ARG10663
anti-VASP antibody

Package: 50 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes VASP
Tested Reactivity	Hu, Ms, Pig
Tested Application	ICC/IF, IP, WB
Specificity	The antibody recognizes both the 46 kDa (Ser-157 dephospho) and 50 kDa (Ser-157 phospho) form of VASP.
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	VASP
Species	Human
Immunogen	His-tagged recombinant full-length Human VASP protein.
Conjugation	Un-conjugated
Alternate Names	VASP; Vasodilator-stimulated phosphoprotein

Application Instructions

Application table

Application	Dilution
ICC/IF	1 µg/ml (1:250)
IP	2 µg/ml (1:125)
WB	0.1 µg/ml (1:2500)

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Positive Control	Human platelet protein (lysate).

Properties

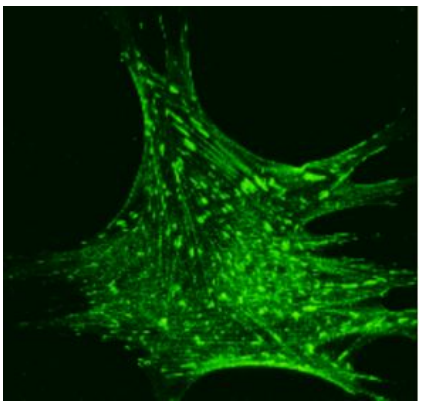
Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS, 0.02% Sodium azide and 1 mg/ml BSA.
Preservative	0.02% Sodium azide
Stabilizer	1 mg/ml BSA
Concentration	0.25 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated

	freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

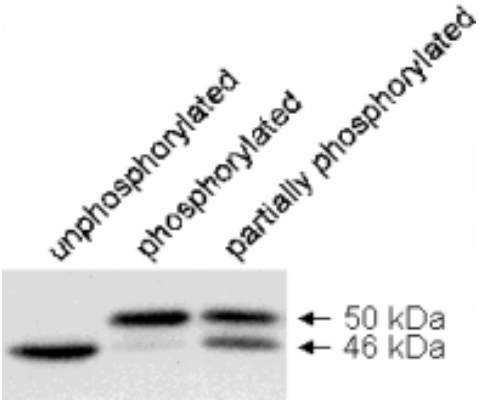
Database links	GeneID: 22323 Mouse GeneID: 7408 Human Swiss-port # P50552 Human Swiss-port # P70460 Mouse
Gene Symbol	VASP
Gene Full Name	vasodilator-stimulated phosphoprotein
Background	Vasodilator-stimulated phosphoprotein (VASP) is a member of the Ena-VASP protein family. Ena-VASP family members contain an EHV1 N-terminal domain that binds proteins containing E/DFPPPPXD/E motifs and targets Ena-VASP proteins to focal adhesions. In the mid-region of the protein, family members have a proline-rich domain that binds SH3 and WW domain-containing proteins. Their C-terminal EVH2 domain mediates tetramerization and binds both G and F actin. VASP is associated with filamentous actin formation and likely plays a widespread role in cell adhesion and motility. VASP may also be involved in the intracellular signaling pathways that regulate integrin-extracellular matrix interactions. VASP is regulated by the cyclic nucleotide-dependent kinases PKA and PKG. [provided by RefSeq, Jul 2008]
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. [UniProt]
Calculated Mw	46 kDa (Ser157 dephospho); 50 kDa (Ser157 phospho)
PTM	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/PRKG1, 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 at Ser-157 by PKA is required for localization to the tight junctions in epithelial cells. Phosphorylation modulates F-actin binding, actin filament elongation and platelet activation. Phosphorylation at Ser-322 by AMPK also alters actin filament binding. 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.

Images



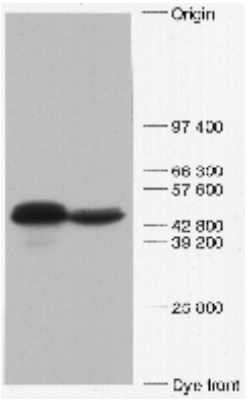
ARG10663 anti-VASP antibody ICC/IF image

Immunofluorescence: Focal contacts and actin filaments of a Human skin fibroblast stained with ARG10663 anti-VASP antibody.



ARG10663 anti-VASP antibody WB image

Western blot: Monitoring cAMP-/cGMP-dependent protein kinase activity. The blots were stained with ARG10663 anti-VASP antibody. The shift from 46 to 50 kDa indicates Ser-157 phosphorylation.



ARG10663 anti-VASP antibody WB image

Western blot: Human platelets (left lane) and Human skin fibroblasts (right lane) stained with ARG10663 anti-VASP antibody.