

Product datasheet for **RR212444**

Map3k7 (NM_001107920) Rat Tagged ORF Clone

Product data:

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| Product Type: | Expression Plasmids |
| Product Name: | Map3k7 (NM_001107920) Rat Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | Map3k7 |
| Synonyms: | Tak1 |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| Cell Selection: | Neomycin |



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ORF Nucleotide Sequence:

>RR212444 representing NM_001107920
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTCGACAGCATCCGCCCTCGTCTCTCTCGTCTTCTGCCAGTGAGATGATCGAAGCGCCATCGC
 AGGTCCTTAAC TTCGAAGAGATCGACTACAAGGAGATCGAGGTGAAGAGTTGTTGGGAGAGGAGCTTT
 TGGAGTGGTTTGCAAAGCTAAGTGGAGAGCAAAAGATGTTGCAATTAACAGATTGAAAGTGAATCTGAG
 AGGAAGGCTTTTCATCGTGGAGCTCCGGCAGTTGTCCCCTGTGAACCATCCTAATATTGTAAGTTGTATG
 GAGCCTGCTTGAATCCAGTCTGTCTTGTGATGGAGTATGCTGAAGGAGGCTCGTTGTATAATGTGCTGCA
 CGGTGCTGAACCATTCCTTATTACACTGCTGCTCATGCCATGAGCTGGTGTCTACAGTGTCCCAAGGA
 GTGGCCTACCTGCACAGCATGCAGCCAAAGCTCTCATTTCATAGGGACCTCAAGCCTCCAAACTTGCTGC
 TGGTTGCAGGAGGACAGTTCTAAAAATCTGCGATTTTGGTACAGCTTGTGACATCCAGACACACATGAC
 CAATAATAAAGGGAGTGTGCTTGGATGGCACCCGAAGTGTTCGAAGGTAGCAATTACAGTGAAAAGTGT
 GATGTCTTCAGCTGGGGTATTATCCTTTGGGAGGTGATAACACGCCGGAACCCCTTTGATGAGATCGGTG
 GCCCAGCTTTCAGAATCATGTGGGCTGTTCAATGTTACTCGACCACCTGATCAAAAATTGCTTAA
 GCCCATTGAGAGCTTGTGACCCGCTGTTGGTCTAAGGACCCCTTCTCAGCGCCCTTCAATGGAGGAAATT
 GTGAAAAATAAGACTCACTTGTGCGGTACTTTCCAGGAGCTGATGAGCCGTTACAGTACCCCTGTCACT
 ACTCTGATGAAGGGCAGAGCAACTCAGCCACCAGCACAGGCTCATTTATGGACATCGCTTCTACAAATAC
 CAGTAATAAAAGTGACACAAATATGGAACAAGTCCCTGCCACAACGACACTATTAACGCTTGGAGTCA
 AAAGTGTGAAAAACCAGGCAAGCAACAGAGTACTCTGGACGCTGAGTTTGGGAGCCTCTCGAGGGA
 GCAGTGTGGAGAGCTTGCCCCGACTTCTGAGGGCAAGAGGATGAGTGTGACATGTCTGAAATAGAAGC
 GAGGATCGTGGCGACTACAGCCTATACCAAGCCTAAACGGGGCCACCGTAAAACCGCTTCATTTGGCAAC
 ATTCTGGATGTCCCTGAGATCGTCATATCAGGCAACGGGCAACCAAGGCTAGATCCATCCAAGACTTGA
 CTGTTACTGGGACAGAACCTGGTCAGGTGAGCAGCAGGTATCCAGCCCTAGTGTGAGAATGATCACTAC
 CTCAGGACCAACCTCAGAGAAGCCAGCTCGCAGTCTTCTTGGACCCCTGATGATCCACAGATACCAAT
 GGCTCGGATAACTCCATCCCAATGGCGTATCTTACTGGATCACCAGCTGCAGCCTCTAGCACCATGCC
 CAAACTCCAAAGAATCCATGGCAGTGTTCGAACAGCATTGTAAGTGGCACAGGAATATATGAAAGTTCA
 AACCGAAATCGCATTGTTACTACAGAGGAAGCAAGAACTAGTTGCAGAATTGGACCAGGATGAAAAGGAC
 CAGCAAAATACATCTCGCTGGTACAGGAACATAAAAAGCTTTTACAGCAAAACAAAAGCCTTTCTACTT
 ATTACCAGCAATGCAAAAAACAACCTAGAGGTATCAGAAGCCAGCAGCAGAAACGACAAGGCACTCA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RR212444 representing NM_001107920
 Red=Cloning site Green=Tags(s)

MSTASAASSSSSSASEMIEAPSQVLNFEIEIDYKEIEVEEVVGRGAFGVVCKAKWRAKDVAIKQIESESE
 RKAFIVELRQLSRVNHPIVKL YGACLNPVCLVMEYAEGLSYNLVHGAEPYPYYTAAHAMSACLQCSQG
 VAYLHSMQPKAL IHRDLKPPNLLL VAGGTVLKICDFGTACDIQTHMTNNGSAAWMAPEVFEGSNYSEKC
 DVFSWGIILWEVITRRKPFDEIGGPAFRIMWAVHNGTRPPLIKNLPKPIESLMTRCWSKDPSPRSMEEI
 VKIMTHLMRYFPGADEPLQYPCQYSDGQSNSTSTGFMDIASNTSNKSDTNMEQVPATNDTIKRLES
 KLLKNQAKQQSDSGRLSLGASRGSSVESLPPTSEGKRMSADMSEIEARIVATTAYTKPKRGHRKTASFGN
 ILDVPEIVISGNGQPRRSIQDLTVTGTEPGQVSSRSSPSVRMITTSPTSEKPARSLPWPDPDDSTDTN
 GSDNSIPMAYL TLDHQLQPLAPCPNSKESMAVFEQHCKMAQEYMKVQTEIALLLQRKQELVAELDQDEK
 QQNTSRLVQEHKLLDENKSLSTYYQCKKQLEVIRSQQKQKRGTS

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

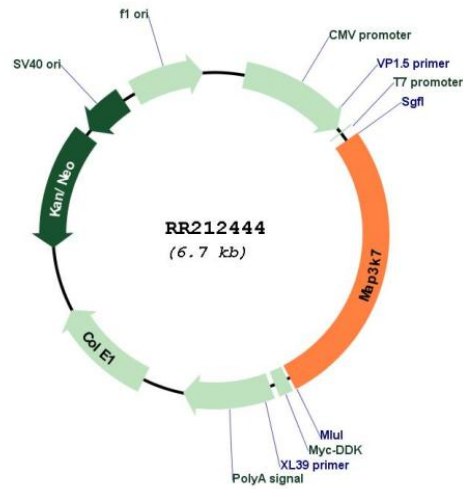
Cloning Scheme:

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_001107920

ORF Size: 1818 bp

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| OTI Disclaimer: | 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: | <ol style="list-style-type: none">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_001107920.2 , NP_001101390.2 |
| RefSeq Size: | 4540 bp |
| RefSeq ORF: | 1821 bp |
| Locus ID: | 313121 |
| UniProt ID: | P0C8E4 |
| Cytogenetics: | 5q21 |
| 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). 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. MAP3K7 activates also IKBKB and MAPK8/JNK1 in response to TRAF6 signaling and mediates BMP2-induced apoptosis. In osmotic stress signaling, plays a major role in the activation of MAPK8/JNK1, but not that of NF-kappa-B (By similarity). Promotes TRIM5 capsid-specific restriction activity (By similarity). [UniProtKB/Swiss-Prot Function] |