Biotinylated Human IL-3 R alpha / CD123 Protein, Fc,Avitag™ (MALS verified)

Catalog # ILA-H82F3

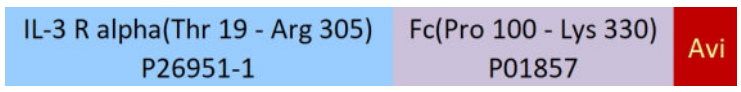
Synonym

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, Fc,Avitag(ILA-H82F3) is expressed from human 293 cells (HEK293). It contains AA Thr 19 - Arg 305 (Accession # P26951-1).
Predicted N-terminus: Thr 19

Molecular Characterization



This protein carries a human IgG1 Fc tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 61.2 kDa. The protein migrates as 80-100 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.

Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in 50 mM Tris, 100 mM Glycine, 25 mM Arginine, 150 mM NaCl, pH7.5 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

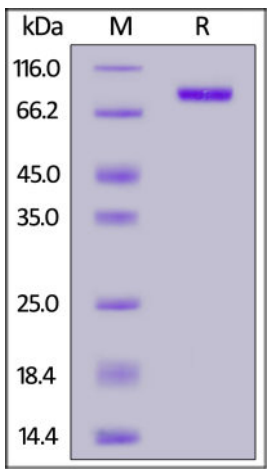
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

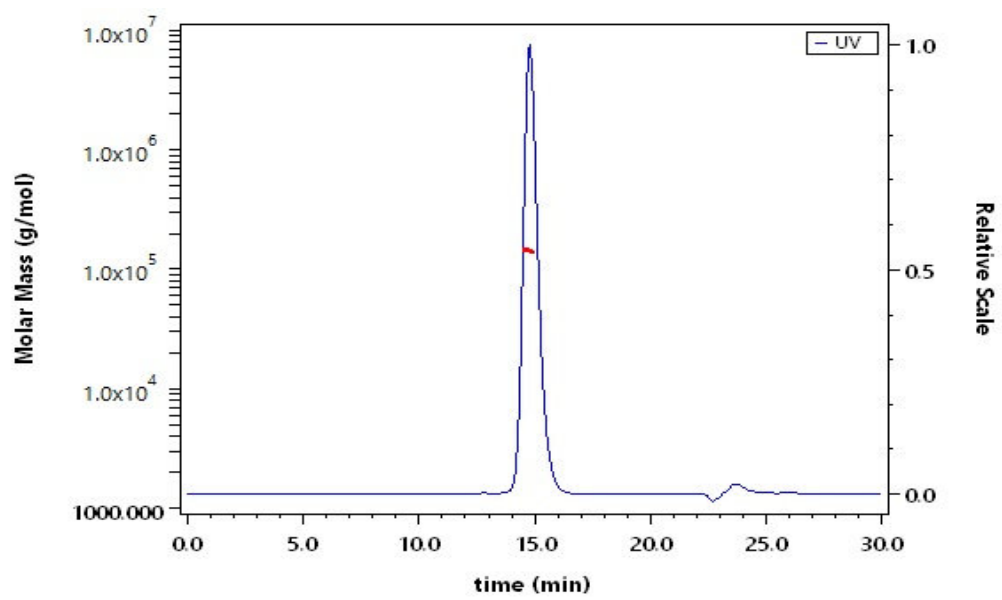
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



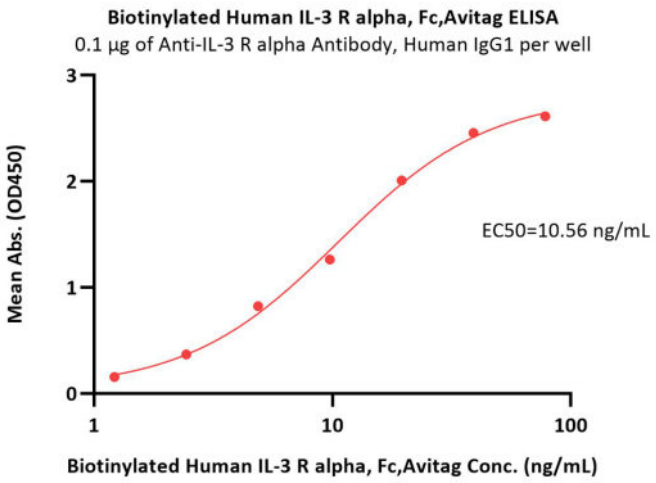
Biotinylated Human IL-3 R alpha, Fc,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

SEC-MALS

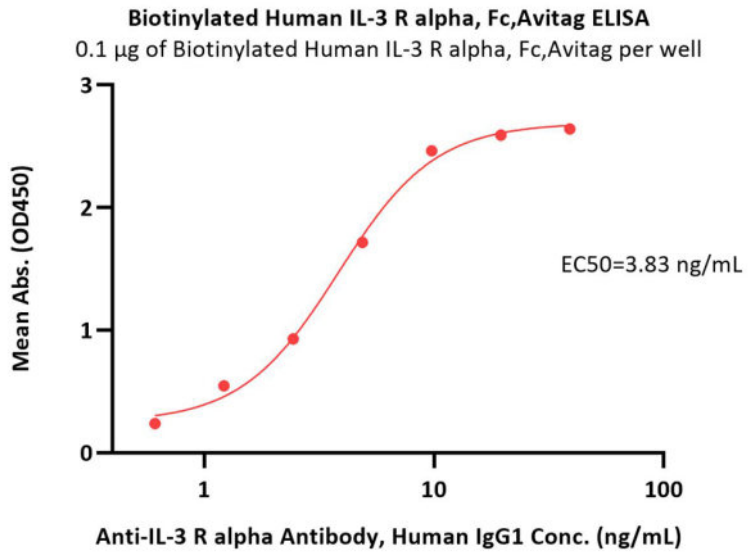


The purity of Biotinylated Human IL-3 R alpha, Fc,Avitag (Cat. No. ILA-H82F3) is more than 90% and the molecular weight of this protein is around 128-156 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA

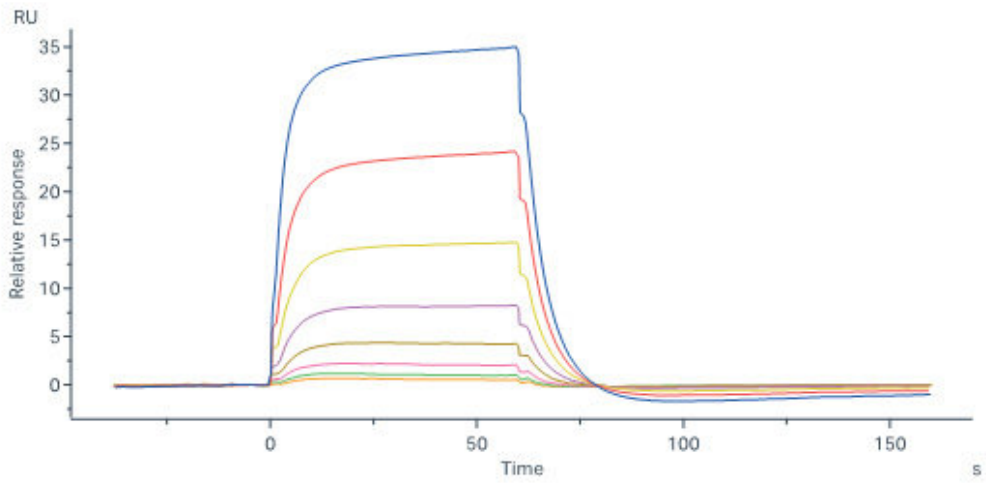


Immobilized Anti-IL-3 R alpha Antibody, Human IgG1 at 1 μg/mL (100 μL/well) can bind Biotinylated Human IL-3 R alpha, Fc,Avitag (Cat. No. ILA-H82F3) with a linear range of 1-20 ng/mL (QC tested).



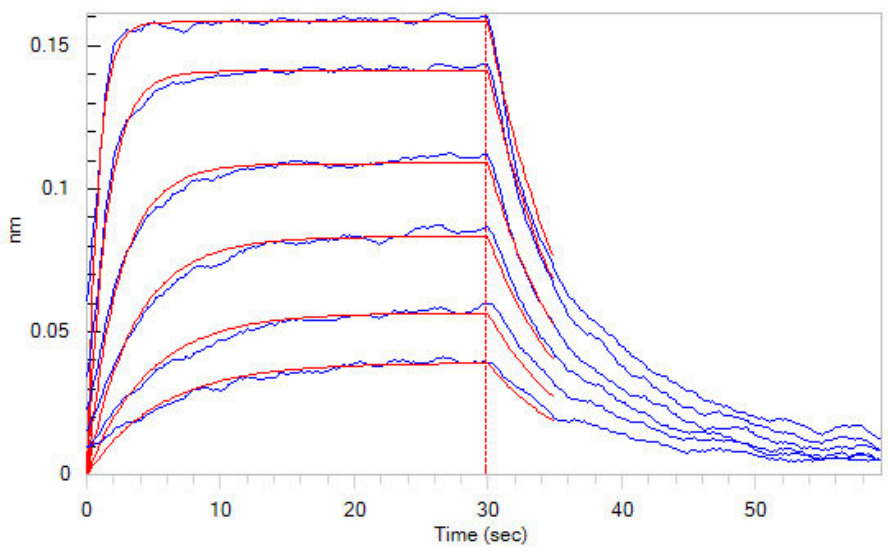
Immobilized Biotinylated Human IL-3 R alpha, Fc,Avitag (Cat. No. ILA-H82F3) at 1 μg/mL (100 μL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate can bind Anti-IL-3 R alpha Antibody, Human IgG1 with a linear range of 0.6-5 ng/mL (Routinely tested).

Bioactivity-SPR



Biotinylated Human IL-3 R alpha, Fc,Avitag (Cat. No. ILA-H82F3) immobilized on SA Chip can bind Human IL-3 Protein, His Tag (Cat. No. IL3-H52H9) with an affinity constant of 0.821 μM as determined in a SPR assay (Biacore 8K) (Routinely tested).

Bioactivity-BLI



Loaded Biotinylated Human IL-3 R alpha, Fc,Avitag (Cat. No. ILA-H82F3) on SA Biosensor, can bind Human IL-3 Protein, His Tag (Cat. No. IL3-H52H9) with an affinity constant of 0.35 μM as determined in BLI assay (ForteBio Octet Red96e) (Routinely 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.