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

Catalog # IL3-C82E4

Synonym

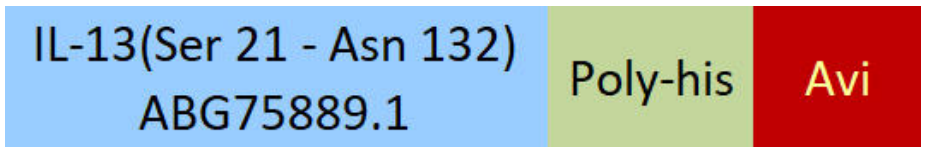
IL13, ALRH, BHR1, MGC116786, MGC116788, MGC116789, P600, Interleukin-13

Source

Biotinylated Cynomolgus IL-13 Protein, His,Avitag (IL3-C82E4) is expressed from human 293 cells (HEK293). It contains AA Ser 21 - Asn 132 (Accession # ABG75889.1).

Predicted N-terminus: Ser 21

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 15.9 kDa. The protein migrates as 13-15 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE).

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.

Purity

>95% as determined by SDS-PAGE.

>95% 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.

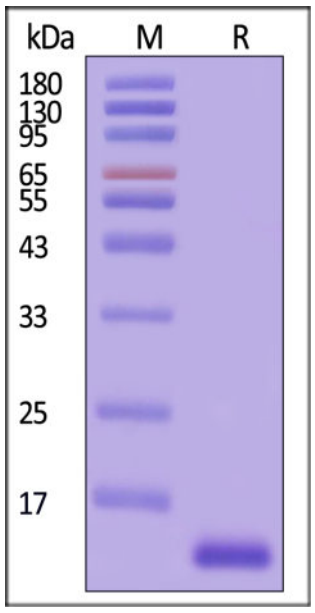
This product is stable after storage at:

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

ACRO Quality Management System

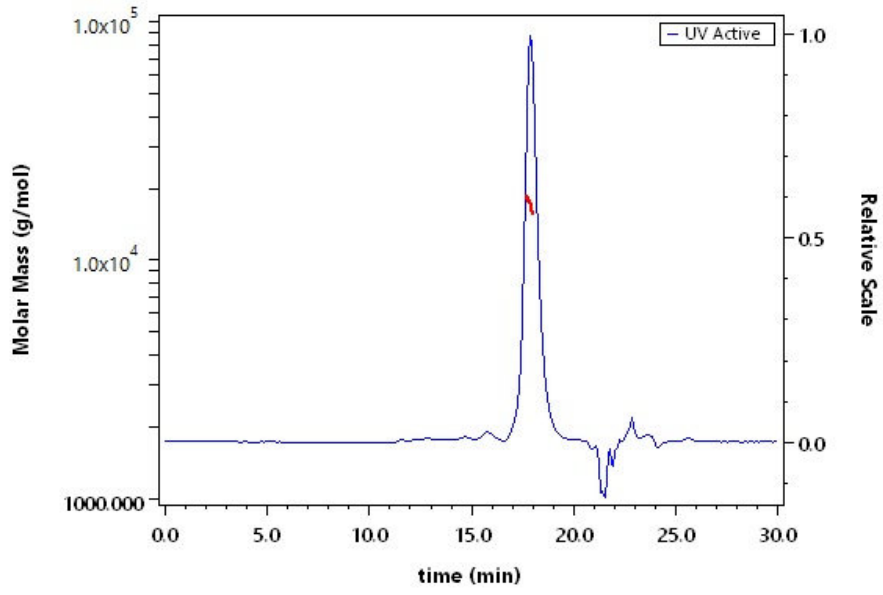
- QMS(ISO, GMP)
- Quality Advantages
- Quality Control Process

SDS-PAGE



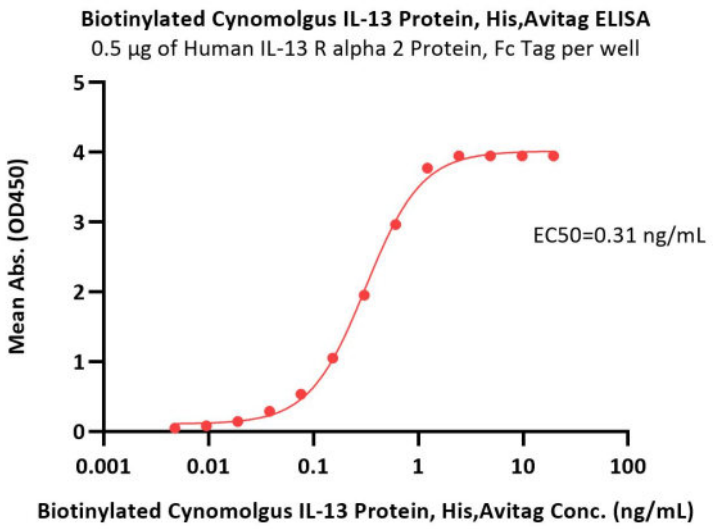
Biotinylated Cynomolgus IL-13 Protein, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS



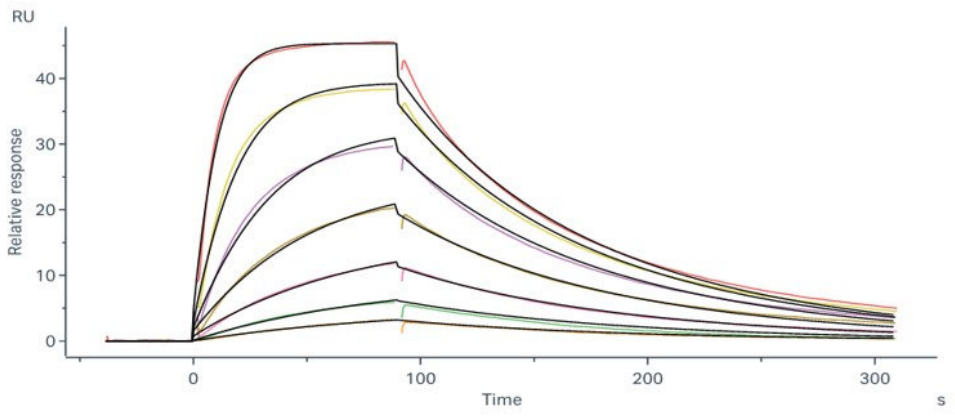
The purity of Biotinylated Cynomolgus IL-13 Protein, His,Avitag (Cat. No. IL3-C82E4) is more than 95% and the molecular weight of this protein is around 15-20 kDa verified by SEC-MALS.

Bioactivity-ELISA



Immobilized Human IL-13 R alpha 2 Protein, Fc Tag (Cat. No. IL2-H5256) at 5 μg/mL (100 μL/well) can bind Biotinylated Cynomolgus IL-13 Protein, His,Avitag (Cat. No. IL3-C82E4) with a linear range of 0.005-1 ng/mL (QC tested).

Bioactivity-SPR



Cynomolgus IL-13 R alpha 1, His Tag (Cat. No. IL1-C52H8) immobilized on CM5 Chip can bind Biotinylated Cynomolgus IL-13 Protein, His,Avitag (Cat. No. IL3-C82E4) with an affinity constant of 24.6 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

Background

Interleukin 13 (IL13) is also known as ALRH, BHR1and 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.