Datasheet for ABIN7317117

GSK3 beta Protein (His tag)

1 Image

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Overview

Quantity:	50 µg
Target:	GSK3 beta (GSK3b)
Origin:	Human
Source:	Baculovirus infected Insect Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This GSK3 beta protein is labelled with His tag.

Product Details

Purpose:	Recombinant Human GSK3B Protein (His Tag)(Active)
Sequence:	Met 1-Thr 433
Characteristics:	The amino acids corresponding to the full length of human GSK3B isoform 1 (NP_002084.2) (Met 1-Thr 433) was fused with a polyhistidine tag at the N-terminus.
Purity:	> 90 % as determined by reducing SDS-PAGE.
Endotoxin Level:	< 1.0 EU per µg as determined by the LAL method.
Biological Activity Comment:	1. The specific activity was determined to be 45 nmol/min/mg using synthetic Phospho-Glycogen Synthase Peptide-2 (YRRAAVPPSPSLSRHSSPHQpSEDEEE) as substrate.2. Immobilized His-GSK3B at 10 µg/ml (100 µl/well) can bind biotinylated human HG3C-CTNNB1, EC50 of biotinylated human HG3C-CTNNB1 is 0.15-0.35 µg/ml.

Target Details

Target:	GSK3 beta (GSK3b)
Alternative Name:	GSK3B (GSK3b Products)
Background:	Background: GSK3B is a serine-threonine kinase, belonging to the glycogen synthase kinase subfamily. It Contains 1 protein kinase domain, and is expressed in testis, thymus, prostate and ovary and weakly expressed in lung, brain and kidney. GSK3B is involved in energy metabolism, neuronal cell development, and body pattern formation. Polymorphisms in GSK3B gene have been implicated in modifying risk of Parkinson disease, and studies in mice show that overexpression of this gene may be relevant to the pathogenesis of Alzheimer disease. GSK3B participates in the Wnt signaling pathway. It is implicated in the hormonal control of several regulatory proteins including glycogen synthase, MYB and the transcription factor JUN. Phosphorylates JUN at sites proximal to its DNA-binding domain, thereby reducing its affinity for DNA. Phosphorylates MUC1 in breast cancer cells, and decreases the interaction of MUC1 with CTNNB1/beta-catenin. GSK3B also plays an important role in ERBB2-dependent stabilization of microtubules at the cell cortex. It prevents the phosphorylation of APC and CLASP2, allowing its association with the cell membrane. In turn, membrane-bound APC allows the localization of MACF1 to the cell membrane, which is required for microtubule capture and stabilization. GSK3B phosphorylates MACF1 and this phosphorylation inhibits the binding of MACF1 to microtubules which is critical for its role in bulge stem cell migration and skin wound repair. It may be required for early embryo development and neuron differentiation. Synonym: GSK3B
Molecular Weight:	50.4 kDa
NCBI Accession:	NP_002084
Pathways:	WNT Signaling, Hedgehog Signaling, Fc-epsilon Receptor Signaling Pathway, Cellular Glucan Metabolic Process, ER-Nucleus Signaling, Regulation of Carbohydrate Metabolic Process, Hepatitis C, Autophagy, BCR Signaling, Warburg Effect

Application Details

Restrictions:	For Research Use only

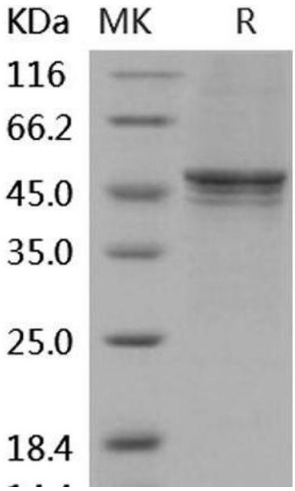
Handling

Format:	Frozen, Liquid
Buffer:	Supplied as sterile 20 mM Tris, 500 mM NaCl, pH 7.4, 25 % glycerol, 0.5 mM PMSF, 0.5 mM EDTA

Handling

Storage:	-20 °C
Storage Comment:	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.

Images



Western Blotting

Image 1.