Human Interleukin-21 / IL-21 Protein

Catalog Number: **10584-HNAE**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

CVID11; IL-21; Za11

Protein Construction:

A DNA sequence encoding the mature form of human IL-21 (Q9HBE4-1) (Gln30-Ser162) was expressed with an initial Met.

Source: Human

Expression Host: E. coli

QC Testing

Purity: ≥ 95 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.

Bio Activity:

Measured by its ability to induced Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The ED_{50} for this effect is 0.4-2 ng/mL.

Endotoxin:

< 5 EU per mg of the protein as determined by the LAL method.

Predicted N terminal: Met

Molecular Mass:

The recombinant human IL-21 consists of 134 amino acids and has a calculated molecular mass of 15.6 kDa. It migrates as an approximately 17 kDa band in SDS-PAGE under reducing conditions.

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

Stability & Storage:
Samples are stable for twelve months from date of receipt at -20℃ to -80℃.

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

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).

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.