

## Product datasheet for **MG225342**

### **Kcnq2 (NM\_001006676) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Kcnq2 (NM_001006676) 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:**

>MG225342 representing NM\_001006676  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGTGCAGAAGTCGCGCAACGGTGGCGTGTACCCGGCACCAGCGGGGAAAAGAAGCTCAAGTGGGCT  
 TCGTGGGGCTGGACCCCGCGCGCCGACTCCACACGCGACGGCGGCTACTCATCGCGGCTCCGAGGC  
 CCCAAGCGCGGACGCTTTTGTAGCAAGCCGCGACGGCGCGGGAGCCGGGAAGCCCCGAAGCGC  
 AACGCCTTCTACCGCAAGCTGCAGAATTTCTCTACAACGTGCTAGAGCGCCCCGCGGCTGGCGTTCA  
 TCTACCACGCCTACGTGTTCTTTTAGTCTTCTCCTGCCTTGTGCTTTCTGTGTTTTCCACCATCAAGGA  
 GTACGAGAAGAGCTCTGAGGGGGCCCTCATACCTTGGAAATCGTACTATCGTGGTATTCGGTGTGAG  
 TACTTTGTGAGGATCTGGGCTGCAGGCTGCTGTTGCCGGTATCGAGGCTGGAGGGCAGGCTCAAGTTG  
 CCAGGAAGCCGTCTGTGTGATTGATATCATGGTGTGATTGCCTCCATTGCTGTGCTGGCTGCTGGTTC  
 CCAGGGCAATGTCTTTGCCACATCTGCGCTTCGGAGCTTGGGTTCTTGCAAATCTTGGGATGATCCGT  
 ATGGACCGGAGGGGTGGCACCTGGAAGCTCTGGGATCGGTAGTCTACGCTCACAGCAAGGAGCTGGTGA  
 CTGCCTGGTACATTGGCTTCTCTGCCTCATCCTGGCCTCATTTCTGGTGTACTTGGCAGAAAAGGGTGA  
 GAATGACCACTTTGACACCTACGCAGATGCACTCTGGTGGGGTCTGATCACCTGACGACCATTTGGCTAC  
 GGGGACAAGTACCCTCAGACCTGGAACGGGAGGCTGCTGGCAGCGACCTTACCCTCATTGGTGTCTCGT  
 TCTTTGCTCTTCTGTGGCATTTTGGGATCCGGCTTGGCCCTGAAAGTCCAAGAGCAGCATCGGCAAAA  
 ACACCTTGAGAAACGGCGGAACCTGCGGCAGGTCTGATCCAGTCTGCCTGGAGATTCTATGCTACTAAC  
 CTCTCACGCCACCGACCTGCATCCACGTGGCAGTACTACGAGCGGACAGTCACTGTCCCCATGTACAGCT  
 CACAACTCAAACCTATGGGGCCTCCAGACTCATCCCACCTCTGAACCAGCTGGAGCTGAGGKACT  
 CAAGAGCAAATCTGGACTCACCTTCAGGAAGGAGCCACAGCCAGAGCCATCACCAAGGTCAGTTCCTCCT  
 GCCTCCAGCCGCCCTGGTGTGTGCTGTACCCACCTTGCCTTGTCTCTGTGTATACACCATGTGTGAT  
 GGGGCAGGGCTACCATGGGGCCCTGTGTGCTTCTATGTACAGCAAGTAACTGTGTGCTCTGGCACACC  
 CAGGGTCACTTCTCAGTTA

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>MG225342 representing NM\_001006676  
 Red=Cloning site Green=Tags(s)

MVQKSRNGGVYPGTSGEKKLKVGFVGLDPGAPDSTRDGALLIAGSEAPKRGSVLSKPRTGGAGAGKPPKR  
 NAFYRKLQNFLYNVLERPRGWAFIYHAYVFLVFSCLVLSVFSTIKEYESSEGALYILEIVTIVVFGVE  
 YFVRIWAAGCCCRYRGRGRLKFARKPFCVIDIMVLIASIAVLAAGSQGNVFATSALRSLRFLQILRMIR  
 MDRRGGTWWKLLGSVVYAHSKELVTAWYIGFLCLILASFLVYLAEKGENDFDHYADALWWGLITLTTIGY  
 GDKYPQTWNGRLLAATFTLIGVSFFALPAGILGSGFALKVQEQHRQKHFEKRRNPAAGLIQSAWRFYATN  
 LSRTDLHSTWQYYERTVTVPMYSSQTQTYGASRLIPPLNQLELLRNLKSKSGLTFRKEPQPEPSRSPRVPP  
 ASSRPGVCCTHLALLSLCIHHVSWGRATMGPCVCFYVQQVTVCPGTPRVTSQL

**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_001006676

**ORF Size:** 1419 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\\_001006676.1](#), [NP\\_001006677.1](#)

**RefSeq Size:** 1864 bp

**RefSeq ORF:** 1422 bp

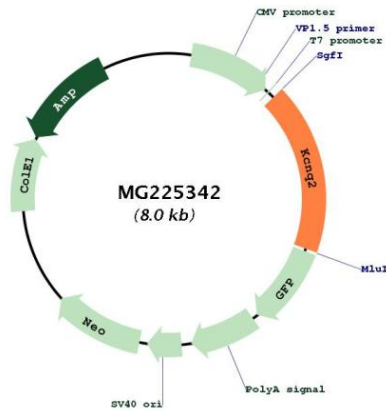
**Locus ID:** 16536

**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 MG225342