

Datasheet for ABIN967512

anti-Myogenin antibody (AA 30-224)

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Overview

Quantity:	0.1 mg
Target:	Myogenin (MYOG)
Binding Specificity:	AA 30-224
Reactivity:	Human, Mouse, Rat, Cat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This Myogenin antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF), Immunohistochemistry (Formalin-fixed Sections) (IHC (f)), Immunohistochemistry (Frozen Sections) (IHC (fro)), Intracellular Staining (ICS), BioImaging (BI)

Product Details

Brand:	BD Pharmingen™
Immunogen:	Rat Myogenin aa. 30-224 Recombinant Protein
Clone:	F5D
Isotype:	IgG1
Cross-Reactivity:	Human, Mouse (Murine), Cat (Feline)
Characteristics:	<ol style="list-style-type: none"> 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive

Product Details

deposits in plumbing.

Purification: The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target: Myogenin (MYOG)

Alternative Name: Myogenin ([MYOG Products](#))

Background: Myogenin is a member of the MyoD family of myogenic basic helix-loop-helix (bHLH) transcription factors that also includes MyoD, Myf-5, and MRF4 (also known as herculin or Myf-6). MyoD family members are expressed exclusively in skeletal muscle and play a key role in activating myogenesis by binding to enhancer sequences of muscle-specific genes. The regulatory domain of MyoD is approximately 70 amino acids in length and includes both a basic DNA binding motif and a bHLH dimerization motif. MyoD family members share about 80% amino acid homology in their bHLH motifs. Transfection of myogenin and other family members into a variety of non-muscle cells has been shown to either convert these cells to myogenic cells, or to transcriptionally activate a set of otherwise unexpressed muscle-specific genes. In addition to activating muscle-specific genes, members of the MyoD family members activate their own transcription and transactivate the transcription of other MyoD family members. For example, transfection of myogenin into 10T1/2 cells or Swiss 3T3 cells results in the activation of the endogenous myogenin gene as well as transactivation of MyoD. Likewise, the transfection of MyoD into these cells results in the activation of MyoD as well as the transactivation of myogenin. Each member of the MyoD family has distinct roles in muscle development, myogenin plays a key role in muscle maturation. Myogenin migrates at a molecular weight of ~34 kDa by SDS-PAGE. Clone F5D recognizes human, mouse, rat and cat myogenin. Mapping studies suggest that F5D reacts with an epitope between amino acids 138-158 of myogenin. A recombinant fusion protein corresponding to amino acids 30-224 of rat myogenin was used as immunogen.

Molecular Weight: 34 kDa

Pathways: [Regulation of Muscle Cell Differentiation, Skeletal Muscle Fiber Development](#)

Application Details

Restrictions: For Research Use only

Handling

Format:	Liquid
Concentration:	0.5 mg/mL
Buffer:	Aqueous buffered solution containing ≤ 0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Store undiluted at 4°C.

Publications

Product cited in:

Ryan, Liu, Chu, Wang, Blais, Skerjanc: "Retinoic acid enhances skeletal myogenesis in human embryonic stem cells by expanding the premyogenic progenitor population." in: **Stem cell reviews**, Vol. 8, Issue 2, pp. 482-93, (2012) ([PubMed](#)).

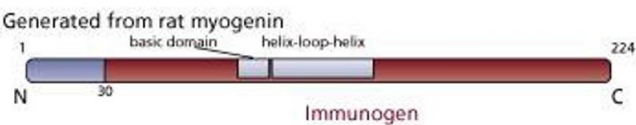
Meadows, Cho, Flynn, Klein: "Myogenin regulates a distinct genetic program in adult muscle stem cells." in: **Developmental biology**, Vol. 322, Issue 2, pp. 406-14, (2009) ([PubMed](#)).

Gang, Jeong, Hong, Hwang, Kim, Yang, Ahn, Han, Kim: "Skeletal myogenic differentiation of mesenchymal stem cells isolated from human umbilical cord blood." in: **Stem cells (Dayton, Ohio)**, Vol. 22, Issue 4, pp. 617-24, (2004) ([PubMed](#)).

Wang, Marx, McNutt, Rutledge, Gown: "Expression of myogenic regulatory proteins (myogenin and MyoD1) in small blue round cell tumors of childhood." in: **The American journal of pathology**, Vol. 147, Issue 6, pp. 1799-810, (1996) ([PubMed](#)).

Dias, Dilling, Houghton: "The molecular basis of skeletal muscle differentiation." in: **Seminars in diagnostic pathology**, Vol. 11, Issue 1, pp. 3-14, (1994) ([PubMed](#)).

Image 1.



Western Blotting

Image 2. Western blot analysis of Myogenin. Lysates from Rh30 rhabdomyosarcoma cells were probed with anti-Myogenin antibody (clone FSD) at 2 myg/ml.