

ImmunoTools IT-Box-139 Award 2013



Mariann Kremlitzka

PhD Supervisor: Dr. Anna Erdei

H-1117 Budapest, Pázmány Péter sétány 1/c., Hungary

Role of immune complex-binding structures under healthy and autoimmune conditions

Our main field of research is the role of natural immunity, its relationship to adaptive immunity, and the regulation of immune processes: Our group works on the complement system, trying to reveal the expression and function of complement receptors (CD35 and CD21) on human B cells under physiological and autoimmune conditions and understand how the complement system regulate the adaptive immunity.

I work with primary human B cells, analyzing the expression and the functional effect of the complement receptors (mainly complement receptor 1 (CD35)) on them. During our experiments, I routinely use **ImmunoTools** reagents, such as recombinant cytokines to the differentiation of human B cells (recombinant IL-2, IL-10 and soluble CD40L) and fluorescently labeled antibodies (CD3, CD19, CD56, CD14, CD80, CD86, CD71, CD20, CD38, CD27, etc.) to identify different human cell populations and cell surface antigens. The fluorescently labeled antibodies are used to test the purity of isolated cell populations (example CD3 as T cell marker, CD14 as monocyte/macrophage marker, CD19 as B cell marker), to analyze the expression of activation markers (CD80, CD86, CD25, CD71) and to distinguish distinct subpopulations of human B cells (naïve cells: CD19⁺CD27⁻, memory cells: CD20⁺CD19⁺CD27⁺CD38⁻, plasma cells: CD20⁻CD19^{low}CD27^{high}CD38⁺⁺). In addition to this, we try to analyze the functions of B cells on flow cytometer, such as proliferation (CFSE labeling), cytokine expression (intracellular cytokine measurement), and activation of signaling pathways (PhosphoFlow).

Referring to the above mentioned experiments and the usage of fluorescently labeled antibodies I would be very grateful if I won the **ImmunoTools** PhD award.

[home](#)

ImmunoTools *IT-Box-139.3* for **Mariann Kremlitzka** includes 100 antibodies

FITC - conjugated anti-human CD1a, CD2, CD3, CD4, CD5, CD6, CD7, CD8, CD9, CD11a, CD11b, CD14, CD15, CD16, CD18, CD19, CD21, CD25, CD29, CD36, CD41a, CD43, CD45, CD45RA, CD46, CD52, CD53, CD54, CD58, CD62p, CD63, CD69, CD71, CD80, CD86, CD95, CD235a, HLA-ABC, HLA-DR, IL-6, Control-IgG1, Control-IgG2a, Control-IgG2b, Annexin V

PE - conjugated anti-human CD2, CD3, CD4, CD8, CD11b, CD14, CD15, CD18, CD19, CD20, CD21, CD22, CD27, CD33, CD34, CD37, CD38, CD40, CD42b, CD45, CD45RB, CD50, CD72, CD95, CD105, CD147, CD177, Control-IgG1, Control-IgG2a, Control-IgG2b, Annexin V

PE/Dy647 -tandem conjugated anti-human CD45

APC -conjugated anti-human CD3, CD4, CD7, CD8, CD10, CD11c, CD14, CD16, CD19, CD27, CD37, CD40, CD44, CD56, CD59, CD61, CD62L, CD62P, CD69, IL-6, Control-IgG1, Control-IgG2a, Control-IgG2b, Annexin V

[DETAILS](#)

plus CD71 APC