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IL-10

Catalog # PVGS1358

Specification

IL-10 - Product Information

Primary Accession P29456

Species
Rat

Sequence
Ser19-Asn178

Purity
> 95% as analyzed by SDS-PAGE
> 95% as analyzed by HPLC

Endotoxin Level
< 0.2 EU/ µg of protein by gel clotting method

Biological Activity
ED₅₀ < 8.0 µg /ml, measured in a bioassay using C6 cells.

Expression System
CHO

Formulation **Lyophilized after extensive dialysis against PBS.**

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 ddH_2O or PBS up to 100 µg/ml.

Storage & Stability
Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. 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), initially known as Cytokine Synthesis Inhibitory Factor (CSIF), belongs to the IL-10 family and shares more than 80% sequence homology with the Epstein-Barr Virus protein BCRFI. It is produced by many immune cells, such as T-cells, macrophages, mast cells and dendritic cells. It is usually secreted as a homodimer and, upon binding to its receptor, inhibits the synthesis of a number of cytokines, including IFN-gamma, IL-2, IL-3, TNF and GM-CSF produced by

activated macrophages and Th2 cells. It also displays the ability to suppress Antigen-Presenting Cell (APC) function. The net effect of Interleukin-10 appears to be inhibitory; however, stimulatory effects, such as stimulation of B cell maturation and antibody production, are also reported.

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. Interferes also 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