

Actin Reorganization Antibody Sampler Kit

✓ 1 Kit
 (7 x 40 µl)



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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.

Products Included	Product #	Quantity	Mol. Wt.	Isotype
Phospho-Cofilin (Ser3) (77G2) Rabbit mAb	3313	40 µl	19 kDa	Rabbit IgG
Cofilin (D3F9) XP® Rabbit mAb	5175	40 µl	19 kDa	Rabbit IgG
Phospho-Ezrin (Thr567)/Radixin (Thr564)/Moesin (Thr558) (41A3) Rabbit mAb	3149	40 µl	75 kDa Moesin. 80 kDa Ezrin, Radixin	Rabbit IgG
Ezrin/Radixin/Moesin Antibody	3142	40 µl	75 kDa Moesin. 80 kDa Ezrin, Radixin	Rabbit IgG
Phospho-VASP (Ser157) Antibody	3111	40 µl	51 kDa	Rabbit IgG
Phospho-VASP (Ser239) Antibody	3114	40 µl	48, 51 kDa	Rabbit IgG
VASP (9A2) Rabbit mAb	3132	40 µl	46, 50 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

See www.cellsignal.com for individual component applications, species cross-reactivity, dilutions, and additional application protocols.

Description: The Actin Reorganization Antibody Sampler Kit contains reagents to examine proteins that help regulate the dynamic actin cytoskeleton. This kit includes enough primary and secondary antibodies to perform four Western blot experiments with each primary antibody.

Background: Ubiquitous actin protein comprises the major structural component of the eukaryotic cytoskeleton. The formation and continual reorganization of the actin cytoskeleton is a key step in many biological processes, including cell motility, cytokinesis, endocytosis, embryonic development, tissue regeneration and the stress response (1). The small protein cofilin is one of a conserved family of actin-binding proteins that promote actin filament regeneration by severing preexisting filaments (2). Phosphorylation of cofilin at Ser3 by LIMK or TESK inhibits cofilin severing activity (3-5). Ezrin, radixin, and moesin (ERM) proteins function as linker proteins and signal transducers between the plasma membrane and actin cytoskeleton. These proteins are involved in cell adhesion, membrane ruffling, and microvilli formation (6,7). Interactive cytosolic ERM proteins exist as monomers or dimers that form both intra- and intermolecular associations through their amino- and carboxy-terminal domains (8). Phosphorylation at carboxy-terminal threonine residues (Thr567 of ezrin, radixin at Thr564 and Thr558 of moesin) may alter protein conformation and disrupt these protein associations and result in ERM protein activation (9,10). Vasodilator-stimulated phosphoprotein (VASP) is an adaptor protein that links the cytoskeleton with signal transduction pathways to act in fibroblast migration, platelet activation and axon guidance (11,12).

Three phosphorylation sites (Ser157, Ser239, and Thr278) have been identified, with phosphorylation of Ser239 by PKG serving as a marker for nitric oxide and cGMP signaling (13). VASP Ser157 can act as a substrate for both PKA and PKC (14,15). Active VASP appears to promote actin polymerization by restricting actin filament capping, with PKA phosphorylation inhibiting this anti-capping activity (16).

Specificity/Sensitivity: All activation state antibodies only detect their target proteins when modified at the indicated site. Cofilin (D3F9) XP® Rabbit mAb detects endogenous levels of total cofilin protein. VASP (9A2) Rabbit mAb detects endogenous levels of total VASP protein. Neither of the Ezrin/Radixin/Moesin antibodies cross-react with related phosphoproteins such as merlin or band 4.1.

Source/Purification: Monoclonal antibodies are produced by immunizing animals with synthetic peptides corresponding to central residues of human cofilin1 and residues near the carboxy terminus of human and mouse VASP. Monoclonal antibodies are produced by immunizing animals with synthetic phosphopeptides corresponding to residues surrounding Ser3 of human cofilin and Thr567 of human ezrin. Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to Thr567 of human ezrin. Activation state polyclonal antibodies are produced by immunizing rabbits with synthetic phosphopeptides corresponding to residues surrounding Ser157 and Ser239 of human VASP. Polyclonal antibodies are purified by protein A and peptide affinity chromatography.

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 antibodies.

Recommended Antibody Dilutions:
 Western blotting 1:1000

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Selected rabbit monoclonal antibodies are produced under license (granting certain rights including those under U. S. Patent No. 5,675,063 and/or U.S.S.N. 11/476,277) from Epitomics, Inc. U.S.S.N. 11/476,277) from Epitomics, Inc.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.