

## Product datasheet for RC220099

### SERCA3 (ATP2A3) (NM\_174955) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SERCA3 (ATP2A3) (NM_174955) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ATP2A3
Synonyms:	SERCA3
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RC220099 representing NM_174955 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGGAGGGCGGCATCTGCTCCCGGCCCGGACGTGCTGCGCCACTTCTCGGTGACAGCCGAGGGCGGCC  
TGAGCCCGGCGCAGGTGACCGGGCGCGGGAGCGCTACGGCCCCAACGAGCTCCCGAGTGAGGAAGGGAA  
GTCCCTGTGGGAGCTGGTCTGGAACAGTTTGGAGACCTCTGGTGCGCATCTCTGCTGGCTGCCCTT  
GTCTCCTTTGTCCTGGCCTGGTTTCGAGGAGGGCGAGGAGACCACGACCGCCTTCTGTGAGCCCTGGTCA  
TCATGCTGATCCTCGTGGCCAACGCCATTGTGGGCGTGTGGCAGGAACGCAACGCCGAGAGTGCCATCGA  
GGCCCTGAAGGAGTATGAGCCTGAGATGGGCAAGGTGATCCGCTCGGACCGCAAGGGCGTGCAGAGGATC  
CGTGCCCGGGACATCGTCCCAGGGGACATTGTAGAAGTGGCAGTGGGGGACAAAGTGCCTGCTGACCTCC  
GCCTCATCGAGATCAAGTCCACCACGCTGCGAGTGGACCAGTCCATCCTGACGGGTGAATCTGTGTCCGT  
GACCAAGCACACAGAGGCCATCCCAGACCCAGAGCTGTGAACCAGGACAAGAAGAATGCTGTTTTCT  
GGCACC AATATCACATCGGGCAAAGCGGTGGGTGTGGCCGTGGCCACCGCCTGCACACGGAGTGGGCA  
AGATCCGGAGCCAGATGGCGGCAGTTCGAGCCCGAGCGGACCGCTGCAGCGCAAGCTGGACGAGTTTGG  
ACGGCAGCTGTCCACGCCATCTCTGTGATCTGCGTGGCCGTGTGGGTCAACAACATCGGCCACTTCGCC  
GACCCGGCCACGGTGGCTCCTGGCTGCGTGGCGTGTCTACTACTTCAAGATCGCCGTGGCCCTGGCGG  
TGGCGGCCATCCCCGAGGGCCTCCCGGTGTCATCACTACATGCCTGGCACTGGGCACGCGGCGCATGGC  
ACGCAAGAAGCCATCGTGCAAGCCTGCCGTCCGTGGAGACCCTGGGCTGCACCTCAGTCATCTGCTCC  
GACAAGACGGGCAGCTCACCACCAATCAGATGTCTGTCTGCCGATGTTCTGTGGTAGCCGAGGCCGATG  
CGGGCTCTGCCTTTTGCACGAGTTCACCATCTCGGGTACCAGTATACCCCGAGGGCGAAGTGGCGCA  
GGGGATCAGCCTGTGCGCTGCGCCAGTTCGACGGGCTGGTGGAGCTGGCGACCATCTGCGCCCTGTGC  
AACGACTCGGCTCTGACTACAACGAGGCCAAGGGTGTGTATGAGAAGTGGGAGAGGCCACGGAGACAG  
CTCTGACTTGCCGTGGAGAAGATGAACGTGTTTCGACACCGACCTGCAGGCTCTGTCCCGGTGGAGCG  
AGCTGGCGCCTGTAACACGGTCATCAAGCAGCTGATGCGGAAGGAGTTCACCCTGGAGTTCTCCCGAGAC  
CGGAAATCCATGTCCGTGTACTGCACGCCACCCGCCCTCACCTACTGGCCAGGGCAGCAAGATGTTTTG



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TGAAGGGGGCTCCTGAGAGTGTGATCGAGCGCTGTAGCTCAGTCCGCGTGGGGAGCCGCACAGCACCCCT  
 GACCCCACTCCAGGGAGCAGATCCTGGCAAAGATCCGGGATTGGGGCTCAGGCTCAGACACGCTGCGC  
 TGCTGGCACTGGCCACCCGGGACGCGCCCAAGGAAGGAGGACATGGAGCTGGACGACTGCAGCAAGT  
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 GGCTGCCTGCATCACACGCTGCTACCAGCGGGCATCCGCGTGGTATGATCACGGGGGATAACAAAGGC  
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 CTGTGAGGTGTTGAGTACGCTTCCCCACCACCATGGCCTTGTCCGTGCTCGTACCATTGAAATGTGC  
 AATGCCCTCAACAGCGTCTCGGAGAACCAGTCGCTGCTGCCGATGCCGCCCTGGATGAACCCCTGGCTGC  
 TGGTGGCTGTGGCCATGTCCATGGCCCTGCACTTCTCATCTGCTCGTCCGCCCTGCCTCTCATT  
 CCAGGTGACCCCACTGAGCGGGCCAGTGGTGGTGGTCTCCAGATATCTCTGCTGTGCATCTGCTG  
 GATGAGGCCCTCAAGTACCTGTCCCGAACCACATGCACGCTGTCTTATCCAGGCTTCTCAGGACAG  
 TCTCGCAGGCTGGAGTAGGCAGCCGCTGACCACCTCTGGACCCAGACCACCCGGAAGAAATGAGCC  
 AGAAGTGAAGCTGGGAACAGAGTGGAGTCTCCGGTGTGTACCTCAGAC

ACGCGTACGCGGGCCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC220099 representing NM\_174955  
 Red=Cloning site Green=Tags(s)

MEAAHLLPAADVLRHFSVTAEGGLSPAQVTGARERYGNELPSEEGKSLWELVLEQFEDLLVRILLAL  
 VSFVLAWFEEGETTTAFVEPLVIMLILVANAIIVGVWQERNAESAIEALKEYEPEMGKVIIRSDRKGVQRI  
 RARDIVPGDIVEVAVGDKVPADLRLIEIKSTTLRVDQSILTGESVSVTKHTEAIPDPRAVNQDKNMLFS  
 GTNITSGKAVGVAVATGLHTELKIRSQMAAVEPERTPLQRKLDEFGRQLSHAISVICVAVVWINIGHFA  
 DPAHGGSWLRGAVVYFKIAVALAVAAIPEGLPAVITTCALGTRRMARKNAIVRSLPSVETLGCSTVICS  
 DKTGTLTTNQMSVCRMFVVAEADAGSCLLHEFTISGTTYTPEGEVROGDQPVRCGQFDGLVELATICALC  
 NDSALDYNEAKGVYKVEATETAL TCLVEKMNVDLQALSRVERAGACNTVIKQLMRKEFTLEFSRD  
 RKSMSVYCTPTRPHPTGQGSKMFVKGAPESVIERCSSVRVGSRTAPLTPTSREQILAKIRDWGSSTLR  
 CLALATRDAPPRKEDMELDDCSKFVQYETDLTFVGCVMGLDPPRPEVAACITRCYQAGIRVVMITGDNKG  
 TAVAICRRLGIFGDTEVAGKAYTGREFDDL SPEQQRQACRTARCFARVEPAHKSRIVENLQSFNEITAM  
 TGDGVNDAPALKAEIGIAMSGTAVAKSAAEMVL SDDNFASIVAAVEEGRAIYSNMKQFIRYLISSNVG  
 EVVICIFLTAILGLPEALIPVQLLWVNLVTDGLPATALGFNPPDL DIMEKLPRSPREALISGWLFFRYLAI  
 GVVYGLATVAAATWWFVYDAEGPHINFYQLRNFLKCEDNPLFAGIDCEVFESRFPTTMALSVLVTIEMC  
 NALNSVSENQSLLRMPWPWNPWLLVAVAMSMALHFLILLVPPLPLIFQVTPLSGRQWVVVLQISLVPVILL  
 DEALKYL SRNHMHACL YPGLLRTVSQAWSRQPLTTSWTPDHTGRNEPEVSAGNRVESPVCTSD

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

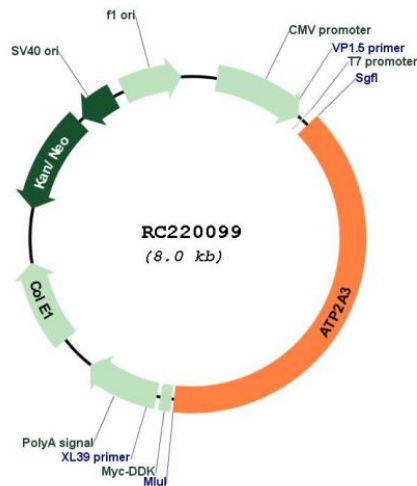
**Restriction Sites:**

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_174955

ORF Size: 3129 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](#)

<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<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>	<a href="#">NM_174955.3</a>
<b>RefSeq Size:</b>	4827 bp
<b>RefSeq ORF:</b>	3132 bp
<b>Locus ID:</b>	489
<b>UniProt ID:</b>	<a href="#">Q93084</a>
<b>Cytogenetics:</b>	17p13.2
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>Protein Pathways:</b>	Alzheimer's disease, Calcium signaling pathway
<b>MW:</b>	114 kDa
<b>Gene Summary:</b>	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 calcium sequestration associated with muscular excitation and contraction. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008]