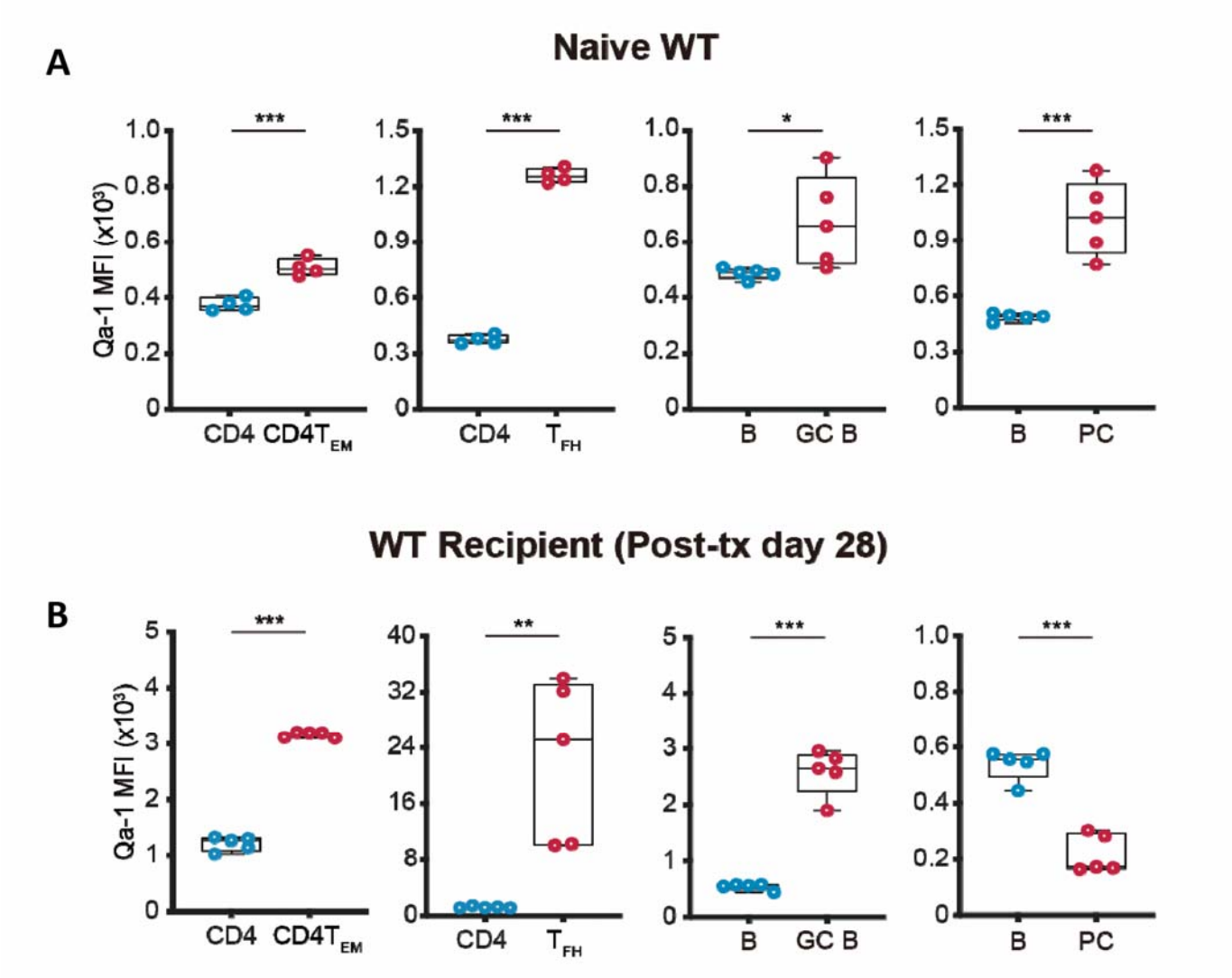
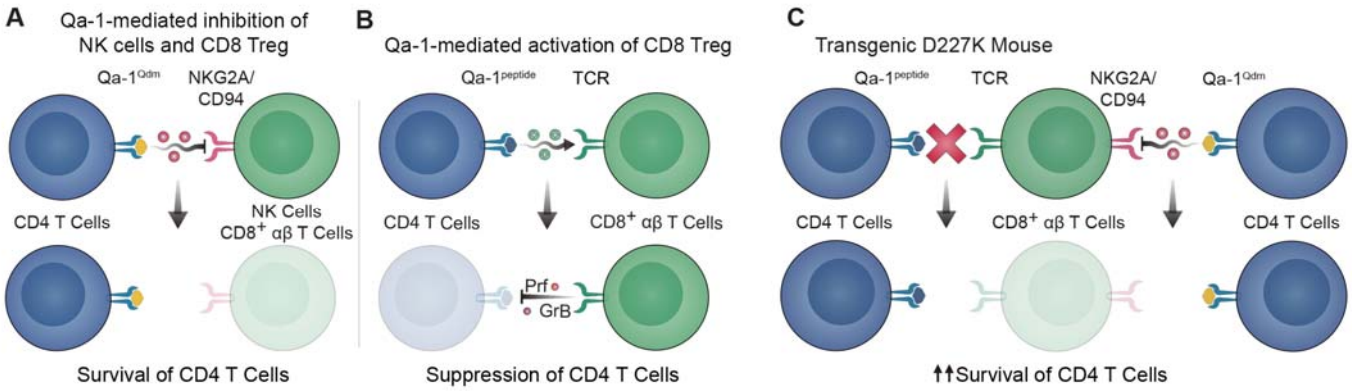


Supplementary Figure 1. Expression of Qa-1 on helper T cell and B cell subsets in naïve versus transplanted WT mice on day 28 with the single dose CTLA4-Ig protocol.

Spleens from naïve C57BL/6 (WT) mice (n= 4 or 5) (**A**) and WT heart allograft recipients (n= 5) at 28 days post transplantation (**B**) were analyzed for Qa-1 expression on different lymphocyte subsets. Naïve WT mice spleens showed elevated Qa-1 expression on CD4 T_{EM}, T_{FH} when compared to whole CD4 T cells, in addition to higher Qa-1 expression on GC B cells and PC when compared to whole B cells (**A**). The differential expression of Qa-1 was more pronounced in WT heart allograft recipients, Qa-1 expression was lower in PC when compared to B cells at day 28 of post transplantation (**B**). *T_{EM}: effector memory T cells; T_{FH}: follicular helper T cells; GC B: Germinal Center B Cells; PC: Plasmacytes.*

Supplementary Fig. 2



Supplementary Figure 2. Interaction between Qa-1 and its receptors (TCR or NKG2A)

(**A**) Engagement of Qa-1-Qdm on CD4 T cells by NKG2A receptor on NK cells or CD8 T cells leads to inhibitory signaling and CD4 T cells are protected from killing.
(**B**) Presentation of non-Qdm peptides on Qa-1 (Qa-1-peptide) and its interaction with TCR on CD8 T cells leads to perforin-dependent cytolysis of target CD4 T cells, resulting in suppression of CD4 T cell-mediated immune response.
(**C**) B6.Qa-1.D227K (D227K) mice contain an amino acid exchange mutation at Qa-1 position 227 (D→K) that disrupts Qa-1 binding to the TCR/CD8 co-receptor, but has no effect on Qa-1 engagement of the inhibitory NKG2A receptor. Lack of recognition of pQa-1 by TCR in D227K mice leads to expansion of Qa-1$^+$ CD4 T cells.