SANTA CRUZ BIOTECHNOLOGY, INC.

β-catenin (BDI480): sc-59893

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. Knudsen, K.A., et al. 1995. Inter-action of α-Actinin with the cadherin/catenin cell-cell adhesion complex via α-catenin. J. Cell Biol. 130: 67-77.
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. Onco. 2: 378-385.
3. Pierceall, et al. 1995. Frequent alterations in E-cadherin and α- and β-catenin expression in human breast cancer cell lines. Oncogene 11: 1319-1326.
4. Takayama, T., et al. 1996. β-catenin expression in human cancers. Amer. J. Pathol. 148: 39-46.
5. Ozawa, M., et al. 1995. Cloning of an alternative form of plakoglobin (γ-catenin) lacking the fourth armadillo repeat. J. Biochem. 118: 836-840.
6. 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.
7. Brady-Kalnay, S.M., et al. 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 3p22.1; Ctnnb1 (mouse) mapping to 9 F4.

SOURCE

β-catenin (BDI480) is a mouse monoclonal antibody raised against amino acids 27-37 of β-catenin of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 in 500 µl of PBS with < 0.1% sodium azide, 1% gelatin, PEG and sucrose.

RESEARCH USE

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

APPLICATIONS

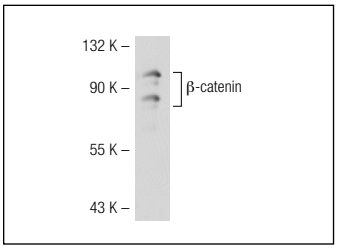
β-catenin (BDI480) is recommended for detection of nuclear dephosphorylated β-catenin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for β-catenin siRNA (h): sc-29209, β-catenin siRNA (m): sc-29210, β-catenin shRNA Plasmid (h): sc-29209-SH, β-catenin shRNA Plasmid (m): sc-29210-SH, β-catenin shRNA (h) Lentiviral Particles: sc-29209-V and β-catenin shRNA (m) Lentiviral Particles: sc-29210-V.

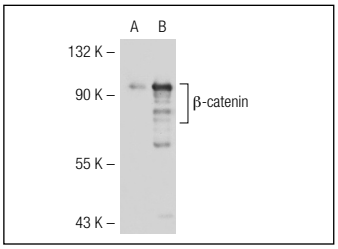
Molecular Weight of β-catenin: 92 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, β-catenin (h): 293T Lysate: sc-116622 or MCF7 whole cell lysate: sc-2206.

DATA



β-catenin (BDI480): sc-59893. Western blot analysis of β-catenin expression in MCF7 whole cell lysate.



β-catenin (BDI080): sc-59891. 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.

SELECT PRODUCT CITATIONS

1. Courtwright, A., et al. 2009. Secreted frizzle-related protein 2 stimulates angiogenesis via a calcineurin/NFAT signaling pathway. Cancer Res. 69: 4621-4628.
2. Lombardi, R., et al. 2009. Genetic fate mapping identifies second heart field progenitor cells as a source of adipocytes in arrhythmogenic right ventricular cardiomyopathy. Circ. Res. 104: 1076-1084.

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 or our catalog for detailed protocols and support products.