

Supplementary material.

Electroretinography. Electroretinograms were recorded in 18 month old dark-adapted wild-type and *Efemp1^{R345W}* mice (n = 8 each) mice using an Espion E2 system (Diagnosys, USA). Mice were anaesthetized with ketamine:xylazine (100:20 mg/kg), pupils dilated with Tropicamide 1% (Falcon Pharma, USA) and corneas moistened using GenTeal (Novartis, USA). Animals were positioned on a temperature-regulated platform. Corneal contact, midline subdermal reference, and ground electrodes were placed. Responses were recorded to ten stimuli ranging from 0.0001 to 30 cd.s.m⁻². For statistical analysis between wild-type and *Efemp1^{R345W}* mice, a- and b-wave amplitudes were fitted with non-linear regression curves that were compared by extra sum of squares F-test in GraphPad (Prism, La Jolla, CA). Curves were fitted to the data sets for two genotypes independently and then to the combined data set for both genotypes; the effect of combining data sets on the quality of fit was then used to calculate if there was a difference between genotypes for a given parameter (slope and EC50).