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

IL-21

Catalog # PVGS1302

Product Information

Primary Accession	Q9HBE4
Species	Human
Sequence	Gln30-Ser162, expressed with an N-terminal Met
Purity	> 95% as analyzed by SDS-PAGE
Endotoxin Level	
Biological Activity	$ED_{50} \leq$ 3.0 ng/ml, measured by its ability to enhance IFN-gamma secretion in NK-92 human natural killer lymphoma cells.
Expression System	E. coli
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 up to 100 g/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.

Additional Information

Gene ID	59067
Other Names	Interleukin-21, IL-21, Za11, IL21 (HGNC:6005)
Target Background	Interleukin-21 (IL-21) belongs to the Type I four helix bundle cytokines, and shares the common cytokine receptor γ chain with IL-2, IL-4, IL-7, IL-9, and IL-15. IL-21 is expressed by $CD4^+$ T cells, natural killer (NK) T cells, and Th17 cells, and the IL-21 receptor is highly expressed on $CD4^+$ and $CD8^+$ B cells; indeed, IL-21 plays a pivotal role in the survival and proliferation of B cells, and their differentiation to immunoglobulin (Ig) producing cells. IL-21 up-regulates and down-regulates the production of IgG1 and IgE by B cells, respectively, and diminishes the severity of allergy and asthma. In some case, IL-21 also induces the apoptosis of B cells. The other roles of IL-21 include regulation of innate immune systems, implication on autoimmunity, and antitumor actions.

Protein Information

Name	IL21 (HGNC:6005)
Function	Cytokine with immunoregulatory activity. May promote the transition between innate and adaptive immunity. Induces the production of IgG(1) and IgG(3) in B-cells (By similarity). Implicated in the generation and maintenance of T follicular helper (Tfh) cells and the formation of germinal-centers. Together with IL6, control the early generation of Tfh cells and are critical for an effective antibody response to acute viral infection (By similarity). May play a role in proliferation and maturation of natural killer (NK) cells in synergy with IL15. May regulate proliferation of mature B- and T-cells in response to activating stimuli. In synergy with IL15 and IL18 stimulates interferon gamma production in T-cells and NK cells (PubMed:11081504, PubMed:15178704). During T-cell mediated immune response may inhibit dendritic cells (DC) activation and maturation (By similarity).
Cellular Location	Secreted.
Tissue Location	Expressed in activated CD4-positive T-cells but not in CD8-positive T-cells, B-cells, or monocytes