

# p-Ezrin (Tyr 354): sc-12942

## BACKGROUND

The microvillar core protein Ezrin is a tyrosine-phosphorylated protein found in epidermal growth factor-stimulated A-431 carcinoma cells. Ezrin is phosphorylated transiently to a high level on Tyrosine residues 146 and 354. One of the sites, Tyrosine 146, lies in the amino-terminal region of homology that is common to the protein 4.1-Talin-Ezrin protein family. This tyrosine residue and its vicinal amino acids are conserved throughout the family which includes Radixin, Moesin and the two phosphotyrosine phosphatases, PTP H1 and PTP MEG. Another phosphorylation site is Tyrosine 354, which is localized within the  $\alpha$ -helical domain of Ezrin. Cytoplasmic signaling may result in activation of Ezrin in tyrosine phosphorylation and this suggests that Ezrin has qualities that might play a role in modulation of cell shape and adhesion.

## REFERENCES

- Hunter, T. and Cooper, J.A. 1981. Epidermal growth factor induces rapid tyrosine phosphorylation of proteins in A-431 human tumor cells. *Cell* 24: 741-752.
- Lankes, W.T. and Furthmayr, H. 1991. Moesin: a member of the protein 4.1-Talin-Ezrin family of proteins. *Proc. Natl. Acad. Sci. USA* 88: 8297-8301.

## CHROMOSOMAL LOCATION

Genetic locus: VIL2 (human) mapping to 6q25.3; Ezr (mouse) mapping to 17 A1.

## SOURCE

p-Ezrin (Tyr 354) is available as either goat (sc-12942) or rabbit (sc-12942-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Tyr 354 phosphorylated Ezrin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-12942 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

p-Ezrin (Tyr 354) is recommended for detection of Tyr 354 phosphorylated Ezrin of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Ezrin siRNA (h): sc-35349, Ezrin siRNA (m): sc-35350, Ezrin shRNA Plasmid (h): sc-35349-SH, Ezrin shRNA Plasmid (m): sc-35350-SH, Ezrin shRNA (h) Lentiviral Particles: sc-35349-V and Ezrin shRNA (m) Lentiviral Particles: sc-35350-V.

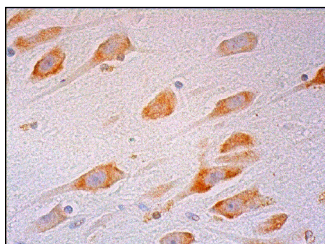
Molecular Weight of p-Ezrin: 87 kDa.

Positive Controls: Ramos cell lysate: sc-2216 or A-431 + EGF whole cell lysate: sc-2202.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: for goat primary antibody (sc-12942): use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), for rabbit primary antibody (sc-12942-R): use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunofluorescence: for goat primary antibody (sc-12942): use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941, for rabbit primary antibody (sc-12942-R): use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



p-Ezrin (Tyr 354): sc-12942. Immunoperoxidase staining of formalin fixed, paraffin-embedded human hippocampus tissue showing cytoplasmic staining of neuronal cells and glial cells.

## SELECT PRODUCT CITATIONS

- Watanabe, K., et al. 2009. Participation of ezrin in bacterial uptake by trophoblast giant cells. *Reprod. Biol. Endocrinol.* 7: 95.
- Di Cristofano, C., et al. 2010. Phosphorylated ezrin is located in the nucleus of the osteosarcoma cell. *Mod. Pathol.* 23: 1012-1020.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.