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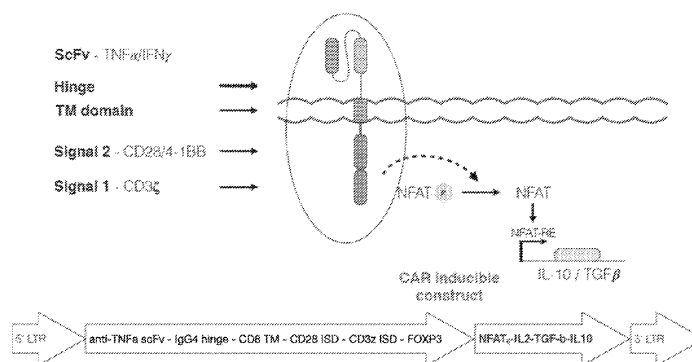
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(54) **Title:** CHIMERIC ANTIGEN RECEPTORS AND MODIFIED CELLS COMPRISING THE SAME

Chimeric antigen receptor construct with inducible cytokine production



Inducible chimeric antigen receptor - Recognition of TNF α /IFN γ by scFv leads to signalling via CD3 ζ and CD28, activating NFAT, which in turn induces expression of cytokines (IL10/TGF β).

Figure 1

(57) **Abstract:** The present invention relates to a chimeric antigen receptor (CAR) comprising an extracellular domain that binds to one or more inflammation associated factor(s), a transmembrane/hinge domain and an intracellular domain. In a specific embodiment, a T regulatory (Treg) cell expressing a construct encoding said CAR which further comprising a Fox3p and a CAR activation-dependent NF-AT promoter that drives the expression of interleukin-10 and TGF-beta. It also relate to the methods of producing the CAR, the Treg cells expressing said CAR and the use of said CAR to treat autoimmune diseases such as transplant rejection, a graft versus host disease (GVHD) and cytokine release syndrome..

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