

SUPPLEMENTARY ONLINE DATA Structure and mechanism of the PiIF DNA transformation ATPase from *Thermus thermophilus*

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Figure S1 TtPilF raw data and reconstruction from negative stain

Examination of negatively stained TtPilF apoprotein by TEM. (**A**) A sample field of TEM data. Scale bar = 1000 Å. (**B**) Examples of SVD/MSA projection averages produced from the raw data. Box size = $240 \text{ Å} \times 240 \text{ Å}$. (**C**) Surface-rendered side views of the TtPilF complex (orthogonal views). The slab view has the foremost 50% of volume removed to display protein density through the complex. Scale bar = 50 Å.



Figure S2 Comparison of top views of the ring (left-hand panel) and disk (right-hand panel) features from the cryoelectron density map with the atomic model of the C-terminal region of TfPiIF (centre panel)

The p[NH]ppA-bound forms of the cryoelectron density map are shown. The original model of the C-terminal region of TtPiIF is shown, before refinement against the density map.

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The density maps reported in the present paper will appear in the Electron Microscopy Data Bank under accession numbers 2222 and 2223.