SANTA CRUZ BIOTECHNOLOGY, INC.

M-RIP (D-13): sc-135495

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

M-RIP (myosin phosphatase Rho interacting protein), also known as MPRIP, p116Rip, RIP3 or RHOIP3, is a 1,025 amino acid cytoplasmic and cytoskeletal protein that is required for regulation of the Actin cytoskeleton. M-RIP colocalizes with Myosin binding subunit (MBS) to regulate the phosphorylation of Myosin light chain, and colocalizes with F-Actin through its N-terminus in the cytoskeleton. M-RIP also interacts with and Rho A at Actin stress fibers via its adjacent coiled-coil domains. M-RIP is highly expressed in ovary, with moderate levels found in brain, heart, liver, lung, skeletal muscle, testis and kidney. M-RIP depletion causes an increase of stress fibers in smooth muscle cells, whereas M-RIP over-expression causes disassembly of stress fibers in neuronal cells. Containing two PH domains, M-RIP has multiple phosphorylated serine and threonine residues and exists as three isoforms which are produced by alternative splicing events.

REFERENCES

1. Gebbink, M.F., et al. 1997. Identification of a novel, putative Rho-specific GDP/GTP exchange factor and a Rho A-binding protein: control of neuronal morphology. J. Cell Biol. 137: 1603-1613.
2. Mulder, J., et al. 2003. p116Rip is a novel filamentous Actin-binding protein. J. Biol. Chem. 278: 27216-27223.
3. Surks, H.K., et al. 2003. Myosin phosphatase-Rho interacting protein. A new member of the Myosin phosphatase complex that directly binds Rho A. J. Biol. Chem. 278: 51484-51493.
4. Mulder, J., et al. 2004. p116Rip targets Myosin phosphatase to the Actin cytoskeleton and is essential for Rho A/ROCK-regulated neuritogenesis. Mol. Biol. Cell 15: 5516-5527.
5. Surks, H.K., et al. 2005. M-RIP targets Myosin phosphatase to stress fibers to regulate Myosin light chain phosphorylation in vascular smooth muscle cells. J. Biol. Chem. 280: 42543-42551.

CHROMOSOMAL LOCATION

Genetic locus: MPRIP (human) mapping to 17p11.2; Mprip (mouse) mapping to 11 B1.3.

SOURCE

M-RIP (D-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of M-RIP 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-135495 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

M-RIP (D-13) is recommended for detection of M-RIP isoforms 1-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for M-RIP siRNA (h): sc-93832, M-RIP siRNA (m): sc-149201, M-RIP shRNA Plasmid (h): sc-93832-SH, M-RIP shRNA Plasmid (m): sc-149201-SH, M-RIP shRNA (h) Lentiviral Particles: sc-93832-V and M-RIP shRNA (m) Lentiviral Particles: sc-149201-V.

Molecular Weight of M-RIP: 125 kDa.

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) 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.

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.