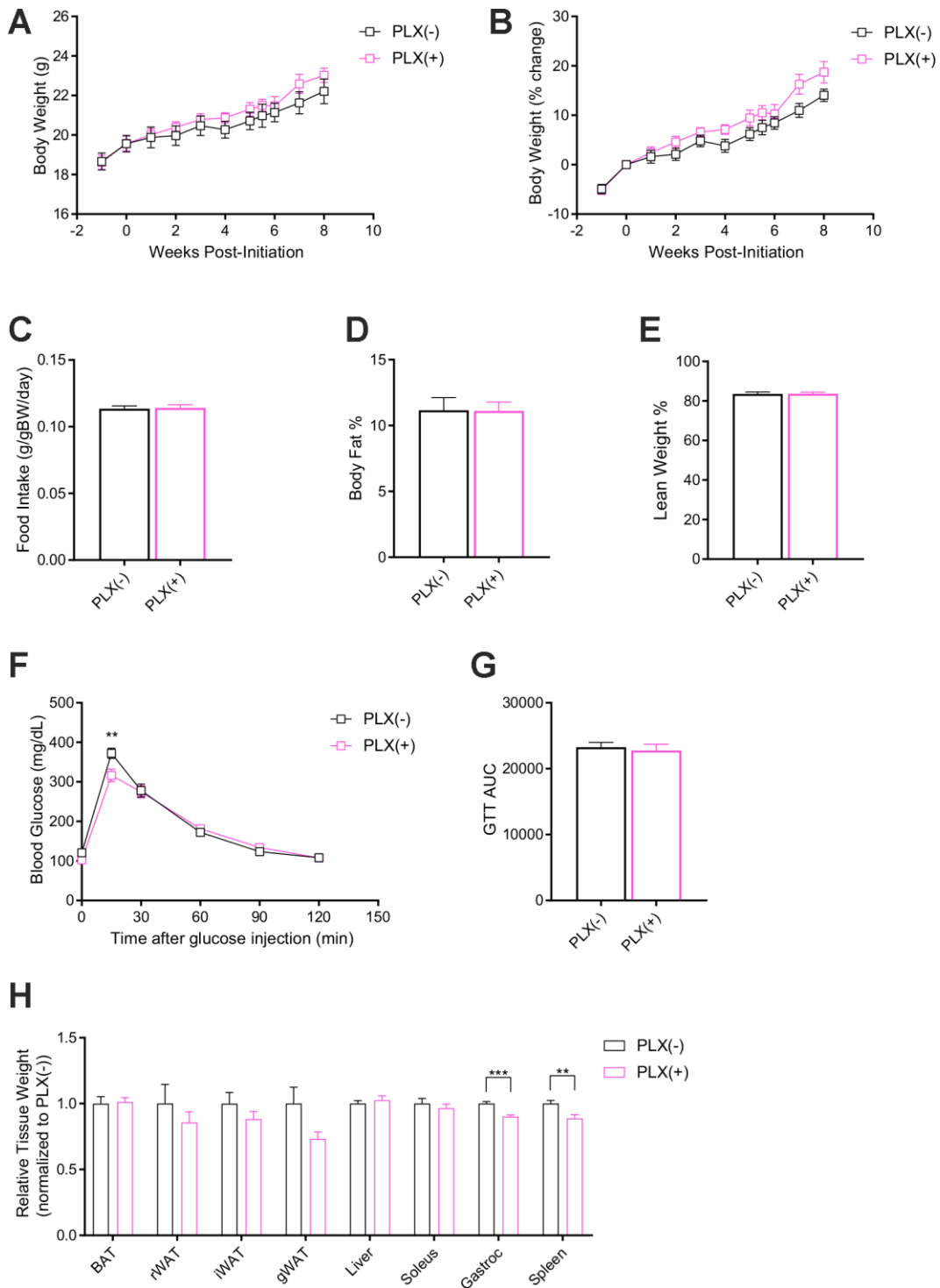
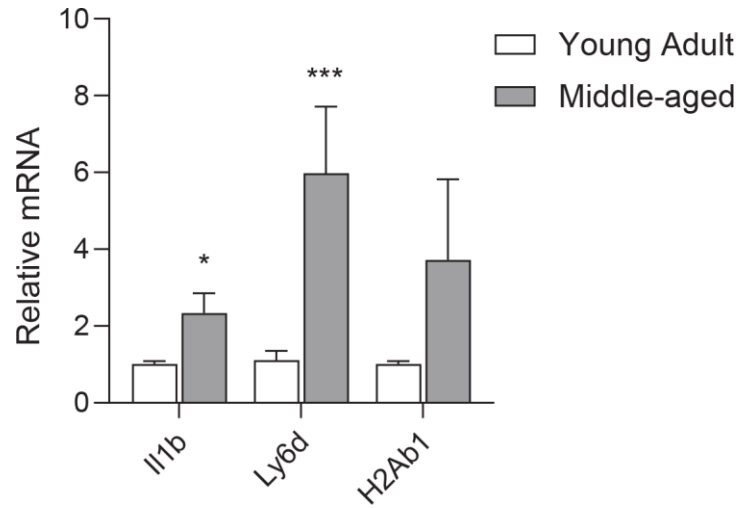


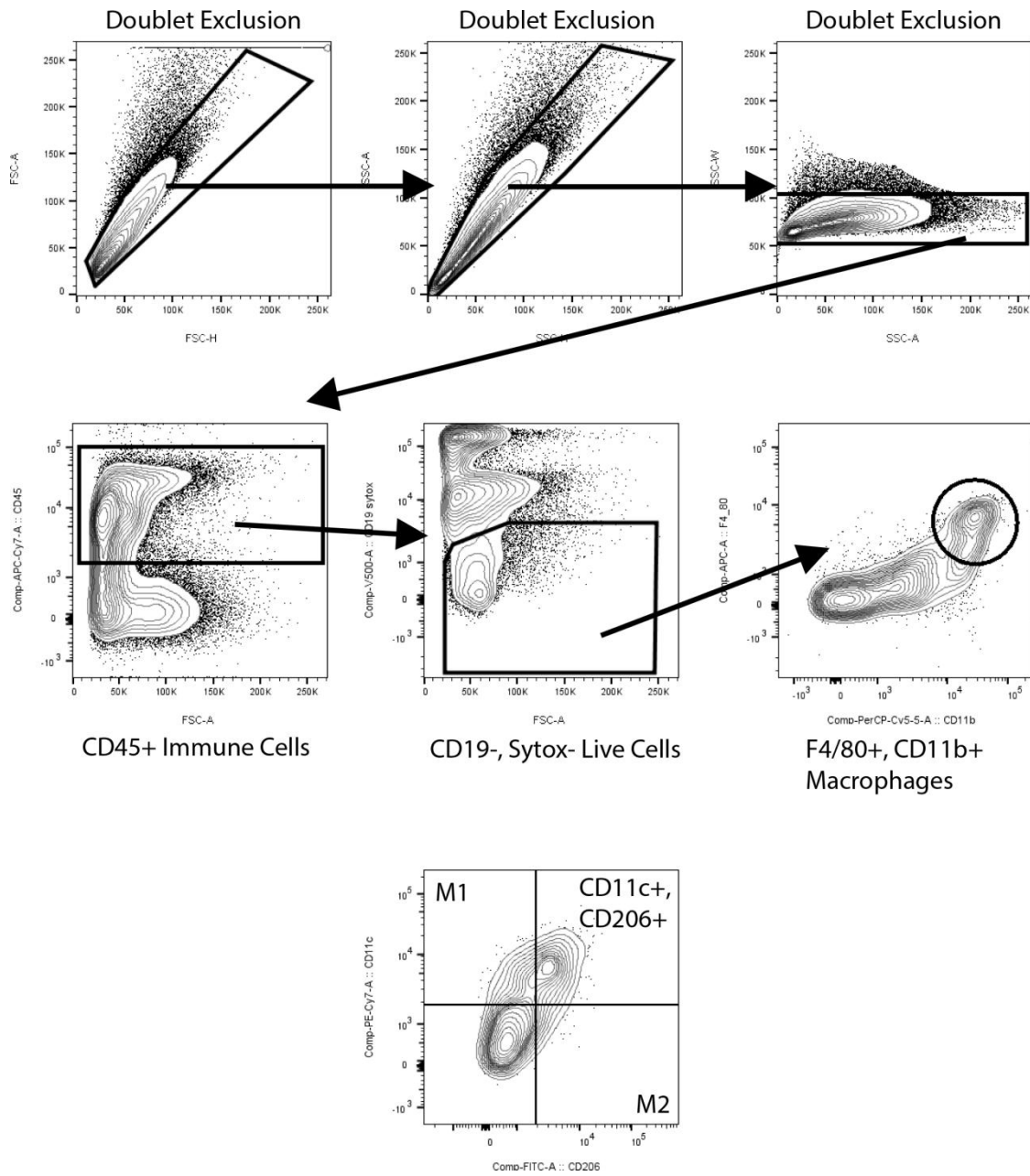
**SUPPLEMENTARY FIGURES**



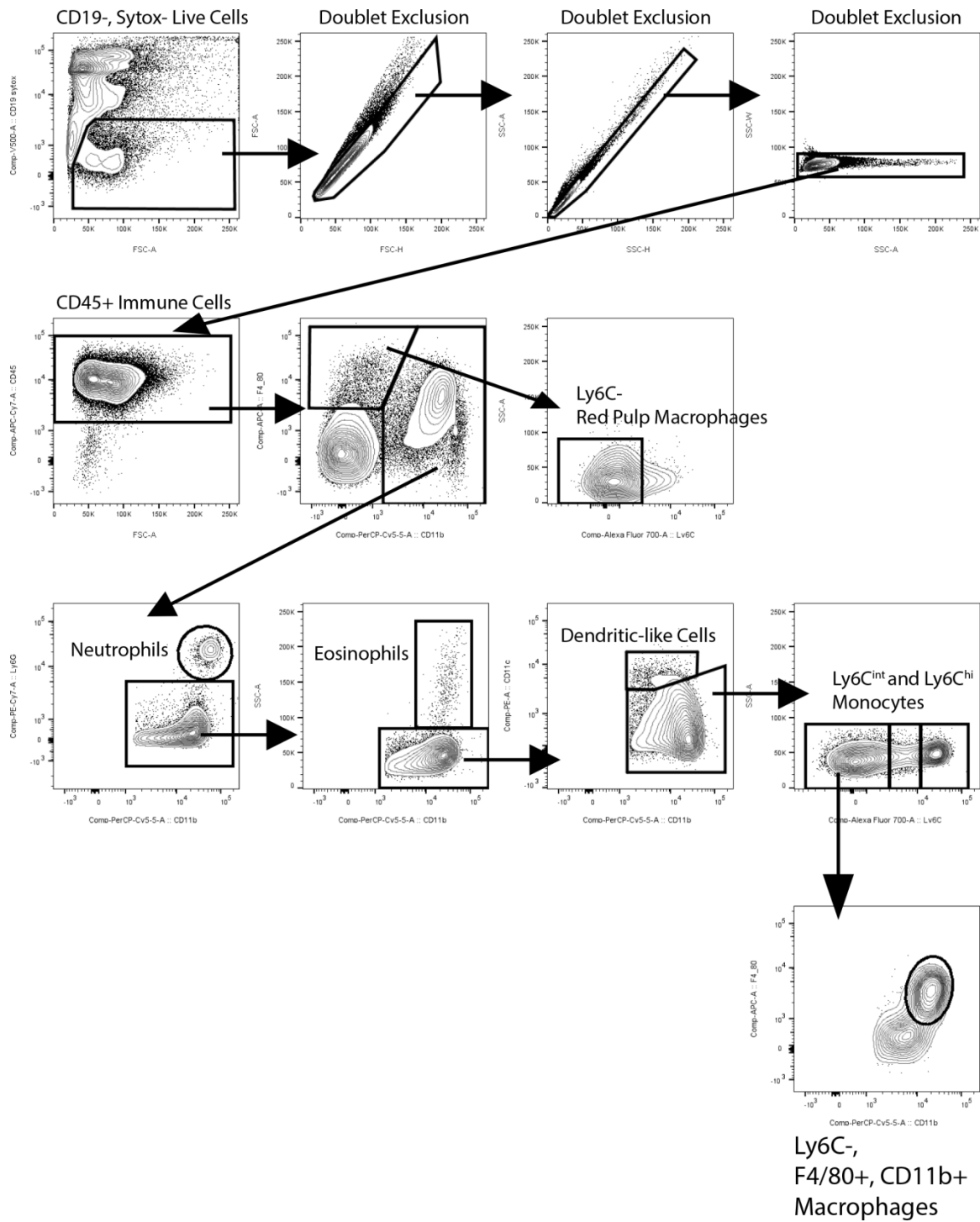
**Supplementary Figure 1. Metabolic outcomes of PLX5622 in young mice.** (A) Body weights for animals on PLX(-) or PLX(+) diets across 8 weeks. (B) Body weight as a percentage change from study starting body weight. (C) Body weight normalized food intake across 8 weeks. (D) Body fat mass percent at 5 weeks. (E) Lean mass percent. (F) Glucose tolerance test at 6 weeks. (G) Area under the curve. (H) Relative tissue weight at sacrifice. (A, B, D-G)  $n=10$  per group, (C)  $n=14$ , 2 cages per group across 8 weeks. (H)  $n=7$  per group. \*\* $p<0.01$ , \*\*\* $p<0.001$ . Values are means  $\pm$  SEM. Statistical analyses are shown in Supplementary File 1.



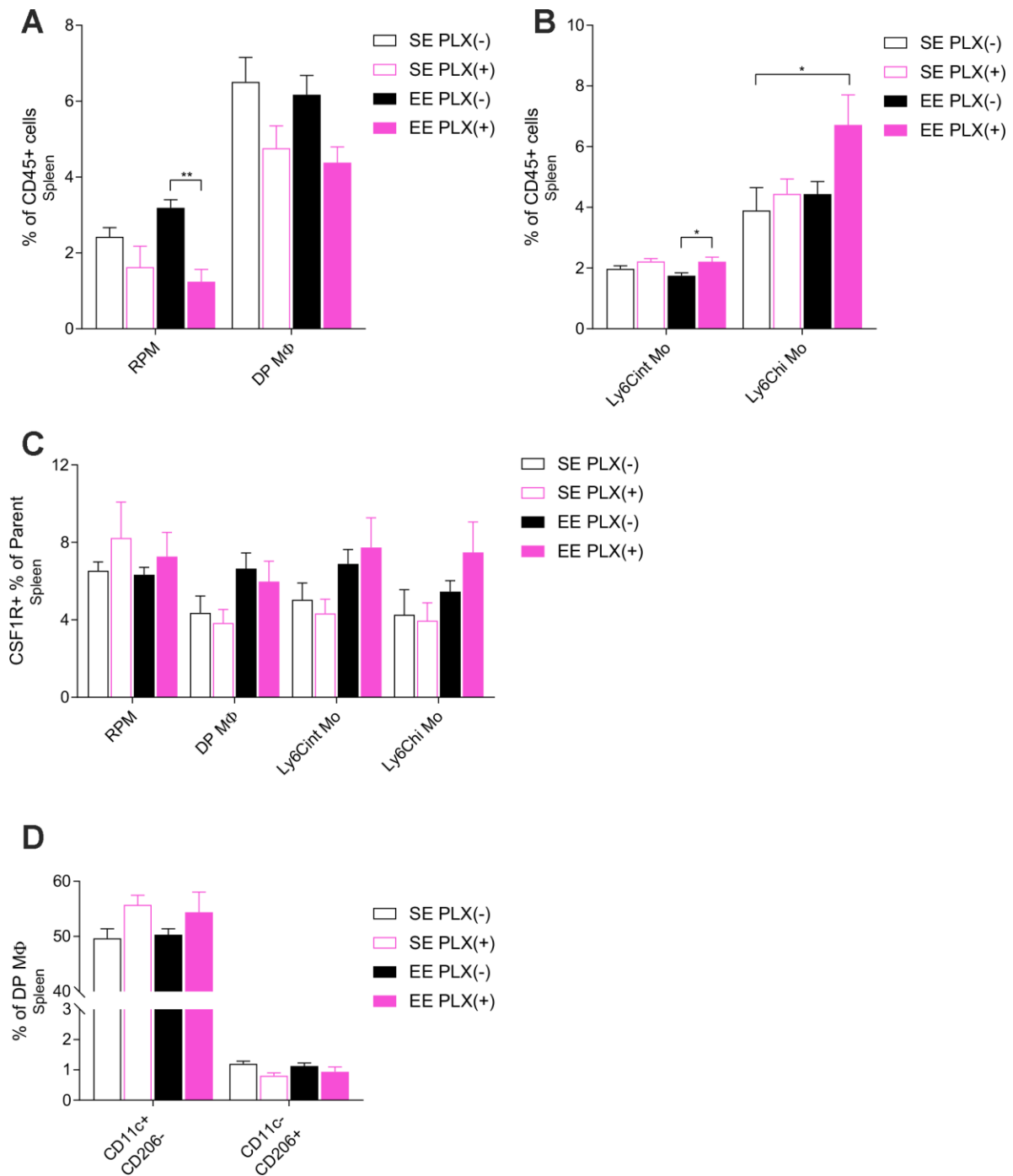
**Supplementary Figure 2. Hypothalamic inflammatory gene expression in young and middle-aged mice.** Inflammatory cytokine interleukin 1 $\beta$  (*Il1b*), lymphocyte antigen family 6 member D (*Ly6d*), and histocompatibility 2, class II antigen A, beta 1 (*H2Ab1*) gene expression.  $n = 6-7$  per group. \* $p < 0.05$ , \*\*\* $p < 0.001$ . Values are means  $\pm$  SEM. Statistical analyses are shown in Supplementary File 1.



Supplementary Figure 3. Gonadal white adipose tissue stromal vascular fraction flow cytometry gating strategy.



Supplementary Figure 4. Splenic flow cytometry gating strategy.



**Supplementary Figure 5. Splenic monocyte and macrophage response to PLX5622 and environmental enrichment in middle-aged mice.** (A) Splenic Ly6C<sup>-</sup> red pulp macrophages (RPM) and F4/80<sup>+</sup>, CD11b<sup>+</sup> macrophages (DP MΦ). (B) Splenic Ly6C intermediate (Ly6C<sup>int</sup>) and Ly6C high (Ly6C<sup>hi</sup>) monocytes (Mo). (C) CSF1R<sup>+</sup> percentage within each population. (D) DP MΦ polarization, M1: CD11c<sup>+</sup>, CD206<sup>-</sup>, M2: CD11c<sup>-</sup>, CD206<sup>+</sup>. (A–D)  $n=5-6$  per group. \* $p<0.05$ , \*\* $p<0.01$ . Values are means  $\pm$  SEM. Statistical analyses are shown in Supplementary File 1.