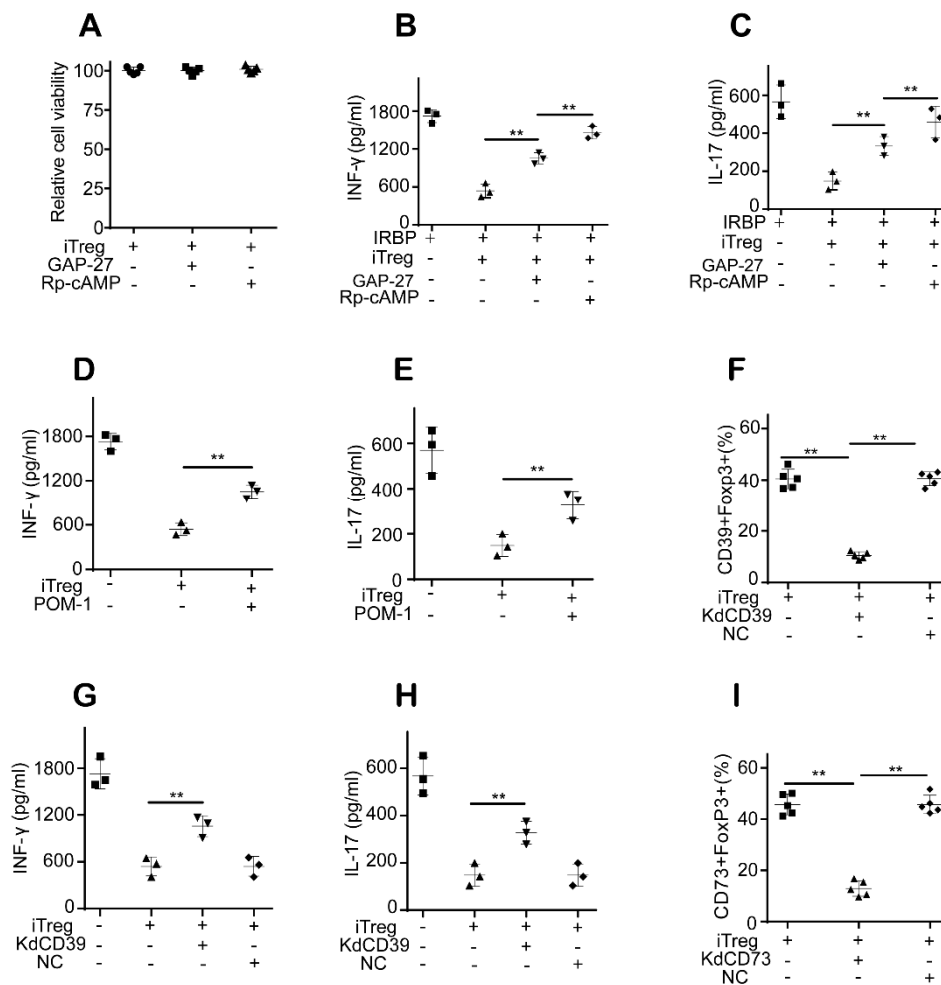
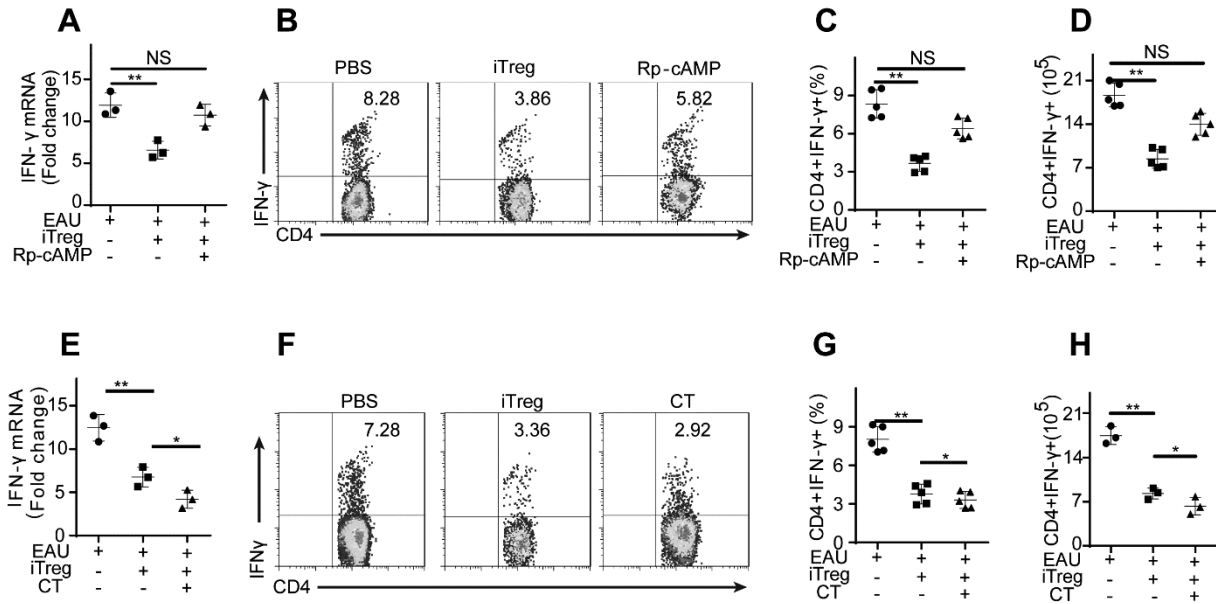


**Figure S1. The gap junction inhibitor and A2AR inhibitor reversed iTregs-mediated inhibition on UTs obtained from EAU mice.** (A-C): Both A2AR antagonists (ZM241385) and gap junctions inhibitor (GAP-27), significantly reversed the iTregs-mediated inhibitory effect on UTs proliferation and inflammatory cytokines production. (D-E): The combination of A2AR antagonists and gap junction inhibitor was more effective compared with either alone in reversing the iTregs-mediated inhibitory effect on UTs inflammatory cytokines production. The results were representative of three independent experiments. The data are presented as the means  $\pm$  SDs. \*  $P < 0.05$ ; \*\*  $P < 0.01$ . (Between the indicated groups). Abbreviations: TGF- $\beta$  Ab, TGF- $\beta$  antibody; CTLA-4 Ab, CTLA-4 antibody. Data were analyzed using one-way ANOVA with Bonferroni correction.



**Figure S2. Intracellular cAMP and CD39 expression of iTregs is essential for iTregs-mediated inhibition on inflammatory cytokines production of UTs.** (A): Cell viability was assessed using Trypan blue exclusion and examined using phase contrast microscopy. (B-C): Pretreatment of iTregs by Rp-cAMPs was more effective than gap junction inhibitor in reversing iTregs-mediated suppression on inflammatory cytokines production of UTs. (D-E): POM-1 pretreatment partially reversed iTregs-mediated suppression on inflammatory cytokines production of UTs. (F): CD39 siRNA but not control siRNA decreased CD39 frequency in iTregs. (G-H): CD39 siRNA but not control siRNA knockdown in iTregs also decreased the inhibitory capability of iTregs on inflammatory cytokines production of UTs. (I): CD73 siRNA but not control siRNA decreased CD73 frequency in iTregs. The results were representative of three independent experiments. The data are presented as the means  $\pm$  SDs. \*\*:  $P < 0.01$ . (Between the indicated groups). Data were analyzed using one-way ANOVA with Bonferroni correction.



**Figure S3. cAMP is critical for iTregs-mediated inhibition on IFN- $\gamma$  production in established EAU.** (A-D): iTregs preincubation with Rp-cAMPs also significantly decreased their inhibitory capability with regard to IFN- $\gamma$  expression (n=3) and the frequency and number of CD4+ IFN- $\gamma$ + T cells in mice with EAU (n = 5). (E-H): CT pretreatment also improved iTregs' capability in inhibiting IFN- $\gamma$  expression (n=3) and the frequency and number of CD4+ IFN- $\gamma$ + T cells in EAU mice (n = 5). The results were representative of three independent experiments. The data are presented as the means  $\pm$  SDs. NS:  $P > 0.05$ ; \*:  $P < 0.05$ ; \*\* $P < 0.01$ . (Between the indicated groups). Data were analyzed using one-way ANOVA with Bonferroni correction.