

Datasheet for ABIN6243415
anti-GSK3 beta antibody (AA 2-33)[Go to Product page](#)

1 Image

Overview

Quantity:	200 µL
Target:	GSK3 beta (GSK3b)
Binding Specificity:	AA 2-33
Reactivity:	Human, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This GSK3 beta antibody is un-conjugated
Application:	Western Blotting (WB)

Product Details

Immunogen:	This GSK3B (Ser9) antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 2-33 amino acids from human GSK3B.
Clone:	RB56641
Isotype:	Ig Fraction
Predicted Reactivity:	M, X
Purification:	This antibody is purified through a protein A column, followed by peptide affinity purification.

Target Details

Target:	GSK3 beta (GSK3b)
Alternative Name:	GSK-3B (GSK3b Products)

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 at '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.

Target Details

Molecular Weight:	46744
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

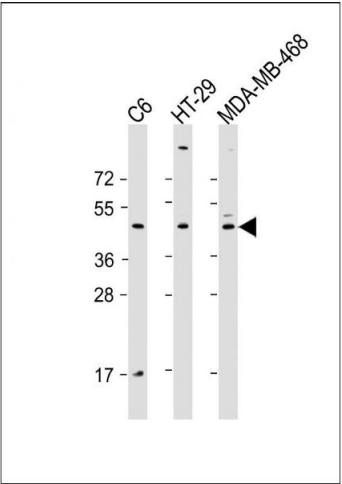
Application Details

Application Notes:	WB: 1:2000
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	Purified polyclonal antibody supplied in PBS with 0.09 % (W/V) sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C, -20 °C
Expiry Date:	6 months

Images



Western Blotting

Image 1. All lanes : Anti-GSK3B Antibody at 1:2000 dilution
Lane 1: C6 whole cell lysate Lane 2: HT-29 whole cell lysate Lane 3: MDA-MB-468 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 47 kDa Blocking/Dilution buffer: 5 % NFDm/TBST.