Full wwPDB X-ray Structure Validation Report ⓘ

Jun 17, 2024 – 08:08 AM EDT

PDB ID	:	3HP0
Title	:	Crystal structure of a Putative polyketide biosynthesis enoyl-CoA hydratase (pksH) from Bacillus subtilis
Authors	:	Satyanarayana, L.; Eswaramoorthy, S.; Burley, S.K.; Swaminathan, S.; New York SGX Research Center for Structural Genomics (NYSGXRC)
Deposited on	:	2009-06-03
Resolution	:	2.32 Å(reported)

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

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

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

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

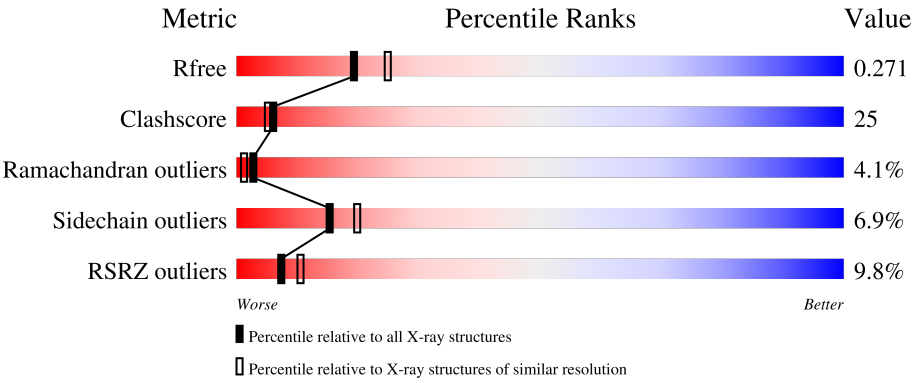
MolProbity	:	4.02b-467
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	1.20.1
EDS	:	2.37.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

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 2.32 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	5974 (2.34-2.30)
Clashscore	141614	6604 (2.34-2.30)
Ramachandran outliers	138981	6523 (2.34-2.30)
Sidechain outliers	138945	6523 (2.34-2.30)
RSRZ outliers	127900	5855 (2.34-2.30)

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 <=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	267	14% 49% 39% 5% 6%
1	B	267	2% 63% 27% • 6%
1	C	267	% 60% 27% 6% • 6%
1	D	267	10% 49% 38% 6% • 6%
1	E	267	8% 48% 41% • • 6%

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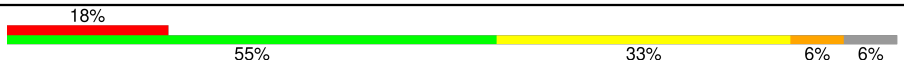
Mol	Chain	Length	Quality of chain
1	F	267	

2 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 11858 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 Putative polyketide biosynthesis enoyl-CoA hydratase homolog pksH.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	250	Total	C	N	O	S	Se	0	0	0
			1836	1161	321	344	4	6			
1	B	251	Total	C	N	O	S	Se	0	0	0
			1995	1269	345	369	5	7			
1	C	251	Total	C	N	O	S	Se	0	0	0
			1995	1269	345	369	5	7			
1	D	251	Total	C	N	O	S	Se	0	0	0
			1995	1269	345	369	5	7			
1	E	251	Total	C	N	O	S	Se	0	0	0
			1995	1269	345	369	5	7			
1	F	251	Total	C	N	O	S	Se	0	0	0
			1833	1158	322	344	4	5			

There are 60 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1	MSE	-	expression tag	UNP P40805
A	2	SER	-	expression tag	UNP P40805
A	260	GLU	-	expression tag	UNP P40805
A	261	GLY	-	expression tag	UNP P40805
A	262	HIS	-	expression tag	UNP P40805
A	263	HIS	-	expression tag	UNP P40805
A	264	HIS	-	expression tag	UNP P40805
A	265	HIS	-	expression tag	UNP P40805
A	266	HIS	-	expression tag	UNP P40805
A	267	HIS	-	expression tag	UNP P40805
B	1	MSE	-	expression tag	UNP P40805
B	2	SER	-	expression tag	UNP P40805
B	260	GLU	-	expression tag	UNP P40805
B	261	GLY	-	expression tag	UNP P40805
B	262	HIS	-	expression tag	UNP P40805
B	263	HIS	-	expression tag	UNP P40805

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Chain	Residue	Modelled	Actual	Comment	Reference
B	264	HIS	-	expression tag	UNP P40805
B	265	HIS	-	expression tag	UNP P40805
B	266	HIS	-	expression tag	UNP P40805
B	267	HIS	-	expression tag	UNP P40805
C	1	MSE	-	expression tag	UNP P40805
C	2	SER	-	expression tag	UNP P40805
C	260	GLU	-	expression tag	UNP P40805
C	261	GLY	-	expression tag	UNP P40805
C	262	HIS	-	expression tag	UNP P40805
C	263	HIS	-	expression tag	UNP P40805
C	264	HIS	-	expression tag	UNP P40805
C	265	HIS	-	expression tag	UNP P40805
C	266	HIS	-	expression tag	UNP P40805
C	267	HIS	-	expression tag	UNP P40805
D	1	MSE	-	expression tag	UNP P40805
D	2	SER	-	expression tag	UNP P40805
D	260	GLU	-	expression tag	UNP P40805
D	261	GLY	-	expression tag	UNP P40805
D	262	HIS	-	expression tag	UNP P40805
D	263	HIS	-	expression tag	UNP P40805
D	264	HIS	-	expression tag	UNP P40805
D	265	HIS	-	expression tag	UNP P40805
D	266	HIS	-	expression tag	UNP P40805
D	267	HIS	-	expression tag	UNP P40805
E	1	MSE	-	expression tag	UNP P40805
E	2	SER	-	expression tag	UNP P40805
E	260	GLU	-	expression tag	UNP P40805
E	261	GLY	-	expression tag	UNP P40805
E	262	HIS	-	expression tag	UNP P40805
E	263	HIS	-	expression tag	UNP P40805
E	264	HIS	-	expression tag	UNP P40805
E	265	HIS	-	expression tag	UNP P40805
E	266	HIS	-	expression tag	UNP P40805
E	267	HIS	-	expression tag	UNP P40805
F	1	MSE	-	expression tag	UNP P40805
F	2	SER	-	expression tag	UNP P40805
F	260	GLU	-	expression tag	UNP P40805
F	261	GLY	-	expression tag	UNP P40805
F	262	HIS	-	expression tag	UNP P40805
F	263	HIS	-	expression tag	UNP P40805
F	264	HIS	-	expression tag	UNP P40805
F	265	HIS	-	expression tag	UNP P40805

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Chain	Residue	Modelled	Actual	Comment	Reference
F	266	HIS	-	expression tag	UNP P40805
F	267	HIS	-	expression tag	UNP P40805

- Molecule 2 is water.

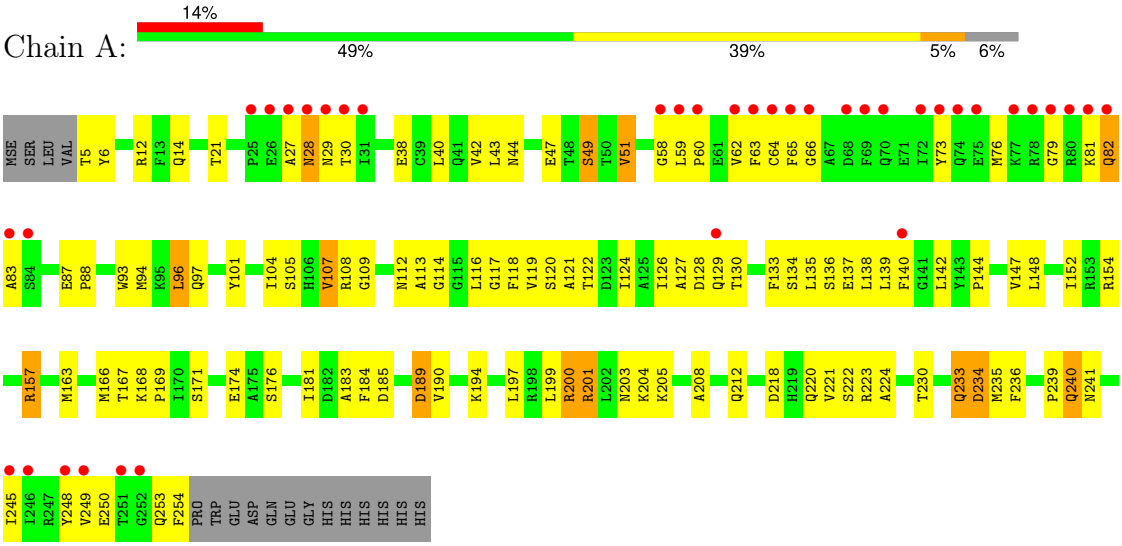
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	33	Total O 33 33	0	0
2	B	44	Total O 44 44	0	0
2	C	49	Total O 49 49	0	0
2	D	23	Total O 23 23	0	0
2	E	31	Total O 31 31	0	0
2	F	29	Total O 29 29	0	0

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.

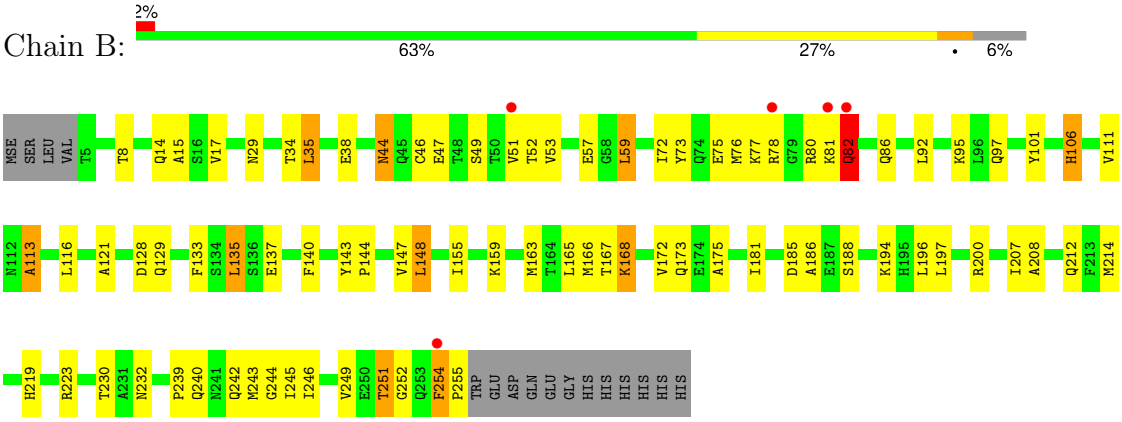
• Molecule 1: Putative polyketide biosynthesis enoyl-CoA hydratase homolog pksH

Chain A:



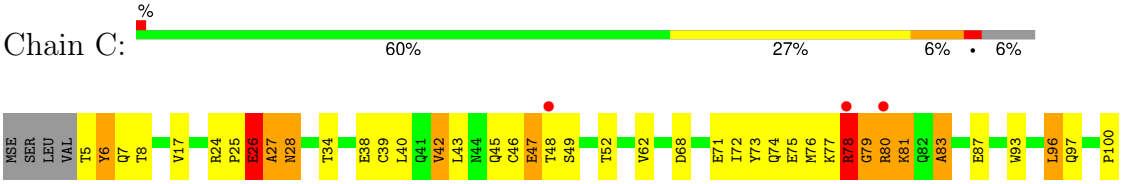
• Molecule 1: Putative polyketide biosynthesis enoyl-CoA hydratase homolog pksH

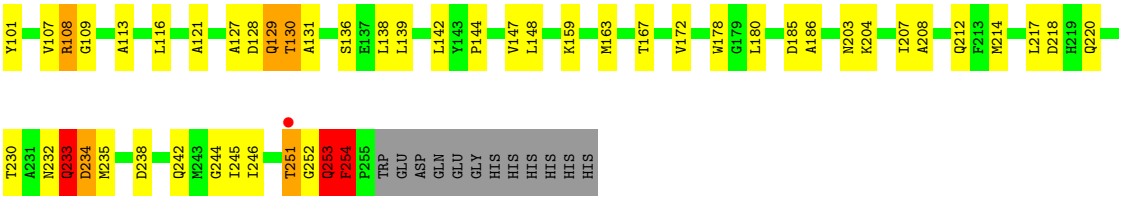
Chain B:



• Molecule 1: Putative polyketide biosynthesis enoyl-CoA hydratase homolog pksH

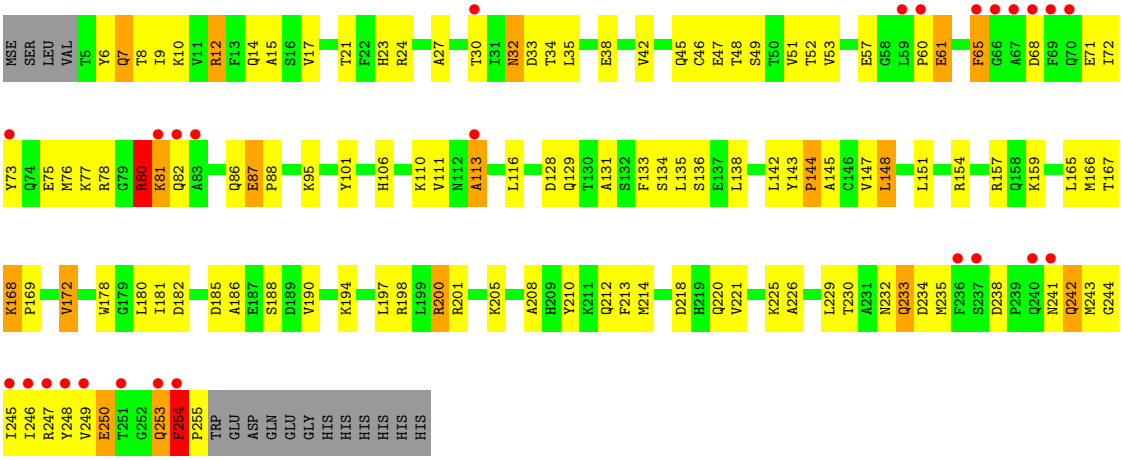
Chain C:





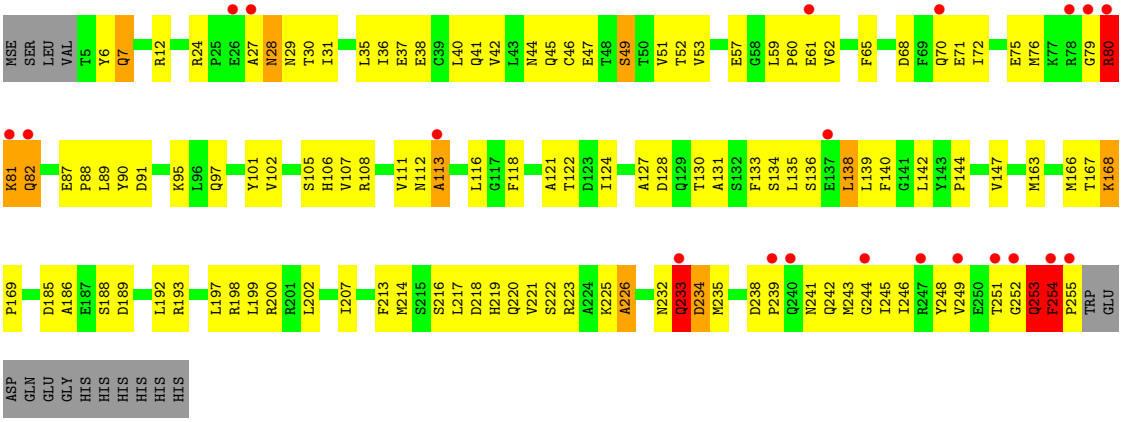
• Molecule 1: Putative polyketide biosynthesis enoyl-CoA hydratase homolog pksH

Chain D:



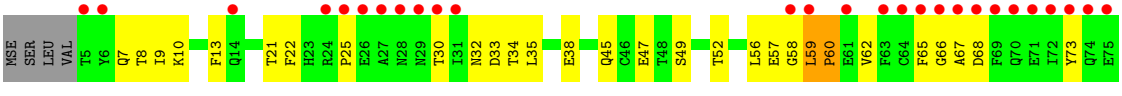
• Molecule 1: Putative polyketide biosynthesis enoyl-CoA hydratase homolog pksH

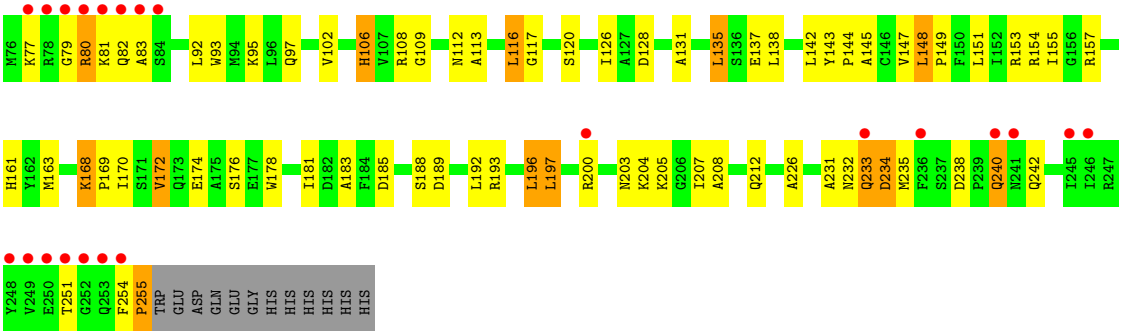
Chain E:



• Molecule 1: Putative polyketide biosynthesis enoyl-CoA hydratase homolog pksH

Chain F:




M76 K77 R78 G79 R80 K81 Q82 A83 S84
L92 W93 M94 K95 L96 Q97
V102
H106 V107 R108 G109
N112 A113
L116 G117
S120
I126 A127 D128
A131
L135 S136 E137 L138
L142 Y143 P144 A145
C146 V147 L148 P149 F150 L151 I152 R153 R154 I155 G156 R157
H161 Y162 M163
K168 P169 I170 S171 V172 Q173 E174 A175 S176 E177 W178
I181 D182 A183 F184 D185
S188 D189
L192 R193
L196 L197
R200
N203 K204 K205 G206 I207 A208
Q212
A226
A231 N232 Q233 D234 M235 P236 S237 D238 P239 Q240 N241 Q242
I245 I246 R247
Y248 V249 E250 T251 G252 Q253 F254 P255 TRP GLU ASP GLN GLU GLY HIS HIS HIS HIS HIS HIS

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 32	Depositor
Cell constants a, b, c, α, β, γ	80.91Å 80.91Å 218.59Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	43.09 – 2.32 43.09 – 2.32	Depositor EDS
% Data completeness (in resolution range)	96.4 (43.09-2.32) 96.4 (43.09-2.32)	Depositor EDS
R_{merge}	0.11	Depositor
R_{sym}	0.11	Depositor
$< I/\sigma(I) >$ [1]	1.90 (at 2.32Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.232 , 0.270 0.232 , 0.271	Depositor DCC
R_{free} test set	5004 reflections (3.75%)	wwPDB-VP
Wilson B-factor (Å^2)	33.5	Xtriage
Anisotropy	0.146	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 49.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	0.010 for -h,-k,l 0.037 for h,-h-k,-l 0.058 for -k,-h,-l	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	11858	wwPDB-VP
Average B, all atoms (Å^2)	41.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.24% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
1	A	0.40	0/1859	0.73	4/2514 (0.2%)
1	B	0.42	0/2028	0.65	0/2732
1	C	0.41	0/2028	0.71	3/2732 (0.1%)
1	D	0.38	0/2028	0.62	0/2732
1	E	0.38	0/2028	0.65	1/2732 (0.0%)
1	F	0.37	0/1856	0.69	5/2511 (0.2%)
All	All	0.39	0/11827	0.68	13/15953 (0.1%)

There are no bond length outliers.

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	233	GLN	N-CA-C	-6.97	92.19	111.00
1	A	200	ARG	N-CA-C	-6.47	93.52	111.00
1	F	233	GLN	N-CA-C	-5.83	95.25	111.00
1	F	60	PRO	N-CA-CB	5.82	110.28	103.30
1	F	255	PRO	N-CA-CB	5.78	110.23	103.30
1	F	196	LEU	N-CA-C	-5.75	95.46	111.00
1	A	60	PRO	N-CA-CB	5.70	110.14	103.30
1	E	233	GLN	N-CA-C	-5.70	95.62	111.00
1	F	25	PRO	N-CA-CB	5.63	110.06	103.30
1	C	233	GLN	N-CA-C	-5.57	95.97	111.00
1	A	189	ASP	N-CA-C	-5.39	96.45	111.00
1	C	78	ARG	N-CA-C	-5.07	97.31	111.00
1	C	254	PHE	C-N-CD	-5.00	109.59	120.60

There are no chirality outliers.

There are no planarity outliers.

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	1836	0	1734	94	0
1	B	1995	0	1997	88	0
1	C	1995	0	1997	92	0
1	D	1995	0	1997	127	0
1	E	1995	0	1997	113	0
1	F	1833	0	1720	83	0
2	A	33	0	0	2	0
2	B	44	0	0	3	0
2	C	49	0	0	6	0
2	D	23	0	0	8	0
2	E	31	0	0	7	0
2	F	29	0	0	7	0
All	All	11858	0	11442	573	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 25.

All (573) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:76:MSE:HE3	1:D:242:GLN:HG3	1.39	1.02
1:B:82:GLN:HE21	1:E:219:HIS:HB3	1.25	1.01
1:F:205:LYS:H	1:F:205:LYS:HD2	1.19	1.01
1:D:254:PHE:HB2	1:D:255:PRO:CD	1.92	1.00
1:D:113:ALA:HB2	1:D:135:LEU:HA	1.39	1.00
1:E:113:ALA:HB2	1:E:135:LEU:HA	1.45	0.99
1:B:133:PHE:CZ	1:B:181:ILE:HD11	1.96	0.98
1:C:233:GLN:O	1:C:234:ASP:HB2	1.62	0.96
1:C:77:LYS:O	1:C:78:ARG:HB2	1.65	0.93
1:F:163:MSE:HE2	1:F:178:TRP:HZ3	1.34	0.92
1:E:136:SER:HA	1:E:167:THR:HG23	1.49	0.92
1:F:163:MSE:HE2	1:F:178:TRP:CZ3	2.07	0.90
1:A:233:GLN:O	1:A:234:ASP:HB2	1.74	0.86
1:E:81:LYS:O	1:E:82:GLN:HG3	1.75	0.85
1:B:76:MSE:HE1	1:B:242:GLN:HB3	1.60	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:76:MSE:HE1	1:E:242:GLN:HB3	1.59	0.84
1:D:52:THR:HG22	1:D:53:VAL:HG12	1.59	0.84
1:A:94:MSE:HE1	1:A:222:SER:HB3	1.58	0.84
1:F:196:LEU:O	1:F:197:LEU:HB3	1.75	0.84
1:A:12:ARG:HH11	1:A:14:GLN:NE2	1.75	0.83
1:D:76:MSE:CE	1:D:242:GLN:HG3	2.08	0.82
1:E:6:TYR:O	1:E:7:GLN:HB3	1.78	0.81
1:D:6:TYR:O	1:D:7:GLN:HB3	1.79	0.81
1:F:233:GLN:O	1:F:234:ASP:HB2	1.81	0.81
1:C:136:SER:HA	1:C:167:THR:HG23	1.63	0.79
1:D:46:CYS:HB3	1:D:51:VAL:HG11	1.63	0.79
1:A:66:GLY:HA2	1:A:114:GLY:HA3	1.66	0.78
1:B:81:LYS:C	1:B:82:GLN:HG3	2.04	0.78
1:B:144:PRO:HB2	1:B:147:VAL:HB	1.65	0.78
1:E:52:THR:HG21	2:E:271:HOH:O	1.82	0.78
1:C:139:LEU:HD11	1:C:167:THR:HG21	1.66	0.78
1:D:214:MSE:HE1	1:F:148:LEU:HG	1.66	0.78
1:D:32:ASN:ND2	1:D:34:THR:H	1.83	0.77
1:A:12:ARG:HD3	1:A:14:GLN:HE21	1.48	0.77
1:C:83:ALA:HB3	1:C:233:GLN:HG2	1.64	0.77
1:D:254:PHE:CD1	1:D:254:PHE:N	2.46	0.76
1:E:102:VAL:HG23	1:E:207:ILE:HD13	1.66	0.75
1:A:139:LEU:HD11	1:A:167:THR:HG21	1.69	0.75
1:A:168:LYS:HB3	1:E:198:ARG:NH1	2.01	0.75
1:F:197:LEU:HA	1:F:200:ARG:HD3	1.69	0.75
1:B:46:CYS:HB3	1:B:51:VAL:HG11	1.69	0.74
1:D:254:PHE:HB2	1:D:255:PRO:HD3	1.68	0.74
1:C:78:ARG:HG3	1:E:45:GLN:NE2	2.01	0.74
1:F:240:GLN:H	1:F:240:GLN:HE21	1.35	0.74
1:C:74:GLN:O	1:C:78:ARG:HD3	1.88	0.74
1:B:81:LYS:O	1:B:82:GLN:HG3	1.89	0.73
1:A:235:MSE:HE2	1:A:236:PHE:CE1	2.24	0.73
1:F:116:LEU:HD21	1:F:151:LEU:HD13	1.71	0.73
1:B:219:HIS:HB2	1:B:223:ARG:HH11	1.53	0.72
1:C:80:ARG:HG3	1:C:81:LYS:H	1.55	0.72
1:A:239:PRO:O	1:A:240:GLN:CB	2.38	0.72
1:B:49:SER:HB2	1:B:51:VAL:HG12	1.72	0.71
1:B:116:LEU:HD22	1:B:135:LEU:HD13	1.70	0.71
1:A:12:ARG:CD	1:A:14:GLN:HE21	2.03	0.71
1:D:197:LEU:HD12	1:D:200:ARG:HH12	1.56	0.71
1:E:49:SER:HB2	1:E:51:VAL:HG12	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:68:ASP:HB3	1:C:71:GLU:HB3	1.71	0.71
1:C:108:ARG:HG3	2:C:310:HOH:O	1.91	0.71
1:C:128:ASP:OD1	1:C:130:THR:HG22	1.89	0.70
1:F:144:PRO:HG2	1:F:148:LEU:HD22	1.73	0.70
1:C:6:TYR:HA	1:C:38:GLU:OE2	1.90	0.70
1:D:46:CYS:CB	1:D:51:VAL:HG11	2.21	0.70
1:E:136:SER:HA	1:E:167:THR:CG2	2.21	0.70
1:F:196:LEU:O	1:F:197:LEU:CB	2.40	0.70
1:C:167:THR:O	1:C:167:THR:HG22	1.92	0.70
1:A:116:LEU:HD23	1:A:135:LEU:HD21	1.74	0.69
1:D:214:MSE:CE	1:F:148:LEU:HG	2.23	0.69
1:D:230:THR:O	1:D:233:GLN:HB2	1.91	0.69
1:E:106:HIS:HD2	1:E:192:LEU:HD22	1.58	0.69
1:E:108:ARG:O	1:E:130:THR:HB	1.91	0.69
1:B:219:HIS:CB	1:B:223:ARG:HD3	2.22	0.68
1:D:73:TYR:HE1	1:D:246:ILE:HG23	1.57	0.68
1:C:46:CYS:O	1:C:47:GLU:CB	2.41	0.68
1:E:106:HIS:CD2	1:E:192:LEU:HD22	2.28	0.68
1:A:239:PRO:O	1:A:240:GLN:HB3	1.94	0.68
1:B:82:GLN:NE2	1:E:222:SER:HB3	2.09	0.68
1:D:197:LEU:HD12	1:D:200:ARG:NH1	2.08	0.68
1:F:128:ASP:HA	1:F:185:ASP:O	1.94	0.68
1:B:46:CYS:CB	1:B:51:VAL:HG11	2.23	0.67
1:B:106:HIS:HE1	1:B:188:SER:OG	1.77	0.67
1:B:78:ARG:HG3	1:D:45:GLN:OE1	1.95	0.67
1:B:254:PHE:CD1	1:B:254:PHE:N	2.61	0.67
1:D:34:THR:O	1:D:38:GLU:HG3	1.95	0.67
1:F:226:ALA:HB3	2:F:284:HOH:O	1.94	0.67
1:A:94:MSE:HE3	1:A:221:VAL:HG12	1.77	0.66
1:E:90:TYR:CE2	1:E:225:LYS:HB2	2.30	0.66
1:C:80:ARG:O	1:C:81:LYS:HB2	1.94	0.66
1:D:6:TYR:O	1:D:7:GLN:CB	2.42	0.66
1:D:76:MSE:HE2	1:D:246:ILE:HD11	1.77	0.66
1:A:59:LEU:CB	1:A:63:PHE:HA	2.26	0.66
1:D:128:ASP:HA	1:D:185:ASP:O	1.96	0.66
1:B:254:PHE:N	1:B:254:PHE:HD1	1.93	0.66
1:D:254:PHE:HB2	1:D:255:PRO:HD2	1.74	0.66
1:B:72:ILE:O	1:B:76:MSE:HG3	1.96	0.65
1:A:136:SER:HA	1:A:167:THR:HG23	1.79	0.65
1:B:144:PRO:HG2	1:B:148:LEU:HD22	1.79	0.65
1:B:116:LEU:HD21	1:B:163:MSE:HE1	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:75:GLU:O	1:E:80:ARG:HB3	1.97	0.65
1:D:38:GLU:O	1:D:42:VAL:HG23	1.97	0.65
1:E:76:MSE:CE	1:E:242:GLN:HB3	2.27	0.65
1:C:128:ASP:O	1:C:129:GLN:NE2	2.29	0.64
1:C:47:GLU:HA	1:C:100:PRO:HG2	1.79	0.64
1:B:17:VAL:HG22	1:B:53:VAL:CG2	2.28	0.64
1:C:34:THR:O	1:C:38:GLU:HG3	1.97	0.64
1:D:116:LEU:HD22	1:D:135:LEU:HD11	1.79	0.64
1:A:200:ARG:O	1:A:201:ARG:HB2	1.95	0.64
1:A:248:TYR:C	1:A:250:GLU:H	2.01	0.64
1:C:116:LEU:HD21	1:C:180:LEU:HD21	1.80	0.63
1:F:170:ILE:HG23	1:F:174:GLU:HB2	1.81	0.63
1:E:68:ASP:O	1:E:72:ILE:HG13	1.98	0.63
1:A:21:THR:HG23	1:A:58:GLY:HA3	1.80	0.63
1:D:254:PHE:CB	1:D:255:PRO:CD	2.71	0.63
1:B:208:ALA:O	1:B:212:GLN:HG3	1.99	0.63
1:C:5:THR:HG22	2:C:306:HOH:O	1.98	0.62
1:C:253:GLN:C	1:C:254:PHE:HD2	2.01	0.62
1:F:135:LEU:HG	1:F:144:PRO:HG3	1.82	0.62
1:F:145:ALA:O	1:F:149:PRO:HD3	2.00	0.62
1:E:254:PHE:CD1	1:E:254:PHE:N	2.66	0.62
1:B:44:ASN:O	1:B:47:GLU:HB2	1.99	0.62
1:D:242:GLN:HE21	1:D:242:GLN:HA	1.64	0.62
1:B:17:VAL:HG13	1:B:53:VAL:HG23	1.80	0.62
1:A:200:ARG:O	1:A:201:ARG:CB	2.47	0.62
1:A:233:GLN:O	1:A:234:ASP:CB	2.48	0.62
1:B:76:MSE:HE1	1:B:242:GLN:CB	2.28	0.61
1:A:197:LEU:O	1:A:200:ARG:HG2	2.00	0.61
1:F:143:TYR:CE1	1:F:235:MSE:HE2	2.36	0.61
1:D:49:SER:HB2	1:D:51:VAL:HG12	1.83	0.61
1:B:128:ASP:HA	1:B:185:ASP:O	2.01	0.61
1:F:13:PHE:CZ	1:F:45:GLN:NE2	2.69	0.61
1:D:245:ILE:O	1:D:249:VAL:HG23	2.00	0.60
1:A:49:SER:OG	1:A:51:VAL:HG13	2.01	0.60
1:A:144:PRO:O	1:A:148:LEU:HG	2.02	0.60
1:D:46:CYS:CA	1:D:51:VAL:HG11	2.31	0.60
1:D:75:GLU:O	1:D:80:ARG:HB3	2.01	0.60
1:C:80:ARG:CG	1:C:81:LYS:N	2.64	0.60
1:F:8:THR:HB	1:F:35:LEU:HD23	1.83	0.60
1:A:208:ALA:O	1:A:212:GLN:HG3	2.01	0.60
1:B:97:GLN:HG3	1:B:121:ALA:O	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:133:PHE:HZ	1:B:181:ILE:HD11	1.61	0.60
1:B:144:PRO:O	1:B:148:LEU:HD22	2.02	0.60
1:C:52:THR:HG21	2:C:304:HOH:O	2.01	0.60
1:A:142:LEU:HB3	1:A:235:MSE:HE3	1.82	0.60
1:C:76:MSE:HB3	1:C:81:LYS:HE3	1.84	0.60
1:B:196:LEU:O	1:B:200:ARG:HG3	2.02	0.60
1:D:249:VAL:O	1:D:250:GLU:HG3	2.01	0.60
1:C:251:THR:HG22	1:C:252:GLY:N	2.17	0.59
1:D:244:GLY:N	2:D:281:HOH:O	2.35	0.59
1:F:106:HIS:HE1	1:F:188:SER:OG	1.84	0.59
1:E:46:CYS:HB3	1:E:51:VAL:HG11	1.84	0.59
1:E:111:VAL:HG12	1:E:116:LEU:HD12	1.83	0.59
1:F:144:PRO:HB2	1:F:147:VAL:HB	1.83	0.59
1:E:163:MSE:O	1:E:166:MSE:O	2.20	0.59
1:F:238:ASP:O	1:F:242:GLN:HG3	2.03	0.59
1:C:251:THR:HG22	1:C:252:GLY:H	1.67	0.59
1:C:254:PHE:N	1:C:254:PHE:CD2	2.69	0.59
1:E:28:ASN:HD22	1:E:62:VAL:HG11	1.68	0.59
1:E:255:PRO:HG2	2:E:269:HOH:O	2.02	0.59
1:F:68:ASP:HA	2:F:282:HOH:O	2.01	0.59
1:A:134:SER:HB3	1:A:169:PRO:HB3	1.85	0.59
1:D:208:ALA:O	1:D:212:GLN:HG3	2.02	0.59
1:D:238:ASP:O	1:D:242:GLN:HB2	2.03	0.59
1:B:17:VAL:HG22	1:B:53:VAL:HG22	1.85	0.59
1:D:210:TYR:OH	1:F:161:HIS:HD2	1.85	0.59
1:C:74:GLN:O	1:C:77:LYS:O	2.21	0.59
1:E:81:LYS:O	1:E:82:GLN:O	2.20	0.59
1:C:80:ARG:CG	1:C:81:LYS:H	2.15	0.58
1:E:225:LYS:O	1:E:226:ALA:CB	2.51	0.58
1:B:95:LYS:HE3	2:B:290:HOH:O	2.04	0.58
1:C:97:GLN:HG2	1:C:121:ALA:O	2.04	0.58
1:F:144:PRO:O	1:F:148:LEU:HD22	2.03	0.58
1:D:86:GLN:HE21	1:D:86:GLN:HA	1.68	0.58
1:E:233:GLN:O	1:E:235:MSE:N	2.36	0.58
1:D:47:GLU:HG2	2:D:282:HOH:O	2.03	0.58
1:F:34:THR:O	1:F:38:GLU:HG3	2.04	0.58
1:B:140:PHE:HA	1:B:254:PHE:CZ	2.39	0.58
1:D:111:VAL:HG12	1:D:116:LEU:HD12	1.86	0.58
1:E:6:TYR:O	1:E:7:GLN:CB	2.49	0.58
1:F:254:PHE:O	1:F:255:PRO:C	2.42	0.58
1:A:66:GLY:HA3	1:A:113:ALA:O	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:233:GLN:O	1:C:234:ASP:CB	2.45	0.58
1:F:232:ASN:C	1:F:233:GLN:O	2.40	0.58
1:D:128:ASP:HB3	1:D:188:SER:HB3	1.86	0.57
1:A:241:ASN:O	1:A:245:ILE:HG13	2.03	0.57
1:D:76:MSE:CE	1:D:246:ILE:HD11	2.34	0.57
1:D:243:MSE:HE2	1:D:246:ILE:HD12	1.86	0.57
1:E:116:LEU:HD22	1:E:135:LEU:CD1	2.33	0.57
1:D:60:PRO:HD2	1:D:61:GLU:OE2	2.05	0.57
1:D:254:PHE:N	1:D:254:PHE:HD1	2.02	0.57
1:E:37:GLU:O	1:E:41:GLN:HG3	2.05	0.57
1:A:142:LEU:HB3	1:A:235:MSE:CE	2.35	0.57
1:D:200:ARG:HH11	1:D:200:ARG:HB2	1.68	0.57
1:F:137:GLU:HG3	1:F:144:PRO:HD3	1.87	0.57
1:B:86:GLN:HG3	1:B:232:ASN:ND2	2.20	0.57
1:D:154:ARG:HH22	1:D:182:ASP:CG	2.08	0.57
1:A:59:LEU:O	1:A:108:ARG:HB2	2.05	0.57
1:C:72:ILE:HG22	1:C:76:MSE:HE2	1.87	0.57
1:F:137:GLU:CD	1:F:137:GLU:H	2.06	0.56
1:F:197:LEU:O	1:F:200:ARG:HG2	2.05	0.56
1:D:218:ASP:HB2	1:F:157:ARG:NE	2.20	0.56
1:B:82:GLN:HG2	1:E:219:HIS:CG	2.40	0.56
1:B:219:HIS:HB3	1:B:223:ARG:HD3	1.86	0.56
1:D:168:LYS:HD2	1:D:168:LYS:O	2.06	0.56
1:F:120:SER:O	1:F:154:ARG:HD2	2.06	0.56
1:A:230:THR:O	1:A:233:GLN:O	2.24	0.56
1:B:86:GLN:HA	1:B:86:GLN:NE2	2.21	0.56
1:A:38:GLU:O	1:A:42:VAL:HG23	2.06	0.56
1:B:254:PHE:HD1	1:B:254:PHE:H	1.51	0.56
1:C:109:GLY:H	1:C:130:THR:CG2	2.18	0.56
1:D:77:LYS:O	1:D:78:ARG:HG3	2.05	0.56
1:E:167:THR:HG22	1:E:167:THR:O	2.06	0.56
1:A:65:PHE:O	1:A:112:ASN:HB3	2.06	0.55
1:C:46:CYS:O	1:C:47:GLU:HB2	2.06	0.55
1:C:144:PRO:HB2	1:C:147:VAL:HB	1.88	0.55
1:B:86:GLN:HA	1:B:86:GLN:HE21	1.70	0.55
1:B:155:ILE:HD12	1:B:159:LYS:HB3	1.88	0.55
1:C:129:GLN:HA	1:C:172:VAL:HG11	1.88	0.55
1:D:142:LEU:HD11	1:D:245:ILE:HD11	1.89	0.55
1:C:109:GLY:H	1:C:130:THR:HG23	1.71	0.55
1:F:131:ALA:O	1:F:172:VAL:HG22	2.07	0.55
1:A:128:ASP:HA	1:A:185:ASP:O	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:38:GLU:O	1:E:42:VAL:HG12	2.06	0.55
1:E:220:GLN:HA	1:E:223:ARG:HD3	1.89	0.55
1:A:138:LEU:HG	1:E:202:LEU:HD22	1.89	0.55
1:D:32:ASN:ND2	1:D:34:THR:HB	2.22	0.55
1:F:205:LYS:H	1:F:205:LYS:CD	1.99	0.55
1:B:144:PRO:HG2	1:B:148:LEU:CD2	2.37	0.55
1:C:159:LYS:HE2	1:C:178:TRP:NE1	2.22	0.55
1:C:139:LEU:CD1	1:C:167:THR:HG21	2.35	0.54
1:B:34:THR:O	1:B:38:GLU:HG3	2.06	0.54
1:C:83:ALA:CB	1:C:233:GLN:HG2	2.36	0.54
1:D:86:GLN:HA	1:D:86:GLN:NE2	2.22	0.54
1:F:66:GLY:HA3	1:F:113:ALA:O	2.07	0.54
1:B:57:GLU:OE2	1:B:106:HIS:HD2	1.90	0.54
1:A:167:THR:O	1:A:167:THR:HG22	2.08	0.54
1:E:36:ILE:HD13	1:E:89:LEU:HB2	1.90	0.54
1:F:79:GLY:O	1:F:81:LYS:N	2.40	0.54
1:E:220:GLN:HA	1:E:223:ARG:HH11	1.73	0.54
1:C:38:GLU:O	1:C:42:VAL:HG12	2.08	0.53
1:C:73:TYR:HE1	1:C:246:ILE:HG23	1.73	0.53
1:E:144:PRO:HB2	1:E:147:VAL:HB	1.90	0.53
1:C:136:SER:CA	1:C:167:THR:HG23	2.35	0.53
1:D:17:VAL:HG13	1:D:53:VAL:HG22	1.89	0.53
1:E:128:ASP:HA	1:E:185:ASP:O	2.08	0.53
1:C:47:GLU:HG2	1:C:100:PRO:CD	2.39	0.53
1:A:73:TYR:O	1:A:76:MSE:N	2.42	0.53
1:B:242:GLN:O	1:B:245:ILE:HG12	2.08	0.53
1:F:95:LYS:HE3	2:F:268:HOH:O	2.07	0.53
1:D:12:ARG:O	1:D:12:ARG:HG2	2.08	0.53
1:D:131:ALA:HB3	1:D:172:VAL:HG13	1.90	0.53
1:A:66:GLY:N	2:A:296:HOH:O	2.39	0.53
1:B:52:THR:HG22	1:B:53:VAL:HG13	1.90	0.53
1:C:71:GLU:O	1:C:75:GLU:HG3	2.08	0.53
1:D:213:PHE:CD2	1:D:214:MSE:HE2	2.44	0.53
1:E:27:ALA:O	1:E:30:THR:HG23	2.08	0.53
1:E:244:GLY:HA2	2:E:275:HOH:O	2.07	0.53
1:A:109:GLY:H	1:A:130:THR:HG22	1.74	0.53
1:C:79:GLY:O	1:C:80:ARG:O	2.25	0.53
1:D:106:HIS:HE1	1:D:188:SER:OG	1.92	0.53
1:A:107:VAL:HG23	1:A:126:ILE:O	2.09	0.53
1:C:138:LEU:HA	1:C:142:LEU:O	2.09	0.53
1:C:144:PRO:O	1:C:148:LEU:HG	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:116:LEU:HD13	1:F:135:LEU:HD13	1.90	0.53
1:C:8:THR:HG22	1:C:24:ARG:HD3	1.90	0.52
1:D:106:HIS:HE1	1:D:188:SER:CB	2.21	0.52
1:E:213:PHE:O	1:E:216:SER:HB3	2.08	0.52
1:F:205:LYS:HD2	1:F:205:LYS:N	2.04	0.52
1:A:171:SER:OG	1:A:174:GLU:HG3	2.09	0.52
1:D:32:ASN:HD22	1:D:34:THR:H	1.52	0.52
1:D:76:MSE:HE3	1:D:242:GLN:CG	2.26	0.52
1:A:140:PHE:HB2	1:A:142:LEU:CD2	2.39	0.52
1:C:128:ASP:HA	1:C:185:ASP:O	2.09	0.52
1:D:159:LYS:HD3	1:D:178:TRP:CD2	2.44	0.52
1:F:102:VAL:HG23	1:F:207:ILE:HD13	1.90	0.52
1:C:129:GLN:O	1:C:129:GLN:HG2	2.09	0.52
1:E:28:ASN:ND2	1:E:62:VAL:HG11	2.24	0.52
1:C:80:ARG:HB2	1:C:80:ARG:CZ	2.39	0.52
1:B:219:HIS:HB2	1:B:223:ARG:HD3	1.89	0.52
1:C:232:ASN:O	1:C:235:MSE:HG2	2.09	0.52
1:F:9:ILE:HG22	1:F:22:PHE:HD1	1.74	0.52
1:A:104:ILE:HA	1:A:124:ILE:O	2.10	0.52
1:C:214:MSE:SE	2:C:275:HOH:O	2.78	0.52
1:E:57:GLU:HG2	1:E:106:HIS:HB3	1.92	0.52
1:D:106:HIS:HE1	1:D:188:SER:HB2	1.76	0.51
1:D:225:LYS:O	1:D:229:LEU:HG	2.10	0.51
1:B:172:VAL:HG13	1:B:173:GLN:NE2	2.25	0.51
1:D:151:LEU:CD1	1:D:180:LEU:HD13	2.40	0.51
1:F:137:GLU:CG	1:F:144:PRO:HD3	2.40	0.51
1:F:208:ALA:O	1:F:212:GLN:HG3	2.09	0.51
1:A:223:ARG:NH2	1:B:230:THR:HG23	2.25	0.51
1:B:133:PHE:CE1	1:B:181:ILE:HD11	2.42	0.51
1:E:254:PHE:N	1:E:254:PHE:HD1	2.07	0.51
1:A:144:PRO:HB2	1:A:147:VAL:HB	1.93	0.51
1:A:6:TYR:HB3	1:A:38:GLU:OE1	2.10	0.51
1:D:254:PHE:CB	1:D:255:PRO:HD2	2.38	0.51
1:E:241:ASN:O	1:E:243:MSE:O	2.29	0.51
1:A:12:ARG:NH1	1:A:14:GLN:NE2	2.54	0.51
1:B:82:GLN:NE2	1:E:219:HIS:HB3	2.08	0.51
1:B:244:GLY:HA3	1:B:254:PHE:CE2	2.46	0.51
1:F:109:GLY:O	1:F:131:ALA:HA	2.11	0.51
1:A:133:PHE:O	1:A:169:PRO:HA	2.10	0.51
1:B:81:LYS:HD2	1:B:81:LYS:N	2.26	0.51
1:C:167:THR:O	1:C:167:THR:CG2	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:208:ALA:O	1:C:212:GLN:HG3	2.10	0.51
1:F:144:PRO:HG2	1:F:148:LEU:CD2	2.41	0.50
1:E:37:GLU:HG3	1:E:41:GLN:HE21	1.76	0.50
1:C:230:THR:O	1:C:234:ASP:HB2	2.11	0.50
1:B:116:LEU:HD22	1:B:135:LEU:CD1	2.37	0.50
1:D:116:LEU:HD22	1:D:135:LEU:CD1	2.40	0.50
1:B:82:GLN:HE22	1:E:223:ARG:HG3	1.77	0.50
1:C:254:PHE:HD2	1:C:254:PHE:N	2.09	0.50
1:A:128:ASP:OD1	1:A:130:THR:HB	2.12	0.50
1:A:166:MSE:HE1	1:E:199:LEU:HD21	1.94	0.50
1:B:75:GLU:O	1:B:80:ARG:HB3	2.12	0.50
1:C:116:LEU:HD11	1:C:163:MSE:HE1	1.92	0.50
1:D:57:GLU:HG2	1:D:106:HIS:HB3	1.94	0.50
1:B:82:GLN:NE2	1:E:223:ARG:HG3	2.27	0.50
1:B:140:PHE:CD1	1:B:254:PHE:CE1	2.99	0.50
1:B:140:PHE:CD1	1:B:254:PHE:HE1	2.30	0.50
1:E:238:ASP:O	1:E:242:GLN:HG2	2.12	0.50
1:C:142:LEU:HD11	1:C:245:ILE:HD11	1.93	0.50
1:F:193:ARG:HD2	2:F:294:HOH:O	2.12	0.50
1:B:113:ALA:HB1	1:B:137:GLU:HG2	1.93	0.49
1:C:47:GLU:HG3	2:C:282:HOH:O	2.11	0.49
1:C:230:THR:O	1:C:233:GLN:O	2.30	0.49
1:C:232:ASN:HA	1:C:235:MSE:HE3	1.93	0.49
1:F:203:ASN:OD1	1:F:205:LYS:HD2	2.12	0.49
1:D:87:GLU:HG2	1:D:229:LEU:HD13	1.93	0.49
1:D:220:GLN:HG3	1:D:221:VAL:N	2.28	0.49
1:F:176:SER:HA	1:F:181:ILE:HG13	1.94	0.49
1:D:106:HIS:CE1	1:D:188:SER:HB2	2.48	0.49
1:A:109:GLY:HA2	1:A:130:THR:HG22	1.95	0.49
1:D:129:GLN:NE2	2:D:277:HOH:O	2.46	0.49
1:E:91:ASP:OD1	1:E:225:LYS:NZ	2.35	0.49
1:A:118:PHE:O	1:A:122:THR:HG23	2.13	0.49
1:D:32:ASN:ND2	1:D:34:THR:CB	2.76	0.49
1:E:220:GLN:HA	1:E:223:ARG:NH1	2.28	0.49
1:E:254:PHE:HD1	1:E:254:PHE:H	1.59	0.49
1:E:116:LEU:HD21	1:E:163:MSE:HE1	1.93	0.49
1:A:21:THR:HG23	1:A:58:GLY:CA	2.41	0.49
1:A:97:GLN:HG2	1:A:121:ALA:O	2.13	0.49
1:C:47:GLU:HG2	1:C:100:PRO:HD2	1.95	0.49
1:E:239:PRO:HA	1:E:242:GLN:HG3	1.95	0.49
1:C:129:GLN:HE21	1:C:186:ALA:HA	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:65:PHE:HE1	1:D:110:LYS:HB3	1.78	0.48
1:D:254:PHE:CG	1:D:255:PRO:HD2	2.48	0.48
1:A:181:ILE:HD12	1:A:181:ILE:O	2.14	0.48
1:D:242:GLN:HA	1:D:242:GLN:NE2	2.28	0.48
1:E:29:ASN:HD21	1:E:59:LEU:HG	1.78	0.48
1:B:168:LYS:HE3	1:B:168:LYS:O	2.13	0.48
1:D:75:GLU:HB3	1:D:80:ARG:CD	2.43	0.48
1:B:251:THR:OG1	1:B:252:GLY:N	2.45	0.48
1:C:109:GLY:O	1:C:131:ALA:HA	2.14	0.48
1:D:133:PHE:O	1:D:169:PRO:HA	2.14	0.48
1:C:93:TRP:O	1:C:96:LEU:HB2	2.13	0.48
1:E:12:ARG:HH11	1:E:12:ARG:HG2	1.79	0.48
1:E:140:PHE:HA	1:E:254:PHE:CZ	2.48	0.48
1:B:76:MSE:HE1	1:B:242:GLN:CG	2.43	0.48
1:D:8:THR:HB	1:D:35:LEU:HD23	1.95	0.48
1:E:76:MSE:HE3	1:E:242:GLN:OE1	2.14	0.48
1:E:232:ASN:O	1:E:233:GLN:O	2.32	0.48
1:A:142:LEU:HD12	1:A:235:MSE:HE3	1.95	0.48
1:B:129:GLN:HG3	1:B:186:ALA:HA	1.95	0.48
1:E:40:LEU:HD22	2:E:284:HOH:O	2.13	0.48
1:F:153:ARG:NH2	2:F:276:HOH:O	2.46	0.47
1:B:214:MSE:HG3	2:B:288:HOH:O	2.13	0.47
1:D:232:ASN:HA	1:D:235:MSE:HE3	1.97	0.47
1:A:152:ILE:HD11	1:E:214:MSE:CE	2.45	0.47
1:A:218:ASP:OD1	1:A:220:GLN:HB2	2.14	0.47
1:F:163:MSE:HE2	1:F:178:TRP:CE3	2.48	0.47
1:C:251:THR:CG2	1:C:252:GLY:H	2.25	0.47
1:A:83:ALA:HB3	1:A:233:GLN:NE2	2.28	0.47
1:B:254:PHE:N	1:B:255:PRO:HD2	2.30	0.47
1:C:253:GLN:C	1:C:254:PHE:CD2	2.85	0.47
1:E:24:ARG:HG2	1:E:27:ALA:HB3	1.95	0.47
1:E:232:ASN:C	1:E:233:GLN:O	2.53	0.47
1:D:46:CYS:HA	1:D:51:VAL:HG11	1.97	0.47
1:E:71:GLU:O	1:E:75:GLU:HG3	2.14	0.47
1:E:81:LYS:C	1:E:82:GLN:HG3	2.35	0.47
1:E:133:PHE:O	1:E:169:PRO:HA	2.14	0.47
1:A:137:GLU:H	1:A:137:GLU:CD	2.17	0.47
1:E:46:CYS:CB	1:E:51:VAL:HG11	2.45	0.47
1:D:190:VAL:O	1:D:194:LYS:HG3	2.15	0.47
1:A:40:LEU:HD11	2:A:274:HOH:O	2.14	0.46
1:A:116:LEU:HA	1:A:116:LEU:HD12	1.76	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:10:LYS:HB2	1:F:21:THR:HB	1.97	0.46
1:F:126:ILE:HD11	1:F:192:LEU:HB2	1.97	0.46
1:D:246:ILE:HB	2:D:281:HOH:O	2.14	0.46
1:F:200:ARG:HG2	1:F:200:ARG:HH11	1.80	0.46
1:F:231:ALA:O	1:F:235:MSE:HB2	2.16	0.46
1:A:203:ASN:OD1	1:A:205:LYS:HB3	2.15	0.46
1:B:244:GLY:HA3	1:B:254:PHE:CZ	2.50	0.46
1:D:14:GLN:O	1:D:15:ALA:HB3	2.15	0.46
1:A:109:GLY:N	1:A:130:THR:HG22	2.31	0.46
1:E:139:LEU:HD11	1:E:167:THR:HG21	1.98	0.46
1:C:218:ASP:OD1	1:C:220:GLN:HG2	2.15	0.46
1:C:238:ASP:O	1:C:242:GLN:HG3	2.16	0.46
1:D:23:HIS:O	1:D:24:ARG:HG2	2.16	0.46
1:E:70:GLN:CD	1:E:70:GLN:H	2.19	0.46
1:F:231:ALA:O	1:F:233:GLN:O	2.33	0.46
1:D:87:GLU:HB2	1:D:88:PRO:HD3	1.98	0.46
1:E:44:ASN:HA	1:E:47:GLU:HB2	1.98	0.46
1:A:224:ALA:HB1	1:E:217:LEU:HD22	1.97	0.46
1:D:200:ARG:HH11	1:D:200:ARG:CB	2.29	0.46
1:F:83:ALA:HB3	1:F:233:GLN:CD	2.37	0.46
1:B:52:THR:HG23	1:B:207:ILE:CD1	2.47	0.45
1:C:251:THR:CG2	1:C:252:GLY:N	2.79	0.45
1:D:159:LYS:HD3	1:D:178:TRP:CG	2.51	0.45
1:A:113:ALA:HB2	1:A:135:LEU:CD2	2.46	0.45
1:C:116:LEU:HD23	1:C:116:LEU:HA	1.83	0.45
1:D:51:VAL:O	1:D:51:VAL:HG13	2.17	0.45
1:D:144:PRO:HG2	1:D:148:LEU:HD22	1.99	0.45
1:E:138:LEU:HD13	1:E:138:LEU:O	2.16	0.45
1:A:59:LEU:CB	1:A:63:PHE:CA	2.95	0.45
1:D:248:TYR:HD1	1:D:253:GLN:N	2.14	0.45
1:E:116:LEU:HD22	1:E:135:LEU:HD13	1.98	0.45
1:D:32:ASN:HB3	1:D:35:LEU:HB2	1.98	0.45
1:E:95:LYS:NZ	2:E:281:HOH:O	2.48	0.45
1:A:142:LEU:CB	1:A:235:MSE:HE3	2.47	0.45
1:B:197:LEU:O	1:B:200:ARG:HB2	2.16	0.45
1:C:45:GLN:C	1:C:46:CYS:O	2.52	0.45
1:E:106:HIS:HE1	1:E:188:SER:OG	1.99	0.45
1:F:59:LEU:CB	1:F:108:ARG:HB2	2.47	0.45
1:F:83:ALA:HB3	1:F:233:GLN:OE1	2.16	0.45
1:B:242:GLN:O	1:B:246:ILE:HG12	2.16	0.45
1:E:113:ALA:N	1:E:134:SER:O	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:44:ASN:O	1:A:47:GLU:HB3	2.17	0.45
1:D:138:LEU:HA	1:D:142:LEU:O	2.17	0.45
1:D:197:LEU:HA	1:D:200:ARG:NH1	2.31	0.45
1:E:189:ASP:O	1:E:193:ARG:HG3	2.17	0.45
1:F:73:TYR:O	1:F:77:LYS:CB	2.64	0.45
1:A:166:MSE:HE3	1:E:124:ILE:CD1	2.47	0.44
1:A:176:SER:HB2	1:A:181:ILE:HD11	1.99	0.44
1:A:223:ARG:HH21	1:B:230:THR:HG23	1.81	0.44
1:A:248:TYR:C	1:A:250:GLU:N	2.69	0.44
1:E:87:GLU:N	1:E:88:PRO:CD	2.80	0.44
1:D:143:TYR:O	1:D:235:MSE:HE1	2.16	0.44
1:D:255:PRO:HA	2:D:269:HOH:O	2.16	0.44
1:E:118:PHE:O	1:E:122:THR:HG23	2.17	0.44
1:E:233:GLN:O	1:E:234:ASP:C	2.55	0.44
1:F:32:ASN:O	1:F:34:THR:N	2.51	0.44
1:A:166:MSE:CE	1:E:199:LEU:HD21	2.48	0.44
1:F:65:PHE:O	1:F:112:ASN:HB3	2.18	0.44
1:A:28:ASN:O	1:A:30:THR:N	2.51	0.44
1:B:240:GLN:HE21	1:B:243:MSE:HE1	1.82	0.44
1:D:81:LYS:HB2	1:D:82:GLN:H	1.37	0.44
1:D:166:MSE:HA	1:D:166:MSE:HE2	1.99	0.44
1:F:126:ILE:HA	1:F:183:ALA:O	2.17	0.44
1:A:190:VAL:O	1:A:194:LYS:HG3	2.18	0.44
1:F:93:TRP:CH2	1:F:117:GLY:HA3	2.53	0.44
1:D:113:ALA:N	1:D:134:SER:O	2.46	0.43
1:E:36:ILE:CD1	1:E:89:LEU:HB2	2.48	0.43
1:E:255:PRO:HD3	2:E:290:HOH:O	2.18	0.43
1:A:120:SER:HA	1:A:154:ARG:HD2	2.00	0.43
1:C:46:CYS:O	1:C:47:GLU:HB3	2.18	0.43
1:B:166:MSE:HB2	1:B:168:LYS:HE2	2.00	0.43
1:B:240:GLN:HE21	1:B:243:MSE:CE	2.31	0.43
1:C:78:ARG:O	1:C:79:GLY:O	2.37	0.43
1:C:244:GLY:HA3	2:C:293:HOH:O	2.18	0.43
1:B:78:ARG:HG3	1:D:45:GLN:CD	2.38	0.43
1:C:62:VAL:O	1:C:62:VAL:HG13	2.19	0.43
1:A:49:SER:OG	1:A:51:VAL:CG1	2.66	0.43
1:C:107:VAL:O	1:C:127:ALA:HA	2.19	0.43
1:D:10:LYS:HE2	1:D:23:HIS:CG	2.54	0.43
1:D:68:ASP:O	1:D:72:ILE:HG13	2.18	0.43
1:D:32:ASN:HD22	1:D:34:THR:N	2.17	0.43
1:E:197:LEU:HD12	1:E:197:LEU:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:66:GLY:CA	1:F:113:ALA:O	2.65	0.43
1:F:155:ILE:CD1	1:F:163:MSE:HE1	2.49	0.43
1:B:95:LYS:CE	2:B:290:HOH:O	2.64	0.43
1:B:113:ALA:CB	1:B:137:GLU:HG2	2.49	0.43
1:E:60:PRO:HB2	1:E:61:GLU:OE2	2.18	0.43
1:A:81:LYS:O	1:A:82:GLN:CB	2.66	0.43
1:C:128:ASP:O	1:C:128:ASP:CG	2.56	0.43
1:C:159:LYS:HE2	1:C:178:TRP:CE2	2.54	0.43
1:F:233:GLN:O	1:F:235:MSE:N	2.47	0.43
1:A:127:ALA:O	1:A:184:PHE:HA	2.19	0.43
1:D:27:ALA:O	1:D:30:THR:HG23	2.19	0.43
1:C:39:CYS:O	1:C:42:VAL:HG13	2.19	0.42
1:D:75:GLU:HB3	1:D:80:ARG:HD3	2.01	0.42
1:D:87:GLU:CB	1:D:88:PRO:HD3	2.49	0.42
1:E:35:LEU:HD13	1:E:35:LEU:C	2.40	0.42
1:E:97:GLN:HG2	1:E:121:ALA:O	2.19	0.42
1:E:225:LYS:O	1:E:226:ALA:HB2	2.19	0.42
1:E:254:PHE:HB3	2:E:275:HOH:O	2.18	0.42
1:F:203:ASN:OD1	1:F:205:LYS:CD	2.67	0.42
1:C:113:ALA:O	1:C:116:LEU:HB2	2.20	0.42
1:D:144:PRO:HB2	1:D:147:VAL:HB	2.02	0.42
1:E:112:ASN:O	1:E:113:ALA:C	2.56	0.42
1:E:140:PHE:HA	1:E:254:PHE:HZ	1.85	0.42
1:B:14:GLN:O	1:B:15:ALA:HB3	2.18	0.42
1:C:43:LEU:HD23	1:C:43:LEU:HA	1.90	0.42
1:E:197:LEU:HA	1:E:200:ARG:HD3	2.01	0.42
1:D:9:ILE:HA	1:D:21:THR:O	2.19	0.42
1:D:57:GLU:OE2	1:D:106:HIS:HD2	2.02	0.42
1:F:57:GLU:OE2	1:F:106:HIS:HD2	2.02	0.42
1:F:58:GLY:HA3	2:F:270:HOH:O	2.19	0.42
1:A:87:GLU:HB3	1:A:88:PRO:HD3	2.01	0.42
1:C:49:SER:O	1:C:204:LYS:HE3	2.20	0.42
1:C:52:THR:HG23	1:C:207:ILE:HD12	2.00	0.42
1:D:80:ARG:NH1	1:D:80:ARG:HG3	2.34	0.42
1:E:138:LEU:HA	1:E:142:LEU:O	2.19	0.42
1:B:239:PRO:HG2	1:B:240:GLN:OE1	2.20	0.42
1:F:143:TYR:CD1	1:F:235:MSE:HE2	2.55	0.42
1:A:253:GLN:O	1:A:254:PHE:CB	2.68	0.42
1:D:186:ALA:HA	2:D:276:HOH:O	2.20	0.42
1:C:80:ARG:O	1:C:81:LYS:CB	2.67	0.42
1:F:176:SER:HB2	1:F:181:ILE:HD11	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:135:LEU:HD13	1:A:144:PRO:HG3	2.01	0.42
1:B:8:THR:OG1	1:B:35:LEU:HA	2.20	0.42
1:B:29:ASN:CG	1:B:59:LEU:HD22	2.41	0.42
1:D:128:ASP:HB3	1:D:188:SER:CB	2.50	0.42
1:D:144:PRO:HG2	1:D:148:LEU:CD2	2.50	0.42
1:F:65:PHE:O	1:F:113:ALA:O	2.37	0.42
1:D:24:ARG:CZ	1:D:32:ASN:HB2	2.49	0.41
1:D:143:TYR:O	1:D:145:ALA:N	2.51	0.41
1:E:251:THR:OG1	1:E:252:GLY:N	2.52	0.41
1:A:167:THR:O	1:A:167:THR:CG2	2.68	0.41
1:B:76:MSE:HE1	1:B:242:GLN:CD	2.40	0.41
1:A:157:ARG:NE	1:E:218:ASP:HB2	2.36	0.41
1:A:199:LEU:HD23	1:A:199:LEU:HA	1.81	0.41
1:E:127:ALA:HB1	1:E:131:ALA:HB2	2.02	0.41
1:E:185:ASP:OD1	1:E:186:ALA:N	2.53	0.41
1:A:224:ALA:CB	1:E:217:LEU:HD22	2.50	0.41
1:D:134:SER:HB3	1:D:169:PRO:HA	2.02	0.41
1:E:142:LEU:HD11	1:E:245:ILE:HD11	2.02	0.41
1:F:83:ALA:C	1:F:233:GLN:HE22	2.24	0.41
1:C:52:THR:O	1:C:52:THR:HG22	2.20	0.41
1:D:226:ALA:HB3	2:D:288:HOH:O	2.20	0.41
1:F:13:PHE:HZ	1:F:45:GLN:HE22	1.63	0.41
1:F:30:THR:HA	1:F:66:GLY:O	2.20	0.41
1:F:97:GLN:NE2	2:F:293:HOH:O	2.53	0.41
1:D:32:ASN:HD22	1:D:35:LEU:H	1.69	0.41
1:A:43:LEU:HD11	1:A:96:LEU:CD1	2.51	0.41
1:D:247:ARG:N	2:D:281:HOH:O	2.33	0.41
1:E:243:MSE:HE2	1:E:246:ILE:HD12	2.03	0.41
1:B:51:VAL:O	1:B:51:VAL:HG13	2.21	0.41
1:C:24:ARG:N	1:C:25:PRO:HD3	2.35	0.41
1:C:26:GLU:O	1:C:27:ALA:HB2	2.20	0.41
1:C:108:ARG:HD2	1:C:128:ASP:OD2	2.21	0.41
1:D:73:TYR:CZ	1:D:77:LYS:HE2	2.55	0.41
1:D:82:GLN:H	1:D:82:GLN:HG3	1.53	0.41
1:E:42:VAL:O	1:E:45:GLN:HB3	2.20	0.41
1:A:51:VAL:O	1:A:204:LYS:NZ	2.47	0.41
1:B:57:GLU:HG2	1:B:106:HIS:HB3	2.03	0.41
1:B:73:TYR:OH	1:B:77:LYS:HE3	2.20	0.41
1:B:111:VAL:HG12	1:B:116:LEU:HD12	2.03	0.41
1:D:129:GLN:C	1:D:131:ALA:H	2.24	0.41
1:D:200:ARG:NH1	1:D:200:ARG:CB	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:107:VAL:HB	1:E:127:ALA:HB2	2.02	0.41
1:E:248:TYR:HD1	1:E:253:GLN:N	2.19	0.41
1:F:52:THR:HG22	1:F:204:LYS:HB2	2.03	0.41
1:D:241:ASN:O	1:D:243:MSE:O	2.39	0.41
1:F:138:LEU:HA	1:F:142:LEU:O	2.20	0.41
1:A:190:VAL:HG12	1:A:194:LYS:HE3	2.03	0.40
1:D:9:ILE:HG23	1:D:35:LEU:HD22	2.03	0.40
1:D:71:GLU:O	1:D:75:GLU:HG3	2.21	0.40
1:E:79:GLY:O	1:E:80:ARG:C	2.58	0.40
1:F:79:GLY:O	1:F:80:ARG:C	2.59	0.40
1:F:143:TYR:CZ	1:F:235:MSE:HE2	2.56	0.40
1:A:105:SER:OG	1:A:119:VAL:HA	2.20	0.40
1:A:129:GLN:H	1:A:129:GLN:HG2	1.66	0.40
1:B:245:ILE:O	1:B:249:VAL:HG23	2.22	0.40
1:E:245:ILE:O	1:E:249:VAL:HG23	2.22	0.40
1:A:93:TRP:CZ2	1:A:117:GLY:HA3	2.57	0.40
1:B:175:ALA:HB3	1:B:181:ILE:HD12	2.02	0.40
1:C:28:ASN:HD22	1:C:28:ASN:HA	1.65	0.40
1:A:27:ALA:O	1:A:28:ASN:C	2.59	0.40
1:B:73:TYR:CZ	1:B:77:LYS:HE3	2.56	0.40
1:D:136:SER:HA	1:D:167:THR:HB	2.04	0.40
1:D:198:ARG:O	1:D:201:ARG:HG3	2.21	0.40
1:E:168:LYS:HA	1:E:169:PRO:HD3	1.92	0.40
1:E:220:GLN:HG3	1:E:221:VAL:N	2.36	0.40
1:F:168:LYS:HA	1:F:169:PRO:HD3	1.97	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	248/267 (93%)	219 (88%)	16 (6%)	13 (5%)	2 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	B	249/267 (93%)	231 (93%)	14 (6%)	4 (2%)	9 8
1	C	249/267 (93%)	223 (90%)	13 (5%)	13 (5%)	2 1
1	D	249/267 (93%)	215 (86%)	24 (10%)	10 (4%)	3 1
1	E	249/267 (93%)	221 (89%)	18 (7%)	10 (4%)	3 1
1	F	249/267 (93%)	223 (90%)	15 (6%)	11 (4%)	2 1
All	All	1493/1602 (93%)	1332 (89%)	100 (7%)	61 (4%)	3 1

All (61) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	234	ASP
1	A	240	GLN
1	B	82	GLN
1	B	167	THR
1	C	27	ALA
1	C	78	ARG
1	C	80	ARG
1	C	81	LYS
1	C	234	ASP
1	C	253	GLN
1	D	7	GLN
1	D	33	ASP
1	D	254	PHE
1	E	7	GLN
1	E	82	GLN
1	E	226	ALA
1	E	233	GLN
1	E	234	ASP
1	E	253	GLN
1	F	7	GLN
1	F	33	ASP
1	F	59	LEU
1	F	60	PRO
1	F	80	ARG
1	A	28	ASN
1	A	29	ASN
1	A	62	VAL
1	A	183	ALA
1	A	189	ASP
1	A	201	ARG

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Mol	Chain	Res	Type
1	A	249	VAL
1	B	113	ALA
1	C	47	GLU
1	C	79	GLY
1	D	80	ARG
1	D	113	ALA
1	D	233	GLN
1	D	250	GLU
1	E	80	ARG
1	F	49	SER
1	F	197	LEU
1	A	79	GLY
1	A	82	GLN
1	C	254	PHE
1	D	234	ASP
1	E	49	SER
1	E	113	ALA
1	F	62	VAL
1	F	67	ALA
1	F	251	THR
1	A	64	CYS
1	B	251	THR
1	C	83	ALA
1	C	251	THR
1	F	82	GLN
1	C	6	TYR
1	C	26	GLU
1	D	32	ASN
1	A	49	SER
1	D	144	PRO
1	E	254	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.

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	178/225 (79%)	171 (96%)	7 (4%)	32 45
1	B	218/225 (97%)	204 (94%)	14 (6%)	17 23
1	C	218/225 (97%)	199 (91%)	19 (9%)	10 12
1	D	218/225 (97%)	198 (91%)	20 (9%)	9 10
1	E	218/225 (97%)	206 (94%)	12 (6%)	21 29
1	F	176/225 (78%)	164 (93%)	12 (7%)	16 20
All	All	1226/1350 (91%)	1142 (93%)	84 (7%)	15 20

All (84) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	5	THR
1	A	51	VAL
1	A	96	LEU
1	A	101	TYR
1	A	107	VAL
1	A	157	ARG
1	A	163	MSE
1	B	35	LEU
1	B	44	ASN
1	B	59	LEU
1	B	82	GLN
1	B	92	LEU
1	B	101	TYR
1	B	106	HIS
1	B	135	LEU
1	B	143	TYR
1	B	148	LEU
1	B	165	LEU
1	B	168	LYS
1	B	194	LYS
1	B	254	PHE
1	C	7	GLN
1	C	17	VAL
1	C	26	GLU
1	C	28	ASN
1	C	40	LEU
1	C	42	VAL

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Mol	Chain	Res	Type
1	C	48	THR
1	C	78	ARG
1	C	87	GLU
1	C	96	LEU
1	C	101	TYR
1	C	108	ARG
1	C	129	GLN
1	C	130	THR
1	C	203	ASN
1	C	217	LEU
1	C	233	GLN
1	C	253	GLN
1	C	254	PHE
1	D	12	ARG
1	D	48	THR
1	D	61	GLU
1	D	65	PHE
1	D	80	ARG
1	D	81	LYS
1	D	87	GLU
1	D	95	LYS
1	D	101	TYR
1	D	148	LEU
1	D	157	ARG
1	D	165	LEU
1	D	168	LYS
1	D	172	VAL
1	D	181	ILE
1	D	200	ARG
1	D	205	LYS
1	D	242	GLN
1	D	253	GLN
1	D	254	PHE
1	E	28	ASN
1	E	31	ILE
1	E	53	VAL
1	E	65	PHE
1	E	80	ARG
1	E	81	LYS
1	E	101	TYR
1	E	105	SER
1	E	138	LEU

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Mol	Chain	Res	Type
1	E	168	LYS
1	E	253	GLN
1	E	254	PHE
1	F	47	GLU
1	F	56	LEU
1	F	92	LEU
1	F	106	HIS
1	F	116	LEU
1	F	135	LEU
1	F	148	LEU
1	F	168	LYS
1	F	172	VAL
1	F	189	ASP
1	F	234	ASP
1	F	240	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (39) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	14	GLN
1	A	41	GLN
1	A	45	GLN
1	A	106	HIS
1	A	129	GLN
1	A	233	GLN
1	A	242	GLN
1	B	28	ASN
1	B	82	GLN
1	B	86	GLN
1	B	106	HIS
1	B	173	GLN
1	B	220	GLN
1	B	240	GLN
1	C	28	ASN
1	C	45	GLN
1	C	112	ASN
1	C	129	GLN
1	C	158	GLN
1	C	203	ASN
1	C	240	GLN
1	D	28	ASN
1	D	32	ASN

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Mol	Chain	Res	Type
1	D	86	GLN
1	D	106	HIS
1	D	129	GLN
1	D	242	GLN
1	E	28	ASN
1	E	41	GLN
1	E	44	ASN
1	E	45	GLN
1	E	106	HIS
1	E	129	GLN
1	F	86	GLN
1	F	106	HIS
1	F	161	HIS
1	F	212	GLN
1	F	233	GLN
1	F	240	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

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	243/267 (91%)	1.01	38 (15%) 2 3	16, 40, 79, 85	0
1	B	244/267 (91%)	0.12	5 (2%) 65 72	14, 30, 58, 73	0
1	C	244/267 (91%)	0.15	4 (1%) 72 78	13, 32, 58, 74	0
1	D	244/267 (91%)	0.63	26 (10%) 6 8	19, 45, 72, 77	0
1	E	244/267 (91%)	0.56	21 (8%) 10 14	17, 46, 68, 77	0
1	F	244/267 (91%)	1.14	49 (20%) 1 1	16, 42, 82, 87	0
All	All	1463/1602 (91%)	0.60	143 (9%) 7 10	13, 39, 74, 87	0

All (143) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	77	LYS	13.6
1	A	58	GLY	11.5
1	F	79	GLY	10.8
1	F	70	GLN	9.6
1	F	73	TYR	8.8
1	A	80	ARG	8.6
1	F	83	ALA	8.2
1	F	252	GLY	7.9
1	A	79	GLY	7.8
1	A	78	ARG	7.7
1	A	249	VAL	7.6
1	A	28	ASN	7.5
1	F	25	PRO	7.4
1	F	64	CYS	7.4
1	F	78	ARG	7.0
1	A	27	ALA	6.9
1	F	28	ASN	6.9
1	F	249	VAL	6.8
1	F	77	LYS	6.8

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Mol	Chain	Res	Type	RSRZ
1	F	74	GLN	6.7
1	D	251	THR	6.5
1	A	75	GLU	6.4
1	A	26	GLU	6.4
1	F	75	GLU	6.2
1	A	73	TYR	6.2
1	F	30	THR	5.9
1	A	64	CYS	5.8
1	A	59	LEU	5.6
1	F	27	ALA	5.6
1	D	59	LEU	5.5
1	D	249	VAL	5.2
1	A	66	GLY	5.1
1	F	71	GLU	5.0
1	F	69	PHE	5.0
1	A	74	GLN	5.0
1	F	80	ARG	4.9
1	F	31	ILE	4.9
1	F	61	GLU	4.9
1	A	29	ASN	4.8
1	A	84	SER	4.7
1	F	59	LEU	4.7
1	E	254	PHE	4.4
1	A	83	ALA	4.4
1	F	254	PHE	4.3
1	F	82	GLN	4.2
1	A	82	GLN	4.2
1	A	245	ILE	4.2
1	A	252	GLY	4.1
1	F	246	ILE	4.1
1	D	69	PHE	4.0
1	D	254	PHE	4.0
1	F	26	GLU	4.0
1	A	81	LYS	3.9
1	A	72	ILE	3.9
1	A	251	THR	3.8
1	C	80	ARG	3.8
1	A	68	ASP	3.8
1	F	68	ASP	3.8
1	D	113	ALA	3.8
1	F	245	ILE	3.8
1	F	253	GLN	3.7

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Mol	Chain	Res	Type	RSRZ
1	F	251	THR	3.7
1	A	69	PHE	3.7
1	E	113	ALA	3.6
1	A	62	VAL	3.6
1	D	245	ILE	3.6
1	A	65	PHE	3.5
1	A	70	GLN	3.5
1	E	255	PRO	3.4
1	E	78	ARG	3.4
1	E	79	GLY	3.4
1	B	254	PHE	3.3
1	F	72	ILE	3.3
1	E	82	GLN	3.1
1	B	82	GLN	3.1
1	F	58	GLY	3.1
1	B	81	LYS	3.1
1	E	249	VAL	3.1
1	E	80	ARG	3.1
1	B	78	ARG	3.1
1	F	67	ALA	3.1
1	E	233	GLN	3.0
1	A	129	GLN	3.0
1	D	67	ALA	3.0
1	A	60	PRO	3.0
1	E	239	PRO	3.0
1	A	248	TYR	3.0
1	E	81	LYS	2.9
1	F	248	TYR	2.9
1	F	65	PHE	2.9
1	F	24	ARG	2.9
1	C	48	THR	2.9
1	D	82	GLN	2.9
1	E	61	GLU	2.9
1	D	81	LYS	2.8
1	E	240	GLN	2.8
1	F	66	GLY	2.8
1	A	63	PHE	2.8
1	E	70	GLN	2.8
1	A	246	ILE	2.7
1	F	81	LYS	2.7
1	E	26	GLU	2.7
1	E	247	ARG	2.7

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Mol	Chain	Res	Type	RSRZ
1	F	29	ASN	2.6
1	F	63	PHE	2.6
1	D	60	PRO	2.6
1	A	30	THR	2.6
1	F	5	THR	2.6
1	D	236	PHE	2.6
1	D	66	GLY	2.6
1	A	31	ILE	2.6
1	D	65	PHE	2.5
1	F	240	GLN	2.5
1	A	25	PRO	2.5
1	E	137	GLU	2.5
1	F	250	GLU	2.4
1	F	84	SER	2.4
1	D	73	TYR	2.4
1	B	51	VAL	2.4
1	D	248	TYR	2.4
1	F	14	GLN	2.4
1	D	68	ASP	2.4
1	F	233	GLN	2.3
1	F	241	ASN	2.3
1	F	200	ARG	2.3
1	D	70	GLN	2.3
1	C	78	ARG	2.2
1	D	247	ARG	2.2
1	D	241	ASN	2.2
1	D	30	THR	2.2
1	E	244	GLY	2.2
1	D	83	ALA	2.2
1	A	140	PHE	2.1
1	F	6	TYR	2.1
1	D	246	ILE	2.1
1	E	27	ALA	2.1
1	E	252	GLY	2.1
1	D	253	GLN	2.1
1	D	240	GLN	2.1
1	E	251	THR	2.1
1	D	237	SER	2.1
1	F	236	PHE	2.1
1	C	251	THR	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.