

Product datasheet for MR218174

Taok1 (NM_144825) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Taok1 (NM_144825) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Taok1
Synonyms:	2810468K05Rik; AU020252; D130018F14Rik; Map3k16; Markk; mKIAA1361; Psk2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR218174 representing NM_144825 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCATCAACTAACAGAGCAGGCAGTCTAAAGGACCCTGAAATTGCAGAGCTCTTCTTCAAGAAGATC
CGGAAAAGCTCTTCACAGATCTCAGAGAAATCGGCCATGGGAGCTTTGGAGCAGTATATTTTGCACGAGA
TGTGCGTACTAATGAAGTGGTGGCCATCAAGAAAATGTCTTATAGTGGAAAGCAGTCTACTGAGAAATGG
CAGGATATTATTAAGGAAGTCAAGTTTCTACAAGAATAAAACATCCCAACAGTATAGAATACAAGGCT
GCTATTTACGTGAACACACAGCATGGCTTGTAAATGGAATATTGTTTAGGATCTGCTTCAGATTTATTAGA
AGTTCATAAAAAGCCATTACAAGAAGTGGAAATAGCAGCAATTACACATGGTGTCTCCAGGACTAGCT
TATTTACATTCTCATACCATGATCCATAGAGATATCAAAGCAGGAAATATCCTTCTGACAGAACCAGGCC
AAGTAAAAGTGGTACTTTGGATCTGCTTCCATGGCTTCCCCTGCCAATTTCTTTTGGGGAACACCATA
TTGGATGGCCCCAGAAGTAAATTTAGCCATGGATGAAGGACAGTATGATGGCAAAGTTGATGTATGGTCT
CTTGAATAACGTGTATTGAATTAGCCGAGAGGAAGCCTCCTTTATTTAATGAATGCAATGAGTGCCT
TATATCACATAGCCAAAATGAATCCCCTACACTACAATCTAATGAATGGTCTGATTATTTTCGAAACTT
GTAGATTTCTGCCTCCAGAAAATCCCTCAAGATCGCCCTACATCAGAGGAACTTTTAAAGCACATGTTT
GTTCTTCGAGAGCGCCCTGAAACAGTGTAAATAGATCTTATTCAAAGGACAAAGGATGCAGTAAGAGAGC
TGGACAACTGCAGTATCGAAAAGATGAAGAACTCCTTTTCCAGGAGGCACATAATGGGCCAGCGGTAGA
AGCACAGGAAGAAGAGGAGGAGCAAGATCATGGTGTGGCCGAACAGGAACAGTGAATAGTGTGGAAAGC
AATCAGTCTATCCCTAGTATGTCTATCAGTGCCAGCAGTCAAAGCAGCAGTGTTAATAGTCTTCCAGATG
CATCAGATGACAAGAGTGAGCTAGACATGATGGAGGGAGACCATACAGTATGTCTAACAGTTCTGTCTAT
CCACTTAAAACCTGAGGAGGAAAATTACCAGGAAGAAGGAGATCCTAGAACAAGAGCATCAGACCCACAG
TCTCCCCTCAGGTGTCTCGTACAAGTACATTATCGTAATAGAGAACAACCTTTGCAACCATACGAACAG
CATCACTGGTTACAAGACAGATGCAAGAACATGAGCAGGACTCTGAACCTTAGAGAACAGATGTCTGGTTA
TAAGCGGATGAGGCGACAGCATCAAAGCAGCTGATGACGCTGGAAAATAAACTGAAGGCAGAGATGGAC



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GAACATCGGCTCAGATTAGACAAAGATCTTAAAACCTCAGCGTAACAATTCGCTGCAGAAATGGAGAAAC
 TTATTAAGAAACACCAAGCTGCTATGAAAAAGAGGCTAAAGTGTGGCCAATGAGGAGAAAAAATCCA
 GCAACACATTCAGGCTCAACAGAAAAAAGAACTGAATAGCTTTTTGGAGTCTCAAAAAAGAGAATAAAA
 CTTTCGAAAGAGCAGCTTAAGGAGGAGCTGAATGAAAACAGAGCACACCTAAAAAGAAAAAGCAGGAAT
 GGCTTTCAAAGCAGAAGGAGAATATACAGCATTTTCAGGCAGAAGAAGAAGCTAATCTTCTCGACGTCA
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 GACAGCATGAATCAATGCAAGAAGCTGGAGTTTCGCCATCTCAACACTATTCAGAAGATGCGCTGTGAGTT
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 CGCAGAGCGCTCTTAGAACAAAAGATTGAAGAAGAGATGTTGGCTTTCGAGAATGAACGCACAGAACGAA
 TACGTAGCCTGCTCGAGCGTCAAGCCAGAGAAATTAAGCATTGACTCTGAAAGCATGAGATTAGGTTT
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 TCTCACAATCCTACTGGGGTCCAGGACCTCACTGGGGTCAATCCATGGGTGGCACCACAAGCTTGGG
 GTCATCCGATGCAAGGTGGACCCCAACATGGGGTCAATCCCTCAGGGCAATGCAAGGGTACCTCGAGG
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 GGCATGAGCAGAAGCAGAGTGTCACTTCAAAAATATCCAATGGGTACACATGTCTTACACA

ACGCGTACGCGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAGGTTTAA

Protein Sequence:

>MR218174 representing NM_144825
 Red=Cloning site Green=Tags(s)

MPSTNRAGSLKDP EIAELFFKEDPEKLF TDLREIGHGSFGAVYFARDVRTNEVVAIKKMSYSGKQSTEKW
 QDIIKEVKFLQRIKHPNSIEYKGCYLREHTAWL VMEYCLGSASDLLEVHKKPLQEVEIAAITHGALQGLA
 YLHSHMTIHRDIKAGNILLTEPGQVKLADFGSASMASPANSFVGTPTYWMAPEVILAMDEGQYDGKVDVWS
 LGITCIELAERKPPFLNMNAMSALYHIAQNESPTLQSNEWSDYFRNFVDSCLQKIPQDRPTSEELLKHM
 VLRERPEVTLIDL IQRTKDAVRELDNLQYRKMKKLLFQEAHNGPAVEAQEEEEEQDHGVTGTVNSVGS
 NQSI PMSISASSQSSSVNSLPDASDDKSELDMMEGDHTVMSNSSVIHLKPEEENYQEEGDPRTASDPQ
 SPPQVSRHKSHYRNREHFATIR TASLVTRQMQEHEQDSELREQMSGYKRMRRQHQQKQLMTLENLKAEMD
 EHRLRLDKDLETQRNNAEMEKL IKKHQAAMEKEAKVMANEKFKQHIQAQQKELNSFLESQKREYK
 LRKEQLKEELNENQSTPKKEKQEWL SKQKENIQHFQAEEEANLRRRQRYLELECRRFKRRMLLGRHNLE
 QDLVREELNKRQTQKDL EHAMLLRQHESMQELEFRHLNTIQKMRCELIRLQHTELTNQL EYNKREREL
 RRKHVMEVRQPKSLKSKELQIKKQFQDTCKIQRQYKALRNHLETPPKSEHKAVLKRLEEQTRKLA
 LAEQYDHSINEMLSTQALRLDEAQEAECQVLMQLQOELELLNAYQSKIKMQAEAQHDRELRELEQRVSL
 RRALLEQKIEEEMLALQNERTERIRSLLERQAREIEAFDSESMRLGFSNMVLSNL SPEAFSHSYPGASSW
 SHNPTGGPGPHWGHPMGGTPQAWGHPMQGGPQWGHPSGPMQGVPRGSSMGVRNSPQALRRRTASGGRTEQ
 GMSRSTSVTSQISNGSHMSYT

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mm9009_c04.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_144825

ORF Size: 3003 bp

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:**
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_144825.3](#)

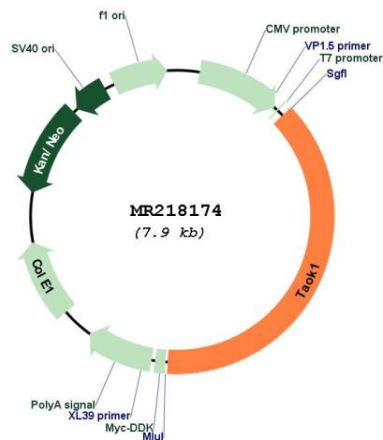
RefSeq Size: 12411 bp

RefSeq ORF: 3006 bp

Locus ID: 216965
UniProt ID: [Q5F2E8](#)
Cytogenetics: 11 B5
MW: 116.5 kDa

Gene Summary: Serine/threonine-protein kinase involved in various processes such as p38/MAPK14 stress-activated MAPK cascade, DNA damage response and regulation of cytoskeleton stability. Phosphorylates MAP2K3, MAP2K6 and MARK2. Acts as an activator of the p38/MAPK14 stress-activated MAPK cascade by mediating phosphorylation and subsequent activation of the upstream MAP2K3 and MAP2K6 kinases. Involved in G-protein coupled receptor signaling to p38/MAPK14. In response to DNA damage, involved in the G2/M transition DNA damage checkpoint by activating the p38/MAPK14 stress-activated MAPK cascade, probably by mediating phosphorylation of MAP2K3 and MAP2K6. Acts as a regulator of cytoskeleton stability by phosphorylating 'Thr-208' of MARK2, leading to activate MARK2 kinase activity and subsequent phosphorylation and detachment of MAPT/TAU from microtubules. Also acts as a regulator of apoptosis: regulates apoptotic morphological changes, including cell contraction, membrane blebbing and apoptotic bodies formation via activation of the MAPK8/JNK cascade (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR218174