

Figure S1. Phenotypic analysis of OT-II transgenic mice. (A) Flow cytometry analysis of CD4⁺ and CD8⁺ T cells in spleen cells collected from C57BL/6 and OT-II mice. Numbers in the dot plots represent the percentages of CD4⁺ or CD8⁺ cells. (B) Flow cytometry analysis of Vβ5-expressing CD4⁺ T cells in spleen cells collected from OT-II mice. Numbers in the dot plots represent the percentages of Vβ5⁺CD4⁺, Vβ5⁺CD4⁻ or Vβ5⁻CD4⁺ cells. Data are representative of three independent experiments .

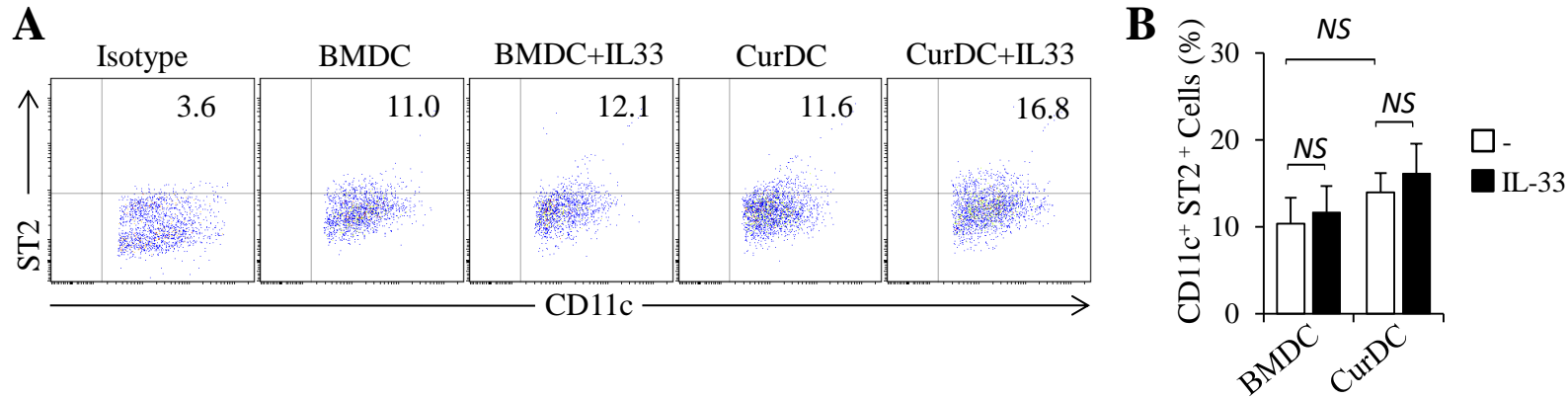


Figure S2. The expression of ST2 in BMDCs and CurDCs with or without IL-33 treatment. Mouse iDCs were matured by TNF- α /IL-1 β (BMDC), Curdlan (CurDC) in the presence of absence of IL-33 (50 ng/mL) for 48 hours. **(A)** flow cytometry analysis of ST2⁺CD11c⁺ cells. Numbers in the dot plots represent the percentages of ST2⁺CD11c⁺ cells. **(B)** summarized results of three independent experiments obtained in (A). **The experiments were performed three times (n=3).** Data are representative of three (A) independent experiments or presented as mean \pm SD of three (B) independent experiments. NS, non-significant.

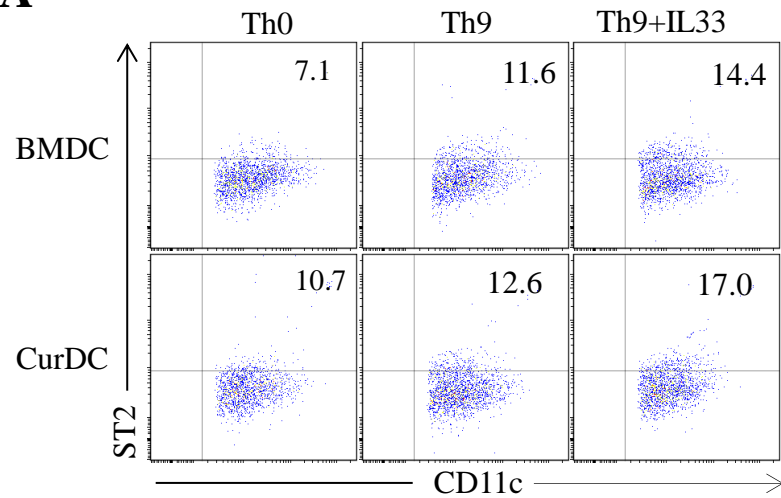
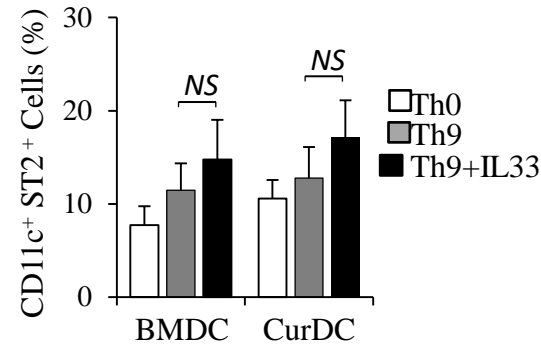
A**B**

Figure S3. The effects of IL-33 on ST2 expression by BMDCs and CurDCs in the *in vitro* Th9-priming cultures. Naïve CD4⁺ T cells were cocultured with BMDCs or CurDCs under Th9 polarizing conditions in the presence or absence of IL-33. Cell cultures without (Th0) addition of Th9-polarizing cytokines TGF- β and IL-4 were used as controls. Cells were cultured for 24 hours. **(A)** flow cytometry analysis of ST2⁺CD11c⁺ cells. Numbers in the dot plots represent the percentages of ST2⁺CD11c⁺ cells. **(B)** summarized results of three independent experiments obtained in (A). **The experiments were performed three times (n=3).** Data are representative of three (A) independent experiments or presented as mean \pm SD of three (B) independent experiments. NS, non-significant.

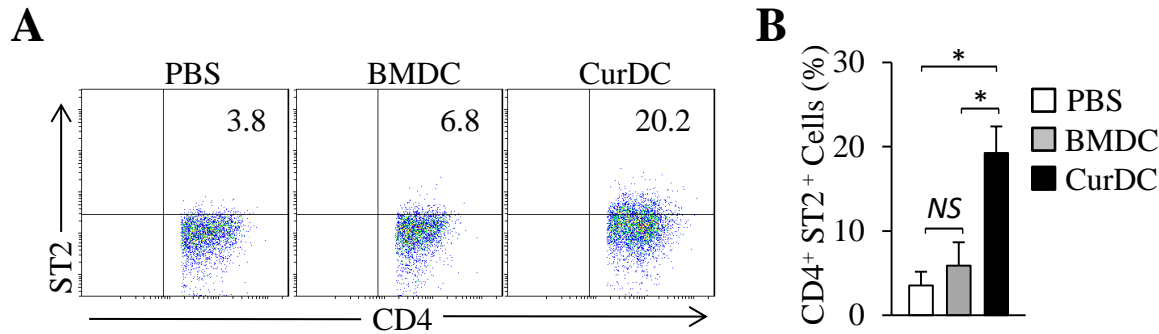


Figure S4. Dectin-1-activated DC immunization stimulates ST2 expression by CD4⁺ T cells. C57BL/6 mice (2 to 3 mice/group) were immunized twice (one week apart) with TRP1-peptide-pulsed BMDCs or CurDCs. PBS served as control. On day 3 after the 2nd immunization, total leukocytes from spleen cells were harvested and restimulated with TRP1-peptide-pulsed BMDCs and CurDCs respectively for 48 hours in the culture. Cells from PBS control mice were cultured without addition of DCs. (A) flow cytometry analysis of ST2⁺CD4⁺ T cells. Numbers in the dot plots represent the percentages of ST2⁺CD4⁺ T cells. (B) summarized results of three independent experiments obtained in (A). The experiments were performed three times (n=3). Data are representative of three (A) independent experiments or presented as mean \pm SD of three (B) independent experiments. NS, non-significant; * $P < 0.05$ (Student *t* test).

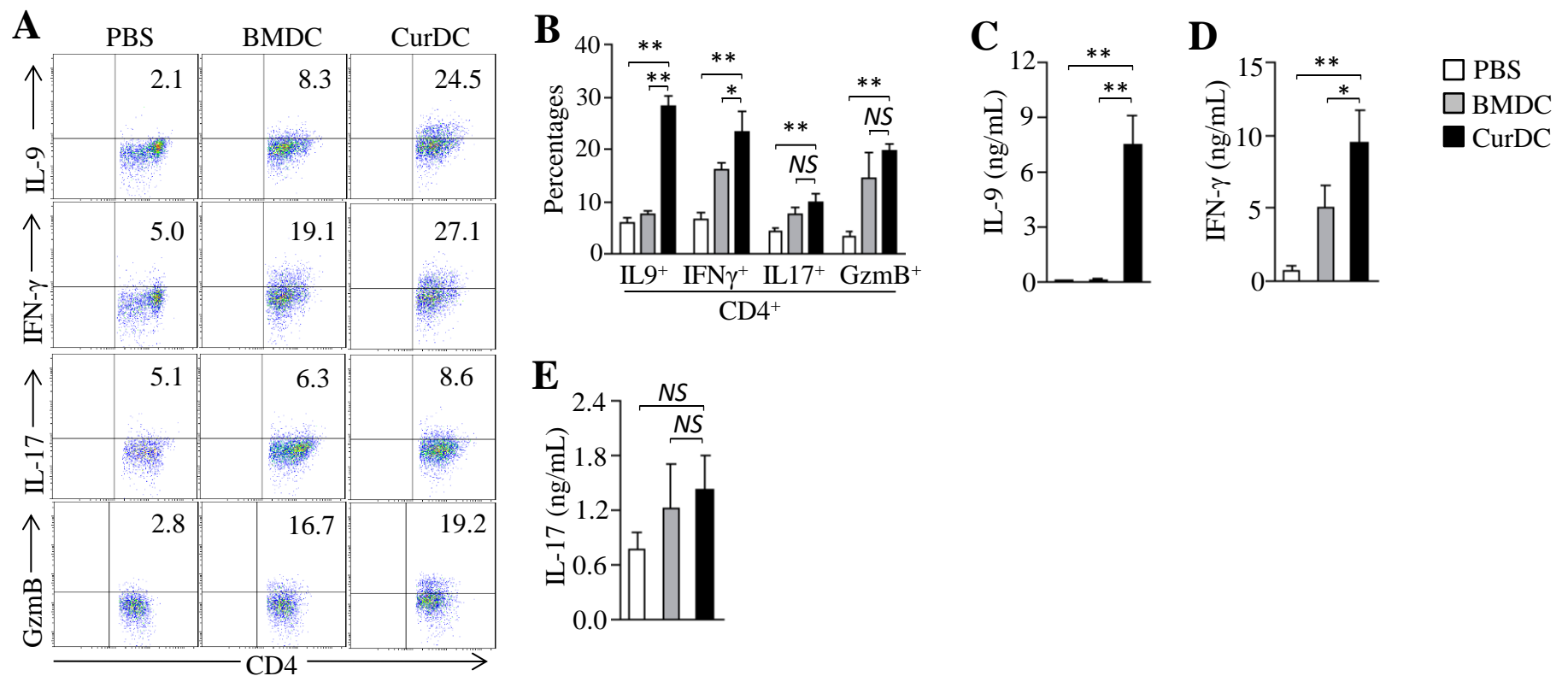


Figure S5. Antitumor effector cells induced by dectin1-DC in vivo. OT-II mice (2 to 3 mice/group) were immunized twice (one week apart) with OVA-peptide-pulsed BMDCs or CurDCs. PBS served as control. On day 3 after the 2nd immunization, total leukocytes from spleen cells were harvested and restimulated with OVA-peptide-pulsed BMDCs and CurDCs respectively for 48 hours in the culture. Leukocytes from PBS control mice were cultured without addition of DCs. **(A)** Flow cytometry assessed the percentages of IFN- γ -, IL-9-, IL-17-, or GzmB-producing CD4⁺ T cells. Numbers in the dot plots represent the percentages of Th cells. **(B)** Summarized results of three independent experiments obtained in (A). **The experiments were performed three times (n=3).** **(C-E)** ELISA examined the protein levels of IL-9 (C), IFN- γ (D) and IL-17 (E) in the culture supernatants. **The experiments were performed three times (n=3).** Data are representative of three (A) independent experiments or presented as mean \pm SD of three (B-E) independent experiments. NS, non-significant; * $P < 0.05$; ** $P < 0.01$ (Student *t* test).

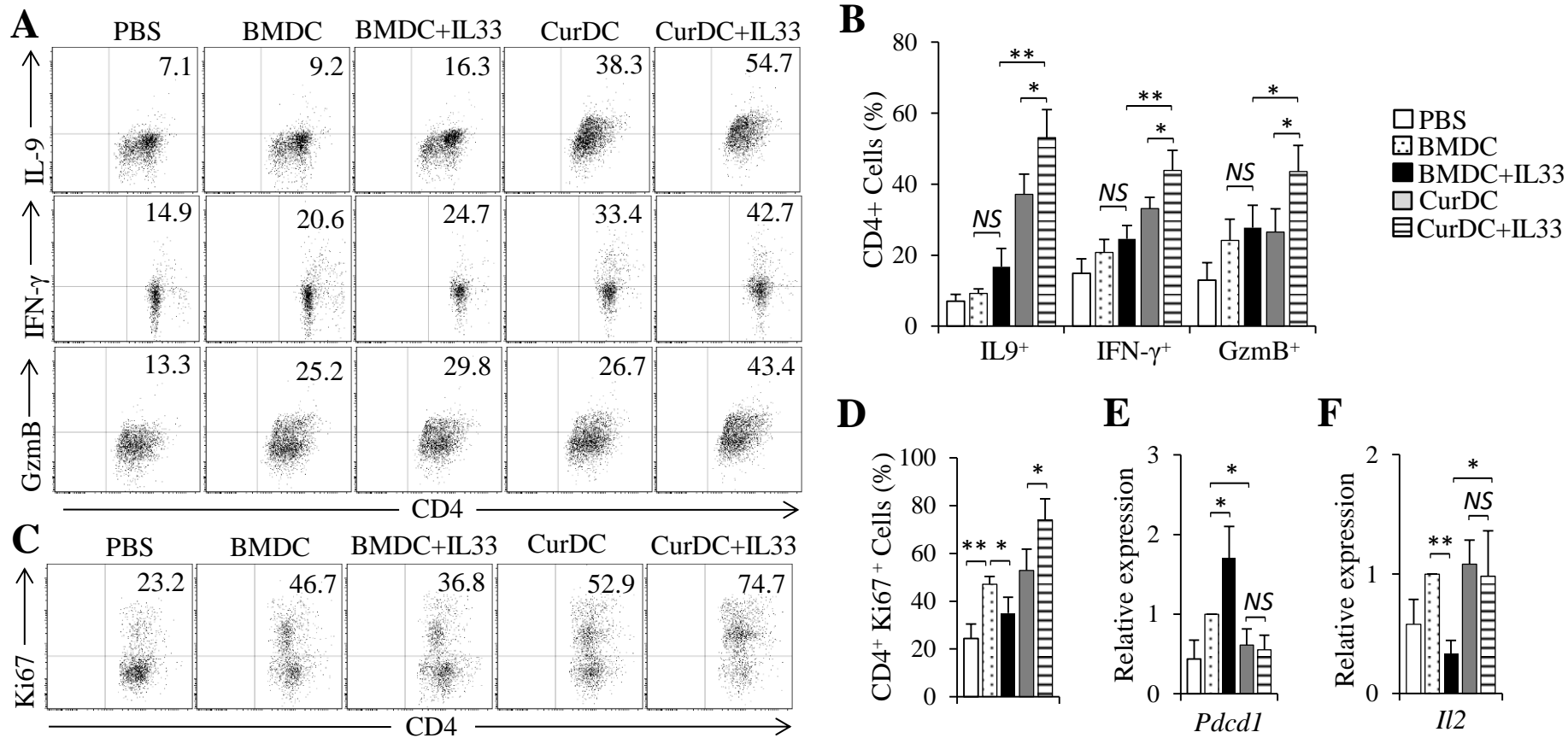


Figure S6. The analysis of tumor infiltrating T cells in mice immunized with dectin-1-activated DCs plus IL-33. OT-II mice were injected subcutaneously with 1×10^5 B16-OVA cells. On day 3 after tumor challenge, mice (2 to 3 mice/group) were given two weekly subcutaneously immunizations with 1×10^6 OVA-peptide-pulsed BMDCs or CurDCs with or without addition of IL-33 (250 ng/mouse). On day 3 after the second immunization, CD4⁺ T cells were isolated from tumor tissues by MACS and restimulated with BMDCs or CurDCs in the presence or absence of IL-33 (50 ng/mL) respectively for 24 hours. (A) Flow cytometry analysis of IL-9- IFN- γ or GzmB-producing CD4⁺ T cells. Numbers in the dot plots represent the percentages of double-positive T cells. (B) summarized results of three independent experiments obtained in (A). The experiments were performed three times (n=3). (C) Flow cytometry analysis of Ki67⁺CD4⁺ T cells. Numbers in the dot plots represent the percentages of Ki67⁺CD4⁺ T cells. (D) summarized results of three independent experiments obtained in (C). The experiments were performed three times (n=3). (E,F) CD4⁺ T cells were isolated by MACS. qPCR examined the expression of *Pdccl1* (E) and *Il2* (F) in CD4⁺ T cells. The experiments were performed three times (n=3). Data are representative of three (A,C) independent experiments or presented as mean \pm SD of three (B,D-F) independent experiments. NS, non-significant; * $P < 0.05$; ** $P < 0.01$.