

MYLK3 (P-16): sc-165056

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 (MYLKs, also designated MLCs). The MYLK kinases phosphorylate Myosin regulatory light chains to catalyze Myosin interaction with actin filaments, resulting in contractile activity. MYLK3 (Myosin light chain kinase 3) is a 795 amino acid cardiac-specific protein that contains one protein kinase domain and belongs to the protein kinase superfamily. Like other MYLK kinases, MYLK3 is thought to play a role in smooth muscle contraction, specifically using magnesium as a cofactor to catalyze the ATP-dependent phosphorylation of Myosin light chain proteins. Additionally, MYLK3 may regulate sarcomere assembly in heart tissue, possibly mediating proper heart function.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: MYLK3 (human) mapping to 16q11.2.

SOURCE

MYLK3 (P-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MYLK3 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-165056 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

MYLK3 (P-16) is recommended for detection of MYLK3 of 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 MYLK or MYLK2.

Suitable for use as control antibody for MYLK3 siRNA (h): sc-93234, MYLK3 shRNA Plasmid (h): sc-93234-SH and MYLK3 shRNA (h) Lentiviral Particles: sc-93234-V.

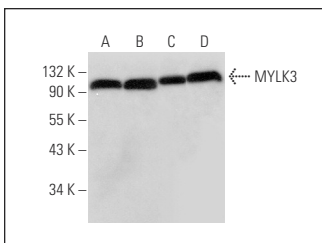
Molecular Weight of MYLK3: 86 kDa.

Positive Controls: A-375 cell lysate: sc-3811, K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

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



MYLK3 (P-16): sc-165056. Western blot analysis of MYLK3 expression in A-375 (A), K-562 (B), HeLa (C) and Hep G2 (D) whole cell lysates.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.