

Store at  
-20°C

#11887

# PhosphoPlus® $\beta$ -Catenin (Ser675) Antibody Duet



Cell Signaling  
TECHNOLOGY®

**Support:** +1-978-867-2388 (U.S.)  
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**Entrez-Gene ID** #1499  
**UniProt ID** #P35222

New 07/18

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

Products Included	Product #	Quantity	Mol. Wt.	Isotype
P- $\beta$ -Catenin (S675)(D2F1) XP® Rabbit mAb	4176	100 $\mu$ l	92 kDa	Rabbit IgG
$\beta$ -catenin (D10A8) XP® Rabbit mAb	8480	100 $\mu$ l	92 kDa	Rabbit IgG

See [www.cellsignal.com](http://www.cellsignal.com) for individual component applications, species cross-reactivity, dilutions and additional application protocols.

**Description:** PhosphoPlus® Duets from Cell Signaling Technology (CST) provide a means to assess protein activation status. Each Duet contains an activation-state and total protein antibody to your target of interest. These antibodies have been selected from CST's product offering based upon superior performance in specified applications.

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

**Specificity/Sensitivity:** Phospho- $\beta$ -Catenin (Ser675) (D2F1) XP® Rabbit mAb detects endogenous levels of  $\beta$ -catenin only when phosphorylated at Ser675.  $\beta$ -Catenin (D10A8) XP® Rabbit mAb recognizes endogenous levels of total  $\beta$ -catenin protein.  $\beta$ -Catenin (D10A8) XP® Rabbit mAb recognizes endogenous levels of total  $\beta$ -catenin protein.

**Source/Purification:** Monoclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser675 of human  $\beta$ -catenin or a synthetic peptide corresponding to residues surrounding Pro714 of human  $\beta$ -catenin protein.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

#### Background References:

- (1) Cadigan, K.M. and Nusse, R. (1997) *Genes Dev* 11, 3286-305.
- (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.

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**Applications:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** 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.