

p70 S6 kinase β (O-21): sc-130833

BACKGROUND

In studies to elucidate key regulatory pathways in signal transduction, several protein serine/threonine (Ser/Thr) kinases have been identified, including two distinct families of 40S Ribosomal Protein S6 Ser/Thr kinases present in somatic animal cells, designated p70 S6 kinase and p90 Rsk kinase. p90 Rsk kinase is maximally-activated within minutes of addition of growth factors or phorbol ester to cultured cells followed by activation of p70 S6 kinase. Both enzymes are regulated by serine/threonine phosphorylation, suggesting that specific kinases may exist upstream in the signaling pathway that regulate these kinases. In fact, evidence suggests that one such family of activating enzymes includes the members of the ERK MAP kinase family. The ERK MAP kinases are, in turn, regulated by phosphorylation at threonine and tyrosine residues by a protein kinase designated MEK.

REFERENCES

- Alcorta, D.A., et al. 1989. Sequence and expression of chicken and mouse Rsk: homologs of *Xenopus laevis* ribosomal S6 kinase. *Mol. Cell. Biol.* 9: 3850-3859.
- Pelech, S.L., et al. 1990. Protein kinase cascades in meiotic and mitotic cell cycle control. *Biochem. Cell Biol.* 68: 1297-1330.
- Sweet, L.J., et al. 1990. Identification of mitogen-responsive Ribosomal Protein S6 kinase pp90 Rsk, a homolog of *Xenopus* S6 kinase II, in chicken embryo fibroblasts. *Mol. Cell. Biol.* 10: 2413-2417.
- Kozma, S.C., et al. 1990. Cloning of the mitogen-activated S6 kinase from rat liver reveals an enzyme of the second messenger subfamily. *Proc. Natl. Acad. Sci. USA* 87: 7365-7369.
- Banerjee, P., et al. 1990. Molecular structure of a major Insulin/mitogen-activated 70 kDa S6 protein kinase. *Proc. Natl. Acad. Sci. USA* 87: 8550-8554.

CHROMOSOMAL LOCATION

Genetic locus: RPS6KB2 (human) mapping to 11q13.2; Rps6kb2 (mouse) mapping to 19 A.

SOURCE

p70 S6 kinase β (O-21) is a purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of p70 S6 kinase β of rat origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml 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.

PROTOCOLS

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

APPLICATIONS

p70 S6 kinase β (O-21) is recommended for detection of p70 S6 kinase β of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for p70 S6 kinase β siRNA (h): sc-39209, p70 S6 kinase β siRNA (m): sc-39210, p70 S6 kinase β shRNA Plasmid (h): sc-39209-SH, p70 S6 kinase β shRNA Plasmid (m): sc-39210-SH, p70 S6 kinase β shRNA (h) Lentiviral Particles: sc-39209-V and p70 S6 kinase β shRNA (m) Lentiviral Particles: sc-39210-V.

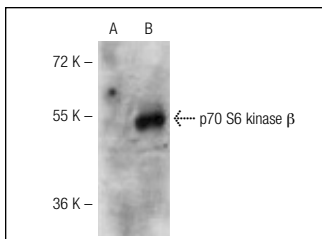
Molecular Weight of p70 S6 kinase β : 70 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

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).

DATA



p70 S6 kinase β (O-21): sc-130833. Western blot analysis of p70 S6 kinase β expression in non-transfected (A) and human p70 S6 kinase β transfected (B) 293 whole cell lysates.

RESEARCH USE

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

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Try **p70 S6 kinase β (4B11): sc-293269**, our highly recommended monoclonal alternative to p70 S6 kinase β (O-21).