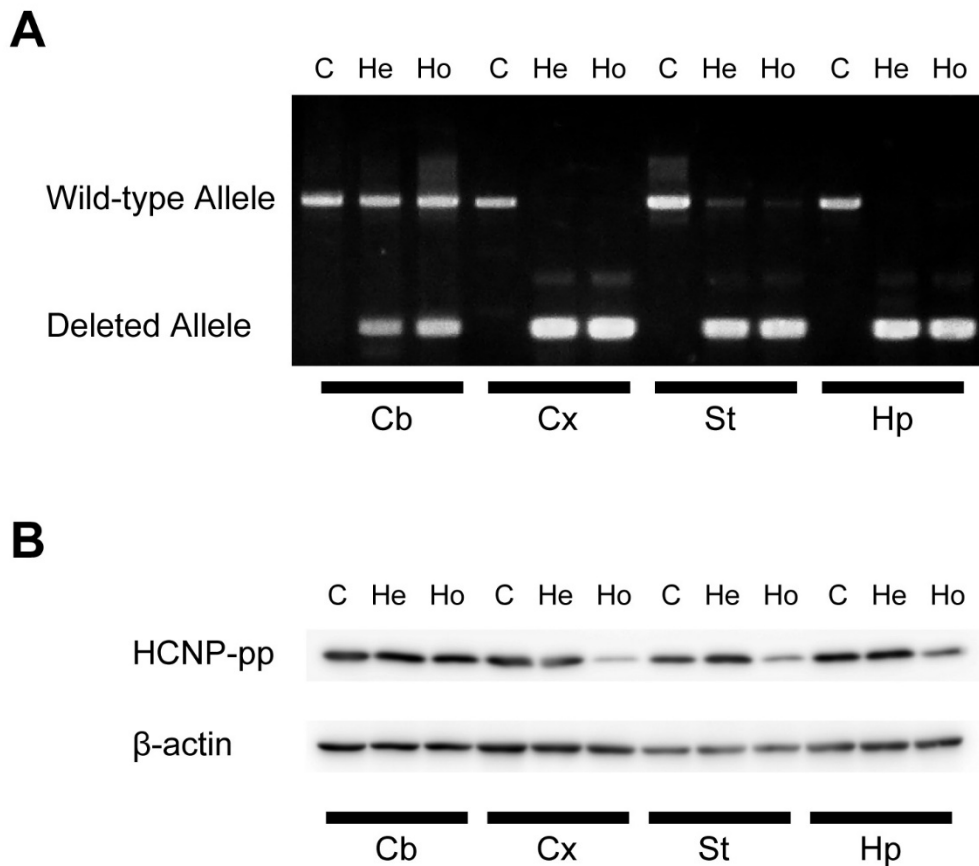
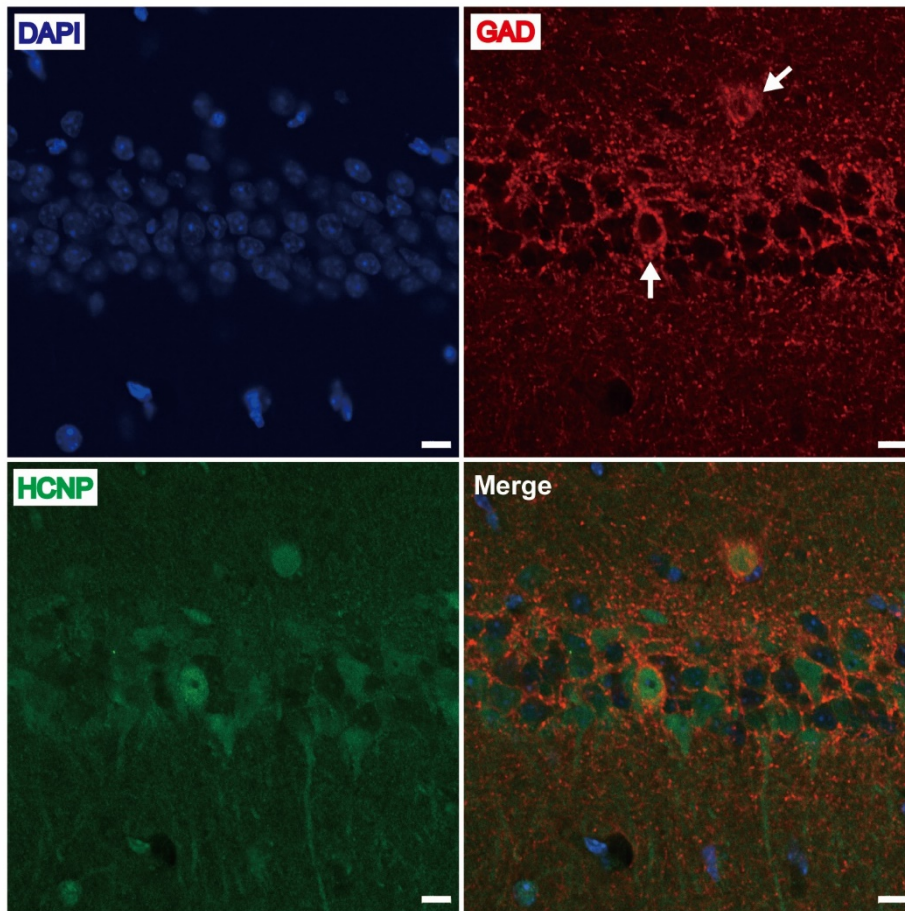


**Figure S1.** Unprocessed images for Figure 1B (left).



**Figure S2.** PCR analysis of *HCNP-pp* gene and Western blot analysis of HCNP-pp and  $\beta$ -actin in Control, heterozygous (He) and homozygous (Ho) HCNP-pp KO mice. **(A)** Genomic analysis by PCR. Successful deletion of HCNP-pp genomic DNA was mainly seen in the frontal cortex (Cx), hippocampus (Hp), and striatum (St) in both heterozygous (He) and homozygous (Ho) HCNP-pp KO mice. In the cerebellum (Cb), a part of the HCNP-pp genome was incidentally deleted in both He and Ho HCNP-pp KO mice. In littermate control (C) mice without the *Cre-ERT* gene, no deleted allele was seen. Forward primer; 5'-GGG CTT GTA GTC TAT CAA CAT TCA-3', Reverse primer; 5'-TTC CGA TCA TAT TCA ATA ACC CTT A-3' **(B)** Western blot analysis of HCNP-pp and  $\beta$ -actin in Cb, Cx, St, and Hp in Control, He, and Ho. The amount of HCNP-pp was obviously decreased in Cx, St, and Hp in Ho HCNP-pp KO mice.



**Figure S3.** Immunohistochemical staining of the HCNP-pp KO hippocampus (CA1 pyramidal layer) with an anti-HCNP-pp antibody and an anti-glutamic acid decarboxylase (GAD) antibody. GAD-positive neurons (white arrows) show strong HCNP-pp immunoreactivity. Scale bar = 10  $\mu$ m.