血管扩张刺激磷蛋白抗体

产品货号： mIR3603

英文名称： VASP

中文名称： 血管扩张刺激磷蛋白抗体

别　　名： Vasodilator stimulated phosphoprotein； Vasodilator-stimulated phosphoprotein； VASP； VASP_HUMAN.

研究领域： 肿瘤　细胞生物　免疫学　神经生物学　信号转导　细胞凋亡　转录调节因子　激酶和磷酸酶

抗体来源： Rabbit

克隆类型： Polyclonal

交叉反应　： Human, Mouse, Rat, Dog, Cow,

产品应用： WB=1:500-2000 ELISA=1:500-1000 IHC-P=1:400-800 IHC-F=1:400-800 IF=1:100-500 （石蜡切片需做抗原修复）
not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

分 子 量： 40kDa

细胞定位： 细胞浆 细胞膜

性　　状： Lyophilized or Liquid

浓　　度： 1mg/ml

免 疫 原： KLH conjugated synthetic peptide derived from human VASP:251-350/380

亚　　型： IgG

纯化方法： affinity purified by Protein A

储 存 液： 0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.

保存条件： Store at -20 ° C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20° C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ° C.

PubMed： PubMed

产品介绍： 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].

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.

Subunit:

Homotetramer. Interacts with PFN1, PFN2, LPP, ACTN1 and ACTG1. Interacts, via the EVH1 domain, 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 (By similarity).

Subcellular Location:

Cytoplasm. Cytoplasm, cytoskeleton. Cell junction, focal adhesion. Cell projection, lamellipodium membrane. Cell projection, filopodium membrane. Note=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.

Tissue Specificity:

Highly expressed in platelets.

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/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 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.

Similarity:

Belongs to the Ena/VASP family.

Contains 1 WH1 domain.

SWISS:

P50552

Gene ID:

7408

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

VASP 属于 Ena-VASP 蛋白家族，是一种肌动蛋白结合蛋白。细胞骨架动力学的调节在细胞粘附、细胞变形、细胞移动等生理过程中是必需的。VASP 可能也参与细胞内信号通道，该通道调节整联蛋白与细胞外基质间的相互作用。VASP 被周期核苷酸依赖型激酶 PKA 与 PKG 所调节,在一些肿瘤的分化、增值、转移中起到一定的作用，在肿瘤中有较高的表达。

近年来的研究发现 VASP 在与细胞骨架调节有关的各种细胞行为中起着重要作用，如神经细胞轴索的延伸、T 细胞的移动、成纤维细胞的迁移等。

VASP 的磷酸化受 PKG（cGMP-dependent protein kinase）和 PKA（cAMP—dependent protein kinase）的调控。在粘附斑的形成与脱落过程中，该磷酸化起着一个“开关”的作用。