

## Product datasheet for **MC222890**

### Ap2a1 (NM\_007458) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Ap2a1 (NM_007458) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Ap2a1
Synonyms:	Adtaa
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >MC222890 representing NM\_007458  
 Red=Cloning site Blue=ORF

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCCGCATCGCC

ATGCCGGTGTATCCAAAGGCGATGGCATGCGTGGGCTCGCCGTGTTTCATCTCCGACATCCGGAAGTCA  
 AGAGCAAAGAGGCTGAGATCAAGAGGATCAACAAGGAAGTGGCCAACATCCGTTCCAAGTTCAAAGGGGA  
 CAAGGCCTTGGATGGCTACAGTAAAAAGAAGTATGTGTGAAGCTGCTTTCATATTCCTGCTTGGCCAT  
 GACATTGACTTTGGACATATGGAGGCCGTGAACCTGCTAAGCTCTAACAAGTACACGGAGAAGCAGATAG  
 GGTACCTGTTTCATCTCAGTCTGGTGAAGTCAAGTCAAGTCAAGTCAAGTCAAGTCAAGTCAAGTCAAGT  
 GAATGACCTGGCCAGTCGCAACCCACCTTCATGTGCCTGGCCTTGCCTGATCGCTAAGTGGGCGAGC  
 CGTGAGATGGGCGAGGCTTTTGTGCAGACATCCCGAATCCTGGTGGTGGGACAGCATGGACAGTG  
 TGAAGCAGAGTGGCCCTATGCCTACTGCGACTCTACAAGGCCCTCGCCGACTTGGTGGCCATGGGCGA  
 GTGGACGGCAGTGTAGTGCCTTGTCAATGATCAGCACATGGGAGTGGTACAGCTGCTGTCAGCCTC  
 ATCACCTGTCTCTGCAAGAAGAATCCGGATGACTTCAAGACCTGTATCTCCCTGGCTGTGTCTCGTTAA  
 GCCGGATCGTCTCCTCAGCCTCCACTGACCTCCAGGACTACACTTACTACTTCGTTCTGCAACCTGGCT  
 CTCTGTGAAGCTACTGCGGCTGCTCCAGTGTACCCACCACCAGAGGATGCAGCCGTGAAAGGGCGGTTA  
 GTGGAGTGTCTGGAGACTGTGCTCAACAAGGCCAGGAGCCTCCCAAGTCCAAGAAGGTGCAGCACTCCA  
 ACGCAAAGAAGCTATCCTCTTTGAGACCATTAGCCTCATCATCCACTATGACAGTGAGCCCAACCTCCT  
 GGTCCGCGCTGCAACCAGCTGGCCAGTTCCTGCAGCACCAGGAGACTAACCTGCGCTACCTGGCCCTG  
 GAGAGCATGTGCACGCTGGCCAGCTCCGAGTTCCTCCACGAGGCCGTCAAGACCCACATTGATACAGTTA  
 TTAATGCCCTCAAGACGGAGCGGACGTCAGTGTGAGGACGCGGCGGCTGATCTCCTGTATGCCATGTG  
 TGACCGGAGCAATGCCAAGCAGATTGTGTGAGAGATGCTGCGGTACCTGGAGACTGCTGACTATGCCATC  
 CGAGAGGAGATCGTGTGAAGGTGGCCATCCTGGCTGAGAAGTATGCAGTGGACTACAGCTGGTACGTGG  
 ACACCATCCTCAACCTCATCCGCATCGCGGGGACTATGTGAGCGAGGAGGTGTGGTACCGCGTGTGCA  
 GATCGTACCAACCGTGTGACGTCCAGGGTTATGCTGCCAAGACAGTGTGGAGGCCCTCCAGGCCCA  
 GCCTGTGATGAGAATGGTGAAGTGGTGGCTACATCCTTGGGGAGTTTGGGAAGTGGATTGCTGGGG  
 ACCCAGCTCCAGCCACCAGTGCAGTTCCTGCTGCTGCACTCCAAGTTCACCTGTGCAGCGTGGCCAC  
 CCGCGCTCTGTTGCTGTCCACCTACATCAAGTTCATCAACCTCTCCCTGAGACCAAGGCCACCATCCAA  
 GGGTTCTGCGTCCGGCTCCAGCTGCGAAATGCCGACGTGGAGCTACAGCAGCGGGCCGTGGAGTACC  
 TCAACCTCAGCTCCGTAGCCAGCACCGATGTTCTGGCTACGGTGTGAGAAGTGGCCCAATTCCTCGA  
 GCGGGAGTCCGTCCATCTTGGCCAAGCTGAAGCGCAAGAAGGGCCCTGGGGCAGCCAGTGCCTTAGATGAC  
 AGCCCGAGGGACACCAGCAGCAATGACATCAATGGGGGTGTGGAGCCACCCCCAGCACTGTGTCGACCC  
 CCTCACCTCCGCGGACCTCTTAGGGCTGCGGGCAGCCCTCCCTGCTGCACCCCGGCTCCCGTAGG  
 CGGGAACCTCCTGGTGGATGTCTTCTGACGGCCCCACTGCACAGCCAGCCTGGGGCCCACTCCTGAG  
 GAGGCTTCTCAGCGAGCTGGAGCCCCCTGCCCTGAGAGCCCCATGGCTTTGTTGGTGAACCAAGT  
 CGTGTGAAGAATAGTGGGTCTTGTGTTGAGAACCAGCTGCTGCAGATTGGAGTCAAGTCTGAGTCCGG  
 CAGAACCTGGGCCGATGTATCTTCTATGGCAACAAGACTTCTGTGCAGTTCAGAAGTCTTGGCCCA  
 CCGTGGTCCATCCTGGGACCTCCAGACTCAGCTGGCGGTGCAGACCAAGCGTGTGGCGGCAAGTGGGA  
 CGGTGGGCACAGGTGCAGCAAGTACTCAACATTGAGTGTCTGCGAGACTTCTGACGCCGCCACTGTTG  
 TCGGTGCGCTTCCGGTACGGTGGCACCAGCCAGTCCCTCACTCTGAAGCTCCAGTGACCATCAACAAAT  
 TCTTCCAGCCACAGAGATGGCGGCCAAGACTTTTTCCAGCGCTGGAAGCAGCTGAGCCTCCCTGCA  
 GGAGGCACAGAAAATCTCAAAGCCAACCCAGTGGATGCTGAAGTACTAAGGCCAAGCTTCTGGGG  
 TTTGGCTCTGCTTCTGGAACAATGTGGATCCCAACCTGAGAAGTCTTGGGTGCTGGAATCATCCAGA  
 CGAAGGCCCTGCAGTGGGTGTCTGCTTCGGCTGGAGCCCAATGCCAGGCCAAATGTACCGTCTAAC  
 CCTGCGCACAGCAAGAGCCTGTCTCCGTCACCTGTGTGAGCTGCTGGCCAGCAGTCTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:	Sgfl-Mlul
ACCN:	NM_007458
Insert Size:	2934 bp
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).
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"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
RefSeq:	<a href="#">BC031433</a> , <a href="#">AAH31433</a>
RefSeq Size:	3407 bp
RefSeq ORF:	2934 bp
Locus ID:	11771
UniProt ID:	<a href="#">P17426</a>
Cytogenetics:	7 B3

**Gene Summary:**

Component of the adaptor protein complex 2 (AP-2). Adaptor protein complexes function in protein transport via transport vesicles in different membrane traffic pathways. Adaptor protein complexes are vesicle coat components and appear to be involved in cargo selection and vesicle formation. AP-2 is involved in clathrin-dependent endocytosis in which cargo proteins are incorporated into vesicles surrounded by clathrin (clathrin-coated vesicles, CCVs) which are destined for fusion with the early endosome. The clathrin lattice serves as a mechanical scaffold but is itself unable to bind directly to membrane components. Clathrin-associated adaptor protein (AP) complexes which can bind directly to both the clathrin lattice and to the lipid and protein components of membranes are considered to be the major clathrin adaptors contributing the CCV formation. AP-2 also serves as a cargo receptor to selectively sort the membrane proteins involved in receptor-mediated endocytosis. AP-2 seems to play a role in the recycling of synaptic vesicle membranes from the presynaptic surface. AP-2 recognizes Y-X-X-[FILMV] (Y-X-X-Phi) and [ED]-X-X-X-L-[LI] endocytosis signal motifs within the cytosolic tails of transmembrane cargo molecules. AP-2 may also play a role in maintaining normal post-endocytic trafficking through the ARF6-regulated, non-clathrin pathway. The AP-2 alpha subunit binds polyphosphoinositide-containing lipids, positioning AP-2 on the membrane. The AP-2 alpha subunit acts via its C-terminal appendage domain as a scaffolding platform for endocytic accessory proteins. The AP-2 alpha and AP-2 sigma subunits are thought to contribute to the recognition of the [ED]-X-X-X-L-[LI] motif (By similarity).[UniProtKB/Swiss-Prot Function]

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