

myogenin (m2): 293T Lysate: sc-121888

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

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2. 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.
3. Wright, W.E., et al. 1989. Myogenin, a factor regulating myogenesis, has a domain homologous to MyoD. *Cell* 56: 607-617.
4. Miner, J.H., et al. 1990. Herculins, a fourth member of the MyoD family of myogenic regulatory genes. *Proc. Natl. Acad. Sci. USA* 87: 1089-1093.
5. 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.
6. Thayer, M.J. et al. 1993. A cellular factor stimulates the DNA-binding activity of Myo D and E47. *Proc. Natl. Acad. Sci. USA* 90: 6483-6487.
7. Hollenberg, S.M., et al. 1993. Use of a conditional MyoD transcription factor in studies of MyoD transactivation and muscle determination. *Proc. Natl. Acad. Sci. USA* 90: 8028-8032.
8. Neuhold, L.A. et al. 1993. HLH forced dimers: tethering Myo D to E47 generates a dominant positive myogenic factor insulated from negative regulation by Id. *Cell* 74: 1033-1042.
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CHROMOSOMAL LOCATION

Genetic locus: Myog (mouse) mapping to 1 E4.

PRODUCT

myogenin (m2): 293T Lysate represents a lysate of mouse myogenin transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

myogenin (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive myogenin antibodies. Recommended use: 10-20 µl per lane.

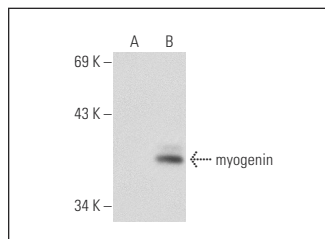
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

myogenin (F5D): sc-12732 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse myogenin expression in myogenin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

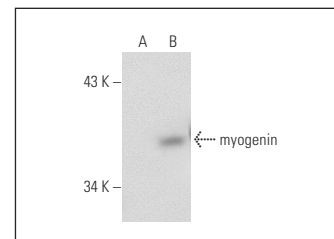
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



myogenin (F5D): sc-12732. Western blot analysis of myogenin expression in non-transfected: sc-117752 (A) and mouse myogenin transfected: sc-121888 (B) 293T whole cell lysates.



myogenin (D-10): sc-13137. Western blot analysis of myogenin expression in non-transfected: sc-117752 (A) and mouse myogenin transfected: sc-121888 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.