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Anti-GSK-3α/β (Tyr-279/Tyr-216), Phosphospecific Antibody

Catalog # AN1807

Product Information

Application	WB
Primary Accession	P49840
Host	Mouse
Clonality	Mouse Monoclonal
Isotype	IgG1
Clone Names	M132
Calculated MW	50981

Additional Information

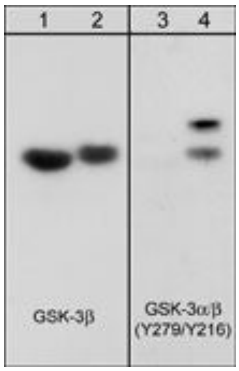
Gene ID	2931
Other Names	Glycogen synthase kinase beta3
Target/Specificity	Glycogen synthase kinase-3 (GSK-3) has been implicated in fundamental cell processes such as cell fate determination, metabolism, transcriptional control, and oncogenesis. Two GSK-3 genes (α and β) have been cloned in mammals and these kinase homologues show strong sequence conservation within their catalytic domain. GSK-3β plays a critical role in cell survival by phosphorylating nuclear factor-κB (NF-κB) p65 subunit, leading to NF-κB transactivation in hepatocytes. Phosphorylation regulates the activity of both GSK-3 genes. MEK1/2 can phosphorylate tyrosine 216 (tyrosine 279 in GSK-3α), which stimulates GSK-3 kinase activity. Tyr-216 phosphorylation is required for GSK-mediated down-regulation of β-catenin activity. Also, TRAIL stimulation can increase Tyr-216 phosphorylation, and GSK-3β activity may suppress TRAIL-induced apoptosis. Inactiviation of GSK-3 occurs through Akt phosphorylation of serine 9 of GSK-3β (Serine 21 in GSK-3α). This phosphorylation may be involved in later phases of neuronal apoptosis.
Dilution	WB~~1:1000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Anti-GSK-3α/β (Tyr-279/Tyr-216), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.
Shipping	Blue Ice

Background

Glycogen synthase kinase-3 (GSK-3) has been implicated in fundamental cell processes such as cell fate determination, metabolism, transcriptional control, and oncogenesis. Two GSK-3 genes (α and β) have been

cloned in mammals and these kinase homologues show strong sequence conservation within their catalytic domain. GSK-3β plays a critical role in cell survival by phosphorylating nuclear factor-κB (NF-κB) p65 subunit, leading to NF-κB transactivation in hepatocytes. Phosphorylation regulates the activity of both GSK-3 genes. MEK1/2 can phosphorylate tyrosine 216 (tyrosine 279 in GSK-3α), which stimulates GSK-3 kinase activity. Tyr-216 phosphorylation is required for GSK-mediated down-regulation of β-catenin activity. Also, TRAIL stimulation can increase Tyr-216 phosphorylation, and GSK-3β activity may suppress TRAIL-induced apoptosis. Inactiviation of GSK-3 occurs through Akt phosphorylation of serine 9 of GSK-3β (Serine 21 in GSK-3α). This phosphorylation may be involved in later phases of neuronal apoptosis.

Images



Western blot analysis of rabbit spleen fibroblasts serum starved for 2 hrs (lanes 1 & 3) or treated with pervanadate (1 mM) for 30 minutes (lanes 2 & 4). The blot was probed with anti-GSK-3β (lanes 1 & 2) or anti-GSK-3α/β (Y279/Y216) (lanes 3 & 4).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.