

Fig. S1. Fiber cell differentiation and denucleation occur normally in neonatal *Nrf2*^{-/-} lenses. WT (A, C) and *Nrf2*^{-/-} (B, D) P1 lenses show typical organelle-free zones (dashed circles in A, B) containing only nuclear fragments and nucleoli. Fiber cells differentiate normally, and express high levels of gamma-crystallins (green) in WT and *Nrf2*^{-/-} lenses (C, D). However, the differentiated fiber cells in *Nrf2*^{-/-} lenses do not appear normally organized. Scale bars in (A, C) are 100 μ m.

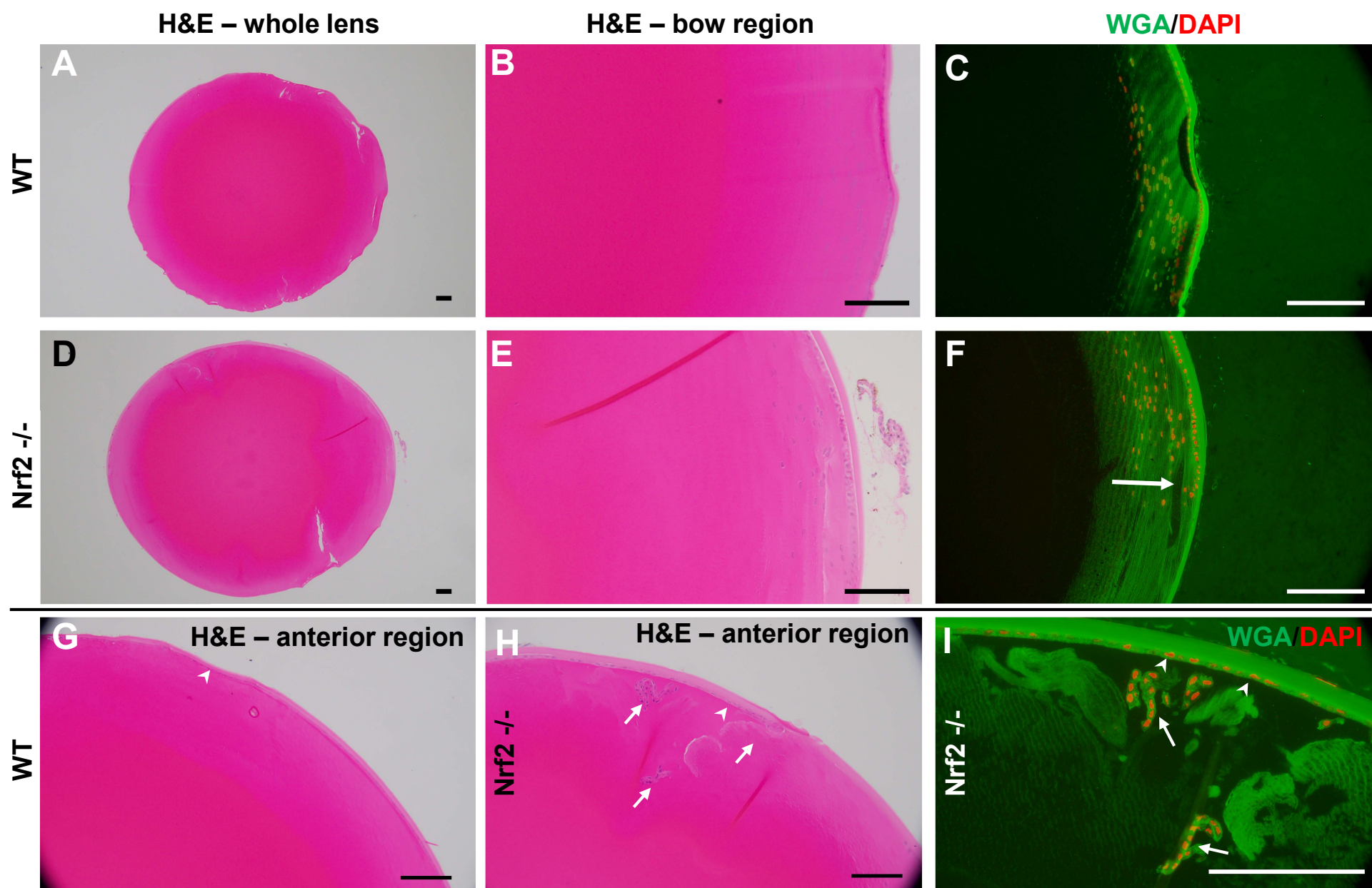


Fig. S2. Fiber cell differentiation abnormalities begin in adult lenses. 3-month WT (A-C, G) and *Nrf2*^{-/-} lenses (D-F, H-I) were evaluated histologically and for cell morphology via wheat germ agglutinin (WGA) and DAPI staining. At low magnification, *Nrf2*^{-/-} lenses appeared grossly normal (D), but close examination of the bow region (E, F) revealed subtle abnormalities within the shape and angle of the bow that were clear at higher magnification (arrow, F). The anterior lens in *Nrf2*^{-/-} mice also showed ectopic nucleated cells (H, I). Scale bar is 100 μ m (note differences between panels). (I) is a close-up of (H). Arrowheads in G-I indicate normal lens epithelial cells and arrows in G-I indicate ectopic nucleated cells.

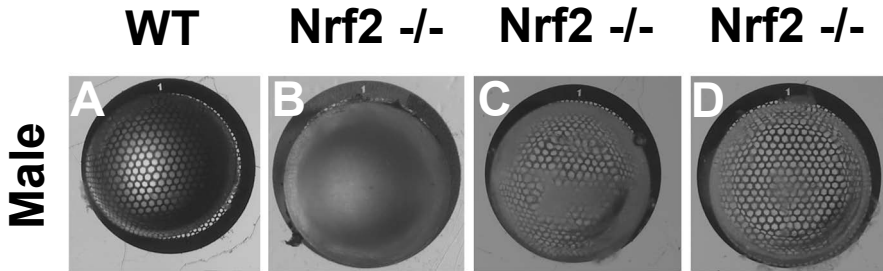


Fig. S3. 21-month male Nrf2 -/- mice exhibit a diverse array of cataracts with different degrees of severity. Cataracts shown are from mice fed their diets ad libitum.