

Product datasheet for **SC124074**

Nicotinic Acetylcholine Receptor alpha 7 (CHRNA7) (NM_000746) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Nicotinic Acetylcholine Receptor alpha 7 (CHRNA7) (NM_000746) Human Untagged Clone
Tag:	Tag Free
Symbol:	Nicotinic Acetylcholine Receptor alpha 7
Synonyms:	CHRNA7-2; NACHRA7
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_000746, the custom clone sequence may differ by one or more nucleotides

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ATGCGCTGCTCGCCGGGAGGCGTCTGGCTGGCGCTGGCCGCGTCTGCTCCTGCACGTGTCCCTGCAAGGCG
AGTTCCAGAGGAAGCTTTACAAGGAGCTGGTCAAGAACTACAATCCCTTGGAGAGGCCCGTGGCCAAATGA
CTCGCAACCCTCACCCTACTTCTCCCTGAGCCTCCTGCAGATCATGGACGTGGATGAGAAGAACCACAA
GTTTTAACCAACATTTGGCTGCAAATGTCTGGACAGATCACTATTTACAGTGAATGTGTCAGAAT
ATCCAGGGGTGAAGACTGTTTCGTTTCCAGATGGCCAGATTTGAAACCAGACATTTCTTCTATAACAG
TGCTGATGAGCGCTTTGACGCCACATCCACACTAACGTGTTGGTGAATCTTCTGGGCATTGCCAGTAC
CTGCCTCCAGGCATATCAAGAGTTCCTGCTACATCGATGTACGCTGGTTCCCTTTGATGTGCAGCACT
GCAAAGTGAAGTTTGGTCTGGTCTTACGGAGGCTGGTCTTGGATCTGCAGATGCAGGAGGCAGATAT
CAGTGGCTATATCCCAATGGAGAATGGGACCTAGTGGGAATCCCCGGCAAGAGGAGTGAAGGTTCTAT
GAGTGTGCAAGAGCCCTACCCGATGTACCTTACAGTGACCATGCGCCGAGGACGCTCTACTATG
GCCTCAACCTGCTGATCCCTGTGTGCTCATCTCCGCCCTCGCCCTGCTGGTGTTCCTGCTTCTGCAGA
TTCCGGGGAGAAGATTTCCCTGGGGATAACAGTCTTACTCTCTTACCCTTTCATGCTGCTCGTGGCT
GAGATCATGCCCGCAACATCCGATTCGGTACCATTGATAGCCAGTACTTCGCCAGCACCATGATCATCG
TGGCCTCTCGGTGGTGGTGACAGTGATCGTGTGAGTACCACCACACGACCCGACGGGGGCAAGAT
GCCAAGTGGACCAGAGTATCCTTCTGAACTGGTGCAGTCCGCGTGGTTCCTGCGAATGAAGAGCCCGGGGAG
GACAAGGTGCGCCCGCCTGCCAGCACAAGCAGCGCGCTGCAGCCTGGCCAGTGTGGAGATGAGCGCCG
TGGCGCCGCCCGCCAGCAACGGGAACCTGCTGTACATCGGCTTCCGCGCCCTGGACGCGTGCAGTGT
TGTCCCGACCCCGACTCTGGGGTAGTGTGTGGCCGATGGCCTGCTCCCCACGCACGATGAGCACCTC
CTGCACGGCGGGCAACCCCGAGGGGGACCCGGACTTGGCCAAGATCCTGGAGGAGTCCGCTACATTG
CCAACCGCTTCCGCTGCCAGGACGAAAGCGAGGCGGTCTGCAGCGAGTGAAGTTCGCCGCTGTGTGGT
GGACCGCTGTGCTCATGGCTTCTCGGTCTTACCATCATCTGCACCATCGGCATCCTGATGTCGGCT
CCCAACTCGTGGAGCCGTGTCCAAGACTTTGCGTAA

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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_000746 unedited
 TAAAGTCAGATTTTGTAAACGACTCACTATAGGCGGCCGGAATTCGCACGAGGCGGCGA
 GGTGCCTCTGTGGCCGACAGGCGCAGGCCCGGGGACAGCCGAGACGTGGAGCGCGCCGGC
 TCGCTGCAGCTCCGGGACTCAACATGCGCTGCTCGCCGGGAGGCGTCTGGCTGGCGCTGG
 CCGCGTCGCTCCTGCACGTGTCCCTGCAAGGCGAGTTCAGAGGAAGCTTTACAAGGAGC
 TGGTCAAGAACTACAATCCCTTGGAGAGGCCCGTGGCCAATGACTCGCAACCACTCACCG
 TCTACTTCTCCCTGAGCCTCCTGCAGATCATGGACGTGGATGAAAAGAACCAAGTTTTAA
 CCACCAACATTTGGCTGCAAAATGTCTTGGACAGATCACTATTTACAGTGAATGTGTCAT
 AATATCCAGGGGTGAAGACTGTTTCGTTTTCCAGATGGCCACATTTGAAAACCAGACATTC
 TTCTCTATAACAGTGCTGATGAGCGCTTTGACGCCACATTCCACACTAACGTGTTGGTGA
 ATTCTTCTGGGCATTGCCAGTACCTGCCTCCAGGCATATTCAAGAGTTCTCTGCTACATCG
 ATGTACGCTGTTTCCCTTTGATGTGCAGCACTGCATACTGAAGTTTGGGTCCTGGTCTT
 ACGGACGCTGGCCCTTGGATCTGCAGATGCAGGGAGCAGATATCACTGGCTATATCCGCA
 AGGGAAAATGGGACCTAGTGGGAATCCCCGCAAGAGGAGTGAAGGTTATATGAGTGCT
 GCAAAGAACCCTACCCCGATGTCAACTTTACAGTGACCATGCGCAAAAGGACGCTCCACT
 ATTTGGGCTCAACGCTGATCCCCTGGGGAAAAATTTCCACCCTGCGCTG

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_000746 unedited
 CATGGCAACTTCCAGGCCAGGAGAGGCACTGGGGAGGGGTACAGGGATGCCACCCGGGA
 TCTGTTACAGAAACAGCTATGACCGCGCCGCAATCTAGAGTCGAGTTTTTTTTTTTTTT
 GTTTTTTTTAAACGGAGAAACAGCATCAAGCTGTTTCTCTCTACCGTCTTTGATAGAAATA
 AAAATAAAAATAAAAAGTTGAATTGCAGAAAAGCTAAGAGTTTTTGTGTTTTTTTTTTT
 GTTTTCTTCCACCAGTCAATTATTGAAAAGGATTTAGTGAGTCTGGTTATTTTAGCTT
 CAATCTGGGTTTTGTACACAAGCAAAAAGCAAAATGTTGAATTTTCAAGTAGACCTTCATGC
 AGACATGCAAAAACCAACTGTCTCGGTGGTGAGGAGCCATGGGGAGCTCTCCGAAGGGCTT
 TCCAAGCAGTGGGCTAATGGGCAAAATGACTACTCAATGGCCCTGCTTACCGATGGTACT
 GATGTGCCAAGGAATATCTATCAGCCATCCGAAAATATTGAAACAAATGCTTGAGTTTC
 TCTTCCCTAAAGTAGCAAAGATACCGTAGGCACCACGACTTGACAGCCAGATGGGACCAC
 TTGAGTTGAGGCGTGAATGCTGTCCTGTATTAGCACCCCAATCTCGTCAAGCCAAA
 GGCCTTGGCCATCTGTGATCTTCCACATGTACAGAACCAGCGTAGTTACGCCAAGTCTT
 TTGACACGGCCTTACGAAGTGGCAGCCGACTACNTGTTGCCAATGGTGCCAATTAGGGT
 AAGAACCAGGAGCTTAAGGGAAGGCGTTCTCCACGGCGGAGAT

Restriction Sites:

Please inquire

ACCN:

NM_000746

Insert Size:

4900 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:	<ol style="list-style-type: none">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_000746.2 , NP_000737.1
RefSeq Size:	2155 bp
RefSeq ORF:	1509 bp
Locus ID:	1139
UniProt ID:	P36544
Cytogenetics:	15q13.3
Protein Families:	Druggable Genome, Ion Channels: Cys-loop Receptors, Transmembrane
Protein Pathways:	Calcium signaling pathway
Gene Summary:	<p>The nicotinic acetylcholine receptors (nAChRs) are members of a superfamily of ligand-gated ion channels that mediate fast signal transmission at synapses. The nAChRs are thought to be hetero-pentamers composed of homologous subunits. The proposed structure for each subunit is a conserved N-terminal extracellular domain followed by three conserved transmembrane domains, a variable cytoplasmic loop, a fourth conserved transmembrane domain, and a short C-terminal extracellular region. The protein encoded by this gene forms a homo-oligomeric channel, displays marked permeability to calcium ions and is a major component of brain nicotinic receptors that are blocked by, and highly sensitive to, alpha-bungarotoxin. Once this receptor binds acetylcholine, it undergoes an extensive change in conformation that affects all subunits and leads to opening of an ion-conducting channel across the plasma membrane. This gene is located in a region identified as a major susceptibility locus for juvenile myoclonic epilepsy and a chromosomal location involved in the genetic transmission of schizophrenia. An evolutionarily recent partial duplication event in this region results in a hybrid containing sequence from this gene and a novel FAM7A gene. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Feb 2012]</p> <p>Transcript Variant: This variant (1) lacks an in-frame portion of the 5' coding region, compared to variant 2. The resulting isoform (1) has a shorter N-terminus, compared to isoform 2.</p> <p>Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.</p>