

Product datasheet for **SC309163**

KCNQ2 (NM_172107) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KCNQ2 (NM_172107) Human Untagged Clone
Tag:	Tag Free
Symbol:	KCNQ2
Synonyms:	BFNC; DEE7; EBN; EBN1; ENB1; HNSPC; KCNA11; KV7.2
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

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>OriGene sequence for NM_172107 edited
CCCCGCTGAGCCTGAGCCGACCCGGGGCGCCTCCCGCCAGGCACCATGGTGCAGAAGTC
GCGCAACGGCGGCGTATACCCCGGCCGAGCGGGGAGAAGAAGCTGAAGGTGGGCTTCGT
GGGGCTGGACCCCGCGCGCCCGACTCCACCCGGGACGGGGCGCTGCTGATCGCCGGCTC
CGAGGCCCCCAAGCGCGGCAGCATCCTCAGCAAACCTCGCGCGGGCGCGCGGGCCCGG
GAAGCCCCCAAGCGCAACGCCTTCTACCGCAAGCTGCAGAATTTCTCTACAACGTGCT
GGAGCGGCCGCGCGGCTGGGCGTTCATCTACCACGCCTACGTGTTCTCTCTGGTTTTCTC
CTGCCTCGTGCTGTCTGTGTTTTCCACCATCAAGGAGTATGAGAAGAGCTCGGAGGGGGC
CCTCTACATCCTGAAATCGTGACTATCGTGGTGTGGCGTGGAGTACTTCGTGCGGAT
CTGGGCGCAGGCTGCTGCTGCCGTACCGTGGCTGGAGGGGGCGGCTCAAGTTTGCCCG
GAAACCGTTCTGTGTGATTGACATCATGGTGTCTATCGCCTCCATTGCGGTGCTGGCCGC
CGGCTCCAGGGCAACGTCTTTGCCACATCTGCGCTCCGAGCCTGCGCTTCTGCAGAT
TCTGCGGATGATCCGCATGGACCGCGGGGAGGCACCTGGAAGCTGCTGGGCTCTGTGGT
CTATGCCACAGCAAGGAGCTGGTCACTGCCTGGTACATCGGCTTCTTTGTCTCATCCT
GGCCTCGTTCCTGGTGTACTTGGCAGAGAAGGGGGAGAAGCACTTTGACACCTACGC
GGATGCACTCTGTGTTGGGCGCTGATCACGCTGACCACTTGGCTACGGGACAAGTACCC
CCAGACCTGGAACGGCAGGCTCCTTGCAGCAACCTTACCCCTCATCGGTGTCTCCTTCTT
CGCGCTGCCTGCAGGCATCTTGGGGTCTGGGTTTGCCTGAAGGTTACAGGAGCAGCACAG
GCGAAGCACTTTGAGAAGAGGGGAACCCGGCAGCAGGCTGATCCAGTCGGCTGGAG
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AACGGTACCCTGCCATGTACAGTTCGCAAACTCAAACCTACGGGGCTCCAGACTTAT
CCCCCGCTGAACCAGCTGGAGCTGCTGAGGAACCTCAAGAGTAAATCTGGACTCGCTTT
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GTGTGGATGCTGCCCGGACGCTTAGCCAGAAGGTCAGTTTGAAGATCGTGTCTTCTC
CAGCCCCGAGGCGTGGCTGCCAAGGGGAAGGGTCCCGCAGGCCAGACTGTGAGGCG
GTCACCCAGCGCCGACCAGAGCCTCGAGGACAGCCCCAGCAAGGTGCCAAGAGCTGGAG
CTTCGGGGACCGCAGCCGGGCACGCCAGGCTTTCCGCATCAAGGGTGCCGCTCACGGCA
GAACTCAGAAGAAGCAAGCCTCCCCGAGAGGACATTGTGGATGACAAGAGCTGCCCTG
CGAGTTTGTGACCGAGGACCTGACCCCGGGCTCAAAGTCAGCATCAGAGCCGTGTGTGT
CATGCGGTTCTGGTGTCCAAGCGGAAGTCAAGGAGAGCCTGCGGCCCTACGACGTGAT
GGACGTATCGAGCAGTACTCAGCCGGCCACCTGGACATGCTGTCCGAATTAAGAGCCT
GCAGTCCAGAGTGGACCAGATCGTGGGGCGGGCCAGCGATCACGGACAAGGACCGCAC
CAAGGGCCCGGCGAGGCGGAGCTGCCCGAGGACCCAGCATGATGGGACGGCTCGGGAA
GGTGGAGAAGCAGGTCTTGTCCATGGAGAAGAAGCTGGACTTCTGGTGAATATCTACAT
GCAGCGGATGGGCATCCCCCGACAGAGACCGAGGCTACTTTGGGGCCAAAGAGCCGGA
GCCGGCGCCCGCTACCACAGCCCGGAAGACAGCCGGGAGCATGTCGACAGGCACGGCTG
CATTGTCAAGATCGTGCCTCCAGCAGCTCCACGGGCCAGAAGAATTCTCGGCGCCCC
GGCCGCGCCCCCTGTCCAGTGTCCGCCCTCCACCTCCTGGCAGCCACAGAGCCACCCGCG
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CCTGCGGCAGGAGACACCCCGGCTGCAGGCCCCCGAGGGAACTGCGGGACAGCGA
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CAGCATCTCCAGTCCAAGGAGAACCTGGATGCTCTAACAGCTGCTACGCGGCCGTGGC
GCCTTGTGCCAAAGTCAGGCCCTACATTGCGGAGGGAGAGTCAGACACCGACTCCGACCT
CTGTACCCCGTGCGGGCCCGCCACGCTCGGCCACCGGCAGGGTCCCTTTGGTACGT
GGGCTGGGCCGGGCCAGGAAGTGA
    
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5' Read Nucleotide Sequence:	<p>>OriGene 5' read for NM_172107 unedited GTTAAATTTGTATACCACTCATATAGGGCGGCCGGAATTCGCACGAGCCCCGCTGAGCC TGAGCCCGACCCGGGGCGCTCCCGCCAGGCACCATGGTGCAGAAGTCGCGCAACGGCGG CGTATACCCCGGCCGAGCGGGGAGAAGAAGCTGAAGGTGGGCTTCGTGGGGCTGGACCC CGGCGCGCCCGACTCCACCCGGGACGGGGCGTGTGATCGCCGGCTCCGAGGCCCCCAA GCGCGGCAGCATCCTCAGCAAACCTCGCGCGGGCGCGGGCGCCGGGAAGCCCCCAA GCGCAACGCCTTCTACCGCAAGCTGCAGAATTTCTCTACAACGTGCTGGAGCGGCCGCG CGGCTGGGCGTTTCTACCTACCACGCCTACGTGTTCTCTCTGGTTTTCTCTGCCTCGTGCT GTCTGTGTTTTCCACCATCAAGGAGTATGAGAAGAGCTCGGAGGGGGCCCTCTACATCCT GGAAATCGTGACTATCGTGGTGTGGCGTGGAGTACTTCGTGCGGATCTGGGCCGAGG CTGCTGCTGCCGTACCGTGGCTGGAGGGGGCGGCTCAAGTTTGCCGAAACCGTTCTG TGTGATTGACATCATGGTGTCTATCGCCTCCATTGCGGTGCTGGCCGCCGGCTCCAGGG CAACGTCTTTGCCACATCTCGCTCCGGAGCCTGCGCTTCTGACAGTTCTGCGGATGAT CCGCATGGACCGCGGGAGGCACCTGGAAGCTGCTGGGCTCTGTGGTCTATGCCACAG CAAGGAGCTGGTCACTGCCTGGTACATCGGCTTCTTTGTCTCAC</p>
3' Read Nucleotide Sequence:	<p>>OriGene 3' read for NM_172107 unedited CATGGGGATGGCACTTCCGGCCAGGAAGCACTGGGGAGGGTCACAGGGTGCCCCGGGAT CTGTTTCAGAAACAGCTATGACCGCGGCCCAATCTAGATCACTTCTGGGCCCGGCCAG CCCACGTACCAAAGGGACCTCGCCGGTGGCCGAGCGTGGCGGGGGCCGCACGGGGTA CAGAGGTCGGAGTCGGTGTCTGACTCTCCCTCCGCAATGTAGGGCCTGACTTTGGACAA GGGCCACGGCCCGTAGCAGCTGTTGAGAGCATCCAGGTTCTCCTTGGACTGGGAGATG CTGAAGCCGCTGAAGGAACGCTCCAGCTCCTCGTGGTCCACGGACGGGATGGAGATGGAC GTGTGCTGTCCCGCAGGTTCCCTCGGGGGCCCTGCAGCCCGGGGTGTCCTCCTGCCGC AGGAACTCCATGCTGGCGCGGTTGCCCCCGCCGTAGGCGGACAGCGACCGCTCGTGGCA GGCGGGCGCGGGATGCGCACAGGGAGCCGTGGTCCCCACGGNGGAGGTGCCGTGGCC TGGCGCGGGTGGCTCTGTGGCTGCCAGGAGGTGGAGGGCGGACACTGGACAGGGGGCGCG GCCGGNGCGCCGAGAAGTTCTTCTGGCCCGTGGAGCTGCTGGAGCGCACGATCTTGACA ATGCAGCCGTGCCTGTCGACATGCTCCCGGCTGTCTTCCGGGCTGTGGTACGGCGGCC GGCTCGGGCTCTTTGGCCCCAAAGTAGGCCTCGGTCTCTGTGGGGGGATGCCCATCCGC TGCATGTANATATTCACCAGGAGTCCAGCTCTTCTCATGGACAAGACTGCTTCTA</p>
Restriction Sites:	Please inquire
ACCN:	NM_172107
Insert Size:	2700 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
OTI Annotation:	The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.
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:	<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_172107.2 , NP_742105.1
RefSeq Size:	3251 bp
RefSeq ORF:	2619 bp
Locus ID:	3785
UniProt ID:	O43526
Cytogenetics:	20q13.33
Protein Families:	Druggable Genome, Ion Channels: Potassium, Transmembrane
Gene Summary:	<p>The M channel is a slowly activating and deactivating potassium channel that plays a critical role in the regulation of neuronal excitability. The M channel is formed by the association of the protein encoded by this gene and a related protein encoded by the KCNQ3 gene, both integral membrane proteins. M channel currents are inhibited by M1 muscarinic acetylcholine receptors and activated by retigabine, a novel anti-convulsant drug. Defects in this gene are a cause of benign familial neonatal convulsions type 1 (BFNC), also known as epilepsy, benign neonatal type 1 (EBN1). At least five transcript variants encoding five different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]</p> <p>Transcript Variant: This variant (1) encodes the longest isoform (a). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.</p>