



Full wwPDB X-ray Structure Validation Report ⓘ

Jul 20, 2026 – 02:46 pm BST

PDB ID : 9RZ7 / pdb_00009rz7
Title : Alpha-Methylacyl-CoA racemase from Mycobacterium tuberculosis in complex with 2-(3-(2-(3-Trifluoromethylphenyl)ethoxy)phenylthiol)propanoyl-CoA
Authors : Mojanaga, O.O.; Acharya, K.R.; Lloyd, M.D.
Deposited on : 2025-07-15
Resolution : 2.25 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:

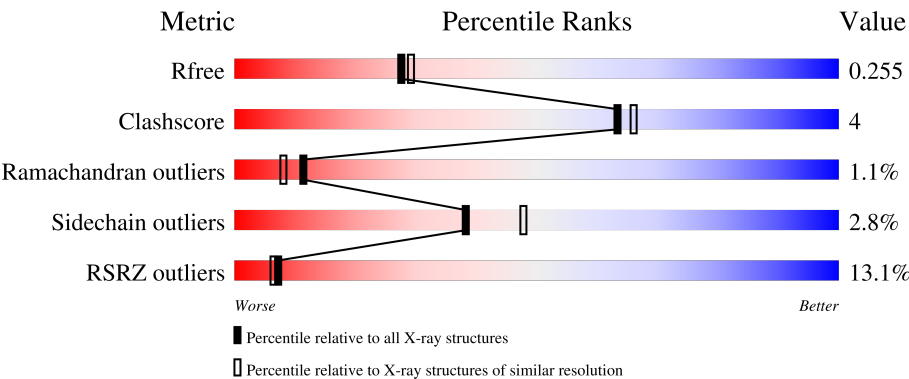
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.015 (Gargrove)
Density-Fitness	:	1.0.12
Ideal 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 2.25 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.



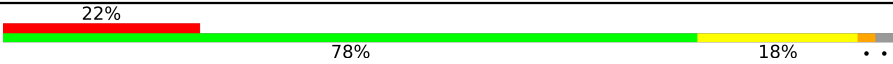
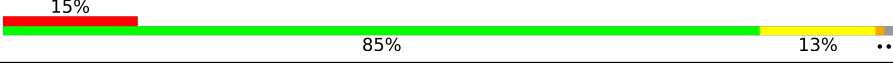
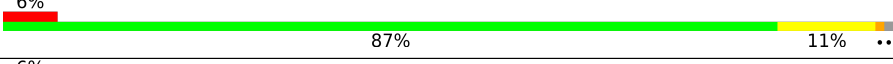
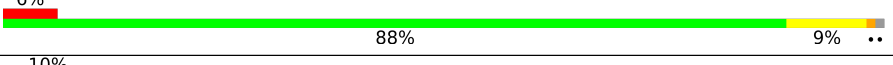
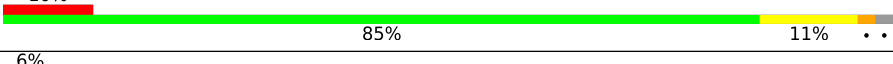
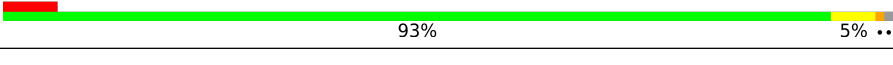
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1898 (2.26-2.26)
Clashscore	190562	2005 (2.26-2.26)
Ramachandran outliers	187476	1965 (2.26-2.26)
Sidechain outliers	187428	1966 (2.26-2.26)
RSRZ outliers	180081	1898 (2.26-2.26)

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 34250 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	359	Total	C	N	O	S	0	2	0
			2718	1704	486	512	16			
1	B	358	Total	C	N	O	S	0	1	0
			2707	1699	485	507	16			
1	C	359	Total	C	N	O	S	0	2	0
			2714	1702	486	510	16			
1	D	359	Total	C	N	O	S	0	1	0
			2715	1703	486	510	16			
1	E	355	Total	C	N	O	S	0	2	0
			2691	1687	482	506	16			
1	F	357	Total	C	N	O	S	0	2	0
			2706	1696	484	510	16			
1	G	359	Total	C	N	O	S	0	2	0
			2718	1704	486	512	16			
1	H	359	Total	C	N	O	S	0	1	0
			2715	1703	486	510	16			
1	I	359	Total	C	N	O	S	0	2	0
			2718	1704	486	512	16			
1	J	359	Total	C	N	O	S	0	2	0
			2721	1707	487	511	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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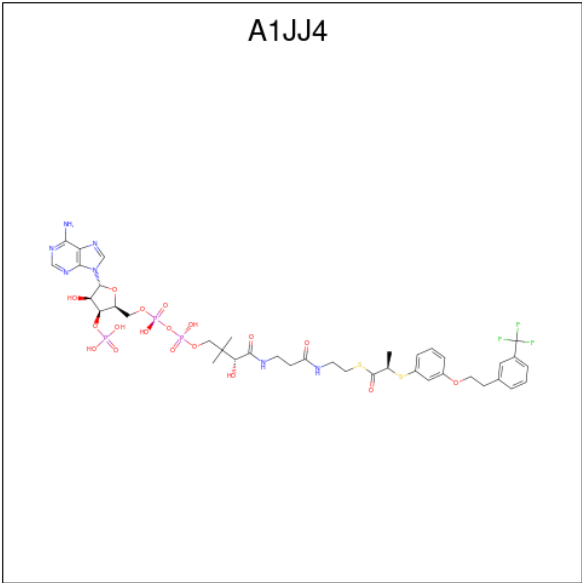
Chain	Residue	Modelled	Actual	Comment	Reference
B	362	SER	-	expression tag	UNP O06543
B	363	GLY	-	expression tag	UNP O06543
B	364	CYS	-	expression tag	UNP O06543
C	361	GLY	-	expression tag	UNP O06543
C	362	SER	-	expression tag	UNP O06543
C	363	GLY	-	expression tag	UNP O06543
C	364	CYS	-	expression tag	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-(3-(2-(3-Trifluoromethylphenyl)ethoxy)phenylthiol)propanoyl-CoA (CCD ID: A1JJ4) (formula: C₃₉H₅₁F₃N₇O₁₈P₃S₂) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms							ZeroOcc	AltConf
2	A	1	Total	C	F	N	O	P	S	0	0
			72	39	3	7	18	3	2		
2	B	1	Total	C	F	N	O	P	S	0	0
			72	39	3	7	18	3	2		
2	C	1	Total	C	F	N	O	P	S	0	0
			72	39	3	7	18	3	2		
2	D	1	Total	C	F	N	O	P	S	0	0
			72	39	3	7	18	3	2		
2	E	1	Total	C	F	N	O	P	S	0	0
			72	39	3	7	18	3	2		
2	F	1	Total	C	F	N	O	P	S	0	0
			72	39	3	7	18	3	2		
2	G	1	Total	C	F	N	O	P	S	0	0
			72	39	3	7	18	3	2		
2	H	1	Total	C	F	N	O	P	S	0	0
			72	39	3	7	18	3	2		
2	I	1	Total	C	F	N	O	P	S	0	0
			72	39	3	7	18	3	2		
2	J	1	Total	C	F	N	O	P	S	0	0
			72	39	3	7	18	3	2		

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Mol	Chain	Residues	Atoms							ZeroOcc	AltConf
2	K	1	Total	C	F	N	O	P	S	0	0
			72	39	3	7	18	3	2		
2	L	1	Total	C	F	N	O	P	S	0	0
			72	39	3	7	18	3	2		

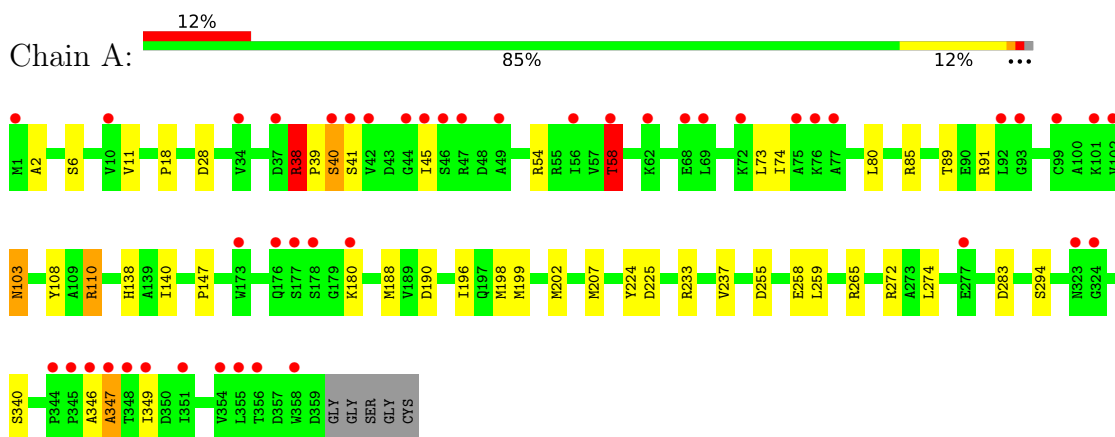
- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	68	Total	O	0	0
			68	68		
3	B	80	Total	O	0	0
			80	80		
3	C	73	Total	O	0	0
			73	73		
3	D	82	Total	O	0	0
			82	82		
3	E	66	Total	O	0	0
			66	66		
3	F	58	Total	O	0	0
			58	58		
3	G	65	Total	O	0	0
			65	65		
3	H	47	Total	O	0	0
			47	47		
3	I	75	Total	O	0	0
			75	75		
3	J	74	Total	O	0	0
			74	74		
3	K	73	Total	O	0	0
			73	73		
3	L	78	Total	O	0	0
			78	78		

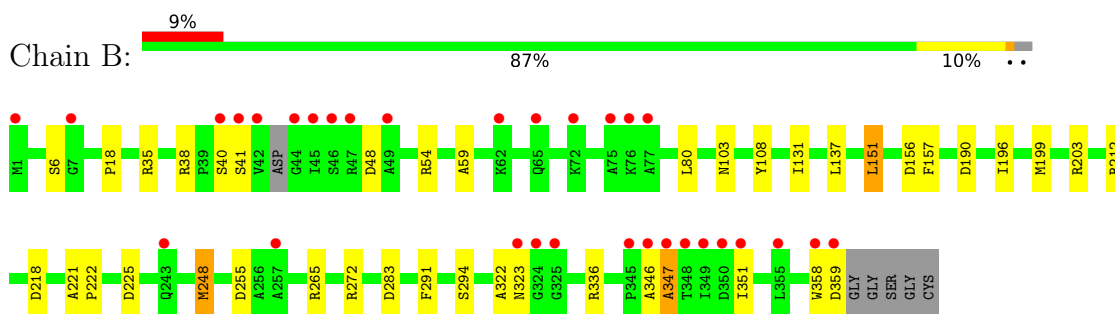
3 Residue-property plots

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.

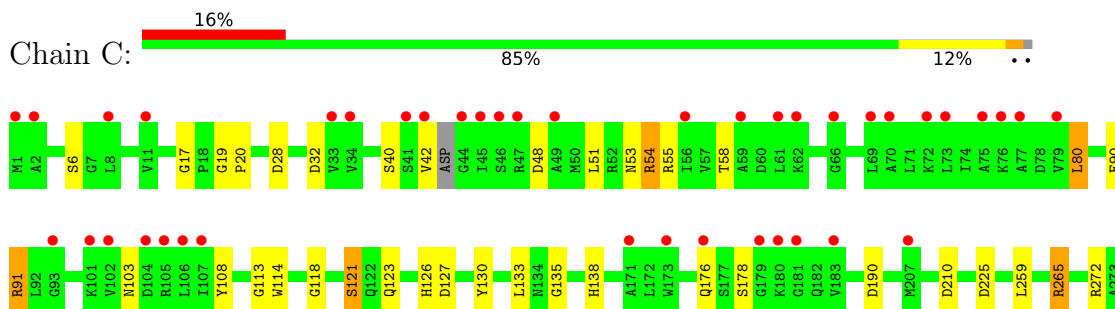
• Molecule 1: Alpha-methylacyl-CoA racemase

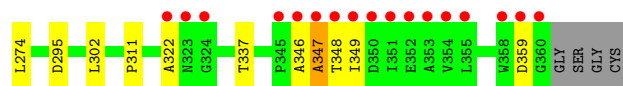


• Molecule 1: Alpha-methylacyl-CoA racemase

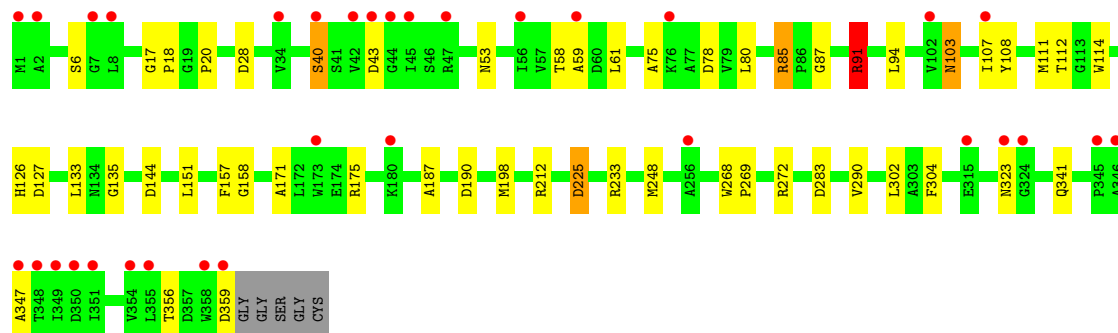
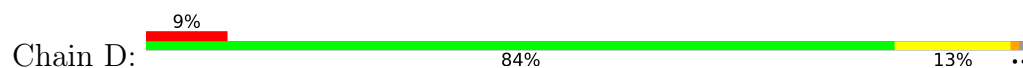


• Molecule 1: Alpha-methylacyl-CoA racemase

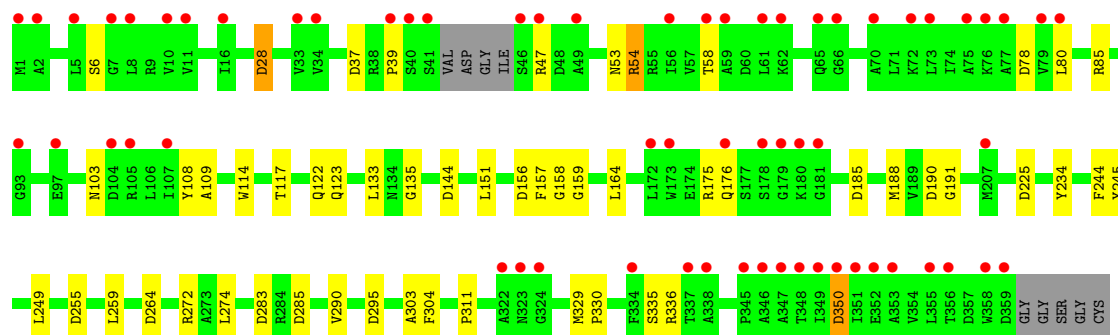
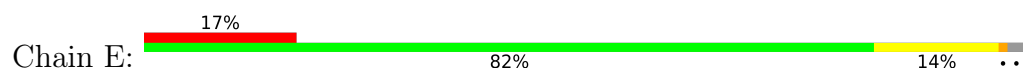




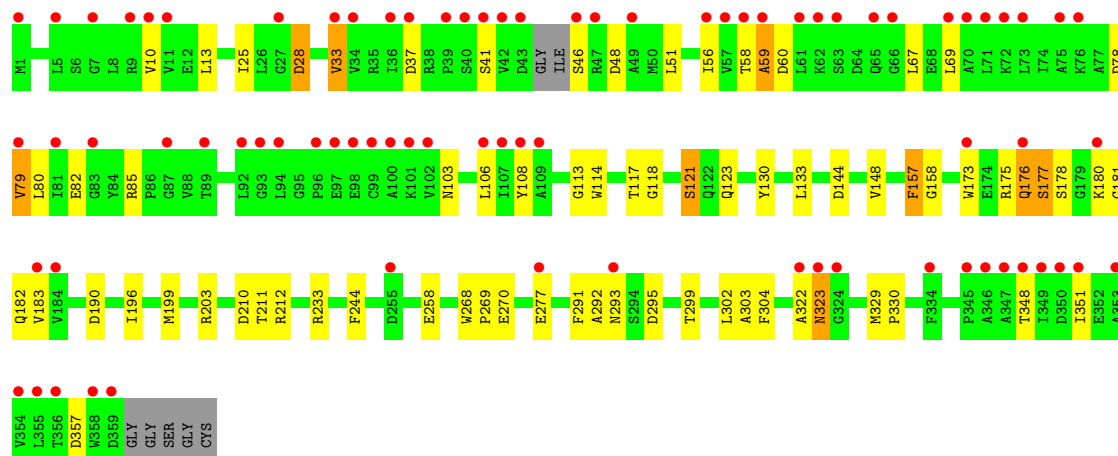
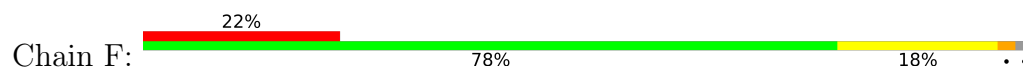
• Molecule 1: Alpha-methylacyl-CoA racemase



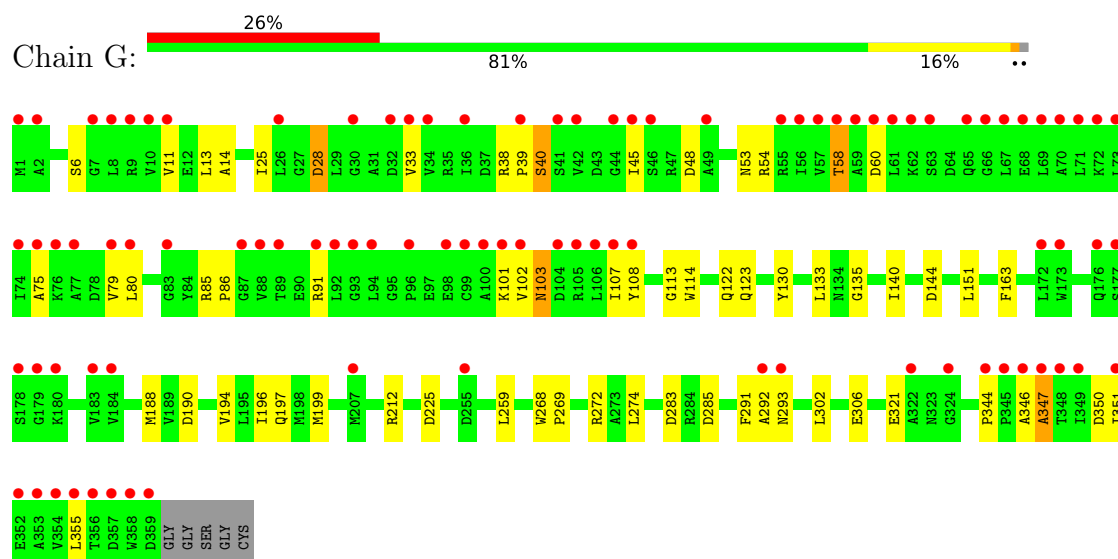
• Molecule 1: Alpha-methylacyl-CoA racemase



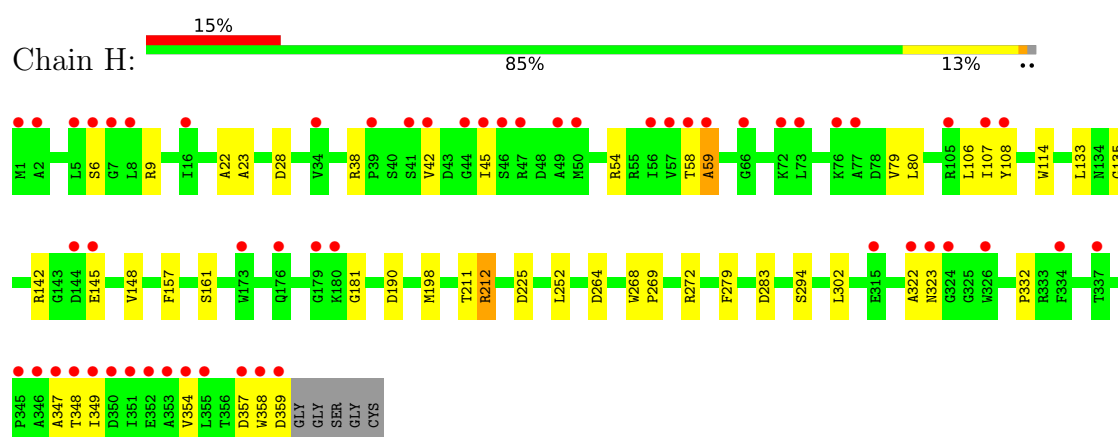
• Molecule 1: Alpha-methylacyl-CoA racemase



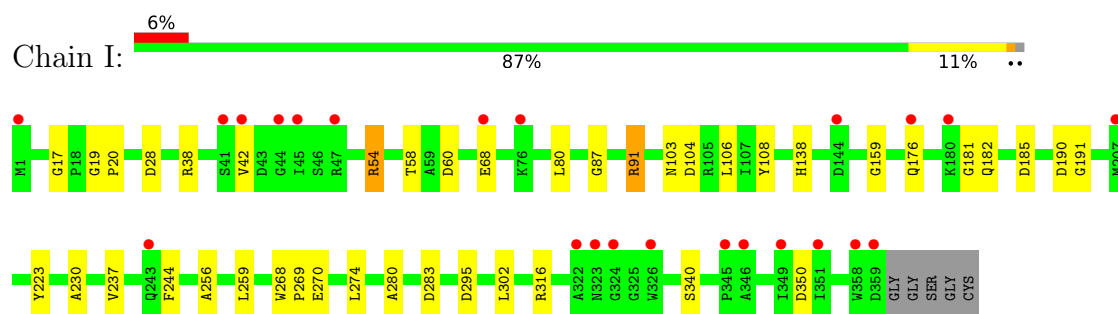
• Molecule 1: Alpha-methylacyl-CoA racemase



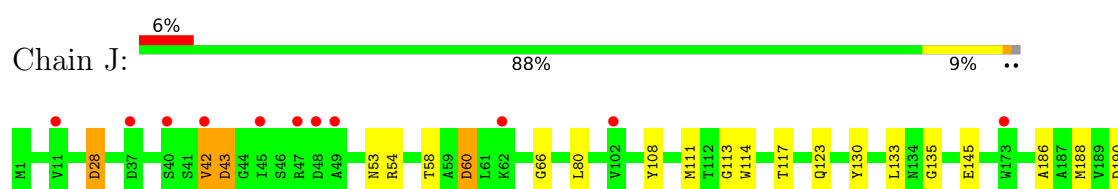
• Molecule 1: Alpha-methylacyl-CoA racemase

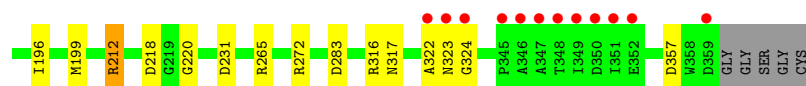


• Molecule 1: Alpha-methylacyl-CoA racemase

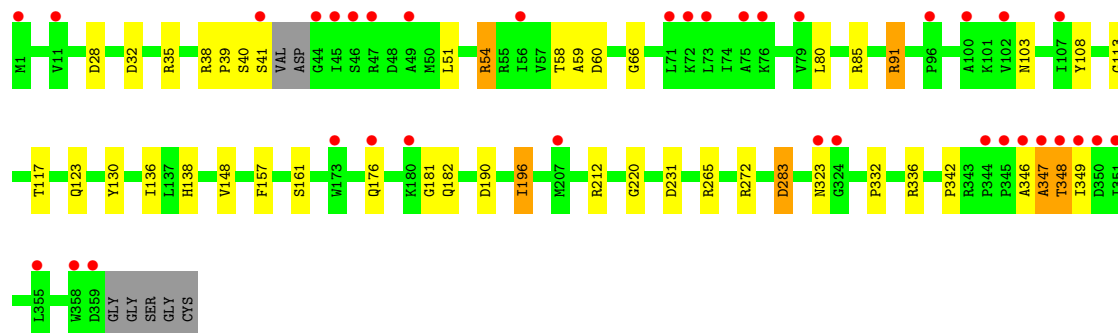
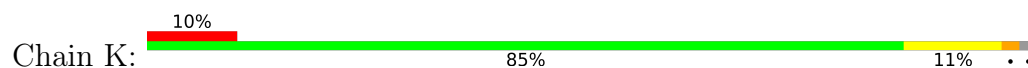


• Molecule 1: Alpha-methylacyl-CoA racemase

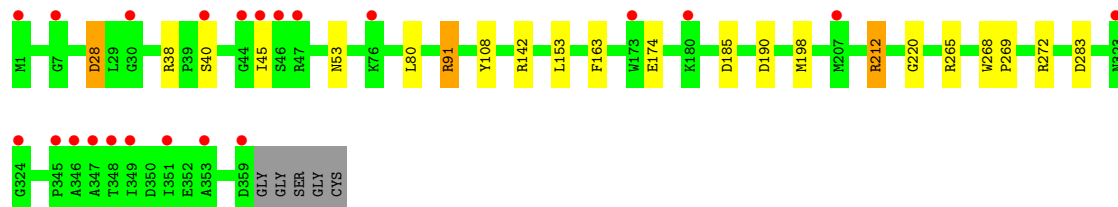




• Molecule 1: Alpha-methylacyl-CoA racemase



• 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	276.62Å 276.62Å 390.75Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	225.77 – 2.25 225.77 – 2.25	Depositor EDS
% Data completeness (in resolution range)	99.9 (225.77-2.25) 99.6 (225.77-2.25)	Depositor EDS
R_{merge}	0.29	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.39 (at 2.25Å)	Xtriage
Refinement program	REFMAC 5.8.0430 (refmacat 0.4.88)	Depositor
R, R_{free}	0.209 , 0.251 0.217 , 0.255	Depositor DCC
R_{free} test set	17783 reflections (5.05%)	wwPDB-VP
Wilson B-factor (Å ²)	43.5	Xtriage
Anisotropy	0.386	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.34 , 30.4	EDS
L-test for twinning ²	$\langle L \rangle = 0.51$, $\langle L^2 \rangle = 0.34$	Xtriage
Estimated twinning fraction	0.000 for -1/2*h+1/2*k-1/2*l,1/2*h-1/2*k-1/2*l,-h-k 0.007 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	34250	wwPDB-VP
Average B, all atoms (Å ²)	54.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.52% 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: A1JJ4

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	0/2791	1.12	8/3797 (0.2%)
1	B	0.61	0/2773	1.12	9/3771 (0.2%)
1	C	0.59	0/2786	1.08	4/3788 (0.1%)
1	D	0.60	0/2782	1.13	8/3785 (0.2%)
1	E	0.60	0/2763	1.10	10/3757 (0.3%)
1	F	0.61	0/2778	1.13	9/3778 (0.2%)
1	G	0.59	0/2791	1.11	9/3797 (0.2%)
1	H	0.59	0/2782	1.13	9/3785 (0.2%)
1	I	0.59	0/2791	1.08	8/3797 (0.2%)
1	J	0.59	0/2791	1.10	10/3797 (0.3%)
1	K	0.61	0/2784	1.11	6/3785 (0.2%)
1	L	0.61	0/2782	1.10	6/3785 (0.2%)
All	All	0.60	0/33394	1.11	96/45422 (0.2%)

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	4
1	B	0	3
1	D	0	3
1	E	0	2
1	F	0	2
1	H	0	2
1	I	0	1
1	J	0	2
1	K	0	1
1	L	0	3
All	All	0	23

There are no bond length outliers.

All (96) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	203	ARG	N-CA-CB	8.79	123.84	110.30
1	G	283	ASP	CA-CB-CG	8.62	121.22	112.60
1	B	203	ARG	CB-CA-C	-8.31	93.43	110.38
1	B	255	ASP	CB-CA-C	7.88	123.22	110.29
1	G	190	ASP	CA-CB-CG	7.38	119.98	112.60
1	D	58	THR	CA-CB-OG1	-7.31	98.64	109.60
1	E	28	ASP	CA-CB-CG	7.18	119.78	112.60
1	J	190	ASP	CA-CB-CG	7.06	119.66	112.60
1	B	190	ASP	CA-CB-CG	6.86	119.46	112.60
1	E	255	ASP	CB-CA-C	6.83	121.93	110.79
1	F	190	ASP	CA-CB-CG	6.83	119.43	112.60
1	E	190	ASP	CA-CB-CG	6.81	119.41	112.60
1	A	38	ARG	CB-CA-C	6.65	118.87	108.63
1	L	283	ASP	CA-CB-CG	6.58	119.18	112.60
1	I	104	ASP	CA-CB-CG	6.58	119.17	112.60
1	H	28	ASP	CA-CB-CG	6.56	119.16	112.60
1	L	190	ASP	CA-CB-CG	6.54	119.14	112.60
1	B	218	ASP	CA-CB-CG	6.31	118.91	112.60
1	A	147	PRO	CA-C-N	-6.31	117.84	123.33
1	A	147	PRO	C-N-CA	-6.31	117.84	123.33
1	L	185	ASP	CA-CB-CG	6.25	118.86	112.60
1	E	255	ASP	CA-CB-CG	6.19	118.79	112.60
1	I	283	ASP	CA-CB-CG	6.15	118.75	112.60
1	H	190	ASP	CA-CB-CG	6.14	118.75	112.60
1	D	91	ARG	CB-CA-C	-6.10	98.62	110.46
1	C	32	ASP	CA-CB-CG	6.08	118.68	112.60
1	L	28	ASP	CA-CB-CG	6.07	118.67	112.60
1	G	48	ASP	CA-CB-CG	6.07	118.67	112.60
1	C	123	GLN	CB-CA-C	-6.04	101.46	110.16
1	L	198	MET	CG-SD-CE	-6.04	87.62	100.90
1	J	28	ASP	CA-CB-CG	6.03	118.63	112.60
1	A	28	ASP	CA-CB-CG	6.01	118.61	112.60
1	H	283	ASP	CB-CA-C	-5.98	97.28	109.65
1	F	48	ASP	CA-CB-CG	5.97	118.57	112.60
1	C	190	ASP	CA-CB-CG	5.93	118.53	112.60
1	J	123	GLN	CB-CA-C	5.92	119.49	109.84
1	A	255	ASP	CA-CB-CG	5.88	118.48	112.60
1	A	283	ASP	CA-CB-CG	5.87	118.47	112.60
1	E	123	GLN	CB-CA-C	-5.84	100.02	109.72
1	D	341	GLN	CB-CA-C	5.82	118.40	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	G	28	ASP	CA-CB-CG	5.77	118.37	112.60
1	B	283	ASP	CA-CB-CG	5.77	118.37	112.60
1	K	190	ASP	CA-CB-CG	5.76	118.36	112.60
1	J	231	ASP	CA-CB-CG	5.76	118.36	112.60
1	B	48	ASP	CA-CB-CG	5.75	118.35	112.60
1	D	190	ASP	CA-CB-CG	5.75	118.35	112.60
1	J	54	ARG	CB-CA-C	-5.72	98.16	110.45
1	H	148	VAL	CB-CA-C	5.70	115.66	110.13
1	D	283	ASP	CA-CB-CG	5.69	118.29	112.60
1	F	28	ASP	CA-CB-CG	5.65	118.25	112.60
1	K	283	ASP	CA-CB-CG	5.64	118.24	112.60
1	E	264	ASP	CA-CB-CG	5.63	118.23	112.60
1	G	144	ASP	CA-CB-CG	5.61	118.20	112.60
1	E	285	ASP	CB-CA-C	5.57	120.03	110.79
1	B	54	ARG	CB-CA-C	-5.54	97.26	109.56
1	A	58	THR	CA-CB-OG1	-5.54	101.30	109.60
1	D	225	ASP	CA-CB-CG	5.47	118.07	112.60
1	E	283	ASP	CA-CB-CG	5.47	118.07	112.60
1	G	285	ASP	CA-CB-CG	5.45	118.05	112.60
1	B	38	ARG	CB-CA-C	5.45	116.71	108.86
1	G	212	ARG	CB-CA-C	5.44	118.59	109.89
1	I	190	ASP	CA-CB-CG	5.43	118.03	112.60
1	L	91	ARG	CB-CA-C	-5.42	101.80	110.79
1	K	28	ASP	CA-CB-CG	5.41	118.01	112.60
1	J	218	ASP	CA-CB-CG	5.39	117.99	112.60
1	H	211	THR	CA-CB-OG1	-5.38	101.52	109.60
1	I	60	ASP	CA-CB-CG	5.38	117.98	112.60
1	H	198	MET	CG-SD-CE	-5.37	89.08	100.90
1	A	190	ASP	CA-CB-CG	5.27	117.87	112.60
1	F	60	ASP	CA-CB-CG	5.27	117.87	112.60
1	J	283	ASP	CA-CB-CG	5.26	117.86	112.60
1	F	357	ASP	CA-CB-CG	5.24	117.84	112.60
1	H	264	ASP	CA-CB-CG	5.24	117.84	112.60
1	I	185	ASP	CA-CB-CG	5.23	117.83	112.60
1	F	123	GLN	N-CA-CB	-5.20	101.29	109.51
1	J	123	GLN	N-CA-CB	-5.18	101.91	109.95
1	I	28	ASP	CA-CB-CG	5.16	117.76	112.60
1	E	37	ASP	CA-CB-CG	5.14	117.74	112.60
1	F	211	THR	CA-CB-OG1	-5.12	101.92	109.60
1	D	144	ASP	CA-CB-CG	5.12	117.72	112.60
1	F	157	PHE	N-CA-CB	-5.10	101.87	110.49
1	G	60	ASP	CA-CB-CG	5.10	117.70	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	J	357	ASP	CA-CB-CG	5.10	117.70	112.60
1	K	212	ARG	CB-CA-C	5.09	118.36	109.65
1	C	48	ASP	CA-CB-CG	5.08	117.69	112.60
1	J	60	ASP	CA-CB-CG	5.08	117.68	112.60
1	H	357	ASP	CA-CB-CG	5.07	117.67	112.60
1	E	185	ASP	CA-CB-CG	5.06	117.66	112.60
1	I	283	ASP	CB-CA-C	5.06	120.88	110.40
1	F	144	ASP	CA-CB-CG	5.06	117.66	112.60
1	I	54	ARG	N-CA-CB	-5.05	102.12	111.52
1	K	32	ASP	CA-CB-CG	5.04	117.64	112.60
1	D	91	ARG	N-CA-CB	5.04	118.10	110.14
1	G	306	GLU	CB-CA-C	-5.02	101.68	110.17
1	H	54	ARG	CB-CA-C	-5.01	100.37	110.30
1	K	123	GLN	CB-CA-C	-5.01	101.88	109.89

There are no chirality outliers.

All (23) planarity outliers are listed below:

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

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	2718	0	2658	27	0
1	B	2707	0	2655	16	0
1	C	2714	0	2656	27	0
1	D	2715	0	2660	24	0
1	E	2691	0	2630	24	0
1	F	2706	0	2643	37	0
1	G	2718	0	2658	35	0
1	H	2715	0	2660	18	0
1	I	2718	0	2658	20	0
1	J	2721	0	2668	17	0
1	K	2709	0	2652	23	0
1	L	2715	0	2660	10	0
2	A	72	0	0	2	0
2	B	72	0	0	0	0
2	C	72	0	0	2	0
2	D	72	0	0	0	0
2	E	72	0	0	0	0
2	F	72	0	0	4	0
2	G	72	0	0	1	0
2	H	72	0	0	1	0
2	I	72	0	0	1	0
2	J	72	0	0	0	0
2	K	72	0	0	2	0
2	L	72	0	0	0	0
3	A	68	0	0	1	0
3	B	80	0	0	1	0
3	C	73	0	0	3	0
3	D	82	0	0	1	0
3	E	66	0	0	2	0
3	F	58	0	0	1	0
3	G	65	0	0	3	0
3	H	47	0	0	0	0
3	I	75	0	0	2	0
3	J	74	0	0	0	0
3	K	73	0	0	2	0
3	L	78	0	0	2	0
All	All	34250	0	31858	262	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 (262) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:91:ARG:HD3	3:C:569:HOH:O	1.74	0.87
1:G:80:LEU:HD23	1:G:108:TYR:CE2	2.11	0.86
1:G:259:LEU:HD22	1:G:274:LEU:HD13	1.65	0.78
1:E:78:ASP:OD1	1:E:175:ARG:NH2	2.13	0.76
1:H:79:VAL:HG22	1:H:107:ILE:HB	1.72	0.72
1:A:259:LEU:HD22	1:A:274:LEU:HD13	1.70	0.72
1:K:196:ILE:HG13	1:L:153:LEU:HD21	1.71	0.72
1:B:80:LEU:HD23	1:B:108:TYR:CE2	2.26	0.71
1:J:80:LEU:HD23	1:J:108:TYR:CE2	2.25	0.70
1:F:85:ARG:HD2	2:F:401:A1JJ4:O10	1.91	0.70
1:K:342:PRO:O	3:K:501:HOH:O	2.08	0.70
1:I:270:GLU:HG3	3:I:564:HOH:O	1.91	0.70
1:D:80:LEU:HD23	1:D:108:TYR:CE2	2.27	0.69
1:F:80:LEU:CD2	1:F:108:TYR:CE2	2.75	0.69
1:A:80:LEU:HD23	1:A:108:TYR:CE2	2.28	0.68
1:L:80:LEU:HD23	1:L:108:TYR:CE1	2.29	0.68
1:G:28:ASP:HA	1:G:53:ASN:HD22	1.59	0.67
1:I:17:GLY:O	1:I:20:PRO:HD2	1.94	0.67
1:C:80:LEU:CD2	1:C:108:TYR:CE2	2.77	0.67
1:I:259:LEU:HD22	1:I:274:LEU:HD13	1.76	0.67
1:H:225:ASP:OD2	1:H:272:ARG:NH1	2.28	0.66
1:A:346:ALA:O	1:A:347:ALA:O	2.13	0.66
1:F:85:ARG:CD	2:F:401:A1JJ4:O10	2.44	0.66
1:I:80:LEU:HD23	1:I:108:TYR:CE2	2.32	0.65
1:B:291:PHE:O	1:B:294:SER:HB3	1.96	0.65
1:F:80:LEU:HD23	1:F:108:TYR:CE2	2.32	0.65
1:G:80:LEU:CD2	1:G:108:TYR:CE2	2.80	0.65
1:E:336:ARG:O	3:E:501:HOH:O	2.15	0.64
1:E:80:LEU:HD23	1:E:108:TYR:CE2	2.33	0.64
1:E:336:ARG:NH2	1:F:180:LYS:HB2	2.13	0.64
1:K:138:HIS:HD2	3:K:540:HOH:O	1.82	0.63
1:D:80:LEU:CD2	1:D:108:TYR:CE2	2.82	0.63
1:H:80:LEU:HD23	1:H:108:TYR:CE2	2.34	0.62
1:G:259:LEU:CD2	1:G:274:LEU:HD13	2.29	0.62
1:C:80:LEU:HD22	1:C:108:TYR:CE2	2.35	0.62
1:G:28:ASP:HA	1:G:53:ASN:ND2	2.13	0.62
1:F:118:GLY:O	1:F:121:SER:OG	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:28:ASP:HA	1:C:53:ASN:HD22	1.65	0.61
1:K:332:PRO:HG3	1:L:163:PHE:O	2.01	0.61
1:J:60:ASP:O	1:J:66:GLY:HA3	2.01	0.61
1:G:38:ARG:NH1	2:G:401:A1JJ4:O13	2.35	0.60
1:C:118:GLY:O	1:C:121:SER:OG	2.18	0.59
1:C:138:HIS:HD2	3:C:539:HOH:O	1.86	0.59
1:J:322:ALA:O	1:J:324:GLY:N	2.36	0.58
1:F:58:THR:O	1:F:59:ALA:HB2	2.03	0.58
1:F:114:TRP:CZ3	1:F:133:LEU:HD22	2.39	0.58
1:A:225:ASP:OD2	1:A:272:ARG:NH1	2.37	0.57
1:C:28:ASP:HA	1:C:53:ASN:ND2	2.20	0.56
1:A:85:ARG:NH2	2:A:401:A1JJ4:O8	2.36	0.56
1:B:346:ALA:O	1:B:347:ALA:O	2.24	0.56
1:E:234:TYR:OH	3:E:502:HOH:O	2.17	0.56
1:J:80:LEU:CD2	1:J:108:TYR:CE2	2.89	0.55
1:E:157:PHE:O	1:E:158:GLY:C	2.49	0.55
1:F:270:GLU:HG3	3:F:508:HOH:O	2.06	0.55
1:H:349:ILE:HD11	1:H:354:VAL:HG22	1.89	0.55
1:C:346:ALA:O	1:C:347:ALA:O	2.25	0.54
1:J:42:VAL:O	1:J:43:ASP:HB2	2.06	0.54
1:D:28:ASP:HA	1:D:53:ASN:ND2	2.22	0.54
1:G:80:LEU:HD23	1:G:108:TYR:CD2	2.42	0.53
1:G:39:PRO:HB3	1:G:58:THR:HG23	1.90	0.53
1:F:291:PHE:O	1:F:293:ASN:N	2.42	0.53
1:A:2:ALA:HB3	1:A:340:SER:OG	2.09	0.53
1:E:245:TYR:CE2	1:E:249:LEU:HD11	2.44	0.53
1:H:58:THR:O	1:H:59:ALA:HB2	2.08	0.52
1:I:176:GLN:HE21	1:I:176:GLN:HA	1.73	0.52
1:D:78:ASP:OD1	1:D:175:ARG:NH2	2.39	0.52
1:I:91:ARG:NH2	2:I:401:A1JJ4:O18	2.43	0.52
1:J:220:GLY:O	1:J:272:ARG:NH2	2.43	0.52
1:E:259:LEU:HD22	1:E:274:LEU:HD13	1.91	0.52
1:C:176:GLN:HA	1:C:176:GLN:HE21	1.75	0.52
1:D:78:ASP:OD1	1:D:175:ARG:NH1	2.42	0.52
1:G:75:ALA:O	1:G:103:ASN:ND2	2.41	0.52
1:G:135:GLY:HA2	1:H:302:LEU:O	2.10	0.52
1:F:10:VAL:HG13	1:F:79:VAL:HG12	1.92	0.51
1:G:40:SER:OG	3:G:501:HOH:O	2.19	0.51
1:A:138:HIS:HD2	3:A:513:HOH:O	1.92	0.51
1:K:196:ILE:HG23	1:K:196:ILE:O	2.09	0.51
1:I:268:TRP:N	1:I:269:PRO:CD	2.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:85:ARG:NH1	2:F:401:A1JJ4:O8	2.44	0.51
1:K:91:ARG:NH2	2:K:401:A1JJ4:O16	2.44	0.51
1:B:225:ASP:OD2	1:B:272:ARG:NH1	2.44	0.51
1:E:114:TRP:CZ3	1:E:133:LEU:HD22	2.46	0.50
1:K:336:ARG:HH11	1:K:336:ARG:HG2	1.75	0.50
1:C:259:LEU:HD22	1:C:274:LEU:HD13	1.92	0.50
1:G:11:VAL:HG12	1:G:80:LEU:HD12	1.92	0.50
1:K:80:LEU:HD23	1:K:108:TYR:CE1	2.46	0.50
1:L:142:ARG:O	1:L:212:ARG:HD2	2.12	0.50
1:A:198:MET:HE3	1:B:157:PHE:HZ	1.77	0.50
1:I:138:HIS:HD2	3:I:534:HOH:O	1.95	0.50
1:G:11:VAL:HG12	1:G:80:LEU:CD1	2.42	0.49
1:I:80:LEU:CD2	1:I:108:TYR:CE2	2.95	0.49
1:C:265:ARG:NH1	3:C:501:HOH:O	2.35	0.49
1:B:40:SER:OG	3:B:501:HOH:O	2.19	0.49
1:A:346:ALA:O	1:A:347:ALA:C	2.55	0.49
1:H:114:TRP:CZ3	1:H:133:LEU:HD22	2.48	0.49
2:H:401:A1JJ4:O4	2:H:401:A1JJ4:C28	2.60	0.49
1:K:136:ILE:HG12	1:K:196:ILE:HD12	1.95	0.49
1:B:80:LEU:CD2	1:B:108:TYR:CE2	2.95	0.48
1:G:102:VAL:O	1:G:103:ASN:HB2	2.12	0.48
1:I:230:ALA:HB2	1:I:280:ALA:O	2.14	0.48
1:E:28:ASP:HA	1:E:53:ASN:ND2	2.28	0.48
1:F:69:LEU:HD13	1:F:351:ILE:HG23	1.96	0.48
1:F:181:GLY:O	1:F:182:GLN:HB3	2.13	0.48
1:A:39:PRO:O	1:A:41:SER:N	2.46	0.48
1:F:113:GLY:HA3	1:F:130:TYR:CE1	2.48	0.48
1:C:90:GLU:OE1	1:C:90:GLU:N	2.40	0.48
1:G:113:GLY:HA3	1:G:130:TYR:CZ	2.49	0.48
1:G:163:PHE:O	1:H:332:PRO:HG3	2.14	0.48
1:J:111:MET:HE3	1:J:186:ALA:O	2.13	0.48
1:C:295:ASP:CG	1:D:85:ARG:HH22	2.21	0.47
1:E:39:PRO:HA	1:E:58:THR:HG23	1.96	0.47
1:D:17:GLY:O	1:D:20:PRO:HD2	2.15	0.47
1:D:268:TRP:N	1:D:269:PRO:CD	2.77	0.47
1:H:157:PHE:HA	1:H:161:SER:OG	2.14	0.47
1:F:85:ARG:HD3	2:F:401:A1JJ4:O10	2.15	0.47
1:G:79:VAL:HG22	1:G:107:ILE:HB	1.96	0.47
1:H:347:ALA:O	1:H:349:ILE:HG23	2.15	0.47
1:J:145:GLU:O	1:J:212:ARG:NH2	2.48	0.47
1:F:196:ILE:HG12	1:F:199:MET:HB2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:225:ASP:OD2	1:D:272:ARG:NH1	2.44	0.46
1:K:346:ALA:O	1:K:347:ALA:O	2.34	0.46
1:E:244:PHE:HB3	1:E:295:ASP:O	2.15	0.46
1:F:113:GLY:HA3	1:F:130:TYR:CZ	2.51	0.46
1:I:159:GLY:O	1:I:191:GLY:HA3	2.15	0.46
1:A:198:MET:HG2	1:A:202:MET:CE	2.44	0.46
1:C:113:GLY:HA3	1:C:130:TYR:CE1	2.51	0.46
1:C:225:ASP:OD2	1:C:272:ARG:NH1	2.48	0.46
1:I:87:GLY:O	1:I:91:ARG:HG3	2.16	0.46
1:J:113:GLY:HA2	1:J:188:MET:HB2	1.97	0.46
1:A:199:MET:HE3	1:A:202:MET:HE3	1.98	0.46
1:I:302:LEU:O	1:J:135:GLY:HA2	2.15	0.46
1:C:19:GLY:N	1:C:20:PRO:CD	2.79	0.46
1:E:303:ALA:O	1:E:304:PHE:C	2.57	0.46
1:H:268:TRP:N	1:H:269:PRO:CD	2.79	0.46
1:K:113:GLY:HA3	1:K:130:TYR:CZ	2.51	0.45
1:C:17:GLY:O	1:C:20:PRO:HD2	2.16	0.45
1:F:80:LEU:HD23	1:F:108:TYR:CD2	2.50	0.45
1:G:344:PRO:O	3:G:502:HOH:O	2.20	0.45
1:J:113:GLY:HA3	1:J:130:TYR:CE1	2.50	0.45
1:E:225:ASP:OD2	1:E:272:ARG:NH1	2.50	0.45
1:C:51:LEU:HA	1:C:54:ARG:NH1	2.31	0.45
1:J:114:TRP:CZ3	1:J:133:LEU:HD22	2.52	0.45
1:E:336:ARG:HG2	1:E:336:ARG:HH11	1.81	0.45
1:H:22:ALA:O	1:H:23:ALA:C	2.59	0.45
1:L:272:ARG:NH2	3:L:501:HOH:O	2.39	0.45
1:A:180:LYS:O	1:B:336:ARG:NH2	2.50	0.45
1:C:113:GLY:HA3	1:C:130:TYR:CZ	2.52	0.45
1:E:28:ASP:HA	1:E:53:ASN:HD22	1.81	0.45
1:G:113:GLY:HA3	1:G:130:TYR:CE1	2.52	0.45
1:I:316:ARG:HD2	1:J:117:THR:O	2.17	0.45
1:A:224:TYR:HA	1:A:237:VAL:O	2.17	0.45
1:G:351:ILE:O	1:G:355:LEU:HD12	2.17	0.45
1:H:80:LEU:CD2	1:H:108:TYR:CE2	3.00	0.45
1:B:18:PRO:HB3	1:B:156:ASP:O	2.17	0.44
1:F:10:VAL:HB	1:F:33:VAL:HG13	2.00	0.44
1:G:302:LEU:O	1:H:135:GLY:HA2	2.17	0.44
1:J:42:VAL:HG13	1:J:43:ASP:H	1.81	0.44
1:D:107:ILE:HD12	1:D:171:ALA:HB1	1.99	0.44
1:F:13:LEU:HD12	1:F:82:GLU:HB3	1.98	0.44
1:K:181:GLY:O	1:K:182:GLN:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:316:ARG:O	1:J:317:ASN:C	2.60	0.44
1:C:210:ASP:OD1	1:D:304:PHE:HB2	2.16	0.44
1:A:18:PRO:HG3	1:A:188:MET:HE2	1.98	0.44
1:B:196:ILE:HG12	1:B:199:MET:HB2	2.00	0.44
1:F:46:SER:HB3	1:F:51:LEU:HD12	1.99	0.44
1:A:103:ASN:C	1:A:103:ASN:OD1	2.60	0.44
1:F:157:PHE:O	1:F:158:GLY:C	2.61	0.44
1:J:28:ASP:HA	1:J:53:ASN:ND2	2.33	0.44
1:K:80:LEU:CD2	1:K:108:TYR:CE1	3.01	0.44
1:F:106:LEU:O	1:F:181:GLY:HA3	2.18	0.44
1:J:196:ILE:HG12	1:J:199:MET:HB2	2.00	0.44
1:K:39:PRO:CA	1:K:58:THR:HG23	2.47	0.44
1:C:347:ALA:O	1:C:348:THR:C	2.60	0.43
1:F:25:ILE:O	1:F:28:ASP:HB2	2.18	0.43
1:A:89:THR:OG1	1:A:110:ARG:NH2	2.51	0.43
1:K:231:ASP:CG	1:K:283:ASP:HB2	2.43	0.43
1:C:302:LEU:O	1:D:135:GLY:HA2	2.17	0.43
1:K:220:GLY:O	1:K:272:ARG:NH2	2.51	0.43
1:F:203:ARG:HH11	1:F:210:ASP:CG	2.26	0.43
1:L:272:ARG:NE	3:L:501:HOH:O	2.36	0.43
1:A:196:ILE:HG12	1:A:199:MET:HB2	2.00	0.43
1:E:85:ARG:NH1	1:E:122:GLN:O	2.47	0.43
1:I:181:GLY:O	1:I:182:GLN:HB3	2.18	0.43
1:E:176:GLN:HG3	1:F:176:GLN:NE2	2.33	0.43
1:G:13:LEU:O	1:G:14:ALA:C	2.61	0.43
1:G:25:ILE:O	1:G:28:ASP:HB2	2.18	0.43
1:K:346:ALA:O	1:K:347:ALA:C	2.61	0.43
1:E:156:ASP:HA	1:E:188:MET:SD	2.59	0.43
1:F:67:LEU:HD12	1:F:67:LEU:O	2.19	0.43
1:L:220:GLY:O	1:L:272:ARG:NH2	2.52	0.43
1:I:223:TYR:O	1:I:237:VAL:HG12	2.18	0.43
1:K:60:ASP:O	1:K:66:GLY:HA3	2.18	0.43
1:A:11:VAL:HG12	1:A:80:LEU:HD12	2.00	0.43
1:F:303:ALA:O	1:F:304:PHE:C	2.62	0.42
1:I:244:PHE:CD1	1:I:295:ASP:HB3	2.54	0.42
1:A:73:LEU:O	1:A:74:ILE:C	2.61	0.42
1:E:135:GLY:HA2	1:F:302:LEU:O	2.19	0.42
1:G:113:GLY:HA2	1:G:188:MET:HB2	2.00	0.42
1:G:114:TRP:CZ3	1:G:133:LEU:HD22	2.54	0.42
1:K:39:PRO:HB3	1:K:58:THR:CG2	2.49	0.42
1:I:106:LEU:O	1:I:181:GLY:HA3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:157:PHE:HA	1:K:161:SER:OG	2.18	0.42
1:L:268:TRP:N	1:L:269:PRO:CD	2.83	0.42
1:A:198:MET:SD	1:A:202:MET:CE	3.08	0.42
1:F:177:SER:O	1:F:177:SER:OG	2.32	0.42
1:E:109:ALA:HB1	1:E:164:LEU:HD11	2.02	0.42
1:C:91:ARG:NH2	2:C:401:A1JJ4:O16	2.52	0.42
1:B:336:ARG:HH11	1:B:336:ARG:HG2	1.84	0.42
1:F:268:TRP:N	1:F:269:PRO:CD	2.83	0.42
1:K:51:LEU:HA	1:K:54:ARG:NH1	2.35	0.42
1:E:47:ARG:HH21	1:E:47:ARG:HG2	1.84	0.41
1:G:225:ASP:OD2	1:G:272:ARG:NH1	2.52	0.41
1:H:142:ARG:O	1:H:212:ARG:HD2	2.20	0.41
1:A:140:ILE:CD1	1:B:151:LEU:HG	2.50	0.41
1:G:85:ARG:NH1	1:G:122:GLN:O	2.48	0.41
1:L:28:ASP:HA	1:L:53:ASN:HD22	1.84	0.41
1:B:358:TRP:O	1:B:359:ASP:HB2	2.20	0.41
1:C:135:GLY:HA2	1:D:302:LEU:O	2.20	0.41
1:D:18:PRO:HB2	1:D:111:MET:HG2	2.02	0.41
1:D:112:THR:O	1:D:187:ALA:HA	2.20	0.41
1:I:19:GLY:N	1:I:20:PRO:CD	2.84	0.41
1:K:85:ARG:NH2	2:K:401:A1JJ4:O7	2.36	0.41
1:A:91:ARG:NH2	2:A:401:A1JJ4:O18	2.53	0.41
1:D:356:THR:O	1:D:359:ASP:C	2.64	0.41
1:A:39:PRO:C	1:A:41:SER:N	2.79	0.41
1:C:126:HIS:O	1:C:127:ASP:C	2.64	0.41
1:D:40:SER:OG	3:D:501:HOH:O	2.21	0.41
1:D:87:GLY:O	1:D:91:ARG:HG3	2.21	0.41
1:F:78:ASP:OD1	1:F:175:ARG:NH2	2.43	0.41
1:G:196:ILE:HG12	1:G:199:MET:HB2	2.02	0.41
1:H:106:LEU:O	1:H:181:GLY:HA3	2.21	0.41
1:L:174:GLU:OE1	1:L:174:GLU:C	2.64	0.41
1:A:80:LEU:CD2	1:A:108:TYR:CE2	3.00	0.41
1:D:75:ALA:HA	1:D:103:ASN:HB2	2.02	0.41
1:H:358:TRP:O	1:H:359:ASP:C	2.64	0.41
1:B:221:ALA:HA	1:B:222:PRO:HD3	1.89	0.41
1:B:248:MET:HE3	1:B:248:MET:HB3	1.95	0.41
1:E:159:GLY:O	1:E:191:GLY:HA3	2.21	0.41
1:E:329:MET:HE3	1:E:330:PRO:HD2	2.03	0.41
1:F:58:THR:O	1:F:59:ALA:CB	2.69	0.41
1:G:123:GLN:CD	3:G:548:HOH:O	2.64	0.41
1:G:194:VAL:O	1:G:197:GLN:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:131:ILE:HG13	1:B:137:LEU:HB2	2.03	0.41
1:C:55:ARG:HD2	1:C:349:ILE:HD12	2.03	0.41
1:F:322:ALA:O	1:F:323:ASN:HB3	2.21	0.41
1:F:329:MET:HE3	1:F:330:PRO:HD2	2.03	0.41
1:G:85:ARG:HB3	1:G:86:PRO:HD2	2.03	0.41
1:D:157:PHE:O	1:D:158:GLY:C	2.63	0.40
1:G:268:TRP:N	1:G:269:PRO:CD	2.84	0.40
1:G:346:ALA:O	1:G:347:ALA:C	2.64	0.40
1:D:61:LEU:HD22	1:D:94:LEU:HD11	2.03	0.40
1:D:114:TRP:CZ3	1:D:133:LEU:HD22	2.56	0.40
1:D:126:HIS:O	1:D:127:ASP:C	2.63	0.40
1:F:244:PHE:HB3	1:F:295:ASP:O	2.22	0.40
1:H:252:LEU:HD21	1:H:279:PHE:CE1	2.56	0.40
1:A:39:PRO:O	1:A:40:SER:C	2.64	0.40
1:C:114:TRP:CZ3	1:C:133:LEU:HD22	2.55	0.40
2:C:401:A1JJ4:C17	1:D:198:MET:HE1	2.52	0.40
1:G:291:PHE:O	1:G:292:ALA:C	2.64	0.40
1:A:39:PRO:HB3	1:A:58:THR:HG23	2.04	0.40
1:I:80:LEU:HD23	1:I:108:TYR:CD2	2.56	0.40
1:K:347:ALA:O	1:K:348:THR:C	2.63	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	359/364 (99%)	332 (92%)	24 (7%)	3 (1%)	16	14
1	B	355/364 (98%)	333 (94%)	17 (5%)	5 (1%)	9	5
1	C	357/364 (98%)	336 (94%)	16 (4%)	5 (1%)	9	5
1	D	358/364 (98%)	333 (93%)	19 (5%)	6 (2%)	7	3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	E	353/364 (97%)	331 (94%)	20 (6%)	2 (1%)	21	21
1	F	355/364 (98%)	321 (90%)	27 (8%)	7 (2%)	6	3
1	G	359/364 (99%)	318 (89%)	36 (10%)	5 (1%)	9	5
1	H	358/364 (98%)	331 (92%)	24 (7%)	3 (1%)	16	14
1	I	359/364 (99%)	341 (95%)	16 (4%)	2 (1%)	21	21
1	J	359/364 (99%)	333 (93%)	23 (6%)	3 (1%)	16	14
1	K	356/364 (98%)	334 (94%)	17 (5%)	5 (1%)	9	5
1	L	358/364 (98%)	341 (95%)	17 (5%)	0	100	100
All	All	4286/4368 (98%)	3984 (93%)	256 (6%)	46 (1%)	11	8

All (46) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	40	SER
1	A	103	ASN
1	A	347	ALA
1	B	347	ALA
1	C	347	ALA
1	D	103	ASN
1	F	59	ALA
1	F	103	ASN
1	F	292	ALA
1	G	103	ASN
1	G	347	ALA
1	J	323	ASN
1	K	347	ALA
1	B	323	ASN
1	C	103	ASN
1	D	43	ASP
1	E	103	ASN
1	F	323	ASN
1	F	348	THR
1	H	59	ALA
1	H	348	THR
1	J	43	ASP
1	K	103	ASN
1	B	103	ASN
1	B	151	LEU
1	C	322	ALA

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Mol	Chain	Res	Type
1	D	347	ALA
1	F	41	SER
1	F	178	SER
1	G	45	ILE
1	I	103	ASN
1	J	42	VAL
1	C	359	ASP
1	D	151	LEU
1	D	323	ASN
1	E	151	LEU
1	K	348	THR
1	B	59	ALA
1	C	178	SER
1	D	59	ALA
1	G	151	LEU
1	I	256	ALA
1	K	59	ALA
1	K	323	ASN
1	G	101	LYS
1	H	45	ILE

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	277/277 (100%)	268 (97%)	9 (3%)	34	43
1	B	275/277 (99%)	270 (98%)	5 (2%)	51	63
1	C	276/277 (100%)	265 (96%)	11 (4%)	28	34
1	D	276/277 (100%)	271 (98%)	5 (2%)	51	63
1	E	274/277 (99%)	266 (97%)	8 (3%)	37	47
1	F	276/277 (100%)	262 (95%)	14 (5%)	21	23
1	G	277/277 (100%)	267 (96%)	10 (4%)	31	39
1	H	276/277 (100%)	269 (98%)	7 (2%)	42	52

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	I	277/277 (100%)	270 (98%)	7 (2%)	42	52
1	J	277/277 (100%)	276 (100%)	1 (0%)	84	89
1	K	276/277 (100%)	265 (96%)	11 (4%)	28	34
1	L	276/277 (100%)	273 (99%)	3 (1%)	65	75
All	All	3313/3324 (100%)	3222 (97%)	91 (3%)	38	49

All (91) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	6	SER
1	A	38	ARG
1	A	45	ILE
1	A	54	ARG
1	A	58	THR
1	A	207	MET
1	A	258	GLU
1	A	294	SER
1	A	349	ILE
1	B	6	SER
1	B	41	SER
1	B	248	MET
1	B	265	ARG
1	B	351	ILE
1	C	6	SER
1	C	40	SER
1	C	42	VAL
1	C	54	ARG
1	C	58	THR
1	C	80	LEU
1	C	91	ARG
1	C	121	SER
1	C	265	ARG
1	C	311	PRO
1	C	337	THR
1	D	6	SER
1	D	40	SER
1	D	85	ARG
1	D	248	MET
1	D	290	VAL
1	E	6	SER
1	E	54	ARG

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Mol	Chain	Res	Type
1	E	117	THR
1	E	144	ASP
1	E	290	VAL
1	E	311	PRO
1	E	335	SER
1	E	350	ASP
1	F	33	VAL
1	F	37	ASP
1	F	56	ILE
1	F	79	VAL
1	F	117	THR
1	F	121	SER
1	F	148	VAL
1	F	173	TRP
1	F	176	GLN
1	F	177	SER
1	F	183	VAL
1	F	258	GLU
1	F	277	GLU
1	F	299	THR
1	G	6	SER
1	G	33	VAL
1	G	40	SER
1	G	54	ARG
1	G	58	THR
1	G	91	ARG
1	G	140	ILE
1	G	293	ASN
1	G	321	GLU
1	G	350	ASP
1	H	6	SER
1	H	9	ARG
1	H	38	ARG
1	H	42	VAL
1	H	145	GLU
1	H	294	SER
1	H	323	ASN
1	I	42	VAL
1	I	54	ARG
1	I	58	THR
1	I	68	GLU
1	I	91	ARG

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Mol	Chain	Res	Type
1	I	340	SER
1	I	350	ASP
1	J	58	THR
1	K	38	ARG
1	K	40	SER
1	K	41	SER
1	K	54	ARG
1	K	91	ARG
1	K	117	THR
1	K	148	VAL
1	K	176	GLN
1	K	196	ILE
1	K	265	ARG
1	K	349	ILE
1	L	38	ARG
1	L	40	SER
1	L	45	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (50) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	138	HIS
1	A	176	GLN
1	A	263	ASN
1	A	282	HIS
1	A	286	HIS
1	A	327	GLN
1	B	323	ASN
1	C	138	HIS
1	C	176	GLN
1	C	263	ASN
1	C	286	HIS
1	C	327	GLN
1	D	282	HIS
1	E	123	GLN
1	E	176	GLN
1	E	293	ASN
1	E	308	HIS
1	F	176	GLN
1	F	282	HIS
1	F	286	HIS
1	F	293	ASN

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Mol	Chain	Res	Type
1	F	323	ASN
1	G	116	GLN
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	323	ASN
1	G	327	GLN
1	H	116	GLN
1	H	286	HIS
1	I	122	GLN
1	I	138	HIS
1	I	176	GLN
1	I	263	ASN
1	I	327	GLN
1	J	122	GLN
1	J	176	GLN
1	J	286	HIS
1	J	308	HIS
1	J	323	ASN
1	K	138	HIS
1	K	197	GLN
1	K	327	GLN
1	L	176	GLN
1	L	286	HIS
1	L	293	ASN
1	L	308	HIS

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry

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	A1JJ4	D	401	-	70,76,76	0.62	1 (1%)	97,112,112	1.13	6 (6%)
2	A1JJ4	E	401	-	70,76,76	0.70	3 (4%)	97,112,112	1.09	7 (7%)
2	A1JJ4	A	401	-	70,76,76	0.58	1 (1%)	97,112,112	1.12	6 (6%)
2	A1JJ4	F	401	-	70,76,76	0.76	3 (4%)	97,112,112	1.13	8 (8%)
2	A1JJ4	L	401	-	70,76,76	0.70	2 (2%)	97,112,112	1.09	6 (6%)
2	A1JJ4	K	401	-	70,76,76	0.64	2 (2%)	97,112,112	1.26	9 (9%)
2	A1JJ4	B	401	-	70,76,76	0.69	2 (2%)	97,112,112	0.99	5 (5%)
2	A1JJ4	G	401	-	70,76,76	0.57	2 (2%)	97,112,112	1.19	9 (9%)
2	A1JJ4	H	401	-	70,76,76	0.85	3 (4%)	97,112,112	1.02	7 (7%)
2	A1JJ4	I	401	-	70,76,76	0.74	3 (4%)	97,112,112	1.09	7 (7%)
2	A1JJ4	J	401	-	70,76,76	0.64	1 (1%)	97,112,112	1.07	7 (7%)
2	A1JJ4	C	401	-	70,76,76	0.66	1 (1%)	97,112,112	1.19	10 (10%)

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	A1JJ4	D	401	-	-	11/70/87/87	0/5/5/5
2	A1JJ4	E	401	-	-	25/70/87/87	0/5/5/5
2	A1JJ4	A	401	-	-	18/70/87/87	0/5/5/5
2	A1JJ4	F	401	-	-	10/70/87/87	0/5/5/5
2	A1JJ4	L	401	-	-	15/70/87/87	0/5/5/5
2	A1JJ4	K	401	-	-	12/70/87/87	0/5/5/5
2	A1JJ4	B	401	-	-	13/70/87/87	0/5/5/5
2	A1JJ4	G	401	-	-	23/70/87/87	0/5/5/5

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	A1JJ4	H	401	-	-	19/70/87/87	0/5/5/5
2	A1JJ4	I	401	-	-	9/70/87/87	0/5/5/5
2	A1JJ4	J	401	-	-	12/70/87/87	0/5/5/5
2	A1JJ4	C	401	-	-	20/70/87/87	0/5/5/5

All (24) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	I	401	A1JJ4	O2-C18	3.68	1.26	1.20
2	H	401	A1JJ4	C2-S1	3.53	1.89	1.83
2	H	401	A1JJ4	O2-C18	3.14	1.25	1.20
2	L	401	A1JJ4	P3-O15	3.12	1.65	1.59
2	C	401	A1JJ4	O2-C18	3.06	1.25	1.20
2	F	401	A1JJ4	P3-O15	2.96	1.64	1.59
2	F	401	A1JJ4	O2-C18	2.96	1.25	1.20
2	L	401	A1JJ4	O2-C18	2.94	1.25	1.20
2	B	401	A1JJ4	O2-C18	2.79	1.24	1.20
2	D	401	A1JJ4	P3-O15	2.66	1.64	1.59
2	I	401	A1JJ4	P3-O15	2.57	1.64	1.59
2	E	401	A1JJ4	O2-C18	2.52	1.24	1.20
2	E	401	A1JJ4	P3-O15	2.40	1.63	1.59
2	K	401	A1JJ4	O2-C18	2.34	1.24	1.20
2	K	401	A1JJ4	P3-O15	2.26	1.63	1.59
2	J	401	A1JJ4	P3-O15	2.21	1.63	1.59
2	I	401	A1JJ4	C2-S1	2.19	1.86	1.83
2	E	401	A1JJ4	C2-S1	2.18	1.86	1.83
2	H	401	A1JJ4	C18-S2	2.17	1.82	1.75
2	B	401	A1JJ4	P3-O15	2.14	1.63	1.59
2	A	401	A1JJ4	P3-O15	2.10	1.63	1.59
2	F	401	A1JJ4	C2-S1	2.08	1.86	1.83
2	G	401	A1JJ4	O2-C18	2.06	1.23	1.20
2	G	401	A1JJ4	P3-O15	2.00	1.63	1.59

All (87) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	C	401	A1JJ4	P2-O9-P1	5.50	151.71	132.83
2	K	401	A1JJ4	O15-P3-O18	-5.02	90.02	109.39
2	L	401	A1JJ4	C38-C39-C31	-4.78	94.75	103.22
2	D	401	A1JJ4	C38-C39-C31	-4.73	94.83	103.22
2	I	401	A1JJ4	C38-C39-C31	-4.61	95.05	103.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	J	401	A1JJ4	C38-C39-C31	-4.52	95.21	103.22
2	F	401	A1JJ4	C38-C39-C31	-4.33	95.55	103.22
2	K	401	A1JJ4	O6-P1-O7	-4.30	92.27	109.07
2	K	401	A1JJ4	C38-C39-C31	-4.29	95.62	103.22
2	D	401	A1JJ4	O2-C18-S2	-4.24	118.10	123.80
2	G	401	A1JJ4	O17-P3-O16	4.20	123.68	107.64
2	A	401	A1JJ4	C28-C26-C29	-4.15	101.46	108.23
2	E	401	A1JJ4	C38-C39-C31	-3.64	96.77	103.22
2	H	401	A1JJ4	C38-C39-C31	-3.57	96.89	103.22
2	F	401	A1JJ4	O8-P1-O7	3.54	129.76	112.24
2	G	401	A1JJ4	O2-C18-S2	-3.54	119.04	123.80
2	A	401	A1JJ4	O2-C18-S2	-3.51	119.07	123.80
2	K	401	A1JJ4	O8-P1-O7	3.47	129.39	112.24
2	A	401	A1JJ4	O8-P1-O7	3.46	129.35	112.24
2	B	401	A1JJ4	C38-C39-C31	-3.43	97.14	103.22
2	L	401	A1JJ4	O8-P1-O7	3.40	129.06	112.24
2	D	401	A1JJ4	C31-O13-C32	-3.35	102.09	109.47
2	B	401	A1JJ4	O2-C18-S2	-3.28	119.39	123.80
2	L	401	A1JJ4	C31-O13-C32	-3.22	102.36	109.47
2	G	401	A1JJ4	C38-C39-C31	-3.19	97.56	103.22
2	C	401	A1JJ4	C28-C26-C29	-3.17	103.07	108.23
2	E	401	A1JJ4	C20-N1-C21	3.15	128.68	122.84
2	G	401	A1JJ4	O8-P1-O7	3.14	127.78	112.24
2	C	401	A1JJ4	C38-C39-C31	-3.12	97.69	103.22
2	F	401	A1JJ4	C31-O13-C32	-3.10	102.63	109.47
2	B	401	A1JJ4	C8-C9-C10	3.07	120.37	113.00
2	I	401	A1JJ4	C31-O13-C32	-3.05	102.74	109.47
2	C	401	A1JJ4	C38-C32-N3	-3.04	105.59	113.30
2	L	401	A1JJ4	C27-C26-C29	3.01	113.15	108.23
2	B	401	A1JJ4	O17-P3-O16	2.94	118.89	107.64
2	C	401	A1JJ4	O11-P2-O12	2.93	121.37	107.75
2	I	401	A1JJ4	O8-P1-O7	2.93	126.70	112.24
2	G	401	A1JJ4	C38-C32-N3	2.89	120.63	113.30
2	I	401	A1JJ4	C28-C26-C29	2.87	112.91	108.23
2	F	401	A1JJ4	O8-P1-O6	-2.82	94.63	107.75
2	H	401	A1JJ4	C27-C26-C29	2.82	112.83	108.23
2	L	401	A1JJ4	O5-C25-C26	-2.81	103.64	110.25
2	K	401	A1JJ4	O17-P3-O15	2.79	118.48	105.99
2	G	401	A1JJ4	C28-C26-C25	2.78	113.64	108.82
2	F	401	A1JJ4	O6-C29-C26	-2.77	106.09	110.55
2	A	401	A1JJ4	C38-C39-C31	-2.68	98.47	103.22
2	J	401	A1JJ4	C31-O13-C32	-2.67	103.59	109.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	K	401	A1JJ4	O16-P3-O18	2.66	121.11	110.68
2	E	401	A1JJ4	C23-C22-C21	-2.65	107.95	112.36
2	I	401	A1JJ4	C20-N1-C21	-2.64	117.94	122.84
2	I	401	A1JJ4	O17-P3-O16	2.63	117.69	107.64
2	G	401	A1JJ4	C27-C26-C29	2.56	112.40	108.23
2	J	401	A1JJ4	O8-P1-O7	2.54	124.78	112.24
2	H	401	A1JJ4	C28-C26-C29	-2.50	104.15	108.23
2	A	401	A1JJ4	O6-P1-O7	-2.49	99.34	109.07
2	E	401	A1JJ4	C28-C26-C29	-2.49	104.17	108.23
2	J	401	A1JJ4	C8-C9-C10	2.45	118.89	113.00
2	K	401	A1JJ4	C31-O13-C32	-2.44	104.10	109.47
2	F	401	A1JJ4	O15-C39-C31	2.42	118.82	110.08
2	C	401	A1JJ4	O5-C25-C26	2.39	115.87	110.25
2	C	401	A1JJ4	O8-P1-O7	2.38	124.01	112.24
2	C	401	A1JJ4	C28-C26-C25	2.37	112.92	108.82
2	E	401	A1JJ4	O2-C18-S2	-2.35	120.63	123.80
2	H	401	A1JJ4	C1-C2-S1	2.33	115.29	108.69
2	J	401	A1JJ4	C1-C2-S1	2.32	115.28	108.69
2	K	401	A1JJ4	O14-C38-C39	2.31	117.73	111.17
2	E	401	A1JJ4	O14-C38-C39	2.30	117.70	111.17
2	H	401	A1JJ4	O8-P1-O7	2.25	123.38	112.24
2	L	401	A1JJ4	C28-C26-C29	-2.23	104.59	108.23
2	G	401	A1JJ4	C28-C26-C27	-2.23	104.62	109.17
2	J	401	A1JJ4	O14-C38-C32	2.23	117.48	110.02
2	E	401	A1JJ4	C27-C26-C25	2.18	112.60	108.82
2	H	401	A1JJ4	C31-O13-C32	-2.17	104.69	109.47
2	D	401	A1JJ4	O8-P1-O7	2.15	122.87	112.24
2	C	401	A1JJ4	C7-C17-C3	2.14	121.26	119.44
2	A	401	A1JJ4	C30-C31-C39	2.12	121.44	114.40
2	H	401	A1JJ4	O6-C29-C26	2.11	113.94	110.55
2	F	401	A1JJ4	O16-P3-O18	-2.09	102.52	110.68
2	F	401	A1JJ4	C38-C32-N3	2.07	118.56	113.30
2	B	401	A1JJ4	O11-P2-O10	2.06	122.43	112.24
2	I	401	A1JJ4	C7-C17-C3	2.05	121.18	119.44
2	K	401	A1JJ4	O2-C18-S2	-2.04	121.05	123.80
2	G	401	A1JJ4	O15-P3-O18	2.04	117.27	109.39
2	D	401	A1JJ4	O14-C38-C32	2.04	116.83	110.02
2	D	401	A1JJ4	C28-C26-C29	2.02	111.53	108.23
2	J	401	A1JJ4	C28-C26-C29	2.02	111.53	108.23
2	C	401	A1JJ4	O13-C32-N3	2.01	112.01	108.06

There are no chirality outliers.

All (187) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	401	A1JJ4	C21-C22-C23-N2
2	A	401	A1JJ4	C24-C25-C26-C27
2	A	401	A1JJ4	C24-C25-C26-C28
2	A	401	A1JJ4	C24-C25-C26-C29
2	A	401	A1JJ4	C29-O6-P1-O7
2	A	401	A1JJ4	C29-O6-P1-O8
2	A	401	A1JJ4	C30-O12-P2-O9
2	A	401	A1JJ4	C30-O12-P2-O11
2	B	401	A1JJ4	O1-C8-C9-C10
2	B	401	A1JJ4	C29-O6-P1-O7
2	C	401	A1JJ4	O1-C8-C9-C10
2	C	401	A1JJ4	C24-C25-C26-C27
2	C	401	A1JJ4	C24-C25-C26-C28
2	C	401	A1JJ4	C24-C25-C26-C29
2	C	401	A1JJ4	C29-O6-P1-O7
2	C	401	A1JJ4	P2-O9-P1-O6
2	C	401	A1JJ4	O12-C30-C31-C39
2	D	401	A1JJ4	O1-C8-C9-C10
2	D	401	A1JJ4	C21-C22-C23-N2
2	D	401	A1JJ4	C30-O12-P2-O9
2	D	401	A1JJ4	C30-O12-P2-O10
2	D	401	A1JJ4	C30-O12-P2-O11
2	E	401	A1JJ4	O3-C21-N1-C20
2	E	401	A1JJ4	C22-C21-N1-C20
2	E	401	A1JJ4	C20-C19-S2-C18
2	E	401	A1JJ4	C24-C25-C26-C28
2	E	401	A1JJ4	C24-C25-C26-C29
2	E	401	A1JJ4	C29-O6-P1-O7
2	E	401	A1JJ4	C29-O6-P1-O8
2	E	401	A1JJ4	C30-O12-P2-O9
2	E	401	A1JJ4	C39-O15-P3-O16
2	F	401	A1JJ4	C21-C22-C23-N2
2	F	401	A1JJ4	C30-O12-P2-O9
2	F	401	A1JJ4	C30-O12-P2-O10
2	F	401	A1JJ4	C30-O12-P2-O11
2	G	401	A1JJ4	O1-C8-C9-C10
2	G	401	A1JJ4	C21-C22-C23-N2
2	G	401	A1JJ4	C24-C25-C26-C27
2	G	401	A1JJ4	C24-C25-C26-C28
2	G	401	A1JJ4	C24-C25-C26-C29
2	G	401	A1JJ4	C29-O6-P1-O7
2	G	401	A1JJ4	C29-O6-P1-O8

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Mol	Chain	Res	Type	Atoms
2	G	401	A1JJ4	C30-O12-P2-O9
2	G	401	A1JJ4	C30-O12-P2-O11
2	H	401	A1JJ4	C24-C25-C26-C29
2	H	401	A1JJ4	C29-O6-P1-O7
2	H	401	A1JJ4	C29-O6-P1-O8
2	H	401	A1JJ4	C30-O12-P2-O9
2	I	401	A1JJ4	C21-C22-C23-N2
2	I	401	A1JJ4	C30-O12-P2-O9
2	J	401	A1JJ4	O1-C8-C9-C10
2	J	401	A1JJ4	C30-O12-P2-O9
2	K	401	A1JJ4	C21-C22-C23-N2
2	K	401	A1JJ4	C30-O12-P2-O9
2	K	401	A1JJ4	C30-O12-P2-O11
2	L	401	A1JJ4	O1-C8-C9-C10
2	L	401	A1JJ4	C30-O12-P2-O9
2	L	401	A1JJ4	C30-O12-P2-O10
2	L	401	A1JJ4	C30-O12-P2-O11
2	B	401	A1JJ4	C6-C7-O1-C8
2	B	401	A1JJ4	C17-C7-O1-C8
2	C	401	A1JJ4	C17-C7-O1-C8
2	A	401	A1JJ4	C6-C7-O1-C8
2	C	401	A1JJ4	O12-C30-C31-O13
2	A	401	A1JJ4	C17-C7-O1-C8
2	C	401	A1JJ4	C6-C7-O1-C8
2	J	401	A1JJ4	C17-C7-O1-C8
2	G	401	A1JJ4	C17-C7-O1-C8
2	G	401	A1JJ4	C9-C8-O1-C7
2	J	401	A1JJ4	C6-C7-O1-C8
2	C	401	A1JJ4	C9-C8-O1-C7
2	E	401	A1JJ4	O1-C8-C9-C10
2	F	401	A1JJ4	O1-C8-C9-C10
2	G	401	A1JJ4	C6-C7-O1-C8
2	K	401	A1JJ4	C17-C7-O1-C8
2	K	401	A1JJ4	C6-C7-O1-C8
2	A	401	A1JJ4	C9-C8-O1-C7
2	L	401	A1JJ4	C17-C7-O1-C8
2	H	401	A1JJ4	C6-C7-O1-C8
2	H	401	A1JJ4	C17-C7-O1-C8
2	L	401	A1JJ4	C6-C7-O1-C8
2	H	401	A1JJ4	O1-C8-C9-C10
2	A	401	A1JJ4	O5-C25-C26-C27
2	C	401	A1JJ4	O5-C25-C26-C27

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Mol	Chain	Res	Type	Atoms
2	C	401	A1JJ4	O5-C25-C26-C28
2	E	401	A1JJ4	O5-C25-C26-C27
2	E	401	A1JJ4	O5-C25-C26-C28
2	G	401	A1JJ4	O5-C25-C26-C27
2	G	401	A1JJ4	O5-C25-C26-C28
2	K	401	A1JJ4	O1-C8-C9-C10
2	B	401	A1JJ4	C39-O15-P3-O18
2	A	401	A1JJ4	O2-C18-C2-S1
2	C	401	A1JJ4	O2-C18-C2-S1
2	D	401	A1JJ4	O2-C18-C2-S1
2	E	401	A1JJ4	O2-C18-C2-S1
2	F	401	A1JJ4	O2-C18-C2-S1
2	G	401	A1JJ4	O2-C18-C2-S1
2	H	401	A1JJ4	O2-C18-C2-S1
2	I	401	A1JJ4	O2-C18-C2-S1
2	J	401	A1JJ4	O2-C18-C2-S1
2	K	401	A1JJ4	O2-C18-C2-S1
2	L	401	A1JJ4	O2-C18-C2-S1
2	E	401	A1JJ4	C24-C25-C26-C27
2	H	401	A1JJ4	C24-C25-C26-C28
2	C	401	A1JJ4	C29-O6-P1-O9
2	E	401	A1JJ4	C29-O6-P1-O9
2	K	401	A1JJ4	C39-O15-P3-O17
2	L	401	A1JJ4	C39-O15-P3-O17
2	B	401	A1JJ4	P1-O9-P2-O10
2	A	401	A1JJ4	C30-O12-P2-O10
2	B	401	A1JJ4	C29-O6-P1-O8
2	C	401	A1JJ4	C29-O6-P1-O8
2	E	401	A1JJ4	C30-O12-P2-O10
2	E	401	A1JJ4	C30-O12-P2-O11
2	G	401	A1JJ4	C30-O12-P2-O10
2	H	401	A1JJ4	C30-O12-P2-O10
2	H	401	A1JJ4	C30-O12-P2-O11
2	I	401	A1JJ4	C30-O12-P2-O10
2	I	401	A1JJ4	C30-O12-P2-O11
2	J	401	A1JJ4	C30-O12-P2-O10
2	J	401	A1JJ4	C30-O12-P2-O11
2	K	401	A1JJ4	C30-O12-P2-O10
2	K	401	A1JJ4	C9-C8-O1-C7
2	L	401	A1JJ4	C9-C8-O1-C7
2	A	401	A1JJ4	O5-C25-C26-C29
2	C	401	A1JJ4	O5-C25-C26-C29

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Mol	Chain	Res	Type	Atoms
2	E	401	A1JJ4	O5-C25-C26-C29
2	G	401	A1JJ4	O5-C25-C26-C29
2	H	401	A1JJ4	O5-C25-C26-C29
2	J	401	A1JJ4	C18-C2-S1-C3
2	F	401	A1JJ4	C17-C7-O1-C8
2	G	401	A1JJ4	C31-C39-O15-P3
2	I	401	A1JJ4	C9-C8-O1-C7
2	K	401	A1JJ4	O12-C30-C31-O13
2	F	401	A1JJ4	C6-C7-O1-C8
2	B	401	A1JJ4	C21-C22-C23-N2
2	J	401	A1JJ4	C21-C22-C23-N2
2	E	401	A1JJ4	C2-C18-S2-C19
2	B	401	A1JJ4	C9-C8-O1-C7
2	A	401	A1JJ4	O12-C30-C31-O13
2	E	401	A1JJ4	O12-C30-C31-O13
2	L	401	A1JJ4	O12-C30-C31-O13
2	I	401	A1JJ4	P1-O9-P2-O11
2	D	401	A1JJ4	C17-C7-O1-C8
2	H	401	A1JJ4	O12-C30-C31-O13
2	J	401	A1JJ4	O12-C30-C31-O13
2	D	401	A1JJ4	C6-C7-O1-C8
2	F	401	A1JJ4	O12-C30-C31-O13
2	G	401	A1JJ4	C39-O15-P3-O18
2	C	401	A1JJ4	C21-C22-C23-N2
2	H	401	A1JJ4	C21-C22-C23-N2
2	B	401	A1JJ4	O2-C18-C2-S1
2	H	401	A1JJ4	C24-C25-C26-C27
2	H	401	A1JJ4	C16-C10-C9-C8
2	A	401	A1JJ4	C29-O6-P1-O9
2	B	401	A1JJ4	C29-O6-P1-O9
2	C	401	A1JJ4	C39-O15-P3-O16
2	G	401	A1JJ4	C29-O6-P1-O9
2	G	401	A1JJ4	C39-O15-P3-O16
2	H	401	A1JJ4	C29-O6-P1-O9
2	J	401	A1JJ4	C39-O15-P3-O16
2	L	401	A1JJ4	C39-O15-P3-O16
2	B	401	A1JJ4	O12-C30-C31-O13
2	D	401	A1JJ4	O12-C30-C31-O13
2	G	401	A1JJ4	O12-C30-C31-O13
2	I	401	A1JJ4	O12-C30-C31-O13
2	D	401	A1JJ4	P1-O9-P2-O10
2	E	401	A1JJ4	P1-O9-P2-O10

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Mol	Chain	Res	Type	Atoms
2	E	401	A1JJ4	P1-O9-P2-O11
2	L	401	A1JJ4	P1-O9-P2-O10
2	L	401	A1JJ4	P1-O9-P2-O11
2	H	401	A1JJ4	C11-C10-C9-C8
2	L	401	A1JJ4	C31-C39-O15-P3
2	E	401	A1JJ4	O2-C18-S2-C19
2	E	401	A1JJ4	C6-C7-O1-C8
2	A	401	A1JJ4	C1-C2-S1-C3
2	B	401	A1JJ4	C1-C2-S1-C3
2	C	401	A1JJ4	C1-C2-S1-C3
2	D	401	A1JJ4	C1-C2-S1-C3
2	E	401	A1JJ4	C1-C2-S1-C3
2	F	401	A1JJ4	C1-C2-S1-C3
2	G	401	A1JJ4	C1-C2-S1-C3
2	H	401	A1JJ4	C1-C2-S1-C3
2	I	401	A1JJ4	C1-C2-S1-C3
2	J	401	A1JJ4	C1-C2-S1-C3
2	K	401	A1JJ4	C1-C2-S1-C3
2	L	401	A1JJ4	C1-C2-S1-C3

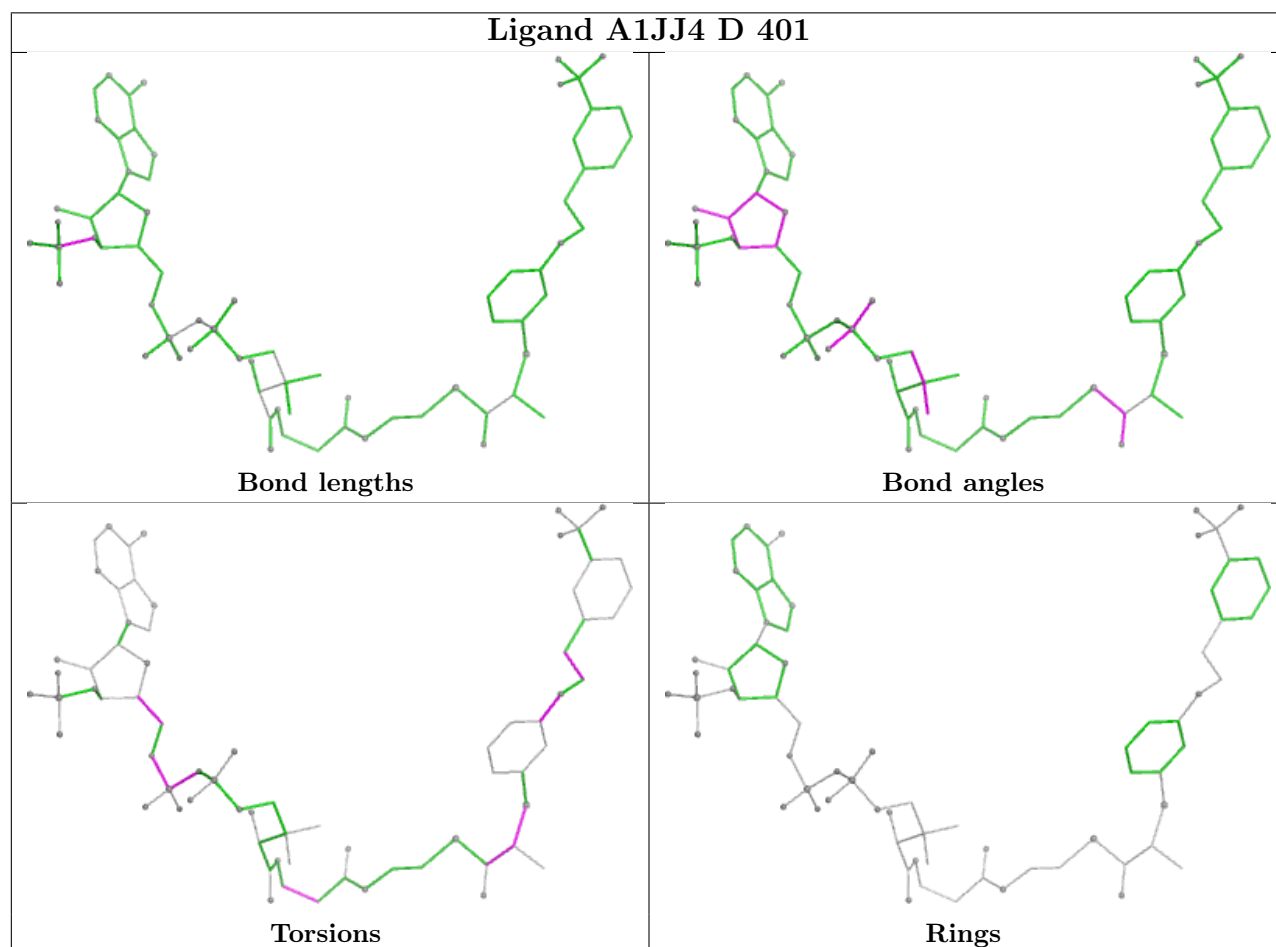
There are no ring outliers.

7 monomers are involved in 13 short contacts:

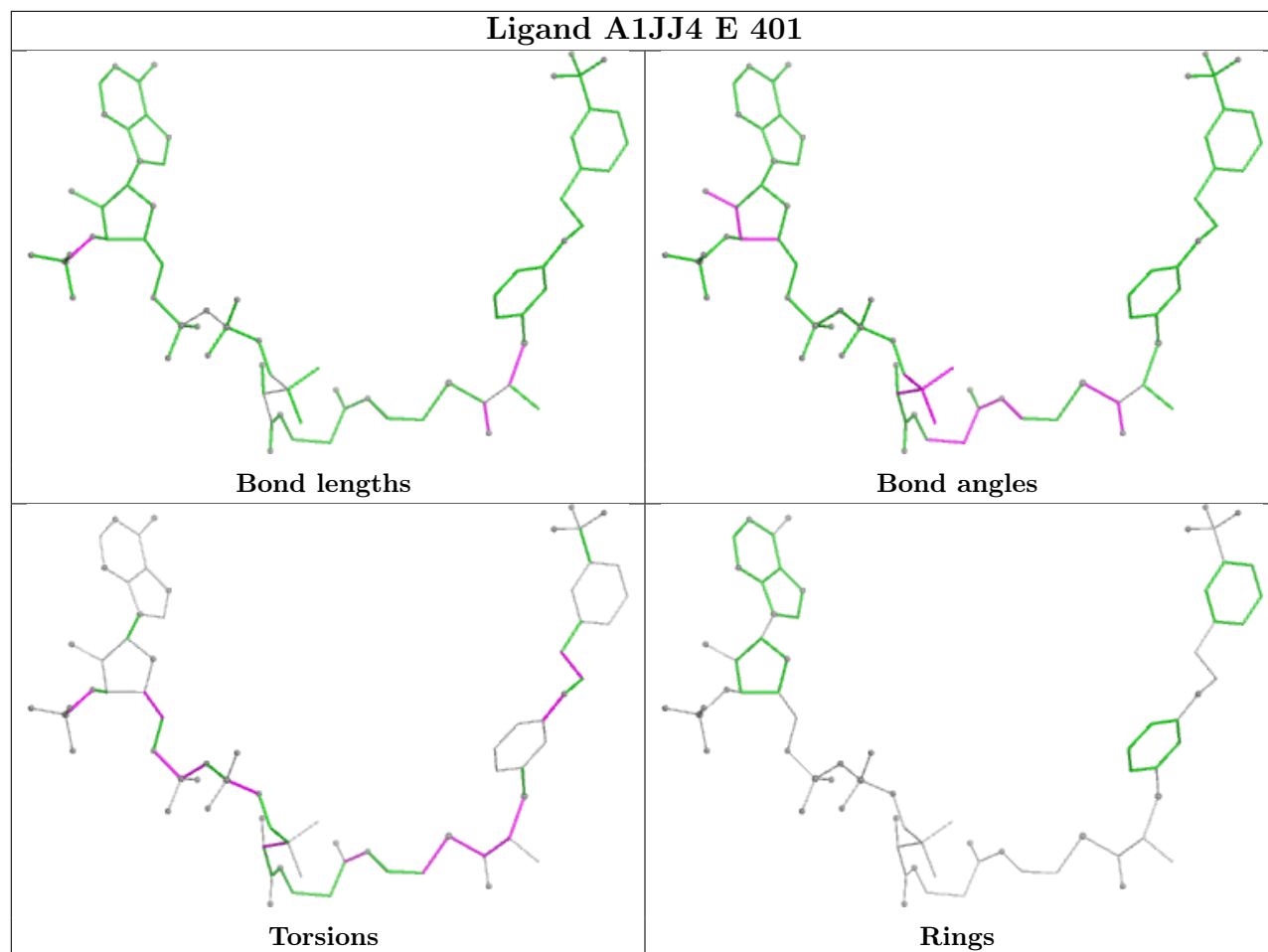
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	401	A1JJ4	2	0
2	F	401	A1JJ4	4	0
2	K	401	A1JJ4	2	0
2	G	401	A1JJ4	1	0
2	H	401	A1JJ4	1	0
2	I	401	A1JJ4	1	0
2	C	401	A1JJ4	2	0

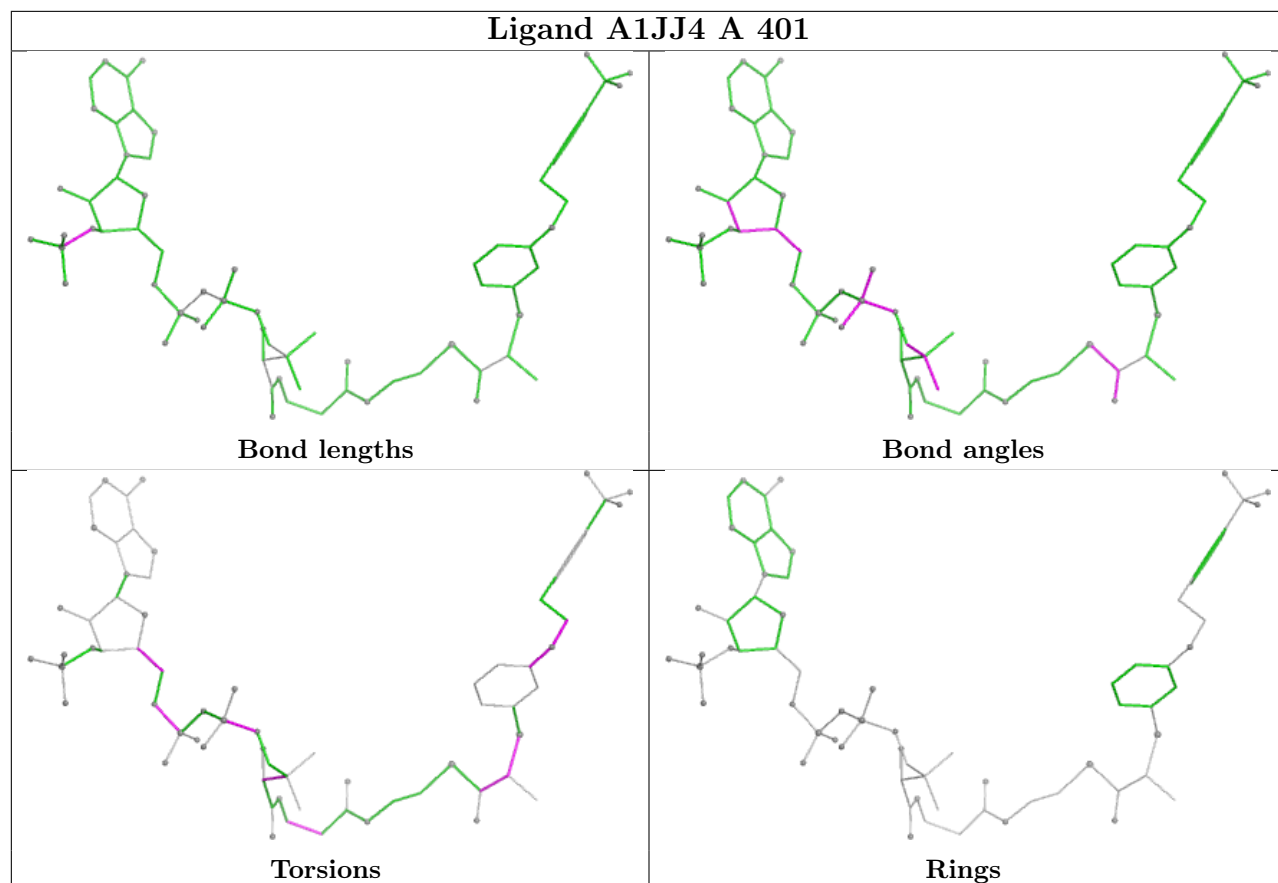
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

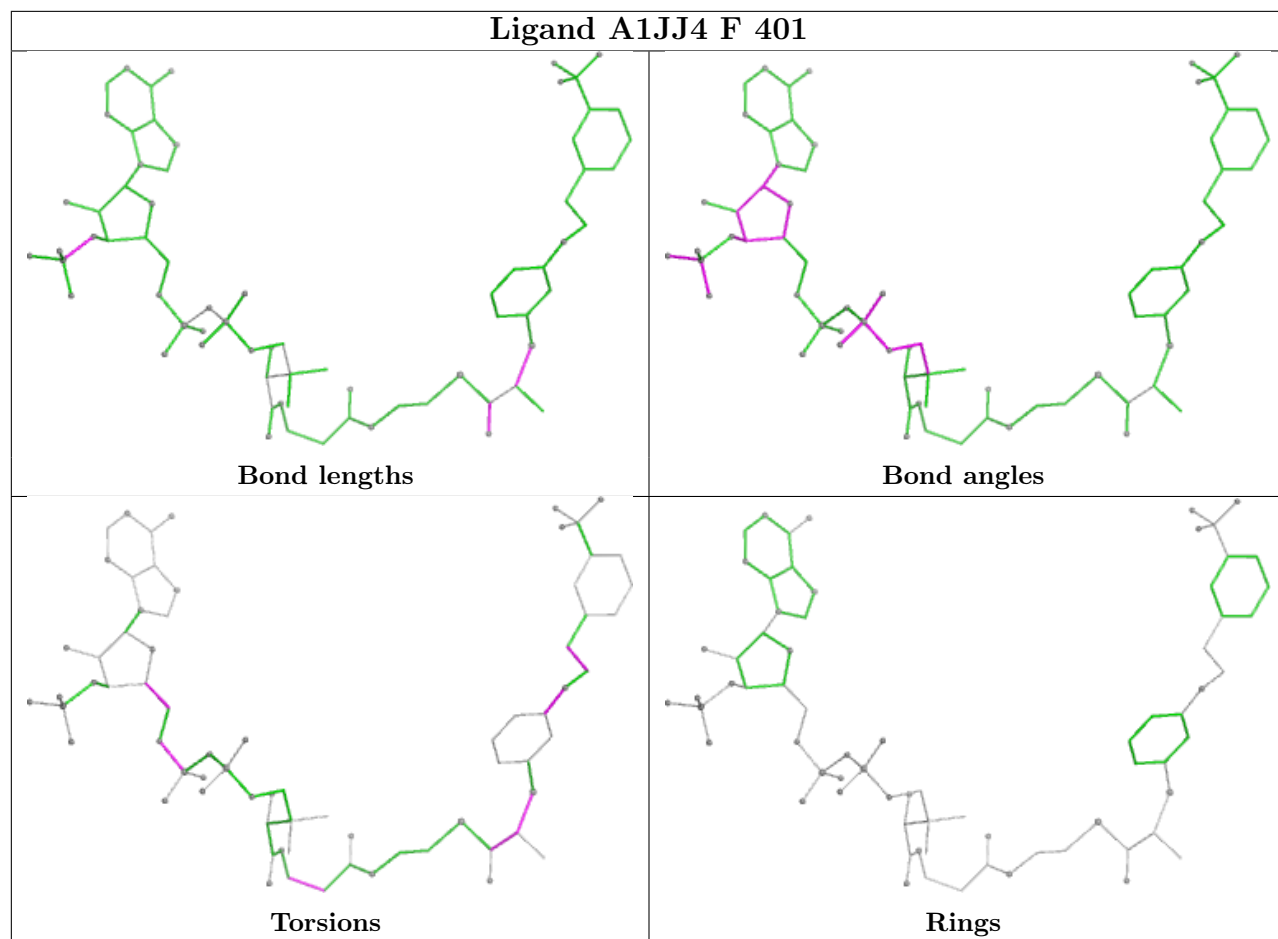
The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

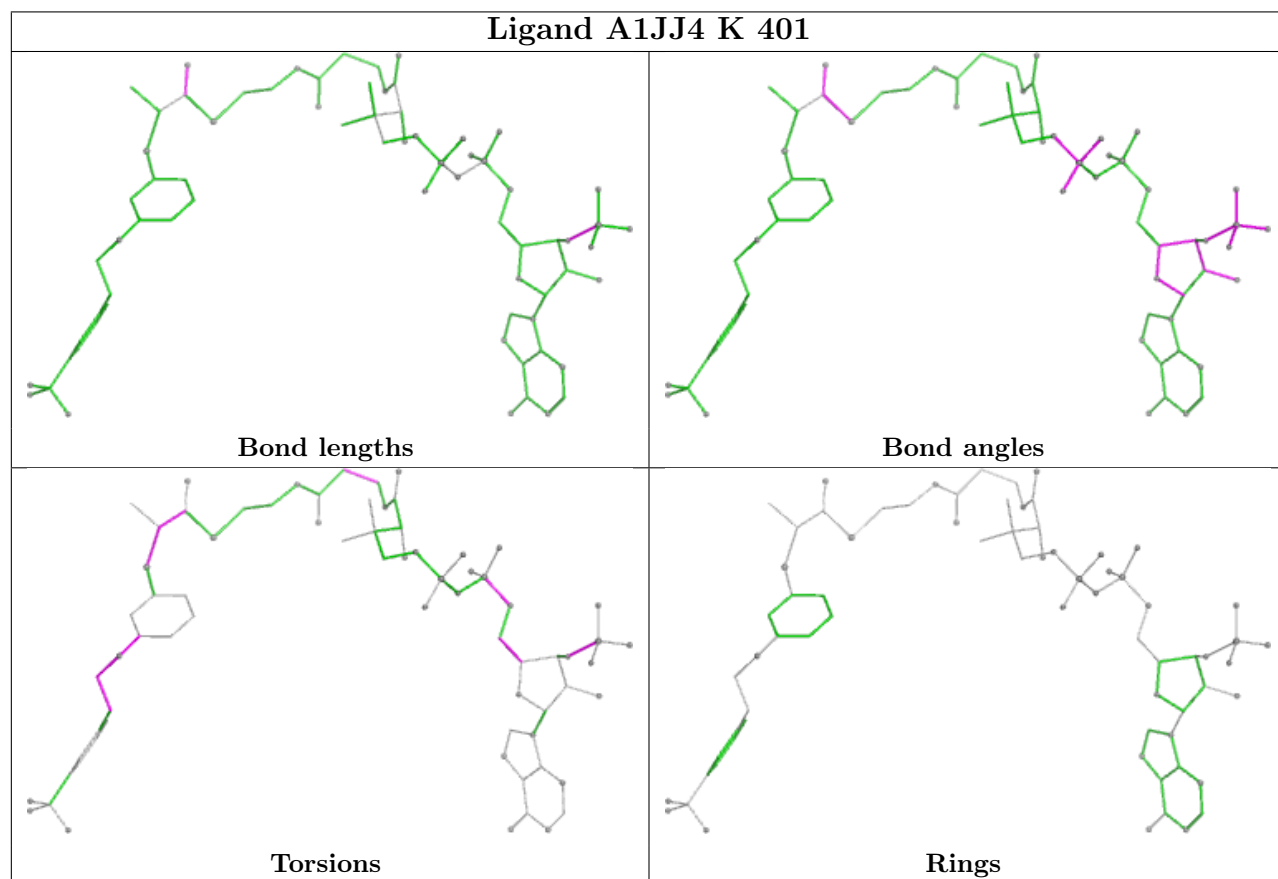
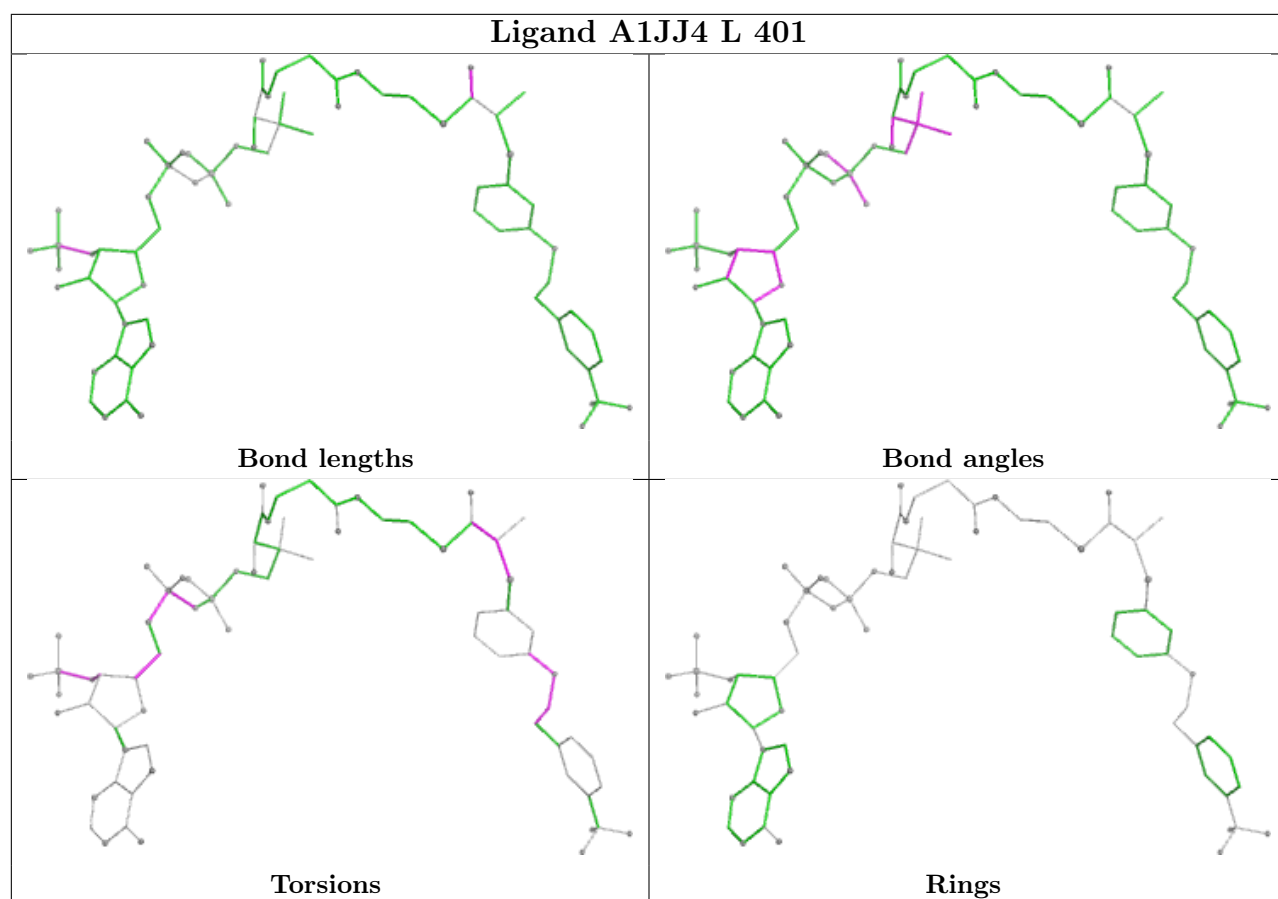


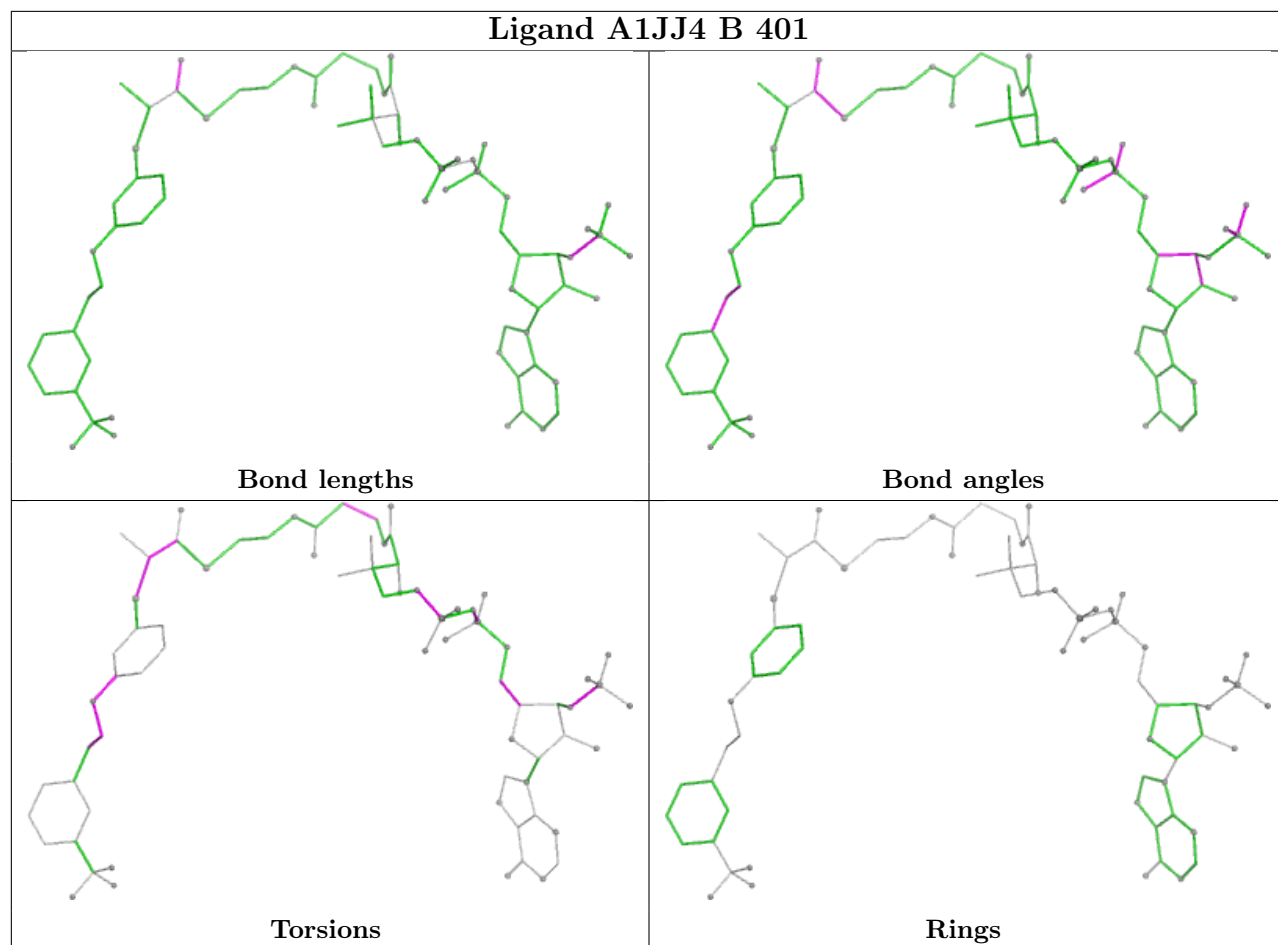
Ligand A1JJ4 E 401

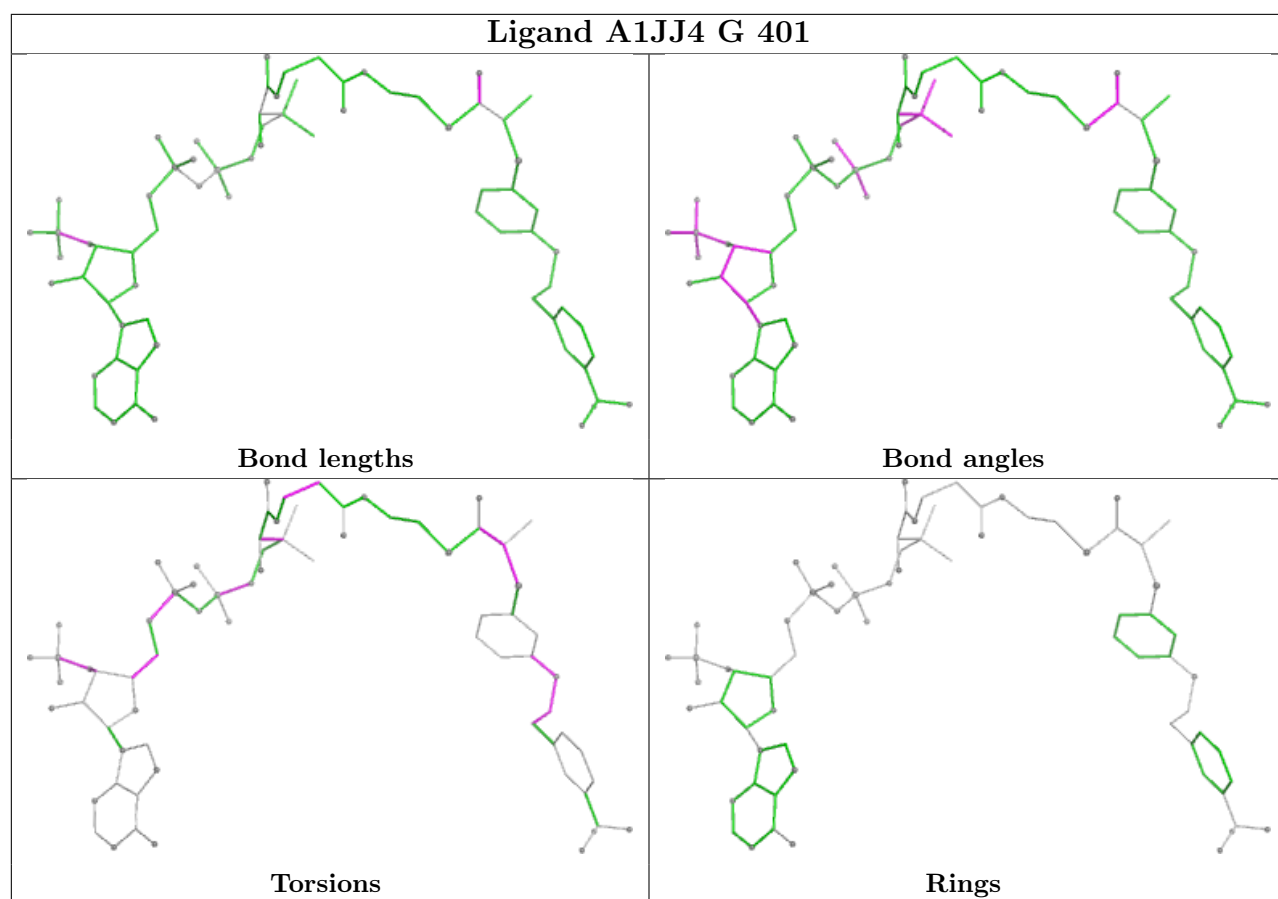




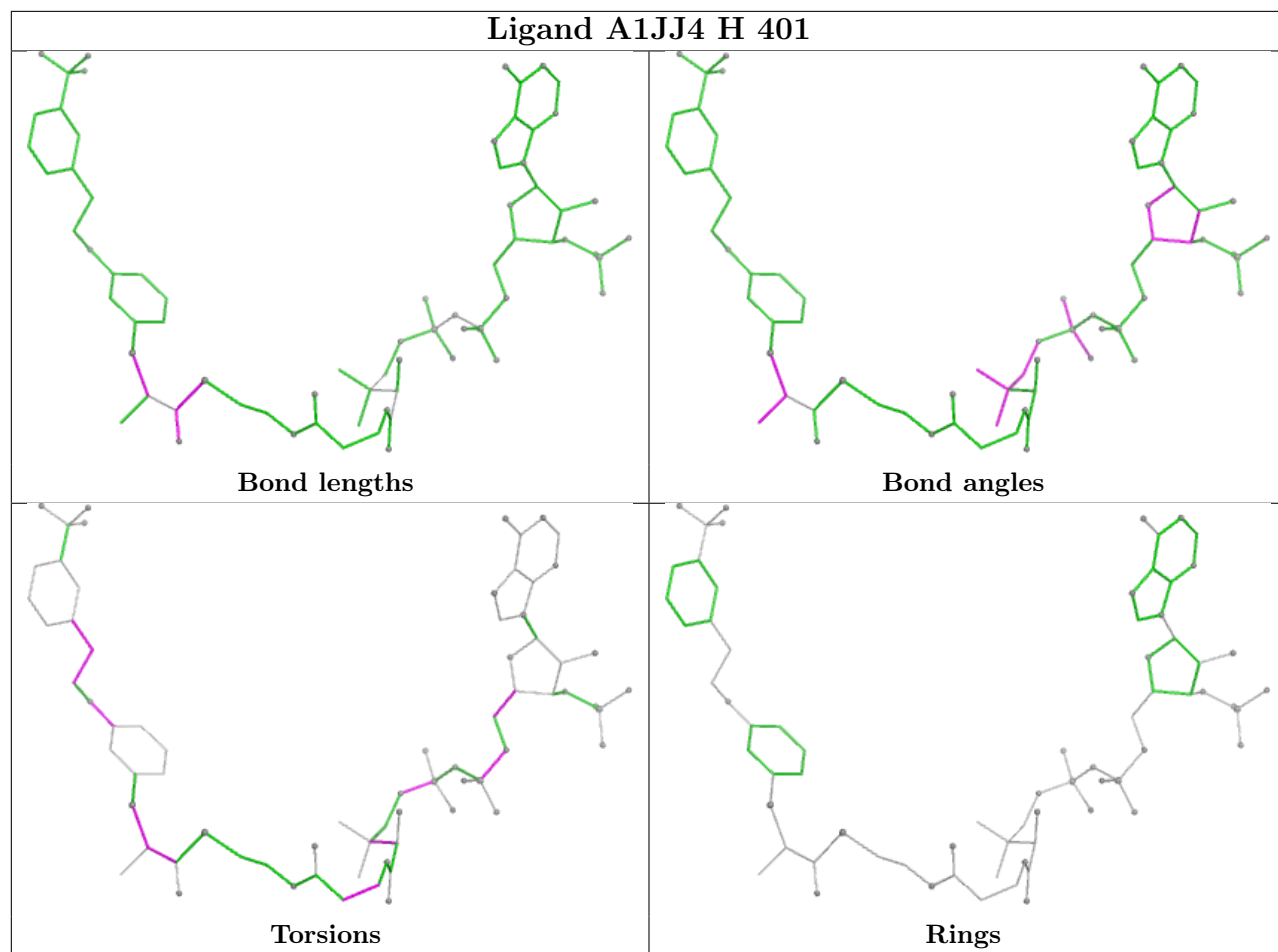


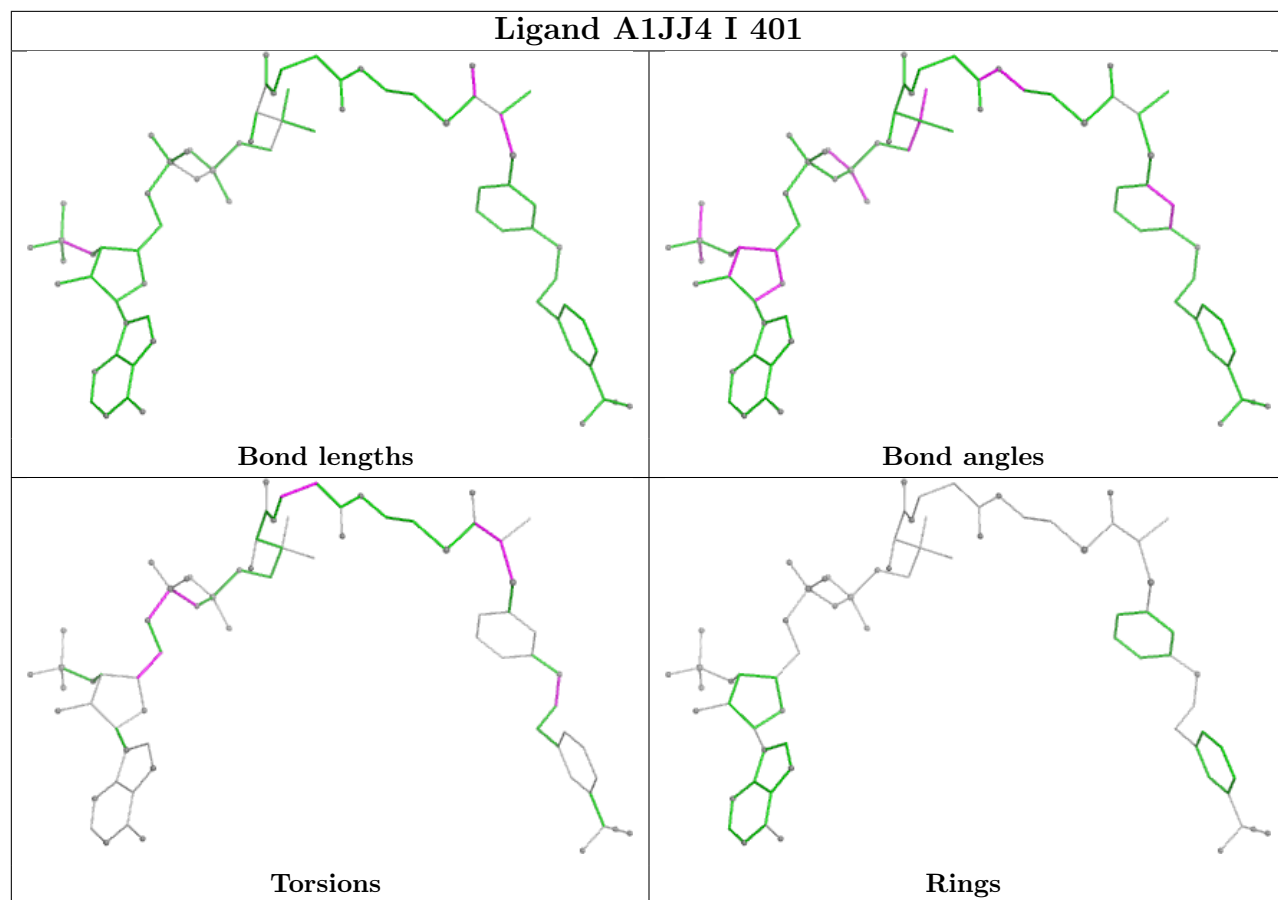


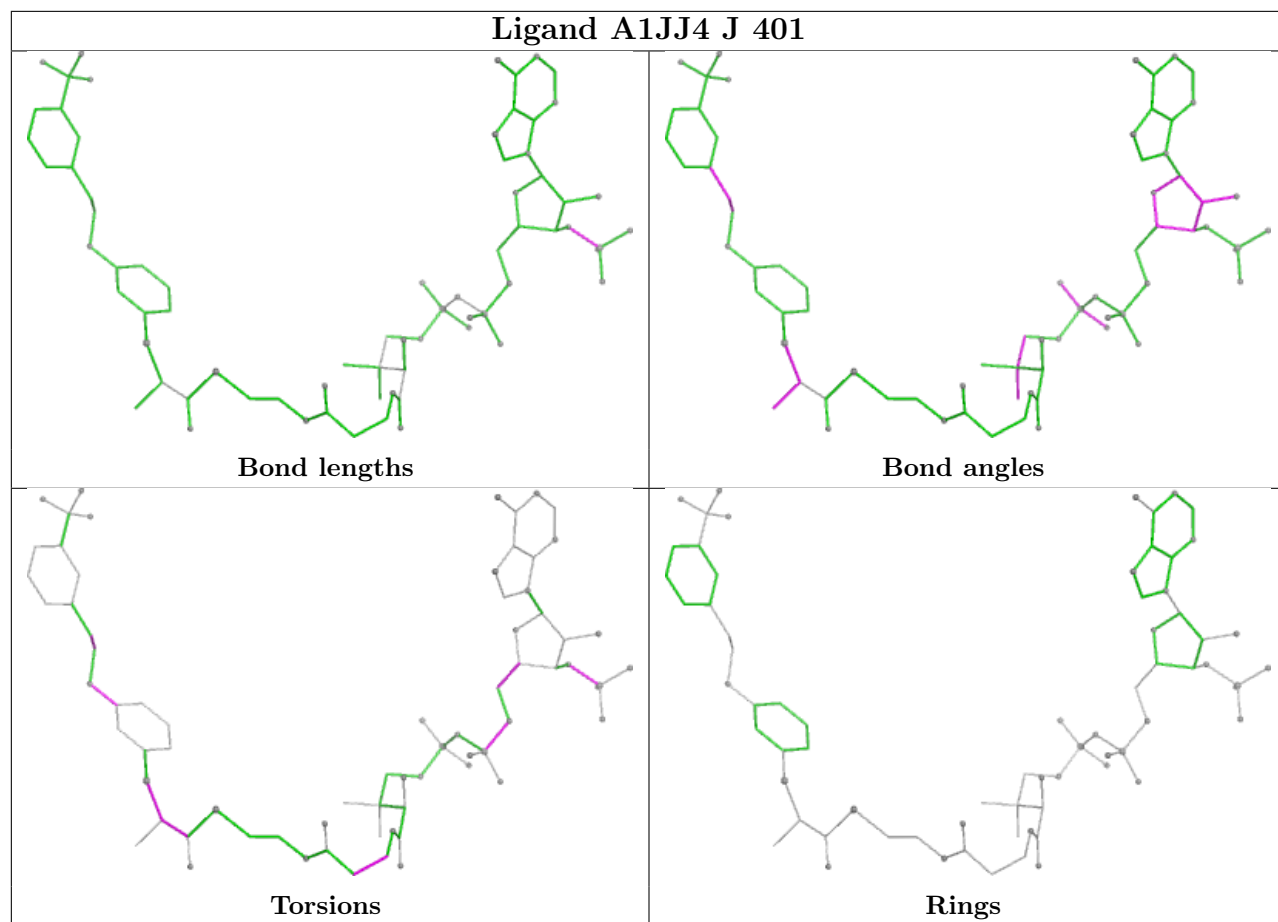


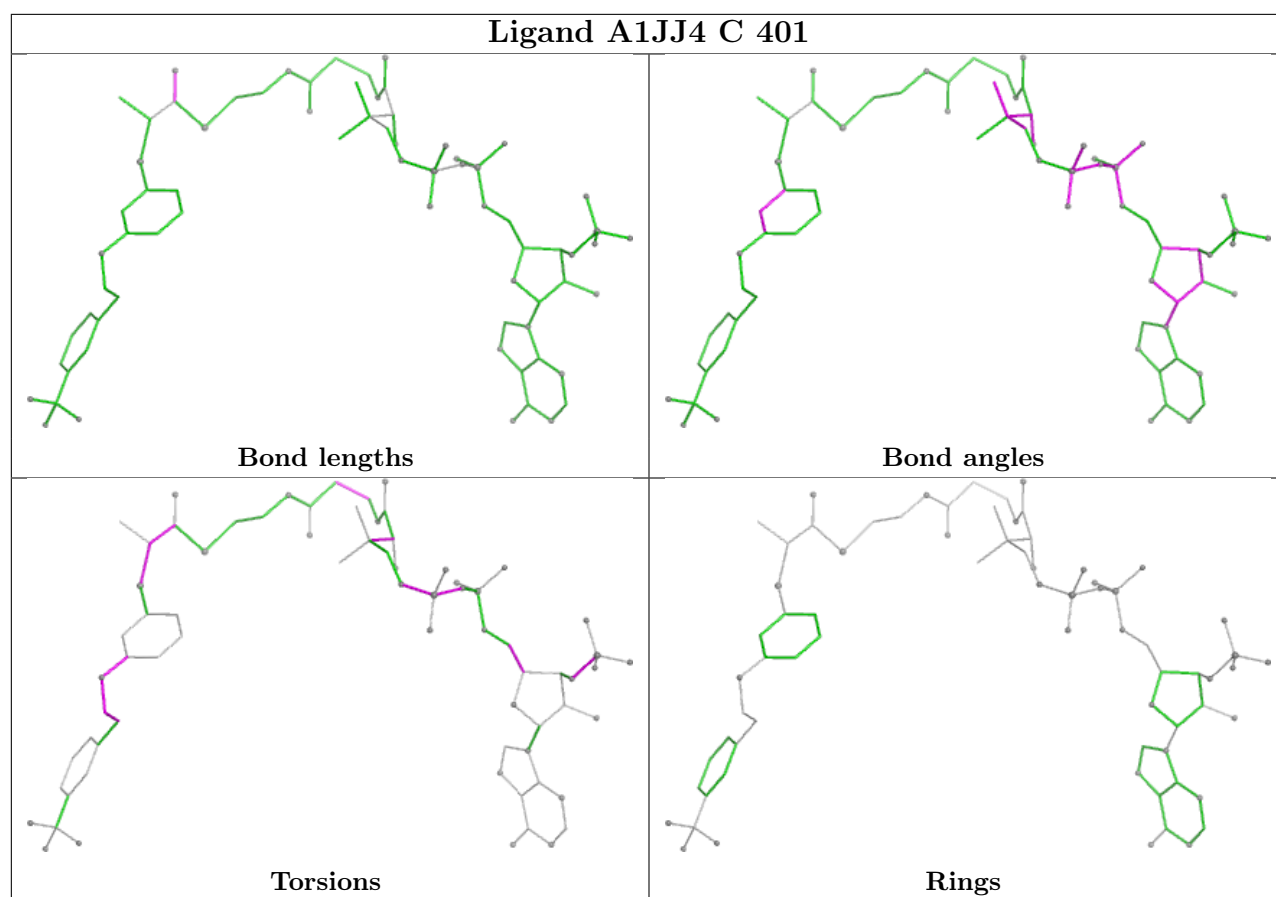


Ligand A1JJ4 H 401









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	359/364 (98%)	0.55	45 (12%) 8 7	28, 48, 94, 138	2 (0%)
1	B	358/364 (98%)	0.46	31 (8%) 16 15	30, 48, 96, 134	1 (0%)
1	C	359/364 (98%)	0.71	58 (16%) 4 4	30, 48, 97, 138	2 (0%)
1	D	359/364 (98%)	0.59	33 (9%) 14 13	29, 48, 93, 134	1 (0%)
1	E	355/364 (97%)	0.75	63 (17%) 4 3	31, 50, 99, 127	2 (0%)
1	F	357/364 (98%)	0.95	79 (22%) 2 2	31, 53, 105, 147	2 (0%)
1	G	359/364 (98%)	1.04	93 (25%) 1 1	31, 54, 113, 145	2 (0%)
1	H	359/364 (98%)	0.76	56 (15%) 5 4	31, 52, 111, 167	1 (0%)
1	I	359/364 (98%)	0.34	23 (6%) 25 24	30, 46, 84, 120	2 (0%)
1	J	359/364 (98%)	0.40	23 (6%) 25 24	22, 45, 91, 138	2 (0%)
1	K	357/364 (98%)	0.49	36 (10%) 12 11	23, 47, 90, 135	3 (0%)
1	L	359/364 (98%)	0.39	22 (6%) 27 25	31, 47, 87, 132	1 (0%)
All	All	4299/4368 (98%)	0.62	562 (13%) 7 6	22, 48, 99, 167	21 (0%)

All (562) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	346	ALA	8.2
1	B	42	VAL	7.7
1	A	45	ILE	7.2
1	B	346	ALA	6.8
1	D	346	ALA	6.8
1	C	42	VAL	6.7
1	H	45	ILE	6.7
1	L	45	ILE	6.6
1	D	42	VAL	6.5
1	E	349	ILE	6.5
1	K	346	ALA	6.4

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Mol	Chain	Res	Type	RSRZ
1	F	346	ALA	6.4
1	H	346	ALA	6.3
1	C	346	ALA	6.2
1	J	346	ALA	6.1
1	E	346	ALA	5.6
1	F	42	VAL	5.4
1	C	45	ILE	5.4
1	J	42	VAL	5.4
1	I	45	ILE	5.4
1	G	45	ILE	5.2
1	K	45	ILE	5.1
1	G	102	VAL	5.1
1	I	346	ALA	5.0
1	G	351	ILE	5.0
1	B	45	ILE	4.9
1	F	349	ILE	4.9
1	D	347	ALA	4.9
1	G	346	ALA	4.8
1	H	358	TRP	4.8
1	B	345	PRO	4.7
1	H	42	VAL	4.6
1	G	354	VAL	4.6
1	F	347	ALA	4.6
1	F	351	ILE	4.5
1	G	100	ALA	4.5
1	G	62	LYS	4.5
1	K	324	GLY	4.4
1	A	180	LYS	4.3
1	G	349	ILE	4.3
1	D	348	THR	4.3
1	E	345	PRO	4.3
1	G	324	GLY	4.3
1	D	45	ILE	4.2
1	B	46	SER	4.2
1	J	45	ILE	4.2
1	F	49	ALA	4.2
1	G	76	LYS	4.2
1	B	351	ILE	4.2
1	F	11	VAL	4.2
1	J	347	ALA	4.2
1	K	347	ALA	4.2
1	F	348	THR	4.2

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Mol	Chain	Res	Type	RSRZ
1	G	93	GLY	4.1
1	F	354	VAL	4.1
1	K	176	GLN	4.1
1	E	351	ILE	4.1
1	F	96	PRO	4.1
1	H	322	ALA	4.1
1	G	72	LYS	4.1
1	G	10	VAL	4.1
1	G	33	VAL	4.1
1	K	44	GLY	4.0
1	C	323	ASN	4.0
1	G	353	ALA	4.0
1	G	358	TRP	4.0
1	B	347	ALA	4.0
1	H	46	SER	4.0
1	G	101	LYS	3.9
1	G	1	MET	3.9
1	G	176	GLN	3.9
1	G	92	LEU	3.9
1	G	41	SER	3.9
1	G	69	LEU	3.9
1	G	179	GLY	3.9
1	A	347	ALA	3.9
1	A	345	PRO	3.9
1	G	347	ALA	3.9
1	F	46	SER	3.8
1	A	42	VAL	3.8
1	H	34	VAL	3.8
1	I	323	ASN	3.8
1	C	349	ILE	3.8
1	A	47	ARG	3.8
1	F	324	GLY	3.8
1	I	324	GLY	3.8
1	G	180	LYS	3.7
1	C	345	PRO	3.7
1	F	107	ILE	3.7
1	J	351	ILE	3.7
1	F	180	LYS	3.7
1	G	99	CYS	3.7
1	K	359	ASP	3.7
1	G	178	SER	3.7
1	G	11	VAL	3.7

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Mol	Chain	Res	Type	RSRZ
1	G	34	VAL	3.7
1	E	347	ALA	3.7
1	L	346	ALA	3.7
1	E	39	PRO	3.7
1	C	93	GLY	3.6
1	F	93	GLY	3.6
1	E	1	MET	3.6
1	H	355	LEU	3.6
1	C	347	ALA	3.6
1	D	345	PRO	3.6
1	C	348	THR	3.6
1	G	58	THR	3.6
1	H	2	ALA	3.6
1	G	107	ILE	3.6
1	K	102	VAL	3.6
1	H	349	ILE	3.5
1	C	66	GLY	3.5
1	G	61	LEU	3.5
1	G	352	GLU	3.5
1	F	176	GLN	3.5
1	E	46	SER	3.5
1	K	207	MET	3.5
1	C	180	LYS	3.5
1	A	324	GLY	3.5
1	J	324	GLY	3.5
1	L	349	ILE	3.5
1	G	345	PRO	3.5
1	H	345	PRO	3.5
1	J	345	PRO	3.5
1	C	41	SER	3.5
1	E	173	TRP	3.5
1	H	173	TRP	3.5
1	G	7	GLY	3.5
1	F	73	LEU	3.5
1	F	34	VAL	3.5
1	C	324	GLY	3.5
1	G	94	LEU	3.5
1	F	183	VAL	3.4
1	G	292	ALA	3.4
1	C	44	GLY	3.4
1	H	47	ARG	3.4
1	D	180	LYS	3.4

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Mol	Chain	Res	Type	RSRZ
1	G	348	THR	3.4
1	D	351	ILE	3.4
1	F	106	LEU	3.4
1	A	76	LYS	3.3
1	L	324	GLY	3.3
1	B	359	ASP	3.3
1	H	323	ASN	3.3
1	G	36	ILE	3.3
1	E	355	LEU	3.3
1	C	46	SER	3.3
1	H	347	ALA	3.3
1	G	355	LEU	3.3
1	F	36	ILE	3.3
1	H	39	PRO	3.3
1	F	358	TRP	3.3
1	B	257	ALA	3.2
1	G	77	ALA	3.2
1	J	359	ASP	3.2
1	A	349	ILE	3.2
1	F	345	PRO	3.2
1	K	72	LYS	3.2
1	A	348	THR	3.2
1	I	176	GLN	3.2
1	L	348	THR	3.2
1	K	1	MET	3.2
1	K	47	ARG	3.2
1	F	37	ASP	3.2
1	J	323	ASN	3.2
1	H	72	LYS	3.2
1	I	349	ILE	3.2
1	K	348	THR	3.2
1	G	177	SER	3.2
1	F	70	ALA	3.2
1	H	324	GLY	3.2
1	H	8	LEU	3.2
1	H	351	ILE	3.2
1	B	47	ARG	3.2
1	F	76	LYS	3.2
1	K	76	LYS	3.2
1	C	176	GLN	3.2
1	A	351	ILE	3.2
1	K	349	ILE	3.2

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Mol	Chain	Res	Type	RSRZ
1	I	47	ARG	3.1
1	F	72	LYS	3.1
1	E	178	SER	3.1
1	F	41	SER	3.1
1	D	44	GLY	3.1
1	F	79	VAL	3.1
1	F	323	ASN	3.1
1	G	79	VAL	3.1
1	C	351	ILE	3.1
1	J	349	ILE	3.1
1	F	322	ALA	3.1
1	K	345	PRO	3.1
1	E	207	MET	3.1
1	A	93	GLY	3.1
1	G	70	ALA	3.1
1	F	101	LYS	3.1
1	I	326	TRP	3.1
1	L	323	ASN	3.1
1	F	353	ALA	3.1
1	G	96	PRO	3.1
1	B	1	MET	3.1
1	G	108	TYR	3.0
1	F	56	ILE	3.0
1	F	81	ILE	3.0
1	A	173	TRP	3.0
1	G	173	TRP	3.0
1	E	40	SER	3.0
1	E	179	GLY	3.0
1	E	324	GLY	3.0
1	F	350	ASP	3.0
1	G	87	GLY	3.0
1	G	293	ASN	3.0
1	F	1	MET	3.0
1	F	57	VAL	3.0
1	E	58	THR	3.0
1	H	7	GLY	3.0
1	E	70	ALA	3.0
1	L	345	PRO	3.0
1	E	79	VAL	3.0
1	F	33	VAL	3.0
1	H	16	ILE	3.0
1	B	348	THR	3.0

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Mol	Chain	Res	Type	RSRZ
1	K	41	SER	3.0
1	L	40	SER	3.0
1	B	350	ASP	3.0
1	F	173	TRP	3.0
1	H	353	ALA	3.0
1	D	102	VAL	3.0
1	G	73	LEU	3.0
1	D	349	ILE	3.0
1	I	351	ILE	3.0
1	I	180	LYS	3.0
1	B	7	GLY	3.0
1	F	66	GLY	3.0
1	D	173	TRP	3.0
1	E	41	SER	2.9
1	F	83	GLY	2.9
1	L	359	ASP	2.9
1	C	173	TRP	2.9
1	F	75	ALA	2.9
1	F	355	LEU	2.9
1	H	49	ALA	2.9
1	A	102	VAL	2.9
1	F	10	VAL	2.9
1	C	360	GLY	2.9
1	E	323	ASN	2.9
1	G	66	GLY	2.9
1	A	62	LYS	2.9
1	A	358	TRP	2.9
1	I	322	ALA	2.9
1	E	10	VAL	2.9
1	B	349	ILE	2.9
1	H	6	SER	2.9
1	F	47	ARG	2.9
1	A	355	LEU	2.9
1	C	106	LEU	2.9
1	D	59	ALA	2.9
1	C	102	VAL	2.9
1	E	34	VAL	2.9
1	I	1	MET	2.9
1	J	40	SER	2.8
1	G	59	ALA	2.8
1	G	75	ALA	2.8
1	G	183	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
1	B	76	LYS	2.8
1	G	357	ASP	2.8
1	H	44	GLY	2.8
1	F	69	LEU	2.8
1	B	72	LYS	2.8
1	C	358	TRP	2.8
1	E	358	TRP	2.8
1	I	358	TRP	2.8
1	D	56	ILE	2.8
1	A	40	SER	2.8
1	F	87	GLY	2.8
1	L	7	GLY	2.8
1	E	16	ILE	2.8
1	B	41	SER	2.8
1	L	46	SER	2.8
1	J	62	LYS	2.8
1	F	102	VAL	2.8
1	A	58	THR	2.7
1	J	348	THR	2.7
1	H	144	ASP	2.7
1	K	180	LYS	2.7
1	J	47	ARG	2.7
1	B	323	ASN	2.7
1	H	58	THR	2.7
1	G	44	GLY	2.7
1	A	178	SER	2.7
1	G	63	SER	2.7
1	B	358	TRP	2.7
1	H	145	GLU	2.7
1	H	315	GLU	2.7
1	C	1	MET	2.7
1	H	1	MET	2.7
1	F	65	GLN	2.7
1	C	107	ILE	2.7
1	C	76	LYS	2.7
1	E	72	LYS	2.7
1	G	105	ARG	2.7
1	L	1	MET	2.7
1	L	47	ARG	2.7
1	C	69	LEU	2.7
1	J	49	ALA	2.7
1	D	323	ASN	2.7

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Mol	Chain	Res	Type	RSRZ
1	A	46	SER	2.7
1	C	47	ARG	2.7
1	H	50	MET	2.7
1	C	61	LEU	2.7
1	D	358	TRP	2.7
1	H	73	LEU	2.7
1	F	62	LYS	2.6
1	D	43	ASP	2.6
1	G	57	VAL	2.6
1	L	351	ILE	2.6
1	A	69	LEU	2.6
1	D	355	LEU	2.6
1	C	75	ALA	2.6
1	E	77	ALA	2.6
1	G	60	ASP	2.6
1	K	350	ASP	2.6
1	G	55	ARG	2.6
1	H	105	ARG	2.6
1	I	42	VAL	2.6
1	B	44	GLY	2.6
1	H	179	GLY	2.6
1	D	1	MET	2.6
1	E	56	ILE	2.6
1	E	62	LYS	2.6
1	I	76	LYS	2.6
1	C	49	ALA	2.6
1	I	44	GLY	2.6
1	K	96	PRO	2.6
1	G	32	ASP	2.6
1	H	348	THR	2.6
1	C	34	VAL	2.6
1	G	65	GLN	2.5
1	A	92	LEU	2.5
1	G	71	LEU	2.5
1	D	324	GLY	2.5
1	F	39	PRO	2.5
1	H	334	PHE	2.5
1	G	184	VAL	2.5
1	I	41	SER	2.5
1	K	79	VAL	2.5
1	F	108	TYR	2.5
1	G	98	GLU	2.5

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Mol	Chain	Res	Type	RSRZ
1	C	70	ALA	2.5
1	D	2	ALA	2.5
1	J	350	ASP	2.5
1	G	255	ASP	2.5
1	K	75	ALA	2.5
1	K	323	ASN	2.5
1	F	9	ARG	2.5
1	G	8	LEU	2.5
1	E	2	ALA	2.5
1	F	100	ALA	2.5
1	F	109	ALA	2.5
1	E	66	GLY	2.5
1	F	277	GLU	2.4
1	B	40	SER	2.4
1	F	63	SER	2.4
1	A	10	VAL	2.4
1	C	11	VAL	2.4
1	H	76	LYS	2.4
1	F	255	ASP	2.4
1	E	176	GLN	2.4
1	G	344	PRO	2.4
1	H	59	ALA	2.4
1	D	7	GLY	2.4
1	F	7	GLY	2.4
1	H	352	GLU	2.4
1	I	68	GLU	2.4
1	A	356	THR	2.4
1	F	58	THR	2.4
1	D	107	ILE	2.4
1	H	57	VAL	2.4
1	K	56	ILE	2.4
1	L	180	LYS	2.4
1	H	5	LEU	2.4
1	D	47	ARG	2.4
1	B	77	ALA	2.4
1	E	93	GLY	2.4
1	F	59	ALA	2.4
1	E	356	THR	2.4
1	K	46	SER	2.4
1	E	180	LYS	2.4
1	F	99	CYS	2.4
1	F	184	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
1	G	56	ILE	2.4
1	H	56	ILE	2.4
1	J	102	VAL	2.4
1	K	11	VAL	2.4
1	F	71	LEU	2.4
1	D	315	GLU	2.4
1	F	97	GLU	2.4
1	A	77	ALA	2.4
1	C	171	ALA	2.4
1	C	353	ALA	2.4
1	E	75	ALA	2.4
1	H	77	ALA	2.4
1	K	49	ALA	2.4
1	G	356	THR	2.4
1	A	34	VAL	2.4
1	G	42	VAL	2.4
1	G	207	MET	2.4
1	E	5	LEU	2.4
1	E	73	LEU	2.4
1	F	92	LEU	2.4
1	L	173	TRP	2.4
1	A	323	ASN	2.3
1	E	350	ASP	2.3
1	F	359	ASP	2.3
1	B	325	GLY	2.3
1	C	2	ALA	2.3
1	D	76	LYS	2.3
1	E	59	ALA	2.3
1	J	322	ALA	2.3
1	H	337	THR	2.3
1	A	41	SER	2.3
1	H	354	VAL	2.3
1	D	8	LEU	2.3
1	G	104	ASP	2.3
1	C	77	ALA	2.3
1	C	207	MET	2.3
1	F	89	THR	2.3
1	E	11	VAL	2.3
1	G	88	VAL	2.3
1	A	99	CYS	2.3
1	G	67	LEU	2.3
1	A	37	ASP	2.3

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Mol	Chain	Res	Type	RSRZ
1	J	37	ASP	2.3
1	A	49	ALA	2.3
1	C	33	VAL	2.3
1	E	33	VAL	2.3
1	F	94	LEU	2.3
1	C	359	ASP	2.3
1	D	359	ASP	2.3
1	E	104	ASP	2.3
1	G	83	GLY	2.3
1	L	30	GLY	2.3
1	C	105	ARG	2.3
1	E	47	ARG	2.3
1	G	49	ALA	2.3
1	L	353	ALA	2.3
1	E	348	THR	2.3
1	F	98	GLU	2.3
1	H	176	GLN	2.3
1	I	243	GLN	2.3
1	G	74	ILE	2.3
1	C	355	LEU	2.2
1	E	61	LEU	2.2
1	J	48	ASP	2.2
1	L	207	MET	2.2
1	E	49	ALA	2.2
1	G	322	ALA	2.2
1	G	46	SER	2.2
1	K	358	TRP	2.2
1	A	72	LYS	2.2
1	C	62	LYS	2.2
1	C	56	ILE	2.2
1	A	354	VAL	2.2
1	C	8	LEU	2.2
1	J	11	VAL	2.2
1	G	9	ARG	2.2
1	G	91	ARG	2.2
1	I	345	PRO	2.2
1	F	27	GLY	2.2
1	A	68	GLU	2.2
1	E	353	ALA	2.2
1	F	356	THR	2.2
1	H	326	TRP	2.2
1	K	351	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
1	G	106	LEU	2.2
1	E	334	PHE	2.2
1	C	350	ASP	2.2
1	H	66	GLY	2.2
1	A	101	LYS	2.2
1	A	176	GLN	2.2
1	B	243	GLN	2.2
1	L	76	LYS	2.2
1	D	256	ALA	2.2
1	H	108	TYR	2.2
1	G	80	LEU	2.2
1	K	73	LEU	2.2
1	K	107	ILE	2.2
1	A	1	MET	2.2
1	D	350	ASP	2.2
1	I	144	ASP	2.2
1	A	277	GLU	2.2
1	G	30	GLY	2.2
1	C	59	ALA	2.2
1	E	337	THR	2.2
1	F	61	LEU	2.1
1	K	355	LEU	2.1
1	D	354	VAL	2.1
1	H	350	ASP	2.1
1	C	101	LYS	2.1
1	E	352	GLU	2.1
1	G	68	GLU	2.1
1	C	181	GLY	2.1
1	L	44	GLY	2.1
1	A	75	ALA	2.1
1	C	322	ALA	2.1
1	L	347	ALA	2.1
1	E	105	ARG	2.1
1	E	8	LEU	2.1
1	E	80	LEU	2.1
1	H	180	LYS	2.1
1	F	43	ASP	2.1
1	H	359	ASP	2.1
1	J	352	GLU	2.1
1	G	39	PRO	2.1
1	J	173	TRP	2.1
1	B	65	GLN	2.1

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Mol	Chain	Res	Type	RSRZ
1	K	344	PRO	2.1
1	C	179	GLY	2.1
1	B	75	ALA	2.1
1	K	100	ALA	2.1
1	B	355	LEU	2.1
1	C	352	GLU	2.1
1	E	172	LEU	2.1
1	K	71	LEU	2.1
1	F	293	ASN	2.1
1	C	79	VAL	2.1
1	A	44	GLY	2.1
1	E	181	GLY	2.1
1	A	177	SER	2.1
1	F	40	SER	2.1
1	B	49	ALA	2.1
1	G	2	ALA	2.1
1	A	56	ILE	2.1
1	C	104	ASP	2.1
1	E	65	GLN	2.1
1	G	26	LEU	2.1
1	G	359	ASP	2.1
1	H	107	ILE	2.1
1	H	357	ASP	2.1
1	I	359	ASP	2.1
1	C	354	VAL	2.1
1	D	34	VAL	2.1
1	B	324	GLY	2.1
1	E	7	GLY	2.1
1	F	334	PHE	2.1
1	H	41	SER	2.0
1	E	97	GLU	2.0
1	E	322	ALA	2.0
1	I	207	MET	2.0
1	C	73	LEU	2.0
1	E	359	ASP	2.0
1	F	5	LEU	2.0
1	G	172	LEU	2.0
1	C	183	VAL	2.0
1	B	62	LYS	2.0
1	C	72	LYS	2.0
1	K	173	TRP	2.0
1	D	40	SER	2.0

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Mol	Chain	Res	Type	RSRZ
1	G	89	THR	2.0
1	E	338	ALA	2.0
1	A	344	PRO	2.0
1	E	107	ILE	2.0
1	E	76	LYS	2.0

6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

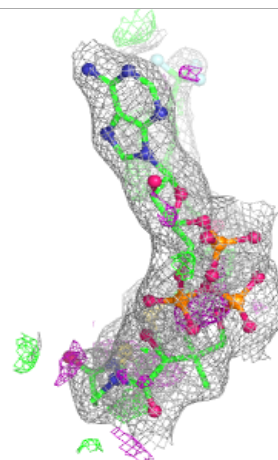
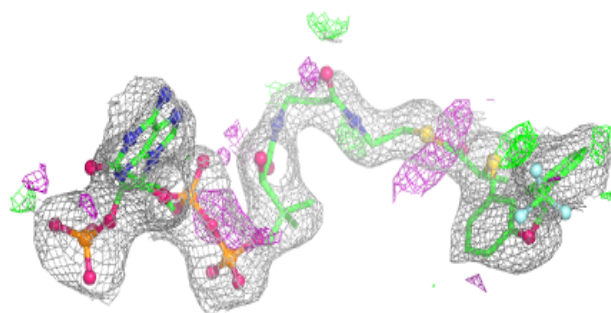
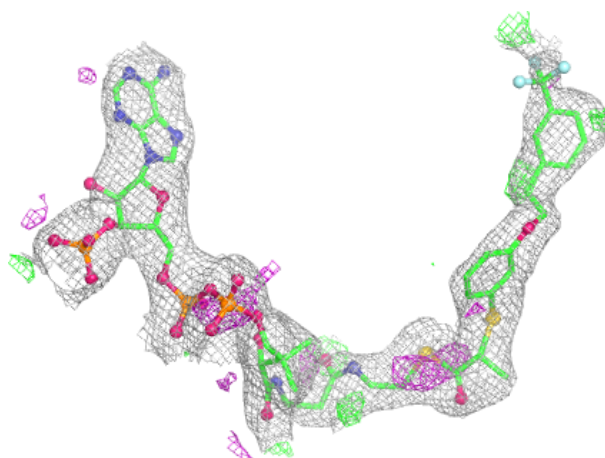
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
2	A1JJ4	E	401	72/72	0.90	0.15	46,74,130,152	0
2	A1JJ4	H	401	72/72	0.91	0.16	49,75,147,157	0
2	A1JJ4	F	401	72/72	0.93	0.14	36,67,151,168	0
2	A1JJ4	C	401	72/72	0.93	0.13	37,65,136,145	0
2	A1JJ4	A	401	72/72	0.94	0.12	37,62,116,125	0
2	A1JJ4	G	401	72/72	0.95	0.13	36,67,132,144	0
2	A1JJ4	B	401	72/72	0.95	0.12	37,60,142,159	0
2	A1JJ4	J	401	72/72	0.95	0.12	34,57,122,145	0
2	A1JJ4	K	401	72/72	0.95	0.11	36,59,116,123	0
2	A1JJ4	L	401	72/72	0.95	0.11	35,51,119,157	0
2	A1JJ4	I	401	72/72	0.96	0.10	29,50,125,139	0
2	A1JJ4	D	401	72/72	0.96	0.11	33,56,124,136	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.

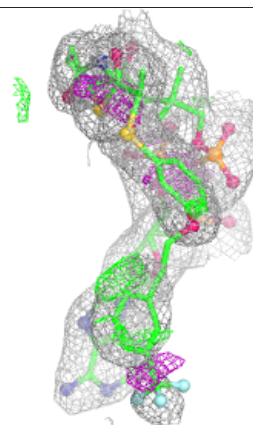
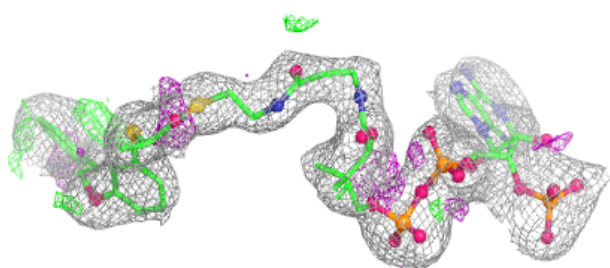
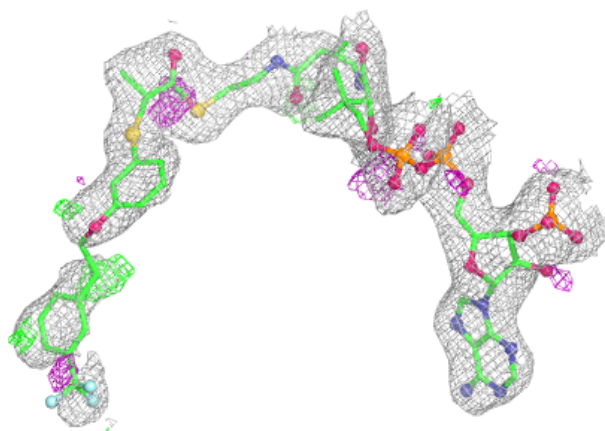
Electron density around A1JJ4 E 401:

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

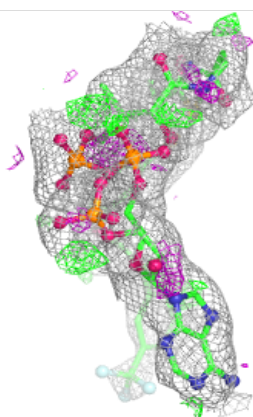
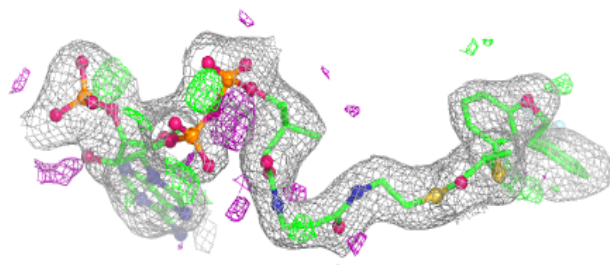
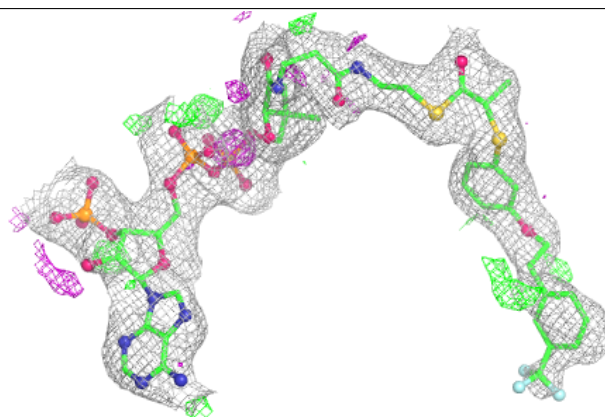


Electron density around A1JJ4 H 401:

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

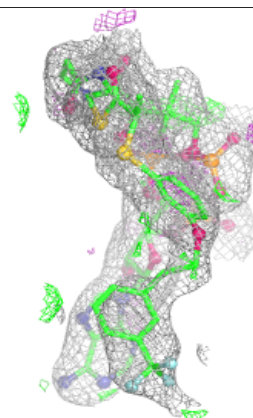
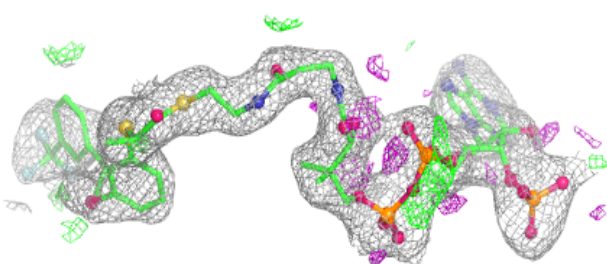
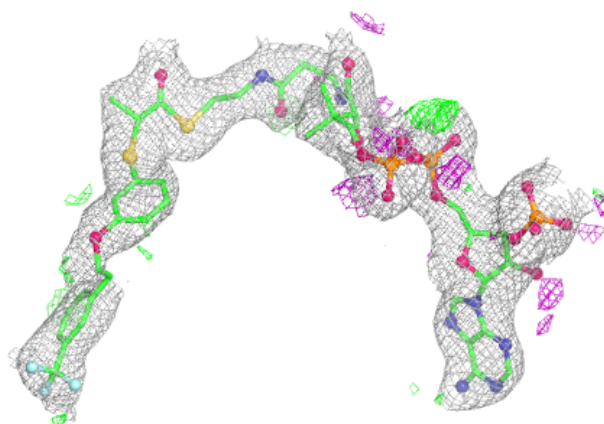
**Electron density around A1JJ4 F 401:**

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

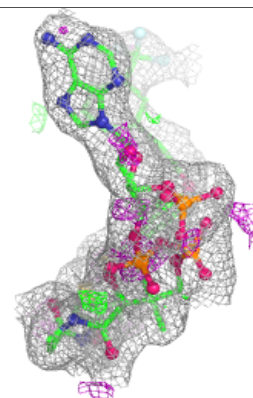
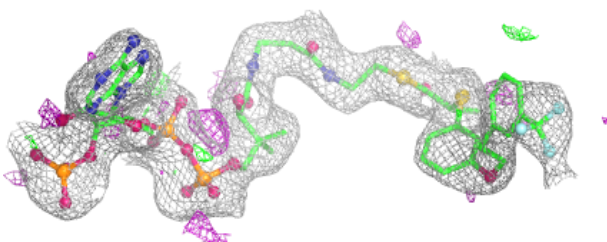
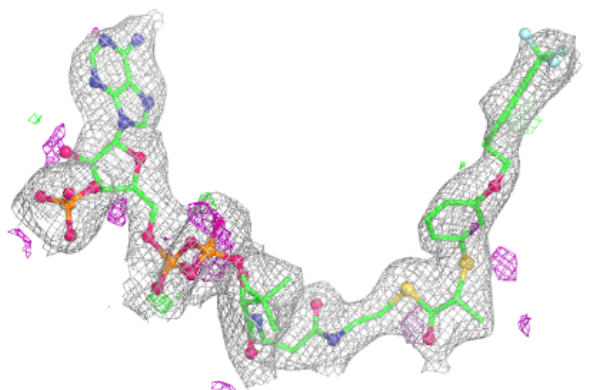


Electron density around A1JJ4 C 401:

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

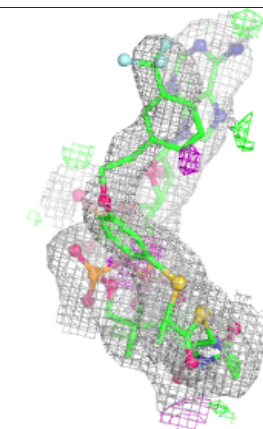
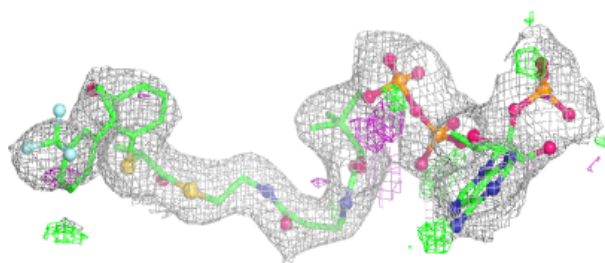
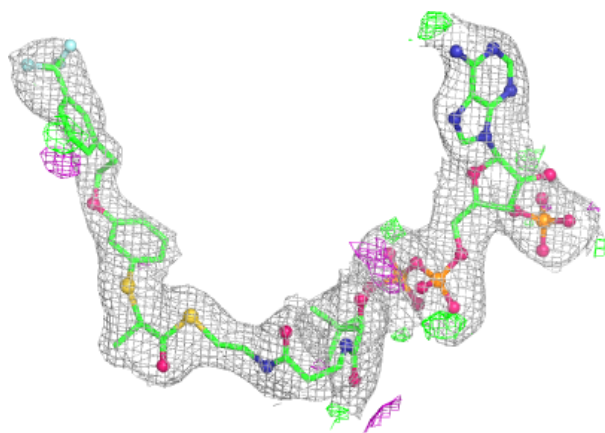
**Electron density around A1JJ4 A 401:**

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

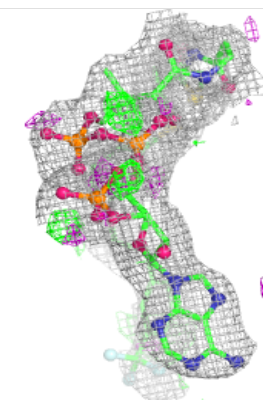
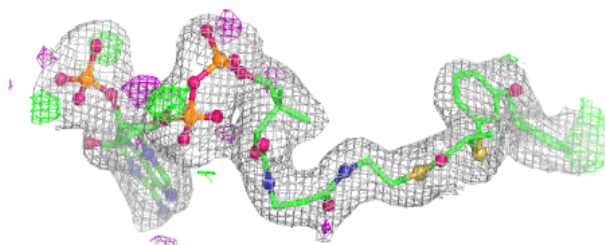
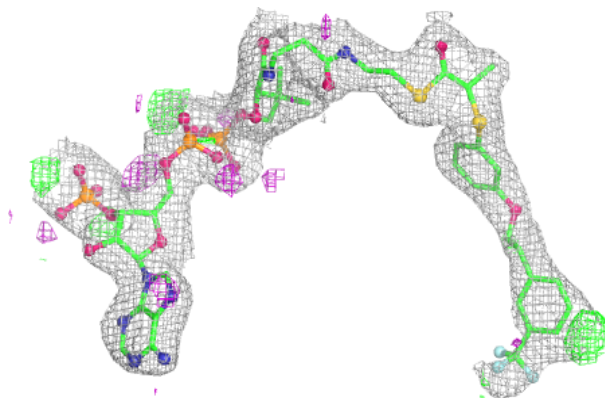


Electron density around A1JJ4 G 401:

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

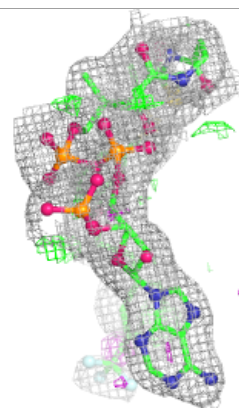
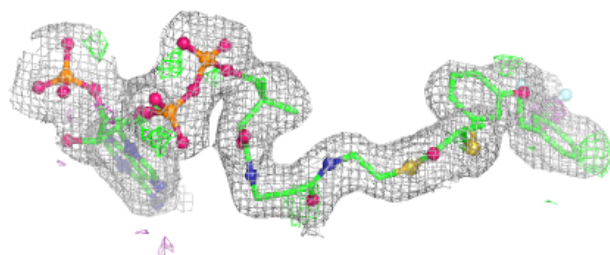
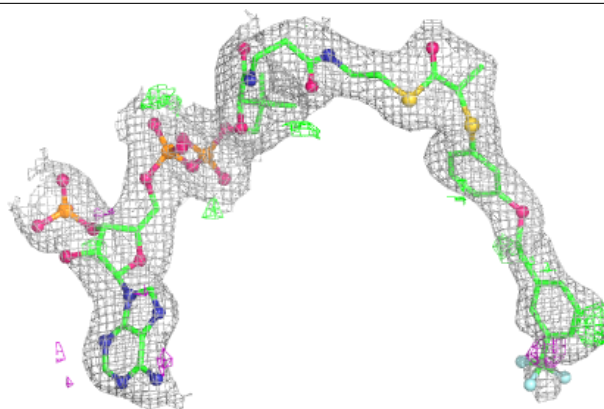
**Electron density around A1JJ4 B 401:**

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

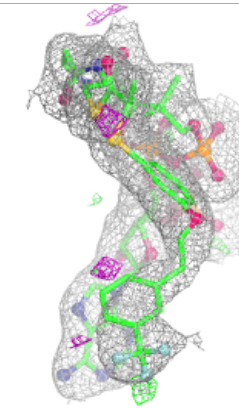
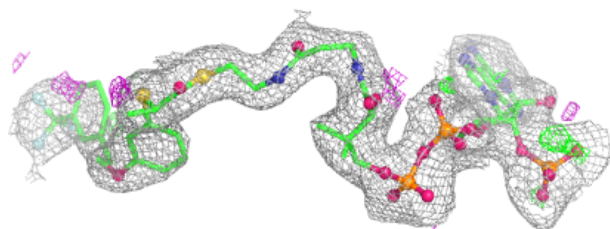
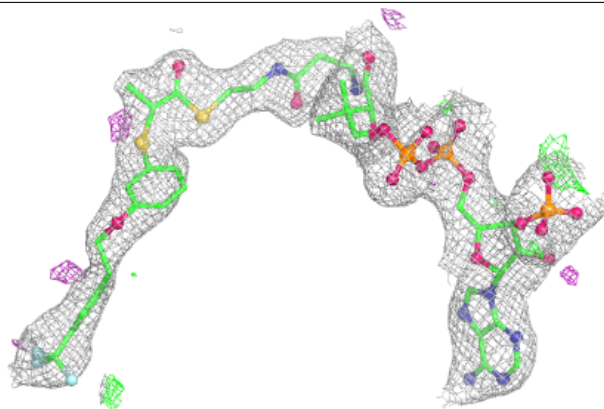


Electron density around A1JJ4 J 401:

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

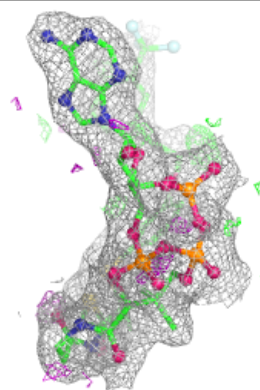
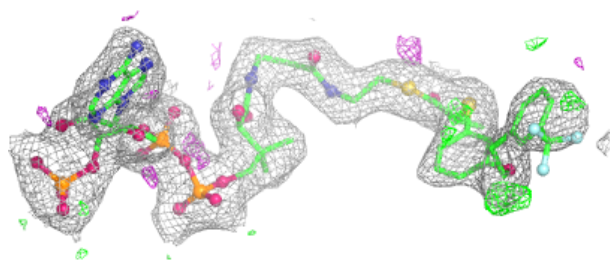
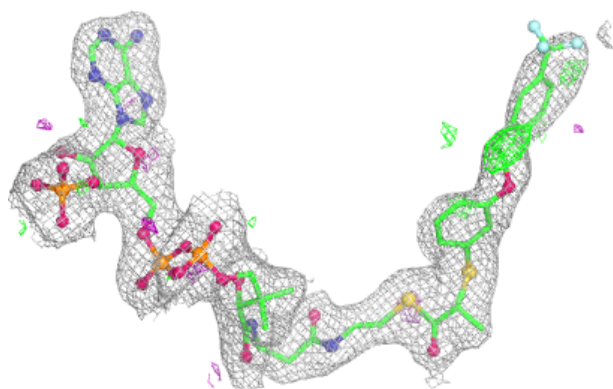
**Electron density around A1JJ4 K 401:**

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

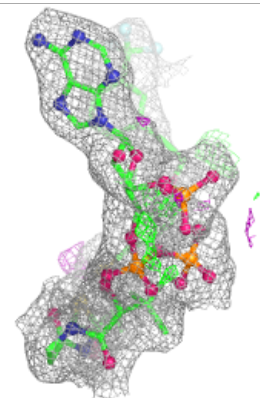
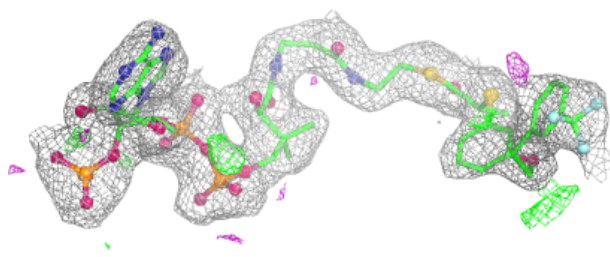
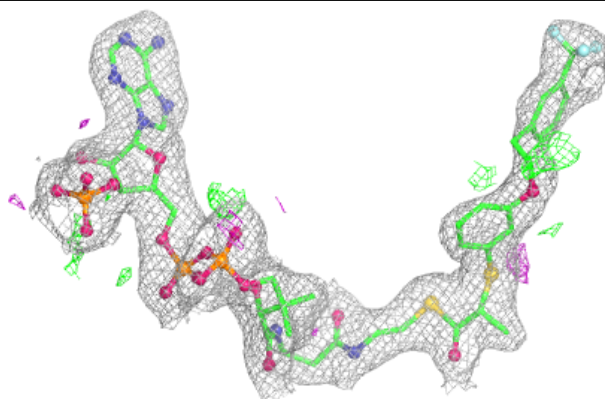


Electron density around A1JJ4 L 401:

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

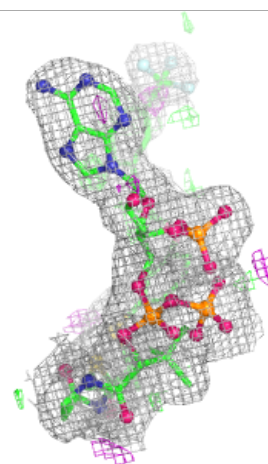
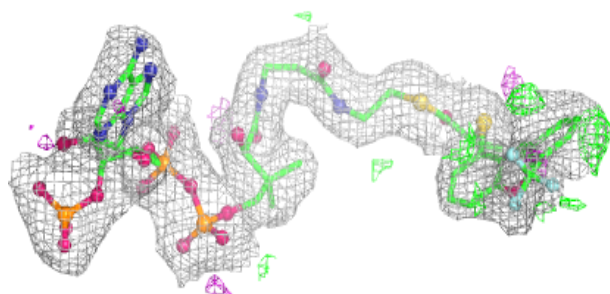
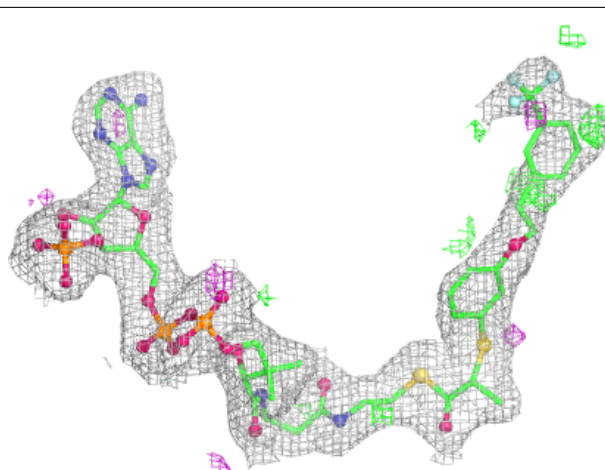
**Electron density around A1JJ4 I 401:**

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



Electron density around A1JJ4 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.