

Product datasheet for MR218607

Taok2 (NM_001163774) Mouse Tagged ORF Clone

Product data:

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| Product Type: | Expression Plasmids |
| Product Name: | Taok2 (NM_001163774) Mouse Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | Taok2 |
| Synonyms: | 1110033K02Rik; B230344N16; MAP3K17; mKIAA0881; PSK; PSK1; TAO1; TAO2 |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| Cell Selection: | Neomycin |
| ORF Nucleotide Sequence: | >MR218607 representing NM_001163774 Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCAGCTGGGGCCGGGCCGGGAGCCTGAAGGACCCTGATGTGGCTGAGCTCTTCTTCAAGGATGACC
CTGAGAAGCTCTTCTGACCTCCGGGAGATCGGCCATGGCAGCTTTGGAGCAGTGTACTTTGCCGGGA
TGTCGGAACAGTGAGGTGGTGGCCATCAAGAAGATGTCTATAGTGGGAAGCAATCAAATGAGAAATGG
CAGGATATCATCAAGGAAGTGCAGTTCTTACAGAAGCTACGGCATCTAATACCATTAGTACCGGGCT
GTTACCTGAGGGAGCACACAGCTTGGCTGGTGTGGAGTATTGCCTGGGCTCAGCTTCTGATCTTCTAGA
AGTGCACAAGAAACCCCTGCAGGAGGTAGAGATTGCAGCTGTGACCCATGGGGCTCTTACGGGCCTGGCA
TATCTACACTCACACAACATGATCCATAGAGATGTGAAGGCTGGAAACATCTTGTGTCAGAACCCAGGCT
TGGTAAACTGGGGGACTTTGGCTCTGCGTCAATCATGGCACCTGCCAACTCTTTTGTGGTACTCCATA
CTGGATGGCTCCAGAGGTGATCCTAGCCATGGATGAGGGACAATATGATGGCAAAGTGGATGTCTGGTCC
TTGGGGATAACCTGTATTGAGCTAGCGGAGCGGAAGCCACCAGTGTCAACATGAATGAATGAGTGCCT
TATACCACATTGCACAGAATGAATCTCCTGCTCCTCAGTCAGGACACTGGTCTGAGTACTCCGGAATTT
TGTTGACTCCTGTCTTACAGAAAATCCCTCAAGACAGACCAACCTCAGAGTTCTTTTGAAGCACCGCTTT
GTGCTCCGGGAGCGACCGCCACAGTCATCATGGACCTAATCCAGAGGACCAAGGATGCTGTACGGGAAC
TGGATAACCTGCAGTACCGAAAGATGAAGAAGATACTGTTCCAAGAGGCACCCAATGGCCCTGGTGTGA
GGCCCCAGAGGAAGAGGAGCTCACACCCTGTTCCAGGAGGCAGAACCTTACACGCACCGTGCAGGGACA
CTGACCAGTCTAGAGAGCAGCCATTAGTGCACAGCATGTCCATCAGCGCCTCCAGCCAGAGCAGCTCAG
TCAACAGCCTAGCAGATGCCTCAGATAATGAAGAAGAGGAGGAAGAAGAAGAGGAAGAGGAGGAGGAGGA
GGAGGAAGAAGGCCCTGAATCCAGAGAGATGGCCATGATGCAGGAGGGGGAGCATACAGTCACTTCCCAC
AGCTCCATCATCCACCGCTGCCGGCTCAGACAACCTATATGATGATCCCTACCAGCCAGAGATGACCC
CAGGTCCACTCCAGCCACTGCAGCCCCCTCCACTCCACTCCTCTTCTGCTCGCCGAGAGCTTATTG
CCGAACCGAGACCCTTTGCTACCATTGTAAGTCCCTGCTCAGCCGTGATCCAGGAGCATGAG
CAGGACTCAGCCCTGCGAGAGCAGCTGAGTGGCTACAAGCGGATGCGACGTGAGCACCAGAAGCAACTGC



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TGGCCCTGGAGTCCCGTCTGAGGGGTGAACGTGAGGAGCACAGTGGGCGTTACAGCGGGAGCTCGAGGC
 ACAGCGGGCTGGCTTTGGGACCGAGGCTGAGAAGCTGGCCCGAGGCACCAGGCCATTGGTGAAGAAGGAG
 GCACGGGCTGCTCAGCGGAGGAGCGGAAGTCCAGCAGCACATCCTGGGCGAGCAGAAGAAGGAGCTGG
 CCGCCCTGCTGGAGGCGCAGAAGCGAACCTACAAGCTGCGGAAGGAGCAGTTGAAAGAGGAGCTCCAGGA
 GAACCCTAGCACACCCAAACGAGAGAAGGCTGAGTGGCTGTTGAGGCAAAAGGAGCAGTTGCAACAGTGC
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 CAAGAGCCTCAAATCAAAGGAGCTGCAGATCAAGAAGCAGTTCAGGAGACGTGTAAAGTCCAGACGCGG
 CAATAAAGGCTCTTCGGGCACACTTGTGAGACCACACCCAAAGCTCAGCACAAAGAGCCTTCTTAAGC
 GGCTCAAGGAGGAGCAGACCCGCAAGCTGGCGATCCTGGCTGAGCAGTATGACCAGTCCATTTAGAGAT
 GCTCAGCTCGCAGGCGCTCCGGTTGATGAGACCCAAGAGGCAGAGTTTCAGGCCCTGCGGCAGCAGCTC
 CAGCAGGAGCTGGAGCTCCTCAACGCTTACCAGAGCAAGATCAAGATCCGCACAGAGAGCCAGCATGAGC
 GGGAGCTGAGGGAGCTGGAGCAGAGAGTGTCTGAGGCGGGCACTGCTAGAGCAACGGGTGGAAGAAGA
 GCTGTGGCCCTACAGACAGGCCGTTCCGGAACGTATCCGGAGTTTGTGAGCGGCAGGCCCGTGAGATC
 GAGGCCTTCGATGCTGAGAGCATGAGACTGGGCTTCTCCAGCATGGCTCTGGGGGCATTCCAGTGAAG
 CTGCGGCCCAGGGCTATCCTGCTCCACCCCGGCCCTGCTGGCCCTCCCGTCCAGTTCGCCGTTCCAGG
 GGCCATTGGAGCCATGGCCCTCCTCCACCAGGCATGCCCCACCAGCTTGGCGTCAGCCAGCTCTGCTG
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 TGCTGCTAAGAAACAGTCTCAACCCCTAAGGCGGGCAGCGTCAAGGGGCGCAGTGGTGAACAGTCCG
 CCCACCTGCTGCAGTCCAGGGCCGCTGAGCCGAAGCACCAGTGTGCTTCCACATCTCAACGGCTCC
 TCCACTTCTATTCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR218607 representing NM_001163774
 Red=Cloning site Green=Tags(s)

MPAGGRAGSLKDPVAELFFKDDPEKLFSDLREIGHGSFGAVYFARDVRNSEVVAIKKMSYSYSGKQSNKWK
 QDIIKEVRFLLQKLRHPNTIQYRGCYLREHTAWLVMEYCLGSASDLLEVHKKPLQEVEIAAVTHGALQGLA
 YLHSHNMIHRDVKAGNILLSEPLVVKLGDGFGSASIMAPANSFVGTPTYWMAPEVILAMDEGQYDGKVDVWS
 LGITCIELAERKPPFLNMNAMSALYHIAQNEPALQSGHWSEYFRNFVDSCLQKIPQDRPTSEVLLKHRF
 VLRERPPVIMDLIQRTKDAVRELDNLQYRKMKKILFQEAPNGPGAEAPPEEELTPCSQEAEPYTHRAGT
 LTSLESSHVSPMSISASSQSSVNSLADASDNEEEEEEEEEEEEEEEEEEPESREMAMMQEGEHTVTSH
 SSIHRLPGSDNLYDDPYQPEMTPGPLQPPAAPPTSTSSARRRAYCRNRDHFATIRTASLVSRQIQEHE
 QDSALREQLSGYKMRHQHQKQLLALLESRLRGEREEHSGRLQRELEAQRAGFGTEAEKLARRHQAIKEKE
 ARAAQAEERKFQQHILGQQKELAALEAQKRYKLRKEQLKEELQENPSTPKREKAEWLLRQKEQLQQC
 QAEEEAGLLRRRQYFELQCRQYKRKMLLARHSLDQDLLREDLNKQTQKDLECALLRQHEATRELELR
 QLQAVQRTAELTRLQHQTTELGNQLEYNKRRQELRQKHAQVRRQPKSLKSKELQIKKQFQETCKIQTR
 QYKALRAHLLLETPKAQHKSLLKRLKEEQTRKLAILEAQYDQSISEMLSSQALRLDETQEAQFQALRQQL
 QQELELLNAYQSKIKIRTESQHERELRELEQRVALRRALLEQRVEEELLALQTGRSERIRSLERQAREI
 EAFDAESMRLGFSSMALGGIPAEAAAQGYAPPPAPAWPSRPVPRSGAHWSHGPPPPGMPPPAWRQPALL
 APPGPPNWLGPPTQSGTPRGGALLLLRNSPQLRRAASGGSSGENVGPAAVPGPLSRSTSVASHILNGS
 SHFYS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

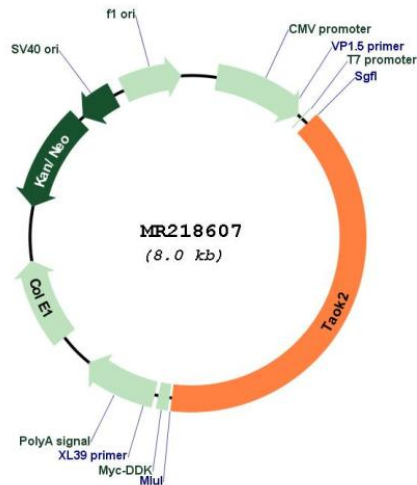
Restriction Sites:

Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001163774

ORF Size: 3165 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.

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| 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: | <u>NM_001163774.2</u> |
| RefSeq Size: | 4986 bp |
| RefSeq ORF: | 3168 bp |
| Locus ID: | 381921 |
| UniProt ID: | <u>Q6ZQ29</u> |
| Cytogenetics: | 7 F3 |
| MW: | 120.4 kDa |
| Gene Summary: | Serine/threonine-protein kinase involved in different processes such as membrane blebbing and apoptotic bodies formation DNA damage response and MAPK14/p38 MAPK stress-activated MAPK cascade. Phosphorylates itself, MBP, activated MAPK8, MAP2K3, MAP2K6 and tubulins. Activates the MAPK14/p38 MAPK signaling pathway through the specific activation and phosphorylation of the upstream MAP2K3 and MAP2K6 kinases. 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 upstream MAP2K3 and MAP2K6 kinases. May affect microtubule organization and stability. May play a role in the osmotic stress-MAPK8 pathway. Prevents MAP3K7-mediated activation of CHUK, and thus NF-kappa-B activation. Isoform 2, but not isoform 1, is required for PCDH8 endocytosis. Following homophilic interactions between PCDH8 extracellular domains, isoform 2 phosphorylates and activates MAPK14/p38 MAPK which in turn phosphorylates isoform 2. This process leads to PCDH8 endocytosis and CDH2 cointernalization. Both isoforms are involved in MAPK14/p38 MAPK activation (By similarity).[UniProtKB/Swiss-Prot Function] |