

Recombinant Human GSK3A, GST-tagged

Cat. No. GSK3A-2648H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human GSK3A was fused at the N-terminus to GST and expressed in <i>S. frugiperda</i> insect cells using a baculovirus expression system. MW = 81500 Da.
Species	Human
Source	<i>S. frugiperda</i>
Description	GSK3 α is unique in its preference for a priming phosphate at n+4 (where n is the site of phosphorylation by GSK3 α) in order to phosphorylate many of its substrates. This motif is found in several well-established substrates of GSK3 α , such as glycogen synthase, the epsilon subunit of eIF2B, and ATP citrate-lyase. The active kinase is useful in the study of GSK3 α regulation and for inhibitor screening.
Purity	≥80% by SDS-PAGE.
Form	Liquid. In 100 mM NaCl, 25 mM Tris-HCl, 10 mM reduced glutathione, 3 mM DTT, 50% glycerol, 0.05% Tween-20 detergent, pH 8.0.
Specific Activity	≥700 units/mg protein.
Unit Definition	One unit is defined as the amount of enzyme that will phosphorylate 1 nmol glycogen synthase peptide substrate (YRRAAVPPSPSLSRHSSPHQSEDEEE) per min at 30°C, pH 7.4.
Toxicity	Standard Handling (MSDS available upon request).

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Recommended Reaction Conditions 50 mM HEPES, 3 mM MgCl₂, 3 mM MnCl₂, 1 mM DTT, 100 μM ATP, 20 μM peptide substrate (YRRAAVPPSPSLSRHSSPHQSEDEEE), 3 μM sodium orthovanadate, and 100 μg enzyme.

Storage ≤ -70°C. Avoid freeze/thaw. Following reconstitution, aliquot and freeze (-70°C).

GENE INFORMATION

Gene Name GSK3A glycogen synthase kinase 3 alpha [Homo sapiens]

Synonyms GSK3A; glycogen synthase kinase 3 alpha; DKFZp686D0638; Glycogen synthase kinase-3 alpha; GSK-3 alpha; EC 2.7.11.26

Gene ID 2931

mRNA Refseq NM_019884

Protein Refseq NP_063937

MIM 606784

UniProt ID P49840

Chromosome Location 19q13

Pathway Chemokine signaling pathway; Signalling by NGF

Function ATP binding; protein binding; nucleotide binding; transferase activity; glycogen synthase kinase 3 activity; protein kinase A catalytic subunit binding; tau-protein kinase activity

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