

Recombinant Human Glycogen Synthase Kinase 3 Beta, His-tagged

Cat. No. GSK3B-2649H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human GSK-3 β was fused at the N-terminus to a His•Tag sequence and expressed in E. coli. MW = 53-56 kDa.
Species	Human
Source	E.coli
Description	Glycogen synthase kinase-3 (GSK-3) is a serine/threonine kinase that was first characterized by its role in intermediary metabolism. GSK-3 β is a dual-specificity kinase that is important role in insulin- and Wnt-mediated cellular signaling events. In Alzheimer"s disease GSK-3 β is reported to affect microtubule stability via the phosphorylation of microtubule associated protein, Tau. Other known substrates include glycogen synthase, p90rsk, c-Jun, and CREB.
Purity	≥90% by SDS-PAGE.
Form	Solid. Lyophilized from 0.1 M NH ₄ CO ₃ .
Specific Activity	1 μ g GSK-3 β maximally phosphorylates 100 ng Tau protein in 30 min in an in vitro kinase assay at 30°C, pH 7.5.
Recommended Reaction Conditions	25 mM Tris-HCl, pH 7.5, 5 mM β -glycerophosphate, 12 mM MgCl ₂ , 2 mM DTT, 100 μ M Na ₃ VO ₄ , 200 μ M ATP, 30°C.

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Solubility	Reconstitute in sterile PBS to a final concentration of 1 mg/ml.
Toxicity	Standard Handling (MSDS available upon request).
Storage	≤ -70°C. Avoid freeze/thaw. Following reconstitution, aliquot and freeze (-70°C).

GENE INFORMATION

Gene Name	GSK3B glycogen synthase kinase 3 beta [Homo sapiens]
Synonyms	GSK3B; glycogen synthase kinase 3 beta; Glycogen synthase kinase-3 beta; GSK-3 beta; EC 2.7.11.26; glycogen synthase kinase -3 beta; GSK3beta isoform
Gene ID	2932
mRNA Refseq	NM_001146156
Protein Refseq	NP_001139628
MIM	605004
UniProt ID	P49841
Chromosome Location	3q13.3
Pathway	Chemokine signaling pathway; Alzheimer"s disease; Axon guidance; B cell receptor signaling pathway; Basal cell carcinoma; Cell cycle; Colorectal cancer; Endometrial cancer; ErbB signaling pathway; Focal adhesion; Hedgehog signaling pathway; Insulin signaling pathway; Melanogenesis; Neurotrophin signaling pathway; Prostate cancer; T cell receptor signaling pathway; Wnt signaling pathway; Axon guidance;

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Signaling by Wnt; Signalling by NGF

Function

ATP binding; nucleotide binding; transferase activity; glycogen synthase kinase 3 activity; protein kinase A catalytic subunit binding; tau-protein kinase activity; NF-kappaB binding; beta-catenin binding; p53 binding

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