SANTA CRUZ BIOTECHNOLOGY, INC.

# β-catenin (12F7): sc-59737

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 has since 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 (12F7) is a mouse monoclonal antibody raised against a recombinant β-catenin of human origin.

## PRODUCT

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

β-catenin (12F7) is available conjugated to agarose (sc-59737 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-59737 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-59737 PE), fluorescein (sc-59737 FITC), Alexa Fluor® 488 (sc-59737 AF488), Alexa Fluor® 546 (sc-59737 AF546), Alexa Fluor® 594 (sc-59737 AF594) or Alexa Fluor® 647 (sc-59737 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-59737 AF680) or Alexa Fluor® 790 (sc-59737 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

β-catenin (12F7) is recommended for detection of β-catenin of mouse, rat and 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)], 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).

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.

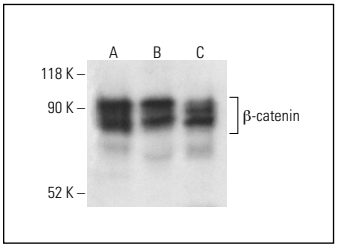
Molecular Weight of β-catenin: 92 kDa.

Positive Controls: U-2 OS cell lysate: sc-2295, C6 whole cell lysate: sc-364373 or MCF7 whole cell lysate: sc-2206.

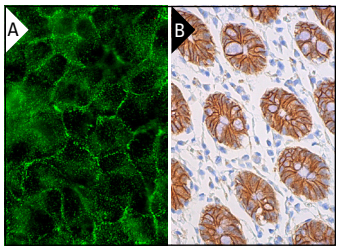
## STORAGE

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

## DATA




β-catenin (12F7) HRP: sc-59737 HRP. Direct western blot analysis of β-catenin expression in C6 (**A**), U-2 OS (**B**) and MCF7 (**C**) whole cell lysates.




β-catenin (12F7): sc-59737. 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


1. Song, J.S., et al. 2009. Differentiation and regenerative capacities of human odontoma-derived mesenchymal cells. Differentiation 77: 29-37.
2. Zhou, Z.P., et al. 2018. Silencing GOLPH3 gene expression reverses resistance to cisplatin in HT29 colon cancer cells via multiple signaling pathways. Int. J. Oncol. 53: 1183-1192.
3. Bocchicchio, S., et al. 2019. Convergence of Wnt and Notch signaling controls ovarian cancer cell survival. J. Cell. Physiol. 234: 22130-22143.
4. Yang, B., et al. 2020. MicroRNA-200a promotes esophageal squamous cell carcinoma cell proliferation, migration and invasion through extensive target genes. Mol. Med. Rep. 21: 2073-2084.
5. Meng, Y., et al. 2021. Nicotinamide promotes cardiomyocyte derivation and survival through kinase inhibition in human pluripotent stem cells. Cell Death Dis. 12: 1119.
6. Semlali, A., et al. 2022. Rapamycin inhibits oral cancer cell growth by promoting oxidative stress and suppressing ERK1/2, NFκB and β-catenin pathways. Front. Oncol. 12: 873447.
7. Semlali, A., et al. 2023. Synergistic effect of anethole and platinum drug cisplatin against oral cancer cell growth and migration by inhibiting MAPKase, β-catenin, and NFκB pathways. Pharmaceuticals 16: 700.
8. Shen, S., et al. 2024. CasRx-based Wnt activation promotes alveolar regeneration while ameliorating pulmonary fibrosis in a mouse model of lung injury. Mol. Ther. 32: 3974-3989.
9. Özar, T., et al. 2025. HN1 is a novel dedifferentiation factor involved in regulating the cell cycle and microtubules in SH-SY5Y neuroblastoma cells. J. Cell. Biochem. 126: e30569.


## RESEARCH USE

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