

**#9566** Store at -20C

## Phospho- $\beta$ -Catenin (Ser552) Antibody


**Cell Signaling**  
TECHNOLOGY®

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

|  |  |                                   |
|--|--|-----------------------------------|
| <b>Product Usage Information</b>                                   | <b>Application</b><br>Western Blotting<br>Immunoprecipitation  | <b>Dilution</b><br>1:1000<br>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 (Ser552) Antibody detects endogenous levels of $\beta$ -catenin only when phosphorylated at Ser552.  |                                   |
| <b>Species predicted to react based on 100% sequence homology:</b> | Rat, Chicken, Xenopus, Zebrafish   |                                   |
| <b>Source / Purification</b>                                       | Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser552 of human $\beta$ -catenin. Antibodies are purified by peptide affinity chromatography.   |                                   |
| <b>Background</b>  | <p><math>\beta</math>-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 <math>\beta</math>-catenin at Ser45. This phosphorylation event primes <math>\beta</math>-catenin for subsequent phosphorylation by GSK-3<math>\beta</math> (4-6). GSK-3<math>\beta</math> destabilizes <math>\beta</math>-catenin by phosphorylating it at Ser33, Ser37, and Thr41 (7). Mutations at these sites result in the stabilization of <math>\beta</math>-catenin protein levels and have been found in many tumor cell lines (8).</p> <p>Both Akt and PKA were shown to phosphorylate <math>\beta</math>-catenin at Ser552. Phosphorylation at Ser552 induces <math>\beta</math>-catenin accumulation in the nucleus and increases its transcriptional activity (9-11).</p> |                                   |
| <b>Background References</b>                                       | 1. Cadigan, K.M. and Nusse, R. (1997) <i>Genes Dev</i> 11, 3286-3305.<br>2. Wodarz, A. and Nusse, R. (1998) <i>Annu Rev Cell Dev Biol</i> 14, 59-88.<br>3. Polakis, P. (1999) <i>Curr Opin Genet Dev</i> 9, 15-21.<br>4. Amit, S. et al. (2002) <i>Genes Dev</i> 16, 1066-76.<br>5. Liu, C. et al. (2002) <i>Cell</i> 108, 837-47.<br>6. Yanagawa, S. et al. (2002) <i>EMBO J</i> 21, 1733-42.<br>7. Yost, C. et al. (1996) <i>Genes Dev</i> 10, 1443-54.<br>8. Morin, P.J. et al. (1997) <i>Science</i> 275, 1787-90.<br>9. Taurin, S. et al. (2006) <i>J. Biol. Chem.</i> 281, 9971-9976.<br>10. Fang, D. et al. (2007) <i>J. Biol. Chem.</i> 282, 11221-11229.<br>11. He, X.C. et al. (2007) <i>Nat. Genet.</i> 39, 189-198.  |                                   |

|                             |  |
|-----------------------------|--|
| <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> |  |

**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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