Revision 2

Store at -80C

#3149

Phospho-Ezrin (Thr567)/Radixin (Thr564)/Moesin (Thr558) (41A3) Rabbit mAb

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Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
Endogenous	75 Moesin. 80 Ezrin, Radixin.	Rabbit IgG	#P15311, #P35241, #P26038	7430, 5962, 4478

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.

Specificity/Sensitivity

Phospho-Ezrin (Thr567)/Radixin (Thr564)/Moesin (Thr558) (41A3) Rabbit mAb detects endogenous levels of ezrin, radixin and moesin only when phosphorylated at Thr567, 564 or 558, respectively. This antibody does not cross-react with related phospho-proteins such as merlin or band 4.1.

Species predicted to react based on 100% sequence homology

Xenopus, Dog, C. elegans

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr567 of human ezrin.

Background

The ezrin, radixin, and moesin (ERM) proteins function as linkers between the plasma membrane and the actin cytoskeleton and are involved in cell adhesion, membrane ruffling, and microvilli formation (1). ERM proteins undergo intra or intermolecular interaction between their amino- and carboxy-terminal domains, existing as inactive cytosolic monomers or dimers (2). Phosphorylation at a carboxy-terminal threonine residue (Thr567 of ezrin, Thr564 of radixin, Thr558 of moesin) disrupts the amino- and carboxy-terminal association and may play a key role in regulating ERM protein conformation and function (3,4). Phosphorylation at Thr567 of ezrin is required for cytoskeletal rearrangements and oncogene-induced transformation (5). Ezrin is also phosphorylated at tyrosine residues upon growth factor stimulation. Phosphorylation of Tyr353 of ezrin transmits a survival signal during epithelial differentiation (6).

Background References

1. Tsukita, S. and Yonemura, S. (1999) *J Biol Chem* 274, 34507-10.
2. Mangeat, P. et al. (1999) *Trends Cell Biol* 9, 187-92.
3. Matsui, T. et al. (1998) *J Cell Biol* 140, 647-57.
4. Gautreau, A. et al. (2000) *J Cell Biol* 150, 193-203.
5. Tran Quang, C. et al. (2000) *EMBO J* 19, 4565-76.
6. Gautreau, A. et al. (1999) *Proc Natl Acad Sci U S A* 96, 7300-5.

Species Reactivity

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

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