

# Cortactin (H-5): sc-55579

## BACKGROUND

Cortactin (also designated Ems-1) is a filamentous Actin (F-Actin) binding protein that has been shown to be a substrate for Src p60. Cortactin contains tandem 37 amino acid repeats at the amino-terminus and an SH3 domain at the carboxy-terminus. The tandem repeats appear to be necessary for F-Actin binding. Tyrosine phosphorylation of Cortactin by Src p60 results in diminished F-Actin binding to Cortactin and reduced F-Actin cross-linking activity. Cortactin has also been shown to be phosphorylated in response to FGF-1. Cortactin exhibits abundant expression in megakaryocytes and platelets, and it may play a role in the maturation of megakaryocytes.

## CHROMOSOMAL LOCATION

Genetic locus: CTTN (human) mapping to 11q13.3; Ctnn (mouse) mapping to 7 F5.

## SOURCE

Cortactin (H-5) is a mouse monoclonal antibody raised against amino acids 309-499 of Cortactin 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.

Cortactin (H-5) is available conjugated to agarose (sc-55579 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-55579 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-55579 PE), fluorescein (sc-55579 FITC), Alexa Fluor® 488 (sc-55579 AF488), Alexa Fluor® 546 (sc-55579 AF546), Alexa Fluor® 594 (sc-55579 AF594) or Alexa Fluor® 647 (sc-55579 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-55579 AF680) or Alexa Fluor® 790 (sc-55579 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

Cortactin (H-5) is recommended for detection of Cortactin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:200-1:2000), 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), 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 Cortactin siRNA (h): sc-35093, Cortactin siRNA (m): sc-35094, Cortactin shRNA Plasmid (h): sc-35093-SH, Cortactin shRNA Plasmid (m): sc-35094-SH, Cortactin shRNA (h) Lentiviral Particles: sc-35093-V and Cortactin shRNA (m) Lentiviral Particles: sc-35094-V.

Molecular Weight of Cortactin: 80 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, A-431 whole cell lysate: sc-2201 or HeLa whole cell lysate: sc-2200.

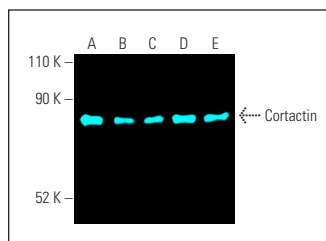
## STORAGE

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

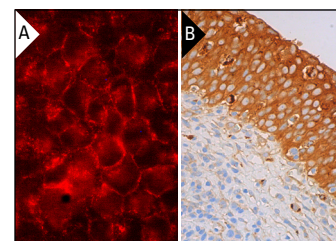
## RESEARCH USE

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

## DATA



Cortactin (H-5) Alexa Fluor® 647: sc-55579 AF647. Direct fluorescent western blot analysis of Cortactin expression in A-431 (A), MCF7 (B), HeLa (C), MDA-MB-231 (D) and BT-20 (E) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



Cortactin (H-5): sc-55579. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoskeletal localization (A). Cortactin (H-5) HRP: sc-55579 HRP. Direct immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic staining of urothelial cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214 (B).

## SELECT PRODUCT CITATIONS

- Amanchy, R., et al. 2009. Identification of c-Src tyrosine kinase substrates in platelet-derived growth factor receptor signaling. *Mol. Oncol.* 3: 439-450.
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- Pennanen, P., et al. 2017. Diversity of Actin architecture in human osteoclasts: network of curved and branched Actin supporting cell shape and intercellular micrometer-level tubes. *Mol. Cell. Biochem.* 432: 131-139.
- Dandoulaki, M., et al. 2018. Src activation by Chk1 promotes Actin patch formation and prevents chromatin bridge breakage in cytokinesis. *J. Cell Biol.* 217: 3071-3089.
- Arif, A., et al. 2019. Multisite phosphorylation of S6K1 directs a kinase phospho-code that determines substrate selection. *Mol. Cell* 73: 446-457.
- Kim, Y.G., et al. 2020. Quantitative proteomics reveals distinct molecular signatures of different cerebellum-dependent learning paradigms. *J. Proteome Res.* 19: 2011-2025.
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- Wang, W., et al. 2022. The role of TKS5 in chromosome stability and bladder cancer progression. *Int. J. Mol. Sci.* 23: 14283.

## PROTOCOLS

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

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