



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 9, 2023 – 03:13 PM EDT

PDB ID : 7UAN
Title : Structure of rat neuronal nitric oxide synthase R349A heme domain in complex with (6-(3-(4,4-difluoropiperidin-1-yl)propyl)-4-methylpyridin-2-amine)
Authors : Li, H.; Poulos, T.L.
Deposited on : 2022-03-13
Resolution : 1.70 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 : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.35.1
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

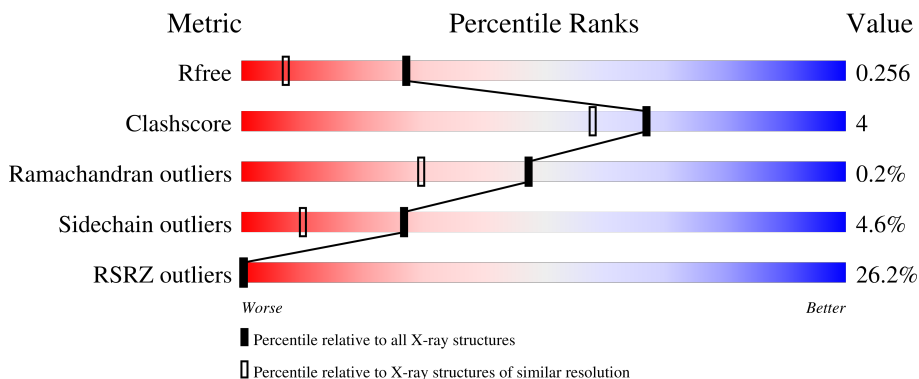
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 1.70 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	4298 (1.70-1.70)
Clashscore	141614	4695 (1.70-1.70)
Ramachandran outliers	138981	4610 (1.70-1.70)
Sidechain outliers	138945	4610 (1.70-1.70)
RSRZ outliers	127900	4222 (1.70-1.70)

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	422	

2 Entry composition [i](#)

There are 7 unique types of molecules in this entry. The entry contains 3496 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.

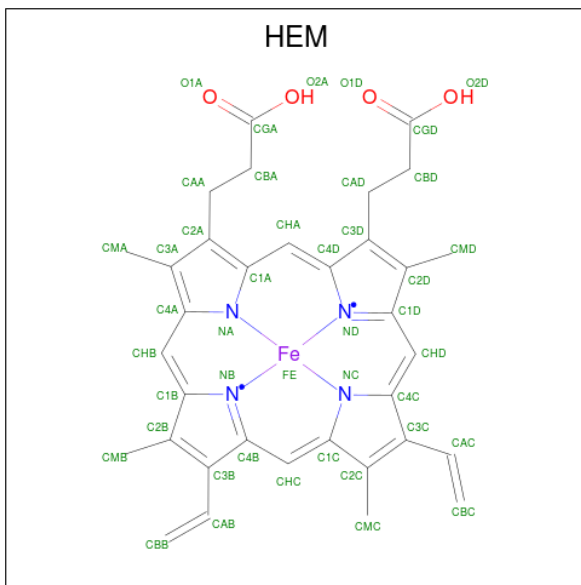
- Molecule 1 is a protein called Nitric oxide synthase, brain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	412	3348	2142	572	613	21	0	1	0

There is a discrepancy between the modelled and reference sequences:

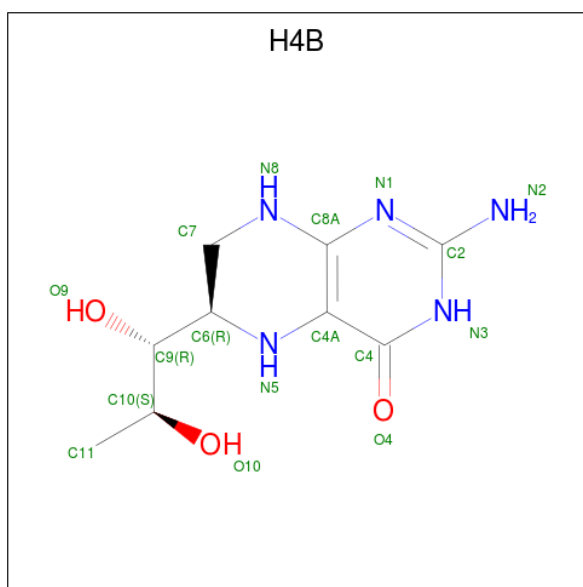
Chain	Residue	Modelled	Actual	Comment	Reference
A	349	ALA	ARG	engineered mutation	UNP P29476

- Molecule 2 is PROTOPORPHYRIN IX CONTAINING FE (three-letter code: HEM) (formula: $C_{34}H_{32}FeN_4O_4$).



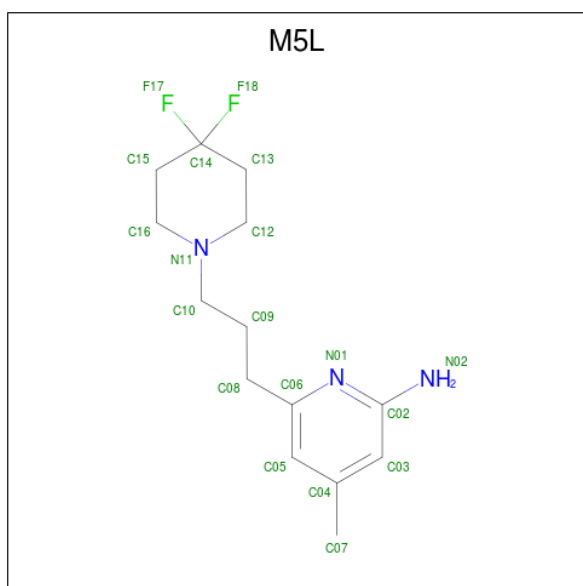
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	
			Total	C	Fe	N			O
2	A	1	43	34	1	4	4	0	0

- Molecule 3 is 5,6,7,8-TETRAHYDROBIOPTERIN (three-letter code: H4B) (formula: $C_9H_{15}N_5O_3$).



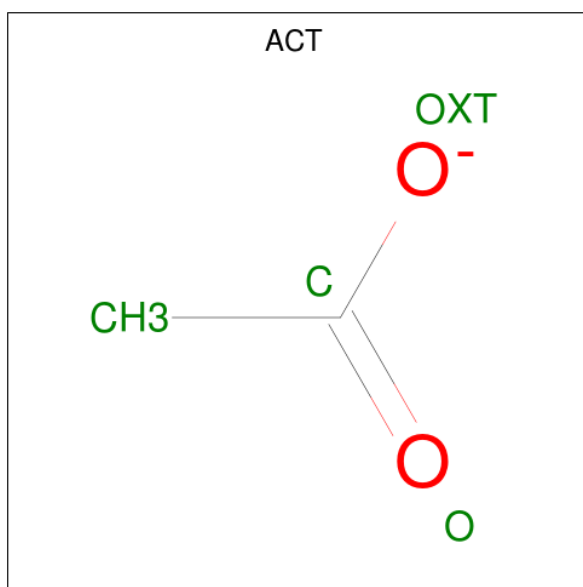
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
3	A	1	17	9	5	3	0	0

- Molecule 4 is 6-[3-(4,4-difluoropiperidin-1-yl)propyl]-4-methylpyridin-2-amine (three-letter code: M5L) (formula: $C_{14}H_{21}F_2N_3$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	F	N		
4	A	1	19	14	2	3	0	0

- Molecule 5 is ACETATE ION (three-letter code: ACT) (formula: $C_2H_3O_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	1	Total C O 4 2 2	0	0

- Molecule 6 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

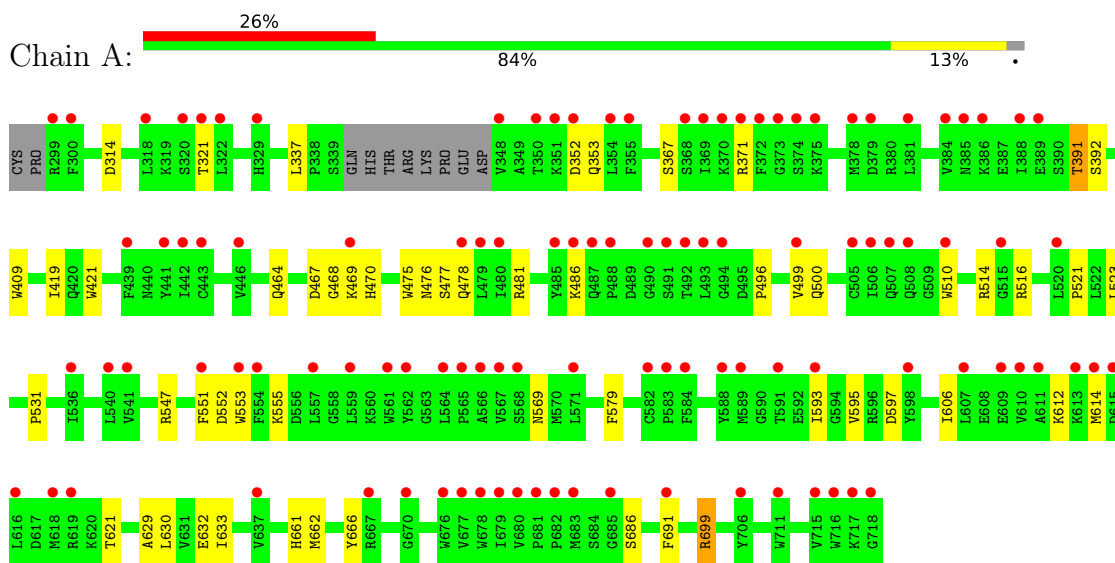
- Molecule 7 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	A	64	Total O 64 64	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: Nitric oxide synthase, brain



4 Data and refinement statistics

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α , β , γ	49.10Å 114.52Å 164.46Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	39.61 – 1.70 39.60 – 1.70	Depositor EDS
% Data completeness (in resolution range)	91.2 (39.61-1.70) 93.6 (39.60-1.70)	Depositor EDS
R_{merge}	0.13	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.12 (at 1.70Å)	Xtrriage
Refinement program	PHENIX 1.11.1_2575	Depositor
R, R_{free}	0.222 , 0.257 0.228 , 0.256	Depositor DCC
R_{free} test set	2462 reflections (5.08%)	wwPDB-VP
Wilson B-factor (Å ²)	32.2	Xtrriage
Anisotropy	1.233	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.34 , 68.6	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.33$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.97	EDS
Total number of atoms	3496	wwPDB-VP
Average B, all atoms (Å ²)	83.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.32% 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: H4B, ACT, HEM, ZN, M5L

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	0.34	0/3444	0.50	0/4670

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	3348	0	3261	25	0
2	A	43	0	30	1	0
3	A	17	0	15	0	0
4	A	19	0	0	0	0
5	A	4	0	3	0	0
6	A	1	0	0	0	0
7	A	64	0	0	1	0
All	All	3496	0	3309	26	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 4.

All (26) 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)
2:A:801:HEM:HMC2	2:A:801:HEM:HBC2	1.86	0.57
1:A:467:ASP:OD1	1:A:468:GLY:N	2.42	0.53
1:A:523:LEU:HD22	1:A:531:PRO:HB2	1.90	0.52
1:A:551:PHE:HB3	1:A:553:TRP:CE2	2.44	0.51
1:A:606:ILE:HD11	1:A:633:ILE:HD13	1.91	0.51
1:A:475:TRP:HB2	1:A:523:LEU:HB3	1.94	0.49
1:A:629:ALA:O	1:A:633:ILE:HG13	2.12	0.49
1:A:419:ILE:HG13	1:A:661:HIS:HB2	1.94	0.48
1:A:612:LYS:HE2	1:A:612:LYS:HB3	1.75	0.46
1:A:391:THR:O	1:A:392:SER:OG	2.29	0.46
1:A:699:ARG:HH11	1:A:699:ARG:HB3	1.80	0.45
1:A:593:ILE:HA	1:A:597:ASP:HB2	1.98	0.45
1:A:686:SER:HA	1:A:691:PHE:CG	2.51	0.45
1:A:409:TRP:CE3	1:A:421:TRP:HA	2.52	0.44
1:A:470:HIS:O	7:A:901:HOH:O	2.21	0.44
1:A:477:SER:HA	1:A:569:ASN:HB3	2.00	0.44
1:A:510:TRP:CD1	1:A:521:PRO:HG3	2.53	0.43
1:A:478:GLN:HB2	1:A:481:ARG:CG	2.48	0.43
1:A:551:PHE:HB3	1:A:553:TRP:NE1	2.34	0.43
1:A:353:GLN:H	1:A:353:GLN:HG3	1.60	0.43
1:A:595:VAL:HG13	1:A:630:LEU:HD11	2.01	0.42
1:A:314:ASP:HB2	1:A:666:TYR:HE2	1.85	0.42
1:A:614:MET:SD	1:A:632:GLU:HG3	2.60	0.42
1:A:464:GLN:HB3	1:A:579:PHE:CE2	2.56	0.41
1:A:467:ASP:OD2	1:A:470:HIS:ND1	2.53	0.40
1:A:496:PRO:HA	1:A:499:VAL:HG23	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	409/422 (97%)	394 (96%)	14 (3%)	1 (0%)	47 30

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	514	ARG

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	367/376 (98%)	350 (95%)	17 (5%)	27 10

All (17) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	321	THR
1	A	337	LEU
1	A	352	ASP
1	A	367	SER
1	A	371	ARG
1	A	391	THR
1	A	469	LYS
1	A	476	ASN
1	A	486	LYS
1	A	500	GLN
1	A	516	ARG
1	A	547	ARG
1	A	552	ASP
1	A	555	LYS
1	A	621	THR
1	A	662	MET
1	A	699	ARG

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 5 ligands modelled in this entry, 1 is monoatomic - leaving 4 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
4	M5L	A	803	-	20,20,20	1.43	4 (20%)	26,28,28	2.43	9 (34%)
5	ACT	A	804	-	3,3,3	0.76	0	3,3,3	0.68	0
3	H4B	A	802	-	16,18,18	0.78	0	11,26,26	2.65	4 (36%)
2	HEM	A	801	1	41,50,50	1.55	7 (17%)	45,82,82	1.47	5 (11%)

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. '2' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	M5L	A	803	-	-	2/6/18/18	0/2/2/2
3	H4B	A	802	-	-	0/8/17/17	0/2/2/2
2	HEM	A	801	1	-	6/12/54/54	-

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	803	M5L	C13-C14	3.82	1.54	1.50
2	A	801	HEM	C3C-CAC	3.80	1.55	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	801	HEM	C3C-C2C	-3.75	1.35	1.40
4	A	803	M5L	F18-C14	-3.17	1.32	1.38
2	A	801	HEM	FE-NB	3.08	2.12	1.96
2	A	801	HEM	CAB-C3B	2.77	1.55	1.47
4	A	803	M5L	F17-C14	-2.70	1.33	1.38
4	A	803	M5L	C15-C14	2.43	1.52	1.50
2	A	801	HEM	CMB-C2B	2.13	1.55	1.50
2	A	801	HEM	CMD-C2D	2.09	1.55	1.50
2	A	801	HEM	CAA-C2A	2.03	1.55	1.52

All (18) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	A	803	M5L	C02-N01-C06	7.62	123.88	118.10
3	A	802	H4B	C8A-C4A-C4	6.39	120.24	114.57
4	A	803	M5L	F17-C14-C13	4.58	112.35	109.37
2	A	801	HEM	CBA-CAA-C2A	-4.49	104.95	112.62
4	A	803	M5L	F17-C14-C15	-3.81	106.89	109.37
4	A	803	M5L	C05-C06-N01	-3.62	119.06	122.90
4	A	803	M5L	F18-C14-C13	-3.24	107.25	109.37
2	A	801	HEM	C4B-CHC-C1C	3.11	126.66	122.56
3	A	802	H4B	N1-C2-N3	-2.80	121.03	125.42
3	A	802	H4B	C2-N3-C4	2.71	120.23	115.93
3	A	802	H4B	C2-N1-C8A	2.67	120.53	114.54
4	A	803	M5L	C08-C06-C05	2.51	124.53	121.22
2	A	801	HEM	CMA-C3A-C4A	-2.43	124.73	128.46
4	A	803	M5L	C04-C05-C06	-2.36	118.78	120.32
2	A	801	HEM	CAD-CBD-CGD	-2.29	108.67	113.60
2	A	801	HEM	C3D-C4D-ND	-2.26	107.65	110.17
4	A	803	M5L	C05-C04-C03	2.18	120.69	118.09
4	A	803	M5L	C10-C09-C08	-2.04	107.61	113.20

There are no chirality outliers.

All (8) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	801	HEM	C2A-CAA-CBA-CGA
2	A	801	HEM	C3D-CAD-CBD-CGD
4	A	803	M5L	N01-C06-C08-C09
4	A	803	M5L	C05-C06-C08-C09
2	A	801	HEM	C2D-C3D-CAD-CBD
2	A	801	HEM	C4D-C3D-CAD-CBD

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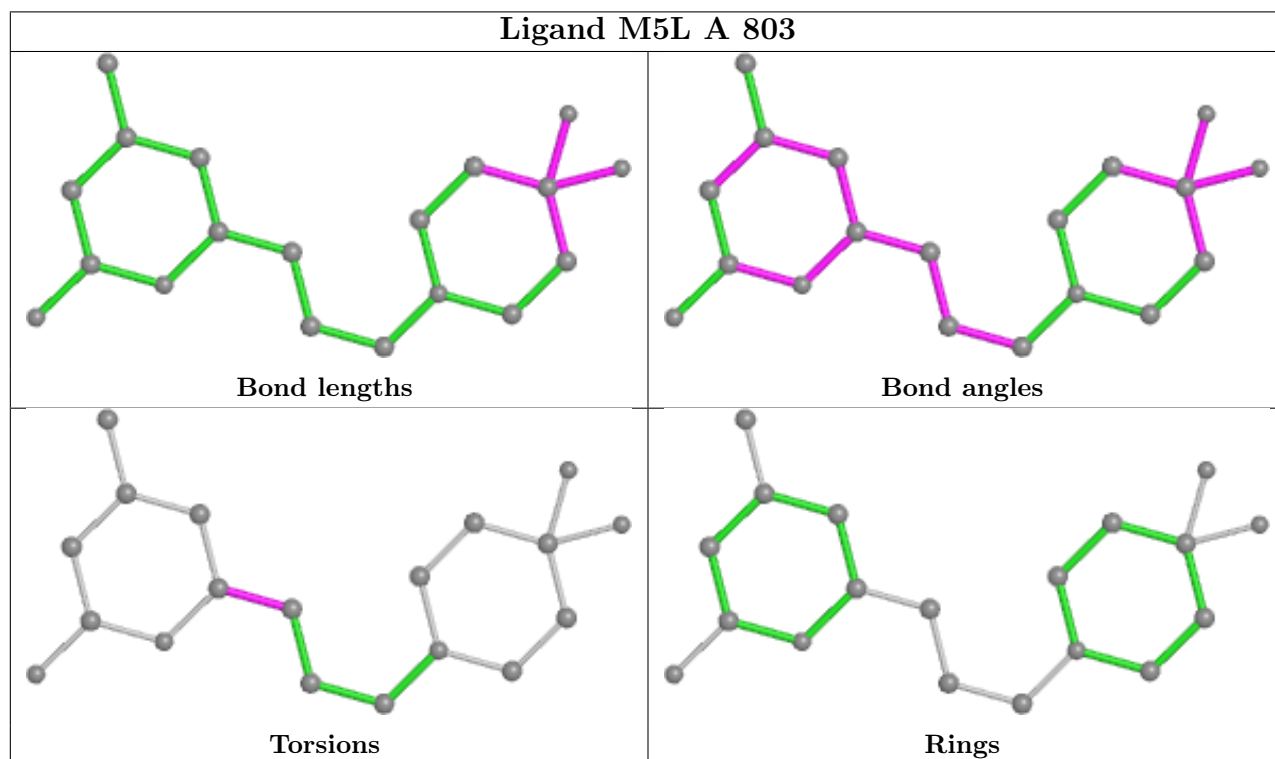
Mol	Chain	Res	Type	Atoms
2	A	801	HEM	CAD-CBD-CGD-O1D
2	A	801	HEM	CAD-CBD-CGD-O2D

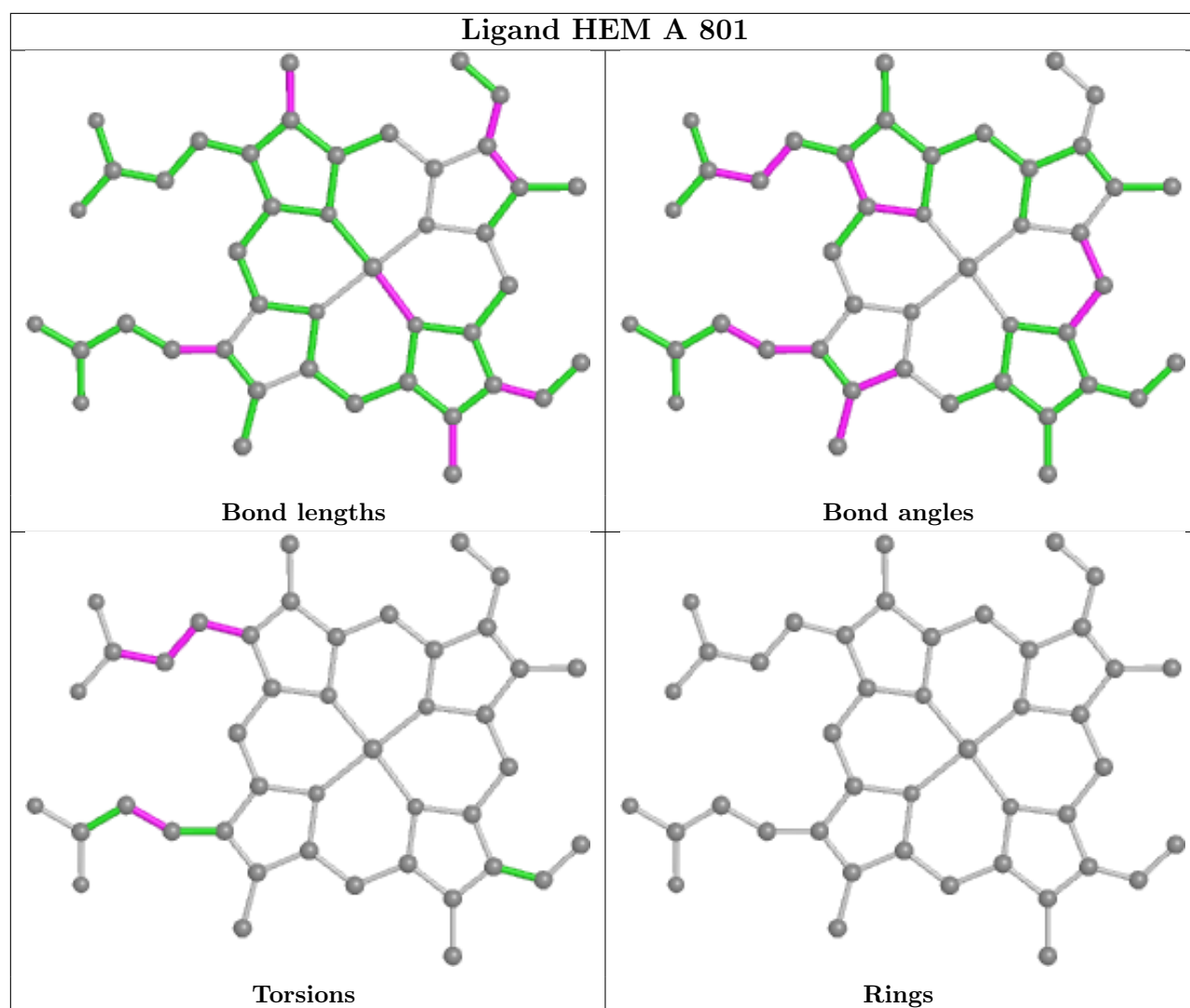
There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	801	HEM	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.





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	412/422 (97%)	1.37	108 (26%) 0 0	44, 80, 136, 175	0

All (108) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	611	ALA	8.4
1	A	369	ILE	7.7
1	A	551	PHE	7.3
1	A	493	LEU	6.3
1	A	488	PRO	5.9
1	A	506	ILE	5.6
1	A	715	VAL	5.5
1	A	505	CYS	5.3
1	A	677	VAL	5.3
1	A	554	PHE	5.3
1	A	615	ASP	5.2
1	A	299	ARG	5.0
1	A	351	LYS	4.9
1	A	355	PHE	4.6
1	A	491	SER	4.6
1	A	370	LYS	4.6
1	A	680	VAL	4.5
1	A	300	PHE	4.5
1	A	588	TYR	4.3
1	A	372	PHE	4.2
1	A	717	LYS	4.2
1	A	566	ALA	4.1
1	A	716	TRP	4.1
1	A	679	ILE	4.0
1	A	381	LEU	3.9
1	A	691	PHE	3.9
1	A	616	LEU	3.9

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Mol	Chain	Res	Type	RSRZ
1	A	490	GLY	3.8
1	A	678	TRP	3.8
1	A	676	TRP	3.7
1	A	348	VAL	3.6
1	A	553	TRP	3.5
1	A	619	ARG	3.5
1	A	487	GLN	3.5
1	A	718	GLY	3.5
1	A	373	GLY	3.4
1	A	682	PRO	3.4
1	A	442	ILE	3.4
1	A	568	SER	3.4
1	A	384	VAL	3.4
1	A	565	PRO	3.4
1	A	610	VAL	3.3
1	A	618	MET	3.3
1	A	443	CYS	3.3
1	A	480	ILE	3.2
1	A	562	TYR	3.2
1	A	388	ILE	3.2
1	A	609	GLU	3.2
1	A	486	LYS	3.2
1	A	354	LEU	3.2
1	A	571	LEU	3.2
1	A	685	GLY	3.2
1	A	567	VAL	3.1
1	A	681	PRO	3.1
1	A	508	GLN	3.1
1	A	557	LEU	3.1
1	A	564	LEU	3.1
1	A	318	LEU	3.0
1	A	352	ASP	3.0
1	A	593	ILE	3.0
1	A	469	LYS	2.9
1	A	607	LEU	2.9
1	A	583	PRO	2.9
1	A	479	LEU	2.9
1	A	711	TRP	2.8
1	A	499	VAL	2.8
1	A	540	LEU	2.8
1	A	385	ASN	2.8
1	A	510	TRP	2.7

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Mol	Chain	Res	Type	RSRZ
1	A	614	MET	2.7
1	A	582	CYS	2.6
1	A	584	PHE	2.6
1	A	492	THR	2.6
1	A	591	THR	2.6
1	A	507	GLN	2.6
1	A	589	MET	2.6
1	A	520	LEU	2.6
1	A	321	THR	2.5
1	A	559	LEU	2.5
1	A	670	GLY	2.5
1	A	375	LYS	2.4
1	A	441	TYR	2.4
1	A	667	ARG	2.4
1	A	706	TYR	2.3
1	A	389	GLU	2.3
1	A	374	SER	2.3
1	A	536	ILE	2.3
1	A	541	VAL	2.2
1	A	320	SER	2.2
1	A	478	GLN	2.2
1	A	683	MET	2.2
1	A	368	SER	2.2
1	A	515	GLY	2.2
1	A	561	TRP	2.2
1	A	598	TYR	2.1
1	A	350	THR	2.1
1	A	637	VAL	2.1
1	A	322	LEU	2.1
1	A	613	LYS	2.1
1	A	329	HIS	2.1
1	A	485	TYR	2.1
1	A	446	VAL	2.1
1	A	378	MET	2.0
1	A	494	GLY	2.0
1	A	439	PHE	2.0
1	A	371	ARG	2.0
1	A	386	LYS	2.0
1	A	379	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](#)

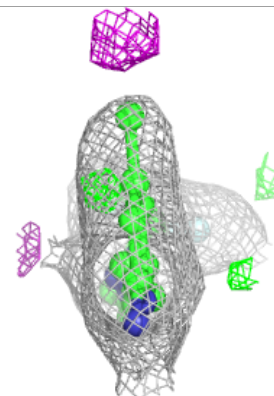
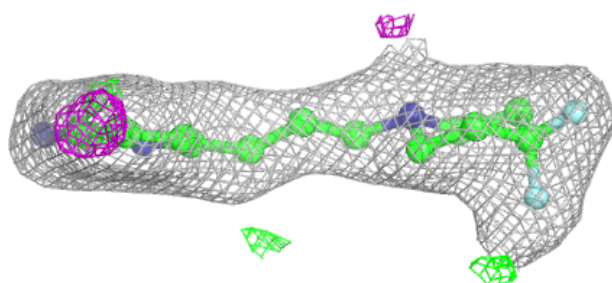
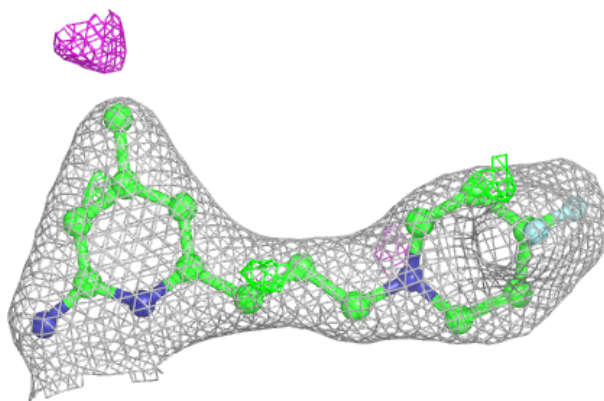
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
5	ACT	A	804	4/4	0.89	0.25	111,112,113,113	0
4	M5L	A	803	19/19	0.92	0.24	45,59,74,74	0
3	H4B	A	802	17/17	0.96	0.21	44,53,58,59	0
2	HEM	A	801	43/43	0.97	0.20	42,52,67,73	0
6	ZN	A	805	1/1	1.00	0.19	47,47,47,47	1

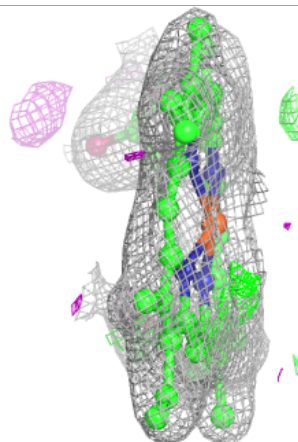
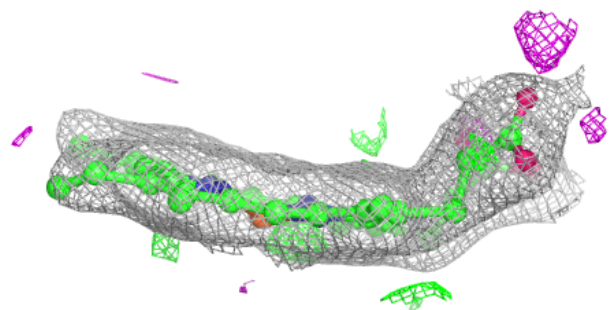
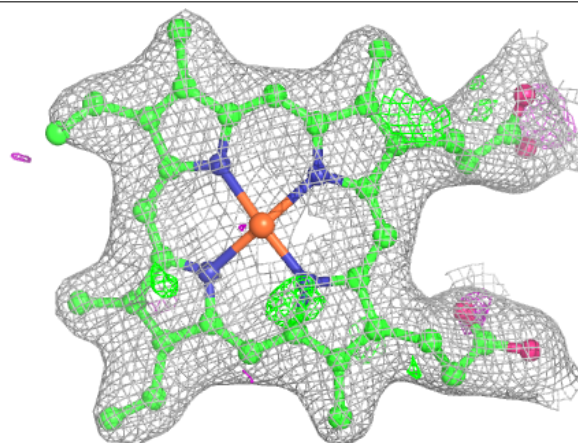
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around M5L 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)

**Electron density around HEM 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 [i](#)

There are no such residues in this entry.