- Molecule 5 is CHLORIDE ION (CCD ID: CL) (formula: Cl).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	B	2	Total Cl 2 2	0	0
5	A	1	Total Cl 1 1	0	0

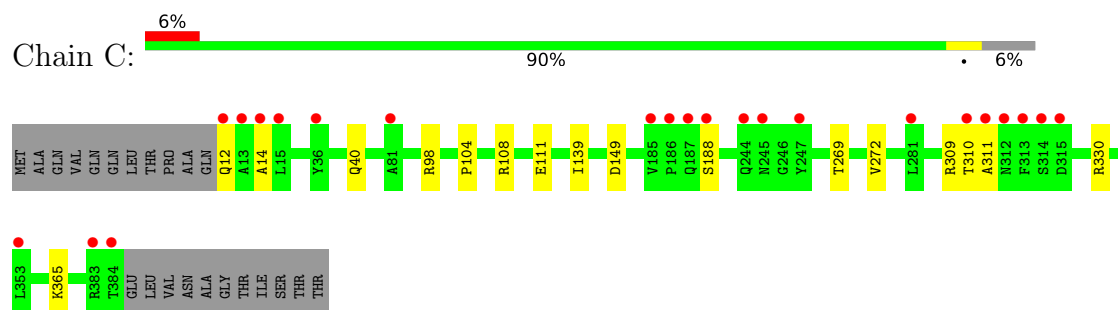
- Molecule 6 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	C	133	Total O 133 133	0	0
6	B	149	Total O 149 149	0	0
6	A	132	Total O 132 132	0	0

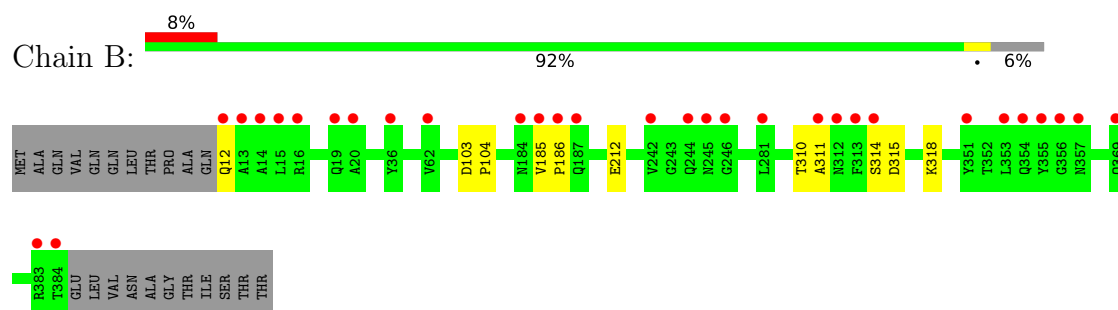
3 Residue-property plots [i](#)

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.

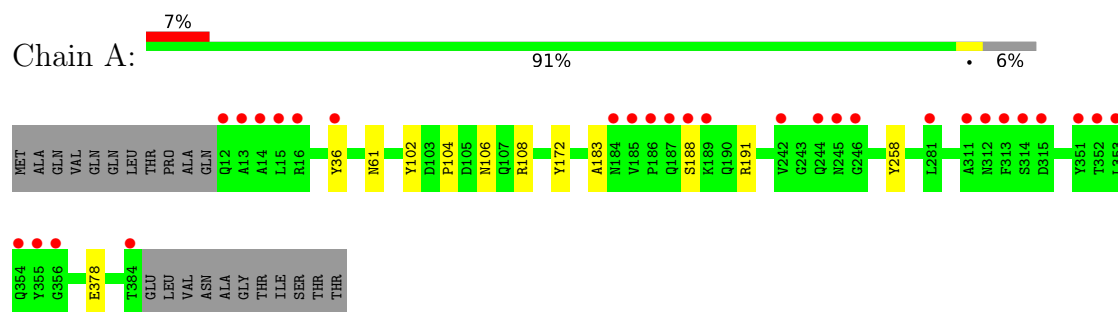
- Molecule 1: Major capsid protein P3



- Molecule 1: Major capsid protein P3



- Molecule 1: Major capsid protein P3



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	116.75Å 122.75Å 126.32Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	39.83 – 2.23 39.83 – 2.23	Depositor EDS
% Data completeness (in resolution range)	99.9 (39.83-2.23) 99.9 (39.83-2.23)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.49 (at 2.22Å)	Xtriage
Refinement program	PHENIX 1.19.1_4122	Depositor
R, R_{free}	0.176 , 0.216 0.174 , 0.216	Depositor DCC
R_{free} test set	4404 reflections (4.95%)	wwPDB-VP
Wilson B-factor (Å ²)	42.6	Xtriage
Anisotropy	0.010	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.38 , 36.6	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.33$	Xtriage
Estimated twinning fraction	0.006 for -h,l,k	Xtriage
F_o, F_c correlation	0.96	EDS
Total number of atoms	17977	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 2.94% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

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: MPD, CL, NA, Z80

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	0.13	0/2983	0.32	0/4078
1	B	0.13	0/3007	0.32	0/4110
1	C	0.12	0/3003	0.31	0/4106
All	All	0.13	0/8993	0.31	0/12294

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	2908	2825	2821	7	0
1	B	2918	2828	2808	6	0
1	C	2917	2819	2797	10	0
2	A	2	0	0	0	0
2	B	2	0	0	0	0
2	C	1	0	0	0	0
3	A	24	42	42	1	0
3	B	40	70	70	1	0
3	C	16	28	28	0	0
4	A	42	38	38	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	B	21	19	19	0	0
5	A	1	0	0	0	0
5	B	2	0	0	0	0
6	A	132	0	0	0	0
6	B	149	0	0	1	0
6	C	133	0	0	2	0
All	All	9308	8669	8623	23	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 1.

All (23) 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:C:330[B]:ARG:NH2	6:C:501:HOH:O	2.15	0.77
1:A:106:ASN:OD1	1:A:191:ARG:NH2	2.17	0.77
1:C:104:PRO:O	1:C:188:SER:OG	2.06	0.72
1:B:212:GLU:OE1	6:B:501:HOH:O	2.11	0.68
1:C:108:ARG:NE	1:C:111:GLU:OE1	2.33	0.62
1:C:149:ASP:OD1	6:C:502:HOH:O	2.17	0.59
1:A:172:TYR:CE2	3:A:807:MPD:H51	2.37	0.59
1:A:258:TYR:OH	1:A:378:GLU:OE2	2.22	0.48
1:B:310:THR:HG22	1:B:311:ALA:N	2.28	0.48
1:C:309:ARG:HG2	1:C:311:ALA:H	1.81	0.46
1:C:98:ARG:NH2	1:C:111:GLU:OE2	2.47	0.46
1:A:104:PRO:HB3	1:A:188:SER:HB2	1.98	0.45
1:B:318:LYS:HE2	3:B:401:MPD:HM3	1.99	0.44
1:C:269:THR:HG23	1:C:272:VAL:HB	2.01	0.43
1:A:61:ASN:ND2	1:A:188:SER:O	2.50	0.43
1:B:314:SER:OG	1:B:315:ASP:N	2.52	0.43
1:A:61:ASN:HA	1:A:183:ALA:HB1	2.01	0.42
1:A:102:TYR:CE2	1:A:108:ARG:HG3	2.56	0.41
1:B:103:ASP:HB2	1:B:104:PRO:HD2	2.02	0.41
1:C:12:GLN:HG3	1:C:14:ALA:H	1.85	0.41
1:C:310:THR:O	1:C:310:THR:CG2	2.68	0.41
1:B:185:VAL:HG22	1:B:186:PRO:O	2.21	0.41
1:C:139:ILE:HD12	1:C:139:ILE:H	1.86	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	375/395 (95%)	361 (96%)	14 (4%)	0	100	100
1	B	378/395 (96%)	370 (98%)	8 (2%)	0	100	100
1	C	378/395 (96%)	370 (98%)	8 (2%)	0	100	100
All	All	1131/1185 (95%)	1101 (97%)	30 (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	306/326 (94%)	305 (100%)	1 (0%)	86	90
1	B	308/326 (94%)	307 (100%)	1 (0%)	86	90
1	C	308/326 (94%)	306 (99%)	2 (1%)	78	83
All	All	922/978 (94%)	918 (100%)	4 (0%)	84	88

All (4) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C	40	GLN
1	C	365	LYS
1	B	12	GLN
1	A	36	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (11) such sidechains are listed below:

Mol	Chain	Res	Type
1	C	107	GLN
1	C	277	GLN
1	C	308	GLN
1	C	345	ASN
1	B	79	ASN
1	B	106	ASN
1	B	146	ASN
1	B	308	GLN
1	B	345	ASN
1	A	146	ASN
1	A	190	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 21 ligands modelled in this entry, 8 are monoatomic - leaving 13 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	$\# Z > 2$
3	MPD	B	405	-	7,7,7	0.27	0	9,10,10	0.37	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	MPD	C	403	-	7,7,7	0.31	0	9,10,10	0.27	0
3	MPD	B	408	-	7,7,7	0.33	0	9,10,10	0.26	0
3	MPD	A	806	-	7,7,7	0.32	0	9,10,10	0.35	0
3	MPD	A	807	-	7,7,7	0.33	0	9,10,10	0.30	0
4	Z80	A	803	-	23,23,23	4.54	4 (17%)	32,32,32	2.29	3 (9%)
3	MPD	C	402	-	7,7,7	0.30	0	9,10,10	0.55	0
3	MPD	B	401	-	7,7,7	0.31	0	9,10,10	0.25	0
4	Z80	B	402	-	23,23,23	4.54	4 (17%)	32,32,32	2.15	3 (9%)
4	Z80	A	801	-	23,23,23	4.53	4 (17%)	32,32,32	2.43	3 (9%)
3	MPD	A	802	-	7,7,7	0.27	0	9,10,10	0.33	0
3	MPD	B	407	-	7,7,7	0.32	0	9,10,10	0.36	0
3	MPD	B	406	-	7,7,7	0.29	0	9,10,10	0.31	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
3	MPD	B	405	-	-	3/5/5/5	-
3	MPD	C	403	-	-	1/5/5/5	-
3	MPD	B	408	-	-	0/5/5/5	-
3	MPD	A	806	-	-	0/5/5/5	-
3	MPD	A	807	-	-	0/5/5/5	-
4	Z80	A	803	-	-	2/6/18/18	0/3/3/3
3	MPD	C	402	-	-	3/5/5/5	-
3	MPD	B	401	-	-	2/5/5/5	-
4	Z80	B	402	-	-	4/6/18/18	0/3/3/3
4	Z80	A	801	-	-	3/6/18/18	0/3/3/3
3	MPD	A	802	-	-	3/5/5/5	-
3	MPD	B	407	-	-	0/5/5/5	-
3	MPD	B	406	-	-	1/5/5/5	-

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	803	Z80	C1-N1	14.34	1.64	1.40
4	A	801	Z80	C1-N1	14.33	1.64	1.40
4	B	402	Z80	C1-N1	14.32	1.64	1.40
4	B	402	Z80	C4-N1	14.10	1.64	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	801	Z80	C4-N1	14.02	1.64	1.40
4	A	803	Z80	C4-N1	14.02	1.64	1.40
4	A	801	Z80	C3-S1	-5.65	1.66	1.76
4	B	402	Z80	C3-S1	-5.61	1.66	1.76
4	A	803	Z80	C3-S1	-5.60	1.66	1.76
4	A	803	Z80	C2-S1	-5.50	1.66	1.76
4	B	402	Z80	C2-S1	-5.46	1.67	1.76
4	A	801	Z80	C2-S1	-5.37	1.67	1.76

All (9) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	A	801	Z80	C12-N1-C4	-8.70	106.90	119.03
4	A	803	Z80	C12-N1-C4	-8.04	107.82	119.03
4	A	801	Z80	C3-S1-C2	7.23	118.33	100.34
4	A	803	Z80	C3-S1-C2	7.16	118.16	100.34
4	B	402	Z80	C12-N1-C4	-7.10	109.13	119.03
4	B	402	Z80	C3-S1-C2	7.07	117.92	100.34
4	A	801	Z80	C12-N1-C1	-6.95	109.34	119.03
4	A	803	Z80	C12-N1-C1	-6.26	110.31	119.03
4	B	402	Z80	C12-N1-C1	-6.02	110.64	119.03

There are no chirality outliers.

All (22) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	C	402	MPD	C2-C3-C4-C5
3	A	802	MPD	C2-C3-C4-O4
4	B	402	Z80	C13-C14-N2-C16
4	A	801	Z80	C13-C14-N2-C15
4	B	402	Z80	C13-C14-N2-C15
4	A	801	Z80	C13-C14-N2-C16
4	A	803	Z80	C12-C13-C14-N2
4	B	402	Z80	C12-C13-C14-N2
3	A	802	MPD	O2-C2-C3-C4
3	B	405	MPD	C1-C2-C3-C4
3	A	802	MPD	C2-C3-C4-C5
4	B	402	Z80	C13-C12-N1-C1
4	A	803	Z80	C13-C12-N1-C1
3	B	401	MPD	O2-C2-C3-C4
3	B	405	MPD	O2-C2-C3-C4
3	B	406	MPD	O2-C2-C3-C4

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Mol	Chain	Res	Type	Atoms
3	C	402	MPD	C2-C3-C4-O4
4	A	801	Z80	C13-C12-N1-C1
3	C	402	MPD	C1-C2-C3-C4
3	C	403	MPD	C1-C2-C3-C4
3	B	401	MPD	C1-C2-C3-C4
3	B	405	MPD	CM-C2-C3-C4

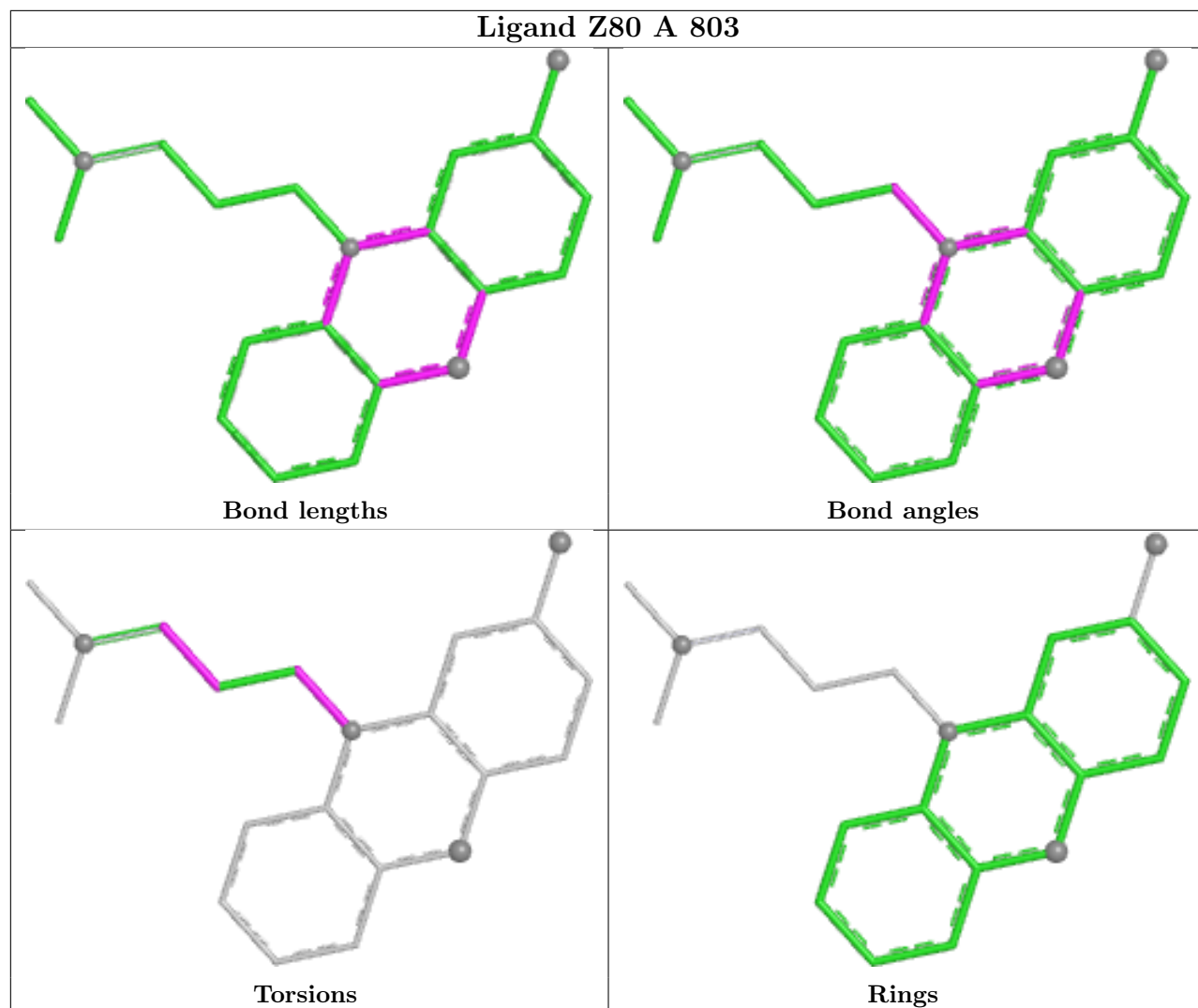
There are no ring outliers.

2 monomers are involved in 2 short contacts:

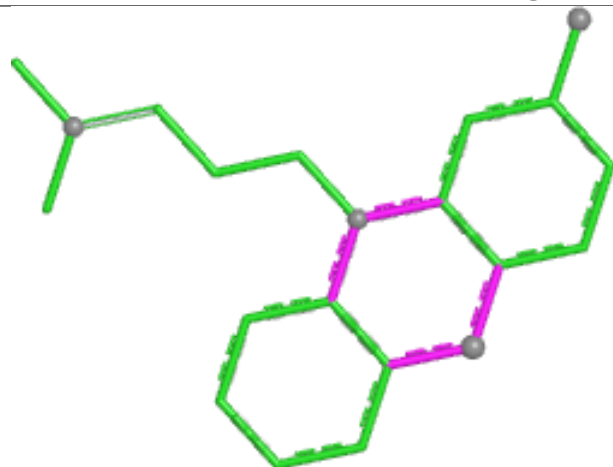
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	A	807	MPD	1	0
3	B	401	MPD	1	0

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.

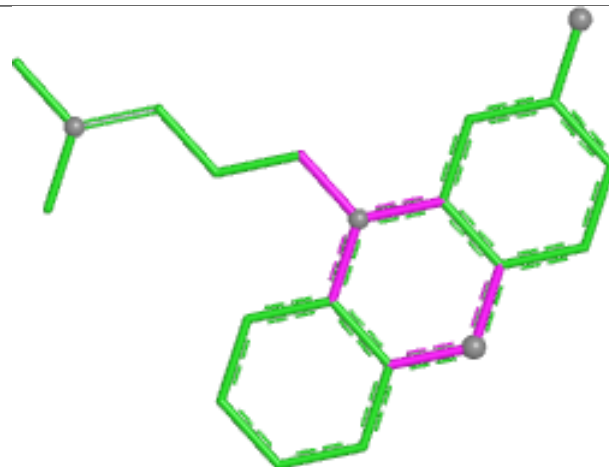
Ligand Z80 A 803



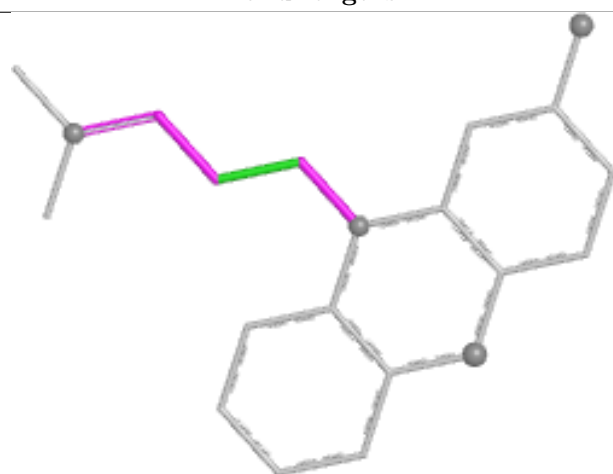
Ligand Z80 B 402



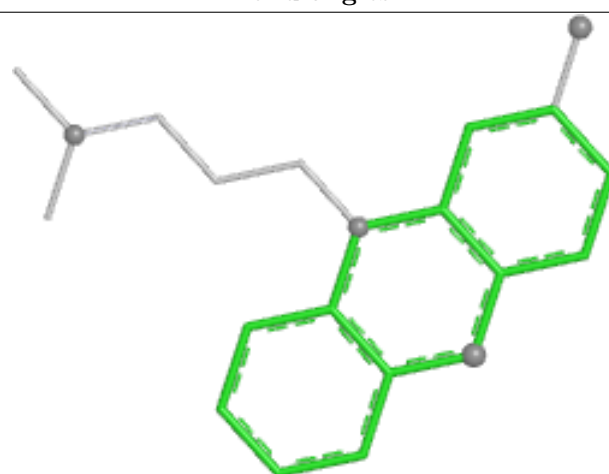
Bond lengths



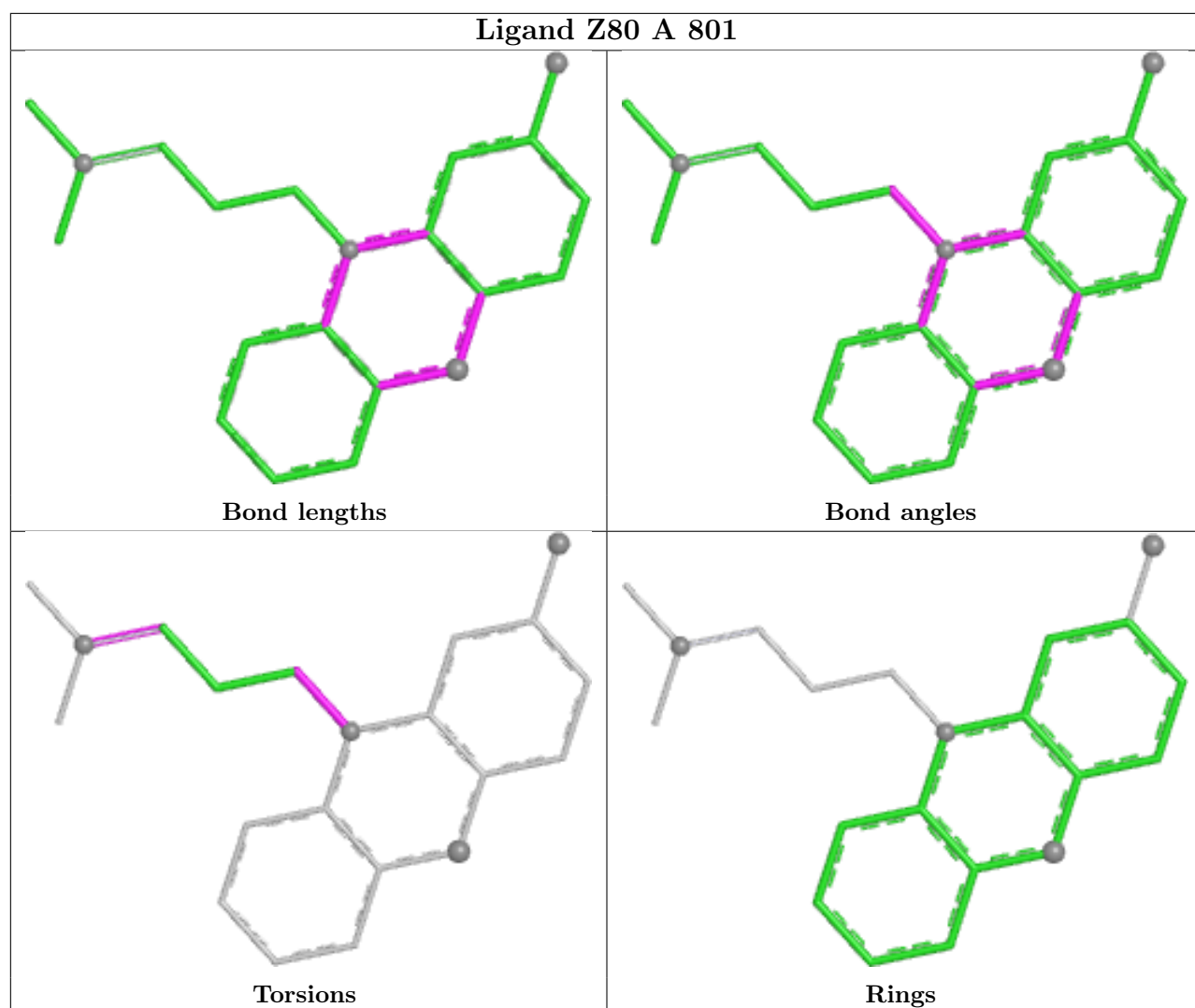
Bond angles



Torsions



Rings



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 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	373/395 (94%)	0.14	29 (7%)	19 17	24, 48, 92, 104	3 (0%)
1	B	373/395 (94%)	0.16	31 (8%)	17 15	23, 48, 93, 105	4 (1%)
1	C	373/395 (94%)	0.22	23 (6%)	26 24	24, 51, 90, 103	4 (1%)
All	All	1119/1185 (94%)	0.17	83 (7%)	20 18	23, 49, 92, 105	11 (0%)

All (83) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	384	THR	7.7
1	B	313	PHE	6.7
1	B	384	THR	6.6
1	C	313	PHE	6.2
1	C	353	LEU	6.1
1	A	313	PHE	5.0
1	B	245	ASN	4.8
1	A	384	THR	4.8
1	B	353	LEU	4.7
1	C	36	TYR	4.7
1	B	185	VAL	4.6
1	B	13	ALA	4.5
1	B	186	PRO	4.5
1	C	245	ASN	4.3
1	B	15	LEU	4.3
1	B	314	SER	4.2
1	A	245	ASN	4.1
1	A	185	VAL	3.9
1	C	15	LEU	3.9
1	A	188	SER	3.9
1	A	186	PRO	3.8
1	A	356	GLY	3.8
1	A	353	LEU	3.8

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Mol	Chain	Res	Type	RSRZ
1	A	15	LEU	3.7
1	C	13	ALA	3.6
1	A	36	TYR	3.5
1	C	12	GLN	3.5
1	C	244	GLN	3.5
1	B	14	ALA	3.4
1	C	185	VAL	3.4
1	A	244	GLN	3.4
1	B	36	TYR	3.3
1	A	13	ALA	3.3
1	B	312	ASN	3.3
1	C	186	PRO	3.3
1	A	12	GLN	3.3
1	B	244	GLN	3.2
1	C	311	ALA	3.1
1	A	281	LEU	3.1
1	B	357	ASN	3.1
1	A	14	ALA	3.1
1	A	184	ASN	3.1
1	B	311	ALA	3.1
1	A	355	TYR	3.1
1	B	369[A]	GLN	3.0
1	A	311	ALA	2.9
1	B	184	ASN	2.9
1	C	281	LEU	2.9
1	B	62	VAL	2.8
1	A	315	ASP	2.7
1	B	246	GLY	2.6
1	B	281	LEU	2.5
1	A	189	LYS	2.5
1	A	187	GLN	2.5
1	A	314	SER	2.5
1	B	12	GLN	2.5
1	C	312	ASN	2.5
1	C	310	THR	2.4
1	B	383	ARG	2.4
1	B	355	TYR	2.4
1	A	246	GLY	2.4
1	A	351	TYR	2.4
1	A	242	VAL	2.3
1	C	383	ARG	2.3
1	B	356	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
1	C	14	ALA	2.3
1	B	351	TYR	2.3
1	A	16	ARG	2.3
1	B	354	GLN	2.3
1	C	187	GLN	2.2
1	B	187	GLN	2.2
1	C	188	SER	2.2
1	A	312	ASN	2.2
1	C	81	ALA	2.2
1	C	314	SER	2.2
1	B	242	VAL	2.1
1	A	352	THR	2.1
1	C	247	TYR	2.1
1	B	20	ALA	2.1
1	C	315	ASP	2.1
1	B	19	GLN	2.1
1	A	354	GLN	2.0
1	B	16	ARG	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, 95th 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
3	MPD	C	402	8/8	0.66	0.34	72,90,108,108	0
3	MPD	A	807	8/8	0.68	0.36	74,93,110,118	0
2	NA	A	808	1/1	0.74	0.26	69,69,69,69	0
3	MPD	B	406	8/8	0.76	0.33	75,92,104,115	0
3	MPD	A	806	8/8	0.77	0.22	51,71,91,97	0

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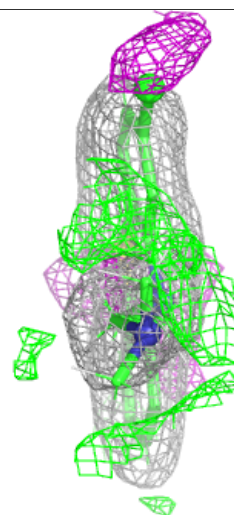
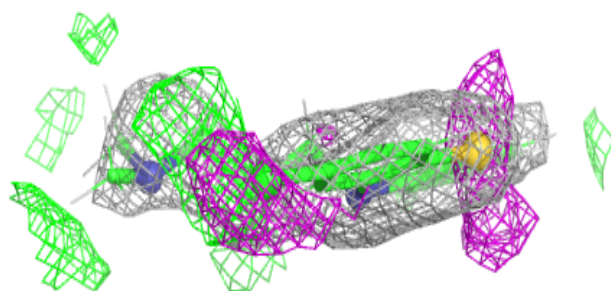
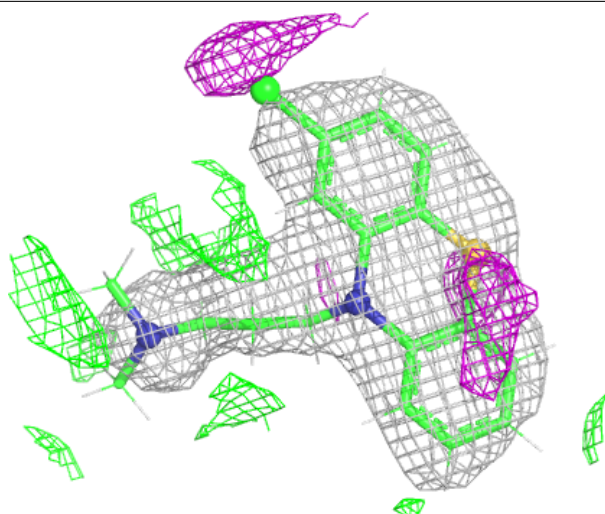
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
3	MPD	B	408	8/8	0.77	0.25	63,80,89,103	0
3	MPD	B	405	8/8	0.79	0.28	81,97,104,105	0
3	MPD	B	401	8/8	0.80	0.26	66,86,96,105	0
4	Z80	A	801	21/21	0.80	0.25	50,79,109,110	0
4	Z80	B	402	21/21	0.81	0.23	49,75,99,117	0
3	MPD	C	403	8/8	0.81	0.22	71,90,98,117	0
3	MPD	A	802	8/8	0.82	0.24	78,94,101,101	0
4	Z80	A	803	21/21	0.83	0.23	50,76,116,123	0
2	NA	C	401	1/1	0.86	0.14	72,72,72,72	0
3	MPD	B	407	8/8	0.89	0.17	55,66,72,84	0
5	CL	B	410	1/1	0.91	0.13	62,62,62,62	0
2	NA	B	403	1/1	0.92	0.09	68,68,68,68	0
2	NA	B	404	1/1	0.93	0.09	60,60,60,60	0
2	NA	A	805	1/1	0.96	0.07	61,61,61,61	0
5	CL	B	409	1/1	0.98	0.05	38,38,38,38	0
5	CL	A	804	1/1	0.98	0.14	47,47,47,47	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.

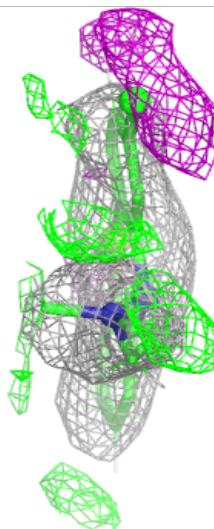
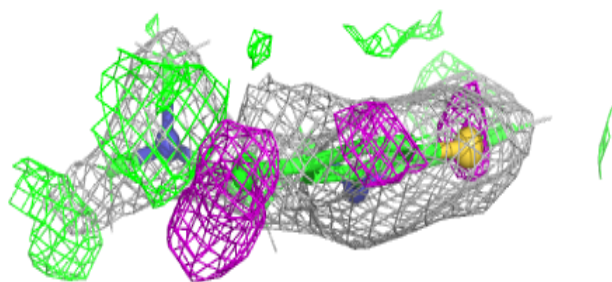
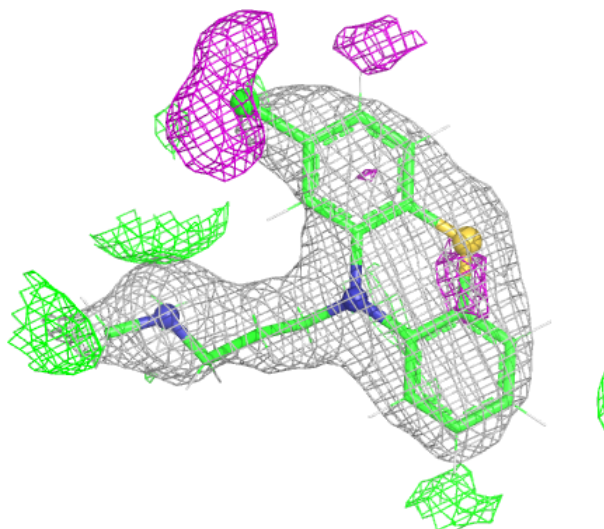
Electron density around Z80 A 801:

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



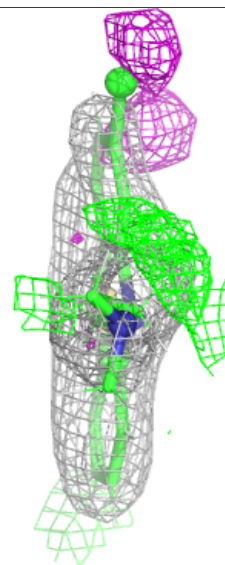
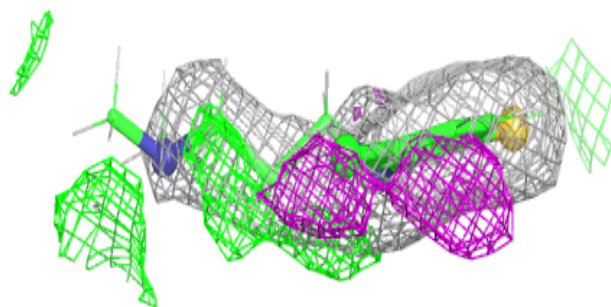
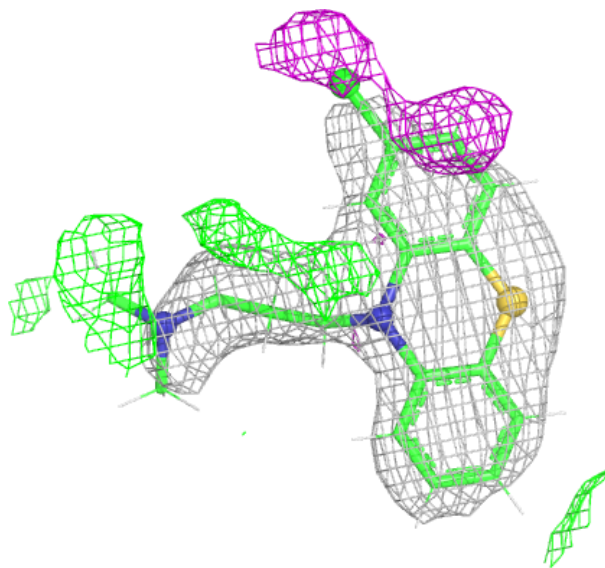
Electron density around Z80 B 402:

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



Electron density around Z80 A 803:

$2mF_o-DF_c$ (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.