

## Product datasheet for **MR225330**

### **Kcnq2 (NM\_010611) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Kcnq2 (NM_010611) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Kcnq2
Synonyms:	HNSPC; KQT2; Nmf134
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR225330 representing NM\_010611  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGTGCAGAAGTCGCGCAACGGTGGCGTGTACCCCGGCACCAGCGGGGAAAAGAAGCTCAAGGTGGGCT  
 TCGTGGGGCTGGACCCCGCGCGCCGACTCCACACGCGACGGCGCGCTACTCATCGCGGGCTCCGAGGC  
 CCCCAAGCGCGGACGCTTTTGTAGCAAGCCGCGGACGGCGCGGGAGCCGGGAAGCCCCGAAGCGC  
 AACGCCTTCTACCGCAAGCTGCAGAATTTCTCTACAACGTGCTAGAGCGGCCCGCGGGTGGCGTTCA  
 TCTACCACGCCTACGTGTTCTTTTAGTCTTCTCTGCTTGTGCTTTCTGTGTTTTCCACCATCAAGGA  
 GTACGAGAAGAGCTCTGAGGGGGCCCTCATACCTTGGAAATCGTACTATCGTGGTATTCGGTGTGAG  
 TACTTTGTGAGGATCTGGGCTGCAGGCTGCTGTTGCCGGTATCGAGGCTGGAGGGCAGGCTCAAGTTG  
 CCAGGAAGCCGTTCTGTGTGATTGATATCATGGTGTGATTGCCTCCATTGCTGTGCTGGCTGCTGGTTC  
 CCAGGGCAATGTCTTTGCCACATCTGCGCTTCGGAGCTTGGCGTTCTTGCAAATCTTGGCGATGATCCGT  
 ATGGACCGGAGGGGTGGCACCTGGAAGCTCTTGGGATCGGTAGTCTACGCTCACAGCAAGGAGCTGGTGA  
 CTGCCTGGTACATTGGCTTCTCTGCTCATCCTGGCCTCATTTCTGGTGTACTTGGCAGAAAAGGGTGA  
 GAATGACCACTTTGACACCTACGCAGATGCACTCTGGTGGGGTCTGATCACCTGACGACCATTTGGCTAC  
 GGGGACAAGTACCCTCAGACCTGGAACGGGAGGCTGCTGGCAGCGACCTTTACCCCTATTGGTGTCTCGT  
 TCTTTGCTCTTCTGCTGGCATTTTGGGATCCGGCTTGGCCCTGAAAGTCCAAGAGCAGCATCGGCAAAA  
 ACACCTTTGAGAAACGGCGGAACCTGCGGCAGGTCTGATCCAGTCTGCCTGGAGATTCTATGCTACTAAC  
 CTCTCACGCCAGCCTGCACTCCACGTGGCAGTACTACGAGCGGACAGTCACTGTCCCCATGTACAGCT  
 CACAAACTCAAACCTATGGGGCTCCAGACTCATCCACCTCTGAACAGCTGGAGCTGTGAGAACTCT  
 CAAGAGCAAATCTGGACTCACCTTCAGGAAGGAGCCACAGCCAGAGCCATCACCAGTAAAGGCAGACCG  
 TGCCGAGGGTGCCTGTGTGGATGCTGCCCGGACACTCTAGTCAGAAGGTGAGTTTGAAGATCGTGTCT  
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 CAGTGGGATCAGAGTCTTGATGACAGCCCGAGCAAGGTGCCAAGAGCTGGAGCTTTGGTGACCGCAGC  
 CGCACAGCCAGGCTTCCGCATCAAGGGTGTGCATCCCGCAGAAATCAGAAGAAGCAAGCCTCCCTG  
 GGGAGGACATCGTAGAGGACAACAAGAGCTGTAAGTGGAGTTTGTGACTGAAGATCTTACCCTGGCCT  
 CAAAGTTAGCATCAGAGCTGTGTGTTATGCGGTTCTTGGTATCTAAGCGAAAGTTCAAAGAGAGTCTG  
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 AGAGCCTGCAGTCCAGAGTGGACCAGATTGTGGGCGGGGCCAACAAATACGGATAAGGACCGCACCAA  
 AGGCCAGCGAAACGGAGCTGCCCGAAGACCCAGCATGATGGGACGGCTTGGGAAGGTGGAGAAACAG  
 GTCTTGTCCATGGAAAAGAAGCTCGACTTCTTGGTGGAGCATCTATACACAGAGAATGGGCATCCCACCAG  
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 CCGTGACCATGCAGACAAGCATGGCTGTATCATTAAGATCGTCCGCTCCACCAGCTCTACGGGCCAGAGG  
 AACTACGACGACCCCGAGCCATCCCCCTGCCAGTGTCTCCCTCCACCTCGTGGCAGCAGAGCCACC  
 AGCGCCATGGCACCTCCCCTGTGGGAGACCATGGCTCACTGGTACGCATCCCACCACCCCTGCACACGA  
 GCGGTCTGCTGTGCTACGGTGGGGCAACAGAGCCAGTACCGAGTTCTTGAGGCTGGAGGGCACCCCA  
 GCCTGCAGGCCCTCTGAGGCTGCCCTGCGGGATAGCGACACGTCATCTCCATCCCTTCCGTTGGACCATG  
 AGGAGCTGGAGCGCTCCTTCAGCGGCTTCAAGTATCTCCAGTCCAAGGAGAACCTGGATGCCCTGGCGAG  
 CTGTTATGCAGCTGTGGCACCATGCGCCAAGGTGAGGCCCTACATTGCAGAGGGAGAGTCTGACACAGAC  
 TCAGACCTCTGCACACCATGTGGCCTCCCCACGCTCTGCCACTGGTGGGGCCCTTTGGAGATGTGG  
 CTTGGGCAGGGCCAGGAAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR225330 representing NM\_010611  
 Red=Cloning site Green=Tags(s)

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MVQKSRNGGVYPGTSGEKKLKVGFVGLDPGAPDSTRDGALLIAGSEAPKRGSVLSKPRTGGAGAGKPPKR
NAFYRKLQNFLYNVLERPRGWAFIYHAYVFLLVFSLVSVFSTIKEYESSEGALYILEIVTIVVFGVE
YFVRIWAAGCCCRYRGRGLKFARKPFCVIDIMVLIASIAVLAAGSQGNVFATSALRSLRFLQILRMIR
MDRRGGTWKLLGSVYVYHSKELVTAWYIGFLCLILASFLVYLAEKGENDHFDYADALWWGLITLTIGY
GDKYPQTWNRRLLAATFTLIGVSFFALPAGILGSGFALKVQEQHRQKHFEKRRNPAAGLIQSAWRFYATN
LSRTDLHSTWQYYERTVTVPMYSSQTQTYGASRLIPPLNQLLELLRNLKKSGLTFRKEPQPEPSPSKGRP
CRGCLCGCCPGHSSQKVS LKDRVFSSPRGMAAKGKSPQAQTVRRSPSADQLDSDSPSKVPSWSFGDRS
RTRQAFRIKGAASRQNSEEASLPGEDIVEDNKSCNCFVTEDELTPGLKVSIRAVCVMRFLVSKRKFESL
RPYDVMVDIEQYSAGHLDMLSRIKSLQSRVDQIVGRGPTITDKDRTKGAETELPEDPSMMGRLGKVEKQ
VLSMEKKLDFLVS IYTQRMGIPPAETEAYFGAKEPEPAPPYHSPEDSRDHADKHGCIKIIVRSTSSTGQR
NYAAPPAIPPAQCPPSTSWQQSHQRHGTSVVDHGSLVRIPPPPAHERSL SAYGGGNRASTEFRLLEGTP
ACRPSEAAALRSDTSSISIPVDHEELERSFSGFSISQSKENLDALGSCYAAVAPCAKVRPYIAEGESDTE
SDLCTPCGPPRSATGEGPFGDVAWAGPRK
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mm9003\\_e01.zip](https://cdn.origene.com/chromatograms/mm9003_e01.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

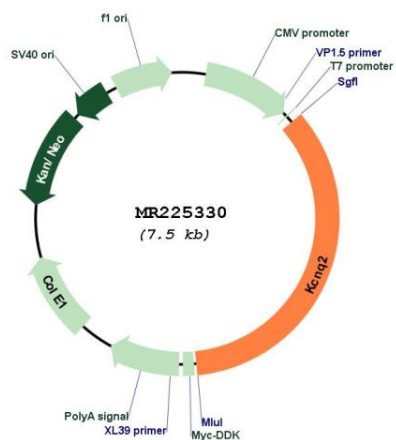
Cloning sites used for ORF Shuttling:



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

<b>ACCN:</b>	NM_010611
<b>ORF Size:</b>	2610 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>RefSeq:</b>	<a href="#">NM_010611.3</a> , <a href="#">NP_034741.2</a>
<b>RefSeq Size:</b>	2777 bp
<b>RefSeq ORF:</b>	2613 bp
<b>Locus ID:</b>	16536
<b>UniProt ID:</b>	<a href="#">Q9Z351</a>
<b>Cytogenetics:</b>	2 103.57 cM
<b>MW:</b>	96.2 kDa
<b>Gene Summary:</b>	Associates with KCNQ3 to form a potassium channel with essentially identical properties to the channel underlying the native M-current, a slowly activating and deactivating potassium conductance which plays a critical role in determining the subthreshold electrical excitability of neurons as well as the responsiveness to synaptic inputs. Therefore, it is important in the regulation of neuronal excitability.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR225330