

## Product datasheet for **SC326156**

### Choline Acetyltransferase (CHAT) (NM\_001142933) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Choline Acetyltransferase (CHAT) (NM_001142933) Human Untagged Clone
Tag:	Tag Free
Symbol:	CHAT
Synonyms:	CHOACTASE; CMS1A; CMS1A2; CMS6
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



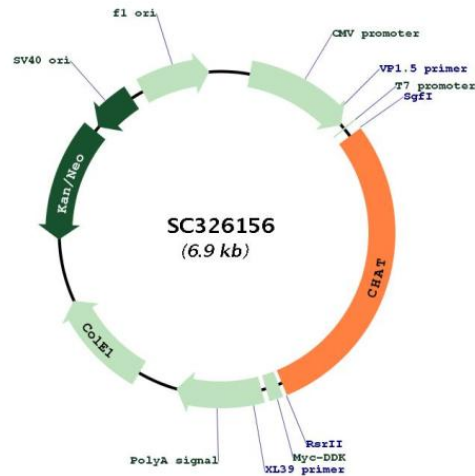
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Fully Sequenced ORF: >SC326156 representing NM\_001142933.  
Blue=Insert sequence Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGCATCGCC
ATGTGGCCGGAATGCAGAGATGAAGCACTGAGCACAGTAGGTCCACACCTCTGCATCCCTGCACCAGGA
CTCACCAGAGCGCCCATCTGGAAAAGGTCCCCCGTAAGATGGCAGCAAAAACCTCCAGCAGTGAGGAG
TCTGGGCTGCCAAACTGCCCGTGCCCGCTGCAGCAGACCCTGGCCAGTACCTGCAGTGCATGCGA
CACTTGGTGTCTGAGGAGCAGTTCAGGAAGAGCCAGGCCATTGTGCAGCAGTTTGGGGCCCTGGTGGC
CTCGGCGAGACCCTGCAGCAGAACTCCTGGAGCGGCAGGAGAAGACAGCCAACCTGGGTGTCTGAGTAC
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TCTAGCAAGTTTGAAAAGCTGTGGAAGAAAGCCTCATTGACATGAGAGACCTCTGCAGTCTGCTGCCG
CCTACTGAGAGCAAGCCATTGGCAACAAAGGAAAAAGCCACGAGGCCAGCCAGGGACACCAACCTTGA
```

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGAT  
ATCCTGGATTACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: Sgfl-RsrII

**Plasmid Map:**


**ACCN:** NM\_001142933

**Insert Size:** 2001 bp

**OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

**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\\_001142933.1](#)

**RefSeq Size:** 2528 bp

**RefSeq ORF:** 2001 bp

**Locus ID:** 1103

**UniProt ID:** [P28329](#)

**Cytogenetics:** 10q11.23

<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Glycerophospholipid metabolism
<b>MW:</b>	74.4 kDa
<b>Gene Summary:</b>	<p>This gene encodes an enzyme which catalyzes the biosynthesis of the neurotransmitter acetylcholine. This gene product is a characteristic feature of cholinergic neurons, and changes in these neurons may explain some of the symptoms of Alzheimer's disease. Polymorphisms in this gene have been associated with Alzheimer's disease and mild cognitive impairment. Mutations in this gene are associated with congenital myasthenic syndrome associated with episodic apnea. Multiple transcript variants encoding different isoforms have been found for this gene, and some of these variants have been shown to encode more than one isoform. [provided by RefSeq, May 2010]</p> <p>Transcript Variant: This variant (S) contains alternate 5' exons M and S in the 5' coding region, and uses an upstream start codon (PMID 11172068). The resulting protein (isoform 3) has a longer N-terminus compared to isoform 1.</p>