abcam

ab239846

Anti-VAV2 antibody [EP1067Y] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EP1067Y
Purification technique	Affinity purification Protein A
Specificity	This antibody detects Vav2 phosphorylated on Tyr172 as well as unphosphorylated Vav2.
Concentration	1.064 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human

Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat
Dilution info	-

Notes	-

Target data

See full target information Guanine nucleotide exchange factor VAV2

Function	Guanine nucleotide exchange factor for the Rho family of Ras-related GTPases. Plays an important role in angiogenesis. Its recruitment by phosphorylated EPHA2 is critical for EFNA1-induced RAC1 GTPase activation and vascular endothelial cell migration and assembly (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab239846 is the carrier-free version of ab52640.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

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 batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	VAV2 also known as Vav 2 guanine nucleotide exchange factor is a member of the VAV family of proteins which function as guanine nucleotide exchange factors (GEFs). It has a molecular mass of approximately 100 kDa. The protein converts inactive GDP-bound Rho family GTPases such as Rac1 and Cdc42 into their active GTP-bound form. VAV2 is expressed in various tissues including the brain heart and lung indicating its broad role in cellular signaling across different systems.
Biological function summary	VAV2 influences multiple cellular processes through its role as a GEF. This protein does not form a part of a static complex but interacts dynamically with other signaling components. VAV2 regulates cytoskeleton organization cell migration and growth by activating Rho family GTPases. Its activity impacts processes such as neuronal development and immune response by modifying the actin cytoskeleton which is important for cell movement and morphological changes.
Pathways	VAV2 plays an integral role in signaling cascades like the Ras and MAPK pathways. It interacts closely with proteins like Rac1 and Cdc42 to propagate signals that influence cell proliferation and survival. By facilitating the switch from inactive GDP-bound states to active GTP-bound forms of Rho GTPases VAV2 integrates signals from cell surface receptors to downstream effectors that mediate cellular responses to external stimuli.
Associated diseases and disorders	VAV2’s function connects to cancer progression and cardiovascular disorders. Changes in VAV2 expression or activity can lead to abnormal cell growth and differentiation linking it to cancerous transformations. Additionally because VAV2 modulates cell migration and cytoskeletal dynamics its malfunction can contribute to cardiovascular diseases by affecting vascular smooth muscle cells and endothelial cells. In both contexts VAV2's interactions with Rho family proteins like Rac1 highlights its influence in disease mechanisms.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

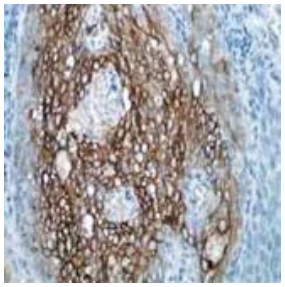
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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5 product images

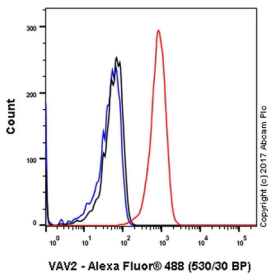


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-VAV2 antibody [EP1067Y] - BSA and Azide free (ab239846)

VAV2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-VAV2 antibody

Human cervical carcinoma stained with ab52640 at 1/50 - 1/100 dilution
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52640).

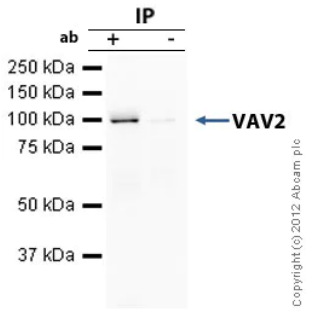
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-VAV2 antibody [EP1067Y] - BSA and Azide free (ab239846)

VAV2 Flow Cytometry (Intracellular) staining using rabbit Anti-VAV2 antibody

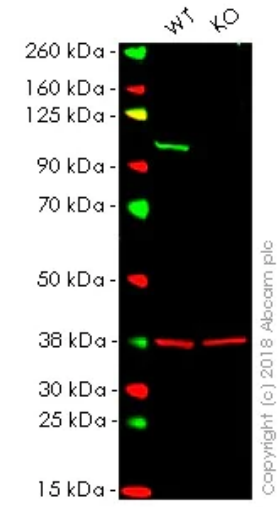
Intracellular Flow Cytometry analysis of HeLa (human cervix adenocarcinoma) cells labeling VAV2 (red) with ab52640 at a 1/2500 dilution. Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. A goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) was used as the secondary antibody at a 1/2000 dilution. Black - Rabbit monoclonal IgG (ab172730). Blue (unlabeled control) - Cells without incubation with the primary and secondary antibodies.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52640).



Immunoprecipitation - Anti-VAV2 antibody [EP1067Y] - BSA and Azide free (ab239846)

VAV2 was immunoprecipitated using 0.5mg Hek293 whole cell extract, 10µg of Rabbit monoclonal to VAV2 and 50µl of protein G magnetic beads (+). No antibody was added to the control (-).
The antibody was incubated under agitation with Protein G beads for 10min, Hek293 whole cell extract lysate diluted in RIPA buffer was added to each sample and incubated for a further 10min under agitation.
Proteins were eluted by addition of 40µl SDS loading buffer and incubated for 10min at 70°C; 10µl of each sample was separated on a SDS PAGE gel, transferred to a nitrocellulose membrane, blocked with 5% BSA and probed with ab52640.
Secondary: Mouse monoclonal [SB62a] Secondary Antibody to Rabbit IgG light chain (HRP) (ab99697).
Band: 100kDa; VAV2.This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab52640).
All lanes:
Immunoprecipitation - Anti-VAV2 antibody [EP1067Y] (ab52640)

Predicted band size: 101 kDa



Western blot - Anti-VAV2 antibody [EP1067Y] - BSA and Azide free (ab239846)

VAV2 Western blot staining using rabbit Anti-VAV2 antibody

This data was developed using the same antibody clone in a different buffer formulation (ab52640).
Lanes 1 - 4: Merged signal (red and green). Green - ab52640 observed at 101 kDa. Red - loading control, ab9484, observed at 37 kDa.

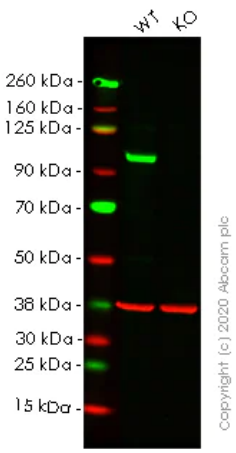
ab52640 was shown to specifically react with VAV2 in wild-type HAP1 cells as signal was lost in VAV2 knockout cells. Wild-type and VAV2 knockout samples were subjected to SDS-PAGE. ab52640 and ab9484 (Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1/20000 dilution and 1/20000 dilution respectively. Blots were developed 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 1/20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-VAV2 antibody [EP1067Y] - BSA and Azide free (ab239846) at 1/20000 dilution

Lane 1:
Wild-type HAP1 whole cell lysate at 20 µg

Lane 2:
VAV2 knockout HAP1 whole cell lysate at 20 µg

Predicted band size: 101 kDa



Western blot - Anti-VAV2 antibody [EP1067Y] - BSA and Azide free (ab239846)

VAV2 Western blot staining using rabbit Anti-VAV2 antibody

This data was developed using the same antibody clone in a different buffer formulation (ab52640).
Lanes 1- 2: Merged signal (red and green). Green - ab52640 observed at 100 kDa. Red - Anti-GAPDH antibody [6C5] - Loading Control (ab8245) observed at 37 kDa.

ab52640 was shown to react with VAV2 in wild-type HeLa cells in western blot. Loss of signal was observed when knockout cell line ab265318 (knockout cell lysate ab257794) was used. Wild-type HeLa and VAV2 knockout HeLa cell lysates were subjected to SDS-PAGE. Membrane was blocked for 1 hour at room temperature in 0.1% TBST with 3% non-fat dried milk. ab52640 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) overnight at 4°C at a 1 in 20000 dilution and a 1 in 20000 dilution respectively. 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 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-VAV2 antibody [EP1067Y] (ab52640) at 1/20000 dilution

Lane 1:
Wild-type HeLa cell lysate at 20 µg

Lane 2:
VAV2 knockout HeLa cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 101 kDa

Observed band size: 100 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.