SANTA CRUZ BIOTECHNOLOGY, INC.

MRTF-B (H-53): sc-98989

BACKGROUND

Serum response factor (SRF) is a transcription factor that binds the serum response element (SRE), a sequence that mediates the transient response of many cellular genes to growth stimulation. SRF regulates the transient response of several muscle genes in response to growth factors and recruits accessory myogenic factors to activate these muscle genes. SRF is required for the formation of vertebrate mesoderm leading to the origin of the cardiovascular system. Myocardin, in association with SRF in cardiac muscle cells, activates cardiac muscle promoters. Myocardin-related transcription factors A and B (MRTF-A and MRTF-B) interact with SRF and act as stimulators for its transcriptional activity. MRTF-B is crucial for skeletal myogenic differentiation.

REFERENCES

1. Cen, B., et al. 2003. Megakaryoblastic leukemia 1, a potent transcriptional coactivator for serum response factor (SRF), is required for serum induction of SRF target genes. Mol. Cell. Biol. 23: 6597-6608.
2. Selvaraj, A. and Prywes, R. 2003. Megakaryoblastic leukemia-1/2, a transcriptional co-activator of serum response factor, is required for skeletal myogenic differentiation. J. Biol. Chem. 278: 41977-41987.
3. Cen, B., et al. 2004. Myocardin/MKL family of SRF coactivators: key regulators of immediate early and muscle specific gene expression. J. Cell. Biochem. 93: 74-82.
4. Kuwahara, K., et al. 2005. Muscle-specific signaling mechanism that links actin dynamics to serum response factor. Mol. Cell. Biol. 25: 3173-3181.

CHROMOSOMAL LOCATION

Genetic locus: MKL2 (human) mapping to 16p13.12; Mkl2 (mouse) mapping to 16 A1.

SOURCE

MRTF-B (H-53) is a rabbit polyclonal antibody raised against amino acids 206-258 mapping within an internal region of MRTF-B 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-98989 X, 200 µg/0.1 ml.

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.

APPLICATIONS

MRTF-B (H-53) is recommended for detection of MRTF-B isoforms 1, 2, 3 and 4 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).

MRTF-B (H-53) is also recommended for detection of MRTF-B isoforms 1, 2, 3 and 4 in additional species, including canine.

Suitable for use as control antibody for MRTF-B siRNA (h): sc-61074, MRTF-B siRNA (m): sc-61075, MRTF-B shRNA Plasmid (h): sc-61074-SH, MRTF-B shRNA Plasmid (m): sc-61075-SH, MRTF-B shRNA (h) Lentiviral Particles: sc-61074-V and MRTF-B shRNA (m) Lentiviral Particles: sc-61075-V.

MRTF-B (H-53) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

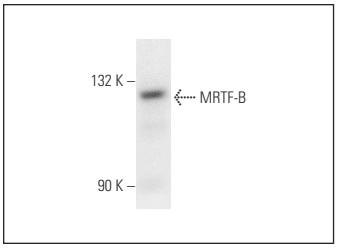
Molecular Weight of MRTF-B: 118 kDa.

Positive Controls: MCF7 nuclear extract: sc-2149.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



MRTF-B (H-53): sc-98989. Western blot analysis of MRTF-B expression in MCF7 nuclear extract.

SELECT PRODUCT CITATIONS

1. Hu, Q., et al. 2011. LMO7 mediates cell-specific activation of the Rho-myocardin-related transcription factor-serum response factor pathway and plays an important role in breast cancer cell migration. Mol. Cell. Biol. 31: 3223-3240.
2. Gupta, M., et al. 2013. Nuclear translocation of myocardin-related transcription factor-A during transforming growth factor β-induced epithelial to mesenchymal transition of lens epithelial cells. Mol. Vis. 19: 1017-1028.