

RIOK2 (N-12): sc-136838

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 sub-family 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

- Hanks, S.K., et al. 1988. The protein kinase family: conserved features and deduced phylogeny of the catalytic domains. *Science* 241: 42-52.
- Hunter, T. 1991. Protein kinase classification. *Meth. Enzymol.* 200: 3-37.
- Hanks, S.K., et al. 1991. Protein kinase catalytic domain sequence database: identification of conserved features of primary structure and classification of family members. *Meth. Enzymol.* 200: 38-62.
- Jin, J., et al. 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.
- LaRonde-LeBlanc, N., et al. 2005. The RIO kinases: an atypical protein kinase family required for ribosome biogenesis and cell cycle progression. *Biochim. Biophys. Acta* 1754: 14-24.
- LaRonde-LeBlanc, N., et al. 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 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus 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-136838 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.

PROTOCOLS

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

APPLICATIONS

RIOK2 (N-12) 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.

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 or T-47D cell lysate: sc-2293.

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.

RESEARCH USE

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