

MYL2 (C-17): sc-34490

BACKGROUND

Encoded by the MYL2 gene, myosin regulatory light chain 2, ventricular/cardiac muscle isoform, also designated MLC-2 or MLC2v, is part of a hexameric complex of two heavy chains and four light chains predominantly expressed in adult cardiac ventricle muscle. Myosin regulatory light chain 2 binds calcium and has been shown to be a useful molecular marker for cardiac chamber specification. The co-expression of myosin regulatory light chain 7 (MYL7) and myosin regulatory light chain 2 in the outflow tract and atrioventricular canal, together with the single expression in the atrial (MYL7) and ventricular (MYL2) myocardium, permits the delineation of their boundaries. At the amino acid level there is 96% homology between the human and mouse myosin regulatory light chain sequences. Mutations in MYL2 are correlated with mid-left ventricular chamber type hypertrophic cardiomyopathy (MVC2) as well as familial hypertrophic cardiomyopathy type 10 (CMH10).

CHROMOSOMAL LOCATION

Genetic locus: MYL2 (human) mapping to 12q24.11; Myl2 (mouse) mapping to 5 F.

SOURCE

MYL2 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of myosin regulatory light chain 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.

Blocking peptide available for competition studies, sc-34490 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MYL2 (C-17) is recommended for detection of myosin regulatory light chain 2, ventricular/cardiac muscle isoform 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).

MYL2 (C-17) is also recommended for detection of myosin regulatory light chain 2, ventricular/cardiac muscle isoform in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MYL2 siRNA (h): sc-45414, MYL2 siRNA (m): sc-45415, MYL2 shRNA Plasmid (h): sc-45414-SH, MYL2 shRNA Plasmid (m): sc-45415-SH, MYL2 shRNA (h) Lentiviral Particles: sc-45414-V and MYL2 shRNA (m) Lentiviral Particles: sc-45415-V.

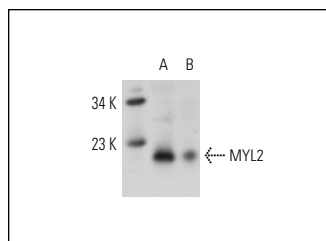
Molecular Weight of MYL2: 18-20 kDa.

Positive Controls: rat skeletal muscle extract: sc-364810 or rat heart extract: sc-2393.

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



MYL2 (C-17): sc-34490. Western blot analysis of MYL2 expression in rat skeletal muscle (A) and rat heart (B) tissue extracts.

SELECT PRODUCT CITATIONS

1. Grauss, R.W., et al. 2008. Forced myocardin expression enhances the therapeutic effect of human mesenchymal stem cells after transplantation in ischemic mouse hearts. *Stem Cells* 26: 1083-1093.
2. Danalache, B.A., et al. 2010. Oxytocin-Gly-Lys-Arg: a novel cardiomyogenic peptide. *PLoS ONE* 5: e13643.
3. Schwab, K., et al. 2011. Dietary phytoestrogen supplementation induces sex differences in the myocardial protein pattern of mice: a comparative proteomics study. *Proteomics* 11: 3887-3904.
4. Harmelink, C., et al. 2013. Myocardial Mycn is essential for mouse ventricular wall morphogenesis. *Dev. Biol.* 373: 53-63.

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 **MYL2 (3F4D7G4): sc-517205**, our highly recommended monoclonal alternative to MYL2 (C-17).