

Glycogen synthase kinase-3 beta Recombinant Protein | GSK3B recombinant protein

Recombinant Human Glycogen synthase kinase-3 beta

CATALOG # AAA113841	HOST E Coli or Yeast or Baculovirus or Mammalian Cell
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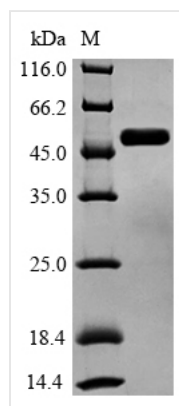
PRODUCT SYNONYMS

Glycogen synthase kinase-3 beta; Recombinant Human Glycogen synthase kinase-3 beta; Serine/threonine-protein kinase GSK3B; GSK3B recombinant protein

PRODUCT SPECIFICATIONS

Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE.
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Sequence Positions	1-420aa; Full Length
Sequence	MSGRPRTTSF AESCKPVQQP SAFGSMKVS R DKDGSKVTTV VATPGQGPDR PQEVSYTDTK VIGNSGFGVV YQAKLCDSGE LVAIKKVLQD KRFRNRELQI MRKLDHCNIV RLRYFFYSSG EKKDEVYLN L VLDYVPETVY RVARHYSRAK QTLPIYVKL YMYQLFRSLA YIHSFGICHR DIKPQNLLD PDTAVLKLCD FGS AKQLVRG EPNVSYICSR YYRAPELIFG ATDYTSSIDV WSAGCVLAEL LLGQPIFPGD SGVDQLVEII KVLGTPTREQ IREMNPNYTE FKFPQIKAHP WTKVFRP RTP PEAIALCSRL LEYTP TARLT PLEACAH SFF DELRDPNVKL PNGRDTPALF NFFTQELSSN PPLATILIPP HARIQAAAST PTNATAASDA NTGDRGQTNN AASASASNST
Sequence Length	420
Species	Homo sapiens (Human)
Preparation and Storage	Store at -20 degree C, for extended storage, conserve at -20 degree C or -80 degree C.

IMAGES



SDS-PAGE

ADDITIONAL INFORMATION

Related Product Information for GSK3B recombinant protein	Constitutively active protein kinase that acts as a negative regulator in the hormonal control of glucose homeostasis, Wnt signaling and regulation of transcription factors and microtubules, by phosphorylating and inactivating glycogen synthase (GYS1 or GYS2), EIF2B, CTNNB1/beta-catenin, APC, AXIN1, DPYSL2/CRMP2, JUN, NFATC1/NFATC, MAPT/TAU and MACF1. Requires primed phosphorylation of the majority of its substrates. In skeletal muscle, contributes to insulin regulation of glycogen synthesis by phosphorylating and inhibiting GYS1 activity and hence glycogen synthesis. May also mediate the development of insulin resistance by regulating activation of transcription factors. Regulates protein synthesis by controlling the activity of initiation factor 2B (EIF2BE/EIF2B5) in the same manner as glycogen synthase. In Wnt signaling, GSK3B forms a multimeric complex with APC, AXIN1 and CTNNB1/beta-catenin and phosphorylates the N-terminus of CTNNB1 leading to its degradation mediated by ubiquitin/proteasomes. Phosphorylates JUN at sites proximal to its DNA-binding domain, thereby reducing its affinity for DNA. Phosphorylates NFATC1/NFATC on conserved serine residues promoting NFATC1/NFATC nuclear export, shutting off NFATC1/NFATC gene regulation, and thereby opposing the action of calcineurin. Phosphorylates MAPT/TAU on 'Thr-548', decreasing significantly MAPT/TAU ability to bind and stabilize microtubules. MAPT/TAU is the principal component of neurofibrillary tangles in Alzheimer disease. Plays an important role in ERBB2-dependent stabilization of microtubules at the cell cortex. Phosphorylates MACF1, inhibiting its binding to microtubules which is critical for its role in bulge stem cell migration and skin wound repair. Probably regulates NF-kappa-B (NFKB1) at the transcriptional level and is required for the NF-kappa-B-mediated anti-apoptotic response to TNF-alpha (TNF/TNFA). Negatively regulates replication in pancreatic beta-cells, resulting in apoptosis, loss of beta-cells and diabetes. Through phosphorylation of the anti-apoptotic protein MCL1, may control cell apoptosis in response to growth factors deprivation. Phosphorylates MUC1 in breast cancer cells, decreasing the interaction of MUC1 with CTNNB1/beta-catenin. Is necessary for the establishment of neuronal polarity and axon outgrowth. Phosphorylates MARK2, leading to inhibit its activity. Phosphorylates SIK1 at 'Thr-182', leading to sustain its activity. Phosphorylates ZC3HAV1 which enhances its antiviral activity. Phosphorylates SNAI1, leading to its BTRC-triggered ubiquitination and proteasomal degradation. Phosphorylates SFPQ at 'Thr-687' upon T-cell activation. Phosphorylates NR1D1 st 'Ser-55' and 'Ser-59' and stabilizes it by protecting it from proteasomal degradation. Regulates the circadian clock via phosphorylation of the major clock components including ARNTL/BMAL1, CLOCK and PER2. Phosphorylates CLOCK AT 'Ser-427' and targets it for proteasomal degradation. Phosphorylates ARNTL/BMAL1 at 'Ser-17' and 'Ser-21' and primes it for ubiquitination and proteasomal degradation. Phosphorylates OGT at 'Ser-3' or 'Ser-4' which positively regulates its activity. Phosphorylates MYCN in neuroblastoma cells which may promote its degradation
Product Categories/Family for GSK3B recombinant protein	Signal Transduction
References	"Activation of protein kinase C decreases phosphorylation of c-Jun at sites that negatively regulate its DNA-binding activity." Boyle W.J., Smeal T., Defize L.H., Angel P., Woodgett J.R., Karin M., Hunter T. Cell 64:573-584(1991)

NCBI AND UNIPROT INFORMATION

NCBI GI #	225903437
NCBI GeneID	2932
NCBI Accession #	NP_001139628.1
NCBI GenBank Nucleotide #	NM_001146156.1
UniProt Accession #	P49841; Q9BWH3; Q9UL47; D3DN89
Molecular Weight	48.7 kDa
NCBI Official Full Name	glycogen synthase kinase-3 beta isoform 2
NCBI Official Synonym Full Names	glycogen synthase kinase 3 beta
NCBI Official Symbol	GSK3B
NCBI Protein Information	glycogen synthase kinase-3 beta
UniProt Protein Name	Glycogen synthase kinase-3 beta
UniProt Gene Name	GSK3B
UniProt Synonym Gene Names	GSK-3 beta

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/gsk3b-recombinant-protein-e-coli-or-yeast-or-baculovirus-or-mammalian-cell/113841>