abcam

Product datasheet

Anti-SHP1 antibody [Y476] ab32559

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-SHP1 antibody [Y476]
Description	Rabbit monoclonal [Y476] to SHP1
Host species	Rabbit
Specificity	The antibody is predicted to detect isoforms 1, 2 and 3 of human SHP1 based on sequence analysis.
Tested applications	**Suitable for:** WB, IHC-P **Unsuitable for:** Flow Cyt,ICC/IF or IP
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide within Human SHP1 aa 550 to the C-terminus (C terminal). The exact sequence is proprietary. Database link: **P29350**
Positive control	WB: THP-1 cell lysate, A431 cell lysate, Jurkat cell lysate, K562 cell lysate. IHC-P: Human tonsil and lymph node tissue; Rat spleen tissue; Mouse liver tissue.
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. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA

Purity	Protein A purified
Clonality	Monoclonal
Clone number	Y476
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab32559 in the following tested applications.

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

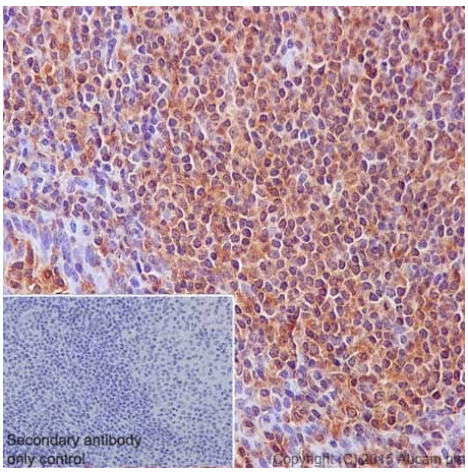
Application	Abreviews	Notes
WB	★★★★★ (2)	1/1000. Detects a band of approximately 65 kDa (predicted molecular weight: 68 kDa).
IHC-P		1/100. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Application notes Is unsuitable for Flow Cyt,ICC/IF or IP.

Target

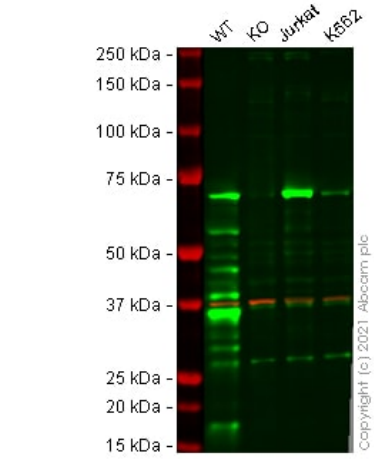
Function	Plays a key role in hematopoiesis. This PTPase activity may directly link growth factor receptors and other signaling proteins through protein-tyrosine phosphorylation. The SH2 regions may interact with other cellular components to modulate its own phosphatase activity against interacting substrates. Together with MTUS1, induces UBE2V2 expression upon angiotensin II stimulation.
Tissue specificity	Isoform 1 is expressed in hematopoietic cells. Isoform 2 is expressed in non-hematopoietic cells.
Sequence similarities	Belongs to the protein-tyrosine phosphatase family. Non-receptor class 2 subfamily. Contains 2 SH2 domains. Contains 1 tyrosine-protein phosphatase domain.
Post-translational modifications	Phosphorylated on serine and tyrosine residues.
Cellular localization	Cytoplasm. Nucleus. In neurons, translocates into the nucleus after treatment with angiotensin II.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SHP1 antibody [Y476] (ab32559)

Immunohistochemical staining of paraffin embedded human tonsil with purified ab32559 at a working dilution of 1/100. The secondary antibody used is HRP goat anti-rabbit IgG H&L (**ab97051**) at 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.



Western blot - Anti-SHP1 antibody [Y476] (ab32559)

All lanes : Anti-SHP1 antibody [Y476] (ab32559) at 1/1000 dilution

Lane 1 : Wild-type THP-1 cell lysate
Lane 2 : PTPN6 knockout THP-1 cell lysate
Lane 3 : Jurkat cell lysate
Lane 4 : K562 cell lysate

Lysates/proteins at 20 µg per lane.

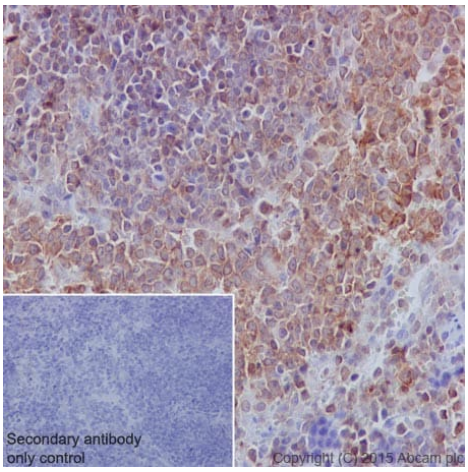
Performed under reducing conditions.

Predicted band size: 68 kDa
Observed band size: 70 kDa

Lanes 1 - 4: Merged signal (red and green). Green - ab32559 observed at 70 kDa. Red - loading control **ab8245** (Mouse anti-GAPDH antibody [6C5]) observed at 37 kDa.

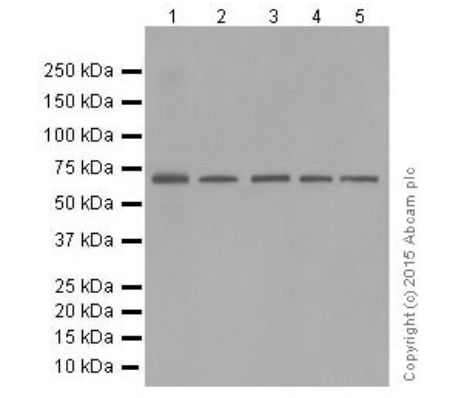
ab32559 was shown to react with SHP1 in wild-type THP-1 cells in

Western blot with loss of signal observed in PTPN6 knockout sample. Wild-type THP-1 and PTPN6 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3 % milk in TBS-T (0.1 % Tween®) before incubation with ab32559 and **ab8245** (Mouse anti-GAPDH antibody [6C5]) overnight at 4 °C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 h at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SHP1 antibody [Y476] (ab32559)

Immunohistochemical staining of paraffin embedded rat spleen with purified ab32559 at a working dilution of 1/100. The secondary antibody used is HRP goat anti-rabbit IgG H&L (**ab97051**) at 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.



Western blot - Anti-SHP1 antibody [Y476] (ab32559)

All lanes : Anti-SHP1 antibody [Y476] (ab32559) at 1/1000 dilution (purified)

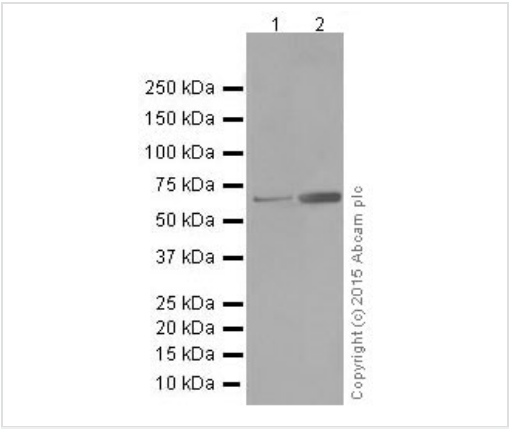
Lane 1 : SP2/0 cell lysate
Lane 2 : mouse marrow
Lane 3 : rat brain
Lane 4 : C6 cell lysate
Lane 5 : rat cerebral cortex

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : HRP goat anti-rabbit IgG (H+L) at 1/50000 dilution

Predicted band size: 68 kDa
Observed band size: 65 kDa

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST



Western blot - Anti-SHP1 antibody [Y476] (ab32559)

All lanes : Anti-SHP1 antibody [Y476] (ab32559) at 1/1000 dilution (purified)

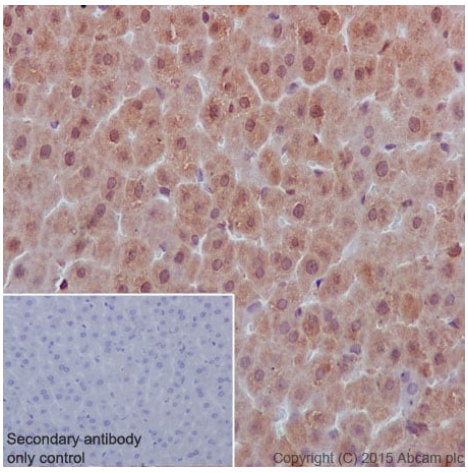
Lane 1 : A431 cell lysate
Lane 2 : Jurkat cell lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : HRP goat anti-rabbit IgG (H+L) at 1/50000 dilution

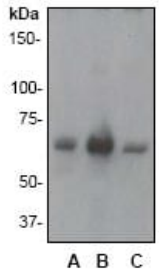
Predicted band size: 68 kDa
Observed band size: 65 kDa

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SHP1 antibody [Y476] (ab32559)

Immunohistochemical staining of paraffin embedded mouse liver with purified ab32559 at a working dilution of 1/100. The secondary antibody used is HRP goat anti-rabbit IgG H&L (**ab97051**) at 1/500. The sample is counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.

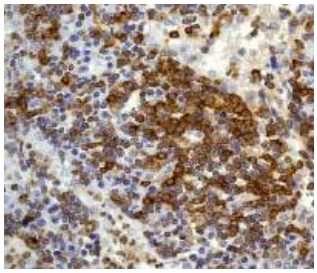


Western blot - Anti-SHP1 antibody [Y476] (ab32559)

All lanes : Anti-SHP1 antibody [Y476] (ab32559) at 1/1000 dilution (unpurified)

Lane 1 : A- A431 cell lysate
Lane 2 : B- Jurkat cell lysate
Lane 3 : C- K562 cell lysate

Predicted band size: 68 kDa
Observed band size: 65 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SHP1 antibody [Y476] (ab32559)

Unpurified ab32559, at a 1/50 dilution, staining human lymph node by immunohistochemistry, Paraffin embedded tissue.

Tissue Microarray (TMA) data for ab32559

Mouse normal tissue samples				Rat normal tissue samples			
Mouse cardiac muscle	x	Mouse pancreas	✓	Rat cardiac muscle	x	Rat pancreas	✓
Mouse cerebrum	✓	Mouse skeletal muscle	x	Rat cerebrum	✓	Rat skeletal muscle	x
Mouse colon	✓	Mouse skin	x	Rat colon	✓	Rat skin	x
Mouse kidney	✓	Mouse spleen	✓	Rat kidney	✓	Rat spleen	✓
Mouse liver	✓	Mouse stomach	✓	Rat liver	✓	Rat stomach	✓
Mouse lung	✓	Mouse testis	✓	Rat lung	✓	Rat testis	✓

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SHP1 antibody [Y476] (ab32559)

Tissue Microarrays stained for "Anti-SHP1 antibody [Y476]" using "ab32559" in immunohistochemical analysis. This table provides a detailed overview of positive (tick mark) and negative (cross mark) staining per sample type tested. The sections were pre-treated using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) for 20 minutes. The sections were incubated with ab32559 for 30 mins at room temperature followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Tissue Microarray (TMA) data for ab32559

Human normal tissue samples				Human malignant tissue samples			
Human cardiac muscle	x	Human placenta	x	Clear cell carcinoma of human kidney	x	Human hepatocellular carcinoma	✓
Human cerebrum	x	Human skeletal muscle	x	Human bladder cancer	✓	Human lung carcinoma	✓
Human colon	✓	Human skin	✓	Human breast carcinoma	✓	Human melanoma	✓
Human endometrium	✓	Human spleen	✓	Human cervical carcinoma	✓	Human ovarian carcinoma	✓
Human kidney	✓	Human stomach	✓	Human colon carcinoma	✓	Human pancreatic carcinoma	✓
Human liver	✓	Human testis	✓	Human endometrial carcinoma	✓	Human prostatic hyperplasia	✓
Human lung	✓	Human thyroid	✓	Human gastric adenocarcinoma	✓	Human thyroid carcinoma	✓
Human mammary gland	✓	Human tonsil	✓	Human glioma	✓		
Human pancreas	✓						

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SHP1 antibody [Y476] (ab32559)

Tissue Microarrays stained for "Anti-SHP1 antibody [Y476]" using "ab32559" in immunohistochemical analysis. This table provides a detailed overview of positive (tick mark) and negative (cross mark) staining per sample type tested. The sections were pre-treated using Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0) for 20 minutes. The sections were incubated with ab32559 for 30 mins at room temperature followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (**ab209101**). The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Anti-SHP1 antibody [Y476] (ab32559)

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