

## Product datasheet for **MR231065**

### App (NM\_001198824) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	App (NM_001198824) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	App
Synonyms:	Abeta; Abpp; Adap; Ag; betaApp; Cvap; E030013M08Rik
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide  
Sequence:

>MR231065 representing NM\_001198824  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTGCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCTGCCAGCTTGGCACTGCTCCTGCTGGCCGCTGGACGGTTCGGGCTCTGGAGGTACCCACTGATG  
 GCAACGCCGGGCTGCTGGCAGAACCCAGATCGCCATGTTCTGTGGTAAACTCAACATGCACATGAATGT  
 GCAGAATGGAAAGTGGGAGTCAGACCCGTCAGGGACAAAACCTGCATTGGCACCAAGGAGGGCATCTTG  
 CAGTACTGCCAAGAGGTCTACCCTGAACTGCAGATCACAAACGTGGTGGAAAGCCAACCAGCCAGTGACCA  
 TCCAGAAGTGGTGAAGCGGGGCCGAAGCAGTGAAGACACACACCCACATCGTGATTCCTTACCCTTG  
 CCTAGTTGG  
 ATGGATGTTTGTGAGACCCATCTCACTGGCACACCGTCGCCAAAGAGACATGCAGCGAGAAGAGCACTA  
 ACTTGACGACTATGGCATGCTGCTGCCCTGCGGCATCGACAAGTTCGAGGGGTAGAGTTTGTATGCTG  
 CCCGTTGGCCGAGGAAAGCGACAGCGTGGATTCTGCGGATGCAGAGGAGGATGACTCTGATGCTGGTGG  
 GGTGGAGCGGACACAGACTACGCTGATGGCGGTGAAGACAAAGTGTAGAAAGTCCGCCAAGAGGAGGAAG  
 TGCTGATGTTGAGGAAGAGGAAGCTGATGATGATGAGGATGTGGAGGATGGGGACGAGGTGGAGGAGGA  
 GGCCGAGGAGCCCTACGAAGAGGCCACCGAGAGAACAACCAGCACTGCCACCACCACCAACCACCACT  
 GAGTCCGTGGAGGAGGTGGTCCGAGAGGTGTGCTCTGAACAAGCCGAGACCGGGCCATGCCGCGCAATGA  
 TCTCCCGTGGTACTTTGATGTCACTGAAGGAAAGTGTGTCCCATTCTTTTACGGCGGATGTGGCGGCA  
 CAGGAACAACCTTTGACACGGAAGAGTACTGCATGGCGGTGTGTGGCAGCGTGTTCACGACAGCAGCC  
 AGCACCCCGACCGCTGCAAGTACCTGGAGACACCCGGGACGAGAACGAGCATGCCATTTCCAGA  
 AAGCCAAAGAGAGGCTGGAAGCCAAGCACCGAGAGAGAATGTCCAGGTCATGAGAGAATGGGAAGAGG  
 AGAGCGTCAAGCCAAGAAGTGGCCAAAGCTGACAAGAAGGCCGTTATCCAGCATTTCCAGGAGAAAGTG  
 GAATCTCTGGAACAGGAAGCAGCAATGAGAGACAGCAGCTTGTAGAGACACACATGGCCAGAGTTGAAG  
 CCATGCTCAATGACCGCCGCGCTGGCCCTCGAGAATTACATCACTGCACTGCAGGCGGTGCCCAAG  
 GCCTCATCATGTGTTCAACATGCTGAAGAAGTACGTCCGTGCGGAGCAGAAAGACAGACAGCACACCCTA  
 AAGCATTTTGAACATGTGCGCATGGTGGACCCCAAGAAAGCTGCTCAGATCCGGTCCCAGGTTATGACAC  
 ACCTCCGTGTGATCTACGAGCGCATGAACCAGTCTCTGTCCCTGCTCTACAATGTCCCTGCGGTGGCTGA  
 GGAGATCAAGATGAAGTCGATGAGCTGCTTCAAGAGGAGCAGAACTACTCCGACGATGTCTTGGCCAAC  
 ATGATCAGTGAGCCAGAATCAGCTACGGAACGACGCTCTCATGCCTTCGCTGACGGAACCAAGACCA  
 CCGTGGAGCTCCTCCCGTGAATGGGGAATTCAGCCTGGATGACCTCCAGCCGTGGCACCCCTTTGGGGT  
 GGACTCTGTGCCAGCAATACCGAAAATGAAGTCGAGCCTGTTGACGCCCCGCCCGCTGTGACCGAGGA  
 CTGACCACTCGACCAGGTTCTGGGCTGACAAACATCAAGACGGAAGAGATCTCGGAAGTGAAGATGGATG  
 CAGAATTCGGACATGATTCAGGATTTGAAGTCCGCCATCAAAAACCTGGTGTCTTTGCTGAAGATGTGGG  
 TTCGAACAAGGCGCCATCATCGGACTCATGGTGGCGGGCTTGTATAGCAACCGTATTGTCATCACC  
 CTGGTGTGTTGAAGAAGAAACAGTACACATCCATCCATCATGGCGTGGTGGAGGTCGACGCCCGCTGA  
 CCCCAGAGGAGCGCCATCTCCAAGATGCAGCAGAACGGATATGAGAATCCAACCTACAAGTCTTTGA  
 GCAAATGCAGAAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR231065 representing NM\_001198824  
 Red=Cloning site Green=Tags(s)

MLPSLALLLLAAWTVRALEVPTDGNAGLLAEPQIAMFCGKLNMHMNVQNGKVESDPSGKTCTIGTKEGIL  
 QYCQEVPELQITNVVEANQPVTIQNWCKRGRKQCKTHTHIVIPYRCLVGEFVSDALLVPDKCKFLHQR  
 MDVCETHLHWHTVAKETCSEKSTNLHDYGMLPCGIDKFRGVEFVCCPLAEESDVSADAEEDSDVWW  
 GGADTDYADGGEDKVVEVAEEEEVADVEEEEADDEDEDVEDGVEVEEAEEPYEEATERTTSTATTTTTTT  
 ESVEEVVREVCSEQAETGPCRAMISRWFYDVTEGKCVPFYGGCGGNRNNFDTEEYCMVCGSVFPTTAA  
 STPDAVDKYLETPGDENEHAHFQKAKERLEAKHRERMSQVMREWEAERQAKNLPKADKKAIVIQHFQEKV  
 ESLEQEAANERQQLVETHMARVEAMLNDRRLALENYITALQAVPPRPHVFNMLKKYVRAEQKDRQHTL  
 KHFEHVRMVDPKKAAQIRSQVMTHLRVIYERMNQLSLLYNPVAVEEIQDEVELLQKEQNYSDVLAN  
 MISEPRISYGNDALMPSLTETKTTVELLPVNGEFLDDLQPWHPFGVDSVPANTENEVVDARPAADRG  
 LTRRPGSLTNIKTEEISEVKMDAEFGHDSGFVVRHQKLVFFAEDVGSNGAIIGLMVGGVVIATVIVIT  
 LVMLKKKQYTSIHGGVVEVDAAVTPEERHL SKMQQNGYENPTYKFFEQMQN

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

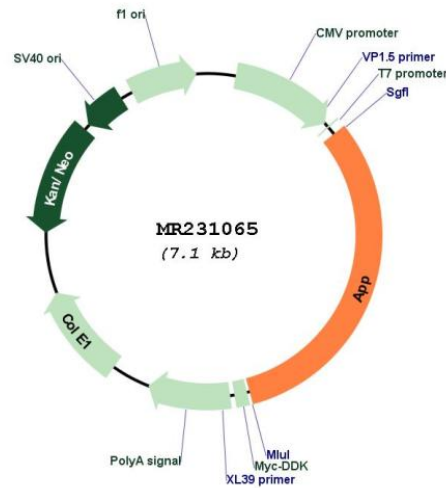
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



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

**Plasmid Map:**


**ACCN:** NM\_001198824

**ORF Size:** 2253 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\\_001198824.1](#), [NP\\_001185753.1](#)

**RefSeq Size:** 3320 bp

**RefSeq ORF:** 2256 bp

**Locus ID:** 11820

**Cytogenetics:** 16 46.92 cM

**MW:** 85.1 kDa

**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]