

Product datasheet for **RG212999**

KCNH4 (NM_012285) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KCNH4 (NM_012285) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	KCNH4
Synonyms:	BEC2; ELK1; Kv12.3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG212999 representing NM_012285 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCGGTCATGAAGGGGTTGCTGGCCCCGAAAAACACCTTCCTGGACACCATCGCCACCCGTTTTGACG
GAACGCACAGCAACTTCCTGCTGGCCAACGCACAGGGCACACGGGGCTTTCCCATCGTCTACTGCTCCGA
CGGCTTCTGCGAGCTCACAGGCTACGGTCGCACCGAGGTCATGCAGAAGACCTGCAGTCCGTTTCCCT
TACGGCCAGAGACCAGTGAGCCAGCCCTGCAGCGTCTGCACAAAGCCCTGGAGGGCCACCAGGAGCACC
GGGCTGAAATCTGCTTCTACCGCAAGGATGGCTCAGCCTTTTGGTGCCTCCTGGACATGATGCCATCAA
GAATGAGATGGGGGAGGTCGTGCTGTTCCCTCTTTTCTTCAAGGATATCACTCAGAGTGAAGCCAGGA
CTTGCCCCCAAGGAGCCGCGGGGACAGTAATCACGAAAACCTCCCTTGGTAGAAGGGGAGCCACCTGGA
AATTTTCGGTCTGCCAGAAGACGGAGCCGTAAGTGTCTTACACCGACTGACCGGCCACTTTGGCCGCGGGG
CCAGGGAGGCAATGAAGCCAATAATAACGTGTTTGGCCAAAGCCATCAGTGCAGGAGTACAAGTTGGCC
TCCGTGGGGGGTCTCGCTGCCTCCTCCACTACAGCGTCTCCAAGGCCATCTGGGACGGCCTTATCC
TCCTTGCCACCTTCTACGTTGCGGTACCGTCCCTACAATGTCTGTTTCTCGGGTGACGATGACACCC
CATCACTTCGCGACACACCCTTGTGAGCAGTCCGGCCAGGTAATCTCTGCTCCTCGTTCCATTGGCCTCCAT
AACTTCGACACCCTTCTCATCGACCTTATTGCTGCTCTGCCCTTTGACCTGCTTACATCTTCAACAT
CACCGTGACCTCGCTGGTGCACCTACTGAAGACAGTGCAGGCTGTTGCGGCTGCTGCGGCTGCTGCAGAAG
CTGGAGCGGTAAGTCTCAGTGCAGTGTGTTGCTCACGCTGCTCATGTCGGTCTTTGCGCTCCTTGCCC
ACTGATGGCCTGCATCTGGTATGTCATCGGGCGCCGGGAGATGGAGGCAATGACCCGCTGCTCTGGGA
CATTGGCTGGTTGCATGAGTTGGCAAGCGTCTGGAGGTGCCCTATGTCAATGGCTCGGTGGGCGGCCCA
TCACGGCGCAGCGCTACATCGCGGCACTGTACTTCACTTAAGCAGCCTCACCAGTGTGGGCTTTGGCA
ACGTGTGTGCCAACCCGACGCGGAGAAGATCTTCCATCTGCAGGATGCTCATAGGCGCCCTGATGCA
CGCTGTGGTGTTCGGGAACGTGACAGCCATCATCCAGCGCATGTACTCGCGCCGCTCGCTCTACCACAGC



[View online >](#)

CGCATGAAGGACCTCAAGGACTTCATCCGTGTGCACCGCCTGCCGCGCCGCTCAAGCAGCGCATGCTCG
 AATACTTCCAGACCACGTGGGCCGTCAACAGCGGCATCGACGCCAACGAGTTACTGCGTGACTTCCCAGA
 CGAGCTGAGAGCTGACATTGCTATGCACCTGAATCGGGAGATCCTGCAGCTGCCGTTGTTCCGGGGCAGCG
 AGCAGGGGCTGCCTGCGGGCCCTATCGCTGCACATCAAGACCTCGTTCTGCGCTCCGGGCGAGTACCTGT
 TGCGCCGTGGGGATGCCCTGCAGGCACATTACTATGTCTGCTCCGGCTCGCTTGAAGTGTCCGAGACAA
 CATGGTGTGGCCATCCTGGGGAAGGGGACCTGATTGGAGCAGATATCCCTGAGCCGGGCGAGGAGCCT
 GGGTGGGAGCAGACCCAACTTCGTGCTAAAGACCAGTGTGATGTGAAAGCTTGACCTACTGTGGCC
 TGACAGCAGCTGAGCAGCCGAGGGCTGGCTGAGGTCCTGAGGCTCTATCCTGAGTATGGGGCTGCCTCCG
 GGCTGGCCTGCCCGGGACCTCACCTTCAACTGCGCCAGGGCTCTGACACCAGTGGCCTCAGCCGCTTT
 TCCCGATCCCCTCGCCTCTCCAGCCCCGCTCAGAAAAGCCTCGGCTCCTCCTCAGACAAGACGCTGCCAT
 CCATCACAGAGGCCGAGAGTGGCGCGGAGCCTGGGGTGGTCCCAGGCCCGACGGCCCCCTCTGTGCC
 CAACCTCAGCCCAGCAGGCCTCGGGCTCCCTGGTCAGCCTTTTGGGCGAGGAGCTGCCCCATTCTCA
 GCCCTGTCTCCTCCTTCTATCCCATCCCTGTCCCCTGCCCTGGTGGCCAGGGCCACAGTGCCT
 CCCCTCAGGCCCCCCCAGGTGCTCTGCTGCCTGGAAGCCCCCTCAGTTCTCATTCCCCACTGGGAAC
 CTTTGGACCTCCGACCTCAGTCCCGGATAGTGGATGGCATTGAGGACTCTGGCAGCACAGCTGAGGCC
 CCTTCATTCCGATTGAGCAGGAGCCTGAACTGCCAAGGCCCGCTCCCAGGCCGCCCTACAGGGACCA
 GGCCAGCCCAGAATTGGCCAGTGAAGGCTGAGGAGGTGAAGGAAAAGGTTTCCCGGCTGAACCAGGAGAT
 CTCTCGTCTCAATCAGGAGGTGTCTCAGCTTAGCCGGGAGCTGCGGCACATCATGGGCTGCTGCAGGCC
 AGGCTGGGTCCCCAGGCCACCCAGCAGGCTCCGCTTGGACCCAGACCCCTCCTTGTCCACAGCTGAGGC
 CACCATGCCTCTCCTTGTGCGTCCAGACCACCCAGCCTCCAGGATACTACGCTTGTGAAGTTCA
 CTGCCAGCCAGTGTGGGACCATGGAGACAGGACTGCGCTCCTGGACTTGAGACCTCCATATTGCC
 CCCTACCCCTCAGAGCCTGACCTCTGGGACCTCTCCAGTGCCAGAGCCTCACCCCAACCCCAAGCC
 TCTTGAGGCACAGTTTCCAGTCCAGGTCAGACACGTTCCAC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG212999 representing NM_012285
 Red=Cloning site Green=Tags(s)

MPVMKGLLAPQNTFLDTIATRFDGTHSNFLLANAQGRGFPPIVYCSDFCEL TGYGRTEVMQKTCSCRFL
 YGPETSEPALQRLHKALEGHQEHRAEICFYRKDGSFAFWCLLDMMPIKNEMGEVVLFLFSFKDITQSGSPG
 LGPQGGRGDSNHENSLGRRGATWKFRSARRRSRTVLHRLTGHFGRRGQGMKANNVFEKPSVPEYKVA
 SVGGSRLLLLHYSVSKAIWDGLILLATFYAVTVPNVCFSGDDDPITSRHTLVSDIAVEMLFILDIIIL
 NFRTTYVSQSGQVISAPRSIGLHYLATWFFIDLIAALPFDLLYIFNITVTSLVHLLKTVRLLRLLRLLQK
 LERYSQCSAVVL TLLMSVFALLAHWMAIWIYVIGRREMEANDPLLWDIGWLHELKRLVPEYVNGSVGGP
 SRRSAYIAALYFTLSSLTSVGFGNVCANTDAEKIFSICTMLIGALMHAVVFGNVTAI IQRMYSRRSLYHS
 RMKDLKDFIRVHRLPRPLKQRMLEYFQTTWAVNSGIDANELLRDFPDEL RADIAMHLNREILQLPLFGAA
 SRGCLRALSLHIKTSFCAPGEYLLRRGDALQAHYYVCSGSLEVL RDNMVLAILGKGD LIGADIPEPQEP
 GLGADPNFVLKTSADV KALTYCGLQQLSSRGLAEVLRLYPEYGA AFRAGLPRDLTFNLRQGS DTSGLSRF
 SRSPRLSQPRSESLGSSSDKTLPSITEAESGAEPGGGPRRRP LLLPNLSPARPRGSLV SLLGEELPPFS
 ALVSSPSLSPSLSPALAGQGHASPHGPPRCSAAWKPPQLLIPPLGTFGPPDLSPRIVDGIEDSGSTAE A
 PSFRFRSRPELPRPRSQA PPTGTRPSPELASEAEVKEKVCRLNQEISRLNQEVSQLSREL RHIMGLLQA
 RLGPPGHPAGSAWTPDPPCQLRPPCLSPCASRPPSLQD TTLAEVHCPASVGTMETGTALLDLRPSILP
 PYPSEPDLGSPVPEASPTPSLLRHSFQSRSDTFH

TRTRPLE – GFP Tag – V

Restriction Sites:

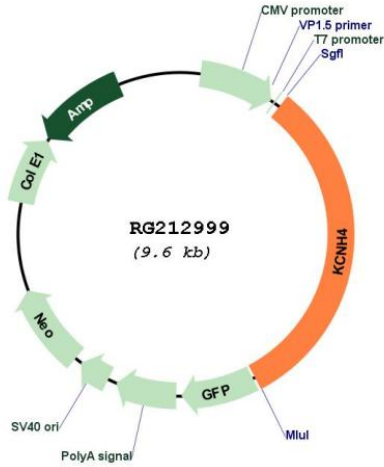
SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM_012285
 ORF Size: 3051 bp

OTI Disclaimer:	<p>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.</p> <p>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</p>
OTI Annotation:	<p>This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.</p>
Components:	<p>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).</p>
Reconstitution Method:	<ol style="list-style-type: none">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
Gene Summary:	<p>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]</p>