

## Product datasheet for **MG223143**

### Dio3 (NM\_172119) Mouse Tagged ORF Clone

#### Product data:

Product Type: Expression Plasmids  
 Product Name: Dio3 (NM\_172119) Mouse Tagged ORF Clone  
 Symbol: Dio3  
 Mammalian Cell Selection: Neomycin  
 Vector: pCMV6-AC-GFP (PS100010)  
 E. coli Selection: Ampicillin (100 ug/mL)  
 ORF Nucleotide Sequence: >MG223143 representing NM\_172119  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGCCTCGCCAGGCCGCCTCGAGGTTGGTGGTCGGAGAAGGTGAAGGGCCCCGGGGGCTTCGGGGCCCG  
 CGGCCACCATGCTCCGCTCTCTGCTGCTTCACTCGCTGAGGCTCTGCGCCAGACCGCTCGTGCCTCGT  
 GCTGTTCCCGCGCTTCTAGGCACGGCCTTCATGCTCTGGCTTTAGATTTCTTGTGCATCCGAAGCAT  
 TTCCTGCGCCGTCGCCATCCTGACCACCCTGAGCCGAAGTAGAGCTCAACAGTGAAGGCGAGGAGATGC  
 CCCCTGACGACCCGCCATATGCGTATCAGACGACAACCGTCTGTGCACCCTGGCCTCTCTCAAAGCCGT  
 GTGGCATGGCCAGAAATTGGATTTCTTCAAGCAAGCCCATGAGGGTGGCCAGCGCCAACTCGGAGGTT  
 GTCGACCTGATGGCTTCCAGAGCCAGCGCATCCTCGACTACGCACAAGGGACCCGCCGTTGGTGTCTA  
 ATTTTGGCAGCTGTACCTGACCACCGTTTCATGGCGGGATGAGCGCCTTCCAGCGCTGGTCACCAAGTA  
 CCAGCGGACGTTGACTTCCTTATCATCTACATCGAGGAAGCCACCCATCCGACGGCTGGGTCAACACA  
 GATTCACCCTATGTATCCCCAGCACCAGCCTGGAGGACCGTGTGAGCGCAGCGAGAGTACTACAAC  
 AAGGTGCACCTGGCTGTGCTCTGGTCTGGACACTATGGCCAACCTAGCAGTTCGCATATGGTGCCTA  
 TTTTGAGCGCCTCTACGTCATCCAGAGTGGCACCATCATGTACCAGGGAGGCCGTGGCCCCGACGGTTAC  
 CAGGTGTCTGAGTTGCGCACTTGGTTGGAGCGCTATGATGAACAGTTGCATGGTACTAGGCCACATCGAT  
 TC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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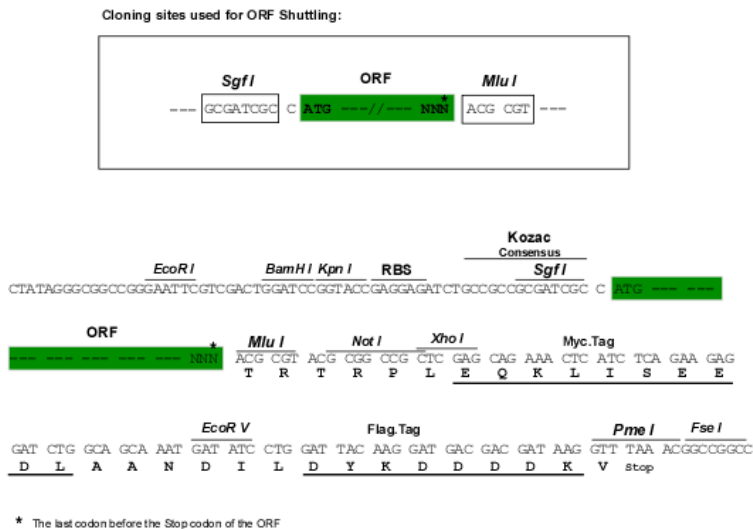
**Protein Sequence:** >MG223143 representing NM\_172119  
Red=Cloning site Green=Tags(s)

MPRQAASRLVVGEGEGPPGASGPAATMLRSLLLHSLRLCAQTASCLVLFPRFLGTAFMLWLLDFLCIRKH  
 FLRRRHPDHPEPEVELNSEGEEMPDPDPPICVSDDNRLCTLASLKAVWHGQKLDFFKQAHEGGPAPNSEV  
 VRPDGFQSQRILDY AQGTRPLVLNFGSCT\*PPFMARMSAFQRLVTKYQRDVDFLI IYIEEAHPSDGWVTT  
 DSPYVIPQHRSLIEDRVSAARVLQQGAPGCALVLDTMANSSSSAYGAYFERLYVIQSGTIMYQGGRPGDGY  
 QVSELRWLERYDEQLHGTRPHRF

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_172119

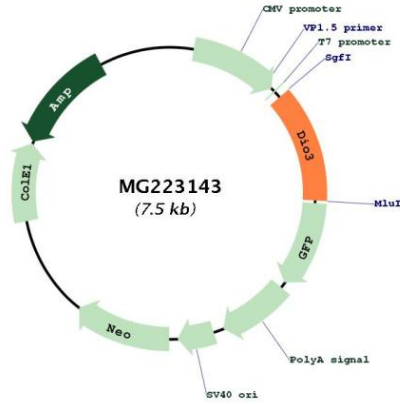
**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of 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](mailto: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](#) The expression of this clone is not guaranteed due to the nature of selenoproteins.

**OTI Annotation:** This clone encodes a selenoprotein containing the rare amino acid selenocysteine (Sec). Sec is encoded by UGA codon, which normally signals translational termination. Expression of this clone is not guaranteed due to the nature of selenoproteins.

<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_172119.2</a></u> , <u><a href="#">NP_742117.2</a></u>
<b>RefSeq Size:</b>	1872 bp
<b>RefSeq ORF:</b>	915 bp
<b>Locus ID:</b>	107585
<b>UniProt ID:</b>	<u><a href="#">Q91Z18</a></u>
<b>Cytogenetics:</b>	12 F1
<b>Gene Summary:</b>	<p>This is an intronless, imprinted gene that is preferentially expressed from the paternal allele in the mouse fetus. The encoded protein belongs to the iodothyronine deiodinase family, and catalyzes the inactivation of thyroid hormone by inner ring deiodination of the prohormone thyroxine (T4) and the bioactive hormone 3,3',5-triiodothyronine (T3) to inactive metabolites, 3,3',5' triiodothyronine (RT3) and 3,3'-diiodothyronine (T2), respectively. It is highly expressed in placenta, fetal and neonatal tissues, and thought to prevent premature exposure of developing fetal tissues to adult levels of thyroid hormones. It thus plays a critical role in mammalian development by regulating circulating fetal thyroid hormone concentration. Knockout mice lacking this gene exhibit severe abnormalities related to development and reproduction. This protein is a selenoprotein, containing the rare selenocysteine (Sec) amino acid at its active site. Sec is encoded by the UGA codon, which normally signals translation termination. The 3' UTRs of selenoprotein mRNAs contain a conserved stem-loop structure, designated the Sec insertion sequence (SECIS) element, that is necessary for the recognition of UGA as a Sec codon rather than as a stop signal. [provided by RefSeq, Jun 2016]</p>

Product images:



Circular map for MG223143