Active Interleukin 6 (IL6)

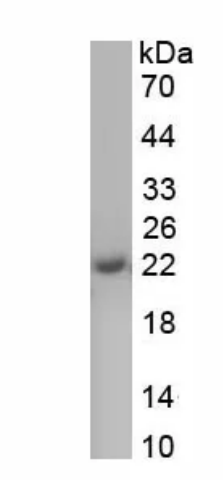
Catalog#:PEH12140

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 90% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Pro29-Met212】
Accession #	P05231
表达宿主（Host）	E.coli
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	24.7 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 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 90% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

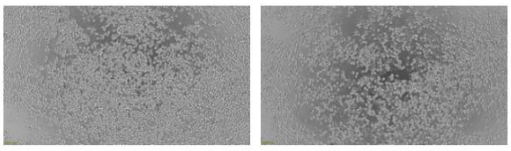


Figure 1. Cell proliferation of TF-1 cells after stimulated with rhIL6.
(A) TF-1 cells cultured in 1640, stimulated with 0.2 ug/ml rhIL6 for 3 days;
(B) Unstimulated TF-1 cells cultured in 1640 for 3 days.

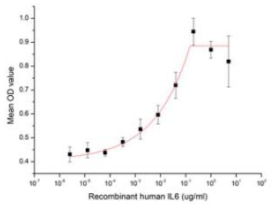


Figure 2. Cell proliferation of TF-1 cells after stimulated with rhIL6.

Interleukin 6 (IL-6) is an interleukin that acts as both a pro-inflammatory cytokine and an anti-inflammatory myokine. Interleukin 6 is secreted by T cells and macrophages to stimulate immune response and also plays a role in fighting infection. It supports the growth of B cells and is antagonistic to regulatory T cells. To test the effect of IL6 on cell proliferation, TF-1 cells were seeded into triplicate wells of 96-well plates at a density of 20,000 cells/well with 10% serum standard 1640 which contains various concentrations of recombinant human IL6. After incubated for 3 days, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10 µl of CCK-8 solution was added to each well of the plate, then the absorbance at 450 nm was measured using a microplate reader after incubating the plate for 1-4 hours at 37 ℃. Proliferation of TF-1 cells after incubation with rhIL6 for 3 days observed by inverted microscope was shown in Figure 1. Cell viability was assessed by CCK-8 (Cell Counting Kit-8) assay after incubation with recombinant human IL6 for 3 days. The result was shown in Figure 2. It was obvious that recombinant human IL6 significantly increased cell viability of TF-1 cells, the EC50 was 0.016 ug/ml.

注意事项（Note）

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