

calsequestrin 2 (H-60): sc-28275

BACKGROUND

Calsequestrin (CS), also known as CSQ, is the major calcium-binding protein of cardiac and skeletal muscle whose function is to sequester calcium in the lumen of the sarcoplasmic reticulum (SR). In mammals, there are two forms of this protein, calsequestrin 1 and calsequestrin 2, which encode fast-twitch skeletal muscle and cardiac calsequestrin, respectively. The form of calsequestrin 1 known as Calmitin is located in the terminal cisternae luminal spaces of the SR of fast skeletal muscle cells. Calsequestrin 2 is present in the terminal cisternae luminal spaces of the SR in both cardiac and slow skeletal muscle cells. In addition, calsequestrin regulates the ryanodine receptor signalling (RyR) through Triadin and Junctin.

REFERENCES

1. Barker, P.A., et al. 1988. An improved method for the isolation of rat cardiac sarcoplasmic reticulum. *Mol. Cell. Biochem.* 84: 87-95.
2. Gunji, K., et al. 1999. A 63 kDa skeletal muscle protein associated with eye muscle inflammation in Graves' disease is identified as the calcium binding protein calsequestrin. *Autoimmunity* 29: 1-9.

CHROMOSOMAL LOCATION

Genetic locus: CASQ2 (human) mapping to 1p13.1; Casq2 (mouse) mapping to 3 F2.2.

SOURCE

calsequestrin 2 (H-60) is a rabbit polyclonal antibody raised against amino acids 21-80 mapping near the N-terminus of calsequestrin 2 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.

APPLICATIONS

calsequestrin 2 (H-60) is recommended for detection of calsequestrin 2 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).

calsequestrin 2 (H-60) is also recommended for detection of calsequestrin 2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for calsequestrin 2 siRNA (h): sc-43277, calsequestrin 2 siRNA (m): sc-43278, calsequestrin 2 shRNA Plasmid (h): sc-43277-SH, calsequestrin 2 shRNA Plasmid (m): sc-43278-SH, calsequestrin 2 shRNA (h) Lentiviral Particles: sc-43277-V and calsequestrin 2 shRNA (m) Lentiviral Particles: sc-43278-V.

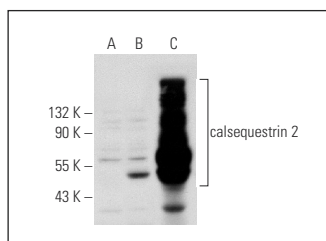
Molecular Weight of calsequestrin 2: 40-46 kDa.

Positive Controls: calsequestrin 2 (h): 293T Lysate: sc-172435, rat heart extract: sc-2393 or mouse heart extract: sc-2254.

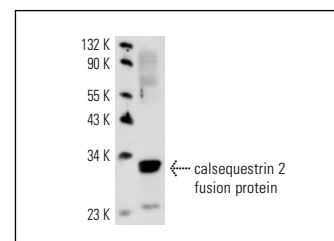
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



calsequestrin 2 (H-60): sc-28275. Western blot analysis of calsequestrin 2 expression in non-transfected: sc-117752 (A) and human calsequestrin 2 transfected: sc-172435 (B) 293T whole cell lysates and mouse heart tissue extract (C).



calsequestrin 2 (H-60): sc-28275. Western blot analysis of human recombinant calsequestrin 2 fusion protein.

SELECT PRODUCT CITATIONS

1. Maack, C., et al. 2009. Endogenous activation of mitochondrial KATP channels protects human failing myocardium from hydroxyl radical-induced stunning. *Circ. Res.* 105: 811-817.
2. Liang, X., et al. 2012. Junctophilin 2 knockdown interfere with mitochondrion status in ESC-CMs and cardiogenesis of ES cells. *J. Cell. Biochem.* 113: 2884-2894.

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 or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **calsequestrin 2 (E-12): sc-390999**, our highly recommended monoclonal alternative to calsequestrin 2 (H-60).