



## Blocking the CD154-CD40 interaction with anti-CD154 antibody differentially regulates interleukin-4 synthesis in T cells and IgE production in B cells

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Using severe combined immunodeficiency mice engrafted with peripheral blood mononuclear cells from atopic patients, we analyzed the regulatory effects of anti-CD154 antibody on the in vivo induction of human interleukin (IL)-4 and IgE expression. Although anti-CD154 treatment of engrafted mice abrogated mature C $\epsilon$  transcription and IgE production, IL-4 mRNA levels were enhanced by the treatment. In addition, anti-CD154-induced enhancement of intracellular IL-4 synthesis was detectable in both CD4<sup>+</sup> and CD8<sup>+</sup> T cell subsets. Furthermore, upregulation of germline C $\epsilon$  transcription could be seen in anti-CD154-treated mice. These results demonstrate that blocking the CD154-CD40 interaction with anti-CD154 differentially regulates IL-4 synthesis in T cells and IgE production in B cells. Our data also indicate that antibody ligation of CD154 on T cells causes enhanced synthesis of IL-4, thereby contributing to upregulation of germline C $\epsilon$  transcription in B cells.

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