# Recombinant Human IL-21 Protein

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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 % as

determined by SDS-PAGE.

PAG

Calculated MW Observed MW

16.12 kDa 18 kDa

#### **Endotoxin**

< 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.

#### Contact

<u>a</u>		400-999-6126
$\bowtie$		cn.market@abclonal.com.cn
•	Π	www.abclonal.com.cn

### **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  $6\times His$  tag at the C-terminus.

# **Bio-Activity**

1.Measured by its binding ability in a functional ELISA. Immobilized Human IL21R at 2  $\mu$ g/mL (100  $\mu$ L/well) can bind Human IL21 with a linear range of 0.078-0.973  $\mu$ g/mL.|2.Measured by its ability to induce Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The ED<sub>50</sub> for this effect is 1.52-6.06 ng/mL, corresponding to a specific activity of  $1.65\times10^5\sim6.58\times10^5$  units/mg.

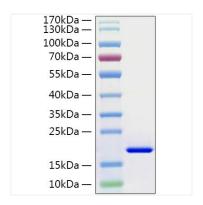
#### **Storage**

Store at  $-20^{\circ}$ C. Store the lyophilized protein at  $-20^{\circ}$ C to  $-80^{\circ}$ C up to 1 year from the date of receipt.

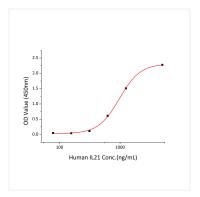
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

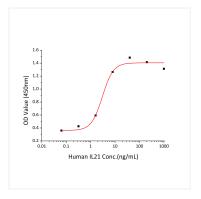
### **Validation Data**



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



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



Recombinant Human IL-21 induce Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The ED $_{50}$  for this effect is 1.52-6.06 ng/mL, corresponding to a specific activity of  $1.65\times10^5\sim6.58\times10^5$  units/mg.