

GSK3 β Monoclonal Antibody

Catalog No :	YM0318
Reactivity :	Human;Mouse;Rat;Monkey
Applications :	WB;IHC;IF;FCM;ELISA
Target :	GSK3 β
Fields :	>>EGFR tyrosine kinase inhibitor resistance;>>ErbB signaling pathway;>>Chemokine signaling pathway;>>Cell cycle;>>mTOR signaling pathway;>>PI3K-Akt signaling pathway;>>Wnt signaling pathway;>>Hedgehog signaling pathway;>>Axon guidance;>>Hippo signaling pathway;>>Focal adhesion;>>Signaling pathways regulating pluripotency of stem cells;>>IL-17 signaling pathway;>>T cell receptor signaling pathway;>>B cell receptor signaling pathway;>>Neurotrophin signaling pathway;>>Dopaminergic synapse;>>Insulin signaling pathway;>>Melanogenesis;>>Prolactin signaling pathway;>>Thyroid hormone signaling pathway;>>Insulin resistance;>>Non-alcoholic fatty liver disease;>>Cushing syndrome;>>Growth hormone synthesis, secretion and action;>>Alcoholic liver disease;>>Alzheimer disease;>>Prion disease;>>Pathways of neurodegeneration - multiple diseases;>>Shigellosis;>>Yersinia infection;>>Hepatitis C;>>Measles;>>Human cytomegalovirus infection;>>Human papillomavirus infection;>>Kaposi sarcoma-associated herpes
Gene Name :	GSK3B
Protein Name :	Glycogen synthase kinase-3 beta
Human Gene Id :	2942
Human Swiss Prot No :	P49841
Mouse Gene Id :	56637
Mouse Swiss Prot No :	Q9WV60
Rat Gene Id :	84027
Rat Swiss Prot No :	P18266

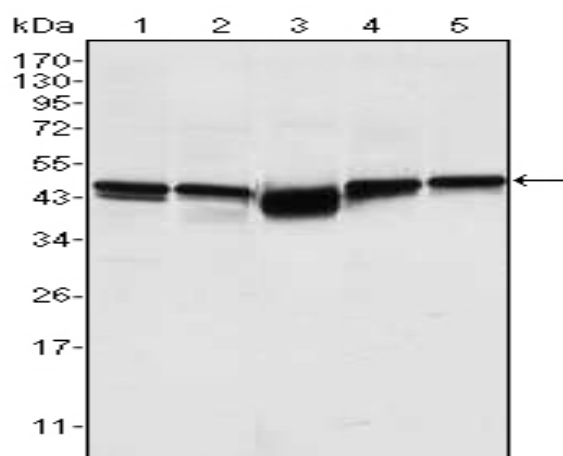
Immunogen :	<u>Purified recombinant fragment of human GSK3β expressed in E. Coli.</u>
Specificity :	<u>GSK3β Monoclonal Antibody detects endogenous levels of GSK3β protein.</u>
Formulation :	<u>Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.</u>
Source :	<u>Monoclonal, Mouse</u>
Dilution :	<u>WB 1:500 - 1:2000. IHC 1:200 - 1:1000. IF 1:200 - 1:1000. Flow cytometry: 1:200 - 1:400. ELISA: 1:10000. Not yet tested in other applications.</u>
Purification :	<u>Affinity purification</u>
Storage Stability :	<u>-15°C to -25°C/1 year(Do not lower than -25°C)</u>
Molecularweight :	<u>47kD</u>
Cell Pathway :	<u>ErbB_HER;Chemokine;Cell_Cycle_G1S;Cell_Cycle_G2M_DNA;WNT;WNT-T CELLHedgehog;Axon guidance;Focal adhesion;T_Cell_Receptor;B_Cell_Antigen ;Neurotrophin;Insulin_Receptor;Melanogenesis;Alzheimer's disease;</u>
P References :	<u>1. EMBO J. 1998 Mar 2;17(5):1371-84. 2. Curr Biol. 2001 Jan 9;11(1):44-9. 3. Cancer Lett. 2003 Sep 25;199(2):201-8.</u>
Background :	<u>The protein encoded by this gene is a serine-threonine kinase, belonging to the glycogen synthase kinase subfamily. It is involved in energy metabolism, neuronal cell development, and body pattern formation. Polymorphisms in this gene have been implicated in modifying risk of Parkinson disease, and studies in mice show that overexpression of this gene may be relevant to the pathogenesis of Alzheimer disease. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.[provided by RefSeq, Sep 2009],</u>
Function :	<u>catalytic activity:ATP + [tau protein] = ADP + [tau protein] phosphate.,enzyme regulation:Inhibited when phosphorylated by AKT1.,function:Participates in the Wnt signaling pathway. Implicated in the hormonal control of several regulatory proteins including glycogen synthase, MYB and the transcription factor JUN. Phosphorylates JUN at sites proximal to its DNA-binding domain, thereby reducing its affinity for DNA. Phosphorylates MUC1 in breast cancer cells, and decreases the interaction of MUC1 with CTNNB1/beta-catenin.,PTM:Phosphorylated by AKT1 and ILK1.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. GSK-3 subfamily.,similarity:Contains 1 protein kinase domain.,subunit:Monomer (By similarity). Interacts with CABYR, MUC1, NIN and PRUNE.,tissue specificity:Expressed in testis, thymus, prostate</u>

Subcellular Location :

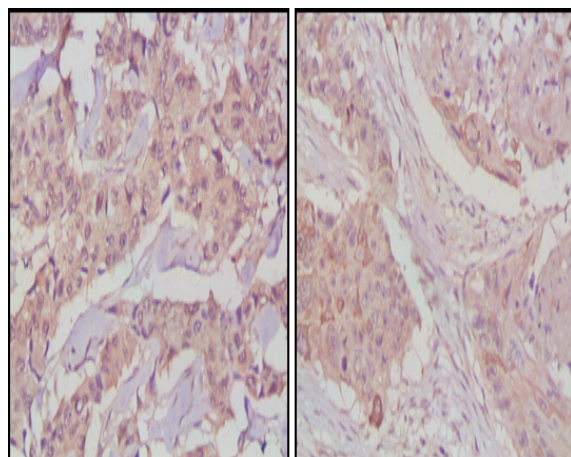
Cytoplasm . Nucleus . Cell membrane . The phosphorylated form shows localization to cytoplasm and cell membrane (PubMed:20937854). The MEMO1-RHOA-DIAPH1 signaling pathway controls localization of the phosphorylated form to the cell membrane (PubMed:20937854) .

Expression :

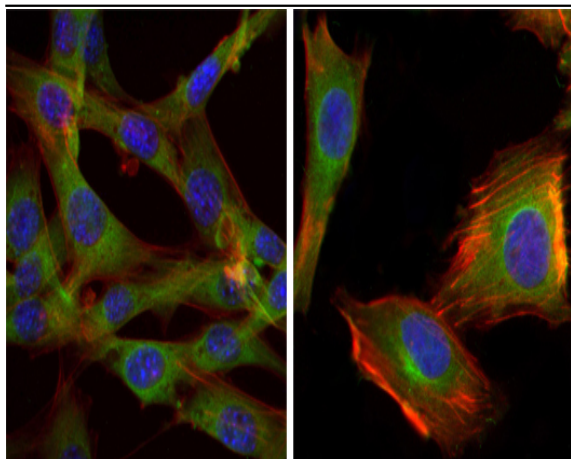
Expressed in testis, thymus, prostate and ovary and weakly expressed in lung, brain and kidney. Colocalizes with EIF2AK2/PKR and TAU in the Alzheimer disease (AD) brain.

Products Images

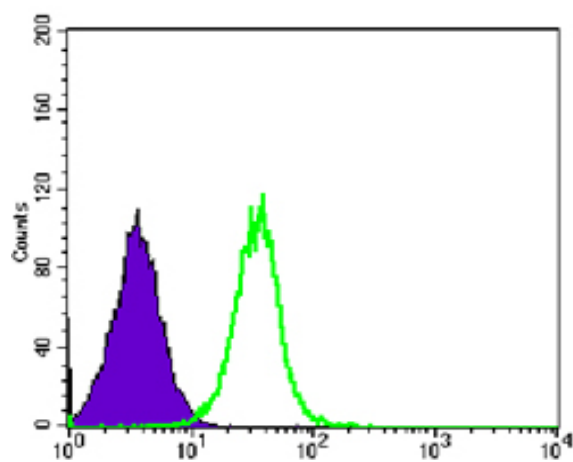
Western Blot analysis using GSK3 β Monoclonal Antibody against A549 (1), K562 (2), PC-12 (3), NIH/3T3 (4), and HEK293 (5) cell lysate.



Immunohistochemistry analysis of paraffin-embedded human lung cancer (left) and breast cancer tissues (right) with DAB staining using GSK3 β Monoclonal Antibody.



Immunofluorescence analysis of NIH/3T3 (left) and U251 (right) cells using GSK3 β Monoclonal Antibody (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.



Flow cytometric analysis of HeLa cells using GSK3 β Monoclonal Antibody (green) and negative control (purple).