



PhosphoSolutions®
Antibodies that work™

Colorado Biosciences Park
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Anti-Phospho-Ser^{33,37} β -Catenin

Catalog Number: p120-3337

Size: 100 μ l

\$310.00

Product Description: Affinity purified rabbit polyclonal antibody

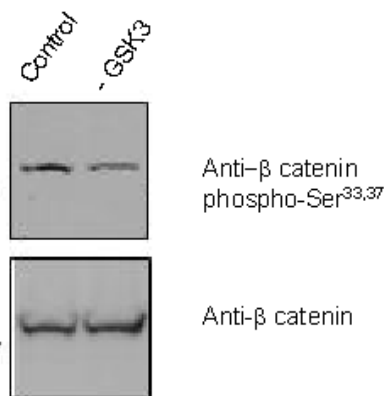
Applications: **WB:** 1:1000

Antigen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser^{33,37} of human β -catenin.

Species reactivity: The antibody has been directly tested for reactivity in Western blots with human tissue. It is anticipated that the antibody will react with mouse, rat and *Xenopus* based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

Biological Significance: β -catenin is a central component of the cadherin cell adhesion complex and plays an essential role in neural development in the Wingless/Wnt signaling pathway (Ding and Dale, 2002; Polakis, 2000). The role of β -catenin in these processes is thought regulated by the sequential phosphorylation of Ser²⁹, Ser³³, Ser³⁷ and Thr⁴¹ by glycogen synthase kinase 3 β (GSK3 β) (Liu et al., 2002). This hyperphosphorylation promotes the ubiquitylation and targeted destruction of β -catenin. Mutations in components of this phosphorylation regulated process that prevent β -catenin hyperphosphorylation by GSK3 β are strongly associated with cancers (Wang et al., 2003; Polakis, 2000; Liu et al., 2002).

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Western blot of human embryonic kidney cell (HEK) lysate showing specific immunolabeling of the ~83k β -catenin phosphorylated at Ser³³ and Ser³⁷ (Upper Panel) and a pan β -catenin (Lower Panel). Control is a standard HEK cell lysate. GSK3 is a HEK cell lysate with glycogen synthase kinase 3 β knocked down by siRNA.

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WB = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation

Packaging: 100 μ l in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 μ g BSA per ml and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.

Storage and Stability. For long term storage -20°C is recommended. Stable at -20°C for at least 1 year.

Shipment: Domestic - Blue Ice; International - Blue Ice or Dry Ice.

Purification Method: Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Antibody Specificity: Specific for the ~83k β -catenin phosphorylated at Ser³³ and Ser³⁷.

Quality Control Tests: Western blots performed on each lot.

References:

Ding Y, Dale, T (2002) Wnt signal transduction: kinase cogs in a nano-machine? Trends Biochem Sci 27:327-329.

Liu C, Li Y, Semenov M, Han C, Baeg GH, Tan Y, Zhang Z, Lin X, He X (2002) Control of β -catenin phosphorylation/degradation by a dual-kinase mechanism. Cell 108:837-847.

Polakis P (2000) Wnt signaling and cancer. Genes Dev 14:1837-1851.

Wang ZH, Vogelstein B, Kinzler KW (2003) Phosphorylation of β -catenin at S33, S37, or T41 can occur in the absence of phosphorylation at T45 in colon cancer cells. Cancer Res 63:5234-5235.

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