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# Product datasheet for MC222825

## Ap2a1 (NM_001077264) Mouse Untagged Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | Ap2a1 (NM_001077264) 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:**

>MC222825 representing NM_001077264
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCGGCTGTATCCAAAGGCGATGGCATGCGTGGGCTCGCCGTGTTCATCTCCGACATCCGGAACTGCA
AGAGCAAAGAGGCTGAGATCAAGAGGATCAACAAGGAACTGGCCAACATCCGTTCCAAGTTCAAAGGGGA
CAAGGCCTTGGATGGCTACAGTAAAAAGAAGTATGTGTGTAAGCTGCTCTTCATATTCCTGCTTGGCCAT
GACATTGACTTTGGACATATGGAGGCCGTGAACCTGCTAAGCTCTAACAAGTACACGGAGAAGCAGATAG
GGTACCTGTTCATCTCAGTCCTGGTGAACTCGAACTCAGAACTGATCCGGCTCATCAACAACGCTATCAA
GAATGACCTGGCCAGTCGCAACCCCACCTTCATGTGCCTGGCCTTGCACTGTATCGCTAACGTGGGCAGC
CGTGAGATGGGCGAGGCTTTTGCTGCAGACATTCCCCGAATCCTGGTGGCTGGGGACAGCATGGACAGTG
TGAAGCAGAGTGCCGCCCTATGCCTACTGCGACTCTACAAGGCCTCGCCCGACTTGGTGCCCATGGGCGA
GTGGACGGCACGTGTAGTGCACTTGCTCAATGATCAGCACATGGGAGTGGTCACAGCTGCTGTCAGCCTC
ATCACCTGTCTCTGCAAGAAGAATCCGGATGACTTCAAGACCTGTATCTCCCTGGCTGTGTCTCGCTTAA
GCCGGATCGTCTCCTCAGCCTCCACTGACCTCCAGGACTACACTTACTACTTCGTTCCTGCACCCTGGCT
CTCTGTGAAGCTACTGCGGCTGCTCCAGTGTTACCCACCACCAGAGGATGCAGCCGTGAAAGGGCGGTTA
GTGGAGTGTCTGGAGACTGTGCTCAACAAGGCCCAGGAGCCTCCCAAGTCCAAGAAGGTGCAGCACTCCA
ACGCCAAGAACGCTATCCTCTTTGAGACCATTAGCCTCATCATCCACTATGACAGTGAGCCCAACCTCCT
GGTCCGCGCCTGCAACCAGCTGGGCCAGTTCCTGCAGCACCGGGAGACTAACCTGCGCTACCTGGCCCTG
GAGAGCATGTGCACGCTGGCCAGCTCCGAGTTCTCCCACGAGGCCGTCAAGACCCACATTGATACAGTTA
TTAATGCCCTCAAGACGGAGCGGGACGTCAGTGTGAGGCAGCGGGCGGCTGATCTCCTGTATGCCATGTG
TGACCGGAGCAATGCCAAGCAGATTGTGTCAGAGATGCTGCGGTACCTGGAGACTGCTGACTATGCCATC
CGAGAGGAGATCGTGCTGAAGGTGGCCATCCTGGCTGAGAAGTATGCAGTGGACTACAGCTGGTACGTGG
ACACCATCCTCAACCTCATCCGCATCGCGGGCGACTATGTGAGCGAGGAGGTGTGGTACCGCGTGCTGCA
GATCGTCACCAACCGTGATGACGTCCAGGGTTATGCTGCCAAGACAGTGTTTGAGGCCCTCCAGGCCCCA
GCCTGTCATGAGAACATGGTGAAGGTCGGTGGCTACATCCTTGGGGAGTTTGGGAACTTGATTGCTGGGG
ACCCACGCTCCAGCCCACCAGTGCAGTTCTCGCTGCTGCACTCCAAGTTCCACCTGTGCAGCGTGGCCAC
CCGCGCTCTGTTGCTGTCCACCTACATCAAGTTCATCAACCTCTTCCCTGAGACCAAGGCCACCATCCAA
GGGGTTCTGCGTGCCGGCTCCCAGCTGCGAAATGCCGACGTGGAGCTACAGCAGCGGGCCGTGGAGTACC
TCACCCTCAGCTCCGTAGCCAGCACCGATGTTCTGGCTACGGTGCTAGAAGAAATGCCCCCATTTCCCGA
GCGGGAGTCGTCCATCTTGGCCAAGCTGAAGCGCAAGAAGGGCCCTGGGGCAGCCAGTGCCCTAGATGAC
AGCCGCAGGGACACCAGCAGCAATGACATCAATGGGGGTGTGGAGCCCACCCCCAGCACTGTGTCGACCC
CCTCACCCTCCGCGGACCTCTTAGGGCTGCGGGCAGCCCCTCCCCCTGCTGCACCCCCGGCTCCCGTAGG
CGGGAACCTCCTGGTGGATGTCTTCTCTGACGGCCCCACTGCACAGCCCAGCCTGGGGCCCACTCCTGAG
GAGGCCTTCCTCAGCCCAGGTCCTGAGGACATAGGCCCTCCCATTCCAGAAGCAGATGAACTGTTGAATA
AGTTCGTGTGTAAGAATAGTGGGGTCTTGTTTGAGAACCAGCTGCTGCAGATTGGAGTCAAGTCTGAGTT
CCGGCAGAACCTGGGCCGCATGTATCTCTTCTATGGCAACAAGACTTCTGTGCAGTTCCAGAACTTCTTG
CCCACCGTGGTCCATCCTGGGGACCTCCAGACTCAGCTGGCGGTGCAGACCAAGCGTGTGGCGGCACAAG
TGGACGGTGGCGCACAGGTGCAGCAAGTACTCAACATTGAGTGTCTGCGAGACTTCCTGACGCCGCCACT
GTTGTCGGTGCGCTTCCGGTACGGTGGCACCGCCCAGTCCCTCACTCTGAAGCTCCCAGTGACCATCAAC
AAATTCTTCCAGCCCACAGAGATGGCGGCCCAAGACTTTTTCCAGCGCTGGAAGCAGCTGAGCCTCCCCC
TGCAGGAGGCACAGAAAATCTTCAAAGCCAACCACCCGATGGATGCTGAAGTTACTAAGGCCAAGCTTCT
GGGGTTTGGCTCTGCTCTTCTGGACAATGTGGATCCCAACCCTGAGAACTTTGTGGGTGCTGGAATCATC
CAGACGAAGGCCCTGCAGGTGGGGTGTCTGCTTCGGCTGGAGCCCAATGCCCAGGCCCAAATGTACCGTC
TAACCCTGCGCACCAGCAAAGAGCCTGTCTCCCGTCACTTGTGTGAGCTGCTGGCCCAGCAGTTCTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI

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| | |
|---|---|
| **ACCN:** | NM_001077264 |
| **Insert Size:** | 2868 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:** | 1. Centrifuge at 5,000xg for 5min.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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_001077264.1, NP_001070732.1 |
| **RefSeq Size:** | 3391 bp |
| **RefSeq ORF:** | 2868 bp |
| **Locus ID:** | 11771 |
| **UniProt ID:** | P17426 |
| **Cytogenetics:** | 7 B3 |

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**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 (2) lacks an alternate exon in the coding region compared to variant 1. The resulting protein (isoform b) is shorter but has the same N- and C-termini compared to isoform a.

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