SANTA CRUZ BIOTECHNOLOGY, INC.

Mnk1 (C-20): sc-6965

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The Power to Question

BACKGROUND

The MAPKAP kinases (for MAP kinase activated protein kinases) are a group of MAP kinase substrates which are themselves kinases. In response to activation, the MAP kinases phosphorylate downstream components on a consensus Pro-X-Ser/Thr-Pro motif. Several kinases that contain this motif have been identifed and serve as substrates for the ERK and p38 MAP kinases. These include the serine/threonine kinases Rsk-1 (also designated MAPKAP kinase-1), Rsk-2 and Rsk-3, which are phosphorylated by ERK1 and ERK2. Similarly p38 phosphorylates and activates the serine/threonine kinases MAPKAP kinase-2 and MAPKAP kinase-3 (also designated 3pK). The serine/threonine kinases Mnk1 and Mnk2 are substrates for both ERK and p38 MAP kinases.

REFERENCES

1. Sturgill, T.W., et al. 1988. Insulin-stimulated MAP2 kinase phosphorylates and activates ribosomal protein S6 kinase II. Nature 334: 715-718.
2. Stokoe, D., et al. 1992. MAPKAP kinase-2: a novel protein kinase activated by mitogen-activated protein kinase. EMBO J. 11: 3985-3994.
3. Davis, R.J. 1993. The mitogen-activated protein kinase signal transduction pathway. J. Biol. Chem. 268: 14553-14556.

CHROMOSOMAL LOCATION

Genetic locus: MKNK1 (human) mapping to 1p33.

SOURCE

Mnk1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Mnk1 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-6965 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Mnk1 (C-20) is recommended for detection of Mnk1 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Mnk1 siRNA (h): sc-39106, Mnk1 shRNA Plasmid (h): sc-39106-SH and Mnk1 shRNA (h) Lentiviral Particles: sc-39106-V.

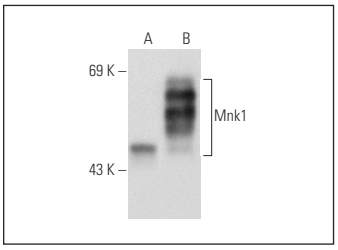
Molecular Weight of Mnk1: 52 kDa.

Positive Controls: Mnk1 (h): 293T Lysate: sc-171267, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

STORAGE

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

DATA



Mnk1 (C-20): sc-6965. Western blot analysis of Mnk1 expression in non-transfected: sc-117752 (**A**) and human Mnk1 transfected: sc-171267 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Williamson, D., et al. 2003. Mitogen-activated protein kinase (MAPK) pathway activation: effects of age and acute exercise on human skeletal muscle. J. Physiol. 547: 977-987.
2. Hargett, D., et al. 2005. Herpes simplex virus ICP27 activation of stress kinases JNK and p38. J. Virol. 79: 8348-8360.
3. Chrestensen, C.A., et al. 2007. Mnk1 and Mnk2 regulation in HER2-overexpressing breast cancer lines. J. Biol. Chem. 282: 4243-4252.
4. Chrestensen, C.A., et al. 2007. Loss of MNK function sensitizes fibroblasts to serum-withdrawal induced apoptosis. Genes Cells 12: 1133-1140.
5. Oster, B., et al. 2008. Human herpesvirus 6B induces phosphorylation of p53 in its regulatory domain by a CK2- and p38-independent pathway. J. Gen. Virol. 89: 87-96.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.