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Product datasheet for MG218607

Taok2 (NM_001163774) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Taok2 (NM_001163774) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Taok2
Synonyms:	1110033K02Rik; B230344N16; MAP3K17; mKIAA0881; PSK; PSK1; TAO1; TAO2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

ORF Nucleotide Sequence:

>MG218607 representing NM_001163774
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCAGCTGGGGGCCGGGCCGGGAGCCTGAAGGACCCTGATGTGGCTGAGCTCTTCTTCAAGGATGACC
CTGAGAAGCTCTTCTCTGACCTCCGGGAGATCGGCCATGGCAGCTTTGGAGCAGTGTACTTTGCCCGGGA
TGTCCGGAACAGTGAGGTGGTGGCCATCAAGAAGATGTCCTATAGTGGGAAGCAATCAAATGAGAAATGG
CAGGATATCATCAAGGAAGTGCGGTTCTTACAGAAGCTACGGCATCCTAATACCATTCAGTACCGGGGCT
GTTACCTGAGGGAGCACACAGCTTGGCTGGTGATGGAGTATTGCCTGGGCTCAGCTTCTGATCTTCTAGA
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TATCTACACTCACACAACATGATCCATAGAGATGTGAAGGCTGGAAACATCTTGCTGTCAGAACCAGGCT
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CAGGACTCAGCCCTGCGAGAGCAGCTGAGTGGCTACAAGCGGATGCGACGTCAGCACCAGAAGCAACTGC
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CCCACCTGCTGCAGTGCCAGGGCCGCTGAGCCGAAGCACCAGTGTTGCTTCCCACATCCTCAACGGCTCC
TCCCACTTCTATTCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG218607 representing NM_001163774
Red=Cloning site Green=Tags(s)

MPAGGRAGSLKDPDVAELFFKDDPEKLFSDLREIGHGSFGAVYFARDVRNSEVVAIKKMSYSGKQSNEKW
QDIIKEVRFLQKLRHPNTIQYRGCYLREHTAWLVMEYCLGSASDLLEVHKKPLQEVEIAAVTHGALQGLA
YLHSHNMIHRDVKAGNILLSEPGLVKLGDFGSASIMAPANSFVGTPYWMAPEVILAMDEGQYDGKVDVWS
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QQELELLNAYQSKIKIRTESQHERELRELEQRVALRRALLEQRVEEELLALQTGRSERIRSLLERQAREI
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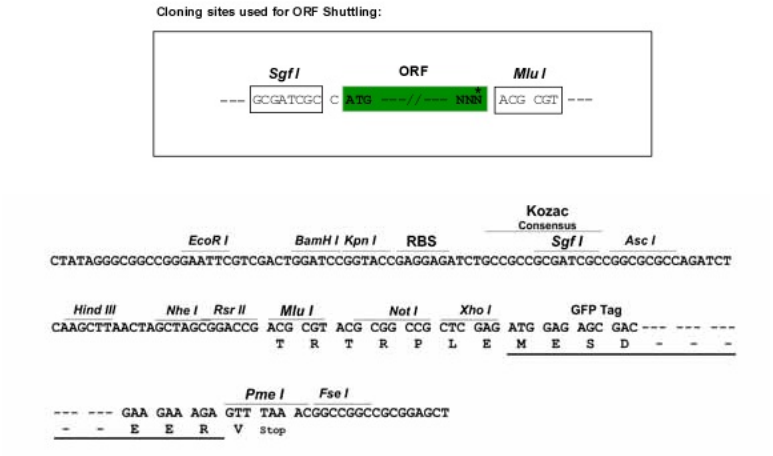
APPGPPNWLGPPTQSGTPRGGALLLLRNSPQPLRRAASGGSSGENVGPPAAVPGPLSRSTSVASHILNGS
SHFYS

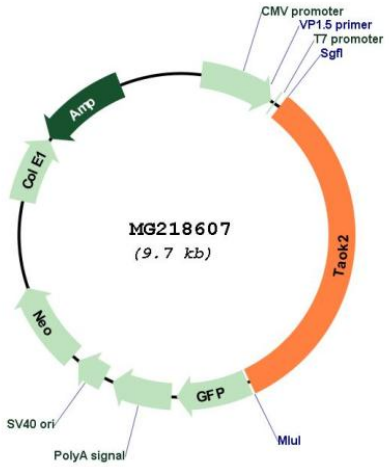
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-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.

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_001163774.2
RefSeq Size:	4986 bp
RefSeq ORF:	3168 bp
Locus ID:	381921
UniProt ID:	Q6ZQ29
Cytogenetics:	7 F3
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]