SANTA CRUZ BIOTECHNOLOGY, INC.

MuRF2 (C-20): sc-49454

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

MuRF1 (RNF28), MuRF2 (RNF29) and MuRF3 (RNF30) are a specific class of RING finger proteins expressed in striated muscle tissues that act as signaling molecules and cytoskeletal adaptors. The MuRF proteins contain a conserved N-terminal RING domain and zinc-binding B-box motif in addition to two coiled-coil motifs in their central regions. In muscle cells, MuRF2 regulates gene expression and protein turnover. It localizes to the cytoplasm, but under atrophic conditions it is detected in the nucleus. MuRF2 can form oligomers with various other proteins, including titin and myosin, during sarcomere assembly. Endogenous MuRF2 associates with the sarcomeric M-band in cardiomyocytes. There are at least four isoforms of MuRF2.

REFERENCES

1. Centner, T., et al. 2001. Identification of muscle specific RING finger proteins as potential regulators of the Titin kinase domain. J. Mol. Biol. 306: 717-726.
2. Pizon, V., et al. 2002. Transient association of Titin and Myosin with microtubules in nascent myofibrils directed by the MuRF2 RING-finger protein. J. Cell Sci. 115: 4469-4482.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606469. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. McElhinny, A.S., et al. 2004. Muscle-specific RING finger-2 (MURF-2) is important for microtubule, intermediate filament and sarcomeric M-line maintenance in striated muscle development. J. Cell Sci. 117: 3175-3188.
5. Tskhovrebova, L., et al. 2005. Muscle disease: a giant feels the strain. Nat. Med. 11: 478-479.
6. Lange, S., et al. 2005. The kinase domain of Titin controls muscle gene expression and protein turnover. Science 308: 1599-1603.
7. Witt, S.H., et al. 2005. MuRF-1 and MuRF-2 target a specific subset of myofibrillar proteins redundantly: towards understanding MuRF-dependent muscle ubiquitination. J. Mol. Biol. 350: 713-722.

CHROMOSOMAL LOCATION

Genetic locus: TRIM55 (human) mapping to 8q13.1.

SOURCE

MuRF2 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MuRF2 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.

Blocking peptide available for competition studies, sc-49454 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

MuRF2 (C-20) is recommended for detection of MuRF2 isoforms 1, 2 and 4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MuRF2 (C-20) is also recommended for detection of MuRF2 isoforms 1, 2 and 4 in additional species, including equine, canine and bovine.

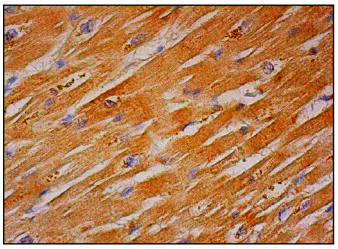
Suitable for use as control antibody for MuRF2 siRNA (h): sc-61101, MuRF2 shRNA Plasmid (h): sc-61101-SH and MuRF2 shRNA (h) Lentiviral Particles: sc-61101-V.

Molecular Weight of MuRF2: 60 kDa.

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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



MuRF2 (C-20): sc-49454. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

STORAGE

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