

Product datasheet for RC212558

CKMT1B (NM_020990) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | CKMT1B (NM_020990) Human Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | CKMT1B |
| Synonyms: | CKMT; CKMT1; UMTCK |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| ORF Nucleotide Sequence: | >RC212558 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCTGGTCCCTTCTCCCGTCTGCTGTCCGCCGCCCGGGACTCAGGCTCCTGGCTTTGGCCGGAGCGG
GGTCTCTAGCCGCTGGGTTTCTGCTCCGACCGAACTGTACGAGCTGCCAGTGAACGACGGAGGCTGTA
TCCCCGAGCGCTGAGTACCCAGACCTCCGAAAGCACAACAACCTGCATGGCCAGTCACCTGACCCAGCA
GTCTATGCACGGCTCTGCGACAAGACCACCCACTGGTTGGACGCTAGATCAGTGTATCCAGACTGGCC
TGGACAACCTGGCCACCCCTTCAAGACTGTGGGCATGGTGGCTGGAGATGAGGAGACCTATGAGGT
ATTTGCTGACCTGTTGACCCTGTGATCCAAGAGCGACACAATGGATATGACCCCGGACAATGAAGCAC
ACCACGGATCTAGATGCCAGTAAATCCGTTCTGGCTACTTTGATGAGAGGTATGTATTGCTCTAGAG
TCAGAACTGGCCGAAGCATCCGAGGACTCAGTCTGCCTCCAGCTTGCCTCGAGCAGAGCGACGAGAGGT
GGAACGTGTTGTGGTGGATGCACTGAGTGGCCTGAAGGGTGACCTGGCTGGACGTTACTATAGGCTCAGT
GAGATGACAGAGGCTGAACAGCAGCAGCTTATTGATGACCACTTTCTGTTTGATAAGCCTGTGTCCCGT
TGCTGACTGCAGCAGGAATGGCTCGAGACTGGCCAGATGCTCGTGAATTTGGCACAACAATGAGAAGAG
CTTCTGATCTGGGTGAATGAGGAGGATCATACCGGGTGATCTCCATGGAGAAGGGTGGTAACATGAAG
AGAGTGGTGAAGATTCTGCCGAGGCCCAAAGAGGTGGAGAGACTTATCCAAGAAGCTGGCTGGGAGT
TCATGTGGAATGAGCGTTTGGGATACATTTGACCTGTCCATCTAACCTGGGCAGTGGACTTCGGGCAGG
AGTGACATCAAACCTGCCCTGCTAAGCAAAGATAGCCGCTTCCCAAAGATCCTGGAGAACCTAAGACTC
CAAAGCGTGGTACTGGAGGAGTGGACTGCTGCCACAGGCGGTGCTTTGATATTTCTAATTTGGACC
GACTAGGCAAAATCAGAGGTGGAGCTGGTCAACTGGTCAATCGATGGAGTAAACTATTTGATTGATTGTA
ACGGCGTCTGGAGAGAGGCCAGGATATCCGCATCCCCACACCTGTCATCCACACCAAGCAT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC212558 protein sequence
Red=Cloning site Green=Tags(s)

MAGPFSRLLSARPLRLLAGAGSLAAGFLLRPEPVRAASERRRLYPPSAEYPDLRKHNNCMASHLTPA
 VYARLCKDKTTPTGWTLDQCIQTGVDNPGHPFIKTVGMVAGDEETYEYVADLFDPIQERHNGYDPRMKH
 TTDLDASKIRSGYFDERIVLSSRVRTGRSIRGLSLPPACTRAERREVERVVVDALSGLKGDLAGRYRLS
 EMTEAEQQQLIDDHFLFDKPVSPLLTAAGMARDWPDARGIWHNNEKSFLIWNNEEDHTRVISMEKGGNMK
 RVFERFCRGLKEVERLIQERGWEFMWNRLGYILTCPNSLGTGLRAGVHIKPLLLSKDSRFPKILENRL
 QKRGTTGGVDTAATGGVFDISNLDRLGKSEVELVQLVIDGVNYLIDCERRLERGQDIRIPTVVIHTKH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6588_a05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

ACCN: NM_020990

ORF Size: 1251 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_020990.4](#)

RefSeq Size: 1779 bp

RefSeq ORF: 1254 bp

Locus ID: 1159

UniProt ID: [P12532](#)

Cytogenetics: 15q15.3

Domains: ATP-gua_Ptrans

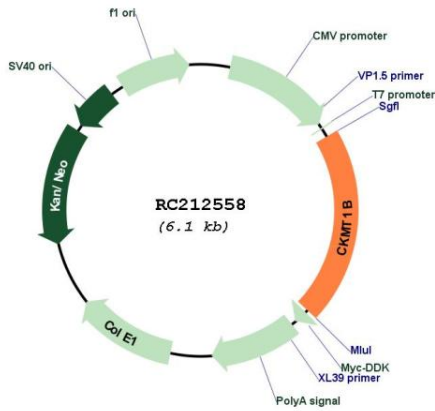
Protein Families: Druggable Genome

Protein Pathways: Arginine and proline metabolism, Metabolic pathways

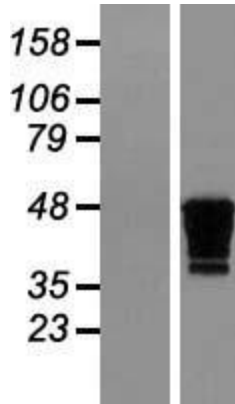
MW: 47 kDa

Gene Summary: 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]

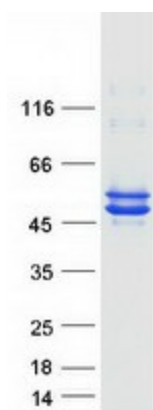
Product images:



Circular map for RC212558



Western blot validation of overexpression lysate (Cat# [LY412155]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212558 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CKMT1B protein (Cat# [TP312558]). The protein was produced from HEK293T cells transfected with CKMT1B cDNA clone (Cat# RC212558) using MegaTran 2.0 (Cat# [TT210002]).