

Rsk-4 (JS-31): sc-100424

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.

REFERENCES

- Alcorta, D.A., et al. 1989. Sequence and expression of chicken and mouse Rsk: homologs of *Xenopus laevis* ribosomal S6 kinase. *Mol. Cell. Biol.* 9: 3850-3859.
- Sweet, L.J., et al. 1990. Identification of mitogen-responsive ribosomal protein S6 kinase pp90^{rsk}, a homolog of *Xenopus* S6 kinase II, in chicken embryo fibroblasts. *Mol. Cell. Biol.* 10: 2413-2417.

CHROMOSOMAL LOCATION

Genetic locus: RPS6KA6 (human) mapping to Xq21.1; Rps6ka6 (mouse) mapping to X E1.

SOURCE

Rsk-4 (JS-31) is a mouse monoclonal antibody raised against recombinant Rsk-4 of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Rsk-4 (JS-31) is recommended for detection of Rsk-4 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).

Suitable for use as control antibody for Rsk-4 siRNA (h): sc-39212, Rsk-4 siRNA (m): sc-39213, Rsk-4 shRNA Plasmid (h): sc-39212-SH, Rsk-4 shRNA Plasmid (m): sc-39213-SH, Rsk-4 shRNA (h) Lentiviral Particles: sc-39212-V and Rsk-4 shRNA (m) Lentiviral Particles: sc-39213-V.

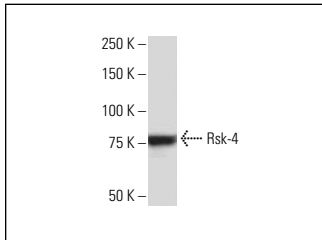
Molecular Weight of Rsk-4: 84 kDa.

Positive Controls: PC-12 cell lysate: sc-2250.

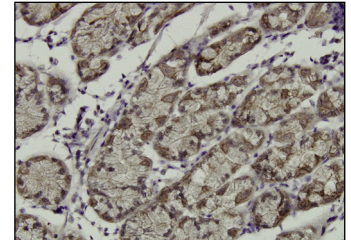
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Rsk-4 (JS-31): sc-100424. Western blot analysis of Rsk-4 expression in PC-12 whole cell lysate.



Rsk-4 (JS-31): sc-100424. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human stomach tissue showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Sun, Y., et al. 2013. Basic anatomy and tumor biology of the RPS6KA6 gene that encodes the p90 ribosomal S6 kinase-4. *Oncogene* 32: 1794-1810.
- Roffé, M., et al. 2015. Two widely used Rsk inhibitors, BI-D1870 and SL0101, alter mTORC1 signaling in a Rsk-independent manner. *Cell. Signal.* 27: 1630-1642.
- Anagnostopoulos, A.K., et al. 2015. Proteomic studies of pediatric medulloblastoma tumors with 17p deletion. *J. Proteome Res.* 14: 1076-1088.
- Nett, I.R., et al. 2018. Negative feedback via Rsk modulates Erk-dependent progression from naïve pluripotency. *EMBO Rep.* 19 pii: e45642.

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 for detailed protocols and support products.