10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

IL-10

Catalog # PVGS1653

Product Information

Primary Accession	P29456
Species	Rat
Sequence	Ser19-Asn178
Purity	> 97% as analyzed by SDS-PAGE > 97% as analyzed by HPLC
Endotoxin Level	
Biological Activity	The ED_{50} 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 1.0×10^6 IU/mg.
Expression System	E. coli
Theoretical Molecular Weight	18.6 kDa
Formulation	Lyophilized from a 0.2 □m 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.

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.

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. 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}.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.