



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 12, 2026 – 03:24 PM UTC

PDB ID : 7KNX / pdb_00007knx
Title : Crystal structure of SND1 in complex with C-26-A6
Authors : Kang, Y.
Deposited on : 2020-11-06
Resolution : 2.70 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4-5-2 with Phenix2.0
Mogul : 2022.3.0, CSD as543be (2022)
Xtriage (Phenix) : 2.0
EDS : 3.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.010 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

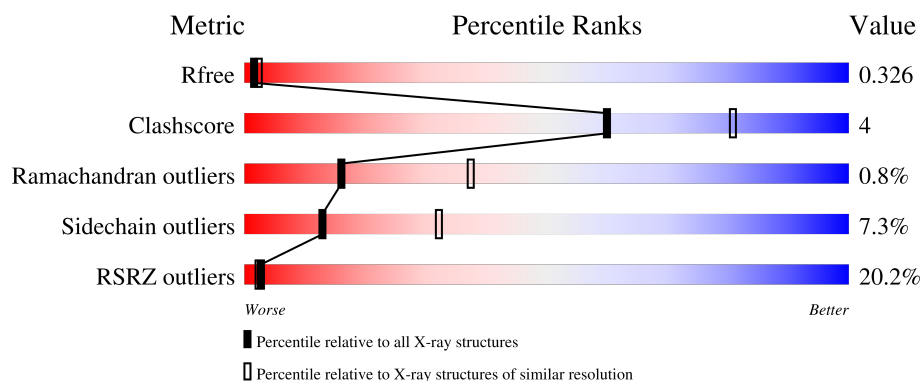
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.70 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	3538 (2.70-2.70)
Clashscore	190562	3843 (2.70-2.70)
Ramachandran outliers	187476	3778 (2.70-2.70)
Sidechain outliers	187428	3778 (2.70-2.70)
RSRZ outliers	180081	3538 (2.70-2.70)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	324	14% 77% 13% • 10%
1	B	324	13% 77% 12% • 9%
1	C	324	21% 75% 13% • 10%
1	D	324	25% 75% 13% • 10%

2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 9995 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 Staphylococcal nuclease domain-containing protein 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	293	Total	C	N	O	S	0	0	0
			2334	1464	438	422	10			
1	B	295	Total	C	N	O	S	0	0	0
			2353	1478	439	426	10			
1	C	290	Total	C	N	O	S	0	1	0
			2320	1457	434	419	10			
1	D	290	Total	C	N	O	S	0	0	0
			2318	1458	431	419	10			

There are 124 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-4	MET	-	initiating methionine	UNP Q7KZF4
A	-3	GLY	-	expression tag	UNP Q7KZF4
A	-2	SER	-	expression tag	UNP Q7KZF4
A	-1	SER	-	expression tag	UNP Q7KZF4
A	0	HIS	-	expression tag	UNP Q7KZF4
A	1	HIS	-	expression tag	UNP Q7KZF4
A	2	HIS	-	expression tag	UNP Q7KZF4
A	3	HIS	-	expression tag	UNP Q7KZF4
A	4	HIS	-	expression tag	UNP Q7KZF4
A	5	HIS	-	expression tag	UNP Q7KZF4
A	6	SER	-	expression tag	UNP Q7KZF4
A	7	SER	-	expression tag	UNP Q7KZF4
A	8	GLY	-	expression tag	UNP Q7KZF4
A	9	GLU	-	expression tag	UNP Q7KZF4
A	10	ASN	-	expression tag	UNP Q7KZF4
A	11	LEU	-	expression tag	UNP Q7KZF4
A	12	TYR	-	expression tag	UNP Q7KZF4
A	13	PHE	-	expression tag	UNP Q7KZF4
A	14	GLN	-	expression tag	UNP Q7KZF4
A	15	GLY	-	expression tag	UNP Q7KZF4
A	?	-	ALA	deletion	UNP Q7KZF4

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Chain	Residue	Modelled	Actual	Comment	Reference
A	?	-	ALA	deletion	UNP Q7KZF4
A	?	-	THR	deletion	UNP Q7KZF4
A	?	-	GLN	deletion	UNP Q7KZF4
A	?	-	PRO	deletion	UNP Q7KZF4
A	?	-	ASP	deletion	UNP Q7KZF4
A	?	-	GLU	deletion	UNP Q7KZF4
A	?	-	ALA	deletion	UNP Q7KZF4
A	?	-	ASP	deletion	UNP Q7KZF4
A	?	-	GLY	deletion	UNP Q7KZF4
A	?	-	SER	deletion	UNP Q7KZF4
B	-4	MET	-	initiating methionine	UNP Q7KZF4
B	-3	GLY	-	expression tag	UNP Q7KZF4
B	-2	SER	-	expression tag	UNP Q7KZF4
B	-1	SER	-	expression tag	UNP Q7KZF4
B	0	HIS	-	expression tag	UNP Q7KZF4
B	1	HIS	-	expression tag	UNP Q7KZF4
B	2	HIS	-	expression tag	UNP Q7KZF4
B	3	HIS	-	expression tag	UNP Q7KZF4
B	4	HIS	-	expression tag	UNP Q7KZF4
B	5	HIS	-	expression tag	UNP Q7KZF4
B	6	SER	-	expression tag	UNP Q7KZF4
B	7	SER	-	expression tag	UNP Q7KZF4
B	8	GLY	-	expression tag	UNP Q7KZF4
B	9	GLU	-	expression tag	UNP Q7KZF4
B	10	ASN	-	expression tag	UNP Q7KZF4
B	11	LEU	-	expression tag	UNP Q7KZF4
B	12	TYR	-	expression tag	UNP Q7KZF4
B	13	PHE	-	expression tag	UNP Q7KZF4
B	14	GLN	-	expression tag	UNP Q7KZF4
B	15	GLY	-	expression tag	UNP Q7KZF4
B	?	-	ALA	deletion	UNP Q7KZF4
B	?	-	ALA	deletion	UNP Q7KZF4
B	?	-	THR	deletion	UNP Q7KZF4
B	?	-	GLN	deletion	UNP Q7KZF4
B	?	-	PRO	deletion	UNP Q7KZF4
B	?	-	ASP	deletion	UNP Q7KZF4
B	?	-	GLU	deletion	UNP Q7KZF4
B	?	-	ALA	deletion	UNP Q7KZF4
B	?	-	ASP	deletion	UNP Q7KZF4
B	?	-	GLY	deletion	UNP Q7KZF4
B	?	-	SER	deletion	UNP Q7KZF4
C	-4	MET	-	initiating methionine	UNP Q7KZF4

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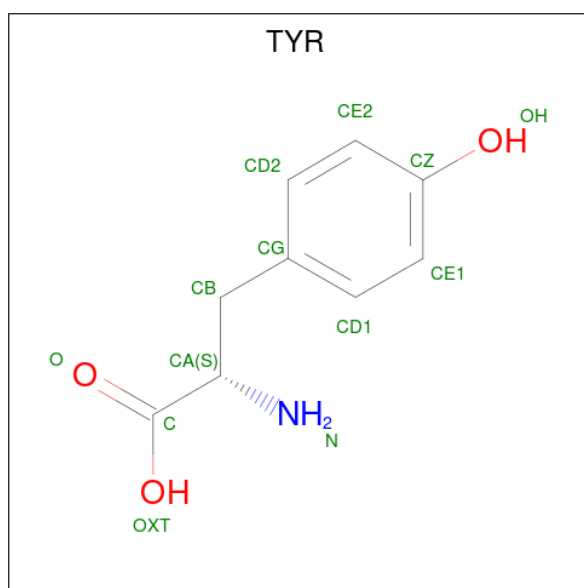
Chain	Residue	Modelled	Actual	Comment	Reference
C	-3	GLY	-	expression tag	UNP Q7KZF4
C	-2	SER	-	expression tag	UNP Q7KZF4
C	-1	SER	-	expression tag	UNP Q7KZF4
C	0	HIS	-	expression tag	UNP Q7KZF4
C	1	HIS	-	expression tag	UNP Q7KZF4
C	2	HIS	-	expression tag	UNP Q7KZF4
C	3	HIS	-	expression tag	UNP Q7KZF4
C	4	HIS	-	expression tag	UNP Q7KZF4
C	5	HIS	-	expression tag	UNP Q7KZF4
C	6	SER	-	expression tag	UNP Q7KZF4
C	7	SER	-	expression tag	UNP Q7KZF4
C	8	GLY	-	expression tag	UNP Q7KZF4
C	9	GLU	-	expression tag	UNP Q7KZF4
C	10	ASN	-	expression tag	UNP Q7KZF4
C	11	LEU	-	expression tag	UNP Q7KZF4
C	12	TYR	-	expression tag	UNP Q7KZF4
C	13	PHE	-	expression tag	UNP Q7KZF4
C	14	GLN	-	expression tag	UNP Q7KZF4
C	15	GLY	-	expression tag	UNP Q7KZF4
C	?	-	ALA	deletion	UNP Q7KZF4
C	?	-	ALA	deletion	UNP Q7KZF4
C	?	-	THR	deletion	UNP Q7KZF4
C	?	-	GLN	deletion	UNP Q7KZF4
C	?	-	PRO	deletion	UNP Q7KZF4
C	?	-	ASP	deletion	UNP Q7KZF4
C	?	-	GLU	deletion	UNP Q7KZF4
C	?	-	ALA	deletion	UNP Q7KZF4
C	?	-	ASP	deletion	UNP Q7KZF4
C	?	-	GLY	deletion	UNP Q7KZF4
C	?	-	SER	deletion	UNP Q7KZF4
D	-4	MET	-	initiating methionine	UNP Q7KZF4
D	-3	GLY	-	expression tag	UNP Q7KZF4
D	-2	SER	-	expression tag	UNP Q7KZF4
D	-1	SER	-	expression tag	UNP Q7KZF4
D	0	HIS	-	expression tag	UNP Q7KZF4
D	1	HIS	-	expression tag	UNP Q7KZF4
D	2	HIS	-	expression tag	UNP Q7KZF4
D	3	HIS	-	expression tag	UNP Q7KZF4
D	4	HIS	-	expression tag	UNP Q7KZF4
D	5	HIS	-	expression tag	UNP Q7KZF4
D	6	SER	-	expression tag	UNP Q7KZF4
D	7	SER	-	expression tag	UNP Q7KZF4

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Chain	Residue	Modelled	Actual	Comment	Reference
D	8	GLY	-	expression tag	UNP Q7KZF4
D	9	GLU	-	expression tag	UNP Q7KZF4
D	10	ASN	-	expression tag	UNP Q7KZF4
D	11	LEU	-	expression tag	UNP Q7KZF4
D	12	TYR	-	expression tag	UNP Q7KZF4
D	13	PHE	-	expression tag	UNP Q7KZF4
D	14	GLN	-	expression tag	UNP Q7KZF4
D	15	GLY	-	expression tag	UNP Q7KZF4
D	?	-	ALA	deletion	UNP Q7KZF4
D	?	-	ALA	deletion	UNP Q7KZF4
D	?	-	THR	deletion	UNP Q7KZF4
D	?	-	GLN	deletion	UNP Q7KZF4
D	?	-	PRO	deletion	UNP Q7KZF4
D	?	-	ASP	deletion	UNP Q7KZF4
D	?	-	GLU	deletion	UNP Q7KZF4
D	?	-	ALA	deletion	UNP Q7KZF4
D	?	-	ASP	deletion	UNP Q7KZF4
D	?	-	GLY	deletion	UNP Q7KZF4
D	?	-	SER	deletion	UNP Q7KZF4

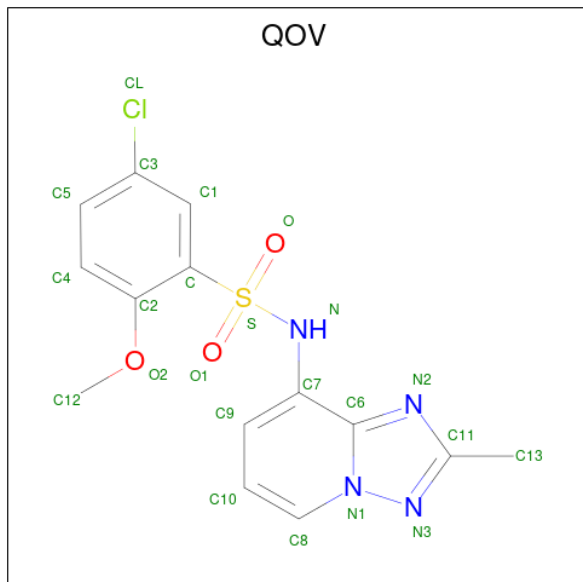
- Molecule 2 is TYROSINE (CCD ID: TYR) (formula: $C_9H_{11}NO_3$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	N	O	0	0
			12	9	1	2		

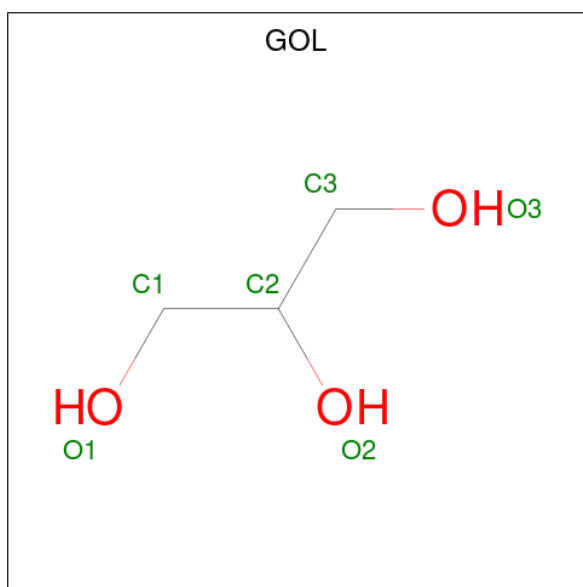
- Molecule 3 is 5-chloro-2-methoxy-N-(2-methyl[1,2,4]triazolo[1,5-a]pyridin-8-yl)benzene-1-s

ulfonamide (CCD ID: QOV) (formula: $C_{14}H_{13}ClN_4O_3S$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
3	A	1	Total 23	C 14	Cl 1	N 4	O 3	S 1	0	0
3	B	1	Total 23	C 14	Cl 1	N 4	O 3	S 1	0	0
3	C	1	Total 23	C 14	Cl 1	N 4	O 3	S 1	0	0
3	D	1	Total 23	C 14	Cl 1	N 4	O 3	S 1	0	0

- Molecule 4 is GLYCEROL (CCD ID: GOL) (formula: $C_3H_8O_3$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	D	1	Total	C	O	0	0
			6	3	3		

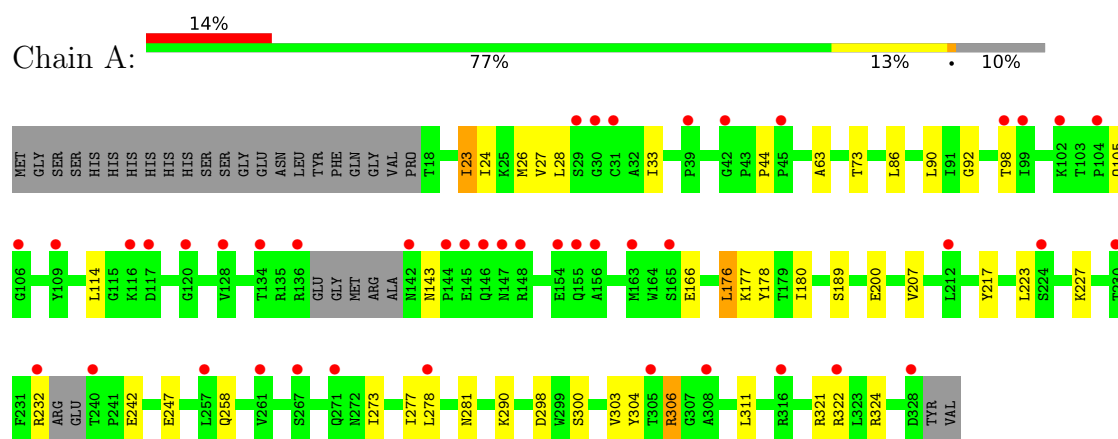
- Molecule 5 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	134	Total	O	0	0
			134	134		
5	B	151	Total	O	0	0
			151	151		
5	C	132	Total	O	0	0
			132	132		
5	D	143	Total	O	0	0
			143	143		

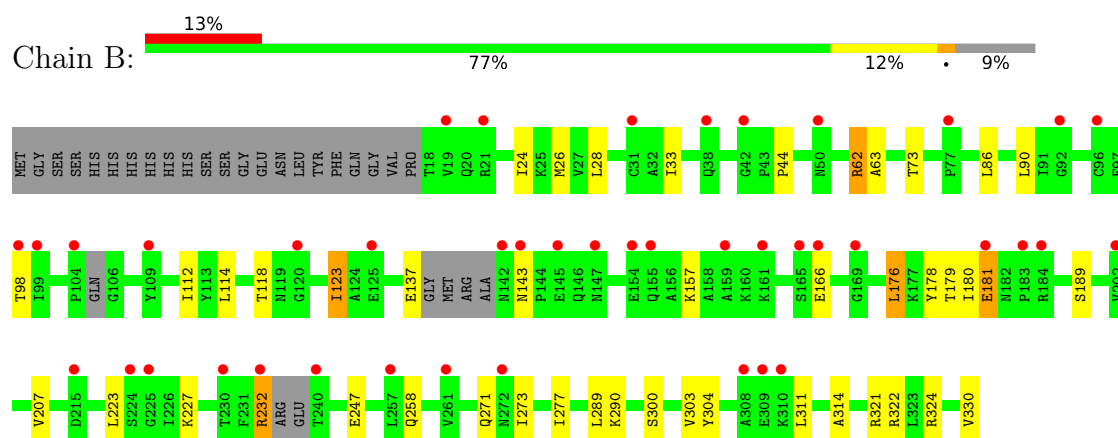
3 Residue-property plots [i](#)

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.

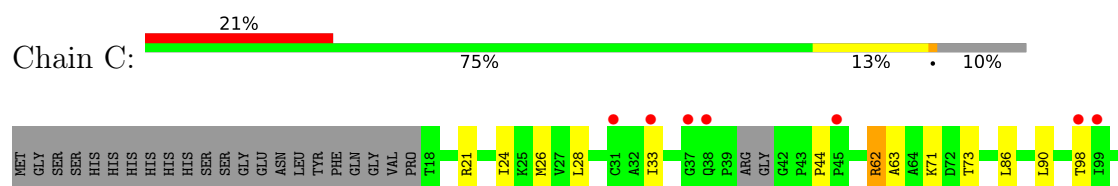
- Molecule 1: Staphylococcal nuclease domain-containing protein 1

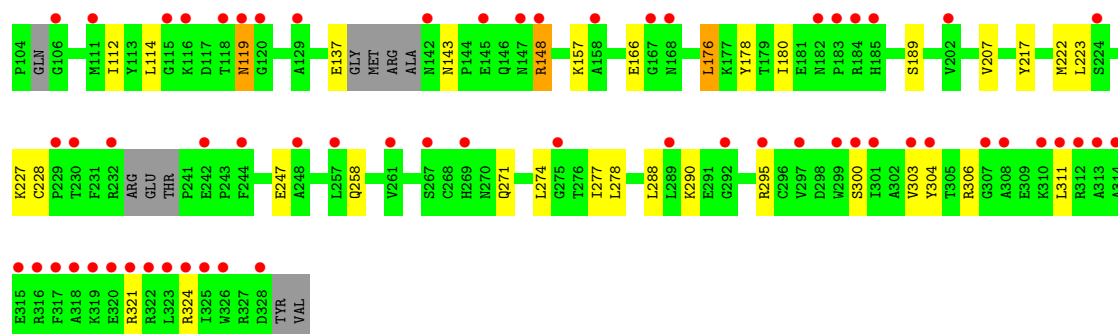


- Molecule 1: Staphylococcal nuclease domain-containing protein 1

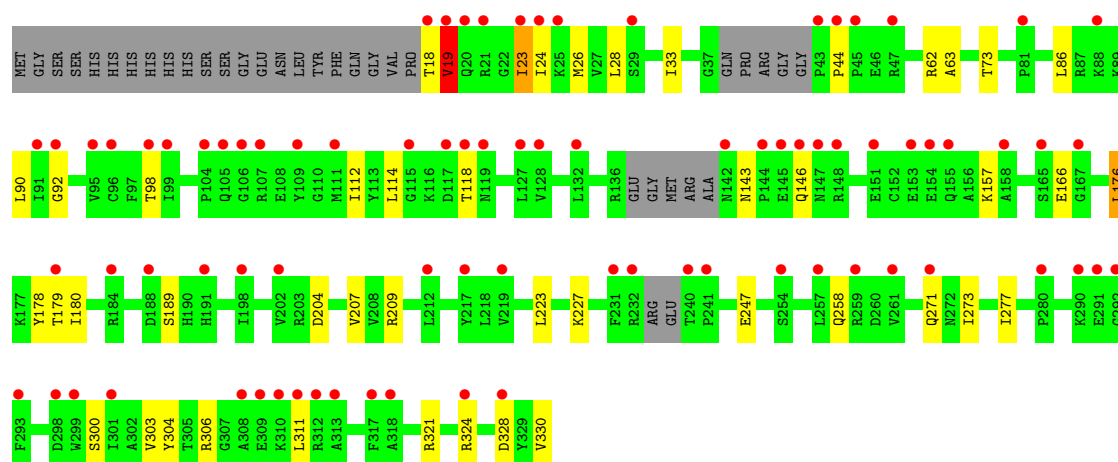
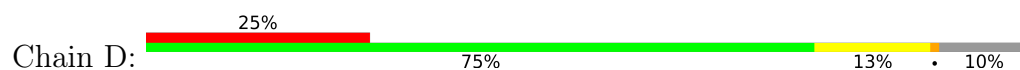


- Molecule 1: Staphylococcal nuclease domain-containing protein 1





- Molecule 1: Staphylococcal nuclease domain-containing protein 1



4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α , β , γ	61.13Å 81.88Å 81.88Å 83.77° 70.89° 70.91°	Depositor
Resolution (Å)	30.00 – 2.70 30.00 – 2.70	Depositor EDS
% Data completeness (in resolution range)	96.4 (30.00-2.70) 96.4 (30.00-2.70)	Depositor EDS
R_{merge}	1.00	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.80 (at 2.72Å)	Xtriage
Refinement program	REFMAC 5.8.0189	Depositor
R, R_{free}	0.260 , 0.329 0.267 , 0.326	Depositor DCC
R_{free} test set	1849 reflections (4.74%)	wwPDB-VP
Wilson B-factor (Å ²)	32.9	Xtriage
Anisotropy	0.141	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.35 , 65.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.53$, $\langle L^2 \rangle = 0.36$	Xtriage
Estimated twinning fraction	0.020 for -h,-l,-k	Xtriage
F_o, F_c correlation	0.86	EDS
Total number of atoms	9995	wwPDB-VP
Average B, all atoms (Å ²)	55.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.14% 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: QOV, GOL

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	0.73	0/2378	0.97	1/3207 (0.0%)
1	B	0.73	0/2397	0.96	1/3232 (0.0%)
1	C	0.73	0/2365	0.96	1/3185 (0.0%)
1	D	0.73	0/2361	0.97	2/3183 (0.1%)
All	All	0.73	0/9501	0.97	5/12807 (0.0%)

There are no bond length outliers.

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	19	VAL	CB-CA-C	-6.90	99.98	111.29
1	C	44	PRO	N-CA-C	6.68	116.88	110.47
1	B	44	PRO	N-CA-C	6.28	116.50	110.47
1	A	44	PRO	N-CA-C	6.17	116.39	110.47
1	D	44	PRO	N-CA-C	5.14	116.97	110.70

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	2334	0	2359	23	0
1	B	2353	0	2374	21	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	C	2320	0	2346	21	0
1	D	2318	0	2343	19	0
2	A	12	0	8	0	0
3	A	23	0	0	0	0
3	B	23	0	0	0	0
3	C	23	0	0	0	0
3	D	23	0	0	0	0
4	D	6	0	8	0	0
5	A	134	0	0	4	0
5	B	151	0	0	2	0
5	C	132	0	0	4	0
5	D	143	0	0	2	0
All	All	9995	0	9438	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 4.

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:C:228:CYS:SG	5:C:2108:HOH:O	2.16	0.95
1:A:27:VAL:HG22	1:A:33:ILE:HD12	1.49	0.94
1:A:26:MET:HE2	1:A:28:LEU:HD23	1.71	0.72
1:C:222:MET:HG3	1:C:274:LEU:HD23	1.71	0.72
1:A:232:ARG:NH1	1:A:242:GLU:OE1	2.23	0.72
1:B:26:MET:HE2	1:B:28:LEU:HD23	1.70	0.71
1:D:26:MET:HE2	1:D:28:LEU:HD23	1.74	0.70
1:C:26:MET:HE2	1:C:28:LEU:HD23	1.72	0.69
1:C:180:ILE:HD13	1:C:217:TYR:CD1	2.27	0.68
1:C:71:LYS:O	5:C:2101:HOH:O	2.14	0.65
1:C:278:LEU:HD23	1:C:306:ARG:NH2	2.11	0.64
1:C:33:ILE:HD11	1:C:112:ILE:HG12	1.82	0.62
1:B:33:ILE:HD11	1:B:112:ILE:HG12	1.83	0.60
1:D:33:ILE:HD11	1:D:112:ILE:HG12	1.82	0.60
1:A:281:ASN:O	1:B:232:ARG:NH1	2.34	0.60
1:A:23:ILE:HD11	1:A:92:GLY:HA2	1.83	0.59
1:C:288:LEU:HD22	5:C:2108:HOH:O	2.01	0.59
1:D:23:ILE:HD11	1:D:92:GLY:HA2	1.83	0.59
1:C:223:LEU:HD21	1:C:277:ILE:HD12	1.86	0.56
1:A:180:ILE:CD1	1:A:273:ILE:HD11	2.36	0.56
1:B:223:LEU:HD21	1:B:277:ILE:HD12	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:314:ALA:HB3	5:B:2200:HOH:O	2.04	0.56
1:D:223:LEU:HD21	1:D:277:ILE:HD12	1.87	0.55
1:D:180:ILE:CD1	1:D:273:ILE:HD11	2.36	0.55
1:B:180:ILE:CD1	1:B:273:ILE:HD11	2.37	0.55
1:A:223:LEU:HD21	1:A:277:ILE:HD12	1.88	0.54
1:A:27:VAL:HG22	1:A:33:ILE:CD1	2.32	0.53
1:B:112:ILE:HB	1:B:123:ILE:HD12	1.91	0.53
1:D:18:THR:O	1:D:19:VAL:HG22	2.09	0.52
1:A:26:MET:HE2	1:A:28:LEU:CD2	2.40	0.52
1:D:26:MET:HE2	1:D:28:LEU:CD2	2.40	0.50
1:A:278:LEU:HD23	5:A:501:HOH:O	2.11	0.50
1:B:26:MET:HE2	1:B:28:LEU:CD2	2.40	0.49
1:A:26:MET:HE3	1:A:258:GLN:NE2	2.27	0.49
1:C:176:LEU:HD13	1:C:178:TYR:CZ	2.47	0.49
1:A:306:ARG:NH2	5:A:501:HOH:O	2.45	0.49
1:C:26:MET:HE2	1:C:28:LEU:CD2	2.41	0.49
1:D:209:ARG:O	5:D:1101:HOH:O	2.20	0.48
1:D:204:ASP:HB2	5:D:1132:HOH:O	2.13	0.48
1:A:277:ILE:O	5:A:501:HOH:O	2.20	0.48
1:B:300:SER:O	1:B:303:VAL:HG22	2.14	0.47
1:A:180:ILE:HD11	1:A:273:ILE:HD11	1.96	0.47
1:B:176:LEU:HD13	1:B:178:TYR:CZ	2.49	0.47
1:B:26:MET:HE3	1:B:258:GLN:NE2	2.29	0.47
1:C:26:MET:HE3	1:C:258:GLN:NE2	2.30	0.47
1:D:300:SER:O	1:D:303:VAL:HG22	2.13	0.47
1:C:300:SER:O	1:C:303:VAL:HG22	2.15	0.46
1:D:176:LEU:HD13	1:D:178:TYR:CZ	2.50	0.46
1:B:289:LEU:HD12	5:B:2200:HOH:O	2.14	0.46
1:A:24:ILE:HD12	1:A:33:ILE:HG21	1.97	0.46
1:C:148[A]:ARG:HD3	1:C:148[A]:ARG:HA	1.74	0.45
1:A:300:SER:O	1:A:303:VAL:HG22	2.15	0.45
1:B:180:ILE:HD11	1:B:273:ILE:HD11	1.97	0.45
1:D:26:MET:HE3	1:D:258:GLN:NE2	2.30	0.45
1:B:181:GLU:CD	1:B:181:GLU:H	2.25	0.44
1:B:247:GLU:OE1	1:B:247:GLU:N	2.50	0.44
1:D:180:ILE:HD11	1:D:273:ILE:HD11	1.99	0.44
1:A:176:LEU:HD13	1:A:178:TYR:CZ	2.52	0.44
1:C:247:GLU:OE1	1:C:247:GLU:N	2.49	0.44
1:D:247:GLU:OE1	1:D:247:GLU:N	2.50	0.44
1:A:247:GLU:OE1	1:A:247:GLU:N	2.50	0.44
1:A:200:GLU:N	5:A:502:HOH:O	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:179:THR:HB	1:D:271:GLN:HE21	1.83	0.43
1:B:179:THR:HB	1:B:271:GLN:HE21	1.83	0.43
1:D:86:LEU:HB3	1:D:90:LEU:HD12	2.00	0.42
1:C:86:LEU:HB3	1:C:90:LEU:HD12	2.01	0.42
1:A:304:TYR:CZ	1:A:311:LEU:HD21	2.55	0.42
1:B:304:TYR:CZ	1:B:311:LEU:HD21	2.55	0.42
1:B:247:GLU:HG2	1:D:328:ASP:HB3	2.02	0.41
1:D:304:TYR:CZ	1:D:311:LEU:HD21	2.55	0.41
1:B:86:LEU:HB3	1:B:90:LEU:HD12	2.02	0.41
1:C:119:ASN:O	1:C:119:ASN:ND2	2.51	0.41
1:C:304:TYR:CZ	1:C:311:LEU:HD21	2.55	0.41
1:A:86:LEU:HB3	1:A:90:LEU:HD12	2.01	0.41
1:C:24:ILE:HG13	1:C:90:LEU:HB3	2.03	0.41
1:D:24:ILE:HG13	1:D:90:LEU:HB3	2.03	0.41
1:A:24:ILE:HG13	1:A:90:LEU:HB3	2.03	0.41
1:A:177:LYS:HD2	1:A:217:TYR:CE1	2.56	0.40
1:B:24:ILE:HG13	1:B:90:LEU:HB3	2.04	0.40
1:B:62:ARG:HB3	1:C:62:ARG:HB3	2.04	0.40
1:C:295:ARG:NH1	5:C:2110:HOH:O	2.53	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	287/324 (89%)	276 (96%)	9 (3%)	2 (1%)	18	41
1	B	287/324 (89%)	275 (96%)	10 (4%)	2 (1%)	18	41
1	C	281/324 (87%)	273 (97%)	6 (2%)	2 (1%)	18	41
1	D	282/324 (87%)	271 (96%)	8 (3%)	3 (1%)	11	29
All	All	1137/1296 (88%)	1095 (96%)	33 (3%)	9 (1%)	16	37

All (9) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	D	19	VAL
1	B	63	ALA
1	C	63	ALA
1	D	63	ALA
1	A	63	ALA
1	A	324	ARG
1	B	324	ARG
1	C	324	ARG
1	D	324	ARG

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	248/274 (90%)	232 (94%)	16 (6%)	15	37
1	B	250/274 (91%)	230 (92%)	20 (8%)	11	28
1	C	247/274 (90%)	228 (92%)	19 (8%)	12	30
1	D	247/274 (90%)	229 (93%)	18 (7%)	13	32
All	All	992/1096 (90%)	919 (93%)	73 (7%)	13	32

All (73) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	23	ILE
1	A	73	THR
1	A	98	THR
1	A	105	GLN
1	A	114	LEU
1	A	143	ASN
1	A	166	GLU
1	A	176	LEU
1	A	189	SER
1	A	207	VAL
1	A	227	LYS

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Mol	Chain	Res	Type
1	A	290	LYS
1	A	298	ASP
1	A	306	ARG
1	A	321	ARG
1	A	322	ARG
1	B	62	ARG
1	B	73	THR
1	B	98	THR
1	B	114	LEU
1	B	118	THR
1	B	123	ILE
1	B	137	GLU
1	B	143	ASN
1	B	157	LYS
1	B	166	GLU
1	B	176	LEU
1	B	181	GLU
1	B	189	SER
1	B	207	VAL
1	B	227	LYS
1	B	232	ARG
1	B	290	LYS
1	B	321	ARG
1	B	322	ARG
1	B	330	VAL
1	C	21	ARG
1	C	62	ARG
1	C	73	THR
1	C	98	THR
1	C	114	LEU
1	C	119	ASN
1	C	137	GLU
1	C	143	ASN
1	C	148[A]	ARG
1	C	148[B]	ARG
1	C	157	LYS
1	C	166	GLU
1	C	176	LEU
1	C	189	SER
1	C	207	VAL
1	C	227	LYS
1	C	271	GLN

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Mol	Chain	Res	Type
1	C	290	LYS
1	C	321	ARG
1	D	19	VAL
1	D	23	ILE
1	D	62	ARG
1	D	73	THR
1	D	98	THR
1	D	114	LEU
1	D	118	THR
1	D	143	ASN
1	D	146	GLN
1	D	157	LYS
1	D	166	GLU
1	D	176	LEU
1	D	189	SER
1	D	207	VAL
1	D	227	LYS
1	D	306	ARG
1	D	321	ARG
1	D	330	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (29) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	20	GLN
1	A	50	ASN
1	A	58	ASN
1	A	105	GLN
1	A	143	ASN
1	A	155	GLN
1	A	182	ASN
1	B	20	GLN
1	B	58	ASN
1	B	143	ASN
1	B	155	GLN
1	B	182	ASN
1	B	271	GLN
1	C	20	GLN
1	C	48	GLN
1	C	58	ASN
1	C	119	ASN
1	C	143	ASN

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Mol	Chain	Res	Type
1	C	155	GLN
1	C	182	ASN
1	C	270	ASN
1	D	20	GLN
1	D	50	ASN
1	D	58	ASN
1	D	143	ASN
1	D	155	GLN
1	D	182	ASN
1	D	196	ASN
1	D	271	GLN

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 oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

6 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
3	QOV	A	402	-	24,25,25	2.02	2 (8%)	34,37,37	2.81	12 (35%)
3	QOV	B	2001	-	24,25,25	1.96	3 (12%)	34,37,37	3.11	14 (41%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	TYR	A	401	-	11,12,13	0.61	0	10,15,17	0.30	0
3	QOV	C	2001	-	24,25,25	2.11	2 (8%)	34,37,37	3.17	10 (29%)
4	GOL	D	1001	-	5,5,5	0.43	0	5,5,5	0.34	0
3	QOV	D	1002	-	24,25,25	2.01	2 (8%)	34,37,37	2.91	9 (26%)

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
3	QOV	A	402	-	-	4/11/13/13	0/3/3/3
3	QOV	B	2001	-	-	6/11/13/13	0/3/3/3
2	TYR	A	401	-	-	1/5/6/8	0/1/1/1
3	QOV	C	2001	-	-	6/11/13/13	0/3/3/3
4	GOL	D	1001	-	-	2/4/4/4	-
3	QOV	D	1002	-	-	3/11/13/13	0/3/3/3

All (9) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	C	2001	QOV	N1-N3	-9.39	1.26	1.37
3	A	402	QOV	N1-N3	-8.80	1.27	1.37
3	D	1002	QOV	N1-N3	-8.54	1.27	1.37
3	B	2001	QOV	N1-N3	-8.37	1.27	1.37
3	B	2001	QOV	C-S	-2.51	1.74	1.77
3	D	1002	QOV	C8-C10	2.30	1.40	1.35
3	B	2001	QOV	C8-C10	2.15	1.39	1.35
3	A	402	QOV	C6-N1	-2.04	1.34	1.38
3	C	2001	QOV	C8-C10	2.04	1.39	1.35

All (45) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	2001	QOV	O1-S-O	-10.35	106.95	119.52
3	B	2001	QOV	O1-S-O	-10.13	107.22	119.52
3	C	2001	QOV	C12-O2-C2	10.08	132.30	117.51
3	B	2001	QOV	C12-O2-C2	9.48	131.42	117.51
3	D	1002	QOV	O1-S-O	-9.33	108.19	119.52
3	D	1002	QOV	C12-O2-C2	9.06	130.80	117.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	402	QOV	O1-S-O	-8.40	109.32	119.52
3	A	402	QOV	C12-O2-C2	7.98	129.22	117.51
3	B	2001	QOV	C-S-N	6.45	113.98	105.96
3	C	2001	QOV	C11-N3-N1	5.51	106.73	102.40
3	D	1002	QOV	C11-N3-N1	5.46	106.70	102.40
3	C	2001	QOV	O2-C2-C	5.42	120.64	116.49
3	D	1002	QOV	C-S-N	5.00	112.18	105.96
3	A	402	QOV	C-S-N	4.88	112.02	105.96
3	A	402	QOV	C11-N3-N1	4.48	105.92	102.40
3	D	1002	QOV	N3-C11-N2	-3.92	110.59	115.36
3	C	2001	QOV	N3-C11-N2	-3.69	110.87	115.36
3	C	2001	QOV	C-S-N	3.64	110.49	105.96
3	B	2001	QOV	N3-C11-N2	-3.64	110.93	115.36
3	A	402	QOV	C1-C3-CL	3.58	123.66	119.17
3	B	2001	QOV	C11-N3-N1	3.58	105.21	102.40
3	A	402	QOV	N3-C11-N2	-3.53	111.07	115.36
3	A	402	QOV	O-S-C	3.48	113.43	107.68
3	D	1002	QOV	C7-N-S	3.17	131.41	121.52
3	B	2001	QOV	C7-N-S	3.07	131.08	121.52
3	B	2001	QOV	N1-C6-N2	-2.80	108.40	109.70
3	A	402	QOV	O2-C2-C	2.67	118.53	116.49
3	C	2001	QOV	C3-C1-C	2.63	121.71	119.32
3	D	1002	QOV	O1-S-C	2.55	111.89	107.68
3	B	2001	QOV	C5-C3-C1	-2.51	118.25	121.53
3	D	1002	QOV	C9-C7-N	-2.40	123.91	127.02
3	B	2001	QOV	C6-C7-N	2.38	120.12	113.35
3	B	2001	QOV	C9-C7-N	-2.37	123.94	127.02
3	C	2001	QOV	C5-C3-C1	-2.37	118.44	121.53
3	A	402	QOV	C2-C-S	-2.29	117.80	120.66
3	B	2001	QOV	O2-C2-C	2.29	118.24	116.49
3	A	402	QOV	C7-N-S	2.28	128.64	121.52
3	D	1002	QOV	C6-C7-N	2.27	119.83	113.35
3	C	2001	QOV	C6-C7-N	2.18	119.56	113.35
3	C	2001	QOV	C9-C7-N	-2.18	124.20	127.02
3	A	402	QOV	C1-C-S	2.15	122.54	118.59
3	B	2001	QOV	C13-C11-N3	2.15	127.77	122.18
3	B	2001	QOV	C5-C3-CL	2.12	122.49	119.36
3	A	402	QOV	C6-C7-N	2.10	119.34	113.35
3	B	2001	QOV	O-S-C	2.04	111.05	107.68

There are no chirality outliers.

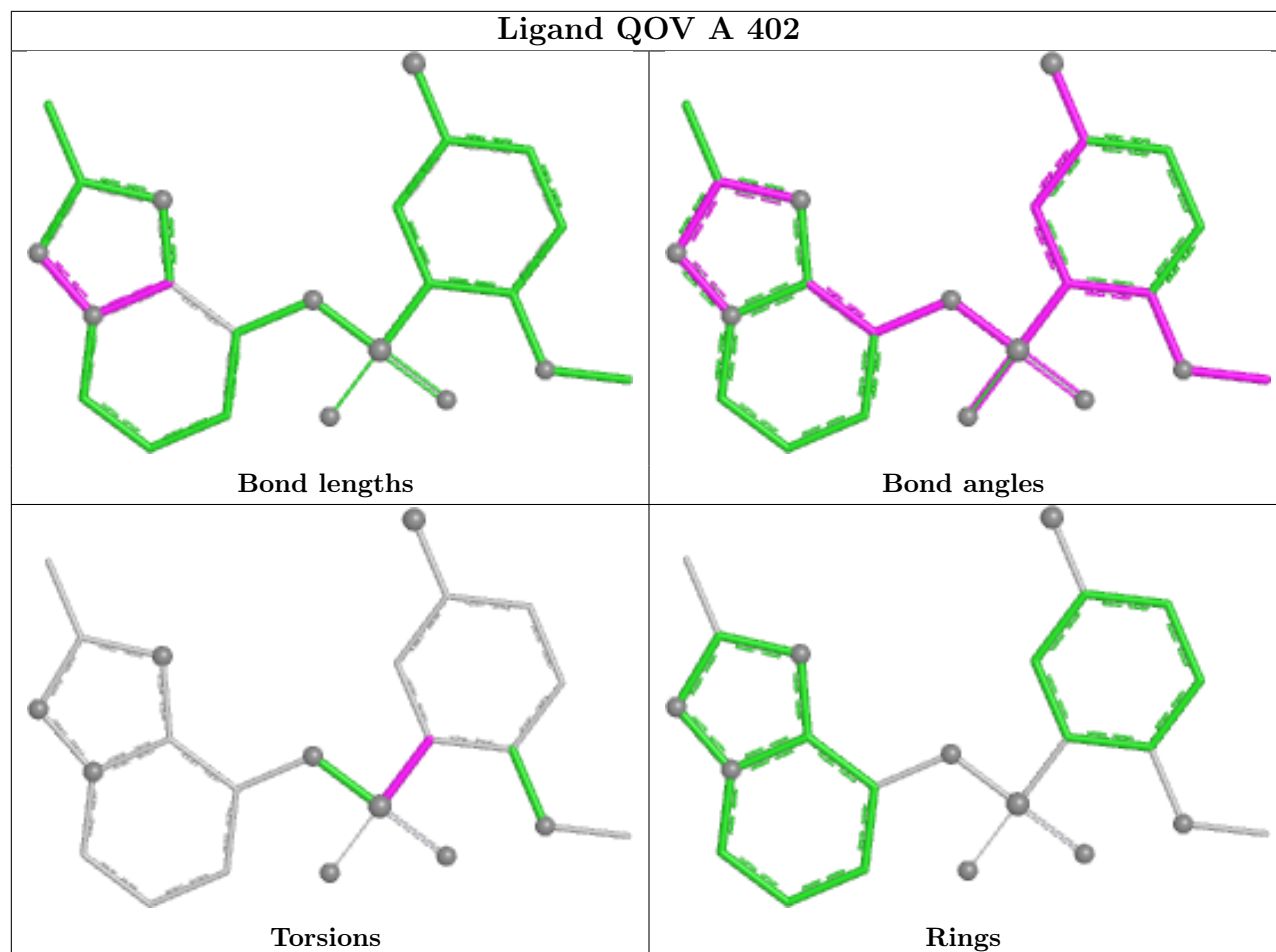
All (22) torsion outliers are listed below:

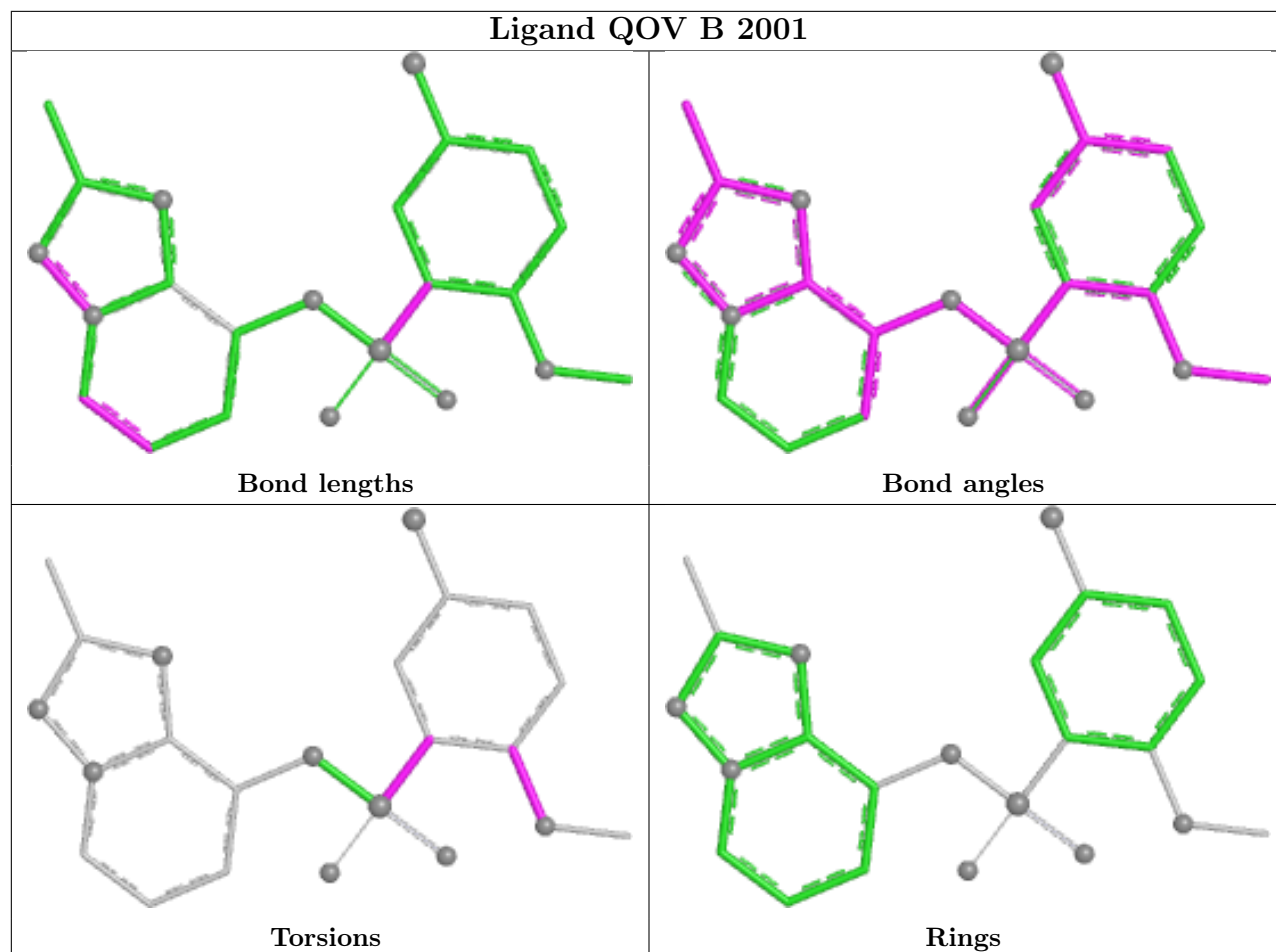
Mol	Chain	Res	Type	Atoms
2	A	401	TYR	O-C-CA-CB
3	A	402	QOV	C2-C-S-O
3	A	402	QOV	C2-C-S-N
3	B	2001	QOV	C2-C-S-N
3	C	2001	QOV	C-C2-O2-C12
3	C	2001	QOV	C2-C-S-N
3	D	1002	QOV	C2-C-S-N
4	D	1001	GOL	O1-C1-C2-C3
3	C	2001	QOV	C4-C2-O2-C12
4	D	1001	GOL	O1-C1-C2-O2
3	A	402	QOV	C1-C-S-N
3	B	2001	QOV	C1-C-S-N
3	C	2001	QOV	C1-C-S-N
3	D	1002	QOV	C1-C-S-N
3	A	402	QOV	C1-C-S-O
3	B	2001	QOV	C-C2-O2-C12
3	B	2001	QOV	C4-C2-O2-C12
3	C	2001	QOV	C1-C-S-O
3	C	2001	QOV	C2-C-S-O
3	D	1002	QOV	C1-C-S-O
3	B	2001	QOV	C1-C-S-O
3	B	2001	QOV	C2-C-S-O

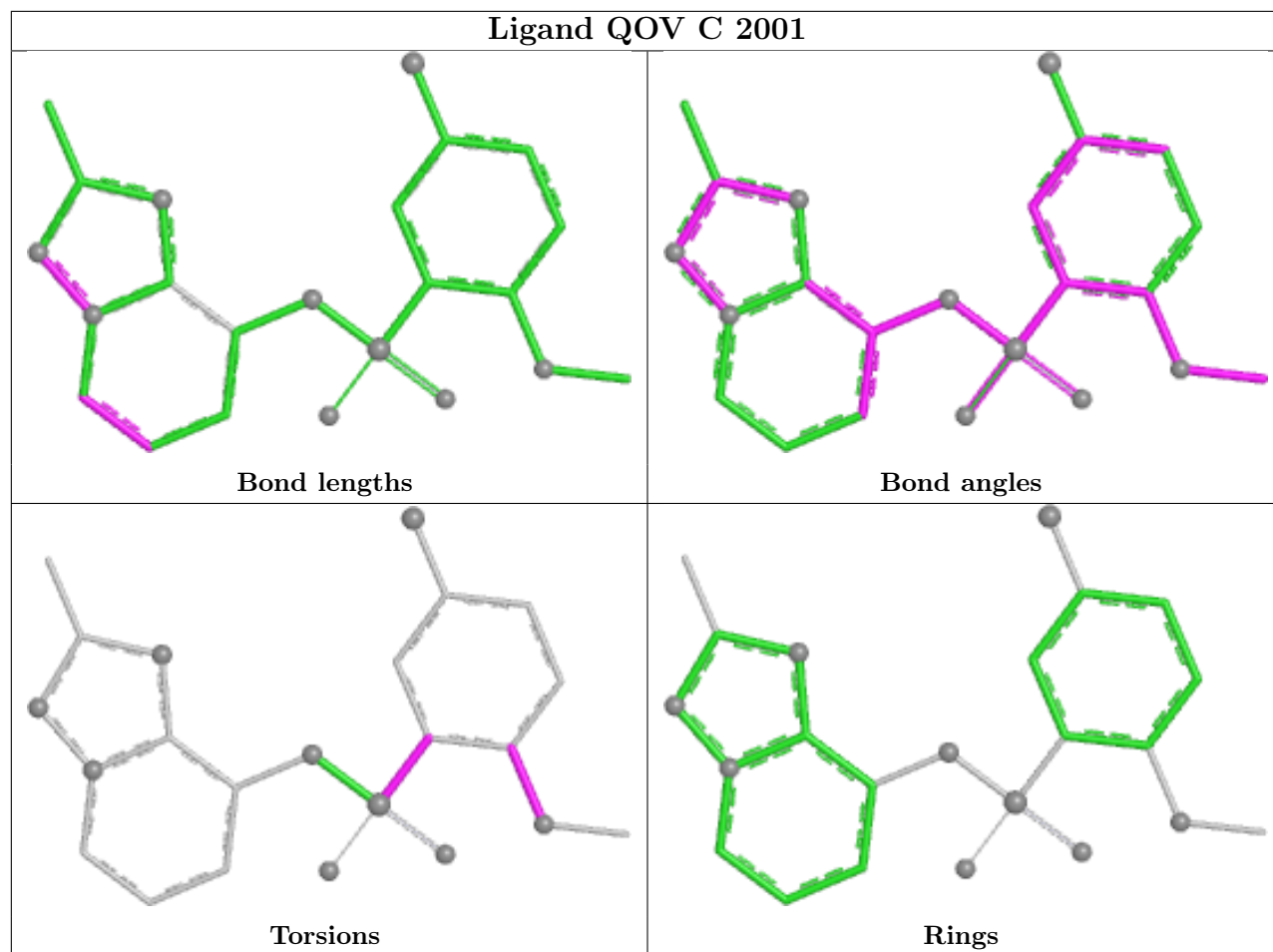
There are no ring outliers.

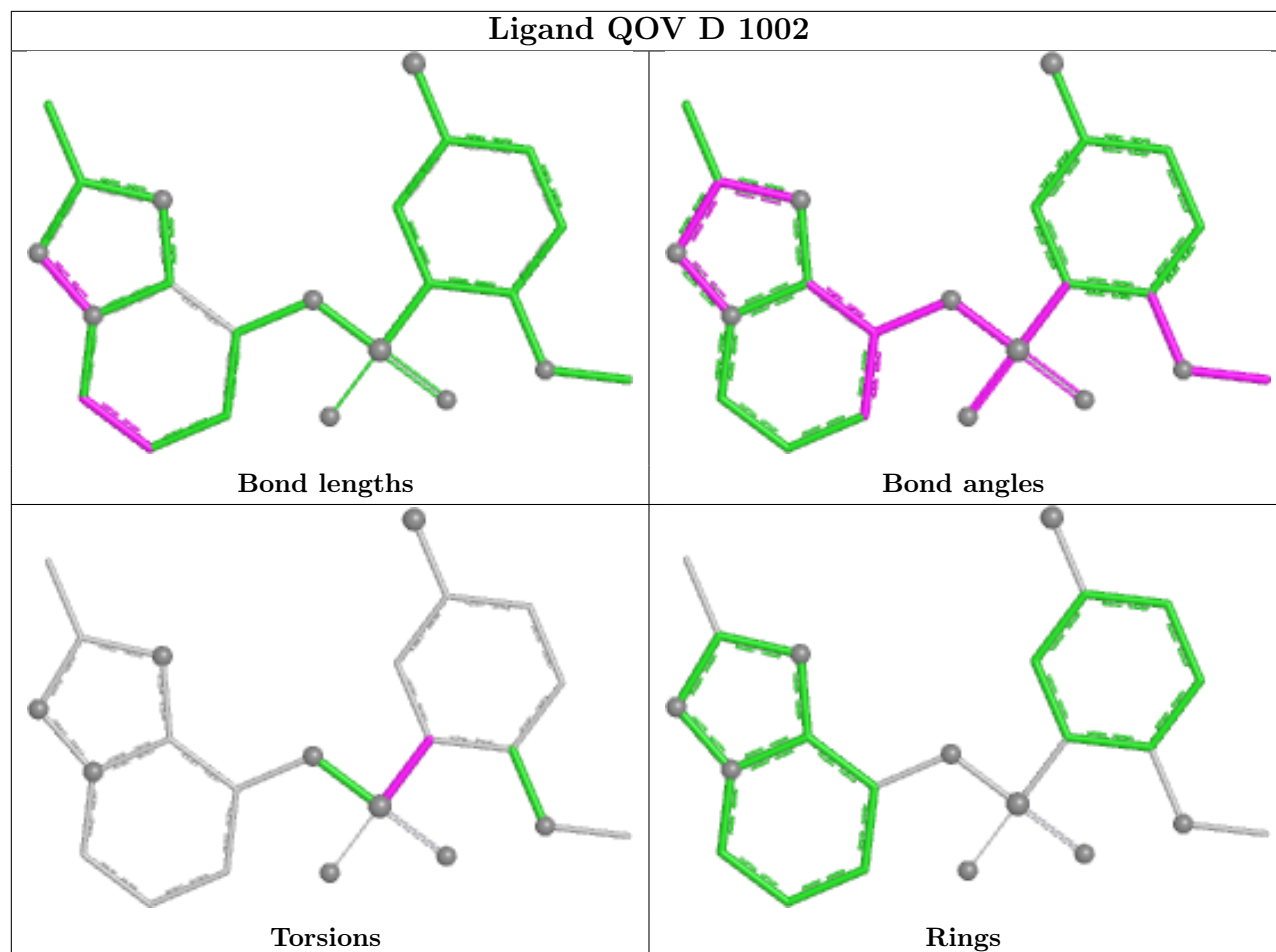
No monomer is involved in short contacts.

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, 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	293/324 (90%)	1.12	44 (15%)	5 4	25, 51, 85, 104	0
1	B	295/324 (91%)	1.18	42 (14%)	6 5	29, 52, 85, 98	0
1	C	290/324 (89%)	1.40	68 (23%)	2 2	27, 53, 86, 100	1 (0%)
1	D	290/324 (89%)	1.58	82 (28%)	1 1	31, 57, 89, 101	0
All	All	1168/1296 (90%)	1.32	236 (20%)	3 2	25, 54, 87, 104	1 (0%)

All (236) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	D	155	GLN	6.3
1	C	314	ALA	5.8
1	C	242	GLU	5.6
1	D	98	THR	5.2
1	C	142	ASN	4.6
1	D	18	THR	4.5
1	C	326	TRP	4.1
1	D	115	GLY	4.1
1	B	224	SER	4.1
1	C	319	LYS	4.0
1	D	105	GLN	3.9
1	D	257	LEU	3.9
1	D	106	GLY	3.8
1	B	31	CYS	3.8
1	A	120	GLY	3.8
1	D	96	CYS	3.7
1	B	257	LEU	3.7
1	C	323	LEU	3.7
1	D	92	GLY	3.7
1	B	155	GLN	3.7
1	D	147	ASN	3.7

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Mol	Chain	Res	Type	RSRZ
1	D	91	ILE	3.6
1	B	147	ASN	3.6
1	D	45	PRO	3.6
1	D	19	VAL	3.6
1	D	212	LEU	3.6
1	C	292	GLY	3.5
1	C	148[A]	ARG	3.5
1	A	134	THR	3.5
1	A	42	GLY	3.5
1	C	275	GLY	3.4
1	D	127	LEU	3.4
1	D	146	GLN	3.4
1	C	224	SER	3.4
1	B	142	ASN	3.4
1	D	43	PRO	3.4
1	D	109	TYR	3.4
1	D	254	SER	3.4
1	B	225	GLY	3.4
1	C	328	ASP	3.4
1	B	98	THR	3.3
1	A	147	ASN	3.3
1	C	147	ASN	3.2
1	A	232	ARG	3.2
1	C	145	GLU	3.2
1	C	300	SER	3.2
1	B	166	GLU	3.2
1	D	259	ARG	3.1
1	D	240	THR	3.1
1	C	318	ALA	3.1
1	A	117	ASP	3.1
1	C	297	VAL	3.0
1	C	322	ARG	3.0
1	A	257	LEU	3.0
1	C	202	VAL	3.0
1	D	29	SER	3.0
1	A	155	GLN	3.0
1	A	163	MET	3.0
1	C	99	ILE	3.0
1	D	311	LEU	2.9
1	C	301	ILE	2.9
1	B	230	THR	2.9
1	C	98	THR	2.9

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Mol	Chain	Res	Type	RSRZ
1	A	142	ASN	2.9
1	C	229	PRO	2.9
1	C	316	ARG	2.9
1	D	21	ARG	2.9
1	A	106	GLY	2.9
1	C	115	GLY	2.9
1	A	104	PRO	2.9
1	D	165	SER	2.9
1	D	99	ILE	2.9
1	D	95	VAL	2.9
1	D	153	GLU	2.8
1	A	230	THR	2.8
1	D	313	ALA	2.8
1	A	145	GLU	2.8
1	B	161	LYS	2.8
1	C	303	VAL	2.8
1	D	158	ALA	2.8
1	D	107	ARG	2.8
1	D	20	GLN	2.7
1	C	257	LEU	2.7
1	D	142	ASN	2.7
1	D	154	GLU	2.7
1	D	298	ASP	2.7
1	B	232	ARG	2.7
1	D	104	PRO	2.7
1	B	42	GLY	2.7
1	C	106	GLY	2.7
1	C	111	MET	2.7
1	D	188	ASP	2.7
1	A	316	ARG	2.7
1	D	308	ALA	2.7
1	D	88	LYS	2.7
1	C	325	ILE	2.6
1	D	145	GLU	2.6
1	C	45	PRO	2.6
1	A	278	LEU	2.6
1	C	120	GLY	2.6
1	A	98	THR	2.6
1	D	198	ILE	2.6
1	A	109	TYR	2.6
1	C	232	ARG	2.6
1	C	37	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
1	B	261	VAL	2.6
1	A	39	PRO	2.5
1	D	241	PRO	2.5
1	B	240	THR	2.5
1	C	118	THR	2.5
1	A	224	SER	2.5
1	C	261	VAL	2.5
1	B	308	ALA	2.5
1	D	290	LYS	2.5
1	C	320	GLU	2.5
1	D	128	VAL	2.5
1	C	230	THR	2.5
1	A	136	ARG	2.5
1	C	295	ARG	2.5
1	D	144	PRO	2.5
1	D	191	HIS	2.4
1	B	145	GLU	2.4
1	B	183	PRO	2.4
1	D	111	MET	2.4
1	D	148	ARG	2.4
1	D	184	ARG	2.4
1	D	132	LEU	2.4
1	B	309	GLU	2.4
1	C	289	LEU	2.4
1	D	301	ILE	2.4
1	B	181	GLU	2.4
1	D	261	VAL	2.4
1	A	154	GLU	2.4
1	A	267	SER	2.4
1	B	165	SER	2.4
1	D	280	PRO	2.4
1	B	169	GLY	2.4
1	C	307	GLY	2.4
1	C	313	ALA	2.4
1	C	317	PHE	2.4
1	C	182	ASN	2.3
1	B	154	GLU	2.3
1	D	232	ARG	2.3
1	B	19	VAL	2.3
1	D	219	VAL	2.3
1	A	99	ILE	2.3
1	A	29	SER	2.3

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Mol	Chain	Res	Type	RSRZ
1	D	328	ASP	2.3
1	C	183	PRO	2.3
1	B	21	ARG	2.3
1	D	23	ILE	2.3
1	A	305	THR	2.3
1	D	118	THR	2.3
1	C	315	GLU	2.3
1	D	291	GLU	2.3
1	C	299	TRP	2.3
1	C	324	ARG	2.3
1	A	212	LEU	2.3
1	A	240	THR	2.3
1	C	116	LYS	2.3
1	D	309	GLU	2.3
1	A	148	ARG	2.3
1	C	38	GLN	2.3
1	A	30	GLY	2.3
1	D	299	TRP	2.3
1	A	261	VAL	2.3
1	C	244	PHE	2.3
1	C	269	HIS	2.2
1	D	324	ARG	2.2
1	B	77	PRO	2.2
1	D	117	ASP	2.2
1	B	202	VAL	2.2
1	C	311	LEU	2.2
1	A	116	LYS	2.2
1	C	185	HIS	2.2
1	C	31	CYS	2.2
1	C	119	ASN	2.2
1	C	168	ASN	2.2
1	C	312	ARG	2.2
1	C	310	LYS	2.2
1	B	99	ILE	2.2
1	B	96	CYS	2.2
1	C	321	ARG	2.2
1	B	272	ASN	2.2
1	A	45	PRO	2.2
1	B	120	GLY	2.2
1	C	167	GLY	2.2
1	A	308	ALA	2.2
1	B	143	ASN	2.2

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Mol	Chain	Res	Type	RSRZ
1	A	271	GLN	2.2
1	C	33	ILE	2.2
1	D	24	ILE	2.2
1	D	318	ALA	2.1
1	B	50	ASN	2.1
1	B	109	TYR	2.1
1	B	310	LYS	2.1
1	A	328	ASP	2.1
1	B	215	ASP	2.1
1	D	293	PHE	2.1
1	D	317	PHE	2.1
1	B	125	GLU	2.1
1	D	151	GLU	2.1
1	A	322	ARG	2.1
1	D	312	ARG	2.1
1	A	102	LYS	2.1
1	D	310	LYS	2.1
1	A	146	GLN	2.1
1	D	119	ASN	2.1
1	D	167	GLY	2.1
1	A	165	SER	2.1
1	A	156	ALA	2.1
1	B	159	ALA	2.1
1	D	81	PRO	2.1
1	B	38	GLN	2.1
1	A	31	CYS	2.1
1	B	92	GLY	2.1
1	C	267	SER	2.1
1	D	25	LYS	2.1
1	D	44	PRO	2.1
1	D	217	TYR	2.1
1	A	128	VAL	2.1
1	D	202	VAL	2.1
1	D	231	PHE	2.1
1	C	129	ALA	2.0
1	C	248	ALA	2.0
1	C	308	ALA	2.0
1	D	179	THR	2.0
1	B	104	PRO	2.0
1	D	271	GLN	2.0
1	D	292	GLY	2.0
1	C	158	ALA	2.0

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Mol	Chain	Res	Type	RSRZ
1	A	144	PRO	2.0
1	B	184	ARG	2.0
1	C	184	ARG	2.0
1	D	47	ARG	2.0
1	C	304	TYR	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 oligosaccharides in this entry.

6.4 Ligands [i](#)

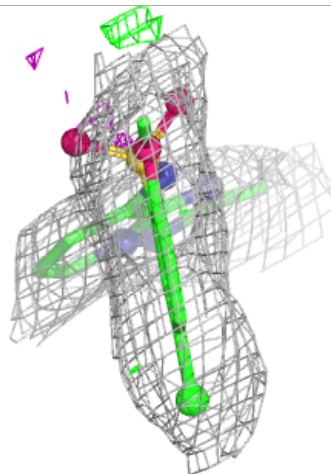
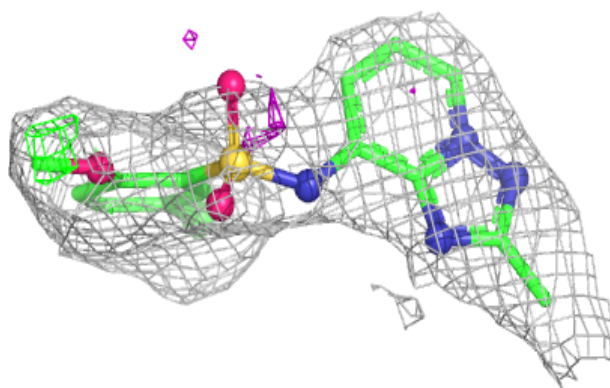
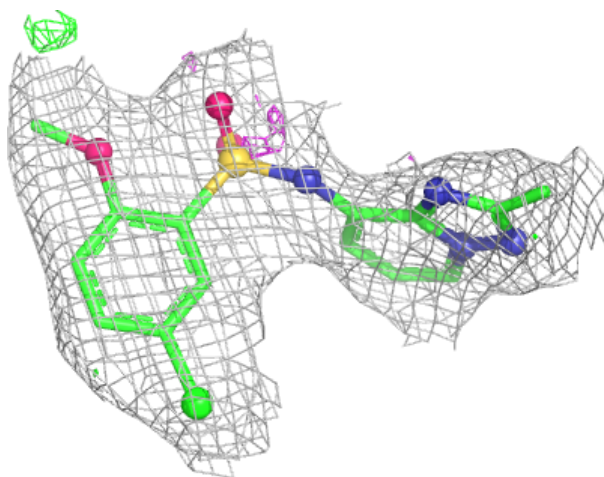
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
4	GOL	D	1001	6/6	0.70	0.27	83,86,90,91	0
2	TYR	A	401	12/13	0.74	0.21	61,75,81,83	0
3	QOV	D	1002	23/23	0.86	0.15	49,57,62,64	0
3	QOV	C	2001	23/23	0.92	0.11	41,44,47,47	0
3	QOV	B	2001	23/23	0.94	0.10	42,46,50,50	0
3	QOV	A	402	23/23	0.95	0.09	37,39,41,41	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.

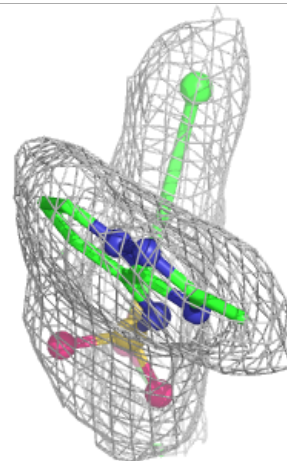
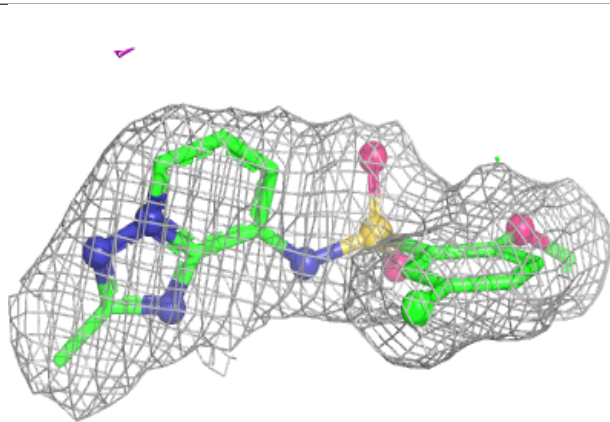
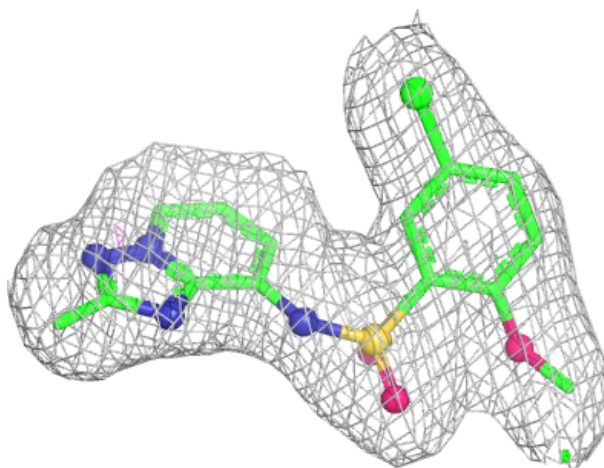
Electron density around QOV D 1002:

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



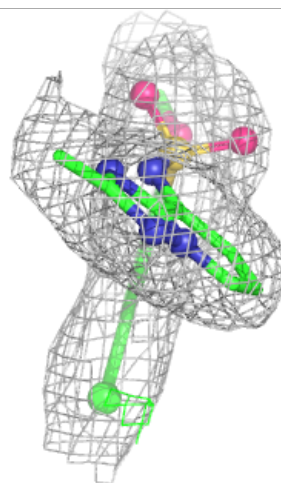
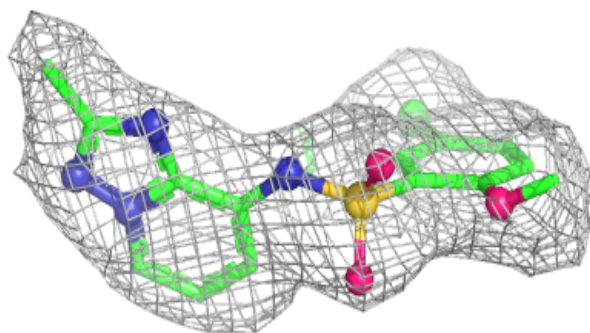
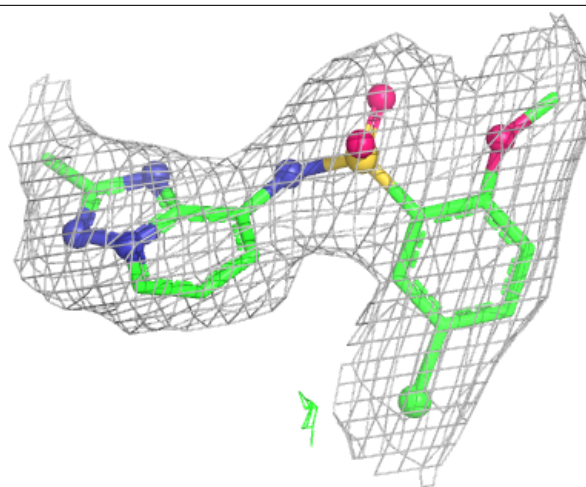
Electron density around QOV C 2001:

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



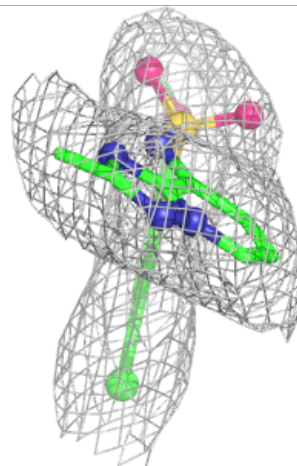
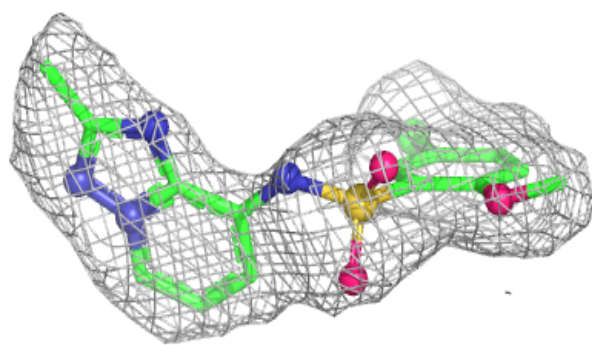
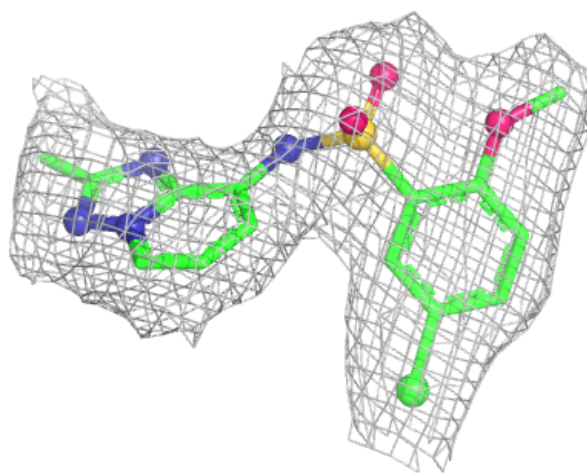
Electron density around QOV B 2001:

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



Electron density around QOV A 402:

$2mF_o-DF_c$ (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.