

## Product datasheet for **SC320360**

### APH1A (NM\_016022) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	APH1A (NM_016022) Human Untagged Clone
Tag:	Tag Free
Symbol:	APH1A
Synonyms:	6530402N02Rik; APH-1; APH-1A; CGI-78
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene sequence for NM\_016022.2  
 GAGGAAGTGGCGCGACCTTCATTTGGGGTTTCGGTTCCTCCCTTCCCGGGG  
 TCTGGGGTGACATTGCACCGCGCCCTCGTGGGGTCGCGTTGCCACCCACGCGGACTC  
 CCCAGCTGGCGCGCCCTCCATTTGCCTGTCTGGTCAGGCCCCACCCCTTCCAC  
 CTGACCAGCCATGGGGCTGCGGTGTTTTTCGGCTGCATTTTCGTCGCGTTCCGCCCGG  
 CTTGCGCTTTTTCTTGATCACTGTGGCTGGGACCCGCTTCGCGTTATCATCCTGGTCG  
 AGGGCATTTTTCTGGCTGGTCTCCCTGCTCCTGGCTCTGTGGTCTGGTTCATCTTGGT  
 CCATGTGACCGCGGTACAGATGCCCGGCTCCAGTACGGCCTCCTGATTTTTGGTCTGC  
 TGCTCTGTCTTCTACAGGAGGTGTTCCGCTTTCCTACTACAAGCTGCTTAAGAAGGC  
 AGATGAGGGGTTAGCATCGCTGAGTGAGGACGGAAGATCACCCATCTCCATCCGCCAGAT  
 GGCCTATGTTTCTGGTCTCTCCTTCGGTATCATCAGTGGTGTCTTCTGTATCAATAT  
 TTTGGCTGATGCACTTGGCCAGGTGTGGTGGGATCCATGGAGACTCACCTATTACTT  
 CCTGACTTCAGCCTTCTGACAGCAGCCATTATCCTGCTCCATACCTTTTGGGAGTTGT  
 GTTCTTTGATGCCTGTGAGAGGAGACGGTACTGGGCTTTGGCCCTGGTGGTGGGAGTCA  
 CCTACTGACATCGGGACTGACATTCCTGAACCCCTGGTATGAGGCCAGCCTGCTGCCAT  
 CTATGCAGTCACTGTTTCCATGGGGCTCTGGGCCTTCATCACAGCTGGAGGGTCCCTCCG  
 AAGTATTCAGCGCAGCCTCTTGTGAAGGACTGACTACCTGGACTGATCGCTGACAGAT  
 CCCACCTGCCTGTCCACTGCCATGACTGAGCCCAGCCCAGCCGGTCCATTGCCAC  
 ATTCTCTGTCTCCTTCTCGTTCGGTCTACCCACTACCTCCAGGGTTTTGCTTTGCTTTT  
 TGTGACCGTTAGTCTCTAAGCTTACCAGGAGCAGCCTGGGTTACGCCAGTCACTGACTG  
 GTGGGTTTGAATCTGCACTTATCCCCACCACCTGGGACCCCTTGTGTGTCCAGGACT  
 CCCCTGTGTCACTGCTCTCACCTGCCAAGACTCACCTCCCTCCCTCTGCA  
 GGCCGACGGCAGGAGGACAGTCCGGTGTGGTGTATTCTGCCCTGCGCATCCACCCGAG  
 GACTGAGGGAACCTAGGGGGACCCCTGGGCCTGGGGTGCCTCCTGATGCTCCTCGCCCT  
 GTATTTCTCCATCTCCAGTTCTGGACAGTGCAGGTTGCCAAGAAAAGGGACCTAGTTTAG  
 CCATTGCCCTGGAGATGAAATTAATGGAGGCTCAAGGATAGATGAGCTCTGAGTTTCTCA  
 GACTCCCTCAAGACTGGACATCTTGGTCTTTTTCTCAGGCCTGAGGGGGAACCATTTTT  
 GGTGTGATAAATACCCTAACTGCCTTTTTTCTTTTTGAGGTGGGGGAGGGAGGAGG  
 TATATTGAACTCTTAACTCCTTGGGCTATTTTTCTCCTCGAGTTGCTCCTCAT  
 GGCTGGGCTCATTCGGTCCCTTCTCCTTGGTCCCAGACCTGGGGGAAAGGAAGGAAG  
 TGCATGTTTGGAACTGGCATTACTGGAATAATGGTTTTAACCTCCTTAACCACAGCA  
 TCCCTCCTCTCCCAAGGTGAAGTGGAGGGTGTGTGGTGTGAGCTGGCCACTCCAGAGCTG  
 CAGTGCCACTGGAGGAGTCAGACTACCATGACATCGTAGGGAAGGAGGGGAGATTTTTT  
 GTAGTTTTTAATTGGGTGTGGGAGGGCGGGGAGGTTTTCTATAAACTGTATCATTTTT  
 TGCTGAGGGTGGAGTGTCCATCCTTTAATCAAGGTGATTGTGATTTTGACTAATAAAA  
 AAGAATTTGTAATAAAAAAAAAAAAAAAAAA

**Restriction Sites:** Please inquire

**ACCN:** NM\_016022

**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](mailto: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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

**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\\_016022.2](#), [NP\\_057106.2](#)

**RefSeq Size:** 2213 bp

**RefSeq ORF:** 744 bp

**Locus ID:** 51107

**UniProt ID:** [Q96BI3](#)

**Cytogenetics:** 1q21.2

**Protein Families:** Druggable Genome, ES Cell Differentiation/IPS, Transmembrane

**Protein Pathways:** Alzheimer's disease, Notch signaling pathway

**Gene Summary:**

This gene encodes a component of the gamma secretase complex that cleaves integral membrane proteins such as Notch receptors and beta-amyloid precursor protein. The gamma secretase complex contains this gene product, or the paralogous anterior pharynx defective 1 homolog B (APH1B), along with the presenilin, nicastrin, and presenilin enhancer-2 proteins. The precise function of this seven-transmembrane-domain protein is unknown though it is suspected of facilitating the association of nicastrin and presenilin in the gamma secretase complex as well as interacting with substrates of the gamma secretase complex prior to their proteolytic processing. Polymorphisms in a promoter region of this gene have been associated with an increased risk for developing sporadic Alzheimer's disease.

Alternative splicing results in multiple protein-coding and non-protein-coding transcript variants. [provided by RefSeq, Aug 2011]

Transcript Variant: This variant (2) contains an alternate segment in the 3' terminus that results in a frameshift and premature stop codon, compared to variant 1, and encodes an isoform (2; also known as isoform S) with a shorter and distinct C-terminus, compared to isoform 1.