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SHP2 Antibody

Catalog # ASC10453

Product Information

Application	WB, IF, E
Primary Accession	Q06124
Other Accession	NP_002825, 33356177
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	68011
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	SHP2 antibody can be used for the detection of SHP2 by Western blot at 0.5 - 1 □g/mL. For immunofluorescence start at 20 □g/mL.

Additional Information

Gene ID	5781
Other Names	SHP2 Antibody: CFC, NS1, SHP2, BPTP3, PTP2C, PTP-1D, SH-PTP2, SH-PTP3, SHPTP2, Tyrosine-protein phosphatase non-receptor type 11, Protein-tyrosine phosphatase 1D, protein tyrosine phosphatase, non-receptor type 11
Target/Specificity	PTPN11;
Reconstitution & Storage	SHP2 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	SHP2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PTPN11
Synonyms	PTP2C, SHPTP2
Function	Acts downstream of various receptor and cytoplasmic protein tyrosine kinases to participate in the signal transduction from the cell surface to the nucleus (PubMed:10655584, PubMed:14739280, PubMed:18559669, PubMed:18829466, PubMed:26742426, PubMed:28074573, PubMed:32184441). Positively regulates MAPK signal transduction pathway (PubMed:28074573). Dephosphorylates GAB1, ARHGAP35 and EGFR (PubMed:28074573). Dephosphorylates ROCK2 at 'Tyr-722' resulting in

	stimulation of its RhoA binding activity (PubMed:18559669). Dephosphorylates CDC73 (PubMed:26742426). Dephosphorylates SOX9 on tyrosine residues, leading to inactivate SOX9 and promote ossification (By similarity). Dephosphorylates tyrosine-phosphorylated NEDD9/CAS-L (PubMed:19275884). Acts as an effector of PDCD1-mediated inhibition of T-cell response: recruited by phosphorylated PDCD1, mediating dephosphorylation of key T-cell receptor (TCR) proximal signaling molecules, leading to TCR signaling inhibition (PubMed:32184441).
Cellular Location	Cytoplasm. Nucleus
Tissue Location	Widely expressed, with highest levels in heart, brain, and skeletal muscle.

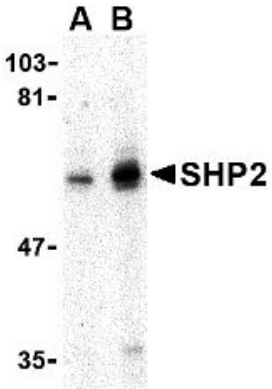
Background

SHP2 Antibody: Src homology-2 domain containing protein (SHP2) is a member of the protein tyrosine phosphatase (PTP) family, a protein family that contains signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. SHP2 contains two tandem Src homology-2 (SH2) domains, which function as phosphotyrosine binding domains either directly or through scaffolding intermediates such as the insulin-receptor substrate 1 (IRS-1). These SH2 domains mediate the interaction of SHP2 with its substrates, allowing SHP2 to dephosphorylate proteins that inhibit signaling kinases such as ERK1 and AKT. SHP2 is widely expressed in most tissues and plays a regulatory role in various cell signaling events that are important for a diversity of cell functions, such as mitogenic activation, metabolic control, transcription regulation, and cell migration. Recent experiments have shown SHP2 plays a significant role in hepatoprotection and liver regeneration.

References

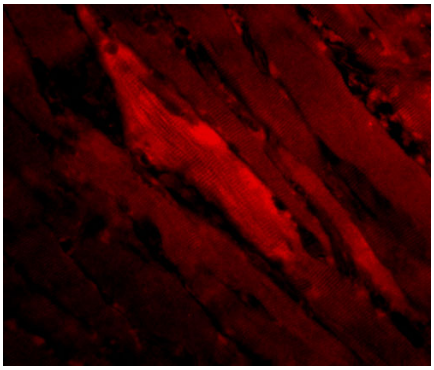
Yu Z, Ahmad S, Schwartz JL, et al. Protein-tyrosine phosphatase SHP2 is positively linked to proteinase-activated receptor 2-mediated mitogenic pathway. J. Biol. Chem.1997; 272:7519-24.
Ostman A, Hellberg C, and Bohmer FD. Protein-tyrosine phosphatases and cancer. Nat. Rev. Cancer 2006; 6:307-20.
Bard-Chapeau EA, Yuan J, Droin N, et al. Concerted functions of Gab1 and Shp2 in liver regeneration and hepatoprotection. Mol/ Cell. Biol. 2006; 26:4664-74.

Images



Western blot analysis of SHP2 in mouse skeletal muscle tissue lysate with SHP2 antibody at (A) 0.5 and (B) 1 µg/mL.

Immunofluorescence of SHP2 in Human Skeletal Muscle cells with SHP2 antibody at 20 µg/mL.



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