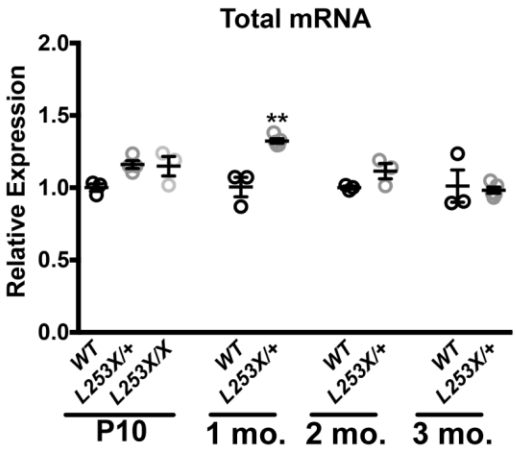
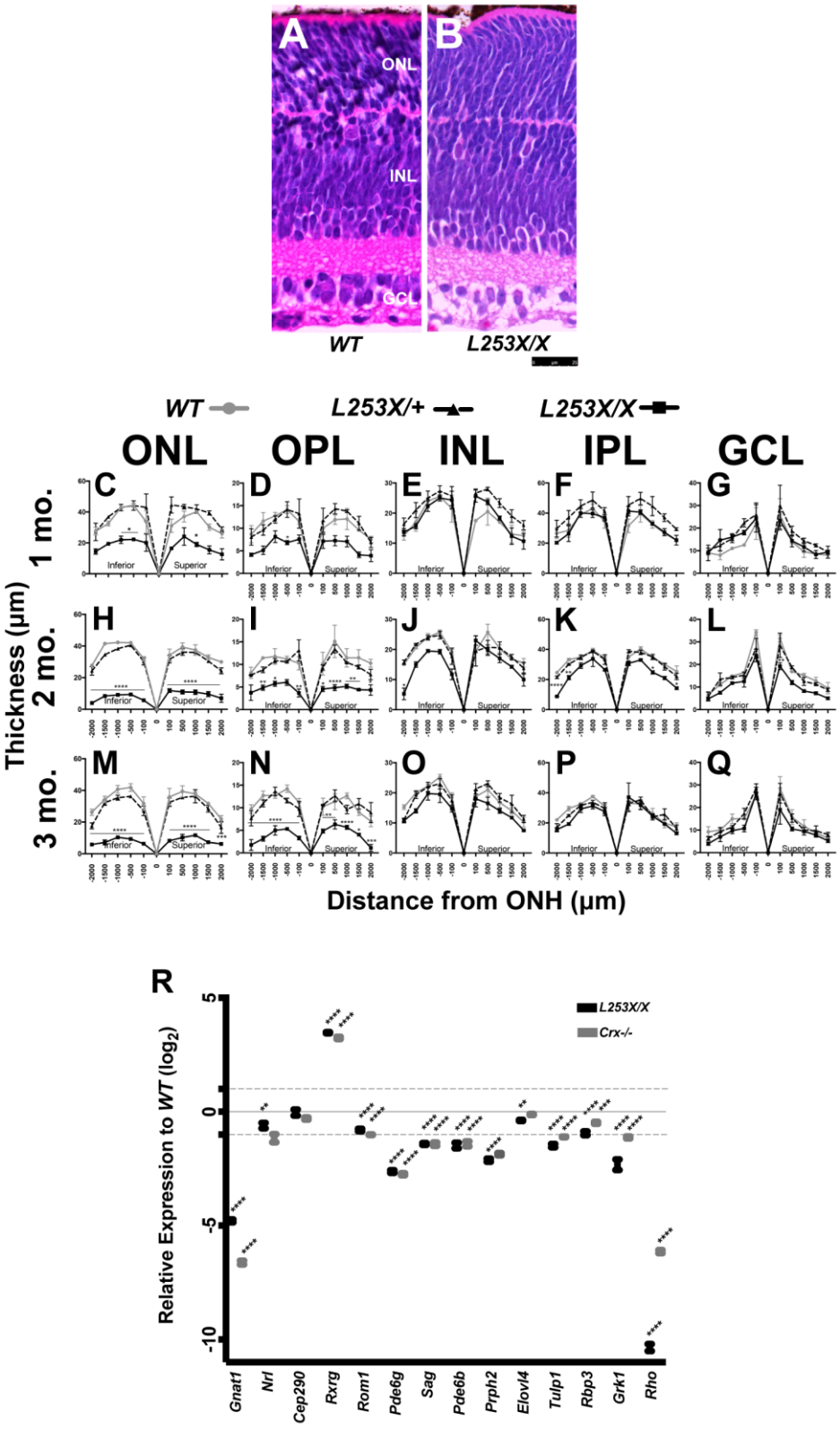


Supplemental Fgure 1



Supplemental Figure 2

Supplemental Figure 1: *L253X/+* retinas display variable excess total *Crx* mRNA. qRT-PCR assays were used to quantify total *Crx* mRNA from mutant and *WT* control retinas at the indicated ages. The results are presented as relative expression to *WT*. (mean ± SEM, n=3, circles represent individual biological replicates; ** p< .01; 1-Way Anova with Tukey's Multiple Comparisons Test).

Supplemental Figure 2: *L253X/X* retinas display normal ONL genesis but photoreceptor layer-specific progressive thinning, while all *L253X/+* retinal layers unaffected. H&E stained retinal sections from P7 *WT* **(A)** and *L253X/X* (**B)** mice were imaged at 40X magnification (scale bar 25um). Morphometry quantification of five retinal layers in *L253X/X* and *L253X/+* mutants along with *WT* controls at 1 mo (**C-G**), 2 mo (**H-L**) and 3 mo (**M-Q**). These layers include ONL-outer nuclear layer, OPL-outer plexiform layer; INL–inner nuclear layer; IPL-inner plexiform layer; and GCL- ganglion cell layer. (mean ± SEM, n ≥ 3; * p<0.05, ** p<0.01, *** p<0.001, **** p<0.0001; 2-Way Anova with Tukey's Multiple Comparisons Test). (**R**) Expression levels of 14 essential photoreceptor genes in P10 *L253X/X* and *Crx-/-* mutants and *WT* controls were determined by qRT-PCR. The results are presented as expression changes relative to *WT* in a $\log_2$ scale with 2-fold differences (±1) marked by grey dash lines (mean ± SEM, n ≥ 3; * p<0.05, ** p<0.01, **** p<0.0001; 1-Way Anova with Tukey's Multiple Comparisons Test)

Supplemental Table 1: Primer sets for PCR and qRT-PCR.

Supplemental Table 2: Custom designed ddpCR assays.