Store at –20°C

#1027

Phospho-GSK-3α (Ser21) Blocking Peptide

☑ 100 µg

Cell Signaling TECHNOLOGY®

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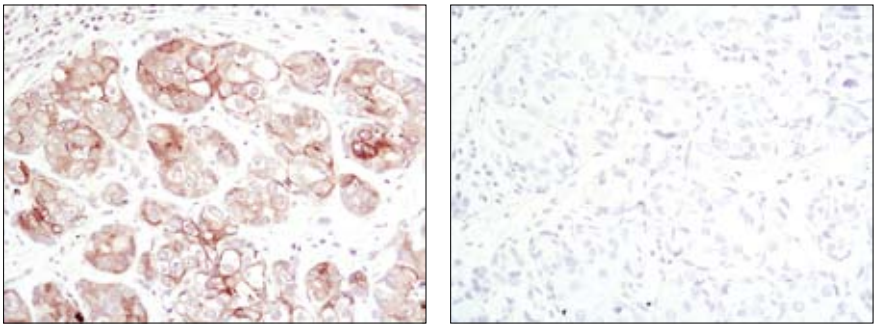
New 03/07

This product is for *in vitro* research use only and is not intended for use in humans or animals.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma using Phospho-GSK-3α (Ser21) (36E9) Rabbit mAb #9316 in the presence of control peptide (left) or Phospho-GSK-3α (Ser21) (36E9) Blocking Peptide (right).

Background: Glycogen synthase kinase-3 (GSK-3) was initially identified as an enzyme that regulated glycogen synthesis in response to insulin (1). GSK-3 is a ubiquitously expressed serine/threonine protein kinase that phosphorylates and inactivates glycogen synthase. GSK-3 is a critical downstream element of the PI3 kinase/Akt cell survival pathway, and its activity can be inhibited by Akt-mediated phosphorylation at Ser21 of GSK-3α and Ser9 of GSK-3β (2,3). GSK-3 has been implicated in the regulation of cell fate in *Dictyostelium*, and is a component of the Wnt signaling pathway required for *Drosophila*, *Xenopus* and mammalian development (4). GSK-3 has been shown to regulate cyclin D1 proteolysis and subcellular localization (5).

Description: This peptide is used to block Phospho-GSK-3α (Ser21) (36E9) Rabbit mAb #9316 reactivity.

Quality Control: The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. The peptide blocks Phospho-GSK-3α (Ser21) (36E9) Rabbit mAb #9316 by immunohistochemistry.

Directions for Use: For immunohistochemistry, add twice the volume of peptide as volume of antibody used in 100 µl total volume. Incubate for a minimum of 30 minutes prior to adding the entire volume to the slide. Recommended antibody dilutions can be found on the product data sheet.

Applications: Use as a blocking reagent to evaluate the specificity of antibody reactivity in immunohistochemistry protocols.

Background References:

(1) Welsh, G.I. et al. (1996) *Trends Cell. Biol.* 6, 274–279.

(2) Srivastava, A.K. and Pandey, S.K. (1998) *Mol. Cell. Biochem.* 182, 135–141.

(3) Cross, D.A. et al. (1995) *Nature* 378, 785–789.

(4) Nusse, R. (1997) *Cell* 89, 321–323.

(5) Diehl, J.A. et al. (1998) *Genes Dev.* 12, 3499–3511.

Storage: Supplied in 20 mM potassium phosphate (pH 7.0), 50 mM NaCl, 0.1 mM EDTA, 1 mg/ml BSA and 5% glycerol. Store at –20°C.

Companion Products:

Phospho-GSK-3α (Ser21) (36E9) Rabbit mAb #9316

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **IC**—Immunocytochemistry **IF**—Immunofluorescence **F**—Flow cytometry **E**—ELISA **D**—DELFIA®

Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **X**—Xenopus **Z**—zebra fish **B**—bovine **All**—all species expected

Species enclosed in parentheses are predicted to react based on 100% sequence homology.