

MYLK2 (R-19): sc-9456

BACKGROUND

The Ca²⁺/calmodulin-dependent protein kinases (CaM kinases) are a structurally related subfamily of serine/threonine kinases that includes CaMKI, CaMKII, CaMKIV and myosin light chain kinases (MYLK, also designated MLCK). The MYLK kinases phosphorylate myosin regulatory light chains to catalyze myosin interaction with actin filaments resulting in contractile activity. Non-muscle, smooth muscle and skeletal/cardiac muscle MYLK isoforms exist. The MYLK gene (also designated MYLK1) encodes both smooth muscle and non-muscle isoforms as well as telokin, a small C-terminal isoform expressed only in smooth muscle with the capacity to stabilize unphosphorylated myosin filaments. Multiple transcript variants are described for the MYLK gene. Smooth-muscle and non-muscle MYLK isoforms are expressed in a wide variety of adult and fetal tissues. The skeletal/cardiac muscle isoforms of MYLK are encoded by a separate gene, MYLK2 (also designated skMLCK). MYLK appears to be a target for PAKs (p21-activated kinases). PAK1 interaction with MYLK results in a decrease in MYLK activity and myosin light chain phosphorylation.

CHROMOSOMAL LOCATION

Genetic locus: MYLK2 (human) mapping to 20q11.21; Mylk2 (mouse) mapping to 2 H1.

SOURCE

MYLK2 (R-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MYLK2 of rat 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-9456 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MYLK2 (R-19) is recommended for detection of MYLK2 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); non cross-reactive with smooth muscle/non-muscle MYLK.

MYLK2 (R-19) is also recommended for detection of MYLK2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for MYLK2 siRNA (h): sc-72063, MYLK2 siRNA (m): sc-72101, MYLK2 shRNA Plasmid (h): sc-72063-SH, MYLK2 shRNA Plasmid (m): sc-72101-SH, MYLK2 shRNA (h) Lentiviral Particles: sc-72063-V and MYLK2 shRNA (m) Lentiviral Particles: sc-72101-V.

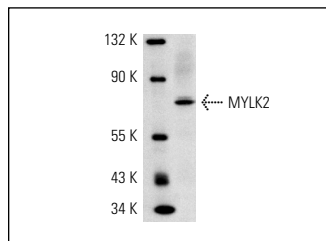
Molecular Weight of MYLK2: 79 kDa.

Positive Controls: L8 cell lysate: sc-3807.

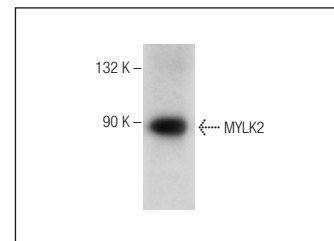
RECOMMENDED SECONDARY REAGENTS

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



MYLK2 (R-19): sc-9456. Western blot analysis of MYLK2 expression in L8 whole cell lysate.



MYLK2 (R-19): sc-9456. Western blot analysis of MYLK2 expression in rat skeletal muscle tissue extract.

SELECT PRODUCT CITATIONS

1. Souza, P.P., et al. 2009. The histone methyltransferase SUV420H2 and heterochromatin proteins HP1 interact but show different dynamic behaviours. *BMC Cell Biol.* 10: 41.

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 **MYLK2 (MY-21): sc-58803**, our highly recommended monoclonal alternative to MYLK2 (R-19).