

# Myogenin Polyclonal Antibody

Catalog # AP71127

## **Product Information**

Application	WB, IHC-P
Primary Accession	<u>P15173</u>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	25037

#### **Additional Information**

Gene ID	4656
Other Names	MYOG; BHLHC3; MYF4; Myogenin; Class C basic helix-loop-helix protein 3; bHLHc3; Myogenic factor 4; Myf-4
Dilution	WB~~IHC-p: 100-300.Western Blot: 1/500 - 1/2000. ELISA: 1/10000. Not yet tested in other applications. IHC-P~~IHC-p: 100-300.Western Blot: 1/500 - 1/2000. ELISA: 1/10000. Not yet tested in other applications.
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20°C

#### **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.

### Background

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. 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).

#### Images



Western Blot analysis of various cells using Myogenin Polyclonal Antibody cells nucleus extracted by Minute TM Cytoplasmic and Nuclear Fractionation kit (SC-003,Inventbiotech,MN,USA).

Immunohistochemical analysis of paraffin-embedded Human liver. 1, Antibody was diluted at 1:100(4°,overnight). 2, High-pressure and temperature EDTA, pH8.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Immunohistochemical analysis of paraffin-embedded Human liver. 1, Antibody was diluted at 1:100(4°,overnight). 2, High-pressure and temperature EDTA, pH8.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 30min).



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Immunohistochemical analysis of paraffin-embedded Human Fallopian tube. 1, Antibody was diluted at 1:100(4°,overnight). 2, High-pressure and temperature EDTA, pH8.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 30min).



Immunohistochemical analysis of paraffin-embedded Human Fallopian tube. 1, Antibody was diluted at 1:100(4°,overnight). 2, High-pressure and temperature EDTA, pH8.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 30min).



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Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.