

Summary of integrative structure determination of Tomaymycin NRPS system: complex of the substrate-loaded peptidyl-carrier-protein domain from the A module (APCP-load) with the adaptor (BN91) and condensation (BC) domains of the B module (PDB ID: 9A82 | [pdb_00009a82](#), PDB-Dev ID: PDBDEV_00000367)

1. Model Composition	
1.1. Entry composition	- Adaptor (BN91) and condensation (BC) domains of Tomaymycin B module : chain(s) A (508 residues) - Substrate-loaded peptidyl-carrier-protein (APCP) domain of the Tomaymycin A module: chain(s) B (75 residues)
1.2. Datasets used for modeling	- NMR data, Not available - Predicted contacts, Not available - NMR data, Not available - Predicted contacts, Not available - Experimental model, PDB: pdb_00008qsx - Experimental model, PDB: pdb_00008qnf - Experimental model, PDB: pdb_00008qrx
2. Representation	
2.1. Number of representations	1
2.2. Scale	Atomic
2.3. Number of rigid and flexible segments	0, 3
3. Restraints	
3.1. Physical principles	Information about physical principles was not provided
3.2. Experimental data	- 4 unique DerivedDistanceRestraint: Lower Upper Bound Distance: 0.0-22.2 - 3 unique DerivedDistanceRestraint: Lower Upper Bound Distance: 0.0-23.3 - 7 unique DerivedDistanceRestraint: Lower Upper Bound Distance: 0.0-24.4 - 1 unique DerivedDistanceRestraint: Lower Upper Bound Distance: 0.0-22.5 - 2 unique DerivedDistanceRestraint: Lower Upper Bound Distance: 0.0-24.0 - 6 unique DerivedDistanceRestraint: Lower Upper Bound Distance: 0.0-23.6 - 1 unique DerivedDistanceRestraint: Lower Upper Bound Distance: 0.0-22.6 - 2 unique DerivedDistanceRestraint: Lower Upper Bound Distance: 0.0-23.1 - 3 unique DerivedDistanceRestraint: Lower Upper Bound Distance: 0.0-24.3 - 3 unique DerivedDistanceRestraint: Lower Upper Bound Distance: 0.0-24.5 - 2 unique DerivedDistanceRestraint: Lower Upper Bound Distance: 0.0-24.6 - 1 unique DerivedDistanceRestraint: Lower Upper Bound Distance: 0.0-21.9 - 2 unique DerivedDistanceRestraint: Lower Upper

Bound Distance: 0.0-23.5
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-21.7
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-22.1
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-22.8
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-21.8
 - 4 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-23.4
 - 2 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-23.8
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-23.0
 - 2 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-23.9
 - 2 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-24.2
 - 4 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-24.7
 - 2 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-24.9
 - 2 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-24.1
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-24.8
 - 2 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-23.7
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-20.9
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-22.7
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-25.8
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-27.0
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-29.2
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-26.6
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 14.0-16.5
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-8.0
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-22.3
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-26.0
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-27.6
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-22.0
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-26.5
 - 2 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-21.6
 - 1 unique DerivedDistanceRestraint: Lower Upper
 Bound Distance: 0.0-59.5

4. Validation

[4.2. Number of ensembles](#)

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<i>4.3. Number of models in ensembles</i>	4
<i>4.4. Number of deposited models</i>	4
<i>4.5. Model precision</i>	Not available
<i>4.6. Data quality</i>	Data quality has not been assessed
<i>4.7. Model quality: assessment of atomic segments</i>	- Clashscore: 10.52-12.62 - Ramachandran outliers: 2-5 - Sidechain outliers: 44-55
<i>4.8. Fit to data used for modeling</i>	Fit of model to information used to compute it has not been determined
<i>4.9. Fit to data used for validation</i>	Fit of model to information not used to compute it has not been determined
5. Methodology and Software	
1. <i>5.1. Method name</i>	Not available
<i>5.2. Method type</i>	Data-driven docking using PRE-derived distance restraints within HADDOCK.
<i>5.3. Method description</i>	Step 1: docking of BC domain and APCP to form a binary BC-APCP complex (representing the starting models for step 2).
2. <i>5.1. Method name</i>	Not available
<i>5.2. Method type</i>	Data-driven docking using PRE-derived distance restraints within HADDOCK.
<i>5.3. Method description</i>	Step 2: docking of BN91 domain to binary BC-APCP complex generated in step 1.
<i>5.5. Software</i>	HADDOCK (version 2.4)