

p70 S6 kinase α (C-18): sc-230

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 17q23.1; Rps6kb1 (mouse) mapping to 11 C.

SOURCE

p70 S6 kinase α (C-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of p70 S6 kinase α of rat 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-230 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p70 S6 kinase α (C-18) is recommended for detection of p70 S6 kinase α of mouse, rat, human, chicken and *Xenopus laevis* 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 α (C-18) is also recommended for detection of p70 S6 kinase α in additional species, including equine, canine, bovine, porcine and avian.

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-36166-SH, p70 S6 kinase α shRNA (h) Lentiviral Particles: sc-36165-V and p70 S6 kinase α shRNA (m) Lentiviral Particles: sc-36166-V.

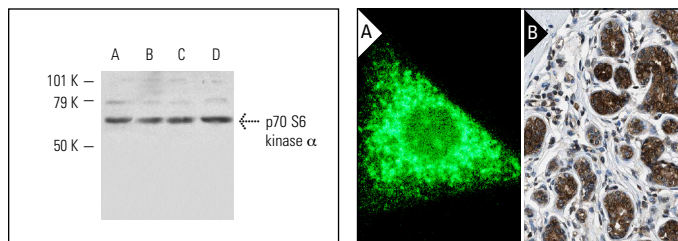
Molecular Weight of p70 S6 kinase α : 70 kDa.

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

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



p70 S6 kinase α (C-18): sc-230. Western blot analysis of p70 S6 kinase α expression in HeLa (A), NIH/3T3 (B) and KNRK (C) whole cell lysates and rat liver tissue (D).

p70 S6 kinase α (C-18): sc-230. Immunofluorescence staining of methanol-fixed KNRK rat cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic and nuclear staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

- Rommel, C., et al. 2001. Mediation of IGF-1-induced skeletal myotube hypertrophy by PI 3-kinase/Akt/mTOR and PI 3-kinase/Akt/GSK-3 pathways. *Nat. Cell Biol.* 11: 1009-1013.
- Bodine, S.C., et al. 2001. Akt/mTOR pathway is a crucial regulator of skeletal muscle hypertrophy and can prevent muscle atrophy *in vivo*. *Nat. Cell Biol.* 11: 1014-1019.
- Chen, W., et al. 2012. Developmental transition of pectoralis muscle from atrophy in late-term duck embryos to hypertrophy in neonates. *Exp. Physiol.* 97: 861-872.
- Diez, H., et al. 2012. Specific roles of Akt iso forms in apoptosis and axon growth regulation in neurons. *PLoS ONE* 7: e32715.
- Zanou, N., et al. 2012. Trpc1 ion channel modulates phosphatidylinositol 3-kinase/Akt pathway during myoblast differentiation and muscle regeneration. *J. Biol. Chem.* 287: 14524-14534.
- Liu, J., et al. 2013. Metformin inhibits renal cell carcinoma *in vitro* and *in vivo* xenograft. *Urol. Oncol.* 31: 264-270.

RESEARCH USE

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



Try **p70 S6 kinase α (H-9): sc-8418** or **p70 S6 kinase α (B-5): sc-393967**, our highly recommended monoclonal alternatives to p70 S6 kinase α (C-18). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **p70 S6 kinase α (H-9): sc-8418**.