

Rsk (B-4): sc-74575

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.

SOURCE

Rsk (B-4) is a mouse monoclonal antibody raised against amino acids 611-670 mapping near the C-terminus of Rsk-2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Rsk (B-4) is available conjugated to agarose (sc-74575 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74575 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74575 PE), fluorescein (sc-74575 FITC), Alexa Fluor[®] 488 (sc-74575 AF488), Alexa Fluor[®] 546 (sc-74575 AF546), Alexa Fluor[®] 594 (sc-74575 AF594) or Alexa Fluor[®] 647 (sc-74575 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-74575 AF680) or Alexa Fluor[®] 790 (sc-74575 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

APPLICATIONS

Rsk (B-4) is recommended for detection of Rsk-1, Rsk-2, Rsk-3 and Rsk-4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Rsk (B-4) is also recommended for detection of Rsk-1, Rsk-2, Rsk-3 and Rsk-4 in additional species, including equine, canine, bovine and porcine.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or NIH/3T3 whole cell lysate: sc-2210.

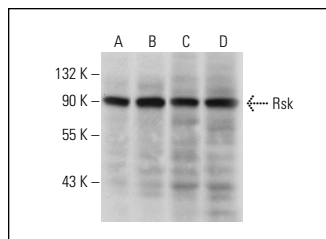
STORAGE

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

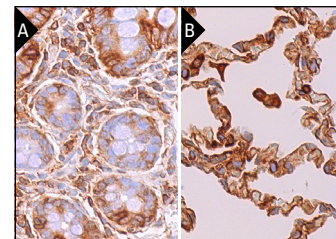
RESEARCH USE

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

DATA



Rsk (B4): sc-74575. Western blot analysis of Rsk expression in HeLa (A), K-562 (B), NIH/3T3 (C) and L8 (D) whole cell lysates.



Rsk (B-4): sc-74575. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing cytoplasmic staining of glandular cells and endothelial cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic, membrane and nuclear staining of pneumocytes and cytoplasmic and nuclear staining of macrophages (B).

SELECT PRODUCT CITATIONS

- Meng, X.B., et al. 2013. P90RSK and Nrf2 activation via MEK1/2-ERK1/2 pathways mediated by notoginsenoside R2 to prevent 6-hydroxydopamine-induced apoptotic death in SH-SY5Y cells. *Evid. Based Complement. Alternat. Med.* 2013: 971712.
- Yeves, A.M., et al. 2014. Physiological cardiac hypertrophy: critical role of Akt in the prevention of NHE-1 hyperactivity. *J. Mol. Cell. Cardiol.* 76: 186-195.
- Brea, M.S., et al. 2019. Silencing of epidermal growth factor receptor reduces Na⁺/H⁺ exchanger 1 activity and hypertensive cardiac hypertrophy. *Biochem. Pharmacol.* 170: 113667.
- Chen, H., et al. 2020. TGF- β 1/IL-11/MEK/ERK signaling mediates senescence-associated pulmonary fibrosis in a stress-induced premature senescence model of Bmi-1 deficiency. *Exp. Mol. Med.* 52: 130-151.
- Jang, Y. 2020. Endurance exercise-induced expression of autophagy-related protein coincides with anabolic expression and neurogenesis in the hippocampus of the mouse brain. *Neuroreport* 31: 442-449.
- Hu, Q.Y., et al. 2021. Malayoside, a cardenolide glycoside extracted from *Antiaris toxicaria* Lesch, induces apoptosis in human non-small lung cancer cells via MAPK-Nur77 signaling pathway. *Biochem. Pharmacol.* 190: 114622.
- de la Fuente-Vivas, D., et al. 2024. ERK1/2 mitogen-activated protein kinase dimerization is essential for the regulation of cell motility. *Mol. Oncol.* E-published.

PROTOCOLS

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