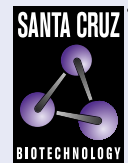


Myf-5 (B-10): sc-518056



The Power to Question

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 include Myo D, myogenin, Myf-5 and Myf-6 (also designated MRF-4 or herculin). Of interest, most muscle cells express either Myo D or Myf-5 in the committed state, but when induced to differentiate, all turn on expression of myogenin. Myo D 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. Myo D-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

1. Braun, T., et al. 1989. A novel human muscle factor related to but distinct from Myo D1 induces myogenic conversion in 10T1/2 fibroblasts. *EMBO J.* 8: 701-709.
2. Rhodes, S.J., et al. 1989. Identification of MRF4: 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 Myo D. *Cell* 56: 607-617.
4. Miner, J.H., et al. 1990. Herculin, a fourth member of the Myo D 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. and Weintraub, H. 1993. A cellular factor stimulates the DNA-binding activity of Myo D and E47. *Proc. Natl. Acad. Sci. USA* 90: 6483-6487.

CHROMOSOMAL LOCATION

Genetic locus: MYF5 (human) mapping to 12q21.31.

SOURCE

Myf-5 (B-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 19-38 near the N-terminus of Myf-5 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Myf-5 (B-10) is available conjugated to agarose (sc-518056 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518056 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518056 PE), fluorescein (sc-518056 FITC), Alexa Fluor® 488 (sc-518056 AF488), Alexa Fluor® 546 (sc-518056 AF546), Alexa Fluor® 594 (sc-518056 AF594) or Alexa Fluor® 647 (sc-518056 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518056 AF680) or Alexa Fluor® 790 (sc-518056 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Myf-5 (B-10) is recommended for detection of Myf-5 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Myf-5 siRNA (h): sc-35988, Myf-5 shRNA Plasmid (h): sc-35988-SH and Myf-5 shRNA (h) Lentiviral Particles: sc-35988-V.

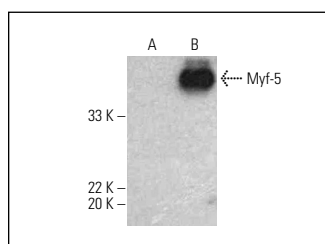
Molecular Weight of Myf-5: 32 kDa.

Positive Controls: human Myf-5 transfected 293T whole cell lysate.

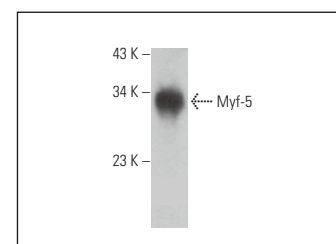
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Myf-5 (B-10): sc-518056. Western blot analysis of Myf-5 expression in non-transfected (A) and human Myf-5 transfected (B) 293T whole cell lysates.



Myf-5 (B-10): sc-518056. Western blot analysis of human recombinant Myf-5.

SELECT PRODUCT CITATIONS

1. VanGenderen, C.A., et al. 2022. Modulating myogenesis: an optimized *in vitro* assay to pharmacologically influence primary myoblast differentiation. *Curr. Protoc.* 2: e565.

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.

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