CKMT1A Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

PRODUCT OVERVIEW

Product Name	CKMT1A, Blocking Peptide
Full Product Name	CKMT1A Blocking Peptide
Product Gene Name	CKMT1A blocking peptide
Product Synonym Gene Name	CKMT1B
Product Synonym Names	Acidic-type mitochondrial creatine kinase; CKMT; CKMT1; CKMT1B; Creatine kinase mitochondrial 1 (ubiquitous); Creatine kinase mitochondrial 1B; Creatine kinase U type mitochondrial; Creatine kinase U-type; KCRU_HUMAN; Mia-CK; mitochondrial; U-MtCK; Ubiquitous mitochondrial creatine kinase; UMTCK
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 10 mg/ml.
Purity/Purification	The purity is >90%,tested by HPLC and MS.
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	CKMT1A peptide (MBS9620962) is used for blocking the activity of CKMT1A antibody (MBS9603485)
Molecular Weight	47,037 Da
OMIM	123290
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Notes	For phospho antibody, we provide phospho peptide (0.5mg) and non-phospho peptide (0.5mg)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for CKMT1A blocking peptide	Blocking/Control
Related Product Information for CKMT1A blocking peptide	Blocking peptides are peptides that bind specifically to the target antibody and block antibody binding. These peptide usually contains the epitope recognized by the antibody. Antibodies bound to the blocking peptide no longer bind to the epitope on the target protein. This mechanism is useful when non-specific binding is an issue, for example, in Western blotting (immunoblot) and immunohistochemistry (IHC). By comparing the staining from the blocked antibody versus the antibody alone, one can see which staining is specific; Specific binding will be absent from the western blot or immunostaining performed with the neutralized antibody.
Other Notes	Small volumes of CKMT1A 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 CKMT1A purchase	MBS9620962 is a blocking peptide targeting CKMT1A.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CKMT1A. It may not necessarily be applicable to this product.

NCBI GI #	66346730
NCBI GeneID	548596
NCBI Accession #	NP_001015001.1

UniProt Primary Accession #	P12532
UniProt Secondary Accession #	Q0VAM3; Q32NF6; Q53FC4; B4DIT8; B7ZA09
UniProt Related Accession #	P12532
GenBank Nucleotide #	NM_001015001.2
NCBI Official Full Name	creatine kinase U-type, mitochondrial
NCBI Official Synonym Full Names	creatine kinase, mitochondrial 1A
NCBI Official Symbol	CKMT1A
NCBI Official Synonym Symbols	CKMT1
UniProt Protein Name	Creatine kinase U-type, mitochondrial
UniProt Synonym Protein Names	Acidic-type mitochondrial creatine kinase; Mia-CK; Ubiquitous mitochondrial creatine kinase
UniProt Gene Name	CKMT1A
UniProt Synonym Gene Names	CKMT; Mia-CK; U-MtCK
UniProt Entry Name	KCRU_HUMAN
NCBI Protein Information	creatine kinase U-type, mitochondrial; U-MtCK; mia-CK; ubiquitous mitochondrial creatine kinase; acidic-type mitochondrial creatine kinase; creatine kinase, mitochondrial 1 (ubiquitous)
NCBI Summary for CKMT1A	Mitochondrial creatine (MtCK) kinase 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. Many malignant cancers with poor prognosis have shown overexpression of ubiquitous mitochondrial creatine kinase; this may be related to high energy turnover and failure to eliminate cancer cells via apoptosis. Ubiquitous mitochondrial creatine kinase has 80% homology with the coding exons of sarcomeric mitochondrial creatine kinase. Two genes located near each other on chromosome 15 have been identified which encode identical mitochondrial creatine kinase proteins. [provided by RefSeq, Jul 2008]
UniProt Comments for CKMT1A	CKMT1A: 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. Exists as an octamer composed of four MTCK homodimers. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Mitochondrial; Kinase, other; EC 2.7.3.2; Amino Acid Metabolism - arginine and proline Chromosomal Location of Human Ortholog: 15q15 Cellular Component: mitochondrion; mitochondrial inner membrane Molecular Function: creatine kinase activity; ATP binding Biological Process: phosphorylation; creatine metabolic process
Research Articles on CKMT1A	**1.** the knock-down of the mitochondrial creatine kinase-1 (CKMT1) by RNA interference causes the dissipation of the mitochondrial membrane potential
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