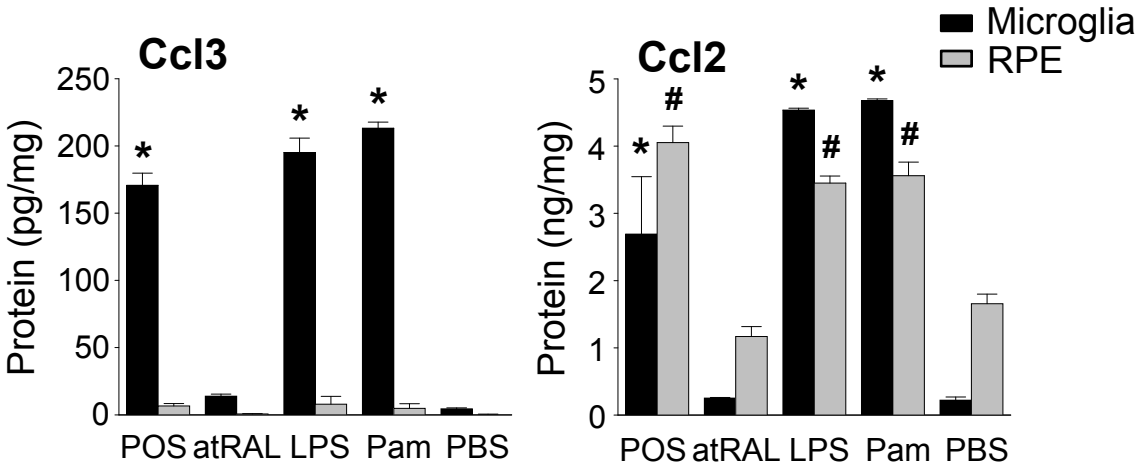
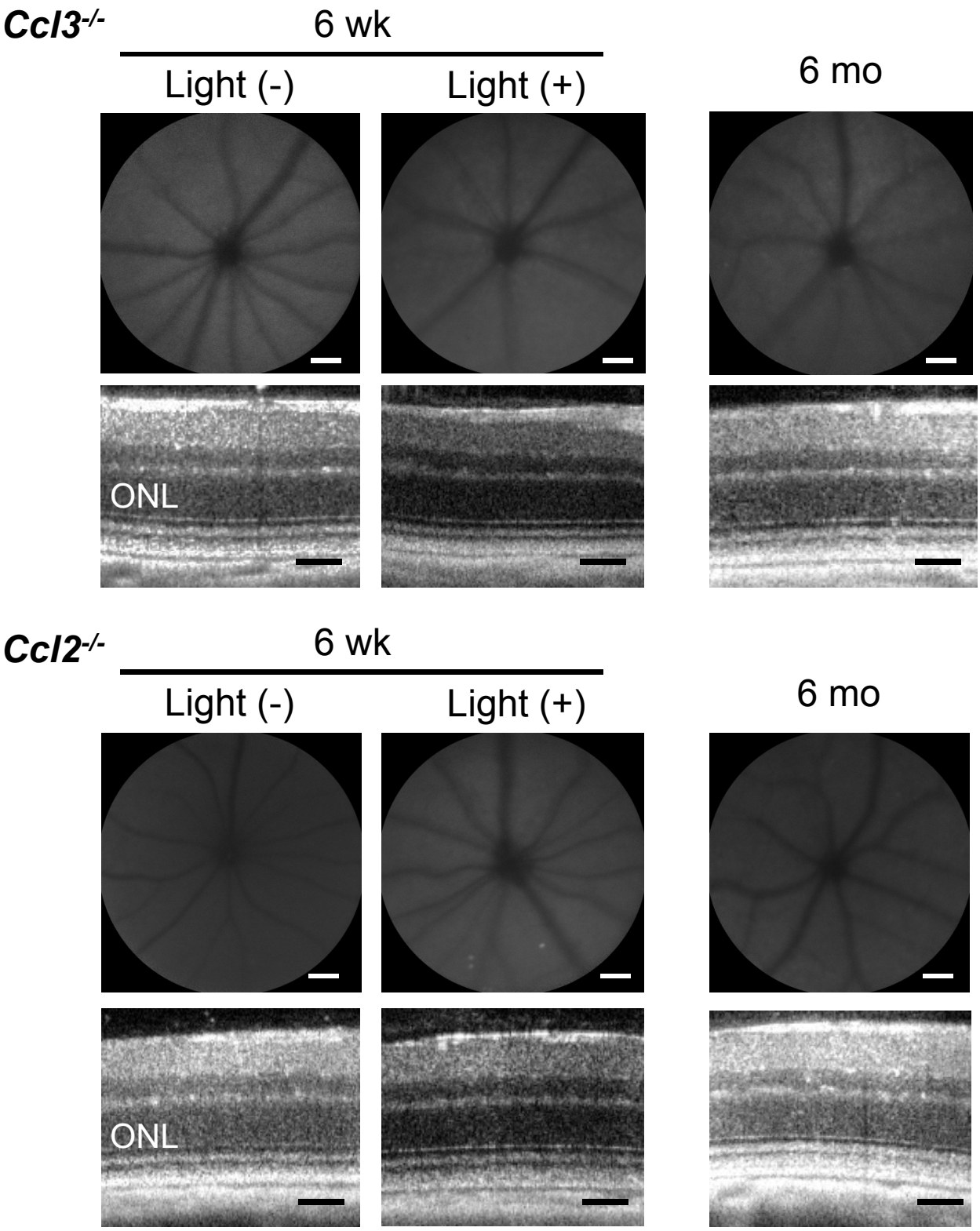
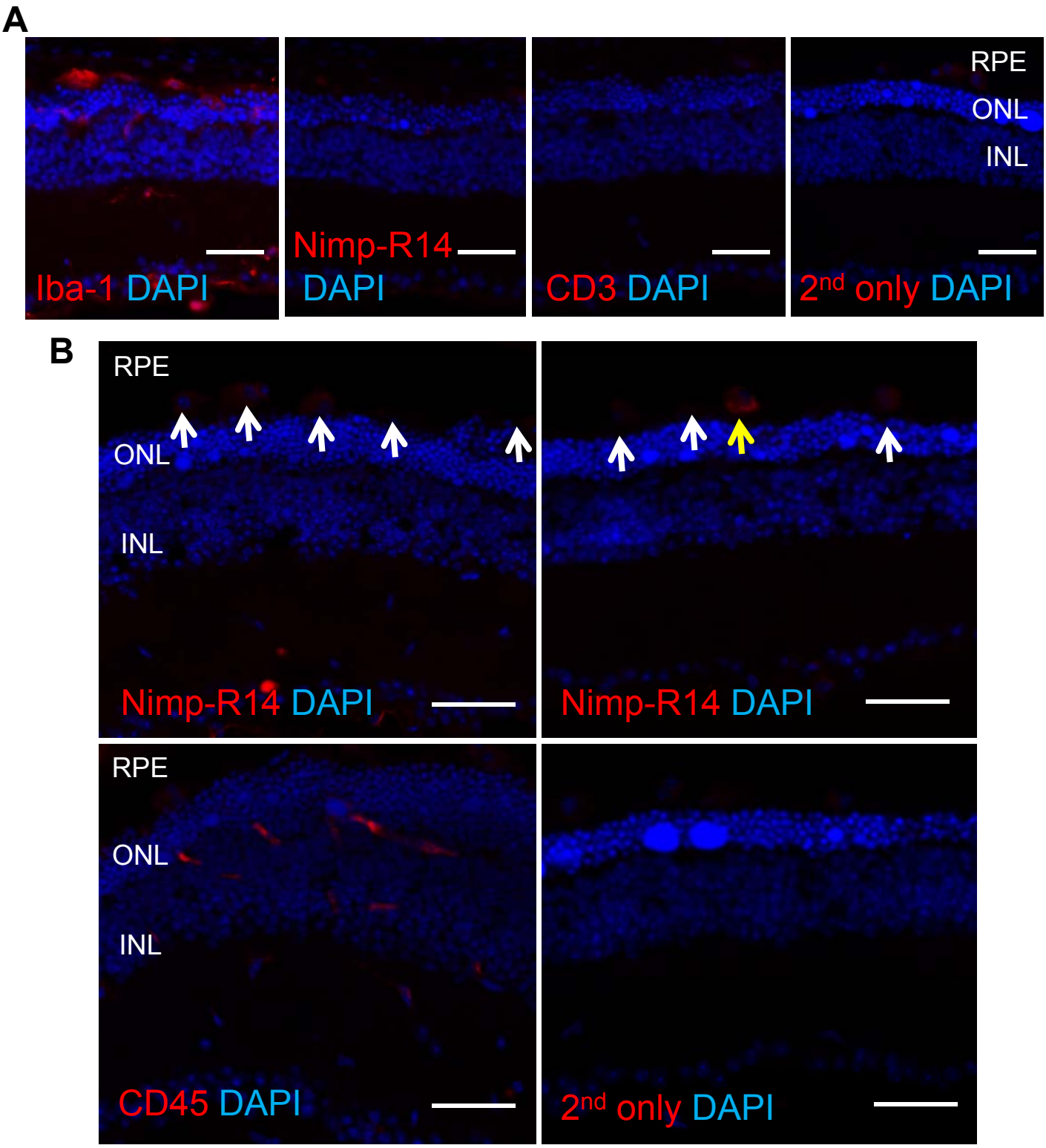


Supplemental Figure S1. CCL3 production from microglia

Primary retinal pigment epithelium (RPE) and retinal microglial cells were isolated from 2-week-old *Abca4*$^{-/-}$*Rdh8*$^{-/-}$ mice. Co-incubation with 6 µg/100 µl purified mouse photoreceptor outer segments (POS) from *Abca4*$^{-/-}$*Rdh8*$^{-/-}$ mice, 2 µM all-*trans*-retinal (atRAL), 1 µM lipopolysaccharide (LPS), 1 µM Pam3CSK4 (Pam) or PBS was performed for 24 h at 37 ºC. Secreted protein amounts of Ccl3 and Ccl2 were measured by ELISA. Error bars indicate S.D. of the means (n > 3).* indicates $P < 0.05$ vs PBS treated microglia. # indicates $P < 0.05$ vs PBS treated RPE.

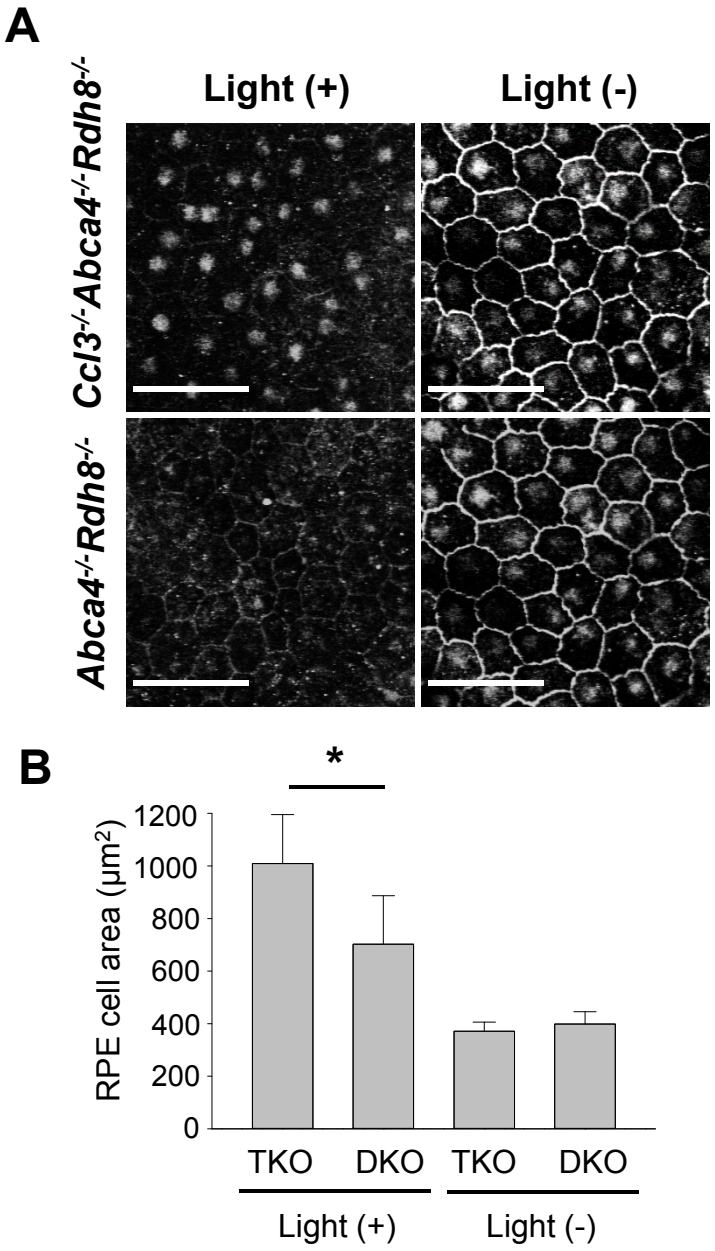


Supplemental Figure S2. SLO and SD-OCT images in *Ccl3*$^{-/-}$ and *Ccl2*$^{-/-}$ mice
Mice (6 wk old) were exposed to light at 10,000 lux for 30 min, and appearance of AF spot was examined 7 days after light exposure by SLO (upper). Retinal morphology was also evaluated by SD-OCT (lower). SLO (upper) and SD-OCT (lower) were also applied to 6 mo old mice. Bars in SLO and SD-OCT indicate 100 and 50 μm, respectively. No degenerative changes were observed.



Supplemental Figure S3. IHC for infiltrated cells into the subretinal space after light exposure in mice.

Abca4$^{-/-}$*Rdh8*$^{-/-}$ mice at 4 weeks of age were exposed to light at 10,000 lux for 30 min, and cryosections were prepared 7 days after exposure. **A.** IHC was performed with anti-Iba-1 (for microglia/macrophage) , anti-Nimp-R14 (for neutrophil) and anit-CD3 (for T cell) Abs. **B**. IHC with anti-Nimp-R14 and CD45 Abs are shown. Nimp-R14 staining display stronger (yellow arrow) and weaker (white arrows) signals. Bars indicate 30 μm. RPE, retinal pigment epithelial cell; ONL, outer nuclear layer; INL, inner nuclear layer.



Supplemental Figure S4. RPE damages in light exposed *Ccl3*$^{-/-}$*Abca4*$^{-/-}$*Rdh8*$^{-/-}$ and *Abca4*$^{-/-}$*Rdh8*$^{-/-}$ mice

RPE flat mounts were made from *Ccl3*$^{-/-}$*Abca4*$^{-/-}$*Rdh8*$^{-/-}$ (TKO) and *Abca4*$^{-/-}$*Rdh8*$^{-/-}$ (DKO) mice at 21 days after light exposure and from no light exposed *Abca4*$^{-/-}$ *Rdh8*$^{-/-}$ mice. Tight junction proteins between RPE cells were stained using anti-Zo-1 Ab (**A**). Size of RPE cell was measured in each mice group (**B**). Bars indicate 50 μm. Error bars indicate S.D. of the means ($n > 5$). * indicates $P < 0.05$.