

## Product datasheet for **SC103206**

### MAP3K4 (AK094629) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	MAP3K4 (AK094629) Human Untagged Clone
Tag:	Tag Free
Symbol:	MAP3K4
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC103206 sequence for AK094629 edited (data generated by NextGen Sequencing)

```
ATGGCGGCGGCAGGCGTGACGGCAAAGGCGGGAGGAGGGACCAGCGCGGCAGCGGCTTCT
CTCATCCGTGCACGGAGCCCGCATGGCCGCGGCGGGCAGTAAGCTGCAGCCTGGCGCGG
GGCACCAGGAGCCCGAAGTGCGGGAGTGACTCGACTCCGCCTCCGCCTTACCCCGCCGC
AGGAGCCGTGCGCGCCGCGGCCATCTTGGAAACGGCGACCGGCCGAGCGCCGGGGCTACG
GTGGGCGGCGAGGGACAAGCCTCCCAGATCGGCGGCGGTGGCGGCGGCGGCGGGGCGC
CGGAATGCGACCGGACGGGGGCGGAGACGGCGGCAGGGAGGGGCGGGGAGCGCCGTC AAG
TGTCGGCGCGATTTCGGTCCTGGAGCCGGGTCTCGCCAGCTCGCCCGGTGTGCGCCCGGCC
GGTGCCAGTGGGGACTGTGGAGCGGAGCCGGGCTGTGCAGCGGCCTGGGAGCTCGAGGC
TTCCCAGGCGGTCTCGGTCTGGGAGGGACGCTGGGTAG
```

Clone variation with respect to AK094629.1  
465 g=>c



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**5' Read Nucleotide Sequence:**

>OriGene 5' read for AK094629 unedited  
 GGGGTCAGAAATTTGTATACGACTCATATAGGCGGCCGCGAAATTCGCACGAGGCGTTGA  
 GGGTGAGCTGGGGGAGTCTACAAGGGAAGGGGAGCCGGCAACACGCTCGAGCGGAACCCT  
 GCGGAGCTGCAACCCCGGGAGGAGTCCGCCGACAGACTCAGACGCGGTCCCCTGGGACCC  
 AGGGATGCACCGCGCCCTCCCGCCCAGCCTGCAGAGACTGGATGCTTCCCTCCCACC  
 TGGCGGGAAGCAGAGGCCCTCGGGCCGACCGAGTTCGGGCCAGGACCCGCCCGCTTTC  
 TCGGAGCGACCGACTGCGGCCGCCACACTCACCTCGCCGCCAAGCAGCACTCGGGTCTG  
 ACTCGGTCTCGGGTTCGGGTGGCGGTGGTGGCGCGCGCGGTGGCGGGCTCCTCCA  
 TGGCGGGCGCAGGCGTGACGGCAAAGGCGGGAGGAGGACCAGCGCGGCAGCGGTTCTC  
 TCATCCGTGCACGGAGCCCCGATGGCCGCGCGGGCAGTAAGCTGCAGCCTGGCGCGGG  
 GCACCGGAGCCCCGAAGTGGGGAGTACTCGACTCCGCCTCCGCCTTACCCCGCCGCA  
 GGAGCCGTGCGCGCCGCGCCATCTTGGAAACGGCGACCGGCCGAGCGCCGGGGCTACGG  
 TGGGCGCGGAGGGACAAAGCCTCCAGATCGCGGCGGTGGCGGGCGCGGCGGCGCC  
 GGAATGCGACCGACGGNGGCGNANAACGCNCGANGGANGGGCGGNGAAGCGCCNTCAA  
 GTGTGCGCGCGATTTCGGTCTGGACCCGGTCTCGNCAGCTCGNCCGGTGTNCCCNNGCC  
 GTGGCANTGGGGACTGTGGAGCNNGACGGGCTGTGCANCGGCCTGGGAGCTCNAGCTTTC  
 CCAGCGTCTTCGCTCGGAGGGAC

**3' Read Nucleotide Sequence:**

>OriGene 3' read for AK094629 unedited  
 GACCGCGGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTTTTTTAAAAAAGAT  
 TTATTTTATTATTTAACTTTTAAAGTCTCTAATATGCCTTCTAAGAAGGGTTCTGGCTCA  
 GAAAATGCAGAAAGAAAATCGAGTAGAGAACTAGAATTACAGAAACCTAAGAAACTTTT  
 TACTGAGCTTTCTCACACAAGAAAATGCACGGAAATGAATTATACATGGATACCAATTT  
 GTGATTTTTAAAAATTTGTAATTTTTTAAATTAAGATAAAAATTAGTTTTTTTTTTTGA  
 TACTTTTTTGTGTTTTACCTCACCTTTACTAAGCTGTTAGCTTGGTCTGTTGCGCT  
 TACTGCTATATCCTCAGCATCTAGTACAGTTCCTGACACATATATGCACTTAATAAGTAT  
 TTGTCAAATGAATATTATTGAGTAAATAAGATGAAGGTCAATTCAGAAATTCAGCACTAT  
 CAGGCTATATACATAATACAGACTATTATAAAAACTAGAATGGAGCAGTTCCTTTTAA  
 GACGGAGAAAATGCAGTAACATACTTTGAGCACAATATAGCTAATTTCACTGGTCTT  
 TAAATATAACATACTATAATCAATTTAATGTTTTTCTTTGTTACCAGAGTTGTTCAAAA  
 CGTGCGTTTTACCTATCAAAGCTCAACTAAATGAGGTTTAAAGAAATCTGCACATTTGA  
 TACTTAATTTTTAAAGATTCTGGTTTTGGATTAATCTGGATTTACCCCTATGGGAAAT  
 TTTGTAATATTTCAAATTAATAAACTGTGAAGCCAGCGCTAGAGTAACGATGCATTG  
 GATTTACAGGATTCTGACTCTGAATATCCTAGCATTCTCTTCCCATCCCTCGGGTA  
 GAGCATCAGTCCAGTTCTTGAATCGTTCGATCTAGACCTGGTGAGAGTTTGGGNTGAA  
 TGAGGGTCCTTAATCGGATCCGAACCTTTGTCGCTAAA

**Restriction Sites:**

NotI-NotI

**ACCN:**

AK094629

**Insert Size:**

1750 bp

**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:**

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:** [AK094629.1](#), [BAC04390.1](#)

**RefSeq Size:** 2028 bp

**RefSeq ORF:** 2028 bp

**Locus ID:** 4216

**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]