

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

Catalog # IL3-H82E5



BIOSYSTEMS
Acro
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Synonym

IL13,ALRH,BHR1,MGC116786,MGC116788,MGC116789,P600,Interleukin-13

Source

Biotinylated Human IL-13, His,Avitag(IL3-H82E5) is expressed from human 293 cells (HEK293). It contains AA Gly 21 - Asn 132 (Accession # [AAK53823.1](#)).

Predicted N-terminus: Gly 21

Molecular Characterization

IL-13(Gly 21 - Asn 132)
AAK53823.1 Poly-his Avi

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

The protein has a calculated MW of 15.9 kDa. The protein migrates as 17 kDa and 28-37 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.

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

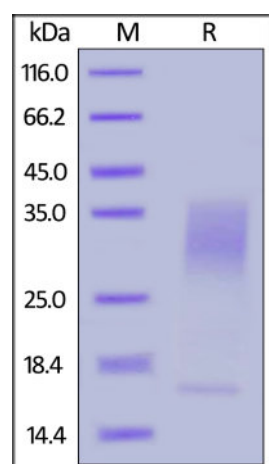
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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.

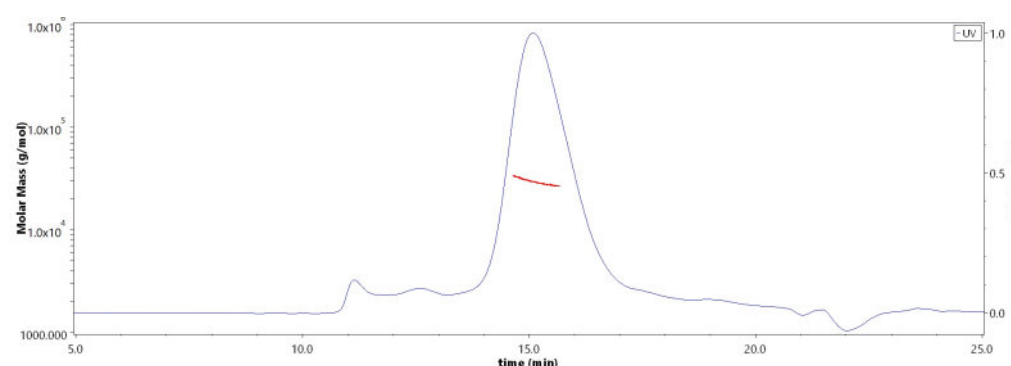
SDS-PAGE



Biotinylated Human IL-13, 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%.

Bioactivity-ELISA

SEC-MALS



The purity of Biotinylated Human IL-13, His,Avitag (Cat. No. IL3-H82E5) is more than 85% and the molecular weight of this protein is around 25-35 kDa verified by SEC-MALS.

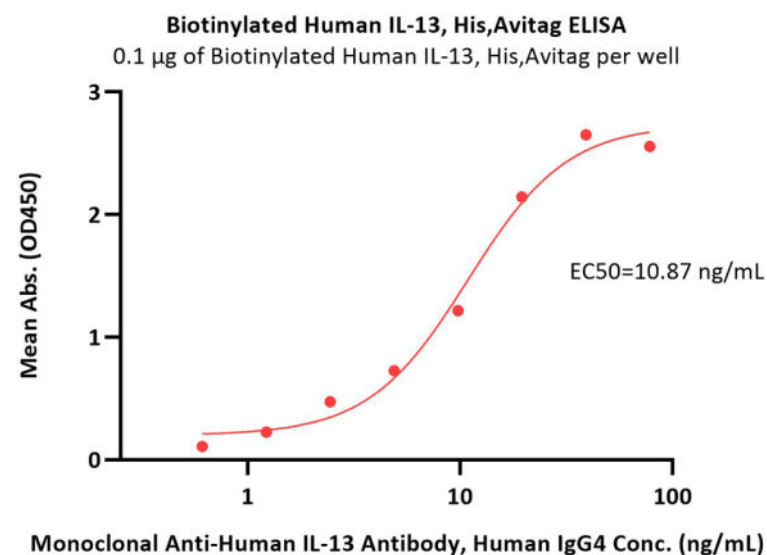
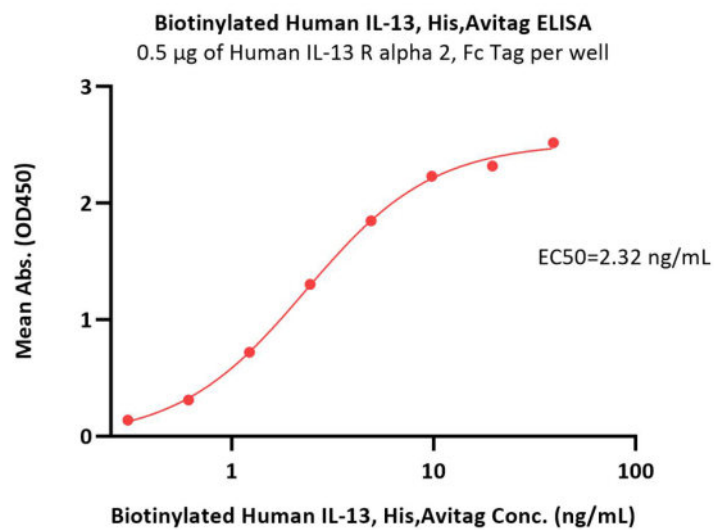
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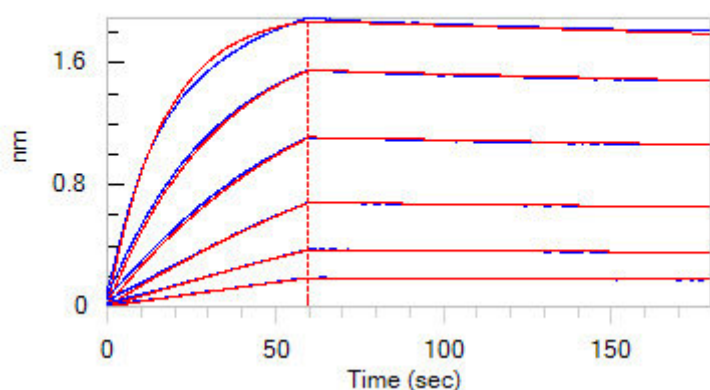
6/14/2024



Immobilized Human IL-13 R alpha 2, Fc Tag (Cat. No. IL2-H5256) at 5 µg/mL (100 µL/well) can bind Biotinylated Human IL-13, His,Avitag (Cat. No. IL3-H82E5) with a linear range of 0.2-5 ng/mL (QC tested).

Immobilized Biotinylated Human IL-13, His,Avitag (Cat. No. IL3-H82E5) at 1 µg/mL (100 µL/well) on Streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate can bind Monoclonal Anti-Human IL-13 Antibody, Human IgG4 with a linear range of 0.3-20 ng/mL (Routinely tested).

Bioactivity-BLI



Loaded Biotinylated Human IL-13, His,Avitag (Cat. No. IL3-H82E5) on SA Biosensor, can bind Human IL-13 R alpha 2, His Tag (Cat. No. IL2-H52H5) with an affinity constant of 6.31 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Background

Interleukin 13 (IL13) is also known as ALRH, BHR1 and P600, is a single-chain glycosylated polypeptide, and is a cytokine critical in regulating inflammatory and immune responses. IL13 is secreted by many cell types, but especially by T helper type 2 (Th2) cells. IL-13 induces its effects through a multi-subunit receptor that includes the alpha chain of the IL-4 receptor (IL-4Rα) and at least one of two known IL-13-specific binding chains. The functions of IL-13 overlap considerably with those of IL-4, especially with regard to changes induced on hematopoietic cells, but these effects are probably less important given the more potent role of IL-4. IL-13 induces matrix metalloproteinases (MMPs) as part of a mechanism that protects against excessive allergic inflammation that predisposes to asphyxiation. IL-13 induces many features of allergic lung disease, including airway hyperresponsiveness, goblet cell metaplasia and mucus hypersecretion, which all contribute to airway obstruction.

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