

# $\alpha$ E-catenin (15D9): sc-65479

## BACKGROUND

$\alpha$  E-catenin (also designated  $\alpha$ -catenin; cadherin-associated protein,  $\alpha$ 1, 102 kDa; and CAP102) plays a role in E-cadherin mediated cell-cell adhesion by linking E-cadherin to the cytoskeleton via  $\beta$ - or  $\gamma$ -catenin and Actin.  $\alpha$  E-catenin connects cell-density-dependent adherens junctions with the developmental hedgehog pathway and may provide a negative feedback loop controlling the size of developing cerebral cortex. It is abundant in neuro-epithelial precursor cells in the developing cortical ventricular zone of the brain, with reduced expression in the cortical plate.  $\alpha$  E-catenin-vinculin interactions play a role in the assembly of the apical junction complex in epithelia. Catenins generally are thought to work as connectors that anchor E-cadherin to the cytoskeletal Actin bundle through the cadherin cytoplasmic domain. Dysfunction of this adhesion complex causes dissociation of cancer cells from primary tumor nodules, and is thus considered a contributing factor to metastasis.

## REFERENCES

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- Linkels, M., et al. 1997. Molecular cloning of an alternative human  $\alpha$  E-catenin cDNA. *Biochem. Biophys. Res. Commun.* 237: 177-181.
- Watabe-Uchida, M., et al. 1998.  $\alpha$ -Catenin-vinculin interaction functions to organize the apical junctional complex in epithelial cells. *J. Cell Biol.* 142: 847-857.
- Vermeulen, S.J., et al. 1999. The  $\alpha$  E-catenin gene (CTNNA1) acts as an invasion-suppressor gene in human colon cancer cells. *Oncogene* 18: 905-915.
- Vanpoucke, G., et al. 2002. The human  $\alpha$  E-catenin gene CTNNA1: mutational analysis and rare occurrence of a truncated splice variant. *Biochim. Biophys. Acta* 1574: 262-268.
- Andre, F., et al. 2004.  $\alpha$ -catenin is required for IGF-I-induced cellular migration but not invasion in human colonic cancer cells. *Oncogene* 23: 1177-1186.
- Stocker, A.M., et al. 2006. Differential expression of  $\alpha$  E-catenin and  $\alpha$  N-catenin in the developing cerebral cortex. *Brain Res.* 1073-1074: 151-158.

## CHROMOSOMAL LOCATION

Genetic locus: CTNNA1 (human) mapping to 5q31; Ctnna1 (mouse) mapping to 18 B1.

## SOURCE

$\alpha$  E-catenin (15D9) is a mouse monoclonal antibody raised against full length  $\alpha$  E-catenin of human origin.

## PRODUCT

Each vial contains 50  $\mu$ g IgG<sub>1</sub> in 500  $\mu$ l of PBS with < 0.1% sodium azide, 1% gelatin, PEG and sucrose.

## APPLICATIONS

$\alpha$  E-catenin (15D9) is recommended for detection of  $\alpha$  E-catenin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2  $\mu$ g per 100–500  $\mu$ g 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  $\alpha$  E-catenin siRNA (h): sc-29190,  $\alpha$  E-catenin siRNA (m): sc-29612,  $\alpha$  E-catenin shRNA Plasmid (h): sc-29190-SH,  $\alpha$  E-catenin shRNA Plasmid (m): sc-29612-SH,  $\alpha$  E-catenin shRNA (h) Lentiviral Particles: sc-29190-V and  $\alpha$  E-catenin shRNA (m) Lentiviral Particles: sc-29612-V.

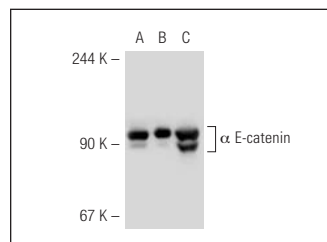
Molecular Weight of  $\alpha$  E-catenin: 102 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HeLa + serum-starved cell lysate: sc-24693 or  $\alpha$  E-catenin (m): 293T Lysate: sc-118094.

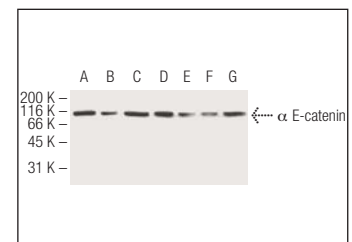
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



$\alpha$  E-catenin (15D9): sc-65479. Western blot analysis of  $\alpha$  E-catenin expression in non-transfected 293T: sc-117752 (A), mouse  $\alpha$  E-catenin transfected 293T: sc-118094 (B) and HeLa (C) whole cell lysates.



$\alpha$  E-catenin (15D9): sc-65479. Western blot analysis of  $\alpha$  E-catenin expression in serum starved A-431 (A), A549 (B), SKOV3 (C), OVCA8-5 (D), HaCaT-7 (E), HeLa (F) and Hep G2 (G) whole cell lysates.

## 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.