

# CTTNBP2 (G-15): sc-164129

## BACKGROUND

Cortactin (also designated Ems-1) is a filamentous Actin (F-Actin) binding protein that functions as a substrate for c-Src and contains tandem 37 amino acid repeats at its N-terminus and an SH3 domain at its C-terminus. The tandem repeats appear to be necessary for F-Actin binding, and tyrosine phosphorylation of Cortactin by c-Src results in diminished F-Actin binding and reduced F-Actin cross-linking activity. Cortactin exhibits abundant expression in megakaryocytes and platelets, where it may play a role in cellular maturation. CTTNBP2 (cortactin binding protein 2), also known as Orf4, C7orf8 or CORTBP2, is a 1,663 amino acid protein that contains six ankyrin repeats. Expressed at high levels in brain and present at lower levels in heart, kidney, lung, liver, pancreas and skeletal muscle, CTTNBP2 interacts with the SH3 domain of Cortactin and may regulate Cortactin function.

## REFERENCES

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2. Zhan, X., et al. 1993. Murine cortactin is phosphorylated in response to fibroblast growth factor-1 on tyrosine residues late in the G<sub>1</sub> 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.
7. Cheung, J., et al. 2001. Identification of the human cortactin-binding protein-2 gene from the autism candidate region at 7q31. *Genomics* 78: 7-11.
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## CHROMOSOMAL LOCATION

Genetic locus: CTTNBP2 (human) mapping to 7q31.2; Ctnb2p2 (mouse) mapping to 6 A2.

## SOURCE

CTTNBP2 (G-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CTTNBP2 of human origin.

## STORAGE

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

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-164129 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CTTNBP2 (G-15) is recommended for detection of CTTNBP2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with CTTNBP2L.

CTTNBP2 (G-15) is also recommended for detection of CTTNBP2 in additional species, including equine and porcine.

Suitable for use as control antibody for CTTNBP2 siRNA (h): sc-89339, CTTNBP2 siRNA (m): sc-142630, CTTNBP2 shRNA Plasmid (h): sc-89339-SH, CTTNBP2 shRNA Plasmid (m): sc-142630-SH, CTTNBP2 shRNA (h) Lentiviral Particles: sc-89339-V and CTTNBP2 shRNA (m) Lentiviral Particles: sc-142630-V.

Molecular Weight of CTTNBP2: 181 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

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

## PROTOCOLS

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