

P-GSK-3 α/β (S21/9) Rabbit mAb [U505]

Cat NO. :A49842

Information:

Applications	Reactivity:	UniProt ID:	MW(kDa)	Host	Isotype	Size
WB	H,M,R	P49840,P49841	51, 46 kDa	Rabbit	IgG	100ul,200ul

Applications detail:

Application	Dilution
WB	1:1000-2000
The optimal dilutions should be determined by the end user	

Conjugate:

UnConjugate

Form:

Liquid

sensitivity:

Endogenous

Purification:

Protein A purification

Specificity:

Antibody is produced by immunizing animals with a synthetic peptide at the sequence of Human Phospho-GSK-3 α/β (Ser21/9)

Storage buffer and conditions:

Antibody store in 10 mM PBS, 0.5mg/ml BSA, 50% glycerol (buffer) .

Shipped at 4°C. Store at-20°C or -80°C.

Products are valid for one natural year of receipt.Avoid repeated freeze / thaw cycles.

Tissue specificity:

Expressed in testis, thymus, prostate and ovary and weakly expressed in lung, brain and kidney. Colocalizes with EIF2AK2/PKR and TAU in the Alzheimer disease (AD) brain..

Subcellular location:

Cytoplasm. Nucleus. Cell membrane.

Function:

Introduction: **WB:** Western Blot **IP:** Immunoprecipitation **IHC:** Immunohistochemistry **ChIP:** Chromatin Immunoprecipitation **ICC/IF:** Immunocytochemistry/Immunofluorescence **F:** Flow Cytometry

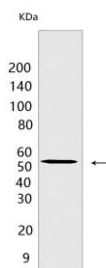
Cross Reactivity: **H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Ml:** mink **C:** chicken **Dm** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Hr:** horse

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Constitutively active protein kinase that acts as a negative regulator in the hormonal control of glucose homeostasis, Wnt signaling and regulation of transcription factors and microtubules, by phosphorylating and inactivating glycogen synthase (GYS1 or GYS2), EIF2B, CTNNB1/beta-catenin, APC, AXIN1, DPYSL2/CRMP2, JUN, NFATC1/NFATC, MAPT/TAU and MACF1 (PubMed:1846781, PubMed:9072970, PubMed:14690523, PubMed:20937854, PubMed:12554650, PubMed:11430833, PubMed:16484495). Requires primed phosphorylation of the majority of its substrates (PubMed:11430833, PubMed:16484495). In skeletal muscle, contributes to insulin regulation of glycogen synthesis by phosphorylating and inhibiting GYS1 activity and hence glycogen synthesis (PubMed:8397507). May also mediate the development of insulin resistance by regulating activation of transcription factors (PubMed:8397507). Regulates protein synthesis by controlling the activity of initiation factor 2B (EIF2BE/EIF2B5) in the same manner as glycogen synthase (PubMed:8397507). In Wnt signaling, GSK3B forms a multimeric complex with APC, AXIN1 and CTNNB1/beta-catenin and phosphorylates the N-terminus of CTNNB1 leading to its degradation mediated by ubiquitin/proteasomes (PubMed:12554650). Phosphorylates JUN at sites proximal to its DNA-binding domain, thereby reducing its affinity for DNA (PubMed:1846781). Phosphorylates NFATC1/NFATC on conserved serine residues promoting NFATC1/NFATC nuclear export, shutting off NFATC1/NFATC gene regulation, and thereby opposing the action of calcineurin (PubMed:9072970). Phosphorylates MAPT/TAU on 'Thr-548', decreasing significantly MAPT/TAU ability to bind and stabilize microtubules (PubMed:14690523). MAPT/TAU is the principal component of neurofibrillary tangles in Alzheimer disease (PubMed:14690523). Plays an important role in ERBB2-dependent stabilization of microtubules at the cell cortex (PubMed:20937854). Phosphorylates MACF1, inhibiting its binding to microtubules which is critical for its role in bulge stem cell migration and skin wound repair (By similarity). Probably regulates NF-kappa-B (NFKB1) at the transcriptional level and is required for the NF-kappa-B-mediated anti-apoptotic response to TNF-alpha (TNF/TNFA) (By similarity). Negatively regulates replication in pancreatic beta-cells, resulting in apoptosis, loss of beta-cells and diabetes (By similarity). Through phosphorylation of the anti-apoptotic protein MCL1, may control cell apoptosis in response to growth factors deprivation (By similarity). Phosphorylates MUC1 in breast cancer cells, decreasing the interaction of MUC1 with CTNNB1/beta-catenin (PubMed:9819408). Is necessary for the establishment of neuronal polarity and axon outgrowth (PubMed:20067585). Phosphorylates MARK2, leading to inhibition of its activity (By similarity). Phosphorylates SIK1 at 'Thr-182', leading to sustainment of its activity (PubMed:18348280). Phosphorylates ZC3HAV1 which enhances its antiviral activity (PubMed:22514281).

Validation Data:

P-GSK-3 α / β (S21/9) Rabbit mAb [U505] Images



Western blot (SDS PAGE) analysis of extracts from COS-7 cells PDGF-treated (100 μ g/ml 15 min). Using P-GSK-3 α / β (S21/9) Rabbit mAb [U505] at dilution of 1:1000

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IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 1% w/v Milk, 1X TBST at 4°C overnight.