

# MEK-1 (FL): sc-4025

## 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 p38b. MEK-7 (or MKK-7) 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.
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## CHROMOSOMAL LOCATION

Genetic locus: MAP2K1 (human) mapping to 15q22.31; Map2k1 (mouse) mapping to 9 C.

## SOURCE

MEK-1 (FL) is expressed in *E. coli* as a 55 kDa polyhistidine tagged fusion protein representing full length MEK-1 protein of human origin.

## PRODUCT

MEK-1 (FL) is purified from bacterial lysates (> 98%) by Ni<sup>2+</sup> affinity chromatography; supplied as 50 µg purified protein in PBS containing 5 mM DTT and 50% glycerol.

## STORAGE

Store at -20° C; stable for one year from the date of shipment.

## RESEARCH USE

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

## APPLICATIONS

MEK-1 (FL) is suitable as a substrate in Raf kinase assays. MEK-1 (FL) is also suitable as a Western blotting control for sc-6250 and sc-365800.

Molecular Weight of MEK-1: 45 kDa.

## SELECT PRODUCT CITATIONS

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## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.