SANTA CRUZ BIOTECHNOLOGY, INC.

TC 21 (V-20): sc-883

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 or 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 wildtype 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.

CHROMOSOMAL LOCATION

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

SOURCE

TC 21 (V-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at 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.

Blocking peptide available for competition studies, sc-883 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TC 21 (V-20) 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), 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).

TC 21 (V-20) is also recommended for detection of TC 21 in additional species, including 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.

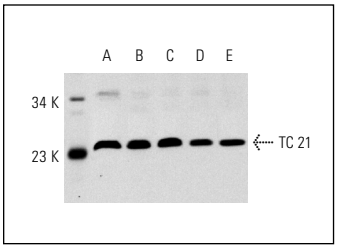
Molecular Weight of TC 21: 21 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, HeLa whole cell lysate: sc-2200 or TC 21 (m): 293T Lysate: sc-127639.

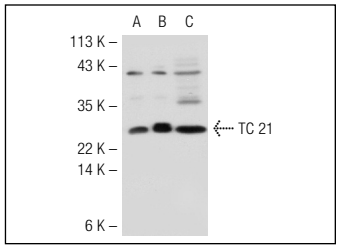
STORAGE

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

DATA



TC 21 (V-20): sc-883. Western blot analysis of TC 21 expression in NIH/3T3 (**A**), MDCK (**B**), HeLa (**C**), A-431 (**D**) and Jurkat (**E**) whole cell lysates.



TC 21 (V-20): sc-883. Western blot analysis of TC 21 expression in non-transfected 293T: sc-117752 (**A**), mouse TC 21 transfected 293T: sc-127639 (**B**) and NIH/3T3 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Arora, S., et al. 2005. Identification of differentially expressed genes in oral squamous cell carcinoma. Mol. Carcinog. 42: 97-108.
2. Augsten, M., et al. 2006. Live-cell imaging of endogenous Ras-GTP illustrates predominant Ras activation at the plasma membrane. EMBO Rep. 7: 46-51.
3. Nunez Rodriguez, N., et al. 2006. Characterization of R-ras3/M-Ras null mice reveals a potential role in trophic factor signaling. Mol. Cell. Biol. 26: 7145-7154.
4. Pozzi, A., et al. 2006. H-Ras, R-Ras, and TC21 differentially regulate ureteric bud cell branching morphogenesis. Mol. Biol. Cell 17: 2046-2056.
5. Rokavec, M., et al. 2008. A polymorphism in the TC21 promoter associates with an unfavorable tamoxifen treatment outcome in breast cancer. Cancer Res. 68: 9799-9808.
6. Bachawal, S.V., et al. 2010. Enhanced antiproliferative and apoptotic response to combined treatment of γ-tocotrienol with erlotinib or gefitinib in mammary tumor cells. BMC Cancer 10: 84.

RESEARCH USE

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

PROTOCOLS

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