WORLDWIDE wwPDB PROTEIN DATA BANK

wwPDB X-ray Structure Validation Summary Report (i)

Nov 21, 2023 – 05:17 PM JST

PDB ID	:	7VXG
Title	:	Non-receptor Protein Tyrosine Phosphatase SHP2 in Complex with Allosteric Inhibitor TK-453
Authors	:	Li, T.H.; Guo, H.T.; Ji, X.Y.
Deposited on	:	2021-11-12
Resolution	:	2.10 Å(reported)

The following versions of software and data (see references (i)) were used in the production of this report:

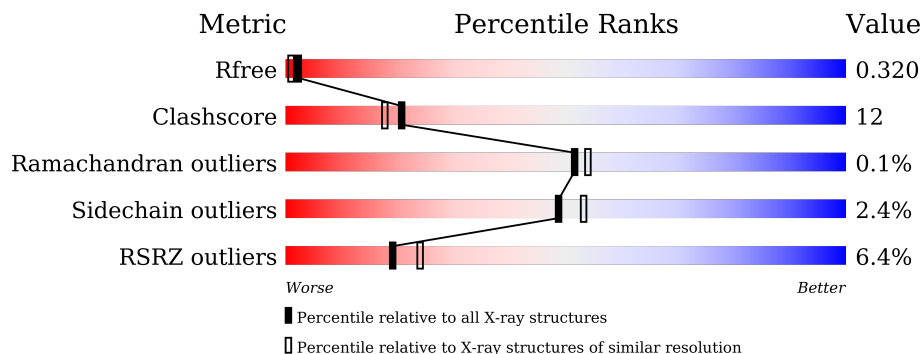|		
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance ⓘ

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

The reported resolution of this entry is 2.10 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	Percentile Ranks	Value
Rfree		0.320
Clashscore		12
Ramachandran outliers		0.1%
Sidechain outliers		2.4%
RSRZ outliers		6.4%

Worse   *Better*

▌Percentile relative to all X-ray structures

▯Percentile relative to X-ray structures of similar resolution

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	5197 (2.10-2.10)
Clashscore	141614	5710 (2.10-2.10)
Ramachandran outliers	138981	5647 (2.10-2.10)
Sidechain outliers	138945	5648 (2.10-2.10)
RSRZ outliers	127900	5083 (2.10-2.10)

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	526	5% — 66% / 24% / • 9%
1	B	526	5% — 73% / 17% / • 9%
1	C	526	6% — 68% / 22% / • 9%
1	D	526	7% — 69% / 23% / • 7%

2 Entity composition ⓘ

There are 3 unique types of molecules in this entry. The entry contains 29981 atoms, of which 14395 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 Tyrosine-protein phosphatase non-receptor type 11.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	477	Total 7338	C 2371	H 3581	N 653	O 715	S 18	0	0	0
1	B	480	Total 7409	C 2387	H 3624	N 666	O 715	S 17	0	0	0
1	C	481	Total 7213	C 2352	H 3478	N 649	O 718	S 16	0	0	0
1	D	487	Total 7457	C 2410	H 3628	N 674	O 728	S 17	0	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	0	SER	-	expression tag	UNP Q06124
B	0	SER	-	expression tag	UNP Q06124
C	0	SER	-	expression tag	UNP Q06124
D	0	SER	-	expression tag	UNP Q06124

- Molecule 2 is 6-[4-(aminomethyl)-4-methyl-piperidin-1-yl]-3-[2,3-bis(chloranyl)phenyl]sulfa nyl-pyrazin-2-amine (three-letter code: 83Q) (formula: $C_{17}H_{21}Cl_2N_5S$) (labeled as "Ligand of Interest" by depositor).
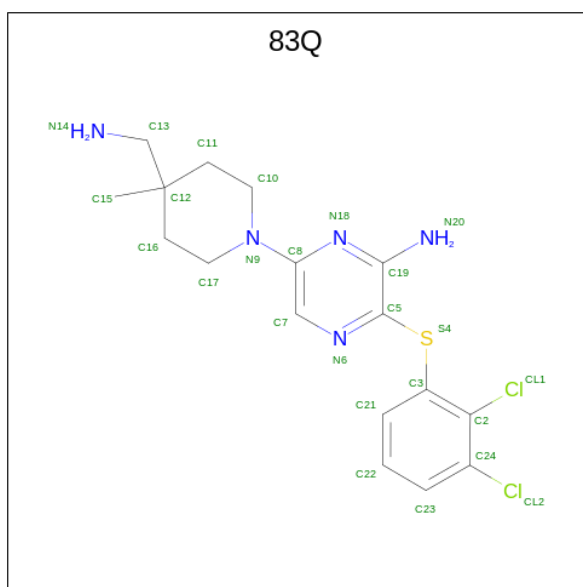
Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
2	A	1	Total	C	Cl	H	N	S	0	0
			46	17	2	21	5	1		
2	B	1	Total	C	Cl	H	N	S	0	0
			46	17	2	21	5	1		
2	C	1	Total	C	Cl	H	N	S	0	0
			46	17	2	21	5	1		
2	D	1	Total	C	Cl	H	N	S	0	0
			46	17	2	21	5	1		

• Molecule 3 is water.

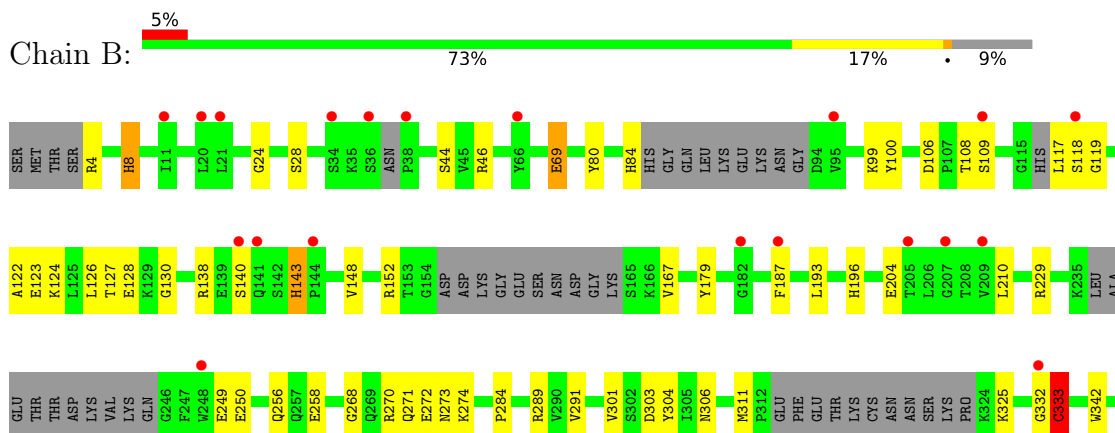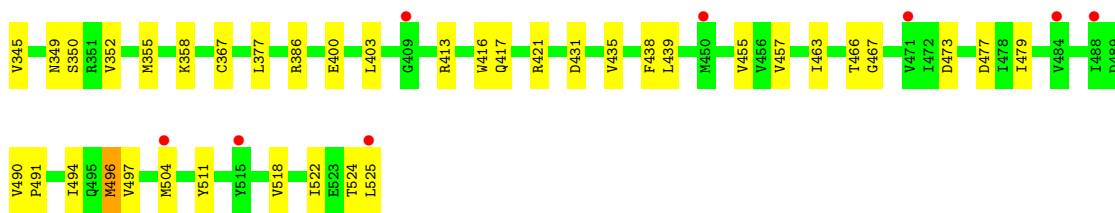| Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	112	Total	O	0	0
			112	112		
3	B	87	Total	O	0	0
			87	87		
3	C	85	Total	O	0	0
			85	85		
3	D	96	Total	O	0	0
			96	96		

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: Tyrosine-protein phosphatase non-receptor type 11
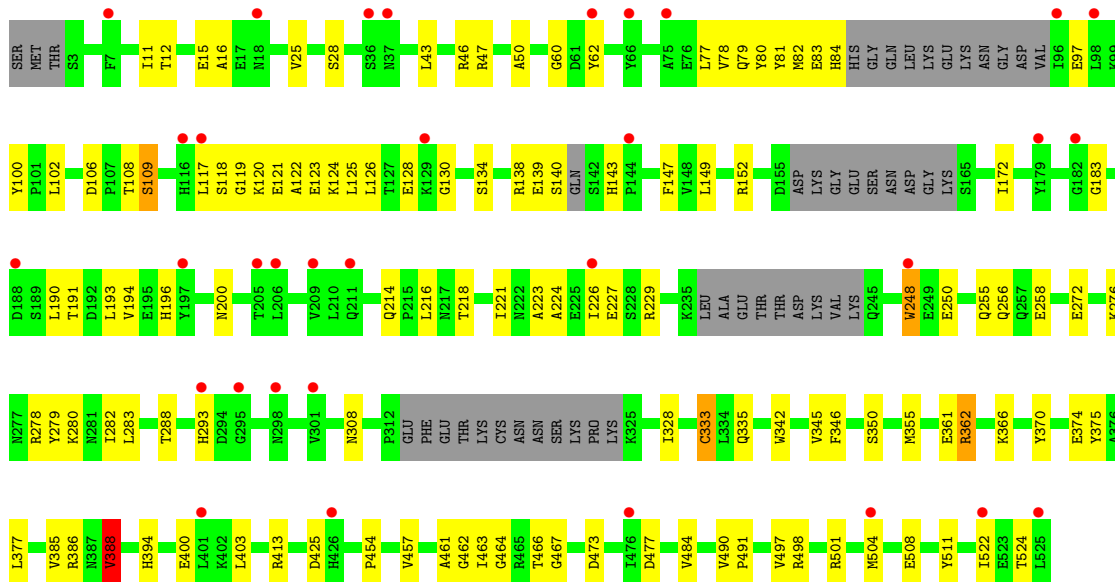

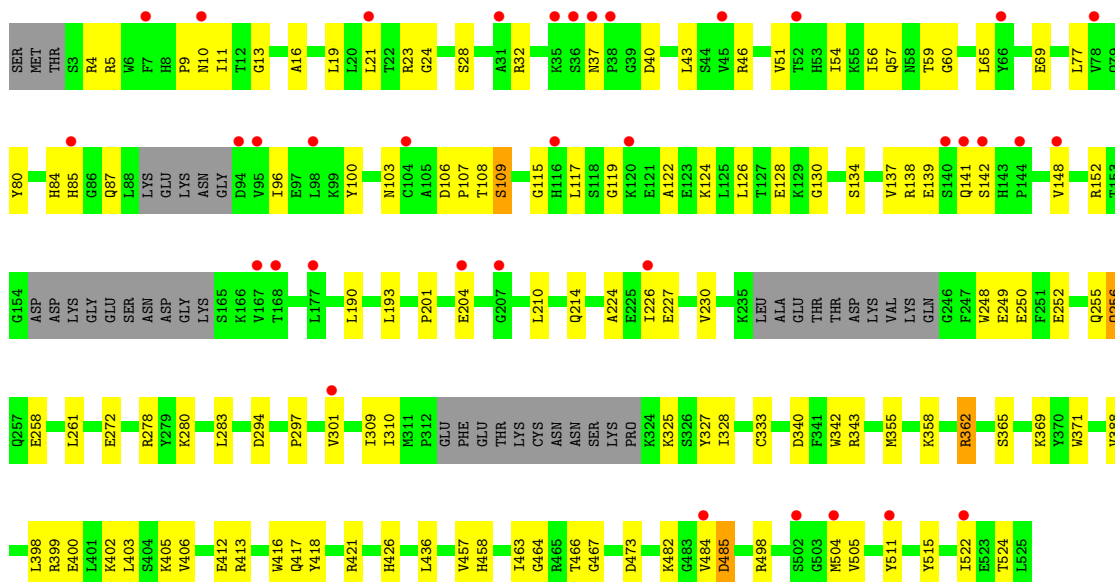• Molecule 1: Tyrosine-protein phosphatase non-receptor type 11

V345 N349 S350 R351 V352 M355 K358 C367 L377 R386 E400 L403 G409 R413 W416 Q417 R421 D431 V435 F438 L439 M450 V455 V456 V457 I463 T466 G467 V471 I472 D473 D477 I478 I479 V484 I488 D489

V490 P491 I494 Q495 M496 V497 M504 Y511 Y515 V518 I522 E523 T524 L525

• Molecule 1: Tyrosine-protein phosphatase non-receptor type 11

Chain C:

6%

68%　　　　　　　　22%　　　　9%

SER MET THR S3 F7 I11 T12 E15 A16 E17 N18 V25 S28 S36 N37 L43 R46 R47 A50 G60 D61 Y62 Y66 A75 E76 L77 V78 Q79 Y80 Y81 M82 E83 H84 HIS GLY GLN LEU LYS GLU LYS ASN GLY ASP VAL I96 E97 L98 K99

Y100 P101 L102 D106 P107 T108 S109 H116 L117 S118 G119 K120 E121 A122 E123 K124 L125 L126 T127 E128 K129 G130 S134 R138 E139 S140 GLN S142 H143 P144 F147 V148 L149 R152 D155 ASP LYS GLY GLU SER ASN ASP GLY LYS S165 I172 Y179 G182 G183

D188 S189 L190 T191 D192 L193 V194 E195 H196 Y197 N200 T205 L206 V209 L210 Q211 Q214 P215 L216 N217 T218 I221 N222 A223 A224 E225 I226 E227 S228 R229 K235 LEU ALA GLU THR ASP LYS VAL LYS Q245 W248 E249 E250 Q255 Q256 Q257 E258 E272 K276

N277 R278 Y279 K280 N281 I282 L283 T288 H293 D294 G295 N298 V301 N308 P312 GLU PHE GLU THR LYS CYS ASN ASN SER LYS PRO LYS K325 I328 C333 L334 Q335 W342 V345 F346 S350 M355 E361 R362 K366 Y370 E374 Y375 A376

L377 V385 R386 N387 W388 H394 E400 L401 K402 L403 R413 D425 H426 P454 V457 A461 G462 I463 G464 R465 T466 G467 D473 I476 D477 V484 V490 P491 V497 R498 R501 M504 E508 Y511 I522 E523 T524 L525

• Molecule 1: Tyrosine-protein phosphatase non-receptor type 11

Chain D:

7%

69%　　　　　　　　23%　　　　7%

SER MET THR S3 R4 R5 W6 F7 H8 P9 N10 I11 T12 G13 A16 L19 L20 L21 T22 R23 G24 S28 A31 R32 K35 S36 N37 P38 G39 D40 L43 S44 V45 R46 V51 T52 H53 I54 K55 I56 Q57 N58 T59 G60 L65 Y66 E69 L77 V78 Q79

Y80 H84 H85 G86 Q87 L88 LYS GLU LYS ASN GLY D94 V95 I96 E97 L98 K99 Y100 N103 C104 A105 D106 P107 T108 S109 G115 H116 L117 S118 G119 K120 E121 A122 E123 K124 L125 L126 T127 E128 K129 G130 S134 V137 R138 E139 S140 Q141 S142 H143 P144 V148 R152 T153

G154 ASP ASP LYS GLY GLU SER ASN ASP GLY LYS S165 K166 V167 T168 L177 L190 L193 P201 E204 G207 L210 Q214 A224 E225 I226 E227 V230 K235 LEU ALA GLU THR ASP LYS VAL LYS GLN G246 F247 W248 E249 E250 F251 E252 Q255 Q256

Q257 E258 L261 E272 R278 Y279 K280 L283 D294 P297 V301 I309 I310 M311 P312 GLU PHE GLU THR LYS CYS ASN ASN SER LYS PRO K324 K325 S326 Y327 I328 C333 D340 F341 W342 R343 M355 K358 R362 S365 K369 Y370 W371 V388

L398 R399 E400 L401 K402 L403 S404 K405 V406 E412 R413 W416 Q417 Y418 R421 H426 L436 V457 H458 I463 G464 R465 T466 G467 D473 K482 G483 V484 D485 R498 S502 G503 M504 V505 Y511 Y515 I522 E523 T524 L525

4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α, β, γ	45.40Å 55.60Å 218.84Å 88.66° 102.01° 96.19°	Depositor
Resolution (Å)	38.14 – 2.10 38.14 – 2.10	Depositor EDS
% Data completeness (in resolution range)	83.7 (38.14-2.10) 83.6 (38.14-2.10)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.46 (at 2.10Å)	Xtriage
Refinement program	PHENIX (1.19.2_4158: ???)	Depositor
R, R_{free}	0.270 , 0.325 0.271 , 0.320	Depositor DCC
R_{free} test set	1994 reflections (1.96%)	wwPDB-VP
Wilson B-factor (Å^2)	27.2	Xtriage
Anisotropy	0.528	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.41 , 36.3	EDS
L-test for twinning[2]	$< \|L\| > = 0.51, < L^2 > = 0.34$	Xtriage
Estimated twinning fraction	0.430 for -h,-k,2*h+l	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	29981	wwPDB-VP
Average B, all atoms (Å^2)	40.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 9.54% of the height of the origin peak. No significant pseudotranslation is detected.*

---

[1]Intensities estimated from amplitudes.

[2]Theoretical 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.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: 83Q

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	0.67	1/3835 (0.0%)	0.76	1/5195 (0.0%)
1	B	0.67	1/3864 (0.0%)	0.79	2/5232 (0.0%)
1	C	0.68	2/3815 (0.1%)	0.78	0/5184
1	D	0.67	1/3911 (0.0%)	0.78	1/5302 (0.0%)
All	All	0.67	5/15425 (0.0%)	0.78	4/20913 (0.0%)

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	D	297	PRO	N-CD	5.42	1.55	1.47
1	A	327	TYR	CD2-CE2	5.33	1.47	1.39
1	C	333	CYS	CB-SG	-5.16	1.73	1.81
1	C	388	VAL	CB-CG2	-5.16	1.42	1.52
1	B	69	GLU	CD-OE1	-5.15	1.20	1.25

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	333	CYS	N-CA-CB	5.95	121.31	110.60
1	B	303	ASP	CB-CG-OD1	5.20	122.98	118.30
1	D	436	LEU	CB-CG-CD1	-5.04	102.43	111.00
1	A	383	MET	CG-SD-CE	5.01	108.22	100.20

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	3757	3581	3577	93	0
1	B	3785	3624	3620	76	0
1	C	3735	3478	3486	96	0
1	D	3829	3628	3636	98	0
2	A	25	21	0	2	0
2	B	25	21	0	1	0
2	C	25	21	0	1	0
2	D	25	21	0	1	0
3	A	112	0	0	3	0
3	B	87	0	0	4	0
3	C	85	0	0	1	0
3	D	96	0	0	2	0
All	All	15586	14395	14319	362	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 12.

The worst 5 of 362 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:D:4:ARG:NH1	1:D:258:GLU:OE2	1.92	1.01
1:B:4:ARG:NH1	1:B:258:GLU:OE2	1.96	0.98
1:B:249:GLU:OE2	2:B:601:83Q:N14	1.96	0.98
1:C:109:SER:OG	1:C:256:GLN:NE2	2.02	0.93
1:D:130:GLY:O	1:D:152:ARG:NH1	2.06	0.88

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.

WORLDWIDE
wwPDB
PROTEIN DATA BANK

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	461/526 (88%)	445 (96%)	16 (4%)	0	100	100
1	B	466/526 (89%)	452 (97%)	13 (3%)	1 (0%)	47	49
1	C	469/526 (89%)	448 (96%)	21 (4%)	0	100	100
1	D	477/526 (91%)	458 (96%)	19 (4%)	0	100	100
All	All	1873/2104 (89%)	1803 (96%)	69 (4%)	1 (0%)	51	54

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	333	CYS

5.3.2   Protein sidechains ⓘ

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	401/468 (86%)	388 (97%)	13 (3%)	39	41
1	B	403/468 (86%)	393 (98%)	10 (2%)	47	52
1	C	391/468 (84%)	382 (98%)	9 (2%)	50	55
1	D	406/468 (87%)	400 (98%)	6 (2%)	65	71
All	All	1601/1872 (86%)	1563 (98%)	38 (2%)	49	53

5 of 38 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C	335	GLN
1	D	362	ARG
1	C	362	ARG
1	D	109	SER
1	D	485	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 8 such

sidechains are listed below:

Mol	Chain	Res	Type
1	D	269	GLN
1	C	426	HIS
1	C	256	GLN
1	B	417	GLN
1	C	308	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

5.6 Ligand geometry ⓘ

4 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	83Q	D	601	-	25,27,27	2.39	10 (40%)	29,39,39	1.66	7 (24%)
2	83Q	A	601	-	25,27,27	1.88	4 (16%)	29,39,39	1.92	7 (24%)
2	83Q	C	601	-	25,27,27	2.51	8 (32%)	29,39,39	1.75	8 (27%)
2	83Q	B	601	-	25,27,27	2.83	14 (56%)	29,39,39	2.01	8 (27%)

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	83Q	D	601	-	-	1/11/23/23	0/3/3/3
2	83Q	A	601	-	-	1/11/23/23	0/3/3/3
2	83Q	C	601	-	-	1/11/23/23	0/3/3/3
2	83Q	B	601	-	-	4/11/23/23	0/3/3/3

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

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	601	83Q	C10-N9	7.36	1.58	1.46
2	D	601	83Q	C2-CL1	-6.66	1.58	1.72
2	B	601	83Q	C2-CL1	-6.40	1.59	1.72
2	C	601	83Q	C24-CL2	-6.23	1.58	1.73
2	C	601	83Q	C10-N9	6.10	1.56	1.46

The worst 5 of 30 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	601	83Q	C24-C2-CL1	-5.16	113.38	120.02
2	B	601	83Q	C24-C2-CL1	-4.27	114.52	120.02
2	B	601	83Q	C3-S4-C5	4.16	114.88	102.91
2	D	601	83Q	C24-C2-CL1	-4.14	114.69	120.02
2	B	601	83Q	N18-C8-N9	4.07	121.11	116.55

There are no chirality outliers.

5 of 7 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	601	83Q	N6-C5-S4-C3
2	B	601	83Q	C15-C12-C13-N14
2	B	601	83Q	C11-C12-C13-N14
2	B	601	83Q	C16-C12-C13-N14
2	B	601	83Q	N6-C5-S4-C3

There are no ring outliers.
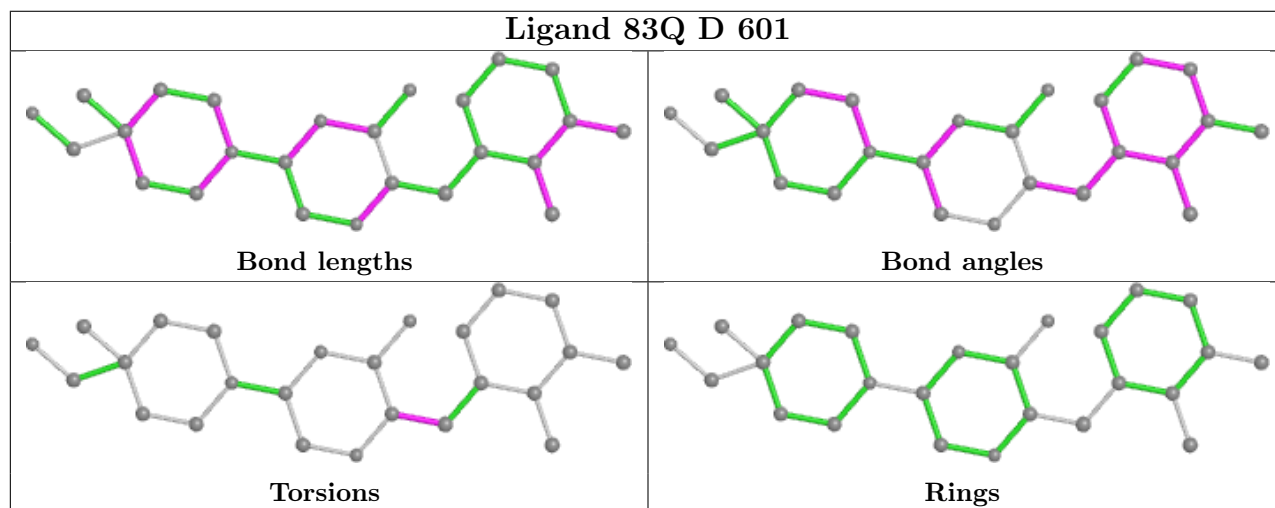
4 monomers are involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	D	601	83Q	1	0
2	A	601	83Q	2	0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	C	601	83Q	1	0
2	B	601	83Q	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.

Ligand 83Q D 601

Bond lengths

Bond angles

Torsions

Rings

Ligand 83Q A 601

Bond lengths

Bond angles

Torsions

Rings

Ligand 83Q C 601

Ligand 83Q B 601
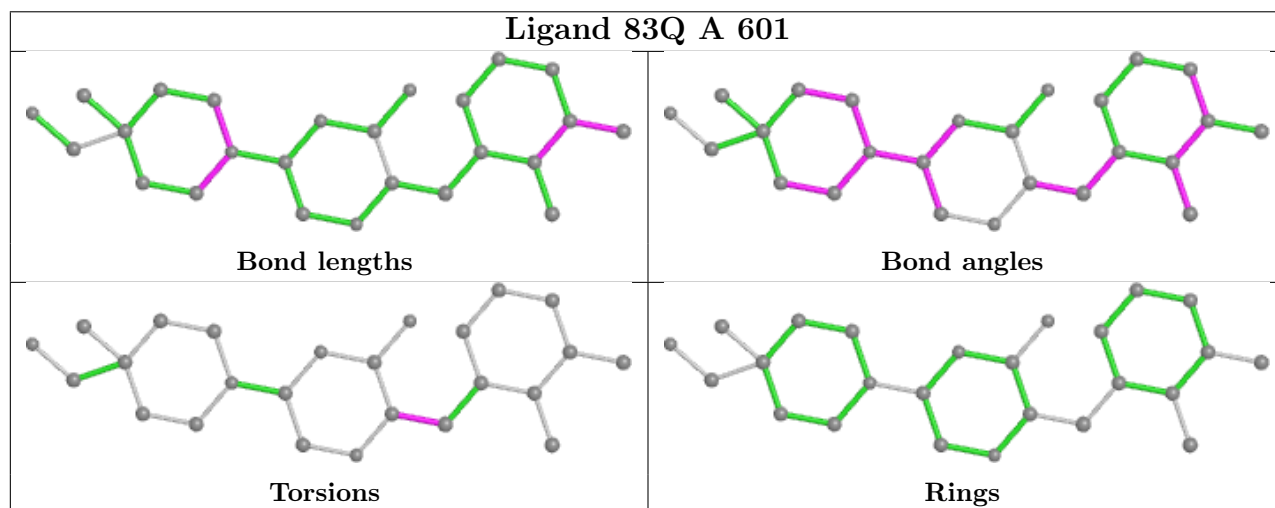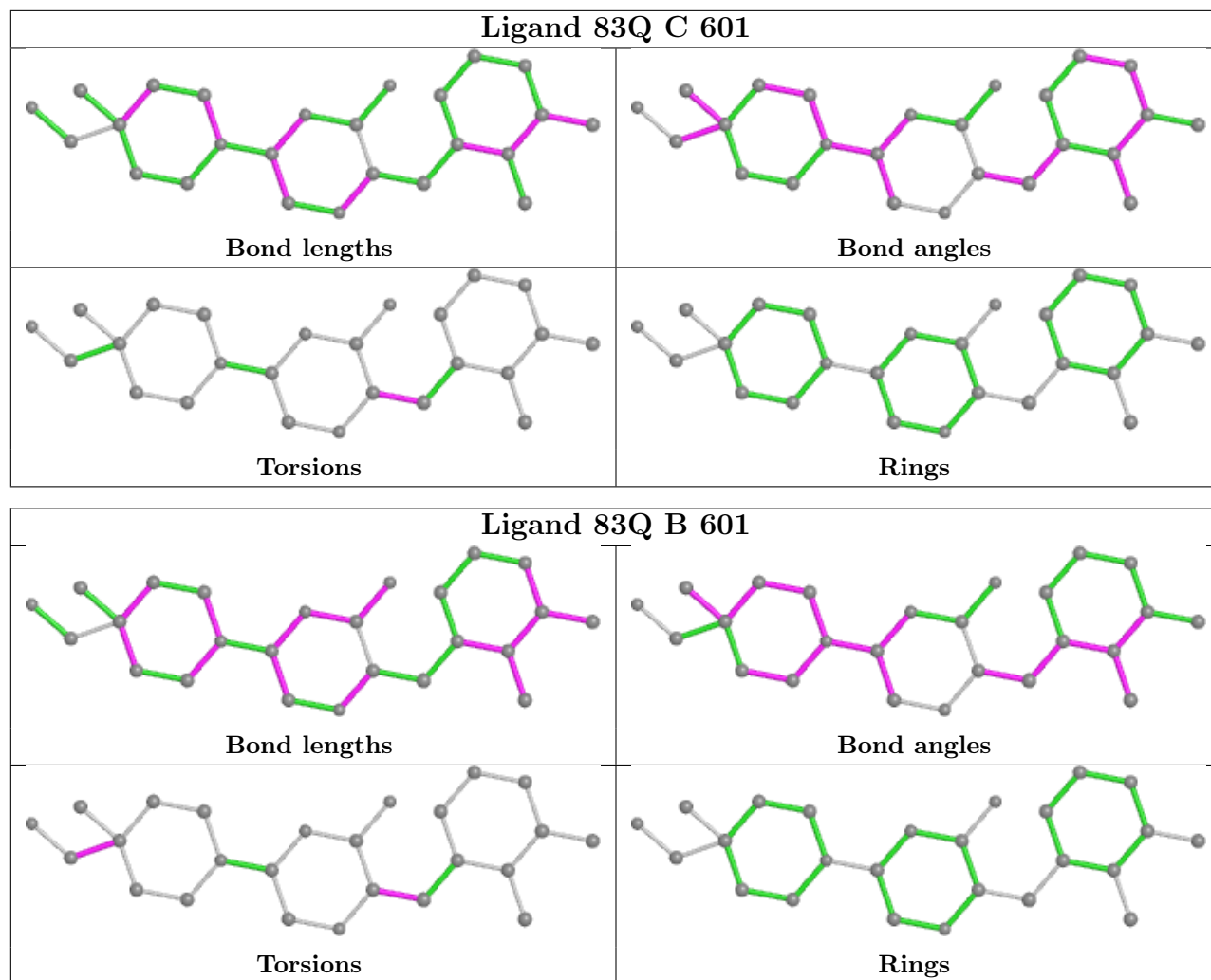
5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

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(Å²)	Q<0.9
1	A	477/526 (90%)	0.64	26 (5%)	25	31	17, 35, 62, 84	0
1	B	480/526 (91%)	0.65	28 (5%)	23	28	19, 35, 61, 94	0
1	C	481/526 (91%)	0.64	33 (6%)	16	21	19, 34, 62, 107	0
1	D	487/526 (92%)	0.68	36 (7%)	14	18	17, 35, 64, 117	0
All	All	1925/2104 (91%)	0.65	123 (6%)	19	24	17, 35, 62, 117	0

The worst 5 of 123 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	36	SER	6.8
1	B	36	SER	5.5
1	B	95	VAL	4.9
1	D	484	VAL	4.5
1	D	38	PRO	4.4

6.2 Non-standard residues in protein, DNA, RNA chains ⓘ

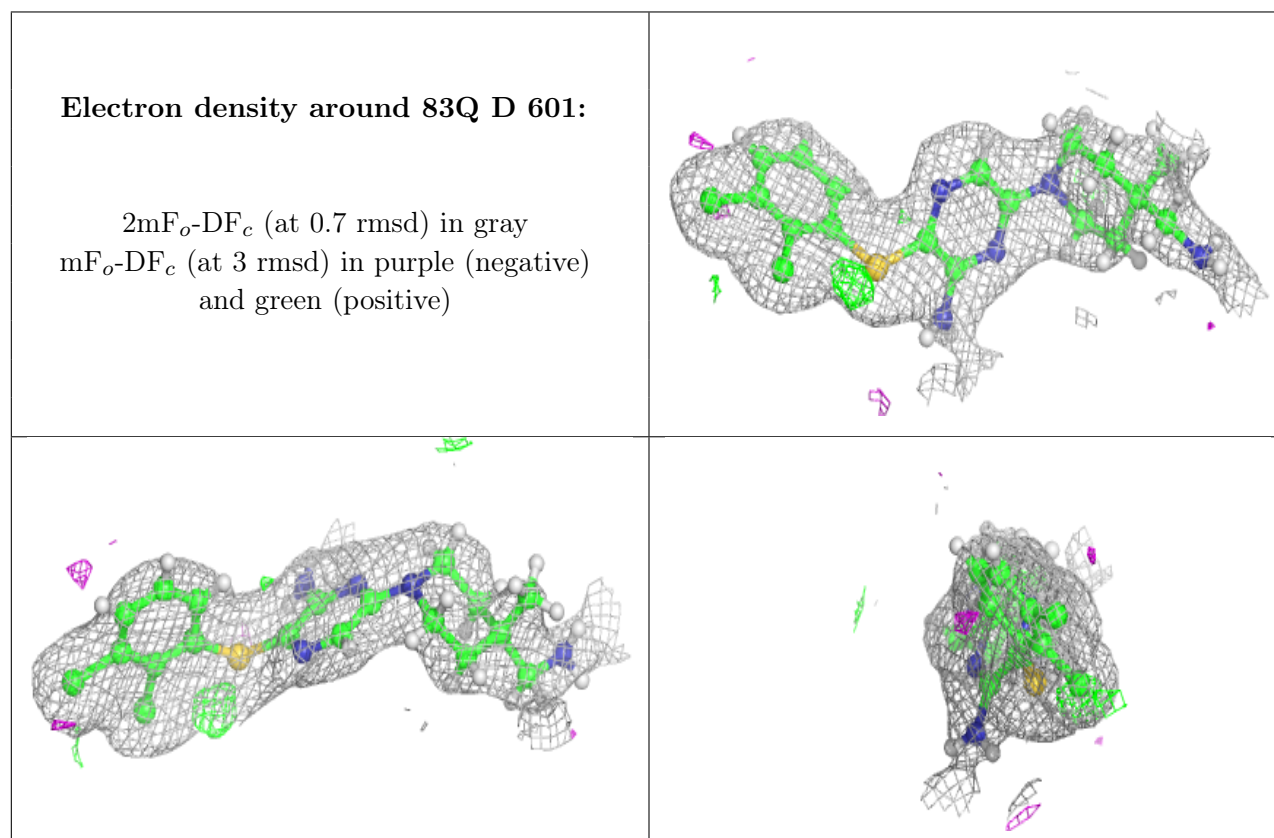There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.4 Ligands ⓘ

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.

WORLDWIDE
wwPDB
PROTEIN DATA BANK

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	83Q	D	601	25/25	0.92	0.15	19,32,45,47	0
2	83Q	B	601	25/25	0.94	0.12	11,31,49,53	0
2	83Q	C	601	25/25	0.94	0.14	16,30,38,49	0
2	83Q	A	601	25/25	0.94	0.14	14,31,42,49	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.
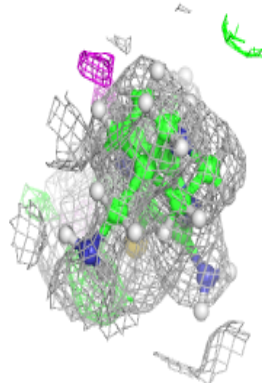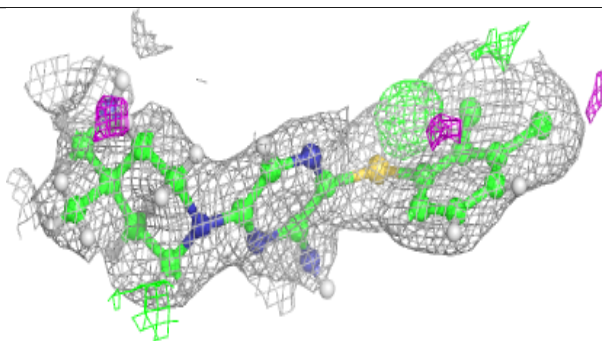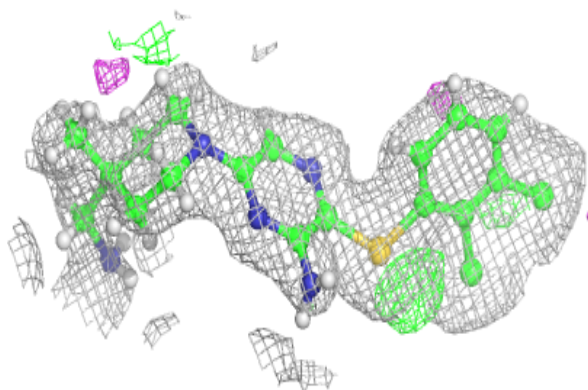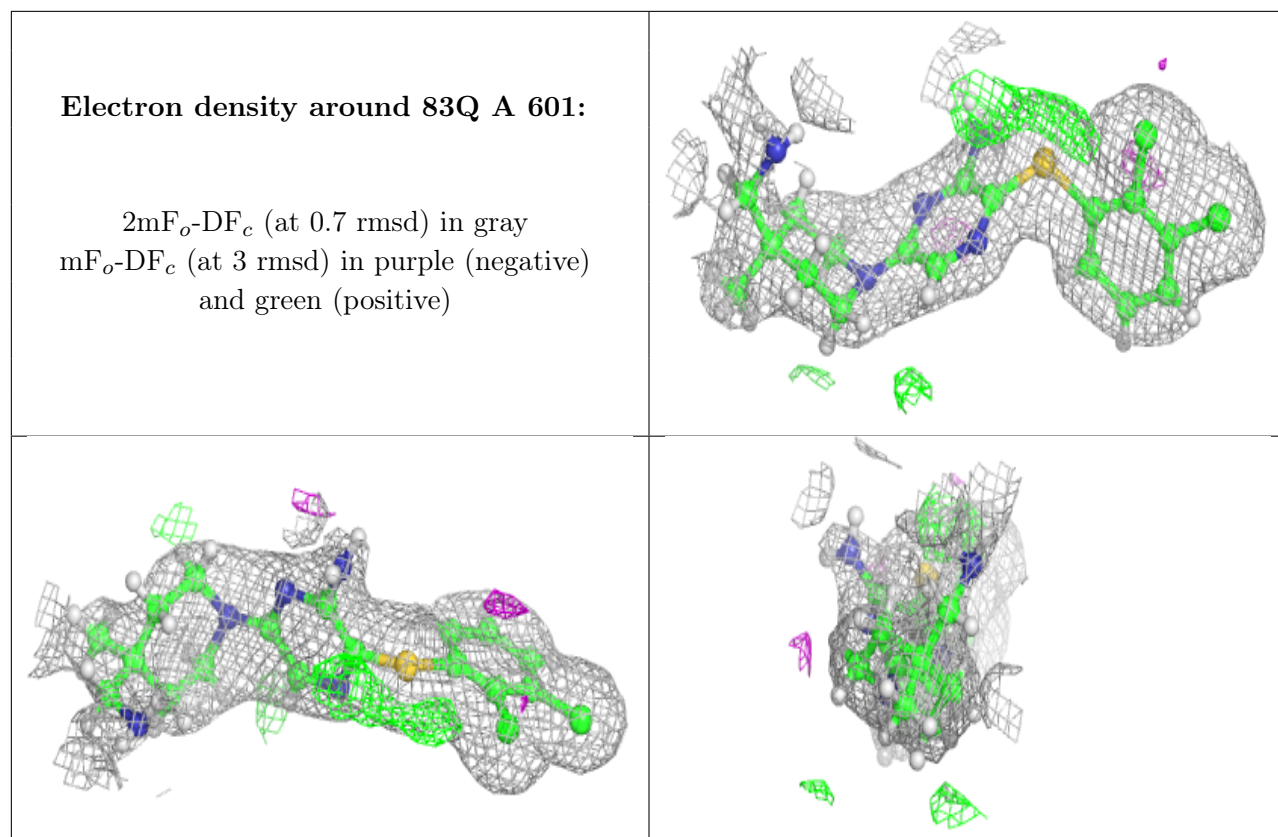
Electron density around 83Q D 601:

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

Electron density around 83Q B 601:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)
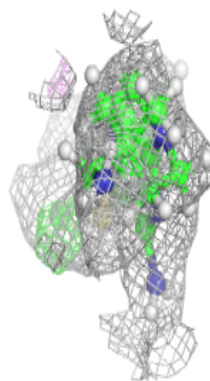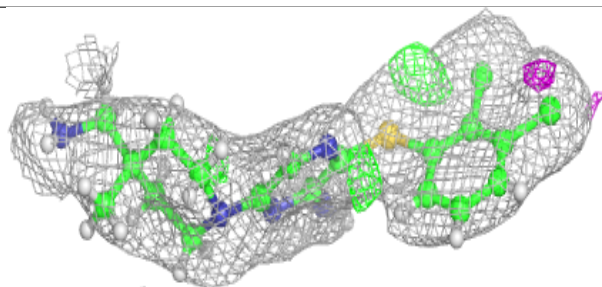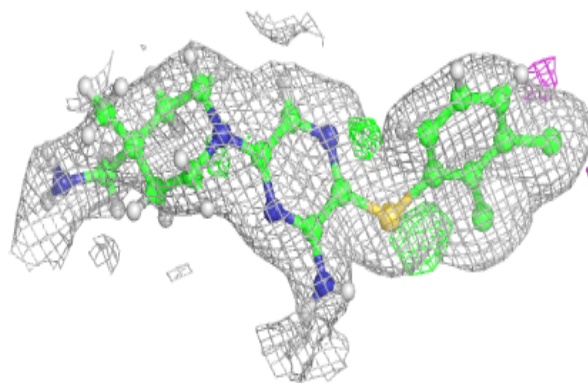
Electron density around 83Q C 601:

$2mF_o\text{-}DF_c$ (at 0.7 rmsd) in gray
$mF_o\text{-}DF_c$ (at 3 rmsd) in purple (negative)
and green (positive)

Electron density around 83Q A 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 ⓘ

There are no such residues in this entry.