10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

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

Specification

MYOG Antibody (N-term) - Product Information

Application	**WB,E**
Primary Accession	P15173
Other Accession	NP_002470.2
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
E~~Use at an assay dependent concentration.

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 respons 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. Also cooperates 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. Also plays 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).

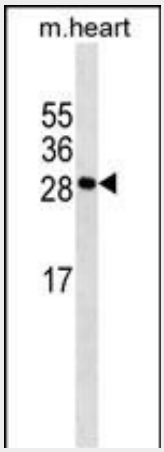
Cellular Location
Nucleus. Note=Recruited to late myogenic gene promoter regulatory sequences with SMARCA4/BRG1/BAF190A and SWI/SNF chromatin-remodeling enzymes to promote chromatin-remodeling and transcription initiation in developing embryos.

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 Cytomety
- 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)
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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)
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