ImmunoTools IT-Box-139 Award 2012

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Transfer of molecules between Natural Killer cells and their targets after de immune synapse: characterization, mechanism and functional consequences

Transfer of molecules between immune cells occurs by two main mechanisms: membrane nanotubes, derived from membrane fusion, and trogocytosis. This latter phenomenon is defined as the intercellular transfer of intact plasma membrane patches and their associated proteins, and has been studied in T, B and NK cells both in vitro and in vivo. Proteins transferred can be ligands or receptors and the functional consequences on the acceptor cell depend on the function of the transferred protein and the phenotype of the donor cell. The main objective of my work is to study the transfer of molecules by trogocytosis from target cells to cells of the immune system, in particular NK cells. This phenomenon could be important for the regulation of immune responses in which NK cells are important, such as tumoral transformation, autoimmune diseases or viral and bacterial infections.
Experiments for the characterization of this process are performed by flow cytometry. The ImmunoTools IT-Box-139 would be used to identify different immune populations and target cells (NK cells, T and B lymphocytes, Macrophages and Dendritic cells) in transfer experiments, as well as to identify the molecules present in the membrane patches transferred. The underlying molecular mechanisms of this process must involve a particular composition of the membrane fragment transferred, or specific domains such as lipid rafts or patches rich in caveolin, tetraspanins, etc. In addition, to study the functional consequences of these processes it is important to investigate possible changes in the phenotype of the immune cells that acquire new molecules, and the possible role of different sub-populations. To answer all these questions the ImmunoTools IT-Box-139 would be very useful.

ImmunoTools IT-Box-139 for Sheila Lopez Cobo 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