

## Product datasheet for **MG225331**

### **Kcnq2 (NM\_001003824) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Kcnq2 (NM_001003824) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Kcnq2
Synonyms:	HNSPC; KQT2; Nmf134
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG225331 representing NM\_001003824  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGTGCAGAAGTCGCGCAACGGTGGCGTGTACCCGGCACCAGCGGGGAAAAGAAGCTCAAGGTGGGCT  
 TCGTGGGCTGGACCCCGCGCGCCGACTCCACACGCGACGGCGGCTACTCATCGCGGCTCCGAGGC  
 CCCAAGCGCGGAGCGTTTTGAGCAAGCCGCGACGGCGCGGGAGCCGGGAAAGCCCCGAAGCGC  
 AACGCCTTCTACCGCAAGCTGCAGAATTTCTCTACAACGTGCTAGAGCGGCCCGCGGCTGGGCGTTCA  
 TCTACCACGCCTACGTGTTCTTTTAGTCTTCTCTGCTTGTGCTTTCTGTGTTTTCCACCATCAAGGA  
 GTACGAGAAGAGCTCTGAGGGGGCCCTACATCTTGGAAATCGTACTATCGTGGTATTCGGTGTGAG  
 TACTTTGTGAGGATCTGGGCTGCAGGCTGCTGTTGCCGGTATCGAGGCTGGAGGGCAGGCTCAAGTTG  
 CCAGGAAGCCGTTCTGTGTGATTGATATCATGGTGTGATTGCCTCCATTGCTGTGCTGGCTGCTGGTTC  
 CCAGGGCAATGTCTTTGCCACATCTGCGCTTCGGAGCTTGGGTTCTTGCAAATCTTGGGATGATCCGT  
 ATGGACCGGAGGGGTGGCACCTGGAAGCTCTTGGGATCGGTAGTCTACGCTCACAGCAAGGAGCTGGTGA  
 CTGCCTGGTACATTGGCTTCTCTGCTCATCCTGGCCTCATTTCTGGTGTACTTGGCAGAAAAGGGTGA  
 GAATGACCACTTTGACACCTACGCAGATGCACTCTGGTGGGCTGATCACCCCTGACGACCATTTGGCTAC  
 GGGGACAAGTACCTCAGACCTGGAACGGGAGGCTGCTGGCAGCGACCTTACCCTCATTGGTGTCTCGT  
 TCTTTGCTCTTCTGCTGGCATTTTGGGATCCGGCTTGGCCCTGAAAGTCCAAGAGCAGCATCGGAAAA  
 ACACCTTGAGAAACGGCGGAACCTGCGGCAGGTCTGATCCAGTCTGCCTGGAGATTCTATGCTACTAAC  
 CTCTCACGCCACCGACCTGCATCCACGTGGCAGTACTACGAGCGGACAGTCACTGTCCCCATGTACAGAC  
 TCATCCCACCTCTGAACCAGCTGGAGCTGCTGAGGAATCTCAAGAGCAAATCTGGACTCACCTTCAGGAA  
 GGAGCCACAGCCAGAGCCATCACCAAGTCAGAAGGTCAGTTTGAAGATCGTGTCTTCTCCAGCCCCGA  
 GGCATGGCTGCCAAGGGAAAGGGTCTCCCCAGGCCAGACGGTCCGGCGGTCCCCAGTGCGGATCAGA  
 GTCTTGATGACAGCCGAGCAAGGTGCCAAGAGCTGGAGCTTTGGTGACCGCAGCCGACACGCCAGGC  
 TTTCCGCATCAAGGGTGTGCATCCCGGCAGAATCAGAAGAAGCAAGCCTCCCTGGGGAGGACATCGTA  
 GAGGACAACAAGAGCTGTAAGTGCAGTTTGTGACTGAAGATCTTACCCTGGCCTCAAAGTTAGCATCA  
 GAGCTGTGTGTTATGCGGTTCTTGGTATCTAAGCGAAAGTTCAAAGAGAGTCTGCGCCCATATGATGT  
 GATGGACGTCATCGAACAGTACTCGGCTGGACACTTGGATATGTTGTCCCGCATCAAGAGCCTGCAGTCC  
 AGGATAGATATGATTGTGGGCCCCACCCCTTCAACTCCCCGGCACAAGAAGTACCCTACCAAAGGAC  
 CCACGGCCCTTCGAGAGAGTACCCCAGTACTACCTAGAGTGGACCAGATTGTGGGGCGGGCCCAAC  
 AATAACGGATAAGGACCGCACCAAGGCCAGCGGAAACGGAGCTGCCCGAAGACCCAGCATGATGGGA  
 CGGCTTGGGAAGGTGGAGAAACAGGTCTTGTCCATGGAAAAGAAGCTCGACTTCTTGGTGTGAGCATCTATA  
 CACAGAGAATGGGCATCCCACCAGCAGAGACAGAGGCCTATTTTGGGGCCAAGGAGCCTGAGCCGGCACC  
 ACCCTACCACAGCCAGAGGACAGCCGTGACCATGCAGACAAGCATGGCTGTATCATTAAAGATCGTCCGC  
 TCCACCAGCTCTACGGGCCAGAGGAACACGCAGCACCCCGCCATCCCCCTGCCAGTGTCTCCCT  
 CCACCTCGTGGCAGCAGGCCACCAGCGCCATGGCACCTCCCCTGTGGGAGACCATGGCTCACTGGTCTC  
 CGACTGGAGAGGAGTGTGGCATGATGAGCTGTAC

**ACGCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:** >MG225331 representing NM\_001003824  
Red=Cloning site Green=Tags(s)

MVQKSRNGGVYPGTSGEKLLKGVFVGLDPGAPDSTRDGALLIAGSEAPKRGSVLSKPRTGGAGAGKPPKR  
 NAFYRKLQNFLYNVLERPRGWAFIYHAYVLLVFSCLVLSVFSTIKEYESSEGALYILEIVTIVVFGVE  
 YFVRIWAAGCCCRYRGRGLKFARKPFCVIDIMVLIASIAVLAAGSQGNVFATSALRSLRFLQILRMIR  
 MDRRGGTWKL LGSVVYAHSKELVTAWYIGFLCLILASFLVYLAEKGENDHFDTYADALWWGLITLTTIGY  
 GDKYPQTWNGRLLAATFTLIGVSFFALPAGILGSGFALKVQEQHRQKHFEKRRNPAAGLIQSAWRFYATN  
 LSRTDLHSTWQYYERTVTVPMYRLIPPLNQLELLRNLKSKSGLTFRKEPQPEPSPQKVS LKDRVFSPPR  
 GMAAKGKGSPPQAQTVRRSPSADQSLDDSPSKVPKSWFSGDRSRTRQAFRIKGAASRQNSEASLPGEDIV  
 EDNKSCNCEFVTEDLTPGLKVSIRAVCMRFLVSKRKFKESLRPYDVMVIEQYSAGHLDMLSRIKSLQS  
 RIDMIVGPPPPSTPRHKKYPTKGP TAPSRESPQYSPRVQIVGRGPTITDKDRTKGPAETELPEDPSMMG  
 RLKGVKEQVLSMEKKLDFL VSIYQRMGIPPAETEAYFGAKEPEPAPPYHSPEDSRDHADKHGCIKIVR  
 STSSTGQRNYAAPPAIPPAQCPPSTSWQQSHQRHGTSPVGDHGSLVLRRLERSAGMMSCH

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001003824

**ORF Size:** 2277 bp

**OTI Disclaimer:** 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. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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:**

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\\_001003824.2](#), [NP\\_001003824.1](#)

**RefSeq Size:** 3007 bp

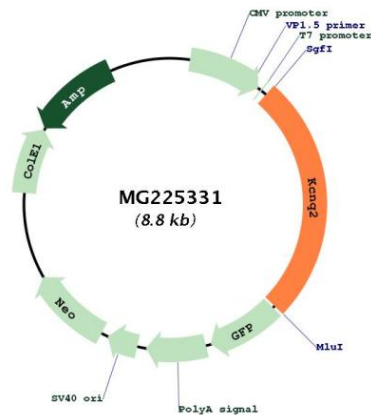
**RefSeq ORF:** 2280 bp

**Locus ID:** 16536

**Cytogenetics:** 2 103.57 cM

**Gene Summary:** 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 MG225331