

Product datasheet for **SC337822**

MAP3K4 (NM_001291958) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MAP3K4 (NM_001291958) Human Untagged Clone
Tag:	Tag Free
Symbol:	MAP3K4
Synonyms:	MAPKKK4; MEKK 4; MEKK4; MTK1; PRO0412
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >NCBI ORF sequence for NM_001291958, the custom clone sequence may differ by one or more nucleotides

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ATGTACATTGGTTCCATCCAGAAAGACAGGACAACCTCGAAGCAGGGATGGGGCTGCAGGTCACAGTTTT
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ACTTTCAAATTATGTATAAAGTGGGGATGGGACATAAGCCACCAATCCCTGAAAGATTAAGCCCTGAAGG
AAAGGACTTCTTTCTACTGCCTTGAGAGTGACCCAAAGATGAGATGGACCGCCAGCCAGCTCCTCGAC
CATTCTGTTTGTCAAGGTTTGACAGATGAAGAA TGA
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Restriction Sites:	Sgfl-Mlul
ACCN:	NM_001291958
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	<u>NM_001291958.1</u> , <u>NP_001278887.1</u>
RefSeq Size:	5662 bp
RefSeq ORF:	3186 bp
Locus ID:	4216
UniProt ID:	<u>Q9Y6R4</u>
Cytogenetics:	6q26
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	GnRH signaling pathway, MAPK signaling pathway

Gene Summary:

The central core of each mitogen-activated protein kinase (MAPK) pathway is a conserved cascade of 3 protein kinases: an activated MAPK kinase kinase (MAPKKK) phosphorylates and activates a specific MAPK kinase (MAPKK), which then activates a specific MAPK. While the ERK MAPKs are activated by mitogenic stimulation, the CSBP2 and JNK MAPKs are activated by environmental stresses such as osmotic shock, UV irradiation, wound stress, and inflammatory factors. This gene encodes a MAPKKK, the MEKK4 protein, also called MTK1. This protein contains a protein kinase catalytic domain at the C terminus. The N-terminal nonkinase domain may contain a regulatory domain. Expression of MEKK4 in mammalian cells activated the CSBP2 and JNK MAPK pathways, but not the ERK pathway. In vitro kinase studies indicated that recombinant MEKK4 can specifically phosphorylate and activate PRKMK6 and SERK1, MAPKKs that activate CSBP2 and JNK, respectively but cannot phosphorylate PRKMK1, an MAPKK that activates ERKs. MEKK4 is a major mediator of environmental stresses that activate the CSBP2 MAPK pathway, and a minor mediator of the JNK pathway. Several alternatively spliced transcripts encoding distinct isoforms have been described. [provided by RefSeq, May 2014]

Transcript Variant: This variant (3) contains an alternate exon compared to variant 1. The resulting isoform (c) has a shorter and distinct N-terminus compared to isoform a.