

Myocardin (H-300): sc-33766

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-binding sites are also constitutive promoter elements in many muscle-specific promoters. Myocardin associates with SRF in cardiac muscle cells to activate cardiac muscle promoters. Myocardin is also expressed in smooth muscle cells and appears to play a role in cell differentiation. Specifically, Myocardin is expressed in vascular smooth muscle within the aortic arteries and pulmonary outflow tract as well as in the genitourinary tract and gastrointestinal tract. Myocardin is absent in the coronary vasculature, dorsal aorta, skeletal muscle and other non-muscle tissue types. Myocardin belongs to the SAP (SAF-A/B, Acinus and PIAS) domain family of nuclear proteins which includes hnRNP U and PIAS. The SAP domain may play a role in targeting proteins to specific chromosomal locations.

CHROMOSOMAL LOCATION

Genetic locus: MYOCD (human) mapping to 17p12; Myocd (mouse) mapping to 11 B3.

SOURCE

Myocardin (H-300) is a rabbit polyclonal antibody raised against amino acids 687-938 mapping at the C-terminus of Myocardin 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.

STORAGE

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

APPLICATIONS

Myocardin (H-300) is recommended for detection of Myocardin 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).

Myocardin (H-300) is also recommended for detection of Myocardin in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Myocardin siRNA (h): sc-43953, Myocardin siRNA (m): sc-43954, Myocardin shRNA Plasmid (h): sc-43953-SH, Myocardin shRNA Plasmid (m): sc-43954-SH, Myocardin shRNA (h) Lentiviral Particles: sc-43953-V and Myocardin shRNA (m) Lentiviral Particles: sc-43954-V.

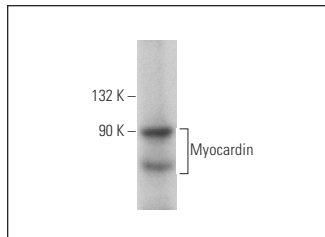
Molecular Weight of Myocardin: 95.7 kDa.

Positive Controls: SW480 nuclear extract: sc-2155 or mouse heart extract: sc-2254.

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



Myocardin (H-300): sc-33766. Western blot analysis of Myocardin expression in mouse heart tissue extract.

SELECT PRODUCT CITATIONS

1. Bulick, A.S., et al. 2009. Impact of endothelial cells and mechanical conditioning on smooth muscle cell extracellular matrix production and differentiation. *Tissue Eng. Part A* 15: 815-825.
2. Du, H., et al. 2010. Phenylephrine induces elevated RhoA activation and smooth muscle α -actin expression in Pkd2^{-/-} vascular smooth muscle cells. *Hypertens. Res.* 33: 37-42.
3. Pagiatakis, C., et al. 2012. A novel RhoA/ROCK-CPI-17-MEF2C signaling pathway regulates vascular smooth muscle cell gene expression. *J. Biol. Chem.* 287: 8361-8370.
4. Pfisterer, L., et al. 2012. Hypertension impairs myocardin function: a novel mechanism facilitating arterial remodelling. *Cardiovasc. Res.* 96: 120-129.

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.