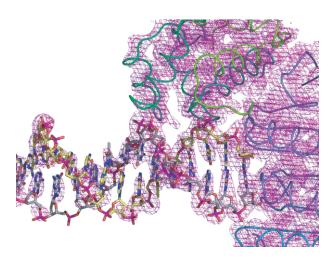
Figure S2: (A) Initial electron density map at 2.8Å calculated using phases from the molecular replacement solution of the nuclease domain. Superposed is the final refined model for ApeXPF-DNA. Density is apparent for both the dsDNA and the (HhH)<sub>2</sub> domain. The map was calculated after "prime-and-switch" phase improvement with RESOLVE and is contoured at  $1.5\sigma$ .



(B) Initial electron density map at 3.2Å calculated using phases from the molecular replacement solution of full length ApeXPF from the DNA-bound structure. Superposed is the final refined model for apo-ApeXPF. The map was calculated after "prime-and-switch" phase improvement with RESOLVE and is contoured at  $1.0\sigma$ .

