



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 5, 2026 – 09:56 AM UTC

PDB ID : 7QWK / pdb_00007qwk
Title : GCN2 (EIF2ALPHA KINASE 4, E2AK4) IN COMPLEX WITH COM-
POUND 2
Authors : Maia de Oliveira, T.
Deposited on : 2022-01-25
Resolution : 2.30 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

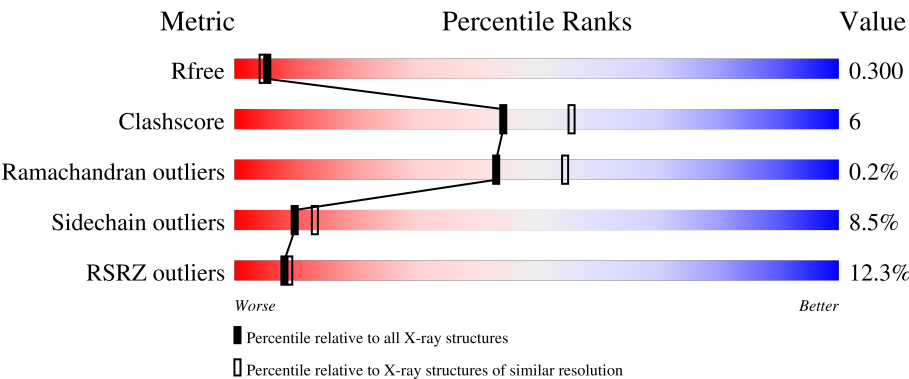
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

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 2.30 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	6319 (2.30-2.30)
Clashscore	190562	6919 (2.30-2.30)
Ramachandran outliers	187476	6854 (2.30-2.30)
Sidechain outliers	187428	6854 (2.30-2.30)
RSRZ outliers	180081	6325 (2.30-2.30)

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

Mol	Chain	Length	Quality of chain
1	A	318	<div><div>11%</div><div><div></div><div></div><div></div><div></div><div></div></div><div>61%14%•23%</div></div>
1	B	318	<div><div>8%</div><div><div></div><div></div><div></div><div></div><div></div></div><div>62%15%•22%</div></div>
1	C	318	<div><div>13%</div><div><div></div><div></div><div></div><div></div><div></div></div><div>61%15%•22%</div></div>
1	D	318	<div><div>10%</div><div><div></div><div></div><div></div><div></div><div></div></div><div>65%13%•20%</div></div>
1	E	318	<div><div>12%</div><div><div></div><div></div><div></div><div></div><div></div></div><div>55%18%•24%</div></div>

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Mol	Chain	Length	Quality of chain
1	F	318	<div><div></div><div>7%</div><div>64%</div><div>13%</div><div>•</div><div>20%</div></div>
1	G	318	<div><div></div><div>12%</div><div>64%</div><div>15%</div><div>•</div><div>19%</div></div>
1	H	318	<div><div></div><div>5%</div><div>66%</div><div>14%</div><div>•</div><div>19%</div></div>

2 Entry composition

There are 4 unique types of molecules in this entry. The entry contains 16000 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 eIF-2-alpha kinase GCN2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	245	Total	C	N	O	S	0	0	0
			1865	1205	315	338	7			
1	B	249	Total	C	N	O	S	0	0	0
			1934	1248	331	348	7			
1	C	249	Total	C	N	O	S	0	0	0
			1928	1249	327	345	7			
1	D	254	Total	C	N	O	S	0	0	0
			1993	1289	337	360	7			
1	E	241	Total	C	N	O	S	0	0	0
			1897	1225	327	338	7			
1	F	254	Total	C	N	O	S	0	0	0
			1990	1285	340	357	8			
1	G	257	Total	C	N	O	S	0	0	0
			2005	1293	340	364	8			
1	H	259	Total	C	N	O	S	0	0	0
			2024	1306	343	366	9			

There are 1016 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	?	-	PRO	deletion	UNP Q9P2K8
A	?	-	ALA	deletion	UNP Q9P2K8
A	?	-	GLY	deletion	UNP Q9P2K8
A	?	-	PRO	deletion	UNP Q9P2K8
A	?	-	GLY	deletion	UNP Q9P2K8
A	?	-	THR	deletion	UNP Q9P2K8
A	?	-	PRO	deletion	UNP Q9P2K8
A	?	-	PRO	deletion	UNP Q9P2K8
A	?	-	PRO	deletion	UNP Q9P2K8
A	?	-	ASP	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	GLY	deletion	UNP Q9P2K8
A	?	-	PRO	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
A	?	-	LEU	deletion	UNP Q9P2K8
A	?	-	ALA	deletion	UNP Q9P2K8
A	?	-	LYS	deletion	UNP Q9P2K8
A	?	-	ASP	deletion	UNP Q9P2K8
A	?	-	ASP	deletion	UNP Q9P2K8
A	?	-	ARG	deletion	UNP Q9P2K8
A	?	-	ALA	deletion	UNP Q9P2K8
A	?	-	ALA	deletion	UNP Q9P2K8
A	?	-	ARG	deletion	UNP Q9P2K8
A	?	-	GLY	deletion	UNP Q9P2K8
A	?	-	GLN	deletion	UNP Q9P2K8
A	?	-	PRO	deletion	UNP Q9P2K8
A	?	-	ALA	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	ASP	deletion	UNP Q9P2K8
A	?	-	THR	deletion	UNP Q9P2K8
A	?	-	ASP	deletion	UNP Q9P2K8
A	?	-	GLY	deletion	UNP Q9P2K8
A	?	-	LEU	deletion	UNP Q9P2K8
A	?	-	ASP	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	VAL	deletion	UNP Q9P2K8
A	?	-	GLU	deletion	UNP Q9P2K8
A	?	-	ALA	deletion	UNP Q9P2K8
A	?	-	ALA	deletion	UNP Q9P2K8
A	?	-	ALA	deletion	UNP Q9P2K8
A	?	-	PRO	deletion	UNP Q9P2K8
A	?	-	PRO	deletion	UNP Q9P2K8
A	?	-	PRO	deletion	UNP Q9P2K8
A	?	-	ILE	deletion	UNP Q9P2K8
A	?	-	LEU	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	VAL	deletion	UNP Q9P2K8
A	?	-	GLU	deletion	UNP Q9P2K8
A	?	-	TRP	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	THR	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	GLY	deletion	UNP Q9P2K8
A	?	-	GLU	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
A	?	-	ARG	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	ALA	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	ALA	deletion	UNP Q9P2K8
A	?	-	ARG	deletion	UNP Q9P2K8
A	?	-	PHE	deletion	UNP Q9P2K8
A	?	-	PRO	deletion	UNP Q9P2K8
A	?	-	ALA	deletion	UNP Q9P2K8
A	?	-	THR	deletion	UNP Q9P2K8
A	?	-	GLY	deletion	UNP Q9P2K8
A	?	-	PRO	deletion	UNP Q9P2K8
A	?	-	GLY	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	ASP	deletion	UNP Q9P2K8
A	?	-	ASP	deletion	UNP Q9P2K8
A	?	-	GLU	deletion	UNP Q9P2K8
A	?	-	ASP	deletion	UNP Q9P2K8
A	?	-	ASP	deletion	UNP Q9P2K8
A	?	-	ASP	deletion	UNP Q9P2K8
A	?	-	GLU	deletion	UNP Q9P2K8
A	?	-	ASP	deletion	UNP Q9P2K8
A	?	-	GLU	deletion	UNP Q9P2K8
A	?	-	HIS	deletion	UNP Q9P2K8
A	?	-	GLY	deletion	UNP Q9P2K8
A	?	-	GLY	deletion	UNP Q9P2K8
A	?	-	VAL	deletion	UNP Q9P2K8
A	?	-	PHE	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	GLN	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	PHE	deletion	UNP Q9P2K8
A	?	-	LEU	deletion	UNP Q9P2K8
A	?	-	PRO	deletion	UNP Q9P2K8
A	?	-	ALA	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	ASP	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	GLU	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	ASP	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
A	?	-	ILE	deletion	UNP Q9P2K8
A	?	-	ILE	deletion	UNP Q9P2K8
A	?	-	PHE	deletion	UNP Q9P2K8
A	?	-	ASP	deletion	UNP Q9P2K8
A	?	-	ASN	deletion	UNP Q9P2K8
A	?	-	GLU	deletion	UNP Q9P2K8
A	?	-	ASP	deletion	UNP Q9P2K8
A	?	-	GLU	deletion	UNP Q9P2K8
A	?	-	ASN	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	LYS	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	GLN	deletion	UNP Q9P2K8
A	?	-	ASN	deletion	UNP Q9P2K8
A	?	-	GLN	deletion	UNP Q9P2K8
A	?	-	ASP	deletion	UNP Q9P2K8
A	?	-	GLU	deletion	UNP Q9P2K8
A	?	-	ASP	deletion	UNP Q9P2K8
A	?	-	CYS	deletion	UNP Q9P2K8
A	?	-	ASN	deletion	UNP Q9P2K8
A	?	-	GLU	deletion	UNP Q9P2K8
A	?	-	LYS	deletion	UNP Q9P2K8
A	?	-	ASN	deletion	UNP Q9P2K8
A	?	-	GLY	deletion	UNP Q9P2K8
A	?	-	CYS	deletion	UNP Q9P2K8
A	?	-	HIS	deletion	UNP Q9P2K8
A	?	-	GLU	deletion	UNP Q9P2K8
A	?	-	SER	deletion	UNP Q9P2K8
A	?	-	GLU	deletion	UNP Q9P2K8
A	848	ASN	ASP	engineered mutation	UNP Q9P2K8
B	?	-	PRO	deletion	UNP Q9P2K8
B	?	-	ALA	deletion	UNP Q9P2K8
B	?	-	GLY	deletion	UNP Q9P2K8
B	?	-	PRO	deletion	UNP Q9P2K8
B	?	-	GLY	deletion	UNP Q9P2K8
B	?	-	THR	deletion	UNP Q9P2K8
B	?	-	PRO	deletion	UNP Q9P2K8
B	?	-	PRO	deletion	UNP Q9P2K8
B	?	-	PRO	deletion	UNP Q9P2K8
B	?	-	ASP	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	GLY	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
B	?	-	PRO	deletion	UNP Q9P2K8
B	?	-	LEU	deletion	UNP Q9P2K8
B	?	-	ALA	deletion	UNP Q9P2K8
B	?	-	LYS	deletion	UNP Q9P2K8
B	?	-	ASP	deletion	UNP Q9P2K8
B	?	-	ASP	deletion	UNP Q9P2K8
B	?	-	ARG	deletion	UNP Q9P2K8
B	?	-	ALA	deletion	UNP Q9P2K8
B	?	-	ALA	deletion	UNP Q9P2K8
B	?	-	ARG	deletion	UNP Q9P2K8
B	?	-	GLY	deletion	UNP Q9P2K8
B	?	-	GLN	deletion	UNP Q9P2K8
B	?	-	PRO	deletion	UNP Q9P2K8
B	?	-	ALA	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	ASP	deletion	UNP Q9P2K8
B	?	-	THR	deletion	UNP Q9P2K8
B	?	-	ASP	deletion	UNP Q9P2K8
B	?	-	GLY	deletion	UNP Q9P2K8
B	?	-	LEU	deletion	UNP Q9P2K8
B	?	-	ASP	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	VAL	deletion	UNP Q9P2K8
B	?	-	GLU	deletion	UNP Q9P2K8
B	?	-	ALA	deletion	UNP Q9P2K8
B	?	-	ALA	deletion	UNP Q9P2K8
B	?	-	ALA	deletion	UNP Q9P2K8
B	?	-	PRO	deletion	UNP Q9P2K8
B	?	-	PRO	deletion	UNP Q9P2K8
B	?	-	PRO	deletion	UNP Q9P2K8
B	?	-	ILE	deletion	UNP Q9P2K8
B	?	-	LEU	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	VAL	deletion	UNP Q9P2K8
B	?	-	GLU	deletion	UNP Q9P2K8
B	?	-	TRP	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	THR	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	GLY	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
B	?	-	GLU	deletion	UNP Q9P2K8
B	?	-	ARG	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	ALA	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	ALA	deletion	UNP Q9P2K8
B	?	-	ARG	deletion	UNP Q9P2K8
B	?	-	PHE	deletion	UNP Q9P2K8
B	?	-	PRO	deletion	UNP Q9P2K8
B	?	-	ALA	deletion	UNP Q9P2K8
B	?	-	THR	deletion	UNP Q9P2K8
B	?	-	GLY	deletion	UNP Q9P2K8
B	?	-	PRO	deletion	UNP Q9P2K8
B	?	-	GLY	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	ASP	deletion	UNP Q9P2K8
B	?	-	ASP	deletion	UNP Q9P2K8
B	?	-	GLU	deletion	UNP Q9P2K8
B	?	-	ASP	deletion	UNP Q9P2K8
B	?	-	ASP	deletion	UNP Q9P2K8
B	?	-	ASP	deletion	UNP Q9P2K8
B	?	-	GLU	deletion	UNP Q9P2K8
B	?	-	ASP	deletion	UNP Q9P2K8
B	?	-	GLU	deletion	UNP Q9P2K8
B	?	-	HIS	deletion	UNP Q9P2K8
B	?	-	GLY	deletion	UNP Q9P2K8
B	?	-	GLY	deletion	UNP Q9P2K8
B	?	-	VAL	deletion	UNP Q9P2K8
B	?	-	PHE	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	GLN	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	PHE	deletion	UNP Q9P2K8
B	?	-	LEU	deletion	UNP Q9P2K8
B	?	-	PRO	deletion	UNP Q9P2K8
B	?	-	ALA	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	ASP	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	GLU	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
B	?	-	ASP	deletion	UNP Q9P2K8
B	?	-	ILE	deletion	UNP Q9P2K8
B	?	-	ILE	deletion	UNP Q9P2K8
B	?	-	PHE	deletion	UNP Q9P2K8
B	?	-	ASP	deletion	UNP Q9P2K8
B	?	-	ASN	deletion	UNP Q9P2K8
B	?	-	GLU	deletion	UNP Q9P2K8
B	?	-	ASP	deletion	UNP Q9P2K8
B	?	-	GLU	deletion	UNP Q9P2K8
B	?	-	ASN	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	LYS	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	GLN	deletion	UNP Q9P2K8
B	?	-	ASN	deletion	UNP Q9P2K8
B	?	-	GLN	deletion	UNP Q9P2K8
B	?	-	ASP	deletion	UNP Q9P2K8
B	?	-	GLU	deletion	UNP Q9P2K8
B	?	-	ASP	deletion	UNP Q9P2K8
B	?	-	CYS	deletion	UNP Q9P2K8
B	?	-	ASN	deletion	UNP Q9P2K8
B	?	-	GLU	deletion	UNP Q9P2K8
B	?	-	LYS	deletion	UNP Q9P2K8
B	?	-	ASN	deletion	UNP Q9P2K8
B	?	-	GLY	deletion	UNP Q9P2K8
B	?	-	CYS	deletion	UNP Q9P2K8
B	?	-	HIS	deletion	UNP Q9P2K8
B	?	-	GLU	deletion	UNP Q9P2K8
B	?	-	SER	deletion	UNP Q9P2K8
B	?	-	GLU	deletion	UNP Q9P2K8
B	848	ASN	ASP	engineered mutation	UNP Q9P2K8
C	?	-	PRO	deletion	UNP Q9P2K8
C	?	-	ALA	deletion	UNP Q9P2K8
C	?	-	GLY	deletion	UNP Q9P2K8
C	?	-	PRO	deletion	UNP Q9P2K8
C	?	-	GLY	deletion	UNP Q9P2K8
C	?	-	THR	deletion	UNP Q9P2K8
C	?	-	PRO	deletion	UNP Q9P2K8
C	?	-	PRO	deletion	UNP Q9P2K8
C	?	-	PRO	deletion	UNP Q9P2K8
C	?	-	ASP	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
C	?	-	GLY	deletion	UNP Q9P2K8
C	?	-	PRO	deletion	UNP Q9P2K8
C	?	-	LEU	deletion	UNP Q9P2K8
C	?	-	ALA	deletion	UNP Q9P2K8
C	?	-	LYS	deletion	UNP Q9P2K8
C	?	-	ASP	deletion	UNP Q9P2K8
C	?	-	ASP	deletion	UNP Q9P2K8
C	?	-	ARG	deletion	UNP Q9P2K8
C	?	-	ALA	deletion	UNP Q9P2K8
C	?	-	ALA	deletion	UNP Q9P2K8
C	?	-	ARG	deletion	UNP Q9P2K8
C	?	-	GLY	deletion	UNP Q9P2K8
C	?	-	GLN	deletion	UNP Q9P2K8
C	?	-	PRO	deletion	UNP Q9P2K8
C	?	-	ALA	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8
C	?	-	ASP	deletion	UNP Q9P2K8
C	?	-	THR	deletion	UNP Q9P2K8
C	?	-	ASP	deletion	UNP Q9P2K8
C	?	-	GLY	deletion	UNP Q9P2K8
C	?	-	LEU	deletion	UNP Q9P2K8
C	?	-	ASP	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8
C	?	-	VAL	deletion	UNP Q9P2K8
C	?	-	GLU	deletion	UNP Q9P2K8
C	?	-	ALA	deletion	UNP Q9P2K8
C	?	-	ALA	deletion	UNP Q9P2K8
C	?	-	ALA	deletion	UNP Q9P2K8
C	?	-	PRO	deletion	UNP Q9P2K8
C	?	-	PRO	deletion	UNP Q9P2K8
C	?	-	PRO	deletion	UNP Q9P2K8
C	?	-	ILE	deletion	UNP Q9P2K8
C	?	-	LEU	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8
C	?	-	VAL	deletion	UNP Q9P2K8
C	?	-	GLU	deletion	UNP Q9P2K8
C	?	-	TRP	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8
C	?	-	THR	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
C	?	-	GLY	deletion	UNP Q9P2K8
C	?	-	GLU	deletion	UNP Q9P2K8
C	?	-	ARG	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8
C	?	-	ALA	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8
C	?	-	ALA	deletion	UNP Q9P2K8
C	?	-	ARG	deletion	UNP Q9P2K8
C	?	-	PHE	deletion	UNP Q9P2K8
C	?	-	PRO	deletion	UNP Q9P2K8
C	?	-	ALA	deletion	UNP Q9P2K8
C	?	-	THR	deletion	UNP Q9P2K8
C	?	-	GLY	deletion	UNP Q9P2K8
C	?	-	PRO	deletion	UNP Q9P2K8
C	?	-	GLY	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8
C	?	-	ASP	deletion	UNP Q9P2K8
C	?	-	ASP	deletion	UNP Q9P2K8
C	?	-	GLU	deletion	UNP Q9P2K8
C	?	-	ASP	deletion	UNP Q9P2K8
C	?	-	ASP	deletion	UNP Q9P2K8
C	?	-	ASP	deletion	UNP Q9P2K8
C	?	-	GLU	deletion	UNP Q9P2K8
C	?	-	ASP	deletion	UNP Q9P2K8
C	?	-	GLU	deletion	UNP Q9P2K8
C	?	-	HIS	deletion	UNP Q9P2K8
C	?	-	GLY	deletion	UNP Q9P2K8
C	?	-	GLY	deletion	UNP Q9P2K8
C	?	-	VAL	deletion	UNP Q9P2K8
C	?	-	PHE	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8
C	?	-	GLN	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8
C	?	-	PHE	deletion	UNP Q9P2K8
C	?	-	LEU	deletion	UNP Q9P2K8
C	?	-	PRO	deletion	UNP Q9P2K8
C	?	-	ALA	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8
C	?	-	ASP	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8
C	?	-	GLU	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
C	?	-	SER	deletion	UNP Q9P2K8
C	?	-	ASP	deletion	UNP Q9P2K8
C	?	-	ILE	deletion	UNP Q9P2K8
C	?	-	ILE	deletion	UNP Q9P2K8
C	?	-	PHE	deletion	UNP Q9P2K8
C	?	-	ASP	deletion	UNP Q9P2K8
C	?	-	ASN	deletion	UNP Q9P2K8
C	?	-	GLU	deletion	UNP Q9P2K8
C	?	-	ASP	deletion	UNP Q9P2K8
C	?	-	GLU	deletion	UNP Q9P2K8
C	?	-	ASN	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8
C	?	-	LYS	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8
C	?	-	GLN	deletion	UNP Q9P2K8
C	?	-	ASN	deletion	UNP Q9P2K8
C	?	-	GLN	deletion	UNP Q9P2K8
C	?	-	ASP	deletion	UNP Q9P2K8
C	?	-	GLU	deletion	UNP Q9P2K8
C	?	-	ASP	deletion	UNP Q9P2K8
C	?	-	CYS	deletion	UNP Q9P2K8
C	?	-	ASN	deletion	UNP Q9P2K8
C	?	-	GLU	deletion	UNP Q9P2K8
C	?	-	LYS	deletion	UNP Q9P2K8
C	?	-	ASN	deletion	UNP Q9P2K8
C	?	-	GLY	deletion	UNP Q9P2K8
C	?	-	CYS	deletion	UNP Q9P2K8
C	?	-	HIS	deletion	UNP Q9P2K8
C	?	-	GLU	deletion	UNP Q9P2K8
C	?	-	SER	deletion	UNP Q9P2K8
C	?	-	GLU	deletion	UNP Q9P2K8
C	848	ASN	ASP	engineered mutation	UNP Q9P2K8
D	?	-	PRO	deletion	UNP Q9P2K8
D	?	-	ALA	deletion	UNP Q9P2K8
D	?	-	GLY	deletion	UNP Q9P2K8
D	?	-	PRO	deletion	UNP Q9P2K8
D	?	-	GLY	deletion	UNP Q9P2K8
D	?	-	THR	deletion	UNP Q9P2K8
D	?	-	PRO	deletion	UNP Q9P2K8
D	?	-	PRO	deletion	UNP Q9P2K8
D	?	-	PRO	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	GLY	deletion	UNP Q9P2K8
D	?	-	PRO	deletion	UNP Q9P2K8
D	?	-	LEU	deletion	UNP Q9P2K8
D	?	-	ALA	deletion	UNP Q9P2K8
D	?	-	LYS	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8
D	?	-	ARG	deletion	UNP Q9P2K8
D	?	-	ALA	deletion	UNP Q9P2K8
D	?	-	ALA	deletion	UNP Q9P2K8
D	?	-	ARG	deletion	UNP Q9P2K8
D	?	-	GLY	deletion	UNP Q9P2K8
D	?	-	GLN	deletion	UNP Q9P2K8
D	?	-	PRO	deletion	UNP Q9P2K8
D	?	-	ALA	deletion	UNP Q9P2K8
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8
D	?	-	THR	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8
D	?	-	GLY	deletion	UNP Q9P2K8
D	?	-	LEU	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	VAL	deletion	UNP Q9P2K8
D	?	-	GLU	deletion	UNP Q9P2K8
D	?	-	ALA	deletion	UNP Q9P2K8
D	?	-	ALA	deletion	UNP Q9P2K8
D	?	-	ALA	deletion	UNP Q9P2K8
D	?	-	PRO	deletion	UNP Q9P2K8
D	?	-	PRO	deletion	UNP Q9P2K8
D	?	-	PRO	deletion	UNP Q9P2K8
D	?	-	ILE	deletion	UNP Q9P2K8
D	?	-	LEU	deletion	UNP Q9P2K8
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	VAL	deletion	UNP Q9P2K8
D	?	-	GLU	deletion	UNP Q9P2K8
D	?	-	TRP	deletion	UNP Q9P2K8
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	THR	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	GLY	deletion	UNP Q9P2K8
D	?	-	GLU	deletion	UNP Q9P2K8
D	?	-	ARG	deletion	UNP Q9P2K8
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	ALA	deletion	UNP Q9P2K8
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	ALA	deletion	UNP Q9P2K8
D	?	-	ARG	deletion	UNP Q9P2K8
D	?	-	PHE	deletion	UNP Q9P2K8
D	?	-	PRO	deletion	UNP Q9P2K8
D	?	-	ALA	deletion	UNP Q9P2K8
D	?	-	THR	deletion	UNP Q9P2K8
D	?	-	GLY	deletion	UNP Q9P2K8
D	?	-	PRO	deletion	UNP Q9P2K8
D	?	-	GLY	deletion	UNP Q9P2K8
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8
D	?	-	GLU	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8
D	?	-	GLU	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8
D	?	-	GLU	deletion	UNP Q9P2K8
D	?	-	HIS	deletion	UNP Q9P2K8
D	?	-	GLY	deletion	UNP Q9P2K8
D	?	-	GLY	deletion	UNP Q9P2K8
D	?	-	VAL	deletion	UNP Q9P2K8
D	?	-	PHE	deletion	UNP Q9P2K8
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	GLN	deletion	UNP Q9P2K8
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	PHE	deletion	UNP Q9P2K8
D	?	-	LEU	deletion	UNP Q9P2K8
D	?	-	PRO	deletion	UNP Q9P2K8
D	?	-	ALA	deletion	UNP Q9P2K8
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8
D	?	-	SER	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
D	?	-	GLU	deletion	UNP Q9P2K8
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8
D	?	-	ILE	deletion	UNP Q9P2K8
D	?	-	ILE	deletion	UNP Q9P2K8
D	?	-	PHE	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8
D	?	-	ASN	deletion	UNP Q9P2K8
D	?	-	GLU	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8
D	?	-	GLU	deletion	UNP Q9P2K8
D	?	-	ASN	deletion	UNP Q9P2K8
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	LYS	deletion	UNP Q9P2K8
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	GLN	deletion	UNP Q9P2K8
D	?	-	ASN	deletion	UNP Q9P2K8
D	?	-	GLN	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8
D	?	-	GLU	deletion	UNP Q9P2K8
D	?	-	ASP	deletion	UNP Q9P2K8
D	?	-	CYS	deletion	UNP Q9P2K8
D	?	-	ASN	deletion	UNP Q9P2K8
D	?	-	GLU	deletion	UNP Q9P2K8
D	?	-	LYS	deletion	UNP Q9P2K8
D	?	-	ASN	deletion	UNP Q9P2K8
D	?	-	GLY	deletion	UNP Q9P2K8
D	?	-	CYS	deletion	UNP Q9P2K8
D	?	-	HIS	deletion	UNP Q9P2K8
D	?	-	GLU	deletion	UNP Q9P2K8
D	?	-	SER	deletion	UNP Q9P2K8
D	?	-	GLU	deletion	UNP Q9P2K8
D	848	ASN	ASP	engineered mutation	UNP Q9P2K8
E	?	-	PRO	deletion	UNP Q9P2K8
E	?	-	ALA	deletion	UNP Q9P2K8
E	?	-	GLY	deletion	UNP Q9P2K8
E	?	-	PRO	deletion	UNP Q9P2K8
E	?	-	GLY	deletion	UNP Q9P2K8
E	?	-	THR	deletion	UNP Q9P2K8
E	?	-	PRO	deletion	UNP Q9P2K8
E	?	-	PRO	deletion	UNP Q9P2K8
E	?	-	PRO	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
E	?	-	ASP	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	GLY	deletion	UNP Q9P2K8
E	?	-	PRO	deletion	UNP Q9P2K8
E	?	-	LEU	deletion	UNP Q9P2K8
E	?	-	ALA	deletion	UNP Q9P2K8
E	?	-	LYS	deletion	UNP Q9P2K8
E	?	-	ASP	deletion	UNP Q9P2K8
E	?	-	ASP	deletion	UNP Q9P2K8
E	?	-	ARG	deletion	UNP Q9P2K8
E	?	-	ALA	deletion	UNP Q9P2K8
E	?	-	ALA	deletion	UNP Q9P2K8
E	?	-	ARG	deletion	UNP Q9P2K8
E	?	-	GLY	deletion	UNP Q9P2K8
E	?	-	GLN	deletion	UNP Q9P2K8
E	?	-	PRO	deletion	UNP Q9P2K8
E	?	-	ALA	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	ASP	deletion	UNP Q9P2K8
E	?	-	THR	deletion	UNP Q9P2K8
E	?	-	ASP	deletion	UNP Q9P2K8
E	?	-	GLY	deletion	UNP Q9P2K8
E	?	-	LEU	deletion	UNP Q9P2K8
E	?	-	ASP	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	VAL	deletion	UNP Q9P2K8
E	?	-	GLU	deletion	UNP Q9P2K8
E	?	-	ALA	deletion	UNP Q9P2K8
E	?	-	ALA	deletion	UNP Q9P2K8
E	?	-	ALA	deletion	UNP Q9P2K8
E	?	-	PRO	deletion	UNP Q9P2K8
E	?	-	PRO	deletion	UNP Q9P2K8
E	?	-	PRO	deletion	UNP Q9P2K8
E	?	-	ILE	deletion	UNP Q9P2K8
E	?	-	LEU	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	VAL	deletion	UNP Q9P2K8
E	?	-	GLU	deletion	UNP Q9P2K8
E	?	-	TRP	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
E	?	-	THR	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	GLY	deletion	UNP Q9P2K8
E	?	-	GLU	deletion	UNP Q9P2K8
E	?	-	ARG	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	ALA	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	ALA	deletion	UNP Q9P2K8
E	?	-	ARG	deletion	UNP Q9P2K8
E	?	-	PHE	deletion	UNP Q9P2K8
E	?	-	PRO	deletion	UNP Q9P2K8
E	?	-	ALA	deletion	UNP Q9P2K8
E	?	-	THR	deletion	UNP Q9P2K8
E	?	-	GLY	deletion	UNP Q9P2K8
E	?	-	PRO	deletion	UNP Q9P2K8
E	?	-	GLY	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	ASP	deletion	UNP Q9P2K8
E	?	-	ASP	deletion	UNP Q9P2K8
E	?	-	GLU	deletion	UNP Q9P2K8
E	?	-	ASP	deletion	UNP Q9P2K8
E	?	-	ASP	deletion	UNP Q9P2K8
E	?	-	ASP	deletion	UNP Q9P2K8
E	?	-	GLU	deletion	UNP Q9P2K8
E	?	-	ASP	deletion	UNP Q9P2K8
E	?	-	GLU	deletion	UNP Q9P2K8
E	?	-	HIS	deletion	UNP Q9P2K8
E	?	-	GLY	deletion	UNP Q9P2K8
E	?	-	GLY	deletion	UNP Q9P2K8
E	?	-	VAL	deletion	UNP Q9P2K8
E	?	-	PHE	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	GLN	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	PHE	deletion	UNP Q9P2K8
E	?	-	LEU	deletion	UNP Q9P2K8
E	?	-	PRO	deletion	UNP Q9P2K8
E	?	-	ALA	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	ASP	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	GLU	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	ASP	deletion	UNP Q9P2K8
E	?	-	ILE	deletion	UNP Q9P2K8
E	?	-	ILE	deletion	UNP Q9P2K8
E	?	-	PHE	deletion	UNP Q9P2K8
E	?	-	ASP	deletion	UNP Q9P2K8
E	?	-	ASN	deletion	UNP Q9P2K8
E	?	-	GLU	deletion	UNP Q9P2K8
E	?	-	ASP	deletion	UNP Q9P2K8
E	?	-	GLU	deletion	UNP Q9P2K8
E	?	-	ASN	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	LYS	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	GLN	deletion	UNP Q9P2K8
E	?	-	ASN	deletion	UNP Q9P2K8
E	?	-	GLN	deletion	UNP Q9P2K8
E	?	-	ASP	deletion	UNP Q9P2K8
E	?	-	GLU	deletion	UNP Q9P2K8
E	?	-	ASP	deletion	UNP Q9P2K8
E	?	-	CYS	deletion	UNP Q9P2K8
E	?	-	ASN	deletion	UNP Q9P2K8
E	?	-	GLU	deletion	UNP Q9P2K8
E	?	-	LYS	deletion	UNP Q9P2K8
E	?	-	ASN	deletion	UNP Q9P2K8
E	?	-	GLY	deletion	UNP Q9P2K8
E	?	-	CYS	deletion	UNP Q9P2K8
E	?	-	HIS	deletion	UNP Q9P2K8
E	?	-	GLU	deletion	UNP Q9P2K8
E	?	-	SER	deletion	UNP Q9P2K8
E	?	-	GLU	deletion	UNP Q9P2K8
E	848	ASN	ASP	engineered mutation	UNP Q9P2K8
F	?	-	PRO	deletion	UNP Q9P2K8
F	?	-	ALA	deletion	UNP Q9P2K8
F	?	-	GLY	deletion	UNP Q9P2K8
F	?	-	PRO	deletion	UNP Q9P2K8
F	?	-	GLY	deletion	UNP Q9P2K8
F	?	-	THR	deletion	UNP Q9P2K8
F	?	-	PRO	deletion	UNP Q9P2K8
F	?	-	PRO	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
F	?	-	PRO	deletion	UNP Q9P2K8
F	?	-	ASP	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	GLY	deletion	UNP Q9P2K8
F	?	-	PRO	deletion	UNP Q9P2K8
F	?	-	LEU	deletion	UNP Q9P2K8
F	?	-	ALA	deletion	UNP Q9P2K8
F	?	-	LYS	deletion	UNP Q9P2K8
F	?	-	ASP	deletion	UNP Q9P2K8
F	?	-	ASP	deletion	UNP Q9P2K8
F	?	-	ARG	deletion	UNP Q9P2K8
F	?	-	ALA	deletion	UNP Q9P2K8
F	?	-	ALA	deletion	UNP Q9P2K8
F	?	-	ARG	deletion	UNP Q9P2K8
F	?	-	GLY	deletion	UNP Q9P2K8
F	?	-	GLN	deletion	UNP Q9P2K8
F	?	-	PRO	deletion	UNP Q9P2K8
F	?	-	ALA	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	ASP	deletion	UNP Q9P2K8
F	?	-	THR	deletion	UNP Q9P2K8
F	?	-	ASP	deletion	UNP Q9P2K8
F	?	-	GLY	deletion	UNP Q9P2K8
F	?	-	LEU	deletion	UNP Q9P2K8
F	?	-	ASP	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	VAL	deletion	UNP Q9P2K8
F	?	-	GLU	deletion	UNP Q9P2K8
F	?	-	ALA	deletion	UNP Q9P2K8
F	?	-	ALA	deletion	UNP Q9P2K8
F	?	-	ALA	deletion	UNP Q9P2K8
F	?	-	PRO	deletion	UNP Q9P2K8
F	?	-	PRO	deletion	UNP Q9P2K8
F	?	-	PRO	deletion	UNP Q9P2K8
F	?	-	ILE	deletion	UNP Q9P2K8
F	?	-	LEU	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	VAL	deletion	UNP Q9P2K8
F	?	-	GLU	deletion	UNP Q9P2K8
F	?	-	TRP	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	THR	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	GLY	deletion	UNP Q9P2K8
F	?	-	GLU	deletion	UNP Q9P2K8
F	?	-	ARG	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	ALA	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	ALA	deletion	UNP Q9P2K8
F	?	-	ARG	deletion	UNP Q9P2K8
F	?	-	PHE	deletion	UNP Q9P2K8
F	?	-	PRO	deletion	UNP Q9P2K8
F	?	-	ALA	deletion	UNP Q9P2K8
F	?	-	THR	deletion	UNP Q9P2K8
F	?	-	GLY	deletion	UNP Q9P2K8
F	?	-	PRO	deletion	UNP Q9P2K8
F	?	-	GLY	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	ASP	deletion	UNP Q9P2K8
F	?	-	ASP	deletion	UNP Q9P2K8
F	?	-	GLU	deletion	UNP Q9P2K8
F	?	-	ASP	deletion	UNP Q9P2K8
F	?	-	ASP	deletion	UNP Q9P2K8
F	?	-	ASP	deletion	UNP Q9P2K8
F	?	-	GLU	deletion	UNP Q9P2K8
F	?	-	ASP	deletion	UNP Q9P2K8
F	?	-	GLU	deletion	UNP Q9P2K8
F	?	-	HIS	deletion	UNP Q9P2K8
F	?	-	GLY	deletion	UNP Q9P2K8
F	?	-	GLY	deletion	UNP Q9P2K8
F	?	-	VAL	deletion	UNP Q9P2K8
F	?	-	PHE	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	GLN	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	PHE	deletion	UNP Q9P2K8
F	?	-	LEU	deletion	UNP Q9P2K8
F	?	-	PRO	deletion	UNP Q9P2K8
F	?	-	ALA	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
F	?	-	ASP	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	GLU	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	ASP	deletion	UNP Q9P2K8
F	?	-	ILE	deletion	UNP Q9P2K8
F	?	-	ILE	deletion	UNP Q9P2K8
F	?	-	PHE	deletion	UNP Q9P2K8
F	?	-	ASP	deletion	UNP Q9P2K8
F	?	-	ASN	deletion	UNP Q9P2K8
F	?	-	GLU	deletion	UNP Q9P2K8
F	?	-	ASP	deletion	UNP Q9P2K8
F	?	-	GLU	deletion	UNP Q9P2K8
F	?	-	ASN	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	LYS	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	GLN	deletion	UNP Q9P2K8
F	?	-	ASN	deletion	UNP Q9P2K8
F	?	-	GLN	deletion	UNP Q9P2K8
F	?	-	ASP	deletion	UNP Q9P2K8
F	?	-	GLU	deletion	UNP Q9P2K8
F	?	-	ASP	deletion	UNP Q9P2K8
F	?	-	CYS	deletion	UNP Q9P2K8
F	?	-	ASN	deletion	UNP Q9P2K8
F	?	-	GLU	deletion	UNP Q9P2K8
F	?	-	LYS	deletion	UNP Q9P2K8
F	?	-	ASN	deletion	UNP Q9P2K8
F	?	-	GLY	deletion	UNP Q9P2K8
F	?	-	CYS	deletion	UNP Q9P2K8
F	?	-	HIS	deletion	UNP Q9P2K8
F	?	-	GLU	deletion	UNP Q9P2K8
F	?	-	SER	deletion	UNP Q9P2K8
F	?	-	GLU	deletion	UNP Q9P2K8
F	848	ASN	ASP	engineered mutation	UNP Q9P2K8
G	?	-	PRO	deletion	UNP Q9P2K8
G	?	-	ALA	deletion	UNP Q9P2K8
G	?	-	GLY	deletion	UNP Q9P2K8
G	?	-	PRO	deletion	UNP Q9P2K8
G	?	-	GLY	deletion	UNP Q9P2K8
G	?	-	THR	deletion	UNP Q9P2K8
G	?	-	PRO	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
G	?	-	PRO	deletion	UNP Q9P2K8
G	?	-	PRO	deletion	UNP Q9P2K8
G	?	-	ASP	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	GLY	deletion	UNP Q9P2K8
G	?	-	PRO	deletion	UNP Q9P2K8
G	?	-	LEU	deletion	UNP Q9P2K8
G	?	-	ALA	deletion	UNP Q9P2K8
G	?	-	LYS	deletion	UNP Q9P2K8
G	?	-	ASP	deletion	UNP Q9P2K8
G	?	-	ASP	deletion	UNP Q9P2K8
G	?	-	ARG	deletion	UNP Q9P2K8
G	?	-	ALA	deletion	UNP Q9P2K8
G	?	-	ALA	deletion	UNP Q9P2K8
G	?	-	ARG	deletion	UNP Q9P2K8
G	?	-	GLY	deletion	UNP Q9P2K8
G	?	-	GLN	deletion	UNP Q9P2K8
G	?	-	PRO	deletion	UNP Q9P2K8
G	?	-	ALA	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	ASP	deletion	UNP Q9P2K8
G	?	-	THR	deletion	UNP Q9P2K8
G	?	-	ASP	deletion	UNP Q9P2K8
G	?	-	GLY	deletion	UNP Q9P2K8
G	?	-	LEU	deletion	UNP Q9P2K8
G	?	-	ASP	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	VAL	deletion	UNP Q9P2K8
G	?	-	GLU	deletion	UNP Q9P2K8
G	?	-	ALA	deletion	UNP Q9P2K8
G	?	-	ALA	deletion	UNP Q9P2K8
G	?	-	ALA	deletion	UNP Q9P2K8
G	?	-	PRO	deletion	UNP Q9P2K8
G	?	-	PRO	deletion	UNP Q9P2K8
G	?	-	PRO	deletion	UNP Q9P2K8
G	?	-	ILE	deletion	UNP Q9P2K8
G	?	-	LEU	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	VAL	deletion	UNP Q9P2K8
G	?	-	GLU	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
G	?	-	TRP	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	THR	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	GLY	deletion	UNP Q9P2K8
G	?	-	GLU	deletion	UNP Q9P2K8
G	?	-	ARG	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	ALA	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	ALA	deletion	UNP Q9P2K8
G	?	-	ARG	deletion	UNP Q9P2K8
G	?	-	PHE	deletion	UNP Q9P2K8
G	?	-	PRO	deletion	UNP Q9P2K8
G	?	-	ALA	deletion	UNP Q9P2K8
G	?	-	THR	deletion	UNP Q9P2K8
G	?	-	GLY	deletion	UNP Q9P2K8
G	?	-	PRO	deletion	UNP Q9P2K8
G	?	-	GLY	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	ASP	deletion	UNP Q9P2K8
G	?	-	ASP	deletion	UNP Q9P2K8
G	?	-	GLU	deletion	UNP Q9P2K8
G	?	-	ASP	deletion	UNP Q9P2K8
G	?	-	ASP	deletion	UNP Q9P2K8
G	?	-	ASP	deletion	UNP Q9P2K8
G	?	-	GLU	deletion	UNP Q9P2K8
G	?	-	ASP	deletion	UNP Q9P2K8
G	?	-	GLU	deletion	UNP Q9P2K8
G	?	-	HIS	deletion	UNP Q9P2K8
G	?	-	GLY	deletion	UNP Q9P2K8
G	?	-	GLY	deletion	UNP Q9P2K8
G	?	-	VAL	deletion	UNP Q9P2K8
G	?	-	PHE	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	GLN	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	PHE	deletion	UNP Q9P2K8
G	?	-	LEU	deletion	UNP Q9P2K8
G	?	-	PRO	deletion	UNP Q9P2K8
G	?	-	ALA	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	ASP	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	GLU	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	ASP	deletion	UNP Q9P2K8
G	?	-	ILE	deletion	UNP Q9P2K8
G	?	-	ILE	deletion	UNP Q9P2K8
G	?	-	PHE	deletion	UNP Q9P2K8
G	?	-	ASP	deletion	UNP Q9P2K8
G	?	-	ASN	deletion	UNP Q9P2K8
G	?	-	GLU	deletion	UNP Q9P2K8
G	?	-	ASP	deletion	UNP Q9P2K8
G	?	-	GLU	deletion	UNP Q9P2K8
G	?	-	ASN	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	LYS	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	GLN	deletion	UNP Q9P2K8
G	?	-	ASN	deletion	UNP Q9P2K8
G	?	-	GLN	deletion	UNP Q9P2K8
G	?	-	ASP	deletion	UNP Q9P2K8
G	?	-	GLU	deletion	UNP Q9P2K8
G	?	-	ASP	deletion	UNP Q9P2K8
G	?	-	CYS	deletion	UNP Q9P2K8
G	?	-	ASN	deletion	UNP Q9P2K8
G	?	-	GLU	deletion	UNP Q9P2K8
G	?	-	LYS	deletion	UNP Q9P2K8
G	?	-	ASN	deletion	UNP Q9P2K8
G	?	-	GLY	deletion	UNP Q9P2K8
G	?	-	CYS	deletion	UNP Q9P2K8
G	?	-	HIS	deletion	UNP Q9P2K8
G	?	-	GLU	deletion	UNP Q9P2K8
G	?	-	SER	deletion	UNP Q9P2K8
G	?	-	GLU	deletion	UNP Q9P2K8
G	848	ASN	ASP	engineered mutation	UNP Q9P2K8
H	?	-	PRO	deletion	UNP Q9P2K8
H	?	-	ALA	deletion	UNP Q9P2K8
H	?	-	GLY	deletion	UNP Q9P2K8
H	?	-	PRO	deletion	UNP Q9P2K8
H	?	-	GLY	deletion	UNP Q9P2K8
H	?	-	THR	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
H	?	-	PRO	deletion	UNP Q9P2K8
H	?	-	PRO	deletion	UNP Q9P2K8
H	?	-	PRO	deletion	UNP Q9P2K8
H	?	-	ASP	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	GLY	deletion	UNP Q9P2K8
H	?	-	PRO	deletion	UNP Q9P2K8
H	?	-	LEU	deletion	UNP Q9P2K8
H	?	-	ALA	deletion	UNP Q9P2K8
H	?	-	LYS	deletion	UNP Q9P2K8
H	?	-	ASP	deletion	UNP Q9P2K8
H	?	-	ASP	deletion	UNP Q9P2K8
H	?	-	ARG	deletion	UNP Q9P2K8
H	?	-	ALA	deletion	UNP Q9P2K8
H	?	-	ALA	deletion	UNP Q9P2K8
H	?	-	ARG	deletion	UNP Q9P2K8
H	?	-	GLY	deletion	UNP Q9P2K8
H	?	-	GLN	deletion	UNP Q9P2K8
H	?	-	PRO	deletion	UNP Q9P2K8
H	?	-	ALA	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	ASP	deletion	UNP Q9P2K8
H	?	-	THR	deletion	UNP Q9P2K8
H	?	-	ASP	deletion	UNP Q9P2K8
H	?	-	GLY	deletion	UNP Q9P2K8
H	?	-	LEU	deletion	UNP Q9P2K8
H	?	-	ASP	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	VAL	deletion	UNP Q9P2K8
H	?	-	GLU	deletion	UNP Q9P2K8
H	?	-	ALA	deletion	UNP Q9P2K8
H	?	-	ALA	deletion	UNP Q9P2K8
H	?	-	ALA	deletion	UNP Q9P2K8
H	?	-	PRO	deletion	UNP Q9P2K8
H	?	-	PRO	deletion	UNP Q9P2K8
H	?	-	PRO	deletion	UNP Q9P2K8
H	?	-	ILE	deletion	UNP Q9P2K8
H	?	-	LEU	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	VAL	deletion	UNP Q9P2K8

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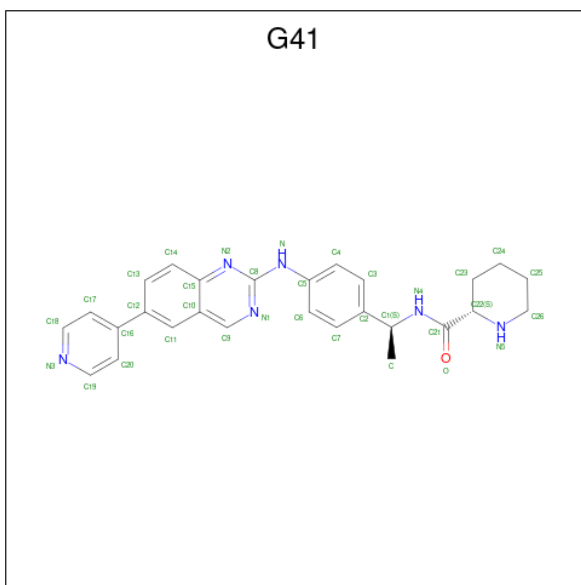
Chain	Residue	Modelled	Actual	Comment	Reference
H	?	-	GLU	deletion	UNP Q9P2K8
H	?	-	TRP	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	THR	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	GLY	deletion	UNP Q9P2K8
H	?	-	GLU	deletion	UNP Q9P2K8
H	?	-	ARG	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	ALA	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	ALA	deletion	UNP Q9P2K8
H	?	-	ARG	deletion	UNP Q9P2K8
H	?	-	PHE	deletion	UNP Q9P2K8
H	?	-	PRO	deletion	UNP Q9P2K8
H	?	-	ALA	deletion	UNP Q9P2K8
H	?	-	THR	deletion	UNP Q9P2K8
H	?	-	GLY	deletion	UNP Q9P2K8
H	?	-	PRO	deletion	UNP Q9P2K8
H	?	-	GLY	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	ASP	deletion	UNP Q9P2K8
H	?	-	ASP	deletion	UNP Q9P2K8
H	?	-	GLU	deletion	UNP Q9P2K8
H	?	-	ASP	deletion	UNP Q9P2K8
H	?	-	ASP	deletion	UNP Q9P2K8
H	?	-	ASP	deletion	UNP Q9P2K8
H	?	-	GLU	deletion	UNP Q9P2K8
H	?	-	ASP	deletion	UNP Q9P2K8
H	?	-	GLU	deletion	UNP Q9P2K8
H	?	-	HIS	deletion	UNP Q9P2K8
H	?	-	GLY	deletion	UNP Q9P2K8
H	?	-	GLY	deletion	UNP Q9P2K8
H	?	-	VAL	deletion	UNP Q9P2K8
H	?	-	PHE	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	GLN	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	PHE	deletion	UNP Q9P2K8
H	?	-	LEU	deletion	UNP Q9P2K8
H	?	-	PRO	deletion	UNP Q9P2K8

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Chain	Residue	Modelled	Actual	Comment	Reference
H	?	-	ALA	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	ASP	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	GLU	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	ASP	deletion	UNP Q9P2K8
H	?	-	ILE	deletion	UNP Q9P2K8
H	?	-	ILE	deletion	UNP Q9P2K8
H	?	-	PHE	deletion	UNP Q9P2K8
H	?	-	ASP	deletion	UNP Q9P2K8
H	?	-	ASN	deletion	UNP Q9P2K8
H	?	-	GLU	deletion	UNP Q9P2K8
H	?	-	ASP	deletion	UNP Q9P2K8
H	?	-	GLU	deletion	UNP Q9P2K8
H	?	-	ASN	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	LYS	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	GLN	deletion	UNP Q9P2K8
H	?	-	ASN	deletion	UNP Q9P2K8
H	?	-	GLN	deletion	UNP Q9P2K8
H	?	-	ASP	deletion	UNP Q9P2K8
H	?	-	GLU	deletion	UNP Q9P2K8
H	?	-	ASP	deletion	UNP Q9P2K8
H	?	-	CYS	deletion	UNP Q9P2K8
H	?	-	ASN	deletion	UNP Q9P2K8
H	?	-	GLU	deletion	UNP Q9P2K8
H	?	-	LYS	deletion	UNP Q9P2K8
H	?	-	ASN	deletion	UNP Q9P2K8
H	?	-	GLY	deletion	UNP Q9P2K8
H	?	-	CYS	deletion	UNP Q9P2K8
H	?	-	HIS	deletion	UNP Q9P2K8
H	?	-	GLU	deletion	UNP Q9P2K8
H	?	-	SER	deletion	UNP Q9P2K8
H	?	-	GLU	deletion	UNP Q9P2K8
H	848	ASN	ASP	engineered mutation	UNP Q9P2K8

- Molecule 2 is (2 {S})- {N}-[(1 {S})-1-[4-[(6-pyridin-4-ylquinazolin-2-yl)amino]phenyl]ethyl]piperidine-2-carboxamide (CCD ID: G41) (formula: C₂₇H₂₈N₆O) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	N	O	0	0
			34	27	6	1		
2	B	1	Total	C	N	O	0	0
			34	27	6	1		
2	C	1	Total	C	N	O	0	0
			34	27	6	1		
2	D	1	Total	C	N	O	0	0
			34	27	6	1		
2	E	1	Total	C	N	O	0	0
			34	27	6	1		
2	F	1	Total	C	N	O	0	0
			34	27	6	1		
2	G	1	Total	C	N	O	0	0
			34	27	6	1		
2	H	1	Total	C	N	O	0	0
			34	27	6	1		

- Molecule 3 is DIMETHYL SULFOXIDE (CCD ID: DMS) (formula: C₂H₆OS).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	H	1	Total	C	O	S	0	0
			4	2	1	1		
3	H	1	Total	C	O	S	0	0
			4	2	1	1		

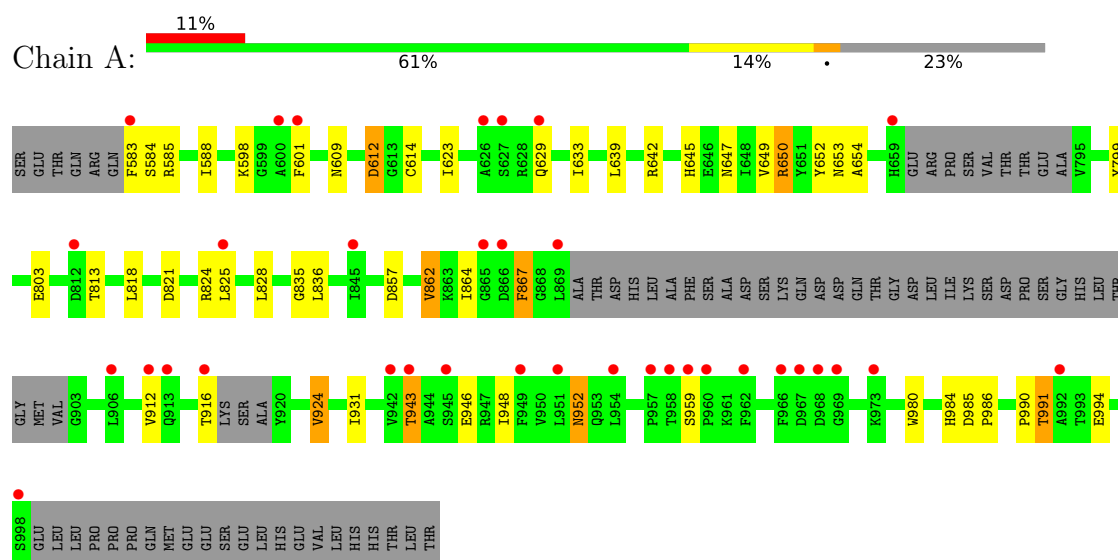
- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	8	Total	O	0	0
			8	8		
4	B	17	Total	O	0	0
			17	17		
4	C	4	Total	O	0	0
			4	4		
4	D	8	Total	O	0	0
			8	8		
4	E	8	Total	O	0	0
			8	8		
4	F	14	Total	O	0	0
			14	14		
4	G	9	Total	O	0	0
			9	9		
4	H	16	Total	O	0	0
			16	16		

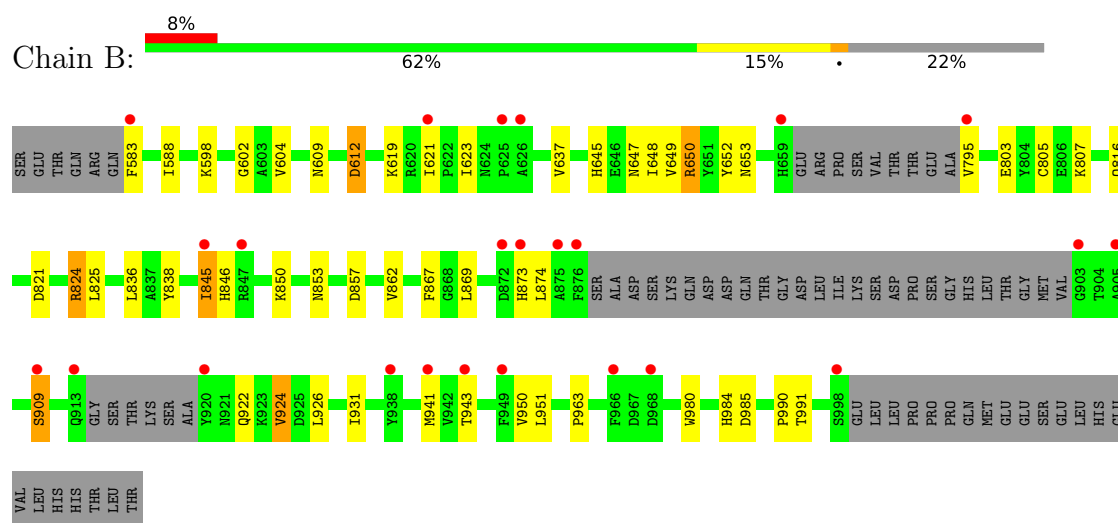
3 Residue-property plots [i](#)

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: eIF-2-alpha kinase GCN2

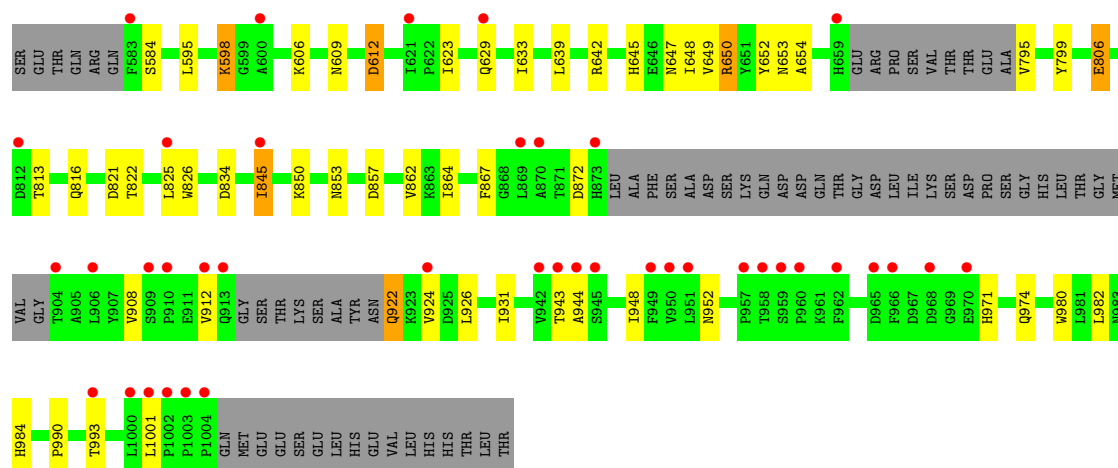


• Molecule 1: eIF-2-alpha kinase GCN2

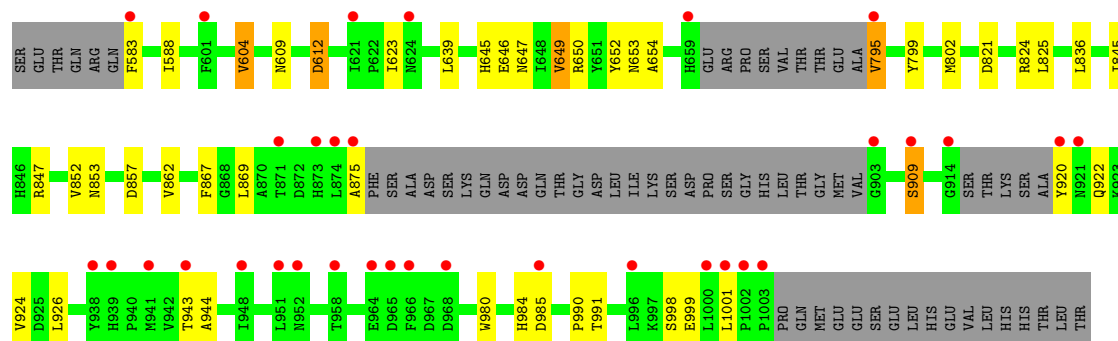


• Molecule 1: eIF-2-alpha kinase GCN2

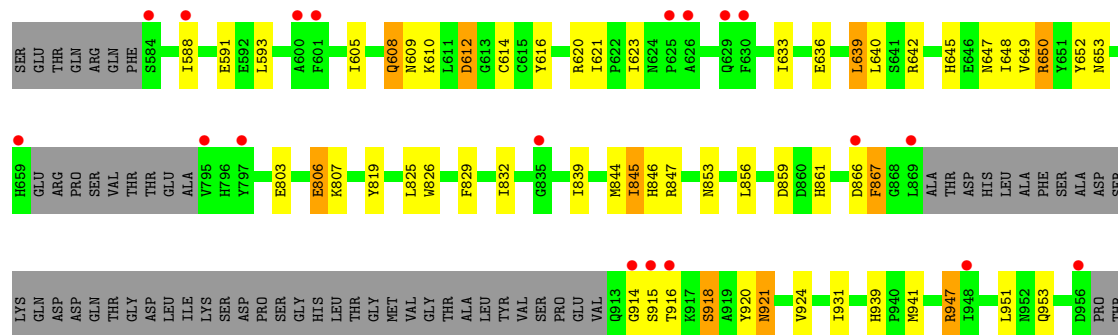




• Molecule 1: eIF-2-alpha kinase GCN2



• Molecule 1: eIF-2-alpha kinase GCN2

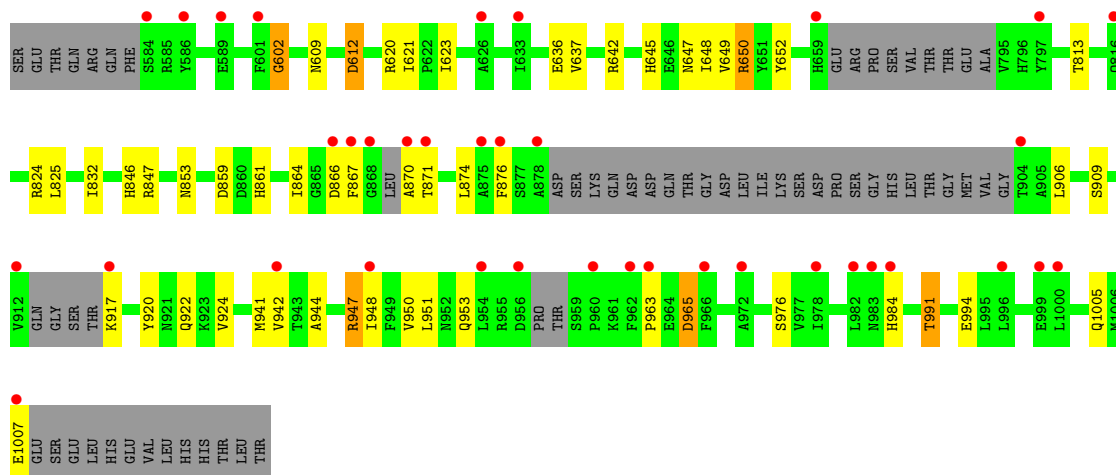


• Molecule 1: eIF-2-alpha kinase GCN2

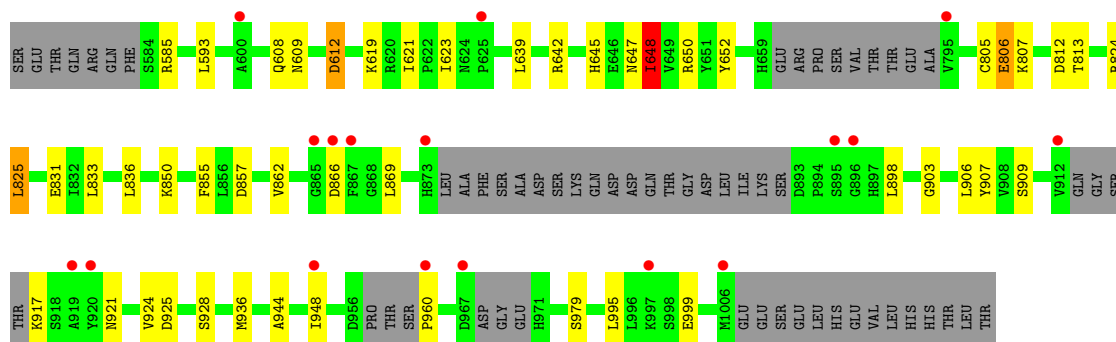




• Molecule 1: eIF-2-alpha kinase GCN2



• Molecule 1: eIF-2-alpha kinase GCN2



4 Data and refinement statistics

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α , β , γ	73.80Å 77.80Å 101.69Å 89.86° 90.05° 68.58°	Depositor
Resolution (Å)	42.00 – 2.30 42.00 – 2.30	Depositor EDS
% Data completeness (in resolution range)	96.0 (42.00-2.30) 94.6 (42.00-2.30)	Depositor EDS
R_{merge}	0.15	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.38 (at 2.29Å)	Xtriage
Refinement program	BUSTER	Depositor
R, R_{free}	0.214 , 0.243 (Not available) , 0.300	Depositor DCC
R_{free} test set	4728 reflections (5.24%)	wwPDB-VP
Wilson B-factor (Å ²)	38.5	Xtriage
Anisotropy	0.321	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.38 , 57.9	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.33$	Xtriage
Estimated twinning fraction	0.448 for -h,-k,l	Xtriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	16000	wwPDB-VP
Average B, all atoms (Å ²)	50.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 43.06 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 1.8623e-04. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: DMS, G41

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	0.89	0/1909	1.37	20/2598 (0.8%)
1	B	0.90	0/1979	1.35	19/2686 (0.7%)
1	C	0.89	0/1976	1.35	13/2686 (0.5%)
1	D	0.90	0/2041	1.37	13/2770 (0.5%)
1	E	0.89	1/1942 (0.1%)	1.37	13/2632 (0.5%)
1	F	0.93	0/2035	1.38	16/2759 (0.6%)
1	G	0.89	0/2049	1.37	15/2779 (0.5%)
1	H	0.91	0/2071	1.37	10/2809 (0.4%)
All	All	0.90	1/16002 (0.0%)	1.37	119/21719 (0.5%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	E	621	ILE	CA-CB	5.36	1.58	1.54

All (119) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	612	ASP	CA-CB-CG	7.95	120.55	112.60
1	B	821	ASP	CA-C-N	7.75	131.00	120.54
1	B	821	ASP	C-N-CA	7.75	131.00	120.54
1	D	821	ASP	CA-C-N	7.71	130.46	120.44
1	D	821	ASP	C-N-CA	7.71	130.46	120.44
1	G	832	ILE	N-CA-C	-7.57	103.16	110.42
1	H	805	CYS	CA-C-N	7.08	129.76	120.28
1	H	805	CYS	C-N-CA	7.08	129.76	120.28
1	F	965	ASP	CA-CB-CG	7.04	119.64	112.60
1	C	612	ASP	CA-CB-CG	7.01	119.61	112.60
1	F	612	ASP	CA-CB-CG	6.73	119.33	112.60
1	E	612	ASP	CA-CB-CG	6.71	119.31	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	F	868	GLY	N-CA-C	6.68	120.88	111.00
1	A	639	LEU	CA-C-N	6.57	129.41	120.54
1	A	639	LEU	C-N-CA	6.57	129.41	120.54
1	H	612	ASP	CA-CB-CG	6.53	119.13	112.60
1	F	805	CYS	CA-C-N	6.44	128.91	120.28
1	F	805	CYS	C-N-CA	6.44	128.91	120.28
1	H	857	ASP	CA-CB-CG	6.44	119.04	112.60
1	E	965	ASP	CA-CB-CG	6.42	119.03	112.60
1	B	924	VAL	CA-C-N	6.42	128.78	120.44
1	B	924	VAL	C-N-CA	6.42	128.78	120.44
1	E	916	THR	CA-C-N	6.37	133.71	121.54
1	E	916	THR	C-N-CA	6.37	133.71	121.54
1	B	612	ASP	CA-CB-CG	6.37	118.97	112.60
1	H	824	ARG	CA-C-N	6.35	129.11	120.54
1	H	824	ARG	C-N-CA	6.35	129.11	120.54
1	E	916	THR	CB-CA-C	6.13	119.41	111.50
1	D	857	ASP	CA-CB-CG	6.13	118.73	112.60
1	G	991	THR	N-CA-C	-6.13	101.45	110.52
1	A	821	ASP	CA-C-N	6.03	128.68	120.54
1	A	821	ASP	C-N-CA	6.03	128.68	120.54
1	C	806	GLU	N-CA-C	5.94	117.75	111.28
1	F	857	ASP	CA-CB-CG	5.93	118.53	112.60
1	B	991	THR	N-CA-C	-5.93	102.88	110.53
1	B	805	CYS	CA-C-N	5.92	128.81	120.28
1	B	805	CYS	C-N-CA	5.92	128.81	120.28
1	F	869	LEU	N-CA-C	5.92	123.41	110.80
1	B	985	ASP	CA-CB-CG	5.90	118.50	112.60
1	A	931	ILE	CA-C-N	5.89	127.98	120.56
1	A	931	ILE	C-N-CA	5.89	127.98	120.56
1	G	612	ASP	CA-CB-CG	5.86	118.46	112.60
1	C	639	LEU	CA-C-N	5.84	128.10	120.28
1	C	639	LEU	C-N-CA	5.84	128.10	120.28
1	E	991	THR	N-CA-C	-5.78	102.21	110.59
1	E	918	SER	CA-C-N	5.77	132.56	121.54
1	E	918	SER	C-N-CA	5.77	132.56	121.54
1	B	824	ARG	CA-C-N	5.76	128.32	120.54
1	B	824	ARG	C-N-CA	5.76	128.32	120.54
1	A	824	ARG	CA-C-N	5.74	128.29	120.54
1	A	824	ARG	C-N-CA	5.74	128.29	120.54
1	A	924	VAL	CA-C-N	5.69	127.90	120.28
1	A	924	VAL	C-N-CA	5.69	127.90	120.28
1	C	857	ASP	CA-CB-CG	5.67	118.27	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	F	1004	PRO	CA-C-N	5.64	131.85	121.70
1	F	1004	PRO	C-N-CA	5.64	131.85	121.70
1	B	857	ASP	CA-CB-CG	5.63	118.23	112.60
1	D	824	ARG	CA-C-N	5.61	128.11	120.54
1	D	824	ARG	C-N-CA	5.61	128.11	120.54
1	H	806	GLU	CB-CG-CD	5.60	122.12	112.60
1	H	639	LEU	CA-C-N	5.56	127.67	120.44
1	H	639	LEU	C-N-CA	5.56	127.67	120.44
1	D	998	SER	CA-C-N	5.53	128.25	120.28
1	D	998	SER	C-N-CA	5.53	128.25	120.28
1	G	922	GLN	CA-C-N	5.48	128.38	120.38
1	G	922	GLN	C-N-CA	5.48	128.38	120.38
1	D	944	ALA	CA-C-N	5.48	127.56	120.44
1	D	944	ALA	C-N-CA	5.48	127.56	120.44
1	D	991	THR	N-CA-C	-5.45	103.50	110.53
1	F	991	THR	N-CA-C	-5.44	103.51	110.53
1	C	821	ASP	CA-C-N	5.41	127.47	120.44
1	C	821	ASP	C-N-CA	5.41	127.47	120.44
1	H	648	ILE	N-CA-CB	-5.40	102.58	111.44
1	A	991	THR	N-CA-C	-5.40	102.76	110.59
1	D	612	ASP	CA-CB-CG	5.39	117.99	112.60
1	A	598	LYS	CA-C-N	5.37	126.33	121.82
1	A	598	LYS	C-N-CA	5.37	126.33	121.82
1	B	602	GLY	N-CA-C	5.37	118.23	111.09
1	C	872	ASP	CA-C-N	5.34	131.31	121.70
1	C	872	ASP	C-N-CA	5.34	131.31	121.70
1	F	822	THR	CA-C-N	5.30	127.25	120.56
1	F	822	THR	C-N-CA	5.30	127.25	120.56
1	F	902	VAL	N-CA-CB	5.30	119.98	111.23
1	G	871	THR	CA-C-N	5.28	128.34	120.90
1	G	871	THR	C-N-CA	5.28	128.34	120.90
1	C	924	VAL	CA-C-N	5.27	127.78	120.29
1	C	924	VAL	C-N-CA	5.27	127.78	120.29
1	A	857	ASP	CA-CB-CG	5.26	117.86	112.60
1	D	847	ARG	N-CA-C	5.22	118.83	111.52
1	E	636	GLU	CA-C-N	5.21	127.60	120.46
1	E	636	GLU	C-N-CA	5.21	127.60	120.46
1	B	637	VAL	CA-C-N	5.21	127.26	120.28
1	B	637	VAL	C-N-CA	5.21	127.26	120.28
1	F	901	MET	CA-C-N	5.18	131.30	121.97
1	F	901	MET	C-N-CA	5.18	131.30	121.97
1	C	606	LYS	N-CA-C	-5.18	100.72	108.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	912	VAL	CA-C-N	5.17	130.68	122.10
1	A	912	VAL	C-N-CA	5.17	130.68	122.10
1	A	583	PHE	CA-CB-CG	5.17	118.97	113.80
1	G	602	GLY	N-CA-C	5.16	118.51	110.88
1	B	941	MET	CA-C-N	5.15	127.52	120.46
1	B	941	MET	C-N-CA	5.15	127.52	120.46
1	A	835	GLY	CA-C-N	5.14	127.12	120.44
1	A	835	GLY	C-N-CA	5.14	127.12	120.44
1	E	639	LEU	CA-C-N	5.14	127.42	120.38
1	E	639	LEU	C-N-CA	5.14	127.42	120.38
1	G	953	GLN	CA-C-N	5.14	127.43	120.44
1	G	953	GLN	C-N-CA	5.14	127.43	120.44
1	D	604	VAL	N-CA-CB	5.12	118.48	111.41
1	G	637	VAL	CA-C-N	5.12	127.14	120.28
1	G	637	VAL	C-N-CA	5.12	127.14	120.28
1	C	834	ASP	CA-CB-CG	5.07	117.67	112.60
1	G	824	ARG	CA-C-N	5.05	127.36	120.54
1	G	824	ARG	C-N-CA	5.05	127.36	120.54
1	E	832	ILE	N-CA-C	-5.04	105.58	110.42
1	F	980	TRP	CA-CB-CG	5.04	123.17	113.60
1	B	838	TYR	CA-C-N	5.01	126.88	120.56
1	B	838	TYR	C-N-CA	5.01	126.88	120.56
1	G	965	ASP	CA-CB-CG	5.00	117.60	112.60

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	1865	0	1731	17	0
1	B	1934	0	1820	20	0
1	C	1928	0	1815	18	0
1	D	1993	0	1896	20	0
1	E	1897	0	1823	32	0
1	F	1990	0	1912	24	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	G	2005	0	1919	23	0
1	H	2024	0	1934	26	0
2	A	34	0	0	1	0
2	B	34	0	0	1	0
2	C	34	0	0	1	0
2	D	34	0	0	1	0
2	E	34	0	0	2	0
2	F	34	0	0	5	0
2	G	34	0	0	2	0
2	H	34	0	0	6	0
3	H	8	0	12	4	0
4	A	8	0	0	0	0
4	B	17	0	0	1	0
4	C	4	0	0	0	0
4	D	8	0	0	0	0
4	E	8	0	0	0	0
4	F	14	0	0	0	0
4	G	9	0	0	1	0
4	H	16	0	0	1	0
All	All	16000	0	14862	183	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 6.

All (183) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:845:ILE:HD11	1:C:922:GLN:HA	1.51	0.91
1:F:636:GLU:HG2	1:F:868:GLY:HA2	1.59	0.83
1:D:609:ASN:HD22	1:D:612:ASP:H	1.25	0.83
1:G:866:ASP:HB2	1:G:870:ALA:HA	1.58	0.83
1:G:609:ASN:HD22	1:G:612:ASP:H	1.28	0.81
1:H:645:HIS:HD2	1:H:647:ASN:H	1.30	0.80
1:B:853:ASN:ND2	1:B:867:PHE:H	1.82	0.76
1:D:853:ASN:ND2	1:D:867:PHE:H	1.84	0.76
1:F:855:PHE:CE2	2:F:1701:G41:C14	2.70	0.75
1:B:853:ASN:HD22	1:B:867:PHE:H	1.33	0.74
1:E:920:TYR:HB3	1:E:924:VAL:HG21	1.70	0.74
1:D:639:LEU:HD12	1:D:875:ALA:HB1	1.69	0.73
1:C:609:ASN:HD22	1:C:612:ASP:H	1.36	0.72
1:A:649:VAL:HG23	1:A:803:GLU:HG2	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:609:ASN:HD22	1:H:612:ASP:H	1.37	0.70
1:F:645:HIS:HD2	1:F:647:ASN:H	1.39	0.70
1:B:609:ASN:HD22	1:B:612:ASP:H	1.39	0.70
1:H:645:HIS:CD2	1:H:647:ASN:H	2.09	0.70
1:B:604:VAL:HG23	1:B:869:LEU:HD21	1.75	0.69
1:A:609:ASN:HD22	1:A:612:ASP:H	1.39	0.68
1:C:845:ILE:HD11	1:C:922:GLN:CA	2.23	0.68
1:F:609:ASN:HD22	1:F:612:ASP:H	1.39	0.68
1:E:609:ASN:HD22	1:E:612:ASP:H	1.40	0.67
1:H:898:LEU:HD22	3:H:1702:DMS:H13	1.76	0.67
1:D:645:HIS:HD2	1:D:647:ASN:H	1.41	0.66
1:B:645:HIS:HD2	1:B:647:ASN:H	1.43	0.66
1:D:795:VAL:HG11	1:F:1005:GLN:HB3	1.77	0.66
1:D:853:ASN:HD22	1:D:867:PHE:H	1.42	0.66
1:H:960:PRO:HG2	1:H:979:SER:HA	1.79	0.65
1:E:649:VAL:HG23	1:E:803:GLU:HG2	1.79	0.65
1:B:645:HIS:CD2	1:B:647:ASN:H	2.15	0.64
1:D:609:ASN:ND2	1:D:612:ASP:H	1.95	0.64
1:F:645:HIS:CD2	1:F:647:ASN:H	2.16	0.64
1:D:645:HIS:CD2	1:D:647:ASN:H	2.16	0.63
1:F:855:PHE:CZ	2:F:1701:G41:C13	2.82	0.63
1:E:609:ASN:HB3	1:E:612:ASP:OD1	1.99	0.63
1:G:859:ASP:HB3	1:G:861:HIS:HD2	1.64	0.63
1:H:619:LYS:HE2	1:H:621:ILE:HD11	1.81	0.62
1:G:609:ASN:ND2	1:G:612:ASP:H	1.96	0.61
1:E:593:LEU:HD11	1:E:608:GLN:HB2	1.83	0.61
1:D:604:VAL:HG23	1:D:869:LEU:HD21	1.83	0.61
1:C:816:GLN:HB3	1:H:806:GLU:HG2	1.82	0.60
1:F:648:ILE:HG22	1:F:866:ASP:OD2	2.01	0.60
1:G:846:HIS:O	1:G:847:ARG:HB2	2.00	0.60
1:A:645:HIS:HD2	1:A:647:ASN:H	1.49	0.60
1:G:609:ASN:HB3	1:G:612:ASP:OD1	2.01	0.60
1:F:855:PHE:CE2	2:F:1701:G41:C15	2.85	0.59
1:E:645:HIS:HB3	1:E:648:ILE:HG12	1.85	0.59
1:G:650:ARG:HG2	1:G:652:TYR:CE1	2.38	0.59
1:C:645:HIS:HD2	1:C:647:ASN:H	1.49	0.59
1:B:909:SER:HB2	1:B:924:VAL:HG13	1.85	0.58
1:E:609:ASN:ND2	1:E:612:ASP:H	2.02	0.58
1:E:941:MET:HE3	1:E:947:ARG:HG2	1.85	0.57
1:F:960:PRO:HG2	1:F:979:SER:HA	1.86	0.57
1:C:931:ILE:HG12	1:C:982:LEU:HD21	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:645:HIS:HD2	1:G:647:ASN:H	1.53	0.56
1:C:629:GLN:O	1:C:633:ILE:HG12	2.05	0.56
1:D:649:VAL:HG22	1:D:802:MET:HE3	1.87	0.56
1:D:650:ARG:HG2	1:D:652:TYR:CE1	2.41	0.56
1:D:909:SER:HB2	1:D:924:VAL:HG13	1.87	0.56
1:H:855:PHE:CE1	2:H:1701:G41:C14	2.89	0.55
1:C:645:HIS:CD2	1:C:647:ASN:H	2.24	0.55
1:G:645:HIS:CD2	1:G:647:ASN:H	2.24	0.55
1:B:845:ILE:HD11	1:B:922:GLN:HG2	1.88	0.55
1:H:648:ILE:HG23	1:H:866:ASP:OD2	2.06	0.55
1:D:583:PHE:N	1:D:588:ILE:HD11	2.22	0.55
1:B:645:HIS:HB3	1:B:648:ILE:HG12	1.88	0.54
1:D:920:TYR:C	1:D:922:GLN:H	2.16	0.54
1:F:855:PHE:CZ	2:F:1701:G41:C14	2.90	0.54
1:G:944:ALA:O	1:G:948:ILE:HG12	2.09	0.53
1:D:646:GLU:HB3	3:H:1703:DMS:H21	1.90	0.52
1:F:944:ALA:O	1:F:948:ILE:HG12	2.10	0.52
1:G:920:TYR:HB3	1:G:924:VAL:HG21	1.90	0.52
1:B:816:GLN:HG3	1:E:806:GLU:HG3	1.92	0.52
1:C:649:VAL:HG12	1:C:864:ILE:O	2.09	0.52
1:E:591:GLU:HG3	1:E:610:LYS:HE2	1.92	0.52
1:B:619:LYS:HE2	1:B:621:ILE:HD11	1.91	0.51
2:E:1701:G41:N2	2:E:1701:G41:C4	2.73	0.51
1:H:593:LEU:HD11	1:H:608:GLN:HB2	1.92	0.51
1:G:853:ASN:ND2	1:G:866:ASP:O	2.43	0.51
1:E:844:MET:HA	1:E:914:GLY:HA3	1.93	0.50
2:F:1701:G41:C4	2:F:1701:G41:N2	2.75	0.50
1:C:826:TRP:CZ2	1:C:974:GLN:HG3	2.47	0.49
1:C:853:ASN:ND2	1:C:867:PHE:H	2.09	0.49
1:B:824:ARG:HD2	1:E:807:LYS:HD3	1.93	0.49
2:B:1701:G41:C4	2:B:1701:G41:N2	2.76	0.49
1:E:650:ARG:HG2	1:E:652:TYR:CE1	2.47	0.49
2:G:1701:G41:C4	2:G:1701:G41:N2	2.75	0.49
1:H:850:LYS:HB2	3:H:1702:DMS:H22	1.95	0.49
1:H:855:PHE:CZ	2:H:1701:G41:C13	2.96	0.49
1:H:650:ARG:HG2	1:H:652:TYR:CE1	2.48	0.49
1:H:903:GLY:HA2	1:H:906:LEU:HD12	1.95	0.48
1:H:855:PHE:CE1	2:H:1701:G41:C15	2.96	0.48
1:A:828:LEU:HD22	1:A:862:VAL:HG23	1.96	0.48
1:C:609:ASN:ND2	1:C:612:ASP:H	2.10	0.48
1:A:584:SER:O	1:A:588:ILE:HG12	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:831:GLU:HB3	1:H:862:VAL:HB	1.94	0.48
1:A:645:HIS:CD2	1:A:647:ASN:H	2.29	0.48
1:E:980:TRP:CZ2	1:E:990:PRO:HB3	2.48	0.48
1:G:602:GLY:HA3	1:G:621:ILE:HD13	1.96	0.48
1:H:898:LEU:O	1:H:903:GLY:HA3	2.14	0.48
4:B:1803:HOH:O	1:F:650:ARG:HD2	2.14	0.48
1:H:609:ASN:ND2	1:H:612:ASP:H	2.08	0.47
1:E:645:HIS:CD2	1:E:647:ASN:H	2.31	0.47
1:E:853:ASN:ND2	1:E:867:PHE:H	2.12	0.47
1:A:813:THR:HG22	1:A:818:LEU:HB2	1.96	0.47
1:G:866:ASP:O	1:G:867:PHE:CB	2.61	0.47
2:D:1701:G41:N2	2:D:1701:G41:C4	2.75	0.47
1:E:645:HIS:HD2	1:E:647:ASN:H	1.61	0.47
1:C:650:ARG:HG2	1:C:652:TYR:CE1	2.50	0.47
1:E:931:ILE:HG23	1:E:951:LEU:HD22	1.97	0.47
1:B:649:VAL:HG13	1:B:803:GLU:HG2	1.97	0.47
1:D:639:LEU:CD1	1:D:875:ALA:HB1	2.40	0.47
1:F:825:LEU:CD2	1:F:936:MET:HB3	2.45	0.47
1:D:650:ARG:HD2	4:H:1805:HOH:O	2.15	0.46
1:A:943:THR:HG22	1:A:946:GLU:H	1.80	0.46
1:B:980:TRP:CD1	1:B:990:PRO:HD3	2.50	0.46
1:F:650:ARG:HG2	1:F:652:TYR:CE1	2.50	0.46
1:H:833:LEU:HD11	1:H:995:LEU:HG	1.97	0.46
1:B:846:HIS:O	1:B:874:LEU:O	2.34	0.46
2:H:1701:G41:N2	2:H:1701:G41:C4	2.78	0.46
1:A:612:ASP:OD1	1:A:614:CYS:HB2	2.15	0.46
1:F:845:ILE:HG12	1:F:871:THR:CG2	2.46	0.46
1:A:629:GLN:O	1:A:633:ILE:HG12	2.16	0.46
1:E:866:ASP:O	2:E:1701:G41:C17	2.64	0.46
1:G:649:VAL:HG12	1:G:864:ILE:O	2.16	0.46
1:D:980:TRP:CD1	1:D:990:PRO:HD3	2.51	0.46
1:E:826:TRP:CZ2	1:E:974:GLN:HG3	2.51	0.46
1:G:950:VAL:HG13	1:G:963:PRO:HG3	1.98	0.46
1:C:944:ALA:O	1:C:948:ILE:HG12	2.16	0.46
1:H:836:LEU:HD11	1:H:925:ASP:HB3	1.98	0.45
1:A:654:ALA:HA	1:A:799:TYR:O	2.17	0.45
1:H:944:ALA:O	1:H:948:ILE:HG12	2.16	0.45
1:G:906:LEU:HD13	1:G:951:LEU:HD12	1.98	0.45
1:B:950:VAL:HG13	1:B:963:PRO:HG3	1.97	0.45
1:F:833:LEU:HD11	1:F:995:LEU:HG	1.98	0.45
1:E:648:ILE:HD12	1:E:839:ILE:HD11	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:828:LEU:HD22	1:F:856:LEU:HD21	1.98	0.44
1:H:855:PHE:CZ	2:H:1701:G41:C14	3.00	0.44
1:B:650:ARG:HG2	1:B:652:TYR:CE1	2.52	0.44
1:E:847:ARG:HH11	1:E:918:SER:HB2	1.83	0.44
1:G:867:PHE:HA	2:G:1701:G41:C13	2.47	0.44
1:G:941:MET:HE3	1:G:947:ARG:HG2	1.99	0.44
1:A:948:ILE:O	1:A:952:ASN:HB2	2.18	0.44
2:A:1701:G41:N2	2:A:1701:G41:C4	2.79	0.44
1:F:902:VAL:HG12	1:F:948:ILE:HD12	1.99	0.44
2:C:1701:G41:C4	2:C:1701:G41:N2	2.79	0.44
1:C:595:LEU:HD21	1:C:598:LYS:HB2	2.00	0.44
1:E:845:ILE:HD13	1:E:847:ARG:HG3	2.00	0.44
1:F:976:SER:O	1:F:980:TRP:HB2	2.18	0.44
1:E:921:ASN:C	1:E:921:ASN:HD22	2.26	0.43
1:A:650:ARG:HG2	1:A:652:TYR:CE1	2.53	0.43
1:B:609:ASN:ND2	1:B:612:ASP:H	2.13	0.43
1:D:985:ASP:HB2	1:G:876:PHE:O	2.18	0.43
1:E:829:PHE:HE2	1:E:1001:LEU:HD11	1.83	0.43
1:H:907:TYR:CE2	3:H:1702:DMS:H23	2.53	0.43
1:E:846:HIS:O	1:E:847:ARG:HB2	2.17	0.42
1:F:903:GLY:HA2	1:F:906:LEU:HD12	2.01	0.42
1:H:812:ASP:OD1	2:H:1701:G41:N5	2.52	0.42
1:B:583:PHE:HB3	1:B:588:ILE:HD11	2.01	0.42
1:D:654:ALA:HA	1:D:799:TYR:O	2.18	0.42
1:E:639:LEU:HD21	1:E:915:SER:HB2	2.00	0.42
1:F:845:ILE:HG12	1:F:871:THR:HG21	2.02	0.42
1:C:980:TRP:CZ2	1:C:990:PRO:HB3	2.54	0.42
1:G:645:HIS:HB3	1:G:648:ILE:HG12	2.02	0.42
1:E:973:LYS:O	1:E:977:VAL:HG23	2.19	0.42
1:C:654:ALA:HA	1:C:799:TYR:O	2.20	0.42
1:C:645:HIS:HB3	1:C:648:ILE:HG12	2.02	0.42
1:B:931:ILE:HG23	1:B:951:LEU:HD22	2.02	0.41
1:E:819:TYR:CD1	1:E:939:HIS:HA	2.55	0.41
1:H:833:LEU:HD21	1:H:995:LEU:HD23	2.02	0.41
1:A:985:ASP:HA	1:A:986:PRO:HD2	1.76	0.41
1:E:614:CYS:HB3	1:E:616:TYR:CE2	2.56	0.41
1:G:650:ARG:HD2	4:G:1803:HOH:O	2.19	0.41
1:A:649:VAL:HG12	1:A:864:ILE:O	2.20	0.41
1:A:991:THR:OG1	1:A:994:GLU:HB2	2.21	0.41
1:E:859:ASP:HB3	1:E:861:HIS:HD2	1.85	0.41
1:G:991:THR:OG1	1:G:994:GLU:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:825:LEU:HD23	1:H:936:MET:HB3	2.03	0.40
1:A:980:TRP:CZ2	1:A:990:PRO:HB3	2.57	0.40
1:E:856:LEU:HD23	1:E:856:LEU:HA	1.91	0.40
1:F:847:ARG:HD3	1:F:869:LEU:CB	2.51	0.40
1:F:899:THR:CB	1:F:948:ILE:HD11	2.51	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	179/318 (56%)	163 (91%)	15 (8%)	1 (1%)	21	27
1	B	59/318 (19%)	57 (97%)	2 (3%)	0	100	100
1	G	50/318 (16%)	47 (94%)	3 (6%)	0	100	100
1	H	204/318 (64%)	195 (96%)	9 (4%)	0	100	100
All	All	492/1272 (39%)	462 (94%)	29 (6%)	1 (0%)	43	55

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	867	PHE

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	184/285 (65%)	168 (91%)	16 (9%)	9	12
1	B	194/285 (68%)	178 (92%)	16 (8%)	10	14
1	C	194/285 (68%)	170 (88%)	24 (12%)	4	5
1	D	204/285 (72%)	189 (93%)	15 (7%)	13	17
1	E	195/285 (68%)	176 (90%)	19 (10%)	8	10
1	F	205/285 (72%)	190 (93%)	15 (7%)	13	18
1	G	206/285 (72%)	189 (92%)	17 (8%)	10	14
1	H	210/285 (74%)	196 (93%)	14 (7%)	15	21
All	All	1592/2280 (70%)	1456 (92%)	136 (8%)	10	13

All (136) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	585	ARG
1	A	601	PHE
1	A	623	ILE
1	A	642	ARG
1	A	650	ARG
1	A	653	ASN
1	A	825	LEU
1	A	836	LEU
1	A	862	VAL
1	A	867	PHE
1	A	916	THR
1	A	924	VAL
1	A	943	THR
1	A	952	ASN
1	A	959	SER
1	A	984	HIS
1	B	598	LYS
1	B	623	ILE
1	B	650	ARG
1	B	653	ASN
1	B	795	VAL
1	B	807	LYS
1	B	825	LEU
1	B	836	LEU
1	B	845	ILE
1	B	850	LYS
1	B	862	VAL

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Mol	Chain	Res	Type
1	B	873	HIS
1	B	909	SER
1	B	926	LEU
1	B	943	THR
1	B	984	HIS
1	C	584	SER
1	C	598	LYS
1	C	623	ILE
1	C	642	ARG
1	C	650	ARG
1	C	653	ASN
1	C	795	VAL
1	C	806	GLU
1	C	813	THR
1	C	822	THR
1	C	825	LEU
1	C	845	ILE
1	C	850	LYS
1	C	862	VAL
1	C	908	VAL
1	C	912	VAL
1	C	922	GLN
1	C	926	LEU
1	C	943	THR
1	C	952	ASN
1	C	971	HIS
1	C	984	HIS
1	C	993	THR
1	C	1001	LEU
1	D	623	ILE
1	D	649	VAL
1	D	653	ASN
1	D	795	VAL
1	D	825	LEU
1	D	836	LEU
1	D	845	ILE
1	D	852	VAL
1	D	862	VAL
1	D	909	SER
1	D	926	LEU
1	D	943	THR
1	D	984	HIS

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Mol	Chain	Res	Type
1	D	999	GLU
1	D	1001	LEU
1	E	588	ILE
1	E	605	ILE
1	E	608	GLN
1	E	620	ARG
1	E	623	ILE
1	E	633	ILE
1	E	640	LEU
1	E	642	ARG
1	E	650	ARG
1	E	653	ASN
1	E	806	GLU
1	E	825	LEU
1	E	845	ILE
1	E	867	PHE
1	E	921	ASN
1	E	947	ARG
1	E	953	GLN
1	E	983	ASN
1	E	984	HIS
1	F	585	ARG
1	F	623	ILE
1	F	642	ARG
1	F	795	VAL
1	F	807	LYS
1	F	813	THR
1	F	825	LEU
1	F	842	LYS
1	F	845	ILE
1	F	848	ASN
1	F	871	THR
1	F	909	SER
1	F	921	ASN
1	F	980	TRP
1	F	998	SER
1	G	620	ARG
1	G	623	ILE
1	G	636	GLU
1	G	642	ARG
1	G	650	ARG
1	G	813	THR

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Mol	Chain	Res	Type
1	G	825	LEU
1	G	874	LEU
1	G	909	SER
1	G	917	LYS
1	G	942	VAL
1	G	947	ARG
1	G	965	ASP
1	G	976	SER
1	G	984	HIS
1	G	1005	GLN
1	G	1007	GLU
1	H	585	ARG
1	H	623	ILE
1	H	642	ARG
1	H	648	ILE
1	H	807	LYS
1	H	813	THR
1	H	825	LEU
1	H	869	LEU
1	H	909	SER
1	H	917	LYS
1	H	921	ASN
1	H	924	VAL
1	H	928	SER
1	H	999	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (54) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	609	ASN
1	A	624	ASN
1	A	645	HIS
1	A	848	ASN
1	A	853	ASN
1	A	983	ASN
1	A	984	HIS
1	B	609	ASN
1	B	624	ASN
1	B	645	HIS
1	B	853	ASN
1	B	913	GLN
1	B	921	ASN

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Mol	Chain	Res	Type
1	B	983	ASN
1	C	609	ASN
1	C	645	HIS
1	C	647	ASN
1	C	853	ASN
1	C	922	GLN
1	D	609	ASN
1	D	645	HIS
1	D	647	ASN
1	D	853	ASN
1	D	921	ASN
1	E	608	GLN
1	E	609	ASN
1	E	645	HIS
1	E	647	ASN
1	E	853	ASN
1	E	861	HIS
1	E	921	ASN
1	F	609	ASN
1	F	624	ASN
1	F	645	HIS
1	F	848	ASN
1	F	853	ASN
1	F	974	GLN
1	G	609	ASN
1	G	624	ASN
1	G	645	HIS
1	G	647	ASN
1	G	853	ASN
1	G	861	HIS
1	G	922	GLN
1	G	939	HIS
1	G	974	GLN
1	G	984	HIS
1	H	609	ASN
1	H	645	HIS
1	H	647	ASN
1	H	853	ASN
1	H	921	ASN
1	H	974	GLN
1	H	983	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

10 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	G41	H	1701	-	38,38,38	0.10	0	50,52,52	0.41	0
2	G41	C	1701	-	38,38,38	0.10	0	50,52,52	0.41	0
2	G41	B	1701	-	38,38,38	0.10	0	50,52,52	0.39	0
2	G41	G	1701	-	38,38,38	0.10	0	50,52,52	0.40	0
3	DMS	H	1703	-	3,3,3	0.36	0	3,3,3	0.81	0
2	G41	D	1701	-	38,38,38	0.10	0	50,52,52	0.40	0
2	G41	A	1701	-	38,38,38	0.12	0	50,52,52	0.42	0
2	G41	E	1701	-	38,38,38	0.10	0	50,52,52	0.39	0
2	G41	F	1701	-	38,38,38	0.10	0	50,52,52	0.40	0
3	DMS	H	1702	-	3,3,3	0.41	0	3,3,3	0.38	0

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	G41	H	1701	-	-	0/20/28/28	0/5/5/5
2	G41	C	1701	-	-	1/20/28/28	0/5/5/5
2	G41	B	1701	-	-	0/20/28/28	0/5/5/5
2	G41	G	1701	-	-	6/20/28/28	0/5/5/5
2	G41	D	1701	-	-	0/20/28/28	0/5/5/5
2	G41	A	1701	-	-	0/20/28/28	0/5/5/5
2	G41	E	1701	-	-	6/20/28/28	0/5/5/5
2	G41	F	1701	-	-	0/20/28/28	0/5/5/5

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (13) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	G	1701	G41	C11-C12-C16-C17
2	G	1701	G41	C13-C12-C16-C20
2	E	1701	G41	C13-C12-C16-C20
2	G	1701	G41	C11-C12-C16-C20
2	G	1701	G41	C13-C12-C16-C17
2	E	1701	G41	C11-C12-C16-C17
2	E	1701	G41	C11-C12-C16-C20
2	E	1701	G41	C13-C12-C16-C17
2	C	1701	G41	O-C21-C22-C23
2	E	1701	G41	O-C21-C22-C23
2	E	1701	G41	N4-C21-C22-C23
2	G	1701	G41	O-C21-C22-C23
2	G	1701	G41	N4-C21-C22-C23

There are no ring outliers.

10 monomers are involved in 23 short contacts:

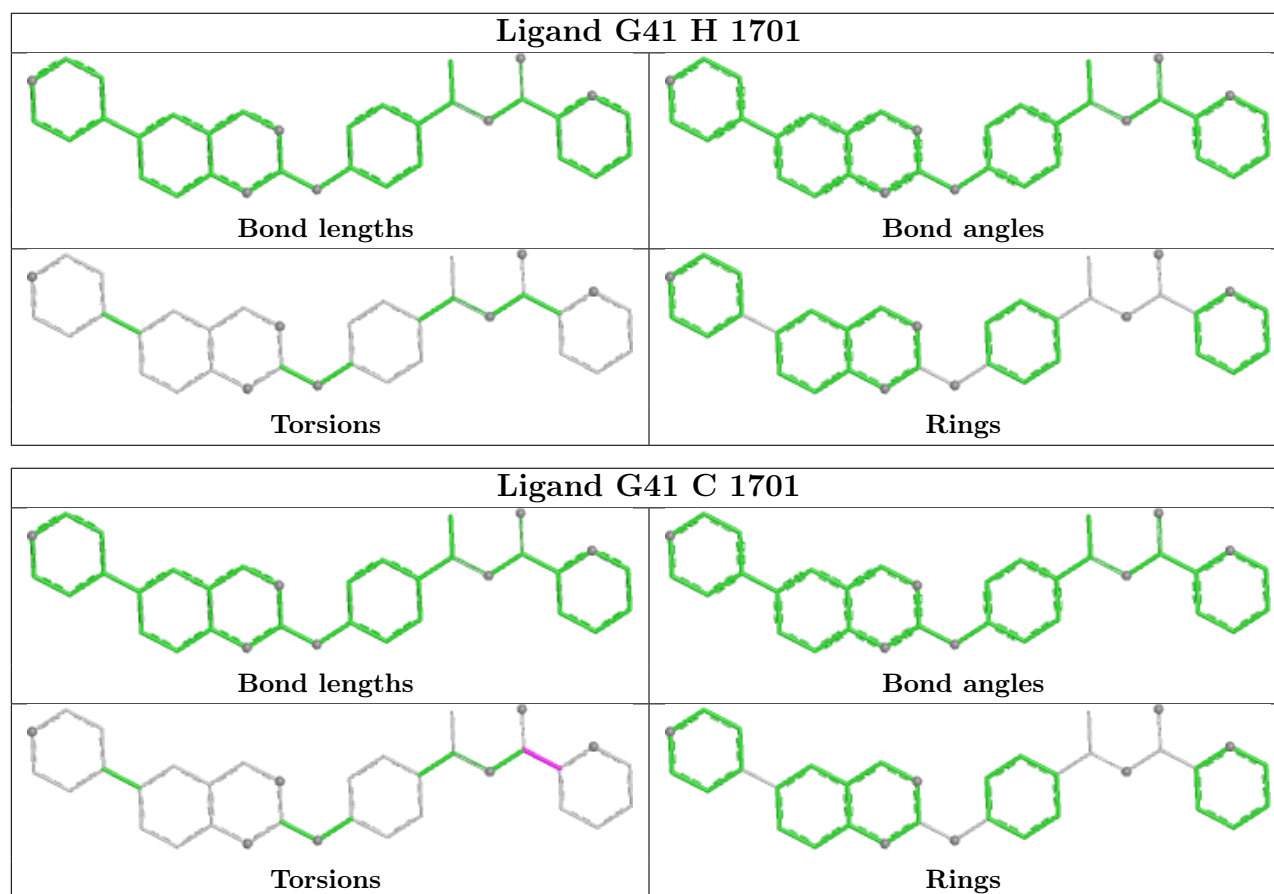
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	H	1701	G41	6	0
2	C	1701	G41	1	0
2	B	1701	G41	1	0
2	G	1701	G41	2	0
3	H	1703	DMS	1	0
2	D	1701	G41	1	0
2	A	1701	G41	1	0
2	E	1701	G41	2	0

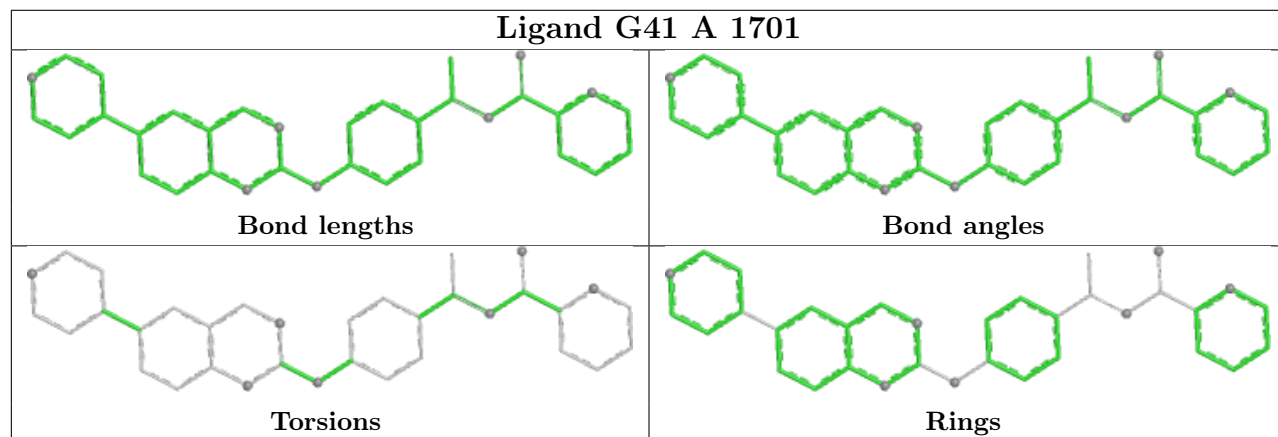
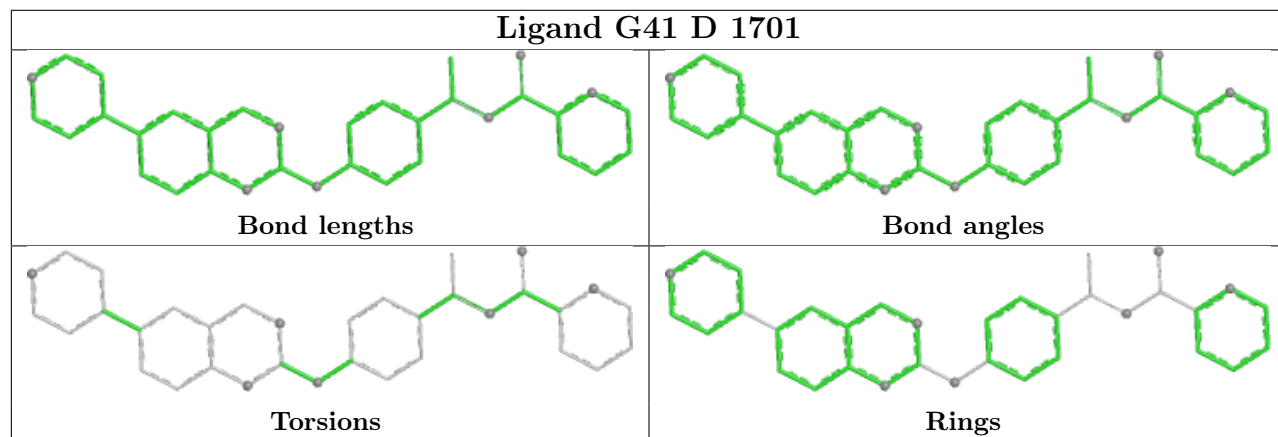
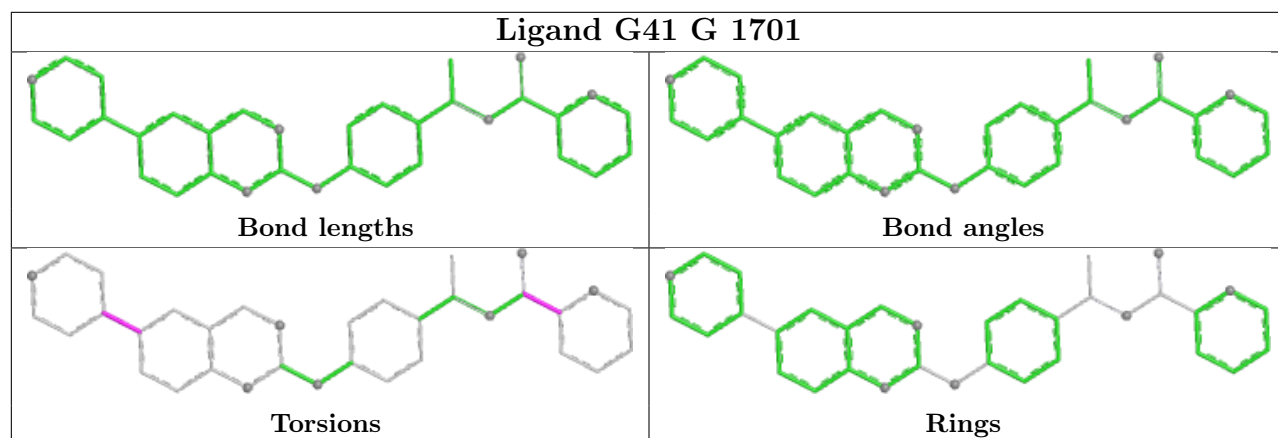
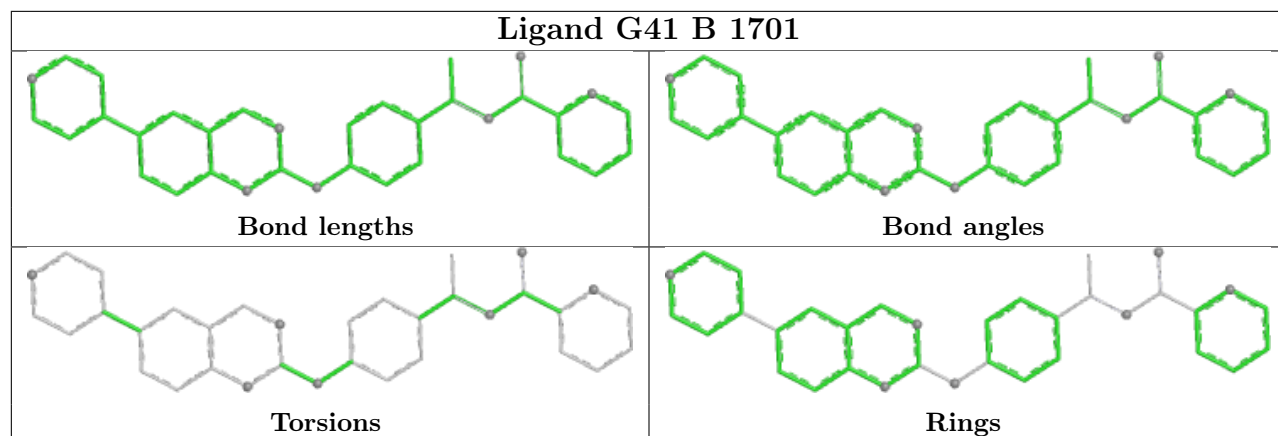
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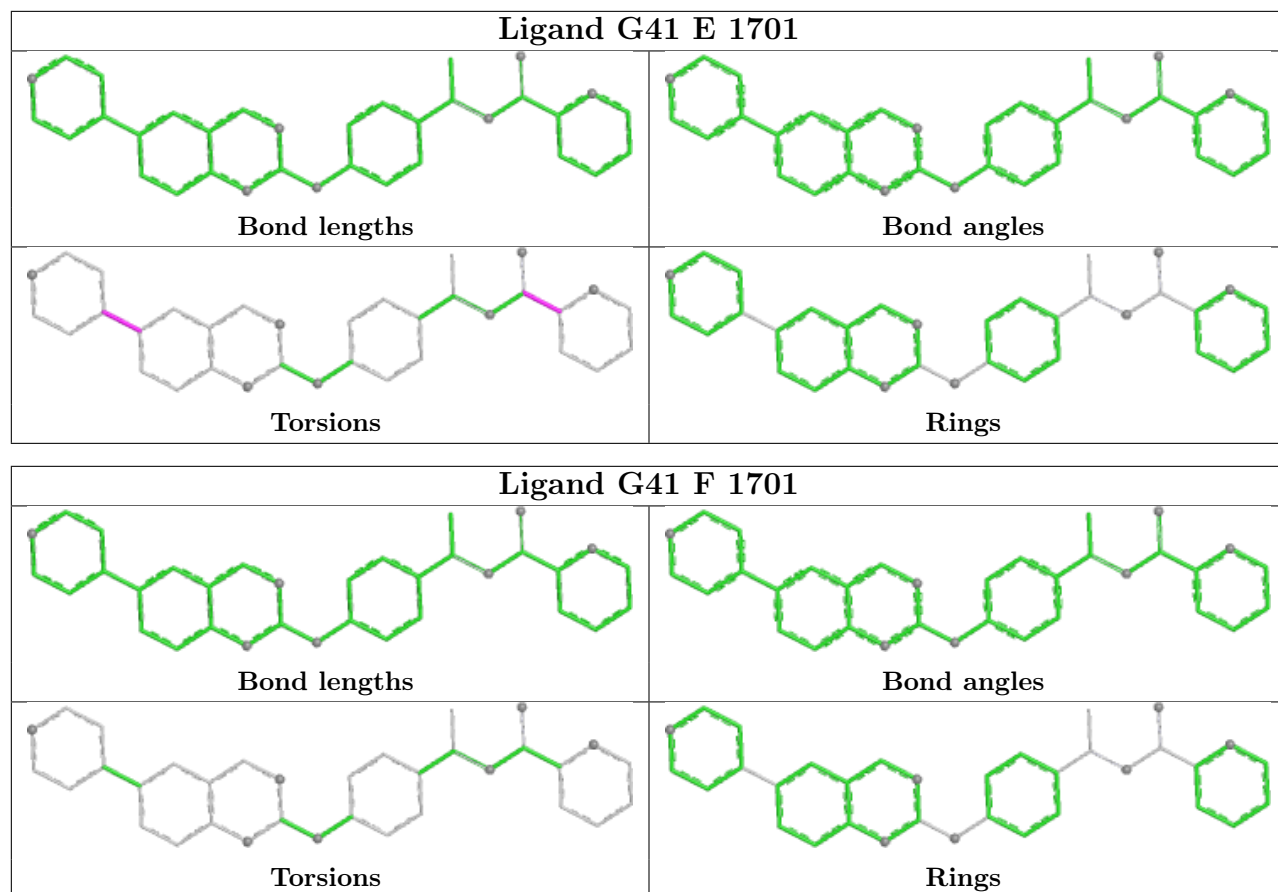
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Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	F	1701	G41	5	0
3	H	1702	DMS	3	0

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







5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	245/318 (77%)	0.96	35 (14%) 6 7	23, 49, 89, 102	0
1	B	249/318 (78%)	0.67	24 (9%) 13 15	23, 45, 76, 97	0
1	C	249/318 (78%)	0.98	40 (16%) 4 5	24, 51, 96, 111	0
1	D	254/318 (79%)	0.76	33 (12%) 7 8	23, 46, 80, 99	0
1	E	241/318 (75%)	1.10	38 (15%) 5 5	28, 51, 82, 102	0
1	F	254/318 (79%)	0.80	23 (9%) 15 16	23, 46, 76, 100	0
1	G	257/318 (80%)	1.09	37 (14%) 6 7	29, 52, 84, 100	0
1	H	259/318 (81%)	0.73	17 (6%) 24 26	23, 46, 74, 110	0
All	All	2008/2544 (78%)	0.88	247 (12%) 8 9	23, 48, 84, 111	0

All (247) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	E	869	LEU	6.5
1	E	915	SER	6.0
1	G	878	ALA	5.8
1	G	982	LEU	5.8
1	E	982	LEU	5.1
1	D	968	ASP	5.0
1	E	659	HIS	4.9
1	B	966	PHE	4.8
1	H	920	TYR	4.8
1	G	870	ALA	4.8
1	H	967	ASP	4.7
1	A	869	LEU	4.6
1	G	659	HIS	4.6
1	A	958	THR	4.4
1	G	866	ASP	4.4
1	E	992	ALA	4.4

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Mol	Chain	Res	Type	RSRZ
1	F	960	PRO	4.3
1	C	958	THR	4.2
1	C	583	PHE	4.2
1	F	869	LEU	4.1
1	A	600	ALA	4.0
1	C	968	ASP	4.0
1	F	868	GLY	3.9
1	C	960	PRO	3.9
1	D	914	GLY	3.9
1	A	945	SER	3.9
1	G	601	PHE	3.8
1	B	968	ASP	3.7
1	D	875	ALA	3.7
1	D	966	PHE	3.7
1	C	913	GLN	3.7
1	C	873	HIS	3.7
1	E	916	THR	3.6
1	B	876	PHE	3.6
1	A	916	THR	3.6
1	A	845	ILE	3.6
1	C	949	PHE	3.6
1	D	1000	LEU	3.6
1	D	1001	LEU	3.6
1	G	626	ALA	3.6
1	D	583	PHE	3.5
1	F	867	PHE	3.5
1	F	866	ASP	3.5
1	H	866	ASP	3.5
1	E	601	PHE	3.5
1	C	659	HIS	3.5
1	D	621	ILE	3.5
1	B	583	PHE	3.5
1	E	626	ALA	3.5
1	F	969	GLY	3.5
1	E	956	ASP	3.5
1	G	868	GLY	3.4
1	F	601	PHE	3.4
1	F	795	VAL	3.4
1	A	942	VAL	3.4
1	F	957	PRO	3.3
1	C	970	GLU	3.3
1	G	966	PHE	3.3

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Mol	Chain	Res	Type	RSRZ
1	A	912	VAL	3.3
1	G	960	PRO	3.3
1	A	998	SER	3.3
1	C	945	SER	3.3
1	G	584	SER	3.3
1	C	600	ALA	3.3
1	F	865	GLY	3.3
1	H	873	HIS	3.2
1	D	909	SER	3.2
1	D	903	GLY	3.2
1	G	956	ASP	3.2
1	G	871	THR	3.2
1	A	601	PHE	3.2
1	E	630	PHE	3.2
1	D	920	TYR	3.2
1	C	1000	LEU	3.2
1	D	948	ILE	3.2
1	A	962	PHE	3.1
1	E	584	SER	3.1
1	A	967	ASP	3.1
1	E	967	ASP	3.1
1	G	984	HIS	3.1
1	A	583	PHE	3.1
1	G	867	PHE	3.1
1	D	985	ASP	3.1
1	E	960	PRO	3.1
1	B	998	SER	3.1
1	A	949	PHE	3.0
1	H	919	ALA	3.0
1	D	943	THR	3.0
1	D	871	THR	3.0
1	H	865	GLY	3.0
1	H	1006	MET	3.0
1	B	626	ALA	3.0
1	G	999	GLU	3.0
1	A	629	GLN	3.0
1	D	1003	PRO	2.9
1	H	960	PRO	2.9
1	D	996	LEU	2.9
1	C	845	ILE	2.9
1	E	948	ILE	2.9
1	A	959	SER	2.9

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Mol	Chain	Res	Type	RSRZ
1	C	629	GLN	2.9
1	B	903	GLY	2.9
1	E	1000	LEU	2.9
1	B	621	ILE	2.9
1	B	659	HIS	2.8
1	D	659	HIS	2.8
1	F	968	ASP	2.8
1	A	960	PRO	2.8
1	F	870	ALA	2.8
1	E	797	TYR	2.8
1	G	586	TYR	2.8
1	E	966	PHE	2.8
1	C	943	THR	2.8
1	F	872	ASP	2.8
1	A	906	LEU	2.8
1	G	797	TYR	2.8
1	G	962	PHE	2.8
1	G	633	ILE	2.7
1	C	904	THR	2.7
1	C	962	PHE	2.7
1	D	601	PHE	2.7
1	C	950	VAL	2.7
1	E	835	GLY	2.7
1	D	874	LEU	2.7
1	A	913	GLN	2.7
1	E	983	ASN	2.7
1	C	1003	PRO	2.7
1	C	951	LEU	2.7
1	F	961	LYS	2.6
1	F	584	SER	2.6
1	F	623	ILE	2.6
1	A	659	HIS	2.6
1	A	992	ALA	2.6
1	G	876	PHE	2.6
1	A	969	GLY	2.6
1	B	941	MET	2.6
1	H	896	GLY	2.6
1	G	1007	GLU	2.6
1	A	968	ASP	2.6
1	D	938	TYR	2.6
1	E	968	ASP	2.5
1	C	957	PRO	2.5

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Mol	Chain	Res	Type	RSRZ
1	C	1004	PRO	2.5
1	F	902	VAL	2.5
1	C	1001	LEU	2.5
1	B	875	ALA	2.5
1	A	951	LEU	2.5
1	E	996	LEU	2.5
1	D	958	THR	2.5
1	B	845	ILE	2.5
1	C	869	LEU	2.5
1	D	873	HIS	2.5
1	G	963	PRO	2.5
1	H	895	SER	2.4
1	F	1000	LEU	2.4
1	B	872	ASP	2.4
1	D	1002	PRO	2.4
1	C	912	VAL	2.4
1	E	961	LYS	2.4
1	E	866	ASP	2.4
1	E	972	ALA	2.4
1	G	904	THR	2.4
1	A	973	LYS	2.4
1	F	966	PHE	2.4
1	E	995	LEU	2.4
1	C	812	ASP	2.4
1	G	917	LYS	2.4
1	C	966	PHE	2.4
1	H	795	VAL	2.4
1	G	996	LEU	2.4
1	E	970	GLU	2.4
1	G	589	GLU	2.4
1	G	983	ASN	2.3
1	A	626	ALA	2.3
1	C	870	ALA	2.3
1	B	909	SER	2.3
1	G	978	ILE	2.3
1	G	816	GLN	2.3
1	C	1002	PRO	2.3
1	A	943	THR	2.3
1	C	942	VAL	2.3
1	C	965	ASP	2.3
1	E	625	PRO	2.3
1	C	909	SER	2.3

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Mol	Chain	Res	Type	RSRZ
1	E	979	SER	2.3
1	F	659	HIS	2.3
1	D	964	GLU	2.3
1	D	795	VAL	2.3
1	G	954	LEU	2.3
1	C	910	PRO	2.3
1	A	954	LEU	2.2
1	G	942	VAL	2.3
1	B	847	ARG	2.2
1	B	938	TYR	2.2
1	A	627	SER	2.2
1	D	951	LEU	2.2
1	A	966	PHE	2.2
1	B	949	PHE	2.2
1	A	957	PRO	2.2
1	B	625	PRO	2.2
1	B	913	GLN	2.2
1	C	944	ALA	2.2
1	G	875	ALA	2.2
1	C	621	ILE	2.2
1	E	978	ILE	2.2
1	A	825	LEU	2.2
1	D	941	MET	2.2
1	A	865	GLY	2.2
1	H	600	ALA	2.2
1	E	976	SER	2.2
1	A	812	ASP	2.2
1	F	921	ASN	2.2
1	D	939	HIS	2.2
1	E	914	GLY	2.2
1	A	866	ASP	2.1
1	B	795	VAL	2.1
1	E	997	LYS	2.1
1	H	625	PRO	2.1
1	E	984	HIS	2.1
1	C	959	SER	2.1
1	F	948	ILE	2.1
1	G	1000	LEU	2.1
1	E	795	VAL	2.1
1	C	993	THR	2.1
1	H	997	LYS	2.1
1	C	825	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
1	D	952	ASN	2.1
1	E	588	ILE	2.1
1	B	873	HIS	2.1
1	H	912	VAL	2.1
1	E	600	ALA	2.1
1	D	624	ASN	2.1
1	C	924	VAL	2.1
1	G	912	VAL	2.1
1	H	867	PHE	2.1
1	B	905	ALA	2.0
1	G	972	ALA	2.0
1	F	648	ILE	2.0
1	H	948	ILE	2.0
1	B	920	TYR	2.0
1	B	943	THR	2.0
1	E	629	GLN	2.0
1	C	906	LEU	2.0
1	D	921	ASN	2.0
1	D	965	ASP	2.0
1	E	986	PRO	2.0
1	G	948	ILE	2.0

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

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

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

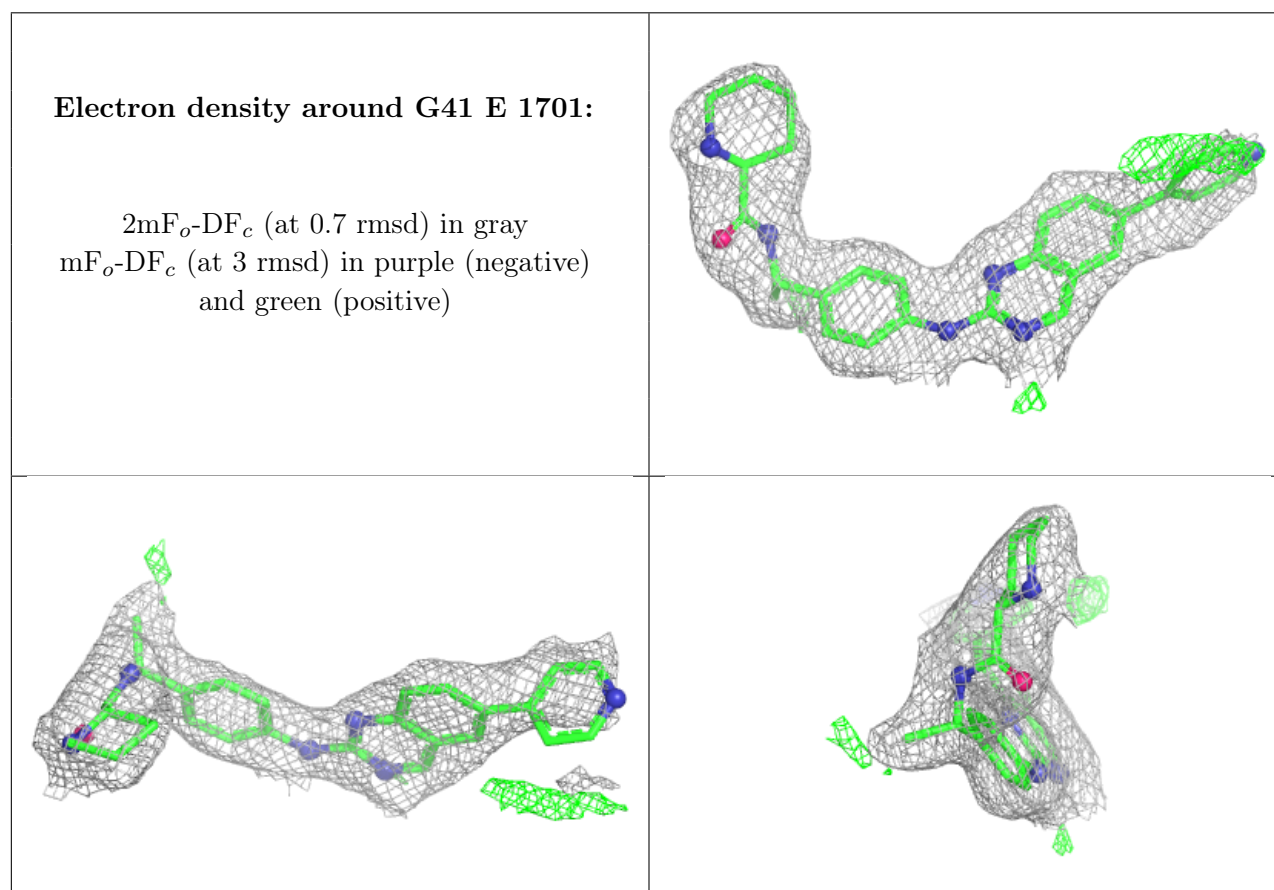
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
3	DMS	H	1702	4/4	0.80	0.27	76,79,80,81	0
3	DMS	H	1703	4/4	0.84	0.23	78,81,81,83	0

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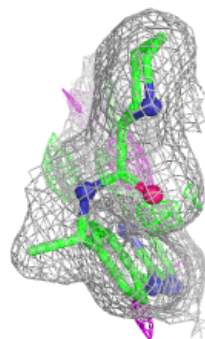
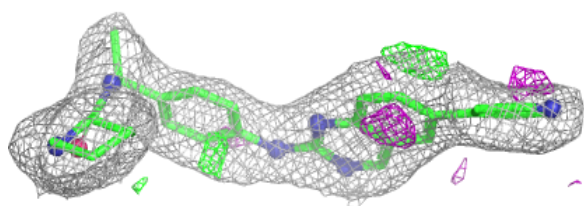
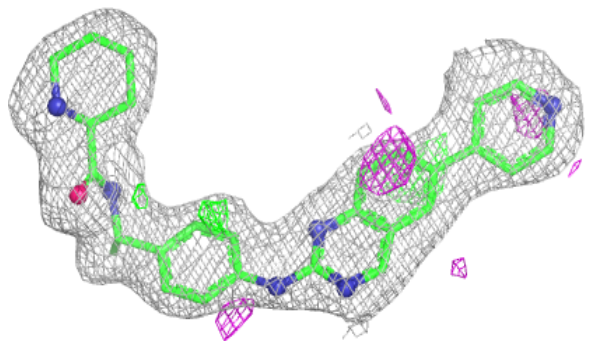
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
2	G41	E	1701	34/34	0.86	0.14	33,46,65,67	0
2	G41	F	1701	34/34	0.86	0.12	29,34,40,42	0
2	G41	G	1701	34/34	0.87	0.13	32,45,70,71	0
2	G41	H	1701	34/34	0.88	0.11	28,33,47,49	0
2	G41	C	1701	34/34	0.93	0.09	25,36,42,43	0
2	G41	B	1701	34/34	0.94	0.09	21,28,40,43	0
2	G41	D	1701	34/34	0.94	0.08	24,32,43,43	0
2	G41	A	1701	34/34	0.95	0.08	20,28,44,47	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.

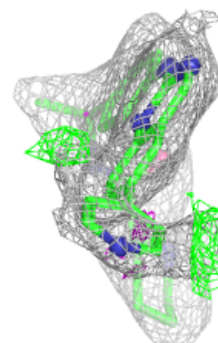
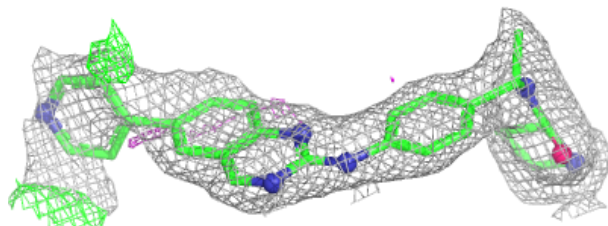
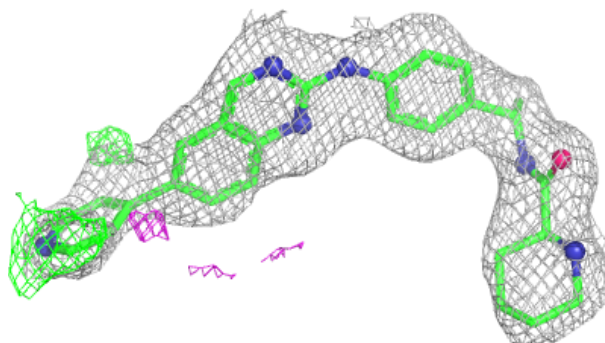


Electron density around G41 F 1701:

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

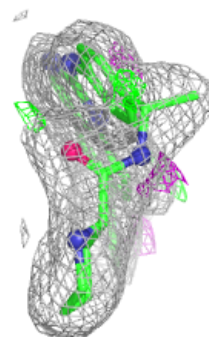
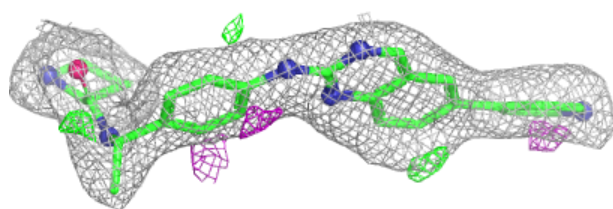
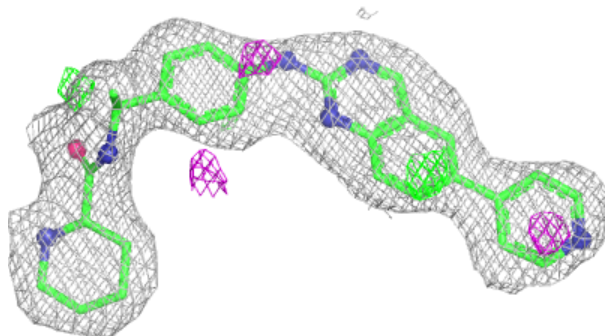
**Electron density around G41 G 1701:**

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

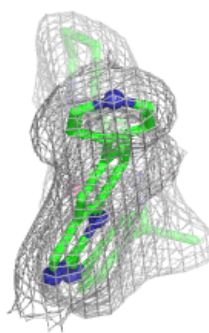
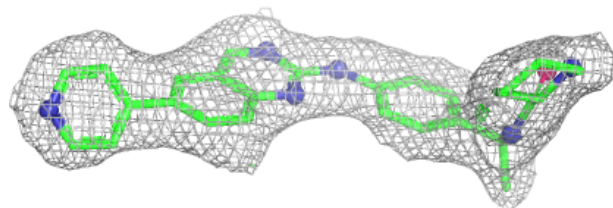
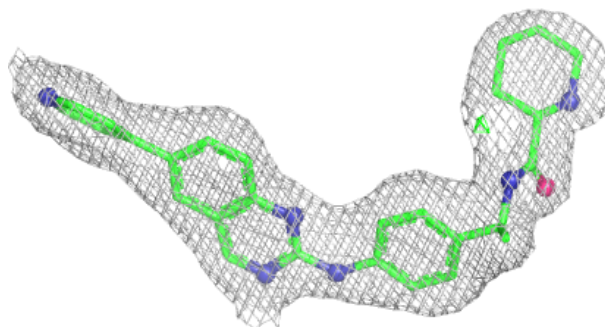


Electron density around G41 H 1701:

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

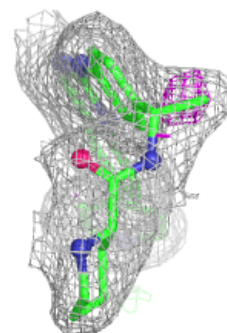
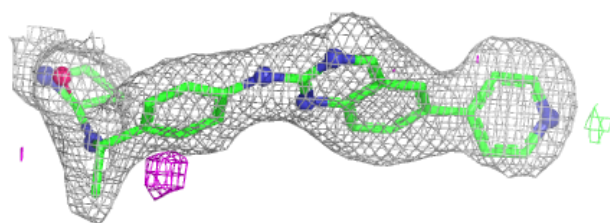
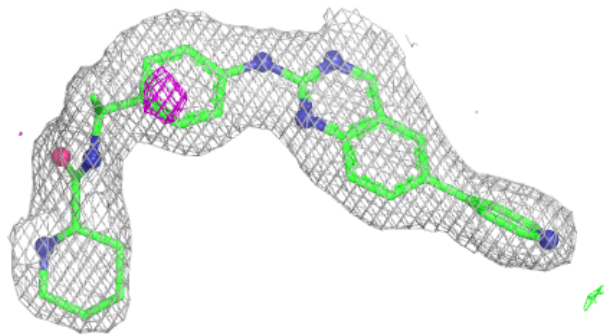
**Electron density around G41 C 1701:**

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

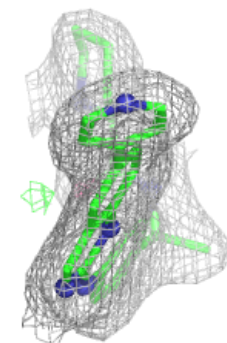
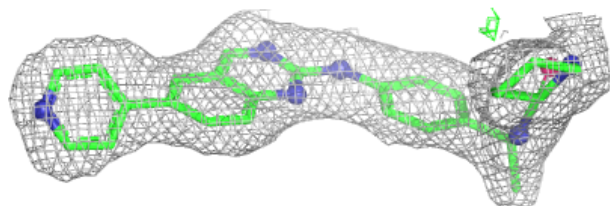
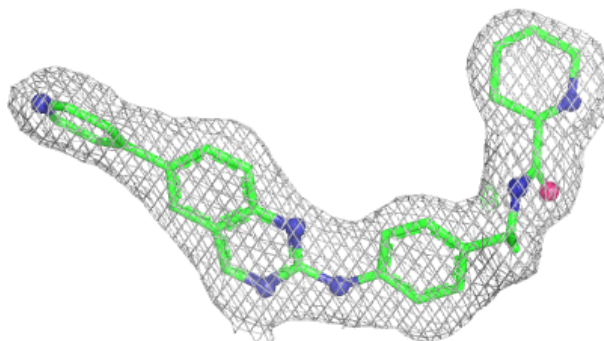


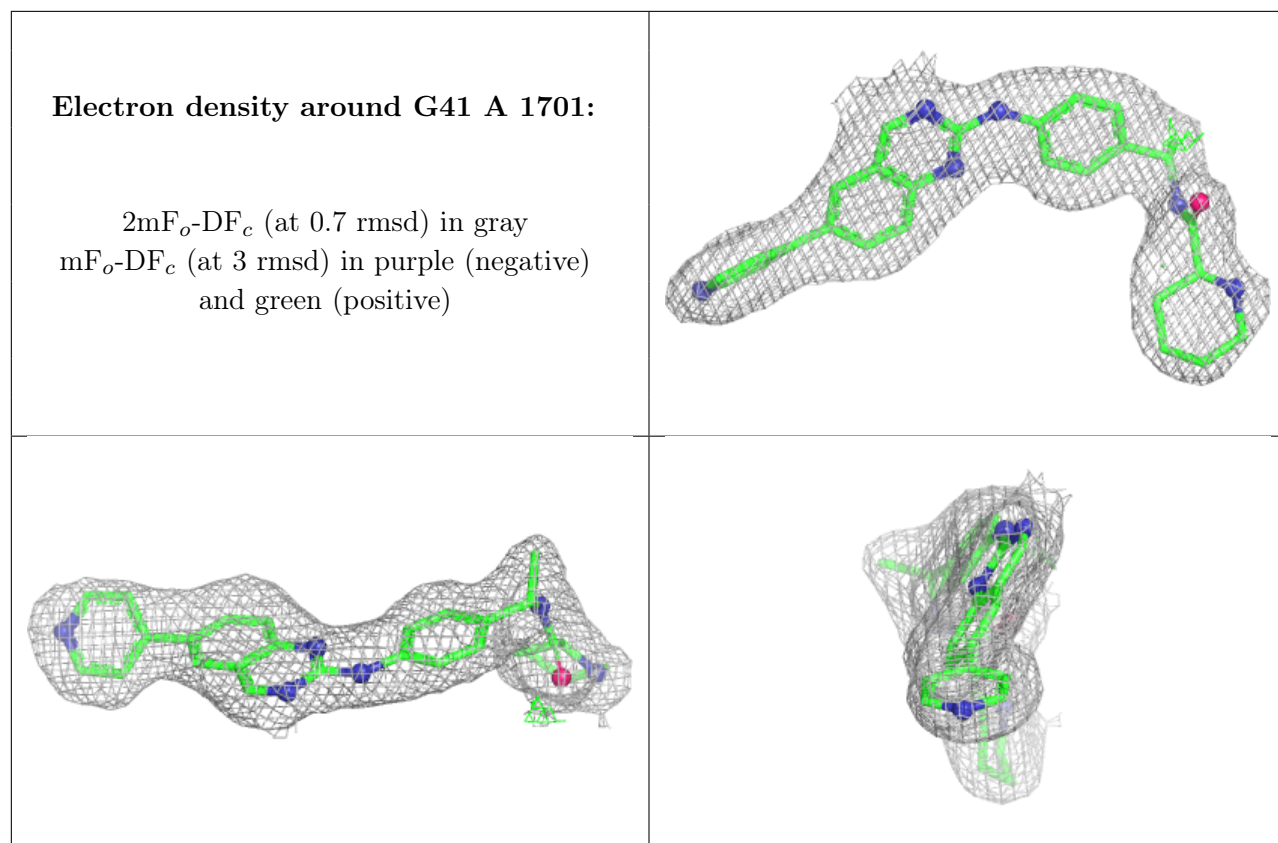
Electron density around G41 B 1701:

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

**Electron density around G41 D 1701:**

$2mF_o-DF_c$ (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.