



POSTER PRESENTATION

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The neonatal Fc receptor is expressed by human lymphocytes

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Introduction

The neonatal Fc receptor (FcRn) is an MHC class I like receptor that binds immunoglobulin G (IgG) in acidic environment (mainly endosomes). The FcRn protects IgG from lysosomal degradation, controls its transport between cell layers and extends IgG serum half-life [1]. It has been shown that the FcRn is expressed by many human cells including APCs and monocytes [2]. Thus far FcRn expression by human lymphocytes has not been proven.

Aim

In this study we examined FcRn expression in isolated mononuclear cells derived from freshly harvested PBMCs.

Methods

Freshly isolated PBMCs were obtained from three healthy volunteers and one buffycoat. NK, B, monocyte and CD4+ and CD8+ cell subsets were sorted by flow cytometry. FcRn and beta-2-microglobulin (β 2M) mRNA levels were determined by RQ-PCR. FcRn protein expression from PBMCs obtained from a buffycoat was analyzed by Western blot studies.

Results

RQ-PCR revealed expression of FcRn and B2M mRNA in B, CD4+ and CD8+ cells and monocytes in all three RPE cultures. Western blot analysis demonstrated that mRNA expression in PBMCs from a buffycoat co-existed with FcRn protein expression.

Conclusions

Apart from monocytes, human B, CD4+ and CD8+ cells express low levels of FcRn.

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