



**Figure S5. Upregulation of Glutamine Synthetase in the retinas of *pdx1*<sup>-/-</sup> mutants.** A. Cryosections of middle-aged (11 months old) controls (top) and *pdx1*<sup>-/-</sup> mutants (bottom), immunostained with anti-glutamine synthetase (magenta), nuclei are labeled by DAPI (gray). Hypertrophic processes are observed at the OLM (arrowheads) in *pdx1*<sup>-/-</sup> mutants. (INL: inner nuclear layer, ONL: outer nuclear layer, OLM: outer limiting membrane). Size bars indicate 20  $\mu\text{m}$ . B. Graph depicting GS staining intensity in *pdx1*<sup>+/+</sup> compared to *pdx1*<sup>-/-</sup> mutants, analyzed from samples as in (A) and Fig. 5J. *pdx1*<sup>+/+</sup>, n=11 regions from 4 samples; *pdx1*<sup>-/-</sup>, n=20 regions from 6 samples. Error bars represent SEM. \*\*\*,  $p < 0.0001$ .