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(54) Title: REGULATORY B CELLS AND THEIR USES

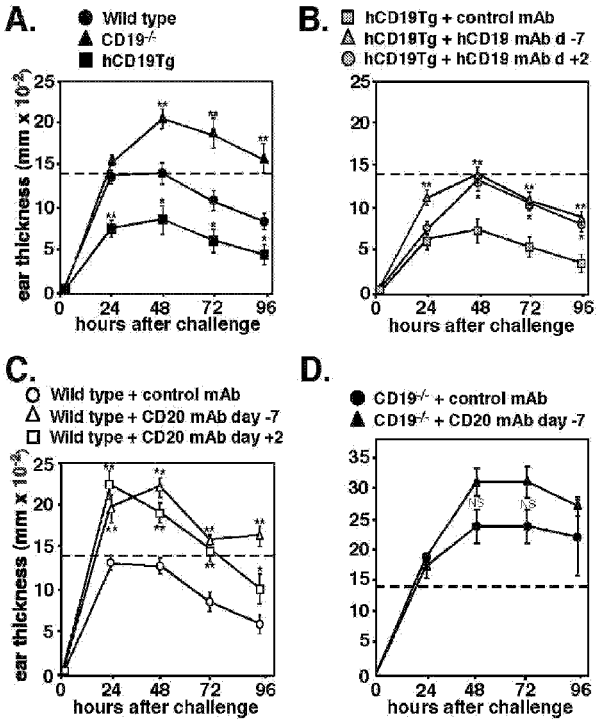


Fig. 1A – 1D

(57) Abstract: The present invention relates to a phenotypically distinct CD1d^{high}CD5^{+} B cell subset that regulates T cell mediated inflammatory responses through the secretion of interleukin-10 (IL-IO). The invention also relates to the use of these IL-IO producing regulatory B cells in the manipulation of immune and inflammatory responses, and in the treatment of disease. Therapeutic approaches involving adoptive transfer of these regulatory B cells, or expansion of their endogenous levels for controlling autoimmune or inflammatory diseases and conditions are described. Ablation of this subset of regulatory B cells, or inhibition of their IL-IO production can be used to upregulate immunodeficient conditions, and/or to treat tumors/cancer. Diagnostic applications also are encompassed.

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