

Recombinant Human CKMT2

Cat. No. CKMT2-26702TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length Human CKMT2 with N terminal proprietary tag, 71.83kDa.
Species	Human
Source	Wheat Germ
ProteinLength	419 amino acids
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.
Molecular Weight	71.830kDa inclusive of tags
Tissue specificity	Sarcomere-specific. Found only in heart and skeletal muscles.

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Form	Liquid
Purity	Proprietary Purification
Storage buffer	pH: 8.00Constituents:0.3% Glutathione, 0.79% Tris HCl
Storage	Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.
Sequences of amino acids	MASIFSKLLTGRNASLLFATMGTSVLTGTYLLNRQKVCAE VREQPRLFPPSADYPDL RKHNNCMAECLTPAIYAKLRNKV TPNGYTLTDQCIQTGVDNPGHPFIKTVGMVAGDE ESYEVFA DLFDPVIKLRHNGYDPRVMKHTTDL DASKITQGQFDEHYV LSSRVRTGR SIRGLSLPPACTRAERREVENVAITALEGLK GDLAGRYYKLSEMQDQDQRLIDDHF LFDKPVSPLLTCAG MARDWPDARGIWHNYDKTFLIWIINEEDHTRVISMEEKGGNM K RVFERFCRGLKEVERLIQERGWEFMWNERLGYILTCPSN LGTGLRAGVHVRIPKLS KDPRFSKILENLRQLKRGTTGGVD TAAVADVYDISNIDRIGRSEVELVQIVIDGVNYLV DCEKK LERGQDIKVPPLPQFGKK
Sequence Similarities	Belongs to the ATP:guanido phosphotransferase family.Contains 1 phosphagen kinase C-terminal domain.Contains 1 phosphagen kinase N-terminal domain.
GENE INFORMATION	
Gene Name	CKMT2 creatine kinase, mitochondrial 2 (sarcomeric) [Homo sapiens]
Official Symbol	CKMT2
Synonyms	CKMT2; creatine kinase, mitochondrial 2 (sarcomeric); creatine kinase S-type, mitochondrial; SMTCK;
Gene ID	1160

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mRNA Refseq	NM_001099735
Protein Refseq	NP_001093205
MIM	123295
Uniprot ID	P17540
Chromosome Location	5
Pathway	Arginine and proline metabolism, organism-specific biosystem; Arginine and proline metabolism, conserved biosystem; Creatine metabolism, organism-specific biosystem; Creatine pathway, organism-specific biosystem; Creatine pathway, conserved biosystem;
Function	ATP binding; creatine kinase activity; nucleotide binding;

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