SANTA CRUZ BIOTECHNOLOGY, INC.

β-catenin (9F2): sc-47752

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The catenins, α, β and γ, 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. α-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. β-catenin associates with the cytoplasmic portion of E-cadherin, which is necessary for the function of E-cadherin as an adhesion molecule. β-catenin has also been found in complexes with the tumor suppressor protein APC. γ-catenin, also known as plakoglobin, binds with α-catenin and N-cadherin. It has been shown that the transmembrane phosphatase PTPμ associates with catenin/cadherin complexes and may regulate complex signaling.

REFERENCES

1. Johnson, K.R., et al. 1993. P- and E-cadherin are in separate complexes in cells expressing both cadherins. Exp. Cell. Res. 207: 252-260.
2. Breen, E., et al. 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.
3. Sacco, P.A., et al. 1995. Identification of plakoglobin domains required for association with N-cadherin and α-catenin. J. Biol. Chem. 270: 20201-20206.
4. Knudsen, K.A., et al. 1995. Interaction of α-actinin with the cadherin/catenin cell-cell adhesion complex via α-catenin. J. Cell Biol. 130: 67-77.
5. Pierceall, W.E., et al. 1995. Frequent alterations in E-cadherin and α- and β-catenin expression in human breast cancer cell lines. Oncogene 11: 1319-1326.
6. Takayama, T., et al. 1996. β-catenin expression in human cancers. Am. J. Pathol. 148: 39-46.
7. Hakuno, M., et al. 2000. Dissociation of intra- and extracellular domains of desmosomal cadherins and E-cadherin in Hailey-Hailey disease and Darier's disease. Br. J. Dermatol. 142: 702-711.

CHROMOSOMAL LOCATION

Genetic locus: CTNNB1 (human) mapping to 3p21.

SOURCE

β-catenin (9F2) is a mouse monoclonal antibody raised against recombinant β-catenin of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

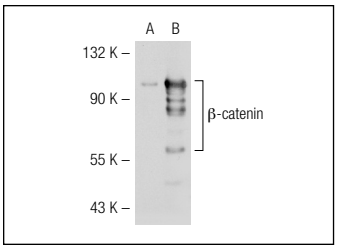
β-catenin (9F2) is recommended for detection of β-catenin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for β-catenin siRNA (h): sc-29209, β-catenin shRNA Plasmid (h): sc-29209-SH and β-catenin shRNA (h) Lentiviral Particles: sc-29209-V.

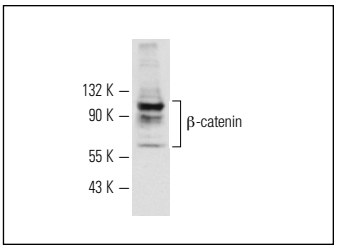
Molecular Weight of β-catenin: 92 kDa.

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

DATA



β-catenin (9F2): sc-47752. Western blot analysis of β-catenin expression in non-transfected: sc-117752 (**A**) and human β-catenin transfected: sc-116622 (**B**) 293T whole cell lysates.



β-catenin (9F2): sc-47752. Western blot analysis of β-catenin expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Yu, J., et al. 2007. Arsenic trioxide (As_2O_3) reduces the invasive and metastatic properties of cervical cancer cells *in vitro* and *in vivo*. Gynecol. Oncol. 106: 400-406.
2. Li, Y., et al. 2009. Adenoviral-mediated gene transfer of Gadd45a results in suppression by inducing apoptosis and cell cycle arrest in pancreatic cancer cell. J. Gene Med. 11: 3-13.
3. Shieh, D.B., et al. 2010. Effects of genistein on β-catenin signaling and subcellular distribution of Actin-binding proteins in human umbilical CD105-positive stromal cells. J. Cell. Physiol. 223: 423-434.
4. Elamin, M.H., et al. 2010. Curcumin inhibits the Sonic Hedgehog signaling pathway and triggers apoptosis in medulloblastoma cells. Mol. Carcinog. 49: 302-314.

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.