

phospho- α 1-Catenin (Tyr-148) Peptide

Cat. # CX3455

Size 50 μ g

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.

Peptide Sequence:

Phospho- α 1-Catenin (Tyr-148) synthetic peptide corresponds 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.

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:

Blocking 1:1000

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 α 1-Catenin (Tyr-148), phospho-specific antibody (CP3451) in ELISA, and has been shown to block the reactivity of CP3451 in Western blot. In addition, the peptide is recommended for use in blocking CP3451 reactivity in immunocytochemistry.

Related Products:

CP3451 α 1-Catenin (Tyr-148), phospho-specific Rabbit Polyclonal
CX3435 α 1-Catenin (a.a. 143-153) Peptide
CP3431 α 1-Catenin (a.a. 143-153) Rabbit Polyclonal
CK6120 β -Catenin Phospho-Regulation Antibody Sampler Kit
CK6150 γ -Catenin Phospho-Regulation Antibody Sampler Kit
SM1631 SHP2 (N-terminal Region) Mouse Monoclonal

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