

IL-21
Catalog # PVGS1302**Specification**

IL-21 - 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
< 0.2 EU/ µg of protein by gel clotting method

Biological Activity
ED₅₀ ≤ 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 ddH₂O 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-21 - 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.

IL-21 - 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](http://www.uniprot.org/citations/11081504), PubMed:[15178704](http://www.uniprot.org/citations/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

IL-21 - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

IL-21 - Images