

## Supplemental Data

### Figure Legends

**Figure S1. GRIN2 contains a transcriptional activation domain.** Full length GRIN2 can induce expression of reporter genes without interacting proteins. 1) pDBLeu empty vector; 2) pDBLeu vector containing GRIN2 1-360 aa; 3) pDBLeu vector containing GRIN2 full length. The transcriptional activation was confirmed by both growth (on plates lacking leucine, tryptophan, and histidine) and B-Gal assay (which measures  $\beta$ -galactosidase activity).

**Figure S2 G $\alpha$ o expression does not affect Sprouty2 subcellular distribution in Neuro-2A cells.** Neuro-2a cells were transiently transfected with expression plasmids for (A) mSprouty2-GFP; (B) mSprouty2-GFP and G $\alpha$ o-Q/L; After 24 hours, live cells were imaged in a laser scanning microscope 510-META. Scale bar, 10  $\mu$ m. Representative images from one of four experiments.

**Figure S3 siRNA knockdown of endogenous GRIN1 in Neuro-2A cells.** Neuro-2a cells were transfected with the either Non-Targeting (CT) or mGRIN1 (GRIN1) siRNA. After 48 hours, RNA was harvested and expression of beta-tubulin and GRIN1 was quantified by real time PCR. GRIN expression was normalized against tubulin RNA levels for each sample.

Figure S1

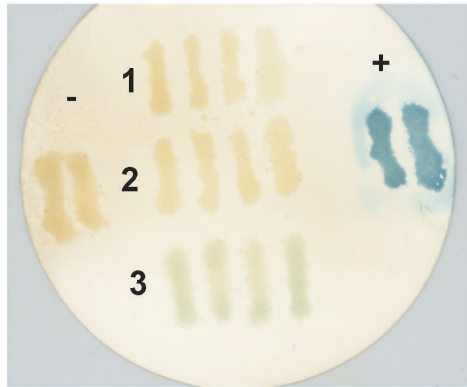


Figure S2

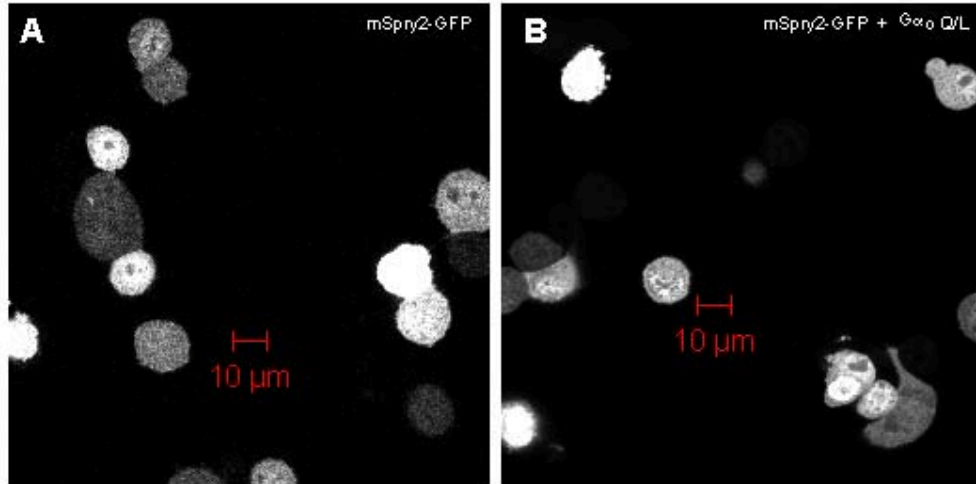


Figure S3

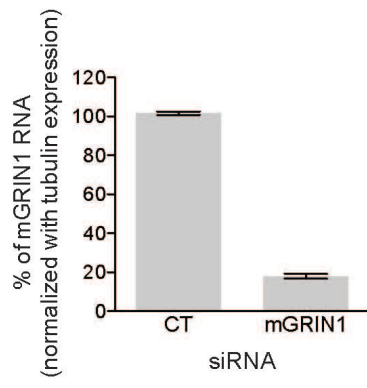


Figure S1

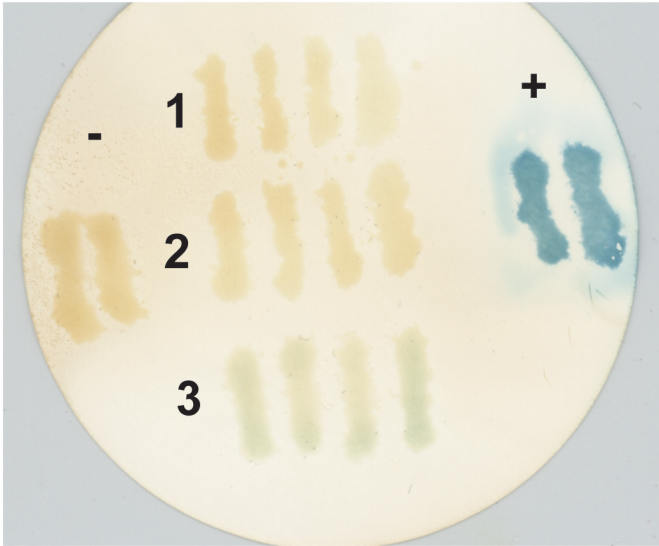


Figure S2

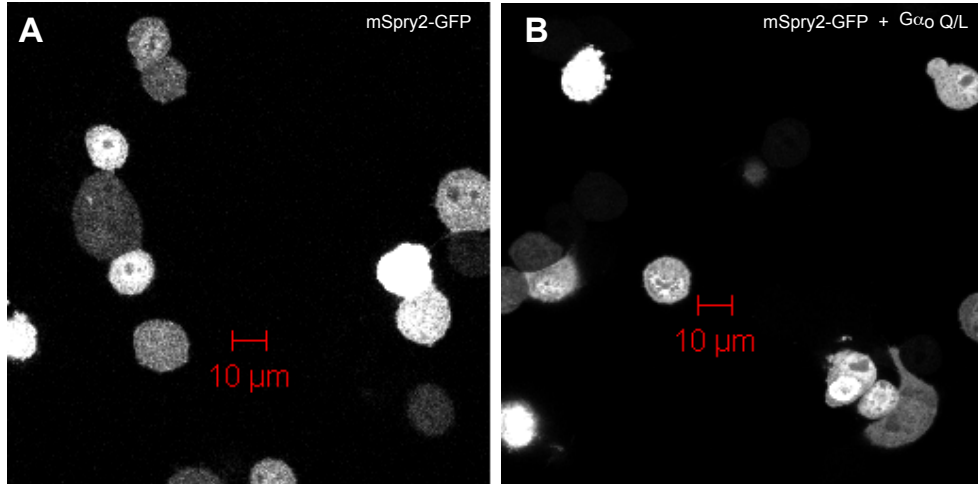


Figure S3

