

Induction of Th2 type T cell response by ct-CD45 treatment of DCs

S. Gil Cantero¹, A. Puck¹, V. Pinnaró¹, S. König¹, P. Waidhofer-Söllner¹, J. Stöckl¹

¹Medical University of Vienna, Center for Pathophysiology, Infectiology and Immunology, Institute of Immunology, Vienna, Austria

Type selection

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General data

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Abstract text

Text: The soluble cytoplasmic tail of CD45 (ct-CD45) is a cleavage fragment of the prototypic receptor-like protein tyrosine phosphatase (PTP) CD45, that is generated during activation of human phagocytes. It acts as an inhibitory factor for T cells, decreasing their proliferation and cytokine production. We have recently demonstrated that ct-CD45 has an anti-inflammatory effect on monocyte-derived dendritic cells (DCs) through direct stimulation, enhancing IL-10 production while not influencing other cytokines such as IL-12. Additionally, ct-CD45 was revealed to be a non-canonical ligand of the Toll-like receptor 4 (TLR4), as its effect were blocked by the addition of TLR4 inhibitors. In this study, we analysed the impact of ct-CD45 stimulated DCs on T cell response. We could demonstrate that ct-CD45 stimulation of DCs do not influence T cell proliferation. Additionally, it resulted in a lower production of IFN-γ when coculture with the latter. However, IL4 and GM-CSF production were increased. Moreover, IL10 expression by T cells was reduced upon coculture with ct-CD45 treated DCs. IL2 production was not significantly affected. In summary, we could demonstrate that ct-CD45 stimulated DCs seem to induce a Th2 type response when coculture with T cells, further supporting the role of ct-CD45 as a damage-associated molecular pattern with immunomodulatory properties.

Conflict of Interest statement

Do you have any conflict of interest to declare?: No

Affirmation

- 1. Consent to participate and present onsite:** Yes
- 2. Consent to publication publication:** Yes
- 3. Consent on treatment of contact details saved in this system:** Yes