

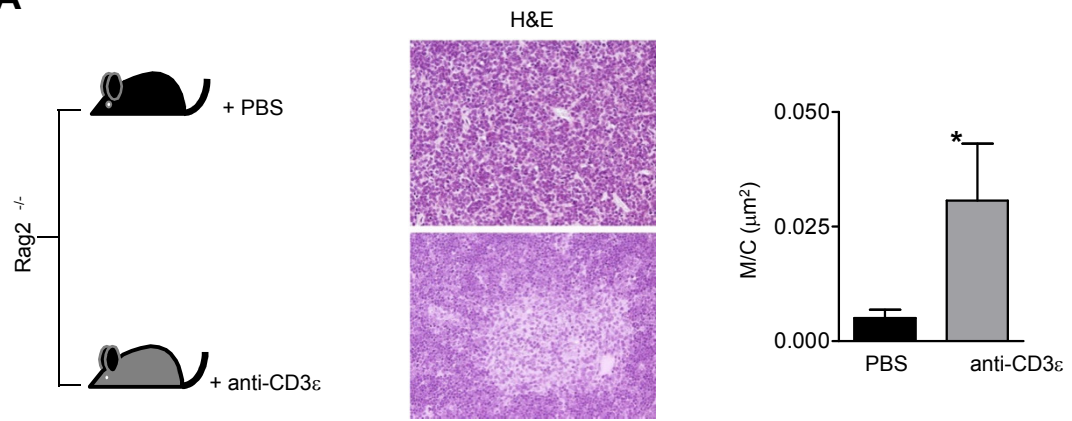
**Figure S1.** Epithelial improvement in RAG2<sup>-/-</sup> thymus ten days after anti-CD3ε mAb administration. (A) Representative H&E staining of thymus from PBS and anti-CD3ε mAb mice (original magnification, X20). Right panel shows graphic representation of the M/C in the two groups (PBS n=4, anti-CD3ε mAb n=6). \*P=0.0381. (B) CK5, CK8, UEA-1 and AIRE immunohistochemistry in a representative thymus from the indicated mice (original magnification, X40).

**Figure S2.** Absence of mature T cells in three day-old RAG2<sup>R229Q</sup> mice. (A) Left, representative dot plot of thymic populations defined with CD4 and CD8 in three day-old RAG2<sup>R229Q</sup> and RAG2<sup>+/+</sup> mice (n=4). Right, overlay of TCRβ expression in gated CD4<sup>+</sup> and CD8<sup>+</sup> SP cells. (B) Representative dot plot of splenic CD4<sup>+</sup> and CD8<sup>+</sup> cells in three days old RAG2<sup>R229Q</sup> and RAG2<sup>+/+</sup> mice (n=4).

**Figure S3.** Anti-CD3ε mAb administration in RAG2<sup>R229Q</sup> adult mice does not prevent peripheral tissue infiltration. Pie chart indicates tissue infiltration grade in each organ calculated from H&E staining as described in Methods. Each pie chart represents a mouse from the two treated groups.

**Figure S1**

**A**



**B**

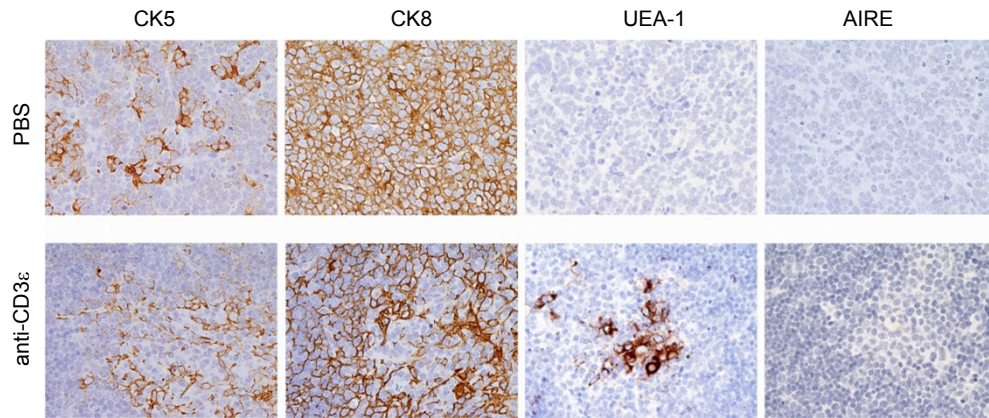
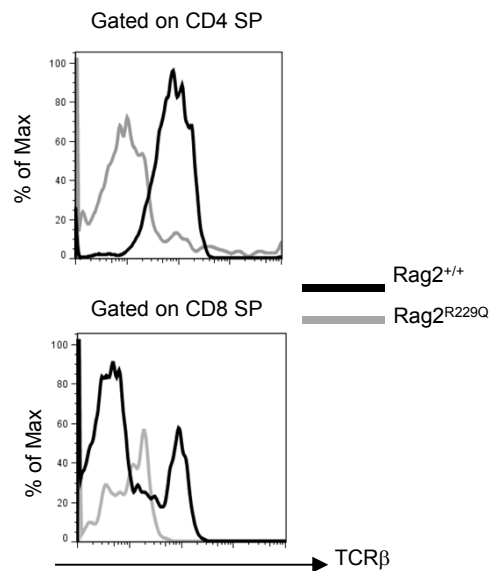
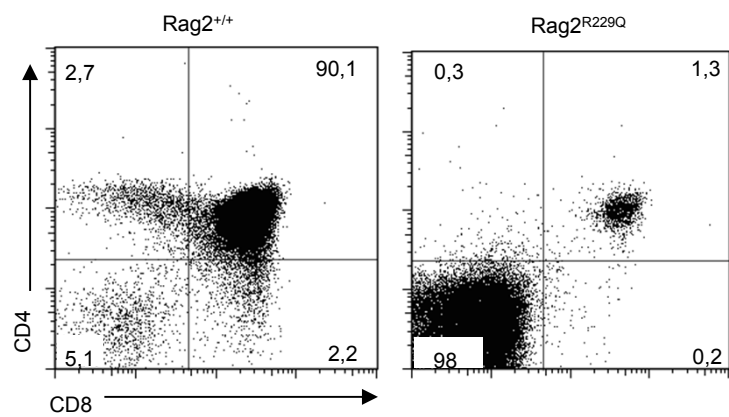


Figure S2

**A**



**B**

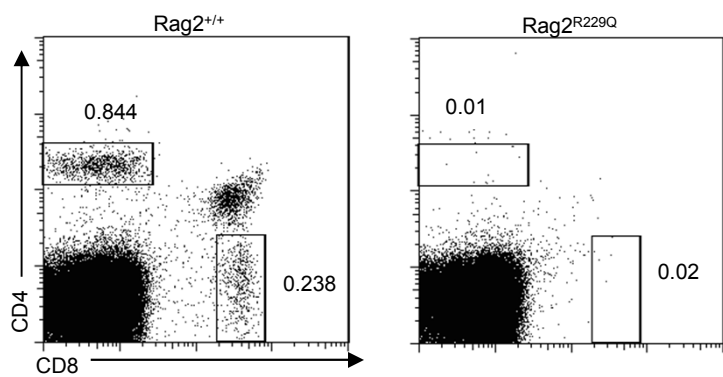


Figure S3

