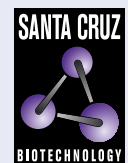


# $\beta$ -catenin (E-5): sc-7963



The Power to Question

## BACKGROUND

The catenins,  $\alpha$ ,  $\beta$  and  $\gamma$ , 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.  $\alpha$ -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.  $\beta$ -catenin associates with the cytoplasmic portion of E-cadherin, which is necessary for the function of E-cadherin as an adhesion molecule.  $\beta$ -catenin has also been found in complexes with the tumor suppressor protein APC.  $\gamma$ -catenin, also known as plakoglobin, binds with  $\alpha$ -catenin and N-cadherin. It has been shown that the transmembrane phosphatase PTP $\mu$  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

$\beta$ -catenin (E-5) is a mouse monoclonal antibody raised against amino acids 680-781 mapping at the C-terminus of  $\beta$ -catenin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $_1$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

$\beta$ -catenin (E-5) is available conjugated to agarose (sc-7963 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-7963 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-7963 PE), fluorescein (sc-7963 FITC), Alexa Fluor<sup>®</sup> 488 (sc-7963 AF488), Alexa Fluor<sup>®</sup> 546 (sc-7963 AF546), Alexa Fluor<sup>®</sup> 594 (sc-7963 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-7963 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-7963 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-7963 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

$\beta$ -catenin (E-5) is recommended for detection of  $\beta$ -catenin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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  $\beta$ -catenin siRNA (h): sc-29209,  $\beta$ -catenin siRNA (m): sc-29210,  $\beta$ -catenin shRNA Plasmid (h): sc-29209-SH,  $\beta$ -catenin shRNA Plasmid (m): sc-29210-SH,  $\beta$ -catenin shRNA (h) Lentiviral Particles: sc-29209-V and  $\beta$ -catenin shRNA (m) Lentiviral Particles: sc-29210-V.

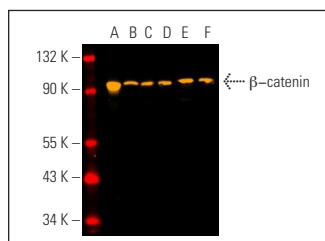
Molecular Weight of  $\beta$ -catenin: 92 kDa.

Positive Controls: PC-12 cell lysate: sc-2250, MCF7 whole cell lysate: sc-2206 or A-431 whole cell lysate: sc-2201.

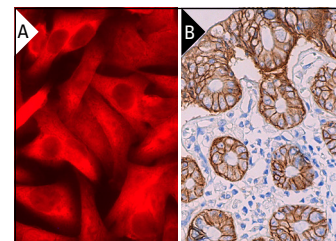
## STORAGE

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

## DATA



$\beta$ -catenin (E-5) Alexa Fluor<sup>®</sup> 594: sc-7963 AF594. Direct fluorescent western blot analysis of  $\beta$ -catenin expression in C3H/10T1/2 (A), PC-12 (B), A-431 (C), SH-SY5Y (D), MCF7 (E) and IMR-32 (F) whole cell lysates. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214. Cruz Marker<sup>™</sup> Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor<sup>®</sup> 790: sc-516731.



$\beta$ -catenin (E-5) PE: sc-7963 PE. Direct immunofluorescence staining of formalin-fixed SW480 cells showing membrane and cytoplasmic localization. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 (A).  $\beta$ -catenin (E-5): sc-7963. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing membrane and cytoplasmic staining of glandular cells. Blocking reagent used: UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 (B).

## SELECT PRODUCT CITATIONS

- Kim, E., et al. 1999. The polycystic kidney disease 1 gene product modulates Wnt signaling. *J. Biol. Chem.* 274: 4947-4953.
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- Maggiorani, D., et al. 2015. Shear stress-induced alteration of epithelial organization in human renal Tubular cells. *PLoS ONE* 10: e0131416.
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- Deacon, P., et al. 2019.  $\beta$ -catenin regulates the formation of multiple nephron segments in the mouse kidney. *Sci. Rep.* 9: 15915.
- Uka, R., et al. 2020. Temporal activation of WNT/ $\beta$ -catenin signaling is sufficient to inhibit SOX10 expression and block melanoma growth. *Oncogene* 39: 4132-4154.

## RESEARCH USE

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

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