

Rsk-1 (C-21): sc-231

BACKGROUND

The family of ribosomal S6 kinases (Rsk), designated Rsk-1 (or MAPKAP kinase-1), Rsk-2 and Rsk-3, are intracellular serine/threonine kinases that are important signaling intermediates in response to a broad range of ligand activated receptor tyrosine kinases. A unique feature common to the members of the Rsk family is that each possesses two non-identical complete kinase catalytic domains. An additional Rsk protein, Rsk-4, shows a high level of homology to the three previously isolated members of the human Rsk family. Rsk-4 is most abundantly expressed in brain and kidney and plays a role in normal neuronal development. The family of ribosomal S6 kinases includes p70 S6 kinase and p70 S6 kinase β , which are thought to have similar regulatory functions. MSK1 (also designated RLPK) is a novel Rsk-related protein, which, like the p90 Rsk family members, contains two non-identical complete kinase catalytic domains.

CHROMOSOMAL LOCATION

Genetic locus: RPS6KA1 (human) mapping to 1p36.11; Rps6ka1 (mouse) mapping to 4 D3.

SOURCE

Rsk-1 (C-21) is available as either rabbit (sc-231) or goat (sc-231-G) polyclonal affinity purified antibody raised against a peptide mapping at the C-terminus of Rsk-1 of human origin.

PRODUCT

Each vial contains either 200 μ g (sc-231) IgG or 100 μ g (sc-231-G) in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Rsk-1 (C-21) is available conjugated to agarose (sc-231 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; and to either phycoerythrin (sc-231 PE, 200 μ g/ml), Alexa Fluor[®] 488 (sc-231 AF488, 200 μ g/ml) or Alexa Fluor[®] 647 (sc-231 AF647, 200 μ g/ml), for IF, IHC(P) and FCM.

In addition, Rsk-1 (C-21) is available conjugated to Alexa Fluor[®] 405 (sc-231 AF405), 100 μ g/2 ml, for IF, IHC(P) and FCM.

Blocking peptide available for competition studies, sc-231 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA

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.

PROTOCOLS

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

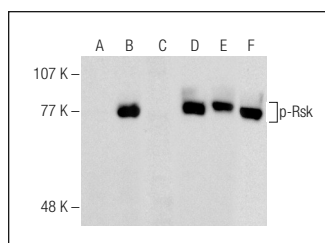
APPLICATIONS

Rsk-1 (C-21) is recommended for detection of Rsk-1 of mouse, rat, human and mink 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), flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). Rsk-1 (C-21) is also recommended for detection of Rsk-1 in additional species, including equine, canine, bovine, porcine and avian.

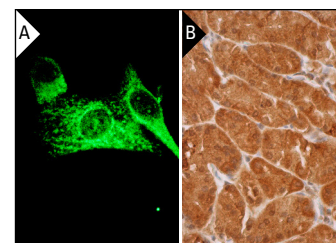
Suitable for use as control antibody for Rsk-1 siRNA (h): sc-29475, Rsk-1 siRNA (m): sc-39211, Rsk-1 shRNA Plasmid (h): sc-29475-SH, Rsk-1 shRNA Plasmid (m): sc-39211-SH, Rsk-1 shRNA (h) Lentiviral Particles: sc-29475-V and Rsk-1 shRNA (m) Lentiviral Particles: sc-39211-V.

Molecular Weight of Rsk-1: 90 kDa.

DATA



Western blot analysis of Rsk phosphorylation in untreated (A,D), PMA treated (B,E) and PMA and lambda protein phosphatase (sc-200312A) treated (C,F) HeLa whole cell lysates. Antibodies tested include p-Rsk (C-5): sc-377526 (A,B,C) and Rsk-1 (C-21): sc-231 (D,E,F).



Rsk-1 (C-21): sc-231. Cytoplasmic immunofluorescence staining of methanol-fixed NIH/3T3 cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic and nuclear staining of glandular cells (B). sc-231 (D,E,F).

SELECT PRODUCT CITATIONS

1. Nakajima, T., et al. 1996. The signal-dependent coactivator CBP is a nuclear target for pp90_{Rsk}. Cell 86: 465-474.
2. Trivier, E., et al. 1996. Mutations in the kinase Rsk-2 associated with Coffin-Lowry syndrome. Nature 384: 567-570.
3. Mraiche, F., et al. 2011. Activated NHE1 is required to induce early cardiac hypertrophy in mice. Basic Res. Cardiol. 106: 603-616.
4. Lara, R., et al. 2011. An siRNA screen identifies RSK1 as a key modulator of lung cancer metastasis. Oncogene 30: 3513-3521.
5. Casar, B., et al. 2012. Mxi2 sustains ERK1/2 phosphorylation in the nucleus by preventing ERK1/2 binding to phosphatases. Biochem. J. 441: 571-578.

MONOS
Satisfaction
Guaranteed

Try **Rsk-1 (A-10): sc-393147** or **Rsk-1 (10B1D7): sc-81162**, our highly recommended monoclonal alternatives to Rsk-1 (C-21).