ImmunoTools IT-Box-139 Award 2013

Roxana Khazen

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Dissecting CTL phenotype and fitness in melanoma patient.

Lethal hit delivery by cytotoxic T lymphocytes (CTL) is a very rapid response which occurs within a few minutes after the initial contact between CTL and target cells, independently of the strength of antigenic stimulation. Intriguingly, the paradigm of exquisitely efficient CTL does not hold for immunesurveillance against solid tumors such as melanoma. Indeed, studies have shown that Tumor Associated Antigen (TAA) specific T cells in melanoma patients constitute more than 2% of the total population and can be detected in the patient, indicating that the immune system is able to recognize and respond to melanoma. However, the effector function of these naturally occurring CTL or of CTL induced by immune-therapy protocols is often insufficient to achieve clinical remission.

Our laboratory has developed a strong expertise in the field of CTL biology and in the study of the immunological synapse formed between CTL and cancer target cells. Likewise, we have recently shown using time-lapse microscopy experiments that individual CTL rapidly polarize their lytic machinery towards target cells, yet the apoptotic process in melanoma cells is defective or "delayed" as compared to conventional targets.

We have a straight collaboration with dermatologists in Larrey Hospital (Toulouse, France) who agreed to provide us metastatic melanoma skin samples together with patients blood samples. The aim of my research project is to describe new markers of CTL fitness which could be correlated with diagnosis and prognosis of melanoma disease. For this study I will need a large number of different fluorochrome-conjugated antibodies for flowcytometry to define an "immunological signature" of melanoma specific CTL (identified by Melan-A/MART-1 tetramer staining) and to sort them in order to perform *in vitro* killing assay on different melanoma cell lines.

I deeply believe that ImmunoTools antibodies might be an interesting option for these studies.

ImmunoTools *IT-Box-139.2* for **Roxana Khazen** includes 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

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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