

MSK1 (H-65): sc-25417

BACKGROUND

The family of ribosomal S6 kinases (Rsk), 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-65) is a rabbit polyclonal antibody raised against amino acids 745-809 mapping at the C-terminus of MSK1 of human origin.

PRODUCT

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

APPLICATIONS

MSK1 (H-65) 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 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), immunohistochemistry (including paraffin-embedded sections) (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-65) is also recommended for detection of MSK1 in additional species, including equine.

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: HeLa whole cell lysate: sc-2200, HL-60 whole cell lysate: sc-2209 or THP-1 cell lysate: sc-2238.

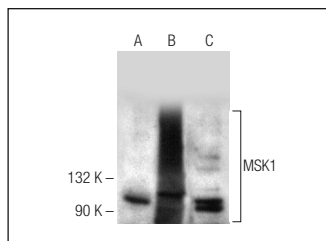
STORAGE

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

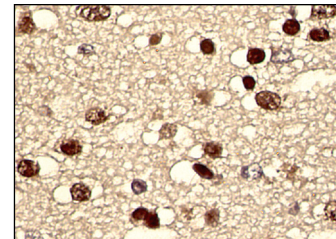
RESEARCH USE

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

DATA



MSK1 (H-65): sc-25417. Western blot analysis of MSK1 expression in HL-60 (A), HeLa (B) and THP-1 (C) whole cell lysates.



MSK1 (H-65): sc-25417. Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain tumor showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Pathak, S.K., et al. 2004. Toll-like receptor 2 and mitogen- and stress-activated kinase 1 are effectors of *Mycobacterium avium*-induced cyclooxygenase-2 expression in macrophages. *J. Biol. Chem.* 279: 55127-55136.
2. Zhang, H.M., et al. 2008. Mitogen-induced recruitment of ERK and MSK to SRE promoter complexes by ternary complex factor Elk-1. *Nucleic Acids Res.* 36: 2594-2607.
3. Pan, M.R., et al. 2009. Tubocapsanolide A inhibits transforming growth factor- β -activating kinase 1 to suppress NF κ B-induced CCR7. *J. Biol. Chem.* 284: 2746-2754.
4. Lorenz, K., et al. 2009. A new type of ERK1/2 autophosphorylation causes cardiac hypertrophy. *Nat. Med.* 15: 75-83.
5. Martin, E., et al. 2011. Mitogen- and stress-activated protein kinase 1-induced neuroprotection in Huntington's disease: role on chromatin remodeling at the PGC-1- α promoter. *Hum. Mol. Genet.* 20: 2422-2434.
6. Kang, J.I. and Ahn, B.Y. 2011. HCV-induced PKR activation is stimulated by the mitogen- and stress-activated protein kinase MSK2. *Biochem. Biophys. Res. Commun.* 407: 248-253.
7. Niu, J., et al. 2012. DNA damage induces NF κ B-dependent microRNA-21 up-regulation and promotes breast cancer cell invasion. *J. Biol. Chem.* 287: 21783-21795.
8. Reyes, D., et al. 2014. Activation of mitogen- and stress-activated kinase 1 is required for proliferation of breast cancer cells in response to estrogens or progestins. *Oncogene* 33: 1570-1580.

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Try **MSK1 (D-77): sc-130431**, our highly recommended monoclonal alternative to MSK1 (H-65).