

Myogenin / MYF4 Antibody (C-Term, near)
Peptide-affinity purified goat antibody
Catalog # AF3171a

Specification

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

Application	WB
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

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 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

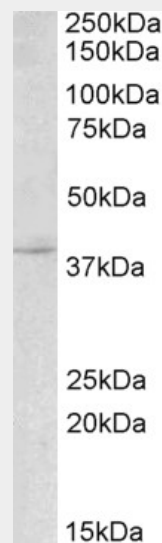
Nucleus. Note=Recruited to late myogenic gene promoter regulatory sequences with SMARCA4/BRG1/BAF190A and SWI/SNF chromatin-remodeling enzymes to promote chromatin-remodeling and transcription initiation in developing embryos.

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

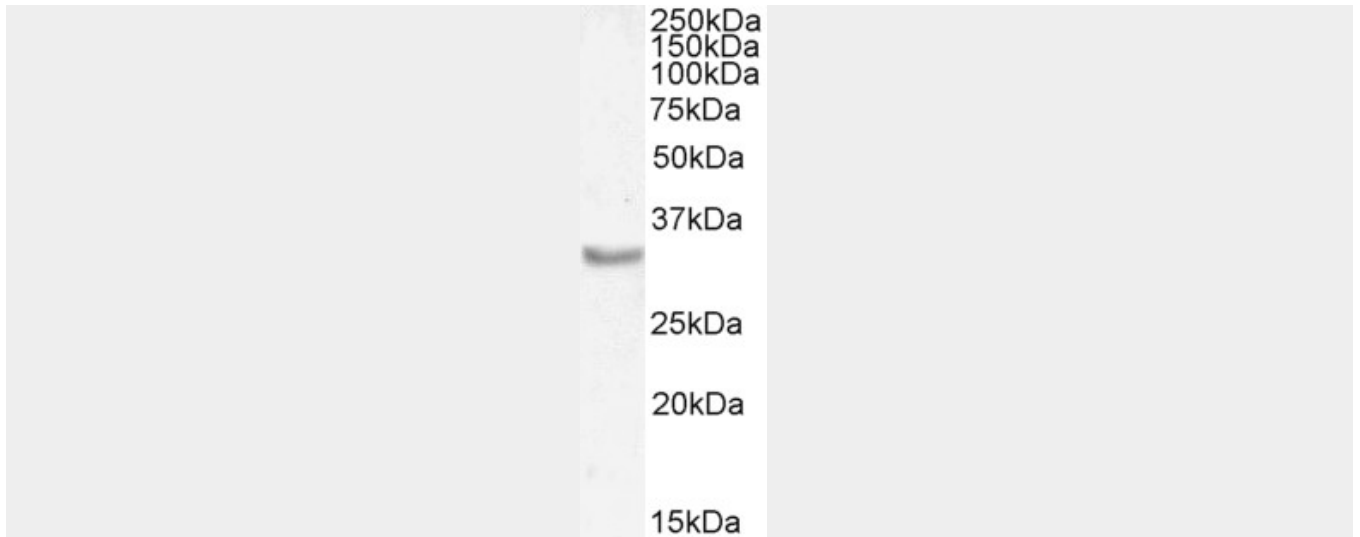
Provided below are standard protocols that you may find useful for product applications.

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

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



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 (1 μ g/ml) staining of Mouse Skeletal Muscle lysate (35 μ g 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