SUPPLEMENT FIGURES

Fig Sup 1

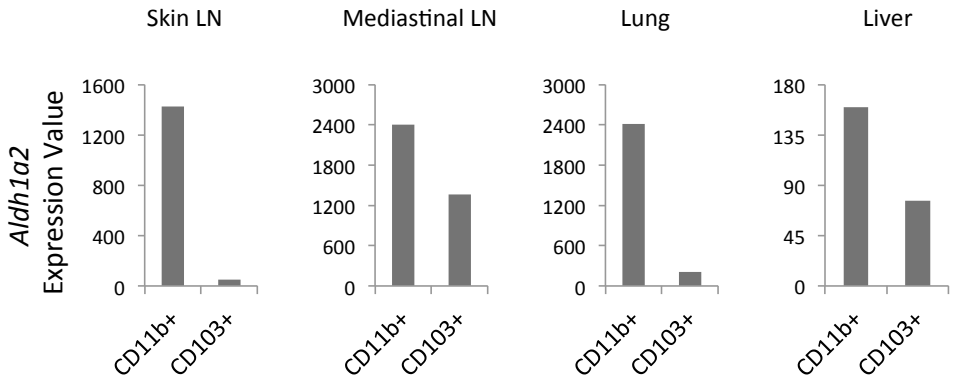

Figure Supplement 1. CD11b+ (type-2) classical DCs express higher levels of *Aldh1a2* compared to CD103+ cDCs in several organs. Data was obtained from the public Immunological Gene Network Consortium after a search was conducted for mRNA expression of the RA-producing isoform *Aldh1a2*, in cDCs across several mouse tissues.

Fig Sup 2

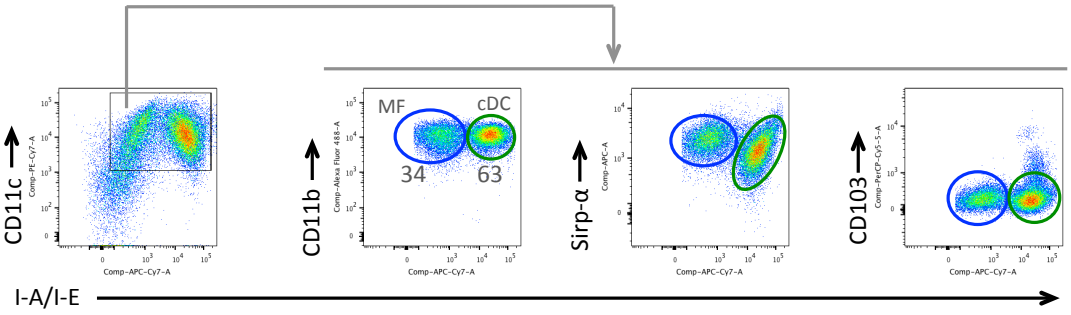

Figure Supplement 2. Flow cytometry analysis of granulocyte-macrophage colony-stimulating factor (GM-CSF) derived bone marrow-derived DCs (BMDC). Loosely adherent cells were collected for immediately stained and flow cytometry analysis. The CD11c+ I-A/I-E+ cells were gated on and subsequently analyzed for CD11b, Sirp-α, and CD103 as indicated.

Fig Sup 3

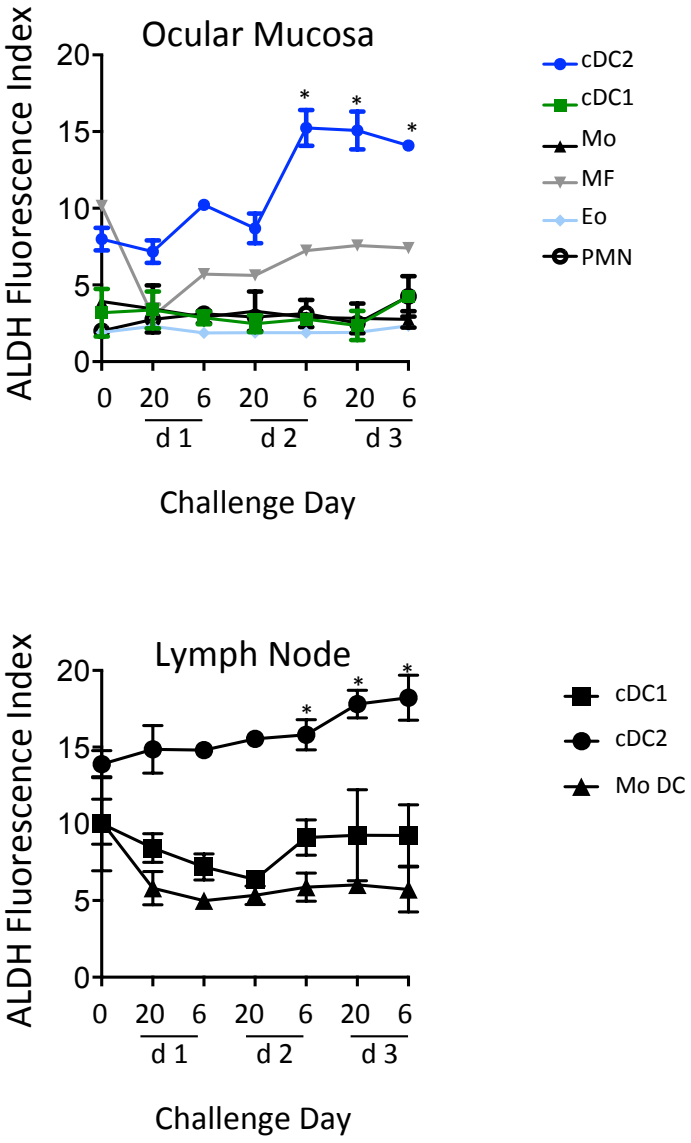

Figure Supplement Sup 3. Analysis of aldehyde dehydrogenase (ALDH) activity of myeloid cells in the ocular mucosa, and migratory cDC and monocyte-derived DC (mo-DC) in the draining lymph node during allergic eye disease (AED). Mice were immunized with OVA/adjuvant, and challenged topically once daily with an OVA instillation to induce AED. Ocular mucosa and draining lymph nodes (LN) were collected at 20 min (20) and 6 hr (6) post OVA challenge on day

(d) 0 through 3. Flow cytometry was performed to measure ALDH activity. Data shown for the ocular mucosal cDCs are representative of duplicate data points from two separate experiments. Cell suspensions were pooled samples from *n*=10 naïve mice or n=6 AED mice for each experiment (**$p<0.005$, one way ANOVA). Each experiment was carried out at least twice.

Fig Sup 4

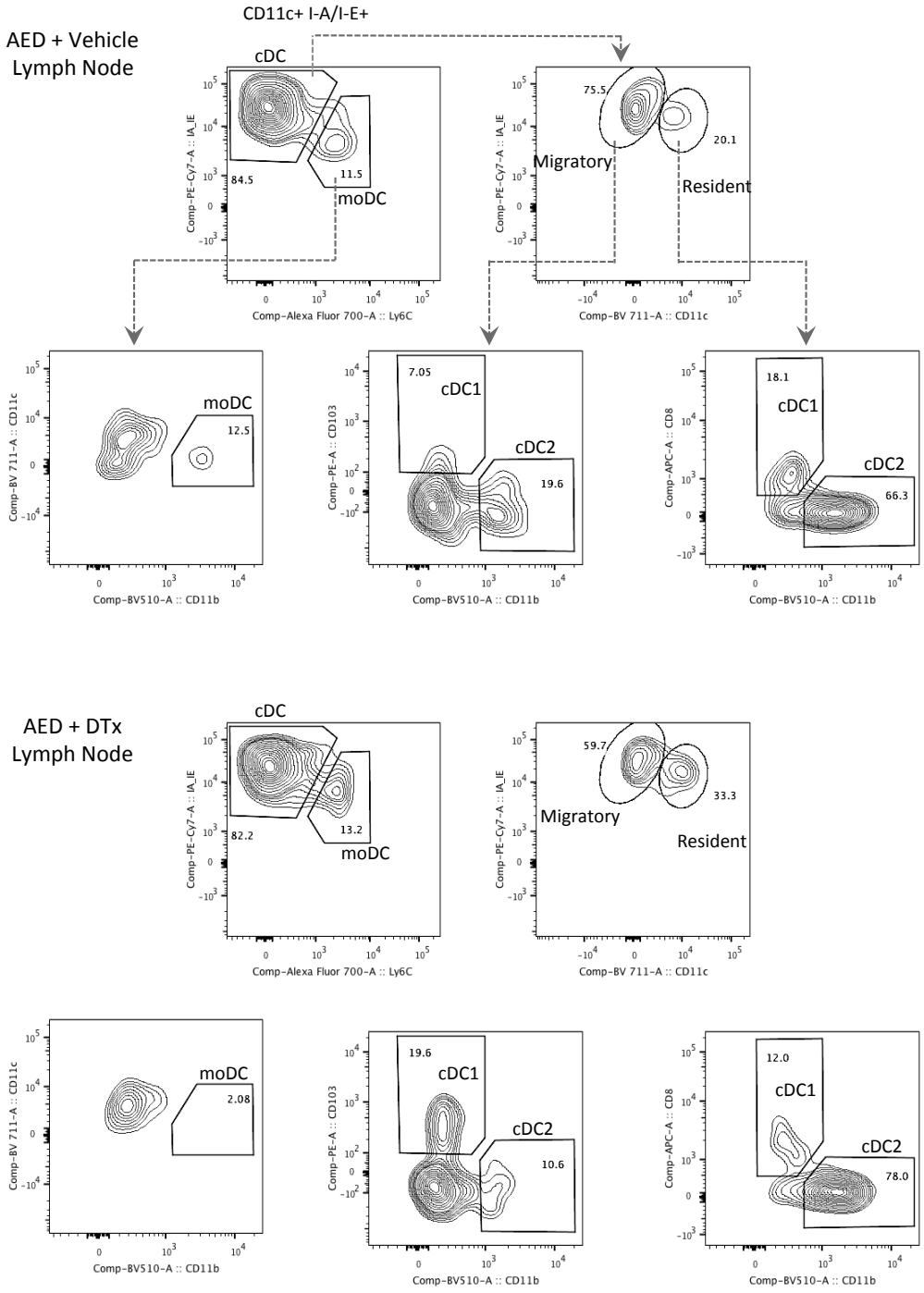

Figure Supplement 4. Gating scheme to assess DC depletion in *CD11c-eGFP/DTR* mice during AED. AED mice were given ipsilateral diphtheria toxin (DTx) instillations (3.125 ng) topically on

days -1, 3 and 5 of challenge, whereas the contralateral eye received PBS control. Lymph nodes were collected and data are derived from triplicate data points from an *n*=5 mice.