

# Phospho-VASP (Ser239) Antibody

✓ 100 µl  
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M, R, Mk	48, 50 kDa	Rabbit**

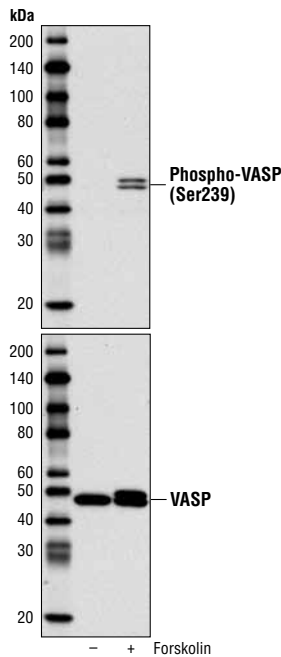
**Background:** Vasodilator-stimulated phosphoprotein (VASP) was originally characterized as a substrate of both cGMP- and cAMP-dependent kinases (PKG and PKA, or cGPK and cAPK, respectively) (1). It is now believed that VASP belongs to the Ena/VASP family of adaptor proteins linking the cytoskeletal system to the signal transduction pathways and that it functions in cytoskeletal organization, fibroblast migration, platelet activation and axon guidance (2,3). Three phosphorylation sites, Ser157, Ser239 and Thr278, have been identified. Ser239 is the major PKG phosphorylation site while Ser157 is the major PKA phosphorylation site (4). Evidence suggests that VASP phosphorylation reduces its association with actin and has a negative effect on actin polymerization (5). Phosphorylation at Ser239 of VASP is a useful marker for monitoring PKG activation and signaling (6,7).

**Specificity/Sensitivity:** Phospho-VASP (Ser239) Antibody detects endogenous levels of VASP only when phosphorylated at Ser239. The antibody does not cross-react with phosphorylated VASP homologues, such as Mena.

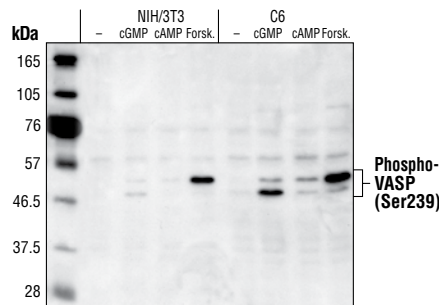
**Source/Purification:** Polyclonal antibodies are produced by immunizing rabbits with a synthetic phospho-peptide (KLH-coupled) corresponding to residues surrounding Ser239 of human VASP. Antibodies are purified by protein A and peptide affinity chromatography.

**Background References:**

- Butt, E. et al. (1994) *J. Biol. Chem.* 269, 14509–14517.
- Ball, L.J. et al. (2000) *EMBO J.* 19, 4903–4914.
- Machesky, L.M. et al. (2000) *Cell* 101, 685–688.
- Smolenski, A. et al. (1998) *J. Biol. Chem.* 273, 20029–20035.
- Harbeck, B. et al. (2000) *J. Biol. Chem.* 275, 30817–30825.
- Oelze, M. et al. (2000) *Circ. Res.* 87, 999–1005.
- Lawrence, D.W. et al. (2001) *J. Immunol.* 166, 5550–5556.



Western blot analysis of extracts from A-431 cells, untreated (-) or treated with Forskolin #3828 (+), using Phospho-VASP (Ser239) Antibody (upper) and VASP (9A2) Rabbit mAb #3132 (lower).



Western blot analysis of extracts from NIH/3T3 and C6 cells, untreated, 8-Br-cGMP-treated, 8-Br-cAMP-treated or forskolin-treated as indicated using Phospho-VASP (Ser239) Antibody.

Entrez-Gene ID #7408  
Swiss-Prot Acc. #P50552

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western blotting 1:1000

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**IMPORTANT: For Western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**