Partial biochemical and functional characterization of gamma delta T cell receptor antibiotics [MAS]

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The functional role of gamma delta T cells in infectious disease is enigmatic. Gamma delta T cells have been shown to be important in experimental listeriosis, leishmaniasis and malaria; gamma delta T cells have also been shown to be toxic for cells infected with herpes simplex virus and tumor cells. In new born ruminants, gamma delta cells comprise up to 70 percent of total of lymphocytes, indicating that these cells are vital to the ruminant immune system; although actual function of the gamma delta T cell in new born ruminants remains unclear. We have generated antibodies with specificity for the bovine gamma delta T cell receptor (TCR), both pan TCR and subset TCR. Specificity of these antibodies was determined by flow cytometric and biochemical analysis, the ability of these antibodies to simulate T cell proliferation was determined, as well as immuno-histologic staining to determine the tissue specificity of various TCR subsets. These antibodies may serve as useful probes for analyzing the functional importance of gamma delta T cells in newborn ruminants.