

# MRTF-A (E-25): sc-133795

## 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 factor A (MRTF-A), also known as MKL1, interacts with SRF and stimulates its transcriptional activity.

## REFERENCES

1. Norman, C., et al. 1988. Isolation and properties of cDNA clones encoding SRF, a transcription factor that binds to the c-Fos serum response element. *Cell* 55: 989-1003.
2. Treisman, R. 1990. The SRE: a growth factor responsive transcriptional regulator. *Semin. Cancer Biol.* 1: 47-58.
3. Hill, C.S., et al. 1993. Functional analysis of a growth factor-responsive transcription factor complex. *Cell* 73: 395-406.
4. Wang, D.Z., et al. 2002. Potentiation of serum response factor activity by a family of Myocardin-related transcription factors. *Proc. Natl. Acad. Sci. USA* 99: 14855-14860.
5. Lockman, K., et al. 2004. Sphingosine 1-phosphate stimulates smooth muscle cell differentiation and proliferation by activating separate serum response factor co-factors. *J. Biol. Chem.* 279: 42422-42430.
6. Zhang, S.X., et al. 2005. Identification of direct serum response factor gene targets during DMSO induced P19 cardiac cell differentiation. *J. Biol. Chem.* 280: 19115-19126.

## CHROMOSOMAL LOCATION

Genetic locus: MKL1 (mouse) mapping to 15 E1.

## SOURCE

MRTF-A (E-25) is a Protein A purified rabbit polyclonal antibody raised against synthetic MRTF-A peptide of mouse origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

MRTF-A (E-25) is recommended for detection of MRTF-A of mouse and rat 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MRTF-A siRNA (m): sc-149641, MRTF-A shRNA Plasmid (m): sc-149641-SH and MRTF-A shRNA (m) Lentiviral Particles: sc-149641-V.

Molecular Weight of MRTF-A: 160 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

## 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).

## RESEARCH USE

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



Try **MRTF-A (G-7): sc-398675** or **MRTF-A (G-8): sc-390324**, our highly recommended monoclonal alternatives to MRTF-A (E-25). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **MRTF-A (G-7): sc-398675**.