

## Product datasheet for **MR208769**

### **Atp5a1 (NM\_007505) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Atp5a1 (NM_007505) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Atp5a1
Synonyms:	AI035633; AL022851; AL023067; Atpm; D18Ertd206e; Mom2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR208769 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGCTGTCTGTGCGCGTGCCTCGCCGCGCCGTGGCCGTGCCCTCCCTCGACGGGCGGGACTGGTCTCCAAA  
 ATGCTTTGGGGTCATCCTTTGTTGGTGCAAGAAATCTCCATGCCTCTAACACTCGACTTCAGAAGACTGG  
 CACAGCTGAGATGTCTCCATTCTCGAGGAGAGGATTCTGGGAGCTGACACGTCTGTTGACCTGGAGGAG  
 ACTGGGCGTGTGTTAAGCATTGGTGATGGTATTGCGCGAGTGCACGGGCTGAGGAATGTTCAAGCAGAGG  
 AGATGGTGAATCTCTTCAGGCTTAAAGGGTATGTCCCTGAACCTGGAACCCGACAATGTTGGAGTTGT  
 CGTGTGTTGGGAATGACAAGCTAATTAAGAAGGAGACGTTGTGAAGAGGACAGGCCCATCGTGATGTC  
 CCCGTTGGCGAGGAGCTGTTGGCCGTGTGGTTGACGCCCTCGGTAATGCTATTGATGGAAGGGTCCAA  
 TTGGTTCCAAGACCCGACAGCAGTGGGCTGAAAGCCCTGGAATTATCCCCGAATCTCTGTGCGGGA  
 GCCGATGCAGACCGGCATCAAGGCTGTGGATAGCCTGGTCCCATGGCCGGGTGAGCGTGAGCTGATT  
 ATTGGTGACAGACAGACTGGGAAAACATCGATTGCCATTGACACAATCATCAACCAGAAACGTTTCAACG  
 ATGGGACCGACGAGAAGAAGAAGCTGTACTGCATCTACGTCGCGATTGGTCTGAGAGCGGTCCACTGTGGC  
 TCAGCTGGTGAAGAGACTGACGGATGCGGATGCCATGAAGTACCCATCGTGGTGTGAGCCACTGCCTCT  
 GACGCTGCCCCGCTTCACTACTGGCTCCCTACTCCGGCTGCTCCATGGGAGAGTACTTTAGAGACAACG  
 GCAAGCACGCTTTGATCATCTATGACGATCTATCCAAGCAGGCTGTCGTTACCGCCAGATGTCTCTGTT  
 GCTCCGCCGACCCCTGGTCGTGAGGCCATCCTGGTGATGTGTTCTACCTACACTCCCGCTGCTGGAG  
 AGAGCAGCCAAGATGAACGATTCCTTTGGTGGTGGCTTTGACTGCCTTACCAGTCATTGAAACACAGG  
 CTGGTGATGTGTCGCTTACATTCACAACTGTTATTTCCATCACTGACGGACAGATCTCTTGGAAAC  
 AGAATTGTTCTATAAAGGCATCCGCCCTGCCATTAATGTGGTTTGTCTGTGTCCCGTGTGCGATCTGCT  
 GCCCAAACCAGAGCCATGAAGCAGGTGGCAGGTACCATGAAGCTGGAGTTGGCTCAGTACCGGGAGGTGG  
 CTGCGTTTGCCAGTTTGGTTCTGATTTGGACGCTGCCACTCAACAGCTTTGAGTCGTGGTGTGCGCTCT  
 GACCGAGTTGCTAAAGCAAGGACAGTACTCTCCCATGGCTATTGAAGAACAGGTGGCTGTTATCTATGCG  
 GGTGTACGGGTTATCTTGACAACTGGAGCCAGCAAGATCACAAAGTTTGAGAATGCTTTCTGTCTC  
 ACGTTATCAGCCAGCACCAGTCCCTCTTGGCAATATCAGGTCTGATGGGAAAATCTCAGAACAGTCAGA  
 CGCAAAGCTCAAAGAGATTGTAACAACTCTTGGCTGGGTTGAACCA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR208769 protein sequence  
 Red=Cloning site Green=Tags(s)

MLSVRVA AVARALPRRAGLVSKNALGSSFVVGARNLHASNTRLQKTGTAEMSSILEERILGADTSVDLEE  
 TGRVLSIGDGIARVHGLRNVQAEEMVEFSSGLKMSLNLEPDNVGVVVFVNDKLIKEGDVVKRTGAIVDV  
 PVGSELLGRVVDALGNAIDGKPIGSKTRRRVGLKAPGIIPRISVREPMQTGIKAVDSLVPVIGRQRELI  
 IGDRQTGKTSIAIDTIIINQKRFNDGTDEKKLYCIYVAIGQKRSTVAQLVKRLTDADAMKYTIVVSATAS  
 DAAPLQYLAPYSGCSMGEYFRDNGKHALIIYDDLKQAVAYRQMSLLRRPPGREAYPGDVFLHSRLLE  
 RAAKMNSFGGSLTALPVIETQAGDVSAYIPTNVISITDQIFLETIFYKIRPAINVGLSVSRVGS  
 AQTRAMKQVAGTMKLELAQYREVAFAQFGSDLDAATQQLSRGVRLTELLKQGQYSPMAIEEQVAVIYA  
 GVRGYLDKLEPSKITKFENAFLSHVISQHSLLGNIRSDGKISEQSDAKLKEIVTNFLAGFEP

**TR**TRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_007505

**ORF Size:** 1662 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](#)

**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:**
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:** [NM\\_007505.2](#), [NP\\_031531.1](#)
**RefSeq Size:** 2443 bp

**RefSeq ORF:** 1662 bp

**Locus ID:** 11946

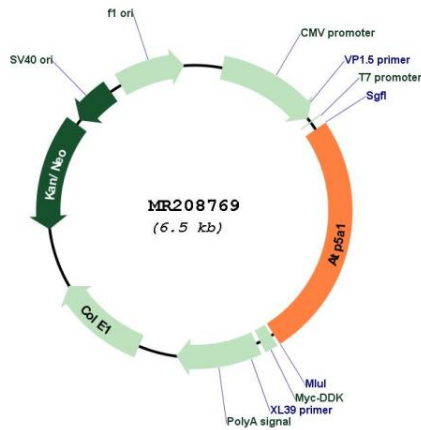
**UniProt ID:** [Q03265](#)

**Cytogenetics:** 18 52.38 cM

**MW:** 59.8 kDa

**Gene Summary:** Mitochondrial membrane ATP synthase (F<sub>1</sub>F<sub>0</sub>) ATP synthase or Complex V) produces ATP from ADP in the presence of a proton gradient across the membrane which is generated by electron transport complexes of the respiratory chain. F-type ATPases consist of two structural domains, F<sub>1</sub> - containing the extramembraneous catalytic core, and F<sub>0</sub> - containing the membrane proton channel, linked together by a central stalk and a peripheral stalk. During catalysis, ATP synthesis in the catalytic domain of F<sub>1</sub> is coupled via a rotary mechanism of the central stalk subunits to proton translocation. Subunits alpha and beta form the catalytic core in F<sub>1</sub>. Rotation of the central stalk against the surrounding alpha(3)beta(3) subunits leads to hydrolysis of ATP in three separate catalytic sites on the beta subunits. Subunit alpha does not bear the catalytic high-affinity ATP-binding sites (By similarity). Binds the bacterial siderophore enterobactin and can promote mitochondrial accumulation of enterobactin-derived iron ions (By similarity).[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MR208769