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SIRP alpha Antibody

Catalog # ASC10014

Product Information

Application	WB, ICC, E
Primary Accession	P78324
Other Accession	NP_542970, 18426911
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	54967
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	SIRP alpha antibody can be used for Western blot at 0.5 - 1 □g/mL. 75 - 110 kDa bands should be detected. Antibody can also be used for immunocytochemistry starting at 1 □g/mL.

Additional Information

Gene ID	140885
Other Names	SIRP alpha Antibody: BIT, MFR, P84, SIRP, MYD-1, SHPS1, CD172A, PTPNS1, BIT, MYD1, Tyrosine-protein phosphatase non-receptor type substrate 1, Brain Ig-like molecule with tyrosine-based activation motifs, SHP substrate 1, signal-regulatory protein alpha
Target/Specificity	SIRPA; Recognizes SIRP alpha 1, 2 and 3.
Reconstitution & Storage	SIRP alpha antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	SIRP alpha Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SIRPA
Synonyms	BIT, MFR, MYD1, PTPNS1, SHPS1, SIRP
Function	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 (By

	similarity). 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. Plays a role in antiviral immunity and limits new world arenavirus infection by decreasing virus internalization (By similarity). Receptor for THBS1 (PubMed:24511121). Interaction with THBS1 stimulates phosphorylation of SIRPA (By similarity). In response to THBS1, involved in ROS signaling in non-phagocytic cells, stimulating NADPH oxidase-derived ROS production (PubMed:24511121).
Cellular Location	Membrane; Single-pass type I membrane protein.
Tissue Location	Ubiquitous. Highly expressed in brain. Detected on myeloid cells, but not T-cells. Detected at lower levels in heart, placenta, lung, testis, ovary, colon, liver, small intestine, prostate, spleen, kidney, skeletal muscle and pancreas

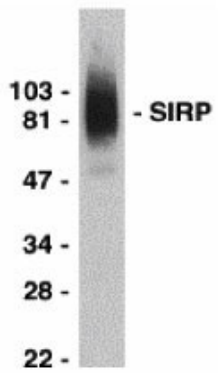
Background

SIRP alpha Antibody: Protein tyrosine phosphatases (PTPases) SHP-1 and SHP-2 are critical regulators in the intracellular signaling pathways that result in cell responses such as mitosis, differentiation, migration, survival, transformation or death. SHP-2 is a signal transducer for several receptor tyrosine kinases and cytokine receptors. A novel SHP-2 associated glycoprotein was recently cloned from human, rat, mouse and cattle by several labs and was designated SIRPalpha, SHPS-1, MyD-1, BIT and p84. SIRPalpha is a new gene family containing at least fifteen members. SIRPalpha is a substrate of many activated tyrosine kinases such as insulin receptor, EGFR, PDGFR and src, and a specific docking protein for SHP-2. SIRPalpha has regulatory effects on cellular responses induced by serum, growth factors, insulin, oncogenes, growth hormones and cell adhesion and plays a general role in different physiological and pathological processes.

References

Kharitonenkov A, et al. Nature 1997;386:181-186.
Fujioka Y, et al. Mol Cell Biol 1996;16:6887-6899
Yamao T, et al. Biochem Biophys Res Commun 1997;231:61-67
Brooke GP, et al. Eur J Immunol 1998;28:1-11

Images



Western blot analysis of SIRP alpha in THP-1 whole cell lysate with SIRP alpha antibody at 0.5 µg/mL.

Immunocytochemistry of SIRP alpha in THP-1 cells with SIRP alpha antibody at 1 µg/mL.