SANTA CRUZ BIOTECHNOLOGY, INC.

MYH6 (K-13): sc-168676

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Actin is a highly conserved protein that is expressed in all eukaryotic cells. Actin filaments can form both stable and labile structures, and are crucial components of microvilli and the contractile apparatus of muscle cells. Myosin is a hexamer of two heavy chains (MHC) and four light chains (MLC) that interacts with Actin to generate the force for diverse cellular movements, including cytokinesis, phagocytosis and muscle contraction. Myosin heavy chains, encoded by the MYH gene family, contain actin-activated ATPase activity that generate the motor function of Myosin. Myosin heavy chains were initially isolated from human fetal skeletal muscle and are the major determinant in the contraction speed of skeletal muscle. MYH6 (myosin heavy chain 6), also known as MYHCA (myosin heavy chain, cardiac muscle α isoform), is a 1,939 amino acid protein that is encoded by a gene that maps to human chromosome 14q11.2. Defects in MYH6 are linked to atrial septal defect type 3 (ASD3) and cardiomyopathy familial hypertrophic type 14 (CMH14).

CHROMOSOMAL LOCATION

Genetic locus: MYH6 (human) mapping to 14q11.2; Myh6 (mouse) mapping to 14 C3.

SOURCE

MYH6 (K-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MYH6 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-168676 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

MYH6 (K-13) is recommended for detection of MYH6 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); non cross-reactive with other MYH family members.

Suitable for use as control antibody for MYH6 siRNA (h): sc-106275, MYH6 siRNA (m): sc-149744, MYH6 shRNA Plasmid (h): sc-106275-SH, MYH6 shRNA Plasmid (m): sc-149744-SH, MYH6 shRNA (h) Lentiviral Particles: sc-106275-V and MYH6 shRNA (m) Lentiviral Particles: sc-149744-V.

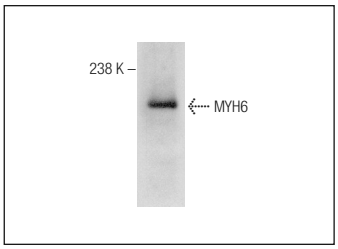
Molecular Weight of MYH6: 224 kDa.

Positive Controls: human heart extract: sc-363763.

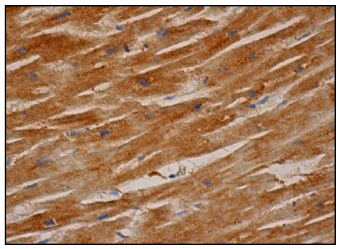
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



MYH6 (K-13): sc-168676. Western blot analysis of MYH6 expression in human heart tissue extract.



MYH6 (K-13): sc-168676. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

SELECT PRODUCT CITATIONS

1. Fang, X., et al. 2014. Caffeine exposure alters cardiac gene expression in embryonic cardiomyocytes. Am. J. Physiol. Regul. Integr. Comp. Physiol. 307: R1471-R1487.

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 **MYH (B-5): sc-376157** or **MYH (TH81): sc-101334**, our highly recommended monoclonal alternatives to MYH6 (K-13). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **MYH (B-5): sc-376157**.