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PII: S0165-2478(17)30422-4
DOI: https://doi.org/10.1016/j.imlet.2017.11.011
Reference: IMLET 6145

To appear in: *Immunology Letters*

Received date: 28-8-2017
Revised date: 28-10-2017
Accepted date: 22-11-2017

Please cite this article as: Jacks Ramiah D, Keller Taylor J, Nelson Alexander, Nishimura Michael, White Paula, Iwashima Makio.Cell intrinsic characteristics of human cord blood naïve CD4T cells.*Immunology Letters* https://doi.org/10.1016/j.imlet.2017.11.011

Cell intrinsic characteristics of human cord blood naïve CD4 T cells

Ramiah D. Jacks[1], Taylor J. Keller[2], Alexander Nelson[1,2], Michael Nishimura[3], Paula White[4], and Makio Iwashima[1,2,5]

[1]Department of Microbiology and Immunology, [2] Institute of Infectious Disease and Immunology, [3]Surgery, [4] Obsterics and Gynecology, [5]Van Kampen Cardiopulmonary Research Laboratory, Stritch School of Medicine, Loyola University Chicago, Maywood, IL 60153

*Corresponding author:
Makio Iwashima, Ph.D.
Department of Microbiology and Immunology
Stritch School of Medicine
Loyola University Medical Center
Building 115, Rm 216
2160 S. First Avenue
Maywood, IL 60153
Email: miwashima@luc.edu
Phone: 708-216-5816
Fax: 708-216-9574

The authors have declared no conflict of interests.

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 naive 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