



Full wwPDB X-ray Structure Validation Report ⓘ

Jul 20, 2026 – 02:35 pm BST

PDB ID : 9RZ4 / pdb_00009rz4
Title : Alpha-Methylacyl-CoA racemase from Mycobacterium tuberculosis in complex with 2-(4-(2-(3-Methoxyphenyl)ethoxy)phenylthiol)propanoyl-CoA
Authors : Mojanaga, O.O.; Acharya, K.R.; Lloyd, M.D.
Deposited on : 2025-07-15
Resolution : 2.20 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:

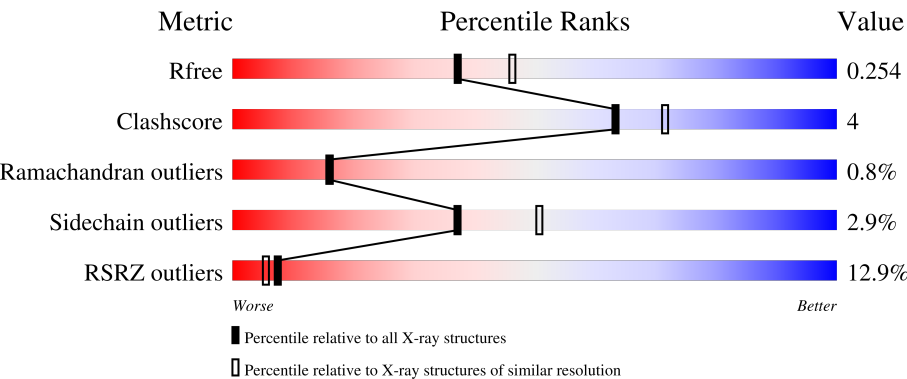
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.015 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.50

1 Overall quality at a glance i

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

The reported resolution of this entry is 2.20 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.



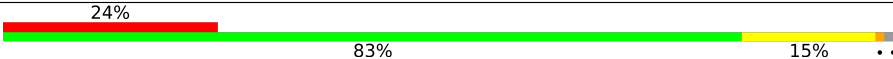
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	6164 (2.20-2.20)
Clashscore	190562	6851 (2.20-2.20)
Ramachandran outliers	187476	6768 (2.20-2.20)
Sidechain outliers	187428	6769 (2.20-2.20)
RSRZ outliers	180081	6166 (2.20-2.20)

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	364	
1	B	364	
1	C	364	
1	D	364	
1	E	364	

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Mol	Chain	Length	Quality of chain
1	F	364	
1	G	364	
1	H	364	
1	I	364	
1	J	364	
1	K	364	
1	L	364	

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 34435 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 Alpha-methylacyl-CoA racemase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	357	Total	C	N	O	S	0	2	0
			2706	1698	484	508	16			
1	B	357	Total	C	N	O	S	0	1	0
			2700	1694	484	506	16			
1	C	357	Total	C	N	O	S	0	3	0
			2709	1699	485	509	16			
1	D	359	Total	C	N	O	S	0	1	0
			2715	1703	486	510	16			
1	E	356	Total	C	N	O	S	0	2	0
			2699	1693	483	507	16			
1	F	358	Total	C	N	O	S	0	2	0
			2710	1700	485	509	16			
1	G	357	Total	C	N	O	S	0	2	0
			2703	1695	484	508	16			
1	H	357	Total	C	N	O	S	0	1	0
			2700	1694	484	506	16			
1	I	359	Total	C	N	O	S	0	3	0
			2724	1708	487	513	16			
1	J	357	Total	C	N	O	S	0	2	0
			2706	1698	485	507	16			
1	K	357	Total	C	N	O	S	0	3	0
			2709	1699	485	509	16			
1	L	359	Total	C	N	O	S	0	1	0
			2715	1703	486	510	16			

There are 48 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	361	GLY	-	expression tag	UNP O06543
A	362	SER	-	expression tag	UNP O06543
A	363	GLY	-	expression tag	UNP O06543
A	364	CYS	-	expression tag	UNP O06543
B	361	GLY	-	expression tag	UNP O06543

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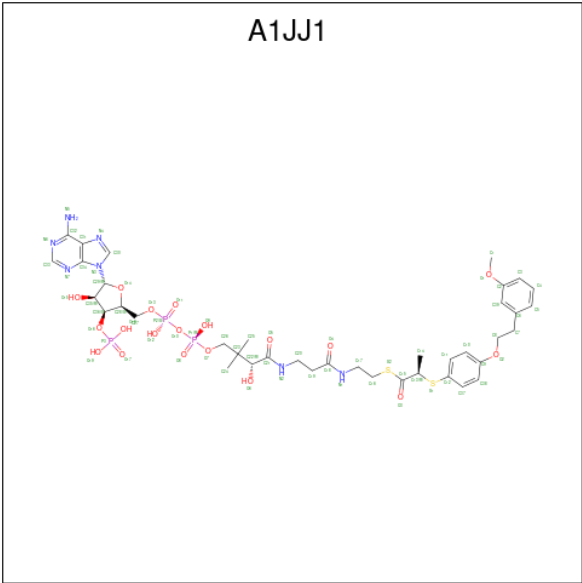
Chain	Residue	Modelled	Actual	Comment	Reference
B	362	SER	-	expression tag	UNP O06543
B	363	GLY	-	expression tag	UNP O06543
B	364	CYS	-	expression tag	UNP O06543
C	361	GLY	-	expression tag	UNP O06543
C	362	SER	-	expression tag	UNP O06543
C	363	GLY	-	expression tag	UNP O06543
C	364	CYS	-	expression tag	UNP O06543
D	361	GLY	-	expression tag	UNP O06543
D	362	SER	-	expression tag	UNP O06543
D	363	GLY	-	expression tag	UNP O06543
D	364	CYS	-	expression tag	UNP O06543
E	361	GLY	-	expression tag	UNP O06543
E	362	SER	-	expression tag	UNP O06543
E	363	GLY	-	expression tag	UNP O06543
E	364	CYS	-	expression tag	UNP O06543
F	361	GLY	-	expression tag	UNP O06543
F	362	SER	-	expression tag	UNP O06543
F	363	GLY	-	expression tag	UNP O06543
F	364	CYS	-	expression tag	UNP O06543
G	361	GLY	-	expression tag	UNP O06543
G	362	SER	-	expression tag	UNP O06543
G	363	GLY	-	expression tag	UNP O06543
G	364	CYS	-	expression tag	UNP O06543
H	361	GLY	-	expression tag	UNP O06543
H	362	SER	-	expression tag	UNP O06543
H	363	GLY	-	expression tag	UNP O06543
H	364	CYS	-	expression tag	UNP O06543
I	361	GLY	-	expression tag	UNP O06543
I	362	SER	-	expression tag	UNP O06543
I	363	GLY	-	expression tag	UNP O06543
I	364	CYS	-	expression tag	UNP O06543
J	361	GLY	-	expression tag	UNP O06543
J	362	SER	-	expression tag	UNP O06543
J	363	GLY	-	expression tag	UNP O06543
J	364	CYS	-	expression tag	UNP O06543
K	361	GLY	-	expression tag	UNP O06543
K	362	SER	-	expression tag	UNP O06543
K	363	GLY	-	expression tag	UNP O06543
K	364	CYS	-	expression tag	UNP O06543
L	361	GLY	-	expression tag	UNP O06543
L	362	SER	-	expression tag	UNP O06543
L	363	GLY	-	expression tag	UNP O06543

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Chain	Residue	Modelled	Actual	Comment	Reference
L	364	CYS	-	expression tag	UNP O06543

- Molecule 2 is 2-(4-(2-(3-Methoxyphenyl)ethoxy)phenylthiol)propanoyl-CoA (CCD ID: A1JJ1) (formula: C₃₉H₅₄N₇O₁₉P₃S₂) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
2	A	1	Total	C	N	O	P	S	0	0
			70	39	7	19	3	2		
2	B	1	Total	C	N	O	P	S	0	0
			70	39	7	19	3	2		
2	C	1	Total	C	N	O	P	S	0	0
			70	39	7	19	3	2		
2	D	1	Total	C	N	O	P	S	0	0
			70	39	7	19	3	2		
2	E	1	Total	C	N	O	P	S	0	0
			70	39	7	19	3	2		
2	F	1	Total	C	N	O	P	S	0	0
			70	39	7	19	3	2		
2	G	1	Total	C	N	O	P	S	0	0
			70	39	7	19	3	2		
2	H	1	Total	C	N	O	P	S	0	0
			70	39	7	19	3	2		
2	I	1	Total	C	N	O	P	S	0	0
			70	39	7	19	3	2		
2	J	1	Total	C	N	O	P	S	0	0
			70	39	7	19	3	2		

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
2	K	1	Total	C	N	O	P	S	0	0
			70	39	7	19	3	2		
2	L	1	Total	C	N	O	P	S	0	0
			70	39	7	19	3	2		

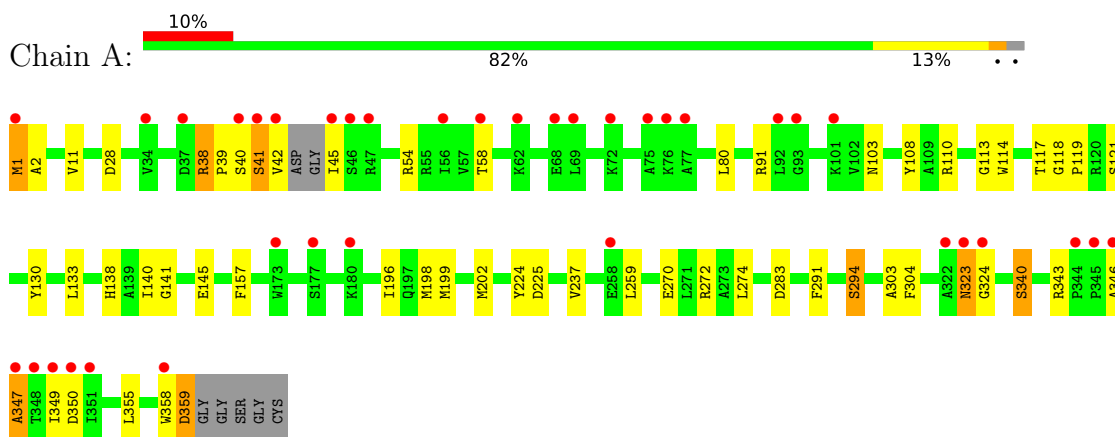
- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	94	Total	O	0	0
			94	94		
3	B	81	Total	O	0	0
			81	81		
3	C	89	Total	O	0	0
			89	89		
3	D	102	Total	O	0	0
			102	102		
3	E	90	Total	O	0	0
			90	90		
3	F	94	Total	O	0	0
			94	94		
3	G	75	Total	O	0	0
			75	75		
3	H	84	Total	O	0	0
			84	84		
3	I	101	Total	O	0	0
			101	101		
3	J	99	Total	O	0	0
			99	99		
3	K	96	Total	O	0	0
			96	96		
3	L	94	Total	O	0	0
			94	94		

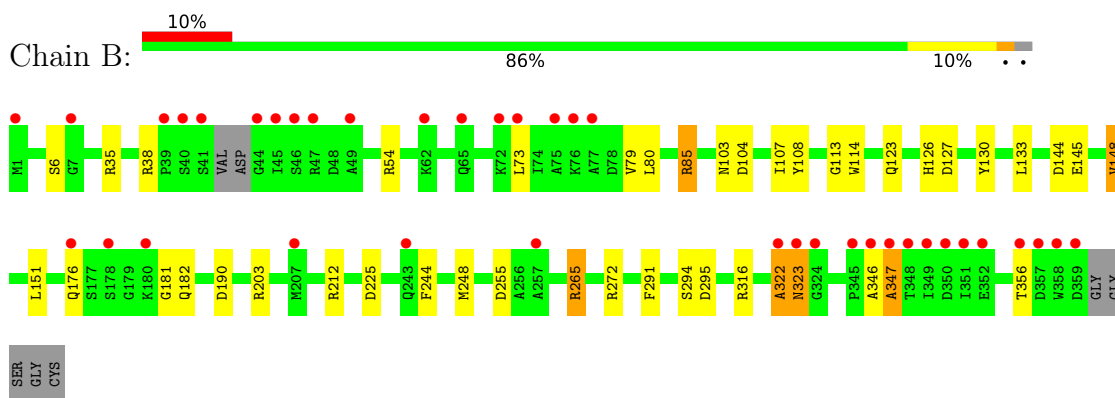
3 Residue-property plots [i](#)

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.

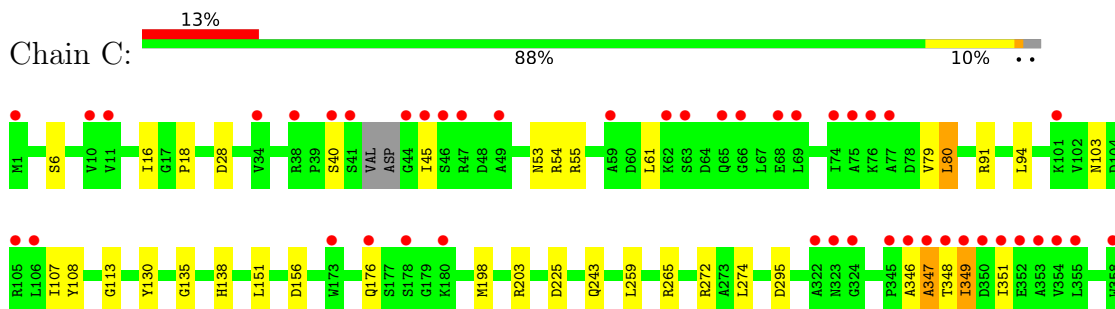
• Molecule 1: Alpha-methylacyl-CoA racemase



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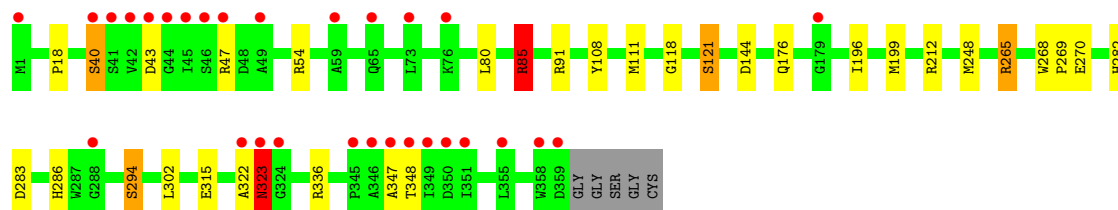
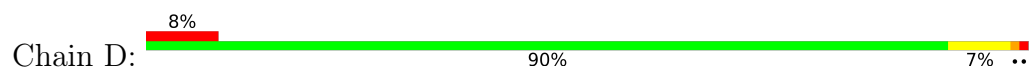


• Molecule 1: Alpha-methylacyl-CoA racemase

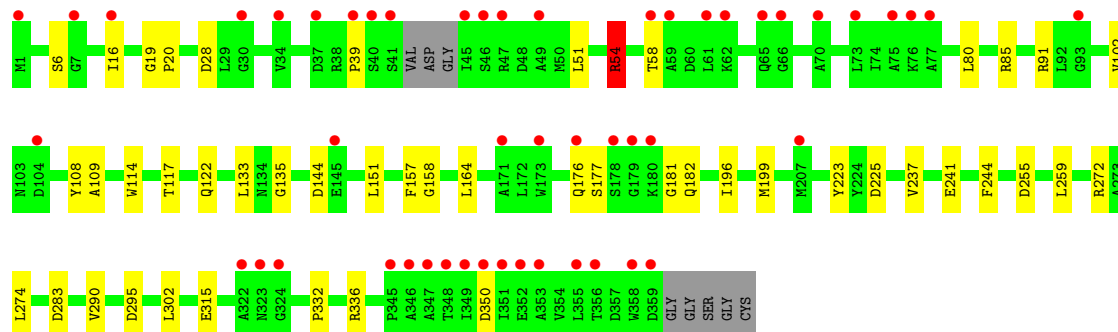
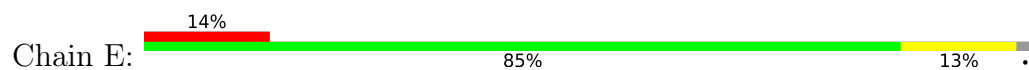




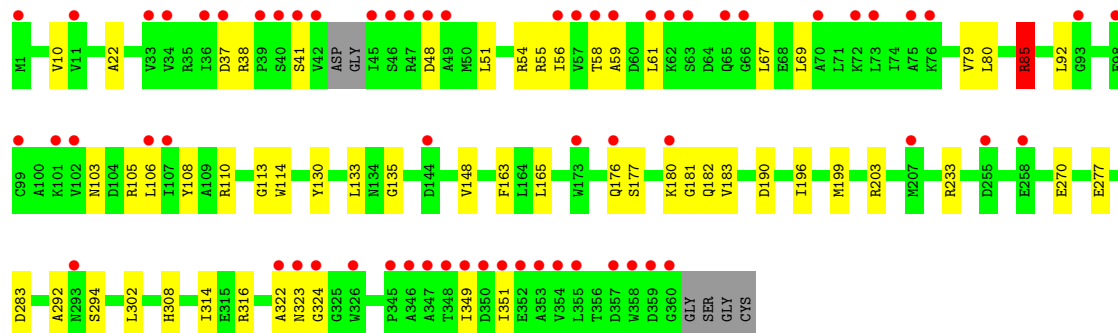
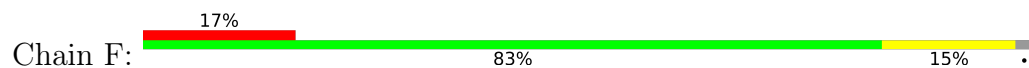
• Molecule 1: Alpha-methylacyl-CoA racemase



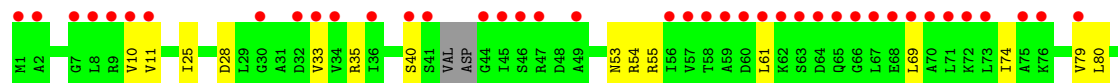
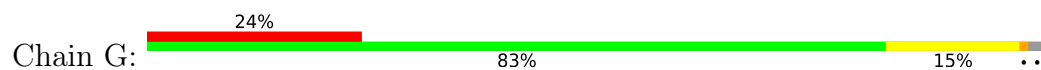
• Molecule 1: Alpha-methylacyl-CoA racemase

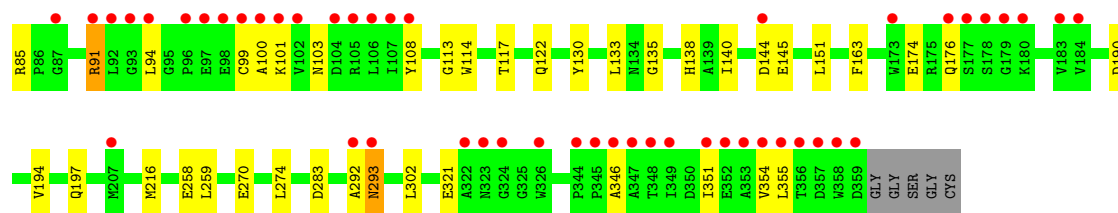


• Molecule 1: Alpha-methylacyl-CoA racemase

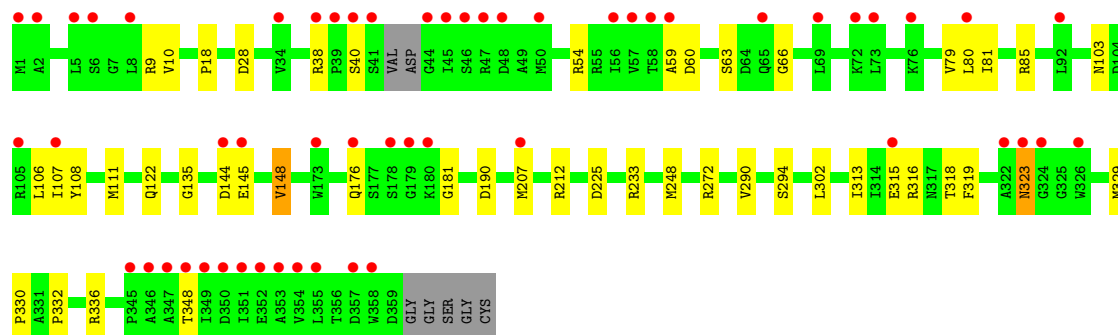
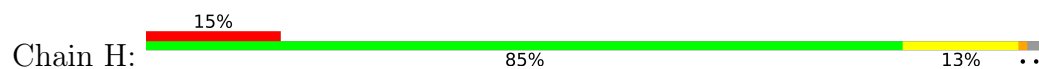


• Molecule 1: Alpha-methylacyl-CoA racemase

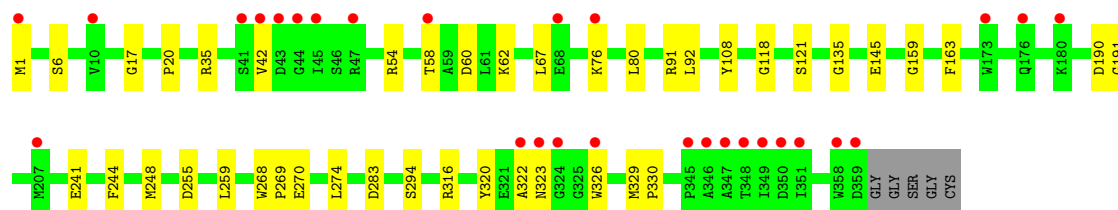
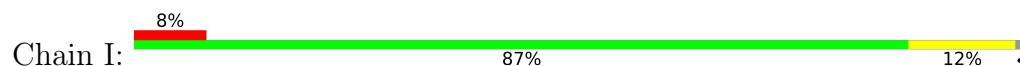




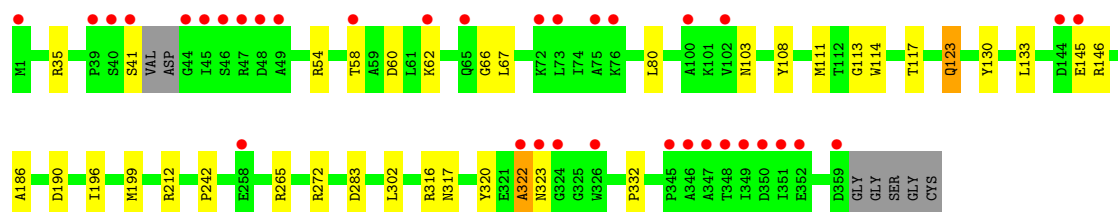
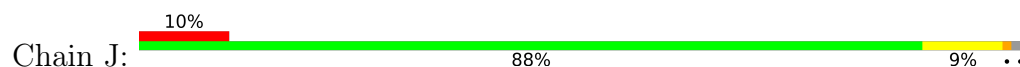
• Molecule 1: Alpha-methylacyl-CoA racemase



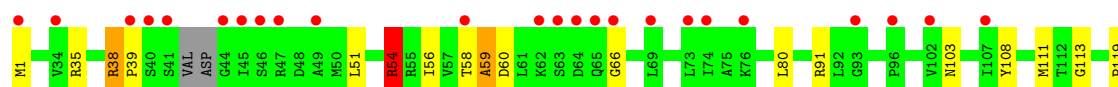
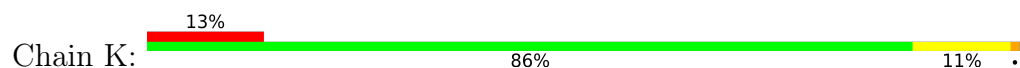
• Molecule 1: Alpha-methylacyl-CoA racemase

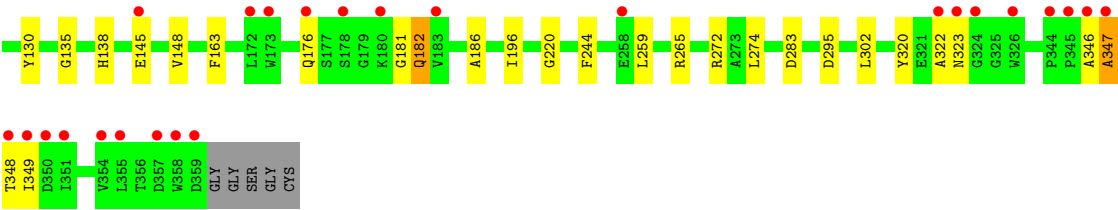


• Molecule 1: Alpha-methylacyl-CoA racemase

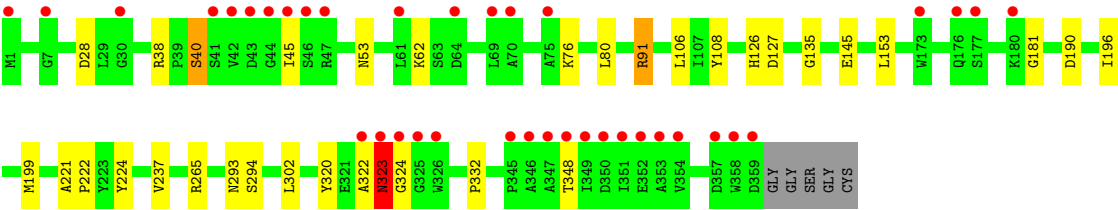
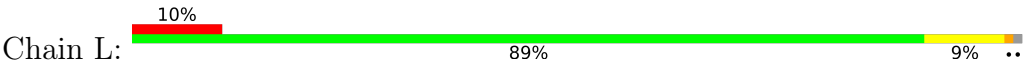


• Molecule 1: Alpha-methylacyl-CoA racemase





● Molecule 1: Alpha-methylacyl-CoA racemase



4 Data and refinement statistics

Property	Value	Source
Space group	I 4 2 2	Depositor
Cell constants a, b, c, α , β , γ	277.17Å 277.17Å 391.17Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	196.35 – 2.20 196.35 – 2.20	Depositor EDS
% Data completeness (in resolution range)	100.0 (196.35-2.20) 99.9 (196.35-2.20)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.32 (at 2.20Å)	Xtriage
Refinement program	REFMAC 5.8.0415	Depositor
R, R_{free}	0.209 , 0.248 0.217 , 0.254	Depositor DCC
R_{free} test set	18924 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å ²)	38.7	Xtriage
Anisotropy	0.003	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.33 , 28.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.51$, $\langle L^2 \rangle = 0.34$	Xtriage
Estimated twinning fraction	0.012 for -1/2*h+1/2*k-1/2*l,1/2*h-1/2*k-1/2*l,-h-k 0.012 for -1/2*h-1/2*k+1/2*l,-1/2*h-1/2*k-1/2*l,h-k	Xtriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	34435	wwPDB-VP
Average B, all atoms (Å ²)	48.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.45% 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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: A1JJ1

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	0.61	0/2778	1.03	3/3778 (0.1%)
1	B	0.62	0/2766	1.02	5/3761 (0.1%)
1	C	0.62	0/2784	1.03	1/3785 (0.0%)
1	D	0.63	0/2782	1.06	2/3785 (0.1%)
1	E	0.61	0/2771	1.00	3/3768 (0.1%)
1	F	0.60	0/2782	1.04	2/3783 (0.1%)
1	G	0.60	0/2775	1.05	3/3773 (0.1%)
1	H	0.61	0/2766	1.07	6/3761 (0.2%)
1	I	0.61	0/2800	1.02	3/3809 (0.1%)
1	J	0.61	0/2775	1.03	4/3773 (0.1%)
1	K	0.63	0/2784	1.04	2/3785 (0.1%)
1	L	0.61	0/2782	1.02	1/3785 (0.0%)
All	All	0.61	0/33345	1.03	35/45346 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	3
1	B	0	6
1	C	0	1
1	D	0	4
1	E	0	2
1	F	0	5
1	G	0	1
1	H	0	3
1	I	0	1
1	J	0	4
1	K	0	3

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Mol	Chain	#Chirality outliers	#Planarity outliers
1	L	0	2
All	All	0	35

There are no bond length outliers.

All (35) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	G	283	ASP	CA-CB-CG	8.13	120.73	112.60
1	B	203	ARG	CB-CA-C	-7.97	97.30	110.85
1	I	190	ASP	CA-CB-CG	7.37	119.97	112.60
1	I	283	ASP	CA-CB-CG	6.92	119.52	112.60
1	H	144	ASP	CA-CB-CG	6.91	119.50	112.60
1	D	91	ARG	CB-CA-C	-6.59	97.68	110.46
1	B	190	ASP	CA-CB-CG	6.56	119.16	112.60
1	C	203	ARG	CB-CA-C	-6.54	99.73	110.85
1	B	255	ASP	CB-CA-C	6.42	120.59	110.19
1	E	28	ASP	CA-CB-CG	6.32	118.92	112.60
1	J	123	GLN	CB-CA-C	6.29	120.60	110.29
1	K	119	PRO	CB-CA-C	-5.87	103.52	111.85
1	L	190	ASP	CA-CB-CG	5.86	118.46	112.60
1	J	190	ASP	CA-CB-CG	5.75	118.35	112.60
1	K	283	ASP	CA-CB-CG	5.73	118.33	112.60
1	A	28	ASP	CA-CB-CG	5.67	118.27	112.60
1	F	190	ASP	CA-CB-CG	5.66	118.26	112.60
1	H	148	VAL	CA-C-O	5.50	123.12	119.38
1	H	148	VAL	CB-CA-C	5.50	116.25	110.37
1	J	54	ARG	CB-CA-C	-5.47	98.02	110.07
1	G	190	ASP	CA-CB-CG	5.45	118.05	112.60
1	F	283	ASP	CA-CB-CG	5.38	117.98	112.60
1	H	313	ILE	N-CA-C	-5.38	105.84	110.74
1	B	104	ASP	CA-CB-CG	5.34	117.94	112.60
1	A	283	ASP	CA-CB-CG	5.28	117.88	112.60
1	E	283	ASP	CA-CB-CG	5.23	117.83	112.60
1	G	144	ASP	CA-CB-CG	5.23	117.83	112.60
1	E	255	ASP	CA-CB-CG	5.23	117.83	112.60
1	I	255	ASP	CB-CA-C	5.22	119.14	110.78
1	J	283	ASP	CA-CB-CG	5.21	117.81	112.60
1	H	28	ASP	CA-CB-CG	5.20	117.80	112.60
1	D	283	ASP	CA-CB-CG	5.14	117.75	112.60
1	H	190	ASP	CA-CB-CG	5.09	117.69	112.60
1	B	144	ASP	CA-CB-CG	5.08	117.68	112.60
1	A	157	PHE	CB-CA-C	5.07	118.95	111.65

There are no chirality outliers.

All (35) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	110	ARG	Sidechain
1	A	38	ARG	Sidechain
1	A	91	ARG	Sidechain
1	B	212	ARG	Sidechain
1	B	265	ARG	Sidechain
1	B	322	ALA	Peptide
1	B	35	ARG	Sidechain
1	B	38	ARG	Sidechain
1	B	54	ARG	Peptide
1	C	91	ARG	Sidechain
1	D	212	ARG	Sidechain
1	D	265	ARG	Sidechain
1	D	54	ARG	Peptide
1	D	85	ARG	Sidechain
1	E	350	ASP	Peptide
1	E	54	ARG	Peptide
1	F	110	ARG	Sidechain
1	F	203	ARG	Sidechain
1	F	233	ARG	Sidechain
1	F	322	ALA	Peptide
1	F	85	ARG	Sidechain
1	G	35	ARG	Sidechain
1	H	212	ARG	Sidechain
1	H	233	ARG	Sidechain
1	H	54	ARG	Peptide
1	I	35	ARG	Sidechain
1	J	212	ARG	Sidechain
1	J	265	ARG	Sidechain
1	J	322	ALA	Peptide
1	J	35	ARG	Sidechain
1	K	35	ARG	Sidechain
1	K	38	ARG	Sidechain
1	K	54	ARG	Sidechain
1	L	265	ARG	Sidechain
1	L	91	ARG	Sidechain

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	2706	0	2650	36	0
1	B	2700	0	2646	20	0
1	C	2709	0	2652	19	0
1	D	2715	0	2660	19	0
1	E	2699	0	2641	25	0
1	F	2710	0	2653	31	0
1	G	2703	0	2644	36	0
1	H	2700	0	2646	20	0
1	I	2724	0	2666	22	0
1	J	2706	0	2654	18	0
1	K	2709	0	2652	24	0
1	L	2715	0	2660	21	0
2	A	70	0	0	2	0
2	B	70	0	0	1	0
2	C	70	0	0	0	0
2	D	70	0	0	3	0
2	E	70	0	0	3	0
2	F	70	0	0	2	0
2	G	70	0	0	2	0
2	H	70	0	0	1	0
2	I	70	0	0	0	0
2	J	70	0	0	1	0
2	K	70	0	0	1	0
2	L	70	0	0	1	0
3	A	94	0	0	3	0
3	B	81	0	0	0	0
3	C	89	0	0	1	0
3	D	102	0	0	2	0
3	E	90	0	0	0	0
3	F	94	0	0	2	0
3	G	75	0	0	4	0
3	H	84	0	0	0	0
3	I	101	0	0	3	0
3	J	99	0	0	0	0
3	K	96	0	0	1	0
3	L	94	0	0	3	0
All	All	34435	0	31824	263	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 (263) 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:G:259:LEU:HD22	1:G:274:LEU:HD13	1.55	0.89
1:I:80:LEU:HD23	1:I:108:TYR:CE2	2.21	0.76
1:G:80:LEU:HD23	1:G:108:TYR:CE2	2.21	0.74
1:H:79:VAL:HG22	1:H:107:ILE:HB	1.70	0.74
1:D:118:GLY:O	1:D:121:SER:OG	2.07	0.72
1:C:80:LEU:CD2	1:C:108:TYR:CE2	2.74	0.70
1:D:80:LEU:HD23	1:D:108:TYR:CE2	2.27	0.68
1:C:80:LEU:HD22	1:C:108:TYR:CE2	2.30	0.67
1:A:259:LEU:HD22	1:A:274:LEU:HD13	1.76	0.66
1:F:85:ARG:HD3	2:F:401:A1JJ1:O11	1.96	0.66
1:E:80:LEU:HD23	1:E:108:TYR:CE2	2.30	0.66
1:F:55:ARG:HD2	1:F:349:ILE:HD11	1.77	0.65
1:E:259:LEU:HD22	1:E:274:LEU:HD13	1.79	0.65
1:F:80:LEU:HD23	1:F:108:TYR:CE2	2.32	0.65
1:G:91:ARG:NH2	2:G:401:A1JJ1:O19	2.29	0.64
1:L:40:SER:OG	3:L:502:HOH:O	2.15	0.64
1:L:323:ASN:CG	1:L:324:GLY:N	2.55	0.63
1:K:138:HIS:HD2	3:K:531:HOH:O	1.81	0.63
1:B:291:PHE:O	1:B:294:SER:HB3	1.98	0.63
1:B:322:ALA:HB3	1:B:323:ASN:HB2	1.79	0.62
1:G:55:ARG:HA	3:G:506:HOH:O	2.00	0.62
1:H:225:ASP:OD2	1:H:272:ARG:NH1	2.33	0.61
1:G:28:ASP:HA	1:G:53:ASN:ND2	2.17	0.60
1:A:80:LEU:HD23	1:A:108:TYR:CE2	2.37	0.60
1:A:119:PRO:O	3:A:501:HOH:O	2.16	0.60
1:B:80:LEU:HD23	1:B:108:TYR:CE2	2.37	0.59
1:I:80:LEU:CD2	1:I:108:TYR:CE2	2.86	0.59
1:A:145:GLU:OE1	1:B:145:GLU:OE1	2.20	0.59
1:D:322:ALA:O	1:D:323:ASN:CB	2.51	0.58
1:C:61:LEU:HD22	1:C:94:LEU:HD11	1.85	0.58
1:J:113:GLY:HA3	1:J:130:TYR:CE1	2.38	0.58
1:L:323:ASN:OD1	1:L:324:GLY:N	2.37	0.57
1:D:40:SER:OG	3:D:501:HOH:O	2.14	0.57
1:F:80:LEU:CD2	1:F:108:TYR:CE2	2.87	0.57
1:F:181:GLY:O	1:F:182:GLN:HB3	2.05	0.57
1:K:220:GLY:O	1:K:272:ARG:NH2	2.38	0.57
1:C:138:HIS:HD2	3:C:571:HOH:O	1.86	0.56
1:E:85:ARG:NH1	1:E:122:GLN:O	2.35	0.56
1:G:270:GLU:HG3	3:G:550:HOH:O	2.04	0.56
1:B:225:ASP:OD2	1:B:272:ARG:NH1	2.39	0.56
1:A:198:MET:HG2	1:A:202:MET:CE	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:346:ALA:O	1:B:347:ALA:O	2.23	0.56
1:J:242:PRO:HB3	1:L:91:ARG:HD3	1.87	0.56
1:C:113:GLY:HA3	1:C:130:TYR:CE1	2.42	0.55
1:K:80:LEU:HD23	1:K:108:TYR:CE2	2.41	0.55
1:G:11:VAL:HG12	1:G:80:LEU:CD1	2.36	0.55
1:A:358:TRP:O	1:A:359:ASP:C	2.50	0.55
1:G:145:GLU:OE1	1:H:145:GLU:OE1	2.24	0.55
1:L:320:TYR:CE2	1:L:322:ALA:HB2	2.42	0.55
1:G:28:ASP:HA	1:G:53:ASN:HD22	1.72	0.55
1:C:176:GLN:CD	1:D:176:GLN:HG2	2.32	0.55
1:J:60:ASP:O	1:J:66:GLY:HA3	2.07	0.55
1:G:61:LEU:HD13	1:G:94:LEU:HD11	1.88	0.54
1:E:225:ASP:OD2	1:E:272:ARG:NH1	2.39	0.54
1:E:302:LEU:O	1:F:135:GLY:HA2	2.07	0.54
1:E:91:ARG:NH2	2:E:401:A1JJ1:O17	2.41	0.54
1:C:259:LEU:HD22	1:C:274:LEU:HD13	1.90	0.54
1:F:85:ARG:CD	2:F:401:A1JJ1:O11	2.55	0.54
1:I:118:GLY:O	1:I:121:SER:OG	2.21	0.54
1:I:241:GLU:HB2	1:I:244:PHE:CD2	2.43	0.54
1:A:2:ALA:HB3	1:A:340:SER:OG	2.07	0.53
1:A:138:HIS:HD2	3:A:519:HOH:O	1.90	0.53
1:E:114:TRP:CZ3	1:E:133:LEU:HD22	2.44	0.53
1:I:259:LEU:HD22	1:I:274:LEU:HD13	1.89	0.53
1:G:25:ILE:O	1:G:28:ASP:HB2	2.07	0.53
1:F:108:TYR:HB3	1:F:183:VAL:HG22	1.91	0.53
1:A:118:GLY:O	1:A:121:SER:OG	2.24	0.53
1:K:346:ALA:O	1:K:347:ALA:O	2.27	0.53
1:G:74:ILE:HG21	1:G:99:CYS:SG	2.49	0.52
1:J:80:LEU:HD23	1:J:108:TYR:CE2	2.44	0.52
1:L:80:LEU:HD23	1:L:108:TYR:CE2	2.43	0.52
1:D:85:ARG:HD3	2:D:401:A1JJ1:O12	2.09	0.52
1:A:45:ILE:HG12	1:A:347:ALA:HB2	1.92	0.52
1:A:198:MET:HG2	1:A:202:MET:HE3	1.91	0.52
1:B:80:LEU:CD2	1:B:108:TYR:CE2	2.92	0.52
1:F:196:ILE:HG12	1:F:199:MET:HB2	1.91	0.52
1:G:216:MET:HE1	2:H:401:A1JJ1:C8	2.40	0.51
1:C:55:ARG:HD2	1:C:349:ILE:HD12	1.92	0.51
1:K:196:ILE:HG13	1:L:153:LEU:HD21	1.91	0.51
1:G:10:VAL:HG22	1:G:79:VAL:HB	1.93	0.51
1:K:259:LEU:HD22	1:K:274:LEU:HD13	1.91	0.51
1:A:38:ARG:NH2	2:A:401:A1JJ1:O14	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:346:ALA:O	1:A:347:ALA:C	2.54	0.51
1:F:270:GLU:HG3	3:F:515:HOH:O	2.11	0.51
1:F:61:LEU:HB2	1:F:92:LEU:HD22	1.91	0.50
1:D:282:HIS:CD2	1:D:286:HIS:CE1	2.99	0.50
1:J:111:MET:HE3	1:J:186:ALA:O	2.11	0.50
1:C:113:GLY:HA3	1:C:130:TYR:CZ	2.47	0.50
1:C:225:ASP:OD2	1:C:272:ARG:NH1	2.44	0.50
1:H:63:SER:HB2	1:H:66:GLY:H	1.76	0.50
1:G:351:ILE:O	1:G:355:LEU:HD12	2.12	0.49
1:B:346:ALA:O	1:B:347:ALA:C	2.55	0.49
1:G:11:VAL:HG12	1:G:80:LEU:HD12	1.94	0.49
1:G:117:THR:O	1:H:316:ARG:HD2	2.12	0.49
1:E:241:GLU:HB2	1:E:244:PHE:CD2	2.46	0.49
1:F:105:ARG:NH1	3:F:504:HOH:O	2.46	0.49
1:C:79:VAL:HG22	1:C:107:ILE:HB	1.95	0.49
1:E:259:LEU:CD2	1:E:274:LEU:HD13	2.43	0.49
1:E:336:ARG:NH2	1:F:180:LYS:HB2	2.27	0.49
1:C:28:ASP:HA	1:C:53:ASN:ND2	2.27	0.49
1:H:329:MET:HE3	1:H:330:PRO:HD2	1.94	0.49
1:A:1:MET:HE2	1:A:343:ARG:NH2	2.28	0.48
1:H:60:ASP:O	1:H:66:GLY:HA3	2.12	0.48
1:I:329:MET:HE3	1:I:330:PRO:HD2	1.95	0.48
1:L:62:LYS:CE	3:L:563:HOH:O	2.62	0.48
1:A:39:PRO:HB3	1:A:58:THR:CG2	2.43	0.48
1:G:61:LEU:HD13	1:G:94:LEU:CD1	2.42	0.48
1:G:135:GLY:HA2	1:H:302:LEU:O	2.13	0.48
1:K:196:ILE:HG23	1:K:196:ILE:O	2.13	0.48
1:G:259:LEU:CD2	1:G:274:LEU:HD13	2.35	0.48
1:E:16:ILE:HD12	2:E:401:A1JJ1:S2	2.54	0.48
1:E:135:GLY:HA2	1:F:302:LEU:O	2.14	0.47
1:E:332:PRO:HG3	1:F:163:PHE:O	2.14	0.47
1:E:336:ARG:HG2	1:E:336:ARG:HH11	1.79	0.47
1:G:80:LEU:HD23	1:G:108:TYR:CD2	2.49	0.47
1:A:41:SER:OG	1:A:42:VAL:N	2.47	0.47
1:D:85:ARG:CD	2:D:401:A1JJ1:O12	2.62	0.47
2:L:401:A1JJ1:O9	3:L:503:HOH:O	2.19	0.47
1:A:198:MET:SD	1:A:202:MET:CE	3.02	0.47
1:E:109:ALA:HB1	1:E:164:LEU:HD11	1.96	0.47
1:A:196:ILE:HG12	1:A:199:MET:HB2	1.96	0.47
1:G:138:HIS:HD2	3:G:539:HOH:O	1.98	0.47
2:G:401:A1JJ1:O5	2:G:401:A1JJ1:C25	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:10:VAL:HG22	1:H:79:VAL:HB	1.97	0.47
1:E:196:ILE:HG12	1:E:199:MET:HB2	1.96	0.47
1:F:308:HIS:O	1:F:314:ILE:HD11	2.15	0.47
1:K:39:PRO:HA	1:K:58:THR:HG23	1.97	0.47
1:B:79:VAL:HG22	1:B:107:ILE:HB	1.97	0.46
1:C:295:ASP:CG	1:D:85:ARG:HH22	2.22	0.46
1:E:51:LEU:HA	1:E:54:ARG:NH1	2.30	0.46
1:G:69:LEU:HB3	1:G:351:ILE:HD13	1.97	0.46
1:I:268:TRP:N	1:I:269:PRO:CD	2.77	0.46
1:I:270:GLU:HG3	3:I:544:HOH:O	2.15	0.46
1:K:346:ALA:O	1:K:347:ALA:C	2.58	0.46
1:E:295:ASP:CG	1:F:85:ARG:HH22	2.24	0.46
1:G:346:ALA:HB3	3:G:506:HOH:O	2.16	0.46
1:I:294:SER:O	1:J:123:GLN:HG3	2.15	0.46
1:D:80:LEU:CD2	1:D:108:TYR:CE2	2.99	0.46
1:G:194:VAL:O	1:G:197:GLN:HB2	2.16	0.46
1:A:291:PHE:O	1:A:294:SER:HB3	2.16	0.46
1:D:268:TRP:N	1:D:269:PRO:CD	2.78	0.46
1:E:117:THR:O	1:F:316:ARG:HD2	2.15	0.46
1:G:85:ARG:NH1	1:G:122:GLN:O	2.45	0.46
1:A:11:VAL:HG12	1:A:80:LEU:HD12	1.98	0.45
1:F:323:ASN:CG	1:F:324:GLY:H	2.23	0.45
1:I:1:MET:HB2	3:I:599:HOH:O	2.16	0.45
1:F:10:VAL:HG22	1:F:79:VAL:HB	1.98	0.45
1:K:302:LEU:O	1:L:135:GLY:HA2	2.17	0.45
1:F:69:LEU:HD13	1:F:351:ILE:HG23	1.99	0.45
1:A:323:ASN:O	1:A:324:GLY:C	2.59	0.45
1:F:48:ASP:HB3	1:F:51:LEU:HG	1.99	0.45
1:G:163:PHE:O	1:H:332:PRO:HG3	2.18	0.44
1:I:145:GLU:OE1	1:J:145:GLU:OE1	2.33	0.44
1:F:58:THR:O	1:F:59:ALA:HB2	2.16	0.44
1:H:318:THR:HG22	1:H:319:PHE:CE1	2.53	0.44
1:I:316:ARG:HD2	1:J:117:THR:O	2.18	0.44
1:K:244:PHE:CD1	1:K:295:ASP:HB3	2.53	0.44
1:C:16:ILE:O	1:C:18:PRO:HD2	2.17	0.44
1:A:113:GLY:HA3	1:A:130:TYR:CE1	2.53	0.44
1:C:176:GLN:HA	1:C:176:GLN:HE21	1.83	0.44
1:K:91:ARG:NH2	2:K:401:A1JJ1:O17	2.51	0.44
1:G:114:TRP:CZ3	1:G:133:LEU:HD22	2.52	0.44
1:A:141:GLY:HA2	1:B:148:VAL:HG21	1.99	0.44
1:A:198:MET:SD	1:A:202:MET:HE2	2.58	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:80:LEU:HD23	1:I:108:TYR:CD2	2.51	0.43
1:D:18:PRO:HB2	1:D:111:MET:HG2	1.99	0.43
2:A:401:A1JJ1:O5	2:A:401:A1JJ1:C25	2.66	0.43
1:A:225:ASP:OD2	1:A:272:ARG:NH1	2.50	0.43
1:C:346:ALA:O	1:C:347:ALA:O	2.36	0.43
1:G:99:CYS:C	1:G:101:LYS:H	2.26	0.43
1:G:113:GLY:HA3	1:G:130:TYR:CZ	2.53	0.43
1:K:39:PRO:CA	1:K:58:THR:HG23	2.49	0.43
1:L:80:LEU:CD2	1:L:108:TYR:CE2	3.01	0.43
1:L:196:ILE:HG12	1:L:199:MET:HB2	2.00	0.43
1:E:181:GLY:O	1:E:182:GLN:HB3	2.19	0.43
1:I:320:TYR:HE2	1:I:322:ALA:HB2	1.83	0.43
1:L:224:TYR:HA	1:L:237:VAL:O	2.18	0.43
1:D:270:GLU:HG3	3:D:563:HOH:O	2.18	0.43
1:E:39:PRO:HA	1:E:58:THR:HG23	2.00	0.43
1:G:113:GLY:HA3	1:G:130:TYR:CE1	2.54	0.43
1:G:174:GLU:OE1	1:G:174:GLU:C	2.62	0.43
1:H:80:LEU:HG	1:H:81:ILE:N	2.34	0.43
1:I:159:GLY:O	1:I:191:GLY:HA3	2.19	0.42
1:L:28:ASP:HA	1:L:53:ASN:ND2	2.34	0.42
1:L:126:HIS:O	1:L:127:ASP:C	2.61	0.42
1:A:198:MET:HG2	1:A:202:MET:HE2	2.01	0.42
1:E:157:PHE:O	1:E:158:GLY:C	2.61	0.42
1:J:196:ILE:HG12	1:J:199:MET:HB2	2.00	0.42
1:K:181:GLY:O	1:K:182:GLN:HB3	2.19	0.42
1:A:117:THR:O	1:B:316:ARG:HD2	2.19	0.42
1:K:60:ASP:O	1:K:66:GLY:HA3	2.19	0.42
1:K:163:PHE:O	1:L:332:PRO:HG3	2.19	0.42
1:B:85:ARG:HD2	2:B:401:A1JJ1:O12	2.19	0.42
1:B:113:GLY:HA3	1:B:130:TYR:CE1	2.55	0.42
1:I:135:GLY:HA2	1:J:302:LEU:O	2.19	0.42
1:I:326:TRP:HD1	3:I:581:HOH:O	2.02	0.42
1:L:106:LEU:O	1:L:181:GLY:HA3	2.19	0.42
1:A:39:PRO:HB3	1:A:58:THR:HG23	2.01	0.42
1:A:270:GLU:HG3	3:A:556:HOH:O	2.18	0.42
1:G:292:ALA:O	1:G:293:ASN:HB2	2.20	0.42
1:H:80:LEU:CD2	1:H:108:TYR:CE2	3.02	0.42
1:H:336:ARG:HG2	1:H:336:ARG:HH11	1.84	0.42
1:K:111:MET:HE3	1:K:186:ALA:O	2.20	0.42
1:D:294:SER:HB2	1:L:293:ASN:O	2.20	0.42
1:F:113:GLY:HA3	1:F:130:TYR:CE1	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:176:GLN:CD	1:H:176:GLN:HG2	2.45	0.42
1:I:67:LEU:HD13	1:I:92:LEU:O	2.18	0.42
1:I:320:TYR:CE2	1:I:322:ALA:HB2	2.54	0.42
1:K:145:GLU:OE1	1:L:145:GLU:OE1	2.37	0.42
1:A:294:SER:O	1:B:123:GLN:HG3	2.20	0.42
1:J:320:TYR:CE2	1:J:322:ALA:HB2	2.55	0.42
1:J:67:LEU:HD12	1:J:67:LEU:O	2.19	0.42
1:A:114:TRP:CZ3	1:A:133:LEU:HD22	2.55	0.41
1:C:135:GLY:HA2	1:D:302:LEU:O	2.19	0.41
1:I:163:PHE:O	1:J:332:PRO:HG3	2.20	0.41
1:A:303:ALA:O	1:A:304:PHE:C	2.62	0.41
1:A:224:TYR:HA	1:A:237:VAL:O	2.20	0.41
1:A:355:LEU:HD23	1:A:355:LEU:HA	1.94	0.41
1:E:19:GLY:N	1:E:20:PRO:HD2	2.35	0.41
1:H:18:PRO:HB2	1:H:111:MET:HG2	2.02	0.41
1:I:60:ASP:OD1	1:I:62:LYS:HB2	2.20	0.41
1:K:347:ALA:O	1:K:348:THR:C	2.64	0.41
1:B:244:PHE:HB3	1:B:295:ASP:O	2.20	0.41
1:E:16:ILE:HD12	2:E:401:A1JJ1:C16	2.49	0.41
1:F:22:ALA:O	1:F:165:LEU:HD21	2.21	0.41
1:F:106:LEU:O	1:F:181:GLY:HA3	2.20	0.41
1:H:106:LEU:O	1:H:181:GLY:HA3	2.21	0.41
1:K:58:THR:O	1:K:59:ALA:HB2	2.21	0.41
1:A:39:PRO:O	1:A:41:SER:N	2.53	0.41
1:G:302:LEU:O	1:H:135:GLY:HA2	2.20	0.41
1:J:316:ARG:O	1:J:317:ASN:C	2.64	0.41
1:C:198:MET:HE1	2:D:401:A1JJ1:C11	2.50	0.41
1:B:73:LEU:HD23	1:B:73:LEU:HA	1.91	0.41
1:B:126:HIS:O	1:B:127:ASP:C	2.63	0.41
1:E:223:TYR:O	1:E:237:VAL:HG12	2.20	0.41
1:J:146:ARG:HH11	1:J:146:ARG:HD3	1.71	0.41
1:B:114:TRP:CZ3	1:B:133:LEU:HD22	2.55	0.41
1:B:181:GLY:O	1:B:182:GLN:HB3	2.21	0.41
1:B:248:MET:HE3	1:B:248:MET:HB3	1.96	0.41
1:F:67:LEU:HD12	1:F:67:LEU:O	2.21	0.41
1:J:114:TRP:CZ3	1:J:133:LEU:HD22	2.55	0.41
1:D:265:ARG:HG2	1:D:268:TRP:CH2	2.55	0.41
1:H:85:ARG:NH2	1:H:122:GLN:O	2.53	0.41
1:J:62:LYS:NZ	2:J:401:A1JJ1:O18	2.54	0.41
1:K:135:GLY:HA2	1:L:302:LEU:O	2.21	0.41
1:D:196:ILE:HG12	1:D:199:MET:HB2	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:55:ARG:HD2	1:F:349:ILE:CD1	2.46	0.40
1:K:320:TYR:CE2	1:K:322:ALA:HB2	2.56	0.40
1:L:320:TYR:HE2	1:L:322:ALA:HB2	1.86	0.40
1:A:199:MET:HE3	1:A:202:MET:HE3	2.02	0.40
1:D:336:ARG:HG2	1:D:336:ARG:HH11	1.86	0.40
1:F:54:ARG:HG2	1:F:54:ARG:HH11	1.86	0.40
1:F:196:ILE:O	1:F:196:ILE:HG23	2.20	0.40
1:G:69:LEU:HD13	1:G:351:ILE:CG2	2.51	0.40
1:I:17:GLY:O	1:I:20:PRO:HD2	2.21	0.40
1:J:113:GLY:HA3	1:J:130:TYR:CZ	2.56	0.40
1:K:113:GLY:HA3	1:K:130:TYR:CZ	2.56	0.40
1:L:221:ALA:HA	1:L:222:PRO:HD3	1.97	0.40
1:K:51:LEU:HA	1:K:54:ARG:NH1	2.37	0.40
1:C:18:PRO:HB3	1:C:156:ASP:O	2.21	0.40
1:D:322:ALA:O	1:D:323:ASN:HB2	2.20	0.40
1:F:114:TRP:CZ3	1:F:133:LEU:HD22	2.57	0.40
1:H:318:THR:HG22	1:H:319:PHE:CD1	2.55	0.40

There are no symmetry-related clashes.

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	355/364 (98%)	330 (93%)	21 (6%)	4 (1%)	11	10
1	B	354/364 (97%)	335 (95%)	16 (4%)	3 (1%)	16	16
1	C	356/364 (98%)	332 (93%)	20 (6%)	4 (1%)	11	10
1	D	358/364 (98%)	336 (94%)	19 (5%)	3 (1%)	16	16
1	E	354/364 (97%)	331 (94%)	22 (6%)	1 (0%)	36	42
1	F	356/364 (98%)	329 (92%)	24 (7%)	3 (1%)	16	16
1	G	355/364 (98%)	331 (93%)	21 (6%)	3 (1%)	16	16

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	H	354/364 (97%)	332 (94%)	17 (5%)	5 (1%)	9	7
1	I	360/364 (99%)	343 (95%)	17 (5%)	0	100	100
1	J	355/364 (98%)	335 (94%)	18 (5%)	2 (1%)	21	23
1	K	356/364 (98%)	337 (95%)	14 (4%)	5 (1%)	9	7
1	L	358/364 (98%)	340 (95%)	17 (5%)	1 (0%)	36	42
All	All	4271/4368 (98%)	4011 (94%)	226 (5%)	34 (1%)	16	16

All (34) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	40	SER
1	A	41	SER
1	A	347	ALA
1	B	347	ALA
1	C	347	ALA
1	D	323	ASN
1	F	103	ASN
1	G	103	ASN
1	K	347	ALA
1	A	103	ASN
1	C	103	ASN
1	C	348	THR
1	D	347	ALA
1	F	292	ALA
1	H	348	THR
1	J	103	ASN
1	J	323	ASN
1	K	103	ASN
1	B	103	ASN
1	G	151	LEU
1	H	40	SER
1	K	323	ASN
1	E	151	LEU
1	H	59	ALA
1	H	103	ASN
1	H	323	ASN
1	L	323	ASN
1	C	151	LEU
1	D	43	ASP
1	G	100	ALA

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Mol	Chain	Res	Type
1	K	59	ALA
1	B	151	LEU
1	F	41	SER
1	K	182	GLN

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	276/277 (100%)	267 (97%)	9 (3%)	33	45
1	B	274/277 (99%)	267 (97%)	7 (3%)	40	55
1	C	276/277 (100%)	266 (96%)	10 (4%)	31	42
1	D	276/277 (100%)	266 (96%)	10 (4%)	31	42
1	E	275/277 (99%)	266 (97%)	9 (3%)	33	45
1	F	276/277 (100%)	267 (97%)	9 (3%)	33	45
1	G	275/277 (99%)	266 (97%)	9 (3%)	33	45
1	H	274/277 (99%)	265 (97%)	9 (3%)	33	45
1	I	278/277 (100%)	270 (97%)	8 (3%)	37	51
1	J	275/277 (99%)	272 (99%)	3 (1%)	65	79
1	K	276/277 (100%)	268 (97%)	8 (3%)	37	51
1	L	276/277 (100%)	269 (98%)	7 (2%)	42	56
All	All	3307/3324 (100%)	3209 (97%)	98 (3%)	37	49

All (98) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1	MET
1	A	54	ARG
1	A	140	ILE
1	A	294	SER
1	A	323	ASN
1	A	340	SER

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Mol	Chain	Res	Type
1	A	349	ILE
1	A	350	ASP
1	A	359	ASP
1	B	6	SER
1	B	85	ARG
1	B	148	VAL
1	B	176	GLN
1	B	265	ARG
1	B	323	ASN
1	B	356	THR
1	C	6	SER
1	C	40	SER
1	C	45	ILE
1	C	54	ARG
1	C	80	LEU
1	C	243[A]	GLN
1	C	243[B]	GLN
1	C	265	ARG
1	C	349	ILE
1	C	351	ILE
1	D	40	SER
1	D	47	ARG
1	D	85	ARG
1	D	121	SER
1	D	144	ASP
1	D	248	MET
1	D	294	SER
1	D	315	GLU
1	D	323	ASN
1	D	348	THR
1	E	6	SER
1	E	54	ARG
1	E	102	VAL
1	E	144	ASP
1	E	176	GLN
1	E	177	SER
1	E	290	VAL
1	E	315[A]	GLU
1	E	315[B]	GLU
1	F	37	ASP
1	F	38	ARG
1	F	56	ILE

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Mol	Chain	Res	Type
1	F	85	ARG
1	F	148	VAL
1	F	176	GLN
1	F	177	SER
1	F	277	GLU
1	F	294	SER
1	G	33	VAL
1	G	40	SER
1	G	54	ARG
1	G	91	ARG
1	G	140	ILE
1	G	258	GLU
1	G	293	ASN
1	G	321	GLU
1	G	354	VAL
1	H	9	ARG
1	H	38	ARG
1	H	148	VAL
1	H	207	MET
1	H	248	MET
1	H	290	VAL
1	H	294	SER
1	H	315	GLU
1	H	323	ASN
1	I	6	SER
1	I	42	VAL
1	I	54	ARG
1	I	58	THR
1	I	76	LYS
1	I	91	ARG
1	I	248	MET
1	I	323	ASN
1	J	41	SER
1	J	58	THR
1	J	272	ARG
1	K	1	MET
1	K	38	ARG
1	K	54	ARG
1	K	56	ILE
1	K	148	VAL
1	K	176	GLN
1	K	265	ARG

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Mol	Chain	Res	Type
1	K	349	ILE
1	L	38	ARG
1	L	40	SER
1	L	45	ILE
1	L	76	LYS
1	L	294	SER
1	L	323	ASN
1	L	348	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (52) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	138	HIS
1	A	286	HIS
1	A	327	GLN
1	B	116	GLN
1	B	134	ASN
1	B	176	GLN
1	B	286	HIS
1	B	293	ASN
1	B	323	ASN
1	C	138	HIS
1	C	176	GLN
1	C	308	HIS
1	C	327	GLN
1	D	282	HIS
1	D	323	ASN
1	E	116	GLN
1	E	176	GLN
1	E	263	ASN
1	E	286	HIS
1	E	293	ASN
1	F	116	GLN
1	F	293	ASN
1	F	308	HIS
1	G	122	GLN
1	G	138	HIS
1	G	176	GLN
1	G	263	ASN
1	G	282	HIS
1	G	286	HIS
1	G	309	ASN

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Mol	Chain	Res	Type
1	G	327	GLN
1	H	116	GLN
1	H	286	HIS
1	H	293	ASN
1	H	323	ASN
1	I	116	GLN
1	I	122	GLN
1	I	123	GLN
1	I	138	HIS
1	I	176	GLN
1	I	282	HIS
1	I	308	HIS
1	I	309	ASN
1	I	327	GLN
1	J	176	GLN
1	J	286	HIS
1	K	65	GLN
1	K	138	HIS
1	K	282	HIS
1	K	308	HIS
1	K	327	GLN
1	L	116	GLN

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 oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

12 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	A1JJ1	C	401	-	68,74,74	0.60	0	92,107,107	1.03	5 (5%)
2	A1JJ1	B	401	-	68,74,74	0.65	2 (2%)	92,107,107	1.10	10 (10%)
2	A1JJ1	F	401	-	68,74,74	0.63	2 (2%)	92,107,107	1.16	8 (8%)
2	A1JJ1	L	401	-	68,74,74	0.71	2 (2%)	92,107,107	1.17	6 (6%)
2	A1JJ1	E	401	-	68,74,74	0.71	3 (4%)	92,107,107	1.09	4 (4%)
2	A1JJ1	H	401	-	68,74,74	0.94	5 (7%)	92,107,107	0.95	6 (6%)
2	A1JJ1	K	401	-	68,74,74	0.62	1 (1%)	92,107,107	1.22	10 (10%)
2	A1JJ1	D	401	-	68,74,74	0.74	2 (2%)	92,107,107	1.13	8 (8%)
2	A1JJ1	A	401	-	68,74,74	0.61	1 (1%)	92,107,107	1.14	8 (8%)
2	A1JJ1	J	401	-	68,74,74	0.64	1 (1%)	92,107,107	1.03	6 (6%)
2	A1JJ1	I	401	-	68,74,74	0.76	2 (2%)	92,107,107	1.10	8 (8%)
2	A1JJ1	G	401	-	68,74,74	0.62	2 (2%)	92,107,107	1.12	7 (7%)

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	A1JJ1	C	401	-	-	10/66/83/83	0/5/5/5
2	A1JJ1	B	401	-	-	15/66/83/83	0/5/5/5
2	A1JJ1	F	401	-	-	13/66/83/83	0/5/5/5
2	A1JJ1	L	401	-	-	22/66/83/83	0/5/5/5
2	A1JJ1	E	401	-	-	18/66/83/83	0/5/5/5
2	A1JJ1	H	401	-	-	14/66/83/83	0/5/5/5
2	A1JJ1	K	401	-	-	12/66/83/83	0/5/5/5
2	A1JJ1	D	401	-	-	13/66/83/83	0/5/5/5
2	A1JJ1	A	401	-	-	24/66/83/83	0/5/5/5
2	A1JJ1	J	401	-	-	15/66/83/83	0/5/5/5
2	A1JJ1	I	401	-	-	11/66/83/83	0/5/5/5
2	A1JJ1	G	401	-	-	14/66/83/83	0/5/5/5

All (23) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	H	401	A1JJ1	O3-C15	4.20	1.26	1.20
2	E	401	A1JJ1	C13-S1	3.48	1.89	1.83
2	H	401	A1JJ1	C13-S1	3.43	1.89	1.83
2	D	401	A1JJ1	P3-O16	3.30	1.65	1.59
2	I	401	A1JJ1	O3-C15	3.04	1.25	1.20
2	L	401	A1JJ1	P3-O16	2.91	1.64	1.59
2	L	401	A1JJ1	O3-C15	2.91	1.25	1.20
2	H	401	A1JJ1	C15-S2	2.78	1.84	1.75
2	B	401	A1JJ1	P3-O16	2.75	1.64	1.59
2	D	401	A1JJ1	O3-C15	2.68	1.24	1.20
2	A	401	A1JJ1	O3-C15	2.53	1.24	1.20
2	G	401	A1JJ1	O3-C15	2.52	1.24	1.20
2	H	401	A1JJ1	P3-O16	2.49	1.64	1.59
2	F	401	A1JJ1	P3-O16	2.40	1.63	1.59
2	E	401	A1JJ1	O3-C15	2.35	1.24	1.20
2	J	401	A1JJ1	O3-C15	2.35	1.24	1.20
2	F	401	A1JJ1	O3-C15	2.32	1.24	1.20
2	H	401	A1JJ1	O4-C18	2.31	1.28	1.23
2	G	401	A1JJ1	P3-O16	2.30	1.63	1.59
2	I	401	A1JJ1	P3-O16	2.24	1.63	1.59
2	K	401	A1JJ1	P3-O16	2.21	1.63	1.59
2	E	401	A1JJ1	P3-O16	2.02	1.63	1.59
2	B	401	A1JJ1	O3-C15	2.02	1.23	1.20

All (86) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	401	A1JJ1	C35-C36-C28	-5.61	93.28	103.22
2	A	401	A1JJ1	C25-C23-C26	-5.23	99.70	108.23
2	L	401	A1JJ1	C35-C36-C28	-5.04	94.30	103.22
2	K	401	A1JJ1	C35-C36-C28	-4.80	94.71	103.22
2	I	401	A1JJ1	C35-C36-C28	-4.67	94.94	103.22
2	J	401	A1JJ1	C35-C36-C28	-4.45	95.34	103.22
2	E	401	A1JJ1	C16-S2-C15	4.36	114.88	101.75
2	F	401	A1JJ1	C35-C36-C28	-4.10	95.95	103.22
2	B	401	A1JJ1	C35-C36-C28	-3.97	96.18	103.22
2	K	401	A1JJ1	O19-P3-O18	3.95	122.73	107.64
2	E	401	A1JJ1	O3-C15-S2	-3.89	118.57	123.80
2	C	401	A1JJ1	C35-C36-C28	-3.77	96.53	103.22
2	A	401	A1JJ1	O9-P1-O8	3.70	130.53	112.24
2	I	401	A1JJ1	O9-P1-O8	3.68	130.45	112.24
2	G	401	A1JJ1	O9-P1-O8	3.63	130.21	112.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	401	A1JJ1	C28-O14-C29	-3.58	101.58	109.47
2	L	401	A1JJ1	O9-P1-O8	3.56	129.84	112.24
2	C	401	A1JJ1	O7-P1-O8	-3.53	95.27	109.07
2	L	401	A1JJ1	C28-O14-C29	-3.51	101.73	109.47
2	D	401	A1JJ1	O7-P1-O8	-3.51	95.36	109.07
2	E	401	A1JJ1	C35-C36-C28	-3.48	97.05	103.22
2	F	401	A1JJ1	O9-P1-O8	3.37	128.92	112.24
2	C	401	A1JJ1	O9-P1-O8	3.37	128.90	112.24
2	L	401	A1JJ1	O7-P1-O8	-3.30	96.18	109.07
2	F	401	A1JJ1	O7-P1-O8	-3.29	96.20	109.07
2	I	401	A1JJ1	C28-O14-C29	-3.29	102.21	109.47
2	G	401	A1JJ1	C25-C23-C26	-3.23	102.97	108.23
2	G	401	A1JJ1	C35-C36-C28	-3.22	97.52	103.22
2	F	401	A1JJ1	O19-P3-O18	3.21	119.89	107.64
2	B	401	A1JJ1	O7-P1-O8	-3.15	96.76	109.07
2	J	401	A1JJ1	C28-O14-C29	-3.14	102.54	109.47
2	F	401	A1JJ1	C28-O14-C29	-3.12	102.59	109.47
2	K	401	A1JJ1	O9-P1-O8	3.11	127.60	112.24
2	L	401	A1JJ1	O6-C22-C23	-3.09	102.98	110.25
2	E	401	A1JJ1	C17-N1-C18	3.02	128.44	122.84
2	K	401	A1JJ1	O7-P1-O8	-3.01	97.32	109.07
2	J	401	A1JJ1	O9-P1-O8	2.98	126.99	112.24
2	K	401	A1JJ1	C28-O14-C29	-2.88	103.13	109.47
2	H	401	A1JJ1	C35-C36-C28	-2.81	98.23	103.22
2	G	401	A1JJ1	O16-P3-O17	2.81	120.23	109.39
2	G	401	A1JJ1	O19-P3-O18	2.77	118.22	107.64
2	H	401	A1JJ1	O16-P3-O17	-2.77	98.72	109.39
2	B	401	A1JJ1	C37-C12-S1	2.76	128.87	120.38
2	A	401	A1JJ1	C25-C23-C22	2.75	113.59	108.82
2	H	401	A1JJ1	O9-P1-O8	2.72	125.67	112.24
2	A	401	A1JJ1	C35-C36-C28	-2.69	98.46	103.22
2	K	401	A1JJ1	O7-C26-C23	-2.65	106.29	110.55
2	D	401	A1JJ1	O9-P1-O8	2.64	125.31	112.24
2	G	401	A1JJ1	C25-C23-C22	2.60	113.33	108.82
2	K	401	A1JJ1	O15-C35-C36	2.57	118.47	111.17
2	H	401	A1JJ1	C25-C23-C26	2.57	112.43	108.23
2	I	401	A1JJ1	O7-P1-O8	-2.57	99.04	109.07
2	J	401	A1JJ1	O7-P1-O8	-2.53	99.17	109.07
2	A	401	A1JJ1	O7-P1-O8	2.52	118.92	109.07
2	F	401	A1JJ1	O19-P3-O16	-2.52	94.70	105.99
2	K	401	A1JJ1	O3-C15-S2	-2.52	120.41	123.80
2	H	401	A1JJ1	O7-P1-O8	-2.51	99.26	109.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	K	401	A1JJ1	O19-P3-O17	-2.50	100.90	110.68
2	B	401	A1JJ1	O9-P1-O8	2.49	124.54	112.24
2	G	401	A1JJ1	C24-C23-C26	2.48	112.28	108.23
2	C	401	A1JJ1	C28-O14-C29	-2.46	104.05	109.47
2	C	401	A1JJ1	C14-C13-S1	2.44	115.61	108.69
2	A	401	A1JJ1	C28-O14-C29	-2.44	104.09	109.47
2	B	401	A1JJ1	O19-P3-O17	-2.42	101.22	110.68
2	D	401	A1JJ1	C24-C23-C26	2.41	112.17	108.23
2	H	401	A1JJ1	C14-C13-S1	2.34	115.33	108.69
2	B	401	A1JJ1	C11-C12-S1	-2.34	113.19	120.38
2	I	401	A1JJ1	O15-C35-C29	2.32	117.80	110.02
2	B	401	A1JJ1	O2-C9-C38	2.29	131.19	119.94
2	B	401	A1JJ1	C28-O14-C29	-2.29	104.43	109.47
2	A	401	A1JJ1	C27-C28-C36	2.27	121.94	114.40
2	D	401	A1JJ1	O15-C35-C29	2.27	117.62	110.02
2	I	401	A1JJ1	O6-C22-C23	-2.24	104.97	110.25
2	I	401	A1JJ1	C14-C13-S1	2.21	114.97	108.69
2	I	401	A1JJ1	C17-N1-C18	-2.20	118.75	122.84
2	F	401	A1JJ1	O6-C22-C23	-2.19	105.10	110.25
2	A	401	A1JJ1	C24-C23-C26	2.18	111.79	108.23
2	D	401	A1JJ1	O16-C36-C28	2.17	117.94	110.08
2	F	401	A1JJ1	O7-C26-C23	-2.16	107.07	110.55
2	L	401	A1JJ1	C14-C13-S1	2.14	114.77	108.69
2	K	401	A1JJ1	O18-P3-O16	-2.13	96.45	105.99
2	D	401	A1JJ1	C14-C13-S1	2.13	114.73	108.69
2	J	401	A1JJ1	O15-C35-C29	2.10	117.03	110.02
2	B	401	A1JJ1	O2-C9-C10	-2.09	109.67	119.94
2	J	401	A1JJ1	O7-C26-C23	-2.03	107.29	110.55
2	B	401	A1JJ1	O19-P3-O18	2.01	115.30	107.64

There are no chirality outliers.

All (181) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	401	A1JJ1	C21-C22-C23-C24
2	A	401	A1JJ1	C21-C22-C23-C25
2	A	401	A1JJ1	C21-C22-C23-C26
2	A	401	A1JJ1	O6-C22-C23-C24
2	A	401	A1JJ1	O6-C22-C23-C26
2	A	401	A1JJ1	C26-O7-P1-O8
2	A	401	A1JJ1	C26-O7-P1-O9
2	A	401	A1JJ1	C27-O13-P2-O10

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Mol	Chain	Res	Type	Atoms
2	A	401	A1JJ1	C27-O13-P2-O11
2	B	401	A1JJ1	C6-C7-C8-O2
2	B	401	A1JJ1	C27-O13-P2-O10
2	B	401	A1JJ1	C27-O13-P2-O11
2	B	401	A1JJ1	C27-O13-P2-O12
2	C	401	A1JJ1	C6-C7-C8-O2
2	C	401	A1JJ1	C18-C19-C20-N2
2	C	401	A1JJ1	C27-O13-P2-O10
2	C	401	A1JJ1	C27-O13-P2-O11
2	D	401	A1JJ1	C27-O13-P2-O10
2	D	401	A1JJ1	C27-O13-P2-O11
2	D	401	A1JJ1	C27-O13-P2-O12
2	E	401	A1JJ1	C16-C17-N1-C18
2	E	401	A1JJ1	C13-C15-S2-C16
2	E	401	A1JJ1	O3-C15-S2-C16
2	E	401	A1JJ1	C17-C16-S2-C15
2	E	401	A1JJ1	C27-O13-P2-O10
2	F	401	A1JJ1	C27-O13-P2-O10
2	G	401	A1JJ1	C6-C7-C8-O2
2	G	401	A1JJ1	C21-C22-C23-C26
2	G	401	A1JJ1	C26-O7-P1-O9
2	G	401	A1JJ1	C26-O7-P1-O10
2	G	401	A1JJ1	C27-O13-P2-O10
2	G	401	A1JJ1	C27-O13-P2-O12
2	H	401	A1JJ1	C27-O13-P2-O10
2	H	401	A1JJ1	C27-O13-P2-O11
2	I	401	A1JJ1	C6-C7-C8-O2
2	I	401	A1JJ1	C27-O13-P2-O10
2	J	401	A1JJ1	C6-C7-C8-O2
2	J	401	A1JJ1	C27-O13-P2-O10
2	J	401	A1JJ1	C36-O16-P3-O17
2	K	401	A1JJ1	C6-C7-C8-O2
2	K	401	A1JJ1	C27-O13-P2-O10
2	K	401	A1JJ1	C27-O13-P2-O11
2	L	401	A1JJ1	C6-C7-C8-O2
2	L	401	A1JJ1	C26-O7-P1-O9
2	L	401	A1JJ1	C27-O13-P2-O10
2	D	401	A1JJ1	C3-C2-O1-C1
2	D	401	A1JJ1	C39-C2-O1-C1
2	A	401	A1JJ1	C3-C2-O1-C1
2	L	401	A1JJ1	C3-C2-O1-C1
2	A	401	A1JJ1	C39-C2-O1-C1

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Mol	Chain	Res	Type	Atoms
2	L	401	A1JJ1	C39-C2-O1-C1
2	J	401	A1JJ1	C3-C2-O1-C1
2	J	401	A1JJ1	C39-C2-O1-C1
2	K	401	A1JJ1	C39-C2-O1-C1
2	K	401	A1JJ1	C3-C2-O1-C1
2	H	401	A1JJ1	O13-C27-C28-O14
2	H	401	A1JJ1	C38-C9-O2-C8
2	H	401	A1JJ1	C10-C9-O2-C8
2	D	401	A1JJ1	C38-C9-O2-C8
2	D	401	A1JJ1	C10-C9-O2-C8
2	F	401	A1JJ1	C38-C9-O2-C8
2	F	401	A1JJ1	C10-C9-O2-C8
2	A	401	A1JJ1	C6-C7-C8-O2
2	F	401	A1JJ1	C6-C7-C8-O2
2	A	401	A1JJ1	C38-C9-O2-C8
2	A	401	A1JJ1	C10-C9-O2-C8
2	L	401	A1JJ1	C39-C6-C7-C8
2	A	401	A1JJ1	C18-C19-C20-N2
2	F	401	A1JJ1	C18-C19-C20-N2
2	H	401	A1JJ1	C18-C19-C20-N2
2	I	401	A1JJ1	C18-C19-C20-N2
2	J	401	A1JJ1	C18-C19-C20-N2
2	K	401	A1JJ1	C18-C19-C20-N2
2	L	401	A1JJ1	C18-C19-C20-N2
2	L	401	A1JJ1	C7-C8-O2-C9
2	E	401	A1JJ1	C7-C8-O2-C9
2	B	401	A1JJ1	C5-C6-C7-C8
2	B	401	A1JJ1	C7-C8-O2-C9
2	B	401	A1JJ1	C38-C9-O2-C8
2	A	401	A1JJ1	O6-C22-C23-C25
2	F	401	A1JJ1	C39-C2-O1-C1
2	E	401	A1JJ1	C39-C6-C7-C8
2	H	401	A1JJ1	C28-C36-O16-P3
2	B	401	A1JJ1	C10-C9-O2-C8
2	F	401	A1JJ1	C3-C2-O1-C1
2	J	401	A1JJ1	C10-C9-O2-C8
2	H	401	A1JJ1	C16-C17-N1-C18
2	J	401	A1JJ1	C38-C9-O2-C8
2	B	401	A1JJ1	C39-C6-C7-C8
2	L	401	A1JJ1	C5-C6-C7-C8
2	E	401	A1JJ1	C5-C6-C7-C8
2	A	401	A1JJ1	S1-C13-C15-O3

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Mol	Chain	Res	Type	Atoms
2	B	401	A1JJ1	S1-C13-C15-O3
2	C	401	A1JJ1	S1-C13-C15-O3
2	D	401	A1JJ1	S1-C13-C15-O3
2	E	401	A1JJ1	S1-C13-C15-O3
2	F	401	A1JJ1	S1-C13-C15-O3
2	G	401	A1JJ1	S1-C13-C15-O3
2	H	401	A1JJ1	S1-C13-C15-O3
2	I	401	A1JJ1	S1-C13-C15-O3
2	J	401	A1JJ1	S1-C13-C15-O3
2	K	401	A1JJ1	S1-C13-C15-O3
2	L	401	A1JJ1	S1-C13-C15-O3
2	G	401	A1JJ1	C21-C22-C23-C25
2	D	401	A1JJ1	C36-O16-P3-O19
2	L	401	A1JJ1	C26-O7-P1-O10
2	L	401	A1JJ1	C36-O16-P3-O19
2	I	401	A1JJ1	O13-C27-C28-O14
2	C	401	A1JJ1	P1-O10-P2-O12
2	H	401	A1JJ1	P1-O10-P2-O12
2	C	401	A1JJ1	C27-O13-P2-O12
2	E	401	A1JJ1	C27-O13-P2-O11
2	E	401	A1JJ1	C27-O13-P2-O12
2	F	401	A1JJ1	C27-O13-P2-O11
2	F	401	A1JJ1	C27-O13-P2-O12
2	G	401	A1JJ1	C27-O13-P2-O11
2	I	401	A1JJ1	C27-O13-P2-O11
2	I	401	A1JJ1	C27-O13-P2-O12
2	J	401	A1JJ1	C27-O13-P2-O11
2	J	401	A1JJ1	C27-O13-P2-O12
2	K	401	A1JJ1	C27-O13-P2-O12
2	L	401	A1JJ1	C27-O13-P2-O11
2	L	401	A1JJ1	C27-O13-P2-O12
2	A	401	A1JJ1	C7-C8-O2-C9
2	B	401	A1JJ1	C15-C13-S1-C12
2	F	401	A1JJ1	C15-C13-S1-C12
2	G	401	A1JJ1	C28-C36-O16-P3
2	I	401	A1JJ1	C39-C2-O1-C1
2	I	401	A1JJ1	C3-C2-O1-C1
2	J	401	A1JJ1	P1-O10-P2-O12
2	E	401	A1JJ1	C39-C2-O1-C1
2	K	401	A1JJ1	O13-C27-C28-O14
2	H	401	A1JJ1	C35-C36-O16-P3
2	B	401	A1JJ1	O13-C27-C28-O14

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Mol	Chain	Res	Type	Atoms
2	D	401	A1JJ1	O13-C27-C28-O14
2	E	401	A1JJ1	C3-C2-O1-C1
2	L	401	A1JJ1	P1-O10-P2-O12
2	C	401	A1JJ1	O13-C27-C28-O14
2	H	401	A1JJ1	C6-C7-C8-O2
2	B	401	A1JJ1	C36-O16-P3-O17
2	G	401	A1JJ1	C24-C23-C26-O7
2	D	401	A1JJ1	C18-C19-C20-N2
2	E	401	A1JJ1	O13-C27-C28-O14
2	G	401	A1JJ1	C35-C36-O16-P3
2	A	401	A1JJ1	C26-O7-P1-O10
2	A	401	A1JJ1	C36-O16-P3-O19
2	B	401	A1JJ1	C36-O16-P3-O18
2	E	401	A1JJ1	C36-O16-P3-O18
2	K	401	A1JJ1	C36-O16-P3-O18
2	L	401	A1JJ1	C36-O16-P3-O18
2	A	401	A1JJ1	O13-C27-C28-O14
2	A	401	A1JJ1	P1-O10-P2-O11
2	B	401	A1JJ1	P1-O10-P2-O12
2	C	401	A1JJ1	P1-O10-P2-O11
2	D	401	A1JJ1	P1-O10-P2-O11
2	E	401	A1JJ1	P1-O10-P2-O11
2	E	401	A1JJ1	P1-O10-P2-O12
2	H	401	A1JJ1	P1-O10-P2-O11
2	I	401	A1JJ1	P1-O10-P2-O11
2	K	401	A1JJ1	P1-O10-P2-O11
2	K	401	A1JJ1	P1-O10-P2-O12
2	L	401	A1JJ1	P1-O10-P2-O11
2	A	401	A1JJ1	C27-O13-P2-O12
2	L	401	A1JJ1	C26-O7-P1-O8
2	F	401	A1JJ1	O13-C27-C28-O14
2	G	401	A1JJ1	O13-C27-C28-O14
2	J	401	A1JJ1	O13-C27-C28-O14
2	L	401	A1JJ1	O13-C27-C28-O14
2	L	401	A1JJ1	C25-C23-C26-O7
2	L	401	A1JJ1	C10-C9-O2-C8
2	J	401	A1JJ1	C5-C6-C7-C8
2	J	401	A1JJ1	C39-C6-C7-C8
2	A	401	A1JJ1	C14-C13-S1-C12
2	C	401	A1JJ1	C14-C13-S1-C12
2	D	401	A1JJ1	C14-C13-S1-C12
2	E	401	A1JJ1	C14-C13-S1-C12

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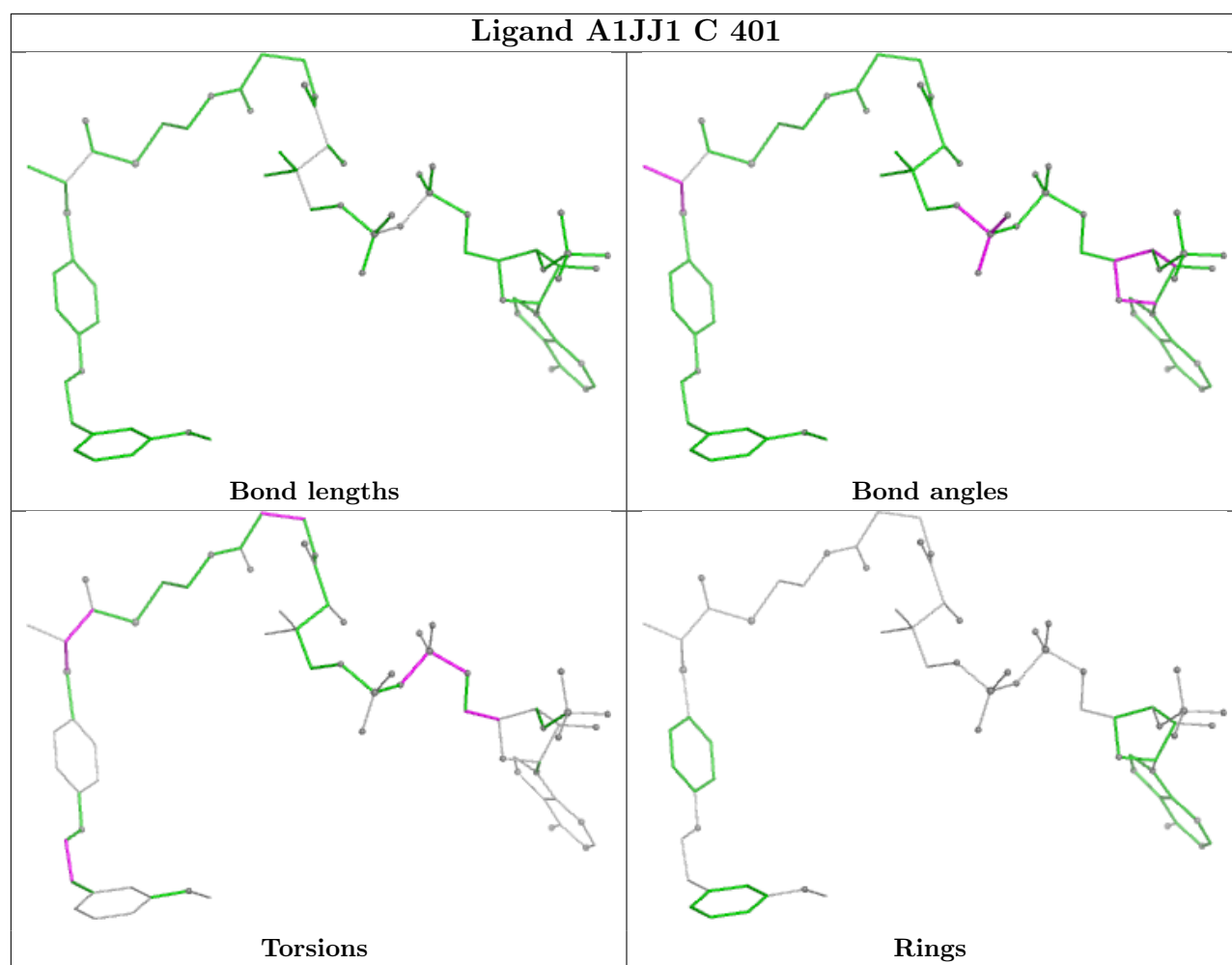
Mol	Chain	Res	Type	Atoms
2	F	401	A1JJ1	C14-C13-S1-C12
2	G	401	A1JJ1	C14-C13-S1-C12
2	H	401	A1JJ1	C14-C13-S1-C12
2	I	401	A1JJ1	C14-C13-S1-C12
2	L	401	A1JJ1	C38-C9-O2-C8

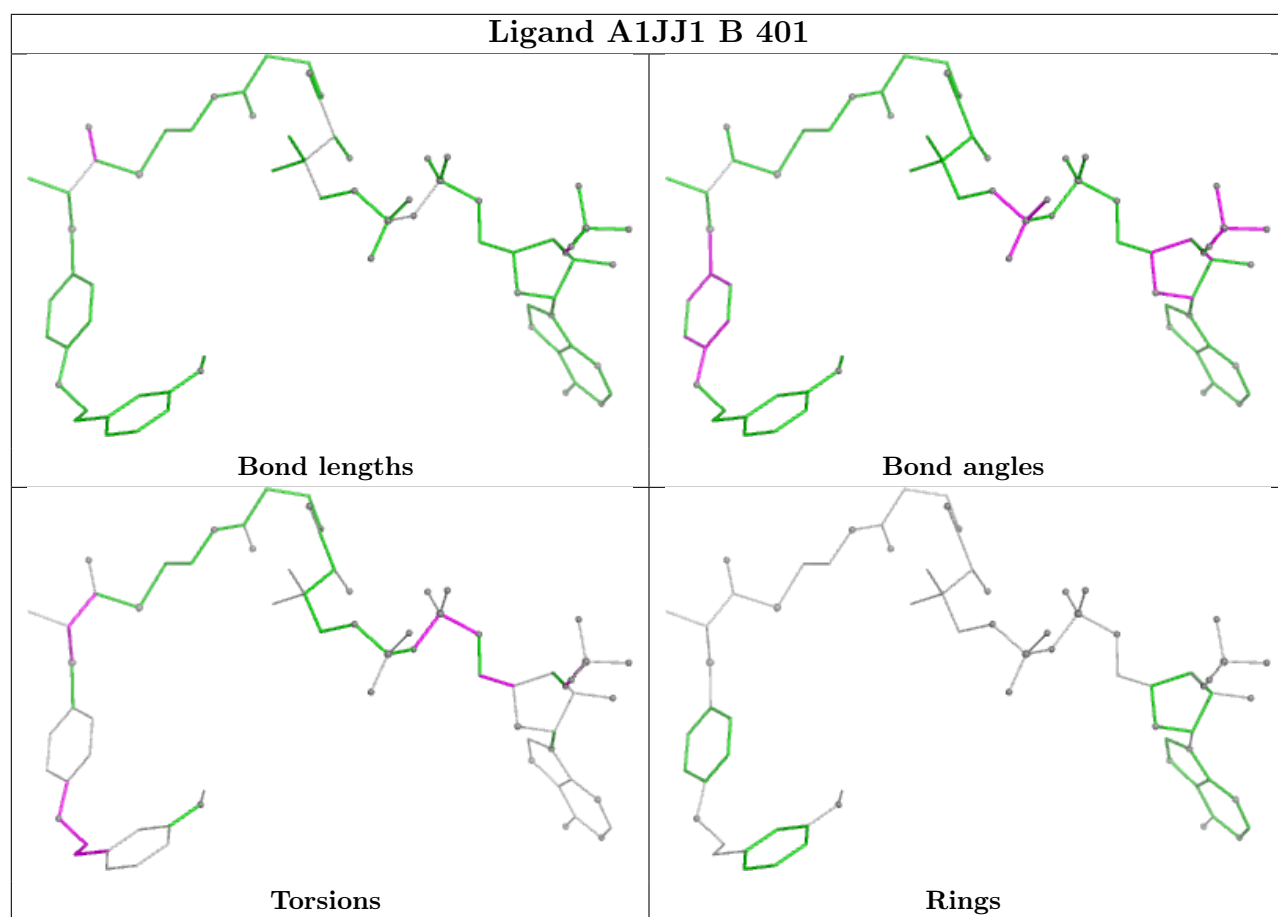
There are no ring outliers.

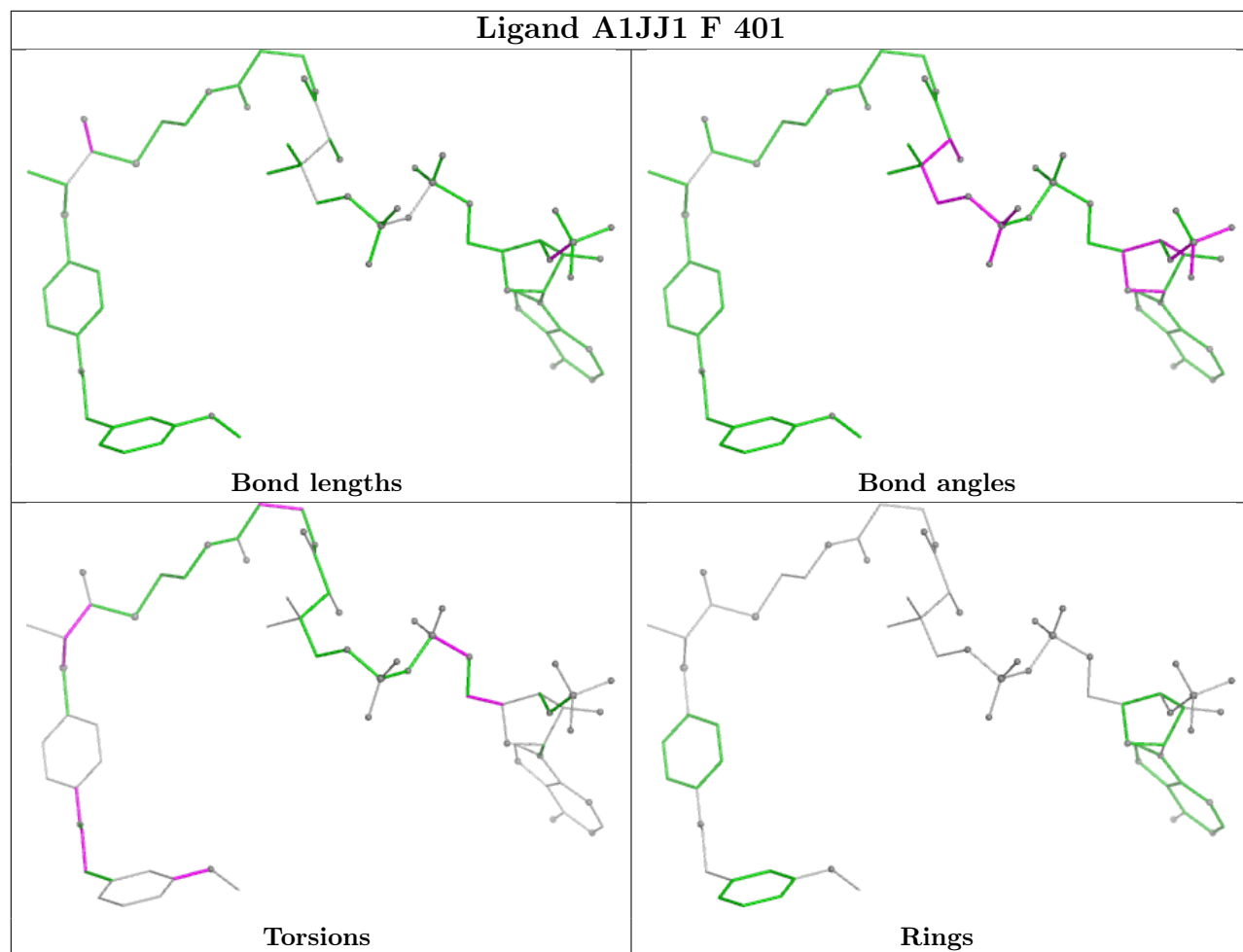
10 monomers are involved in 17 short contacts:

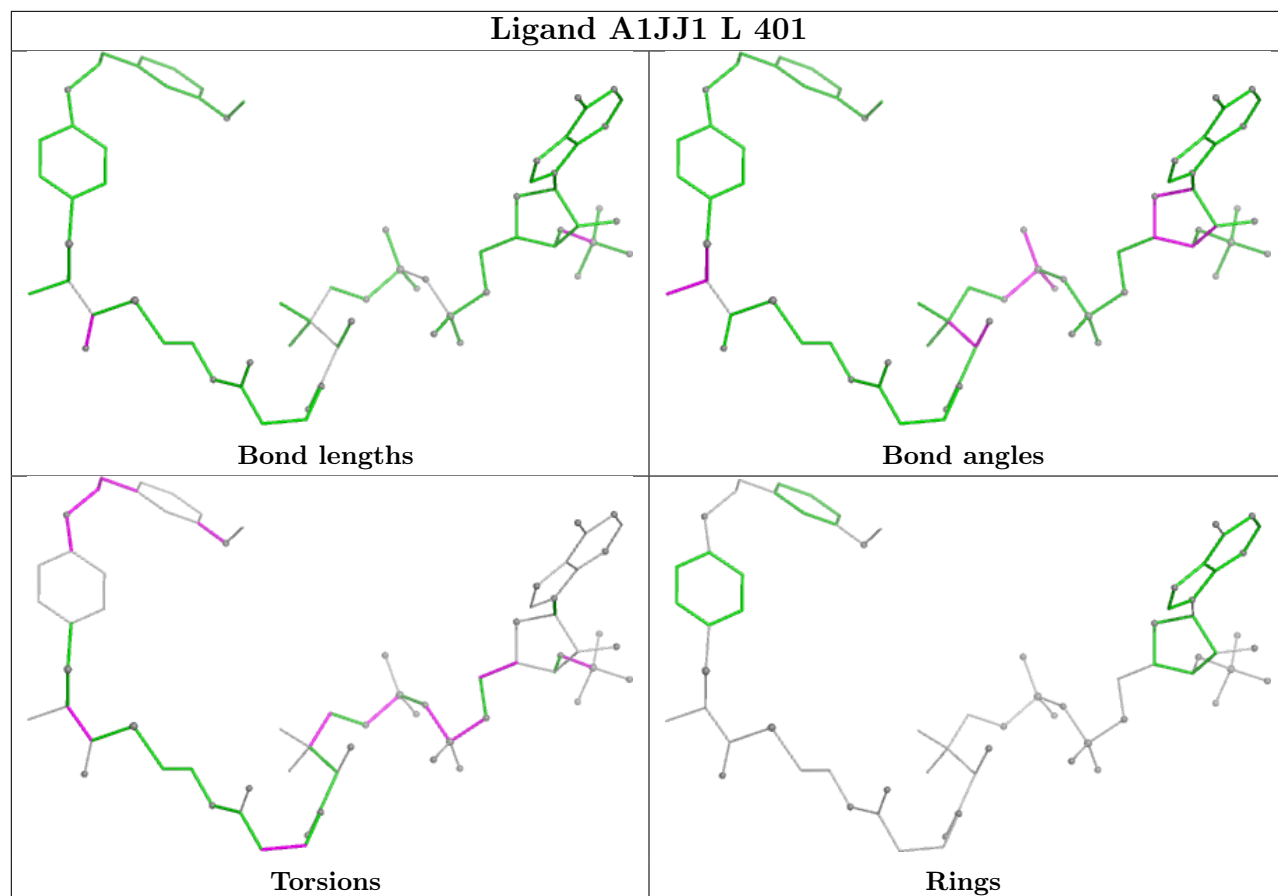
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	401	A1JJ1	1	0
2	F	401	A1JJ1	2	0
2	L	401	A1JJ1	1	0
2	E	401	A1JJ1	3	0
2	H	401	A1JJ1	1	0
2	K	401	A1JJ1	1	0
2	D	401	A1JJ1	3	0
2	A	401	A1JJ1	2	0
2	J	401	A1JJ1	1	0
2	G	401	A1JJ1	2	0

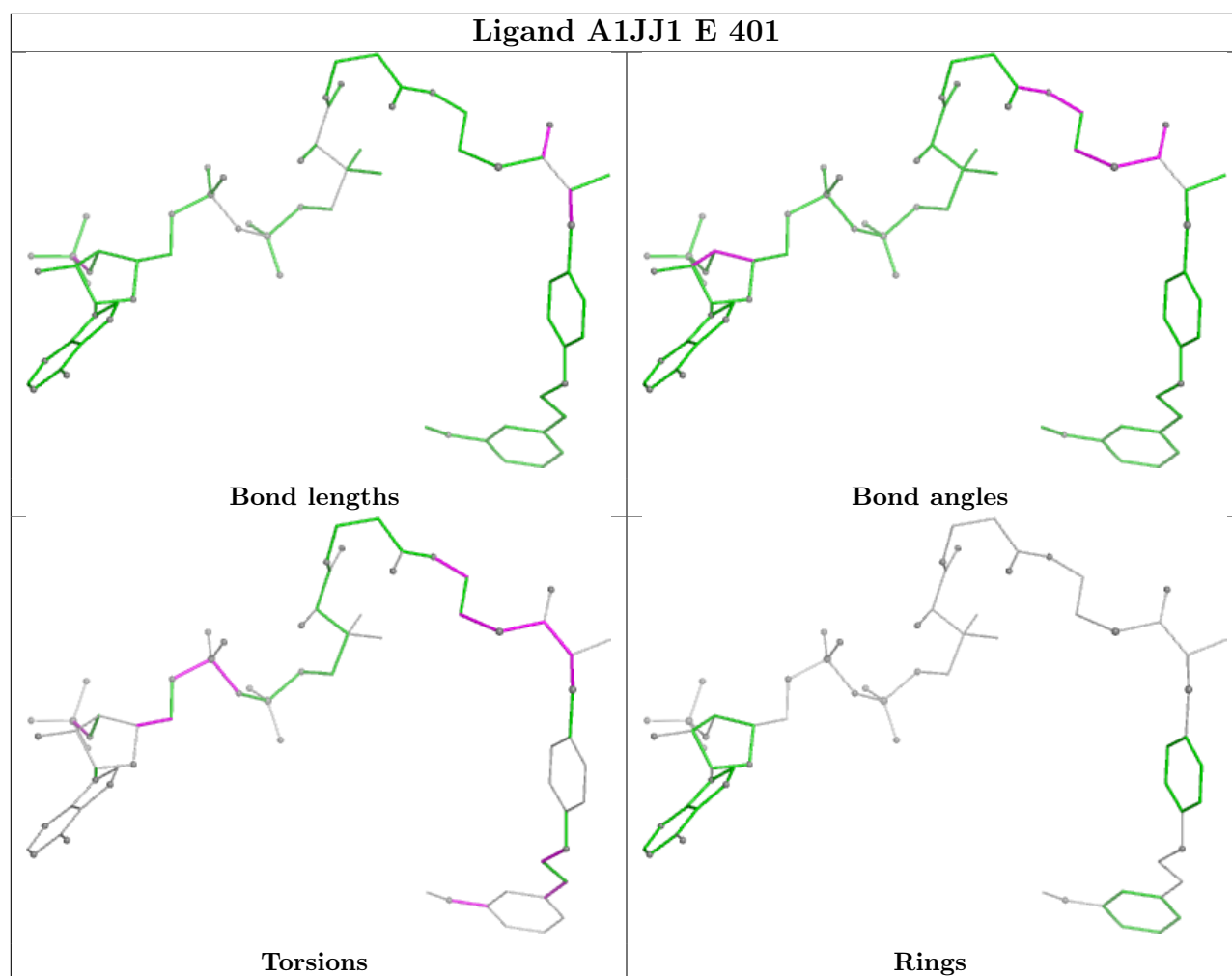
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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.

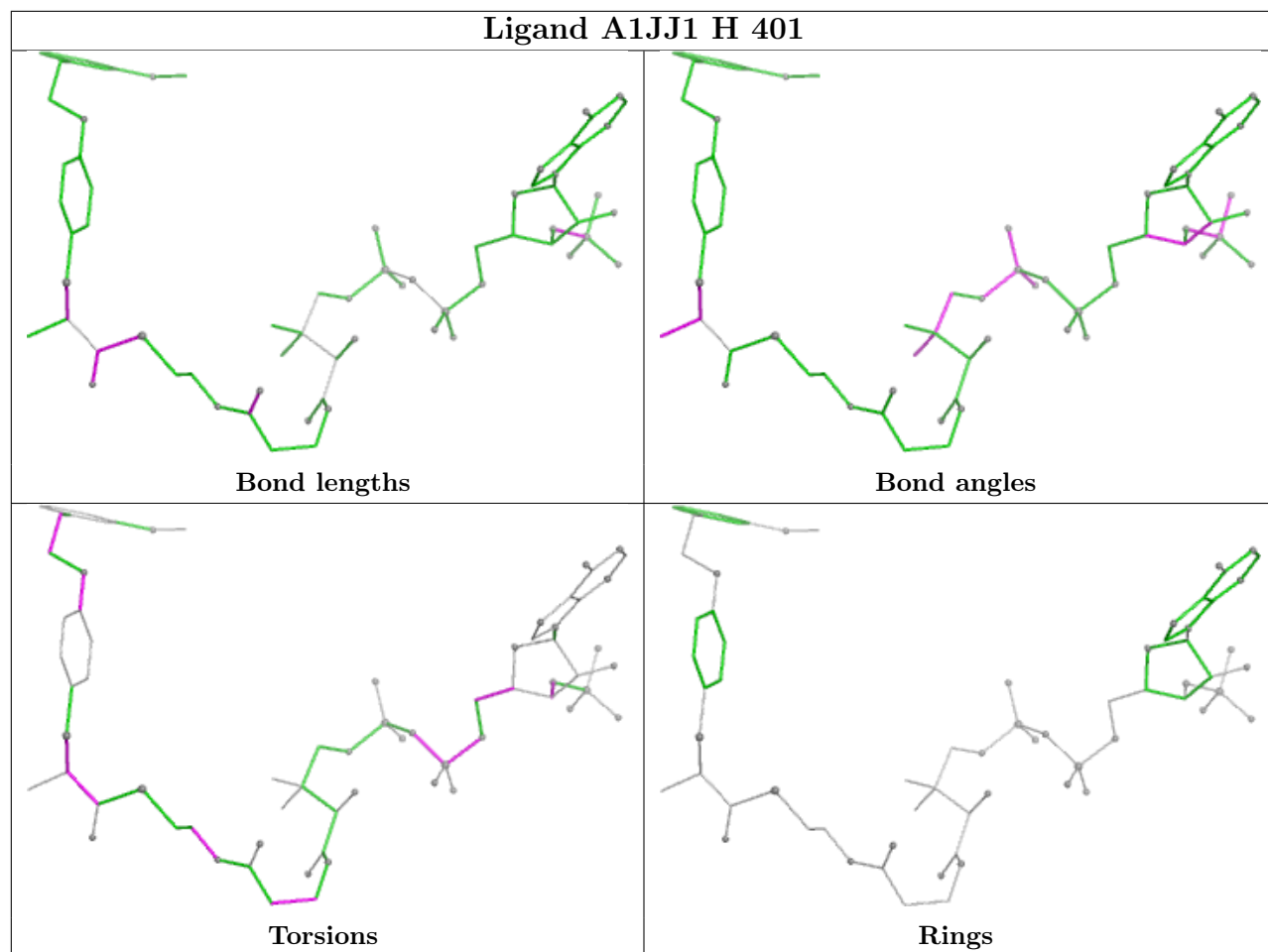




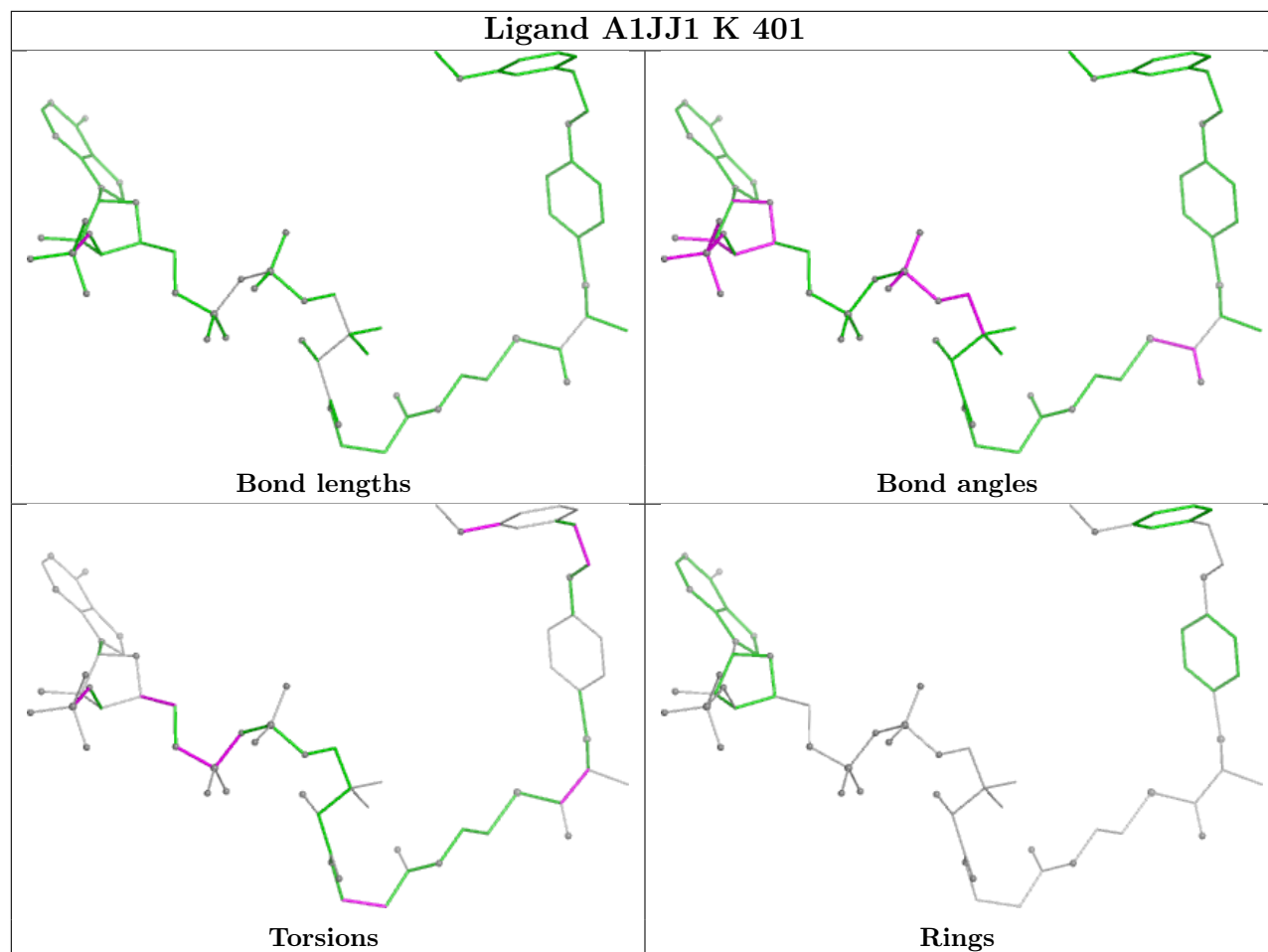




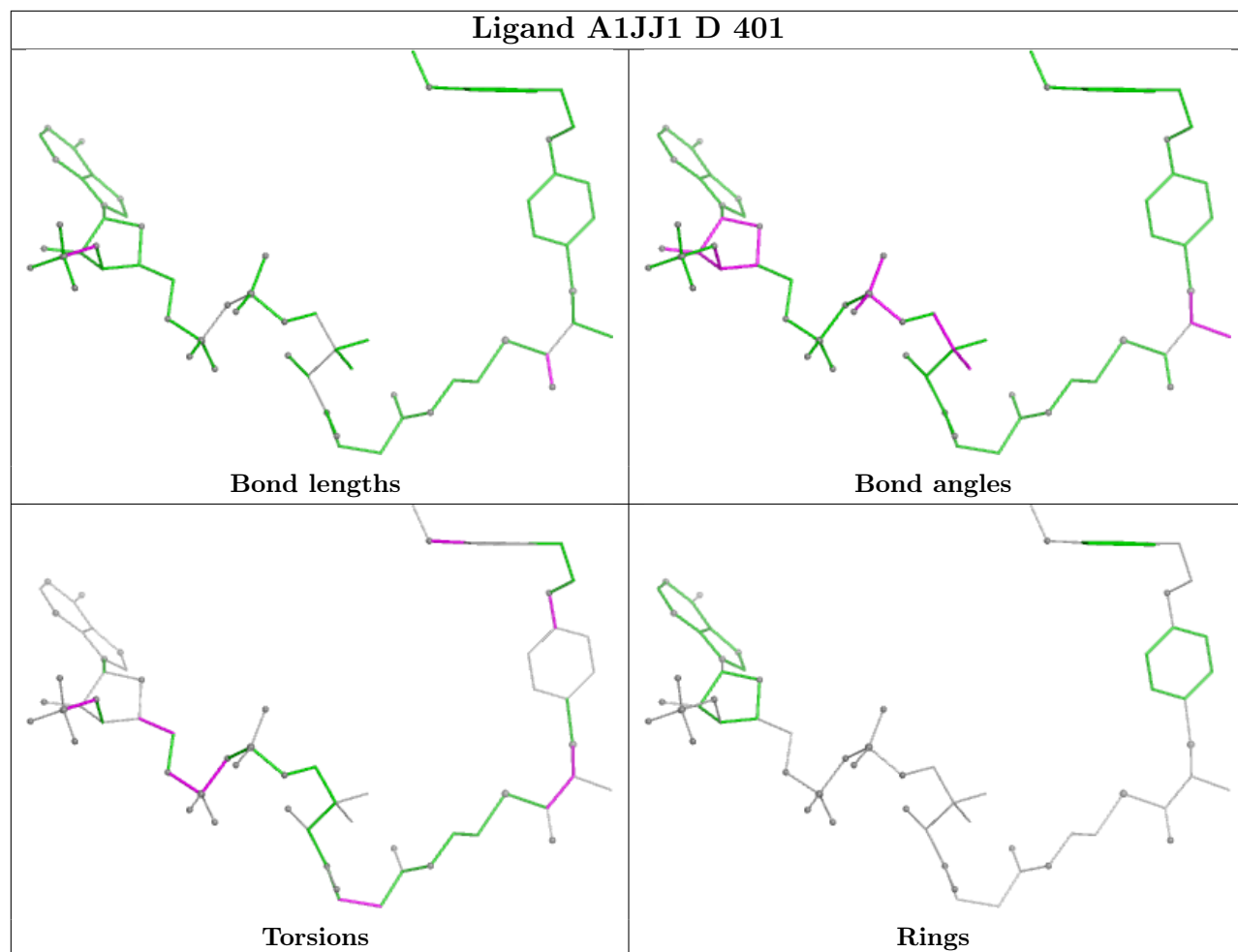




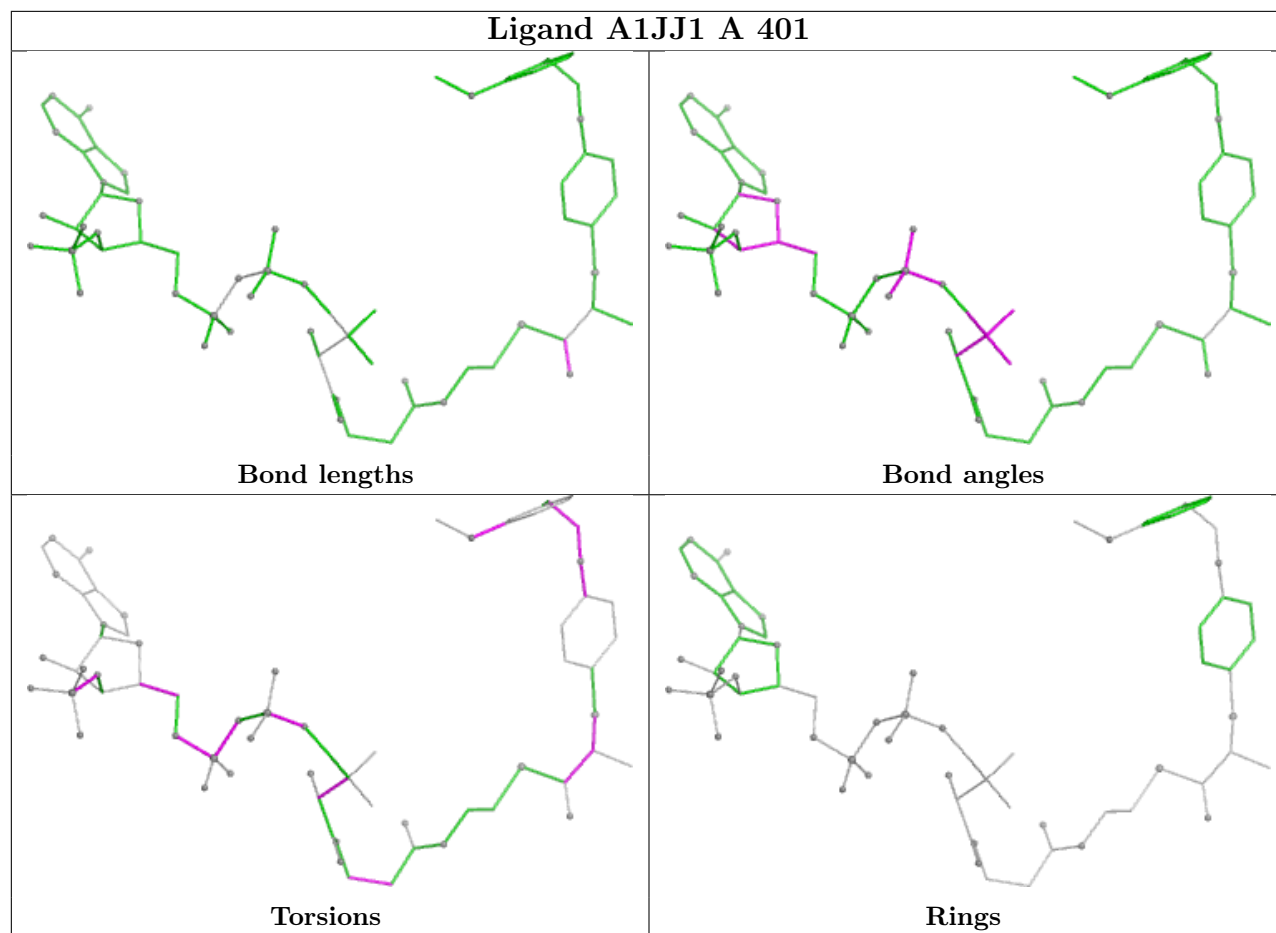
Ligand A1JJ1 K 401

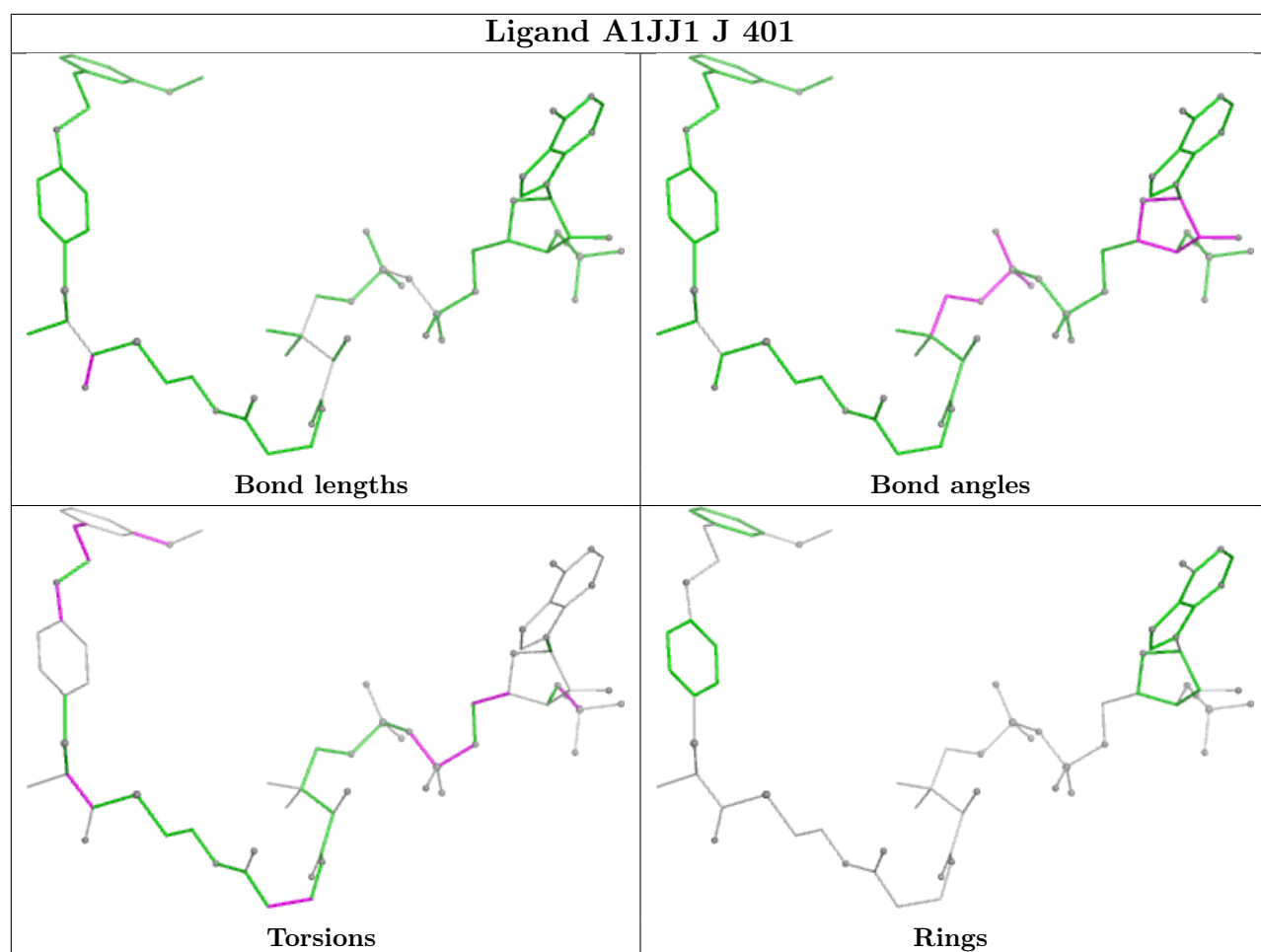


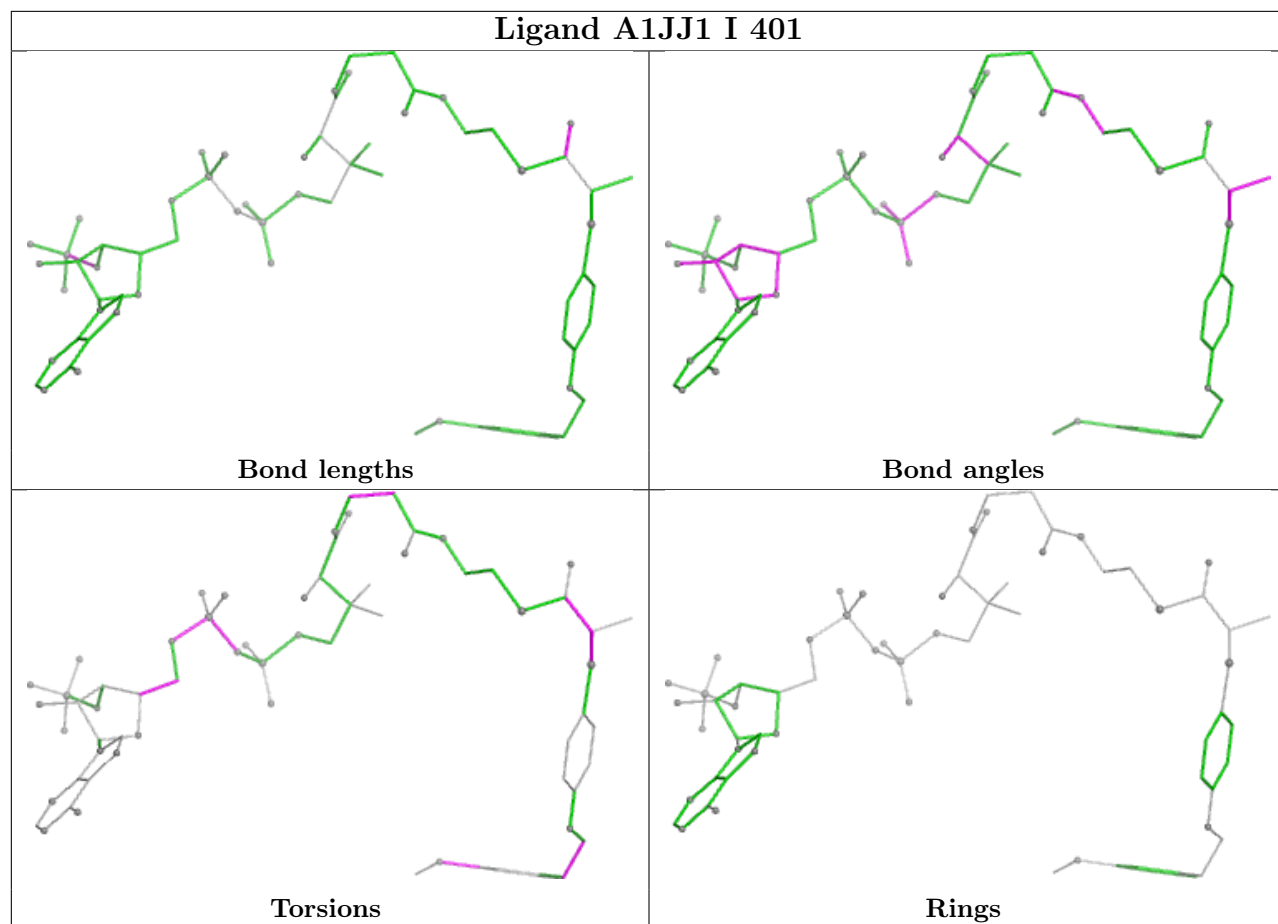
Ligand A1JJ1 D 401

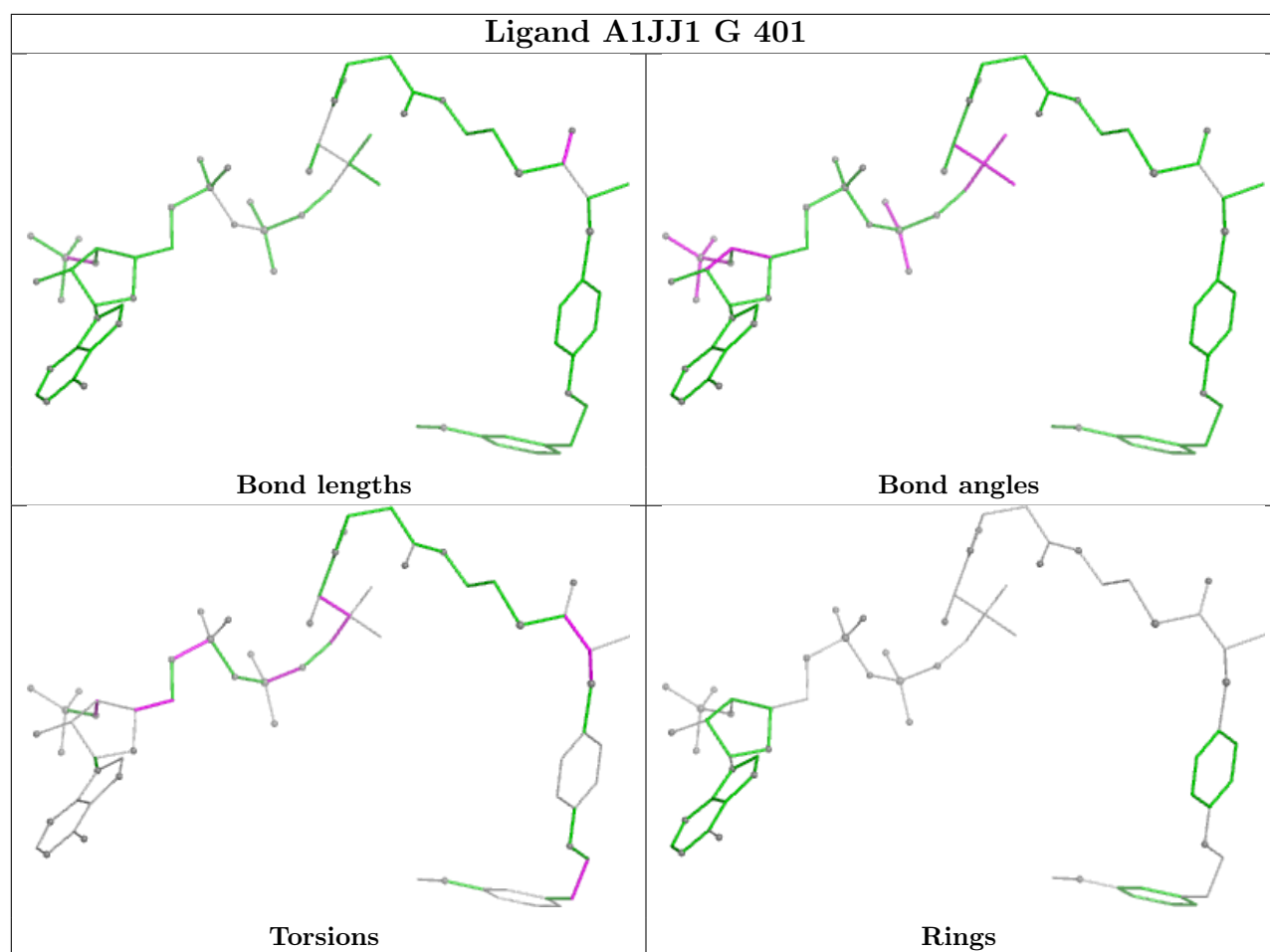


Ligand A1JJ1 A 401









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	357/364 (98%)	0.55	37 (10%)	11 9	25, 42, 88, 122	2 (0%)
1	B	357/364 (98%)	0.45	38 (10%)	11 8	25, 41, 88, 129	1 (0%)
1	C	357/364 (98%)	0.53	46 (12%)	7 5	16, 41, 86, 129	3 (0%)
1	D	359/364 (98%)	0.47	29 (8%)	18 15	25, 40, 83, 132	1 (0%)
1	E	356/364 (97%)	0.63	50 (14%)	6 4	26, 43, 93, 127	2 (0%)
1	F	358/364 (98%)	0.73	63 (17%)	4 3	25, 43, 92, 124	2 (0%)
1	G	357/364 (98%)	0.89	88 (24%)	2 1	24, 45, 95, 128	2 (0%)
1	H	357/364 (98%)	0.67	55 (15%)	5 4	26, 45, 101, 133	1 (0%)
1	I	359/364 (98%)	0.41	28 (7%)	19 16	22, 40, 80, 120	3 (0%)
1	J	357/364 (98%)	0.46	35 (9%)	13 10	19, 40, 81, 131	2 (0%)
1	K	357/364 (98%)	0.63	49 (13%)	6 5	20, 42, 90, 127	3 (0%)
1	L	359/364 (98%)	0.53	37 (10%)	12 9	25, 42, 87, 127	1 (0%)
All	All	4290/4368 (98%)	0.58	555 (12%)	7 5	16, 42, 90, 133	23 (0%)

All (555) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	42	VAL	9.4
1	A	346	ALA	8.2
1	F	42	VAL	8.1
1	D	42	VAL	7.5
1	K	346	ALA	7.1
1	D	322	ALA	6.9
1	F	45	ILE	6.9
1	E	45	ILE	6.8
1	D	346	ALA	6.8
1	H	346	ALA	6.8
1	J	346	ALA	6.8

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Mol	Chain	Res	Type	RSRZ
1	J	45	ILE	6.6
1	C	346	ALA	6.6
1	H	45	ILE	6.6
1	K	45	ILE	6.4
1	L	45	ILE	6.1
1	G	347	ALA	6.1
1	B	45	ILE	6.0
1	B	346	ALA	6.0
1	G	41	SER	6.0
1	L	346	ALA	5.9
1	K	324	GLY	5.9
1	I	45	ILE	5.8
1	A	45	ILE	5.8
1	F	346	ALA	5.6
1	C	45	ILE	5.6
1	D	348	THR	5.5
1	J	323	ASN	5.5
1	D	347	ALA	5.5
1	J	324	GLY	5.5
1	D	45	ILE	5.5
1	H	41	SER	5.3
1	B	41	SER	5.2
1	E	346	ALA	5.1
1	E	349	ILE	5.1
1	J	347	ALA	5.1
1	E	41	SER	5.1
1	G	346	ALA	5.1
1	A	349	ILE	5.0
1	K	349	ILE	5.0
1	G	45	ILE	4.9
1	K	44	GLY	4.8
1	F	349	ILE	4.7
1	A	324	GLY	4.7
1	L	323	ASN	4.7
1	I	346	ALA	4.7
1	K	347	ALA	4.7
1	H	322	ALA	4.6
1	G	351	ILE	4.6
1	F	323	ASN	4.6
1	A	180	LYS	4.6
1	G	44	GLY	4.5
1	E	323	ASN	4.5

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Mol	Chain	Res	Type	RSRZ
1	F	345	PRO	4.5
1	H	39	PRO	4.5
1	H	349	ILE	4.5
1	L	324	GLY	4.4
1	C	323	ASN	4.4
1	H	358	TRP	4.4
1	E	47	ARG	4.4
1	J	44	GLY	4.4
1	G	58	THR	4.4
1	F	360	GLY	4.4
1	C	41	SER	4.4
1	H	44	GLY	4.3
1	K	41	SER	4.3
1	F	47	ARG	4.3
1	B	359	ASP	4.3
1	E	347	ALA	4.3
1	I	359	ASP	4.2
1	E	39	PRO	4.2
1	L	349	ILE	4.2
1	A	347	ALA	4.2
1	F	207	MET	4.2
1	C	349	ILE	4.2
1	B	323	ASN	4.2
1	F	322	ALA	4.2
1	K	322	ALA	4.1
1	G	324	GLY	4.1
1	C	44	GLY	4.1
1	I	349	ILE	4.0
1	H	323	ASN	4.0
1	K	180	LYS	3.9
1	C	40	SER	3.9
1	E	351	ILE	3.9
1	I	47	ARG	3.9
1	L	348	THR	3.9
1	I	323	ASN	3.9
1	E	40	SER	3.9
1	H	345	PRO	3.9
1	H	34	VAL	3.9
1	D	323	ASN	3.9
1	H	351	ILE	3.8
1	H	50	MET	3.8
1	G	348	THR	3.8

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Mol	Chain	Res	Type	RSRZ
1	B	347	ALA	3.8
1	G	102	VAL	3.8
1	J	322	ALA	3.7
1	E	345	PRO	3.7
1	F	41	SER	3.7
1	G	345	PRO	3.7
1	G	358	TRP	3.7
1	G	323	ASN	3.7
1	C	347	ALA	3.7
1	G	322	ALA	3.7
1	J	345	PRO	3.7
1	C	176	GLN	3.7
1	G	354	VAL	3.7
1	K	176	GLN	3.7
1	A	41	SER	3.7
1	G	178	SER	3.7
1	G	76	LYS	3.7
1	A	351	ILE	3.6
1	A	322	ALA	3.6
1	A	345	PRO	3.6
1	B	322	ALA	3.6
1	H	347	ALA	3.6
1	H	46	SER	3.6
1	J	40	SER	3.6
1	L	46	SER	3.6
1	G	62	LYS	3.6
1	B	46	SER	3.6
1	J	41	SER	3.6
1	B	351	ILE	3.6
1	J	349	ILE	3.6
1	E	324	GLY	3.6
1	G	179	GLY	3.6
1	K	348	THR	3.6
1	E	46	SER	3.5
1	C	66	GLY	3.5
1	F	350	ASP	3.5
1	E	1	MET	3.5
1	G	355	LEU	3.5
1	D	345	PRO	3.5
1	B	47	ARG	3.5
1	L	42	VAL	3.5
1	F	49	ALA	3.5

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Mol	Chain	Res	Type	RSRZ
1	G	353	ALA	3.5
1	G	1	MET	3.5
1	K	1	MET	3.5
1	D	324	GLY	3.5
1	F	324	GLY	3.5
1	A	323	ASN	3.5
1	K	359	ASP	3.5
1	K	47	ARG	3.5
1	F	11	VAL	3.5
1	G	46	SER	3.5
1	D	349	ILE	3.5
1	J	350	ASP	3.5
1	K	323	ASN	3.5
1	L	180	LYS	3.4
1	A	40	SER	3.4
1	F	76	LYS	3.4
1	G	10	VAL	3.4
1	H	324	GLY	3.4
1	C	322	ALA	3.4
1	C	345	PRO	3.4
1	I	345	PRO	3.4
1	D	47	ARG	3.4
1	G	292	ALA	3.4
1	G	65	GLN	3.4
1	C	69	LEU	3.3
1	H	58	THR	3.3
1	L	347	ALA	3.3
1	K	76	LYS	3.3
1	E	359	ASP	3.3
1	K	350	ASP	3.3
1	B	1	MET	3.3
1	G	207	MET	3.3
1	B	345	PRO	3.3
1	G	34	VAL	3.3
1	I	42	VAL	3.3
1	I	44	GLY	3.3
1	G	349	ILE	3.3
1	K	345	PRO	3.3
1	B	44	GLY	3.3
1	J	359	ASP	3.3
1	L	345	PRO	3.3
1	I	326	TRP	3.3

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Mol	Chain	Res	Type	RSRZ
1	G	93	GLY	3.2
1	L	44	GLY	3.2
1	F	351	ILE	3.2
1	G	72	LYS	3.2
1	I	180	LYS	3.2
1	B	65	GLN	3.2
1	J	348	THR	3.2
1	F	46	SER	3.2
1	G	101	LYS	3.2
1	H	355	LEU	3.2
1	A	348	THR	3.2
1	A	46	SER	3.2
1	C	324	GLY	3.2
1	G	33	VAL	3.2
1	G	352	GLU	3.2
1	H	72	LYS	3.2
1	I	324	GLY	3.2
1	I	351	ILE	3.2
1	H	348	THR	3.2
1	B	40	SER	3.2
1	E	322	ALA	3.2
1	L	30	GLY	3.1
1	E	70	ALA	3.1
1	E	73	LEU	3.1
1	D	351	ILE	3.1
1	J	351	ILE	3.1
1	C	348	THR	3.1
1	D	44	GLY	3.1
1	G	40	SER	3.1
1	G	176	GLN	3.1
1	B	356	THR	3.0
1	F	66	GLY	3.0
1	A	76	LYS	3.0
1	L	353	ALA	3.0
1	H	1	MET	3.0
1	E	179	GLY	3.0
1	F	255	ASP	3.0
1	G	7	GLY	3.0
1	G	357	ASP	3.0
1	L	359	ASP	3.0
1	F	1	MET	3.0
1	F	348	THR	3.0

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Mol	Chain	Res	Type	RSRZ
1	E	176	GLN	3.0
1	J	47	ARG	3.0
1	D	359	ASP	3.0
1	B	207	MET	3.0
1	H	207	MET	3.0
1	E	355	LEU	3.0
1	G	61	LEU	3.0
1	G	69	LEU	3.0
1	G	73	LEU	3.0
1	A	72	LYS	3.0
1	E	348	THR	3.0
1	D	355	LEU	2.9
1	H	57	VAL	2.9
1	I	76	LYS	2.9
1	G	107	ILE	2.9
1	D	40	SER	2.9
1	D	1	MET	2.9
1	H	326	TRP	2.9
1	G	70	ALA	2.9
1	G	75	ALA	2.9
1	J	49	ALA	2.9
1	B	76	LYS	2.9
1	J	72	LYS	2.9
1	L	47	ARG	2.9
1	B	348	THR	2.9
1	G	97	GLU	2.9
1	A	62	LYS	2.9
1	A	69	LEU	2.9
1	F	358	TRP	2.9
1	K	49	ALA	2.9
1	H	56	ILE	2.9
1	C	178	SER	2.9
1	D	43	ASP	2.9
1	C	47	ARG	2.9
1	H	145	GLU	2.9
1	I	1	MET	2.9
1	G	180	LYS	2.8
1	L	7	GLY	2.8
1	F	101	LYS	2.8
1	F	176	GLN	2.8
1	F	73	LEU	2.8
1	G	92	LEU	2.8

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Mol	Chain	Res	Type	RSRZ
1	C	49	ALA	2.8
1	C	11	VAL	2.8
1	C	180	LYS	2.8
1	H	47	ARG	2.8
1	F	93	GLY	2.8
1	K	178	SER	2.8
1	J	73	LEU	2.8
1	F	258	GLU	2.8
1	A	77	ALA	2.8
1	G	47	ARG	2.8
1	F	359	ASP	2.8
1	K	93	GLY	2.8
1	E	62	LYS	2.8
1	B	257	ALA	2.8
1	D	49	ALA	2.8
1	H	59	ALA	2.8
1	I	322	ALA	2.8
1	L	322	ALA	2.8
1	K	58	THR	2.7
1	F	39	PRO	2.7
1	B	180	LYS	2.7
1	C	1	MET	2.7
1	B	77	ALA	2.7
1	F	347	ALA	2.7
1	F	354	VAL	2.7
1	G	11	VAL	2.7
1	G	79	VAL	2.7
1	B	349	ILE	2.7
1	D	350	ASP	2.7
1	F	40	SER	2.7
1	B	72	LYS	2.7
1	C	358	TRP	2.7
1	E	358	TRP	2.7
1	A	47	ARG	2.7
1	K	102	VAL	2.7
1	B	350	ASP	2.7
1	H	144	ASP	2.7
1	G	66	GLY	2.7
1	G	99	CYS	2.7
1	G	94	LEU	2.7
1	E	37	ASP	2.7
1	G	293	ASN	2.7

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Mol	Chain	Res	Type	RSRZ
1	H	180	LYS	2.7
1	L	173	TRP	2.7
1	H	76	LYS	2.6
1	D	46	SER	2.6
1	H	176	GLN	2.6
1	C	76	LYS	2.6
1	G	68	GLU	2.6
1	E	66	GLY	2.6
1	E	178	SER	2.6
1	H	6	SER	2.6
1	H	8	LEU	2.6
1	C	101	LYS	2.6
1	F	62	LYS	2.6
1	H	2	ALA	2.6
1	F	102	VAL	2.6
1	G	177	SER	2.6
1	J	46	SER	2.6
1	L	351	ILE	2.6
1	F	65	GLN	2.6
1	C	105	ARG	2.6
1	F	59	ALA	2.6
1	J	326	TRP	2.6
1	F	37	ASP	2.6
1	C	62	LYS	2.6
1	D	59	ALA	2.5
1	F	293	ASN	2.5
1	K	357	ASP	2.5
1	L	64	ASP	2.5
1	F	326	TRP	2.5
1	G	173	TRP	2.5
1	A	93	GLY	2.5
1	B	7	GLY	2.5
1	K	66	GLY	2.5
1	A	177	SER	2.5
1	H	354	VAL	2.5
1	J	102	VAL	2.5
1	B	176	GLN	2.5
1	F	61	LEU	2.5
1	F	355	LEU	2.5
1	G	67	LEU	2.5
1	K	69	LEU	2.5
1	F	353	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
1	G	59	ALA	2.5
1	B	39	PRO	2.5
1	F	58	THR	2.5
1	B	358	TRP	2.5
1	K	358	TRP	2.5
1	D	41	SER	2.5
1	G	57	VAL	2.5
1	I	176	GLN	2.5
1	L	354	VAL	2.5
1	J	352	GLU	2.5
1	A	92	LEU	2.5
1	F	106	LEU	2.5
1	H	5	LEU	2.5
1	L	1	MET	2.5
1	C	75	ALA	2.5
1	C	350	ASP	2.5
1	I	350	ASP	2.5
1	J	144	ASP	2.5
1	K	344	PRO	2.5
1	C	34	VAL	2.5
1	H	179	GLY	2.5
1	E	58	THR	2.4
1	E	352	GLU	2.4
1	F	98	GLU	2.4
1	F	352	GLU	2.4
1	F	34	VAL	2.4
1	A	358	TRP	2.4
1	B	352	GLU	2.4
1	C	68	GLU	2.4
1	H	38	ARG	2.4
1	H	352	GLU	2.4
1	A	58	THR	2.4
1	I	41	SER	2.4
1	L	41	SER	2.4
1	A	34	VAL	2.4
1	F	107	ILE	2.4
1	F	72	LYS	2.4
1	F	180	LYS	2.4
1	I	358	TRP	2.4
1	K	173	TRP	2.4
1	G	106	LEU	2.4
1	E	77	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
1	G	2	ALA	2.4
1	L	75	ALA	2.4
1	G	356	THR	2.4
1	K	40	SER	2.4
1	E	34	VAL	2.4
1	D	358	TRP	2.4
1	H	173	TRP	2.4
1	L	326	TRP	2.4
1	C	38	ARG	2.4
1	C	359	ASP	2.4
1	F	48	ASP	2.4
1	J	76	LYS	2.4
1	K	351	ILE	2.4
1	H	69	LEU	2.4
1	E	173	TRP	2.4
1	F	173	TRP	2.4
1	A	350	ASP	2.3
1	G	60	ASP	2.3
1	H	350	ASP	2.3
1	J	48	ASP	2.3
1	B	324	GLY	2.3
1	F	70	ALA	2.3
1	G	100	ALA	2.3
1	H	353	ALA	2.3
1	K	46	SER	2.3
1	A	1	MET	2.3
1	E	207	MET	2.3
1	J	1	MET	2.3
1	F	33	VAL	2.3
1	F	56	ILE	2.3
1	E	61	LEU	2.3
1	K	326	TRP	2.3
1	G	344	PRO	2.3
1	I	348	THR	2.3
1	L	177	SER	2.3
1	B	243	GLN	2.3
1	F	57	VAL	2.3
1	K	34	VAL	2.3
1	K	65	GLN	2.3
1	D	76	LYS	2.3
1	G	144	ASP	2.3
1	L	43	ASP	2.3

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Mol	Chain	Res	Type	RSRZ
1	A	75	ALA	2.3
1	B	49	ALA	2.3
1	H	73	LEU	2.3
1	H	92	LEU	2.3
1	G	359	ASP	2.3
1	H	357	ASP	2.3
1	G	96	PRO	2.3
1	J	39	PRO	2.3
1	E	75	ALA	2.3
1	E	171	ALA	2.3
1	I	58	THR	2.3
1	C	63	SER	2.3
1	C	65	GLN	2.3
1	H	65	GLN	2.3
1	I	68	GLU	2.3
1	D	73	LEU	2.2
1	K	73	LEU	2.2
1	B	357	ASP	2.2
1	G	30	GLY	2.2
1	E	145	GLU	2.2
1	C	173	TRP	2.2
1	H	40	SER	2.2
1	L	176	GLN	2.2
1	G	32	ASP	2.2
1	L	357	ASP	2.2
1	D	179	GLY	2.2
1	L	325	GLY	2.2
1	C	59	ALA	2.2
1	J	75	ALA	2.2
1	K	63	SER	2.2
1	A	173	TRP	2.2
1	E	16	ILE	2.2
1	K	183	VAL	2.2
1	F	144	ASP	2.2
1	G	91	ARG	2.2
1	L	352	GLU	2.2
1	C	351	ILE	2.2
1	G	36	ILE	2.2
1	K	107	ILE	2.2
1	H	105	ARG	2.2
1	E	104	ASP	2.2
1	A	68	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
1	E	76	LYS	2.2
1	K	62	LYS	2.2
1	C	77	ALA	2.2
1	G	63	SER	2.2
1	I	347	ALA	2.2
1	J	58	THR	2.2
1	J	100	ALA	2.2
1	G	9	ARG	2.1
1	G	71	LEU	2.1
1	H	107	ILE	2.1
1	G	326	TRP	2.1
1	I	173	TRP	2.1
1	K	172	LEU	2.1
1	K	64	ASP	2.1
1	D	65	GLN	2.1
1	E	65	GLN	2.1
1	J	65	GLN	2.1
1	D	288	GLY	2.1
1	E	7	GLY	2.1
1	E	93	GLY	2.1
1	F	99	CYS	2.1
1	E	356	THR	2.1
1	L	70	ALA	2.1
1	B	62	LYS	2.1
1	F	36	ILE	2.1
1	G	8	LEU	2.1
1	G	56	ILE	2.1
1	K	355	LEU	2.1
1	L	61	LEU	2.1
1	G	64	ASP	2.1
1	K	258	GLU	2.1
1	I	10	VAL	2.1
1	K	39	PRO	2.1
1	K	354	VAL	2.1
1	L	358	TRP	2.1
1	B	75	ALA	2.1
1	E	59	ALA	2.1
1	I	207	MET	2.1
1	J	62	LYS	2.1
1	B	73	LEU	2.1
1	H	315	GLU	2.1
1	J	258	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	37	ASP	2.1
1	G	183	VAL	2.1
1	E	30	GLY	2.1
1	H	178	SER	2.1
1	C	353	ALA	2.1
1	E	353	ALA	2.1
1	F	75	ALA	2.1
1	G	49	ALA	2.1
1	K	145	GLU	2.1
1	C	355	LEU	2.1
1	G	108	TYR	2.1
1	G	184	VAL	2.1
1	G	105	ARG	2.1
1	B	178	SER	2.0
1	F	63	SER	2.0
1	A	258	GLU	2.0
1	E	49	ALA	2.0
1	G	98	GLU	2.0
1	J	145	GLU	2.0
1	C	106	LEU	2.0
1	F	357	ASP	2.0
1	H	48	ASP	2.0
1	H	80	LEU	2.0
1	I	43	ASP	2.0
1	L	350	ASP	2.0
1	C	74	ILE	2.0
1	A	344	PRO	2.0
1	C	10	VAL	2.0
1	C	354	VAL	2.0
1	G	87	GLY	2.0
1	E	180	LYS	2.0
1	C	46	SER	2.0
1	C	352	GLU	2.0
1	E	350	ASP	2.0
1	G	104	ASP	2.0
1	L	69	LEU	2.0
1	A	56	ILE	2.0
1	K	74	ILE	2.0
1	K	96	PRO	2.0
1	A	101	LYS	2.0

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 oligosaccharides in this entry.

6.4 Ligands ⓘ

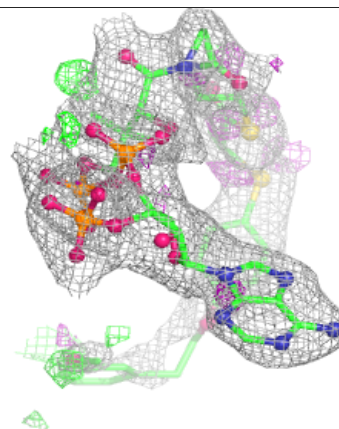
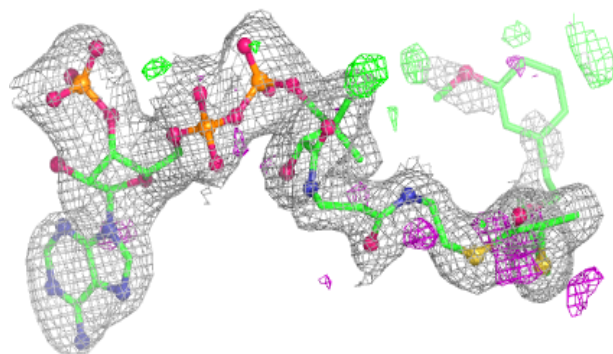
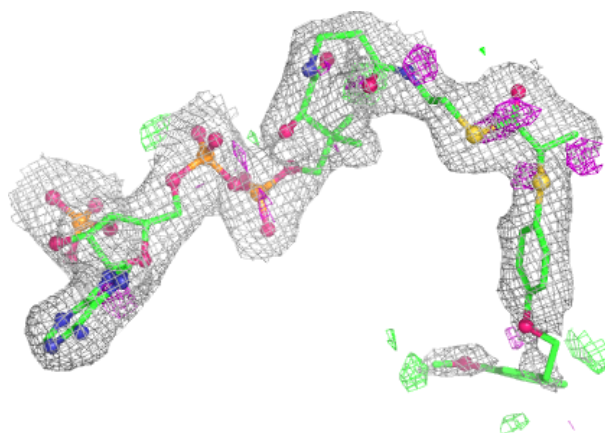
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
2	A1JJ1	H	401	70/70	0.90	0.17	40,70,138,145	0
2	A1JJ1	E	401	70/70	0.91	0.17	41,67,143,148	0
2	A1JJ1	A	401	70/70	0.94	0.14	31,54,138,144	0
2	A1JJ1	F	401	70/70	0.94	0.13	31,55,121,137	0
2	A1JJ1	G	401	70/70	0.94	0.15	33,57,144,154	0
2	A1JJ1	C	401	70/70	0.94	0.14	33,55,146,153	0
2	A1JJ1	B	401	70/70	0.95	0.12	31,54,138,153	0
2	A1JJ1	I	401	70/70	0.95	0.12	24,50,125,135	0
2	A1JJ1	J	401	70/70	0.95	0.13	28,51,134,147	0
2	A1JJ1	K	401	70/70	0.95	0.13	31,52,142,157	0
2	A1JJ1	L	401	70/70	0.95	0.13	30,48,142,151	0
2	A1JJ1	D	401	70/70	0.97	0.10	30,45,102,121	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.

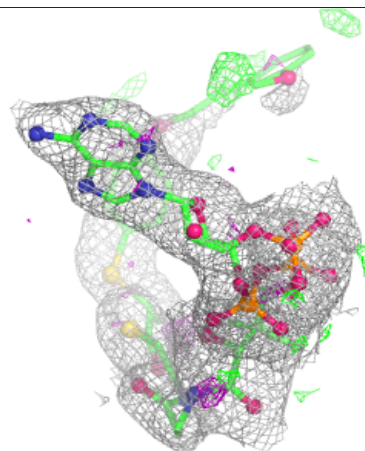
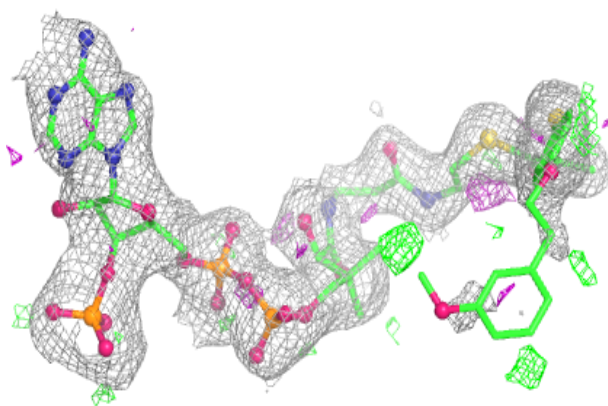
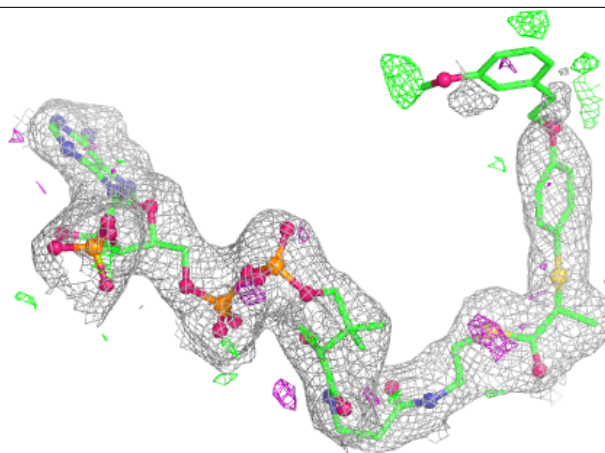
Electron density around A1JJ1 H 401:

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

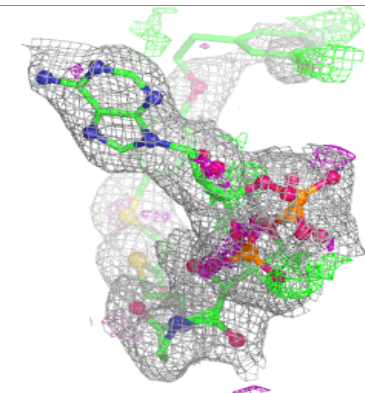
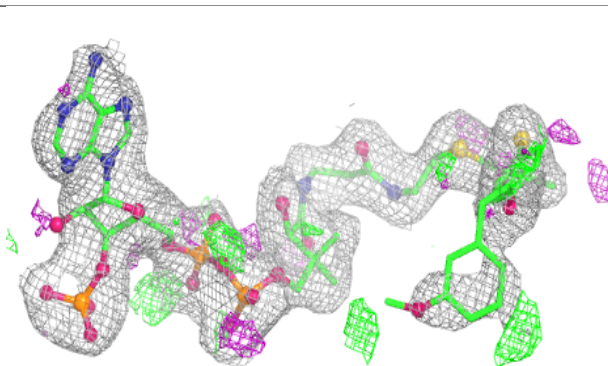
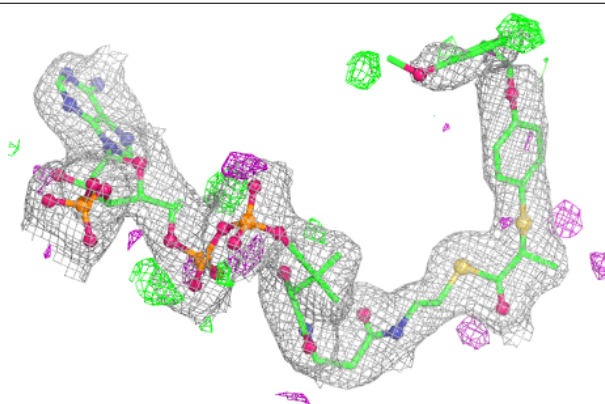


Electron density around A1JJ1 E 401:

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 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

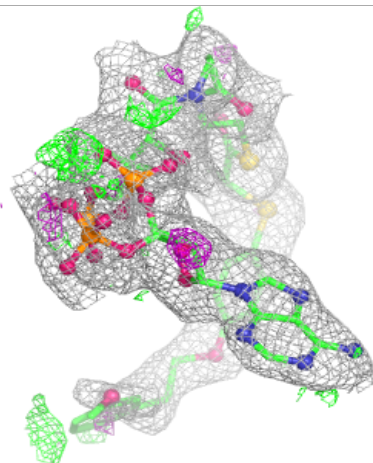
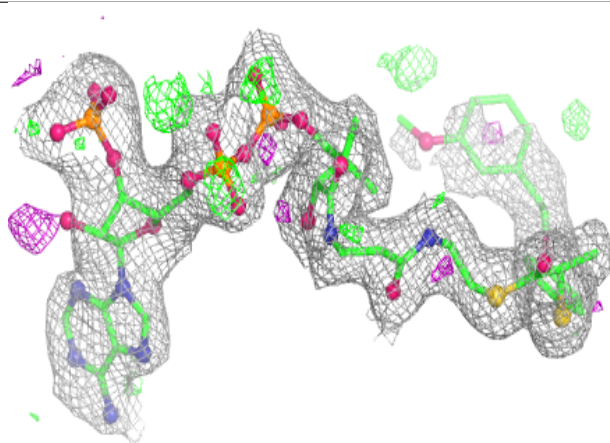
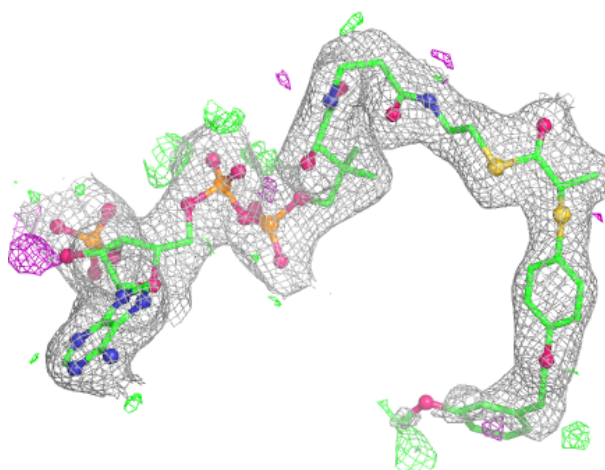
**Electron density around A1JJ1 A 401:**

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 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



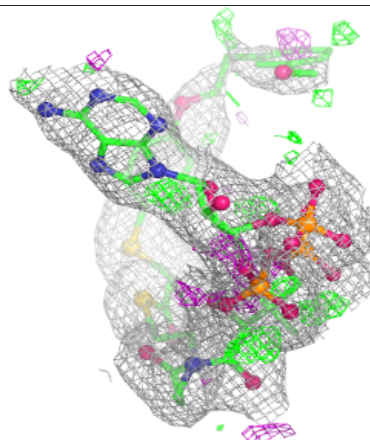
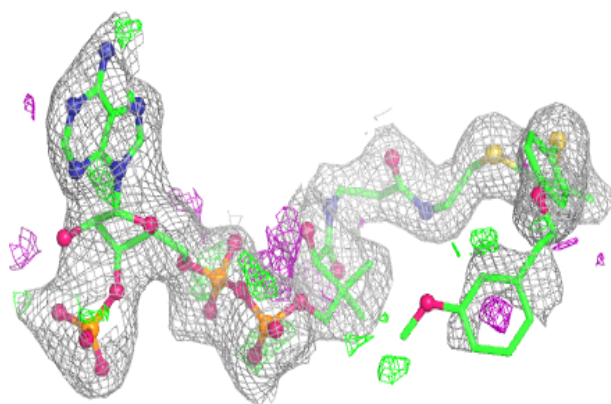
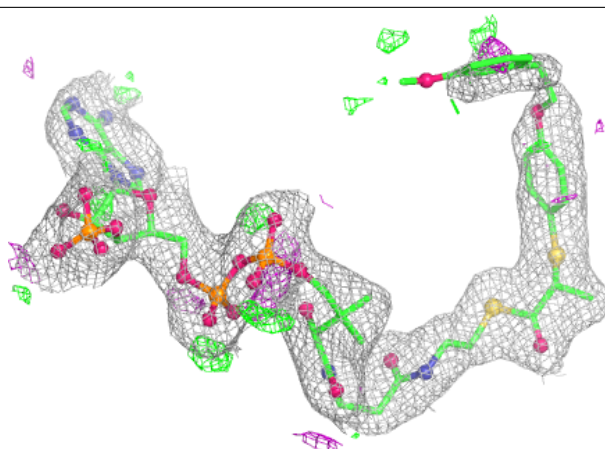
Electron density around A1JJ1 F 401:

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 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



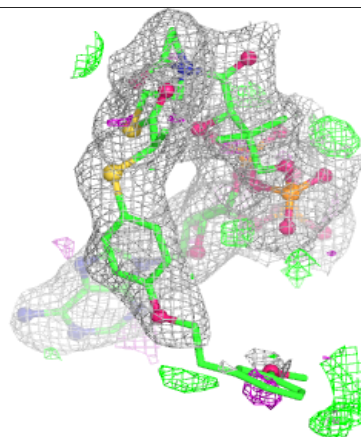
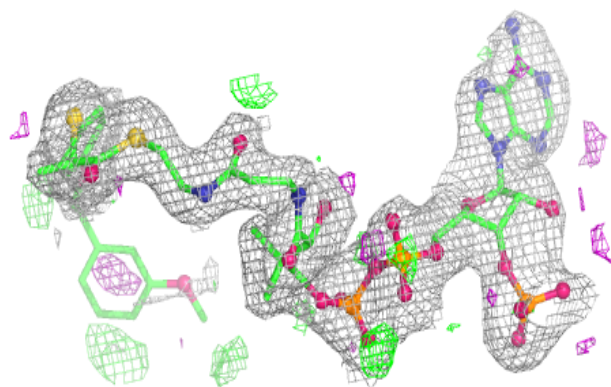
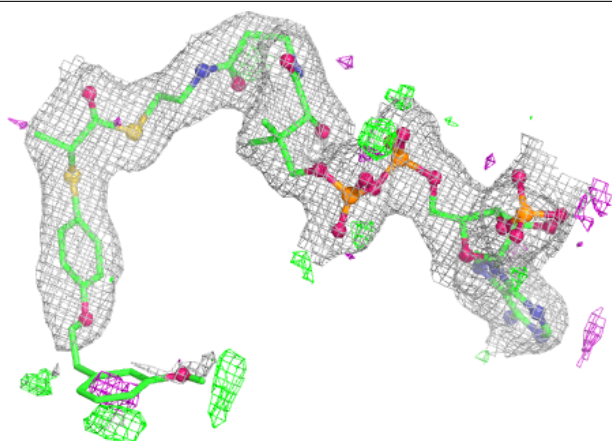
Electron density around A1JJ1 G 401:

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 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

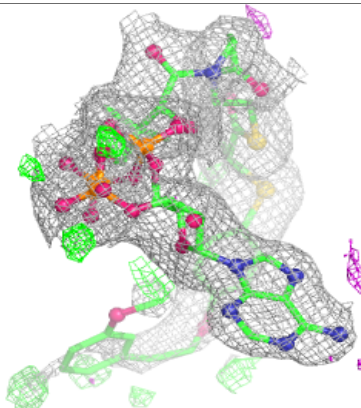
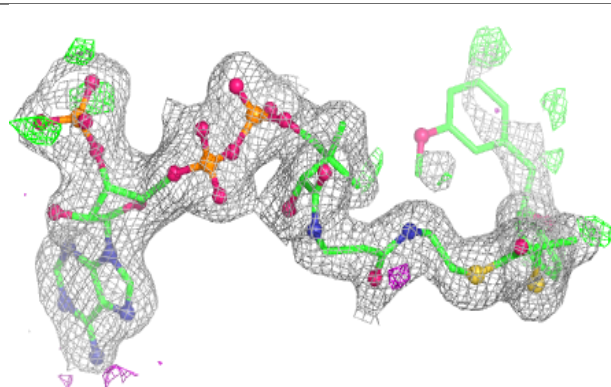
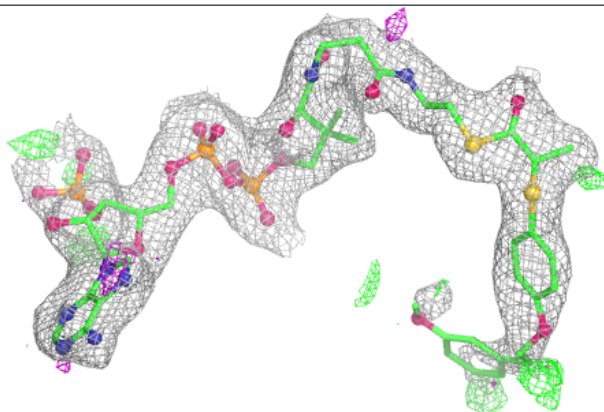


Electron density around A1JJ1 C 401:

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 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

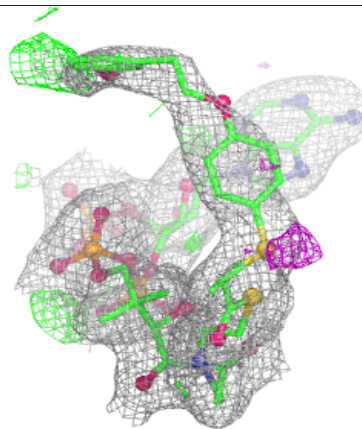
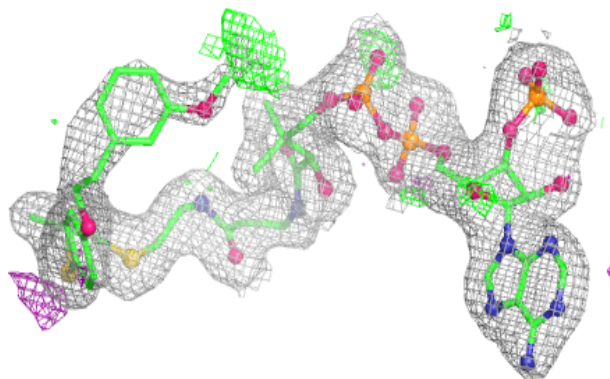
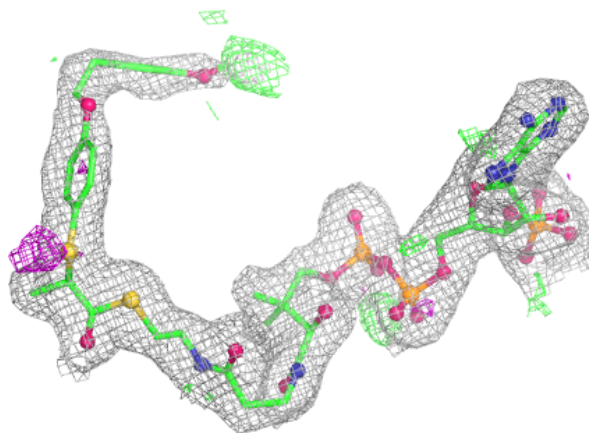
**Electron density around A1JJ1 B 401:**

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 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



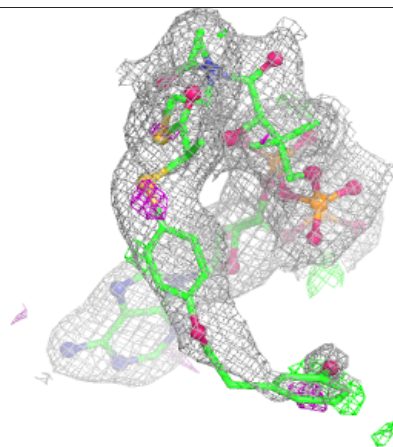
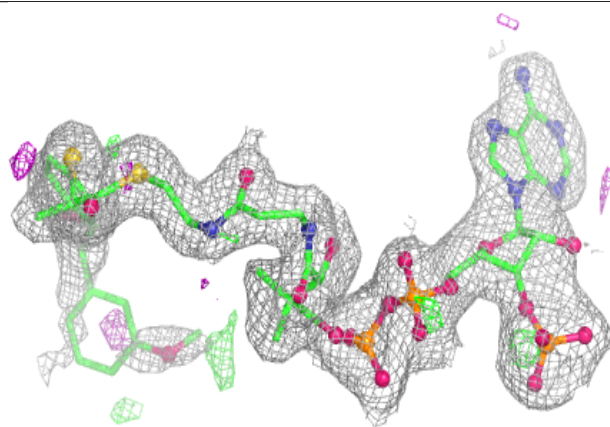
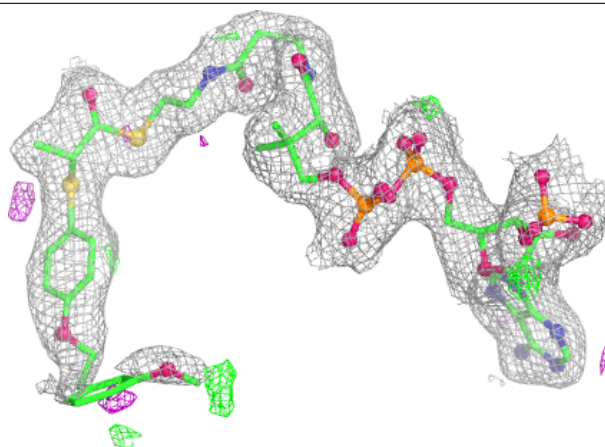
Electron density around A1JJ1 I 401:

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and green (positive)



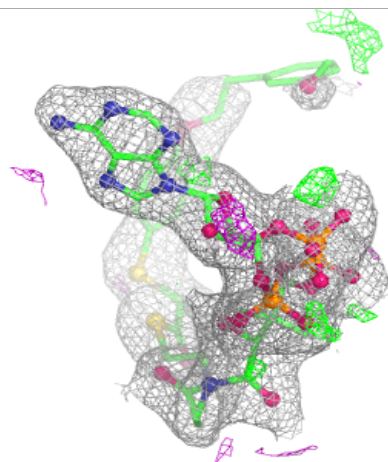
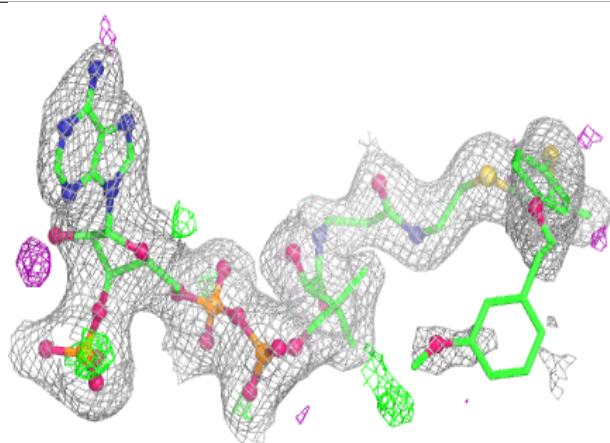
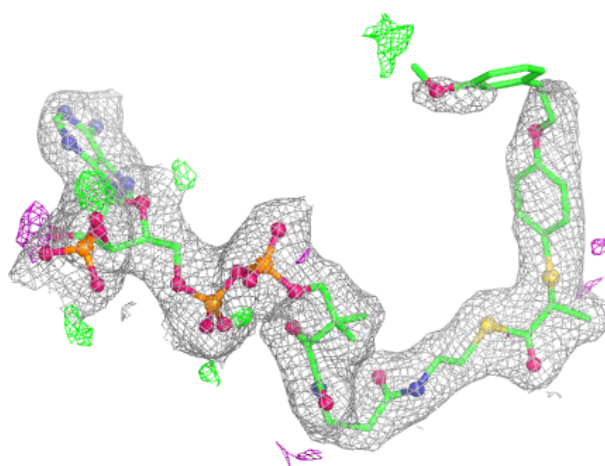
Electron density around A1JJ1 J 401:

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 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



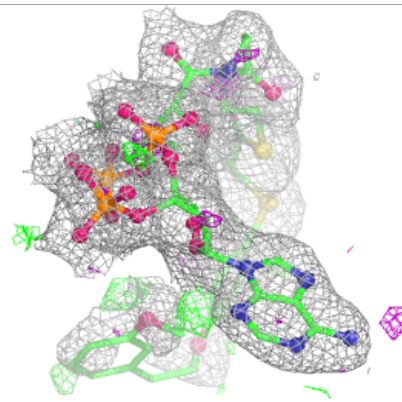
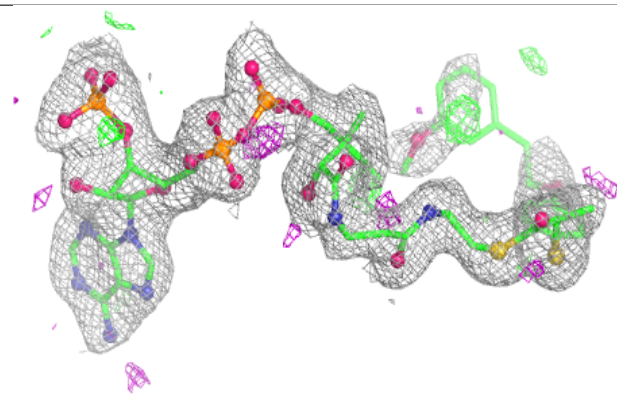
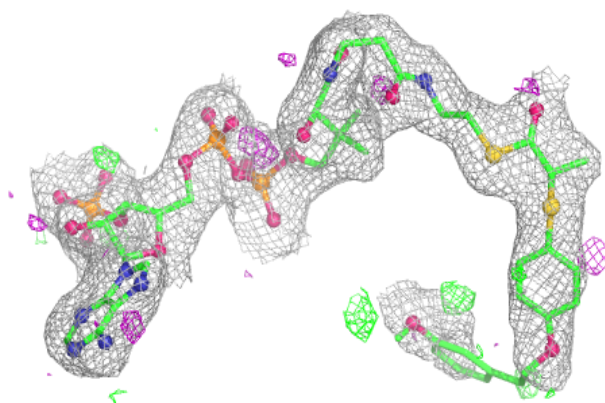
Electron density around A1JJ1 K 401:

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 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



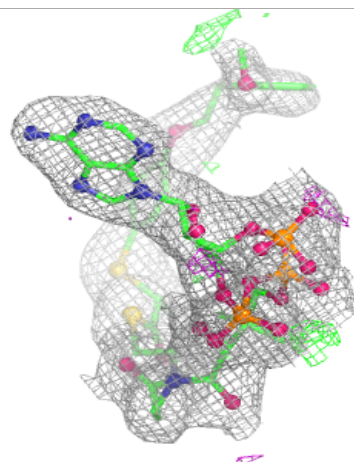
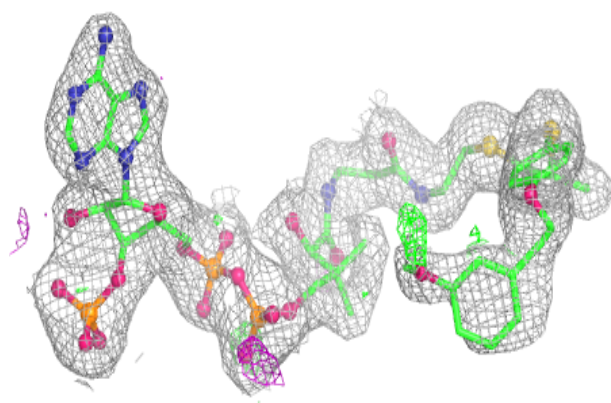
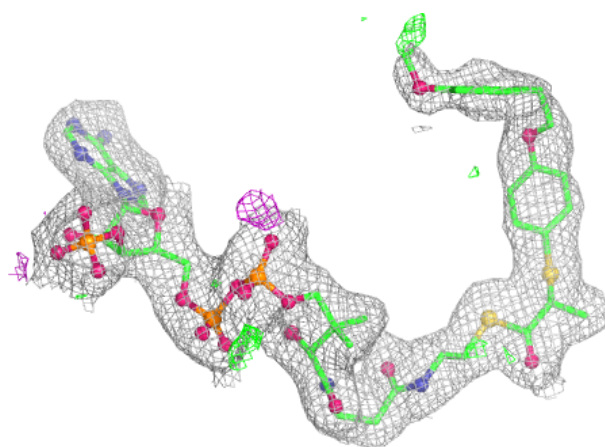
Electron density around A1JJ1 L 401:

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



Electron density around A1JJ1 D 401:

$2mF_o-DF_c$ (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.