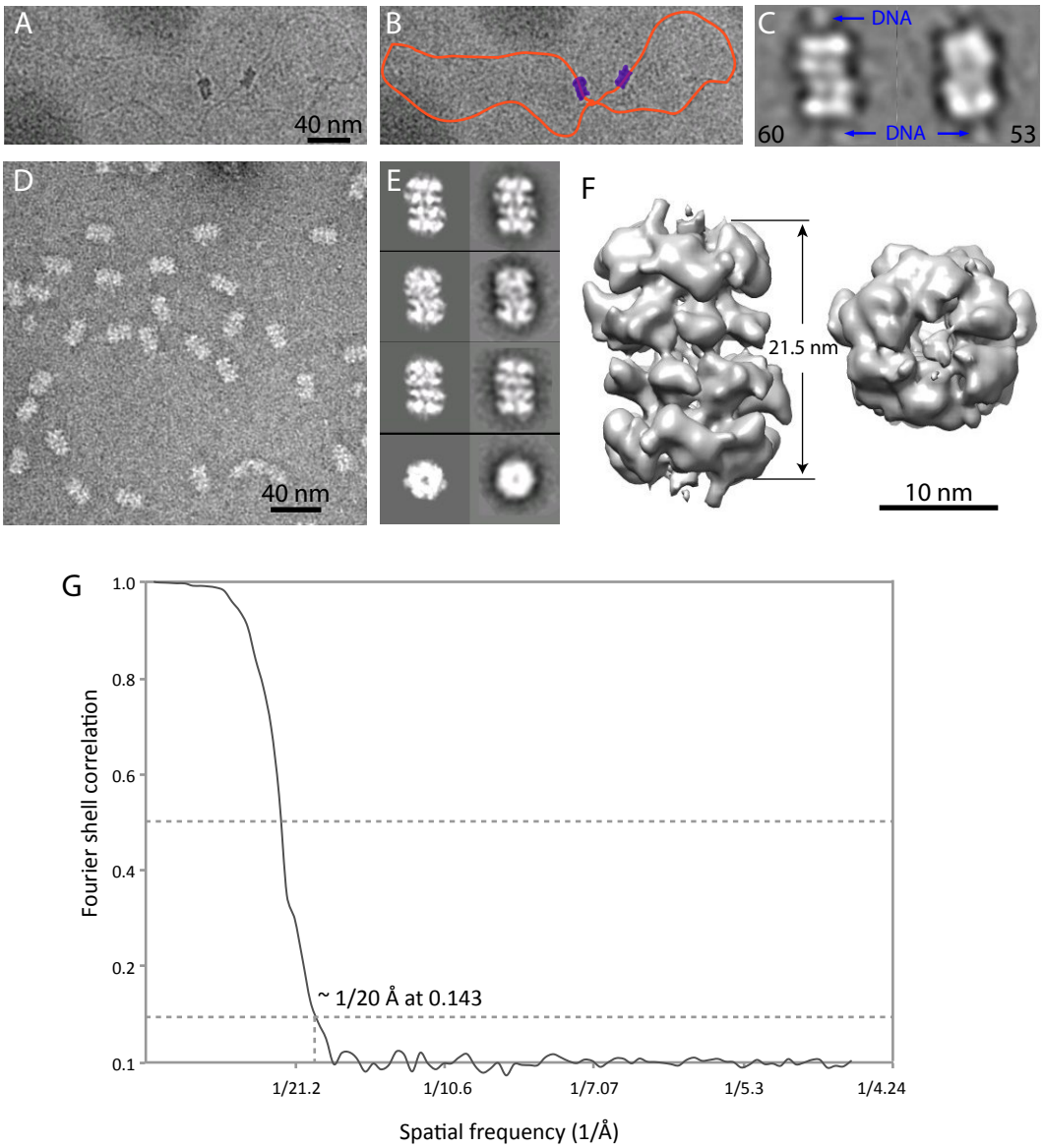

Supplementary figure 1. EM characterization and 3D reconstruction of in vitro assembled yeast Mcm2-7 double hexamer on a plasmid DNA. (A) A region of a cryo-EM micrograph showing two Mcm2-7 double hexamers assembled on a circular plasmid DNA. (B) A copy of (A) with DNA traced in orange and Mcm2-7 double hexamer shaded in purple. (C) Two class averages of the cryo-EM images of the Mcm2-7 double hexamers on intact plasmid. Blue arrows point to the DNA density on top or bottom of the double hexamer. Box size is 36 nm. Number at the lower corner indicates particles used to generate the class average. (D) Raw EM image of negatively stained Mcm2-7 double hexamers cleaved from the plasmid DNA by DNase I treatment. (E) Selected re-projections of the 3D reconstruction (left) and the approximately corresponding reference-free class averages of the negative-stain EM images of the Mcm2-7 double hexamer (right). Box size is 36 nm. (F) 3D negative-stain EM map of the Mcm2-7 double hexamer in side (left) and top (right) views. (G) The gold standard Fourier shell correlation curve suggests a resolution of 2 nm for the 3D EM density map of the in vitro assembled and purified yeast Mcm2-7 double-hexamer.