SANTA CRUZ BIOTECHNOLOGY, INC.

MEK-2 (96): sc-136261

BACKGROUND

A family of protein kinases located upstream of the MAP kinases and responsible for their activation has been identified. The prototype member of this family, designated MAP kinase kinase, or MEK-1, specifically phosphorylates the MAP kinase regulatory threonine and tyrosine residues present in the Thr-Glu-Tyr motif of ERK. A second MEK family member, MEK-2, resembles MEK-1 in its substrate specificity. MEK-3 (or Mkk3) functions to activate p38 MAP kinase and MEK-4 (also called SEK1 or Mkk4) activates both p38 and JNK MAP kinases. MEK-5 appears to specifically phosphorylate ERK 5, whereas MEK-6 phosphorylates p38 and p38β. MEK-7 (or Mkk7) phosphorylates and activates the JNK signal transduction pathway.

REFERENCES

1. Crews, C.M., et al. 1992. The primary structure of MEK, a protein kinase that phosphorylates the ERK gene product. Science 258: 478-480.
2. Wu, J., et al. 1993. Identification and characterization of a new mammalian mitogen-activated protein kinase kinase, Mkk2. Mol. Cell. Biol. 13: 4539-4548.
3. Derijard, B., et al. 1995. Independent human MAP-kinase signal transduction pathways defined by MEK and Mkk isoforms. Science 267: 682-685.
4. Zhou, G., et al. 1995. Components of a new human protein kinase signal transduction pathway. J. Biol. Chem. 270: 12665-12669.
5. Han, J., et al. 1996. Characterization of the structure and function of a novel MAP kinase kinse (Mkk6). J. Biol. Chem. 271: 2886-2891.
6. Jiang, Y., et al. 1996. Characterization of the structure and function of a new mitogen-activated protein kinase (p38β). J. Biol. Chem. 271: 17920-17926.
7. Tournier, C., et al. 1997. Mitogen-activated protein kinase kinase 7 is an activator of the c-Jun NH_2-terminal kinase. Proc. Natl. Acad. Sci. USA 94: 7337-7442.

CHROMOSOMAL LOCATION

Genetic locus: MAP2K2 (human) mapping to 19p13.3; Map2k2 (mouse) mapping to 10 C1.

SOURCE

MEK-2 (96) is a mouse monoclonal antibody raised against amino acids 1-110 of MEK-2 of rat origin.

PRODUCT

Each vial contains 50 µg IgG_{2a} in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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. Not for resale.

APPLICATIONS

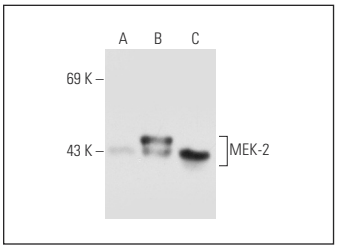
MEK-2 (96) is recommended for detection of MEK-2 of mouse, rat, human and canine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for MEK-2 siRNA (h): sc-35905, MEK-2 siRNA (m): sc-35906, MEK-2 shRNA Plasmid (h): sc-35905-SH, MEK-2 shRNA Plasmid (m): sc-35906-SH, MEK-2 shRNA (h) Lentiviral Particles: sc-35905-V and MEK-2 shRNA (m) Lentiviral Particles: sc-35906-V.

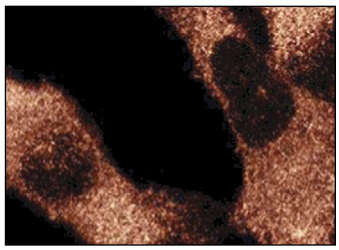
Molecular Weight of MEK-2: 47 kDa.

Positive Controls: MEK-2 (h2): 293T Lysate: sc-176551, A-431 whole cell lysate: sc-2201 or Jurkat whole cell lysate: sc-2204.

DATA



MEK-2 (96): sc-136261. Western blot analysis of MEK-2 expression in non-transfected 293T: sc-117752 (**A**), human MEK-2 transfected 293T: sc-176551 (**B**) and A-431 (**C**) whole cell lysates.



MEK-2 (96): sc-136261. Immunofluorescence staining of human fibroblast cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Min, B.K., et al. 2013. Stimulation of CD107 affects LPS-induced cytokine secretion and cellular adhesion through the ERK signaling pathway in the human macrophage-like cell line, THP-1. Cell. Immunol. 281: 122-128.

PROTOCOLS

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

CONJUGATES

See **MEK-2 (A-1): sc-13159** for MEK-2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.