

# Recombinant Human SIRPA protein, mouse IgG1 Fc-tagged (HPLC-verified)

Cat. No. SIRPA-346H Lot. No. (See product label)

## SPECIFICATION

### Product Overview

Recombinant Human SIRPA protein (Glu31-Arg370)(HPLC-verified), fused to Mouse IgG1 Fc tag at C-terminus, was expressed in human 293 cells (HEK293).

### Species

Human

### Source

HEK293

### ProteinLength

340

### Description

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

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	production by mature dendritic cells.
<b>Form</b>	Lyophilized from 0.22 um filtered solution in 50 mM Tris, 100 mM Glycine, pH7.5, 10% trehalose.
<b>Molecular Mass</b>	The protein has a calculated MW of 63.5 kDa. The predicted N-terminus is Glu 31. The reducing (R) protein migrates as 70-105 kDa in SDS-PAGE due to glycosylation.
<b>Endotoxin</b>	Less than 1.0 EU per ug by the LAL method.
<b>Purity</b>	>95% as determined by SDS-PAGE.
<b>Storage</b>	For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles. This product is stable after storage at: -20 centigrade to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution.
<b>Reconstitution</b>	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

## GENE INFORMATION

<b>Gene Name</b>	SIRPA
<b>Official Symbol</b>	SIRPA
<b>Synonyms</b>	SIRPA; signal-regulatory protein alpha; protein tyrosine phosphatase, non receptor type substrate 1 , PTPNS1; tyrosine-protein phosphatase non-receptor type substrate 1; BIT; CD172a; MFR; MYD 1; P84; SHPS 1; SHPS1; SIRP; SIRP ALPHA 1;

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SIRPalpha; SIRPalpha2; myd-1 antigen; inhibitory receptor SHPS-1; macrophage fusion receptor; CD172 antigen-like family member A; tyrosine phosphatase SHP substrate 1; brain-immunoglobulin-like molecule with tyrosine-based activation motifs; MYD-1; CD172A; PTPNS1

**Gene ID** [140885](#)

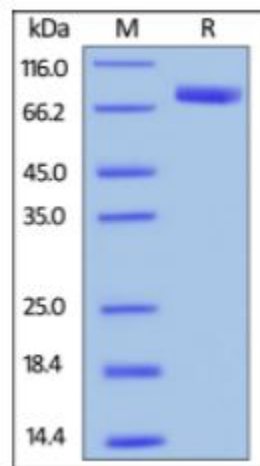
**mRNA Refseq** [NM\\_001040022](#)

**Protein Refseq** [NP\\_001035111](#)

**MIM** [602461](#)

**UniProt ID** [P78324](#)

**SDS-PAGE of SIRPA-346H**



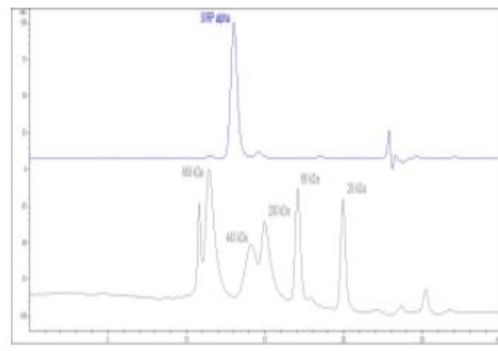
Human SIRP alpha, Mouse IgG1 Fc Tag (HPLC-verified) on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

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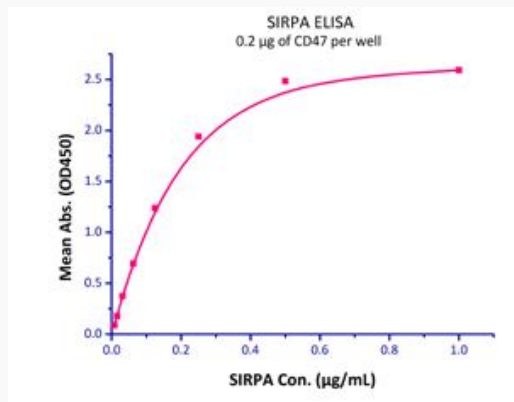
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**SEC-HPLC of SIRPA-346H**



The purity of Human SIRP alpha, Mouse IgG1 Fc Tag (HPLC-verified) was greater than 90% as determined by SEC-HPLC.

**Bioactivity-ELISA of SIRPA-346H**



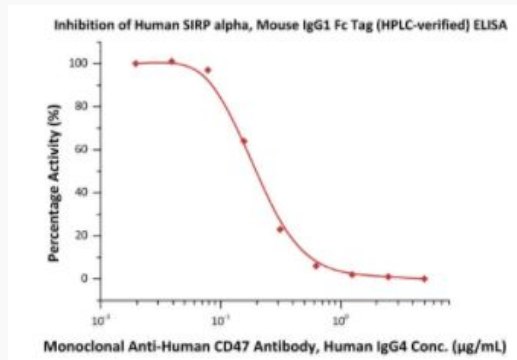
Immobilized Human CD47, His Tag at 2 µg/mL (100 µL/well) can bind Human SIRP alpha, Mouse IgG1 Fc Tag (HPLC-verified) with a linear range of 0.008-0.25 µg/mL (QC tested).

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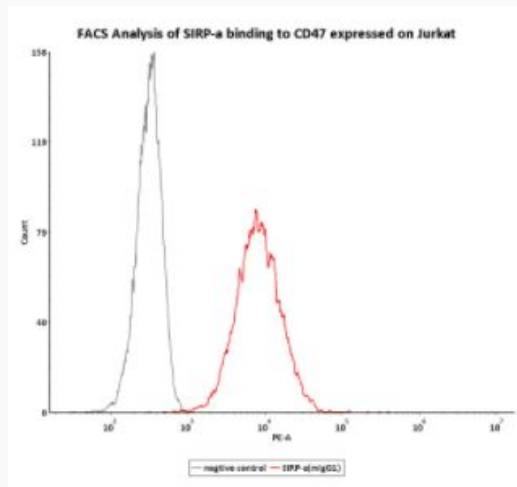
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### Bioactivity-ELISA of SIRPA-346H



Serial dilutions of Anti-Human CD47 Neutralizing Antibody were added into Human SIRP alpha, Mouse IgG1 Fc Tag (HPLC-verified): Biotinylated Human CD47, Fc,Avitag binding reactions. The half maximal inhibitory concentration (IC50) is 0.2006 µg/mL (Routinely tested).

### Bioactivity-FACS of SIRPA-346H



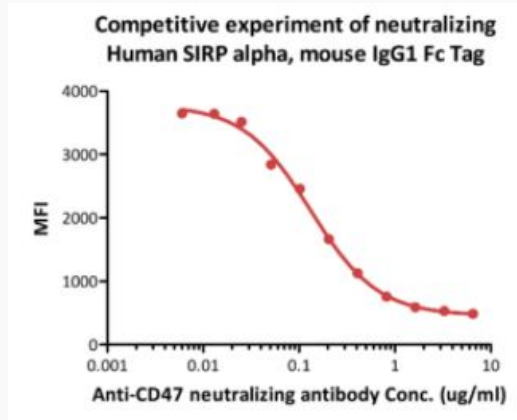
FACS assay shows that Human SIRP alpha, Mouse IgG1 Fc Tag (HPLC-verified) can bind to Jurkat cell expressing CD47. The concentration of SIRP alpha used is 0.3 µg/mL (Routinely tested).

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### Bioactivity-FACS of SIRPA-346H



FACS analysis shows that the binding of Human SIRP alpha, Mouse IgG1 Fc Tag (HPLC-verified) to Jurkat expressing CD47 was inhibited by increasing concentration of neutralizing anti-CD47 antibody. The concentration of SIRP alpha used is 0.3 µg/mL. IC<sub>50</sub>=0.1318 µg/mL (Routinely tested).

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