

GSK-3β (27C10) Rabbit mAb



Orders ■ 877-616-CELL (2355)
orders@cellsignal.com

Support ■ 877-678-TECH (8324)
info@cellsignal.com

Web ■ www.cellsignal.com

rev. 04/06/16

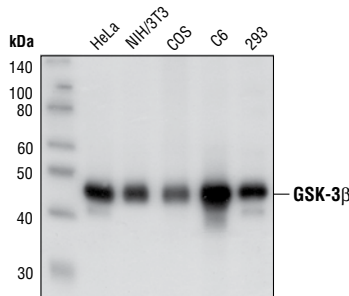
For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IHC-P Endogenous	H, M, R, Mk	46 kDa	Rabbit IgG**

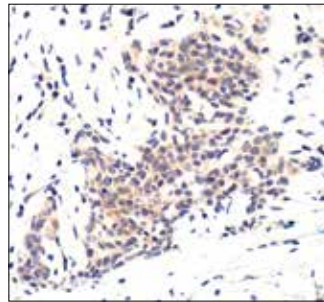
Background: Glycogen synthase kinase-3 (GSK-3) was initially identified as an enzyme that regulated glycogen synthesis in response to insulin (1). GSK-3 is a ubiquitously expressed serine/threonine protein kinase that phosphorylates and inactivates glycogen synthase. GSK-3 is a critical downstream element 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).

Specificity/Sensitivity: GSK-3β (27C10) Rabbit mAb detects endogenous levels of total GSK-3β protein.

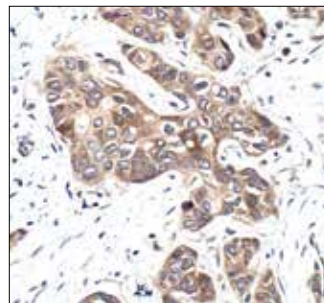
Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to the sequence of human GSK-3β.



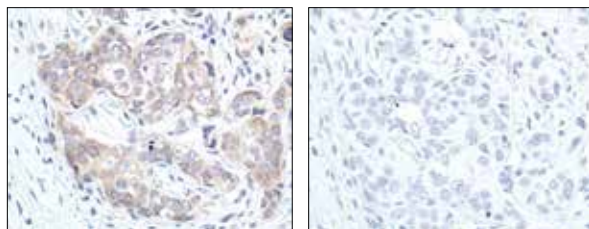
Western blot analysis of extracts from HeLa, NIH/3T3, COS, C6 and 293 cells using GSK-3β (27C10) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human lung carcinoma using GSK-3β (27C10) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma, showing cytoplasmic and nuclear localization using GSK-3β (27C10) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma, using GSK-3β (27C10) Rabbit mAb in the presence of control peptide (left) or GSK-3β Blocking Peptide #1073 (right).

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

Entrez-Gene ID #2932
UniProt ID #P49841

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50
Immunohistochemistry (Paraffin)	1:100†
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Detection reagent:	SignalStain® Boost (HRP, Rabbit) #8114

†Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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.

U.S. Patent No. 5,675,063

Tween®20 is a registered trademark of ICI Americas, Inc.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.