

Direct Detection of the Second Murine TCR-Invariant gd T Cell

Jena D. French, M. Kemal Aydintug, Christina L. Roark, Julie Lewis, Xiang Yin, Youn-Soo Hahn, Willi K. Born, Robert E. Tigelaar, and Rebecca L. O'Brien. Integrated Dept. of Immunology, National Jewish Medical and Research Center, and University of Colorado Health Sciences Center, Denver, Colorado; and Dept. of Dermatology, Yale University School of Medicine, New Haven Connecticut

The Vg6/Vd1+ cells, the second murine gd T cell subset to arise, express a nearly invariant TCR, are distributed in a highly tissue-specific manner, and expand preferentially during inflammation. Their TCR is thought to recognize an undetermined inducible host molecule. Here, we report that a monoclonal antibody which detects the related Vg5/Vd1+ TCR will also bind the Vg6/Vd1 TCR if it is first complexed to an anti-Cd antibody, providing for the first time a means to directly identify the Vg6/Vd1+ subset. Additionally, using a recombinant soluble gd TCR as a reagent to directly detect its ligand, we show evidence that expression of the ligand of the Vg6/Vd1 TCR is enhanced on Listeria-infected liver cells, coincident with Vg6/Vd1 cell expansion.