



R-Ras (h): 293T Lysate: sc-111894

BACKGROUND

H-, K- and N-Ras represent the prototype members of a family of small G proteins that are frequently activated to an oncogenic state in a wide variety of human tumors. Activation is due to point mutations at either position 12 or 61 within their coding sequence. Such mutations cause these proteins to be constitutively converted to their active, rather than the inactive, GDP-bound state. The related human R-Ras gene was initially cloned by low stringency hybridization methods. The R-Ras protein has been shown to interact with the Bcl-2 gene product involved in a signaling pathway that intervenes with apoptosis. Positions 38 and 87 (analogous to positions 12 and 61 in H-Ras) mutants of R-Ras have been shown to be capable of activating oncogenic function. Data has been obtained indicating that R-Ras may exert its biological effect by means of modulating the activity of the Raf-1 kinase on its direct downstream effectors.

REFERENCES

1. Barbacid, M. 1987. Ras genes. *Annu. Rev. Biochem.* 56: 779-827.
2. Lowe, D.G., Capon, D.J., Delwart, E., Sakaguchi, A.Y., Naylor, S.L. and Goeddel, D.V. 1987. Structure of the human and murine R-Ras genes, novel genes closely related to Ras proto-oncogenes. *Cell* 48: 137-146.
3. Lowe, D.G. and Goeddel, D.V. 1987. Heterologous expression and characterization of the human R-ras gene product. *Mol. Cell. Biol.* 7: 2845-2856.
4. Bos, J.L. 1989. Ras oncogenes in human cancer: a review. *Cancer Res.* 49: 4682-4689.
5. Fernandez-Sarabia, M.J. and Bischoff, J.R. 1993. Bcl-2 associates with the Ras-related protein R-Ras p23. *Nature* 366: 274-275.
6. Saez, R., Chan, A.M., Miki, T. and Aaronson, S.A. 1994. Oncogenic activation of human R-Ras by point mutations analogous to that of prototype H-Ras oncogenes. *Oncogene* 9: 2977-2982.
7. Cox, A.D., Brtva, T.R., Lowe, D.G. and Der, C.J. 1994. R-Ras induces malignant, but not morphologic, transformation of NIH/3T3 cells. *Oncogene* 9: 3281-3288.
8. Chan, A.M., Miki, T., Meyers, K.A. and Aaronson, S.A. 1994. A human oncogene of the Ras superfamily unmasked by expression cDNA cloning. *Proc. Natl. Acad. Sci. USA* 91: 7558-7562.
9. Spaargaren, M., Martin, G.A., McCormick, F., Fernandez-Sarabia, M.J. and Bischoff, J.R. 1994. The Ras-related protein R-Ras interacts directly with Raf-1 in a GTP-dependent manner. *Biochem. J.* 300: 303-307.

CHROMOSOMAL LOCATION

Genetic locus: RRAS (human) mapping to 19q13.33.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

R-Ras (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive R-Ras 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.

PROTOCOLS

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