

## Product datasheet for **RG238663**

### CHRNA2 (NM\_001282455) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	CHRNA2 (NM_001282455) 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:**

>RG238663 representing NM\_001282455.  
 Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGGCCCTCCTGTCTGTGTTCTCTTCCTTACAAAGCTCAGCCTGTGGTGGCTCCTTCTGACCCCA
GCAGGTGGAGAGGAAGCTAAGCGCCACCTCCCAGGGCTCCTGGAGACCCACTCTCCTCTCCAGTCCC
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TACAACCGCTGGGCGCGCCCGGTGCCAACACTTCAGACGTGGATGAGAAGAACCAAATGATGACCACC
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ACATCTCTCAGGGTCCCTTCTGAGATGATCTGGATCCCCGACATTGTTCTCTACAACAATGCAGATGGG
GAGTTTGAGTGACCCACATGACCAAGGCCACCTTCTCCACGGGCACTGTGCACTGGGTGCCCCCG
GCCATCTACAAGAGCTCCTGCAGCATCGACGTACCTTCTCCCTTCGACCAGCAGAAGTGAAGATG
AAGTTTGGCTCCTGGACTTATGACAAGGCCAAGATCGACCTGGAGCAGATGGAGCAGACTGTGGACCTG
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GACTGCTGCGCCGAGATCTACCCGACGTACCTACGCCTTCGTATCCGGCGGGTGCCTCTTCTAC
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TTGCTCACCTGTCCATCGTCAACCGTCTTCGTGCTCAATGTGACACCACCGCTCCCCAGCACCCAC
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AACGTGGATGCCGAGGAGGGAGGTGGTGGTGGAGGAGGAGACAGATGGGCATGTGCAGTGTG
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GCTCTGCTGCAGGAGGTGAGCTGCTGCTATACCCACATGCAGAAGGCACTGGAAGGTGTGCACTAC
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GTCATCGACAGGATCTTCTCTGGCTGTTATCATCGTCTGCTTCTGGGGACCATCGGCCCTTTCTG
CCTCCGTTCTAGCTGGAATGATC
ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTAAAC
```

**Protein Sequence:**

>Peptide sequence encoded by RG238663  
 Blue=ORF Red=Cloning site Green=Tag(s)

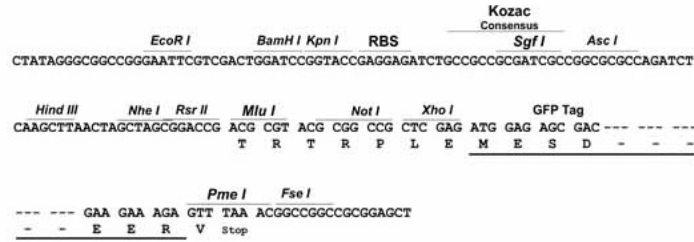
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EFAVTHMTKAHLFSTGTVHWVPPAIYKSSCIDVTFPPFDQONCKMKFGSWTYDKAKIDLEQMEQTVDL
KDYWESGEWAIVNATGTYNKKYDCCAEIYPDVTYAFVIRRLPLFYINLIIPCLLISCLTVLVFYLPS
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TMPHWVRGALLGCVPRWLLMNRPPPVELCHPLRLKLSPSYHWLESNVDAAEEREVVVEEDRWACAGHV
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TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV
MGYGFYHFGTYPSGYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED
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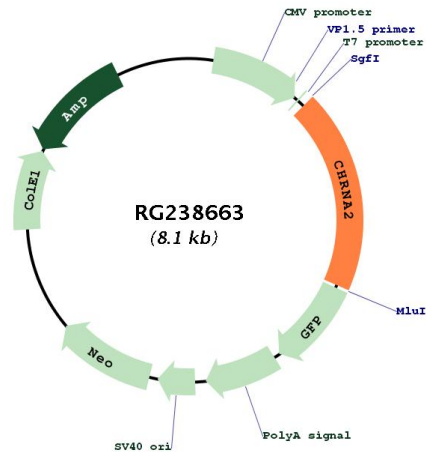
**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



**Plasmid Map:**


**ACCN:** NM\_001282455

**ORF Size:** 1542 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).

**RefSeq:** [NM\\_001282455.2](#)

RefSeq Size: 4038 bp

RefSeq ORF: 1545 bp

Locus ID: 1135

UniProt ID: [Q15822](#)

Cytogenetics: 8p21.2

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

MW: 58.6 kDa

**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]