Revision 1

Store at -20C

#3141

Phospho-Ezrin (Thr567)/Radixin (Thr564)/Moesin (Thr558) Antibody

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	75 Moesin. 80 Ezrin, Radixin.	Rabbit	#P15311, #P35241, #P26038	7430, 5962, 4478

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-Ezrin (Thr567)/Radixin (Thr564)/Moesin (Thr558) Antibody detects endogenous levels of ezrin, radixin and moesin only when phosphorylated at threonine 567, 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

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr567 of human ezrin. Antibodies are purified by protein A and peptide affinity chromatography.

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).

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

Trademarks and Patents

Limited Uses

terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.