abcam

Product datasheet

Anti-VASP antibody ab229624

4 Images

Overview

Product name	Anti-VASP antibody
Description	Rabbit polyclonal to VASP
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, WB, ICC/IF
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide within Human VASP (internal sequence). The exact sequence is proprietary. Conjugated to a protein carrier. Database link: P50552
Positive control	WB: HEK-293T, A431, HeLa and HepG2 whole cell extracts. IHC-P: MDA-MB-231 xenograft tissue. ICC/IF: HeLa cells.

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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.00 Preservative: 0.025% Proclin Constituents: PBS, 20% Glycerol
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab229624** in the following tested applications.

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

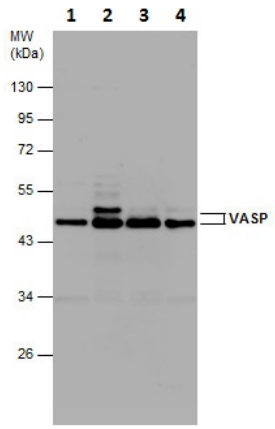
Application	Abreviews	Notes
IHC-P		1/100 - 1/1000.

Application	Abreviews	Notes
WB		1/500 - 1/3000. Predicted molecular weight: 39 kDa.
ICC/IF		1/100 - 1/1000.

Target

Function	Ena/VASP proteins are actin-associated proteins involved in a range of processes dependent on cytoskeleton remodeling and cell polarity such as axon guidance, lamellipodial and filopodial dynamics, platelet activation and cell migration. VASP promotes actin filament elongation. It protects the barbed end of growing actin filaments against capping and increases the rate of actin polymerization in the presence of capping protein. VASP stimulates actin filament elongation by promoting the transfer of profilin-bound actin monomers onto the barbed end of growing actin filaments. Plays a role in actin-based mobility of Listeria monocytogenes in host cells. Regulates actin dynamics in platelets and plays an important role in regulating platelet aggregation.
Tissue specificity	Highly expressed in platelets.
Sequence similarities	Belongs to the Ena/VASP family. Contains 1 WH1 domain.
Domain	The EVH2 domain is comprised of 3 regions. Block A is a thymosin-like domain required for G-actin binding. The KLKR motif within this block is essential for the G-actin binding and for actin polymerization. Block B is required for F-actin binding and subcellular location, and Block C for tetramerization. The WH1 domain mediates interaction with XIRP1.
Post-translational modifications	Major substrate for cAMP-dependent (PKA) and cGMP-dependent protein kinase (PKG) in platelets. The preferred site for PKA is Ser-157, the preferred site for PKG, Ser-239. In ADP-activated platelets, phosphorylation by PKA or PKG on Ser-157 leads to fibrinogen receptor inhibition. Phosphorylation on Thr-278 requires prior phosphorylation on Ser-157 and Ser-239. In response to phorbol ester (PMA) stimulation, phosphorylated by PKC/PRKCA. In response to thrombin, phosphorylated by both PKC and ROCK1. Phosphorylation at Thr-278 by AMPK does not require prior phosphorylation at Ser-157 or Ser-239. Phosphorylation modulates F-actin binding, actin filament elongation and platelet activation. Carbon monoxide (CO) promotes phosphorylation at Ser-157, while nitric oxide (NO) promotes phosphorylation at Ser-157, but also at Ser-239. Response to NO and CO is blunted in platelets from diabetic patients, and VASP is not phosphorylated efficiently at Ser-157 and Ser-239.
Cellular localization	Cytoplasm. Cytoplasm > cytoskeleton. Cell junction > focal adhesion. Cell projection > lamellipodium membrane. Cell projection > filopodium membrane. Targeted to stress fibers and focal adhesions through interaction with a number of proteins including MRL family members. Localizes to the plasma membrane in protruding lamellipodia and filopodial tips. Stimulation by thrombin or PMA, also translocates VASP to focal adhesions. Localized along the sides of actin filaments throughout the peripheral cytoplasm under basal conditions.

Images



Western blot - Anti-VASP antibody (ab229624)

All lanes : Anti-VASP antibody (ab229624) at 1/1000 dilution

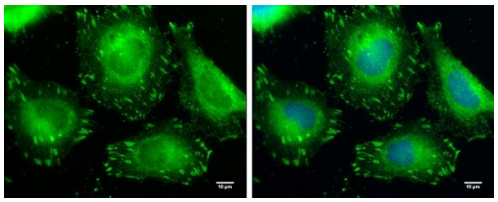
Lane 1 : HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell extract
Lane 2 : A431 (human epidermoid carcinoma cell line) whole cell extract
Lane 3 : HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell extract
Lane 4 : HepG2 (human liver hepatocellular carcinoma cell line) whole cell extract

Lysates/proteins at 30 µg per lane.

Developed using the ECL technique.

Predicted band size: 39 kDa

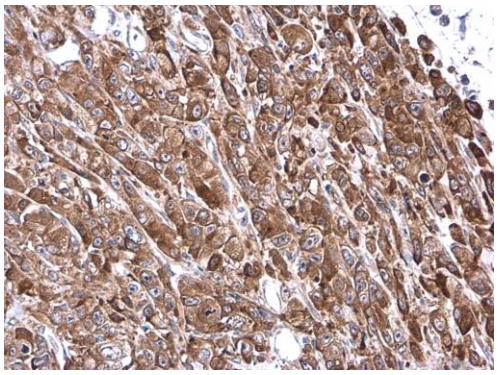
10% SDS-PAGE



Immunocytochemistry/ Immunofluorescence - Anti-VASP antibody (ab229624)

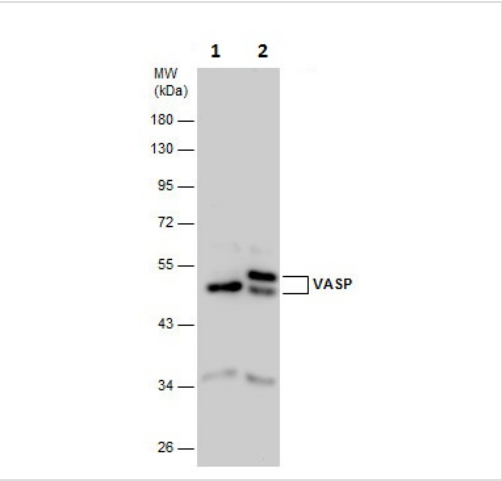
HeLa (human epithelial cell line from cervix adenocarcinoma) cells stained for VASP (green) using ab229624 at a 1/500 dilution in ICC/IF. Cells were fixed in 4% paraformaldehyde at RT for 10 minutes.

Nuclear counterstain: Hoechst 33342 (blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-VASP antibody (ab229624)

Paraffin-embedded MDA-MB-231 xenograft stained for VASP with ab229624 at 1/500 dilution in immunohistochemical analysis.



Western blot - Anti-VASP antibody (ab229624)

All lanes : Anti-VASP antibody (ab229624) at 1/2000 dilution

Lane 1 : Untreated HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell extract
Lane 2 : Forskolin-treated (10 µM, 20 minutes) HEK-293T whole cell extract

Lysates/proteins at 30 µg per lane.

Developed using the ECL technique.

Predicted band size: 39 kDa

10% SDS-PAGE

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