



Supplementary Information for an Article Titled:

Structural Characterization of an ACP from *Thermotoga maritima*: Insights into Hyperthermal Adaptation

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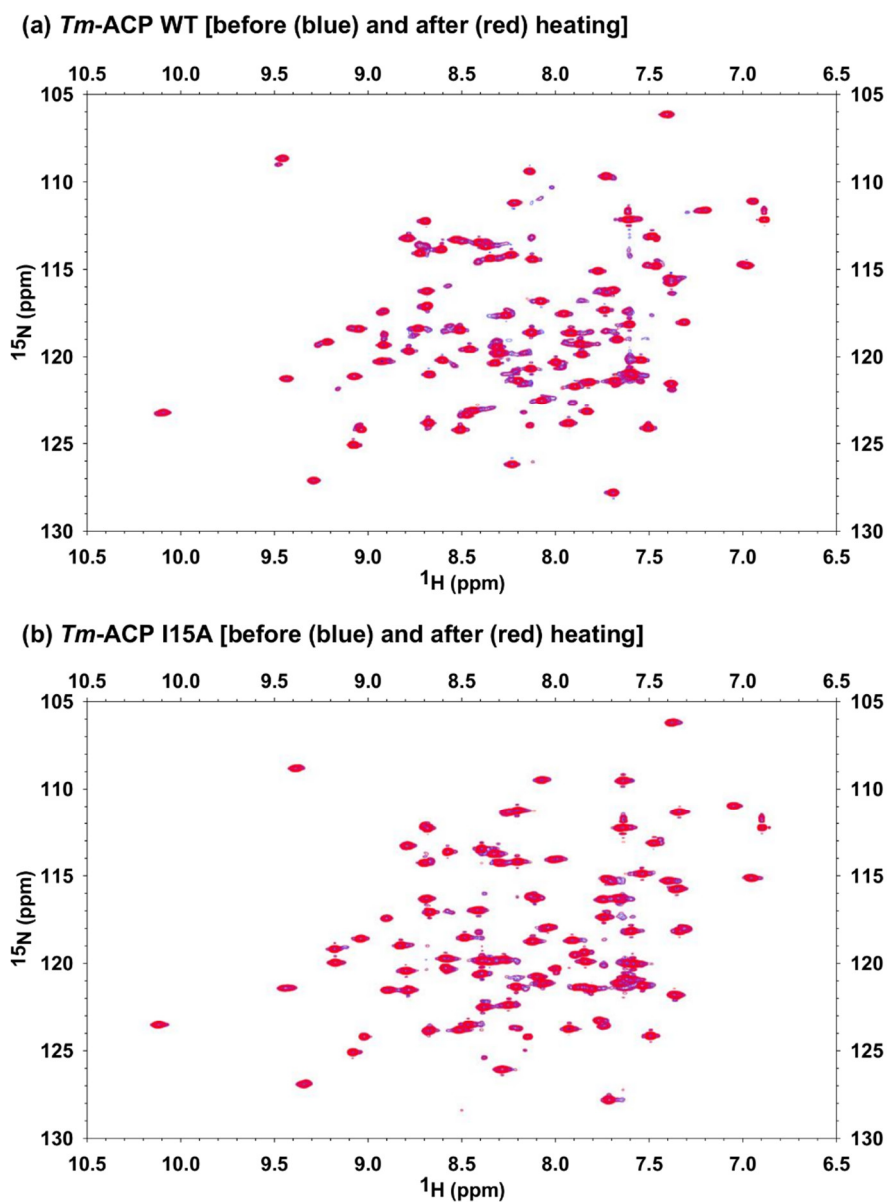


Figure S1. Reversibility of the thermal denaturation of (a) the wild-type and (b) the I15A mutant holo *Tm*-ACPs was confirmed by comparing the ^1H - ^{15}N HSQC spectra of each protein before (blue) and after (red) heat-treatments. The annealing was performed by heating the native sample in a boiling water bath for 15 min and cooling down to room temperature.

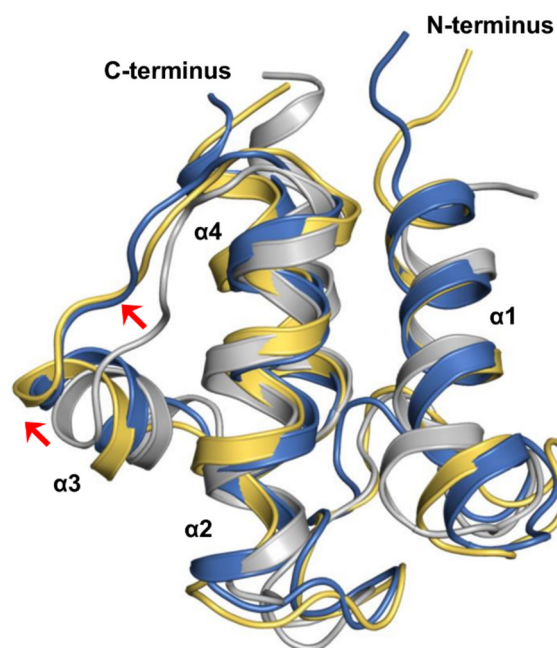


Figure S2. Superimposition of three structures: the solution structure of holo *Tm*-ACP (blue, PDB ID: 6LVT) with the lowest energy, the crystal structure of apo *Tm*-ACP (yellow, PDB ID: 6LVU) and the solution structure of holo *Ec*-ACP (grey, PDB ID: 2k93) [38]. The red arrows indicate the protrusion of helix III of *Tm*-ACP compared to that of *Ec*-ACP.

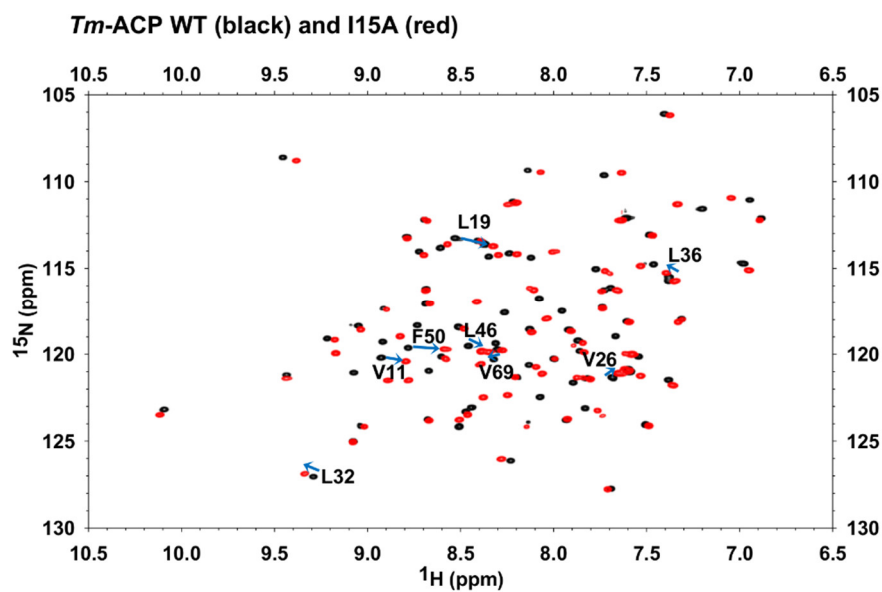


Figure S3. ^1H - ^{15}N HSQC spectral overlay of the wild-type (black) and the I15A mutant (red) holo *Tm*-ACPs. The chemical shift perturbation of the eight residues, V11, L19, V26, L32, L36, L46, F50, and V69, whose sidechains contact closely with that of I15, were indicated as blue arrows.