

Recombinant Human IL-21 Protein

Catalog No.: RP01312 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Human	59067	Q9HBE4-1

Tags

C-His

Synonyms

IL21;CVID11;IL-21;Za11

Product Information

Source	Purification
HEK293 cells	> 95% by SDS-PAGE.

Endotoxin

< 1.0 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 stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Contact

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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 (Gln25-Ser155) of human IL-21 (Accession #NP_068575.1) fused with an 6×His tag at the C-terminus.

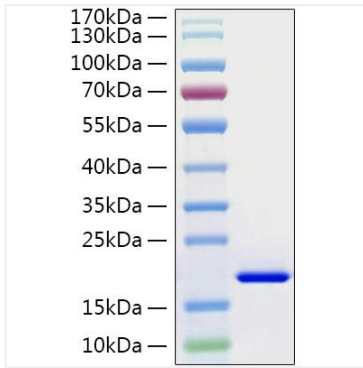
Bio-Activity

1. Measured by its binding ability in a functional ELISA. Immobilized Human IL21R at 2 μg/mL (100 μL/well) can bind Human IL21 with a linear range of 0.078-0.973 μg/mL. 2. Measured by its ability to induce Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The ED₅₀ for this effect is 1.52-6.06 ng/mL, corresponding to a specific activity of 1.65×10⁵~6.58×10⁵ units/mg.

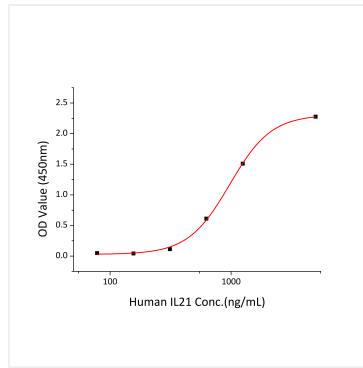
Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt. After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. Avoid repeated freeze/thaw cycles.

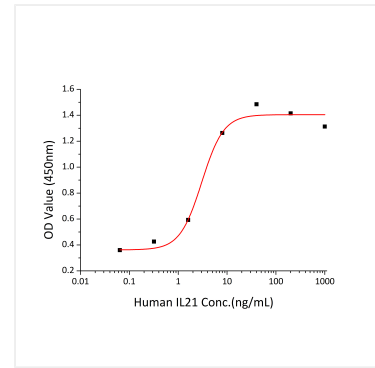
Validation Data



Recombinant Human IL-21 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 18 kDa.



Immobilized Human IL21R at 2 μ g/mL (100 μ L/well) can bind Human IL21 with a linear range of 0.078-0.973 μ g/mL.



Recombinant Human IL-21 induce Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The ED₅₀ for this effect is 1.52-6.06 ng/mL, corresponding to a specific activity of 1.65 \times 10⁵~6.58 \times 10⁵ units/mg.