SANTA CRUZ BIOTECHNOLOGY, INC.

Myocardin (E-5): sc-518132

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (E-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 391-410 of Myocardin of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Myocardin (E-5) is available conjugated to agarose (sc-518132 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-518132 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518132 PE), fluorescein (sc-518132 FITC), Alexa Fluor® 488 (sc-518132 AF488), Alexa Fluor® 546 (sc-518132 AF546), Alexa Fluor® 594 (sc-518132 AF594) or Alexa Fluor® 647 (sc-518132 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518132 AF680) or Alexa Fluor® 790 (sc-518132 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Myocardin (E-5) is recommended for detection of Myocardin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Myocardin siRNA (h): sc-43953, Myocardin siRNA (m): sc-43954, Myocardin siRNA (r): sc-72228, Myocardin shRNA Plasmid (h): sc-43953-SH, Myocardin shRNA Plasmid (m): sc-43954-SH, Myocardin shRNA Plasmid (r): sc-72228-SH, Myocardin shRNA (h) Lentiviral Particles: sc-43953-V, Myocardin shRNA (m) Lentiviral Particles: sc-43954-V and Myocardin shRNA (r) Lentiviral Particles: sc-72228-V.

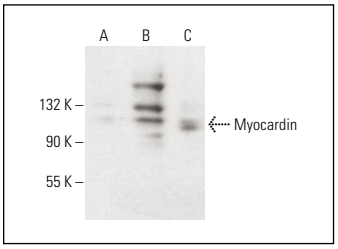
Molecular Weight of Myocardin: 96 kDa.

Positive Controls: Myocardin (m): 293 Lysate: sc-178975.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Myocardin (E-5): sc-518132. Western blot analysis of Myocardin expression in non-transfected 293T: sc-117752 (**A**), mouse Myocardin transfected 293T: sc-178975 (**B**) and SW480 (**C**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

SELECT PRODUCT CITATIONS

1. Li, Z., et al. 2021. miR-25-5p regulates endothelial progenitor cell differentiation in response to shear stress through targeting ABCA1. Cell Biol. Int. 45: 1876-1886.
2. Zhang, L., et al. 2022. RIP2 knockdown attenuates vascular smooth muscle cells activation via negative regulating myocardin expression. Am. J. Hypertens. 35: 454-461.
3. Zheng, G.Q., et al. 2022. Melatonin attenuates vascular smooth muscle contraction through the γ-secretase/Notch intracellular domain/myocardin pathway. J. Cardiovasc. Pharmacol. 80: 574-582.

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 for detailed protocols and support products.