

## Product datasheet for **RC218669**

### MAP3K10 (NM\_002446) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	MAP3K10 (NM_002446) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MAP3K10
Synonyms:	MEKK10; MLK2; MST
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC218669 representing NM\_002446  
 Red=Cloning site Blue=ORF Green=Tags(s)

CTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGGATCGCC**GGCGC**  
**GCCC**

ATGGAGGAGGAGGAGGGGGCGGTGGCCAAGGAGTGGGGCACGACCCCCGCGGGGCCGTCTGGACCGCGG  
 TGTTCCGACTACGAGCGCGGGCGACGAGGAGCTGACCCCTGCGGAGGGGCGATCGCGTCCAGGTGCTTTC  
 CCAAGACTGTGCGGTGTCCGGCGACGAGGGCTGGTGGACCGGGCAGCTCCCCAGCGGCCCGTGGGCGTC  
 TTCCCCAGCAACTACGTGGCCCCGGCGCCCCGCTGCACCCGCGGGCCTCCAGCTGCCCCAGGAGATCC  
 CCTTCCACGAGCTGCAGCTAGAGGAGATCATCGGTGTGGGGGGCTTTGGCAAGTCTATCGGGCCCTGTG  
 GCGTGGCGAGGAGGTGGCAGTCAAGGCCGCCGGCTGGACCCTGAGAAGGACCCGGCAGTGACAGCGGAG  
 CAGGTGTGCCAGGAAGCCCGCTCTTTGGAGCCCTGCAGCACCCCAACATAATTGCCCTTAGGGGCGCT  
 GCCTCAACCCCCACACCTCTGCCTAGTGATGGAGTATGCCCGGGTGGTGCAGTGCAGGAGGTGCTGGC  
 AGGTGCGCGGGTGCCACCTCACGTGCTGGTCAACTGGGCTGTGCAGGTGGCCCGGGCATGAACTACCTA  
 CACAATGATGCCCTGTGCCATCATCCACCGGACCTCAAGTCCATCAACATCCTGATCCTGGAGGCCA  
 TCGAGAACCACAACTCGCAGACACGGTGTCAAGATCACGGACTTCGGCCTCGCCCGGAGTGGACAA  
 GACCACCAAGATGAGCGCTGCGGGGACCTACGCCTGGATGGCGCCGGAGGTTATCCGTCTCTCCCTTTC  
 TCCAAAAGCAGTGATGTCTGGAGCTTCGGGGTGTGCTGTGGGAGCTGCTGACGGGGGAGGTCCCCTACC  
 GTGAGATCGACGCCTTGCCCGTGGCGTATGGCTGGCTATGAATAAGCTGACGCTGCCCATTCCTCCAC  
 GTGCCCGAGCCCTTTGCCCGCTCCTGGAGGAATGCTGGGACCCAGACCCACGGGCGGCCAGATTTCC  
 GGTAGCATCTTGAAGCGGCTTGAAGTCAATCGAACAGTCAGCCCTGTTCCAGATGCCACTGGAGTCTTCC  
 ACTCGTGCAGGAAGACTGGAAGCTGGAGATTACACATGTTTATGACCTTCGGACCAAGGAGAAAGGA  
 GCTTCGGAGCCGTGAGGAGGAGCTGCTCGGGCGGCACAGGAGCAGCGCTTCCAGGAGGAGCAGCTGCGG  
 CGGCGGGAGCAGGAGCTGGCAGAACGTGAGATGGACATCGTGGACGGGAGCTGCACCTGCTCATGTGCC  
 AGCTGAGCCAGGAGAAGCCCGGTCCGCAAGCGCAAGGGCAACTTCAAGCGCAGCCGCCTGCTCAAGCT  
 GCGGGAAGGCGGAGCCACATCAGCCTGCCCTCTGGCTTTGAGCATAAGATCACAGTCCAGGCTCTCCA  
 ACTCTGGATAAGCGAAAGGATCCGATGGGGCCAGCCCCCTGCAAGCCACGATCATCCCCGGCTGA  
 GGGCCATTGCGCTGACTCCCGTGGACTGTGGTGGCAGCAGCAGTGGCAGCAGTGGAGGAAGTGGGAC  
 ATGGAGCCGCGTGGGCCCCAAAGAAGGAAGAACTGGTGGGGGCAAGAAGAAGGACGAACGTGGGGG  
 CCCAGCTCCACCTGCAGAAGGAGCGGGTGGGAGGAGAGGAGGCTGAAGGGGTGGGGGAAGGAAGCA  
 AACAGTGGTCAAGTCCCCAACCTGGGCAAGTCCCCAACACACACCCATCGCCCTGGCTTTGC  
 CAGCCTCAATGAGATGGAGGAGTTCGCGGAGGCAGAGGATGGAGGCAGCAGCTGCCCCCTTCCCTAC  
 TCGACCCCGTCTACCTCTCAGTGCCACTGCCTGCCGAGCCCTCCCCGGGGGCGCGGGCGCCGTGGGAGC  
 CGACGCGTCCGCGCCCCCGCTCGGTGGGGACACGGCGCCCGGGCGGCTGCGACCTGGCGTGTAGG  
 CTGCGCCACGCTGCTGGGGGCTGTGGGCTGGGCGCCGACGTGGCCGAGGCGCGCGGGCCGACGGTGA  
 GAGCAGCGGCGTGGCTCGACGGCTCTTTTCCCCGCGCGGCGCTTCCCGGGGCGCTCAGCCAC  
 CCGCGCTCCCCAGGCCCGCGAAGACGTGGGCCCGGCTGGGCTGGCGCCCTCGGCCACCTCGT  
 GTCGCTGTCCGTCCGACTGCAACTCCACGCTTCACTGCTGCGCTGACAGTGACGAGGCGCA  
 CCGGCCGCGCCCTCCCCACCCTCCCCGCGGCCACACCCACGCCCTCGCCAGCACCAACCCCC  
 TGGTGGACCTGGAGCTGGAGAGCTTCAAGAAGGACCCCGCCAGTTCGCTCACGCCACCCACGTACGGC  
 TGCATGCGCTGTGAGCCGCGGGCACCGCGGACGCCATCGACGGGGCGCTGGGGCAGCGGGGGCGCC  
 GAGCCCGGGCCATGGCCCTGGCCCTCGTACCTTCTGGACTTCCCCGCTGCCGACCCCAAGGCC  
 TGTTCCAGCCCGCGCCGCGCCCTGAGTTCAGGCGCCACCACCCTGACCTTTGCCCGAGACC  
 TCGCCCGCTGCCAGTGCCTCCCGCTTGGACCCCTGAAACTGGTCTCCTTCGGCCGACACTCACCATC  
 TCGCTCCAGCAGGCCAGACTCCGGAGAGCCCTGGGCCCCAGCGTGCAGCCACACTGCTGGACA  
 TGGACATGGAGGGCAGAACAAGACAGCACAGTGCCCTGTGCGGGGCCACGGCTCCAC

**AGCGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
 TGGATTACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC218669 representing NM\_002446  
 Red=Cloning site Green=Tags(s)

MEEEEGAVAKEWGTTPAGPVWTVAFDYEAAGDEELTLRRGDRVQVLSQDCAVSGDEGWWTGQLPSGRVGV  
 FPSNYVAPGAPAAPAGLQLPQEIPFHELQLEEIIGVGGFGKVYRALWRGEEVAVKAARLDPEKDPVTAE  
 QVCQEARLFGALQHPNIIALRGACLNPPHCLVMEYARGGALSRVLAGRRVPPHVLVNWAVQVARGMNYL  
 HNDAPVPIIHRDLKXSINILILEAIENHNLADTVLKITDFGLAREWHKTKMSAAGTYAWMAPEVIRLSLF  
 SKSSDVWSFGVLLWELLTGEVPYREIDALAVAYGVAMNKLTLPSTCPEPFARLLEECWDPDPHGRPDF  
 GSILKRLEVIEQSALFQMPLESFHSLQEDWKLEIQHMFDDLRTKEKELRSREEELLRAAQEQRFQEEQLR  
 RREQELAEREMDIVERELHLLMCQLSQEKPRVRKRKGNFKRSRLLKLRGGSHISLPSGFEHKITVQASP  
 TLDKRKSGSDGASPPASPSIIPRLRAIRLTPVDCGSSSSGSSGGTWSRGGPPKKEELVGGKKKGRTWG  
 PSSTLQKERVGGEEERLKGLGEGSKQWSSAPNLGKSPKHPIAPGFASLNEMEEFAEAEDGGSSVPPSPY  
 STPSYLSVPLPAEPSGARAPWEPTPSAPPARWGHGARRRCDLALLGCATLLGAVGLGADVAEARADGE  
 EQRRWLDGLFFPRAGRFPRGLSPPARPHGRREDVGPGLGLAPSATLVLSVSDCNSTRSLLRSDSEAA  
 PAAPSPPPSPAPTPTSPSTNPLVDLELESFKKDPKQSLTPTHVTAACAVSRGHRRTPSDGLGQRGPP  
 EPAGHGPRDLDFPRLPDQALFPARRRPPEFGRPTTLTFAPRPRPAASRPRLDPWKLVSFGRTLTI  
 SPPSRPDTPESPGPPSVQPTLLDMDMEGQNQDSTVPLCGAHGSH

SGPTRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

AscI-RsrII

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_002446

**ORF Size:** 2862 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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:** [NM\\_002446.4](#)

**RefSeq Size:** 3453 bp

**RefSeq ORF:** 2865 bp

**Locus ID:** 4294

**UniProt ID:** [Q02779](#)

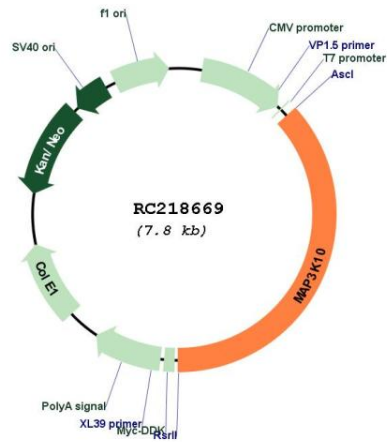
**Cytogenetics:** 19q13.2

**Protein Families:** Druggable Genome, Protein Kinase

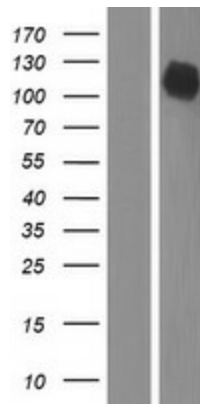
**MW:** 104.1 kDa

**Gene Summary:** The protein encoded by this gene is a member of the serine/threonine kinase family. This kinase has been shown to activate MAPK8/JNK and MKK4/SEK1, and this kinase itself can be phosphorylated, and thus activated by JNK kinases. This kinase functions preferentially on the JNK signaling pathway, and is reported to be involved in nerve growth factor (NGF) induced neuronal apoptosis. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC218669



Western blot validation of overexpression lysate (Cat# [LY419320]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC218669 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).