Product Name: Phospho-GSK3 (alpha + beta)(Y216 + Y279) (17D9) Rabbit Monoclonal Antibody
Catalog #: AMRe05914

Summary

Production Name	Phospho-GSK3 (alpha + beta)(Y216 + Y279) (17D9) Rabbit Monoclonal Antibody
Description	Rabbit Monoclonal Antibody
Host	Rabbit
Application	WB
Reactivity	Human,Mouse,Rat

Performance

Conjugation	Unconjugated
Modification	Phospho Antibody
Isotype	IgG
Clonality	Monoclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Supplied in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% New type preservative N and 0.05% BSA.
Purification	Affinity purification

Immunogen

Gene Name	GSK3A
Alternative Names	Glycogen synthase kinase-3 alpha; GSK-3 alpha; GSK3A
Gene ID	2931.0
SwissProt ID	P49840.A synthetic phosphopeptide corresponding to residues surrounding Tyr216 of human GSK3 alpha

Application

Dilution Ratio	WB: 1:1000
Molecular Weight	51,47kDa

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Background

GSK3A a proline-directed protein kinase of the GSK family. Implicated in the control of several regulatory proteins including glycogen synthase, Myb, and c-Jun. GSK3 and GSK3 have similar functions. GSK3 phophorylates tau, the principal component of neurofibrillary tangles in Alzheimer disease and is required for maximal production of amyloid plaque peptides by secretase. 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), CTNNB1/beta-catenin, APC and AXIN1 (PubMed:11749387, PubMed:17478001, PubMed:19366350). Requires primed phosphorylation of the majority of its substrates (PubMed:11749387, PubMed:17478001, PubMed:19366350). Contributes to insulin regulation of glycogen synthesis by phosphorylating and inhibiting GYS1 activity and hence glycogen synthesis (PubMed:11749387, PubMed:17478001, PubMed:19366350). Regulates glycogen metabolism in liver, but not in muscle (By similarity). May also mediate the development of insulin resistance by regulating activation of transcription factors (PubMed:10868943, PubMed:17478001). In Wnt signaling, regulates the level and transcriptional activity of nuclear CTNNB1/beta-catenin (PubMed:17229088). Facilitates amyloid precursor protein (APP) processing and the generation of APP-derived amyloid plaques found in Alzheimer disease (PubMed:12761548). May be involved in the regulation of replication in pancreatic beta-cells (By similarity). Is necessary for the establishment of neuronal polarity and axon outgrowth (By similarity). Through phosphorylation of the anti-apoptotic protein MCL1, may control cell apoptosis in response to growth factors deprivation (By similarity). Acts as a regulator of autophagy by mediating phosphorylation of KAT5/TIP60 under starvation conditions, leading to activate KAT5/TIP60 acetyltransferase activity and promote acetylation of key autophagy regulators, such as ULK1 and RUBCNL/Pacer (PubMed:30704899). Negatively regulates extrinsic apoptotic signaling pathway via death domain receptors. Promotes the formation of an anti- apoptotic complex, made of DDX3X, BRIC2 and GSK3B, at death receptors, including TNFRSF10B. The anti-apoptotic function is most effective with weak apoptotic signals and can be overcome by stronger stimulation (By similarity).

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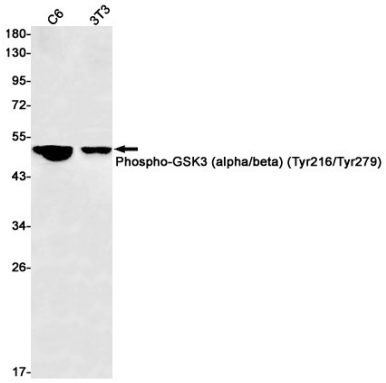
Research Area

Image Data



Western blot detection of Phospho-GSK3 (alpha/beta) (Tyr216/Tyr279) in C6,3T3 cell lysates using Phospho-GSK3 (alpha/beta) (Tyr216/Tyr279) antibody(1:1000 diluted).

Note

For research use only.