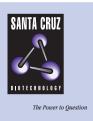
## SANTA CRUZ BIOTECHNOLOGY, INC.

# β-catenin (N-1C10): sc-69764



## 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

- 1. Knudsen, K.A., Soler, A.P., Johnson, K.R. and Wheelock, M.J. 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., Rimm, D.L. and Tonks, N.K. 1995. Receptor protein tyrosine phosphatase PTPμ associates with cadherins and catenins *in vivo*. J. Cell Biol. 130: 977-986.
- Breen, E., Steele, G., Jr. and Mercurio, A.M. 1995. Role of the E-cadherin/ α-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., Woodard, A.S., Morrow, J.S., Rimm, D. and Fearon, E.R. 1995. Frequent alterations in E-cadherin and α- and β-catenin expression in human breast cancer cell lines. Oncogene 11: 1319-1326.
- Ozawa, M., Nuruki, K., Toyoyama, H. and Ohi, Y. 1995. Cloning of an alternative form of plakoglobin (γ-catenin) lacking the fourth armadillo repeat. J. Biochem. 118: 836-840.
- Sacco, P.A., McGranahan, T.M., Wheelock, M.J. and Johnson, K.R. 1995. Identification of plakoglobin domains required for association with N-cadherin and α-catenin. J. Biol. Chem. 270: 20201-20206.
- Takayama, T., Shiozaki, H., Shibamoto, S., Oka, H., Kimura, Y., Tamura, S., Inoue, M., Monden, T., Ito, F. and Monden, M. 1996. β-catenin expression in human cancers. Am. J. Pathol. 148: 39-46.

## CHROMOSOMAL LOCATION

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

## SOURCE

 $\beta$ -catenin (N-1C10) is a mouse monoclonal antibody raised against the Histagged recombinant N-terminal fragment of  $\beta$ -catenin of human origin.

## PRODUCT

Each vial contains 100  $\mu g~lg G_{2b}$  in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

#### APPLICATIONS

 $\beta$ -catenin (N-1C10) 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 µg per 100-500 µg of total protein (1 ml of cell lysate)] 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 (m): sc-29210,  $\beta$ -catenin shRNA Plasmid (h): sc-29209-SH,  $\beta$ -catenin shRNA Plasmid (m): sc-29210-SH,  $\beta$ -catenin shRNA (h) Lentiviral Particles: sc-29209-V and  $\beta$ -catenin shRNA (m) Lentiviral Particles: sc-29210-V.

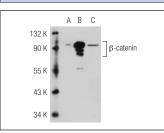
Molecular Weight of β-catenin: 92 kDa.

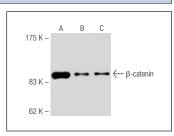
Positive Controls: HeLa whole cell lysate: sc-2200, A-431 whole cell lysate: sc-2201 or  $\beta$ -catenin (h): 293T Lysate: sc-116622.

### **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).

#### DATA





 $\begin{array}{l} \beta\text{-catenin} \ (\text{N-1C10}): \ sc-69764. \ Western \ blot \ analysis \ of \ \beta\text{-catenin} \ expression \ in \ non-transfected \ 293T \ sc-117752 \ (\textbf{A}), \ human \ \beta\text{-catenin} \ transfected \ 293T \ sc-116622 \ (\textbf{B}) \ and \ MCF7 \ (\textbf{C}) \ whole \ cell \ lysates. \end{array}$ 

 $\beta$ -catenin (N-1C10): sc-69764. Western blot analysis of  $\beta$ -catenin expression in 293T (**A**), SH-SY5Y (**B**) and NIH/3T3 (**C**) 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.

#### **PROTOCOLS**

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