GALC Blocking Peptide (N-Term) Blocking Peptide

PRODUCT OVERVIEW

Product Name	GALC, Blocking Peptide
Full Product Name	GALC Blocking Peptide (N-Term)
Product Gene Name	GALC blocking peptide
Product Synonym Names	Galactocerebrosidase; GALCERase; 3.2.1.46; Galactocerebroside beta-galactosidase; Galactosylceramidase; Galactosylceramide beta-galactosidase; GALC
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 1 mg/ml.
Specificity	The synthetic peptide sequence is selected from aa 46-56 of HUMAN GALC
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	GALC peptide (MBS9230682) is used for blocking the activity of GALC antibody (MBS9217245)
Molecular Weight	67,184 Da
OMIM	245200
Cellular Location	Lysosome.
Tissue Location	Detected in urine. Detected in testis, brain and placenta (at protein level). Detected in kidney and liver
Related Product Information for GALC blocking peptide	Hydrolyzes the galactose ester bonds of galactosylceramide, galactosylsphingosine, lactosylceramide, and monogalactosyldiglyceride. Enzyme with very low activity responsible for the lysosomal catabolism of galactosylceramide, a major lipid in myelin, kidney and epithelial cells of small intestine and colon.
Other Notes	Small volumes of GALC blocking peptide 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 GALC purchase	MBS9230682 is a blocking peptide targeting GALC. Also known as GALC Blocking Peptide (N-Term).

ADDITIONAL DETAILS

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

NCBI GI #	1035664365
NCBI GeneID	2581
NCBI Accession #	P54803.3
UniProt Primary Accession #	P54803
UniProt Secondary Accession #	Q8J030; B4DKE8; B4DYN1; B4DZJ8; B7Z7Z2; J3KN25; J3KPP8
UniProt Related Accession #	P54803
NCBI Official Full Name	Galactocerebrosidase
NCBI Official Synonym Full Names	galactosylceramidase
NCBI Official Symbol	GALC
UniProt Protein Name	Galactocerebrosidase

UniProt Synonym Protein Names	Galactocerebroside beta-galactosidase; Galactosylceramidase; Galactosylceramide beta-galactosidase
Protein Family	4-carboxy-4-hydroxy-2-oxoadipic acid aldolase
UniProt Gene Name	GALC
UniProt Synonym Gene Names	GALCERase
UniProt Entry Name	GALC_HUMAN
NCBI Protein Information	galactocerebrosidase
NCBI Summary for GALC	This gene encodes a lysosomal protein which hydrolyzes the galactose ester bonds of galactosylceramide, galactosylsphingosine, lactosylceramide, and monogalactosyldiglyceride. Mutations in this gene have been associated with Krabbe disease, also known as globoid cell leukodystrophy. Alternate transcriptional splice variants, encoding different isoforms, have been characterized. [provided by RefSeq, Jul 2008]
UniProt Comments for GALC	GALC: Hydrolyzes the galactose ester bonds of galactosylceramide, galactosylsphingosine, lactosylceramide, and monogalactosyldiglyceride. Enzyme with very low activity responsible for the lysosomal catabolism of galactosylceramide, a major lipid in myelin, kidney and epithelial cells of small intestine and colon. Defects in GALC are the cause of leukodystrophy globoid cell (GLD); also known as Krabbe disease. This autosomal recessive disorder results in the insufficient catabolism of several galactolipids that are important in the production of normal myelin. Clinically, the most frequent form is the infantile form. Most patients (90%) present before six months of age with irritability, spasticity, arrest of motor and mental development, and bouts of temperature elevation without infection. This is followed by myoclonic jerks of arms and legs, oposthotonus, hypertonic fits, and mental regression, which progresses to a severe decerebrate condition with no voluntary movements and death from respiratory infections or cerebral hyperpyrexia before 2 years of age. However, a significant number of cases with later onset, presenting with unexplained blindness, weakness and/or progressive motor, and sensory neuropathy that can progress to severe mental incapacity and death, have been identified. Belongs to the glycosyl hydrolase 59 family. 4 isoforms of the human protein are produced by alternative splicing. Protein type: Lipid Metabolism - sphingolipid; EC 3.2.1.46; Hydrolase Chromosomal Location of Human Ortholog: 14q31 Cellular Component: lysosomal lumen; lysosome Molecular Function: galactosylceramidase activity Biological Process: galactosylceramide catabolic process; glycosphingolipid metabolic process Disease: Krabbe Disease
Research Articles on GALC	**1.** GALC was downregulated by promoter hypermethylation and contributed to the pathogenesis of EBV-associated nasopharyngeal carcinoma
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