SANTA CRUZ BIOTECHNOLOGY, INC.

β-catenin (C-18): sc-1496

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.

CHROMOSOMAL LOCATION

Genetic locus: CTNNB1 (human) mapping to 3p22.1; Ctnnb1 (mouse) mapping to 9 F4.

SOURCE

β-catenin (C-18) is available as either goat (sc-1496) or rabbit (sc-1496-R) polyclonal affinity purified antibody raised against a peptide mapping at the C-terminus of β-catenin of human origin.

PRODUCT

Each vial contains either 100 µg (sc-1496) or 200 µg (sc-1496-R) IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1496 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-1496 AC, 500 µg/0.25 ml agarose in 1 ml.

APPLICATIONS

β-catenin (C-18) is recommended for detection of β-catenin of mouse, rat, human, *Xenopus laevis* and zebrafish 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

β-catenin (C-18) is also recommended for detection of β-catenin in additional species, including equine, canine, bovine, porcine and avian.

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.

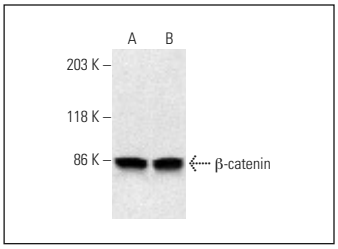
Molecular Weight of β-catenin: 92 kDa.

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

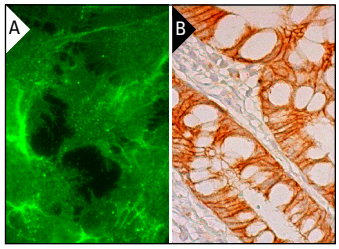
STORAGE

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

DATA



β-catenin (C-18): sc-1496. Western blot analysis of β-catenin expression in HeLa (**A**) and A-431 (**B**) whole cell lysates.



β-catenin (C-18): sc-1496. Immunofluorescence staining of formalin-fixed Hep G2 cells showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing membrane and cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Lefebvre, A., et al. 1998. Activation of the peoxisome proliferator-activated receptor γ promotes the development of colon tumors in C57BL/6J-APC^{Min}/+ mice. Nat. Med. 4: 1053-1057.
2. Guo, H., et al. 2011. Targeting tumor gene by shRNA-expressing *Salmonella*-mediated RNAi. Gene Ther. 18: 95-105.
3. Berzal, S., et al. 2012. GSK3, snail, and adhesion molecule regulation by cyclosporine A in renal tubular cells. Toxicol. Sci. 127: 425-437.
4. Chocarro-Calvo, A., et al. 2012. Glucose-induced β-catenin acetylation enhances Wnt signaling in cancer. Mol. Cell 49: 474-486.
5. Kasaai, B., et al. 2012. Spatial and temporal localization of WNT signaling proteins in a mouse model of distraction osteogenesis. J. Histochem. Cytochem. 60: 219-228.
6. Cases, O., et al. 2013. Cubilin, a high affinity receptor for fibroblast growth factor 8, is required for cell survival in the developing vertebrate head. J. Biol. Chem. 288: 16655-16670.
7. Shao, L., et al. 2013. A20 restricts wnt signaling in intestinal epithelial cells and suppresses colon carcinogenesis. PLoS ONE 8: e62223.

RESEARCH USE

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