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SHP2 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8471A

Product Information

Application	IF, WB, E
Primary Accession	Q06124
Other Accession	NP_002825
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB7283
Calculated MW	68011

Additional Information

Gene ID	5781
Other Names	Tyrosine-protein phosphatase non-receptor type 11, Protein-tyrosine phosphatase 1D, PTP-1D, Protein-tyrosine phosphatase 2C, PTP-2C, SH-PTP2, SHP-2, Shp2, SH-PTP3, PTPN11, PTP2C, SHPTP2
Target/Specificity	This SHP2 antibody is generated from rabbits immunized with a recombinant protein of partial human SHP2.
Dilution	IF~~1:10~50 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
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). 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).

Cellular Location Cytoplasm. Nucleus

Tissue Location Widely expressed, with highest levels in heart, brain, and skeletal muscle.

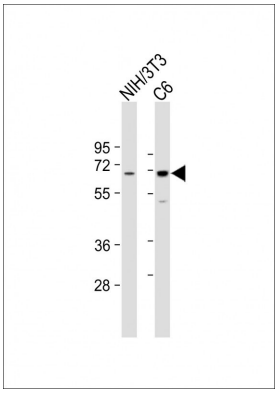
Background

SHP2, also known as PTPN11, is a member of the protein tyrosine phosphatase (PTP) family. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. This PTP contains two tandem Src homology-2 domains, which function as phospho-tyrosine binding domains and mediate the interaction of this PTP with its substrates. This PTP 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. Mutations in the gene are a cause of Noonan syndrome as well as acute myeloid leukemia.

References

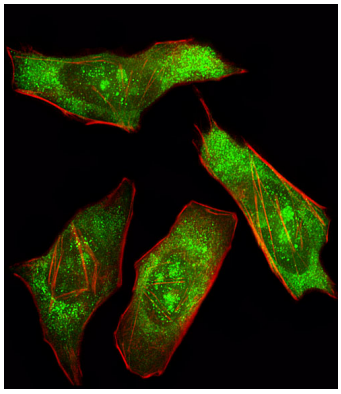
Chan, R.J., et al., Blood 105(9):3737-3742 (2005).
Sturla, L.M., et al., J. Biol. Chem. 280(15):14597-14604 (2005).
Loh, M.L., et al., Leuk. Res. 29(4):459-462 (2005).
Wang, Q., et al., J. Biol. Chem. 280(9):8397-8406 (2005).
Niihori, T., et al., J. Hum. Genet. 50(4):192-202 (2005).

Images



All lanes : Anti-SHP2 Antibody at 1:1000-2000 dilution Lane 1: NIH/3T3 whole cell lysate Lane 2: C6 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 68 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Fluorescent image of Hela cell stained with SHP2 Antibody(Cat#AP8471a/SH050329B).Hela cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with SHP2 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red)



conjugated Phalloidin (7units/ml, 1 h at 37°C).SHP2 immunoreactivity is localized to Nucleolus and Cytoplasm significantly and Nucleus weakly.