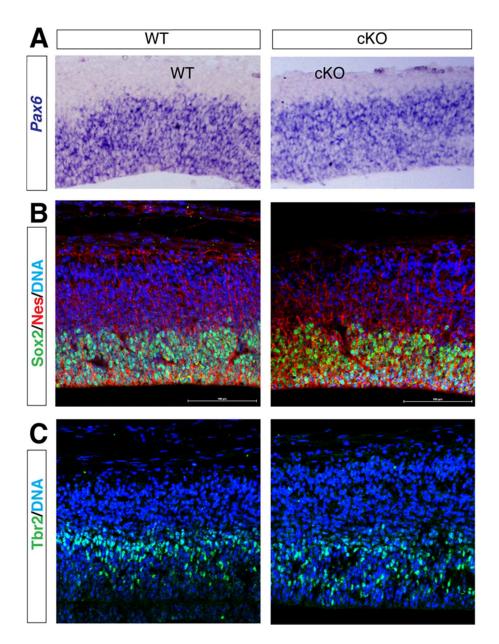
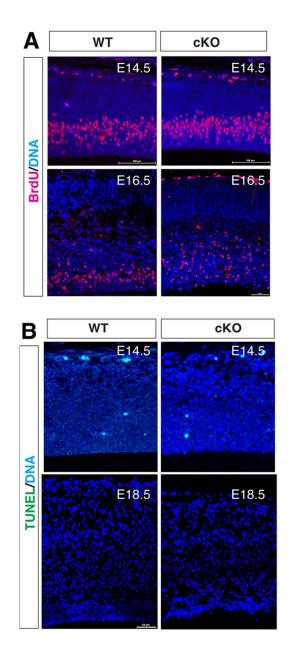


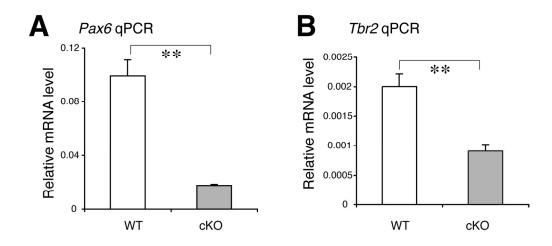
Supplementary Figure S1. (A) Quantitative PCR of  $\beta$ -catenin mRNAs from the wild-type (WT) and the  $\beta$ -catenin-cKO mutant neocortex at E16.5, E18.5, P3, and P15. (B) Representative H&E staining of the normal and mutant neocortical sections at E16.5, P3, and P15. (C) Significantly reduced neocortical thickness in the  $\beta$ -catenin-cKO mutants from E18.5. \*\*, P < 0.01. Scale bars = 200  $\mu$ m. 101x198mm (300 x 300 DPI)



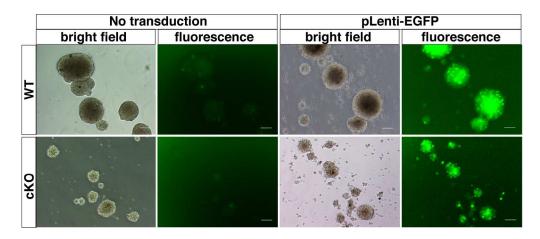
Supplementary Figure S2. (A) In situ hybridization of Pax6 mRNAs in the normal and ß-catenin-cKO mutant neocortical sections at E13.5. (B,C) Immunohistochemistry of Sox2/Nestin (B) and Tbr2 (C) in the normal and mutant neocortical sections at E14.5. 61x81mm (300 x 300 DPI)



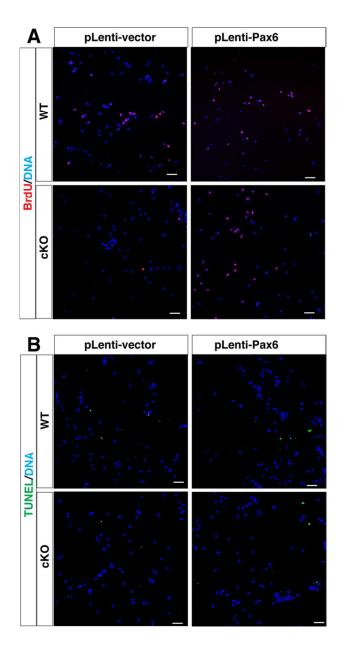
Supplementary Figure S3. Micrographs of BrdU labeling (A) at E14.5 and E16.5, and TUNEL detection (B) at E14.5 and E18.5 neocortex of the wild-type control and ß-catenin-cKO mutants. 41x97mm (300 x 300 DPI)



Supplementary Figure S4. Real-time PCR results show the significantly reduced Pax6 (A) and Tbr2 (B) mRNAs in the mutant neurosphere cells. 146x65mm (300 x 300 DPI)

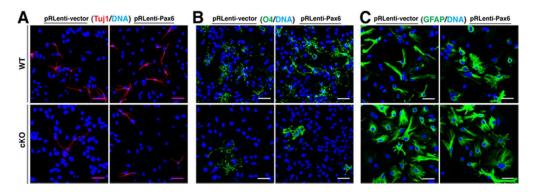


Supplementary Figure S5. Bright field and fluorescence micrographs of the wild-type or the  $\beta$ -catenin-cKO neurospheres transduced with or without pLenti-EGFP. Scale bars = 150  $\mu$ m. 165x70mm (300 x 300 DPI)



Supplementary Figure S6. BrdU immunolabeling (A) and TUNEL assay (B) on the cells dissociated from the wild-type or the  $\beta$ -catenin-cKO neurospheres transduced with either Pax6-expressing or blank lentiviruses. Scale bars = 50  $\mu$ m.

57x112mm (300 x 300 DPI)



Supplementary Figure S7. Immunocytochemistry of Tuj1 (A), O4 (B), and GFAP (C) on the differentiated wild-type or the ß-catenin-cKO neocortex neurosphere cells transduced with either Pax6-expressing or blank lentiviruses. Scale bars = 50 µm. 61x21mm (300 x 300 DPI)