

## Product datasheet for **MC222982**

### Atp2a1 (NM\_007504) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Atp2a1 (NM_007504) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Atp2a1
Synonyms:	SERCA1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC222982 representing NM_007504 Red=Cloning site Blue=ORF

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGAGGCCGCGCACTCCAAGTCCACAGAGGAATGTTTGTCTATTTTCGGGGTGAGCGAGACCACAGGCC  
TTACCCAGACCAAGTTAAGCGACATCTGGAAAAATACGGCCCAATGAGCTCCCTGCTGAGGAAGGCAA  
GTCTCTGTGGGAGTTGGTGTAGAGCAGTTCGAAGACCTGCTTGTGCGGATTCCTCTCTGGCTGCCTGC  
ATTTCTTTGTGCTGGCCTGGTTTGAGGAAGGCCAAGAAACCGTCACTGCCTTTGTGGAACCTTTGTCA  
TTCTCTTGATCCTCATTGCCAACGCCATTGTTGGGGTTTGGCAGGAACCGAATGCAGAGAACGCTATCGA  
AGCGCTGAAAGAATATGAACCCGAGATGGGAAAGGTCTATCGGGCTGACCGAAAGTCAGTGCAAAGGATC  
AAGGCTCGGGACATCGTTCTGGGGACATCGTGGAGGTGGCCGTTGGGGACAAAGTCCCTGCAGACATCC  
GCATCCTCTCCATCAAATCCACCACCCTCCGGGTCCGACAGTCCATCCTGACAGGAGAGTCTGTGTCTGT  
CATCAAGCACACAGACCTGTCCCTGACCCCGAGCTGTCAACCAGGACAAGAAGAACATGCTCTTCTCA  
GGTACCAACATCGCAGCCGGCAAGGCTGTAGGCATCGTGGCCACCACTGGTGTGAGTACTGAGATTGGCA  
AGATCCGAGACAGATGGCTGCCACCGAGCAGGACAAGACTCCACTGCAGCAGAAGCTTGACGAGTTTGG  
GGAGCAGCTGTCCAAGGTCACTCTCTCATCTGTGTGGCTGTCTGGCTTATCAACATTGGCCACTCAAC  
GATCCTGTCCATGGGGCTCCTGGTTCCGGGGTGCCATTTACTACTTCAAGATTGCTGTGGCCTTGGCTG  
TGGCGGCCATCCCAGAAGGGCTTCTGCTGTATCACCACCTGCTTGGCTTTGGGTACCCGCCGGATGGC  
AAAGAAGAACGCCATCGTGAGGAGTCTGCCTCTGTGGAGACCCTGGGCTGTACCTCTGTATCTGTTCT  
GACAAAACAGGGACCCTCACCACCAACCAGATGTCAGTTTGAAGATGTTTCATCATTGACAAGGTGGATG  
GGGATGTCTGCTCACTGAACGAGTTCTCCATCACTGGCTCTACTTATGCTCCTGAGGGAGAGGTCTTGAA  
GAATGATAAGCCAGTCCGAGCAGGGCAGTATGATGGGCTGGTGGAGCTCGCTACCATCTGTGCCCTCTGC  
AATGATTCCTCCTGGACTTTAATGAGACCAAGGTGTCTATGAGAAGGTGGGCGAGGCCACGGAGACTG  
CTCTACCACCTTGGTGGAGAAGATGAACGATTCACACGGAAGTGAGAAGCCTCTCTAAAGTGGAGCG  
GGCCAACGCTGCAATTCGGTGATCCGCCAACTCATGAAGAAGGAATTCACCCTGGAATTTCCCGAGAC



```

AGGAAGTCTATGTCTGTCTACTGTTACCAGCTAAGTCCTCACGGGCTGCCGTGGCAACAAGATGTTTG
TCAAGGGTGCCCCGAGGGGGTCATCGACCGCTGTAACATGTGCGTGTGGCACGCCGTGTGCCATT
GACAGGCCCGTGAAGGAGAAGATCATGTCTGTGATCAAGGAGTGGGCACTGGTCGGGACACACTGCGG
TGCCTGGCGTGGCCACCCGCGACACGCCCCCAACGCGAGGAGATGGTTCTGGATGATTCAGCCAAGT
TCATGGAGTATGAGATGGACCTGACGTTTGTGGTGTGGGCATGTTGGATCCACCCGCAAGGAGGT
CACAGGCTCTATCCAGCTGTGTCGTGATGCTGGGATCCGAGTGATCATGATCACTGGGACAACAAGGTT
ACAGCCATTGCCATCTGCCGACGAATTGGCATCTTTTCGGAGAATGAGGAAGTGACAGACCGTGCCTACA
CTGGCCGTGAGTTTGACGATCTGCCCTGGCCGAGCAGCGGGAGGCTGCAGACGCGCTGCTGCTTTC
TCGTGTGGAGCCCTCACACAAGTCCAAGATTGTGGAGTACCTGCAGTCTACGATGAGATCACAGCCATG
ACAGGGGATGGTGTCAATGATGCCCTGCTCTGAAGAAGGCCGAGATTGGCATTGCCATGGGATCTGGTA
CTGCTGTGGCTAAGACGGCCTCTGAAATGGTACTGGCCGATGATAACTTCTCCACCATCGTGGCTGCCGT
GGAGGAAGGCCGCGCCATCTACAACAACATGAAGCAGTTCATCCGCTACCTCATCTCCTCAATGTGGC
GAGGTGGTCTGTATCTTGTGACAGCAGCCTTGGGGCTGCCTGAGGCTCTGATCCCTGTGCAGTCTCT
GGGTGAACCTGGTACTGATGGGCTCCCGCTACTGCCCTGGGATTCAACCCACCTGACCTGGACATCAT
GGACCGCCCCCAGGAGTCCCAAGGAGCCTTATCAGTGGCTGGCTCTTTTTCGCTACATGGCAATT
GGGGGCTATGTGGGTGCAGCCACTGTAGGAGCAGCTGCCTGGTGGTTTTGTATGCAGAGGACGGGCCTC
ATGTCAGTACCATCAGCTGACTCATTTTCAGTGCAGTGCAGTGCAGCACAACCTGAATTCGATGGCCTGGA
CTGTGAGGTCTTTGAGGCCCGAGCCCATGACCATGGCCTTGTCTGTGTTGGTACCATCGAGATGTGC
AATGCTCTCAACAGCCTGTCTGAGAACCAGTCCCTACTGCGGATGCCACCTGGGTGAACATCTGGCTGC
TGGGTTCCATCTGCCTGTCCATGTCCCTCCACTCCTCATCTCTATGTCGACCCCTGCCGATGATCTT
CAAGCTCCGGGCCCTGGACTTACCCAGTGGCTCATGGTCTCAAGATCTCACTGCCAGTCATCGGGCTG
GATGAGCTTCAAGTTCATTGCTCGGAACTATCTGGAGGGATAA
    
```

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM\_007504
- Insert Size:** 2985 bp
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- 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:** [BC036292](#), [AAH36292](#)
- RefSeq Size:** 3486 bp
- RefSeq ORF:** 2985 bp

Locus ID: 11937

UniProt ID: [Q8R429](#)

Cytogenetics: 7 69.04 cM

**Gene Summary:** Key regulator of striated muscle performance by acting as the major Ca(2+) ATPase responsible for the reuptake of cytosolic Ca(2+) into the sarcoplasmic reticulum (PubMed:21697544, PubMed:22961106, PubMed:25640239, PubMed:26816378). Catalyzes the hydrolysis of ATP coupled with the translocation of calcium from the cytosol to the sarcoplasmic reticulum lumen. Contributes to calcium sequestration involved in muscular excitation/contraction (PubMed:21697544, PubMed:22961106, PubMed:25640239, PubMed:26816378).[UniProtKB/Swiss-Prot Function]