SANTA CRUZ BIOTECHNOLOGY, INC.

Rsk-1 (10B1D7): sc-81162

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 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

1. 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.
2. 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.
3. 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.
4. 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.
5. Moller, D.E., et al.1994. Human Rsk isoforms: cloning and characterization of tissue-specific expression. Am. J. Physiol. 266: C351-C359.
6. 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 µg IgG_{2a} 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 µg per 100-500 µg 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.

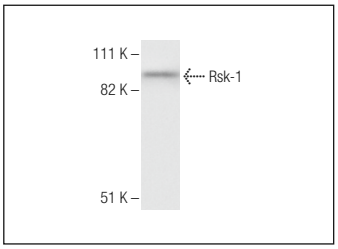
Molecular Weight of Rsk-1: 90 kDa.

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

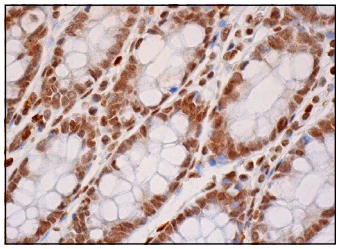
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-IgGκ 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

1. 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.