

Recombinant Rat IL-21 Protein

Catalog No.: RP01756 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Rat	365769	A3QPB9

Tags

C-6His

Synonyms

Za11; IL-21; CVID11

Product Information

Source Purification

HEK293 cells

Endotoxin

< 0.1EU/ μ g

Formulation

Lyophilized from a 0.22 μ m 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 Rat IL-21 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (His18-Ser146) of rat IL-21 (Accession #NP_001102413.1) fused with a 6 \times His tag at the C-terminus.

Bio-Activity

Measured by its ability to induce Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The ED₅₀ for this effect is 0.45-1.8 ng/mL, corresponding to a specific activity of 5.6 \times 10⁵~2.2 \times 10⁶ units/mg.

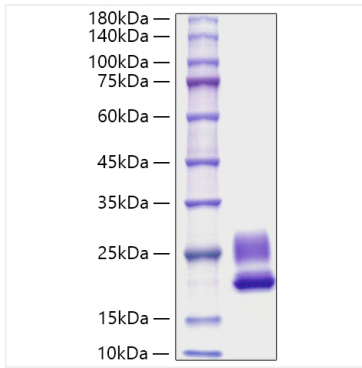
Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

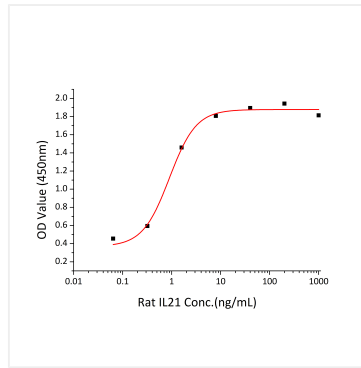
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Rat IL-21 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 20 kDa.



Recombinant Rat IL-21 induce Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The ED_{50} for this effect is 0.45-1.8 ng/mL, corresponding to a specific activity of $5.6 \times 10^5 \sim 2.2 \times 10^6$ units/mg.