abcam

Product datasheet

Anti-SHP2 antibody [Y477] ab32159

KO VALIDATED Recombinant RabMAb

1 Abreviews 3 Images

Overview

Product name	Anti-SHP2 antibody [Y477]
Description	Rabbit monoclonal [Y477] to SHP2
Host species	Rabbit
Specificity	This antibody recognises SHP2. It is predicted to detect splice isoforms 2 and 3 based on sequence analysis.
Tested applications	**Suitable for:** WB **Unsuitable for:** Flow Cyt
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat
Immunogen	Synthetic peptide within Human SHP2 aa 1-100 (N terminal). The exact sequence is proprietary. Database link: **Q06124**
Positive control	WB: Wild-type HAP1 cell lysate. Jurkat and A431 cell lysate.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine), 0.05% BSA
Clonality	Monoclonal

Clone number	Y477
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab32159 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)**	1/1000. Detects a band of approximately 65 kDa (predicted molecular weight: 68 kDa).

Application notes Is unsuitable for Flow Cyt.

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.

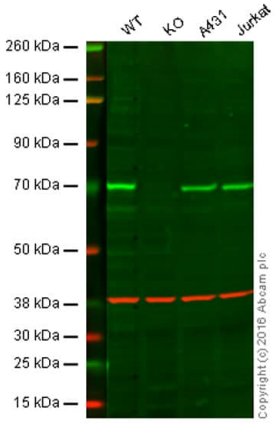
Sequence similarities Belongs to the protein-tyrosine phosphatase family. Non-receptor class 2 subfamily.
Contains 2 SH2 domains.
Contains 1 tyrosine-protein phosphatase domain.

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.

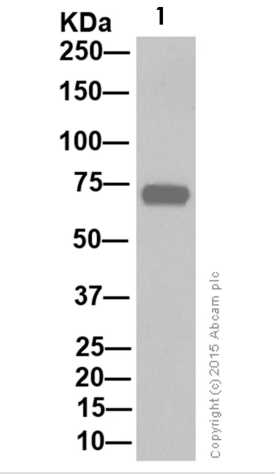
Cellular localization Cytoplasm.

Images



Western blot - Anti-SHP2 antibody [Y477] (ab32159)

Lane 1: Wild-type HAP1 cell lysate (20 µg)
Lane 2: SHP2 knockout HAP1 cell lysate (20 µg)
Lane 3: A431 cell lysate (20 µg)
Lane 4: Jurkat cell lysate (20 µg)
Lanes 1 to 4: Merged signal (red and green). Green - ab32159 observed at 68 kDa. Red - loading control, **ab8245**, observed at 37 kDa.
ab32159 was shown to specifically react with SHP2 when SHP2 knockout samples were used. Wild-type and SHP2 knockout samples were subjected to SDS-PAGE. ab32159 and **ab8245** (loading control to GAPDH) were both diluted 1/1000 and 1/10 000 respectively and incubated overnight at 4°C. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1/10 000 dilution for 1 h at room temperature before imaging.



Western blot - Anti-SHP2 antibody [Y477] (ab32159)

Anti-SHP2 antibody [Y477] (ab32159) at 1/2000 dilution + Jurkat (Human T cell leukemia T lymphocyte) Whole cell lysate at 20 µg

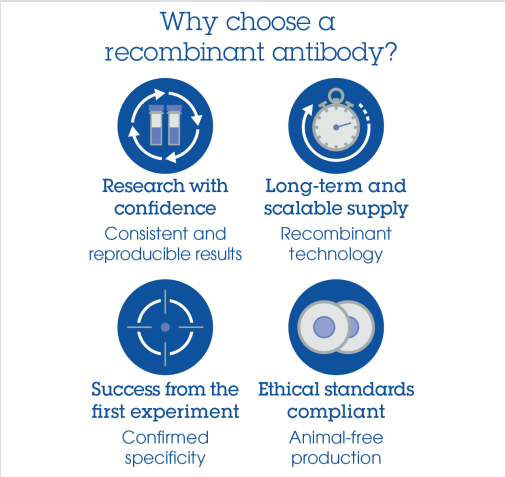
Secondary
Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution (Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated)

Predicted band size: 68 kDa
Observed band size: 72 kDa

Exposure time: 7 seconds

Blocking / Dilution buffer and concentration:

5% NFDM/TBST



Anti-SHP2 antibody [Y477] (ab32159)

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