# Active Interleukin 4 (IL4)

*Catalog#:PXM12130*

## 概述（Summary）

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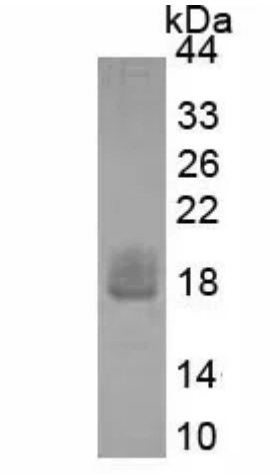
| **别称（Alternative Names）** | BSF1; BCGF1 ;B Cell Stimulatory Factor 1; Lymphocyte stimulatory factor 1; B Cell Growth Factor; Binetrakin; Pitrakinra |
| **纯度（Purity）** | Greater than 95% as determined by reducing SDS-PAGE. |
| **内毒素（Endotoxin level）** | Please contact with the lab for this information |
| **蛋白构建（Construction）** | 【His21-Ser140】 |
| **Accession #** | P07750 |
| **表达宿主（Host）** | - |
| **种属（Species）** | Mus musculus (Mouse) |
| **预测分子量（Predicted MW）** | 15.2 kDa |
| **制剂（Form）** | Lyophilized from a 0.2 μm filtered solution of 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300. |
| **运输方式（Shipping）** | The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below. |
| **稳定性&储存（Stability &Storage）** | 12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles. |
| **复溶（Reconstitution）** | Reconstitute in 20mM Tris, 150mM NaCl (PH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex. |
| **背景介绍（References）** | Participates in at least several B-cell activation processes as well as of other cell types. It is a costimulator of DNA-synthesis. It induces the expression of class II MHC molecules on resting B-cells. It enhances both secretion and cell surface expression of IgE and IgG1. It also regulates the expression of the low affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes. Positively regulates IL31RA expression in macrophages. Stimulates autophagy in dendritic cells by interfering with mTORC1 signaling and through the induction of RUFY4. |

## 电泳图（SDS-PAGE image）




Greater than 95% as determined by reducing SDS-PAGE.

## 活性图（Bioactivity image）

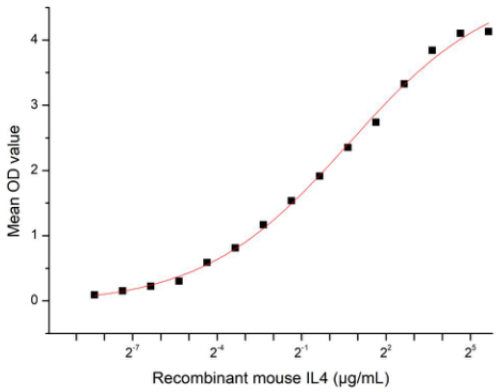



**Figure 1. The binding activity of recombinant mouse IL4 and recombinant goat IL1a**

Interleukin 4 (IL4) is a pleiotropic cytokine primarily secreted by activated T cells, mast cells, and basophils. It plays a central role in immune regulation by promoting the differentiation of naïve T cells into Th2 cells and stimulating B cell proliferation and antibody class switching to IgE and IgG1. IL4 is crucial for defense against parasitic infections and is involved in allergic responses, including asthma and atopic dermatitis. It signals through the IL4 receptor complex , activating JAK-STAT pathways to modulate gene expression. Dysregulated IL4 production is associated with autoimmune diseases, chronic inflammation, and cancer. Its dual role in both promoting and suppressing immune responses makes it a key therapeutic target.Besides,Interleukin 1 Alpha (IL1a) has been identified as an interactor of IL4, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse IL4 and recombinant goat IL1a. Briefly, IL4 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to IL1a-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-IL4 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37°C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50 µL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant mouse IL4 and recombinant goat IL1a was shown in Figure 1, the EC50 for this effect is 1.595µg/mL.

## 注意事项（Note）

For Research Use Only , Not for Diagnostic Use.