Human IL13RA1 Protein (His Tag)

Catalog Number: 10943-H08H

General Information

Gene Name Synonym:

CD213A1; IL-13Ra; NR4

Protein Construction:

A DNA sequence encoding the human IL13Rα1 (NP_001551.1) extracellular domain (Met 1-Thr 343) expressed, with a C-terminal polyhistidine tag.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: ≥ 97 % as determined by SDS-PAGE. ≥ 90 % as determined by SEC-HPLC.

Bio Activity:

1.Captured Human IL13RA1,His tag(Cat:10943-H08H) on NTA Chip can bind Human IL13 (Cat.No.10369-HNAC) with an affinity constant of 10.20nM as determined in a SPR assay (Biacore T200) (Routinely tested)
2.Loaded Recombinant Human IL13RA1 Protein, His Tag (Cat.No. 10943-H08H) on NTA Biosensor, can bind Recombinant Human IL-13 Protein (Cat.No. 10369-HNAC) with an affinity constant of 26.53 nM as determined in BLI assay (Sartorius Octet Red384) (QC tested).

Endotoxin:

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

Predicted N terminal: Gly 22

Molecular Mass:

The recombinant human IL13Rα1 consists of 333 amino acids and has a predicted molecular mass of 38.3 kDa. As a result of glycosylation, the apparent molecular mass of rh IL13Rα1 is approximately 55-65 kDa 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℃.

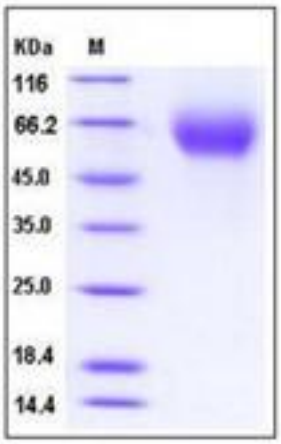
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Interleukin 13 receptor, alpha 1, also known as IL13RA1/IL-13RA1 and CD213A1 (cluster of differentiation 213A1), is a subunit of the interleukin 13 receptor. This subunit forms a receptor complex with IL4 receptor alpha, a subunit shared by IL13 and IL4 receptors. IL13RA1/IL-13RA1 serves as a primary IL13-binding subunit of the IL13 receptor, and may also be a component of IL4 receptors. This protein has been shown to bind tyrosine kinase TYK2, and thus may mediate the signaling processes that lead to the activation of JAK1, STAT3 and STAT6 induced by IL13 and IL4. IL13RA1/IL-13RA1 binds with low affinity to interleukin-13 (IL13). This subunit together with IL4RA can form a functional receptor for IL13. IL13RA1/IL-13RA1 also serves as an alternate accessory protein to the common cytokine receptor gamma chain for interleukin-4 (IL4) signaling, but cannot replace the function of IL2RG in allowing enhanced interleukin-2 (IL2) binding activity.

References

1.Kawakami M, et al. (2002) Mutation and functional analysis of IL-13 receptors in human malignant glioma cells. Oncol Res. 12 (11-12): 459-67.
2.Umeshita-Suyama R, et al. (2000) Characterization of IL-4 and IL-13 signals dependent on the human IL-13 receptor alpha chain 1: redundancy of requirement of tyrosine residue for STAT3 activation. Int Immunol. 12 (11): 1499-509.
3.He JQ, et al. (2003) Polymorphisms in the IL13, IL13RA1, and IL4RA genes and rate of decline in lung function in smokers. Am J Respir. Cell Mol Biol. 28 (3): 379-85.