

TC 21 (H-45): sc-292485

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 GTP-bound, rather than the inactive GDP-bound, state. The related human R-Ras gene was initially cloned by low stringency hybridization methods. Position 38 and 87 (analogous to position 12 and 61 in H-Ras) mutants of R-Ras have been shown to be capable of activating oncogenic function. An additional member of the Ras oncogene family, designated TC 21 (or R-Ras-2) is most closely related to R-Ras. While wild type TC 21 does not exhibit transforming potential *in vitro*, mutant forms of TC 21 that possess amino acid substitutions analogous to those that activate Ras oncogenic potential, exhibit potent transforming activities comparable to the activity characteristic of the known oncogenic Ras proteins.

REFERENCES

1. Lowe, D.G., et al. 1987. Structure of the human and murine R-Ras genes, novel genes closely related to Ras proto-oncogenes. *Cell* 48: 137-146.
2. Lowe, D.G., et al. 1987. Heterologous expression and characterization of the human R-Ras gene product. *Mol. Cell. Biol.* 7: 2845-2856.
3. Barbacid, M. 1987. Ras genes. *Annu. Rev. Biochem.* 56: 779-827.
4. Bos, J.L. 1989. Ras oncogenes in human cancer: a review. *Cancer Res.* 49: 4682-4689.
5. Drivas, G.T., et al. 1990. Characterization of four novel Ras-like genes expressed in a human teratocarcinoma cell line. *Mol. Cell. Biol.* 10: 1793-1798.
6. Saez, R., et al. 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., et al. 1994. R-Ras induces malignant, but not morphologic, transformation of NIH/3T3 cells. *Oncogene* 9: 3281-3288.

CHROMOSOMAL LOCATION

Genetic locus: RRAS2 (human) mapping to 11p15.2; Rras2 (mouse) mapping to 7 F1.

SOURCE

TC 21 (H-45) is a rabbit polyclonal antibody raised against amino acids 137-181 mapping near the C-terminus of TC 21 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.

STORAGE

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

APPLICATIONS

TC 21 (H-45) is recommended for detection of TC 21 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TC 21 (H-45) is also recommended for detection of TC 21 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for TC 21 siRNA (h): sc-41861, TC 21 siRNA (m): sc-41862, TC 21 shRNA Plasmid (h): sc-41861-SH, TC 21 shRNA Plasmid (m): sc-41862-SH, TC 21 shRNA (h) Lentiviral Particles: sc-41861-V and TC 21 shRNA (m) Lentiviral Particles: sc-41862-V.

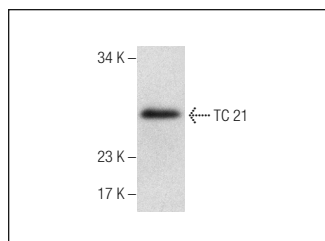
Molecular Weight of TC 21: 21 kDa.

Positive Controls: mouse brain extract: sc-2253.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



TC 21 (H-45): sc-292485. Western blot analysis of TC 21 expression in mouse brain tissue extract.

RESEARCH USE

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

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Try **TC 21 (F-8): sc-166262**, our highly recommended monoclonal alternative to TC 21 (H-45).