

**#2911** Store at -20°C

# Phospho-Catenin $\delta$ -1 (Tyr 228) Antibody

- Small 100  $\mu$ l (10 western blots)
- Petite 40  $\mu$ l (4 western blots)



**Orders** ■ 877-616-CELL (2355)  
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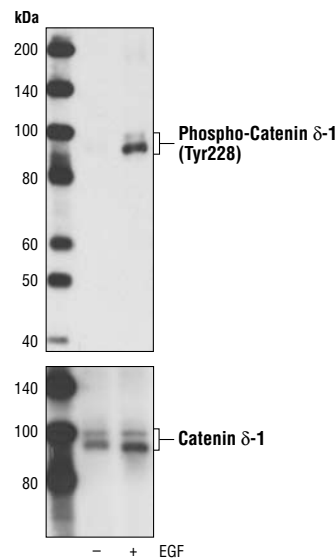
This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IF-IC Endogenous	H	95, 100 kDa	Rabbit**

**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).

**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.



Western blot analysis of extracts from A431 cells, serum-starved overnight and then either left untreated or treated with EGF for 15 minutes, using Phospho-Catenin  $\delta$ -1 (Tyr228) Antibody (upper) and Catenin  $\delta$ -1 Antibody #4989 as a loading control (lower).

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with synthetic phosphopeptides (KLH-coupled) corresponding to residues surrounding Tyr228 of human/mouse catenin  $\delta$ -1. Antibodies are purified by peptide affinity chromatography.

**Entrez-Gene ID #** 1500  
**Swiss-Prot Acc. #** O60716

**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.

**\*Species cross-reactivity is determined by Western blot.**

**\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.**

**Recommended Antibody Dilutions:**

Western blotting	1:1000
Immunofluorescence (IF-IC)	1:100

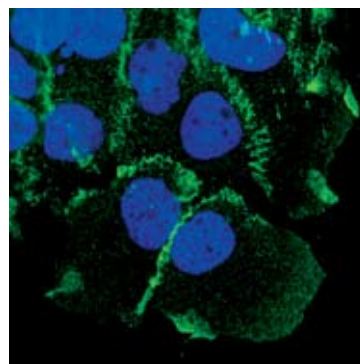
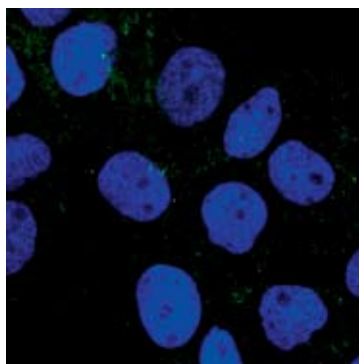
For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**Background References:**

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

**IMPORTANT:** For Western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.



◀ Confocal immunofluorescent analysis of A431 cells, serum-starved (left) or EGF-treated (right), using Phospho-Catenin  $\delta$ -1 (Tyr228) Antibody (green). Blue pseudocolor = DRAQ5™ (fluorescent DNA dye).

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.