

Rit2 (T-13): sc-65199

BACKGROUND

Ras-like expressed in many tissues (Rit) is a member of a subgroup within the larger Ras superfamily of small guanine triphosphatases (GTP-binding proteins). Rit contains a unique effector domain that is similar to the same domain in the closely related RIN and *Drosophila* Ric proteins. Rit is involved in neuronal differentiation, development and regeneration by coupling specific trophic factor signals to sustained activation of the B-Raf/ERK and p38 MAP kinase cascades. Rit also appears to play a critical role in neurotrophin-mediated MAP kinase signaling and has modest transforming ability.

REFERENCES

- Chang, S. and Raible, D.W. 1994. Rin, a novel cell-surface protein that labels reticular neurons early in chick neurogenesis. *J. Neurobiol.* 25: 395-405.
- Lee, C.H., 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.
- Rusyn, E.V., Reynolds, E.R., Shao, H., Grana, T.M., Chan, T.O., Andres, D.A. and Cox, A.D. 2000. Rit, a non-lipid-modified Ras-related protein, transforms NIH/3T3 cells activating the ERK, JNK, p38 MAPK or PI 3-K/Akt pathways. *Oncogene* 19: 4685-4694.
- Hoshino, M. and Nakamura, S. 2002. The Ras-like small GTP-binding protein Rin is activated by growth factor stimulation. *Biochem. Biophys. Res. Commun.* 295: 651-656.
- Hynds, D.L., Spencer, M.L., Andres, D.A. and Snow, D.M. 2003. Rit promotes MEK-independent neurite branching in human neuroblastoma cells. *J. Cell Sci.* 116: 1925-1935.
- Shi, G.X. and Andres, D.A. 2005. Rit contributes to nerve growth factor-induced neuronal differentiation via activation of B-Raf-extracellular signal-regulated kinase and p38 mitogen-activated protein kinase cascades. *Mol. Cell. Biol.* 25: 830-846.
- Bliss, J.M., Venkatesh, B. and Colicelli, J. 2006. The RIN family of Ras effectors. *Methods Enzymol.* 407: 335-344.
- Andres, D.A., Rudolph, J.L., Sengoku, T. and Shi, G.X. 2006. Analysis of Rit signaling and biological activity. *Methods Enzymol.* 407: 499-512.

CHROMOSOMAL LOCATION

Genetic locus: RIT2 (human) mapping to 18q12.3; Rit2 (mouse) mapping to 18 B1.

SOURCE

Rit2 (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Rit2 of human origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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-65199 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rit2 (T-13) is recommended for detection of Rit2 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).

Rit2 (T-13) is also recommended for detection of Rit2 in additional species, including equine, canine and avian.

Suitable for use as control antibody for Rit2 siRNA (h): sc-62950, Rit2 siRNA (m): sc-62951, Rit2 shRNA Plasmid (h): sc-62950-SH, Rit2 shRNA Plasmid (m): sc-62951-SH, Rit2 shRNA (h) Lentiviral Particles: sc-62950-V and Rit2 shRNA (m) Lentiviral Particles: sc-62951-V.

Molecular Weight of Rit2: 25 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410.

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.


 MONOS
Satisfaction
Guaranteed

Try **Rit2 (27G2): sc-58474**, our highly recommended monoclonal alternative to Rit2 (T-13).