

MRCK γ (C-20): sc-324140

BACKGROUND

Protein kinases comprise a large group of encoded factors that regulate cellular processes by catalyzing the transfer of a phosphate group to a hydroxyl acceptor in serine, threonine or tyrosine residues. MRCK γ (serine/threonine-protein kinase MRCK gamma), also known as CDC42BPG (CDC42 binding protein kinase gamma (DMPK-like)), myotonic dystrophy protein kinase-like α , DMPK2, HSMDPKIN or KAPPA-200, is a 1551 amino acid cytoplasmic protein belonging to the protein kinase superfamily. Expressed in skeletal muscle and heart, MRCK γ exists as both a homodimer and homotetramer. MRCK γ may function as a downstream effector of CDC42 in cytoskeletal reorganization, and is known to regulate the phosphorylation of MYPT1 and MYL2, which is required for actomyosin contractility in cell invasion. MRCK γ binds magnesium as a cofactor and strongly associates with GTP-bound CDC42. The gene encoding MRCK γ maps to human chromosome 11q13.1.

REFERENCES

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- Ng, Y., et al. 2004. Expression of the human myotonic dystrophy kinase-related Cdc42-binding kinase gamma is regulated by promoter DNA methylation and Sp1 binding. *J. Biol. Chem.* 279: 34156-34164.
- Garcia, P., et al. 2006. Molecular insights into the self-assembly mechanism of dystrophin myotonic kinase. *FASEB J.* 2: 1142-1151.
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CHROMOSOMAL LOCATION

Genetic locus: CDC42BPG (human) mapping to 11q13.1; Cdc42bpg (mouse) mapping to 19 A.

SOURCE

MRCK γ (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MRCK γ of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-324140 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

MRCK γ (C-20) is recommended for detection of MRCK γ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 MRCK α or MRCK β .

Suitable for use as control antibody for MRCK siRNA (h): sc-96278, MRCK siRNA (m): sc-155919, MRCK shRNA Plasmid (h): sc-96278-SH, MRCK shRNA Plasmid (m): sc-155919-SH, MRCK shRNA (h) Lentiviral Particles: sc-96278-V and MRCK shRNA (m) Lentiviral Particles: sc-155919-V.

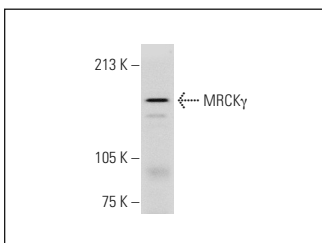
Molecular Weight of MRCK γ : 172 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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



MRCK γ (C-20): sc-324140. Western blot analysis of MRCK γ expression in Jurkat whole cell lysate.

RESEARCH USE

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

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Try **MRCK γ (2C3): sc-517148**, our highly recommended monoclonal alternative to MRCK γ (C-20).