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Titel des Beitrags: Antigen targeting to plasmacytoid dendritic cells via Siglec-H inhibits Th cell-dependent autoimmunity.

Abstract: Plasmacytoid dendritic cells (PDCs) have been shown to present Ags and to contribute to peripheral immune tolerance and to Ag-specific adaptive immunity. However, modulation of adaptive immune responses by selective Ag targeting to PDCs with the aim of preventing autoimmunity has not been investigated. In the current study, we demonstrate that in vivo Ag delivery to murine PDCs via the specifically expressed surface molecule sialic acid binding Ig-like lectin H (Siglec-H) inhibits Th cell and Ab responses in the presence of strong immune stimulation in an Ag-specific manner. Correlating with sustained low-level MHC class II-restricted Ag presentation on PDCs, Siglec-H-mediated Ag delivery induced a hyporesponsive state in CD4(+) T cells leading to reduced expansion and Th1/Th17 cell polarization without conversion to Foxp3(+) regulatory T cells or deviation to Th2 or Tr1 cells. Siglec-H-mediated delivery of a T cell epitope derived from the autoantigen myelin oligodendrocyte glycoprotein to PDCs effectively delayed onset and reduced disease severity in myelin oligodendrocyte glycoprotein-induced experimental autoimmune encephalomyelitis by interfering with the priming phase without promoting the generation or expansion of myelin oligodendrocyte glycoprotein-specific Foxp3(+) regulatory T cells. We conclude that Ag delivery to PDCs can be harnessed to inhibit Ag-specific
immune responses and prevent Th cell-dependent autoimmunity.

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