

MYL2 (7C9): sc-517244

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 (7C9) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 2-166 of MYL2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MYL2 (7C9) is available conjugated to agarose (sc-517244 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-517244 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-517244 PE), fluorescein (sc-517244 FITC), Alexa Fluor[®] 488 (sc-517244 AF488), Alexa Fluor[®] 546 (sc-517244 AF546), Alexa Fluor[®] 594 (sc-517244 AF594) or Alexa Fluor[®] 647 (sc-517244 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-517244 AF680) or Alexa Fluor[®] 790 (sc-517244 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

MYL2 (7C9) is recommended for detection of MYL2 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), 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).

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.

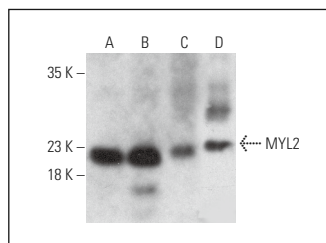
Molecular Weight of MYL2: 18-20 kDa.

Positive Controls: human skeletal muscle extract: sc-363776, rat heart extract: sc-2393 or human heart extract: sc-363763.

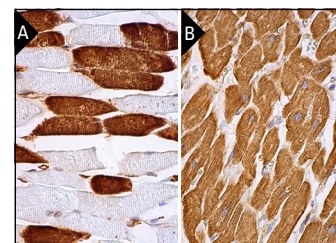
RECOMMENDED SUPPORT REAGENTS

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, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



MYL2 (7C9): sc-517244. Western blot analysis of MYL2 expression in human skeletal muscle (A), human heart (B), mouse skeletal muscle (C) and rat heart (D) tissue extracts.



MYL2 (7C9): sc-517244. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skeletal muscle tissue showing cytoplasmic staining of subset of myocytes (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes (B).

SELECT PRODUCT CITATIONS

1. Wang, W.Y., et al. 2019. Fibronectin promotes nasopharyngeal cancer cell motility and proliferation. *Biomed. Pharmacother.* 109: 1772-1784.
2. Quijada, P., et al. 2021. Coordination of endothelial cell positioning and fate specification by the epicardium. *Nat. Commun.* 12: 4155.

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 for detailed protocols and support products.

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