Recombinant Mouse GSK-3 beta/GSK3B Protein

Catalog No.: RP03186LQ

Sequence Information

Species
Mouse

Gene ID
56637

Swiss Prot
Q9WV60

Tags
N-His

Synonyms
7330414F15Rik; 8430431H08Rik; C86142; GSK-3; GSK-3beta; GSK3b

Product Information

Source
Baculovirus-Insect Cells

Purification
≥ 75 % as determined by SDS-PAGE.

Calculated MW
49 kDa

Observed MW
45-50 kDa

Endotoxin
< 1 EU/μg of the protein by LAL method.

Formulation
Supplied as sterile 20mM Tris, 500 mM NaCl, 25% glycerol, 0.2 mM DTT, pH 7.4.

Reconstitution

Background

GSK3B is a serine-threonine kinase, belonging to the glycogen synthase kinase subfamily. It Contains 1 protein kinase domain, and is expressed in the testis, thymus, prostate, and ovary and weakly expressed in the lung, brain, and kidney. GSK3B is involved in energy metabolism, neuronal cell development, and body pattern formation. Polymorphisms in the GSK3B gene have been implicated in modifying the risk of Parkinson's disease, and studies in mice show that overexpression of this gene may be relevant to the pathogenesis of Alzheimer's 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 are critical for its role in bulge stem cell migration and skin wound repair. It may be required for early embryo development and neuron differentiation.

Basic Information

Description
Recombinant Mouse GSK-3 beta/GSK3B Protein is produced by Baculovirus-Insect Cells expression system. The target protein is expressed with sequence (Met1-Thr420) of Mouse GSK-3 beta/GSK3B (Accession #Q9WV60) fused with His tag at the N-terminus.

Activity
1.The specific activity was determined to be > 20 nmol/min/mg using synthetic Phospho-Glycogen Synthase Peptide-2 (YRRAAVPPSPSLSRHSSPHQpSEDEEE) as substrate.
2. Immobilized His-mGSK3B at 10 μg/mL (100 μL/well) can bind biotinylated human HG3C-CTNNB1, EC_{50} of biotinylated human HG3C-CTNNB1 is 0.15-0.35 μg/mL.

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -70℃

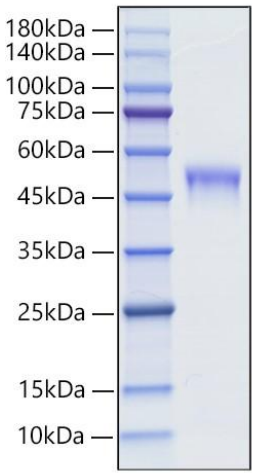
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

400-999-6126
cn.market@abclonal.com.cn
www.abclonal.com.cn

For research use only. Not for therapeutic or diagnostic purposes.
Please visit http://abclonal.com for a complete listing of recommended products.

Validation Data



Recombinant Mouse GSK-3 beta/GSK3B Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.

For research use only. Not for therapeutic or diagnostic purposes.
Please visit http://abclonal.com for a complete listing of recommended products.