

Rac 1 (C-11): sc-95

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.

CHROMOSOMAL LOCATION

Genetic locus: RAC1 (human) mapping to 7p22.1, RAC3 (human) mapping to 17q25.3; Rac1 (mouse) mapping to 5 G2, Rac3 (mouse) mapping to 11 E2.

SOURCE

Rac 1 (C-11) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within the C-terminus of Rac 1 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-95 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rac 1 (C-11) is recommended for detection of Rac 1 and, to a lesser extent, Rac 3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with Rac 2.

Rac 1 (C-11) is also recommended for detection of Rac 1 and, to a lesser extent, Rac 3 in additional species, including canine.

Molecular Weight of Rac 1: 22 kDa.

Positive Controls: Rac 1 (m): 293T Lysate: sc-122932, A-431 whole cell lysate: sc-2201.

STORAGE

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

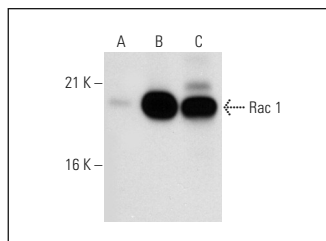
PROTOCOLS

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

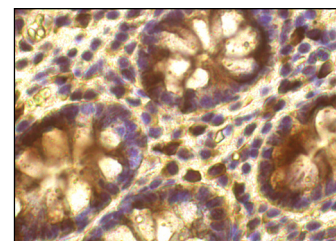
RESEARCH USE

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

DATA



Rac 1 (C-11): sc-95. Western blot analysis of Rac 1 expression in non-transfected 293T: sc-117752 (A), mouse Rac 1 transfected 293T: sc-122932 (B) and A-431 (C) whole cell lysates.



Rac 1 (C-11): sc-95. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

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2. Wilk-Blaszczak, M.A., et al. 1997. The monomeric G proteins Rac1 and/or Cdc42 are required for the inhibition of voltage dependent calcium current by Bradykinin. *J. Neurosci.* 17: 4094-4100.
3. Brenner, B., et al. 1997. Fas or ceramide induced apoptosis is mediated by a Rac-1 regulated activation of Jun N-terminal kinase-p38 kinases and GADD 153. *J. Biol. Chem.* 272: 22173-22181.
4. Cheng, W.Y., et al. 2013. Luteolin inhibits migration of human glioblastoma U-87 MG and T98G cells through downregulation of Cdc42 expression and PI3K/AKT activity. *Mol. Biol. Rep.* 40: 5315-5326.
5. Toyo-oka, K., et al. 2014. 14-3-3ε and ζ regulate neurogenesis and differentiation of neuronal progenitor cells in the developing brain. *J. Neurosci.* 34: 12168-12181.
6. Garcia-Ruiz, I., et al. 2015. *In vitro* treatment of Hep G2 cells with saturated fatty acids reproduces mitochondrial dysfunction found in nonalcoholic steatohepatitis. *Dis. Model. Mech.* 8: 183-191.
7. Vu, H.L., et al. 2015. RAC1 P29S regulates PD-L1 expression in melanoma. *Pigment Cell Melanoma Res.* 28: 590-598.
8. Shen, Y., et al. 2015. Effect of surface chemistry on the integrin induced pathway in regulating vascular endothelial cells migration. *Colloids Surf. B, Biointerfaces* 126: 188-197.

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