

Product datasheet for RC216526

ATP2A1 (NM_004320) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ATP2A1 (NM_004320) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ATP2A1
Synonyms:	ATP2A; SERCA1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC216526 representing NM_004320 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGAGGCCGCTCATGCTAAAACCACGGAGGAATGTTGGCCTATTTGGGGTGAGTGAGACCACGGGCC
TCACCCCGGACCAAGTTAAGCGGAATCTGGAGAAATACGGCCTCAATGAGCTCCCTGCTGAGGAAGGGAA
GACCCCTGGGAGCTGGTATAGAGCAGTTGAAGACCTCCTGGTGCGGATTCTCCTCTGGCCGATGC
ATTTCTTCGTGCTGGCCTGGTTGAGGAAGGTGAAGAGACCATCACTGCCTTTGTTGAACCTTTGTCA
TCCTCTTGATCCTCATTGCCAATGCCATCGTGGGGTTTGGCAGGAGCGGAACGCAGAGAACGCCATCGA
GGCCTGAAGGAGTATGAGCCAGAGATGGGAAGGTCTACCGGGCTGACCGCAAGTCAGTGCAAAGGATC
AAGGCTCGGGACATCGTCCCTGGGGACATCGTGGAGGTGGCTGTGGGGGACAAAGTCCCTGCAGACATCC
GAATCCTCGCCATCAAATCCACCACGCTGCGGGTTGACCAAGTCCATCCTGACAGGCGAGTCTGTATCTGT
CATCAAACACACGGAGCCCGTTCCTGACCCCGAGCTGTCAACCAGGACAAGAAGAACATGCTTTTCTCG
GGCACCAACATTGCAGCCGGCAAGGCCTTGGGCATCGTGGCCACCACTGGTGTGGCACCAGATTGGGA
AGATCCGAGACCAAATGGCTGCCACAGAACAGGACAAGACCCCTTGACAGAGAAGCTGGATGAGTTGG
GGAGCAGCTCTCCAAGGTCACTCCCTCATCTGTGTGGCTGTCTGGCTTATCAACATTGGCCACTCAAC
GACCCCGTCCATGGGGCTCCTGGTTCCGCGGGGCCATCTACTTTAAGATTGCCGTGGCCTTGGCTG
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AGAAAGTCCATGTCTGTCTATTGCTCCCCAGCCAAATCTTCCCGGGCTGCTGTGGCAACAAGATGTTTG
TCAAGGGTGCCCCGAGGGCGTCATCGACCGCTGTAACATGTGCGAGTTGGCACCACCCGGTGCCACT
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ATGTCAACTACAGCCAGCTGACTCACTTATGCAGTGCACCGAGGACAACACCCACTTTGAGGGCATA
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AATGCACTGAACAGCCTGTCCGAGAACCAGTCCCTGCTGCGGATGCCACCTGGGTGAACATCTGGCTGC
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CAAGCTCCGGGCCCTGGACCTCACCCAGTGGCTCATGGTCTCAAGATCTCACTGCCAGTATTGGGCTC
GACGAAATCCTCAAGTTCGTTGCTCGGAACTACCTAGAGGGA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC216526 representing NM_004320
Red=Cloning site Green=Tags(s)

MEAAHAKTTEELAYFGVSETTGLTPDQVKRNLEKYGLNELPAEEGKTLWELVIEQFEDLLVRILLAAAC
ISFVLAWFEEGEETITAFVEPFVILLILIANAIIVGVWQERNAENAIEALKEYEPEMGKVYRADRKSQVRI
KARDIVPGDIVEVAVGDKVPADIRILAIKSTTLRVDQSILTGESVSVIKHTEPVDPRAVNQDKKNMLFS
GTNIAAGKALGIVATTGVGTEIGKIRDQMAATEQDKTPLQQLDEFGEQLSKVISLICVAVWLINIGHFN
DPVHGGSWFRGAIYFFKIAVALAVAAIPEGLPAVITTTCLALGTRRMAKKNAIVRSLPSVETLGCTSVICS
DKTGTLTTNQMSVCKMFIIDKVDGDI CLLNEFSITGSTYAPEGEVLKNDKPVRPGQYDGLVELATICALC
NDSSLDNFNEAKGVYKVGAEATETALTTLVEKMNVFNTDVRSLSKVERANACNSVIRQLMKKEFTLEFSRD
RKSMSVYCSPAKSSRAAVGNKMFVKGAPGVIDRCNYVRVGTTRVPLTGPVKEKIMAVIKEWGTGRDTRLR
CLALATRDTPPKREEMVLDDSFLEYEYTDLTFVGVVGMDDPPRKEVTGSIQLCRDAGIRVIMITGDNKG
TAIAICRRIGIFGENEEVADRAYTGREFDDLPLAEQREACRRACCFARVEPSHKS KIVEYLQSYDEITAM
TGDGVNDAPALKKAEIGIAMSGTAVAKTASEMVLADDNFSTIVA AVEEGRAIYNNMKQFIRYLISSNVG
EVVICIFLTAALGLPEALIPVQLLWVNLVTDGLPATALGFNPPDLDIMDRPPRSPKEPLISGWLFFRYMAI
GGYVGAATVGA AAWFLYAEDGPHVNYSQLTHFMQCTEDNTHFEGIDCEVFEAPEPMTMALSVLVTIEMC
NALNSLSENQSLLRMPWVNIWLLGSICLSMSLHFLILYVDPLPMIFKLRALDLTQWMLVKIISLPVIGL
DEILKFVARNYLEG

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_004320

ORF Size: 2982 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.

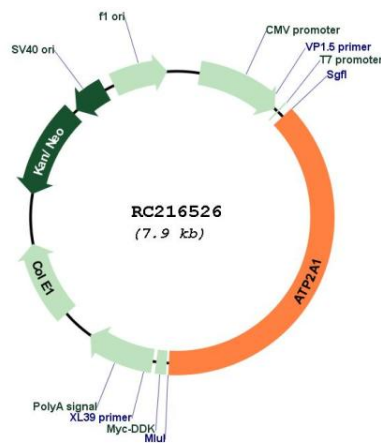
RefSeq: [NM_004320.6](#)

RefSeq Size: 3570 bp

RefSeq ORF: 2985 bp
Locus ID: 487
UniProt ID: [O14983](#)
Cytogenetics: 16p11.2
Protein Families: Druggable Genome, Transmembrane
Protein Pathways: Alzheimer's disease, Calcium signaling pathway
MW: 109.3 kDa

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 RC216526