

MEK kinase-2 (N-19): sc-1088

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; Map3k2 (mouse) mapping to 18 B1.

SOURCE

MEK kinase-2 (N-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of MEK kinase-2 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. Also available as TransCruz reagent for ChIP application, sc-1088 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-1088 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MEK kinase-2 (N-19) is recommended for detection of MEK kinase-2 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), flow cytometry (1 µg per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

MEK kinase-2 (N-19) is also recommended for detection of MEK kinase-2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for MEK kinase-2 siRNA (h): sc-35900, MEK kinase-2 siRNA (m): sc-35901, MEK kinase-2 shRNA Plasmid (h): sc-35900-SH, MEK kinase-2 shRNA Plasmid (m): sc-35901-SH, MEK kinase-2 shRNA (h) Lentiviral Particles: sc-35900-V and MEK kinase-2 shRNA (m) Lentiviral Particles: sc-35901-V.

MEK kinase-2 (N-19) X TransCruz antibody is recommended for ChIP assays.

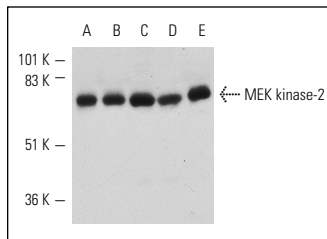
Molecular Weight of MEK kinase-2: 70 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, Jurkat whole cell lysate: sc-2204 or K-562 whole cell lysate: sc-2203.

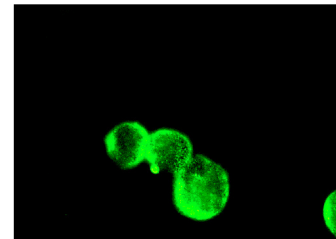
STORAGE

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

DATA



MEK kinase-2 (N-19): sc-1088. Western blot analysis of MEK kinase-2 expression in MCF7 (A), Jurkat (B), BJAB (C), Ramos (D) and K-562 (E) whole cell lysates.



MEK kinase-2 (N-19): sc-1088. Immunofluorescence staining of methanol-fixed K-562 cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

- Lui, W.Y., et al. 2003. Transforming growth factor β 3 regulates the dynamics of Sertoli cell tight junctions via the p38 mitogen-activated protein kinase pathway. *Biol. Reprod.* 68: 1597-1612.
- Hammaker, D.R., et al. 2007. Regulation of the JNK pathway by TGF β activated kinase 1 in rheumatoid arthritis synovocytes. *Arthritis Res. Ther.* 9: R57.
- Winsauer, G., et al. 2008. XIAP regulates bi-phasic NF κ B induction involving physical interaction and ubiquitination of MEKK2. *Cell. Signal.* 20: 2107-2112.
- Lu, K., et al. 2008. Targeting WW domains linker of HECT-type ubiquitin ligase Smurf1 for activation by CKIP-1. *Nat. Cell Biol.* 10: 994-1002.
- Nakamura, K., et al. 2010. Activity assays for extracellular signal-regulated kinase 5. *Methods Mol. Biol.* 661: 91-106.
- Guo, Y., et al. 2013. Receptor for activated C kinase 1 promotes hepatocellular carcinoma growth by enhancing mitogen-activated protein kinase kinase 7 activity. *Hepatology* 57: 140-151.
- Jiang, H., et al. 2014. Restoration of miR17/20a in solid tumor cells enhances the natural killer cell antitumor activity by targeting Mekk2. *Cancer Immunol. Res.* 2: 1-11.

RESEARCH USE

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

MONOS
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Try **MEK kinase-2 (H-9): sc-398091**, our highly recommended monoclonal alternative to MEK kinase-2 (N-19).