# Active Interleukin 10 (IL10)

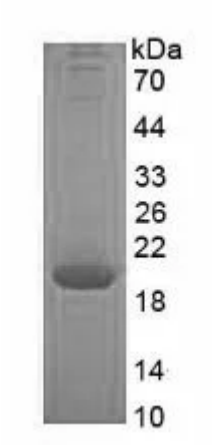
*Catalog#:PHH12089*

## 概述（Summary）

| | |
|---|---|
| **别称（Alternative Names）** | CSIF; IL10A; TGIF; Cytokine Synthesis Inhibitory Factor |
| **纯度（Purity）** | Greater than 97% as determined by reducing SDS-PAGE. |
| **内毒素（Endotoxin level）** | Please contact with the lab for this information |
| **蛋白构建（Construction）** | 【Ser19-Asn178】 |
| **Accession #** | P22301 |
| **表达宿主（Host）** | 293F |
| **种属（Species）** | Homo sapiens (Human) |
| **预测分子量（Predicted MW）** | 20.3 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 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex. |
| **背景介绍（References）** | Major immune regulatory cytokine that acts on many cells of the immune system where it has profound anti-inflammatory functions, limiting excessive tissue disruption caused by inflammation. Mechanistically, IL10 binds to its heterotetrameric receptor comprising IL10RA and IL10RB leading to JAK1 and STAT2-mediated phosphorylation of STAT3. In turn, STAT3 translocates to the nucleus where it drives expression of anti-inflammatory mediators. Targets antigen-presenting cells (APCs) such as macrophages and monocytes and inhibits their release of pro-inflammatory cytokines including granulocyte-macrophage colony-stimulating factor /GM-CSF, granulocyte colony-stimulating |

factor/G-CSF, IL-1 alpha, IL-1 beta, IL-6, IL-8 and TNF-alpha. Interferes also with antigen presentation by reducing the expression of MHC-class II and co-stimulatory molecules, thereby inhibiting their ability to induce T cell activation. In addition, controls the inflammatory response of macrophages by reprogramming essential metabolic pathways including mTOR signaling.

## 电泳图（SDS-PAGE image）




Greater than 97% as determined by reducing SDS-PAGE.

## 活性图（Bioactivity image）

**Table 1. Inhibitory effects of IL-10 on IL-1β production by THP1 cells**

| Sample (cell supernatant of THP1 cells) | Concentration of IL-1β (ng/m |
|---|---|
| Stimulated with LPS (1ug/mL) and IL-10 (5ng/mL) | <2.343 |
| Stimulated with LPS (1ug/mL) and IL-10 (10ng/mL) | <2.343 |
| Stimulated with LPS (1ug/mL) | 19.9 |
| Unstimulated | <2.343 |

Interleukin 10 (IL-10), also known as human cytokine synthesis inhibitory factor (CSIF), is an anti-inflammatory cytokine. IL-10 was initially reported to suppress cytokine secretion, antigen presentation and CD4 T cell activation. Further investigation has shown that IL-10 predominantly inhibits lipopolysaccharide (LPS) mediated induction of the pro-inflammatory cytokines TNFα, IL-1β, IL-12, and IFNγ made by cells such as macrophages and Th1 T cells. Therefore, THP1 cells were cultured in 24 well plates at a concentration of 106 cells/ml and activated by LPS (1ug/mL) in the absence or presence of IL-10 (5ng/mL, 10ng/mL) for 24h and production of IL-1β was determined in the supernatants by cytokine specific ELISA. Activation of THP1 cells with LPS (1ug/mL) resulted in high levels of production of IL-1β and strong inhibitory effects of IL-10 (5ng/mL, 10ng/mL) were observed on the production of IL-1β as shown in Table 1.

## 注意事项（Note）

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