

**#4176** Store at -20°C

# Phospho-β-Catenin (Ser675) (D2F1) XP® Rabbit mAb

100 µl  
 (10 western blots)



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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.

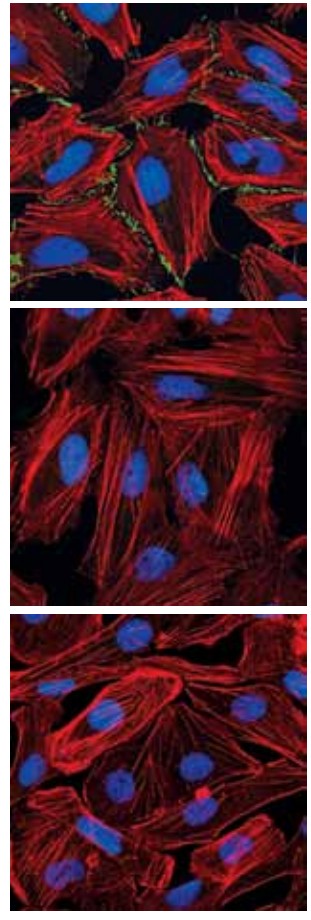
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IF-IC, IF-F Endogenous	H, (M, R, C, X, Z)	92 kDa	Rabbit IgG**

**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 on Ser45. This phosphorylation event primes β-catenin for subsequent phosphorylation by GSK-3 (4-6). GSK-3β destabilizes β-catenin by phosphorylating it at Ser33, Ser37 and Thr41 (7). Mutations in these phosphorylation sites, which result in the stabilization of β-catenin protein levels, have been found in many tumor cell lines (8).

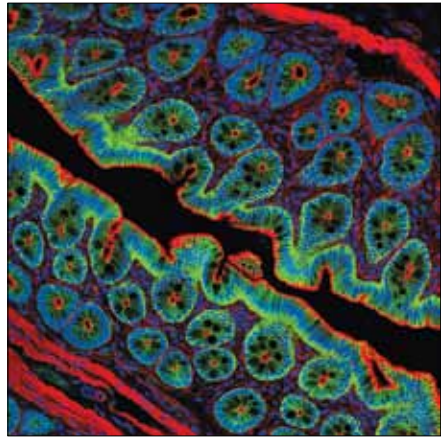
PKA was shown to phosphorylate β-catenin at Ser675. Phosphorylation at Ser675 induces β-catenin accumulation in the nucleus and increases its transcriptional activity (9,10).

**Specificity/Sensitivity:** Phospho-β-Catenin (Ser675) (D2F1) XP® Rabbit mAb detects endogenous levels of β-catenin only when phosphorylated at Ser675.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser675 of human β-catenin.



Confocal immunofluorescent analysis of HeLa cells, untreated (upper), λ phosphatase-treated (middle), or untreated NCI-H28 cells (β-catenin null; lower) using Phospho-β-Catenin (Ser675) (D2F1) XP® Rabbit mAb (green). Actin filaments have been labeled with DY-554 phalloidin (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).



Confocal immunofluorescent analysis of rat colon using Phospho-β-Catenin (Ser675) (D2F1) XP® Rabbit mAb (green). Actin filaments have been labeled with DY-554 Phalloidin (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

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

**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.**

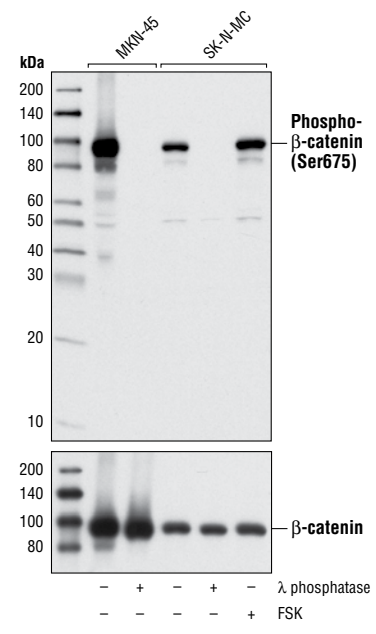
**\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.**

**Recommended Antibody Dilutions:**

Western blotting	1:1000
Immunoprecipitation	1:200
Immunofluorescence (IF-IC)	1:100
Immunofluorescence (IF-F)	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.



Western blot analysis of extracts from MKN-45 and SK-N-MC cells, untreated or treated with λ phosphatase for 1 hour or forskolin (FSK) for 30 minutes, using Phospho-β-Catenin (Ser675) (D2F1) XP® Rabbit mAb (upper) or β-Catenin (6B3) Rabbit mAb #9582 (lower).

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**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.

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**Background References:**

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- (3) Polakis, P. (1999) *Curr. Opin. Genet. Dev.* 9, 15-21.
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