

Product datasheet for MR211405

Atp2a1 (NM_007504) Mouse Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | Atp2a1 (NM_007504) Mouse Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | Atp2a1 |
| Synonyms: | SERCA1 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| ORF Nucleotide Sequence: | >MR211405 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGC**C

ATGGAGGCCGCGCACTCCAAGTCCACAGAGGAATGTTTGTCTATTTTCGGGGTGAGCGAGACCACAGGCC
TTACCCAGACCAAGTTAAGCGACATCTGGAAAAATACGGCCCAATGAGCTCCCTGCTGAGGAAGGCAA
GTCTCTGTGGGAGTTGGTGTAGAGCAGTTCGAAGACCTGCTTGTGCGGATTCTTCTCCTGGCTGCCTGC
ATTTCTTTGTGCTGGCCTGGTTTGAGGAAGGCCAAGAAACCGTCACTGCCTTTGTGGAACCTTTGTCA
TTCTCTTGATCCTCATTGCCAACGCCATTGTGGGGTTTGGCAGGAACGGAATGCAGAGAACGCTATCGA
AGCGCTGAAAGAATATGAACCCGAGATGGGAAAGGTCTATCGGGCTGACCGAAAGTCAGTGCAAAGGATC
AAGGCTCGGGACATCGTTCCTGGGGACATCGTGGAGGTGGCCGTTGGGGACAAAGTCCCTGCAGACATCC
GCATCCTCTCCATCAAATCCACCACCCTCCGGGTCCGACAGTCCATCCTGACAGGAGAGTCTGTGTCTGT
CATCAAGCACACAGACCTGTCCCTGACCCCGAGCTGTCAACCAGGACAAGAAGAACATGCTCTTCTCA
GGTACCAACATCGCAGCCGGCAAGGCTGTAGGCATCGTGGCCACCACTGGTGTGAGTACTGAGATTGGCA
AGATCCGAGACCAGATGGCTGCCACCGAGCAGGACAAGACTCCACTGCAGCAGAAGCTTGACGAGTTTGG
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GATCCTGTCCATGGGGCTCCTGGTTCCGGGGTGCCATTTACTACTTCAAGATTGCTGTGGCCTTGGCTG
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GAATGATAAGCCAGTCCGAGCAGGGCAGTATGATGGGCTGGTGGAGCTCGCTACCATCTGTGCCCTCTGC
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CTCTACCACCTTGGTGGAGAAGATGAACGATTCACACGGAAGTGAAGAAGCCTCTCTAAAGTGGAGCG
GGCCAACGCTGCAATTCGGTGATCCGCCAACTCATGAAGAAGGAATTCACCCTGGAATTTCCCGAGAC



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AGGAAGTCTATGTCTGTCTACTGTTACCAGCTAAGTCCTCACGGGCTGCCGTGGCAACAAGATGTTTG
TCAAGGGTGCCCCGAGGGGGTCATCGACCGCTGTAACATGTGCGTGTTGGCACGCCCGTGTGCCATT
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CACAGGCTCTATCCAGCTGTGTCGTGATGCTGGGATCCGAGTGATCATGATCACTGGGGACAACAAGGGT
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GATGAGCTTCTCAAGTTCATTGCTCGGAACTATCTGGAGGGA
    
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ACGCGTACGCGCGCCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATGAGTTTAA
    
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Protein Sequence:

>MR211405 protein sequence
 Red=Cloning site Green=Tags(s)

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MEAAHSKSTEECLSYFGVSETTGLTPDQVKRHLEKYGNELPAEEGKSLWELVVEQFEDLLVRILLAAC
ISFVLAWFEEGETVTAFVEPFVILLILIANAIIVGVWQERNAENAIEALKEYEPEMGKVYRADRKSQVRI
KARDIVPGDIVEVAVGDKVPADIRILSIKSTTLRVDQSILTGESVSVIKHTDPVDPRAVNQDKNMLFS
GTNIAAGKAVGIVATTGVSTEIGKIRDQMAATEQDKTPLQQLDEFGEQLSKVISLICVAVWLINIGHFN
DPVHGGSWFRGAIYYFKIAVALAVAAIPEGLPAVITTTCLALGTRRMAKKNAIVRSLPSVETLGCTSVICS
DKTGTLTTNQMSVCKMFIIDKVDGDVCSLNEFSITGSTYAPEGEVLKNDKPVRAGQYDGLVELATICALC
NDSSLDNETKGVYKVEATETALTTLVEKMNVFNTVRSLSKVERANACNSVIRQLMKKEFTLEFSRD
RKSMSVYCSPAKSSRAAVGNKMFVKGAPGVIDRCNYVRVGTTRVPLTGPVKEKIMSVIKEWGTGRDTRL
CLALATRDTPPKREEMVLDDSAKFMEYEMDLTFVGVVGMLDPPRKEVTGSIQLCRDAGIRVIMITGDNKG
TAIAICRRIGIFSENEEVDRAITGREFDDLPLAEQREACRRACCFARVEPSHKSIVEYLQSYDEITAM
TGDGVNDAPALKKAEIGIAMSGTAVAKTASEMVLADDFSTIVAAVEEGRAIYNNMKQFIRYLISSNVG
EVVICIFLTAALGLPEALIPVQLLWVNLVTDGLPATALGFNPPDLIDMRPPRSPKEPLISGWLFFRYMAI
GGYVGAATVGAAWWFLYAEDGPHVSYHQLTHFMQCTEHNPEFDGLDCEVFEAPEPMTMALSVLVTIEMC
NALNSLSENQSLLRMPWNIWLLGSICLSMSLHFLILYVDPLPMIFKLRALDFTQWMLVKISLPVIGL
DELLKFIARNYLEG
    
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV
    
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Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_007504

ORF Size: 2985 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_007504.2](#), [NP_031530.2](#)

RefSeq Size: 3486 bp

RefSeq ORF: 2985 bp

Locus ID: 11937

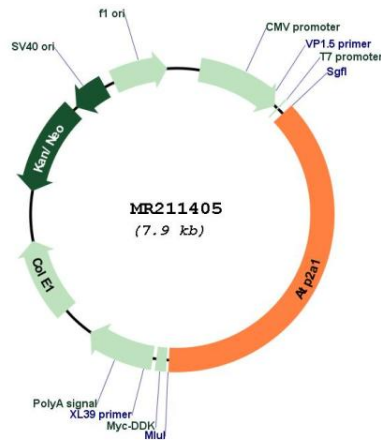
UniProt ID: [Q8R429](#)

Cytogenetics: 7 69.04 cM

MW: 109.4 kDa

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]

Product images:



Circular map for MR211405