

# Rsk-1 (10B1D7): sc-81162

## BACKGROUND

The family of ribosomal S6 kinases (Rsks), 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  $\beta$ , 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.
- Kozma, S.C., et al. 1990. Cloning of the mitogen-activated S6 kinase from rat liver reveals an enzyme of the second messenger subfamily. *Proc. Natl. Acad. Sci. USA* 87: 7365-7369.
- Banerjee, P., et al. 1990. Molecular structure of a major Insulin/mitogen-activated 70 kDa S6 protein kinase. *Proc. Natl. Acad. Sci. USA* 87: 8550-8554.
- Moller, D.E., et al. 1994. Human Rsk isoforms: cloning and characterization of tissue-specific expression. *Am. J. Physiol.* 266: C351-C359.
- Zhao, Y., et al. 1995. Rsk-3 encodes a novel pp90rsk isoform with a unique N-terminal sequence: growth factor-stimulated kinase function and nuclear translocation. *Mol. Cell. Biol.* 15: 4353-4363.

## CHROMOSOMAL LOCATION

Genetic locus: RPS6KA1 (human) mapping to 1p36.11.

## SOURCE

Rsk-1 (10B1D7) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 581-735 of Rsk-1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

Rsk-1 (10B1D7) is recommended for detection of Rsk-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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

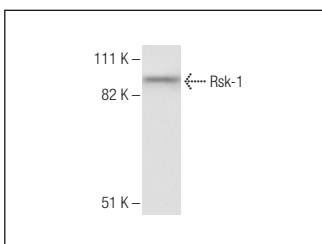
Molecular Weight of Rsk-1: 90 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MCF7 whole cell lysate: sc-2206 or A-431 whole cell lysate: sc-2201.

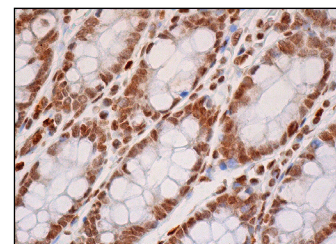
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Rsk-1 (10B1D7): sc-81162. Western blot analysis of Rsk-1 expression in HeLa whole cell lysate.



Rsk-1 (10B1D7): sc-81162. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing nuclear staining of glandular cells.

## SELECT PRODUCT CITATIONS

- Méant, A., et al. 2020. Proteomic analysis reveals a role for RSK in p120-catenin phosphorylation and melanoma cell-cell adhesion. *Mol. Cell. Proteomics* 19: 50-64.

## RESEARCH USE

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