



## p- $\beta$ -catenin (BC-76): sc-57536

### BACKGROUND

The catenins,  $\alpha$ ,  $\beta$  and  $\gamma$ , 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.  $\beta$ -catenin associates with the cytoplasmic portion of E-cadherin, which is necessary for the function of E-cadherin as an adhesion molecule.  $\beta$ -catenin 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 $\beta$ , results in accumulation of the  $\beta$ -catenin protein in the cytoplasm and nucleus. Pin1 is a novel regulator of  $\beta$ -catenin signaling that directly binds a phosphorylated Ser-Pro motif next to the APC-binding site in  $\beta$ -catenin, inhibiting the interaction with APC, and increasing  $\beta$ -catenin translocation into the nucleus. Thus, Pin1 overexpression may contribute to the upregulation of  $\beta$ -catenin in tumors such as breast cancer.

### REFERENCES

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3. Perceall, W.E., Woodard, A.S., Morrow, J.S., Rimm, D. and Fearon, E.R. 1995. Frequent alterations in E-cadherin and  $\alpha$ - and  $\beta$ -catenin expression in human breast cancer cell lines. *Oncogene* 11: 1319-1326.
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### CHROMOSOMAL LOCATION

Genetic locus: GORASP2 (human) mapping to 2q31.1-q31.2; Gorasp2 (mouse) mapping to 2 C2.

### SOURCE

p- $\beta$ -catenin (BC-76) is a mouse monoclonal antibody raised against a synthetic peptide, corresponding to amino acids 32-45 of human  $\beta$ -catenin, phosphorylated at Ser 33.

### PRODUCT

Each vial contains 100  $\mu$ g IgM in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

### APPLICATIONS

p- $\beta$ -catenin (BC-76) is recommended for detection of Ser 33 phosphorylated  $\beta$ -catenin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Suitable for use as control antibody for  $\beta$ -catenin siRNA (h): sc-29209.

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

Positive Controls: 293 cell lysate + calyculin A + LiCl.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgM-HRP: sc-2064 (dilution range: 1:500-1:5,000), TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent) and Western Blotting Luminol Reagent: sc-2048.

### STORAGE

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

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.