Active Interleukin 6 (IL6)

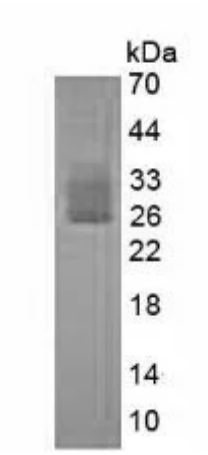
Catalog#:PHM12142

概述（Summary）

别称（Alternative Names）	MGI2-A; MGI2A; HGF; BSF2; HSF; IFNB2; B-Cell Stimulatory Factor-2; Hybridoma/Plasmacytoma Growth Factor; Hepatocyte Stimulating Factor; Cytotoxic T-Cell Differentiation Factor
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）	【Phe25-Thr211】
Accession #	P08505
表达宿主（Host）	293F
种属（Species）	Mus musculus (Mouse)
预测分子量（Predicted MW）	23.3 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 20mM Tris, 150mM NaCl (PH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Cytokine with a wide variety of biological functions in immunity, tissue regeneration, and metabolism (Probable). Binds to IL6R, then the complex associates to the signaling subunit IL6ST/gp130 to trigger the intracellular IL6-signaling pathway. The interaction with the membrane-bound IL6R and IL6ST stimulates 'classic signaling', whereas the binding of IL6 and soluble IL6R to IL6ST stimulates 'trans-signaling'. Alternatively, 'cluster signaling' occurs when membrane-bound IL6:IL6R complexes on transmitter cells activate IL6ST

receptors on neighboring receiver cells.; IL6 is a potent inducer of the acute phase response. Rapid production of IL6 contributes to host defense during infection and tissue injury, but excessive IL6 synthesis is involved in disease pathology. In the innate immune response, is synthesized by myeloid cells, such as macrophages and dendritic cells, upon recognition of pathogens through toll-like receptors (TLRs) at the site of infection or tissue injury. In the adaptive immune response, is required for the differentiation of B-cells into immunoglolin-secreting cells (Probable). Plays a major role in the differentiation of CD4(+) T cell subsets. Essential factor for the development of T follicular helper (Tfh) cells that are required for the induction of germinal-center formation. Together with IL21, controls the early generation of Tfh cells and are critical for an effective antibody response to acute viral infection. Required to drive naive CD4(+) T cells to the Th17 lineage, through 'cluster signaling' by dendritic cells. Also required for proliferation of myeloma cells and the survival of plasmablast cells (Probable).; Acts as an essential factor in bone homeostasis and on vessels directly or indirectly by induction of VEGF, resulting in increased angiogenesis activity and vascular permeability. Induces, through 'trans-signaling' and synergistically with IL1B and TNF, the production of VEGF. Involved in metabolic controls, is discharged into the bloodstream after muscle contraction increasing lipolysis and improving insulin resistance. 'Trans-signaling' in central nervous system regulates energy and glucose homeostasis. Mediates, through GLP-1, crosstalk between insulin-sensitive tissues, intestinal L cells and pancreatic islets to adapt to changes in insulin demand. Also acts as a myokine. Plays a protective role during liver injury, being required for maintenance of tissue regeneration. Also has a pivotal role in iron metabolism by regulating HAMP/hepcidin expression upon inflammation or bacterial infection. Through activation of IL6ST-YAP-NOTCH pathway, induces inflammation-induced epithelial regeneration.

电泳图（SDS-PAGE image）



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

活性图（Bioactivity image）

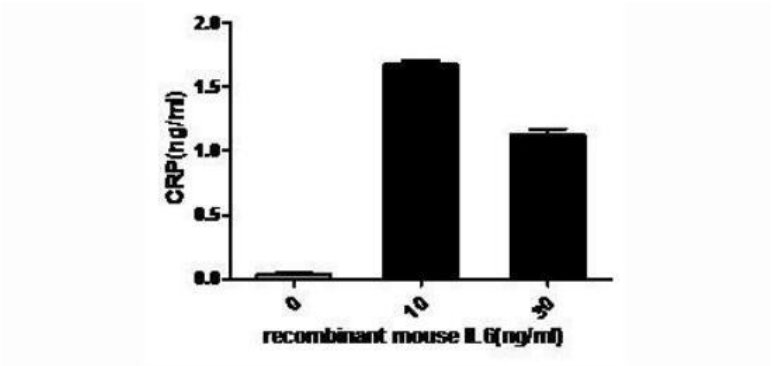


Figure 1. CRP levels in the cell supernatant of HepG2 cells regulated by IL6.

Interleukin-6 (IL-6), a pro-inflammatory cytokine and an anti-inflammatory myokine, plays important roles in the acute phase reaction, inflammation, hematopoiesis, bone metabolism, and cancer progression. It has been reported that IL6 induces C-reactive protein (CRP) expression through the STAT3 pathway in HepG2 cells. To test this effect, HepG2 cells were seeded overnight at a density of 1x105 cells/mL, and treated with or without various concentrations of IL6 for 24h and CRP levels in the cell supernatant were determined by ELISA. CRP levels in the cell supernatant of HepG2 cells increased significantly after stimulated with IL6, the data was shown in Table 1 and Figure 1.

Sample (cell supernatant of HepG2 cells)	O.D. value	Corrected	Concentration of CRP (ng/mL)
stimulated with IL6 (10ng/mL)	0.514	0.453	1.61
stimulated with IL6 (30ng/mL)	0.396	0.335	1.13
unstimulated	0.128	0.067	0.03

Table 1. CRP levels in the cell supernatant of HepG2 cells regulated by IL6.

注意事项（Note）

For Research Use Only , Not for Diagnostic Use.