

# IL-10

Catalog # PVGS1653

## Product Information

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<b>Primary Accession Species</b>	<a href="#">P29456</a> Rat
<b>Sequence</b>	Ser19-Asn178
<b>Purity</b>	> 97% as analyzed by SDS-PAGE > 97% as analyzed by HPLC
<b>Endotoxin Level</b>	
<b>Biological Activity</b>	The ED <sub>50</sub> 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 $1.0 \times 10^6$ IU/mg.
<b>Expression System</b>	E. coli
<b>Theoretical Molecular Weight</b>	18.6 kDa
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in 20 mM Tris-HCl, pH 8.0, 100 mM NaCl.
<b>Reconstitution</b>	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.
<b>Storage &amp; Stability</b>	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

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<b>Gene ID</b>	25325
<b>Other Names</b>	Interleukin-10, IL-10, Cytokine synthesis inhibitory factor, CSIF, IL10, IL-10
<b>Target Background</b>	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

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<b>Name</b>	IL10
<b>Synonyms</b>	IL-10
<b>Function</b>	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).
<b>Cellular Location</b>	Secreted {ECO:0000250   UniProtKB:P22301}.

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