GSK-3α/β monoclonal antibody (1H8)

Glycogen Synthase Kinase 3β (GSK-3β) is a unique serine/threonine kinase that is inactivated by phosphorylation. In response to insulin binding, PKB/AKT phosphorylates GSK-3β on serine 9, which prevents GSK-3β from phosphorylating glycogen synthase. Unphosphorylated glycogen synthase is active and able to synthesize glycogen. GSK-3β is also unique in that it requires a substrate that has been phosphorylated by a distinct kinase before it can phosphorylate the substrate. This phosphate priming mechanism explains why phosphorylation of serine 9 inactivates GSK-3β. The phosphorylated serine binds to the GSK-3β priming phosphate position and prevents binding of alternative substrates. In addition to insulin signaling, GSK-3β participates in the Wnt signaling pathway, where it forms a complex with axin, beta-catenin and adenomatous polyposis coli (APC) protein. In the presence of Wnts, GSK-3β is unable to phosphorylate beta-catenin, which leads to stabilization of beta-catenin. The Wnt pathway inactivates GSK-3β via the proteins, Dishevelled and FRAT, which disrupt the interaction of GSK-3β with axin, beta-catenin, and APC. Clinically, there is considerable interest in GSK-3β inhibitors because they may mimic the effect of insulin or reduce the hyperphosphorylation of Tau that is observed in Alzheimer's Disease.

This antibody is covered by our Worry-Free Guarantee.

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ADI-KAM-ST002-D	50µg
ADI-KAM-ST002-F	200µg

Manuals, SDS & CofA View Online »



Western blot analysis: Lane 1: MW marker, Lane 2: 20µg HeLa lysate (heat shocked), Lane 3: 20µg mouse brain lysate, Lane 4: 20µg rat brain lysate, Lane 5: 20µg RK-13 lysate.

Handling & Storage

Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	Glycogen synthase kinase-3α/β
Application	ICC, IHC, WB
Application Notes	Detects bands of ~51 and ~47kDa by Western blot.
Clone	1H8
Formulation	Liquid. In PBS, pH 7.2, containing 50% glycerol and 0.09% sodium azide.
Host	Mouse
Immunogen	Recombinant Xenopus GSK-3β.
Isotype	IgG2b
Purity Detail	Protein G affinity purified.
Recommendation Dilutions/Conditions	Western Blot (1:1,000, colorimetric)Suggested dilutions/conditions may not be available for all applications.Optimal conditions must be determined individually for each application.
Source	Purified from mouse ascites.
Species Reactivity	Bovine, Dog, Hamster, Human, Monkey, Mouse, Porcine, Rabbit, Rat, Sheep
UniProt ID	Q91757
Worry-free Guarantee	**This antibody is covered by our Worry-Free Guarantee .**

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