



# Rabbit Anti-GSK3A, GSK3B monoclonal antibody, clone TZ37-16 (CABT-L635)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

<b>Target</b>	Phospho-GSK3(alpha+beta)(Y216+Y279)
<b>Immunogen</b>	Recombinant protein
<b>Isotype</b>	IgG
<b>Source/Host</b>	Rabbit
<b>Species Reactivity</b>	Human, Mouse, Rat
<b>Clone</b>	TZ37-16
<b>Purification</b>	Protein A purified.
<b>Conjugate</b>	Unconjugated
<b>Applications</b>	WB, ICC, IHC, IP
<b>Molecular Weight</b>	51 kDa
<b>Cellular Localization</b>	Cytoplasm, Nucleus, Cell membrane.
<b>Positive Control</b>	A431, MCF-7, Hela.
<b>Format</b>	Liquid
<b>Size</b>	100 µl
<b>Buffer</b>	1×TBS (pH7.4), 1% BSA, 40% Glycerol.
<b>Preservative</b>	0.05% Sodium Azide

**Storage**

Store at +4°C after thawing. Aliquot store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

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## BACKGROUND

**Introduction**

Glycogen synthase kinase-3 $\alpha$  (GSK-3 $\alpha$ ) and GSK-3 $\beta$  are highly similar isoforms of serine/threonine kinases that regulate metabolic enzymes and transcription factors, which are responsible for coordinating processes such as glycogen synthesis and cell adhesion. GSK-3 $\beta$  activity is also required for nuclear activity of Rel dimers, which mediate an anti-apoptotic response to TNF $\alpha$  in mice. GSK-3 catalytic kinase activity is controlled through differential phosphorylation of serine/threonine residues, which have an inhibitory effect, and tyrosine residues, which have an activating effect. Growth factor stimulation of mammalian cells expressing GSK-3 $\alpha$  and GSK-3 $\beta$  induces phosphorylation of Ser 21 and Ser 9, respectively, through a phosphatidylinositol 3-kinase (PI 3-K)-protein kinase B (PKB)-dependent pathway, thereby enhancing proliferative signals. Additionally, GSK-3 physically associates with cAMP-dependent protein kinase A (PKA), which phosphorylates Ser 21 of GSK-3 $\alpha$  or Ser 9 of GSK-3 $\beta$  and inactivates both forms. GSK-3 $\alpha$ / $\beta$  is positively regulated by phosphorylation on Tyr 279 and Tyr 216, respectively. Activated GSK-3 $\alpha$ / $\beta$  participates in energy metabolism, neuronal cell development, and body pattern formation. Tyrosine dephosphorylation of GSK-3 is involved in its extracellular signal-dependent inactivation.

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**Keywords**

Factor A;Glycogen synthase kinase 3 alpha;Glycogen synthase kinase 3 beta;GSK3 alpha;GSK3 beta;GSK3B antibody

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