

Product datasheet for **RC204454**

TAK1 (MAP3K7) (NM_003188) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	TAK1 (MAP3K7) (NM_003188) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	TAK1
Synonyms:	CSCF; FMD2; MEKK7; TAK1; TGF1a
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC204454 representing NM_003188
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTCTACAGCCTCTGCCGCTCCTCCTCCTCGTCTTCGGCCGGTGAGATGATCGAAGCCCCTTCCC
 AGGTCCTCAACTTTGAAGAGATCGACTACAAGGAGATCGAGGTGGAAGAGTTGTTGGAAGAGGAGCCTT
 TGGAGTTGTTTGCAAAGCTAAGTGGAGAGCAAAAGATGTTGCTATTAAACAAATAGAAAAGTGAATCTGAG
 AGGAAAGCGTTTATTGTAGAGCTTCGGCAGTTATCCCGTGTGAACCATCCTAATATTGTAAGCTTTATG
 GAGCCTGCTTGAATCCAGTGTGCTTGTGATGGAATATGCTGAAGGGGGCTTTTATAATGTGCTGCA
 TGGTGCTGAACCATGCCATATTACTGCTGCCACGCAATGAGTTGGTGTTCACAGTGTCCCAAGGA
 GTGGCTTATCTTACAGCATGCAACCCAAAGCGCTAATTCACAGGGACCTGAAACCACAAACTTACTGC
 TGGTTGCAGGGGGACAGTTCTAAAAATTTGTGATTTTGGTACAGCCTGTGACATTCAGACACACATGAC
 CAATAACAAGGGGAGTGTGCTTGGATGGCACCTGAAGTTTTTGAAGGTAGTAATTACAGTGAAAAATGT
 GACGCTTTCAGCTGGGGTATTATTCTTTGGGAAGTGATAACGCGTCGAAACCCCTTTGATGAGATTGGTG
 GCCCAGCTTTCGAATCATGTGGGCTGTTCAATGGTACTCGACCACCTGATAAAAAATTTACCTAA
 GCCCATTGAGAGCCTGATGACTCGTTGTTGGTCTAAAGATCCTTCCCAGCGCCCTTCAATGGAGGAAATT
 GTGAAAAATAGACTCACTTGTGCGGTACTTTCCAGGAGCAGATGAGCCATTACAGTATCCTTGTGAGT
 ATTCAGATGAAGGACAGAGCAACTCTGCCACCAGTACAGGCTCATTATGGACATTGCTTCTACAAATAC
 GAGTAACAAAAGTGACTACTAATATGGAGCAAGTTCCTGCCACAAATGATACTATTAAGCGCTTAGAATCA
 AAATTGTTGAAAAATCAGGCAAGCAACAGAGTGAATCTGGACGTTTAAAGCTTGGGAGCCTCCCGTGGGA
 GCAGTGTGGAGAGCTTGCCCAACTCTGAGGGCAAGAGGATGAGTGTGACATGTCTGAAATAGAAGC
 TAGGATCGCCGCAACCACAGGCAACGGACAGCCAAAGACGTAGATCCATCCAAGACTTGACTGTAACCTGGA
 ACAGAACCTGGTCAGGTGAGCAGTAGGTCATCCAGTCCCAGTGTGAGAATGATTACTACCTCAGGACCAA
 CCTCAGAAAAGCCAACCTCGAAGTCATCCATGGACCCTGATGATTCCACAGATACCAATGGATCAGATAA
 CTCCATCCCAATGGCTTATCTTACACTGGATCACCAACTACAGCCTCTAGCACCGTGCCCAAACTCCAAA
 GAATCTATGGCAGTGTGTAACAGCATTGTAATAATGGCACAAGAATATATGAAAGTTCAAACAGAAATTG
 CATTGTTATTACAGAGAAAGCAAGAACTAGTTGCAGAACTGGACCAGGATGAAAAGGACCAGCAAAATAC
 ATCTCGCCTGGTACAGGAACATAAAAAGCTTTTAGATGAAAACAAAAGCCTTTCTACTTACTACCAGCAA
 TGCAAAAAACAACCTAGAGGTCATCAGAAGTCAGCAGCAGAAACGACAAGGCACTCA

AC**CGGGCCGC**TCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAA
 TTACAAGGATGACGACGATAAAGGTTTAA

Protein Sequence:

>RC204454 representing NM_003188
 Red=Cloning site Green=Tags(s)

MSTASAASSSSSSSAGEMIEAPSQVLNFEEDYKEIEVEEVVGRGAFGVVCKAKWRAKDVAIKQIESESE
 RKAFIVELRQLSRVNHPIVKLYGAACLNVPCLVMEYAEGGSLYNVLHGAELPPYYTAAHAMSWLQCSQG
 VAYLHSMQPKAL IHRDLKPPNLLL VAGGTVLKICDFGTACDIQTHMTNNGSAAWMAPEVFEGSNYSEKC
 DVFSWGIILWEVITRRKPFDEIGGPAFRIMWAVHNGTRPPLIKNLPKPIESLMTRCWSKDPSQRPSMEEI
 VKIMTHLMRYFPGADEPLQYPCQYSDEGQNSATSTGFSMDIANTNSNKSDTNMEQVPATNDTIKRLS
 KLLKNQAKQQSESGRLSLGASRGSSVESLPPTSEGKRMSADMSEIEARIAATTGNGQPRRSIQDLTVTG
 TEPGQVSSRSSSPVSRMITTSPTSEKPTRSHPWTPDDSTDTNGSDNSIPMAYLTLDHQLQPLAPCPNSK
 ESMVFEQHCKMAQEYMKVQTEIALLLQRKQELVAELDQDEKQNTSRLVQEHKLLDENKSLSTYYQQ
 CKKQLEVIRSQQKRQGT

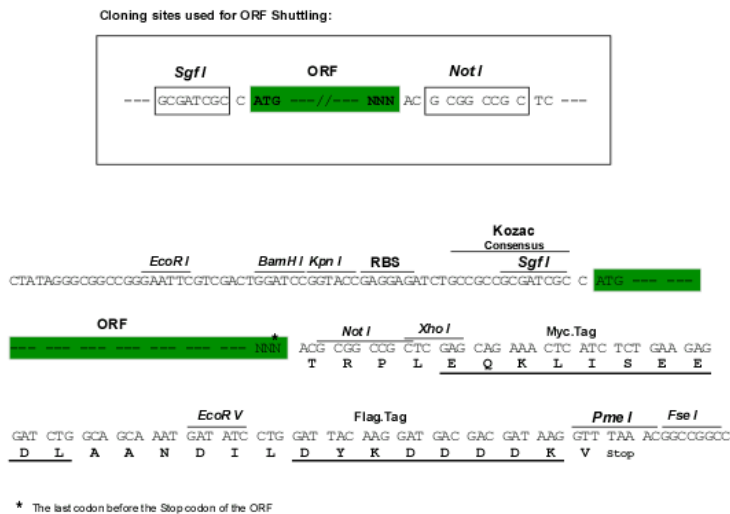
TRRLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mg3428_f01.zip

Restriction Sites:

Sgfl-NotI

Cloning Scheme:


ACCN: NM_003188

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](#)

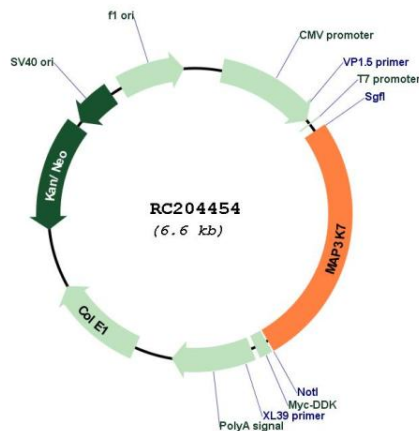
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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).

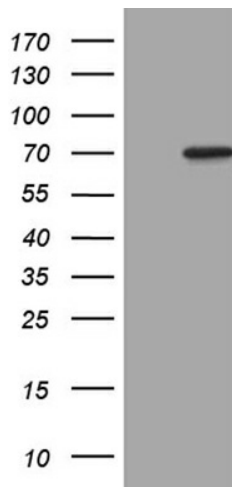
- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
 3. Close the tube and incubate for 10 minutes at room temperature.
 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the 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:	<u>NM_003188.4</u>
RefSeq Size:	2912 bp
RefSeq ORF:	1740 bp
Locus ID:	6885
UniProt ID:	<u>O43318</u>
Cytogenetics:	6q15
Domains:	pkinase, TyrKc, S_TKc
Protein Families:	Druggable Genome, Protein Kinase
Protein Pathways:	Adherens junction, MAPK signaling pathway, NOD-like receptor signaling pathway, RIG-I-like receptor signaling pathway, T cell receptor signaling pathway, Toll-like receptor signaling pathway, Wnt signaling pathway
MW:	64 kDa
Gene Summary:	The protein encoded by this gene is a member of the serine/threonine protein kinase family. This kinase mediates the signaling transduction induced by TGF beta and morphogenetic protein (BMP), and controls a variety of cell functions including transcription regulation and apoptosis. In response to IL-1, this protein forms a kinase complex including TRAF6, MAP3K7P1/TAB1 and MAP3K7P2/TAB2; this complex is required for the activation of nuclear factor kappa B. This kinase can also activate MAPK8/JNK, MAP2K4/MKK4, and thus plays a role in the cell response to environmental stresses. Four alternatively spliced transcript variants encoding distinct isoforms have been reported. [provided by RefSeq, Jul 2008]

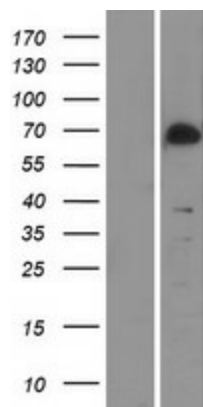
Product images:



Circular map for RC204454



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY MAP3K7 (Cat# RC204454, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-MAP3K7 (Cat# [TA809633])(1:2000). Positive lysates [LY418841] (100ug) and [LC418841] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY418841]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204454 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MAP3K7 protein (Cat# [TP304454]). The protein was produced from HEK293T cells transfected with MAP3K7 cDNA clone (Cat# RC204454) using MegaTran 2.0 (Cat# [TT210002]).