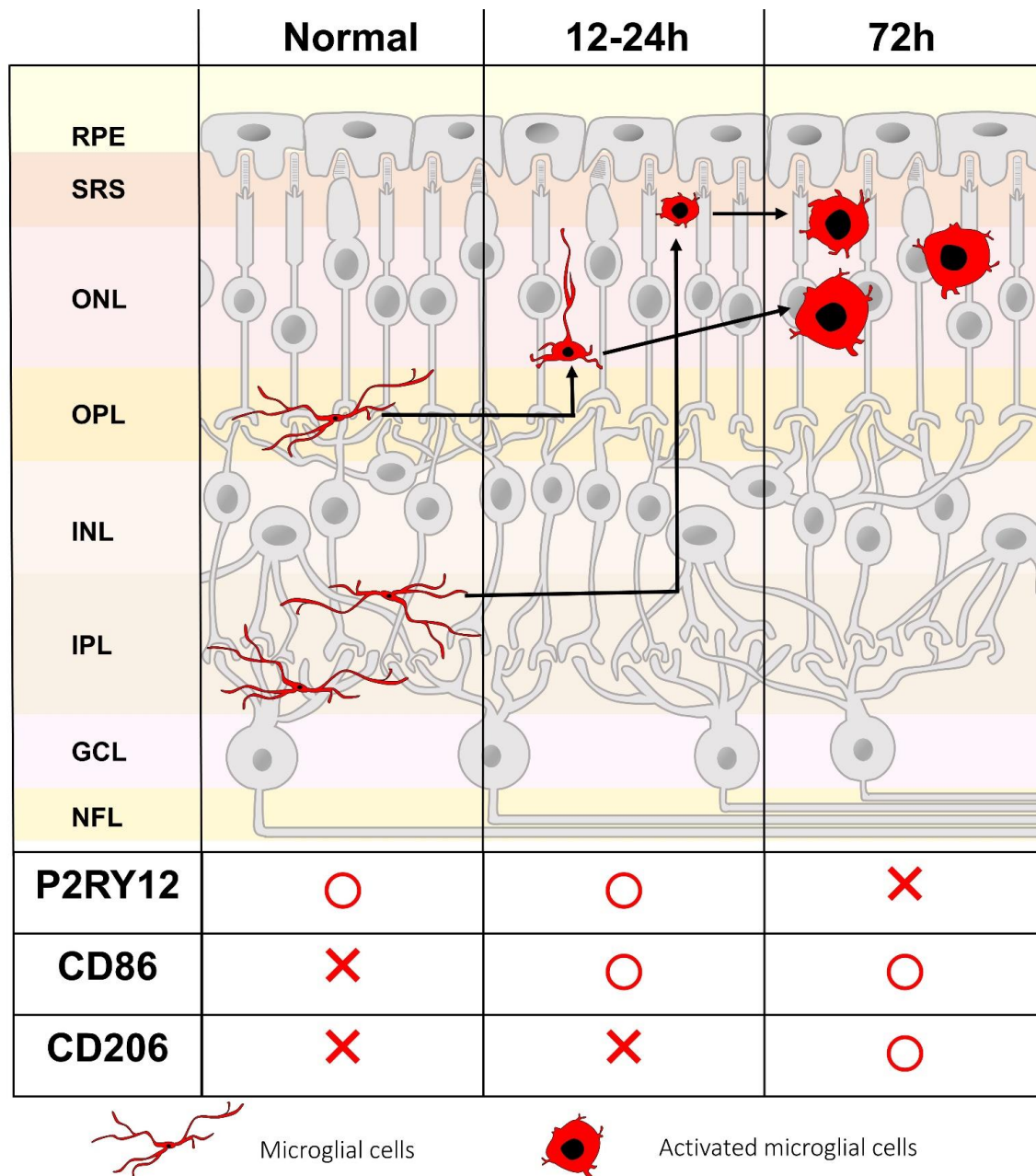


**Figure S1.** IL-10 and GS expression in the normal and blue LED-exposed Balb/c mice retina. (A) The RNA level of *Il-10* in whole retina increased at 72 h after LED exposure. (B,C) IL-10 was increased in the RPE after blue LED-induced RD retina 72 h (C, White square). (D,E) CD44 expression was increased in the end-feet of GS-labeled Müller glial cells at 72 h (D,E, white arrows). FACS was used to sort CD44 (+) and CX3CR1 (+) cells in the normal and blue LED-exposed Balb/c mice sclera and retinas (F,G). RNA level of the GS in FACS-sorted CX3CR1 cell population compared with FACS-sorted CD44 cell population (H). The RNA level of GS in CD44 positive cells is much higher than in CX3CR1 positive cells. RNA level of the *Il-10* was up-regulated in the CD44 sorted Müller glial cells from RD retina than normal retina (I). Data are presented by the mean  $\pm$  S.E.M. (n = 7). \*\*\*  $p < 0.05$ , one-way ANOVA with Tukey's multiple comparison post-hoc test, \*  $p < 0.05$ , Tukey's multiple comparison test. IL-10, interleukin 10; GS, glutamine synthetase.



**Figure S2.** Graphical abstract depicting the alterations in the spatial and temporal profiles of microglia during the early stages of retinal degeneration in two mouse models. NFL, nerve fiber layer; GCL, ganglion cell layer; INL, inner nuclear layer; IPL, inner plexiform layer; ONL, outer nuclear layer; OPL, outer plexiform layer; RPE, retinal pigment epithelium; SRS, subretinal space.