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

Catalog Number: **80189-R08H**

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Biological Solution Specialist

General Information

Gene Name Synonym:

CD360; NILR; NILR

Protein Construction:

A DNA sequence encoding the rat IL21R (Q5EBB1) (Met1-Pro236) was expressed, fused with a polyhistidine tag at the C-terminus.

Source: Rat

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

Immobilized rat IL21R-His at 10 μg/ml (100 μl/well) can bind biotinylated rat IL21-His (Cat:80200-R08B), The EC_{50} of biotinylated rat IL21-His (Cat:80200-R08B) is 4.6-10.9 ng/ml.

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 ℃

Predicted N terminal: Cys 20

Molecular Mass:

The recombinant rat IL21R comprises 228 amino acids and predicts a molecular mass of 26.5 kDa. The apparent molecular mass of the recombinant protein is approximately 43-48 kDa in SDS-PAGE under reducing conditions 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:

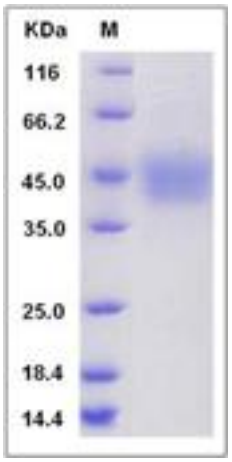
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

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.