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Product datasheet for RC220994

CHRNA2 (NM_000742) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CHRNA2 (NM_000742) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CHRNA2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

View online »

ORF Nucleotide Sequence:

>RC220994 representing NM_000742
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGGCCCCTCCTGTCCTGTGTTCCTGTCCTTCACAAAGCTCAGCCTGTGGTGGCTCCTTCTGATCCCAG
CAGGTGGAGAGGAAGCTAAGCGCCCACCTCCCAGGGCTCCTGGAGACCCACTCTCCTCTCCCAGTCCCAC
GGCATTGCCGCAGGGAGGCTCGCATACCGAGACTGAGGACCGGCTCTTCAAACACCTCTTCCGGGGCTAC
AACCGCTGGGCGCGCCCGGTGCCCAACACTTCAGACGTGGTGATTGTGCGCTTTGGACTGTCCATCGCTC
AGCTCATCGATGTGGATGAGAAGAACCAAATGATGACCACCAACGTCTGGCTAAAACAGGAGTGGAGCGA
TTACAAACTGCGCTGGAACCCCGCTGATTTTGGCAACATCACATCTCTCAGGGTCCCTTCTGAGATGATC
TGGATCCCCGACATTGTTCTCTACAACAATGCAGATGGGGAGTTTGCAGTGACCCACATGACCAAGGCCC
ACCTCTTCTCCACGGGCACTGTGCACTGGGTGCCCCCGGCCATCTACAAGAGCTCCTGCAGCATCGACGT
CACCTTCTTCCCCTTCGACCAGCAGAACTGCAAGATGAAGTTTGGCTCCTGGACTTATGACAAGGCCAAG
ATCGACCTGGAGCAGATGGAGCAGACTGTGGACCTGAAGGACTACTGGGAGAGCGGCGAGTGGGCCATCG
TCAATGCCACGGGCACCTACAACAGCAAGAAGTACGACTGCTGCGCCGAGATCTACCCCGACGTCACCTA
CGCCTTCGTCATCCGGCGGCTGCCGCTCTTCTACACCATCAACCTCATCATCCCCTGCCTGCTCATCTCC
TGCCTCACTGTGCTGGTCTTCTACCTGCCCTCCGACTGCGGCGAGAAGATCACGCTGTGCATTTCGGTGC
TGCTGTCACTCACCGTCTTCCTGCTGCTCATCACTGAGATCATCCCGTCCACCTCGCTGGTCATCCCGCT
CATCGGCGAGTACCTGCTGTTCACCATGATCTTCGTCACCCTGTCCATCGTCATCACCGTCTTCGTGCTC
AATGTGCACCACCGCTCCCCCAGCACCCACACCATGCCCCACTGGGTGCGGGGGGCCCTTCTGGGCTGTG
TGCCCCGGTGGCTTCTGATGAACCGGCCCCCACCACCCGTGGAGCTCTGCCACCCCCTACGCCTGAAGCT
CAGCCCCTCTTATCACTGGCTGGAGAGCAACGTGGATGCCGAGGAGAGGGAGGTGGTGGTGGAGGAGGAG
GACAGATGGGCATGTGCAGGTCATGTGGCCCCCTCTGTGGGCACCCTCTGCAGCCACGGCCACCTGCACT
CTGGGGCCTCAGGTCCCAAGGCTGAGGCTCTGCTGCAGGAGGGTGAGCTGCTGCTATCACCCCACATGCA
GAAGGCACTGGAAGGTGTGCACTACATTGCCGACCACCTGCGGTCTGAGGATGCTGACTCTTCGGTGAAG
GAGGACTGGAAGTATGTTGCCATGGTCATCGACAGGATCTTCCTCTGGCTGTTTATCATCGTCTGCTTCC
TGGGGACCATCGGCCTCTTTCTGCCTCCGTTCCTAGCTGGAATGATC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC220994 representing NM_000742
Red=Cloning site Green=Tags(s)

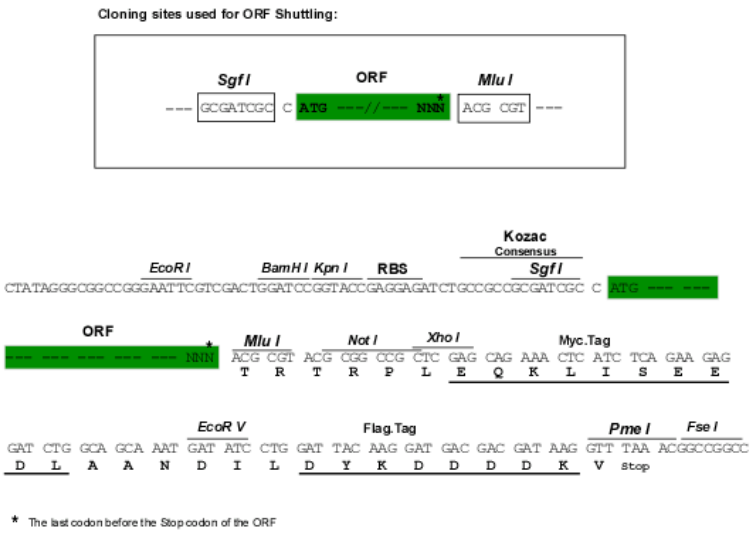
MGPSCPVFLSFTKLSLWWLLLIPAGGEEAKRPPPRAPGDPLSSPSPTALPQGGSHTETEDRLFKHLFRGY
NRWARPVPNTSDVVIVRFGLSIAQLIDVDEKNQMMTTNVWLKQEWSDYKLRWNPADFGNITSLRVPSEMI
WIPDIVLYNNADGEFAVTHMTKAHLFSTGTVHWVPPAIYKSSCSIDVTFFPFDQQNCKMKFGSWTYDKAK
IDLEQMEQTVDLKDYWESGEWAIVNATGTYNSKKYDCCAEIYPDVTYAFVIRRLPLFYTINLIIPCLLIS
CLTVLVFYLPSDCGEKITLCISVLLSLTVFLLLITEIIPSTSLVIPLIGEYLLFTMIFVTLSIVITVFVL
NVHHRSPSTHTMPHWVRGALLGCVPRWLLMNRPPPPVELCHPLRLKLSPSYHWLESNVDAEEREVVVEEE
DRWACAGHVAPSVGTLCSHGHLHSGASGPKAEALLQEGELLLSPHMQKALEGVHYIADHLRSEDADSSVK
EDWKYVAMVIDRIFLWLFIIVCFLGTIGLFLPPFLAGMI

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6102_h03.zip

Restriction Sites: SgfI-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_000742.4

RefSeq Size: 2664 bp

RefSeq ORF: 1590 bp

Locus ID: 1135

UniProt ID: Q15822

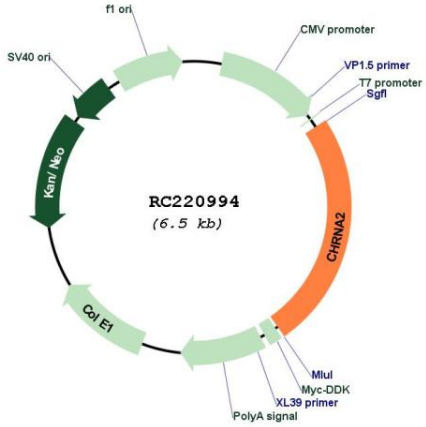
Cytogenetics: 8p21.2

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

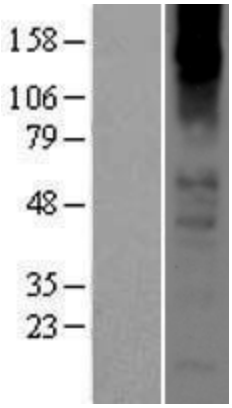
MW: 59.75 kDa

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]

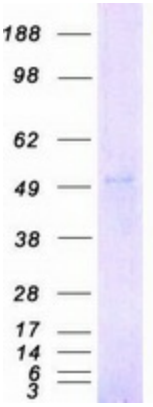
Product images:



Circular map for RC220994



Western blot validation of overexpression lysate (Cat# [LY400246]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC220994 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CHRNA2 protein (Cat# [TP320994]). The protein was produced from HEK293T cells transfected with CHRNA2 cDNA clone (Cat# RC220994) using MegaTran 2.0 (Cat# [TT210002]).