

GSK-3 β polyclonal antibody

Glycogen Synthase Kinase 3 β (GSK-3 β) is a unique serine/threonine kinase that is inactivated by phosphorylation. In response to insulin binding, PKB/AKT phosphorylates GSK-3 β on serine 9, which prevents GSK-3 β from phosphorylating glycogen synthase. Unphosphorylated glycogen synthase is active and able to synthesize glycogen. GSK-3 β 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-3 β . The phosphorylated serine binds to the GSK-3 β priming phosphate position and prevents binding of alternative substrates. In addition to insulin signaling, GSK-3 β 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-3 β is unable to phosphorylate beta-catenin, which leads to stabilization of beta-catenin. The Wnt pathway inactivates GSK-3 β via the proteins, Dishevelled and FRAT, which disrupt the interaction of GSK-3 β with axin, beta-catenin, and APC. Clinically, there is considerable interest in GSK-3 β 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

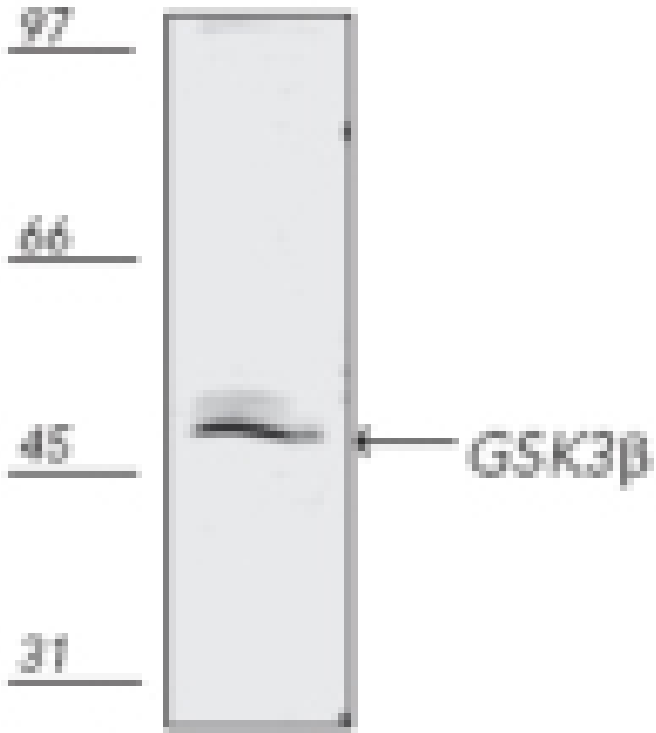
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ADI-KAP-ST002-E

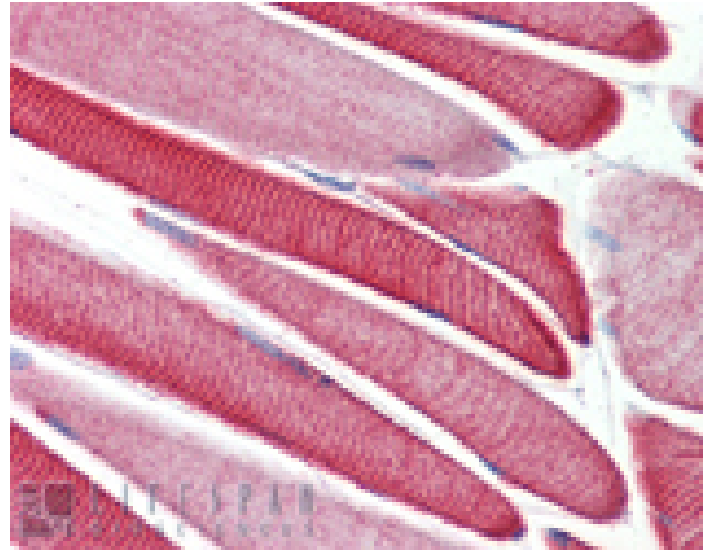
100 μ g

Manuals, SDS & CofA

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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 10 μg/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-3 β

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-3 β . 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

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