

Product datasheet for **RC208703**

MTMR2 (NM_016156) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MTMR2 (NM_016156) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MTMR2
Synonyms:	CMT4B; CMT4B1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide
Sequence:**

>RC208703 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGAGACGAGCTCGAGCTGCGAGAGTCTTGGCTCCCAGCCGGCGGGCTCGGCCGCCAGCGTGGACT
 CCTTGTCCAGTGCCTCCACTTCTCATTCCAGAGAATTCAGTGCATACAAAATCAGCTTCTGTTGTATCATC
 AGATTCCATTTCAACTTCTGCCGACAACCTTTCTCCTGATTTGAGGGTCTCGAGGGAGTCTAACAAGTTA
 GCAGAAATGGAAGAACCACCTTCTCCAGGAGAAAATATTAAGACATGGCCAAAGATGTAACCTATA
 TATGTCCATTCAGTGGCCTGTACGAGGAACCTGACTGTCACGAATTATAGGTTATATTTCAAAGCAT
 GGAACGGGATCCCCATTTGTTTTAGATGCTTCCCTTGGTGTGATAAATAGAGTAGAAAAAATTGGTGGT
 GCTTCTAGTCGAGGTGAAAATTTCTATGGACTAGAAAATGTGTGAAGGATATTAGGAATTTACGATTTG
 CTCATAAACCTGAGGGGCGGACAAGAAGATCCATATTTGAGAATCTAATGAAATATGCATTTCTGTCTC
 TAATAACCTGCCCTTTTTGCTTTTGAATACAAAGAAGTATTCCTGAAAATGGGTGGAAGCTATATGAC
 CCTCTTTTAGAGTATAGAAGGCAGGGAATTCAAATGAAAGCTGGAGAATAACAAAGATAAATGAACGAT
 ATGAACTTTGTGATACATACCCTGCCCTCCTGGTTGTGCCAGCAAATATTCCTGATGAAGAATTAAGAG
 AGTGGCATCCTTCAGATCAAGAGGCCGTATCCCAGTTTTATCATGGATTCATCCTGAAAGTCAAGCCACA
 ATCACTCGGTGTAGCCAGCCATGGTTGGAGTGTGAAAGCGAAGCAAAGAAGATGAAAAATACCTTC
 AAGCTATCATGGATTCCAATGCCAGTCTCACAAAATCTTTATATTTGATGCCCGGCCAAGTGTTAATGC
 TGTTGCCAACAAGGCAAAGGGTGGAGGTTATGAAAGTGAAGATGCCTATCAAAATGCTGAACTAGTTTT
 CTGGATATCCACAATATTCATGTTATGAGAGAATCATTACGAAAACCTAAGGAGATTGTACCCCAACA
 TTGAGGAAACTCACTGGTTGTCTAACTTGAATCTACTCATTGGCTAGAACATATTAAGCTTATTCTTGC
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 AGATAAGAACCATGCAGATGCAGACAGATCGCCTGTTTTCTTCAATTTATTGACTGTGTCTGCCAGATG
 ACAAGACAGTTTCTACCGCATTTGAATTCATGAGTATTTCTCATTACCATTTGGACCACCTATACA
 GCTGCTTATTCGGAACATTCCTCTGTAATAGTGAACAACAGAGAGGAAAAGAGAATCTTCTAAAAGGAC
 TGTGTCAGTGTGGTCTTACATAAACAGCCAGCTGGAAGACTTCACTAATCCTCTCTATGGGAGCTATTCC
 AATCATGTCCTTTATCCAGTAGCCAGCATGCGCCACCTAGAGCTCTGGGTGGGATATTACATAAGGTGGA
 ATCCACGGATGAAACCACAGGAACCTATTCACAACAGATACAAAGAACCTCTTGCTAAACGAGCAGAGCT
 TCAGAAAAAGTAGAGGAACTACAGAGAGAGATTTCTAACCGATCAACCTCATCCTCAGAGAGAGCCAGC
 TCTCCTGCACAGTGTGCTCACTCCTGTCCAACTGTTGTA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC208703 protein sequence
Red=Cloning site Green=Tags(s)

METSSSCESLGSQPAARPPSVDSLSSASTSHSENSVHTKSASVSSDSISTSDNFSPDLRVLRESNKL
 AEMEEPPLLPGENIKDMAKDVTYICPFTGAVRGTLTVTNYRLYFKSMERDPPFVLDASLGVINRVEKIGG
 ASSRGENSYGLETVCKDIRNLRFAHKPEGRTRRSIFENLMKYAFPVSNLPLFAFEYKEVFPENGWKLVD
 PLLEYRRQGIPNESWRITKINERYELCDTYPALLVVPANIPDEELKRVASFRRGRIPVLSWIHPESQAT
 ITRCSQPMVGVSGKRSEDEKYLQAIMDSNAQSHKIFIFDARPSVNAVANKAKGGGYESEDAYQNAELVF
 LDIHNIHVMRESLRKLKEIVYPNIEETHWLSNLESTHWLEHIKILLAGALRIADKVESGKTSVVVHCSDG
 WDRTAQLTSLAMLMLDGYRTIRGFEVLVEKEWLSFGHRFQLRVGHGDKNHADADRSPVFLQFIDCVWQM
 TRQFPTAFEFNEYFLITILDHLYSCLFGTFLCNSEQQRGKENLPKRTVSLWSYINSQLEDFTNPLYGSYS
 NHVLYPVASMRHLELWVGYYIRWNPRMKPQEPHNRKELLAKRAELQKKVEELQREISNRSTSSSERAS
 SPAQCVTPVQTVV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6224_h09.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_016156

ORF Size: 1929 bp

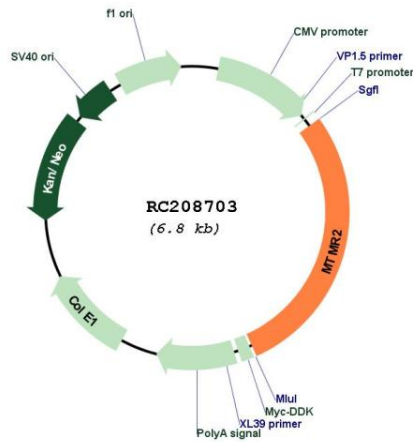
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

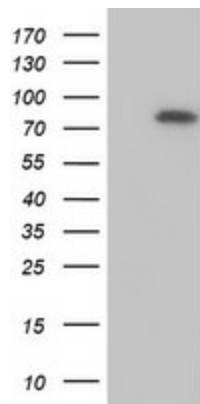
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:	<ol style="list-style-type: none">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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_016156.2
RefSeq Size:	4603 bp
RefSeq ORF:	1932 bp
Locus ID:	8898
UniProt ID:	Q13614
Cytogenetics:	11q21
Domains:	PTPc_motif, GRAM
Protein Families:	Druggable Genome, Phosphatase
Protein Pathways:	Fructose and mannose metabolism, Metabolic pathways, Riboflavin metabolism, Thiamine metabolism
MW:	73.4 kDa
Gene Summary:	This gene is a member of the myotubularin family of phosphoinositide lipid phosphatases. The encoded protein possesses phosphatase activity towards phosphatidylinositol-3-phosphate and phosphatidylinositol-3,5-bisphosphate. Mutations in this gene are a cause of Charcot-Marie-Tooth disease type 4B, an autosomal recessive demyelinating neuropathy. Alternatively spliced transcript variants encoding multiple isoforms have been found for this gene. [provided by RefSeq, Aug 2011]

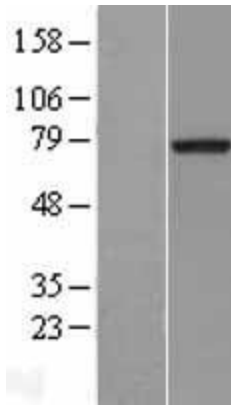
Product images:



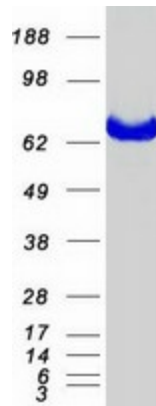
Circular map for RC208703



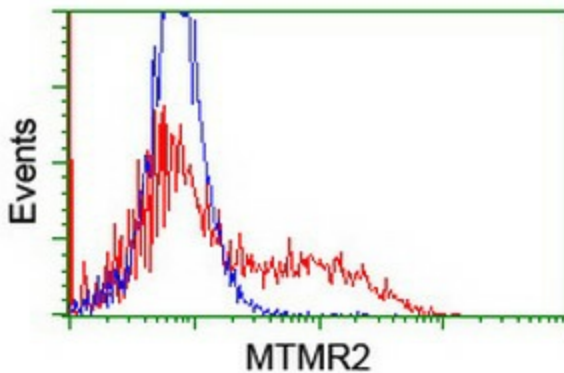
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY MTMR2 (Cat# RC208703, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-MTMR2 (Cat# [TA502204]). Positive lysates [LY414151] (100ug) and [LC414151] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY414151]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208703 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MTMR2 protein (Cat# [TP308703]). The protein was produced from HEK293T cells transfected with MTMR2 cDNA clone (Cat# RC208703) using MegaTran 2.0 (Cat# [TT210002]).



HEK293T cells transfected with either RC208703 overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-MTMR2 antibody ([TA502204]), and then analyzed by flow cytometry.