Biotinylated Human CD23 / Fc epsilon RII Protein, His,Avitag™ (MALS & SPR verified)

Catalog # CD3-H82Q5

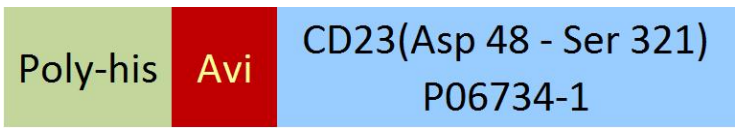
Synonym

FCER2,CD23,CD23A,CLEC4J,FCE2,IGEBF,FcεRII,FcεRII

Source

Biotinylated Human CD23, His,Avitag(CD3-H82Q5) is expressed from human 293 cells (HEK293). It contains AA Asp 48 - Ser 321 (Accession # P06734-1). Predicted N-terminus: His

Molecular Characterization



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

The protein has a calculated MW of 34.2 kDa. The protein migrates as 40-46 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

>95% 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

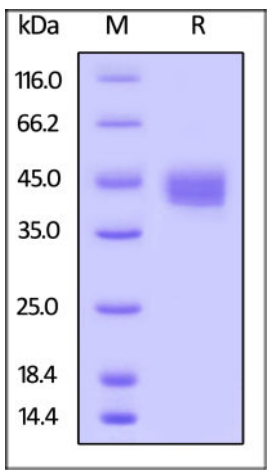
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

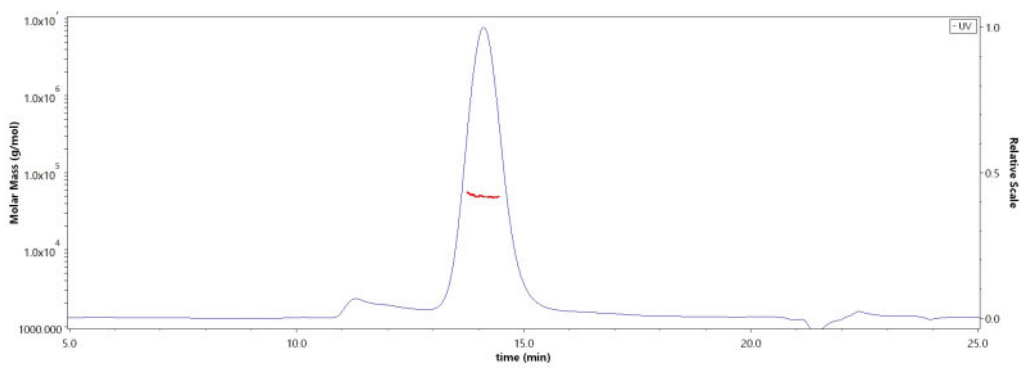
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 12 months under sterile conditions after reconstitution.

SDS-PAGE



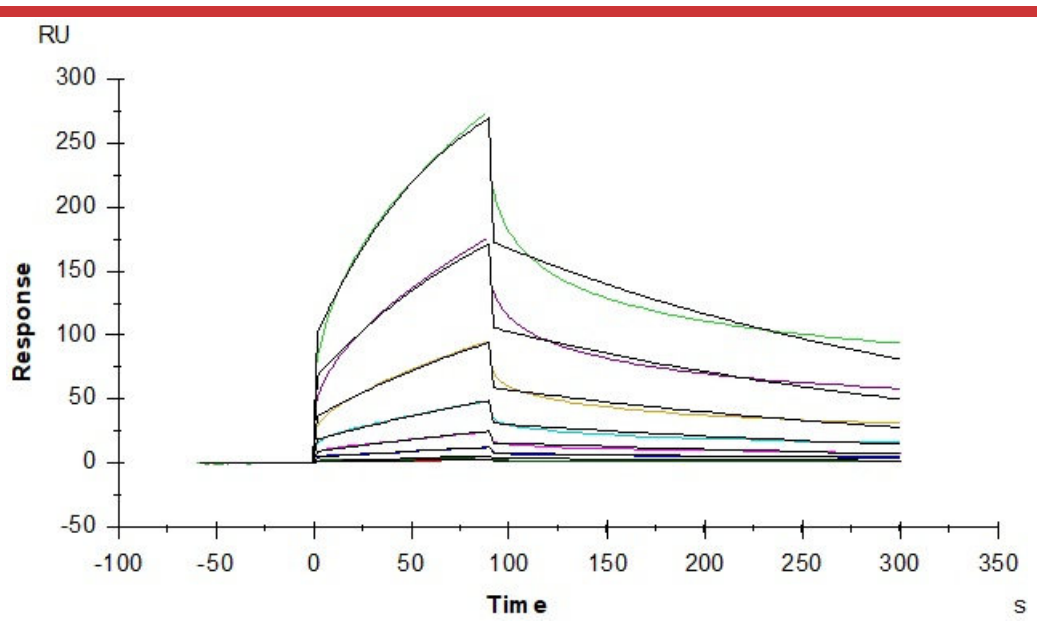
Biotinylated Human CD23, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

SEC-MALS



The purity of Biotinylated Human CD23, His,Avitag (Cat. No. CD3-H82Q5) is more than 90% and the molecular weight of this protein is around 35-55 kDa verified by SEC-MALS.
Report

Bioactivity-SPR



Biotinylated Human CD23, His,Avitag (Cat. No. CD3-H82Q5) captured on Biotin CAP-Series S Sensor Chip can bind Immunoglobulin E with an affinity constant of 326 nM as determined in a SPR assay (Biacore T200) (QC tested).

Background

Cluster of differentiation 23 (CD23) is also known as Low affinity immunoglobulin epsilon Fc receptor (FCER2), C-type lectin domain family 4 member J (CLEC4J), Fc-epsilon-RII (FcεRII), Immunoglobulin E-binding factor (IGEBF), is the "low-affinity" receptor for IgE, an antibody isotype involved in allergy and resistance to parasites, and is important in regulation of IgE levels. Unlike many of the antibody receptors, CD23 is a C-type lectin. It is found on mature B cells, activated macrophages, eosinophils, follicular dendritic cells, and platelets.There are two forms of CD23: CD23a and CD23b. CD23a is present on follicular B cells, whereas CD23b requires IL-4 to be expressed on T-cells, monocytes, Langerhans cells, eosinophils, and macrophages. CD23 is known to have role of transportation in antibody feedback regulation. Antigen that enters the blood stream is captured by antigen specific IgE antibodies. The IgE immune complexes that are formed bind to CD23 molecules on B cells, and are transported to the B cell follicles of the spleen. The antigen is then transferred from CD23+ B cells to CD11c+ antigen presenting cells. The CD11c+ cells in turn present the antigen to CD4+ T cells, which can lead to an enhanced antibody response. In flow cytometry, CD23 is helpful in the differentiation of chronic lymphocytic leukemia (CD23-positive) from mantle cell leukemia (CD23-negative).

Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.