abcam

Product datasheet

Anti-SHP2 antibody ab9214

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Overview

Product name	Anti-SHP2 antibody
Description	Goat polyclonal to SHP2
Host species	Goat
Tested applications	**Suitable for:** WB, ICC/IF, Flow Cyt (Intra)
Species reactivity	**Reacts with:** Human **Predicted to work with:** Rat, Cow, Pig
Immunogen	Synthetic peptide corresponding to Human SHP2 aa 550 to the C-terminus (C terminal). (NP_001317366.1) Database link: **NP_002825.3** Run BLAST with Run BLAST with
Positive control	WB: Human muscle lysate. ICC/IF: HeLa cells Flow Cyt (intra): A431 cells
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.30 Preservative: 0.02% Sodium azide Constituents: Tris buffered saline, 0.5% BSA
Purity	Immunogen affinity purified
Purification notes	Purified from goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide.
Clonality	Polyclonal

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab9214 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		Use a concentration of 1 - 3 µg/ml. Detects a band of approximately 70 kDa (predicted molecular weight: 68 kDa). 1 hour primary incubation is recommended for this product.
ICC/IF	★★★★☆ (1)	Use a concentration of 10 µg/ml.
Flow Cyt (Intra)		Use a concentration of 10 µg/ml.

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.

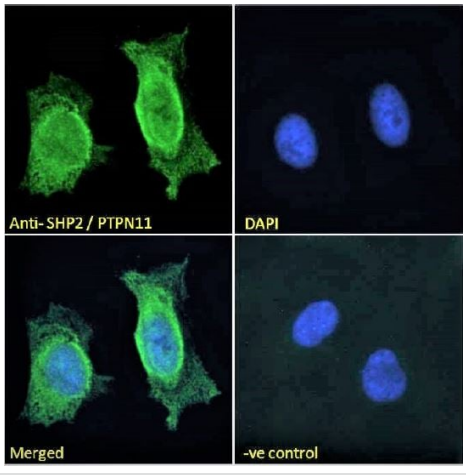
Involvement in disease Defects in PTPN11 are the cause of LEOPARD syndrome type 1 (LEOPARD1) [MIM:151100]. It is an autosomal dominant disorder allelic with Noonan syndrome. The acronym LEOPARD stands for lentigines, electrocardiographic conduction abnormalities, ocular hypertelorism, pulmonic stenosis, 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.

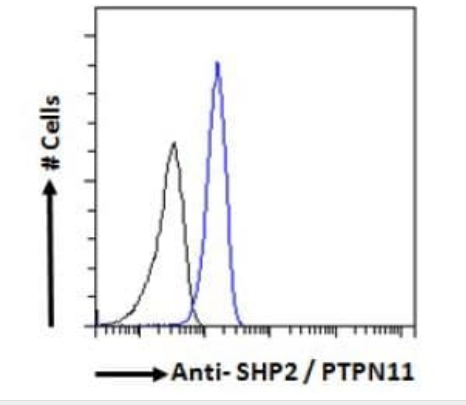
Images



Immunocytochemistry/ Immunofluorescence - Anti-SHP2 antibody (ab9214)

Immunocytochemistry/Immunofluorescence analysis of paraformaldehyde-fixed, 0.15% triton-permeabilized HeLa cells staining SHP2 antibody with ab9214 at 10µg/ml, followed by Alexa Fluor 488 secondary antibody at 2ug/ml. DAPI was used as a nuclear counterstain.

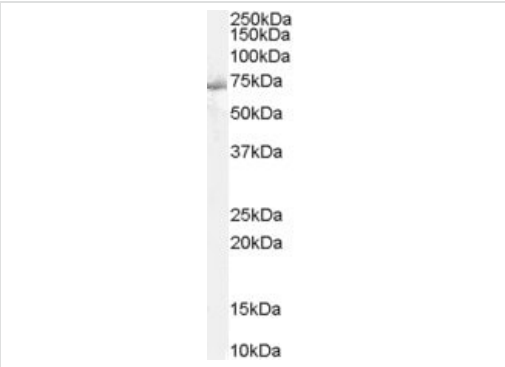
Negative control: Unimmunized goat IgG (10ug/ml) followed by Alexa Fluor 488 secondary antibody at 2ug/ml



Flow Cytometry (Intracellular) - Anti-SHP2 antibody (ab9214)

Flow cytometric analysis of paraformaldehyde-fixed, 0.5% Triton-permeabilized A431 cells (blue) staining SHP2 with ab9214 at 10µg/ml, followed by Alexa Fluor 488 secondary antibody at 1ug/ml. Primary incubation carried out for one hour.

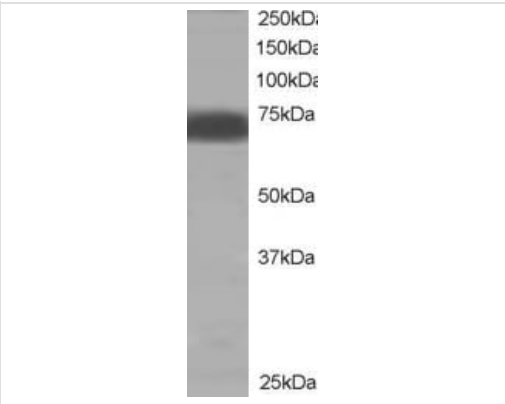
IgG control: Unimmunized goat IgG followed by Alexa Fluor 488 secondary antibody (black).



Western blot - Anti-SHP2 antibody (ab9214)

Anti-SHP2 antibody (ab9214) at 2 µg/ml + Human muscle lysate at 35 µg

Predicted band size: 68 kDa



Western blot - Anti-SHP2 antibody (ab9214)

ab9214 staining (2µg/ml) of Human Muscle lysate (RIPA buffer, 35µg total protein per lane). Primary incubated for 1 hour. Detected by western blot using chemiluminescence. ab9214 staining (2µg/ml) of Human Muscle lysate (RIPA buffer, 35µg total protein per lane). Primary incubated for 1 hour. Detected by western blot using chemiluminescence.

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