SANTA CRUZ BIOTECHNOLOGY, INC.

β-catenin (H-1): sc-133240

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.

CHROMOSOMAL LOCATION

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

SOURCE

β-catenin (H-1) 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 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

β-catenin (H-1) is available conjugated to agarose (sc-133240 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-133240 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-133240 PE), fluorescein (sc-133240 FITC), Alexa Fluor® 488 (sc-133240 AF488), Alexa Fluor® 546 (sc-133240 AF546), Alexa Fluor® 594 (sc-133240 AF594) or Alexa Fluor® 647 (sc-133240 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-133240 AF680) or Alexa Fluor® 790 (sc-133240 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

β-catenin (H-1) 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 µg per 100-500 µg 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). β-catenin (H-1) is also recommended for detection of β-catenin in additional species, including equine, canine, bovine and porcine.

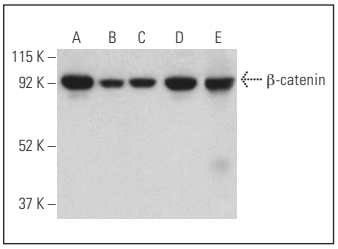
Suitable for use as control antibody for β-catenin siRNA (h): sc-29209, β-catenin siRNA (m): sc-29210, β-catenin siRNA (r): sc-270011, β-catenin shRNA Plasmid (h): sc-29209-SH, β-catenin shRNA Plasmid (m): sc-29210-SH, β-catenin shRNA Plasmid (r): sc-270011-SH, β-catenin shRNA (h) Lentiviral Particles: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

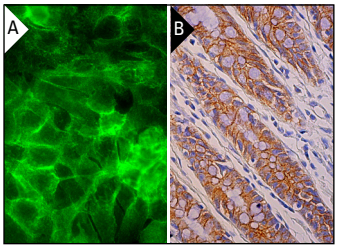
STORAGE

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

DATA



β-catenin (H-1): sc-133240. Western blot analysis of β-catenin expression in A-431 (**A**), HeLa (**B**), SH-SY5Y (**C**) and C6 (**D**) whole cell lysates and rat brain tissue extract (**E**). Detection reagent used: m-IgG_1 BP-HRP: sc-525408.



β-catenin (H-1): sc-133240. Immunofluorescence stain-ing 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. Jaiswal, A.S. and Narayan, S. 2004. Zinc stabilizes adenomatous polyposis coli (APC) protein levels and induces cell cycle arrest in colon cancer cells. J. Cell. Biochem. 93: 345-357.
2. Zhang, W.J., et al. 2013. The expression and functional characterization associated with cell apoptosis and proteomic analysis of the novel gene MLAA-34 in U937 cells. Oncol. Rep. 29: 491-506.
3. Du, H., et al. 2017. Salinomycin inhibits canine mammary carcinoma *in vitro* by targeting cancer stem cells. Oncol. Lett. 14: 427-432.
4. Zhou, B., et al. 2018. 5-fluorouracil may enrich cancer stem cells in canine mammary tumor cells *in vitro*. Oncol. Lett. 15: 7987-7992.
5. Moparthi, L., et al. 2019. Wnt activator FOXB2 drives the neuroendocrine differentiation of prostate cancer. Proc. Natl. Acad. Sci. USA 116: 22189-22195.
6. Mehdi, S., et al. 2020. LY75 suppression in mesenchymal epithelial ovarian cancer cells generates a stable hybrid EOC cellular phenotype, associated with enhanced tumor initiation, spreading and resistance to treatment in orthotopic xenograft mouse model. Int. J. Mol. Sci. 21: 4992.
7. Zhou, S., et al. 2021. Pyrvinium treatment confers hepatic metabolic benefits via β-catenin downregulation and AMPK activation. Pharmaceutics 13: 330.
8. Cicek, E., et al. 2022. EGF-SNX3-EGFR axis drives tumor progression and metastasis in triple-negative breast cancers. Oncogene 41: 220-232.

RESEARCH USE

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