



**Supplementary Figure S6.** ABCA4 expression in the outer segments of treated *Abca4*<sup>-/-</sup> eyes was maintained 6 months postinjection. ABCA4 (green) and Hcn1 staining (red) in *Abca4*<sup>-/-</sup> eyes. Nuclei were stained with Hoescht. **(A)** Absence of ABCA4 staining in *Abca4*<sup>-/-</sup> eyes injected with downstream vector-only 6 months postinjection; **(B)** ABCA4 staining in photoreceptor outer segments of dual vector injected *Abca4*<sup>-/-</sup> eyes 6 months postinjection; **(C)** ABCA4 and Hcn1 staining in O-ring sections of injected and uninjected *Abca4*<sup>-/-</sup> mouse eyes. Specific photoreceptor outer segment staining of ABCA4 was apparent in the dual vector injected eye but not the uninjected eye. Nonspecific edge staining of the ganglion cell layer was apparent in both eyes. ABCA4, ATP-binding cassette transporter protein family member 4; Dual, dual vector injected *Abca4*<sup>-/-</sup>; GCL, ganglion cell layer; Hcn1, hyperpolarization activated cyclic nucleotide gated potassium channel 1 (inner segment marker); INL, inner nuclear layer; IS, inner segments; KO, *Abca4*<sup>-/-</sup>; ONL, outer nuclear layer; OS, outer segments; RPE, retinal pigment epithelium; KO, *Abca4*<sup>-/-</sup>.