Full wwPDB X-ray Structure Validation Report ⓘ

Aug 21, 2023 – 07:00 PM EDT

PDB ID	:	2PT7
Title	:	Crystal structure of Cag VirB11 (HP0525) and an inhibitory protein (HP1451)
Authors	:	Hare, S.; Fischer, W.; Williams, R.; Terradot, L.; Bayliss, R.; Haas, R.; Waksman, G.
Deposited on	:	2007-05-08
Resolution	:	2.40 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

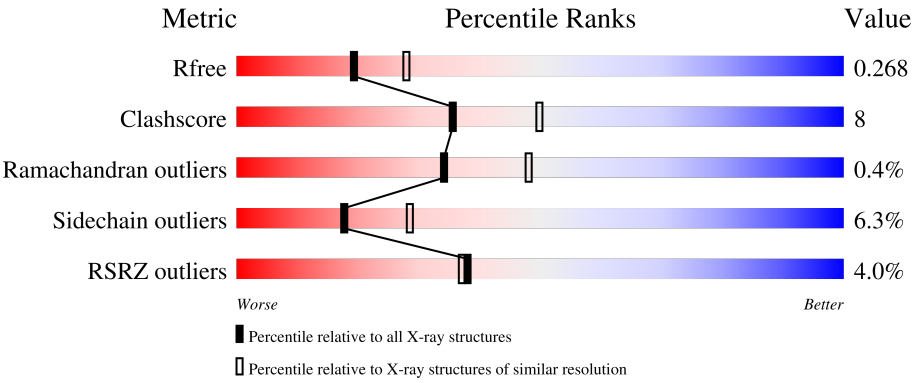
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.35
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35

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 2.40 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	3907 (2.40-2.40)
Clashscore	141614	4398 (2.40-2.40)
Ramachandran outliers	138981	4318 (2.40-2.40)
Sidechain outliers	138945	4319 (2.40-2.40)
RSRZ outliers	127900	3811 (2.40-2.40)

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

Mol	Chain	Length	Quality of chain
1	A	330	2% 82% 15% • •
1	B	330	2% 77% 14% • 7%
1	C	330	3% 78% 13% • 7%
1	D	330	2% 82% 14% • •
1	E	330	3% 78% 12% • 7%

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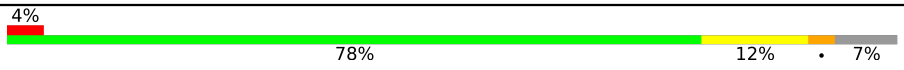
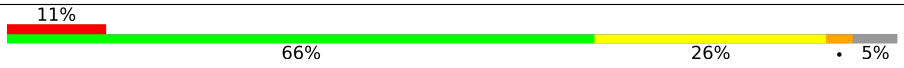
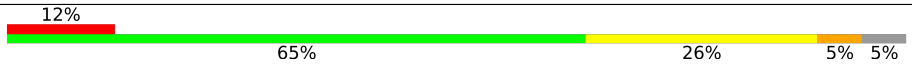
Mol	Chain	Length	Quality of chain
1	F	330	
2	G	152	
2	H	152	

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 17894 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 Cag-alfa.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	323	Total	C	N	O	S	0	0	0
			2565	1625	440	486	14			
1	B	308	Total	C	N	O	S	0	0	0
			2454	1554	422	464	14			
1	C	307	Total	C	N	O	S	0	0	0
			2441	1545	419	463	14			
1	D	323	Total	C	N	O	S	0	0	0
			2568	1627	441	486	14			
1	E	308	Total	C	N	O	S	0	0	0
			2454	1554	422	464	14			
1	F	307	Total	C	N	O	S	0	0	0
			2445	1548	420	463	14			

- Molecule 2 is a protein called Hypothetical protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	G	145	Total	C	N	O	S	0	0	0
			1140	743	183	212	2			
2	H	145	Total	C	N	O	S	0	0	0
			1140	744	185	208	3			

- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	124	Total	O	0	0
			124	124		
3	B	107	Total	O	0	0
			107	107		
3	C	109	Total	O	0	0
			109	109		
3	D	137	Total	O	0	0
			137	137		

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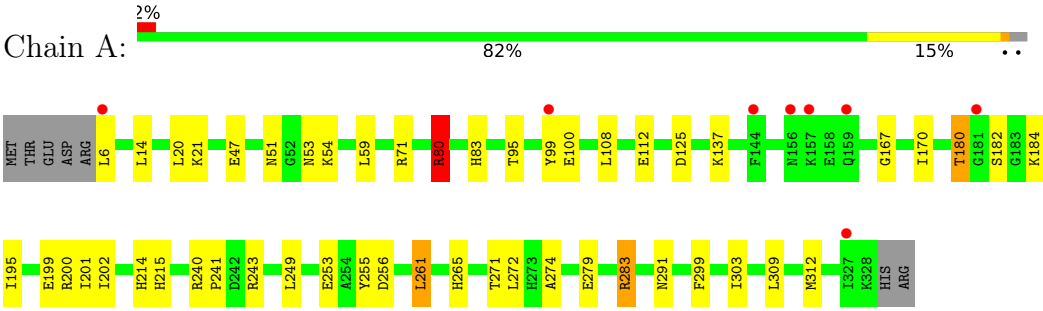
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	E	77	Total O 77 77	0	0
3	F	82	Total O 82 82	0	0
3	G	26	Total O 26 26	0	0
3	H	25	Total O 25 25	0	0

3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

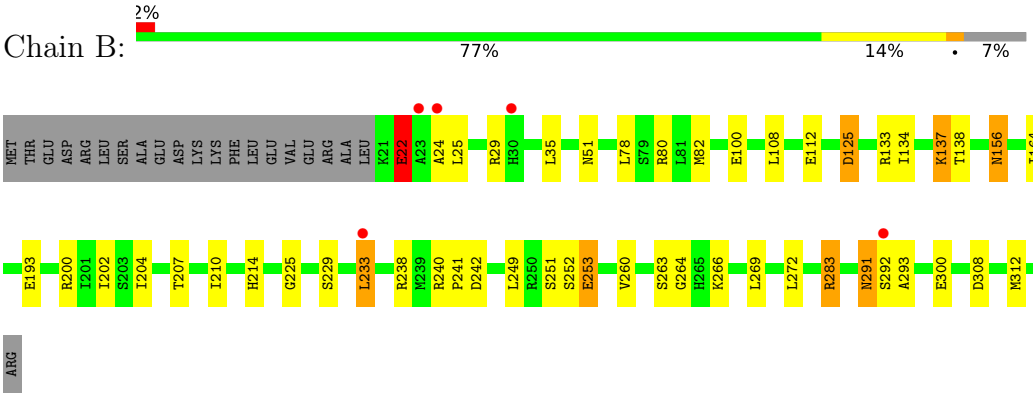
• Molecule 1: Cag-alfa

Chain A:



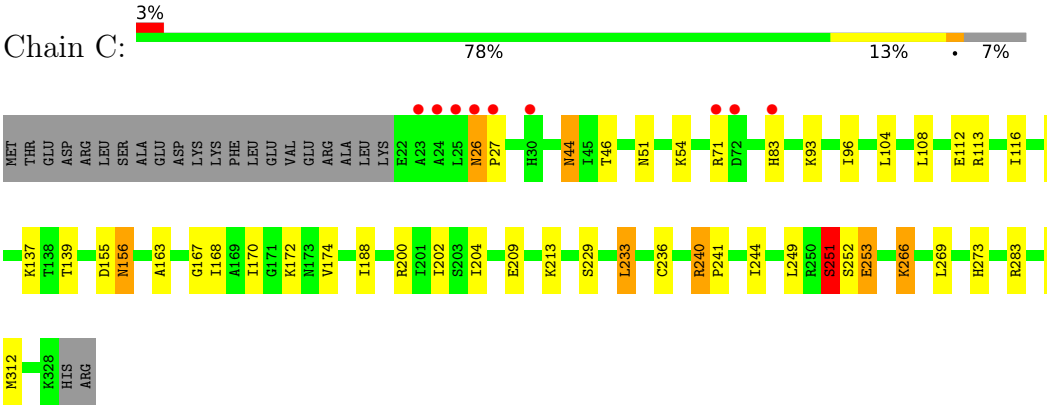
• Molecule 1: Cag-alfa

Chain B:



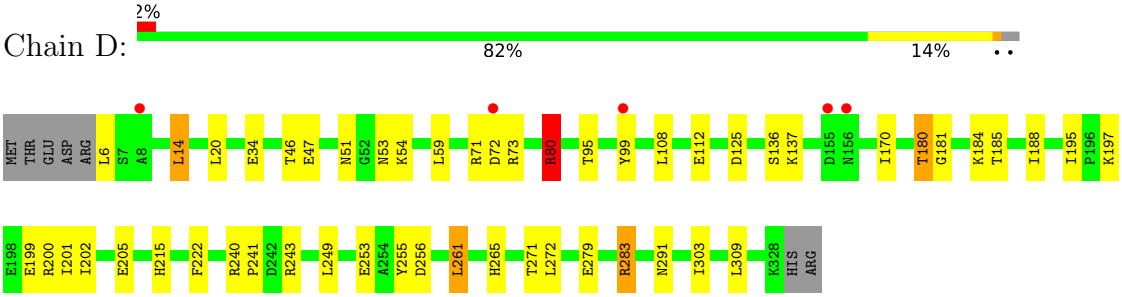
• Molecule 1: Cag-alfa

Chain C:



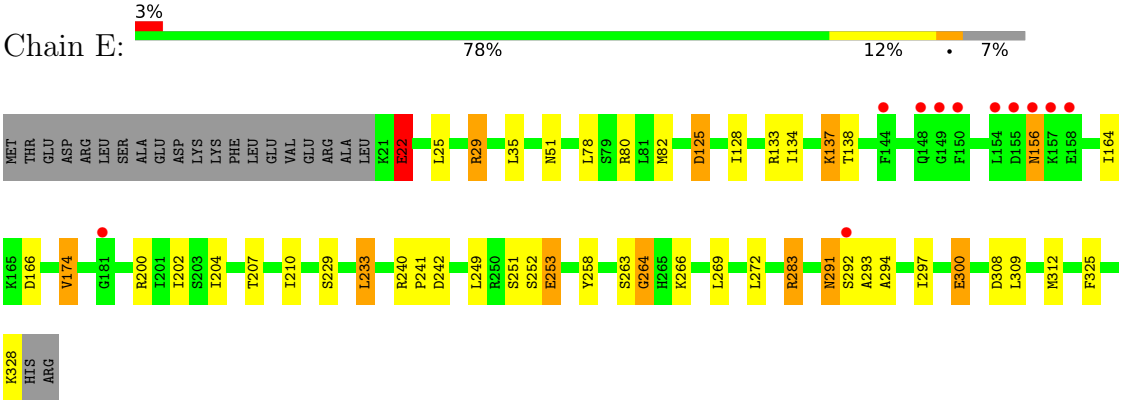
• Molecule 1: Cag-alfa

Chain D:



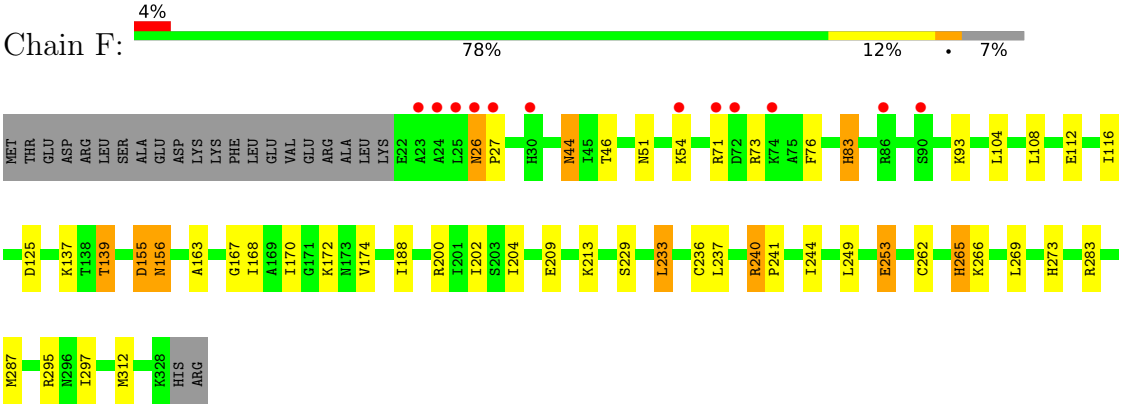
• Molecule 1: Cag-alfa

Chain E:



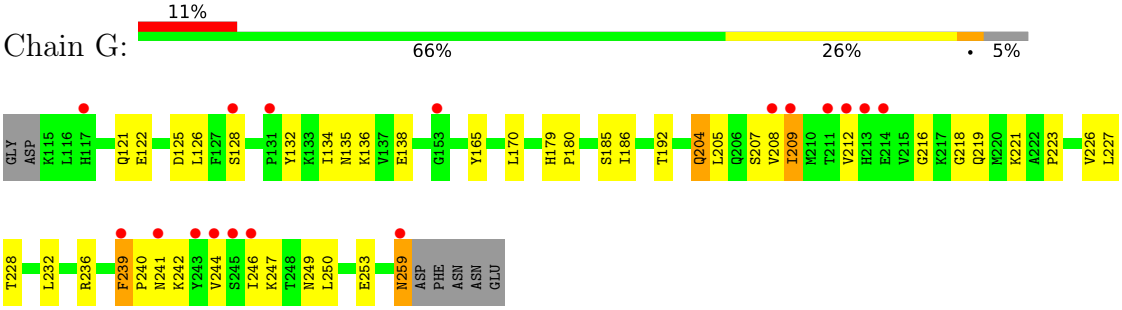
• Molecule 1: Cag-alfa

Chain F:



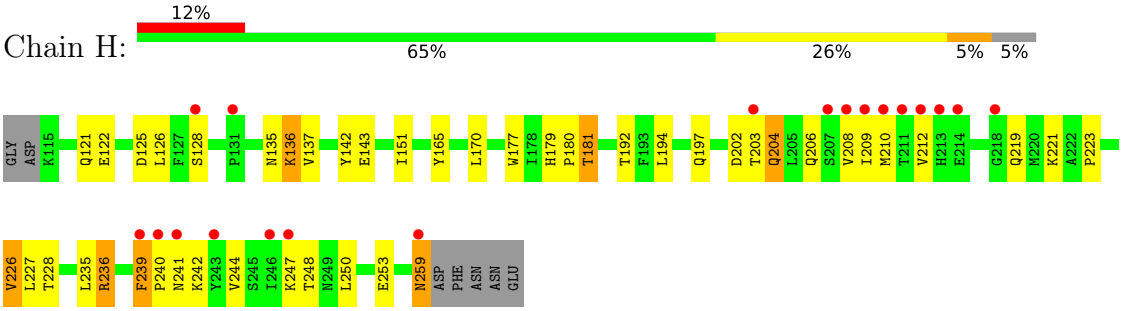
• Molecule 2: Hypothetical protein

Chain G:



• Molecule 2: Hypothetical protein

Chain H:


12%
65%
26%
5%
5%
GLY
ASP
K115
Q121
E122
D125
L126
F127
S128
P131
N135
K136
V137
Y142
E143
I151
Y165
L170
W177
I178
H179
P180
T181
T192
F193
L194
Q197
D202
T203
Q204
L205
Q206
S207
V208
I209
M210
T211
V212
H213
E214
G218
Q219
M220
K221
A222
P223
V226
L227
T228
L235
R236
F239
P240
N241
K242
Y243
V244
S245
I246
K247
T248
N249
L250
E253
N259
ASP
PHE
ASN
ASN
GLU

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α, β, γ	86.85Å 86.90Å 104.13Å 111.04° 95.98° 104.94°	Depositor
Resolution (Å)	40.00 – 2.40 38.56 – 2.40	Depositor EDS
% Data completeness (in resolution range)	96.3 (40.00-2.40) 96.3 (38.56-2.40)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	0.09	Depositor
$< I/\sigma(I) >$ [1]	3.68 (at 2.39Å)	Xtriage
Refinement program	REFMAC	Depositor
R, R_{free}	0.230 , 0.270 0.229 , 0.268	Depositor DCC
R_{free} test set	5056 reflections (5.01%)	wwPDB-VP
Wilson B-factor (Å^2)	32.1	Xtriage
Anisotropy	0.094	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.36 , 50.7	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.31$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	17894	wwPDB-VP
Average B, all atoms (Å^2)	34.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 12.43% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality (i)

5.1 Standard geometry (i)

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	0.46	0/2614	0.59	3/3522 (0.1%)
1	B	0.76	2/2502 (0.1%)	0.59	3/3370 (0.1%)
1	C	0.50	1/2489 (0.0%)	0.57	2/3355 (0.1%)
1	D	0.48	0/2617	0.60	2/3525 (0.1%)
1	E	1.11	6/2502 (0.2%)	0.58	1/3370 (0.0%)
1	F	0.47	1/2493 (0.0%)	0.55	0/3359
2	G	0.68	3/1163 (0.3%)	0.64	0/1579
2	H	0.76	3/1164 (0.3%)	0.70	2/1580 (0.1%)
All	All	0.68	16/17544 (0.1%)	0.59	13/23660 (0.1%)

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	B	0	1
1	E	0	1
2	G	0	1
2	H	0	1
All	All	0	4

All (16) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	E	22	GLU	CD-OE2	47.52	1.77	1.25
1	B	22	GLU	CD-OE2	28.01	1.56	1.25
1	B	22	GLU	CD-OE1	14.31	1.41	1.25
1	E	22	GLU	CD-OE1	12.98	1.40	1.25
2	H	128	SER	CB-OG	12.23	1.58	1.42
1	C	266	LYS	CE-NZ	10.44	1.75	1.49
2	G	259	ASN	C-O	10.21	1.42	1.23
1	E	22	GLU	CG-CD	8.79	1.65	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	E	22	GLU	CB-CG	8.18	1.67	1.52
2	H	259	ASN	C-O	-8.01	1.08	1.23
1	E	300	GLU	CD-OE1	6.90	1.33	1.25
1	E	29	ARG	CZ-NH1	6.71	1.41	1.33
2	G	128	SER	CB-OG	6.36	1.50	1.42
1	F	265	HIS	CE1-NE2	5.48	1.45	1.32
2	G	207	SER	CA-CB	5.34	1.60	1.52
2	H	236	ARG	CZ-NH1	5.21	1.39	1.33

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	22	GLU	OE1-CD-OE2	-7.48	114.32	123.30
1	B	22	GLU	CG-CD-OE1	6.40	131.11	118.30
1	C	266	LYS	CD-CE-NZ	-6.29	97.24	111.70
1	B	22	GLU	CG-CD-OE2	-5.95	106.41	118.30
1	E	22	GLU	CB-CG-CD	-5.92	98.22	114.20
2	H	236	ARG	NE-CZ-NH2	-5.66	117.47	120.30
1	A	20	LEU	CD1-CG-CD2	-5.44	94.19	110.50
1	D	14	LEU	CD1-CG-CD2	-5.37	94.38	110.50
1	D	80	ARG	CG-CD-NE	5.13	122.57	111.80
2	H	236	ARG	NE-CZ-NH1	5.12	122.86	120.30
1	A	14	LEU	CD1-CG-CD2	-5.11	95.18	110.50
1	A	80	ARG	CG-CD-NE	5.05	122.40	111.80
1	C	266	LYS	CB-CA-C	-5.02	100.35	110.40

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	22	GLU	Sidechain
1	E	22	GLU	Sidechain
2	G	239	PHE	Peptide
2	H	239	PHE	Peptide

5.2 Too-close contacts (i)

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	2565	0	2538	45	0
1	B	2454	0	2435	45	0
1	C	2441	0	2411	45	0
1	D	2568	0	2547	39	0
1	E	2454	0	2435	41	0
1	F	2445	0	2422	46	0
2	G	1140	0	1131	32	0
2	H	1140	0	1135	31	0
3	A	124	0	0	4	0
3	B	107	0	0	5	0
3	C	109	0	0	2	0
3	D	137	0	0	2	0
3	E	77	0	0	4	0
3	F	82	0	0	2	0
3	G	26	0	0	1	0
3	H	25	0	0	3	0
All	All	17894	0	17054	278	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 8.

All (278) 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)
2:H:209:ILE:CD1	2:H:209:ILE:CG1	1.79	1.58
1:C:266:LYS:CE	1:C:266:LYS:NZ	1.75	1.47
1:E:22:GLU:CD	1:E:22:GLU:OE2	1.77	1.22
1:A:201:ILE:HD11	1:A:215:HIS:ND1	1.81	0.95
1:E:300:GLU:OE1	3:E:391:HOH:O	1.86	0.93
1:D:201:ILE:HD11	1:D:215:HIS:ND1	1.85	0.91
1:D:200:ARG:HH12	1:E:51:ASN:HD21	1.14	0.90
1:A:200:ARG:HH12	1:B:51:ASN:HD21	1.21	0.86
1:F:237:LEU:HD22	1:F:265:HIS:HE1	1.38	0.85
1:E:308:ASP:O	1:E:328:LYS:NZ	2.08	0.85
2:G:236:ARG:O	2:G:240:PRO:HD3	1.77	0.85
1:B:100:GLU:HG3	3:G:290:HOH:O	1.77	0.83
2:H:236:ARG:O	2:H:240:PRO:HD3	1.78	0.83
1:D:188:ILE:HD11	1:D:271:THR:CG2	2.10	0.81
1:C:240:ARG:NH1	1:D:59:LEU:HD23	1.95	0.81
1:C:156:ASN:HD22	1:C:156:ASN:H	1.28	0.81
1:A:188:ILE:HD11	1:A:271:THR:CG2	2.11	0.80
1:B:25:LEU:HG	1:B:29:ARG:HE	1.47	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:209:ILE:HA	2:G:212:VAL:HG22	1.65	0.79
1:B:308:ASP:O	1:B:328:LYS:NZ	2.15	0.79
2:H:209:ILE:CD1	2:H:209:ILE:CB	2.60	0.78
1:A:201:ILE:HD11	1:A:215:HIS:CE1	2.19	0.78
1:C:266:LYS:NZ	1:C:266:LYS:CD	2.48	0.77
1:E:25:LEU:HG	1:E:29:ARG:HE	1.47	0.77
1:E:82:MET:HE3	3:E:376:HOH:O	1.84	0.76
1:F:156:ASN:HD22	1:F:156:ASN:H	1.30	0.76
1:D:188:ILE:HD11	1:D:271:THR:HG21	1.67	0.75
2:G:212:VAL:HG21	2:G:239:PHE:CZ	2.21	0.75
1:D:201:ILE:HD11	1:D:215:HIS:CE1	2.21	0.75
1:A:201:ILE:CD1	1:A:215:HIS:ND1	2.50	0.74
1:E:156:ASN:HD22	1:E:156:ASN:H	1.35	0.74
1:D:201:ILE:CD1	1:D:215:HIS:ND1	2.50	0.74
1:B:156:ASN:H	1:B:156:ASN:HD22	1.36	0.74
1:E:82:MET:CE	3:E:376:HOH:O	2.36	0.74
1:A:59:LEU:HD23	1:F:240:ARG:NH1	2.03	0.73
1:A:188:ILE:HD11	1:A:271:THR:HG21	1.70	0.73
1:F:240:ARG:HG2	1:F:240:ARG:HH11	1.52	0.73
1:D:200:ARG:HH12	1:E:51:ASN:ND2	1.88	0.72
1:F:237:LEU:HD22	1:F:265:HIS:CE1	2.24	0.71
1:C:200:ARG:HH12	1:D:51:ASN:HD21	1.38	0.71
2:G:212:VAL:CG2	2:G:239:PHE:CZ	2.73	0.71
1:B:200:ARG:HH12	1:C:51:ASN:HD21	1.39	0.70
1:E:200:ARG:HH12	1:F:51:ASN:HD21	1.37	0.69
1:A:51:ASN:HD21	1:F:200:ARG:HH12	1.40	0.69
1:C:240:ARG:HG2	1:C:240:ARG:HH11	1.56	0.69
1:D:197:LYS:HA	1:D:215:HIS:CD2	2.28	0.68
2:H:239:PHE:N	2:H:240:PRO:HD2	2.09	0.67
1:A:214:HIS:C	1:A:215:HIS:HD2	1.99	0.66
1:A:214:HIS:O	1:A:215:HIS:HD2	1.78	0.66
1:F:240:ARG:NH1	1:F:240:ARG:HG2	2.10	0.66
2:H:177:TRP:O	2:H:181:THR:HG23	1.97	0.65
1:E:174:VAL:HB	1:E:312:MET:HG3	1.78	0.65
1:F:202:ILE:HD12	1:F:241:PRO:HB3	1.77	0.65
2:H:121:GLN:O	2:H:125:ASP:HB2	1.97	0.65
2:G:209:ILE:HA	2:G:212:VAL:CG2	2.26	0.64
2:G:121:GLN:O	2:G:125:ASP:HB2	1.97	0.64
1:A:188:ILE:HD11	1:A:271:THR:HG23	1.79	0.64
2:H:236:ARG:HG3	2:H:244:VAL:HB	1.80	0.63
1:E:200:ARG:HH12	1:F:51:ASN:ND2	1.96	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:291:ASN:HD22	1:E:293:ALA:H	1.47	0.62
1:D:188:ILE:HD11	1:D:271:THR:HG23	1.80	0.62
1:C:229:SER:HB3	1:C:253:GLU:HG2	1.81	0.62
1:B:174:VAL:HB	1:B:312:MET:HG3	1.82	0.61
1:F:204:ILE:HD13	1:F:233:LEU:HD13	1.83	0.61
1:B:291:ASN:HD22	1:B:293:ALA:H	1.49	0.61
1:F:240:ARG:HH11	1:F:240:ARG:CG	2.13	0.61
1:B:82:MET:CE	3:B:332:HOH:O	2.48	0.60
1:C:202:ILE:HD12	1:C:241:PRO:HB3	1.81	0.60
1:D:195:ILE:HB	1:D:215:HIS:HE1	1.66	0.60
1:F:229:SER:HB3	1:F:253:GLU:HG2	1.81	0.60
1:E:264:GLY:HA3	1:F:273:HIS:HD1	1.67	0.60
2:G:209:ILE:HB	2:G:239:PHE:CE2	2.37	0.60
1:D:200:ARG:NH1	1:E:51:ASN:HD21	1.93	0.60
2:G:239:PHE:N	2:G:240:PRO:HD2	2.18	0.59
1:C:240:ARG:NH1	1:C:240:ARG:HG2	2.15	0.59
2:G:205:LEU:O	2:G:209:ILE:CG2	2.51	0.59
1:D:199:GLU:OE2	1:D:243:ARG:NE	2.35	0.58
1:B:25:LEU:HD21	1:B:29:ARG:HH21	1.67	0.58
2:H:202:ASP:O	2:H:206:GLN:HG2	2.03	0.58
2:G:236:ARG:HG3	2:G:244:VAL:HB	1.86	0.58
2:H:223:PRO:HB2	2:H:227:LEU:HB3	1.86	0.58
1:C:240:ARG:HH11	1:C:240:ARG:CG	2.17	0.58
1:A:180:THR:CG2	1:F:240:ARG:HE	2.16	0.57
1:A:200:ARG:HH12	1:B:51:ASN:ND2	1.98	0.57
2:G:205:LEU:O	2:G:209:ILE:HG22	2.05	0.57
1:C:204:ILE:HD13	1:C:233:LEU:HD13	1.87	0.57
1:D:197:LYS:HA	1:D:215:HIS:HD2	1.68	0.57
1:B:25:LEU:CD2	1:B:29:ARG:HH21	2.18	0.57
1:F:237:LEU:CD2	1:F:265:HIS:HE1	2.13	0.57
1:E:263:SER:O	1:E:264:GLY:C	2.42	0.57
2:G:223:PRO:HB2	2:G:227:LEU:HB3	1.87	0.57
1:C:295:ARG:HH21	1:F:295:ARG:HH21	1.50	0.56
1:A:214:HIS:C	1:A:215:HIS:CD2	2.79	0.56
1:E:25:LEU:HD21	1:E:29:ARG:HH21	1.69	0.56
2:H:235:LEU:O	2:H:239:PHE:HB2	2.06	0.56
1:B:82:MET:HE3	3:B:332:HOH:O	2.05	0.55
1:B:202:ILE:HD12	1:B:241:PRO:HB3	1.89	0.55
1:D:185:THR:HA	1:D:188:ILE:HD12	1.88	0.55
1:E:252:SER:HB2	2:H:250:LEU:HD21	1.88	0.54
1:B:200:ARG:HH12	1:C:51:ASN:ND2	2.04	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:240:ARG:HE	1:D:180:THR:CG2	2.21	0.54
1:B:204:ILE:HD13	1:B:233:LEU:HD13	1.90	0.54
1:B:252:SER:HB2	2:G:250:LEU:HD21	1.90	0.53
2:G:232:LEU:HB3	2:G:236:ARG:HH11	1.73	0.53
1:A:199:GLU:OE2	1:A:243:ARG:NE	2.40	0.53
2:H:192:THR:O	2:H:192:THR:HG22	2.09	0.53
2:H:204:GLN:O	2:H:208:VAL:HG23	2.09	0.53
1:A:185:THR:HA	1:A:188:ILE:HD12	1.90	0.53
1:B:174:VAL:HG13	1:B:269:LEU:HD13	1.89	0.53
1:E:204:ILE:HD13	1:E:233:LEU:HD13	1.89	0.53
1:A:255:TYR:HB3	1:A:291:ASN:HD22	1.73	0.53
1:B:240:ARG:NH2	1:C:46:THR:OG1	2.33	0.53
1:C:163:ALA:HB1	1:C:312:MET:CE	2.39	0.53
2:H:239:PHE:N	2:H:240:PRO:CD	2.71	0.53
1:A:182:SER:HA	3:A:449:HOH:O	2.08	0.53
1:B:263:SER:O	1:B:264:GLY:C	2.48	0.53
1:C:163:ALA:HB1	1:C:312:MET:HE3	1.92	0.52
1:A:214:HIS:O	1:A:215:HIS:CD2	2.62	0.52
2:G:236:ARG:NE	2:H:241:ASN:HD21	2.07	0.52
1:B:82:MET:HE1	3:B:332:HOH:O	2.10	0.52
1:C:113:ARG:NH2	3:C:428:HOH:O	2.43	0.52
1:B:264:GLY:HA3	1:C:273:HIS:ND1	2.25	0.52
1:B:80:ARG:HE	1:B:80:ARG:HA	1.75	0.52
2:H:223:PRO:HD2	2:H:228:THR:HA	1.91	0.52
2:H:253:GLU:HG2	3:H:283:HOH:O	2.09	0.52
1:C:44:ASN:N	1:C:44:ASN:HD22	2.09	0.51
1:F:163:ALA:HB1	1:F:312:MET:CE	2.41	0.51
1:A:80:ARG:HH12	1:A:83:HIS:CD2	2.29	0.51
1:A:184:LYS:O	1:A:188:ILE:HG13	2.11	0.51
1:B:238:ARG:HD2	3:B:428:HOH:O	2.08	0.51
2:G:212:VAL:HG23	2:G:239:PHE:CZ	2.44	0.51
1:F:73:ARG:O	3:F:406:HOH:O	2.19	0.51
1:C:139:THR:CG2	1:C:213:LYS:HD2	2.41	0.51
1:C:200:ARG:HH12	1:D:51:ASN:ND2	2.08	0.50
1:C:104:LEU:HD23	1:C:116:ILE:HD12	1.93	0.50
1:E:202:ILE:HD12	1:E:241:PRO:HB3	1.92	0.50
1:D:184:LYS:O	1:D:188:ILE:HG13	2.11	0.50
1:D:202:ILE:HD12	1:D:241:PRO:HB3	1.94	0.50
1:F:44:ASN:N	1:F:44:ASN:HD22	2.09	0.50
1:A:108:LEU:HB2	1:A:112:GLU:HG2	1.94	0.50
1:A:99:TYR:OH	1:F:93:LYS:HD2	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:261:LEU:HB3	1:A:309:LEU:HD13	1.94	0.50
1:F:237:LEU:CD2	1:F:265:HIS:CE1	2.92	0.49
1:A:100:GLU:OE1	3:A:381:HOH:O	2.20	0.49
1:D:255:TYR:HB3	1:D:291:ASN:HD22	1.77	0.49
1:A:202:ILE:HD12	1:A:241:PRO:HB3	1.95	0.49
1:C:236:CYS:SG	1:C:244:ILE:HG12	2.52	0.49
1:A:180:THR:HG22	1:F:240:ARG:HE	1.78	0.49
1:F:236:CYS:SG	1:F:244:ILE:HG12	2.53	0.49
2:G:221:LYS:HE2	2:G:253:GLU:HG3	1.95	0.49
1:A:279:GLU:O	1:A:283:ARG:HB2	2.12	0.48
1:D:279:GLU:O	1:D:283:ARG:HB2	2.13	0.48
1:E:82:MET:HE1	3:E:376:HOH:O	2.09	0.48
1:F:104:LEU:HD23	1:F:116:ILE:HD12	1.96	0.48
2:G:209:ILE:CA	2:G:212:VAL:HG22	2.41	0.48
1:C:240:ARG:HH11	1:D:59:LEU:HD23	1.73	0.48
2:G:240:PRO:HA	2:G:241:ASN:HA	1.54	0.48
2:H:242:LYS:NZ	3:H:273:HOH:O	2.47	0.48
1:C:93:LYS:HD2	1:D:99:TYR:OH	2.14	0.48
2:G:192:THR:HG22	2:G:192:THR:O	2.14	0.48
1:C:266:LYS:NZ	1:C:266:LYS:HD3	2.28	0.48
1:D:108:LEU:HB2	1:D:112:GLU:HG2	1.96	0.48
1:E:80:ARG:HE	1:E:80:ARG:HA	1.78	0.48
1:F:167:GLY:HA2	1:F:172:LYS:HD2	1.96	0.48
1:A:195:ILE:CG2	1:A:215:HIS:HE1	2.28	0.47
1:B:264:GLY:HA3	1:C:273:HIS:HD1	1.78	0.47
1:B:291:ASN:HD22	1:B:292:SER:N	2.12	0.47
2:H:142:TYR:CD2	2:H:143:GLU:HG3	2.48	0.47
1:C:139:THR:HG22	1:C:213:LYS:HD2	1.96	0.47
2:G:241:ASN:HD21	2:H:236:ARG:HD3	1.79	0.47
1:E:174:VAL:HG13	1:E:269:LEU:HD13	1.95	0.47
1:F:163:ALA:HB1	1:F:312:MET:HE3	1.96	0.47
1:D:34:GLU:OE2	1:D:80:ARG:HD3	2.14	0.47
2:G:209:ILE:HB	2:G:239:PHE:HE2	1.79	0.47
1:C:240:ARG:HE	1:D:180:THR:HG22	1.80	0.47
1:E:291:ASN:ND2	1:E:293:ALA:H	2.11	0.47
1:D:261:LEU:HB3	1:D:309:LEU:HD13	1.96	0.47
2:H:239:PHE:H	2:H:240:PRO:HD2	1.79	0.47
2:H:239:PHE:O	2:H:242:LYS:N	2.48	0.47
1:C:283:ARG:O	1:C:287:MET:HG3	2.14	0.46
2:G:216:GLY:HA2	2:G:242:LYS:NZ	2.30	0.46
1:D:54:LYS:HD2	1:D:71:ARG:HA	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:73:ARG:HD3	3:D:380:HOH:O	2.15	0.46
1:B:225:GLY:O	2:G:249:ASN:ND2	2.49	0.46
1:F:108:LEU:HD12	1:F:112:GLU:CG	2.46	0.46
1:A:283:ARG:NH1	3:A:437:HOH:O	2.17	0.46
1:C:240:ARG:NH1	1:D:47:GLU:HB2	2.31	0.46
1:A:54:LYS:HD2	1:A:71:ARG:HA	1.97	0.46
1:F:139:THR:CG2	1:F:213:LYS:HD2	2.46	0.46
1:C:167:GLY:HA2	1:C:172:LYS:HD2	1.98	0.45
1:F:26:ASN:H	1:F:27:PRO:CD	2.28	0.45
1:A:47:GLU:HB2	1:F:240:ARG:NH1	2.31	0.45
1:A:51:ASN:ND2	1:F:200:ARG:HH12	2.12	0.45
1:C:26:ASN:H	1:C:27:PRO:CD	2.29	0.45
1:D:240:ARG:HH21	1:E:133:ARG:HD3	1.81	0.45
1:E:264:GLY:HA3	1:F:273:HIS:ND1	2.31	0.45
1:E:291:ASN:HD22	1:E:292:SER:N	2.14	0.45
1:F:283:ARG:O	1:F:287:MET:HG3	2.17	0.45
2:H:221:LYS:HE2	2:H:253:GLU:HG3	1.99	0.45
1:B:24:ALA:HA	3:B:386:HOH:O	2.16	0.45
1:E:133:ARG:NH1	1:E:134:ILE:O	2.50	0.45
2:G:223:PRO:HD2	2:G:228:THR:HA	1.97	0.45
1:A:80:ARG:HH11	1:A:80:ARG:HA	1.81	0.45
1:B:137:LYS:H	1:B:137:LYS:HG2	1.56	0.45
2:H:210:MET:O	2:H:210:MET:HG2	2.17	0.44
1:B:291:ASN:ND2	1:B:293:ALA:H	2.12	0.44
2:G:204:GLN:O	2:G:208:VAL:HG23	2.17	0.44
1:A:240:ARG:HH21	1:B:133:ARG:HD3	1.82	0.44
2:G:239:PHE:H	2:G:240:PRO:HD2	1.82	0.44
1:B:156:ASN:HD22	1:B:156:ASN:N	2.11	0.44
1:B:242:ASP:O	1:B:266:LYS:HB3	2.17	0.44
1:D:205:GLU:O	1:D:222:PHE:HA	2.17	0.44
1:A:200:ARG:NH1	1:B:51:ASN:HD21	2.02	0.44
1:D:195:ILE:HB	1:D:215:HIS:CE1	2.49	0.44
1:F:139:THR:HG22	1:F:213:LYS:HD2	2.00	0.44
1:B:133:ARG:NH1	1:B:134:ILE:O	2.50	0.44
2:G:209:ILE:HB	2:G:239:PHE:CZ	2.53	0.44
1:B:229:SER:HB3	1:B:253:GLU:HG2	2.00	0.43
1:F:83:HIS:ND1	1:F:83:HIS:C	2.71	0.43
1:B:164:ILE:HG12	1:B:325:PHE:CZ	2.53	0.43
1:C:108:LEU:HD12	1:C:112:GLU:CG	2.48	0.43
1:C:168:ILE:CD1	1:C:174:VAL:HG21	2.48	0.43
1:E:200:ARG:NH1	1:F:51:ASN:HD21	2.11	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:264:GLY:O	1:F:273:HIS:HE1	2.02	0.43
1:C:96:ILE:HD12	1:C:104:LEU:HB3	2.00	0.43
1:C:251:SER:HB3	1:C:252:SER:H	1.38	0.43
1:D:181:GLY:HA2	3:D:460:HOH:O	2.17	0.43
2:G:212:VAL:HG12	2:G:218:GLY:HA3	2.00	0.43
1:C:240:ARG:HH22	1:D:46:THR:HB	1.83	0.43
1:F:168:ILE:CD1	1:F:174:VAL:HG21	2.48	0.43
1:A:299:PHE:HB2	1:F:297:ILE:HG12	2.00	0.43
1:E:25:LEU:CD2	1:E:29:ARG:HH21	2.30	0.43
1:E:22:GLU:OE2	1:E:25:LEU:HD23	2.19	0.43
1:A:184:LYS:HD2	1:A:271:THR:HB	2.01	0.42
1:B:240:ARG:HH22	1:C:46:THR:HG1	1.62	0.42
1:A:188:ILE:CD1	1:A:271:THR:HG23	2.47	0.42
2:H:135:ASN:OD1	2:H:136:LYS:N	2.53	0.42
1:B:108:LEU:HB2	1:B:112:GLU:HG2	2.01	0.42
1:F:155:ASP:OD2	1:F:155:ASP:N	2.30	0.42
1:D:253:GLU:HA	1:D:256:ASP:OD2	2.19	0.42
1:E:242:ASP:O	1:E:266:LYS:HB3	2.18	0.42
1:A:253:GLU:HA	1:A:256:ASP:OD2	2.19	0.42
1:E:82:MET:CE	1:E:128:ILE:HD11	2.50	0.42
1:E:137:LYS:H	1:E:137:LYS:HG2	1.56	0.42
2:H:197:GLN:HB3	2:H:227:LEU:HD21	2.02	0.42
1:A:80:ARG:HA	1:A:80:ARG:HD2	1.89	0.42
1:D:188:ILE:CD1	1:D:271:THR:HG23	2.47	0.42
1:B:272:LEU:HD11	1:B:283:ARG:HG2	2.02	0.41
1:D:184:LYS:HD2	1:D:271:THR:HB	2.02	0.41
1:E:272:LEU:HD11	1:E:283:ARG:HG2	2.02	0.41
1:B:22:GLU:OE2	1:B:25:LEU:HD23	2.20	0.41
1:C:83:HIS:ND1	1:C:83:HIS:C	2.72	0.41
1:E:240:ARG:NH2	1:F:46:THR:OG1	2.39	0.41
1:A:274:ALA:HA	1:F:262:CYS:O	2.19	0.41
1:E:294:ALA:HA	1:E:297:ILE:HD12	2.01	0.41
1:F:54:LYS:HD2	1:F:71:ARG:HA	2.01	0.41
1:A:180:THR:HG23	3:A:436:HOH:O	2.21	0.41
2:G:216:GLY:O	2:G:242:LYS:NZ	2.48	0.41
2:H:179:HIS:HB3	2:H:180:PRO:HD3	2.01	0.41
1:B:193:GLU:HG2	1:B:214:HIS:NE2	2.36	0.41
1:C:188:ILE:CG1	1:C:269:LEU:HD23	2.50	0.41
1:E:229:SER:HB3	1:E:253:GLU:HG2	2.02	0.41
2:G:132:TYR:HB3	2:G:134:ILE:HD13	2.02	0.41
1:E:258:TYR:CE1	1:E:309:LEU:HD12	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:133:ARG:NE	3:C:392:HOH:O	2.31	0.41
1:E:164:ILE:HG12	1:E:325:PHE:CZ	2.56	0.41
2:H:136:LYS:O	2:H:151:ILE:HA	2.20	0.41
2:H:208:VAL:O	2:H:212:VAL:HG23	2.21	0.41
2:H:223:PRO:HB2	2:H:227:LEU:CB	2.51	0.41
2:H:226:VAL:HG22	3:H:288:HOH:O	2.21	0.41
1:B:164:ILE:HG12	1:B:325:PHE:HZ	1.86	0.40
1:B:233:LEU:HD12	1:B:260:VAL:HG21	2.03	0.40
2:G:179:HIS:HB3	2:G:180:PRO:HD3	2.02	0.40
1:A:21:LYS:NZ	1:B:125:ASP:OD2	2.54	0.40
1:F:188:ILE:CG1	1:F:269:LEU:HD23	2.51	0.40
1:A:167:GLY:HA3	1:A:312:MET:HE3	2.03	0.40
1:C:54:LYS:HD2	1:C:71:ARG:HA	2.03	0.40
1:F:76:PHE:HB2	3:F:406:HOH:O	2.22	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	321/330 (97%)	312 (97%)	9 (3%)	0	100	100
1	B	306/330 (93%)	296 (97%)	8 (3%)	2 (1%)	22	32
1	C	305/330 (92%)	296 (97%)	7 (2%)	2 (1%)	22	32
1	D	321/330 (97%)	312 (97%)	9 (3%)	0	100	100
1	E	306/330 (93%)	295 (96%)	8 (3%)	3 (1%)	15	23
1	F	305/330 (92%)	296 (97%)	8 (3%)	1 (0%)	41	55
2	G	143/152 (94%)	133 (93%)	10 (7%)	0	100	100
2	H	143/152 (94%)	135 (94%)	8 (6%)	0	100	100
All	All	2150/2284 (94%)	2075 (96%)	67 (3%)	8 (0%)	34	48

All (8) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	E	125	ASP
1	B	125	ASP
1	C	26	ASN
1	F	26	ASN
1	B	251	SER
1	C	251	SER
1	E	251	SER
1	E	264	GLY

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	283/293 (97%)	269 (95%)	14 (5%)	25	40
1	B	273/293 (93%)	258 (94%)	15 (6%)	21	35
1	C	271/293 (92%)	259 (96%)	12 (4%)	28	45
1	D	284/293 (97%)	266 (94%)	18 (6%)	18	28
1	E	273/293 (93%)	258 (94%)	15 (6%)	21	35
1	F	272/293 (93%)	258 (95%)	14 (5%)	24	39
2	G	121/138 (88%)	105 (87%)	16 (13%)	4	4
2	H	121/138 (88%)	106 (88%)	15 (12%)	4	5
All	All	1898/2034 (93%)	1779 (94%)	119 (6%)	18	28

All (119) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	6	LEU
1	A	53	ASN
1	A	80	ARG
1	A	95	THR
1	A	125	ASP
1	A	137	LYS

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Mol	Chain	Res	Type
1	A	170	ILE
1	A	180	THR
1	A	249	LEU
1	A	261	LEU
1	A	265	HIS
1	A	272	LEU
1	A	283	ARG
1	A	303	ILE
1	B	35	LEU
1	B	78	LEU
1	B	137	LYS
1	B	138	THR
1	B	156	ASN
1	B	166	ASP
1	B	174	VAL
1	B	207	THR
1	B	210	ILE
1	B	233	LEU
1	B	249	LEU
1	B	253	GLU
1	B	283	ARG
1	B	291	ASN
1	B	300	GLU
1	C	44	ASN
1	C	125	ASP
1	C	137	LYS
1	C	155	ASP
1	C	156	ASN
1	C	170	ILE
1	C	209	GLU
1	C	233	LEU
1	C	240	ARG
1	C	249	LEU
1	C	251	SER
1	C	253	GLU
1	D	6	LEU
1	D	14	LEU
1	D	20	LEU
1	D	53	ASN
1	D	72	ASP
1	D	80	ARG
1	D	95	THR

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Mol	Chain	Res	Type
1	D	125	ASP
1	D	136	SER
1	D	137	LYS
1	D	170	ILE
1	D	180	THR
1	D	249	LEU
1	D	261	LEU
1	D	265	HIS
1	D	272	LEU
1	D	283	ARG
1	D	303	ILE
1	E	35	LEU
1	E	78	LEU
1	E	125	ASP
1	E	137	LYS
1	E	138	THR
1	E	156	ASN
1	E	166	ASP
1	E	174	VAL
1	E	207	THR
1	E	210	ILE
1	E	233	LEU
1	E	249	LEU
1	E	253	GLU
1	E	283	ARG
1	E	291	ASN
1	F	44	ASN
1	F	83	HIS
1	F	125	ASP
1	F	137	LYS
1	F	139	THR
1	F	155	ASP
1	F	156	ASN
1	F	170	ILE
1	F	209	GLU
1	F	233	LEU
1	F	240	ARG
1	F	249	LEU
1	F	253	GLU
1	F	266	LYS
2	G	122	GLU
2	G	126	LEU

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Mol	Chain	Res	Type
2	G	135	ASN
2	G	136	LYS
2	G	138	GLU
2	G	165	TYR
2	G	170	LEU
2	G	185	SER
2	G	186	ILE
2	G	204	GLN
2	G	209	ILE
2	G	219	GLN
2	G	226	VAL
2	G	246	ILE
2	G	247	LYS
2	G	259	ASN
2	H	122	GLU
2	H	126	LEU
2	H	136	LYS
2	H	137	VAL
2	H	165	TYR
2	H	170	LEU
2	H	181	THR
2	H	194	LEU
2	H	203	THR
2	H	204	GLN
2	H	219	GLN
2	H	226	VAL
2	H	247	LYS
2	H	248	THR
2	H	259	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (40) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	51	ASN
1	A	53	ASN
1	A	66	GLN
1	A	215	HIS
1	A	273	HIS
1	A	286	ASN
1	B	51	ASN
1	B	156	ASN
1	B	226	ASN

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Mol	Chain	Res	Type
1	B	291	ASN
1	C	44	ASN
1	C	51	ASN
1	C	66	GLN
1	C	156	ASN
1	C	159	GLN
1	C	220	GLN
1	C	286	ASN
1	C	321	GLN
1	D	51	ASN
1	D	53	ASN
1	D	66	GLN
1	D	273	HIS
1	D	286	ASN
1	E	51	ASN
1	E	156	ASN
1	E	226	ASN
1	E	291	ASN
1	F	44	ASN
1	F	51	ASN
1	F	66	GLN
1	F	156	ASN
1	F	159	GLN
1	F	265	HIS
1	F	273	HIS
1	F	286	ASN
1	F	321	GLN
2	G	196	ASN
2	G	241	ASN
2	H	196	ASN
2	H	241	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

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, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	323/330 (97%)	0.13	8 (2%)	57	55	21, 31, 46, 56	0
1	B	308/330 (93%)	0.06	5 (1%)	72	70	22, 33, 54, 68	0
1	C	307/330 (93%)	0.16	10 (3%)	46	45	20, 32, 56, 69	0
1	D	323/330 (97%)	-0.04	5 (1%)	73	72	21, 31, 46, 56	0
1	E	308/330 (93%)	0.20	11 (3%)	42	42	22, 33, 54, 68	0
1	F	307/330 (93%)	0.11	12 (3%)	39	38	20, 32, 56, 69	0
2	G	145/152 (95%)	0.44	17 (11%)	4	4	25, 38, 43, 46	0
2	H	145/152 (95%)	0.59	19 (13%)	3	3	25, 38, 43, 46	0
All	All	2166/2284 (94%)	0.16	87 (4%)	38	37	20, 33, 52, 69	0

All (87) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	99	TYR	6.6
1	C	24	ALA	6.4
2	H	213	HIS	5.8
1	F	24	ALA	5.1
1	F	72	ASP	5.0
1	C	23	ALA	5.0
2	G	241	ASN	4.6
2	H	239	PHE	4.6
2	H	243	TYR	4.2
2	H	259	ASN	4.2
2	G	209	ILE	4.1
1	A	144	PHE	4.0
1	D	156	ASN	3.9
2	H	246	ILE	3.8
2	G	239	PHE	3.7
2	H	207	SER	3.6

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Mol	Chain	Res	Type	RSRZ
2	H	210	MET	3.5
1	E	148	GLN	3.4
2	G	214	GLU	3.4
1	B	292	SER	3.4
2	H	208	VAL	3.4
1	F	30	HIS	3.3
2	H	131	PRO	3.3
1	D	72	ASP	3.3
2	G	243	TYR	3.2
1	F	27	PRO	3.2
1	C	25	LEU	3.2
1	A	156	ASN	3.1
1	B	23	ALA	3.1
2	H	203	THR	3.1
1	D	99	TYR	3.1
1	E	149	GLY	3.1
1	C	26	ASN	3.0
2	G	259	ASN	3.0
1	F	74	LYS	3.0
1	E	155	ASP	2.9
1	A	159	GLN	2.9
2	G	211	THR	2.8
2	H	241	ASN	2.8
2	G	131	PRO	2.8
2	G	153	GLY	2.8
1	C	72	ASP	2.8
2	H	218	GLY	2.7
2	H	128	SER	2.7
1	F	71	ARG	2.6
2	G	208	VAL	2.6
1	E	158	GLU	2.6
2	H	240	PRO	2.5
2	H	209	ILE	2.5
1	C	27	PRO	2.5
1	D	155	ASP	2.5
2	H	214	GLU	2.4
1	F	54	LYS	2.4
2	G	212	VAL	2.4
2	G	117	HIS	2.4
1	C	71	ARG	2.4
2	G	246	ILE	2.4
1	B	24	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
2	G	245	SER	2.3
2	H	211	THR	2.3
1	A	181	GLY	2.3
1	C	126	GLU	2.3
1	A	327	ILE	2.3
1	F	90	SER	2.3
1	C	83	HIS	2.3
1	D	8	ALA	2.3
1	E	292	SER	2.3
1	F	26	ASN	2.2
1	E	150	PHE	2.2
1	E	156	ASN	2.2
1	B	30	HIS	2.2
1	C	30	HIS	2.2
1	F	23	ALA	2.2
2	G	213	HIS	2.2
2	G	128	SER	2.2
1	A	157	LYS	2.2
2	H	247	LYS	2.2
1	E	181	GLY	2.1
1	F	86	ARG	2.1
1	B	233	LEU	2.1
2	G	244	VAL	2.1
1	E	154	LEU	2.1
1	E	144	PHE	2.0
1	F	25	LEU	2.0
2	H	212	VAL	2.0
1	E	157	LYS	2.0
1	A	6	LEU	2.0

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

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

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

There are no ligands in this entry.

6.5 Other polymers (i)

There are no such residues in this entry.