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SHP2 Antibody (Y546)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8471e

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q06124
Other Accession	P41499, P35235, Q90687, NP_002825
Reactivity	Human, Rat, Mouse
Predicted	Chicken, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB21493
Calculated MW	68011
Antigen Region	526-551

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 KLH conjugated synthetic peptide between 526-551 amino acids from human SHP2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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 (Y546) 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.

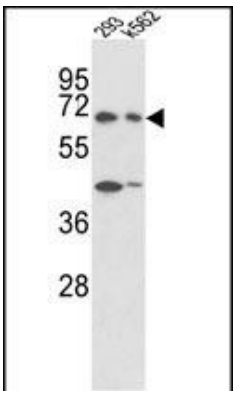
Background

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

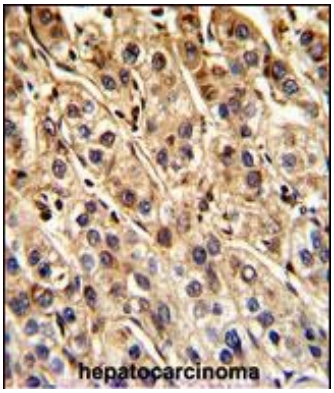
Chan, R.J., et al., Blood 105(9):3737-3742 (2005).
Sturla, L.M., et al., J. Biol. Chem. 280(15):14597-14604 (2005).
Loh, M.L., et al., Leuk. Res. 29(4):459-462 (2005).
Wang, Q., et al., J. Biol. Chem. 280(9):8397-8406 (2005).
Niihori, T., et al., J. Hum. Genet. 50(4):192-202 (2005).

Images

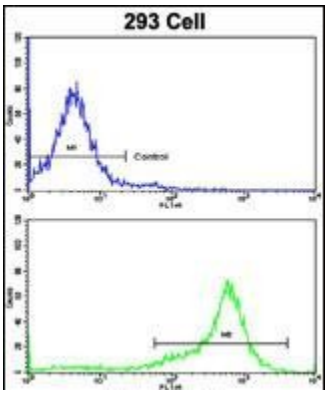


Western blot analysis of SHP2 Antibody (Y546) (Cat. #AP8471e) in 293, K562 cell line lysates (35ug/lane). SHP2 (arrow) was detected using the purified Pab.

Formalin-fixed and paraffin-embedded human hepatocarcinoma reacted with SHP2 Antibody (Y546), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data



demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Flow cytometric analysis of 293 cells using SHP2 Antibody (Y546)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- Gene expression profiling-derived immunohistochemistry signature with high prognostic value in colorectal carcinoma.