

Store at  
-20°C

# PhosphoPlus® GSK-3β (Ser9) Antibody Duet



Cell Signaling  
TECHNOLOGY®

#8213

rev. 06/29/20

Support: +1-978-867-2388 (U.S.)  
www.cellsignal.com/support

Orders: 877-616-2355 (U.S.)  
orders@cellsignal.com

Entrez-Gene ID #2932  
UniProt ID #P49841

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

Products Included	Product #	Quantity	Mol. Wt.	Isotype
P-GSK-3-β (S9) (D85E12) XP® Rabbit mAb	5558	100 µl	46 kDa	Rabbit IgG
GSK-3-β (D5C5Z) XP® Rabbit mAb	12456	100 µl	46 kDa	Mouse IgG2a

See [www.cellsignal.com](http://www.cellsignal.com) for individual component applications, species cross-reactivity, dilutions and additional application protocols.

**Description:** PhosphoPlus® Duets from Cell Signaling Technology (CST) provide a means to assess protein activation status. Each Duet contains an activation-state and total protein antibody to your target of interest. These antibodies have been selected from CST's product offering based upon superior performance in specified applications.

**Background:** Glycogen synthase kinase-3 (GSK-3) was initially identified as an enzyme that regulates 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 PI3K/Akt cell survival pathway whose 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:** Phospho-GSK-3β (Ser9) (D85E12) XP® Rabbit mAb detects endogenous levels of GSK-3β only when phosphorylated at Ser9. This antibody reacts with denatured components of bovine serum, including BSA. GSK-3β (D5C5Z) XP® Rabbit mAb recognizes endogenous levels of total GSK-3α protein. This antibody does not cross-react with GSK-3α protein.

**Source/Purification:** Monoclonal antibodies are produced by immunizing animals either with a synthetic phosphopeptide corresponding to residues surrounding Ser9 of human GSK-3β, or with recombinant protein specific to the carboxy-terminus of human GSK-3β protein.

**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.

#### Background References:

- (1) Welsh, G.I. et al. (1996) *Trends Cell Biol* 6, 274-9.
- (2) Srivastava, A.K. and Pandey, S.K. (1998) *Mol Cell Biochem* 182, 135-41.
- (3) Cross, D.A. et al. (1995) *Nature* 378, 785-9.
- (4) Nusse, R. (1997) *Cell* 89, 321-3.
- (5) Diehl, J.A. et al. (1998) *Genes Dev* 12, 3499-511.

U.S. Patent No. 7,429,487, foreign equivalents, and child patents deriving therefrom.

Thank you for your recent purchase. If you would like to provide a review visit [cellsignal.com/comments](http://cellsignal.com/comments).

[www.cellsignal.com](http://www.cellsignal.com)

© 2018 Cell Signaling Technology, Inc.

PhosphoPlus and Cell Signaling Technology are trademarks of Cell Signaling Technology, Inc.

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