

SUPPLEMENTARY FIGURE LEGENDS

Supplementary Figure 1. Confocal image of retinal cross-section from a WT P14 OIR mouse stained for retinal ganglion cell (RGC)-specific β III tubulin, vessels (Isolectin B4), nuclei (DAPI). The image shows RGCs in intimate contact with degenerating vasculature. Scale bar: 50 μ m.

Supplementary Figure 2. Gating scheme explaining the identification of the $CD11b^+/F4-80^+/Gr1^-$ and $CD11b^+/F4/80^+/Gr1^-/NRP^+$ mononuclear phagocytes in whole retinal lysates.

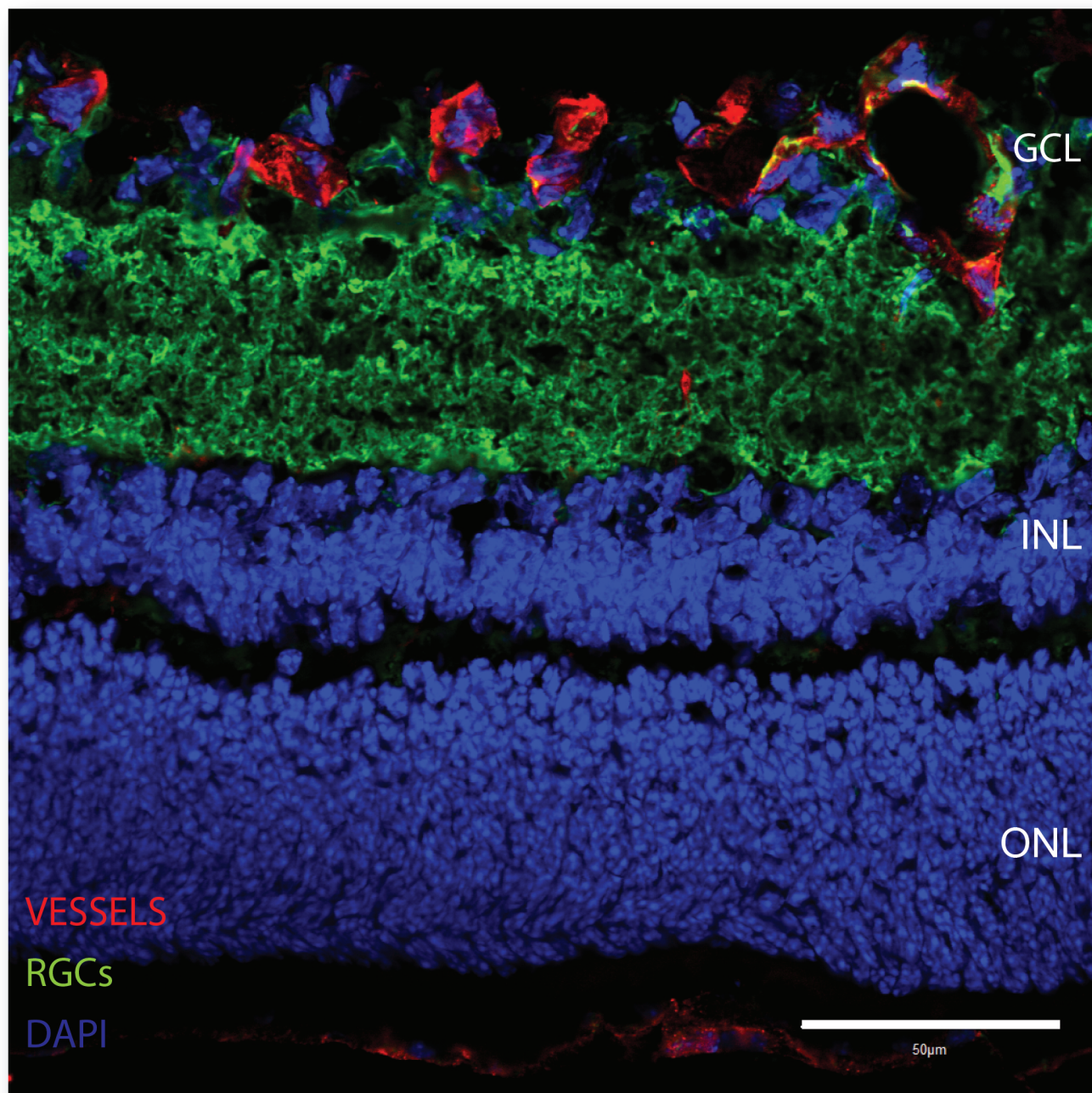
Supplementary Figure 3. Weights of mice in experimental paradigms involving OIR. Bar graphs represent the weight of mice used for FACS analysis in Figure 1 (**A-C**) and for vasoobliteration and neovascularization analysis (**D, E**) in Figure 4. No significant difference was noted between WT or $LysM-Cre/Nrp-1^{fl/fl}$ mice attesting that metabolic difference could not account for the observed phenotypes. Expressed as Weight \pm SEM; n=6-18.

Supplementary Figure 4. Numbers of resident retinal microglia in WT and $LysM-Cre/Nrp-1^{fl/fl}$ mice were similar. (**A, B**) Representative FACS plots show the populations of $CD11b^+/F4-80^+$ cells (microglia) in retinas collected from WT or $LysM-Cre/Nrp1^{fl/fl}$ mice. (**C-E**) FACS analysis from retinas collected at P10, P14 and P17 from normoxic mice reveals similar numbers of resident microglia in retinas from WT and $LysM-Cre/Nrp1^{fl/fl}$ mice. Data are expressed as total numbers of $CD11b^+/F4-80^+/Gr1^-$ cells \pm SEM; n=3 - 8 (total of 12-32 retinas per condition; each “n” comprises 4 retinas).

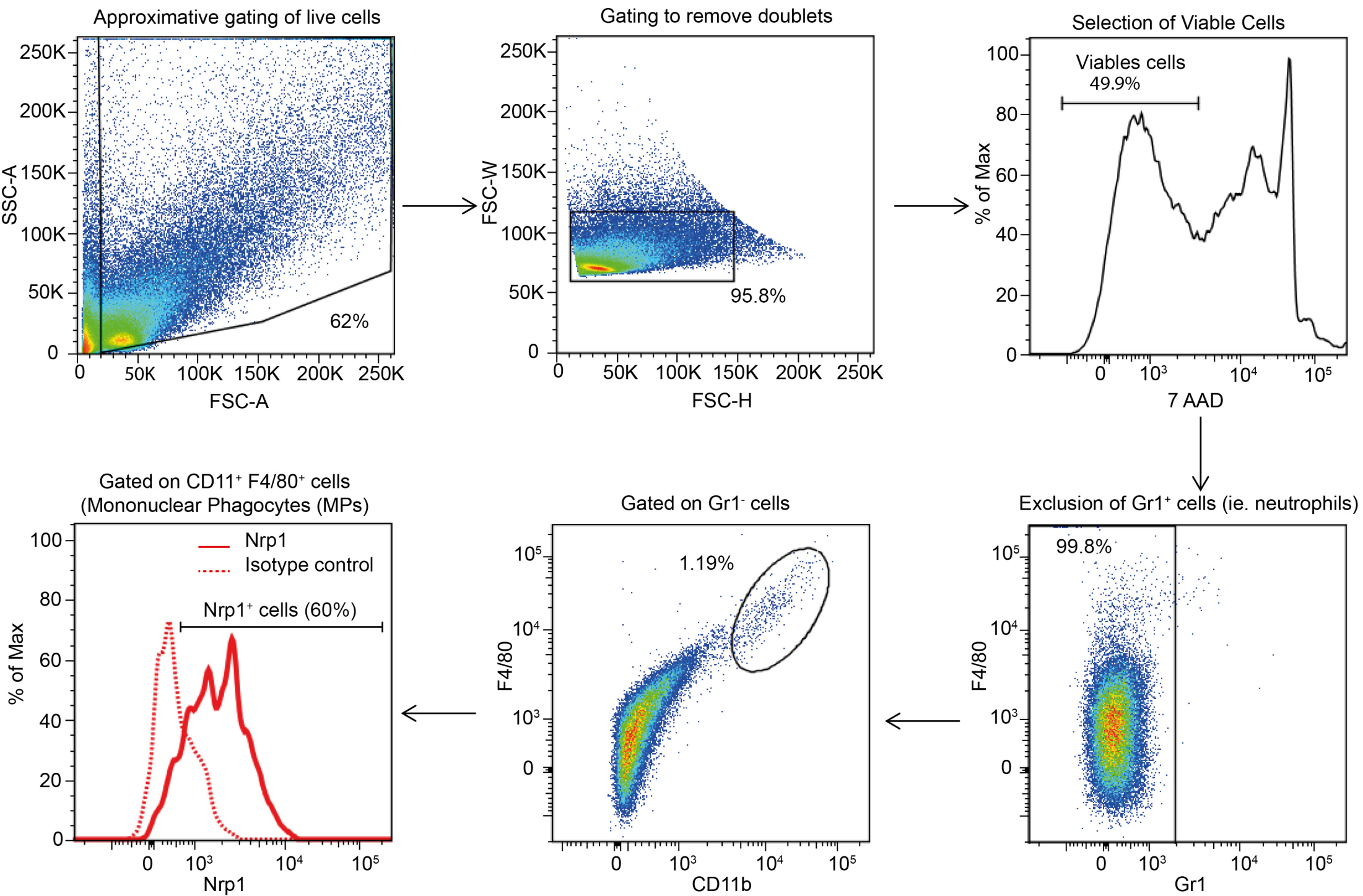
Supplementary Figure 5. CD45 expression on various cell populations in the mouse retina and spleen. Retinas and spleens collected at P14 from WT mice were analyzed by flow cytometry. Representative FACS histograms show intermediate/low expression of CD45 on microglia from retinas ($\text{Gr1}^-/\text{CD11b}^+/\text{F4/80}^+$ cells) when compared to high levels of expression on spleen-derived monocytes ($\text{CD11b}^+/\text{Gr1}^+/\text{F4/80}^+$), neutrophils ($\text{CD11b}^+/\text{Gr1}^{\text{high}}/\text{F4/80}^-$ cells) and macrophages ($\text{Gr1}^-/\text{CD11b}^+/\text{F4/80}^+$ cells). $n = 4$ (total of 16 retinas per condition; each “n” comprises 4 retinas).

Supplementary Figure 6. IL-1 β mRNA expression in OIR. Retinas from OIR and control Normoxic WT or $\text{LysM-Cre}/\text{Nrp1}^{\text{fl/fl}}$ mice at P10 (**A**) and P14 (**B**) were analyzed by RT-qPCR. IL-1 β mRNA was significantly induced in OIR in WT retinas yet remained at basal levels in $\text{LysM-Cre}/\text{Nrp1}^{\text{fl/fl}}$ mice. Data are expressed as a fold change relative to respective controls \pm SEM; $n = 4-6$; * $p < 0.05$, *** $p < 0.001$.

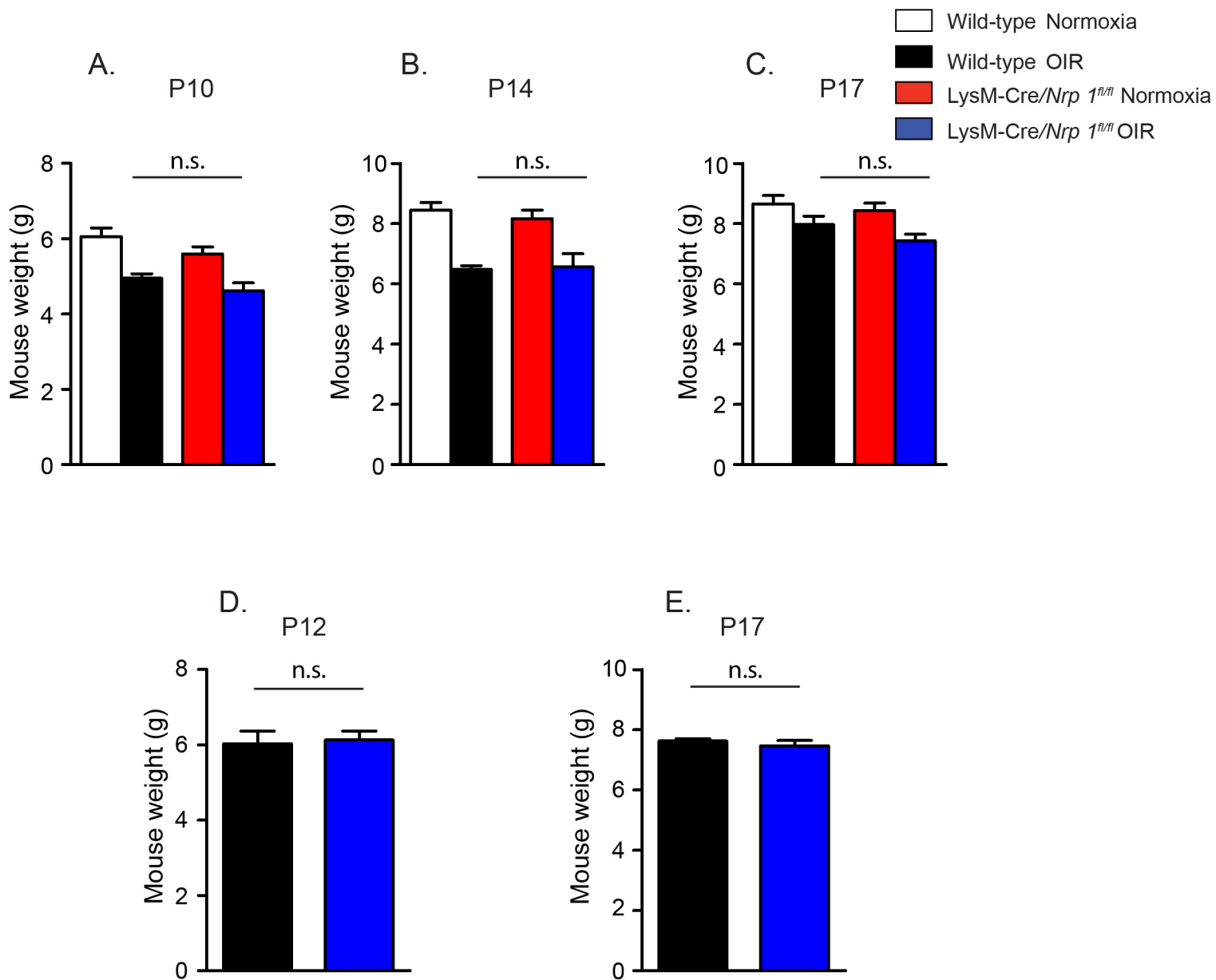
Supplementary Figure 1.



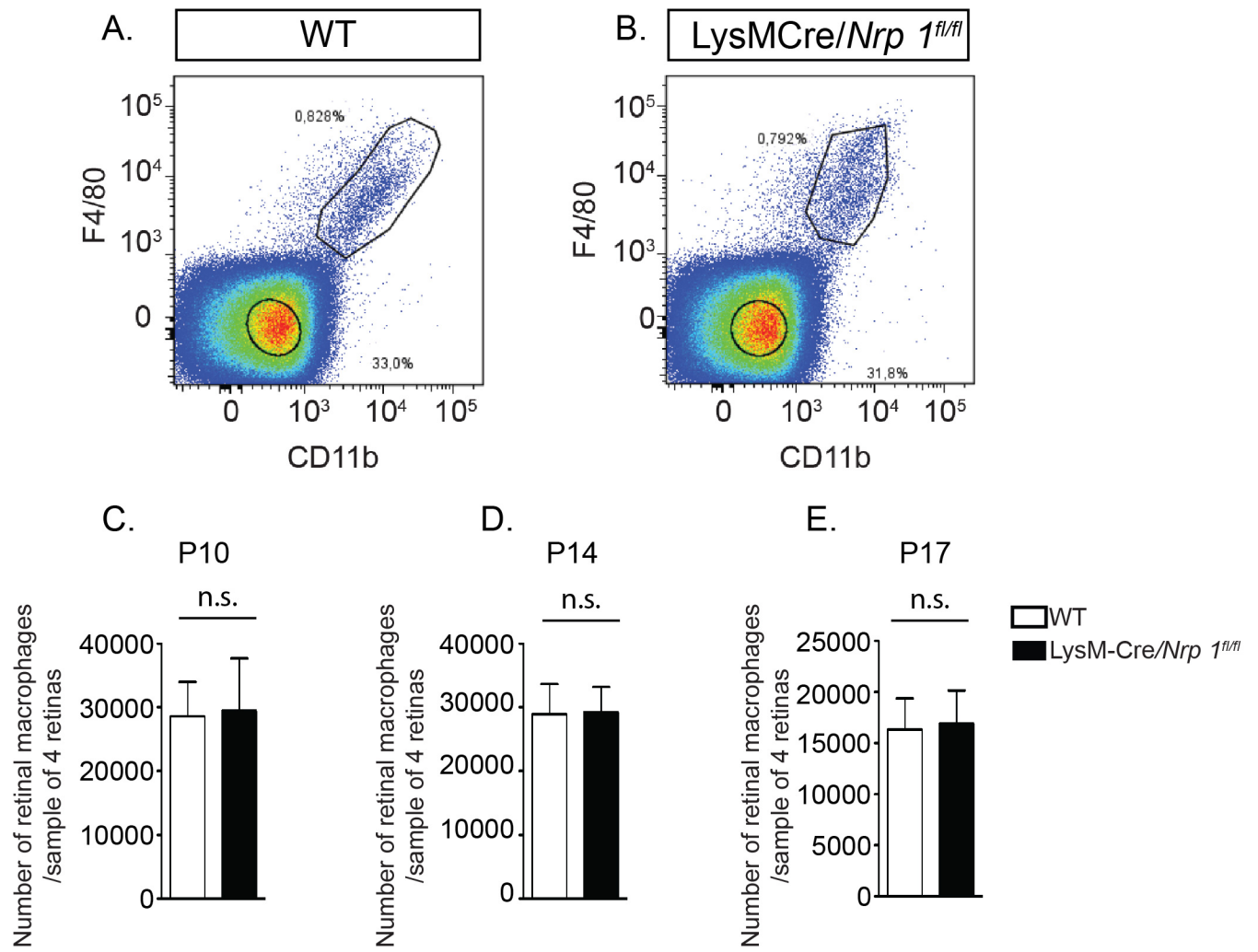
Supplementary Figure 2.



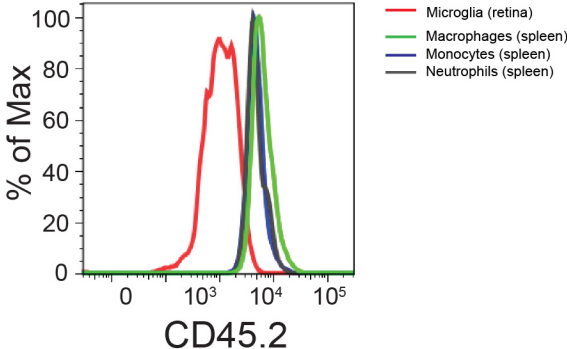
Supplementary Figure 3.



Supplementary Figure 4.



Supplementary Figure 5.



Supplementary Figure 6.

