

Product datasheet for **RG215147**

Amyloid Precursor Protein (APP) (NM_201414) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Amyloid Precursor Protein (APP) (NM_201414) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Amyloid Precursor Protein
Synonyms:	AAA; ABETA; ABPP; AD1; alpha-sAPP; APPI; CTFgamma; CVAP; PN-II; PN2; preA4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG215147 representing NM_201414
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGCTGCCCGTTTGGCACTGCTCCTGCTGGCCGCTGGACGGCTCGGGCGCTGGAGGTACCCACTGATG
 GTAATGCTGGCCTGCTGGCTGAACCCAGATTGCCATGTTCTGTGGCAGACTGAACATGCACATGAATGT
 CCAGAATGGGAAGTGGGATTAGATCCATCAGGGACAAAACCTGCATTGATACCAAGGAAGGCATCCTG
 CAGTATTGCCAAGAAGTCTACCCTGAACTGCAGATCACCAATGTGGTAGAAGCCAACCAACCAAGTACCA
 TCCAGAAGTGGTCAAGCGGGCCGCAAGCAGTGAAGACCCATCCCACTTTGTGATCCCTACCCTG
 CTTAGTTGGTGGTGGTAAAGTATGCTGCTGCTGCTGCAAGTGCATTTTACACCAGGAGAGG
 ATGGATGTTTGCAGAACTCATCTTCACTGGCACACCGTCGCCAAGAGACATGCAGTGAAGAGTACCA
 ACTTGCATGACTACGGCATGTTGCTGCCCTGCGGAATTGACAAGTCCGAGGGGTAGAGTTTGTGTGTTG
 CCCACTGGCTGAAGAAAGTGACAATGTGGATTCTGCTGATGCGGAGGAGGATGACTCGGATGTCTGGTGG
 GCGGAGCAGACAGACTATGCAGATGGGAGTGAAGACAAAGTAGTAGAAGTAGCAGAGGAGGAAGAAG
 TGCTGAGGTGGAAGAAGAAGACCGATGATGACGAGGACGATGAGGATGGTGTGAGGTAGAGGAAGA
 GGCTGAGGAACCTACGAAGAAGCCACAGAGAGAACACCAGCATTGCCACCACCACCACCACCACACA
 GAGTCTGTGGAAGAGGTGGTTCGAGTTCCTACAACAGCAGCCAGTACCCCTGATGCCGTTGACAAGTATC
 TCGAGACACCTGGGGATGAGAATGAACATGCCATTTCCAGAAAGCCAAGAGAGGCTTGGAGCCAAAGCA
 CCGAGAGAGAATGTTCCAGGTCATGAGAGAATGGGAAGAGGCAGAACGTCAAGCAAGAAGTGCCTAAA
 GCTGATAAGAAGGCAGTTATCCAGCATTCCAGGAGAAAGTGAATCTTTGGAACAGGAAGCAGCCAACG
 AGAGACAGCAGCTGGTGGAGACACATGGCCAGAGTGAAGCCATGCTCAATGACCGCCGCCCTGGC
 CCTGGAGAACTACATCACCGCTCTGCAGGCTGTTCCCTCCTCGGCCTCGTCACGTGTTCAATATGCTAAAG
 AAGTATGTCCGCGCAGAACAGAAGGACAGACAGCACACCCATAAGCATTTCGAGCATGTGCGCATGGTGG
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 TCAGTCTCTCCTGCTCTACAACGTGCCTGCAGTGGCCGAGGAGATTCAGGATGAAGTTGATGAGCTG
 CTTCAGAAAGAGCAAACTATTCAGATGACGCTTTGGCCAACATGATTAGTGAACCAAGGATCAGTTACG
 GAAACGATGCTCTCATGCCATCTTTGACCGAAACGAAAACCACCGTGGAGCTCCTCCCGTGAATGGAGA
 GTTCAGCCTGGACGATCTCCAGCCGTGGCATTCTTTGGGGCTGACTCTGTGCCAGCCAACAGAAAAC
 GAAGTTGAGCCTGTTGATGCCCCCCTGCTGCCGACCGAGGACTGACCACTCGACCAGGTTCTGGGTTGA
 CAAATATCAAGACGGAGGAGATCTCTGAAGTGAAGATGGATGCAGAATTCGACATGACTCAGGATATGA
 AGTTCATCATCAAAAATTGGTGTCTTTGCAGAAGATGTGGGTTCAAACAAGGTGCAATATTGGACTC
 ATGGTGGGCGGTGTTGTCATAGCGACAGTATCGTCATCACCTTGGTGTGCTGAAGAAGAAACAGTACA
 CATCCATTATCATGGTGTGGTGGAGGTTGACCGCGCTGTACCCAGAGGAGCGCCACCTGTCCAAGAT
 GCAGCAGAACGGCTACGAAAATCCAACCTACAAGTTCTTTGAGCAGATGCAGAAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG215147 representing NM_201414
Red=Cloning site Green=Tags(s)

MLPGLALLLLAAWTARALEVPTDGNAGLLAEPQIAMFCGRLNMHMNVQNGKWDSDPSGKTKCIDTKEGIL
 QYCQEVPELQITNVVEANQPVTIQNWCKRGRKQCKTHPHFVIPYRCLVGEFVSDALLVPDKCKFLHQR
 MDVCETHLHWHTVAKETCSEKSTNLHDYGMLPCGIDKFRGVEFVCCPLAEESDNVDSADAEDSDVWW
 GGADTDYADGSEDKVVEVAEEEEVAEVEEEEADDEDEDEGDEVEEEAEEPYEEATERTTSIATTTTTTT
 ESVEEVVRVPTTAASTPDAVDKYLETPGDENEHAHFQKAKERLEAKHRERMSQVMREWEAEERQAKNLPK
 ADKKAIVIQHFQEKVESLEQEAANERQQLVETHMARVEAMLNDRRLALENYITALQAVPPRPRHVFNMLK
 KYVRAEQKDRQHTLKHFEHVRMVDPKKAAQIRSQVMTHLRVIYERMNQLSLLYNVPAVAEEIQDEVDEL
 LQKEQNYSDDLANMISEPRI SYGNDALMPSL TETKTTVELLPVNGEFLDLDLQPWHSFGADSV PANTEN
 EVEPVDARPAADRGLTTRPGSGLTNIKTEEISEVKMDAEFRHDSGYEVHHQKLVFFAEDVGSNKGAIIIGL
 MVGGVVIATVIVITL VMLKKKQYTSIIHGVVEVDAAVTPEERHL SKMQQNGYENPTYKFFEQMQN

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_201414

ORF Size: 2085 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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_201414.3](#)

RefSeq Size: 3416 bp

RefSeq ORF: 2088 bp

Locus ID: 351

UniProt ID: [P05067](#)

Cytogenetics: 21q21.3

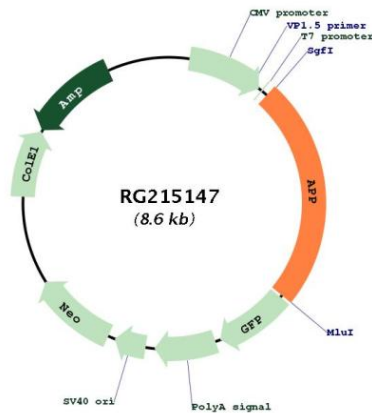
Protein Families: Druggable Genome, Transmembrane

Protein Pathways: Alzheimer's disease

Gene Summary:

This gene encodes a cell surface receptor and transmembrane precursor protein that is cleaved by secretases to form a number of peptides. Some of these peptides are secreted and can bind to the acetyltransferase complex APBB1/TIP60 to promote transcriptional activation, while others form the protein basis of the amyloid plaques found in the brains of patients with Alzheimer disease. In addition, two of the peptides are antimicrobial peptides, having been shown to have bacteriocidal and antifungal activities. Mutations in this gene have been implicated in autosomal dominant Alzheimer disease and cerebroarterial amyloidosis (cerebral amyloid angiopathy). Multiple transcript variants encoding several different isoforms have been found for this gene. [provided by RefSeq, Aug 2014]

Product images:



Circular map for RG215147