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.

**APPLICATIONS**

p70 S6 kinase α (H-9) is recommended for detection of p70 S6 kinase α 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for p70 S6 kinase α siRNA (h): sc-36165, p70 S6 kinase α siRNA (m): sc-36166, p70 S6 kinase α shRNA Plasmid (h): sc-36165-SH, p70 S6 kinase α shRNA Plasmid (m): sc-36164-SH, p70 S6 kinase α shRNA (h) Lentiviral Particles: sc-36165-V and p70 S6 kinase α shRNA (m) Lentiviral Particles: sc-36164-V.

Molecular Weight of p70 S6 kinase α: 70 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or KNRK whole cell lysate: sc-2214.

**DATA**

p70 S6 kinase α (H-9): sc-8418. Western blot analysis of p70 S6 kinase α expression in HeLa (A), Jurkat (B), MDA-MB-231 (C), KNRK (D) and NIH/3T3 (E) whole cell lysates.

p70 S6 kinase α (H-9): sc-8418. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic and nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing nuclear, or nuclear and cytoplasmic staining of squamous epithelial cells (B).

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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