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

Catalog # SIA-M82F7

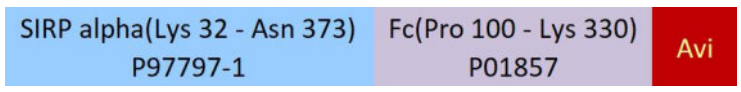
## Synonym

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

## Source

Biotinylated Mouse SIRP alpha Protein, Fc,Avitag(SIA-M82F7) is expressed from human 293 cells (HEK293). It contains AA Lys 32 - Asn 373 (Accession # P97797-1).
Predicted N-terminus: Lys 32

## 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 66.0 kDa. The protein migrates as 90-116 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

>90% 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

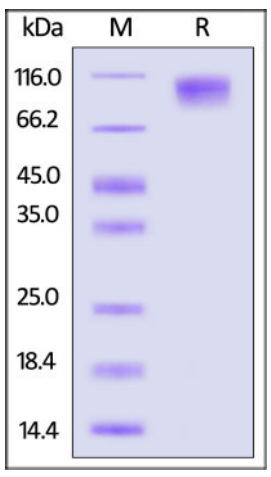
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

***Please avoid repeated freeze-thaw cycles.***

This product is stable after storage at:

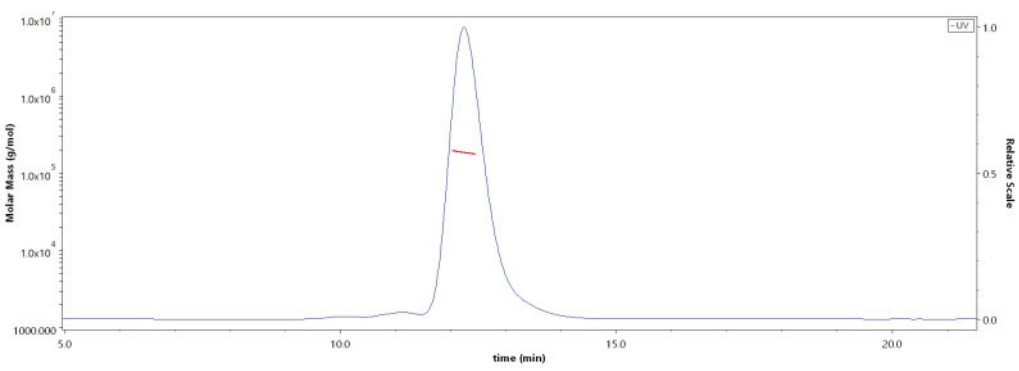
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## SDS-PAGE



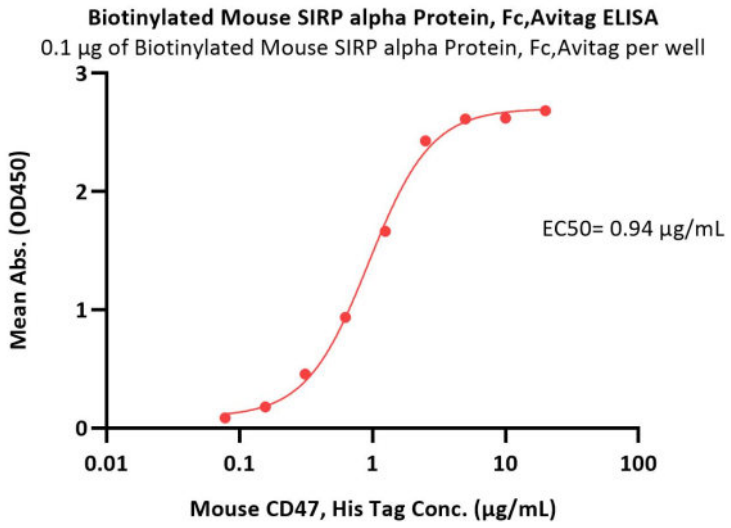

Biotinylated Mouse SIRP alpha Protein, Fc,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

## SEC-MALS




The purity of Biotinylated Mouse SIRP alpha Protein, Fc,Avitag (Cat. No. SIA-M82F7) is more than 90% and the molecular weight of this protein is around 175-205 kDa verified by SEC-MALS.
Report

## Bioactivity-ELISA




Immobilized Biotinylated Mouse SIRP alpha Protein, Fc,Avitag (Cat. No. SIA-M82F7) at 1 μg/mL (100 μL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate can bind Mouse CD47, His Tag (Cat. No. CD7-M522b) with a linear range of 0.078-2.5 μg/mL (QC 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.

## Clinical and Translational Updates