

Product datasheet for **RG235125**

ATP1A3 (NM_001256213) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ATP1A3 (NM_001256213) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ATP1A3
Synonyms:	AHC2; ATP1A1; CAPOS; DYT12; RDP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG235125 representing NM_001256213 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGGAGGCTGGGAGGAGGAGGAACAGGAGAGCCACGGACAAGAAAGATGACAAGGACTACCCAAGA
AGAACAAGGGCAAGGAGCGCCGGGACCTGGATGACCTCAAGAAGGAGGTGGCTATGACAGAGCACAAGAT
GTCAGTGAAGAGGTCTGCCGAAATACAACACAGACTGTGTGCAGGGTTTGACCCACAGCAAAGCCAG
GAGATCCTGGCCCGGATGGGCCTAACGCACTCACGCCACCGCTACCACCCAGAGTGGTCAAGTTTT
GCCGGCAGCTCTCGGGGCTTCTCCATCTGCTGTGGATCGGGGCTATCCTCTGCTTCTGGCCTACGG
TATCCAGGCGGGCACCGAGGACGACCCCTCTGGTGACAACCTGTACCTGGGCATCGTGTGGCGCCGTG
GTGATCATCACTGGCTGCTTCTCCTACTACCAGGAGGCCAAGAGCTCCAAGATCATGGAGTCTTCAAGA
ACATGGTGCCCAAGCAAGCCCTGGTGATCCGGGAAGGTGAGAAGATGCAGGTGAACGCTGAGGAGGTGGT
GGTCGGGGACCTGGTGGAGATCAAGGTGGAGACCGAGTGCCAGCTGACCTGCGGATCATCTCAGCCAC
GGCTGCAAGGTGGACAACCTCCTCCTGACTGGCGAATCCGAGCCCAAGACTCGTCTCCGACTGCACTC
ACGACAACCCCTGGGAGACTCGGAACATCACCTTCTTTCCACCAACTGTGTGGAAGGCACGGCTCGGGG
CGTGGTGGTGGCCACGGGCGACCGCACTGTATGGGCCGATCGCCACCCCTGGCATCAGGGCTGGAGGTG
GGCAAGACGCCATCGCCATCGAGATTGACACTTCATCCAGCTCATCCGGCGTGGCTGTCTTCTCTGG
GTGTCTCCTTCTCATCCTCTCCCTATTCTCGGATACACCTGGCTTGAGGCTGTATCTTCTCATCGG
CATCATCGTGGCCAATGTCCCAGAGGGTCTGCTGGCCACTGTCACTGTGTGTCTGACGCTGACCGCAAG
CGCATGGCCCGGAAGAACTGCCTGGTGAAGAACCTGGAGGCTGTAGAAACCCCTGGGCTCCACGTCCACCA
TCTGCTCAGATAAGACAGGGACCCTCACTCAGAACCGCATGACAGTCGCCACATGTGGTTTGACAACCA
GATCCACGAGGCTGACCACTGAGGACAGTCAGGGACCTCATTTGACAAGAGTTGACACACCTGGGTG
GCCCTGTCTCACATCGTGGGCTCTGCAATCGCGCTGTCTTCAAGGGTGGTCAGGACAACATCCCTGTGC
TCAAGAGGGATGTGGCTGGGATGCGTCTGAGTCTGCCCTGCTCAAGTGCATCGAGCTGTCTCTGGCTC
CGTGAAGCTGATGCGTGAACGCAACAAGAAAGTGGCTGAGATTCCTTCAATTCCACCAACAATACCAG



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CTCTCCATCCATGAGACCGAGGACCCCAACGACAACCGATACCTGCTGGTGATGAAGGGTGCCCCGAGC
GCATCCTGGACCGCTGCTCCACCATCTGCTACAGGGCAAGGAGCAGCCTCTGGACGAGGAAATGAAGGA
GGCCTTCCAGAATGCCTACCTTGAGCTCGGTGGCCTGGGCGAGCGGTGCTTGGTTTCTGCCATTATTAC
CTGCCCGAGGAGCAGTCCCAAGGGCTTTGCCTCGACTGTGATGACGTGAACCTCACCACGGACAACC
TCTGCTTGTGGGCTCATGTCCATGATCGACCAACCCGGGAGCCGTCCTGACGCGGTGGGCAAGTG
TCGCAGCGCAGGCATCAAGGTCATCATGGTCACCGGCGATCACCCATCACGCGCAAGGCCATTGCCAAG
GGTGTGGGCATCATCTCTGAGGGCAACGAGACTGTGGAGGACATCGCCGCCGGCTCAACATTCCCGTCA
GCCAGGTTAACCCCGGGATGCCAAGGCCTGCGTGATCCACGGCACCGACCTCAAGGACTTCACCTCCGA
GCAAATCGACGAGATCCTGCAGAATCACACCGAGATCGTCTTCGCCCGCACATCCCCCAGCAGAAGCTC
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TGACATGATCCTGCTGGACGACAACCTTGCCTCCATCGTCACAGGGGTGGAGGAGGGCCGCTGATCTTC
GACAACCTAAAGAAGTCCATTGCCTACACCCTGACCAGCAATATCCCGGAGATCACGCCCTTCTGCTGT
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GGTCCCTGCCATCTCACTGGCGTACGAGGCTGCCGAAAGCGACATCATGAAGAGACAGCCAGGAACCCG
CGGACGGACAAATTTGGTCAATGAGAGACTCATCAGCATGGCCTACGGGCAGATTGGAATGATCCAGGCTC
TCGGTGGCTTCTTCTTACTTTGTGATCCTGGCAGAAAATGGCTTCTTGCCCGCAACCTGGTGGGCAT
CCGGTGAACCTGGGATGACCGCACCGTCAATGACCTGGAAGACAGTTACGGGCAGCAGTGGACATACGAG
CAGAGGAAGGTGGTGGAGTTCACCTGCCACACGGCCTTCTTTGTGAGCATCGTTGTGTCAGTGGGCCG
ATCTGATCATCTGCAAGACCCGGAGAACTCGGTCTTCCAGCAGGGCATGAAGAACAAGATCCTGATCTT
CGGGCTGTTTGGAGAGACGGCCCTGGCTGCCTTCTGTCTACTGCCCGGCATGGACGTGGCCCTGCGC
ATGTACCCTCTCAAGCCAGCTGGTGGTCTGTGCCTTCCCCTACAGTTTCCCTCATCTTCGCTACGACG
AAATCCGCAAACATCCTGCGCAGGAACCCAGGGGTTGGTGGAGAAGGAAACCTACTAC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG235125 representing NM_001256213
Red=Cloning site Green=Tags(s)

MGWEEERNRRATDKKDDKSPKKNKGKERRDLDDLKKEVAMTEHKMSVEEVCRKYNTDCVQGLTHSKAQ
EILARDGNALTPPPTTPEWVKFRQLFGGFSILLWIGAILCFLAYGIQAGTEDDPSGDNLYLGIVLAAY
VIITGCFSYQAEAKSSKIMESFKNMVPPQALVIREGEMQVNAEEVVVDLVEIKGGDRVPADLRIISAH
GCKVDNSSLTGESEPQTRSPDCTHDNPLETRNITFFSTNCVEGTARGVVVATGDRTVMGRIATLASGLEV
GKTPIAIEIEHF IQLITGVAVFLGVSFFILSLILGYTWLEAVIFLIGIIVANVPEGLLATVTVCLTLTAK
RMARKNCLVKNLEAVETLGSTSTICSDKTGTLTQNRMTVAHMWFDNQIHEADTTEDQSGTSFDKSSHTWV
ALSHIAGLCNRAVFKGGQDNIPVLKRDVAGDASESALLKCIELSSGSVKLMRERNKKVAEIPFNSTNKYQ
LSIHETEDPNDNRYLLVMKGAPERILDRCSILLQGKEQPLDEEMKEAFQAYLELGGGERVLFCHYY
LPEEQFPKGFADFCDVNF TTDNLCFVGLMSMIDPPRAAVPDAVGKCRSAGIKVIMVTGDHPITAKAIK
GVGIISEGNETVEDIAARLNIPVSQVNPRAKACVIHGTDLKDF TSEQIDEILQNHTEIVFARTSPQQL
IIVEGCRQQAIVAVTGDGVNDSPALKKADIGVAMGIAGSDVSKQAADMILLDDNFASIVTGVEEGRLIF
DNLKKSIAYTLTSNIPEITPFLFFIMANIPLPLGTITILCIDLGTDMVPAISLAYEAAESDIMKRQPRNP
RTDKLVNERLISMAYGQIGMIQALGGFFSYFVILAENGF L PGNLVGIRLNWDDRTVNDLEDSYQQWTYE
QRKVVEFTCHTAFFVSI VVVQWADLIICKTRRNSVFQGMKNKILIFGLFEETALAAFLSYCPGMDVALR
MYPLKPSWWFCAPYSFLIFVYDEIRKLILRRNPGGWVEKETY

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-Mlul

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:	<u>NM_001256213.1</u> , <u>NP_001243142.1</u>
RefSeq Size:	3504 bp
RefSeq ORF:	3075 bp
Locus ID:	478
UniProt ID:	<u>P13637</u>
Cytogenetics:	19q13.2
Protein Families:	Druggable Genome, Transmembrane
Protein Pathways:	Cardiac muscle contraction
Gene Summary:	<p>The protein encoded by this gene belongs to the family of P-type cation transport ATPases, 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 catalytic subunit of Na⁺/K⁺ -ATPase is encoded by multiple genes. This gene encodes an alpha 3 subunit. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jan 2012]</p>