Biotinylated Human IL-13 R alpha 2 Protein, His,Avitag™ (MALS verified)

Catalog # IL2-H82E6

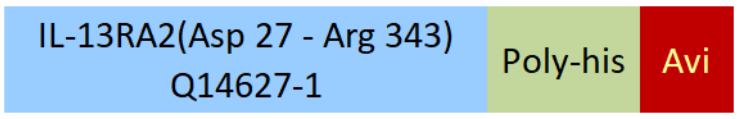
Synonym

IL13RA2,CD213A2,CT19,IL-13R,IL13BP

Source

Biotinylated Human IL-13 R alpha 2, His,Avitag(IL2-H82E6) is expressed from human 293 cells (HEK293). It contains AA Asp 27 - Arg 343 (Accession # Q14627-1).
Predicted N-terminus: Asp 27

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 40.7 kDa. The protein migrates as 47-60 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

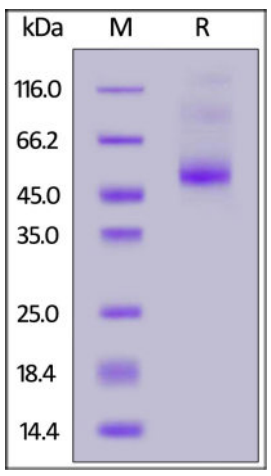
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

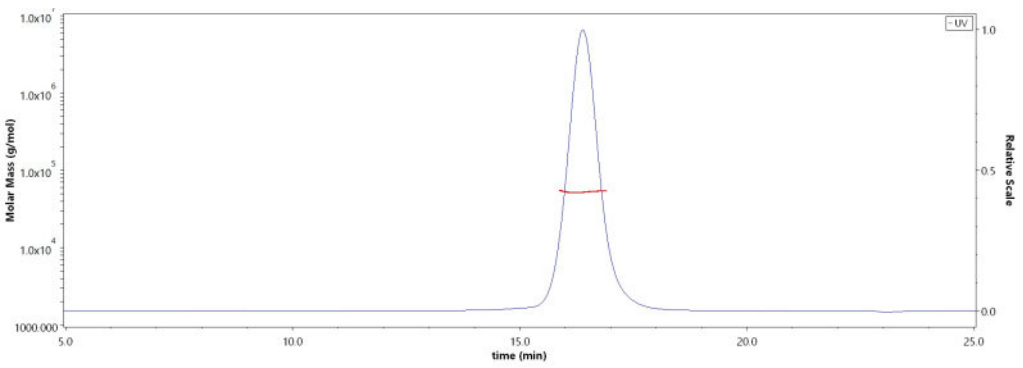
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



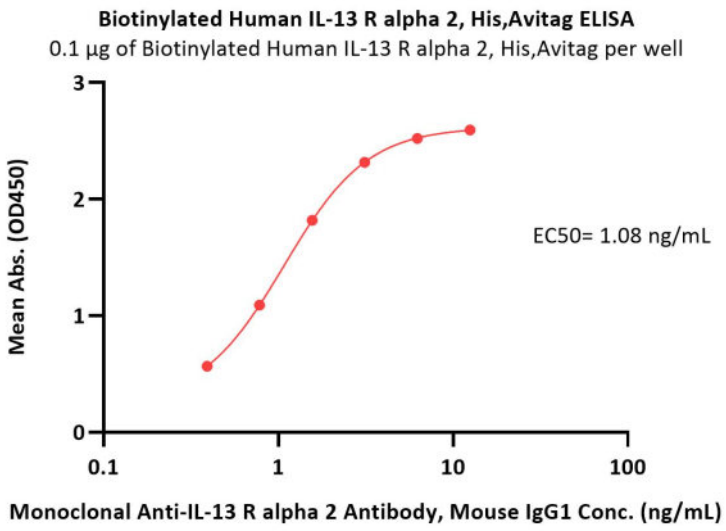
Biotinylated Human IL-13 R alpha 2, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

SEC-MALS



The purity of Biotinylated Human IL-13 R alpha 2, His,Avitag (Cat. No. IL2-H82E6) is more than 90% and the molecular weight of this protein is around 47-57 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



Immobilized Biotinylated Human IL-13 R alpha 2, His,Avitag (Cat. No. IL2-H82E6) at 1 μg/mL (100 μL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate can bind Monoclonal Anti-IL-13 R alpha 2 Antibody, Mouse IgG1 with a linear range of 0.4-2 ng/mL (QC tested).

Background

Interleukin-13 receptor subunit alpha-2 is also known as IL13Rα2, IL13Ra2 cluster of differentiation 213A2, CD213A2, CT19, IL-13R, IL13BP, and is a membrane bound protein that in humans is encoded by the IL13RA2 gene. IL13Rα2 is closely related to IL13Rα1, a subunit of the interleukin-13 receptor complex. This protein binds IL13 with high affinity, but lacks any significant cytoplasmic domain, and does not appear to function as a signal mediator. It is, however able to regulate the effects of both IL13 and IL4, despite the fact it is unable to bind directly to the latter. It is also reported to play a role in the internalization of IL13. IL13Rα2 is a component of the cell surface receptors, however, the majority exists in intracellular pools and in soluble form, and thus plays an opposite role as a potent IL13 antagonist compared with IL13Rα1. It also functions as an inhibitor of IL4-dependent pathway probably through the physical interaction between the short intracellular domain of and cytoplasmic domain of IL13Rα2 and the IL4Rα chain. In spite of the failed STAT signaling function, IL13Rα2 dose induce TGF-beta production and fibrosis. Additionally, IL13Rα2has been reported to be abundantly and specifically overexpressed in glioblastoma multiforme.

Clinical and Translational Updates