

SIRP alpha/CD172a Protein, Human (G75A, HEK293, His)

Cat. No.:	HY-P74546
Synonyms:	Signal-regulatory protein alpha; CD172a; SIRP alpha; SIRPA; MFR; SHPS1; SIRP
Species:	Human
Source:	HEK293
Accession:	P78324 (E31-R370, G75A)
Gene ID:	140885
Molecular Weight:	45-55 kDa

PROPERTIES

AA Sequence	<pre> E E E L Q V I Q P D K S V L V A A G E T A T L R C T A T S L I P V G P I Q W F R G A G P A R E L I Y N Q K E G H F P R V T T V S D L T K R N N M D F S I R I G N I T P A D A G T Y Y C V K F R K G S P D D V E F K S G A G T E L S V R A K P S A P V V S G P A A R A T P Q H T V S F T C E S H G F S P R D I T L K W F K N G N E L S D F Q T N V D P V G E S V S Y S I H S T A K V V L T R E D V H S Q V I C E V A H V T L Q G D P L R G T A N L S E T I R V P P T L E V T Q Q P V R A E N Q V N V T C Q V R K F Y P Q R L Q L T W L E N G N V S R T E T A S T V T E N K D G T Y N W M S W L L V N V S A H R D D V K L T C Q V E H D G Q P A V S K S H D L K V S A H P K E Q G S N T A A E N T G S N E R </pre>
Biological Activity	Immobilized Recombinant Human CD47 Protein (ECD, Fc Tag) at 2 µg/mL (100 µL/well) can bind Recombinant Human SIRP alpha / CD172a Protein (ECD, His Tag), the EC ₅₀ is 280-850 ng/mL.
Appearance	Solution
Formulation	Supplied as a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

DESCRIPTION

Background	SIRP alpha V4/CD172a Protein, an immunoglobulin-like cell surface receptor for CD47, acts as a docking protein that
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facilitates the translocation of PTPN6, PTPN11, and other binding partners from the cytosol to the plasma membrane. This receptor contributes to diverse cellular processes, including supporting the adhesion of cerebellar neurons, promoting neurite outgrowth, and facilitating glial cell attachment. With a potential role in intracellular signaling during synaptogenesis and synaptic function, SIRP alpha V4/CD172a also engages in negative regulation of receptor tyrosine kinase-coupled responses triggered by cell adhesion, growth factors, or insulin. Furthermore, it mediates the negative modulation of phagocytosis, mast cell activation, and dendritic cell activation. Notably, CD47 binding prevents the maturation of immature dendritic cells and inhibits cytokine production by mature dendritic cells. SIRP alpha V4/CD172a plays a significant role in antiviral immunity, limiting new world arenavirus infection by decreasing virus internalization. As a receptor for THBS1, it participates in ROS signaling in non-phagocytic cells upon interaction with THBS1, stimulating NADPH oxidase-derived ROS production. The receptor engages in various protein interactions, including binding to PTPN11, GRB2, FGR, JAK2, SCAP1, SCAP2, FYB1, PTK2B, and TRIM2.

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

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