SANTA CRUZ BIOTECHNOLOGY, INC.

MEK-1/2 (12-B): sc-436

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 MKK-3) functions to activate p38 MAP kinase, and MEK-4 (also called SEK1 or MKK-4) 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 MKK-7) phosphorylates and activates the JNK signal transduction pathway.

CHROMOSOMAL LOCATION

Genetic locus: MAP2K1 (human) mapping to 15q22.31, MAP2K2 (human) mapping to 19p13.3; Map2k1 (mouse) mapping to 9 C, Map2k2 (mouse) mapping to 10 C1.

SOURCE

MEK-1/2 (12-B) is a rabbit polyclonal antibody raised against amino acids 1-360 representing full length MEK-1 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.

MEK-1/2 (12-B) is available conjugated to agarose (sc-436 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP.

APPLICATIONS

MEK-1/2 (12-B) is recommended for detection of MEK-1 and MEK-2 of mouse, rat, human and *Xenopus laevis* 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-1/2 (12-B) is also recommended for detection of MEK-1 and MEK-2 in additional species, including canine, bovine, porcine and avian.

Molecular Weight of MEK-1: 45 kDa.

Molecular Weight of MEK-2: 47 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or KNRK whole cell lysate: sc-2214.

STORAGE

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

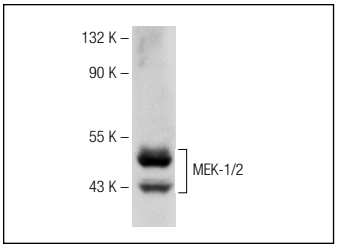
PROTOCOLS

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

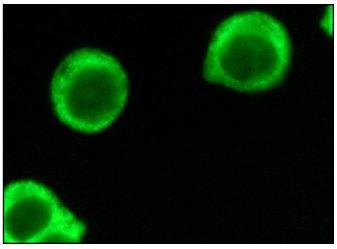
RESEARCH USE

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

DATA



MEK-1/2 (12-B): sc-436. Western blot analysis of MEK-1 (lower band) and MEK-2 (upper band) in NIH/3T3 whole cell lysate.



MEK-1/2 (12-B): sc-436. Immunofluorescence staining of methanol-fixed K-562 cells showing cytoplasmic and membrane staining.

SELECT PRODUCT CITATIONS

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3. Kosik, A., et al. 2009. Investigating the role of Aurora kinases in RAS signaling. J. Cell. Biochem. 106: 33-41.
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6. Beffy, P., et al. 2010. Altered signal transduction pathways and induction of autophagy in human myotonic dystrophy type 1 myoblasts. Int. J. Biochem. Cell Biol. 42: 1973-1983.
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8. Huang, T.Y., et al. 2012. Effect of sulforaphane on growth inhibition in human brain malignant glioma GBM 8401 cells by means of mitochondrial- and MEK/ERK-mediated apoptosis pathway. Cell. Biochem. Biophys. 63: 247-259.