

# β-catenin (E-17): sc-31001

## BACKGROUND

The catenins,  $\alpha$ ,  $\beta$  and  $\gamma$ , are proteins which bind to the highly conserved, intracellular cytoplasmic tail of E-cadherin. Together, the catenin/cadherin complexes play an important role mediating cellular adhesion.  $\alpha$ -catenin was initially described as an E-cadherin associated protein, and since has been shown to associate with other members of the cadherin family, such as N-cadherin and P-cadherin.  $\beta$ -catenin associates with the cytoplasmic portion of E-cadherin, which is necessary for the function of E-cadherin as an adhesion molecule.  $\beta$ -catenin has also been found in complexes with the tumor suppressor protein APC.  $\gamma$ -catenin, also known as plakoglobin, binds with  $\alpha$ -catenin and N-cadherin. It has been shown that the transmembrane phosphatase PTP $\mu$  associates with catenin/cadherin complexes and may regulate complex signaling.

## REFERENCES

- Breen, E., et al. 1995. Role of the E-cadherin/ $\alpha$ -catenin complex in modulating cell-cell and cell-matrix adhesive properties of invasive colon carcinoma cells. *Ann. Surg. Oncol.* 2: 378-385.
- Pierceall, W.E., et al. 1995. Frequent alterations in E-cadherin and  $\alpha$ - and  $\beta$ -catenin expression in human breast cancer cell lines. *Oncogene* 11: 1319-1326.
- Ozawa, M., et al. 1995. Cloning of an alternative form of plakoglobin ( $\gamma$ -catenin) lacking the fourth armadillo repeat. *J. Biochem.* 118: 836-840.
- Sacco, P.A., et al. 1995. Identification of plakoglobin domains required for association with N-cadherin and  $\alpha$ -catenin. *J. Biol. Chem.* 270: 20201-20206.
- Knudsen, K.A., et al. 1995. Interaction of  $\alpha$ -actinin with the cadherin/catenin cell-cell adhesion complex via  $\alpha$ -catenin. *J. Cell Biol.* 130: 67-77.
- Brady-Kalnay, S.M., et al. 1995. Receptor protein tyrosine phosphatase PTP $\mu$  associates with cadherins and catenins *in vivo*. *J. Cell Biol.* 130: 977-986.

## CHROMOSOMAL LOCATION

Genetic locus: CTNNB1 (human) mapping to 3p21; Ctnnb1 (mouse) mapping to 9 F4.

## SOURCE

$\beta$ -catenin (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of  $\beta$ -catenin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-31001 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

$\beta$ -catenin (E-17) is recommended for detection of  $\beta$ -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  $\beta$ -catenin siRNA (h): sc-29209,  $\beta$ -catenin siRNA (h2): sc-44252,  $\beta$ -catenin siRNA (m): sc-29210 and  $\beta$ -catenin siRNA (m2): sc-44253.

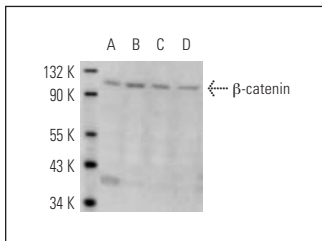
Molecular Weight of  $\beta$ -catenin: 92 kDa.

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

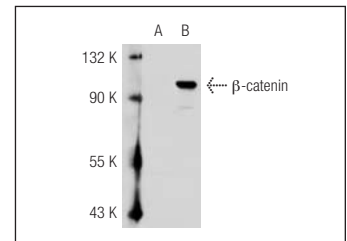
## RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



$\beta$ -catenin (E-17): sc-31001. Western blot analysis of  $\beta$ -catenin expression in A-431 (A), HeLa (B), MCF7 (C) and SK-BR-3 (D) whole cell lysates.



$\beta$ -catenin (E-17): sc-31001. Western blot analysis of  $\beta$ -catenin expression in non-transfected: sc-117752 (A) and human  $\beta$ -catenin transfected: sc-116622 (B) 293T 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.

## PROTOCOLS

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