



Rac 1 (m2): 293T Lysate: sc-122933

BACKGROUND

A large number of low molecular weight, GTP binding proteins of the Ras superfamily have been identified. These proteins regulate many fundamental processes in all eukaryotic cells such as growth, vesicle traffic and cytoskeletal organization. GTPase-activating proteins (GAPs) accelerate the intrinsic rate of GTP hydrolysis of Ras-related proteins, resulting in downregulation of their active form. Two proteins in this family, Rac 1 and Rac 2, are 92% identical and share GTP binding and GTP hydrolysis motifs with other members of the Ras superfamily. Rac 1 is expressed in a large number of different cell types. Rac 2 is primarily expressed only in myeloid cells and has been reported to be a regulatory component of the human neutrophil NADPH oxidase.

REFERENCES

1. Trahey, M. and McCormick, F. 1987. A cytoplasmic protein stimulates normal N-Ras p21 GTPase, but does not affect oncogenic mutants. *Science* 238: 542-545.
2. Sewell, J.L. and Kahn, R.A. 1988. Sequences of the bovine and yeast ADP-ribosylation factor and comparison to other GTP-binding proteins. *Proc. Natl. Acad. Sci. USA* 85: 4620-4624.
3. Didsbury, J., et al. 1989. Rac, a novel Ras-related family of proteins that are *botulinum* toxin substrates. *J. Biol. Chem.* 264: 16378-16382.
4. Hall, A. 1990. The cellular functions of small GTP-binding proteins. *Science* 249: 636-640.
5. Xu, G., et al. 1990. The catalytic domain of the neurofibromatosis type 1 gene product stimulates ras GTPase and complements ira mutants of *S. cerevisiae*. *Cell* 63: 835-841.
6. Martin, G.A., et al. 1990. The GAP-related domain of the neurofibromatosis type 1 gene product interacts with Ras p21. *Cell* 63: 843-849.
7. Ballester, R.M., et al. 1990. The NF-1 locus encodes a protein functionally related to mammalian GAP and yeast IRA proteins. *Cell* 63: 851-859.
8. Diekmann, D., et al. 1991. Bcr encodes a GTPase-activating protein for p21rac. *Nature* 351: 400-402.
9. Knaus, U.G., et al. 1991. Regulation of phagocyte oxygen radical production by the GTP-binding protein Rac2. *Science* 254: 1512-1515.

CHROMOSOMAL LOCATION

Genetic locus: Rac1 (mouse) mapping to 5 G2.

PRODUCT

Rac 1 (m2): 293T Lysate represents a lysate of mouse Rac 1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Rac 1 (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Rac 1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.