

MURC (K-14): sc-163021

BACKGROUND

MURC (muscle-related coiled-coil protein), also known as muscle-restricted coiled-coil protein, is a 364 amino acid developmental protein belonging to the PTRF/SDPR family. Encoded by a gene that maps to human chromosome 9q31.1, MURC induces Rho A activation and activates ANP transcription and myofibrillar organization through the Rho/ROCK signaling pathway. The subunit structure of MURC interacts with SDPR, thus enhancing the transactivation of ANP. MURC accumulates in the Z-line of the sarcomere in cardiomyocytes and in cytoplasm in vascular smooth muscle cells. Evolutionarily conserved from frog to human, MURC plays important roles in the development of cardiac dysfunction and the regulation of skeletal myogenesis, caveolin expression and caveolae morphology. Overexpression of MURC in skeletal muscle and cardiac muscle promotes myogenesis and causes cardiac dysfunction and conduction disturbance.

REFERENCES

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4. Nabi, I.R. 2009. Cavin fever: regulating caveolae. *Nat. Cell Biol.* 11: 789-791.
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7. Hansen, C.G. and Nichols, B.J. 2010. Exploring the caves: cavins, caveolins and caveolae. *Trends Cell Biol.* 20: 177-186.
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CHROMOSOMAL LOCATION

Genetic locus: MURC (human) mapping to 9q31.1; Murc (mouse) mapping to 4 B1.

SOURCE

MURC (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MURC of human origin.

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.

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-163021 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MURC (K-14) is recommended for detection of MURC 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).

Suitable for use as control antibody for MURC siRNA (h): sc-92803, MURC siRNA (m): sc-108693, MURC shRNA Plasmid (h): sc-92803-SH, MURC shRNA Plasmid (m): sc-108693-SH, MURC shRNA (h) Lentiviral Particles: sc-92803-V and MURC shRNA (m) Lentiviral Particles: sc-108693-V.

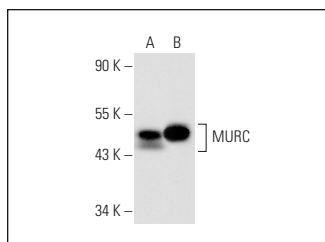
Molecular Weight of MURC: 42 kDa.

Positive Controls: mouse skeletal muscle extract: sc-364250 or 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



MURC (K-14): sc-163021. Western blot analysis of MURC expression in rat skeletal muscle (A) and mouse skeletal muscle (B) tissue extracts.

PROTOCOLS

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