

Figure S1. EE upregulates the expression of Cav 2.1 and induces higher colocalization of Cav 2.1 with MAP2 in striatum in HIE mice (A) The representative WB images of Cav 2.1 in striatum. (B) Quantification of Cav 2.1 protein expression in striatum. Significant difference was observed between HI control mice and HI EE mice in striatum. (C) The representative confocal images of Cav 2.1 and MAP2 in striatum. A white bar is 100 μm . (D) The number of Cav 2.1⁺ cells in striatum was significantly different between HI control mice and HI EE mice. (E) Significant difference in the area of Cav 2.1⁺ MAP2⁺ was observed between HI control mice and HI EE mice in striatum. Molecular and histological data are expressed as mean \pm SEM with 6 mice per group (**P<0.01, Mann-Whitney U test).

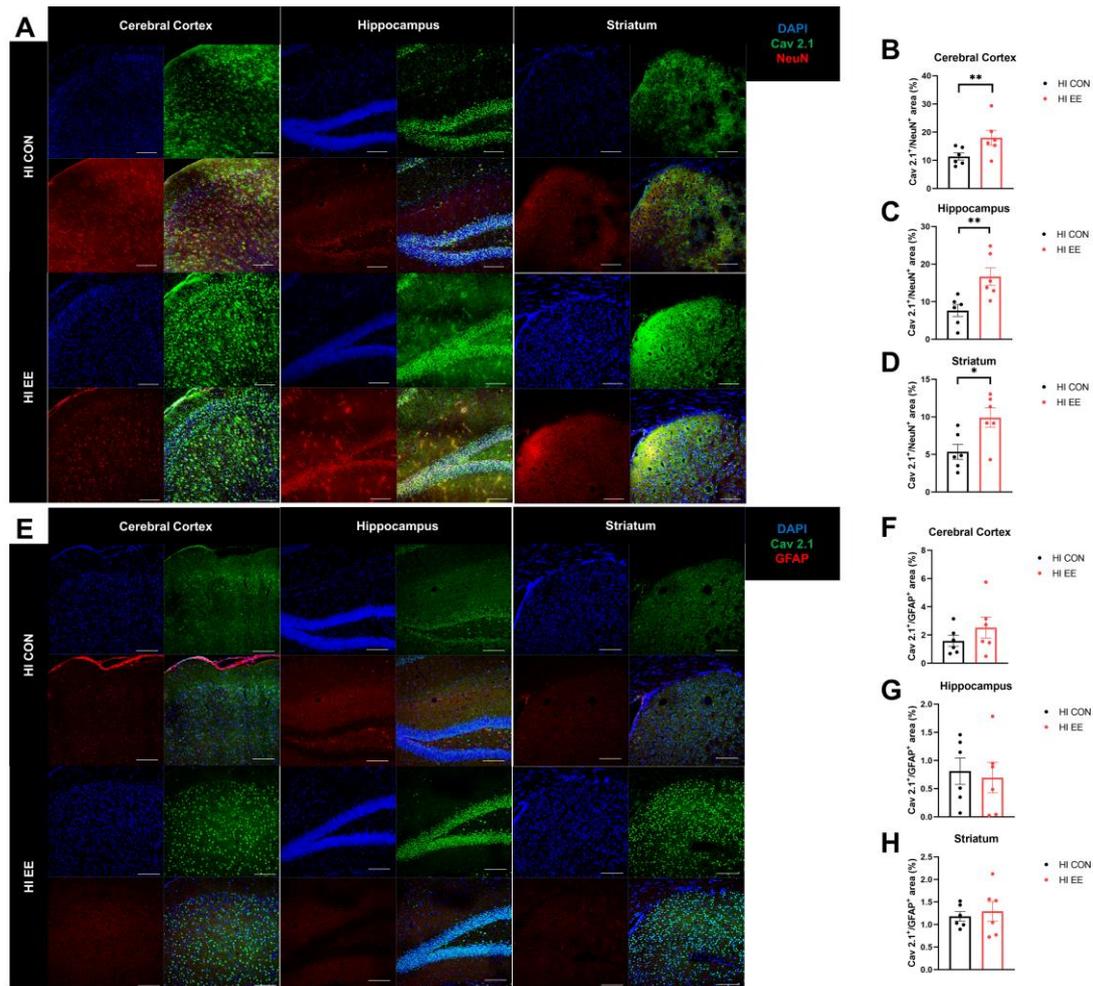


Figure S2. The higher colocalization with Cav 2.1 is noticed in neuron-related markers in HI EE mice. (A) The representative confocal images of Cav 2.1 and NeuN in cerebral cortex, hippocampus, and striatum. (B-D) Significant difference in the area of Cav 2.1+NeuN⁺ was observed between HI control mice and HI EE mice in cerebral cortex, hippocampus, and striatum, respectively. (E) The representative confocal images of Cav 2.1 and GFAP in cerebral cortex, hippocampus, and striatum. Relative to the neuronal markers such as MAP2 and NeuN, the small subpopulation of GFAP, an astrocyte marker, was colocalized with Cav 2.1. (F-H) No significant difference in the area of Cav 2.1+GFAP⁺ was observed between HI control mice and HI EE mice in cerebral cortex, hippocampus, and striatum, respectively. Histological data are expressed as mean ± SEM with 6 mice per group (*P<0.05, **P<0.01, Mann-Whitney U test). A white bar is 100 μm.