

## Product datasheet for RC235220

### KCNT1 (NM\_001272003) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	KCNT1 (NM_001272003) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	KCNT1
Synonyms:	bA100C15.2; DEE14; EIEE14; ENFL5; KCa4.1; SLACK; Slo2.2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC235220 representing NM_001272003 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCCACTCCCTGACGGGGCGGGACCCCGGGGGCGTCTGCCGGGAGGCGCGGGCGGGGGCTACACCA  
ACCGGACCTTCGAGTTTGACGACGGCCAATGCGCCCCAGGGTCCAGGTGGAGTTCTACGTCAACGAGAA  
CACCTTCAAGGAGCGGCTCAAGCTGTTCTTCATCAAAAACCAAAGATCGAGCCTGAGGATCCGGCTGTT  
AACTTCTCCCTGAAGCTGCTCACCTGCCTGCTCTACATTGTGCGCGTCTGCTCGATGACCCGGCCCTGG  
GCATCGGATGCTGGGGTGCCAAAGCAGAACTACTCCTCAATGACTCGTCCCGAGATCAACTGGG  
TCCTATTCTGTGGTGGAGAGAAAGATGACACTGTGGCGATCCAGGTACATCGTGGCCATAATAAGCTTC  
CTGGAGACGATGCTTCTCATCTACCTCAGCTACAAAGGCAACATCTGGGAGCAGATCTTCCGCGTGTCT  
TCGTCTGGAGATGATCAACTCTGCCCTTCATCATCAGATCTTCTGGCCGCCGCTGCGGAACCTGTT  
CATCCCGTCTTCTGAACTGCTGGTGGCCAAGCAGCGCTGGAAAACATGATTAATGACTTCCACCGT  
GCCATCTGCGGACACAGTCAGCCATGTTCAACCAGGTCTCATCTTCTGCACCCTGCTGTGCCTCG  
TTTTACGGGGGGTTGCAGGACCTGCGGCATCCAGCACCTGGAGCGGGCGGGGAGAACCTGTCCCTCT  
GACCTCCTTCTACTTCTGCATCGTCACCTTCTCCACCGTGGGCTACGGTGACGTACGCCCAAGATCTGG  
CCATCGCAGCTGCTGGTGGTTCATGATCTGCGTGGCCCTCGTGGTGTCTCCACTCGATTCGAGGAGC  
TCGTCTACCTCTGGATGGAGCGGCAGAAGTCAGGGGGCAACTACAGCCGCCACCGTGCAGACGGAGAA  
GCACGTGGTCTGTGTGTCAGCTCCCTCAAGATCGACCTTCTCATGGACTTCTGAAACGAGTTCTACGCC  
CACCCCGGCTCCAGGACTATTACGTGGTTCATCTGTGCCCCACGGAGATGGATGTCCAGGTGCGCAGAG  
TCCTGCAGATCCCTCTGTGGTCCAGCGGGTTCATCTACCTCCAGGGCTCTGCACTCAAAGACCAGGACCT  
CATGCGAGCCAAGATGGACAATGGGAGGCTGCTTCATCTCAGCAGCAGGAACGAGGTGGACCGCACG  
GCTGCAGACCACCAGACCATCTGCGCGCTGGGCGTGAAGGACTTCGCCCCAACTGCCCTCTACG  
TCCAGATCTCAAACCTGAAAACAAGTTTACGTCAAGTTTGTGACCACGTGGTGTGTGAGGAGGAGTG  
CAAGTACGCCATGCTGGCGTGAAGTGCATCTGCCGGCGACCTCCACCCTCATACCCTGCTGGTGCAC



ACGTCCCGCGGCCAGGAGGGACAGGAGTCTCCGGAGCAGTGGCAGCGCATGTATGGGCGCTGCTCCGGCA  
ACGAGGTGTACCACATCCGCATGGGTGACAGCAAGTTCTTCCGCGAGTACGAGGGCAAGAGCTTCACCTA  
CGCGGCCCTTCCACGCCACAAGAAGTATGGCGTGTGCCTCATCGGGCTGAAGCGGGAGGACAACAAGAGC  
ATCCTGCTGAACCCGGGGCCCCGGCACATCCTGGCCGCTCTGACACCTGCTTCTACATCAACATCACCA  
AGGAGGAGAACTCGGCCCTCATCTTCAAGCAGGAGGAGAAGCGGAAGAAGAGGGCCTTCTCGGGCAGGG  
GCTGCACGAGGGTCCGGCCCCCTGCCCGTGCACAGCATCATCGCTCCATGGGGACAGTGGCCATGGCA  
CTGCAGGGCACAGACACCGCCCTACGCAGAGCGGCGTGGGGGGGGGGCAGCAAGCTGGCACTGCCCA  
CGGAGAACGGCTCGGGCAGCCGGCGGCCAGCATCGCGCCCGTCTGAACTGGCCGACAGCTCAGCCCT  
GCTGCCCTGCGACCTGCTGAGCGACCAGTCCGAGGATGAGGTGACGCCGTCCGACGACGAGGGGCTCTCC  
GTGGTAGAGTATGTGAAGGGCTACCCTCCAACTCGCCCTACATCGGCAGCTCCCCAACCTGTGCCACC  
TCCTGCCTGTGAAAGCCCCCTTCTGCTGCCTGCGGCTGGACAAGGGCTGCAAGCACAACAGCTATGAAGA  
CGCAAGGCCCTACGGTTCAAGAACAAGCTGATCATCGTCTCGGCAGAGACGGCCGCAATGGGCTGTAC  
AACTTCATCGTGCCTGCGGGCTACTACAGATCCCAGGAGGCTGAACCCCATCGTGTCTGCTGCTGG  
ACAACAAGCCCGACCACCACTTCTGGAAGCCATCTGCTGCTTCCCATGGTCTACTACATGGAGGGCTC  
TGTGGACAACCTGGACAGCTGCTGCAGTGTGGCATCATCTATGCGGACAACCTGGTGGTGGTGGACAAG  
GAGAGCACCATGAGCGCCGAGGAGGACTACATGGCGGACGCCAAGACCATCGTCAACGTGACAGACATGT  
TCGGGCTCTTCCCAGCCTCAGCATCACACGGAGCTCACCCACCCTTCCAACATGCGCTTCATGCAAGT  
CCGCGCCAAGGACAGCTACTCTCTGGCTCTTCCAACTAGAAAAGAGGGAGCGAGAGAATGGTCCAAC  
CTGGCCTTCATGTTCCGCTGCCGTTCCGCGCCGGCCGCTTTCAGCATCAGCATGTTGGACACACTGC  
TCTACCAGTCTTCGTGAAGGACTACATGATCACCATCACCCGGCTGCTGCTGGGCTGGACACCACGCC  
GGGCTCGGGTACCTCTGTGCCATGAAAATCACCGAGGGCGACCTGTGGATCCGCACGTACGGCCGCTC  
TTCCAGAAGCTCTGCTCCTCCAGCGCCGAGATCCCCATTGGCATCTACCGGACAGAGACCACGCTTCT  
CCACCTCGGAGCCCCACGACCTCAGAGCCAGTCCCAGATCTCGGTGAACGTGGAGGACTGTGAGGACAC  
ACGGGAAGTGAAGGGGCCCTGGGGCTCCCGCGCTGGCACCGGAGGACAGCTCCAGGGCCGCCACAGGGC  
GGCGGTGACCCCGCAGAGCACCCACTGCTACGGCGCAAGAGCCTGCAGTGGGCCCCGAGGCTGAGCCGA  
AGGCGCCCAAGCAGGACGGCCGGCGGGCGCGGAGTGGATCAGCCAGCAGCGCTCAGCCTGTACCG  
GCGCTCTGAGCGCCAGGAGCTCTCCGAGCTGGTGAAGAACCAGCATGAAGCACCTGGGGCTGCCACCACC  
GGCTACGAGGACGTAGCAAATTTAACAGCCAGTGTGTCATGAATCGGGTAAACCTGGGATATTTGCAAG  
ACGAGATGAACGACCACCAGAACACCCTCTCTACGTCTCATCAACCCTCCGCCGACACGAGGCTGGA  
GCCAGTGACATTGTCTATCTCATCCGCTCCGACCCCTGGCTCACGTGGCCAGCAGCTCCAGAGCCGG  
AAGAGCAGCTGCAGCCACAAGCTGTCGCTGCAACCCCGAGACTCGCGACGAGACAGCTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC235220 representing NM\_001272003  
 Red=Cloning site Green=Tags(s)

MPLPDGARTPGGVCREARGGGYTNRTFEFDDGQCAPRVQVEFYVNENTFKERLKLFFIKNQRSSLRIRLF  
 NFSLKLTLCLLYIVRVLDDPALGIGCWGCPKQNYSFNDSSSEINWAPILWVERKMTLWAIQVIVAIISF  
 LETMLLIYLSYKGNIEWEQIFRVSVFLEMINTLPFIITIFWPPLRNLFIPVFLNCWLAKHALENMINDFHR  
 AILRTQSAMFNQVLILFCTLLCLVFTGGCRTCGIQHLERAGENLSLLTSFYFCIVTFSTVGYGDVTPKIW  
 PSQLLVVIMICVALVVLPLQFEELVYLVMERQKSGGNYSRHRAQTEKHVVLCVSSLKIDLLMDFLNEFYA  
 HPRLQDYVVVILCPTEMDVQVRRVLQIPLWSQRVIYLGQSALKDQDLMRAKMDNGEACFILSSRNEVDRT  
 AADHQITILRAWAVKDFAPNCPLYVQILKPENKFHVYKADHVVCEEECKYAMLALNCICPATSTLITLLVH  
 TSRGQEGQESPEQWQRMYGRCSGNEVYHIRMGDSKFFREYEGKSFTYAAFHAKKYGVCLIGLKREDNKS  
 ILLNPGPRHILAASTCFYINITKEENSAFIFKQEEKRKKRAFSGQGLHEGPAPLPHVHSIIASMGTVAMD  
 LQGTEHRPTQSGGGGGSKLALPTENGSGRRPSIAPVLELADSSALLPCDLLSDQSEDEVTPSDDEGLS  
 VVEYVKGYPNSPYIGSSPTLCHLLPVKAPFCCLRLDKGCKHNSYEDAKAYGFKNKLIIVSAETAGNGLY  
 NFIVPLRAYYRSRKELNPIVLLLDNKPDDHFFLEAICCFPMVYMEGSVDNLDLQLCGGIYADNLVVVDK  
 ESTMSAEEDYMADAKTIVNVQTMFRLFPSLSITTELTHPSNMRFMQFRAKDSYSLALSKLEKRERENGSN  
 LAFMFRLPFAAGRVFSISMLDITLLYQSFVKDYMITITRLLGLDTPGSGYLCAWKITEGDLWIRTYGRL  
 FQKLCSSSAEIPIGIYRTESHVFTSEPHDLRAQSQISVNVEDCEDTREVKGPGWRSRAGTGGSSQGRHTG  
 GGDPAEHPLLRRKSLQWARRLSRKAPKQAGRAAAAEWISQQRLSYRRSERQELSELVKNRMKHLGLPTT  
 GYEDVANLTASDVMNRVNLGYLQDEMNDHQNTLSYVLIINPPDTRLEPSDIVYLIRSDPLAHVASSSQSR  
 KSSCSHKLSSCNPETRDETQL

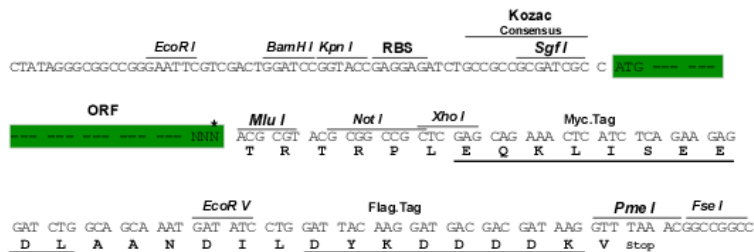
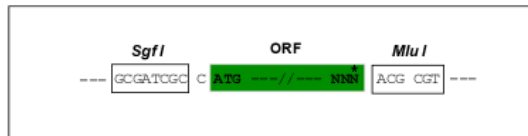
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



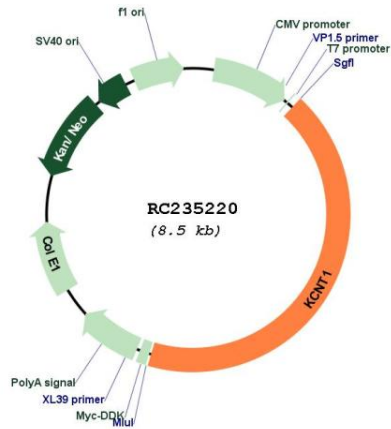
\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_001272003

**ORF Size:** 3633 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_001272003.2</a>
<b>RefSeq Size:</b>	4696 bp
<b>RefSeq ORF:</b>	3636 bp
<b>Locus ID:</b>	57582
<b>UniProt ID:</b>	<a href="#">Q5JUK3</a>
<b>Cytogenetics:</b>	9q34.3
<b>Protein Families:</b>	Druggable Genome, Ion Channels: Potassium, Transmembrane
<b>MW:</b>	137.4 kDa
<b>Gene Summary:</b>	Potassium 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 sodium-activated potassium channel subunit which is thought to function in ion conductance and developmental signaling pathways. Mutations in this gene cause the early-onset epileptic disorders, malignant migrating partial seizures of infancy and autosomal dominant nocturnal frontal lobe epilepsy. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Dec 2012]

Product images:



Circular map for RC235220