

Product datasheet for **SC309510**

KCNQ2 (NM_172108) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KCNQ2 (NM_172108) Human Untagged Clone
Tag:	Tag Free
Symbol:	KCNQ2
Synonyms:	BFNC; DEE7; EBN; EBN1; ENB1; HNSPC; KCNA11; KV7.2
Vector:	<u>pCMV6 series</u>



[View online »](#)

Fully Sequenced ORF: >NCBI ORF sequence for NM_172108, the custom clone sequence may differ by one or more nucleotides

```

ATGGTGCAGAAGTCGCGCAACGGCGGCGTATACCCCGGCCGAGCGGGGAGAAGAAGCTG
AAGGTGGGCTTCGTGGGGCTGGACCCCGGCGGCCGACTCCACCCGGGACGGGGCGCTG
CTGATCGCCGGCTCCGAGGCCCAAGCGCGCAGCATCTCAGCAAACCTCGCGCGGGC
GGCGCGGGCGCCGGGAAGCCCCCAAGCGCAACGCCTTCTACCGCAAGCTGCAGAATTTT
CTCTACAACGTGCTGGAGCGGCCGCGGCTGGGCGTTTCATCTACCACGCCTACGTGTTT
CTCCTGGTTTTCTCCTGCCTCGTGTGTGTGTTTTCCACCATCAAGGAGTATGAGAAG
AGCTCGGAGGGGGCCCTCTACATCCTGGAATCGTGAATATCGTGGTGTGGCGTGAG
TACTTCGTGCGGATCTGGGCCGAGGCTGCTGCTGCCGGTACCGTGGCTGGAGGGGGCGG
CTCAAGTTTGCCCGAAACCGTTCTGTGTGATTGACATCATGGTGTCTATCGCTCCATT
GCGGTGCTGGCCCGGCTCCAGGGCAACGTCTTTGCCACATCTGCGCTCCGGAGCCTG
CGTTCTGCAGATTCTGCGGATGATCCGCATGGACCGCGGGGAGGCACCTGGAAGCTG
CTGGGCTCTGTGGTCTATGCCACAGCAAGGAGCTGGTACTGCCTGGTACATCGGCTTC
CTTTGTCTCATCTGGCCTCGTTCTGGTGTACTTGGCAGAGAAGGGGGAGAACGACCAC
TTTGACACCTACCGGGATGCACTCTGGTGGGGCCTGATACGCTGACCACCATTGGCTAC
GGGACAAGTACCCCAAGACCTGGAACGGCAGGCTCCTTGCGGCAACCTTACCCTCATC
GGTGTCTCCTTCTCGCGCTGCCTGCAGGCATCTTGGGGTCTGGGTTTGGCCTGAAGTT
CAGGAGCAGCACAGGCAGAAGCACTTTGAGAAGAGGGCGGAACCCGGCAGCAGGCCTGATC
CAGTGGCCTGGAGATTCTACGCCACCAACCTCTCGCGCACAGACCTGCACTCCACGTGG
CAGTACTACGAGCGAACGGTCACCGTGCCCATGTACAGTTCGCAAACCTCAAACCTACGGG
GCCTCCAGACTTATCCCCCGCTGAACCAAGTGGAGCTGCTGAGGAACCTCAAGAGTAAA
TCTGGACTCGCTTTCAGGAAGGACCCCGCGGAGCGTCTCAAGCCCCGAGGGCGGAC
GCTGCCAAGGGGAAGGGGTCCCCGACGGCCAGACTGTGAGGCGGTCAACCAGCGCCGAC
CAGAGCCTCGAGGACAGCCCCAGCAAGGTGCCAAGAGCTGGAGCTTCGGGGACCGCAGC
CGGGCACGCCAGGCTTTCGCATCAAGGGTGCCTGTCACGGCAGAACTCAGAAGCAAGC
CTCCCCGAGAGGACATTGTGGATGACAAGAGCTGCCCTGCGAGTTTGTGACCGAGGAC
CTGACCCCGGGCCTCAAAGTCAAGTCAAGAGCCTGCGGCTGCGGTTCTGGTGTCC
AAGCGGAAGTTCAAGGAGAGCCTGCGGCCCTACGACGTGATGGACGTATCGAGCAGTAC
TCAGCCGGCCACCTGGACATGCTGTCCCGAATTAAGAGCCTGCAGTCCAGAGTGGACCAG
ATCGTGGGGCGGGGCCACGCGATCACGGACAAGGACCGCACCAAGGGCCCGCCGAGGCG
GAGCTGCCCGAGGACCCAGCATGATGGGACGGCTCGGGAAGGTGGAGAAGCAGGCTTGT
TCCATGGAGAAGAAGCTGGACTTCTGGTGAATATCTACATGCAGCGGATGGGCATCCCC
CCGACAGAGACCGAGGCCTACTTTGGGGCCAAAGAGCCGGAGCCGGCGCCGCGTACCAC
AGCCCGGAAGACAGCCGGGAGCATGTGACAGGCACGGCTGCATTGTCAAGATCGTGCGC
TCCAGCAGCTCCACGGGCCAGAAGAACTTCTCGGCGCCCCCGGCCGCGCCCCCTGTCCAG
TGTCCGCCCTCCACCTCCTGGCAGCCACAGAGCCACCCGCGCCAGGGCCACGGCACCTCC
CCCGTGGGGGACCACGGTCCCTGGTGCATCCCGCCCGCCCTGCCACGAGCGGTCCG
CTGTCCGCCTACGGCGGGGGCAACCGCGCCAGCATGGAGTTCTGCGGCAGGAGGACACC
CCGGGCTGCAGGCCCCCGAGGGGAACCTGCGGGACAGCGACACGTCCATCTCCATCCCCG
TCCGTGGACCACGAGGAGCTGGAGCGTTCCTTACGCGGTTTACGATCTCCAGTCCAAG
GAGAACCTGGATGCTCTCAACAGCTGCTACGCGCCGTGGCGCCTTGTGCCAAAGTCAAG
CCCTACATTGCGGAGGGAGAGTCAACACCGACTCCGACCTCTGTACCCCGTGGGGGCC
CCGCCACGCTCGGCCACCGGCGAGGGTCCCTTTGGTGACGTGGGCTGGGCCGGGCCAGG
AAGTGA
    
```

Restriction Sites: Please inquire

ACCN: NM_172108

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:	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.
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:	<u>NM_172108.1</u> , <u>NP_742106.1</u>
RefSeq Size:	2950 bp
RefSeq ORF:	2526 bp
Locus ID:	3785
UniProt ID:	<u>O43526</u>
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 (4) lacks two alternate in-frame coding segments compared to variant 1, resulting in a shorter isoform (d) compared to isoform a. The 3' UTR of this variant has not been fully characterized. 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>