

Product datasheet for **RG214911**

ATP2A1 (NM_173201) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ATP2A1 (NM_173201) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ATP2A1
Synonyms:	ATP2A; SERCA1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RG214911 representing NM_173201
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGAGGCCGCTCATGCTAAAACCACGGAGGAATGTTTGGCCTATTTTGGGTGAGTGAGACCACGGGCC
 TCACCCCGGACCAAGTTAAGCGGAATCTGGAGAAATACGGCCTCAATGAGCTCCCTGCTGAGGAAGGGAA
 GACCTGTGGGAGCTGGTGATAGAGCAGTTTGAAGACCTCCTGGTGCGGATTCTCCTCCTGGCCGATGC
 ATTTCTTCTGCTGCTGGCCTGGTTTGAAGAGGTGAAGAGACCATCACTGCCTTTGTTGAACCTTTGTCA
 TCCTCTTGATCCTCATTGCCAATGCCATCGTGGGGTTTGGCAGGAGCGAACGCAGAGAACGCCATCGA
 GGCCCTGAAGGAGTATGAGCCAGAGATGGGGAAGGTCTACCGGGCTGACCGCAAGTCAGTGCAAAGGATC
 AAGGCTCGGGACATCGTCCCTGGGGACATCGTGGAGGTGGCTGTGGGGACAAAGTCCCTGCAGACATCC
 GAATCCTCGCCATCAAATCCACCACGCTGCGGGTTGACCAGTCCATCCTGACAGGCGAGTCTGTATCTGT
 CATCAAACACACGGAGCCGTTCTGACCCCGAGCTGTCAACCAGGACAAGAAGACATGCTTTTCTCG
 GGCACCAACATTGCAGCCGGCAAGGCCTTGGGCATCGTGGCCACCACCGGTGTGGCACCAGAGATTGGGA
 AGATCCGAGACCAATGGCTGCCACAGAACAGGACAAGACCCCTTGCAGCAGAAGCTGGATGAGTTTGG
 GGAGCAGCTCTCCAAGGTCACTCCCTCATCTGTGTGGCTGTCTGGCTTATCAACATTGGCCACTTCAAC
 GACCCCGTCCATGGGGGCTCCTGGTTCGCGGGGCCATCTACTACTTAAAGATTGCCGTGGCCTTGGCTG
 TGGCTGCCATCCCGAAGGTCTTCTGCAGTCACTACCACCTGCCTGGCCTGGTACCCGTCGGATGGC
 AAAGAAGAATGCCATTGTAAGAAGCTTGCCTCCGTAGAGACCTGGGCTGCACCTCTGTATCTGTTCC
 GACAAGACAGGCACCCCTACCACCAACCAGATGTCTGTGCAAGATGTTATCATTGACAAGGTGGATG
 GGGACATCTGCCCTCCTGAATGAGTTCTCCATCACCGGCTCCACTACGCTCCAGAGGGAGAGTCTTGAA
 GAATGATAAGCCAGTCCGGCCAGGGCAGTATACGGGCTGGTGGAGCTGGCCACCATCTGTGCCCTCTGC
 AATGACTCCTCCTGGACTTCAACGAGGCCAAAGGTGTCTATGAGAAGTTCGGCAGGACCACCGAGACAG
 CACTCACCCCTGGTGGAGAAGATGAATGTGTTCAACACGGATGTGAGAAGCCTCTCGAAGGTGGAGAG
 AGCCAACGCTGCAACTCGGTGATCCGCCAGCTAATGAAGAAGGAATTCACCTGGAGTTCTCCCGAGAC
 AGAAAGTCCATGTCTGTCTATTGCTCCCGACCAAATCTTCCCGGCTGCTGTGGCAACAAGATGTTTG
 TCAAGGGTGCCCTGAGGGCGTCATCGACCGTGAATATGTGCGAGTTGGCACCACCCGGGTGCCACT
 GACGGGGCCGGTGAAGGAAAAGATCATGGCGGTGATCAAGGAGTGGGCACTGGCCGGGACACCCCTGCGC
 TGCTTGGCCCTGGCCACCCGGGACACCCCGAAGCGAGAGGAAATGGTCTGGATGACTCTGCCAGGT
 TCCTGGAGTATGAGACGGACCTGACATTCGTGGGTGTAGTGGGCATGCTGGACCTCCCGCAAGGAGGT
 CACGGGCTCCATCCAGCTGTGCCGTGACCCGGGATCCGGGTGATCATGATCACTGGGGACAACAAGGGC
 ACAGCCATTGCCATCTGCCGGCGAATTGGCATCTTTGGGAGAACGAGGAGGTGGCCGATCGCGCTACA
 CGGGCCGAGAGTTCGACGACCTGCCCTGGCTGAACAGCGGGAAGCCTGCCGACGTGCCTGCTGCTTCGC
 CCGTGTGGAGCCCTCGCACAAGTCCAAGATTGTGGAGTACCTGCAGTCTACGATGAGATCACAGCCATG
 ACAGGTGATGGCGTCAATGACGCCCTGCCCTGAAGAAGGCTGAGATTGGCATTGCCATGGGATCTGGCA
 CTGCCGTGGCCAAAGACTGCCTCTGAGATGGTGTGGCTGACGACAACCTTCCACCATCTAGCTGCTGT
 GGAGGAGGGCCGCGCCATCTACAACAACATGAAGCAGTTTCCGCTACCTCATTTCCTCAACGTGGGC
 GAGGTGGTCTGTATCTTCTGACCGCTGCCCTGGGGCTGCTGAGGCCCTGATCCCGGTGACGCTGCTAT
 GGTGAACTTGGTACCACGGGCTCCAGCCACAGCCCTGGGCTTCAACCCACCAGACCTGGACATCAT
 GGACCGCCCCCGGAGCCCAAGGAGCCCTCATCAGTGGCTGGCTCTTCTCCGCTACATGGCAATC
 GGGGGCTATGTGGGTGCAGCCACCGTGGGAGCAGCTGCCTGGTGGTTCTGTACGCTGAGGATGGCCTC
 ATGTCAACTACAGCCAGCTGACTCACTTATGCAGTGCACCGAGGACAACACCCACTTTGAGGGCATAGA
 CTGTGAGGTCTTCGAGGCCCGGAGCCCATGACCATGGCCCTGTCCGTGCTGGTGACCATCGAGATGTGC
 AATGCACTGAACAGCCTGTCCGAGAACCAGTCCCTGCTGCGGATGCCACCCTGGTGAACATCTGGCTGC
 TGGGCTCCATCTGCTCTCCATGTCCCTGCACTTCTCATCTATGTTGACCCCTGCCGATGATCTT
 CAAGCTCCGGGCCCTGGACCTCACCCAGTGCTCATGGTCTCAAGATCTCACTGCCAGTATTGGGCTC
 GACGAAATCCTCAAGTTCGTTGCTCGGAACTACCTAGAGGATCCAGAAGATGAAAGAAGGAAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG214911 representing NM_173201
Red=Cloning site Green=Tags(s)

```

MEAAHAKTTEECLAYFGVSETTGLTPDQVKRNLEKYGLNELPAEEGKTLWELVIEQFEDLLVRILLLAAC
ISFVLAWFEEGEETITAFVEPFVILLILIANAVGVWQERNAENAIEALKEYEPEMGKVYRADRSVQRI
KARDIVPGDIVEVAVGDKVPADIRILAIKSTTLRVDQSILTGESVSVIKHTEPVPDPRAVNQDKKNMLFS
GTNIAAGKALGIVATTGVGTEIGKIRDQMAATEQDKTPLQQKLDEFGEQLSKVISLICVAVWLINIGHFN
DPVHGGSWFRGAIYYFKIAVALAVAAIPEGLPAVITTCALGTRRMAKKNAIVRSLPSVETLGCTSVICS
DKTGTLTTNQMVSCKMFIIDKVDGDI LLNEFSITGSTYAPEGEVLKNDKPVPRGQYDGLVELATICALC
NDSSLDNFNAKGVYEKVGATETALTTLVEKMNVFNTDVRSLSKVERANACNSVIRQLMKKEFTLEFSRD
RKSMSVYCSPAKSSRAAVGNKMFVKGAPGVIDRCNYVRVGTTRVPLTGPVKEKIMAVIKEWGTGRDTRL
CLALATRDTPPKREEMVLDD SARFLEYETDLTFVGVVGM LDP PRKEVTGSIQLCRDAGIRVIMITGDNKG
TATAICRRIGIFGENEEVADRAYTGREFDDLPLAEQREACRRACCFARVEPSHKSKIVEYLQSYDEITAM
TGDGVNDAPALKKAEIGIAMSGTAVAKTASEMVLADDNFSTIVA AVEEGRAIYNNMKQFIRYLISSNVG
EVCIFLTAALGLPEALIPVQLLWVNLVTDGLPATALGFNPPDLDIMDRPPRSPKEPLISGWLFFRYMAI
GGYVGAATVGAAAWFLYAEDGPHVNSQLTHFMQCTEDNTHFEGIDCEVFEAPEPMTMALSVLVTIEMC
NALNSLSENQSLLRMPWNIWLLGSICLSMSLHFLILYVDPLPMIFKLRALDLTQWLMVLKISLPVIGL
DEILKFVARNYLEDPEDERRK
  
```

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:

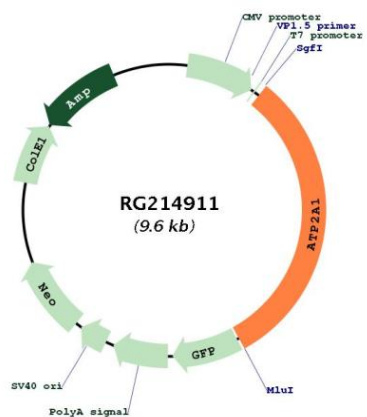


ACCN: NM_173201

ORF Size: 3003 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:	<ol style="list-style-type: none">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_173201.2 , NP_775293.1
RefSeq Size:	3528 bp
RefSeq ORF:	3006 bp
Locus ID:	487
UniProt ID:	O14983
Cytogenetics:	16p11.2
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Alzheimer's disease, Calcium signaling pathway
Gene Summary:	This gene encodes one of the SERCA Ca(2+)-ATPases, which are intracellular pumps located in the sarcoplasmic or endoplasmic reticula of muscle cells. This enzyme catalyzes the hydrolysis of ATP coupled with the translocation of calcium from the cytosol to the sarcoplasmic reticulum lumen, and is involved in muscular excitation and contraction. Mutations in this gene cause some autosomal recessive forms of Brody disease, characterized by increasing impairment of muscular relaxation during exercise. Alternative splicing results in three transcript variants encoding different isoforms. [provided by RefSeq, Oct 2013]

Product images:



Circular map for RG214911