

phospho- β -Catenin (Tyr-142) Blocking Peptide

Cat. # **CX1085**

Size **50 μ g**

Background:

β -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 β -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 α - and β -Catenins. The phosphorylation of tyrosine 142 may act as a switch from the transcriptional to the adhesive role of β -Catenin. Src family kinases can also phosphorylate tyrosine 654 in the C-terminal armadillo repeat of β -Catenin. This phosphorylation regulates β -Catenin binding to E-cadherin. Thus, site-specific tyrosine phosphorylation of β -Catenin may regulate specific 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- β -Catenin (Tyr-142) synthetic peptide corresponds to amino acid residues around tyrosine 142 of human β -Catenin. This peptide sequence has one amino acid difference from a sequence around tyrosine 133 of human γ -Catenin. These human sequences are highly conserved in rat and mouse β - and γ -Catenins.

Buffer and Storage:

Blocking Peptide is supplied in 50 μ l phosphate-buffered saline and 0.05% sodium azide. Store at -20° C. Stable for 1 year.

Applications:

Antibody Blocking 1 μ g/ml¹

ELISA 10-100 ng/well²

End user should determine optimal concentration dependent on the concentration of the antibody.

¹Recommended for blocking antibody reactivity in Western blot and immunocytochemistry.

²Established 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- β -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 β -Catenin (C-terminal) Rabbit Polyclonal

CP1061 β -Catenin (N-terminal) Rabbit Polyclonal

CP1081 β -Catenin (Tyr-142) (γ -Catenin (Tyr-133)), phospho-specific Rabbit Polyclonal

CP1191 β -Catenin (Tyr-86), phospho-specific Rabbit Polyclonal

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