SANTA CRUZ BIOTECHNOLOGY, INC.

RICH2 (S-16): sc-165365

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

RICH2 (RhoGAP interacting with CIP4 homologs protein 2), also known as NPC-A-10 or ARHGAP44 (Rho GTPase activating protein 44), is an 818 amino acid protein that is highly expressed in brain. RICH2 acts as a GTPase activator for Rac 1, Cdc42 and Rho-type GTPases by binding them to GDP, thereby rendering them inactive. RICH2 contains one BAR domain, one Rho-GAP domain, and is encoded by a gene that maps to human chromosome 17p12. Chromosome 17 comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

REFERENCES

1. Hall, J.M., et al. 1992. Closing in on a breast cancer gene on chromosome 17q. Am. J. Hum. Genet. 50: 1235-1242.
2. Evans, S.C., et al. 1997. The Li-Fraumeni syndrome: an inherited susceptibility to cancer. Mol. Med. Today 3: 390-395.
3. Soussi, T., et al. 2000. p53 website and analysis of p53 gene mutations in human cancer: forging a link between epidemiology and carcinogenesis. Hum. Mutat. 15: 105-113.
4. Piura, B., et al. 2001. Three primary malignancies related to BRCA mutation successively occurring in a BRCA1 185delAG mutation carrier. Eur. J. Obstet. Gynecol. Reprod. Biol. 97: 241-244.
5. Richnau, N., et al. 2001. Rich, a rho GTPase-activating protein domain-containing protein involved in signaling by Cdc42 and Rac1. J. Biol. Chem. 276: 35060-35070.

CHROMOSOMAL LOCATION

Genetic locus: ARHGAP44 (human) mapping to 17p12; Arhgap44 (mouse) mapping to 11 B3.

SOURCE

RICH2 (S-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RICH2 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-165365 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

RICH2 (S-16) is recommended for detection of RICH2 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).

RICH2 (S-16) is also recommended for detection of RICH2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for RICH2 siRNA (h): sc-94119, RICH2 siRNA (m): sc-152956, RICH2 shRNA Plasmid (h): sc-94119-SH, RICH2 shRNA Plasmid (m): sc-152956-SH, RICH2 shRNA (h) Lentiviral Particles: sc-94119-V and RICH2 shRNA (m) Lentiviral Particles: sc-152956-V.

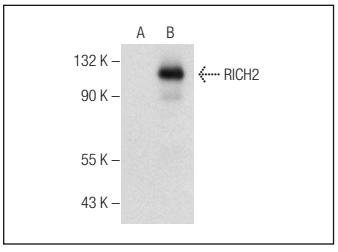
Molecular Weight of RICH2: 89 kDa.

Positive Controls: RICH2 (h): 293T Lysate: sc-372859.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



RICH2 (S-16): sc-165365. Western blot analysis of RICH2 expression in non-transfected: sc-117752 (**A**) and human RICH2 transfected: sc-372859 (**B**) 293T whole cell lysates.

RESEARCH USE

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