10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

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

Catalog # AN1807

Specification

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

Primary Accession	P49840
Reactivity	**Bovine**
Host	**Mouse**
Clonality	**Mouse Monoclonal**
Isotype	**IgG1**
Calculated MW	**50981**

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

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

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

Provided below are standard protocols that you may find useful for product applications.

- Western Blot

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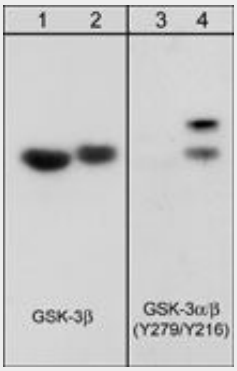
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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

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