



Full wwPDB X-ray Structure Validation Report ⓘ

Jul 20, 2026 – 02:55 pm BST

PDB ID : 9RZ8 / pdb_00009rz8
Title : Alpha-Methylacyl-CoA racemase from Mycobacterium tuberculosis in complex with 2-(3-(2-(3-Methoxyphenyl)ethoxy)phenylthiol)propanoyl-CoA
Authors : Mojanaga, O.O.; Acharya, K.R.; Lloyd, M.D.
Deposited on : 2025-07-15
Resolution : 2.00 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:

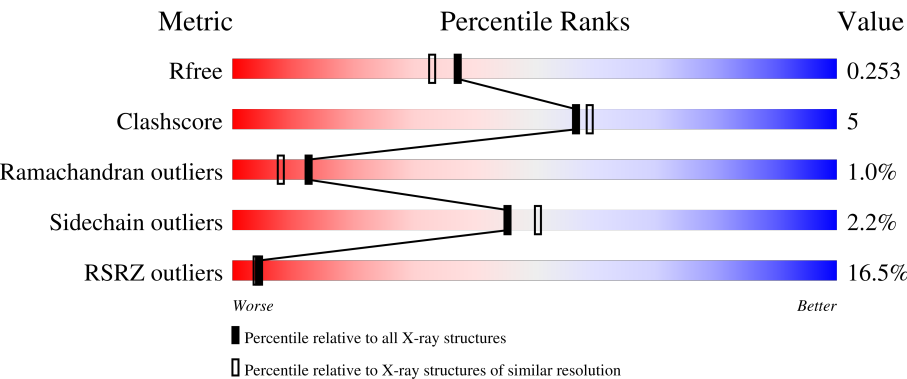
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.015 (Gargrove)
Density-Fitness	:	1.0.12
Ideal 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 2.00 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	10052 (2.00-2.00)
Clashscore	190562	11152 (2.00-2.00)
Ramachandran outliers	187476	11031 (2.00-2.00)
Sidechain outliers	187428	11029 (2.00-2.00)
RSRZ outliers	180081	10067 (2.00-2.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. 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	23%82%14%...
1	G	364	31%82%15%..
1	H	364	24%84%13%..
1	I	364	7%86%12%..
1	J	364	8%89%9%..
1	K	364	15%88%10%..
1	L	364	10%90%7%...

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 35015 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	359	Total	C	N	O	S	0	2	0
			2724	1708	488	512	16			
1	C	359	Total	C	N	O	S	0	2	0
			2718	1704	486	512	16			
1	D	359	Total	C	N	O	S	0	1	0
			2715	1703	486	510	16			
1	E	359	Total	C	N	O	S	0	2	0
			2718	1704	486	512	16			
1	F	359	Total	C	N	O	S	0	1	0
			2715	1703	486	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	1	0
			2715	1703	486	510	16			
1	K	359	Total	C	N	O	S	0	3	0
			2724	1708	487	513	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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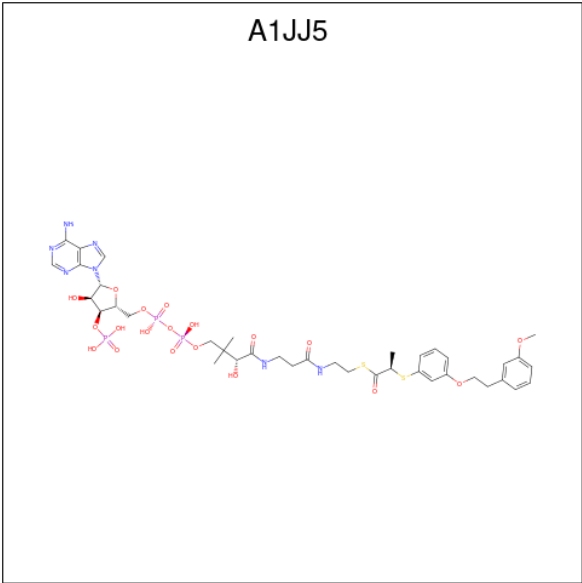
Chain	Residue	Modelled	Actual	Comment	Reference
B	362	SER	-	expression tag	UNP O06543
B	363	GLY	-	expression tag	UNP O06543
B	364	CYS	-	expression tag	UNP O06543
C	361	GLY	-	expression tag	UNP O06543
C	362	SER	-	expression tag	UNP O06543
C	363	GLY	-	expression tag	UNP O06543
C	364	CYS	-	expression tag	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-Methoxyphenyl)ethoxy)phenylthiol)propanoyl-CoA (CCD ID: A1JJ5) (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		

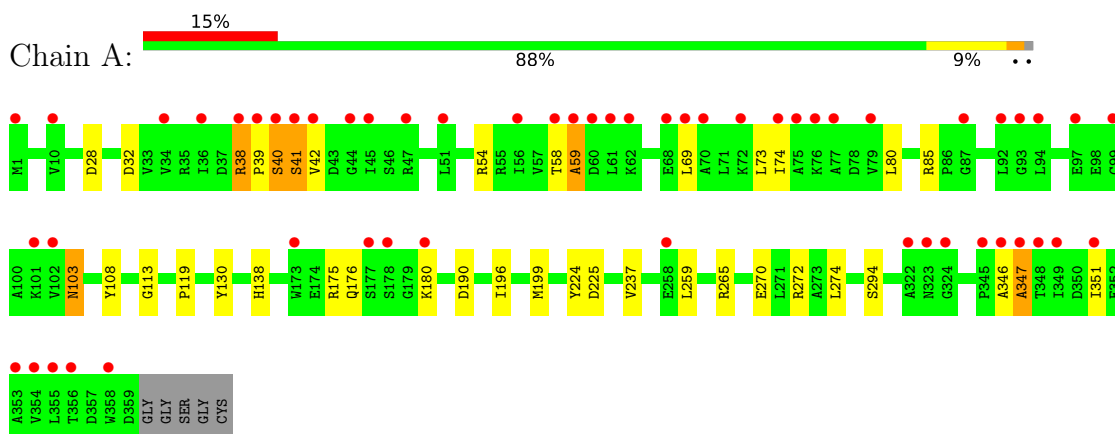
- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	136	Total	O	0	0
			136	136		
3	B	120	Total	O	0	0
			120	120		
3	C	126	Total	O	0	0
			126	126		
3	D	134	Total	O	0	0
			134	134		
3	E	123	Total	O	0	0
			123	123		
3	F	114	Total	O	0	0
			114	114		
3	G	112	Total	O	0	0
			112	112		
3	H	132	Total	O	0	0
			132	132		
3	I	144	Total	O	0	0
			144	144		
3	J	154	Total	O	0	0
			154	154		
3	K	131	Total	O	0	0
			131	131		
3	L	136	Total	O	0	0
			136	136		

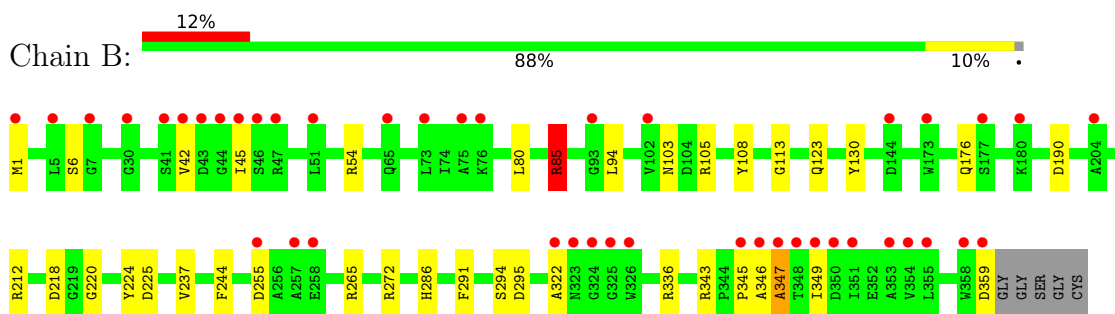
3 Residue-property plots [i](#)

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.

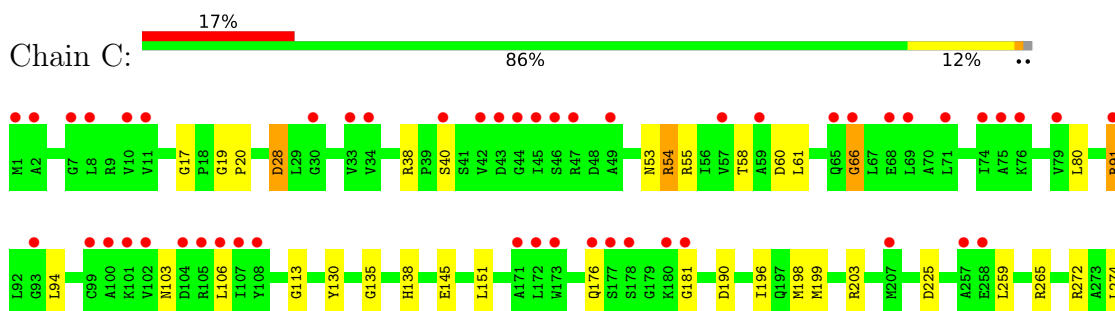
- Molecule 1: Alpha-methylacyl-CoA racemase



- Molecule 1: Alpha-methylacyl-CoA racemase

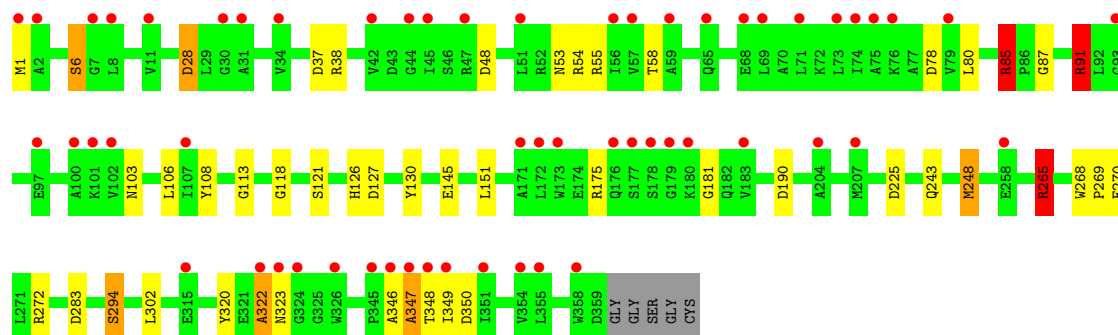
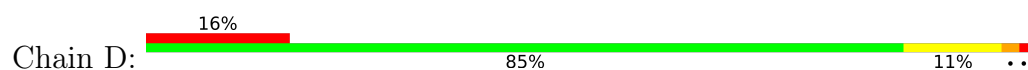


- Molecule 1: Alpha-methylacyl-CoA racemase

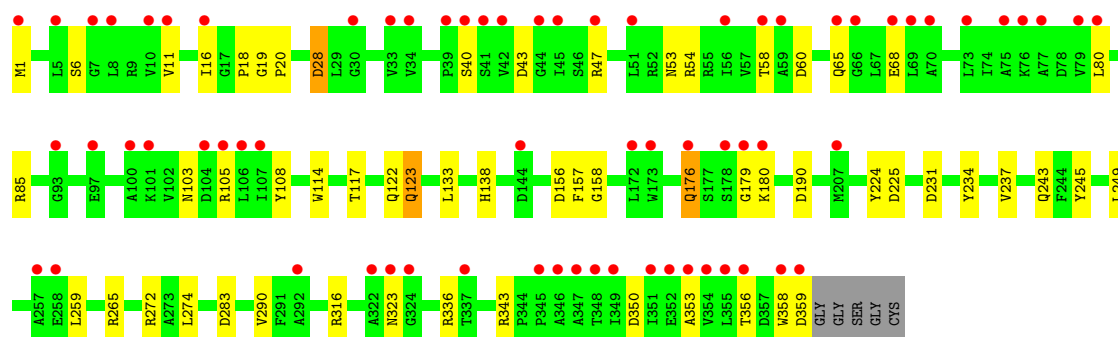
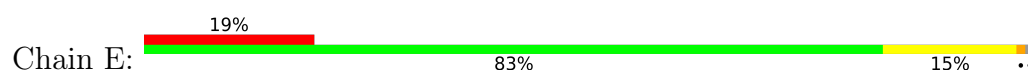




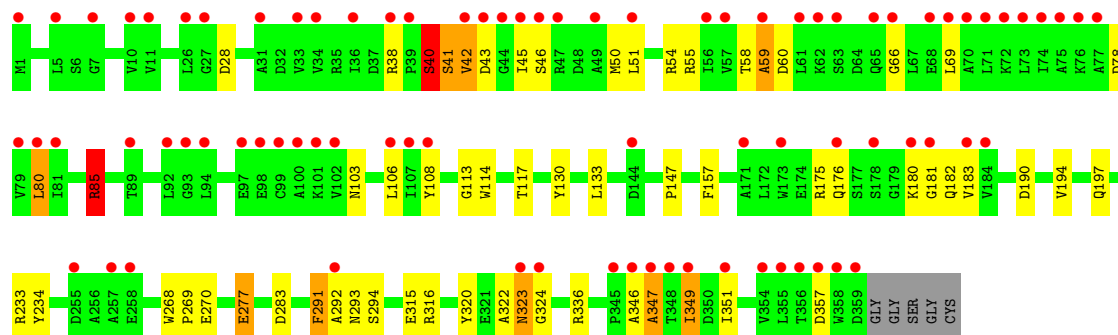
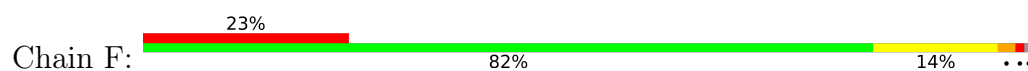
• Molecule 1: Alpha-methylacyl-CoA racemase



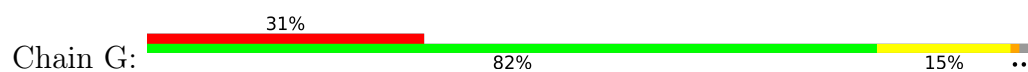
• Molecule 1: Alpha-methylacyl-CoA racemase

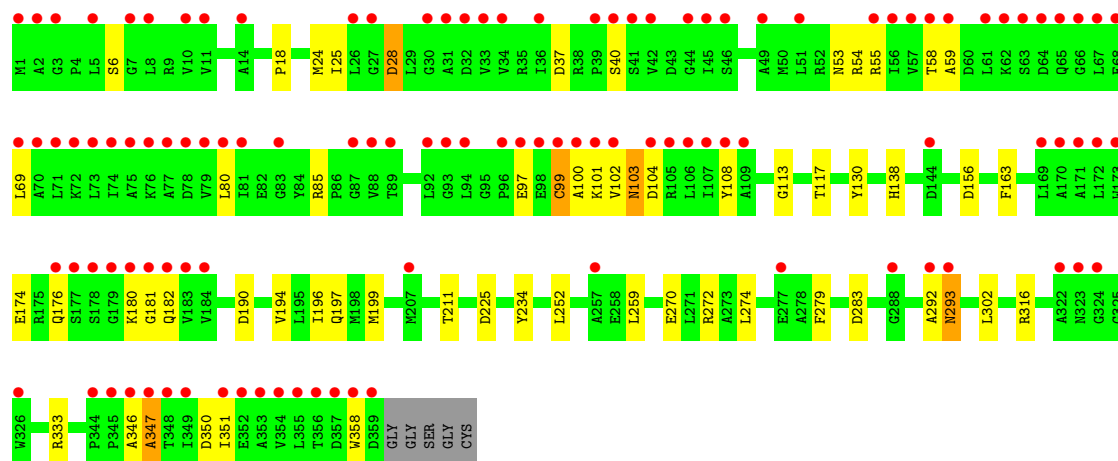


• Molecule 1: Alpha-methylacyl-CoA racemase

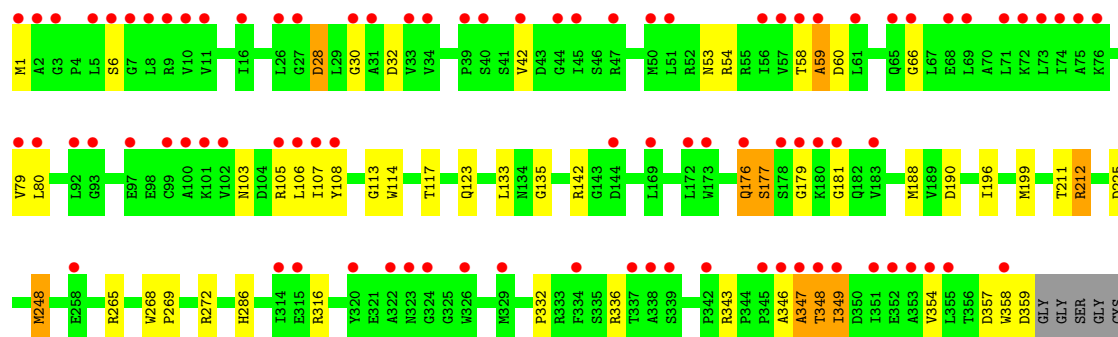
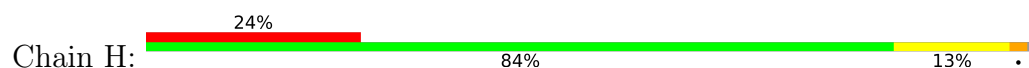


• Molecule 1: Alpha-methylacyl-CoA racemase

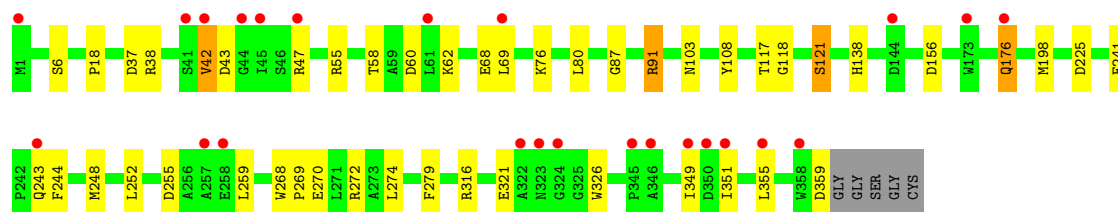
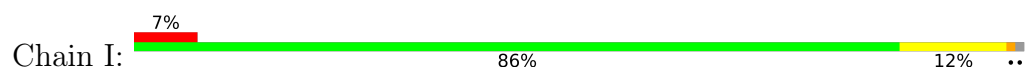




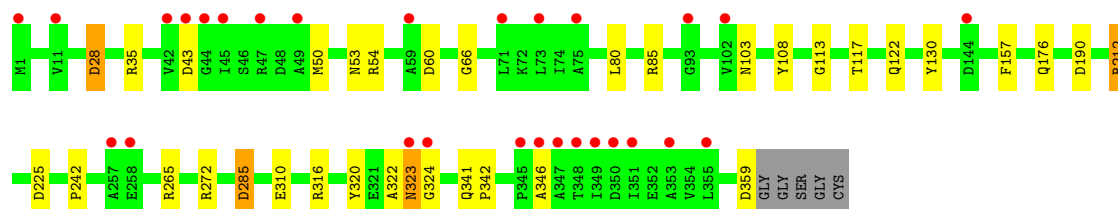
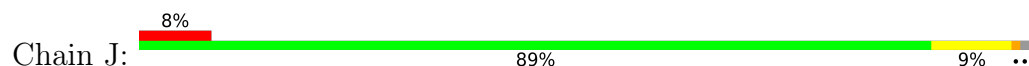
● Molecule 1: Alpha-methylacyl-CoA racemase



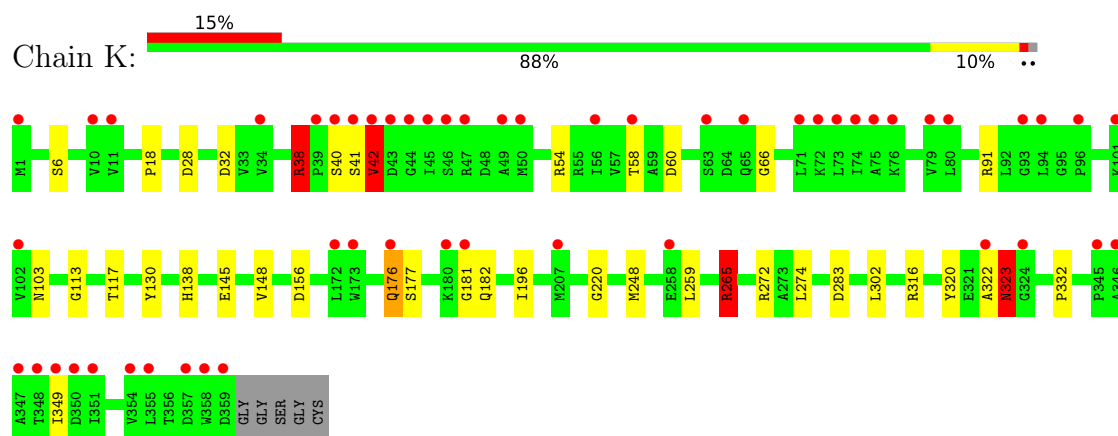
● Molecule 1: Alpha-methylacyl-CoA racemase



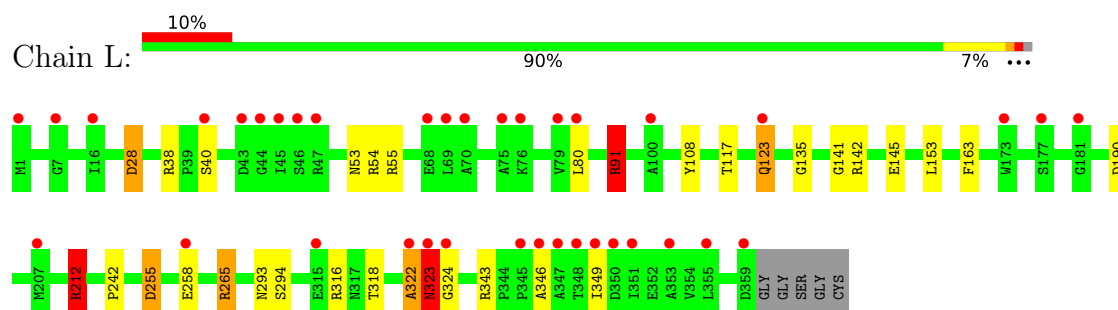
● Molecule 1: Alpha-methylacyl-CoA racemase



• 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	276.67Å 276.67Å 389.56Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	195.54 – 2.00 195.54 – 2.00	Depositor EDS
% Data completeness (in resolution range)	100.0 (195.54-2.00) 99.9 (195.54-2.00)	Depositor EDS
R_{merge}	0.25	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.25 (at 2.00Å)	Xtriage
Refinement program	REFMAC 5.8.0430 (refmacat 0.4.88)	Depositor
R, R_{free}	0.207 , 0.244 0.217 , 0.253	Depositor DCC
R_{free} test set	24859 reflections (4.98%)	wwPDB-VP
Wilson B-factor (Å ²)	36.4	Xtriage
Anisotropy	0.019	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.37 , 44.6	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.34$	Xtriage
Estimated twinning fraction	0.010 for $-1/2^*h+1/2^*k-1/2^*l, 1/2^*h-1/2^*k-1/2^*l, -h-k$ 0.010 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	35015	wwPDB-VP
Average B, all atoms (Å ²)	45.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.51% 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: A1JJ5

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	0.65	0/2791	1.10	3/3797 (0.1%)
1	B	0.66	0/2791	1.11	6/3797 (0.2%)
1	C	0.64	0/2791	1.15	5/3797 (0.1%)
1	D	0.66	0/2782	1.16	11/3785 (0.3%)
1	E	0.65	0/2791	1.14	10/3797 (0.3%)
1	F	0.64	0/2782	1.15	8/3785 (0.2%)
1	G	0.63	0/2791	1.13	6/3797 (0.2%)
1	H	0.64	0/2782	1.13	6/3785 (0.2%)
1	I	0.64	0/2791	1.13	6/3797 (0.2%)
1	J	0.64	0/2782	1.11	7/3785 (0.2%)
1	K	0.64	0/2800	1.10	7/3809 (0.2%)
1	L	0.64	0/2782	1.14	9/3785 (0.2%)
All	All	0.65	0/33456	1.13	84/45516 (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	3
1	B	0	3
1	C	0	1
1	D	0	3
1	E	0	2
1	F	0	2
1	G	0	2
1	H	0	3
1	J	0	2
1	K	0	2
1	L	0	5

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Mol	Chain	#Chirality outliers	#Planarity outliers
All	All	0	28

There are no bond length outliers.

All (84) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L	123	GLN	CB-CA-C	11.88	129.21	109.84
1	D	248	MET	CG-SD-CE	8.01	118.52	100.90
1	I	255	ASP	CB-CA-C	7.73	122.71	110.19
1	C	91	ARG	CB-CA-C	-7.46	98.40	110.79
1	L	323	ASN	CB-CA-C	7.39	125.13	110.42
1	D	265	ARG	NE-CZ-NH2	7.17	125.66	119.20
1	E	28	ASP	CA-CB-CG	7.14	119.74	112.60
1	D	91	ARG	CB-CA-C	-7.12	97.45	110.63
1	L	28	ASP	CA-CB-CG	7.11	119.71	112.60
1	B	255	ASP	CB-CA-C	7.01	121.93	110.22
1	B	218	ASP	CA-CB-CG	6.75	119.35	112.60
1	J	28	ASP	CA-CB-CG	6.72	119.32	112.60
1	F	190	ASP	CA-CB-CG	6.70	119.30	112.60
1	H	28	ASP	CA-CB-CG	6.63	119.23	112.60
1	K	28	ASP	CA-CB-CG	6.61	119.21	112.60
1	B	123	GLN	N-CA-CB	-6.55	99.80	109.95
1	L	190	ASP	CA-CB-CG	6.53	119.13	112.60
1	B	190	ASP	CA-CB-CG	6.50	119.10	112.60
1	G	190	ASP	CA-CB-CG	6.42	119.02	112.60
1	J	190	ASP	CA-CB-CG	6.38	118.98	112.60
1	G	28	ASP	CA-CB-CG	6.33	118.93	112.60
1	G	99	CYS	CB-CA-C	6.24	121.91	110.11
1	E	123	GLN	N-CA-CB	6.17	119.04	109.97
1	K	38	ARG	N-CA-CB	6.16	119.10	110.11
1	J	285	ASP	CB-CA-C	6.15	122.48	110.67
1	K	32	ASP	CA-CB-CG	6.15	118.75	112.60
1	D	265	ARG	CD-NE-CZ	6.14	132.99	124.40
1	A	28	ASP	CA-CB-CG	6.14	118.74	112.60
1	D	91	ARG	N-CA-CB	6.11	119.63	110.22
1	C	28	ASP	CA-CB-CG	6.08	118.68	112.60
1	I	91	ARG	CB-CA-C	-6.07	99.40	110.63
1	E	190	ASP	CA-CB-CG	6.04	118.64	112.60
1	E	123	GLN	CB-CA-C	-6.03	99.34	109.65
1	B	54	ARG	CB-CA-C	-6.02	97.44	109.79
1	L	255	ASP	CB-CA-C	-5.97	100.11	109.84
1	A	190	ASP	CA-CB-CG	5.92	118.52	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	306	GLU	CB-CA-C	-5.82	99.52	109.65
1	D	54	ARG	CB-CA-C	-5.79	97.32	110.07
1	I	176	GLN	N-CA-CB	5.77	118.71	110.06
1	D	28	ASP	CA-CB-CG	5.76	118.36	112.60
1	H	211	THR	CA-CB-OG1	-5.76	100.97	109.60
1	K	283	ASP	CA-CB-CG	5.74	118.33	112.60
1	F	283	ASP	CA-CB-CG	5.73	118.33	112.60
1	I	321	GLU	CB-CA-C	-5.70	100.94	110.29
1	G	283	ASP	CA-CB-CG	5.68	118.28	112.60
1	D	38	ARG	CB-CA-C	5.65	117.00	108.86
1	J	54	ARG	CB-CA-C	-5.63	97.68	110.07
1	L	91	ARG	CB-CA-C	-5.61	101.48	110.79
1	F	147	PRO	CA-C-N	-5.59	118.47	123.33
1	F	147	PRO	C-N-CA	-5.59	118.47	123.33
1	C	54	ARG	CB-CA-C	-5.57	97.81	110.07
1	I	38	ARG	CB-CA-C	-5.56	100.32	109.27
1	I	248	MET	CG-SD-CE	5.52	113.05	100.90
1	D	283	ASP	CB-CA-C	5.52	120.94	110.51
1	E	176	GLN	N-CA-CB	5.47	118.16	110.12
1	F	157	PHE	CB-CA-C	5.46	119.52	111.65
1	H	190	ASP	CA-CB-CG	5.44	118.04	112.60
1	L	123	GLN	N-CA-CB	-5.43	101.53	109.95
1	J	157	PHE	CB-CA-C	5.42	119.46	111.65
1	L	265	ARG	NE-CZ-NH2	5.38	124.04	119.20
1	D	190	ASP	CA-CB-CG	5.36	117.96	112.60
1	F	357	ASP	CA-CB-CG	5.35	117.95	112.60
1	H	248	MET	CG-SD-CE	5.27	112.49	100.90
1	E	43	ASP	CA-CB-CG	5.26	117.86	112.60
1	A	32	ASP	CA-CB-CG	5.25	117.85	112.60
1	F	28	ASP	CA-CB-CG	5.23	117.83	112.60
1	J	43	ASP	CA-CB-CG	5.22	117.82	112.60
1	B	123	GLN	CB-CA-C	5.20	118.31	109.84
1	H	357	ASP	CA-CB-CG	5.19	117.79	112.60
1	E	47	ARG	N-CA-CB	-5.19	102.31	110.46
1	G	104	ASP	CA-CB-CG	5.17	117.77	112.60
1	E	231	ASP	CA-CB-CG	5.14	117.74	112.60
1	H	123	GLN	CB-CA-C	5.13	118.20	109.84
1	D	48	ASP	CA-CB-CG	5.10	117.70	112.60
1	E	283	ASP	CA-CB-CG	5.09	117.69	112.60
1	F	291	PHE	CB-CA-C	5.07	118.70	110.24
1	K	38	ARG	CB-CA-C	-5.07	101.11	109.27
1	J	212	ARG	CD-NE-CZ	5.06	131.49	124.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	K	54	ARG	CB-CA-C	-5.06	99.41	109.79
1	L	318	THR	CA-CB-OG1	-5.06	102.01	109.60
1	G	211	THR	CA-CB-OG1	-5.05	102.02	109.60
1	E	54	ARG	CB-CA-C	-5.04	98.37	109.56
1	K	265	ARG	CD-NE-CZ	5.03	131.44	124.40
1	C	190	ASP	CA-CB-CG	5.01	117.61	112.60

There are no chirality outliers.

All (28) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	265	ARG	Sidechain
1	A	38	ARG	Sidechain
1	A	54	ARG	Peptide
1	B	212	ARG	Sidechain
1	B	322	ALA	Peptide
1	B	85	ARG	Sidechain
1	C	203	ARG	Sidechain
1	D	265	ARG	Sidechain
1	D	322	ALA	Peptide
1	D	85	ARG	Sidechain
1	E	265	ARG	Sidechain
1	E	350	ASP	Peptide
1	F	233	ARG	Sidechain
1	F	85	ARG	Sidechain
1	G	333	ARG	Sidechain
1	G	85	ARG	Sidechain
1	H	212	ARG	Sidechain
1	H	265	ARG	Sidechain
1	H	54	ARG	Peptide
1	J	212	ARG	Sidechain
1	J	35	ARG	Sidechain
1	K	265	ARG	Sidechain
1	K	38	ARG	Sidechain
1	L	212	ARG	Sidechain
1	L	265	ARG	Sidechain
1	L	322	ALA	Peptide
1	L	54	ARG	Peptide
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	26	0
1	B	2724	0	2667	21	0
1	C	2718	0	2658	30	0
1	D	2715	0	2660	26	0
1	E	2718	0	2658	28	0
1	F	2715	0	2660	39	0
1	G	2718	0	2658	39	0
1	H	2715	0	2660	32	0
1	I	2718	0	2658	24	0
1	J	2715	0	2660	23	0
1	K	2724	0	2666	24	0
1	L	2715	0	2660	21	0
2	A	70	0	0	2	0
2	B	70	0	0	3	0
2	C	70	0	0	1	0
2	D	70	0	0	3	0
2	E	70	0	0	1	0
2	F	70	0	0	3	0
2	G	70	0	0	0	0
2	H	70	0	0	0	0
2	I	70	0	0	0	0
2	J	70	0	0	1	0
2	K	70	0	0	2	0
2	L	70	0	0	0	0
3	A	136	0	0	3	0
3	B	120	0	0	4	0
3	C	126	0	0	2	0
3	D	134	0	0	4	0
3	E	123	0	0	4	0
3	F	114	0	0	6	0
3	G	112	0	0	3	0
3	H	132	0	0	2	0
3	I	144	0	0	6	0
3	J	154	0	0	7	0
3	K	131	0	0	3	0
3	L	136	0	0	4	0
All	All	35015	0	31923	299	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 5.

All (299) 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:J:285:ASP:HB2	3:J:510:HOH:O	1.77	0.83
1:G:259:LEU:HD22	1:G:274:LEU:HD13	1.62	0.82
1:F:85:ARG:HD3	2:F:401:A1JJ5:O11	1.87	0.73
1:J:225:ASP:OD2	1:J:272:ARG:NH1	2.23	0.72
1:A:270:GLU:HG3	3:A:596:HOH:O	1.91	0.70
1:L:346:ALA:HB3	3:L:528:HOH:O	1.91	0.70
1:G:80:LEU:HD22	1:G:108:TYR:CE1	2.27	0.69
1:E:234:TYR:OH	3:E:501:HOH:O	2.11	0.69
1:E:243:GLN:HG3	3:E:616:HOH:O	1.92	0.69
1:D:85:ARG:HD3	2:D:401:A1JJ5:O11	1.94	0.68
1:L:80:LEU:HD23	1:L:108:TYR:CE2	2.27	0.68
1:A:80:LEU:HD23	1:A:108:TYR:CE2	2.29	0.68
1:C:91:ARG:HG3	1:C:91:ARG:HH11	1.59	0.67
1:F:320:TYR:OH	3:F:501:HOH:O	2.11	0.66
1:J:310:GLU:OE2	3:J:501:HOH:O	2.13	0.66
1:E:105:ARG:HG2	1:E:179:GLY:O	1.96	0.66
1:C:138:HIS:HD2	3:C:566:HOH:O	1.78	0.65
1:I:80:LEU:HD23	1:I:108:TYR:CE2	2.31	0.65
1:F:85:ARG:NH1	2:F:401:A1JJ5:O9	2.30	0.65
1:A:180:LYS:HD3	3:I:551:HOH:O	1.96	0.65
1:H:349:ILE:HD11	1:H:354:VAL:HG22	1.77	0.65
1:H:225:ASP:OD2	1:H:272:ARG:NH1	2.30	0.64
1:J:285:ASP:CB	3:J:510:HOH:O	2.40	0.64
1:J:346:ALA:HB3	3:J:505:HOH:O	1.98	0.64
1:H:286:HIS:HE1	3:H:614:HOH:O	1.81	0.64
1:K:91:ARG:NH2	2:K:401:A1JJ5:O18	2.31	0.63
1:E:80:LEU:HD23	1:E:108:TYR:CE2	2.34	0.63
1:F:80:LEU:HD22	1:F:108:TYR:CE2	2.34	0.62
1:F:291:PHE:O	1:F:293:ASN:N	2.33	0.62
1:D:294:SER:HB2	1:L:293:ASN:O	2.00	0.61
1:L:323:ASN:CG	1:L:324:GLY:H	2.07	0.61
1:B:346:ALA:O	1:B:347:ALA:O	2.19	0.61
1:E:336:ARG:NH2	1:F:180:LYS:HB2	2.14	0.61
1:F:293:ASN:ND2	3:F:503:HOH:O	2.27	0.61
1:G:176:GLN:HG3	1:H:176:GLN:HE21	1.65	0.61
1:D:80:LEU:HD23	1:D:108:TYR:CE2	2.36	0.61
1:F:85:ARG:CD	2:F:401:A1JJ5:O11	2.49	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:322:ALA:O	1:J:324:GLY:N	2.33	0.61
1:K:138:HIS:HD2	3:K:593:HOH:O	1.84	0.60
1:H:32:ASP:OD1	3:H:501:HOH:O	2.16	0.60
1:H:60:ASP:O	1:H:66:GLY:HA3	2.01	0.60
1:F:234:TYR:OH	3:F:502:HOH:O	2.16	0.60
1:I:259:LEU:HD22	1:I:274:LEU:HD13	1.82	0.60
1:J:80:LEU:HD23	1:J:108:TYR:CE2	2.37	0.59
1:H:80:LEU:HD23	1:H:108:TYR:CE2	2.37	0.59
1:C:28:ASP:HA	1:C:53:ASN:ND2	2.18	0.59
1:J:60:ASP:O	1:J:66:GLY:HA3	2.03	0.59
1:F:78:ASP:OD1	1:F:175:ARG:NH2	2.33	0.58
1:F:69:LEU:HD13	1:F:351:ILE:HG23	1.84	0.58
1:G:80:LEU:HD22	1:G:108:TYR:CD1	2.39	0.58
1:E:225:ASP:OD2	1:E:272:ARG:NH1	2.37	0.58
1:C:91:ARG:HG3	1:C:91:ARG:NH1	2.19	0.58
1:D:85:ARG:CD	2:D:401:A1JJ5:O11	2.51	0.57
1:H:105:ARG:HG2	1:H:179:GLY:O	2.03	0.57
1:B:225:ASP:OD2	1:B:272:ARG:NH1	2.37	0.57
1:C:291:PHE:O	1:C:294:SER:HB3	2.04	0.57
1:F:320:TYR:CE2	1:F:322:ALA:HB2	2.39	0.57
1:A:80:LEU:CD2	1:A:108:TYR:CE2	2.87	0.57
1:C:91:ARG:HH11	1:C:91:ARG:CG	2.19	0.56
1:G:270:GLU:HG3	3:G:562:HOH:O	2.05	0.56
1:C:225:ASP:OD2	1:C:272:ARG:NH1	2.38	0.56
1:G:69:LEU:HB3	1:G:351:ILE:HD13	1.88	0.56
1:A:138:HIS:HD2	3:A:535:HOH:O	1.88	0.56
1:B:85:ARG:CD	2:B:401:A1JJ5:O11	2.54	0.56
1:I:243:GLN:HG3	3:I:640:HOH:O	2.07	0.55
1:G:163:PHE:O	1:H:332:PRO:HG3	2.07	0.55
1:C:145:GLU:OE2	1:D:145:GLU:OE1	2.25	0.55
1:F:346:ALA:O	1:F:347:ALA:O	2.25	0.55
1:G:69:LEU:HD13	1:G:351:ILE:HG21	1.89	0.55
1:H:79:VAL:HG22	1:H:107:ILE:HB	1.89	0.55
1:C:176:GLN:HA	1:C:176:GLN:HE21	1.71	0.54
1:F:38:ARG:HG2	3:F:515:HOH:O	2.07	0.54
1:A:38:ARG:O	1:A:41:SER:HB2	2.08	0.54
1:H:58:THR:O	1:H:59:ALA:HB2	2.08	0.54
1:D:118:GLY:O	1:D:121:SER:OG	2.21	0.53
1:C:19:GLY:N	1:C:20:PRO:CD	2.72	0.53
1:C:346:ALA:O	1:C:347:ALA:O	2.26	0.53
1:I:225:ASP:OD2	1:I:272:ARG:NH1	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:259:LEU:HD22	1:A:274:LEU:HD13	1.90	0.53
1:C:329:MET:HE3	1:C:330:PRO:HD2	1.90	0.53
1:A:119:PRO:O	3:A:501:HOH:O	2.18	0.53
1:B:85:ARG:HD3	2:B:401:A1JJ5:O11	2.08	0.53
1:J:320:TYR:CE2	1:J:322:ALA:HB2	2.44	0.53
1:C:38:ARG:NH2	2:C:401:A1JJ5:O14	2.41	0.53
1:G:346:ALA:O	1:G:347:ALA:O	2.27	0.53
1:L:343:ARG:NH2	3:L:502:HOH:O	2.37	0.53
1:C:198:MET:HE1	2:D:401:A1JJ5:C38	2.39	0.53
1:A:39:PRO:O	1:A:41:SER:N	2.42	0.52
1:E:272:ARG:NH1	3:E:509:HOH:O	2.41	0.52
1:F:106:LEU:O	1:F:181:GLY:HA3	2.09	0.52
1:K:145:GLU:OE1	1:L:145:GLU:OE1	2.26	0.52
1:G:234:TYR:OH	3:G:501:HOH:O	2.19	0.51
1:D:243:GLN:HG3	3:D:622:HOH:O	2.10	0.51
1:E:353:ALA:O	1:E:356:THR:HB	2.11	0.51
1:H:6:SER:HA	1:H:30:GLY:O	2.10	0.51
1:H:349:ILE:HD11	1:H:354:VAL:CG2	2.39	0.51
1:B:105:ARG:NH1	3:B:507:HOH:O	2.43	0.51
1:E:138:HIS:HD2	3:E:570:HOH:O	1.94	0.51
1:B:345:PRO:HA	3:B:573:HOH:O	2.11	0.50
1:C:61:LEU:HD22	1:C:94:LEU:HD11	1.92	0.50
1:D:28:ASP:HA	1:D:53:ASN:ND2	2.25	0.50
1:D:1:MET:O	1:D:6:SER:OG	2.30	0.50
1:E:123:GLN:HE21	1:F:293:ASN:HA	1.77	0.50
1:B:80:LEU:HD23	1:B:108:TYR:CE2	2.47	0.49
1:I:268:TRP:N	1:I:269:PRO:CD	2.74	0.49
1:A:196:ILE:HG12	1:A:199:MET:HB2	1.93	0.49
1:L:255:ASP:HB2	1:L:258:GLU:HG2	1.94	0.49
1:G:28:ASP:HA	1:G:53:ASN:ND2	2.27	0.49
1:I:270:GLU:HG3	3:I:605:HOH:O	2.12	0.49
1:K:220:GLY:O	1:K:272:ARG:NH2	2.45	0.49
1:G:181:GLY:O	1:H:336:ARG:NH2	2.38	0.49
1:K:41:SER:O	1:K:42:VAL:HG23	2.12	0.49
1:A:58:THR:O	1:A:59:ALA:HB2	2.12	0.49
1:L:322:ALA:C	3:L:509:HOH:O	2.55	0.49
1:C:259:LEU:HD22	1:C:274:LEU:HD13	1.95	0.49
1:D:320:TYR:CE2	1:D:322:ALA:HB2	2.47	0.49
1:I:138:HIS:HD2	3:I:549:HOH:O	1.96	0.48
1:D:265:ARG:NH1	3:D:506:HOH:O	2.42	0.48
1:F:54:ARG:O	1:F:346:ALA:HB3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:122:GLN:HG2	3:J:502:HOH:O	2.12	0.48
1:I:241:GLU:HB2	1:I:244:PHE:CD2	2.48	0.48
1:J:346:ALA:CB	3:J:505:HOH:O	2.60	0.48
1:K:148:VAL:HG21	1:L:141:GLY:HA2	1.96	0.48
1:G:18:PRO:HB3	1:G:156:ASP:O	2.13	0.48
1:I:252:LEU:HD21	1:I:279:PHE:CE1	2.48	0.48
1:D:346:ALA:O	1:D:347:ALA:O	2.32	0.48
1:F:181:GLY:O	1:F:182:GLN:HB3	2.13	0.48
1:I:176:GLN:CD	1:J:176:GLN:HG2	2.38	0.48
1:G:69:LEU:HD13	1:G:351:ILE:CG2	2.43	0.48
1:K:113:GLY:HA3	1:K:130:TYR:CZ	2.49	0.48
1:A:85:ARG:NH2	2:A:401:A1JJ5:O8	2.30	0.48
1:A:180:LYS:O	1:B:336:ARG:NH2	2.47	0.48
1:K:323:ASN:OD1	1:K:323:ASN:N	2.47	0.47
1:F:294:SER:HB3	1:G:293:ASN:HB3	1.96	0.47
1:A:225:ASP:OD2	1:A:272:ARG:NH1	2.47	0.47
1:D:265:ARG:HD2	3:D:581:HOH:O	2.13	0.47
1:K:265:ARG:NH2	3:K:513:HOH:O	2.48	0.47
1:B:286:HIS:HE1	3:B:618:HOH:O	1.97	0.47
1:D:78:ASP:OD1	1:D:175:ARG:NH2	2.38	0.47
1:F:80:LEU:CD2	1:F:108:TYR:CE2	2.97	0.47
1:G:180:LYS:HB2	1:H:336:ARG:NH2	2.30	0.47
1:A:38:ARG:NH2	2:A:401:A1JJ5:O14	2.48	0.46
1:B:85:ARG:HD2	2:B:401:A1JJ5:O11	2.15	0.46
1:E:358:TRP:O	1:E:359:ASP:C	2.58	0.46
1:J:113:GLY:HA3	1:J:130:TYR:CE1	2.49	0.46
1:C:113:GLY:HA3	1:C:130:TYR:CE1	2.51	0.46
1:F:46:SER:OG	1:F:51:LEU:HD12	2.16	0.46
1:G:55:ARG:HH22	1:G:358:TRP:NE1	2.13	0.46
1:H:346:ALA:O	1:H:347:ALA:O	2.33	0.46
1:A:69:LEU:HD13	1:A:351:ILE:CG2	2.46	0.46
1:C:28:ASP:HA	1:C:53:ASN:HD22	1.79	0.46
1:F:114:TRP:CZ3	1:F:133:LEU:HD22	2.51	0.46
1:G:55:ARG:HH22	1:G:358:TRP:HE1	1.63	0.46
1:F:270:GLU:HG3	3:F:509:HOH:O	2.16	0.46
1:G:181:GLY:O	1:G:182:GLN:HB3	2.16	0.46
1:C:135:GLY:HA2	1:D:302:LEU:O	2.16	0.45
1:F:108:TYR:HB3	1:F:183:VAL:HG22	1.97	0.45
1:C:196:ILE:HG12	1:C:199:MET:HB2	1.98	0.45
1:K:91:ARG:NH1	3:K:501:HOH:O	2.34	0.45
1:D:126:HIS:O	1:D:127:ASP:C	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:102:VAL:O	1:G:103:ASN:HB2	2.16	0.45
1:C:54:ARG:O	1:C:346:ALA:HB3	2.16	0.45
1:F:60:ASP:O	1:F:66:GLY:HA3	2.16	0.45
1:F:113:GLY:HA3	1:F:130:TYR:CZ	2.52	0.45
1:E:180:LYS:HB2	1:F:336:ARG:NH2	2.31	0.45
1:F:322:ALA:O	1:F:324:GLY:N	2.48	0.44
1:E:245:TYR:CE2	1:E:249:LEU:HD11	2.52	0.44
1:H:142:ARG:O	1:H:212:ARG:HD2	2.18	0.44
1:L:323:ASN:N	3:L:509:HOH:O	2.49	0.44
1:A:39:PRO:HG3	1:A:58:THR:HG22	1.99	0.44
1:A:224:TYR:HA	1:A:237:VAL:O	2.17	0.44
1:B:80:LEU:CD2	1:B:108:TYR:CE2	3.00	0.44
1:C:91:ARG:HD3	1:L:242:PRO:CB	2.47	0.44
1:F:194:VAL:O	1:F:197:GLN:HB2	2.18	0.44
1:G:194:VAL:O	1:G:197:GLN:HB2	2.17	0.44
1:H:177:SER:O	1:H:177:SER:OG	2.34	0.44
1:I:117:THR:O	1:J:316:ARG:HD2	2.17	0.44
1:B:113:GLY:HA3	1:B:130:TYR:CE1	2.53	0.44
1:D:87:GLY:O	1:D:91:ARG:HG3	2.17	0.44
1:G:99:CYS:C	1:G:101:LYS:H	2.25	0.44
1:A:346:ALA:O	1:A:347:ALA:C	2.60	0.44
1:C:55:ARG:HG2	1:C:349:ILE:CD1	2.48	0.44
1:E:28:ASP:HA	1:E:53:ASN:ND2	2.33	0.44
1:I:355:LEU:O	1:I:359:ASP:C	2.61	0.44
1:H:80:LEU:CD2	1:H:108:TYR:CE2	3.00	0.44
1:E:114:TRP:CZ3	1:E:133:LEU:HD22	2.53	0.43
1:I:272:ARG:NH1	3:I:510:HOH:O	2.46	0.43
1:D:106:LEU:O	1:D:181:GLY:HA3	2.18	0.43
1:G:252:LEU:HD21	1:G:279:PHE:CE1	2.53	0.43
1:K:332:PRO:HG3	1:L:163:PHE:O	2.18	0.43
1:B:345:PRO:CA	3:B:573:HOH:O	2.66	0.43
1:H:113:GLY:HA2	1:H:188:MET:HB2	2.01	0.43
1:L:142:ARG:O	1:L:212:ARG:HD2	2.18	0.43
1:F:55:ARG:HD2	1:F:349:ILE:HD11	2.00	0.43
1:F:277:GLU:HG3	3:F:562:HOH:O	2.17	0.43
1:H:268:TRP:N	1:H:269:PRO:CD	2.81	0.43
1:C:60:ASP:O	1:C:66:GLY:HA3	2.19	0.43
1:I:326:TRP:HD1	3:I:570:HOH:O	2.01	0.43
1:C:17:GLY:O	1:C:20:PRO:HD2	2.19	0.43
1:C:106:LEU:O	1:C:181:GLY:HA3	2.19	0.43
1:I:316:ARG:HD2	1:J:117:THR:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:265:ARG:NH2	3:J:504:HOH:O	2.35	0.43
1:K:316:ARG:HD2	1:L:117:THR:O	2.19	0.43
1:G:69:LEU:HB3	1:G:351:ILE:CD1	2.48	0.43
1:G:97:GLU:HA	1:G:97:GLU:OE2	2.18	0.43
1:K:42:VAL:O	1:K:42:VAL:HG12	2.19	0.43
1:D:225:ASP:OD2	1:D:272:ARG:NH1	2.49	0.43
1:F:51:LEU:HA	1:F:54:ARG:NH1	2.33	0.43
1:H:358:TRP:O	1:H:359:ASP:HB2	2.19	0.43
1:I:60:ASP:OD1	1:I:62:LYS:HB2	2.19	0.43
1:L:28:ASP:HA	1:L:53:ASN:ND2	2.34	0.43
1:L:55:ARG:HD2	1:L:349:ILE:CD1	2.49	0.43
1:C:113:GLY:HA3	1:C:130:TYR:CZ	2.54	0.43
1:K:259:LEU:HD22	1:K:274:LEU:HD13	2.01	0.43
1:E:16:ILE:HD13	2:E:401:A1JJ5:S2	2.58	0.43
1:F:50:MET:O	1:F:50:MET:HG2	2.19	0.43
1:H:42:VAL:HG11	1:H:348:THR:OG1	2.19	0.43
1:I:18:PRO:HB3	1:I:156:ASP:O	2.19	0.43
1:I:69:LEU:HD13	1:I:351:ILE:CG2	2.49	0.43
1:I:198:MET:HB2	1:J:50:MET:HE1	2.01	0.43
1:K:196:ILE:HG13	1:L:153:LEU:HD21	2.01	0.43
1:K:302:LEU:O	1:L:135:GLY:HA2	2.18	0.43
1:E:11:VAL:O	1:E:80:LEU:HD12	2.19	0.42
1:E:316:ARG:HD2	1:F:117:THR:O	2.19	0.42
1:I:118:GLY:O	1:I:121:SER:OG	2.28	0.42
1:E:1:MET:HE2	1:E:343:ARG:NH2	2.33	0.42
1:G:113:GLY:HA3	1:G:130:TYR:CZ	2.55	0.42
1:D:37:ASP:O	1:D:58:THR:HA	2.18	0.42
1:D:55:ARG:HD2	1:D:349:ILE:CD1	2.49	0.42
1:D:113:GLY:HA3	1:D:130:TYR:CZ	2.55	0.42
1:E:105:ARG:CG	1:E:179:GLY:O	2.65	0.42
1:G:117:THR:O	1:H:316:ARG:HD2	2.19	0.42
1:G:259:LEU:CD2	1:G:274:LEU:HD13	2.42	0.42
1:B:1:MET:HE2	1:B:343:ARG:NH2	2.35	0.42
1:E:259:LEU:HD22	1:E:274:LEU:HD13	2.01	0.42
1:H:80:LEU:HD23	1:H:108:TYR:CD2	2.55	0.42
1:I:87:GLY:O	1:I:91:ARG:HG3	2.19	0.42
1:K:181:GLY:O	1:K:182:GLN:HB3	2.19	0.42
1:C:272:ARG:NH1	3:C:512:HOH:O	2.52	0.42
1:D:270:GLU:HG3	3:D:562:HOH:O	2.19	0.42
1:G:37:ASP:O	1:G:58:THR:HA	2.20	0.42
1:I:37:ASP:O	1:I:58:THR:HA	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:138:HIS:HD2	3:G:531:HOH:O	2.02	0.42
1:G:174:GLU:OE1	1:G:174:GLU:C	2.63	0.42
1:A:69:LEU:HD13	1:A:351:ILE:HG21	2.01	0.42
1:B:94:LEU:HA	1:B:94:LEU:HD23	1.82	0.42
1:C:80:LEU:C	1:C:80:LEU:HD13	2.44	0.42
1:E:117:THR:O	1:F:316:ARG:HD2	2.20	0.42
1:G:24:MET:HB3	1:G:24:MET:HE2	1.85	0.42
1:G:54:ARG:HG2	1:G:54:ARG:HH11	1.85	0.42
1:G:346:ALA:O	1:G:347:ALA:C	2.62	0.42
1:J:28:ASP:HA	1:J:53:ASN:ND2	2.34	0.41
1:H:28:ASP:HA	1:H:53:ASN:ND2	2.35	0.41
1:K:320:TYR:CE2	1:K:322:ALA:HB2	2.55	0.41
1:A:176:GLN:NE2	1:B:176:GLN:HG2	2.35	0.41
1:G:196:ILE:HG12	1:G:199:MET:HB2	2.02	0.41
1:K:60:ASP:O	1:K:66:GLY:HA3	2.20	0.41
1:A:103:ASN:OD1	1:A:103:ASN:C	2.62	0.41
1:D:268:TRP:N	1:D:269:PRO:CD	2.82	0.41
1:B:291:PHE:O	1:B:294:SER:HB3	2.20	0.41
1:E:18:PRO:HB3	1:E:156:ASP:O	2.19	0.41
1:H:1:MET:HE2	1:H:343:ARG:NH1	2.35	0.41
1:J:85:ARG:NH1	2:J:401:A1JJ5:O8	2.46	0.41
1:K:248:MET:HE3	1:K:248:MET:HB3	1.84	0.41
1:G:302:LEU:O	1:H:135:GLY:HA2	2.20	0.41
1:K:176:GLN:HA	1:K:176:GLN:HE21	1.85	0.41
1:A:73:LEU:O	1:A:74:ILE:C	2.63	0.41
1:G:225:ASP:OD2	1:G:272:ARG:NH1	2.54	0.41
1:G:316:ARG:HD2	1:H:117:THR:O	2.20	0.41
1:H:106:LEU:O	1:H:181:GLY:HA3	2.21	0.41
1:K:18:PRO:HB3	1:K:156:ASP:O	2.21	0.41
1:B:244:PHE:HB3	1:B:295:ASP:O	2.21	0.41
1:D:113:GLY:HA3	1:D:130:TYR:CE1	2.56	0.41
1:L:323:ASN:CG	1:L:324:GLY:N	2.76	0.41
1:A:175:ARG:HG2	1:A:175:ARG:O	2.21	0.41
1:C:295:ASP:CG	1:D:85:ARG:HH22	2.29	0.41
1:E:60:ASP:OD1	1:E:60:ASP:C	2.64	0.41
1:E:85:ARG:NH1	1:E:122:GLN:O	2.49	0.41
1:I:176:GLN:NE2	1:J:176:GLN:HG2	2.36	0.41
1:B:220:GLY:O	1:B:272:ARG:NH2	2.54	0.41
1:H:196:ILE:HG12	1:H:199:MET:HB2	2.03	0.41
1:J:242:PRO:HB3	1:L:91:ARG:HD3	2.03	0.41
1:E:19:GLY:N	1:E:20:PRO:HD2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:113:GLY:HA3	1:J:130:TYR:CZ	2.56	0.40
1:B:224:TYR:HA	1:B:237:VAL:O	2.21	0.40
1:J:341:GLN:HA	1:J:342:PRO:HD3	1.98	0.40
1:K:117:THR:O	1:L:316:ARG:HD2	2.21	0.40
1:A:176:GLN:CD	1:B:176:GLN:HG2	2.46	0.40
1:G:25:ILE:O	1:G:28:ASP:HB2	2.21	0.40
1:I:55:ARG:HG2	1:I:349:ILE:HD12	2.04	0.40
1:F:40:SER:O	1:F:41:SER:HB3	2.21	0.40
1:F:55:ARG:HD2	1:F:349:ILE:CD1	2.52	0.40
1:F:58:THR:O	1:F:59:ALA:HB2	2.21	0.40
1:F:268:TRP:N	1:F:269:PRO:CD	2.84	0.40
1:H:114:TRP:CZ3	1:H:133:LEU:HD22	2.56	0.40
1:K:91:ARG:HH22	2:K:401:A1JJ5:P3	2.43	0.40
1:A:113:GLY:HA3	1:A:130:TYR:CE1	2.57	0.40
1:E:157:PHE:O	1:E:158:GLY:C	2.63	0.40
1:E:224:TYR:HA	1:E:237:VAL:O	2.20	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	359/364 (99%)	328 (91%)	25 (7%)	6 (2%)	7	3
1	B	359/364 (99%)	340 (95%)	17 (5%)	2 (1%)	21	17
1	C	359/364 (99%)	343 (96%)	12 (3%)	4 (1%)	11	7
1	D	358/364 (98%)	339 (95%)	16 (4%)	3 (1%)	16	11
1	E	359/364 (99%)	335 (93%)	22 (6%)	2 (1%)	21	17
1	F	358/364 (98%)	334 (93%)	16 (4%)	8 (2%)	5	2
1	G	359/364 (99%)	324 (90%)	30 (8%)	5 (1%)	9	4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	H	358/364 (98%)	336 (94%)	18 (5%)	4 (1%)	11	7
1	I	359/364 (99%)	342 (95%)	15 (4%)	2 (1%)	21	17
1	J	358/364 (98%)	343 (96%)	13 (4%)	2 (1%)	21	17
1	K	360/364 (99%)	343 (95%)	14 (4%)	3 (1%)	16	11
1	L	358/364 (98%)	342 (96%)	16 (4%)	0	100	100
All	All	4304/4368 (98%)	4049 (94%)	214 (5%)	41 (1%)	12	8

All (41) 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	D	347	ALA
1	F	41	SER
1	F	103	ASN
1	F	347	ALA
1	G	103	ASN
1	G	347	ALA
1	H	59	ALA
1	H	347	ALA
1	K	42	VAL
1	C	66	GLY
1	C	103	ASN
1	G	292	ALA
1	H	103	ASN
1	H	348	THR
1	I	42	VAL
1	J	323	ASN
1	K	103	ASN
1	A	59	ALA
1	B	103	ASN
1	F	59	ALA
1	F	292	ALA
1	F	323	ASN
1	G	59	ALA
1	J	103	ASN

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Mol	Chain	Res	Type
1	A	41	SER
1	E	103	ASN
1	I	103	ASN
1	C	151	LEU
1	D	151	LEU
1	E	323	ASN
1	G	100	ALA
1	K	323	ASN
1	F	40	SER
1	F	42	VAL
1	A	42	VAL

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%)	275 (99%)	2 (1%)	76	82
1	B	277/277 (100%)	270 (98%)	7 (2%)	42	45
1	C	277/277 (100%)	272 (98%)	5 (2%)	51	58
1	D	276/277 (100%)	268 (97%)	8 (3%)	37	40
1	E	277/277 (100%)	270 (98%)	7 (2%)	42	45
1	F	276/277 (100%)	265 (96%)	11 (4%)	28	27
1	G	277/277 (100%)	273 (99%)	4 (1%)	59	66
1	H	276/277 (100%)	272 (99%)	4 (1%)	59	66
1	I	277/277 (100%)	270 (98%)	7 (2%)	42	45
1	J	276/277 (100%)	274 (99%)	2 (1%)	76	82
1	K	278/277 (100%)	268 (96%)	10 (4%)	31	31
1	L	276/277 (100%)	270 (98%)	6 (2%)	45	50
All	All	3320/3324 (100%)	3247 (98%)	73 (2%)	45	50

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

Mol	Chain	Res	Type
1	A	40	SER
1	A	294	SER
1	B	6	SER
1	B	42	VAL
1	B	45	ILE
1	B	85	ARG
1	B	265	ARG
1	B	349	ILE
1	B	359	ASP
1	C	40	SER
1	C	58	THR
1	C	265	ARG
1	C	290	VAL
1	C	311	PRO
1	D	6	SER
1	D	85	ARG
1	D	91	ARG
1	D	248	MET
1	D	294	SER
1	D	323	ASN
1	D	348	THR
1	D	350	ASP
1	E	6	SER
1	E	40	SER
1	E	58	THR
1	E	65	GLN
1	E	68	GLU
1	E	176	GLN
1	E	290	VAL
1	F	40	SER
1	F	42	VAL
1	F	43	ASP
1	F	45	ILE
1	F	80	LEU
1	F	85	ARG
1	F	176	GLN
1	F	277	GLU
1	F	315	GLU
1	F	323	ASN
1	F	349	ILE
1	G	6	SER
1	G	40	SER
1	G	293	ASN

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Mol	Chain	Res	Type
1	G	350	ASP
1	H	176	GLN
1	H	177	SER
1	H	248	MET
1	H	349	ILE
1	I	6	SER
1	I	42	VAL
1	I	43	ASP
1	I	47	ARG
1	I	68	GLU
1	I	76	LYS
1	I	121	SER
1	J	323	ASN
1	J	359	ASP
1	K	6	SER
1	K	38	ARG
1	K	40	SER
1	K	42	VAL
1	K	58	THR
1	K	176	GLN
1	K	177	SER
1	K	265	ARG
1	K	323	ASN
1	K	349	ILE
1	L	38	ARG
1	L	40	SER
1	L	123	GLN
1	L	212	ARG
1	L	294	SER
1	L	323	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (56) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	138	HIS
1	A	176	GLN
1	A	263	ASN
1	A	286	HIS
1	A	327	GLN
1	B	123	GLN
1	B	176	GLN
1	B	282	HIS

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Mol	Chain	Res	Type
1	B	286	HIS
1	B	293	ASN
1	B	308	HIS
1	B	323	ASN
1	C	116	GLN
1	C	138	HIS
1	C	176	GLN
1	C	263	ASN
1	C	308	HIS
1	C	327	GLN
1	D	65	GLN
1	D	308	HIS
1	E	138	HIS
1	E	176	GLN
1	E	263	ASN
1	E	293	ASN
1	F	116	GLN
1	F	176	GLN
1	F	282	HIS
1	F	286	HIS
1	F	293	ASN
1	F	323	ASN
1	G	116	GLN
1	G	138	HIS
1	G	176	GLN
1	G	263	ASN
1	G	282	HIS
1	G	286	HIS
1	G	293	ASN
1	G	327	GLN
1	H	176	GLN
1	H	286	HIS
1	I	116	GLN
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	134	ASN
1	J	263	ASN
1	J	286	HIS

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Mol	Chain	Res	Type
1	J	323	ASN
1	K	138	HIS
1	K	176	GLN
1	L	176	GLN
1	L	282	HIS
1	L	293	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no 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	A1JJ5	D	401	-	68,74,74	0.60	0	92,107,107	0.95	6 (6%)
2	A1JJ5	L	401	-	68,74,74	0.66	1 (1%)	92,107,107	0.85	4 (4%)
2	A1JJ5	I	401	-	68,74,74	0.73	1 (1%)	92,107,107	0.87	5 (5%)
2	A1JJ5	B	401	-	68,74,74	0.84	2 (2%)	92,107,107	0.91	3 (3%)
2	A1JJ5	G	401	-	68,74,74	0.69	2 (2%)	92,107,107	1.05	7 (7%)
2	A1JJ5	A	401	-	68,74,74	0.67	1 (1%)	92,107,107	1.01	7 (7%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	A1JJ5	J	401	-	68,74,74	0.69	1 (1%)	92,107,107	0.85	3 (3%)
2	A1JJ5	K	401	-	68,74,74	0.73	1 (1%)	92,107,107	1.08	7 (7%)
2	A1JJ5	E	401	-	68,74,74	0.83	3 (4%)	92,107,107	0.94	5 (5%)
2	A1JJ5	H	401	-	68,74,74	1.02	3 (4%)	92,107,107	0.92	4 (4%)
2	A1JJ5	C	401	-	68,74,74	0.68	1 (1%)	92,107,107	0.88	6 (6%)
2	A1JJ5	F	401	-	68,74,74	0.78	4 (5%)	92,107,107	1.14	5 (5%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	A1JJ5	D	401	-	-	9/66/83/83	0/5/5/5
2	A1JJ5	L	401	-	-	13/66/83/83	0/5/5/5
2	A1JJ5	I	401	-	-	14/66/83/83	0/5/5/5
2	A1JJ5	B	401	-	-	12/66/83/83	0/5/5/5
2	A1JJ5	G	401	-	-	10/66/83/83	0/5/5/5
2	A1JJ5	A	401	-	-	11/66/83/83	0/5/5/5
2	A1JJ5	J	401	-	-	12/66/83/83	0/5/5/5
2	A1JJ5	K	401	-	-	12/66/83/83	0/5/5/5
2	A1JJ5	E	401	-	-	12/66/83/83	0/5/5/5
2	A1JJ5	H	401	-	-	14/66/83/83	0/5/5/5
2	A1JJ5	C	401	-	-	11/66/83/83	0/5/5/5
2	A1JJ5	F	401	-	-	19/66/83/83	0/5/5/5

All (20) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	H	401	A1JJ5	C14-S1	4.43	1.90	1.83
2	H	401	A1JJ5	O3-C16	4.25	1.27	1.20
2	I	401	A1JJ5	O3-C16	3.42	1.25	1.20
2	E	401	A1JJ5	O3-C16	3.31	1.25	1.20
2	E	401	A1JJ5	C14-S1	3.14	1.88	1.83
2	B	401	A1JJ5	C14-S1	3.10	1.88	1.83
2	L	401	A1JJ5	O3-C16	3.01	1.25	1.20
2	H	401	A1JJ5	C16-S2	3.01	1.84	1.75
2	B	401	A1JJ5	O3-C16	2.96	1.25	1.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	K	401	A1JJ5	O3-C16	2.77	1.24	1.20
2	G	401	A1JJ5	O3-C16	2.45	1.24	1.20
2	F	401	A1JJ5	O3-C16	2.42	1.24	1.20
2	J	401	A1JJ5	O3-C16	2.39	1.24	1.20
2	A	401	A1JJ5	O3-C16	2.33	1.24	1.20
2	C	401	A1JJ5	O5-C22	2.32	1.28	1.23
2	F	401	A1JJ5	P3-O16	2.20	1.63	1.59
2	E	401	A1JJ5	C16-S2	2.19	1.82	1.75
2	G	401	A1JJ5	P3-O16	2.13	1.63	1.59
2	F	401	A1JJ5	O4-C19	2.13	1.27	1.23
2	F	401	A1JJ5	O5-C22	2.11	1.27	1.23

All (62) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	K	401	A1JJ5	O19-P3-O17	4.86	126.20	107.64
2	F	401	A1JJ5	C25-C24-C27	-4.80	100.41	108.23
2	G	401	A1JJ5	O8-P1-O9	4.68	135.35	112.24
2	F	401	A1JJ5	C26-C24-C27	4.32	115.27	108.23
2	A	401	A1JJ5	O8-P1-O9	3.93	131.68	112.24
2	L	401	A1JJ5	O8-P1-O9	3.78	130.94	112.24
2	J	401	A1JJ5	O8-P1-O9	3.52	129.62	112.24
2	F	401	A1JJ5	O8-P1-O9	3.51	129.60	112.24
2	I	401	A1JJ5	O8-P1-O9	3.50	129.55	112.24
2	F	401	A1JJ5	O15-C36-C37	3.18	120.20	111.17
2	G	401	A1JJ5	O15-C36-C37	3.17	120.16	111.17
2	A	401	A1JJ5	O19-P3-O17	3.13	119.60	107.64
2	E	401	A1JJ5	O15-C36-C37	3.10	119.97	111.17
2	G	401	A1JJ5	O3-C16-S2	-3.06	119.68	123.80
2	K	401	A1JJ5	O17-P3-O16	-3.05	92.32	105.99
2	C	401	A1JJ5	O7-P1-O9	-3.04	97.19	109.07
2	D	401	A1JJ5	O8-P1-O9	2.90	126.57	112.24
2	G	401	A1JJ5	O15-C36-C30	-2.89	100.36	110.02
2	D	401	A1JJ5	O3-C16-S2	-2.86	119.95	123.80
2	E	401	A1JJ5	O15-C36-C30	-2.85	100.49	110.02
2	D	401	A1JJ5	O7-C27-C24	-2.84	105.98	110.55
2	C	401	A1JJ5	O19-P3-O17	2.79	118.31	107.64
2	A	401	A1JJ5	C26-C24-C27	-2.78	103.70	108.23
2	K	401	A1JJ5	O8-P1-O9	2.76	125.88	112.24
2	A	401	A1JJ5	C15-C14-S1	2.65	116.22	108.69
2	K	401	A1JJ5	O19-P3-O18	-2.61	100.48	110.68
2	I	401	A1JJ5	C18-N1-C19	-2.58	118.04	122.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	F	401	A1JJ5	C25-C24-C23	2.54	113.22	108.82
2	L	401	A1JJ5	O19-P3-O17	2.53	117.31	107.64
2	G	401	A1JJ5	O8-P1-O7	-2.48	96.22	107.75
2	H	401	A1JJ5	C25-C24-C27	2.46	112.25	108.23
2	C	401	A1JJ5	O8-P1-O9	2.45	124.38	112.24
2	I	401	A1JJ5	C26-C24-C27	2.45	112.23	108.23
2	K	401	A1JJ5	C8-C7-C6	2.41	118.80	113.00
2	L	401	A1JJ5	C15-C14-S1	2.41	115.52	108.69
2	E	401	A1JJ5	O19-P3-O17	2.40	116.82	107.64
2	B	401	A1JJ5	C25-C24-C27	2.36	112.08	108.23
2	K	401	A1JJ5	O7-C27-C24	-2.31	106.84	110.55
2	L	401	A1JJ5	O8-P1-O7	-2.27	97.20	107.75
2	I	401	A1JJ5	O17-P3-O18	2.27	119.56	110.68
2	D	401	A1JJ5	C9-C38-C13	2.27	121.37	119.44
2	A	401	A1JJ5	C36-C30-N3	2.27	119.05	113.30
2	J	401	A1JJ5	O17-P3-O16	2.26	116.11	105.99
2	I	401	A1JJ5	C15-C14-S1	2.25	115.08	108.69
2	E	401	A1JJ5	O17-P3-O18	-2.25	101.88	110.68
2	K	401	A1JJ5	C9-C38-C13	2.24	121.35	119.44
2	H	401	A1JJ5	O17-P3-O16	2.22	115.95	105.99
2	J	401	A1JJ5	C25-C24-C23	2.22	112.67	108.82
2	A	401	A1JJ5	O8-P1-O7	-2.22	97.44	107.75
2	D	401	A1JJ5	O16-P3-O18	-2.19	100.92	109.39
2	H	401	A1JJ5	O8-P1-O9	2.17	122.98	112.24
2	D	401	A1JJ5	C18-N1-C19	-2.16	118.82	122.84
2	C	401	A1JJ5	C25-C24-C23	2.15	112.56	108.82
2	C	401	A1JJ5	C15-C14-S1	2.15	114.80	108.69
2	C	401	A1JJ5	O17-P3-O18	-2.15	102.27	110.68
2	E	401	A1JJ5	C25-C24-C27	2.13	111.70	108.23
2	B	401	A1JJ5	C15-C14-S1	2.11	114.69	108.69
2	G	401	A1JJ5	O19-P3-O18	-2.09	102.48	110.68
2	G	401	A1JJ5	O7-C27-C24	-2.09	107.19	110.55
2	H	401	A1JJ5	C15-C14-S1	2.06	114.55	108.69
2	A	401	A1JJ5	O6-C23-C24	-2.06	105.40	110.25
2	B	401	A1JJ5	O17-P3-O18	2.02	118.58	110.68

There are no chirality outliers.

All (149) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	401	A1JJ5	C19-C20-C21-N2
2	B	401	A1JJ5	C6-C7-C8-O2

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Mol	Chain	Res	Type	Atoms
2	B	401	A1JJ5	C19-C20-C21-N2
2	B	401	A1JJ5	C28-O13-P2-O12
2	C	401	A1JJ5	C19-C20-C21-N2
2	D	401	A1JJ5	C6-C7-C8-O2
2	D	401	A1JJ5	C19-C20-C21-N2
2	D	401	A1JJ5	C28-O13-P2-O12
2	E	401	A1JJ5	C6-C7-C8-O2
2	F	401	A1JJ5	C6-C7-C8-O2
2	F	401	A1JJ5	C22-C23-C24-C25
2	F	401	A1JJ5	C22-C23-C24-C26
2	F	401	A1JJ5	C22-C23-C24-C27
2	F	401	A1JJ5	C27-O7-P1-O9
2	G	401	A1JJ5	C6-C7-C8-O2
2	G	401	A1JJ5	C19-C20-C21-N2
2	H	401	A1JJ5	C6-C7-C8-O2
2	H	401	A1JJ5	C27-O7-P1-O9
2	I	401	A1JJ5	C27-O7-P1-O8
2	K	401	A1JJ5	C6-C7-C8-O2
2	A	401	A1JJ5	C3-C2-O1-C1
2	A	401	A1JJ5	C39-C2-O1-C1
2	K	401	A1JJ5	C3-C2-O1-C1
2	K	401	A1JJ5	C39-C2-O1-C1
2	L	401	A1JJ5	C3-C2-O1-C1
2	L	401	A1JJ5	C39-C2-O1-C1
2	I	401	A1JJ5	C39-C2-O1-C1
2	I	401	A1JJ5	C3-C2-O1-C1
2	C	401	A1JJ5	C39-C2-O1-C1
2	C	401	A1JJ5	C3-C2-O1-C1
2	B	401	A1JJ5	C39-C2-O1-C1
2	B	401	A1JJ5	C3-C2-O1-C1
2	G	401	A1JJ5	C39-C2-O1-C1
2	F	401	A1JJ5	C38-C9-O2-C8
2	E	401	A1JJ5	C38-C9-O2-C8
2	H	401	A1JJ5	C38-C9-O2-C8
2	B	401	A1JJ5	C38-C9-O2-C8
2	G	401	A1JJ5	C3-C2-O1-C1
2	E	401	A1JJ5	C10-C9-O2-C8
2	B	401	A1JJ5	C10-C9-O2-C8
2	H	401	A1JJ5	C10-C9-O2-C8
2	J	401	A1JJ5	C39-C2-O1-C1
2	F	401	A1JJ5	C10-C9-O2-C8
2	J	401	A1JJ5	C3-C2-O1-C1

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Mol	Chain	Res	Type	Atoms
2	L	401	A1JJ5	C10-C9-O2-C8
2	K	401	A1JJ5	C38-C9-O2-C8
2	D	401	A1JJ5	C38-C9-O2-C8
2	C	401	A1JJ5	C6-C7-C8-O2
2	K	401	A1JJ5	C10-C9-O2-C8
2	L	401	A1JJ5	C38-C9-O2-C8
2	D	401	A1JJ5	C10-C9-O2-C8
2	G	401	A1JJ5	C38-C9-O2-C8
2	L	401	A1JJ5	C5-C6-C7-C8
2	I	401	A1JJ5	C10-C9-O2-C8
2	G	401	A1JJ5	C10-C9-O2-C8
2	A	401	A1JJ5	C10-C9-O2-C8
2	H	401	A1JJ5	C20-C21-N2-C22
2	A	401	A1JJ5	C38-C9-O2-C8
2	J	401	A1JJ5	C10-C9-O2-C8
2	I	401	A1JJ5	C38-C9-O2-C8
2	E	401	A1JJ5	C19-C20-C21-N2
2	F	401	A1JJ5	C19-C20-C21-N2
2	I	401	A1JJ5	C19-C20-C21-N2
2	K	401	A1JJ5	C19-C20-C21-N2
2	J	401	A1JJ5	C38-C9-O2-C8
2	L	401	A1JJ5	C7-C8-O2-C9
2	I	401	A1JJ5	C7-C8-O2-C9
2	C	401	A1JJ5	C7-C8-O2-C9
2	A	401	A1JJ5	C7-C8-O2-C9
2	J	401	A1JJ5	C6-C7-C8-O2
2	F	401	A1JJ5	O6-C23-C24-C25
2	F	401	A1JJ5	O6-C23-C24-C26
2	I	401	A1JJ5	C39-C6-C7-C8
2	I	401	A1JJ5	C5-C6-C7-C8
2	L	401	A1JJ5	C39-C6-C7-C8
2	H	401	A1JJ5	C37-O16-P3-O18
2	A	401	A1JJ5	S1-C14-C16-O3
2	B	401	A1JJ5	S1-C14-C16-O3
2	C	401	A1JJ5	S1-C14-C16-O3
2	D	401	A1JJ5	S1-C14-C16-O3
2	E	401	A1JJ5	S1-C14-C16-O3
2	F	401	A1JJ5	S1-C14-C16-O3
2	G	401	A1JJ5	S1-C14-C16-O3
2	H	401	A1JJ5	S1-C14-C16-O3
2	I	401	A1JJ5	S1-C14-C16-O3
2	J	401	A1JJ5	S1-C14-C16-O3

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Mol	Chain	Res	Type	Atoms
2	K	401	A1JJ5	S1-C14-C16-O3
2	L	401	A1JJ5	S1-C14-C16-O3
2	B	401	A1JJ5	C28-O13-P2-O10
2	D	401	A1JJ5	C28-O13-P2-O10
2	F	401	A1JJ5	C27-O7-P1-O10
2	K	401	A1JJ5	C37-O16-P3-O19
2	A	401	A1JJ5	P1-O10-P2-O11
2	F	401	A1JJ5	C27-O7-P1-O8
2	E	401	A1JJ5	C23-C24-C27-O7
2	F	401	A1JJ5	O6-C23-C24-C27
2	H	401	A1JJ5	C23-C24-C27-O7
2	H	401	A1JJ5	C25-C24-C27-O7
2	C	401	A1JJ5	P1-O10-P2-O11
2	F	401	A1JJ5	P1-O10-P2-O11
2	H	401	A1JJ5	P1-O10-P2-O11
2	I	401	A1JJ5	P1-O10-P2-O11
2	L	401	A1JJ5	C19-C20-C21-N2
2	D	401	A1JJ5	O13-C28-C29-O14
2	B	401	A1JJ5	O13-C28-C29-O14
2	C	401	A1JJ5	O13-C28-C29-O14
2	E	401	A1JJ5	C25-C24-C27-O7
2	E	401	A1JJ5	C26-C24-C27-O7
2	E	401	A1JJ5	C39-C2-O1-C1
2	J	401	A1JJ5	P1-O10-P2-O12
2	K	401	A1JJ5	P1-O10-P2-O11
2	L	401	A1JJ5	P1-O10-P2-O11
2	E	401	A1JJ5	C3-C2-O1-C1
2	F	401	A1JJ5	C37-O16-P3-O18
2	G	401	A1JJ5	C37-O16-P3-O18
2	H	401	A1JJ5	C26-C24-C27-O7
2	J	401	A1JJ5	C19-C20-C21-N2
2	G	401	A1JJ5	O13-C28-C29-O14
2	A	401	A1JJ5	C37-O16-P3-O17
2	H	401	A1JJ5	C37-O16-P3-O17
2	J	401	A1JJ5	C7-C8-O2-C9
2	E	401	A1JJ5	O13-C28-C29-O14
2	H	401	A1JJ5	O13-C28-C29-O14
2	I	401	A1JJ5	O13-C28-C29-O14
2	J	401	A1JJ5	O13-C28-C29-O14
2	L	401	A1JJ5	O13-C28-C29-O14
2	B	401	A1JJ5	P1-O10-P2-O11
2	G	401	A1JJ5	P1-O10-P2-O11

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Mol	Chain	Res	Type	Atoms
2	B	401	A1JJ5	C28-O13-P2-O11
2	C	401	A1JJ5	C28-O13-P2-O12
2	F	401	A1JJ5	C28-O13-P2-O12
2	I	401	A1JJ5	C28-O13-P2-O12
2	K	401	A1JJ5	C28-O13-P2-O12
2	L	401	A1JJ5	C28-O13-P2-O12
2	A	401	A1JJ5	O13-C28-C29-O14
2	F	401	A1JJ5	O13-C28-C29-O14
2	K	401	A1JJ5	O13-C28-C29-O14
2	C	401	A1JJ5	C5-C6-C7-C8
2	J	401	A1JJ5	C5-C6-C7-C8
2	A	401	A1JJ5	C15-C14-S1-C13
2	C	401	A1JJ5	C15-C14-S1-C13
2	D	401	A1JJ5	C15-C14-S1-C13
2	E	401	A1JJ5	C15-C14-S1-C13
2	F	401	A1JJ5	C15-C14-S1-C13
2	H	401	A1JJ5	C15-C14-S1-C13
2	I	401	A1JJ5	C15-C14-S1-C13
2	J	401	A1JJ5	C15-C14-S1-C13
2	K	401	A1JJ5	C15-C14-S1-C13
2	L	401	A1JJ5	C15-C14-S1-C13

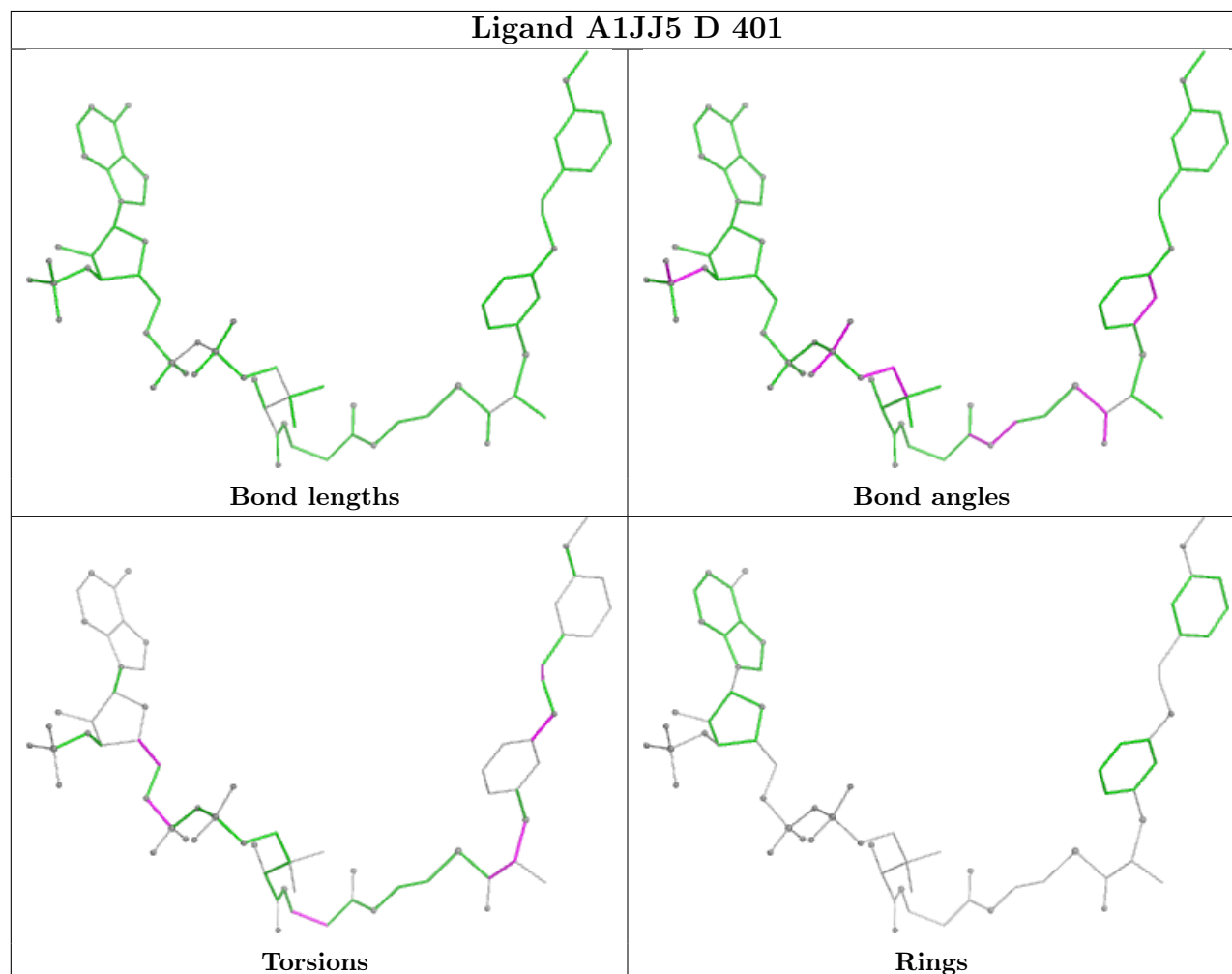
There are no ring outliers.

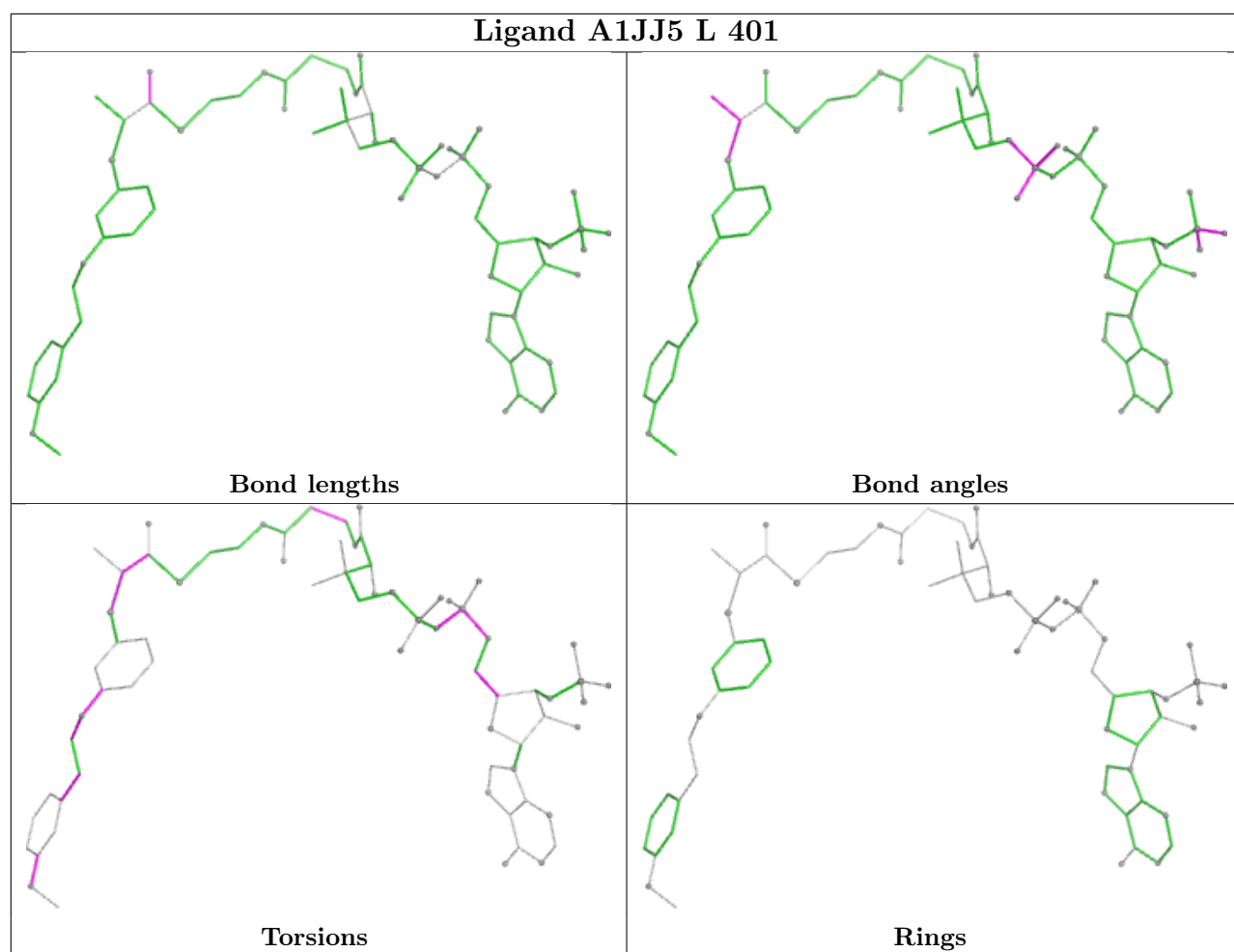
8 monomers are involved in 16 short contacts:

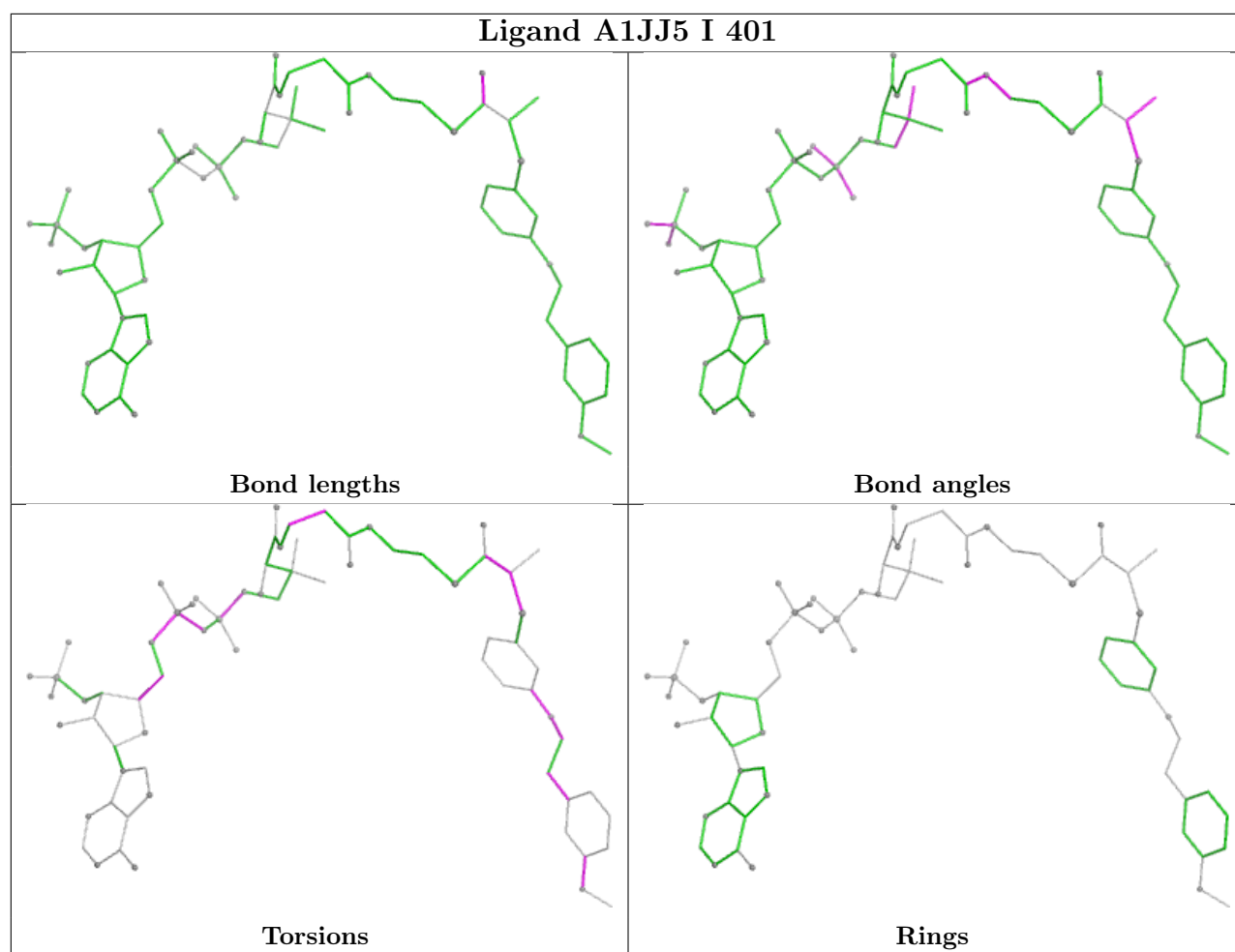
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	D	401	A1JJ5	3	0
2	B	401	A1JJ5	3	0
2	A	401	A1JJ5	2	0
2	J	401	A1JJ5	1	0
2	K	401	A1JJ5	2	0
2	E	401	A1JJ5	1	0
2	C	401	A1JJ5	1	0
2	F	401	A1JJ5	3	0

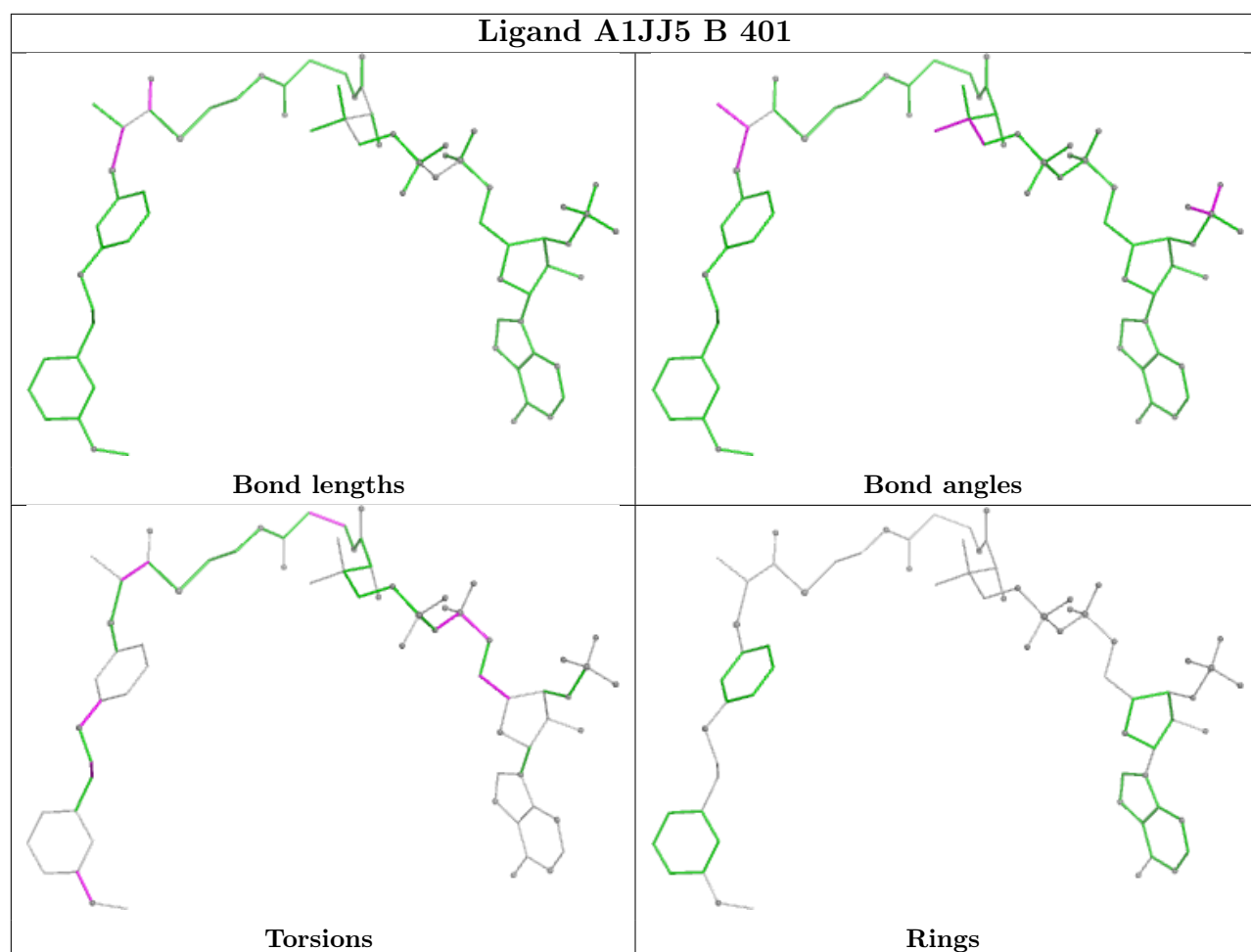
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

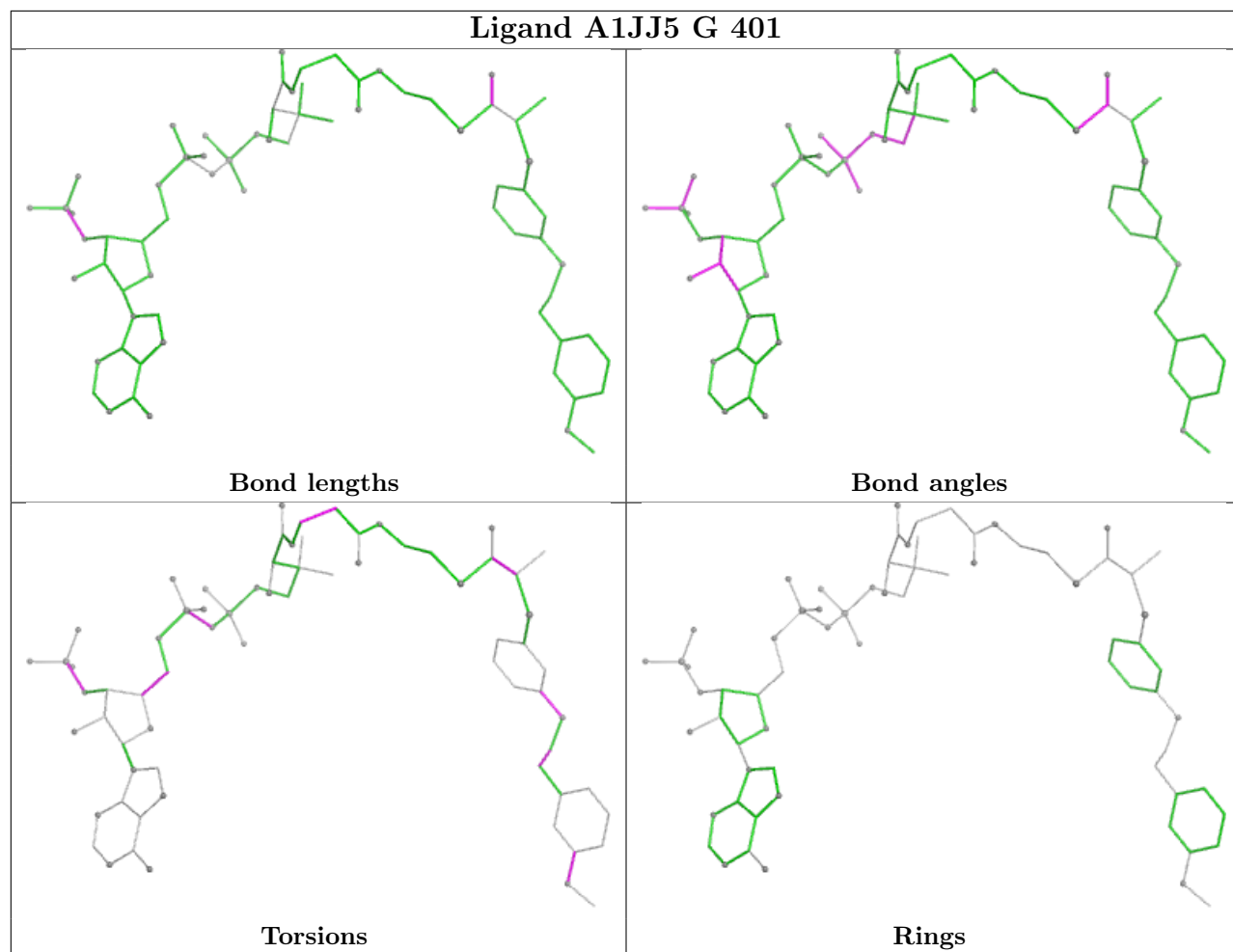
in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



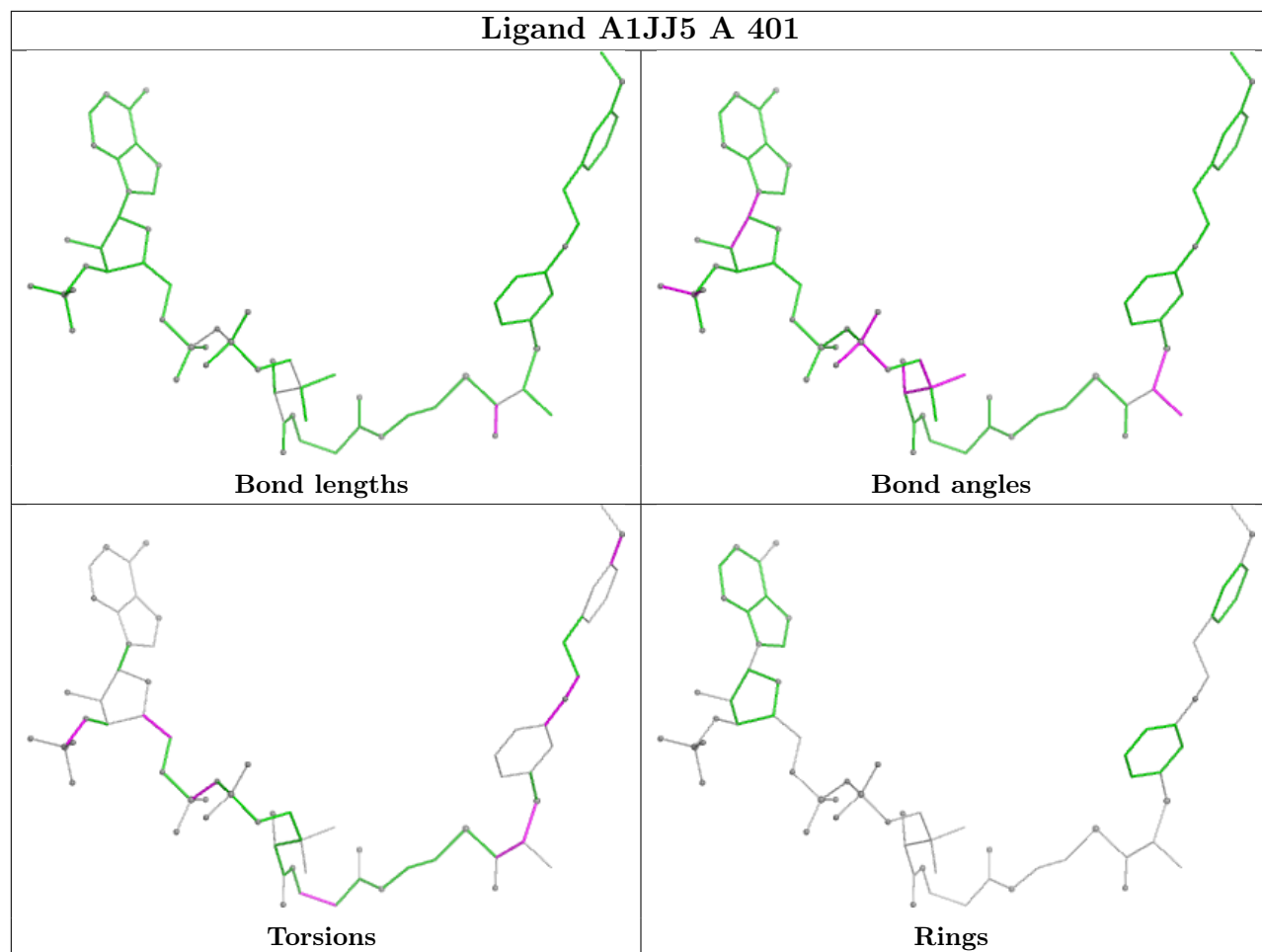


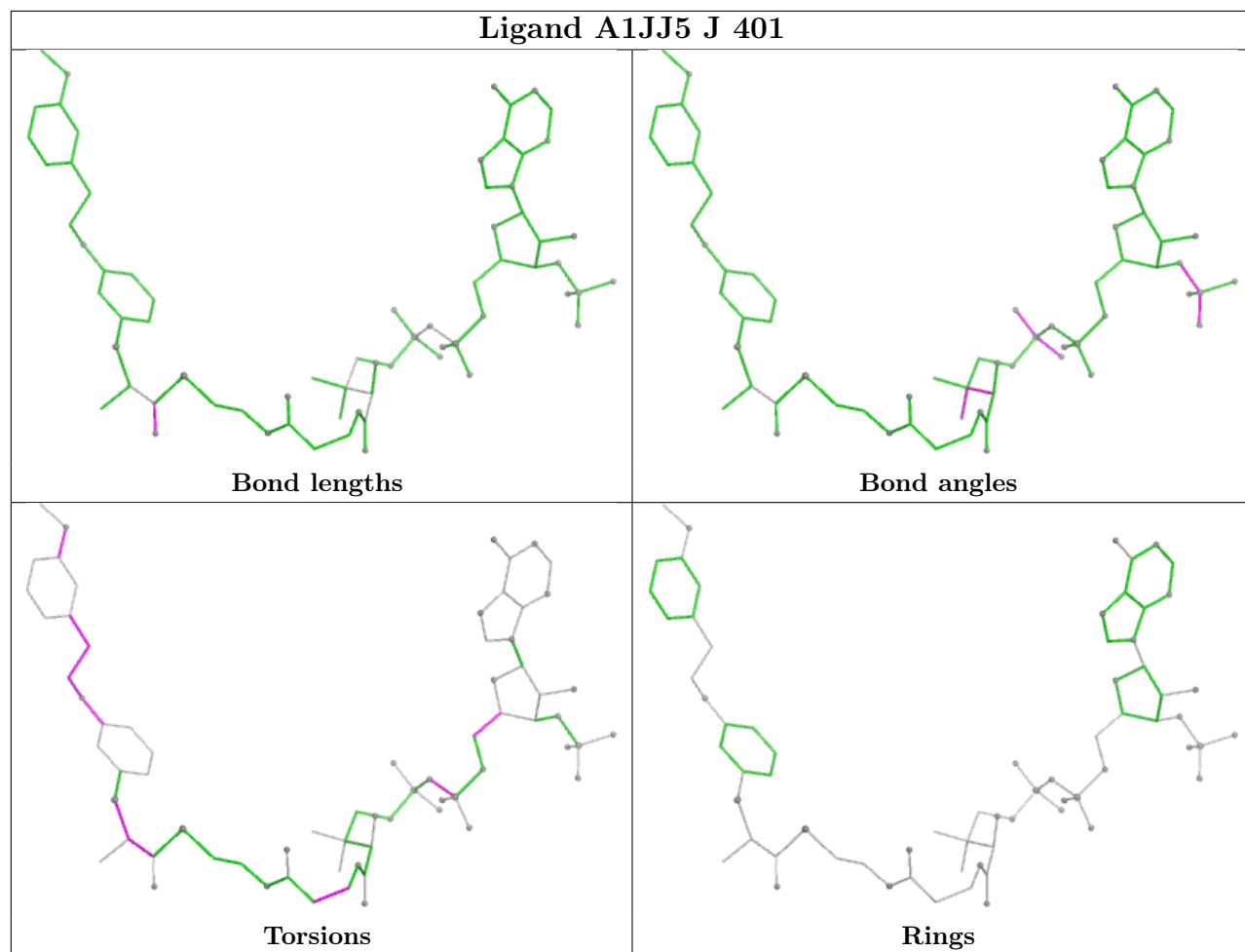




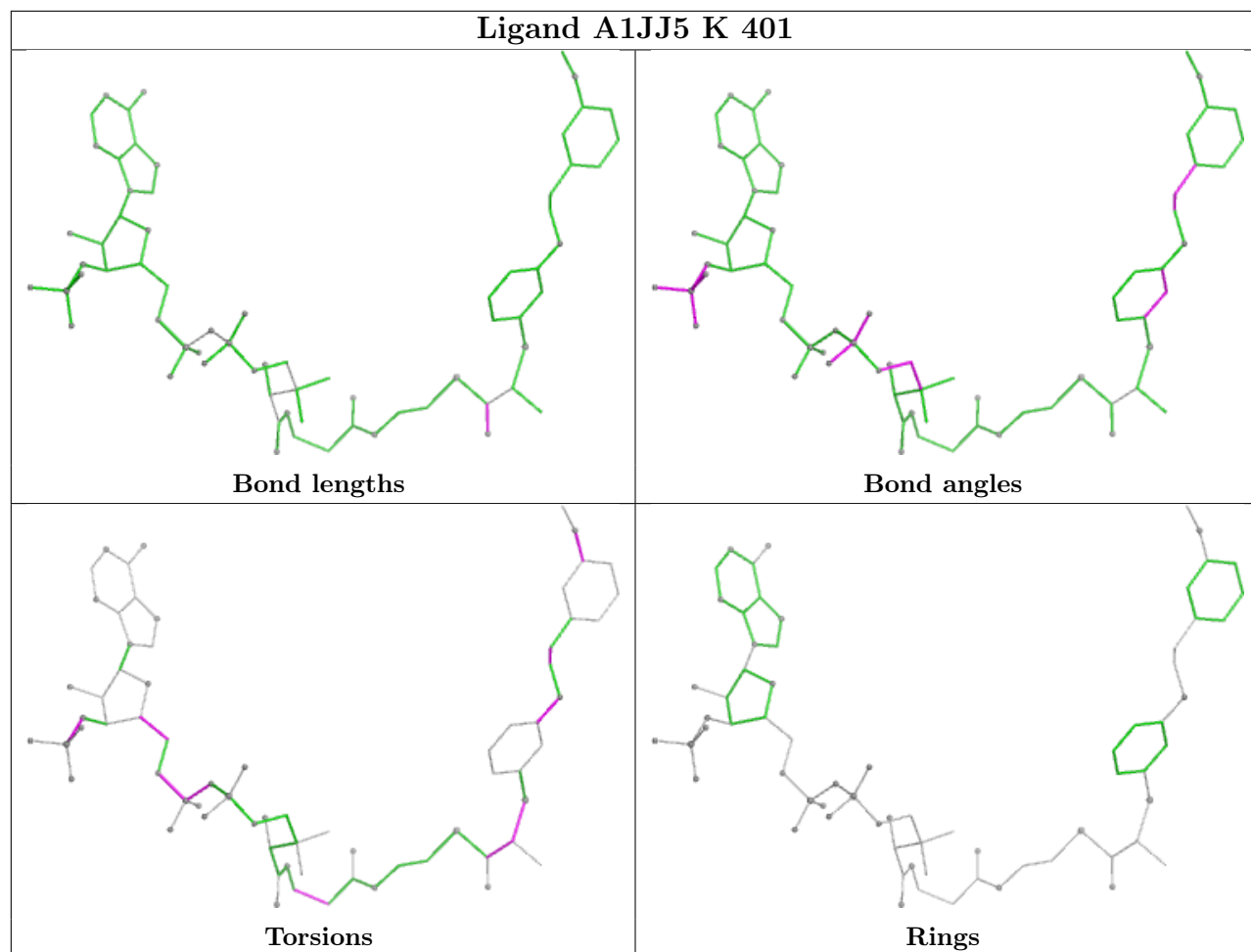


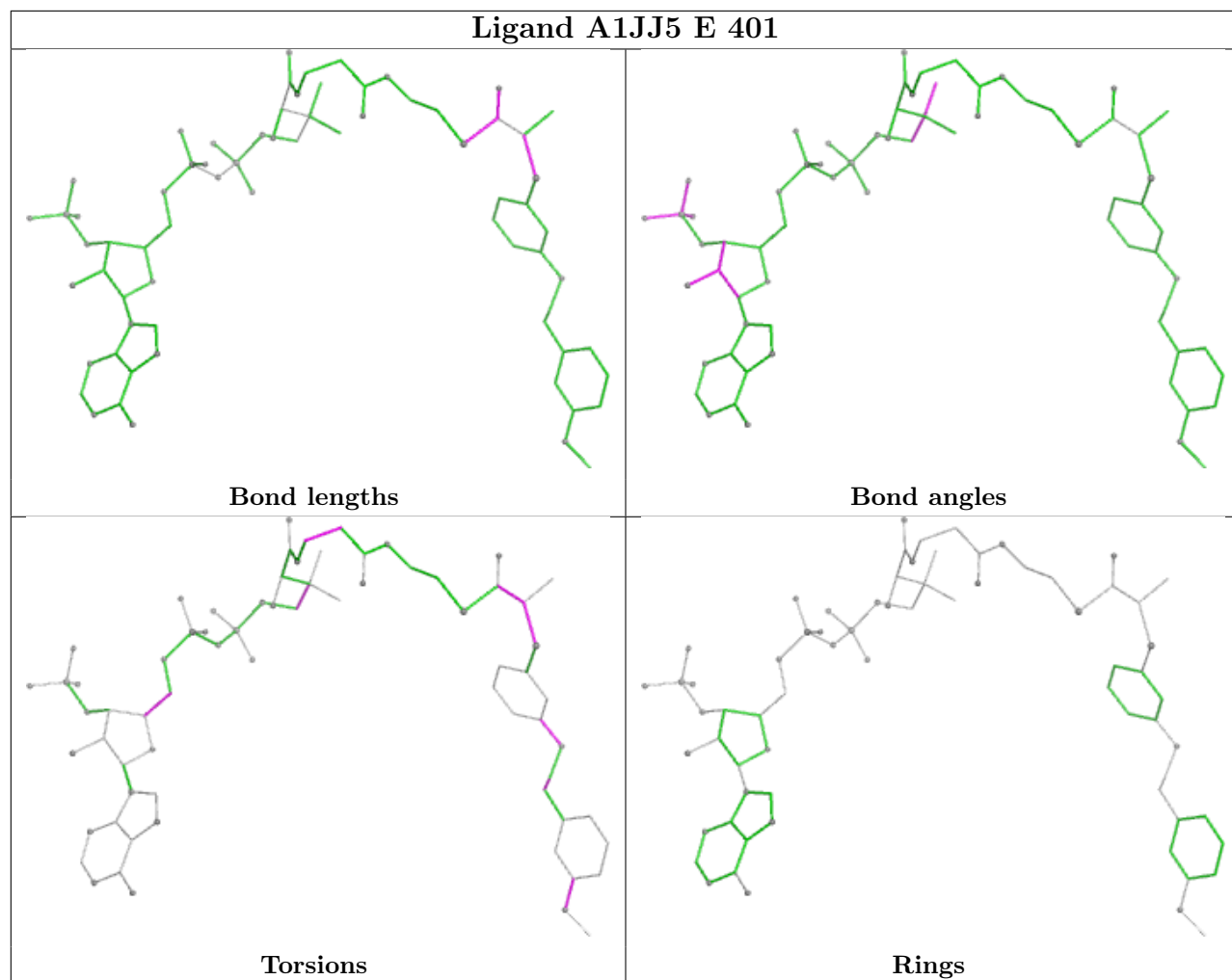
Ligand A1JJ5 A 401



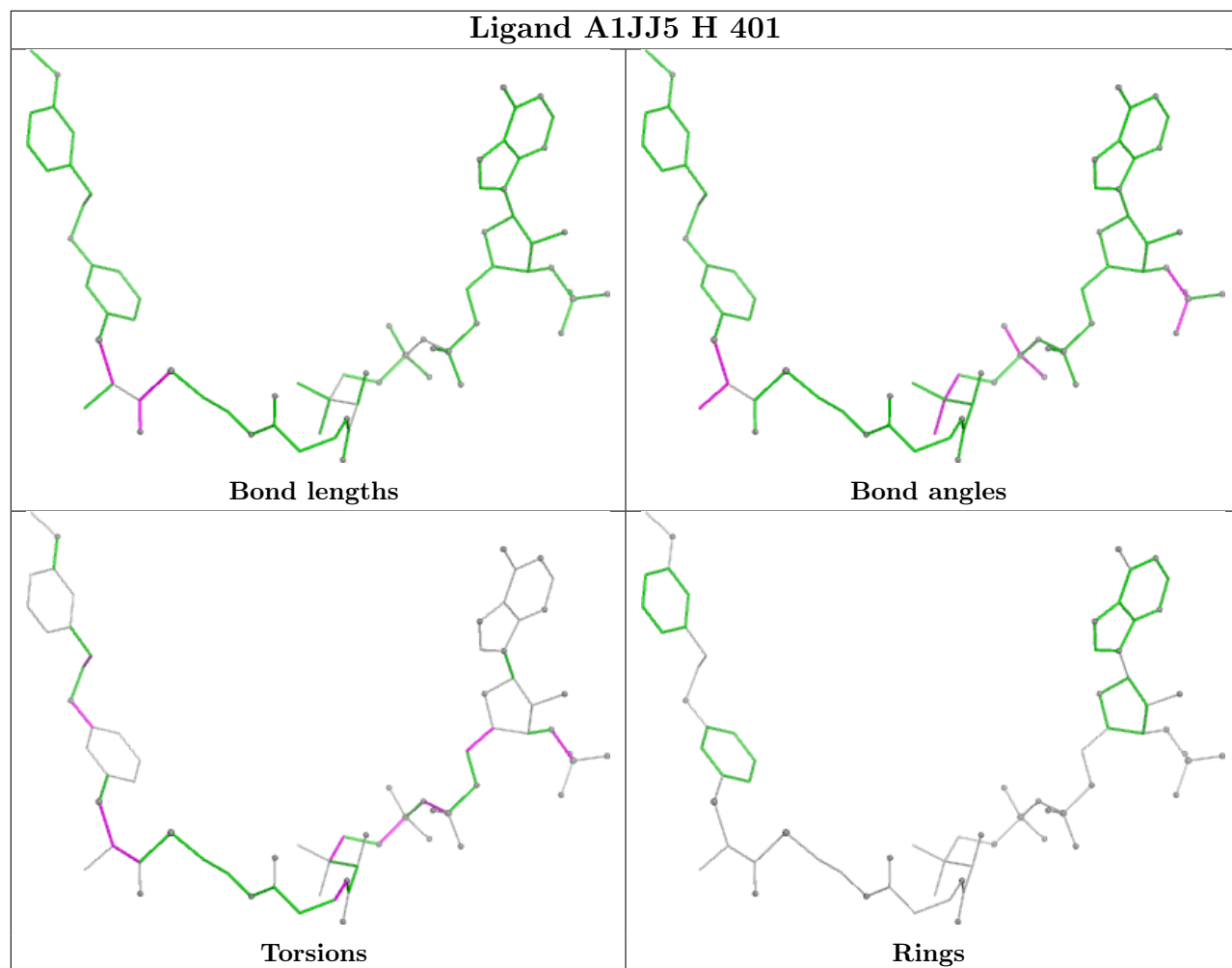


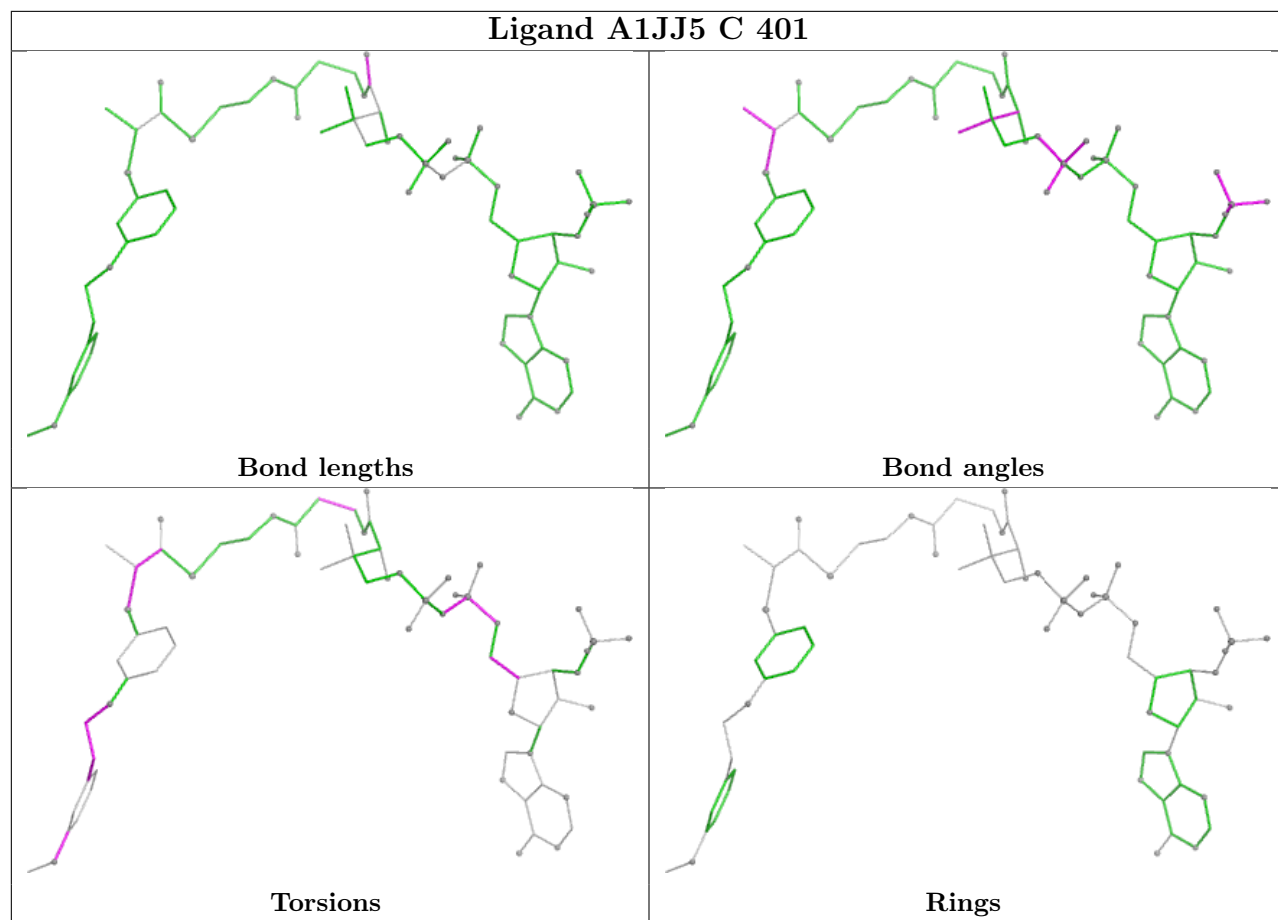
Ligand A1JJ5 K 401

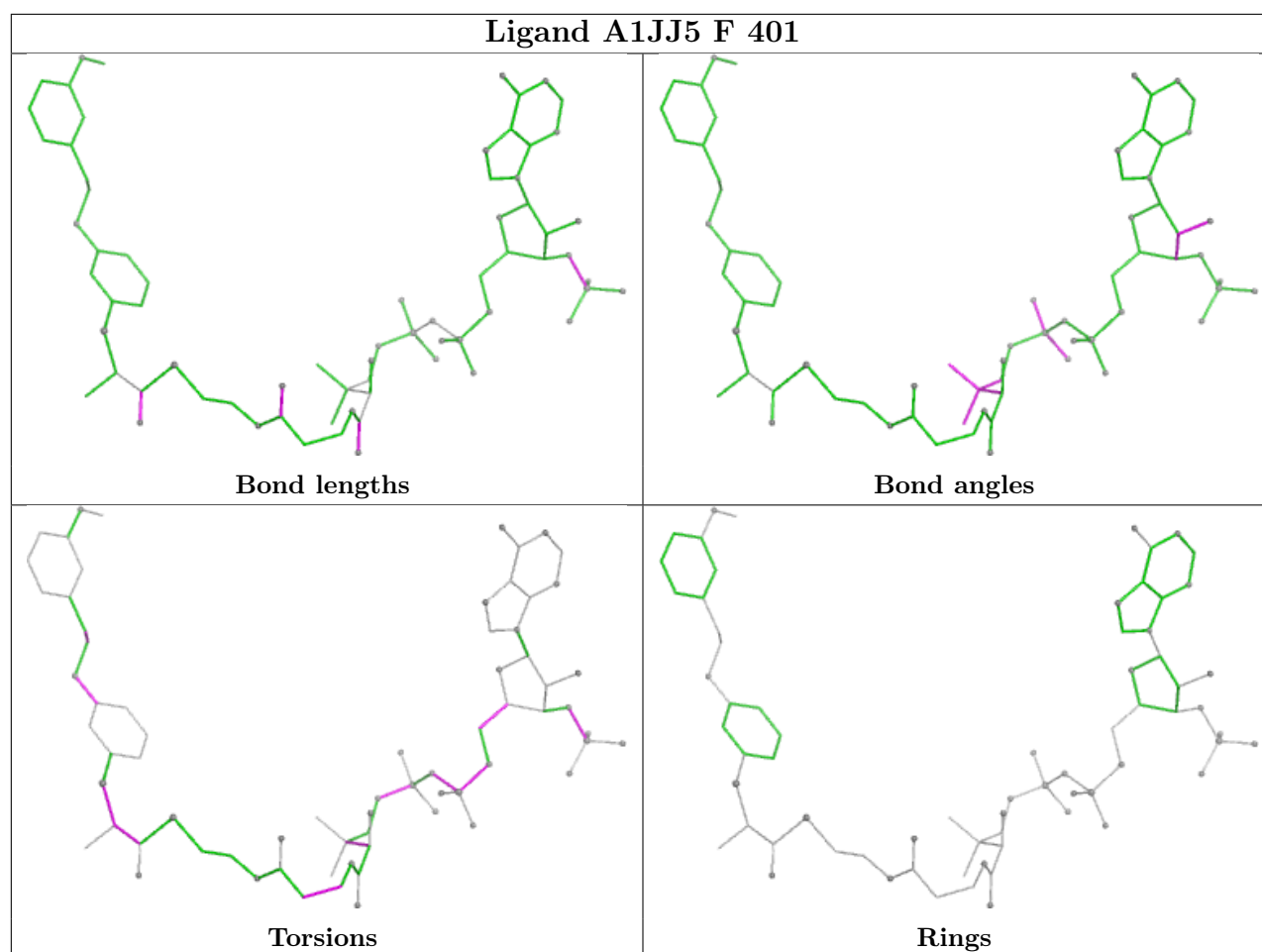




Ligand A1JJ5 H 401







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%)	0.79	55 (15%) 5 4	24, 40, 80, 107	2 (0%)
1	B	359/364 (98%)	0.67	43 (11%) 9 8	18, 39, 79, 117	2 (0%)
1	C	359/364 (98%)	0.84	63 (17%) 4 3	24, 40, 81, 122	2 (0%)
1	D	359/364 (98%)	0.79	57 (15%) 5 4	25, 41, 77, 107	1 (0%)
1	E	359/364 (98%)	0.90	68 (18%) 3 3	25, 41, 84, 107	2 (0%)
1	F	359/364 (98%)	1.05	82 (22%) 2 2	25, 43, 86, 116	1 (0%)
1	G	359/364 (98%)	1.32	112 (31%) 1 1	24, 45, 87, 110	2 (0%)
1	H	359/364 (98%)	1.07	88 (24%) 2 1	23, 43, 90, 121	1 (0%)
1	I	359/364 (98%)	0.55	24 (6%) 24 22	24, 37, 69, 117	2 (0%)
1	J	359/364 (98%)	0.55	28 (7%) 19 18	25, 37, 72, 109	1 (0%)
1	K	359/364 (98%)	0.72	53 (14%) 5 5	18, 39, 78, 113	3 (0%)
1	L	359/364 (98%)	0.62	37 (10%) 12 11	25, 39, 75, 105	1 (0%)
All	All	4308/4368 (98%)	0.82	710 (16%) 4 4	18, 40, 81, 122	20 (0%)

All (710) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	346	ALA	8.5
1	K	346	ALA	8.3
1	D	346	ALA	7.5
1	G	346	ALA	7.0
1	H	346	ALA	6.9
1	F	42	VAL	6.8
1	C	346	ALA	6.6
1	E	346	ALA	6.5
1	F	351	ILE	6.4
1	J	346	ALA	6.4
1	B	346	ALA	5.9

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Mol	Chain	Res	Type	RSRZ
1	K	45	ILE	5.8
1	F	346	ALA	5.8
1	C	42	VAL	5.7
1	G	351	ILE	5.4
1	G	93	GLY	5.3
1	A	351	ILE	5.2
1	B	45	ILE	5.1
1	E	351	ILE	5.1
1	G	10	VAL	5.0
1	J	45	ILE	4.9
1	F	345	PRO	4.9
1	G	11	VAL	4.8
1	G	102	VAL	4.8
1	D	347	ALA	4.8
1	J	351	ILE	4.8
1	E	349	ILE	4.8
1	K	345	PRO	4.7
1	B	42	VAL	4.7
1	F	93	GLY	4.7
1	H	355	LEU	4.7
1	G	57	VAL	4.6
1	B	351	ILE	4.6
1	H	42	VAL	4.6
1	I	346	ALA	4.6
1	L	346	ALA	4.6
1	C	45	ILE	4.6
1	G	99	CYS	4.5
1	G	56	ILE	4.5
1	G	345	PRO	4.5
1	G	69	LEU	4.5
1	L	351	ILE	4.5
1	G	79	VAL	4.5
1	K	42	VAL	4.5
1	A	347	ALA	4.5
1	H	351	ILE	4.4
1	K	349	ILE	4.4
1	G	33	VAL	4.4
1	G	178	SER	4.4
1	H	16	ILE	4.4
1	H	45	ILE	4.4
1	E	347	ALA	4.4
1	H	34	VAL	4.4

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Mol	Chain	Res	Type	RSRZ
1	G	107	ILE	4.4
1	H	345	PRO	4.3
1	G	97	GLU	4.3
1	G	355	LEU	4.3
1	H	349	ILE	4.3
1	G	347	ALA	4.3
1	A	45	ILE	4.3
1	E	345	PRO	4.3
1	B	257	ALA	4.2
1	D	351	ILE	4.2
1	F	45	ILE	4.2
1	B	347	ALA	4.2
1	G	73	LEU	4.2
1	H	358	TRP	4.2
1	G	292	ALA	4.2
1	G	45	ILE	4.2
1	B	323	ASN	4.1
1	G	94	LEU	4.1
1	G	354	VAL	4.1
1	B	258	GLU	4.1
1	G	7	GLY	4.1
1	K	324	GLY	4.1
1	H	57	VAL	4.1
1	B	46	SER	4.1
1	H	7	GLY	4.1
1	A	349	ILE	4.1
1	C	351	ILE	4.1
1	D	59	ALA	4.0
1	A	324	GLY	4.0
1	B	44	GLY	4.0
1	G	70	ALA	4.0
1	H	59	ALA	4.0
1	G	180	LYS	4.0
1	G	61	LEU	4.0
1	E	42	VAL	4.0
1	G	100	ALA	3.9
1	G	71	LEU	3.9
1	H	8	LEU	3.9
1	H	178	SER	3.9
1	A	42	VAL	3.9
1	G	34	VAL	3.9
1	F	101	LYS	3.9

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Mol	Chain	Res	Type	RSRZ
1	I	349	ILE	3.9
1	I	47	ARG	3.9
1	L	349	ILE	3.9
1	A	345	PRO	3.9
1	D	345	PRO	3.9
1	K	44	GLY	3.8
1	G	8	LEU	3.8
1	A	93	GLY	3.8
1	G	66	GLY	3.8
1	I	45	ILE	3.8
1	C	347	ALA	3.8
1	G	96	PRO	3.8
1	F	359	ASP	3.8
1	B	324	GLY	3.8
1	F	66	GLY	3.8
1	D	45	ILE	3.8
1	D	75	ALA	3.8
1	C	180	LYS	3.8
1	C	176	GLN	3.8
1	E	45	ILE	3.7
1	F	349	ILE	3.7
1	I	351	ILE	3.7
1	D	349	ILE	3.7
1	G	173	TRP	3.7
1	C	75	ALA	3.7
1	G	75	ALA	3.7
1	E	355	LEU	3.7
1	H	5	LEU	3.7
1	G	324	GLY	3.7
1	G	349	ILE	3.7
1	D	102	VAL	3.6
1	C	258	GLU	3.6
1	K	43	ASP	3.6
1	G	101	LYS	3.6
1	H	173	TRP	3.6
1	F	348	THR	3.6
1	B	345	PRO	3.6
1	B	43	ASP	3.5
1	I	42	VAL	3.5
1	E	75	ALA	3.5
1	L	323	ASN	3.5
1	E	324	GLY	3.5

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Mol	Chain	Res	Type	RSRZ
1	F	176	GLN	3.5
1	A	40	SER	3.5
1	K	348	THR	3.5
1	C	345	PRO	3.5
1	J	347	ALA	3.5
1	C	66	GLY	3.5
1	C	177	SER	3.5
1	F	173	TRP	3.5
1	F	358	TRP	3.5
1	G	358	TRP	3.5
1	H	56	ILE	3.5
1	A	69	LEU	3.5
1	L	359	ASP	3.5
1	G	1	MET	3.5
1	E	16	ILE	3.4
1	F	347	ALA	3.4
1	K	347	ALA	3.4
1	G	67	LEU	3.4
1	F	99	CYS	3.4
1	E	176	GLN	3.4
1	I	323	ASN	3.4
1	A	75	ALA	3.4
1	E	93	GLY	3.4
1	K	207	MET	3.4
1	F	258	GLU	3.4
1	J	323	ASN	3.4
1	H	58	THR	3.4
1	F	324	GLY	3.4
1	I	41	SER	3.4
1	D	76	LYS	3.4
1	F	106	LEU	3.4
1	G	106	LEU	3.4
1	E	58	THR	3.4
1	F	354	VAL	3.4
1	H	354	VAL	3.4
1	G	63	SER	3.4
1	G	177	SER	3.4
1	F	180	LYS	3.4
1	G	2	ALA	3.4
1	H	347	ALA	3.4
1	J	349	ILE	3.4
1	B	65	GLN	3.4

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Mol	Chain	Res	Type	RSRZ
1	H	176	GLN	3.4
1	A	348	THR	3.3
1	F	57	VAL	3.3
1	C	358	TRP	3.3
1	L	173	TRP	3.3
1	G	42	VAL	3.3
1	G	108	TYR	3.3
1	G	74	ILE	3.3
1	H	323	ASN	3.3
1	C	43	ASP	3.3
1	L	40	SER	3.3
1	F	11	VAL	3.3
1	G	183	VAL	3.3
1	B	349	ILE	3.3
1	H	73	LEU	3.3
1	F	323	ASN	3.3
1	G	98	GLU	3.3
1	F	62	LYS	3.3
1	G	72	LYS	3.3
1	H	27	GLY	3.2
1	H	338	ALA	3.2
1	H	353	ALA	3.2
1	G	36	ILE	3.2
1	H	144	ASP	3.2
1	H	105	ARG	3.2
1	A	323	ASN	3.2
1	C	76	LYS	3.2
1	G	59	ALA	3.2
1	H	322	ALA	3.2
1	L	100	ALA	3.2
1	H	106	LEU	3.2
1	G	176	GLN	3.2
1	D	97	GLU	3.2
1	H	39	PRO	3.2
1	G	353	ALA	3.2
1	H	2	ALA	3.2
1	B	41	SER	3.2
1	C	46	SER	3.2
1	F	98	GLU	3.2
1	D	324	GLY	3.2
1	D	348	THR	3.2
1	D	323	ASN	3.2

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Mol	Chain	Res	Type	RSRZ
1	D	56	ILE	3.1
1	E	73	LEU	3.1
1	K	40	SER	3.1
1	G	89	THR	3.1
1	K	180	LYS	3.1
1	F	102	VAL	3.1
1	G	184	VAL	3.1
1	G	357	ASP	3.1
1	L	75	ALA	3.1
1	B	358	TRP	3.1
1	D	355	LEU	3.1
1	E	358	TRP	3.1
1	H	69	LEU	3.1
1	A	177	SER	3.1
1	E	40	SER	3.1
1	G	62	LYS	3.1
1	F	355	LEU	3.1
1	A	180	LYS	3.1
1	D	44	GLY	3.1
1	F	69	LEU	3.1
1	A	74	ILE	3.1
1	H	74	ILE	3.1
1	K	351	ILE	3.1
1	L	46	SER	3.1
1	F	56	ILE	3.0
1	F	81	ILE	3.0
1	A	68	GLU	3.0
1	A	77	ALA	3.0
1	H	31	ALA	3.0
1	K	75	ALA	3.0
1	A	47	ARG	3.0
1	K	258	GLU	3.0
1	J	345	PRO	3.0
1	F	43	ASP	3.0
1	J	144	ASP	3.0
1	B	76	LYS	3.0
1	E	180	LYS	3.0
1	I	176	GLN	3.0
1	B	75	ALA	3.0
1	G	171	ALA	3.0
1	G	257	ALA	3.0
1	I	322	ALA	3.0

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Mol	Chain	Res	Type	RSRZ
1	J	49	ALA	3.0
1	E	66	GLY	3.0
1	K	181	GLY	3.0
1	L	45	ILE	3.0
1	G	58	THR	3.0
1	H	337	THR	3.0
1	A	72	LYS	3.0
1	A	173	TRP	3.0
1	D	358	TRP	3.0
1	D	178	SER	2.9
1	E	353	ALA	2.9
1	G	77	ALA	2.9
1	F	71	LEU	2.9
1	G	92	LEU	2.9
1	J	42	VAL	2.9
1	G	44	GLY	2.9
1	G	348	THR	2.9
1	E	1	MET	2.9
1	K	176	GLN	2.9
1	F	70	ALA	2.9
1	D	8	LEU	2.9
1	G	26	LEU	2.9
1	C	30	GLY	2.9
1	L	44	GLY	2.9
1	D	107	ILE	2.9
1	F	107	ILE	2.9
1	E	65	GLN	2.9
1	A	358	TRP	2.9
1	G	76	LYS	2.9
1	F	75	ALA	2.9
1	C	34	VAL	2.9
1	E	33	VAL	2.9
1	F	144	ASP	2.9
1	I	144	ASP	2.9
1	L	350	ASP	2.9
1	A	56	ILE	2.9
1	C	349	ILE	2.9
1	E	337	THR	2.9
1	F	36	ILE	2.9
1	G	356	THR	2.9
1	F	59	ALA	2.9
1	H	326	TRP	2.9

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Mol	Chain	Res	Type	RSRZ
1	J	44	GLY	2.9
1	E	47	ARG	2.8
1	F	1	MET	2.8
1	H	80	LEU	2.8
1	E	348	THR	2.8
1	H	107	ILE	2.8
1	H	76	LYS	2.8
1	B	144	ASP	2.8
1	C	93	GLY	2.8
1	E	77	ALA	2.8
1	E	257	ALA	2.8
1	F	255	ASP	2.8
1	H	50	MET	2.8
1	K	350	ASP	2.8
1	F	94	LEU	2.8
1	K	71	LEU	2.8
1	A	258	GLU	2.8
1	C	173	TRP	2.8
1	G	352	GLU	2.8
1	L	258	GLU	2.8
1	A	58	THR	2.8
1	D	101	LYS	2.8
1	C	323	ASN	2.8
1	K	47	ARG	2.8
1	E	44	GLY	2.8
1	J	324	GLY	2.8
1	A	355	LEU	2.8
1	F	33	VAL	2.8
1	B	47	ARG	2.8
1	E	178	SER	2.8
1	C	7	GLY	2.8
1	C	353	ALA	2.8
1	I	257	ALA	2.8
1	F	5	LEU	2.8
1	A	34	VAL	2.8
1	A	354	VAL	2.8
1	K	358	TRP	2.8
1	G	293	ASN	2.7
1	H	352	GLU	2.7
1	K	359	ASP	2.7
1	G	179	GLY	2.7
1	L	7	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
1	A	62	LYS	2.7
1	D	322	ALA	2.7
1	E	322	ALA	2.7
1	F	257	ALA	2.7
1	G	109	ALA	2.7
1	E	5	LEU	2.7
1	G	5	LEU	2.7
1	B	348	THR	2.7
1	B	1	MET	2.7
1	E	173	TRP	2.7
1	E	104	ASP	2.7
1	B	325	GLY	2.7
1	H	324	GLY	2.7
1	C	101	LYS	2.7
1	K	76	LYS	2.7
1	H	100	ALA	2.7
1	J	353	ALA	2.7
1	E	106	LEU	2.7
1	H	26	LEU	2.7
1	K	56	ILE	2.7
1	A	76	LYS	2.7
1	H	101	LYS	2.7
1	E	7	GLY	2.7
1	H	30	GLY	2.7
1	K	93	GLY	2.7
1	E	59	ALA	2.7
1	F	292	ALA	2.7
1	G	31	ALA	2.7
1	F	73	LEU	2.7
1	A	1	MET	2.7
1	D	1	MET	2.7
1	I	1	MET	2.7
1	A	102	VAL	2.7
1	B	350	ASP	2.7
1	C	107	ILE	2.7
1	E	56	ILE	2.7
1	C	324	GLY	2.7
1	G	83	GLY	2.7
1	H	47	ARG	2.7
1	I	324	GLY	2.7
1	F	49	ALA	2.6
1	G	322	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
1	E	356	THR	2.6
1	H	334	PHE	2.6
1	C	178	SER	2.6
1	E	34	VAL	2.6
1	K	102	VAL	2.6
1	C	181	GLY	2.6
1	H	1	MET	2.6
1	C	100	ALA	2.6
1	C	69	LEU	2.6
1	F	61	LEU	2.6
1	H	342	PRO	2.6
1	I	345	PRO	2.6
1	A	101	LYS	2.6
1	K	41	SER	2.6
1	K	72	LYS	2.6
1	C	102	VAL	2.6
1	F	79	VAL	2.6
1	E	179	GLY	2.6
1	G	3	GLY	2.6
1	H	181	GLY	2.6
1	F	100	ALA	2.6
1	K	58	THR	2.6
1	F	39	PRO	2.6
1	G	78	ASP	2.6
1	K	357	ASP	2.6
1	H	6	SER	2.6
1	C	11	VAL	2.6
1	F	65	GLN	2.6
1	G	88	VAL	2.6
1	A	99	CYS	2.6
1	D	7	GLY	2.6
1	L	324	GLY	2.6
1	A	322	ALA	2.6
1	D	171	ALA	2.6
1	G	105	ARG	2.6
1	L	43	ASP	2.6
1	A	61	LEU	2.6
1	C	8	LEU	2.6
1	D	173	TRP	2.6
1	E	69	LEU	2.6
1	G	80	LEU	2.6
1	K	65	GLN	2.5

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Mol	Chain	Res	Type	RSRZ
1	C	74	ILE	2.5
1	G	81	ILE	2.5
1	H	79	VAL	2.5
1	K	10	VAL	2.5
1	D	207	MET	2.5
1	H	72	LYS	2.5
1	C	171	ALA	2.5
1	E	39	PRO	2.5
1	E	70	ALA	2.5
1	H	75	ALA	2.5
1	G	41	SER	2.5
1	E	172	LEU	2.5
1	H	179	GLY	2.5
1	K	34	VAL	2.5
1	L	16	ILE	2.5
1	C	104	ASP	2.5
1	L	348	THR	2.5
1	H	97	GLU	2.5
1	H	172	LEU	2.5
1	K	50	MET	2.5
1	I	173	TRP	2.5
1	C	105	ARG	2.5
1	D	354	VAL	2.5
1	F	183	VAL	2.5
1	E	323	ASN	2.5
1	C	350	ASP	2.5
1	A	41	SER	2.5
1	F	89	THR	2.5
1	B	204	ALA	2.5
1	G	39	PRO	2.5
1	B	73	LEU	2.5
1	F	80	LEU	2.5
1	E	10	VAL	2.4
1	F	34	VAL	2.4
1	F	184	VAL	2.4
1	G	359	ASP	2.4
1	H	65	GLN	2.4
1	L	68	GLU	2.4
1	A	59	ALA	2.4
1	K	49	ALA	2.4
1	L	207	MET	2.4
1	B	51	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
1	F	72	LYS	2.4
1	K	80	LEU	2.4
1	K	94	LEU	2.4
1	C	91	ARG	2.4
1	F	7	GLY	2.4
1	L	177	SER	2.4
1	C	257	ALA	2.4
1	E	100	ALA	2.4
1	E	101	LYS	2.4
1	F	26	LEU	2.4
1	G	172	LEU	2.4
1	H	169	LEU	2.4
1	I	355	LEU	2.4
1	I	44	GLY	2.4
1	G	277	GLU	2.4
1	J	258	GLU	2.4
1	E	144	ASP	2.4
1	C	33	VAL	2.4
1	D	74	ILE	2.4
1	E	79	VAL	2.4
1	F	10	VAL	2.4
1	K	354	VAL	2.4
1	L	345	PRO	2.4
1	A	92	LEU	2.4
1	D	73	LEU	2.4
1	E	80	LEU	2.4
1	F	92	LEU	2.4
1	H	61	LEU	2.4
1	H	71	LEU	2.4
1	C	68	GLU	2.4
1	H	315	GLU	2.4
1	I	243	GLN	2.4
1	J	350	ASP	2.4
1	F	74	ILE	2.4
1	E	105	ARG	2.4
1	E	207	MET	2.4
1	H	183	VAL	2.4
1	K	1	MET	2.4
1	K	63	SER	2.4
1	G	326	TRP	2.4
1	H	108	TYR	2.3
1	B	322	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
1	E	97	GLU	2.3
1	H	92	LEU	2.3
1	J	355	LEU	2.3
1	C	1	MET	2.3
1	C	47	ARG	2.3
1	D	180	LYS	2.3
1	K	101	LYS	2.3
1	A	79	VAL	2.3
1	A	178	SER	2.3
1	C	10	VAL	2.3
1	C	57	VAL	2.3
1	D	42	VAL	2.3
1	F	31	ALA	2.3
1	L	322	ALA	2.3
1	L	353	ALA	2.3
1	C	44	GLY	2.3
1	C	71	LEU	2.3
1	K	355	LEU	2.3
1	L	69	LEU	2.3
1	L	355	LEU	2.3
1	E	359	ASP	2.3
1	I	350	ASP	2.3
1	D	11	VAL	2.3
1	D	57	VAL	2.3
1	D	68	GLU	2.3
1	H	10	VAL	2.3
1	K	39	PRO	2.3
1	C	106	LEU	2.3
1	G	32	ASP	2.3
1	H	93	GLY	2.3
1	H	320	TYR	2.3
1	L	80	LEU	2.3
1	A	97	GLU	2.3
1	E	258	GLU	2.3
1	D	65	GLN	2.3
1	D	79	VAL	2.3
1	H	11	VAL	2.3
1	J	102	VAL	2.3
1	C	99	CYS	2.3
1	B	353	ALA	2.3
1	C	49	ALA	2.3
1	G	14	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
1	J	75	ALA	2.3
1	E	30	GLY	2.3
1	A	94	LEU	2.3
1	B	355	LEU	2.3
1	E	8	LEU	2.3
1	I	69	LEU	2.3
1	J	1	MET	2.3
1	A	10	VAL	2.2
1	C	348	THR	2.2
1	C	354	VAL	2.2
1	H	102	VAL	2.2
1	D	47	ARG	2.2
1	E	76	LYS	2.2
1	A	70	ALA	2.2
1	B	7	GLY	2.2
1	B	30	GLY	2.2
1	D	2	ALA	2.2
1	D	100	ALA	2.2
1	H	66	GLY	2.2
1	L	1	MET	2.2
1	B	5	LEU	2.2
1	J	71	LEU	2.2
1	K	73	LEU	2.2
1	E	68	GLU	2.2
1	L	315	GLU	2.2
1	C	40	SER	2.2
1	A	39	PRO	2.2
1	A	356	THR	2.2
1	B	180	LYS	2.2
1	C	79	VAL	2.2
1	E	11	VAL	2.2
1	F	76	LYS	2.2
1	K	79	VAL	2.2
1	D	93	GLY	2.2
1	D	179	GLY	2.2
1	G	30	GLY	2.2
1	D	31	ALA	2.2
1	D	258	GLU	2.2
1	H	51	LEU	2.2
1	F	108	TYR	2.2
1	B	177	SER	2.2
1	H	339	SER	2.2

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Mol	Chain	Res	Type	RSRZ
1	H	180	LYS	2.2
1	G	323	ASN	2.2
1	H	348	THR	2.2
1	J	43	ASP	2.2
1	H	33	VAL	2.2
1	F	97	GLU	2.2
1	G	181	GLY	2.2
1	H	44	GLY	2.2
1	C	65	GLN	2.2
1	E	292	ALA	2.2
1	F	171	ALA	2.2
1	A	51	LEU	2.2
1	D	172	LEU	2.2
1	J	73	LEU	2.2
1	K	172	LEU	2.2
1	F	47	ARG	2.2
1	H	9	ARG	2.2
1	C	108	TYR	2.2
1	L	76	LYS	2.2
1	K	173	TRP	2.2
1	F	357	ASP	2.2
1	G	344	PRO	2.1
1	F	68	GLU	2.1
1	H	68	GLU	2.1
1	B	102	VAL	2.1
1	D	34	VAL	2.1
1	A	87	GLY	2.1
1	F	44	GLY	2.1
1	D	204	ALA	2.1
1	G	49	ALA	2.1
1	L	347	ALA	2.1
1	C	172	LEU	2.1
1	G	55	ARG	2.1
1	H	40	SER	2.1
1	A	60	ASP	2.1
1	G	64	ASP	2.1
1	B	173	TRP	2.1
1	E	107	ILE	2.1
1	H	314	ILE	2.1
1	E	354	VAL	2.1
1	H	3	GLY	2.1
1	K	11	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
1	F	38	ARG	2.1
1	A	353	ALA	2.1
1	C	322	ALA	2.1
1	L	70	ALA	2.1
1	D	69	LEU	2.1
1	F	51	LEU	2.1
1	F	178	SER	2.1
1	H	258	GLU	2.1
1	G	104	ASP	2.1
1	G	65	GLN	2.1
1	D	326	TRP	2.1
1	B	354	VAL	2.1
1	C	59	ALA	2.1
1	K	322	ALA	2.1
1	D	71	LEU	2.1
1	D	177	SER	2.1
1	E	41	SER	2.1
1	F	46	SER	2.1
1	G	40	SER	2.1
1	G	51	LEU	2.1
1	I	61	LEU	2.1
1	C	207	MET	2.1
1	G	68	GLU	2.1
1	I	258	GLU	2.1
1	B	359	ASP	2.1
1	G	144	ASP	2.1
1	D	176	GLN	2.1
1	J	348	THR	2.1
1	L	47	ARG	2.1
1	G	27	GLY	2.1
1	G	87	GLY	2.1
1	G	288	GLY	2.1
1	J	93	GLY	2.1
1	L	181	GLY	2.1
1	B	326	TRP	2.1
1	E	352	GLU	2.0
1	G	46	SER	2.1
1	G	170	ALA	2.1
1	J	257	ALA	2.1
1	K	46	SER	2.1
1	G	207	MET	2.0
1	D	51	LEU	2.0

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Mol	Chain	Res	Type	RSRZ
1	E	51	LEU	2.0
1	A	38	ARG	2.0
1	K	96	PRO	2.0
1	A	44	GLY	2.0
1	F	27	GLY	2.0
1	A	36	ILE	2.0
1	K	74	ILE	2.0
1	D	183	VAL	2.0
1	D	315	GLU	2.0
1	J	11	VAL	2.0
1	L	79	VAL	2.0
1	F	63	SER	2.0
1	H	329	MET	2.0
1	C	2	ALA	2.0
1	F	77	ALA	2.0
1	I	358	TRP	2.0
1	J	59	ALA	2.0
1	G	169	LEU	2.0
1	G	182	GLN	2.0
1	L	123	GLN	2.0
1	B	255	ASP	2.0
1	J	47	ARG	2.0
1	H	99	CYS	2.0
1	F	356	THR	2.0
1	B	93	GLY	2.0
1	D	30	GLY	2.0
1	F	181	GLY	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,

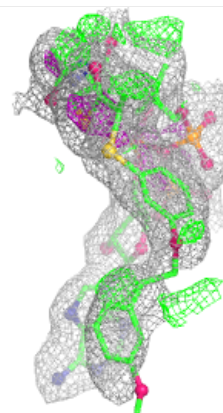
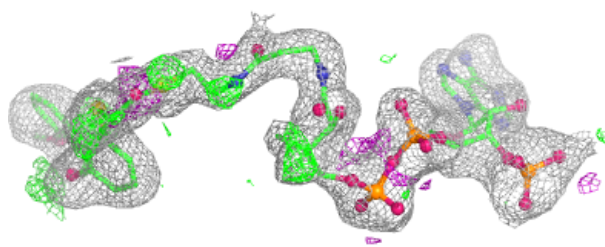
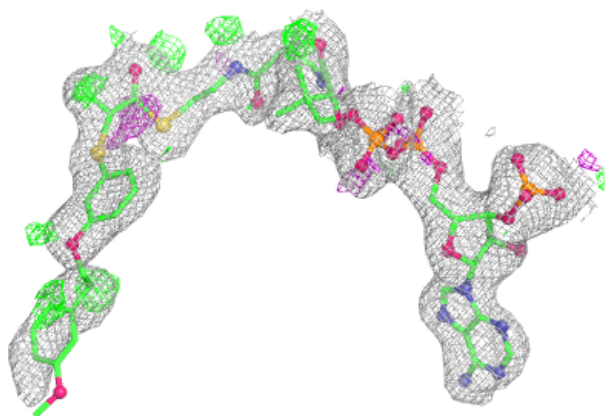
median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q<0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
2	A1JJ5	H	401	70/70	0.89	0.17	41,65,102,111	0
2	A1JJ5	E	401	70/70	0.90	0.16	42,60,99,104	0
2	A1JJ5	F	401	70/70	0.94	0.13	28,52,99,115	0
2	A1JJ5	G	401	70/70	0.94	0.14	30,51,92,118	0
2	A1JJ5	A	401	70/70	0.94	0.13	31,50,92,110	0
2	A1JJ5	C	401	70/70	0.95	0.12	31,52,97,108	0
2	A1JJ5	K	401	70/70	0.95	0.12	28,46,94,107	0
2	A1JJ5	D	401	70/70	0.96	0.11	26,45,92,107	0
2	A1JJ5	I	401	70/70	0.96	0.10	27,44,88,105	0
2	A1JJ5	J	401	70/70	0.96	0.11	28,44,91,105	0
2	A1JJ5	B	401	70/70	0.96	0.11	29,46,101,112	0
2	A1JJ5	L	401	70/70	0.96	0.11	28,42,90,104	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.

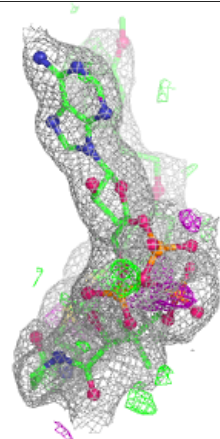
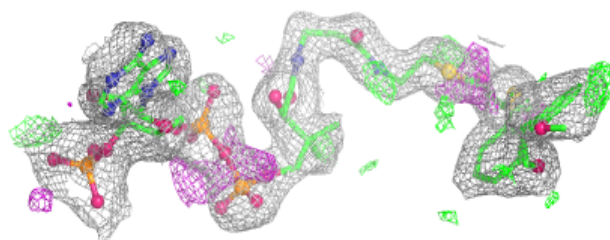
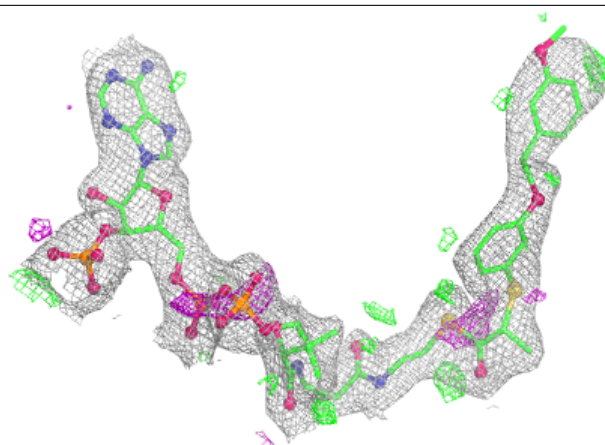
Electron density around A1JJ5 H 401:

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



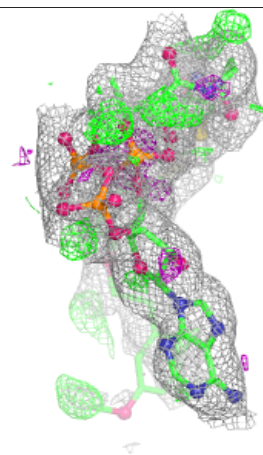
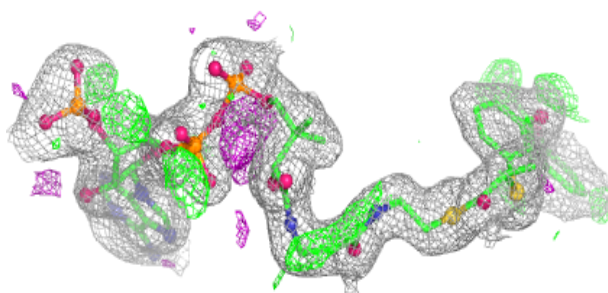
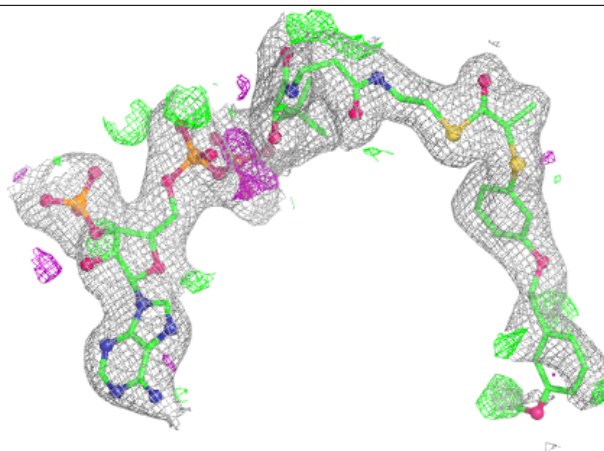
Electron density around A1JJ5 E 401:

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

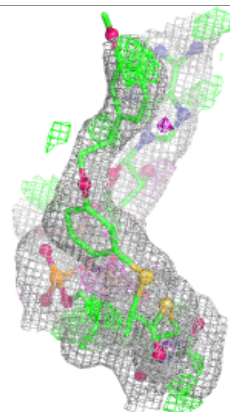
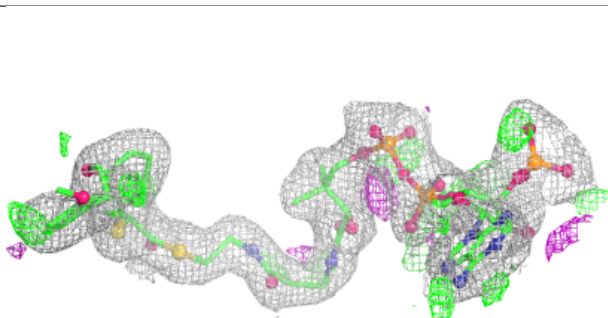
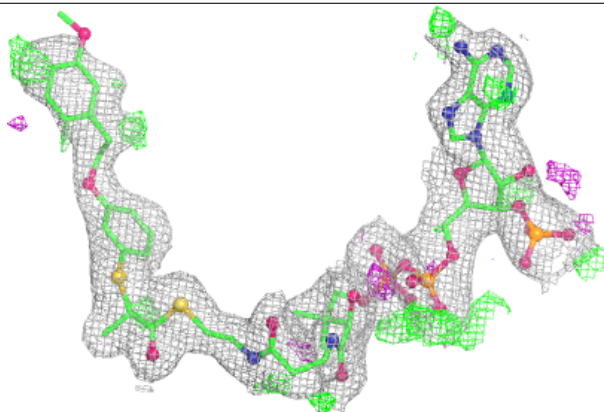


Electron density around A1JJ5 F 401:

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

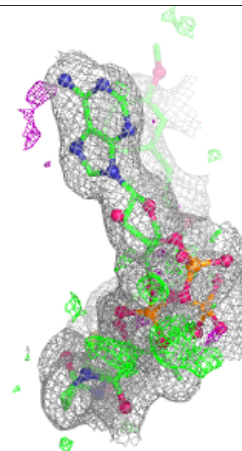
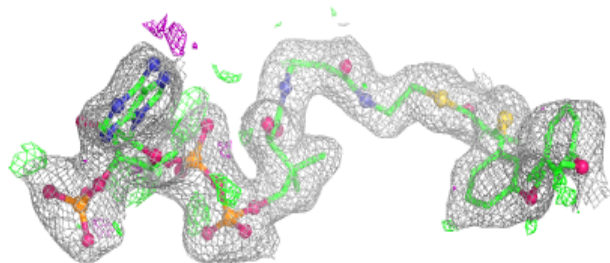
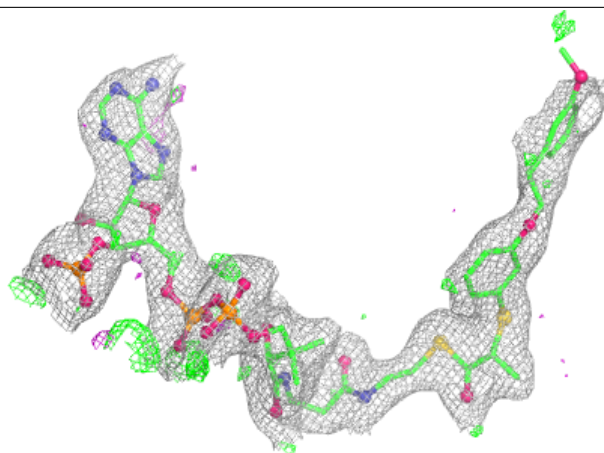
**Electron density around A1JJ5 G 401:**

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



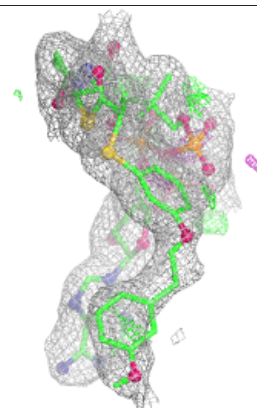
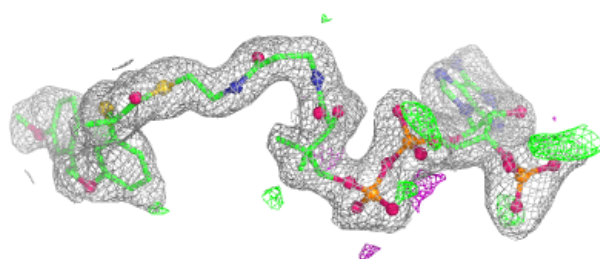
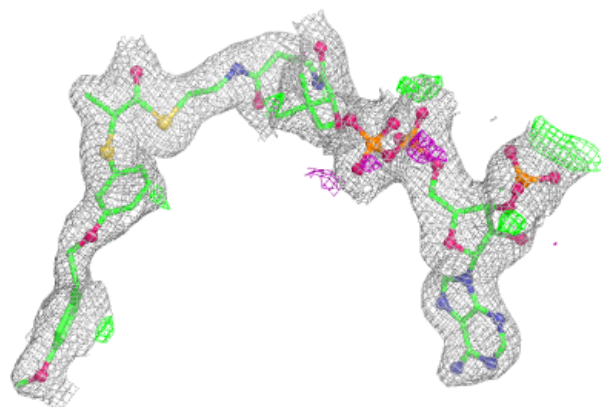
Electron density around A1JJ5 A 401:

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



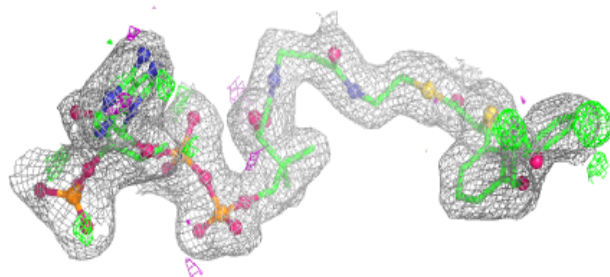
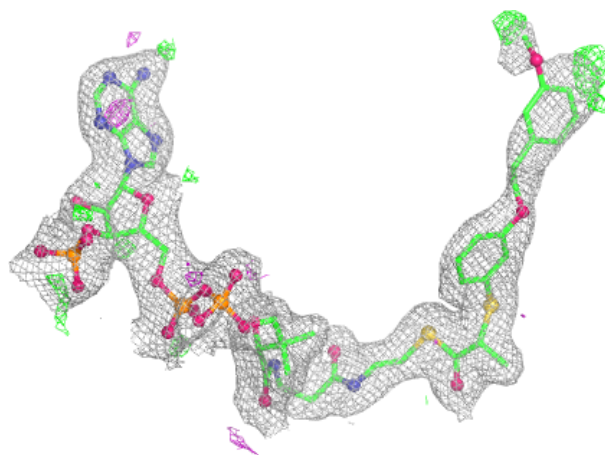
Electron density around A1JJ5 C 401:

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



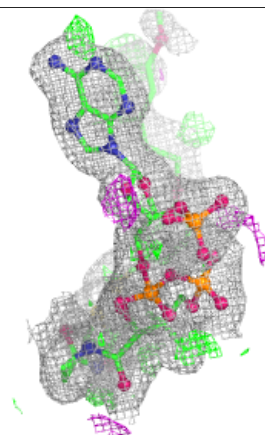
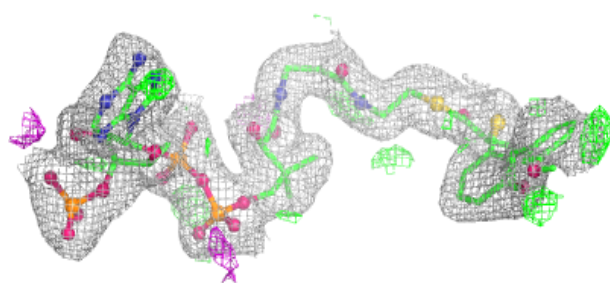
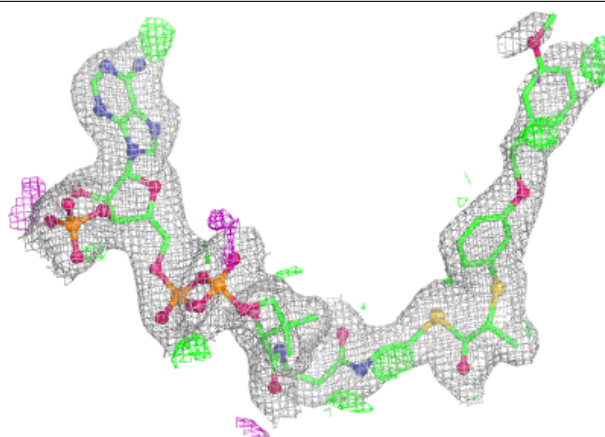
Electron density around A1JJ5 K 401:

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



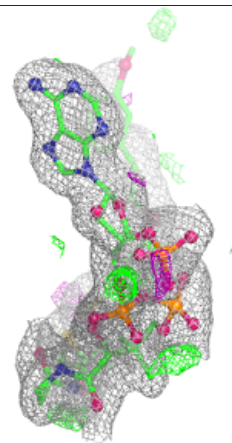
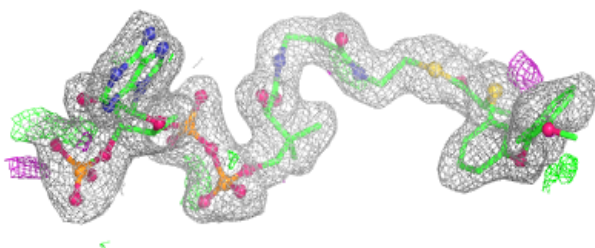
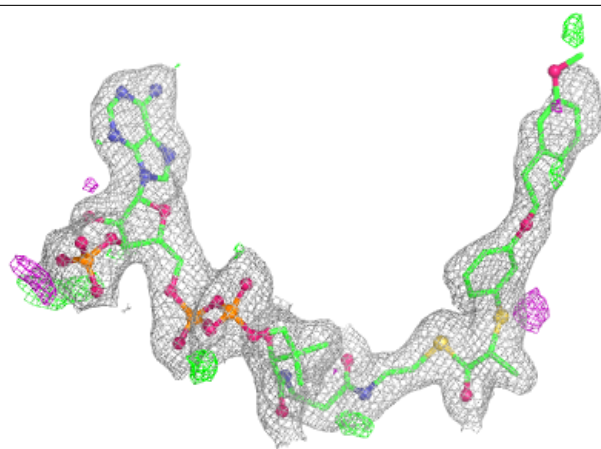
Electron density around A1JJ5 D 401:

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



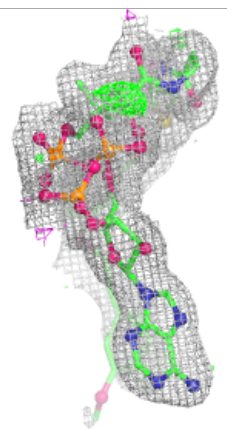
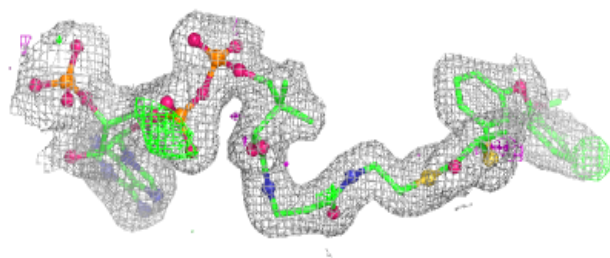
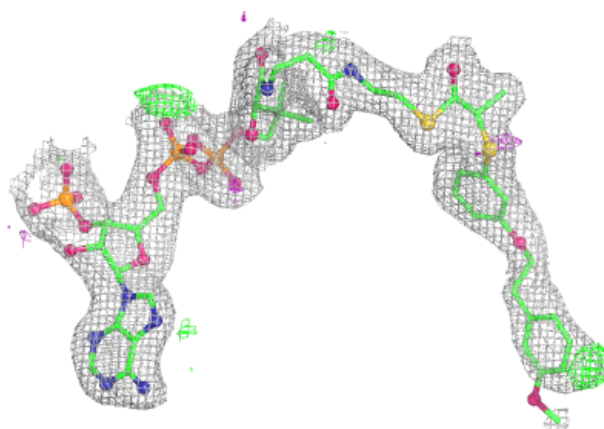
Electron density around A1JJ5 I 401:

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



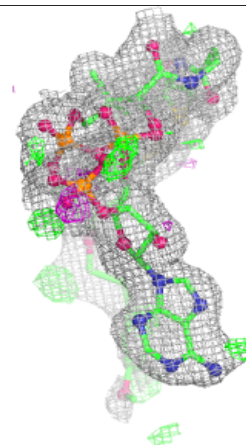
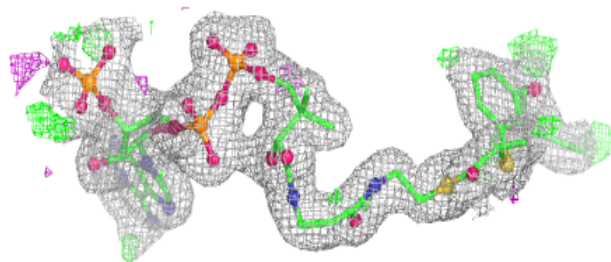
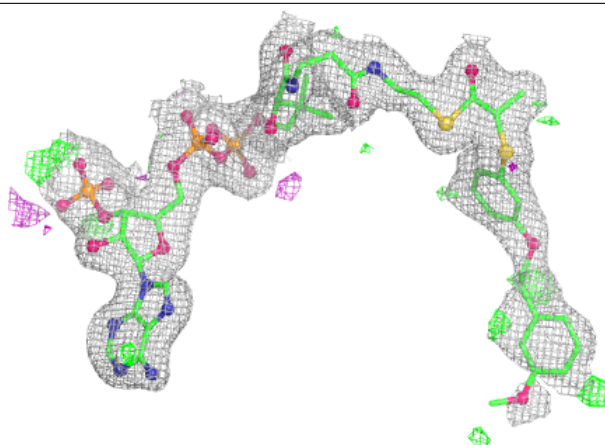
Electron density around A1JJ5 J 401:

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



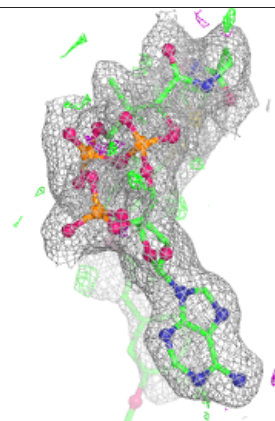
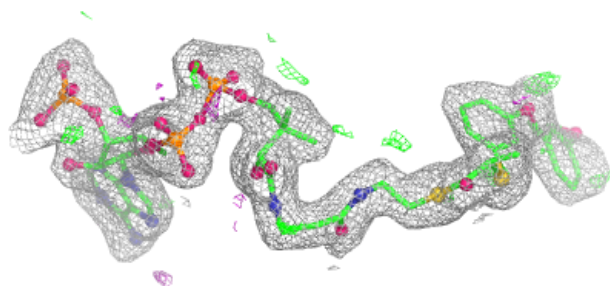
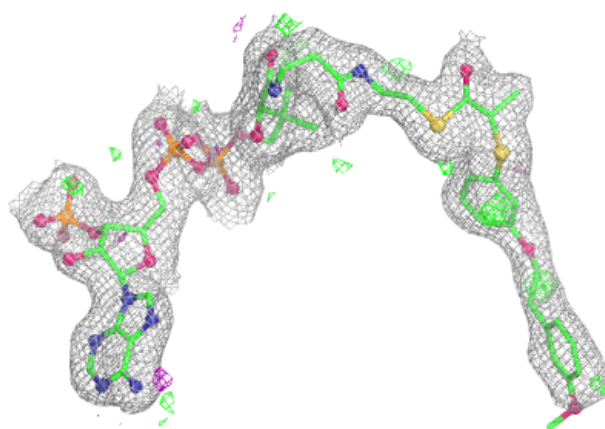
Electron density around A1JJ5 B 401:

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



Electron density around A1JJ5 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)



6.5 Other polymers [i](#)

There are no such residues in this entry.