

#2911 Store at -20C

## Phospho-Catenin $\delta$ -1 (Tyr228) Antibody



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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IF-IC	H	Endogenous	95, 100	Rabbit	#O60716	1500

### Product Usage Information

#### Application

Western Blotting  
Immunofluorescence (Immunocytochemistry)

#### Dilution

1:1000  
1:100

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

### Specificity / Sensitivity

Phospho-Catenin  $\delta$ -1 (Tyr228) Antibody detects endogenous levels of catenin  $\delta$ -1 protein only when phosphorylated at Tyr228. The antibody might cross react with another overexpressed phospho-tyrosine protein.

### Source / Purification

Polyclonal antibodies are produced by immunizing animals with synthetic phosphopeptides corresponding to residues surrounding Tyr228 of human/mouse catenin  $\delta$ -1. Antibodies are purified by peptide affinity chromatography.

### Background

Catenin  $\delta$ -1 (p120 catenin) has an amino-terminal coiled-coil domain followed by a regulatory domain containing multiple phosphorylation sites and a central Armadillo repeat domain of ten linked 42-amino acid repeats. The carboxy-terminal tail has no known function (1). Catenin  $\delta$ -1 fulfills critical roles in the regulation of cell-cell adhesion as it regulates E-cadherin turnover at the cell surface to determine the level of E-cadherin available for cell-cell adhesion (2). Catenin  $\delta$ -1 has both positive and negative effects on cadherin-mediated adhesion (3). Actin dynamics are also regulated by catenin  $\delta$ -1, which modulates RhoA, Rac, and cdc42 proteins (1). Analogous to  $\beta$ -catenin, catenin  $\delta$ -1 translocates to the nucleus, although its role at this location is unclear. Many studies show that catenin  $\delta$ -1 is expressed irregularly or is absent in various types of tumor cells, suggesting that catenin  $\delta$ -1 may function as a tumor suppressor (4). Catenin  $\delta$ -1 is phosphorylated at multiple tyrosine sites along its sequence both *in vivo* and *in vitro* (5). High levels of catenin  $\delta$ -1 phosphorylated at Tyr228 are commonly seen in several carcinoma cell lines. EGFR signaling induces catenin  $\delta$ -1 phosphorylation at Tyr228, with the phosphorylated protein becoming localized at adherens junctions although phosphorylation is not essential in junction formation (6).

### Background References

1. Reynolds, A.B. and Roczniak-Ferguson, A. (2004) *Oncogene* 23, 7947-7956.
2. Davis, M. A. et al. (2003) *J. Cell Biol.* 163, 525-534.
3. Thoreson, M.A. and Reynolds, A.B. (2002) *Differentiation* 70, 583-589.
4. Anastasiadis, P.Z. and Reynolds, A.B. (2000) *J. Cell Sci.* 113, 1319-1334.
5. Mariner, D.J. et al. (2001) *J. Biol. Chem.* 276, 28006-28013.
6. Mariner, D.J. et al. (2004) *J. Cell Sci.* 117, 1339-1350.

### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key

**WB:** Western Blotting **IF-IC:** Immunofluorescence (Immunocytochemistry)

### Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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