Revision 1

Store at -20C

#9534

Acetyl-β-Catenin (Lys49) Antibody

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	92	Rabbit	#P35222	1499

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

Acetyl-β-Catenin (Lys49) Antibody detects endogenous β-catenin only when acetylated at Lys49.

Species predicted to react based on 100% sequence homology

Mouse, Rat, Pig

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic acetylated peptide corresponding to residues surrounding Lys49 of human β-catenin. Antibodies were purified by protein A and peptide affinity chromatography.

Background

β-catenin is a key downstream effector in the Wnt signaling pathway (1). It is implicated in two major biological processes in vertebrates: early embryonic development (2) and tumorigenesis (3). CK1 phosphorylates β-catenin at Ser45. This phosphorylation event primes β-catenin for subsequent phosphorylation by GSK-3β (4-6). GSK-3β destabilizes β-catenin by phosphorylating it at Ser33, Ser37, and Thr41 (7). Mutations at these sites result in the stabilization of β-catenin protein levels and have been found in many tumor cell lines (8).

Lys49 lies in a region that contains several Ser/Thr residues whose phosphorylation status regulates the stability of β-catenin and is one of few residues frequently mutated in thyroid anaplastic carcinoma (9). CBP (CREB-binding protein) binds and acetylates β-catenin at Lys49 (10, 11).

Background References

1. Cadigan, K.M. and Nusse, R. (1997) *Genes Dev* 11, 3286-3305.
2. Wodarz, A. and Nusse, R. (1998) *Annu Rev Cell Dev Biol* 14, 59-88.
3. Polakis, P. (1999) *Curr Opin Genet Dev* 9, 15-21.
4. Amit, S. et al. (2002) *Genes Dev* 16, 1066-76.
5. Liu, C. et al. (2002) *Cell* 108, 837-47.
6. Yanagawa, S. et al. (2002) *EMBO J* 21, 1733-42.
7. Yost, C. et al. (1996) *Genes Dev* 10, 1443-54.
8. Morin, P.J. et al. (1997) *Science* 275, 1787-90.
9. Polakis, P. (2000) *Genes Dev.* 14, 1837-5181.
10. Takemaru, K.I. and Moon, R.T. (2000) *J. Cell Biol.* 149, 249-254.
11. Wolf, D. et al. (2002) *J. Biol. Chem.* 277, 25562-25567.

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 BSA, 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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