

MYOGENIN Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP12509A

Product Information

Application	WB, E
Primary Accession	P15173
Other Accession	NP_002470.2
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB31228
Calculated MW	25037
Antigen Region	1-30

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 MYOGENIN antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human MYOGENIN.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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	MYOGENIN Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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. 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.

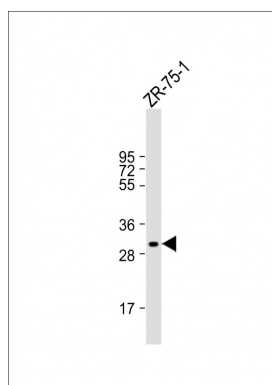
Background

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].

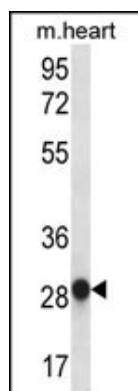
References

- 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)

Images



Anti-MYOGENIN Antibody (N-term) at 1:1000 dilution + ZR-75-1 whole cell lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 25 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



MYOGENIN Antibody (N-term) (Cat. #AP12509a) western blot analysis in mouse heart tissue lysates (35ug/lane). This demonstrates the MYOGENIN antibody detected the MYOGENIN protein (arrow).

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