

Store at
-20C
#12456**GSK-3 β (D5C5Z) XP[®] Rabbit mAb**
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, W-S, IP, IHC-P, IF-IC, FC-FP	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 46	Source/Isotype: Rabbit IgG	UniProt ID: #P49841	Entrez-Gene Id: 2932
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Product Usage Information**Application**

Western Blotting
Simple Western™
Immunoprecipitation
Immunohistochemistry (Paraffin)
Immunofluorescence (Immunocytochemistry)
Flow Cytometry (Fixed/Permeabilized)

Dilution

1:1000
1:50 - 1:250
1:50
1:400 - 1:1600
1:200 - 1:800
1:100 - 1:400

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.

For a carrier free (BSA and azide free) version of this product see product #37653.

Specificity/Sensitivity

GSK-3 β (D5C5Z) XP[®] Rabbit mAb recognizes endogenous levels of total GSK-3 β protein. This antibody does not cross-react with GSK-3 α protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the carboxy terminus of human GSK-3 β protein.

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-3 α and Ser9 of GSK-3 β (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).

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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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.

Applications Key

W: Western Blotting **W-S:** Simple Western™ **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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