Product datasheet for RC219490L4

TAOK1 (NM_020791) Human Tagged Lenti ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	TAOK1 (NM_020791) Human Tagged Lenti ORF Clone
Tag:	mGFP
Symbol:	TAOK1
Synonyms:	hKFC-B; hTAOK1; KFC-B; MAP3K16; MARKK; PSK-2; PSK2; TAO1
Mammalian Cell Selection:	Puromycin
Vector:	pLenti-C-mGFP-P2A-Puro (PS100093)
E. coli Selection:	Chloramphenicol (34 ug/mL)
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(RC219490).
Restriction Sites:	SgfI-MluI
Cloning Scheme:	

Cloning sites used for ORF Shuttling:

```
          Sgf I              ORF              Mlu I
--- GCG ATC GC C  ATG ---//--- NNŇ  ACG CGT ---
```

```
                                          Kozak
                                        Consensus
          EcoR I        BamH I       RBS          Sgf I              ORF
CTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGC C  ATG --- --- ---

                         Mlu I        Not I   Xho I       mGFP Tag
--- --- --- --- --- --- NNŇ  ACG CGT ACG CGG CCG CTC GAG ATG AGC GGG GGC --- --- --- ---
                         T    R   T   R   P   L   E   M   S   G   G   - - - -

--- --- GGA CTC AGA GTT TGG GTA GGA AGC
  - -   G   L   R   V
```

* The last codon before the Stop codon of the ORF.

ACCN:	NM_020791
ORF Size:	3003 bp

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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_020791.2
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
MW:	116.1 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.[UniProtKB/Swiss-Prot Function]

Product images:
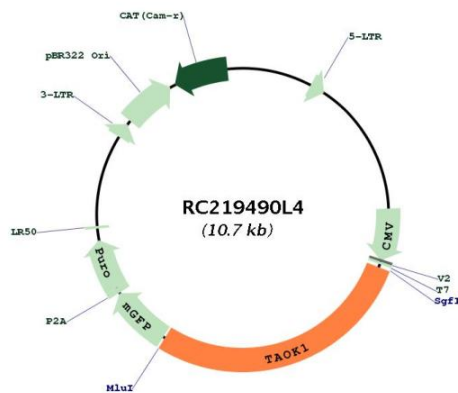
Circular map for RC219490L4
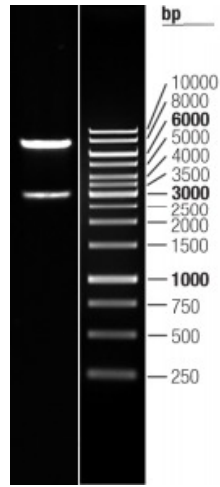
Double digestion of RC219490L4 using SgfI and MluI