

**Anti-GSK-3 $\alpha$ / $\beta$  (Tyr-279/Tyr-216), Phosphospecific Antibody**  
Catalog # AN1807**Specification****Anti-GSK-3 $\alpha$ / $\beta$  (Tyr-279/Tyr-216), Phosphospecific Antibody - Product Information**

Primary Accession	<a href="#">P49840</a>
Reactivity	<b>Bovine</b>
Host	<b>Mouse</b>
Clonality	<b>Mouse Monoclonal</b>
Isotype	<b>IgG1</b>
Calculated MW	<b>50981</b>

**Anti-GSK-3 $\alpha$ / $\beta$  (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 ( $\alpha$  and  $\beta$ ) have been cloned in mammals and these kinase homologues show strong sequence conservation within their catalytic domain. GSK-3 $\beta$  plays a critical role in cell survival by phosphorylating nuclear factor- $\kappa$ B (NF- $\kappa$ B) p65 subunit, leading to NF- $\kappa$ B transactivation in hepatocytes. Phosphorylation regulates the activity of both GSK-3 genes. MEK1/2 can phosphorylate tyrosine 216 (tyrosine 279 in GSK-3 $\alpha$ ), which stimulates GSK-3 kinase activity. Tyr-216 phosphorylation is required for GSK-mediated down-regulation of  $\beta$ -catenin activity. Also, TRAIL stimulation can increase Tyr-216 phosphorylation, and GSK-3 $\beta$  activity may suppress TRAIL-induced apoptosis. Inactivation of GSK-3 occurs through Akt phosphorylation of serine 9 of GSK-3 $\beta$  (Serine 21 in GSK-3 $\alpha$ ). 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-3 $\alpha$ / $\beta$  (Tyr-279/Tyr-216), Phosphospecific Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Shipping**

Blue Ice

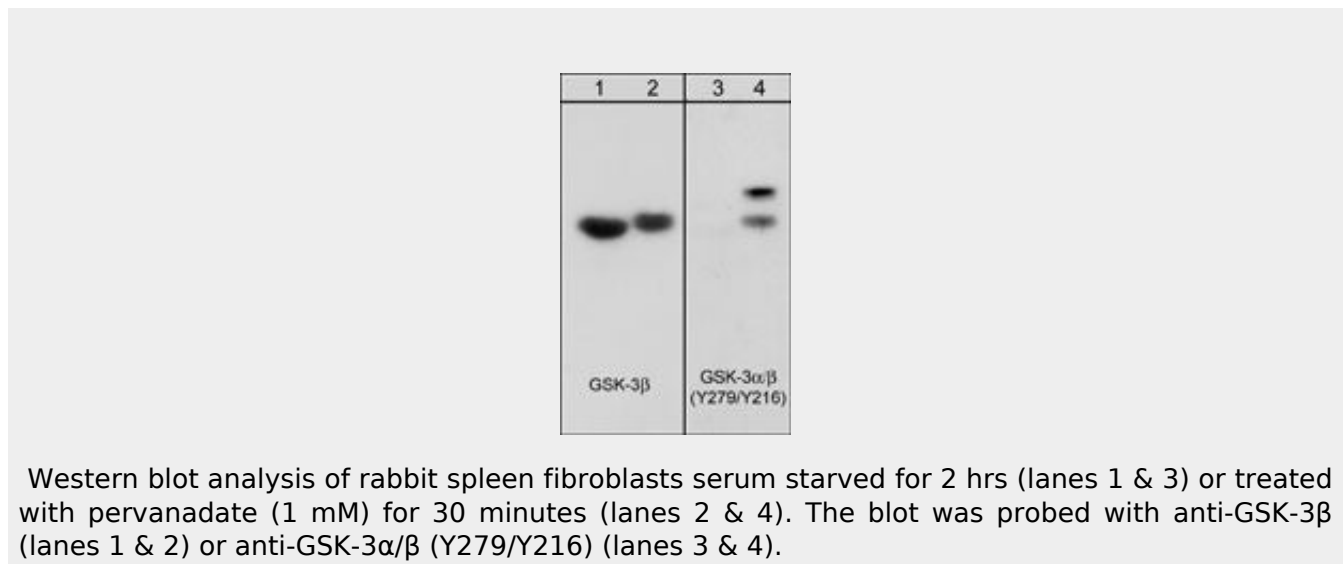
**Anti-GSK-3 $\alpha$ / $\beta$  (Tyr-279/Tyr-216), Phosphospecific Antibody - Protocols**

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

- [Western Blot](#)

- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **Anti-GSK-3 $\alpha/\beta$ (Tyr-279/Tyr-216), Phosphospecific Antibody - Images**



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