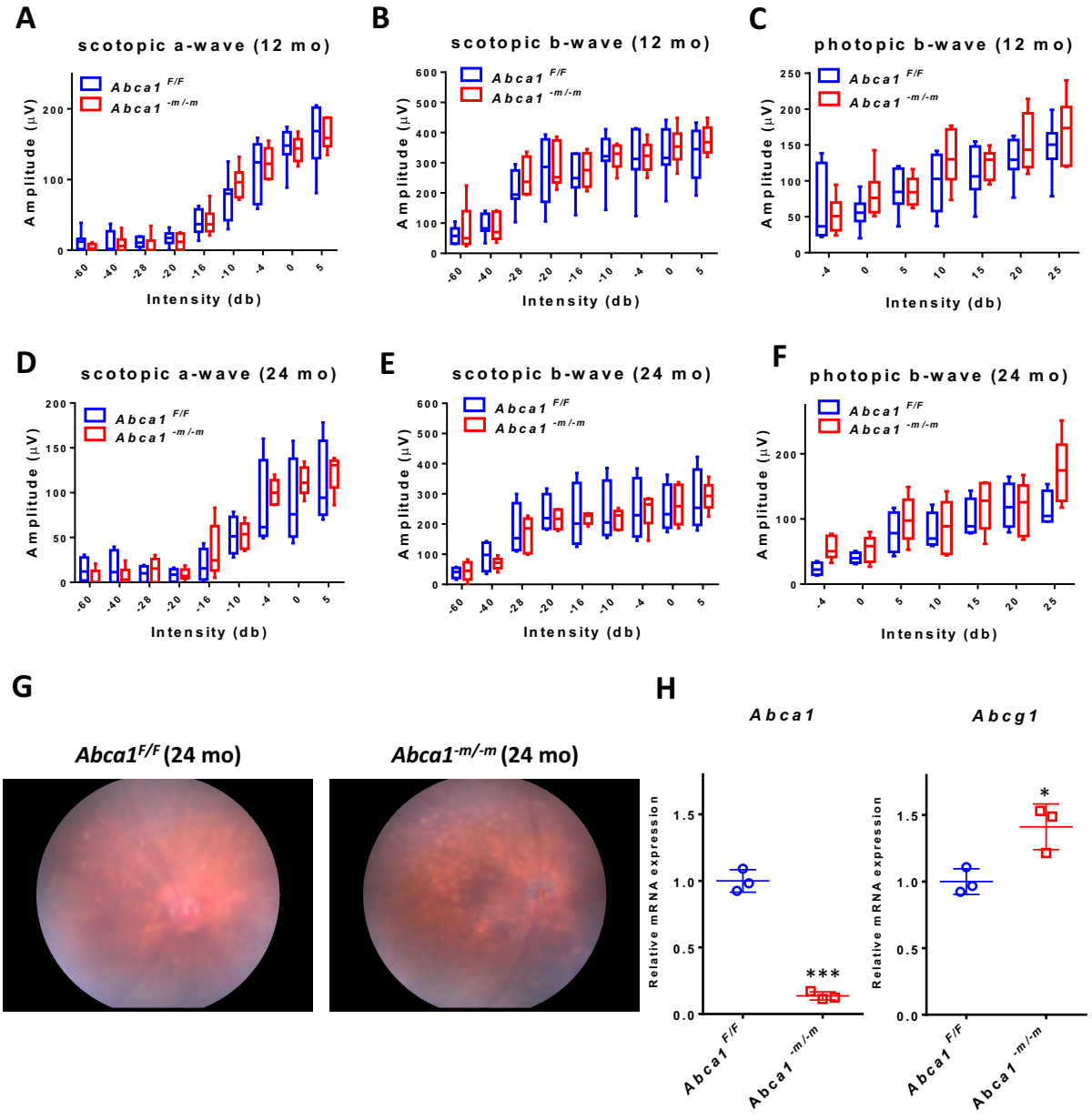
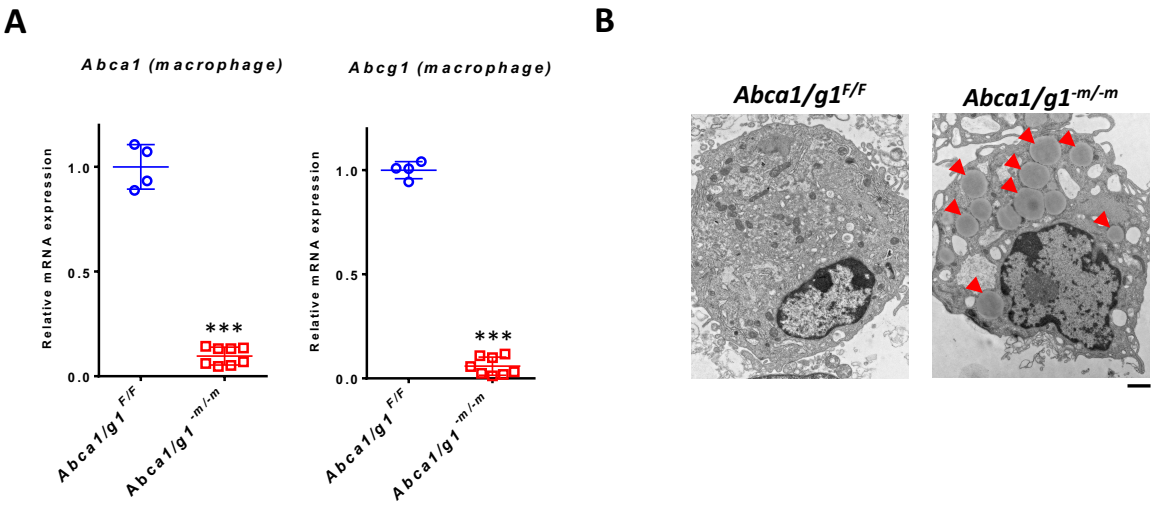
Supplementary Figure 1



Supplementary Figure 1

(A-C) Electroretinography (ERG) of 12-month-old *Abca1*$^{F/F}$ (n=5) and *Abca1*$^{-m/-m}$ mice (n=6) (A) Scotopic a-wave amplitude. (B) Scotopic b-wave amplitude. (C) Photopic b-wave amplitude. No significant difference was detected by two-way ANOVA. (D-F) ERG of 24-month-old *Abca1*$^{F/F}$ (n=4) and *Abca1*$^{-m/-m}$ mice (n=5) (D) Scotopic a-wave amplitude. (E) Scotopic b-wave amplitude. (F) Photopic b-wave amplitude. No significant difference was detected by two-way ANOVA. (G) Representative fundus images of 12-month-old *Abca1*$^{F/F}$ and *Abca1*$^{-m/-m}$ mice retinas. (H) *Abca1* and *Abcg1* expression in peritoneal macrophages from 3-month-old *Abca1*$^{F/F}$ (n=3) and *Abca1*$^{-m/-m}$ mice (n=3). *p<0.05 and ***p<0.001 by two-tailed unpaired t-test. Values are mean ± SE.

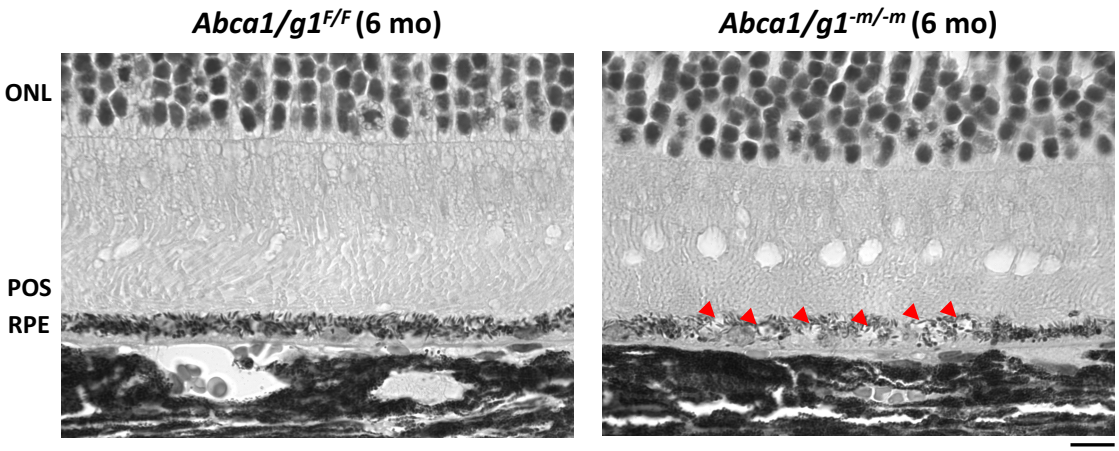
Supplementary Figure 2



Supplementary Figure 2

(A) *Abca1* and *Abcg1* expression in peritoneal macrophages from 3-month-old *Abca1/g1*$^{F/F}$ (n=4) and *Abca1/g1*$^{-m/-m}$ mice (n=8). ***p<0.001 by two-tailed unpaired t-test. (B) Representative electron microscopy images of peritoneal macrophages of 3-month-old *Abca1/g1*$^{F/F}$ and *Abca1/g1*$^{-m/-m}$ mice. Note the lipid droplets in macrophages of *Abca1/g1*$^{-m/-m}$ mice (red arrowheads). Scale bar: 1 μm. Values are mean ± SE.

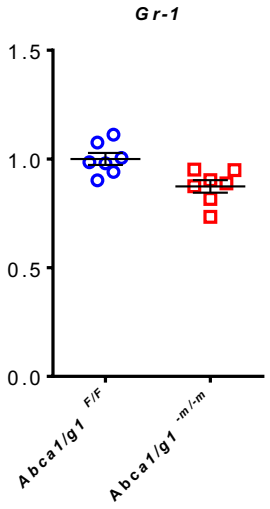
Supplementary Figure 3



Supplementary Figure 3

Representative H and E images of 6-month-old *Abca1/g1*$^{F/F}$ and *Abca1/g1*$^{-m/-m}$ mice retinas. Note the vacuoles in the RPE of *Abca1/g1*$^{-m/-m}$ mice (red arrowheads). ONL: outer nuclear layer. POS: photoreceptor outer segment. Scale bar: 10 μm.

Supplementary Figure 4



Supplementary Figure 4

qPCR quantification of *Gr-1* expression in the retina/RPE/choroid complex at 12 months of age; *Abca1/g1*$^{F/F}$: n=7, *Abca1/g1*$^{-m/-m}$: n=7. No significant difference was detected by two-tailed unpaired t-test.