ATP1A2 cDNA Clone – Atpase, Na+/K+ Transporting, Alpha 2 (+) Polypeptide (Human)

PRODUCT OVERVIEW

Product Name	ATP1A2, cDNA Clone
Full Product Name	ATP1A2 cDNA Clone
Product Gene Name	ATP1A2 cdna clone
Sequence	atgggccgtg gggctggccg tgagtactca cctgccgcca ccacggcaga gaatgggggc ggcaagaaga aacagaagga gaaggaactg gatgagctga agaaggaggt ggcaatggat gaccacaagc tgtccttgga tgagctgggc cgcaaatacc aagtggacct gtccaagggc ctcaccaacc agcgggctca ggacgttctg gctcgagatg ggcccaacgc cctcacacca cctcccacaa cccctgagtg ggtcaagttc tgccgtcagc ttttcggggg gttctccatc ctgctgtgga ttggggctat cctctgcttc ctggcctacg gcatccaggc tgccatggag gatgaaccat ccaacgacaa tctatatctg ggtgtggtgc tggcagctgt ggtcattgtc actggctgct tctcctacta ccaggaggcc aagagctcca agatcatgga ttccttcaag aacatggtac ctcagcaagc ccttgtgatc cgggagggag agaagatgca gatcaacgca gaggaagtgg tggtgggaga cctggtggag gtgaagggtg gagaccgcgt ccctgctgac ctccggatca tctcttctca tggctgtaag gtggataact catccttaac aggagagtcg gagccccaga cccgctcccc cgagttcacc catgagaacc ccctggagac ccgcaatatc tgtttcttct ccaccaactg tgttgaaggc actgccaggg gcattgtgat tgccacagga gaccggacgg tgatgggccg catagctact ctcgcctcag gcctggaggt tgggcggaca cccatagcaa tggagattga acacttcatc cagctgatca caggggtcgc tgtattcctg ggggtctcct tcttcgtgct ctccctcatc ctgggctaca gctggctgga ggcagtcatc ttcctcatcg gcatcatagt ggccaacgtg cctgaggggc ttctggccac tgtcactgtg tgcctgaccc tgacagccaa gcgcatggca cggaagaact gcctggtgaa gaacctggag gcggtggaga cgctgggctc cacgtccacc atctgctcgg acaagacggg caccctcacc cagaaccgca tgaccgtcgc ccacatgtgg ttcgacaacc aaatccatga ggctgacacc accgaagatc agtctggggc cacttttgac aaacgatccc ctacgtggac ggccctgtct cgaattgctg gtctctgcaa ccgcgccgtc ttcaaggcag gacaggagaa catctccgtg tctaagcggg acacagctgg tgatgcctct gagtcagctc tgctcaagtg cattgagctc tcctgtggct cagtgaggaa aatgagagac agaaacccca aggtggcaga gattcctttc aactctacca acaagtacca gctgtctatc cacgagcgag aagacagccc ccagagccac gtgctggtga tgaagggggc cccagagcgc attctggacc ggtgctccac catcctggtg cagggcaagg agatcccgct cgacaaggag atgcaagatg cctttcaaaa tgcctacatg gagctggggg gacttgggga gcgtgtgctg ggattctgtc aactgaatct gccatctgga aagtttcctc ggggcttcaa attcgacacg gatgagctga actttcccac ggagaagctt tgctttgtgg ggctcatgtc tatgattgac cctccccggg ctgctgtgcc agatgctgtg ggcaagtgcc gaagcgcagg catcaaggtg atcatggtaa ccggggatca ccctatcaca gccaaggcca ttgccaaagg cgtgggcatc atatcagagg gtaacgagac tgtggaggac attgcagccc ggctcaacat tcccatgagt caagtcaacc ccagagaagc caaggcatgc gtggtgcacg gctctgacct gaaggacatg acatcggagc agctcgatga gatcctcaag aaccacacag agatcgtctt tgctcgaacg tctccccagc agaagctcat cattgtggag ggatgtcaga ggcagggagc cattgtggcc gtgacgggtg acggggtgaa cgactcccct gcattgaaga aggctgacat tggcattgcc atgggcatct ctggctctga cgtctctaag caggcagccg acatgatcct gctggatgac aactttgcct ccatcgtcac gggggtggag gagggccgcc tgatctttga caacttgaag aaatccatcg cctacaccct gaccagcaac atccccgaga tcaccccctt cctgctgttc atcattgcca acatccccct acctctgggc actgtgacca tcctttgcat tgacctgggc acagatatgg tccctgccat ctccttggcc tatgaggcag ctgagagtga tatcatgaag cggcagccac gaaactccca gacggacaag ctggtgaatg agaggctcat cagcatggcc tacggacaga tcgggatgat ccaggcactg ggtggcttct tcacctactt tgtgatcctg gcagagaacg gtttcctgcc atcacggcta ctgggaatcc gcctcgactg ggatgaccgg accatgaatg atctggagga cagctatgga caggagtgga cctatgagca gcggaaggtg gtggagttca cgtgccacac ggcattcttt gccagcatcg tggtggtgca gtgggctgac ctcatcatct gcaagacccg ccgcaactca gtcttccagc agggcatgaa gaacaagatc ctgatttttg ggctcctgga ggagacggcg ttggctgcct ttctctctta ctgcccaggc atgggtgtag ccctccgcat gtacccgctc aaagtcacct ggtggttctg cgccttcccc tacagcctcc tcatcttcat ctatgatgag gtccgaaagc tcatcctgcg gcggtatcct ggtggctggg tggagaagga gacatactac tga
Molecular Weight	112,265 Da
OMIM	104290
Vector	Please Inquire
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for ATP1A2 cdna clone	MBS1271064 is a cDNA clone targeting ATP1A2.
Other Notes	Small volumes of ATP1A2 cdna clone vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ATP1A2. It may not necessarily be applicable to this product.

NCBI GI #	30354533
NCBI GeneID	477
NCBI Accession #	BC052271
UniProt Secondary Accession #	Q07059; Q5JW74; Q86UZ5; Q9UQ25; D3DVE4
UniProt Related Accession #	P50993
NCBI Official Full Name	Homo sapiens ATPase, Na+/K+ transporting, alpha 2 (+) polypeptide, mRNA
NCBI Official Synonym Full Names	ATPase Na+/K+ transporting subunit alpha 2
NCBI Official Symbol	ATP1A2
NCBI Official Synonym Symbols	FHM2; MHP2
UniProt Protein Name	Sodium/potassium-transporting ATPase subunit alpha-2
UniProt Synonym Protein Names	Sodium pump subunit alpha-2
Protein Family	Sodium/potassium-transporting ATPase
UniProt Gene Name	ATP1A2
UniProt Synonym Gene Names	KIAA0778; Na(+)/K(+) ATPase alpha-2 subunit
UniProt Entry Name	AT1A2_HUMAN
NCBI Protein Information	sodium/potassium-transporting ATPase subunit alpha-2
NCBI Summary for ATP1A2	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 2 subunit. Mutations in this gene result in familial basilar or hemiplegic migraines, and in a rare syndrome known as alternating hemiplegia of childhood. [provided by RefSeq, Oct 2008]
UniProt Comments for ATP1A2	ATP1A2: This is the catalytic component of the active enzyme, which catalyzes the hydrolysis of ATP coupled with the exchange of sodium and potassium ions across the plasma membrane. This action creates the electrochemical gradient of sodium and potassium, providing the energy for active transport of various nutrients. Defects in ATP1A2 are the cause of familial hemiplegic migraine type 2 (FHM2). FHM2 is a rare, severe, autosomal dominant subtype of migraine characterized by aura and some hemiparesis. Defects in ATP1A2 are a cause of alternating hemiplegia of childhood 1 (AHC1). AHC is typically distinguished from familial hemiplegic migraine by infantile onset of the symptoms and high prevalence of associated neurological deficits that become increasingly obvious with age. Belongs to the cation transport ATPase (P-type) (TC 3.A.3) family. Type IIC subfamily. Protein type: EC 3.6.3.9; Hydrolase; Transporter; Membrane protein, integral; Membrane protein, multi-pass; Transporter, ion channel Chromosomal Location of Human Ortholog: 1q23.2 Cellular Component: cytoplasm; intracellular membrane-bound organelle; membrane; plasma membrane; sodium:potassium-exchanging ATPase complex Molecular Function: ATP binding; ATPase activity; chaperone binding; drug binding; potassium ion binding; protein binding; sodium ion binding; sodium:potassium-exchanging ATPase activity Biological Process: ATP hydrolysis coupled proton transport; ATP metabolic process; cardiac muscle contraction; cellular potassium ion homeostasis; cellular sodium ion homeostasis; potassium ion import Disease: Alternating Hemiplegia Of Childhood 1; Migraine, Familial Hemiplegic, 2
Research Articles on ATP1A2	**1.** A missense variant of the ATP1A2 gene is associated with a novel phenotype of progressive sensorineural hearing loss associated with migraine

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