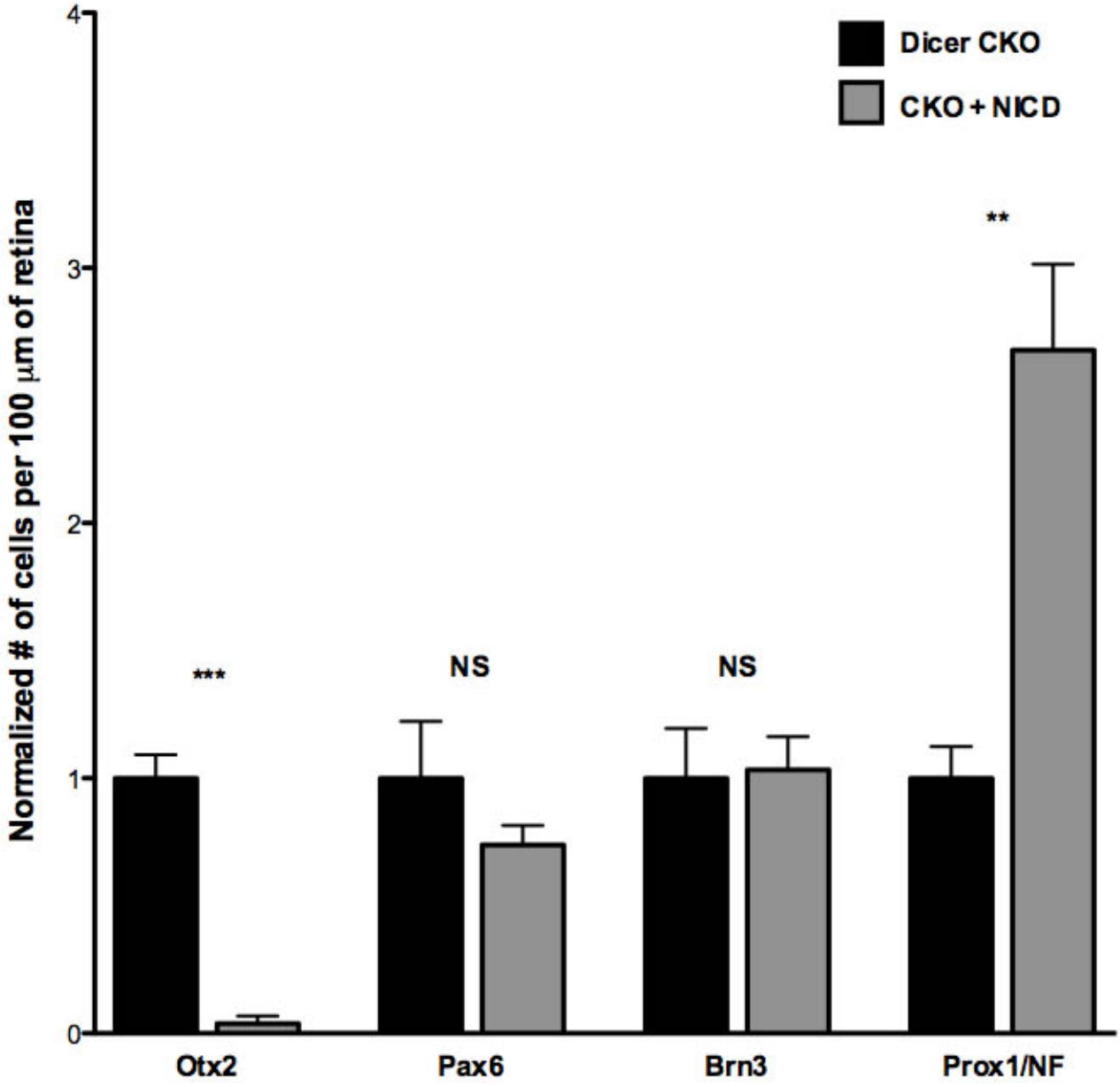
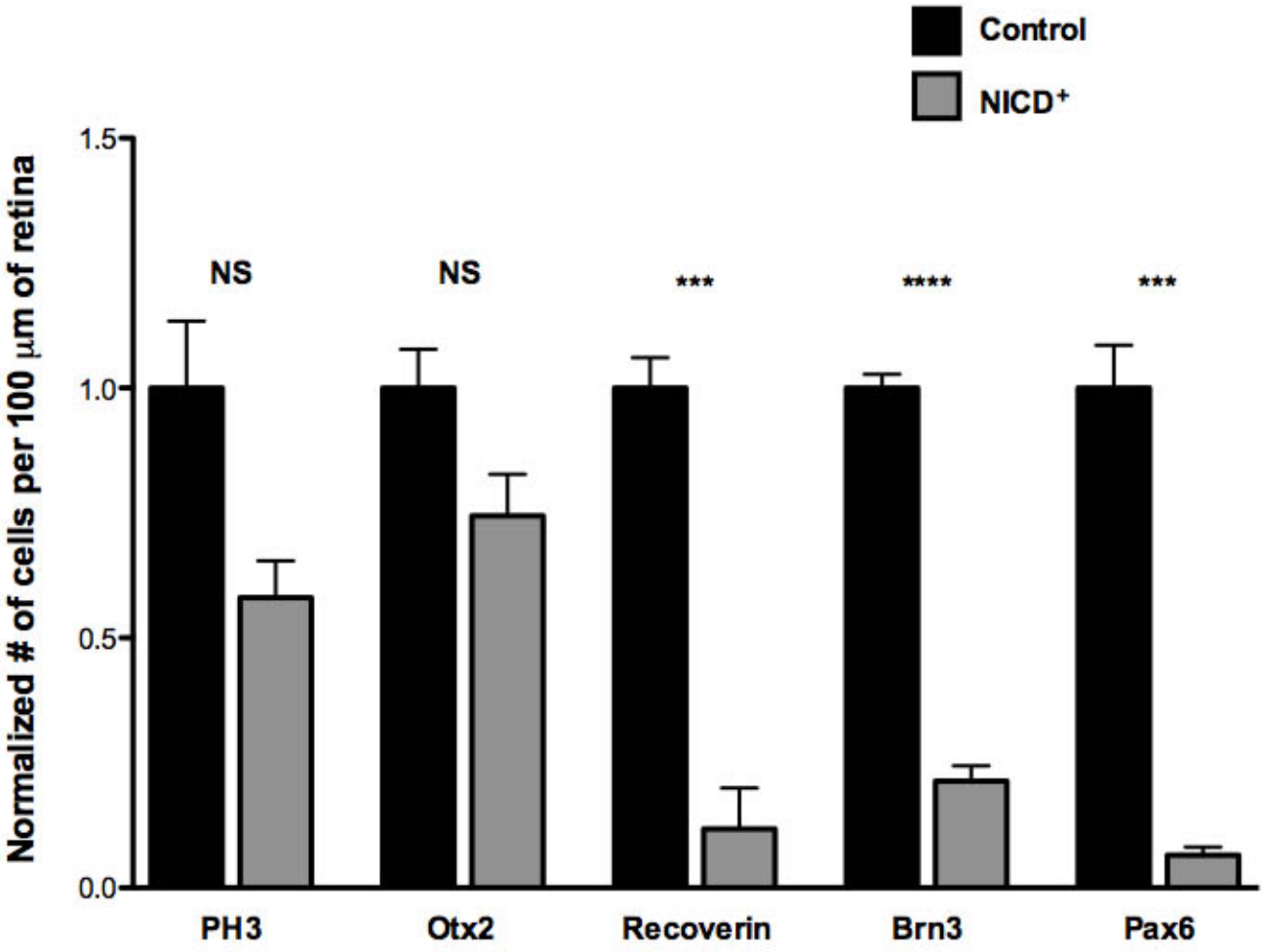
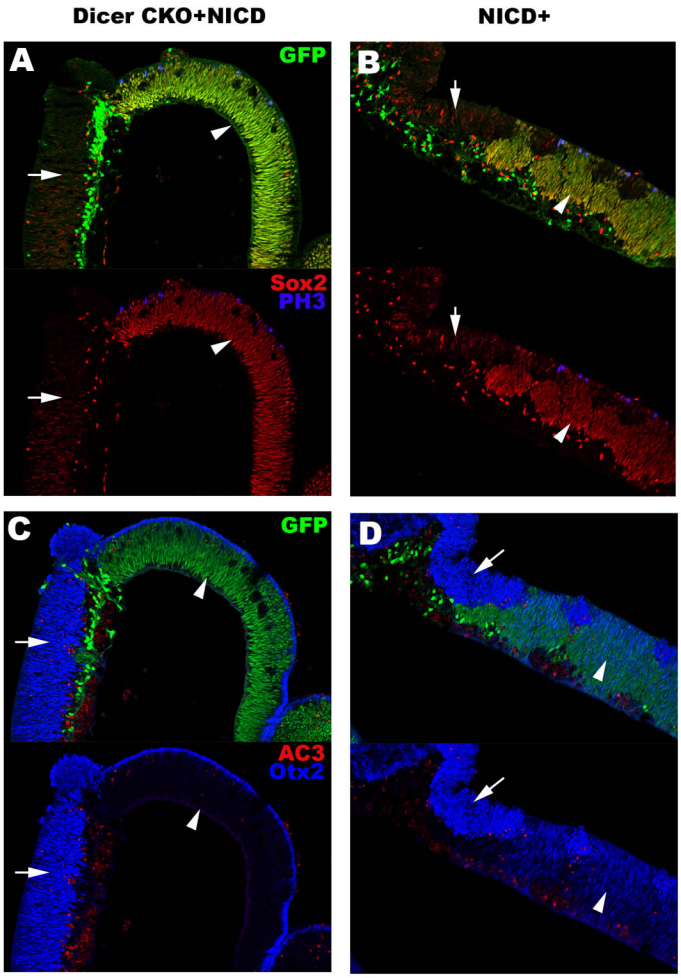


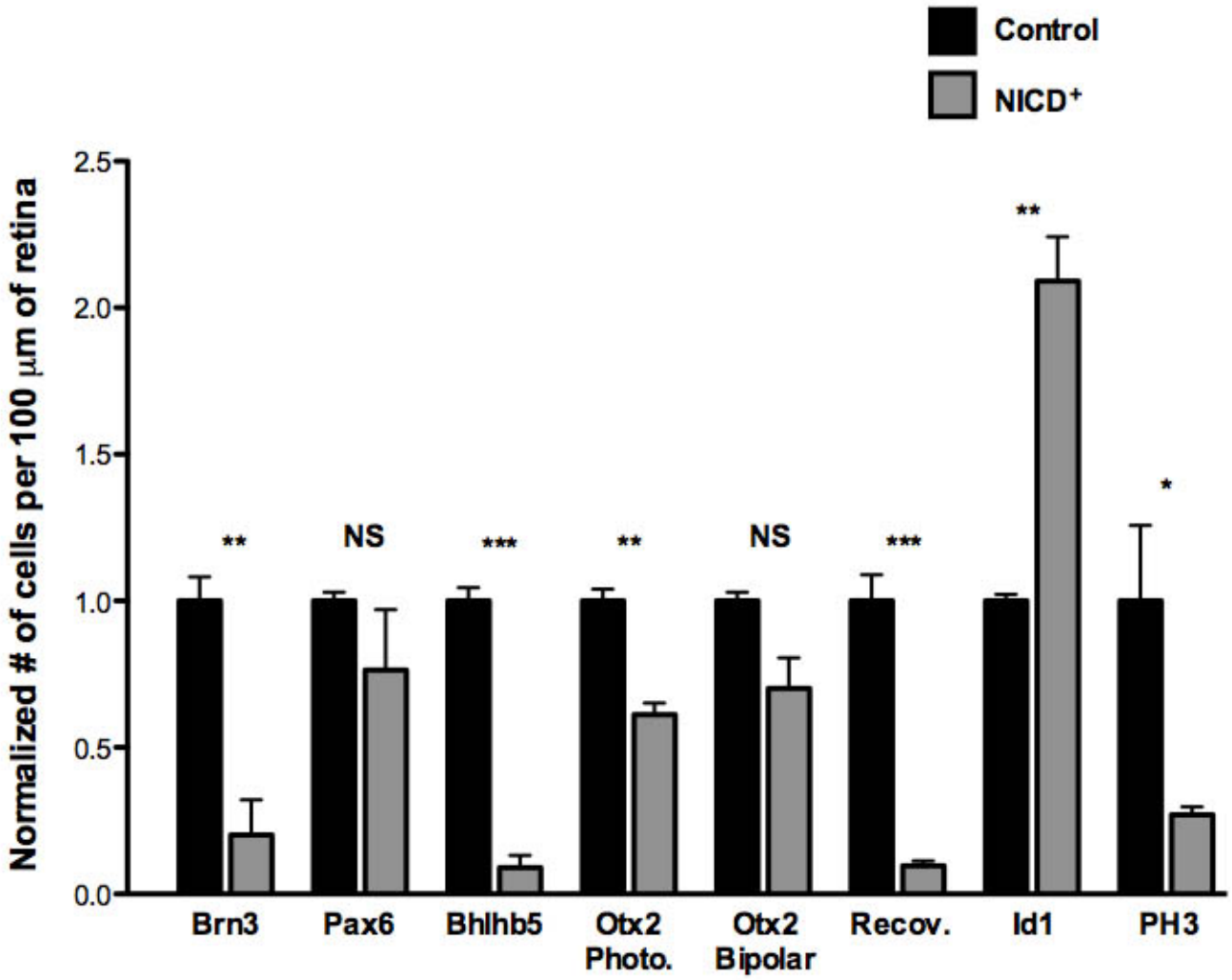
Supplementary Figure 1. Quantification of immunofluorescence staining of P0 Dicer CKO versus Dicer CKO+NICD retinas, normalized to Dicer CKO counts. Counts of $Otx2^{+}$ photoreceptors, $Pax6^{+}$ amacrine cells, $Brn3^{+}$ ganglion cells, and $Prox1^{+}$/$Neurofilament^{+}$ horizontal cells. Error bars indicate mean ± SEM. P-value summary: NS- Not significant; ★ < 0.05; ★★ < 0.01; ★★★ < 0.001



Supplementary Figure 2. Quantification of immunofluorescence staining of P0 NICD$^+$ versus control retinas, normalized to average of control counts. Counts of PH3$^+$ mitotic cells, Otx2$^+$ photoreceptors, recoverin$^+$ photoreceptors, Brn3$^+$ ganglion cells at the vitreal surface, and Pax6$^+$ amacrine cells. Error bars indicate mean ± SEM. P-value summary: NS- Not significant; ★ < 0.05; ★★ < 0.01; ★★★ < 0.001, ★★★★ < 0.0001



Supplementary Figure 3. Immunofluorescence staining of P0 Dicer CKO+NICD and NICD+ retinas after 48h in DAPT. **A-B,** Staining for the progenitor markers Sox2 (red) and PH3 (blue) is reduced in wild type areas (arrows), but is rescued in NICD-expressing areas (green, arrowheads) in both Dicer CKO+NICD (A) and NICD+ (B) retinas. **C-D**, Staining for the photoreceptor marker Otx2 (blue) is increased in wild type areas (arrows), but is absent from Dicer CKO+NICD areas (C, green, arrowheads), and comparatively reduced in NICD+ areas (D, green, arrowheads). Staining for AC3 (red) shows no induction in both Dicer CKO+NICD and NICD+ areas (green, arrowheads).



Supplementary Figure 4. Quantification of immunofluorescence staining of P5 NICD$^+$ versus control retinas, normalized to control counts. Counts of Brn3$^+$ ganglion cells, Pax6$^+$ amacrine cells, Bhlhb5$^+$ mature amacrine cells, Otx2$^+$ photoreceptors, bright Otx2$^+$ bipolar cells, recoverin$^+$ photoreceptors, Id1$^+$ Müller glia, and PH3$^+$ mitotic cells. All counts were done in central retina, except PH3, which was counted in the most peripheral 100 μm of retina. Error bars indicate mean ± SEM. P-value summary: NS- Not significant; ★ < 0.05; ★★ < 0.01; ★★★ < 0.001