

α 1-Catenin (Tyr-148), phospho-specific

Cat. # CP3451

Host Rabbit Polyclonal

Size 100 μ l

Background:

α -catenins are cadherin interacting proteins with homology to vinculin. Three α -catenin genes have been described including α 1-catenin (α E-catenin), α 2-catenin (α N-catenin), and α 3-catenin (α T-catenin). α 1-catenin has 81% homology with α 2-catenin and 60% homology with α 3-catenin. These α -catenin isoforms may have similar roles since each binds cadherins. However, their expression patterns are both overlapping and distinct. α 1-catenin was identified in epithelial cells, and is expressed in various cell types. α 2-catenin is enriched in the nervous system, and α 3-catenin is expressed highest in testis and heart. Phosphorylation may regulate the activity of α 1-catenin, since tyrosine phosphorylation of Tyr-148 occurs during intercellular adhesion. This site is dephosphorylated by SHP2, which inhibits α 1-catenin binding to β -catenin and translocation to the plasma membrane. Phosphorylation of α 1-catenin at Tyr-148 may be important for inhibition of cell transformation, and dephosphorylation of this site may be important during SHP2-mediated cell transformation.

References

- Herrenknecht, K. et al. (1991) Proc Natl Acad Sci U S A. 88(20):9156.
 Hirano, S. et al. (1992) Cell. 70(2):293.
 Janssens, B. et al. (2001) J Cell Sci. 114(17):3177.
 Burks, J. & Agazie, Y.M. (2006) Oncogene 25:7166.

Immunogen:

Phospho- α 1-Catenin (Tyr-148) synthetic peptide (coupled to KLH) corresponding to amino acid residues around tyrosine 148 in human α 1-Catenin. This peptide sequence is highly conserved in rat and mouse α 1-Catenin, but is not conserved in α 2-Catenin or α 3-Catenin.

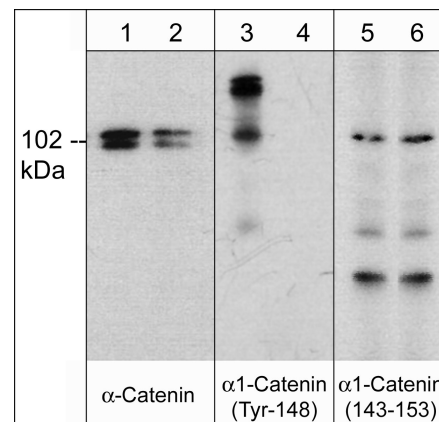
Applications:

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:

- CP3431 α 1-Catenin (a.a. 143-153) Rabbit Polyclonal
 CX3455 phospho- α 1-Catenin (Tyr-148) Peptide
 CK6120 β -Catenin Phospho-Regulation Antibody Sampler Kit
 CK6150 γ -Catenin Phospho-Regulation Antibody Sampler Kit
 CP1081 β -Catenin (Tyr-142), phospho-specific [Conserved site] Rabbit Polyclonal
 CP1121 γ -Catenin (Tyr-550), phospho-specific Rabbit Polyclonal



Western blot analysis of rat PC12 cells treated with pervanadate (1 mM) for 30 min (lanes 1, 3, & 5) then the blot was treated with alkaline phosphatase (lanes 2, 4, & 6). The blot was probed with anti- α -Catenin monoclonal (lanes 1 & 2), anti- α 1-Catenin (Tyr-148) phospho-specific (lanes 3 & 4), or anti- α 1-Catenin (a.a. 143-153) (lanes 5 & 6).

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 unrelated phospho-tyrosine peptide before affinity purification using phospho- α 1-Catenin (Tyr-148) peptide (without carrier). The antibody detects a 102 kDa* protein corresponding to the molecular mass of α 1-Catenin on SDS-PAGE immunoblots of rat PC12 cells treated with pervanadate.

*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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