

# Human IL-21R / Interleukin-21 Receptor Protein (His Tag)

Catalog Number: 11483-H08H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

CD360; NILR

### Protein Construction:

A DNA sequence encoding the human IL21R (Q9HBE5-1) extracellular domain (Met 1-Pro 236) was expressed, with a polyhistidine tag at the C-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 92 % as determined by SDS-PAGE. >90% as determined by SEC-HPLC.

### Bio Activity:

**1. Measured by its ability to bind human IL-21 in a functional ELISA. 2. Measured by its ability to inhibit IL-21-induced Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The ED<sub>50</sub> for this effect is typically 4-25 ng/mL in the presence of 2ng/mL of recombinant human IL-21.**

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Cys 20

### Molecular Mass:

The recombinant human IL21R consists of 228 amino acids and predicts a molecular mass of 26.5 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rh IL21R is approximately 42-46 kDa due to glycosylation.

### Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

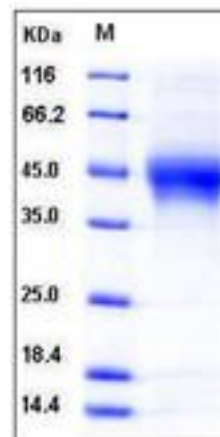
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Interleukin-21 receptor, also known as IL-21 receptor, IL-21R, Novel interleukin receptor, IL21R and NILR, is a single-pass type I membrane protein which belongs to the type I cytokine receptor family and Type 4 subfamily. Interleukin-21 (IL-21) belongs to a family of cytokines that bind to a composite receptor consisting of a private receptor (IL-21R) and the common cytokine receptor gamma chain (gamma(C)). The IL-21R is discovered as a novel member of the class-I-cytokine-receptor family and is selectively expressed in lymphoid tissues. IL-21R shows strong sequence homologies to the interleukin-4 receptor alpha chain gene (IL-4RA). The WSXWS motif of IL-21R appears to be necessary for proper protein folding and thereby efficient intracellular transport and cell-surface receptor binding. The box 1 motif of IL-21R is required for JAK interaction and / or activation. The IL-21R is widely distributed on lympho-haematopoietic cells and IL21 impacts a number of cell types, including CD8+ memory T cells, NK cells and subsets of CD4 memory T cells. Increased IL21 production is characteristic of certain autoimmune diseases and is likely to contribute to autoantibody production as well as pathological features of autoimmune disease. The critical role of IL21 in promoting humoral immune responses makes it an important focus of potential therapeutic interventions in conditions characterised by overproduction of pathogenic autoantibodies.

## References

- 1.Asao H, *et al.* (2001) Cutting edge: the common gamma-chain is an indispensable subunit of the IL-21 receptor complex. *J Immunol.* 167(1): 1-5.
- 2.Wu Z, *et al.* (2005) Interleukin-21 receptor gene induction in human T cells is mediated by T-cell receptor-induced Sp1 activity. *Mol Cell Biol.* 25(22): 9741-52.
- 3.De Totero D, *et al.* (2006) Interleukin-21 receptor (IL-21R) is up-regulated by CD40 triggering and mediates proapoptotic signals in chronic lymphocytic leukemia B cells. *Blood.* 107(9): 3708-15.

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