

β -Catenin (Tyr-489), phospho-specific [Conserved site: γ -Catenin (Tyr-480)]

Cat. #	CP2961
Host	Rabbit Polyclonal
Size	100 μ l

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, 489, and 654 in β -Catenin. Tyr-654 phosphorylation regulates β -Catenin binding to E-cadherin, while c-Abl phosphorylation of Tyr-489 decreases β -Catenin binding to N-Cadherin and leads to nuclear translocation and transcriptional activation.

References

- Roura, S. et al. (1999) *J Biol Chem.* 274(51) :36734.
 Piedra, J. et al. (2003) *Mol. Cell. Biol.* 23(7):2287.
 Brembeck, F.H. et al. (2004) *Genes Dev.* 18(18):2225.
 Rhee, J. et al. (2007) *Nat. Cell Biol.* 9(8):883.

Immunogen:

Phospho- β -Catenin (Tyr-489) synthetic peptide corresponds to amino acid residues around tyrosine 489 of human β -Catenin. This peptide sequence is highly conserved in rat and mouse β -Catenin, and has high homology to the conserved site in γ -Catenin (Tyr-480).

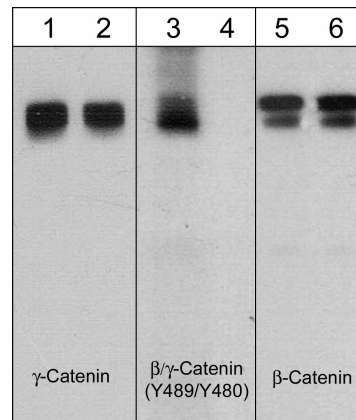
Applications:

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:

CM1181 β -Catenin Mouse Monoclonal
 CP1061 β -Catenin (N-terminal) Rabbit Polyclonal
 CP1081 β -Catenin (Tyr-142), phospho-specific [Conserved site] Rabbit Polyclonal
 CP1191 β -Catenin (Tyr-86), phospho-specific Rabbit Polyclonal
 AM2091 c-Abl (C-terminal Region) Mouse Monoclonal
 RP2791 Robo1 (C-terminal region) Rabbit Polyclonal



Western blot analysis of A431 cells stimulated with pervanadate (1 mM) for 30 min (lanes 1, 3, & 5) then treated with alkaline phosphatase (lanes 2, 4, & 6). The blot was probed with anti- γ -Catenin (CM1111), anti- β -Catenin (Tyr-489) conserved site (CP2961), or anti- β -Catenin (CM1181).

Buffer and Storage:

Rabbit polyclonal, affinity-purified antibody is supplied in 100 μ l phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C . Do not aliquot. Stable for 1 year.

Specificity:

This antibody was cross-adsorbed to phospho- β -Catenin (Tyr-654) peptide before affinity purification using phospho- β -Catenin (Tyr-489) peptide (without carrier). The antibody detects 84 and 88kDa* proteins corresponding to the molecular mass of γ -Catenin and β -Catenin, respectively, on SDS-PAGE immunoblots of A431 cells treated with pervanadate, but does not detect these proteins 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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web: www.ecmbiosciences.com

telephone: 859-879-2075

email: info@ecmbiosciences.com

toll-free: 1-800-859-8202

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