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IL-6

Catalog # PVGS1046

Specification

IL-6 - Product Information

Primary Accession P08505

Species
Mouse

Sequence
Phe25-Thr211, expressed with an N-terminal Met

Purity
> 97% as analyzed by SDS-PAGE
> 97% as analyzed by HPLC

Endotoxin Level
< 1 EU/ µg of protein by LAL method

Biological Activity
Fully biologically active when compared to standard. The ED₅₀ as determined by the dose-dependent stimulation of the proliferation of IL-6-dependent murine 7TD1 cells is less than 0.02 ng/ml, corresponding to a specific activity of > 5.0 × 10⁷ IU/mg.

Expression System
E. coli

Theoretical Molecular Weight
21.7 kDa

Formulation **Lyophilized from a 0.2 µm filtered solution in PBS, pH 7.4.**

Reconstitution
It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/ml.

Storage & Stability
Upon receiving, this product remains stable for up to 6 months at -70°C or -20°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. Avoid repeated freeze-thaw cycles.

IL-6 - Additional Information

Gene ID 16193

Other Names
Interleukin-6, IL-6, B-cell hybridoma growth factor, Interleukin HP-1, Il6 {ECO:0000312|MGI:MGI:96559}, Il-6

Target Background
Interleukin-6 (IL-6), also known as BSF-2, CDF and IFNB2, is a pleiotropic cytokine that participates in both pro-inflammatory and anti-inflammatory responses. It is produced mainly by T cells, macrophages, monocytes, endothelial cells and muscle cells. IL-6 binds to IL-6 receptor (IL-6R) to trigger the association of IL-6R with gp130, inducing signal transduction through JAKs and STATs. The biological functions of IL-6 are diverse. It stimulates B cell differentiation and antibody production, myeloma and plasmacytoma growth, and nerve cell differentiation. It also acts as a myokine, produced by muscle cells in response to muscle contraction and released into the blood stream to help break down fats and improve insulin resistance.

IL-6 - Protein Information

Name Il6 {ECO:0000312|MGI:MGI:96559}

Synonyms Il-6

Function
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 (PubMed:8910279). 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 (PubMed:27893700).

Cellular Location
Secreted.

Tissue Location
Expressed by dendritic cells and macrophages (PubMed:23045607, PubMed:27893700). Expressed by activated follicular B cells (PubMed:23045607). Abundantly expressed in the central nervous system (CNS), particularly the hypothalamic region (PubMed:28402851)

IL-6 - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

IL-6 - Images