wwPDB X-ray Structure Validation Summary Report ⓘ

Nov 6, 2023 – 11:47 AM EST

PDB ID	:	5USY
Title	:	JAK2 JH1 in complex with JNJ-7706621
Authors	:	Puleo, D.E.; Schlessinger, J.
Deposited on	:	2017-02-14
Resolution	:	2.00 Å(reported)

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

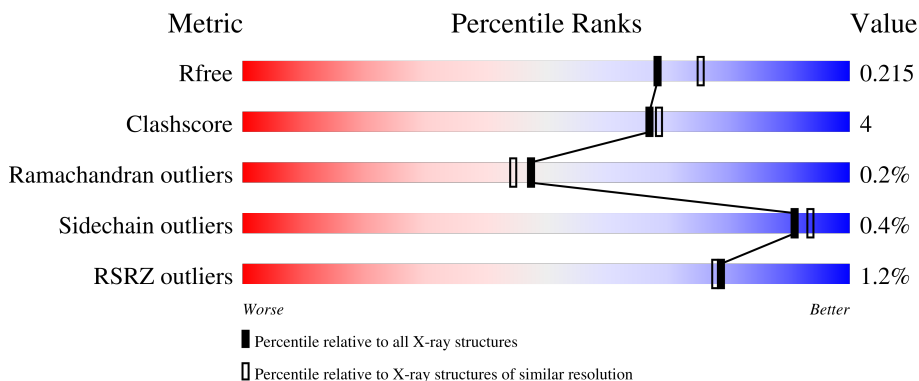|		
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & 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 2.00 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		0.215
Clashscore		4
Ramachandran outliers		0.2%
Sidechain outliers		0.4%
RSRZ outliers		1.2%

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	8085 (2.00-2.00)
Clashscore	141614	9178 (2.00-2.00)
Ramachandran outliers	138981	9054 (2.00-2.00)
Sidechain outliers	138945	9053 (2.00-2.00)
RSRZ outliers	127900	7900 (2.00-2.00)

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	316	·% / 83% / 8% / 9%
1	B	316	2% / 82% / 9% / 9%

2 Entry composition ⓘ

There are 5 unique types of molecules in this entry. The entry contains 5438 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 Tyrosine-protein kinase JAK2.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	288	Total	C	N	O	P	S	0	2	0
			2345	1495	406	429	1	14			
1	B	288	Total	C	N	O	P	S	0	2	0
			2339	1490	403	431	1	14			

There are 46 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	817	SER	-	expression tag	UNP O60674
A	818	TYR	-	expression tag	UNP O60674
A	819	TYR	-	expression tag	UNP O60674
A	820	HIS	-	expression tag	UNP O60674
A	821	HIS	-	expression tag	UNP O60674
A	822	HIS	-	expression tag	UNP O60674
A	823	HIS	-	expression tag	UNP O60674
A	824	HIS	-	expression tag	UNP O60674
A	825	HIS	-	expression tag	UNP O60674
A	826	ASP	-	expression tag	UNP O60674
A	827	TYR	-	expression tag	UNP O60674
A	828	ASP	-	expression tag	UNP O60674
A	829	ILE	-	expression tag	UNP O60674
A	830	PRO	-	expression tag	UNP O60674
A	831	THR	-	expression tag	UNP O60674
A	832	THR	-	expression tag	UNP O60674
A	833	GLU	-	expression tag	UNP O60674
A	834	ASN	-	expression tag	UNP O60674
A	835	LEU	-	expression tag	UNP O60674
A	836	TYR	-	expression tag	UNP O60674
A	837	PHE	-	expression tag	UNP O60674
A	838	GLN	-	expression tag	UNP O60674
A	839	GLY	-	expression tag	UNP O60674
B	817	SER	-	expression tag	UNP O60674
B	818	TYR	-	expression tag	UNP O60674

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Chain	Residue	Modelled	Actual	Comment	Reference
B	819	TYR	-	expression tag	UNP O60674
B	820	HIS	-	expression tag	UNP O60674
B	821	HIS	-	expression tag	UNP O60674
B	822	HIS	-	expression tag	UNP O60674
B	823	HIS	-	expression tag	UNP O60674
B	824	HIS	-	expression tag	UNP O60674
B	825	HIS	-	expression tag	UNP O60674
B	826	ASP	-	expression tag	UNP O60674
B	827	TYR	-	expression tag	UNP O60674
B	828	ASP	-	expression tag	UNP O60674
B	829	ILE	-	expression tag	UNP O60674
B	830	PRO	-	expression tag	UNP O60674
B	831	THR	-	expression tag	UNP O60674
B	832	THR	-	expression tag	UNP O60674
B	833	GLU	-	expression tag	UNP O60674
B	834	ASN	-	expression tag	UNP O60674
B	835	LEU	-	expression tag	UNP O60674
B	836	TYR	-	expression tag	UNP O60674
B	837	PHE	-	expression tag	UNP O60674
B	838	GLN	-	expression tag	UNP O60674
B	839	GLY	-	expression tag	UNP O60674

- Molecule 2 is 4-({5-amino-1-[(2,6-difluorophenyl)carbonyl]-1H-1,2,4-triazol-3-yl}amino)benzenesulfonamide (three-letter code: SKE) (formula: $C_{15}H_{12}F_2N_6O_3S$).

SKE
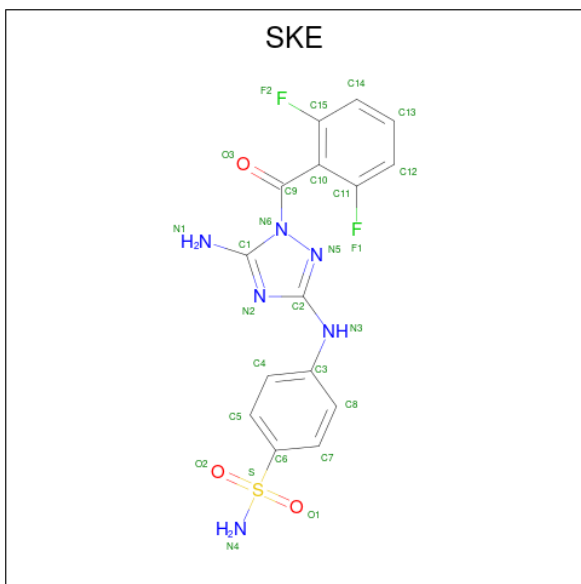
Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
2	A	1	Total	C	F	N	O	S	0	0
			27	15	2	6	3	1		
2	B	1	Total	C	F	N	O	S	0	0
			27	15	2	6	3	1		

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

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

- Molecule 4 is GLYCEROL (three-letter code: GOL) (formula: $C_3H_8O_3$).

GOL

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

- Molecule 5 is water.

| Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	315	Total 315	O 315	0	0
5	B	342	Total 342	O 342	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: Tyrosine-protein kinase JAK2
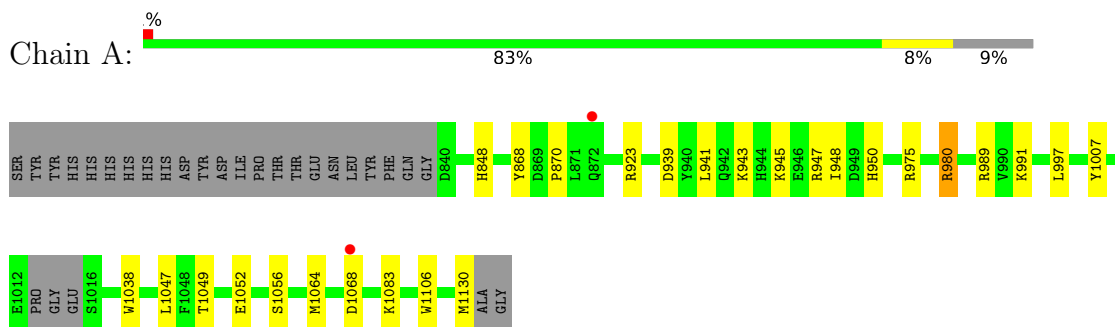
• Molecule 1: Tyrosine-protein kinase JAK2
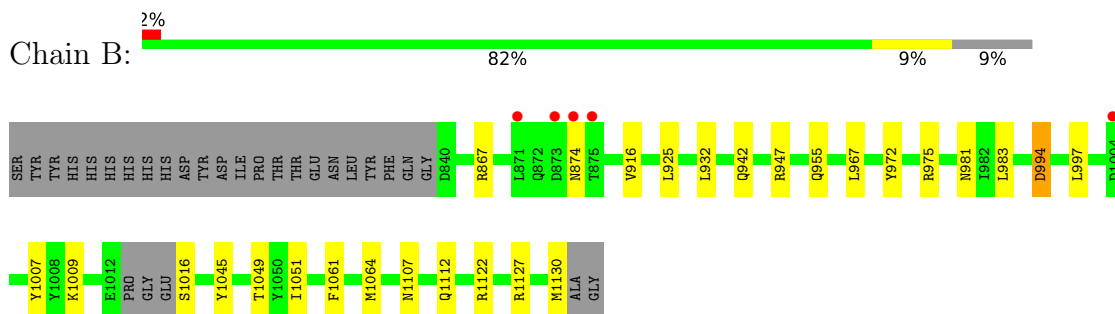
4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	137.02Å 68.97Å 100.57Å 90.00° 127.16° 90.00°	Depositor
Resolution (Å)	37.62 – 2.00 41.25 – 2.00	Depositor EDS
% Data completeness (in resolution range)	99.0 (37.62-2.00) 87.6 (41.25-2.00)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.09	Depositor
$< I/\sigma(I) >$ [1]	2.22 (at 2.00Å)	Xtriage
Refinement program	PHENIX 1.11.1_2575	Depositor
R, R_{free}	0.176 , 0.216 0.176 , 0.215	Depositor DCC
R_{free} test set	2525 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å^2)	14.8	Xtriage
Anisotropy	0.193	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.35 , 66.4	EDS
L-test for twinning [2]	$< |L| > = 0.45, < L^2 > = 0.28$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	5438	wwPDB-VP
Average B, all atoms (Å^2)	21.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 78.28 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 7.1487e-07. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

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[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: PTR, SKE, GOL, SO4

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	0.60	0/2384	0.73	4/3218 (0.1%)
1	B	0.64	0/2377	0.74	0/3207
All	All	0.62	0/4761	0.73	4/6425 (0.1%)

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	923	ARG	NE-CZ-NH2	-6.26	117.17	120.30
1	A	980	ARG	NE-CZ-NH2	-5.28	117.66	120.30
1	A	980	ARG	NE-CZ-NH1	5.17	122.89	120.30
1	A	923	ARG	NE-CZ-NH1	5.12	122.86	120.30

There are no chirality outliers.

There are no planarity outliers.

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	2345	0	2286	17	0
1	B	2339	0	2283	17	0
2	A	27	0	12	1	0
2	B	27	0	12	2	0
3	A	10	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	B	15	0	0	1	0
4	A	12	0	16	1	0
4	B	6	0	8	0	0
5	A	315	0	0	6	1
5	B	342	0	0	4	1
All	All	5438	0	4617	37	1

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.

The worst 5 of 37 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:1122:ARG:NH1	5:B:1301:HOH:O	2.07	0.77
1:B:867:ARG:HH22	1:B:874:ASN:HA	1.52	0.74
2:B:1201:SKE:N5	2:B:1201:SKE:H4	2.05	0.71
1:A:950:HIS:HE1	5:A:1531:HOH:O	1.74	0.70
1:B:867:ARG:NH2	1:B:874:ASN:HA	2.11	0.66

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:1611:HOH:O	5:B:1614:HOH:O[2_657]	2.08	0.12

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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	285/316 (90%)	277 (97%)	8 (3%)	0	100	100
1	B	285/316 (90%)	278 (98%)	5 (2%)	2 (1%)	22	16

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
All	All	570/632 (90%)	555 (97%)	13 (2%)	2 (0%)	47	30

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	994[A]	ASP
1	B	994[B]	ASP

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	251/288 (87%)	249 (99%)	2 (1%)	81	86
1	B	251/288 (87%)	251 (100%)	0	100	100
All	All	502/576 (87%)	500 (100%)	2 (0%)	91	93

All (2) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	947	ARG
1	A	1130	MET

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	B	1112	GLN
1	B	1111	ASN
1	B	1072	GLN
1	B	1067	ASN
1	B	1077	HIS

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

2 non-standard protein/DNA/RNA residues 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	#$|Z| > 2$
1	PTR	A	1007	1	15,16,17	1.19	1 (6%)	19,22,24	0.91	1 (5%)
1	PTR	B	1007	1	15,16,17	1.33	2 (13%)	19,22,24	0.65	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
1	PTR	A	1007	1	-	0/10/11/13	0/1/1/1
1	PTR	B	1007	1	-	0/10/11/13	0/1/1/1

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	1007	PTR	OH-CZ	-3.97	1.31	1.40
1	A	1007	PTR	OH-CZ	-3.32	1.33	1.40
1	B	1007	PTR	P-OH	2.28	1.62	1.59

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1007	PTR	O2P-P-OH	2.80	113.98	105.24
1	B	1007	PTR	O2P-P-OH	2.17	112.02	105.24

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

5.6 Ligand geometry ⓘ

10 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	SO4	A	1203	-	4,4,4	0.11	0	6,6,6	0.17	0
2	SKE	B	1201	-	27,29,29	1.79	6 (22%)	31,43,43	2.60	8 (25%)
4	GOL	A	1204	-	5,5,5	0.58	0	5,5,5	0.62	0
2	SKE	A	1201	-	27,29,29	1.91	7 (25%)	31,43,43	2.50	7 (22%)
3	SO4	A	1202	-	4,4,4	0.13	0	6,6,6	0.14	0
3	SO4	B	1202	-	4,4,4	0.15	0	6,6,6	0.12	0
3	SO4	B	1204	-	4,4,4	0.35	0	6,6,6	0.35	0
3	SO4	B	1203	-	4,4,4	0.18	0	6,6,6	0.18	0
4	GOL	A	1205	-	5,5,5	0.48	0	5,5,5	0.77	0
4	GOL	B	1205	-	5,5,5	0.33	0	5,5,5	0.31	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	SKE	B	1201	-	-	3/12/18/18	0/3/3/3
4	GOL	A	1204	-	-	4/4/4/4	-
2	SKE	A	1201	-	-	2/12/18/18	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	GOL	A	1205	-	-	0/4/4/4	-
4	GOL	B	1205	-	-	2/4/4/4	-

The worst 5 of 13 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	1201	SKE	C1-N1	5.80	1.45	1.33
2	A	1201	SKE	S-N4	4.96	1.70	1.60
2	B	1201	SKE	C1-N1	4.79	1.43	1.33
2	B	1201	SKE	S-N4	4.25	1.68	1.60
2	B	1201	SKE	C2-N3	3.28	1.43	1.36

The worst 5 of 15 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	1201	SKE	O2-S-O1	-10.29	101.85	118.76
2	A	1201	SKE	O2-S-O1	-9.18	103.67	118.76
2	A	1201	SKE	O2-S-N4	6.99	117.73	107.36
2	B	1201	SKE	O2-S-N4	5.55	115.58	107.36
2	B	1201	SKE	O1-S-N4	3.73	112.90	107.36

There are no chirality outliers.

5 of 11 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	1204	GOL	O1-C1-C2-C3
4	B	1205	GOL	O1-C1-C2-C3
4	A	1204	GOL	C1-C2-C3-O3
4	A	1204	GOL	O1-C1-C2-O2
4	B	1205	GOL	O1-C1-C2-O2

There are no ring outliers.

4 monomers are involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	1201	SKE	2	0
4	A	1204	GOL	1	0
2	A	1201	SKE	1	0
3	B	1202	SO4	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 SKE B 1201

Bond lengths

Bond angles

Torsions

Rings

Ligand SKE A 1201

Bond lengths

Bond angles

Torsions

Rings
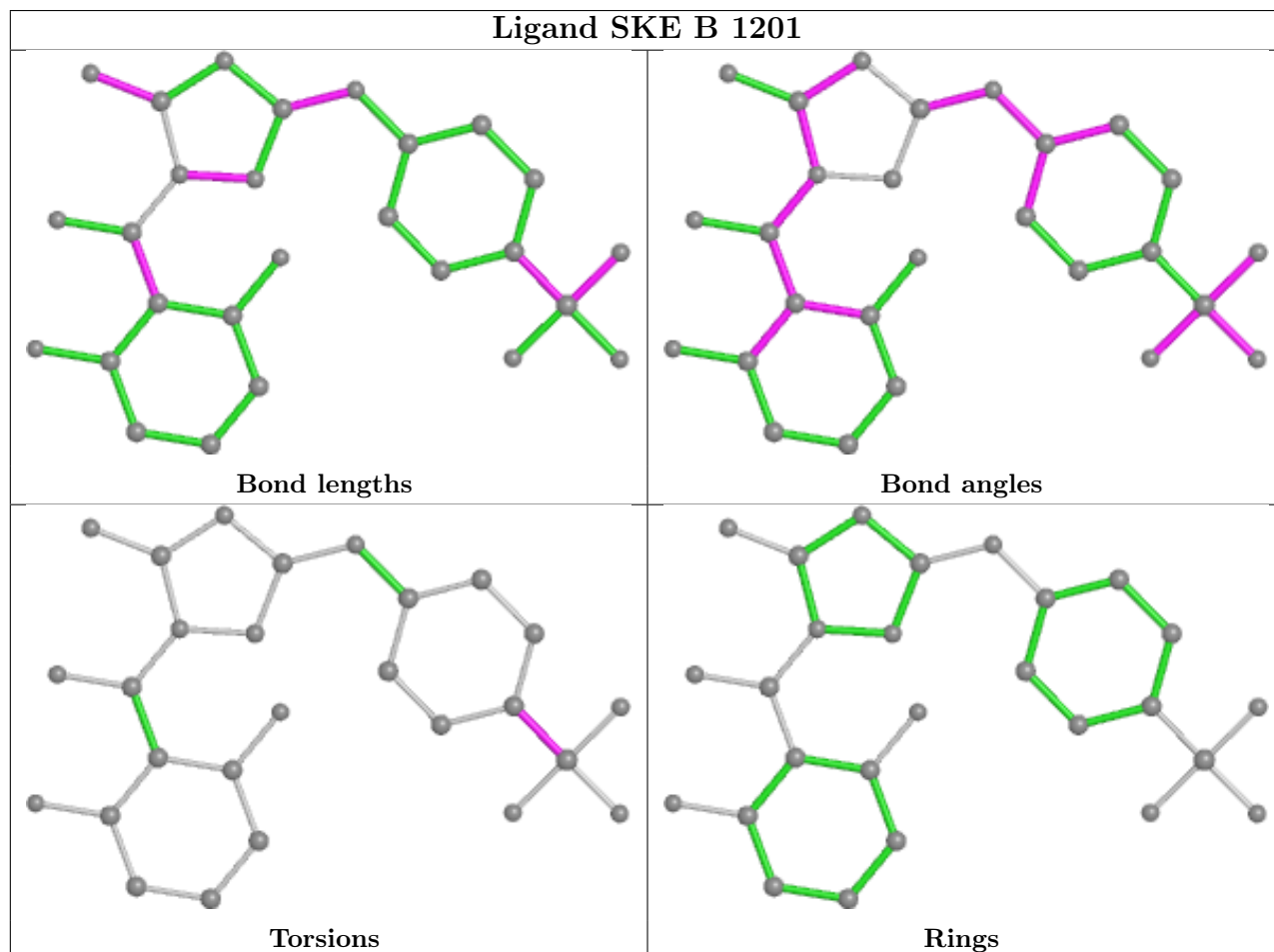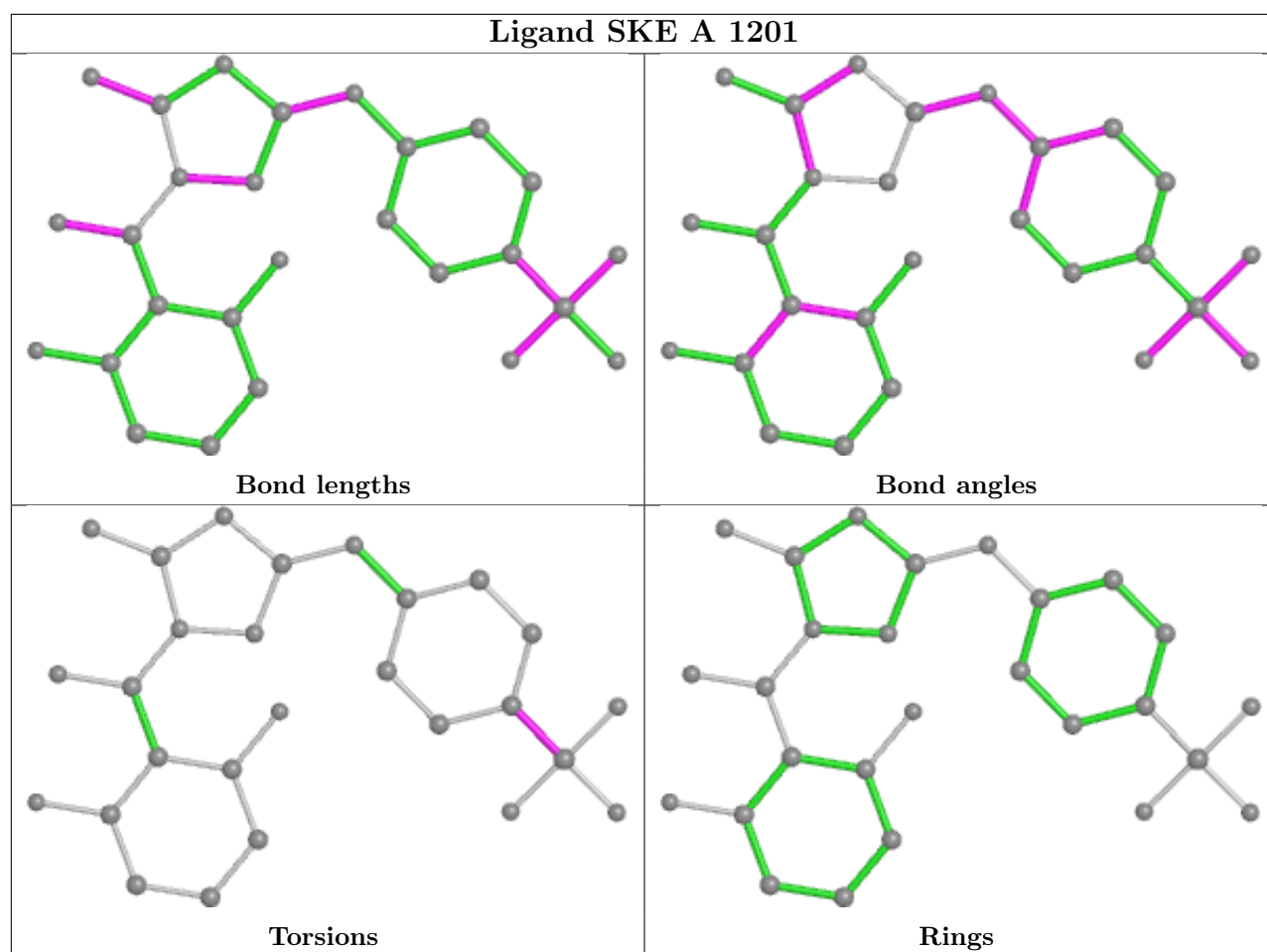
5.7 Other polymers ⓘ

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(Å^2)	Q<0.9
1	A	287/316 (90%)	-0.67	2 (0%)	87	87	8, 17, 39, 55	0
1	B	287/316 (90%)	-0.66	5 (1%)	70	68	7, 17, 40, 60	0
All	All	574/632 (90%)	-0.67	7 (1%)	79	78	7, 17, 40, 60	0

The worst 5 of 7 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	873	ASP	3.4
1	B	875	THR	2.7
1	B	871	LEU	2.6
1	B	874	ASN	2.6
1	A	872	GLN	2.6

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

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.

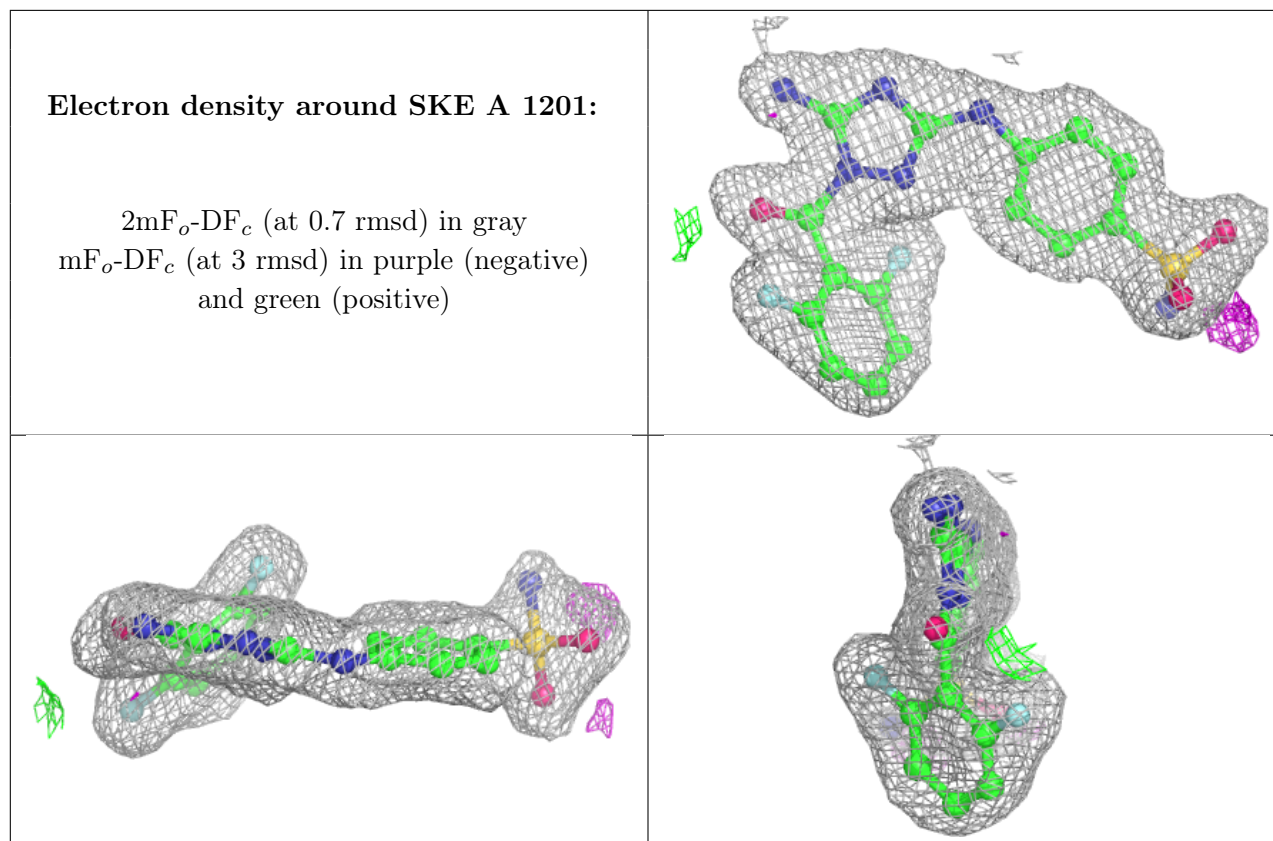| Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
1	PTR	A	1007	16/17	0.88	0.18	16,30,54,58	0
1	PTR	B	1007	16/17	0.92	0.14	17,31,61,64	0

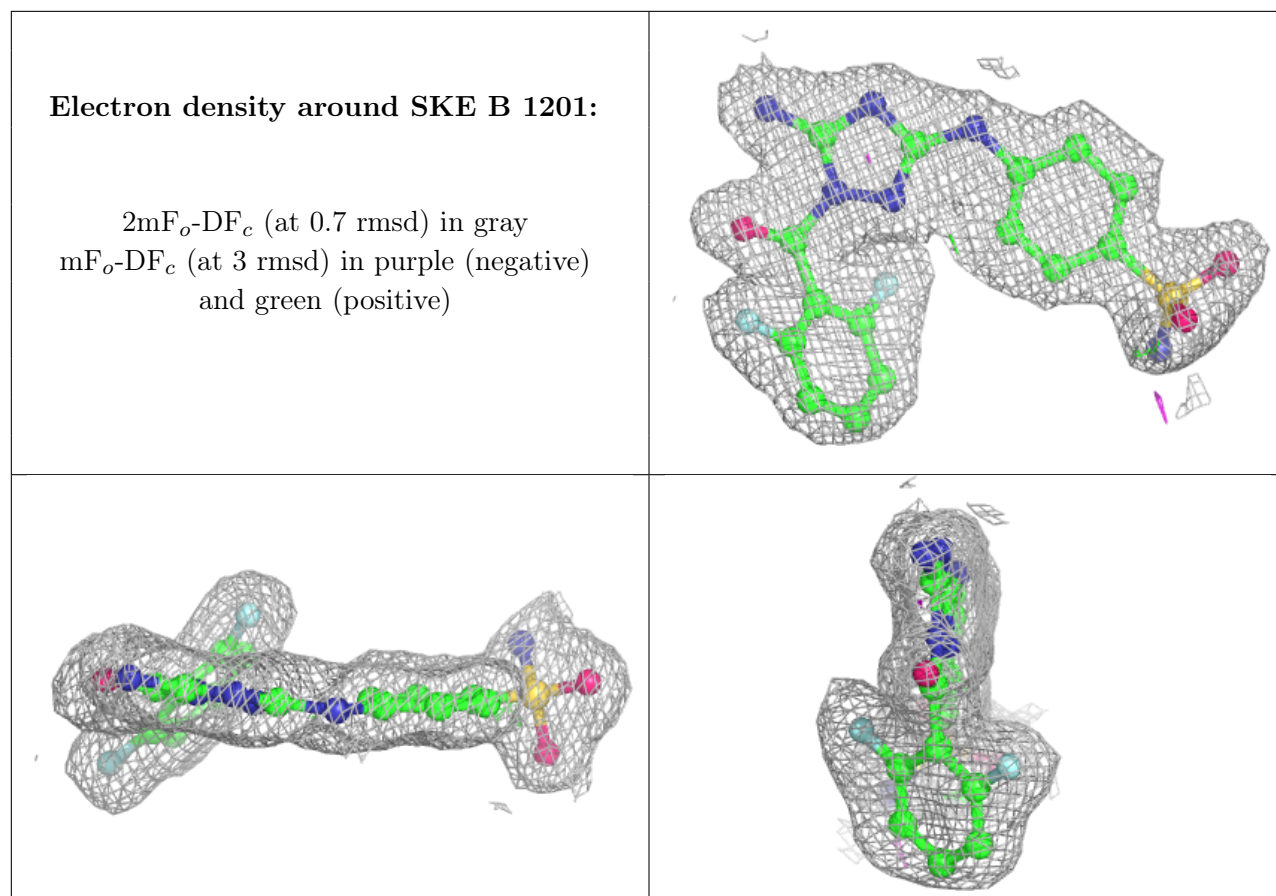## 6.3 Carbohydrates ⓘ

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.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
4	GOL	B	1205	6/6	0.78	0.17	34,46,47,49	0
4	GOL	A	1205	6/6	0.89	0.23	52,52,53,54	0
4	GOL	A	1204	6/6	0.92	0.17	42,43,44,45	0
3	SO4	B	1203	5/5	0.93	0.24	67,67,69,70	0
3	SO4	A	1203	5/5	0.93	0.23	71,72,72,73	0
3	SO4	B	1204	5/5	0.97	0.17	26,35,36,40	0
3	SO4	A	1202	5/5	0.97	0.10	53,54,56,59	0
2	SKE	A	1201	27/27	0.97	0.07	11,19,29,32	0
2	SKE	B	1201	27/27	0.97	0.08	12,18,28,30	0
3	SO4	B	1202	5/5	0.98	0.09	44,47,48,50	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 SKE A 1201:

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

Electron density around SKE B 1201:

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

6.5 Other polymers ⓘ

There are no such residues in this entry.