

Cortactin (30): sc-136134

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.

REFERENCES

1. Wu, H., et al. 1993. Cortactin, an 80/85 kilodalton pp60Src substrate, is a filamentous Actin-binding protein enriched in the cell cortex. *J. Cell Biol.* 120: 1417-1426.
2. Zhan, X., et al. 1993. Murine Cortactin is phosphorylated in response to fibroblast growth factor-1 on tyrosine residues late in the G₁ phase of the BALB/c 3T3 cell cycle. *J. Biol. Chem.* 268: 24427-24431.
3. Zhan, X., et al. 1994. Association of fibroblast growth factor receptor-1 with c-Src correlates with association between c-Src and Cortactin. *J. Biol. Chem.* 269: 20221-20224.
4. Okamura, H., et al. 1995. p80/85 Cortactin associates with the Src SH2 domain and colocalizes with v-Src in transformed cells. *J. Biol. Chem.* 270: 26613-26618.
5. Huang, C., et al. 1997. Down-regulation of the filamentous Actin cross-linking activity of Cortactin by Src-mediated tyrosine phosphorylation. *J. Biol. Chem.* 272: 13911-13915.
6. Zhan, X., et al. 1997. Upregulation of Cortactin expression during the maturation of megakaryocytes. *Blood* 89: 457-464.

CHROMOSOMAL LOCATION

Genetic locus: CTTN (human) mapping to 11q13.3.

SOURCE

Cortactin (30) is a mouse monoclonal antibody raised against Cortactin of chicken origin.

PRODUCT

Each vial contains 50 µg IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

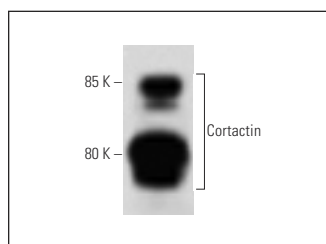
Cortactin (30) is recommended for detection of Cortactin of human, avian and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Cortactin siRNA (h): sc-35093, Cortactin shRNA Plasmid (h): sc-35093-SH and Cortactin shRNA (h) Lentiviral Particles: sc-35093-V.

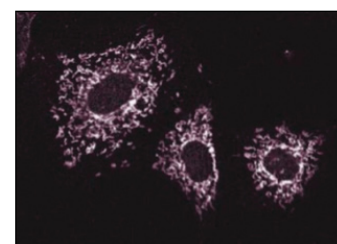
Molecular Weight of Cortactin: 80 kDa.

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

DATA



Cortactin (30): sc-136134. Western blot analysis of Cortactin expression in A-431 whole cell lysate.



Cortactin (30): sc-136134. Immunofluorescence staining of NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Liu, Y.Z., et al. 2014. A panel of protein markers for the early detection of lung cancer with bronchial brushing specimens. *Cancer Cytopathol.* 122: 833-841.

RESEARCH USE

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



See **Cortactin (H-5): sc-55579** for Cortactin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.