Full wwPDB X-ray Structure Validation Report ⓘ

Mar 26, 2026 – 06:02 PM UTC

PDB ID	:	6OED / pdb_00006oed
Title	:	CRYSTAL STRUCTURE OF THE RV144 C1-C2 SPECIFIC ANTIBODY CH55 FAB
Authors	:	Yan, F.; Van, V.; Tolbert, W.D.; Pazgier, M.
Deposited on	:	2019-03-27
Resolution	:	2.46 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:

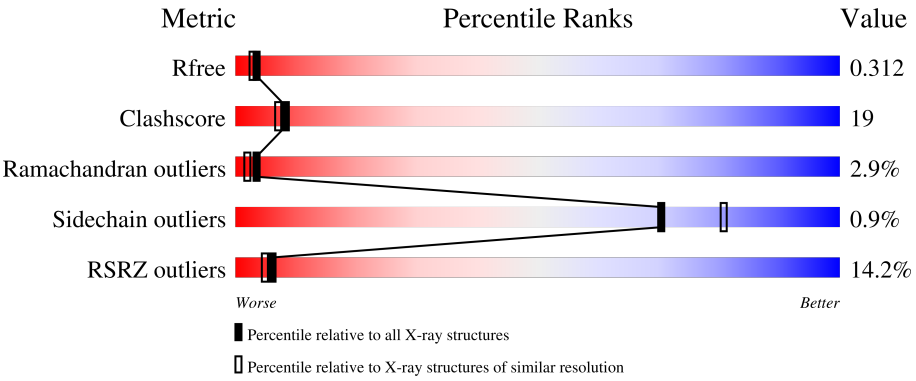
MolProbity	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
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 2.46 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	1190 (2.46-2.46)
Clashscore	190562	1229 (2.46-2.46)
Ramachandran outliers	187476	1218 (2.46-2.46)
Sidechain outliers	187428	1218 (2.46-2.46)
RSRZ outliers	180081	1190 (2.46-2.46)

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	223	12% 65% 29% 5%
1	C	223	25% 53% 39% • 5%
1	H	223	5% 63% 32% • •
2	B	215	12% 66% 30% • •
2	D	215	22% 64% 32% • •

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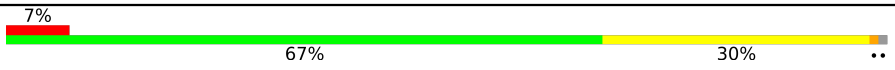
Mol	Chain	Length	Quality of chain
2	L	215	

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 9840 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 CH55 Fab heavy chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	H	214	Total	C	N	O	S	0	0	0
			1634	1031	282	313	8			
1	A	211	Total	C	N	O	S	0	0	0
			1613	1019	278	308	8			
1	C	211	Total	C	N	O	S	0	0	0
			1613	1019	278	308	8			

- Molecule 2 is a protein called CH55 Fab light chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	L	213	Total	C	N	O	S	0	0	0
			1632	1017	280	330	5			
2	B	213	Total	C	N	O	S	0	0	0
			1632	1017	280	330	5			
2	D	213	Total	C	N	O	S	0	0	0
			1632	1017	280	330	5			

- Molecule 3 is water.

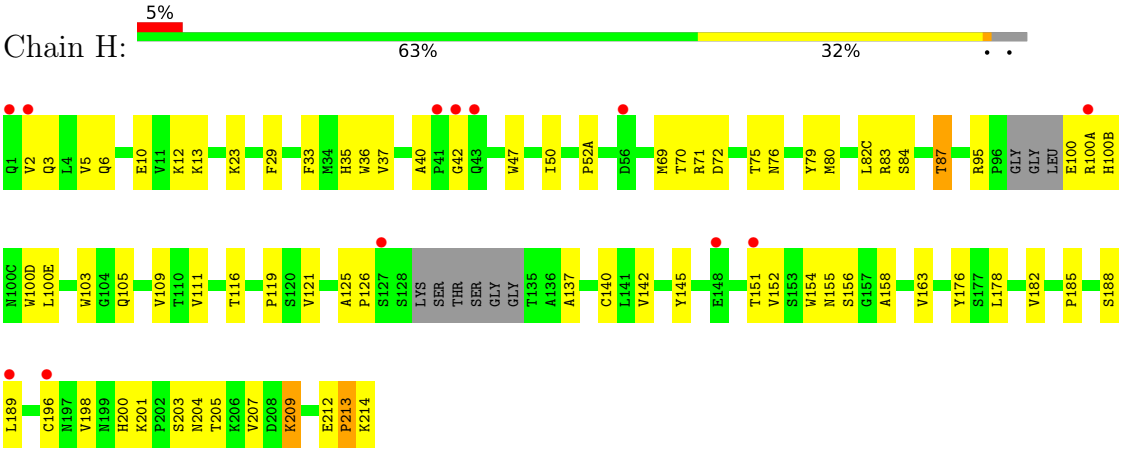
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	H	18	Total	O	0	0
			18	18		
3	L	16	Total	O	0	0
			16	16		
3	A	11	Total	O	0	0
			11	11		
3	B	16	Total	O	0	0
			16	16		
3	C	9	Total	O	0	0
			9	9		
3	D	14	Total	O	0	0
			14	14		

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.

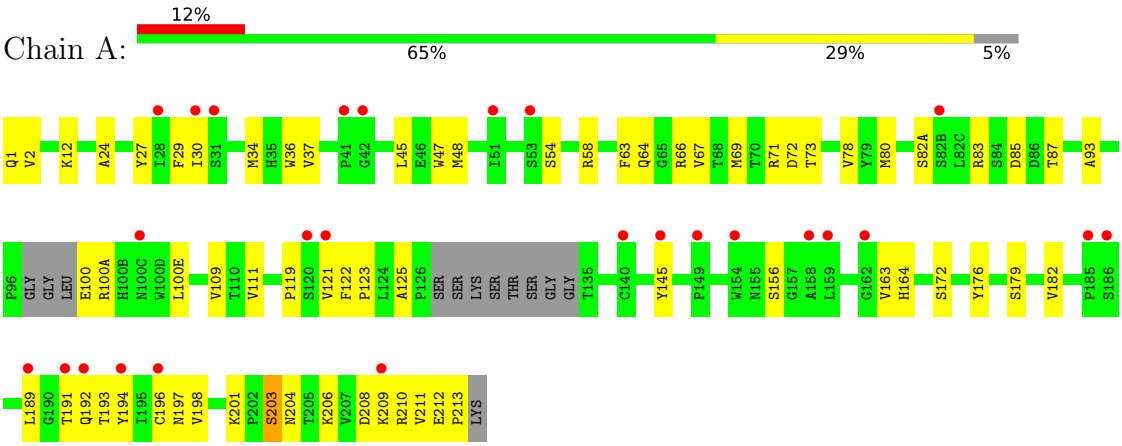
• Molecule 1: CH55 Fab heavy chain

Chain H:



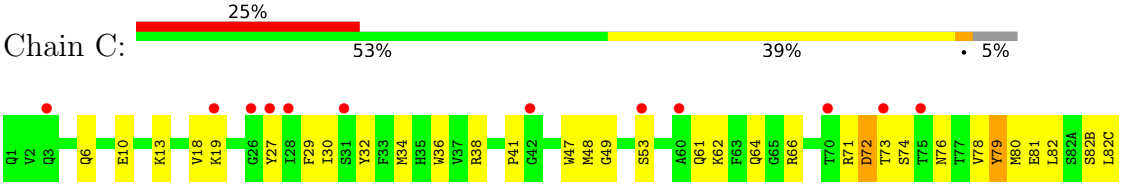
• Molecule 1: CH55 Fab heavy chain

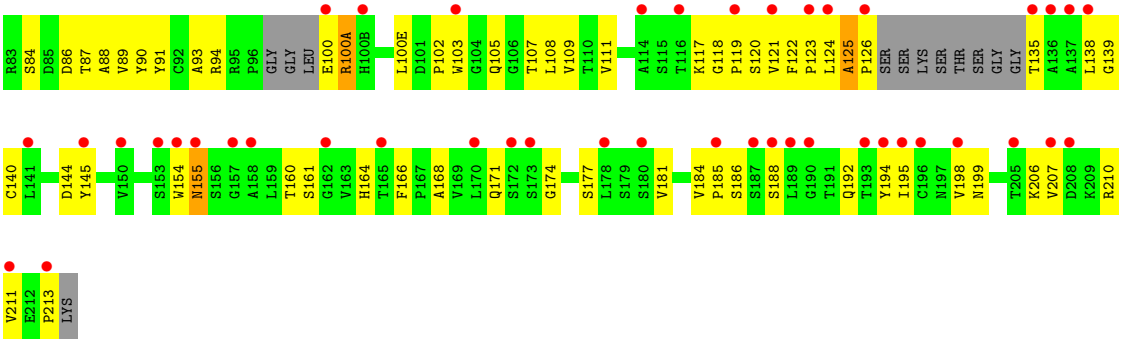
Chain A:



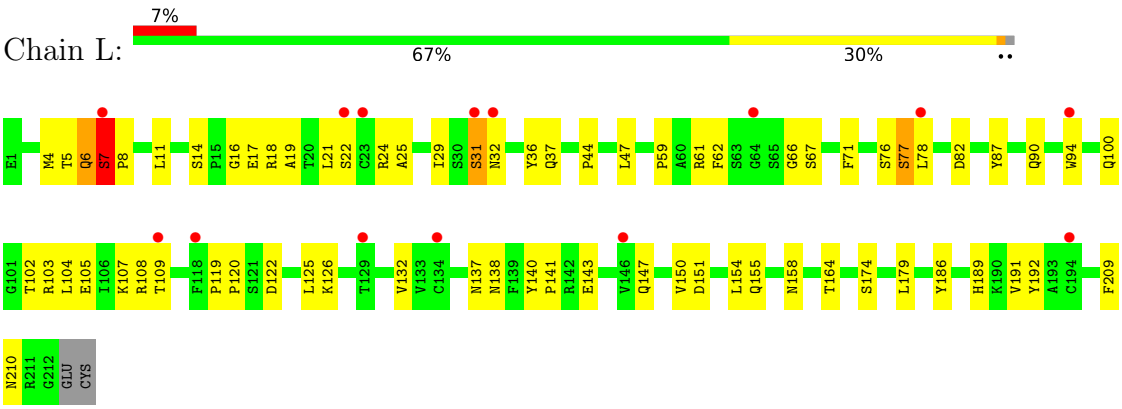
• Molecule 1: CH55 Fab heavy chain

Chain C:

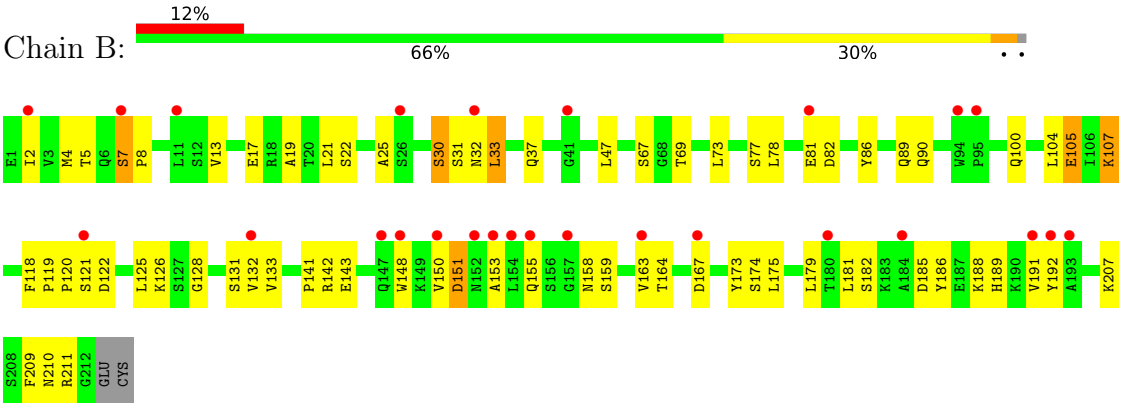




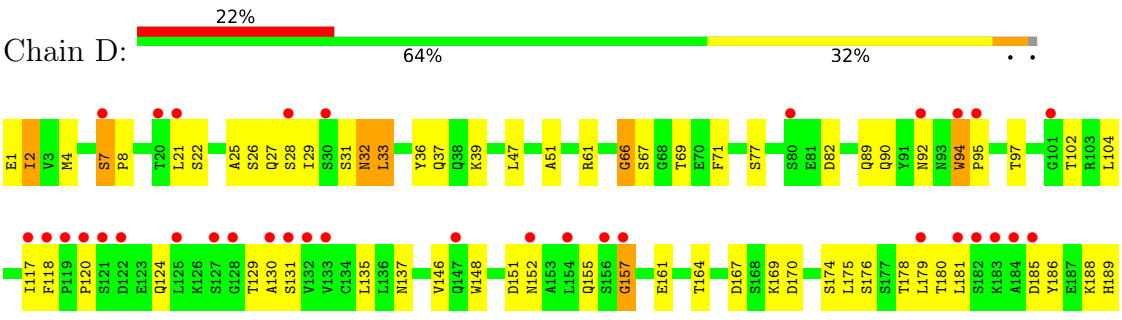
• Molecule 2: CH55 Fab light chain

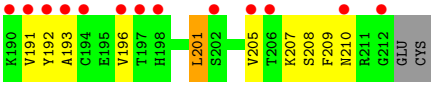


• Molecule 2: CH55 Fab light chain



• Molecule 2: CH55 Fab light chain




K190
V191
Y192
A193
C194
E195
V196
T197
H198
L201
S202
V205
T206
K207
S208
F209
N210
R211
G212
GLU
CYS

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α, β, γ	73.99Å 74.03Å 75.93Å 106.84° 108.43° 91.78°	Depositor
Resolution (Å)	42.12 – 2.46 42.12 – 2.46	Depositor EDS
% Data completeness (in resolution range)	65.6 (42.12-2.46) 76.7 (42.12-2.46)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.56 (at 2.45Å)	Xtriage
Refinement program	PHENIX (1.13_2998: ???)	Depositor
R, R_{free}	0.256 , 0.312 0.258 , 0.312	Depositor DCC
R_{free} test set	1995 reflections (3.79%)	wwPDB-VP
Wilson B-factor (Å^2)	46.6	Xtriage
Anisotropy	0.641	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.30 , 54.3	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	0.011 for -k,-h,-l	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	9840	wwPDB-VP
Average B, all atoms (Å^2)	67.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.85% 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	0.18	0/1653	0.45	0/2252
1	C	0.25	0/1653	0.54	1/2252 (0.0%)
1	H	0.19	0/1674	0.47	0/2279
2	B	0.18	0/1667	0.49	0/2265
2	D	0.23	0/1667	0.55	0/2265
2	L	0.23	1/1667 (0.1%)	0.49	2/2265 (0.1%)
All	All	0.21	1/9981 (0.0%)	0.50	3/13578 (0.0%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L	7	SER	C-N	5.47	1.40	1.33

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	C	79	TYR	CA-CB-CG	5.80	124.34	113.90
2	L	6	GLN	CA-C-N	5.19	134.47	121.80
2	L	6	GLN	C-N-CA	5.19	134.47	121.80

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	1613	0	1586	48	1
1	C	1613	0	1586	96	0
1	H	1634	0	1609	57	1
2	B	1632	0	1584	59	0
2	D	1632	0	1584	68	0
2	L	1632	0	1584	57	0
3	A	11	0	0	1	0
3	B	16	0	0	1	0
3	C	9	0	0	2	0
3	D	14	0	0	0	0
3	H	18	0	0	2	0
3	L	16	0	0	1	0
All	All	9840	0	9533	370	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 19.

All (370) 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:19:LYS:HD3	1:C:81:GLU:HG2	1.13	1.12
1:C:126:PRO:HD3	1:C:213:PRO:HA	1.37	1.07
1:C:19:LYS:CD	1:C:81:GLU:HG2	1.92	0.99
1:C:135:THR:N	1:C:186:SER:HG	1.61	0.97
1:C:19:LYS:HD3	1:C:81:GLU:CG	1.96	0.96
1:C:125:ALA:HB3	1:C:126:PRO:CD	1.98	0.93
2:B:5:THR:HA	2:B:100:GLN:HE22	1.41	0.84
1:C:19:LYS:HE2	1:C:79:TYR:HB2	1.58	0.84
1:C:125:ALA:CB	1:C:126:PRO:CD	2.56	0.84
1:C:125:ALA:HB3	1:C:126:PRO:HD2	1.59	0.84
2:B:21:LEU:HD12	2:B:73:LEU:HD23	1.60	0.82
1:C:171:GLN:O	1:C:174:GLY:N	2.13	0.82
1:C:61:GLN:HG2	1:C:62:LYS:HD3	1.62	0.81
1:A:37:VAL:HG12	1:A:47:TRP:HA	1.62	0.81
2:D:28:SER:HA	2:D:69:THR:HG22	1.63	0.81
2:B:158:ASN:HD22	2:B:181:LEU:HD11	1.45	0.80
1:H:5:VAL:HG13	1:H:105:GLN:HE22	1.46	0.80
1:C:121:VAL:HG21	1:C:198:VAL:HG11	1.63	0.80
2:D:151:ASP:OD2	2:D:191:VAL:N	2.14	0.79
2:D:7:SER:HB2	2:D:22:SER:H	1.49	0.78
1:C:19:LYS:HE2	1:C:79:TYR:CB	2.14	0.78
2:L:6:GLN:HE22	2:L:87:TYR:HA	1.48	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:61:ARG:NH1	2:L:82:ASP:OD1	2.16	0.78
1:A:34:MET:HG3	1:A:78:VAL:HG21	1.66	0.78
2:B:81:GLU:OE2	3:B:301:HOH:O	2.01	0.78
2:B:105:GLU:OE1	2:B:142:ARG:NH1	2.17	0.77
1:C:19:LYS:CE	1:C:79:TYR:HB2	2.12	0.77
1:C:87:THR:HG22	1:C:111:VAL:H	1.48	0.77
2:D:21:LEU:HD22	2:D:102:THR:HG21	1.66	0.77
1:C:29:PHE:HZ	1:C:78:VAL:HG23	1.47	0.77
2:D:191:VAL:HG22	2:D:210:ASN:HD21	1.50	0.77
2:B:7:SER:HB3	2:B:8:PRO:HD3	1.67	0.76
1:C:100:GLU:HG3	1:C:100(A):ARG:HG2	1.66	0.76
1:C:48:MET:HE1	1:C:80:MET:HE2	1.68	0.76
2:D:135:LEU:HD21	2:D:137:ASN:HB2	1.70	0.73
1:C:124:LEU:HD22	2:D:118:PHE:HB3	1.70	0.73
1:C:66:ARG:NH1	1:C:86:ASP:OD2	2.22	0.72
1:C:171:GLN:HE21	1:C:177:SER:HB2	1.54	0.72
2:L:6:GLN:NE2	2:L:87:TYR:HA	2.05	0.71
1:A:1:GLN:HG2	1:A:2:VAL:HG23	1.73	0.71
1:A:121:VAL:HG21	1:A:198:VAL:HG11	1.73	0.70
2:D:146:VAL:HG13	2:D:196:VAL:HG12	1.72	0.70
2:B:122:ASP:HA	2:B:125:LEU:HD12	1.74	0.70
1:C:125:ALA:CB	1:C:126:PRO:HD3	2.22	0.69
1:A:156:SER:H	1:A:197:ASN:HD21	1.38	0.69
1:H:126:PRO:HD2	1:H:213:PRO:HB3	1.74	0.69
1:H:70:THR:HG23	1:H:79:TYR:HB2	1.74	0.69
1:H:33:PHE:HB3	1:H:50:ILE:HD11	1.76	0.68
1:A:54:SER:O	1:A:71:ARG:NH2	2.26	0.68
1:H:155:ASN:HB3	1:H:158:ALA:HB3	1.76	0.68
1:C:82(C):LEU:HB3	1:C:111:VAL:HG21	1.75	0.68
2:B:30:SER:OG	2:B:31:SER:N	2.23	0.67
1:H:152:VAL:HG22	1:H:198:VAL:HG12	1.77	0.67
2:D:151:ASP:N	2:D:191:VAL:O	2.23	0.67
1:H:13:LYS:NZ	3:H:302:HOH:O	2.27	0.67
1:C:29:PHE:CZ	1:C:78:VAL:HG23	2.30	0.67
1:H:121:VAL:O	1:H:209:LYS:NZ	2.27	0.67
2:L:24:ARG:NH1	3:L:301:HOH:O	2.22	0.67
1:A:36:TRP:HB3	1:A:48:MET:HE3	1.76	0.67
2:B:120:PRO:HD3	2:B:132:VAL:HG22	1.77	0.66
1:H:116:THR:HG22	1:H:203:SER:HB3	1.77	0.66
2:L:17:GLU:O	2:L:78:LEU:HD22	1.95	0.66
2:D:1:GLU:O	2:D:2:ILE:HG22	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:181:LEU:HD13	2:D:185:ASP:HB3	1.78	0.66
2:D:193:ALA:HB2	2:D:208:SER:HB3	1.78	0.66
1:H:142:VAL:HG22	1:H:178:LEU:HG	1.78	0.65
2:B:118:PHE:HB2	2:B:133:VAL:HG23	1.79	0.65
1:H:100(D):TRP:O	2:L:36:TYR:OH	2.14	0.65
1:C:126:PRO:HG3	1:C:213:PRO:O	1.97	0.65
1:C:125:ALA:HB3	1:C:126:PRO:HD3	1.78	0.65
1:C:198:VAL:HG12	1:C:207:VAL:O	1.97	0.65
1:H:154:TRP:CZ3	1:H:196:CYS:HB2	2.32	0.64
2:D:26:SER:O	2:D:27:GLN:HB3	1.96	0.64
2:L:7:SER:HB2	2:L:8:PRO:CD	2.28	0.64
1:C:6:GLN:NE2	1:C:90:TYR:O	2.27	0.64
2:L:16:GLY:H	2:L:78:LEU:HB2	1.64	0.63
2:D:36:TYR:OH	2:D:89:GLN:OE1	2.05	0.63
2:D:124:GLN:HE22	2:D:131:SER:HB3	1.62	0.63
2:B:33:LEU:HA	2:B:89:GLN:O	1.98	0.63
1:C:192:GLN:NE2	3:C:303:HOH:O	2.32	0.63
2:L:191:VAL:HG12	2:L:210:ASN:ND2	2.14	0.63
1:C:195:ILE:HA	1:C:210:ARG:HA	1.81	0.63
1:A:196:CYS:O	1:A:208:ASP:HB2	1.98	0.62
1:A:194:TYR:H	1:A:211:VAL:HG13	1.64	0.62
2:B:189:HIS:O	2:B:211:ARG:NH1	2.32	0.62
2:L:5:THR:HG23	2:L:100:GLN:HE22	1.64	0.62
1:H:185:PRO:O	1:H:188:SER:OG	2.15	0.62
1:C:125:ALA:HA	1:C:138:LEU:HD22	1.82	0.62
2:D:37:GLN:HB2	2:D:47:LEU:HD11	1.81	0.62
1:C:120:SER:HB3	1:C:122:PHE:CE2	2.34	0.61
2:L:122:ASP:O	2:L:126:LYS:HE3	2.00	0.61
1:C:66:ARG:NH2	1:C:82(B):SER:O	2.26	0.61
1:H:87:THR:HA	1:H:109:VAL:O	1.99	0.61
2:D:7:SER:HB2	2:D:22:SER:O	2.00	0.61
2:B:163:VAL:HG12	2:B:175:LEU:HD12	1.82	0.61
2:B:150:VAL:HG23	2:B:153:ALA:HB3	1.82	0.61
1:C:139:GLY:HA2	1:C:154:TRP:HH2	1.66	0.61
1:C:155:ASN:HA	1:C:195:ILE:CG2	2.30	0.60
1:C:19:LYS:CE	1:C:79:TYR:CB	2.78	0.60
2:L:29:ILE:O	2:L:32:ASN:HB2	2.00	0.60
2:L:186:TYR:O	2:L:192:TYR:OH	2.20	0.59
1:A:163:VAL:HG22	1:A:182:VAL:HG12	1.84	0.59
1:A:58:ARG:NH1	1:C:100:GLU:OE2	2.35	0.59
1:A:123:PRO:HG3	1:A:210:ARG:HD2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:6:GLN:N	1:H:105:GLN:OE1	2.29	0.59
2:L:29:ILE:HG21	2:L:90:GLN:HG3	1.84	0.59
1:H:201:LYS:O	1:H:201:LYS:NZ	2.28	0.59
2:L:143:GLU:N	2:L:143:GLU:OE2	2.34	0.58
2:L:137:ASN:ND2	2:L:138:ASN:OD1	2.36	0.58
2:B:17:GLU:O	2:B:78:LEU:HD12	2.03	0.58
1:C:168:ALA:O	3:C:301:HOH:O	2.17	0.57
2:B:19:ALA:HB2	2:B:78:LEU:HD11	1.85	0.57
1:C:122:PHE:CE2	2:D:124:GLN:HB2	2.39	0.57
2:D:130:ALA:N	2:D:181:LEU:O	2.37	0.57
1:H:36:TRP:HB2	1:H:69:MET:HE2	1.85	0.57
1:H:203:SER:O	1:H:205:THR:N	2.38	0.57
2:L:191:VAL:HG12	2:L:210:ASN:HD21	1.69	0.57
2:B:158:ASN:ND2	2:B:181:LEU:HD11	2.19	0.56
2:L:19:ALA:HB2	2:L:78:LEU:HD11	1.87	0.56
1:C:184:VAL:HG22	1:C:185:PRO:HD2	1.86	0.56
1:C:6:GLN:HB2	1:C:105:GLN:HG3	1.88	0.56
1:C:155:ASN:HA	1:C:195:ILE:HG21	1.88	0.56
1:A:93:ALA:HB3	1:A:100(E):LEU:HD23	1.87	0.56
2:L:4:MET:HE1	2:L:25:ALA:HB2	1.86	0.56
1:C:89:VAL:HG23	1:C:108:LEU:HD13	1.86	0.55
2:L:59:PRO:HG2	2:L:62:PHE:CE2	2.41	0.55
1:A:1:GLN:OE1	1:A:1:GLN:N	2.33	0.55
1:C:195:ILE:HD12	1:C:210:ARG:CZ	2.36	0.55
2:D:164:THR:HG22	2:D:174:SER:H	1.72	0.55
1:H:119:PRO:HD2	1:H:205:THR:HG21	1.87	0.55
2:L:14:SER:O	2:L:17:GLU:HG2	2.07	0.55
2:D:7:SER:OG	2:D:8:PRO:HD3	2.05	0.55
2:D:29:ILE:HD11	2:D:33:LEU:HB2	1.88	0.55
2:L:132:VAL:HG23	2:L:179:LEU:HB3	1.89	0.55
1:A:210:ARG:HG3	1:A:211:VAL:N	2.22	0.55
2:B:191:VAL:HG23	2:B:210:ASN:HB3	1.89	0.54
2:L:21:LEU:HD22	2:L:102:THR:HG21	1.88	0.54
2:B:192:TYR:HB2	2:B:209:PHE:CE2	2.43	0.54
2:B:37:GLN:HB2	2:B:47:LEU:HD11	1.88	0.54
2:L:120:PRO:HB2	2:L:125:LEU:HD21	1.88	0.54
1:C:53:SER:O	1:C:71:ARG:NH2	2.40	0.54
2:D:155:GLN:OE1	2:D:157:GLY:N	2.39	0.54
1:C:125:ALA:HB2	1:C:211:VAL:HG22	1.90	0.54
1:C:195:ILE:CD1	1:C:210:ARG:CZ	2.86	0.53
2:B:179:LEU:HG	2:B:181:LEU:HD13	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:186:TYR:HD1	2:B:192:TYR:HH	1.55	0.53
1:A:123:PRO:HB3	1:A:210:ARG:HG2	1.90	0.53
2:D:7:SER:CB	2:D:22:SER:H	2.19	0.53
1:C:199:ASN:OD1	1:C:206:LYS:HD3	2.08	0.53
1:A:123:PRO:O	2:B:121:SER:OG	2.26	0.53
1:A:164:HIS:HE2	2:B:167:ASP:CG	2.17	0.53
1:C:171:GLN:NE2	1:C:177:SER:HB2	2.24	0.53
1:H:37:VAL:HG12	1:H:47:TRP:HD1	1.74	0.53
1:A:189:LEU:HD23	1:A:189:LEU:H	1.73	0.53
2:B:7:SER:CB	2:B:8:PRO:HD3	2.37	0.53
1:C:87:THR:HA	1:C:109:VAL:O	2.09	0.53
2:L:126:LYS:HE2	2:L:126:LYS:N	2.24	0.52
1:C:166:PHE:HE2	2:D:176:SER:HB3	1.74	0.52
1:A:145:TYR:CE1	1:A:176:TYR:HB2	2.43	0.52
1:A:29:PHE:HE1	1:A:73:THR:HG22	1.73	0.52
1:C:72:ASP:OD1	1:C:73:THR:N	2.42	0.52
2:D:185:ASP:HA	2:D:188:LYS:HG3	1.91	0.52
1:H:140:CYS:HB2	1:H:154:TRP:CH2	2.44	0.52
1:H:87:THR:HB	1:H:111:VAL:H	1.73	0.52
1:H:5:VAL:CG1	1:H:105:GLN:HE22	2.20	0.52
2:B:148:TRP:CE2	2:B:179:LEU:HB2	2.45	0.52
2:L:59:PRO:HG2	2:L:62:PHE:HE2	1.74	0.52
1:H:72:ASP:HB3	1:H:75:THR:HG22	1.92	0.51
1:H:200:HIS:HB3	1:H:205:THR:HB	1.92	0.51
2:L:103:ARG:NH1	2:L:105:GLU:OE2	2.44	0.51
1:H:100(A):ARG:O	1:H:100(A):ARG:HG2	2.11	0.51
1:C:119:PRO:HB3	1:C:145:TYR:HB3	1.91	0.51
1:H:12:LYS:HG3	1:H:82(C):LEU:HD23	1.93	0.51
1:C:82(B):SER:O	1:C:82(B):SER:OG	2.25	0.51
1:A:211:VAL:HG12	1:A:212:GLU:HB3	1.92	0.51
2:B:164:THR:HG22	2:B:174:SER:H	1.76	0.50
2:D:151:ASP:HA	2:D:191:VAL:HB	1.92	0.50
1:C:19:LYS:HE3	1:C:79:TYR:C	2.37	0.50
2:B:132:VAL:HG11	2:B:209:PHE:HE2	1.77	0.50
2:B:185:ASP:O	2:B:189:HIS:ND1	2.44	0.50
1:C:19:LYS:HE3	1:C:79:TYR:HB2	1.93	0.50
1:H:100(B):HIS:HB3	1:H:100(D):TRP:CZ3	2.47	0.50
2:B:158:ASN:N	2:B:158:ASN:OD1	2.45	0.50
1:H:145:TYR:OH	1:H:178:LEU:HD23	2.11	0.50
1:C:80:MET:HE1	1:C:82:LEU:HB2	1.94	0.50
2:D:2:ILE:HG21	2:D:90:GLN:NE2	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:18:VAL:HG22	1:C:82(C):LEU:HD21	1.93	0.50
1:H:2:VAL:O	1:H:3:GLN:HG2	2.12	0.49
1:C:123:PRO:HA	1:C:140:CYS:HA	1.93	0.49
1:A:36:TRP:CE2	1:A:80:MET:HB2	2.47	0.49
1:A:64:GLN:O	1:A:64:GLN:NE2	2.40	0.49
2:B:141:PRO:HB2	2:B:143:GLU:OE2	2.13	0.49
2:D:129:THR:HB	2:D:181:LEU:O	2.11	0.49
1:H:103:TRP:CE3	2:L:44:PRO:HD2	2.47	0.49
1:H:151:THR:O	1:H:198:VAL:HA	2.12	0.49
2:L:66:GLY:HA3	2:L:71:PHE:CD1	2.48	0.49
1:A:24:ALA:HB1	1:A:27:TYR:CE2	2.47	0.49
1:C:27:TYR:CD1	1:C:32:TYR:HD2	2.31	0.49
2:L:16:GLY:O	2:L:77:SER:HA	2.12	0.49
1:H:5:VAL:HA	1:H:105:GLN:OE1	2.12	0.49
2:D:36:TYR:CE2	2:D:89:GLN:OE1	2.66	0.49
1:A:100:GLU:O	1:A:100(A):ARG:HB2	2.13	0.49
1:C:29:PHE:CD2	1:C:76:ASN:HA	2.48	0.48
2:B:131:SER:HA	2:B:179:LEU:O	2.13	0.48
2:D:66:GLY:HA3	2:D:71:PHE:CD1	2.48	0.48
2:L:7:SER:CB	2:L:22:SER:H	2.26	0.48
2:L:37:GLN:HB2	2:L:47:LEU:HD22	1.95	0.48
2:B:13:VAL:C	2:B:107:LYS:HB3	2.38	0.48
2:B:188:LYS:HE2	2:B:188:LYS:HB3	1.59	0.48
1:H:71:ARG:NH1	3:H:305:HOH:O	2.45	0.48
2:B:155:GLN:CD	2:B:158:ASN:HD21	2.21	0.48
1:H:36:TRP:CE2	1:H:80:MET:HB2	2.48	0.48
1:H:163:VAL:HG22	1:H:182:VAL:HB	1.95	0.48
1:A:122:PHE:HB3	2:B:121:SER:HB2	1.95	0.48
1:C:117:LYS:NZ	1:C:118:GLY:O	2.35	0.48
1:C:181:VAL:HG21	2:D:135:LEU:CD1	2.44	0.48
2:D:124:GLN:HE22	2:D:131:SER:CB	2.27	0.48
2:B:105:GLU:OE1	2:B:173:TYR:OH	2.32	0.48
1:C:100:GLU:O	1:C:100(A):ARG:C	2.56	0.48
2:L:17:GLU:OE2	2:L:18:ARG:NH1	2.45	0.47
2:L:17:GLU:C	2:L:78:LEU:HD22	2.38	0.47
1:H:126:PRO:HB3	1:H:137:ALA:O	2.13	0.47
2:L:151:ASP:OD2	2:L:189:HIS:ND1	2.35	0.47
1:H:12:LYS:HG3	1:H:82(C):LEU:CD2	2.43	0.47
2:D:151:ASP:CG	2:D:189:HIS:HB3	2.40	0.47
2:B:150:VAL:HG12	2:B:192:TYR:CD1	2.49	0.47
1:C:195:ILE:HD12	1:C:210:ARG:NH2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:142:VAL:CG2	1:H:178:LEU:HG	2.44	0.47
2:D:117:ILE:HG12	2:D:209:PHE:HD2	1.80	0.47
2:L:164:THR:HG22	2:L:174:SER:H	1.79	0.47
1:A:83:ARG:O	1:A:111:VAL:HG11	2.15	0.47
2:L:143:GLU:H	2:L:143:GLU:CD	2.22	0.47
2:B:148:TRP:CD1	2:B:159:SER:HB3	2.50	0.47
2:D:25:ALA:O	2:D:69:THR:HB	2.15	0.46
1:C:125:ALA:HB2	1:C:211:VAL:CG2	2.45	0.46
2:D:191:VAL:CG2	2:D:210:ASN:HD21	2.25	0.46
1:C:84:SER:HA	1:C:111:VAL:HG13	1.96	0.46
2:D:61:ARG:NH2	2:D:82:ASP:OD1	2.48	0.46
2:D:31:SER:O	2:D:31:SER:OG	2.30	0.46
1:H:83:ARG:HG3	1:H:84:SER:H	1.81	0.46
1:A:119:PRO:HB3	1:A:145:TYR:HB3	1.97	0.46
1:A:209:LYS:HD2	1:A:210:ARG:HB2	1.98	0.46
2:D:120:PRO:HG2	2:D:186:TYR:CE1	2.51	0.46
1:C:93:ALA:HB3	1:C:100(E):LEU:HD23	1.98	0.46
1:C:166:PHE:CE2	2:D:176:SER:HB3	2.50	0.45
1:H:29:PHE:CG	1:H:76:ASN:HB2	2.52	0.45
1:A:30:ILE:HD12	1:C:30:ILE:HD11	1.98	0.45
2:B:122:ASP:O	2:B:125:LEU:HB2	2.15	0.45
1:C:19:LYS:HE2	1:C:79:TYR:HB3	1.95	0.45
2:D:1:GLU:O	2:D:1:GLU:HG2	2.15	0.45
1:H:156:SER:O	1:H:156:SER:OG	2.34	0.45
1:C:103:TRP:HZ2	2:D:36:TYR:CE1	2.33	0.45
2:L:119:PRO:HB3	2:L:209:PHE:CE1	2.52	0.45
2:B:86:TYR:CE2	2:B:104:LEU:HD22	2.51	0.45
2:B:148:TRP:CD1	2:B:179:LEU:HD13	2.52	0.45
2:D:7:SER:OG	2:D:8:PRO:CD	2.64	0.45
2:D:104:LEU:HD12	2:D:104:LEU:HA	1.81	0.45
1:H:145:TYR:CE1	1:H:176:TYR:HB2	2.51	0.45
2:L:7:SER:HB3	2:L:22:SER:HB3	1.99	0.45
1:C:36:TRP:HB3	1:C:48:MET:HE2	1.99	0.45
1:C:125:ALA:HB1	1:C:126:PRO:HD3	1.97	0.45
1:A:45:LEU:N	3:A:304:HOH:O	2.49	0.45
2:B:7:SER:HB2	2:B:22:SER:HB3	1.98	0.45
1:C:34:MET:HG3	1:C:78:VAL:HG21	1.99	0.45
1:C:94:ARG:HB3	1:C:102:PRO:HD2	1.99	0.44
1:C:168:ALA:HA	1:C:177:SER:O	2.17	0.44
2:D:94:TRP:HB3	2:D:95:PRO:HD3	1.99	0.44
1:H:40:ALA:C	1:H:42:GLY:H	2.26	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:100:GLN:H	2:B:100:GLN:CD	2.25	0.44
2:B:150:VAL:HG12	2:B:192:TYR:CE1	2.52	0.44
2:D:32:ASN:O	2:D:51:ALA:N	2.50	0.44
2:D:39:LYS:HB3	2:D:39:LYS:HE3	1.55	0.44
2:D:164:THR:HG22	2:D:174:SER:N	2.33	0.44
1:C:18:VAL:O	1:C:81:GLU:HA	2.17	0.44
2:L:4:MET:HA	2:L:24:ARG:O	2.18	0.44
1:A:100(A):ARG:HD2	1:A:100(A):ARG:HA	1.84	0.44
1:A:192:GLN:HG3	1:A:193:THR:H	1.83	0.44
2:D:161:GLU:OE2	2:D:175:LEU:HD21	2.18	0.44
2:D:90:GLN:OE1	2:D:92:ASN:N	2.49	0.44
2:L:147:GLN:CD	2:L:154:LEU:HD11	2.43	0.44
2:L:7:SER:HB3	2:L:22:SER:H	1.81	0.44
1:C:6:GLN:N	1:C:105:GLN:HE21	2.16	0.44
2:D:4:MET:HG2	2:D:97:THR:HG23	1.99	0.44
2:D:131:SER:HB2	2:D:180:THR:HG22	1.99	0.44
1:A:66:ARG:HG2	1:A:82(A):SER:O	2.18	0.43
2:D:148:TRP:HB3	2:D:179:LEU:HD11	2.00	0.43
1:H:10:GLU:HG2	1:H:12:LYS:HE3	1.99	0.43
1:A:71:ARG:HG2	1:A:72:ASP:N	2.33	0.43
1:A:204:ASN:OD1	1:A:206:LYS:HD3	2.18	0.43
1:C:89:VAL:HG11	1:C:91:TYR:CZ	2.53	0.43
1:H:35:HIS:CD2	1:H:50:ILE:HD13	2.53	0.43
2:L:158:ASN:N	2:L:158:ASN:OD1	2.52	0.43
2:D:131:SER:HA	2:D:180:THR:HA	1.98	0.43
1:H:70:THR:OG1	1:H:71:ARG:N	2.52	0.43
1:A:36:TRP:HB2	1:A:69:MET:HE2	2.00	0.43
1:A:125:ALA:HB1	1:A:213:PRO:HB3	2.01	0.43
1:C:194:TYR:HD1	1:C:194:TYR:HA	1.68	0.43
2:D:178:THR:HG22	2:D:180:THR:HG23	2.01	0.43
2:B:186:TYR:HD1	2:B:192:TYR:OH	2.02	0.43
1:C:19:LYS:NZ	1:C:81:GLU:HG3	2.34	0.43
1:C:6:GLN:NE2	1:C:107:THR:HG23	2.34	0.43
2:D:36:TYR:CZ	2:D:89:GLN:OE1	2.71	0.43
2:D:191:VAL:HG22	2:D:210:ASN:ND2	2.25	0.43
2:D:192:TYR:O	2:D:208:SER:HA	2.19	0.43
2:L:11:LEU:HB3	2:L:104:LEU:HD12	2.01	0.43
2:D:36:TYR:HE2	2:D:89:GLN:HG2	1.83	0.43
1:H:209:LYS:HA	1:H:209:LYS:HD3	1.77	0.42
2:B:207:LYS:HA	2:B:207:LYS:HD3	1.88	0.42
2:D:167:ASP:HB3	2:D:170:ASP:O	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:63:PHE:O	1:A:67:VAL:HG12	2.18	0.42
2:B:82:ASP:O	2:B:86:TYR:OH	2.18	0.42
2:B:151:ASP:HA	2:B:191:VAL:HG12	2.01	0.42
1:C:195:ILE:HB	1:C:210:ARG:HG3	2.02	0.42
1:C:181:VAL:HG21	2:D:135:LEU:HD13	2.02	0.42
1:C:164:HIS:HB2	1:C:181:VAL:HG13	2.02	0.42
1:C:210:ARG:HD2	1:C:210:ARG:N	2.35	0.42
1:H:33:PHE:HA	1:H:52(A):PRO:HD3	2.02	0.42
2:L:77:SER:O	2:L:77:SER:OG	2.28	0.42
1:C:124:LEU:HB3	2:D:118:PHE:CD1	2.54	0.42
1:H:119:PRO:HB3	1:H:145:TYR:HB3	2.01	0.42
2:B:7:SER:HB3	2:B:8:PRO:CD	2.44	0.42
2:D:201:LEU:H	2:D:201:LEU:HG	1.56	0.42
1:H:80:MET:HE3	1:H:80:MET:HB3	1.87	0.42
1:H:189:LEU:HD21	1:H:212:GLU:OE1	2.20	0.42
1:C:19:LYS:HE3	1:C:80:MET:N	2.35	0.42
1:H:95:ARG:HD3	1:H:100(B):HIS:O	2.20	0.42
2:L:107:LYS:HA	2:L:140:TYR:OH	2.20	0.42
2:L:132:VAL:CG2	2:L:179:LEU:HB3	2.50	0.42
1:A:12:LYS:O	1:A:111:VAL:HA	2.20	0.42
2:B:104:LEU:HD12	2:B:104:LEU:HA	1.82	0.42
2:B:143:GLU:H	2:B:143:GLU:CD	2.26	0.42
1:A:191:THR:OG1	1:A:192:GLN:N	2.53	0.42
1:A:201:LYS:O	1:A:203:SER:N	2.49	0.42
1:C:41:PRO:HD3	1:C:88:ALA:HA	2.02	0.42
2:B:119:PRO:HB3	2:B:209:PHE:CE1	2.56	0.41
1:C:160:THR:HG23	1:C:161:SER:H	1.84	0.41
2:D:117:ILE:CG2	2:D:207:LYS:HG2	2.50	0.41
1:C:10:GLU:O	1:C:109:VAL:HA	2.20	0.41
1:H:6:GLN:H	1:H:105:GLN:CD	2.24	0.41
1:C:13:LYS:HA	1:C:13:LYS:HD3	1.89	0.41
1:H:125:ALA:HB1	1:H:213:PRO:HB3	2.03	0.41
2:B:4:MET:HE2	2:B:90:GLN:HB3	2.01	0.41
2:L:47:LEU:HD12	2:L:47:LEU:HA	1.93	0.41
2:L:61:ARG:HB3	2:L:76:SER:O	2.20	0.41
2:L:108:ARG:NH1	2:L:109:THR:O	2.54	0.41
2:L:17:GLU:C	2:L:78:LEU:CD2	2.94	0.41
2:B:19:ALA:CB	2:B:78:LEU:HD11	2.50	0.41
2:L:18:ARG:H	2:L:18:ARG:HD3	1.85	0.41
2:L:140:TYR:CG	2:L:141:PRO:HA	2.55	0.41
2:L:141:PRO:HB2	2:L:143:GLU:OE2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:182:SER:O	2:B:185:ASP:N	2.54	0.41
1:A:87:THR:HA	1:A:109:VAL:O	2.21	0.41
1:H:205:THR:HG23	1:H:207:VAL:HG23	2.02	0.41
2:L:150:VAL:HG22	2:L:155:GLN:NE2	2.36	0.41
2:B:25:ALA:O	2:B:69:THR:HG23	2.21	0.41
2:B:151:ASP:HB3	2:B:191:VAL:HG12	2.03	0.41
2:D:196:VAL:HG22	2:D:205:VAL:HG12	2.02	0.41
1:C:19:LYS:NZ	1:C:81:GLU:CG	2.84	0.41
2:B:126:LYS:N	2:B:126:LYS:HD3	2.36	0.40
1:C:19:LYS:HZ2	1:C:81:GLU:HG3	1.86	0.40
2:D:90:GLN:HG2	2:D:97:THR:HG22	2.03	0.40
1:H:100:GLU:HB3	1:H:100(A):ARG:H	1.60	0.40
2:D:90:GLN:CG	2:D:97:THR:HG22	2.50	0.40
2:L:125:LEU:C	2:L:126:LYS:HE2	2.47	0.40
1:A:194:TYR:O	1:A:211:VAL:HA	2.21	0.40
1:C:47:TRP:CZ2	1:C:49:GLY:HA2	2.56	0.40
2:L:31:SER:HB3	2:L:32:ASN:H	1.75	0.40
1:A:1:GLN:HG2	1:A:2:VAL:N	2.36	0.40
1:A:71:ARG:HE	1:A:71:ARG:HB3	1.75	0.40
1:A:83:ARG:HH21	1:A:85:ASP:CG	2.29	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:23:LYS:NZ	1:A:192:GLN:NE2[1_566]	2.19	0.01

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	205/223 (92%)	185 (90%)	19 (9%)	1 (0%)	24 32

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	C	205/223 (92%)	172 (84%)	26 (13%)	7 (3%)	3 1
1	H	208/223 (93%)	186 (89%)	19 (9%)	3 (1%)	9 8
2	B	211/215 (98%)	181 (86%)	20 (10%)	10 (5%)	2 0
2	D	211/215 (98%)	177 (84%)	23 (11%)	11 (5%)	1 0
2	L	211/215 (98%)	195 (92%)	12 (6%)	4 (2%)	6 5
All	All	1251/1314 (95%)	1096 (88%)	119 (10%)	36 (3%)	3 2

All (36) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	H	204	ASN
2	L	7	SER
2	B	7	SER
1	C	74	SER
1	C	100(A)	ARG
1	C	125	ALA
2	D	7	SER
2	D	94	TRP
1	A	203	SER
2	B	2	ILE
2	B	30	SER
2	B	32	ASN
1	C	155	ASN
2	D	152	ASN
1	H	213	PRO
2	L	67	SER
2	B	33	LEU
2	B	67	SER
2	B	77	SER
2	B	128	GLY
2	B	151	ASP
1	C	64	GLN
1	C	72	ASP
2	D	2	ILE
2	D	77	SER
2	D	169	LYS
1	H	100(E)	LEU
2	L	94	TRP
2	B	105	GLU
2	D	67	SER

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Mol	Chain	Res	Type
2	D	33	LEU
2	D	157	GLY
2	L	77	SER
1	C	144	ASP
2	D	32	ASN
2	D	66	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	182/190 (96%)	180 (99%)	2 (1%)	65	76
1	C	182/190 (96%)	180 (99%)	2 (1%)	65	76
1	H	185/190 (97%)	182 (98%)	3 (2%)	55	69
2	B	183/185 (99%)	182 (100%)	1 (0%)	81	87
2	D	183/185 (99%)	182 (100%)	1 (0%)	81	87
2	L	183/185 (99%)	182 (100%)	1 (0%)	81	87
All	All	1098/1125 (98%)	1088 (99%)	10 (1%)	70	81

All (10) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	H	87	THR
1	H	209	LYS
1	H	214	LYS
2	L	31	SER
1	A	172	SER
1	A	179	SER
2	B	107	LYS
1	C	38	ARG
1	C	188	SER
2	D	201	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (22)

such sidechains are listed below:

Mol	Chain	Res	Type
1	H	39	GLN
1	H	164	HIS
2	L	6	GLN
2	L	42	GLN
2	L	137	ASN
2	L	138	ASN
2	L	210	ASN
1	A	39	GLN
1	A	192	GLN
2	B	27	GLN
2	B	38	GLN
2	B	92	ASN
2	B	93	ASN
2	B	100	GLN
2	B	124	GLN
2	B	137	ASN
2	B	158	ASN
1	C	39	GLN
1	C	105	GLN
1	C	171	GLN
2	D	37	GLN
2	D	210	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)

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	211/223 (94%)	1.04	26 (12%) 8 7	36, 61, 109, 126	0
1	C	211/223 (94%)	1.60	56 (26%) 1 1	46, 84, 150, 173	0
1	H	214/223 (95%)	0.77	12 (5%) 30 27	29, 56, 84, 101	0
2	B	213/215 (99%)	0.98	26 (12%) 8 7	26, 50, 108, 124	0
2	D	213/215 (99%)	1.34	47 (22%) 2 2	37, 67, 181, 219	1 (0%)
2	L	213/215 (99%)	0.79	14 (6%) 24 22	31, 50, 70, 89	0
All	All	1275/1314 (97%)	1.09	181 (14%) 6 5	26, 59, 130, 219	1 (0%)

All (181) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	B	154	LEU	4.9
2	D	196	VAL	4.4
1	C	137	ALA	4.4
1	C	208	ASP	4.1
1	A	162	GLY	4.1
2	D	184	ALA	4.0
2	D	125	LEU	4.0
1	C	135	THR	3.9
1	A	194	TYR	3.8
2	L	94	TRP	3.8
2	D	179	LEU	3.7
2	B	150	VAL	3.7
1	A	42	GLY	3.6
2	D	212	GLY	3.6
1	C	196	CYS	3.6
2	L	7	SER	3.6
2	B	184	ALA	3.6
2	D	193	ALA	3.6
2	L	118	PHE	3.6

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Mol	Chain	Res	Type	RSRZ
1	C	19	LYS	3.5
2	B	132	VAL	3.5
1	C	157	GLY	3.5
1	A	191	THR	3.5
2	D	157	GLY	3.5
1	C	73	THR	3.5
1	H	42	GLY	3.4
2	B	2	ILE	3.4
2	B	155	GLN	3.3
2	D	94	TRP	3.3
2	D	132	VAL	3.3
1	A	154	TRP	3.3
1	C	198	VAL	3.3
2	D	182	SER	3.3
2	L	23	CYS	3.2
1	C	188	SER	3.2
1	C	26	GLY	3.2
2	D	20	THR	3.2
1	C	126	PRO	3.2
1	C	172	SER	3.2
2	D	122	ASP	3.2
2	B	94	TRP	3.1
2	D	152	ASN	3.1
1	C	194	TYR	3.1
2	D	117	ILE	3.1
1	A	140	CYS	3.1
2	D	118	PHE	3.1
1	H	43	GLN	3.0
1	C	116	THR	3.0
1	A	53	SER	3.0
1	C	207	VAL	3.0
1	C	205	THR	3.0
1	C	119	PRO	3.0
2	B	95	PRO	3.0
1	C	190	GLY	3.0
1	C	123	PRO	2.9
1	C	27	TYR	2.9
2	B	153	ALA	2.9
2	D	95	PRO	2.9
1	C	121	VAL	2.9
2	D	133	VAL	2.9
1	H	151	THR	2.9

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Mol	Chain	Res	Type	RSRZ
2	B	192	TYR	2.9
1	H	148	GLU	2.9
1	C	187	SER	2.9
1	C	193	THR	2.9
2	D	30	SER	2.8
2	D	120	PRO	2.8
2	L	78	LEU	2.8
2	B	167	ASP	2.8
2	B	191	VAL	2.8
2	L	64	GLY	2.8
1	C	195	ILE	2.8
1	C	124	LEU	2.8
2	D	181	LEU	2.8
1	C	28	ILE	2.7
1	C	114	ALA	2.7
2	B	180	THR	2.7
2	D	156	SER	2.7
1	C	189	LEU	2.7
1	C	211	VAL	2.7
2	B	163	VAL	2.7
1	C	170	LEU	2.7
1	C	70	THR	2.7
2	B	26	SER	2.7
2	D	131	SER	2.7
2	D	128	GLY	2.6
1	C	136	ALA	2.6
2	D	101	GLY	2.6
2	B	11	LEU	2.6
2	D	154	LEU	2.6
2	D	28	SER	2.5
2	D	130	ALA	2.5
1	H	41	PRO	2.5
1	C	42	GLY	2.5
1	C	180	SER	2.5
2	D	194	CYS	2.5
1	C	154	TRP	2.5
1	A	159	LEU	2.5
1	C	31	SER	2.5
1	C	213	PRO	2.5
1	C	103	TRP	2.5
1	C	75	THR	2.5
2	B	7	SER	2.5

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Mol	Chain	Res	Type	RSRZ
1	A	158	ALA	2.4
2	L	31	SER	2.4
2	D	198	HIS	2.4
1	C	60	ALA	2.4
2	B	157	GLY	2.4
1	H	196	CYS	2.4
1	A	51	ILE	2.4
1	H	189	LEU	2.4
1	A	41	PRO	2.4
2	D	183	LYS	2.4
1	C	178	LEU	2.4
2	D	205	VAL	2.4
1	C	173	SER	2.3
1	C	162	GLY	2.3
2	L	129	THR	2.3
2	D	190	LYS	2.3
2	D	197	THR	2.3
2	D	121	SER	2.3
1	A	209	LYS	2.3
1	H	2	VAL	2.3
1	C	153	SER	2.3
2	D	202	SER	2.3
1	H	100(A)	ARG	2.3
1	C	145	TYR	2.3
1	A	31	SER	2.2
1	A	120	SER	2.2
1	A	186	SER	2.2
2	D	185	ASP	2.2
2	D	191	VAL	2.2
2	L	32	ASN	2.2
2	L	134	CYS	2.2
2	D	147	GLN	2.2
2	D	127	SER	2.2
2	B	81	GLU	2.2
1	C	3	GLN	2.2
2	B	121	SER	2.2
1	H	56	ASP	2.2
2	D	119	PRO	2.2
1	A	192	GLN	2.2
2	D	192	TYR	2.2
1	C	100	GLU	2.2
1	C	158	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
2	D	92	ASN	2.1
1	C	141	LEU	2.1
1	H	127	SER	2.1
1	C	185	PRO	2.1
2	B	193	ALA	2.1
1	A	189	LEU	2.1
1	C	165	THR	2.1
2	L	194	CYS	2.1
2	L	22	SER	2.1
2	D	80	SER	2.1
1	C	100(B)	HIS	2.1
1	C	150	VAL	2.1
1	A	100(C)	ASN	2.1
2	L	109	THR	2.1
1	A	28	ILE	2.1
1	A	121	VAL	2.1
2	L	146	VAL	2.1
1	C	155	ASN	2.1
2	B	152	ASN	2.1
2	D	21	LEU	2.1
2	B	41	GLY	2.1
1	A	145	TYR	2.1
1	H	1	GLN	2.0
1	C	138	LEU	2.0
2	B	32	ASN	2.0
2	D	210	ASN	2.0
1	A	30	ILE	2.0
2	D	206	THR	2.0
1	A	82(B)	SER	2.0
1	A	149	PRO	2.0
1	A	185	PRO	2.0
1	A	196	CYS	2.0
2	B	147	GLN	2.0
2	B	148	TRP	2.0
1	C	53	SER	2.0
2	D	7	SER	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)

There are no ligands in this entry.

6.5 Other polymers (i)

There are no such residues in this entry.