

Anti-GSK3 alpha Picoband Antibody
Catalog # ABO10279**Specification****Anti-GSK3 alpha Picoband Antibody - Product Information**

Application	WB
Primary Accession	P49840
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for GSK3 alpha detection. Tested with WB in Human;Mouse;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-GSK3 alpha Picoband Antibody - Additional Information

Gene ID 2931

Other Names

Glycogen synthase kinase-3 alpha, GSK-3 alpha, 2.7.11.26, Serine/threonine-protein kinase GSK3A, 2.7.11.1, GSK3A

Application Details

Western blot, 0.1-0.5 µg/ml

Contents

Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

Immunogen

A synthetic peptide corresponding to a sequence of human GSK3 alpha (QEVAYTDIKVIGNSGFGVVYQARLAETRELVAIKKVLQDKR).

Cross Reactivity

No cross reactivity with other proteins.

Storage

At -20°C; for one year. After reconstitution, at 4°C; for one month. It can also be aliquotted and stored frozen at -20°C; for a longer time. Avoid repeated freezing and thawing.

Anti-GSK3 alpha Picoband Antibody - Protein Information

Name GSK3A

Function

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](http://www.uniprot.org/citations/11749387) [17478001](http://www.uniprot.org/citations/17478001) [19366350](http://www.uniprot.org/citations/19366350)). Requires primed phosphorylation of the majority of its substrates (PubMed: [11749387](http://www.uniprot.org/citations/11749387) [17478001](http://www.uniprot.org/citations/17478001) [19366350](http://www.uniprot.org/citations/19366350)). Contributes to insulin regulation of glycogen synthesis by phosphorylating and inhibiting GYS1 activity and hence glycogen synthesis (PubMed: [11749387](http://www.uniprot.org/citations/11749387) [17478001](http://www.uniprot.org/citations/17478001) [19366350](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/10868943) [17478001](http://www.uniprot.org/citations/17478001)). In Wnt signaling, regulates the level and transcriptional activity of nuclear CTNNB1/beta-catenin (PubMed: [17229088](http://www.uniprot.org/citations/17229088)). Facilitates amyloid precursor protein (APP) processing and the generation of APP-derived amyloid plaques found in Alzheimer disease (PubMed: [12761548](http://www.uniprot.org/citations/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 which activates KAT5/TIP60 acetyltransferase activity and promotes acetylation of key autophagy regulators, such as ULK1 and RUBCNL/Pacer (PubMed: [30704899](http://www.uniprot.org/citations/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). Phosphorylates mTORC2 complex component RICTOR at 'Thr- 1695' which facilitates FBXW7-mediated ubiquitination and subsequent degradation of RICTOR (PubMed: [25897075](http://www.uniprot.org/citations/25897075)).

Anti-GSK3 alpha Picoband 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-GSK3 alpha Picoband Antibody - Images

Anti-GSK3 alpha Picoband Antibody - Background

Glycogen synthase kinase-3 alpha is an enzyme that in humans is encoded by the GSK3A gene. This gene encodes a multifunctional Ser/Thr protein kinase that is implicated in the control of several regulatory proteins including glycogen synthase, and transcription factors, such as JUN. It also plays a role in the WNT and PI3K signaling pathways, as well as regulates the production of beta-amyloid peptides associated with Alzheimer's disease.