Overview

Synonyms	CD172 antigen-like family member A; CD172a antigen; CD172a
Description	Signal regulatory protein alpha (SIRP±, designated CD172a), is also known as CD172 antigen-like family member A (CD172a), also called SHPS-1 (SHP substrate 1) and previously, MyD-1 (Myeloid/Dendritic-1), which is a monomeric about 90kDa type I transmembrane glycoprotein that belongs to the SIRP/SHPS (CD172) family of the immunoglobulin superfamily. SIRP± 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. SIRP± recognition of surfactants SP-A and SP-D in the lung can inhibit alveolar macrophage cytokine production. Recombinant Human SIRP± produced in HEK293 cells is a polypeptide chain containing 346 amino acids with C-terminal 6His. A fully biologically active molecule, rhSIRP± has a molecular mass of 50-55 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques.
Accession No	P78324
Species	Human
Source	*HEK293*
Biological Activity	Immobilized SIRPa-His, Human at 2 µg/mL (100 µl/well), can bind CD47 Fc Chimera, Human (Z03418) with a linear range of 0.25-185 ng/mL.
Sequence	EEELQVIQ PDKSVLVA AGETATLR CTATSLIP VGPIQWFR GAGPGREL IYNQKEGH FPRVTTVS DLTKRNNM DFSIRIGN ITPADAGT YYCVKFRK GSPDDVEF KSGAGTEL SVRAKPSA PVVSGPAA RATPQHTV SFTCESHG FSPRDITL KWFKNGNE LSDFQTNV DPVGESVS YSIHSTAK VVLTREDV HSQVICEV AHVTLQGD PLRGTANL SETIRVPP TLEVTQQP VRAENQVN VTCQVRKF YPQRLQLT WLENGNVS RTETASTV TENKDGTY NWMSWLLV NVSAHRDD VKLTCQVE HDGQPAVS KSHDLKVS AHPKEQGS NTAAENTG SNERHHHH HH

Properties

Measured Molecular Weight	50-55 kDa, observed by reducing SDS-PAGE.
Purity	> 95% as analyzed by reducing SDS-PAGE.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS, 5% trehalose and mannitol.
Reconstitution	Reconstituted in ddH_2O or PBS at 100 µg/ml
Endotoxin Level	< 0.2 EU/µg, determined by LAL method.
Storage	Lyophilized recombinant SIRP± remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution; Human SIRP± should be stable up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.
Note	For research use only

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