Revision 1

Phospho-VASP (Ser157) Antibody

#3111 Store at -20C

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk GP	Endogenous	50	Rabbit	#P50552	7408

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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.

Specificity/Sensitivity

Phospho-VASP (Ser157) Antibody detects endogenous levels of VASP only when phosphorylated at serine 157. The antibody may cross-react with the phosphorylated VASP homologue Mena.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser157 of human VASP. Antibodies are purified by protein A and peptide affinity chromatography.

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).

Background References

1. Butt, E. et al. (1994) *J Biol Chem* 269, 14509-17.
2. Ball, L.J. et al. (2000) *EMBO J* 19, 4903-14.
3. Machesky, L.M. (2000) *Cell* 101, 685-8.
4. Smolenski, A. et al. (1998) *J Biol Chem* 273, 20029-35.
5. Harbeck, B. et al. (2000) *J Biol Chem* 275, 30817-25.
6. Oelze, M. et al. (2000) *Circ Res* 87, 999-1005.
7. Lawrence, D.W. and Pryzwansky, K.B. (2001) *J Immunol* 166, 5550-6.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey **GP:** Guinea Pig

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Limited Uses

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