

## Supplemental information inventory

- 1) **Extended experimental procedures**
- 2) **Supplemental Figures and Tables**

**Figure S1:** Deletion of *Pten* from GABAergic interneuron progenitors in the MGE results in hyper-activation of AKT. Related to Figure 1.

**Figure S2:** *Dlx12b-Cre<sup>+</sup>; Pten<sup>Flox/Flox</sup>* cKOs have an increased PV/SST ratio and ectopic PV<sup>+</sup> projections into neocortical layer I. Related to Figures 2 and 3.

**Figure S3:** *Nkx2.1-Cre; Pten* mutants exhibit normal MGE proliferation at embryonic ages. Related to Figure 1.

**Figure S4:** Transplanted *Dlx12b-Cre<sup>+</sup>; Pten<sup>Flox/Flox</sup>* MGE cells exhibit disproportionate ratios of KV3.1, Reelin and NPAS1. Related to Figure 6.

**Figure S5:** Lentiviral vectors to assess the function of *PTEN* ASD alleles. Related to Figure 7.

**Figure S6:** Complementation assay at 35 DPT of *PTEN* ASD alleles to complement the ratio of SST<sup>+</sup> cells and soma size. Related to Figure 7.

**Table S1:** *Nkx2.1-Cre*-lineage counts at P30 for the hippocampus, neocortex, striatum and globus pallidus. Related to Figure 1.

**Table S2:** Comparison of the changes in the proportion of PV and SST among different experimental approaches. Related to Figures 1, 6, 7 and S2.

**Table S3:** Cell intrinsic properties of *Dlx12b-Cre; Pten* cKO transplanted MGE cells at 45 DPT. Related to Figure 6.

**3) Supplemental Figure and Table legends**

**4) Supplemental references**