Glycogen Synthase Kinase-3 Alpha (GSK3A) Mouse Recombinant Protein

PRODUCT OVERVIEW

Product Name	Glycogen synthase kinase-3 alpha (Gsk3a), Recombinant Protein
Full Product Name	Recombinant Mouse Glycogen synthase kinase-3 alpha (Gsk3a)
Product Gene Name	Gsk3a recombinant protein
Product Synonym Gene Name	Gsk3a
Sequence	SGGGPSGGGP GGSGRARTSS FAEPGGGGGG GGGGPGGSAS GPGGTGGGKA SVGAMGGGVG ASSSGGGPSG SGGGGSGGPG AGTSFPPPGV KLGRDSGKVT TVVATVGQGP ERSQEVAYTD IKVIGNGSFG VVYQARLAET RELVAIKKVL QDKRFKNREL QIMRKLDHCN IVRLRYFFYS SGEKKDELYL NLVLEYVPET VYRVARHFTK AKLITPIIYI KVYMYQLFRS LAYIHSQGVC HRDIKPQNLL VDPDTAVLKL CDFGSAKQLV RGEPNVSYIC SRYYRAPELI FGATDYTSSI DVWSAGCVLA ELLLGQPIFP GDSGVDQLVE IIKVLGTPTR EQIREMNPNY TEFKFPQIKA HPWTKVFKSS KTPPEAIALC SSLLEYTPSS RLSPLEACAH SFFDELRRLG AQLPNDRPLP PLFNFSPGEL SIQPSLNAIL IPPHLRSPAG PASPLTTSYN PSSQALTEAQ TGQDWQPSDA TTATLASSS
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	51,661 Da
Sequence Positions	2-490, full length protein
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for Q2NL51
Species	Mouse
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for Gsk3a recombinant protein	MBS1331398 is a recombinant protein targeting Gsk3a. Also known as Recombinant Mouse Glycogen synthase kinase-3 alpha (Gsk3a). Host: E Coli or Yeast or Baculovirus or Mammalian Cell.
Other Notes	Small volumes of Gsk3a recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Gsk3a. It may not necessarily be applicable to this product.

NCBI GI #	72384361
NCBI GeneID	606496
NCBI Accession #	NP_001026837.1

UniProt Primary Accession #	Q2NL51
UniProt Related Accession #	Q2NL51
GenBank Nucleotide #	NM_001031667.1
NCBI Official Full Name	glycogen synthase kinase-3 alpha
NCBI Official Synonym Full Names	glycogen synthase kinase 3 alpha
NCBI Official Symbol	Gsk3a
NCBI Official Synonym Symbols	2700086H06Rik
UniProt Protein Name	Glycogen synthase kinase-3 alpha
UniProt Synonym Protein Names	Serine/threonine-protein kinase GSK3A (EC:2.7.11.1)
Protein Family	Glycogen synthase kinase
UniProt Gene Name	Gsk3a
UniProt Synonym Gene Names	GSK-3 alpha
NCBI Protein Information	glycogen synthase kinase-3 alpha
UniProt Comments for Gsk3a	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), CTNNB1/beta-catenin, APC and AXIN1. Requires primed phosphorylation of the majority of its substrates. Contributes to insulin regulation of glycogen synthesis by phosphorylating and inhibiting GYS1 activity and hence glycogen synthesis. Regulates glycogen metabolism in liver, but not in muscle. May also mediate the development of insulin resistance by regulating activation of transcription factors. In Wnt signaling, regulates the level and transcriptional activity of nuclear CTNNB1/beta-catenin. Facilitates amyloid precursor protein (APP) processing and the generation of APP-derived amyloid plaques found in Alzheimer disease. May be involved in the regulation of replication in pancreatic beta-cells. Is necessary for the establishment of neuronal polarity and axon outgrowth. Through phosphorylation of the anti-apoptotic protein MCL1, may control cell apoptosis in response to growth factors deprivation.
Research Articles on Gsk3a	**1.** GSK-3 plays a significant role in astrocyte development and behavioral control in mice.
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