

myogenin (M-225): sc-576

BACKGROUND

Differentiation of myogenic cells is regulated by multiple positively and negatively acting factors. One well characterized family of helix-loop-helix (HLH) proteins known to play an important role in the regulation of muscle cell development includes MyoD, myogenin, Myf-5 and Myf-6 (also designated MRF-4 or herculin). Of interest, most muscle cells express either MyoD or Myf-5 in the committed state, but when induced to differentiate, all turn on expression of myogenin. MyoD transcription factors form heterodimers with products of a more widely expressed family of bHLH genes, the E family, which consists of at least three distinct genes: E2A, Irf2 and HEB. MyoD-E heterodimers bind avidly to consensus (CANNTG) E box target sites that are functionally important elements in the upstream regulatory sequences of many muscle-specific terminal differentiation genes.

CHROMOSOMAL LOCATION

Genetic locus: MYOG (human) mapping to 1q32.1; Myog (mouse) mapping to 1 E4.

SOURCE

myogenin (M-225) is a rabbit polyclonal antibody raised against amino acids 1-225 representing full length myogenin protein of rat origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-576 X, 200 µg/0.1 ml.

APPLICATIONS

myogenin (M-225) is recommended for detection of myogenin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

myogenin (M-225) is also recommended for detection of myogenin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for myogenin siRNA (h): sc-29402, myogenin siRNA (m): sc-35992, myogenin shRNA Plasmid (h): sc-29402-SH, myogenin shRNA Plasmid (m): sc-35992-SH, myogenin shRNA (h) Lentiviral Particles: sc-29402-V and myogenin shRNA (m) Lentiviral Particles: sc-35992-V.

myogenin (M-225) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of myogenin: 34 kDa.

Positive Controls: myogenin (h3): 293T Lysate: sc-177592.

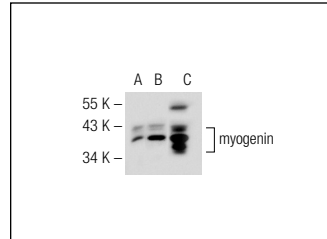
RESEARCH USE

For research use only, not for use in diagnostic procedures.

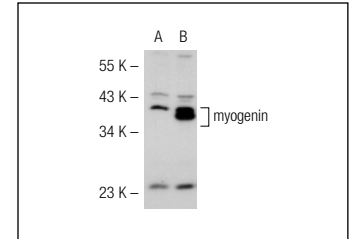
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



myogenin (M-225): sc-576. Western blot analysis of myogenin expression in non-transfected 293T: sc-117752 (A), human myogenin transfected 293T: sc-177592 (B) and SJRH30 (C) whole cell lysates.



myogenin (M-225): sc-576. Western blot analysis of myogenin expression in non-transfected: sc-117752 (A) and human myogenin transfected: sc-116551 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Guttridge, D.C., et al. 1997. Thrombin causes a marked delay in skeletal myogenesis that correlates with the delayed expression of myogenin and p21^{CIP1/WAF1}. *J. Biol. Chem.* 272: 24117-24120.
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- Nicklas, S., et al. 2012. TRIM32 regulates skeletal muscle stem cell differentiation and is necessary for normal adult muscle regeneration. *PLoS ONE* 7: e30445.
- Charrasse, S., et al. 2012. Rab35 regulates cadherin-mediated adherens junction formation and myoblast fusion. *Mol. Biol. Cell* 24: 234-245.



Try **myogenin (5FD): sc-52903** or **myogenin (G-3): sc-398002**, our highly recommended monoclonal alternatives to myogenin (M-225). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **myogenin (5FD): sc-52903**.