

Recombinant Human CKMT1A

Cat. No. CKMT1A-27115TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length Human CKMT1B with N terminal proprietary tag; Predicted MWt 71.94 kDa.
Species	Human
Source	Wheat Germ
ProteinLength	417 amino acids
Description	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.
Molecular Weight	71.940kDa inclusive of tags
Form	Liquid

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Purity	Proprietary Purification
Storage buffer	pH: 8.00 Constituents: 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	MAGPFSRLLSARPGRLRLLAGAGSLAAGFLLRPEPVRAA SERRRLYPPSAEYPDL RKHNNCMASHLTPAVYARLCDKTT PTGWTL DQCIQTGVDNPGHPFIKTVGMVAGD EETYEVFAD LFDPVIQERHNGYDPRTMKHTTDL DASKIRSGYFDERYVL SSRVRTG RSIRGLSLPPACTRAERREVERVVVDALSGLK G DLAGRYRRLSEMTEAEQQQLIDD HFLFDKPVSPLLTAAGM ARDWPDARGIWHNNEKSFLI WVNEEDHTRVISMEKGGN MK RVFERFCRGLKEVERLIQERGWEFMWNERLG YILTCPSNL GTGLRAGVHIKLPL LSKDSRFPKILENLRLQKRGTGGVDT AATGGVFDISNLDRLGKSEVELVQLVIDGVN YLIDCERRL ERGQDIRIPTPVIHTKH

GENE INFORMATION

Gene Name	CKMT1A creatine kinase, mitochondrial 1A [Homo sapiens]
Official Symbol	CKMT1A
Synonyms	CKMT1A; creatine kinase, mitochondrial 1A; CKMT1, creatine kinase, mitochondrial 1 (ubiquitous); creatine kinase U-type, mitochondrial;
Gene ID	548596
mRNA Refseq	NM_001015001
Protein Refseq	NP_001015001

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MIM	613415
Uniprot ID	P12532
Chromosome Location	15q15
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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