

p-Ezrin (G-7): sc-166858

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 α -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.
- Krieg, J. and Hunter, T. 1992. Identification of the two major epidermal growth factor-induced tyrosine phosphorylation sites in the microvillar core protein Ezrin. *J. Biol. Chem.* 267: 19258-19265.
- Egerton, M., et al. 1992. Identification of Ezrin as an 81 kDa tyrosine-phosphorylated protein in T cells. *J. Immunol.* 149: 1847-1852.

CHROMOSOMAL LOCATION

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

SOURCE

p-Ezrin (G-7) is a mouse monoclonal antibody specific for an epitope containing Tyr 146 phosphorylated Ezrin of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

p-Ezrin (G-7) is available conjugated to agarose (sc-166858 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166858 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166858 PE), fluorescein (sc-166858 FITC), Alexa Fluor[®] 488 (sc-166858 AF488), Alexa Fluor[®] 546 (sc-166858 AF546), Alexa Fluor[®] 594 (sc-166858 AF594) or Alexa Fluor[®] 647 (sc-166858 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-166858 AF680) or Alexa Fluor[®] 790 (sc-166858 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166858 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

p-Ezrin (G-7) is recommended for detection of Tyr 146 phosphorylated Ezrin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (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.

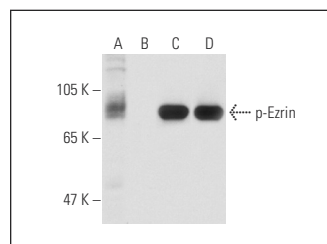
Molecular Weight of p-Ezrin: 87 kDa.

Positive Controls: Ramos cell lysate: sc-2216, BJAB whole cell lysate: sc-2207 or Raji whole cell lysate: sc-364236.

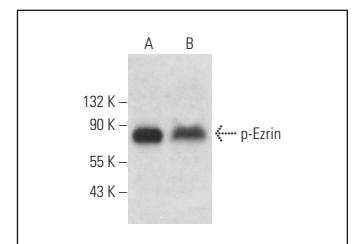
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Lambda Phosphatase: sc-200312A and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



Western blot analysis of Ezrin phosphorylation in untreated (A, C), and lambda protein phosphatase treated (B, D) Ramos whole cell lysates. Antibodies tested include p-Ezrin (G-7): sc-166858 (A, B) and Ezrin (3C12): sc-58758 (C, D).



p-Ezrin (G-7): sc-166858. Western blot analysis of Ezrin phosphorylation in BJAB (A) and Raji (B) whole cell lysates.

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.