

β -catenin (D-10): sc-133239

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 PTP μ associates with catenin/cadherin complexes and may regulate complex signaling.

REFERENCES

- 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.
- Brady-Kalnay, S.M., et al. 1995. Receptor protein tyrosine phosphatase PTP μ 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 (D-10) is a mouse monoclonal antibody raised against amino acids 680-781 mapping at the C-terminus of β -catenin of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

β -catenin (D-10) is recommended for detection of β -catenin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for β -catenin siRNA (h): sc-29209, β -catenin siRNA (m): sc-29210, β -catenin siRNA (r): sc-270011, β -catenin shRNA Plasmid (h): sc-29209-SH, β -catenin shRNA Plasmid (m): sc-29210-SH, β -catenin shRNA Plasmid (r): sc-270011-SH, β -catenin shRNA (h) Lentiviral Particles: sc-29209-V, β -catenin shRNA (m) Lentiviral Particles: sc-29210-V and β -catenin shRNA (r) Lentiviral Particles: sc-270011-V.

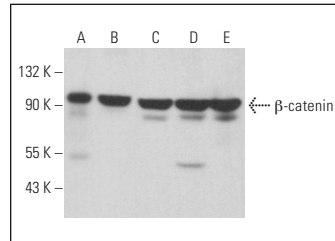
Molecular Weight of β -catenin: 92 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, HeLa whole cell lysate: sc-2200 or PC-12 cell lysate: sc-2250.

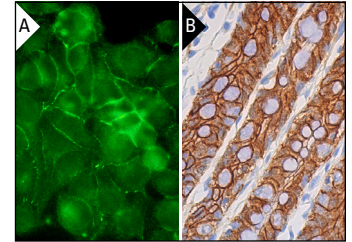
STORAGE

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

DATA



β -catenin (D-10): sc-133239. Western blot analysis of β -catenin expression in HeLa (A), NIH/3T3 (B), PC-12 (C) and C6 (D) whole cell lysates and rat brain tissue extract (E).



β -catenin (D-10): sc-133239. Immunofluorescence staining of methanol-fixed HeLa 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

- Allagnat, F., et al. 2011. Mcl-1 downregulation by pro-inflammatory cytokines and palmitate is an early event contributing to β -cell apoptosis. *Cell Death Differ.* 18: 328-337.
- Yang, L., et al. 2013. lncRNA-dependent mechanisms of androgen-receptor-regulated gene activation programs. *Nature* 500: 598-602.
- Xiong, W., et al. 2015. Estradiol promotes cells invasion by activating β -catenin signaling pathway in endometriosis. *Reproduction* 150: 507-516.
- Lu, M., et al. 2018. MicroRNA-370 suppresses the progression and proliferation of human astrocytoma and glioblastoma by negatively regulating β -catenin and causing activation of FOXO3a. *Exp. Ther. Med.* 15: 1093-1098.
- Bu, X., et al. 2018. Inhibition of DNA methyltransferase 1 by RNA interference reverses epithelial-mesenchymal transition in highly metastatic 95D lung cancer cells by inhibiting the Wnt signaling pathway. *Oncol. Lett.* 15: 9242-9250.
- Yu, Y., et al. 2020. Overexpression of long noncoding RNA CUDR promotes hepatic differentiation of human umbilical cord mesenchymal stem cells. *Mol. Med. Rep.* 21: 1051-1058.

RESEARCH USE

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



See **β -catenin (E-5): sc-7963** for β -catenin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.