Biotinylated Human SIRP alpha / CD172a Protein, Fc,Avitag™ (MALS verified)

Catalog # CDA-H82F2

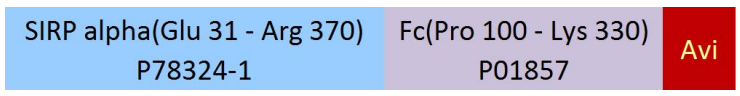
Synonym

SHPS1,SIRPA,CD172A,BIT,MFR,MYD1,P84,PTPNS1

Source

Biotinylated Human SIRP alpha, Fc,Avitag(CDA-H82F2) is expressed from human 293 cells (HEK293). It contains AA Glu 31 - Arg 370 (Accession # P78324-1).
Predicted N-terminus: Glu 31

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 65.8 kDa. The protein migrates as 75-105 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

Supplied as 0.2 μm filtered solution in
Tris with Glycine, Arginine and NaCl, pH7.5 with trehalose as protectant.

Contact us for customized product form or formulation.

Shipping

This product is supplied and shipped with dry ice, please inquire the shipping cost.

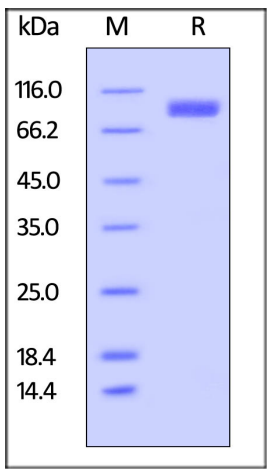
Storage

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

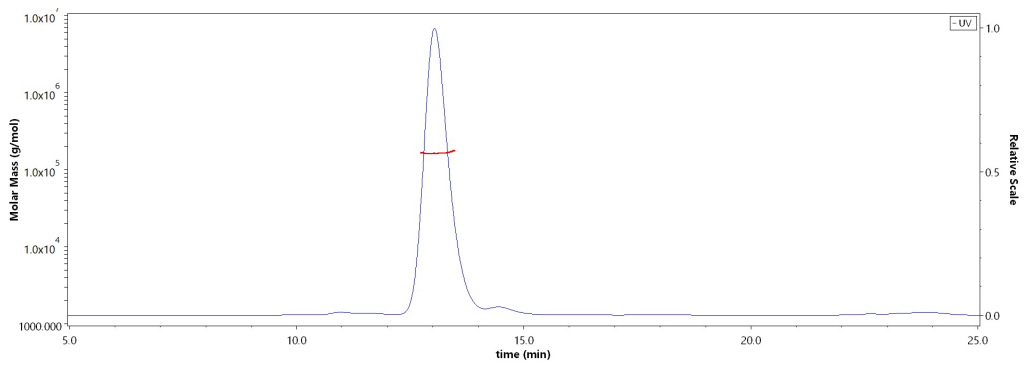
- The product MUST be stored at -70°C or lower upon receipt;
- -70°C for 3 months under sterile conditions.

SDS-PAGE



Biotinylated Human SIRP 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

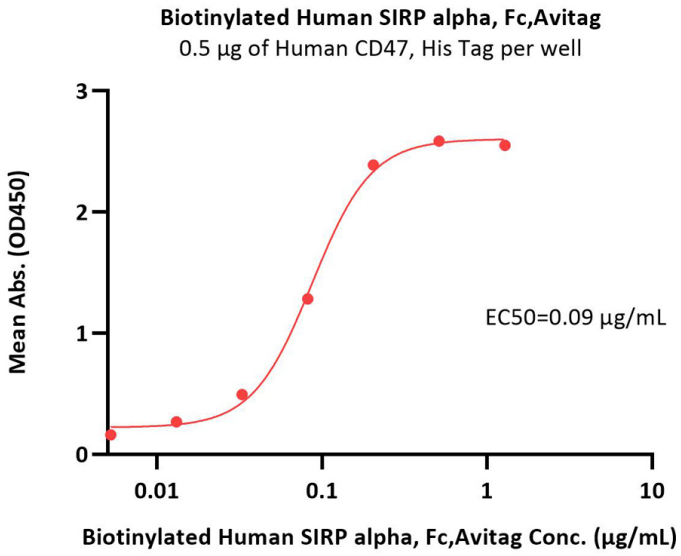


The purity of Biotinylated Human SIRP alpha, Fc,Avitag (Cat. No. CDA-H82F2) is more than 90% and the molecular weight of this protein is around 155-170 kDa verified by SEC-MALS.
Report

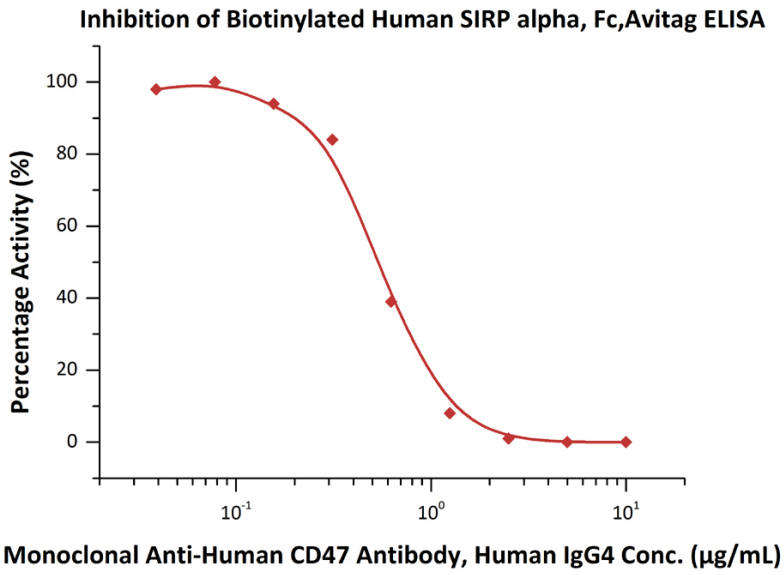
Bioactivity-ELISA

Biotinylated Human SIRP alpha / CD172a Protein, Fc,Avitag™ (MALS verified)

Catalog # CDA-H82F2

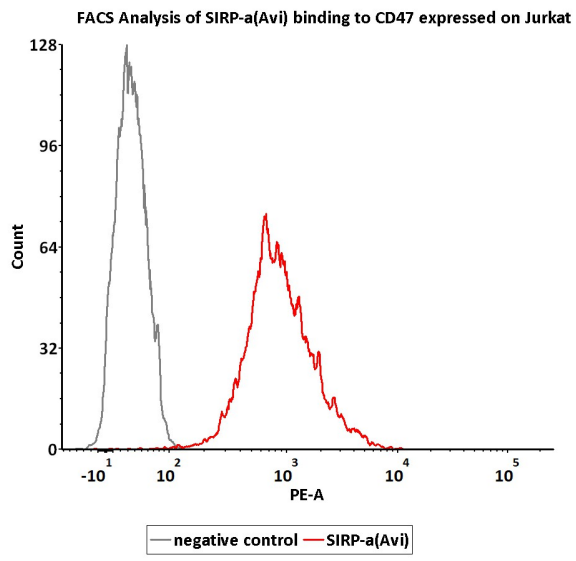


Immobilized Human CD47, His Tag (Cat. No. CD7-H5227) at 5 μg/mL (100 μL/well) can bind Biotinylated Human SIRP alpha, Fc,Avitag (Cat. No. CDA-H82F2) with a linear range of 0.05-0.2 μg/mL (QC tested).

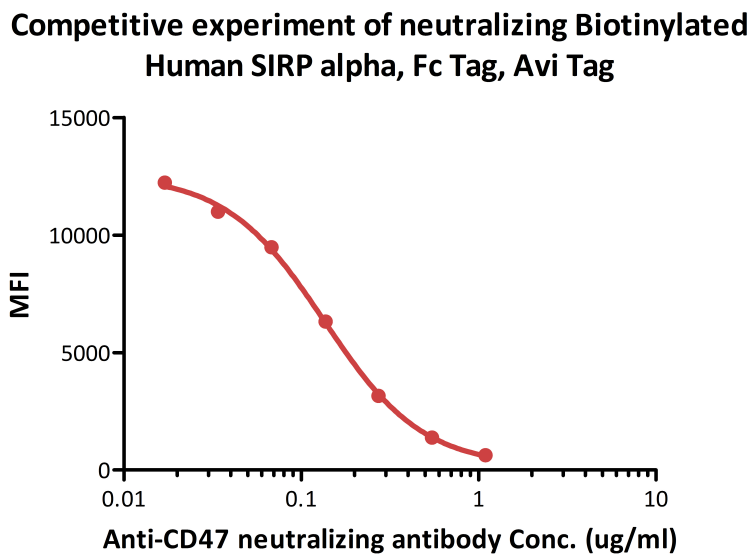


Serial dilutions of Anti-Human CD47 Neutralizing Antibody were added into Human CD47, Fc Tag (Cat. No. CD7-H5256): Biotinylated Human SIRP alpha, Fc,Avitag (Cat. No. CDA-H82F2) binding reactions. The half maximal inhibitory concentration (IC50) is 0.5431 μg/mL (Routinely tested).

Bioactivity-FACS



FACS assay shows that Biotinylated Human SIRP alpha, Fc,Avitag (Cat. No. CDA-H82F2) can bind to Jurkat cell expressing CD47. The concentration of SIRP alpha used is 3 μg/mL (QC tested).



FACS analysis shows that the binding of Biotinylated Human SIRP alpha, Fc,Avitag (Cat. No. CDA-H82F2) to Jurkat expressing CD47 was inhibited by increasing concentration of neutralizing Anti- Human CD47 antibody. The concentration of SIRP alpha used is 1 μg/mL. IC50=0.1303 μg/mL (Routinely tested).

Background

Tyrosine-protein phosphatase non-receptor type substrate 1 (SHPS1) is also known as CD172 antigen-like family member A (CD172a), Macrophage fusion receptor, MyD-1 antigen, Signal-regulatory protein alpha (SIRPA or SIRP alpha) or p84, is a member of the SIRP family, and also belongs to the immunoglobulin superfamily. SIRP alpha is Ubiquitous and highly expressed in brain. SIRPA / CD172a is immunoglobulin-like cell surface receptor for CD47 and acts as docking protein and induces translocation of PTPN6, PTPN11 and other binding partners from the cytosol to the plasma membrane. SIRPA / SHPS-1 supports adhesion of cerebellar neurons, neurite outgrowth and glial cell attachment and may play a key role in intracellular signaling during synaptogenesis and in synaptic function By similarity. SIRPA / MyD1 involved in the negative regulation of receptor tyrosine kinase-coupled cellular responses induced by cell adhesion, growth factors or insulin and mediates negative regulation of phagocytosis, mast cell activation and dendritic cell activation. CD47 binding prevents maturation of immature dendritic cells and inhibits cytokine production by mature dendritic cells.