Full wwPDB X-ray Structure Validation Report ⓘ

Nov 23, 2023 – 01:33 AM JST

PDB ID	:	7Y0X
Title	:	Orf1-glycine complex
Authors	:	Wang, Y.L.; Li, T.L.
Deposited on	:	2022-06-06
Resolution	:	2.05 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:

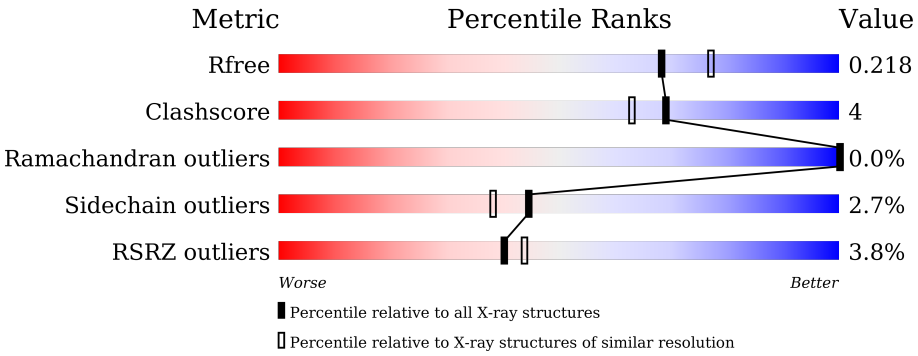
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.05 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}	130704	1692 (2.04-2.04)
Clashscore	141614	1773 (2.04-2.04)
Ramachandran outliers	138981	1752 (2.04-2.04)
Sidechain outliers	138945	1752 (2.04-2.04)
RSRZ outliers	127900	1672 (2.04-2.04)

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

Mol	Chain	Length	Quality of chain
1	A	508	2% 86% 8% • 5%
1	B	508	% 87% 7% 5%
1	C	508	3% 87% 7% • 5%
1	D	508	9% 85% 8% • 6%
1	E	508	% 87% 7% • 5%
1	F	508	% 89% 6% • 5%

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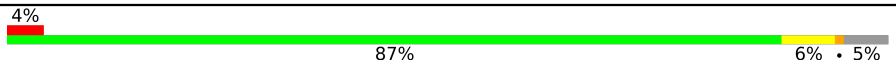
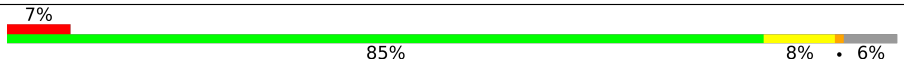
Mol	Chain	Length	Quality of chain
1	G	508	
1	H	508	

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 31217 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 N-formimidoyl fortimicin A synthase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	481	Total	C	N	O	S	0	0	0
			3639	2282	658	687	12			
1	B	482	Total	C	N	O	S	0	0	0
			3648	2287	660	689	12			
1	C	482	Total	C	N	O	S	0	0	0
			3648	2287	660	689	12			
1	D	479	Total	C	N	O	S	0	0	0
			3624	2274	656	682	12			
1	E	482	Total	C	N	O	S	0	0	0
			3648	2287	660	689	12			
1	F	482	Total	C	N	O	S	0	0	0
			3648	2287	660	689	12			
1	G	481	Total	C	N	O	S	0	0	0
			3639	2282	658	687	12			
1	H	479	Total	C	N	O	S	0	0	0
			3624	2274	656	682	12			

There are 144 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-16	MET	-	initiating methionine	UNP A0A125SZC1
A	-15	GLY	-	expression tag	UNP A0A125SZC1
A	-14	SER	-	expression tag	UNP A0A125SZC1
A	-13	SER	-	expression tag	UNP A0A125SZC1
A	-12	HIS	-	expression tag	UNP A0A125SZC1
A	-11	HIS	-	expression tag	UNP A0A125SZC1
A	-10	SER	-	expression tag	UNP A0A125SZC1
A	-9	SER	-	expression tag	UNP A0A125SZC1
A	-8	GLY	-	expression tag	UNP A0A125SZC1
A	-7	LEU	-	expression tag	UNP A0A125SZC1
A	-6	VAL	-	expression tag	UNP A0A125SZC1
A	-5	PRO	-	expression tag	UNP A0A125SZC1
A	-4	ARG	-	expression tag	UNP A0A125SZC1

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Chain	Residue	Modelled	Actual	Comment	Reference
A	-3	GLY	-	expression tag	UNP A0A125SZC1
A	-2	SER	-	expression tag	UNP A0A125SZC1
A	-1	HIS	-	expression tag	UNP A0A125SZC1
A	0	MET	-	expression tag	UNP A0A125SZC1
A	316	ALA	PHE	engineered mutation	UNP A0A125SZC1
B	-16	MET	-	initiating methionine	UNP A0A125SZC1
B	-15	GLY	-	expression tag	UNP A0A125SZC1
B	-14	SER	-	expression tag	UNP A0A125SZC1
B	-13	SER	-	expression tag	UNP A0A125SZC1
B	-12	HIS	-	expression tag	UNP A0A125SZC1
B	-11	HIS	-	expression tag	UNP A0A125SZC1
B	-10	SER	-	expression tag	UNP A0A125SZC1
B	-9	SER	-	expression tag	UNP A0A125SZC1
B	-8	GLY	-	expression tag	UNP A0A125SZC1
B	-7	LEU	-	expression tag	UNP A0A125SZC1
B	-6	VAL	-	expression tag	UNP A0A125SZC1
B	-5	PRO	-	expression tag	UNP A0A125SZC1
B	-4	ARG	-	expression tag	UNP A0A125SZC1
B	-3	GLY	-	expression tag	UNP A0A125SZC1
B	-2	SER	-	expression tag	UNP A0A125SZC1
B	-1	HIS	-	expression tag	UNP A0A125SZC1
B	0	MET	-	expression tag	UNP A0A125SZC1
B	316	ALA	PHE	engineered mutation	UNP A0A125SZC1
C	-16	MET	-	initiating methionine	UNP A0A125SZC1
C	-15	GLY	-	expression tag	UNP A0A125SZC1
C	-14	SER	-	expression tag	UNP A0A125SZC1
C	-13	SER	-	expression tag	UNP A0A125SZC1
C	-12	HIS	-	expression tag	UNP A0A125SZC1
C	-11	HIS	-	expression tag	UNP A0A125SZC1
C	-10	SER	-	expression tag	UNP A0A125SZC1
C	-9	SER	-	expression tag	UNP A0A125SZC1
C	-8	GLY	-	expression tag	UNP A0A125SZC1
C	-7	LEU	-	expression tag	UNP A0A125SZC1
C	-6	VAL	-	expression tag	UNP A0A125SZC1
C	-5	PRO	-	expression tag	UNP A0A125SZC1
C	-4	ARG	-	expression tag	UNP A0A125SZC1
C	-3	GLY	-	expression tag	UNP A0A125SZC1
C	-2	SER	-	expression tag	UNP A0A125SZC1
C	-1	HIS	-	expression tag	UNP A0A125SZC1
C	0	MET	-	expression tag	UNP A0A125SZC1
C	316	ALA	PHE	engineered mutation	UNP A0A125SZC1
D	-16	MET	-	initiating methionine	UNP A0A125SZC1

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Chain	Residue	Modelled	Actual	Comment	Reference
D	-15	GLY	-	expression tag	UNP A0A125SZC1
D	-14	SER	-	expression tag	UNP A0A125SZC1
D	-13	SER	-	expression tag	UNP A0A125SZC1
D	-12	HIS	-	expression tag	UNP A0A125SZC1
D	-11	HIS	-	expression tag	UNP A0A125SZC1
D	-10	SER	-	expression tag	UNP A0A125SZC1
D	-9	SER	-	expression tag	UNP A0A125SZC1
D	-8	GLY	-	expression tag	UNP A0A125SZC1
D	-7	LEU	-	expression tag	UNP A0A125SZC1
D	-6	VAL	-	expression tag	UNP A0A125SZC1
D	-5	PRO	-	expression tag	UNP A0A125SZC1
D	-4	ARG	-	expression tag	UNP A0A125SZC1
D	-3	GLY	-	expression tag	UNP A0A125SZC1
D	-2	SER	-	expression tag	UNP A0A125SZC1
D	-1	HIS	-	expression tag	UNP A0A125SZC1
D	0	MET	-	expression tag	UNP A0A125SZC1
D	316	ALA	PHE	engineered mutation	UNP A0A125SZC1
E	-16	MET	-	initiating methionine	UNP A0A125SZC1
E	-15	GLY	-	expression tag	UNP A0A125SZC1
E	-14	SER	-	expression tag	UNP A0A125SZC1
E	-13	SER	-	expression tag	UNP A0A125SZC1
E	-12	HIS	-	expression tag	UNP A0A125SZC1
E	-11	HIS	-	expression tag	UNP A0A125SZC1
E	-10	SER	-	expression tag	UNP A0A125SZC1
E	-9	SER	-	expression tag	UNP A0A125SZC1
E	-8	GLY	-	expression tag	UNP A0A125SZC1
E	-7	LEU	-	expression tag	UNP A0A125SZC1
E	-6	VAL	-	expression tag	UNP A0A125SZC1
E	-5	PRO	-	expression tag	UNP A0A125SZC1
E	-4	ARG	-	expression tag	UNP A0A125SZC1
E	-3	GLY	-	expression tag	UNP A0A125SZC1
E	-2	SER	-	expression tag	UNP A0A125SZC1
E	-1	HIS	-	expression tag	UNP A0A125SZC1
E	0	MET	-	expression tag	UNP A0A125SZC1
E	316	ALA	PHE	engineered mutation	UNP A0A125SZC1
F	-16	MET	-	initiating methionine	UNP A0A125SZC1
F	-15	GLY	-	expression tag	UNP A0A125SZC1
F	-14	SER	-	expression tag	UNP A0A125SZC1
F	-13	SER	-	expression tag	UNP A0A125SZC1
F	-12	HIS	-	expression tag	UNP A0A125SZC1
F	-11	HIS	-	expression tag	UNP A0A125SZC1
F	-10	SER	-	expression tag	UNP A0A125SZC1

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Chain	Residue	Modelled	Actual	Comment	Reference
F	-9	SER	-	expression tag	UNP A0A125SZC1
F	-8	GLY	-	expression tag	UNP A0A125SZC1
F	-7	LEU	-	expression tag	UNP A0A125SZC1
F	-6	VAL	-	expression tag	UNP A0A125SZC1
F	-5	PRO	-	expression tag	UNP A0A125SZC1
F	-4	ARG	-	expression tag	UNP A0A125SZC1
F	-3	GLY	-	expression tag	UNP A0A125SZC1
F	-2	SER	-	expression tag	UNP A0A125SZC1
F	-1	HIS	-	expression tag	UNP A0A125SZC1
F	0	MET	-	expression tag	UNP A0A125SZC1
F	316	ALA	PHE	engineered mutation	UNP A0A125SZC1
G	-16	MET	-	initiating methionine	UNP A0A125SZC1
G	-15	GLY	-	expression tag	UNP A0A125SZC1
G	-14	SER	-	expression tag	UNP A0A125SZC1
G	-13	SER	-	expression tag	UNP A0A125SZC1
G	-12	HIS	-	expression tag	UNP A0A125SZC1
G	-11	HIS	-	expression tag	UNP A0A125SZC1
G	-10	SER	-	expression tag	UNP A0A125SZC1
G	-9	SER	-	expression tag	UNP A0A125SZC1
G	-8	GLY	-	expression tag	UNP A0A125SZC1
G	-7	LEU	-	expression tag	UNP A0A125SZC1
G	-6	VAL	-	expression tag	UNP A0A125SZC1
G	-5	PRO	-	expression tag	UNP A0A125SZC1
G	-4	ARG	-	expression tag	UNP A0A125SZC1
G	-3	GLY	-	expression tag	UNP A0A125SZC1
G	-2	SER	-	expression tag	UNP A0A125SZC1
G	-1	HIS	-	expression tag	UNP A0A125SZC1
G	0	MET	-	expression tag	UNP A0A125SZC1
G	316	ALA	PHE	engineered mutation	UNP A0A125SZC1
H	-16	MET	-	initiating methionine	UNP A0A125SZC1
H	-15	GLY	-	expression tag	UNP A0A125SZC1
H	-14	SER	-	expression tag	UNP A0A125SZC1
H	-13	SER	-	expression tag	UNP A0A125SZC1
H	-12	HIS	-	expression tag	UNP A0A125SZC1
H	-11	HIS	-	expression tag	UNP A0A125SZC1
H	-10	SER	-	expression tag	UNP A0A125SZC1
H	-9	SER	-	expression tag	UNP A0A125SZC1
H	-8	GLY	-	expression tag	UNP A0A125SZC1
H	-7	LEU	-	expression tag	UNP A0A125SZC1
H	-6	VAL	-	expression tag	UNP A0A125SZC1
H	-5	PRO	-	expression tag	UNP A0A125SZC1
H	-4	ARG	-	expression tag	UNP A0A125SZC1

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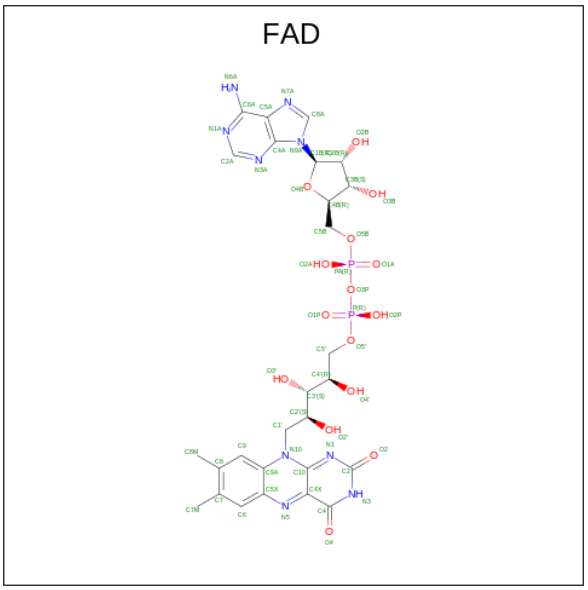
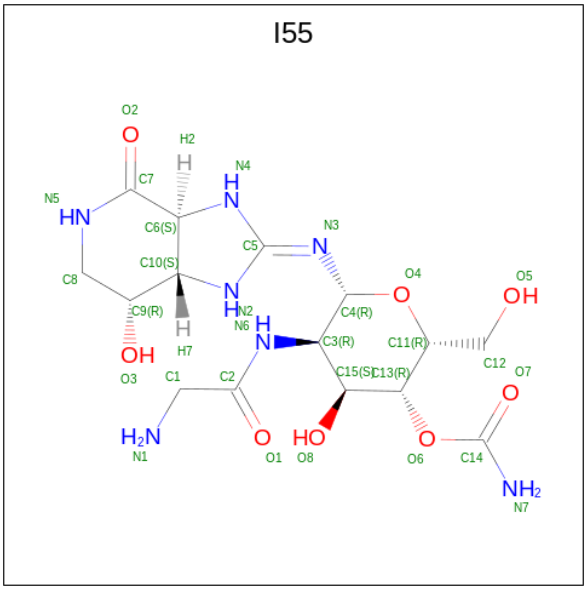
Chain	Residue	Modelled	Actual	Comment	Reference
H	-3	GLY	-	expression tag	UNP A0A125SZC1
H	-2	SER	-	expression tag	UNP A0A125SZC1
H	-1	HIS	-	expression tag	UNP A0A125SZC1
H	0	MET	-	expression tag	UNP A0A125SZC1
H	316	ALA	PHE	engineered mutation	UNP A0A125SZC1

- Molecule 2 is FLAVIN-ADENINE DINUCLEOTIDE (three-letter code: FAD) (formula: $C_{27}H_{33}N_9O_{15}P_2$) (labeled as "Ligand of Interest" by depositor).



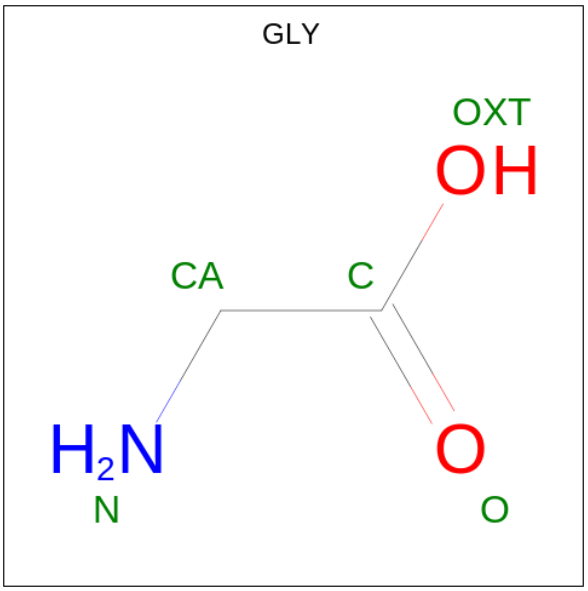
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	N	O	P	0	0
			53	27	9	15	2		
2	B	1	Total	C	N	O	P	0	0
			53	27	9	15	2		
2	C	1	Total	C	N	O	P	0	0
			53	27	9	15	2		
2	D	1	Total	C	N	O	P	0	0
			53	27	9	15	2		
2	E	1	Total	C	N	O	P	0	0
			53	27	9	15	2		
2	F	1	Total	C	N	O	P	0	0
			53	27	9	15	2		
2	G	1	Total	C	N	O	P	0	0
			53	27	9	15	2		
2	H	1	Total	C	N	O	P	0	0
			53	27	9	15	2		

- Molecule 3 is [(2 {R},3 {R},4 {S},5 {R},6 {R})-6-[({E})-[(3 {a} {S},7 {R},7 {a} {S})-7-oxidanyl-4-oxidanylidene-3,3 {a},5,6,7,7 {a}-hexahydro-1 {H}-imidazo[4,5-c]pyridin-2-ylidene]amino]-5-(2-azanylethanoylamino)-2-(hydroxymethyl)-4-oxidanyl-oxan-3-yl] carbamate (three-letter code: I55) (formula: $C_{15}H_{25}N_7O_8$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total C N O 30 15 7 8	0	0
3	B	1	Total C N O 30 15 7 8	0	0
3	C	1	Total C N O 30 15 7 8	0	0
3	D	1	Total C N O 30 15 7 8	0	0
3	E	1	Total C N O 30 15 7 8	0	0
3	F	1	Total C N O 30 15 7 8	0	0
3	G	1	Total C N O 30 15 7 8	0	0
3	H	1	Total C N O 30 15 7 8	0	0

- Molecule 4 is GLYCINE (three-letter code: GLY) (formula: $C_2H_5NO_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	1	Total C N O 5 2 1 2	0	0
4	B	1	Total C N O 5 2 1 2	0	0
4	C	1	Total C N O 5 2 1 2	0	0
4	D	1	Total C N O 5 2 1 2	0	0
4	E	1	Total C N O 5 2 1 2	0	0
4	F	1	Total C N O 5 2 1 2	0	0
4	G	1	Total C N O 5 2 1 2	0	0
4	H	1	Total C N O 5 2 1 2	0	0

- Molecule 5 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	204	Total O 204 204	0	0
5	B	198	Total O 198 198	0	0
5	C	175	Total O 175 175	0	0
5	D	113	Total O 113 113	0	0

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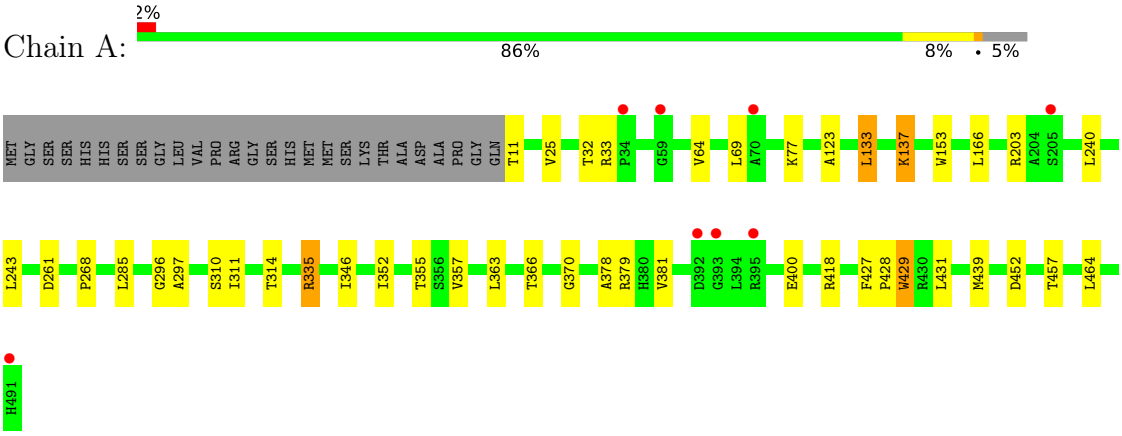
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	E	211	Total O 211 211	0	0
5	F	202	Total O 202 202	0	0
5	G	175	Total O 175 175	0	0
5	H	117	Total O 117 117	0	0

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.

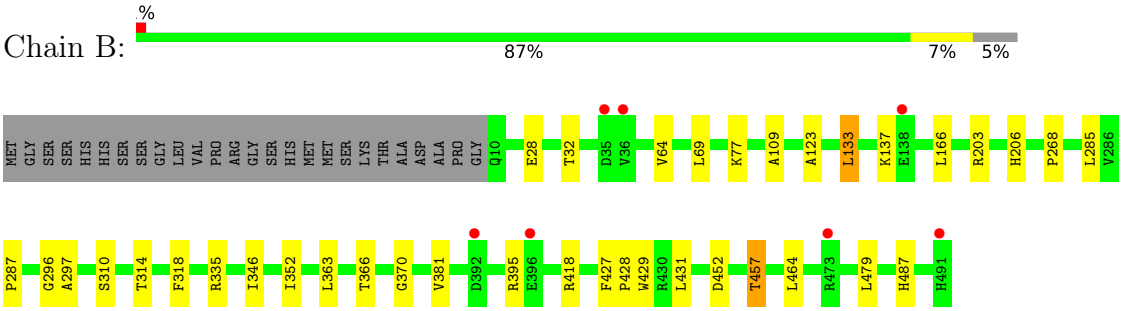
• Molecule 1: N-formimidoyl fortimicin A synthase

Chain A:



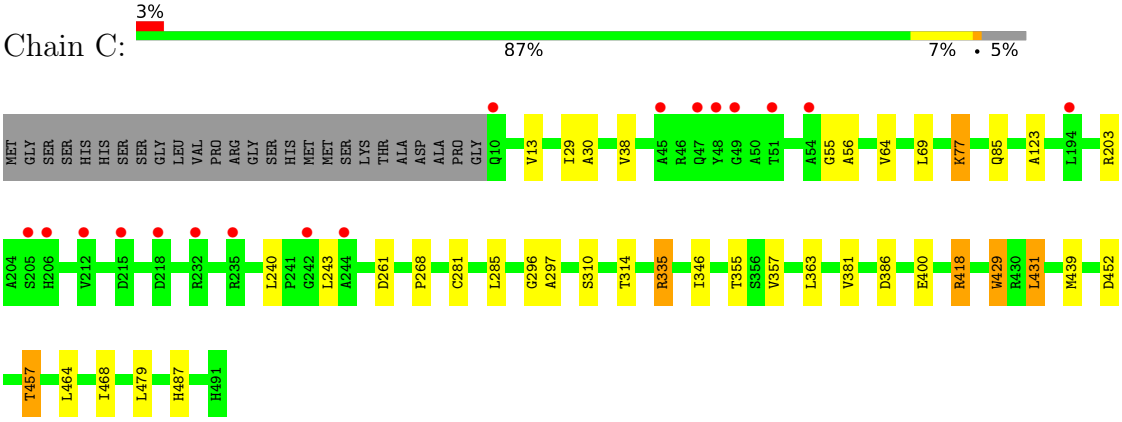
• Molecule 1: N-formimidoyl fortimicin A synthase

Chain B:



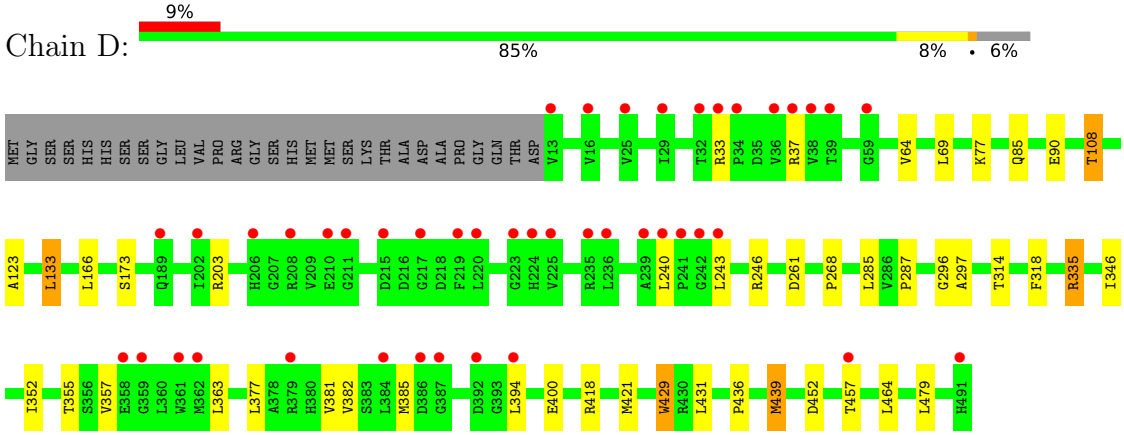
• Molecule 1: N-formimidoyl fortimicin A synthase

Chain C:



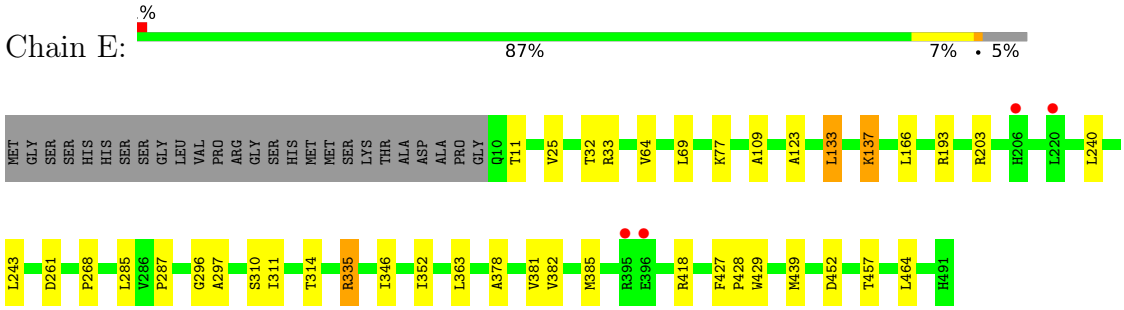
• Molecule 1: N-formimidoyl fortimicin A synthase

Chain D:



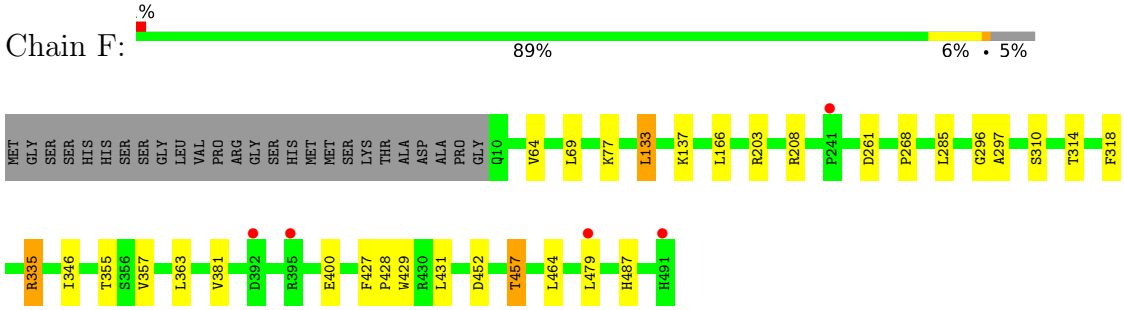
• Molecule 1: N-formimidoyl fortimicin A synthase

Chain E:



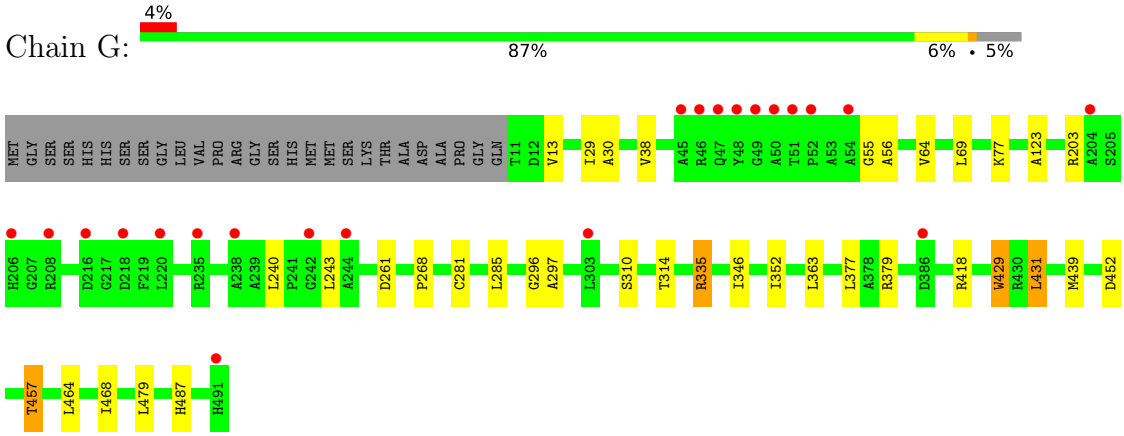
• Molecule 1: N-formimidoyl fortimicin A synthase

Chain F:



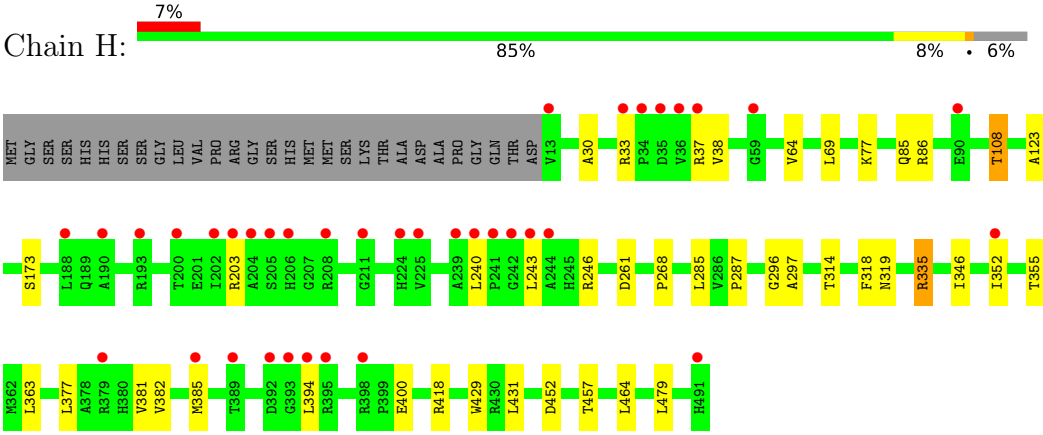
• Molecule 1: N-formimidoyl fortimicin A synthase

Chain G:



• Molecule 1: N-formimidoyl fortimicin A synthase

Chain H:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α, β, γ	103.42Å 107.22Å 135.16Å 90.05° 90.04° 83.68°	Depositor
Resolution (Å)	27.74 – 2.05 27.72 – 2.05	Depositor EDS
% Data completeness (in resolution range)	97.4 (27.74-2.05) 97.4 (27.72-2.05)	Depositor EDS
R_{merge}	0.06	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.92 (at 2.04Å)	Xtriage
Refinement program	REFMAC 5.8.0267	Depositor
R, R_{free}	0.199 , 0.214 0.205 , 0.218	Depositor DCC
R_{free} test set	17716 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å^2)	24.1	Xtriage
Anisotropy	0.010	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.36 , 22.7	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	0.468 for -h,-k,l 0.011 for k,h,-l 0.011 for -k,-h,-l	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	31217	wwPDB-VP
Average B, all atoms (Å^2)	31.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.01% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: I55, FAD

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	0.67	0/3721	0.79	0/5071
1	B	0.68	0/3730	0.78	0/5083
1	C	0.69	0/3730	0.81	1/5083 (0.0%)
1	D	0.64	0/3706	0.78	0/5050
1	E	0.67	0/3730	0.79	0/5083
1	F	0.67	0/3730	0.78	0/5083
1	G	0.69	0/3721	0.79	0/5071
1	H	0.65	0/3706	0.78	0/5050
All	All	0.67	0/29774	0.79	1/40574 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	C	418	ARG	NE-CZ-NH1	5.93	123.27	120.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3639	0	3572	26	0
1	B	3648	0	3580	21	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	C	3648	0	3580	25	0
1	D	3624	0	3561	43	0
1	E	3648	0	3580	32	0
1	F	3648	0	3580	18	0
1	G	3639	0	3572	27	0
1	H	3624	0	3561	35	0
2	A	53	0	31	1	0
2	B	53	0	31	2	0
2	C	53	0	31	1	0
2	D	53	0	31	1	0
2	E	53	0	31	1	0
2	F	53	0	31	1	0
2	G	53	0	31	0	0
2	H	53	0	31	0	0
3	A	30	0	0	0	0
3	B	30	0	0	0	0
3	C	30	0	0	0	0
3	D	30	0	0	0	0
3	E	30	0	0	0	0
3	F	30	0	0	0	0
3	G	30	0	0	0	0
3	H	30	0	0	0	0
4	A	5	0	2	0	0
4	B	5	0	2	0	0
4	C	5	0	2	0	0
4	D	5	0	2	0	0
4	E	5	0	2	0	0
4	F	5	0	2	0	0
4	G	5	0	2	0	0
4	H	5	0	2	0	0
5	A	204	0	0	2	0
5	B	198	0	0	0	0
5	C	175	0	0	3	0
5	D	113	0	0	0	0
5	E	211	0	0	3	0
5	F	202	0	0	0	0
5	G	175	0	0	3	0
5	H	117	0	0	3	0
All	All	31217	0	28850	218	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 (218) 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:H:319:ASN:HB3	5:H:801:HOH:O	1.61	0.98
1:H:352:ILE:HD13	1:H:377:LEU:HD22	1.45	0.98
1:D:352:ILE:HD13	1:D:377:LEU:HD22	1.45	0.97
1:B:28:GLU:O	1:B:32:THR:HG23	1.81	0.81
1:G:281:CYS:HB3	5:G:945:HOH:O	1.88	0.74
1:E:382:VAL:HA	1:E:385:MET:CE	2.18	0.73
1:D:382:VAL:HA	1:D:385:MET:CE	2.21	0.71
1:H:319:ASN:CB	5:H:801:HOH:O	2.28	0.71
1:H:382:VAL:HA	1:H:385:MET:CE	2.21	0.70
1:D:421:MET:CE	1:D:439:MET:CE	2.71	0.69
1:D:382:VAL:HA	1:D:385:MET:HE2	1.75	0.68
1:D:436:PRO:HA	1:D:439:MET:HE2	1.75	0.68
1:E:382:VAL:HA	1:E:385:MET:HE2	1.74	0.67
1:H:382:VAL:HA	1:H:385:MET:HE2	1.76	0.67
1:E:335:ARG:HG2	5:E:934:HOH:O	1.94	0.66
1:D:436:PRO:HA	1:D:439:MET:CE	2.27	0.65
1:D:421:MET:HE1	1:D:439:MET:HE2	1.80	0.64
1:D:108:THR:HG22	1:D:173:SER:OG	1.99	0.63
1:B:133:LEU:HD13	1:B:166:LEU:HD22	1.81	0.62
1:B:206:HIS:O	1:H:86:ARG:HD2	1.98	0.62
1:H:108:THR:HG22	1:H:173:SER:OG	1.99	0.61
1:F:133:LEU:HD13	1:F:166:LEU:HD22	1.81	0.61
1:A:133:LEU:HD13	1:A:166:LEU:HD22	1.81	0.61
1:B:352:ILE:HG23	1:B:363:LEU:CD1	2.31	0.60
1:E:133:LEU:HD13	1:E:166:LEU:HD22	1.82	0.60
1:A:363:LEU:HD13	1:A:381:VAL:HG21	1.83	0.60
1:E:352:ILE:HG23	1:E:363:LEU:CD1	2.31	0.60
1:H:133:LEU:HD13	1:H:166:LEU:HD22	1.84	0.60
1:A:352:ILE:HG23	1:A:363:LEU:CD1	2.32	0.60
1:C:281:CYS:HB3	5:C:946:HOH:O	2.00	0.60
1:H:123:ALA:HB1	1:H:418:ARG:HD3	1.83	0.60
1:D:429:TRP:CH2	1:D:439:MET:CE	2.85	0.59
1:E:363:LEU:HD13	1:E:381:VAL:HG21	1.83	0.59
1:H:352:ILE:HG23	1:H:363:LEU:CD1	2.33	0.59
1:A:25:VAL:HG21	1:A:363:LEU:HD22	1.84	0.58
1:D:133:LEU:HD13	1:D:166:LEU:HD22	1.84	0.58
1:G:352:ILE:HG23	1:G:363:LEU:CD1	2.34	0.58
1:C:363:LEU:HD11	1:C:381:VAL:HG21	1.85	0.58
1:C:457:THR:HG21	1:C:487:HIS:CE1	2.37	0.58
1:H:246:ARG:NH1	1:H:400:GLU:OE1	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:352:ILE:HG23	1:D:363:LEU:CD1	2.33	0.58
1:E:25:VAL:HG21	1:E:363:LEU:HD22	1.84	0.58
1:G:457:THR:HG21	1:G:487:HIS:CE1	2.38	0.58
1:G:429:TRP:CD1	1:G:431:LEU:HD11	2.38	0.57
1:C:429:TRP:CD1	1:C:431:LEU:HD11	2.39	0.57
1:H:363:LEU:HD13	1:H:381:VAL:HG21	1.87	0.57
1:B:431:LEU:HD11	1:D:431:LEU:CD1	2.35	0.57
1:D:246:ARG:NH1	1:D:400:GLU:OE1	2.36	0.57
1:F:457:THR:HG21	1:F:487:HIS:CE1	2.40	0.57
1:H:319:ASN:CG	5:H:801:HOH:O	2.42	0.57
1:D:363:LEU:HD13	1:D:381:VAL:HG21	1.87	0.56
1:A:355:THR:HG23	1:A:400:GLU:OE2	2.05	0.56
1:D:429:TRP:CH2	1:D:439:MET:HE1	2.39	0.56
1:F:355:THR:HG23	1:F:400:GLU:OE2	2.05	0.56
1:C:355:THR:HG23	1:C:400:GLU:OE2	2.05	0.56
1:A:346:ILE:HG13	1:A:464:LEU:CD2	2.36	0.56
1:D:355:THR:HG23	1:D:400:GLU:OE2	2.05	0.56
1:F:431:LEU:HD11	1:H:431:LEU:CD1	2.35	0.56
1:H:355:THR:HG23	1:H:400:GLU:OE2	2.05	0.56
1:E:346:ILE:HG13	1:E:464:LEU:CD2	2.36	0.56
1:G:429:TRP:CE2	1:G:431:LEU:HD11	2.41	0.56
1:B:431:LEU:CD1	1:D:431:LEU:HD11	2.36	0.55
1:C:429:TRP:CE2	1:C:431:LEU:HD11	2.41	0.55
1:B:346:ILE:HG13	1:B:464:LEU:CD2	2.36	0.55
1:B:363:LEU:HD13	1:B:381:VAL:HG21	1.87	0.55
1:F:346:ILE:HG13	1:F:464:LEU:CD2	2.36	0.55
1:G:123:ALA:HB1	1:G:418:ARG:HD3	1.87	0.55
1:E:137:LYS:NZ	5:E:802:HOH:O	2.30	0.55
1:G:468:ILE:HD13	1:G:479:LEU:CD2	2.37	0.55
1:B:457:THR:HG21	1:B:487:HIS:CE1	2.40	0.55
1:D:421:MET:HE1	1:D:439:MET:CE	2.35	0.55
1:F:431:LEU:CD1	1:H:431:LEU:HD11	2.37	0.54
1:H:108:THR:HG21	1:H:287:PRO:O	2.08	0.54
1:H:346:ILE:HG13	1:H:464:LEU:CD2	2.38	0.54
1:D:429:TRP:HH2	1:D:439:MET:CE	2.21	0.54
1:E:268:PRO:HG3	1:E:285:LEU:HD22	1.90	0.54
1:F:268:PRO:HG3	1:F:285:LEU:HD22	1.90	0.54
1:D:421:MET:HE3	1:D:439:MET:CE	2.38	0.53
1:A:268:PRO:HG3	1:A:285:LEU:HD22	1.90	0.53
1:E:64:VAL:HG13	1:E:69:LEU:HD22	1.90	0.53
1:C:468:ILE:HD13	1:C:479:LEU:CD2	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:346:ILE:HG13	1:D:464:LEU:CD2	2.38	0.53
1:B:268:PRO:HG3	1:B:285:LEU:HD22	1.90	0.53
1:B:431:LEU:HD11	1:D:431:LEU:HD11	1.91	0.53
1:G:346:ILE:HG13	1:G:464:LEU:CD2	2.38	0.53
1:D:108:THR:HG21	1:D:287:PRO:O	2.08	0.52
1:C:123:ALA:HB1	1:C:418:ARG:HD3	1.91	0.52
1:C:346:ILE:HG13	1:C:464:LEU:CD2	2.39	0.52
1:H:268:PRO:HG3	1:H:285:LEU:HD22	1.92	0.52
1:D:429:TRP:HH2	1:D:439:MET:HE3	1.74	0.51
1:F:431:LEU:HD11	1:H:431:LEU:HD11	1.90	0.51
1:D:352:ILE:HD13	1:D:377:LEU:CD2	2.32	0.51
1:A:64:VAL:HG13	1:A:69:LEU:HD22	1.91	0.51
1:C:268:PRO:HG3	1:C:285:LEU:HD22	1.93	0.50
1:E:439:MET:HA	1:G:439:MET:HE1	1.93	0.50
1:D:268:PRO:HG3	1:D:285:LEU:HD22	1.92	0.50
1:F:64:VAL:HG13	1:F:69:LEU:HD22	1.94	0.50
1:H:64:VAL:HG13	1:H:69:LEU:HD22	1.94	0.50
1:A:123:ALA:HB1	1:A:418:ARG:HD2	1.94	0.49
1:G:379:ARG:HD3	5:G:909:HOH:O	2.12	0.49
1:E:382:VAL:HA	1:E:385:MET:HE3	1.94	0.49
1:G:429:TRP:NE1	1:G:431:LEU:HD11	2.27	0.49
1:E:25:VAL:HG22	1:E:378:ALA:HA	1.95	0.49
1:C:64:VAL:HG13	1:C:69:LEU:HD22	1.94	0.49
1:D:123:ALA:HB1	1:D:418:ARG:HD2	1.95	0.49
1:B:64:VAL:HG13	1:B:69:LEU:HD22	1.94	0.49
1:G:13:VAL:HG11	1:G:29:ILE:HD13	1.95	0.48
1:C:429:TRP:NE1	1:C:431:LEU:HD11	2.28	0.48
1:E:123:ALA:HB1	1:E:418:ARG:HD2	1.95	0.48
1:G:281:CYS:CB	5:G:945:HOH:O	2.54	0.48
1:G:268:PRO:HG3	1:G:285:LEU:HD22	1.94	0.48
1:C:13:VAL:HG11	1:C:29:ILE:HD13	1.96	0.48
1:G:352:ILE:HG23	1:G:363:LEU:HD12	1.96	0.48
1:G:64:VAL:HG13	1:G:69:LEU:HD22	1.95	0.48
1:B:431:LEU:CD1	1:D:431:LEU:CD1	2.93	0.47
1:C:261:ASP:OD2	1:C:335:ARG:HD3	2.15	0.47
1:D:64:VAL:HG13	1:D:69:LEU:HD22	1.95	0.47
1:D:439:MET:HE2	1:D:439:MET:HB2	1.76	0.47
1:G:261:ASP:OD2	1:G:335:ARG:HD3	2.15	0.47
1:C:310:SER:O	1:C:314:THR:HG23	2.16	0.46
1:H:261:ASP:OD2	1:H:335:ARG:HD3	2.15	0.46
1:A:261:ASP:OD2	1:A:335:ARG:HD3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:261:ASP:OD2	1:D:335:ARG:HD3	2.15	0.46
1:A:310:SER:O	1:A:314:THR:HG23	2.16	0.46
2:C:701:FAD:H9	2:C:701:FAD:H1'2	1.79	0.46
1:A:25:VAL:HG21	1:A:363:LEU:CD2	2.44	0.46
1:E:25:VAL:HG21	1:E:363:LEU:CD2	2.45	0.46
1:C:281:CYS:CB	5:C:946:HOH:O	2.61	0.46
1:A:25:VAL:HG22	1:A:378:ALA:HA	1.97	0.45
1:D:355:THR:HG22	1:D:357:VAL:H	1.81	0.45
1:H:355:THR:HG22	1:H:357:VAL:H	1.81	0.45
1:A:355:THR:HG22	1:A:357:VAL:H	1.82	0.45
1:F:261:ASP:OD2	1:F:335:ARG:HD3	2.15	0.45
1:H:382:VAL:HA	1:H:385:MET:HE3	1.96	0.45
1:F:363:LEU:HD11	1:F:381:VAL:HG21	1.97	0.45
1:H:381:VAL:O	1:H:385:MET:HE2	2.17	0.45
1:E:310:SER:O	1:E:314:THR:HG23	2.16	0.45
1:G:310:SER:O	1:G:314:THR:HG23	2.16	0.45
2:D:701:FAD:H9	2:D:701:FAD:H1'2	1.78	0.45
1:F:355:THR:HG22	1:F:357:VAL:H	1.80	0.45
1:G:30:ALA:HB2	1:G:38:VAL:HG11	1.99	0.45
1:D:381:VAL:O	1:D:385:MET:HE2	2.17	0.44
1:E:261:ASP:OD2	1:E:335:ARG:HD3	2.16	0.44
2:E:701:FAD:H9	2:E:701:FAD:H1'2	1.72	0.44
1:A:137:LYS:NZ	5:A:814:HOH:O	2.50	0.44
1:C:363:LEU:CD1	1:C:381:VAL:HG21	2.47	0.44
1:E:381:VAL:O	1:E:385:MET:HE2	2.17	0.44
1:E:311:ILE:HG23	1:F:318:PHE:HB3	2.00	0.44
1:C:30:ALA:HB2	1:C:38:VAL:HG11	1.99	0.44
1:A:25:VAL:CG2	1:A:363:LEU:CD2	2.96	0.44
1:F:431:LEU:CD1	1:H:431:LEU:CD1	2.94	0.44
1:H:352:ILE:HD12	1:H:394:LEU:HD22	2.00	0.43
1:D:296:GLY:HA3	1:D:297:ALA:HB2	2.00	0.43
1:D:352:ILE:CD1	1:D:377:LEU:HD22	2.33	0.43
1:G:55:GLY:N	1:G:56:ALA:HA	2.33	0.43
1:H:108:THR:CG2	1:H:287:PRO:O	2.66	0.43
1:C:240:LEU:HB2	1:C:243:LEU:HD22	2.01	0.43
1:B:297:ALA:HB1	2:B:701:FAD:HM73	2.00	0.43
1:D:108:THR:CG2	1:D:287:PRO:O	2.66	0.43
1:A:311:ILE:HG23	1:B:318:PHE:HB3	2.00	0.43
1:H:352:ILE:CD1	1:H:377:LEU:HD22	2.33	0.43
1:H:314:THR:HG22	1:H:318:PHE:CE2	2.54	0.43
1:H:352:ILE:HD13	1:H:377:LEU:CD2	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:363:LEU:HD12	1:H:363:LEU:HA	1.83	0.43
1:C:55:GLY:N	1:C:56:ALA:HA	2.34	0.43
1:H:296:GLY:HA3	1:H:297:ALA:HB2	2.00	0.43
1:A:379:ARG:HD3	5:A:937:HOH:O	2.19	0.43
2:A:701:FAD:H9	2:A:701:FAD:H1'2	1.76	0.43
1:A:32:THR:HG22	1:A:33:ARG:HG2	2.01	0.42
2:B:701:FAD:H9	2:B:701:FAD:H1'2	1.77	0.42
1:D:382:VAL:HA	1:D:385:MET:HE3	1.97	0.42
1:E:25:VAL:CG2	1:E:363:LEU:CD2	2.97	0.42
1:G:468:ILE:CD1	1:G:479:LEU:CD2	2.97	0.42
1:D:352:ILE:HD12	1:D:394:LEU:HD22	2.00	0.42
1:E:32:THR:HG22	1:E:33:ARG:HG2	2.01	0.42
1:F:296:GLY:HA3	1:F:297:ALA:HB2	2.01	0.42
1:D:314:THR:HG22	1:D:318:PHE:CE2	2.54	0.42
1:B:296:GLY:HA3	1:B:297:ALA:HB2	2.01	0.42
1:E:296:GLY:HA3	1:E:297:ALA:HB2	2.02	0.42
1:G:363:LEU:HD12	1:G:363:LEU:HA	1.84	0.42
1:A:439:MET:HA	1:C:439:MET:HE1	2.02	0.42
1:B:366:THR:HB	1:B:370:GLY:CA	2.50	0.42
1:G:240:LEU:HB2	1:G:243:LEU:HD22	2.02	0.42
1:C:296:GLY:HA3	1:C:297:ALA:HB2	2.02	0.42
2:F:701:FAD:H9	2:F:701:FAD:H1'2	1.79	0.42
1:B:123:ALA:HB1	1:B:418:ARG:HD3	2.01	0.41
1:A:296:GLY:HA3	1:A:297:ALA:HB2	2.02	0.41
1:F:310:SER:O	1:F:314:THR:HG23	2.19	0.41
1:E:363:LEU:HA	1:E:363:LEU:HD12	1.80	0.41
1:G:296:GLY:HA3	1:G:297:ALA:HB2	2.02	0.41
1:F:208:ARG:HG2	1:F:208:ARG:HH11	1.86	0.41
1:A:427:PHE:N	1:A:428:PRO:HA	2.36	0.41
1:A:240:LEU:HB2	1:A:243:LEU:HD22	2.02	0.41
1:H:30:ALA:HB2	1:H:38:VAL:HG11	2.03	0.41
1:C:468:ILE:CD1	1:C:479:LEU:CD2	2.98	0.41
1:B:427:PHE:N	1:B:428:PRO:HA	2.36	0.41
1:D:352:ILE:HG23	1:D:363:LEU:HD12	2.02	0.41
1:E:240:LEU:HB2	1:E:243:LEU:HD22	2.02	0.41
1:E:427:PHE:N	1:E:428:PRO:HA	2.36	0.41
1:H:240:LEU:HB2	1:H:243:LEU:HD22	2.02	0.41
1:B:109:ALA:HB2	1:B:287:PRO:HG2	2.03	0.41
1:C:355:THR:HG22	1:C:357:VAL:H	1.85	0.41
1:A:363:LEU:HA	1:A:363:LEU:HD12	1.81	0.40
1:E:382:VAL:CA	1:E:385:MET:HE2	2.48	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:439:MET:CG	1:G:439:MET:HE2	2.51	0.40
1:B:310:SER:O	1:B:314:THR:HG23	2.21	0.40
1:E:346:ILE:HG13	1:E:464:LEU:HD21	2.03	0.40
1:A:366:THR:HB	1:A:370:GLY:CA	2.52	0.40
1:C:77:LYS:NZ	5:C:812:HOH:O	2.54	0.40
1:D:382:VAL:CA	1:D:385:MET:HE2	2.48	0.40
1:E:287:PRO:HA	5:E:935:HOH:O	2.21	0.40
1:F:427:PHE:N	1:F:428:PRO:HA	2.36	0.40
1:D:240:LEU:HB2	1:D:243:LEU:HD22	2.03	0.40
1:D:352:ILE:HD12	1:D:394:LEU:CD2	2.51	0.40
1:E:109:ALA:HB2	1:E:287:PRO:HG2	2.03	0.40
1:E:439:MET:HG2	1:G:439:MET:HE2	2.04	0.40
1:A:429:TRP:CG	1:A:431:LEU:HD13	2.57	0.40
1:G:363:LEU:HD11	1:G:377:LEU:HB3	2.03	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	479/508 (94%)	467 (98%)	11 (2%)	1 (0%)	47 39
1	B	480/508 (94%)	468 (98%)	12 (2%)	0	100 100
1	C	480/508 (94%)	469 (98%)	11 (2%)	0	100 100
1	D	477/508 (94%)	465 (98%)	12 (2%)	0	100 100
1	E	480/508 (94%)	469 (98%)	11 (2%)	0	100 100
1	F	480/508 (94%)	468 (98%)	12 (2%)	0	100 100
1	G	479/508 (94%)	468 (98%)	11 (2%)	0	100 100
1	H	477/508 (94%)	465 (98%)	12 (2%)	0	100 100
All	All	3832/4064 (94%)	3739 (98%)	92 (2%)	1 (0%)	100 100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	153	TRP

5.3.2 Protein sidechains (i)

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	374/395 (95%)	365 (98%)	9 (2%)	49	42
1	B	375/395 (95%)	365 (97%)	10 (3%)	44	38
1	C	375/395 (95%)	366 (98%)	9 (2%)	49	42
1	D	372/395 (94%)	358 (96%)	14 (4%)	33	26
1	E	375/395 (95%)	365 (97%)	10 (3%)	44	38
1	F	375/395 (95%)	366 (98%)	9 (2%)	49	42
1	G	374/395 (95%)	367 (98%)	7 (2%)	57	53
1	H	372/395 (94%)	360 (97%)	12 (3%)	39	32
All	All	2992/3160 (95%)	2912 (97%)	80 (3%)	44	38

All (80) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	11	THR
1	A	77	LYS
1	A	133	LEU
1	A	137	LYS
1	A	203	ARG
1	A	335	ARG
1	A	429	TRP
1	A	452	ASP
1	A	457	THR
1	B	77	LYS
1	B	133	LEU
1	B	137	LYS
1	B	203	ARG

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Mol	Chain	Res	Type
1	B	335	ARG
1	B	395	ARG
1	B	429	TRP
1	B	452	ASP
1	B	457	THR
1	B	479	LEU
1	C	77	LYS
1	C	85	GLN
1	C	203	ARG
1	C	335	ARG
1	C	386	ASP
1	C	429	TRP
1	C	431	LEU
1	C	452	ASP
1	C	457	THR
1	D	33	ARG
1	D	37	ARG
1	D	77	LYS
1	D	85	GLN
1	D	90	GLU
1	D	108	THR
1	D	133	LEU
1	D	203	ARG
1	D	335	ARG
1	D	429	TRP
1	D	439	MET
1	D	452	ASP
1	D	457	THR
1	D	479	LEU
1	E	11	THR
1	E	77	LYS
1	E	133	LEU
1	E	137	LYS
1	E	193	ARG
1	E	203	ARG
1	E	335	ARG
1	E	429	TRP
1	E	452	ASP
1	E	457	THR
1	F	77	LYS
1	F	133	LEU
1	F	137	LYS

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Mol	Chain	Res	Type
1	F	203	ARG
1	F	335	ARG
1	F	429	TRP
1	F	452	ASP
1	F	457	THR
1	F	479	LEU
1	G	77	LYS
1	G	203	ARG
1	G	335	ARG
1	G	429	TRP
1	G	431	LEU
1	G	452	ASP
1	G	457	THR
1	H	33	ARG
1	H	37	ARG
1	H	77	LYS
1	H	85	GLN
1	H	108	THR
1	H	133	LEU
1	H	203	ARG
1	H	335	ARG
1	H	429	TRP
1	H	452	ASP
1	H	457	THR
1	H	479	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (20) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	487	HIS
1	B	10	GLN
1	B	83	GLN
1	B	444	GLN
1	B	487	HIS
1	B	491	HIS
1	C	487	HIS
1	C	491	HIS
1	D	319	ASN
1	D	487	HIS
1	E	487	HIS
1	E	491	HIS
1	F	10	GLN

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Mol	Chain	Res	Type
1	F	319	ASN
1	F	487	HIS
1	F	491	HIS
1	G	67	HIS
1	G	487	HIS
1	G	491	HIS
1	H	487	HIS

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

24 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	$\#\|Z\| > 2$
4	GLY	A	703	-	4,4,4	1.06	0	3,4,4	1.08	0
3	I55	B	702	-	28,32,32	1.04	1 (3%)	31,46,46	0.99	2 (6%)
4	GLY	H	703	-	4,4,4	0.73	0	3,4,4	1.97	1 (33%)
2	FAD	D	701	-	53,58,58	0.63	0	68,89,89	0.81	2 (2%)
3	I55	G	702	-	28,32,32	1.05	1 (3%)	31,46,46	0.95	1 (3%)
4	GLY	E	703	-	4,4,4	0.99	0	3,4,4	0.75	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
2	FAD	A	701	-	53,58,58	0.74	1 (1%)	68,89,89	0.87	3 (4%)
3	I55	E	702	-	28,32,32	0.81	2 (7%)	31,46,46	0.92	1 (3%)
2	FAD	G	701	-	53,58,58	0.61	0	68,89,89	0.89	3 (4%)
2	FAD	B	701	-	53,58,58	0.77	2 (3%)	68,89,89	0.89	3 (4%)
4	GLY	C	703	-	4,4,4	1.15	0	3,4,4	1.19	0
4	GLY	B	703	-	4,4,4	1.18	0	3,4,4	0.89	0
2	FAD	H	701	-	53,58,58	0.63	0	68,89,89	0.80	3 (4%)
2	FAD	F	701	-	53,58,58	0.81	1 (1%)	68,89,89	0.86	2 (2%)
2	FAD	E	701	-	53,58,58	0.72	1 (1%)	68,89,89	0.87	3 (4%)
2	FAD	C	701	-	53,58,58	0.62	0	68,89,89	0.88	3 (4%)
3	I55	A	702	-	28,32,32	0.92	2 (7%)	31,46,46	0.91	2 (6%)
4	GLY	D	703	-	4,4,4	0.77	0	3,4,4	1.96	1 (33%)
4	GLY	F	703	-	4,4,4	1.00	0	3,4,4	1.01	0
3	I55	D	702	-	28,32,32	0.82	1 (3%)	31,46,46	1.14	3 (9%)
3	I55	F	702	-	28,32,32	1.13	1 (3%)	31,46,46	0.91	2 (6%)
3	I55	H	702	-	28,32,32	0.74	1 (3%)	31,46,46	0.83	1 (3%)
4	GLY	G	703	-	4,4,4	1.15	0	3,4,4	1.14	0
3	I55	C	702	-	28,32,32	0.96	1 (3%)	31,46,46	0.99	2 (6%)

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
4	GLY	A	703	-	-	0/2/2/2	-
3	I55	B	702	-	-	1/14/61/61	0/3/3/3
4	GLY	H	703	-	-	0/2/2/2	-
2	FAD	D	701	-	-	3/30/50/50	0/6/6/6
3	I55	G	702	-	-	1/14/61/61	0/3/3/3
4	GLY	E	703	-	-	0/2/2/2	-
2	FAD	A	701	-	-	1/30/50/50	0/6/6/6
3	I55	E	702	-	-	0/14/61/61	0/3/3/3
2	FAD	G	701	-	-	3/30/50/50	0/6/6/6
2	FAD	B	701	-	-	2/30/50/50	0/6/6/6
4	GLY	C	703	-	-	0/2/2/2	-
4	GLY	B	703	-	-	0/2/2/2	-
2	FAD	H	701	-	-	3/30/50/50	0/6/6/6

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	FAD	F	701	-	-	1/30/50/50	0/6/6/6
2	FAD	E	701	-	-	1/30/50/50	0/6/6/6
2	FAD	C	701	-	-	3/30/50/50	0/6/6/6
3	I55	A	702	-	-	1/14/61/61	0/3/3/3
4	GLY	D	703	-	-	0/2/2/2	-
4	GLY	F	703	-	-	0/2/2/2	-
3	I55	D	702	-	-	3/14/61/61	0/3/3/3
3	I55	F	702	-	-	2/14/61/61	0/3/3/3
3	I55	H	702	-	-	3/14/61/61	0/3/3/3
4	GLY	G	703	-	-	0/2/2/2	-
3	I55	C	702	-	-	1/14/61/61	0/3/3/3

All (15) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	F	702	I55	C4-C3	-4.93	1.50	1.53
3	G	702	I55	C4-C3	-4.57	1.50	1.53
3	B	702	I55	C4-C3	-4.53	1.50	1.53
3	C	702	I55	C4-C3	-3.84	1.50	1.53
3	A	702	I55	C4-C3	-3.59	1.51	1.53
3	D	702	I55	C4-C3	-3.57	1.51	1.53
3	H	702	I55	C4-C3	-3.21	1.51	1.53
2	A	701	FAD	C1'-C2'	-2.51	1.49	1.52
3	E	702	I55	C4-C3	-2.45	1.51	1.53
3	E	702	I55	C8-C9	2.37	1.54	1.52
2	B	701	FAD	O2'-C2'	-2.25	1.38	1.43
2	B	701	FAD	C9-C8	-2.17	1.36	1.39
2	F	701	FAD	O2'-C2'	-2.11	1.38	1.43
3	A	702	I55	C8-C9	2.06	1.54	1.52
2	E	701	FAD	C9-C8	-2.02	1.36	1.39

All (38) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	D	702	I55	C10-N6-C5	-3.18	109.51	112.56
3	B	702	I55	C10-N6-C5	-3.10	109.59	112.56
2	B	701	FAD	C4'-C3'-C2'	2.96	119.52	113.36
3	D	702	I55	C6-C7-N5	-2.80	114.73	118.19
3	G	702	I55	O3-C9-C10	2.73	116.05	109.77
2	E	701	FAD	O2A-PA-O1A	2.71	125.64	112.24
3	E	702	I55	C10-N6-C5	-2.67	110.00	112.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	C	702	I55	O3-C9-C10	2.66	115.90	109.77
2	F	701	FAD	C4'-C3'-C2'	2.64	118.86	113.36
4	H	703	GLY	OXT-C-CA	2.62	123.89	113.45
4	D	703	GLY	OXT-C-CA	2.58	123.73	113.45
2	B	701	FAD	O2A-PA-O1A	2.57	124.96	112.24
2	E	701	FAD	C4'-C3'-C2'	2.46	118.47	113.36
2	C	701	FAD	C5A-C6A-N6A	2.43	124.04	120.35
2	A	701	FAD	O2A-PA-O1A	2.42	124.20	112.24
2	G	701	FAD	C5A-C6A-N6A	2.41	124.02	120.35
2	H	701	FAD	O2P-P-O1P	2.38	123.98	112.24
2	D	701	FAD	C5A-C6A-N6A	2.31	123.86	120.35
3	H	702	I55	C10-N6-C5	-2.29	110.36	112.56
2	A	701	FAD	C5A-C6A-N6A	2.27	123.80	120.35
2	H	701	FAD	C5A-C6A-N6A	2.27	123.80	120.35
2	D	701	FAD	O2P-P-O1P	2.25	123.38	112.24
3	D	702	I55	C9-C8-N5	2.25	112.16	109.83
2	C	701	FAD	O2P-P-O1P	2.25	123.34	112.24
2	G	701	FAD	O2P-P-O1P	2.24	123.29	112.24
2	E	701	FAD	C5A-C6A-N6A	2.21	123.70	120.35
2	A	701	FAD	C4'-C3'-C2'	2.19	117.92	113.36
3	A	702	I55	N6-C5-N4	-2.18	106.96	109.20
2	B	701	FAD	C5A-C6A-N6A	2.16	123.63	120.35
2	H	701	FAD	O2A-PA-O1A	2.14	122.80	112.24
2	C	701	FAD	C4-N3-C2	-2.13	121.71	125.64
2	F	701	FAD	O2A-PA-O1A	2.11	122.65	112.24
3	C	702	I55	C10-N6-C5	-2.07	110.58	112.56
3	A	702	I55	C9-C8-N5	2.07	111.97	109.83
3	F	702	I55	C10-N6-C5	-2.06	110.58	112.56
3	B	702	I55	C9-C8-N5	2.05	111.95	109.83
2	G	701	FAD	C4-N3-C2	-2.03	121.88	125.64
3	F	702	I55	O3-C9-C10	2.02	114.42	109.77

There are no chirality outliers.

All (29) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	C	701	FAD	O4'-C4'-C5'-O5'
3	D	702	I55	N4-C5-N3-C4
3	D	702	I55	N6-C5-N3-C4
3	H	702	I55	N4-C5-N3-C4
3	H	702	I55	N6-C5-N3-C4
2	H	701	FAD	O4B-C4B-C5B-O5B

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Mol	Chain	Res	Type	Atoms
2	D	701	FAD	O4B-C4B-C5B-O5B
2	G	701	FAD	O4B-C4B-C5B-O5B
2	F	701	FAD	O4B-C4B-C5B-O5B
3	A	702	I55	C15-C13-O6-C14
3	B	702	I55	C15-C13-O6-C14
3	C	702	I55	C15-C13-O6-C14
3	D	702	I55	C15-C13-O6-C14
3	F	702	I55	C15-C13-O6-C14
3	G	702	I55	C15-C13-O6-C14
3	H	702	I55	C15-C13-O6-C14
3	F	702	I55	N1-C1-C2-N2
2	C	701	FAD	O4B-C4B-C5B-O5B
2	H	701	FAD	C3B-C4B-C5B-O5B
2	C	701	FAD	C2'-C1'-N10-C10
2	D	701	FAD	C2'-C1'-N10-C10
2	G	701	FAD	C2'-C1'-N10-C10
2	H	701	FAD	C2'-C1'-N10-C10
2	B	701	FAD	O4B-C4B-C5B-O5B
2	A	701	FAD	O4B-C4B-C5B-O5B
2	G	701	FAD	O4'-C4'-C5'-O5'
2	D	701	FAD	C3B-C4B-C5B-O5B
2	E	701	FAD	O4B-C4B-C5B-O5B
2	B	701	FAD	O4'-C4'-C5'-O5'

There are no ring outliers.

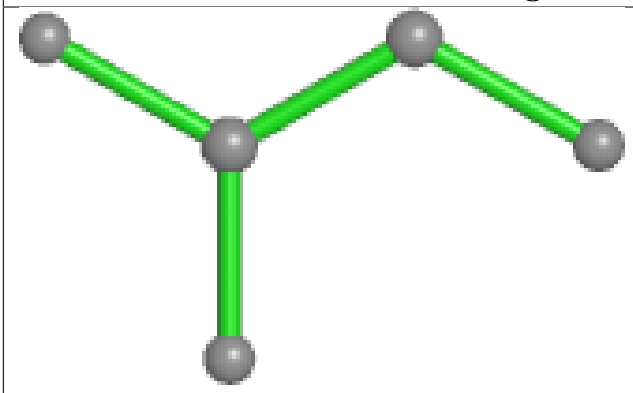
6 monomers are involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	D	701	FAD	1	0
2	A	701	FAD	1	0
2	B	701	FAD	2	0
2	F	701	FAD	1	0
2	E	701	FAD	1	0
2	C	701	FAD	1	0

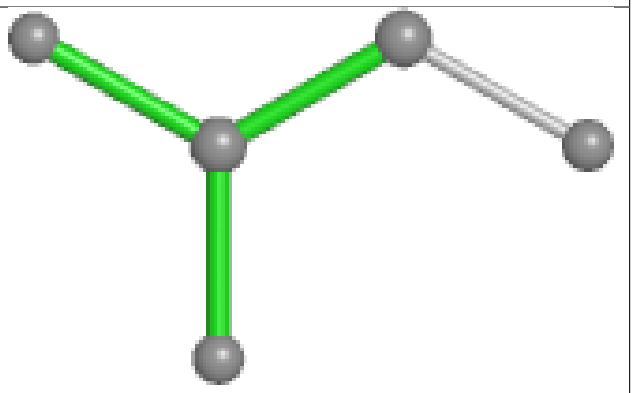
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring

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

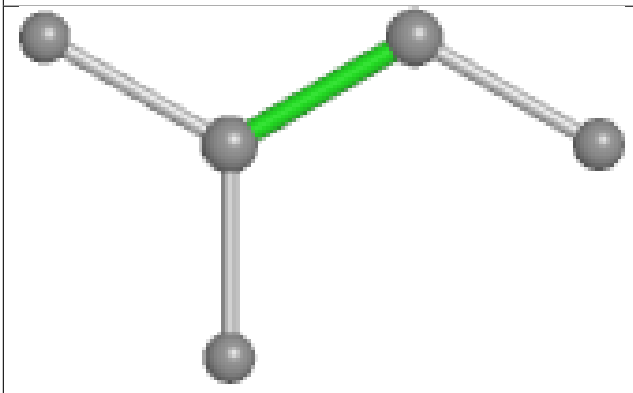
Ligand GLY A 703



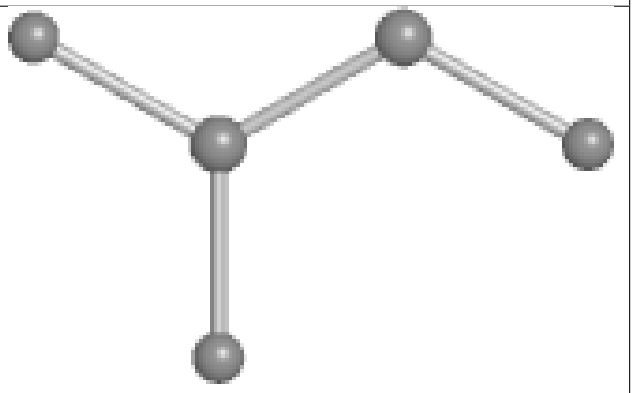
Bond lengths



Bond angles

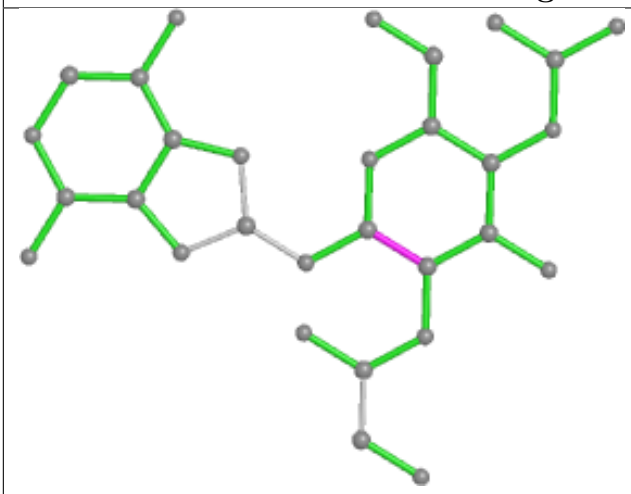


Torsions



Rings

Ligand I55 B 702



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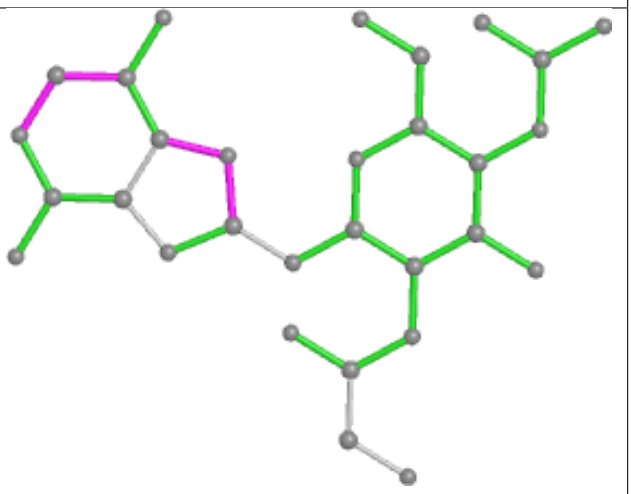

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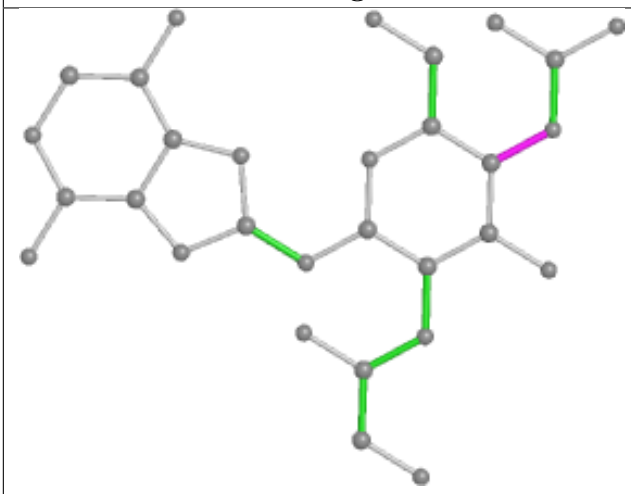

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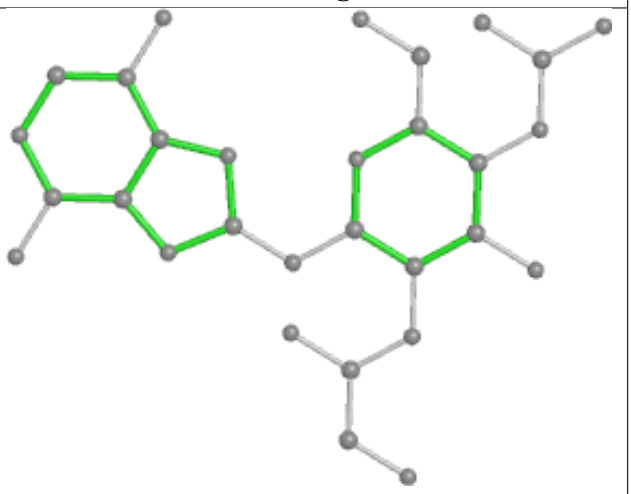
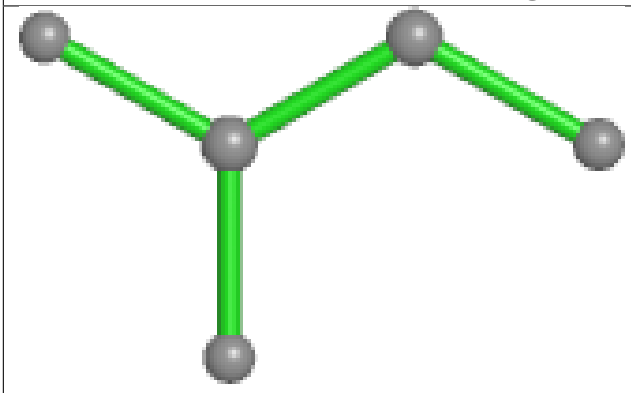


Rings

Ligand GLY H 703



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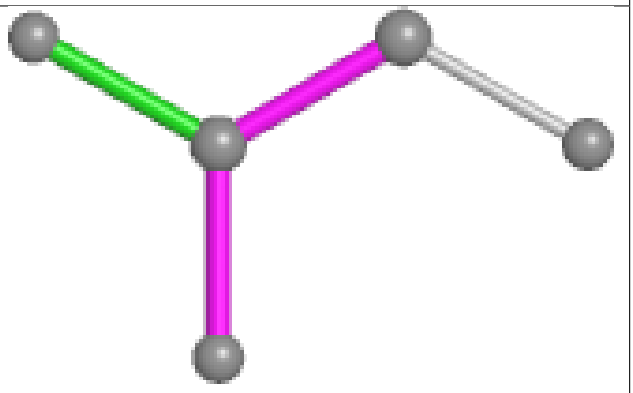

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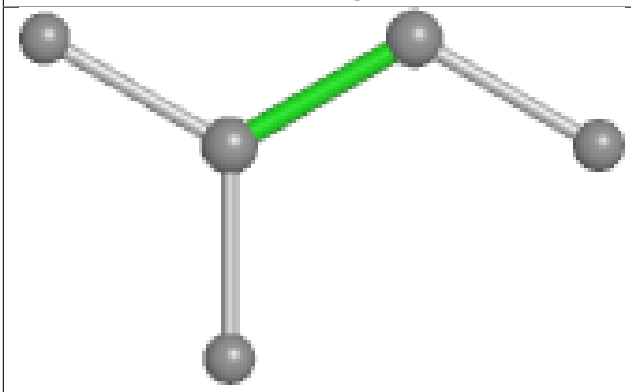

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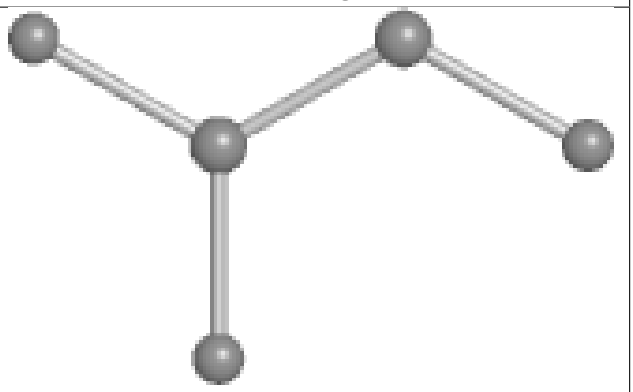
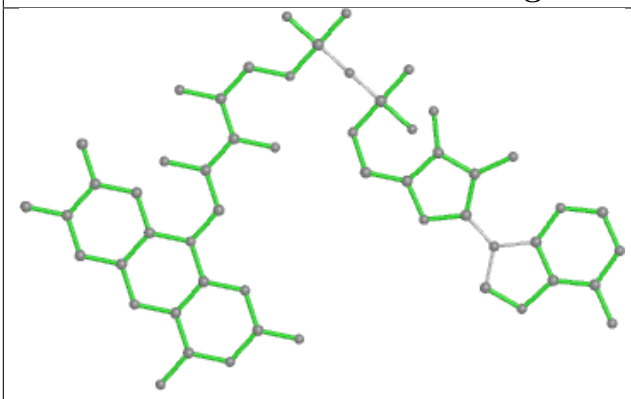


Rings

Ligand FAD D 701



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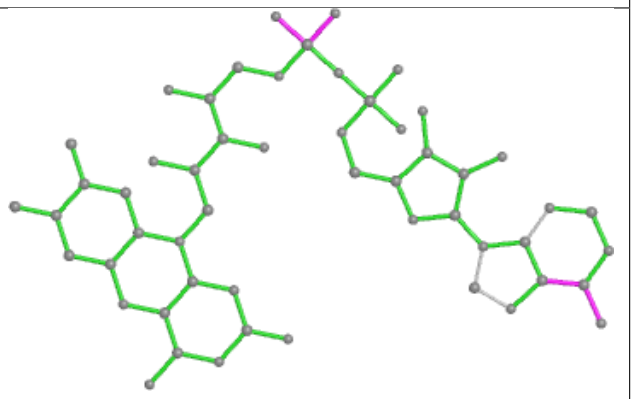

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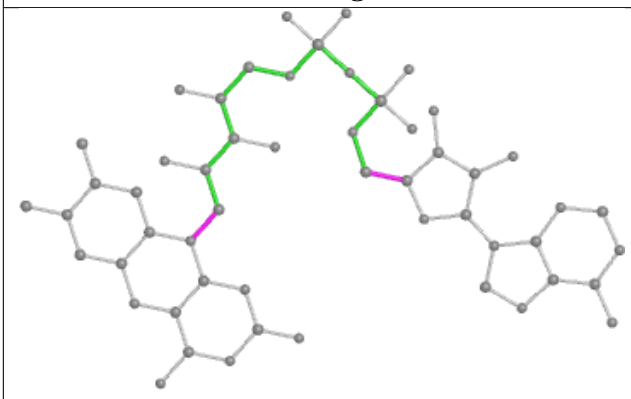

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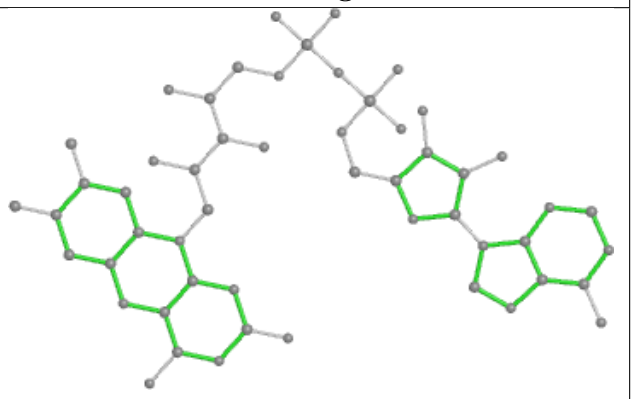

Rings

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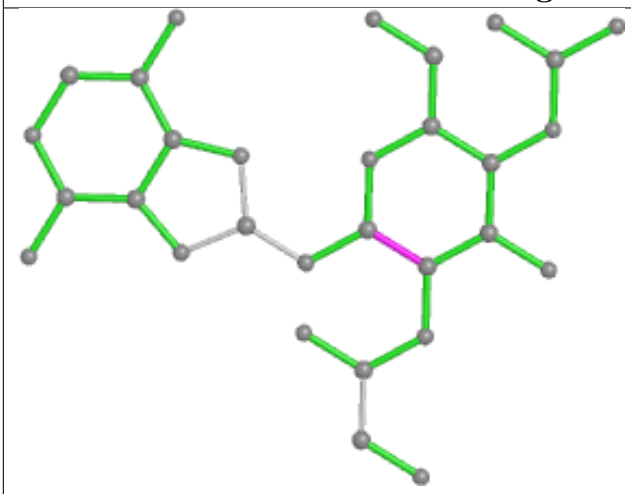

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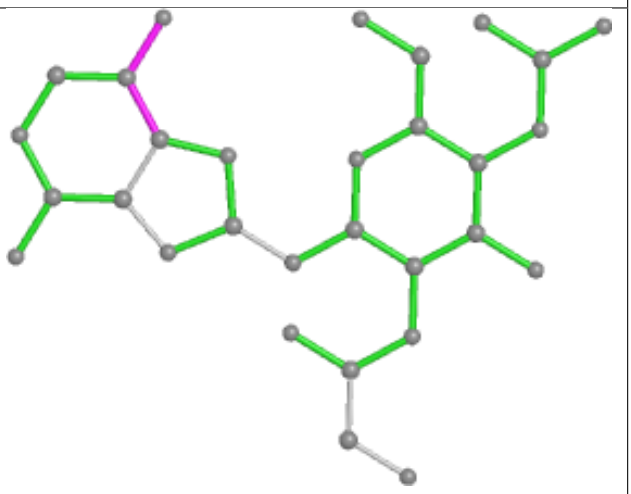

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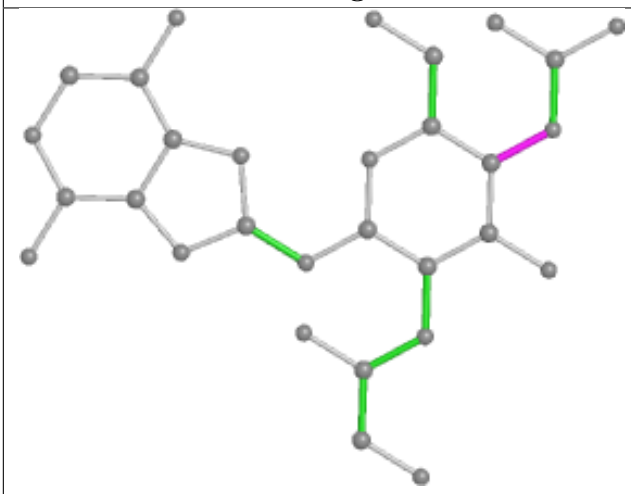

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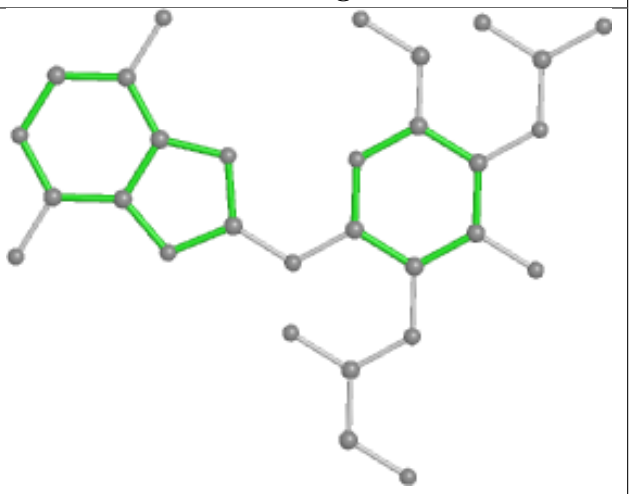
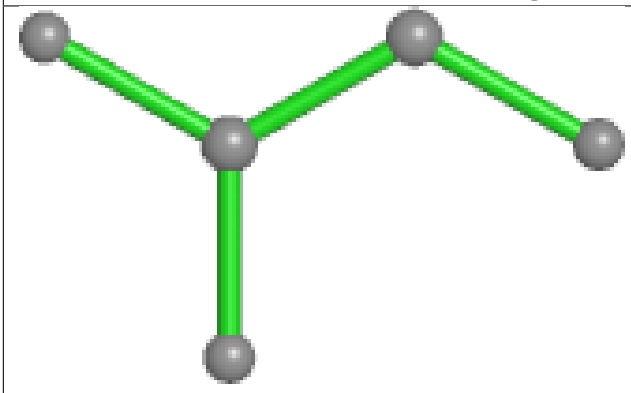


Rings

Ligand GLY E 703



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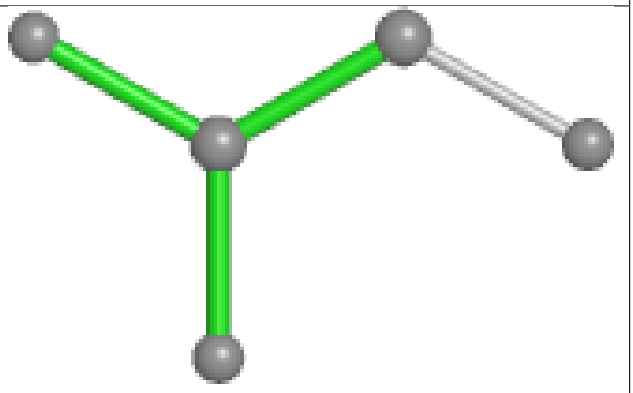

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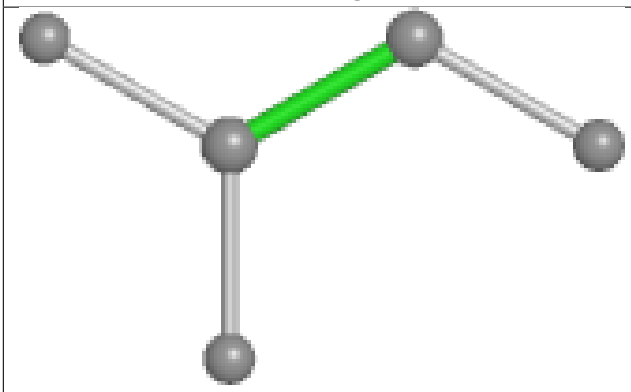

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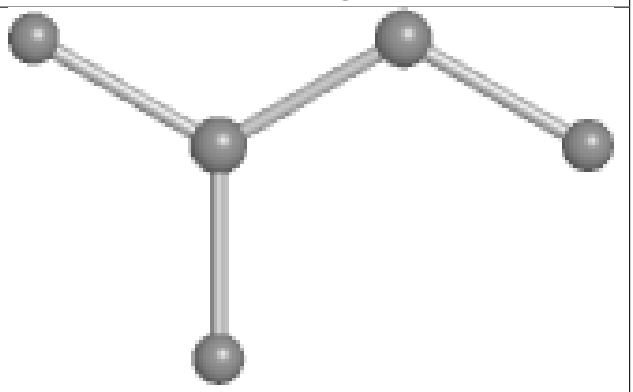
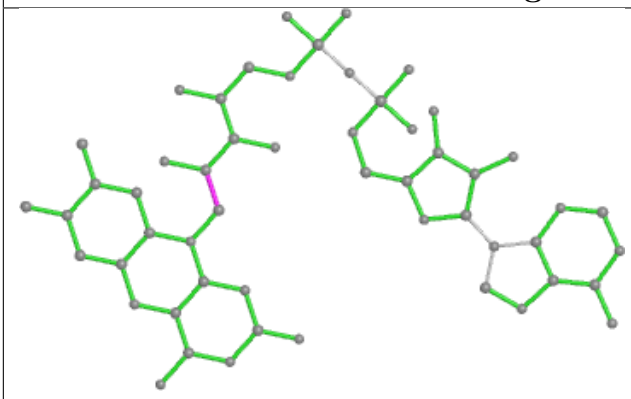


Rings

Ligand FAD A 701



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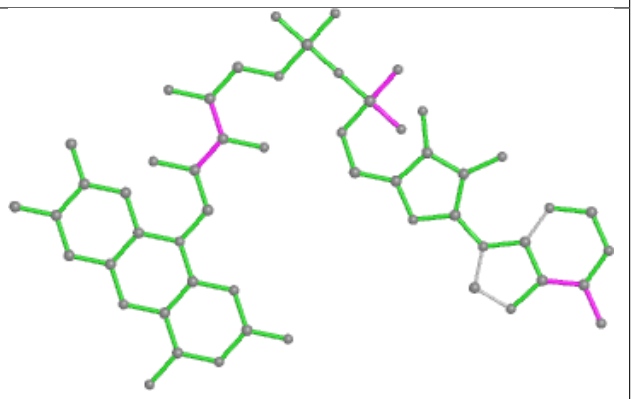

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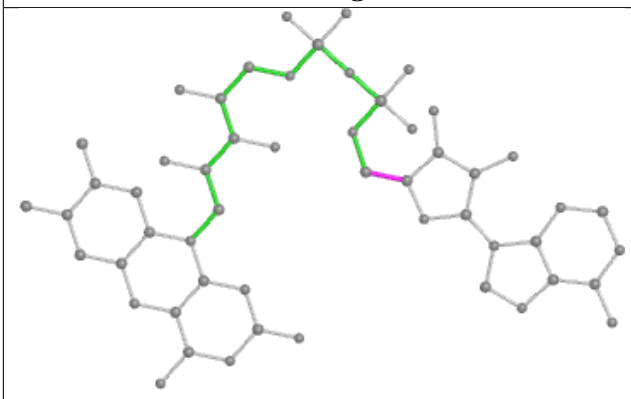

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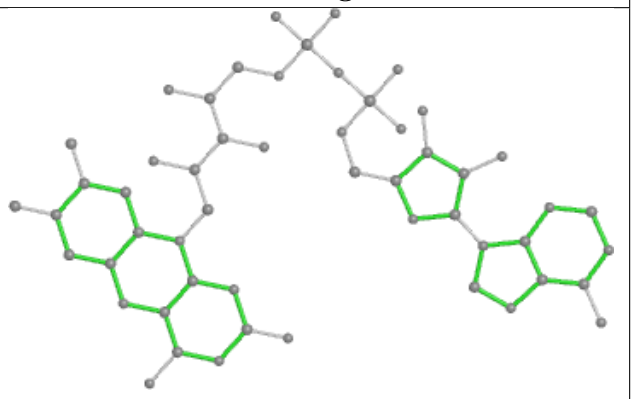
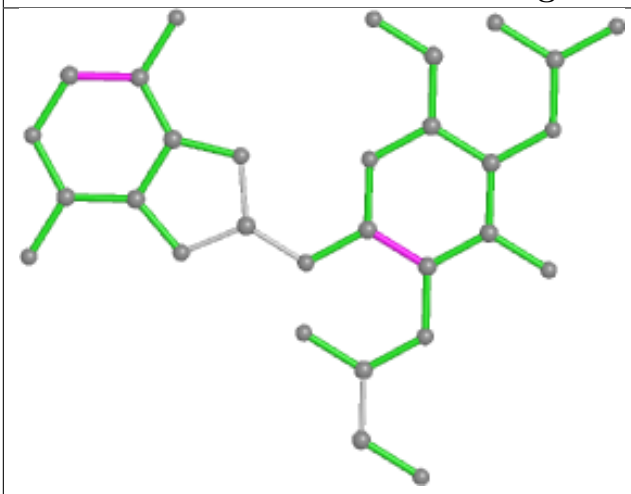


Rings

Ligand I55 E 702



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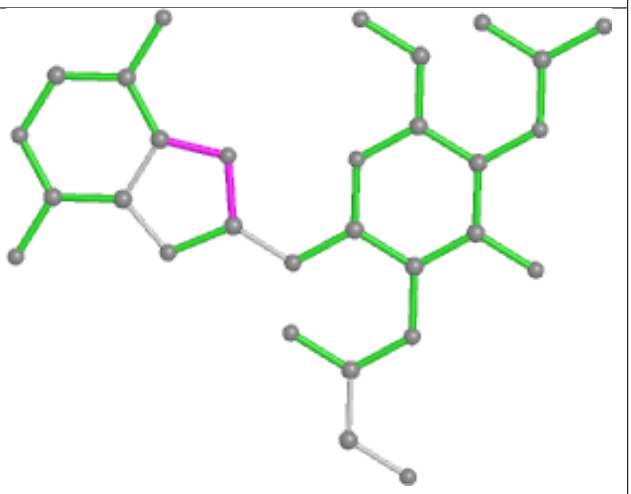

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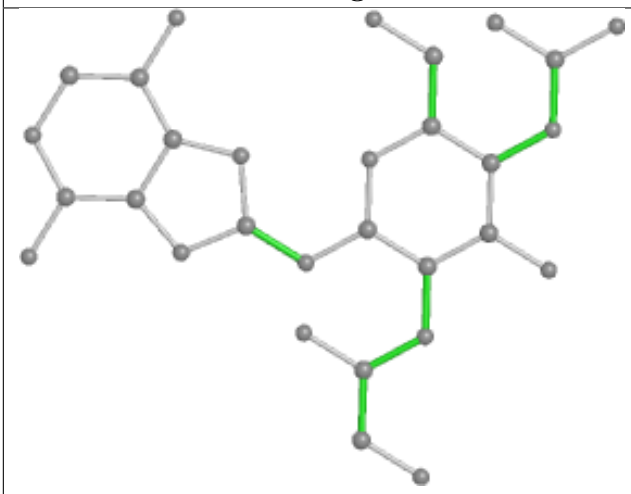

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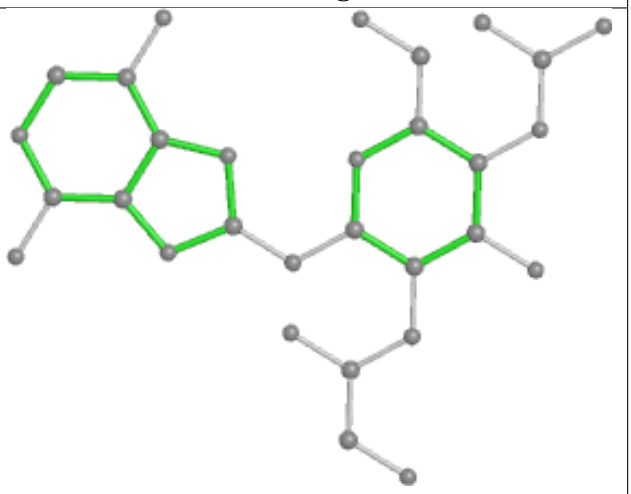
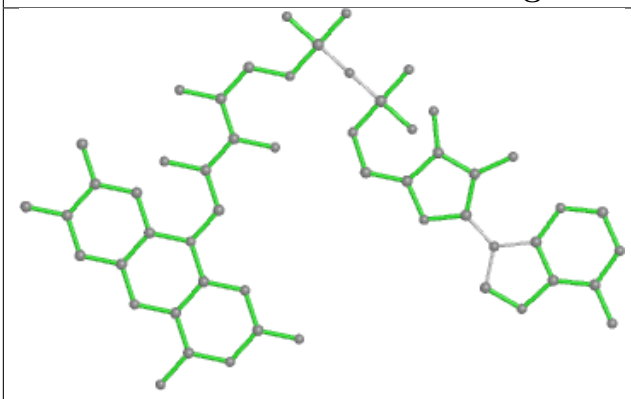


Rings

Ligand FAD G 701



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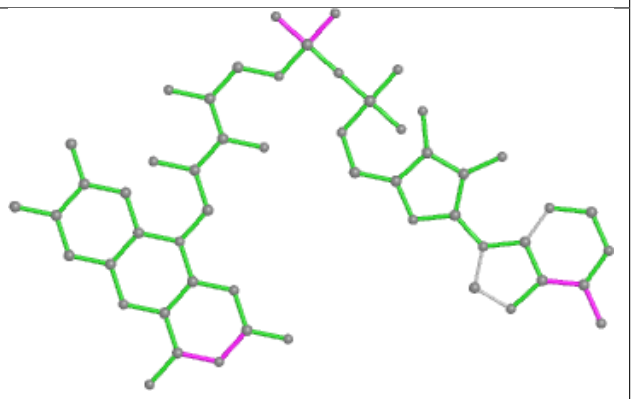

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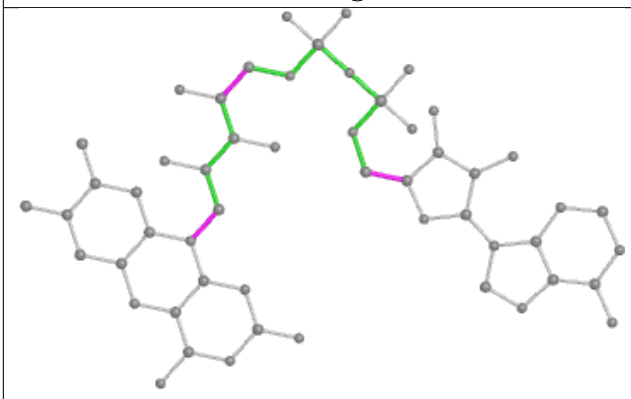

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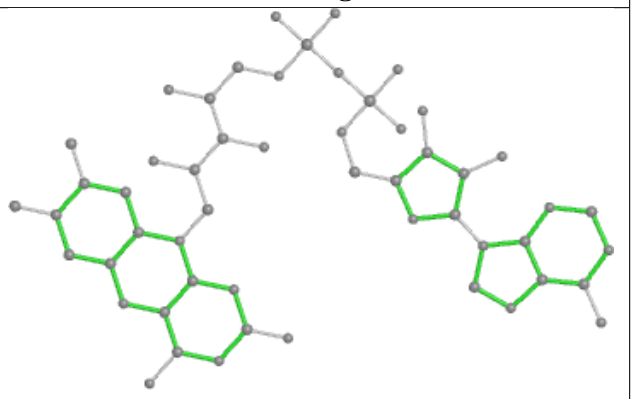

Rings

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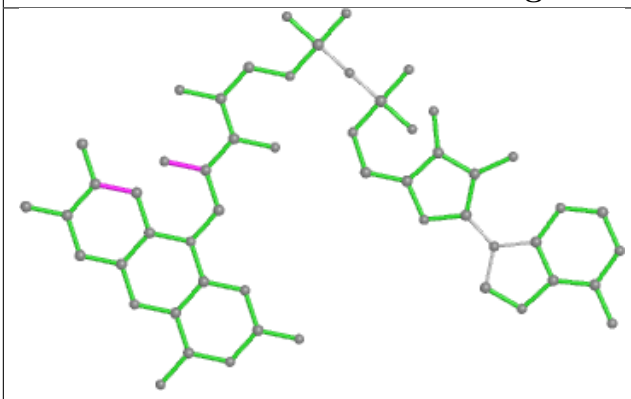

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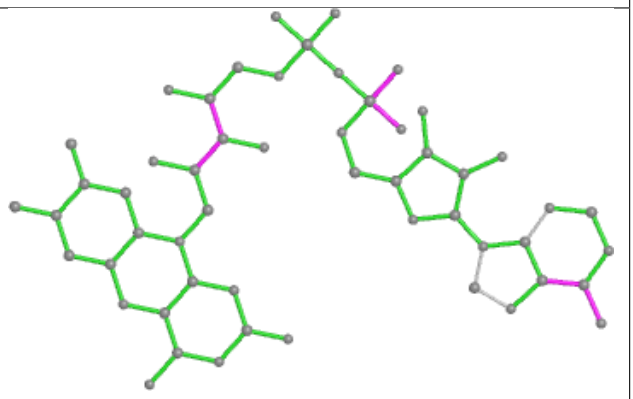

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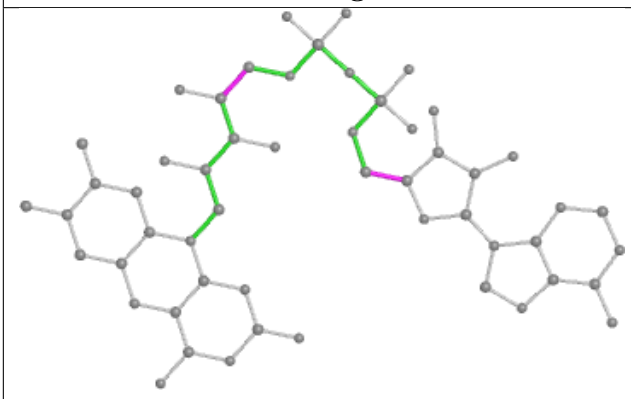

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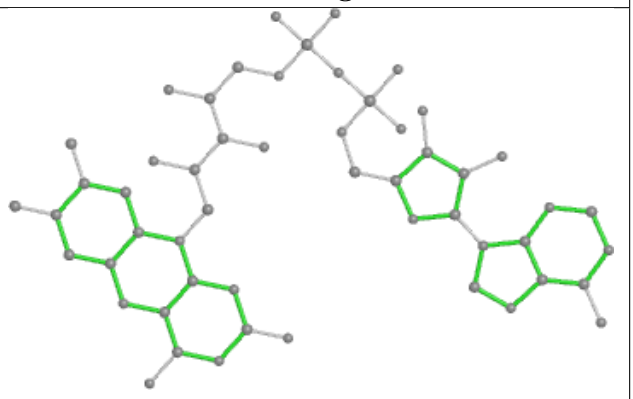
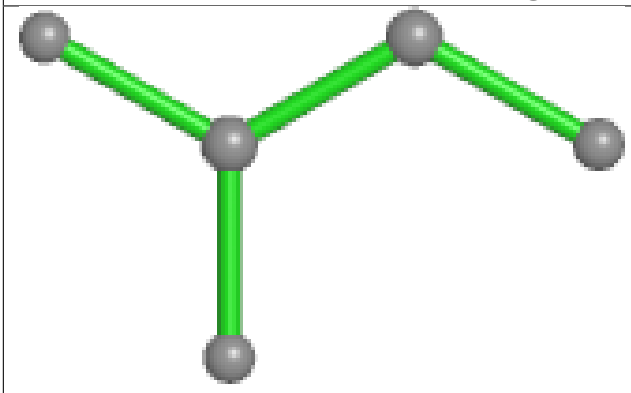


Rings

Ligand GLY C 703



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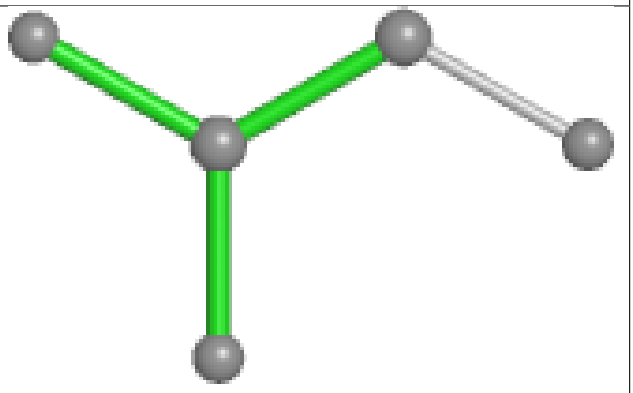

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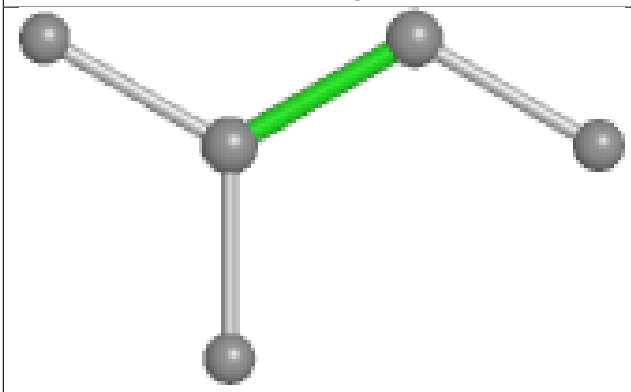

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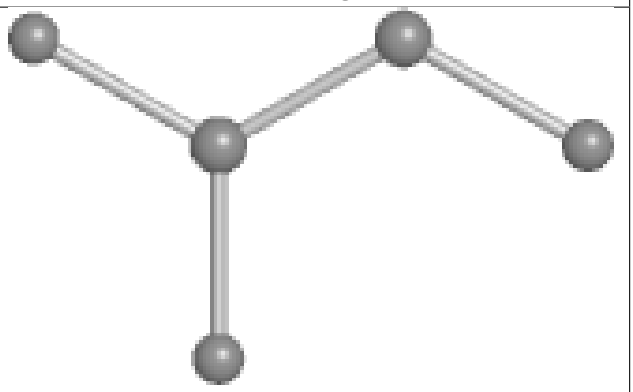
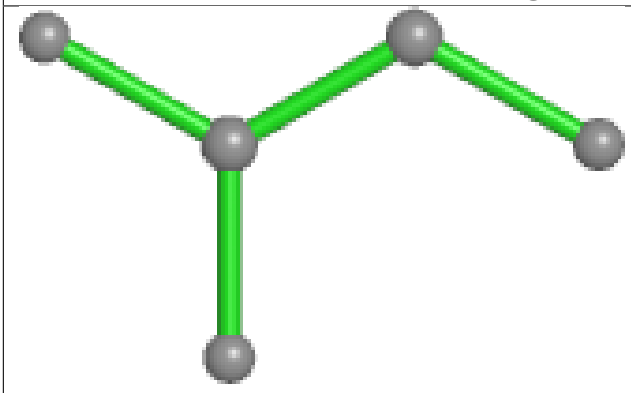


Rings

Ligand GLY B 703



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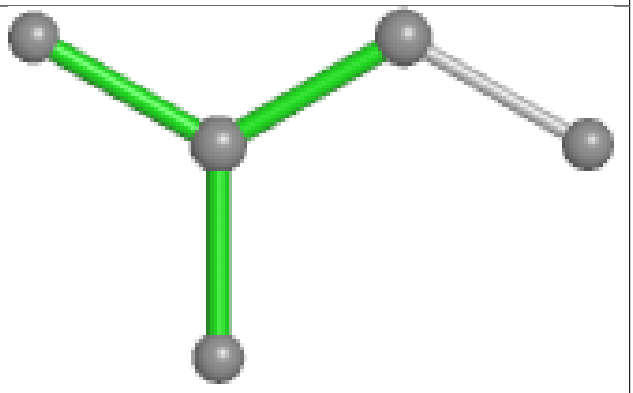

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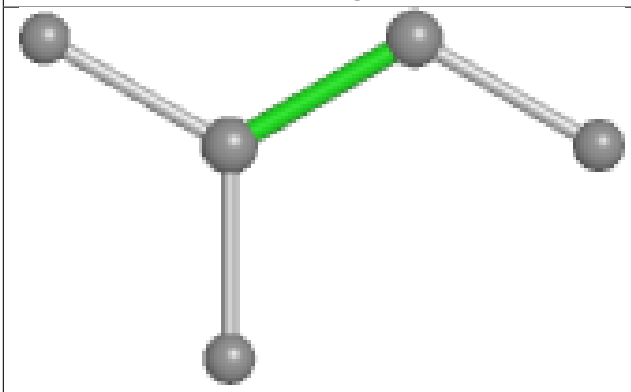

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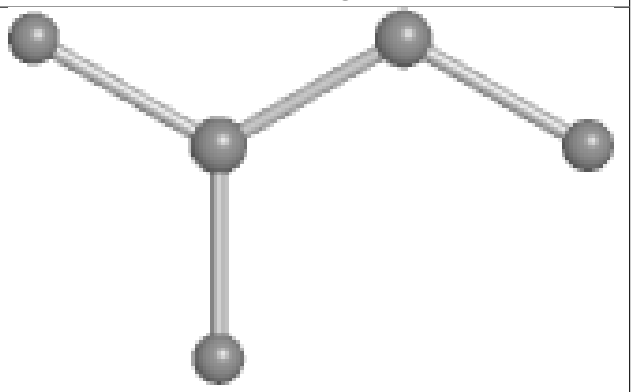
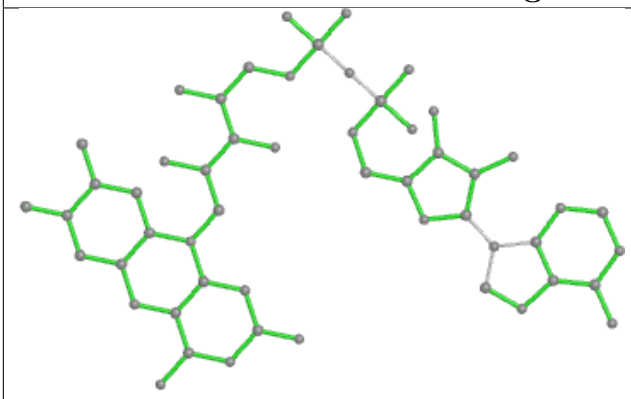


Rings

Ligand FAD H 701



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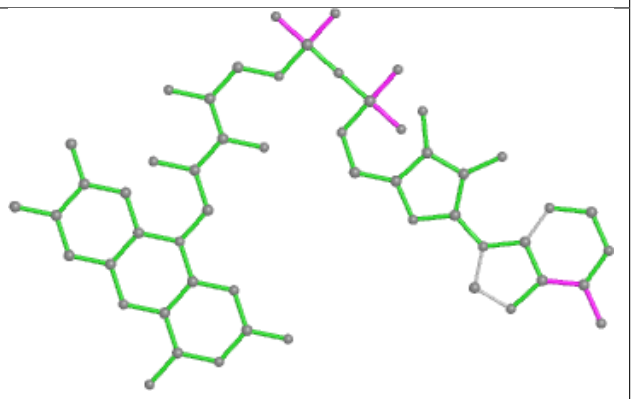

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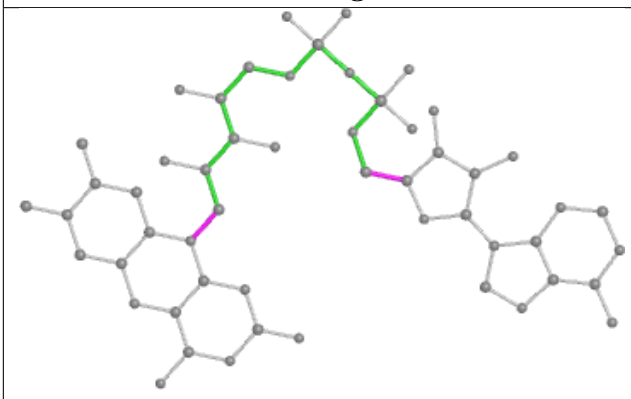

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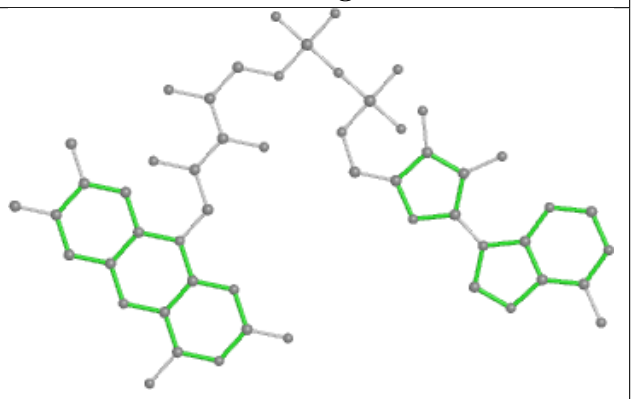
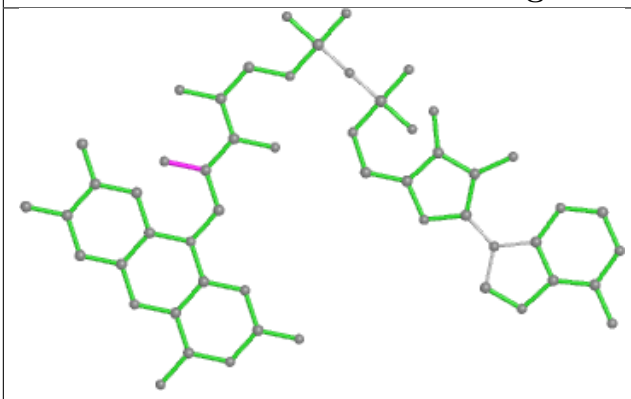


Rings

Ligand FAD F 701



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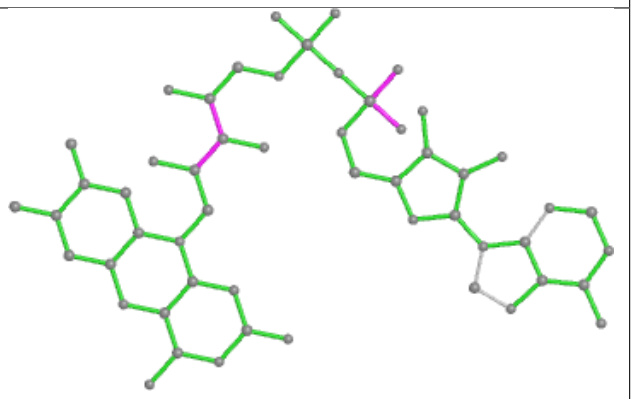
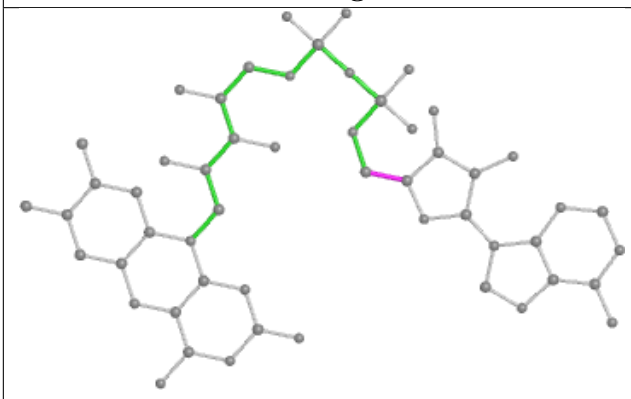


Bond angles



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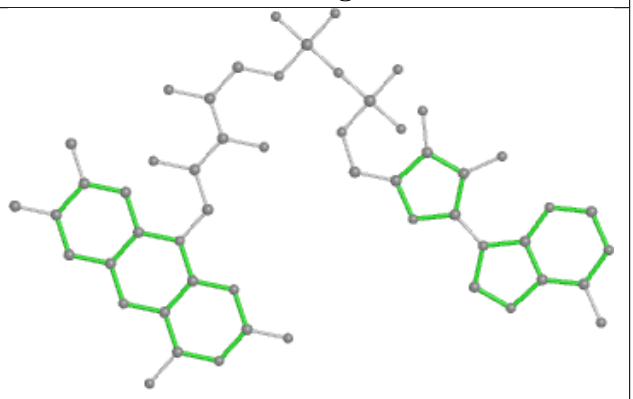
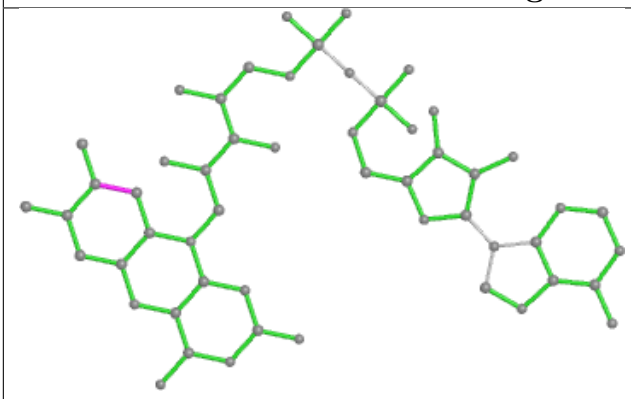


Rings

Ligand FAD E 701



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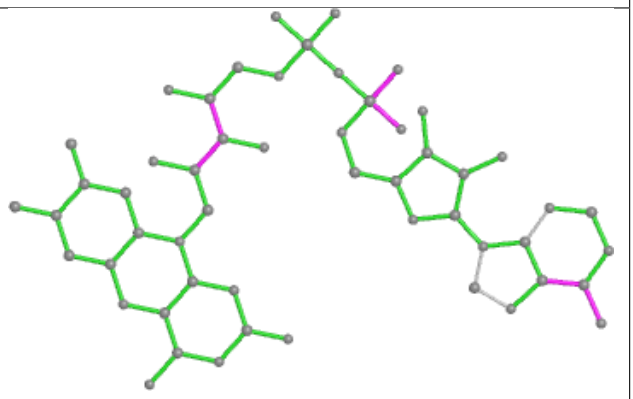
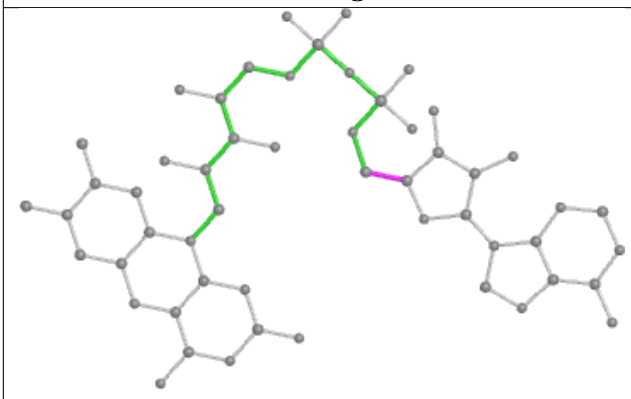


Bond angles



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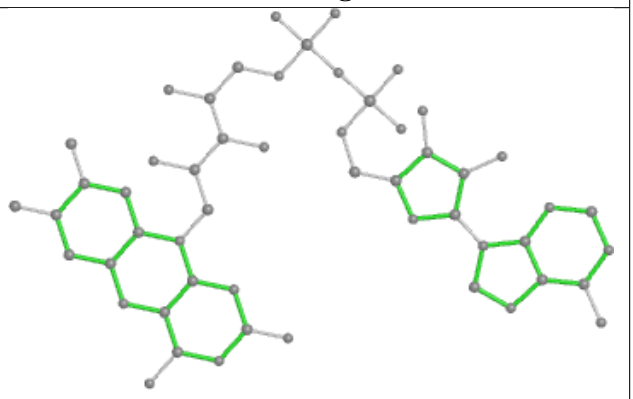
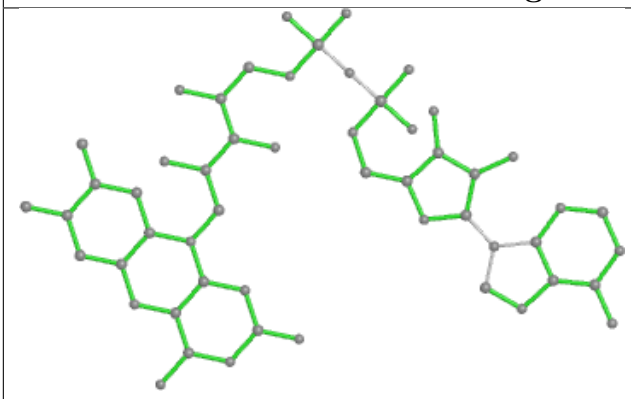
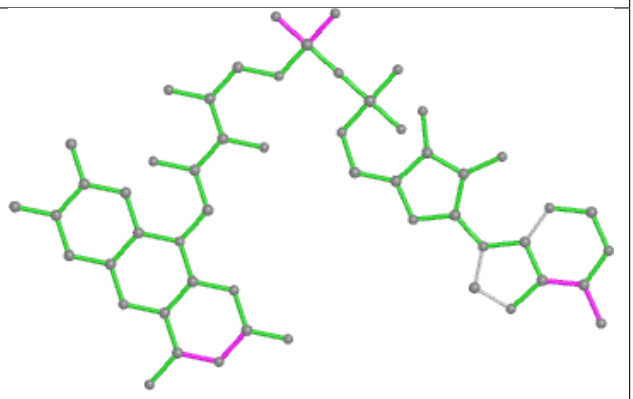


Rings

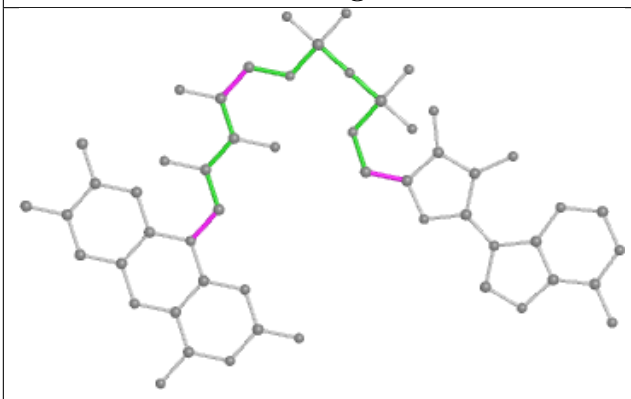
Ligand FAD C 701



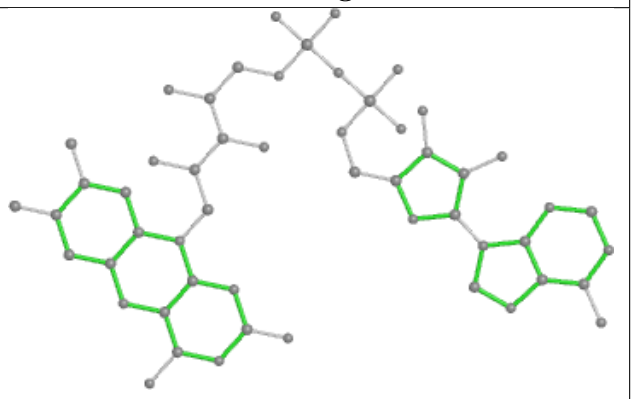
Bond lengths



Bond angles

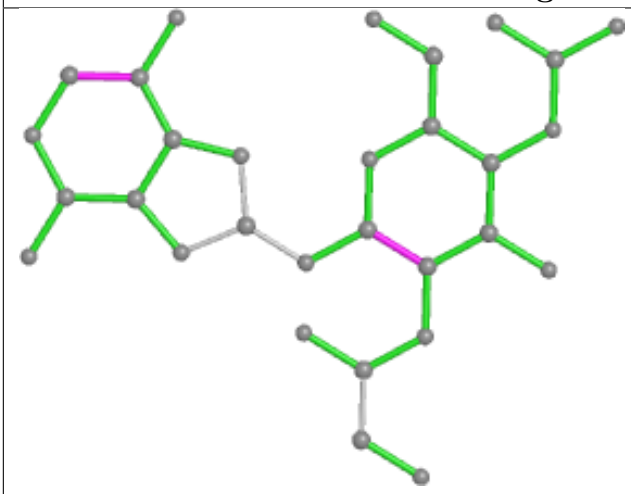


Torsions

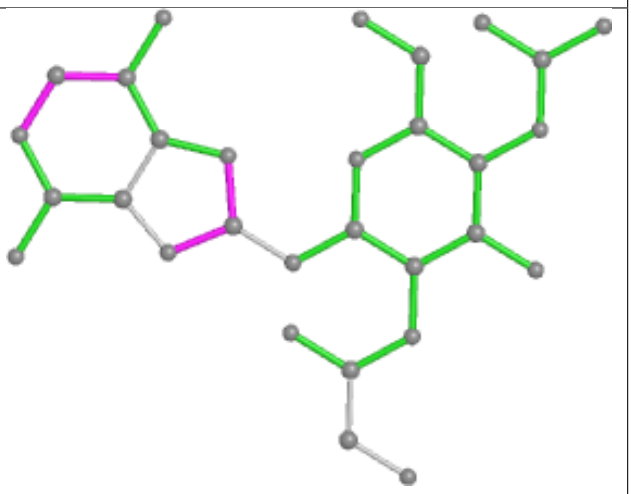


Rings

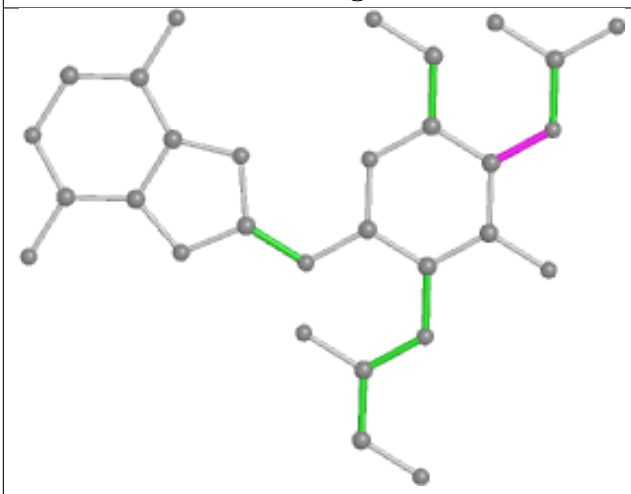
Ligand I55 A 702



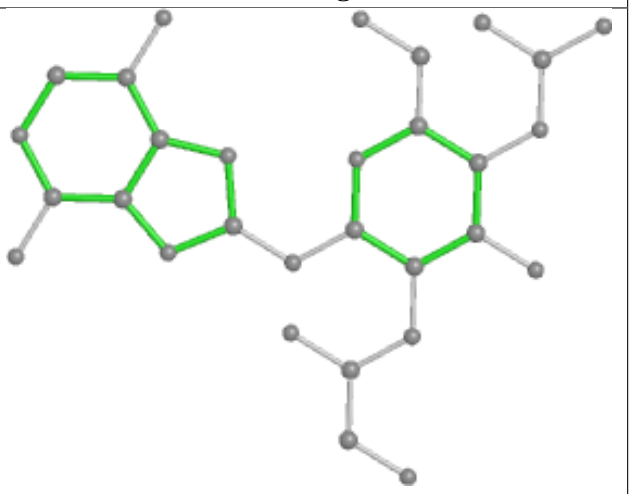
Bond lengths



Bond angles

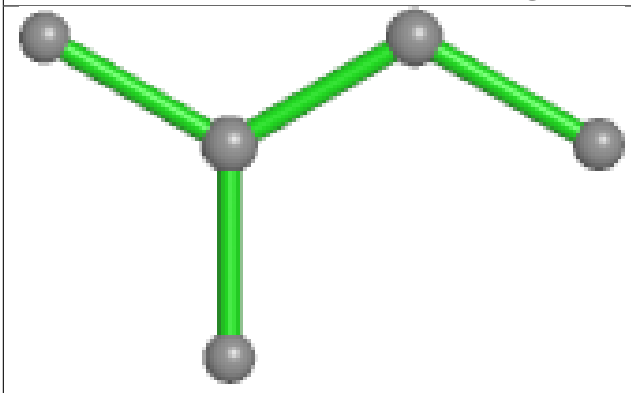


Torsions

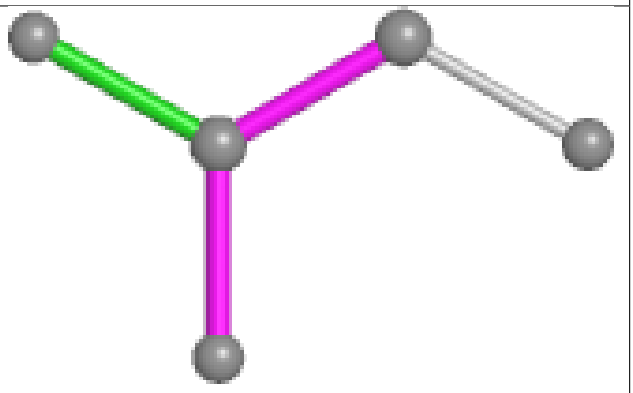


Rings

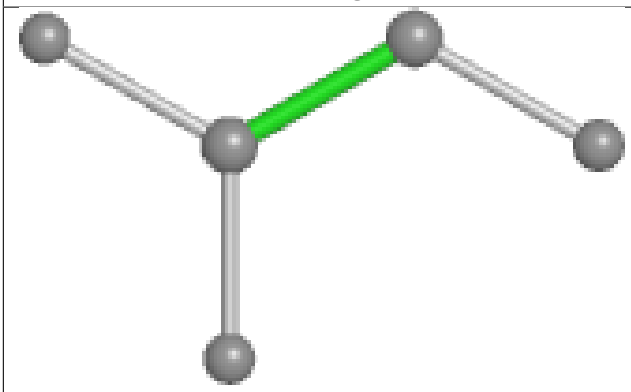
Ligand GLY D 703



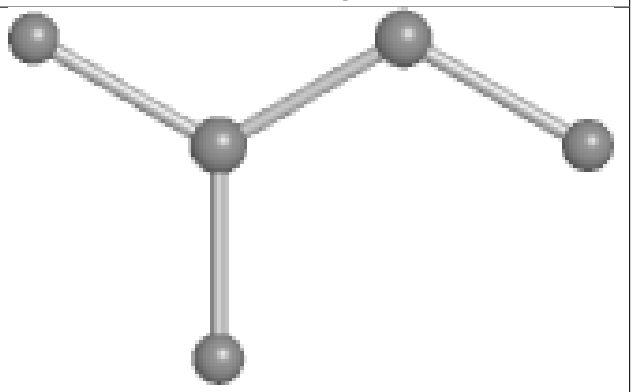
Bond lengths



Bond angles

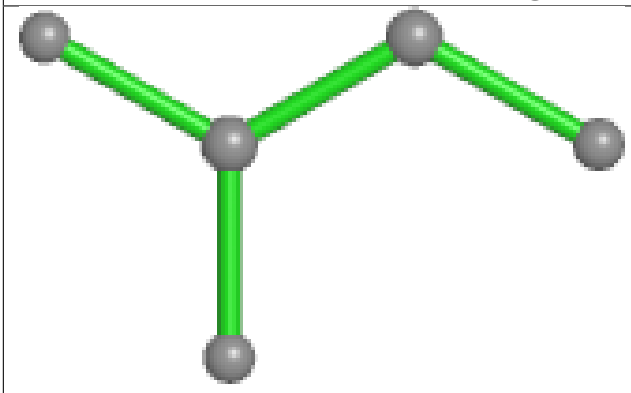


Torsions

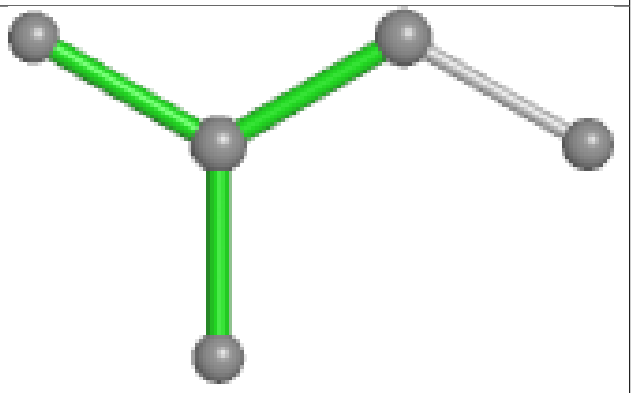


Rings

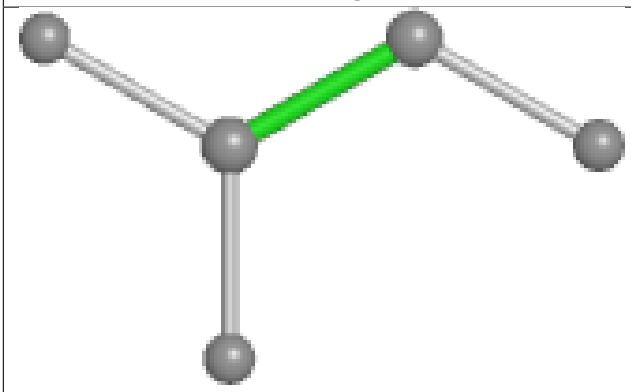
Ligand GLY F 703



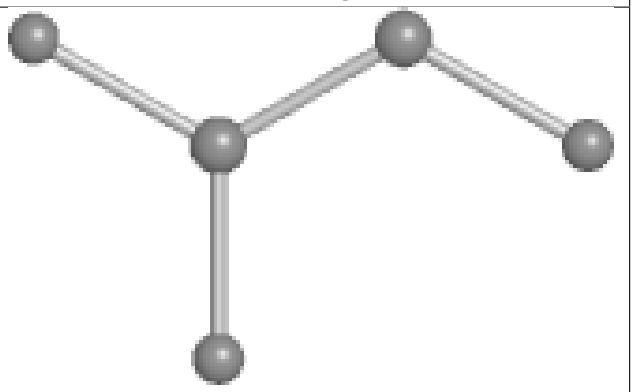
Bond lengths



Bond angles

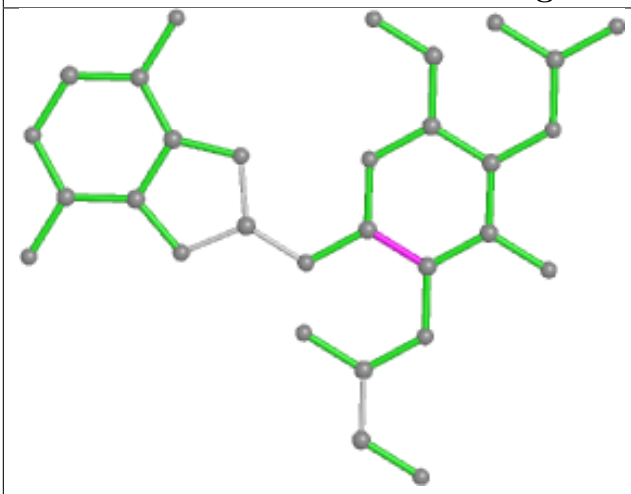


Torsions

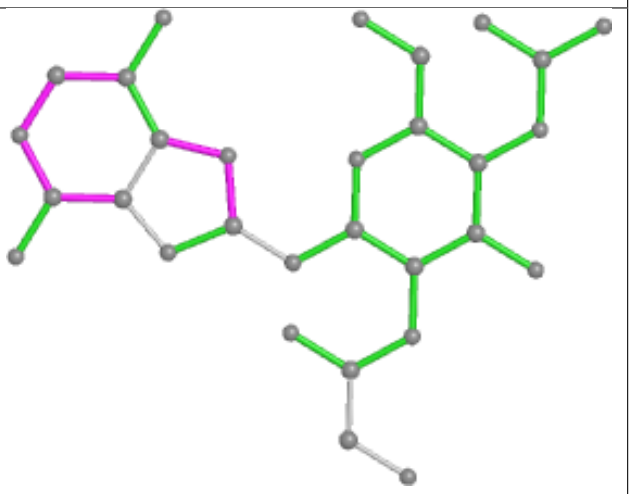


Rings

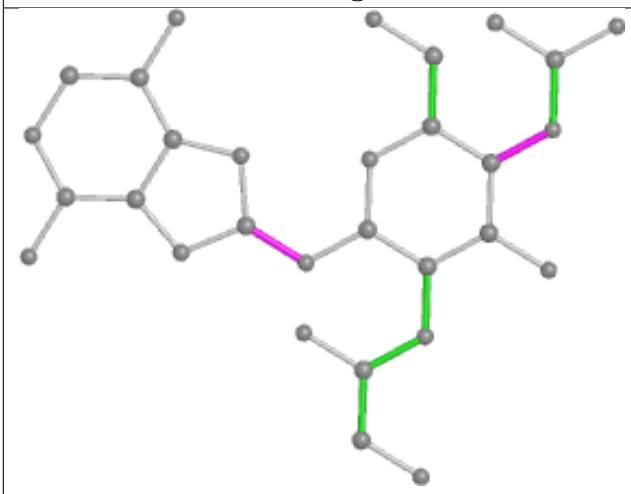
Ligand I55 D 702



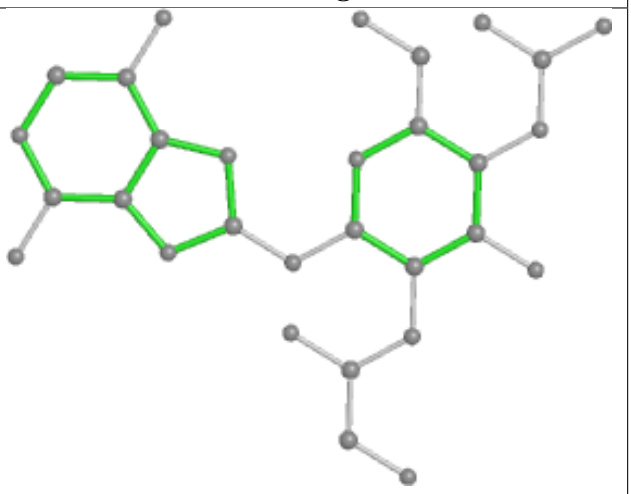
Bond lengths



Bond angles

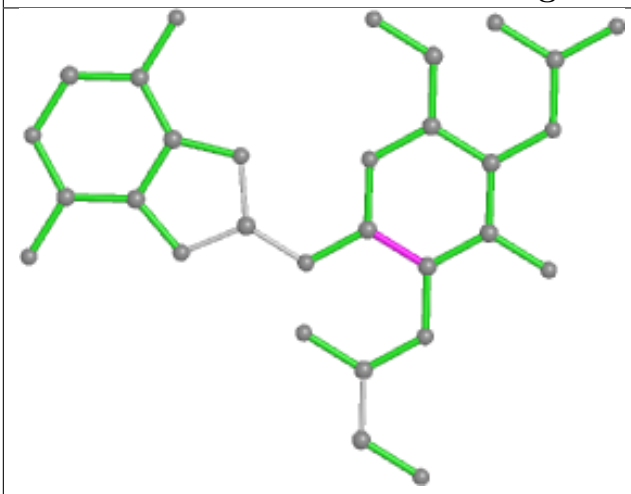


Torsions

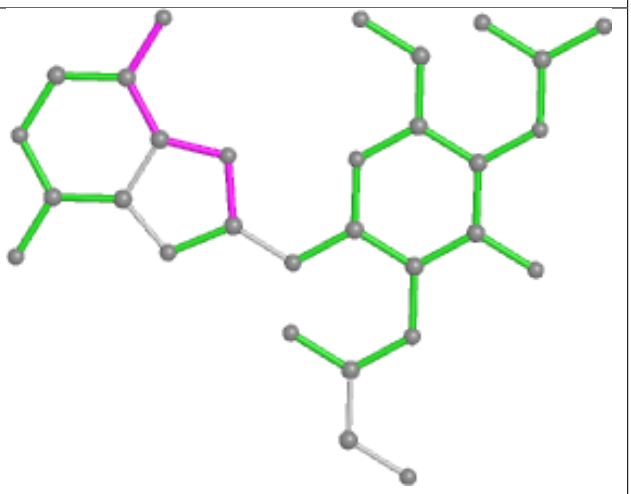


Rings

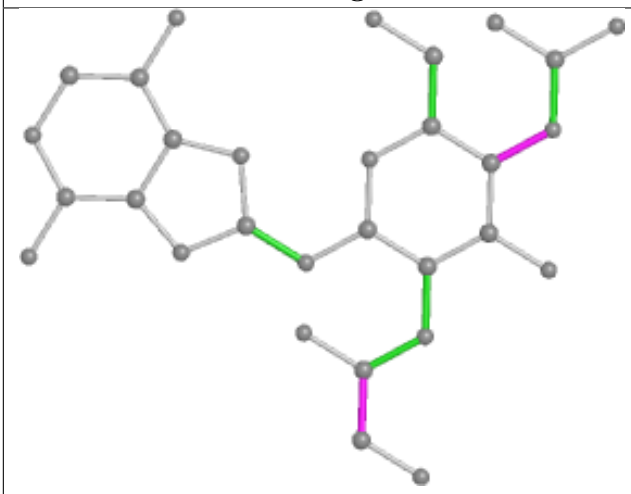
Ligand I55 F 702



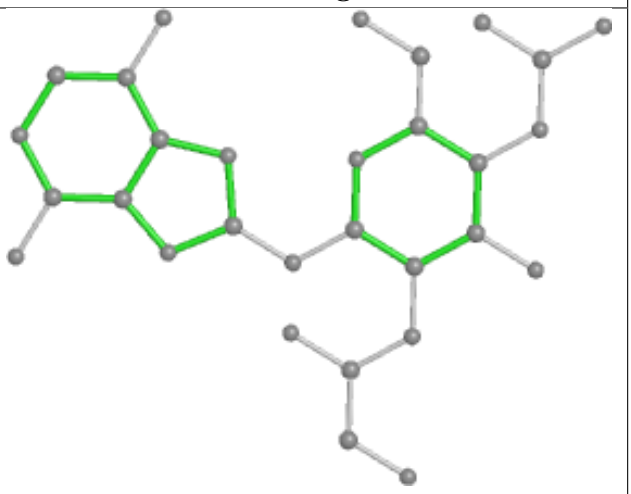
Bond lengths



Bond angles

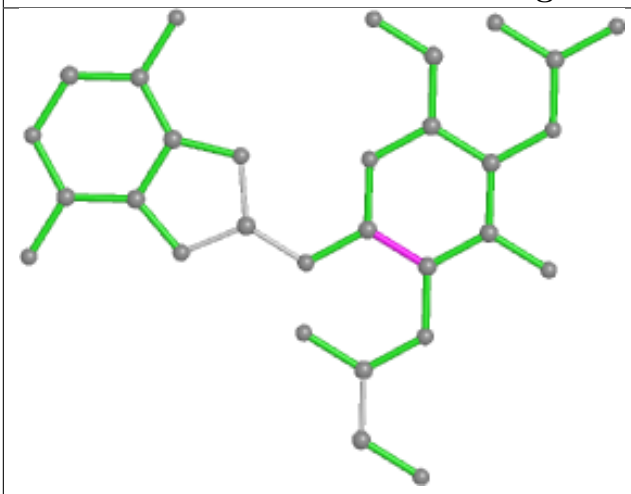


Torsions

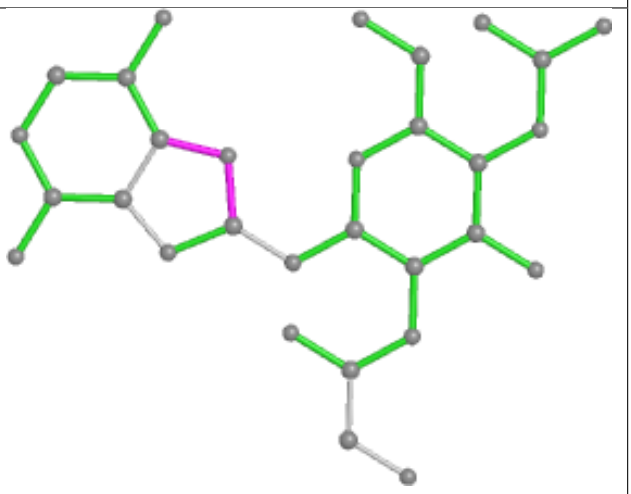


Rings

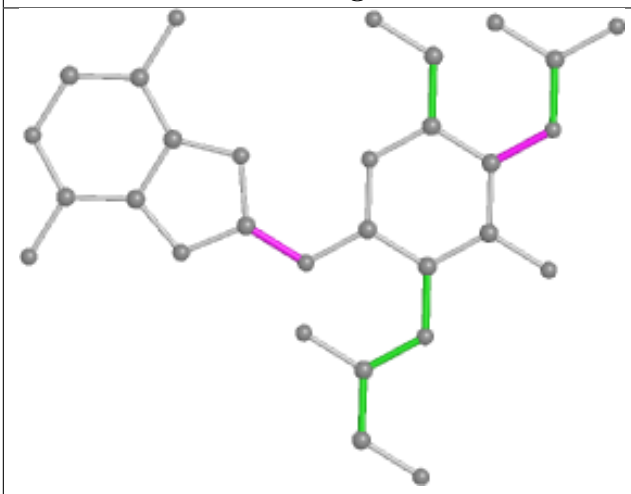
Ligand I55 H 702



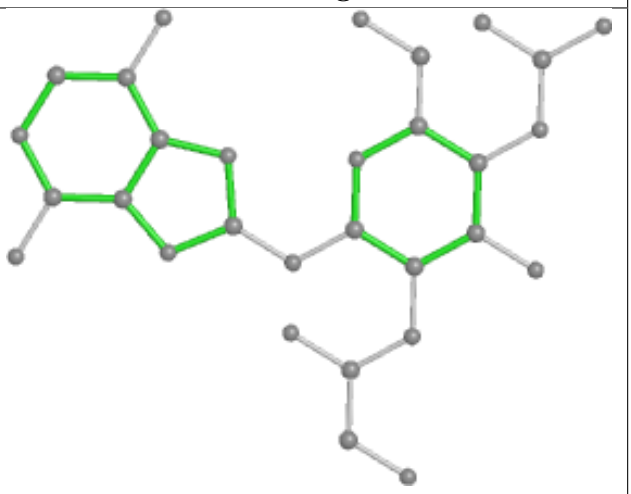
Bond lengths



Bond angles

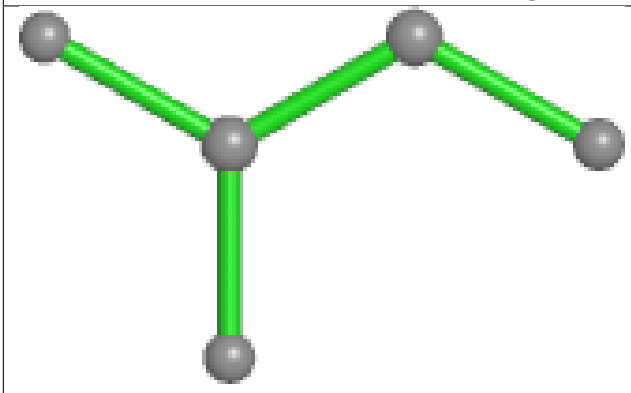


Torsions

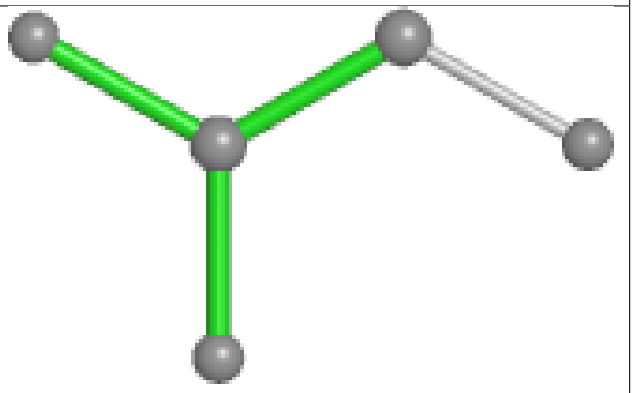


Rings

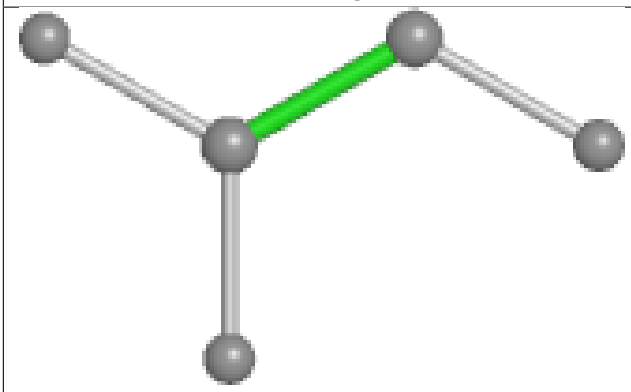
Ligand GLY G 703



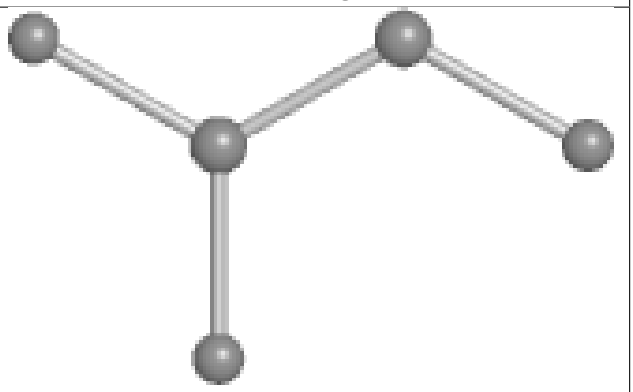
Bond lengths



Bond angles

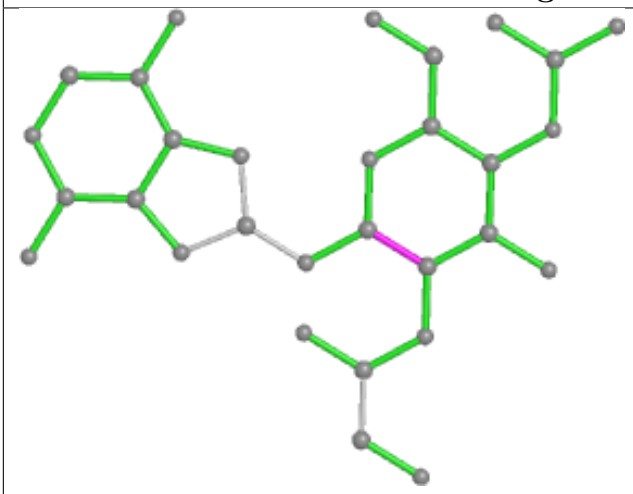


Torsions

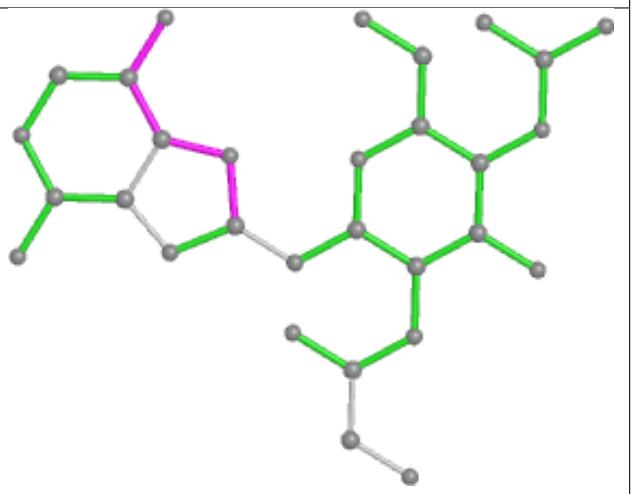


Rings

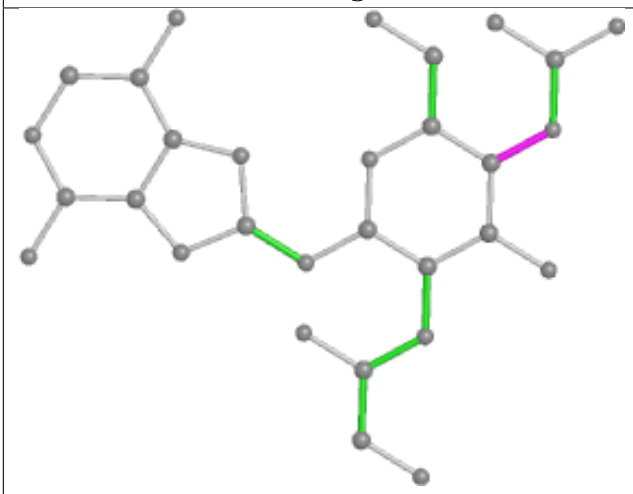
Ligand I55 C 702



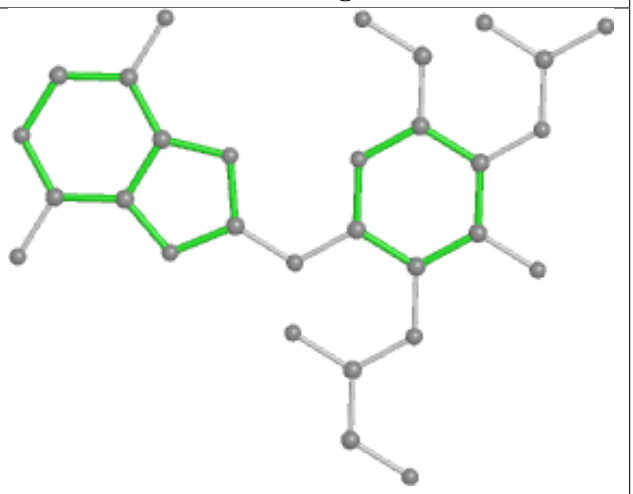
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} 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	481/508 (94%)	0.18	8 (1%) 70 73	13, 25, 46, 64	0
1	B	482/508 (94%)	0.21	7 (1%) 73 76	12, 24, 45, 68	0
1	C	482/508 (94%)	0.33	17 (3%) 44 48	12, 27, 58, 79	0
1	D	479/508 (94%)	0.58	44 (9%) 9 9	15, 36, 77, 103	0
1	E	482/508 (94%)	0.16	4 (0%) 86 88	13, 25, 47, 68	0
1	F	482/508 (94%)	0.18	5 (1%) 82 84	12, 24, 45, 69	0
1	G	481/508 (94%)	0.37	22 (4%) 32 35	12, 27, 58, 81	0
1	H	479/508 (94%)	0.62	38 (7%) 12 13	15, 36, 76, 105	0
All	All	3848/4064 (94%)	0.33	145 (3%) 40 44	12, 27, 61, 105	0

All (145) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	H	206	HIS	6.8
1	H	202	ILE	5.8
1	C	242	GLY	5.7
1	D	220	LEU	5.3
1	C	48	TYR	5.3
1	G	48	TYR	5.1
1	D	243	LEU	4.8
1	H	33	ARG	4.6
1	G	51	THR	4.5
1	D	206	HIS	4.5
1	C	47	GLN	4.5
1	D	219	PHE	4.2
1	C	54	ALA	4.1
1	D	38	VAL	4.1
1	H	392	ASP	4.1
1	G	242	GLY	4.1

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Mol	Chain	Res	Type	RSRZ
1	H	36	VAL	4.0
1	D	223	GLY	3.9
1	G	45	ALA	3.8
1	D	34	PRO	3.8
1	G	54	ALA	3.8
1	H	491	HIS	3.7
1	H	193	ARG	3.6
1	D	210	GLU	3.6
1	H	242	GLY	3.4
1	H	394	LEU	3.4
1	G	49	GLY	3.4
1	F	392	ASP	3.4
1	C	218	ASP	3.4
1	H	13	VAL	3.3
1	H	244	ALA	3.3
1	G	206	HIS	3.3
1	H	240	LEU	3.3
1	D	37	ARG	3.2
1	H	352	ILE	3.2
1	C	51	THR	3.2
1	D	457	THR	3.2
1	D	33	ARG	3.2
1	D	362	MET	3.1
1	D	202	ILE	3.1
1	D	379	ARG	3.1
1	C	206	HIS	3.1
1	H	239	ALA	3.0
1	D	32	THR	3.0
1	H	205	SER	3.0
1	H	203	ARG	3.0
1	H	37	ARG	2.9
1	D	59	GLY	2.9
1	F	395	ARG	2.9
1	H	35	ASP	2.9
1	H	211	GLY	2.9
1	G	491	HIS	2.9
1	D	236	LEU	2.9
1	D	384	LEU	2.9
1	H	241	PRO	2.9
1	D	36	VAL	2.8
1	D	240	LEU	2.8
1	H	243	LEU	2.8

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Mol	Chain	Res	Type	RSRZ
1	D	211	GLY	2.8
1	C	45	ALA	2.8
1	G	52	PRO	2.8
1	G	220	LEU	2.8
1	H	224	HIS	2.7
1	D	387	GLY	2.7
1	H	361	TRP	2.7
1	D	394	LEU	2.7
1	G	235	ARG	2.7
1	H	34	PRO	2.6
1	D	224	HIS	2.6
1	H	190	ALA	2.6
1	B	392	ASP	2.6
1	D	241	PRO	2.6
1	C	49	GLY	2.6
1	H	208	ARG	2.6
1	G	47	GLN	2.6
1	G	50	ALA	2.5
1	G	244	ALA	2.5
1	H	204	ALA	2.5
1	H	385	MET	2.5
1	C	232	ARG	2.5
1	E	206	HIS	2.5
1	A	59	GLY	2.5
1	D	225	VAL	2.5
1	H	379	ARG	2.5
1	D	215	ASP	2.5
1	D	392	ASP	2.5
1	D	358	GLU	2.5
1	H	393	GLY	2.5
1	G	208	ARG	2.4
1	A	34	PRO	2.4
1	D	239	ALA	2.4
1	A	393	GLY	2.4
1	D	13	VAL	2.4
1	F	241	PRO	2.4
1	A	491	HIS	2.4
1	D	491	HIS	2.4
1	D	25	VAL	2.3
1	G	204	ALA	2.3
1	B	35	ASP	2.3
1	E	396	GLU	2.3

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Mol	Chain	Res	Type	RSRZ
1	C	194	LEU	2.3
1	D	29	ILE	2.3
1	H	395	ARG	2.3
1	D	386	ASP	2.3
1	D	39	THR	2.3
1	H	398	ARG	2.3
1	D	208	ARG	2.3
1	D	361	TRP	2.2
1	A	392	ASP	2.2
1	H	90	GLU	2.2
1	D	16	VAL	2.2
1	D	189	GLN	2.2
1	D	359	GLY	2.2
1	B	491	HIS	2.2
1	A	70	ALA	2.2
1	D	242	GLY	2.2
1	F	479	LEU	2.2
1	H	389	THR	2.2
1	H	188	LEU	2.2
1	D	235	ARG	2.2
1	B	138	GLU	2.2
1	G	218	ASP	2.2
1	C	235	ARG	2.2
1	C	212	VAL	2.1
1	B	473	ARG	2.1
1	A	395	ARG	2.1
1	G	238	ALA	2.1
1	G	216	ASP	2.1
1	E	220	LEU	2.1
1	D	217	GLY	2.1
1	E	395	ARG	2.1
1	F	491	HIS	2.1
1	C	205	SER	2.1
1	G	303	LEU	2.1
1	B	36	VAL	2.1
1	C	215	ASP	2.1
1	G	386	ASP	2.1
1	H	59	GLY	2.1
1	G	46	ARG	2.0
1	B	396	GLU	2.0
1	A	205	SER	2.0
1	C	244	ALA	2.0

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Mol	Chain	Res	Type	RSRZ
1	H	200	THR	2.0
1	C	10	GLN	2.0
1	H	225	VAL	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 monosaccharides 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, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
4	GLY	C	703	5/5	0.56	0.33	40,46,48,49	0
2	FAD	G	701	53/53	0.76	0.23	35,47,58,59	0
2	FAD	C	701	53/53	0.79	0.23	38,49,61,63	0
4	GLY	H	703	5/5	0.86	0.13	32,35,38,39	0
3	I55	F	702	30/30	0.88	0.16	18,25,43,45	0
2	FAD	H	701	53/53	0.88	0.16	31,38,54,56	0
3	I55	A	702	30/30	0.88	0.16	18,24,46,47	0
3	I55	G	702	30/30	0.90	0.16	19,29,44,46	0
3	I55	H	702	30/30	0.90	0.16	21,30,65,67	0
3	I55	E	702	30/30	0.90	0.14	17,26,47,47	0
3	I55	B	702	30/30	0.90	0.16	19,26,45,48	0
3	I55	C	702	30/30	0.91	0.14	18,29,42,44	0
3	I55	D	702	30/30	0.91	0.16	21,31,66,72	0
4	GLY	G	703	5/5	0.92	0.26	36,41,44,45	0
4	GLY	D	703	5/5	0.92	0.21	33,36,40,41	0
2	FAD	D	701	53/53	0.93	0.12	31,36,55,57	0
4	GLY	F	703	5/5	0.94	0.15	20,22,23,24	0
4	GLY	B	703	5/5	0.94	0.14	20,21,21,21	0
4	GLY	E	703	5/5	0.94	0.13	20,21,24,24	0
2	FAD	E	701	53/53	0.95	0.11	16,18,22,22	0

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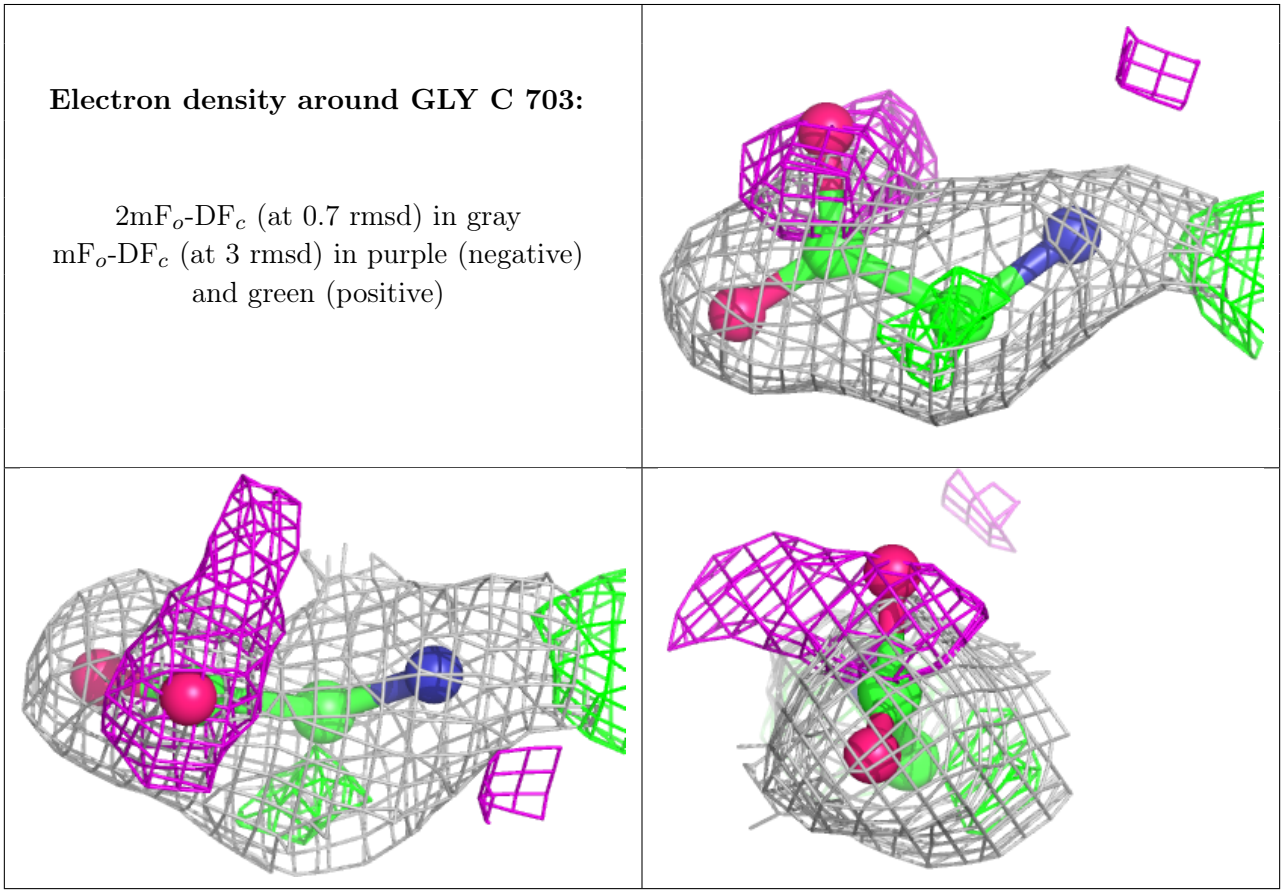
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	FAD	F	701	53/53	0.96	0.11	13,15,19,20	0
4	GLY	A	703	5/5	0.96	0.12	21,21,25,26	0
2	FAD	A	701	53/53	0.96	0.11	15,18,22,23	0
2	FAD	B	701	53/53	0.97	0.10	13,15,19,20	0

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.

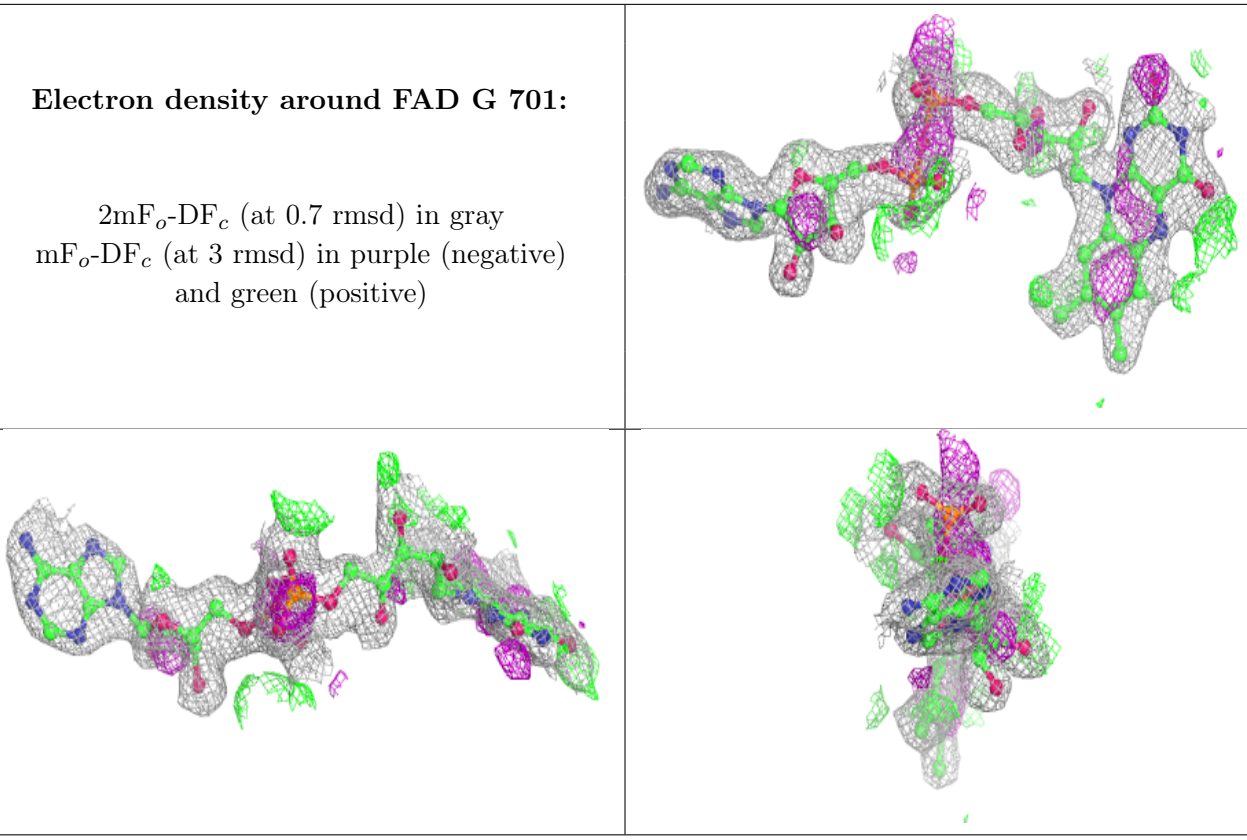
Electron density around GLY C 703:

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



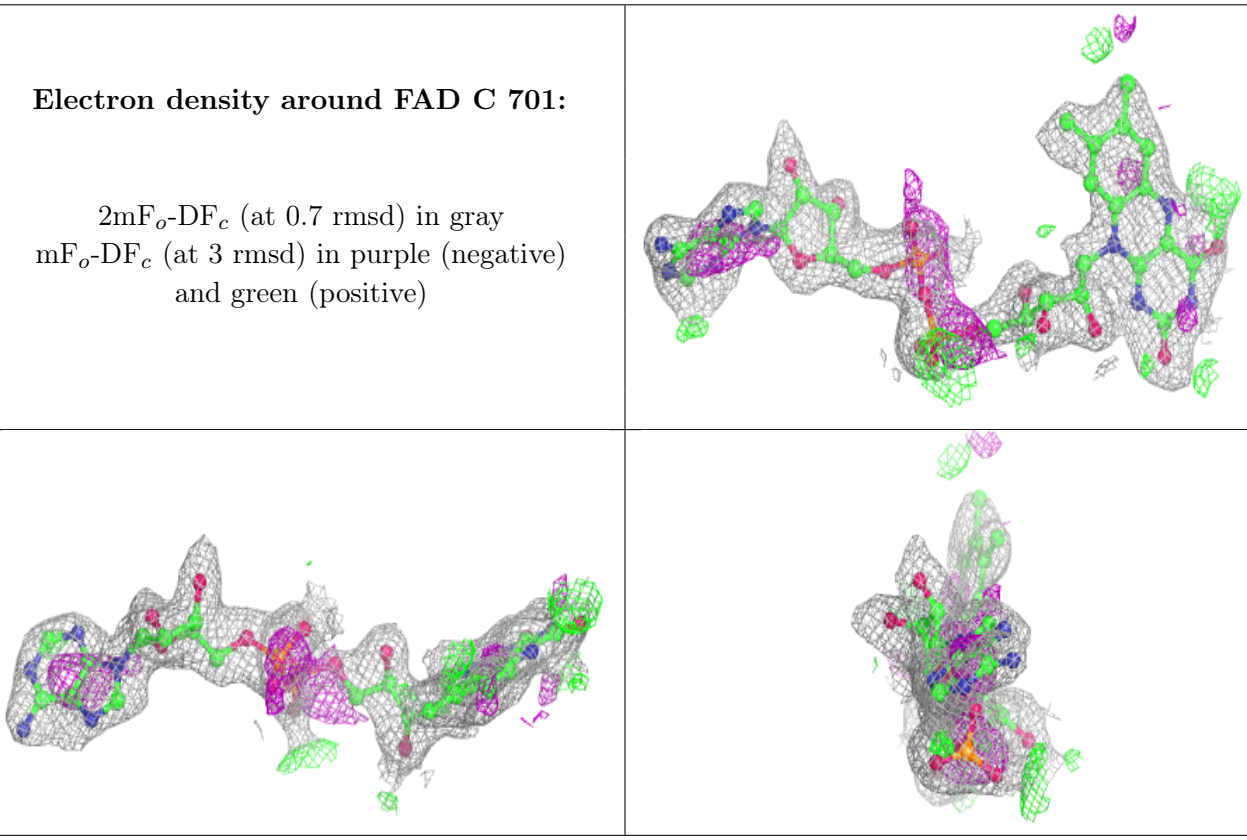
Electron density around FAD G 701:

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



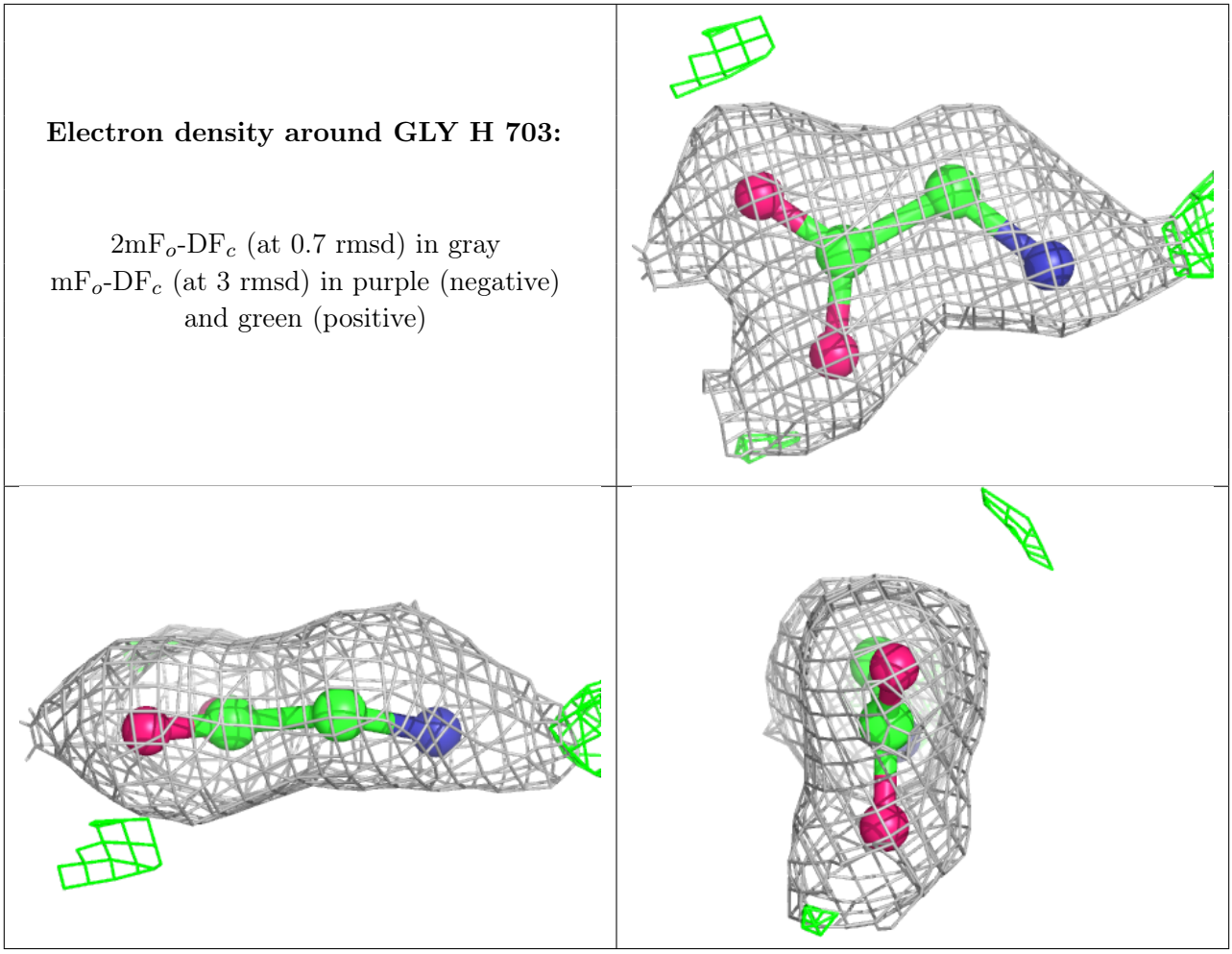
Electron density around FAD C 701:

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



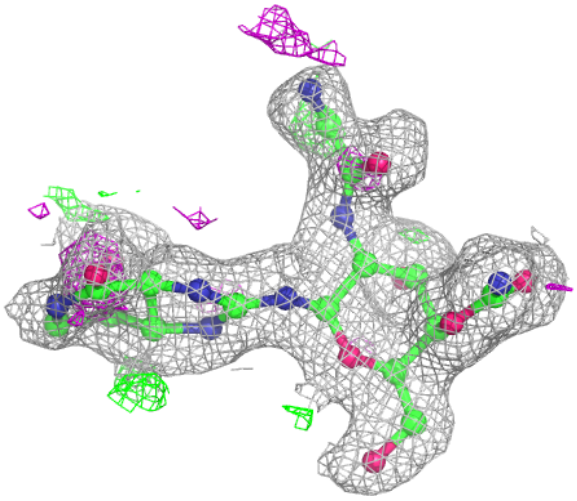
Electron density around GLY H 703:

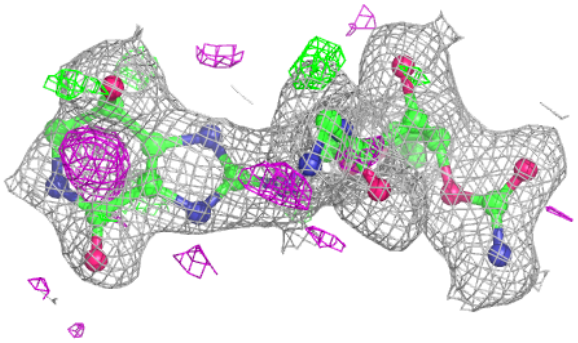
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

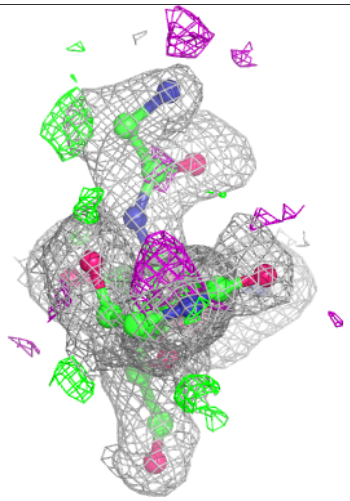


Electron density around I55 F 702:

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

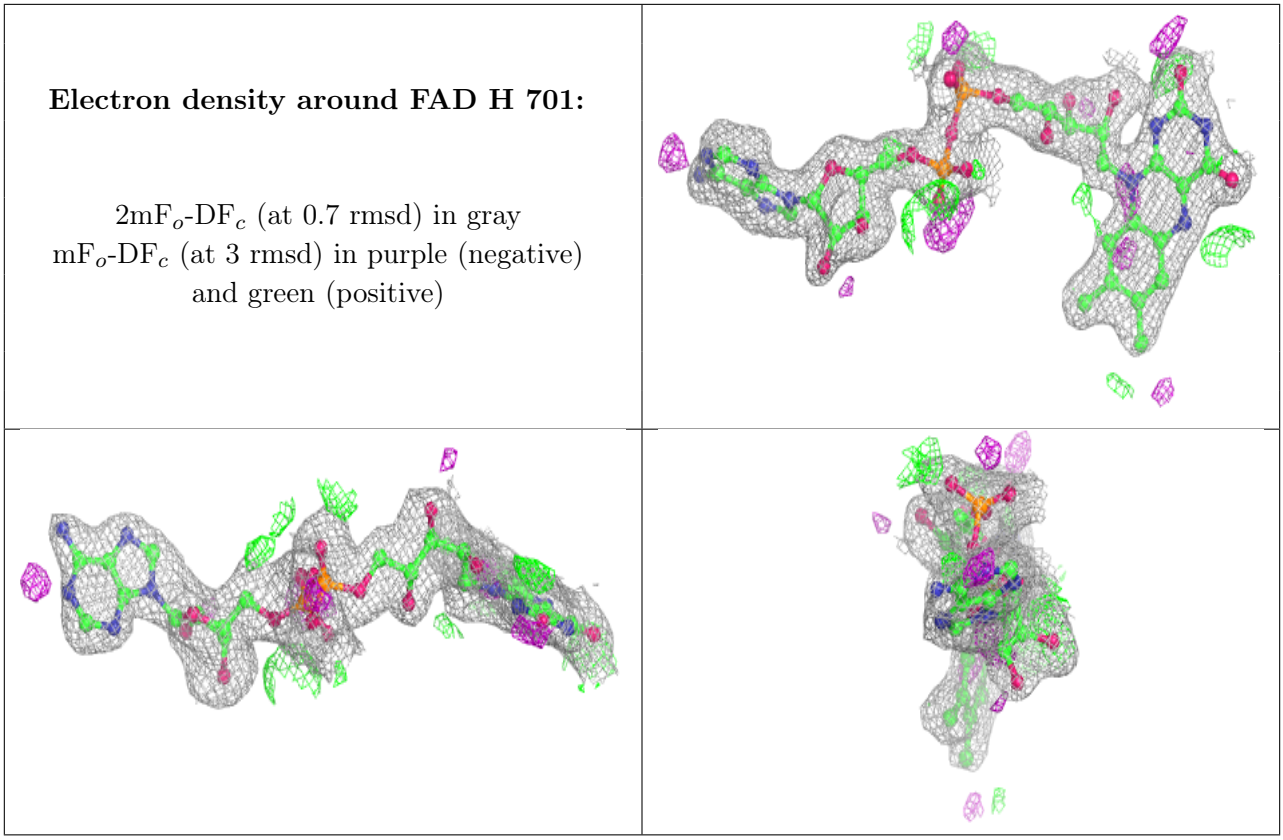






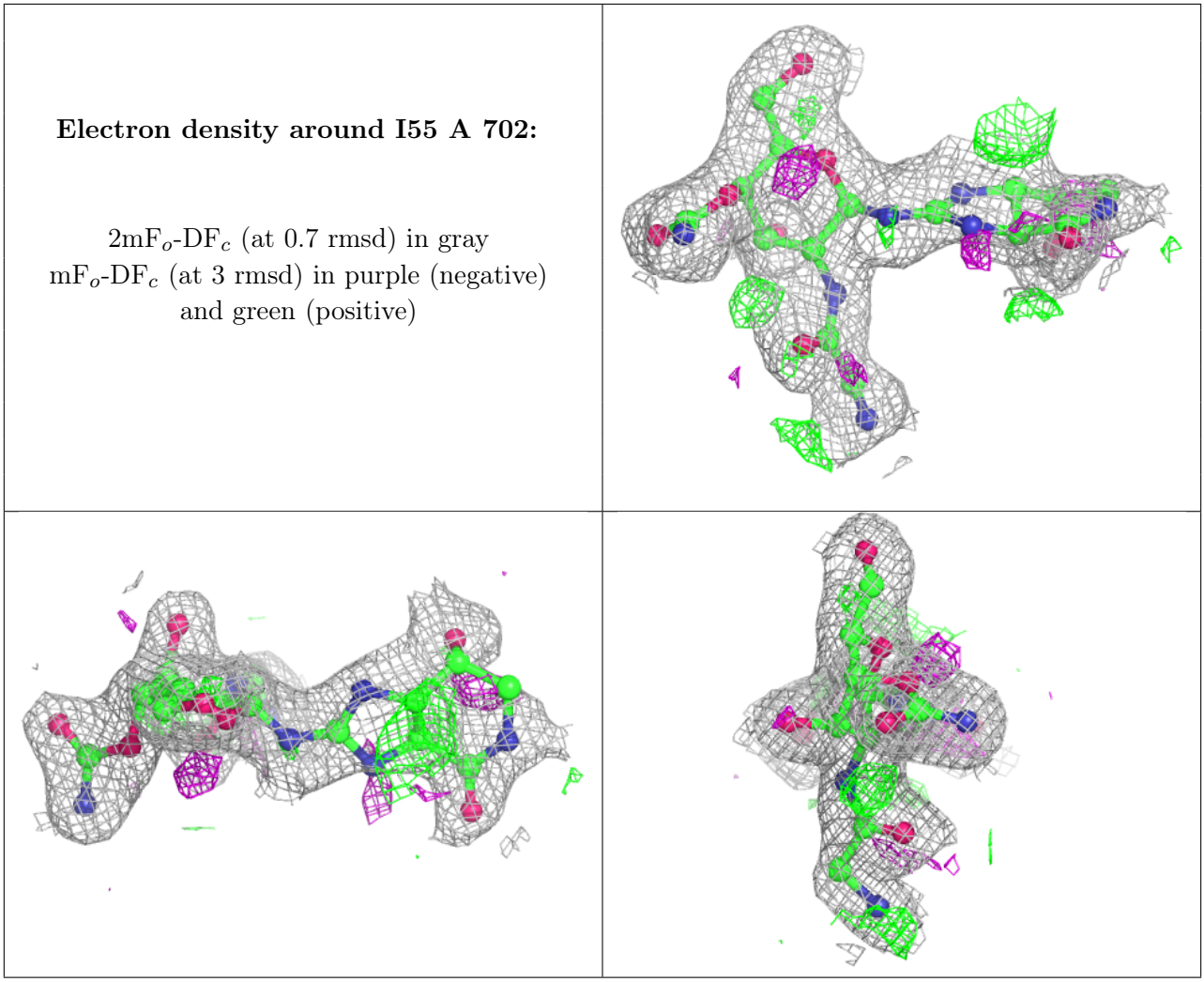
Electron density around FAD H 701:

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



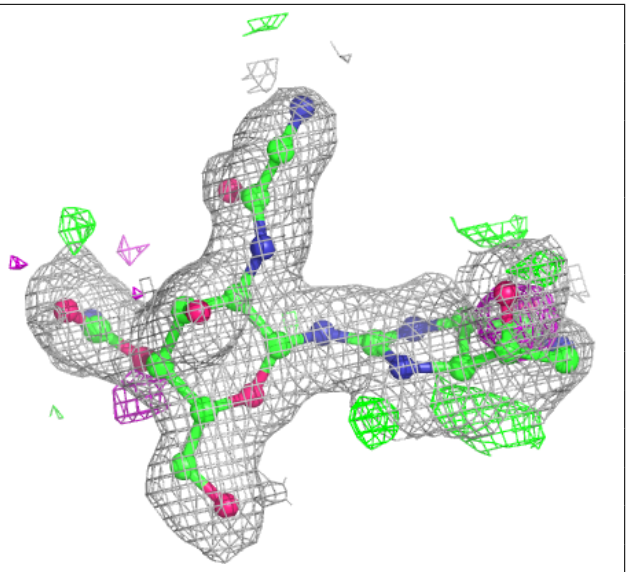
Electron density around I55 A 702:

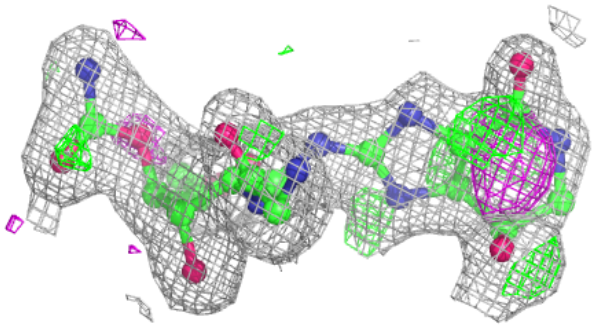
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

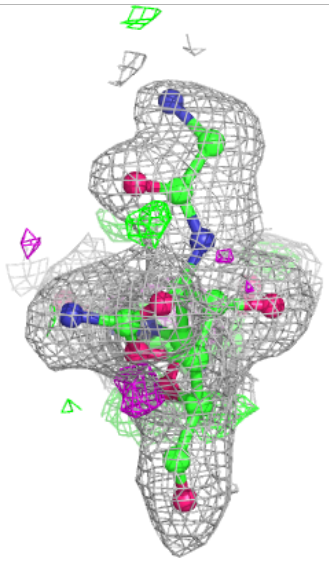


Electron density around I55 G 702:

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

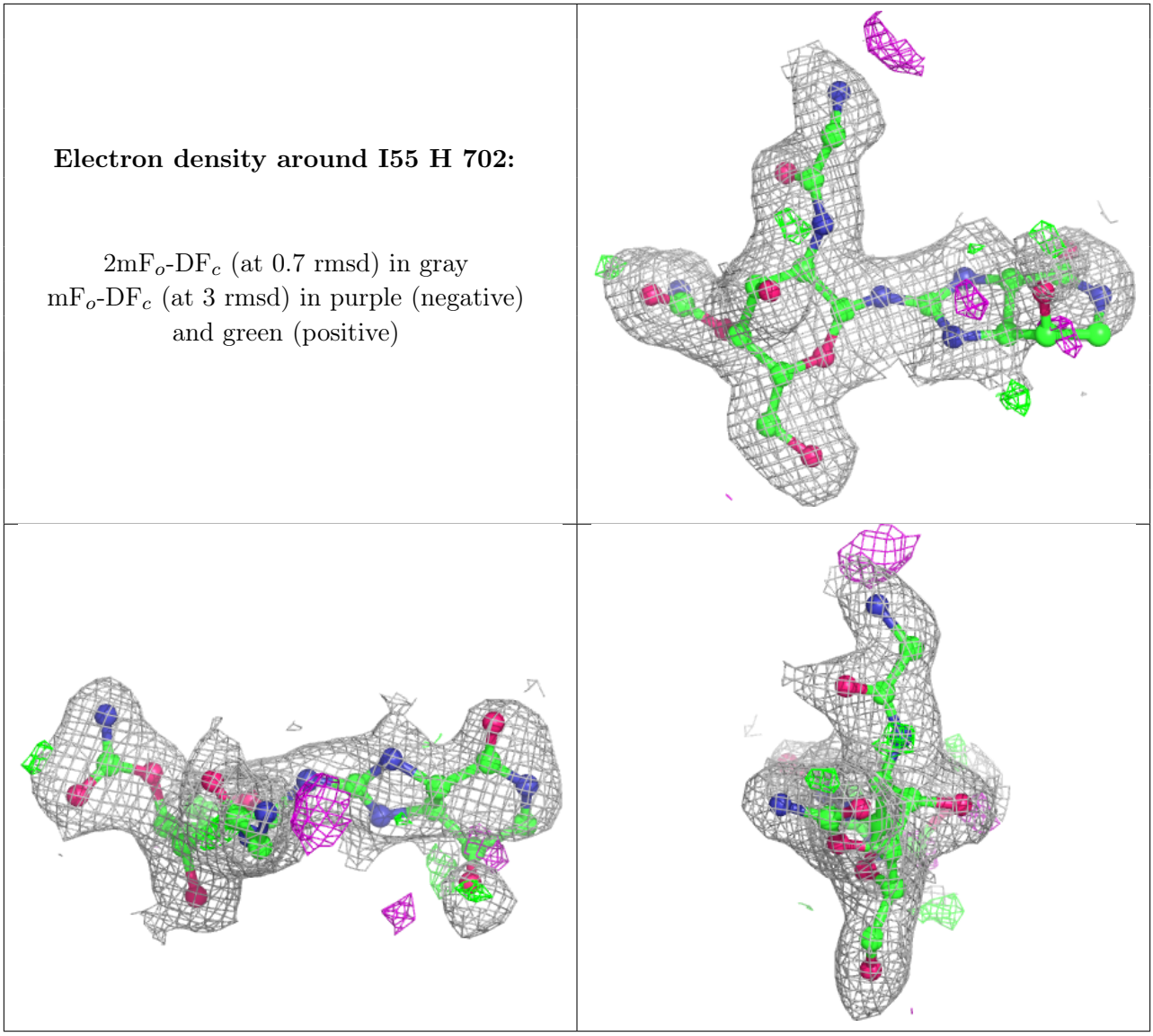






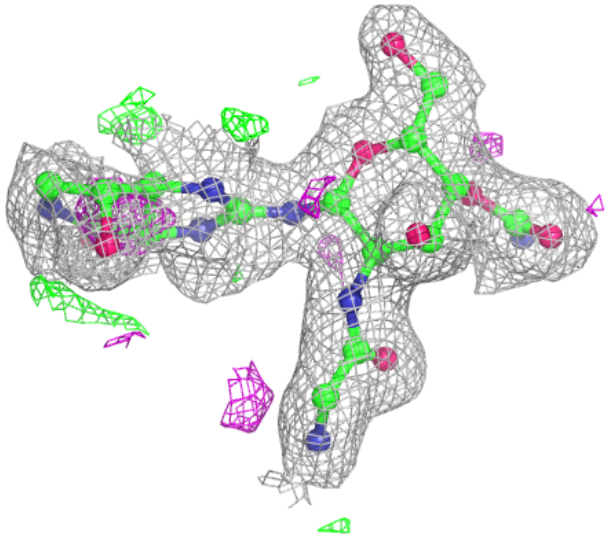
Electron density around I55 H 702:

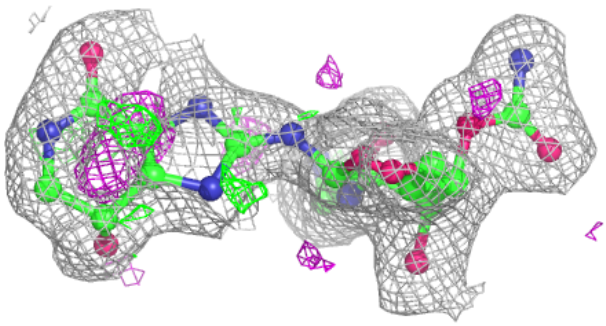
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

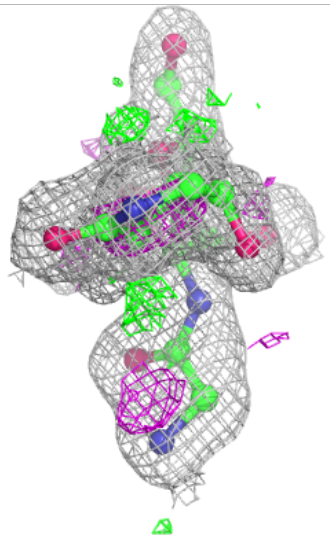


Electron density around I55 E 702:

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

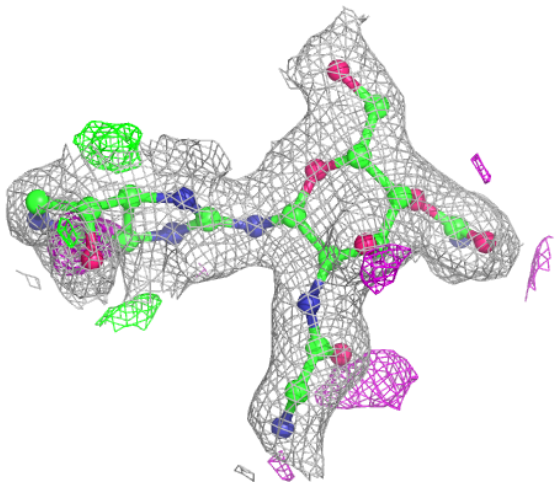


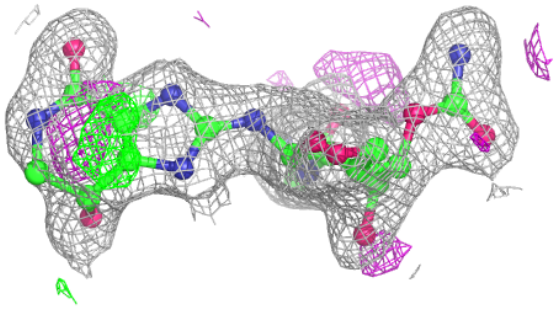


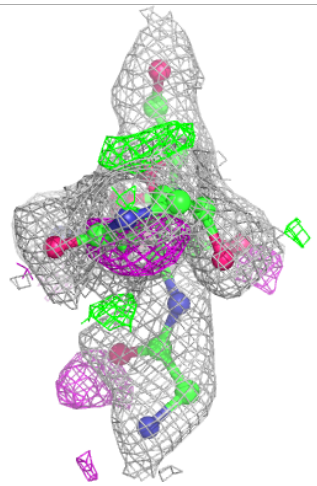


Electron density around I55 B 702:

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

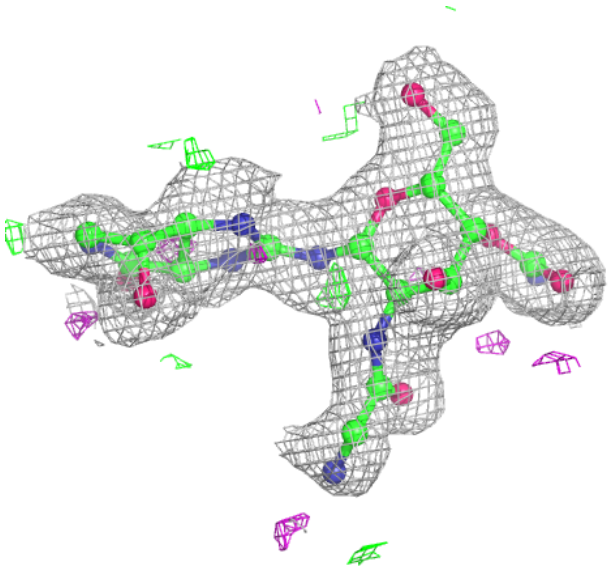


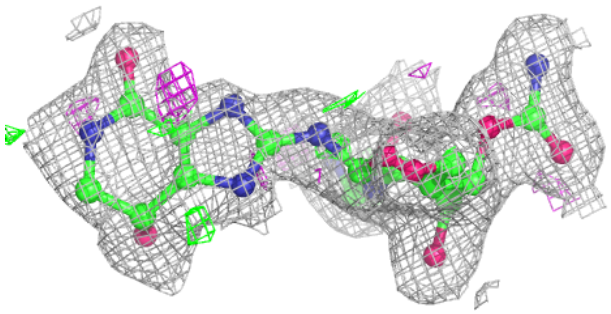


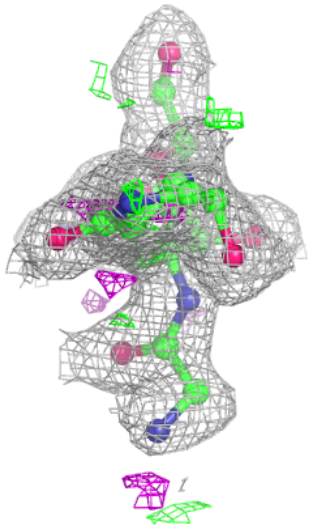


Electron density around I55 C 702:

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

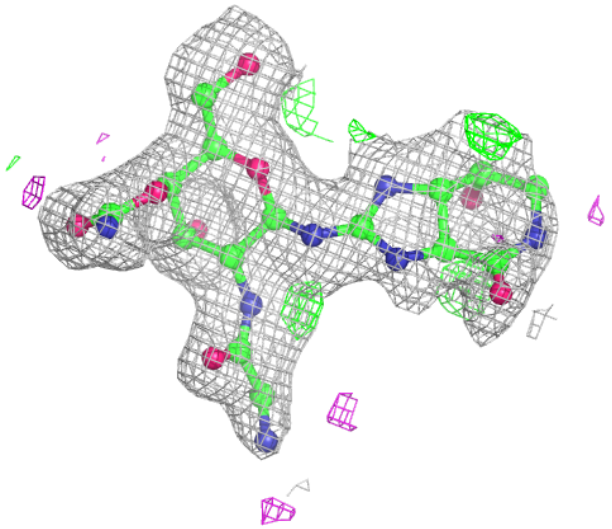


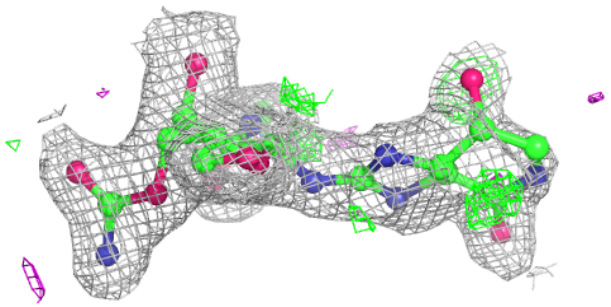


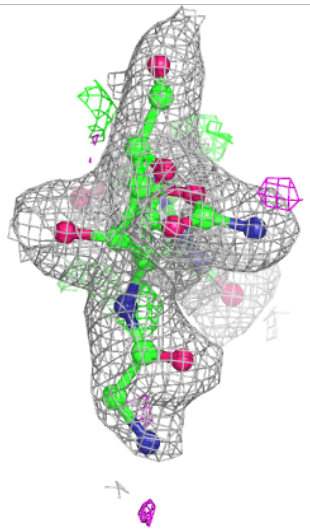


Electron density around I55 D 702:

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

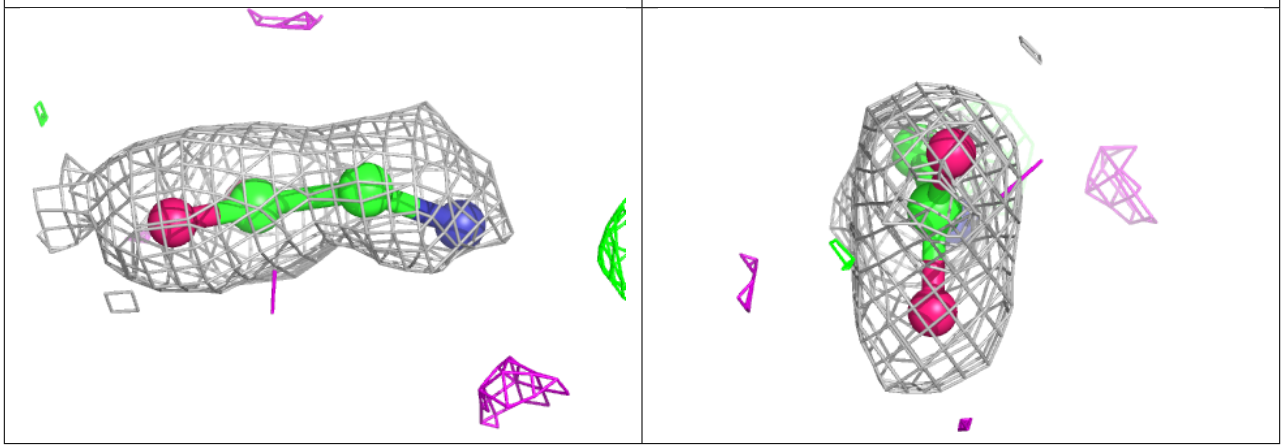






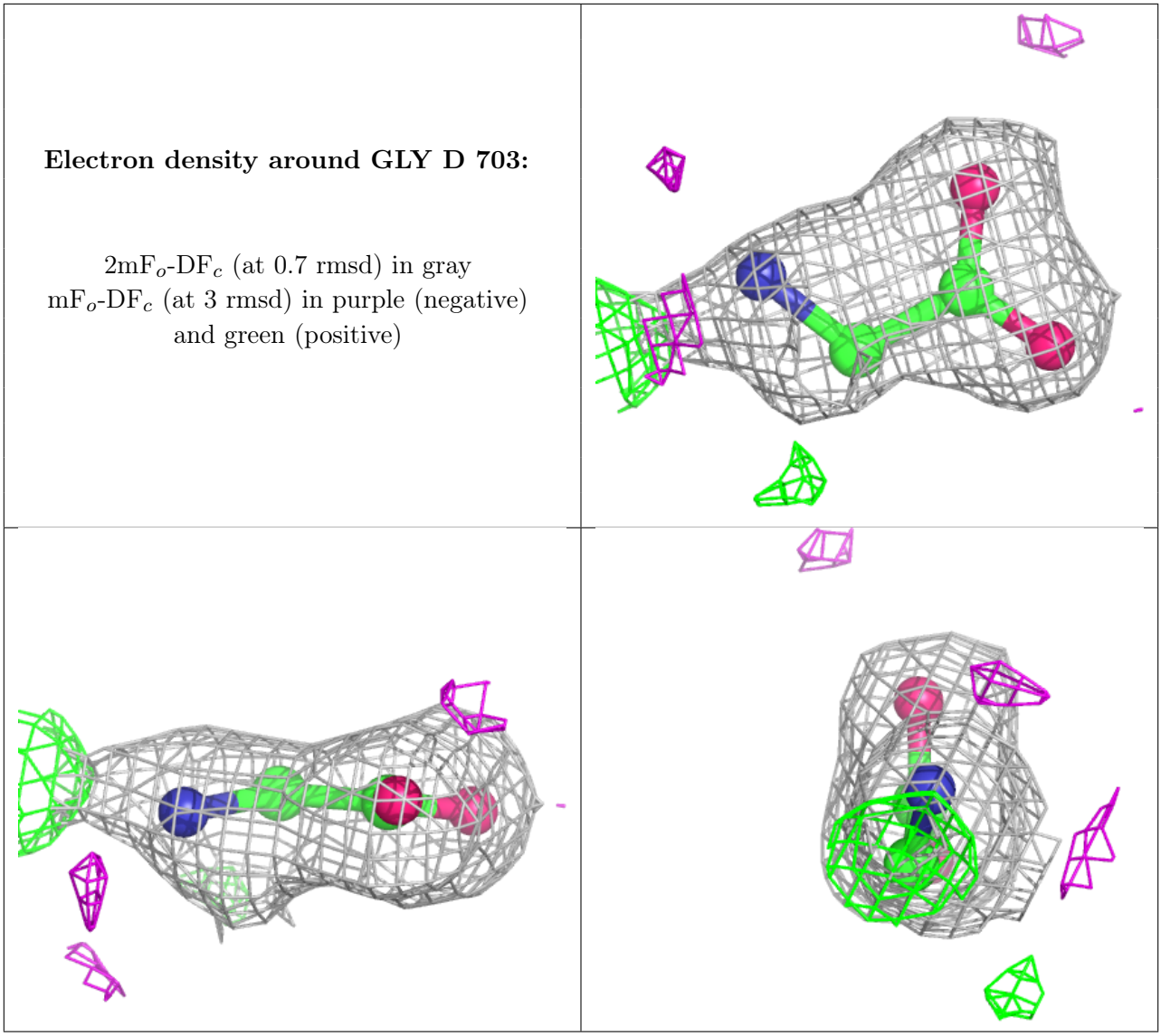
Electron density around GLY G 703:

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



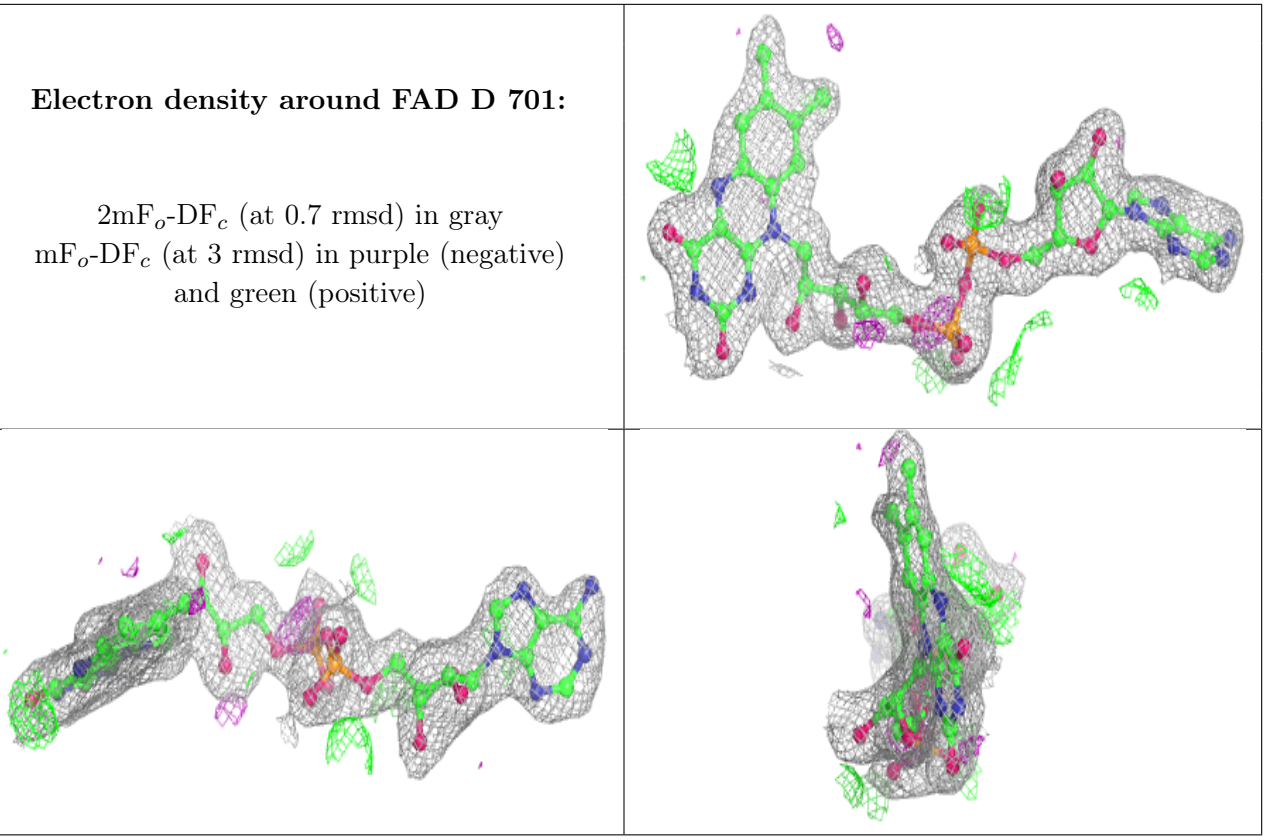
Electron density around GLY D 703:

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



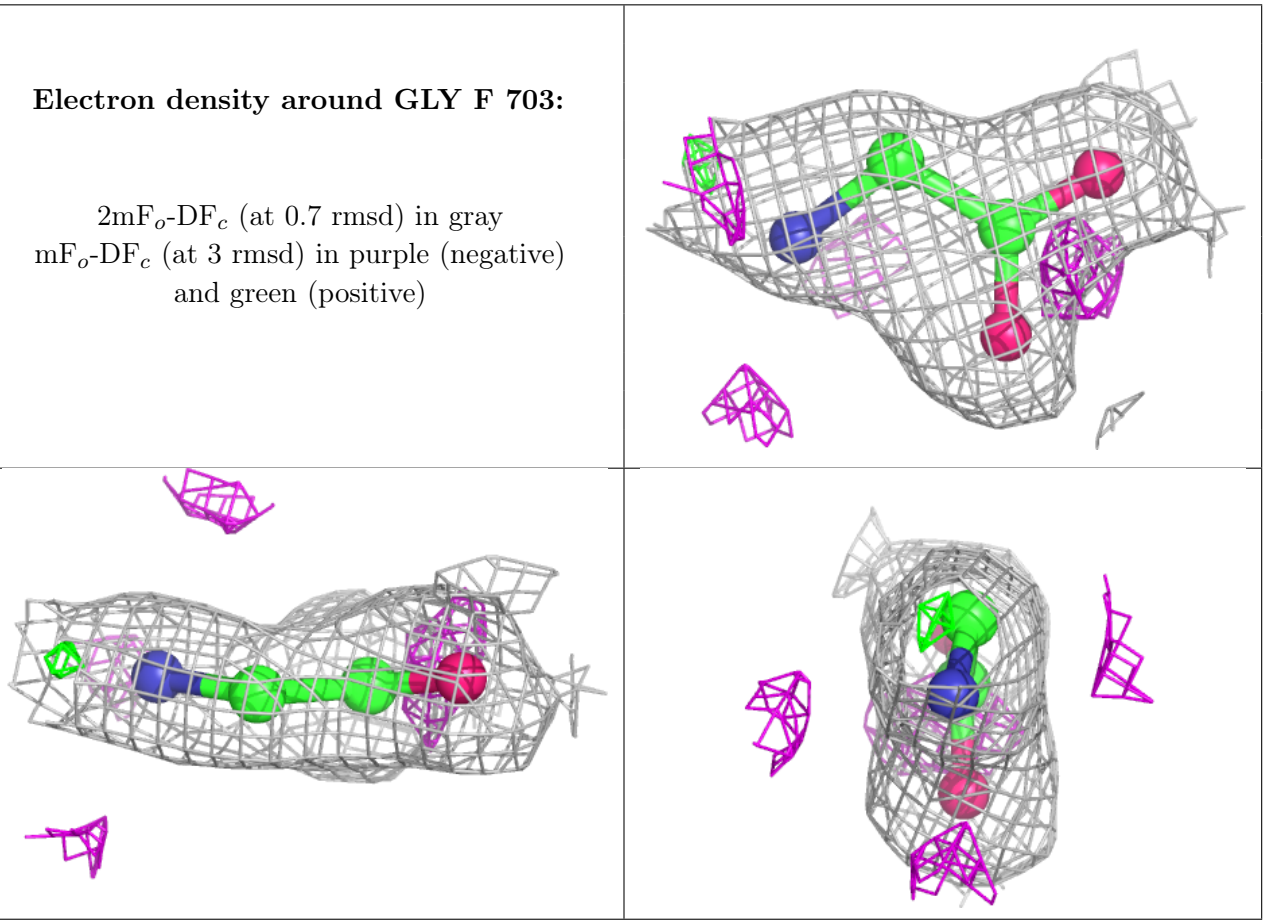
Electron density around FAD D 701:

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



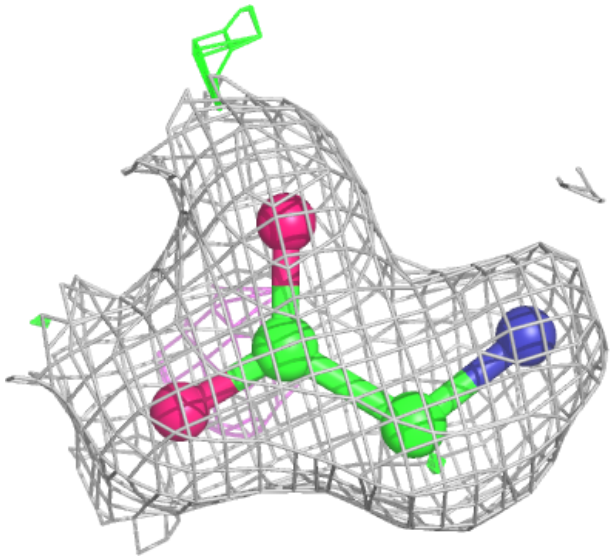
Electron density around GLY F 703:

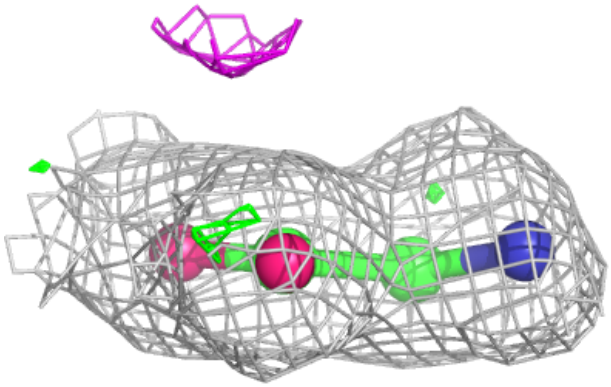
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

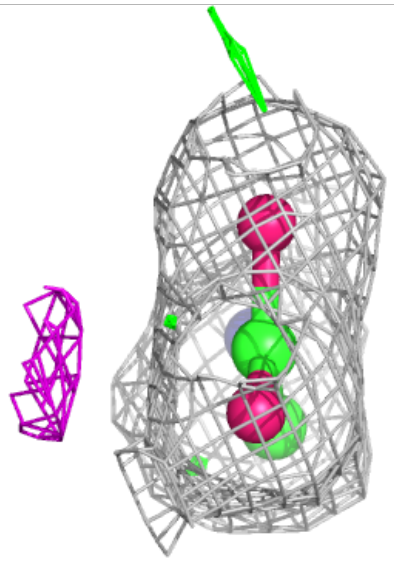


Electron density around GLY B 703:

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

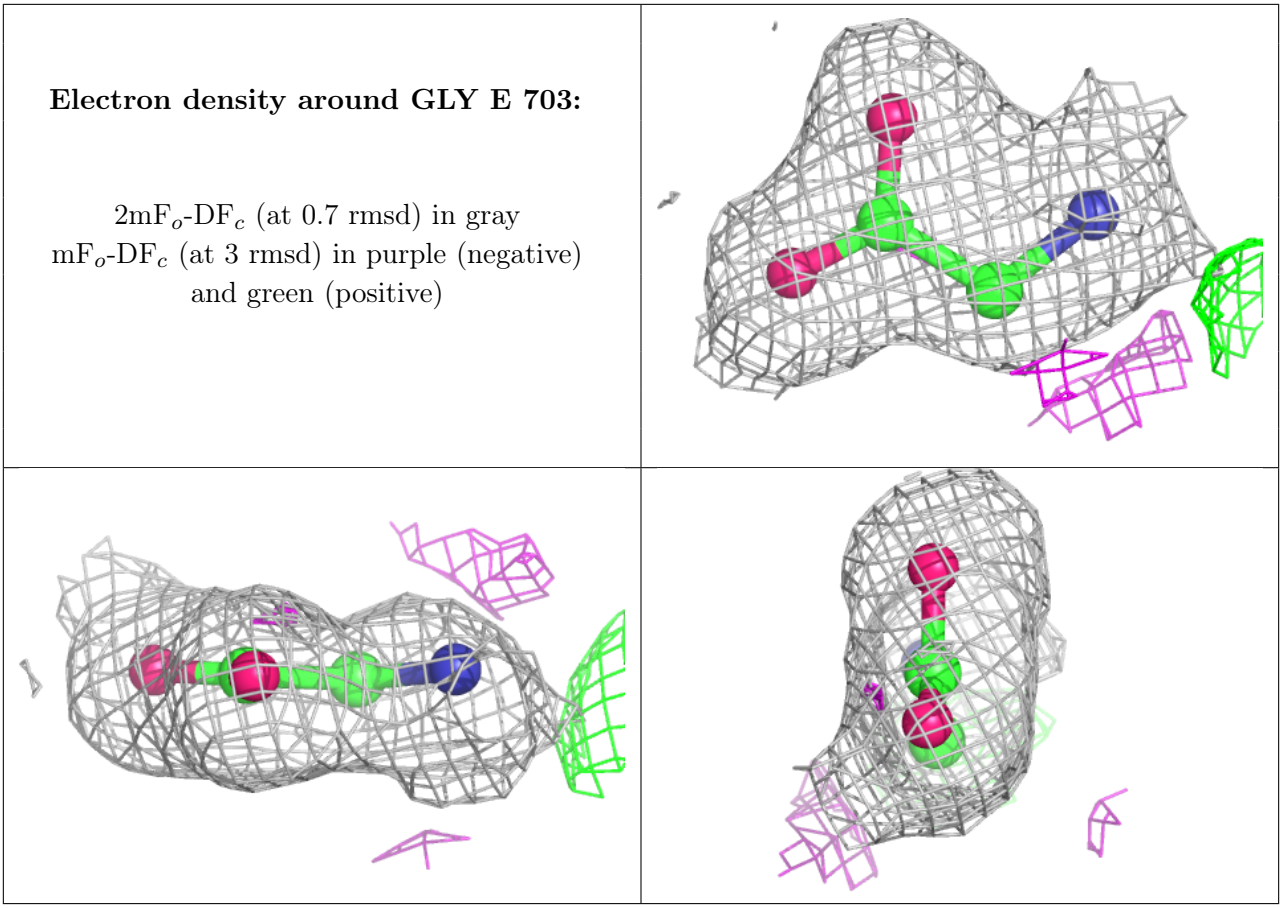






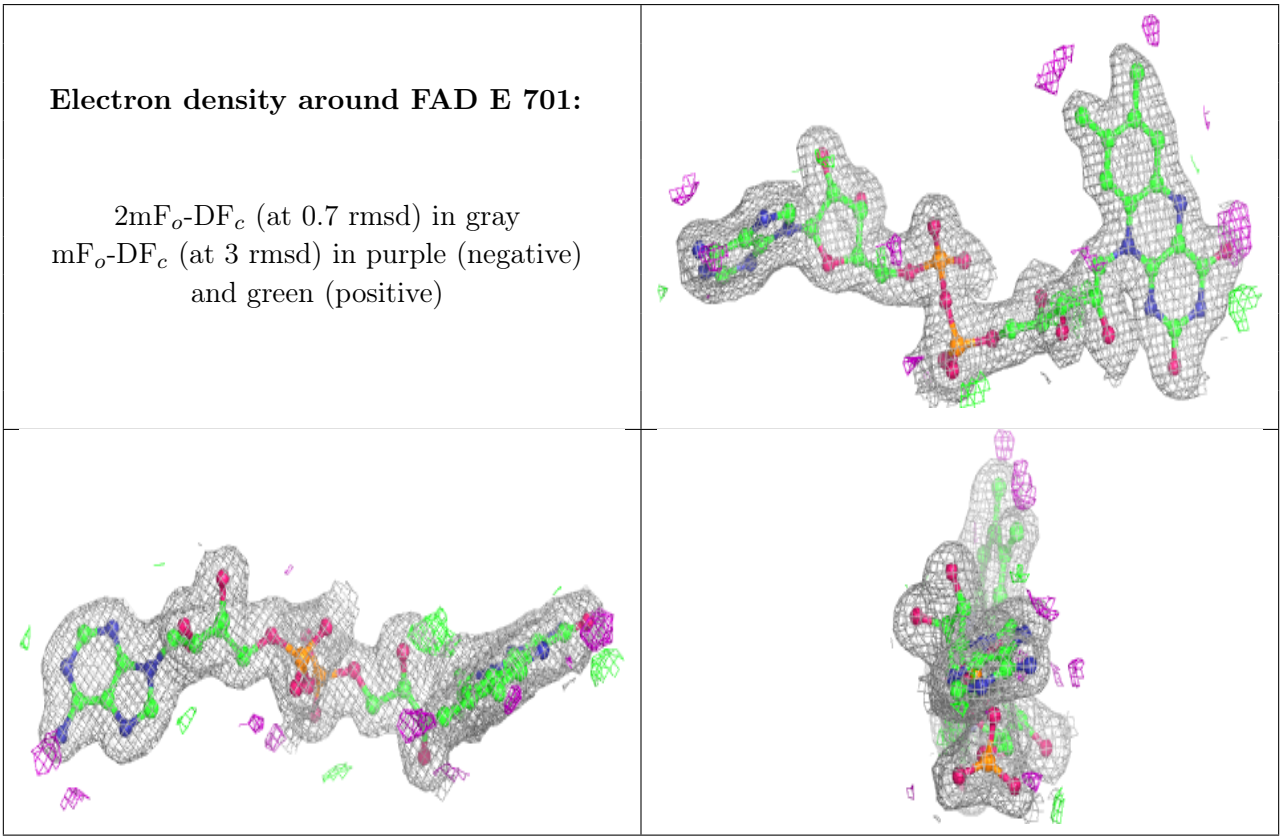
Electron density around GLY E 703:

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



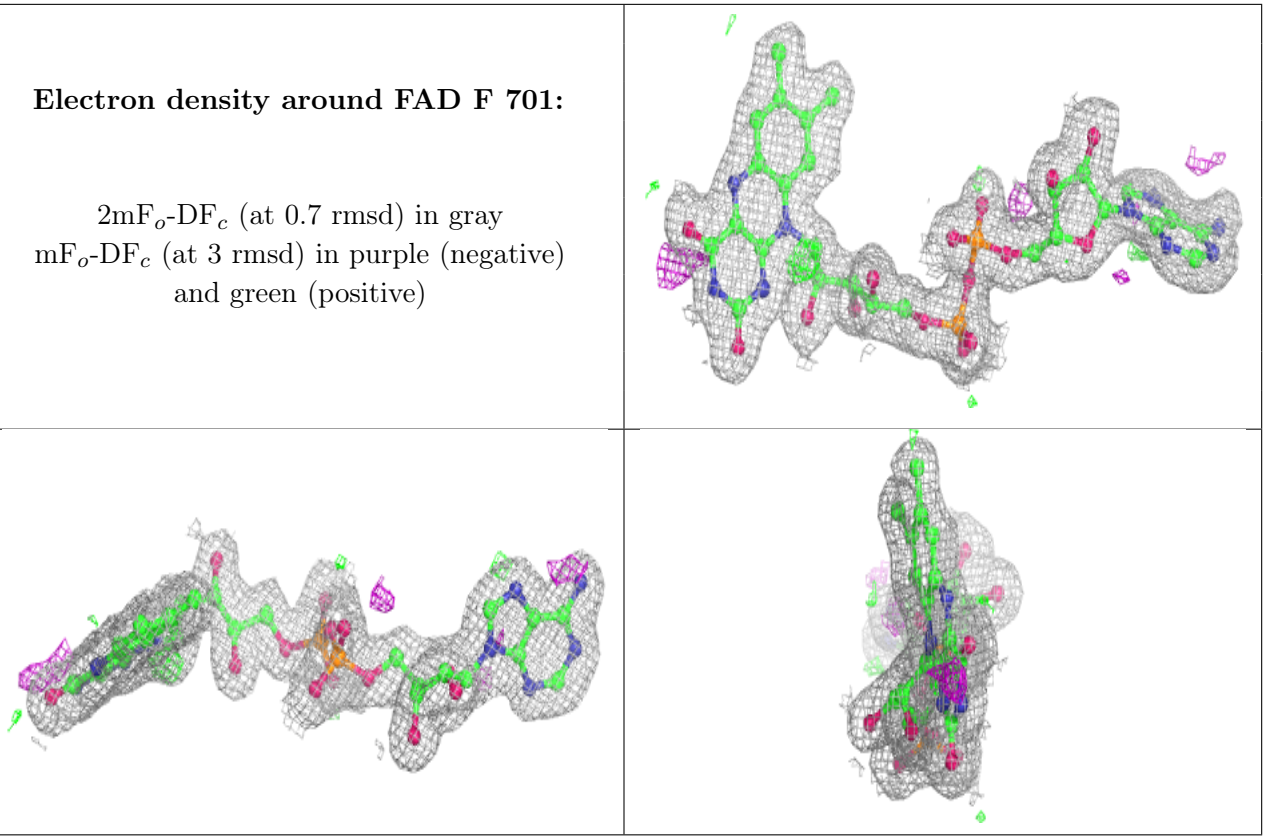
Electron density around FAD E 701:

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



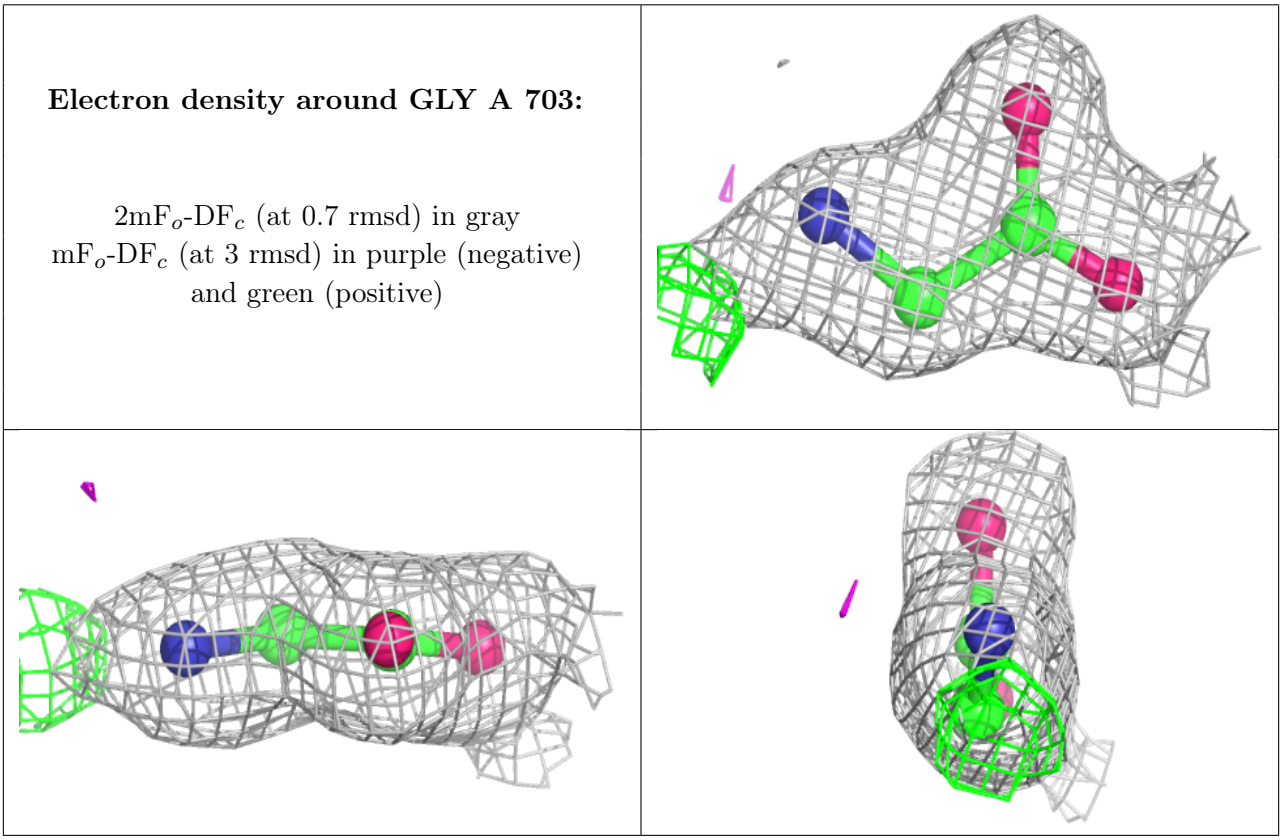
Electron density around FAD F 701:

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



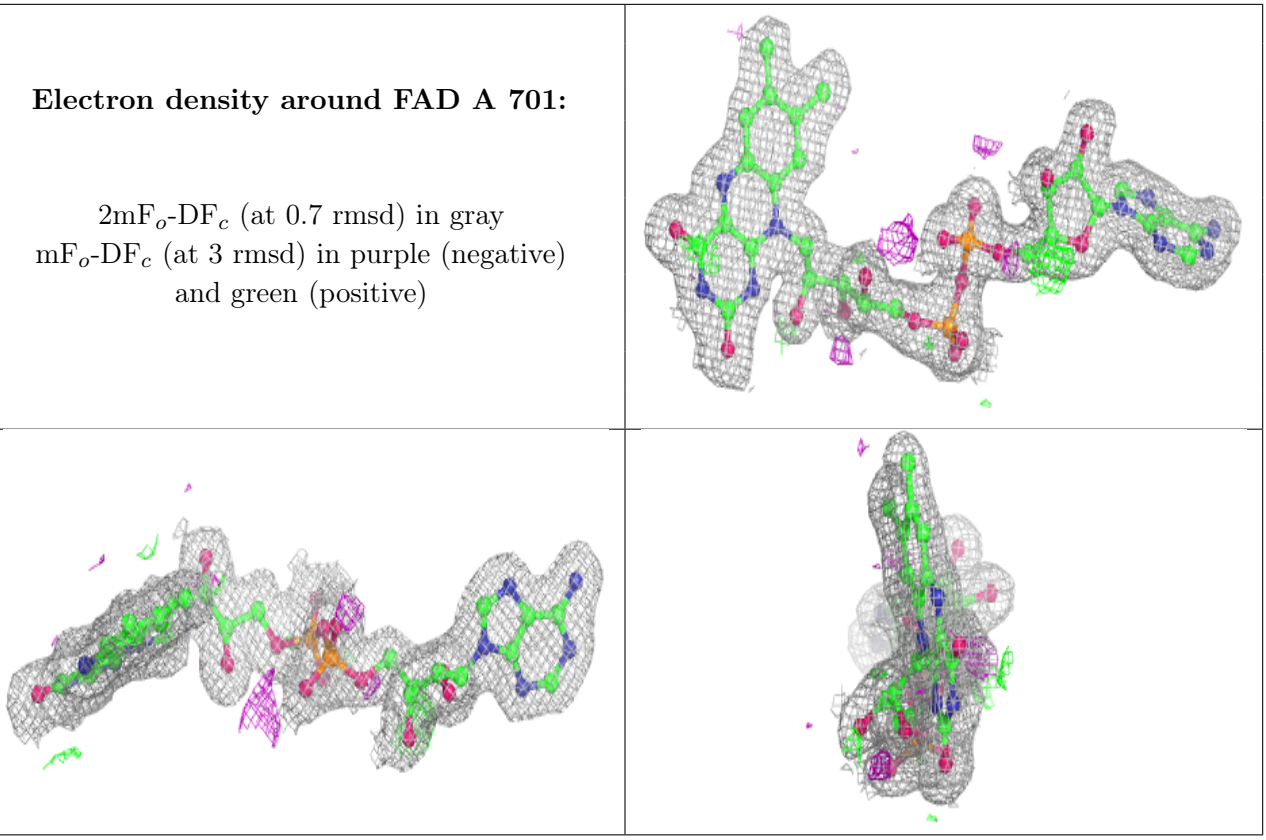
Electron density around GLY A 703:

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



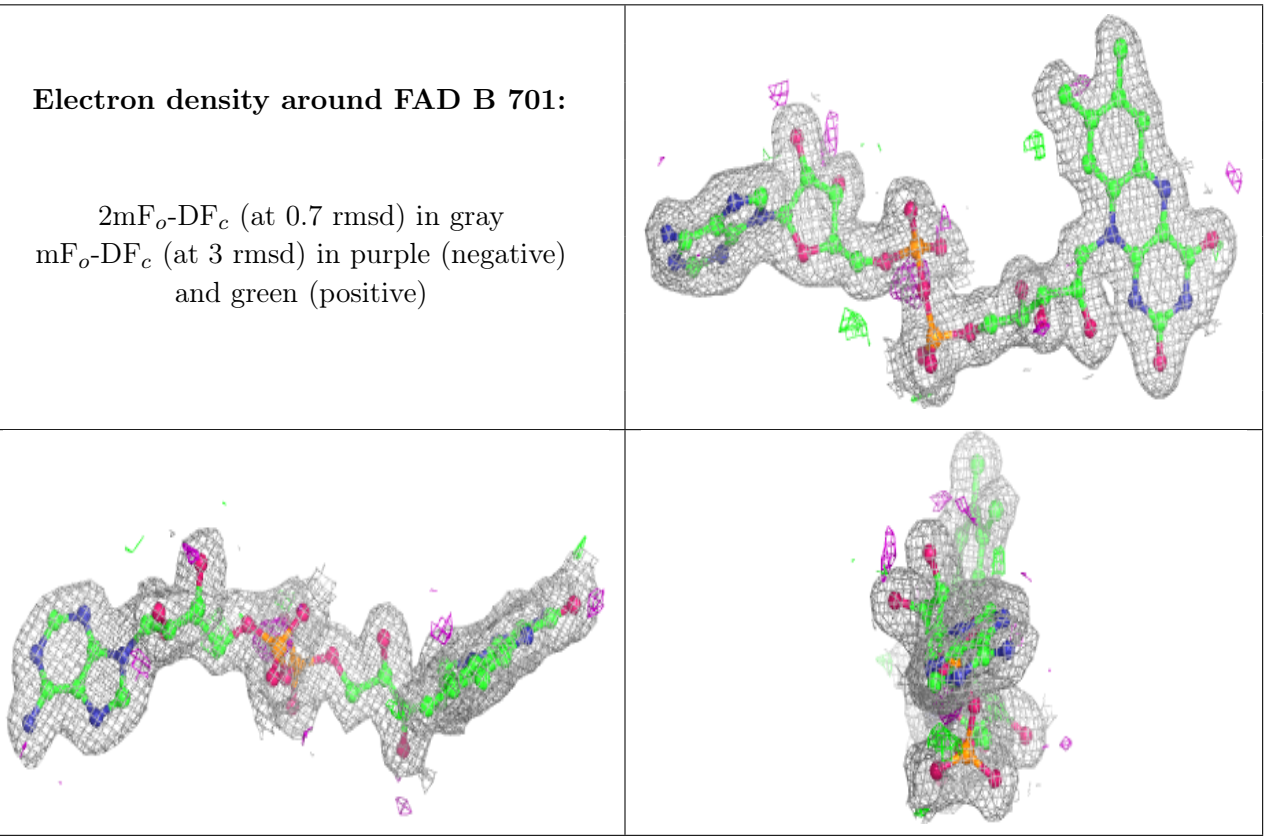
Electron density around FAD A 701:

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



Electron density around FAD B 701:

$2mF_o$-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.