Revision 6

Store at -20C

#2911

Phospho-Catenin δ-1 (Tyr228) Antibody

Cell Signaling TECHNOLOGY®

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

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

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

Specificity/Sensitivity

Phospho-Catenin δ-1 (Tyr228) Antibody detects endogenous levels of catenin δ-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 δ-1. Antibodies are purified by peptide affinity chromatography.

Background

Catenin δ-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 δ-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 δ-1 has both positive and negative effects on cadherin-mediated adhesion (3). Actin dynamics are also regulated by catenin δ-1, which modulates RhoA, Rac, and cdc42 proteins (1). Analogous to β-catenin, catenin δ-1 translocates to the nucleus, although its role at this location is unclear. Many studies show that catenin δ-1 is expressed irregularly or is absent in various types of tumor cells, suggesting that catenin δ-1 may function as a tumor suppressor (4).
Catenin δ-1 is phosphorylated at multiple tyrosine sites along its sequence both *in vivo* and *in vitro* (5). High levels of catenin δ-1 phosphorylated at Tyr228 are commonly seen in several carcinoma cell lines. EGFR signaling induces catenin δ-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

W: Western Blotting

Cross-Reactivity Key

H: Human

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