abcam

ab52938

Anti-VAV3 antibody [EP1130Y]

Recombinant | RabMAb | KO Validated | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EP1130Y
Purification technique	Affinity purification Protein A
Concentration	0.359 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/40
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information Guanine nucleotide exchange factor VAV3

Function

Exchange factor for GTP-binding proteins RhoA, RhoG and, to a lesser extent, Rac1. Binds physically to the nucleotide-free states of those 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). May be important for integrin-mediated signaling, at least in some cell types. In osteoclasts, along with SYK tyrosine kinase, required for signaling through integrin alpha-v/beta-1 (ITAGV-ITGB1), a crucial event for osteoclast proper cytoskeleton organization and function. This signaling pathway involves RAC1, but not RHO, activation. Necessary for proper wound healing. In the course of wound healing, required for the phagocytotic cup formation preceding macrophage phagocytosis of apoptotic neutrophils. Responsible for integrin beta-2 (ITGB2)-mediated macrophage adhesion and, to a lesser extent, contributes to beta-3 (ITGB3)-mediated adhesion. Does not affect integrin beta-1 (ITGB1)-mediated adhesion (By similarity).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

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.

Species reactivity
Rat: We have preliminary internal testing data to indicate this antibody may not react with this species.
Please contact us for more information.

Supplementary info

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

Activity summary	The VAV3 protein also known as the guanine nucleotide exchange factor VAV3 functions as a regulator of Rho family GTPases by promoting the exchange of GDP for GTP. It weighs approximately 101 kDa and exhibits expression in various tissues including the brain heart and hematopoietic cells. VAV3 serves as an important modulator within the intracellular signaling processes by influencing actin cytoskeletal dynamics and impacting cellular morphology and movement.

Biological function summary	VAV3 influences multiple cellular processes like cell proliferation differentiation and migration. Part of many signaling complexes VAV3 interacts with receptors on the cell surface transmitting signals inside the cell. These interactions play a role in the regulation of immune responses and its involvement in the nervous system aids in neuron development and connectivity.
Pathways	VAV3 takes part in the regulation of the Rho GTPase pathway and the phosphoinositide 3-kinase (PI3K) pathway. VAV3 cooperates with proteins such as RAC1 and CDC42 influencing these pathways to modulate cell survival cytoskeleton rearrangement and membrane trafficking. Interaction with PI3K pathway components amplifies signals for growth factor-induced cellular responses impacting the overall cell function and homeostasis.
Associated diseases and disorders	VAV3 influences both cancer and autoimmune diseases due to its regulatory role in cell signaling. Overexpression or abnormal regulation of VAV3 relates to prostate cancer progression and metastasis through its interaction with androgen receptor signaling pathways. In autoimmune diseases VAV3's interaction with proteins such as SYK can affect the severity of conditions like rheumatoid arthritis by modulating immune cell activation and response.

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

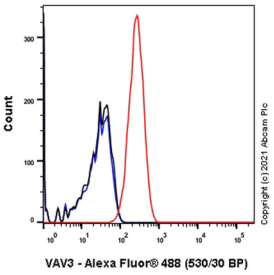
We do not recommend this combination. It is not covered by our product promise.

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.

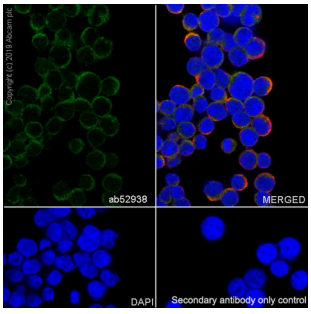
5 product images



Flow Cytometry (Intracellular) - Anti-VAV3 antibody [EP1130Y] (ab52938)

VAV3 Flow Cytometry (Intracellular) staining using rabbit Anti-VAV3 antibody

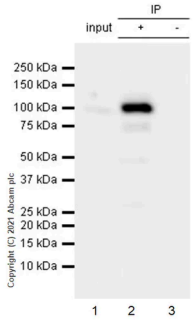
Intracellular Flow Cytometry analysis of Jurkat (Human T cell leukemia T lymphocyte) cells labelling VAV3 with purified ab52938 at 1/40 dilution (10 µg/mL) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabelled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunocytochemistry/ Immunofluorescence - Anti-VAV3 antibody [EP1130Y] (ab52938)

VAV3 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-VAV3 antibody

Immunocytochemistry analysis of Jurkat (Human T cell leukemia T lymphocyte) cells labeling VAV3 with purified ab52938 at 1/50 dilution (7.2 µg/mL). Cells were fixed in 100% Methanol and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 (2.5 µg/mL). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1/1000 (2 µg/mL) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

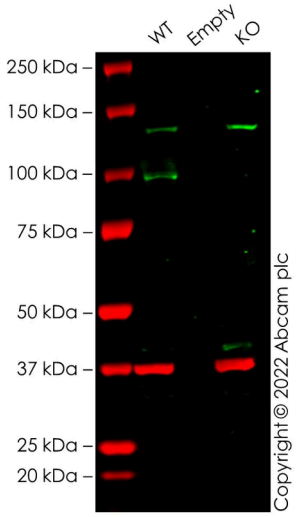


Immunoprecipitation - Anti-VAV3 antibody [EP1130Y] (ab52938)

Purified ab52938 at 1/30 dilution (2µg) immunoprecipitating VAV3 in Jurkat whole cell lysate.
Lane 1 (input): Jurkat (Human T cell leukemia T lymphocyte) whole cell lysate 10µg.
Lane 2 (+): ab52938 + Jurkat whole cell lysate.
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab52938 in Jurkat whole cell lysate.
VeriBlot for IP Detection Reagent (HRP) (ab131366) (1/1000 dilution) was used for Western blotting.
Blocking Buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
All lanes:
Immunoprecipitation - Anti-VAV3 antibody [EP1130Y] (ab52938)

Predicted band size: 98 kDa

Observed band size: 98 kDa



Western blot - Anti-VAV3 antibody [EP1130Y] (ab52938)

VAV3 Western blot staining using rabbit Anti-VAV3 antibody

False colour image of Western blot: Anti-VAV3 antibody [EP1130Y] staining at 1/1000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] (ab8245) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab52938 was shown to bind specifically to VAV3. A band was observed at 98 kDa in wild-type HeLa cell lysates with no signal observed at this size in VAV3 knockout cell line ab265419 (knockout cell lysate ab258280). To generate this image, wild-type and VAV3 knockout HeLa cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 5 % milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (ab216776) at 1/20000 dilution.
Lanes 1 and 3:
Western blot - Anti-VAV3 antibody [EP1130Y] (ab52938) at 1/1000 dilution

Lane 2:
Western blot - Anti-VAV3 antibody [EP1130Y] (ab52938)

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

Lane 2:
Empty

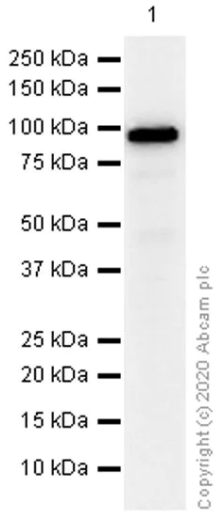
Lane 2:
Western blot - Human VAV3 knockout HeLa cell line (ab265419)

Lane 3:
VAV3 knockout HeLa cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 98 kDa

Observed band size: 98 kDa



Western blot - Anti-VAV3 antibody [EP1130Y] (ab52938)

All lanes:
Western blot - Anti-VAV3 antibody [EP1130Y] (ab52938) at 1/1000 dilution

All lanes:
Jurkat (Human T cell leukemia T lymphocyte) whole cell lysate

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 98 kDa

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