SANTA CRUZ BIOTECHNOLOGY, INC.

RIOK2 (E-14): sc-136837

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. RIOK2 (RIO kinase 2) is a 552 amino acid protein that contains one protein kinase domain and belongs to the RIO subfamily of atypical Ser/Thr protein kinases. RIOK2 functions to catalyze the ATP-dependent phosphorylation of target proteins and is thought to play an important role in ribosome biogenesis and cell cycle progression.

REFERENCES

1. Hanks, S.K., Quinn, A.M. and Hunter, T. 1988. The protein kinase family: conserved features and deduced phylogeny of the catalytic domains. Science 241: 42-52.
2. Hunter, T. 1991. Protein kinase classification. Meth. Enzymol. 200: 3-37.
3. Hanks, S.K. and Quinn, A.M. 1991. Protein kinase catalytic domain sequence database: identification of conserved features of primary structure and classification of family members. Meth. Enzymol. 200: 38-62.
4. Jin, J., Smith, F.D., Stark, C., Wells, C.D., Fawcett, J.P., Kulkarni, S., Metalnikov, P., O'Donnell, P., Taylor, P., Taylor, L., Zougman, A., Woodgett, J.R., Langeberg, L.K., Scott, J.D. and Pawson, T. 2004. Proteomic, functional, and domain-based analysis of *in vivo* 14-3-3 binding proteins involved in cytoskeletal regulation and cellular organization. Curr. Biol. 14: 1436-1450.
5. LaRonde-LeBlanc, N. and Wlodawer, A. 2005. The RIO kinases: an atypical protein kinase family required for ribosome biogenesis and cell cycle progression. Biochim. Biophys. Acta 1754: 14-24.
6. LaRonde-LeBlanc, N. and Wlodawer, A. 2005. A family portrait of the RIO kinases. J. Biol. Chem. 280: 37297-37300.

CHROMOSOMAL LOCATION

Genetic locus: RIOK2 (human) mapping to 5q15; Riok2 (mouse) mapping to 17 A3.2.

SOURCE

RIOK2 (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RIOK2 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-136837 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.

APPLICATIONS

RIOK2 (E-14) is recommended for detection of RIOK2 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); non cross-reactive with RIOK1.

RIOK2 (E-14) is also recommended for detection of RIOK2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for RIOK2 siRNA (h): sc-91773, RIOK2 siRNA (m): sc-152973, RIOK2 shRNA Plasmid (h): sc-91773-SH, RIOK2 shRNA Plasmid (m): sc-152973-SH, RIOK2 shRNA (h) Lentiviral Particles: sc-91773-V and RIOK2 shRNA (m) Lentiviral Particles: sc-152973-V.

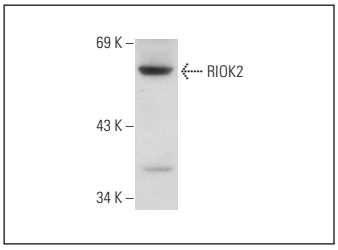
Molecular Weight of RIOK2: 63 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, T-47D cell lysate: sc-2293 or HeLa whole cell lysate: sc-2200.

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.

DATA



RIOK2 (E-14): sc-136837. Western blot analysis of RIOK2 expression in HeLa whole cell lysate.

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.