

Product datasheet for **SC111265**

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:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_016022, the custom clone sequence may differ by one or more nucleotides

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ATGGGGGCTGCGGTGTTTTTCGGCTGCACTTTCGTGCGTTCGGCCCGCCTTCGCGCTTTTCTTGATCA  
CTGTGGCTGGGACCGCTTCGCGTTATCATCCTGGTCGCAGGGGCATTTTTCTGGCTGGTCTCCCTGCT  
CCTGGCCTCTGTGGTCTGGTTCATCTTGGTCCATGTGACCGACCGGTCAGATGCCCGGCTCCAGTACGGC  
CTCCTGATTTTTGGTGCTGCTGTCTGTCTTACAGGAGGTGTTCCGCTTTGCCTACTACAAGCTGC  
TTAAGAAGGCAGATGAGGGTTAGCATCGCTGAGTGAGGACGGAAGATCACCCATCTCCATCCGCCAGAT  
GGCCTATGTTTCTGGTCTCTCCTTCGGTATCATCAGTGGTGTCTTCTCTGTTATCAATATTTGGCTGAT  
GCACTTGGGCCAGGTGTGGTTGGGATCCATGGAGACTCACCTATTACTTCTGACTTCAGCCTTTCTGA  
CAGCAGCCATTATCCTGCTCCATACCTTTGGGGAGTTGTGTTCTTTGATGCCTGTGAGAGGAGACGGTA  
CTGGGCTTTGGGCTGGTGGTGGGAGTCACTACTGACATCGGGACTGACATTCCTGAACCCCTGGTAT  
GAGGCCAGCCTGCTGCCATCTATGCAGTCACTGTTTCCATGGGGCTCTGGGCCTTCATCACAGCTGGAG  
GGTCCCTCCGAAGTATTCAGCGCAGCCTTGTGTAAGGACTGA
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5' Read Nucleotide Sequence: >OriGene 5' read for NM_016022 unedited
 GCATTTGTATACGACTCTATAGGGCGGCCGGAATTCGCACGAGGGTGACATTGCACCG
 CGCCCCTCGTGGGGTCGCGTTGCCACCCACGCGGACTCCCCAGCTGGCGCGCCCCTCCC
 ATTTGCCTGTCTGGTCAGGCCCCACCCCCTTCCCACCTGACCAGCCATGGGGGCTGC
 GGTGTTTTTCGGCTGCACTTTCGTCGCGTTTCGGCCCGCCTTCGCGCTTTTCTTGATCAC
 TGTGGCTGGGACCCGCTTCGCGTTATCATCCTGGTCGCAGGGGCATTTTTCTGGCTGGT
 CTCCTGCTCCTGGCCTCTGTGGTCTGGTTCATCTTGGTCCATGTGACCGACCGGTCAGA
 TGCCCGGCTCCAGTACGGCCTCCTGATTTTTGGTGTGCTGTCTCTGTCTTCTACAGGA
 GGTGTTCCGCTTTGCCTACTACAAGCTGCTTAAGAAGGCAGATGAGGGGTTAGCATCGCT
 GAGTGAGGACGGAAGATCACCCATCTCCATCCGCCAGATGGCCTATGTTTCTGGTCTCTC
 CTTCCGGTATCATCAGTGGTGTCTCTCTGTTATCAATATTTGGCTGATGCACTTGGGCC
 AGGTGTGGTTGGGATCCATGGAGACTCACCTATTACTTCTGACTTCAGCCTTTCTGAC
 AGCAGCCATTATCCTGCTCCATACCTTTTGGGAGTTGTGTTCTTTGATGCCTGTGAGAG
 GAGACGGTACTGNGCTNTGGCCTGGNTGTTTGGGAGTCACCTACTGACATCGGGACTGA
 CATTCTGAACCCCTGGTATGANGCCAGCCTGCTGCCATCTATGCAGTCACTGGTTCCA
 TGGGGCTCTGGGCCTTATCACAGCTGGAGGGTCCCTTCGAAAGTATCAGCGCAGCCTCTG
 TGCCCGCNCAGNAGACAGTCGNGGAATGGGGTATCTGCCTGCGCTCCACCGAGGCTGAGA
 ACCCTAGGGGGACT

3' Read Nucleotide Sequence: >OriGene 3' read for NM_016022 unedited
 AAAGAACCTGGNGGNAATAAAGCCCATGTTACATGCACCTTGGTATAAAGGGAGGGG
 AACTCCACCCTCAGTAGAAAAGTTACAGTTTATAGAAAACCTCCCCGCCCTCCCACACC
 CCAATTA AAAACTACAAAAAAATCTCCCCTCCTCCCTACGATGCCATGGCAGTCTGAC
 TCCTCCAGTGGCACTGCAGCTCTGGTAGTGCCAGCTCACACAGCACCCCTCCACTTTAC
 CTGCTCGACACGAGGGATGCTGGTGGCTAAGGAGGTTAAAACCACCACTCCCAGCACTGC
 CAGCCCCAAACATGCACTTCACTTCTTTCCCAAGGTCTGGGACCAAGGATAAAGGG
 ACCCAAATGAGCCACCCATGACGCACCAACCCAGGTGAGAAAACATAGCCCCACGACG
 CTAGAACCAGCTCCAATATACCTTCTCCCTCCCACCACCTCAAAAATTATAACAGGCAGT
 TTACGGTATTTATCACACAAAAATGGCCCCCTCACGCCTGCCAAAACGACCCGACG
 TCCACCCTCAGGAATACTGAAAAACTCAAACCTCATTATCCTTTTCAGCCCCATCAATC
 CCATCTCCAGCGCCACGGCTCCTCCTACGTCCCCTTTTTCTTGGCCATCCTGCCCTGTG
 CATAACTGGCCACTGGCCAAACAATCATGGGCGATGGCCATTATGAATCGCACCTCCAGTC
 CCCAGGGGCCCCCACTTTAGTNTCCCCTCTACTCTCCTCCTTCTGCCTCCCTCTGGCC
 TTCATTACCCCTCACCCCTCGTGTCCCTCTCCGTGCGCGGGCACCCATAAGGCCGTG
 CCGAAATATCTCCGACACGACCCCTCCCAACGTCTCCTAGAAGGTCCCACATGCTCCCT
 GTCTAACACGGTAATCGCCGTTAAATCGCCCTCCCACACTCGCCCACTTAACCAG

Restriction Sites: NotI-NotI

ACCN: NM_016022

Insert Size: 1800 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](#)

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_016022.1](#), [NP_057106.1](#)

RefSeq Size: 2290 bp

RefSeq ORF: 756 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.