

RICH2 (h): 293T Lysate: sc-372859

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.
6. Minamoto, T., et al. 2001. Distinct pattern of p53 phosphorylation in human tumors. *Oncogene* 20: 3341-3347.
7. Rollason, R., et al. 2009. A CD317/tetherin-RICH2 complex plays a critical role in the organization of the subapical Actin cytoskeleton in polarized epithelial cells. *J. Cell Biol.* 184: 721-736.

CHROMOSOMAL LOCATION

Genetic locus: ARHGAP44 (human) mapping to 17p12.

PRODUCT

RICH2 (h): 293T Lysate represents a lysate of human RICH2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

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.

APPLICATIONS

RICH2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive RICH2 antibodies. Recommended use: 10-20 µl per lane.

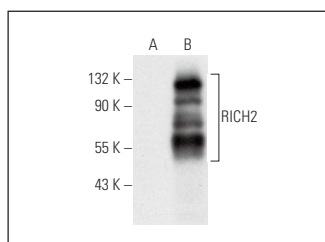
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RICH2 (A-7): sc-390609 is recommended as a positive control antibody for Western Blot analysis of enhanced human RICH2 expression in RICH2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



RICH2 (A-7): sc-390609. 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.

PROTOCOLS

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