

Product datasheet for **RG219490**

TAOK1 (NM_020791) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	TAOK1 (NM_020791) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	TAOK1
Synonyms:	hKFC-B; hTAOK1; KFC-B; MAP3K16; MARKK; PSK-2; PSK2; TAO1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG219490 representing NM_020791
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCCATCAACTAACAGAGCAGGCAGCCTGAAGGACCCTGAAATTGCAGAGCTCTTCTTCAAAGAAGATC
 CAGAGAAGCTCTTCACAGATCTCAGAGAAATTGGCCATGGAAGCTTTGGAGCAGTGATTTTGCAGGAGA
 TGTGCGTACCAATGAAGTGGTGGCCATCAAGAAAATGTCTTATAGTGGAAGCAGTCTACTGAGAAATGG
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 AAGACAATACCTAGAGCTGGAATGCCGTGCTTCAAGAGAAGAATGTTACTTGGGCGTCATAACTTAGAG
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 GCCATCCAATGCAAGGTGACCCAGCCATGGGGTCACTTCCAGGGCAATGCAAGGGGTACCTCGAGG
 TAGCAGTATGGGAGTCCGCAATAGCCCCAGGCTCTGAGGCGGACAGCTTCTGGGGGACGGACGGAGCAG
 GGCATGAGCAGAAGCAGGAGTGTCACTTCAAAATATCCAATGGGTACACATGTCTTATACA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

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_020791.4](#)

RefSeq Size: 12096 bp

RefSeq ORF: 3006 bp

Locus ID: 57551

UniProt ID: [Q7L7X3](#)

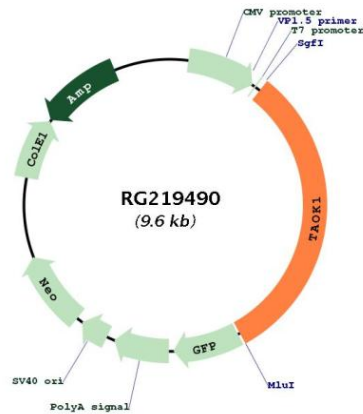
Cytogenetics: 17q11.2

Protein Families: Druggable Genome, Protein Kinase

Protein Pathways: MAPK signaling pathway

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.[UniProtKB/Swiss-Prot Function]

Product images:


Circular map for RG219490