#9030 Store at -20°C

Acetyl-β-Catenin (Lys49) (D7C2) Rabbit mAb

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For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez-Gene ID #1499
Swiss-Prot Acc. #P35222

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H, M, Mk	92 kDa	Rabbit IgG**

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. 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
Immunoprecipitation	1:200

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended complementary products.

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. Research studies have shown that Lys49 is one of few residues frequently mutated in thyroid anaplastic carcinoma (9). CREB-binding protein (CBP) binds and acetylates β-catenin at Lys49 (10,11).

Specificity/Sensitivity: Acetyl-β-Catenin (Lys49) (D7C2) Rabbit mAb recognizes endogenous levels of β-catenin protein only when acetylated at Lys49.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic acetylated peptide corresponding to residues surrounding Lys49 of human β-catenin protein.

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, 1066-1076.

(5) Lin, C. et al. (2002) *Cell* 108, 837-847.

(6) Yanagawa, S. et al. (2002) *EMBO J.* 21, 1733-1742.

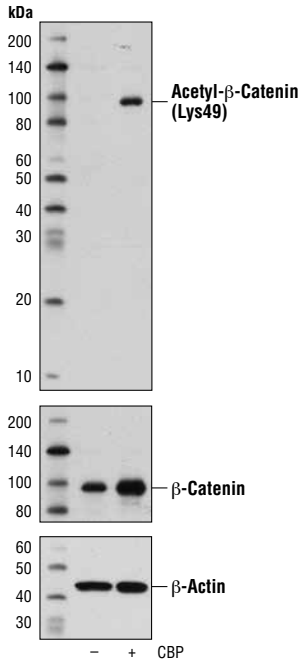
(7) Yost, C. et al. (1996) *Genes Dev.* 10, 1443-1454.

(8) Morin, P.J. (1997) *Science* 275, 1787-1790.

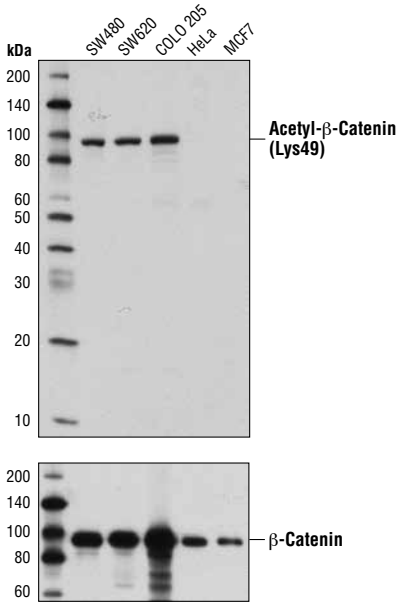
(9) Polakis, P. (2000) *Genes Dev* 14, 1837-51.

(10) Takemaru, K.I. and Moon, R.T. (2000) *J Cell Biol* 149, 249-54.

(11) Wolf, D. et al. (2002) *J Biol Chem* 277, 25562-7.



Western blot analysis of extracts from 293T cells, mock transfected (-) or transfected with a construct expressing CBP (+), using Acetyl-β-Catenin (Lys49) (D7C2) Rabbit mAb (upper), β-Catenin (D10A8) XP® Rabbit mAb #8480 (middle), and β-Actin (D6A8) Rabbit mAb #8457 (lower).



Western blot analysis of extracts from various cell lines using Acetyl-β-Catenin (Lys49) (D7C2) Rabbit mAb (upper) or β-Catenin (D10A8) XP® Rabbit mAb #8480 (lower).

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.

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.