



Supplementary Figure S3. Detection of full-length ABCA4 6 weeks postinjection in *Abca4*^{-/-} eyes treated with different dual vector combinations. **(A)** Dual vector overlap variants were injected into *Abca4*^{-/-} mouse eyes with a faint band of full length ABCA4 visible at 245kDa 6 weeks postinjection for all variants ($n=3$ eyes per lane). As predicted, no ABCA4 protein band was seen in uninjected control eyes (KO) and dual vector X injected eyes, which carried no overlap between upstream and downstream vectors. Truncated ABCA4 was detected around 135 kDa in eyes injected with variants **A** and **B**. **(B)** Including an intron in the upstream vector ("In" annotated samples) of dual vector overlap variants had a significant influence on the levels of full length ABCA4 detected 6 weeks postinjection (two-way ANOVA, $n=3-6$, intron $**p=0.004$, overlap $p=0.04$, interaction ns). **(C)** Representation of the ABCA4 amino acid length with the regions targeted by the commercially available antibodies used for Western blot (Abcam) and immunohistochemistry (AntibodiesOnline) indicated.