OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for MR223796

Tigar (NM_177003) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Tigar (NM_177003) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Tigar
Synonyms:	9630033F20Rik; AA793651; AI595337; C79710; C85509
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>MR223796 representing NM_177003
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCGCGCTTCGCCTTGACCGTTATCCGCCATGGTGAAACAAGACTTAATAAGGAGAAAATCATTCAAG
GACAAGGCGTAGATGCGCCCCTTTCGGAGACTGGGTTTCGGCAAGCAGCGGCCGCCGGGCAGTTTCTGAG
CAATGTGCAGTTTACCCACGCCTTCTCCAGCGATCTCACGAGGACTAAGCAGACCATACATGGCATTTTG
GAGAAAAGCAGATTTTGTAAAGACATGGCGGTGAAGTACGACTCCAGGCTCCGAGAAAGGATGTACGGAG
TCGCGGAAGGCAAGCCGCTAAGCGAGCTTCGGGCCATGGCCAAAGCCGCTGGGGAAGAGTGCCCCATGTT
CACCCCGCCTGGAGGAGAGACAGTTGAGCAGGTAAAGATGCGCGGAAAGGATTTCTTTGATTTCATTTGT
CAGCTAATCCTGGGCAAGGCAGGGCAGAGAGAAAGCGTCCTGCCTGGAGCGCCAGGCAGCGGTTTGGAAA
GCTCTTTGGCAGAGGTTTTCCCTGTTGGAAAACATGGCAGCTTGGGGGCGAATCCCAAAGGTGGCACCCT
GGGCTTAGCAGCCAGCATCTTAGTTGTGAGCCATGGCGCTTACATGAGAAGCCTCTTTGGTTATTTTCTG
AGTGACCTCAGATGCTCGTTGCCAGGAGCGAGAGACAAATTGGAACTTTCCTCCATCACTCCCAACACTG
GGATCAGTGTCTTCATCATAGACTGTGAGGAAGCACGCCAGCCATCGATTCAGTGCGTTTGTATGAACCT
CCAGGAGCACCTGAACGGAGTGACTGAGAAGCAGCAC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

View online »

Protein Sequence:

>MR223796 representing NM_177003
Red=Cloning site Green=Tags(s)

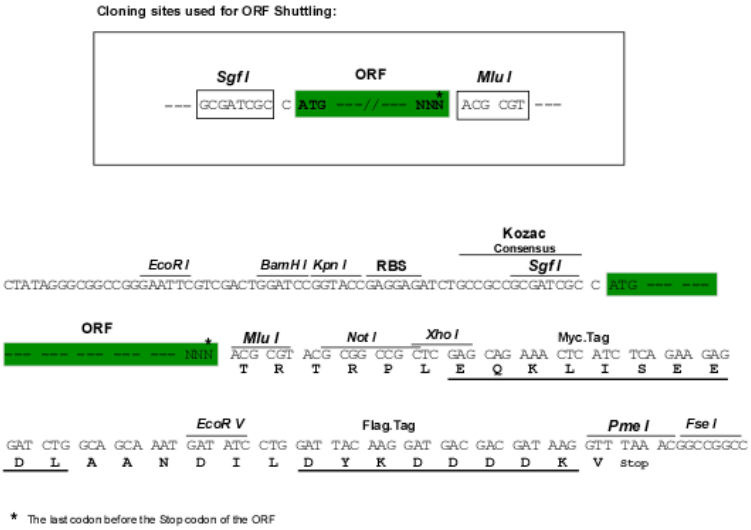
MPRFALTVIRHGETRLNKEKIIQGQGVDAPLSETGFRQAAAAGQFLSNVQFTHAFSSDLTRTKQTIHGIL
EKSRFCKDMAVKYDSRLRERMYGVAEGKPLSELRAMAKAAGEECPMFTPPGGETVEQVKMRGKDFFDFIC
QLILGKAGQRESVLPGAPGSGLESSLAEVFPVGKHGSLGANPKGGTLGLAASILVVSHGAYMRSLFGYFL
SDLRCSLPGARDKLELSSITPNTGISVFIIDCEEARQPSIQCVCMNLQEHLNGVTEKQH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9044_b03.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_177003

ORF Size: 807 bp

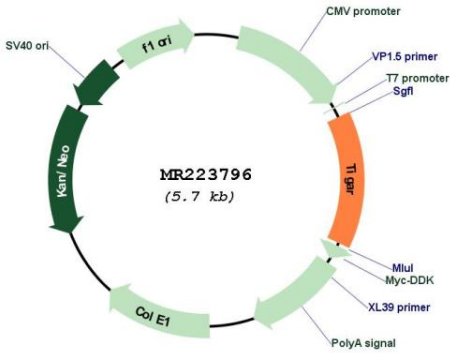
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_177003.5, NP_795977.1
RefSeq Size:	3653 bp
RefSeq ORF:	810 bp
Locus ID:	319801
UniProt ID:	Q8BZA9
Cytogenetics:	6 F3
MW:	29.6 kDa
Gene Summary:	Fructose-bisphosphatase hydrolyzing fructose-2,6-bisphosphate as well as fructose-1,6-bisphosphate (By similarity). Acts as a negative regulator of glycolysis by lowering intracellular levels of fructose-2,6-bisphosphate in a p53/TP53-dependent manner, resulting in the pentose phosphate pathway (PPP) activation and NADPH production (PubMed:23726973). Contributes to the generation of reduced glutathione to cause a decrease in intracellular reactive oxygen species (ROS) content, correlating with its ability to protect cells from oxidative or metabolic stress-induced cell death (PubMed:23726973). Plays a role in promoting protection against cell death during hypoxia by decreasing mitochondria ROS levels in a HK2-dependent manner through a mechanism that is independent of its fructose-bisphosphatase activity (By similarity). In response to cardiac damage stress, mediates p53-induced inhibition of myocyte mitophagy through ROS levels reduction and the subsequent inactivation of BNIP3 (PubMed:22044588). Reduced mitophagy results in an enhanced apoptotic myocyte cell death, and exacerbates cardiac damage (PubMed:22044588). Plays a role in adult intestinal regeneration; contributes to the growth, proliferation and survival of intestinal crypts following tissue ablation (PubMed:23726973). Plays a neuroprotective role against ischemic brain damage by enhancing PPP flux and preserving mitochondria functions (PubMed:24872551). Protects glioma cells from hypoxia- and ROS-induced cell death by inhibiting glycolysis and activating mitochondrial energy metabolism and oxygen consumption in a TKTL1-dependent and p53/TP53-independent manner. Plays a role in cancer cell survival by promoting DNA repair through activating PPP flux in a CDK5-ATM-dependent signaling pathway during hypoxia and/or genome stress-induced DNA damage responses (By similarity). Involved in intestinal tumor progression (PubMed:23726973). [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR223796