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► **To cite this version:**

Jérôme Martin, Gaëlle Bériou, Michèle Heslan, Céline Bossard, Anne-Chantal Knol, et al.. A subset of dendritic cells as a major and constitutive source of IL-22BP. 6th european workshop on immune-mediated inflammatory diseases, Nice, France. BioMed Central, 9 (Suppl 2), pp.P2, 2011. <inserm-00643975>

HAL Id: inserm-00643975

<http://www.hal.inserm.fr/inserm-00643975>

Submitted on 23 Nov 2011

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POSTER PRESENTATION

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A subset of dendritic cells as a major and constitutive source of IL-22BP

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From 6th European Workshop on Immune-Mediated Inflammatory Diseases
Nice, France. 23-25 November 2011

Introduction

IL-22 is a cytokine produced by T cells and innate lymphocytes. Its receptor is exclusively expressed by non hematopoietic cells mostly epithelial cells and hepatocytes. IL-22 has pathogenic or protective effects depending on the model. A role for IL-22 is suggested in IMID such as psoriasis, rheumatoid arthritis and Crohn disease. IL-22BP is a soluble inhibitory receptor specific for IL-22 whose cellular source and physiological role are mainly unknown.

Aims

To identify the cellular source of IL-22BP in vivo and its regulation of expression.

Methods

Rat dendritic cells (DCs) were prepared from spleen. Human DCs were derived from monocytes (MDDC) in the presence of GM-CSF+IL-4. IL-22BP mRNA expression was assessed by q-PCR. Immunostaining experiments were performed with polyclonal and/or monoclonal Ab to IL-22BP. IL-22BP in serum was identified by WB.

Results

IL-22BP mRNA was expressed at high levels in rat secondary lymphoid organs and intestine. In spleen, IL-22BP mRNA was restricted to a CD4⁺SIRPA⁺ subset of DCs. This expression was constitutive. Similar results were obtained in lymph nodes. IL-22BP expression in DCs was confirmed at the protein level. An even stronger expression was found in a subset of lymph DCs migrating from gut. In mouse, IL-22BP expression appeared restricted to the CD103⁺ subsets of intestine DCs. In human, immunostaining experiments identified stellate IL-22BP⁺ cells in

colon lamina propria and dermis. In vitro, IL-22BP expression was induced during MDDC differentiation and retinoic acid receptor alpha agonist dramatically enhanced this expression. IL-22BP expression was rapidly down-regulated following maturation both in rat and human DC. Finally, WB analysis revealed high levels of serum IL-22BP in healthy volunteers.

Conclusion

These results indicate that tissue and lymphoid DCs are a main source of IL-22BP suggesting a role for these DCs in regulating IL-22 at epithelial barriers.

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Published: 23 November 2011

doi:10.1186/1479-5876-9-S2-P2

Cite this article as: Martin et al.: A subset of dendritic cells as a major and constitutive source of IL-22BP. *Journal of Translational Medicine* 2011 **9**(Suppl 2):P2.

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