Fig. S1

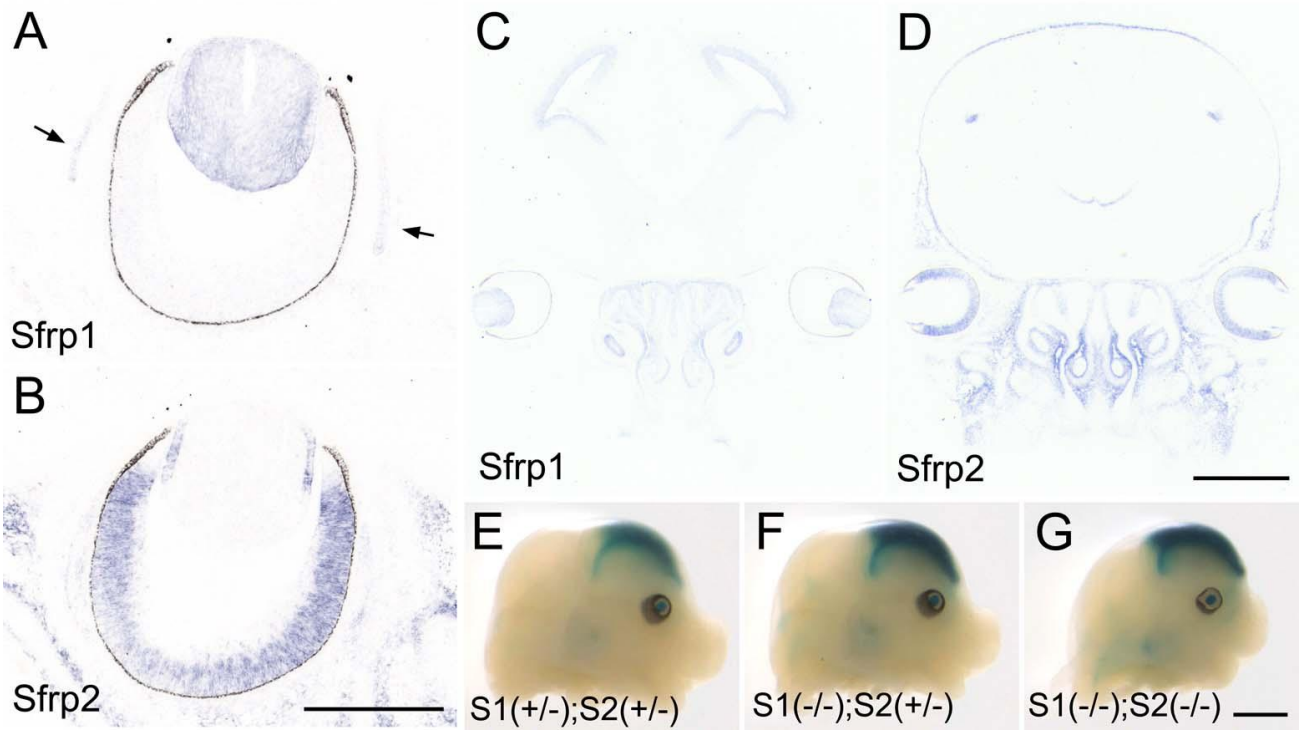

Fig. S1 ***Sfrp1* and *Sfrp2* expression. (A-D)** *In situ* hybridization for *Sfrp1* (A, C) and *Sfrp2* (B, D) (E14.5). *Sfrp1* expression was detected in conjunctiva (arrow, A) albeit weakly compared to the expression in lens. *Sfrp1* and *Sfrp2* showed non-overlapping expression lens (A, B) and in head sections (C, D). **(E-G)** *LacZ* reporter activity from the *Sfrp1* allele in whole heads (E14.5). Blue staining was detectable in the forebrain as well as in the lens. Stronger X-gal staining was observed in *Sfrp1* KOs (F and G) than in the heterozygote (E). Scale bars for A, B 400 μm; C, D 1mm; J-K 2 mm.

Fig. S2

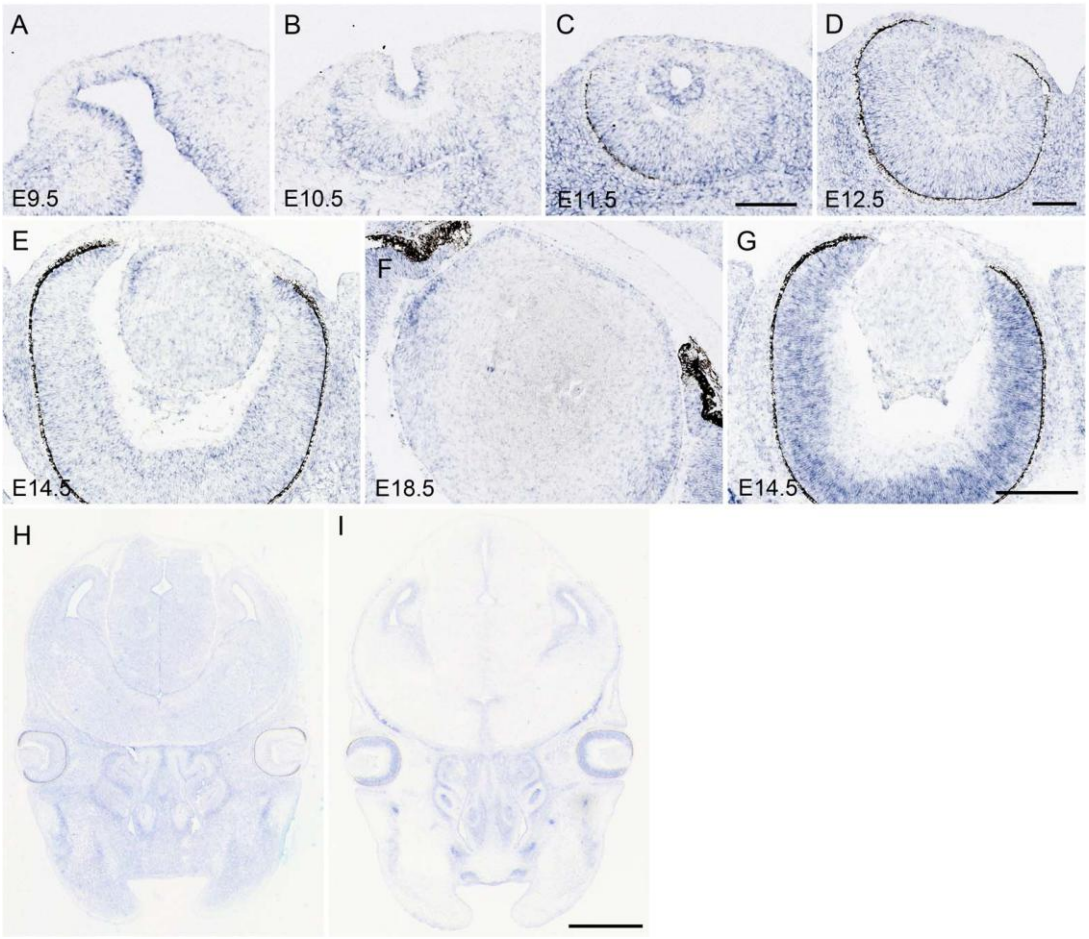

Fig. S2 *Lrp6* expression in lens epithelium. *In situ* hybridization on coronal cryosections for *Lrp6* (A-F, H) and *Lrp5* (G, I) probes. **(A)** At E9.5 *Lrp6* was not observed in lens placode but was found in underlying forebrain protrusion. **(B, C)** The first distinct signal of *Lrp6* in lens was detected in the lens pit epithelial cells (B) and this signal was persisted in whole lens cells of lens pit (C). **(D-F)** After lumen closure *Lrp6* was detected only in lens epithelial cells (D) with higher intensity around the equator (E, F). **(G)** *Lrp5* was not detected in lens but was strongly expressed in retina. **(H, I)** Although *Lrp6* and *Lrp5* sequences show overall similarities their hybridization patterns were quite different; *Lrp6* signal was detected broadly, but mostly weakly, across many tissues (H, E14.5). In contrast, *Lrp5* expression was absent from most tissues but consequently stood out sharply in tissues where it was expressed, such as retina (I, E14.5). For each gene two probes were set from different sequences around 3' coding regions and confirmed hybridization patterns were similar between two probes from a same gene. Scale bars: A-C and D 100 μm, E-G 200 μm, H and I 1 mm.

To prepare templates for RNA polymerase reaction the following PCR primers were used:
Lrp6 3540/3559 T3-Fw AATTAACCCTCACTAAAGGGTCCAGGCTCGAATTGCTC and Lrp6 4100/4081 T7-Rv TAATACGACTCACTATAGGGCTGGCTCCTCAGTTGGATA; Lrp6 4101/4120 T3-Fw AATTAACCCTCACTAAAGGGACCACAAGCCACCAACACAG and Lrp6 4671/4652 T7-Rv TAATACGACTCACTATAGGGTGTAGCCCTTGGCTGTTG; Lrp5 3601/3620 T3-Fw AATTAACCCTCACTAAAGGGCATGCCGTGGAGGAAGTCAG and Lrp5 4138/4119 T7-Rv TAATACGACTCACTATAGGGATGTCATCAGAGGGTGGC; Lrp5 4129/4148 T3-Fw AATTAACCCTCACTAAAGGGATGACATCCCAGCCCACAG and Lrp5 4673/4654 T7-Rv TAATACGACTCACTATAGGGCTCTTCCAGCGACTGGTGCT.

Fig. S3

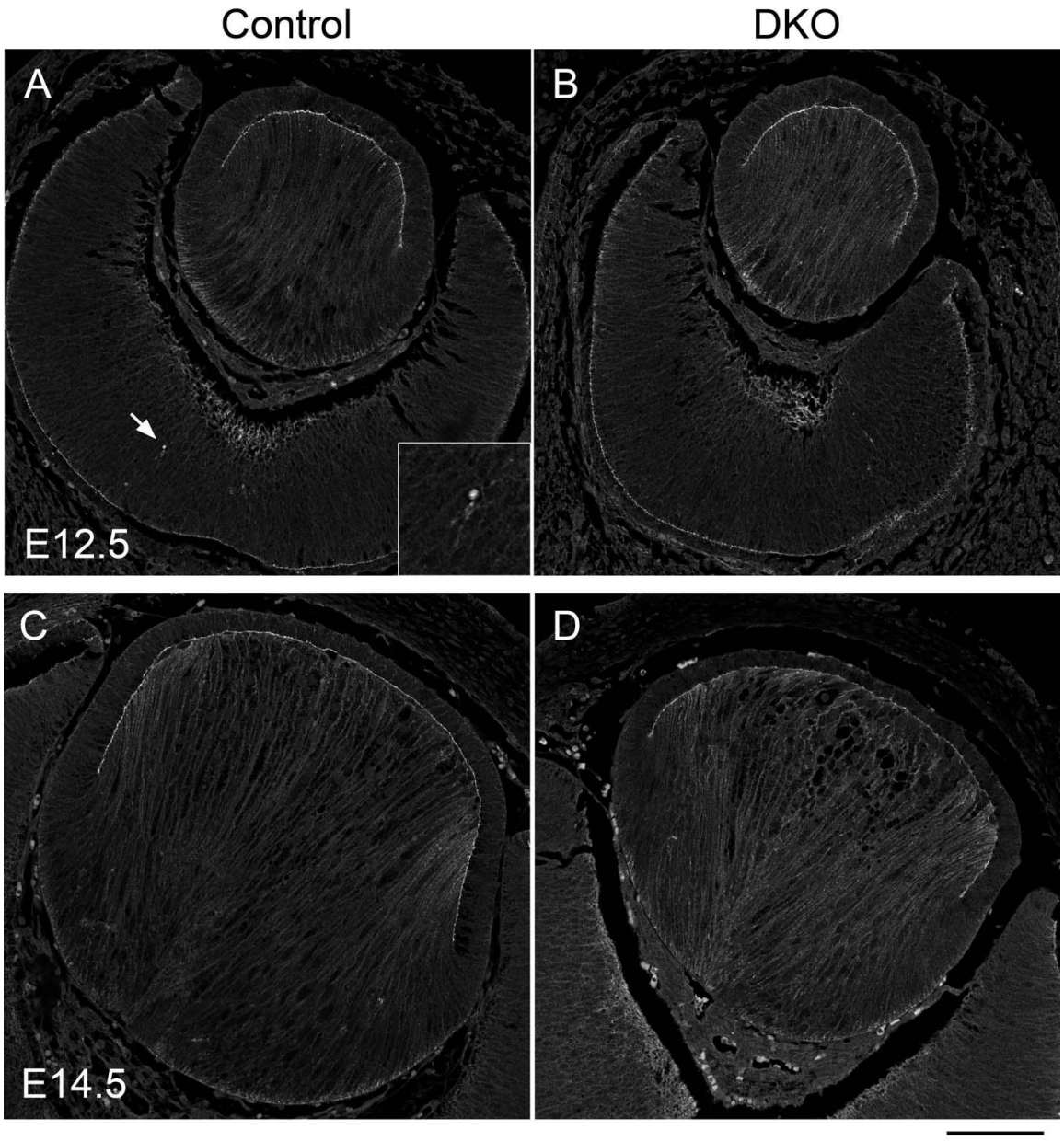

Fig. S3 Apoptosis was not induced in *Sfrp1;Sfrp2* DKO lenses. Confocal microscope images of paraffin sections immunostained with anti-cleaved caspase-3 antibody (Asp 175, Cell Signaling #9664) of control (A, C) and DKO (B, D) eyes at E12.5 (A, B) and E14.5 (C, D). In control and DKO lenses no positive cells were detected in lens epithelial cells at either age studied. The arrow in A shows staining in a retina cell (enlarged in the inset) that provides a positive staining control. Note that there was some non-specific staining at the interface between the epithelial cells and fiber cells. Also autofluorescent signals from blood cells were visible as bright dots in the hyaloid vasculature that develops between retina and lens (most prominent in D). Scale bar 100 μm.