

Product datasheet for **MG201346**

Myl2 (NM_010861) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Myl2 (NM_010861) Mouse Tagged ORF Clone
Tag: TurboGFP
Symbol: Myl2
Synonyms: MLC-2; MLC-2s/v; MLC-2v; Mlc2v; Mylpc
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >MG201346 representing NM_010861
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCACCAAAGAAAGCCAAGAAGCGGATAGAAGGCGGGAGCTCCAACGTGTTCTCCATGTTTGAGCAGA
CCCAGATCCAGGAGTTCAAGGAAGCCTTACAATCATGGACCAGAACAGAGACGGCTTCATCGACAAGAA
TGACCTAAGGGACACATTTGCTGCCCTAGGACGAGTGAACGTGAAAAATGAAGAGATCGATGAAATGATC
AAAGAGGCTCCAGGTCCAATTAACCTCACCGTGTTCCTCAGATGTTTGGGAGAAACTTAAGGGGCTG
ATCCTGAAGAGACCATTCTCAACGCATTCAAGGTGTTTATCCCGAGGGCAAAGGGTCACTGAAGGCTGA
CTATGTCCGGGAGATGCTGACCACACAAGCAGGGAGTTCTCAAAGAGGAGATCGACCAGATGTTTCGCA
GCCTTTCCCCTGACGTACCGCAATCTTGATTATAAGAATTTGGTCCACATCATTACCCACGGAGAAG
AGAAGGAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG201346 representing NM_010861
Red=Cloning site Green=Tags(s)

MAPKKAKKRIEGSSNVFSMFEQTQIQEFKEAFTIMDQNRDGFIDKNDLRDTFAALGRVNVKNEEIDEMI
KEAPGPINFTVFLTMFGEKLGADPEETILNAFKVFDPEGKGLKADYVREMLTTQAGRFSKEEIDQMFA
AFPPDVTGNLDYKNLVHIITHGEEKD

TRTRPLE - GFP Tag - V

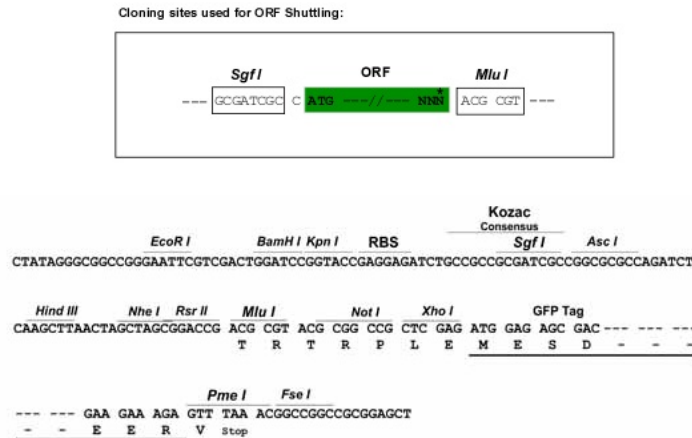
Chromatograms: https://cdn.origene.com/chromatograms/ja1784_e09.zip



[View online >](#)

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_010861

ORF Size: 498 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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_010861.2](#), [NP_034991.2](#)

RefSeq Size: 812 bp

RefSeq ORF: 501 bp

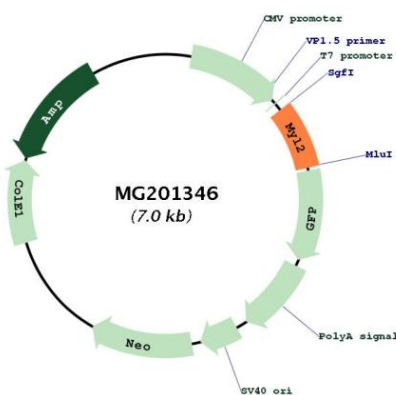
Locus ID: 17906

UniProt ID: [P51667](#)

Cytogenetics: 5 F

Gene Summary: Contractile protein that plays a role in heart development and function (PubMed:10409661). Following phosphorylation, plays a role in cross-bridge cycling kinetics and cardiac muscle contraction by increasing myosin lever arm stiffness and promoting myosin head diffusion; as a consequence of the increase in maximum contraction force and calcium sensitivity of contraction force. These events altogether slow down myosin kinetics and prolong duty cycle resulting in accumulated myosins being cooperatively recruited to actin binding sites to sustain thin filament activation as a means to fine-tune myofilament calcium sensitivity to force (By similarity) (PubMed:22426213, PubMed:16908724, PubMed:10409661). During cardiogenesis plays an early role in cardiac contractility by promoting cardiac myofibril assembly (PubMed:9422794).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG201346