

## Product datasheet for **MR227400**

### Myog (NM\_031189) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Myog (NM\_031189) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Myog  
**Synonyms:** bHLHc3; MYF4; myo  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >MR227400 representing NM\_031189  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGAGCTGTATGAGACATCCCCCTATTTCTACCAGGAGCCCCACTTCTATGATGGGGAAAACCTACCTTC  
CTGTCCACCTTCAGGGCTTCGAGCCCCGGGCTATGAGCGGACTGAGCTCAGCTTAAGCCCCGAAGCCCC  
AGGGCCCCGGAAGAAAAGGGACTGGGGACCCCTGAGCATTGTCCAGGCCAGTGCCTGCCGTGGGCATGT  
AAGGTGTGTAAGAGGAAGTCTGTGTCGGTGGACCGGAGGAGGGCAGCCACACTGAGGGAGAAGCGCAGGC  
TCAAGAAAGTGAATGAGGCCTTCGAGGCCCTGAAGAGGAGCACCTGCTCAACCCCAACCAGCGGCTGCC  
TAAAGTGGAGATCCTGCGCAGCGCCATCCAGTACATTGAGCGCCTACAGGCCTTGCTCAGCTCCCTCAAC  
CAGGAGGAGCGCGATCTCCGCTACAGAGCGGGGGCGGGCCCCAGCCCATGGTGCCCAAGTGAATGCAACT  
CCCACAGCGCCTCCTGCAGTCCGGAGTGGGGCAATGCACTGGAGTTCCGGTCCCAACCCAGGAGATCATT  
GCTCGGGCTGACCTACAGACGCCCAATCTGCACTCCCTACGTCCATCGTGGACAGCATCACGGTG  
GAGGATATGTCTGTTGCCTTCCCAGACGAAACCATGCCAAC

**ACGCGT**ACGCGGGCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >MR227400 representing NM\_031189  
Red=Cloning site Green=Tags(s)

MELYETSPYFYQEPHFYDGENYLPVHLQGFEPGGYERTELSLSPEARGPLEEKGLGTPEHCPGQCLPWAC  
 KVCKRKSVSVDRRRAATLREKRRLKVKVNEAFEALKRSTLLNPNQRLPKVEILRSATQYIERLQALLSSLN  
 QEERDLRYRGGGGPQPMVPSECNSHSASCSPWGNALFPGPNPDHLLAADPTDAHNLHSLTSIVDSITV  
 EDMSVAFPDETMPN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_031189

**ORF Size:** 672 bp

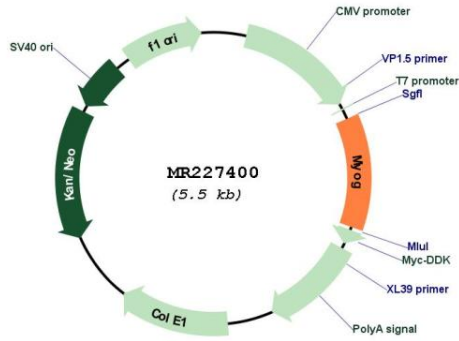
**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of 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](mailto: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.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_031189.2</a> , <a href="#">NP_112466.1</a>
<b>RefSeq Size:</b>	1518 bp
<b>RefSeq ORF:</b>	675 bp
<b>Locus ID:</b>	17928
<b>UniProt ID:</b>	<a href="#">P12979</a>
<b>Cytogenetics:</b>	1 58.18 cM
<b>MW:</b>	25.7 kDa
<b>Gene Summary:</b>	Acts as a transcriptional activator that promotes transcription of muscle-specific target genes and plays a role in muscle differentiation, cell cycle exit and muscle atrophy. Essential for the development of functional embryonic skeletal fiber muscle differentiation. However is dispensable for postnatal skeletal muscle growth; phosphorylation by CAMK2G inhibits its transcriptional activity in response to muscle activity. Required for the recruitment of the FACT complex to muscle-specific promoter regions, thus promoting gene expression initiation. During terminal myoblast differentiation, plays a role as a strong activator of transcription at loci with an open chromatin structure previously initiated by MYOD1. Together with MYF5 and MYOD1, co-occupies muscle-specific gene promoter core regions during myogenesis. Cooperates also with myocyte-specific enhancer factor MEF2D and BRG1-dependent recruitment of SWI/SNF chromatin-remodeling enzymes to alter chromatin structure at myogenic late gene promoters. Facilitates cell cycle exit during terminal muscle differentiation through the up-regulation of miR-20a expression, which in turn represses genes involved in cell cycle progression. Binds to the E-box containing (E1) promoter region of the miR-20a gene. Plays also a role in preventing reversal of muscle cell differentiation. Contributes to the atrophy-related gene expression in adult denervated muscles. Induces fibroblasts to differentiate into myoblasts.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR227400