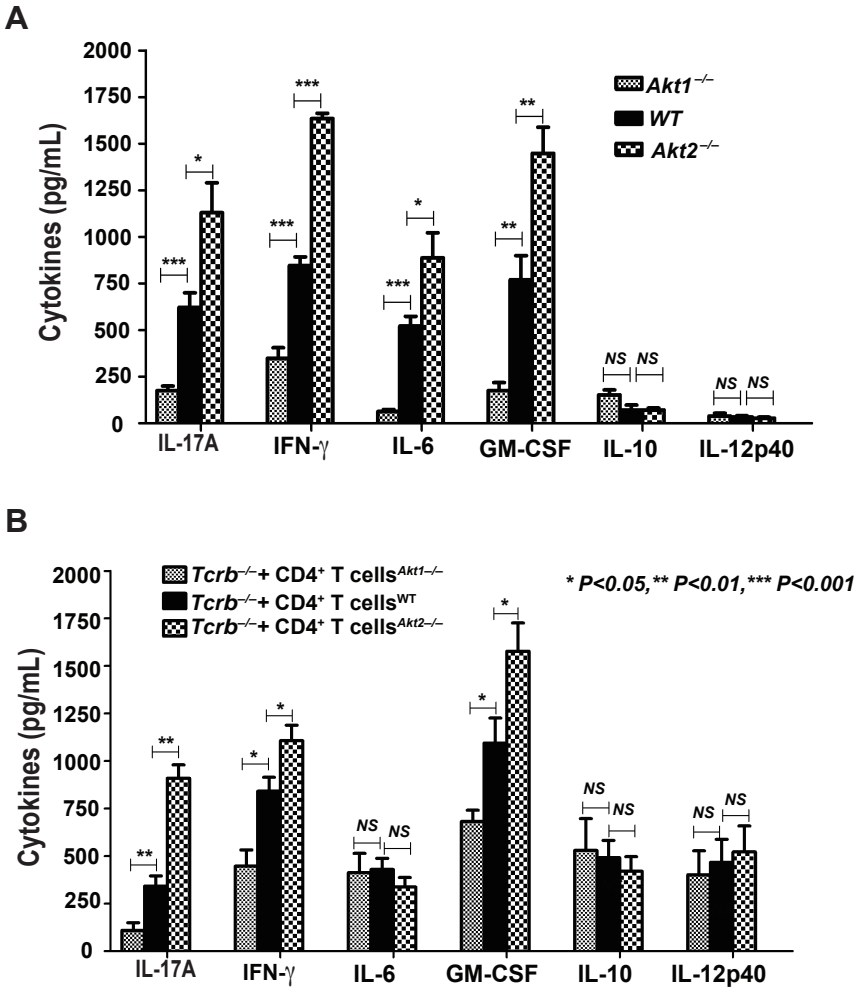
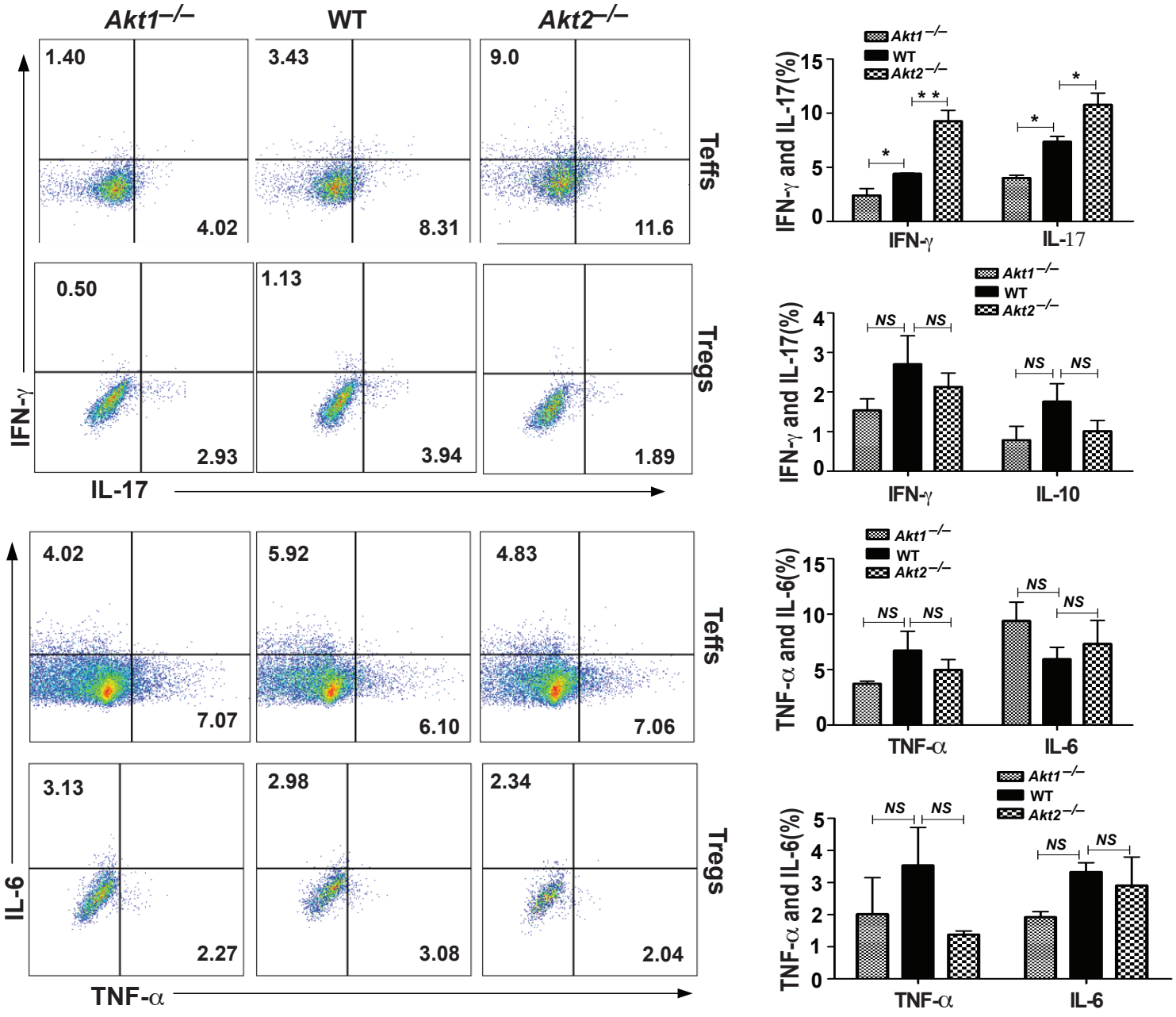


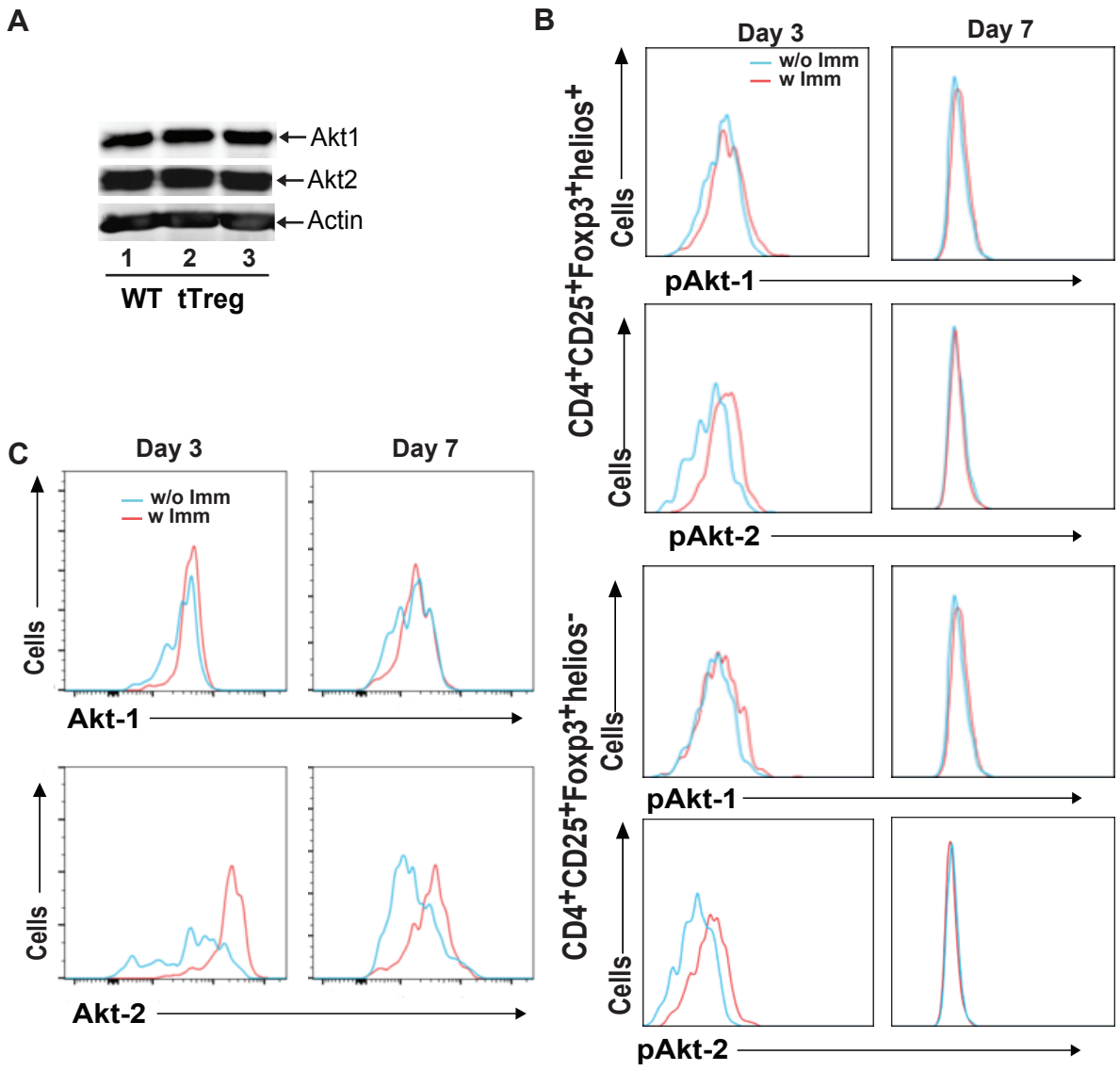
Supplemental Figure 1. *Akt1*$^{-/-}$ and *Akt2*$^{-/-}$ T cells display an opposing capacity in producing IL-17, IFN-γ, and GM-CSF, but not IL-10, IL-6, and IL-12p40

(A) WT, *Akt1*$^{-/-}$ and *Akt2*$^{-/-}$ mice (n = 8) were immunized with MOG_{35-55} in CFA and 8 days later the mice were sacrificed. The draining lymph node cells were cultured with MOG_{35-55} peptide (20 μg/ml) for 72 h. The supernatants collected from these cultures were subjected to ELISA for IL-17, IFN-γ, IL-6, and GM-CSF, IL-10 and IL12p40. (**B)** *Tcrb*$^{-/-}$ mice receiving WT, *Akt1*$^{-/-}$ or *Akt2*$^{-/-}$ $CD4^+$ T cells (n = 5) were immunized with MOG_{35-55} in CFA. The recipient mice were sacrificed at day 10. The draining lymph node cells were cultured with MOG_{35-55} peptide (20 μg/ml) for 72 h. The supernatants collected from these cultures were subjected to ELISA for IL-17, IFN-γ, IL-6, and GM-CSF, IL-10 and IL12p40. The data shown are one representative of three independent experiments. Student t test. * $p<0.05$,** $p<0.01$,*** $p<0.001$

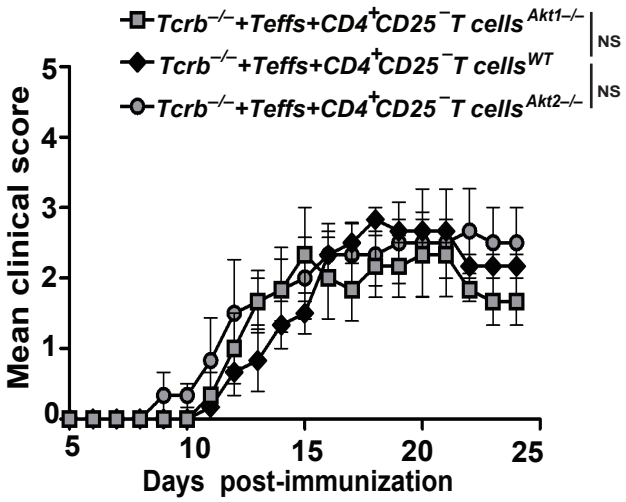


Supplemental Figure 2. The major T cells that contribute to inflammatory cytokines by *Akt1*$^{-/-}$, and *Akt2*$^{-/-}$ mice during EAE induction are Teffs and not Tregs

WT, *Akt1*$^{-/-}$, and *Akt2*$^{-/-}$ mice (n= 4) were immunized with MOG_{35-55} in CFA and 8 days later the mice were sacrificed. The draining lymph node cells stimulated with PMA/ionomycin, surface-stained with anti-CD4, anti-CD25, and intracellularly stained with anti-Foxp3 Ab, together with anti-IL-17, anti-IFN-γ, anti-IL-6, and anti-TNF-α Abs, respectively. The expression of these cytokines in $CD4^+CD25^+Foxp3^+$ Tregs and $CD4^+Foxp3^-$ Teffs as determined by flow cytometry.



Supplemental Figure 3. Activated Akt-1 and Akt-2, as well as total Akt-1 and Akt-2 are differentially expressed in $CD4^+CD25^+Foxp3^+$ Tregs upon immunization with MOG_{35-55} in CFA.
(A) Tregs were isolated from thymuses of WT mice (n = 3) at the steady state, and the expressions of Akt-1 and Akt-2 in these Tregs were assessed by immunoblotting. (**B)** WT mice (n = 3) immunized with MOG_{35-55} in CFA were sacrificed on day 3 and 7 after immunization (w Imm). The cells in the draining lymph nodes were surface-stained with anti-CD4, anti-CD25, and intracellularly stained with anti-Foxp3 and anti-Helios, together with anti-phospho-Akt-1, and anti-phospho-Akt-2. (**C**) WT mice (n = 3) immunized with MOG_{35-55} in CFA were sacrificed on day 3 and 7 after immunization (w Imm). The cells in the draining lymph nodes were surface-stained with anti-CD4 and anti-CD25, and intracellularly stained with anti-Foxp3, together with anti-Akt-1, or anti-Akt-2. WT mice without immunization (w/o imm) were used as controls. The data showed are one representative of three independent experiments.



Supplemental Figure 4. *Akt1*$^{-/-}$ and *Akt2*$^{-/-}$ Teffs do not suppress EAE development in *Tcrb*$^{-/-}$ mice receiving naive CD4^{+} T cells
Naïve $CD4^{+}CD44^{low}CD62L^{hi}CD25^{-}$ T cells from WT mice together with $CD4^{+}CD25^{-}$ T cells from WT, *Akt1*$^{-/-}$, or *Akt2*$^{-/-}$ mice were transferred into *Tcrb*$^{-/-}$ mice (n = 4 per group) which were then immunized with MOG_{35-55} in CFA. The development of EAE was monitored. The data shown are one representative of two independent experiments.