

**MYOG Antibody (N-term)**  
**Mouse Monoclonal Antibody (Mab)**  
**Catalog # AM1947b**

**Specification**

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**MYOG Antibody (N-term) - Product Information**

Application	WB,E
Primary Accession	<a href="#">P15173</a>
Other Accession	<a href="#">NP_002470.2</a>
Reactivity	Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1,k
Calculated MW	25037
Antigen Region	30-58

**MYOG Antibody (N-term) - Additional Information**

**Gene ID** 4656

**Other Names**

Myogenin, Class C basic helix-loop-helix protein 3, bHLHC3, Myogenic factor 4, Myf-4, MYOG, BHLHC3, MYF4

**Target/Specificity**

This MYOG antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 30-58 amino acids from the N-terminal region of human MYOG.

**Dilution**

WB~~1:100

**Format**

Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

MYOG Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**MYOG Antibody (N-term) - Protein Information**

**Name** MYOG

**Synonyms** BHLHC3, MYF4

**Function** 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 (By similarity).

#### Cellular Location

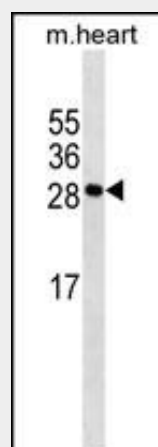
Nucleus. Note=Recruited to late myogenic gene promoter regulatory sequences with SMARCA4/BRG1/BAF190A and SWI/SNF chromatin-remodeling enzymes to promote chromatin-remodeling and transcription initiation in developing embryos.

#### MYOG Antibody (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### MYOG Antibody (N-term) - Images



MYOG Antibody (N-term) (Cat. #AM1947b) western blot analysis in mouse heart tissue lysates (35µg/lane). This demonstrates the MYOG antibody detected the MYOG protein (arrow).

### **MYOG Antibody (N-term) - Background**

Myogenin is a muscle-specific transcription factor that can induce myogenesis in a variety of cell types in tissue culture. It is a member of a large family of proteins related by sequence homology, the helix-loop-helix (HLH) proteins. It is essential for the development of functional skeletal muscle. [provided by RefSeq].

### **MYOG Antibody (N-term) - References**

Gao, X., et al. J. Cell. Biochem. 110(1):162-170(2010)  
Yerges, L.M., et al. J. Bone Miner. Res. 24(12):2039-2049(2009)  
Ramamoorthy, S., et al. Am. J. Physiol. Endocrinol. Metab. 297 (2), E392-E401 (2009) :  
Nanni, P., et al. Mol. Cancer Ther. 8(4):754-761(2009)  
Gong, C., et al. Genes Dev. 23(1):54-66(2009)