

**IMMUNOREGULATORY EFFECTS OF A MONOCLONAL
ANTIBODY TO HUMAN 4-1 BB MOLECULE ON
ALLOANTIGEN-MEDIATED IMMUNE RESPONSES.**

Joong-Gon Kim,¹ Soo-Hyun Lee,^{2,0} Jae-Woo Lee,² B. S. Kwon,³
Chang-Yuil Kang².

College of Med.¹ & College of Pharmacy², Seoul National Univ.,
Seoul, Korea; Indiana Univ. Sch. of Med., Indianapolis, IN 46202³

4-1BB molecule is expressed on the surface of activated CD4⁺ and CD8⁺ T cells. We generated a panel of anti-4-1 BB murine mAbs using a fusion protein consisting of the extracellular domain of human 4-1 BB fused to Glutathione S-transferase. The binding activity against cell surface 4-1 BB molecule was assessed by flow cytometry analysis. These studies showed that several anti-4-1 BB mAbs bound to 10~30 % of CD4⁺ and CD8⁺T cells in PHA or Con A stimulated PBLs, although these mAbs interacted with only 1~2% of CD4⁺ and CD8⁺ T cells in normal PBLs, indicating the specificity of mAbs to the 4-1BB molecule on activated CD4⁺ and CD8⁺ T cells. Next, we examined the effect of an anti-4-1BB mAb (4B4-1-1) on allogeneic mixed lymphocyte reactions (MLRs). The data indicated that the antibody significantly inhibited the proliferative response at higher concentrations. When tested with several T cell mitogens, the antibody had no stimulatory or inhibitory effects on the mitogen-mediated T cell proliferation. These data suggest that 4-1 BB molecule may play a role in the regulation of antigen-mediated immune response.