SANTA CRUZ BIOTECHNOLOGY, INC.

M-RIP (E-1): sc-515720

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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 RhoA 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 RhoA-binding protein: control of neuronal morphology. J. Cell Biol. 137: 1603-1613.
2. Mulder, J., et al. 2003. $p116^{Rip}$ 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 RhoA. J. Biol. Chem. 278: 51484-51493.
4. Mulder, J., et al. 2004. $p116^{Rip}$ targets myosin phosphatase to the Actin cytoskeleton and is essential for RhoA/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 (E-1) is a mouse monoclonal antibody raised against amino acids 668-760 mapping within an internal region of M-RIP of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

M-RIP (E-1) is available conjugated to agarose (sc-515720 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515720 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515720 PE), fluorescein (sc-515720 FITC), Alexa Fluor® 488 (sc-515720 AF488), Alexa Fluor® 546 (sc-515720 AF546), Alexa Fluor® 594 (sc-515720 AF594) or Alexa Fluor® 647 (sc-515720 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515720 AF680) or Alexa Fluor® 790 (sc-515720 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

M-RIP (E-1) is recommended for detection of M-RIP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

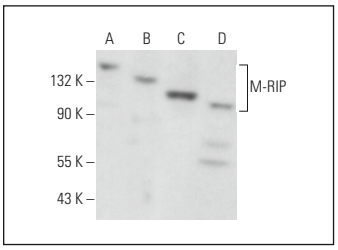
Molecular Weight of M-RIP: 125 kDa.

Positive Controls: MDA-MB-231 cell lysate: sc-2232, SCC-4 whole cell lysate: sc-364363 or A-431 whole cell lysate: sc-2201.

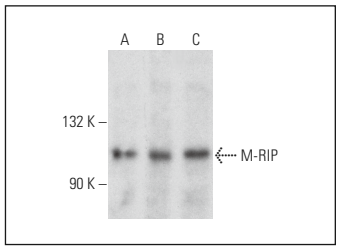
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



M-RIP (E-1): sc-515720. Western blot analysis of M-RIP expression in MDA-MB-231 (**A**), A-431 (**B**), Neuro-2A (**C**) and F9 (**D**) whole cell lysates.



M-RIP (E-1): sc-515720. Western blot analysis of M-RIP expression in MDA-MB-231 (**A**), SCC-4 (**B**) and NIH:OVCAR-3 (**C**) whole cell lysates.

SELECT PRODUCT CITATION

1. Balaban, C., et al. 2023. PIP2-effector protein MPRIP regulates RNA polymerase II condensation and transcription. Biomolecules 13: 426.

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.