

Sarcalumenin (E-15): sc-165424

BACKGROUND

Muscle contraction is activated by the release of calcium from the sarcoplasmic reticulum (SR), and muscle relaxation is triggered by a rapid re-uptake of calcium from the cytosol into the lumen of the SR. Sarcalumenin is a glycoprotein expressed in the longitudinal tubules in the lumen of the sarcoplasmic reticulum (SR) in striated muscle cells, and it associates with the inner side of the SR membranes through calcium bridges. Endogenous casein kinase II may regulate its function via phosphorylation of Sarcalumenin. Sarcalumenin binds to calcium and helps to sequester it in the nonjunctional regions of the sarcoplasmic reticulum. Sarcalumenin also improves upon the condition of calcium pump proteins. Basic mammalian muscle functions do not require a functional Sarcalumenin, but loss of this protein causes slowed contraction and relaxation.

REFERENCES

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5. Dowling, P., et al. 2004. Drastic reduction of Sarcalumenin in Dp427 (dystrophin of 427 kDa)-deficient fibres indicates that abnormal calcium handling plays a key role in muscular dystrophy. *Biochem. J.* 379: 479-488.
6. Lohan, J., et al. 2004. Drastic reduction in the luminal Ca²⁺-binding proteins calsequestrin and Sarcalumenin in dystrophin-deficient cardiac muscle. *Biochim. Biophys. Acta* 1689: 252-258.
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CHROMOSOMAL LOCATION

Genetic locus: SRL (human) mapping to 16p13.3; Srl (mouse) mapping to 16 A1.

SOURCE

Sarcalumenin (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Sarcalumenin 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-165424 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Sarcalumenin (E-15) is recommended for detection of Sarcalumenin of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Sarcalumenin (E-15) is also recommended for detection of Sarcalumenin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Sarcalumenin siRNA (h): sc-93132, Sarcalumenin siRNA (m): sc-63354, Sarcalumenin shRNA Plasmid (h): sc-93132-SH, Sarcalumenin shRNA Plasmid (m): sc-63354-SH, Sarcalumenin shRNA (h) Lentiviral Particles: sc-93132-V and Sarcalumenin shRNA (m) Lentiviral Particles: sc-63354-V.

Molecular Weight of Sarcalumenin: 150 kDa.

Positive Controls: Rat skeletal muscle.

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.

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.



Try **Sarcalumenin (XIIC4): sc-58845**, our highly recommended monoclonal alternative to Sarcalumenin (E-15).