SANTA CRUZ BIOTECHNOLOGY, INC.

Myf-5 (N-20): sc-31946

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 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.

CHROMOSOMAL LOCATION

Genetic locus: MYF5 (human) mapping to 12q21.31; Myf5 (mouse) mapping to 10 D1.

SOURCE

Myf-5 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Myf-5 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-31946 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-31946 X, 200 µg/0.1 ml.

APPLICATIONS

Myf-5 (N-20) is recommended for detection of Myf-5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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-5 (N-20) is also recommended for detection of Myf-5 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Myf-5 siRNA (h): sc-35988, Myf-5 siRNA (m): sc-35989, Myf-5 shRNA Plasmid (h): sc-35988-SH, Myf-5 shRNA Plasmid (m): sc-35989-SH, Myf-5 shRNA (h) Lentiviral Particles: sc-35988-V and Myf-5 shRNA (m) Lentiviral Particles: sc-35989-V.

Myf-5 (N-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Myf-5: 32 kDa.

Positive Controls: rat skeletal muscle extract: sc-364810.

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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA

Myf-5 (N-20): sc-31946. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of myocytes.

SELECT PRODUCT CITATIONS

1. Carlson, M.E., et al. 2008. Imbalance between pSmad3 and Notch induces CDK inhibitors in old muscle stem cells. Nature 454: 528-532.
2. Yang, J., et al. 2012. Dopaminergic neuronal conversion from adult rat skeletal muscle-derived stem cells *in vitro*. Neurochem. Res. 37: 1982-1992.
3. Cazzato, D., et al. 2014. Nitric oxide drives embryonic myogenesis in chicken through the upregulation of myogenic differentiation factors. Exp. Cell Res. 320: 269-280.

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.

PROTOCOLS

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