Rabbit SHP-2 Polyclonal Antibody | anti-SHP-2 antibody

Phospho-SHP-2 (Tyr542) Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA321705	**Rabbit**	**Human, Mouse, Rat**	**ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot**

PRODUCT SYNONYMS

SHP-2; Polyclonal Antibody; Phospho-SHP-2 (Tyr542) Antibody; BPTP3; CFC; JMML; METCDS; MGC14433; NS1; OTTHUMP00000166107; OTTHUMP00000166108; Protein tyrosine phosphatase 2; Protein tyrosine phosphatase 2C; Protein tyrosine phosphatase non receptor type 11; Protein-tyrosine phosphatase 1D; Protein-tyrosine phosphatase 2C; PTN11_HUMAN; PTP-1D; PTP-2C; PTP1D; PTP2C; PTPN11; SAP2; SH-PTP2; SH-PTP3; SH2 domain containing protein tyrosine phosphatase 2; SHP 2; Shp2; SHPTP2; SHPTP3; Syp; Tyrosine-protein phosphatase non-receptor type 11; anti-SHP-2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-SHP-2 (Tyr542) antibody detects endogenous levels of SHP-2 only when phosphorylated at Tyrosine 542
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	597
Applicable Applications for anti-SHP-2 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human SHP-2 around the phosphorylation site of Tyrosine 542
Subcellular Location	Cytoplasm.
Tissue Specificity	Widely expressed, with highest levels in heart, brain, and skeletal muscle.
Predicted Cross Reactivity	**Pig, Bovine, Horse, Sheep, Rabbit, Dog, Chicken**
Similarity	Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%)
Conjugation	Unconjugated
Epitope	Phospho Tyr542
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES

WB (Western Blot)
Western blot analysis of Phospho-SHP-2 (Tyr542) expression in various lysates

IF (Immunofluorescence)
AAA321705 staining A431 by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.

WB (Western Blot)
Western blot analysis of SHP-2 phosphorylation expression in A431 whole cell lysates, The lane on the left is treated with the antigen-specific peptide.

IHC (Immunohistochemistry)
AAA321705 at 1/100 staining human Breast carcinoma tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

ADDITIONAL INFORMATION

Related Product Information for anti-SHP-2 antibody	Description: SHP-2 a SH2-containing a ubiquitously expressed tyrosine-specific protein phosphatase. It participates in signaling events downstream of receptors for growth factors, cytokines, hormones, antigens and extracellular matrices in the control of cell growth, differentiation, migration, and death. Function: Acts downstream of various receptor and cytoplasmic protein tyrosine kinases to participate in the signal transduction from the cell surface to the nucleus. Positively regulates MAPK signal transduction pathway (PubMed:28074573). Dephosphorylates GAB1, ARHGAP35 and EGFR (PubMed:28074573). Dephosphorylates ROCK2 at 'Tyr-722' resulting in stimulatation of its RhoA binding activity. Dephosphorylates CDC73 (PubMed:26742426). Subunit Structure: Interacts with phosphorylated LIME1 and BCAR3. Interacts with SHB and INPP5D/SHIP1 (By similarity). Interacts with MILR1 (tyrosine-phosphorylated). Interacts with FLT1 (tyrosine-phosphorylated), FLT3 (tyrosine-phosphorylated), FLT4 (tyrosine-phosphorylated), KIT and GRB2. Interacts with PDGFRA (tyrosine phosphorylated). Interacts (via SH2 domain) with TEK/TIE2 (tyrosine phosphorylated) (By similarity). Interacts with PTPNS1 and CD84. Interacts with phosphorylated SIT1 and MPZL1. Interacts with FCRL4, FCRL6 and ANKHD1. Interacts with KIR2DL1; the interaction is enhanced by ARRB2. Interacts with GAB2. Interacts with TERT; the interaction retains TERT in the nucleus. Interacts with PECAM1 and FER. Interacts with EPHA2 (activated); participates in PTK2/FAK1 dephosphorylation in EPHA2 downstream signaling. Interacts with ROS1; mediates PTPN11 phosphorylation. Interacts with PDGFRB (tyrosine phosphorylated); this interaction increases the PTPN11 phosphatase activity. Interacts with GAREM1 isoform 1 (tyrosine phosphorylated); the interaction increases MAPK/ERK activity and does not affect the GRB2/SOS complex formation. Interacts with CDC73 (PubMed:26742426). Interacts with CEACAM1 (via cytoplasmic domain); this interaction depends on the monomer/dimer equilibrium and is phosphorylation-dependent (By similarity). Interacts with MPIG6B (via ITIM motif) (PubMed:23112346). Interacts with SIGLEC10 (By similarity). Interacts with FCRL3 (via phosphorylated ITIM motifs) (PubMed:11162587, PubMed:19843936). Post-translational Modifications: Phosphorylated on Tyr-546 and Tyr-584 upon receptor protein tyrosine kinase activation; which creates a binding site for GRB2 and other SH2-containing proteins. Phosphorylated upon activation of the receptor-type kinase FLT3. Phosphorylated upon activation of the receptor-type kinase PDGFRA (By similarity). Phosphorylated by activated PDGFRB. Similarity: The SH2 domains repress phosphatase activity. Binding of these domains to phosphotyrosine-containing proteins relieves this auto-inhibition, possibly by inducing a conformational change in the enzyme. Belongs to the protein-tyrosine phosphatase family. Non-receptor class 2 subfamily.

NCBI AND UNIPROT INFORMATION

NCBI GI #	1059433492
NCBI GeneID	5781
NCBI Accession #	NP_001317366.1

NCBI GenBank Nucleotide #	NM_001330437.1
UniProt Accession #	Q06124; Q96HD7; A8K1D9
Molecular Weight	Observed: 70 kDa Predicted: 69 kDa
NCBI Official Full Name	tyrosine-protein phosphatase non-receptor type 11 isoform 3
NCBI Official Synonym Full Names	protein tyrosine phosphatase, non-receptor type 11
NCBI Official Symbol	PTPN11
NCBI Official Synonym Symbols	CFC; NS1; JMML; SHP2; BPTP3; PTP2C; METCDS; PTP-1D; SH-PTP2; SH-PTP3
NCBI Protein Information	tyrosine-protein phosphatase non-receptor type 11
UniProt Protein Name	Tyrosine-protein phosphatase non-receptor type 11
UniProt Gene Name	**PTPN11**
UniProt Synonym Gene Names	PTP2C; SHPTP2; PTP-1D; PTP-2C; SHP-2; Shp2

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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