

# ImmunoTools IT-Box-139 Award 2012



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## Phenotype and cytotoxicity of NK cells after stimulation with interleukin-15

We propose an investigation into the antitumor effect of donors' Natural Killer cells (NK cells) in paediatric patients with acute leukaemia who receive an allogeneic identical HLA Stem Cell Transplant (SCT). The development of biotechnology at the present moment allows the manipulation of NK cells. It is possible to isolate NK cells from peripheral blood, activate and expand them in the laboratory. This fact, alongside the immunobiology knowledge of interactions between NK cells and malignant cells, would allow the exploitation of the NK cells' effect in an allogeneic identical HLA SCT. Studies like this are really important to make possible the use of donors' NK cells for infusions, following expansion and activation in vitro, as immunotherapy in the future. We intend to develop the pre-clinical experimentation in this project, studying in the laboratory the phenotype and the cytotoxicity of donors' NK cells (after selection, expansion and stimulation with Interleukin-15) in the allogeneic HLA identical SCT. We would use antibodies provided by the **ImmunoTools** IT-Box-139 for the flow cytometric phenotypic analysis of the NK cells at three stages during the expansion and activation. It is really useful to check the changes in the expression of the receptors due to the expansion and activation with Interleukin-15. The antibodies CD16, CD25, CD45, Control- IgG1, CD19, CD20, CD56, HLA-ABC, Control-IgG2a and CD3, provided by the **ImmunoTools** IT-Box-139, would be very useful in this investigation.

**ImmunoTools** IT-Box-139 for Isabel Martínez Romera 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

**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](#)