Biotinylated Human CD47 Protein, His,Avitag™ (MALS verified)

Catalog # CD7-H82E9

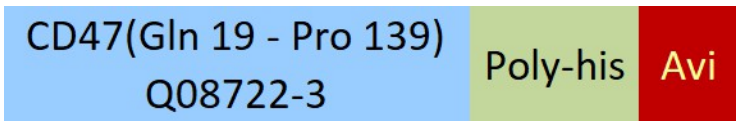
Synonym

CD47,MER6,IAP,OA3

Source

Biotinylated Human CD47, His,Avitag(CD7-H82E9) is expressed from human 293 cells (HEK293). It contains AA Gln 19 - Pro 139 (Accession # Q08722-3). Predicted N-terminus: Gln 19

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 16.9 kDa. The protein migrates as 32-44 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 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

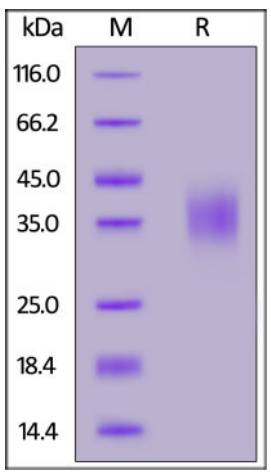
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

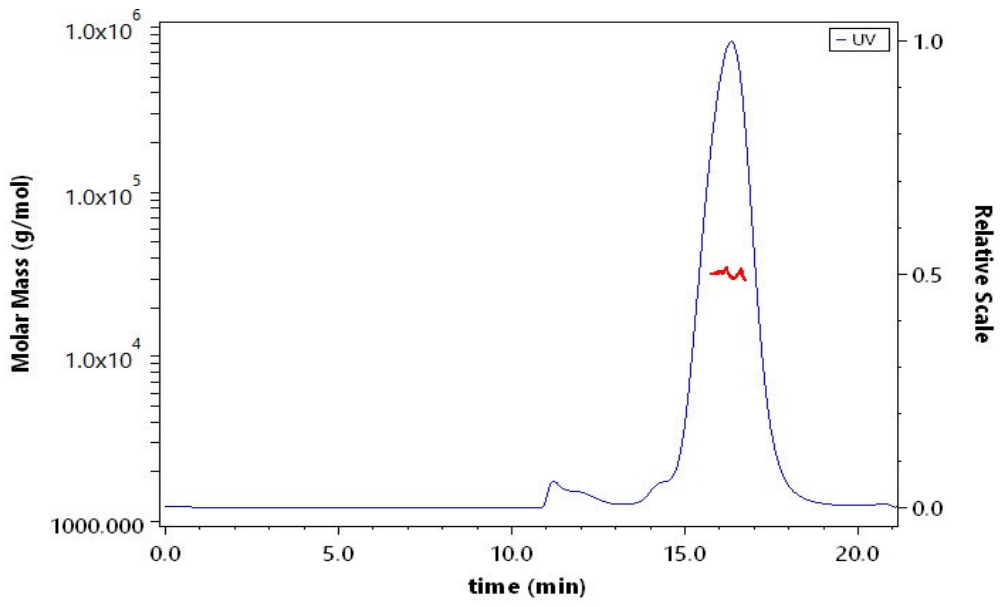
- -20°C to -70°C for 24 months in lyophilized state;
- -70°C for 12 months under sterile conditions after reconstitution.

SDS-PAGE



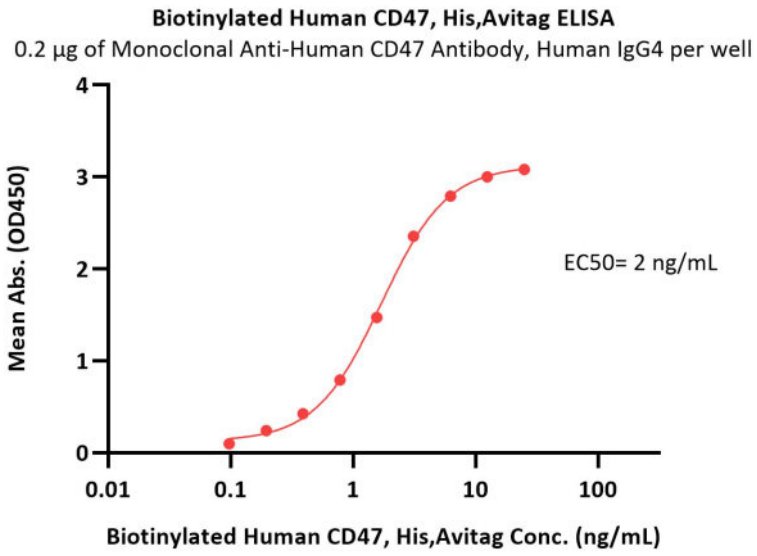
Biotinylated Human CD47, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

SEC-MALS

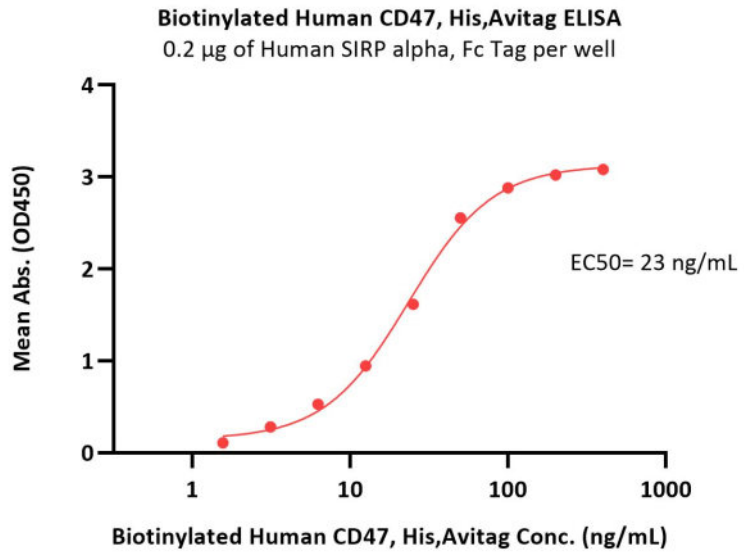


The purity of Biotinylated Human CD47, His,Avitag (Cat. No. CD7-H82E9) is more than 90% and the molecular weight of this protein is around 28-38 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA

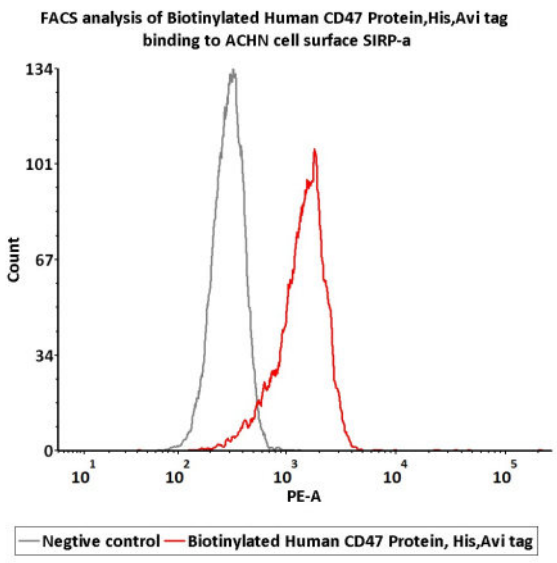


Immobilized Monoclonal Anti-Human CD47 Antibody, Human IgG4 at 2 μg/mL (100 μL/well) can bind Biotinylated Human CD47, His,Avitag (Cat. No. CD7-H82E9) with a linear range of 0.1-3 ng/mL (QC tested).

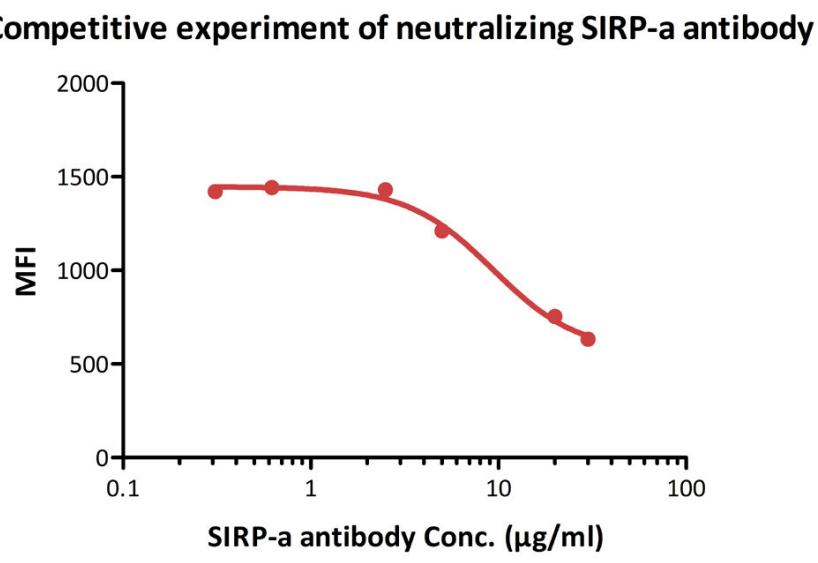


Immobilized Human SIRP alpha, Fc Tag (Cat. No. SIA-H5251) at 2 μg/mL (100 μL/well) can bind Biotinylated Human CD47, His,Avitag (Cat. No. CD7-H82E9) with a linear range of 2-25 ng/mL (Routinely tested).

Bioactivity-FACS



FACS assay shows that Biotinylated Human CD47, His,Avitag (Cat. No. CD7-H82E9) can bind to ACHN cell expressing human SIRP-a. The concentration of CD47 used is 10 μg/mL (Routinely tested).



FACS analysis shows that the binding of Human CD47 to ACHN expressing SIRP-a was inhibited by increasing concentration of neutralizing SIRP-a antibody. The concentration of Human CD47 used is 20 μg/mL. IC50=9.334 μg/mL

Background

Leukocyte surface antigen CD47 is also known as Antigenic surface determinant protein OA3, Integrin-associated protein (IAP) and Protein MER6. CD47 contains 1 Ig-like V-type (immunoglobulin-like) domain. CD47 is very broadly distributed on normal adult tissues. CD47 has a role in both cell adhesion by acting as an adhesion receptor for THBS1 on platelets, and in the modulation of integrins and plays an important role in memory formation and synaptic plasticity in the hippocampus by similarity. CD47 is the receptor for SIRPA, binding to which prevents maturation of immature dendritic cells and inhibits cytokine production by mature dendritic cells. CD47 Interaction with SIRPG mediates cell-cell adhesion, enhances superantigen-dependent T-cell-mediated proliferation and costimulates T-cell activation.