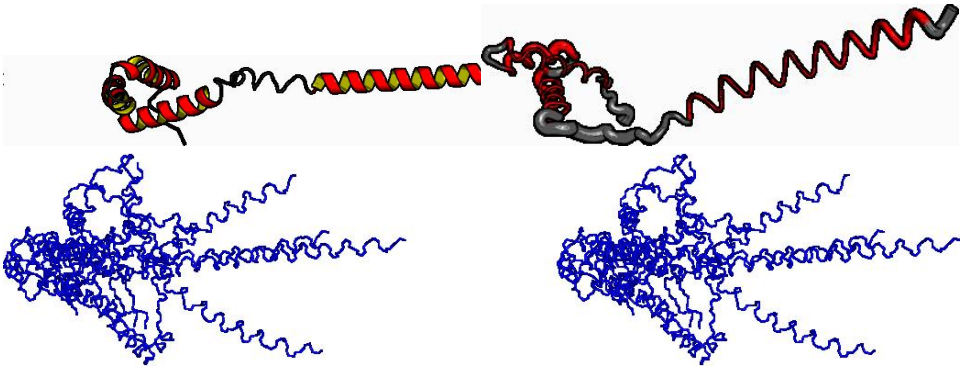
Structure Quality Analysis for NAME

Analyses performed for DAOP well-defined residues.

Procheck analysis, RMSD calculation and structure superimposition are based on DAOP with S(phi)+S(psi)>=1.8 : 2A-60A, 68A-70A, 77A-107A

NESG ID:	NAME
PDB ID:	
Deposition date:	
Common Name:	
Class:	
Length (a.a.):	108
Organism:	
SwissProt / TrEMBL ID:	
# models:	5
Oligomerization:	monomer
Molecular weight:	12640



Secondary Structure Elements:
alpha helices: 9A-22A, 29A-40A, 44A-58A, 67A-72A, 79A-104A
beta strands:

FIDs deposited in the BMRB? no

Comparison of core atoms:

DAOP > 1.8 Å :	A:2..A:60, A:68..A:70, A:77..A:107
FindCore2 :	A:4..A:61
CYRANGE :	7..54

RMSD	***All residues***	***Ordered residues[2]***	***Selected residues[3]***
All backbone atoms	16.6 Å	14.9 Å	14.9 Å
All heavy atoms	15.6 Å	16.1 Å	16.1 Å

Ramachandran Plot Summary for selected residues[3] from Procheck

Most favoured regions	*Additionally allowed regions*	*Generously allowed regions*	*Disallowed regions*
93.0%	7.0%	0.0%	0.0%

Ramachandran Plot Summary for selected residues[3] from Richardson Lab's Molprobity

Most favoured regions	*Allowed regions*	*Disallowed regions*	View plot	View model summary
95.3%	4.5%	0.2%		

Global quality scores

Program	*Verify3D*	*ProsaII (-ve)*	*Procheck (phi-psi)*[3]	*Procheck (all)*[3]	*MolProbity Clashscore*
Raw score	0.05	N/A	0.26	0.20	0.00
Z-score[1]	-6.58	N/A	1.34	1.18	1.53

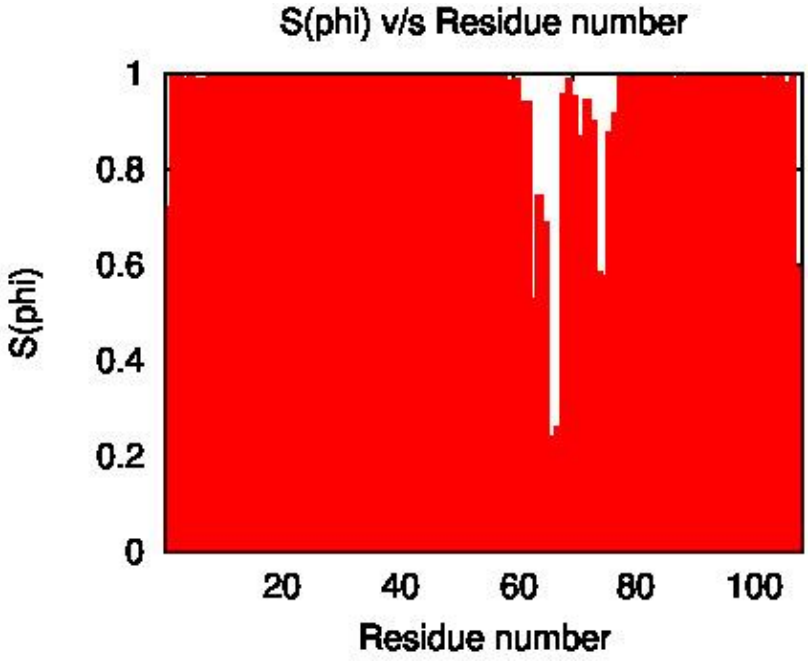
Close Contacts and Deviations from Ideal Geometry (from PDB validation software)

Number of close contacts (within 1.6 &Aring for H atoms, 2.2 &Aring for heavy atoms):	0
RMS deviation for bond angles:	2.0 °
RMS deviation for bond lengths:	0.013 Å

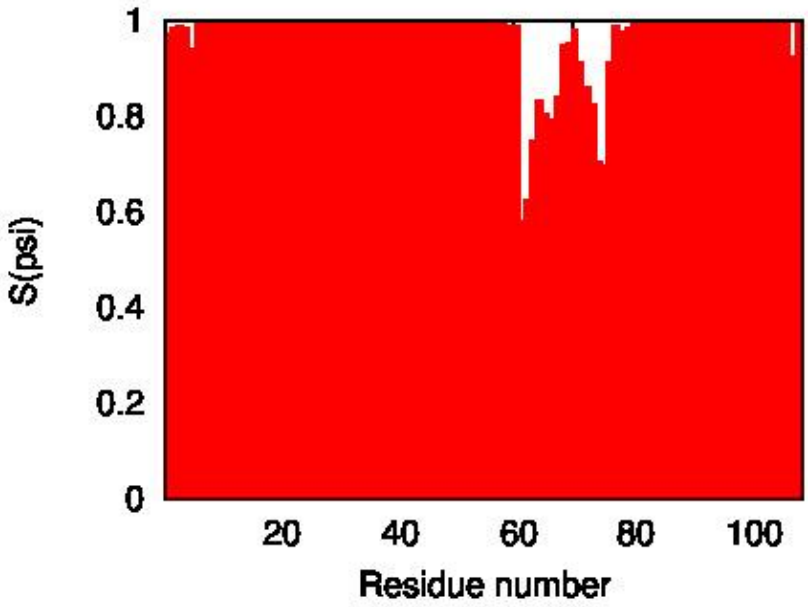
[1] With respect to mean and standard deviation for a set of 252 X-ray structures < 500 residues, of resolution <= 1.80 Å, R-factor <= 0.25 and R-free <= 0.28; a positive value indicates a 'better' score

[2] Ordered residues (DAOP): 2A-60A, 68A-70A, 77A-107A

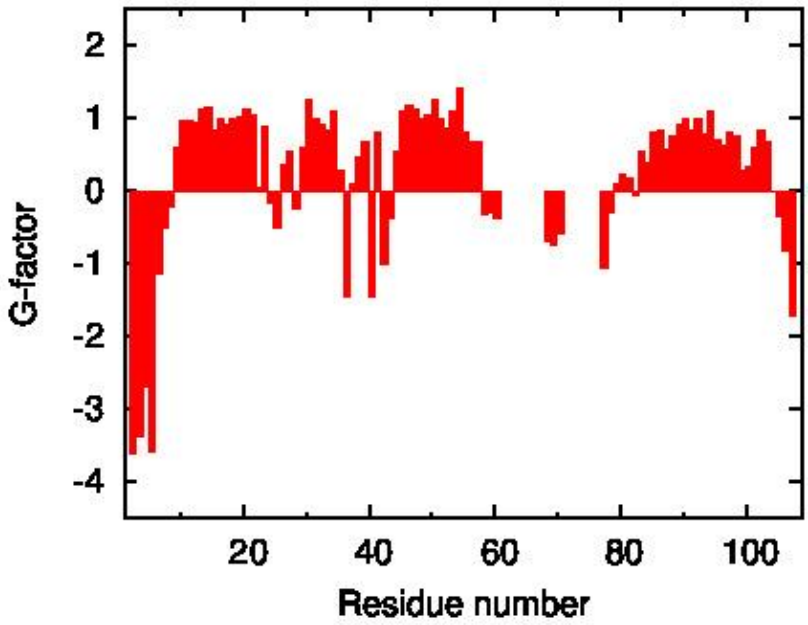
[3] Selected residues DAOP with S(phi)+S(psi)>=1.8 : 2A-60A, 68A-70A, 77A-107A



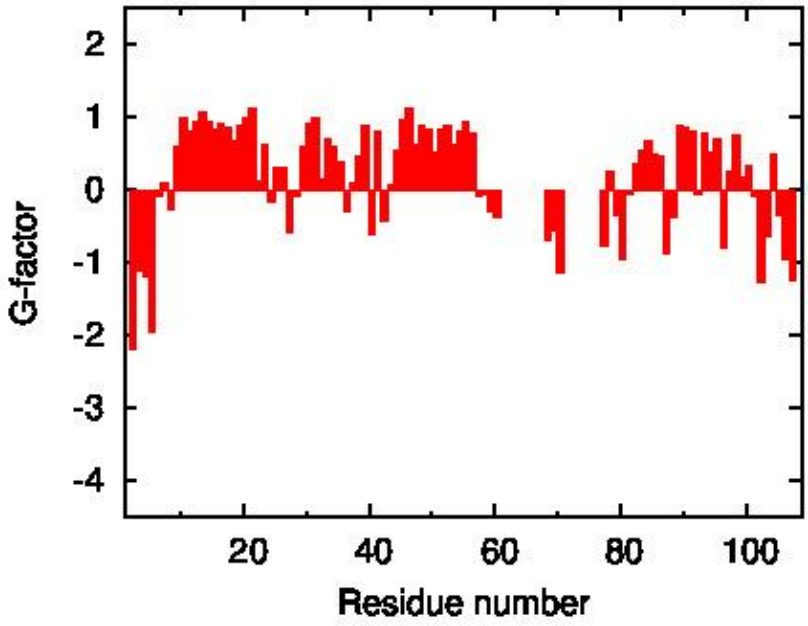
S(psi) v/s Residue number



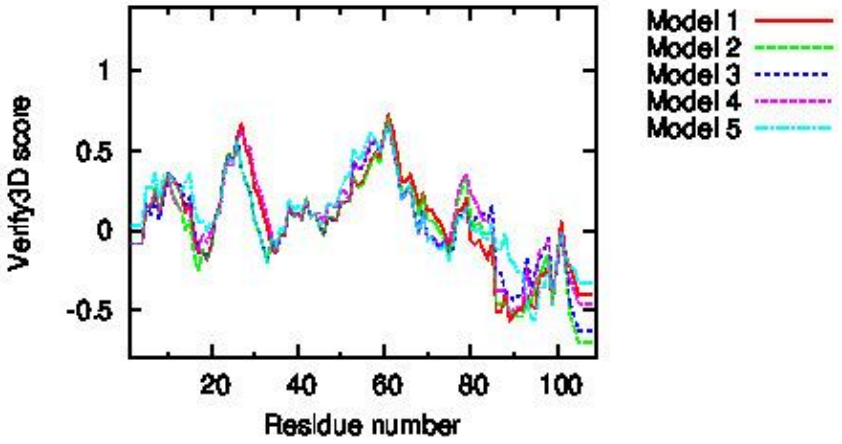
Procheck G-factor for phi-psi



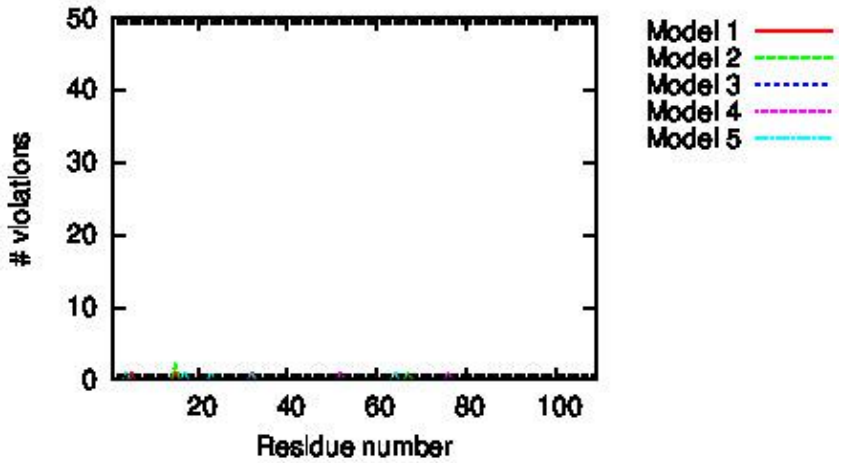
Procheck G-factor for all dihedral angles

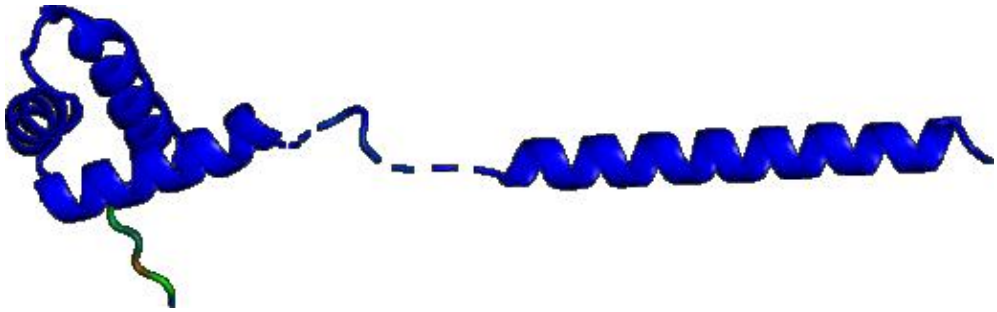


Verify3D score over window of 7 residues



Residual VdW violations from MolProbity





Residue Plot of Ramachandran anlysis(based on data from Richardson Lab's Molprobity)

References:
1. Bhattacharya A, Tejero R and Montelione GT, "Evaluating protein structures determined by structural genomics consortia". Proteins 2007, 66:778-795
2. Tejero R, Snyder D, Mao B, Aramini JM and Montelione GT, "PDBStat: a universal restraint converter and restraint analysis software package for protein NMR". J Biomol NMR 2013, 56:337-351
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17. Bagaria A, Jaravine, V, Huang YJ, Montelione, GT, and Guntert, P "Protein structure validation by generalized linear model root-mean-square deviation prediction". Protein Sci 2012) 21:229-238.

Protein Structure Validation Suite (PSVS)

Software Environment

Software for structure quality evaluation:

DSSP	DsspCMBI-April-2000
pdbstat	PdbStat-5.20.8 Version
AutoAssign	Version 2.4.0 (uses only AVS scripts)
RPF analysis	ASDP-2.3

PDB validation	Version 8.061
Verify3D	Version 1.0 corrected by Aneerban
ProsaII	Prosa2003
PROCHECK	Version 3.5.4

MolProbity programs:

cluster	1999
clashlistcluster	1999 (corrected by Aneerban)
mage	Version 6.35.040409
prekin	Version 6.35.040406
reduce	Version 2.14
probe	Version 2.6

Other Software:

PERL	Version 5.16.3
convert	ImageMagick 6.7.8
ps2pdf	Ghostscript 9.25
htmldoc	v1.8.28
gnuplot	Version 4.6.2
jpegtopnm	netpbm-progs 10.79.00
pnmcrop	netpbm-progs 10.79.00
pnmtojpeg	netpbm-progs 10.79.00

Information updated on October, 2021. RTT