

# $\beta$ -Catenin (Tyr-86), phospho-specific

Cat. # CP1191

Host Rabbit Polyclonal

Size 100  $\mu$ l

## Background:

$\beta$ -Catenin is a 92 kDa protein that binds to the cytoplasmic tail of E-Cadherin. The cadherins, transmembrane adhesion molecules, are found with catenins at adherens junctions. Deletions in the cytoplasmic domain of E-Cadherin eliminate catenin binding and result in a loss of cell adhesion. Tyrosine phosphorylation of  $\beta$ -Catenin can regulate its interaction with critical components of adherens junctions. Both Fer and Fyn Kinases phosphorylate tyrosine 142 in vitro. Overexpression of these kinases in epithelial cells disrupts interactions between  $\alpha$ - and  $\beta$ -Catenins. The phosphorylation of tyrosine 142 may act as a switch from the transcriptional to the adhesive role of  $\beta$ -Catenin. Src family kinases can also phosphorylate tyrosine 86 and 654 in  $\beta$ -Catenin. The Tyr-654 phosphorylation regulates  $\beta$ -Catenin binding to E-cadherin. Thus, site-specific tyrosine phosphorylation of  $\beta$ -Catenin may regulate protein-protein interactions, leading to changes in cell adhesion.

## References

- Ozawa, M. et al. (1990) Proc. Natl. Acad. Sci. USA 87:4246.  
 Roura, S. et al. (1999) J Biol Chem. 274(51) :36734.  
 Piedra, J. et al. (2003) Mol. Cell. Biol. 23(7):2287-2297.  
 Brembeck, F.H. et al. (2004) Genes Dev. 18(18):2225-2230.

## Immunogen:

Phospho- $\beta$ -Catenin (Tyr-86) synthetic peptide (coupled to KLH) corresponding to amino acid residues around tyrosine 86 of human  $\beta$ -Catenin. This peptide sequence is highly conserved in rat and mouse  $\beta$ -Catenin.

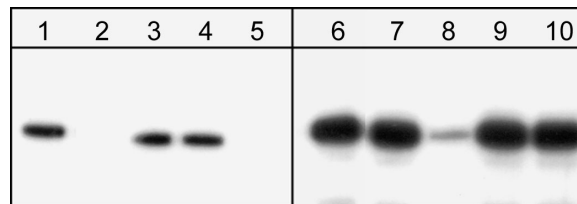
## Applications:

WB 1:1000  
 ELISA 1:2000

End user should determine optimal dilution for their particular applications and experiments. Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1 hour at room temperature.

## Related Products:

- CP1061  $\beta$ -Catenin (N-terminal) Rabbit Polyclonal  
 CP1081  $\beta$ -Catenin (Tyr-142), phospho-specific [Conserved site] Rabbit Polyclonal  
 CP1201  $\beta$ -Catenin /  $\gamma$ -Catenin (a.a. 649-661) Rabbit Polyclonal  
 CM1181  $\beta$ -Catenin Mouse Monoclonal  
 CX1195 phospho- $\beta$ -Catenin (Tyr-86) Peptide  
 CK6120  $\beta$ -Catenin Phospho-Regulation Antibody Sampler Kit



$\beta$ -Catenin (Y86)  $\beta$ -Catenin (649-661)

Western blot analysis of  $\beta$ -Catenin immunoprecipitated from A431 cells treated with pervanadate. The blots were probed with anti- $\beta$ -Catenin (Tyr-86) or anti- $\beta$ -Catenin (a.a. 649-661) polyclonal antibodies. The immunoprecipitates were untreated (lanes 1 & 6) or treated with alkaline phosphatase (lanes 5 & 10) then probed with the antibodies. In addition, these antibodies were used in the presence of phospho- $\beta$ -Catenin (Tyr-86) peptide (lanes 2 & 7),  $\beta$ -Catenin (a.a. 649-661) peptide (lanes 3 & 8), or BSA-coupled phosphotyrosine (lanes 4 & 9).

## Buffer and Storage:

Rabbit polyclonal, affinity-purified antibody is supplied in 100  $\mu$ l phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at  $-20^{\circ}\text{C}$ . Do not aliquot. Stable for 1 year.

## Specificity:

This antibody was cross-adsorbed to phospho-tyrosine coupled to agarose before affinity purification using phospho-  $\beta$ -Catenin (Tyr-86) peptide (without carrier). The antibody detects a 92kDa\* protein corresponding to the molecular mass of  $\beta$ -Catenin on SDS-PAGE immunoblots of A431 and Hct116 src transformed cells treated with pervanadate (1 mM for 30 min), but not in control cells.

\*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

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