Revision 2

Store at -20C

#9967

Actin Reorganization Antibody Sampler Kit

1 Kit (7 x 20 microliters)

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Phospho-Cofilin (Ser3) (77G2) Rabbit mAb	3313	20 µl	19 kDa	Rabbit IgG
Cofilin (D3F9) XP® Rabbit mAb	5175	20 µl	19 kDa	Rabbit IgG
Phospho-Ezrin (Thr567)/Radixin (Thr564)/Moesin (Thr558) (48G2) Rabbit mAb	3726	20 µl	75 Moesin. 80 Ezrin, Radixin. kDa	Rabbit IgG
Ezrin/Radixin/Moesin Antibody	3142	20 µl	75 Moesin. 80 Ezrin and Radixin. kDa	Rabbit
Phospho-VASP (Ser157) Antibody	3111	20 µl	50 kDa	Rabbit
Phospho-VASP (Ser239) Antibody	3114	20 µl	48, 50 kDa	Rabbit
VASP (9A2) Rabbit mAb	3132	20 µl	46, 50 kDa	Rabbit
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

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 two Western blot experiments with each primary antibody.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the 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). *A*ctive VASP appears to promote actin polymerization by restricting actin filament capping, with PKA phosphorylation inhibiting this anti-capping activity (16).

Background References

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