

# IL-10

Catalog # PVGS1358

## Product Information

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<b>Primary Accession</b>	<a href="#">P29456</a>
<b>Species</b>	Rat
<b>Sequence</b>	Ser19-Asn178
<b>Purity</b>	> 95% as analyzed by SDS-PAGE > 95% as analyzed by HPLC
<b>Endotoxin Level</b>	
<b>Biological Activity</b>	ED <sub>50</sub>
<b>Expression System</b>	CHO
<b>Formulation</b>	Lyophilized after extensive dialysis against PBS.
<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 ddH <sub>2</sub> O or PBS up to 100 µg/ml.
<b>Storage &amp; Stability</b>	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.

## 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), 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 BCRF1. 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.

## 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'.