

Product datasheet for **RG214597**

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:	TurboGFP
Symbol:	Nicotinic Acetylcholine Receptor alpha 4
Synonyms:	BFNC; EBN; EBN1; NACHR; NACHRA4; NACRA4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RG214597 representing NM_000744
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGAGCTAGGGGGCCCCGGAGCGCCGGCTGCTGCCGCGCTGCTGCTTCTGGGACCGGCCTCC
 TCGCGCCAGCAGCCATGTGGAGACCCGGGCCACGCCGAGGAGCGGCTCCTGAAGAACTTCTCCGG
 TTACAACAAGTGGTCCCACCCGTGGCCAACTCTCGGACGTGGTCTCGTCCGCTTCGGCTGTCCATC
 GCTCAGCTCATTGACGTGGATGAGAAGAACCAGATGATGACCACGAACGTATGGGTGAAGCAGGAGTGGC
 ACGACTACAAGCTGCGTGGGACCCAGCTGACTATGAGAATGTCACCTCCATCCGCATCCCTCCGAGCT
 CATCTGGCGGCCGACATCGTCTCTACAACAATGCTGACGGGGACTTCGCGGTACCCACCTGACCAAG
 GCCACCTGTTCCATGACGGGCGGTGCAGTGGACTCCCCGGCCATTTACAAGAGCTCTGCAGCATCG
 ACGTCACCTTCTCCCTTCGACCAGCAGAAGTGCACCATGAAATTCGGCTCCTGGACCTACGACAAGGC
 CAAGATCGACCTGGTGAACATGCACAGCCGCGTGGACCAGCTGGACTTCTGGGAGAGTGGCGAGTGGGTC
 ATCGTGGACGCCGTGGGCACCTACAACACCAGGAAGTACGAGTGTGCGCCGAGATCTACCCGGACATCA
 CCTATGCCTTCGTCATCCGGCGGCTGCCGCTTCTACACCATCAACCTCATATCCCTGCCTGCTCAT
 TCCTGCCTCACCGTGTGGTCTTCTACCTGCCCTCCGAGTGTGGCGAGAAGATCACGCTGTGCATCTCC
 GTGCTGTGTCGCTCACCGTCTTCTGTGCTCATCACCGAGATCATCCCGTCCACCTCACTGGTCATCC
 CACTCATCGGCGAGTACCTGTGTTACCATGATCTTCGTCACCTGTCCATCGTCATCACGGTCTTCGT
 GCTCAACGTGCACCACCGCTCGCCACGCACGCACCAATGCCACCTGGGTACGCAGGGTCTTCTGGAC
 ATCGTGCCACGCTGCTCCTCATGAAGCGGCCGTCGTTGGTCAAGGACAATTGCCGGCGGCTCATCGAGT
 CCATGACATAAGATGGCCAGTCCCCCGCTTCTGGCCGAGCCAGAAGGGGAGCCCCCTGCCACGAGCGG
 CACCCAGAGCCTGCACCCTCCCTCACCGTCTTCTGCGTCCCCCTGGATGTGCCGGCTGAGCCTGGGCT
 TCTGCAAGTACCCTCCGACCAGCTCCCTCCTCAGCAGCCCCTGGAAGCTGAGAAGGCCAGCCCCACC
 CCTCGCTGGACCCTGCCGCCGCCACGGCACCCAGGCACCCAGGCTGGCCAAAGCCAGGTCCCTCAG
 CGTCCAGCACATGTCCAGCCTGGCGAAGCGGTGGAAGGCGGCTCCGGTCCGGTCTCGGAGCATCCAG
 TACTGTGTTCCCCGAGACGATGCCGCCCCGAGGCAGATGGCCAGGCTGCCGGCGCCTGGCCTCTCGCA
 ACACCCACTCGGCTGAGTCCCACCCAGACCAGCCCTCCTCGTCAAATGCACATGCAAGAAGGAGCC
 CTCTTCGGTGTCCCCGAGCGCCACGGTCAAGACCCGAGCACAAAGCGCCGCCCTGCCCCTG
 TCGCCGGCCTGACCCGGCGGTGGAGGGCTCCAGTACATTGCAGACCCTGAAGGCCAAGACACAG
 ACTTCTCGGTGAAGGAGGACTGGAAGTACGTGGCCATGGTCATCGACCGCATCTTCTCTGGATGTCAT
 CATCGTCTGCCTGCTGGGACGGTGGGCTCTTCTGCCGCCCTGGCTGGCTGGCATGAT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG214597 representing NM_000744
 Red=Cloning site Green=Tags(s)

MELGGPGAPRLLPPLLLLLGTGLLRASSHVETRAHAERLLKLFSGYNKWSRPVANISDVVLVRFGLSI
 AQLIDVDEKNQMMTTNVWVKQEWHDYKLRWDPADYENVTSIRIPSELIWRPDIVLYNNADGDFAVTHLTK
 AHLFHDGRVQWTPPAIYKSSCSIDVTFPPFDQQNCTMKFGSWTYDKAKIDLNMHSRVDQLDFWESGEWV
 IVDVAGTYNTRKYECCAEIYPDITYAFVIRRLPLFYTINLIIPCLLISCLTVLVFYLPSCEGKILCIS
 VLLSLTVFLLITEIIPSTSLVIPLIGEYLLFTMIFVTLIVITVFLNVHHRSPRTHMPTWVRRVFLD
 IVPRLLLMKRPSVVKDNCRRLLIESMHKMASAPRFWPEPEGEPPATSGTQSLHPPSPSFCVPLDVPAPGPG
 SCKSPSQQLPPQPLEAEKASPHSPGCRPPHGTQAPGLAKARLSVQHMSPPGEAVEGGVRCRSRSIQ
 YCVPDRDAAPEADGQAAGALASRNTHSAELPPDPQSPCKCTCKKEPSSVSPSATVKTRSTKAPPHLPL
 SPALTRAVEGVQYIADHLKAEDTDFSVKEDWKYVAMVIDRIFLWMFIIVCLLGTVGLFLPPWLAGMI

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-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

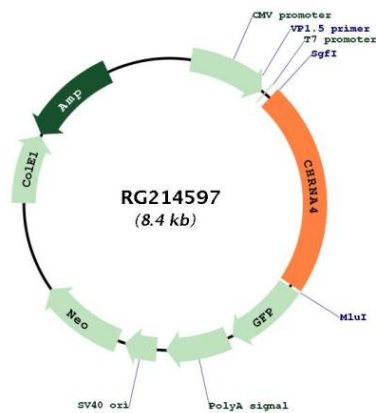
UniProt ID: [P43681](#)

Cytogenetics: 20q13.33

Protein Families: Druggable Genome, Ion Channels: Cys-loop Receptors, Transmembrane

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 RG214597