Supplementary Material

Figure Legends

Figure S1. Additional images of ectopic Ect2 expression in the hippocampus of *Ube3a* null mice in two independent immunostaining runs. The CA3 region and Dentate Gyrus (DG) are labeled for reference. Images were captured using separate fluorescent filters for FITC and DAPI at 200x magnification on a Leica microscope with a CCD-cooled, color Hamamatsu digital camera. Data presented was generated from independent wild type and null mice than those shown in Figure 6a.. For the images presented in the right hand panels (Experiment 2) the digital camera capture times were purposefully set to be identical for wild type and null mice (FITC 1.2 sec; DAPI 0.6sec) in order to highlight the increased staining intensity of Ect2 present in the *Ube3a*-/- mice compared to WT littermates, even in the CA3 region where Ect2 was normally detected in the wild type animals.

Figure S2. Additional images demonstrating the Purkinje cell phenotype in the cerebellum of *Ube3a* null mice from two independent immunostaining. Black arrows point to representative Purkinje cells in each panel (see Figure 6I,J for magnified views of a similar region of the cerebellum of wild-type and mutant mice in the main text). Note that nearly all Purkinje cell bodies/nuclei are labeled in wild-type animals but that only a small fraction of these cells are strongly labeled in mutant mice. Images were captured at 100x magnification using a Lecia DM6000B upright microscope with a FireWire Quest color camera. *Ube3a* null mice consistently showed a decrease in Ect2 staining in the cytoplasm of Purkinje cells as compared to wild type littermates.

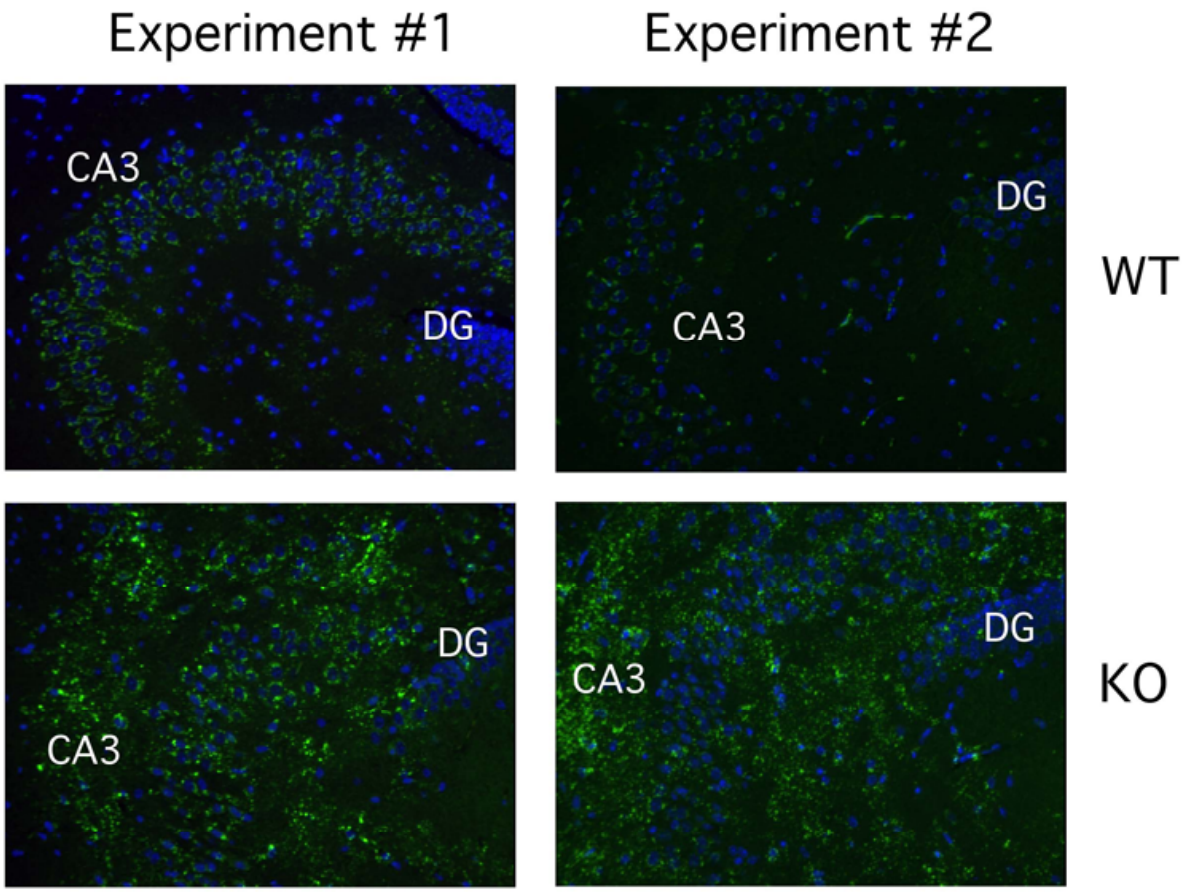

Figure S1

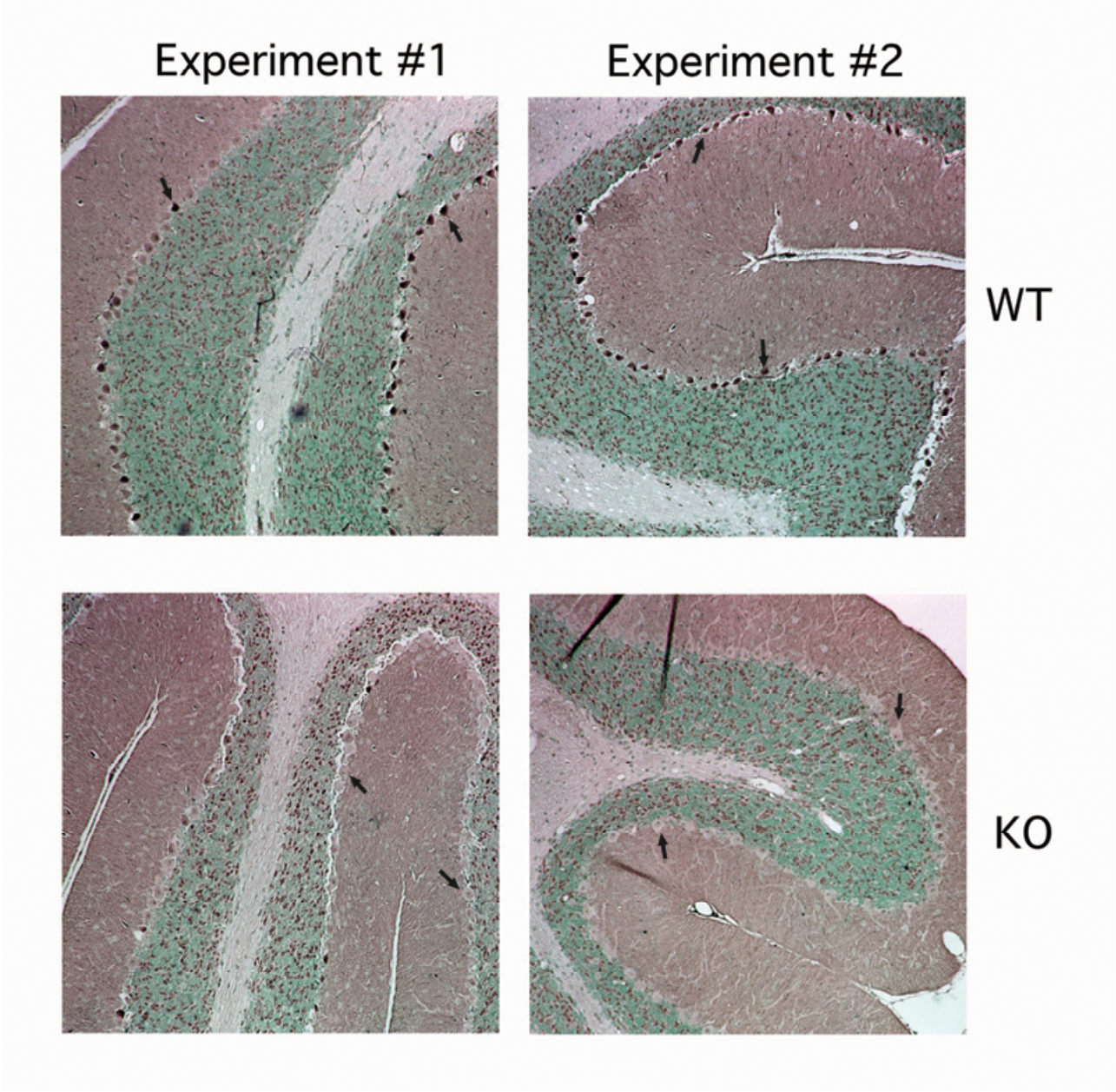

Figure S2