# SANTA CRUZ BIOTECHNOLOGY, INC.

# 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  $\alpha$ -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

- 1. 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.

#### **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  $\mu g\, lgG_1$  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 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166858 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166858 PE), fluorescein (sc-166858 FITC), Alexa Fluor<sup>®</sup> 488 (sc-166858 AF488), Alexa Fluor<sup>®</sup> 546 (sc-166858 AF546), Alexa Fluor<sup>®</sup> 594 (sc-166858 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-166858 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-166858 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-166858 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

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# **RESEARCH USE**

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

## 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 µg per 100-500 µg 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-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> 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 ( $\pmb{A}$ ) and Raji  $(\pmb{B})$  whole cell lysates.

# **SELECT PRODUCT CITATIONS**

 García-Solís, B., et al. 2023. Inherited human Ezrin deficiency impairs adaptive immunity. J. Allergy Clin. Immunol. 152: 997-1009.e11.

#### **STORAGE**

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