

## Product datasheet for **RC216463**

### MAP3K12 (NM\_006301) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	MAP3K12 (NM_006301) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	MAP3K12
Synonyms:	DLK; MEKK12; MUK; ZPK; ZPKP1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide Sequence:**

>RC216463 representing NM\_006301  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCTTGCCTCCATGAGACCCGAACACCTCTCCTTCTTTGGGGCTTTGTGTCTACCCTAAGTGAGG  
 CATCCATGCGCAAGCTGGACCCAGACACTTCTGACTGCACTCCCGAGAAGGACCTGACGCCTACCCATGT  
 CCTGCAGCTACATGAGCAGGATGCAAGGGGGCCAGGGGAGCAGCTGGGTACCTGAGAGTCGGGCATCC  
 AGAGTTCGAGCTGACGAGGTGCGACTGCACTGCCAGAGTGGCAGTGGCTTCTTGAGGGCCTTTTGGCT  
 GCCTGCGCCCTGTCTGGACCATGATTGGCAAAGCCTACTCCACTGAGCACAAGCAGCAGCAAGACCT  
 TTGGGAGGTCCCCTTTGAGGAAATCCTGGACCTGCACTGGGTGGGCTCAGGGGCCAGGGTGTCTTTC  
 CTGGGGCCTTCCACGGGAGGAGGTGGCTGTGAAGAAGTGGCAGACCTCAAAGAAACCGACATCAAGC  
 ACTTGCAAAAGCTGAAGCACCCCAACATCATCACTTTCAAGGGTGTGTGCCACCCAGGCTCCCTGCTACTG  
 CATCCTCATGGAGTTCTGCGCCAGGGCCAGCTGTATGAGTACTGCGGGCTGGCCGCCCTGTACCCCC  
 TCCTTACTGGTTGACTGGTCCATGGGCATCGCTGGTGGCATGAACTACCTGCACCTGCACAAGATTATCC  
 ACAGGGATCTCAAGTACCCAACATGCTAATCACCTACGACGATGTGGTGAAGATCTCAGATTTTGGCAC  
 TTCCAAGGAGCTGAGTGACAAGAGCACCAAGATGTCTTTGCAGGGACAGTAGCCTGGATGGCCCCGTGAG  
 GTGATCCGCAATGAACCTGTGTCTGAGAAGGTCGACATCTGGTCTTTGGCGTGGTGTATGGAACTGC  
 TGACTGGTGAGATCCCCTACAAAGACGTAGATTCTCAGCCATTATCTGGGGTGTGGGAAGCAACAGTCT  
 CCATCTGCCCCTGCCCTCCAGTTGCCAGATGGTTTCAAGATCCTGCTTCGCCAGTGTGGAATAGCAAA  
 CCACGAAATCGCCCATCATTCCGACAGATCCTGCTGCATCTGGACATTGCCTCAGCTGATGACTCTCCA  
 CACCCAGGAGACTTACTTTAAGTCCCAGGCAGAGTGGCGGAAGAAGTAAAAGTGCATTTGAAAAGAT  
 TAAGTCAGAAGGGACCTGTCTGCACCGCTAGAAGAGGAACTGGTGTGAGGAGGAGGGAGGAGCTCAGA  
 CACGCCCTGGACATCAGGGAGCACTATGAAAGGAAGCTGGAGAGAGCCAACAACCTGTATATGAACTTA  
 ATGCCCTCATGTTGCAGCTGGAACCTCAAGGAGAGGGAGCTGCTCAGGCGAGAGCAAGCTTTAGAGCGGAG  
 GTGCCAGGCCTGCTGAAGCCACACCTTCCCGGGCCTCCTGCATGGAACACAATGGAGAAGCTTATC  
 AAGAAGAGGAATGTGCCACAGAAGCTGTACCCCATAGCAAAAGGCCAGATATCCTCAAGACGGAGTCTT  
 TGCTCCCTAAACTAGATGCAGCCCTGAGTGGGGTGGGCTTCTGGGTGTCTAAGGGCCCCCCTCACC  
 AGGACGGAGTCGCCGTGGCAAGACCCGTACCCGAAGGCCAGCGCAAGGGGAGCTGTGGGACCTGCCT  
 GGGCTTCGTACAGCTGTGCCACCCATGAACCTGGAGGACCAGGAAGCCAGGGGGCCTAGGAGGGGGAC  
 CCTCAGCCTGGGAGGCCTGCCCTCCCGCCTCCGTGGGCTTCATCATGACCTCCTGCTCCGCAAAATGTC  
 TTCATCGTCCCCAGACCTGCTGTGAGCAGCACTAGGGTCCCAGGGCCGGGGGCCACAGGCGGAGCTGGG  
 GATCCTGGCTCACCACTCCGGCCCGGGGTGACACCCACCAAGTGAAGGGCTCAGCCCCTGGCTCCACCA  
 GCCCAGATTACCTGGGGGAGCCAAAGGGGAACCCTCCTCCAGTAGGGCCTGGTGAAGGTGTGGGGCT  
 TCTGGAACTGGAAGGGAAGGGACCTCAGGCGGGGAGGAAGCCGGGCTGGTCCCAGCACTTGACCCCA  
 GCTGCACTGCTGTACAGGGCTGCCGTACCCGAAGTCAGAAACGTGGCATCTCATCGGAAGAGGAGGAAG  
 GAGAGGTAGACAGTGAAGTAGAGCTGACATCAAGCCAGAGGTGGCCTCAGAGCCTGAACATGCCCCAGTC  
 ACTATCTACCTTCAGCTCAGAGAATCCATCAGATGGGGAGGAAGGCACAGCTAGTGAACCTTCCCCAGTC  
 GGCACACCTGAAGTTGGCAGCACCAACTGATGAGCGGCCAGATGAGCGGTCTGATGACATGTGCTCCC  
 AGGGCTCAGAAATCCCACTGGACCCACCTCCTTCAAGGTCATCCTGGCCCTGAACCCAGCTCCCTGCC  
 CATTCCACACCAGGAACCTTCTCAGAGAGCGGGCCCTCCCAATTCTGAGGACTCAGACTGTGACAGCACT  
 GAATTGGACAACCTCAACAGCGTTGATGCCTTGCGGCCCCAGCTTCCCTCCCTCCA

**ACGGT**ACGGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC216463 representing NM\_006301  
Red=Cloning site Green=Tags(s)

MACLHETRTPSPSFGGFVSTLSEASMRKLDPDTSDCTPEKDLTPTHVLQLHEQDAGGPGGAAGSPESRAS  
RVRADDEVRLQCQSGSGFLEGLFGCLRPVWTMIGKAYSTEHKQQQEDLWEVPFEEILDQWVGSGAQGAVF  
LGRFHGEEVAVKKVRDLKETDIKHLRKLKHPNIIITFKGVCTQAPCYCILMEFCAQQQLYEVLRAGRPTP  
SLLVDWSMGIAGGMNYLHLHKIIHRDLKSPNMLITYDDVVKISDFGTSKELSDKSTKMSFAGTVAWMAPE  
VIRNEPVSEKVDIWSFGVVLWELLTGEIPYKDVSSAIIWVGVSNSLHLPVPSSCPDGFKILLRQCWNSK  
PRNRPSFRQILLHLDIASADVLSTPQETYFKSQAEWREEVKLHFEEKIKSEGTCLEHREELVMRRREELR  
HALDIREHYERKLERANNLYMELNALMLQELKERELLRREQALERRCPLLKPHPSRGLLHGNTMEKLI  
KKRNVPQKLSPHSKRPDILKTESLLPKLDAALSGVGLPGCPKPPSPGRSRRGKTRHRKASAKGSCGDL  
GLRTAVPPHEPGGPGSPGGLGGGSAWEACPPALRGLHHDLLLKMSSSPDLLSALGSRGRGATGGAG  
DPGSPPPARGDTPPSEGSAPGSTSPDSPGGAKGEPVPPVGPGEVGLLGTGREGTSGRGGSRAGSQHLTP  
AALLYRAAVTRSQKRGISSEEEEGVDSEVELTSSQRWPQSLNMRQSLSTFSENPSDGEEGTASEPSPS  
GTPEVGSTNTDERPDERSDDMCSQGSEIPLDPPPSEVIPGPEPSSLPIPHQELLRERGPNSDSDCDST  
ELDNSNSVDALRPPASLPP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: Sgfl-MluI



<b>ACCN:</b>	NM_006301
<b>ORF Size:</b>	2577 bp
<b>OTI Disclaimer:</b>	<p>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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_006301.4</a>
<b>RefSeq Size:</b>	3541 bp
<b>RefSeq ORF:</b>	2580 bp
<b>Locus ID:</b>	7786
<b>UniProt ID:</b>	<a href="#">Q12852</a>
<b>Cytogenetics:</b>	12q13.13
<b>Domains:</b>	pkinase, TyrKc, S_TKc
<b>Protein Families:</b>	Druggable Genome, Protein Kinase
<b>Protein Pathways:</b>	MAPK signaling pathway
<b>MW:</b>	93.7 kDa

**Gene Summary:**

This gene encodes a member of the serine/threonine protein kinase family. This kinase contains a leucine-zipper domain and is predominately expressed in neuronal cells. The phosphorylation state of this kinase in synaptic terminals was shown to be regulated by membrane depolarization via calcineurin. This kinase forms heterodimers with leucine zipper containing transcription factors, such as cAMP responsive element binding protein (CREB) and MYC, and thus may play a regulatory role in PKA or retinoic acid induced neuronal differentiation. Alternatively spliced transcript variants encoding different proteins have been described.[provided by RefSeq, Jul 2010]