

Human IL-17F / Interleukin-17F Protein (His Tag)

Catalog Number: 11855-H07H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

CANDF6; IL-17F; ML-1; ML1

Protein Construction:

A DNA sequence encoding the human IL17F (NP_443104.1) (Arg 31-Gln 163) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: ≥ 80 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-MALS.

Bio Activity:

1. Measured by its ability to bind human IL17Ra in a functional ELISA. 2. Measured by its ability to induce IL-6 secretion by NIH3T3 mouse embryonic fibroblast cells in the presence of 20 ng/mL TNFα. The ED₅₀ for this effect is typically 5-40 ng/ml.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Predicted N terminal: His

Molecular Mass:

The recombinant human IL17F consists of 152 amino acids and has a calculated molecular mass of 17.2 kDa. rhIL17F migrates as an approximately 24 kDa band in SDS-PAGE under reducing conditions and a 44 kDa band in non-reduced SDS-PAGE as the homodimer. The molecular weight of this protein is around 56.5 kDa verified by SEC-MALS.

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°C to -80°C.

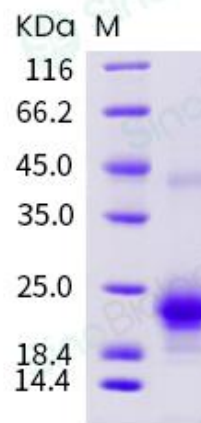
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Interleukin-17F (IL-17F) is a cytokine that shares sequence similarity with IL-17. The most notable role of IL-17 is its involvement in inducing and mediating proinflammatory responses. IL-17 is commonly associated with allergic responses. IL-17F is expressed by activated T cells and was expressed only in activated CD4+ T cells and activated monocytes. IL-17F has been shown to stimulate the production of several other cytokines, including IL6 and IL8. This cytokine is also found to inhibit the angiogenesis of endothelial cells and induce endothelial cells to produce IL2, TGFB1/TGFB, and monocyte chemoattractant protein-1. Recombinant human IL-17F did not stimulate the proliferation of hematopoietic progenitors or the migration of mature leukocytes. However, it markedly inhibited the angiogenesis of human endothelial cells and induced endothelial cells to produce IL-2, TGF-β, and monocyte chemoattractant protein-1. IL-17F stimulates the production of other cytokines and granulocyte colony-stimulating factor and can regulate cartilage matrix turnover. IL-17F stimulates PBMC and T-cell proliferation. It also functions in inhibiting angiogenesis. By similarity, IL-17F plays a role in the induction of neutrophilia in the lungs and the exacerbation of antigen-induced pulmonary allergic inflammation.

References

et al. 1. Starnes T, *et al.* (2001) Cutting edge: IL-17F, a novel cytokine selectively expressed in activated T cells and monocytes, regulates angiogenesis and endothelial cell cytokine production. *J Immunol.* 167(8): 4137-40. 2. Hymowitz SG, *et al.* (2001) IL-17s adopt a cystine knot fold: structure and activity of a novel cytokine, IL-17F, and implications for receptor binding. *EMBO J.* 20(19): 5332-41. 3. McAllister F, *et al.* (2005) Role of IL-17A, IL-17F, and the IL-17 receptor in regulating growth-related oncogene-α and granulocyte colony-stimulating factor in bronchial epithelium: implications for airway inflammation in cystic fibrosis. *J Immunol.* 175(1): 404-12.

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