

Product datasheet for RC212999

KCNH4 (NM_012285) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KCNH4 (NM_012285) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	KCNH4
Synonyms:	BEC2; ELK1; Kv12.3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC212999 representing NM_012285 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCGGTCATGAAGGGGTTGCTGGCCCCGAAAAACACCTTCCTGGACACCATCGCCACCCGTTTTGACG
GAACGCACAGCAACTTCCTGCTGGCCAACGCACAGGGCACACGGGGCTTTCCCATCGTCTACTGCTCCGA
CGGCTTCTGCGAGCTCACAGGCTACGGTCGCACCGAGGTCATGCAGAAGACCTGCAGTCCGTTTCCCT
TACGGCCAGAGACCAGTGAGCCAGCCCTGCAGCGTCTGCACAAAGCCCTGGAGGGCCACCAGGAGCACC
GGGCTGAAATCTGCTTCTACCGCAAGGATGGCTCAGCCTTTTGGTGCCTCCTGGACATGATGCCATCAA
GAATGAGATGGGGGAGGTCGTGCTGTTCCCTCTTTTCTTCAAGGATATCACTCAGAGTGAAGCCAGGA
CTTGGCCCCAAGGAGCCGCGGGGACAGTAATCACGAAAACCTCCCTGGTAGAAGGGGAGCCACCTGGA
AATTTTCGGTCTGCCAGAAGACGGAGCCGTACTGTCTACACCGACTGACCGGCCACTTTGGCCGCGGGG
CCAGGGAGGCAATGAAGCCAATAATAACGTGTTGAGCCAAAGCCATCAGTGCCCGAGTACAAGGTGGCC
TCCGTGGGGGGTCTCGCTGCCTCCTCCACTACAGCGTCTCCAAGGCCATCTGGGACGGCCTTATCC
TCCTTGCCACCTTCTACGTTGCGGTACCGTCCCTACAATGTCTGTTTCTCGGGTGACGATGACACCC
CATCACTTCGCGACACACCCTTGTGAGCAGTCCGGCCAGGTAATCTCTGCTCCTCGTTCCATTGGCCCAT
AACTTCCGACCCACTATGTGTCCAGTCCGGCCAGGTAATCTCTGCTCCTCGTTCCATTGGCCCAT
ACCTGGCCACCTGGTTCTTTCATCGACCTTATTGCTGCTCTGCCCTTTGACCTGCTTACATCTTCAACAT
CACCGTGACCTCGCTGGTGCACCTACTGAAGACAGTGCAGGCTGTTGCGGCTGCTGCGGCTGCTGCAGAAG
CTGGAGCGGTAATCTCAGTGCAGTGTGTGGTGTGCTCACGCTGCTCATGTCGGTCTTTGCGCTCCTTGCC
ACTGATGGCCTGCATCTGGTATGTATCGGGCGCCGGGAGATGGAGGCAATGACCCGCTGCTCTGGGA
CATTGGCTGGTTGCATGAGTTGGGAAGCGTCTGGAGGTGCCCTATGTCAATGGCTCGGTGGGCGGCCCA
TCACGGCGCAGCGCTACATCGCGGCACTGTACTTCACTAAGCAGCCTCACCAGTGTGGGCTTTGGCA
ACGTGTGTGCCAACCCGACGCGGAGAAGATCTTCCATCTGCAGGATGCTCATAGGCGCCCTGATGCA
CGCTGTGGTGTTCGGGAACGTGACAGCCATCATCCAGCGCATGTACTCGCGCCGCTCGCTCTACCACAGC



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CGCATGAAGGACCTCAAGGACTTCATCCGTGTGCACCGCCTGCCGCGCCGCTCAAGCAGCGCATGCTCG
 AATACTTCCAGACCACGTGGGCCGTCAACAGCGGCATCGACGCCAACGAGTTACTGCGTGACTTCCCAGA
 CGAGCTGAGAGCTGACATTGCTATGCACCTGAATCGGGAGATCCTGCAGCTGCCGTTGTTCCGGGGCAGCG
 AGCAGGGGCTGCCTGCGGGCCCTATCGTGCACATCAAGACCTCGTTCTGCGCTCCGGGCGAGTACCTGT
 TGCGCCGTGGGGATGCCCTGCAGGCACATTACTATGTCTGCTCCGGCTCGCTTGAAGTGTCCGAGACAA
 CATGGTGTGGCCATCCTGGGGAAGGGGACCTGATTGGAGCAGATATCCCTGAGCCGGGCGAGGACCT
 GGGTTGGGAGCAGACCCAACTTCGTGCTAAAGACCAGTGTGATGTGAAAGCTTGACCTACTGTGGCC
 TGCAGCAGCTGAGCAGCCGAGGGCTGGCTGAGGTCCTGAGGCTCTATCCTGAGTATGGGGCTGCCTTCCG
 GGCTGGCCTGCCCGGGACCTCACCTTCAACTGCGCCAGGGCTCTGACACCAGTGGCCTCAGCCGCTTT
 TCCCGATCCCCTCGCCTCTCCAGCCCCGCTCAGAAAGCCTCGGCTCCTCCTCAGACAAGACGCTGCCAT
 CCATCACAGAGGCCGAGAGTGGCGCGGAGCCTGGGGTGGTCCCAGGCCCGACGGCCCCCTCTGCTGCC
 CAACCTCAGCCCAGCAGGCCTCGGGGCTCCCTGGTCAAGCTTTTGGGCGAGGAGCTGCCCCATTCTCA
 GCCCTGTCTCCTCCTTCTATCCCATCCCTGTCCCCTGCCCTGGTGGCCAGGGCCACAGTGCCT
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 GGCCAGCCCAGAATTGGCCAGTGAAGGCTGAGGAGGTGAAGGAAAAGGTTTCCCGGCTGAACCAGGAGAT
 CTCTCGTCTAATCAGGAGGTGTCTCAGCTTAGCCGGGAGCTGCGGCACATCATGGCCCTGCTGCAGGCC
 AGGCTGGGTCCCCAGGCCACCCAGCAGGCTCCGCTTGGACCCAGACCCCTCCTTGTCCACAGCTGAGGC
 CACCATGCCTCTCCTTGTGCGTCCAGACCACCCAGCCTCCAGGATACTACGCTTGTGAAGTTCA
 CTGCCAGCCAGTGTGGGACCATGGAGACAGGACTGCGCTCCTGGACTTGAGACCTCCATATTGCC
 CCCTACCCCTCAGAGCCTGACCTCTGGGACCTCTCCAGTCCAGGAGCCTCACCCCAACCCCAAGCC
 TCTTGAGGCACAGTTTCCAGTCCAGGTGACACAGTCCAC

ACGCGTACGCGGGCCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTAA

Protein Sequence:

>RC212999 representing NM_012285
 Red=Cloning site Green=Tags(s)

MPVMKGLLAPQNTFLDTIATRFDGTHSNFLLANAQGRGFPPIVYCSDFGCELTYGRTEVMQKTCSCRFL
 YGPETSEPALQRLHKALEGHQEHRAEICFYRKDGSFAFWCLLDMMPIKNEMGEVVLFLFSFKDITQSGSPG
 LGPQGGGRGDSNHENSLGRRGATWKFRRSARRSRTVLHRLTGHFGRRGQGMKANNNVFEPKPSVPEYKVA
 SVGGSRLLLLHYSVSKAIWDGLILLATFYAVTVPNVCFSGDDDPITSRHTLVSDIAVEMLFILDIIIL
 NFRTTYVSQSQQVISAPRSIGLHLYLATWFFIDLIAALPFDLLYIFNITVTSLVHLLKTVRLLRLLRLLQK
 LERYSQSAVVLTLMSVFALLAHWMACIWWYVIGRREMEANDPLLWDIGWLHELKGRLEVPYVNGSVGGP
 SRRSAYIAALYFTLSSLTSVGFGNVCANTDAEKIFSICTMLIGALMHAVVFGNVTAIIRMYSSRSLYHS
 RMKDLKDFIRVHRLPRPLKQRMLEYFQTTWAVNSGIDANELLRDFPDELADIAMHLNREILQLPLFGAA
 SRGCLRALSLHIKTSFCAPGEYLLRRGDALQAHYYVCSGSLEVLDRNMVLAAILGKGLIGADIPPEGQEP
 GLGADPNFVLKTSADV KALTYCGLQQLSSRGLAEVLRLYPEYGAAFRAGLPRDLTFNLRQGS DTSGLSRF
 SRSRPLSQPRSELSGSSDKTLP SITEAESGAEPGGPRPRRPLLLPNLSPARPRGSLVSLGEE LPPFS
 ALVSSPSLSPSLPALAGQGHASPHGPPRCSAAWKPPQLLIPPLGTFGPPDLSPRIVDGIEDSGSTAE
 PSFRFRSRPELPRRSQAPPTGTRPSPELASEAEVKEKVCRLNQEISRLNQEVSQLSREL RHIMGLLQA
 RLGPPGHPAGSAWTPDPPCQLRPPCLSPCASRPPSLQD TLLAEVHCPASVGTMETGTALLDLRPSILP
 PYPSEPDLGSPVPEASPTPSLLRHSFQSRSDTFH

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk8008_f11.zip

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_012285

ORF Size: 3051 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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_012285.3](#)

RefSeq Size: 3920 bp

RefSeq ORF: 3054 bp

Locus ID: 23415

UniProt ID: [Q9UQ05](#)

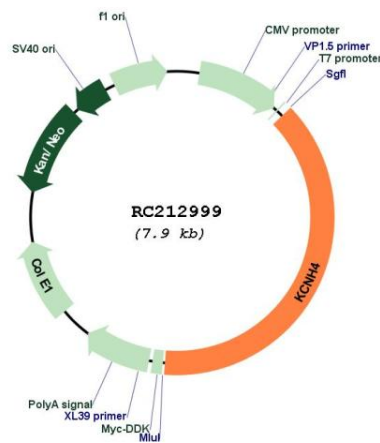
Cytogenetics: 17q21.2

Protein Families: Druggable Genome, Ion Channels: Potassium, Transmembrane

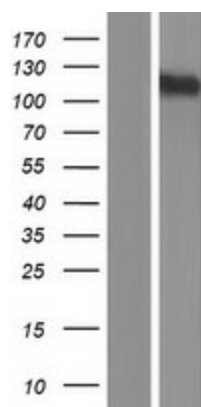
MW: 111.5 kDa

Gene Summary: Voltage-gated potassium (Kv) channels represent the most complex class of voltage-gated ion channels from both functional and structural standpoints. Their diverse functions include regulating neurotransmitter release, heart rate, insulin secretion, neuronal excitability, epithelial electrolyte transport, smooth muscle contraction, and cell volume. This gene encodes a member of the potassium channel, voltage-gated, subfamily H. This member is a pore-forming (alpha) subunit. The gene is brain-specific, and located in the neocortex and the striatum. It may be involved in cellular excitability of restricted neurons in the central nervous system. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC212999



Western blot validation of overexpression lysate (Cat# [LY415853]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212999 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).