

# $\delta$ 1-Catenin (Tyr-96), phospho-specific

Cat. # CM3551

Host Mouse Monoclonal IgG1

Size 100  $\mu$ l

## Background:

Catenins have emerged as molecular sensors that integrate cell-cell junctions and cytoskeletal dynamics with signaling pathways that control morphogenesis and cell to cell communication.  $\delta$ 1-Catenin (p120 catenin) is a catenin family member which contains an N-terminal coiled-coil domain, a regulatory domain containing multiple phosphorylation sites, and a central Armadillo repeat domain.  $\delta$ 1-Catenin regulates E-cadherin turnover, and has both positive and negative effects on cadherin-mediated adhesion. Actin dynamics are also regulated by  $\delta$ 1-Catenin, which can modulate RhoA, Rac and cdc42 activity.  $\delta$ 1-Catenin is phosphorylated at multiple tyrosine, serine and threonine sites both *in vitro* and *in vivo*. High levels of  $\delta$ 1-Catenin phosphorylated at Tyr-228 are commonly seen in several carcinoma cell lines and after EGFR activation. Many other tyrosine sites are also phosphorylated in the N-terminal region including Tyr-96, Tyr-112, Tyr-280, and Tyr-302. In addition, Thr-310 and Thr-916 are constitutively phosphorylated in many cell types, however this phosphorylation may occur only in  $\delta$ 1-Catenin associated with the plasma membrane.

## References

- Mariner, D.J. et al. (2001) J. Biol. Chem. 276:28006.  
 Reynolds, A.B. & Rocznik-Ferguson, A. (2004) Oncogene 23:7947.  
 Fukumoto, Y. et al. (2008) Exp. Cell Res. 314:52.

## Immunogen:

Phospho- $\delta$ 1-Catenin (Tyr-96) synthetic peptide corresponds to amino acid residues around tyrosine 96 of human  $\delta$ 1-Catenin. This peptide sequence is highly conserved in rat and mouse  $\delta$ 1-Catenin.

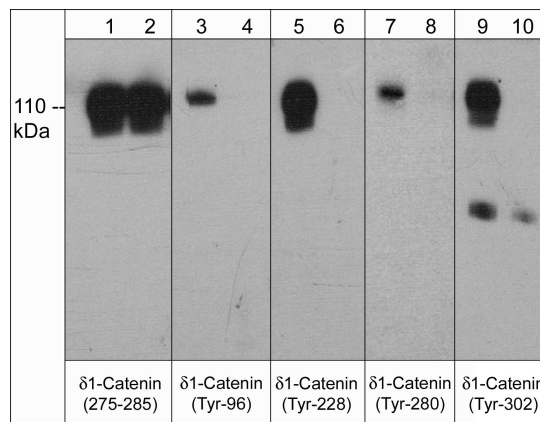
## Applications:

WB 1:500  
 ELISA 1:1000

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:

CM3541  $\delta$ 1-Catenin (a.a. 275-285) Mouse Monoclonal  
 CM3561  $\delta$ 1-Catenin (Tyr-228), phospho-specific Mouse Monoclonal  
 CM3571  $\delta$ 1-Catenin (Tyr-280), phospho-specific Mouse Monoclonal  
 CM3601  $\delta$ 1-Catenin (Tyr-302), phospho-specific Mouse Monoclonal  
 CP3621  $\delta$ 1-Catenin (Thr-916), phospho-specific Rabbit Polyclonal  
 CK6120  $\beta$ -Catenin Phospho-Regulation Antibody Sampler Kit



Western blot analysis of  $\delta$ 1-Catenin phosphorylation in A431 cells stimulated with pervanadate (1 mM) for 30 min. (lanes 1, 3, 5, 7, & 9). The blot was then treated with alkaline phosphatase (lanes 2, 4, 6, 8, & 10). Blots were probed with mouse monoclonal anti- $\delta$ 1-Catenin (a.a. 275-285) (lanes 1 & 2), anti- $\delta$ 1-Catenin (Tyr-96) (lanes 3 & 4), anti- $\delta$ 1-Catenin (Tyr-228) (lanes 5 & 6), anti- $\delta$ 1-Catenin (Tyr-280) (lanes 7 & 8) or anti- $\delta$ 1-Catenin (Tyr-302) (lanes 9 & 10).

## Buffer and Storage:

Mouse monoclonal antibody purified with protein A chromatography is supplied in 100 $\mu$ l phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at  $-20^{\circ}$ C. Do not aliquot. Stable for 1 year.

## Specificity:

The antibody detects a 110 kDa\* protein corresponding to the molecular mass of  $\delta$ 1-Catenin on SDS-PAGE immunoblots of human A431 and HUVEC cells treated with pervanadate. This antibody does not detect this band after alkaline phosphatase treatment.

\*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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