SANTA CRUZ BIOTECHNOLOGY, INC.

RBKS (P-14): sc-165342

BACKGROUND

The phosphorylation and dephosphorylation of proteins is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. Ribose is a five carbon-containing monosaccharide that is an essential component of RNA and is, thus, critical to the survival of all living creatures. Ribose is trapped inside the cell (for use in a variety of chemical reactions) via phosphorylation by RBKS (ribokinase), a 322 amino acid member of the carbohydrate kinase pfkB family. RBKS uses magnesium as a cofactor to catalyze the ATP-dependent phosphorylation of ribose, a reaction that yields ADP and ribose 5-phosphate and is the first step in ribose metabolism.

REFERENCES

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2. Sigrell, J.A., Cameron, A.D. and Mowbray, S.L. 1999. Induced fit on sugar binding activates ribokinase. J. Mol. Biol. 290: 1009-1018.
3. Andersson, C.E. and Mowbray, S.L. 2002. Activation of ribokinase by monovalent cations. J. Mol. Biol. 315: 409-419.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611132. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Park, J., van Koeverden, P., Singh, B. and Gupta, R.S. 2007. Identification and characterization of human ribokinase and comparison of its properties with *E. coli* ribokinase and human adenosine kinase. FEBS Lett. 581: 3211-3216.
6. Park, J. and Gupta, R.S. 2008. Adenosine kinase and ribokinase-the RK family of proteins. Cell. Mol. Life Sci. 65: 2875-2896.

CHROMOSOMAL LOCATION

Genetic locus: RBKS (human) mapping to 2p23.2; Rbks (mouse) mapping to 5 B1.

SOURCE

RBKS (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RBKS 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-165342 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.

RESEARCH USE

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

APPLICATIONS

RBKS (P-14) is recommended for detection of RBKS of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 RBKS siRNA (h): sc-94340, RBKS siRNA (m): sc-152723, RBKS shRNA Plasmid (h): sc-94340-SH, RBKS shRNA Plasmid (m): sc-152723-SH, RBKS shRNA (h) Lentiviral Particles: sc-94340-V and RBKS shRNA (m) Lentiviral Particles: sc-152723-V.

Molecular Weight of RBKS: 34 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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) 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.

PROTOCOLS

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