

Product name:	VASP (phospho Thr278) Rabbit Polyclonal Antibody
Cat number:	ABN05610
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	Synthesized phospho-peptide around the phosphorylation site of human VASP (phospho Thr278)
Reactivity:	Human, Mouse, Rat
Applications:	IHC 1:100-1:300, ICC/IF 1:50-1:200, ELISA 1:20000-1:40000
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

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],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.,domain:The WH1 domain mediates interaction with XIRP1.,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 and lamellipodial and filopodial dynamics in migrating cells. VASP promotes actin nucleation and increases the rate of actin polymerization in the presence of capping protein. Plays a role in actin-based activity of *Listeria monocytogenes* in platelets.,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, 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.,similarity:Belongs to the Ena/VASP family.,similarity:Contains 1 WH1 domain.,subcellular location: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.,subunit:Homotetramer. Interacts with PFN1, PFN2, LPP, ACTN1 and ACTG1. Interacts, via the EVH1, with the Pro-rich regions of ZYX. This interaction is important for targeting to focal adhesions and the formation of actin-rich structures at the apical surface of cells. Interacts, via the EVH1 domain, with the Pro-rich domain of *Listeria monocytogenes* actA. Interacts with APBB1IP. Interacts, via the Pro-rich domain, with the C-terminal SH3 domain of DNMBP.,tissue specificity:Highly expressed in platelets.,