SANTA CRUZ BIOTECHNOLOGY, INC.

Mnk2 (M-20): sc-7445

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. Mnk2 exists as multiple isoforms, including Mnk2a and Mnk2b, due to alternative splicing events.

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.
4. Zhao, Y., et al. 1995. RSK3 encodes a novel pp90rsk isoform with a unique N-terminal sequence: growth factor stimulated kinase function and nuclear translocation. Mol. Cell. Biol. 15: 4353-4363.
5. Sithanandam, G., et al. 1996. 3pK, a new mitogen-activated protein kinase-activated protein kinase located in the small cell lung cancer tumor suppressor gene region. Mol. Cell. Biol. 16: 868-876.

CHROMOSOMAL LOCATION

Genetic locus: MKNK2 (human) mapping to 19p13.3; Mknk2 (mouse) mapping to 10 C1.

SOURCE

Mnk2 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Mnk2 of mouse 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-7445 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

Mnk2 (M-20) is recommended for detection of Mnk2 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), 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).

Mnk2 (M-20) is also recommended for detection of Mnk2 in additional species, including canine, bovine and porcine.

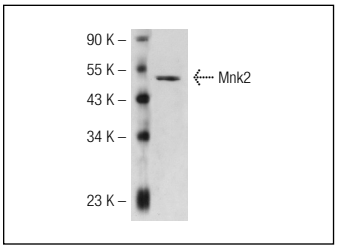
Suitable for use as control antibody for Mnk2 siRNA (h): sc-35951, Mnk2 siRNA (m): sc-35952, Mnk2 shRNA Plasmid (h): sc-35951-SH, Mnk2 shRNA Plasmid (m): sc-35952-SH, Mnk2 shRNA (h) Lentiviral Particles: sc-35951-V and Mnk2 shRNA (m) Lentiviral Particles: sc-35952-V.

Molecular Weight of Mnk2a: 52 kDa.

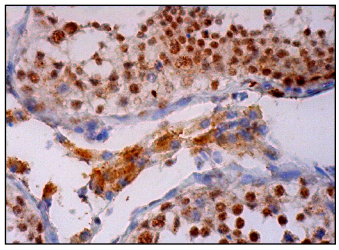
Molecular Weight of Mnk2b: 47 kDa.

Positive Controls: rat lung extract: sc-2396, HeLa whole cell lysate: sc-2200 or Ramos cell lysate: sc-2216.

DATA



Mnk2 (M-20): sc-7445. Western blot analysis of Mnk2 expression in Ramos whole cell lysate.



Mnk2 (M-20): sc-7445. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of cells in seminiferous ducts and cytoplasmic staining of Leydig cells.

SELECT PRODUCT CITATIONS

1. Leitinger, B. and Kwan, A.P. 2006. The discoidin domain receptor DDR2 is a receptor for type X collagen. Matrix Biol. 25: 355-364.
2. Walker, C.L., et al. 2012. Systemic bisperoxovanadium activates Akt/mTOR, reduces autophagy, and enhances recovery following cervical spinal cord injury. PLoS ONE 7: e30012.

PROTOCOLS

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

MONOS Satisfaction Guaranteed

Try **Mnk2 (B-6): sc-271559**, our highly recommended monoclonal alternative to Mnk2 (M-20).