10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

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

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.

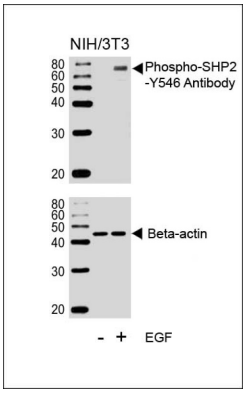
Background

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

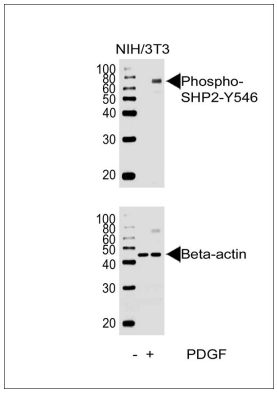
Nystrom,A.M., et.al., Eur J Med Genet (2010) In press
Carver,K.C., et.al., J. Biol. Chem. 285 (11), 8003-8012 (2010)

Images

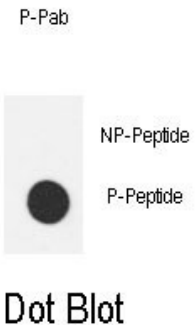


Western blot analysis of lysates from NIH/3T3 cell line, untreated or treated with EGF, 100ng/ml, using Phospho-SHP2-Y546 Antibody(EV)(upper) or Beta-actin (lower).

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 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'.