

## Product datasheet for **RC214597**

### Nicotinic Acetylcholine Receptor alpha 4 (CHRNA4) (NM\_000744) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Nicotinic Acetylcholine Receptor alpha 4 (CHRNA4) (NM_000744) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Nicotinic Acetylcholine Receptor alpha 4
Synonyms:	BFNC; EBN; EBN1; NACHR; NACHRA4; NACRA4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC214597 representing NM\_000744  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCCGGATCGCC

ATGGAGCTAGGGGGCCCCGGAGCGCCGGCTGCTGCCGCGCTGCTGCTTCTGGGACCGGCCTCC  
 TCGCGCCAGCAGCCATGTGGAGACCCGGGCCACGCCGAGGAGCGGCTCCTGAAGAAACTTCTCCGG  
 TTACAACAAGTGGTCCCACCCGTGGCCAACTCTCGGACGTGGTCTCGTCCGCTTCGGCTGTCCATC  
 GCTCAGCTCATTGACGTGGATGAGAAGAACCAGATGATGACCACGAACGTATGGGTGAAGCAGGAGTGGC  
 ACGACTACAAGCTGCGTGGGACCCAGCTGACTATGAGAATGTCACCTCCATCCGCATCCCTCCGAGCT  
 CATCTGGCGCCGGACATCGTCTCTACAACAATGCTGACGGGGACTTCGCGGTACCCACCTGACCAAG  
 GCCACCTGTTCCATGACGGGCGGTGCAGTGGACTCCCCCGCCATTTACAAGAGCTCTGCAGCATCG  
 ACGTCACCTTCTCCCTTCGACCAGCAGAAGTGCACCATGAAATTCGGCTCCTGGACCTACGACAAGGC  
 CAAGATCGACCTGGTGAACATGCACAGCCGCTGGACCAGCTGGACTTCTGGGAGAGTGGCGAGTGGGTC  
 ATCGTGGACGCCGTGGGCACCTACAACACCAGGAAGTACGAGTGTGCGCCGAGATCTACCCGGACATCA  
 CCTATGCCTTCGTCATCCGGCGGTGCCGCTTCTACACCATCAACCTCATATCCCCTGCCTGCTCAT  
 CTCCTGCCTACCGTGTGGTCTTCTACCTGCCCTCCGAGTGTGGCGAGAAGATCACGCTGTGCATCTCC  
 GTGCTGTGTCGCTACCGTCTTCTGTGCTCATCACCGAGATCATCCCGTCCACCTCACTGGTCATCC  
 CACTCATCGGCGAGTACCTGTGTTACCATGATCTTCGTCACCTGTCCATCGTCATCACGGTCTTCGT  
 GCTCAACGTGCACCACCGCTCGCCACGCACGCACCAATGCCACCTGGGTACGCAGGGTCTTCTGGAC  
 ATCGTGCCACGCTGCTCCTCATGAAGCGGCCGTCGTTCTGGCCGAGCCAGAAGGGGAGCCCTGCCACGCGG  
 CACCCAGAGCCTGCACCCTCCCTCACCGTCTTCTGCGTCCCCCTGGATGTGCCGCTGAGCCTGGGCT  
 TCTGCAAGTACCCTCCGACCAGCTCCCTCCTCAGCAGCCCCTGGAAGCTGAGAAGGCCAGCCCCACC  
 CCTCGCTGGACCCTGCCGCCGCCACGGCACCCAGGCACCCAGGCACCCAGGGCTGGCCAAAGCCAGGTCCCTCAG  
 CGTCCAGCACATGTCCAGCCTGGCGAAGCGGTGGAAGGCGGCTCCGGTCCCGTCTCGGAGCATCCAG  
 TACTGTGTTCCCCGAGACGATGCCGCCCCGAGGCAGATGGCCAGGCTGCCGGCGCCTGGCTCTCGCA  
 ACACCCACTCGGCTGAGTCCCACCCAGACCAGCCCTCCTCGTCAAATGCACATGCAAGAAGGAGCC  
 CTCTTCGGTGTCCCGAGCGCCACGGTCAAGACCCGACGACCAAAGCGCCGCCCTGCCCCTG  
 TCGCCGCCCTGACCCGGCGGTGGAGGGCTCCAGTACATTGCAGACCCTGAAGGCCAAGACACAG  
 ACTTCTCGGTGAAGGAGGACTGGAAGTACGTGGCCATGGTCATCGACCGCATCTTCTCTGGATGTTTCAT  
 CATCGTCTGCCTGCTGGGACGGTGGGCCCTTCTCGCCGCCCTGGCTGGCTGGCATGATC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTAA

**Protein Sequence:**

>RC214597 representing NM\_000744  
 Red=Cloning site Green=Tags(s)

MELGGPGAPRLLPPLLLLLGTGLLRASSHVETRAHAERLLKLFSGYNKWSRPVANI SDVVLVRFGLSI  
 AQLIDVDEKNQMMTTNVWVKQEWHDYKLRWDPADYENVTSIRIPSEL IWRPDI VL YNNADGDFAVTHLTK  
 AHLFHDGRVQWTPPAIYKSSCSIDVTFPFDDQNCMTKFGSWTYDKAKIDL VNMHSRVDQLDFWESGEWV  
 IVDVAGTYNTRKYECCAEIYPDITYAFVIRRLPLFYTINLIIPCLLISCLTVL VFYLPSECGEKITLCIS  
 VLLSLTVFLLLITEIIPSTSLVIPLIGEYLLFTMIFVTL SIVITVFVLNVHHRSPRTHMPTWVRRVFLD  
 IVPRLLLMKRPSVVKDNCRRLLIESMHKMASAPRFWPEPEGPPATSGTQSLHPPSPSFCVPLDVPAEPGP  
 SCKSPSDQLPPQPLEAEKASPHSPGCRPPHGTQAPGLAKARSL SVQHMSSPGEAVEGGVRCRSRSIQ  
 YCVPRDDAAPEADGQAAGALASRNTHSAELPPPDQPSCKCTCKKEPSSVSPSATVKTRSTKAPPPLPL  
 SPALTRAVEGVQYIADHLKAEDTDFSVKEDWKYVAMVIDRIFLWMFIIVCLLGTVGLFLPPWLAGMI

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: [https://cdn.origene.com/chromatograms/mg2560\\_a07.zip](https://cdn.origene.com/chromatograms/mg2560_a07.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM\_000744

ORF Size: 1881 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.

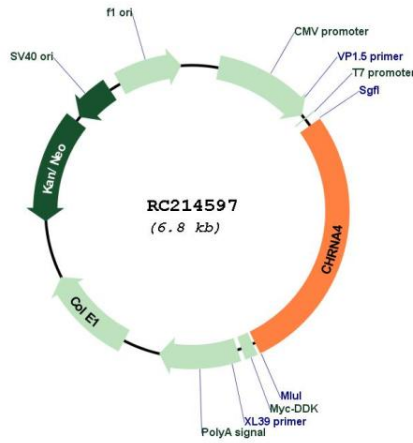
RefSeq: [NM\\_000744.1](#)

RefSeq Size: 3773 bp

RefSeq ORF: 1884 bp

**Locus ID:** 1137  
**UniProt ID:** [P43681](#)  
**Cytogenetics:** 20q13.33  
**Protein Families:** Druggable Genome, Ion Channels: Cys-loop Receptors, Transmembrane  
**MW:** 69.96 kDa  
**Gene Summary:** This gene encodes a nicotinic acetylcholine receptor, which belongs to a superfamily of ligand-gated ion channels that play a role in fast signal transmission at synapses. These pentameric receptors can bind acetylcholine, which causes an extensive change in conformation that leads to the opening of an ion-conducting channel across the plasma membrane. This protein is an integral membrane receptor subunit that can interact with either nAChR beta-2 or nAChR beta-4 to form a functional receptor. Mutations in this gene cause nocturnal frontal lobe epilepsy type 1. Polymorphisms in this gene that provide protection against nicotine addiction have been described. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Feb 2012]

**Product images:**



Circular map for RC214597



Coomassie blue staining of purified CHRNA4 protein (Cat# [TP314597]). The protein was produced from HEK293T cells transfected with CHRNA4 cDNA clone (Cat# RC214597) using MegaTran 2.0 (Cat# [TT210002]).