

## Product datasheet for **MG226794**

### **Atp2a2 (NM\_009722) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Atp2a2 (NM_009722) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Atp2a2
Synonyms:	9530097L16Rik; D5Wsu150e; mKIAA4195; SERCA2; Serca2a; SERCA2B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG226794 representing NM\_009722  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGAGAACGCTCACACAAGACCGTGGAGGAGGTGCTGGCCACTTCGGGGTCAACGAGAGCACGGGGC  
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**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >MG226794 representing NM\_009722  
 Red=Cloning site Green=Tags(s)

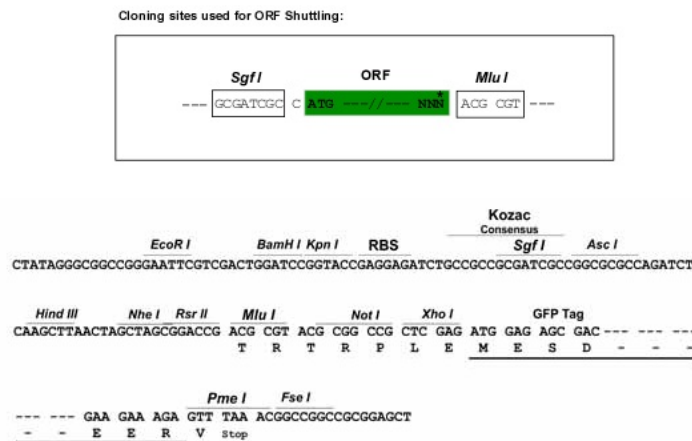
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TRTRPLE - GFP Tag - V

**Chromatograms:** [https://cdn.origene.com/chromatograms/ja1159\\_g01.zip](https://cdn.origene.com/chromatograms/ja1159_g01.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

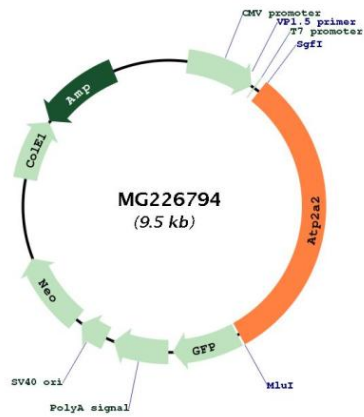


**ACCN:** NM\_009722

**ORF Size:** 2994 bp

<b>OTI Disclaimer:</b>	<p>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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	<p>This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.</p>
<b>Components:</b>	<p>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).</p>
<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>	<p><a href="#">NM_009722.3</a>, <a href="#">NP_033852.1</a></p>
<b>RefSeq Size:</b>	<p>4353 bp</p>
<b>RefSeq ORF:</b>	<p>2997 bp</p>
<b>Locus ID:</b>	<p>11938</p>
<b>UniProt ID:</b>	<p><a href="#">O55143</a></p>
<b>Cytogenetics:</b>	<p>5 F</p>
<b>Gene Summary:</b>	<p>This magnesium-dependent enzyme catalyzes the hydrolysis of ATP coupled with the translocation of calcium from the cytosol to the sarcoplasmic reticulum lumen. Isoform SERCA2A is involved in the regulation of the contraction/relaxation cycle. Acts as a regulator of TNFSF11-mediated Ca(2+) signaling pathways via its interaction with TMEM64 which is critical for the TNFSF11-induced CREB1 activation and mitochondrial ROS generation necessary for proper osteoclast generation. Association between TMEM64 and SERCA2 in the ER leads to cytosolic Ca (2+) spiking for activation of NFATC1 and production of mitochondrial ROS, thereby triggering Ca (2+) signaling cascades that promote osteoclast differentiation and activation (PubMed:23395171).[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for MG226794