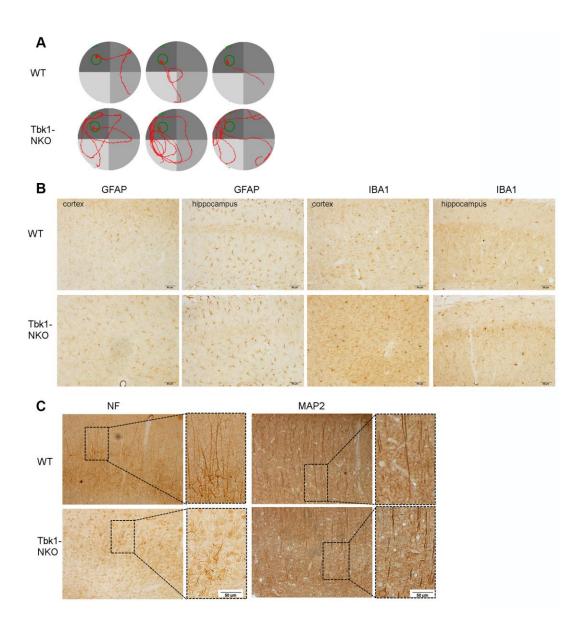
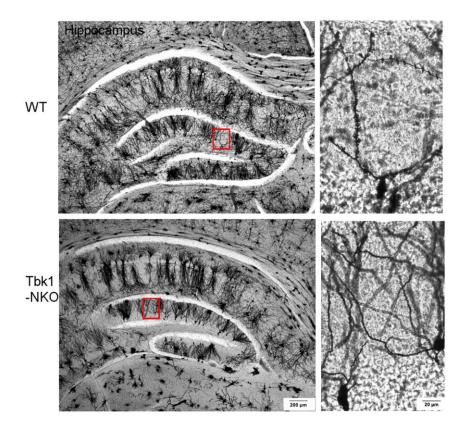
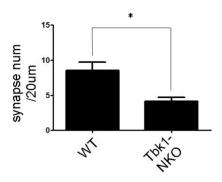
## **SUPPLEMENTARY FIGURES**

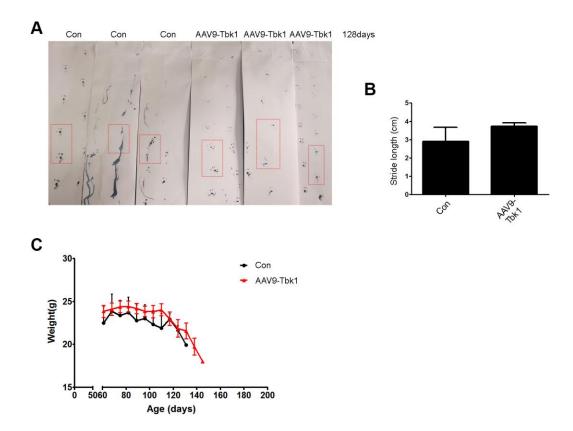


**Supplementary Figure 1.** (A) Representative swimming path of Tbk1-NKO and WT mice in the Morris water maze experiment. (B–C) GFAP, IBA1 (n = 3; bar =  $20 \mu m$ ), Neurofilament, and MAP2 immunostaining of brain sections from WT and Tbk1-NKO mice (n = 3; bar =  $50 \mu m$ ).





Supplementary Figure 2. Golgi-Cox staining of the hippocampus of Tbk1-NKO and WT mice (n = 3). Dendritic spine density was measured using Image J (n = 5); \*P < 0.05, compared to WT mice.



Supplementary Figure 3. (A–B) Mice footprints and (C) body weights were evaluated in mutant SOD1 mice after ICV injection of AAV9-Tbk1 and AAV9-GFP (Con) vectors.