

Store at -20C  
#2009

## Phospho- $\beta$ -Catenin (Ser33/37) Antibody



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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	H	Endogenous	92	Rabbit	#P35222	1499

<b>Product Usage Information</b>	<b>Application</b> Western Blotting Immunoprecipitation	<b>Dilution</b> 1:1000 1:50
<b>Storage</b>	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 $\mu$ g/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.	
<b>Specificity / Sensitivity</b>	Phospho- $\beta$ -Catenin (Ser33/37) Antibody detects endogenous levels of $\beta$ -catenin only when phosphorylated at Ser33 and Ser37.	
<b>Species predicted to react based on 100% sequence homology:</b>	Mouse, Rat, Xenopus, Zebrafish	
<b>Source / Purification</b>	Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser33 and Ser37 of human $\beta$ -catenin. Antibodies are purified by protein A and peptide affinity chromatography.	
<b>Background</b>	$\beta$ -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).	
<b>Background References</b>	1. Cadigan, K.M. and Nusse, R. (1997) <i>Genes Dev</i> 11, 3286-3305. 2. Wodarz, A. and Nusse, R. (1998) <i>Annu Rev Cell Dev Biol</i> 14, 59-88. 3. Polakis, P. (1999) <i>Curr Opin Genet Dev</i> 9, 15-21. 4. Amit, S. et al. (2002) <i>Genes Dev</i> 16, 1066-76. 5. Liu, C. et al. (2002) <i>Cell</i> 108, 837-47. 6. Yanagawa, S. et al. (2002) <i>EMBO J</i> 21, 1733-42. 7. Yost, C. et al. (1996) <i>Genes Dev</i> 10, 1443-54. 8. Morin, P.J. et al. (1997) <i>Science</i> 275, 1787-90.	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	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.
<b>Applications Key</b>	<b>WB:</b> Western Blotting <b>IP:</b> Immunoprecipitation
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected
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