

Rat IL21 / Interleukin 21 Protein (His Tag)

Catalog Number: 80200-R08B



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

IL21

Protein Construction:

A DNA sequence encoding the rat IL21 (NP_001102413.1) (Met1-Ser146) was expressed with a polyhistidine tag at the C-terminus.

Source: Rat

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to induce Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The ED_{50} for this effect is typically 2-8 ng/ml.

Endotoxin:

< 1.0 EU per μ g 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: His 18

Molecular Mass:

The recombinant rat IL21 consists of 140 amino acids and predicts a molecular mass of 16.64 KDa. It migrates as an approximately 20 KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, 10% glycerol, 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:

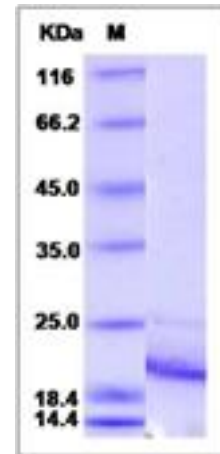
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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 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)

References

1. Coquet JM, et al. (2007) IL-21 is produced by NKT cells and modulates NKT cell activation and cytokine production. *J Immunol.* 178(5):2827-34.
2. Wei L, et al. (2007) IL-21 is produced by Th17 cells and drives IL-17 production in a STAT3-dependent manner. *J Biol Chem.* 282(48):34605-10.
3. Parrish-Novak J, et al. (2002) Interleukin-21 and the IL-21 receptor: novel effectors of NK and T cell responses. *J Leukoc Biol.* 72(5):856-63.
4. Kuchen S, et al. (2007) Essential role of IL-21 in B cell activation, expansion, and plasma cell generation during CD4+ T cell-B cell collaboration. *J Immunol.* 179(9):5886-96.

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