



Full wwPDB X-ray Structure Validation Report ⓘ

Nov 30, 2022 – 03:24 pm GMT

PDB ID : 7QY9
Title : The structure of T.forsythia NanH with oseltamivir
Authors : Rafferty, J.; Stafford, G.; Satur, M.
Deposited on : 2022-01-27
Resolution : 1.92 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 : 1.8.4, CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.31.3
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0267
CCP4 : 7.1.010 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.3

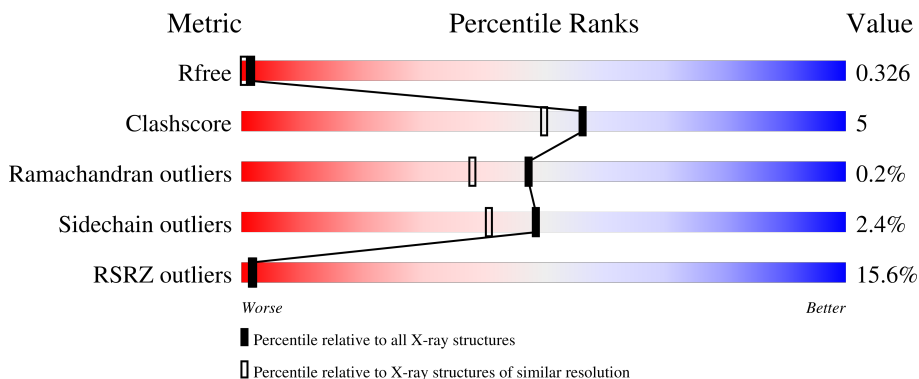
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 1.92 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	7937 (1.94-1.90)
Clashscore	141614	8644 (1.94-1.90)
Ramachandran outliers	138981	8530 (1.94-1.90)
Sidechain outliers	138945	8530 (1.94-1.90)
RSRZ outliers	127900	7793 (1.94-1.90)

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 ≥ 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	519	 11% 88% 11%
1	B	519	 20% 91% 9%

2 Entry composition i

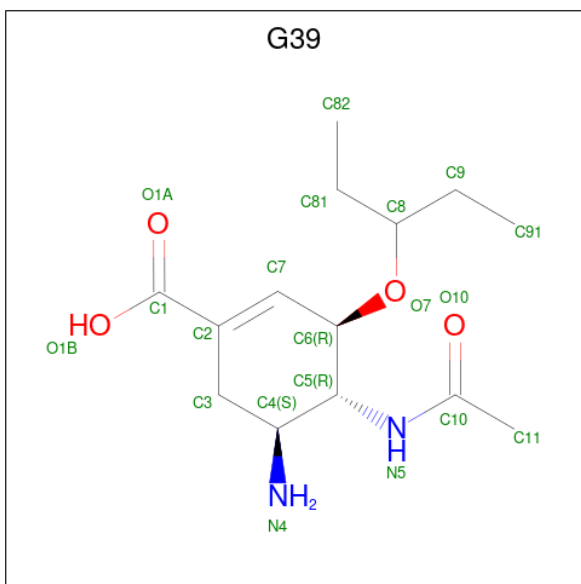
There are 3 unique types of molecules in this entry. The entry contains 16438 atoms, of which 8052 are hydrogens and 0 are deuteriums.

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 BNR/Asp-box repeat protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace	
			Total	C	H	N	O				S
1	A	519	Total 8029	C 2505	H 4004	N 724	O 776	S 20	126	0	0
1	B	519	Total 8023	C 2503	H 4002	N 724	O 774	S 20	126	0	0

- Molecule 2 is (3R,4R,5S)-4-(acetylamino)-5-amino-3-(pentan-3-yloxy)cyclohex-1-ene-1-carboxylic acid (three-letter code: G39) (formula: $C_{14}H_{24}N_2O_4$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	H	N	O		
2	A	1	Total 43	C 14	H 23	N 2	O 4	0	0
2	B	1	Total 43	C 14	H 23	N 2	O 4	0	0

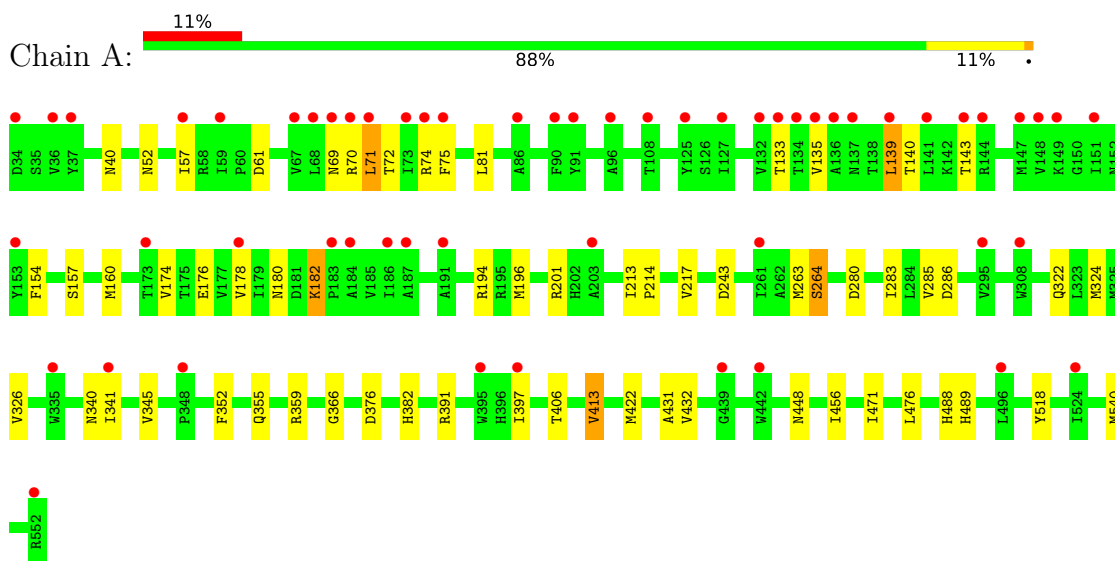
- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	161	Total 161	O 161	0	0
3	B	139	Total 139	O 139	0	0

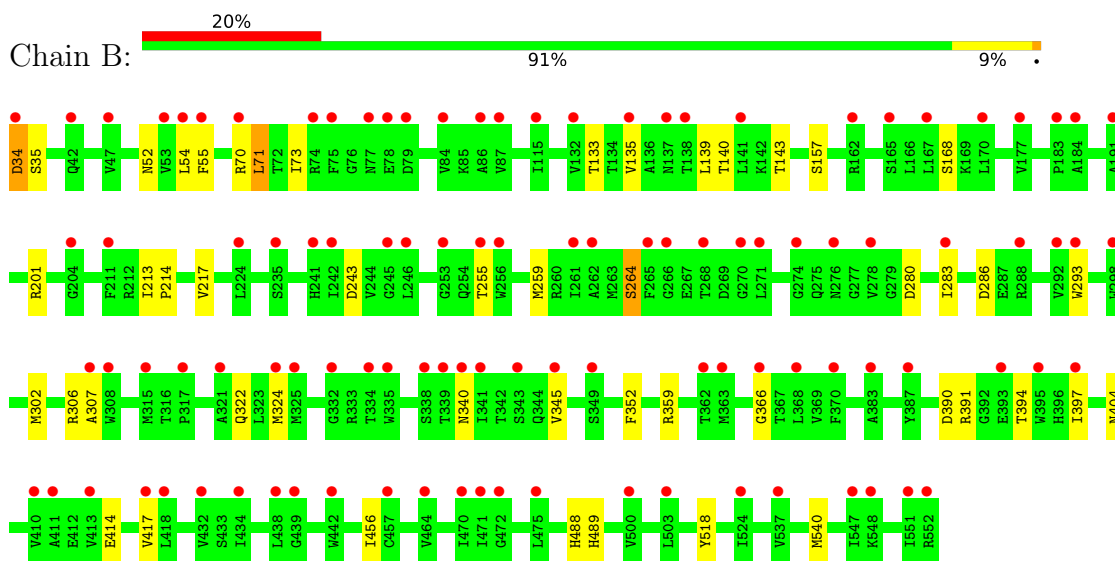
3 Residue-property plots [i](#)

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: BNR/Asp-box repeat protein



- Molecule 1: BNR/Asp-box repeat protein



4 Data and refinement statistics

Property	Value	Source
Space group	P 41 21 2	Depositor
Cell constants a, b, c, α , β , γ	79.50Å 79.50Å 348.85Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	77.63 – 1.92 77.51 – 1.92	Depositor EDS
% Data completeness (in resolution range)	95.1 (77.63-1.92) 93.0 (77.51-1.92)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.13 (at 1.92Å)	Xtriage
Refinement program	REFMAC 5.8.0267	Depositor
R, R_{free}	0.313 , 0.346 0.297 , 0.326	Depositor DCC
R_{free} test set	4058 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å ²)	24.5	Xtriage
Anisotropy	0.316	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	(Not available) , (Not available)	EDS
L-test for twinning ²	$\langle L \rangle = 0.51$, $\langle L^2 \rangle = 0.35$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.89	EDS
Total number of atoms	16438	wwPDB-VP
Average B, all atoms (Å ²)	44.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.51% 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: G39

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	0.65	0/4103	0.77	0/5572
1	B	0.66	0/4099	0.77	0/5567
All	All	0.65	0/8202	0.77	0/11139

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	4025	4004	3989	44	0
1	B	4021	4002	3985	37	0
2	A	20	23	23	1	0
2	B	20	23	23	0	0
3	A	161	0	0	0	0
3	B	139	0	0	0	0
All	All	8386	8052	8020	81	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 5.

All (81) 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:302:MET:HE1	1:B:307:ALA:HA	1.48	0.96
1:A:160:MET:HG3	1:A:196:MET:HE1	1.47	0.94
1:B:201:ARG:HH11	1:B:259:MET:HE2	1.52	0.74
1:A:324:MET:HE2	1:A:340:ASN:HA	1.72	0.70
1:A:243:ASP:CG	1:A:264:SER:HG	1.95	0.68
1:B:213:ILE:HG21	1:B:280:ASP:HA	1.77	0.67
1:A:213:ILE:HG21	1:A:280:ASP:HA	1.79	0.65
1:A:160:MET:HG3	1:A:196:MET:CE	2.23	0.63
1:A:432:VAL:H	1:A:448:ASN:HD22	1.46	0.63
1:A:263:MET:HE2	1:A:324:MET:HB3	1.80	0.63
1:B:488:HIS:HD2	1:B:489:HIS:ND1	1.96	0.62
1:B:324:MET:HE2	1:B:340:ASN:HA	1.82	0.61
1:B:201:ARG:HH11	1:B:259:MET:CE	2.13	0.61
1:B:54:LEU:HD12	1:B:55:PHE:CD2	2.36	0.61
1:A:243:ASP:CG	1:A:264:SER:OG	2.39	0.60
1:B:302:MET:CE	1:B:307:ALA:HA	2.29	0.58
1:B:286:ASP:HB2	1:B:293:TRP:HZ3	1.69	0.58
1:B:139:LEU:HD23	1:B:140:THR:N	2.21	0.56
1:A:57:ILE:HD11	1:A:154:PHE:HB2	1.88	0.55
1:B:414:GLU:HB2	1:B:417:VAL:CG1	2.37	0.55
1:B:135:VAL:HG13	1:B:139:LEU:HD12	1.89	0.54
1:A:488:HIS:HD2	1:A:489:HIS:CD2	2.27	0.52
1:B:322:GLN:HB3	1:B:324:MET:CE	2.39	0.52
1:B:70:ARG:HG2	1:B:140:THR:HG23	1.92	0.51
1:A:263:MET:CE	1:A:324:MET:HB3	2.39	0.51
1:B:201:ARG:HB2	1:B:540:MET:HB2	1.92	0.51
1:B:286:ASP:CB	1:B:293:TRP:HZ3	2.24	0.50
1:A:70:ARG:HB2	1:A:178:VAL:CG2	2.41	0.50
1:A:488:HIS:HD2	1:A:489:HIS:HD2	1.59	0.50
1:A:217:VAL:HB	1:A:285:VAL:HG23	1.94	0.50
1:A:71:LEU:CD1	1:A:174:VAL:HG13	2.42	0.50
1:A:201:ARG:HB2	1:A:540:MET:HB2	1.94	0.49
1:B:71:LEU:CD1	1:B:73:ILE:CD1	2.91	0.49
1:B:54:LEU:HD12	1:B:55:PHE:CE2	2.48	0.48
1:B:286:ASP:HB2	1:B:293:TRP:CZ3	2.46	0.48
1:A:366:GLY:O	1:A:391:ARG:NH2	2.47	0.48
1:A:180:ASN:O	1:A:182:LYS:HD3	2.13	0.48
1:A:283:ILE:O	1:A:359:ARG:HA	2.14	0.47
1:B:366:GLY:O	1:B:391:ARG:NH2	2.46	0.47
1:A:69:ASN:HB2	1:A:178:VAL:HG23	1.95	0.47
1:B:322:GLN:HB3	1:B:324:MET:HE3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:217:VAL:HG13	1:B:283:ILE:HG23	1.97	0.47
1:B:71:LEU:C	1:B:71:LEU:HD12	2.34	0.47
1:A:70:ARG:HB2	1:A:178:VAL:HG22	1.97	0.47
1:B:71:LEU:CD1	1:B:73:ILE:HD12	2.45	0.46
1:B:283:ILE:O	1:B:359:ARG:HA	2.16	0.46
1:A:322:GLN:HB3	1:A:324:MET:CE	2.46	0.46
1:A:139:LEU:HD23	1:A:140:THR:N	2.32	0.45
1:A:286:ASP:OD1	1:A:391:ARG:NH1	2.49	0.45
1:A:57:ILE:CG1	1:A:154:PHE:HB2	2.46	0.45
1:A:217:VAL:HG13	1:A:283:ILE:HG23	1.98	0.45
1:B:286:ASP:OD1	1:B:391:ARG:NH1	2.49	0.45
1:A:52:ASN:O	1:A:157:SER:HA	2.17	0.45
1:A:345:VAL:HB	1:A:397:ILE:HD12	1.99	0.44
1:B:390:ASP:OD2	1:B:394:THR:OG1	2.31	0.44
1:B:243:ASP:OD1	1:B:264:SER:OG	2.30	0.44
1:A:214:PRO:HD2	1:A:518:TYR:HB3	1.99	0.44
1:B:54:LEU:CD1	1:B:55:PHE:CE2	3.00	0.44
1:A:75:PHE:CG	1:A:81:LEU:HD11	2.53	0.43
1:B:52:ASN:O	1:B:157:SER:HA	2.17	0.43
1:B:293:TRP:CZ2	1:B:391:ARG:O	2.71	0.43
1:A:263:MET:HE3	1:A:326:VAL:HG13	1.99	0.43
1:A:376:ASP:OD2	1:A:382:HIS:HE1	2.02	0.43
1:B:293:TRP:CH2	1:B:391:ARG:O	2.71	0.43
1:A:71:LEU:HD12	1:A:174:VAL:HG13	2.01	0.42
1:A:322:GLN:HB3	1:A:324:MET:HE1	2.00	0.42
1:A:422:MET:HB2	1:A:431:ALA:HB3	2.02	0.42
1:B:345:VAL:HB	1:B:397:ILE:HD12	2.02	0.41
1:A:341:ILE:O	1:A:341:ILE:HG22	2.21	0.41
1:A:280:ASP:O	1:A:355:GLN:NE2	2.49	0.41
1:B:34:ASP:N	1:B:34:ASP:OD1	2.54	0.41
1:A:57:ILE:HD11	1:A:154:PHE:CD1	2.55	0.41
1:A:135:VAL:HG13	1:A:139:LEU:HD12	2.03	0.41
1:A:413:VAL:HG12	1:A:476:LEU:HD11	2.03	0.41
1:B:214:PRO:HD2	1:B:518:TYR:HB3	2.02	0.41
1:A:488:HIS:CD2	1:A:489:HIS:HD2	2.39	0.41
1:A:406:THR:HG21	2:A:601:G39:H911	2.03	0.40
1:B:54:LEU:HD13	1:B:54:LEU:C	2.42	0.40
1:A:72:THR:OG1	1:A:176:GLU:HB3	2.20	0.40
1:B:306:ARG:HA	1:B:306:ARG:NE	2.37	0.40
1:A:40:ASN:OD1	1:A:194:ARG:HD3	2.22	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	517/519 (100%)	491 (95%)	25 (5%)	1 (0%)	47	38
1	B	517/519 (100%)	490 (95%)	26 (5%)	1 (0%)	47	38
All	All	1034/1038 (100%)	981 (95%)	51 (5%)	2 (0%)	47	38

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	456	ILE
1	B	456	ILE

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	446/446 (100%)	435 (98%)	11 (2%)	47	39
1	B	445/446 (100%)	435 (98%)	10 (2%)	52	45
All	All	891/892 (100%)	870 (98%)	21 (2%)	49	41

All (21) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	61	ASP
1	A	71	LEU
1	A	74	ARG
1	A	133	THR

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Mol	Chain	Res	Type
1	A	139	LEU
1	A	143	THR
1	A	182	LYS
1	A	264	SER
1	A	352	PHE
1	A	413	VAL
1	A	471	ILE
1	B	34	ASP
1	B	35	SER
1	B	71	LEU
1	B	133	THR
1	B	143	THR
1	B	168	SER
1	B	255	THR
1	B	264	SER
1	B	352	PHE
1	B	404	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (7) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	163	ASN
1	A	382	HIS
1	A	448	ASN
1	A	488	HIS
1	A	489	HIS
1	B	163	ASN
1	B	488	HIS

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

2 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).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	G39	B	601	-	20,20,20	0.82	1 (5%)	19,27,27	0.97	1 (5%)
2	G39	A	601	-	20,20,20	0.72	1 (5%)	19,27,27	1.06	1 (5%)

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	G39	B	601	-	-	1/16/32/32	0/1/1/1
2	G39	A	601	-	-	0/16/32/32	0/1/1/1

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	601	G39	O1B-C1	-2.67	1.22	1.30
2	B	601	G39	O1B-C1	-2.53	1.23	1.30

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	601	G39	C4-C3-C2	3.16	113.50	109.75
2	B	601	G39	C4-C3-C2	3.05	113.36	109.75

There are no chirality outliers.

All (1) torsion outliers are listed below:

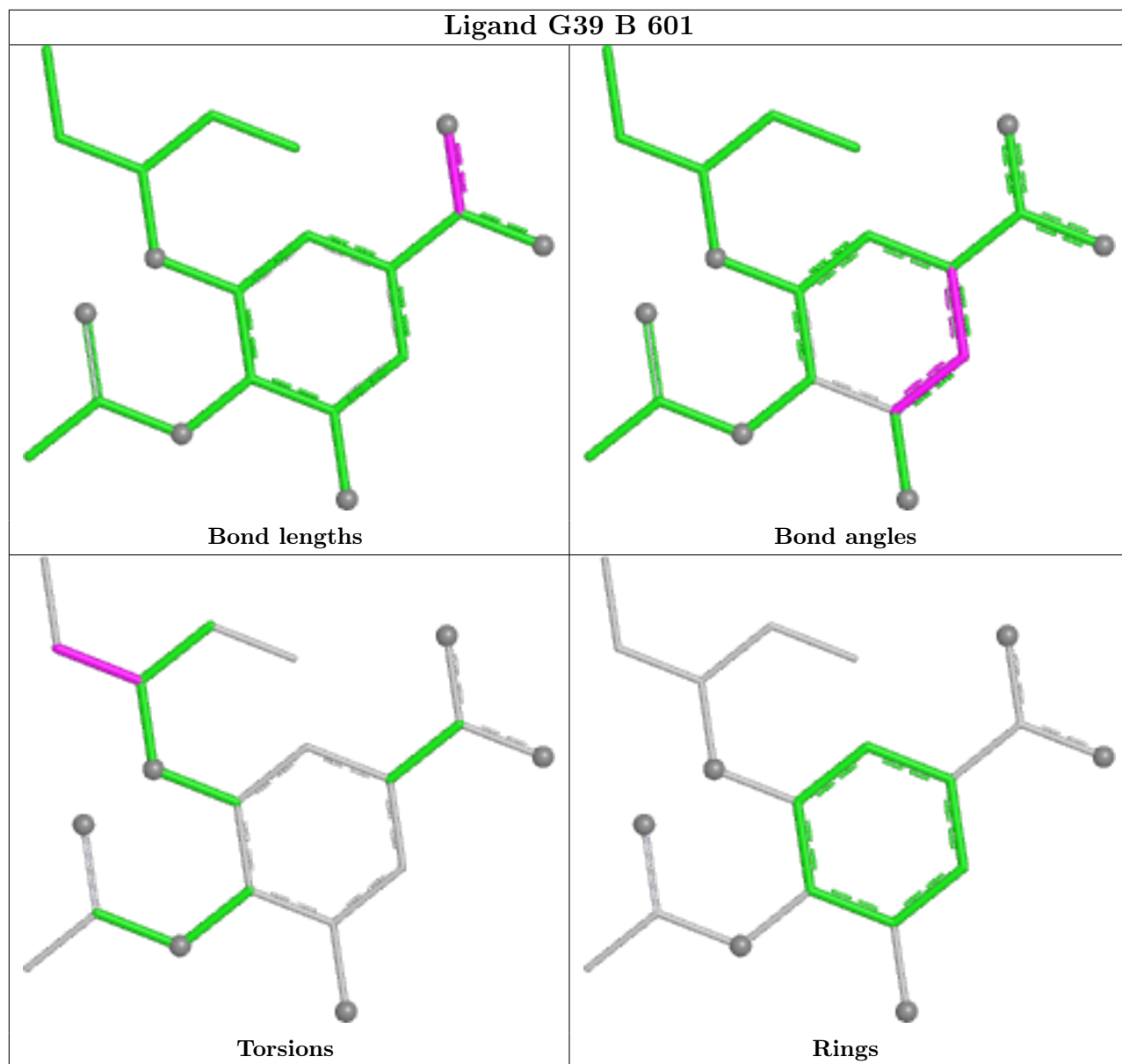
Mol	Chain	Res	Type	Atoms
2	B	601	G39	C9-C8-C81-C82

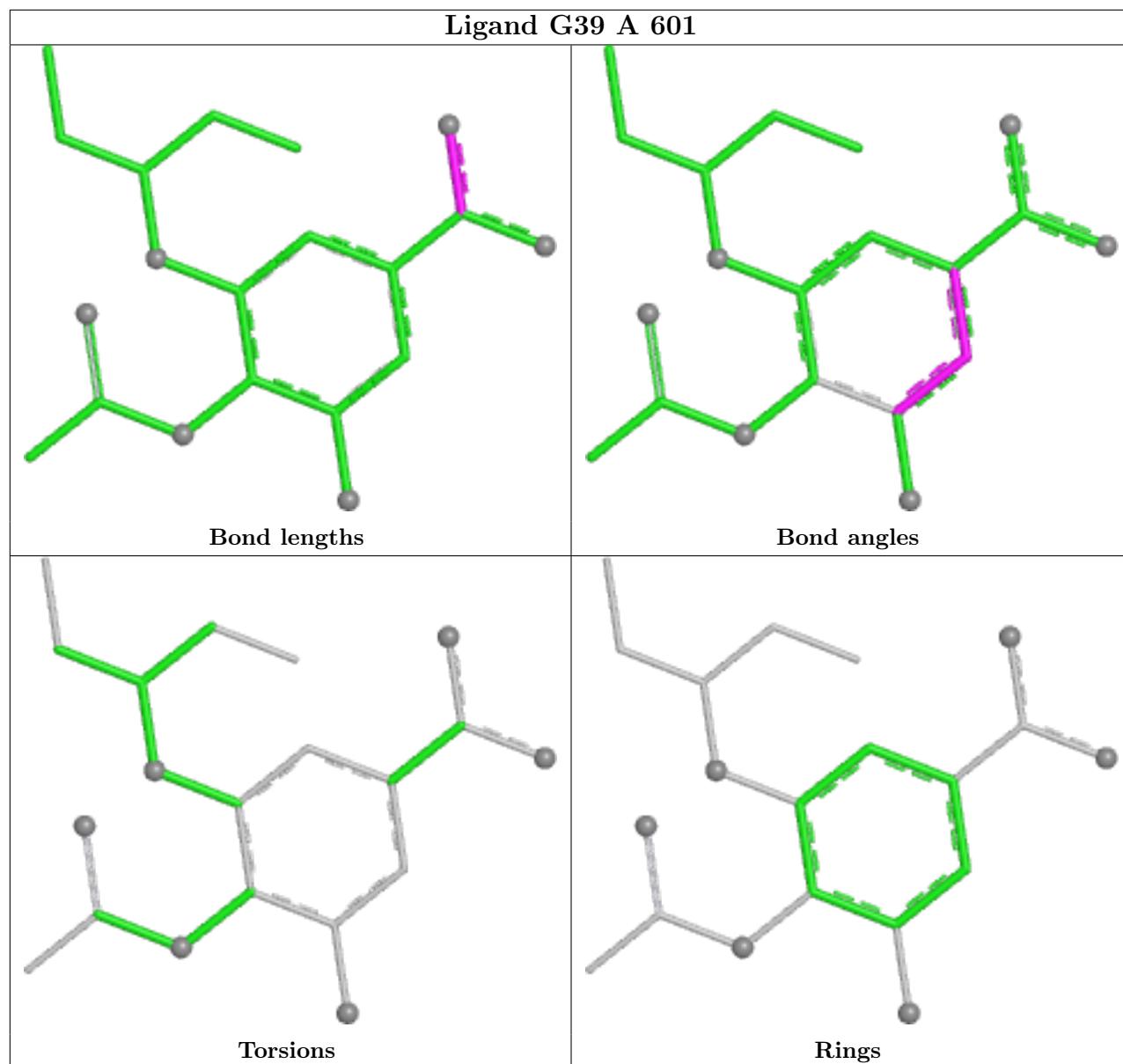
There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	601	G39	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	519/519 (100%)	0.96	56 (10%) 5 7	22, 38, 75, 97	0
1	B	519/519 (100%)	1.28	106 (20%) 1 1	27, 46, 63, 86	0
All	All	1038/1038 (100%)	1.12	162 (15%) 2 2	22, 42, 67, 97	0

All (162) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	137	ASN	5.2
1	B	552	ARG	4.9
1	B	308	TRP	4.9
1	B	395	TRP	4.7
1	A	132	VAL	4.6
1	B	464	VAL	4.6
1	A	148	VAL	4.5
1	B	339	THR	4.3
1	B	471	ILE	4.2
1	B	47	VAL	4.1
1	A	308	TRP	4.0
1	B	500	VAL	4.0
1	B	34	ASP	3.8
1	A	136	ALA	3.7
1	A	135	VAL	3.7
1	A	178	VAL	3.7
1	B	393	GLU	3.6
1	B	345	VAL	3.6
1	A	71	LEU	3.5
1	B	417	VAL	3.5
1	A	186	ILE	3.4
1	A	57	ILE	3.4
1	B	470	ILE	3.4
1	B	262	ALA	3.4

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Mol	Chain	Res	Type	RSRZ
1	B	274	GLY	3.4
1	B	246	LEU	3.4
1	B	84	VAL	3.3
1	A	496	LEU	3.3
1	B	261	ILE	3.3
1	B	442	TRP	3.3
1	B	547	ILE	3.2
1	A	134	THR	3.2
1	A	36	VAL	3.2
1	A	86	ALA	3.2
1	B	271	LEU	3.1
1	B	475	LEU	3.1
1	B	298	TRP	3.1
1	B	292	VAL	3.1
1	B	418	LEU	3.1
1	B	472	GLY	3.1
1	B	387	TYR	3.1
1	B	135	VAL	3.0
1	B	170	LEU	3.0
1	B	366	GLY	3.0
1	B	75	PHE	2.9
1	B	413	VAL	2.9
1	B	77	ASN	2.9
1	A	397	ILE	2.9
1	B	315	MET	2.9
1	A	552	ARG	2.9
1	B	343	SER	2.9
1	B	410	VAL	2.9
1	B	265	PHE	2.9
1	A	141	LEU	2.8
1	B	87	VAL	2.8
1	B	340	ASN	2.8
1	B	335	TRP	2.8
1	A	59	ILE	2.8
1	B	242	ILE	2.7
1	B	256	TRP	2.7
1	A	143	THR	2.7
1	A	68	LEU	2.7
1	A	187	ALA	2.6
1	B	307	ALA	2.6
1	B	245	GLY	2.6
1	B	55	PHE	2.6

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Mol	Chain	Res	Type	RSRZ
1	B	293	TRP	2.6
1	B	54	LEU	2.6
1	B	283	ILE	2.6
1	B	324	MET	2.6
1	B	439	GLY	2.6
1	B	411	ALA	2.6
1	A	127	ILE	2.6
1	A	151	ILE	2.6
1	A	341	ILE	2.6
1	B	288	ARG	2.5
1	B	270	GLY	2.5
1	B	334	THR	2.5
1	A	153	TYR	2.5
1	A	184	ALA	2.5
1	B	177	VAL	2.5
1	A	144	ARG	2.5
1	B	138	THR	2.5
1	B	78	GLU	2.5
1	B	317	PRO	2.5
1	A	75	PHE	2.5
1	B	184	ALA	2.4
1	B	434	ILE	2.4
1	A	139	LEU	2.4
1	A	34	ASP	2.4
1	A	67	VAL	2.4
1	B	266	GLY	2.4
1	B	276	ASN	2.4
1	B	183	PRO	2.4
1	B	70	ARG	2.4
1	A	183	PRO	2.4
1	B	548	LYS	2.4
1	A	90	PHE	2.4
1	B	141	LEU	2.3
1	B	438	LEU	2.3
1	A	96	ALA	2.3
1	B	321	ALA	2.3
1	B	524	ILE	2.3
1	A	133	THR	2.3
1	B	224	LEU	2.3
1	B	74	ARG	2.3
1	B	255	THR	2.3
1	B	268	THR	2.3

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Mol	Chain	Res	Type	RSRZ
1	B	211	PHE	2.3
1	A	395	TRP	2.3
1	B	383	ALA	2.3
1	B	165	SER	2.3
1	B	235	SER	2.3
1	B	167	LEU	2.3
1	B	191	ALA	2.2
1	B	115	ILE	2.2
1	A	108	THR	2.2
1	B	551	ILE	2.2
1	B	503	LEU	2.2
1	B	253	GLY	2.2
1	B	325	MET	2.2
1	A	125	TYR	2.2
1	B	86	ALA	2.2
1	A	74	ARG	2.2
1	B	537	VAL	2.2
1	A	73	ILE	2.2
1	A	149	LYS	2.2
1	B	278	VAL	2.2
1	B	341	ILE	2.1
1	B	397	ILE	2.1
1	A	191	ALA	2.1
1	A	203	ALA	2.1
1	A	442	TRP	2.1
1	B	53	VAL	2.1
1	B	162	ARG	2.1
1	A	69	ASN	2.1
1	B	332	GLY	2.1
1	B	132	VAL	2.1
1	B	42	GLN	2.1
1	B	457	CYS	2.1
1	A	524	ILE	2.1
1	A	348	PRO	2.1
1	A	37	TYR	2.1
1	A	91	TYR	2.1
1	B	368	LEU	2.1
1	A	439	GLY	2.1
1	B	241	HIS	2.1
1	A	173	THR	2.0
1	B	363	MET	2.0
1	B	79	ASP	2.0

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Mol	Chain	Res	Type	RSRZ
1	A	137	ASN	2.0
1	B	432	VAL	2.0
1	A	335	TRP	2.0
1	B	204	GLY	2.0
1	A	295	VAL	2.0
1	B	370	PHE	2.0
1	A	261	ILE	2.0
1	A	147	MET	2.0
1	B	338	SER	2.0
1	B	349	SER	2.0
1	B	362	THR	2.0
1	A	70	ARG	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](#)

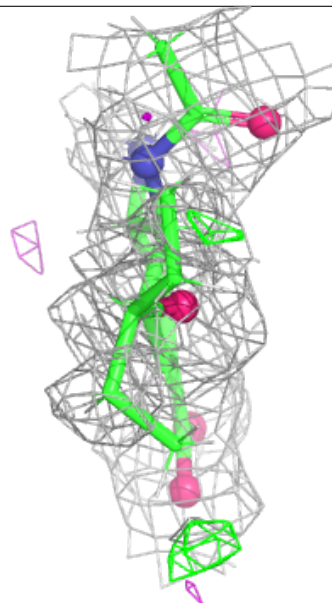
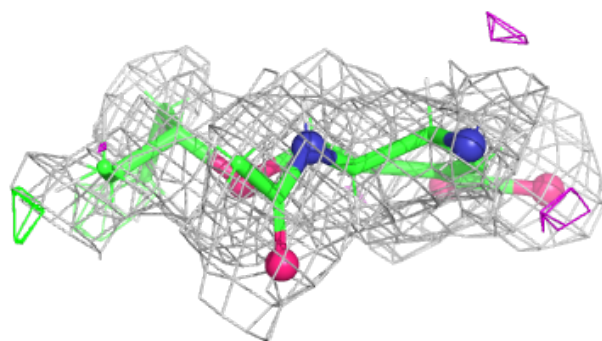
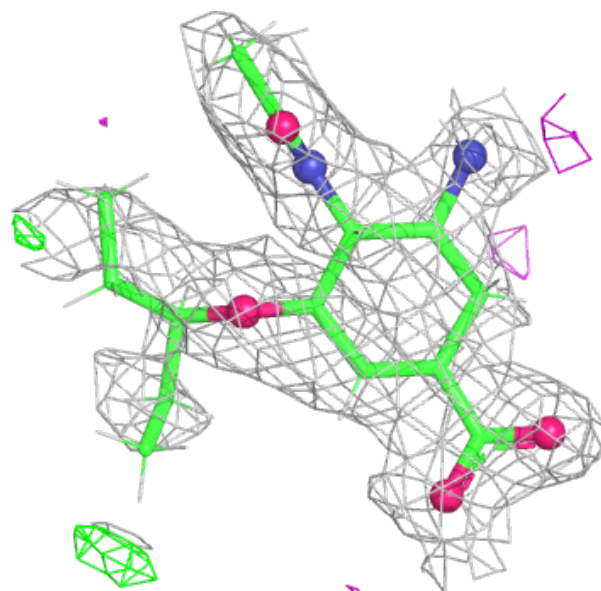
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

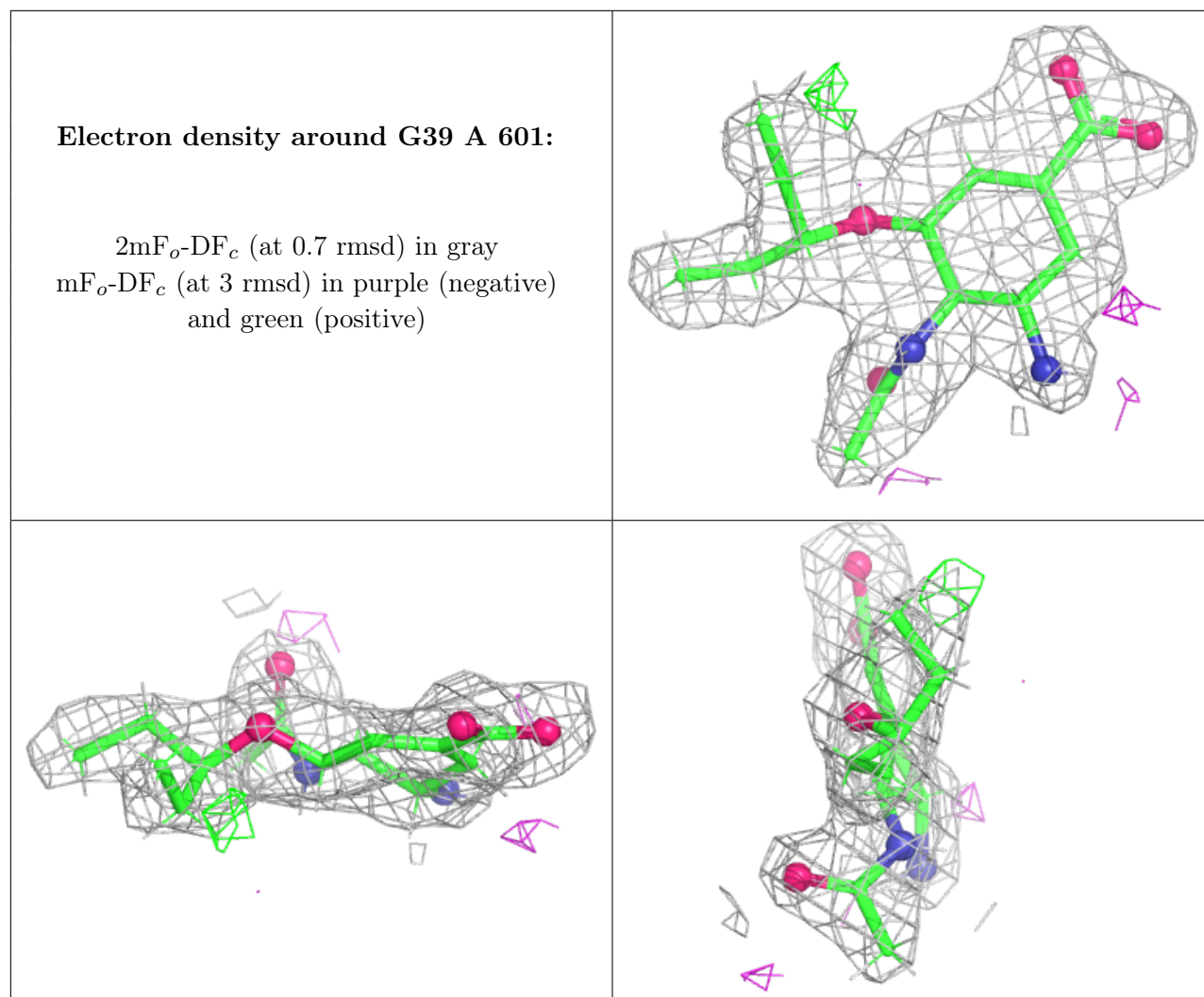
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
2	G39	B	601	20/20	0.78	0.24	47,53,60,61	0
2	G39	A	601	20/20	0.90	0.17	32,35,38,38	0

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 G39 B 601:

$2mF_o-DF_c$ (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.