

## SIRP alpha/CD172a Protein, Mouse (HEK293, His)

Cat. No.:	HY-P72468
Synonyms:	Signal-regulatory protein alpha; CD172a; SIRP alpha; SIRPA; MFR; SHPS1; SIRP
Species:	Mouse
Source:	HEK293
Accession:	P97797-1/Q6P6I8/BAA13520.1 (K32-N373)
Gene ID:	19261
Molecular Weight:	60-110 kDa

### PROPERTIES

#### AA Sequence

KELKVTQPEK	SVSVAAGDST	VLNCTLTSL L	PVGPIRWYRG
VGPSRLLIYS	FAGEYVPRIR	NVSDTTKRNN	MDFSIRISNV
TPADAGIYYC	VKFQKGSSEP	DTEIQSGGGT	EVYVLAKPSP
PEVSGPADRG	IPDQKVNFTC	KSHGFSPRNI	TLKWFKDGQE
LHPLETTVNP	SGKNVSYNIS	STVRVVLNSM	DVNSKVICEV
AHITLDRSPL	RGIANLSNFI	RVSPTVKVTQ	QSPTSMNQVN
LTCRAERFYP	EDLQLIWLEN	GNVSRNDTPK	NLTKNTDGT Y
NYTSLFLVNS	SAHREDVVFT	CQVKHDQQPA	ITRNHTV LGF
AHSSDQGS MQ	TFPDNNATHN	WN	

#### Appearance

Lyophilized powder

#### Formulation

Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.

#### Endotoxin Level

<1 EU/µg, determined by LAL method.

#### Reconstitution

It is not recommended to reconstitute to a concentration less than 100 µg/mL in PBS, pH 7.4. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

#### Storage & Stability

Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

#### Shipping

Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

#### Background

SIRP alpha/CD172a Protein functions as an immunoglobulin-like cell surface receptor for CD47, facilitating the translocation of PTPN6, PTPN11, and other binding partners from the cytosol to the plasma membrane. This receptor plays a crucial role in various cellular processes, including supporting adhesion of cerebellar neurons, promoting neurite outgrowth, and

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facilitating glial cell attachment. Additionally, SIRP alpha/CD172a is implicated in intracellular signaling during synaptogenesis and synaptic function. Its negative regulatory role extends to receptor tyrosine kinase-coupled responses induced by cell adhesion, growth factors, or insulin. Furthermore, SIRP alpha/CD172a participates in the negative modulation of phagocytosis, mast cell activation, and dendritic cell activation, with CD47 binding preventing dendritic cell maturation and inhibiting cytokine production. Notably, it contributes to antiviral immunity by limiting new world arenavirus infection, specifically by decreasing virus internalization. The receptor also interacts with THBS1, participating in ROS signaling in non-phagocytic cells and stimulating NADPH oxidase-derived ROS production. SIRP alpha/CD172a engages in diverse protein interactions, including binding to PTPN11, GRB2, FGR, JAK2, SCAP1, SCAP2, FYB1, PTK2B, and TRIM2.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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