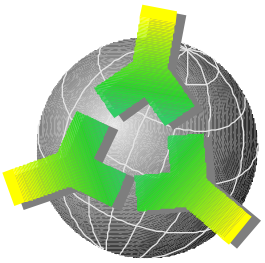
a n t i - V A S P

mouse monoclonal antibody IE273

Lot: 633 **catalog #: 0016-05**



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Background information

VASP (vasodilator stimulated phosphoprotein) is a proline-rich[21] protein substrate of cAMP- and cGMP-dependent protein kinases[18,20,26-43]. Phosphorylation of VASP at Ser-157 causes a mobility shift in SDS gel electrophoresis from 46 to 50 kDa[25], which has been used as a convenient marker to monitor cyclic nucleotide-dependent protein kinase activity[16,18,20,26-40]. VASP is the founding member of the Ena-VASP protein family, comprising the Drosophila protein Enabled (Ena)[19], its mouse homologue Mena (mammalian Enabled)[9], and mouse EVL (Ena-VASP-like protein)[9]. With these proteins VASP shares a conserved overall domain organization[9,21]: a) the conserved N-terminal Ena-VASP homology domain 1 (EVH1), which mediates binding to a novel proline-rich motif[1,6,10], b) a more divergent proline-rich central domain (which is responsible for profilin binding)[4,5,24], and c) a conserved C-terminal EVH2 domain. Particularly high VASP levels are present in platelets[33,36,41], although VASP is expressed in a variety of mammalian cell types and tissues[11,32,33,36,41]. In cultured cells, VASP is associated with focal adhesions, cell-cell contacts, microfilaments, and highly dynamic membrane regions[2,24,36]. From *in vitro* binding data VASP has been suggested to link profilin to zyxin[25], vinculin[6,10], and the *Listeria spp.* surface protein ActA[8,17,22], respectively. Functional evidence indicates that VASP is a crucial factor involved in the enhancement of actin filament formation and the actin-dependent motility of intracellular bacterial pathogens[1-3,10,12-14,23].

Antibody preparation and storage

Clone[44]: IE273, isotype IgG_1. 50 µg of purified antibody in PBS, with 1 mg/ml BSA and 0.02% (w/v) NaN_3. Antibody concentration: 500 µg/ml. Vials have been overfilled by 10% to ensure complete recovery of the specified amount. Short term storage at 4°C, stable for one year from date of shipment when stored at -20°C. Avoid repeated freezing and thawing! Do not store in "frost-free" freezers.

Antigen

VASP purified[42] from human platelets.

Species cross-reactivity

human, porcine, and bovine VASP

Specificity

The antibody recognizes both the 46 kDa (Ser-157 dephospho) and 50 kDa (Ser-157 phospho) form of VASP.

Applications

Western (immuno) blotting (0.1-0.25 µg/ml; dilution 1:2000 - 1:5000), immunofluorescence of formaldehyde fixed cells (1-5 µg/ml; dilution 1:100 - 1:500), immunoprecipitation with anti-mouse secondary antibody.

All dilutions refer to the analysis of cells and tissues with intermediate to high levels of VASP expression and must be viewed as approximate. The antibody should be titrated for each individual application.

Positive control

Human platelet protein (500 µg), supplied at 5 mg/ml in SDS-stop solution (100 mM NaCl, 73 mM Tris/HCl pH 6.7, 10 mM DTT, 8 mM EDTA, 5 % [v/v] glycerol, 2% [w/v] SDS, 10 µg/ml Bromophenol Blue sodium salt). Use 5 µl (25 µg) per lane.

Related products

- mouse monoclonal antibody IE273 to VASP, carrier-free, 1 mg (catalog # 0016-blk)
- affinity purified rabbit antibody IG731 to human VASP, 25 µg (catalog # 0012-02)
- positive control: human platelet protein in SDS-sample buffer, 500 µg (catalog # 8010-50)

References

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