

wwPDB X-ray Structure Validation Summary Report (i)

Jun 23, 2024 – 01:52 AM EDT

PDB ID : 6C6N

Title: Human squalene epoxidase (SQLE, squalene monooxygenase) structure with

FAD and Cmpd-4"

Authors : Padyana, A.K.; Jin, L.

Deposited on : 2018-01-19

Resolution : 2.30 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 : 2022.3.0, CSD as543be (2022)

Xtriage (Phenix) : 1.20.1

EDS : 2.37.1

 $buster\text{-report} \quad : \quad 1.1.7 \ (2018)$

Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)

 $Refmac \quad : \quad 5.8.0158$

CCP4 : 7.0.044 (Gargrove)

Ideal geometry (proteins) : Engh & Huber (2001) Ideal geometry (DNA, RNA) : Parkinson et al. (1996)

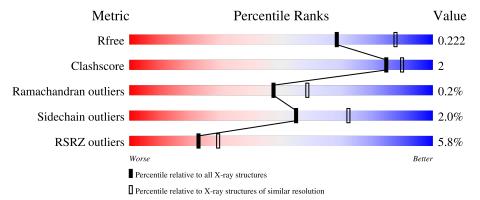
Validation Pipeline (wwPDB-VP) : 2.37.1

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.30 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	Similar resolution
Metric	$(\# \mathrm{Entries})$	$(\# ext{Entries}, ext{ resolution range}(ext{Å}))$
R_{free}	130704	5042 (2.30-2.30)
Clashscore	141614	5643 (2.30-2.30)
Ramachandran outliers	138981	5575 (2.30-2.30)
Sidechain outliers	138945	5575 (2.30-2.30)
RSRZ outliers	127900	4938 (2.30-2.30)

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	A	458	7% 93%	5% • •						
1	В	458	89%	9% •						



2 Entry composition (i)

There are 7 unique types of molecules in this entry. The entry contains 7638 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.

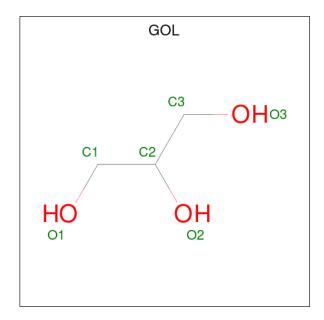
• Molecule 1 is a protein called Squalene monooxygenase.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace	
1	A	450	Total 3526	C 2280	N 594	O 637	S 15	0	0	0
1	В	450	Total 3532	C 2283	N 595	O 639	S 15	0	1	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	117	GLY	-	expression tag	UNP Q14534
В	117	GLY	-	expression tag	UNP Q14534

• Molecule 2 is GLYCEROL (three-letter code: GOL) (formula: C₃H₈O₃).



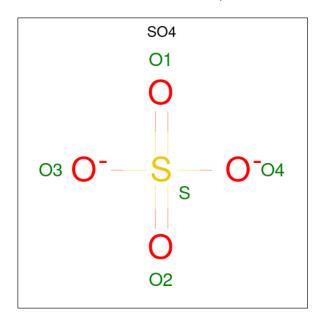
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	1	Total C O 6 3 3	0	0



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

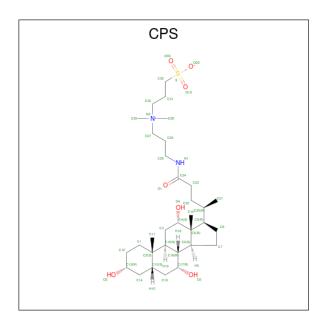
• Molecule 3 is SULFATE ION (three-letter code: SO4) (formula: O_4S).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total O S 5 4 1	0	0
3	В	1	Total O S 5 4 1	0	0

• Molecule 4 is 3-[(3-CHOLAMIDOPROPYL)DIMETHYLAMMONIO]-1-PROPANESULFO NATE (three-letter code: CPS) (formula: $C_{32}H_{58}N_2O_7S$).

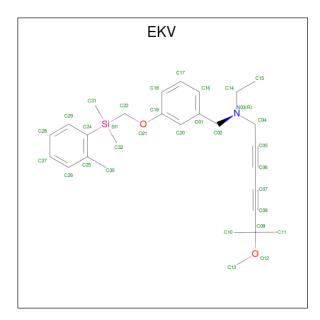




Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	1	Total C N O 31 26 1 4	0	0
4	A	1	Total C N O 30 25 1 4	0	0
4	A	1	Total C O 26 23 3	0	0
4	A	1	Total C N O 29 24 1 4	0	0
4	A	1	Total C O 25 22 3	0	0
4	В	1	Total C N O 30 25 1 4	0	0
4	В	1	Total C O 26 23 3	0	0

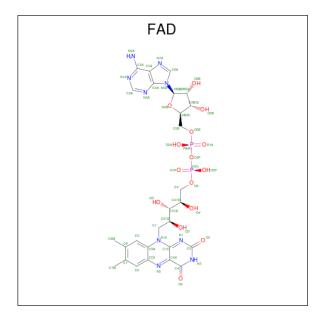
 $\bullet \ \, Molecule \ 5 \ is \ N-[(3-\{[dimethyl(2-methylphenyl)silyl]methoxy\}phenyl)methyl]-N-ethyl-6-methylphenyl-6-methylphenyl-1-amine (three-letter code: EKV) (formula: $C_{28}H_{37}NO_2Si)$.$





Mol	Chain	Residues	Atoms					ZeroOcc	AltConf		
5	Λ	1	Total	С	N	О	Si	0	0		
$\begin{vmatrix} 0 & A \end{vmatrix}$	A	1	32	28	1	2	1	U	0		
5	В	D	D	1	Total	С	N	О	Si	0	0
5		1	32	28	1	2	1	U			

 \bullet Molecule 6 is FLAVIN-ADENINE DINUCLEOTIDE (three-letter code: FAD) (formula: $C_{27}H_{33}N_9O_{15}P_2).$



\mathbf{Mol}	Chain	Residues	Atoms				ZeroOcc	AltConf	
6	A	1	Total 53	C 27	N 9	O 15	P 2	0	0



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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	
6	D	1	Total	С	N	О	Р	0	0
0	Б	1	53	27	9	15	2	U	

• Molecule 7 is water.

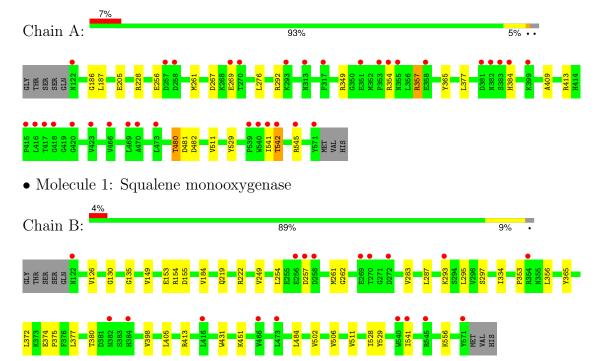
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
7	A	98	Total O 98 98	0	0
7	В	81	Total O 81 81	0	0



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: Squalene monooxygenase





4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 32 2 1	Depositor
Cell constants	126.96Å 126.96Å 166.12Å	Depositor
a, b, c, α , β , γ	90.00° 90.00° 120.00°	Depositor
Resolution (Å)	37.16 - 2.30	Depositor
resolution (A)	37.17 - 2.30	EDS
% Data completeness	98.8 (37.16-2.30)	Depositor
(in resolution range)	98.8 (37.17-2.30)	EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.08	Depositor
$< I/\sigma(I) > 1$	3.97 (at 2.29Å)	Xtriage
Refinement program	PHENIX (1.11.1_2575)	Depositor
R, R_{free}	0.189 , 0.220	Depositor
it, it _{free}	0.190 , 0.222	DCC
R_{free} test set	3351 reflections $(4.90%)$	wwPDB-VP
Wilson B-factor (Å ²)	43.3	Xtriage
Anisotropy	0.001	Xtriage
Bulk solvent $k_{sol}(e/Å^3)$, $B_{sol}(Å^2)$	0.35, 46.3	EDS
L-test for twinning ²	$< L > = 0.49, < L^2> = 0.33$	Xtriage
Estimated twinning fraction	0.019 for -h,-k,l	Xtriage
F_o, F_c correlation	0.96	EDS
Total number of atoms	7638	wwPDB-VP
Average B, all atoms (Å ²)	53.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: The largest off-origin peak in the Patterson function is 3.03% of the height of the origin peak. No significant pseudotranslation is detected.

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



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: EKV, SO4, GOL, CPS, FAD

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		
IVIOI	Chain	RMSZ	# Z > 5	RMSZ	# Z > 5	
1	A	0.26	0/3609	0.44	0/4887	
1	В	0.26	0/3615	0.43	0/4895	
All	All	0.26	0/7224	0.43	0/9782	

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	3526	0	3580	13	0
1	В	3532	0	3584	21	0
2	A	18	0	24	1	0
2	В	6	0	8	1	0
3	A	5	0	0	0	0
3	В	5	0	0	0	0
4	A	141	0	193	1	0
4	В	56	0	77	0	0
5	A	32	0	0	0	0
5	В	32	0	0	0	0
6	A	53	0	31	0	0



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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	В	53	0	31	1	0
7	A	98	0	0	0	0
7	В	81	0	0	0	0
All	All	7638	0	7528	35	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 2.

The worst 5 of 35 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	$\begin{array}{c} {\rm Interatomic} \\ {\rm distance} \ ({\rm \AA}) \end{array}$	$egin{aligned} ext{Clash} \ ext{overlap } (ext{Å}) \end{aligned}$
1:B:154:ARG:HG3	1:B:249:VAL:HG22	1.88	0.55
1:B:126:VAL:HB	1:B:149:VAL:HG22	1.94	0.50
1:B:334:ILE:HD13	1:B:372:LEU:HD13	1.93	0.50
1:A:365:TYR:CE1	1:A:377:LEU:HG	2.48	0.48
1:B:295:LEU:HB3	1:B:398:VAL:HG13	1.96	0.48

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	Percei	ntiles	
1	A	448/458 (98%)	435 (97%)	12 (3%)	1 (0%)	47	58
1	В	449/458 (98%)	438 (98%)	10 (2%)	1 (0%)	47	58
All	All	897/916 (98%)	873 (97%)	22 (2%)	2 (0%)	47	58

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	511	VAL



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Mol	Chain	Res	Type
1	В	511	VAL

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	384/391 (98%)	375 (98%)	9 (2%)	50 67		
1	В	385/391 (98%)	379 (98%)	6 (2%)	62 78		
All	All	769/782 (98%)	754 (98%)	15 (2%)	55 72		

5 of 15 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	541	ILE
1	B 529		TYR
1	A	542	THR
1	В	541	ILE
1	В	297	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1) such sidechains are listed below:

\mathbf{Mol}	Chain	Res	Type
1	В	200	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)

17 ligands are modelled in this entry.

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).

N	TD.	CI ·	Ъ	т. 1	Во	ond leng	ths	В	ond ang	les
Mol	Type	Chain	Res	Link	Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
4	CPS	A	609	-	28,28,45	0.20	0	46,46,70	0.41	0
4	CPS	A	605	-	34,34,45	0.19	0	53,53,70	0.37	0
2	GOL	A	603	_	5,5,5	0.37	0	5,5,5	0.33	0
4	CPS	В	603	_	33,33,45	0.16	0	52,52,70	0.37	0
5	EKV	A	610	-	30,33,33	2.50	8 (26%)	33,45,45	1.06	3 (9%)
6	FAD	В	606	-	54,58,58	0.48	0	71,89,89	0.48	1 (1%)
3	SO4	A	604	-	4,4,4	0.22	0	6,6,6	0.07	0
4	CPS	A	607	-	29,29,45	0.19	0	47,47,70	0.37	0
4	CPS	A	608	-	32,32,45	0.15	0	51,51,70	0.35	0
6	FAD	A	611	-	54,58,58	0.48	0	71,89,89	0.49	1 (1%)
3	SO4	В	602	-	4,4,4	0.25	0	6,6,6	0.08	0
2	GOL	A	601	-	5,5,5	0.37	0	5,5,5	0.31	0
5	EKV	В	605	-	30,33,33	2.50	9 (30%)	33,45,45	0.90	1 (3%)
4	CPS	В	604	-	29,29,45	0.19	0	47,47,70	0.41	0
2	GOL	В	601	-	5,5,5	0.37	0	5,5,5	0.29	0
4	CPS	A	606	-	33,33,45	0.18	0	52,52,70	0.38	0
2	GOL	A	602	-	5,5,5	0.37	0	5,5,5	0.26	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
4	CPS	A	609	-	-	0/4/69/90	0/4/4/4
4	CPS	A	605	-	-	0/12/77/90	0/4/4/4



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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	GOL	A	603	-	-	2/4/4/4	-
4	CPS	В	603	-	-	3/11/76/90	0/4/4/4
5	EKV	A	610	-	-	5/27/30/30	0/2/2/2
6	FAD	В	606	-	-	2/30/50/50	0/6/6/6
4	CPS	A	608	-	-	1/9/74/90	0/4/4/4
4	CPS	A	607	-	-	0/6/71/90	0/4/4/4
6	FAD	A	611	ı	-	2/30/50/50	0/6/6/6
2	GOL	A	601	ı	-	2/4/4/4	-
5	EKV	В	605	-	-	2/27/30/30	0/2/2/2
4	CPS	В	604	-	-	0/6/71/90	0/4/4/4
2	GOL	В	601	-	-	2/4/4/4	-
4	CPS	A	606	-	-	2/11/76/90	0/4/4/4
2	GOL	A	602	-	-	2/4/4/4	-

The worst 5 of 17 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	\mathbf{Z}	$\operatorname{Observed}(\operatorname{\AA})$	$[Ideal(ext{\AA})]$
5	A	610	EKV	C09-C08	8.16	1.55	1.48
5	В	605	EKV	C09-C08	8.04	1.54	1.48
5	A	610	EKV	C07-C06	7.86	1.54	1.37
5	В	605	EKV	C07-C06	7.84	1.54	1.37
5	В	605	EKV	C04-C05	3.63	1.55	1.47

The worst 5 of 6 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	\mathbf{Z}	$Observed(^o)$	$Ideal(^{o})$
5	A	610	EKV	C10-C09-C08	-3.60	105.09	109.76
5	В	605	EKV	C29-C24-C25	2.49	120.03	117.86
5	A	610	EKV	C29-C24-C25	2.48	120.02	117.86
6	A	611	FAD	C5A-C6A-N6A	2.37	123.92	120.31
6	В	606	FAD	C5A-C6A-N6A	2.27	123.77	120.31

There are no chirality outliers.

5 of 25 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	601	GOL	C1-C2-C3-O3
2	В	601	GOL	O1-C1-C2-C3
5	A	610	EKV	N03-C04-C05-C06



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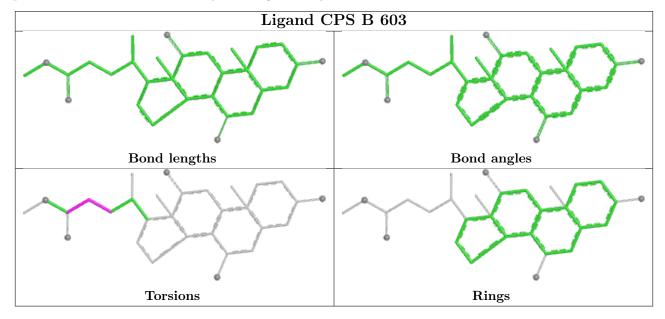
Mol	Chain	Res	Type	Atoms
5	A	610	EKV	C10-C09-O12-C13
5	A	610	EKV	C08-C09-O12-C13

There are no ring outliers.

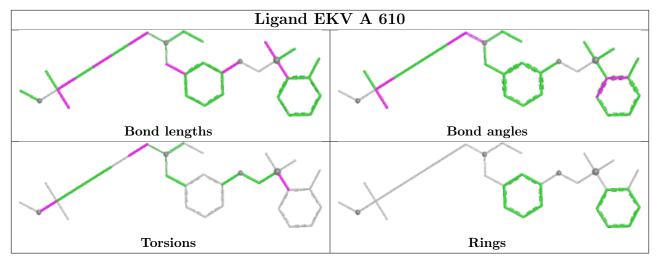
4 monomers are involved in 4 short contacts:

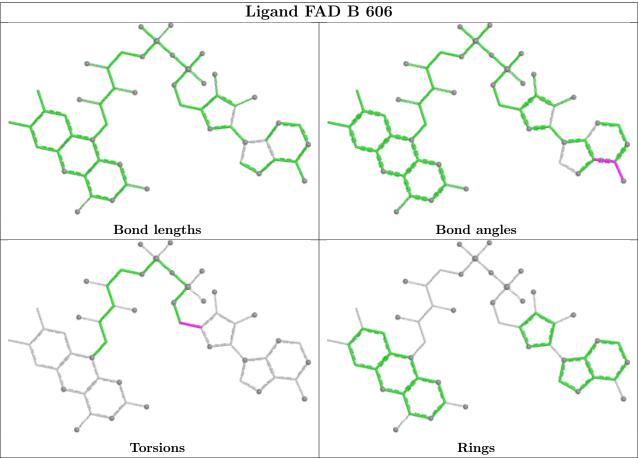
Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	A	605	CPS	1	0
6	В	606	FAD	1	0
2	В	601	GOL	1	0
2	A	602	GOL	1	0

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 then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

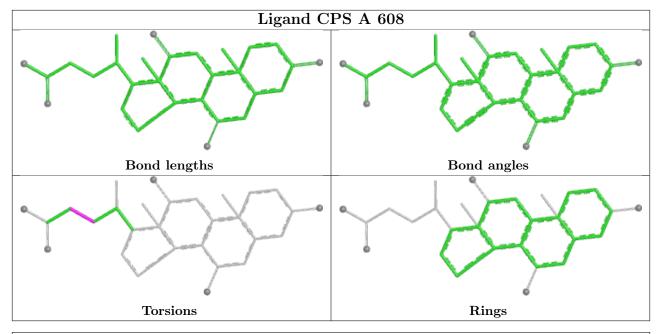


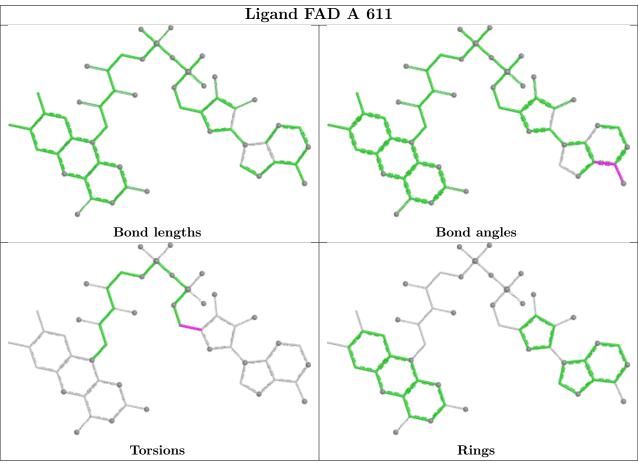




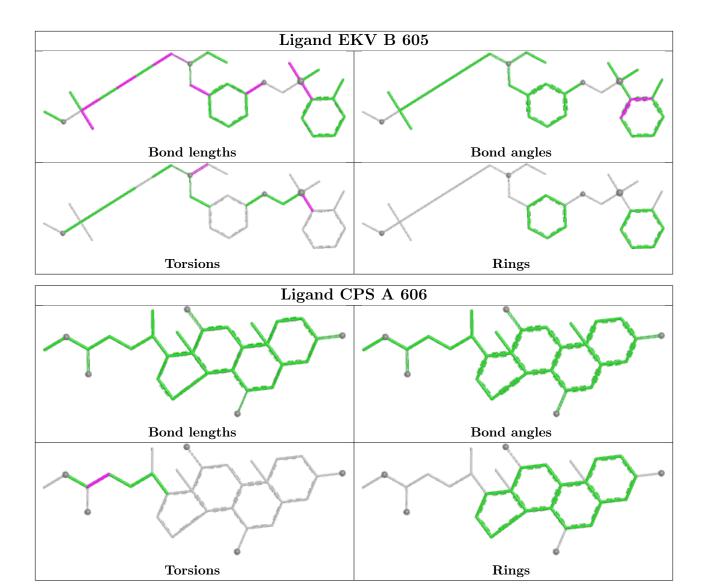












5.7 Other polymers (i)

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	<RSRZ $>$	$\#\mathrm{RSRZ}{>}2$		$OWAB(A^2)$	Q<0.9	
1	A	450/458~(98%)	0.15	34 (7%)	13	18	28, 48, 88, 115	0
1	В	450/458 (98%)	0.12	18 (4%)	38	45	29, 50, 83, 109	0
All	All	900/916 (98%)	0.13	52 (5%)	23	29	28, 49, 85, 115	0

The worst 5 of 52 RSRZ outliers are listed below:

Mol	Chain	Chain Res		RSRZ
1	A	541	ILE	8.1
1	A	354	ARG	4.7
1	A	384	HIS	4.5
1	В	384	HIS	4.0
1	A	382	ASN	4.0

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.

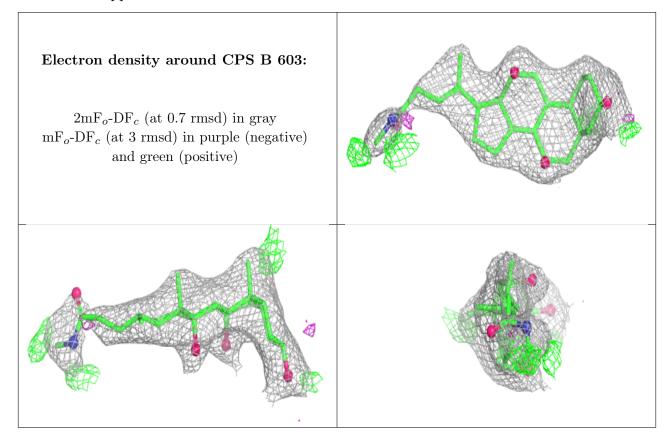
6.4 Ligands (i)

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	$\operatorname{B-factors}({ m \AA}^2)$	Q < 0.9
2	GOL	В	601	6/6	0.72	0.24	60,70,76,81	0
2	GOL	A	603	6/6	0.85	0.27	82,82,92,92	0
2	GOL	A	602	6/6	0.85	0.27	59,75,83,84	0
4	CPS	В	604	26/42	0.86	0.25	64,75,81,83	0
4	CPS	В	603	30/42	0.91	0.18	61,74,95,105	0
3	SO4	A	604	5/5	0.91	0.19	67,69,78,81	5
4	CPS	A	609	25/42	0.92	0.16	39,54,71,75	0
2	GOL	A	601	6/6	0.92	0.13	54,61,66,67	0
4	CPS	A	608	29/42	0.92	0.26	60,68,96,103	0
4	CPS	A	607	26/42	0.93	0.30	64,78,87,90	0
4	CPS	A	606	30/42	0.94	0.13	31,41,79,88	0
3	SO4	В	602	5/5	0.94	0.21	78,81,103,107	0
6	FAD	A	611	53/53	0.95	0.16	36,43,54,58	0
5	EKV	A	610	32/32	0.96	0.25	31,41,56,61	0
5	EKV	В	605	32/32	0.96	0.19	27,41,51,60	0
4	CPS	A	605	31/42	0.96	0.11	28,38,83,109	0
6	FAD	В	606	53/53	0.96	0.14	35,44,67,69	0

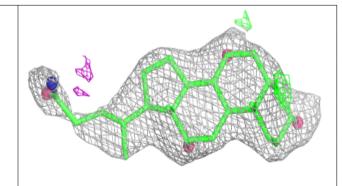
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

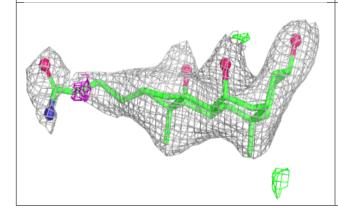


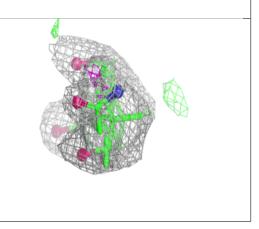


Electron density around CPS A 608:

 $2 \mathrm{mF}_o\text{-}\mathrm{DF}_c$ (at 0.7 rmsd) in gray $\mathrm{mF}_o\text{-}\mathrm{DF}_c$ (at 3 rmsd) in purple (negative) and green (positive)

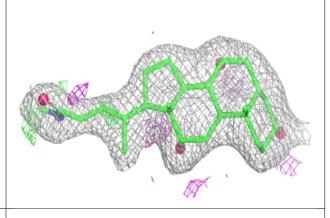


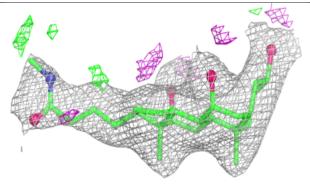


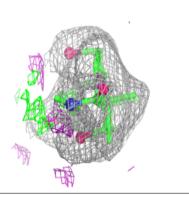


Electron density around CPS A 606:

 $2 \mathrm{mF}_o\text{-}\mathrm{DF}_c$ (at 0.7 rmsd) in gray $\mathrm{mF}_o\text{-}\mathrm{DF}_c$ (at 3 rmsd) in purple (negative) and green (positive)



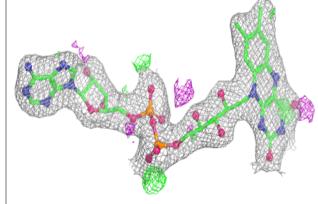


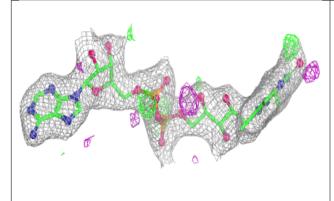


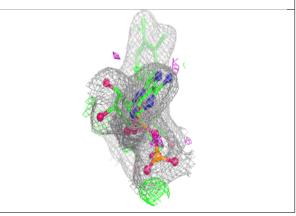


Electron density around FAD A 611:

 $2 {\rm mF}_o\text{-}{\rm DF}_c$ (at 0.7 rmsd) in gray ${\rm mF}_o\text{-}{\rm DF}_c$ (at 3 rmsd) in purple (negative) and green (positive)

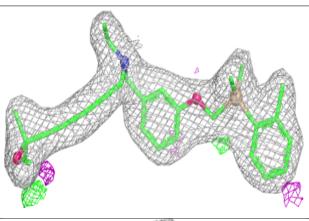


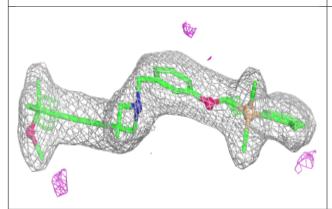


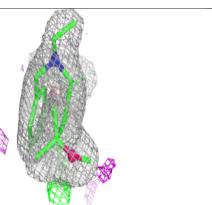


Electron density around EKV A 610:

 $2 \text{mF}_o\text{-DF}_c$ (at 0.7 rmsd) in gray $\text{mF}_o\text{-DF}_c$ (at 3 rmsd) in purple (negative) and green (positive)



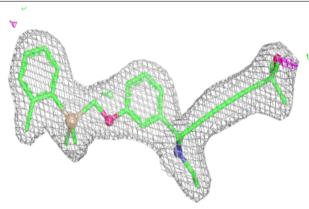


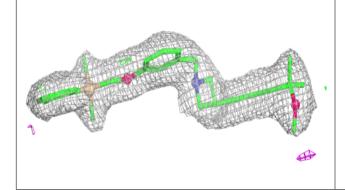


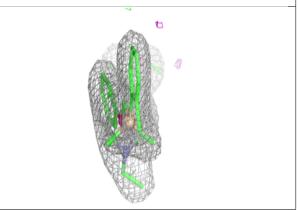


Electron density around EKV B 605:

 $2 {
m mF}_o {
m -DF}_c$ (at 0.7 rmsd) in gray ${
m mF}_o {
m -DF}_c$ (at 3 rmsd) in purple (negative) and green (positive)

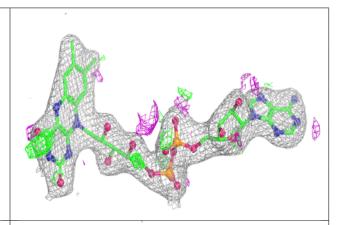


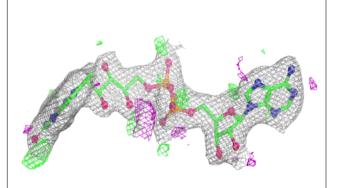


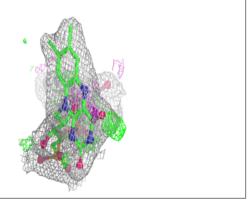


Electron density around FAD B 606:

 $2 \mathrm{mF}_o\text{-}\mathrm{DF}_c$ (at 0.7 rmsd) in gray $\mathrm{mF}_o\text{-}\mathrm{DF}_c$ (at 3 rmsd) in purple (negative) and green (positive)









6.5 Other polymers (i)

There are no such residues in this entry.

