

Product datasheet for **MG226783**

Map3k7 (NM_172688) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Map3k7 (NM_172688) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Map3k7
Synonyms:	B430101B05; C87327; Tak1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG226783 representing NM_172688
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGTCGACAGCCTCCGCCCTCGTCTCTCTCGTCTTCTGCCAGTGAGATGATCGAAGCGCCGTCGC
 AGGTCCTGAACCTCGAAGAGATCGACTACAAGGAGATCGAGGTGAAGAGTTGTCGGAAGAGGAGCTTT
 TGGAGTAGTTTGCAAAGCTAAGTGGAGAGCAAAAGATGTCGCTATTAAACAGATAGAAAAGTGAAGTCTGAG
 AGGAAGGCTTTTATTGTGGAGCTCCGGCAGTTGTCACGTGTGAACCATCCTAACATTGTCAAGTTGTATG
 GAGCCTGCCTGAATCCAGTATGTCTTGTGATGGAATATGCAGAGGGGGGCTCATTGTATAATGTGCTGCA
 TGGTGTGAACCATTCCTTACTACACTGCTGCTCATGCCATGAGCTGGTGTTCACAGTGTCCCAAGGA
 GTGGCTTACCTGCACAGCATGCAGCCAAAGCGCTGATTCACAGGGACCTCAAGCCTCCAAACTGTCTGC
 TGGTTGCAGGAGGACAGTTCTAAAAATCTGCGATTTTGGTACAGCTTGTGACATCCAAACACACATGAC
 CAATAATAAAGGGAGTGTGCTTGGATGGCGCCTGAAGTATTTGAAGGTAGCAATTACAGTGAAAAGTGT
 GATGTCTTCAGCTGGGGTATTATCCTCTGGGAAGTGATAACACGCGGAAACCCCTTCGATGAGATCGGTG
 GCCCAGCTTTCAGAATCATGTGGGCTGTTCATAATGGCACTCGACCACCACTGATCAAAAATTTACCTAA
 GCCCATTGAGAGCTTGTGACACGCTGTTGGTCTAAGGACCCATCTCAGCGCCCTTCAATGGAGGAAATT
 GTGAAAATAATGACTCACTTGTGCGGTACTTCCAGGAGCGGATGAGCCGTTACAGTATCCTTGTGAGT
 ACTCTGATGAAGGGCAGAGCAACTCAGCCACCAGCACAGGCTCATTATGGACATTGCTTCTACAAATAC
 CAGTAATAAAAGTGACACAAATATGGAACAGGTTCTGCCACAAACGACACTATTAACGCTTGGAGTCA
 AAACTTTTGAAAACCAGGCAAGCAACAGAGTGAATCTGGACGCTGAGCTTGGGAGCCTCTCGTGGGA
 GCAGTGTGGAGAGCTTGCCTCCCACTTCCGAGGGCAAGAGGATGAGTGTGACATGTCTGAAATAGAAGC
 CAGGATCGTGGCGACTGCAGGTAACGGGCAACCAAGCGTAGATCCATCCAAGACTTGACTGTTACTGGG
 ACAGAACCTGGTCAGGTGAGCAGCCGGTATCCAGCCCTAGTGTGAGAATGATCACTACCTCAGGACCAA
 CCTCAGAGAAGCCAGCTCGCAGTCAACCCGTTGGACCCCTGATGATTCCACAGATACCAATGGCTCAGATA
 CTCCATCCCAATGGCGTATCTTACACTGGATCACCAGCTACAGCCTTAGCGCCGTGCCAAACTCCAAA
 GAATCCATGGCAGTGTTCGAACAACATTGTAATAATGGCACAGGAGTATATGAAAGTTCAAACCGAAATCG
 CATTGTTACTACAGAGAAAGCAAGAACTAGTTGCAGAATTGGACCAGGATGAAAAGGACCAGCAAAATAC
 ATCTCGTCTGGTACAGGAACATAAAAAGCTTTTAGATGAAAACAAAAGCCTTTCTACTTATTACCAGCAA
 TGCAAAAACAACACTAGAGGTCATCAGAAGCCAACAGCAGAAACGACAAGGCACTCA

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>MG226783 representing NM_172688
 Red=Cloning site Green=Tags(s)

MSTASAASSSSSSASEMIEAPSQVLNFEIEIDYKEIEVEEVVGRGAFVGVCKAKWRAKDVAIKQIESESE
 RKAFIVELRQLSRVNHPNIVKLYGACLNPVCLVMEYAEGGSLYNVLHGAELPPYYTAAHAMSACLQCSQG
 VAYLHSMQPKALIHRDLKPPNLLL VAGGTVLKICDFGTACDIQTHMTNNGSAAWMAPEVFEFSNYSEKC
 DVFSWGIIILWEVITRRKPFDEIGGPAFRIMWAVHNGTRPPLIKNLPKPIESLMTRCWSKDPSPRSMEEI
 VKIMTHLMRYFPGADEPLQYPCQYSDEGQNSATSTGSFMDIASTNNTSNKSDTNMEQVPATNDTIKRLS
 KLLKNQAKQQSESGRLSLGASRGSSVESLPPTSEKPARSHPWTPDDSDTNGSDNSIPMAYLTLDHQLQPLAPCNSK
 TEPGQVSSRSSSPVSRMITTSPTSEKPARSHPWTPDDSDTNGSDNSIPMAYLTLDHQLQPLAPCNSK
 ESMVFEQHCKMAQEYMKVQTEIALLLQRKQELVAELDQDEKQDQNTSRLVQEHKLLDENKSLSTYYQQ
 CKKQLEVIRSQQKRQGT

TRTRPLE – GFP Tag – V

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_172688

ORF Size: 1737 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).

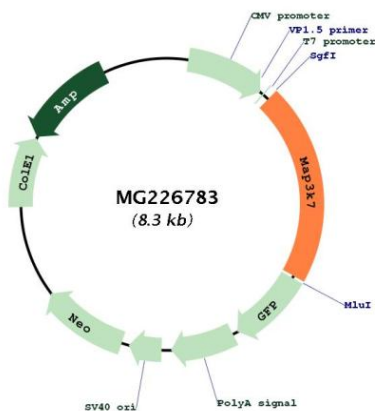
Reconstitution Method:

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_172688.3, NP_766276.1](#)
RefSeq Size: 5682 bp
RefSeq ORF: 1740 bp
Locus ID: 26409
UniProt ID: [Q62073](#)
Cytogenetics: 4 A5
MW: 64.2 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 MG226783