CKMT2 Peptide - C-Terminal Region Blocking Peptide

PRODUCT OVERVIEW

Product Name	CKMT2, Blocking Peptide
Full Product Name	CKMT2 Peptide - C-terminal region
Product Gene Name	CKMT2 blocking peptide
Product Synonym Gene Name	SMTCK
Form/Format	Lyophilized powder
Preparation and Storage	Add 100ul of sterile PBS. Final peptide concentration is 1 mg/ml in PBS. For longer periods of storage, store at -20 degree C. Avoid repeat freeze-thaw cycles.
Antibody/Peptide Pairs	CKMT2 peptide (MBS3230837) is used for blocking the activity of CKMT2 antibody (MBS3205875)
Molecular Weight	43kDa
OMIM	123295
Product Categories/Family for CKMT2 blocking peptide	Peptide
Applications Tested/Suitable for CKMT2 blocking peptide	Western Blot (WB)
Related Product Information for CKMT2 blocking peptide	This is a synthetic peptide designed for use in combination with anti-CKMT2 antibody made Target Description: Mitochondrial creatine kinase (MtCK) is responsible for the transfer of high energy phosphate from mitochondria to the cytosolic carrier, creatine. It belongs to the creatine kinase isoenzyme family. It exists as two isoenzymes, sarcomeric MtCK and ubiquitous MtCK, encoded by separate genes. Mitochondrial creatine kinase occurs in two different oligomeric forms: dimers and octamers, in contrast to the exclusively dimeric cytosolic creatine kinase isoenzymes. Sarcomeric mitochondrial creatine kinase has 80% homology with the coding exons of ubiquitous mitochondrial creatine kinase. This gene contains sequences homologous to several motifs that are shared among some nuclear genes encoding mitochondrial proteins and thus may be essential for the coordinated activation of these genes during mitochondrial biogenesis. Three transcript variants encoding the same protein have been found for this gene.Mitochondrial creatine kinase (MtCK) is responsible for the transfer of high energy phosphate from mitochondria to the cytosolic carrier, creatine. It belongs to the creatine kinase isoenzyme family. It exists as two isoenzymes, sarcomeric MtCK and ubiquitous MtCK, encoded by separate genes. Mitochondrial creatine kinase occurs in two different oligomeric forms: dimers and octamers, in contrast to the exclusively dimeric cytosolic creatine kinase isoenzymes. Sarcomeric mitochondrial creatine kinase has 80% homology with the coding exons of ubiquitous mitochondrial creatine kinase. This gene contains sequences homologous to several motifs that are shared among some nuclear genes encoding mitochondrial proteins and thus may be essential for the coordinated activation of these genes during mitochondrial biogenesis. Three transcript variants encoding the same protein have been found for this gene.
Other Notes	Small volumes of CKMT2 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 CKMT2 purchase	MBS3230837 is a blocking peptide targeting CKMT2. Also known as CKMT2 Peptide - C-terminal region.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CKMT2. It may not necessarily be applicable to this product.

NCBI GI #	153251982
NCBI GeneID	1160

NCBI Accession #	NP_001816
UniProt Primary Accession #	P17540
UniProt Related Accession #	P17540
GenBank Nucleotide #	NM_001825
NCBI Official Full Name	creatine kinase S-type, mitochondrial
NCBI Official Synonym Full Names	creatine kinase, mitochondrial 2
NCBI Official Symbol	CKMT2
NCBI Official Synonym Symbols	SMTCK
UniProt Protein Name	Creatine kinase S-type, mitochondrial
UniProt Synonym Protein Names	Basic-type mitochondrial creatine kinase; Mib-CK; Sarcomeric mitochondrial creatine kinase
Protein Family	Creatine kinase
UniProt Gene Name	CKMT2
UniProt Synonym Gene Names	Mib-CK; S-MtCK
UniProt Entry Name	KCRS_HUMAN
NCBI Protein Information	creatine kinase S-type, mitochondrial
NCBI Summary for CKMT2	Mitochondrial creatine kinase (MtCK) is responsible for the transfer of high energy phosphate from mitochondria to the cytosolic carrier, creatine. It belongs to the creatine kinase isoenzyme family. It exists as two isoenzymes, sarcomeric MtCK and ubiquitous MtCK, encoded by separate genes. Mitochondrial creatine kinase occurs in two different oligomeric forms: dimers and octamers, in contrast to the exclusively dimeric cytosolic creatine kinase isoenzymes. Sarcomeric mitochondrial creatine kinase has 80% homology with the coding exons of ubiquitous mitochondrial creatine kinase. This gene contains sequences homologous to several motifs that are shared among some nuclear genes encoding mitochondrial proteins and thus may be essential for the coordinated activation of these genes during mitochondrial biogenesis. Three transcript variants encoding the same protein have been found for this gene. [provided by RefSeq, Jul 2008]
UniProt Comments for CKMT2	CKMT2: Reversibly catalyzes the transfer of phosphate between ATP and various phosphogens (e.g. creatine phosphate). Creatine kinase isoenzymes play a central role in energy transduction in tissues with large, fluctuating energy demands, such as skeletal muscle, heart, brain and spermatozoa. Belongs to the ATP:guanido phosphotransferase family. Protein type: Amino Acid Metabolism - arginine and proline; Mitochondrial; Kinase, other; EC 2.7.3.2 Chromosomal Location of Human Ortholog: 5q13.3 Cellular Component: mitochondrion; mitochondrial inner membrane Molecular Function: creatine kinase activity; ATP binding Biological Process: muscle contraction; creatine metabolic process; phosphorylation
Research Articles on CKMT2	**1.** These findings support increased CK activity as protection against ischaemia-reperfusion injury, in particular, protection via CKMT2 in a cardiac-relevant cell line, which merits further investigation in vivo.
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