

Product datasheet for SC325119

Presenilin 1 (PSEN1) (NM_007318) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Presenilin 1 (PSEN1) (NM_007318) Human Untagged Clone
Tag:	Tag Free
Symbol:	Presenilin 1
Synonyms:	ACNINV3; AD3; FAD; PS-1; PS1; S182
Vector:	<u>pCMV6 series</u>
Fully Sequenced ORF:	<p>>NCBI ORF sequence for NM_007318, the custom clone sequence may differ by one or more nucleotides</p> <pre> ATGACAGAGTTACCTGCACCGTTGCTCTACTTCCAGAATGCACAGATGTCTGAGGACAAC CACCTGAGCAATACTAATGACAATAGAGAACGGCAGGAGCACAACGACAGACGGAGCCTT GGCCACCTGAGCCATTATCTAATGGACGACCCAGGGTAACTCCCGGCAGGTGGTGGAG CAAGATGAGGAAGAAGATGAGGAGCTGACATTGAAATATGGCGCCAAGCATGTGATCATG CTCTTTGTCCCTGTGACTCTCTGCATGGTGGTGGTGGTGGCTACCATTAAGTCAGTCAGC TTTTATACCCGGAAGGATGGGCAGCTAATCTATACCCCATTCACAGAAGATACCGAGACT GTGGGCCAGAGAGCCCTGCACTCAATTCTGAATGCTGCCATCATGATCAGTGTCATTGTT GTCATGACTATCCTCCTGGTGGTCTGTATAAATACAGGTGCTATAAGGTCATCCATGCC TGGCTTATTATATCATCTCTATTGTTGCTGTTCTTTTTTTCATTCATTTACTTGGGGGAA GTGTTTAAACCTATAACGTTGCTGTGGACTACATTACTGTTGCACTCCTGATCTGGAAT TTTGGTGTGGTGGGAATGATTTCCATTCCTGGAAGGTCCACTTCGACTCCAGCAGGCA TATCTCATTATGATTAGTGCCCTCATGGCCCTGGTGGTTATCAAGTACCTCCCTGAATGG ACTGCGTGGCTCATCTTGGCTGTGATTTCAATATGATTTAGTGGCTGTTTGTGTCCG AAAGGTCCACTTCGTATGCTGGTTGAAACAGCTCAGGAGAGAAATGAAACGCTTTTTCCA GCTCTCATTTACTCCTCAACAATGGTGTGGTGGTGAATATGGCAGAAGGAGACCCGAA GCTCAAAGGAGAGTATCCAAAAATTCCAAGTATAATGCAGAAAGCACAGAAAGGGAGTCA CAAGACACTGTTGCAGAGAATGATGATGGCGGGTTCAGTGAGGAATGGGAAGCCAGAGG GACAGTCATCTAGGGCTCATCGCTCTACACCTGAGTCACGAGCTGCTGTCCAGGAACCT TCCAGCAGTATCCTCGCTGGTGAAGACCCAGAGGAAAGGGGAGTAAACTTGGATTGGGA GATTTTCATTTTCTACAGTGTCTGGTGGTAAAGCCTCAGCAACAGCCAGTGAGACTGG AACACAACCATAGCCTGTTTCGTAGCCATATTAATTGGTTTGTGCCTTACATTATTACTC CTTGCCATTTTCAAGAAAGCATTGCCAGCTCTTCCAATCTCCATCACCTTTGGGCTTGT TTCTACTTTGCCACAGATTATCTTGTACAGCCTTTTATGGACCAATTAGCATTCCATCAA TTTTATATC </pre>
Restriction Sites:	Please inquire
ACCN:	NM_007318



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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 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_007318.2](#), [NP_015557.2](#)

RefSeq Size: 6095 bp

RefSeq ORF: 1392 bp

Locus ID: 5663

UniProt ID: [P49768](#)

Cytogenetics: 14q24.2

Domains: Presenilin, PSN

Protein Families: Druggable Genome, Protease, Transmembrane

Protein Pathways: Alzheimer's disease, Neurotrophin signaling pathway, Notch signaling pathway, Wnt signaling pathway

Gene Summary:

Alzheimer's disease (AD) patients with an inherited form of the disease carry mutations in the presenilin proteins (PSEN1; PSEN2) or in the amyloid precursor protein (APP). These disease-linked mutations result in increased production of the longer form of amyloid-beta (main component of amyloid deposits found in AD brains). Presenilins are postulated to regulate APP processing through their effects on gamma-secretase, an enzyme that cleaves APP. Also, it is thought that the presenilins are involved in the cleavage of the Notch receptor, such that they either directly regulate gamma-secretase activity or themselves are protease enzymes. Several alternatively spliced transcript variants encoding different isoforms have been identified for this gene, the full-length nature of only some have been determined. [provided by RefSeq, Aug 2008]

Transcript Variant: This variant (2) uses an alternative donor splice site at one of the coding exons compared to transcript variant 1. It maintains the same reading frame, and encodes a shorter isoform (l-463) missing a 4 aa peptide compared to isoform l-467.