

p-β-catenin (Ser 33)-R: sc-16743-R

BACKGROUND

The catenins, α , β and γ , are proteins that bind to the highly conserved, intracellular cytoplasmic tail of E-cadherin. Together, the catenin/cadherin complexes play critical roles in mediating cellular adhesion. 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 also forms complexes with the tumor suppressor protein APC. Amino acid alterations at residues around Ser 33, one of the targets for phosphorylation of glycogen synthase kinase-3 β , results in accumulation of the β -catenin protein in the cytoplasm and nucleus. Pin1 is a novel regulator of β -catenin signaling that directly binds a phosphorylated Ser/Pro motif next to the APC-binding site in β -catenin, inhibiting the interaction with APC, and increasing β -catenin translocation into the nucleus. Thus, Pin1 overexpression may contribute to the upregulation of β -catenin in tumors such as breast cancer.

CHROMOSOMAL LOCATION

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

SOURCE

p- β -catenin (Ser 33)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 33 phosphorylated β -catenin of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16743-R P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p- β -catenin (Ser 33)-R is recommended for detection of Ser 33 phosphorylated β -catenin of mouse, rat, human, *Xenopus laevis* and zebrafish 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).

p- β -catenin (Ser 33)-R is also recommended for detection of correspondingly phosphorylated β -catenin in additional species, including equine, canine, bovine, porcine and avian.

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.

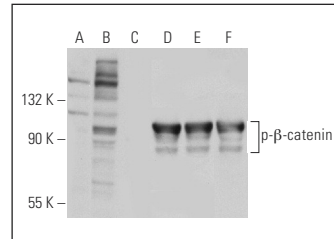
Molecular Weight of β -catenin: 92 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812.

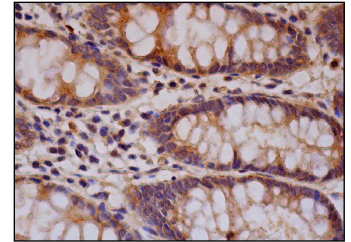
STORAGE

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

DATA



Western blot analysis of β -catenin phosphorylation in untreated (A, D), calyculin treated (B, E) and calyculin and lambda protein phosphatase treated (C, F) SH-SY5Y whole cell lysates. Antibodies tested include p- β -catenin (Ser 33)-R: sc-16743-R (A, B, C) and β -catenin (15B8): sc-53483 (D, E, F).



p- β -catenin (Ser 33)-R: sc-16743-R. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic and membrane staining of glandular cells.

SELECT PRODUCT CITATIONS

- Zarling, A.L., et al. 2006. Identification of class I MHC-associated phosphopeptides as targets for cancer immunotherapy. Proc. Natl. Acad. Sci. USA 103: 14889-14894.
- Roca, F., et al. 2006. Prognostic value of E-cadherin, β -catenin, MMPs (7 and 9), and TIMPs (1 and 2) in patients with colorectal carcinoma. J. Surg. Oncol. 93: 151-160.
- Haraguchi, K., et al. 2008. Ajuba negatively regulates the Wnt signaling pathway by promoting GSK-3 β -mediated phosphorylation of β -catenin. Oncogene 27: 274-284.
- Arnsdorf, E.J., et al. 2009. Non-canonical Wnt signaling and N-cadherin related β -catenin signaling play a role in mechanically induced osteogenic cell fate. PLoS ONE 4: e5388.
- Parody, J.P., et al. 2010. Attenuation of the Wnt/ β -catenin/TCF pathway by *in vivo* interferon- α 2b (IFN- α 2b) treatment in preneoplastic rat livers. Growth Factors 28: 166-177.
- Dzobo, K., et al. 2015. Wnt/ β -catenin and MEK-ERK signaling are required for fibroblast-derived extracellular matrix-mediated endoderm differentiation of embryonic stem cells. Stem Cell Rev. 11: 761-173.

RESEARCH USE

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


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Try **p- β -catenin (BC-22): sc-57535**, our highly recommended monoclonal alternative to p- β -catenin (Ser 33).