SANTA CRUZ BIOTECHNOLOGY, INC.

Myf-5 (B-2): sc-518039

SANTA CRUZ BIOTECHNOLOGY

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 hetero-dimers 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. and Konieczny, S.F. 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. and Wold, B. 1990. Herculin, a fourth member of the Myo D family of myogenic regulatory genes. Proc. Natl. Acad. Sci. USA 87: 1089-1093.

CHROMOSOMAL LOCATION

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

SOURCE

Myf-5 (B-2) 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_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Myf-5 (B-2) is available conjugated to agarose (sc-518039 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518039 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518039 PE), fluorescein (sc-518039 FITC), Alexa Fluor® 488 (sc-518039 AF488), Alexa Fluor® 546 (sc-518039 AF546), Alexa Fluor® 594 (sc-518039 AF594) or Alexa Fluor® 647 (sc-518039 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518039 AF680) or Alexa Fluor® 790 (sc-518039 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

Myf-5 (B-2) 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.

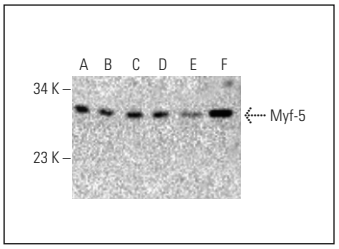
Molecular Weight of Myf-5: 32 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, A549 cell lysate: sc-2413 or MCF7 whole cell lysate: sc-2206.

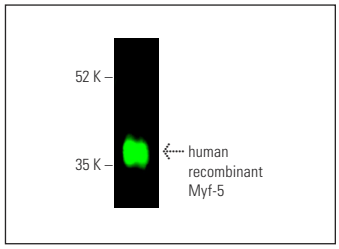
RECOMMENDED SUPPORT REAGENTS

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-2): sc-518039. Western blot analysis of Myf-5 expression in A549 (**A**), A-431 (**B**), A-673 (**C**), RD (**D**), MCF7 (**E**) and HCT-116 (**F**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



Myf-5 (B-2): sc-518039. Near-infrared western blot analysis of human recombinant Myf-5. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_3 BP-CFL 680: sc-533677.

SELECT PRODUCT CITATIONS

1. Posadas-Rodríguez, P., et al. 2020. tBHQ induces a hormetic response that protects L6 myoblasts against the toxic effect of palmitate. Oxid. Med. Cell. Longev. 2020: 3123268.
2. Suh, D.K., et al. 2022. A novel muscle atrophy mechanism: myocyte degeneration due to intracellular iron deprivation. Cells 11: 2853.

RESEARCH USE

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