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Cell intrinsic characteristics of human cord blood naïve CD4 T cells

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Highlights

- Human cord blood naïve CD4 T cells constitutively express high levels of CD26.
- Cord blood naïve CD4 T cells do not have an intrinsic propensity to produce Th2 type cytokines.
- Cord blood naïve CD4 T cells produce significantly more IFN- γ /IL-5 than adult naïve CD4 T cells when they are cultured under Th1/Th2 differentiation conditions, respectively.
- Cord blood naïve T cells proliferate in response to IL-7 without TCR engagement.

Abstract

It has been generally considered that the perinatal immune system is less inflammatory compared to the adult system and type 2 responses predominate perinatal immune responses against antigens. Indeed, previous studies in mice showed that there are cell-intrinsic differences between neonatal and adult CD4 T cells. However, studies on human cord blood and infant blood demonstrated that human perinatal T cells do not produce elevated levels of Th2 cytokines

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