

# p-Rsk (C-5): sc-377526

## 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  $\beta$ , 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.

## SOURCE

p-Rsk (C-5) is a mouse monoclonal antibody specific for an epitope mapping to a short amino acid sequence containing Ser 380 phosphorylated 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.

p-Rsk (C-5) is available conjugated to agarose (sc-377526 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377526 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377526 PE), fluorescein (sc-377526 FITC), Alexa Fluor<sup>®</sup> 488 (sc-377526 AF488), Alexa Fluor<sup>®</sup> 546 (sc-377526 AF546), Alexa Fluor<sup>®</sup> 594 (sc-377526 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-377526 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-377526 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-377526 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377526 P, (100  $\mu$ 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

p-Rsk (C-5) is recommended for detection of Ser 380 phosphorylated Rsk of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

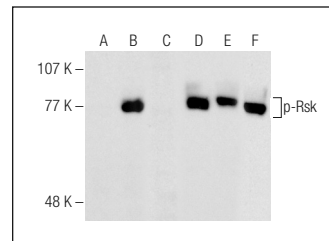
Molecular Weight of p-Rsk: 90 kDa.

Positive Controls: HeLa-PMA cell lysate: sc-2258, SJRH30 cell lysate: sc-2287 or HeLa whole cell lysate: sc-2200.

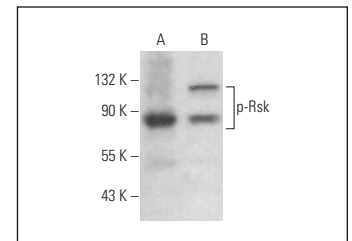
## RECOMMENDED SUPPORT REAGENTS

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<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Lambda Phosphatase: sc-200312A 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



Western blot analysis of Rsk phosphorylation in untreated (A, D), PMA treated (B, E) and PMA and lambda protein phosphatase (sc-200312A) treated (C, F) HeLa whole cell lysates. Antibodies tested include p-Rsk (C-5): sc-377526 (A, B, C) and Rsk-1 (C-21): sc-231 (D, E, F).



p-Rsk (C-5): sc-377526. Western blot analysis of Rsk phosphorylation in SJRH30 (A) and HeLa (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Chen, H., et al. 2020. TGF- $\beta$ 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.
- Mayer, A.M.S, et al. 2021. Rsk-1 vs. Rsk-2 inhibitory activity of the marine  $\beta$ -carboline alkaloid manzamine A: a biochemical, cervical cancer protein expression, and computational study. *Mar. Drugs* 19: 506.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.