Datasheet for ABIN7345946

anti-GSK3 beta antibody (AA 1-420)

2 Images

Go to Product page

Overview

Quantity:	50 µg
Target:	GSK3 beta (GSK3b)
Binding Specificity:	AA 1-420
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This GSK3 beta antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunofluorescence (IF)

Product Details

Immunogen:	Recombinant Human Glycogen synthase kinase-3 beta protein (1-420AA)
Isotype:	IgG
Cross-Reactivity:	Human, Mouse
Purification:	>95%, Protein G purified

Target Details

Target:	GSK3 beta (GSK3b)
Alternative Name:	GSK3B (GSK3b Products)
Background:	Background: 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. Requires primed phosphorylation of the majority of its substrates. In skeletal muscle, contributes to insulin regulation of glycogen synthesis by phosphorylating and inhibiting GYS1 activity and hence glycogen synthesis. May also mediate the development of insulin resistance by regulating activation of transcription factors. Regulates protein synthesis by controlling the activity of initiation factor 2B (EIF2BE/EIF2B5) in the same manner as glycogen synthase. 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. Phosphorylates JUN at sites proximal to its DNA-binding domain, thereby reducing its affinity for DNA. 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. Phosphorylates MAPT/TAU on \\\'Thr-548\\\', decreasing significantly MAPT/TAU ability to bind and stabilize microtubules. MAPT/TAU is the principal component of neurofibrillary tangles in Alzheimer disease. Plays an important role in ERBB2-dependent stabilization of microtubules at the cell cortex. Phosphorylates MACF1, inhibiting its binding to microtubules which is critical for its role in bulge stem cell migration and skin wound repair. 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). Negatively regulates replication in pancreatic beta-cells, resulting in apoptosis, loss of beta-cells and diabetes. Through phosphorylation of the anti-apoptotic protein MCL1, may control cell apoptosis in response to growth factors deprivation. Phosphorylates MUC1 in breast cancer cells, decreasing the interaction of MUC1 with CTNNB1/beta-catenin. Is necessary for the establishment of neuronal polarity and axon outgrowth. Phosphorylates MARK2, leading to inhibit its activity. Phosphorylates SIK1 at \\\'Thr-182\\\', leading to sustain its activity. Phosphorylates ZC3HAV1 which enhances its antiviral activity. Phosphorylates SNAI1, leading to its BTRC-triggered ubiquitination and proteasomal degradation. Phosphorylates SFPQ at \\\'Thr-687\\\' upon T-cell activation. Phosphorylates NR1D1 st \\\'Ser-55\\\' and \\\'Ser-59\\\' and stabilizes it by protecting it from proteasomal degradation. Regulates the circadian clock via phosphorylation of the major clock components including ARNTL/BMAL1, CLOCK and PER2. Phosphorylates CLOCK AT \\\'Ser-427\\\' and targets it for proteasomal degradation. Phosphorylates ARNTL/BMAL1 at \\\'Ser-17\\\' and \\\'Ser-21\\\' and primes it for ubiquitination and proteasomal degradation. Phosphorylates OGT at \\\'Ser-3\\\' or \\\'Ser-4\\\' which positively regulates its activity. Phosphorylates MYCN in neuroblastoma cells which may promote its degradation (PubMed:24391509).

Target Details

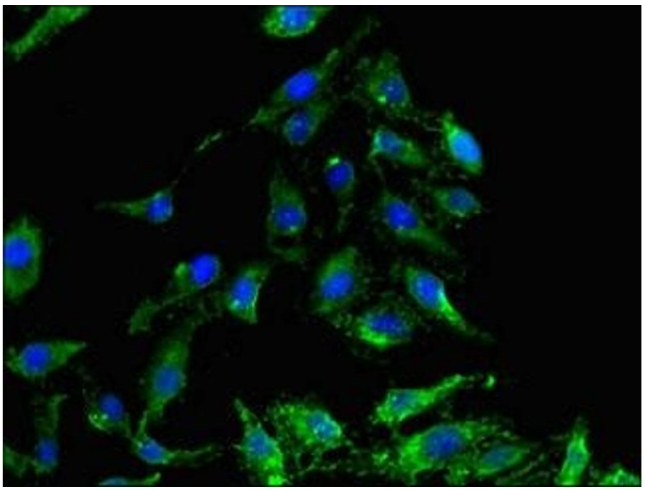
	Aliases: Glycogen Synthase Kinase 3 Beta antibody, Glycogen synthase kinase-3 beta antibody, GSK 3 beta antibody, GSK-3 beta antibody, GSK3B antibody, GSK3B_HUMAN antibody, GSK3beta isoform antibody, Serine/threonine-protein kinase GSK3B antibody
UniProt:	P49841
Pathways:	WNT Signaling, Hedgehog Signaling, Fc-epsilon Receptor Signaling Pathway, Cellular Glucan Metabolic Process, ER-Nucleus Signaling, Regulation of Carbohydrate Metabolic Process, Hepatitis C, Autophagy, BCR Signaling, Warburg Effect

Application Details

Application Notes:	Recommended dilution: WB:1:1000-1:5000, IF:1:50-1:200,
Restrictions:	For Research Use only

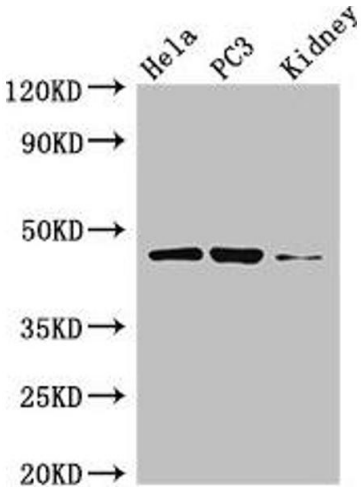
Handling

Format:	Liquid
Buffer:	Preservative: 0.03 % Proclin 300 Constituents: 50 % Glycerol, 0.01M PBS, PH 7.4
Preservative:	ProClin
Precaution of Use:	This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C,-80 °C
Storage Comment:	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.



Immunofluorescence

Image 1. Immunofluorescent analysis of Hela cells using at dilution of 1:100 and Alexa Fluor 488-congugated AffiniPure Goat Anti-Rabbit IgG(H+L)



Western Blotting

Image 2. Western Blot Positive WB detected in: Hela whole cell lysate, PC-3 whole cell lysate, Mouse kidney tissue All lanes: GSK3B antibody at 3 µg/mL Secondary Goat polyclonal to rabbit IgG at 1/50000 dilution Predicted band size: 47, 49 kDa Observed band size: 47 kDa

