

# Canine IL21 / Interleukin 21 Protein

Catalog Number: 70016-DNAE



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

IL21

### Protein Construction:

A DNA sequence encoding the canine IL21 (Q6L7I9) (His 18-Ser 146) was expressed, with an initial Met at the N-terminus.

**Source:** Canine

**Expression Host:** E. coli

## QC Testing

**Purity:** > 97 % 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<sub>50</sub> for this effect is typically 0.4-2 ng/ml.

### Endotoxin:

Please contact us for more information.

### Stability:

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

**Predicted N terminal:** Met

### Molecular Mass:

The recombinant canine IL21 consists of 130 amino acids and has a calculated molecular mass of 15 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 15KDa band as predicted.

### 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:

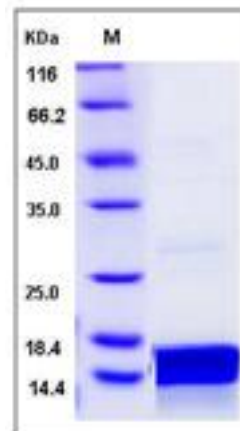
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

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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