Supporting Information

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Fig. S1. Peptide-induced differential IL-2 sensitivity is not dependent on 5C.C7 production of IL-2. Foury-eight hours after injection of high-dose (2 μ g) 1025 or low-dose (0.2 μ g) MCC peptide, adoptively-transferred IL-2^{-/-} 5C.C7 T cells were isolated, stripped of cytokine, and treated for 10 min with the indicated dose of IL-2 before staining for pSTAT5. Representative (A) flow plots and (B) dose–response curves.



Fig. 52. Few TCR-stimulated genes appear to be regulated based on density of pMHC. Affymetrix microarray analysis of mRNA from 5C.C7 sorted after injection of varying doses of MCC or 1025 (high, 2 μg; low, 0.2 μg). As in Fig. 5 *A* and *B*, TCR regulated genes were batched based on similar expression, in this case, due to pMHC density.



Fig. S3. IL-2 signaling genes are enriched in 5C.C7 stimulated with low-dose MCC, compared with high-dose 102S. Affymetrix microarray data, using mRNA from 5C.C7 stimulated in vivo with MCC or 102S (0.2μ g or 2μ g, respectively) were assessed by gene set enrichment analysis. (A) Eight gene sets were enriched with a nominal *P* value < 0.05, displayed above. Labeled gene sets: Marzec_IL2_Signaling_Up, Grabarczyk_Bcl11b_Targets_Dn, and Marson_Foxp3_Targets_Up. Unlabeled gene sets compare various leukemias and lymphomas with normal T cells. (*B*) For the IL-2 signaling gene set, the top 20 gene hits are shown, represented by SDs above (red) or below (blue) the mean.



Movie S1. 5C.C7 T-cell interactions with DC are distinct during sensing of low-density or low-potency peptide-MHC. 5C.C7 Ub-GFP T cells were imaged using two-photon microscopy, 15 h after injection of high (2 µg) or low (0.2 µg) doses of the indicated peptide.

Movie S1