# **Human IL13 Protein**

Catalog Number: 10369-HNAC



### **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.

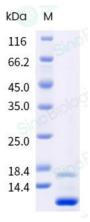
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

#### 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, <em>et al.</em> (2008) Tuning sensitivity to IL-4 and IL-13: differential expression of IL-4Ralpha, IL-13Ralpha1, and gammac regulates relative cytokine sensitivity. J Exp Med. 205(11): 2595-608.
Shimamura T,<em>et al.</em> (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.