

Product datasheet for RC207943

MT (MCAT) (NM_173467) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MT (MCAT) (NM_173467) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MT
Synonyms:	fabD; FASN2C; MCT; MCT1; MT; NET62
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC207943 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAGCGTCCGGGTGCGACGGGTAGCGTGGGTGAGGGCTTGGGCGCCAGCTACCGCCGGCGCCCTCGA
GCTTCCCGGTGCCTCCGCCGGGGCCAGGGTGTAGCGGAGCTGCTGCGAGATGCGACCGGGGGCGGAGGA
GGAGGCGCCCTGGGCGGCGACGGAGCGGCAATGCCGGCCAGTGTCTCGTGTCTCTTCCCGGGCCAG
GGCAGCCAGGTGGTGGGCATGGCCGCGGTCTGCTCAACTACCCGCGCTCCGCGAACTCTACGCCGCC
CCCGCCGCGTGTGGGCTACGACCTGTGGAAGTGTGAGCCTGCACGGGCCGAGGAGACCTGGACCGCAC
CGTGCAGTGTGAGCCCGGATCTTCGTGGCATCGCTGGCCGCTGTGAGAACTACATCACCTGCAGCCC
TCGGTGATTGAGAACTGTGTTGCTGCTGCTGGATTGAGTGTGGGAGATTTGCAGCCCTAGTGTGGCCG
GAGCCATGGAATTTGCTGAAGTTTGTATGCAAGTAAAATCCGAGCTGAGGCCATGCAGGAAGCTTCAGA
AGCTGTCCCCAGTGGGATGCTGTCTGTCTCGGCCAGCCTCAGTCCAAGTTCAACTTCGCTGTTTGAA
GCCCGGGAACACTGCAAGTCTTTAGGCATAGAGAAACCCGATGTGAAGTGTCCAACCTCTTTCCAG
ATTGCAGGGTGATTTGAGGACACCAAGAGGCTCTACGGTTTCTCCAGAAGAATTCCTCTAAGTTTCAAT
CAGACGCCACAGGATGTTGCCGTTAGTGGCGCATTCCACACCCGCTCATGGAGCCAGCCGTGGAGCCC
CTGACGCAAGCTTTAAAGGCAGTCGACATTAAGAAGCCTCTGGTTTCTGTCTCAACCTCCACGGGC
ATAGATACAGGCATCCCGGGCACATCCACAAGCTGCTGGCCAGCAGCTGGTCTCCCAAGTGAAGTGGGA
GCAGACGATGCATGCCATATACGAAAGGAAAAAGGCAGGGGTTCCCCAAACTTTGAAAGTAGGCCCT
GGCAGGCAGTGGGAGCCATCCTGAAGAGCTGTAACATGCAGGCCTGGAAGTCTACAGCCCGTGGATG
TGCTGCAGACCCTCGAACATGTGGACCTGGACCCTCAGGAGCCCCGAGA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC207943 protein sequence
Red=Cloning site Green=Tags(s)

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MSVRVARVAWRGLGASYRRGASSFPVPPPGAQGVAE LLRDATGAE EEPWAATERRMPGQCSVLLFPGQ
GSQVVMGRGLLNYPVREL YAAARRVLGYDLLE LSLHGPQETLDR TVHCQPAIFVASLA AVEKLHHLQP
SVIENCVAAGFSVGEFAAL VFAGAMEFAEGL YAVKIRAEAMQEASEAVPSGMLSVLGQPQSKFNFACE
AREHCKSLGIENPVCEVSNY LFPDCRVI SGHQEALRFLQKNSSKFHFRTRMLPVSGAFHTRLMEPAVEP
LTQALKAVDIKKPLVSVYSNVHGHRYRHPGHIHKLLAQQLVSPVKWEQTMHAIYERKKGRGFPQTFEVGP
GRQLGAILKSCNMQAWKSYS AVDVLQTL EHVLDLDPQEPPR
```

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6343_a09.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

ACCN: NM_173467

ORF Size: 1170 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_173467.5](#)

RefSeq Size: 2086 bp

RefSeq ORF: 1173 bp

Locus ID: 27349

UniProt ID: [Q8IVS2](#)

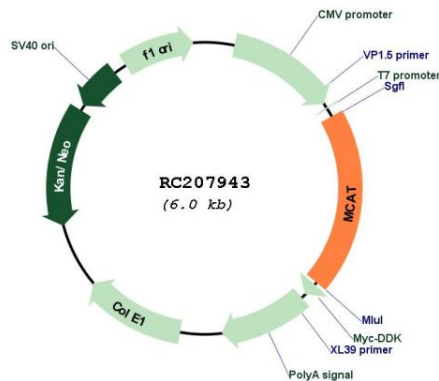
Cytogenetics: 22q13.2

Protein Pathways: Fatty acid biosynthesis, Metabolic pathways

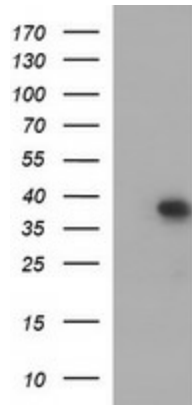
MW: 42.9 kDa

Gene Summary: The protein encoded by this gene is found exclusively in the mitochondrion, where it catalyzes the transfer of a malonyl group from malonyl-CoA to the mitochondrial acyl carrier protein. The encoded protein may be part of a fatty acid synthase complex that is more like the type II prokaryotic and plastid complexes rather than the type I human cytosolic complex. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Mar 2012]

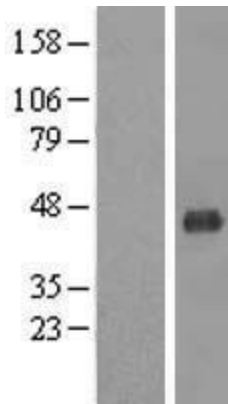
Product images:



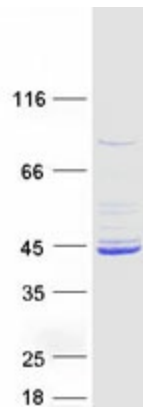
Circular map for RC207943



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY MCAT (Cat# RC207943, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-MCAT (Cat# [TA507070]). Positive lysates [LY406620] (100ug) and [LC406620] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY406620]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207943 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MCAT protein (Cat# [TP307943]). The protein was produced from HEK293T cells transfected with MCAT cDNA clone (Cat# RC207943) using MegaTran 2.0 (Cat# [TT210002]).