

# Ezrin (3C12): sc-58758

## BACKGROUND

Ezrin, Moesin and Radixin belong to a family of highly homologous Actin-associated proteins that are localized just beneath the plasma membrane. The proteins are believed to be involved in the mediation of interactions between cytoskeletal and membrane proteins. Ezrin serves as a major cytoplasmic substrate of various protein-tyrosine kinases, including the epidermal growth factor receptor. Ezrin has also been identified as a cAMP-dependent protein kinase (A-kinase) anchoring protein and designated AKAP78. Moesin and Radixin share over 70% homology with Ezrin and are coexpressed within various cell types. Despite the high degree of homology, the three proteins exhibit a distinct receptor-specific pattern of phosphorylation.

## CHROMOSOMAL LOCATION

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

## SOURCE

Ezrin (3C12) is a mouse monoclonal antibody raised against amino acids 362-585 of Ezrin of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Ezrin (3C12) is available conjugated to agarose (sc-58758 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-58758 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-58758 PE), fluorescein (sc-58758 FITC), Alexa Fluor® 488 (sc-58758 AF488), Alexa Fluor® 546 (sc-58758 AF546), Alexa Fluor® 594 (sc-58758 AF594) or Alexa Fluor® 647 (sc-58758 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-58758 AF680) or Alexa Fluor® 790 (sc-58758 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Ezrin (3C12) is recommended for detection of Ezrin of mouse, rat, human and bovine origin by Western Blotting (starting dilution to be determined by researcher, dilution range ), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:50-1:500).

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 Ezrin: 87 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

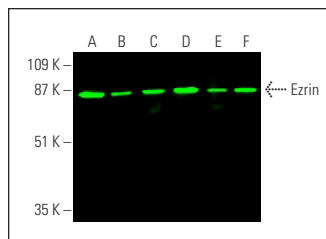
## STORAGE

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

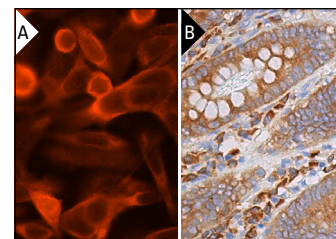
## RESEARCH USE

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

## DATA



Ezrin (3C12): sc-58758. Near-infrared western blot analysis of Ezrin expression in A-431 (A), HeLa (B), Jurkat (C), Ramos (D), C2C12 (E) and KNRK (F) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



Ezrin (3C12) Alexa Fluor® 546: sc-58758 AF546. Direct immunofluorescence staining of formalin-fixed SW480 cells showing membrane and cytoplasmic localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (A). Ezrin (3C12): sc-58758. Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells and lymphoid cells (B).

## SELECT PRODUCT CITATIONS

- Xie, J.J., et al. 2009. Roles of Ezrin in the growth and invasiveness of esophageal squamous carcinoma cells. *Int. J. Cancer* 124: 2549-2558.
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- Yanda, M.K., et al. 2018. Role of calcium in adult onset polycystic kidney disease. *Cell. Signal.* 53: 140-150.
- Demacopulo, B. and Kreimann, E.L. 2019. Bisphenol S increases Ezrin expression and the detrimental effects induced by dehydroepiandrosterone in rat endometrium. *Mol. Cell. Endocrinol.* 483: 64-73.
- Miao, Z.F., et al. 2020. A metformin-responsive metabolic pathway controls distinct steps in gastric progenitor fate decisions and maturation. *Cell Stem Cell* 26: 910-925.e6.
- Inoue, H., et al. 2021. The interaction of ATP11C-b with ezrin contributes to its polarized localization. *J Cell Sci.* 134: jcs258523.
- Xu, C., et al. 2022. Expression patterns of Ezrin and AJAP1 and clinical significance in breast cancer. *Front. Oncol.* 12: 831507.
- Holmes, J., et al. 2023. Reversion of breast epithelial polarity alterations caused by obesity. *NPJ Breast Cancer* 9: 35.
- Qiao, J., et al. 2024. Histone H3K18 and Ezrin lactylation promote renal dysfunction in sepsis-associated acute kidney injury. *Adv. Sci.* 11: e2307216.
- Tang, C., et al. 2025. GPR137-RAB8A activation promotes ovarian cancer development via the Hedgehog pathway. *J. Exp. Clin. Cancer Res.* 44: 22.

## PROTOCOLS

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

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