

## Product datasheet for **SC309162**

### **KCNQ2 (NM\_172106) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	KCNQ2 (NM_172106) Human Untagged Clone
Tag:	Tag Free
Symbol:	KCNQ2
Synonyms:	BFNC; DEE7; EBN; EBN1; ENB1; HNSPC; KCNA11; KV7.2
Vector:	<u>pCMV6 series</u>



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**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_172106, the custom clone sequence may differ by one or more nucleotides

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ATGGTGCAGAAGTCGCGCAACGGCGGCGTATACCCCGGCCGAGCGGGGAGAAGAAGCTG
AAGGTGGGCTTCGTGGGGCTGGACCCCGGCGGCCGACTCCACCCGGGACGGGGCGCTG
CTGATCGCCGGCTCCGAGGCCCAAGCGCGCAGCATCTCAGCAAACCTCGCGCGGGC
GGCGCGGGCGCCGGGAAGCCCCCAAGCGCAACGCCTTACCGAAGCTGCAGAATTTT
CTCTACAACGTGCTGGAGCGGCCGCGCGCTGGGCGTTCATCTACCACGCCTACGTGTT
CTCCTGGTTTTCTCCTGCCTCGTGTGTGTGTTTTCCACCATCAAGGAGTATGAGAAG
AGCTCGGAGGGGGCCCTCTACATCCTGGAATCGTGAATATCGTGGTGTGGCGTGAG
TACTTCGTGCGGATCTGGGCCGAGGCTGCTGCTGCCGGTACCGTGGCTGGAGGGGGCGG
CTCAAGTTTGCCCGAAACCGTTCTGTGTGATTGACATCATGGTGTCTATCGCTCCATT
GCGGTGCTGGCCCGGCTCCAGGGCAACGTCTTTGCCACATCTGCGCTCCGGAGCCTG
CGTTCCTGCAGATTCTGCGGATGATCCGCATGGACCGCGGGGAGGCACCTGGAAGCTG
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TTTGACACCTACCGGGATGCACTCTGGTGGGGCCTGATACGCTGACCACCATTGGCTAC
GGGGACAAGTACCCCAAGACTGGAACGGCAGGCTCCTTGGCGCAACCTTACCCTCATC
GGTGTCTCCTTCTCGCGCTGCCTGCAGGCATCTTGGGGTCTGGGTTTGGCCTGAAGTT
CAGGAGCAGCACAGGCAGAAGCACTTTGAGAAGAGGGCGGAACCCGGCAGCAGGCTGATC
CAGTGGCCTGGAGATTCTACGCCACCAACCTCTCGCGCACAGACCTGCACTCCACGTGG
CAGTACTACGAGCGAACGGTACCGTGCCCATGTACAGTTCGCAAACCTCAAACCTACGGG
GCCTCCAGACTTATCCCCCGCTGAACCAAGTGGAGCTGCTGAGGAACCTCAAGAGTAAA
TCTGGAAGTGGTTCAGGAAGGACCCCGCGGAGCGTCTCCAAGCCAGAAGGTGAGT
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AAGGGTCCCGCTCACGGCAGAAGCTCAGAAGAAGCAAGCCTCCCGGAGAGGACATTGTG
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CTGCGGCCCTACGACGTGATGGACGTATCGAGCAGTACTCAGCCGGCCACCTGGACATG
CTGTCCCGAATTAAGAGCCTGCAGTCCAGAGTGGACCAGATCGTGGGGCGGGGCCAGCG
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TTCTGTGAATATCTACATGCAGCGGATGGGCATCCCCCGACAGAGACCGAGGCTTAC
TTTGGGGCAAAGAGCCGGAGCCGGCGCCCGTACCACAGCCCGGAAGACAGCCGGGAG
CATGTGACAGGCACGGCTGCATTGTCAAGATCGTGCCTCCAGCAGCTCCACGGGCCAG
AAGAACTTCTCGGCGCCCCGGCCGCGCCCCGTCCAGTGTCCGCCCTCCACCTCCTGG
CAGCCACAGAGCCACCCGCGCCAGGGCCACGGCACCTCCCCGTGGGGGACCACGGCTCC
CTGGTGCATCCCGCCCGCCCTGCCACGAGCGGTGCTGTCCGCCTACGGCGGGGGC
AACCGCGCCAGCATGGAGTTCCTGCGGCAGGAGACACCCCGGGCTGCAGGCCCCCGAG
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GAGCGTTCCTTACGCGGCTTACGATCTCCAGTCCAAGGAGAACCTGGATGCTCTCAAC
AGCTGCTACGCGGCCGTGGCGCTTGTGCCAAAGTCAGGCCCTACATTGCGGAGGGAGAG
TCAGACACCGACTCCGACCTCTGTACCCCGTGGGGCCCCCGCCAGCTCGGCCACCGGC
GAGGGTCCCTTGGTGACGTGGGCTGGGCCGGGCCAGGAAGTGA

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**Restriction Sites:** Please inquire

**ACCN:** NM\_172106

<b>OTI Disclaimer:</b>	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).
<b>OTI Annotation:</b>	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
<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>RefSeq:</b>	<u><a href="#">NM_172106.1</a></u> , <u><a href="#">NP_742104.1</a></u>
<b>RefSeq Size:</b>	3197 bp
<b>RefSeq ORF:</b>	2565 bp
<b>Locus ID:</b>	3785
<b>UniProt ID:</b>	<u><a href="#">O43526</a></u>
<b>Cytogenetics:</b>	20q13.33
<b>Protein Families:</b>	Druggable Genome, Ion Channels: Potassium, Transmembrane
<b>Gene Summary:</b>	<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 (2) lacks an alternate in-frame exon compared to variant 1, resulting in a shorter isoform (b) compared to 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>