SANTA CRUZ BIOTECHNOLOGY, INC.

RP1 (KT52): sc-101490

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

APC (adenomatous polyposis coli) is a tumor suppressor gene that is frequently mutated in colorectal cancers and is one of the earliest indicators of colorectal carcinogenesis. APC is widely expressed and is largely similar to the related brain-specific homolog APCL. These proteins both associate with β-catenin and functionally regulate the levels of intracellular β-catenin. Additionally, these homologs interact with the microtubule cytoskeletal protein EB1 to regulate cell cycle progression or growth control. EB1 family proteins (EB1, RP1 (EB2) and EB3) interact with cytoplasmic microtubules in interphase cells, with mitotic spindles and with the APC tumor suppressor gene. The functional inactivation of the APC gene product is a key event in colorectal tumorigenesis. RP1 is localized in the plus ends of microtubule networks in the presence or absence of APC. The gene which encodes RP1 maps to human chromosome 18q12.1.

REFERENCES

1. Cottrell, S., et al. 1992. Molecular analysis of APC mutations in familial adenomatous polyposis and sporadic colon carcinomas. Lancet 340: 626-630.
2. Su, L.K., et al. 1993. Association of the APC tumor suppressor protein with catenins. Science 262: 1734-1737.
3. Nakagawa, H., et al. 1998. Identification of a brain-specific APC homologue, APCL, and its interaction with β-catenin. Cancer Res. 58: 5176-5181.
4. Morrison, E.E., et al. 1998. EB1, a protein which interacts with the APC tumour suppressor, is associated with the microtubule cytoskeleton throughout the cell cycle. Oncogene 17: 3471-3477.
5. Juwana, J.P., et al. 1999. EB/RP gene family encodes tubulin binding proteins. Int. J. Cancer 81: 275-284.
6. Nakagawa, H., et al. 2000. APCL, a central nervous system-specific homologue of adenomatous polyposis coli tumor suppressor, binds to p53-binding protein 2 and translocates it to the perinucleus. Cancer Res. 60: 101-105.
7. Su, L.K., et al. 2001. Characterization of human MAPRE genes and their proteins. Genomics 71: 143-149.

CHROMOSOMAL LOCATION

Genetic locus: MAPRE2 (human) mapping to 18q12.1; Mapre2 (mouse) mapping to 18 A2.

SOURCE

RP1 (KT52) is a rat monoclonal antibody raised against RP1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2b} in 1.0 ml 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

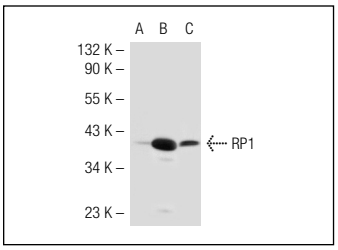
RP1 (KT52) is recommended for detection of RP1 of mouse, rat, human, hamster and ape origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RP1 siRNA (h): sc-37609, RP1 siRNA (m): sc-37610, RP1 shRNA Plasmid (h): sc-37609-SH, RP1 shRNA Plasmid (m): sc-37610-SH, RP1 shRNA (h) Lentiviral Particles: sc-37609-V and RP1 shRNA (m) Lentiviral Particles: sc-37610-V.

Molecular Weight of RP1: 35 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203 or RP1 (m3): 293T Lysate: sc-123260.

DATA



RP1 (KT52): sc-101490. Western blot analysis of RP1 expression in non-transfected 293T: sc-117752 (**A**), mouse RP1 transfected 293T: sc-123260 (**B**) and K-562 (**C**) 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.