

myogenin (G-20): sc-31945

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, IF2 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.

REFERENCES

- Braun, T., et al. 1989. A novel human muscle factor related to but distinct from MyoD1 induces myogenic conversion in 10T1/2 fibroblasts. *EMBO J.* 8: 701-709.
- Rhodes, S.J., et al. 1989. Identification of Mrf-4: a new member of the muscle regulatory factor gene family. *Genes Dev.* 3: 2050-2061.
- Wright, W.E., et al. 1989. Myogenin, a factor regulating myogenesis, has a domain homologous to MyoD. *Cell* 56: 607-617.
- Miner, J.H., et al. 1990. Herculin, a fourth member of the MyoD family of myogenic regulatory genes. *Proc. Natl. Acad. Sci. USA* 87: 1089-1093.
- Braun, T., et al. 1990. Myf-6, a new member of the human gene family of myogenic determination factors: evidence for a gene cluster on chromosome 12. *EMBO J.* 9: 821-831.

CHROMOSOMAL LOCATION

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

SOURCE

myogenin (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of myogenin of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-31945 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

APPLICATIONS

myogenin (G-20) 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 (G-20) 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 (G-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

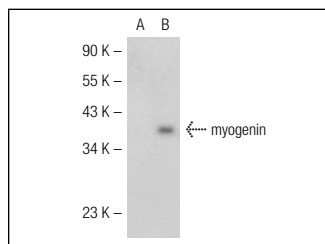
Molecular Weight of myogenin: 34 kDa.

Positive Controls: myogenin (h): 293T Lysate: sc-116551, SJRH30 cell lysate: sc-2287, RD whole cell lysate: sc-364791.

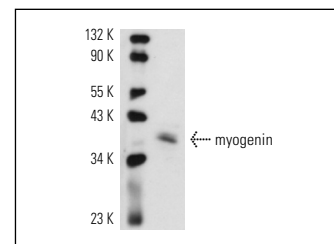
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



myogenin (G-20): sc-31945. Western blot analysis of myogenin expression in non-transfected: sc-117752 (A) and human myogenin transfected: sc-116551 (B) 293T whole cell lysates.



myogenin (G-20): sc-31945. Western blot analysis of myogenin expression in SJRH30 whole cell lysate.

SELECT PRODUCT CITATIONS

- Qin, L., et al. 2013. Notch1-mediated signaling regulates proliferation of porcine satellite cells (PSCs). *Cell. Signal.* 25: 561-569.