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IL-10
Catalog # PVGS1653

Specification

IL-10 - Product Information

Primary Accession P29456

Species
Rat

Sequence
Ser19-Asn178

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

Endotoxin Level
< 0.1 EU/ µg of protein by LAL method

Biological Activity
The ED₅₀ as determined by a cell proliferation assay using murine MC/9-2 cells is less than 1.0 ng/ml, corresponding to a specific activity of 1.0 × 10⁶ IU/mg.

Expression System
E. coli

Theoretical Molecular Weight
18.6 kDa

Formulation **Lyophilized from a 0.2 µm filtered solution in 20 mM Tris-HCl, pH 8.0, 100 mM NaCl.**

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 -20°C or -70°C. Upon reconstitution, the product should be stable for up to 1 week at 2-8°C or up to 3 months at -20°C. Avoid repeated freeze-thaw cycles.

IL-10 - Additional Information

Gene ID 25325

Other Names
Interleukin-10, IL-10, Cytokine synthesis inhibitory factor, CSIF, Il10, Il-10

Target Background
Interleukin-10 (IL-10), also known as cytokine synthesis inhibitory factor (CSIF), is an

anti-inflammatory cytokine produced by a variety of cell lines including T-cells, macrophages and mast cells. IL-10 is classified as a class-2 cytokine, a set of cytokines including IL-19, IL-20, IL-22, IL-24, and IL-26. IL-10 can inhibit the synthesis of pro-inflammatory cytokines such as IFN-gamma, IL-2, IL-3, TNF and GM-CSF. It also stimulates Th2 responses, but suppresses the antigen-presentation capacity of antigen presenting cells.

IL-10 - Protein Information

Name Il10

Synonyms Il-10

Function
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. Also interferes with antigen presentation by reducing the expression of MHC- class II and co-stimulatory molecules, thereby inhibiting their ability to induce T cell activation (By similarity). In addition, controls the inflammatory response of macrophages by reprogramming essential metabolic pathways including mTOR signaling (By similarity).

Cellular Location
Secreted {ECO:0000250|UniProtKB:P22301}.

IL-10 - 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-10 - Images