

Product datasheet for **SC319402**

beta 1 Sodium Potassium ATPase (ATP1B1) (NM_001677) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	beta 1 Sodium Potassium ATPase (ATP1B1) (NM_001677) Human Untagged Clone
Tag:	Tag Free
Symbol:	beta 1 Sodium Potassium ATPase
Synonyms:	ATP1B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_001677.3
 AGAAGCCGAGCGCGCAGAGGACGCCAGGGCGCGCCGCGAGCCACCCACCTCCGGACC
 GCGGCAGCTGCTGACCCGCCATCGCCATGGCCCCGCGGAAAGCCAAGGAGGAGGGCAGCT
 GGAAGAAATTCATCTGGAAGCTCAGAGAAGAAGGAGTTTCTGGGCAGGACCGGTGGCAGTT
 GGTTTAAGATCCTTCTATTCTACGTAATATTTTATGGCTGCCTGGCTGGCATCTTCATCG
 GAACCATCCAAGTGATGCTGCTCACCATCAGTGAATTTAAGCCACATATCAGGACCGAG
 TGGCCCCGCCAGGATTAACACAGATTCTCAGATCCAGAAGACTGAAATTTCTTTTCGTC
 CTAATGATCCCAAGAGCTATGAGGCATATGTAAGTGAACATAGTTAGGTTCTGGAAAAGT
 ACAAGATTTCAGCCAGAGGGATGACATGATTTTTGAAGATTGTGGCGATGTGCCAGTG
 AACCGAAAGAACGAGGAGACTTTAATCATGAACGAGGAGAGCGAAAGGTCTGCAGATTCA
 AGCTTGAATGGCTGGGAAATTGCTCTGGATTAATGATGAACTTATGGCTACAAAGAGG
 GCAAACCGTGCATTATTATAAAGCTCAACCGAGTTCTAGGCTTCAAACCTAAGCCTCCCA
 AGAATGAGTCCTTGGAGACTTACCCAGTGATGAAGTATAACCCAAATGTCCTTCCCGTTC
 AGTGCACTGGCAAGCGAGATGAAGATAAGGATAAAGTTGGAAATGTGGAGATTTTGGAC
 TGGGCAACTCCCCTGGTTTTCTCTGCAGTATTATCCGTAATATGGCAAACCTCCTGCAGC
 CCAAATACCTGCAGCCCCCTGCTGGCCGTACAGTTCACCAATCTTACCATGGACACTGAAA
 TTCGCATAGAGTGAAGGCGTACGGTGAGAACATTGGGTACAGTGAGAAAGACCGTTTTTC
 AGGGACGTTTTGATGTAAAAATTGAAGTTAAGAGCTGATCACAAGCACAAATCTTTCCCA
 CTAGCCATTTAATAAGTTAAAAAAGATACAAAAACAAAAACCTACTAGTCTTGAACAAA
 CTGTACATCGTATGGGACCTACACTTAATCTATATGCTTTACACTAGCTTTCTGCATTTA
 ATAGGTTAGAATGTAATTAAGTGTAGCAATAGCAACAAAAATTTATTCTACTGTAAA
 TGACAAAAA

Restriction Sites:	Please inquire
ACCN:	NM_001677



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OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
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:	<u>NM_001677.3</u> , <u>NP_001668.1</u>
RefSeq Size:	2212 bp
RefSeq ORF:	912 bp
Locus ID:	481
UniProt ID:	<u>P05026</u>
Cytogenetics:	1q24.2
Domains:	Na_K-ATPase
Protein Families:	Transmembrane
Protein Pathways:	Cardiac muscle contraction

Gene Summary:

The protein encoded by this gene belongs to the family of Na⁺/K⁺ and H⁺/K⁺ ATPases beta chain proteins, and to the subfamily of Na⁺/K⁺ -ATPases. Na⁺/K⁺ -ATPase is an integral membrane protein responsible for establishing and maintaining the electrochemical gradients of Na and K ions across the plasma membrane. These gradients are essential for osmoregulation, for sodium-coupled transport of a variety of organic and inorganic molecules, and for electrical excitability of nerve and muscle. This enzyme is composed of two subunits, a large catalytic subunit (alpha) and a smaller glycoprotein subunit (beta). The beta subunit regulates, through assembly of alpha/beta heterodimers, the number of sodium pumps transported to the plasma membrane. The glycoprotein subunit of Na⁺/K⁺ -ATPase is encoded by multiple genes. This gene encodes a beta 1 subunit. Alternatively spliced transcript variants encoding different isoforms have been described, but their biological validity is not known. [provided by RefSeq, Mar 2010]

Transcript Variant: This variant (1) represents the longer transcript, and encodes the longer isoform (a).