

ImmunoTools IT-Box-139 Award 2012



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Evaluation of Endothelial Progenitor Cells (EPCs) Activity and Number in the Development of Diabetic Retinopathy

The major objective of my PhD project is to investigate whether discrete EPC abnormalities were associated with early Non Proliferative Diabetic Retinopathy or with Proliferative Diabetic Retinopathy, with a particular consideration of the EPC subtypes (the one solely committed to the endothelial lineage or the other carrying both endothelial and monocytic markers, or both). We plan to evaluate also the expression of molecules related to homing process of these cells from the bone marrow to the blood flow and to the retina.

The hypothesis that diabetes may impact not only on the retinal vasculature but also on the progenitor cells involved in the pathogenesis of diabetic retinopathy and residing inside the bone marrow is rapidly taking place. In parallel, the concept of diabetic mobilopathy as a novel complication of diabetes is becoming widely accepted. Based on this concepts, the study of the dysfunctions of EPCs appears to be necessary, but is probably not sufficient to explain the development of diabetic retinopathy as these cells are reasonably not the only ones to be affected by the diabetic milieu.

To understand if other circulating cells are affected by diabetes how they relate to the onset and progression of diabetic retinopathy, we plan to take advantage of the IT-Box-139 for a quantitative screening.

ImmunoTools IT-Box-139 for Silvia Maestroni include 100 antibodies

FITC - conjugated anti-human CD1a, CD3, CD4, CD5, CD6, CD7, CD8, CD14, CD15, CD16, CD19, CD21, CD25, CD29, CD35, CD36, CD41a, CD42b, CD45, CD45RA, CD45RB, CD45RO, CD49d, CD53, CD57, CD61, CD63, CD80, CD86, HLA-DR, IL-6, Control-IgG1, Control-IgG2a, Control-IgG2b, Annexin V

PE - conjugated anti-human CD3, CD4, CD8, CD11b, CD15, CD14, CD18, CD19, CD20, CD21, CD22, CD31, CD33, CD38, CD40, CD45, CD45RB, CD50, CD52, CD56, CD58, CD62p, CD72, CD95, CD105, CD147, CD177, CD235a, HLA-ABC, IL-6, Control-IgG1, Control-IgG2a, Control-IgG2b, Annexin V

PE/Dy647 -tandem conjugated anti-human CD3, CD4, CD8, CD14, CD19, CD20, CD25, CD54

APC -conjugated anti-human CD2, CD3, CD4, CD8, CD10, CD11a, CD11c, CD14, CD16, CD27, CD37, CD42b, CD44, CD45, CD59, CD62L, CD69, CD71, IL-6, Control-IgG1, Control-IgG2a, Control-IgG2b, Annexin V

[DETAILS](#)