

## Product datasheet for **SC304885**

### Choline Acetyltransferase (CHAT) (NM\_020985) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Choline Acetyltransferase (CHAT) (NM_020985) Human Untagged Clone
Tag:	Tag Free
Symbol:	CHAT
Synonyms:	CHOACTASE; CMS1A; CMS1A2; CMS6
Vector:	<u>pCMV6 series</u>



[View online »](#)

**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_020985, the custom clone sequence may differ by one or more nucleotides  
 ATGGCAGCAAAAACCTCCCAGCAGTGAGGAGTCTGGGCTGCCAAAACCTGCCCGTGCCCCG  
 CTGCAGCAGACCTGGCCACGTACCTGCAGTGCATGCGACACTTGGTGTCTGAGGAGCAG  
 TTCAGGAAGAGCCAGGCCATTGTGCAGCAGTTTGGGGCCCCTGGTGGCCTCGGCGAGACC  
 CTGCAGCAGAAAACCTCCTGGAGCGGCAGGAGAAGACAGCCAACCTGGGTGTCTGAGTACTGG  
 CTGAATGACATGTATCTCAACAACCGCCTGGCCCTGCCTGTCAACTCCAGCCCTGCCGTG  
 ATCTTTGCTCGGCAGCACTTCCCTGGCACCGATGACCAGCTGAGGTTTGCAGCCAGCCTC  
 ATCTCTGGTGTACTCAGCTACAAGGCCCTGCTGGACAGCCACTCCATTCCCACTGACTGT  
 GCCAAAGGCCAGCTGTCAGGGCAGCCCTTTGCATGAAGCAATACTATGGGCTCTTCTCC  
 TCCTACCGGCTCCCCGGCATAACCAGGACACGCTGGTGGCTCAGAACAGCAGCATCATG  
 CCGGAGCCTGAGCAGTCATCGTAGCCTGCTGCAATCAGTTCTTTGTCTTGGATGTTGTC  
 ATTAATTTCCGCCGTCTCAGTGAGGGGGATCTGTTCACTCAGTTGAGAAAGATAGTCAAA  
 ATGGCTTCCAACGAGGACGAGCGTTTGCCTCCAATTGGCCTGCTGACGTCTGACGGGAGG  
 AGCGAGTGGGCCGAGGCCAGGACGGTCTCGTGAAGACTCCACCAACCGGGACTCGCTG  
 GACATGATTGAGCGCTGCATCTGCCTTGTATGCCTGGACGCGCCAGGAGCGTGGAGCTC  
 AGCGACACCCACAGGGCACTCCAGCTCCTTACGGCGGAGGCTACAGCAAGAACGGGGCC  
 AATCGCTGGTACGACAAGTCCCTGCAGTTTGTGGTGGGCCGAGACGGCACCTGCGGTGTG  
 GTGTGCGAACACTCCCCATTCGATGGCATCGTCTGGTGCAGTGCCTGAGCATCTGCTC  
 AAGCACATGACGCAGAGCAGCAGGAAGCTGATCCGAGCAGACTCCGTGAGCGAGCTCCCC  
 GCCCCCCGGAGGCTGCGGTGGAATGCTCCCCGAAATTAAGGCCACTTAGCCTCCTCG  
 GCAGAAAAACTTCAACGAATAGTAAAGAACCCTTGACTTCATTGTCTATAAGTTTGACAAC  
 TATGGGAAAAACATTCATTAAGAAGCAGAAATGCAGCCCTGATGCCTTCATCCAGGTGGCC  
 CTCCAGCTGGCCTTCTACAGGCTCCATCGAAGACTGGTGGCCACCTACGAGAGCGCGTCC  
 ATCCGCCGATTCCAGGAGGGACGCGTGGACAACATCAGATCGGCCACTCCAGAGGCACTG  
 GCTTTTGTGAGAGCCGTGACTGACCACAAGGCTGCTGTGCCAGCTTCTGAGAAGCTTCTG  
 CTCCTGAAGGATGCCATCCGTGCCAGACTGCATACACAGTCAATGGCCATAACAGGGATG  
 GCCATTGACAACCACCTGCTGGCACTGCGGGAGCTGGCCCGGCCATGTGCAAGGAGCTG  
 CCCGAGATGTTTATGGATGAAACCTACCTGATGAGCAACCGGTTTGTCTCTCCACTAGC  
 CAGGTGCCACAACCACGGAGATGTTCTGCTGCTATGGTCTGTGGTCCCAAATGGGTAT  
 GGTGCCTGCTACAACCCAGCCAGAGACCATCCTTTTCTGCATCTCTAGCTTTACAGC  
 TGCAAAGAGACTTCTTCTAGCAAGTTTGCAAAAGCTGTGGAAGAAAGCCTCATTGACATG  
 AGAGACCTCTGCAGTCTGCTGCCGCTACTGAGAGCAAGCCATTGGCAACAAAGGAAAAA  
 GCCACGAGGCCAGCCAGGGACACCAACCTTGA

**Restriction Sites:** Please inquire

**ACCN:** NM\_020985

**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).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_020985.1</a> , <a href="#">NP_066265.1</a>
<b>RefSeq Size:</b>	2286 bp
<b>RefSeq ORF:</b>	2286 bp
<b>Locus ID:</b>	1103
<b>UniProt ID:</b>	<a href="#">P28329</a>
<b>Cytogenetics:</b>	10q11.23
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Glycerophospholipid metabolism
<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 (N1) contains alternate 5' exon N and uses an alternate splice site within alternate exon M, and encodes isoform 1 (PMID 9073174). Transcript variants R, N1, N2, M and S encode isoform 1.</p>