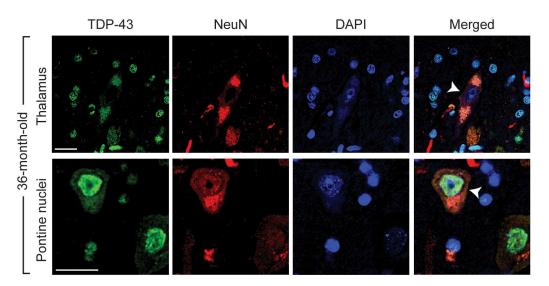
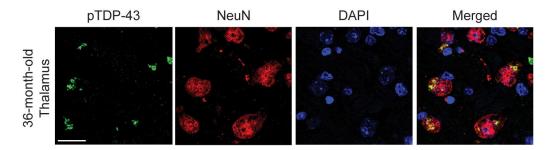
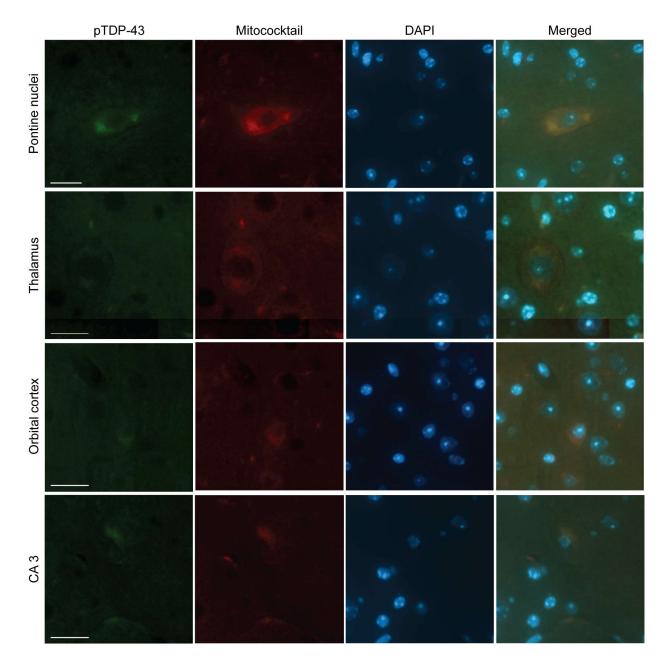
## **Supplemental Figures**



Supplemental Figure 1. Neuronal nuclear depletion and cytoplasmic mislocalization of TDP-43 in specific brain regions was also demonstrated on confocal microscopic images. Neurons in the pontine nuclei and thalamus of one of the 36-month-old mouse were shown. Arrow heads point to neurons with TDP-43 mislocalization. Each scale bar =  $20 \mu m$ .



Supplemental Figure 2. Neuronal nuclear depletion and cytoplasmic mislocalization of phosphorylated TDP-43 (pTDP-43) in specific brain regions was also demonstrated on confocal microscopic images. Neurons in the pontine nuclei and thalamus of one of the 36-month-old mouse were shown. Each scale bar =  $20 \ \mu m$ .



Supplementary Figure 3. Colocalization between phosphorylated TDP-43 (pTDP-43) and mitochondria was also demonstrated in specific brain regions in young mice. The figure represented higher magnification of high-resolution images of double fluorescence staining of the whole brain sagittal section of a representative 6-month-old (young) mouse. Each scale bar = 20  $\mu$ m.