Active Interleukin 6 (IL6)

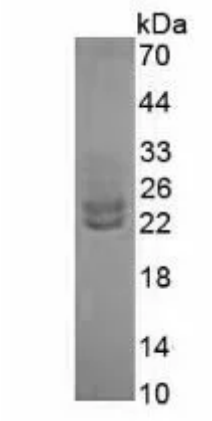
Catalog#:PHH12141

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 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）	【Val30-Met212】
Accession #	P05231
表达宿主（Host）	293F
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	22.4 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）	Cytokine with a wide variety of biological functions in immunity, tissue regeneration, and metabolism. Binds to IL6R, then the complex associates to the signaling subunit IL6ST/gp130 to trigger the intracellular IL6-signaling pathway (Probable). 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 (Probable).; 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 (Probable). In the adaptive immune response, is required for the differentiation of B cells into immunoglobulin-secreting cells. 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. Required to drive naive CD4(+) T cells to the Th17 lineage. Also required for proliferation of myeloma cells and the survival of plasmablast cells.; 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 also 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 (Probable). 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 97% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

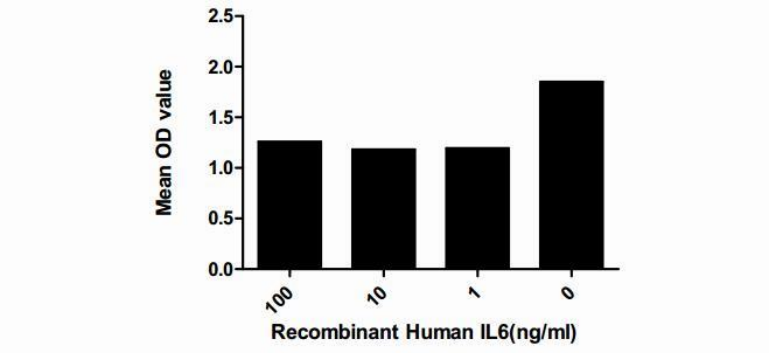


Figure 2. The inhibitory effect of IL-6 on cell proliferation of MCF-7 cells detected by CCK8.

Interleukin 6 (IL-6) is an interleukin that acts as both a pro-inflammatory cytokine and an anti-inflammatory myokine. Current data suggest that direct application of IL-6 on breast cancer cells inhibits proliferation in ER-positive (estrogen- receptor-positive) cells through the Jak/Stat3 pathway. To test the inhibitory effect of IL-6 on proliferation of ER-positive MCF-7 cell line, cells were seeded into triplicate wells of 96-well plates at a density of 5,000 cells/well and allowed to attach overnight, then the medium was replaced with serum-free standard DMEM prior to the addition of various concentrations of IL-6. After incubated for 96h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10μL of CCK-8 solution was added to each well of the plate, then measure the absorbance at 450nm using a microplate reader after incubating the plate for 1-4 hours at 37oC. The inhibitory effect of IL-6 on cell proliferation of MCF-7 cells observed by inverted microscope and detected by CCK-8 was shown in Figure 1 and Figure 2 respectively (Dose-dependent effect was not detected in this case).



A B

Figure 1. The inhibitory effect of IL-6 on cell proliferation of MCF-7 cells .

(A) MCF-7 cells cultured in serum-free DMEM, stimulated with 100ng/mL IL-6 for 96h;

(B) Unstimulated MCF-7 cells cultured in serum-free DMEM for 96h.

注意事项（Note）

For Research Use Only , Not for Diagnostic Use.