

## Product datasheet for **MR231020**

### App (NM\_001198825) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	App (NM_001198825) 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:

>MR231020 representing NM\_001198825  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGCTGCCAGCTTGGCACTGCTCTGCTGGCCGCTGGACGGTTCGGGCTCTGGAGGTACCCACTGATG  
GCAACGCCGGGCTGCTGGCAGAACCCAGATCGCCATGTTCTGTGGTAACTCAACATGCACATGAATGT  
GCAGAATGGAAAGTGGGAGTCAGACCCGTCAGGGACAAAACCTGCATTGGCACCAAGGAGGGCATCTTG  
CAGTACTGCCAAGAGGTCTACCCTGAACTGCAGATCACAAACGTGGTGGAAAGCCAACCAGCCAGTGACCA  
TCCAGAACTGGTGAAGCGGGCCGCAAGCAGTGAAGACACACCCACATCGTGATTCCTTACCCTTG  
CCTAGTTGGTGGTGTGAGCGACGCCCTTCTCGTGCCCGACAAGTGAAGTTCCTACACCAGGAGCGG  
ATGGATGTTTGTGAGACCCATCTCACTGGCACACCGTCGCCAAAGAGACATGCAGCGAGAAGAGCACTA  
ACTTGCACGACTATGGCATGCTGCTGCCCTGCGGCATCGACAAGTTCGAGGGGTAGAGTTTGTATGCTG  
CCCCTTGGCCGAGGAAAGCGACAGCGTGGATTCTGCGGATGCAGAGGAGGATGACTCTGATGCTGTTGG  
GGTGGAGCGGACACAGACTACGCTGATGGCGGTGAAGACAAAGTGTAGAAAGTCCGCCGAAGAGGAGGAAG  
TGCTGATGTTGAGGAAGAGGAAGCTGATGATGATGAGGATGTGGAGGATGGGGACGAGGTGGAGGAGGA  
GGCCGAGGAGCCCTACGAAGAGGCCACCCAGAGAAACACCAGCACTGCCACCACCACCAACCACCACT  
GAGTCCGTGGAGGAGGTGGTCCGAGAGGTGTGCTCTGAACAAGCCGAGACCGGGCCATGCCGCGCAATGA  
TCTCCCGTGGTACTTTGATGTCACCTGAAGGAAAGTGTGTCCCATTCTTTTACGGCGGATGTGGCGGCAA  
CAGGAACAACCTTTGACACGGAAGAGTACTGCATGGCGGTGTGTGGCAGCGTGTTCACACGACAGCAGCC  
AGCACCCCGACCGCTCGACAAGTACCTGGAGACACCCGGGACGAGAACGAGCATGCCATTTCCAGA  
AAGCCAAAGAGAGGCTGGAAGCCAAAGCACCCGAGAGAGAATGTCCAGGTGATGAGAGAATGGGAAGAGGC  
AGAGCGTCAAGCCAAGAAGTTCGCCAAAGCTGACAAGAAGGCCGTTATCCAGCATTTCAGGAGAAAGTG  
GAATCTCTGGAACAGGAAGCAGCAATGAGAGACAGCAGCTTGTAGAGACACACATGGCCAGAGTTGAAG  
CCATGCTCAATGACCGCCGCGCTGGCCCTCGAGAATTACATCACTGCACTGCAGGCGGTGCCCAAG  
GCCTCATCATGTGTTCAACATGCTGAAGAAGTACGTCCGTGCGGAGCAGAAAGACAGACAGCACACCCTA  
AAGCATTGTAACATGTGCGCATGGTGGACCCCAAGAAAGCTGCTCAGATCCGGTCCCAGGTTATGACAC  
ACCTCCGTGTGATCTACGAGCGCATGAACCAGTCTCTGTCCCTGCTCTACAATGTCCCTGCGGTGGCTGA  
GGAGATCAAGATGAAGTCGATGAGCTGCTTCAGAAGGAGCAGAACTACTCCGACGATGTCTTGCCCAAC  
ATGATCAGTGAGCCAGAATCAGCTACGGAACGACGCTCTCATGCCTTCGCTGACGGAACCAAGACCA  
CCGTGGAGCTCCTCCCGTGAATGGGGAATTCAGCCTGGATGACCTCCAGCCGTGGCACCCCTTTGGGGT  
GGACTCTGTGCCAGCAATACCGAAAATGAAGTTCTGGGCTGACAAACATCAAGACGGAAGAGATCTCG  
GAAGTGAAGATGGATGCAGAATTCGGACATGATTCAGGATTTGAAGTCCGCCATCAAAAAGTGGTGTCT  
TTGCTGAAGATGTGGTTGCAACAAGGCGCCATCATCGGACTCATGGTGGGCGGCGTGTGCATAGCAAC  
CGTGATTGTCATACCCTGGTGTGTTGAAGAAGAAACAGTACACATCCATCCATCATGGCGTGGTGGAG  
GTCGACGCCGCGTGACCCAGAGGAGCGCCATCTCTCCAAGATGCAGCAGAACGGATATGAGAATCCAA  
CTTACAAGTCTTTGAGCAAATGCAGAAC

**ACGCGT**ACGCGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR231020 representing NM\_001198825  
 Red=Cloning site Green=Tags(s)

MLPSLALLLLAAWTVRALEVPTDGNAGLLAEPQIAMFCGKLNHMHMVQNGKVESDPSGKTCTIGTKEGIL  
 QYCQEVPELQITNVVEANQPVTIQNWCKRGRKQCKTHTHIVIPYRCLVGEFVSDALLVPDKCKFLHQR  
 MDVCETHLHWHTVAKETCSEKSTNLHDYGMLPCGIDKFRGVEFVCCPLAEESDVSADAEEDSDVWW  
 GGADTDYADGGEDKVVEVAEEEEVADVEEEEADDEDEDVEDGVEVEEAEEEPYEEATERTTSTATTTTTTT  
 ESVEEVVREVCSEQAETGPCRAMISRWFYDVTEGKCVFFYGGCGGNRNNFDTEEYCMVCGSVFPTTAA  
 STPDAVDKYLETPGDENEHAHFQKAKERLEAKHRERMSQVMREWEAERQAKNLPKADKKAIVIQHFQEKV  
 ESLEQEAANERQQLVETHMARVEAMLNDRRLALENYITALQAVPPRPHVFNMLKKYVRAEQKDRQHTL  
 KHFEHVRMVDPKKAAQIRSQVMTHLRVIYERMNQLSLLYNVPAVAEEIQDEVELLQKEQNYSDVLAN  
 MISEPRISYGNDALMPSLTETKTTVELLPVNGEFLDDLQPWHPFGVDSVPANTENEGSGLTNIKTEEIS  
 EVKMDAEFGHDSGFVRHQKLVFFAEDVGSNGKAIIGLMVGGVVIATVIVITLVMKKKQYTSIHGQVVE  
 VDAAVTPEERHL SKMQQNGYENPTYKFFEQMQN

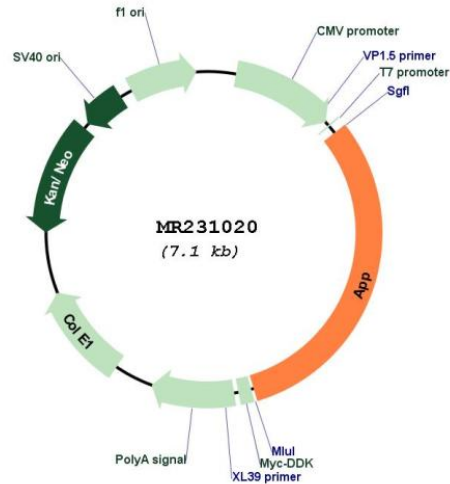
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



**Plasmid Map:**


**ACCN:** NM\_001198825

**ORF Size:** 2199 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\\_001198825.1](#), [NP\\_001185754.1](#)

**RefSeq Size:** 3266 bp

**RefSeq ORF:** 2202 bp

**Locus ID:** 11820

**Cytogenetics:** 16 46.92 cM

**MW:** 83.2 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]