



Rat Interleukin 4,IL-4 ELISA KIT

Product Code	CSB-E04635r
Abbreviation	IL4
Protein Biological Process 1	Immunity
Target Name	interleukin 4
Uniprot No.	P20096
Alias	BCGF-1, BCGF1, BSF1, IL-4, MGC79402, B cell growth factor 1 B_cell stimulatory factor 1 lymphocyte stimulatory factor 1
Product Type	ELISA Kit
Immunogen Species	Rattus norvegicus (Rat)
Protein Biological Process 3	B-cell activation
Sample Types	serum, plasma, tissue homogenates
Detection Range	15.6 pg/mL-1000 pg/mL
Sensitivity	3.9 pg/mL
Assay Time	1-5h
Sample Volume	50-100ul
Detection Wavelength	450 nm
Lead Time	3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.
Research Area	Immunology
Gene Names	Il4
Tag Info	quantitative
Protein Description	Sandwich

Description

CUSABIO's rat IL-4 ELISA kit is an in vitro enzyme-linked immunosorbent assay for the quantitative determination of IL-4 concentrations in serum, plasma, and tissue homogenates. This assay exclusively recognizes rat IL-4. The quantitative sandwich ELISA technique of this kit is based on IL-4 antibody-IL-4 antigen interactions and an HRP colorimetric detection system to detect the levels of IL-4 in samples. The intensity of the color is positively proportional to the amount of bound IL-4 in the initial step.

IL-4 is a pleiotropic Th2 cytokine involved in IgE production, mast cell development, and eosinophil development. IL-4 binds to IL-4R α - γ C or IL-4R α -IL-13R α 1, activating JAKs, leading to the recruitment of mediators of cell growth, resistance to apoptosis, gene activation, and differentiation.



Dysregulated IL-4 signaling is associated with the pathophysiology of inflammatory and allergic disorders, such as asthma and atopic dermatitis (AD). IL-4 is implicated in asthma through its involvement in IgE production, eosinophil chemotaxis, and the differentiation of TH0 cells to TH2 cells. It also plays an essential role in the development of allergic diseases. IL4/IL4R signaling also exerts immune and pro-tumor functions.

Target Details

This protein is a pleiotropic cytokine produced by activated T cells. This cytokine is a ligand for interleukin 4 receptor. The interleukin 4 receptor also binds to IL13, which may contribute to many overlapping functions of this cytokine and IL13. STAT6, a signal transducer and activator of transcription, has been shown to play a central role in mediating the immune regulatory signal of this cytokine. This gene, IL3, IL5, IL13, and CSF2 form a cytokine gene cluster on chromosome 5q, with this gene particularly close to IL13. This gene, IL13 and IL5 are found to be regulated coordinately by several long-range regulatory elements in an over 120 kilobase range on the chromosome. Two alternatively spliced transcript variants of this gene encoding distinct isoforms have been reported.

Msds

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