

Functional *in house* Assays for Immunodeficiencies in Lymphocytes by Cytometry

A research group from CIBER and Hospital Universitario la Paz has developed several assays for the evaluation and assessment of immunodeficiencies in Lymphocytes.

The Need

Patients with immunodeficiencies are up to now diagnosed using sequencing techniques, often identifying genes with unknown function. Functional studies should be performed to identify the pathogenicity of these genes for better understanding of the clinical manifestations. However, these assays are not always performed in clinical routine and if so, they are neither standardized nor reproducible, making difficult to reach reliable conclusions.

The Solution

Development of *in house* flow cytometry assays under standardized criteria and set out in standard operating procedures

Innovative Aspects

- ✓ Possibility of obtention of reliable conclusions with clinical applicability, thanks to the strict controls applied, together with the supervision of specialists in clinical immunology, standard and quality criteria applied.
- ✓ Possibility of using the assays as a resource for precision medicine for detecting the impact and variability intra and interpersonal in patients with different diseases with immune pathology basis.

Stage of Development:

Validation of the assays in lymphocytes from healthy donors and patients with immunodeficiencies.



Figure 1. Trademark registered (EUIPO)

Intellectual Property:

- **Trademark registration in Europe:** Immune signal.
- **Protocols registered in SafeCreative.**
 - Assay for the determination of IκBα levels at baseline in B and T cells, and the degradation upon anti IgM, CD40L and PMA by intracellular flow cytometry.
 - Assay for the determination of Akt and S6 phosphorylation levels in B cells at baseline and after anti IgM stimulation by intracellular flow cytometry.

Aims

Looking for a partner interested in a license and/or a collaboration agreement to develop and exploit this asset.

Contact details