



# Full wwPDB X-ray Structure Validation Report ⓘ

Jan 29, 2024 – 09:03 PM EST

PDB ID : 1FIE  
Title : RECOMBINANT HUMAN COAGULATION FACTOR XIII  
Authors : Yee, V.C.; Teller, D.C.  
Deposited on : 1996-08-24  
Resolution : 2.50 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](mailto: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>.

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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  
Xtrriage (Phenix) : **NOT EXECUTED**  
EDS : **NOT EXECUTED**  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.36

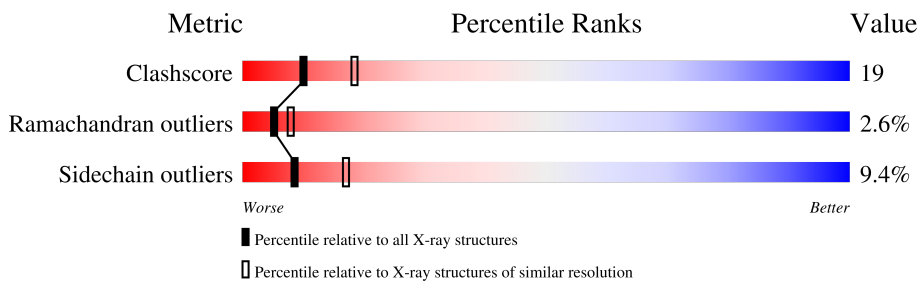
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 2.50 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))
Clashscore	141614	5346 (2.50-2.50)
Ramachandran outliers	138981	5231 (2.50-2.50)
Sidechain outliers	138945	5233 (2.50-2.50)

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  $\geq 3$ , 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  $\leq 5\%$ .

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	731	 56% 35% 5% .
1	B	731	 58% 36% . .

## 2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 11928 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 COAGULATION FACTOR XIII.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	705	5651	3584	976	1064	27	0	0	0
1	B	715	5720	3626	986	1081	27	0	0	0

- Molecule 2 is water.

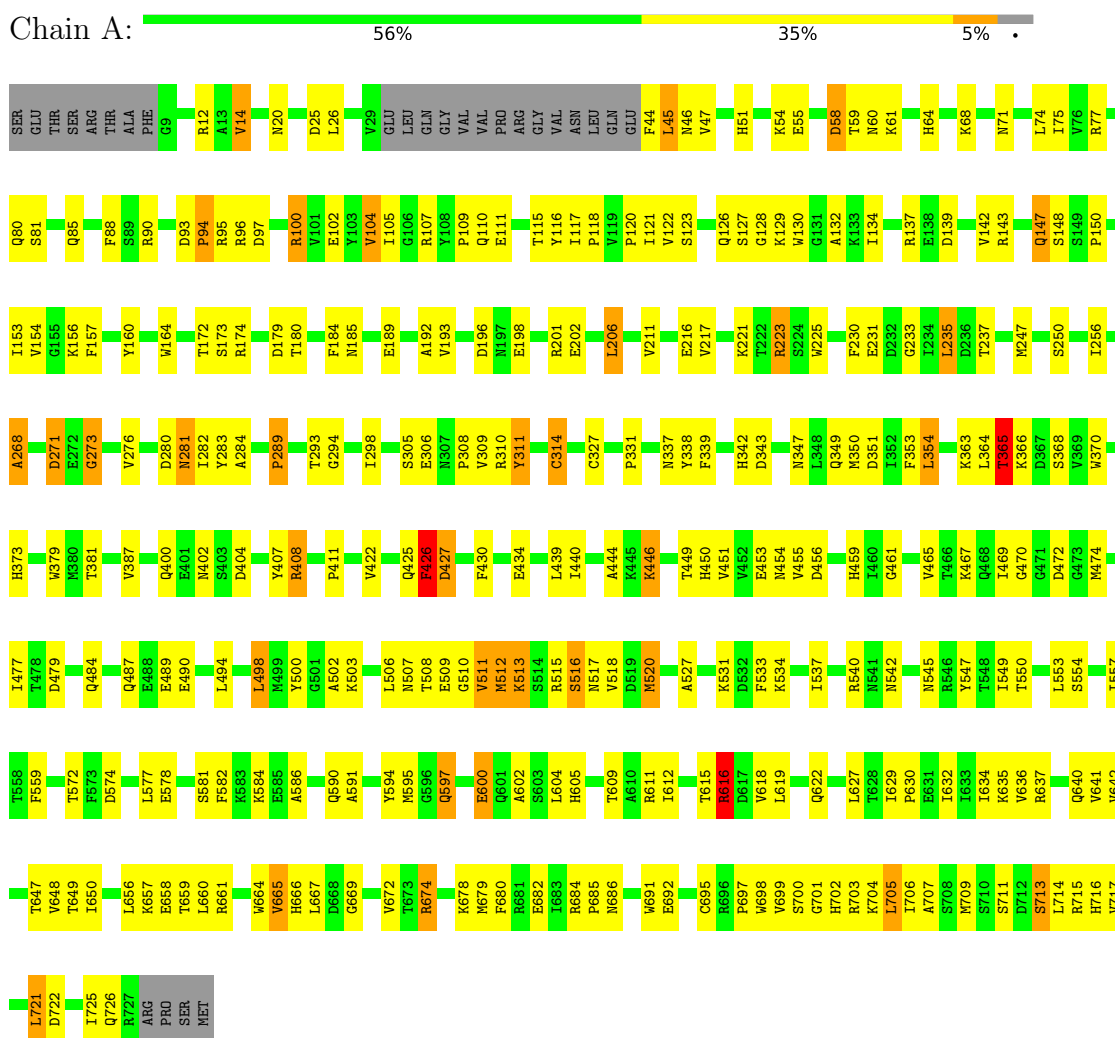
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	270	Total 270	O 270	0	0
2	B	287	Total 287	O 287	0	0

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

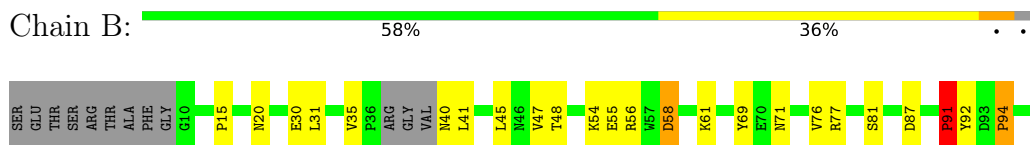
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. Residues are color-coded 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. 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.

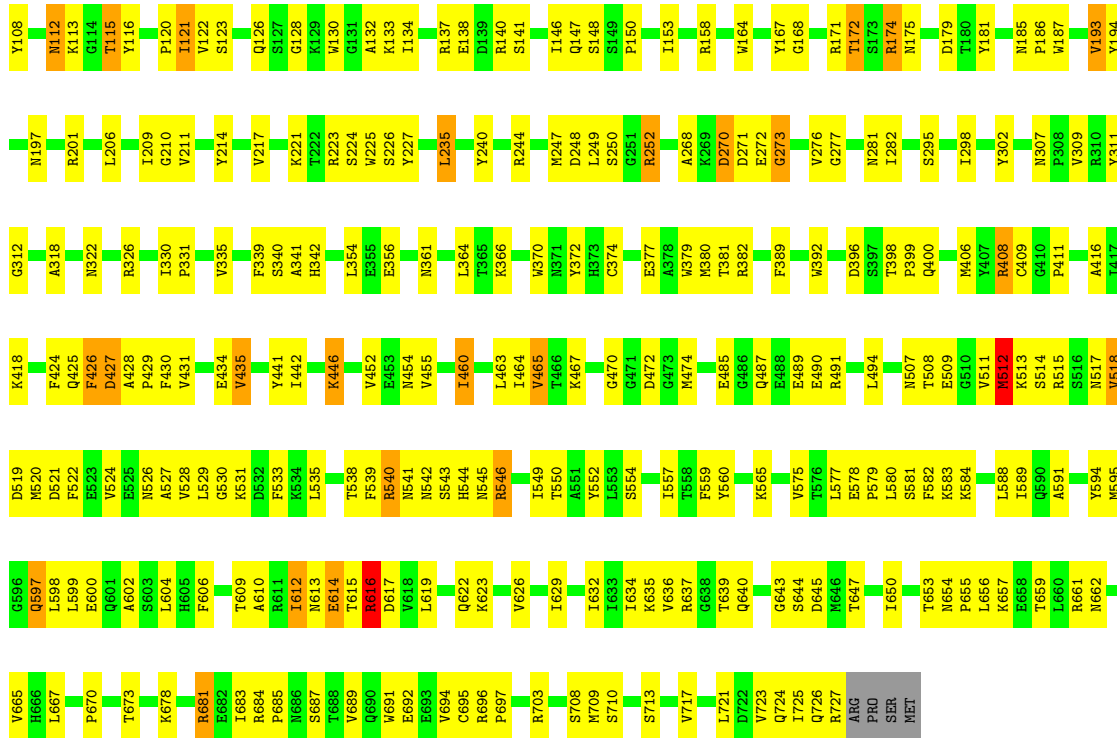
Note EDS was not executed.

- Molecule 1: COAGULATION FACTOR XIII



- Molecule 1: COAGULATION FACTOR XIII





## 4 Data and refinement statistics

Xtrriage (Phenix) and EDS were not executed - this section is therefore incomplete.

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	101.10Å 73.13Å 134.70Å 90.00° 106.40° 90.00°	Depositor
Resolution (Å)	10.00 – 2.50	Depositor
% Data completeness (in resolution range)	77.0 (10.00-2.50)	Depositor
$R_{merge}$	0.07	Depositor
$R_{sym}$	(Not available)	Depositor
Refinement program	X-PLOR	Depositor
R, $R_{free}$	0.182 , (Not available)	Depositor
Estimated twinning fraction	No twinning to report.	Xtrriage
Total number of atoms	11928	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	39.0	wwPDB-VP

## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
1	A	0.58	0/5784	0.83	2/7848 (0.0%)
1	B	0.61	0/5853	0.84	3/7941 (0.0%)
All	All	0.60	0/11637	0.83	5/15789 (0.0%)

There are no bond length outliers.

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	365	THR	N-CA-C	-7.06	91.95	111.00
1	A	426	PHE	CB-CA-C	5.36	121.13	110.40
1	B	425	GLN	N-CA-C	5.33	125.39	111.00
1	B	518	VAL	N-CA-C	-5.28	96.76	111.00
1	B	460	ILE	N-CA-C	5.21	125.06	111.00

There are no chirality outliers.

There are no planarity outliers.

### 5.2 Too-close contacts [i](#)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	5651	0	5518	214	0
1	B	5720	0	5566	216	0
2	A	270	0	0	14	0
2	B	287	0	0	17	0
All	All	11928	0	11084	427	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 19.

All (427) 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:B:538:THR:HG22	1:B:584:LYS:HG3	1.37	1.06
1:B:528:VAL:HB	1:B:531:LYS:HD3	1.44	0.97
1:A:650:ILE:HB	1:A:691:TRP:HB3	1.50	0.90
1:B:509:GLU:HB2	1:B:511:VAL:O	1.76	0.85
1:A:331:PRO:HB2	1:A:379:TRP:HB3	1.59	0.84
1:B:659:THR:HG22	1:B:685:PRO:HD3	1.60	0.84
1:A:549:ILE:HD12	1:A:612:ILE:HG12	1.60	0.82
1:B:40:ASN:C	1:B:41:LEU:CA	2.48	0.82
1:B:565:LYS:HD2	1:B:599:LEU:HD21	1.61	0.81
1:A:517:ASN:HB3	1:A:542:ASN:HB2	1.62	0.81
1:A:337:ASN:HD21	1:A:461:GLY:HA2	1.45	0.81
1:A:667:LEU:HD11	1:A:705:LEU:HD22	1.62	0.81
1:B:650:ILE:HG21	1:B:665:VAL:HG11	1.63	0.79
1:B:223:ARG:HG3	1:B:223:ARG:HH11	1.48	0.79
1:B:527:ALA:HB2	1:B:533:PHE:HB3	1.66	0.78
1:B:540:ARG:HA	1:B:582:PHE:HD1	1.48	0.78
1:B:515:ARG:HB2	1:B:619:LEU:HD21	1.64	0.77
1:B:465:VAL:HG21	1:B:474:MET:SD	2.25	0.76
1:A:298:ILE:HG23	1:A:309:VAL:HG11	1.68	0.76
1:A:650:ILE:HD11	1:A:667:LEU:HD13	1.67	0.76
1:B:632:ILE:HD11	1:B:709:MET:HB2	1.70	0.74
1:B:298:ILE:HG23	1:B:309:VAL:HG11	1.70	0.72
1:B:331:PRO:HB2	1:B:379:TRP:HB3	1.70	0.72
1:B:575:VAL:HG13	1:B:583:LYS:HD2	1.71	0.72
1:B:454:ASN:HA	2:B:967:HOH:O	1.89	0.72
1:A:636:VAL:HG12	1:A:648:VAL:HG22	1.70	0.72
1:A:143:ARG:HD2	2:A:735:HOH:O	1.89	0.71
1:A:484:GLN:HG2	1:A:487:GLN:HE21	1.55	0.71
1:B:546:ARG:HH11	1:B:546:ARG:HG3	1.54	0.70
1:A:531:LYS:O	1:A:591:ALA:HB2	1.91	0.70
1:A:634:ILE:HG22	1:A:721:LEU:HD12	1.73	0.69
1:A:121:ILE:HG13	1:A:121:ILE:O	1.91	0.68
1:B:549:ILE:HG22	1:B:550:THR:H	1.58	0.68
1:B:411:PRO:O	1:B:426:PHE:HB2	1.94	0.67
1:B:581:SER:HB3	2:B:950:HOH:O	1.94	0.66
1:A:71:ASN:HB3	1:A:75:ILE:HD11	1.76	0.66
1:B:591:ALA:HA	1:B:594:TYR:CE2	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:517:ASN:HB3	1:B:542:ASN:HB2	1.78	0.66
1:A:193:VAL:HG13	1:A:331:PRO:HD3	1.79	0.65
1:A:411:PRO:O	1:A:426:PHE:HB2	1.96	0.65
1:B:545:ASN:O	1:B:579:PRO:HA	1.96	0.65
1:B:612:ILE:O	1:B:612:ILE:HG22	1.95	0.65
1:B:121:ILE:HD13	1:B:134:ILE:HG13	1.78	0.65
1:A:268:ALA:HA	1:A:273:GLY:HA3	1.77	0.64
1:A:679:MET:HG2	1:A:680:PHE:N	2.11	0.64
1:A:484:GLN:HG2	1:A:487:GLN:NE2	2.12	0.64
1:A:540:ARG:HG2	1:A:582:PHE:CD2	2.31	0.64
1:A:107:ARG:HG2	1:A:107:ARG:HH11	1.63	0.64
1:A:134:ILE:HG13	1:A:142:VAL:HG21	1.79	0.64
1:B:91:PRO:HD3	1:B:140:ARG:HG2	1.79	0.64
1:A:600:GLU:HG3	1:A:715:ARG:HD2	1.79	0.63
1:B:214:TYR:HD2	2:B:831:HOH:O	1.81	0.63
1:A:446:LYS:O	1:B:164:TRP:HZ3	1.82	0.63
1:B:600:GLU:HA	2:B:956:HOH:O	1.99	0.62
1:A:134:ILE:HG13	1:A:142:VAL:CG2	2.28	0.62
1:A:439:LEU:O	1:A:455:VAL:HA	1.99	0.62
1:A:453:GLU:O	1:A:513:LYS:HG2	2.00	0.62
1:B:515:ARG:HH12	1:B:519:ASP:HA	1.64	0.62
1:B:528:VAL:HB	1:B:531:LYS:CD	2.25	0.62
1:A:189:GLU:HB3	2:A:891:HOH:O	1.99	0.61
1:B:318:ALA:O	1:B:322:ASN:HB2	1.99	0.61
1:B:659:THR:CG2	1:B:685:PRO:HD3	2.30	0.61
1:B:268:ALA:HA	1:B:273:GLY:HA3	1.82	0.61
1:A:665:VAL:HG22	1:A:680:PHE:HE1	1.65	0.61
1:B:270:ASP:HA	2:B:868:HOH:O	2.01	0.61
1:B:514:SER:O	1:B:515:ARG:HG2	2.00	0.61
1:B:549:ILE:HG22	1:B:550:THR:N	2.15	0.61
1:A:678:LYS:HB2	1:A:691:TRP:CZ2	2.35	0.61
1:A:484:GLN:HG3	1:A:487:GLN:HG3	1.82	0.61
1:B:703:ARG:HG3	1:B:725:ILE:HD12	1.83	0.60
1:A:363:LYS:O	1:A:366:LYS:HE2	2.02	0.60
1:A:510:GLY:O	1:A:511:VAL:HB	2.01	0.60
1:A:154:VAL:HG21	1:A:184:PHE:CE2	2.37	0.60
1:A:51:His:HB2	1:A:85:GLN:HB3	1.83	0.60
1:A:640:GLN:O	1:A:726:GLN:HG2	2.02	0.60
1:B:518:VAL:HA	1:B:540:ARG:O	2.01	0.60
1:A:100:ARG:HG2	1:A:164:TRP:HE1	1.66	0.60
1:A:446:LYS:O	1:B:164:TRP:CZ3	2.55	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:649:THR:HA	1:A:691:TRP:O	2.02	0.59
1:B:515:ARG:NH1	1:B:519:ASP:HA	2.17	0.59
1:A:511:VAL:HG13	1:A:512:MET:N	2.17	0.59
1:A:100:ARG:HE	1:A:164:TRP:HZ2	1.51	0.59
1:A:678:LYS:HB2	1:A:691:TRP:CE2	2.37	0.59
1:B:546:ARG:HG3	1:B:546:ARG:NH1	2.15	0.59
1:B:662:ASN:N	1:B:662:ASN:HD22	2.00	0.59
1:B:361:ASN:ND2	1:B:364:LEU:HD12	2.18	0.58
1:B:128:GLY:HA2	1:B:150:PRO:HD2	1.84	0.58
1:B:226:SER:CB	1:B:670:PRO:HD3	2.34	0.58
1:B:578:GLU:HB2	1:B:581:SER:OG	2.03	0.58
1:B:541:ASN:HB2	1:B:577:LEU:HD23	1.84	0.58
1:A:540:ARG:NE	1:A:582:PHE:HE2	2.01	0.58
1:B:128:GLY:HA2	1:B:150:PRO:CD	2.33	0.58
1:B:540:ARG:HA	1:B:582:PHE:CD1	2.36	0.57
1:A:439:LEU:HB2	1:A:456:ASP:HB3	1.86	0.57
1:B:187:TRP:CH2	1:B:206:LEU:HD21	2.39	0.57
1:B:511:VAL:HG12	1:B:512:MET:N	2.20	0.57
1:A:44:PHE:O	1:A:45:LEU:HB2	2.04	0.57
1:A:656:LEU:HD12	1:A:660:LEU:HD21	1.86	0.57
1:B:31:LEU:HD23	1:B:168:GLY:HA3	1.86	0.57
1:A:513:LYS:HD3	1:A:618:VAL:H	1.70	0.56
1:A:513:LYS:HG3	1:A:618:VAL:O	2.05	0.56
1:B:92:TYR:O	1:B:94:PRO:HD3	2.04	0.56
1:B:511:VAL:HG12	1:B:512:MET:H	1.69	0.56
1:A:211:VAL:HG22	1:A:467:LYS:HB2	1.86	0.56
1:A:657:LYS:HD3	1:A:686:ASN:HD21	1.69	0.56
1:B:223:ARG:HG3	1:B:223:ARG:NH1	2.17	0.56
1:B:435:VAL:HG21	1:B:464:ILE:HD11	1.87	0.56
1:B:634:ILE:O	1:B:721:LEU:HD22	2.05	0.56
1:A:233:GLY:O	1:A:237:THR:HG23	2.04	0.56
1:A:559:PHE:HD2	2:A:815:HOH:O	1.87	0.56
1:B:105:ILE:HD12	1:B:115:THR:HA	1.87	0.56
1:B:598:LEU:HD22	1:B:602:ALA:HA	1.86	0.56
1:B:382:ARG:NH2	1:B:411:PRO:O	2.39	0.56
1:B:392:TRP:HB2	2:B:976:HOH:O	2.04	0.56
1:B:678:LYS:HB2	1:B:691:TRP:CE2	2.40	0.56
1:B:670:PRO:O	1:B:703:ARG:NH1	2.38	0.56
1:A:664:TRP:CE3	1:A:679:MET:HB2	2.39	0.56
1:A:709:MET:HB3	1:A:717:VAL:HB	1.86	0.56
1:A:578:GLU:HB2	1:A:581:SER:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:539:PHE:O	1:B:582:PHE:HA	2.06	0.56
1:A:116:TYR:CE2	1:A:118:PRO:HG3	2.41	0.55
1:B:540:ARG:HG3	1:B:582:PHE:CD1	2.42	0.55
1:A:121:ILE:HA	1:A:132:ALA:HB3	1.89	0.55
1:B:538:THR:C	1:B:540:ARG:HH21	2.09	0.55
1:B:544:HIS:HD2	1:B:580:LEU:HD21	1.71	0.55
1:A:231:GLU:HB3	1:A:674:ARG:HH22	1.71	0.55
1:A:679:MET:HG2	1:A:680:PHE:H	1.71	0.55
1:B:153:ILE:HD13	1:B:249:LEU:O	2.07	0.55
1:B:616:ARG:H	1:B:616:ARG:HD3	1.72	0.55
1:A:77:ARG:HB3	1:A:185:ASN:HB2	1.89	0.54
1:A:347:ASN:ND2	1:A:503:LYS:HG3	2.21	0.54
1:B:81:SER:HA	1:B:146:ILE:O	2.06	0.54
1:A:268:ALA:HA	1:A:273:GLY:CA	2.38	0.54
1:A:276:VAL:O	1:A:311:TYR:HA	2.08	0.54
1:B:197:ASN:O	1:B:201:ARG:HG3	2.08	0.54
1:B:389:PHE:HE1	1:B:416:ALA:HA	1.72	0.54
1:B:282:ILE:HD12	1:B:282:ILE:H	1.72	0.54
1:A:93:ASP:OD2	1:A:95:ARG:HB3	2.08	0.54
1:A:247:MET:HA	2:A:778:HOH:O	2.07	0.54
1:A:697:PRO:HB3	1:A:725:ILE:HD13	1.90	0.54
1:B:302:TYR:HE1	2:B:869:HOH:O	1.89	0.54
1:B:606:PHE:O	1:B:622:GLN:HA	2.07	0.54
1:A:55:GLU:O	1:A:58:ASP:HB2	2.08	0.54
1:A:682:GLU:CD	1:A:684:ARG:HH12	2.12	0.53
1:B:667:LEU:HB2	1:B:691:TRP:CZ3	2.43	0.53
1:B:683:ILE:HG12	1:B:689:VAL:HG11	1.89	0.53
1:B:557:ILE:HD13	1:B:597:GLN:HB3	1.91	0.53
1:A:515:ARG:HD3	1:A:518:VAL:O	2.08	0.53
1:A:549:ILE:HG22	1:A:550:THR:H	1.73	0.53
1:A:507:ASN:HB3	1:A:509:GLU:OE1	2.08	0.53
1:A:557:ILE:HG13	1:A:597:GLN:HB2	1.91	0.53
1:B:227:TYR:CE2	1:B:326:ARG:NH1	2.76	0.53
1:B:662:ASN:HD21	1:B:681:ARG:HH21	1.56	0.53
1:A:217:VAL:HG22	1:A:338:TYR:HB3	1.91	0.53
1:B:276:VAL:O	1:B:311:TYR:HA	2.08	0.53
1:A:692:GLU:OE1	1:A:692:GLU:HA	2.09	0.52
1:B:356:GLU:HB2	1:B:446:LYS:NZ	2.23	0.52
1:B:544:HIS:CD2	1:B:580:LEU:HD21	2.45	0.52
1:A:600:GLU:HG3	1:A:715:ARG:CD	2.40	0.52
1:B:659:THR:HG22	1:B:684:ARG:HA	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:12:ARG:HD3	1:A:14:VAL:O	2.09	0.52
1:A:353:PHE:HB2	1:A:365:THR:OG1	2.09	0.52
1:B:515:ARG:HH22	1:B:520:MET:H	1.57	0.52
1:A:672:VAL:HG13	1:A:697:PRO:HG3	1.91	0.52
1:A:90:ARG:HH11	1:A:90:ARG:HG3	1.74	0.52
1:A:507:ASN:C	1:A:509:GLU:N	2.62	0.52
1:A:698:TRP:CD1	1:A:699:VAL:HG23	2.44	0.52
1:B:615:THR:O	1:B:617:ASP:N	2.43	0.52
1:A:231:GLU:HB3	1:A:674:ARG:NH2	2.25	0.51
1:A:153:ILE:HD11	1:A:250:SER:HA	1.93	0.51
1:B:662:ASN:HD22	1:B:662:ASN:H	1.55	0.51
1:A:44:PHE:O	1:A:45:LEU:CB	2.59	0.51
1:B:545:ASN:OD1	1:B:546:ARG:N	2.44	0.51
1:A:349:GLN:HG2	1:A:440:ILE:CG1	2.41	0.51
1:A:68:LYS:HB2	2:A:849:HOH:O	2.10	0.51
1:A:174:ARG:NH2	1:A:179:ASP:OD1	2.43	0.51
1:A:594:TYR:CD1	1:A:595:MET:N	2.79	0.51
1:A:511:VAL:HG22	1:A:512:MET:H	1.76	0.51
1:A:540:ARG:HG2	1:A:582:PHE:HD2	1.76	0.51
1:A:658:GLU:C	1:A:685:PRO:HG3	2.32	0.51
1:A:615:THR:HA	1:A:616:ARG:CZ	2.41	0.50
1:A:349:GLN:HG2	1:A:440:ILE:HG13	1.93	0.50
1:A:444:ALA:HB1	2:A:898:HOH:O	2.11	0.50
1:A:453:GLU:HB3	1:A:513:LYS:HD2	1.92	0.50
1:A:507:ASN:C	1:A:509:GLU:H	2.14	0.50
1:A:695:CYS:O	1:A:697:PRO:HD3	2.12	0.50
1:B:640:GLN:HB3	1:B:724:GLN:O	2.12	0.50
1:B:673:THR:HB	1:B:695:CYS:SG	2.50	0.50
1:B:709:MET:SD	1:B:710:SER:N	2.84	0.50
1:A:667:LEU:HD11	1:A:705:LEU:CD2	2.38	0.50
1:A:515:ARG:NH1	1:A:520:MET:H	2.10	0.50
1:A:642:VAL:HG13	1:A:697:PRO:O	2.11	0.50
1:B:409:CYS:HB3	1:B:427:ASP:HB2	1.92	0.50
1:A:635:LYS:O	1:A:648:VAL:HA	2.11	0.50
1:B:174:ARG:NH2	1:B:179:ASP:OD1	2.45	0.50
1:B:92:TYR:CE2	1:B:94:PRO:HG3	2.47	0.50
1:A:686:ASN:N	1:A:686:ASN:HD22	2.10	0.49
1:B:158:ARG:HG2	1:B:174:ARG:NH2	2.27	0.49
1:B:226:SER:HB2	1:B:670:PRO:HD3	1.94	0.49
1:A:90:ARG:NH2	1:A:97:ASP:OD1	2.46	0.49
1:A:88:PHE:HE2	1:A:142:VAL:HG12	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:223:ARG:NH2	2:A:768:HOH:O	2.46	0.49
1:A:338:TYR:O	1:A:339:PHE:HB2	2.12	0.49
1:A:515:ARG:CZ	1:A:619:LEU:HD22	2.42	0.49
1:B:511:VAL:HG12	1:B:513:LYS:H	1.78	0.49
1:B:727:ARG:HG3	1:B:727:ARG:HH11	1.78	0.49
1:A:26:LEU:HD11	1:A:104:VAL:HG11	1.95	0.49
1:A:527:ALA:HB2	1:A:533:PHE:CD1	2.48	0.49
1:A:656:LEU:HD12	1:A:660:LEU:CD2	2.42	0.49
1:B:56:ARG:HG3	2:B:929:HOH:O	2.13	0.49
1:A:100:ARG:CG	1:A:164:TRP:HE1	2.26	0.49
1:A:632:ILE:HD11	1:A:709:MET:HB2	1.95	0.49
1:A:507:ASN:O	1:A:509:GLU:HG2	2.12	0.49
1:A:659:THR:N	1:A:685:PRO:HG3	2.28	0.49
1:B:15:PRO:HG2	1:B:108:TYR:CZ	2.48	0.49
1:A:615:THR:HA	1:A:616:ARG:NH1	2.27	0.48
1:B:104:VAL:HG12	1:B:116:TYR:HD1	1.77	0.48
1:A:629:ILE:CG2	1:A:630:PRO:HD2	2.42	0.48
1:B:214:TYR:HB2	1:B:372:TYR:CZ	2.48	0.48
1:B:370:TRP:HZ3	1:B:560:TYR:HH	1.60	0.48
1:B:452:VAL:O	1:B:452:VAL:HG23	2.13	0.48
1:B:697:PRO:HB2	1:B:725:ILE:HG21	1.95	0.48
1:A:126:GLN:HG3	1:A:129:LYS:HB3	1.95	0.48
1:A:192:ALA:HB1	1:A:381:THR:OG1	2.13	0.48
1:A:635:LYS:O	1:A:649:THR:N	2.45	0.48
1:B:221:LYS:HE2	1:B:626:VAL:CG2	2.43	0.48
1:A:117:ILE:HG21	1:A:130:TRP:CE2	2.48	0.48
1:B:281:ASN:OD1	1:B:600:GLU:HG3	2.14	0.48
1:A:217:VAL:HG23	2:A:783:HOH:O	2.12	0.48
1:A:465:VAL:HG21	1:A:474:MET:SD	2.54	0.48
1:A:55:GLU:HB2	1:A:58:ASP:OD2	2.13	0.48
1:A:68:LYS:HD3	1:A:230:PHE:CE2	2.49	0.48
1:A:342:HIS:ND1	1:A:434:GLU:OE2	2.45	0.48
1:A:549:ILE:HG22	1:A:550:THR:N	2.29	0.48
1:A:469:ILE:HD11	2:A:925:HOH:O	2.13	0.47
1:B:252:ARG:HD3	2:B:784:HOH:O	2.13	0.47
1:B:428:ALA:HB3	1:B:429:PRO:HD3	1.95	0.47
1:B:431:VAL:O	1:B:434:GLU:HB2	2.14	0.47
1:B:380:MET:HG3	1:B:381:THR:O	2.14	0.47
1:A:107:ARG:HG2	1:A:107:ARG:NH1	2.29	0.47
1:A:198:GLU:O	1:A:202:GLU:HG2	2.15	0.47
1:B:441:TYR:CD1	1:B:454:ASN:HB3	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:55:GLU:O	1:B:58:ASP:HB2	2.14	0.47
1:B:226:SER:HB3	1:B:670:PRO:HD3	1.97	0.47
1:A:343:ASP:HA	1:A:400:GLN:HG3	1.97	0.47
1:A:439:LEU:HD12	1:A:459:HIS:HB3	1.96	0.47
1:A:605:HIS:HE1	1:A:622:GLN:HB3	1.79	0.47
1:B:519:ASP:HB3	1:B:540:ARG:NH1	2.28	0.47
1:B:544:HIS:HA	1:B:580:LEU:HD21	1.96	0.47
1:B:557:ILE:CD1	1:B:597:GLN:HB3	2.45	0.47
1:B:609:THR:HA	1:B:619:LEU:O	2.15	0.47
1:B:640:GLN:HB2	2:B:1013:HOH:O	2.14	0.47
1:A:351:ASP:HB2	2:A:806:HOH:O	2.15	0.47
1:A:498:LEU:HD12	1:A:502:ALA:O	2.15	0.47
1:B:515:ARG:HA	1:B:617:ASP:CB	2.44	0.47
1:A:235:LEU:O	1:A:235:LEU:HD22	2.15	0.46
1:B:524:VAL:HG22	1:B:535:LEU:HG	1.97	0.46
1:A:697:PRO:CB	1:A:725:ILE:HD13	2.45	0.46
1:B:396:ASP:O	1:B:408:ARG:HB2	2.15	0.46
1:B:644:SER:O	1:B:697:PRO:HD2	2.16	0.46
1:B:662:ASN:N	1:B:662:ASN:ND2	2.63	0.46
1:A:515:ARG:O	1:A:518:VAL:HB	2.16	0.46
1:A:666:HIS:O	1:A:707:ALA:HA	2.16	0.46
1:A:702:HIS:CE1	1:A:703:ARG:O	2.68	0.46
1:A:109:PRO:HA	1:A:115:THR:OG1	2.15	0.46
1:B:442:ILE:HG12	1:B:452:VAL:HG12	1.97	0.46
1:A:402:ASN:HA	1:A:430:PHE:CZ	2.51	0.46
1:B:342:HIS:HE1	2:B:752:HOH:O	1.98	0.46
1:B:507:ASN:OD1	1:B:508:THR:N	2.48	0.46
1:A:193:VAL:HG13	1:A:331:PRO:CD	2.44	0.46
1:A:511:VAL:HG13	1:A:512:MET:H	1.81	0.46
1:A:650:ILE:HB	1:A:691:TRP:CB	2.35	0.46
1:B:130:TRP:HA	1:B:147:GLN:O	2.16	0.46
1:B:515:ARG:NE	1:B:619:LEU:HD22	2.31	0.46
1:B:657:LYS:HE3	2:B:867:HOH:O	2.15	0.46
1:B:227:TYR:CD2	1:B:326:ARG:NH1	2.84	0.46
1:A:685:PRO:O	1:A:686:ASN:HB2	2.15	0.46
1:B:559:PHE:HD2	2:B:829:HOH:O	1.97	0.46
1:B:684:ARG:HB2	1:B:687:SER:OG	2.16	0.46
1:A:636:VAL:HA	1:A:647:THR:O	2.17	0.45
1:A:641:VAL:HA	1:A:726:GLN:O	2.16	0.45
1:B:645:ASP:OD1	1:B:696:ARG:HG2	2.16	0.45
1:A:193:VAL:HG12	1:A:193:VAL:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:138:GLU:HG2	1:B:141:SER:HB2	1.98	0.45
1:B:643:GLY:O	1:B:696:ARG:NH2	2.50	0.45
1:B:616:ARG:CD	1:B:616:ARG:N	2.79	0.45
1:A:111:GLU:HB3	1:A:116:TYR:HD2	1.82	0.45
1:A:549:ILE:CD1	1:A:612:ILE:HG12	2.38	0.45
1:A:611:ARG:NH2	2:A:808:HOH:O	2.49	0.45
1:B:137:ARG:HD2	2:B:880:HOH:O	2.15	0.45
1:B:522:PHE:O	1:B:623:LYS:HE2	2.16	0.45
1:A:314:CYS:HB2	1:A:373:HIS:CE1	2.51	0.45
1:B:193:VAL:HG21	1:B:330:ILE:HG23	1.98	0.45
1:A:629:ILE:HG23	1:A:630:PRO:HD2	1.99	0.45
1:B:187:TRP:CZ2	1:B:206:LEU:HD21	2.52	0.45
1:B:211:VAL:HG22	1:B:467:LYS:HD2	1.99	0.45
1:B:629:ILE:HG21	1:B:717:VAL:HG22	1.99	0.45
1:A:271:ASP:HA	1:A:308:PRO:HG2	1.99	0.45
1:B:508:THR:O	1:B:512:MET:HG3	2.17	0.45
1:A:353:PHE:HB2	1:A:364:LEU:O	2.16	0.45
1:B:113:LYS:HB3	1:B:250:SER:OG	2.16	0.45
1:A:305:SER:O	1:A:306:GLU:HB2	2.17	0.45
1:B:214:TYR:HB2	1:B:372:TYR:CE1	2.52	0.44
1:A:44:PHE:CD2	1:A:96:ARG:NH2	2.85	0.44
1:B:580:LEU:N	1:B:580:LEU:HD22	2.32	0.44
1:A:487:GLN:O	1:A:490:GLU:HB3	2.17	0.44
1:B:549:ILE:CG2	1:B:610:ALA:HB1	2.48	0.44
1:A:280:ASP:O	1:A:282:ILE:N	2.50	0.44
1:A:298:ILE:HG23	1:A:309:VAL:CG1	2.45	0.44
1:A:637:ARG:HH12	1:A:647:THR:HG21	1.82	0.44
1:B:543:SER:O	1:B:580:LEU:HD22	2.18	0.44
1:A:235:LEU:HA	1:A:327:CYS:SG	2.58	0.44
1:B:520:MET:HG2	1:B:521:ASP:N	2.32	0.44
1:B:602:ALA:O	1:B:626:VAL:HA	2.18	0.44
1:A:54:LYS:O	1:A:61:LYS:HD2	2.18	0.44
1:A:117:ILE:HG21	1:A:130:TRP:CD2	2.53	0.44
1:A:516:SER:HB2	1:A:547:TYR:CZ	2.52	0.44
1:B:541:ASN:O	1:B:580:LEU:HA	2.17	0.44
1:B:112:ASN:HB3	1:B:113:LYS:HD3	2.00	0.44
1:B:612:ILE:O	1:B:614:GLU:N	2.51	0.44
1:B:723:VAL:HG23	1:B:725:ILE:HG13	2.00	0.44
1:A:102:GLU:HB2	1:A:160:TYR:HB2	2.00	0.43
1:A:370:TRP:N	1:A:370:TRP:CD1	2.84	0.43
1:A:515:ARG:HG2	1:A:619:LEU:CD2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:88:PHE:HE2	1:A:142:VAL:CG1	2.31	0.43
1:A:354:LEU:HD11	1:A:609:THR:HG21	2.00	0.43
1:A:422:VAL:HG23	1:A:500:TYR:HB2	1.99	0.43
1:A:705:LEU:C	1:A:706:ILE:HG13	2.38	0.43
1:B:635:LYS:HE3	1:B:635:LYS:HB2	1.68	0.43
1:A:402:ASN:HA	1:A:430:PHE:CE2	2.53	0.43
1:A:494:LEU:HD12	1:A:494:LEU:HA	1.85	0.43
1:A:656:LEU:C	1:A:658:GLU:H	2.22	0.43
1:A:553:LEU:HD13	1:A:554:SER:N	2.33	0.43
1:B:311:TYR:CD1	1:B:311:TYR:N	2.84	0.43
1:B:507:ASN:OD1	1:B:509:GLU:N	2.51	0.43
1:B:612:ILE:HD12	1:B:617:ASP:HB2	2.00	0.43
1:B:121:ILE:HA	1:B:132:ALA:O	2.18	0.43
1:B:282:ILE:HD12	1:B:282:ILE:N	2.32	0.43
1:A:515:ARG:HB3	1:A:518:VAL:O	2.19	0.43
1:B:223:ARG:HH12	1:B:225:TRP:HE3	1.65	0.43
1:B:400:GLN:NE2	1:B:430:PHE:HB3	2.33	0.43
1:B:653:THR:O	1:B:655:PRO:HD3	2.18	0.43
1:A:400:GLN:HG2	2:A:799:HOH:O	2.18	0.43
1:A:408:ARG:HD2	1:A:408:ARG:O	2.18	0.43
1:B:123:SER:O	1:B:133:LYS:HG3	2.19	0.43
1:B:636:VAL:HA	1:B:647:THR:O	2.18	0.43
1:A:508:THR:O	1:A:510:GLY:N	2.52	0.43
1:B:175:ASN:HB3	2:B:809:HOH:O	2.17	0.43
1:B:339:PHE:O	1:B:460:ILE:O	2.37	0.43
1:B:382:ARG:NH2	1:B:426:PHE:HD2	2.16	0.43
1:A:147:GLN:HG3	1:A:148:SER:N	2.33	0.43
1:A:602:ALA:HB1	1:A:627:LEU:HB2	2.00	0.43
1:A:665:VAL:CG2	1:A:680:PHE:HE1	2.30	0.43
1:B:69:TYR:O	1:B:71:ASN:N	2.50	0.42
1:B:538:THR:HG23	2:B:863:HOH:O	2.18	0.42
1:A:211:VAL:HG11	1:A:472:ASP:HB3	2.01	0.42
1:B:356:GLU:HB2	1:B:446:LYS:HZ3	1.83	0.42
1:A:64:HIS:CE1	1:A:80:GLN:OE1	2.73	0.42
1:A:648:VAL:HG21	1:A:705:LEU:HD11	2.00	0.42
1:B:181:TYR:CE2	1:B:235:LEU:HD13	2.54	0.42
1:B:612:ILE:O	1:B:612:ILE:CG2	2.66	0.42
1:A:110:GLN:HE22	1:B:366:LYS:HB2	1.85	0.42
1:A:642:VAL:CG2	1:A:700:SER:HB3	2.50	0.42
1:A:713:SER:HB2	1:A:714:LEU:H	1.72	0.42
1:B:270:ASP:O	1:B:272:GLU:N	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:342:HIS:HA	1:B:434:GLU:OE2	2.19	0.42
1:B:435:VAL:CG2	1:B:464:ILE:HD11	2.48	0.42
1:A:193:VAL:O	1:A:193:VAL:CG1	2.67	0.42
1:A:701:GLY:O	1:A:703:ARG:HG2	2.20	0.42
1:B:240:TYR:OH	1:B:244:ARG:NH1	2.52	0.42
1:B:678:LYS:HB2	1:B:691:TRP:CZ2	2.54	0.42
1:A:534:LYS:HD2	1:A:586:ALA:HB1	2.01	0.42
2:A:809:HOH:O	1:B:424:PHE:HA	2.19	0.42
1:B:529:LEU:HD12	1:B:656:LEU:CD2	2.49	0.42
1:B:552:TYR:N	1:B:609:THR:O	2.52	0.42
1:B:614:GLU:CD	1:B:614:GLU:H	2.23	0.42
1:A:105:ILE:HG23	1:A:157:PHE:CD2	2.55	0.42
1:A:196:ASP:O	1:A:196:ASP:CG	2.58	0.42
1:B:539:PHE:HB2	1:B:577:LEU:HD11	2.02	0.42
1:A:93:ASP:HA	1:A:94:PRO:HD3	1.85	0.42
1:A:704:LYS:HE3	1:A:704:LYS:HB2	1.89	0.42
1:B:54:LYS:O	1:B:61:LYS:HE3	2.20	0.42
1:B:48:THR:N	1:B:87:ASP:O	2.48	0.41
1:B:697:PRO:HB3	1:B:725:ILE:HD13	2.02	0.41
1:A:283:TYR:CZ	1:A:289:PRO:HD2	2.55	0.41
1:A:611:ARG:HD2	1:A:616:ARG:HA	2.02	0.41
1:B:538:THR:O	1:B:540:ARG:NH2	2.53	0.41
1:A:128:GLY:HA2	1:A:150:PRO:CD	2.50	0.41
1:A:484:GLN:CG	1:A:487:GLN:HG3	2.49	0.41
1:A:506:LEU:HD12	2:A:902:HOH:O	2.19	0.41
1:B:45:LEU:HD12	1:B:45:LEU:HA	1.92	0.41
1:B:77:ARG:HB3	1:B:185:ASN:HB2	2.02	0.41
1:B:513:LYS:HE2	1:B:513:LYS:HB2	1.87	0.41
1:A:120:PRO:O	1:A:122:VAL:HG23	2.21	0.41
1:B:247:MET:O	1:B:248:ASP:C	2.58	0.41
1:B:341:ALA:HB2	1:B:460:ILE:HD13	2.03	0.41
1:B:527:ALA:HB1	1:B:531:LYS:HB2	2.03	0.41
1:B:654:ASN:HB2	1:B:683:ILE:CG2	2.51	0.41
1:B:172:THR:HB	2:B:876:HOH:O	2.21	0.41
1:B:398:THR:HA	1:B:399:PRO:HD3	1.80	0.41
1:B:515:ARG:CB	1:B:619:LEU:HD21	2.45	0.41
1:A:711:SER:C	1:A:713:SER:N	2.73	0.41
1:B:223:ARG:NH1	1:B:225:TRP:HE3	2.18	0.41
1:B:335:VAL:HG21	1:B:377:GLU:HG3	2.03	0.41
1:A:71:ASN:CB	1:A:75:ILE:HD11	2.48	0.41
1:A:591:ALA:HA	1:A:594:TYR:CE2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:680:PHE:N	1:A:680:PHE:CD1	2.89	0.41
1:B:528:VAL:HG12	1:B:529:LEU:N	2.36	0.41
1:B:530:GLY:HA2	1:B:595:MET:SD	2.61	0.41
1:B:578:GLU:O	1:B:581:SER:HB2	2.21	0.41
1:A:74:LEU:HD23	1:A:180:THR:HG23	2.03	0.41
1:A:225:TRP:CE2	1:A:294:GLY:HA2	2.56	0.41
1:A:449:THR:HG22	1:A:450:HIS:N	2.36	0.41
1:B:186:PRO:O	1:B:194:TYR:HD1	2.04	0.41
1:B:221:LYS:HE2	1:B:626:VAL:HG23	2.01	0.41
1:B:277:GLY:HA2	1:B:312:GLY:O	2.20	0.41
1:B:515:ARG:HE	1:B:619:LEU:HD22	1.84	0.41
1:B:637:ARG:NH2	1:B:692:GLU:OE1	2.55	0.40
1:A:198:GLU:HA	1:A:201:ARG:NH1	2.37	0.40
1:A:537:ILE:O	1:A:584:LYS:HA	2.21	0.40
1:B:549:ILE:CG2	1:B:550:THR:N	2.84	0.40
1:A:206:LEU:HD12	1:A:206:LEU:HA	1.97	0.40
1:A:404:ASP:O	1:A:407:TYR:HE2	2.05	0.40
1:B:546:ARG:HB2	1:B:579:PRO:HG3	2.02	0.40
1:B:120:PRO:O	1:B:122:VAL:HG23	2.22	0.40
1:B:209:ILE:HG22	1:B:210:GLY:N	2.37	0.40
1:B:455:VAL:O	1:B:455:VAL:HG13	2.21	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	701/731 (96%)	617 (88%)	63 (9%)	21 (3%)	<b>4</b> <b>6</b>
1	B	710/731 (97%)	626 (88%)	69 (10%)	15 (2%)	<b>7</b> <b>11</b>
All	All	1411/1462 (96%)	1243 (88%)	132 (9%)	36 (3%)	<b>5</b> <b>8</b>

All (36) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	45	LEU
1	A	511	VAL
1	B	426	PHE
1	B	613	ASN
1	B	616	ARG
1	A	268	ALA
1	A	273	GLY
1	A	284	ALA
1	A	425	GLN
1	A	427	ASP
1	A	600	GLU
1	B	273	GLY
1	B	446	LYS
1	A	139	ASP
1	A	281	ASN
1	A	311	TYR
1	A	365	THR
1	A	426	PHE
1	B	270	ASP
1	A	446	LYS
1	A	470	GLY
1	B	252	ARG
1	B	271	ASP
1	B	470	GLY
1	B	612	ILE
1	B	614	GLU
1	A	60	ASN
1	A	94	PRO
1	B	512	MET
1	A	616	ARG
1	B	35	VAL
1	B	94	PRO
1	B	91	PRO
1	A	256	ILE
1	A	477	ILE
1	A	669	GLY

### 5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	620/644 (96%)	561 (90%)	59 (10%)	8	17
1	B	626/644 (97%)	568 (91%)	58 (9%)	9	17
All	All	1246/1288 (97%)	1129 (91%)	117 (9%)	8	17

All (117) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	14	VAL
1	A	20	ASN
1	A	25	ASP
1	A	46	ASN
1	A	47	VAL
1	A	58	ASP
1	A	59	THR
1	A	81	SER
1	A	100	ARG
1	A	104	VAL
1	A	123	SER
1	A	127	SER
1	A	137	ARG
1	A	147	GLN
1	A	156	LYS
1	A	172	THR
1	A	173	SER
1	A	206	LEU
1	A	216	GLU
1	A	221	LYS
1	A	223	ARG
1	A	235	LEU
1	A	271	ASP
1	A	281	ASN
1	A	289	PRO
1	A	293	THR
1	A	310	ARG
1	A	314	CYS
1	A	350	MET
1	A	354	LEU
1	A	368	SER
1	A	387	VAL
1	A	408	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	427	ASP
1	A	451	VAL
1	A	454	ASN
1	A	479	ASP
1	A	489	GLU
1	A	498	LEU
1	A	512	MET
1	A	513	LYS
1	A	516	SER
1	A	520	MET
1	A	545	ASN
1	A	572	THR
1	A	574	ASP
1	A	577	LEU
1	A	590	GLN
1	A	597	GLN
1	A	604	LEU
1	A	616	ARG
1	A	661	ARG
1	A	665	VAL
1	A	674	ARG
1	A	705	LEU
1	A	713	SER
1	A	716	HIS
1	A	721	LEU
1	A	722	ASP
1	B	20	ASN
1	B	30	GLU
1	B	47	VAL
1	B	58	ASP
1	B	76	VAL
1	B	91	PRO
1	B	98	LEU
1	B	104	VAL
1	B	105	ILE
1	B	112	ASN
1	B	115	THR
1	B	121	ILE
1	B	126	GLN
1	B	148	SER
1	B	167	TYR
1	B	171	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	B	172	THR
1	B	174	ARG
1	B	193	VAL
1	B	217	VAL
1	B	224	SER
1	B	235	LEU
1	B	295	SER
1	B	307	ASN
1	B	340	SER
1	B	354	LEU
1	B	374	CYS
1	B	406	MET
1	B	408	ARG
1	B	418	LYS
1	B	427	ASP
1	B	435	VAL
1	B	463	LEU
1	B	465	VAL
1	B	472	ASP
1	B	485	GLU
1	B	487	GLN
1	B	489	GLU
1	B	490	GLU
1	B	491	ARG
1	B	494	LEU
1	B	512	MET
1	B	526	ASN
1	B	540	ARG
1	B	546	ARG
1	B	554	SER
1	B	588	LEU
1	B	589	ILE
1	B	597	GLN
1	B	604	LEU
1	B	616	ARG
1	B	639	THR
1	B	661	ARG
1	B	681	ARG
1	B	694	VAL
1	B	708	SER
1	B	713	SER
1	B	726	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (21) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	46	ASN
1	A	110	GLN
1	A	267	ASN
1	A	337	ASN
1	A	347	ASN
1	A	454	ASN
1	A	484	GLN
1	A	487	GLN
1	A	545	ASN
1	A	556	ASN
1	A	622	GLN
1	A	726	GLN
1	B	18	ASN
1	B	110	GLN
1	B	126	GLN
1	B	307	ASN
1	B	544	HIS
1	B	613	ASN
1	B	662	ASN
1	B	686	ASN
1	B	724	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 monosaccharides in this entry.

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

There are no ligands in this entry.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

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

There are no chain breaks in this entry.



## 6 Fit of model and data

### 6.1 Protein, DNA and RNA chains

EDS was not executed - this section is therefore empty.

### 6.2 Non-standard residues in protein, DNA, RNA chains

EDS was not executed - this section is therefore empty.

### 6.3 Carbohydrates

EDS was not executed - this section is therefore empty.

### 6.4 Ligands

EDS was not executed - this section is therefore empty.

### 6.5 Other polymers

EDS was not executed - this section is therefore empty.