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

Catalog # CD7-H82F6

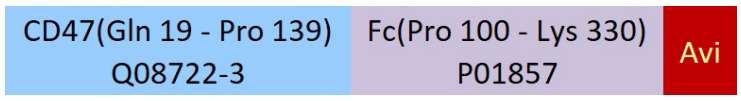
Synonym

CD47,MER6,IAP,OA3

Source

MABSol® Biotinylated Human CD47, Fc,Avitag (CD7-H82F6) is expressed from human HEK293 cells. It contains AA Gln 19 - Pro 139 (Accession # Q08722-3).
Predicted N-terminus: Gln 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 42.2 kDa. The protein migrates as 55-66 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.

>95% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in
Tris with Glycine, Arginine and 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

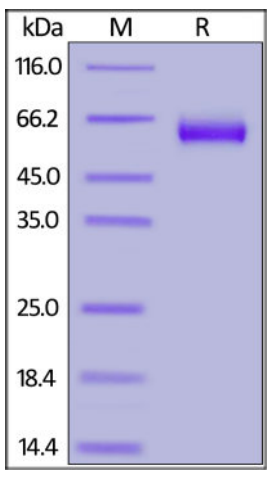
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

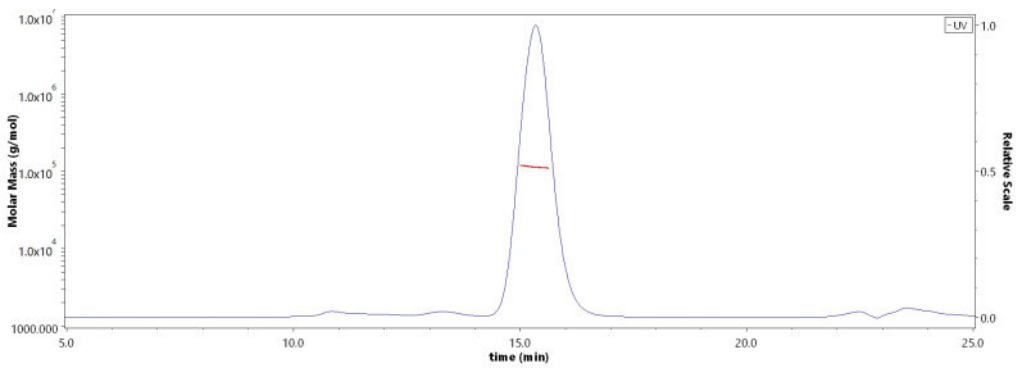
- -20°C to -70°C for 24 months in lyophilized state;
- -70°C for 24 months under sterile conditions after reconstitution.

SDS-PAGE



Biotinylated Human CD47, 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

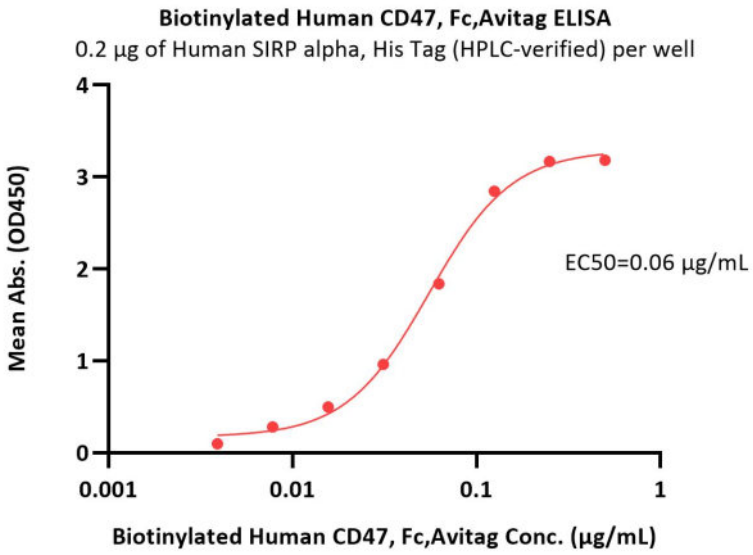


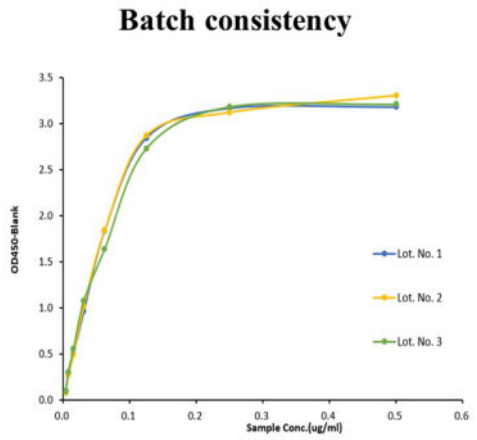
The purity of Biotinylated Human CD47, Fc,Avitag (Cat. No. CD7-H82F6) is more than 95% and the molecular weight of this protein is around 105-135 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA

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

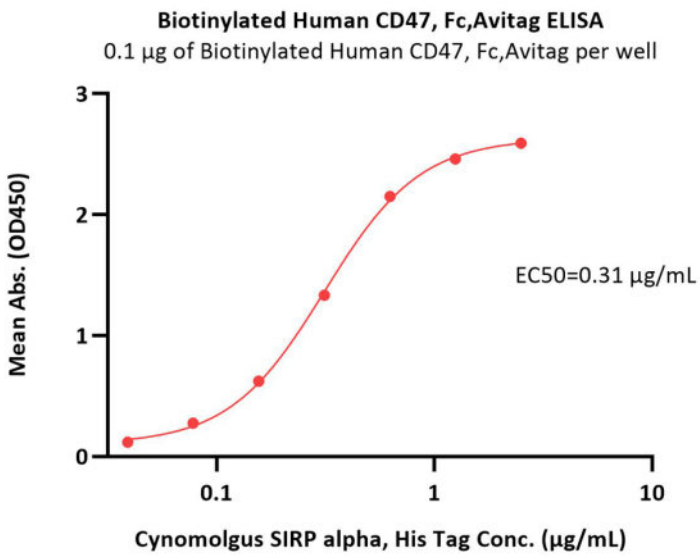
Catalog # CD7-H82F6

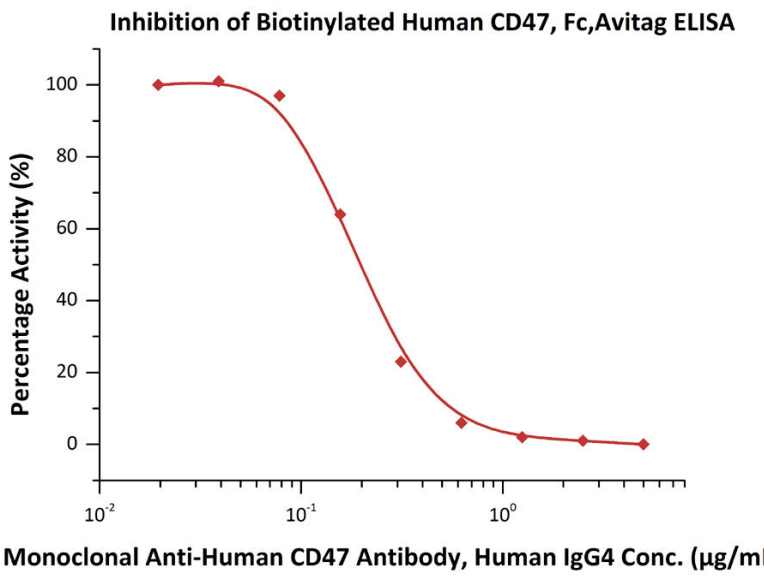




Lot. No.	EC50(μg/mL)
Lot. No. 1	0.0551
Lot. No. 2	0.0538
Lot. No. 3	0.0590

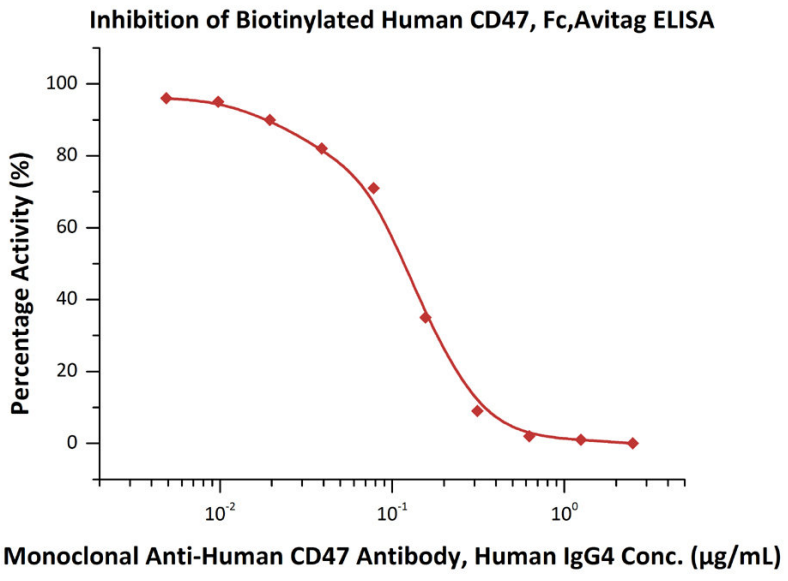
Immobilized Human SIRP alpha, His Tag (HPLC-verified) (Cat. No. SIA-H5225) at 2 μg/mL (100 μL/well) can bind Biotinylated Human CD47, Fc,Avitag (Cat. No. CD7-H82F6) with a linear range of 0.004-0.5 μg/mL (QC tested).





Immobilized Biotinylated Human CD47, Fc,Avitag (Cat. No. CD7-H82F6) at 1 μg/mL (100 μL/well) on streptavidin precoated (0.2 μg/well) plate, can bind Cynomolgus SIRP alpha, His Tag (Cat. No. SIA-C52H7) with a linear range of 0.039-0.625 μg/mL (Routinely tested).

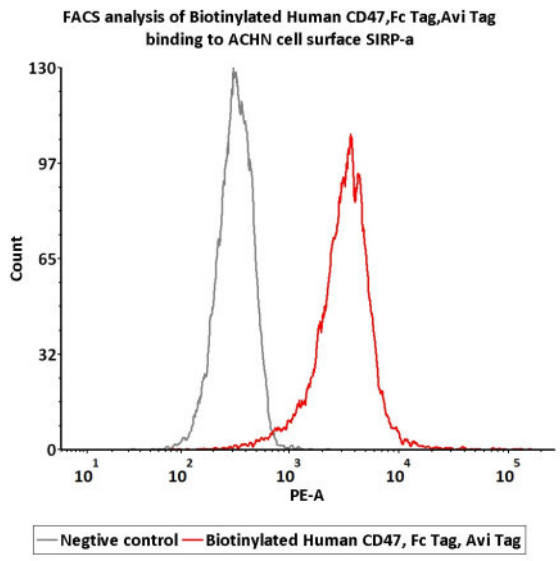
Serial dilutions of Anti-Human CD47 Neutralizing Antibody were added into Human SIRP alpha, Mouse IgG1 Fc Tag (HPLC-verified) (Cat. No. SIA-H52A8): Biotinylated Human CD47, Fc,Avitag (Cat. No. CD7-H82F6) binding reactions. The half maximal inhibitory concentration (IC50) is 0.2006 μg/mL (Routinely tested).



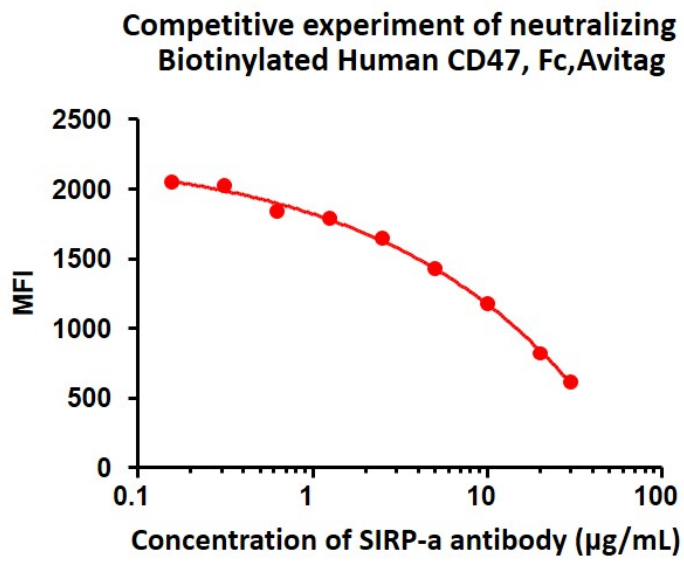
Serial dilutions of Anti-Human CD47 Neutralizing Antibody were added into Human SIRP alpha, His Tag (HPLC-verified) (Cat. No. SIA-H5225): Biotinylated Human CD47, Fc,Avitag (Cat. No. CD7-H82F6) binding

reactions. The half maximal inhibitory concentration (IC50) is 0.1245 μg/mL (Routinely tested).

Bioactivity-FACS



FACS assay shows that Biotinylated Human CD47, Fc,Avitag (Cat. No. CD7-H82F6) can bind to ACHN cell expressing human SIRP-a. The concentration of CD47 used is 3 μg/mL (Routinely tested).



FACS analysis shows that the binding of Biotinylated Human CD47, Fc,Avitag to ACHN expressing SIRP-a was inhibited by increasing concentration of neutralizing SIRP-a antibody. The concentration of Human CD47 used is 3 μg/mL (Routinely tested).

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.

Clinical and Translational Updates