

Product datasheet for **RG220994**

CHRNA2 (NM_000742) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CHRNA2 (NM_000742) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CHRNA2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RG220994 representing NM_000742
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGCCCTCCTGTCTGTGTTCTGTCTTCACAAAGCTCAGCCTGTGGTGGCTCCTTCTGATCCCAG
 CAGGTGGAGAGGAAGCTAAGCGCCACCTCCCAGGGCTCCTGGAGACCCACTCTCCTCTCCAGTCCCAC
 GGCATTGCCGCAGGGAGGCTCGCATACCGAGACTGAGGACCGGCTCTTCAAACACCTCTCCGGGGTAC
 AACCGCTGGGCGCGCCGGTGCCCAACTTCAGACGTGGTGATTGTGCGCTTTGGACTGTCCATCGCTC
 AGCTCATCGATGTGGATGAGAAGAACCAATGATGACCACCAACGTCTGGCTAAAACAGGAGTGGAGCGA
 TTACAAACTGCGCTGGAACCCCGCTGATTTTGGCAACATCACATCTCTCAGGGTCCCTTCTGAGATGATC
 TGGATCCCGACATTGTTCTCTACAACAATGCAGATGGGGAGTTGCAGTGACCCACATGACCAAGGCC
 ACCTCTTCTCCACGGGCACTGTGACTGGGTGCCCGGCCATCTACAAGAGCTCCTGCAGCATCGACGT
 CACCTTCTCCCTTCGACCAGCAGAAGTGAAGATGAAGTTGGCTCCTGGACTTATGACAAGGCCAAG
 ATCGACCTGGAGCAGATGGAGCAGACTGTGACCTGAAGGACTACTGGGAGAGCGCGAGTGGGCCATCG
 TCAATGCCACGGGCACCTACAACAGCAAGAAGTACGACTGCTGCGCCGAGATCTACCCCGACGTACCTA
 CGCCTTGTATCCGGCGGCTGCCGCTCTTCTACACCATCAACCTCATATCCCTGCGCTGCTCATCTCC
 TGCTCACTGTGCTGGTCTTCTACCTGCCCTCCGACTGCGGCGAGAAGATCACGCTGTGCATTTCCGGTGC
 TGCTGTCACTCACCGTCTTCTGCTGCTCATCACTGAGATCATCCCGTCCACCTCGCTGGTCACTCCGCT
 CATCGGCGAGTACCTGCTGTTACCATGATCTTCGTCACCCTGTCCATCGTCATCACCGTCTTCGTGCTC
 AATGTGCACCACCGTCCCCAGCACCCACACCATGCCCACTGGGTGCGGGGGGCCCTTCTGGGCTGTG
 TGCCCCGGTGGCTTCTGATGAACCGGCCCCACCACCCGTGGAGCTCTGCCACCCCTACGCTGAAGCT
 CAGCCCCCTTATCACTGGCTGGAGAGCAACGTGGATGCCGAGGAGAGGGAGGTGGTGGAGAGGAGGAG
 GACAGATGGGCATGTGCAGGTATGTGGCCCCCTCTGTGGGCACCTCTGCAGCCACGGCCACCTGCACT
 CTGGGGCCTCAGGTCCCAAGGCTGAGGCTCTGCTGCAGGAGGGTGAAGTCTGCTATCACCCACATGCA
 GAAGGCACTGGAAGGTGTGCACTACATTGCCGACCACCTGCGGTCTGAGGATGCTGACTCTTCGGTGAAG
 GAGGACTGGAAGTATGTTGCCATGGTATCGACAGGATCTTCTCTGGCTGTTTATCATCGTCTGCTTCC
 TGGGGACCATCGGCTCTTCTGCTCCGTTCTAGCTGGAATGATC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG220994 representing NM_000742
 Red=Cloning site Green=Tags(s)

MGPSCPVFLSFTKLSLWLLLIPAGGEEAKRPPPRAPGDPLSSPSPTALPQGGSHTEEDRLFKHLFRGY
 NRWARVPNTSDVVIVRFGLSIAQLIDVDEKNQMMTTNVWLKQEWSDYKLRWNPADFGNITSLRVPSEMI
 WIPDIVLYNNADGEFAVTHMTKAHLFSTGTVHWVPPAIYKSSCSIDVTFPFDDQONCKMKFGSWTYDKAK
 IDLEQMEQTVDLKDYWESGEWAIVNATGTYNSSKYDCCAEIYPDVTYAFVIRRLPLFYINLIIPCLLIS
 CLTVLVFYLPSCDGEKITLCSVLLSLTVFLLLITEIIPSTSLVIPLIGEYLLFTMIFVTLISIVITVFVL
 NVHHRSPSTHTMPHWVRGALLGCVPRWLLMNRPPPVELCHPLRLKLSYHWHLESNVDAEEREVVVEE
 DRWACAGHVAPSVGTLCSHGHLHSGASGPKAEALLQECELLSPHMQKALEGVHYIADHLRSEDADSSVK
 EDWKYVAMVIDRIFLWLFIIIVCFLGTIGLFLPPFLAGMI

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_000742

ORF Size: 1587 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_000742.1](#), [NP_000733.1](#)

RefSeq Size: 2664 bp

RefSeq ORF: 1590 bp

Locus ID: 1135

UniProt ID: [Q15822](#)

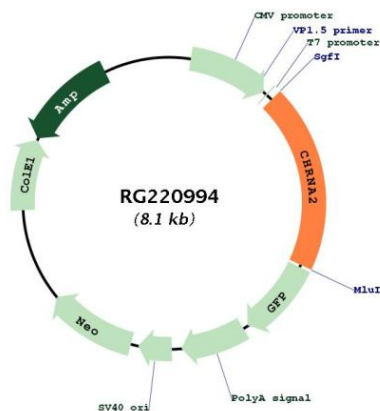
Cytogenetics: 8p21.2

Protein Families:

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

Gene Summary:

Nicotinic acetylcholine receptors (nAChRs) are ligand-gated ion channels formed by a pentameric arrangement of alpha and beta subunits to create distinct muscle and neuronal receptors. Neuronal receptors are found throughout the peripheral and central nervous system where they are involved in fast synaptic transmission. This gene encodes an alpha subunit that is widely expressed in the brain. The proposed structure for nAChR subunits 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. Mutations in this gene cause autosomal dominant nocturnal frontal lobe epilepsy type 4. Single nucleotide polymorphisms (SNPs) in this gene have been associated with nicotine dependence. [provided by RefSeq, Nov 2009]

Product images:

Circular map for RG220994