

# MAP3K6 (I-12): sc-68104

## 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). MAP3K6, also called ASK 2, activates the JNK kinase pathway but not the ERK or p38 kinase pathways. It is activated by phosphorylation on Thr 806 and is only stable and catalytically active when coupled with ASK 1. Three isoforms exist for MAP3K6 due to alternative splicing. Isoform 1 represents the full length protein. Isoform 2 lacks the amino acid sequences 1-277 and 1075-1288 and contains a unique sequence between amino acid residues 1065-1074. Isoform 3 lacks the amino acid sequence 161-168.

## REFERENCES

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2. Maki, H. 2003. Genomic organization and promoter analysis of mouse apoptosis signal-regulating kinase 2 (ASK 2). *Kokubyo Gakkai Zasshi* 70: 9-18.
3. Ryan, J.C., Morey, J.S., Ramsdell, J.S. and Van Dolah, F.M. 2005. Acute phase gene expression in mice exposed to the marine neurotoxin domoic acid. *Neuroscience* 136: 1121-1132.
4. Yan, M., Zhang, L.Y., Sun, L.X., Jiang, Z.Z. and Xiao, X.H. 2006. Nephrotoxicity study of total rhubarb anthraquinones on sprague dawley rats using DNA microarrays. *J. Ethnopharmacol.* 107: 308-311.
5. Takeda, K., Shimozone, R., Noguchi, T., Umeda, T., Morimoto, Y., Naguro, I., Tobiume, K., Saitoh, M., Matsuzawa, A. and Ichijo, H. 2007. Apoptosis signal-regulating kinase (ASK) 2 functions as a mitogen-activated protein kinase kinase kinase in a heteromeric complex with ASK 1. *J. Biol. Chem.* 282: 7522-7531.

## CHROMOSOMAL LOCATION

Genetic locus: MAP3K6 (human) mapping to 1p36.11; Map3k6 (mouse) mapping to 4 D2.3.

## SOURCE

MAP3K6 (I-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MAP3K6 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-68104 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

MAP3K6 (I-12) is recommended for detection of MAP3K6 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).

MAP3K6 (I-12) is also recommended for detection of MAP3K6 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for MAP3K6 siRNA (h): sc-62598, MAP3K6 siRNA (m): sc-62599, MAP3K6 shRNA Plasmid (h): sc-62598-SH, MAP3K6 shRNA Plasmid (m): sc-62599-SH, MAP3K6 shRNA (h) Lentiviral Particles: sc-62598-V and MAP3K6 shRNA (m) Lentiviral Particles: sc-62599-V.

Molecular Weight of MAP3K6 isoforms 1/3: 143 kDa.

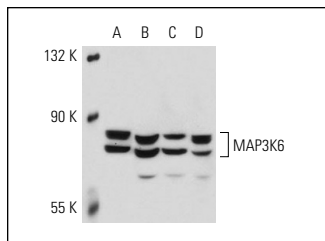
Molecular Weight of MAP3K6 isoform 2: 88 kDa.

Positive Controls: A549 cell lysate: sc-2413, SW480 cell lysate: sc-2219 or PC-12 cell lysate: sc-2250.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



MAP3K6 (I-12): sc-68104. Western blot analysis of MAP3K6 expression in A549 (A), SW480 (B), PC-12 (C) and SW-13 (D) whole cell lysates.

## 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.