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# Product datasheet for RC226973

## MYL12B (NM_001144944) Human Tagged ORF Clone

## Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | MYL12B (NM_001144944) Human Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | MYL12B |
| **Synonyms:** | MLC-B; MRLC2 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |

**ORF Nucleotide Sequence:**

```
>RC226973 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTCGAGCAAAAAGGCAAAGACCAAGACCACCAAGAAGCGCCCTCAGCGTGCAACATCCAATGTGTTTG
CCATGTTTGACCAGTCACAGATTCAGGAGTTCAAAGAGGCCTTCAACATGATTGATCAGAACAGAGATGG
CTTCATCGACAAGGAAGATTTGCATGATATGCTTGCTTCTCTAGGGAAGAATCCCACTGATGCATACCTT
GATGCCATGATGAATGAGGCCCCAGGGCCCATCAATTTCACCATGTTCCTGACCATGTTTGGTGAGAAGT
TAAATGGCACAGATCCTGAAGATGTCATCAGAAACGCCTTTGCTTGCTTTGATGAAGAAGCAACAGGCAC
CATTCAGGAAGATTACCTAAGAGAGCTGCTGACAACCATGGGGGATCGGTTTACAGATGAGGAAGTGGAT
GAGCTGTACAGAGAAGCACCTATTGACAAAAAGGGGAATTTCAATTACATCGAGTTCACACGCATCCTGA
AACATGGAGCCAAAGACAAAGATGAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA
```

**Protein Sequence:**

```
>RC226973 protein sequence
Red=Cloning site Green=Tags(s)

MSSKKAKTKTTKKRPQRATSNVFAMFDQSQIQEFKEAFNMIDQNRDGFIDKEDLHDMLASLGKNPTDAYL
DAMMNEAPGPINFTMFLTMFGEKLNGTDPEDVIRNAFACFDEEATGTIQEDYLRELLTTMGDRFTDEEVD
ELYREAPIDKKGNFNYIEFTRILKHGAKDKDD

TRTRPLEQKLISEEDLAANDILDYKDDDDKV
```

**Chromatograms:** https://cdn.origene.com/chromatograms/mk6083_a01.zip

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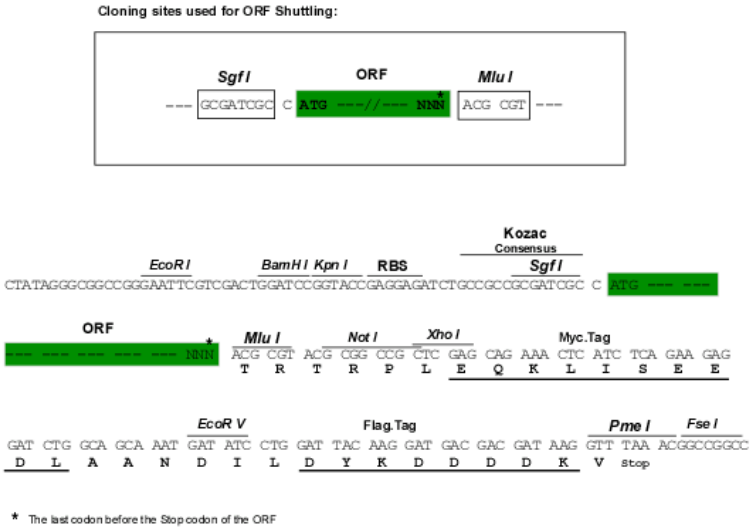
**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**




**ACCN:** NM_001144944

**ORF Size:** 516 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** NM_001144944.1, NP_001138416.1

**RefSeq Size:** 1041 bp

**RefSeq ORF:** 519 bp

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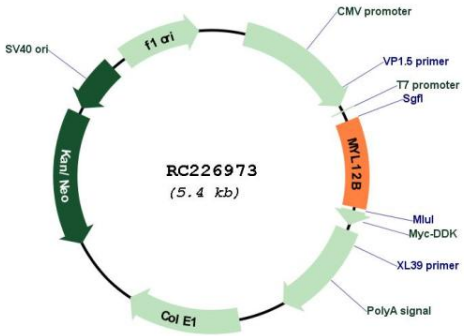
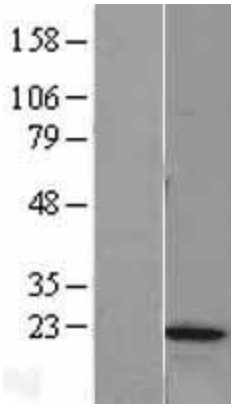
| | |
|---|---|
| **Locus ID:** | 103910 |
| **UniProt ID:** | O14950 |
| **Cytogenetics:** | 18p11.31 |
| **Protein Pathways:** | Focal adhesion, Leukocyte transendothelial migration, Regulation of actin cytoskeleton, Tight junction |
| **MW:** | 19.8 kDa |
| **Gene Summary:** | The activity of nonmuscle myosin II (see MYH9; MIM 160775) is regulated by phosphorylation of a regulatory light chain, such as MRLC2. This phosphorylation results in higher MgATPase activity and the assembly of myosin II filaments (Iwasaki et al., 2001 [PubMed 11942626]). [supplied by OMIM, Mar 2008] |

## Product images:




Circular map for RC226973




Western blot validation of overexpression lysate (Cat# [LY428597]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC227002] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).

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