#3149 Store at –20°C

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

☑ 100 µl
(10 western blots)

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rev. 07/26/10

Entrez-Gene ID #7430, 5962, 4478
Swiss-Prot Acc. #P15311, P35241, P26038

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IHC-P, IF-IC Endogenous	H, M, R, Mk, B, Dm, (X, Dg)	75 kDa Moesin 80 kDa Ezrin, Radixin.	Rabbit IgG**

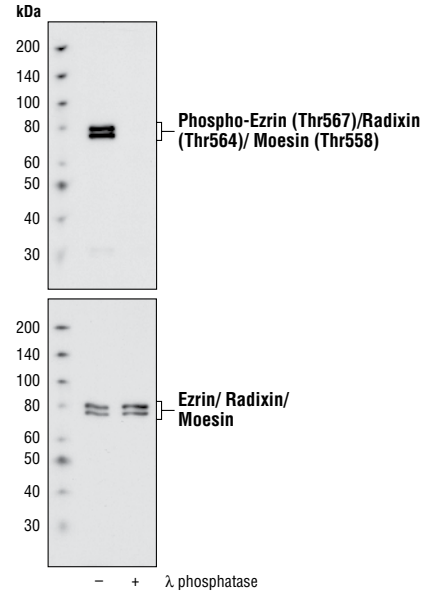
Background: The ezrin, radixin and moesin (ERM) proteins function as linkers between the plasma membrane and the actin cytoskeleton and are involved in cell adhesion, membrane ruffling and microvilli formation (1). ERM proteins undergo intra or intermolecular interaction between their amino- and carboxy-terminal 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), which disrupts their amino- and carboxy-terminal association, may play a key role in modulating the conformation and function of ERM proteins (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).

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.

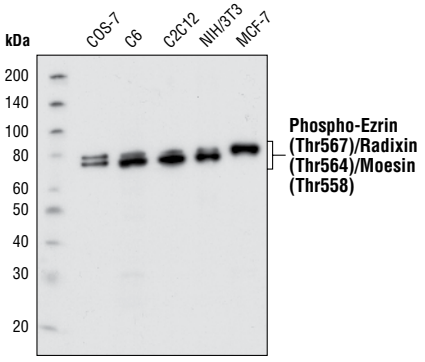
Source/Purification: Monoclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide (KLH-coupled) corresponding to residues surrounding Thr567 of human ezrin.

Background References:

(1) Tsukita, S. and Yonemura, S. (1999) *J. Biol. Chem.* 274, 34507–34510.
(2) Mangeat, P. et al. (1999) *Trends Cell Biol.* 9, 187–192.
(3) Matsui, T. et al. (1998) *J. Cell Biol.* 140, 647–657.
(4) Gautreau, A. et al. (2000) *J. Cell Biol.* 150, 193–203.
(5) Tran Quang, C. et al. (2000) *EMBO J.* 19, 4565–4576.
(6) Gautreau, A. et al. (1999) *Proc. Natl. Acad. Sci. USA* 96, 7300–7305.



Western blot analysis of untreated or λ phosphatase treated A431 cells using Phospho-Ezrin (Thr567)/Radixin (Thr564)/ Moesin (Thr558) (41A3) Rabbit mAb #3149 (upper) and Ezrin/Radixin/Moesin Antibody #3142 (lower).



Western blot analysis of various cell extracts, using Phospho-Ezrin (Thr567)/Radixin (Thr564)/Moesin (Thr558) (41A3) Rabbit mAb.

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.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunohistochemistry (Paraffin)	1:100
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Immunofluorescence (IF-IC)	1:200

For application specific protocols please see the web page for this product at www.cellsignal.com.

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

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

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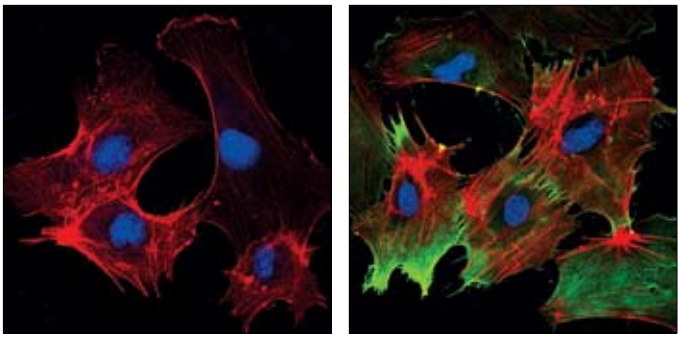
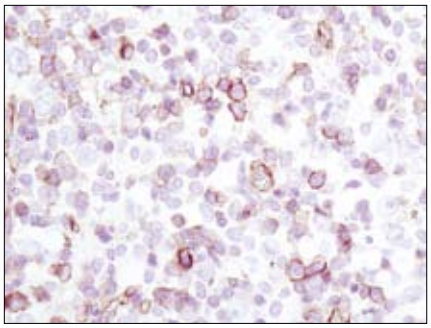
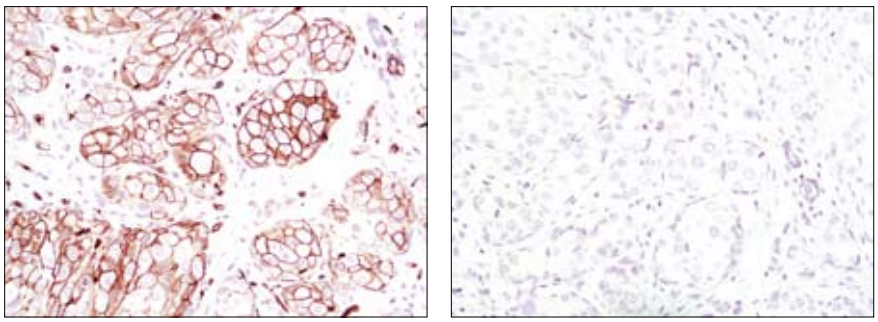
Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **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.



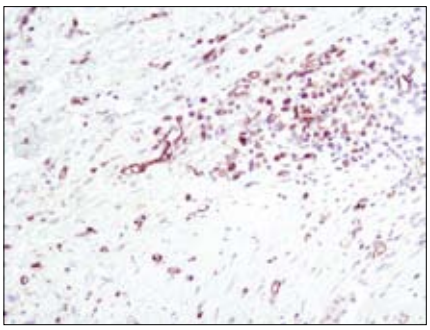
Confocal immunofluorescent analysis of HUVE cells, untreated (left) or TNF-α-treated (#8902, right), using Phospho-Ezrin (Thr567)/Radixin (Thr564)/Moesin (Thr558) (41A3) Rabbit mAb (green). Actin filaments have been labeled with DY-554 phalloidin (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).



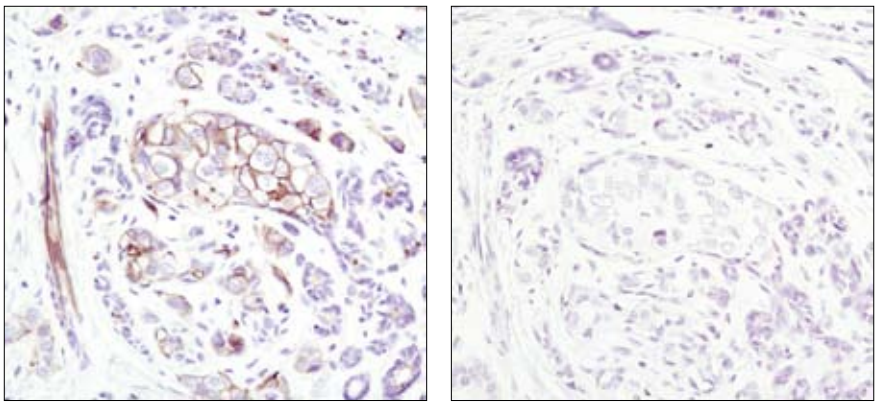
Immunohistochemical analysis of paraffin-embedded human Non-Hodgkin's lymphoma, using Phospho-Ezrin (Thr567)/ Radixin (Thr564)/ Moesin (Thr558) (41A3) Rabbit mAb



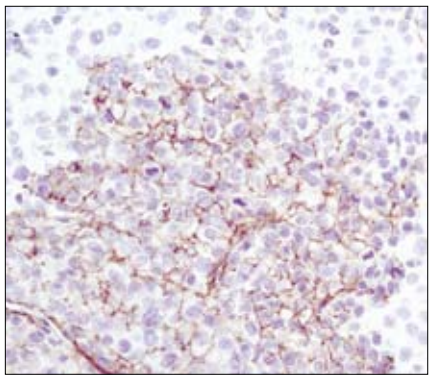
Immunohistochemical analysis of paraffin-embedded human breast carcinoma using Phospho-Ezrin (Thr567)/Radixin (Thr564)/ Moesin (Thr558) (41A3) Rabbit mAb #3149 in the presence of control peptide (left) or Phospho-Ezrin (Thr567)/Radixin (Thr564)/ Moesin (Thr558) (41A3) Blocking Peptide (right).



Immunohistochemical analysis of paraffin-embedded human stomach carcinoma, using Phospho-Ezrin (Thr567)/Radixin (Thr564)/ Moesin (Thr558) (41A3) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma, using Phospho-Ezrin (Thr567)/Radixin (Thr564)/ Moesin (Thr558) (41A3) Rabbit mAb in the presence of control peptide (left) or antigen specific peptide (right).



Immunohistochemical analysis of paraffin-embedded human hepatocellular carcinoma, using Phospho-Ezrin (Thr567)/ Radixin (Thr564)/ Moesin (Thr558) (41A3) Rabbit mAb.