Full wwPDB X-ray Structure Validation Report ⓘ

Oct 29, 2024 – 09:08 AM EDT

PDB ID	:	3NCY
Title	:	X-ray crystal structure of an arginine agmatine antiporter (AdiC) in complex with a Fab fragment
Authors	:	Fang, Y.; Jayaram, H.; Shane, T.; Komalkova-Partensky, L.; Wu, F.; Williams, C.; Xiong, Y.; Miller, C.
Deposited on	:	2010-06-06
Resolution	:	3.20 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:

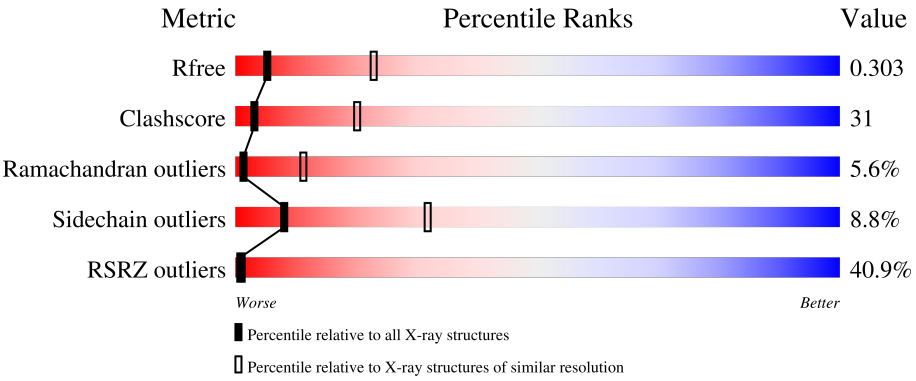
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.20.1
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.003 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.39

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 3.20 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}	164625	1370 (3.20-3.20)
Clashscore	180529	1497 (3.20-3.20)
Ramachandran outliers	177936	1479 (3.20-3.20)
Sidechain outliers	177891	1478 (3.20-3.20)
RSRZ outliers	164620	1371 (3.20-3.20)

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	445	42% 47% 40% 8% • 5%
1	B	445	42% 46% 40% 7% • 6%
1	C	445	44% 47% 41% 7% 6%
1	D	445	37% 47% 41% 7% 6%
2	P	219	42% 46% 45% 9%

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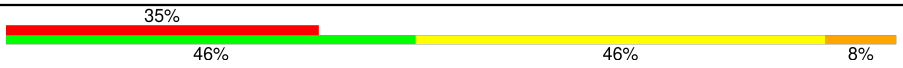
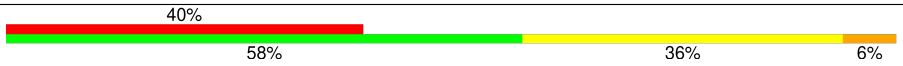
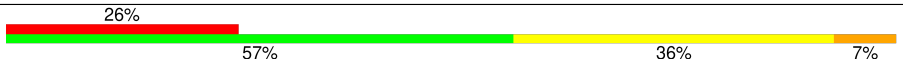
Mol	Chain	Length	Quality of chain
2	Q	219	
3	S	211	
3	W	211	

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 18693 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 AdiC.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	422	Total	C	N	O	S	0	0	0
			3052	2018	489	524	21			
1	B	420	Total	C	N	O	S	5	0	0
			3039	2009	489	520	21			
1	C	420	Total	C	N	O	S	0	0	0
			3034	2006	487	520	21			
1	D	419	Total	C	N	O	S	17	0	0
			3031	2005	486	519	21			

- Molecule 2 is a protein called Fab Heavy chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	Q	218	Total	C	N	O	S	16	0	0
			1640	1044	264	325	7			
2	P	219	Total	C	N	O	S	15	0	0
			1647	1049	265	326	7			

- Molecule 3 is a protein called Fab Light chain.

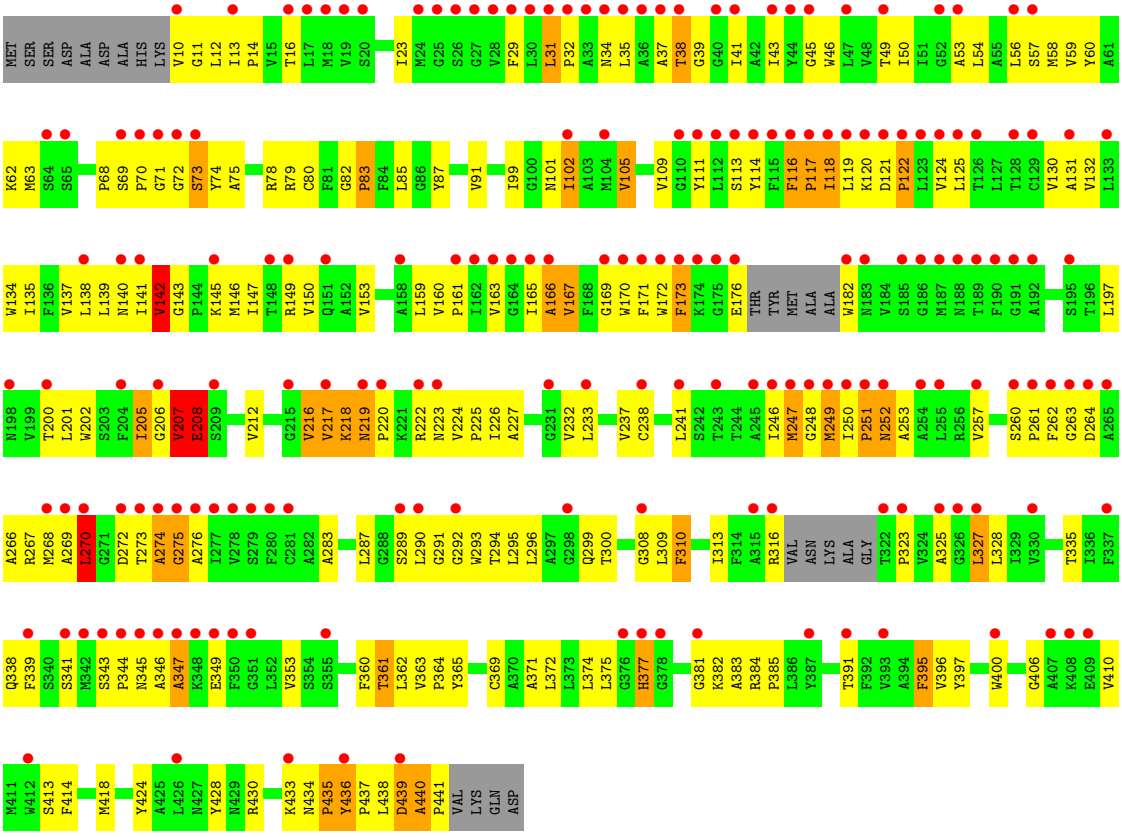
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	W	211	Total	C	N	O	S	40	0	0
			1625	1011	271	333	10			
3	S	211	Total	C	N	O	S	20	0	0
			1625	1011	271	333	10			

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.

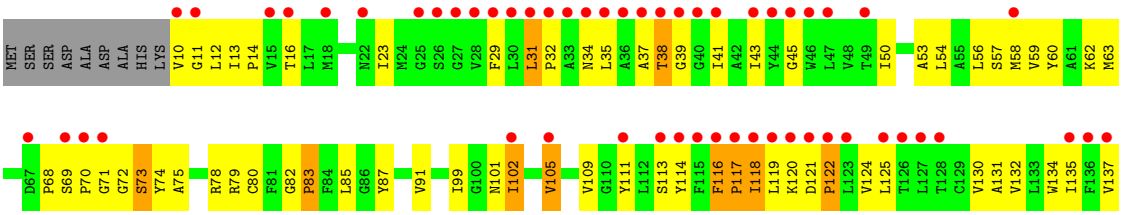
• Molecule 1: AdiC

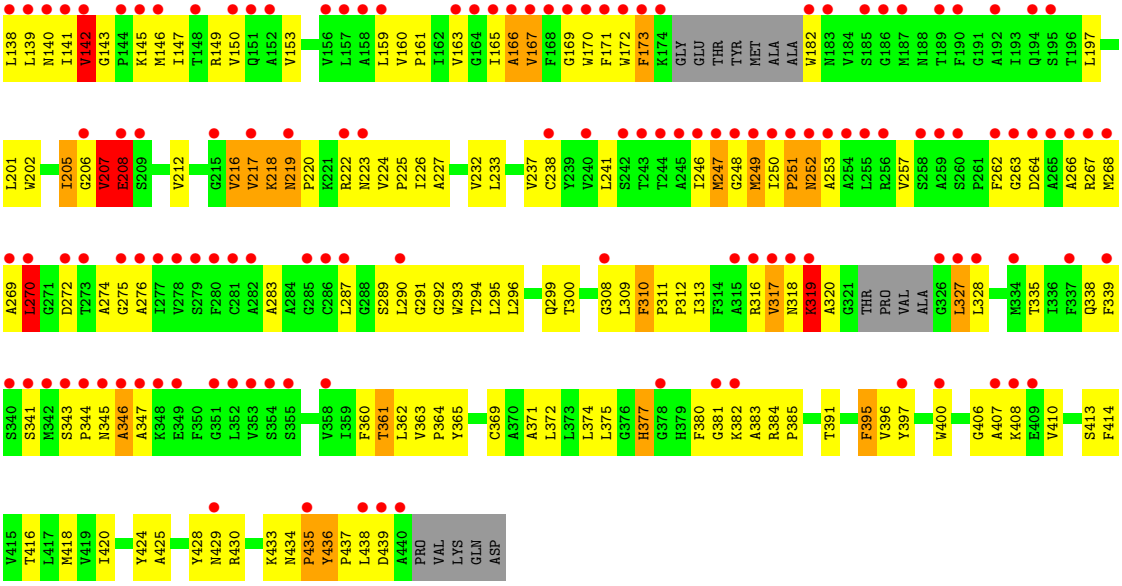
Chain A:



• Molecule 1: AdiC

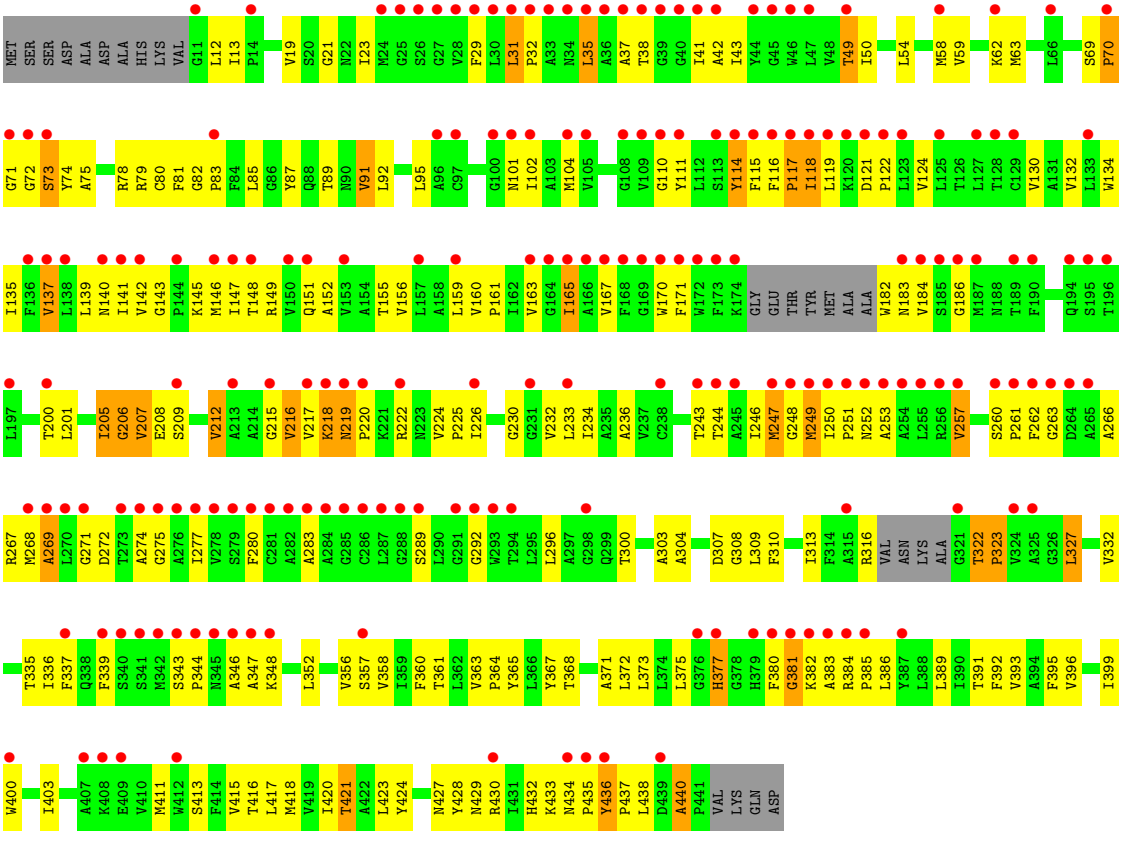
Chain B:





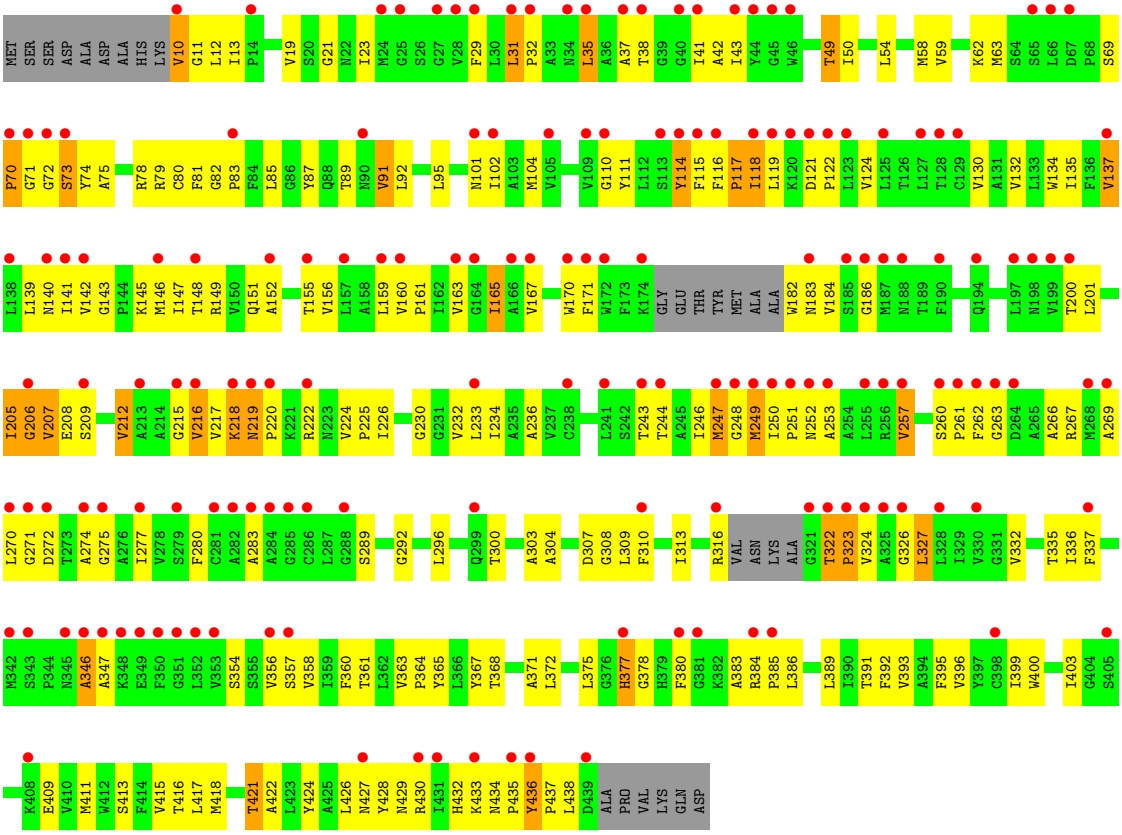
• Molecule 1: AdiC

Chain C:



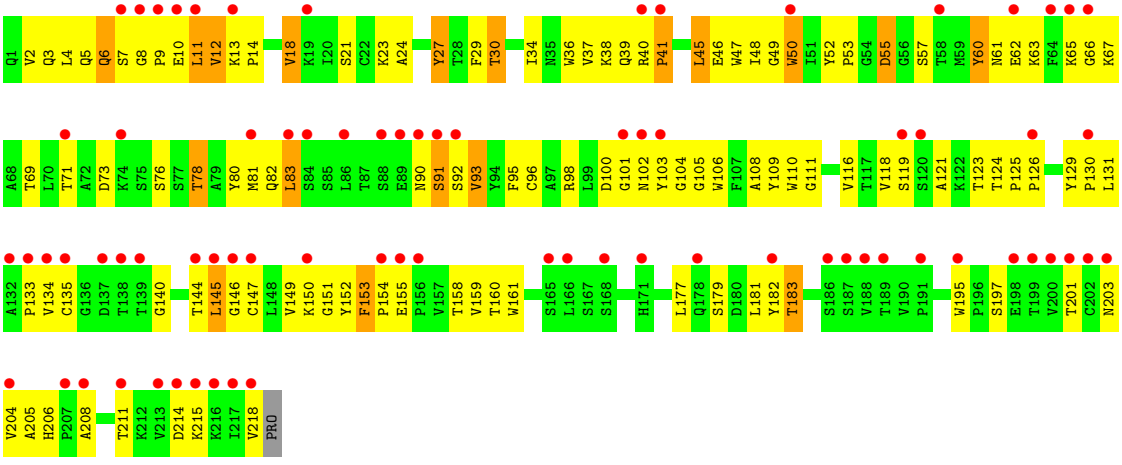
• Molecule 1: AdiC

Chain D:



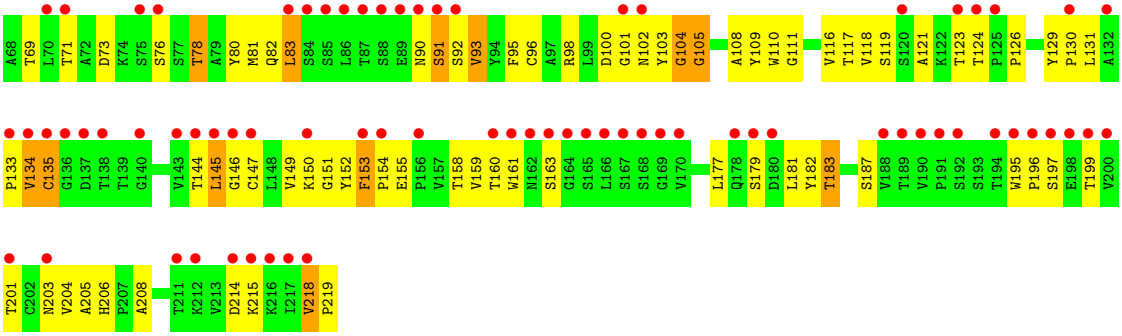
• Molecule 2: Fab Heavy chain

Chain Q:



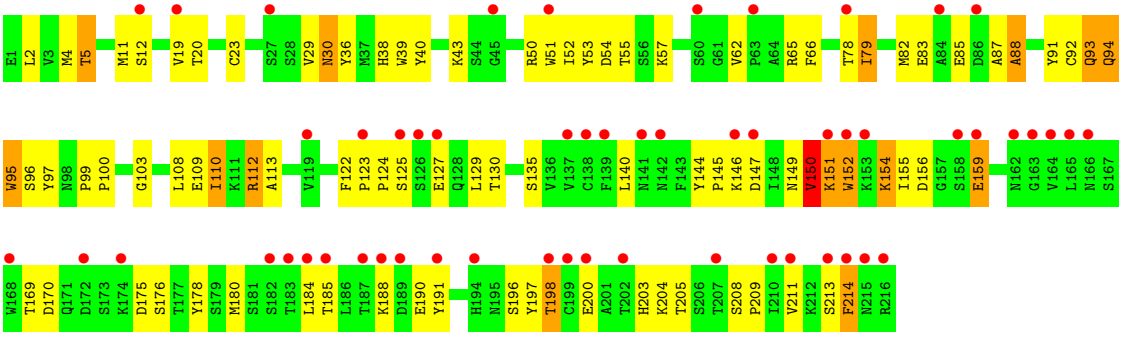
• Molecule 2: Fab Heavy chain

Chain P:



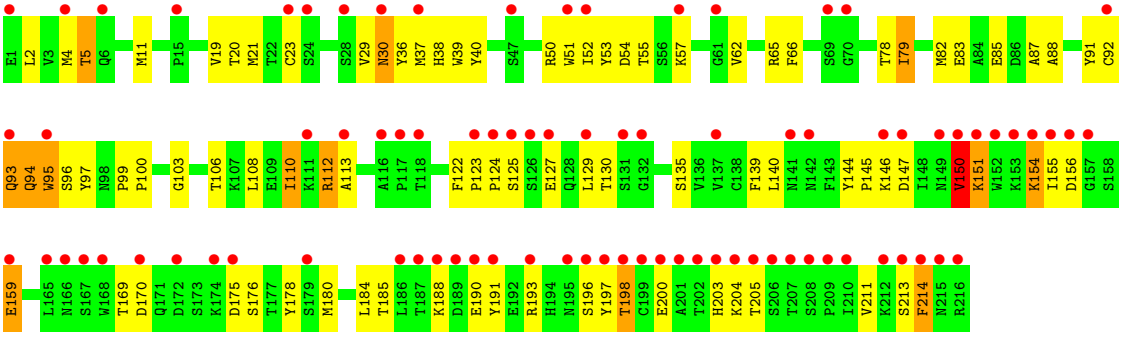
• Molecule 3: Fab Light chain

Chain W:



• Molecule 3: Fab Light chain

Chain S:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α, β, γ	79.66Å 104.15Å 154.03Å 81.96° 75.93° 73.73°	Depositor
Resolution (Å)	33.23 – 3.20 33.23 – 3.20	Depositor EDS
% Data completeness (in resolution range)	96.4 (33.23-3.20) 96.3 (33.23-3.20)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.38 (at 3.19Å)	Xtriage
Refinement program	PHENIX 1.6.1_357, REFMAC	Depositor
R, R_{free}	0.282 , 0.312 0.275 , 0.303	Depositor DCC
R_{free} test set	3612 reflections (4.95%)	wwPDB-VP
Wilson B-factor (Å^2)	38.4	Xtriage
Anisotropy	0.186	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.21 , 88.3	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	0.80	EDS
Total number of atoms	18693	wwPDB-VP
Average B, all atoms (Å^2)	115.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.05% 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	0.22	0/3125	0.42	0/4281
1	B	0.22	0/3110	0.43	0/4257
1	C	0.22	0/3107	0.43	0/4256
1	D	0.22	0/3103	0.42	0/4250
2	P	0.22	0/1694	0.46	1/2319 (0.0%)
2	Q	0.23	0/1686	0.46	0/2307
3	S	0.23	0/1665	0.42	0/2260
3	W	0.23	0/1665	0.43	0/2260
All	All	0.22	0/19155	0.43	1/26190 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	P	134	VAL	N-CA-C	-5.71	95.58	111.00

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	3052	0	3120	201	0
1	B	3039	0	3112	191	0
1	C	3034	0	3098	190	0
1	D	3031	0	3102	199	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	P	1647	0	1601	128	0
2	Q	1640	0	1594	135	0
3	S	1625	0	1550	83	0
3	W	1625	0	1550	85	0
All	All	18693	0	18727	1142	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 31.

All (1142) 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:A:346:ALA:HA	1:A:347:ALA:CB	1.58	1.24
1:A:346:ALA:CA	1:A:347:ALA:HB3	1.76	1.12
1:A:23:ILE:HG12	1:A:206:GLY:HA3	1.33	1.11
1:D:356:VAL:HG11	1:D:409:GLU:HB3	1.30	1.10
1:B:23:ILE:HG12	1:B:206:GLY:HA3	1.32	1.08
2:P:91:SER:HA	2:P:92:SER:HB3	1.36	1.07
2:P:9:PRO:HB3	2:P:10:GLU:HB3	1.37	1.05
1:B:346:ALA:CB	1:B:347:ALA:HA	1.91	1.01
1:B:346:ALA:HB3	1:B:347:ALA:CA	1.90	1.00
2:P:101:GLY:HA2	2:P:102:ASN:HB3	1.42	1.00
2:Q:101:GLY:HA2	2:Q:102:ASN:HB3	1.40	0.99
1:C:347:ALA:N	1:C:348:LYS:HA	1.75	0.99
1:B:346:ALA:HB3	1:B:347:ALA:HA	1.01	0.98
1:C:346:ALA:H	1:C:347:ALA:HA	1.26	0.96
1:D:72:GLY:HA3	1:D:74:TYR:N	1.80	0.96
1:C:72:GLY:HA3	1:C:74:TYR:N	1.81	0.95
1:B:39:GLY:HA3	1:B:247:MET:HG3	1.49	0.94
2:Q:10:GLU:HG2	2:Q:11:LEU:H	1.32	0.94
1:A:39:GLY:HA3	1:A:247:MET:HG3	1.50	0.94
2:Q:10:GLU:HG2	2:Q:11:LEU:N	1.83	0.92
2:Q:9:PRO:HB2	2:Q:10:GLU:HB2	1.52	0.90
2:P:90:ASN:HB3	2:P:118:VAL:HG12	1.53	0.90
1:D:72:GLY:HA3	1:D:74:TYR:H	1.35	0.90
2:Q:90:ASN:HB3	2:Q:118:VAL:HG12	1.53	0.89
1:C:134:TRP:HE1	1:C:335:THR:HG21	1.38	0.88
1:C:377:HIS:CD2	1:D:430:ARG:HG2	2.09	0.88
1:B:319:LYS:H	1:B:319:LYS:HD2	1.40	0.87
1:C:72:GLY:HA3	1:C:74:TYR:H	1.37	0.87
1:D:134:TRP:HE1	1:D:335:THR:HG21	1.39	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:343:SER:HB2	1:A:344:PRO:HD3	1.56	0.86
1:B:202:TRP:HE3	1:B:205:ILE:HD11	1.40	0.86
1:A:202:TRP:HE3	1:A:205:ILE:HD11	1.41	0.85
2:P:9:PRO:CB	2:P:10:GLU:HB3	2.06	0.84
1:A:313:ILE:HD12	1:A:313:ILE:H	1.42	0.84
2:Q:10:GLU:HG2	2:Q:11:LEU:HD23	1.59	0.84
1:C:346:ALA:N	1:C:347:ALA:HA	1.89	0.84
1:A:250:ILE:HB	1:A:251:PRO:HD3	1.59	0.83
1:B:313:ILE:HD12	1:B:313:ILE:H	1.42	0.83
1:B:250:ILE:HB	1:B:251:PRO:HD3	1.59	0.83
1:B:216:VAL:HG12	1:B:217:VAL:H	1.44	0.82
1:B:134:TRP:HE1	1:B:335:THR:HG21	1.44	0.82
1:A:38:THR:HG21	1:A:41:ILE:HG22	1.61	0.82
1:B:38:THR:HG21	1:B:41:ILE:HG22	1.61	0.81
1:D:50:ILE:HD11	1:D:236:ALA:HB1	1.62	0.81
1:C:313:ILE:H	1:C:313:ILE:HD12	1.45	0.81
1:B:269:ALA:O	1:B:270:LEU:HB2	1.80	0.81
1:A:134:TRP:HE1	1:A:335:THR:HG21	1.45	0.80
1:A:216:VAL:HG12	1:A:217:VAL:H	1.45	0.80
1:D:356:VAL:CG1	1:D:409:GLU:HB3	2.11	0.80
1:C:346:ALA:H	1:C:347:ALA:CA	1.94	0.79
2:P:218:VAL:HG12	2:P:219:PRO:HD2	1.64	0.79
1:C:50:ILE:HD11	1:C:236:ALA:HB1	1.62	0.79
1:D:313:ILE:HD12	1:D:313:ILE:H	1.46	0.79
2:Q:154:PRO:HB2	2:Q:206:HIS:HE2	1.46	0.79
1:B:166:ALA:H	1:B:167:VAL:HB	1.48	0.79
1:A:166:ALA:H	1:A:167:VAL:HB	1.48	0.78
1:B:343:SER:HB3	1:B:344:PRO:HD3	1.63	0.78
1:B:142:VAL:O	1:B:142:VAL:HG13	1.82	0.78
1:B:252:ASN:HB2	1:B:253:ALA:HA	1.65	0.78
1:A:142:VAL:O	1:A:142:VAL:HG13	1.83	0.77
1:B:35:LEU:HD22	1:B:247:MET:HG2	1.66	0.77
1:B:72:GLY:HA3	1:B:74:TYR:N	2.00	0.77
1:A:72:GLY:HA3	1:A:74:TYR:N	1.99	0.77
1:C:322:THR:HB	1:C:323:PRO:HD3	1.66	0.77
1:A:35:LEU:HD22	1:A:247:MET:HG2	1.66	0.77
1:A:346:ALA:HA	1:A:347:ALA:HB3	0.79	0.76
1:C:80:CYS:HA	1:D:434:ASN:HD21	1.48	0.76
2:Q:24:ALA:HB1	2:Q:27:TYR:HE1	1.51	0.76
2:Q:63:LYS:HZ3	2:Q:67:LYS:NZ	1.84	0.76
2:P:24:ALA:HB1	2:P:27:TYR:HE1	1.51	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:91:SER:HB3	2:P:116:VAL:HB	1.66	0.76
1:A:252:ASN:HB2	1:A:253:ALA:HA	1.66	0.75
1:D:322:THR:HB	1:D:323:PRO:HD3	1.66	0.75
1:D:219:ASN:N	1:D:220:PRO:HD3	2.01	0.75
1:C:219:ASN:N	1:C:220:PRO:HD3	2.01	0.75
3:W:39:TRP:HB2	3:W:52:ILE:HB	1.68	0.75
1:B:31:LEU:HD13	1:B:246:ILE:HD12	1.69	0.75
1:D:356:VAL:HG11	1:D:409:GLU:CB	2.16	0.75
2:Q:91:SER:HB3	2:Q:116:VAL:HB	1.68	0.74
1:A:85:LEU:HD11	1:B:85:LEU:HD11	1.68	0.74
2:P:150:LYS:NZ	3:S:185:THR:HG21	2.03	0.74
1:A:267:ARG:NE	1:A:274:ALA:HB2	2.03	0.74
3:W:94:GLN:HG2	3:W:96:SER:H	1.52	0.74
1:A:31:LEU:HD13	1:A:246:ILE:HD12	1.69	0.73
1:D:10:VAL:HG21	1:D:218:LYS:HD3	1.69	0.73
2:P:48:ILE:HG23	2:P:67:LYS:NZ	2.04	0.73
2:Q:159:VAL:HG22	2:Q:204:VAL:HG22	1.72	0.72
3:S:94:GLN:HG2	3:S:96:SER:H	1.52	0.72
1:D:435:PRO:HB3	2:Q:102:ASN:O	1.90	0.72
3:W:150:VAL:HG23	3:W:151:LYS:HA	1.72	0.72
1:A:346:ALA:CA	1:A:347:ALA:CB	2.42	0.72
1:A:381:GLY:N	1:A:382:LYS:HA	2.04	0.72
2:Q:48:ILE:HG23	2:Q:67:LYS:NZ	2.04	0.72
3:S:39:TRP:HB2	3:S:52:ILE:HB	1.69	0.72
1:C:267:ARG:HH12	1:C:277:ILE:HG22	1.55	0.71
1:D:87:TYR:CE1	1:D:424:TYR:HB2	2.25	0.71
1:A:269:ALA:O	1:A:270:LEU:HB2	1.91	0.71
1:D:250:ILE:HB	1:D:251:PRO:HD3	1.71	0.71
1:C:250:ILE:HB	1:C:251:PRO:HD3	1.71	0.71
1:D:267:ARG:HH12	1:D:277:ILE:HG22	1.55	0.71
2:Q:92:SER:O	2:Q:93:VAL:HB	1.91	0.71
1:A:176:GLU:HA	1:A:182:TRP:N	2.06	0.70
3:S:40:TYR:CE2	3:S:93:GLN:HG2	2.26	0.70
1:D:207:VAL:HG12	1:D:232:VAL:HG22	1.73	0.70
1:B:202:TRP:CE3	1:B:205:ILE:HD11	2.26	0.70
1:D:224:VAL:HB	1:D:225:PRO:HD3	1.73	0.70
2:Q:10:GLU:CG	2:Q:11:LEU:H	1.95	0.70
2:P:40:ARG:HD3	2:P:92:SER:HB2	1.72	0.70
3:W:129:LEU:HD23	3:W:188:LYS:HZ2	1.57	0.70
2:P:159:VAL:HG22	2:P:204:VAL:HG22	1.73	0.70
2:P:129:TYR:HB3	3:S:125:SER:OG	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:W:40:TYR:CE2	3:W:93:GLN:HG2	2.27	0.70
1:A:202:TRP:CE3	1:A:205:ILE:HD11	2.26	0.70
1:B:381:GLY:N	1:B:382:LYS:HA	2.05	0.70
2:P:11:LEU:HD12	2:P:117:THR:O	1.92	0.69
1:C:375:LEU:HD12	1:D:438:LEU:HG	1.74	0.69
1:D:10:VAL:CG2	1:D:218:LYS:HD3	2.22	0.69
1:A:212:VAL:HG23	1:A:296:LEU:HD22	1.75	0.69
1:C:49:THR:HG21	1:C:200:THR:HB	1.74	0.69
1:C:87:TYR:CE1	1:C:424:TYR:HB2	2.26	0.69
1:D:49:THR:HG21	1:D:200:THR:HB	1.74	0.69
2:Q:10:GLU:CG	2:Q:11:LEU:HD23	2.22	0.69
2:Q:37:VAL:HG21	2:Q:110:TRP:HZ3	1.57	0.69
1:A:54:LEU:O	1:A:58:MET:HG2	1.93	0.69
2:P:39:GLN:O	2:P:92:SER:HA	1.91	0.69
1:C:31:LEU:HD12	1:C:32:PRO:HD3	1.74	0.69
1:D:262:PHE:CZ	1:D:266:ALA:HB2	2.28	0.69
2:Q:63:LYS:HZ3	2:Q:67:LYS:HZ3	1.40	0.68
1:B:212:VAL:HG23	1:B:296:LEU:HD22	1.75	0.68
1:C:262:PHE:CZ	1:C:266:ALA:HB2	2.28	0.68
1:C:31:LEU:HD23	1:C:243:THR:HG22	1.75	0.68
1:C:224:VAL:HB	1:C:225:PRO:HD3	1.74	0.68
1:D:171:PHE:HA	1:D:249:MET:HB3	1.75	0.68
1:C:207:VAL:HG12	1:C:232:VAL:HG22	1.74	0.68
3:S:40:TYR:HE2	3:S:93:GLN:HG2	1.59	0.68
1:B:54:LEU:O	1:B:58:MET:HG2	1.94	0.68
1:C:430:ARG:HG2	1:D:377:HIS:CD2	2.29	0.68
1:D:74:TYR:OH	1:D:309:LEU:HD12	1.94	0.68
1:A:414:PHE:HD1	1:B:410:VAL:HG13	1.59	0.67
1:D:31:LEU:HD23	1:D:243:THR:HG22	1.76	0.67
1:D:31:LEU:HD12	1:D:32:PRO:HD3	1.73	0.67
1:D:134:TRP:HA	1:D:137:VAL:HG12	1.76	0.67
1:A:29:PHE:O	1:A:32:PRO:HD2	1.94	0.67
1:B:29:PHE:O	1:B:32:PRO:HD2	1.95	0.67
2:P:37:VAL:HG21	2:P:110:TRP:HZ3	1.58	0.67
3:S:150:VAL:O	3:S:151:LYS:HB2	1.94	0.67
1:C:79:ARG:HA	1:D:436:TYR:H	1.60	0.67
3:W:40:TYR:HE2	3:W:93:GLN:HG2	1.59	0.67
1:A:171:PHE:HA	1:A:249:MET:HB3	1.77	0.67
1:A:439:ASP:O	1:A:440:ALA:HB2	1.95	0.67
1:B:319:LYS:HD2	1:B:319:LYS:N	2.08	0.67
1:A:435:PRO:HB3	2:P:103:TYR:HB3	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:10:VAL:HB	1:B:218:LYS:HD3	1.76	0.67
2:P:47:TRP:CZ2	2:P:49:GLY:HA2	2.30	0.67
1:C:171:PHE:HA	1:C:249:MET:HB3	1.75	0.67
2:Q:47:TRP:CZ2	2:Q:49:GLY:HA2	2.30	0.66
1:B:171:PHE:HA	1:B:249:MET:HB3	1.77	0.66
1:B:145:LYS:O	1:B:149:ARG:HG3	1.96	0.66
1:A:72:GLY:HA3	1:A:73:SER:C	2.15	0.66
1:C:134:TRP:HA	1:C:137:VAL:HG12	1.76	0.66
1:C:268:MET:O	1:C:269:ALA:HB2	1.95	0.66
1:C:116:PHE:HB3	1:C:118:ILE:H	1.61	0.66
2:Q:134:VAL:HG21	3:W:123:PRO:HD3	1.76	0.66
1:A:145:LYS:O	1:A:149:ARG:HG3	1.96	0.65
2:Q:83:LEU:HD21	2:P:199:THR:HG23	1.78	0.65
1:A:10:VAL:HB	1:A:218:LYS:HD3	1.76	0.65
1:A:38:THR:HG1	1:A:182:TRP:N	1.95	0.65
1:D:116:PHE:HB3	1:D:118:ILE:H	1.61	0.65
1:B:72:GLY:HA3	1:B:73:SER:C	2.15	0.65
2:Q:134:VAL:CG2	3:W:123:PRO:HD3	2.26	0.65
2:P:37:VAL:HG21	2:P:110:TRP:CZ3	2.32	0.65
2:P:63:LYS:HZ3	2:P:67:LYS:NZ	1.94	0.65
1:A:439:ASP:O	1:A:440:ALA:CB	2.45	0.65
1:C:432:HIS:HD2	1:C:434:ASN:HB2	1.62	0.65
2:P:91:SER:HA	2:P:92:SER:CB	2.15	0.64
2:P:154:PRO:HB2	2:P:206:HIS:NE2	2.11	0.64
3:S:38:HIS:CE1	3:S:54:ASP:H	2.16	0.64
1:D:432:HIS:HD2	1:D:434:ASN:HB2	1.62	0.64
1:B:38:THR:HG1	1:B:182:TRP:N	1.95	0.64
1:C:74:TYR:OH	1:C:309:LEU:HD12	1.97	0.64
2:Q:154:PRO:HB2	2:Q:206:HIS:NE2	2.11	0.64
3:S:53:TYR:O	3:S:57:LYS:HB2	1.98	0.64
1:D:140:ASN:OD1	1:D:147:ILE:HG12	1.98	0.64
1:A:224:VAL:HB	1:A:225:PRO:HD3	1.79	0.64
1:B:224:VAL:HB	1:B:225:PRO:HD3	1.80	0.64
2:P:130:PRO:HG3	2:P:215:LYS:HB3	1.79	0.64
3:W:19:VAL:HB	3:W:79:ILE:HG13	1.79	0.64
1:B:237:VAL:HG13	1:B:241:LEU:HD12	1.80	0.64
2:Q:37:VAL:HG21	2:Q:110:TRP:CZ3	2.32	0.64
1:A:69:SER:HB3	1:A:70:PRO:HD2	1.80	0.63
2:Q:130:PRO:HG3	2:Q:215:LYS:HB3	1.78	0.63
1:A:237:VAL:HG13	1:A:241:LEU:HD12	1.79	0.63
1:C:438:LEU:HG	1:D:375:LEU:HD12	1.78	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:262:PHE:CE1	1:B:266:ALA:HB2	2.33	0.63
3:S:198:THR:HG23	3:S:213:SER:HB2	1.79	0.63
1:A:274:ALA:HA	1:A:275:GLY:C	2.19	0.63
1:D:161:PRO:O	1:D:165:ILE:HG12	1.98	0.63
3:W:124:PRO:HB2	3:W:129:LEU:HD11	1.80	0.63
1:A:343:SER:HB2	1:A:344:PRO:CD	2.29	0.63
1:C:434:ASN:HD21	1:D:80:CYS:HA	1.64	0.63
2:Q:48:ILE:HD13	2:Q:80:TYR:OH	1.99	0.63
1:B:69:SER:HB3	1:B:70:PRO:HD2	1.80	0.63
1:D:415:VAL:HA	1:D:418:MET:HG3	1.81	0.63
1:A:262:PHE:CE1	1:A:266:ALA:HB2	2.33	0.63
3:S:19:VAL:HB	3:S:79:ILE:HG13	1.81	0.63
1:C:54:LEU:O	1:C:58:MET:HG2	1.99	0.62
1:C:140:ASN:OD1	1:C:147:ILE:HG12	1.98	0.62
1:C:161:PRO:O	1:C:165:ILE:HG12	1.98	0.62
2:P:63:LYS:HB2	2:P:67:LYS:HZ3	1.65	0.62
3:W:53:TYR:O	3:W:57:LYS:HB2	1.98	0.62
3:W:38:HIS:CE1	3:W:54:ASP:H	2.18	0.62
1:C:347:ALA:N	1:C:348:LYS:CA	2.59	0.62
2:Q:83:LEU:HD21	2:P:199:THR:CG2	2.30	0.62
3:S:124:PRO:HB2	3:S:129:LEU:HD11	1.80	0.62
3:W:198:THR:HG23	3:W:213:SER:HB2	1.80	0.62
1:C:415:VAL:HA	1:C:418:MET:HG3	1.82	0.62
1:D:435:PRO:HA	1:D:437:PRO:HD3	1.82	0.62
1:D:54:LEU:O	1:D:58:MET:HG2	2.00	0.61
1:D:135:ILE:O	1:D:139:LEU:HG	2.00	0.61
1:C:63:MET:HB2	1:C:372:LEU:HD12	1.82	0.61
1:A:273:THR:O	1:A:274:ALA:CB	2.48	0.61
1:C:395:PHE:O	1:C:399:ILE:HG13	2.00	0.61
1:B:165:ILE:O	1:B:166:ALA:HB2	2.01	0.61
1:C:218:LYS:O	1:C:219:ASN:HB2	2.00	0.61
1:D:218:LYS:O	1:D:219:ASN:HB2	2.00	0.61
2:P:34:ILE:HG21	2:P:78:THR:HG21	1.83	0.61
2:Q:39:GLN:O	2:Q:92:SER:HB3	2.00	0.61
2:P:48:ILE:HD13	2:P:80:TYR:OH	2.01	0.61
1:A:267:ARG:HE	1:A:274:ALA:HB2	1.64	0.61
1:B:205:ILE:HG22	1:B:205:ILE:O	2.01	0.61
1:C:135:ILE:O	1:C:139:LEU:HG	2.00	0.61
2:Q:34:ILE:HG21	2:Q:78:THR:HG21	1.82	0.61
1:C:361:THR:HG22	1:C:365:TYR:HE2	1.66	0.60
1:D:395:PHE:O	1:D:399:ILE:HG13	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Q:124:THR:H	2:Q:154:PRO:HD3	1.65	0.60
1:D:63:MET:HB2	1:D:372:LEU:HD12	1.82	0.60
3:S:110:ILE:HD12	3:S:110:ILE:H	1.67	0.60
1:A:205:ILE:O	1:A:205:ILE:HG22	2.01	0.60
1:A:384:ARG:HB3	1:A:385:PRO:HD3	1.83	0.60
2:P:101:GLY:CA	2:P:102:ASN:HB3	2.26	0.60
2:P:177:LEU:H	2:P:177:LEU:HD23	1.66	0.60
2:P:124:THR:H	2:P:154:PRO:HD3	1.65	0.60
1:B:142:VAL:O	1:B:142:VAL:CG1	2.49	0.60
1:C:435:PRO:HA	1:C:437:PRO:HD3	1.83	0.60
2:Q:177:LEU:HD23	2:Q:177:LEU:H	1.67	0.60
1:A:142:VAL:O	1:A:142:VAL:CG1	2.49	0.60
1:B:13:ILE:HG22	1:B:14:PRO:HD3	1.84	0.60
1:A:160:VAL:HB	1:A:161:PRO:HD3	1.84	0.60
1:A:435:PRO:HB3	2:P:103:TYR:CB	2.32	0.60
1:B:166:ALA:N	1:B:167:VAL:HB	2.17	0.60
1:B:268:MET:HG3	1:B:269:ALA:N	2.17	0.60
2:Q:14:PRO:O	2:P:163:SER:HB2	2.02	0.60
1:B:384:ARG:HB3	1:B:385:PRO:HD3	1.83	0.59
1:A:165:ILE:O	1:A:166:ALA:HB2	2.01	0.59
1:D:361:THR:HG22	1:D:365:TYR:HE2	1.66	0.59
2:P:48:ILE:HG23	2:P:67:LYS:HZ1	1.66	0.59
1:A:251:PRO:HB2	1:A:257:VAL:HG22	1.84	0.59
1:C:216:VAL:HG12	1:C:217:VAL:H	1.68	0.59
1:A:268:MET:HG3	1:A:269:ALA:N	2.17	0.59
1:B:63:MET:HE2	1:B:371:ALA:HB1	1.85	0.59
1:B:170:TRP:N	1:B:249:MET:HE1	2.18	0.59
1:D:364:PRO:O	1:D:368:THR:HG23	2.03	0.59
1:A:31:LEU:HB2	1:A:32:PRO:HD3	1.85	0.59
1:B:251:PRO:HB2	1:B:257:VAL:HG22	1.84	0.59
1:C:80:CYS:HA	1:D:434:ASN:ND2	2.17	0.59
2:Q:40:ARG:HB3	2:Q:41:PRO:HD2	1.84	0.59
2:P:40:ARG:HB3	2:P:41:PRO:HD2	1.84	0.59
3:W:110:ILE:HD12	3:W:110:ILE:H	1.68	0.59
2:Q:8:GLY:N	2:Q:9:PRO:CD	2.66	0.59
1:A:13:ILE:HG22	1:A:14:PRO:HD3	1.85	0.58
1:C:346:ALA:C	1:C:348:LYS:HA	2.23	0.58
1:B:16:THR:HG22	1:B:227:ALA:HA	1.85	0.58
1:B:160:VAL:HB	1:B:161:PRO:HD3	1.85	0.58
1:C:43:ILE:HG12	1:C:244:THR:HG22	1.86	0.58
2:Q:18:VAL:HG23	2:Q:82:GLN:HB2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:113:SER:HB2	1:A:119:LEU:O	2.04	0.58
1:D:435:PRO:HG3	2:Q:103:TYR:HD1	1.68	0.58
2:P:29:PHE:O	2:P:53:PRO:HG2	2.03	0.58
1:D:43:ILE:HG12	1:D:244:THR:HG22	1.86	0.58
1:C:364:PRO:O	1:C:368:THR:HG23	2.04	0.58
1:C:377:HIS:HD2	1:D:430:ARG:HG2	1.62	0.58
2:Q:29:PHE:O	2:Q:53:PRO:HG2	2.03	0.58
3:S:156:ASP:HA	3:S:196:SER:HB3	1.86	0.58
1:B:31:LEU:HB2	1:B:32:PRO:HD3	1.85	0.58
3:S:30:ASN:O	3:S:36:TYR:HB2	2.03	0.58
1:D:10:VAL:HG22	1:D:145:LYS:HE3	1.84	0.58
1:D:216:VAL:HG12	1:D:217:VAL:H	1.67	0.57
1:A:219:ASN:N	1:A:220:PRO:HD3	2.19	0.57
1:A:374:LEU:HD21	1:B:425:ALA:HA	1.86	0.57
2:Q:47:TRP:CE3	3:W:100:PRO:HD2	2.39	0.57
2:P:150:LYS:HZ2	3:S:185:THR:HG21	1.68	0.57
1:A:63:MET:HE2	1:A:371:ALA:HB1	1.86	0.57
1:A:274:ALA:HA	1:A:275:GLY:O	2.04	0.57
1:B:105:VAL:HG13	1:B:290:LEU:HD11	1.87	0.57
1:C:417:LEU:O	1:C:421:THR:HG23	2.04	0.57
2:P:11:LEU:HD13	2:P:117:THR:HB	1.86	0.57
1:A:31:LEU:O	1:A:35:LEU:HG	2.05	0.57
1:B:50:ILE:O	1:B:54:LEU:HB2	2.05	0.57
2:P:37:VAL:HG12	2:P:47:TRP:HA	1.86	0.57
1:A:16:THR:HG22	1:A:227:ALA:HA	1.86	0.57
3:W:4:MET:HB2	3:W:103:GLY:HA2	1.87	0.57
1:B:339:PHE:O	1:B:344:PRO:HD2	2.04	0.57
2:Q:10:GLU:CD	2:Q:11:LEU:HD23	2.25	0.57
2:Q:37:VAL:HG12	2:Q:47:TRP:HA	1.85	0.57
2:Q:63:LYS:HB2	2:Q:67:LYS:HZ3	1.69	0.57
3:W:156:ASP:HA	3:W:196:SER:HB3	1.86	0.57
1:B:113:SER:HB2	1:B:119:LEU:O	2.04	0.57
3:S:129:LEU:HD23	3:S:188:LYS:HZ2	1.68	0.57
2:Q:24:ALA:HB1	2:Q:27:TYR:CE1	2.37	0.57
1:A:79:ARG:HB2	1:A:375:LEU:HD11	1.86	0.57
1:A:166:ALA:N	1:A:167:VAL:HB	2.17	0.57
1:C:399:ILE:HA	1:D:418:MET:HE2	1.87	0.56
1:C:418:MET:HE2	1:D:399:ILE:HA	1.87	0.56
1:D:417:LEU:O	1:D:421:THR:HG23	2.04	0.56
2:P:101:GLY:HA2	2:P:102:ASN:CB	2.19	0.56
3:W:151:LYS:O	3:W:151:LYS:HG2	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:129:LEU:HB3	3:S:188:LYS:HZ2	1.70	0.56
1:A:31:LEU:CD1	1:A:246:ILE:HD12	2.36	0.56
1:A:71:GLY:O	1:A:212:VAL:HA	2.06	0.56
2:P:60:TYR:HD2	2:P:61:ASN:N	2.03	0.56
3:W:30:ASN:O	3:W:36:TYR:HB2	2.05	0.56
1:A:105:VAL:HG13	1:A:290:LEU:HD11	1.87	0.56
1:B:31:LEU:O	1:B:35:LEU:HG	2.05	0.56
1:C:118:ILE:HG22	1:C:119:LEU:HG	1.88	0.56
1:D:23:ILE:HG12	1:D:206:GLY:HA3	1.87	0.56
3:W:2:LEU:HD12	3:W:97:TYR:HD2	1.70	0.56
3:S:4:MET:HB2	3:S:103:GLY:HA2	1.87	0.56
1:B:219:ASN:N	1:B:220:PRO:HD3	2.19	0.56
1:C:262:PHE:CG	1:C:263:GLY:N	2.72	0.56
1:C:436:TYR:H	1:D:79:ARG:HA	1.70	0.56
2:P:63:LYS:HZ3	2:P:67:LYS:HZ3	1.53	0.56
1:A:50:ILE:O	1:A:54:LEU:HB2	2.06	0.56
1:A:313:ILE:H	1:A:313:ILE:CD1	2.16	0.56
1:A:362:LEU:HD23	1:A:365:TYR:HD2	1.70	0.56
1:A:414:PHE:CD1	1:B:410:VAL:HG13	2.41	0.56
1:B:345:ASN:O	1:B:346:ALA:HB2	2.05	0.56
1:C:433:LYS:O	1:C:435:PRO:HD3	2.05	0.56
1:D:262:PHE:CG	1:D:263:GLY:N	2.73	0.56
2:P:45:LEU:HD12	2:P:45:LEU:H	1.71	0.56
1:A:313:ILE:HD12	1:A:313:ILE:N	2.19	0.56
1:C:383:ALA:HB1	1:C:386:LEU:HB3	1.88	0.56
2:Q:47:TRP:O	2:Q:60:TYR:HD1	1.88	0.56
3:S:140:LEU:H	3:S:140:LEU:HD12	1.69	0.56
1:B:166:ALA:HA	1:B:167:VAL:C	2.26	0.56
1:C:267:ARG:HA	1:C:272:ASP:HB3	1.88	0.56
1:A:62:LYS:HG3	1:A:372:LEU:HD11	1.88	0.56
1:B:79:ARG:HB2	1:B:375:LEU:HD11	1.87	0.56
2:Q:47:TRP:O	2:Q:60:TYR:CD1	2.59	0.56
3:S:51:TRP:CZ3	3:S:62:VAL:HG13	2.41	0.56
1:A:102:ILE:HG22	1:A:338:GLN:OE1	2.06	0.55
1:C:72:GLY:H	1:C:75:ALA:H	1.54	0.55
2:P:18:VAL:HG12	2:P:82:GLN:HB2	1.87	0.55
3:S:2:LEU:HD12	3:S:97:TYR:HD2	1.70	0.55
3:S:94:GLN:HG2	3:S:95:TRP:N	2.21	0.55
1:A:440:ALA:N	1:A:441:PRO:HD2	2.21	0.55
1:B:102:ILE:HG22	1:B:338:GLN:OE1	2.06	0.55
1:B:39:GLY:CA	1:B:247:MET:HG3	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:23:ILE:HG12	1:C:206:GLY:HA3	1.87	0.55
1:D:267:ARG:NH1	1:D:277:ILE:H	2.04	0.55
2:P:36:TRP:O	2:P:48:ILE:HB	2.06	0.55
2:P:153:PHE:H	2:P:154:PRO:CD	2.19	0.55
3:W:87:ALA:HB2	3:W:110:ILE:HG13	1.88	0.55
1:C:62:LYS:HB3	1:C:372:LEU:HD11	1.88	0.55
1:D:433:LYS:O	1:D:435:PRO:HD3	2.06	0.55
2:Q:60:TYR:HD2	2:Q:61:ASN:N	2.05	0.55
2:Q:153:PHE:H	2:Q:154:PRO:CD	2.20	0.55
1:A:166:ALA:HA	1:A:167:VAL:C	2.26	0.55
1:C:384:ARG:HB3	1:C:385:PRO:HD3	1.88	0.55
3:W:140:LEU:HD12	3:W:140:LEU:H	1.70	0.55
1:A:12:LEU:HB2	1:A:223:ASN:OD1	2.06	0.55
1:B:71:GLY:O	1:B:212:VAL:HA	2.07	0.55
2:Q:101:GLY:CA	2:Q:102:ASN:HB3	2.25	0.55
1:B:12:LEU:HB2	1:B:223:ASN:OD1	2.07	0.55
1:B:62:LYS:HG3	1:B:372:LEU:HD11	1.89	0.55
1:D:10:VAL:HA	1:D:217:VAL:O	2.06	0.55
1:D:269:ALA:O	1:D:270:LEU:C	2.44	0.55
1:D:377:HIS:HD1	1:D:378:GLY:N	2.05	0.55
2:Q:36:TRP:O	2:Q:48:ILE:HB	2.06	0.55
2:Q:48:ILE:HG21	2:Q:80:TYR:OH	2.07	0.55
1:A:161:PRO:O	1:A:165:ILE:HG12	2.07	0.55
1:B:31:LEU:CD1	1:B:246:ILE:HD12	2.36	0.55
2:P:47:TRP:O	2:P:60:TYR:HD1	1.90	0.55
2:P:150:LYS:HZ3	3:S:185:THR:HG21	1.71	0.55
1:B:161:PRO:O	1:B:165:ILE:HG12	2.06	0.55
1:B:437:PRO:HG2	2:P:32:TYR:CZ	2.42	0.55
2:Q:45:LEU:HD12	2:Q:45:LEU:H	1.70	0.55
2:P:37:VAL:HG23	2:P:95:PHE:HB2	1.87	0.55
1:B:216:VAL:HG12	1:B:217:VAL:N	2.20	0.54
1:D:296:LEU:O	1:D:300:THR:HG22	2.07	0.54
3:W:94:GLN:HG2	3:W:95:TRP:N	2.23	0.54
3:S:87:ALA:HB2	3:S:110:ILE:HG13	1.88	0.54
1:B:362:LEU:HD23	1:B:365:TYR:HD2	1.71	0.54
1:C:37:ALA:O	1:C:184:VAL:HA	2.07	0.54
1:C:267:ARG:NH1	1:C:277:ILE:H	2.04	0.54
1:D:116:PHE:HB3	1:D:118:ILE:N	2.22	0.54
1:D:267:ARG:HA	1:D:272:ASP:HB3	1.88	0.54
2:Q:37:VAL:HG23	2:Q:95:PHE:HB2	1.88	0.54
3:W:38:HIS:HB2	3:W:93:GLN:HG3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:118:ILE:HG22	1:D:119:LEU:HG	1.88	0.54
1:D:324:VAL:HG12	1:D:326:GLY:H	1.72	0.54
3:W:150:VAL:CG2	3:W:151:LYS:HA	2.37	0.54
3:S:36:TYR:HA	3:S:55:THR:OG1	2.07	0.54
3:S:38:HIS:HB2	3:S:93:GLN:HG3	1.88	0.54
1:D:78:ARG:HA	1:D:82:GLY:O	2.08	0.54
1:A:439:ASP:O	3:S:97:TYR:HB3	2.08	0.54
1:C:38:THR:HG23	1:C:42:ALA:HB2	1.89	0.54
1:C:343:SER:HB2	1:C:344:PRO:HD3	1.88	0.54
3:S:85:GLU:CD	3:S:85:GLU:H	2.11	0.54
1:A:216:VAL:HG12	1:A:217:VAL:N	2.20	0.54
1:A:246:ILE:C	1:A:248:GLY:H	2.11	0.54
2:Q:90:ASN:CB	2:Q:118:VAL:HG12	2.34	0.54
3:S:95:TRP:CH2	3:S:100:PRO:HD3	2.42	0.54
1:A:296:LEU:O	1:A:300:THR:HG22	2.08	0.54
1:C:116:PHE:HB3	1:C:118:ILE:N	2.22	0.54
3:W:85:GLU:CD	3:W:85:GLU:H	2.10	0.54
1:B:135:ILE:O	1:B:139:LEU:HG	2.08	0.54
1:B:246:ILE:C	1:B:248:GLY:H	2.11	0.54
1:D:37:ALA:O	1:D:184:VAL:HA	2.07	0.54
1:A:273:THR:O	1:A:274:ALA:HB2	2.08	0.54
1:D:62:LYS:HB3	1:D:372:LEU:HD11	1.89	0.54
1:D:72:GLY:H	1:D:75:ALA:H	1.54	0.54
1:D:292:GLY:O	1:D:296:LEU:HG	2.08	0.54
1:B:313:ILE:H	1:B:313:ILE:CD1	2.16	0.53
1:C:274:ALA:HB1	1:C:275:GLY:HA2	1.90	0.53
2:Q:118:VAL:HG13	2:Q:118:VAL:O	2.08	0.53
2:P:118:VAL:HG13	2:P:118:VAL:O	2.08	0.53
1:C:296:LEU:O	1:C:300:THR:HG22	2.08	0.53
1:D:384:ARG:HB3	1:D:385:PRO:HD3	1.90	0.53
2:P:38:LYS:HB2	2:P:48:ILE:HD11	1.89	0.53
2:P:48:ILE:HG21	2:P:80:TYR:OH	2.08	0.53
1:A:289:SER:O	1:A:293:TRP:HD1	1.91	0.53
1:D:38:THR:HG23	1:D:42:ALA:HB2	1.89	0.53
2:P:47:TRP:O	2:P:60:TYR:CD1	2.61	0.53
3:W:36:TYR:HA	3:W:55:THR:OG1	2.07	0.53
1:C:78:ARG:HA	1:C:82:GLY:O	2.08	0.53
1:D:219:ASN:N	1:D:220:PRO:CD	2.70	0.53
1:D:277:ILE:O	1:D:280:PHE:HB2	2.08	0.53
2:Q:38:LYS:HB2	2:Q:48:ILE:HD11	1.90	0.53
1:A:135:ILE:O	1:A:139:LEU:HG	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:24:ALA:HB1	2:P:27:TYR:CE1	2.38	0.53
1:B:289:SER:O	1:B:293:TRP:HD1	1.91	0.53
1:B:313:ILE:HD12	1:B:313:ILE:N	2.18	0.53
2:Q:45:LEU:HD12	2:Q:45:LEU:N	2.24	0.53
1:D:274:ALA:HB1	1:D:275:GLY:HA2	1.90	0.53
3:S:82:MET:SD	3:S:108:LEU:HD21	2.49	0.53
1:A:205:ILE:CG2	1:A:361:THR:HG21	2.39	0.53
1:B:80:CYS:SG	1:B:374:LEU:HD12	2.49	0.53
1:B:205:ILE:CG2	1:B:361:THR:HG21	2.39	0.53
3:W:51:TRP:CZ3	3:W:62:VAL:HG13	2.44	0.53
1:D:160:VAL:N	1:D:161:PRO:HD2	2.24	0.52
1:B:346:ALA:CB	1:B:347:ALA:CA	2.67	0.52
1:B:377:HIS:CE1	3:S:30:ASN:HD21	2.28	0.52
1:C:277:ILE:O	1:C:280:PHE:HB2	2.08	0.52
1:A:216:VAL:HG23	1:A:299:GLN:NE2	2.24	0.52
1:B:207:VAL:HG23	1:B:365:TYR:CE1	2.45	0.52
1:D:399:ILE:O	1:D:403:ILE:HG13	2.09	0.52
2:P:12:VAL:HG12	2:P:13:LYS:N	2.25	0.52
2:P:63:LYS:HB2	2:P:63:LYS:HZ2	1.73	0.52
1:B:59:VAL:HG22	1:B:391:THR:HG22	1.91	0.52
1:B:116:PHE:HB3	1:B:118:ILE:H	1.75	0.52
1:A:262:PHE:HE1	1:A:266:ALA:HB2	1.74	0.52
1:B:262:PHE:HE1	1:B:266:ALA:HB2	1.74	0.52
1:C:19:VAL:O	1:C:23:ILE:HG13	2.09	0.52
2:Q:150:LYS:NZ	3:W:185:THR:HG21	2.24	0.52
1:A:308:GLY:O	1:A:428:TYR:HE1	1.91	0.52
1:B:296:LEU:O	1:B:300:THR:HG22	2.09	0.52
1:C:292:GLY:O	1:C:296:LEU:HG	2.08	0.52
1:D:19:VAL:O	1:D:23:ILE:HG13	2.10	0.52
1:D:71:GLY:O	1:D:212:VAL:HA	2.09	0.52
1:B:87:TYR:O	1:B:91:VAL:HG23	2.10	0.52
1:C:130:VAL:O	1:C:134:TRP:HD1	1.93	0.52
2:P:45:LEU:HD12	2:P:45:LEU:N	2.25	0.52
1:A:116:PHE:HB3	1:A:118:ILE:H	1.75	0.52
1:D:145:LYS:O	1:D:149:ARG:HG3	2.10	0.52
2:P:153:PHE:N	2:P:154:PRO:CD	2.73	0.52
3:W:4:MET:CE	3:W:4:MET:HA	2.40	0.52
1:A:80:CYS:SG	1:A:374:LEU:HD12	2.50	0.52
1:A:87:TYR:O	1:A:91:VAL:HG23	2.10	0.52
1:B:308:GLY:O	1:B:428:TYR:HE1	1.92	0.52
2:Q:2:VAL:HB	2:Q:109:TYR:CD1	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:63:LYS:NZ	2:P:67:LYS:HZ3	2.07	0.52
3:W:23:CYS:HB2	3:W:39:TRP:CH2	2.45	0.52
1:C:71:GLY:O	1:C:212:VAL:HA	2.10	0.51
1:C:160:VAL:N	1:C:161:PRO:HD2	2.24	0.51
1:C:219:ASN:N	1:C:220:PRO:CD	2.70	0.51
3:S:151:LYS:CB	3:S:200:GLU:HB2	2.40	0.51
1:A:59:VAL:HG22	1:A:391:THR:HG22	1.92	0.51
1:A:119:LEU:HB3	1:A:124:VAL:HG11	1.92	0.51
1:C:92:LEU:HD11	1:C:417:LEU:HD21	1.93	0.51
1:C:145:LYS:O	1:C:149:ARG:HG3	2.11	0.51
2:Q:50:TRP:O	2:Q:57:SER:HB2	2.10	0.51
3:W:155:ILE:HA	3:W:196:SER:O	2.10	0.51
3:S:197:TYR:HB2	3:S:214:PHE:CE2	2.44	0.51
1:A:207:VAL:HG23	1:A:365:TYR:CE1	2.46	0.51
1:B:216:VAL:HG23	1:B:299:GLN:NE2	2.25	0.51
3:W:197:TYR:HB2	3:W:214:PHE:CE2	2.45	0.51
1:C:41:ILE:HG22	1:C:41:ILE:O	2.11	0.51
1:C:147:ILE:HD12	1:C:148:THR:N	2.25	0.51
2:Q:153:PHE:N	2:Q:154:PRO:CD	2.73	0.51
3:S:4:MET:HA	3:S:4:MET:CE	2.40	0.51
1:A:267:ARG:HB3	1:A:272:ASP:HB2	1.92	0.51
1:C:395:PHE:CE2	1:D:422:ALA:HA	2.45	0.51
1:C:399:ILE:O	1:C:403:ILE:HG13	2.09	0.51
2:Q:9:PRO:CB	2:Q:10:GLU:HB2	2.35	0.51
1:D:308:GLY:O	1:D:428:TYR:HE1	1.94	0.51
2:Q:4:LEU:O	2:Q:111:GLY:HA2	2.11	0.51
3:W:150:VAL:CB	3:W:151:LYS:HA	2.41	0.51
2:P:12:VAL:N	2:P:117:THR:O	2.43	0.51
3:S:155:ILE:HA	3:S:196:SER:O	2.11	0.51
1:B:159:LEU:HD11	1:B:238:CYS:SG	2.51	0.51
1:B:220:PRO:C	1:B:222:ARG:H	2.15	0.51
2:P:47:TRP:CE3	3:S:100:PRO:HD2	2.46	0.51
2:P:66:GLY:HA2	2:P:83:LEU:HB3	1.93	0.51
2:P:150:LYS:HG3	2:P:183:THR:HB	1.94	0.50
1:B:87:TYR:CE1	1:B:424:TYR:HB2	2.46	0.50
1:C:308:GLY:O	1:C:428:TYR:HE1	1.94	0.50
1:D:92:LEU:HD11	1:D:417:LEU:HD21	1.93	0.50
3:W:200:GLU:HG2	3:W:211:VAL:HG23	1.93	0.50
1:D:41:ILE:O	1:D:41:ILE:HG22	2.11	0.50
1:D:69:SER:C	1:D:71:GLY:HA3	2.31	0.50
1:D:219:ASN:H	1:D:220:PRO:HD3	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:87:TYR:CE1	1:A:424:TYR:HB2	2.45	0.50
1:C:69:SER:C	1:C:71:GLY:HA3	2.32	0.50
1:C:251:PRO:HB2	1:C:257:VAL:HG22	1.94	0.50
1:D:147:ILE:HD12	1:D:148:THR:N	2.26	0.50
2:P:2:VAL:HB	2:P:109:TYR:CD1	2.46	0.50
2:P:4:LEU:O	2:P:111:GLY:HA2	2.12	0.50
2:P:92:SER:O	2:P:93:VAL:C	2.49	0.50
2:P:187:SER:HB3	3:S:139:PHE:CE2	2.47	0.50
1:A:287:LEU:O	1:A:290:LEU:HB2	2.11	0.50
1:A:309:LEU:O	1:A:310:PHE:CB	2.60	0.50
2:Q:150:LYS:HG3	2:Q:183:THR:HB	1.94	0.50
2:P:135:CYS:SG	3:S:214:PHE:HB2	2.51	0.50
3:W:151:LYS:C	3:W:152:TRP:CG	2.85	0.50
3:S:200:GLU:HG2	3:S:211:VAL:HG23	1.94	0.50
1:A:134:TRP:O	1:A:138:LEU:HG	2.12	0.50
1:B:119:LEU:HB3	1:B:124:VAL:HG11	1.92	0.50
1:B:343:SER:CB	1:B:344:PRO:HD3	2.36	0.50
1:D:313:ILE:H	1:D:313:ILE:CD1	2.21	0.50
2:P:144:THR:O	3:S:122:PHE:HZ	1.94	0.50
1:A:134:TRP:HE1	1:A:335:THR:CG2	2.20	0.50
1:A:166:ALA:HA	1:A:167:VAL:O	2.12	0.50
1:A:170:TRP:N	1:A:249:MET:HE1	2.27	0.50
1:A:249:MET:HE3	1:A:249:MET:H	1.76	0.50
1:C:121:ASP:HB3	1:C:122:PRO:CD	2.42	0.50
1:D:222:ARG:O	1:D:226:ILE:HG13	2.12	0.50
2:Q:63:LYS:CB	2:Q:67:LYS:HZ3	2.24	0.50
1:A:37:ALA:O	1:A:38:THR:HG22	2.12	0.50
1:B:287:LEU:O	1:B:290:LEU:HB2	2.11	0.50
1:D:436:TYR:N	1:D:436:TYR:CD2	2.80	0.50
2:P:50:TRP:O	2:P:57:SER:HB2	2.12	0.50
1:A:159:LEU:HD11	1:A:238:CYS:SG	2.52	0.50
1:A:246:ILE:O	1:A:251:PRO:HD2	2.12	0.50
1:D:251:PRO:HB2	1:D:257:VAL:HG22	1.94	0.50
2:Q:66:GLY:HA2	2:Q:83:LEU:HB3	1.93	0.50
2:Q:134:VAL:HG12	2:Q:135:CYS:SG	2.52	0.50
3:W:51:TRP:HZ3	3:W:66:PHE:CD2	2.30	0.50
3:W:95:TRP:CH2	3:W:100:PRO:HD3	2.46	0.50
3:S:23:CYS:HB2	3:S:39:TRP:CH2	2.47	0.50
1:A:39:GLY:CA	1:A:247:MET:HG3	2.33	0.49
1:D:130:VAL:O	1:D:134:TRP:HD1	1.93	0.49
2:P:158:THR:HB	2:P:205:ALA:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:430:ARG:HG2	1:B:377:HIS:ND1	2.27	0.49
1:B:363:VAL:N	1:B:364:PRO:HD2	2.27	0.49
1:D:81:PHE:HB3	1:D:85:LEU:HD12	1.94	0.49
1:D:111:TYR:HB3	1:D:283:ALA:HB2	1.94	0.49
1:B:37:ALA:O	1:B:38:THR:HG22	2.12	0.49
1:B:166:ALA:HA	1:B:167:VAL:O	2.12	0.49
2:P:11:LEU:CD1	2:P:117:THR:HB	2.42	0.49
1:A:57:SER:HB3	1:A:232:VAL:HG21	1.94	0.49
1:A:159:LEU:O	1:A:163:VAL:HG12	2.13	0.49
1:D:69:SER:O	1:D:71:GLY:HA3	2.12	0.49
3:S:198:THR:CG2	3:S:213:SER:HB2	2.42	0.49
1:B:159:LEU:O	1:B:163:VAL:HG12	2.13	0.49
1:B:250:ILE:HG23	1:B:269:ALA:HB3	1.94	0.49
1:C:69:SER:O	1:C:71:GLY:HA3	2.13	0.49
1:C:111:TYR:HB3	1:C:283:ALA:HB2	1.94	0.49
1:C:339:PHE:O	1:C:344:PRO:HD2	2.12	0.49
1:A:249:MET:H	1:A:249:MET:CE	2.26	0.49
1:A:363:VAL:N	1:A:364:PRO:HD2	2.27	0.49
1:B:309:LEU:O	1:B:310:PHE:CB	2.60	0.49
1:B:339:PHE:O	1:B:344:PRO:CD	2.60	0.49
1:D:121:ASP:HB3	1:D:122:PRO:CD	2.43	0.49
1:D:357:SER:O	1:D:360:PHE:HB2	2.11	0.49
1:D:377:HIS:HD1	1:D:378:GLY:H	1.60	0.49
2:P:30:THR:HG22	2:P:53:PRO:HB2	1.94	0.49
3:S:146:LYS:HE2	3:S:178:TYR:CE2	2.47	0.49
1:C:268:MET:O	1:C:269:ALA:CB	2.59	0.49
1:C:313:ILE:H	1:C:313:ILE:CD1	2.21	0.49
1:D:433:LYS:HE2	2:Q:52:TYR:CG	2.48	0.49
3:W:112:ARG:HD3	3:W:113:ALA:O	2.13	0.49
3:W:140:LEU:HD12	3:W:140:LEU:N	2.28	0.49
1:D:122:PRO:C	1:D:124:VAL:H	2.16	0.49
2:P:67:LYS:HB2	2:P:80:TYR:HE1	1.77	0.49
1:A:140:ASN:HD22	1:A:327:LEU:HD11	1.78	0.49
1:C:429:ASN:OD1	1:C:430:ARG:HG3	2.13	0.49
3:W:149:ASN:ND2	3:W:151:LYS:HE2	2.28	0.49
1:A:250:ILE:HG23	1:A:269:ALA:HB3	1.94	0.49
1:B:57:SER:HB3	1:B:232:VAL:HG21	1.94	0.49
2:Q:30:THR:HG22	2:Q:53:PRO:HB2	1.95	0.49
2:Q:67:LYS:HB2	2:Q:80:TYR:HE1	1.77	0.49
2:P:90:ASN:CB	2:P:118:VAL:HG12	2.34	0.49
1:A:131:ALA:O	1:A:135:ILE:HG13	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:131:ALA:O	1:B:135:ILE:HG13	2.12	0.48
1:B:141:ILE:HD12	1:B:328:LEU:HD21	1.95	0.48
1:C:222:ARG:O	1:C:226:ILE:HG13	2.13	0.48
1:C:357:SER:O	1:C:360:PHE:HB2	2.12	0.48
1:C:436:TYR:N	1:C:436:TYR:CD2	2.81	0.48
1:D:159:LEU:O	1:D:163:VAL:HG12	2.13	0.48
3:W:146:LYS:HE2	3:W:178:TYR:CE2	2.48	0.48
3:S:144:TYR:CG	3:S:145:PRO:HA	2.48	0.48
1:A:436:TYR:HE2	2:P:103:TYR:HE2	1.60	0.48
1:C:159:LEU:O	1:C:163:VAL:HG12	2.13	0.48
2:Q:92:SER:O	2:Q:93:VAL:CB	2.59	0.48
3:S:140:LEU:HD12	3:S:140:LEU:N	2.27	0.48
1:B:140:ASN:HD22	1:B:327:LEU:HD11	1.78	0.48
1:C:343:SER:HB2	1:C:344:PRO:CD	2.42	0.48
2:Q:27:TYR:CE2	2:Q:98:ARG:HD2	2.48	0.48
2:Q:106:TRP:HB3	3:W:38:HIS:CE1	2.48	0.48
1:B:140:ASN:HD21	1:B:295:LEU:HA	1.78	0.48
3:W:82:MET:SD	3:W:108:LEU:HD21	2.52	0.48
3:W:198:THR:CG2	3:W:213:SER:HB2	2.43	0.48
1:A:60:TYR:CE1	1:A:208:GLU:HB3	2.48	0.48
1:A:220:PRO:C	1:A:222:ARG:H	2.15	0.48
1:A:410:VAL:HG13	1:B:414:PHE:HD1	1.78	0.48
1:B:101:ASN:ND2	1:B:294:THR:HG23	2.29	0.48
1:B:246:ILE:O	1:B:251:PRO:HD2	2.12	0.48
1:C:59:VAL:HG22	1:C:391:THR:HG22	1.95	0.48
1:D:354:SER:C	1:D:356:VAL:H	2.16	0.48
2:Q:158:THR:HB	2:Q:205:ALA:HB3	1.95	0.48
3:W:54:ASP:HB2	3:W:57:LYS:HD3	1.96	0.48
1:B:31:LEU:CB	1:B:32:PRO:HD3	2.43	0.48
1:D:110:GLY:O	1:D:114:TYR:HB2	2.13	0.48
3:S:51:TRP:HZ3	3:S:66:PHE:CD2	2.31	0.48
3:S:146:LYS:HE2	3:S:178:TYR:HE2	1.79	0.48
1:A:140:ASN:HD21	1:A:295:LEU:HA	1.79	0.48
1:A:169:GLY:HA2	1:A:170:TRP:HA	1.65	0.48
1:A:381:GLY:HA3	1:A:383:ALA:H	1.79	0.48
1:B:134:TRP:O	1:B:138:LEU:HG	2.12	0.48
1:D:59:VAL:HG22	1:D:391:THR:HG22	1.95	0.48
1:D:429:ASN:OD1	1:D:430:ARG:HG3	2.14	0.48
2:P:27:TYR:CE2	2:P:98:ARG:HD2	2.48	0.48
3:W:144:TYR:CG	3:W:145:PRO:HA	2.48	0.48
1:A:70:PRO:N	1:A:71:GLY:HA3	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:32:PRO:HG3	1:D:262:PHE:HB2	1.95	0.48
1:B:117:PRO:O	1:B:118:ILE:C	2.53	0.48
1:C:35:LEU:HA	1:C:38:THR:O	2.14	0.48
1:D:435:PRO:HG3	2:Q:103:TYR:CD1	2.49	0.48
2:P:152:TYR:CE1	2:P:182:TYR:HB2	2.49	0.48
3:S:20:THR:HG23	3:S:78:THR:HG22	1.96	0.48
1:A:433:LYS:O	1:A:435:PRO:HD3	2.14	0.47
1:B:73:SER:HB3	1:B:74:TYR:H	1.59	0.47
1:B:165:ILE:O	1:B:166:ALA:CB	2.62	0.47
1:C:141:ILE:HG23	1:C:141:ILE:O	2.14	0.47
1:C:346:ALA:H	1:C:347:ALA:C	2.17	0.47
1:D:141:ILE:HG23	1:D:141:ILE:O	2.14	0.47
2:P:134:VAL:O	2:P:135:CYS:HB2	2.13	0.47
3:S:54:ASP:HB2	3:S:57:LYS:HD3	1.96	0.47
3:S:112:ARG:HD3	3:S:113:ALA:O	2.14	0.47
1:A:165:ILE:O	1:A:166:ALA:CB	2.62	0.47
1:D:307:ASP:C	1:D:309:LEU:H	2.17	0.47
2:Q:60:TYR:CE2	3:W:99:PRO:HG2	2.49	0.47
1:A:101:ASN:ND2	1:A:294:THR:HG23	2.29	0.47
1:A:141:ILE:HD12	1:A:328:LEU:HD21	1.96	0.47
1:B:130:VAL:HG13	1:B:335:THR:HG22	1.96	0.47
1:B:249:MET:H	1:B:249:MET:CE	2.26	0.47
2:Q:119:SER:HB3	2:Q:153:PHE:CZ	2.49	0.47
2:Q:152:TYR:CE1	2:Q:182:TYR:HB2	2.49	0.47
1:A:268:MET:HG3	1:A:269:ALA:H	1.79	0.47
1:B:10:VAL:HA	1:B:11:GLY:HA2	1.61	0.47
1:B:70:PRO:N	1:B:71:GLY:HA3	2.29	0.47
2:Q:10:GLU:HG2	2:Q:11:LEU:CD2	2.37	0.47
1:A:117:PRO:O	1:A:118:ILE:C	2.53	0.47
1:C:32:PRO:HG3	1:C:262:PHE:HB2	1.95	0.47
1:C:122:PRO:C	1:C:124:VAL:H	2.16	0.47
1:D:134:TRP:HA	1:D:137:VAL:CG1	2.43	0.47
1:B:60:TYR:CE1	1:B:208:GLU:HB3	2.49	0.47
1:B:134:TRP:HE1	1:B:335:THR:CG2	2.19	0.47
1:B:197:LEU:HB3	1:B:201:LEU:HG	1.96	0.47
1:C:165:ILE:O	1:C:165:ILE:HG22	2.15	0.47
1:D:35:LEU:HA	1:D:38:THR:O	2.14	0.47
1:D:80:CYS:SG	1:D:371:ALA:HA	2.55	0.47
1:A:349:GLU:O	1:A:353:VAL:HG23	2.14	0.47
1:B:125:LEU:HD23	1:B:125:LEU:O	2.15	0.47
1:C:73:SER:OG	1:C:364:PRO:HB3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:110:GLY:O	1:C:114:TYR:HB2	2.14	0.47
1:C:307:ASP:C	1:C:309:LEU:H	2.18	0.47
1:D:248:GLY:HA3	1:D:249:MET:HA	1.70	0.47
2:Q:63:LYS:NZ	2:Q:67:LYS:HZ3	2.12	0.47
2:Q:126:PRO:HA	2:Q:151:GLY:O	2.14	0.47
2:Q:145:LEU:HD23	2:Q:145:LEU:N	2.30	0.47
2:P:18:VAL:O	2:P:81:MET:HA	2.15	0.47
2:P:119:SER:HB3	2:P:153:PHE:CZ	2.50	0.47
2:P:154:PRO:HB3	2:P:208:ALA:CB	2.45	0.47
3:W:200:GLU:HG2	3:W:211:VAL:CG2	2.45	0.47
1:A:31:LEU:CB	1:A:32:PRO:HD3	2.44	0.47
1:C:134:TRP:HA	1:C:137:VAL:CG1	2.43	0.47
1:D:361:THR:O	1:D:365:TYR:HD2	1.97	0.47
1:C:219:ASN:H	1:C:220:PRO:HD3	1.76	0.47
1:C:393:VAL:O	1:C:396:VAL:HG12	2.15	0.47
1:D:73:SER:OG	1:D:364:PRO:HB3	2.14	0.47
1:D:207:VAL:C	1:D:209:SER:H	2.18	0.47
1:D:346:ALA:HA	1:D:347:ALA:HA	1.56	0.47
2:Q:48:ILE:HG23	2:Q:67:LYS:HZ2	1.80	0.47
2:P:12:VAL:CG1	2:P:13:LYS:N	2.78	0.47
3:W:20:THR:HG23	3:W:78:THR:HG22	1.96	0.47
1:A:141:ILE:HG12	1:A:141:ILE:O	2.15	0.47
1:C:49:THR:OG1	1:C:201:LEU:HD23	2.15	0.47
1:C:252:ASN:HA	1:C:253:ALA:HA	1.65	0.47
1:D:433:LYS:HE2	2:Q:52:TYR:CD2	2.50	0.47
1:A:377:HIS:ND1	1:B:430:ARG:HG2	2.29	0.46
1:B:381:GLY:HA3	1:B:383:ALA:H	1.80	0.46
1:C:332:VAL:O	1:C:336:ILE:HG13	2.15	0.46
1:D:247:MET:N	1:D:248:GLY:O	2.48	0.46
1:D:363:VAL:HB	1:D:364:PRO:HD3	1.97	0.46
2:Q:53:PRO:HA	2:Q:71:THR:HG21	1.98	0.46
2:Q:63:LYS:HD2	2:Q:67:LYS:HZ3	1.80	0.46
2:P:63:LYS:CB	2:P:67:LYS:HZ3	2.27	0.46
3:W:65:ARG:CZ	3:W:83:GLU:HG3	2.45	0.46
3:S:65:ARG:CZ	3:S:83:GLU:HG3	2.45	0.46
1:A:130:VAL:HG13	1:A:335:THR:HG22	1.97	0.46
1:A:205:ILE:HG23	1:A:361:THR:HG21	1.97	0.46
1:B:262:PHE:CG	1:B:263:GLY:N	2.83	0.46
1:C:81:PHE:HB3	1:C:85:LEU:HD12	1.96	0.46
1:C:361:THR:O	1:C:365:TYR:HD2	1.98	0.46
1:D:147:ILE:H	1:D:147:ILE:HG13	1.56	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:145:LEU:N	2:P:145:LEU:HD23	2.30	0.46
2:P:187:SER:HB3	3:S:139:PHE:CD2	2.50	0.46
3:W:146:LYS:HE2	3:W:178:TYR:HE2	1.79	0.46
1:A:121:ASP:HB3	1:A:122:PRO:HD2	1.97	0.46
2:P:126:PRO:HA	2:P:151:GLY:O	2.14	0.46
1:B:85:LEU:HD12	1:B:85:LEU:N	2.31	0.46
1:B:360:PHE:HE2	1:B:413:SER:HA	1.80	0.46
1:B:435:PRO:HA	1:B:436:TYR:HA	1.59	0.46
1:C:170:TRP:H	1:C:249:MET:HG3	1.80	0.46
1:C:363:VAL:HB	1:C:364:PRO:HD3	1.96	0.46
1:C:430:ARG:HG2	1:D:377:HIS:HD2	1.76	0.46
1:D:10:VAL:CG2	1:D:145:LYS:HE3	2.45	0.46
2:P:134:VAL:O	2:P:135:CYS:CB	2.62	0.46
3:W:110:ILE:H	3:W:110:ILE:CD1	2.26	0.46
1:A:125:LEU:O	1:A:125:LEU:HD23	2.15	0.46
1:A:360:PHE:HE2	1:A:413:SER:HA	1.80	0.46
1:C:182:TRP:O	1:C:184:VAL:N	2.48	0.46
2:Q:154:PRO:HB3	2:Q:208:ALA:CB	2.45	0.46
2:P:53:PRO:HA	2:P:71:THR:HG21	1.97	0.46
1:B:222:ARG:O	1:B:226:ILE:HG13	2.16	0.46
1:B:248:GLY:HA2	1:B:249:MET:HA	1.63	0.46
1:B:268:MET:HG3	1:B:269:ALA:H	1.79	0.46
2:Q:65:LYS:O	2:Q:67:LYS:HG2	2.15	0.46
1:B:43:ILE:C	1:B:45:GLY:H	2.19	0.46
1:C:70:PRO:HB3	1:C:215:GLY:CA	2.46	0.46
1:A:197:LEU:HB3	1:A:201:LEU:HG	1.96	0.46
1:A:216:VAL:O	1:A:217:VAL:HB	2.16	0.46
1:B:216:VAL:O	1:B:217:VAL:HB	2.15	0.46
1:C:79:ARG:HB2	1:D:436:TYR:O	2.16	0.46
1:C:147:ILE:HD12	1:C:148:THR:H	1.81	0.46
1:D:250:ILE:HG23	1:D:269:ALA:CB	2.45	0.46
2:Q:18:VAL:O	2:Q:81:MET:HA	2.15	0.46
2:P:65:LYS:O	2:P:67:LYS:HG2	2.16	0.46
3:S:39:TRP:HA	3:S:91:TYR:O	2.15	0.46
1:A:117:PRO:HG2	1:A:120:LYS:HE2	1.98	0.46
1:C:403:ILE:HA	1:D:411:MET:CE	2.46	0.46
1:C:411:MET:CE	1:D:403:ILE:HA	2.46	0.46
1:D:165:ILE:HG22	1:D:165:ILE:O	2.15	0.46
3:W:154:LYS:HA	3:W:159:GLU:HA	1.98	0.46
1:A:72:GLY:HA3	1:A:75:ALA:H	1.81	0.46
1:A:85:LEU:N	1:A:85:LEU:HD12	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:222:ARG:O	1:A:226:ILE:HG13	2.16	0.46
1:B:205:ILE:HG23	1:B:361:THR:HG21	1.97	0.46
1:D:427:ASN:C	1:D:429:ASN:H	2.19	0.46
3:W:144:TYR:O	3:W:203:HIS:HE1	1.99	0.46
1:A:435:PRO:HB2	2:P:103:TYR:CD2	2.50	0.45
1:B:72:GLY:HA3	1:B:75:ALA:H	1.81	0.45
1:D:70:PRO:HB3	1:D:215:GLY:CA	2.46	0.45
1:D:207:VAL:O	1:D:209:SER:N	2.50	0.45
2:Q:134:VAL:HG12	2:Q:135:CYS:N	2.31	0.45
2:P:60:TYR:CE2	2:P:62:GLU:HB3	2.51	0.45
2:P:102:ASN:HA	2:P:103:TYR:HA	1.72	0.45
1:A:68:PRO:HB3	1:A:220:PRO:HB2	1.99	0.45
1:D:332:VAL:O	1:D:336:ILE:HG13	2.16	0.45
2:Q:47:TRP:CG	3:W:100:PRO:HG2	2.52	0.45
2:Q:63:LYS:HD2	2:Q:67:LYS:NZ	2.32	0.45
3:S:200:GLU:HG2	3:S:211:VAL:CG2	2.45	0.45
1:A:339:PHE:O	1:A:344:PRO:HD2	2.16	0.45
1:D:49:THR:OG1	1:D:201:LEU:HD23	2.16	0.45
2:Q:63:LYS:HB3	2:Q:67:LYS:HE2	1.99	0.45
2:Q:129:TYR:HB3	3:W:125:SER:OG	2.16	0.45
1:A:43:ILE:C	1:A:45:GLY:H	2.19	0.45
1:A:274:ALA:CA	1:A:275:GLY:C	2.84	0.45
1:B:68:PRO:HB3	1:B:220:PRO:HB2	1.99	0.45
1:C:382:LYS:C	1:C:384:ARG:H	2.18	0.45
1:D:29:PHE:O	1:D:29:PHE:CG	2.69	0.45
1:D:71:GLY:H	1:D:303:ALA:CB	2.30	0.45
3:S:144:TYR:O	3:S:203:HIS:HE1	2.00	0.45
1:D:147:ILE:HD12	1:D:148:THR:HG23	1.99	0.45
1:D:250:ILE:HG12	1:D:269:ALA:HB3	1.99	0.45
3:S:30:ASN:O	3:S:36:TYR:CB	2.64	0.45
1:A:134:TRP:HA	1:A:137:VAL:HB	1.99	0.45
1:C:71:GLY:H	1:C:303:ALA:CB	2.30	0.45
1:C:147:ILE:HD12	1:C:148:THR:HG23	1.98	0.45
1:C:260:SER:HA	1:C:261:PRO:HD3	1.79	0.45
1:D:147:ILE:HD12	1:D:148:THR:H	1.82	0.45
1:D:170:TRP:H	1:D:249:MET:HG3	1.80	0.45
1:A:10:VAL:HA	1:A:11:GLY:HA2	1.61	0.45
1:B:53:ALA:HA	1:B:397:TYR:CE1	2.52	0.45
1:B:117:PRO:HG2	1:B:120:LYS:HE2	1.98	0.45
1:B:141:ILE:HG12	1:B:141:ILE:O	2.15	0.45
1:D:74:TYR:CZ	1:D:304:ALA:HA	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:205:ILE:HG23	1:D:361:THR:HG21	1.99	0.45
1:D:361:THR:HG22	1:D:365:TYR:CE2	2.49	0.45
3:S:129:LEU:HD12	3:S:129:LEU:H	1.82	0.45
1:A:146:MET:O	1:A:150:VAL:HG23	2.17	0.45
1:A:216:VAL:C	1:A:218:LYS:H	2.20	0.45
1:A:262:PHE:CG	1:A:263:GLY:N	2.84	0.45
1:C:141:ILE:HA	1:C:142:VAL:HA	1.48	0.45
1:D:81:PHE:CB	1:D:85:LEU:HD12	2.47	0.45
1:D:143:GLY:O	1:D:146:MET:HB3	2.17	0.45
1:A:13:ILE:N	1:A:14:PRO:CD	2.80	0.45
1:B:13:ILE:N	1:B:14:PRO:CD	2.80	0.45
1:C:29:PHE:CG	1:C:29:PHE:O	2.69	0.45
1:C:85:LEU:HD21	1:D:85:LEU:HD11	1.98	0.45
1:C:121:ASP:HB3	1:C:122:PRO:HD2	1.98	0.45
1:C:143:GLY:O	1:C:146:MET:HB3	2.17	0.45
1:D:182:TRP:O	1:D:184:VAL:N	2.49	0.45
1:D:260:SER:HA	1:D:261:PRO:HD3	1.79	0.45
1:D:393:VAL:O	1:D:396:VAL:HG12	2.16	0.45
2:Q:60:TYR:CE2	2:Q:62:GLU:HB3	2.52	0.45
2:P:60:TYR:CE2	3:S:99:PRO:HG2	2.52	0.45
2:P:60:TYR:C	2:P:60:TYR:CD2	2.91	0.45
3:W:127:GLU:HA	3:W:130:THR:OG1	2.17	0.45
3:W:151:LYS:O	3:W:152:TRP:CD1	2.70	0.45
3:S:2:LEU:HD22	3:S:94:GLN:HE21	1.82	0.45
3:S:127:GLU:HA	3:S:130:THR:OG1	2.17	0.45
1:A:70:PRO:HB2	1:A:71:GLY:HA2	1.99	0.45
1:B:327:LEU:HD13	1:B:327:LEU:O	2.17	0.45
1:C:132:VAL:HA	1:C:135:ILE:HD12	1.99	0.45
1:D:141:ILE:HA	1:D:142:VAL:HA	1.48	0.45
3:S:40:TYR:HD1	3:S:50:ARG:HA	1.82	0.45
1:A:23:ILE:HG12	1:A:206:GLY:CA	2.24	0.44
1:A:435:PRO:HA	1:A:436:TYR:HA	1.59	0.44
1:B:216:VAL:C	1:B:218:LYS:H	2.20	0.44
1:B:434:ASN:O	1:B:437:PRO:HG3	2.17	0.44
1:C:428:TYR:N	1:C:428:TYR:CD2	2.85	0.44
2:Q:121:ALA:HB3	2:Q:153:PHE:CE2	2.52	0.44
3:S:191:TYR:HA	3:S:197:TYR:OH	2.17	0.44
1:B:121:ASP:HB3	1:B:122:PRO:HD2	1.98	0.44
1:B:433:LYS:HE2	2:P:52:TYR:CG	2.52	0.44
1:C:70:PRO:O	1:C:303:ALA:HB2	2.17	0.44
2:Q:12:VAL:O	2:Q:118:VAL:HA	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:W:129:LEU:HD12	3:W:129:LEU:N	2.32	0.44
1:B:70:PRO:HB2	1:B:71:GLY:HA2	1.99	0.44
1:C:373:LEU:CD1	1:D:426:LEU:HD23	2.47	0.44
1:C:435:PRO:HA	1:C:436:TYR:HA	1.68	0.44
1:D:252:ASN:HA	1:D:253:ALA:HA	1.66	0.44
2:P:60:TYR:HD2	2:P:60:TYR:C	2.21	0.44
2:P:121:ALA:HB3	2:P:153:PHE:CE2	2.53	0.44
1:A:327:LEU:O	1:A:327:LEU:HD13	2.18	0.44
1:D:392:PHE:O	1:D:395:PHE:HB2	2.17	0.44
2:Q:151:GLY:O	2:Q:152:TYR:HB3	2.18	0.44
2:P:133:PRO:HG2	2:P:195:TRP:CH2	2.53	0.44
3:W:129:LEU:HD12	3:W:129:LEU:H	1.81	0.44
3:S:154:LYS:HA	3:S:159:GLU:HA	1.98	0.44
1:A:53:ALA:HA	1:A:397:TYR:CE1	2.52	0.44
1:A:292:GLY:O	1:A:296:LEU:HG	2.17	0.44
1:B:78:ARG:HA	1:B:82:GLY:O	2.17	0.44
1:B:147:ILE:HD11	1:B:291:GLY:C	2.38	0.44
1:C:207:VAL:C	1:C:209:SER:H	2.19	0.44
1:C:361:THR:HG22	1:C:365:TYR:CE2	2.49	0.44
1:C:440:ALA:HB2	3:W:97:TYR:CD2	2.53	0.44
1:D:31:LEU:HB2	1:D:246:ILE:HD11	2.00	0.44
1:D:71:GLY:HA2	1:D:75:ALA:HB2	2.00	0.44
3:W:203:HIS:CE1	3:W:205:THR:HG23	2.52	0.44
1:A:60:TYR:CZ	1:A:208:GLU:HB3	2.53	0.44
1:A:377:HIS:HB3	1:B:429:ASN:OD1	2.16	0.44
1:C:247:MET:N	1:C:248:GLY:O	2.48	0.44
3:W:40:TYR:HD1	3:W:50:ARG:HA	1.82	0.44
1:A:78:ARG:HA	1:A:82:GLY:O	2.17	0.44
1:A:270:LEU:HD13	1:A:270:LEU:O	2.17	0.44
1:A:434:ASN:O	1:A:437:PRO:HG3	2.18	0.44
1:B:170:TRP:O	1:B:249:MET:HG3	2.18	0.44
1:B:311:PRO:HA	1:B:312:PRO:HD3	1.71	0.44
1:B:377:HIS:HE1	3:S:30:ASN:HD21	1.66	0.44
1:C:71:GLY:HA2	1:C:75:ALA:HB2	2.00	0.44
1:C:74:TYR:CZ	1:C:304:ALA:HA	2.52	0.44
1:C:80:CYS:SG	1:C:371:ALA:HA	2.58	0.44
1:C:207:VAL:O	1:C:209:SER:N	2.50	0.44
1:C:392:PHE:O	1:C:395:PHE:HB2	2.18	0.44
2:Q:160:THR:O	2:Q:203:ASN:N	2.49	0.44
2:P:9:PRO:CB	2:P:10:GLU:CB	2.90	0.44
3:W:123:PRO:HB3	3:W:214:PHE:CE1	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:123:PRO:HB3	3:S:214:PHE:CE1	2.53	0.44
1:A:147:ILE:HD11	1:A:291:GLY:C	2.38	0.44
1:B:250:ILE:HB	1:B:251:PRO:CD	2.40	0.44
1:C:216:VAL:HG12	1:C:217:VAL:N	2.33	0.44
1:D:250:ILE:HG23	1:D:269:ALA:HB2	2.00	0.44
1:D:360:PHE:CZ	1:D:416:THR:HG21	2.53	0.44
2:Q:134:VAL:CG1	2:Q:135:CYS:N	2.80	0.44
2:P:4:LEU:HG	2:P:96:CYS:SG	2.57	0.44
3:W:112:ARG:HD2	3:W:144:TYR:HB2	2.00	0.44
3:S:175:ASP:O	3:S:176:SER:HB2	2.18	0.44
1:B:105:VAL:CG1	1:B:290:LEU:HD11	2.48	0.44
1:B:134:TRP:HA	1:B:137:VAL:HB	1.99	0.44
2:Q:34:ILE:O	2:Q:50:TRP:HA	2.18	0.44
2:Q:101:GLY:HA2	2:Q:102:ASN:CB	2.18	0.44
3:W:191:TYR:HA	3:W:197:TYR:OH	2.17	0.44
1:B:433:LYS:O	1:B:435:PRO:HD3	2.18	0.43
1:D:10:VAL:HA	1:D:11:GLY:HA2	1.73	0.43
1:D:132:VAL:HA	1:D:135:ILE:HD12	2.00	0.43
2:P:34:ILE:O	2:P:50:TRP:HA	2.17	0.43
2:P:60:TYR:CD2	2:P:61:ASN:N	2.86	0.43
3:S:129:LEU:HD12	3:S:129:LEU:N	2.32	0.43
3:S:193:ARG:NH1	3:S:193:ARG:HA	2.33	0.43
1:C:205:ILE:HG23	1:C:361:THR:HG21	1.99	0.43
2:Q:131:LEU:HB2	2:Q:146:GLY:C	2.38	0.43
2:P:18:VAL:HG22	2:P:19:LYS:N	2.33	0.43
1:A:250:ILE:HB	1:A:251:PRO:CD	2.40	0.43
1:A:369:CYS:HB2	1:A:395:PHE:CE1	2.53	0.43
1:B:13:ILE:CG2	1:B:14:PRO:HD3	2.47	0.43
1:D:70:PRO:O	1:D:303:ALA:HB2	2.17	0.43
1:D:250:ILE:HB	1:D:251:PRO:CD	2.45	0.43
2:Q:10:GLU:OE2	2:Q:11:LEU:CD2	2.66	0.43
2:Q:41:PRO:HA	2:Q:92:SER:OG	2.19	0.43
1:A:262:PHE:CZ	1:A:266:ALA:HB2	2.54	0.43
1:A:270:LEU:HD22	1:A:270:LEU:HA	1.88	0.43
1:A:325:ALA:C	1:A:327:LEU:H	2.22	0.43
1:B:111:TYR:HB3	1:B:283:ALA:HB2	2.00	0.43
1:B:292:GLY:O	1:B:296:LEU:HG	2.18	0.43
1:B:369:CYS:HB2	1:B:395:PHE:CE1	2.53	0.43
2:P:131:LEU:HB2	2:P:146:GLY:C	2.39	0.43
3:W:30:ASN:O	3:W:36:TYR:CB	2.65	0.43
1:A:170:TRP:O	1:A:249:MET:HG3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:292:GLY:O	1:A:295:LEU:HB3	2.19	0.43
1:B:377:HIS:HE1	3:S:30:ASN:ND2	2.16	0.43
2:Q:4:LEU:HG	2:Q:96:CYS:SG	2.58	0.43
3:W:2:LEU:HD22	3:W:94:GLN:HE21	1.83	0.43
1:A:105:VAL:CG1	1:A:290:LEU:HD11	2.48	0.43
1:A:111:TYR:HB3	1:A:283:ALA:HB2	2.00	0.43
1:C:91:VAL:O	1:C:95:LEU:HG	2.19	0.43
1:C:218:LYS:O	1:C:219:ASN:CB	2.67	0.43
1:C:381:GLY:HA2	1:C:382:LYS:HA	1.60	0.43
1:D:117:PRO:O	1:D:118:ILE:C	2.57	0.43
2:Q:60:TYR:C	2:Q:60:TYR:CD2	2.92	0.43
3:S:151:LYS:HB2	3:S:200:GLU:HB2	2.00	0.43
1:A:13:ILE:CG2	1:A:14:PRO:HD3	2.48	0.43
1:A:140:ASN:ND2	1:A:295:LEU:HA	2.33	0.43
1:B:140:ASN:ND2	1:B:295:LEU:HA	2.33	0.43
1:C:81:PHE:CB	1:C:85:LEU:HD12	2.48	0.43
1:D:31:LEU:H	1:D:31:LEU:HG	1.38	0.43
1:D:313:ILE:HD12	1:D:313:ILE:N	2.25	0.43
2:Q:6:GLN:HB3	2:Q:21:SER:O	2.17	0.43
2:Q:60:TYR:HD2	2:Q:60:TYR:C	2.22	0.43
3:S:2:LEU:HD11	3:S:29:VAL:HG12	2.01	0.43
3:S:112:ARG:HD2	3:S:144:TYR:HB2	2.00	0.43
3:S:203:HIS:CE1	3:S:205:THR:HG23	2.53	0.43
1:D:216:VAL:HG12	1:D:217:VAL:N	2.33	0.43
2:P:61:ASN:O	2:P:62:GLU:C	2.57	0.43
3:S:38:HIS:O	3:S:92:CYS:HA	2.18	0.43
1:B:169:GLY:HA2	1:B:170:TRP:HA	1.65	0.43
1:B:262:PHE:CZ	1:B:266:ALA:HB2	2.54	0.43
1:C:70:PRO:HB3	1:C:215:GLY:HA3	2.00	0.43
1:D:91:VAL:O	1:D:95:LEU:HG	2.18	0.43
1:D:121:ASP:HB3	1:D:122:PRO:HD2	1.99	0.43
1:D:435:PRO:HA	1:D:436:TYR:HA	1.69	0.43
2:Q:100:ASP:HB2	2:Q:108:ALA:HB2	2.01	0.43
2:P:6:GLN:HB3	2:P:21:SER:O	2.18	0.43
1:A:132:VAL:HA	1:A:135:ILE:HD12	2.01	0.43
1:B:60:TYR:CZ	1:B:208:GLU:HB3	2.53	0.43
1:B:267:ARG:HB3	1:B:272:ASP:O	2.19	0.43
2:Q:151:GLY:HA2	2:Q:181:LEU:HD23	2.01	0.43
1:B:146:MET:O	1:B:150:VAL:HG23	2.18	0.42
1:B:201:LEU:HD22	1:B:397:TYR:CE2	2.53	0.42
1:C:352:LEU:O	1:C:356:VAL:HG23	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:427:ASN:C	1:C:429:ASN:H	2.21	0.42
1:D:428:TYR:N	1:D:428:TYR:CD2	2.85	0.42
3:S:11:MET:HG3	3:S:108:LEU:HD12	2.01	0.42
1:A:201:LEU:HD22	1:A:397:TYR:CE2	2.53	0.42
1:A:246:ILE:C	1:A:248:GLY:N	2.72	0.42
1:C:85:LEU:HD11	1:D:85:LEU:HD21	2.01	0.42
1:C:389:LEU:O	1:C:392:PHE:HB3	2.18	0.42
1:D:267:ARG:CA	1:D:272:ASP:HB3	2.49	0.42
1:D:389:LEU:O	1:D:392:PHE:HB3	2.19	0.42
2:P:50:TRP:CD1	2:P:50:TRP:C	2.92	0.42
3:W:154:LYS:HG3	3:W:159:GLU:HB3	2.01	0.42
3:W:175:ASP:O	3:W:176:SER:HB2	2.18	0.42
1:C:140:ASN:HB3	1:C:327:LEU:HD11	2.01	0.42
1:D:70:PRO:HB3	1:D:215:GLY:HA3	2.00	0.42
3:W:11:MET:HG3	3:W:108:LEU:HD12	2.01	0.42
3:S:198:THR:HG23	3:S:213:SER:CB	2.47	0.42
2:Q:48:ILE:HG12	2:Q:67:LYS:HZ2	1.83	0.42
2:Q:50:TRP:C	2:Q:50:TRP:CD1	2.92	0.42
2:P:151:GLY:O	2:P:152:TYR:HB3	2.19	0.42
3:S:37:MET:HE2	3:S:37:MET:HB2	1.80	0.42
1:B:38:THR:HG21	1:B:41:ILE:CG2	2.41	0.42
1:B:318:ASN:C	1:B:320:ALA:H	2.22	0.42
1:C:69:SER:HA	1:C:70:PRO:HD3	1.80	0.42
1:D:92:LEU:HD11	1:D:417:LEU:CD2	2.50	0.42
1:D:151:GLN:HE22	1:D:289:SER:HA	1.84	0.42
2:Q:52:TYR:HD1	2:Q:53:PRO:HD2	1.84	0.42
2:Q:147:CYS:HB2	2:Q:161:TRP:CH2	2.55	0.42
2:P:63:LYS:HB3	2:P:67:LYS:HE2	2.00	0.42
2:P:153:PHE:H	2:P:154:PRO:HD3	1.84	0.42
1:A:109:VAL:C	1:A:111:TYR:H	2.23	0.42
1:A:248:GLY:HA2	1:A:249:MET:HA	1.63	0.42
1:C:117:PRO:O	1:C:118:ILE:C	2.57	0.42
1:D:218:LYS:O	1:D:219:ASN:CB	2.67	0.42
1:D:230:GLY:O	1:D:234:ILE:HG13	2.19	0.42
2:Q:145:LEU:HD23	2:Q:145:LEU:H	1.85	0.42
2:P:52:TYR:HD1	2:P:53:PRO:HD2	1.84	0.42
2:P:145:LEU:HD23	2:P:145:LEU:H	1.85	0.42
1:B:31:LEU:H	1:B:31:LEU:HG	1.58	0.42
1:B:343:SER:N	1:B:344:PRO:CD	2.82	0.42
1:C:115:PHE:CE2	1:C:280:PHE:HE1	2.38	0.42
1:C:249:MET:SD	1:C:249:MET:N	2.90	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:140:ASN:HB3	1:D:327:LEU:HD11	2.00	0.42
2:P:195:TRP:HB3	2:P:196:PRO:HD3	2.01	0.42
3:W:135:SER:HA	3:W:184:LEU:O	2.20	0.42
1:A:10:VAL:CB	1:A:218:LYS:HD3	2.47	0.42
1:B:246:ILE:C	1:B:248:GLY:N	2.72	0.42
1:C:79:ARG:HD3	1:C:375:LEU:HD11	2.01	0.42
1:C:151:GLN:HE22	1:C:289:SER:HA	1.84	0.42
1:D:72:GLY:HA3	1:D:73:SER:C	2.33	0.42
2:Q:60:TYR:CD2	2:Q:61:ASN:N	2.87	0.42
2:P:63:LYS:HD2	2:P:67:LYS:NZ	2.34	0.42
3:S:21:MET:HB3	3:S:106:THR:HG21	2.02	0.42
2:Q:40:ARG:HB3	2:Q:41:PRO:CD	2.49	0.42
2:Q:119:SER:HB3	2:Q:153:PHE:HZ	1.84	0.42
2:Q:150:LYS:HZ3	3:W:185:THR:HG21	1.85	0.42
3:S:53:TYR:CZ	3:S:57:LYS:HB3	2.54	0.42
1:A:99:ILE:O	1:A:102:ILE:HG13	2.20	0.42
1:A:345:ASN:O	1:A:347:ALA:CB	2.67	0.42
1:B:292:GLY:O	1:B:295:LEU:HB3	2.19	0.42
1:C:92:LEU:HD11	1:C:417:LEU:CD2	2.49	0.42
1:C:230:GLY:O	1:C:234:ILE:HG13	2.20	0.42
1:C:313:ILE:HD12	1:C:313:ILE:N	2.25	0.42
1:D:249:MET:SD	1:D:249:MET:N	2.90	0.42
2:Q:106:TRP:HB3	3:W:38:HIS:CG	2.54	0.42
3:W:43:LYS:HG2	3:W:88:ALA:HB2	2.01	0.42
3:S:135:SER:HA	3:S:184:LEU:O	2.19	0.42
1:A:69:SER:C	1:A:71:GLY:HA3	2.40	0.41
1:A:149:ARG:O	1:A:153:VAL:HG23	2.21	0.41
1:B:317:VAL:O	1:B:318:ASN:C	2.58	0.41
1:C:31:LEU:HB2	1:C:246:ILE:HD11	2.01	0.41
1:C:423:LEU:HD12	1:C:423:LEU:HA	1.93	0.41
3:W:208:SER:HA	3:W:209:PRO:HD3	1.92	0.41
1:B:99:ILE:O	1:B:102:ILE:HG13	2.20	0.41
1:B:165:ILE:O	1:B:165:ILE:HG22	2.20	0.41
1:B:267:ARG:CZ	1:B:276:ALA:HA	2.50	0.41
1:C:21:GLY:HA3	1:C:155:THR:HG21	2.02	0.41
2:Q:153:PHE:H	2:Q:154:PRO:HD3	1.85	0.41
2:P:119:SER:HB3	2:P:153:PHE:HZ	1.84	0.41
2:Q:41:PRO:N	2:Q:92:SER:HB2	2.36	0.41
2:Q:144:THR:O	3:W:122:PHE:HZ	2.03	0.41
3:W:38:HIS:O	3:W:92:CYS:HA	2.20	0.41
3:W:39:TRP:HA	3:W:91:TYR:O	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:S:110:ILE:H	3:S:110:ILE:CD1	2.25	0.41
3:S:154:LYS:HG3	3:S:159:GLU:HB3	2.02	0.41
1:A:170:TRP:C	1:A:249:MET:HE2	2.40	0.41
1:A:172:TRP:O	1:A:173:PHE:C	2.59	0.41
1:B:132:VAL:HA	1:B:135:ILE:HD12	2.01	0.41
1:C:261:PRO:O	1:C:262:PHE:C	2.59	0.41
1:D:21:GLY:HA3	1:D:155:THR:HG21	2.02	0.41
1:D:115:PHE:CE2	1:D:280:PHE:HE1	2.38	0.41
2:Q:10:GLU:OE2	2:Q:11:LEU:HD23	2.19	0.41
2:P:100:ASP:HB2	2:P:108:ALA:HB2	2.02	0.41
2:P:151:GLY:HA2	2:P:181:LEU:HD23	2.01	0.41
3:W:53:TYR:CZ	3:W:57:LYS:HB3	2.56	0.41
1:A:267:ARG:CZ	1:A:276:ALA:HA	2.50	0.41
1:B:109:VAL:C	1:B:111:TYR:H	2.22	0.41
1:C:73:SER:HA	1:C:368:THR:CG2	2.50	0.41
1:C:91:VAL:HG11	1:C:420:ILE:HD12	2.01	0.41
1:C:267:ARG:CA	1:C:272:ASP:HB3	2.49	0.41
1:D:12:LEU:CD2	1:D:13:ILE:HD12	2.50	0.41
1:D:101:ASN:O	1:D:104:MET:HB2	2.20	0.41
2:Q:7:SER:C	2:Q:9:PRO:HD2	2.40	0.41
2:Q:23:LYS:HE3	2:Q:23:LYS:HB2	1.88	0.41
2:Q:48:ILE:HG23	2:Q:67:LYS:HZ1	1.82	0.41
2:P:48:ILE:HG23	2:P:67:LYS:CE	2.49	0.41
1:B:380:PHE:HD2	1:B:380:PHE:HA	1.76	0.41
2:P:147:CYS:HB2	2:P:161:TRP:CH2	2.55	0.41
1:A:436:TYR:CE2	2:P:103:TYR:HE2	2.37	0.41
1:C:23:ILE:HG12	1:C:206:GLY:CA	2.50	0.41
1:D:73:SER:HA	1:D:368:THR:CG2	2.51	0.41
1:D:102:ILE:HD11	1:D:337:PHE:HB3	2.03	0.41
2:Q:48:ILE:HG23	2:Q:67:LYS:CE	2.50	0.41
2:Q:63:LYS:HB2	2:Q:63:LYS:NZ	2.34	0.41
2:Q:102:ASN:HA	2:Q:103:TYR:HA	1.73	0.41
2:Q:125:PRO:HB3	2:Q:211:THR:HG21	2.03	0.41
1:A:165:ILE:O	1:A:165:ILE:HG22	2.20	0.41
1:A:440:ALA:O	1:A:441:PRO:C	2.58	0.41
1:B:69:SER:C	1:B:71:GLY:HA3	2.41	0.41
1:B:149:ARG:O	1:B:153:VAL:HG23	2.21	0.41
2:Q:61:ASN:O	2:Q:62:GLU:C	2.58	0.41
2:Q:133:PRO:HG2	2:Q:195:TRP:CH2	2.56	0.41
2:P:63:LYS:HB2	2:P:63:LYS:NZ	2.36	0.41
1:B:407:ALA:O	1:B:408:LYS:C	2.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:12:LEU:CD2	1:C:13:ILE:HD12	2.50	0.41
1:C:31:LEU:H	1:C:31:LEU:HG	1.37	0.41
1:C:89:THR:CG2	1:C:367:TYR:HD2	2.34	0.41
1:C:386:LEU:HD23	1:C:386:LEU:C	2.41	0.41
1:D:79:ARG:HD3	1:D:375:LEU:HD11	2.02	0.41
1:D:152:ALA:O	1:D:156:VAL:HG23	2.21	0.41
1:D:386:LEU:HD23	1:D:386:LEU:C	2.41	0.41
2:Q:3:GLN:HA	2:Q:3:GLN:OE1	2.21	0.41
3:W:198:THR:HG23	3:W:213:SER:CB	2.48	0.41
1:A:49:THR:HG21	1:A:200:THR:HB	2.03	0.41
1:B:241:LEU:HD23	1:B:241:LEU:HA	1.94	0.41
1:C:152:ALA:O	1:C:156:VAL:HG23	2.21	0.41
1:D:87:TYR:HE1	1:D:424:TYR:HB2	1.82	0.41
1:D:207:VAL:C	1:D:209:SER:N	2.74	0.41
2:P:30:THR:HA	2:P:53:PRO:HB2	2.04	0.41
2:P:160:THR:O	2:P:203:ASN:N	2.48	0.41
1:B:416:THR:O	1:B:420:ILE:HG12	2.21	0.40
1:C:70:PRO:N	1:C:71:GLY:HA3	2.35	0.40
1:C:101:ASN:O	1:C:104:MET:HB2	2.21	0.40
1:C:119:LEU:HD13	1:C:124:VAL:CG1	2.51	0.40
1:D:119:LEU:HD13	1:D:124:VAL:CG1	2.50	0.40
1:D:356:VAL:HG12	1:D:356:VAL:O	2.20	0.40
2:Q:12:VAL:CG2	2:Q:13:LYS:N	2.84	0.40
2:P:104:GLY:HA2	2:P:105:GLY:HA2	1.85	0.40
1:A:43:ILE:HA	1:A:46:TRP:HD1	1.85	0.40
1:A:267:ARG:CB	1:A:272:ASP:HB2	2.51	0.40
1:B:172:TRP:O	1:B:173:PHE:C	2.59	0.40
2:Q:63:LYS:CD	2:Q:67:LYS:HZ3	2.34	0.40
1:A:241:LEU:HD23	1:A:241:LEU:HA	1.94	0.40
1:C:403:ILE:HA	1:D:411:MET:HE1	2.03	0.40
1:D:70:PRO:N	1:D:71:GLY:HA3	2.35	0.40
3:W:2:LEU:HB3	3:W:94:GLN:HE22	1.86	0.40
3:W:12:SER:HA	3:W:109:GLU:O	2.21	0.40
1:A:73:SER:O	1:A:74:TYR:C	2.60	0.40
1:A:260:SER:HA	1:A:261:PRO:HD3	1.91	0.40
1:B:69:SER:HB3	1:B:70:PRO:CD	2.50	0.40
1:B:249:MET:H	1:B:249:MET:HE3	1.86	0.40
1:C:222:ARG:O	1:C:225:PRO:HD2	2.21	0.40
1:C:360:PHE:CZ	1:C:416:THR:HG21	2.55	0.40
1:D:89:THR:CG2	1:D:367:TYR:HD2	2.34	0.40
1:D:261:PRO:O	1:D:262:PHE:C	2.59	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:3:GLN:OE1	2:P:3:GLN:HA	2.22	0.40
2:P:40:ARG:HA	2:P:92:SER:HB2	2.03	0.40
3:W:2:LEU:HD11	3:W:29:VAL:HG12	2.02	0.40
1:B:216:VAL:O	1:B:218:LYS:N	2.51	0.40
1:C:102:ILE:HD11	1:C:337:PHE:HB3	2.04	0.40
1:D:361:THR:O	1:D:365:TYR:CD2	2.74	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	416/445 (94%)	328 (79%)	59 (14%)	29 (7%)	1	6
1	B	414/445 (93%)	328 (79%)	57 (14%)	29 (7%)	1	6
1	C	414/445 (93%)	322 (78%)	68 (16%)	24 (6%)	1	10
1	D	413/445 (93%)	319 (77%)	71 (17%)	23 (6%)	1	11
2	P	217/219 (99%)	179 (82%)	27 (12%)	11 (5%)	1	13
2	Q	216/219 (99%)	180 (83%)	25 (12%)	11 (5%)	1	13
3	S	209/211 (99%)	174 (83%)	28 (13%)	7 (3%)	3	21
3	W	209/211 (99%)	173 (83%)	29 (14%)	7 (3%)	3	21
All	All	2508/2640 (95%)	2003 (80%)	364 (14%)	141 (6%)	1	11

All (141) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	116	PHE
1	A	118	ILE
1	A	166	ALA
1	A	270	LEU

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Mol	Chain	Res	Type
1	A	274	ALA
1	A	440	ALA
1	B	116	PHE
1	B	118	ILE
1	B	166	ALA
1	B	270	LEU
1	B	317	VAL
1	B	346	ALA
1	C	70	PRO
1	C	118	ILE
1	C	186	GLY
1	C	219	ASN
1	C	271	GLY
1	D	70	PRO
1	D	118	ILE
1	D	186	GLY
1	D	271	GLY
1	D	383	ALA
2	Q	93	VAL
2	Q	140	GLY
2	P	135	CYS
3	W	152	TRP
3	S	151	LYS
1	A	38	THR
1	A	142	VAL
1	A	207	VAL
1	A	208	GLU
1	A	275	GLY
1	A	406	GLY
1	A	435	PRO
1	B	38	THR
1	B	142	VAL
1	B	207	VAL
1	B	208	GLU
1	B	274	ALA
1	B	275	GLY
1	B	406	GLY
1	B	435	PRO
1	C	183	ASN
1	C	207	VAL
1	C	208	GLU
1	C	218	LYS

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Mol	Chain	Res	Type
1	C	269	ALA
1	C	381	GLY
1	D	183	ASN
1	D	207	VAL
1	D	208	GLU
1	D	218	LYS
1	D	219	ASN
2	Q	55	ASP
2	Q	83	LEU
2	Q	104	GLY
2	Q	197	SER
2	P	55	ASP
2	P	83	LEU
2	P	93	VAL
2	P	104	GLY
2	P	197	SER
3	W	154	LYS
3	W	170	ASP
3	S	150	VAL
3	S	154	LYS
3	S	170	ASP
1	A	143	GLY
1	A	216	VAL
1	A	310	PHE
1	A	438	LEU
1	B	143	GLY
1	B	216	VAL
1	B	310	PHE
1	B	438	LEU
1	C	216	VAL
1	C	247	MET
1	C	322	THR
1	C	380	PHE
1	D	216	VAL
1	D	247	MET
1	D	322	THR
1	D	346	ALA
1	D	380	PHE
3	S	5	THR
1	A	117	PRO
1	A	122	PRO
1	A	173	PHE

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Mol	Chain	Res	Type
1	A	218	LYS
1	A	251	PRO
1	A	323	PRO
1	A	341	SER
1	B	117	PRO
1	B	122	PRO
1	B	173	PHE
1	B	218	LYS
1	B	251	PRO
1	B	319	LYS
1	B	341	SER
1	C	73	SER
1	C	83	PRO
1	C	205	ILE
1	C	310	PHE
1	D	73	SER
1	D	83	PRO
1	D	310	PHE
2	Q	149	VAL
2	P	149	VAL
3	W	5	THR
3	W	150	VAL
1	C	117	PRO
1	C	323	PRO
1	D	117	PRO
1	D	205	ILE
1	D	323	PRO
2	Q	41	PRO
2	Q	179	SER
2	P	41	PRO
2	P	179	SER
3	W	88	ALA
3	W	204	LYS
3	S	88	ALA
3	S	204	LYS
1	A	167	VAL
1	A	347	ALA
1	B	167	VAL
1	C	206	GLY
1	D	206	GLY
1	A	205	ILE
1	C	165	ILE

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Mol	Chain	Res	Type
1	D	165	ILE
2	Q	105	GLY
1	B	205	ILE
2	P	105	GLY
1	A	83	PRO
1	A	217	VAL
1	B	83	PRO
1	B	217	VAL
2	P	153	PHE
1	C	440	ALA
2	Q	153	PHE

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	308/343 (90%)	280 (91%)	28 (9%)	7 29
1	B	306/343 (89%)	277 (90%)	29 (10%)	7 28
1	C	305/343 (89%)	286 (94%)	19 (6%)	15 47
1	D	306/343 (89%)	286 (94%)	20 (6%)	14 45
2	P	187/187 (100%)	166 (89%)	21 (11%)	5 22
2	Q	186/187 (100%)	162 (87%)	24 (13%)	3 17
3	S	185/185 (100%)	169 (91%)	16 (9%)	8 33
3	W	185/185 (100%)	168 (91%)	17 (9%)	7 29
All	All	1968/2116 (93%)	1794 (91%)	174 (9%)	8 32

All (174) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	31	LEU
1	A	34	ASN
1	A	56	LEU
1	A	73	SER

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Mol	Chain	Res	Type
1	A	83	PRO
1	A	102	ILE
1	A	105	VAL
1	A	114	TYR
1	A	142	VAL
1	A	207	VAL
1	A	208	GLU
1	A	219	ASN
1	A	233	LEU
1	A	247	MET
1	A	249	MET
1	A	252	ASN
1	A	264	ASP
1	A	270	LEU
1	A	316	ARG
1	A	327	LEU
1	A	361	THR
1	A	377	HIS
1	A	395	PHE
1	A	396	VAL
1	A	400	TRP
1	A	418	MET
1	A	436	TYR
1	A	439	ASP
1	B	31	LEU
1	B	34	ASN
1	B	56	LEU
1	B	73	SER
1	B	83	PRO
1	B	102	ILE
1	B	105	VAL
1	B	114	TYR
1	B	142	VAL
1	B	207	VAL
1	B	208	GLU
1	B	219	ASN
1	B	233	LEU
1	B	247	MET
1	B	249	MET
1	B	252	ASN
1	B	264	ASP
1	B	270	LEU

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Mol	Chain	Res	Type
1	B	316	ARG
1	B	319	LYS
1	B	327	LEU
1	B	361	THR
1	B	377	HIS
1	B	395	PHE
1	B	396	VAL
1	B	400	TRP
1	B	418	MET
1	B	436	TYR
1	B	439	ASP
1	C	31	LEU
1	C	35	LEU
1	C	49	THR
1	C	91	VAL
1	C	114	TYR
1	C	137	VAL
1	C	167	VAL
1	C	212	VAL
1	C	233	LEU
1	C	249	MET
1	C	257	VAL
1	C	316	ARG
1	C	327	LEU
1	C	358	VAL
1	C	377	HIS
1	C	400	TRP
1	C	413	SER
1	C	421	THR
1	C	436	TYR
1	D	10	VAL
1	D	31	LEU
1	D	35	LEU
1	D	49	THR
1	D	91	VAL
1	D	114	TYR
1	D	137	VAL
1	D	167	VAL
1	D	212	VAL
1	D	233	LEU
1	D	249	MET
1	D	257	VAL

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Mol	Chain	Res	Type
1	D	316	ARG
1	D	327	LEU
1	D	358	VAL
1	D	377	HIS
1	D	400	TRP
1	D	413	SER
1	D	421	THR
1	D	436	TYR
2	Q	5	GLN
2	Q	6	GLN
2	Q	11	LEU
2	Q	12	VAL
2	Q	18	VAL
2	Q	27	TYR
2	Q	30	THR
2	Q	45	LEU
2	Q	46	GLU
2	Q	50	TRP
2	Q	55	ASP
2	Q	60	TYR
2	Q	69	THR
2	Q	73	ASP
2	Q	76	SER
2	Q	78	THR
2	Q	91	SER
2	Q	123	THR
2	Q	145	LEU
2	Q	155	GLU
2	Q	183	THR
2	Q	201	THR
2	Q	214	ASP
2	Q	218	VAL
2	P	5	GLN
2	P	6	GLN
2	P	27	TYR
2	P	30	THR
2	P	45	LEU
2	P	46	GLU
2	P	50	TRP
2	P	55	ASP
2	P	60	TYR
2	P	69	THR

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Mol	Chain	Res	Type
2	P	73	ASP
2	P	76	SER
2	P	78	THR
2	P	91	SER
2	P	123	THR
2	P	145	LEU
2	P	155	GLU
2	P	183	THR
2	P	201	THR
2	P	214	ASP
2	P	218	VAL
3	W	5	THR
3	W	30	ASN
3	W	79	ILE
3	W	93	GLN
3	W	94	GLN
3	W	95	TRP
3	W	110	ILE
3	W	112	ARG
3	W	147	ASP
3	W	150	VAL
3	W	151	LYS
3	W	159	GLU
3	W	169	THR
3	W	180	MET
3	W	190	GLU
3	W	198	THR
3	W	214	PHE
3	S	5	THR
3	S	30	ASN
3	S	79	ILE
3	S	93	GLN
3	S	94	GLN
3	S	95	TRP
3	S	110	ILE
3	S	112	ARG
3	S	147	ASP
3	S	150	VAL
3	S	159	GLU
3	S	169	THR
3	S	180	MET
3	S	190	GLU

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Mol	Chain	Res	Type
3	S	198	THR
3	S	214	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (11) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	140	ASN
1	B	140	ASN
1	B	299	GLN
1	B	377	HIS
1	C	299	GLN
1	C	434	ASN
1	D	299	GLN
3	W	30	ASN
3	W	94	GLN
3	S	41	GLN
3	S	94	GLN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no 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	422/445 (94%)	1.99	185 (43%)	1	1	56, 127, 231, 339	0
1	B	419/445 (94%)	2.09	185 (44%)	1	1	62, 126, 220, 332	0
1	C	419/445 (94%)	2.02	194 (46%)	1	1	37, 104, 203, 283	0
1	D	416/445 (93%)	1.85	163 (39%)	1	1	33, 105, 197, 283	0
2	P	218/219 (99%)	2.02	92 (42%)	1	1	48, 104, 168, 224	2 (0%)
2	Q	216/219 (98%)	1.73	76 (35%)	1	1	44, 108, 166, 278	2 (0%)
3	S	209/211 (99%)	1.84	84 (40%)	1	1	30, 80, 169, 258	0
3	W	207/211 (98%)	1.44	55 (26%)	2	2	23, 81, 166, 266	0
All	All	2526/2640 (95%)	1.91	1034 (40%)	1	1	23, 109, 203, 339	4 (0%)

All (1034) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	186	GLY	12.7
1	B	264	ASP	10.3
2	P	134	VAL	9.2
1	B	116	PHE	9.1
1	B	255	LEU	8.3
1	B	186	GLY	8.3
1	D	121	ASP	8.2
1	C	264	ASP	8.0
2	P	88	SER	7.7
1	C	116	PHE	7.7
1	A	175	GLY	7.5
2	Q	139	THR	7.5
1	B	248	GLY	7.3
2	Q	92	SER	7.3
1	D	270	LEU	7.3
1	A	140	ASN	7.2

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Mol	Chain	Res	Type	RSRZ
2	Q	8	GLY	7.2
2	Q	9	PRO	7.2
1	B	263	GLY	7.1
1	B	265	ALA	7.1
1	C	255	LEU	7.1
2	Q	137	ASP	7.0
3	W	199	CYS	7.0
1	D	345	ASN	6.7
1	D	250	ILE	6.7
1	C	194	GLN	6.6
2	P	84	SER	6.6
3	S	152	TRP	6.5
1	B	190	PHE	6.5
1	D	381	GLY	6.4
1	B	326	GLY	6.4
1	B	185	SER	6.4
1	C	141	ILE	6.3
1	D	252	ASN	6.3
1	D	343	SER	6.2
1	C	252	ASN	6.2
2	Q	138	THR	6.2
2	P	66	GLY	6.0
1	B	140	ASN	6.0
3	S	202	THR	6.0
3	S	207	THR	6.0
1	C	185	SER	5.9
1	B	347	ALA	5.9
1	B	244	THR	5.8
1	B	349	GLU	5.8
2	P	199	THR	5.8
2	P	195	TRP	5.7
1	B	381	GLY	5.7
3	S	199	CYS	5.7
2	P	200	VAL	5.7
1	B	275	GLY	5.7
2	P	140	GLY	5.7
3	S	210	ILE	5.7
1	B	189	THR	5.7
1	A	255	LEU	5.7
2	Q	134	VAL	5.7
1	B	269	ALA	5.7
3	S	165	LEU	5.6

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Mol	Chain	Res	Type	RSRZ
2	P	9	PRO	5.6
1	C	215	GLY	5.6
1	B	440	ALA	5.6
1	C	341	SER	5.6
2	P	137	ASP	5.5
1	B	346	ALA	5.5
1	B	247	MET	5.5
1	A	36	ALA	5.5
2	Q	132	ALA	5.5
2	P	138	THR	5.5
1	C	70	PRO	5.4
1	B	40	GLY	5.4
2	P	166	LEU	5.3
1	B	41	ILE	5.3
1	B	341	SER	5.3
1	A	171	PHE	5.3
2	Q	135	CYS	5.3
1	A	254	ALA	5.3
1	A	219	ASN	5.2
2	P	10	GLU	5.2
1	B	25	GLY	5.2
1	D	347	ALA	5.2
1	C	11	GLY	5.2
1	A	141	ILE	5.2
1	B	114	TYR	5.2
1	A	252	ASN	5.2
1	B	318	ASN	5.2
1	B	173	PHE	5.1
1	C	270	LEU	5.1
3	S	159	GLU	5.1
1	C	115	PHE	5.1
1	D	342	MET	5.1
1	C	262	PHE	5.1
1	D	70	PRO	5.1
1	D	260	SER	5.0
2	P	163	SER	5.0
1	A	265	ALA	5.0
1	B	70	PRO	5.0
1	B	171	PHE	5.0
1	A	25	GLY	5.0
1	D	38	THR	5.0
1	A	116	PHE	4.9

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Mol	Chain	Res	Type	RSRZ
1	D	262	PHE	4.9
2	P	135	CYS	4.9
3	W	152	TRP	4.9
1	B	254	ALA	4.9
1	D	164	GLY	4.9
1	B	10	VAL	4.9
1	C	25	GLY	4.9
1	B	343	SER	4.9
1	C	337	PHE	4.8
1	D	268	MET	4.8
1	C	174	LYS	4.8
2	P	162	ASN	4.8
1	D	337	PHE	4.8
1	B	243	THR	4.8
1	B	28	VAL	4.7
3	S	170	ASP	4.7
1	B	262	PHE	4.7
1	C	346	ALA	4.7
1	A	128	THR	4.7
1	B	150	VAL	4.7
1	A	41	ILE	4.7
1	B	141	ILE	4.7
2	P	83	LEU	4.7
1	B	342	MET	4.7
1	B	117	PRO	4.7
2	Q	133	PRO	4.6
1	C	287	LEU	4.6
1	B	219	ASN	4.6
1	A	176	GLU	4.6
2	P	194	THR	4.6
1	D	34	ASN	4.6
2	P	92	SER	4.6
1	B	187	MET	4.6
1	C	36	ALA	4.6
1	C	34	ASN	4.5
1	B	145	LYS	4.5
2	P	178	GLN	4.5
3	S	200	GLU	4.5
2	Q	166	LEU	4.5
1	D	285	GLY	4.5
1	D	281	CYS	4.5
2	P	167	SER	4.5

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Mol	Chain	Res	Type	RSRZ
1	C	37	ALA	4.5
2	P	198	GLU	4.5
1	A	185	SER	4.5
1	B	249	MET	4.4
1	D	321	GLY	4.4
1	A	264	ASP	4.4
1	D	114	TYR	4.4
1	B	250	ILE	4.4
1	C	248	GLY	4.4
2	P	8	GLY	4.4
2	P	71	THR	4.4
1	B	174	LYS	4.4
3	W	123	PRO	4.4
1	A	343	SER	4.4
1	B	345	ASN	4.4
1	C	183	ASN	4.4
2	P	12	VAL	4.4
1	B	29	PHE	4.4
1	D	215	GLY	4.4
1	B	268	MET	4.3
1	C	114	TYR	4.3
2	Q	10	GLU	4.3
1	B	123	LEU	4.3
1	A	247	MET	4.3
1	D	325	ALA	4.3
1	B	44	TYR	4.3
1	A	26	SER	4.3
1	B	170	TRP	4.3
1	B	138	LEU	4.3
1	A	122	PRO	4.3
1	A	322	THR	4.3
1	B	182	TRP	4.3
1	C	125	LEU	4.3
1	A	316	ARG	4.3
1	D	247	MET	4.3
1	C	113	SER	4.3
1	D	167	VAL	4.2
2	Q	218	VAL	4.2
1	C	44	TYR	4.2
1	B	163	VAL	4.2
1	A	16	THR	4.2
2	Q	91	SER	4.2

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Mol	Chain	Res	Type	RSRZ
2	P	216	LYS	4.2
1	A	18	MET	4.2
1	A	249	MET	4.2
1	B	276	ALA	4.2
1	D	272	ASP	4.2
2	Q	83	LEU	4.2
1	C	40	GLY	4.2
1	B	352	LEU	4.2
1	D	138	LEU	4.2
1	D	408	LYS	4.2
1	B	113	SER	4.1
1	B	354	SER	4.1
1	C	129	CYS	4.1
2	P	154	PRO	4.1
1	A	44	TYR	4.1
1	B	252	ASN	4.1
1	B	251	PRO	4.1
1	C	275	GLY	4.1
1	A	37	ALA	4.1
1	A	409	GLU	4.1
1	A	189	THR	4.1
1	B	148	THR	4.1
1	C	379	HIS	4.1
1	D	122	PRO	4.1
3	W	159	GLU	4.1
1	C	263	GLY	4.1
1	C	277	ILE	4.1
1	C	32	PRO	4.1
2	Q	7	SER	4.1
1	C	247	MET	4.0
1	C	342	MET	4.0
1	D	37	ALA	4.0
1	A	70	PRO	4.0
1	C	260	SER	4.0
1	B	222	ARG	4.0
1	D	322	THR	4.0
3	S	198	THR	4.0
1	C	250	ILE	4.0
3	S	191	TYR	4.0
1	A	65	SER	4.0
1	C	343	SER	4.0
2	P	132	ALA	4.0

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Mol	Chain	Res	Type	RSRZ
1	A	173	PHE	4.0
1	D	115	PHE	4.0
1	B	348	LYS	4.0
1	C	46	TRP	4.0
1	C	120	LYS	3.9
1	C	381	GLY	3.9
2	P	191	PRO	3.9
2	P	201	THR	3.9
1	C	249	MET	3.9
1	C	209	SER	3.9
3	W	200	GLU	3.9
1	D	188	ASN	3.9
3	W	188	LYS	3.9
1	C	119	LEU	3.9
1	C	226	ILE	3.9
1	B	258	SER	3.9
3	S	166	ASN	3.9
1	C	42	ALA	3.9
1	D	264	ASP	3.9
1	A	408	LYS	3.9
3	S	153	LYS	3.9
1	A	20	SER	3.9
2	Q	120	SER	3.9
1	A	19	VAL	3.9
3	W	162	ASN	3.9
1	A	120	LYS	3.9
1	D	439	ASP	3.9
2	P	180	ASP	3.9
3	S	151	LYS	3.9
1	B	256	ARG	3.9
2	P	168	SER	3.8
1	A	183	ASN	3.8
1	A	345	ASN	3.8
3	S	149	ASN	3.8
1	D	141	ILE	3.8
1	B	119	LEU	3.8
1	A	13	ILE	3.8
3	S	142	ASN	3.8
1	B	169	GLY	3.8
1	D	263	GLY	3.8
2	Q	208	ALA	3.8
1	A	215	GLY	3.8

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Mol	Chain	Res	Type	RSRZ
2	P	143	VAL	3.8
1	B	27	GLY	3.8
1	B	39	GLY	3.8
2	Q	64	PHE	3.8
1	A	119	LEU	3.8
1	B	344	PRO	3.8
1	C	279	SER	3.7
1	A	280	PHE	3.7
1	A	47	LEU	3.7
1	A	123	LEU	3.7
1	B	16	THR	3.7
1	B	125	LEU	3.7
1	D	199	VAL	3.7
3	S	209	PRO	3.7
1	A	281	CYS	3.7
1	B	273	THR	3.7
1	C	38	THR	3.7
1	C	187	MET	3.7
1	A	279	SER	3.7
1	B	327	LEU	3.7
1	B	429	ASN	3.7
1	C	170	TRP	3.7
1	A	165	ILE	3.7
2	P	89	GLU	3.7
1	B	245	ALA	3.7
1	C	254	ALA	3.7
2	P	136	GLY	3.7
1	A	272	ASP	3.7
1	B	26	SER	3.7
1	B	400	TRP	3.7
1	D	219	ASN	3.7
2	P	196	PRO	3.7
1	C	265	ALA	3.7
1	D	120	LYS	3.7
3	S	172	ASP	3.7
1	B	194	GLN	3.7
1	A	57	SER	3.7
1	C	219	ASN	3.7
1	C	280	PHE	3.6
1	A	200	THR	3.6
1	C	291	GLY	3.6
1	C	268	MET	3.6

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Mol	Chain	Res	Type	RSRZ
1	A	34	ASN	3.6
1	C	321	GLY	3.6
1	D	71	GLY	3.6
3	S	188	LYS	3.6
2	P	144	THR	3.6
1	C	71	GLY	3.6
3	S	4	MET	3.6
1	A	114	TYR	3.6
1	C	292	GLY	3.6
2	P	145	LEU	3.6
1	A	190	PHE	3.6
2	Q	214	ASP	3.5
1	A	27	GLY	3.5
1	A	188	ASN	3.5
3	W	210	ILE	3.5
1	A	49	THR	3.5
1	A	251	PRO	3.5
1	A	125	LEU	3.5
1	A	138	LEU	3.5
1	A	245	ALA	3.5
1	B	172	TRP	3.5
1	C	439	ASP	3.5
3	W	183	THR	3.5
1	B	47	LEU	3.5
1	C	315	ALA	3.5
1	D	170	TRP	3.5
1	A	186	GLY	3.5
1	A	308	GLY	3.5
1	C	190	PHE	3.5
2	P	101	GLY	3.5
2	Q	89	GLU	3.5
2	P	70	LEU	3.5
1	A	268	MET	3.5
1	D	186	GLY	3.5
3	W	182	SER	3.5
1	D	435	PRO	3.5
3	S	123	PRO	3.5
1	D	282	ALA	3.5
2	P	123	THR	3.5
1	A	241	LEU	3.4
1	D	385	PRO	3.4
3	S	213	SER	3.4

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Mol	Chain	Res	Type	RSRZ
1	A	274	ALA	3.4
1	A	243	THR	3.4
1	B	126	THR	3.4
1	D	27	GLY	3.4
1	B	287	LEU	3.4
1	D	251	PRO	3.4
1	D	261	PRO	3.4
1	A	38	THR	3.4
1	D	244	THR	3.4
3	S	92	CYS	3.4
1	B	118	ILE	3.4
1	A	270	LEU	3.4
1	C	274	ALA	3.4
2	P	214	ASP	3.4
1	A	174	LYS	3.4
2	P	190	VAL	3.4
1	C	243	THR	3.4
1	C	288	GLY	3.4
1	C	109	VAL	3.4
2	P	124	THR	3.4
1	A	233	LEU	3.4
1	B	30	LEU	3.4
2	P	86	LEU	3.4
1	A	269	ALA	3.4
1	C	163	VAL	3.4
1	B	11	GLY	3.4
1	B	270	LEU	3.3
1	D	187	MET	3.3
3	S	168	TRP	3.3
2	P	90	ASN	3.3
1	D	10	VAL	3.3
1	D	283	ALA	3.3
1	A	164	GLY	3.3
1	A	250	ILE	3.3
1	C	128	THR	3.3
3	S	137	VAL	3.3
1	A	344	PRO	3.3
1	B	122	PRO	3.3
3	W	189	ASP	3.3
1	B	166	ALA	3.3
1	A	220	PRO	3.3
1	A	52	GLY	3.3

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Mol	Chain	Res	Type	RSRZ
1	A	275	GLY	3.3
1	D	123	LEU	3.3
1	D	352	LEU	3.3
1	D	348	LYS	3.3
3	W	153	LYS	3.3
1	C	172	TRP	3.3
1	C	189	THR	3.3
1	D	200	THR	3.3
2	Q	195	TRP	3.3
2	P	87	THR	3.3
3	W	185	THR	3.3
1	B	217	VAL	3.3
2	Q	178	GLN	3.3
2	Q	215	LYS	3.2
1	A	400	TRP	3.2
1	A	121	ASP	3.2
1	B	253	ALA	3.2
1	C	151	GLN	3.2
1	D	29	PHE	3.2
3	S	126	SER	3.2
3	S	179	SER	3.2
1	A	348	LYS	3.2
3	S	215	ASN	3.2
1	C	28	VAL	3.2
1	D	353	VAL	3.2
1	D	326	GLY	3.2
2	Q	101	GLY	3.2
1	C	168	PHE	3.2
2	P	64	PHE	3.2
1	D	125	LEU	3.2
1	B	340	SER	3.2
1	B	280	PHE	3.2
1	D	148	THR	3.2
1	A	133	LEU	3.2
1	C	157	LEU	3.2
3	W	165	LEU	3.2
1	C	122	PRO	3.2
1	B	121	ASP	3.2
1	C	121	ASP	3.2
2	P	192	SER	3.2
1	D	140	ASN	3.2
1	A	111	TYR	3.2

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Mol	Chain	Res	Type	RSRZ
1	C	283	ALA	3.2
1	D	116	PHE	3.2
1	A	273	THR	3.2
1	C	251	PRO	3.1
1	A	248	GLY	3.1
1	D	222	ARG	3.1
1	D	249	MET	3.1
3	S	131	SER	3.1
1	D	257	VAL	3.1
1	A	262	PHE	3.1
1	A	337	PHE	3.1
1	C	347	ALA	3.1
1	A	412	TRP	3.1
1	C	123	LEU	3.1
1	C	138	LEU	3.1
1	D	220	PRO	3.1
2	P	5	GLN	3.1
2	Q	84	SER	3.1
1	C	144	PRO	3.1
1	D	271	GLY	3.1
2	P	164	GLY	3.1
1	C	105	VAL	3.1
1	C	184	VAL	3.1
1	D	142	VAL	3.1
3	S	156	ASP	3.1
1	A	131	ALA	3.1
1	B	246	ILE	3.1
1	C	140	ASN	3.1
1	A	330	VAL	3.1
3	W	194	HIS	3.1
1	C	173	PHE	3.1
1	C	96	ALA	3.1
1	C	436	TYR	3.1
2	P	85	SER	3.1
3	W	12	SER	3.1
3	S	47	SER	3.1
2	P	125	PRO	3.1
2	P	215	LYS	3.1
1	A	347	ALA	3.1
1	B	102	ILE	3.1
3	W	216	ARG	3.1
1	B	209	SER	3.0

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Mol	Chain	Res	Type	RSRZ
3	W	27	SER	3.0
1	A	378	GLY	3.0
1	B	351	GLY	3.0
1	C	108	GLY	3.0
1	C	169	GLY	3.0
2	Q	90	ASN	3.0
1	A	342	MET	3.0
2	Q	213	VAL	3.0
1	A	30	LEU	3.0
3	S	23	CYS	3.0
1	D	190	PHE	3.0
1	B	33	ALA	3.0
1	B	192	ALA	3.0
2	Q	207	PRO	3.0
1	A	148	THR	3.0
1	D	243	THR	3.0
1	C	31	LEU	3.0
1	A	315	ALA	3.0
1	B	286	CYS	3.0
1	D	436	TYR	3.0
1	B	378	GLY	3.0
1	D	73	SER	3.0
1	A	163	VAL	3.0
1	B	183	ASN	3.0
1	A	172	TRP	3.0
1	B	409	GLU	3.0
1	A	298	GLY	3.0
1	B	316	ARG	3.0
1	B	34	ASN	3.0
1	D	350	PHE	3.0
2	P	67	LYS	3.0
1	A	323	PRO	3.0
1	C	45	GLY	3.0
1	D	46	TRP	3.0
2	Q	66	GLY	3.0
1	A	257	VAL	3.0
1	B	355	SER	3.0
1	C	171	PHE	3.0
2	P	7	SER	3.0
1	A	145	LYS	2.9
3	S	203	HIS	2.9
1	D	129	CYS	2.9

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Mol	Chain	Res	Type	RSRZ
1	A	117	PRO	2.9
2	Q	146	GLY	2.9
1	D	127	LEU	2.9
1	D	356	VAL	2.9
2	P	11	LEU	2.9
2	P	218	VAL	2.9
2	P	153	PHE	2.9
1	C	244	THR	2.9
3	S	189	ASP	2.9
1	B	267	ARG	2.9
1	A	191	GLY	2.9
1	B	164	GLY	2.9
1	C	164	GLY	2.9
1	D	163	VAL	2.9
3	W	137	VAL	2.9
1	B	281	CYS	2.9
1	B	408	LYS	2.9
1	C	325	ALA	2.9
1	D	128	THR	2.9
2	Q	199	THR	2.9
2	Q	187	SER	2.9
2	Q	40	ARG	2.9
1	A	263	GLY	2.9
1	B	157	LEU	2.9
1	D	25	GLY	2.9
1	D	110	GLY	2.9
2	P	130	PRO	2.9
3	S	150	VAL	2.9
1	A	246	ILE	2.9
1	C	118	ILE	2.9
1	A	355	SER	2.9
1	D	328	LEU	2.9
2	Q	145	LEU	2.9
3	W	146	LYS	2.9
1	B	43	ILE	2.9
3	S	201	ALA	2.9
1	C	148	THR	2.9
1	B	18	MET	2.9
1	C	146	MET	2.9
1	D	119	LEU	2.9
1	A	110	GLY	2.9
1	B	317	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
2	Q	50	TRP	2.9
3	S	155	ILE	2.9
2	P	62	GLU	2.8
1	A	53	ALA	2.8
1	D	286	CYS	2.8
1	D	67	ASP	2.8
1	D	279	SER	2.8
1	D	324	VAL	2.8
3	W	213	SER	2.8
3	S	157	GLY	2.8
1	D	32	PRO	2.8
1	C	282	ALA	2.8
3	S	216	ARG	2.8
1	C	159	LEU	2.8
1	D	330	VAL	2.8
1	A	169	GLY	2.8
1	A	351	GLY	2.8
2	P	146	GLY	2.8
3	S	125	SER	2.8
1	D	172	TRP	2.8
1	C	383	ALA	2.8
1	B	31	LEU	2.8
3	W	174	LYS	2.8
1	A	278	VAL	2.8
1	B	38	THR	2.8
1	C	200	THR	2.8
2	P	170	VAL	2.8
1	B	206	GLY	2.8
1	D	171	PHE	2.8
2	Q	126	PRO	2.8
1	A	276	ALA	2.8
1	D	166	ALA	2.8
3	W	215	ASN	2.8
3	S	30	ASN	2.8
2	Q	13	LYS	2.8
1	B	278	VAL	2.8
2	Q	188	VAL	2.8
1	C	238	CYS	2.8
2	P	40	ARG	2.8
3	W	158	SER	2.8
3	W	172	ASP	2.8
3	S	175	ASP	2.8

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Mol	Chain	Res	Type	RSRZ
3	S	196	SER	2.8
1	D	183	ASN	2.8
3	W	141	ASN	2.8
1	C	137	VAL	2.8
1	C	278	VAL	2.8
3	W	163	GLY	2.8
1	A	43	ILE	2.8
1	A	115	PHE	2.8
1	D	118	ILE	2.8
1	B	272	ASP	2.7
3	W	166	ASN	2.7
1	B	137	VAL	2.7
1	C	142	VAL	2.7
1	C	110	GLY	2.7
1	D	351	GLY	2.7
1	B	111	TYR	2.7
1	D	255	LEU	2.7
1	A	69	SER	2.7
3	W	125	SER	2.7
3	S	208	SER	2.7
1	C	217	VAL	2.7
1	C	72	GLY	2.7
3	S	214	PHE	2.7
1	C	14	PRO	2.7
1	C	117	PRO	2.7
1	D	83	PRO	2.7
1	A	151	GLN	2.7
1	D	174	LYS	2.7
1	D	274	ALA	2.7
2	Q	216	LYS	2.7
1	A	209	SER	2.7
1	D	405	SER	2.7
1	A	40	GLY	2.7
2	Q	65	LYS	2.7
3	S	205	THR	2.7
1	D	269	ALA	2.7
1	C	30	LEU	2.7
2	P	50	TRP	2.7
1	C	111	TYR	2.7
1	C	167	VAL	2.7
1	B	69	SER	2.7
1	D	101	ASN	2.7

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Mol	Chain	Res	Type	RSRZ
1	A	326	GLY	2.7
1	B	319	LYS	2.7
1	C	344	PRO	2.7
3	S	124	PRO	2.7
1	C	213	ALA	2.7
1	C	276	ALA	2.7
3	W	51	TRP	2.7
2	Q	103	TYR	2.7
2	Q	204	VAL	2.7
1	D	349	GLU	2.6
1	B	136	PHE	2.6
3	S	147	ASP	2.6
1	A	17	LEU	2.6
1	C	66	LEU	2.6
1	C	261	PRO	2.6
2	P	189	THR	2.6
1	C	382	LYS	2.6
1	C	285	GLY	2.6
3	W	126	SER	2.6
1	A	325	ALA	2.6
1	B	22	ASN	2.6
2	Q	11	LEU	2.6
3	S	129	LEU	2.6
1	C	435	PRO	2.6
3	S	51	TRP	2.6
1	A	64	SER	2.6
1	A	113	SER	2.6
1	A	158	ALA	2.6
1	A	195	SER	2.6
1	B	439	ASP	2.6
2	P	133	PRO	2.6
2	Q	58	THR	2.6
1	B	167	VAL	2.6
3	S	212	LYS	2.6
1	A	436	TYR	2.6
1	D	72	GLY	2.6
2	Q	86	LEU	2.6
1	B	58	MET	2.6
1	B	260	SER	2.6
1	C	195	SER	2.6
1	C	340	SER	2.6
1	D	209	SER	2.6

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Mol	Chain	Res	Type	RSRZ
1	D	384	ARG	2.6
2	Q	202	CYS	2.6
1	C	101	ASN	2.6
1	C	29	PHE	2.6
2	Q	182	TYR	2.6
1	C	39	GLY	2.6
1	C	271	GLY	2.6
1	B	266	ALA	2.6
1	B	146	MET	2.6
2	Q	81	MET	2.6
1	A	10	VAL	2.6
1	C	218	LYS	2.6
1	B	165	ILE	2.5
1	B	438	LEU	2.5
1	D	66	LEU	2.5
3	W	191	TYR	2.5
1	B	285	GLY	2.5
1	C	409	GLU	2.5
2	P	156	PRO	2.5
1	C	357	SER	2.5
1	D	65	SER	2.5
2	Q	88	SER	2.5
1	C	165	ILE	2.5
1	D	41	ILE	2.5
1	D	431	ILE	2.5
2	Q	102	ASN	2.5
1	C	400	TRP	2.5
2	P	161	TRP	2.5
1	A	377	HIS	2.5
1	C	273	THR	2.5
3	W	60	SER	2.5
3	S	69	SER	2.5
1	D	90	ASN	2.5
2	Q	203	ASN	2.5
2	P	61	ASN	2.5
2	P	102	ASN	2.5
1	B	215	GLY	2.5
1	A	346	ALA	2.5
1	B	37	ALA	2.5
3	S	113	ALA	2.5
1	B	240	VAL	2.5
1	A	327	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
1	B	139	LEU	2.5
1	D	233	LEU	2.5
3	W	202	THR	2.5
2	P	179	SER	2.5
3	S	132	GLY	2.5
1	B	407	ALA	2.5
1	A	24	MET	2.5
1	A	261	PRO	2.5
1	B	32	PRO	2.5
1	D	31	LEU	2.5
1	D	377	HIS	2.5
3	W	139	PHE	2.5
3	W	214	PHE	2.5
1	C	73	SER	2.5
1	A	439	ASP	2.5
1	D	218	LYS	2.5
1	D	248	GLY	2.5
1	C	281	CYS	2.5
1	C	434	ASN	2.5
3	W	138	CYS	2.5
3	S	195	ASN	2.5
1	D	146	MET	2.5
1	C	153	VAL	2.5
3	S	1	GLU	2.5
1	A	35	LEU	2.4
1	D	35	LEU	2.4
1	D	310	PHE	2.4
2	P	58	THR	2.4
3	W	198	THR	2.4
1	B	308	GLY	2.4
1	A	289	SER	2.4
1	A	341	SER	2.4
1	D	213	ALA	2.4
2	Q	165	SER	2.4
2	Q	186	SER	2.4
2	P	91	SER	2.4
1	C	345	ASN	2.4
1	D	160	VAL	2.4
2	Q	200	VAL	2.4
1	A	32	PRO	2.4
1	D	323	PRO	2.4
1	C	197	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
1	D	159	LEU	2.4
1	A	381	GLY	2.4
2	P	169	GLY	2.4
1	A	187	MET	2.4
1	B	15	VAL	2.4
1	D	185	SER	2.4
3	W	86	ASP	2.4
1	C	83	PRO	2.4
3	S	141	ASN	2.4
1	B	35	LEU	2.4
1	C	222	ARG	2.4
1	D	316	ARG	2.4
2	Q	62	GLU	2.4
2	Q	198	GLU	2.4
1	B	168	PHE	2.4
1	C	231	GLY	2.4
3	S	61	GLY	2.4
3	S	197	TYR	2.4
1	D	113	SER	2.4
1	B	290	LEU	2.4
2	Q	74	LYS	2.4
3	S	154	LYS	2.4
1	A	29	PHE	2.4
1	D	44	TYR	2.4
2	P	53	PRO	2.4
2	Q	119	SER	2.4
3	S	174	LYS	2.4
1	A	238	CYS	2.4
3	S	190	GLU	2.4
1	A	292	GLY	2.4
1	C	298	GLY	2.4
1	D	346	ALA	2.4
1	D	105	VAL	2.4
3	S	118	THR	2.4
1	A	277	ILE	2.3
1	C	47	LEU	2.3
1	B	382	LYS	2.3
1	C	408	LYS	2.3
3	W	63	PRO	2.3
3	W	151	LYS	2.3
1	A	33	ALA	2.3
1	A	206	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
1	C	104	MET	2.3
1	A	217	VAL	2.3
1	B	36	ALA	2.3
1	C	377	HIS	2.3
2	Q	71	THR	2.3
2	Q	144	THR	2.3
3	S	193	ARG	2.3
1	A	112	LEU	2.3
1	A	162	ILE	2.3
1	C	62	LYS	2.3
1	B	195	SER	2.3
3	S	167	SER	2.3
1	B	152	ALA	2.3
1	C	33	ALA	2.3
1	D	284	ALA	2.3
2	Q	171	HIS	2.3
2	P	188	VAL	2.3
1	B	120	LYS	2.3
1	C	412	TRP	2.3
1	A	118	ILE	2.3
3	S	93	GLN	2.3
1	D	380	PHE	2.3
1	C	289	SER	2.3
1	A	149	ARG	2.3
1	D	198	ASN	2.3
1	B	105	VAL	2.3
1	B	259	ALA	2.3
1	C	407	ALA	2.3
1	D	40	GLY	2.3
1	D	398	CYS	2.3
1	D	433	LYS	2.3
1	A	31	LEU	2.3
2	Q	41	PRO	2.3
1	A	350	PHE	2.3
1	A	28	VAL	2.3
1	A	45	GLY	2.3
1	B	142	VAL	2.3
1	B	158	ALA	2.3
1	B	242	SER	2.3
1	B	282	ALA	2.3
2	P	120	SER	2.3
2	Q	19	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
3	S	111	LYS	2.3
3	S	127	GLU	2.3
3	S	204	LYS	2.3
1	A	426	LEU	2.3
1	B	127	LEU	2.3
2	P	33	ASP	2.3
1	A	102	ILE	2.3
1	A	129	CYS	2.3
1	C	220	PRO	2.3
2	Q	201	THR	2.3
1	A	204	PHE	2.3
1	C	339	PHE	2.3
1	B	334	MET	2.3
1	B	358	VAL	2.3
1	D	109	VAL	2.3
3	S	57	LYS	2.3
1	A	71	GLY	2.3
1	C	284	ALA	2.3
1	B	159	LEU	2.3
1	D	197	LEU	2.3
2	P	165	SER	2.3
1	D	102	ILE	2.2
1	A	161	PRO	2.2
1	B	115	PHE	2.2
2	Q	191	PRO	2.2
3	S	187	THR	2.2
1	B	151	GLN	2.2
1	C	387	TYR	2.2
1	A	290	LEU	2.2
1	D	43	ILE	2.2
2	Q	217	ILE	2.2
2	P	217	ILE	2.2
2	Q	130	PRO	2.2
1	C	286	CYS	2.2
1	A	56	LEU	2.2
1	C	133	LEU	2.2
3	S	186	LEU	2.2
1	C	27	GLY	2.2
1	D	288	GLY	2.2
1	A	73	SER	2.2
1	B	279	SER	2.2
2	P	76	SER	2.2

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Mol	Chain	Res	Type	RSRZ
2	P	197	SER	2.2
1	B	46	TRP	2.2
1	D	427	ASN	2.2
3	S	95	TRP	2.2
1	A	433	LYS	2.2
1	B	128	THR	2.2
2	Q	211	THR	2.2
2	P	160	THR	2.2
3	W	207	THR	2.2
1	D	24	MET	2.2
1	D	194	GLN	2.2
1	B	156	VAL	2.2
1	D	137	VAL	2.2
1	A	260	SER	2.2
1	B	339	PHE	2.2
1	C	293	TRP	2.2
2	Q	168	SER	2.2
3	S	206	SER	2.2
1	C	348	LYS	2.2
1	D	14	PRO	2.2
2	Q	156	PRO	2.2
1	A	198	ASN	2.2
2	P	212	LYS	2.2
1	A	126	THR	2.2
1	C	294	THR	2.2
1	D	28	VAL	2.2
1	B	238	CYS	2.2
1	B	71	GLY	2.2
1	D	277	ILE	2.2
1	A	222	ARG	2.2
1	C	58	MET	2.2
1	D	155	THR	2.2
3	W	187	THR	2.2
1	A	166	ALA	2.1
1	A	192	ALA	2.1
1	C	269	ALA	2.1
3	S	6	GLN	2.2
1	C	256	ARG	2.1
1	C	384	ARG	2.1
2	Q	154	PRO	2.1
1	C	24	MET	2.1
1	C	26	SER	2.1

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Mol	Chain	Res	Type	RSRZ
1	C	257	VAL	2.1
2	P	75	SER	2.1
3	W	78	THR	2.1
1	C	166	ALA	2.1
1	B	277	ILE	2.1
1	C	376	GLY	2.1
3	S	146	LYS	2.1
1	A	339	PHE	2.1
1	C	380	PHE	2.1
1	B	208	GLU	2.1
2	Q	155	GLU	2.1
1	C	385	PRO	2.1
1	A	104	MET	2.1
1	A	170	TRP	2.1
1	C	35	LEU	2.1
1	C	324	VAL	2.1
1	B	49	THR	2.1
1	B	315	ALA	2.1
2	P	211	THR	2.1
3	S	116	ALA	2.1
1	A	223	ASN	2.1
1	B	223	ASN	2.1
1	B	435	PRO	2.1
1	C	127	LEU	2.1
2	P	41	PRO	2.1
3	S	15	PRO	2.1
1	C	150	VAL	2.1
1	C	245	ALA	2.1
1	A	391	THR	2.1
1	A	387	TYR	2.1
1	C	41	ILE	2.1
3	S	24	SER	2.1
1	D	45	GLY	2.1
1	D	299	GLN	2.1
1	A	349	GLU	2.1
1	B	144	PRO	2.1
1	B	328	LEU	2.1
2	Q	147	CYS	2.1
2	P	147	CYS	2.1
1	A	182	TRP	2.1
1	A	393	VAL	2.1
1	B	353	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
3	W	19	VAL	2.1
3	W	168	TRP	2.1
1	A	407	ALA	2.1
1	C	253	ALA	2.1
1	C	102	ILE	2.1
1	A	72	GLY	2.1
1	B	397	TYR	2.1
1	C	100	GLY	2.1
1	D	357	SER	2.1
1	C	136	PHE	2.1
2	P	55	ASP	2.1
3	W	147	ASP	2.1
1	C	233	LEU	2.1
1	D	241	LEU	2.1
3	S	117	PRO	2.1
1	C	97	CYS	2.1
3	W	127	GLU	2.1
1	D	430	ARG	2.0
3	W	84	ALA	2.0
1	A	376	GLY	2.0
1	D	275	GLY	2.0
3	W	45	GLY	2.0
3	S	70	GLY	2.0
1	C	49	THR	2.0
2	Q	189	THR	2.0
1	B	337	PHE	2.0
2	P	203	ASN	2.0
1	B	67	ASP	2.0
3	W	184	LEU	2.0
1	A	124	VAL	2.0
1	D	216	VAL	2.0
3	W	119	VAL	2.0
3	W	164	VAL	2.0
1	D	256	ARG	2.0
2	Q	150	LYS	2.0
2	P	150	LYS	2.0
1	B	135	ILE	2.0
1	C	147	ILE	2.0
1	D	238	CYS	2.0
3	S	52	ILE	2.0
1	A	231	GLY	2.0
1	B	45	GLY	2.0

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Mol	Chain	Res	Type	RSRZ
1	D	206	GLY	2.0
1	C	196	THR	2.0
1	D	157	LEU	2.0
3	S	28	SER	2.0
3	W	142	ASN	2.0
3	S	37	MET	2.0
3	W	211	VAL	2.0
1	C	430	ARG	2.0
1	D	152	ALA	2.0
1	D	253	ALA	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.