

Mnk1 (A-4): sc-133107

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 identified 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 ERK 1 and ERK 2. 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.

CHROMOSOMAL LOCATION

Genetic locus: MKNK1 (human) mapping to 1p33; Mknk1 (mouse) mapping to 4 D1.

SOURCE

Mnk1 (A-4) is a mouse monoclonal antibody raised against amino acids 411-465 mapping at the C-terminus of Mnk1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Mnk1 (A-4) is available conjugated to agarose (sc-133107 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-133107 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-133107 PE), fluorescein (sc-133107 FITC), Alexa Fluor® 488 (sc-133107 AF488), Alexa Fluor® 546 (sc-133107 AF546), Alexa Fluor® 594 (sc-133107 AF594) or Alexa Fluor® 647 (sc-133107 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-133107 AF680) or Alexa Fluor® 790 (sc-133107 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

Mnk1 (A-4) is recommended for detection of Mnk1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 siRNA (m): sc-39107, Mnk1 shRNA Plasmid (h): sc-39106-SH, Mnk1 shRNA Plasmid (m): sc-39107-SH, Mnk1 shRNA (h) Lentiviral Particles: sc-39106-V and Mnk1 shRNA (m) Lentiviral Particles: sc-39107-V.

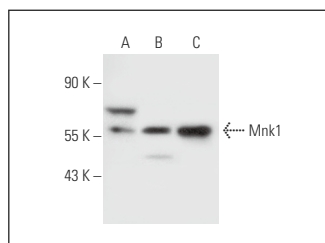
Molecular Weight of Mnk1: 52 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, 3611-RF whole cell lysate: sc-2215 or K-562 whole cell lysate: sc-2203.

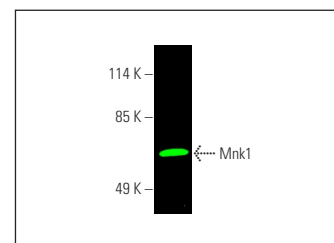
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Mnk1 (A-4): sc-133107. Western blot analysis of Mnk1 expression in HeLa (A), K-562 (B) and 3611-RF (C) whole cell lysates.



Mnk1 (A-4) Alexa Fluor® 680: sc-133107 AF680. Direct near-infrared western blot analysis of Mnk1 expression in U-698-M whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

- Shi, Y., et al. 2013. MNK kinases facilitate c-Myc IRES activity in rapamycin-treated multiple myeloma cells. *Oncogene* 32: 190-197.
- Holmes, B., et al. 2021. mTORC2-mediated direct phosphorylation regulates YAP activity promoting glioblastoma growth and invasive characteristics. *Neoplasia* 23: 951-965.
- Zhang, P., et al. 2021. miR-370-3p regulates adipogenesis through targeting Mknk1. *Molecules* 26: 6926.

STORAGE

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

PROTOCOLS

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

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