



# Full wwPDB NMR Structure Validation Report ⓘ

Jun 16, 2024 – 01:27 PM EDT

PDB ID : 2J8J  
Title : Solution Structure of the A4 Domain of Blood Coagulation Factor XI  
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Roder, H.  
Deposited on : 2006-10-25

This is a Full wwPDB NMR Structure Validation Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

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

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>.

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

MolProbity : 4.02b-467  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
wwPDB-RCI : v\_1n\_11\_5\_13\_A (Berjanski et al., 2005)  
PANAV : Wang et al. (2010)  
wwPDB-ShiftChecker : v1.2  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.37.1

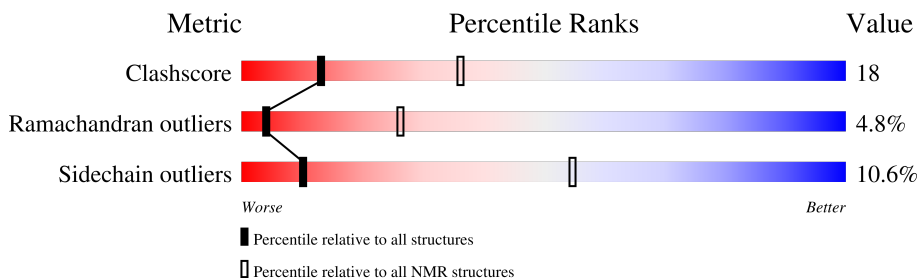
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*SOLUTION NMR*

The overall completeness of chemical shifts assignment was not calculated.

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)	NMR archive (#Entries)
Clashscore	158937	12864
Ramachandran outliers	154571	11451
Sidechain outliers	154315	11428

The table below summarises the geometric issues observed across the polymeric chains and their fit to the experimental data. The red, orange, yellow and green segments indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. A cyan segment indicates the fraction of residues that are not part of the well-defined cores, and a grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$

Mol	Chain	Length	Quality of chain
1	A	90	
1	B	90	

## 2 Ensemble composition and analysis

This entry contains 14 models. Model 1 is the overall representative, medoid model (most similar to other models).

The following residues are included in the computation of the global validation metrics.

Well-defined (core) protein residues			
Well-defined core	Residue range (total)	Backbone RMSD (Å)	Medoid model
1	A:273-A:361, B:272-B:361 (179)	1.57	1

Ill-defined regions of proteins are excluded from the global statistics.

Ligands and non-protein polymers are included in the analysis.

The models can be grouped into 1 clusters. No single-model clusters were found.

Cluster number	Models
1	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

### 3 Entry composition

There is only 1 type of molecule in this entry. The entry contains 2484 atoms, of which 1098 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called COAGULATION FACTOR XI.

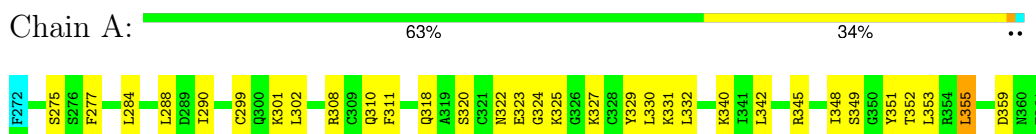
Mol	Chain	Residues	Atoms						Trace
			Total	C	H	N	O	S	
1	A	90	1242	431	549	121	133	8	0
1	B	90	1242	431	549	121	133	8	0

## 4 Residue-property plots [i](#)

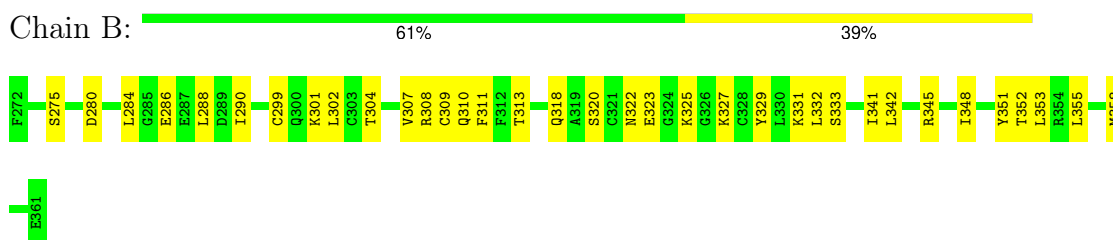
### 4.1 Average score per residue in the NMR ensemble

These plots are provided for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic is the same as shown in the summary in section 1 of this report. The second graphic shows the sequence where residues are colour-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. Stretches of 2 or more consecutive residues without any outliers are shown as green connectors. Residues which are classified as ill-defined in the NMR ensemble, are shown in cyan with an underline colour-coded according to the previous scheme. Residues which were present in the experimental sample, but not modelled in the final structure are shown in grey.

- Molecule 1: COAGULATION FACTOR XI



- Molecule 1: COAGULATION FACTOR XI

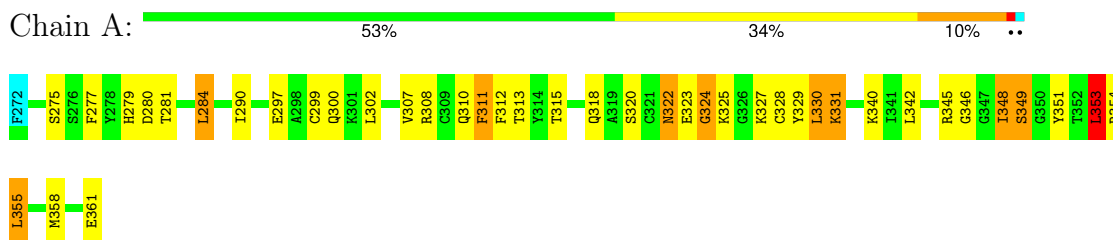


### 4.2 Scores per residue for each member of the ensemble

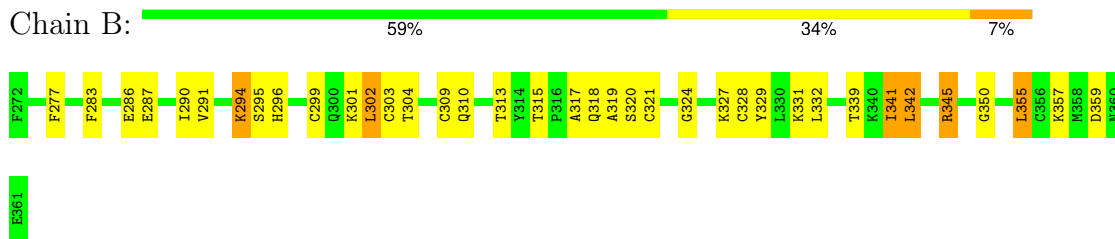
Colouring as in section 4.1 above.

#### 4.2.1 Score per residue for model 1 (medoid)

- Molecule 1: COAGULATION FACTOR XI

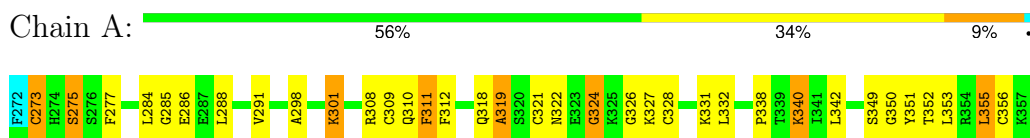


- Molecule 1: COAGULATION FACTOR XI

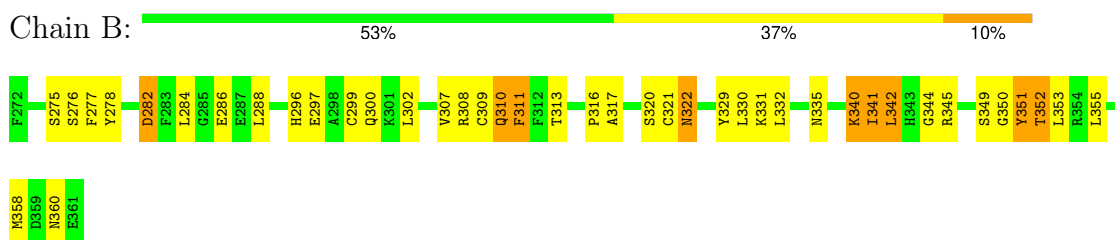


#### 4.2.2 Score per residue for model 2

- Molecule 1: COAGULATION FACTOR XI

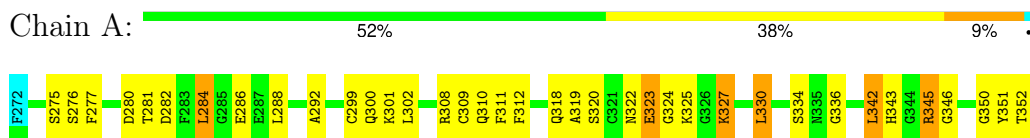


- Molecule 1: COAGULATION FACTOR XI

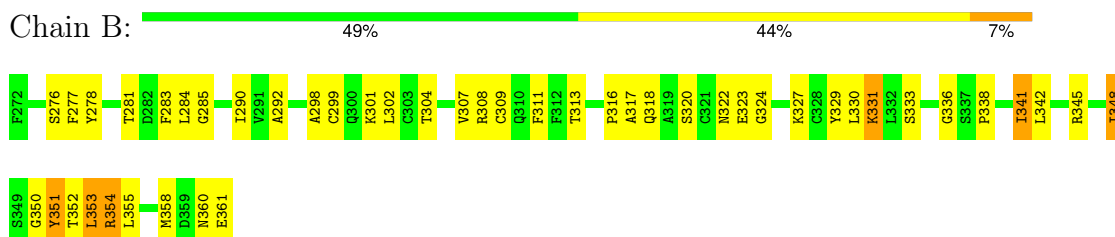


#### 4.2.3 Score per residue for model 3

- Molecule 1: COAGULATION FACTOR XI

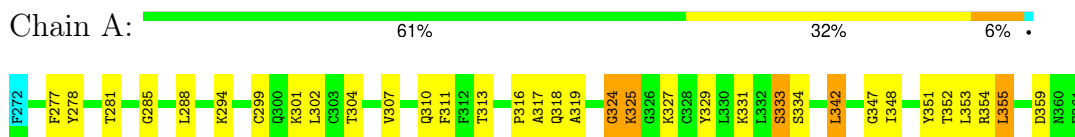


- Molecule 1: COAGULATION FACTOR XI

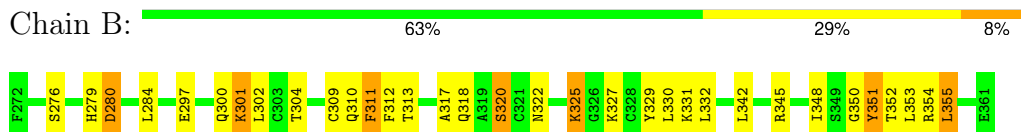


#### 4.2.4 Score per residue for model 4

- Molecule 1: COAGULATION FACTOR XI

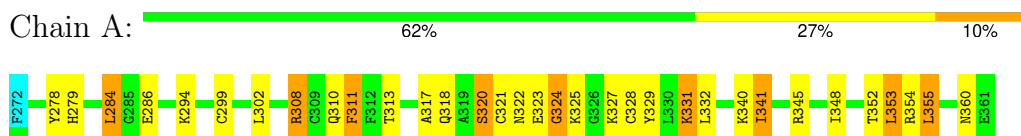


- Molecule 1: COAGULATION FACTOR XI

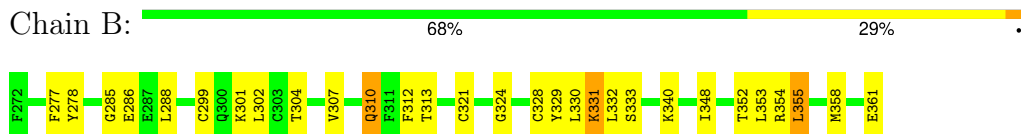


#### 4.2.5 Score per residue for model 5

- Molecule 1: COAGULATION FACTOR XI

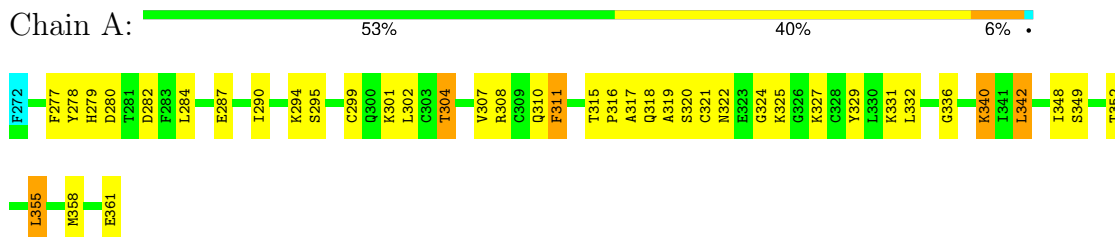


- Molecule 1: COAGULATION FACTOR XI



#### 4.2.6 Score per residue for model 6

- Molecule 1: COAGULATION FACTOR XI



- Molecule 1: COAGULATION FACTOR XI

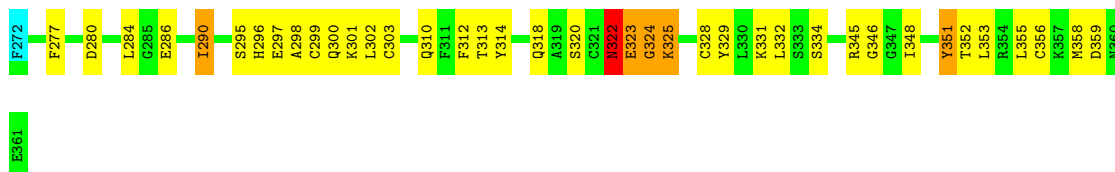




#### 4.2.7 Score per residue for model 7

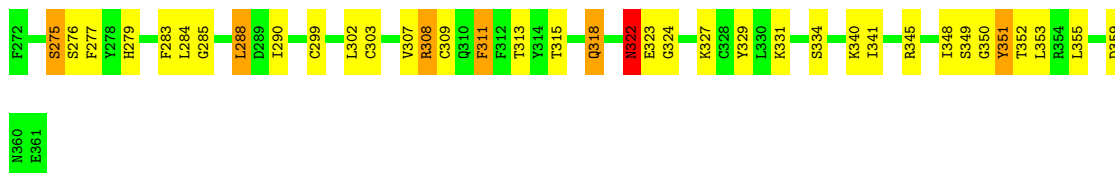
- Molecule 1: COAGULATION FACTOR XI

Chain A: 56% 37% 6% ..



- Molecule 1: COAGULATION FACTOR XI

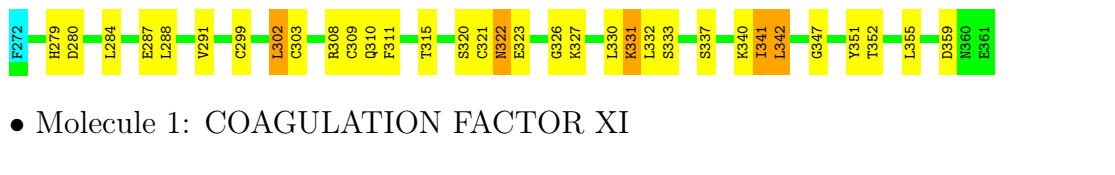
Chain B: 59% 33% 7% .



#### 4.2.8 Score per residue for model 8

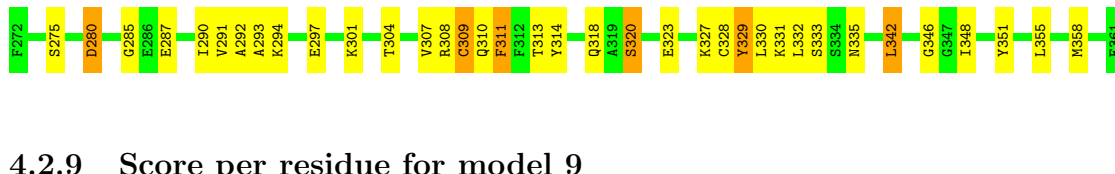
- Molecule 1: COAGULATION FACTOR XI

Chain A: 62% 31% 6% .



- Molecule 1: COAGULATION FACTOR XI

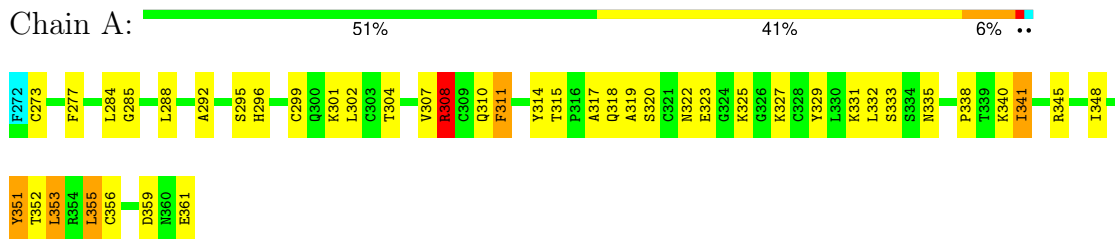
Chain B: 60% 33% 7%



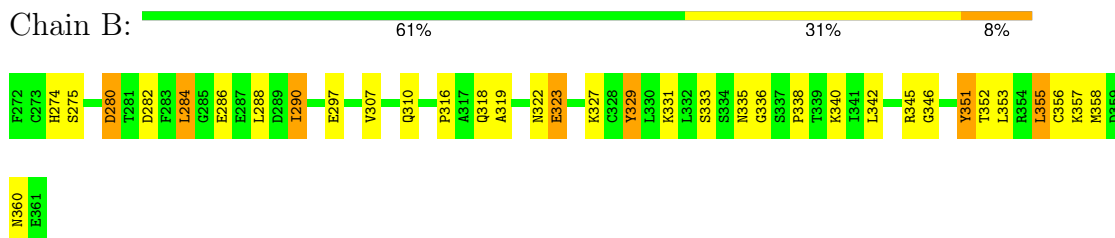
#### 4.2.9 Score per residue for model 9

- Molecule 1: COAGULATION FACTOR XI



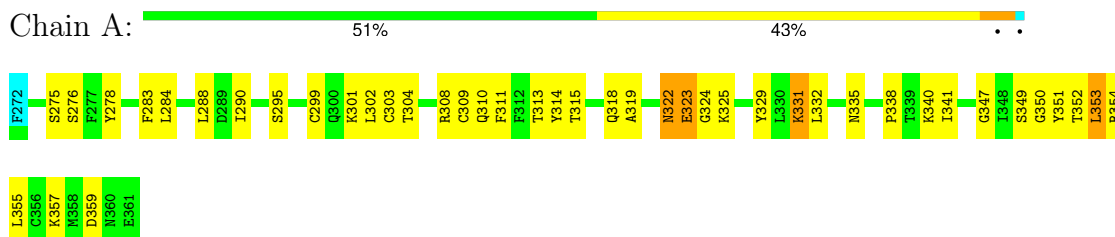


- Molecule 1: COAGULATION FACTOR XI

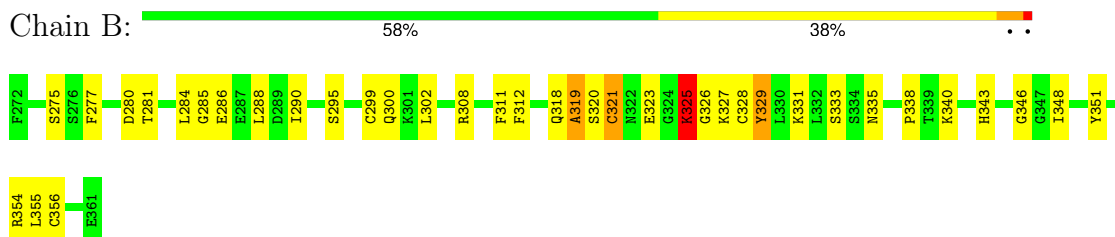


#### 4.2.10 Score per residue for model 10

- Molecule 1: COAGULATION FACTOR XI

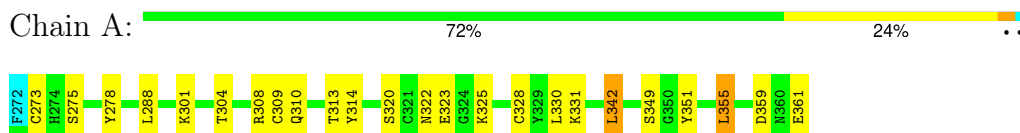


- Molecule 1: COAGULATION FACTOR XI

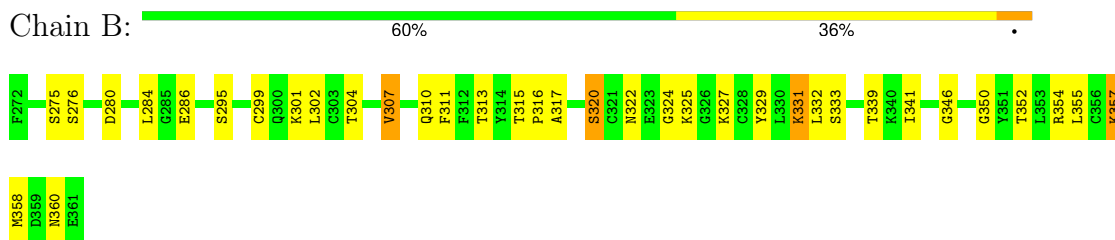


#### 4.2.11 Score per residue for model 11

- Molecule 1: COAGULATION FACTOR XI

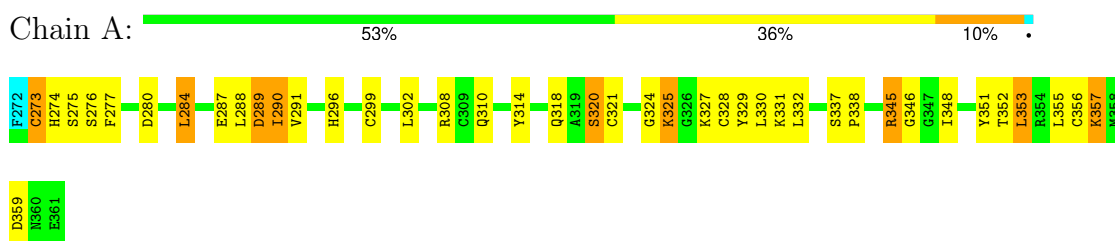


- Molecule 1: COAGULATION FACTOR XI

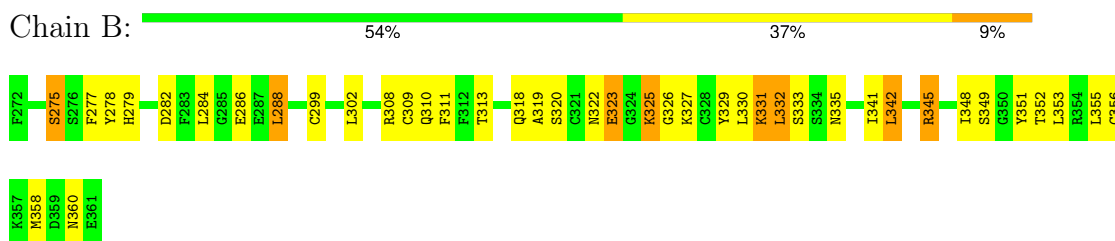


#### 4.2.12 Score per residue for model 12

- Molecule 1: COAGULATION FACTOR XI

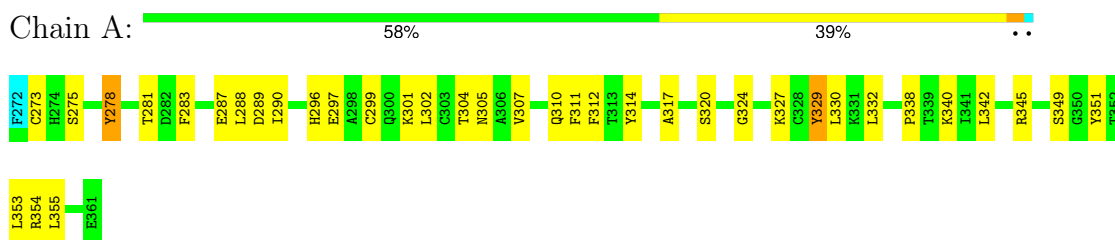


- Molecule 1: COAGULATION FACTOR XI



#### 4.2.13 Score per residue for model 13

- Molecule 1: COAGULATION FACTOR XI



- Molecule 1: COAGULATION FACTOR XI

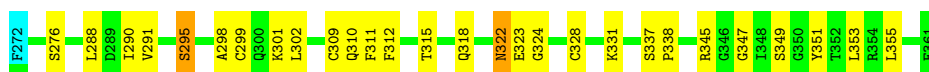




#### 4.2.14 Score per residue for model 14

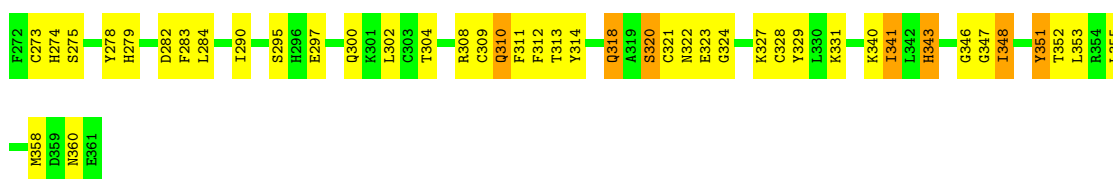
- Molecule 1: COAGULATION FACTOR XI

Chain A: 68% 29%



- Molecule 1: COAGULATION FACTOR XI

Chain B: 52% 40% 8%



## 5 Refinement protocol and experimental data overview

The models were refined using the following method: *CNS*.

Of the 100 calculated structures, 14 were deposited, based on the following criterion: *NO RESTRAINT VIOLATION AND LOWEST ENERGY*.

The following table shows the software used for structure solution, optimisation and refinement.

Software name	Classification	Version
CNS	refinement	
CNS	structure solution	

No chemical shift data was provided.

## 6 Model quality

### 6.1 Standard geometry

There are no covalent bond-length or bond-angle outliers.

There are no bond-length outliers.

There are no bond-angle outliers.

There are no chirality outliers.

There are no planarity outliers.

### 6.2 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 each 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 averaged over the ensemble.

Mol	Chain	Non-H	H(model)	H(added)	Clashes
1	A	682	538	650	28±7
1	B	693	549	658	25±5
All	All	19250	15218	18312	686

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 18.

All unique clashes are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:B:320:SER:HA	1:B:329:TYR:HB2	1.03	1.30	11	1
1:A:334:SER:HB2	1:A:359:ASP:HA	0.95	1.35	4	1
1:B:313:THR:HB	1:B:329:TYR:HB3	0.94	1.39	11	8
1:B:284:LEU:HB3	1:B:331:LYS:HD2	0.89	1.44	9	1
1:A:313:THR:HB	1:A:329:TYR:HB3	0.88	1.44	7	4
1:A:358:MET:HA	1:A:361:GLU:HB2	0.85	1.48	1	1
1:A:288:LEU:HB2	1:B:342:LEU:HD13	0.85	1.47	8	1
1:B:320:SER:HB3	1:B:327:LYS:HB2	0.83	1.51	4	2
1:A:343:HIS:HA	1:A:345:ARG:HD2	0.82	1.49	3	1
1:B:285:GLY:HA3	1:B:333:SER:HB3	0.81	1.52	5	2
1:A:311:PHE:HB2	1:A:331:LYS:HE3	0.79	1.55	1	1
1:B:352:THR:HG23	1:B:353:LEU:HD22	0.78	1.56	9	1
1:A:351:TYR:HB2	1:A:355:LEU:HD11	0.77	1.55	14	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:280:ASP:HA	1:A:346:GLY:HA2	0.77	1.54	1	4
1:A:307:VAL:HA	1:A:355:LEU:HD12	0.77	1.55	6	1
1:A:323:GLU:HB2	1:B:323:GLU:HB3	0.77	1.52	14	1
1:A:324:GLY:HA3	1:B:322:ASN:ND2	0.77	1.95	4	1
1:A:284:LEU:HB3	1:A:340:LYS:HB2	0.76	1.55	8	2
1:B:280:ASP:HA	1:B:346:GLY:HA2	0.76	1.57	8	4
1:B:277:PHE:HB3	1:B:348:ILE:HD11	0.75	1.58	5	3
1:A:355:LEU:H	1:A:355:LEU:HD13	0.75	1.42	1	3
1:B:335:ASN:HB2	1:B:360:ASN:HA	0.75	1.57	2	1
1:A:319:ALA:N	1:A:324:GLY:HA2	0.73	1.97	6	1
1:B:312:PHE:HE2	1:B:328:CYS:HB2	0.73	1.43	14	2
1:A:307:VAL:HG13	1:A:355:LEU:HB3	0.73	1.59	1	1
1:A:310:GLN:HA	1:A:355:LEU:HD21	0.72	1.59	8	1
1:A:284:LEU:HB3	1:A:340:LYS:HG2	0.72	1.60	2	1
1:B:332:LEU:HD11	1:B:358:MET:HG3	0.72	1.62	8	1
1:A:299:CYS:O	1:A:302:LEU:HG	0.71	1.85	4	9
1:A:288:LEU:HG	1:B:284:LEU:HD22	0.71	1.60	3	1
1:B:318:GLN:HB3	1:B:324:GLY:H	0.71	1.44	14	1
1:A:320:SER:HB2	1:A:327:LYS:HB2	0.71	1.63	13	2
1:A:290:ILE:HB	1:A:328:CYS:O	0.70	1.86	12	1
1:A:289:ASP:HA	1:A:330:LEU:O	0.70	1.86	12	1
1:A:324:GLY:HA2	1:B:323:GLU:HB3	0.70	1.62	3	1
1:A:318:GLN:HB3	1:A:323:GLU:HA	0.69	1.64	3	2
1:A:299:CYS:O	1:A:302:LEU:HB3	0.69	1.87	3	2
1:A:303:CYS:HB3	1:A:352:THR:HG21	0.69	1.63	10	2
1:A:352:THR:HG22	1:A:355:LEU:HG	0.69	1.62	10	1
1:B:312:PHE:CE2	1:B:328:CYS:HB2	0.69	2.22	14	2
1:A:310:GLN:HB2	1:A:332:LEU:HD12	0.68	1.63	9	2
1:A:287:GLU:HB3	1:A:332:LEU:HB3	0.68	1.66	12	3
1:B:299:CYS:O	1:B:302:LEU:HG	0.68	1.88	10	5
1:B:342:LEU:HD13	1:B:342:LEU:H	0.67	1.48	1	2
1:A:275:SER:HA	1:A:352:THR:HB	0.67	1.66	3	1
1:B:285:GLY:HA3	1:B:333:SER:OG	0.67	1.88	8	3
1:B:308:ARG:HA	1:B:308:ARG:HE	0.67	1.48	7	2
1:B:284:LEU:HA	1:B:331:LYS:HD2	0.67	1.65	4	1
1:B:355:LEU:H	1:B:355:LEU:HD13	0.67	1.50	1	2
1:A:345:ARG:HG2	1:B:290:ILE:HB	0.67	1.66	1	1
1:A:315:THR:OG1	1:A:322:ASN:HA	0.67	1.89	9	2
1:A:287:GLU:CB	1:A:332:LEU:HB3	0.67	2.20	12	1
1:A:334:SER:CB	1:A:359:ASP:HA	0.67	2.15	4	1
1:B:320:SER:OG	1:B:324:GLY:HA3	0.66	1.91	14	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:323:GLU:HB2	1:B:323:GLU:HB2	0.66	1.66	9	1
1:B:314:TYR:HA	1:B:320:SER:H	0.66	1.51	8	1
1:B:354:ARG:HD3	1:B:354:ARG:H	0.65	1.51	3	1
1:B:290:ILE:HD13	1:B:329:TYR:HB3	0.65	1.68	10	2
1:B:310:GLN:HA	1:B:355:LEU:HB2	0.65	1.69	5	1
1:B:355:LEU:O	1:B:358:MET:HG3	0.65	1.92	3	2
1:A:300:GLN:HA	1:A:351:TYR:HE1	0.65	1.51	3	1
1:B:300:GLN:HA	1:B:351:TYR:CE1	0.65	2.26	2	1
1:A:289:ASP:HA	1:A:330:LEU:N	0.64	2.07	12	1
1:A:314:TYR:HA	1:A:320:SER:HA	0.64	1.68	11	2
1:B:318:GLN:HB2	1:B:323:GLU:HA	0.64	1.70	13	3
1:B:312:PHE:HE1	1:B:328:CYS:HB2	0.64	1.53	10	1
1:A:352:THR:HG22	1:A:353:LEU:HG	0.64	1.70	2	1
1:B:311:PHE:HA	1:B:351:TYR:HB2	0.64	1.70	7	4
1:B:310:GLN:HB2	1:B:332:LEU:HD12	0.64	1.69	4	2
1:A:318:GLN:HB3	1:A:324:GLY:H	0.63	1.52	5	1
1:A:289:ASP:HA	1:A:330:LEU:H	0.63	1.53	12	1
1:A:320:SER:HB3	1:A:327:LYS:HB2	0.62	1.69	12	2
1:A:286:GLU:HA	1:B:340:LYS:HE3	0.62	1.71	7	1
1:A:356:CYS:HA	1:A:359:ASP:OD1	0.62	1.93	9	1
1:A:313:THR:HB	1:A:329:TYR:CB	0.62	2.23	7	1
1:A:314:TYR:HA	1:A:319:ALA:O	0.62	1.94	10	1
1:A:310:GLN:CB	1:A:332:LEU:HA	0.62	2.24	9	1
1:B:332:LEU:HD11	1:B:358:MET:SD	0.62	2.35	11	1
1:B:288:LEU:HB3	1:B:331:LYS:HB3	0.62	1.71	12	1
1:A:318:GLN:HB3	1:A:325:LYS:H	0.61	1.55	1	3
1:A:288:LEU:HB2	1:B:342:LEU:HB3	0.61	1.71	2	1
1:A:285:GLY:HA3	1:A:333:SER:CB	0.61	2.24	4	1
1:B:315:THR:HA	1:B:347:GLY:HA3	0.61	1.70	13	1
1:A:288:LEU:H	1:B:341:ILE:HD11	0.61	1.55	14	1
1:A:290:ILE:HG13	1:A:329:TYR:CA	0.61	2.25	12	1
1:A:352:THR:HG22	1:A:355:LEU:CG	0.61	2.25	10	1
1:A:319:ALA:HB1	1:A:327:LYS:HG3	0.61	1.73	6	1
1:A:310:GLN:HB2	1:A:332:LEU:HA	0.61	1.71	12	2
1:A:304:THR:HA	1:A:353:LEU:HD11	0.61	1.70	13	1
1:B:283:PHE:CD1	1:B:341:ILE:HB	0.61	2.31	1	1
1:A:310:GLN:HE22	1:A:356:CYS:HA	0.61	1.54	3	1
1:A:287:GLU:O	1:A:331:LYS:HA	0.60	1.96	6	1
1:A:310:GLN:HG2	1:A:332:LEU:CD1	0.60	2.26	10	1
1:A:310:GLN:O	1:A:351:TYR:HB2	0.60	1.95	3	1
1:B:279:HIS:HB3	1:B:348:ILE:HB	0.60	1.73	7	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:324:GLY:HA3	1:A:327:LYS:NZ	0.60	2.11	12	1
1:A:332:LEU:HD11	1:A:358:MET:SD	0.60	2.36	2	1
1:B:292:ALA:HA	1:B:327:LYS:HD3	0.60	1.73	3	1
1:B:298:ALA:O	1:B:301:LYS:HG2	0.60	1.96	3	1
1:A:318:GLN:HB2	1:A:323:GLU:HA	0.60	1.73	14	1
1:A:310:GLN:HA	1:A:355:LEU:HB2	0.59	1.74	9	1
1:B:284:LEU:HG	1:B:288:LEU:HD21	0.59	1.72	9	1
1:A:313:THR:O	1:A:320:SER:HB3	0.59	1.97	11	1
1:B:302:LEU:HD21	1:B:330:LEU:HD21	0.59	1.73	2	1
1:A:310:GLN:HA	1:A:355:LEU:HD13	0.59	1.73	2	3
1:B:282:ASP:HB2	1:B:343:HIS:CG	0.59	2.33	6	1
1:B:284:LEU:CB	1:B:331:LYS:HD2	0.59	2.26	9	1
1:A:312:PHE:HB3	1:A:351:TYR:CE2	0.59	2.33	3	1
1:B:352:THR:HG23	1:B:353:LEU:HG	0.59	1.73	7	1
1:A:340:LYS:HE2	1:B:288:LEU:HB3	0.59	1.74	6	1
1:A:353:LEU:HD12	1:A:354:ARG:H	0.58	1.58	1	1
1:A:342:LEU:H	1:A:342:LEU:HD13	0.58	1.58	11	1
1:A:340:LYS:HD3	1:B:286:GLU:O	0.58	1.98	1	1
1:A:298:ALA:O	1:A:301:LYS:HG2	0.58	1.98	7	1
1:A:320:SER:H	1:A:324:GLY:HA3	0.58	1.58	6	1
1:B:311:PHE:CE2	1:B:331:LYS:HG3	0.58	2.34	6	1
1:B:309:CYS:SG	1:B:355:LEU:HD12	0.58	2.39	3	1
1:A:311:PHE:CD1	1:A:331:LYS:HG2	0.58	2.34	10	1
1:B:311:PHE:CE2	1:B:331:LYS:HE3	0.58	2.33	14	1
1:A:323:GLU:HG2	1:B:324:GLY:HA2	0.58	1.75	11	2
1:A:301:LYS:O	1:A:304:THR:HG22	0.57	1.99	10	5
1:A:309:CYS:O	1:A:355:LEU:HD22	0.57	1.99	10	1
1:B:310:GLN:HA	1:B:355:LEU:HD13	0.57	1.74	8	2
1:A:313:THR:HB	1:A:329:TYR:HD1	0.57	1.59	4	1
1:A:280:ASP:HA	1:A:346:GLY:CA	0.57	2.29	1	2
1:B:279:HIS:HA	1:B:347:GLY:O	0.57	2.00	14	1
1:B:284:LEU:HD23	1:B:341:ILE:CG1	0.57	2.29	14	1
1:B:320:SER:CB	1:B:327:LYS:HB2	0.57	2.28	4	1
1:B:352:THR:O	1:B:355:LEU:HG	0.57	2.00	11	1
1:A:289:ASP:CA	1:A:330:LEU:O	0.57	2.53	12	1
1:B:313:THR:HB	1:B:329:TYR:CB	0.56	2.25	11	1
1:B:299:CYS:O	1:B:302:LEU:HB3	0.56	2.00	3	3
1:B:318:GLN:HG3	1:B:325:LYS:HA	0.56	1.77	4	1
1:B:282:ASP:O	1:B:341:ILE:HA	0.56	2.01	6	1
1:A:322:ASN:HB3	1:B:327:LYS:NZ	0.56	2.14	9	1
1:A:310:GLN:HB3	1:A:332:LEU:HA	0.56	1.77	9	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:288:LEU:H	1:A:288:LEU:HD23	0.56	1.60	13	2
1:A:324:GLY:HA3	1:A:327:LYS:HZ3	0.56	1.61	12	1
1:A:319:ALA:HB1	1:A:327:LYS:O	0.56	2.01	3	2
1:A:310:GLN:HG2	1:A:332:LEU:HD13	0.56	1.77	10	1
1:B:291:VAL:HB	1:B:328:CYS:SG	0.55	2.40	1	1
1:B:283:PHE:CA	1:B:341:ILE:HG22	0.55	2.32	14	1
1:A:283:PHE:HB3	1:A:341:ILE:HG22	0.55	1.78	10	1
1:A:345:ARG:HA	1:A:345:ARG:CZ	0.55	2.31	12	1
1:A:277:PHE:HB3	1:A:348:ILE:HD11	0.55	1.78	1	4
1:B:301:LYS:O	1:B:304:THR:HG22	0.55	2.01	4	4
1:A:340:LYS:CE	1:B:288:LEU:HB3	0.55	2.32	6	1
1:B:288:LEU:HB3	1:B:329:TYR:HE2	0.55	1.62	9	1
1:A:284:LEU:HD22	1:B:288:LEU:HB2	0.55	1.79	7	1
1:A:290:ILE:H	1:A:290:ILE:HD13	0.55	1.59	7	1
1:A:333:SER:HB3	1:A:337:SER:OG	0.55	2.01	8	1
1:A:298:ALA:O	1:A:301:LYS:HG3	0.55	2.02	2	1
1:B:352:THR:O	1:B:355:LEU:HD22	0.55	2.02	12	3
1:A:336:GLY:N	1:A:361:GLU:O	0.55	2.39	6	1
1:B:322:ASN:HB2	1:B:345:ARG:NH1	0.54	2.17	12	1
1:A:336:GLY:HA3	1:A:361:GLU:HA	0.54	1.78	3	1
1:A:311:PHE:CD2	1:A:331:LYS:HD3	0.54	2.37	5	2
1:A:315:THR:HG22	1:A:347:GLY:HA3	0.54	1.79	10	1
1:B:278:TYR:O	1:B:348:ILE:HA	0.54	2.03	13	4
1:A:276:SER:HB2	1:A:351:TYR:CE2	0.54	2.37	14	1
1:A:275:SER:HA	1:A:351:TYR:O	0.54	2.01	2	6
1:A:279:HIS:HA	1:A:348:ILE:HB	0.54	1.79	1	1
1:A:288:LEU:N	1:B:341:ILE:HD11	0.54	2.16	14	1
1:B:313:THR:HA	1:B:349:SER:HB3	0.54	1.80	7	1
1:B:279:HIS:HA	1:B:348:ILE:HG22	0.54	1.79	12	1
1:B:322:ASN:HB2	1:B:345:ARG:HH11	0.54	1.62	12	1
1:B:321:CYS:HA	1:B:329:TYR:CZ	0.54	2.37	10	1
1:B:284:LEU:HG	1:B:340:LYS:O	0.54	2.03	14	1
1:A:289:ASP:CA	1:A:330:LEU:H	0.54	2.16	12	1
1:A:322:ASN:HB3	1:B:327:LYS:HZ2	0.54	1.63	9	1
1:A:355:LEU:O	1:A:358:MET:HG3	0.53	2.02	1	1
1:A:285:GLY:HA3	1:A:333:SER:OG	0.53	2.03	4	1
1:B:352:THR:HG22	1:B:353:LEU:HD22	0.53	1.80	5	2
1:B:317:ALA:HB3	1:B:322:ASN:HD21	0.53	1.63	13	1
1:B:276:SER:O	1:B:350:GLY:HA2	0.53	2.03	4	6
1:B:310:GLN:OE1	1:B:356:CYS:HA	0.53	2.03	6	1
1:B:313:THR:HB	1:B:329:TYR:CE2	0.53	2.38	14	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:B:303:CYS:HB3	1:B:355:LEU:HD21	0.53	1.79	7	1
1:A:290:ILE:HG13	1:A:330:LEU:N	0.53	2.19	12	1
1:A:352:THR:O	1:A:355:LEU:HG	0.53	2.03	12	1
1:B:318:GLN:HG3	1:B:323:GLU:OE1	0.53	2.04	3	1
1:B:283:PHE:HA	1:B:341:ILE:HG22	0.53	1.81	14	1
1:A:312:PHE:CE1	1:A:328:CYS:HB2	0.52	2.39	2	1
1:B:330:LEU:H	1:B:330:LEU:HD23	0.52	1.64	6	1
1:A:310:GLN:NE2	1:A:359:ASP:HA	0.52	2.19	11	1
1:A:288:LEU:HG	1:B:342:LEU:HA	0.52	1.81	12	1
1:A:332:LEU:HG	1:A:333:SER:N	0.52	2.18	8	2
1:A:311:PHE:HB2	1:A:331:LYS:HB2	0.52	1.82	14	1
1:B:287:GLU:HB2	1:B:332:LEU:CD2	0.52	2.35	1	1
1:A:336:GLY:CA	1:A:361:GLU:HA	0.52	2.33	3	1
1:A:313:THR:HB	1:A:329:TYR:CD1	0.52	2.40	4	1
1:A:278:TYR:CZ	1:A:349:SER:HB2	0.52	2.39	6	1
1:B:284:LEU:HD23	1:B:285:GLY:N	0.52	2.20	7	1
1:A:335:ASN:CB	1:A:361:GLU:HA	0.52	2.35	9	1
1:B:311:PHE:HB2	1:B:331:LYS:HE2	0.52	1.81	11	1
1:B:310:GLN:HA	1:B:355:LEU:HB3	0.52	1.82	13	1
1:B:310:GLN:O	1:B:351:TYR:HB2	0.52	2.04	2	2
1:A:352:THR:O	1:A:353:LEU:HB2	0.52	2.05	3	1
1:B:300:GLN:HA	1:B:351:TYR:HE1	0.52	1.62	2	1
1:A:343:HIS:CA	1:A:345:ARG:HD2	0.52	2.29	3	1
1:B:280:ASP:HA	1:B:346:GLY:CA	0.52	2.35	9	1
1:A:319:ALA:HB3	1:A:324:GLY:O	0.52	2.05	2	1
1:A:302:LEU:HD13	1:A:303:CYS:N	0.52	2.19	8	1
1:B:351:TYR:HB3	1:B:355:LEU:HD11	0.51	1.82	3	1
1:A:309:CYS:CB	1:A:330:LEU:HD11	0.51	2.35	8	1
1:A:314:TYR:CD1	1:A:319:ALA:HA	0.51	2.40	9	1
1:A:284:LEU:HD13	1:B:284:LEU:HD21	0.51	1.82	10	1
1:A:352:THR:HG23	1:A:353:LEU:HD22	0.51	1.80	3	1
1:A:324:GLY:HA3	1:B:322:ASN:HD21	0.51	1.62	4	1
1:B:299:CYS:HB3	1:B:312:PHE:CZ	0.51	2.40	5	1
1:B:324:GLY:HA3	1:B:327:LYS:HD3	0.51	1.80	7	1
1:B:297:GLU:HB3	1:B:301:LYS:HE3	0.51	1.81	8	1
1:B:282:ASP:O	1:B:341:ILE:HG22	0.51	2.05	14	1
1:A:299:CYS:O	1:A:302:LEU:HD12	0.51	2.05	8	1
1:B:354:ARG:O	1:B:357:LYS:HG3	0.51	2.06	11	1
1:B:284:LEU:HD23	1:B:341:ILE:HG13	0.51	1.81	14	1
1:B:311:PHE:CD1	1:B:331:LYS:HG3	0.51	2.41	8	1
1:A:342:LEU:HG	1:B:288:LEU:HB2	0.51	1.83	2	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:B:313:THR:CB	1:B:329:TYR:HB3	0.51	2.36	12	2
1:A:307:VAL:O	1:A:308:ARG:HB3	0.51	2.06	9	1
1:A:345:ARG:HD2	1:A:345:ARG:N	0.51	2.21	9	1
1:A:340:LYS:HD3	1:B:286:GLU:HA	0.51	1.83	10	1
1:B:288:LEU:HD22	1:B:331:LYS:HD2	0.51	1.83	13	1
1:B:320:SER:HB2	1:B:323:GLU:O	0.51	2.06	3	1
1:B:335:ASN:ND2	1:B:360:ASN:HA	0.51	2.21	9	1
1:B:320:SER:O	1:B:329:TYR:HB2	0.50	2.06	2	1
1:A:281:THR:HA	1:A:345:ARG:HG2	0.50	1.82	3	1
1:B:299:CYS:HA	1:B:302:LEU:HG	0.50	1.81	13	1
1:A:315:THR:HG21	1:A:322:ASN:HA	0.50	1.83	1	1
1:A:278:TYR:O	1:A:348:ILE:HA	0.50	2.06	5	3
1:B:318:GLN:NE2	1:B:323:GLU:HB3	0.50	2.22	6	1
1:A:340:LYS:HE2	1:B:286:GLU:HB3	0.50	1.83	9	1
1:B:311:PHE:CE1	1:B:331:LYS:HB2	0.50	2.41	2	1
1:A:327:LYS:HD2	1:B:322:ASN:OD1	0.50	2.06	4	1
1:A:352:THR:CG2	1:A:355:LEU:HB2	0.50	2.36	8	1
1:A:309:CYS:O	1:A:355:LEU:HG	0.50	2.06	11	1
1:B:332:LEU:HD11	1:B:358:MET:HG2	0.50	1.84	2	1
1:B:340:LYS:HA	1:B:340:LYS:HE3	0.50	1.82	2	1
1:A:292:ALA:CB	1:A:327:LYS:HA	0.50	2.37	3	1
1:A:345:ARG:NE	1:A:345:ARG:HA	0.50	2.22	5	2
1:B:320:SER:HB3	1:B:327:LYS:O	0.50	2.06	8	1
1:B:308:ARG:HD3	1:B:358:MET:HB2	0.50	1.83	2	1
1:B:311:PHE:HA	1:B:351:TYR:CD2	0.50	2.41	7	1
1:A:288:LEU:HD23	1:A:331:LYS:HG2	0.50	1.84	9	1
1:A:277:PHE:CD1	1:A:350:GLY:HA3	0.50	2.42	3	1
1:A:281:THR:HA	1:A:342:LEU:O	0.50	2.07	1	3
1:B:308:ARG:NH1	1:B:361:GLU:O	0.50	2.45	3	1
1:B:318:GLN:HB2	1:B:322:ASN:O	0.50	2.06	7	1
1:B:309:CYS:O	1:B:355:LEU:HB2	0.49	2.07	8	1
1:A:316:PRO:HD3	1:A:347:GLY:HA3	0.49	1.84	4	1
1:A:282:ASP:HB3	1:A:342:LEU:HD21	0.49	1.83	6	1
1:A:337:SER:HB3	1:A:338:PRO:HD2	0.49	1.84	12	2
1:B:352:THR:HB	1:B:353:LEU:HD22	0.49	1.83	2	1
1:A:322:ASN:HD22	1:A:322:ASN:N	0.49	2.05	7	1
1:A:310:GLN:OE1	1:A:355:LEU:HD23	0.49	2.08	9	1
1:B:310:GLN:HB2	1:B:332:LEU:HA	0.49	1.85	1	2
1:B:275:SER:HB3	1:B:277:PHE:HE2	0.49	1.68	2	1
1:B:307:VAL:O	1:B:308:ARG:HG2	0.49	2.08	2	1
1:B:297:GLU:O	1:B:300:GLN:HG2	0.49	2.07	4	3

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:B:304:THR:OG1	1:B:353:LEU:HD11	0.49	2.07	6	1
1:A:329:TYR:CD1	1:A:331:LYS:HD2	0.49	2.43	9	1
1:A:288:LEU:HD13	1:B:284:LEU:HD22	0.49	1.85	10	1
1:B:275:SER:HA	1:B:351:TYR:O	0.49	2.07	10	4
1:A:289:ASP:O	1:A:330:LEU:HG	0.49	2.08	13	1
1:A:311:PHE:HB3	1:A:351:TYR:HD1	0.48	1.67	4	1
1:B:308:ARG:HA	1:B:308:ARG:NE	0.48	2.22	7	1
1:B:280:ASP:CA	1:B:346:GLY:HA2	0.48	2.37	10	1
1:B:355:LEU:O	1:B:358:MET:HG2	0.48	2.08	14	1
1:A:310:GLN:HA	1:A:352:THR:CG2	0.48	2.39	6	1
1:A:285:GLY:O	1:B:340:LYS:HE2	0.48	2.07	9	1
1:A:298:ALA:HA	1:A:301:LYS:HE3	0.48	1.84	14	1
1:A:282:ASP:O	1:A:342:LEU:HD13	0.48	2.07	3	1
1:A:277:PHE:HB3	1:A:348:ILE:HG23	0.48	1.84	9	1
1:A:320:SER:HB2	1:A:328:CYS:HA	0.48	1.85	11	1
1:B:286:GLU:HB3	1:B:333:SER:HB3	0.48	1.85	12	1
1:A:320:SER:HB3	1:A:324:GLY:HA3	0.48	1.84	1	1
1:A:353:LEU:CD1	1:A:354:ARG:H	0.48	2.21	1	1
1:A:296:HIS:HE1	1:A:325:LYS:HB2	0.48	1.67	9	1
1:B:282:ASP:HB3	1:B:342:LEU:HD23	0.48	1.85	12	1
1:A:290:ILE:O	1:B:345:ARG:HD3	0.48	2.08	13	1
1:A:334:SER:HB2	1:A:359:ASP:CA	0.48	2.25	4	1
1:A:352:THR:O	1:A:355:LEU:HD12	0.48	2.08	5	2
1:B:283:PHE:HB2	1:B:311:PHE:CE2	0.48	2.43	6	1
1:B:355:LEU:HD23	1:B:356:CYS:N	0.48	2.24	9	2
1:A:318:GLN:NE2	1:A:323:GLU:HG3	0.48	2.24	10	1
1:A:312:PHE:O	1:A:349:SER:HA	0.48	2.08	14	3
1:A:289:ASP:HB2	1:A:329:TYR:CD2	0.48	2.44	12	1
1:A:310:GLN:HB3	1:A:351:TYR:HE1	0.48	1.68	4	1
1:B:279:HIS:O	1:B:280:ASP:HB3	0.48	2.09	4	2
1:A:351:TYR:CZ	1:A:356:CYS:HB2	0.48	2.44	7	1
1:A:352:THR:HG23	1:A:355:LEU:HB2	0.48	1.85	8	1
1:A:301:LYS:HA	1:A:304:THR:HG22	0.48	1.84	13	2
1:B:277:PHE:HB3	1:B:348:ILE:HB	0.48	1.86	12	1
1:A:340:LYS:N	1:A:340:LYS:HD2	0.47	2.24	5	2
1:A:310:GLN:NE2	1:A:359:ASP:HB3	0.47	2.23	7	2
1:A:312:PHE:HA	1:A:330:LEU:HA	0.47	1.85	13	1
1:A:318:GLN:NE2	1:A:323:GLU:HB3	0.47	2.24	14	1
1:A:273:CYS:HB2	1:A:353:LEU:O	0.47	2.10	2	1
1:B:325:LYS:HD2	1:B:326:GLY:N	0.47	2.24	12	1
1:A:320:SER:HB2	1:A:326:GLY:HA3	0.47	1.86	8	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:B:284:LEU:N	1:B:284:LEU:HD13	0.47	2.24	9	1
1:B:345:ARG:NE	1:B:345:ARG:HA	0.47	2.25	9	1
1:A:284:LEU:CD1	1:A:342:LEU:HD12	0.47	2.39	3	1
1:B:284:LEU:HG	1:B:331:LYS:HD3	0.47	1.86	4	1
1:B:351:TYR:HB3	1:B:356:CYS:SG	0.47	2.49	12	1
1:A:311:PHE:HD2	1:A:331:LYS:HD3	0.47	1.69	8	2
1:A:281:THR:HA	1:A:345:ARG:CG	0.47	2.40	3	1
1:B:352:THR:O	1:B:353:LEU:HB2	0.47	2.10	5	4
1:A:355:LEU:HD22	1:A:356:CYS:N	0.47	2.25	9	1
1:A:288:LEU:HD21	1:B:341:ILE:O	0.47	2.10	12	1
1:B:299:CYS:O	1:B:302:LEU:HD12	0.47	2.10	1	1
1:B:278:TYR:HB3	1:B:281:THR:HG21	0.47	1.85	3	1
1:B:315:THR:HG22	1:B:347:GLY:HA3	0.47	1.85	6	1
1:B:319:ALA:HB3	1:B:327:LYS:O	0.47	2.10	1	1
1:B:320:SER:O	1:B:321:CYS:SG	0.47	2.73	1	1
1:A:278:TYR:CE2	1:A:349:SER:HB2	0.47	2.45	10	2
1:B:290:ILE:HD13	1:B:329:TYR:HB2	0.47	1.86	8	1
1:B:290:ILE:HD13	1:B:329:TYR:CB	0.47	2.40	14	2
1:B:291:VAL:O	1:B:327:LYS:HB3	0.47	2.10	8	1
1:A:340:LYS:NZ	1:B:286:GLU:HA	0.46	2.24	2	1
1:A:320:SER:OG	1:A:327:LYS:HB3	0.46	2.10	3	1
1:A:338:PRO:HG2	1:B:338:PRO:HG2	0.46	1.86	9	1
1:A:283:PHE:HB2	1:A:311:PHE:CE2	0.46	2.45	13	1
1:B:300:GLN:OE1	1:B:301:LYS:HG3	0.46	2.10	13	1
1:A:279:HIS:CE1	1:A:348:ILE:HD12	0.46	2.46	5	1
1:B:288:LEU:HD13	1:B:331:LYS:HE2	0.46	1.85	5	1
1:A:318:GLN:C	1:A:324:GLY:HA2	0.46	2.31	6	1
1:A:287:GLU:CG	1:A:332:LEU:HB3	0.46	2.40	8	1
1:A:273:CYS:SG	1:A:354:ARG:HA	0.46	2.50	13	1
1:B:318:GLN:HG3	1:B:325:LYS:HB2	0.46	1.86	13	1
1:B:342:LEU:HD22	1:B:342:LEU:O	0.46	2.11	6	1
1:B:279:HIS:CB	1:B:348:ILE:HB	0.46	2.40	7	1
1:B:357:LYS:NZ	1:B:357:LYS:HB3	0.46	2.25	1	1
1:B:285:GLY:HA3	1:B:333:SER:CB	0.46	2.41	10	2
1:B:318:GLN:HB3	1:B:325:LYS:N	0.46	2.26	13	1
1:A:360:ASN:O	1:A:361:GLU:HG2	0.46	2.10	2	1
1:A:275:SER:HB3	1:A:277:PHE:HE2	0.46	1.69	3	1
1:A:277:PHE:HA	1:A:349:SER:O	0.46	2.11	6	1
1:A:276:SER:O	1:A:350:GLY:HA2	0.46	2.11	10	2
1:A:315:THR:HG1	1:A:322:ASN:HA	0.46	1.70	9	1
1:B:288:LEU:HD13	1:B:331:LYS:HE3	0.46	1.87	10	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:B:304:THR:HG23	1:B:353:LEU:HG	0.46	1.86	14	1
1:A:315:THR:HA	1:A:347:GLY:HA3	0.46	1.88	8	1
1:A:320:SER:HB2	1:A:323:GLU:O	0.46	2.10	9	1
1:B:343:HIS:CE1	1:B:346:GLY:HA3	0.46	2.45	14	1
1:A:284:LEU:H	1:A:284:LEU:HD13	0.46	1.69	5	3
1:A:310:GLN:OE1	1:A:358:MET:HB3	0.46	2.10	7	1
1:A:299:CYS:HA	1:A:302:LEU:HD23	0.45	1.88	5	1
1:A:323:GLU:OE1	1:B:324:GLY:HA2	0.45	2.11	5	1
1:A:291:VAL:O	1:A:327:LYS:HB3	0.45	2.11	8	1
1:B:311:PHE:CZ	1:B:331:LYS:HD2	0.45	2.46	10	1
1:A:330:LEU:O	1:A:331:LYS:HG3	0.45	2.11	12	1
1:B:277:PHE:CD2	1:B:350:GLY:HA3	0.45	2.45	1	3
1:A:284:LEU:HD23	1:A:285:GLY:N	0.45	2.26	2	1
1:A:335:ASN:HB3	1:A:361:GLU:HA	0.45	1.88	9	1
1:A:286:GLU:OE1	1:A:334:SER:HB3	0.45	2.11	3	1
1:A:345:ARG:HD3	1:A:345:ARG:H	0.45	1.72	3	1
1:A:318:GLN:HE22	1:A:323:GLU:HG3	0.45	1.71	10	1
1:B:275:SER:HB3	1:B:277:PHE:CE2	0.45	2.46	2	1
1:A:342:LEU:H	1:A:342:LEU:CD1	0.45	2.23	11	1
1:A:290:ILE:HD13	1:B:322:ASN:HB2	0.45	1.87	14	1
1:A:345:ARG:HB2	1:B:290:ILE:HG13	0.45	1.87	14	1
1:A:355:LEU:HD13	1:A:355:LEU:N	0.45	2.25	6	1
1:B:355:LEU:HD12	1:B:356:CYS:N	0.45	2.27	10	1
1:B:286:GLU:HB3	1:B:333:SER:HA	0.45	1.87	11	1
1:B:318:GLN:HB2	1:B:323:GLU:CA	0.45	2.41	13	1
1:B:342:LEU:HB3	1:B:345:ARG:HE	0.45	1.72	3	1
1:A:345:ARG:HD2	1:B:290:ILE:HB	0.45	1.88	7	1
1:A:322:ASN:HB3	1:B:320:SER:OG	0.45	2.11	10	1
1:A:273:CYS:HB3	1:A:353:LEU:O	0.45	2.12	12	1
1:A:311:PHE:O	1:A:331:LYS:HG3	0.45	2.12	6	1
1:A:311:PHE:CB	1:A:331:LYS:HE3	0.45	2.38	1	1
1:A:311:PHE:HB2	1:A:331:LYS:HD3	0.45	1.89	10	1
1:B:302:LEU:HD13	1:B:303:CYS:N	0.45	2.26	1	1
1:B:310:GLN:C	1:B:351:TYR:HB2	0.45	2.33	2	1
1:A:275:SER:HB3	1:A:277:PHE:CE2	0.45	2.46	3	1
1:A:355:LEU:H	1:A:355:LEU:HD22	0.45	1.72	6	1
1:A:308:ARG:O	1:A:308:ARG:HD2	0.45	2.12	8	1
1:B:293:ALA:H	1:B:327:LYS:HE2	0.45	1.72	8	1
1:A:353:LEU:HD13	1:A:354:ARG:HD2	0.45	1.89	10	1
1:B:278:TYR:CZ	1:B:349:SER:HB2	0.45	2.47	2	1
1:B:342:LEU:HD13	1:B:342:LEU:N	0.45	2.26	6	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:B:278:TYR:HB3	1:B:281:THR:CG2	0.45	2.42	3	1
1:A:313:THR:OG1	1:A:331:LYS:HE2	0.44	2.12	7	2
1:B:330:LEU:HD23	1:B:331:LYS:N	0.44	2.27	5	1
1:B:315:THR:OG1	1:B:322:ASN:HA	0.44	2.12	7	1
1:A:331:LYS:N	1:A:331:LYS:HD3	0.44	2.27	1	1
1:A:284:LEU:HD22	1:A:284:LEU:O	0.44	2.13	3	1
1:A:288:LEU:HD12	1:A:329:TYR:HE2	0.44	1.70	13	1
1:A:287:GLU:HG2	1:A:332:LEU:HB3	0.44	1.88	8	1
1:A:292:ALA:HB3	1:A:327:LYS:HA	0.44	1.89	9	1
1:A:320:SER:CB	1:A:328:CYS:HA	0.44	2.43	11	1
1:A:290:ILE:HG13	1:A:329:TYR:C	0.44	2.32	12	1
1:A:324:GLY:HA2	1:B:323:GLU:HB2	0.44	1.88	7	3
1:A:342:LEU:N	1:A:342:LEU:HD23	0.44	2.27	8	1
1:A:351:TYR:CD1	1:A:355:LEU:HD21	0.44	2.48	9	1
1:A:291:VAL:HG23	1:A:328:CYS:SG	0.44	2.52	2	1
1:B:318:GLN:HB3	1:B:324:GLY:O	0.44	2.12	3	1
1:A:318:GLN:HB2	1:A:325:LYS:HA	0.44	1.89	4	1
1:A:318:GLN:HA	1:A:325:LYS:HA	0.44	1.88	12	1
1:B:278:TYR:CZ	1:B:349:SER:HB3	0.44	2.48	12	1
1:B:288:LEU:CD2	1:B:331:LYS:HG2	0.44	2.43	7	1
1:B:314:TYR:O	1:B:348:ILE:HB	0.44	2.12	8	1
1:B:310:GLN:NE2	1:B:359:ASP:HB2	0.44	2.28	1	1
1:A:311:PHE:CD2	1:A:331:LYS:HG3	0.44	2.48	2	1
1:B:313:THR:OG1	1:B:331:LYS:HE3	0.44	2.12	4	1
1:A:310:GLN:NE2	1:A:332:LEU:HB2	0.44	2.28	10	1
1:A:278:TYR:HB2	1:A:349:SER:OG	0.44	2.13	11	1
1:B:322:ASN:O	1:B:323:GLU:HB2	0.44	2.12	13	1
1:B:288:LEU:HG	1:B:331:LYS:HB3	0.44	1.88	9	1
1:A:284:LEU:HD22	1:A:288:LEU:HD21	0.44	1.88	10	1
1:A:309:CYS:SG	1:A:355:LEU:HD22	0.44	2.53	14	1
1:A:286:GLU:HG2	1:B:340:LYS:HE2	0.44	1.89	5	1
1:B:309:CYS:HB2	1:B:330:LEU:HD11	0.44	1.89	12	1
1:B:341:ILE:H	1:B:341:ILE:HD13	0.43	1.72	2	1
1:B:282:ASP:HB3	1:B:342:LEU:HD22	0.43	1.89	9	1
1:B:320:SER:HB2	1:B:327:LYS:HB2	0.43	1.88	10	1
1:A:307:VAL:HG23	1:A:355:LEU:HB3	0.43	1.90	13	1
1:A:322:ASN:HD22	1:A:323:GLU:N	0.43	2.11	8	1
1:B:313:THR:HG22	1:B:329:TYR:O	0.43	2.13	8	1
1:B:310:GLN:CD	1:B:332:LEU:HB2	0.43	2.34	5	1
1:A:342:LEU:HD23	1:A:342:LEU:H	0.43	1.73	8	1
1:A:277:PHE:HB3	1:A:348:ILE:CD1	0.43	2.43	12	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:B:332:LEU:HG	1:B:333:SER:N	0.43	2.27	12	1
1:A:315:THR:HG22	1:A:347:GLY:CA	0.43	2.43	14	1
1:B:313:THR:HB	1:B:329:TYR:CZ	0.43	2.47	14	1
1:A:330:LEU:HD13	1:A:330:LEU:N	0.43	2.28	1	1
1:B:296:HIS:HB2	1:B:319:ALA:CB	0.43	2.44	1	1
1:B:310:GLN:HG3	1:B:311:PHE:HD1	0.43	1.72	6	1
1:A:311:PHE:CE2	1:A:331:LYS:HB2	0.43	2.48	8	1
1:B:292:ALA:HA	1:B:327:LYS:HG3	0.43	1.90	8	1
1:B:288:LEU:HD21	1:B:329:TYR:CE1	0.43	2.48	7	1
1:B:325:LYS:HG2	1:B:326:GLY:N	0.43	2.28	10	1
1:A:287:GLU:HB3	1:A:332:LEU:CB	0.43	2.41	12	1
1:A:312:PHE:HE1	1:A:328:CYS:HB2	0.43	1.71	2	1
1:B:312:PHE:HB3	1:B:351:TYR:CE2	0.43	2.49	4	1
1:B:307:VAL:HB	1:B:355:LEU:HB3	0.43	1.91	11	1
1:A:296:HIS:CE1	1:A:314:TYR:HE2	0.43	2.31	13	1
1:A:300:GLN:HA	1:A:351:TYR:CE1	0.43	2.40	3	1
1:B:317:ALA:HB3	1:B:322:ASN:ND2	0.43	2.27	13	1
1:A:288:LEU:HB2	1:B:342:LEU:HD11	0.43	1.91	3	1
1:A:308:ARG:O	1:A:332:LEU:HD13	0.43	2.12	5	1
1:B:311:PHE:CE2	1:B:331:LYS:HD2	0.43	2.48	10	1
1:A:291:VAL:HB	1:A:328:CYS:SG	0.43	2.54	14	1
1:B:352:THR:HA	1:B:355:LEU:HD23	0.43	1.91	2	1
1:A:329:TYR:CE1	1:A:331:LYS:HD2	0.43	2.49	4	1
1:A:311:PHE:HD1	1:A:331:LYS:HG2	0.43	1.69	10	1
1:A:342:LEU:N	1:A:342:LEU:HD13	0.43	2.28	6	1
1:A:318:GLN:HB2	1:A:323:GLU:CA	0.43	2.43	14	1
1:A:352:THR:HG22	1:A:353:LEU:HD22	0.42	1.90	9	1
1:B:335:ASN:OD1	1:B:360:ASN:HA	0.42	2.14	12	1
1:A:284:LEU:HG	1:B:284:LEU:HD23	0.42	1.92	2	1
1:B:283:PHE:CE2	1:B:341:ILE:HG13	0.42	2.49	3	1
1:A:310:GLN:HB3	1:A:355:LEU:HD23	0.42	1.89	5	1
1:B:283:PHE:CD2	1:B:341:ILE:HG22	0.42	2.49	7	1
1:B:303:CYS:SG	1:B:351:TYR:CE2	0.42	3.12	7	1
1:B:311:PHE:HA	1:B:351:TYR:HD2	0.42	1.74	7	1
1:A:330:LEU:HD23	1:A:330:LEU:H	0.42	1.75	3	1
1:B:320:SER:OG	1:B:327:LYS:HB2	0.42	2.14	12	2
1:B:330:LEU:C	1:B:331:LYS:HD3	0.42	2.35	3	1
1:B:309:CYS:O	1:B:355:LEU:HG	0.42	2.13	13	1
1:A:310:GLN:HE21	1:A:359:ASP:HA	0.42	1.74	8	1
1:A:324:GLY:CA	1:B:323:GLU:HG3	0.42	2.45	14	1
1:B:318:GLN:HB3	1:B:324:GLY:N	0.42	2.22	14	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:B:317:ALA:O	1:B:318:GLN:HB2	0.42	2.14	1	1
1:A:340:LYS:HG2	1:B:286:GLU:O	0.42	2.15	5	1
1:B:281:THR:HG22	1:B:343:HIS:HA	0.42	1.90	10	1
1:A:323:GLU:CG	1:B:324:GLY:HA2	0.42	2.43	11	1
1:A:322:ASN:OD1	1:B:327:LYS:HE3	0.42	2.15	3	1
1:A:341:ILE:N	1:A:341:ILE:HD13	0.42	2.30	5	1
1:B:311:PHE:CD2	1:B:331:LYS:HE3	0.42	2.49	7	1
1:B:287:GLU:HG3	1:B:332:LEU:HB3	0.42	1.91	8	1
1:A:335:ASN:HB3	1:A:361:GLU:CA	0.42	2.44	9	1
1:A:345:ARG:HD3	1:B:290:ILE:O	0.42	2.15	9	1
1:A:284:LEU:HA	1:A:331:LYS:HD2	0.42	1.90	12	1
1:A:286:GLU:O	1:B:340:LYS:HD3	0.42	2.14	2	1
1:A:326:GLY:O	1:A:327:LYS:HG3	0.42	2.14	2	1
1:A:308:ARG:O	1:A:308:ARG:HG2	0.42	2.14	9	1
1:A:322:ASN:O	1:A:323:GLU:HB2	0.42	2.15	10	1
1:A:345:ARG:HA	1:A:345:ARG:NE	0.42	2.28	12	1
1:A:314:TYR:CD2	1:A:319:ALA:HA	0.42	2.49	10	1
1:A:276:SER:HB3	1:A:351:TYR:CZ	0.42	2.49	12	1
1:A:288:LEU:HB2	1:B:341:ILE:CD1	0.42	2.45	14	1
1:A:312:PHE:HE2	1:A:328:CYS:HB3	0.42	1.74	1	2
1:B:335:ASN:HB2	1:B:360:ASN:CA	0.42	2.36	2	1
1:A:307:VAL:HB	1:A:355:LEU:HB3	0.42	1.89	4	1
1:B:309:CYS:HB3	1:B:330:LEU:HD21	0.42	1.92	8	1
1:B:320:SER:HG	1:B:329:TYR:HD1	0.42	1.56	8	1
1:B:318:GLN:O	1:B:319:ALA:HB2	0.42	2.15	10	1
1:B:319:ALA:HB1	1:B:327:LYS:O	0.42	2.15	10	1
1:A:288:LEU:HD21	1:A:329:TYR:HE2	0.42	1.75	4	1
1:A:311:PHE:CE2	1:A:331:LYS:HE2	0.42	2.49	9	1
1:A:277:PHE:CD2	1:A:350:GLY:HA3	0.41	2.50	2	1
1:B:286:GLU:CB	1:B:333:SER:HA	0.41	2.45	11	1
1:A:318:GLN:HB3	1:A:324:GLY:N	0.41	2.29	12	1
1:B:344:GLY:C	1:B:345:ARG:HD2	0.41	2.34	2	1
1:B:309:CYS:HB3	1:B:330:LEU:HD11	0.41	1.92	4	1
1:B:297:GLU:CD	1:B:297:GLU:H	0.41	2.18	9	1
1:A:288:LEU:HD23	1:B:341:ILE:HG13	0.41	1.92	14	1
1:A:352:THR:HG23	1:A:353:LEU:HD23	0.41	1.91	4	1
1:A:291:VAL:HG13	1:B:345:ARG:HG2	0.41	1.92	12	1
1:A:338:PRO:HB2	1:A:340:LYS:HE3	0.41	1.93	2	1
1:A:309:CYS:HB3	1:A:330:LEU:HD11	0.41	1.92	11	1
1:B:286:GLU:HB2	1:B:337:SER:HB3	0.41	1.91	13	1
1:B:311:PHE:HB3	1:B:351:TYR:HD2	0.41	1.75	13	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:290:ILE:HG23	1:B:345:ARG:HB2	0.41	1.93	1	1
1:A:323:GLU:CD	1:B:324:GLY:HA2	0.41	2.36	1	1
1:A:320:SER:N	1:A:324:GLY:HA3	0.41	2.29	6	1
1:A:279:HIS:O	1:A:280:ASP:HB3	0.41	2.16	8	1
1:A:315:THR:CG2	1:A:322:ASN:HA	0.41	2.45	6	1
1:A:277:PHE:HB3	1:A:348:ILE:CG2	0.41	2.45	7	1
1:A:297:GLU:O	1:A:300:GLN:HG2	0.41	2.16	1	1
1:A:341:ILE:HD13	1:A:341:ILE:N	0.41	2.31	9	2
1:A:321:CYS:SG	1:B:322:ASN:ND2	0.41	2.94	12	1
1:B:314:TYR:CZ	1:B:348:ILE:HG13	0.41	2.51	14	1
1:B:294:LYS:N	1:B:294:LYS:HD2	0.41	2.30	1	1
1:A:356:CYS:HA	1:A:359:ASP:OD2	0.41	2.15	2	1
1:B:335:ASN:CG	1:B:336:GLY:H	0.41	2.17	9	1
1:B:312:PHE:CE1	1:B:328:CYS:HB2	0.41	2.43	10	1
1:B:282:ASP:O	1:B:341:ILE:C	0.41	2.59	14	1
1:B:283:PHE:HB2	1:B:311:PHE:CZ	0.41	2.51	3	1
1:B:307:VAL:HG23	1:B:355:LEU:HA	0.41	1.91	3	1
1:A:356:CYS:O	1:A:359:ASP:HB3	0.41	2.16	12	1
1:A:332:LEU:HD21	1:A:358:MET:HE1	0.41	1.92	2	1
1:B:301:LYS:HA	1:B:304:THR:OG1	0.41	2.14	3	1
1:B:302:LEU:HA	1:B:305:ASN:HD21	0.41	1.75	6	1
1:B:315:THR:HB	1:B:316:PRO:HD2	0.41	1.92	11	1
1:A:330:LEU:HD23	1:A:331:LYS:N	0.41	2.30	12	1
1:A:297:GLU:HG3	1:A:300:GLN:OE1	0.40	2.16	7	1
1:A:312:PHE:CE2	1:A:328:CYS:HB3	0.40	2.51	7	1
1:A:322:ASN:ND2	1:A:323:GLU:H	0.40	2.14	8	1
1:A:323:GLU:CB	1:B:323:GLU:HB3	0.40	2.37	14	1
1:B:288:LEU:HB3	1:B:329:TYR:CE2	0.40	2.49	9	1
1:B:320:SER:CA	1:B:329:TYR:HB2	0.40	2.23	11	1
1:A:289:ASP:C	1:A:330:LEU:H	0.40	2.19	12	1
1:B:320:SER:O	1:B:322:ASN:N	0.40	2.54	13	1
1:B:345:ARG:H	1:B:345:ARG:CD	0.40	2.30	13	1
1:B:278:TYR:HE2	1:B:282:ASP:HA	0.40	1.75	2	1
1:A:301:LYS:N	1:A:301:LYS:HD2	0.40	2.32	3	1
1:A:288:LEU:HD22	1:B:342:LEU:HG	0.40	1.92	4	1
1:A:355:LEU:C	1:A:355:LEU:HD22	0.40	2.37	5	1
1:A:341:ILE:HD13	1:A:341:ILE:H	0.40	1.75	9	1
1:A:357:LYS:O	1:A:357:LYS:HE2	0.40	2.17	12	1
1:B:282:ASP:O	1:B:341:ILE:CG2	0.40	2.70	14	1

## 6.3 Torsion angles [i](#)

### 6.3.1 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 PDB entries followed by that with respect to all NMR entries. 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	88/90 (98%)	67±3 (77±4%)	17±3 (19±4%)	4±2 (4±2%)	4	28
1	B	88/90 (98%)	68±2 (77±2%)	16±3 (18±3%)	5±2 (5±2%)	4	24
All	All	2464/2520 (98%)	1893 (77%)	452 (18%)	119 (5%)	4	26

All 41 unique Ramachandran outliers are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
1	A	308	ARG	9
1	A	353	LEU	6
1	B	307	VAL	6
1	A	324	GLY	5
1	B	295	SER	5
1	B	317	ALA	5
1	B	322	ASN	5
1	A	325	LYS	5
1	A	317	ALA	5
1	B	318	GLN	5
1	A	322	ASN	4
1	B	316	PRO	4
1	B	320	SER	4
1	A	295	SER	4
1	B	275	SER	4
1	B	319	ALA	4
1	B	321	CYS	3
1	B	325	LYS	3
1	B	308	ARG	3
1	A	321	CYS	2
1	B	338	PRO	2
1	B	353	LEU	2
1	A	320	SER	2
1	B	359	ASP	2
1	A	338	PRO	2
1	A	273	CYS	2

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Mol	Chain	Res	Type	Models (Total)
1	B	360	ASN	2
1	A	275	SER	1
1	A	318	GLN	1
1	A	319	ALA	1
1	B	309	CYS	1
1	B	336	GLY	1
1	A	333	SER	1
1	A	280	ASP	1
1	A	316	PRO	1
1	A	323	GLU	1
1	B	333	SER	1
1	A	290	ILE	1
1	A	289	ASP	1
1	B	273	CYS	1
1	B	274	HIS	1

### 6.3.2 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 PDB entries followed by that with respect to all NMR entries. 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	75/76 (99%)	68±3 (90±4%)	7±3 (10±4%)	12	57
1	B	76/76 (100%)	67±2 (89±3%)	9±2 (11±3%)	9	52
All	All	2114/2128 (99%)	1890 (89%)	224 (11%)	10	55

All 91 unique residues with a non-rotameric sidechain are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
1	A	355	LEU	9
1	B	351	TYR	7
1	A	311	PHE	6
1	B	345	ARG	6
1	A	284	LEU	5
1	A	331	LYS	5
1	B	309	CYS	5
1	B	331	LYS	5
1	B	341	ILE	5

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Mol	Chain	Res	Type	Models (Total)
1	B	342	LEU	5
1	B	355	LEU	5
1	A	322	ASN	5
1	B	311	PHE	5
1	A	342	LEU	5
1	B	308	ARG	5
1	A	353	LEU	4
1	B	354	ARG	4
1	B	302	LEU	3
1	A	340	LYS	3
1	B	310	GLN	3
1	B	322	ASN	3
1	A	323	GLU	3
1	A	345	ARG	3
1	B	348	ILE	3
1	A	294	LYS	3
1	B	280	ASP	3
1	A	341	ILE	3
1	A	290	ILE	3
1	B	274	HIS	3
1	B	335	ASN	3
1	A	351	TYR	3
1	B	323	GLU	3
1	B	329	TYR	3
1	B	284	LEU	3
1	B	325	LYS	3
1	A	330	LEU	2
1	B	294	LYS	2
1	B	339	THR	2
1	A	273	CYS	2
1	A	309	CYS	2
1	B	340	LYS	2
1	B	352	THR	2
1	A	359	ASP	2
1	B	290	ILE	2
1	B	360	ASN	2
1	A	354	ARG	2
1	B	321	CYS	2
1	B	358	MET	2
1	A	295	SER	2
1	A	321	CYS	2
1	A	325	LYS	2

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Mol	Chain	Res	Type	Models (Total)
1	A	329	TYR	2
1	B	275	SER	2
1	A	296	HIS	2
1	B	288	LEU	2
1	B	357	LYS	2
1	A	357	LYS	2
1	B	300	GLN	2
1	A	310	GLN	1
1	A	348	ILE	1
1	A	349	SER	1
1	B	315	THR	1
1	A	301	LYS	1
1	B	282	ASP	1
1	B	296	HIS	1
1	A	327	LYS	1
1	B	301	LYS	1
1	A	328	CYS	1
1	A	360	ASN	1
1	B	361	GLU	1
1	A	279	HIS	1
1	A	304	THR	1
1	A	358	MET	1
1	B	273	CYS	1
1	B	286	GLU	1
1	A	334	SER	1
1	B	334	SER	1
1	A	302	LEU	1
1	B	304	THR	1
1	B	328	CYS	1
1	A	308	ARG	1
1	A	335	ASN	1
1	A	361	GLU	1
1	B	327	LYS	1
1	A	274	HIS	1
1	A	314	TYR	1
1	B	332	LEU	1
1	A	278	TYR	1
1	A	297	GLU	1
1	A	305	ASN	1
1	B	343	HIS	1

### 6.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

### 6.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

### 6.6 Ligand geometry [i](#)

There are no ligands in this entry.

### 6.7 Other polymers [i](#)

There are no such molecules in this entry.

### 6.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

## 7 Chemical shift validation

No chemical shift data were provided