Title (en)

ICOS+ SUPPRESSER T CELLS

Title (de)

ICOS+ SUPPRESSER T CELLS

Title (fr)

LYMPHOCYTES T SUPPRESSEURS ICOS+

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2004067697A2] Human antigen-presenting cells (APC), on which the costimulatory ligands CD40, CD80 and CD86 are blocked e.g. by antibodies, are unable to fully activate allogeneic T cells in vitro. Instead, they induce a long-lasting functional T cell alteration with lack of IL-2, IL-5 and IL-13 production upon allogeneic restimulation. Present invention demonstrates that despite costimulation blockade during in vitro allogeneic stimulation, a non-proliferating responder T cell subpopulation is activated to express ICOS. Removal of these ICOS-expressing cells restores the capacity of reciprocal ICOS negative cells to proliferate and to produce Th1 and Th2 cytokines after allogeneic restimulation. ICOS+ cells on the other hand are anergic at the level of proliferation and Th1 and Th2 cytokine production. However, these cells can produce IL-10, and they suppress the allogeneic responses of either primed or naive T cells through inhibition of IL-2 mRNA transcription. Suppression is not mediated by IL-10, but depends on cell-cell contact. Thus a subtype of regulatory T cells in human blood can be activated in the absence of costimulatory signals from CD40, CD80 and CD86, and that they can be identified by expression of ICOS after activation.

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