

## Product datasheet for MC209008

### Myog (NM\_031189) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Myog (NM_031189) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Myog
Synonyms:	bHLHc3; MYF4; myo
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC209008 representing NM_031189 Red=Cloning site Blue=ORF Orange=Stop codon

TTTGTAAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGAGCTGTATGAGACATCCCCCTATTCTACCAGGAGCCCCACTTCTATGATGGGGAAAACCTTC  
 CTGTCCACCTTCAGGGCTTCGAGCCCCGGGCTATGAGCGGACTGAGCTCAGCTTAAGCCCGGAAGCCCG  
 AGGGCCCCCTGGAAGAAAAGGGACTGGGGACCCCTGAGCATTGTCCAGGCCAGTGCCTGCCGTGGGCATGT  
 AAGGTGTGTAAGAGGAAGTCTGTGTCGGTGGACCGGAGGAGGGCAGCCACACTGAGGGAGAAGCGCAGGC  
 TCAAGAAAGTGAATGAGGCCTTCGAGGCCCTGAAGAGGAGCACCTGCTCAACCCCAACAGCGGCTGCC  
 TAAAGTGGAGATCCTGCGCAGCGCCATCCAGTACATTGAGCGCCTACAGGCCTTGCTCAGCTCCCTCAAC  
 CAGGAGGAGCGCGATCTCCGCTACAGAGCGGGGGCGGGCCCCAGCCCATGGTGCCCAAGTGAATGCAACT  
 CCCACAGCGCCTCCTGCAGTCCGGAGTGGGGCAATGCACTGGAGTTCCGTCCCAACCCAGGAGATCATTT  
 GCTCGCGGCTGACCTACAGACGCCACAATCTGCACTCCCTACGTCCATCGTGGACAGCATCACGGTG  
 GAGGATATGCTGTTGCCTTCCCAGACGAAACCATGCCCAACTGA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:	SgfI-MluI
ACCN:	NM_031189
Insert Size:	675 bp


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<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<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>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<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>Gene Summary:</b>	<p>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]</p>