SANTA CRUZ BIOTECHNOLOGY, INC.

RCK (H-110): sc-67209

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

RCK, also known as DDX6 and P54, is a member of the DEAD-box RNA helicase family of proteins, all of which share common protein motifs. Found in most tissues, RCK is an unwindase that exhibits ATP-dependent RNA unwinding activity, as well as the ability to decay RNA in the 5'-3' direction. In non-malignant cells, RCK is associated with all processes of normal RNA metabolism including splicing, export and translation initiation. Mutations in the gene encoding RCK can cause the protein to be overexpressed, changing its function to that of an oncogene that positively regulates the expression of genes involved in cell growth and proliferation. It is believed that, through its unwindase activity, the main function of RCK is to downregulate mRNA expression and maintain normal transcriptional levels within the cell.

REFERENCES

1. Akao, Y., Marukawa, O., Morikawa, H., Nakao, K., Kamei, M., Hachiya, T. and Tsujimoto, Y. 1995. The RCK/P54 candidate proto-oncogene product is a 54 kDa DEAD box protein differentially expressed in human and mouse tissues. Cancer Res. 55: 3444-3449.
2. Akiyama, K., Akao, Y., Yokoyama, M., Nakagawa, Y., Noguchi, T., Yagi, K. and Nishi, Y. 1999. Expression of two DEAD box genes (DDX1 and DDX6) is independent of that of MYCN in human neuroblastoma cell lines. Biochem. Mol. Biol. Int. 47: 563-568.
3. Smillie, D.A. and Sommerville, J. 2002. RNA helicase p54 (DDX6) is a shuttling protein involved in nuclear assembly of stored mRNP particles. J. Cell Sci. 115: 395-407.
4. Akao, Y., Yoshida, H., Matsumoto, K., Matsui, T., Hogetu, K., Tanaka, N. and Usukura, J. 2003. A tumor-associated DEAD-box protein, RCK/P54 exhibits RNA unwinding activity toward c-Myc RNAs *in vitro*. Genes Cells 8: 671-676.
5. Matsumoto, K., Kwon, O.Y., Kim, H. and Akao, Y. 2005. Expression of RCK/P54, a DEAD-box RNA helicase, in gametogenesis and early embryogenesis of mice. Dev. Dyn. 233: 1149-1156.

CHROMOSOMAL LOCATION

Genetic locus: DDX6 (human) mapping to 11q23.3; Ddx6 (mouse) mapping to 9 A5.2.

SOURCE

RCK (H-110) is a rabbit polyclonal antibody raised against amino acids 61-170 mapping near the N-terminus of RCK 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

RCK (H-110) is recommended for detection of RCK 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).

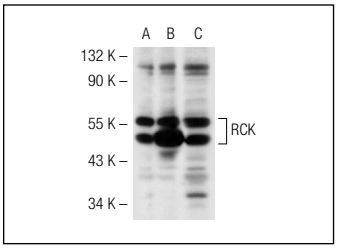
RCK (H-110) is also recommended for detection of RCK in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for RCK siRNA (h): sc-72246, RCK siRNA (m): sc-72247, RCK shRNA Plasmid (h): sc-72246-SH, RCK shRNA Plasmid (m): sc-72247-SH, RCK shRNA (h) Lentiviral Particles: sc-72246-V and RCK shRNA (m) Lentiviral Particles: sc-72247-V.

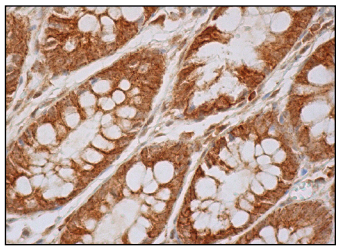
Molecular Weight of RCK: 54 kDa.

Positive Controls: RCK (h): 293T Lysate: sc-117056, K-562 whole cell lysate: sc-2203 or MOLT-4 cell lysate: sc-2233.

DATA



RCK (H-110): sc-67209. Western blot analysis of RCK expression in non-transfected 293T: sc-117752 (**A**), human RCK transfected 293T: sc-117056 (**B**) and K-562 (**C**) whole cell lysates.



RCK (H-110): sc-67209. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells.

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.

MONOS Satisfaction Guaranteed

Try **RCK (E-12): sc-376433** or **RCK (E-8): sc-166590**, our highly recommended monoclonal alternatives to RCK (H-110).