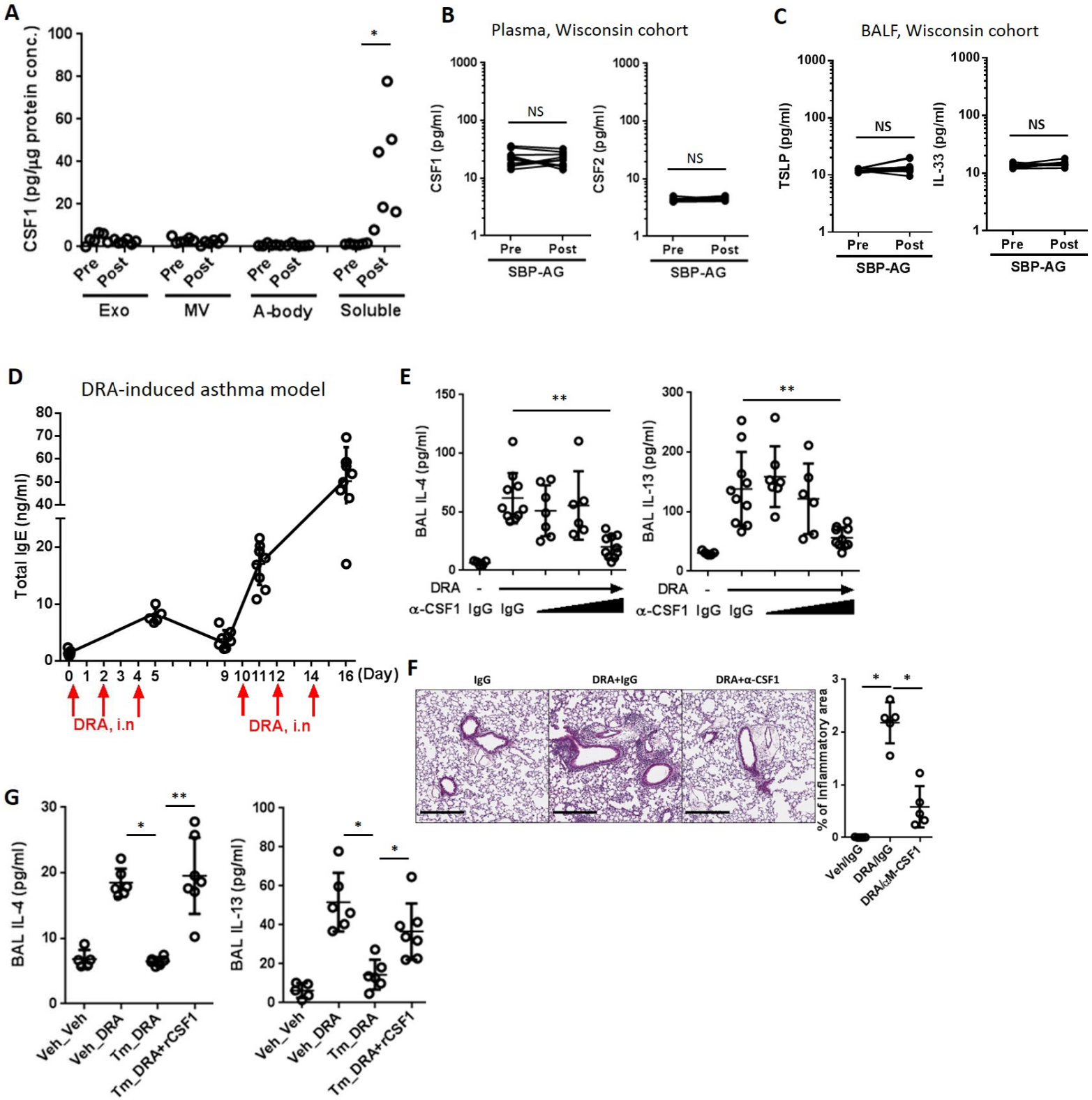


Figure S1 (related figure 1 & 2). CSF1 promotes allergic inflammation.
(A) Secretion pattern of CSF1 in the BAL fluids of patients with mild asthma enrolled in the SBP-AG protocol before (Pre) and at 48 hours after allergen challenge (Post). Exo stands for exosome, MV for microvesicle and A-body for apoptotic body. (B-C) CSF-1 & CSF-2 in plasma and TSLP & IL-33 in human BAL fluids from the Wisconsin cohort, before and 48 hours after SBP-AG challenge. Statistical analysis was by paired-*t* test. (D) The concentration of total serum IgE during the course of DRA asthma model. (E-F) BAL IL-4 & IL-13 and lung histology in the DRA model performed for the CSF-1 neutralizing antibody experiment. Representative images of three groups, isotype control IgG (IgG), DRA with isotype control IgG (DRA+IgG) and DRA with anti-CSF-1 antibody (DRA+aCSF1). The graph on the right shows the percentage area of lung inflammation measured by whole lung digital morphometry as described in Methods. Scale bar; 300μm. (G) BAL IL-4 & IL-13 in the DRA model performed for the CSF-1 reconstitution experiment of *Scgb1a1-cre*ERT;*Csf1*$^{fl/fl}$ with and without tamoxifen injection. 10 ng of recombinant CSF-1 (rCSF1) was instilled Data are representative of two (D-G) independent experiments with similar results. *p<.05, NS, not significant.

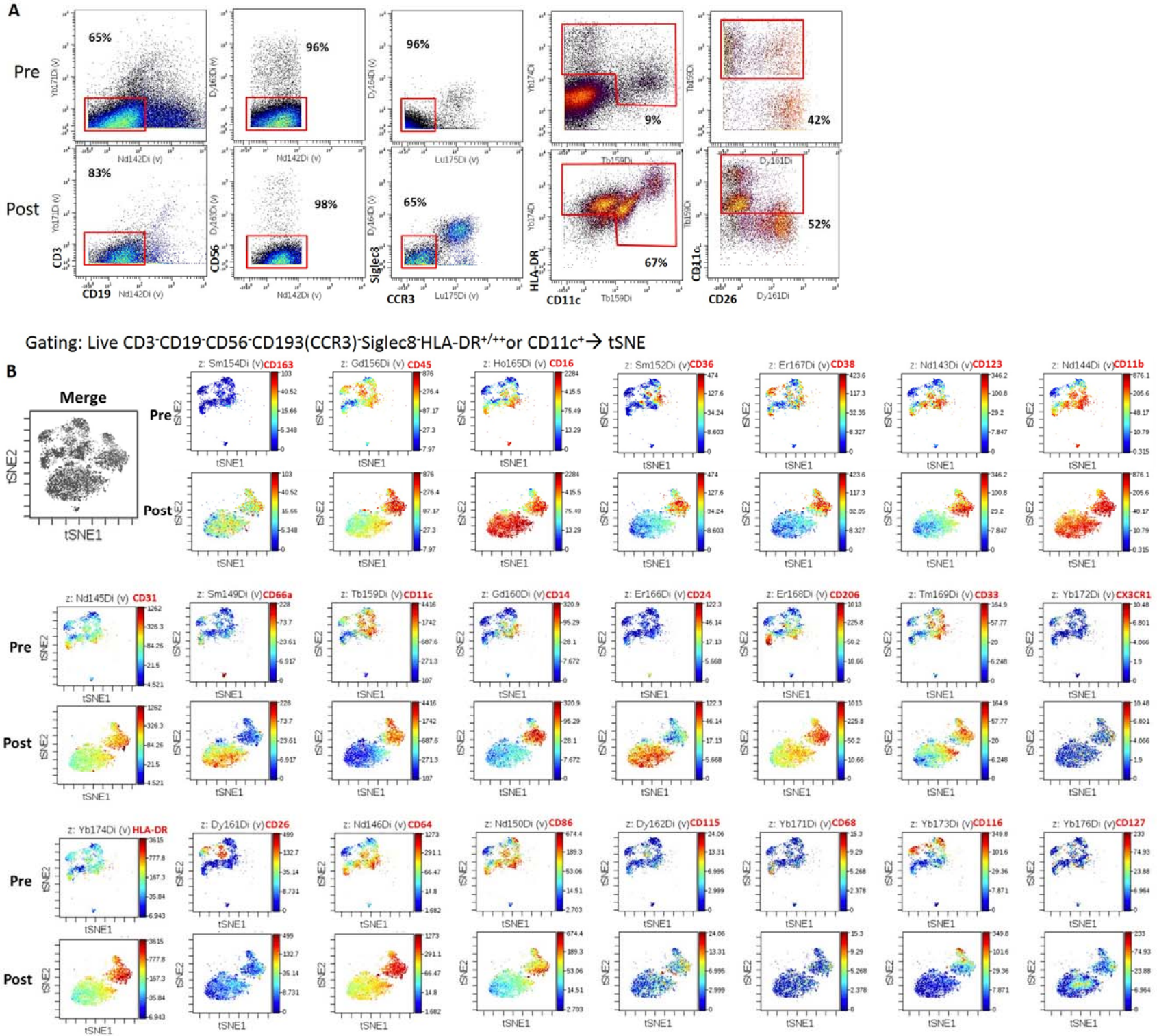


Figure S2 (related figure 3A). Mass cytometry with human BAL cells

(A) Gating strategy for mass cytometry with human SBP-AG BAL cells. (B) tSNE data for each markers pre or post allergen challenge

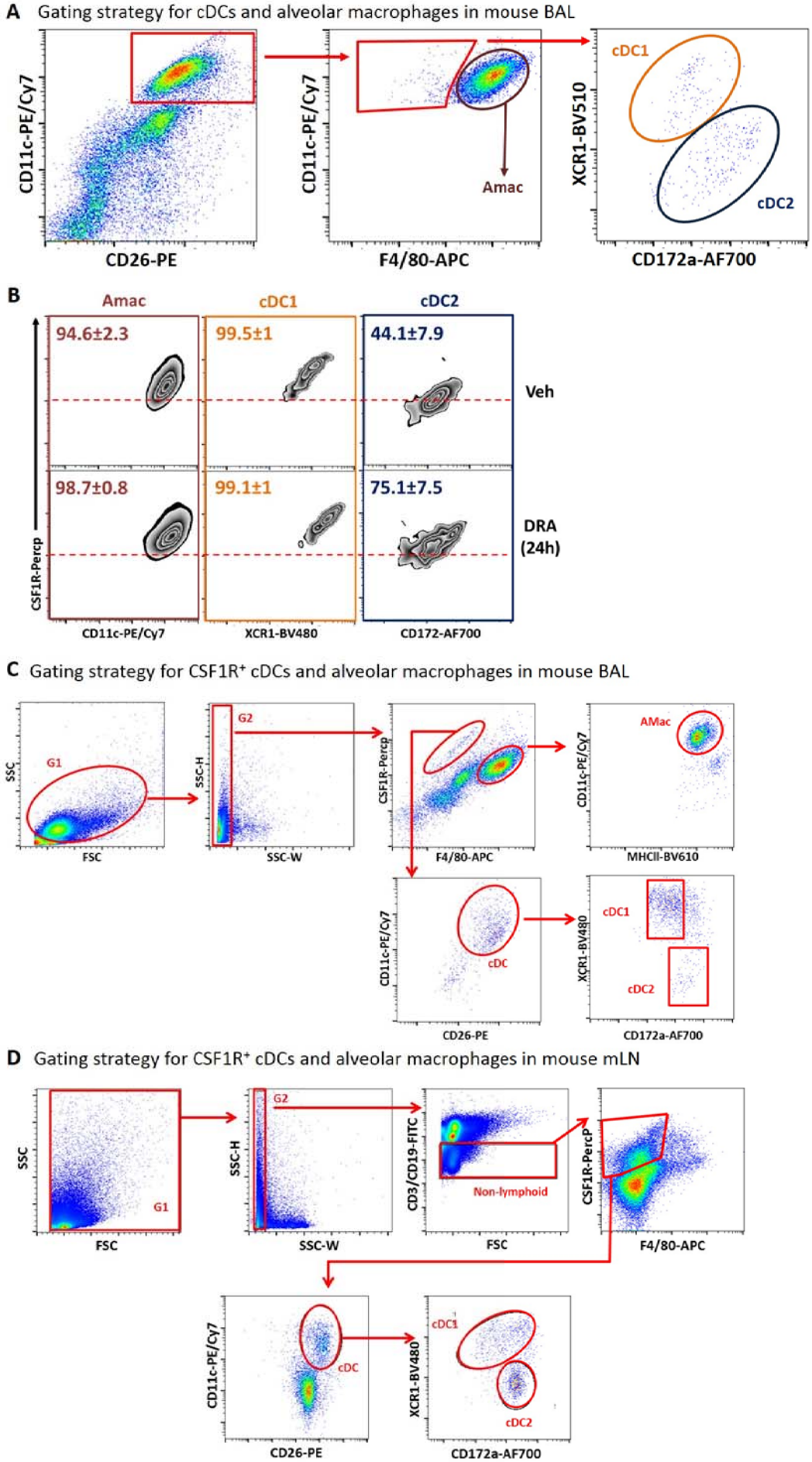


Figure S3 (related to figure 3).Gating strategies for cDC2
(A-B) Gating strategy for flow cytometry; mouse BAL cells were separated into alveolar macrophages (Amac), cDC1 and cDC2 and the percentage of CSF1R+ cells with or without DRA challenges. (C-D) Gating strategy for flow cytometry for detecting CSF1R+ cDCs in BAL fluids and mediastinal LNs. Amac; alveolar macrophages and cDC; conventional dendritic cells.

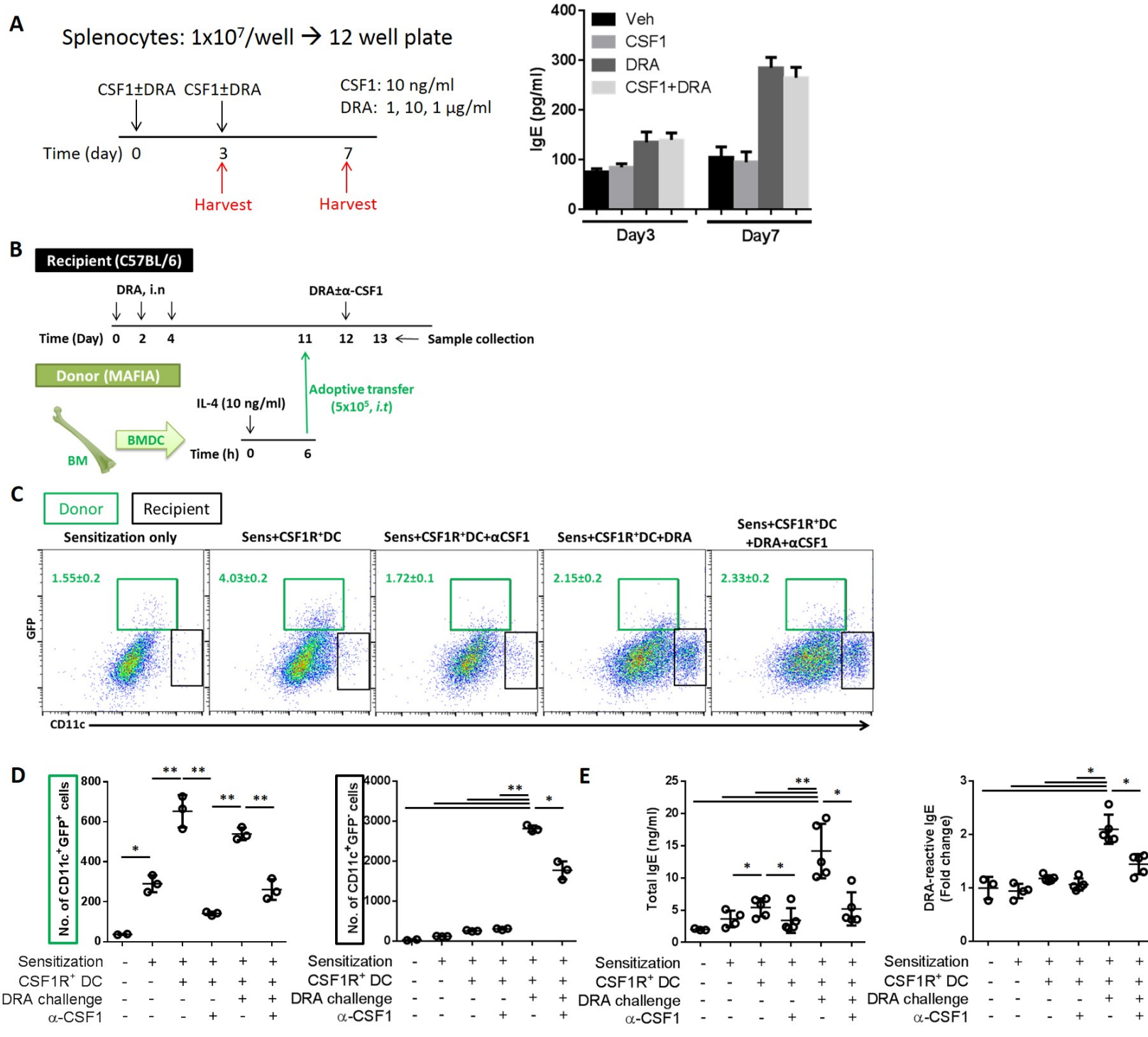
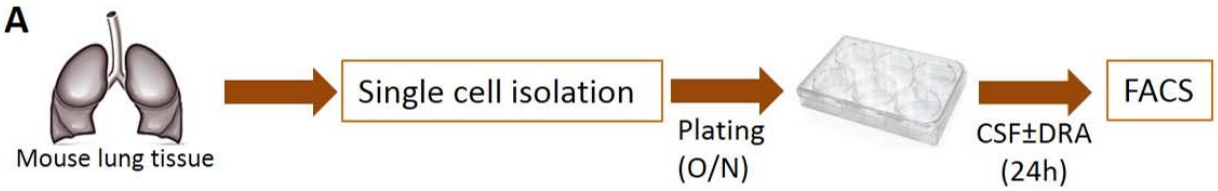
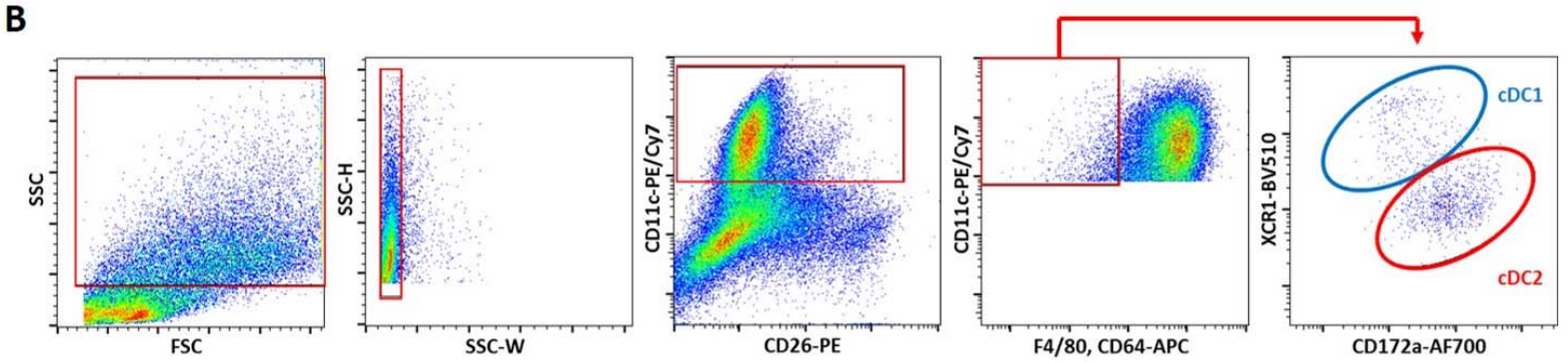


Figure S4 (related to figure 6A). CSF1 facilitates dendritic cells migration to regional lymph node.
(A) *Ex vivo* IgE secretion assay with mouse splenocytes. The cells were incubated up to 7 days in various conditions as described in Method. IgE were measured in the media at day 3 and 7. (B) Experimental scheme of adoptive transfer of EGFP⁺DCs. (B-D) Flow gating strategy and the number of donor EGFP⁺DCs (green box) and recipient intrinsic DCs (black box) in mediastinal LNs after DRA challenge with or without anti-CSF1 antibody (100 ng/mouse). (E) Total and DRA-reactive IgE in serum. Data are representative of two (A-E) independent experiments.





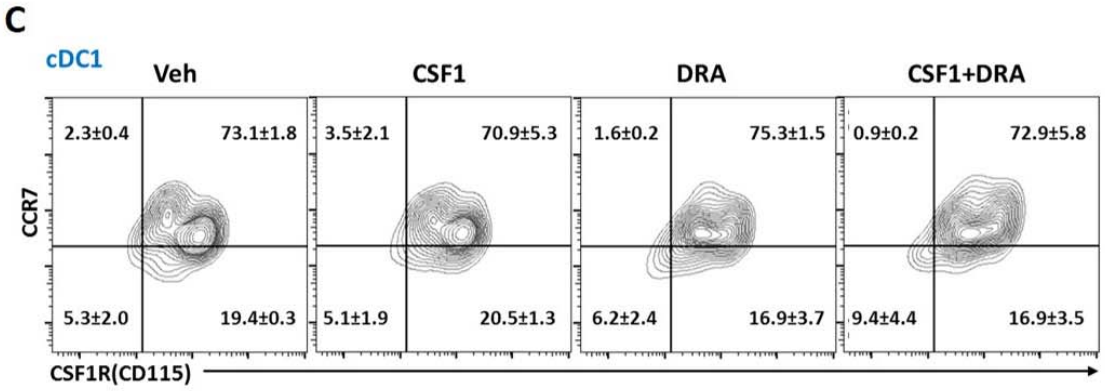


Figure S5 (related to figure 6B & C). Co-expression of CCR7 & CSF1R in response to allergen
(A) Scheme of *ex vivo* cDC experiments. Single cell suspension from mouse lungs and plated on 6 well plate for O/N and stimulated for another 24h. (B-C) Flow gating strategy and the percentage of $CSF1R^{+}CCR7^{+}$ population in cDC1 in response to CSF1 and/or DRA (each 5, 50, 5 µg/ml). The figure for cDC2 is shown in Fig.6B.

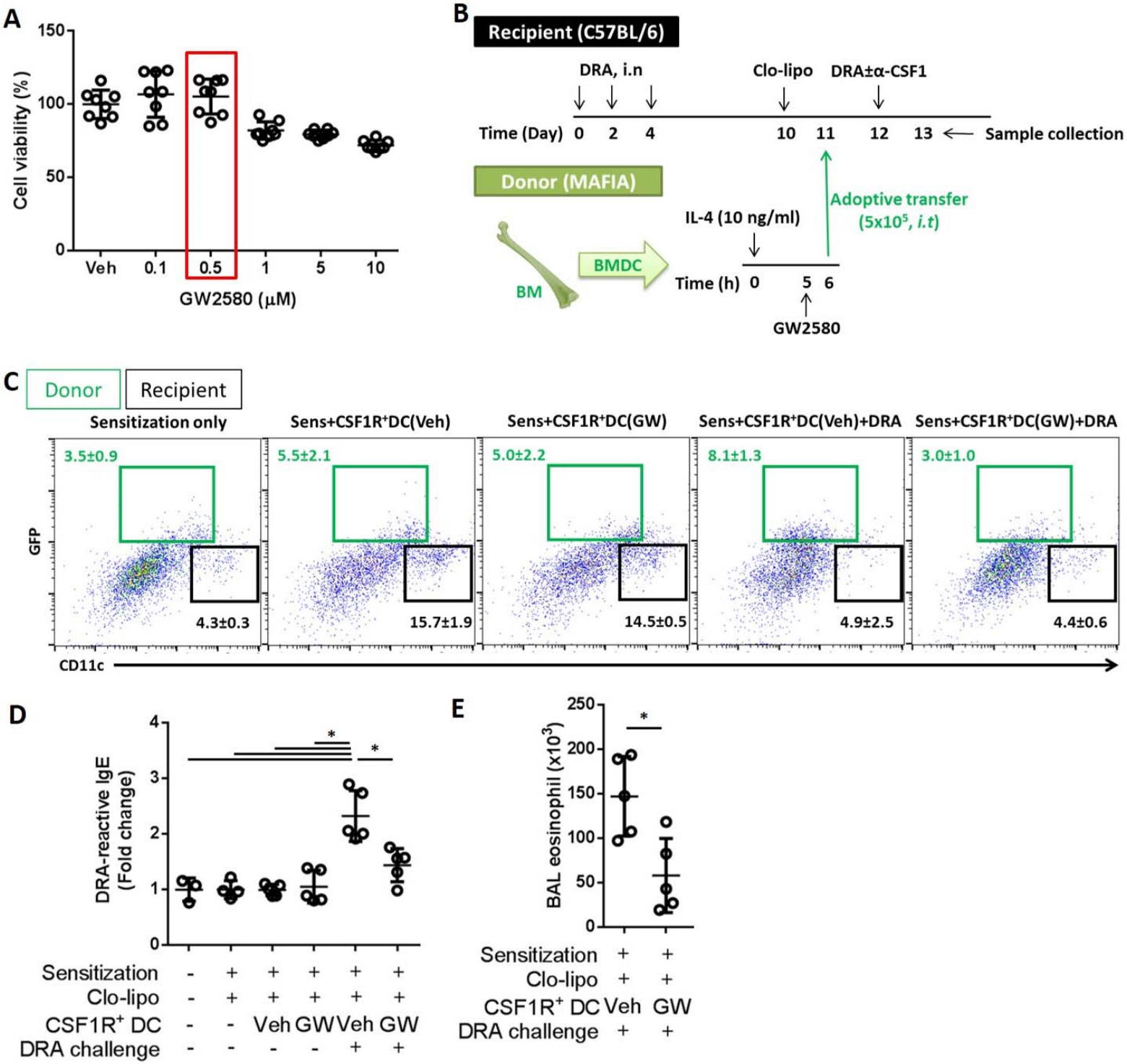


Figure S6 (related to figure 6D). CSF1R inhibition attenuated dendritic cell migration to regional lymph node.

(A) BMDC viability after GW2580 treatment for 24h. (B) Experimental scheme of adoptive transfer of EGFP$^+$DCs with or without GW2580 pre-treatment. (C) Flow gating strategy and the percentage of donor EGFP$^+$DCs (green box) and recipient intrinsic DCs (black box) in mediastinal LNs after DRA challenge. (D-E) DRA-reactive IgE in serum and the number of BAL eosinophils. Data are representative of two (C-E) independent experiments