OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RC227499

Choline Acetyltransferase (CHAT) (NM_001142933) Human Tagged ORF Clone

Product data:

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

View online »

ORF Nucleotide Sequence:

>RC227499 representing NM_001142933
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGTGGCCGGAATGCAGAGATGAAGCACTGAGCACAGTAGGTCCACACCTCTGCATCCCTGCACCAGGAC
TCACCAAGACGCCCATCCTGGAAAAGGTCCCCCGTAAGATGGCAGCAAAAACTCCCAGCAGTGAGGAGTC
TGGGCTGCCCAAACTGCCCGTGCCCCCGCTGCAGCAGACCCTGGCCACGTACCTGCAGTGCATGCGACAC
TTGGTGTCTGAGGAGCAGTTCAGGAAGAGCCAGGCCATTGTGCAGCAGTTTGGGGCCCCTGGTGGCCTCG
GCGAGACCCTGCAGCAGAAACTCCTGGAGCGGCAGGAGAAGACAGCCAACTGGGTGTCTGAGTACTGGCT
GAATGACATGTATCTCAACAACCGCCTGGCCCTGCCTGTCAACTCCAGCCCTGCCGTGATCTTTGCTCGG
CAGCACTTCCCTGGCACCGATGACCAGCTGAGGTTTGCAGCCAGCCTCATCTCTGGTGTACTCAGCTACA
AGGCCCTGCTGGACAGCCACTCCATTCCCACTGACTGTGCCAAAGGCCAGCTGTCAGGGCAGCCCCTTTG
CATGAAGCAATACTATGGGCTCTTCTCCTCCTACCGGCTCCCCGGCCATACCCAGGACACGCTGGTGGCT
CAGAACAGCAGCATCATGCCGGAGCCTGAGCACGTCATCGTAGCCTGCTGCAATCAGTTCTTTGTCTTGG
ATGTTGTCATTAATTTCCGCCGTCTCAGTGAGGGGGATCTGTTCACTCAGTTGAGAAAGATAGTCAAAAT
GGCTTCCAACGAGGACGAGCGTTTGCCTCCAATTGGCCTGCTGACGTCTGACGGGAGGAGCGAGTGGGCC
GAGGCCAGGACGGTCCTCGTGAAAGACTCCACCAACCGGGACTCGCTGGACATGATTGAGCGCTGCATCT
GCCTTGTATGCCTGGACGCGCCAGGAGGCGTGGAGCTCAGCGACACCCACAGGGCACTCCAGCTCCTTCA
CGGCGGAGGCTACAGCAAGAACGGGGCCAATCGCTGGTACGACAAGTCCCTGCAGTTTGTGGTGGGCCGA
GACGGCACCTGCGGTGTGGTGTGCGAACACTCCCCATTCGATGGCATCGTCCTGGTGCAGTGCACTGAGC
ATCTGCTCAAGCACATGACGCAGAGCAGCAGGAAGCTGATCCGAGCAGACTCCGTCAGCGAGCTCCCCGC
CCCCCGGAGGCTGCGGTGGAAATGCTCCCCGGAAATTCAAGGCCACTTAGCCTCCTCGGCAGAAAAACTT
CAACGAATAGTAAAGAACCTTGACTTCATTGTCTATAAGTTTGACAACTATGGGAAAACATTCATTAAGA
AGCAGAAATGCAGCCCTGATGCCTTCATCCAGGTGGCCCTCCAGCTGGCCTTCTACAGGCTCCATCGAAG
ACTGGTGCCCACCTACGAGAGCGCGTCCATCCGCCGATTCCAGGAGGGACGCGTGGACAACATCAGATCG
GCCACTCCAGAGGCACTGGCTTTTGTGAGAGCCGTGACTGACCACAAGGCTGCTGTGCCAGCTTCTGAGA
AGCTTCTGCTCCTGAAGGATGCCATCCGTGCCCAGACTGCATACACAGTCATGGCCATAACAGGGATGGC
CATTGACAACCACCTGCTGGCACTGCGGGAGCTGGCCCGGGCCATGTGCAAGGAGCTGCCCGAGATGTTC
ATGGATGAAACCTACCTGATGAGCAACCGGTTTGTCCTCTCCACTAGCCAGGTGCCCACAACCACGGAGA
TGTTCTGCTGCTATGGTCCTGTGGTCCCAAATGGGTATGGTGCCTGCTACAACCCCCAGCCAGAGACCAT
CCTTTTCTGCATCTCTAGCTTTCACAGCTGCAAAGAGACTTCTTCTAGCAAGTTTGCAAAAGCTGTGGAA
GAAAGCCTCATTGACATGAGAGACCTCTGCAGTCTGCTGCCGCCTACTGAGAGCAAGCCATTGGCAACAA
AGGAAAAAGCCACGAGGCCCAGCCAGGGACACCAACCT

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC227499 representing NM_001142933
Red=Cloning site Green=Tags(s)

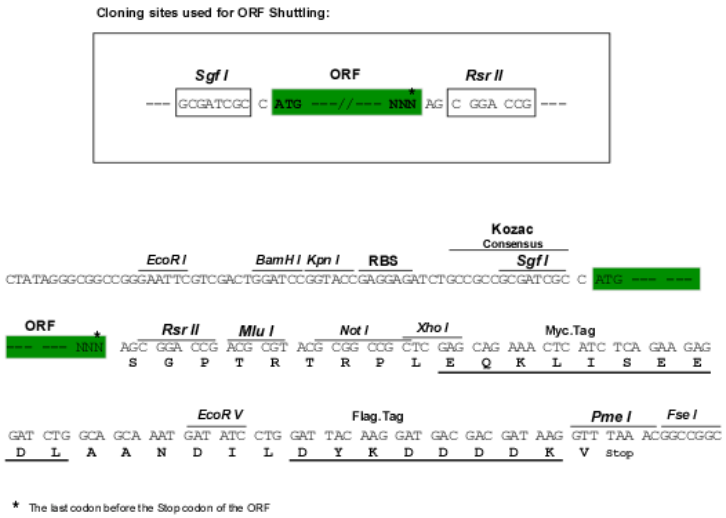
MWPECRDEALSTVGPHLCIPAPGLTKTPILEKVPRKMAAKTPSSEESGLPKLPVPPLQQTLATYLQCMRH
LVSEEQFRKSQAIVQQFGAPGGLGETLQQKLLERQEKTANWVSEYWLNDMYLNNRLALPVNSSPAVIFAR
QHFPGTDDQLRFAASLISGVLSYKALLDSHSIPTDCAKGQLSGQPLCMKQYYGLFSSYRLPGHTQDTLVA
QNSSIMPEPEHVIVACCNQFFVLDVVINFRRLSEGDLFTQLRKIVKMASNEDERLPPIGLLTSDGRSEWA
EARTVLVKDSTNRDSLDMIERCICLVCLDAPGGVELSDTHRALQLLHGGGYSKNGANRWYDKSLQFVVGR
DGTCGVVCEHSPFDGIVLVQCTEHLLKHMTQSSRKLIRADSVSELPAPRRLRWKCSPEIQGHLASSAEKL
QRIVKNLDFIVYKFDNYGKTFIKKQKCSPDAFIQVALQLAFYRLHRRLVPTYESASIRRFQEGRVDNIRS
ATPEALAFVRAVTDHKAAVPASEKLLLLKDAIRAQTAYTVMAITGMAIDNHLLALRELARAMCKELPEMF
MDETYLMSNRFVLSTSQVPTTTEMFCCYGPVVPNGYGACYNPQPETILFCISSFHSCKETSSSKFAKAVE
ESLIDMRDLCSLLPPTESKPLATKEKATRPSQGHQP

SGPTRTRRLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8072_b02.zip

Restriction Sites: SgfI-RsrII

Cloning Scheme:



ACCN: NM_001142933

ORF Size: 1998 bp

OTI Disclaimer: 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 clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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, NP_001136405.1

RefSeq ORF: 2001 bp

Locus ID: 1103

UniProt ID: P28329

Cytogenetics: 10q11.23

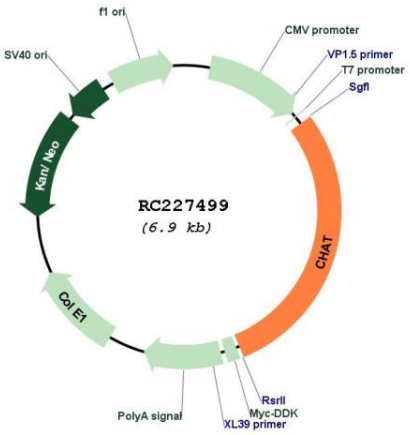
Protein Families: Druggable Genome

Protein Pathways: Glycerophospholipid metabolism

MW: 74.2 kDa

Gene Summary: 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]

Product images:



Circular map for RC227499