

Rac 1 (h): 293T Lysate: sc-116394

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

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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.
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7. Ballester, R.M., et al. 1990. The NF1 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 Rac 2. *Science* 254: 1512-1515.

CHROMOSOMAL LOCATION

Genetic locus: RAC1 (human) mapping to 7p22.1.

PRODUCT

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

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.

APPLICATIONS

Rac 1 (h): 293T Lysate is suitable as a Western Blotting positive control for human 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.

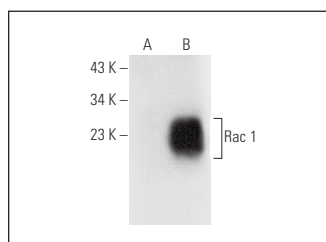
Rac 1 (G-2): sc-514583 is recommended as a positive control antibody for Western Blot analysis of enhanced human Rac 1 expression in Rac 1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

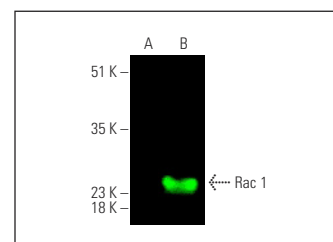
To ensure optimal results, the following support reagents are recommended:

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.

DATA



Rac 1 (G-2): sc-514583. Western blot analysis of Rac 1 expression in non-transfected: sc-117752 (A) and human Rac 1 transfected: sc-116394 (B) 293T whole cell lysates.



Rac 1/2/3 (G-2): sc-514583. Near-infrared western blot analysis of Rac 1 expression in non-transfected: sc-117752 (A) and human Rac 1 transfected: sc-116394 (B) 293T whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

PROTOCOLS

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