SANTA CRUZ BIOTECHNOLOGY, INC.

# MSK1 (H-19): sc-9392

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

The family of ribosomal S6 kinases (Rsks), designated Rsk-1, Rsk-2 and Rsk-3, have been implicated as important signaling intermediates in response to a broad range of ligand-activated receptor tyrosine kinases. A unique feature common to the three members of the Rsk family is that each possesses two non-identical complete kinase catalytic domains. A related S6 kinase, p70 S6 kinase, functions to phosphorylate the S6 protein on ribosomal 40S subunits. p70 S6 kinase β shares high sequence homology with p70 S6 kinase, except in the carboxy terminus where it contains a proline-rich domain that may be involved in SH3 domain containing protein interactions. MSK1 (also designated RLPK) is related to Rsk and p70 S6 kinase family members and is thought to be structurally similar to Rsk family members, but it may be regulated by distinct mechanisms.

## CHROMOSOMAL LOCATION

Genetic locus: RPS6KA5 (human) mapping to 14q32.11; Rps6ka5 (mouse) mapping to 12 E.

## SOURCE

MSK1 (H-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MSK1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9392 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

MSK1 (H-19) is recommended for detection of MSK1 of mouse, rat and 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MSK1 (H-19) is also recommended for detection of MSK1 in additional species, including equine and porcine.

Suitable for use as control antibody for MSK1 siRNA (h): sc-35977, MSK1 siRNA (m): sc-35978, MSK1 siRNA (r): sc-63273, MSK1 shRNA Plasmid (h): sc-35977-SH, MSK1 shRNA Plasmid (m): sc-35978-SH, MSK1 shRNA Plasmid (r): sc-63273-SH, MSK1 shRNA (h) Lentiviral Particles: sc-35977-V, MSK1 shRNA (m) Lentiviral Particles: sc-35978-V and MSK1 shRNA (r) Lentiviral Particles: sc-63273-V.

Molecular Weight of MSK1: 90 kDa.

Positive Controls: MSK1 (m): 293T Lysate: sc-121803, HL-60 whole cell lysate: sc-2209 or HeLa whole cell lysate: sc-2200.

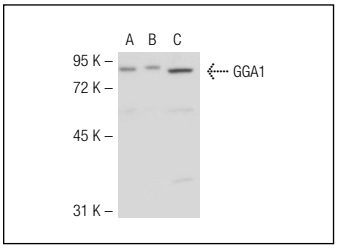
## RESEARCH USE

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

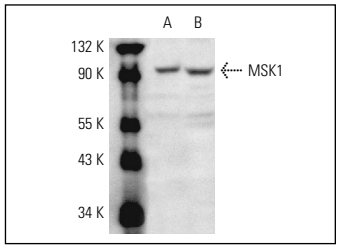
## STORAGE

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

## DATA




MSK1 (H-19): sc-9392. Western blot analysis of MSK1 expression in non-transfected 293T: sc-117752 (**A**), mouse MSK1 transfected 293T: sc-121803 (**B**) and HeLa (**C**) whole cell lysates.




MSK1 (H-19): sc-9392. Western blot analysis of MSK1 expression in HL-60 (**A**) and HeLa (**B**) whole cell lysates.

## SELECT PRODUCT CITATIONS


1. Becker, F., et al. 2004. A three-hybrid approach to scanning to proteome for targets of small molecule kinase inhibitors. Chem. Biol. 11: 211-233.
2. Abecassis, L., et al. 2004. Evidence for a role of MSK1 in transforming growth factor-β-mediated responses through p38α and Smad signaling pathways. J. Biol. Chem. 279: 30474-30479.
3. Beck, I.M., et al. 2009. Glucocorticoids and mitogen- and stress-activated protein kinase 1 inhibitors: possible partners in the combat against inflammation. Biochem. Pharmacol. 77: 1194-1205.
4. Reber, L., et al. 2009. Ser 276 phosphorylation of NFκB p65 by MSK1 controls SCF expression in inflammation. PLoS ONE 4: e4393.
5. Saha, B., et al. 2009. Sphingolipid-mediated restoration of Mitf expression and repigmentation *in vivo* in a mouse model of hair graying. Pigment Cell Melanoma Res. 22: 205-218.
6. Ronkina, N., et al. 2011. Stress induced gene expression: a direct role for MAPKAP kinases in transcriptional activation of immediate early genes. Nucleic Acids Res. 39: 2503-2518.
7. Gesser, B., et al. 2011. Dimethylfumarate inhibits MIF-induced proliferation of keratinocytes by inhibiting MSK1 and RSK1 activation and by inducing nuclear p-c-Jun (S63) and p-p53 (S15) expression. Inflamm. Res. 60: 643-653.
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