SANTA CRUZ BIOTECHNOLOGY, INC.

Myf-6 (242): sc-784

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). 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.

CHROMOSOMAL LOCATION

Genetic locus: MYF6 (human) mapping to 12q21.31; Myf6 (mouse) mapping to 10 D1.

SOURCE

Myf-6 (242) is a rabbit polyclonal antibody raised against amino acids 1-242 representing full length Myf-6 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-784 X, 200 µg/0.1 ml.

APPLICATIONS

Myf-6 (242) is recommended for detection of Myf-6 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).

Myf-6 (242) is also recommended for detection of Myf-6 in additional species, including equine, bovine, porcine and avian.

Suitable for use as control antibody for Myf-6 siRNA (h): sc-43521, Myf-6 siRNA (m): sc-43522, Myf-6 shRNA Plasmid (h): sc-43521-SH, Myf-6 shRNA Plasmid (m): sc-43522-SH, Myf-6 shRNA (h) Lentiviral Particles: sc-43521-V and Myf-6 shRNA (m) Lentiviral Particles: sc-43522-V.

Myf-6 (242) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Myf-6: 30 kDa.

Positive Controls: rat heart extract: sc-2393, rat skeletal muscle extract: sc-364810 or Myf-6 (h2): 293T Lysate: sc-176122.

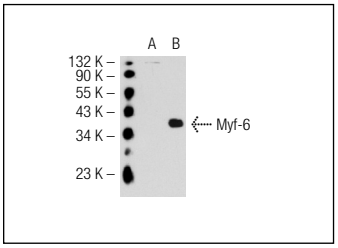
RESEARCH USE

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

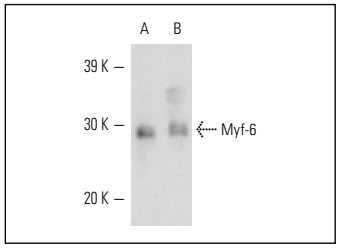
STORAGE

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

DATA



Myf-6 (242): sc-784. Western blot analysis of Myf-6 expression in non-transfected: sc-117752 (**A**) and human Myf-6 transfected: sc-176122 (**B**) 293T whole cell lysates.



Myf-6 (242): sc-784. Western blot analysis of Myf-6 expression in rat heart (**A**) and rat skeletal muscle (**B**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Kraner, S.D., et al. 1999. Interaction between the skeletal muscle type 1 Na^+ channel promoter E-box and an upstream repressor element: release of repression by myogenin. J. Biol. Chem. 274: 8129-8136.
2. Macpherson, P.C., et al. 2004. Activity-dependent gene regulation in conditionally-immortalized muscle precursor cell lines. J. Cell. Biochem. 91: 821-839.
3. Fontemaggi, G., et al. 2005. δEF1 repressor controls selectively p53 family members during differentiation. Oncogene 24: 7273-7280.
4. Hebert, S.L., et al. 2007. Basic helix-loop-helix factors recruit nuclear factor I to enhance expression of the NaV 1.4 Na^+ channel gene. Biochim. Biophys. Acta 1769: 649-658.
5. Kook, S.H., et al. 2008. Cyclic mechanical stress suppresses myogenic differentiation of adult bovine satellite cells through activation of extracellular signal-regulated kinase. Mol. Cell. Biochem. 309: 133-141.
6. Kook, S.H., et al. 2008. Involvement of p38 MAPK-mediated signaling in the calpeptin-mediated suppression of myogenic differentiation and fusion in C2C12 cells. Mol. Cell. Biochem. 310: 85-92.
7. Kook, S.H., et al. 2008. Cyclic mechanical stretch stimulates the proliferation of C2C12 myoblasts and inhibits their differentiation via prolonged activation of p38 MAPK. Mol. Cells 25: 479-486.
8. Batlle, R., et al. 2013. Snail1 controls TGF-β responsiveness and differentiation of mesenchymal stem cells. Oncogene 32: 3381-3389.