

#9565 Store at -20°C

Phospho-β-Catenin (Thr41/Ser45) Antibody

100 μl
 (10 Western mini-blots)



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This product is for *in vitro* research use only and is not intended for use in humans or animals.
 This product is not intended for use as a therapeutic or in diagnostic procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M, Mk, (Pg)	92 kDa	Rabbit**

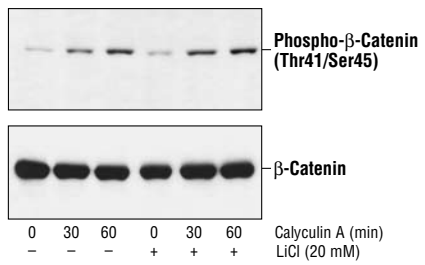
Background: β-catenin is a key downstream effector in the Wnt signaling pathway (1). It is implicated in two major biological processes in vertebrates: early embryonic development (2) and tumorigenesis (3). CK1 phosphorylates β-catenin on Ser45. This phosphorylation event primes β-catenin for subsequent 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).

Specificity/Sensitivity: Phospho-β-Catenin (Thr41/Ser45) Antibody detects endogenous levels of β-catenin only when phosphorylated at Thr41 or Ser45. This antibody does not recognize β-catenin phosphorylated at other sites.

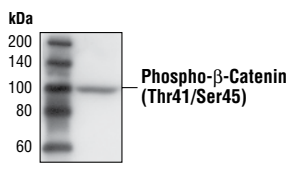
Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic phospho-peptide (KLH-coupled) corresponding to residues surrounding Thr41 and Ser45 of human β-catenin. Antibodies are purified by protein A and peptide affinity chromatography.

Selected Application References:
 Amit, S. et al. (2002) Axin-mediated CKI phosphorylation of Beta-catenin at Ser 45: a molecular switch for the Wnt pathway. *Genes and Development* 16, 1066–1076. Application: W

- Background References:**
- Cadigan, K.M. and Nusse, R. (1997) *Genes Dev.* 11, 3286–3305.
 - Wodarz, A. and Nusse, R. (1998) *Annu. Rev. Cell. Dev. Biol.* 14, 59–88.
 - Polakis, P. (1999) *Curr. Opin. Genet. Dev.* 9, 15–21.
 - Amit, S. et al. (2002) *Genes Dev.* 16, 1066–1076.
 - Lin, C. et al. (2002) *Cell* 108, 837–847.
 - Yanagawa, S. et al. (2002) *EMBO J.* 21, 1742.
 - Yost, C. et al. (1996) *Genes Dev.* 10, 1443–1454.
 - Morin, P.J. (1997) *Science* 275, 1787–1790.



Western blot analysis of extracts from 293 cells pretreated with 20 mM LiCl for 30 minutes and then with 50 nM calyculin A, using Phospho-β-Catenin (Thr41/Ser45) Antibody (upper) or β-Catenin Antibody #9562 (lower).



Western blot analysis of extracts from SW480 cells using Phospho-β-Catenin (Thr41/Ser45) Antibody.

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 and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

***Species cross-reactivity is determined by Western blot.**

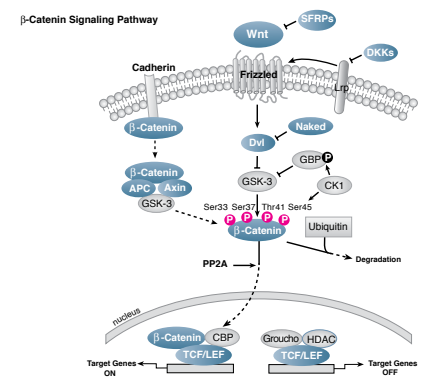
****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:
 Western Blotting 1:1000

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

- Companion Products:**
- Phospho-β-Catenin (Ser33/37/Thr41) Antibody #9561
 - β-Catenin Antibody #9562
 - Phospho-β-Catenin (Thr41/Ser45) Blocking Peptide #1130
 - Anti-rabbit IgG, HRP-linked Antibody #7074
 - Prestained Protein Marker, Broad Range (Premixed Format) #7720
 - Biotinylated Protein Ladder #7727
 - 20X LumiGLO® Reagent and 20X Peroxide #7003

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



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—zebra fish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae All—all species expected Species enclosed in parentheses are predicted to react based on 100% sequence homology.