



## wwPDB EM Validation Summary Report ⓘ

Apr 11, 2022 – 09:25 pm BST

PDB ID : 7PZC  
EMDB ID : EMD-13686  
Title : Cryo-EM structure of the NLRP3 decamer bound to the inhibitor CRID3  
Authors : Hochheiser, I.V.; Pilsl, M.; Hagelueken, G.; Engel, C.; Geyer, M.  
Deposited on : 2021-10-12  
Resolution : 3.90 Å (reported)

This is a wwPDB EM Validation Summary Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

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

EMDB validation analysis : 0.0.0.dev97  
Mogul : 1.8.4, CSD as541be (2020)  
MolProbity : 4.02b-467  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.27

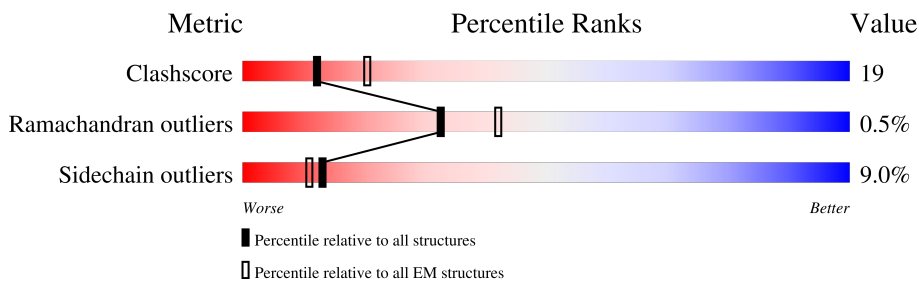
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 3.90 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)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 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 EM map (all-atom inclusion  $< 40\%$ ). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	1036	
1	B	1036	
1	C	1036	
1	D	1036	
1	E	1036	
1	F	1036	
1	G	1036	
1	H	1036	

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Mol	Chain	Length	Quality of chain
1	I	1036	
1	J	1036	

## 2 Entry composition [i](#)

There are 3 unique types of molecules in this entry. The entry contains 72752 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 NACHT, LRR and PYD domains-containing protein 3.

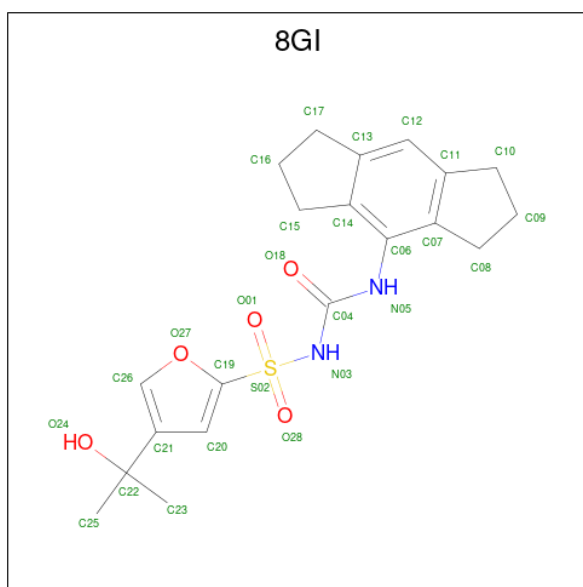
Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	1010	8065	5117	1377	1501	70	0	0
1	B	880	7009	4450	1197	1302	60	0	0
1	C	880	7009	4450	1197	1302	60	0	0
1	D	880	7009	4450	1197	1302	60	0	0
1	E	880	7009	4450	1197	1302	60	0	0
1	F	880	7009	4450	1197	1302	60	0	0
1	G	880	7009	4450	1197	1302	60	0	0
1	H	1010	8065	5117	1377	1501	70	0	0
1	I	880	7009	4450	1197	1302	60	0	0
1	J	880	7009	4450	1197	1302	60	0	0

- Molecule 2 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula:  $C_{10}H_{15}N_5O_{10}P_2$ ).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
2	A	1	Total	C	N	O	P	0
			27	10	5	10	2	
2	B	1	Total	C	N	O	P	0
			27	10	5	10	2	
2	C	1	Total	C	N	O	P	0
			27	10	5	10	2	
2	D	1	Total	C	N	O	P	0
			27	10	5	10	2	
2	E	1	Total	C	N	O	P	0
			27	10	5	10	2	
2	F	1	Total	C	N	O	P	0
			27	10	5	10	2	
2	G	1	Total	C	N	O	P	0
			27	10	5	10	2	
2	H	1	Total	C	N	O	P	0
			27	10	5	10	2	
2	I	1	Total	C	N	O	P	0
			27	10	5	10	2	
2	J	1	Total	C	N	O	P	0
			27	10	5	10	2	

- Molecule 3 is 1-(1,2,3,5,6,7-hexahydro-s-indacen-4-yl)-3-[4-(2-oxidanylpropan-2-yl)furan-2-yl]sulfonyl-urea (three-letter code: 8GI) (formula: C<sub>20</sub>H<sub>24</sub>N<sub>2</sub>O<sub>5</sub>S) (labeled as "Ligand of Interest" by depositor).

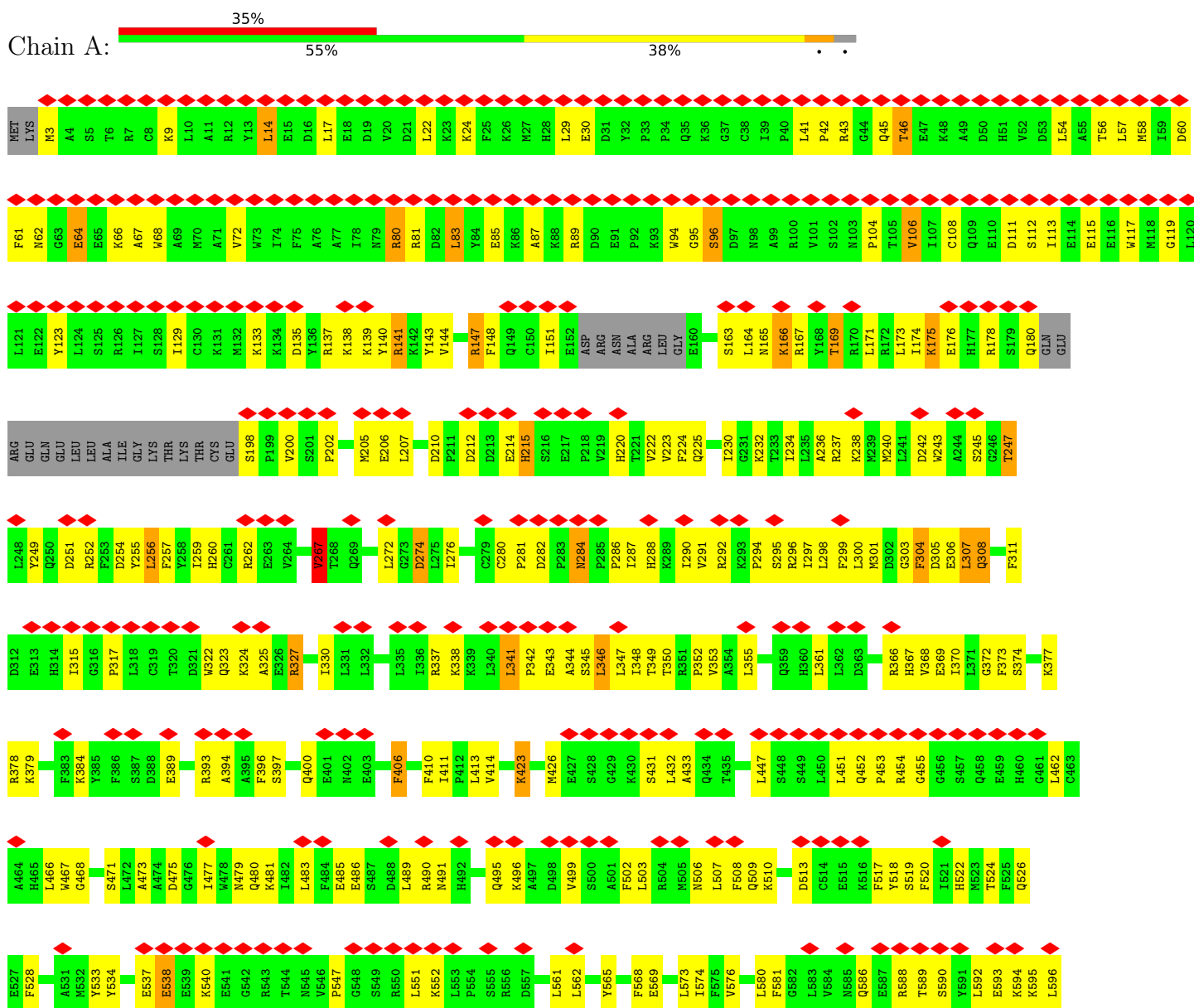


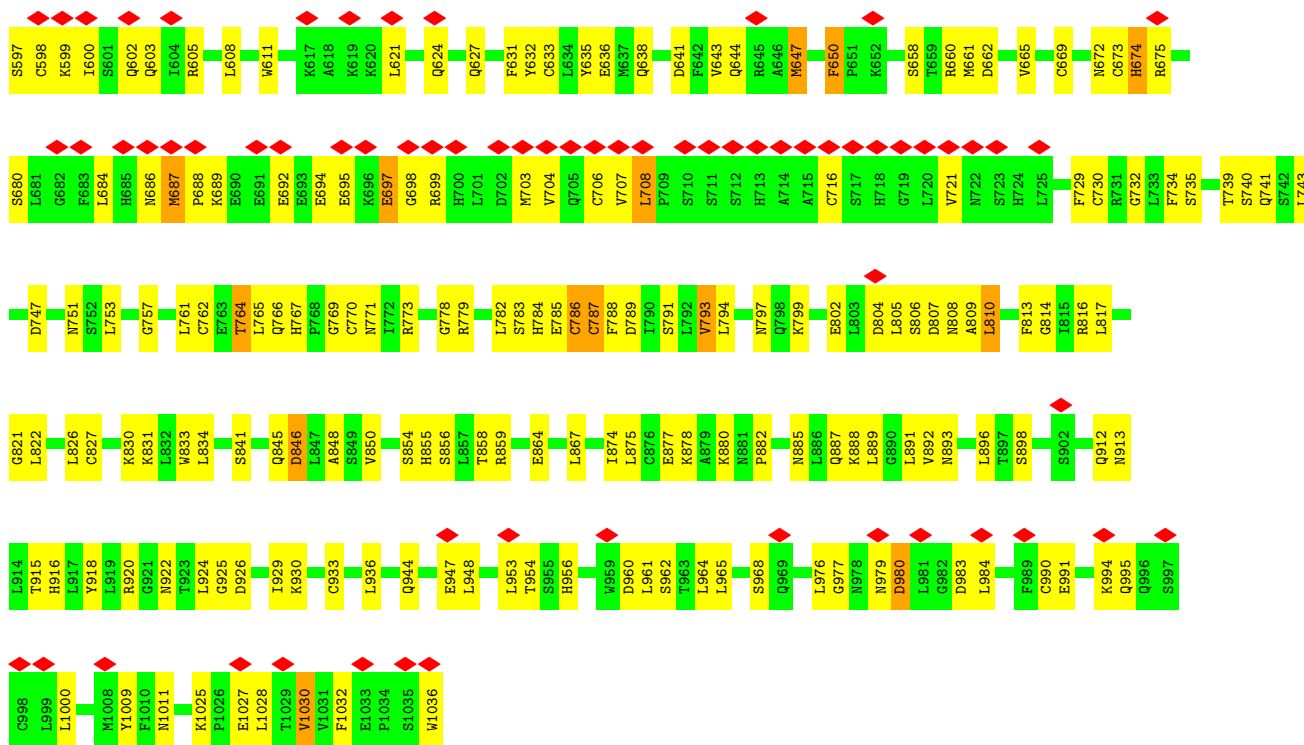
Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	S	
3	A	1	Total	C	N	O	S	0
			28	20	2	5	1	
3	B	1	Total	C	N	O	S	0
			28	20	2	5	1	
3	C	1	Total	C	N	O	S	0
			28	20	2	5	1	
3	D	1	Total	C	N	O	S	0
			28	20	2	5	1	
3	E	1	Total	C	N	O	S	0
			28	20	2	5	1	
3	F	1	Total	C	N	O	S	0
			28	20	2	5	1	
3	G	1	Total	C	N	O	S	0
			28	20	2	5	1	
3	H	1	Total	C	N	O	S	0
			28	20	2	5	1	
3	I	1	Total	C	N	O	S	0
			28	20	2	5	1	
3	J	1	Total	C	N	O	S	0
			28	20	2	5	1	

### 3 Residue-property plots

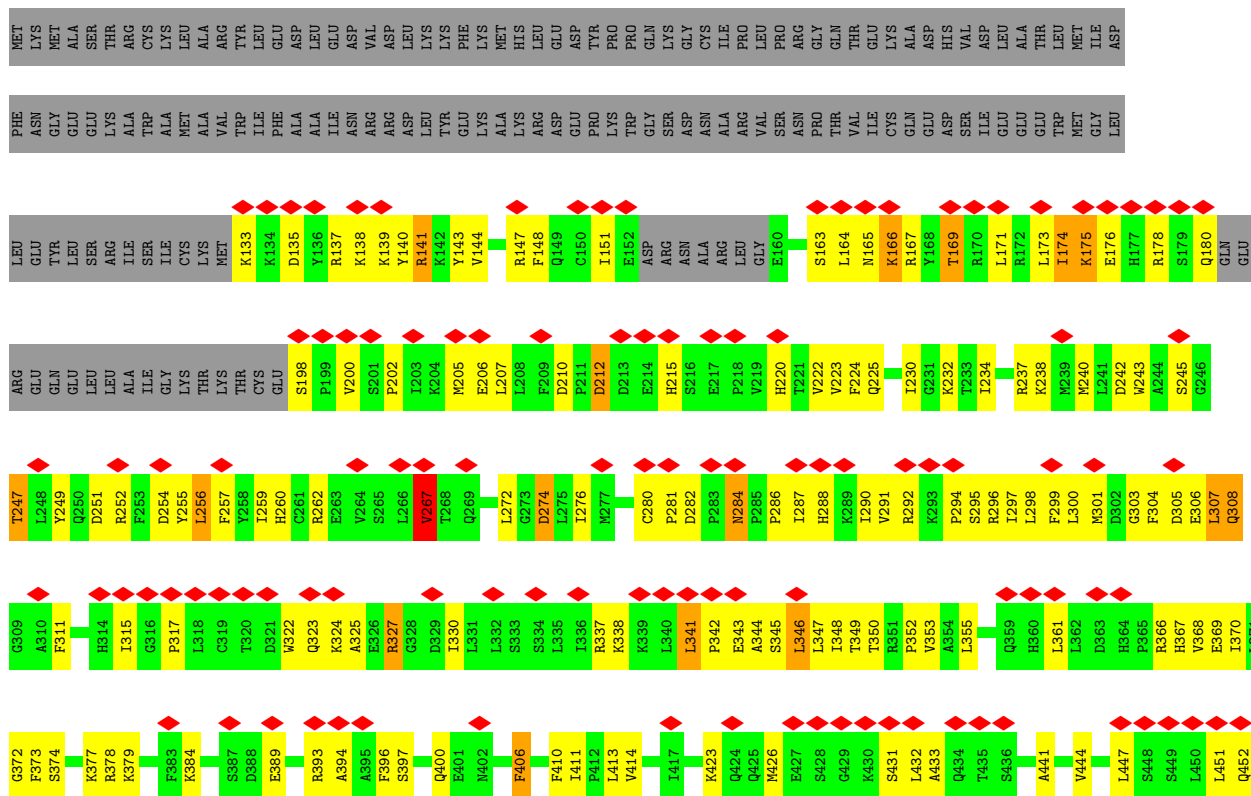
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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: NACHT, LRR and PYD domains-containing protein 3

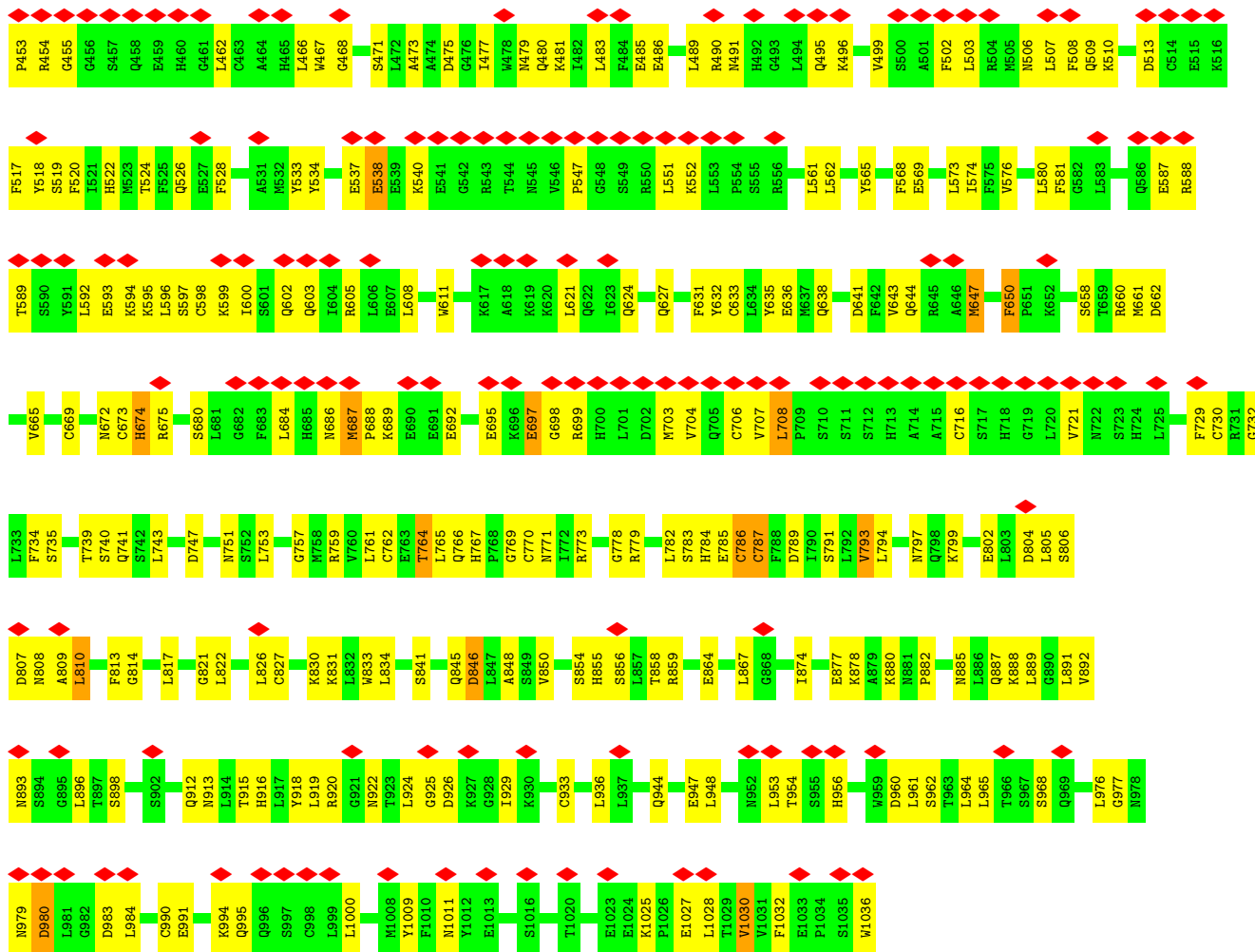




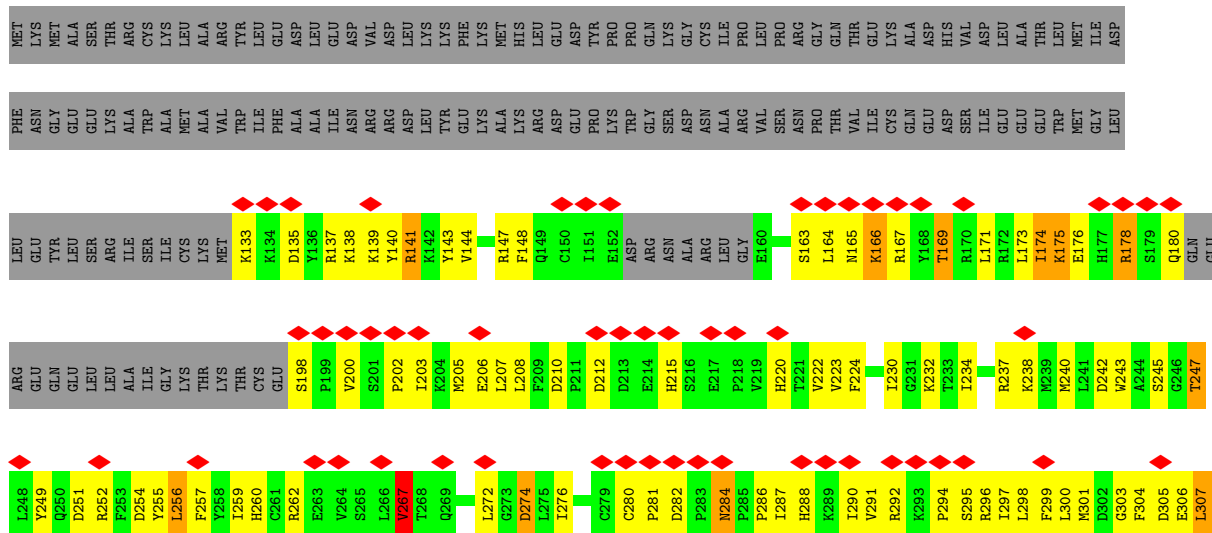
● Molecule 1: NACHT, LRR and PYD domains-containing protein 3



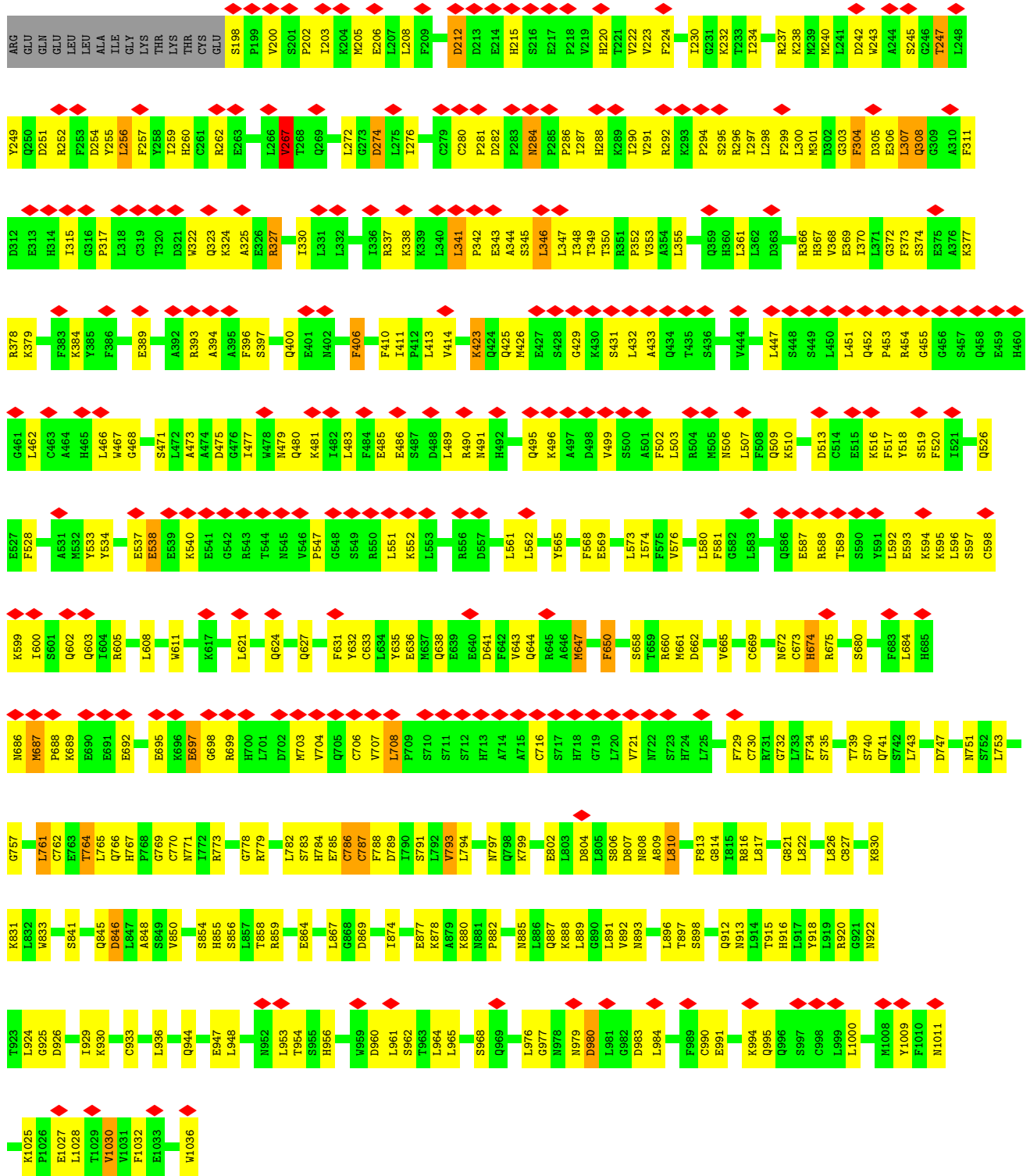




● Molecule 1: NACHT, LRR and PYD domains-containing protein 3



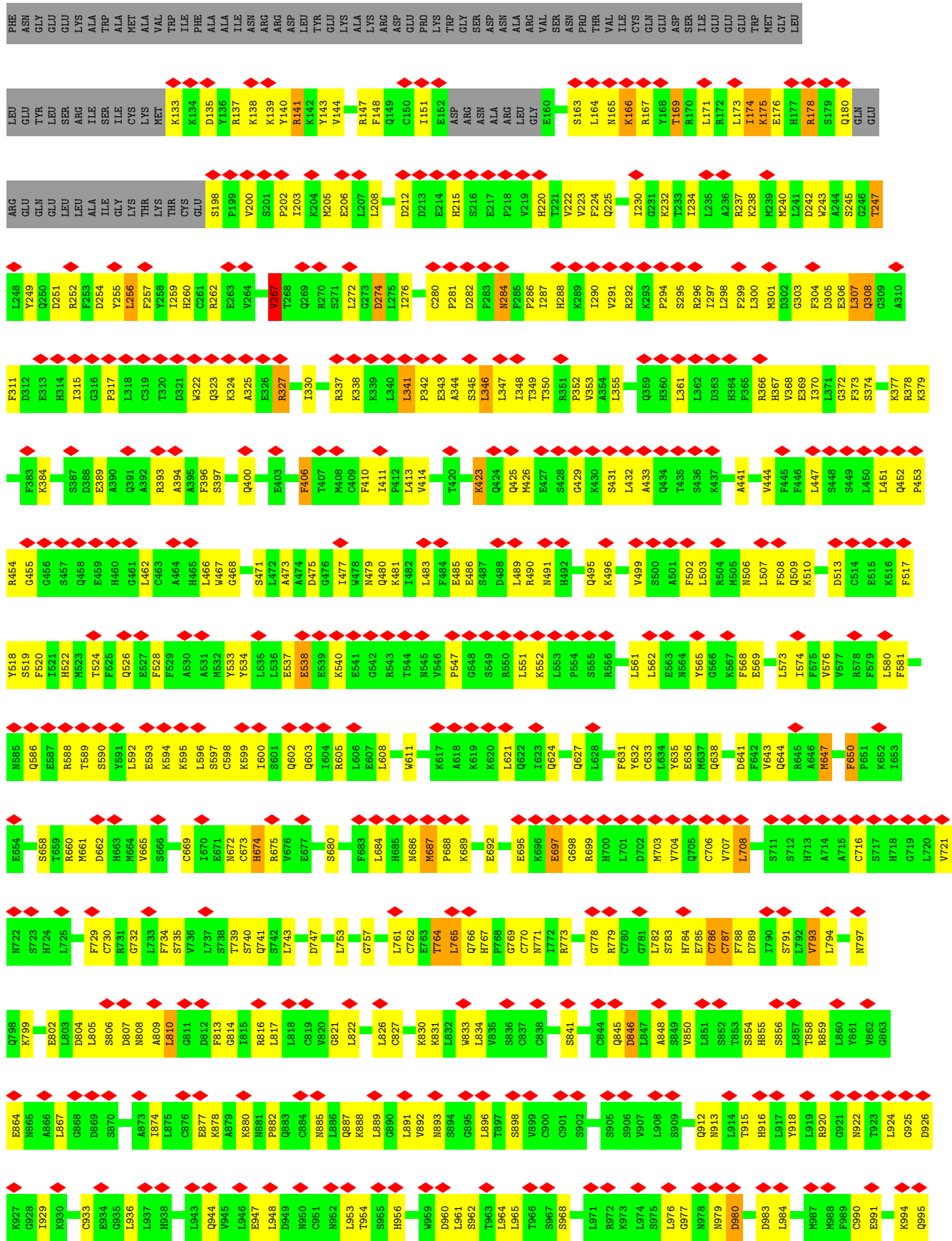


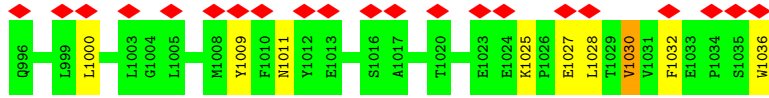


● Molecule 1: NACHT, LRR and PYD domains-containing protein 3

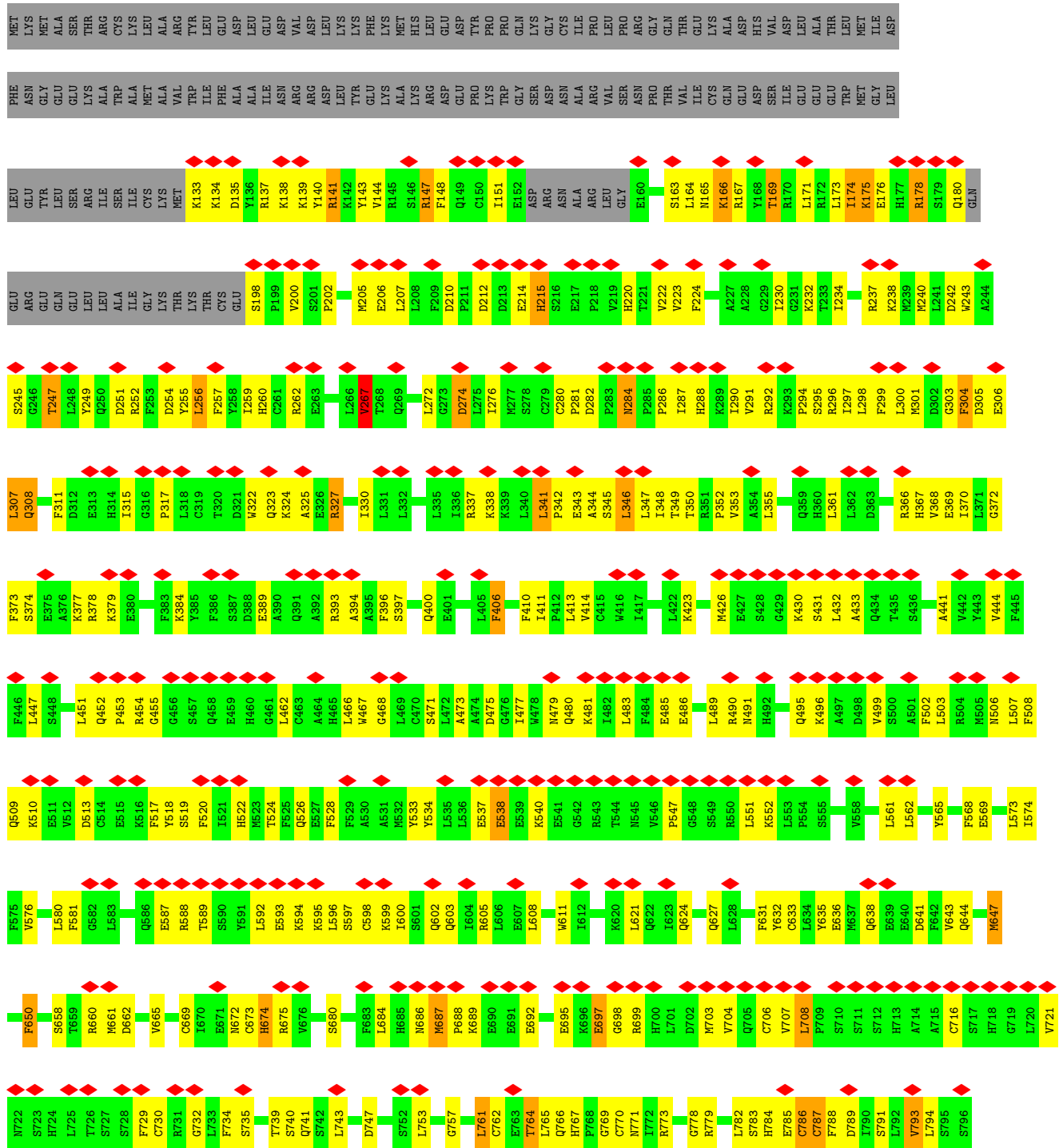


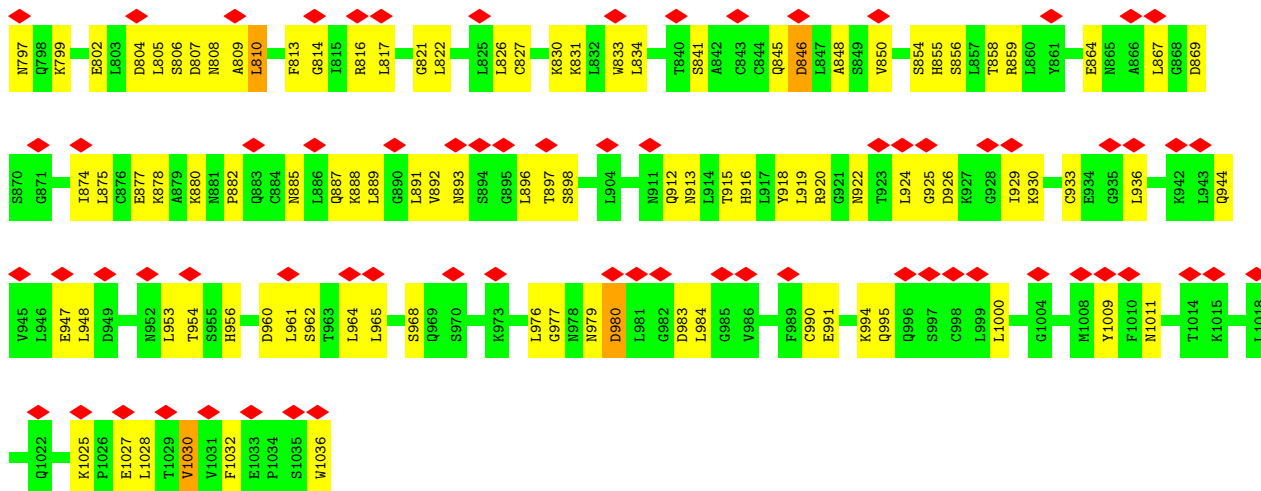
MET	LYS	MET	ALA	SER	ARG	CYS	LYS	LEU	LEU	ALA	TYR	LEU	GLU	ASP	VAL	ASP	LYS	LYS	LYS	MET	HIS	LEU	GLU	ASP	TYR	PRO	PRO	GLN	LYS	GLY	CYS	ILE	PRO	LEU	PRO	ARG	GLY	THR	LYS	ASP	HIS	VAL	ASP	LEU	ALA	THR	LEU	MET	ILE	ASP
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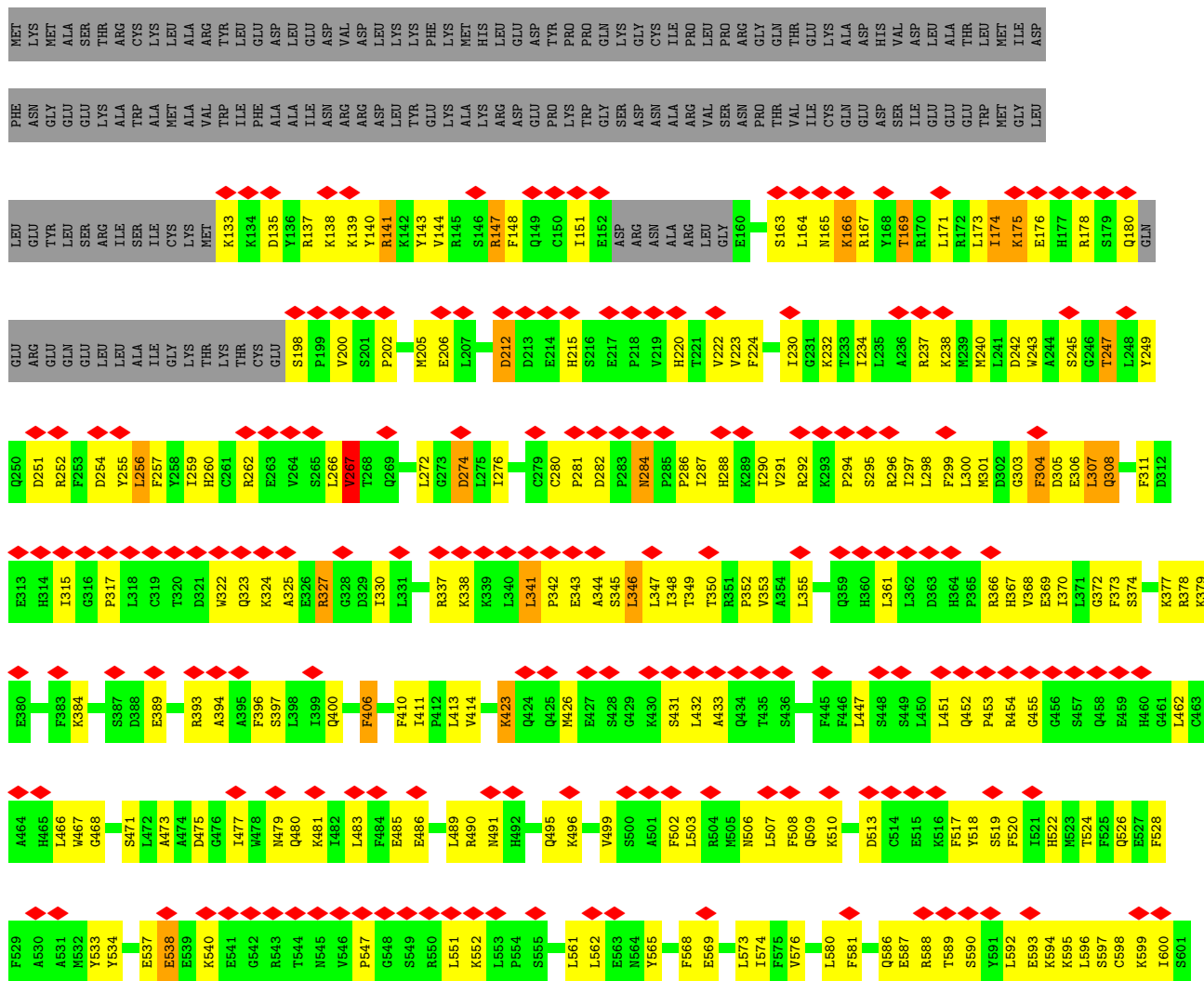


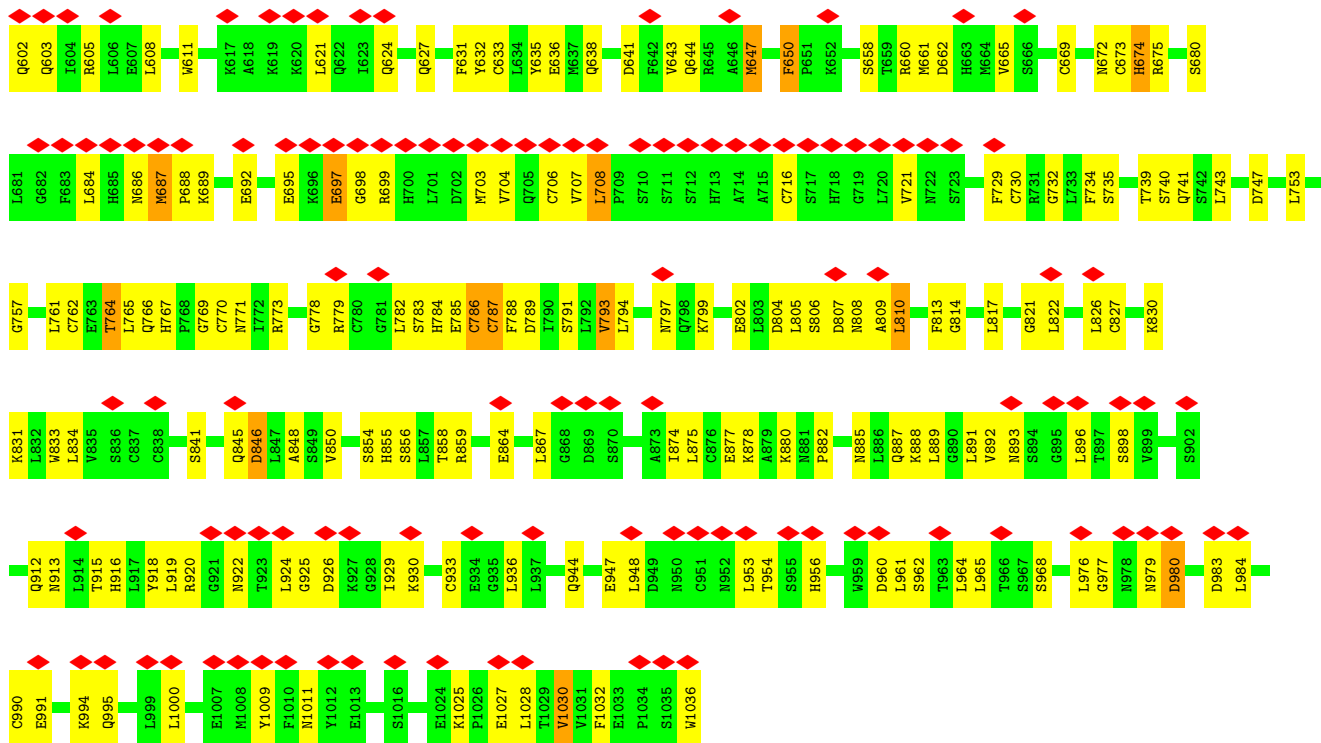
● Molecule 1: NACHT, LRR and PYD domains-containing protein 3



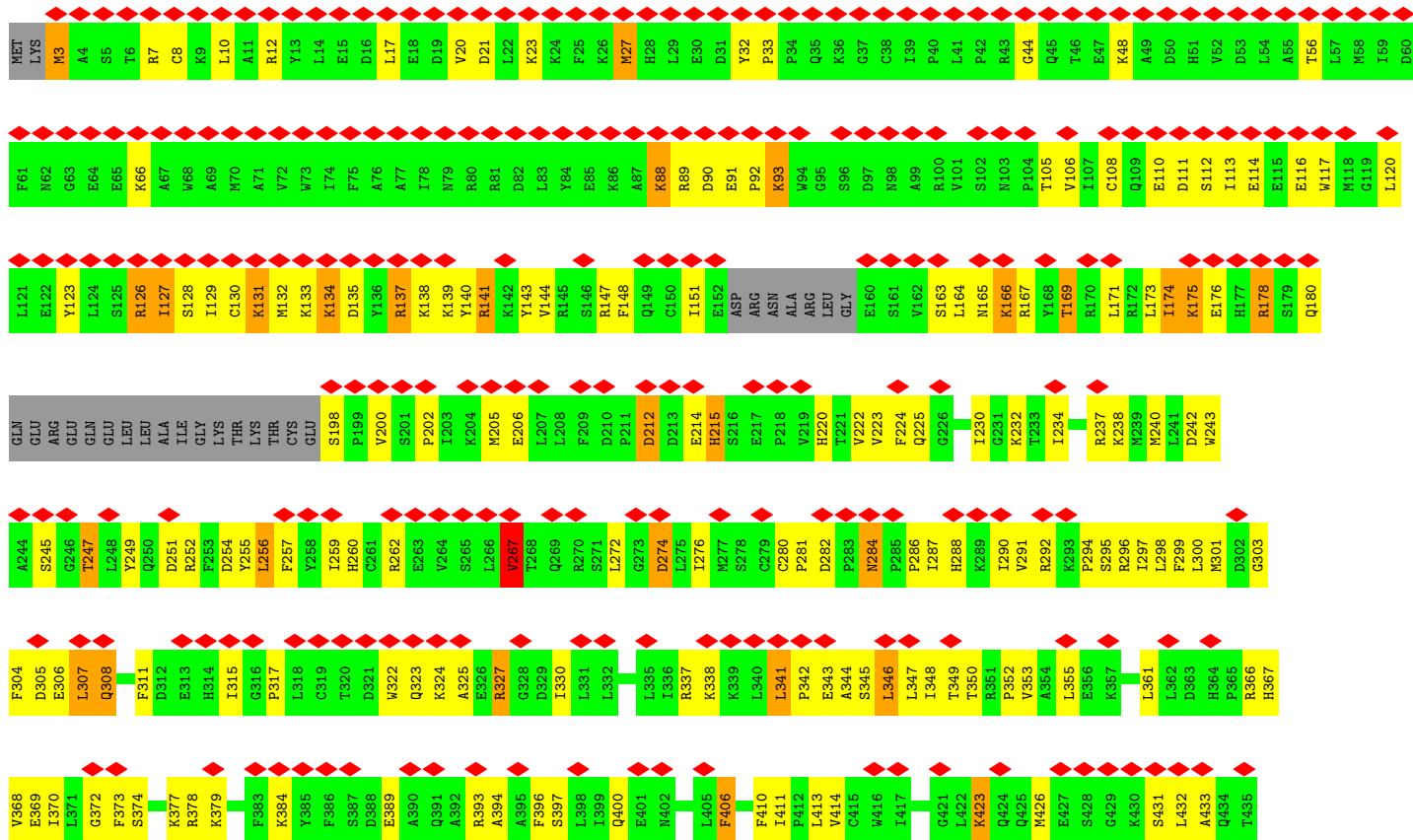


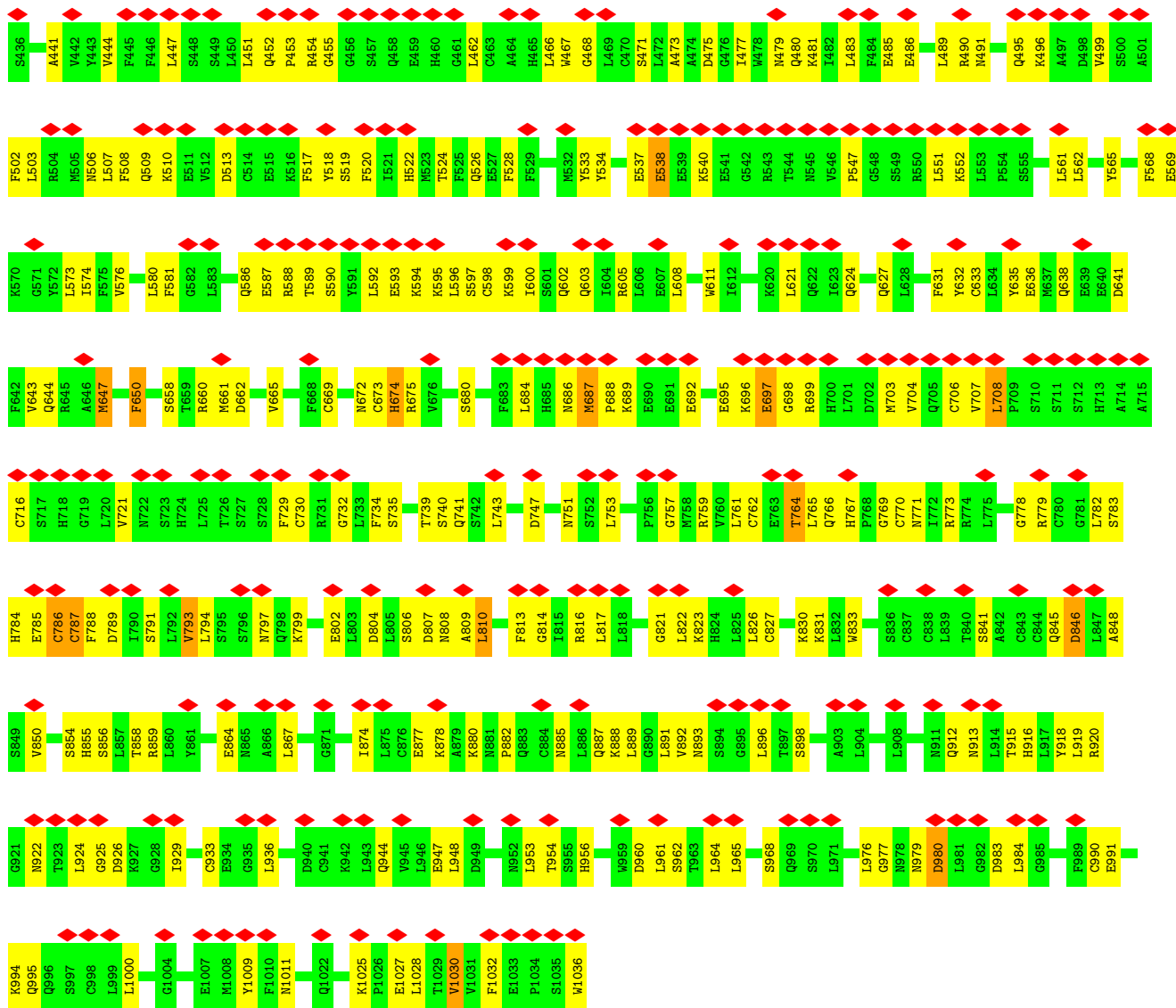
● Molecule 1: NACHT, LRR and PYD domains-containing protein 3



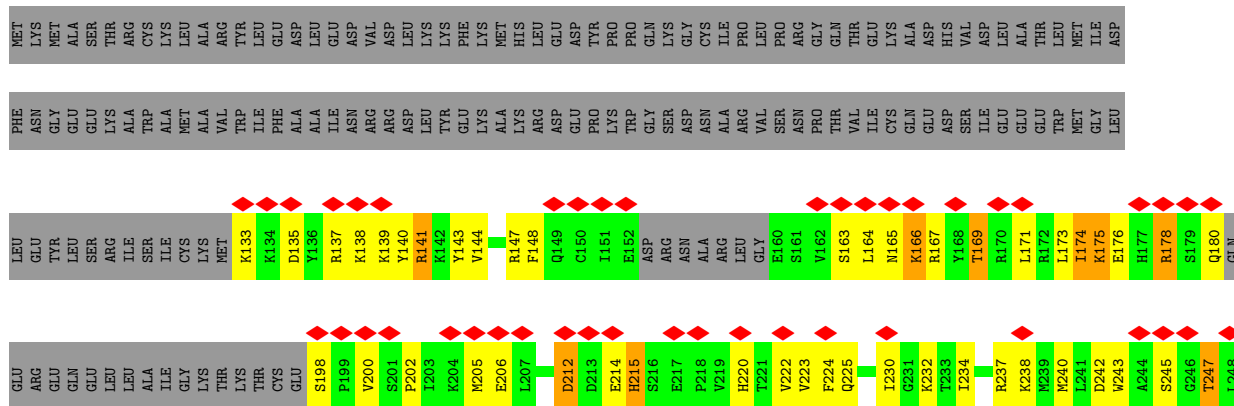


• Molecule 1: NACHT, LRR and PYD domains-containing protein 3





● Molecule 1: NACHT, LRR and PYD domains-containing protein 3









## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, D5	Depositor
Number of particles used	161351	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	45	Depositor
Minimum defocus (nm)	750	Depositor
Maximum defocus (nm)	1500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.046	Depositor
Minimum map value	-0.021	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.002	Depositor
Recommended contour level	0.00515	Depositor
Map size (Å)	309.59998, 309.59998, 309.59998	wwPDB
Map dimensions	240, 240, 240	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.2899998, 1.2899998, 1.2899998	Depositor

## 5 Model quality

### 5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 8GI, ADP

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	0.40	0/8223	0.56	1/11088 (0.0%)
1	B	0.35	0/7144	0.55	1/9632 (0.0%)
1	C	0.35	0/7144	0.55	1/9632 (0.0%)
1	D	0.35	0/7144	0.55	1/9632 (0.0%)
1	E	0.35	0/7144	0.55	1/9632 (0.0%)
1	F	0.35	0/7144	0.55	1/9632 (0.0%)
1	G	0.35	0/7144	0.55	1/9632 (0.0%)
1	H	0.50	1/8223 (0.0%)	0.61	1/11088 (0.0%)
1	I	0.35	0/7144	0.55	1/9632 (0.0%)
1	J	0.35	0/7144	0.55	1/9632 (0.0%)
All	All	0.38	1/73598 (0.0%)	0.56	10/99232 (0.0%)

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	1
1	B	0	1
1	C	0	1
1	D	0	1
1	E	0	1
1	F	0	1
1	G	0	1
1	H	0	1
1	I	0	1
1	J	0	1
All	All	0	10

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	H	27	MET	CB-CG	5.81	1.70	1.51

The worst 5 of 10 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	I	165	ASN	CB-CA-C	5.37	121.14	110.40
1	F	165	ASN	CB-CA-C	5.37	121.13	110.40
1	E	165	ASN	CB-CA-C	5.36	121.13	110.40
1	G	165	ASN	CB-CA-C	5.36	121.12	110.40
1	H	165	ASN	CB-CA-C	5.36	121.12	110.40

There are no chirality outliers.

5 of 10 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	809	ALA	Mainchain
1	B	809	ALA	Mainchain
1	C	809	ALA	Mainchain
1	D	809	ALA	Mainchain
1	E	809	ALA	Mainchain

## 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	8065	0	8081	314	0
1	B	7009	0	7038	281	0
1	C	7009	0	7038	286	0
1	D	7009	0	7038	307	0
1	E	7009	0	7038	285	0
1	F	7009	0	7038	289	0
1	G	7009	0	7038	285	0
1	H	8065	0	8081	343	0
1	I	7009	0	7038	273	0
1	J	7009	0	7038	284	0
2	A	27	0	12	2	0
2	B	27	0	12	2	0
2	C	27	0	12	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	D	27	0	12	2	0
2	E	27	0	12	2	0
2	F	27	0	12	2	0
2	G	27	0	12	2	0
2	H	27	0	12	2	0
2	I	27	0	12	2	0
2	J	27	0	12	2	0
3	A	28	0	0	0	0
3	B	28	0	0	0	0
3	C	28	0	0	0	0
3	D	28	0	0	0	0
3	E	28	0	0	0	0
3	F	28	0	0	0	0
3	G	28	0	0	0	0
3	H	28	0	0	0	0
3	I	28	0	0	0	0
3	J	28	0	0	0	0
All	All	72752	0	72586	2779	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 19.

The worst 5 of 2779 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:D:133:LYS:HZ1	1:H:3:MET:CG	1.10	1.62
1:D:133:LYS:CE	1:H:3:MET:HG3	1.42	1.49
1:D:133:LYS:NZ	1:H:3:MET:HG3	1.15	1.47
1:D:133:LYS:NZ	1:H:3:MET:CG	1.82	1.13
1:D:133:LYS:NZ	1:H:3:MET:CB	2.11	1.12

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 PDB entries followed by that with respect to all EM entries.

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	1004/1036 (97%)	878 (88%)	120 (12%)	6 (1%)	25	63
1	B	874/1036 (84%)	757 (87%)	113 (13%)	4 (0%)	29	67
1	C	874/1036 (84%)	757 (87%)	113 (13%)	4 (0%)	29	67
1	D	874/1036 (84%)	757 (87%)	113 (13%)	4 (0%)	29	67
1	E	874/1036 (84%)	757 (87%)	113 (13%)	4 (0%)	29	67
1	F	874/1036 (84%)	757 (87%)	113 (13%)	4 (0%)	29	67
1	G	874/1036 (84%)	757 (87%)	113 (13%)	4 (0%)	29	67
1	H	1004/1036 (97%)	872 (87%)	125 (12%)	7 (1%)	22	60
1	I	874/1036 (84%)	757 (87%)	113 (13%)	4 (0%)	29	67
1	J	874/1036 (84%)	757 (87%)	113 (13%)	4 (0%)	29	67
All	All	9000/10360 (87%)	7806 (87%)	1149 (13%)	45 (0%)	32	67

5 of 45 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	96	SER
1	H	127	ILE
1	H	131	LYS
1	A	303	GLY
1	A	721	VAL

### 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 PDB entries followed by that with respect to all EM entries.

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	911/933 (98%)	825 (91%)	86 (9%)	8	33
1	B	797/933 (85%)	726 (91%)	71 (9%)	9	36
1	C	797/933 (85%)	726 (91%)	71 (9%)	9	36
1	D	797/933 (85%)	726 (91%)	71 (9%)	9	36

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	E	797/933 (85%)	726 (91%)	71 (9%)	9	36
1	F	797/933 (85%)	726 (91%)	71 (9%)	9	36
1	G	797/933 (85%)	726 (91%)	71 (9%)	9	36
1	H	911/933 (98%)	827 (91%)	84 (9%)	9	34
1	I	797/933 (85%)	726 (91%)	71 (9%)	9	36
1	J	797/933 (85%)	726 (91%)	71 (9%)	9	36
All	All	8198/9330 (88%)	7460 (91%)	738 (9%)	13	36

5 of 738 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	G	341	LEU
1	H	707	VAL
1	G	596	LEU
1	G	327	ARG
1	H	112	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 64 such sidechains are listed below:

Mol	Chain	Res	Type
1	I	913	ASN
1	J	545	ASN
1	D	885	ASN
1	D	808	ASN
1	J	638	GLN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.



## 5.6 Ligand geometry

20 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	ADP	D	1101	-	24,29,29	0.93	1 (4%)	29,45,45	1.52	4 (13%)
2	ADP	C	1101	-	24,29,29	0.93	1 (4%)	29,45,45	1.52	4 (13%)
2	ADP	F	1101	-	24,29,29	0.94	1 (4%)	29,45,45	1.52	4 (13%)
3	8GI	J	1102	-	27,31,31	1.62	7 (25%)	33,48,48	3.04	9 (27%)
3	8GI	B	1102	-	27,31,31	1.62	7 (25%)	33,48,48	3.04	9 (27%)
2	ADP	E	1101	-	24,29,29	0.93	1 (4%)	29,45,45	1.52	4 (13%)
3	8GI	G	1102	-	27,31,31	1.61	7 (25%)	33,48,48	3.04	9 (27%)
2	ADP	I	1101	-	24,29,29	0.93	1 (4%)	29,45,45	1.52	4 (13%)
3	8GI	H	1102	-	27,31,31	1.61	7 (25%)	33,48,48	3.04	9 (27%)
3	8GI	A	1102	-	27,31,31	1.62	7 (25%)	33,48,48	3.05	9 (27%)
3	8GI	D	1102	-	27,31,31	1.62	7 (25%)	33,48,48	3.05	9 (27%)
2	ADP	J	1101	-	24,29,29	0.92	1 (4%)	29,45,45	1.52	4 (13%)
2	ADP	G	1101	-	24,29,29	0.93	1 (4%)	29,45,45	1.52	4 (13%)
3	8GI	F	1102	-	27,31,31	1.60	7 (25%)	33,48,48	3.04	9 (27%)
3	8GI	C	1102	-	27,31,31	1.62	7 (25%)	33,48,48	3.04	9 (27%)
2	ADP	A	1101	-	24,29,29	0.93	1 (4%)	29,45,45	1.53	4 (13%)
2	ADP	H	1101	-	24,29,29	0.93	1 (4%)	29,45,45	1.53	4 (13%)
3	8GI	E	1102	-	27,31,31	1.62	7 (25%)	33,48,48	3.04	9 (27%)
3	8GI	I	1102	-	27,31,31	1.62	7 (25%)	33,48,48	3.04	9 (27%)
2	ADP	B	1101	-	24,29,29	0.94	1 (4%)	29,45,45	1.52	4 (13%)

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	ADP	D	1101	-	-	3/12/32/32	0/3/3/3
2	ADP	C	1101	-	-	2/12/32/32	0/3/3/3
2	ADP	F	1101	-	-	3/12/32/32	0/3/3/3
3	8GI	J	1102	-	-	1/11/33/33	0/4/4/4
3	8GI	B	1102	-	-	1/11/33/33	0/4/4/4
2	ADP	E	1101	-	-	2/12/32/32	0/3/3/3
3	8GI	G	1102	-	-	1/11/33/33	0/4/4/4
2	ADP	I	1101	-	-	2/12/32/32	0/3/3/3
3	8GI	H	1102	-	-	1/11/33/33	0/4/4/4
3	8GI	A	1102	-	-	1/11/33/33	0/4/4/4
3	8GI	D	1102	-	-	1/11/33/33	0/4/4/4
2	ADP	J	1101	-	-	3/12/32/32	0/3/3/3
2	ADP	G	1101	-	-	2/12/32/32	0/3/3/3
3	8GI	F	1102	-	-	1/11/33/33	0/4/4/4
3	8GI	C	1102	-	-	1/11/33/33	0/4/4/4
2	ADP	A	1101	-	-	2/12/32/32	0/3/3/3
2	ADP	H	1101	-	-	3/12/32/32	0/3/3/3
3	8GI	E	1102	-	-	1/11/33/33	0/4/4/4
3	8GI	I	1102	-	-	1/11/33/33	0/4/4/4
2	ADP	B	1101	-	-	3/12/32/32	0/3/3/3

The worst 5 of 80 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	1102	8GI	O24-C22	-3.62	1.39	1.44
3	C	1102	8GI	O24-C22	-3.61	1.39	1.44
3	D	1102	8GI	O24-C22	-3.60	1.39	1.44
3	J	1102	8GI	O24-C22	-3.59	1.39	1.44
3	G	1102	8GI	O24-C22	-3.59	1.39	1.44

The worst 5 of 130 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	1102	8GI	O28-S02-O01	-14.23	102.06	119.55
3	G	1102	8GI	O28-S02-O01	-14.19	102.10	119.55
3	E	1102	8GI	O28-S02-O01	-14.19	102.10	119.55
3	D	1102	8GI	O28-S02-O01	-14.19	102.11	119.55
3	F	1102	8GI	O28-S02-O01	-14.18	102.12	119.55

There are no chirality outliers.

5 of 35 torsion outliers are listed below:

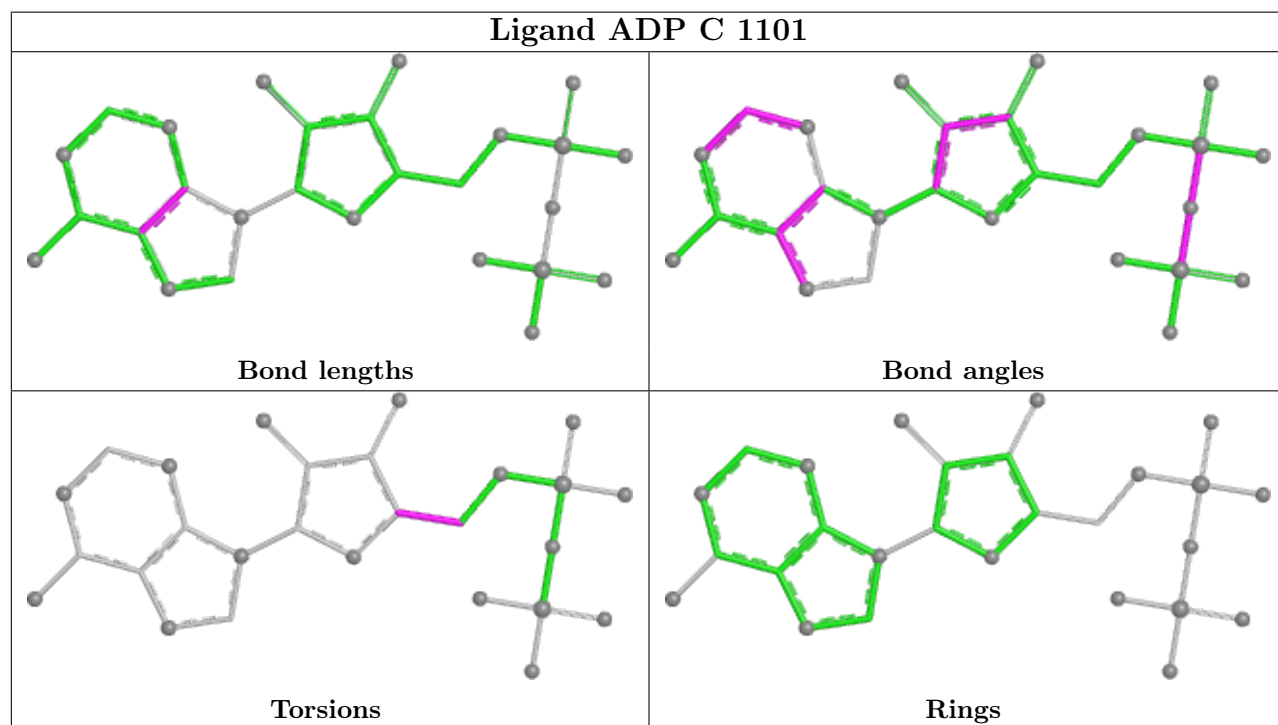
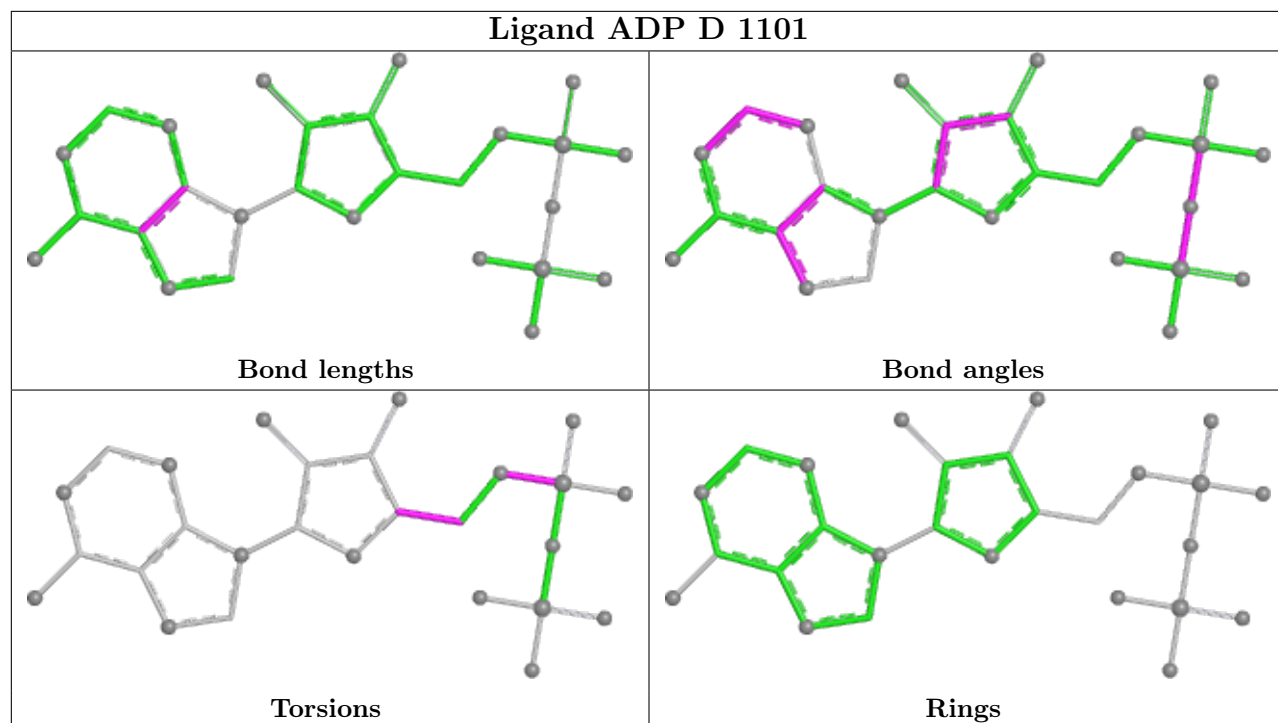
Mol	Chain	Res	Type	Atoms
2	A	1101	ADP	C3'-C4'-C5'-O5'
2	B	1101	ADP	C3'-C4'-C5'-O5'
2	C	1101	ADP	C3'-C4'-C5'-O5'
2	D	1101	ADP	C3'-C4'-C5'-O5'
2	E	1101	ADP	C3'-C4'-C5'-O5'

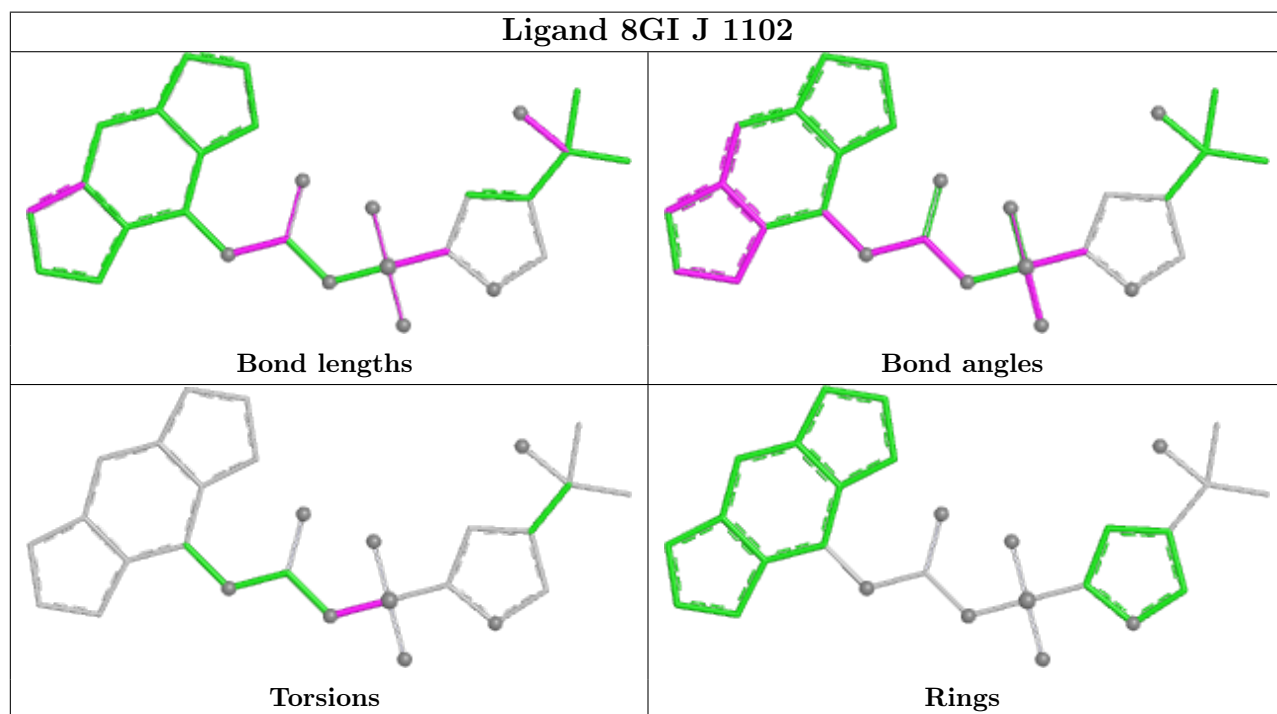
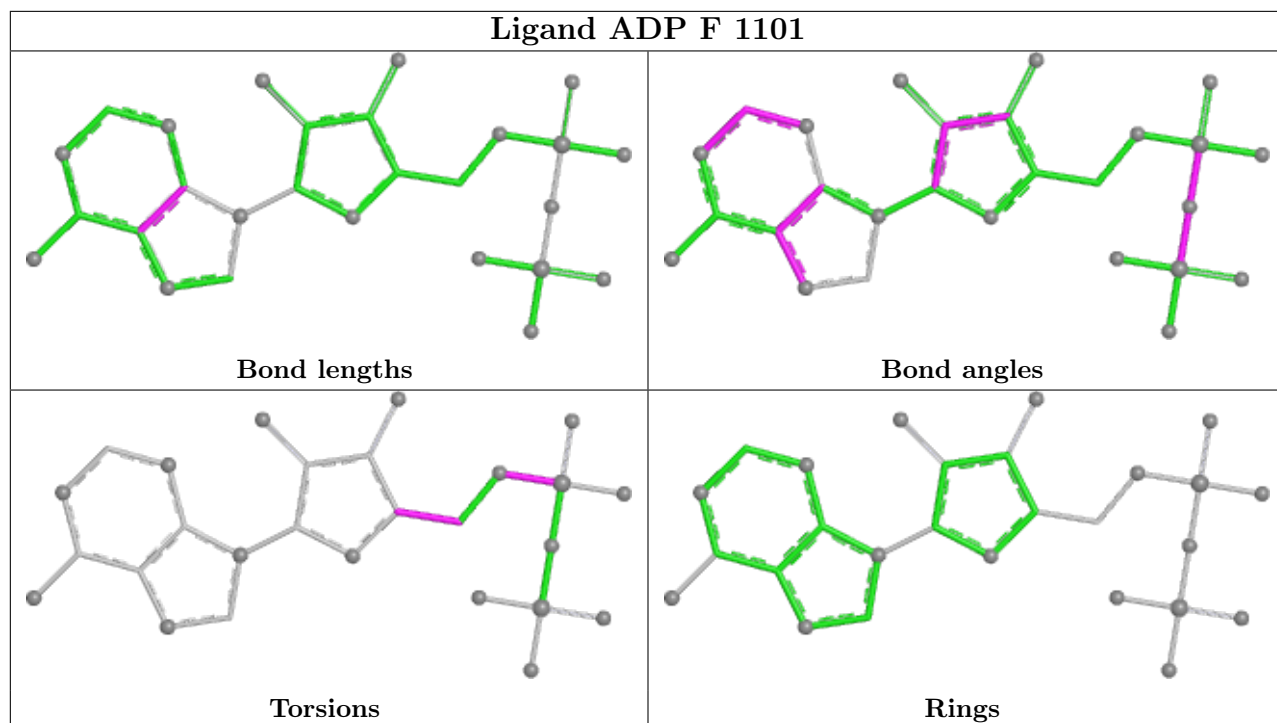
There are no ring outliers.

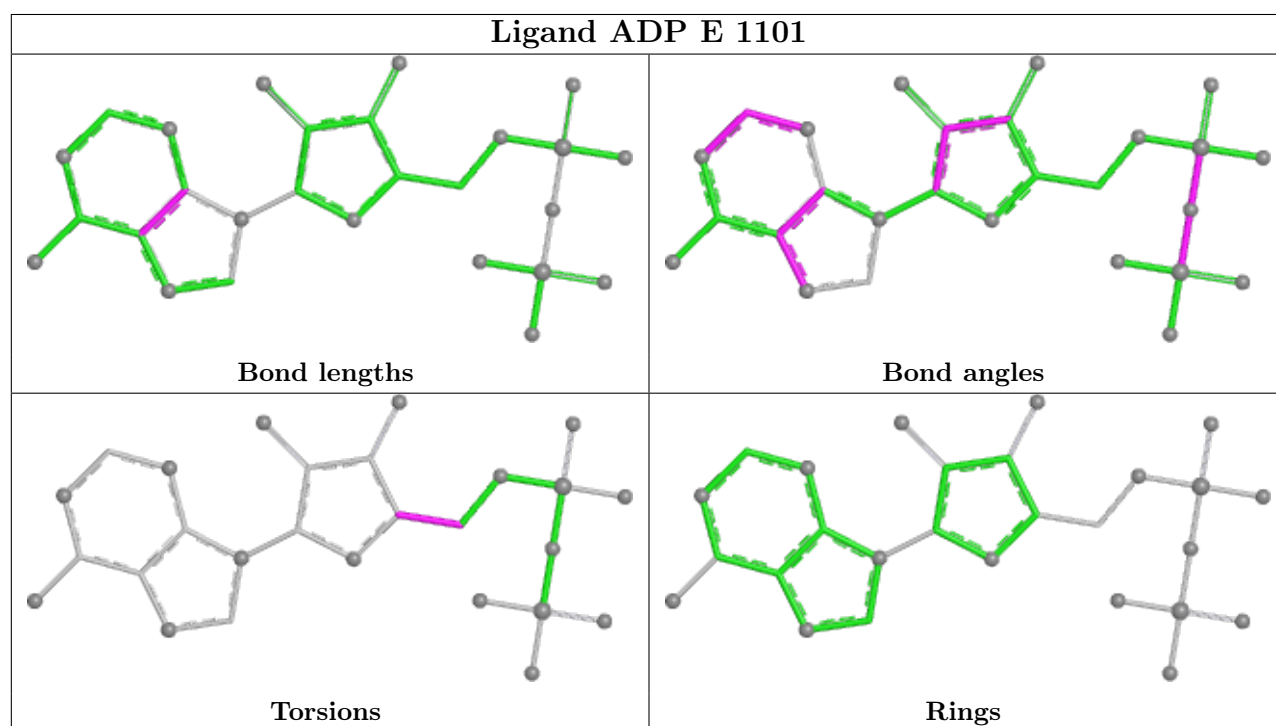
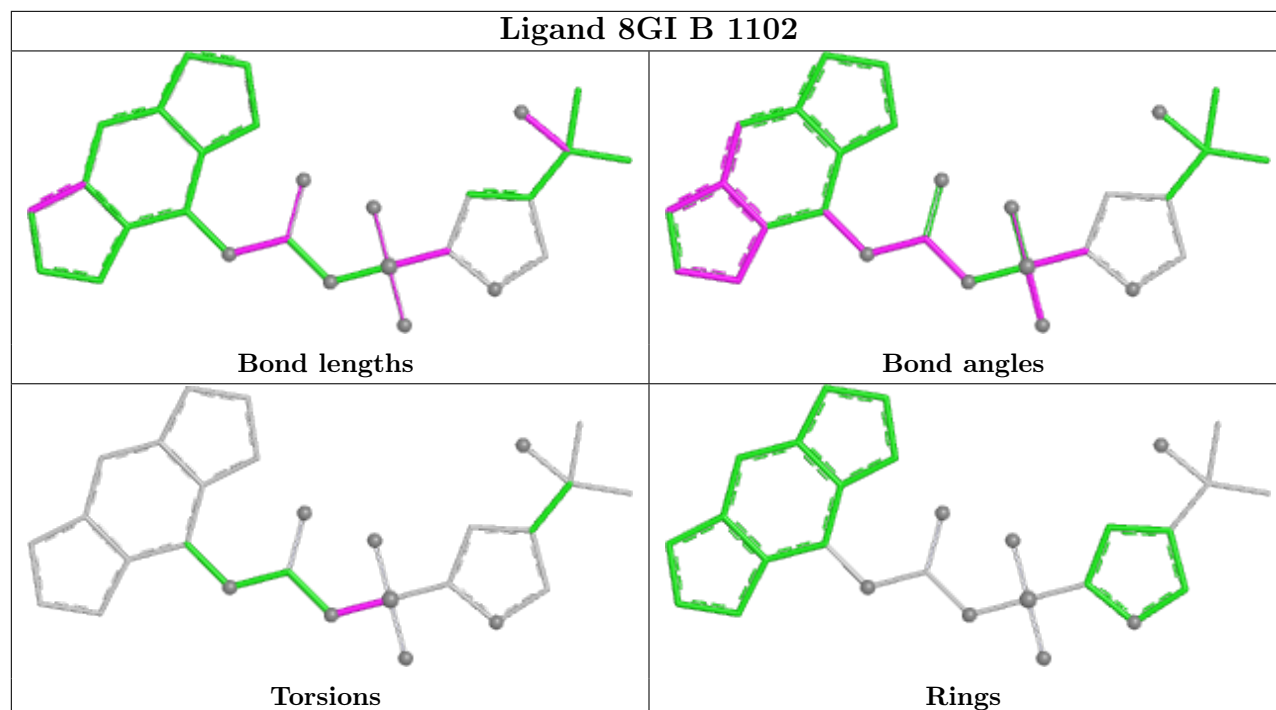
10 monomers are involved in 20 short contacts:

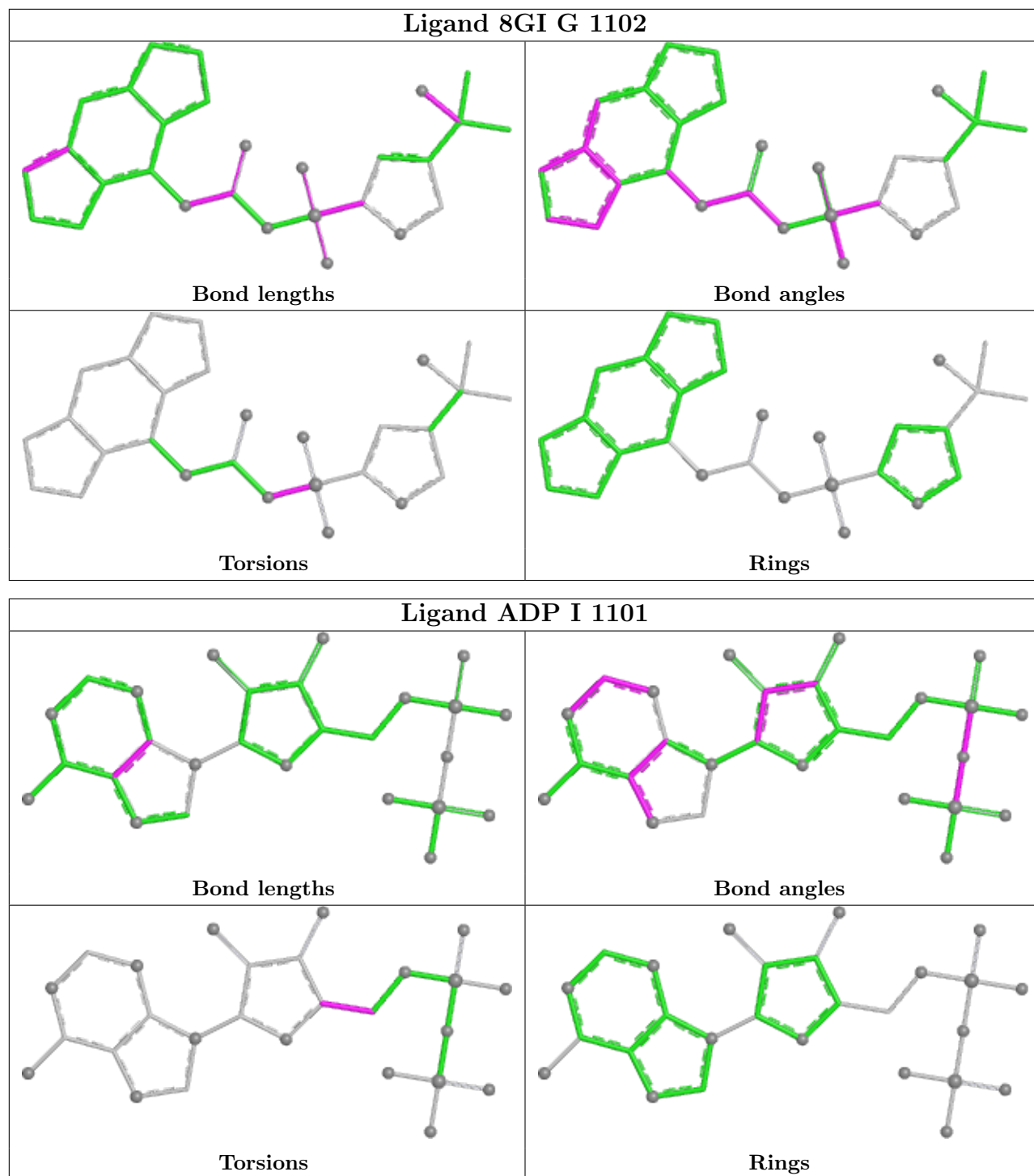
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	D	1101	ADP	2	0
2	C	1101	ADP	2	0
2	F	1101	ADP	2	0
2	E	1101	ADP	2	0
2	I	1101	ADP	2	0
2	J	1101	ADP	2	0
2	G	1101	ADP	2	0
2	A	1101	ADP	2	0
2	H	1101	ADP	2	0
2	B	1101	ADP	2	0

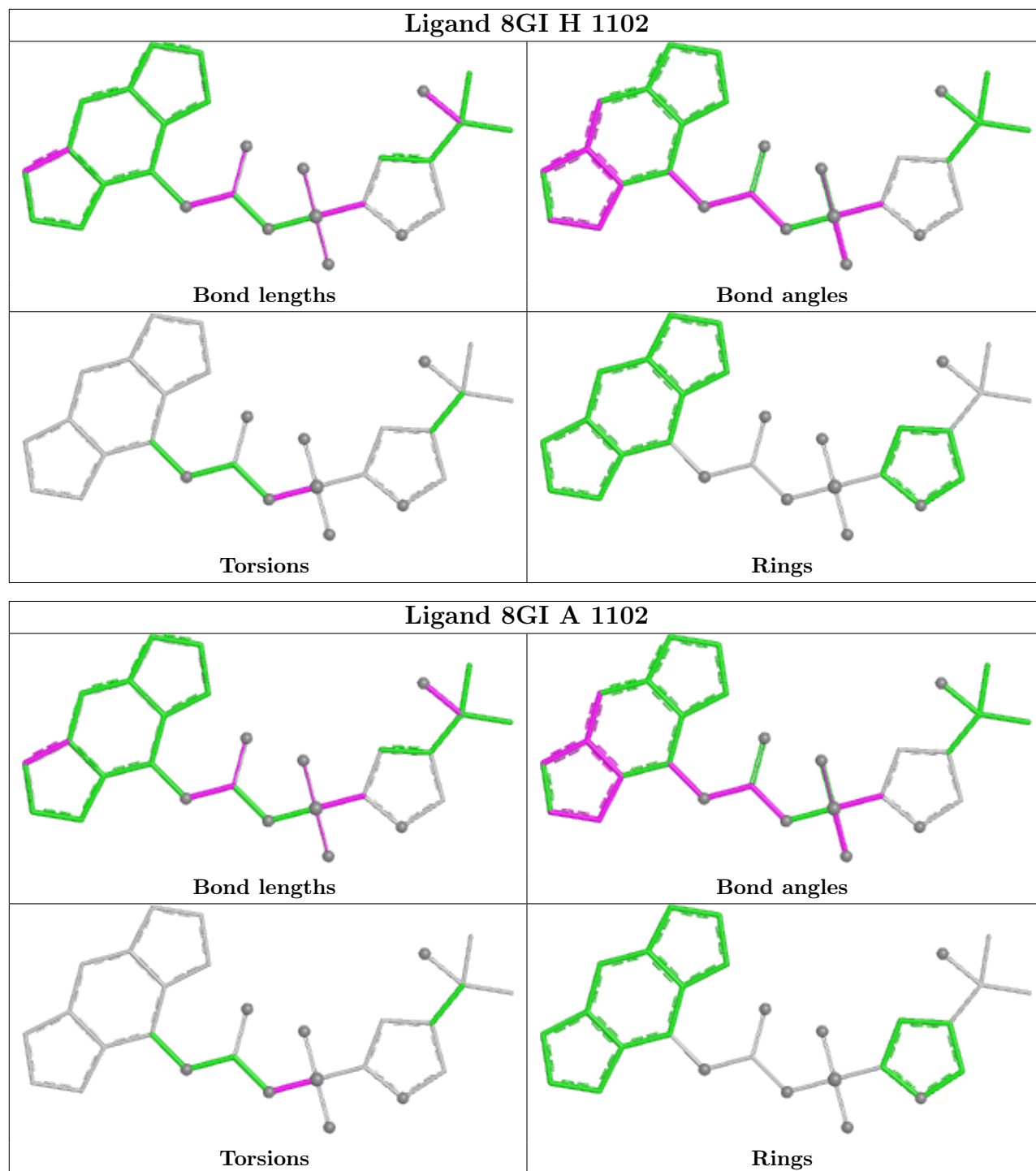
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



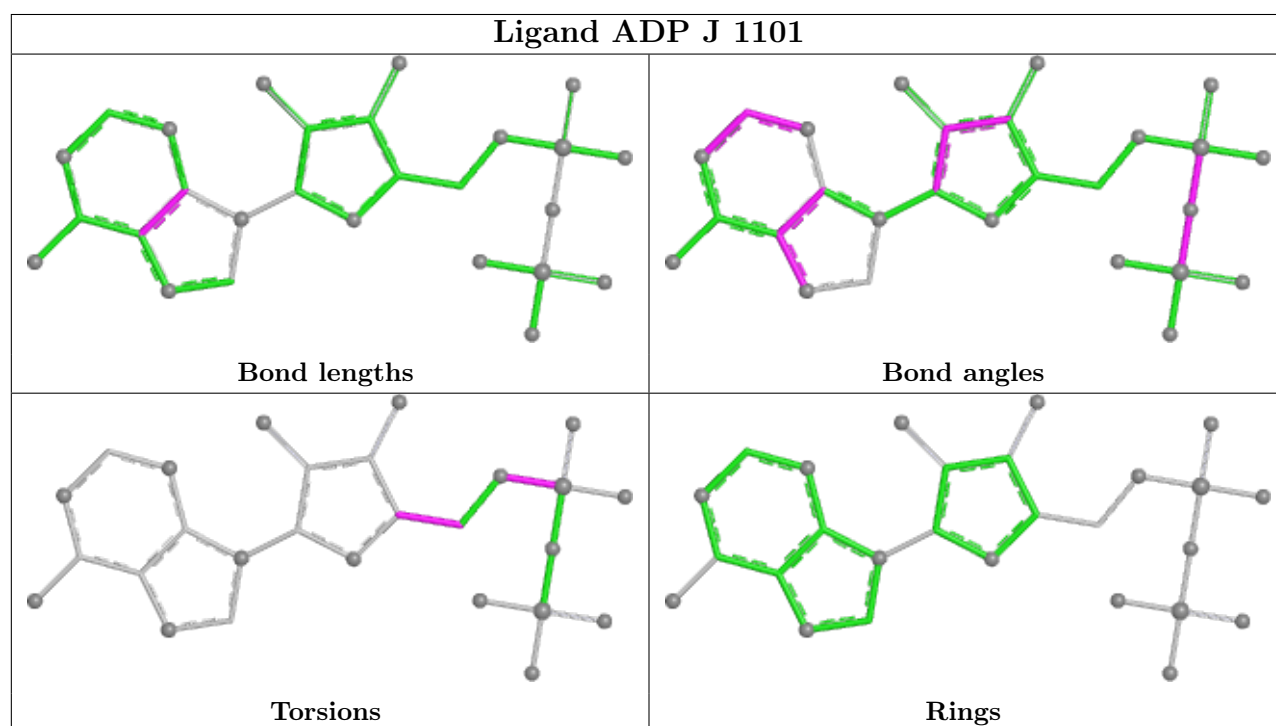
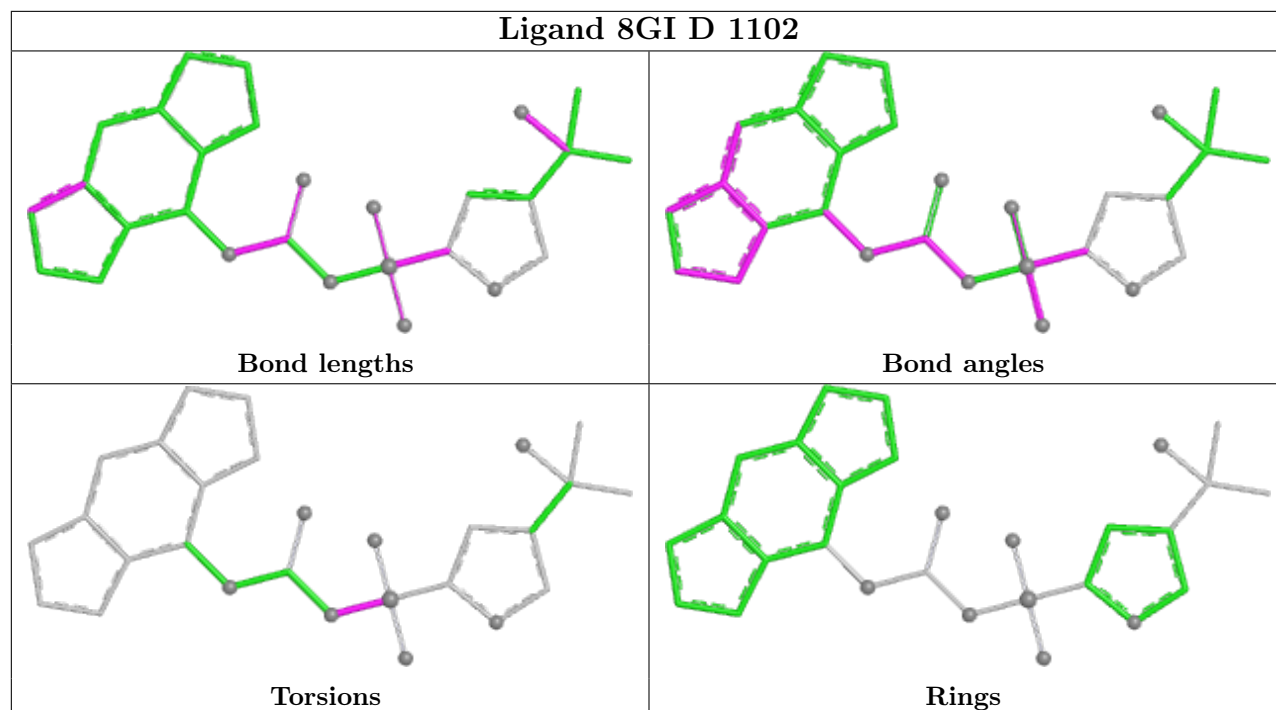


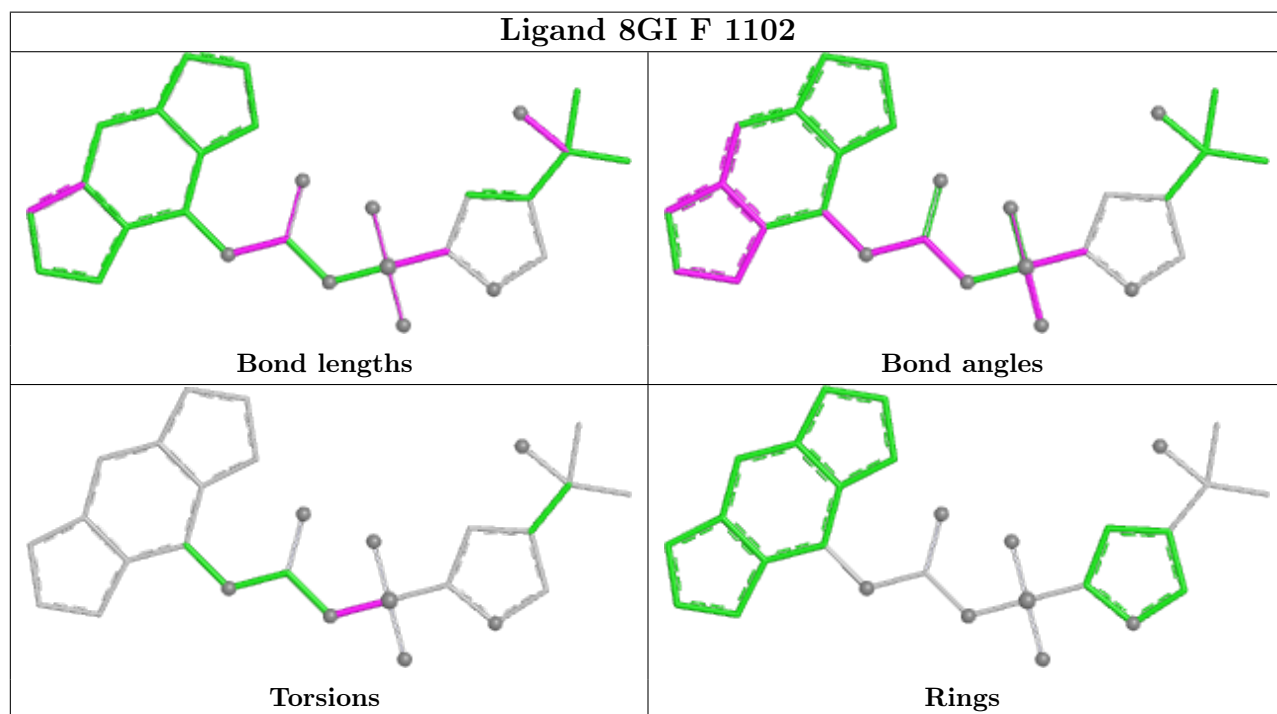
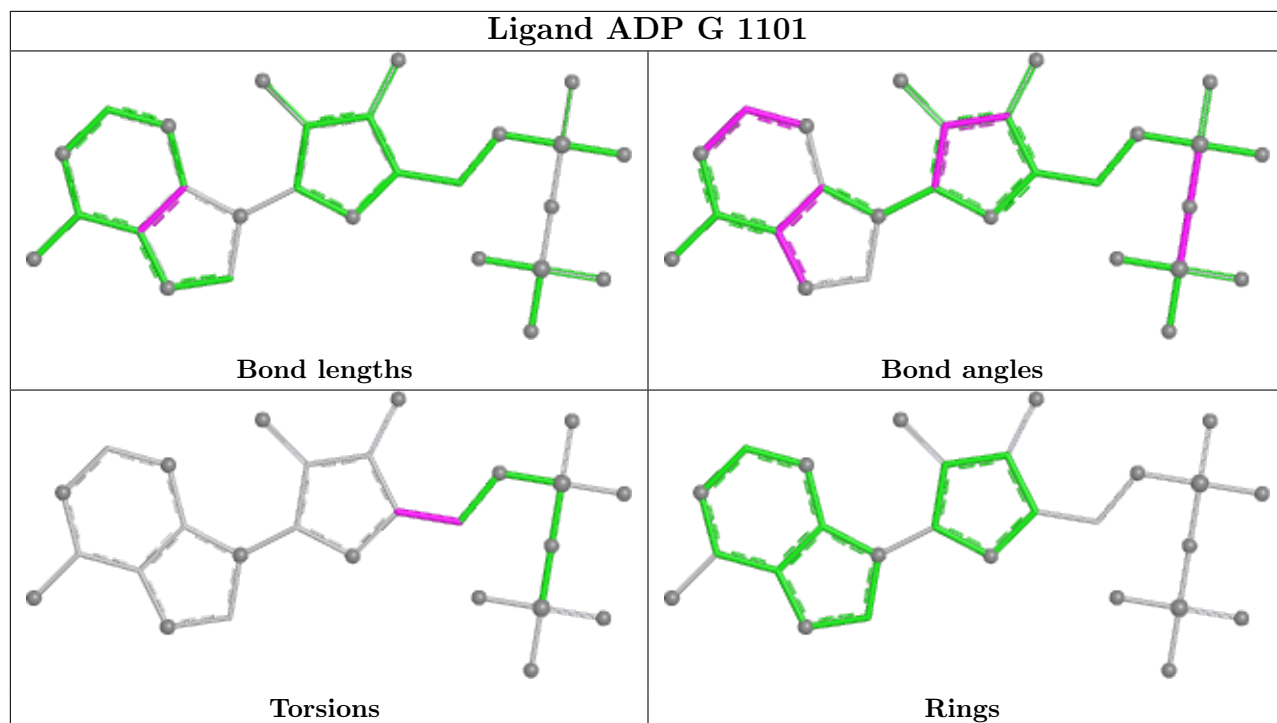


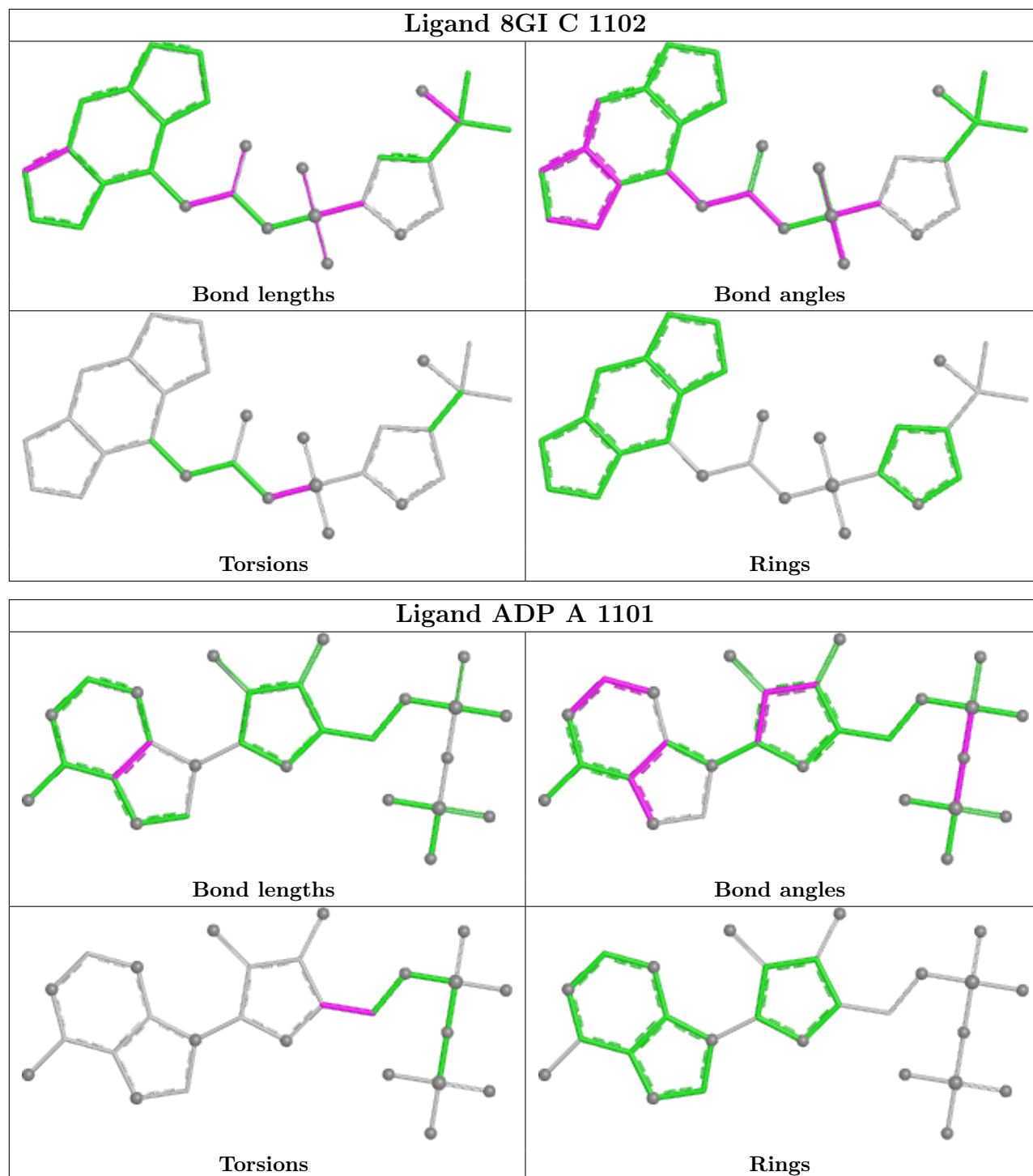


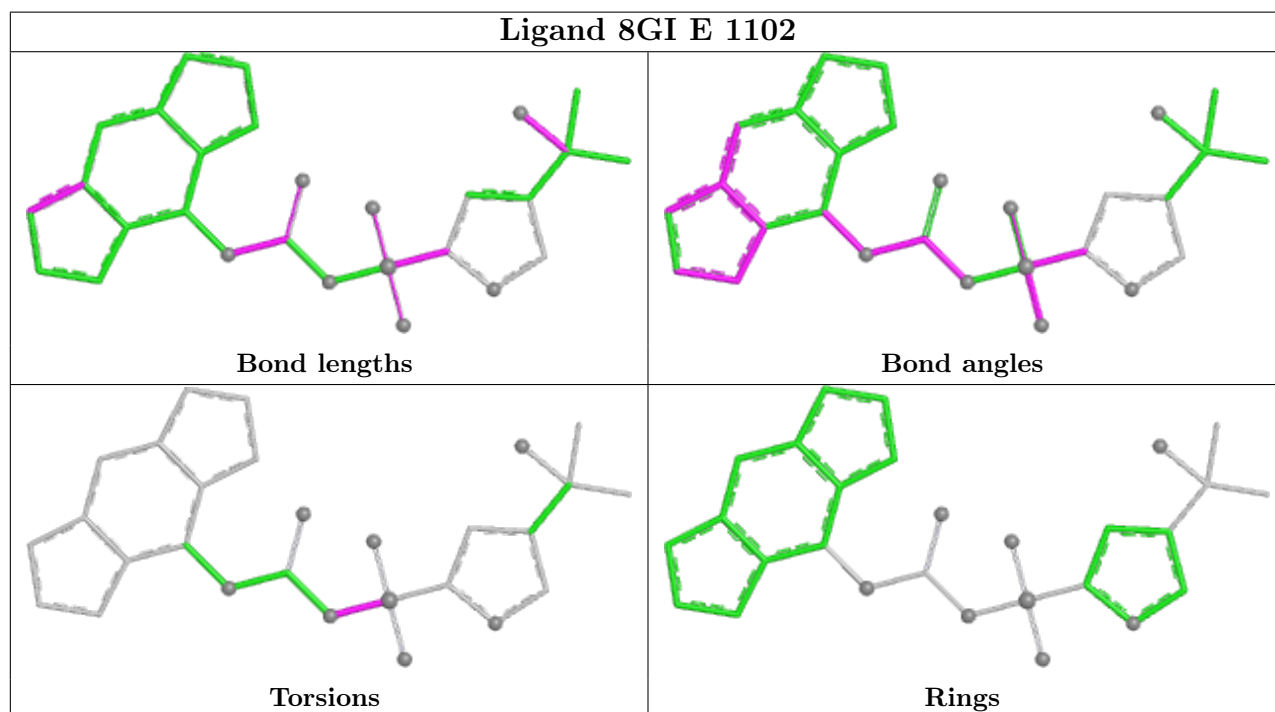
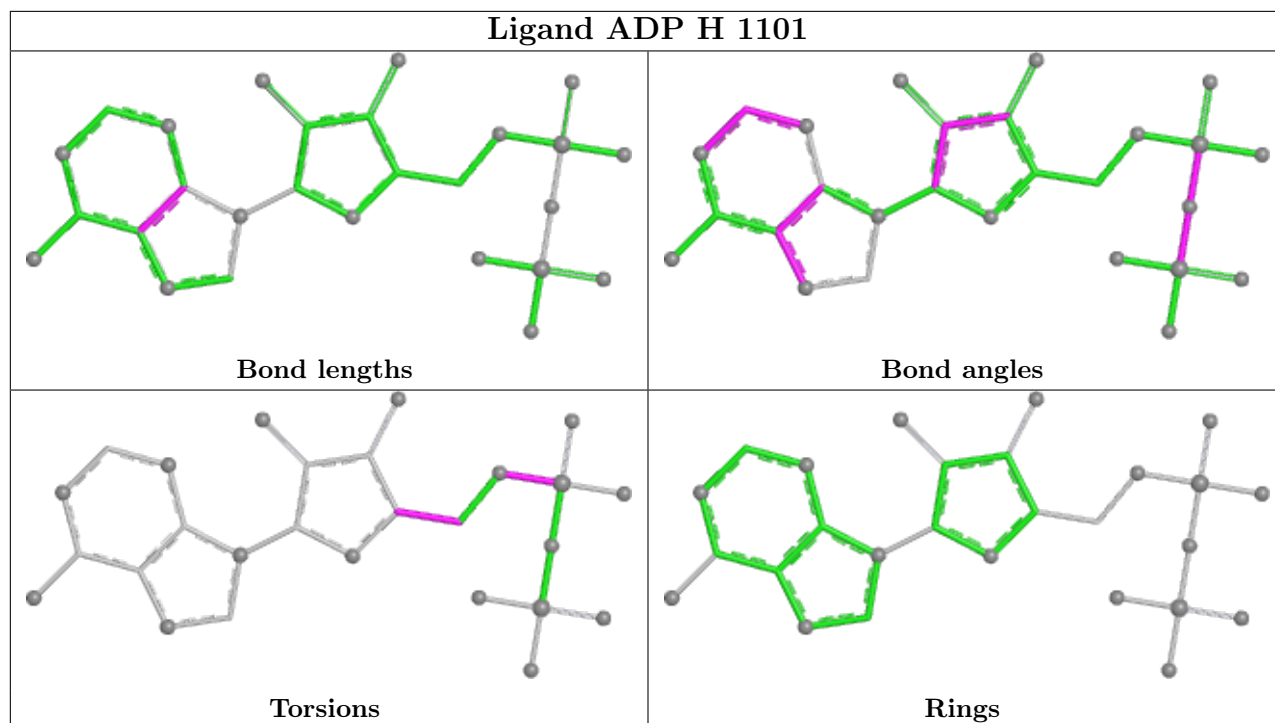


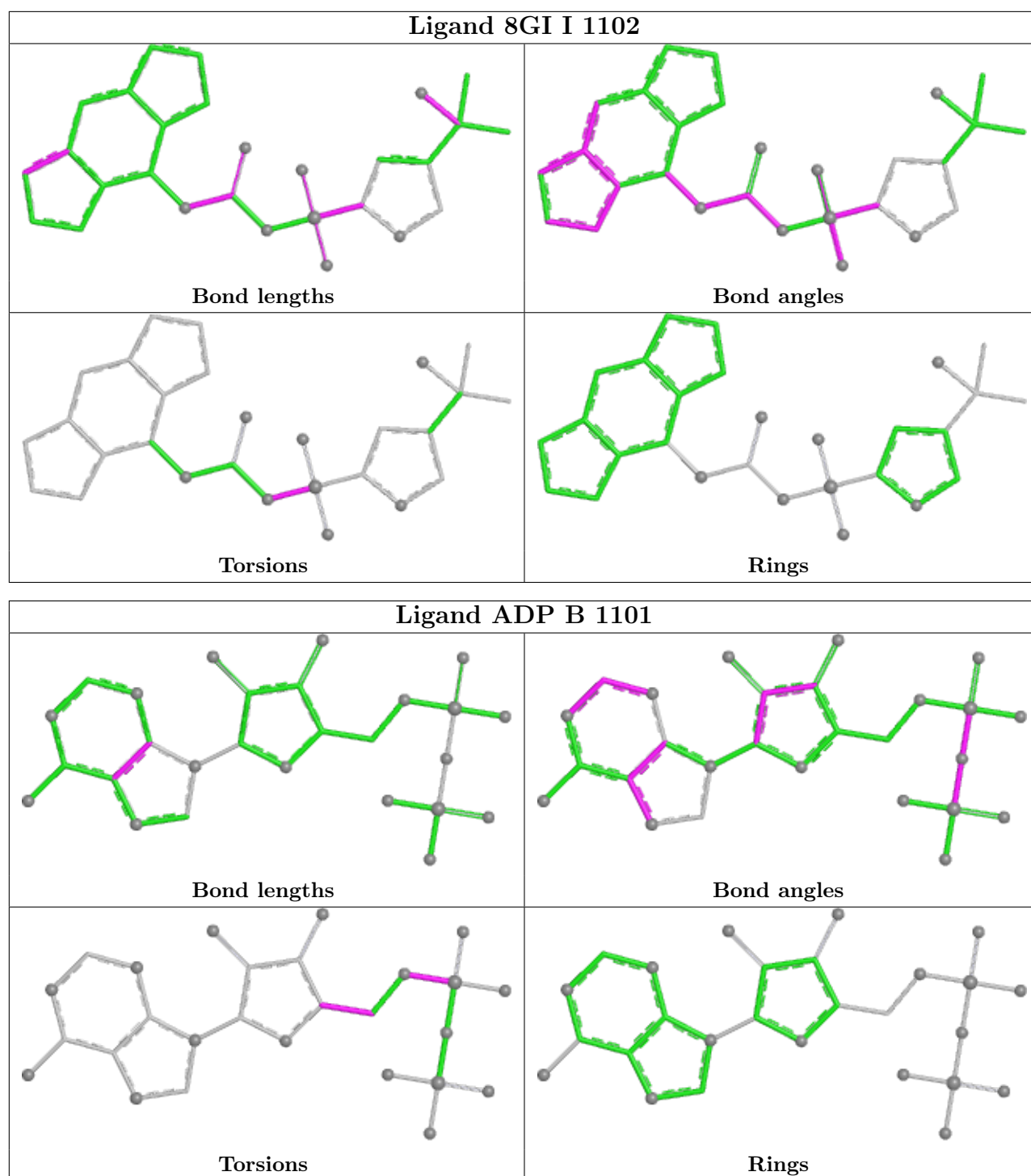












## 5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues

There are no chain breaks in this entry.

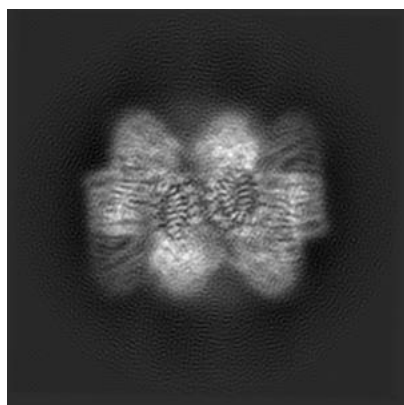
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-13686. These allow visual inspection of the internal detail of the map and identification of artifacts.

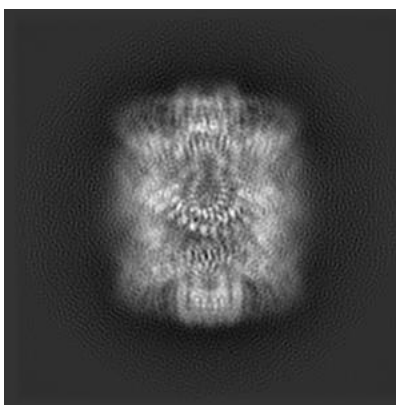
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

### 6.1 Orthogonal projections [i](#)

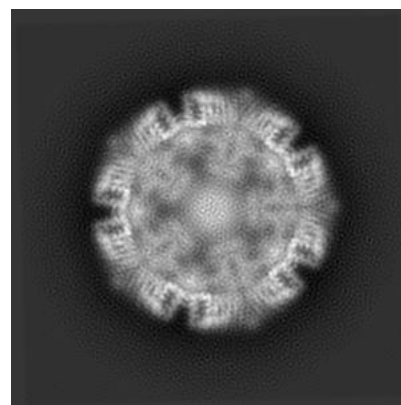
#### 6.1.1 Primary map



X



Y

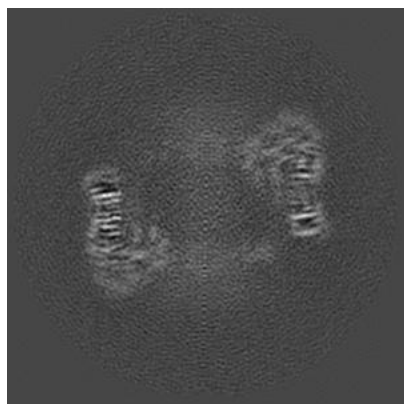


Z

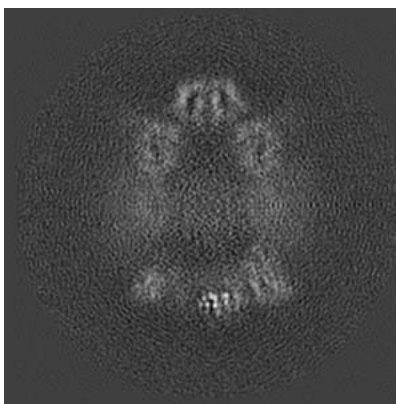
The images above show the map projected in three orthogonal directions.

### 6.2 Central slices [i](#)

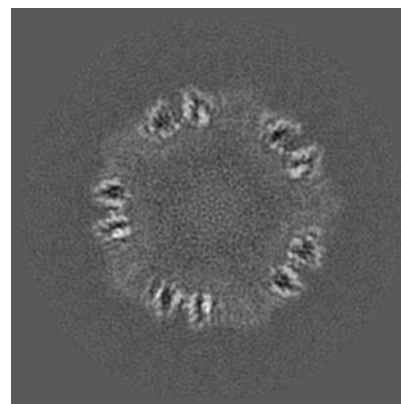
#### 6.2.1 Primary map



X Index: 120



Y Index: 120

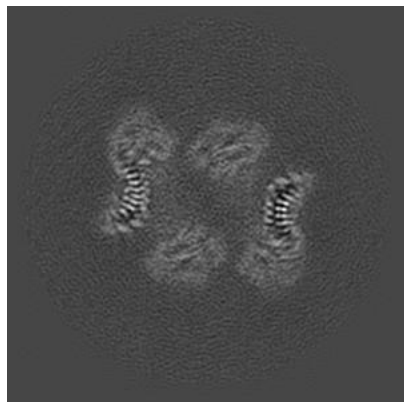


Z Index: 120

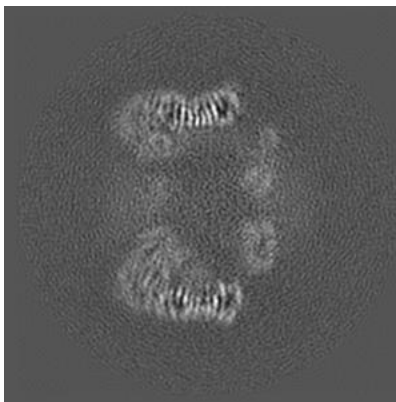
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

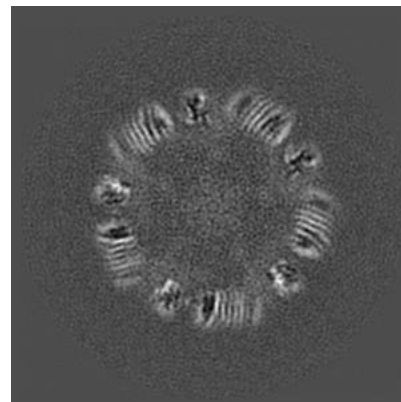
### 6.3.1 Primary map



X Index: 158



Y Index: 100

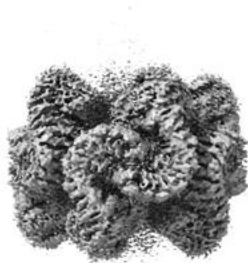


Z Index: 130

The images above show the largest variance slices of the map in three orthogonal directions.

## 6.4 Orthogonal surface views [i](#)

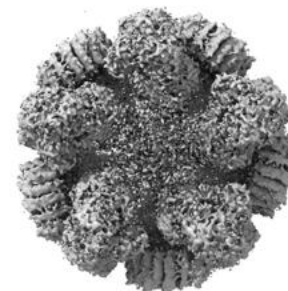
### 6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.00515. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.



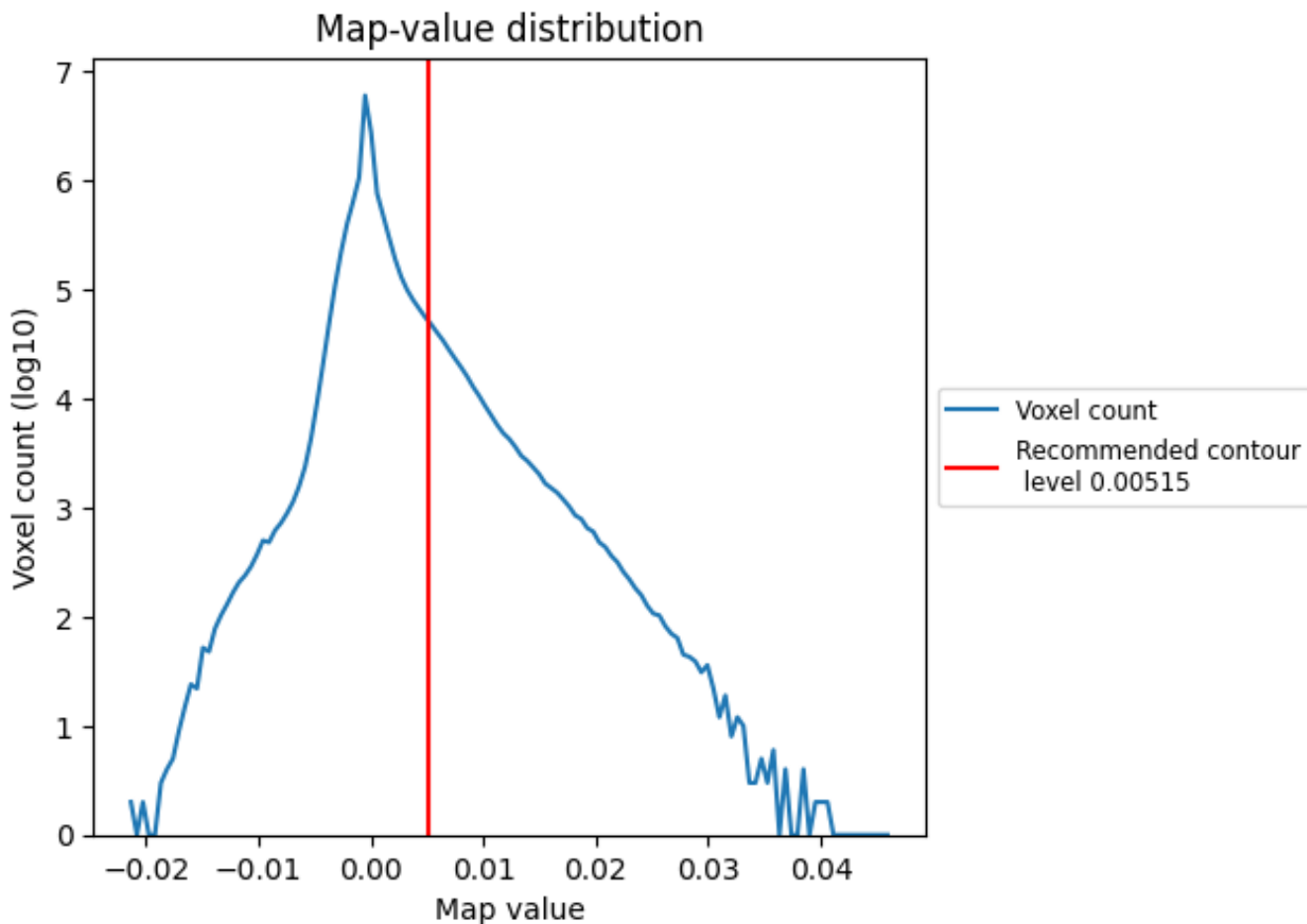
## 6.5 Mask visualisation

This section was not generated. No masks/segmentation were deposited.

## 7 Map analysis [i](#)

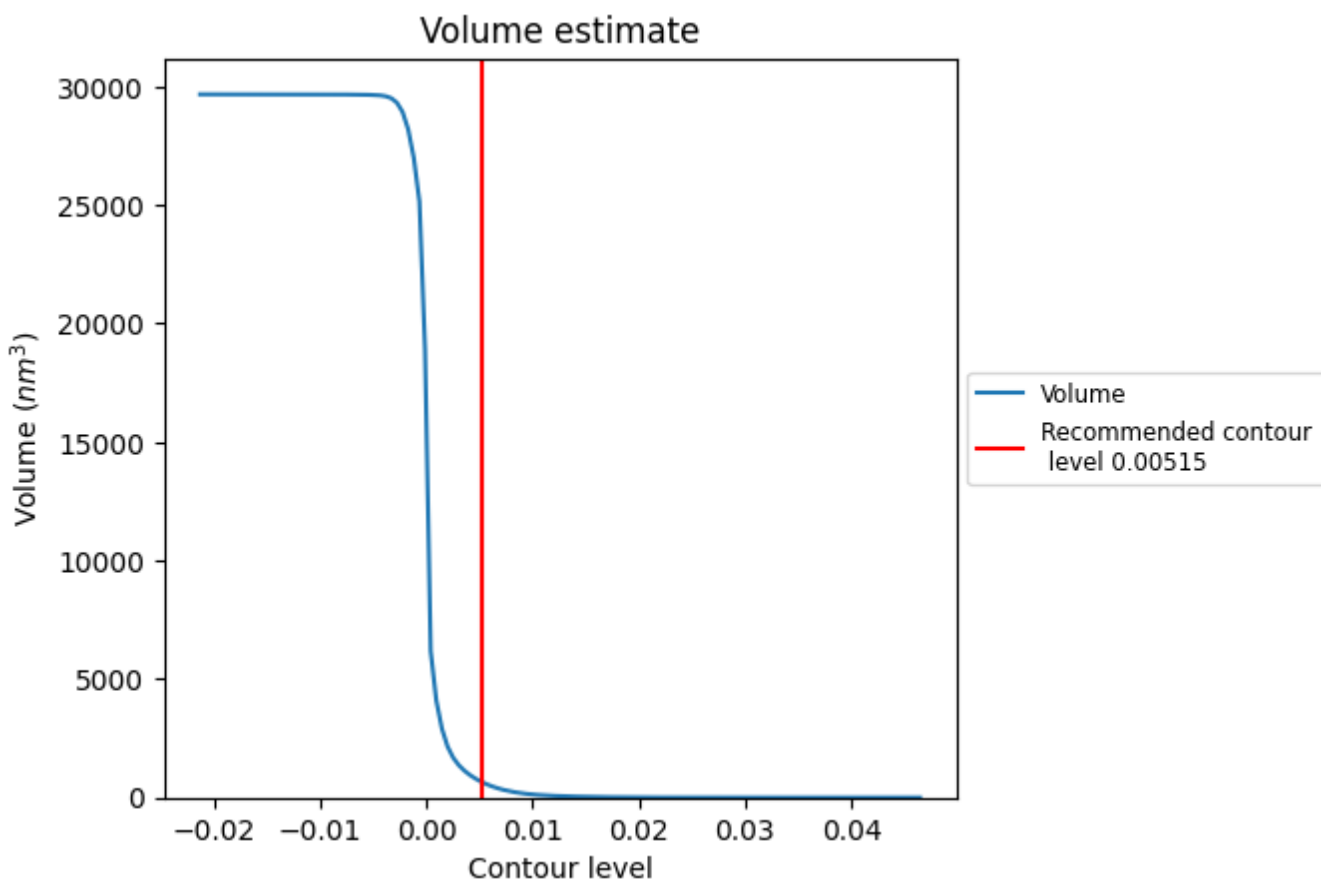
This section contains the results of statistical analysis of the map.

### 7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

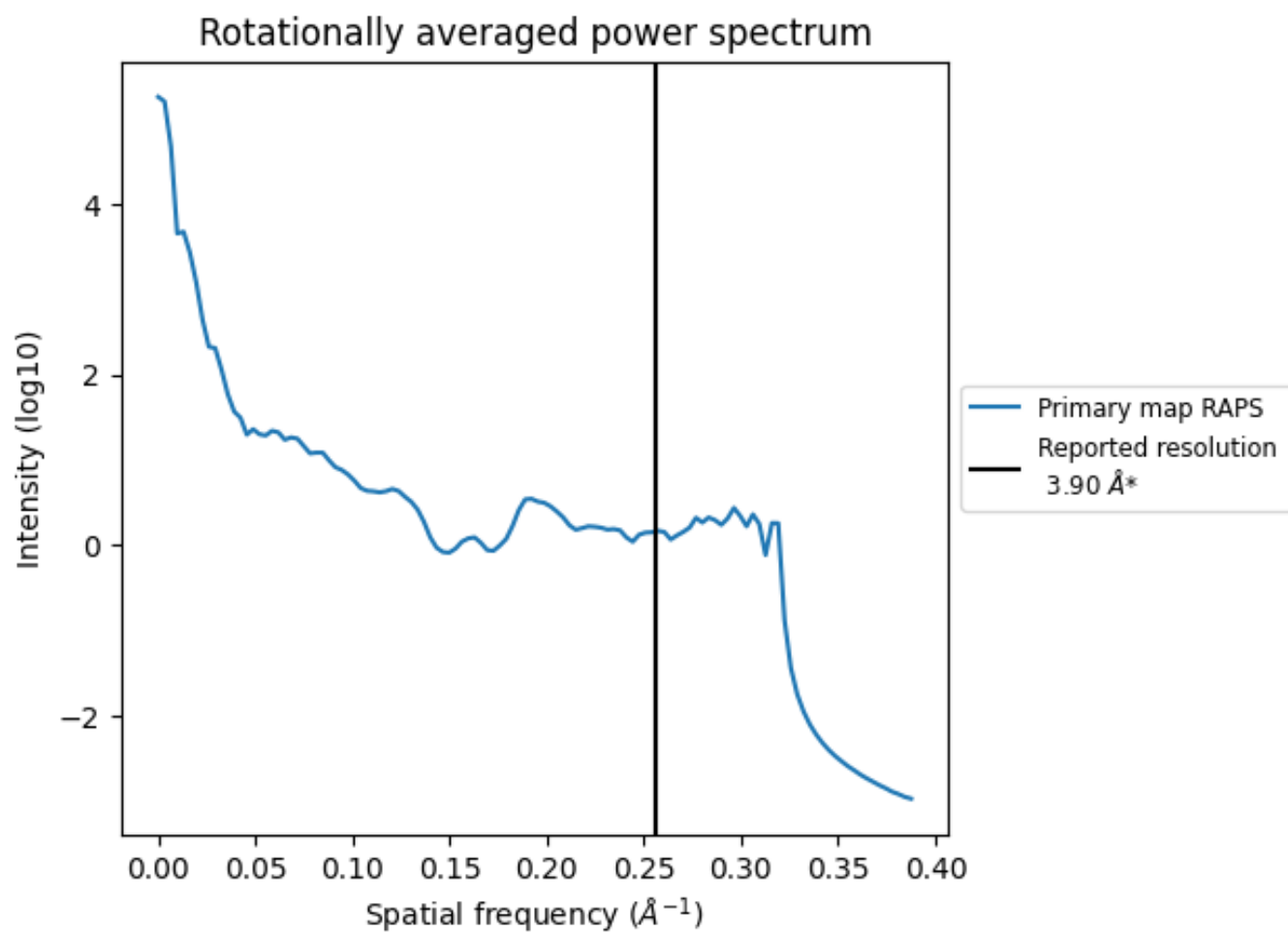
## 7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 670 nm<sup>3</sup>; this corresponds to an approximate mass of 605 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

### 7.3 Rotationally averaged power spectrum [i](#)

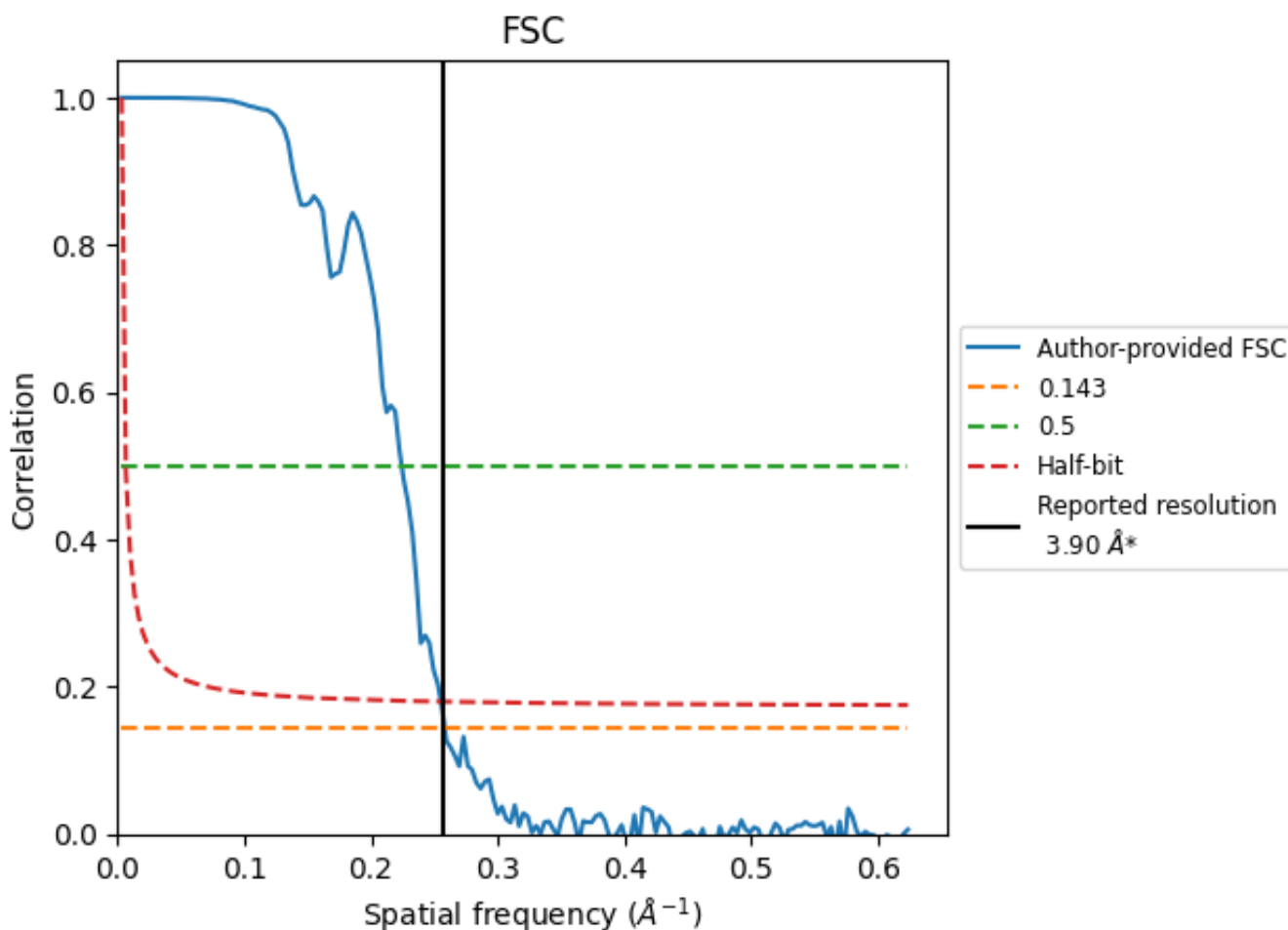


\*Reported resolution corresponds to spatial frequency of 0.256 Å<sup>-1</sup>

## 8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

### 8.1 FSC [i](#)



\*Reported resolution corresponds to spatial frequency of 0.256 Å<sup>-1</sup>

## 8.2 Resolution estimates [i](#)

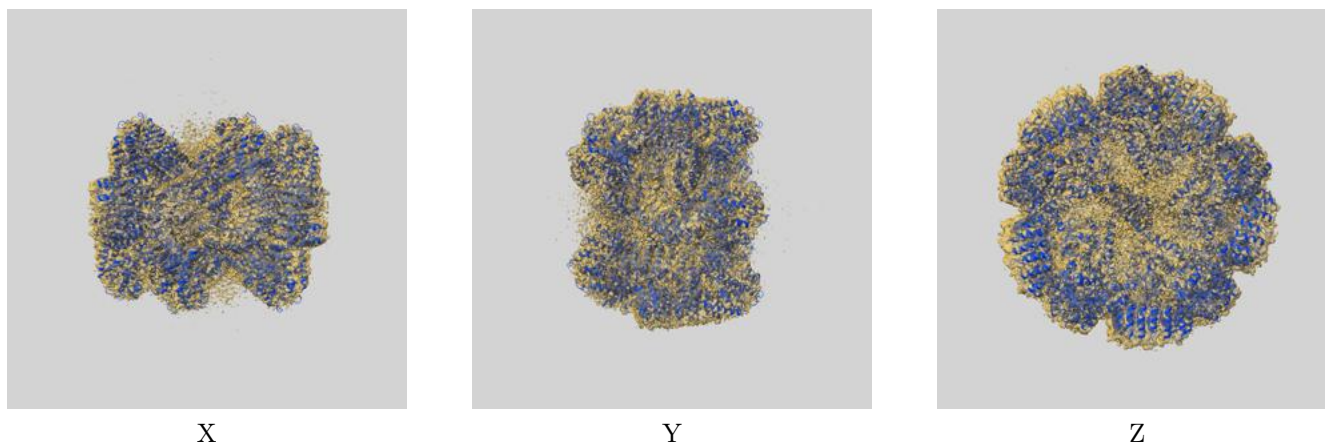
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.90	-	-
Author-provided FSC curve	3.87	4.46	3.92
Unmasked-calculated*	-	-	-

\*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

## 9 Map-model fit [i](#)

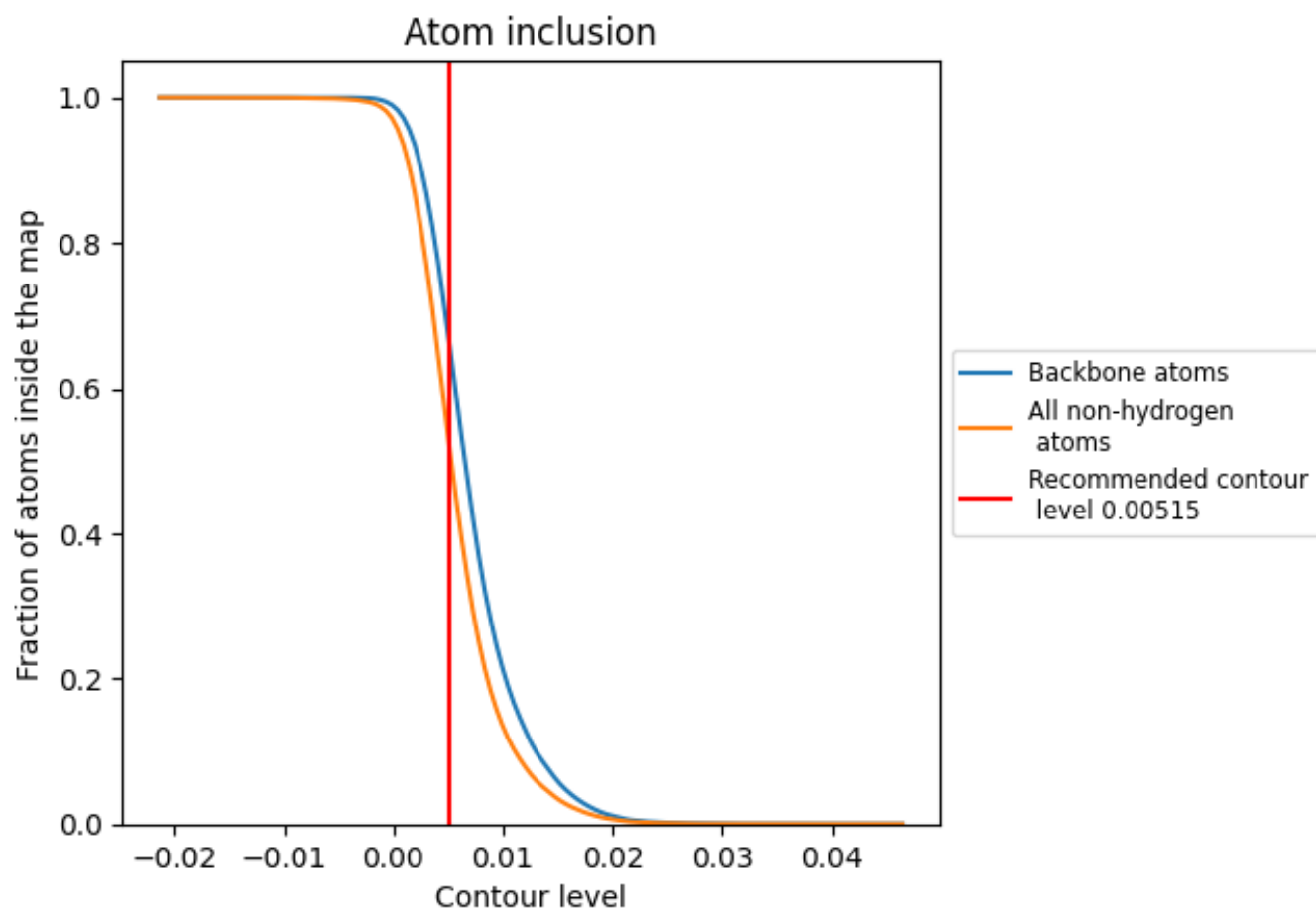
This section contains information regarding the fit between EMDB map EMD-13686 and PDB model 7PZC. Per-residue inclusion information can be found in section 3 on page 7.

### 9.1 Map-model overlay [i](#)



The images above show the 3D surface view of the map at the recommended contour level 0.00515 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

## 9.2 Atom inclusion [i](#)



At the recommended contour level, 66% of all backbone atoms, 52% of all non-hydrogen atoms, are inside the map.