

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](#).

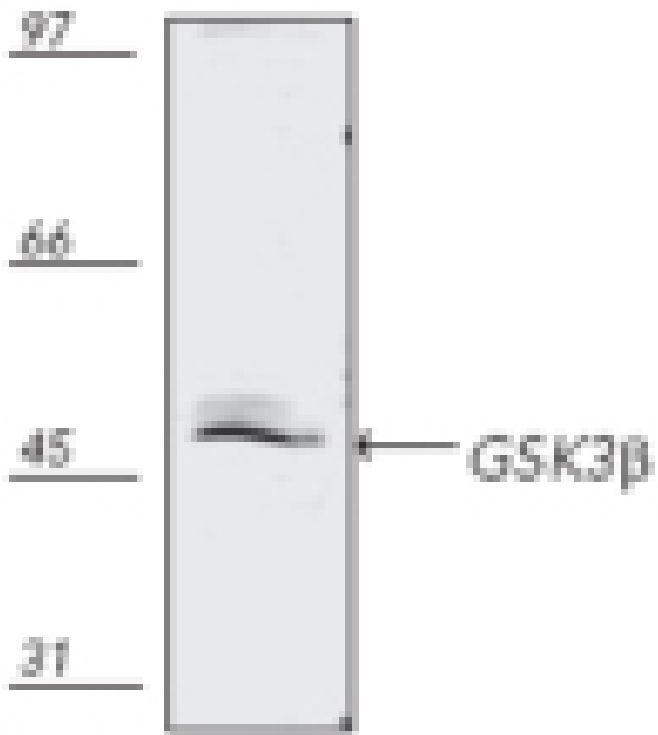
Ordering Information

[Order Online »](#)

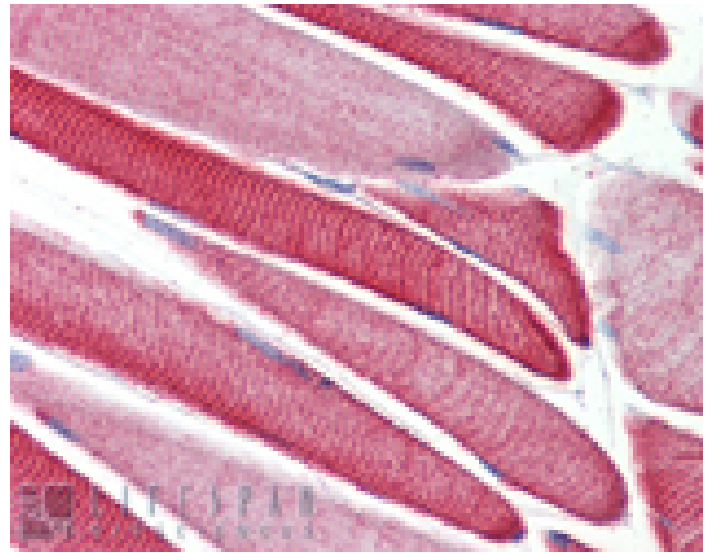
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|-----------------|-------------|
| ADI-KAP-ST002-C | 25 μ g |
| ADI-KAP-ST002-E | 100 μ g |

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-3 β , pAb at 10 μ g/ml.

Handling & Storage

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

Regulatory Status

RUO - Research Use Only

Product Details

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|-------------------------------------|---|
| 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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