

# phospho- $\beta$ -Catenin (Tyr-142) Peptide

Cat. # CX1085

Size 50  $\mu$ g

## **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**

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

## **Peptide Sequence:**

Phospho- $\beta$ -Catenin (Tyr-142) synthetic peptide corresponds to amino acid residues around tyrosine 142 of human  $\beta$ -Catenin. This peptide sequence has one amino acid difference from a sequence around tyrosine 133 of human  $\gamma$ -Catenin. These human sequences are highly conserved in rat and mouse  $\beta$ - and  $\gamma$ -Catenins.

## **Buffer and Storage:**

Blocking Peptide is supplied in 50 $\mu$ l phosphate-buffered saline and 0.05% sodium azide. Store at  $-20^{\circ}$ C. Stable for 1 year.

## **Applications:**

Blocking 1:1,000

ELISA 50 ng/well

End user should determine optimal concentration dependent on the concentration of the antibody.  
Recommended for blocking antibody reactivity in Western blot and immunocytochemistry.  
ELISA established in 96-well Nunc immunoplates where peptide was bound to plates for 2 hrs in 0.1 M sodium carbonate buffer, pH 8.5.

## **Specificity:**

The peptide is specifically recognized by anti- $\beta$ -Catenin (Tyr-142) phospho-specific antibody (CP1081) in ELISA, and is recommended for use in blocking CP1081 reactivity in Western blot and immunocytochemistry.

## **Related Products:**

CP1201  $\beta$ -Catenin /  $\gamma$ -Catenin (a.a. 649-661) Rabbit Polyclonal  
CP1061  $\beta$ -Catenin (N-terminal) Rabbit Polyclonal  
CP1081  $\beta$ -Catenin (Tyr-142), phospho-specific [Conserved site] Rabbit  
CP1191  $\beta$ -Catenin (Tyr-86), phospho-specific Rabbit Polyclonal  
CK6120  $\beta$ -Catenin Phospho-Regulation Antibody Sampler Kit  
CK6230  $\delta$ 1-Catenin Phospho-Regulation Antibody Sampler Kit

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