Diaclone
IMMUNOLOGY PRODUCTS & SERVICES

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Human IL-13 ELISpot Kit

PRODUCT SPECIFICATIONS

Catalogue N°	856.121.001PC - 1 x 96 Discovery (pre-coated plate) 856.121.002PC - 2 x 96 (pre-coated plates) 856.121.005PC - 5 x 96 (pre-coated plates)
Target species	Human
Specificity	Recognises both natural and recombinant human IL-13
Incubation	3h after cell stimulation
Cross Reaction	No cross reactivity with other human cytokines
Kit Content	Diaclone Pre-coated ELISpot kits include precoated PVDF plates, Detection antibody, Alkaline phosphatase conjugate, BSA, BCIP/NBT ready-to-use substrate buffer.

BACKGROUND

Interleukin-13 (IL-13) is a Th2-type cytokine, secreted from CD4(+) T cells, mast cells, basophils and eosinophils. The IL-13 gene generates a cluster with other Th2-type cytokines such as IL-4 and IL-5. Although the homology between IL-13 and IL-4 at the amino acid level is low, the IL-13 structure determined by NMR is very similar to that of IL-4. Both cytokines share their receptors and signal pathways, giving these two cytokines similar biological properties.

IL-13 is an immunoregulatory cytokine. It has become evident that IL-13 is a key mediator in the pathogenesis of allergic inflammation. IL-13 mediates its effects by interacting with a complex receptor system comprised of IL-4Ralpha and two IL-13 binding proteins, IL-13Ralpha1 and IL-13Ralpha2.

IL-13 receptors are expressed on human B cells, basophils, eosinophils, mast cells, endothelial cells, fibroblasts, monocytes, macrophages, respiratory epithelial cells, and smooth muscle cells. However, functional IL-13 receptors have not been demonstrated on human or mouse T cells. Thus unlike IL-4, IL-13 does not appear to be important in the initial differentiation of CD4 T cells into T(H)2-type cells but rather appears to be important in the effector phase of allergic inflammation.

The important role of IL-13 in the pathogenesis of bronchial asthma as well as other allergic diseases has been recognized, based mainly on analyses of mouse models. Interleukin-13 further plays a major role in various other inflammatory diseases including cancer. The IL-13Ralpha2 but not IL-13Ralpha1 chain binds IL-13 with high affinity and is over expressed in a variety of human cancer cells derived from glioma, squamous cell carcinoma of head and neck, and AIDS-associated Kaposi's sarcoma.