

Product datasheet for RC206607

CKMT2 (NM_001825) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CKMT2 (NM_001825) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CKMT2
Synonyms:	SMTCK
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC206607 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCCAGTATCTTTTCTAAGTTGCTAACTGGCCGCAATGCTTCTCTGCTGTTTGTACCATGGGCACCA
GTGTCCTGACCACCGGTACCTGCTGAACCGGCAGAAAGTGTGTGCCGAGGTCCGGGAGCAGCCTAGGCT
ATTTCTCCAAGCGCAGACTACCCAGACCTGCGCAAGCACAACAAGTGCATGGCCGAGTGCCTACCCCC
GCCATTTATGCCAAGCTTCGCAACAAGGTGACACCAACGGCTACACGCTGGACCAGTGCATCCAGACTG
GAGTGGACAACCCTGGCCACCCCTTCATAAAGACTGTGGGCATGGTGGCTGGTGACGAGGAGTCCATGA
GGTGTGTTGCTGACCTTTTGGACCCGTCATCAAATAAGACACAACGGCTATGACCCAGGGTGATGAAG
CACACAACGGATCTGGATGCATCAAAGTACCCAAAGGGCAGTTCGACGAGCATTACGTGCTGTCTTCTC
GGGTGCGCACTGGCCGAGCATCCGTGGGCTGAGCCTGCCTCCAGCCTGCACCCGGGCCGAGCGAAGGGA
GGTAGAGAACGTGGCCATCACTGCCCTGGAGGGCTCAAGGGGGACCTGGCTGGCCGCTACTACAAGCTG
TCCGAGATGACGGAGCAGGACCAGCAGCGGCTCATCGATGACCACTTTCTGTTTGATAAGCCAGTGTCC
CTTTATTAACATGTGCTGGATGGCCCGTACTGGCCAGATGCCAGGGGAATCTGGCATAATTATGATAA
GACATTTCTCATCTGGATAAATGAGGAGGATCACACCAGGTAATCTCAATGGAAAAAGGAGGCAATATG
AAACGAGTATTTGAGCGATTCTGCTGGACTAAAAGAAGTGAACGGTTAATCCAAGAAGCAGGCTGGG
AGTTCATGTGGAATGAGCGCTAGGATACATTTTACCTGTCTTTCGAACCTTGGAAACAGGACTACGAGC
TGGTGTCCACGTTAGGATCCCAAAGCTCAGCAAGGACCCACGCTTTTCTAAGATCCTGAAAAACCTAAGA
CTCCAGAAGCGTGGCACAGGTGGTGTGGACACTGCCGCGTGCAGATGTGTACGACATTTCCAACATAG
ATAGAATTGGTCGATCAGAGTTGAGCTTGTTCAGATAGTCATCGATGGAGTCAATTACCTGGTGGATTG
TGAAAAGAAGTTGGAGAGAGGCCAAGATATAAGGTGCCACCCCTCTGCCTCAGTTTGGCAAAAAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC206607 protein sequence
Red=Cloning site Green=Tags(s)

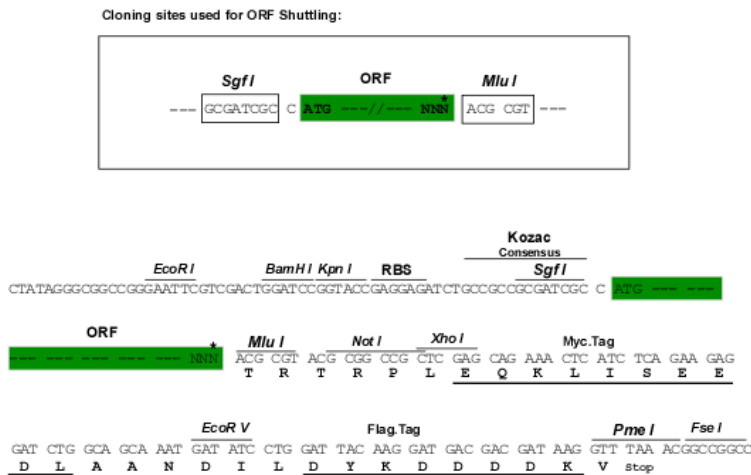
MASIFSKLLTGRNASLLFATMGTSVLTTGYLLNRQKVCAEVREQPRLFPPSADYDPLRKHNNCMAECLTP
 AIYAKLRNKVTPNGYTLDQCIQTGVDNPGHPFIKTVGMVAGDEESYEYFADLFDPVIKLRHNGYDPRVMK
 HTTDL DASKITQGQFDEHYVLSRVRTGRSIRGLSLPPACTRAERREVENVAITALEGLKGDLAGRYYKL
 SEMTEQDQRLIDDFLFDKPVSPLLTCAGMARDWPDARGIWHNYDKTFLIWIINEEDHTRVISMEKGGNM
 KRVFERFCRGLKEVERLIQERGWEFMWNERLGYILTCPSNLGTGLRAGVHVRIPKLSKDPRFSKILENLR
 LQKRGTGGVDTAAVADVYDISNIDRIGRSEVELVQIVIDGVNYLV DCEK KLERGQDIKVPPLPQFGKK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6017_e05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

ACCN: NM_001825

ORF Size: 1257 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_001825.2](#)

RefSeq Size: 1650 bp

RefSeq ORF: 1260 bp

Locus ID: 1160

UniProt ID: [P17540](#)

Cytogenetics: 5q14.1

Domains: ATP-gua_Ptrans

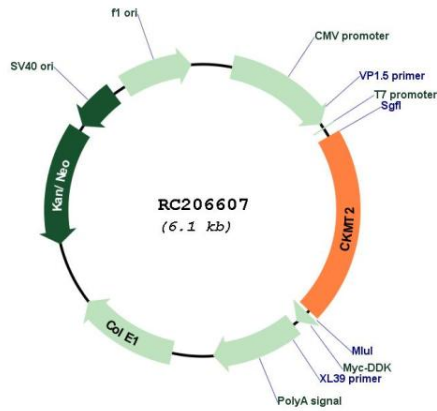
Protein Families: Druggable Genome

Protein Pathways: Arginine and proline metabolism, Metabolic pathways

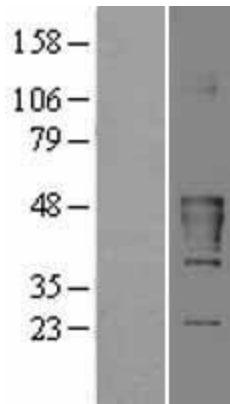
MW: 47.5 kDa

Gene Summary: 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]

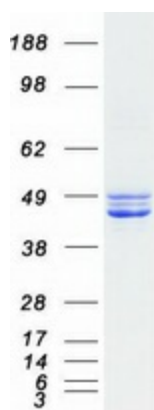
Product images:



Circular map for RC206607



Western blot validation of overexpression lysate (Cat# [LY420508]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC224501] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CKMT2 protein (Cat# [TP306607]). The protein was produced from HEK293T cells transfected with CKMT2 cDNA clone (Cat# RC206607) using MegaTran 2.0 (Cat# [TT210002]).