

#5651 Store at -20C

Phospho- β -Catenin (Ser552) (D8E11) Rabbit mAb


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

Product Usage Information	Application Western Blotting Immunoprecipitation	Dilution 1:1000 1:200
Storage	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C . Do not aliquot the antibody.	
Specificity / Sensitivity	Phospho- β -Catenin (Ser552) (D8E11) Rabbit mAb detects endogenous levels of β -catenin protein only when phosphorylated at Ser552.	
Species predicted to react based on 100% sequence homology:	Rat, Xenopus, Zebrafish	
Source / Purification	Monoclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser552 of human β -catenin protein.	
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). Both Akt and PKA were shown to phosphorylate β-catenin at Ser552. Phosphorylation at Ser552 induces β-catenin accumulation in the nucleus and increases its transcriptional activity (9-11).	
Background References	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. 9. Taurin, S. et al. (2006) <i>J Biol Chem</i> 281, 9971-9976. 10. Fang, D. et al. (2007) <i>J Biol Chem</i> 282, 11221-11229. 11. He, X.C. et al. (2007) <i>Nat Genet</i> 39, 189-198.	

Species Reactivity	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
Western Blot Buffer	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.
Applications Key	WB: Western Blotting IP: Immunoprecipitation
Cross-Reactivity Key	

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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