

Product datasheet for **MR209357**

Map3k7 (NM_009316) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Map3k7 (NM_009316) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Map3k7
Synonyms:	B430101B05; C87327; Tak1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR209357 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTCGACAGCCTCCGCCCTCGTCTCTCTCGTCTTCTGCCAGTGAGATGATCGAAGCGCCGTCGC
 AGGTCCTGAACCTCGAAGAGATCGACTACAAGGAGATCGAGGTGGAAGAGTTGTGCGAAGAGGAGCTTT
 TGGAGTAGTTTGCAAAGCTAAGTGGAGAGCAAAAGATGTCGCTATTAAACAGATAGAAAAGTGAAGTCTGAG
 AGGAAGGCTTTTATTGTGGAGCTCCGGCAGTTGTCGCGTGTGAACCATCCTAACATTGTCAAGTTGTACG
 GAGCCTGCCTGAATCCAGTATGTCTTGTGATGGAATATGCAGAGGGGGGCTCATTGTATAATGTGCTGCA
 TGGTGTGAACCATGCCTTACTACACTGCTGCTCATGCCATGAGCTGGTGTTCACAGTGTCCCAAGGA
 GTGGCTTACCTGCACAGCATGCAGCCAAAGCGCTGATTCACAGGGACCTCAAGCCTCCAAACTGTCTGC
 TGGTTGCAGGAGGACAGTTCTAAAAATCTGCGATTTTGGTACAGCTTGTGACATCCAAACACACATGAC
 CAATAATAAAGGGAGTGTGCTTGGATGGCGCCTGAAGTGTGTAAGGTAGCAATTACAGTGAAAAGTGT
 GATGTCTTCAGCTGGGGTATTATCCTCTGGGAAGTGATAACACGCCGGAAACCCCTTCGATGAGATCGGTG
 GCCCAGCTTTCAGAATCATGTGGGCTGTTCAATGGCACTCGACCACCACTGATCAAAAATTTACCTAA
 GCCCATTGAGAGCTTGTGACACGCTGTTGGTCTAAGGACCCATCTCAGCGCCCTTCAATGGAGGAAATT
 GTGAAAATAATGACTCACTTGTGCGGTAATCCCAGGAGCGGATGAGCCATTACAGTATCCTTGTGAGT
 ACTCTGATGAAGGGCAGAGCAACTCAGCCACCAGCACAGGCTCGTTTATGGACATTGCTTCTACAAATAC
 CAGTAATAAAAGTGACACAAATATGGAACAGGTTCTGCCACAACGACACTATTAACGCTTGGAGTCA
 AAAGTGTGAAAACCAGGCAAGCAACAGAGTGAATCTGGACGCTGAGCTTGGGAGCCTCTCGTGGGA
 GCAGTGTGGAGAGCTTGCCTCCACTTCCGAGGGCAAGAGGATGAGTGTGACATGTGAAATAGAAAG
 CAGGATCGTGGGACTGCAGCCTATTCCAAGCCTAAACGGGGCCACCGTAAAACCGCTTCATTTGGCAAC
 ATTCTGGATGTCCCTGAGATCGTCATATCAGGTAAACGGGCAACCAAGGCTAGATCCATCCAAGACTTGA
 CTGTTACTGGGACAGAACCTGGTCAGGTGAGCAGCCGGTCATCCAGCCCTAGTGTGAGAATGATCACTAC
 CTCAGGACCAACCTCAGAGAAGCCAGCTCGCAGTACCCATGGACCCCTGATGATCCACAGACACCAAT
 GGCTCAGATAACTCCATCCCAATGGCGTATCTTACTGATCACCAGCTACAGCCTCTAGCGCCGTGCC
 CAAACTCCAAAGAATCCATGGCAGTGTTCGAACAGCACTGTAATAAGGCACAGGAGTATATGAAAGTTCA
 AACCGAAATCGCATTGTTACTACAGAGAAAGCAAGAACTAGTTGCAGAATTGGACCAGGATGAAAAGGAC
 CAGCAAAATACATCTCGTCTGGTACAGGAACATAAAAAGCTTTTATGATGAAAACAAAAGCCTTTCTACTT
 ATTACCAGCAATGCAAAAAACAACCTAGAGGTCATCAGAAGCCAACAGCAGAAACGACAAGGCACTTCA

ACGCGTACGCGGCGGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR209357 protein sequence
 Red=Cloning site Green=Tags(s)

MSTASAASSSSSSASEMIEAPSQVLNFEEIDYKEIEVEEVVGRGAFGVVCKAKWRAKDVAIKQIESESE
 RKAFIVELRQLSRVNHPIVVKLYGACLNVPCLVMEYAEGGSLYNVLHGAELPPYYTAAHMSWCLQCSQG
 VAYLHSMQPKALIHRDLKPPNLLL VAGGTVLKICDFGTACDIQTHMTNNGSAAWMAPEVFEGSNYSEKC
 DVFSWGIILWEVITRRKPFDEIGGPAFRIMWAVHNGTRPPLIKNLPKPIESLMTRCWSKDPSQRPSMEEI
 VKIMTHLMRYFPGADEPLQYPCQYSDGQNSATSTGFSMDIASNTNSNKSDTNMEQVPAATNDTIKRLS
 KLLKNQAKQQSESGRLSLGASRGSSVESLPPTSEGKRMSADMSEIEARIVATAAAYSKPKRGRHRTASFGN
 ILDVPEIVI SGNGQPRRRSIQDLTVTGTGEPQVSSRSPSVRMITTSPTSEKPARSHWPPTDDSTDTN
 GSDNSIPMAYLTLDHQLQPLAPCPNSKESMAVFEQHCKMAQEYMKVQTEIALLLQRKQELVAELDQDEKD
 QQNTSRLVQEHKLLDENKSLSTYYQCKKQLEVIRSQQKQKRGTS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_009316

ORF Size: 1821 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 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).

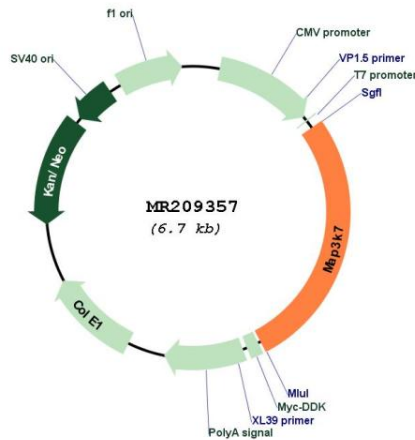
- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
 3. Close the tube and incubate for 10 minutes at room temperature.
 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the 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_009316.1](#), [NP_033342.1](#)

RefSeq Size: 5763 bp
RefSeq ORF: 1821 bp
Locus ID: 26409
Cytogenetics: 4 A5
MW: 67.2 kDa

Gene Summary: Serine/threonine kinase which acts as an essential component of the MAP kinase signal transduction pathway. Plays an important role in the cascades of cellular responses evoked by changes in the environment. Mediates signal transduction of TRAF6, various cytokines including interleukin-1 (IL-1), transforming growth factor-beta (TGFB), TGFB-related factors like BMP2 and BMP4, toll-like receptors (TLR), tumor necrosis factor receptor CD40 and B-cell receptor (BCR) (PubMed:10748100, PubMed:16157589, PubMed:21183079, PubMed:29291351). Ceramides are also able to activate MAP3K7/TAK1. Once activated, acts as an upstream activator of the MKK/JNK signal transduction cascade and the p38 MAPK signal transduction cascade through the phosphorylation and activation of several MAP kinase kinases like MAP2K1/MEK1, MAP2K3/MKK3, MAP2K6/MKK6 and MAP2K7/MKK7. These MAP2Ks in turn activate p38 MAPKs, c-jun N-terminal kinases (JNKs) and I-kappa-B kinase complex (IKK). Both p38 MAPK and JNK pathways control the transcription factors activator protein-1 (AP-1), while nuclear factor-kappa B is activated by IKK (PubMed:16157589, PubMed:8533096, PubMed:29291351). MAP3K7 activates also IKBKB and MAPK8/JNK1 in response to TRAF6 signaling and mediates BMP2-induced apoptosis (PubMed:10748100). In osmotic stress signaling, plays a major role in the activation of MAPK8/JNK1, but not that of NF-kappa-B. Promotes TRIM5 capsid-specific restriction activity (By similarity). [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR209357