# Recombinant Human IL-21 Protein

## Catalog No.: RP01708



## Sequence Information

**Species**
Human

**Gene ID**
59067

**Swiss Prot**
Q9HBE4

**Tags**
No-tag

**Synonyms**
Za11; IL-21; CVID11;IL21

## Product Information

**Source**
HEK293 cells

**Purification**
≥ 90 % as determined by SDS-PAGE.

**Calculated MW**
15.28 kDa

**Observed MW**
15-25 kDa

**Endotoxin**
< 0.1 EU/μg of the protein by LAL method.

**Formulation**
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

**Reconstitution**
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

## Background

IL21 belongs to the IL-15/IL-21 family. It is a cytokine with immunoregulatory activity. Cytokines are proteinaceous signaling compounds that are major mediators of the immune response. They control many different cellular functions including proliferation, differentiation, and cell survival/apoptosis but are also involved in several pathophysiological processes including viral infections and autoimmune diseases. Cytokines are synthesized under various stimuli by a variety of cells of both the innate (monocytes, macrophages, dendritic cells) and adaptive (T- and B-cells) immune systems. IL21 is expressed in activated CD4-positive T-cells but not in CD8-positive T-cells, B-cells, or monocytes. It may promote the transition between innate and adaptive immunity. IL-21 has been tried as a therapy for alleviating allergic responses. It can significantly decrease pro-inflammatory cytokines produced by T cells in addition to decreasing IgE levels in a mouse model for rhinitis (nasal passage inflammation).

## Basic Information

### Description
Recombinant Human IL-21 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Gln32-Ser162) of human IL-21 (Accession #NP_068575.1) fused with no additional amino acid.

### Activity
Measured by its ability to induce Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The $ED_{50}$ for this effect is 2.7-10.8 ng /mL, corresponding to a specific activity of $9.3\times10^4$~$3.7\times10^5$ units/mg.

### Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

### Storage
Store at -20℃

### Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

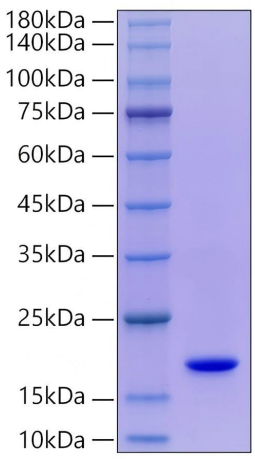
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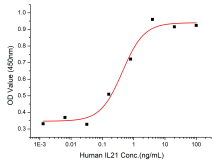


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## Validation Data




Recombinant Human IL-21 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.




Measured by its ability to induce Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The $ED_{50}$ for this effect is 0.215-0.86 ng/mL, corresponding to a specific activity of $1.16\times10^{6}$~$4.65\times10^{6}$ units/mg.



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