

## Product datasheet for **MC228903**

### App (NM\_001198823) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	App (NM_001198823) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	App
Synonyms:	Abeta; Abpp; Adap; Ag; betaApp; Cvap; E030013M08Rik
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >MC228903 representing NM\_001198823  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGCTGCCAGCTTGGCACTGCTCCTGCTGGCCGCTGGACGGTTCGGGCTCTGGAGGTACCCACTGATG  
 GCAACGCCGGGCTGCTGGCAGAACCCAGATCGCCATGTTCTGTGGTAACTCAACATGCACATGAATGT  
 GCAGAATGAAAAGTGGGAGTCAGACCCGTCAGGGACAAAACCTGCATTGGCACCAAGGAGGGCATCTTG  
 CAGTACTGCCAAGAGGTCTACCCTGAACTGCAGATCACAAACGTGGTGGAAAGCCAACCAGCCAGTGACCA  
 TCCAGAACTGGTGAAGCGGGGCCGAAGCAGTGAAGACACACACCCACATCGTGATTCCTTACCCTTG  
 CCTAGTTGGTGGTGTGAGCGACGCCCTTCTCGTGCCCGACAAGTGAAGTTCCTACACCAGGAGCGG  
 ATGGATGTTTGTGAGACCCATCTCACTGGCACACCGTCGCCAAAGAGACATGCAGCGAGAAGAGCACTA  
 ACTTGCACGACTATGGCATGCTGCTGCCCTGCGGCATCGACAAGTTCGAGGGGTAGAGTTTGTATGCTG  
 CCCGTTGGCCGAGAAAGCGACAGCGTGGATTCTGCGGATGCAGAGGAGGATGACTCTGATGCTGTGGTGG  
 GGTGGAGCGGACACAGACTACGCTGATGGCGGTGAAGACAAAGTGTAGAAAGTTCGCCGAAGAGGAGGAAG  
 TGCTGATGTTGAGGAAGAGGAAGCTGATGATGATGAGGATGTGGAGGATGGGGACGAGGTGGAGGAGGA  
 GGCCGAGGAGCCCTACGAAGAGGCCACCGAGAGAAACACCAGCACTGCCACCACCACCAACCACCACT  
 GAGTCCGTGGAGGAGGTGGTCCGAGAGGTGTGCTCTGAACAAGCCGAGACCGGGCCATGCCGCGCAATGA  
 TCTCCCGTGGTACTTTGATGTCACCTGAAGGGAAGTGTGTCCATTCTTTTACGGCGGATGTGGCGGCAA  
 CAGGAACAACCTTTGACACGGAAGAGTACTGCATGGCGGTGTGTGGCAGCGTGTCAACCCAAAGTTTACTC  
 AAGACTACCAGTGAACCTCTTCCCAAGATCCTGATAAACTTCCCACGACAGCAGCCAGCACCCCGGACG  
 CCGTCGACAAGTACCTGGAGACACCCGGGGACGAGAACGAGCATGCCATTTCAGAAAGCCAAAGAGAG  
 GCTGGAAGCCAAAGCACCGAGAGAGAATGTCCAGGTCATGAGAGAATGGGAAGAGGCAGAGCGTCAAGCC  
 AAGAACTTGCCAAAGCTGACAAGAAGGCCGTTATCCAGCATTTCCAGGAGAAAGTGAATCTCTGGAAC  
 AGGAAGCAGCCAAAGAGAGACAGCAGCTTGTAGAGACACACATGGCCAGAGTTGAAGCCATGCTCAATGA  
 CCGCCCGCCCTGGCCCTCGAGAATTACATCACTGCACTGCAGGCGGTGCCCCCAAGGCCTCATCATGTG  
 TTCAACATGCTGAAGAAGTACGTCCGTGCGGAGCAGAAAGACAGACAGCACACCCATAAGCATTGTAAC  
 ATGTGCGCATGGTGGACCCCAAGAAAGTGTCTCAGATCCGGTCCCAGGTTATGACACACCTCCGTGTGAT  
 CTACGAGCGCATGAACAGTCTCTGTCCCTGCTCTACAATGTCCCTGCGGTGGCTGAGGAGATTCAAGAT  
 GAAGTCGATGAGCTGCTCAGAAGGAGCAGAACTACTCCGACGATGTCTTGGCCAACATGATCAGTGAGC  
 CCAGAATCAGCTACGGAACGACGCTCTCATGCCTTCGCTGACGGAACCAAGACCACCGTGGAGCTCCT  
 TCCCGTGAATGGGGAATTCAGCCTGGATGACCTCCAGCCGTGGCACCCCTTTTGGGGTGGACTCTGTGCCA  
 GCCAATACCGAAAATGAAGTCGAGCCTGTTGACGCCCGCCCGCTGCTGACCGGAGGACTGACCACTCGAC  
 CAGGTTCTGGGCTGACAAACATCAAGACGGAAGAGATCTCGGAAGTGAAGATGGATGCAGAATTCGGACA  
 TGATTGAGGATTTGAAGTCCGCCATCAAAAAGTGGTGTCTTTGCTGAAGATGTGGGTTCGAACAAAGGC  
 GCCATCATCGGACTCATGGTGGGCGGCTTGTATAGCAACCGTATTGTATCACCCCTGGTGTGTTGA  
 AGAAGAAACAGTACACATCCATCCATCATGGCGTGGTGGAGGTCGACGCCCGCTGACCCAGAGGAGCG  
 CCATCTCTCAAGATGCAGCAGAACGGATATGAGAATCCAACCTACAAGTCTTTGAGCAATGCAGAAC  
 TAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: Sgfl-Mlul  
 ACCN: NM\_001198823  
 Insert Size: 2313 bp

<b>OTI Disclaimer:</b>	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).
<b>OTI Annotation:</b>	Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<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>
<b>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<u><a href="#">NM_001198823.1</a></u> , <u><a href="#">NP_001185752.1</a></u>
<b>RefSeq Size:</b>	3377 bp
<b>RefSeq ORF:</b>	2313 bp
<b>Locus ID:</b>	11820
<b>UniProt ID:</b>	<u><a href="#">P12023</a></u>
<b>Cytogenetics:</b>	16 46.92 cM

**Gene Summary:**

Functions as a cell surface receptor and performs physiological functions on the surface of neurons relevant to neurite growth, neuronal adhesion and axonogenesis. Interaction between APP molecules on neighboring cells promotes synaptogenesis. Involved in cell mobility and transcription regulation through protein-protein interactions. Can promote transcription activation through binding to APBB1-KAT5 and inhibit Notch signaling through interaction with Numb. Couples to apoptosis-inducing pathways such as those mediated by G(O) and JIP. Inhibits G(o) alpha ATPase activity (By similarity). Acts as a kinesin I membrane receptor, mediating the axonal transport of beta-secretase and presenilin 1. May be involved in copper homeostasis/oxidative stress through copper ion reduction. Can regulate neurite outgrowth through binding to components of the extracellular matrix such as heparin and collagen I and IV (By similarity). The splice isoforms that contain the BPTI domain possess protease inhibitor activity. Induces a AGER-dependent pathway that involves activation of p38 MAPK, resulting in internalization of amyloid-beta peptide and leading to mitochondrial dysfunction in cultured cortical neurons (By similarity). Provides Cu(2+) ions for GPC1 which are required for release of nitric oxide (NO) and subsequent degradation of the heparan sulfate chains on GPC1.[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (1).