**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**


**CHROMOSOMAL LOCATION**

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

**SOURCE**

Sarcalumenin (XIIC4) is a mouse monoclonal antibody raised against purified Sarcalumenin of rat origin.

**PRODUCT**

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

**APPLICATIONS**

Sarcalumenin (XIIC4) is recommended for detection of Sarcalumenin and the 53 kDa glycoprotein splice variant of mouse, rat, human, rabbit and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)]. 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 extract: sc-364810, human skeletal muscle extract: sc-363776 or human heart extract: sc-363763.

**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, 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).

**DATA**

Sarcalumenin (XIIC4): sc-58845. Western blot analysis of Sarcalumenin expression in human skeletal muscle (A) and human heart (B) tissue extracts.

Sarcalumenin (XIIC4): sc-58845. Western blot analysis of Sarcalumenin expression in rat skeletal muscle tissue extract.

**SELECT PRODUCT CITATIONS**


**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.