

# MEK kinase-1 (1-9C-2A): sc-449

## BACKGROUND

Mitogen-activated protein (MAP) kinase cascades are activated by various extracellular stimuli including growth factors. The MEK kinases (also designated MAP kinase kinase kinases, MKKKs, MAP3Ks or MEKKs) phosphorylate and thereby activate the MEKs (also called MAP kinase kinases or MKKs), including ERK, JNK and p38. These activated MEKs in turn phosphorylate and activate the MAP kinases. The MEK kinases include Raf-1, Raf-B, Mos, MEK kinase-1, MEK kinase-2, MEK kinase-3, MEK kinase-4, ASK 1 (MEK kinase-5) and MAP3K6 (MEK kinase-6). MEK kinase-1 activates the ERK and c-Jun NH<sub>2</sub>-terminal kinase (JNK) pathways by phosphorylation of MAP2K1 and MAP2K4, and also activates the central protein kinases of the NFκB pathway, CHUK and IKKB. Additionally, MEK kinase-1 uses an E3 ligase through its PHD domain, a RING-finger-like structure, to target proteins for degradation through ubiquitination.

## CHROMOSOMAL LOCATION

Genetic locus: MAP3K1 (human) mapping to 5q11.2; Map3k1 (mouse) mapping to 13 D2.2.

## SOURCE

MEK kinase-1 (1-9C-2A) is a mouse monoclonal antibody raised against amino acids 1-301 mapping near the N-terminus of MEK kinase-1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MEK kinase-1 (1-9C-2A) is available conjugated to agarose (sc-449 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-449 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-449 PE), fluorescein (sc-449 FITC), Alexa Fluor<sup>®</sup> 488 (sc-449 AF488), Alexa Fluor<sup>®</sup> 546 (sc-449 AF546), Alexa Fluor<sup>®</sup> 594 (sc-449 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-449 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-449 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-449 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

MEK kinase-1 (1-9C-2A) is recommended for detection of MEK kinase-1 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for MEK kinase-1 siRNA (h): sc-35898, MEK kinase-1 siRNA (m): sc-35899, MEK kinase-1 shRNA Plasmid (h): sc-35898-SH, MEK kinase-1 shRNA Plasmid (m): sc-35899-SH, MEK kinase-1 shRNA (h) Lentiviral Particles: sc-35898-V and MEK kinase-1 shRNA (m) Lentiviral Particles: sc-35899-V.

Molecular Weight of full length MEK kinase-1: 195 kDa.

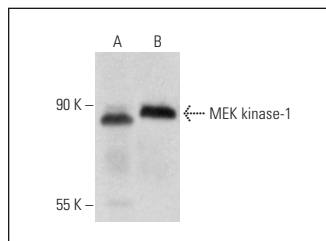
Molecular Weight of cleaved MEK kinase-1: 80 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, c4 whole cell lysate: sc-364186 or NRK whole cell lysate: sc-364197.

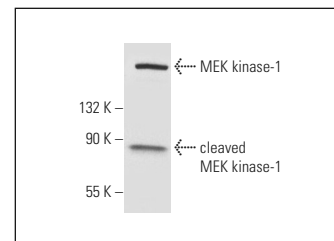
## STORAGE

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

## DATA



MEK kinase-1 (1-9C-2A): sc-449. Western blot analysis of MEK kinase-1 expression in c4 (A) and NRK (B) whole cell lysates.



MEK kinase-1 (1-9C-2A): sc-449. Western blot analysis of MEK kinase-1 expression in A-431 whole cell lysate. Note cleaved MEK kinase-1 expression.

## SELECT PRODUCT CITATIONS

- Avdi, N.J., et al. 1996. Activation of MEKK by formyl-methionyl-leucyl-phenylalanine in human neutrophils. Mapping pathways for mitogen-activated protein kinase activation. *J. Biol. Chem.* 271: 33598-33606.
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- Shimizu, K., et al. 2017. The SCFβ-TRCP E3 ubiquitin ligase complex targets Lipin1 for ubiquitination and degradation to promote hepatic lipogenesis. *Sci. Signal.* 10: eaah4117.

## RESEARCH USE

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

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