

β-catenin (15B8): sc-53483

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, is a protein that 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 (15B8) is a mouse monoclonal antibody raised against full length β -catenin of chicken 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.

β -catenin (15B8) is available conjugated to agarose (sc-53483 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53483 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53483 PE), fluorescein (sc-53483 FITC), Alexa Fluor[®] 488 (sc-53483 AF488), Alexa Fluor[®] 546 (sc-53483 AF546), Alexa Fluor[®] 594 (sc-53483 AF594) or Alexa Fluor[®] 647 (sc-53483 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-53483 AF680) or Alexa Fluor[®] 790 (sc-53483 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 (15B8) is recommended for detection of β -catenin of mouse, rat, human and *Arabidopsis thaliana* origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with plakoglobin.

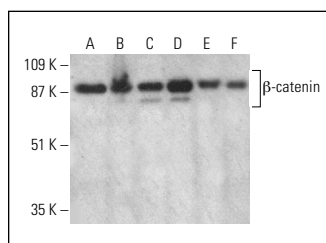
β -catenin (15B8) is also recommended for detection of β -catenin in additional species, including bovine and canine.

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.

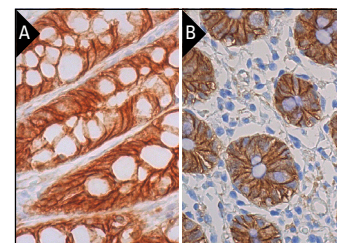
Molecular Weight of β -catenin: 92 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, 3T3-L1 cell lysate: sc-2243 or IMR-32 cell lysate: sc-2409.

DATA



β -catenin (15B8) HRP: sc-53483 HRP. Direct western blot analysis of β -catenin expression in NIH/3T3 (A), 3T3-L1 (B), IMR-32 (C), C6 (D), PC-12 (E) and HeLa (F) whole cell lysates.



β -catenin (15B8): sc-53483. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing membrane and cytoplasmic staining of glandular cells (A, B).

SELECT PRODUCT CITATIONS

- Kim, J.H., et al. 2005. Transcriptional regulation of a metastasis suppressor gene by Tip60 and β -catenin complexes. *Nature* 434: 921-926.
- Hou, R., et al. 2017. MiR-762 can negatively regulate menin in ovarian cancer. *Onco Targets Ther.* 10: 2127-2137.
- Sun, Z., et al. 2018. MiR-532 downregulation of the Wnt/ β -catenin signaling via targeting Bcl-9 and induced human intervertebral disc nucleus pulposus cells apoptosis. *J. Pharmacol. Sci.* 138: 263-270.
- Lindsey, B.W., et al. 2019. Midbrain tectal stem cells display diverse regenerative capacities in zebrafish. *Sci. Rep.* 9: 4420.

RESEARCH USE

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