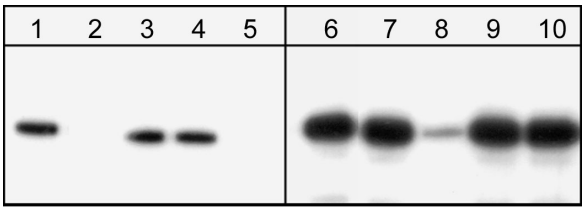
β-Catenin (a.a. 649-661) Peptide

Cat. # CX1205

Size 50 µg

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 86 and 654 in β-Catenin. The Tyr-654 phosphorylation regulates β-Catenin binding to E-cadherin. Thus, site-specific tyrosine phosphorylation of β-Catenin may regulate protein-protein interactions, leading to changes in cell adhesion.



Western blot analysis of β-Catenin immunoprecipitated from A431 cells treated with pervanadate. The blots were probed with anti-β-Catenin (Tyr-86) or anti-β-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-β-Catenin (Tyr-86) peptide (lanes 2 & 7), β-Catenin (a.a. 649-661) peptide (lanes 3 & 8), or BSA-coupled phosphotyrosine (lanes 4 & 9).

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.

Peptide Sequence:

A synthetic peptide corresponding to amino acid residues 649 to 661 in the C-terminal region of human β-Catenin. This peptide sequence has homology to the C-terminal region of γ-Catenin and is highly conserved in rat and mouse β- and γ-Catenins.

Buffer and Storage:

Blocking Peptide is supplied in 50µl phosphate-buffered saline and 0.05% sodium azide. Store at –20°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-β-Catenin (a.a. 649-661) antibody (CP1201) in ELISA, and has been shown to block the reactivity of CP1201 during Western blot. In addition, the peptide is recommended for use in blocking CP1201 reactivity in immunocytochemistry.

Related Products:

CP1201 β-Catenin / γ-Catenin (a.a. 649-661) Rabbit Polyclonal
CP1061 β-Catenin (N-terminal) Rabbit Polyclonal
CP1081 β-Catenin (Tyr-142), phospho-specific [Conserved site] Rabbit
CP1191 β-Catenin (Tyr-86), phospho-specific Rabbit Polyclonal
CK6120 β-Catenin Phospho-Regulation Antibody Sampler Kit
CK6230 δ1-Catenin Phospho-Regulation Antibody Sampler Kit

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