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## **CD3(bright) signals on $\gamma\delta$ T cells identify IL-17A-producing V $\gamma$ 6V $\delta$ 1(+) T cells.**

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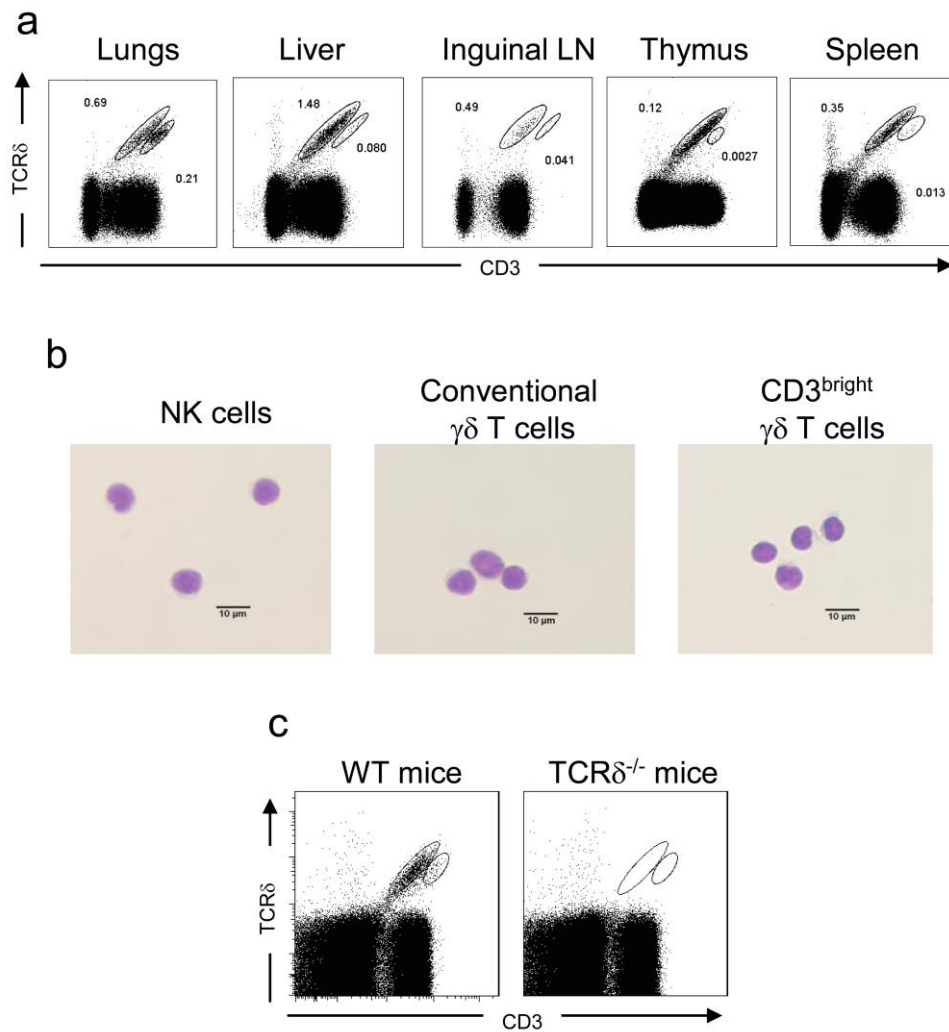
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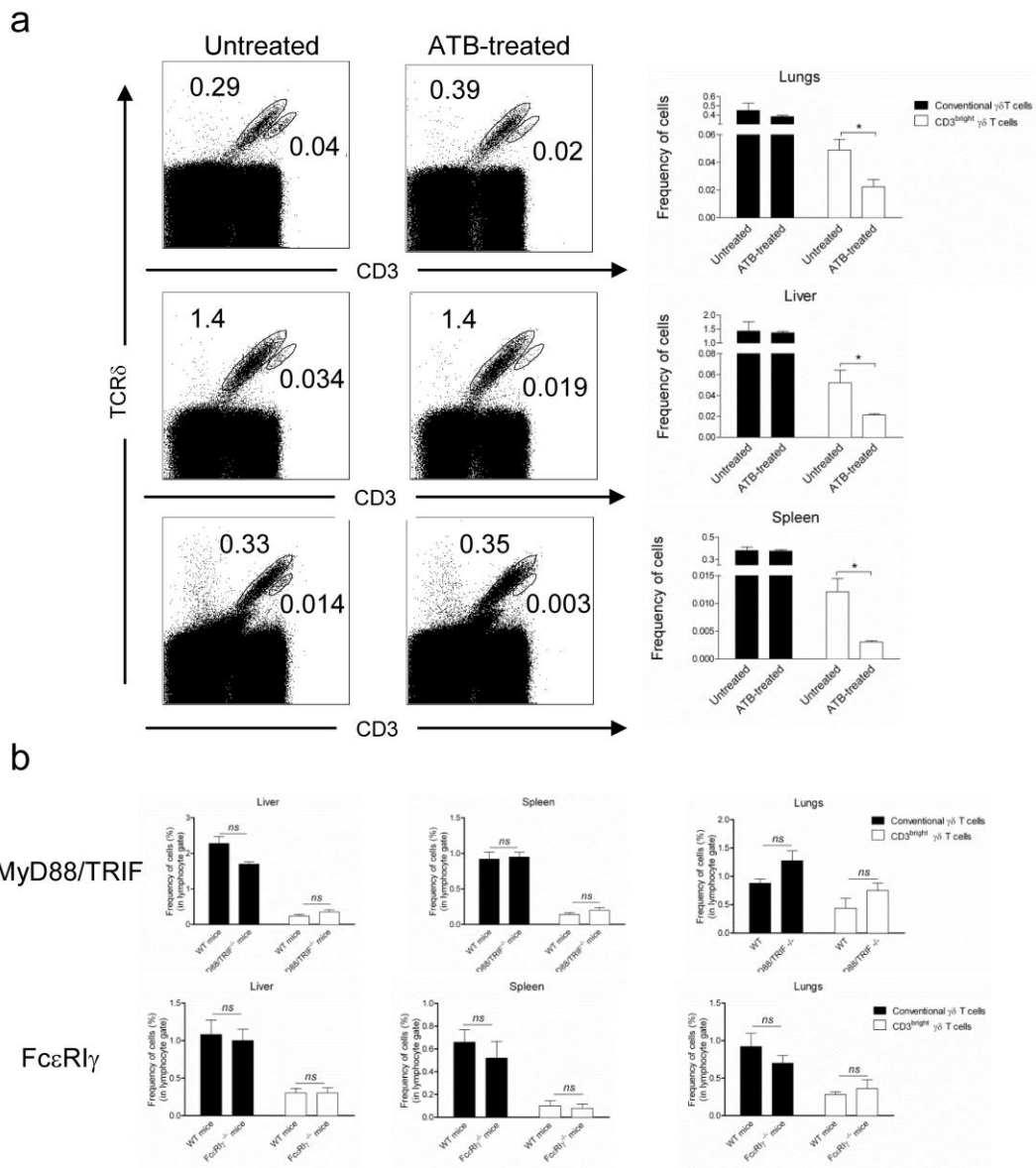
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## Supplementary materials:



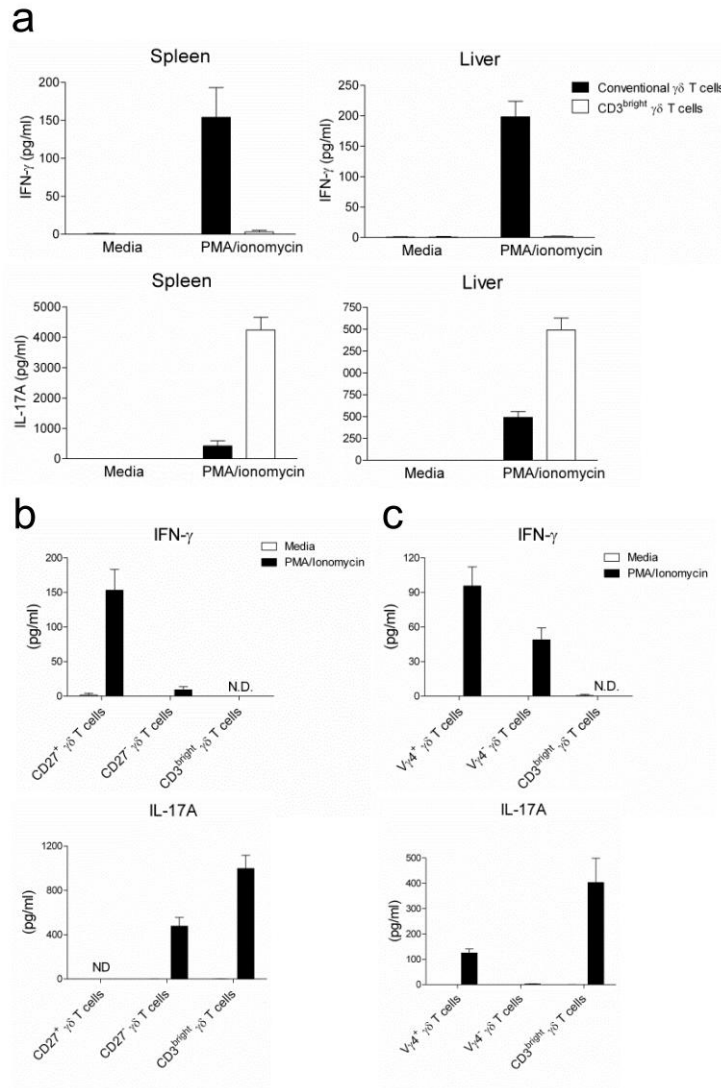
### **Supplemental Figure 1: CD3<sup>bright</sup> $\gamma\delta$ T cells are authentic $\gamma\delta$ T cells and conserved in different mouse backgrounds.**

*a*, Cells from naïve BALB/c WT mice were analyzed by flow cytometry based on CD3 and TCR $\delta$  expression. *b*, Morphology and Giemsa staining of cytospun FACS-sorted C57BL/6 WT lymphocyte populations. *c*, Cells from naïve C57BL/6 WT and TCR $\delta$ <sup>-/-</sup> mice were analyzed by flow cytometry based on CD3 and TCR $\delta$  expression.



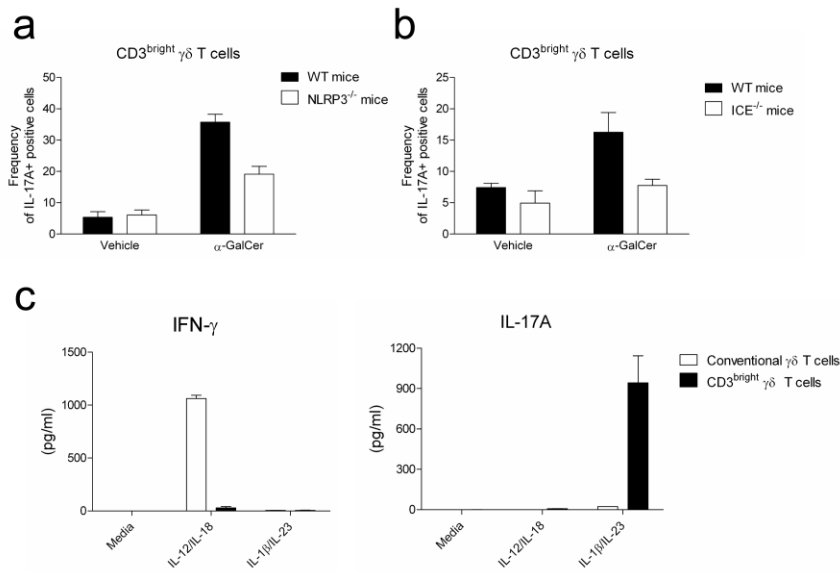
**Supplemental Figure 2: Factors influencing CD3<sup>bright</sup>  $\gamma\delta$  T cells homeostasis.**

*a*, Effect of chronic exposure to antibiotics on CD3<sup>bright</sup>  $\gamma\delta$  T cells. 5-week-old C57BL/6 mice were exposed three weeks with or without neomycin in the drinking water. Frequency of CD3<sup>bright</sup> and conventional  $\gamma\delta$  T cells in each group was evaluated by flow cytometry in different organs. Of note, antibiotic exposure did not impact on the total number of cells in each organ. *b*, TLR-signalling and Fc $\epsilon$ RI $\gamma$  are not involved in CD3<sup>bright</sup>  $\gamma\delta$  T cell homeostasis. Frequency of  $\gamma\delta$  T subsets was analyzed by flow cytometry in WT vs MyD88/TRIF<sup>-/-</sup> mice. The percentage of  $\gamma\delta$  T cell subsets is shown. The mean  $\pm$  SEM of  $\gamma\delta$  T cell subset frequencies of one representative experiment out of two is shown ( $n = 5-6$ ).



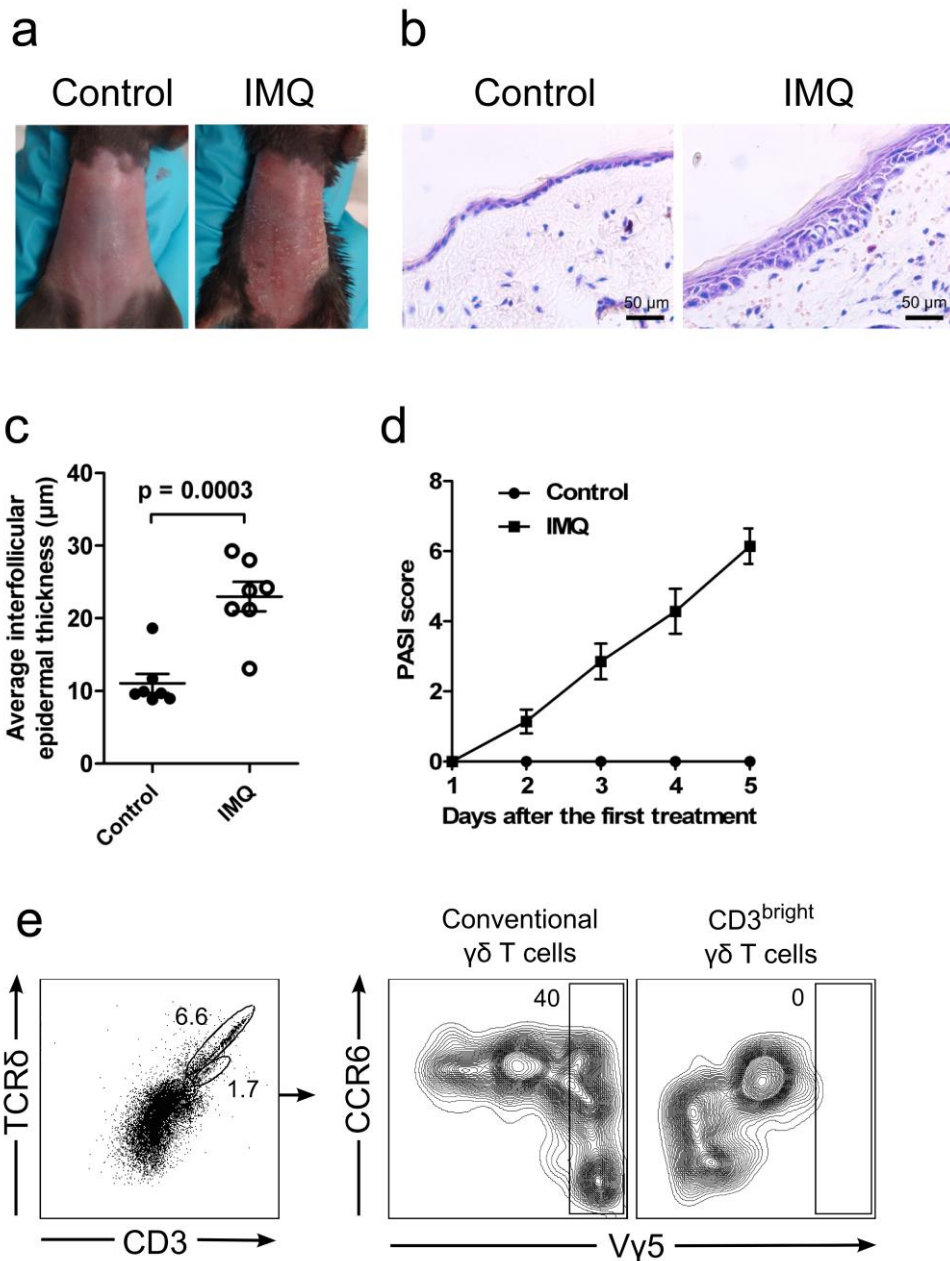
**Supplemental Figure 3: Capacity of CD3<sup>bright</sup>  $\gamma\delta$  T cells vs other  $\gamma\delta$ T17 populations to produce IL-17A.**

*a*, FACS-sorted splenic or hepatic  $\gamma\delta$  T cell subsets were incubated with PMA (10 ng/ml) and ionomycin (1  $\mu$ g/ml). Data represent the pooled mean  $\pm$  SEM of two independent experiments performed at least in duplicate. *b and c*, FACS-sorted pulmonary  $\gamma\delta$  T cell subsets were incubated as in panel *a*. Cytokine production in the supernatants was measured by CBA. Data represent the pooled mean  $\pm$  SEM of two independent experiments performed at least in duplicate.



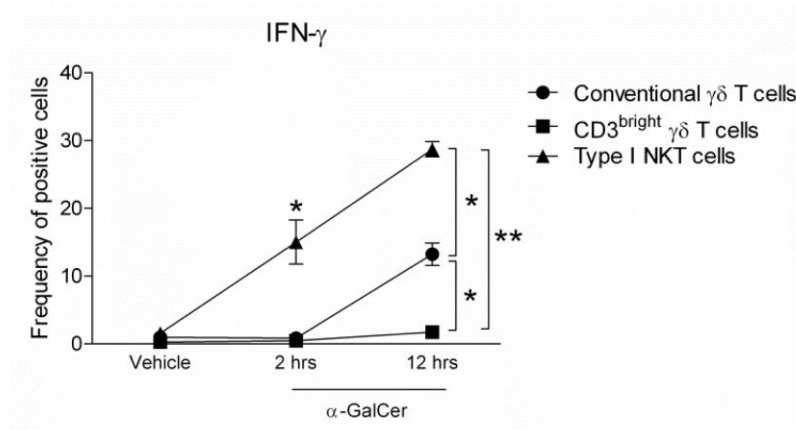
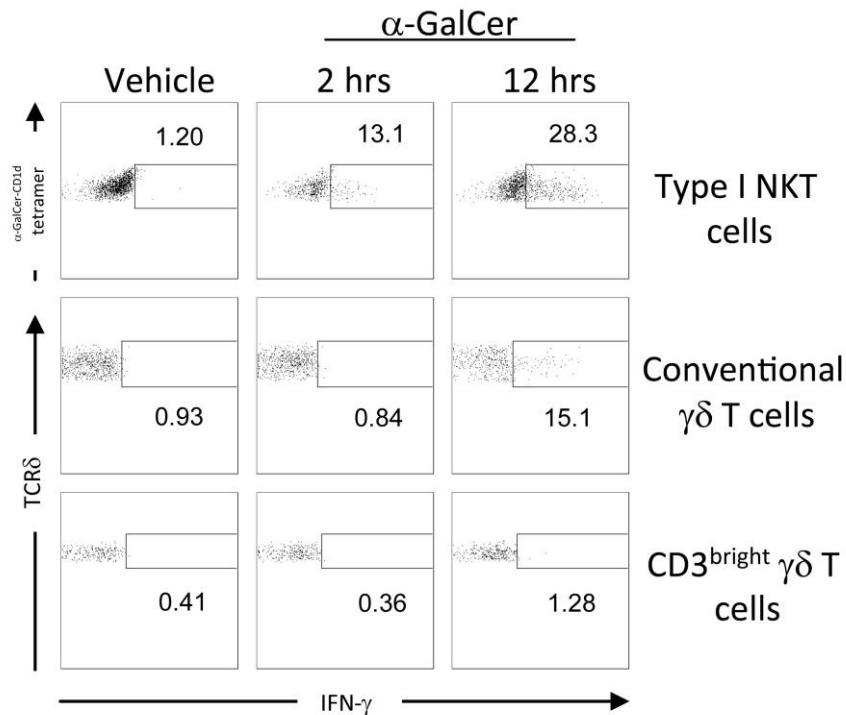
**Supplemental Figure 4: IL-17 production by CD3<sup>bright</sup> γδ T cells requires NLRP3 inflammasome components *in vivo*.**

*a-b*, WT, NLRP3<sup>-/-</sup> (*a*) or ICE<sup>-/-</sup> (*b*) mice were injected i.p. with vehicle or α-GalCer (2 μg/mouse) and were sacrificed after 2 hrs. Liver cells were treated with GolgiStop for another 2 hrs. Gated CD3<sup>bright</sup> γδ T cells were screened for IL-17A production. The pooled mean ± SEM of two independent experiments for IL-17A-positive cells subsets is shown (*n* = 5-6). *c*, FACS-sorted γδ T cell subsets were incubated or not with IL-12/IL-18 (50 pg/ml and 1 ng/ml respectively) or IL-1β/IL-23 (1 ng/ml for both) for 20 hrs. Cytokine production in the supernatants was measured by CBA. Data represent the mean ± SEM of two experiments performed in duplicate.



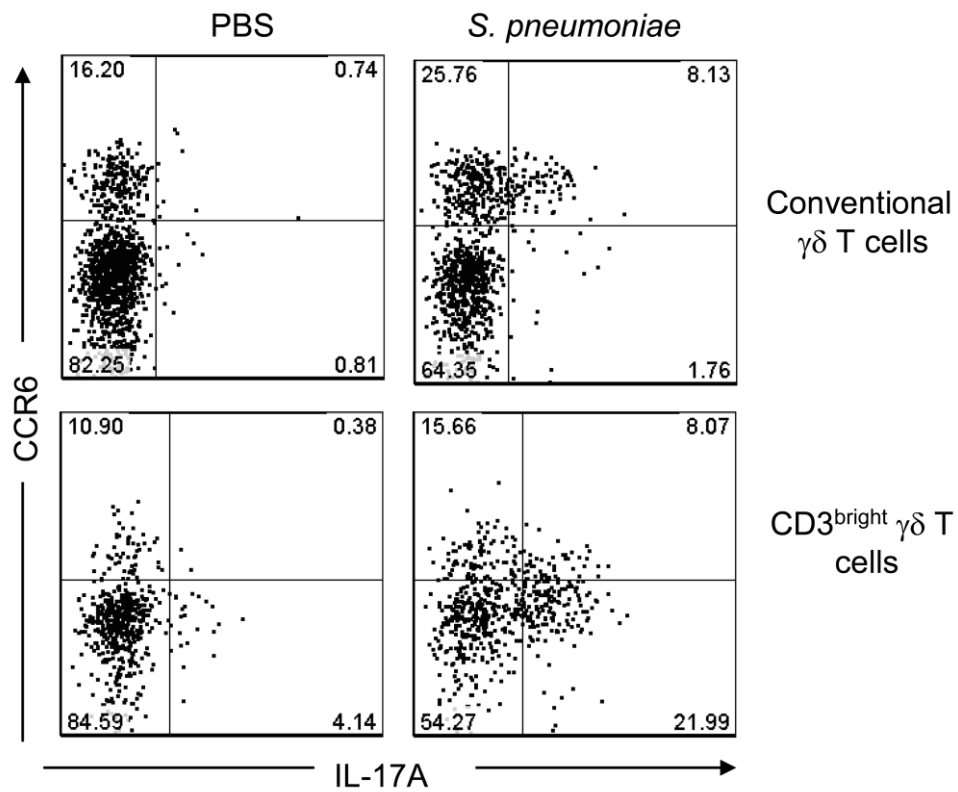
### Supplemental Figure 5: Psoriasis-like Mouse Model

Representative skin morphology (a) and Giemsa-stained sections (b) and average interfollicular epidermal thickness (c) of the abdominal skin of C57BL/6 WT mice treated with a daily topical dose of IMQ cream (IMQ) or control “Lanette” cream (Control) during 5 days: presented data correspond 5 days after the first application of the cream. Scale bar corresponds to 50  $\mu\text{m}$ . (d) PASI score was estimated at the 1<sup>st</sup> to 5<sup>th</sup> days during treatment with IMQ cream (IMQ) or control “Lanette” cream (Control). Data are shown as mean  $\pm$  SEM,  $n = 7$  mice per group. Statistical differences between groups were analysed by unpaired two-tailed  $t$ -test. (e) DETC V $\gamma$ 5<sup>+</sup> T cells are part of the skin conventional  $\gamma\delta$  T cell population.



**Supplemental Figure 6: CD3<sup>bright</sup>  $\gamma\delta$  T cells do not produce IFN- $\gamma$  following intranasal instillation of  $\alpha$ -GalCer.**

WT mice were injected i.n. with vehicle or  $\alpha$ -GalCer (500 ng/mouse) and were sacrificed at indicated times. Pulmonary cells were treated with GolgiPlug for another 2 hrs. Gated innate-like T cells were screened for IFN- $\gamma$  production. One representative experiment out of three is shown (*upper panel*). The pooled mean  $\pm$  SEM of three independent experiments for IFN- $\gamma$ -positive cells subsets is shown (6 mice/group/experiment) in the lower panel. \*,  $p < 0.05$  and \*\*,  $p < 0.01$ .



**Supplemental Figure 7: CCR6 expression on conventional, but not on CD3<sup>bright</sup>  $\gamma\delta$  T cells correlated with their ability to produce IL-17.**

WT mice were infected i.n. with *S. pneumoniae* serotype 1 ( $2 \times 10^6$  bacteria) and were sacrificed at indicated time points. Gated pulmonary  $\gamma\delta$  T cell subsets were screened for IL-17A production based on their CCR6 expression. One representative experiment out of two is shown. Gates were set based on the staining with isotype control.