

Phospho-SHP2(Y546) Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AW5158

Product Information

Application	DB, WB
Primary Accession	Q06124
Other Accession	P41499 , P35235 , Q90687
Reactivity	Mouse, Human
Predicted	Rat, Chicken
Host	Rabbit
Clonality	Polyclonal
Calculated MW	68011
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	5781
Antigen Region	521-551
Other Names	PTPN11; PTP2C; SHPTP2; Tyrosine-protein phosphatase non-receptor type 11; Protein-tyrosine phosphatase 1D; Protein-tyrosine phosphatase 2C; SH-PTP2; SH-PTP3
Dilution	DB~~1:500 WB~~1:1000
Target/Specificity	This SHP2 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding Y546 of human SHP2.
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	Phospho-SHP2(Y546) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PTPN11
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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.

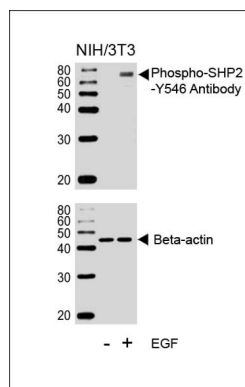
Background

SHP2 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.

References

Nystrom,A.M., et.al., Eur J Med Genet (2010) In press
Carver,K.C., et.al., J. Biol. Chem. 285 (11), 8003-8012 (2010)

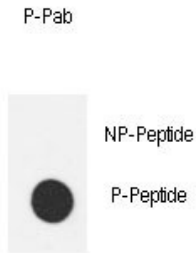
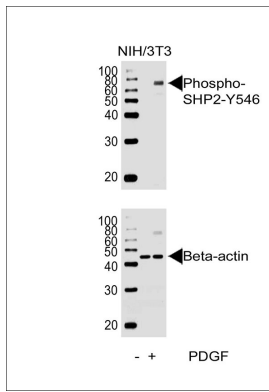
Images



Western blot analysis of lysates from NIH/3T3 cell line, untreated or treated with EGF, 100ng/ml, using Phospho-SHP2-Y546 Antibody(EV)(upper) or Beta-actin (lower).

Western blot analysis of lysate from NIH/3T3 cell line, using Phospho-SHP2-Y546 Antibody(Cat. #AW5158). AW5158 was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary

antibody.Lysate at 20ug.



Dot Blot

Dot blot analysis of anti-Phospho-SHP2-Y546 Phospho-specific Pab (Cat. #AW5158) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.