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Rabbit Anti-MyoD1 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP52107

Product Information

Application	WB, E
Primary Accession	P10085
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	34233
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse MyoD1
Epitope Specificity	51-150/318
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nucleus.
SIMILARITY	Contains 1 bHLH (basic helix-loop-helix) domain.
SUBUNIT	Efficient DNA binding requires dimerization with another bHLH protein. Seems to form active heterodimers with ITF-2. Interacts with SUV39H1 and CDK9. Interacts with DDX5 (By similarity).
Post-translational modifications	Phosphorylated by CDK9. This phosphorylation promotes its function in muscle differentiation.Acetylated by a complex containing EP300 and PCAF. The acetylation is essential to activate target genes. Conversely, its deacetylation by SIRT1 inhibits its function (By similarity). Ubiquitinated on the N-terminus; which is required for proteasomal degradation.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a nuclear protein that belongs to the basic helix-loop-helix family of transcription factors and the myogenic factors subfamily. It regulates muscle cell differentiation by inducing cell cycle arrest, a prerequisite for myogenic initiation. The protein is also involved in muscle regeneration. It activates its own transcription which may stabilize commitment to myogenesis. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	17927
Other Names	MYF3; MyoD; Myod-1; bHLHc1; AI53393; Myoblast determination protein 1; Myod1
Dilution	WB=1:500-2000,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce

Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	Myod1
Synonyms	Myod
Function	Acts as a transcriptional activator that promotes transcription of muscle-specific target genes and plays a role in muscle differentiation (PubMed:16901893). Together with MYF5 and MYOG, co-occupies muscle-specific gene promoter core region during myogenesis. Induces fibroblasts to differentiate into myoblasts. Interacts with and is inhibited by the twist protein. This interaction probably involves the basic domains of both proteins (PubMed:21798092, PubMed:3175662).
Cellular Location	Nucleus.

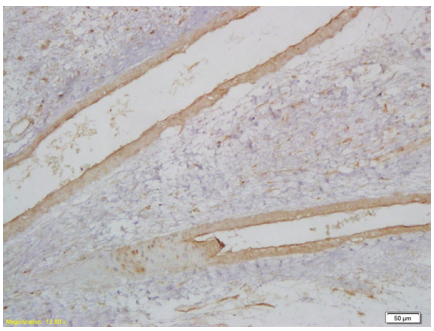
Background

Acts as a transcriptional activator that promotes transcription of muscle-specific target genes and plays a role in muscle differentiation. Together with MYF5 and MYOG, co-occupies muscle-specific gene promoter core region during myogenesis. Induces fibroblasts to differentiate into myoblasts. Interacts with and is inhibited by the twist protein. This interaction probably involves the basic domains of both proteins.

References

Davis R.L.,et al.Cell 51:987-1000(1987).
Zingg J.-M.,et al.Nucleic Acids Res. 19:6433-6439(1991).
Pinney D.F.,et al.Cell 53:781-793(1988).
Carninci P.,et al.Science 309:1559-1563(2005).
Tapscott S.J.,et al.Science 242:405-411(1988).

Images



Formalin-fixed and paraffin embedded rat embryonic rhabdomyoma labeled with Anti-MyoD1/Myf3 Polyclonal Antibody, Unconjugated (AP52107) at 1:200 followed by conjugation to the secondary antibody

Lane 1: mouse muscle lysates; Lane 2: mouse heart lysates probed with MyoD1 Polyclonal Antibody, Unconjugated (AP52107) at 1:300 overnight at 4˚C. Followed by a conjugated secondary antibody at 1:5000 for 90 min at 37˚C.