

# wwPDB X-ray Structure Validation Summary Report (i)

#### Jan 8, 2024 – 12:44 pm GMT

PDB ID	:	5O6H
Title	:	Human NMT1 in complex with myristoyl-CoA and inhibitor IMP-917
Authors	:	Brannigan, J.A.; Wilkinson, A.J.
Deposited on		
Resolution	:	1.29 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:

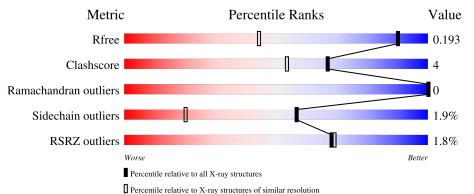
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

# 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 1.29 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	$egin{array}{c} { m Whole \ archive} \ (\#{ m Entries}) \end{array}$	${f Similar\ resolution}\ (\#{ m Entries,\ resolution\ range}({ m \AA}))$
$R_{free}$	130704	1058 (1.30-1.30)
Clashscore	141614	1101 (1.30-1.30)
Ramachandran outliers	138981	1058 (1.30-1.30)
Sidechain outliers	138945	1058 (1.30-1.30)
RSRZ outliers	127900	1029 (1.30-1.30)

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	391	2% <b>8</b> 4%	13%	••			
1	В	391	2% <b>8</b> 4%	13%	••			

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
3	PO4	А	2003	-	Х	-	-
3	PO4	В	2002	-	Х	-	-
6	GOL	В	2010	-	Х	-	-



# 2 Entry composition (i)

There are 8 unique types of molecules in this entry. The entry contains 7829 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.

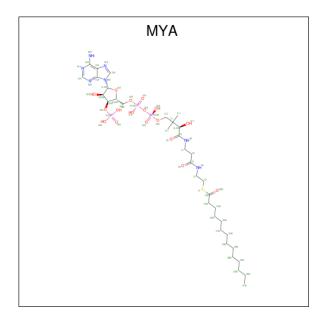
• Molecule 1 is a protein called Glycylpeptide N-tetradecanoyltransferase 1.

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf	Trace		
1	А	382	Total 3298	C 2145	1,	O 583	S 17	0	28	0
1	В	382	Total 3261	C 2122		O 577	${ m S}$ 17	0	23	0

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
А	106	GLY	-	expression tag	UNP P30419
А	107	PRO	-	expression tag	UNP P30419
А	108	HIS	-	expression tag	UNP P30419
В	106	GLY	-	expression tag	UNP P30419
В	107	PRO	-	expression tag	UNP P30419
В	108	HIS	-	expression tag	UNP P30419

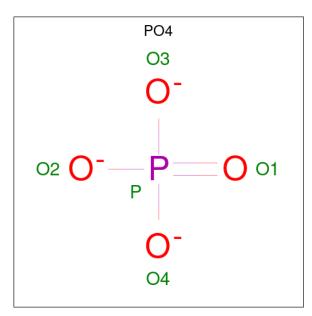
• Molecule 2 is TETRADECANOYL-COA (three-letter code: MYA) (formula:  $C_{35}H_{62}N_7O_{17}P_3S$ ).





Mol	Chain	Residues	Atoms				ZeroOcc	AltConf		
2	Δ	1	Total	С	Ν	Ο	Р	S	0	0
	A		63	35	7	17	3	1	0	0
0	р	1	Total	С	Ν	Ο	Р	S	0	0
	В	1	63	35	7	17	3	1	0	0

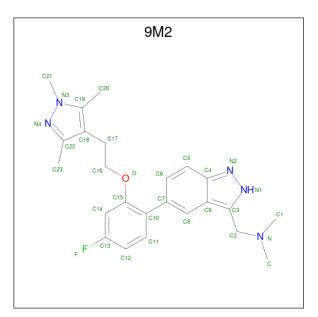
• Molecule 3 is PHOSPHATE ION (three-letter code: PO4) (formula:  $O_4P$ ).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	А	1	$\begin{array}{ccc} \text{Total} & \text{O} & \text{P} \\ 5 & 4 & 1 \end{array}$	0	0
3	А	1	$\begin{array}{ccc} \text{Total} & \text{O} & \text{P} \\ 5 & 4 & 1 \end{array}$	0	0
3	А	1	$\begin{array}{ccc} \text{Total} & \text{O} & \text{P} \\ 5 & 4 & 1 \end{array}$	0	0
3	В	1	$\begin{array}{ccc} \text{Total} & \text{O} & \text{P} \\ 5 & 4 & 1 \end{array}$	0	0
3	В	1	$\begin{array}{ccc} \text{Total} & \text{O} & \text{P} \\ 5 & 4 & 1 \end{array}$	0	0
3	В	1	$\begin{array}{ccc} \text{Total} & \text{O} & \text{P} \\ 5 & 4 & 1 \end{array}$	0	0
3	В	1	$\begin{array}{ccc} \text{Total} & \text{O} & \text{P} \\ 5 & 4 & 1 \end{array}$	0	0
3	В	1	$\begin{array}{ccc} \text{Total} & \text{O} & \text{P} \\ 5 & 4 & 1 \end{array}$	0	0

• Molecule 4 is 1-[5-[4-fluoranyl-2-[2-(1,3,5-trimethylpyrazol-4-yl)ethoxy]phenyl]-2 {H}-indazo l-3-yl]- {N}, {N}-dimethyl-methanamine (three-letter code: 9M2) (formula:  $C_{24}H_{28}FN_5O$ ).



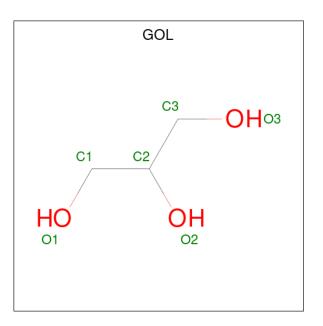


Mol	Chain	Residues	Atoms			ZeroOcc	AltConf		
4	Λ	1	Total	С	F	Ν	0	0	0
4	4 A		31	24	1	5	1	0	0
4	В	1	Total	С	F	Ν	Ο	0	0
4	D	1	31	24	1	5	1	0	0

• Molecule 5 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

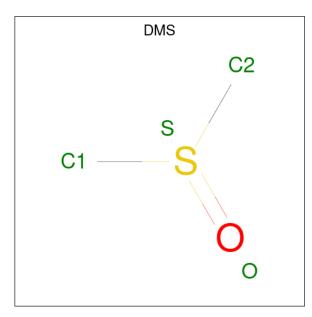
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	А	1	Total Mg 1 1	0	0
5	В	1	Total Mg 1 1	0	0





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

• Molecule 7 is DIMETHYL SULFOXIDE (three-letter code: DMS) (formula:  $\rm C_2H_6OS).$ 



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
7	А	1	Total 4	$\begin{array}{c} \mathrm{C} \\ \mathrm{2} \end{array}$	0 1	S 1	0	0



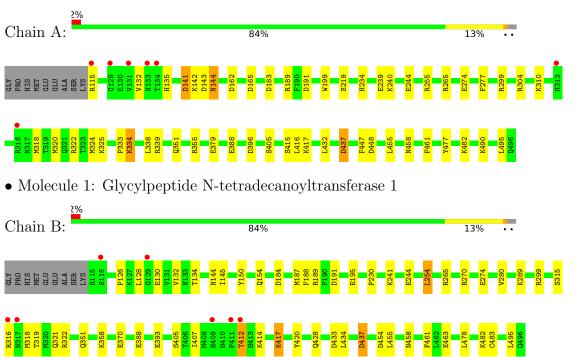
• Molecule 8 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
8	А	497	Total O 497 497	0	0
8	В	521	Total         O           521         521	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: Glycylpeptide N-tetradecanoyltransferase 1



## 4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 2	Depositor
Cell constants	79.14Å 178.85Å 58.47Å	Depositor
a, b, c, $\alpha$ , $\beta$ , $\gamma$	$90.00^{\circ}$ $90.00^{\circ}$ $90.00^{\circ}$	Depositor
Resolution (Å)	55.00 - 1.29	Depositor
Resolution (A)	55.57 - 1.29	EDS
% Data completeness	98.7 (55.00-1.29)	Depositor
(in resolution range)	98.7(55.57-1.29)	EDS
R <sub>merge</sub>	0.06	Depositor
R <sub>sym</sub>	(Not available)	Depositor
$< I/\sigma(I) > 1$	$1.84 (at 1.29 \text{\AA})$	Xtriage
Refinement program	REFMAC 5.8.0158	Depositor
$R, R_{free}$	0.164 , $0.193$	Depositor
It, Itfree	0.164 , $0.193$	DCC
$R_{free}$ test set	10300 reflections $(5.00\%)$	wwPDB-VP
Wilson B-factor ( $Å^2$ )	11.1	Xtriage
Anisotropy	0.904	Xtriage
Bulk solvent $k_{sol}(e/Å^3)$ , $B_{sol}(Å^2)$	0.33 , $42.7$	EDS
L-test for twinning <sup>2</sup>	$ < L >=0.48, < L^2>=0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
$F_o, F_c$ correlation	0.97	EDS
Total number of atoms	7829	wwPDB-VP
Average B, all atoms $(Å^2)$	17.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: The largest off-origin peak in the Patterson function is 13.94% of the height of the origin peak. No significant pseudotranslation is detected.

<sup>&</sup>lt;sup>2</sup>Theoretical 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.



<sup>&</sup>lt;sup>1</sup>Intensities 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: 9M2, MG, PO4, DMS, GOL, MYA

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	Bo	nd lengths	Bo	ond angles
IVIOI	Chain	RMSZ	# Z  > 5	RMSZ	# Z  > 5
1	А	1.37	8/3469~(0.2%)	1.33	31/4703~(0.7%)
1	В	1.37	10/3417~(0.3%)	1.53	24/4638~(0.5%)
All	All	1.37	18/6886~(0.3%)	1.43	55/9341~(0.6%)

The worst 5 of 18 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	А	388	GLU	CD-OE1	8.84	1.35	1.25
1	В	189	ARG	CD-NE	-8.02	1.32	1.46
1	В	388	GLU	CD-OE1	7.33	1.33	1.25
1	А	199	TRP	CG-CD1	7.14	1.46	1.36
1	А	415	SER	CB-OG	6.99	1.51	1.42

The worst 5 of 55 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	$Observed(^{o})$	$Ideal(^{o})$
1	В	189	ARG	NE-CZ-NH1	41.87	141.23	120.30
1	В	189	ARG	NE-CZ-NH2	-41.66	99.47	120.30
1	В	189	ARG	CD-NE-CZ	14.14	143.39	123.60
1	А	299	ARG	NE-CZ-NH2	-12.88	113.86	120.30
1	А	189	ARG	NE-CZ-NH1	-12.22	114.19	120.30

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



Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	А	3298	0	3362	31	0
1	В	3261	0	3313	25	0
2	А	63	0	58	0	0
2	В	63	0	58	0	0
3	А	15	0	0	0	0
3	В	25	0	0	0	0
4	А	31	0	0	0	0
4	В	31	0	0	0	0
5	А	1	0	0	0	0
5	В	1	0	0	0	0
6	А	6	0	8	0	0
6	В	12	0	16	0	0
7	А	4	0	6	0	0
8	А	497	0	0	8	0
8	В	521	0	0	5	0
All	All	7829	0	6821	53	0

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.

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 4.

The worst 5 of 53 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:318:MET:CE	1:A:322:ARG:HG3	1.71	1.20
1:A:318:MET:HE3	1:A:322:ARG:HG3	1.04	1.03
1:A:144[B]:ASN:HD21	1:B:351:GLN:NE2	1.60	0.99
1:A:318:MET:HE3	1:A:322:ARG:CG	1.95	0.97
1:B:280[B]:VAL:HG22	1:B:478:LEU:HD23	1.55	0.87

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.



Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percent	tiles
1	А	408/391~(104%)	399~(98%)	9(2%)	0	100	100
1	В	403/391~(103%)	394 (98%)	9(2%)	0	100	100
All	All	811/782 (104%)	793~(98%)	18 (2%)	0	100	100

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

There are no Ramachandran outliers to report.

#### 5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	А	376/355~(106%)	367~(98%)	9~(2%)	49 12
1	В	371/355~(104%)	363~(98%)	8 (2%)	52 15
All	All	747/710~(105%)	730~(98%)	17 (2%)	57 13

5 of 17 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	В	417[A]	LYS
1	В	455	LEU
1	А	334	LYS
1	А	455	LEU
1	В	154[A]	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (4) such sidechains are listed below:

Mol	Chain	Res	Type
1	А	135	HIS
1	А	351	GLN
1	А	380	ASN
1	В	351	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 monosaccharides in this entry.

### 5.6 Ligand geometry (i)

Of 18 ligands modelled in this entry, 2 are monoatomic - leaving 16 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with |Z| > 2 is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	B	ond leng	gths	B	ond ang	gles
	Type	Ullalli	ites		Counts	RMSZ	# Z >2	Counts	RMSZ	# Z >2
4	9M2	В	2007	-	31,34,34	1.84	8 (25%)	39,49,49	3.89	13 (33%)
6	GOL	В	2010	-	$5,\!5,\!5$	1.01	0	$5,\!5,\!5$	1.92	2 (40%)
2	MYA	В	2001	5	57,65,65	1.10	5 (8%)	68,91,91	1.24	7 (10%)
7	DMS	А	2008	-	$3,\!3,\!3$	0.61	0	3,3,3	1.07	0
2	MYA	А	2001	5	$57,\!65,\!65$	1.13	4 (7%)	68,91,91	1.25	7 (10%)
3	PO4	В	2004	-	4,4,4	0.77	0	6,6,6	1.87	2 (33%)
4	9M2	А	2005	-	31,34,34	2.01	10 (32%)	39,49,49	<mark>3.35</mark>	14 (35%)
6	GOL	В	2009	-	$5,\!5,\!5$	1.45	1 (20%)	$5,\!5,\!5$	1.03	0
3	PO4	В	2005	-	4,4,4	0.83	0	6,6,6	1.01	0
3	PO4	А	2002	-	$4,\!4,\!4$	1.98	1 (25%)	6,6,6	1.81	2 (33%)
3	PO4	В	2002	-	4,4,4	1.58	2 (50%)	6,6,6	1.68	2 (33%)
3	PO4	А	2003	-	4,4,4	2.58	3 (75%)	6,6,6	2.08	1 (16%)
3	PO4	А	2004	-	4,4,4	0.48	0	6,6,6	1.66	2 (33%)
3	PO4	В	2006	-	4,4,4	0.63	0	$6,\!6,\!6$	1.05	0
6	GOL	А	2007	-	$5,\!5,\!5$	1.06	0	$5,\!5,\!5$	0.56	0



ſ	Mol	Type	e Chain	Chain	Chain	Chain	Chain	Chain	Res Link	Link	Bond lengths			Bond angles		
				nes	LIIIK	Counts	RMSZ	# Z >2	Counts	RMSZ	# Z >2					
	3	PO4	В	2003	-	$4,\!4,\!4$	2.75	2 (50%)	$6,\!6,\!6$	1.78	1 (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
4	9M2	В	2007	-	-	0/13/14/14	0/4/4/4
6	GOL	В	2010	-	-	4/4/4/4	-
2	MYA	В	2001	5	-	1/60/80/80	0/3/3/3
2	MYA	А	2001	5	-	0/60/80/80	0/3/3/3
4	9M2	А	2005	-	-	0/13/14/14	0/4/4/4
6	GOL	В	2009	-	-	0/4/4/4	-
6	GOL	А	2007	-	_	0/4/4/4	-

The worst 5 of 36 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Ζ	$\operatorname{Observed}(\operatorname{\AA})$	$\mathrm{Ideal}(\mathrm{\AA})$
4	А	2005	9M2	C18-C22	5.92	1.49	1.39
4	В	2007	9M2	C18-C22	4.92	1.48	1.39
3	В	2003	PO4	P-01	4.56	1.61	1.50
3	А	2003	PO4	P-O3	-3.87	1.43	1.54
4	А	2005	9M2	C19-C18	3.55	1.46	1.39

The worst 5 of 53 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	$Observed(^{o})$	$Ideal(^{o})$
4	В	2007	9M2	C17-C18-C22	16.34	138.78	127.30
4	В	2007	9M2	C17-C18-C19	-9.44	120.66	127.30
4	А	2005	9M2	C19-N3-N4	9.02	123.11	112.10
4	А	2005	9M2	C17-C18-C22	8.94	133.57	127.30
4	А	2005	9M2	C18-C19-N3	-8.43	100.07	106.79

There are no chirality outliers.

All (5) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms			
6	В	2010	GOL	O1-C1-C2-C3			
6	В	2010	GOL	C1-C2-C3-O3			
6	В	2010	GOL	O1-C1-C2-O2			
	Continued on next page						

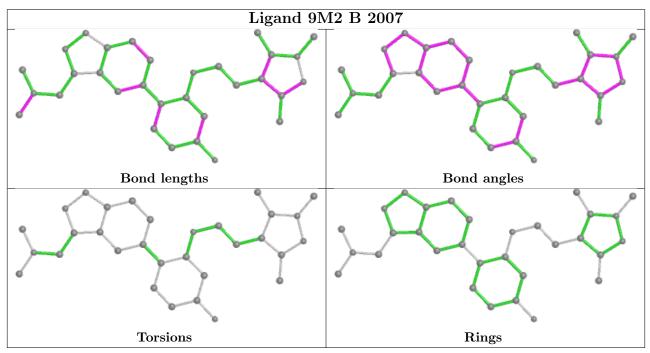
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Mol	Chain	Res	Type	Atoms
6	В	2010	GOL	O2-C2-C3-O3
2	В	2001	MYA	C6-C7-N8-C9

There are no ring outliers.

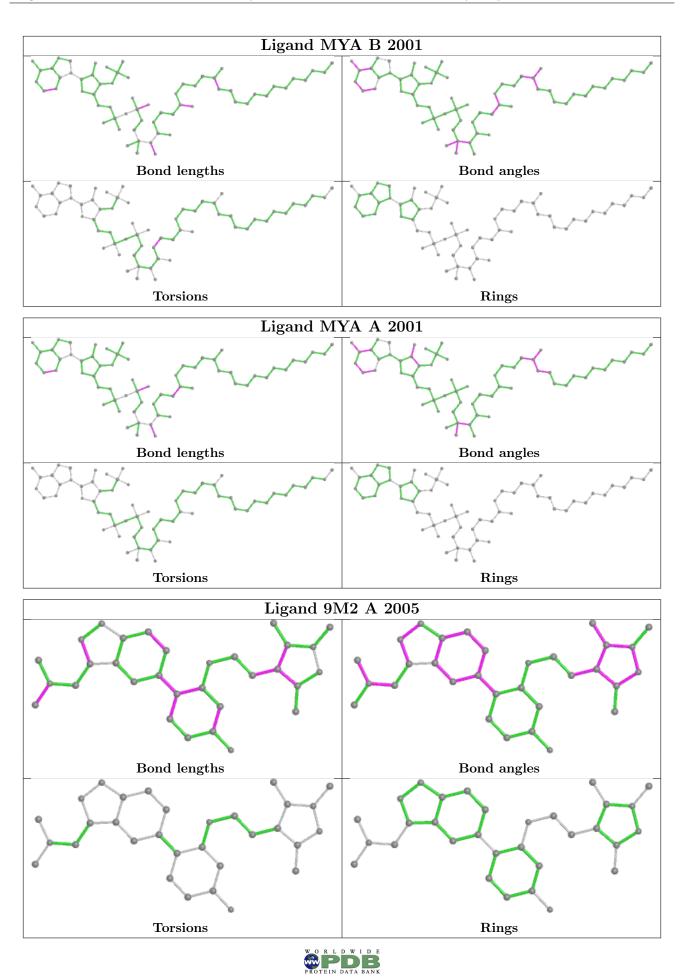
No monomer is involved in short contacts.

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 sufficient must be highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.









### 5.7 Other polymers (i)

There are no such residues in this entry.

### 5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.



## 6 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	$ ext{vsed}  <  ext{RSRZ} >  \#  ext{RSRZ} > 2$		$OWAB(Å^2)$	Q<0.9
1	А	382/391~(97%)	-0.36	7 (1%) 68 69	8, 14, 29, 72	0
1	В	382/391~(97%)	-0.36	7 (1%) 68 69	8, 13, 30, 66	4 (1%)
All	All	764/782~(97%)	-0.36	14 (1%) 68 69	8, 13, 29, 72	4 (0%)

The worst 5 of 14 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	А	115	ARG	3.6
1	В	412	THR	3.4
1	А	133	ASN	3.0
1	А	129	GLY	2.7
1	В	316	ARG	2.6

### 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)

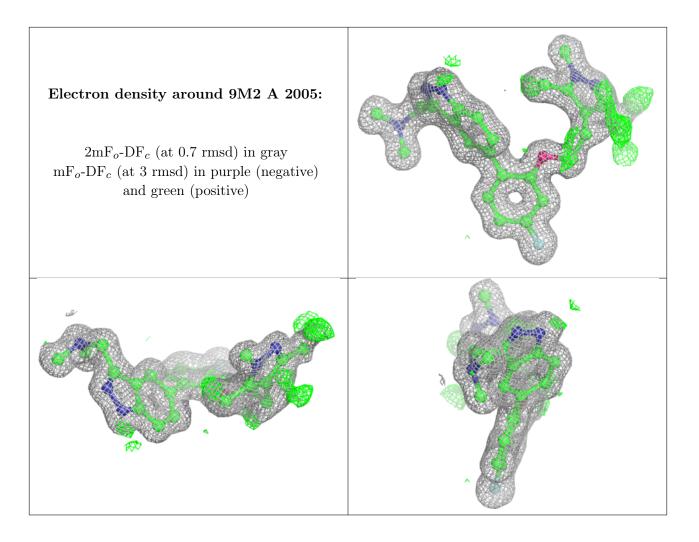
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median,  $95^{th}$  percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9'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



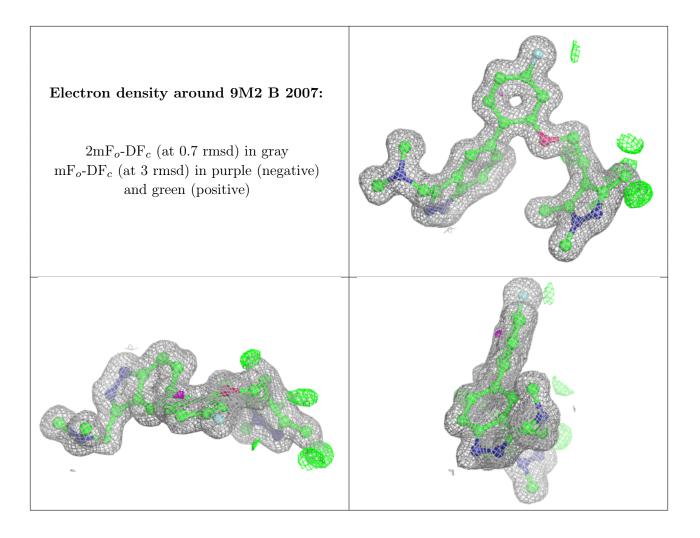
Mol	Type	Chain	Res	Atoms	RSCC	RSR	$B$ -factors( $Å^2$ )	Q<0.9
3	PO4	А	2004	5/5	0.83	0.26	46,54,62,64	0
3	PO4	В	2005	5/5	0.85	0.23	42,44,61,61	0
6	GOL	В	2010	6/6	0.85	0.24	23,33,38,49	0
3	PO4	В	2006	5/5	0.87	0.16	44,56,58,62	0
7	DMS	А	2008	4/4	0.88	0.18	36,37,39,40	0
6	GOL	В	2009	6/6	0.90	0.13	16,17,18,20	0
3	PO4	В	2004	5/5	0.92	0.33	48,48,64,64	0
6	GOL	А	2007	6/6	0.95	0.11	17,18,20,20	0
4	9M2	А	2005	31/31	0.96	0.06	12,14,20,24	0
4	9M2	В	2007	31/31	0.96	0.06	11,13,17,18	0
3	PO4	А	2003	5/5	0.98	0.06	16,16,19,19	0
2	MYA	А	2001	63/63	0.98	0.05	8,12,16,23	0
3	PO4	В	2003	5/5	0.98	0.10	16,16,18,20	0
2	MYA	В	2001	63/63	0.98	0.05	8,11,14,17	0
3	PO4	А	2002	5/5	0.99	0.05	17,18,20,21	0
3	PO4	В	2002	5/5	0.99	0.06	16,18,23,23	0
5	MG	А	2006	1/1	0.99	0.07	21,21,21,21	0
5	MG	В	2008	1/1	0.99	0.09	20,20,20,20	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.

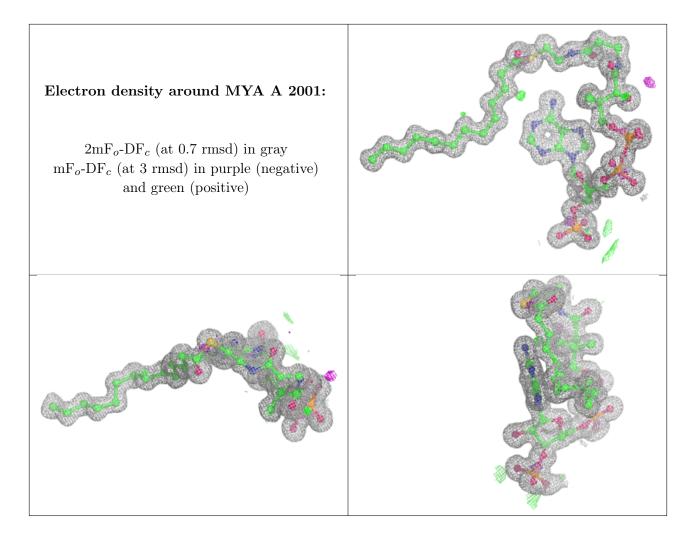




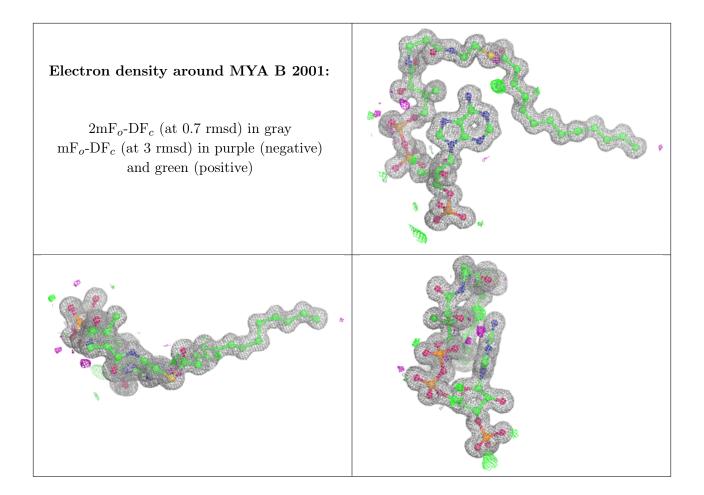












## 6.5 Other polymers (i)

There are no such residues in this entry.

