**Supporting Information**

# DNA Polymerase θ Increases Mutational Rates in Mitochondrial DNA

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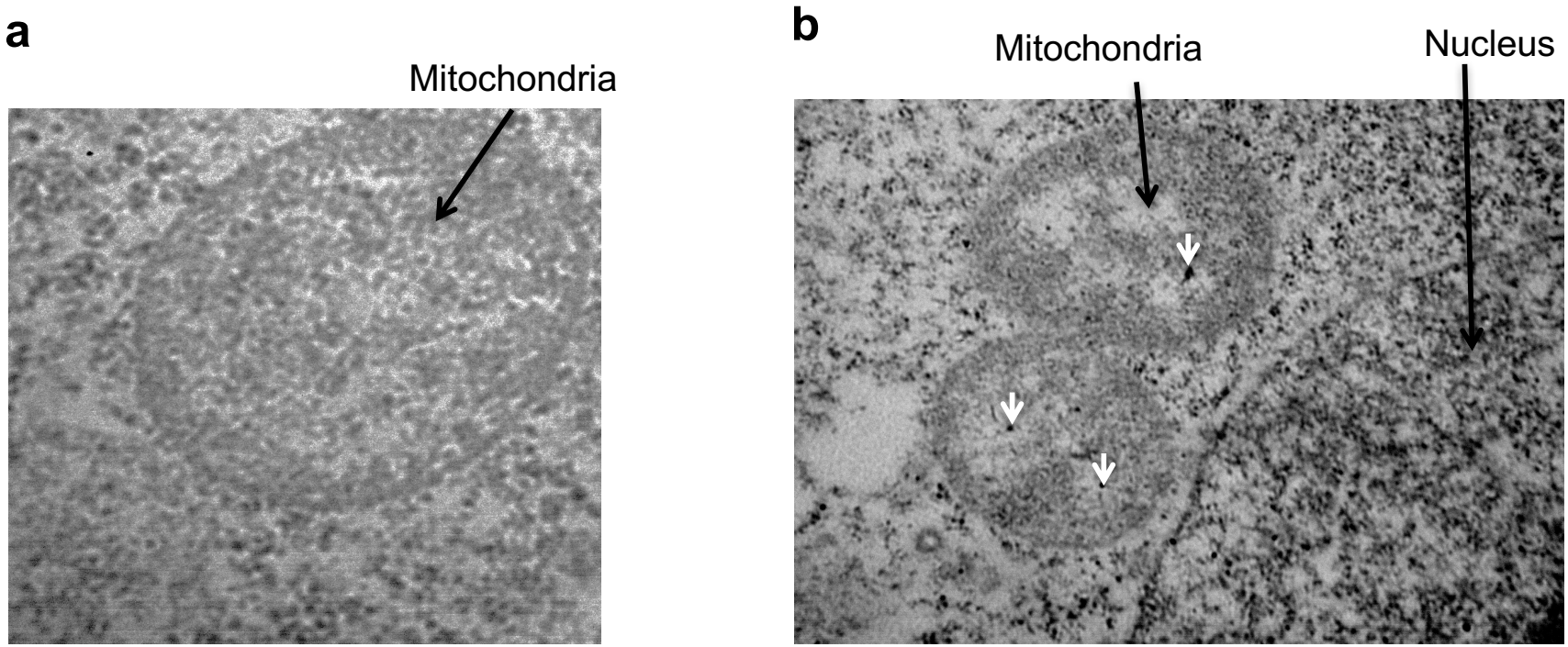
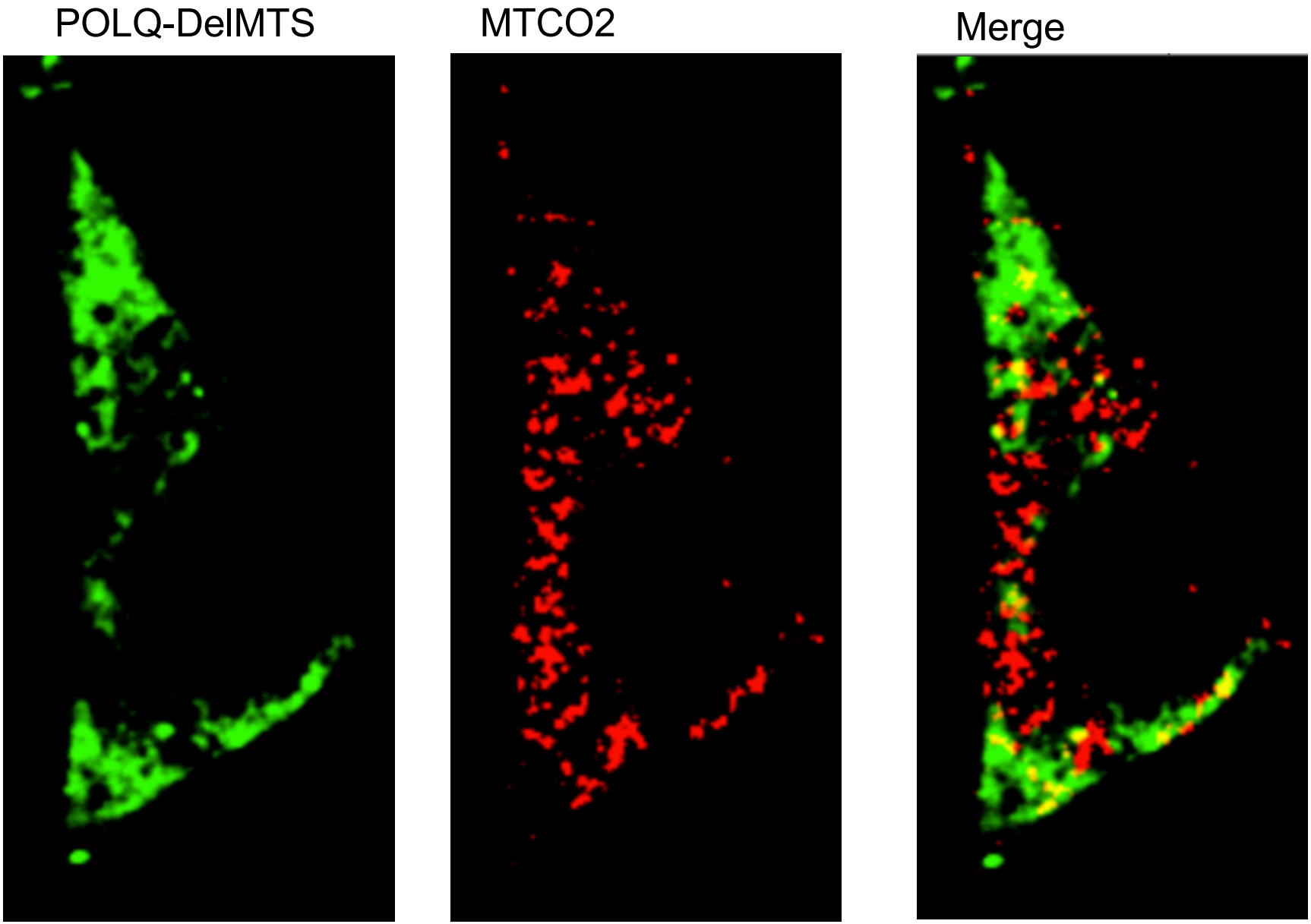
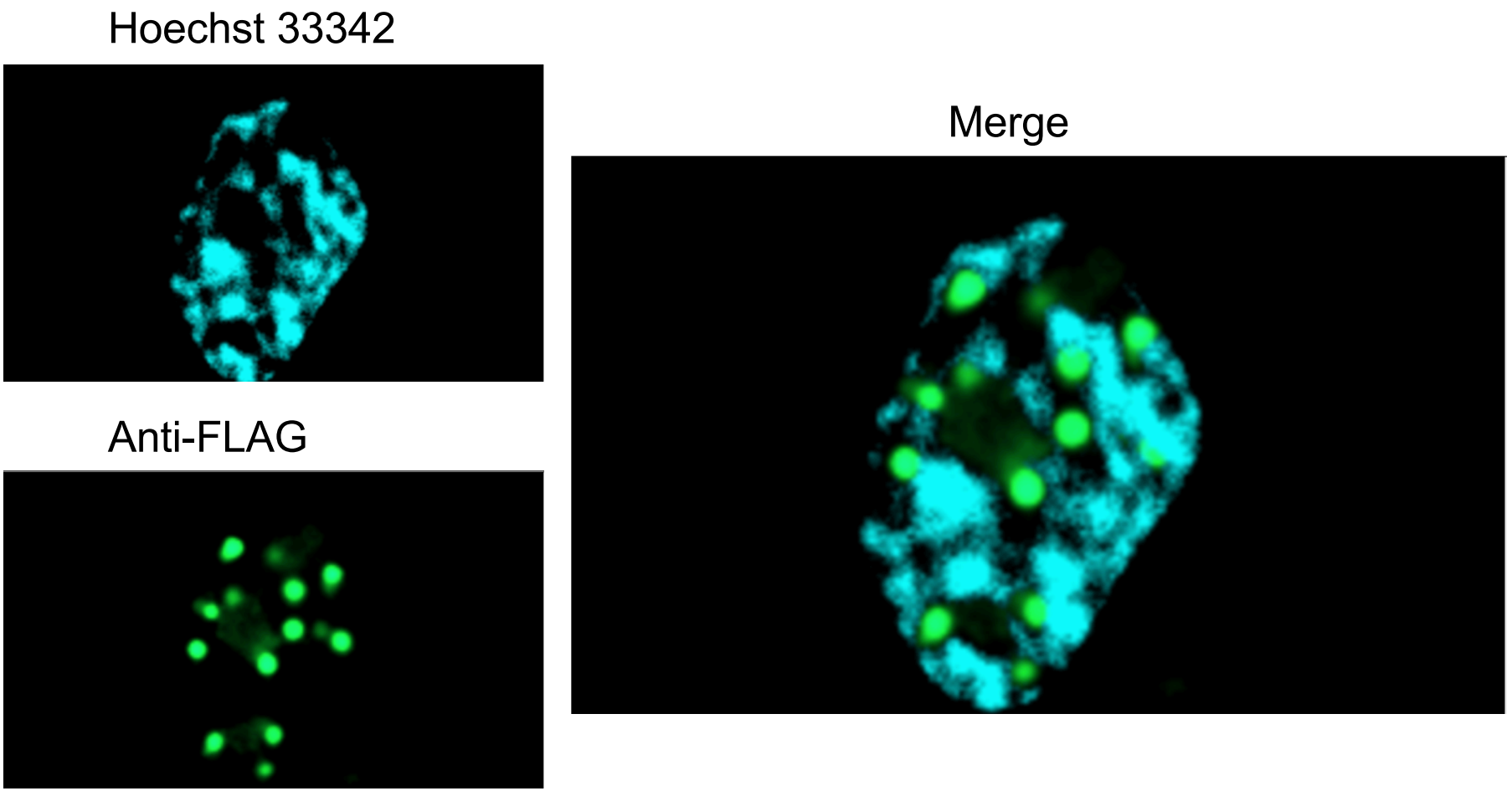



**Supporting Figure 1.** a) Immunogold labeling of mitochondria from untransfected cells shows minimal non-specific staining b) POLθ localizes in the mitochondrial matrix by immunogold electron microscopy. Punctate gold staining indicated with arrows. Lighter, less membrane dense regions correspond to the mitochondrial matrix. Images are at 30,000x magnification




**Supporting Figure 2.** POLQ-delMTS (POLQ cDNA lacking MNLLRRSGKRRRS leader sequence) localizes shows diffuse cytosolic staining. Mitochondria were stained with an MTCO2 antibody.




**Supporting Figure 3.** POLQ-NLS localizes solely to the nucleus. Cell nuclei were stained with Hoechst 33342.