abcam

Product datasheet

Anti-SHP2 antibody ab131541

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Overview

Product name	Anti-SHP2 antibody
Description	Rabbit polyclonal to SHP2
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, ICC/IF
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide conjugated to KLH, derived from around amino acids 540-544 (H-E-Y-T-N) of Human SHP2 (NP_002825.3). Run BLAST with Run BLAST with
Positive control	HeLa cells; 3T3 cell extract; Human breast carcinoma tissue

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: 0.88% Sodium chloride, 49% PBS, 50% Glycerol (glycerin, glycerine) PBS without Mg^{2+} and Ca^{2+}
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab131541** in the following tested applications.

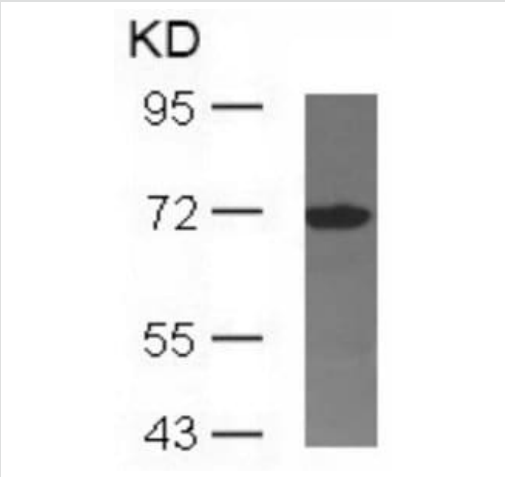
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/500 - 1/1000. Predicted molecular weight: 68 kDa.
IHC-P		1/50 - 1/100.
ICC/IF		1/100 - 1/200.

Target

Function	Acts downstream of various receptor and cytoplasmic protein tyrosine kinases to participate in the signal transduction from the cell surface to the nucleus.
Tissue specificity	Widely expressed, with highest levels in heart, brain, and skeletal muscle.
Involvement in disease	Defects in PTPN11 are the cause of LEOPARD syndrome type 1 (LEOPARD1) [MIM:151100]. It is an autosomal dominant disorder allelic with Noonan syndrome. The acronym LEOPARD stands for lentigines, electrocardiographic conduction abnormalities, ocular hypertelorism, pulmonic stenosis, abnormalities of genitalia, retardation of growth, and deafness. Defects in PTPN11 are the cause of Noonan syndrome type 1 (NS1) [MIM:163950]. Noonan syndrome (NS) is a disorder characterized by dysmorphic facial features, short stature, hypertelorism, cardiac anomalies, deafness, motor delay, and a bleeding diathesis. Some patients with Noonan syndrome type 1 develop multiple giant cell lesions of the jaw or other bony or soft tissues, which are classified as pigmented villomoduolar synovitis (PVNS) when occurring in the jaw or joints. Note=Mutations in PTPN11 account for more than 50% of the cases. Rarely, NS is associated with juvenile myelomonocytic leukemia (JMML). NS1 inheritance is autosomal dominant. Defects in PTPN11 are a cause of juvenile myelomonocytic leukemia (JMML) [MIM:607785]. JMML is a pediatric myelodysplastic syndrome that constitutes approximately 30% of childhood cases of myelodysplastic syndrome (MDS) and 2% of leukemia. It is characterized by leukocytosis with tissue infiltration and in vitro hypersensitivity of myeloid progenitors to granulocyte-macrophage colony stimulating factor. Defects in PTPN11 are a cause of metachondromatosis (MC) [MIM:156250]. It is a skeletal disorder with radiologic fetarures of both multiple exostoses and Ollier disease, characterized by the presence of multiple enchondromas and osteochondroma-like lesions.
Sequence similarities	Belongs to the protein-tyrosine phosphatase family. Non-receptor class 2 subfamily. Contains 2 SH2 domains. Contains 1 tyrosine-protein phosphatase domain.
Domain	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.
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.
Cellular localization	Cytoplasm.

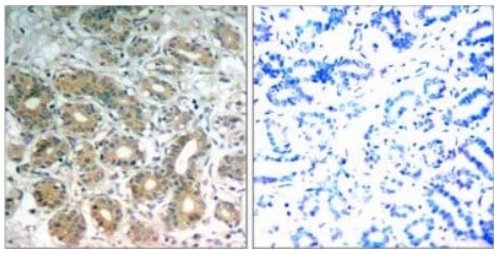
Images



Western blot - Anti-SHP2 antibody (ab131541)

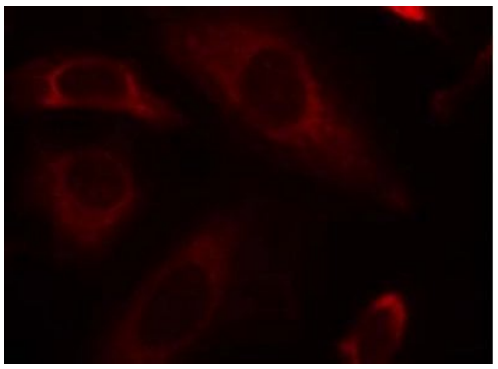
Anti-SHP2 antibody (ab131541) at 1/500 dilution + 3T3 cell extract

Predicted band size: 68 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SHP2 antibody (ab131541)

Immunohistochemical analysis of paraffin-embedded Human breast carcinoma tissue labelling SHP2 with ab131541 at 1/50 dilution. Right panel was preincubated with blocking peptide.



Immunocytochemistry/ Immunofluorescence - Anti-SHP2 antibody (ab131541)

Immunofluorescence analysis of methanol-fixed HeLa cells labelling SHP2 with ab131541 at 1/100 dilution.

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