

# RBKS (FL-322): sc-135384

## 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

1. Bork, P., Sander, C. and Valencia, A. 1993. Convergent evolution of similar enzymatic function on different protein folds: the hexokinase, ribokinase, and galactokinase families of sugar kinases. *Protein Sci.* 2: 31-40.
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.

## CHROMOSOMAL LOCATION

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

## SOURCE

RBKS (FL-322) is a rabbit polyclonal antibody raised against amino acids 1-322 representing full length 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.

## APPLICATIONS

RBKS (FL-322) 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), 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).

RBKS (FL-322) is also recommended for detection of RBKS in additional species, including equine, canine, bovine and porcine.

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.

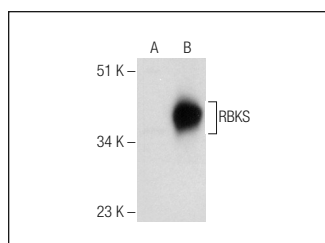
Molecular Weight of RBKS: 34 kDa.

Positive Controls: RBKS (m): 293T Lysate: sc-122991 or Hep G2 cell lysate: sc-2227.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



RBKS (FL-322): sc-135384. Western blot analysis of RBKS expression in non-transfected: sc-117752 (A) and mouse RBKS transfected: sc-122991 (B) 293T whole cell lysates.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **RBKS (F-9): sc-365733**, our highly recommended monoclonal alternative to RBKS (FL-322).