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Product Information

Anti-phospho-VASP [pThr^{278}]
produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200521**

Product Description

Anti-phospho-VASP [pThr^{278}] is produced in rabbit using as immunogen a synthetic peptide containing phosphorylated Thr^{278} of human VASP (GeneID 7408), conjugated to KLH. The corresponding sequence is identical in mouse and rat VASP. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-phospho-VASP [pThr^{278}] specifically recognizes human VASP phosphorylated at Thr^{278}. The antibody may be used in various immunochemical techniques including immunoblotting (~45 kDa) and immunoprecipitation. Staining of the VASP band by immunoblotting is specifically inhibited by the VASP immunizing phosphorylated VASP peptide [pThr^{278}], but not by the corresponding non-phosphorylated peptide.

VASP (vasodilator-stimulated phosphoprotein) belongs to the family of Ena/VASP actin-regulatory proteins that are implicated in cell motility and adhesion.[1-3] VASP is localized at highly dynamic membrane regions, focal adhesion sites, lamellipodia protrusions, filopodia tips and along stress fibers. VASP is also localized at cell-matrix and cell-cell contacts and plays an important role in adherens junction formation and stabilization in epithelial cells. VASP is a substrate for cAMP- and cGMP-dependent protein kinases. It is phosphorylated at multiple sites including Ser^{157}, Ser^{239} and Thr^{278}.[4] cGMP-dependent protein kinase I (cGKI) phosphorylates VASP in a variety of cells, including platelets, fibroblasts and endothelial cells. In platelets, cGMP-mediated phosphorylation of VASP correlates with inhibition of agonist-induced platelet aggregation.[5] Ena/VASP proteins are required for neurite initiation and extension in the developing cortex.[6] VASP has been shown to be required for endothelial barrier function *in vivo*. Knockout of Ena/VASP proteins in mice leads to increased endothelial permeability causing fatal vascular leakage and hemorrhaging during late embryonic development.[7] In contrast, over-expression of VASP enhances barrier function of endothelial cells *in vitro* and increases their force generation.

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative and 1% BSA as stabilizer.

Antibody Concentration: ~0.1 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working dilution of 1:5,000-10,000 is recommended using human platelets cell lysates.

Immunoprecipitation: a working amount of 40 µL is recommended using HEK-293T cells overexpressing human VASP.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

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