

β -catenin (H-1): sc-133240

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.
- 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. Oncol.* 2: 378-385.

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 μ g 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 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-133240 HRP), 200 μ g/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 μ g/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 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

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 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).

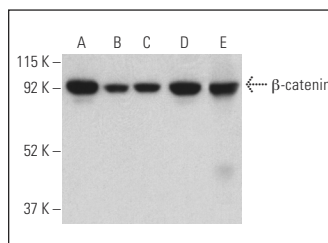
β -catenin (H-1) is also recommended for detection of β -catenin in additional species, including equine, canine, bovine and porcine.

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.

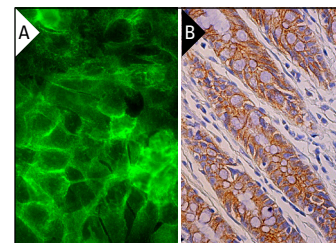
Molecular Weight of β -catenin: 92 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, A-431 whole cell lysate: sc-2201 or C6 whole cell lysate: sc-364373.

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

- 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.
- Zhou, S., et al. 2021. Pyrvinium treatment confers hepatic metabolic benefits via β -catenin downregulation and AMPK activation. *Pharmaceutics* 13: 330.
- Cicek, E., et al. 2022. EGF-SNX3-EGFR axis drives tumor progression and metastasis in triple-negative breast cancers. *Oncogene* 41: 220-232.
- Amirrad, F., et al. 2023. Hypertrophic and fibrotic human PKD hearts are associated with macrophage infiltration and abnormal TGF- β_1 signaling. *Cell Tissue Res.* 391: 189-203.

RESEARCH USE

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