

Product datasheet

Human IL-2 ELISPOT Kit (without plates) ab46546

1 References

Overview

Product name	Human IL-2 ELISPOT Kit (without plates)
Sample type	Suspension cells
Assay type	Sandwich (qualitative)
Assay duration	Multiple steps standard assay
Species reactivity	Reacts with: Human
Product overview	Abcam's IL-2 Human ELISPOT kit is an <i>in vitro</i> ELISPOT assay designed for the qualitative measurement of IL-2 production and secretion in a single cell suspension.

The ELISPOT assay is designed to enumerate cytokine producing cells in a single cell suspension. This method has the advantage of requiring a minimum of in-vitro manipulations allowing cytokine production analysis as close as possible to in-vivo conditions in a highly specific way. This technique is designed to determine the frequency of cytokine producing cells under a given stimulation, and the follow-up of such frequency during a treatment and/or a pathological state. ELISPOT assay constitutes an ideal tool in the TH1 / TH2 response, vaccine development, viral infection monitoring and treatment, cancerology, infectious diseases, autoimmune diseases and transplantation.

The ELISPOT assay is based on sandwich immuno-enzyme technology. Cell secreted cytokines or soluble molecules are captured by coated antibodies avoiding diffusion in supernatant, protease degradation or binding on soluble membrane receptors. After cell removal, the captured cytokines are revealed by tracer antibodies and appropriate conjugates.

After cell stimulation, locally produced cytokines are captured by a specific monoclonal antibody. After cell lysis, trapped cytokine molecules are revealed by a secondary biotinylated detection antibody, which is in turn recognised by streptavidin conjugated to alkaline phosphatase. PVDF-bottomed-well plates are then incubated with BCIP/NBT substrate. Colored "purple" spots indicate cytokine production by individual cells.

Recognizes natural human IL2.

Tested applications	Suitable for: ELISpot
Platform	Reagents

Properties

Storage instructions

Store at +4°C. Please refer to protocols.

Components	5 x 96 tests	10 x 96 tests	15 x 96 tests	20 x 96 tests
Bovine Serum Albumin	1 x 1g	2 x 1g	3 x 1g	4 x 1g
Human IL-2 Capture antibody	1 x 0.5ml	2 x 0.5ml	3 x 0.5ml	4 x 0.5ml
IL-2 Biotinylated detection antibody	1 x 0.55ml	2 x 0.55ml	3 x 0.55ml	4 x 0.55ml
Ready-to-use BCIP/NBT substrate buffer	1 x 50ml	2 x 50ml	3 x 50ml	4 x 50ml
Streptavidin - Alkaline Phosphatase conjugated	1 x 50µl	2 x 50µl	3 x 50µl	4 x 50µl

Relevance

Human interleukin 2 (IL2) is a secreted cytokine that is important for the proliferation of T and B lymphocytes. The receptor of this cytokine is a heterotrimeric protein complex whose gamma chain is also shared by interleukin 4 (IL4) and interleukin 7 (IL7). The expression of this gene in mature thymocytes is monoallelic, which represents an unusual regulatory mode for controlling the precise expression of a single gene. The targeted disruption of a similar gene in mice leads to ulcerative colitis like disease, which suggests an essential role of this gene in the immune response to antigenic stimuli. IL2 has been shown to have antitumor effects in some studies. This is probably mediated by cytotoxic effector cells.

Cellular localization

Secreted

Applications

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The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ELISpot		Use at an assay dependent dilution.

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