



# Full wwPDB X-ray Structure Validation Report ⓘ

Aug 20, 2023 – 03:24 PM EDT

PDB ID : 2IKO  
Title : Crystal Structure of Human Renin Complexed with Inhibitor  
Authors : Mochalkin, I.  
Deposited on : 2006-10-02  
Resolution : 1.90 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](mailto: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>.

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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  
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

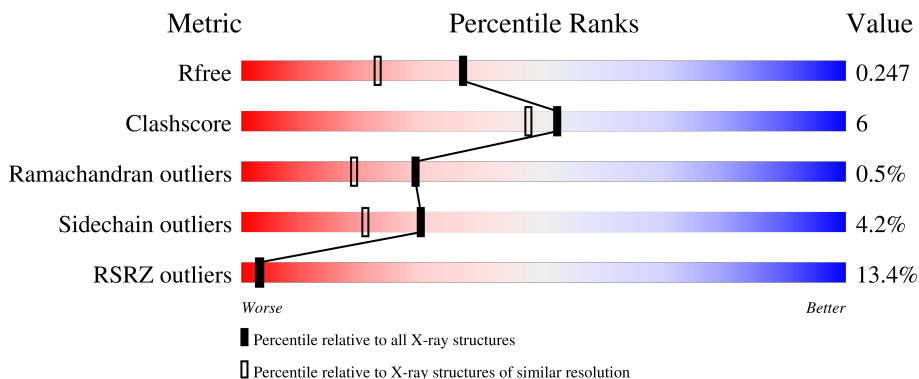
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*


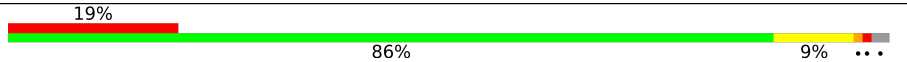
The reported resolution of this entry is 1.90 Å.

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	6207 (1.90-1.90)
Clashscore	141614	6847 (1.90-1.90)
Ramachandran outliers	138981	6760 (1.90-1.90)
Sidechain outliers	138945	6760 (1.90-1.90)
RSRZ outliers	127900	6082 (1.90-1.90)

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  $\geq 3$ , 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	340	
1	B	340	

## 2 Entry composition [i](#)

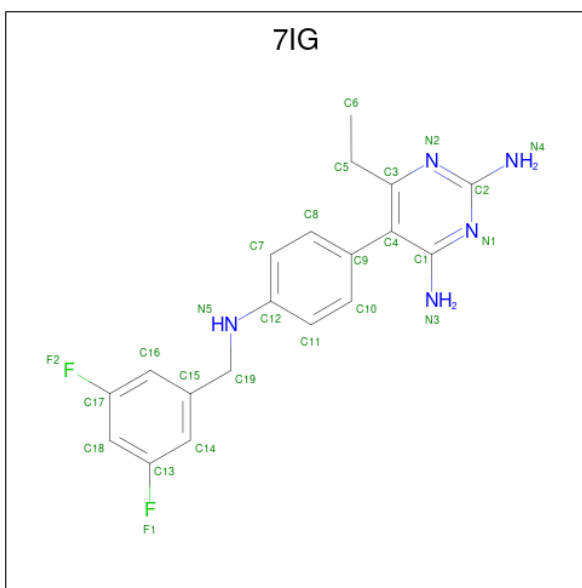
There are 3 unique types of molecules in this entry. The entry contains 5640 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 Renin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	338	Total 2616	C 1669	N 422	O 510	S 15	0	2	0
1	B	332	Total 2590	C 1657	N 415	O 503	S 15	0	6	0

- Molecule 2 is 5-{4-[(3,5-DIFLUOROBENZYL)AMINO]PHENYL}-6-ETHYLPYRIMIDINE-2,4-DIAMINE (three-letter code: 7IG) (formula: C<sub>19</sub>H<sub>19</sub>F<sub>2</sub>N<sub>5</sub>).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	F	N		
2	A	1	Total 26	C 19	F 2	N 5	0	0

- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	236	Total 236	O 236	0	0

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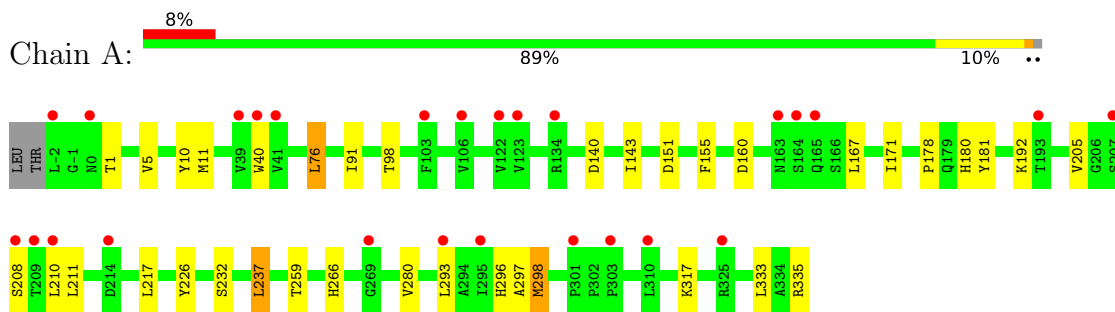
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<b>Mol</b>	<b>Chain</b>	<b>Residues</b>	<b>Atoms</b>		<b>ZeroOcc</b>	<b>AltConf</b>
3	B	172	Total 172	O 172	0	0

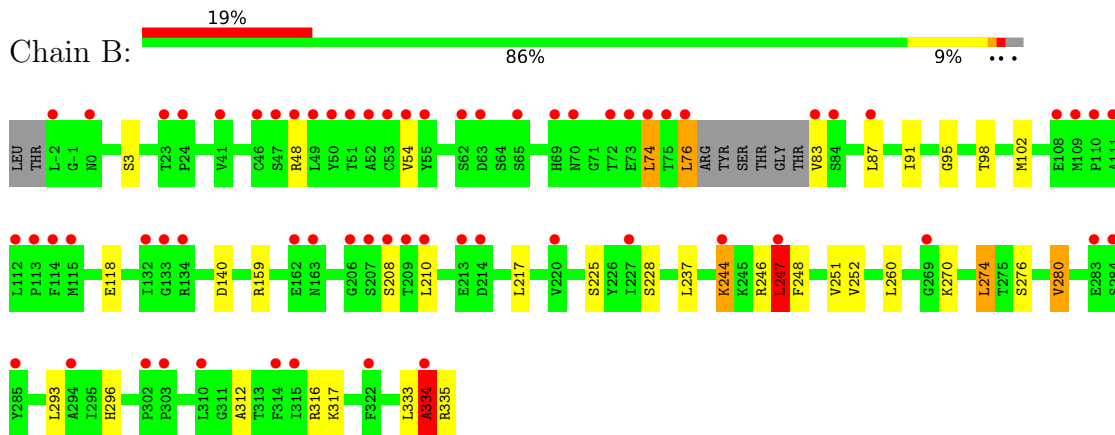
### 3 Residue-property plots

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: Renin



- Molecule 1: Renin



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 3	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	140.88Å 140.88Å 140.88Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	20.00 – 1.90 19.92 – 1.90	Depositor EDS
% Data completeness (in resolution range)	96.1 (20.00-1.90) 96.1 (19.92-1.90)	Depositor EDS
$R_{merge}$	0.06	Depositor
$R_{sym}$	0.06	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.18 (at 1.90Å)	Xtrriage
Refinement program	REFMAC 5.2.0019	Depositor
R, $R_{free}$	0.194 , 0.229 0.219 , 0.247	Depositor DCC
$R_{free}$ test set	3528 reflections (5.03%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	32.0	Xtrriage
Anisotropy	0.000	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.37 , 46.7	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.33$	Xtrriage
Estimated twinning fraction	0.029 for l,-k,h	Xtrriage
$F_o, F_c$ correlation	0.95	EDS
Total number of atoms	5640	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	38.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.51% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<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.

## 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: 7IG

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	0.48	0/2682	0.63	0/3636
1	B	0.43	0/2667	0.65	1/3614 (0.0%)
All	All	0.46	0/5349	0.64	1/7250 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	B	1	1

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed( $^{\circ}$ )	Ideal( $^{\circ}$ )
1	B	334	ALA	N-CA-CB	5.58	117.90	110.10

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	B	334	ALA	CA

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	334	ALA	Peptide

## 5.2 Too-close contacts

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	2616	0	2551	23	0
1	B	2590	0	2535	35	0
2	A	26	0	19	0	0
3	A	236	0	0	4	0
3	B	172	0	0	5	0
All	All	5640	0	5105	57	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 6.

All (57) 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:B:334:ALA:HB1	1:B:335:ARG:HA	1.33	1.09
1:A:210:LEU:HD12	1:A:211:LEU:HG	1.60	0.83
1:A:205:VAL:HG21	1:A:237:LEU:HD23	1.63	0.81
1:B:334:ALA:HB2	3:B:376:HOH:O	1.80	0.81
1:B:334:ALA:HB1	1:B:335:ARG:CA	2.10	0.80
1:B:91:ILE:CG2	1:B:98:THR:HG23	2.14	0.77
1:A:208:SER:OG	1:A:210:LEU:HD23	1.87	0.73
1:A:11[B]:MET:SD	3:A:761:HOH:O	2.47	0.72
1:B:244:LYS:NZ	1:B:251:VAL:CG2	2.54	0.71
1:A:160:ASP:OD2	3:A:709:HOH:O	2.10	0.69
1:B:244:LYS:NZ	1:B:251:VAL:HG22	2.12	0.64
1:B:76:LEU:HB2	1:B:83:VAL:HG23	1.80	0.64
1:B:244:LYS:HZ2	1:B:251:VAL:HG22	1.62	0.63
1:B:276:SER:O	1:B:280:VAL:HG13	2.01	0.60
1:B:244:LYS:HZ1	1:B:251:VAL:CG2	2.14	0.59
1:B:74:LEU:HD11	1:B:76:LEU:HD21	1.85	0.59
1:B:247:LEU:HD22	1:B:247:LEU:N	2.21	0.56
1:B:91:ILE:HG23	1:B:98:THR:HG23	1.85	0.56
1:B:334:ALA:CB	1:B:335:ARG:CA	2.84	0.54
1:B:102:MET:HE2	3:B:504:HOH:O	2.08	0.53
1:A:143:ILE:HD11	1:A:151[B]:ASP:OD1	2.09	0.52
1:A:91:ILE:CG2	1:A:98:THR:HG23	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:247:LEU:N	1:B:247:LEU:CD2	2.72	0.51
1:B:252:VAL:HG11	1:B:260:LEU:HD11	1.92	0.51
1:A:11[A]:MET:HE3	3:A:761:HOH:O	2.11	0.50
1:B:3:SER:OG	1:B:95:GLY:O	2.28	0.50
1:B:246:ARG:HG2	1:B:247:LEU:HD22	1.95	0.49
1:B:74:LEU:HG	1:B:76:LEU:HD13	1.96	0.48
1:B:334:ALA:HB3	3:B:465:HOH:O	2.14	0.47
1:B:87[A]:LEU:HD11	1:B:102:MET:HB3	1.96	0.47
1:B:74:LEU:HD21	1:B:76:LEU:HD22	1.98	0.46
1:B:246:ARG:C	1:B:247:LEU:HD22	2.36	0.46
1:B:274:LEU:HD22	1:B:317:LYS:HG2	1.97	0.46
1:B:280:VAL:HB	1:B:293:LEU:HD22	1.98	0.46
1:B:280:VAL:HB	1:B:293:LEU:CD2	2.46	0.45
1:A:40:TRP:CD1	1:A:76:LEU:HD23	2.51	0.45
1:A:180:HIS:HE1	3:A:729:HOH:O	1.99	0.45
1:B:247:LEU:HD23	1:B:248:PHE:H	1.81	0.45
1:A:259:THR:HG23	1:B:118:GLU:OE1	2.17	0.45
1:A:5:VAL:HB	1:A:171:ILE:CG2	2.47	0.44
1:B:334:ALA:CB	3:B:465:HOH:O	2.66	0.44
1:A:178:PRO:HA	1:A:181:TYR:CE1	2.53	0.44
1:A:280:VAL:HG22	1:A:293:LEU:HD22	2.00	0.43
1:A:155:PHE:CZ	1:A:171:ILE:HD12	2.53	0.43
1:A:226:TYR:CD1	1:A:296:HIS:CD2	3.07	0.43
1:A:143:ILE:CD1	1:A:151[B]:ASP:OD1	2.65	0.43
1:A:210:LEU:HD12	1:A:211:LEU:CG	2.42	0.43
1:B:159:ARG:HG3	1:B:316:ARG:HD2	2.01	0.42
1:B:74:LEU:HD23	1:B:74:LEU:O	2.18	0.42
1:B:48:ARG:HD2	1:B:54:VAL:HG22	2.01	0.42
1:A:10:TYR:CZ	1:A:11[B]:MET:HE2	2.55	0.42
1:B:228:SER:HA	1:B:296:HIS:O	2.20	0.41
1:A:91:ILE:HG23	1:A:98:THR:HG23	2.01	0.41
1:A:205:VAL:HG21	1:A:237:LEU:CD2	2.42	0.40
1:A:297:ALA:O	1:A:298:MET:HE3	2.21	0.40
1:A:317:LYS:HE3	3:B:396:HOH:O	2.20	0.40
1:B:225:SER:O	1:B:312:ALA:HB3	2.20	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	338/340 (99%)	332 (98%)	6 (2%)	0	100	100
1	B	334/340 (98%)	320 (96%)	11 (3%)	3 (1%)	17	7
All	All	672/680 (99%)	652 (97%)	17 (2%)	3 (0%)	29	24

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	334	ALA
1	B	247	LEU
1	B	208	SER

### 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	290/290 (100%)	278 (96%)	12 (4%)	30	21
1	B	289/290 (100%)	277 (96%)	12 (4%)	30	20
All	All	579/580 (100%)	555 (96%)	24 (4%)	30	21

All (24) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1	THR
1	A	76	LEU
1	A	140	ASP

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Mol	Chain	Res	Type
1	A	167	LEU
1	A	192	LYS
1	A	217	LEU
1	A	232	SER
1	A	237	LEU
1	A	266	HIS
1	A	298	MET
1	A	333	LEU
1	A	335	ARG
1	B	74	LEU
1	B	76	LEU
1	B	140	ASP
1	B	210	LEU
1	B	217	LEU
1	B	237	LEU
1	B	244	LYS
1	B	247	LEU
1	B	270	LYS
1	B	274	LEU
1	B	280	VAL
1	B	333	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (8) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	141	ASN
1	A	189	ASN
1	A	326	ASN
1	B	70	ASN
1	B	141	ASN
1	B	189	ASN
1	B	266	HIS
1	B	296	HIS

### 5.3.3 RNA

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](#)

1 ligand is 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).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
2	7IG	A	601	-	27,28,28	1.20	2 (7%)	35,39,39	2.63	7 (20%)

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
2	7IG	A	601	-	-	0/7/11/11	0/3/3/3

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	601	7IG	C3-C4	3.34	1.48	1.43
2	A	601	7IG	C3-N2	2.86	1.35	1.32

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	601	7IG	C2-N2-C3	8.46	123.30	116.24
2	A	601	7IG	C3-C4-C1	-8.04	116.15	123.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	601	7IG	C4-C3-N2	-6.12	117.99	122.44
2	A	601	7IG	C18-C17-C16	-3.45	119.16	123.52
2	A	601	7IG	C17-C18-C13	2.74	120.40	116.13
2	A	601	7IG	C18-C13-C14	-2.52	120.34	123.52
2	A	601	7IG	N2-C2-N1	-2.06	122.19	125.42

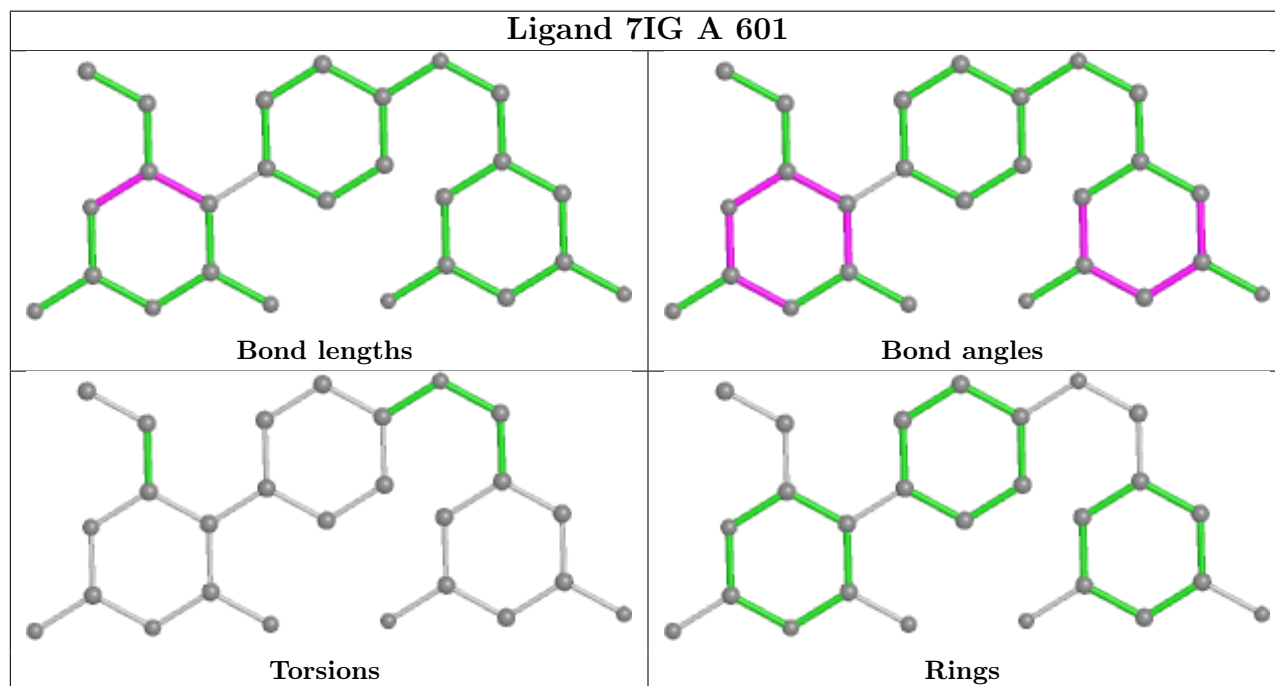
There are no chirality outliers.

There are no torsion outliers.

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 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 [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<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	A	338/340 (99%)	0.50	26 (7%) 13 15	29, 35, 49, 55	0
1	B	332/340 (97%)	1.04	64 (19%) 1 1	31, 40, 59, 66	0
All	All	670/680 (98%)	0.77	90 (13%) 3 3	29, 37, 53, 66	0

All (90) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	51	THR	9.1
1	B	74	LEU	8.0
1	B	208	SER	7.7
1	A	208	SER	7.5
1	B	207	SER	7.3
1	B	114	PHE	7.3
1	B	113	PRO	6.9
1	B	50	TYR	6.8
1	B	55	TYR	6.6
1	B	49	LEU	6.5
1	B	52	ALA	6.1
1	B	111	ALA	5.8
1	B	47	SER	5.6
1	A	207	SER	5.4
1	B	48	ARG	5.4
1	B	83	VAL	5.4
1	B	112	LEU	5.0
1	B	53	CYS	4.9
1	B	115	MET	4.9
1	A	165	GLN	4.9
1	A	164	SER	4.7
1	B	54	VAL	4.7
1	B	69	HIS	4.5
1	B	76	LEU	4.4

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Mol	Chain	Res	Type	RSRZ
1	A	-2	LEU	4.1
1	A	209	THR	4.1
1	B	109	MET	4.0
1	B	75	THR	4.0
1	B	134	ARG	3.9
1	B	214	ASP	3.8
1	B	210	LEU	3.8
1	B	247	LEU	3.7
1	B	0	ASN	3.6
1	B	285	TYR	3.5
1	B	-2	LEU	3.4
1	A	41	VAL	3.4
1	B	315	ILE	3.4
1	B	269	GLY	3.3
1	B	284	SER	3.3
1	A	40	TRP	3.2
1	A	269	GLY	3.2
1	B	303	PRO	3.1
1	B	310	LEU	3.1
1	A	325	ARG	3.1
1	B	227	ILE	3.0
1	B	73	GLU	3.0
1	B	220	VAL	3.0
1	B	108	GLU	3.0
1	A	163	ASN	3.0
1	A	214	ASP	3.0
1	A	303	PRO	2.9
1	B	63	ASP	2.9
1	A	0	ASN	2.9
1	B	110	PRO	2.8
1	B	72	THR	2.8
1	A	193	THR	2.7
1	B	314	PHE	2.7
1	A	310	LEU	2.7
1	A	39	VAL	2.6
1	B	70	ASN	2.6
1	A	301	PRO	2.6
1	B	163	ASN	2.6
1	A	293	LEU	2.6
1	B	23	THR	2.6
1	B	209	THR	2.6
1	B	62[A]	SER	2.5

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Mol	Chain	Res	Type	RSRZ
1	A	122	VAL	2.5
1	B	132	ILE	2.5
1	B	24	PRO	2.5
1	B	65	SER	2.4
1	B	244	LYS	2.4
1	B	84	SER	2.4
1	A	295	ILE	2.4
1	A	106	VAL	2.3
1	B	302	PRO	2.3
1	A	134	ARG	2.3
1	B	213	GLU	2.2
1	B	322	PHE	2.2
1	B	334	ALA	2.2
1	B	87[A]	LEU	2.2
1	A	210	LEU	2.2
1	B	283	GLU	2.1
1	A	103	PHE	2.1
1	B	162	GLU	2.1
1	B	133	GLY	2.1
1	A	123	VAL	2.1
1	B	46	CYS	2.1
1	B	41	VAL	2.0
1	B	294	ALA	2.0
1	B	206	GLY	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](#)

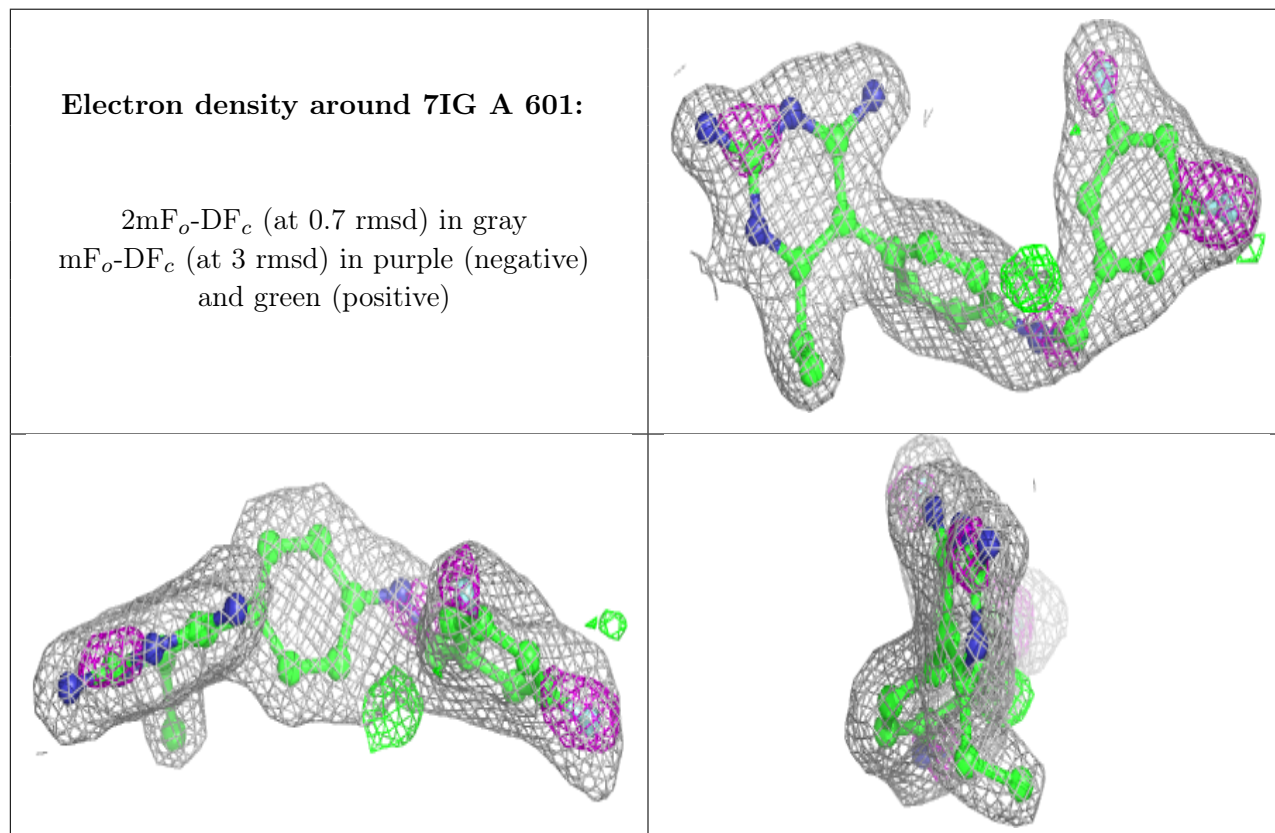
There are no monosaccharides in this entry.

## 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<sup>th</sup> 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( $\text{\AA}^2$ )	Q<0.9
2	7IG	A	601	26/26	0.92	0.12	25,28,29,29	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.