GSK-3β polyclonal antibody

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.

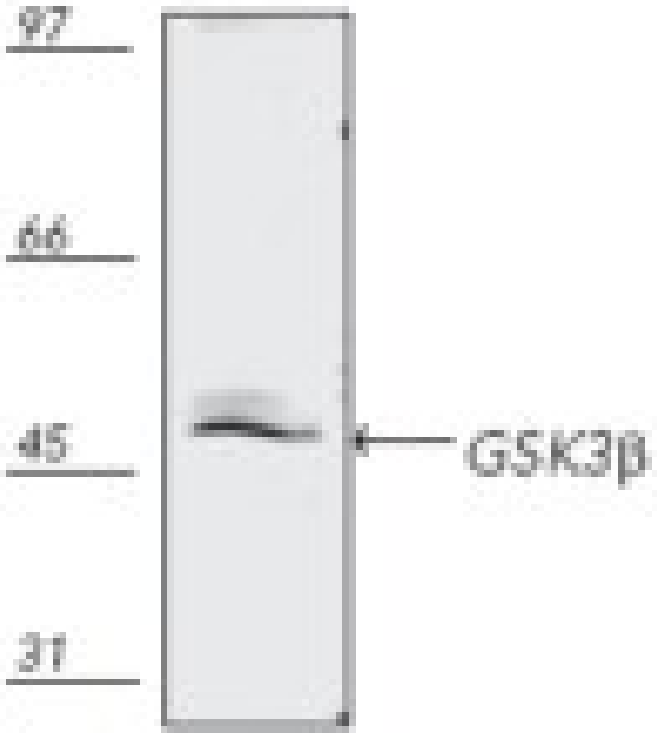
Ordering Information

Order Online »

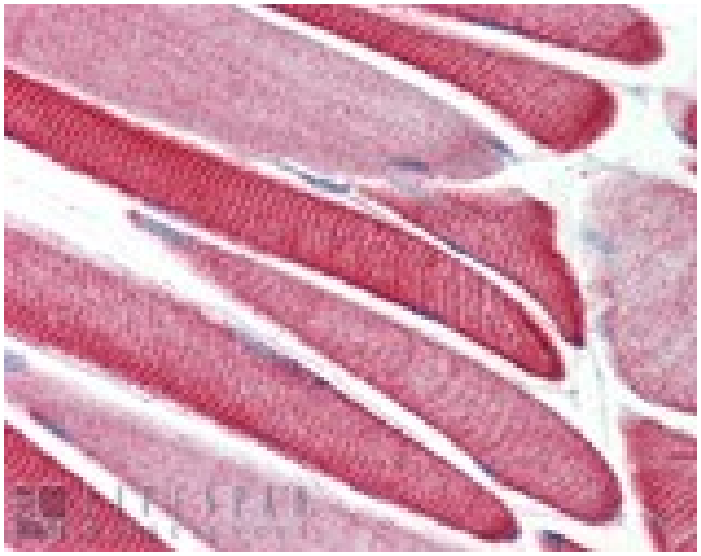
ADI-KAP-ST002-E	100µg

Manuals, SDS & CofA

View Online »



Western blot analysis of human HeLa (heat shocked) cell lysate, probed with GSK3-β pAb



Immunohistochemistry analysis of human skeletal muscle tissue stained with GSK-3β, pAb at 10µg/ml.

Handling & Storage

Handling	Avoid freeze/thaw cycles.
Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	Glycogen synthase kinase-3β
Application	ICC, IHC (PS), WB
Application Notes	Detects a band of ~47kDa by Western blot.
Formulation	Liquid. In PBS, pH 7.2, containing 50% glycerol and 0.09% sodium azide.
GenBank ID	X53428
Host	Rabbit
Immunogen	Synthetic peptide corresponding to a portion of rat GSK-3β. The sequence is completely conserved in human.
Purity Detail	Protein A 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 rabbit serum.
Species Reactivity	Bovine, Human, Mouse, Rat
UniProt ID	P18266
Worry-free Guarantee	**This antibody is covered by our Worry-Free Guarantee .**

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