

# MEK kinase-2 (C-18): sc-1089

## BACKGROUND

Mitogen-activated protein (MAP) kinase cascades are activated by various extracellular stimuli including growth factors. The MEK kinases (also called MAP kinase kinase kinases) phosphorylate and activate the MAP kinases, 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 has been shown to phosphorylate MEK-1 via a Raf-independent pathway. Evidence suggests that MEK-3 is preferentially activated by MEK kinase-3 and that MEK-4 is activated by both MEK kinase-2 and MEK kinase-3. MEK kinase-4 has been shown to specifically activate the JNK pathway. ASK 1 activates both MEK-4 and MEK-3/MEK-6 pathways.

## CHROMOSOMAL LOCATION

Genetic locus: MAP3K2 (human) mapping to 2q14.3, MAP3K3 (human) mapping to 17q23.3; Map3k2 (mouse) mapping to 18 B1, Map3k3 (mouse) mapping to 11 B2.

## SOURCE

MEK kinase-2 (C-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of MEK kinase-2 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-1089 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

MEK kinase-2 (C-18) is recommended for detection of MEK kinase-2 and, to a lesser extent, MEK kinase-3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MEK kinase-2 (C-18) is also recommended for detection of MEK kinase-2 and, to a lesser extent, MEK kinase-3 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of MEK kinase-2: 70/71 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Ramos cell lysate: sc-2216 or BJAB whole cell lysate: sc-2207.

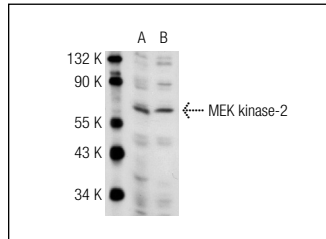
## STORAGE

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

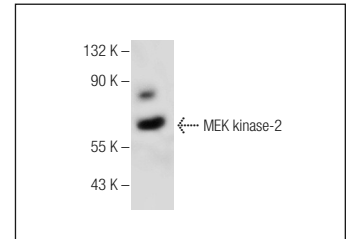
## RESEARCH USE

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

## DATA



MEK kinase-2 (C-18): sc-1089. Western blot analysis of MEK kinase-2 expression in K-562 (A) and Ramos (B) whole cell lysates.



MEK kinase-2 (C-18): sc-1089. Western blot analysis of MEK kinase-2 expression in BJAB whole cell lysate.

## SELECT PRODUCT CITATIONS

- Widmann, C., et al. 1998. Caspase-dependent cleavage of signalling proteins during apoptosis. *J. Biol. Chem.* 273: 7141-7147.
- Lenz, G., et al. 2000. P2Y purinoceptor subtypes recruit different MEK activators in astrocytes. *Br. J. Pharmacol.* 129: 927-936.
- lenz, G., et al. 2001. Extracellular ATP stimulates an inhibitory pathway towards growth factor-induced cRaf-1 and MEKK activation in astrocyte cultures. *J. Neurochem.* 77: 1001-1009.
- Raviv, Z., et al. 2004. MEK-5 and ERK 5 are localized in the nuclei of resting as well as stimulated cells, while MEKK2 translocates from the cytosol to the nucleus upon stimulation. *J. Cell Sci.* 117: 1773-1784.
- Paruch, S., et al. 2006. A role of p44/42 mitogen-activated protein kinases in formyl-peptide receptor-mediated phospholipase D activity and oxidant production. *FASEB J.* 20: 142-144.
- Nakamura, K., et al. 2010. Activity assays for extracellular signal-regulated kinase 5. *Methods Mol. Biol.* 661: 91-106.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **MEK kinase-2 (H-9): sc-398091**, our highly recommended monoclonal alternative to MEK kinase-2 (C-18).