

MEK kinase-4 (E-6): sc-166197

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 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: MAP3K4 (human) mapping to 6q26; Map3k4 (mouse) mapping to 17 A1.

SOURCE

MEK kinase-4 (E-6) is a mouse monoclonal antibody raised against amino acids 1531-1607 mapping at the C-terminus of MEK kinase-4 of human origin.

PRODUCT

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

MEK kinase-4 (E-6) is available conjugated to agarose (sc-166197 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166197 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166197 PE), fluorescein (sc-166197 FITC), Alexa Fluor® 488 (sc-166197 AF488), Alexa Fluor® 546 (sc-166197 AF546), Alexa Fluor® 594 (sc-166197 AF594) or Alexa Fluor® 647 (sc-166197 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166197 AF680) or Alexa Fluor® 790 (sc-166197 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

MEK kinase-4 (E-6) is recommended for detection of MEK kinase-4 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 MEK kinase-4 siRNA (h): sc-35902, MEK kinase-4 siRNA (m): sc-35903, MEK kinase-4 shRNA Plasmid (h): sc-35902-SH, MEK kinase-4 shRNA Plasmid (m): sc-35903-SH, MEK kinase-4 shRNA (h) Lentiviral Particles: sc-35902-V and MEK kinase-4 shRNA (m) Lentiviral Particles: sc-35903-V.

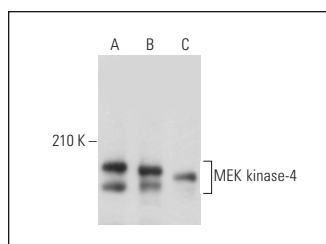
Molecular Weight of MEK kinase-4: 180 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, RAW 264.7 whole cell lysate: sc-2211 or K-562 whole cell lysate: sc-2203.

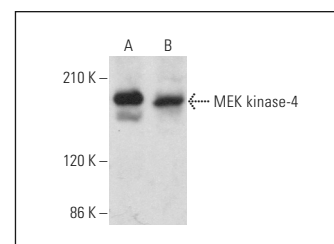
RECOMMENDED SUPPORT REAGENTS

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



MEK kinase-4 (E-6): sc-166197. Western blot analysis of MEK kinase-4 expression in Jurkat (A), IB4 (B) and KNRK (C) whole cell lysates.



MEK kinase-4 (E-6): sc-166197. Western blot analysis of MEK kinase-4 expression in K-562 (A) and RAW 264.7 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Wang, Y., et al. 2015. The cranberry flavonoids PAC DP-9 and quercetin aglycone induce cytotoxicity and cell cycle arrest and increase cisplatin sensitivity in ovarian cancer cells. *Int. J. Oncol.* 46: 1924-1934.
- Zhu, G., et al. 2017. Sublytic C5b-9 induces glomerular mesangial cell apoptosis through the cascade pathway of MEKK2-p38 MAPK-IRF-1-TRADD-caspase 8 in rat Thy-1 nephritis. *J. Immunol.* 198: 1104-1118.
- Diallo, I., et al. 2022. A tRNA-derived fragment present in *E. coli* OMVs regulates host cell gene expression and proliferation. *PLoS Pathog.* 18: e1010827.

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.

PROTOCOLS

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

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