

Product datasheet for **SC300162**

ATP2B1 (NM_001001323) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ATP2B1 (NM_001001323) Human Untagged Clone
Tag:	Tag Free
Symbol:	ATP2B1
Synonyms:	PMCA1; PMCA1kb
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene ORF sequence for NM_001001323 edited
 ATGGGCGACATGGCAAACAACACTCAGTTGCTTACAGTGGTGTGAAAACTCTTTGAAGGAA
 GCTAATCATGATGGAGACTTTGGAATTACGCTCGCAGAGCTGCGGGCTCTCATGGAGCTC
 AGGTCCACAGATGCATTACGAAAAATACAGGAAAGCTATGGAGATGTCTATGGAATTTGC
 ACCAAATTGAAAACATCTCCAATGAAGTTTAAGTGGAAACCCTGCAGATTTAGAAAGA
 AGAGAAGCAGTGTGGAAAGAATTTATACCTCTAAAAGCCAAAACCTTTCTTCAA
 TTAGTATGGGAAGCATTACAAGATGTCACCTTAATTATATTAGAAATTGCAGCCATAGTA
 TCATTGGGCCTTTCTTTTATCAGCCTCCAGAAGGGGATAATGCACTTTGTGGAGAAGTT
 TCTGTTGGGGAGGAAGAAGGTGAAGGTGAAACTGGTTGGATTGAAGGAGCTGCAATCCTC
 TTGTCTGTAGTGTGTGGTGTAGTAACAGCTTTCAATGACTGGAGTAAGGAAAAACAG
 TTTAGAGTTTGCAGAGCCGAATTGAACAAGAACAGAAGTTCACGTGCATCAGGGGTGGT
 CAGGTCATTACAGATACCTGTAGCTGACATTACTGTTGGAGATATTGCTCAAGTAAATAT
 GGTGATCTTCTCCAGCTGACGGCATACTTATTCAAGGCAACGATCTTAAAATTGATGAA
 AGCTCATTGACTGGTGAATCAGATCATGTTAAAAAGTCTTTAGATAAAGGATCCCTTACTT
 CTATCAGGTACTCATGTAATGGAAGGCTCTGGAAGAATGGTAGTTACAGCTGTAGGTGTA
 AATTCTCAAACCTGGAATTATCTTTACCTTACTTGGAGCTGGAGGTGAAGAGGAAGAGAAG
 AAAGATGAGAAGAAAAAGGAAAAAGAAAAAATAAGAAACAAGATGGAGCTATTGAGAATCGC
 AACAAAGCAAAAGCCAGGATGGTGCAGCCATGGAATGCAGCCATTGAAGAGTGAAGAA
 GGTGGAGATGGTATGAAAAAGATAAAAAGAAAGCAAATTTGCCAAAAAGGAAAAATCT
 GTTTTACAAGGGAAACTTACAAAACCTGGCTGTTTACAGATTGGCAAAGCAGGTCTGTTGATG
 TCTGCCATCACAGTTATCATTCTAGTATTATTTTTGTCATTGACACCTTCTGGGTTGAG
 AAAAGACCATGGCTTGTGAGTGCACACCAATTTATATACAATACTTTGTGAAGTTCTTC
 ATTATTGGAGTTACAGTTTTAGTGGTGCAGTGCAGAGAAGGTCTTCCACTTGCAGTCACG
 ATCTCACTGGCTTATTCAGTCAAAAAATGATGAAAGATAATAACTTAGTAAGGCATCTG
 GATGCTTGTGAAACCATGGGAAATGCTACAGCTATTTGTTGATGATAAAACAGGAACCTTG
 ACAATGAACAGAATGACAGTCGTTCAAGCTTACATAAATGAAAAACATTATAAAAAGGTT
 CCTGAACCAGAAGCTATCCACCAAATATTTTGCCTATCTTGTAAACAGGAATTTCTGTG



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AATTGTGCTTATACATCAAAAATATTGCCACCAGAGAAAAGAGGGTGGATTACCTCGTCAC
 GTTGGTAATAAACTGAATGTGCCTTGTGGGACTTCTTTTGGATTTAAAACGGGATTAT
 CAGGATGTTAGAAATGAAATACCAGAAGAAGCACTGTACAAAAGTCTACACCTTCAATTCT
 GTTAGGAAGTCCATGAGTACTGTCTGAAAAATTCAGATGGAAGTTATCGAATATTCAGC
 AAGGGTGCATCTGAGATAATTCTGAAAAAGTGTTCAAAATCTTGAGTGCATATGGTGAG
 GCAAAAAGTATTCAGACCAAGGGACCGTGATGATATTGTA AAAA ACTGTGATTGAACCGATG
 GCATCAGAAGGCTTGAGAACCATATGTCTTGCAATTCAGAGATTTCCAGCAGGAGAACCA
 GAACCAGAGTGGGATAATGAAAATGATATTGTCACCGGCCTTACATGCATTGCTGTTGTG
 GGGATTGAAGATCCTGTGAGACCTGAGGTGCCAGATGCAATTA AAAA AGTGCAGAGGGCT
 GGAATTACTGTGCGGATGGTCACTGGTGATAATATTAATACTGCTCGGGCCATTGCTACC
 AAATGTGGTATTTTACATCCTGGGAAGATTTTCTGTGCCTAGAAGGTAAAGATTTTAAAC
 AGAAGAATACGAAATGAAAAGGAGAGATTGAGCAAGAGAGGATAGACAAGATTTGGCCA
 AAACCTCGAGTACTTGAAGATCATCTCCTACTGATAAGCATACTGGTTAAAGGTATA
 ATTGACAGCACTGTCTCAGACCAACGCCAGTTGTAGCTGTA ACTGGTGATGGTACAAT
 GATGGCCAGCACTAAAGAAAGCAGATGTTGGATTTGCAATGGGTATTGCTGGA ACTGAT
 GTAGCTAAAGAAGCATCCGATATTATTCTCACAGATGACA ACTTTACAAGCATTGTTAAA
 GCAGTTATGTGGGGACGAAATGTCTATGACAGCATCTCAAAAATTCCTTCAGTTCCAACTT
 ACTGTTAATGTAGTAGCAGTGATTGTTGCTTTTACGGGCGCCTGCATTACTCAAGACTCA
 CCGCTTAAGGCTGTGCAGATGCTGTGGGTAAACCTCATAATGGATACACTCGCTTCCCTG
 GCTCTGGCAACGGAACCCCACTGAGTCTCTCTTGTCTCGGAAACCTTATGGTAGAAAT
 AAGCCTCTCATCTCACGTACAATGATGAAGAATATTTGGGTGATGCATTCTATCAACTT
 GTAGTAGTCTTTACACTCTTATTTGCTGGAGAAAAGTTTTTTGACATTGATAGTGAAGA
 AATGCTCCTTTGCATGCTCCTCCTTCAGAACATTATACTATTGTTTTTAATACCTTTGTG
 CTGATGCAACTTTTCAACGAAAATAAATGCCCGGAAAATTCATGGTGAAAGAAATGTATTC
 GAAGGAATCTTTAACAATGCCATCTTCTGCACAATTGTTTTAGGCACTTTTGTGGTACAG
 ATAATAATTGTGCAGTTTGGTGGAAAACCTTTCAGTTGTTCAGAACTTTCAATAGAACAG
 TGGCTATGGTCAATATTCCTAGGAATGGGAACATTACTCTGGGGCCAGCTTATTTCAACA
 ATTCCAAGTCCGTTTAAAATTCCTCAAAGAAGCTGGTCATGGAACACAAAAGGAAGAA
 ATACCTGAGGAGGAATTAGCAGAGGATGTTGAAGAGATTGATCACGCTGAAAGGGAGTTG
 CGGCGTGGCCAAATCTTGTGGTTTAGAGGTCTGAACAGAATCAAACACAGATGGATGTA
 GTGAATGCTTTCCAGAGTGAAGTTCCATTCAGGGGGCTCTAAGGCGGCAACCCTCCATC
 GCCAGCCAGCATCATGATGTAACAAATATTTCTACCCCTACACATGTAGTGTTCCTCT
 TCTACTGCTTCTACTACTGTGGGTATTTCGAGTGGTGAATGCATTTTCGTAG

Restriction Sites:

Please inquire

ACCN:

NM_001001323

Insert Size:

4000 bp

OTI Disclaimer:	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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</p>
OTI Annotation:	<p>The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference except a SNP at the 413th nt. This clone may be unstable or toxic at high copy number in common E. coli strain. We recommend using a lower copy number E. coli strain, such as CopyCutter strain (http://www.epibio.com/item.asp?ID=435) for transformation and plasmid preparation. Please be aware that the DNA yield could be low. Additional aliquots of this clone can be ordered from OriGene.</p>
Components:	<p>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).</p>
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:	<u>NM_001001323.1, NP_001001323.1</u>
RefSeq Size:	6950 bp
RefSeq ORF:	3531 bp
Locus ID:	490
UniProt ID:	<u>P20020</u>
Cytogenetics:	12q21.33
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Calcium signaling pathway

Gene Summary:

The protein encoded by this gene belongs to the family of P-type primary ion transport ATPases characterized by the formation of an aspartyl phosphate intermediate during the reaction cycle. These enzymes remove bivalent calcium ions from eukaryotic cells against very large concentration gradients and play a critical role in intracellular calcium homeostasis. The mammalian plasma membrane calcium ATPase isoforms are encoded by at least four separate genes and the diversity of these enzymes is further increased by alternative splicing of transcripts. The expression of different isoforms and splice variants is regulated in a developmental, tissue- and cell type-specific manner, suggesting that these pumps are functionally adapted to the physiological needs of particular cells and tissues. This gene encodes the plasma membrane calcium ATPase isoform 1. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Jul 2008] Transcript Variant: This variant (1), as well as variant 6, encodes isoform 1a, also known as hPMCA1a. Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.