

# Notch Signalling Regulates Cytokine Production by CD8+ and CD4+ T Cells

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The Notch signalling pathway regulates several aspects of cellular differentiation such as T lineage commitment and effector functions on peripheral T cells; however, there is limited information regarding Notch receptor expression on different T cell subsets and the putative role of the different receptors on T cell effector function. Here, we studied the protein expression of Notch receptors on murine T cells in vitro and in vivo and analysed the role of the Notch pathway in cytokine production by CD4+ and CD8+ T cells. We found that resting CD4+ and CD8+ T cells do not express Notch receptors, but they upregulate Notch 1 and Notch 2 shortly after in vitro and in vivo activation. Using a  $\gamma$ -secretase inhibitor, which blocks Notch signalling through all Notch receptors, we demonstrated that the Notch pathway regulates IL-10 production by CD4+ T cells and IFN- $\gamma$  and IL-17 production by CD8+ T cells. These results suggest that Notch 1 and 2 are expressed by CD4+ and CD8+ T cells and repre