

## Product datasheet for **RC207294**

### MRCL3 (MYL12A) (NM\_006471) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** MRCL3 (MYL12A) (NM\_006471) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** MRCL3  
**Synonyms:** HEL-S-24; MLC-2B; MLCB; MRCL3; MRLC3; MYL2B  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC207294 ORF sequence  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGTCGAGCAAAGAACAAGACCAAGACCAAGAAGCGCCCTCAGCGTGCAACATCCAATGTGTTTGCTA  
TGTTTGACCAGTCGAGATTCAGGAGTTCAAAGAGGCCTCAACATGATTGATCAGAACAGAGATGGTTT  
CATCGACAAGGAAGATTTGCATGATATGCTTGCTTCATTGGGGAAGAATCCAAGTATGAGTATCTAGAT  
GCCATGATGAATGAGGCTCCAGGCCCATCAATTTACCATGTTCTCACCATGTTTGGTGAGAAGTTAA  
ATGGCACAGATCCTGAAGATGTCATCAGAAATGCCTTTGCTTGCTTTGATGAAGAAGCAACTGGCACCAT  
ACAGGAAGATTACTTGAGAGAGCTGCTGACAACCATGGGGGATCGGTTTACAGATGAGGAAGTGGATGAG  
CTGTACAGAGAAGCACCTATTGATAAAAAGGGGAATTTCAATTACATCGAGTTCACACGCATCCTGAAAC  
ATGGAGCCAAAGACAAAGATGAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC207294 protein sequence  
Red=Cloning site Green=Tags(s)

MSSKRTKTKKKRPQRATSNVFMFDQSQIQEFKEAFNMIDQNRDGFIDKEDLHDMLASLGKNPTDEYLD  
AMMNEAPGPINF TMFLTMFGEKLNGLDPEDVIRNAFACFDEEATGTIQEDYLRELLTMMGDRFTDEEVD  
LYREAPIDKKGNFNIEFTRILKHGAKDKDD

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

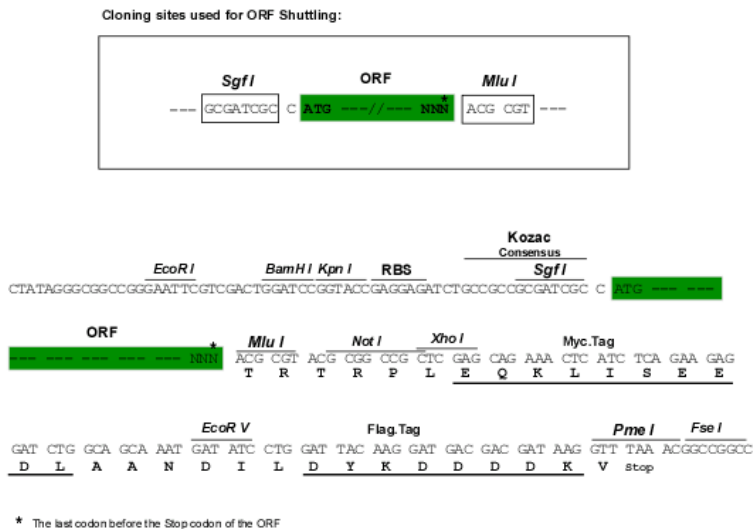
**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6321\\_f08.zip](https://cdn.origene.com/chromatograms/mk6321_f08.zip)



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Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM\_006471

ORF Size: 513 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\\_006471.2](#), [NP\\_006462.1](#)

RefSeq Size: 1243 bp

RefSeq ORF: 516 bp

Locus ID: 10627

UniProt ID: [P19105](#)

**Cytogenetics:** 18p11.31

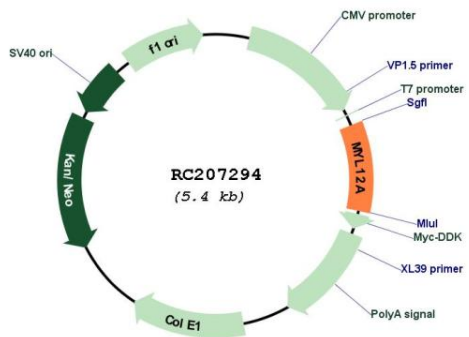
**Domains:** EFh

**Protein Pathways:** Focal adhesion, Leukocyte transendothelial migration, Regulation of actin cytoskeleton, Tight junction

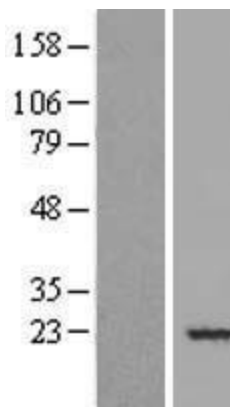
**MW:** 19.8 kDa

**Gene Summary:** This gene encodes a nonsarcomeric myosin regulatory light chain. This protein is activated by phosphorylation and regulates smooth muscle and non-muscle cell contraction. This protein may also be involved in DNA damage repair by sequestering the transcriptional regulator apoptosis-antagonizing transcription factor (AATF)/Che-1 which functions as a repressor of p53-driven apoptosis. Alternate splicing results in multiple transcript variants. A pseudogene of this gene is found on chromosome 8.[provided by RefSeq, Dec 2014]

**Product images:**



Circular map for RC207294



Western blot validation of overexpression lysate (Cat# [LY416623]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207294 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MYL12A protein (Cat# [TP307294]). The protein was produced from HEK293T cells transfected with MYL12A cDNA clone (Cat# RC207294) using MegaTran 2.0 (Cat# [TT210002]).