

SIRP alpha Protein, Human, Recombinant (hFc)

General Information

Synonyms:	signal-regulatory protein alpha;SIRP alpha;PTPNS1;P84;CD172A;signal-regulatory protein α ; MYD-1;SIRP;SHPS1;SIRP α ;BIT;MFR
Protein Construction:	A DNA sequence encoding the human SIRPA (NP_542970.1) (Met1-Arg370) was expressed with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Glu 31
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P78324-1
Molecular Weight:	64 kDa (predicted); 77.9 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its binding ability in a functional ELISA. Immobilized human CD47-His at 2 $\mu\text{g/ml}$ (100 $\mu\text{l/well}$) can bind human SIRPA-Fc , the EC50 of human SIRPA-Fc is 3-15 ng/mL.
Purity:	> 95 % as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/ μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:	Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Tyrosine-protein phosphatase non-receptor type substrate 1, also known as SHP substrate 1, Inhibitory receptor SHPS-1, Brain Ig-like molecule with tyrosine-based activation motifs, Macrophage fusion receptor, CD172 antigen-like family member A, SIRPA and CD172a, is a single-pass type I membrane protein which contains two Ig-like C1-type (immunoglobulin-like) domains and one Ig-like V-type (immunoglobulin-like) domain. SIRPA is ubiquitously

expressed. It is highly expressed in brain and detected at lower levels in heart, placenta, lung, testis, ovary, colon, liver, small intestine, prostate, spleen, kidney, skeletal muscle and pancreas. It is also detected on myeloid cells, but not T-cells. SIRPA is an immunoglobulin-like cell surface receptor for CD47. SIRPA acts as docking protein and induces translocation of PTPN6, PTPN11 and other binding partners from the cytosol to the plasma membrane. SIRPA supports adhesion of cerebellar neurons, neurite outgrowth and glial cell attachment. It may play a key role in intracellular signaling during synaptogenesis and in synaptic function. SIRPA is involved in the negative regulation of receptor tyrosine kinase-coupled cellular responses induced by cell adhesion, growth factors or insulin. It mediates negative regulation of phagocytosis, mast cell activation and dendritic cell activation. Cancer Immunotherapy Co-inhibitory Immune Checkpoint Targets Immune Checkpoint Immune Checkpoint Detection: ELISA Antibodies Immune Checkpoint Detection: FCM Antibodies Immune Checkpoint Detection: IHC Antibodies Immune Checkpoint Detection: IP Antibodies Immune Checkpoint Detection: WB Antibodies Immune Checkpoint Targets Immunotherapy Targeted Therapy

Reference

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