

Human Interleukin-21 / IL-21 Protein

Catalog Number: 10584-HNAE



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

IL-21, Za11

Protein Construction:

A DNA sequence encoding the mature form of human IL-21 isoform 1 (Q9HBE4-1) (Gln 23-Ser 155) was expressed and purified, with an initial Met.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 92 % as determined by SDS-PAGE

Bio-Activity

1. Measured by its ability to bind human IL-21R in a functional ELISA.
2. Measured by its ability to induced Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The ED50 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 human IL-21 consisting 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 20mM NaAc, 150mM NaCl, pH 5.5

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

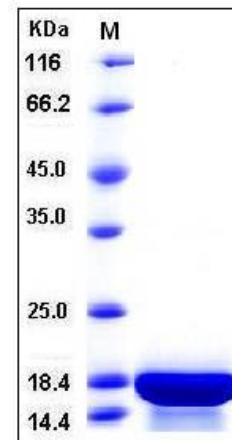
Usage Guide

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.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Interleukin-21, also known as IL-21 and Za11, is a secreted protein which belongs to the IL-15/IL-21 family. Interleukin-21 / IL-21 belongs to a family of cytokines that bind to a composite receptor consisting of a private receptor (IL21R) and the common cytokine receptor gamma chain (gamma (C)). Interleukin-21 / IL-21 impacts a number of cell types, including CD8+ memory T cells, NK cells and subsets of CD4 memory T cells. The IL-21R is widely distributed on lympho-haematopoietic cells. Interleukin-21 / IL-21 is a cytokine with immunoregulatory activity. It is a new immune-stimulating cytokine that has demonstrated antitumour activity in several preclinical models, and has undergone Phase I trials in metastatic melanoma and renal cell carcinoma. Interleukin-21 / IL-21 may promote the transition between innate and adaptive immunity. It induces the production of IgG1 and IgG3 in B-cells. Interleukin-21 / IL-21 may play a role in proliferation and maturation of natural killer (NK) cells in synergy with IL15. It may regulate proliferation of mature B-cells and T-cells in response to activating stimuli. One essential role of IL-21 is the promotion of B-cell activation and differentiation or death during humoral immune responses. Increased IL-21 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 Interleukin-21 / IL-21 in promoting humoral immune responses makes it an important focus of potential therapeutic interventions in conditions characterised by overproduction of pathogenic autoantibodies.

References

1. Sivakumar P.V., et al., 2004, Immunology. 112:177-182.
2. Strengell M., et al., 2004, J. Leukoc. Biol. 76:416-422.
3. Rahman M., et al., 2007, FEBS Lett. 581: 4001-4009.
4. Skak, K. et al., 2008, Nat Rev Drug Discov. 7 (3):231-40.
5. Ettinger, R. et al., 2008, Ann Rheum. Dis 67 Suppl. 3:iii83-6.

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