

p70 S6 kinase β (N-19): sc-9379

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.

CHROMOSOMAL LOCATION

Genetic locus: RPS6KB1 (human) mapping to 11q13.2; Rps6kb1 (mouse) mapping to 19 A.

SOURCE

p70 S6 kinase β (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of p70 S6 kinase β of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9379 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p70 S6 kinase β (N-19) 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p70 S6 kinase β (N-19) is also recommended for detection of p70 S6 kinase β in additional species, including equine, bovine and porcine.

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.

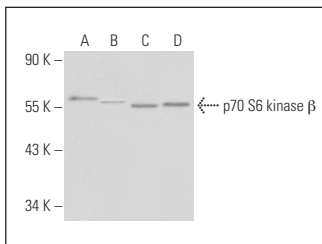
Molecular Weight of p70 S6 kinase β : 70 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or Hep G2 cell lysate: sc-2227.

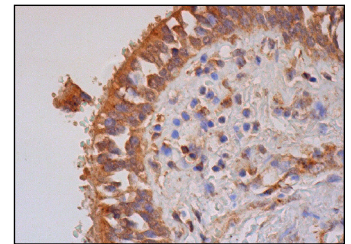
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



p70 S6 kinase β (N-19): sc-9379. Western blot analysis of p70 S6 kinase β expression in HeLa (A), Hep G2 (B), K-562 (C) and SK-BR-3 (D) whole cell lysates.



p70 S6 kinase β (N-19): sc-9379. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bronchus tissue showing cytoplasmic staining of respiratory epithelial cells.

SELECT PRODUCT CITATIONS

- Boylan, J.M., et al. 2001. Ribosomal protein S6 phosphorylation and function during late gestation liver development in the rat. *J. Biol. Chem.* 276: 44457-44463.
- Mizuarai, S., et al. 2009. Inhibition of p70S6K2 down-regulates Hedgehog/GLI pathway in non-small cell lung cancer cell lines. *Mol. Cancer* 8: 44.
- Zhou, X., et al. 2014. Rapamycin and everolimus facilitate hepatitis E virus replication: revealing a basal defense mechanism of PI3K-PKB-mTOR pathway. *J. Hepatol.* 61: 746-754.

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.



Try **p70 S6 kinase β (4B11): sc-293269**, our highly recommended monoclonal alternative to p70 S6 kinase β (N-19).