

Rsk-1 (A-10): sc-393147



The Power to Question

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

SOURCE

Rsk-1 (A-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 707-735 at the C-terminus of Rsk-1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Rsk-1 (A-10) is available conjugated to agarose (sc-393147 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393147 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393147 PE), fluorescein (sc-393147 FITC), Alexa Fluor[®] 488 (sc-393147 AF488), Alexa Fluor[®] 546 (sc-393147 AF546), Alexa Fluor[®] 594 (sc-393147 AF594) or Alexa Fluor[®] 647 (sc-393147 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393147 AF680) or Alexa Fluor[®] 790 (sc-393147 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393147 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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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 (A-10) is recommended for detection of Rsk-1 of mouse, rat, human and mink 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

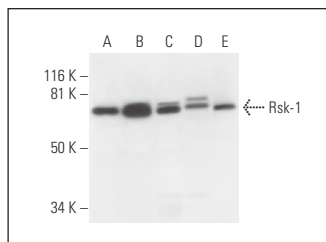
Rsk-1 (A-10) is also recommended for detection of Rsk-1 in additional species, including equine, canine, bovine and porcine.

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.

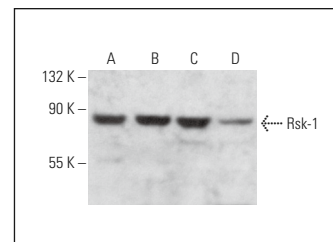
Molecular Weight of Rsk-1: 90 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or MCF7 whole cell lysate: sc-2206.

DATA



Rsk-1 (A-10): sc-393147. Western blot analysis of Rsk-1 expression in HeLa (A), K-562 (B), Mv 1 Lu (C), A-431 (D) and MCF7 (E) whole cell lysates.



Rsk-1 (A-10): sc-393147. Western blot analysis of Rsk-1 expression in Hep G2 (A), Jurkat (B), RAW 264.7 (C) and WEHI-3 (D) whole cell lysates.

SELECT PRODUCT CITATIONS

- Baba, Y., et al. 2018. Arctigenin induces the apoptosis of primary effusion lymphoma cells under conditions of glucose deprivation. *Int. J. Oncol.* 52: 505-517.
- Zhu, J., et al. 2022. Alteration of Trop-2 expression in breast cancer cells by clinically used therapeutic agents and acquired tamoxifen resistance. *Breast Cancer* 29: 1076-1087.
- Wang, C., et al. 2023. Alternative glucose uptake mediated by β -catenin/RSK1 axis under stress stimuli in mammalian cells. *Biochem. Pharmacol.* 214: 115645.
- Liu, T., et al. 2024. ED-71 ameliorates bone loss in type 2 diabetes mellitus by enhancing osteogenesis through upregulation of the circadian rhythm coregulator BMAL1. *Drug Des. Devel. Ther.* 18: 3903-3919.

RESEARCH USE

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