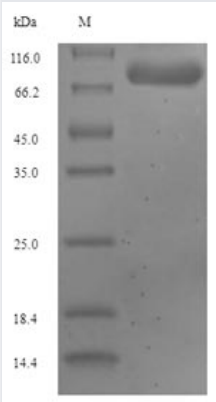
Glutaminase Liver Isoform (GLS2) Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	Glutaminase liver isoform (GLS2), Recombinant Protein
Full Product Name	Recombinant Human Glutaminase liver isoform, mitochondrial
Product Gene Name	GLS2 recombinant protein
Product Synonym Names	L-glutaminase; L-glutamine amidohydrolase
Sequence	GSHCGRGGWG HPSRSPLLGG GVRHHLSEAA AQGRETPHSH QPQHQDHDSS ESGMLSRLGD LLFYTIAEGQ ERIPIHKFTT ALKATGLQTS DPRLRDCMSE MHRVVQESSS GGLLDRDLFR KCVSSNIVLL TQAFRKKFVI PDFEEFTGHV DRIFEDVKEL TGGKVAAYIP QLAKSNPDLW GVSLCTVDGQ RHSVGHTKIP FCLQSCVKPL TYAISISTLG TDYVHKFVGK EPSGLRYNKL SLNEEGIPHN PMVNAGAIVV SSLIKMDCNK AEKFDFVLQY LNKMAGNEYM GFSNATFQSE KETGDRNYAI GYYLKEKKCF PKGVDMMAAL DLYFQLCSVE VTCESGSVMA ATLANGGICP ITGESVLSAE AVRNTLSLMH SCGMYDFSGQ FAFHVGLPAK SAVSGAILLV VPNVMGMMCL SPPLDKLGNS HRGTSFCQKL VSLFNFHNYD NLRHCARKLD PRREGAEIRN KTVVNLLFAA YSGDVSALRR FALSAMDMEQ KDYDSRTALH VAAAEGHIEV VKFLIEACKV NPFAKDRWGN IPLDDAVQFN HLEVVKLLQD YQDSYTLSET QAEAAAEALS KENLESMV
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 degree C, for extended storage, conserve at -20 degree C or -80 degree C.
Molecular Weight	80.7 kDa
Sequence Positions	15-602. Mature 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.
OMIM	606365
3D Structure	ModBase 3D Structure for Q9UI32
Species	Homo sapiens (Human)
Product Categories/Family for GLS2 recombinant protein	Metabolism
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for GLS2 recombinant protein	Plays an important role in the regulation of glutamine catabolism. Promotes mitochondrial respiration and increases ATP generation in cells by catalyzing the synthesis of glutamate and alpha-ketoglutarate. Increases cellular anti-oxidant function via NADH and glutathione production. May play a role in preventing tumor proliferation.
Product References and Citations for GLS2 recombinant protein	"Molecular cloning, sequencing and expression studies of the human breast cancer cell glutaminase." Gomez-Fabre P.M., Aledo J.C., del Castillo-Olivares A., Alonso F.J., Nunez de Castro I., Campos J.A., Marquez J. Biochem. J. 345:365-375(2000)
Other Notes	Small volumes of GLS2 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.

Searchable Terms for GLS2 purchase	MBS1398581 is a recombinant protein targeting GLS2. Also known as Recombinant Human Glutaminase liver isoform, mitochondrial. Host: E Coli or Yeast or Baculovirus or Mammalian Cell.



SDS-PAGE of GLS2 recombinant protein

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for GLS2. It may not necessarily be applicable to this product.

NCBI GI #	526118222
NCBI GeneID	27165
NCBI Accession #	NP_001267727.1
UniProt Primary Accession #	Q9UI32
UniProt Secondary Accession #	Q8IX91; Q9NYY2; Q9UI31; B7Z8Q9
UniProt Related Accession #	Q9UI32
GenBank Nucleotide #	NM_001280798.1
NCBI Official Full Name	glutaminase liver isoform, mitochondrial isoform 4
NCBI Official Synonym Full Names	glutaminase 2
NCBI Official Symbol	GLS2
NCBI Official Synonym Symbols	GA; GLS; LGA; hLGA
UniProt Protein Name	Glutaminase liver isoform, mitochondrial
UniProt Synonym Protein Names	L-glutaminase; L-glutamine amidohydrolase
Protein Family	Glucosidase
UniProt Gene Name	GLS2
UniProt Synonym Gene Names	GA; GLS
UniProt Entry Name	GLSL_HUMAN
NCBI Protein Information	glutaminase liver isoform, mitochondrial
NCBI Summary for GLS2	The protein encoded by this gene is a mitochondrial phosphate-activated glutaminase that catalyzes the hydrolysis of glutamine to stoichiometric amounts of glutamate and ammonia. Originally thought to be liver-specific, this protein has been found in other tissues as well. Alternative splicing results in multiple transcript variants that encode different isoforms. [provided by RefSeq, Jul 2013]

UniProt Comments for GLS2	GLS2: Plays an important role in the regulation of glutamine catabolism. Promotes mitochondrial respiration and increases ATP generation in cells by catalyzing the synthesis of glutamate and alpha-ketoglutarate. Increases cellular anti-oxidant function via NADH and glutathione production. May play a role in preventing tumor proliferation. Belongs to the glutaminase family. Protein type: Hydrolase; Amino Acid Metabolism - arginine and proline; Mitochondrial; Amino Acid Metabolism - alanine, aspartate and glutamate; EC 3.5.1.2; Other Amino Acids Metabolism - D-Glutamine and D-glutamate; Energy Metabolism - nitrogen Chromosomal Location of Human Ortholog: 12q13.3 Cellular Component: mitochondrial matrix; mitochondrion Molecular Function: glutaminase activity; protein binding Biological Process: amino acid biosynthetic process; amino acid metabolic process; gene expression; glutamate biosynthetic process; glutamate secretion; glutamine catabolic process; neurotransmitter secretion; regulation of apoptosis; synaptic transmission; transcription initiation from RNA polymerase II promoter
Research Articles on GLS2	**1.** GABAergic neurons and astrocytes express Gls and Gls2 isoenzymes in nucleus and mitochondria, in addition to glutamatergic neurons
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