

Supplemental Figure 1. PD-1 controls TFR cells in NP-OVA immunized mice. **(a)** WT or PD-1^{-/-} mice were immunized with NP-OVA emulsified in CFA and 7 days later draining lymph nodes were stained for CD4⁺FoxP3⁺ICOS⁺CXCR5⁺CD19⁻ T follicular regulatory cells (TFR) and CD4⁺FoxP3⁻ICOS⁺CXCR5⁺CD19⁻ T follicular helper cells (TFH) using gating strategy shown. **(b)** TFH cells were gated and expressed as a percentage of CD4⁺FoxP3⁻ cells. **(c)** TFR cells were gated and expressed as a percentage of all CD4⁺ cells. **(d)** TFR cells were gated and expressed as a percentage of CD4⁺FoxP3⁺ cells. **(e)** TFR cells were gated and expressed as a percentage of CD4⁺CXCR5⁺ICOS⁺ cells.

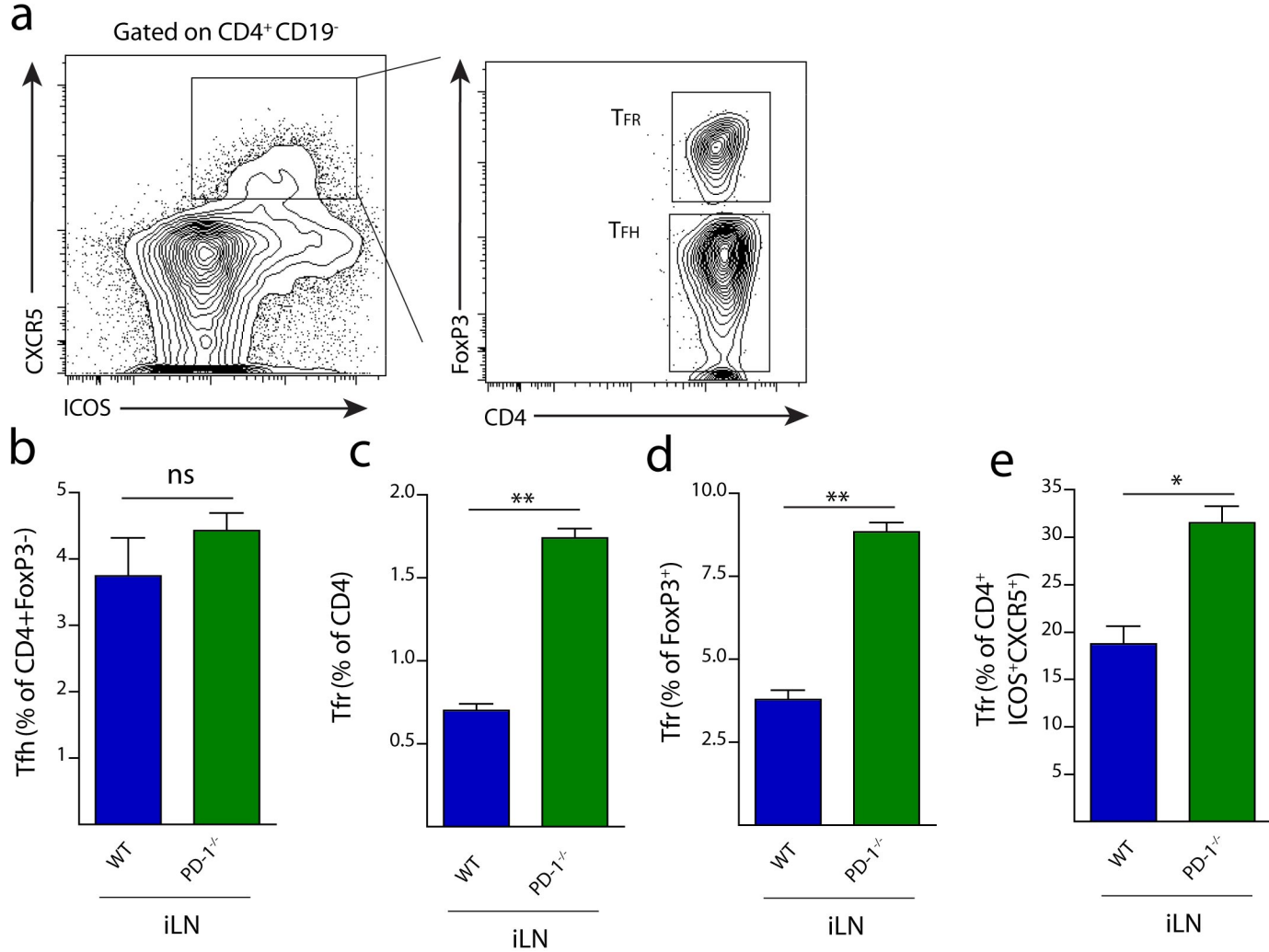
Supplemental Figure 2. Comparison of PD-L1, CD103 and GITR expression on WT and PD-1^{-/-} T Follicular Regulatory Cells. **(a-c)** WT or PD-1^{-/-} mice were immunized with MOG (35-55) and 7 days later draining lymph nodes were stained. TFR (CD4⁺ICOS⁺CXCR5⁺FoxP3⁺CD19⁻) cells were analyzed for surface expression of PD-L1 **(a)**, CD103 **(b)** and GITR **(c)**.

Supplemental Figure 3. WT and PD-1 deficient TFR cells express similar levels of GITR. WT and PD-1^{-/-} mice were immunized with NP-OVA and 7 days later populations were sorted according to gating strategy.

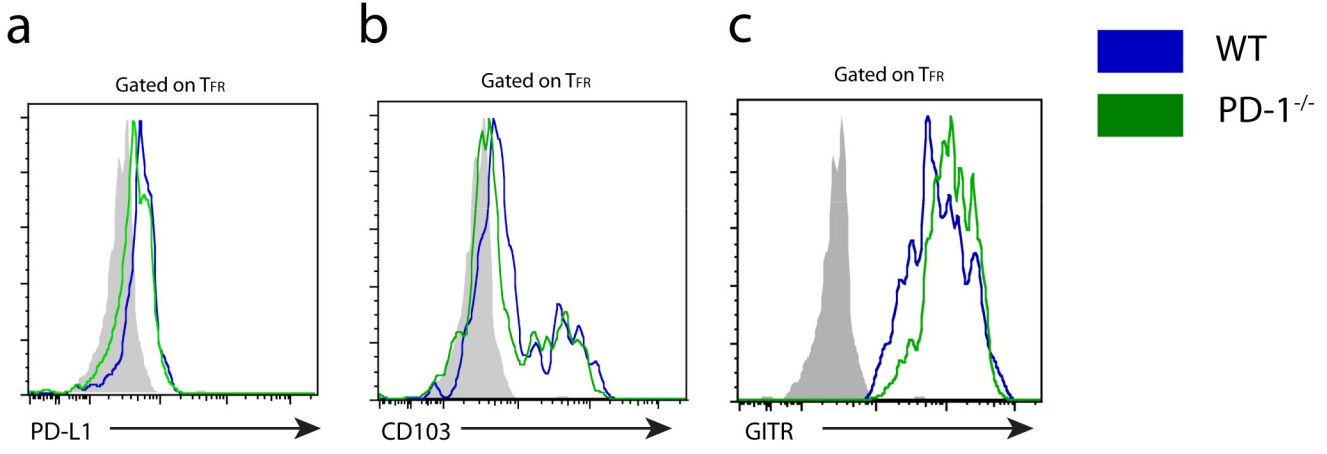
Supplemental Figure 4. TFH and TFR cells can bind similar levels of anti-CD3. **(a)** Gating of TFH, TFR and B cells from *in vitro* suppression assays as in Figure 4k. **(b)**

Cells gated as in (a) were stained with an anti-hamster secondary antibody to quantify the amount of anti-CD3 bound to the surface of the cells.

Supplemental Figure 5. Blood TFH and TFR cells express central memory homing markers. WT and PD-1^{-/-} mice were immunized with MOG/CFA and 7 days later populations from blood were analyzed for CD62L (a) and CD44 (b) expression. (c) PD-1 expression was compared on WT and PD-1 deficient mice from draining lymph node and blood TFH and TFR cells 7 days after NP-OVA immunization.

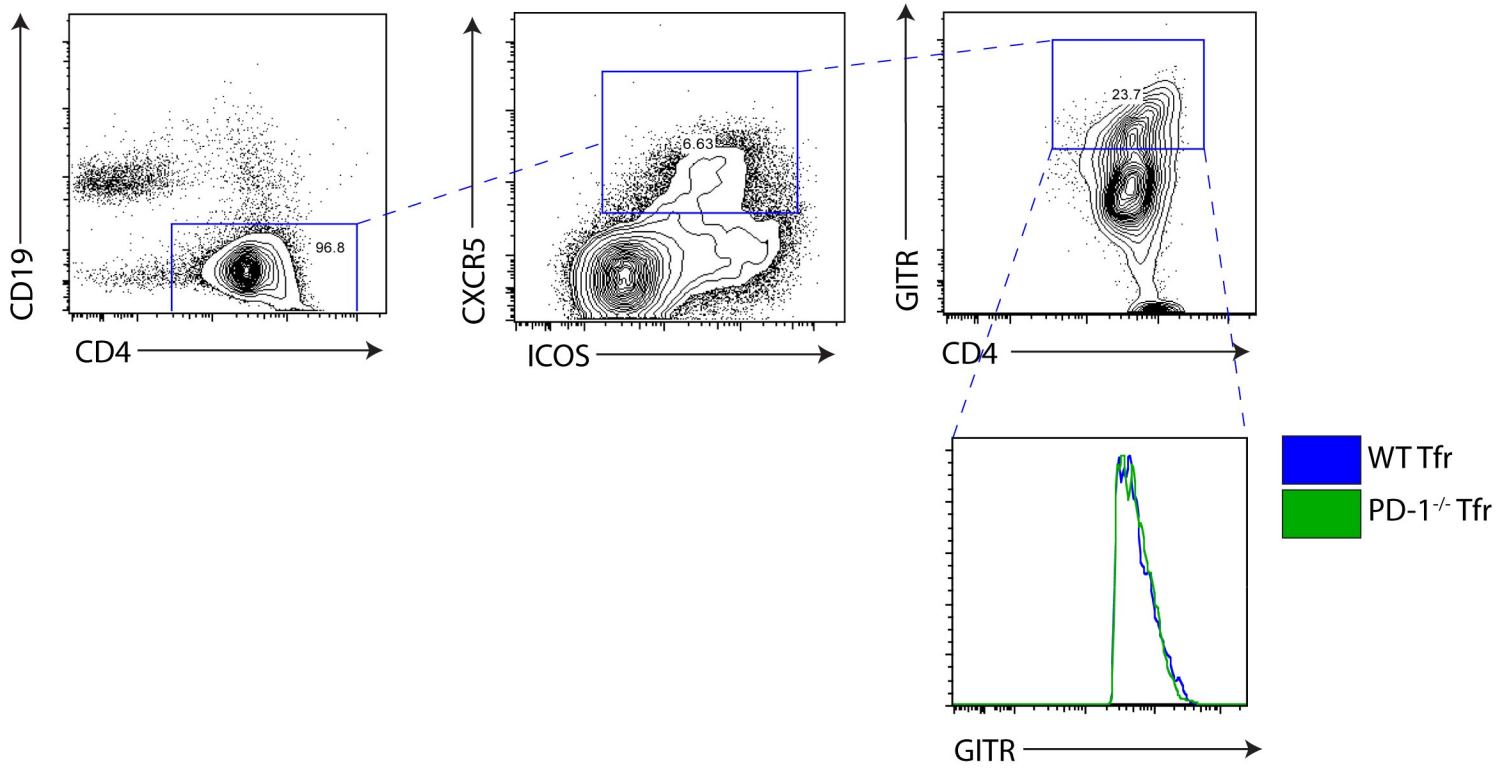


Supplemental Figure 1



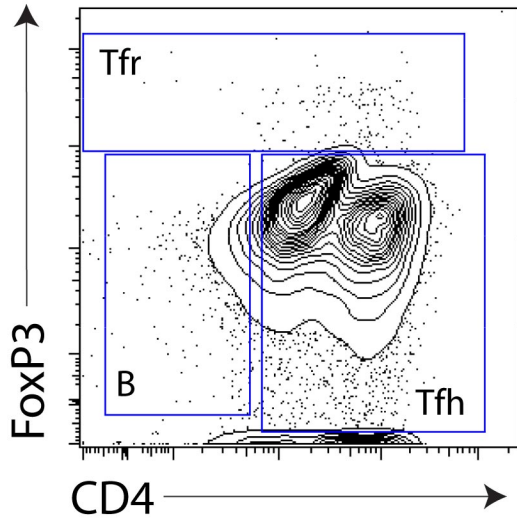
Supplemental Figure 2

a.

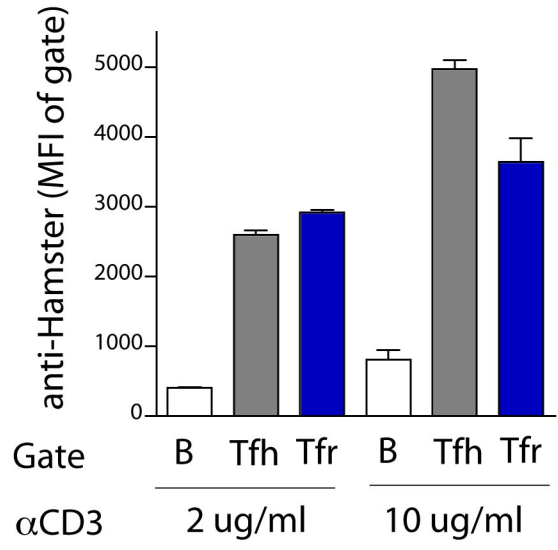


Supplemental Figure 3

a.

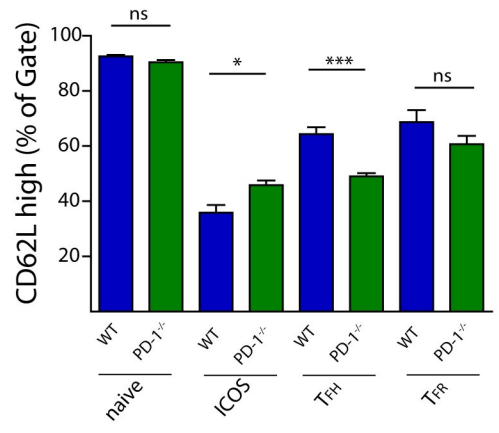


b.

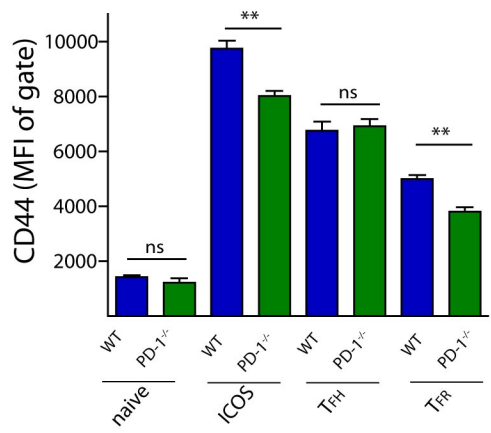


Supplemental Figure 4

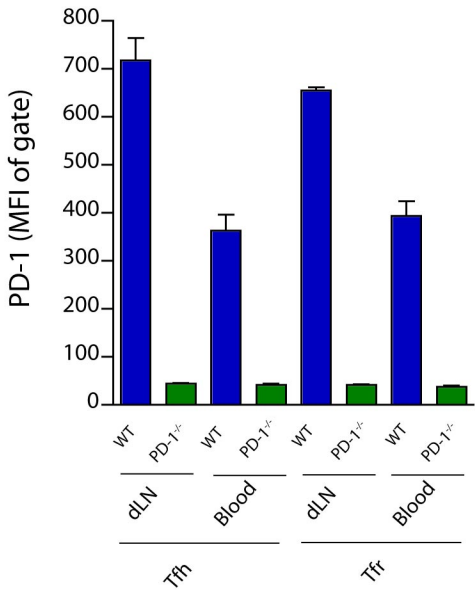
a



b



c



Supplemental Figure 5