

## SIRP alpha/CD172a Protein, Cynomolgus (Biotinylated, HEK293, His-Avi)

Cat. No.:	HY-P78553
Synonyms:	SHPS1; SIRPA; CD172A; BIT; MFR; MYD1; P84; PTPNS1
Species:	Cynomolgus
Source:	HEK293
Accession:	NP_001271679 (E31-N370)
Gene ID:	101926317
Molecular Weight:	66 kDa

### PROPERTIES

Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Human CD47 hFc at 2 µg/mL (100 µL/well) can bind Biotinylated Cynomolgus SIRP alpha, His-Avi with a linear range of 13.3-15.39 ng/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized a 0.2 µm filtered solution of 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0.
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 ddH <sub>2</sub> O.
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 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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