

## ELISpot Human IL-2

### Product Details

#### Application

The Human IL-2 Enzyme-Linked ImmunoSpot (ELISpot) assay is a highly sensitive method used to detect and quantify individual cells that secrete specific cytokines or other soluble molecules. This assay is utilized in immunology to monitor cellular immune responses at the single-cell level and reliably detects and measures human IL-2 secretion by stimulated effector cells.

#### Description

IL-2 is a multifunctional cytokine involved in both innate and adaptive immunity. It is produced primarily by activated CD4<sup>+</sup> T cells and, to a lesser extent, by CD8<sup>+</sup> T cells and dendritic cells during immune responses. IL-2 can also be produced by other cell types, including Natural Killer (NK) cells and some subsets of B cells.

As a proinflammatory cytokine, IL-2 plays a major role in the activation and proliferation of T cells, promoting the growth, differentiation, and survival of antigen-selected cytotoxic T cells. IL-2 regulates immune responses by modulating the activity of various immune cells, including T cells, B cells, NK cells, and macrophages. It is critical for both innate and adaptive immunity, enhancing the immune response against a wide range of pathogens, including viruses, bacteria, and parasites, due to its ability to promote the expansion and activation of effector immune cells.

One of its key functions is the induction of regulatory T cells, which are essential for maintaining immune tolerance and preventing autoimmune reactions. IL-2 also stimulates the production of other cytokines and growth factors, contributing to the coordination and amplification of immune responses.

#### Product Specifications

Product	ELISpot Human IL-2 kit
Application	ELISpot
Analyte	IL-2
Reactivity	Human
Specificity	Human IFN- $\gamma$ .
Storage	Store plates and reagents between 2 and 8°C
Shelf life	18 months from date of receipt.

#### Kit content

Peptide pools	No peptide pool included – plate and reagents only
Plate	ELISpot plate precoated with IL-2 capture antibody

Detection mAb	Biotinylated recombinant IL-2 antibody
Enzyme conjugate	Streptavidin-ALP (Alkaline Phosphatase)
Substrate	BCIP/NBT Ready-to-use solution
Blocking agent	Bovine Serum Albumin (BSA)