

Human IL13 Protein

Catalog Number: 10369-HNAC



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

ALRH; IL-13; P600

Protein Construction:

A DNA sequence encoding the human IL13 (AAK53823.1) (Met 1-Asn 132) was expressed and purified.

Source: Human

Expression Host: CHO Stable Cells

QC Testing

Purity: ≥ 95 % as determined by SDS-PAGE. ≥ 95 % as determined by HPLC. ≥ 95 % as determined by SEC-MALS (Routinely tested).

Bio Activity:

1. Measured in a cell proliferation assay using TF1 human erythroleukemic cells (Kitamura, T. et al. 1989, J. Cell Physiol. 140:323.). The ED50 for this effect is typically 0.5-3 ng/mL.
2. Loaded Recombinant Human IL-4Rα & IL-13Rα1 Heterodimer Protein, hFc Tag (Cat. No. CT117-H02H) on proA Biosensor, can bind Recombinant Human IL-13 Protein (Cat. No. 10369-HNAC) with an affinity constant of 1.690 nM as determined in BLI assay (Sartorius Octet RED384) (Routinely tested).
3. Loaded Recombinant Human IL13RA1 Protein (ECD, Fc Tag) (Cat. No. 10943-H02H) on ProA Biosensor, can bind Recombinant Human IL13 Protein (Cat. No. 10369-HNAC) with an affinity constant of 17.6 nM as determined in BLI assay (Sartorius Octet RED384) (Routinely tested).
4. Recombinant Human IL13RA1 Protein (ECD, Fc Tag) (Cat: 10943-H02H) captured on Protein A chip, can bind Recombinant Human IL13 Protein (Cat: 10369-HNAC) with an affinity constant of 9.560 nM as determined in an SPR assay (Biacore T200) (Routinely tested).
5. Recombinant Human IL13RA1 Protein (ECD, His & AVI Tag), Biotinylated (Cat: 10943-H49H-B) captured on NTA chip, can bind Recombinant Human IL13 Protein (Cat: 10369-HNAC) with an affinity constant of 3.366 nM as determined in an SPR assay (Biacore T200) (Routinely tested).

Endotoxin:

<10 EU per mg protein.

Predicted N terminal: Gly 21

Molecular Mass:

The recombinant human IL13 consists of 112 amino acids and migrates as an approximately 12.35 kDa band in SDS-PAGE under reducing conditions 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

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 13 (IL-13) is a single-chain glycosylated polypeptide, which belongs to the IL-13/IL-4 family. IL-13 protein is secreted by many cell types, but especially by T helper type 2 (Th2) cells. IL-13 exerts its effects through a multi-subunit receptor comprising the alpha chain of the IL-4 receptor (IL-4Rα) and at least one of two known IL-13-specific binding chains (IL-13 Rα1 and IL-13 Rα2). As a cytokine, IL-13 protein is critical in regulating inflammatory, immune responses and diseases. In addition, it inhibits the production of pro-inflammatory cytokines and chemokines, and thus down-regulates macrophage activity. IL-13 protein and antibody is more importantly implicated as a central mediator of immunoregulatory processes in various cell types.

References

Junttila IS, et al. (2008) Tuning sensitivity to IL-4 and IL-13: differential expression of IL-4Rα, IL-13Rα1, and γc regulates relative cytokine sensitivity. J Exp Med. 205(11): 2595-608.
Shimamura T, et al. (2008) Novel role of IL-13 in fibrosis induced by nonalcoholic steatohepatitis and its amelioration by IL-13R-directed cytotoxin in a rat model. J Immunol. 181(7): 4656-65.

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