

Rit (14G7): sc-58473

BACKGROUND

Neuronal activity dramatically increases the concentration of cytosolic Ca^{2+} , which then serves as a second messenger to direct diverse cellular responses. Calmodulin is a primary mediator of Ca^{2+} signals in the nervous system. Ric, a protein related to the Ras subfamily of small GTPases, has the ability to bind calmodulin. In addition, two 25 kDa Ras-like human proteins, RIN and Rit (Ric-related gene expressed in many tissues), which are 71% and 66% identical to Ric respectively, share related G2 domains with Ric. While most members of the Ras subfamily are plasma membrane-associated and generally require a C-terminal isoprenyl group to bind to the plasma membrane, Rit and RIN lack the recognition signal for C-terminal prenylation. Transiently expressed Rit and RIN are plasma membrane-localized because both proteins contain a C-terminal cluster of basic amino acids, which provides a mechanism for membrane association. RIN binds calmodulin through a C-terminal binding motif. Rit and Ric are widely expressed, whereas expression of RIN is restricted to the neuron system. In conclusion, Rit and RIN define a novel subfamily of Ras-related proteins.

REFERENCES

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- Casey, P.J. 1995. Protein lipidation in cell signaling. *Science* 268: 221-225.
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- Lee, C.J., Della, N.G., Chew, C.E. and Zack, D.J. 1996. RIN, a neuron-specific and calmodulin-binding small G protein, and Rit define a novel subfamily of Ras proteins. *J. Neurosci.* 16: 6784-6794.

CHROMOSOMAL LOCATION

Genetic locus: RIT1 (human) mapping to 1q22; Rit1 (mouse) mapping to 12 F1.

SOURCE

Rit (14G7) is a mouse monoclonal antibody raised against recombinant full-length Rit of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and < 1% glycerol.

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 for detailed protocols and support products.

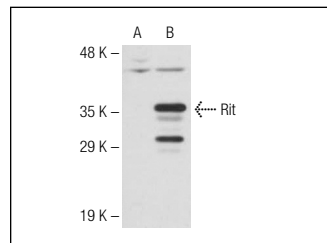
APPLICATIONS

Rit (14G7) is recommended for detection of Rit of mouse 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with Rit 2.

Suitable for use as control antibody for Rit siRNA (h): sc-106512, Rit siRNA (m): sc-152979, Rit shRNA Plasmid (h): sc-106512-SH, Rit shRNA Plasmid (m): sc-152979-SH, Rit shRNA (h) Lentiviral Particles: sc-106512-V and Rit shRNA (m) Lentiviral Particles: sc-152979-V.

Molecular Weight of Rit: 25 kDa.

DATA



Rit (14G7): sc-58473. Western blot analysis of Rit expression in non-transfected (A) and Rit transfected (B) 293 whole cell lysates.

RESEARCH USE

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