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Myogenin / MYF4 Antibody (C-Term, near)

Peptide-affinity purified goat antibody
Catalog # AF3171a

Specification

Myogenin / MYF4 Antibody (C-Term, near) - Product Information

Application	**WB, E**
Primary Accession	P15173
Other Accession	NP_002470.2, 4656
Reactivity	**Mouse**
Predicted	**Human, Rat, Pig, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**0.5 mg/ml**
Isotype	**IgG**
Calculated MW	**25037**

Myogenin / MYF4 Antibody (C-Term, near) - 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

Dilution
WB~~1:1000
E~~N/A

Format
0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Myogenin / MYF4 Antibody (C-Term, near) is for research use only and not for use in diagnostic or therapeutic procedures.

Myogenin / MYF4 Antibody (C-Term, near) - 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).

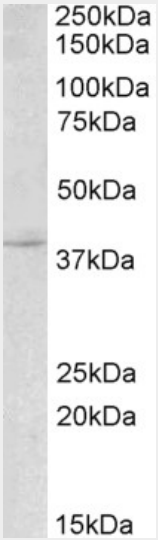
Cellular Location
Nucleus. Note=Recruited to late myogenic gene promoter regulatory sequences with SMARCA4/BRG1/BAF190A and SWI/SNF chromatin-remodeling enzymes to promote chromatin-remodeling and transcription initiation in developing embryos.

Myogenin / MYF4 Antibody (C-Term, near) - 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

Myogenin / MYF4 Antibody (C-Term, near) - Images



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AF3171a (2 µg/ml) staining of Mouse Skeletal Muscle lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

EB09955 (1µg/ml) staining of Mouse Skeletal Muscle lysate (35µg protein in RIPA buffer). Detected by chemiluminescence.

Myogenin / MYF4 Antibody (C-Term, near) - References

The myogenic basic helix-loop-helix family of transcription factors shows similar requirements for SWI/SNF chromatin remodeling enzymes during muscle differentiation in culture. Roy K, de la Serna IL, Imbalzano AN, The Journal of biological chemistry 2002 Sep 277 (37): 33818-24. PMID: 12105204