Biotinylated Human IL-3 R alpha / CD123 Protein, His,Avitag™, premium grade

Catalog # ILA-H82H5

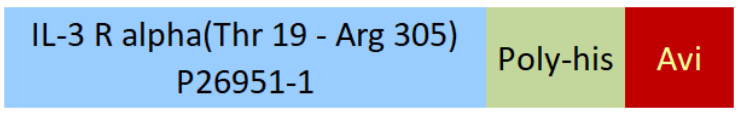
Synonym

IL3R,IL3RA,IL-3Ra,IL-3R-alpha,IL3RAY,IL3RX,IL3RY,CD123 antigen,CD123,hIL3Ra,hIL-3Ra,MGC34174,IL-3 R alpha

Source

Biotinylated Human IL-3 R alpha Protein, His,Avitag, premium grade(ILA-H82H5) is expressed from human 293 cells (HEK293). It contains AA Thr 19 - Arg 305 (Accession # P26951-1).
Predicted N-terminus: Thr 19
Biotinylated Human IL-3 R alpha Protein, His,Avitag, premium grade (ILA-H82H5), designed for preclinical stage, has the same activity and performance with GMP Biotinylated Human IL-3 R alpha Protein, His,Avitag, which enables a seamless transition from preclinical development to clinical phases. Premium Grade product offer a cost efficient alternative of GMP Grade products for the early development phase when safety of raw materials is not top priority. By using Premium Grade products in early development phase, you can transition easily into clinical and commercial phase without need to revalidate the raw materials and modify manufacturing process.

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 36.7 kDa. The protein migrates as 57 kDa±3 kDa under reducing (R) condition, and 54 kDa±3 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under non-reducing (NR) 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 0.01 EU per μg by the LAL method.

Host Cell Protein

<0.5 ng/μg of protein tested by ELISA.

Host Cell DNA

<0.02 ng/μg of protein tested by qPCR.

Sterility

Negative

Mycoplasma

Negative.

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.

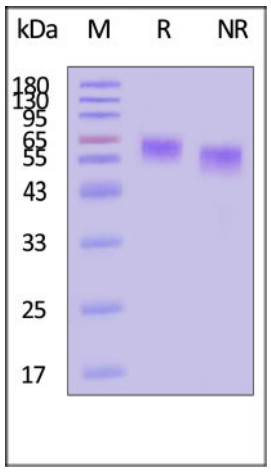
Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

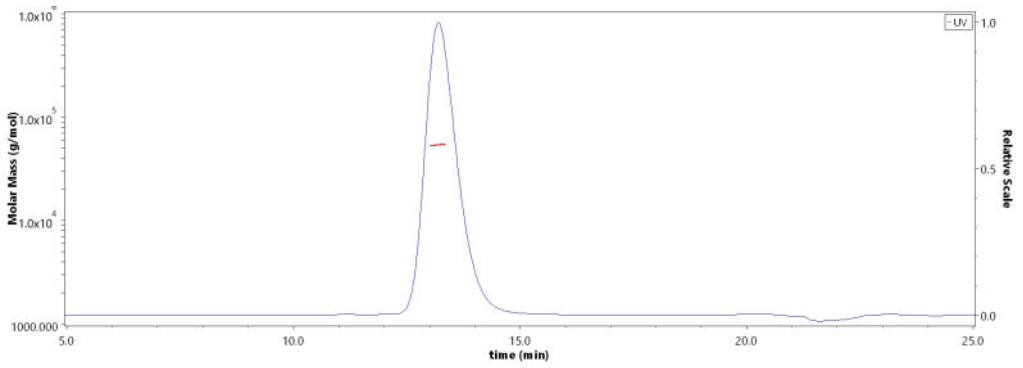
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

SEC-MALS

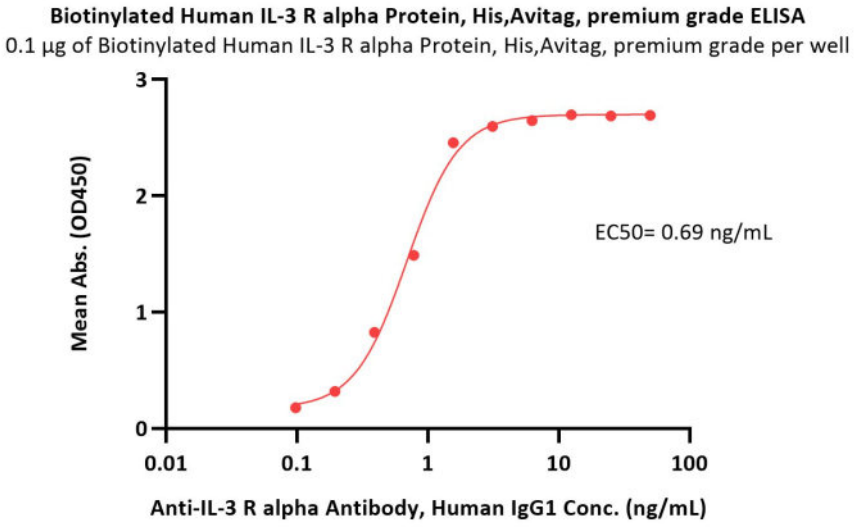


Biotinylated Human IL-3 R alpha Protein, His,Avitag, premium grade on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).



The purity of Biotinylated Human IL-3 R alpha Protein, His,Avitag, premium grade (Cat. No. ILA-H82H5) is more than 90% and the molecular weight of this protein is around 45-65 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



Immobilized Biotinylated Human IL-3 R alpha Protein, His,Avitag, premium grade (Cat. No. ILA-H82H5) at 1 μg/mL (100 μL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate can bind Anti-IL-3 R alpha Antibody, Human IgG1 with a linear range of 0.1-3 ng/mL (QC tested).

Background

Interleukin 3 receptor alpha (low affinity) (IL3RA), also known as CD123 (Cluster of Differentiation 123) is a 70-kD glycoprotein member of the hematopoietin receptor superfamily. This protein associates with a beta subunit common to the receptors for IL-5 and granulocyte-macrophage colony-stimulating factor (GM-CSF) to form a high-affinity receptor for IL-3. The interleukin-3 receptor α chain (CD123) has been identified as a potential immunotherapeutic target because it is overexpressed in AML compared with normal hematopoietic stem cells.

Clinical and Translational Updates