

wwPDB X-ray Structure Validation Summary Report (i)

Jan 23, 2023 – 12:31 pm GMT

PDB ID	:	7ZOB
Title	:	Metagenomic cytidine deaminase Cdd
Authors	:	Tamulaitiene, G.; Urbeliene, N.; Meskys, R.
Deposited on	:	2022-04-25
Resolution	:	1.20 Å(reported)

This is a wwPDB X-ray Structure Validation Summary 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 (1)) were used in the production of this report:

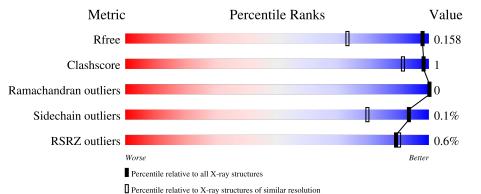
MolProbity		4 02b-467
·		
Mogul	:	1.8.4, CSD as 541 be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.31.3
buster-report	:	1.1.7(2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.3

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure: $X\text{-}RAY \, DIFFRACTION$

The reported resolution of this entry is 1.20 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	$\begin{array}{c} \textbf{Whole archive} \\ (\#\textbf{Entries}) \end{array}$	${f Similar\ resolution}\ (\#{ m Entries,\ resolution\ range}({ m \AA}))$
R_{free}	130704	1223 (1.22-1.18)
Clashscore	141614	1286 (1.22-1.18)
Ramachandran outliers	138981	1240 (1.22-1.18)
Sidechain outliers	138945	1239 (1.22-1.18)
RSRZ outliers	127900	1200 (1.22-1.18)

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	А	140	93% • •
1	В	140	94% ••
1	С	140	% 94% · ·
1	D	140	93% • •
1	Е	140	97%



Mol	Chain	Length	Quality of chain	
1	F	140	% • • • •	
1	G	140	% 94%	•
1	Н	140	% 95% • •	•



2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 9653 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.

Mol	Chain	Residues		At	oms			ZeroOcc	AltConf	Trace
1	Δ	134	Total	С	Ν	0	S	0	11	0
1	А	154	1091	680	180	222	9	0	11	0
1	В	134	Total	С	Ν	0	S	0	7	0
	D	104	1066	665	177	216	8	0	1	0
1	С	134	Total	С	Ν	0	S	0	13	0
	U		1102	685	182	226	9	0	19	0
1	D	134	Total	С	Ν	0	S	0	9	0
		104	1081	673	179	221	8			U
1	Е	136	Total	С	Ν	0	S	0	14	0
	Ľ	130	1129	702	190	228	9			
1	F	134	Total	С	Ν	0	S	0	11	0
	Г	104	1096	684	183	220	9	0		0
1	C	125	Total	С	Ν	0	S	0	16	0
	1 G	135	1146	710	191	237	8		16	U
1	Н	134	Total	С	Ν	0	S	0	10	0
	11	104	1082	677	181	215	9		10	U

• Molecule 1 is a protein called Metagenomic cytidine deaminase Cdd.

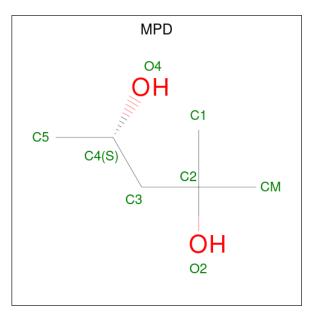
• Molecule 2 is ZINC ION (three-letter code: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	А	1	Total Zn 1 1	0	0
2	В	1	Total Zn 1 1	0	0
2	С	1	Total Zn 1 1	0	0
2	D	1	Total Zn 1 1	0	0
2	Е	1	Total Zn 1 1	0	0
2	F	1	Total Zn 1 1	0	0



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	G	1	Total Zn 1 1	0	0
2	Н	1	Total Zn 1 1	0	0

• Molecule 3 is (4S)-2-METHYL-2,4-PENTANEDIOL (three-letter code: MPD) (formula: $C_6H_{14}O_2$).

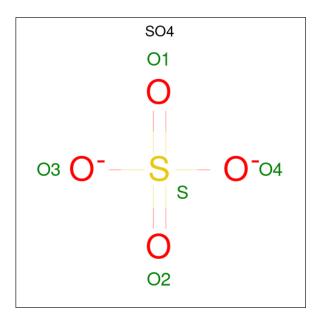


Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	А	1	$\begin{array}{ccc} \text{Total} & \text{C} & \text{O} \\ 8 & 6 & 2 \end{array}$	0	0
3	А	1	$\begin{array}{ccc} \text{Total} & \text{C} & \text{O} \\ 8 & 6 & 2 \end{array}$	0	0
3	В	1	$\begin{array}{ccc} \text{Total} & \text{C} & \text{O} \\ 8 & 6 & 2 \end{array}$	0	0
3	В	1	$\begin{array}{ccc} \text{Total} & \text{C} & \text{O} \\ 8 & 6 & 2 \end{array}$	0	0
3	С	1	$\begin{array}{ccc} \text{Total} & \text{C} & \text{O} \\ 8 & 6 & 2 \end{array}$	0	0
3	С	1	$\begin{array}{ccc} \text{Total} \text{C} \text{O} \\ 8 6 2 \end{array}$	0	0
3	D	1	$\begin{array}{ccc} \text{Total} & \text{C} & \text{O} \\ 8 & 6 & 2 \end{array}$	0	0
3	D	1	$\begin{array}{ccc} \text{Total} & \text{C} & \text{O} \\ 8 & 6 & 2 \end{array}$	0	0
3	Е	1	$\begin{array}{ccc} \text{Total} & \text{C} & \text{O} \\ 8 & 6 & 2 \end{array}$	0	0



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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	Е	1	$\begin{array}{ccc} \text{Total} & \text{C} & \text{O} \\ 8 & 6 & 2 \end{array}$	0	0
3	F	1	$\begin{array}{ccc} \text{Total} & \text{C} & \text{O} \\ 8 & 6 & 2 \end{array}$	0	0
3	F	1	$\begin{array}{ccc} \text{Total} & \text{C} & \text{O} \\ 8 & 6 & 2 \end{array}$	0	0
3	G	1	$\begin{array}{ccc} \text{Total} & \text{C} & \text{O} \\ 8 & 6 & 2 \end{array}$	0	0
3	G	1	$\begin{array}{ccc} \text{Total} & \text{C} & \text{O} \\ 8 & 6 & 2 \end{array}$	0	0
3	Н	1	$\begin{array}{ccc} \text{Total} & \text{C} & \text{O} \\ 8 & 6 & 2 \end{array}$	0	0
3	Н	1	$\begin{array}{ccc} \text{Total} & \text{C} & \text{O} \\ 8 & 6 & 2 \end{array}$	0	0



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	Е	1	$\begin{array}{ccc} \text{Total} & \text{O} & \text{S} \\ 5 & 4 & 1 \end{array}$	0	0
4	Е	1	$\begin{array}{ccc} \text{Total} & \text{O} & \text{S} \\ 5 & 4 & 1 \end{array}$	0	0

• Molecule 5 is water.



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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	А	79	Total O 79 79	0	0
5	В	94	Total O 94 94	0	0
5	С	84	Total O 84 84	0	0
5	D	92	Total O 92 92	0	0
5	Е	92	Total O 92 92	0	0
5	F	90	Total O 90 90	0	0
5	G	94	Total O 94 94	0	0
5	Н	89	Total O 89 89	0	0



3 Residue-property plots (i)

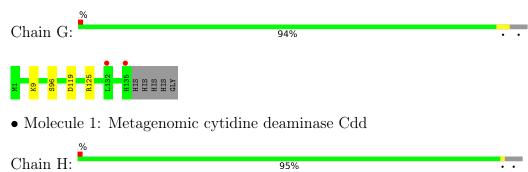
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density.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

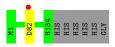
• Molecule 1: Metagenomic cytidine deaminase Cdd

Chain A:	93%	• •
M1 N2 D5 A17 H25	HIS HIS HIS HIS HIS HIS CLY	
• Molecule 1	1: Metagenomic cytidine deaminase Cdd	
Chain B:	94%	
M1 159 172 H134 H134 H15 H15	HIS HIS GLT GLT	
• Molecule 1	1: Metagenomic cytidine deaminase Cdd	
Chain C:	94%	•••
M1 N2 A17 H25 B80	HIS HIS HIS HIS HIS HIS HIS HIS HIS HIS	
• Molecule 1	1: Metagenomic cytidine deaminase Cdd	
Chain D:	93%	• •
M1 K9 L39 159 172	HIS HIS HIS HIS HIS HIS HIS HIS HIS HIS	
• Molecule 1	1: Metagenomic cytidine deaminase Cdd	
Chain E:	97%	·
M1 H136 H158 H158 H158 H158 GLY		
• Molecule	1: Metagenomic cytidine deaminase Cdd	
Chain F:	95%	• •
	PROTEIN DATA BANK	



• Molecule 1: Metagenomic cytidine deaminase Cdd







4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Depositor
Resolution (Å)	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	Depositor EDS
% Data completeness	98.9(60.72 - 1.20)	Depositor
(in resolution range)	99.7 (64.45 - 1.20)	EDS
R _{merge}	(Not available)	Depositor
R _{sym}	0.06	Depositor
$< I/\sigma(I) > 1$	5.70 (at 1.20Å)	Xtriage
Refinement program	PHENIX phenix-1.19.2-4158	Depositor
D D	0.145 , 0.161	Depositor
R, R_{free}	0.142 , 0.158	DCC
R_{free} test set	36876 reflections $(9.91%)$	wwPDB-VP
Wilson B-factor $(Å^2)$	13.0	Xtriage
Anisotropy	0.326	Xtriage
Bulk solvent $k_{sol}(e/Å^3)$, $B_{sol}(Å^2)$	0.38, 39.1	EDS
L-test for twinning ²	$< L >=0.49, < L^2>=0.32$	Xtriage
Estimated twinning fraction	0.479 for -h,-k,l	Xtriage
F_o, F_c correlation	0.97	EDS
Total number of atoms	9653	wwPDB-VP
Average B, all atoms $(Å^2)$	18.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: The largest off-origin peak in the Patterson function is 14.05% of the height of the origin peak. No significant pseudotranslation is detected.

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.



¹Intensities estimated from amplitudes.

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: ZN, MPD, SO4

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	
	Unam	RMSZ	# Z > 5	RMSZ	# Z > 5
1	А	0.41	0/1110	0.64	0/1503
1	В	0.46	0/1082	0.66	0/1464
1	С	0.42	0/1121	0.64	0/1519
1	D	0.45	0/1097	0.66	0/1485
1	Ε	0.42	0/1146	0.64	0/1556
1	F	0.42	0/1114	0.65	0/1507
1	G	0.44	0/1164	0.64	0/1578
1	Н	0.42	0/1100	0.65	0/1489
All	All	0.43	0/8934	0.65	0/12101

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	А	1091	0	1027	2	0
1	В	1066	0	1014	2	0
1	С	1102	0	1032	1	0
1	D	1081	0	1017	2	0
1	Е	1129	0	1053	0	0



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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	F	1096	0	1036	1	0
1	G	1146	0	1073	2	0
1	Н	1082	0	1021	1	0
2	А	1	0	0	0	0
2	В	1	0	0	0	0
2	С	1	0	0	0	0
2	D	1	0	0	0	0
2	Е	1	0	0	0	0
2	F	1	0	0	0	0
2	G	1	0	0	0	0
2	Н	1	0	0	0	0
3	А	16	0	28	0	0
3	В	16	0	28	0	0
3	С	16	0	28	0	0
3	D	16	0	28	0	0
3	Е	16	0	28	0	0
3	F	16	0	28	0	0
3	G	16	0	28	0	0
3	Н	16	0	28	0	0
4	Е	10	0	0	0	0
5	А	79	0	0	0	0
5	В	94	0	0	0	0
5	С	84	0	0	0	0
5	D	92	0	0	0	0
5	Е	92	0	0	0	0
5	F	90	0	0	1	0
5	G	94	0	0	0	0
5	Н	89	0	0	1	0
All	All	9653	0	8497	11	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.

The worst 5 of 11 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:2:ASN:ND2	1:A:5:ASP:OD2	2.31	0.63
1:F:82[B]:ASP:OD1	5:F:301:HOH:O	2.17	0.57
1:D:59[B]:ILE:HD11	1:D:72:ILE:HD13	1.91	0.53
1:B:59[B]:ILE:HD11	1:B:72:ILE:HD13	1.92	0.51
1:C:17:ALA:HB3	1:C:25:HIS:CD2	2.52	0.44



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	Perce	ntiles
1	А	143/140~(102%)	141 (99%)	2(1%)	0	100	100
1	В	139/140~(99%)	139 (100%)	0	0	100	100
1	С	145/140~(104%)	145 (100%)	0	0	100	100
1	D	141/140 (101%)	141 (100%)	0	0	100	100
1	Ε	149/140~(106%)	147~(99%)	2(1%)	0	100	100
1	F	143/140~(102%)	143 (100%)	0	0	100	100
1	G	149/140~(106%)	149 (100%)	0	0	100	100
1	Н	142/140~(101%)	140 (99%)	2(1%)	0	100	100
All	All	1151/1120~(103%)	1145 (100%)	6 (0%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent side chain 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 side chain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	А	113/112 (101%)	113 (100%)	0	100 100	
1	В	110/112~(98%)	110 (100%)	0	100 100	
1	С	114/112~(102%)	114 (100%)	0	100 100	
1	D	111/112 (99%)	111 (100%)	0	100 100	



Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	Ε	115/112~(103%)	115 (100%)	0	100	100
1	F	113/112~(101%)	113 (100%)	0	100	100
1	G	120/112~(107%)	119 (99%)	1 (1%)	81	55
1	Н	110/112~(98%)	110 (100%)	0	100	100
All	All	906/896~(101%)	905 (100%)	1 (0%)	93	80

All (1) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	G	119	ASP

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

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 monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 26 ligands modelled in this entry, 8 are monoatomic - leaving 18 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		
WIOI	туре	Ullain		LIIIK	Counts	RMSZ	# Z >2	Counts	RMSZ	# Z > 2
3	MPD	А	201	-	$7,\!7,\!7$	0.28	0	$9,\!10,\!10$	0.31	0
3	MPD	Е	202	-	7,7,7	0.53	0	9,10,10	0.70	0
3	MPD	Е	203	-	7,7,7	0.23	0	$9,\!10,\!10$	0.16	0
3	MPD	Н	201	-	7,7,7	0.22	0	9,10,10	0.18	0
3	MPD	С	201	-	7,7,7	0.26	0	9,10,10	0.34	0
4	SO4	Е	205	-	4,4,4	0.31	0	$6,\!6,\!6$	0.26	0
4	SO4	Е	204	-	4,4,4	0.29	0	$6,\!6,\!6$	0.16	0
3	MPD	А	202	-	7,7,7	0.44	0	9,10,10	0.75	0
3	MPD	В	202	-	7,7,7	0.23	0	9,10,10	0.29	0
3	MPD	D	201	-	7,7,7	0.21	0	9,10,10	0.31	0
3	MPD	F	202	-	7,7,7	0.44	0	9,10,10	0.65	0
3	MPD	F	201	-	7,7,7	0.22	0	9,10,10	0.21	0
3	MPD	С	202	-	7,7,7	0.27	0	9,10,10	0.46	0
3	MPD	G	202	-	7,7,7	0.24	0	9,10,10	0.15	0
3	MPD	Н	202	-	7,7,7	0.46	0	9,10,10	0.71	0
3	MPD	G	201	-	7,7,7	0.55	0	9,10,10	0.69	0
3	MPD	D	202	-	7,7,7	0.35	0	9,10,10	0.64	0
3	MPD	В	201	-	7,7,7	0.31	0	9,10,10	0.64	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	А	201	-	-	2/5/5/5	-
3	MPD	Е	202	-	-	0/5/5/5	-
3	MPD	Ε	203	-	-	2/5/5/5	-
3	MPD	Н	201	-	-	2/5/5/5	-
3	MPD	С	201	-	-	2/5/5/5	-
3	MPD	А	202	-	-	0/5/5/5	-
3	MPD	В	202	-	-	2/5/5/5	-
3	MPD	D	201	-	-	2/5/5/5	-
3	MPD	F	202	-	-	0/5/5/5	-
3	MPD	F	201	-	-	2/5/5/5	-
3	MPD	С	202	-	-	0/5/5/5	-
3	MPD	G	202	-	-	2/5/5/5	-
3	MPD	Н	202	-	-	0/5/5/5	-
3	MPD	G	201	-	-	0/5/5/5	-
3	MPD	D	202	-	-	0/5/5/5	-
3	MPD	В	201	-	-	0/5/5/5	-



There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

5 of 16 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	С	201	MPD	C2-C3-C4-O4
3	А	201	MPD	C2-C3-C4-C5
3	В	202	MPD	C2-C3-C4-C5
3	С	201	MPD	C2-C3-C4-C5
3	D	201	MPD	C2-C3-C4-C5

There are no ring outliers.

No monomer is involved in short contacts.

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 (i)

6.1 Protein, DNA and RNA chains (i)

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	$\langle RSRZ \rangle$	#RSRZ>2	$\mathbf{OWAB}(\mathrm{\AA}^2)$	Q < 0.9
1	А	134/140~(95%)	0.04	0 100 100	11, 17, 30, 41	0
1	В	134/140~(95%)	-0.05	0 100 100	10, 14, 28, 32	0
1	С	134/140~(95%)	0.14	2 (1%) 73 74	11, 17, 30, 39	0
1	D	134/140~(95%)	-0.08	0 100 100	10, 14, 27, 32	0
1	Е	136/140~(97%)	0.03	0 100 100	11, 16, 30, 34	0
1	F	134/140~(95%)	0.03	1 (0%) 87 87	11, 16, 29, 37	0
1	G	135/140~(96%)	0.11	2 (1%) 73 74	11, 16, 31, 39	0
1	Н	134/140~(95%)	0.08	1 (0%) 87 87	11, 16, 27, 37	0
All	All	1075/1120~(95%)	0.04	6 (0%) 89 90	10, 16, 30, 41	0

The worst 5 of 6 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	G	132	LEU	2.6
1	С	2	ASN	2.3
1	С	80	ASP	2.1
1	Н	82[A]	ASP	2.1
1	F	82[B]	ASP	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.



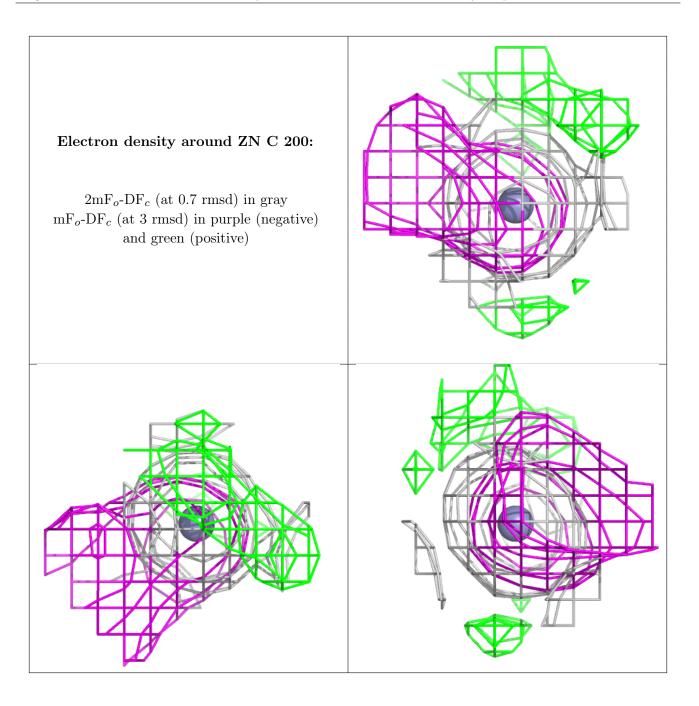
6.4 Ligands (i)

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.

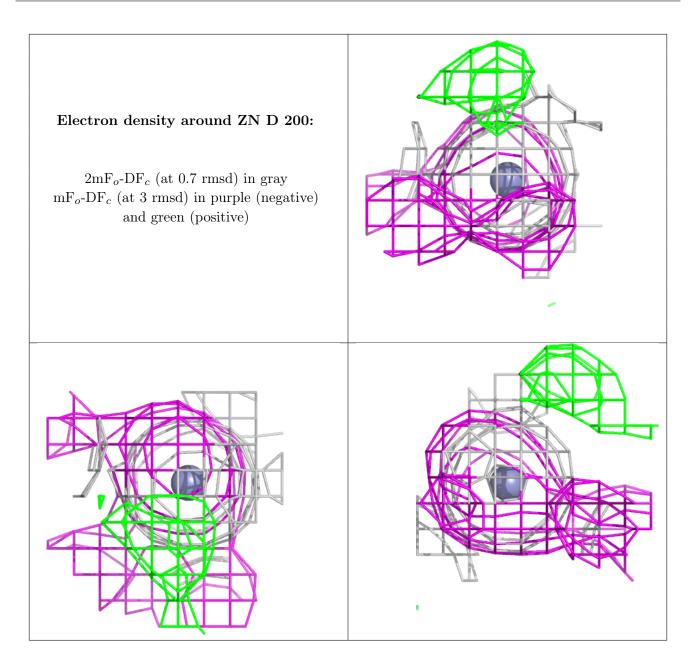
Mol	Type	Chain	Res	Atoms	RSCC	RSR	$\operatorname{B-factors}(\operatorname{\AA}^2)$	Q < 0.9
4	SO4	Е	204	5/5	0.87	0.18	17,17,20,20	5
4	SO4	Е	205	5/5	0.91	0.14	18,18,20,21	5
3	MPD	Н	201	8/8	0.92	0.12	11,12,14,14	0
3	MPD	С	202	8/8	0.93	0.11	$12,\!14,\!15,\!17$	0
3	MPD	G	201	8/8	0.94	0.09	12,13,14,15	0
3	MPD	Е	202	8/8	0.96	0.07	12,13,14,15	0
3	MPD	Е	203	8/8	0.96	0.09	11,12,13,14	0
3	MPD	В	202	8/8	0.96	0.08	10,12,12,13	0
3	MPD	С	201	8/8	0.96	0.09	11,12,13,14	0
3	MPD	Н	202	8/8	0.96	0.08	13,13,14,16	0
3	MPD	А	201	8/8	0.96	0.09	12,12,13,14	0
3	MPD	D	202	8/8	0.96	0.07	12,12,13,14	0
3	MPD	В	201	8/8	0.97	0.07	12,13,13,14	0
3	MPD	G	202	8/8	0.97	0.06	11,12,13,14	0
3	MPD	F	201	8/8	0.98	0.08	11,13,14,14	0
3	MPD	F	202	8/8	0.98	0.06	13,13,14,15	0
3	MPD	D	201	8/8	0.98	0.06	10,11,12,13	0
3	MPD	А	202	8/8	0.98	0.06	12,14,15,16	0
2	ZN	С	200	1/1	1.00	0.03	11,11,11,11	0
2	ZN	D	200	1/1	1.00	0.05	11,11,11,11	0
2	ZN	Е	201	1/1	1.00	0.04	12,12,12,12	0
2	ZN	F	200	1/1	1.00	0.04	12,12,12,12	0
2	ZN	G	200	1/1	1.00	0.03	12,12,12,12	0
2	ZN	Н	200	1/1	1.00	0.04	11,11,11,11	0
2	ZN	А	200	1/1	1.00	0.04	12,12,12,12	0
2	ZN	В	200	1/1	1.00	0.04	11,11,11,11	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.

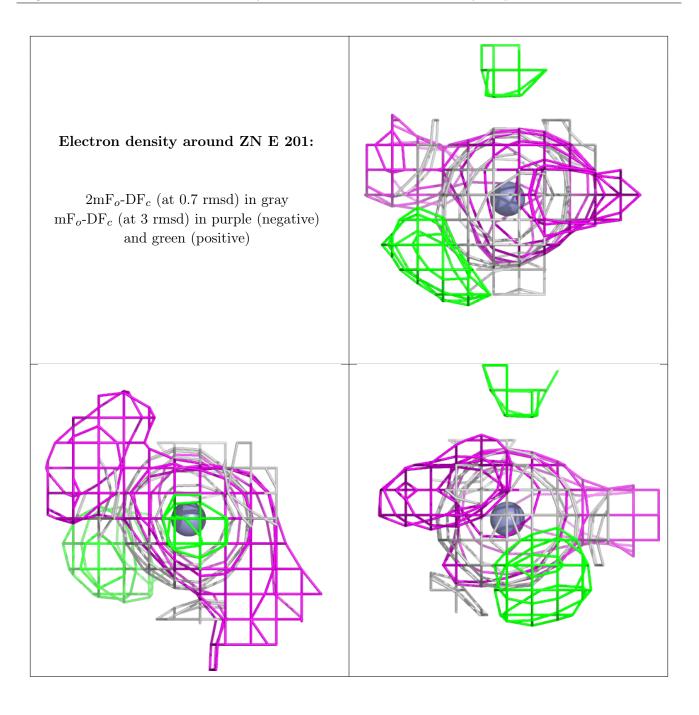




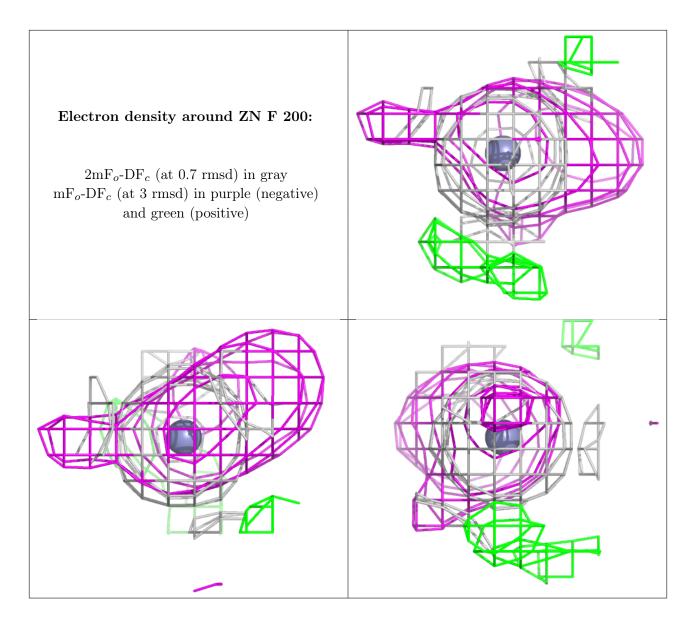




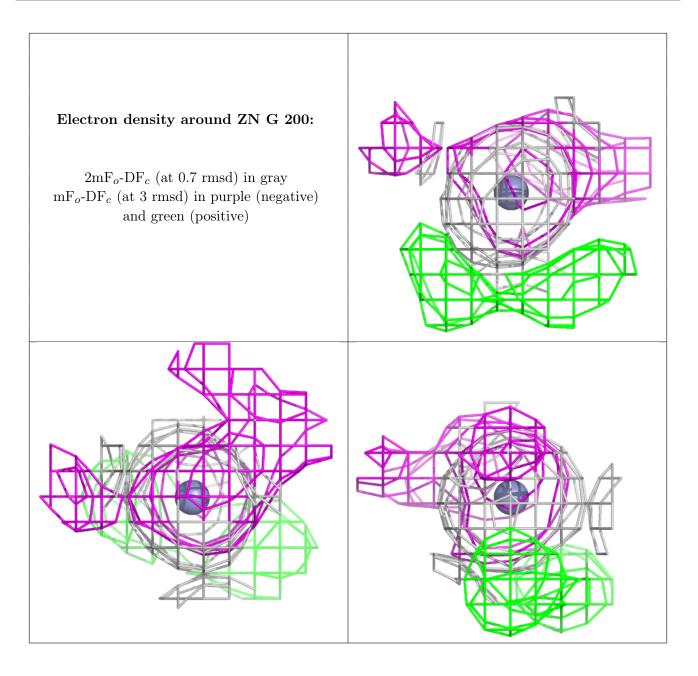




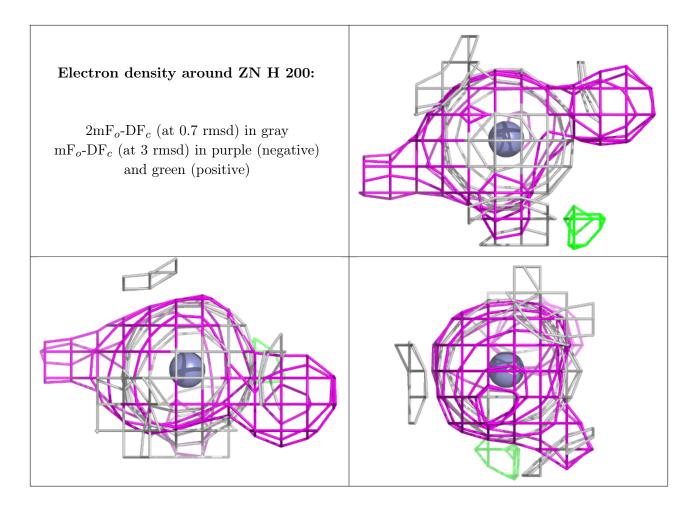




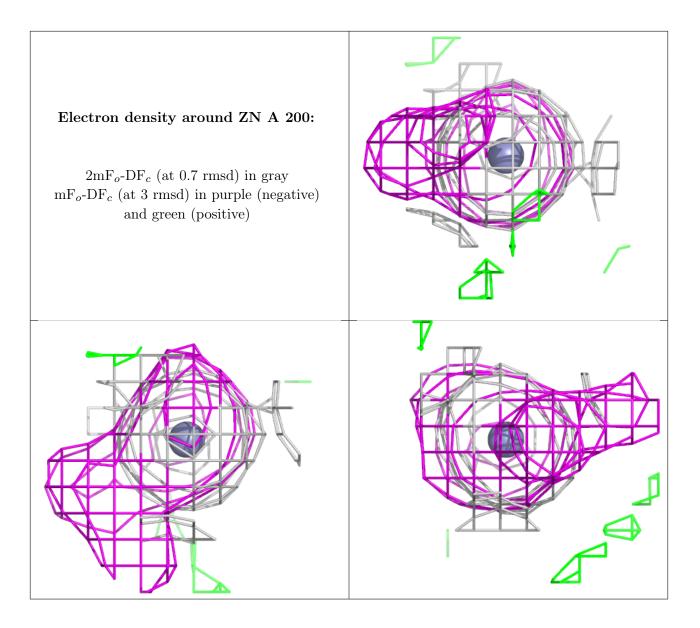




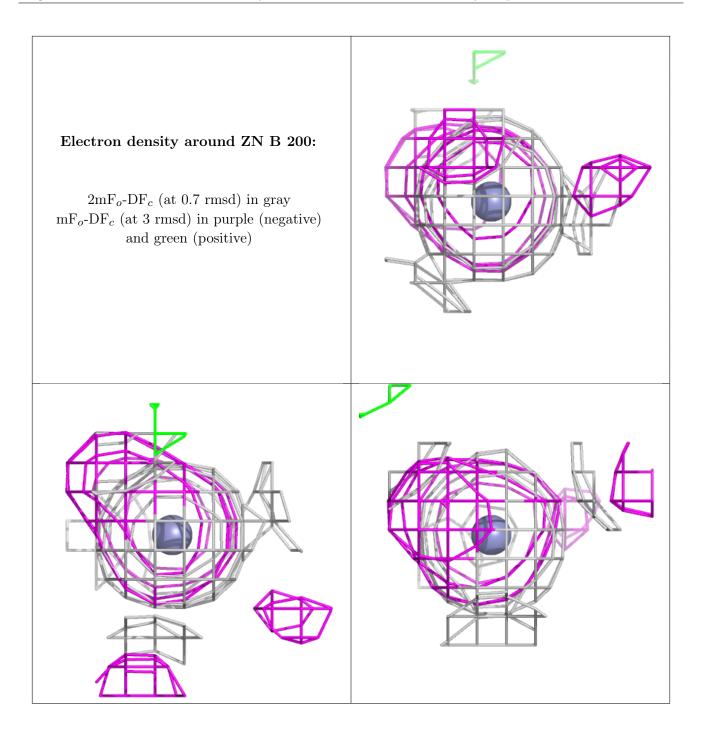












6.5 Other polymers (i)

There are no such residues in this entry.

