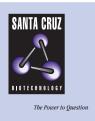
## SANTA CRUZ BIOTECHNOLOGY, INC.

# β-catenin (BDI710): sc-59894



## 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. y-catenin, also known as plakoglobin, binds with  $\alpha$ -catenin and N-cadherin. It has been shown that the transmembrane phosphatase PTP<sub>µ</sub> associates with catenin/cadherin complexes and may regulate complex signaling.

## REFERENCES

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- 2. Breen, E., Steele, G. Jr. and Mercurio, A.M. 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. Onco. 2: 378-385.
- 3. Pierceall, W.E., Woodard, A.S., Morrow, J.S., Rimm, D. and Fearon, E.R. 1995. Frequent alterations in E-cadherin and  $\alpha$ - and  $\beta$ -catenin expression in human breast cancer cell lines. Oncogene 11: 1319-1326.
- 4. 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. Amer. J. Pathol. 148: 39-46.
- 5. Ozawa, M., Nuruki, K., Toyoyama, H. and Ohi, Y. 1995. Cloning of an alternative form of plakoglobin (y-catenin) lacking the fourth armadillo repeat. J. Biochem. 118: 836-840.
- 6. 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  $\alpha$ -catenin. J. Biol. Chem. 270: 20201-20206.
- 7. Brady-Kalnay, S.M., Rimm, D.L. and Tonks, N.K. 1995. Receptor protein tyrosine phosphatase PTPm 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

β-catenin (BDI710) is a mouse monoclonal antibody raised against full length  $\beta$ -catenin of human origin.

## PRODUCT

Each vial contains 50  $\mu$ g lgG<sub>2a</sub> in 500  $\mu$ l of PBS with < 0.1% sodium azide, 1% gelatin, PEG and sucrose.

#### **APPLICATIONS**

 $\beta$ -catenin (BDI710) 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  $[1-2 \mu g \text{ per } 100-500 \mu g \text{ of total}]$ 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 siRNA (h2): sc-44252, and β-catenin siRNA (m2): sc-44253.

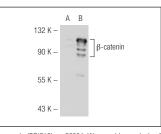
Molecular Weight of β-catenin: 92 kDa.

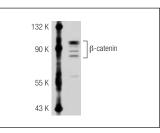
Positive Controls: HeLa whole cell lysate: sc-2200, A-431 whole cell lysate: sc-2201 or MCF7 whole cell lysate: sc-2206.

### **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat antimouse 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





β-catenin (BDI710): sc-59894. Western blot analysis of B-catenin expression in non-transfected: sc-117752 (A) and human β-catenin transfected: sc-116622 (B)

β-catenin (BDI710): sc-59894. Western blot analysis of B-catenin expression in MCF7 whole cell lysate

## 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.

#### **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.