PE-Labeled SIRP alpha/CD172a Protein, Human (HEK293, Fc)

Cat. No.:	HY-P701294
Synonyms:	SHPS1; SIRPA; CD172A; BIT; MFR; MYD1; P84; PTPNS1
Species:	Human
Source:	HEK293
Accession:	P78324 (E31-R370)
Gene ID:	140885
Molecular Weight:	65.7 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from 0.22 μm filtered solution of PBS, 0.5% BSA, pH7.4. Normally trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 1 year, protect from light. 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 V4/CD172a Protein, an immunoglobulin-like cell surface receptor for CD47, acts as a docking protein that 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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