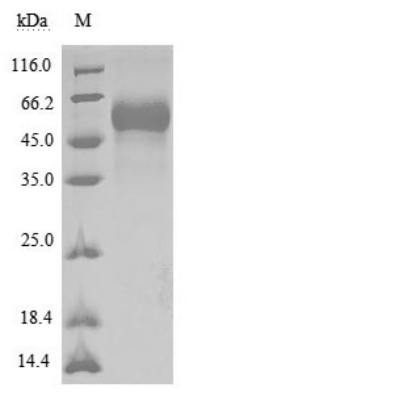
Recombinant Human Tyrosine-protein phosphatase non-receptor type substrate 1 (SIRPA), partial (Active)

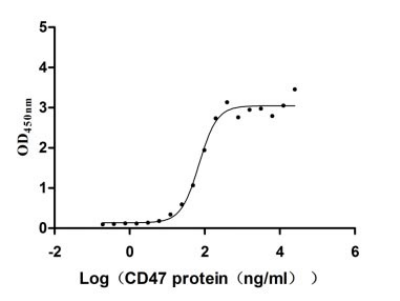
Product Code	CSB-MP021334HU
Relevance	Immunoglobulin-like cell surface receptor for CD47. Acts as docking protein and induces translocation of PTPN6, PTPN11 and other binding partners from the cytosol to the plasma membrane. Supports adhesion of cerebellar neurons, neurite outgrowth and glial cell attachment. May play a key role in intracellular signaling during synaptogenesis and in synaptic function. Involved in the negative regulation of receptor tyrosine kinase-coupled cellular responses induced by cell adhesion, growth factors or insulin. Mediates negative regulation of phagocytosis, mast cell activation and dendritic cell activation. CD47 binding prevents maturation of immature dendritic cells and inhibits cytokine production by mature dendritic cells.
Abbreviation	Recombinant Human SIRPA protein, partial (Active)
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P78324
Form	Lyophilized powder
Product Type	Others
Immunogen Species	Homo sapiens (Human)
Biological Activity	①Measured by its binding ability in a functional ELISA. Immobilized SIRPA at 2 μg/ml can bind human CD47(CSB-MP004940HU), the EC_{50} of human SIRPA protein is 58.30-85.04 ng/ml.②Human SIRPA protein His/Myc tag (CSB-MP021334HU) captured on COOH chip can bind Human CD47 protein Fc tag (CSB-MP004940HU) with an affinity constant of 19.1 nM as detected by LSPR Assay.
Purity	Greater than 95% as determined by SDS-PAGE.
Sequence	EEELQVIQPDKSVLVAAGETATLRCTATSLIPVGPIQWFRGAGPGRELIYNQKEGHFPRVTTVSDLTKRNNMDFSIRIGNITPADAGTYYCVKFRKGSPDDVEFKSGAGTELSVRAKPSAPVVSGPAARATPQHTVSFTCESHGFSPRDITLKWFKNGNELSDFQTNVDPVGESVSYSIHSTAKVVLTREDVHSQVICEVAHVTLQGDPLRGTANLSETIRVPPTLEVTQQPVRAENQVNVTCQVRKFYPQRLQLTWLENGNVSRTETASTVTENKDGTYNWMSWLLVNVSAHRDDVKLTCQVEHDGQPAVSKSHDLKVSAHPKEQGSNTAAENTGSNER
Research Area	Cancer
Source	Mammalian cell

Target Names	SIRPA
Expression Region	31-370aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	C-terminal 6xHis-Myc-tagged
Mol. Weight	41.8 kDa
Protein Length	Partial

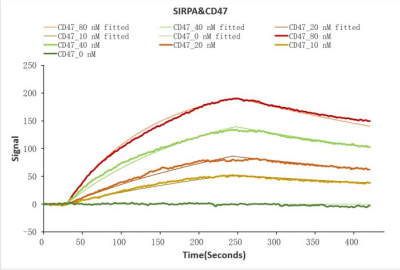
Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Activity
Measured by its binding ability in a functional ELISA. Immobilized SIRPA at 2 μg/ml can bind human CD47(CSB-MP004940HU), the EC_{50} of human SIRPA protein is 58.30-85.04 ng/ml.



Human SIRPA protein His/Myc tag (CSB-MP021334HU) captured on COOH chip can bind Human CD47 protein Fc tag (CSB-MP004940HU) with an affinity constant of 19.1 nM as detected by LSPR Assay.

Description

The recombinant human tyrosine-protein phosphatase non-receptor type substrate 1 (SIRPA) is an active protein expressed from mammalian cells, with a C-terminal 6xHis-Myc-tag. Its expression region is the DNA fragment encoding the amino acid residues 31-370 of the human SIRPA protein. The purity of this SIRPA protein is greater than 95% measured by SDS-PAGE. This recombinant SIRPA protein migrated to the band with a molecular weight of approximately 50 kDa on the gel. Its endotoxin level is less than 1.0 EU/ug determined by the LAL method. And its bioactivity has been validated in the ELISA and LSPR assay. In

	the functional ELISA, this SIRPA protein binds to the human CD47, with an EC_{50} constant of 58.30-85.04 ng/ml. In the LSPR assay, the SIRPA protein captured on the COOH ship binds to the human CD47 protein with an affinity constant of 19.1 nM. It is in stock now. SIRPA binds to its ligand CD47, initiating a signaling cascade that results in the inhibition of phagocytosis. It also suppresses infection by various viruses that enter via acidic compartments, including Zika, SARS-CoV-2, and Ebola.
Endotoxin	Less than 1.0 EU/ug as determined by LAL method.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.