

## Rit (N-12): sc-19463

### BACKGROUND

Neuronal activity dramatically increases the concentration of cytosolic Ca<sup>2+</sup>, which then serves as a second messenger to direct diverse cellular responses. Calmodulin is a primary mediator of Ca<sup>2+</sup> 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 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 G<sub>2</sub> 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.
- Wes, P.D., Yu, M. and Montell, C. 1996. Ric, a calmodulin-binding Ras-like GTPase. *EMBO J.* 15: 5839-5848.
- 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 3 F1.

### SOURCE

Rit (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Rit 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-19463 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

Rit (N-12) is recommended for detection of Rit 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).

Rit (N-12) is also recommended for detection of Rit in additional species, including equine and bovine.

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.

### 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](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **Rit (14G7): sc-58473**, our highly recommended monoclonal alternative to Rit (N-12).