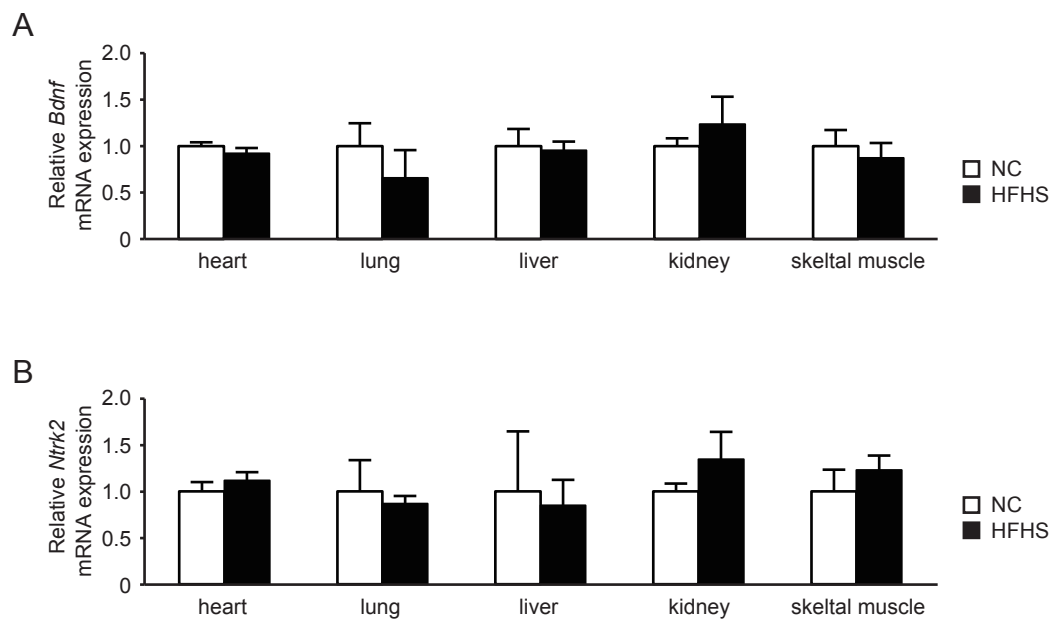
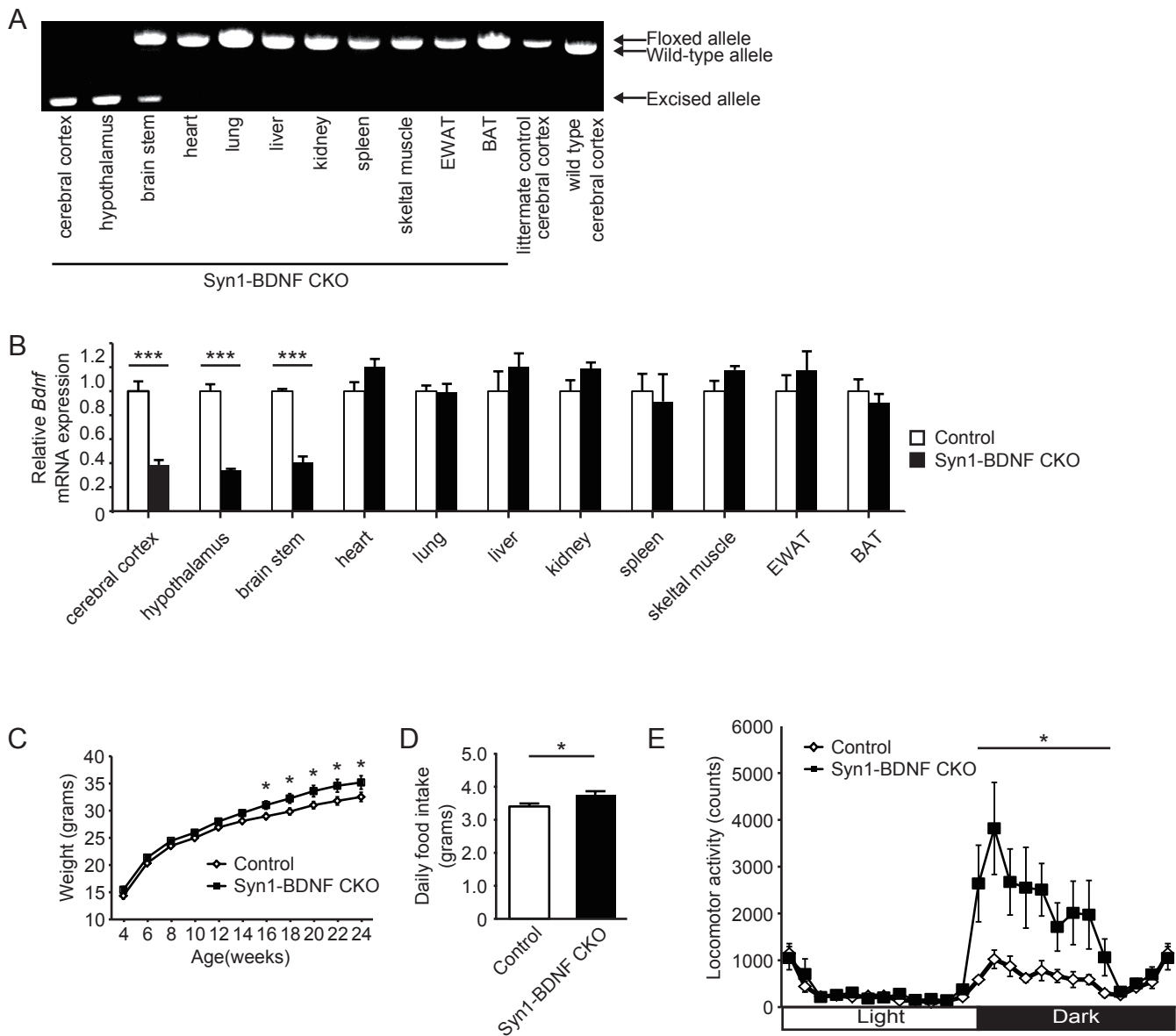


Supplementary Figure S1



Supplementary Figure S1. *Bdnf* and *Ntrk2* expression in the peripheral tissues of mice with dietary obesity. (A, B) Expression of *Bdnf* (A) and *Ntrk2* (B) in several peripheral tissues assessed by real-time PCR in 16-week-old mice fed normal chow (NC) or a high-fat/high-sucrose (HFHS) diet.

Supplementary Figure S2



Supplementary Figure S2. Neuronal *Bdnf* deficiency leads to similar phenotypes to those of *Fabp4*-*BDNF*/*TrkB* CKO mice.

(A) PCR analysis of genomic DNA isolated from various tissues of Syn1-BDNF CKO mice and from the cerebral cortex of their littermate controls and wild-type mice. Littermates were homozygous for the floxed *Bdnf* allele, but did not carry Cre recombinase.

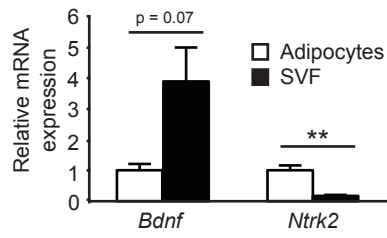
(B) Real-time PCR analysis of *Bdnf* expression in various tissues of Syn1-BDNF CKO mice and their littermate controls (Control). $n = 5$. $***p < 0.001$.

(C) Body weight of Syn1-BDNF CKO mice and their littermate controls (Control). $n = 22-25$. $*p < 0.05$.

(D) Food intake of Syn1-BDNF CKO mice and their littermate controls (Control) at 8–12 weeks of age. $n = 12-14$. $*p < 0.05$.

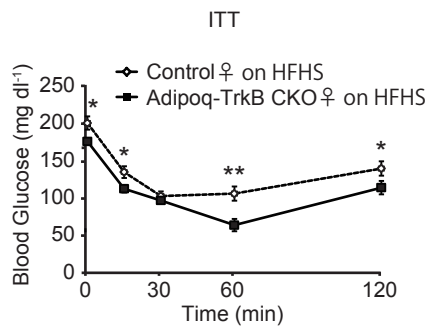
(E) Locomotor activity of Syn1-BDNF CKO mice and littermate controls (Control) at 14–16 weeks of age. $n = 8$. $*p < 0.05$. Data are shown as the mean \pm SEM.

Supplementary Figure S3



Supplementary Figure S3. *Bdnf* expression was elevated in the stromal vascular fraction, while expression of *Ntrk2* was increased in adipocytes. Expression of *Bdnf* and *Ntrk2* in adipocytes and the stromal vascular fraction (SVF) was assessed by real-time PCR. $n = 3-5$. ** $p < 0.01$. Data are shown as the mean \pm SEM.

Supplementary Figure S4



Supplementary Figure S4. Blood glucose levels in Adipoq-TrkB CKO mice and their littermate controls during ITT

n = 12-13. *p < 0.05, **p < 0.01. Data are shown as the mean ± SEM.