

Product datasheet for **MC205473**

Kcnq1 (NM_008434) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Kcnq1 (NM_008434) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Kcnq1
Synonyms:	AW559127; Kcna9; KVLQT1
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >BC055304
 GCTCTGCGCTGCCTTACCTCAGCTCCGAGGAGCAGCGGGGTGAGGGTCTGTCTGGCCATGGACACGG
 CCTCGTCCCCGCCAGTCTGAAAGGAAGCGCGGGTGGAGCCGCCTGCTAGGCGCCCGGGGGCAG
 CGCGGTGGTCAAGAAGTGTCCCTTCTACTGGAGCTGGCCGAAGTGGCCCTGAGGGCAGCACGGTCTAT
 GCGCCCATCGCGCAACCGGAGCCCCGGGCTCGCGCCCCATGTGACCCAGTGTGCCCCCCCCGG
 CCCCTGCAGACCTCGGCCACGTCCGCGGTGAGCCTTGACCCGCGGGTCTCCATCTACAGTGGCGCCG
 CCCGTGCTGGCGCCACCCACATCCAGGGCCGAGTCTACAACCTCCTCGAGCGCCACAGGGTTGGAAG
 TGTTTCGTGTACCACTTACCGTCTTCTCATTGTTCTGGTCTGCCTCATCTTACGTCTCTGTCCACTA
 TTGAGCAGTATGCCGCTCTGGCCACCGGACCCTCTTCTGGATGGAGATTGCCTTGTGGTGTCTTTGG
 GACAGAATATGTGGTCCGCTCTGGTCTGCAGGCTGCCGCAGCAAGTACGTGGGCATCTGGGGCCGGCTA
 CGTTTTGCCCGAAGCCATTTCCATCATTGACCTCATCGTGGTGTAGCCTCTATGGTTGTCTCTGCG
 TGGGTTCCAAAGGACAAGTGTTCGCCACATCAGCTATCAGGGGTATCCGCTTCTTACAGTCTGCGGAT
 GCTGCATGTGATCGCCAGGGGGTACCTGGAGGCTCTGGGCTGTAGTCTTATTACCCGCCAGGAG
 CTGATCACCACCCTGTACATTGGCTTTCTGGGCTTATCTTCTCCTCTACTTTGTCTACTTGGCTGAGA
 AAGATGCGGTGAACGAGTCCGGCCGATCGAGTTTGGCAGCTACGCAGATGCTCTGTGGTGGGGGTGGT
 CACAGTCACTACCATTTGGCTACGGGGATAAGGTACCTCAGACGTGGGTTGGGAAGACCATCGCCTCTGT
 TTCTCTGTCTTCCCATATCCTTCTTGGACTCCAGCGGGGATACTTGGCTCTGGGTTCCGCGTGAAGG
 TCCAGCAGAAGCAGAGGCAGAAGCACTTCAACCGCAGATCCCAGCTGCAGCCTCACTCATCCAGACTGC
 ATGGAGGTGCTATGCCGCTGAGAACCCTGACTCAGCCACTTGAAGATCTATGTCCGGAAGCCTGCTCGG
 AGTCACACGCTTCTGTCCCCAGCCCCAAACCTAAAAAGTCTGTCATGGTAAAGAAGAAGAAGTTCAAGC
 TGGATAAGGATAATGGGATGAGTCTGGAGAGAAGATGTTCAATGTTCTCACATCACTTATGATCCCC
 AGAGGATAGGAGGCCAGACCATTTCTCCATTGATGGCTATGACAGCTCAGTAAGGAAGAGCCCTACACTG
 CTGGAAGTAAGCACACCCCATTTCTTGAACAACAGCTTTGACAGAGGACCTGGACCTGGAAGGGGAGA
 CACTGCTGACCCCATCACCCATGTGTACAGCTGCGGGATCACCATCGGGCCACCATCAAGGTCAACAG
 GCGCATGCAGTACTTTGTAGCCAAGAAGAAATTCCAGCAAGCACGGAAGCCCTACGACGTGCGAGATGTC
 ATCGAGCAGTACTCCAGGGCCACTGAACCTTATGGTGCATTAAGAAGTACAGAGAAGGCTGGATC
 AGTCCATTGGGAAGCCATCTTTGTTTATCCCCATCTCAGAAAAGAGCAAAGACCGTGGCAGTAACCCAT
 CGGTGCCCGTCTGAACAGGGTGAAGACAAGGTGACACAAGTGGACCAGAGACTGGTGTATCACAGAC
 ATGCTCCACCAGTGTGTCATGCAACAAGGTGGTCCAACCTGCAACAGCAGGTACAAGTTGTAGCCA
 GCAATGAAGTGGTCCATCAACCCTGAGCTTCTCCTACCCAGCAACAGCCTGCCACCTACGAACAAGT
 GACTGTGCCCCAGACAGGCCCTGATGAGGGTCTTGAAGGAGCTCAGAAGGGAGTCCAGGGTAAACCC
 CCACAGGTCTGCCCCACCTCCCTCTCAACAGGGGCACACCCACCTGGTCTCACCCCTTGAAGGCCTGA
 TATGACAGCCTAGCTCCCTAAGGCCCCGAACCCATGGGCCAAGCCACTGGCCTGGATCTGGATATCACC
 AACACCCCTCTGCCCAGCCAGTGGGAAGTGAAGTGTCTGGGCATGGGGTTCCTCTCAGGCCCTATCA
 AGATGTTGATGCTCTTCTGATGGCTGGAACATAGGGATGGGGAGTATATGTGTAAGCAGGATGCAG
 CTCAGGCAGAGGGAAGCCATCCAGGTATGCCAAGTGGCTTCTAAAGGGAAACAGGAAGAGTCTGGGGT
 TTCCACCCCTCAGCCCTGAATCCAGAGACCATCAGGGAACGTGCAGGGCAAGACAGGCCCGGCCACACTA
 ACTGCAGGCTGTAGCCCAGTGGGAGCTCAGCAGGCTAGAGCCTGACTCCTTATTCTCTAGTGTGTTGA
 CCACAACAAGATACTAGCGGGATTTTACACCCCCCAAAGGATATCCCAAGCAAGGGATTGTCCACTG
 TCCACCCTAGCCAGGTATGGACTGACAACCTTCTCCCTAAAGTAAAAGCAGGGCCCTCAAGCCCTATGA
 GCCCCACATGTGACGCTGCCTCCTTCTTGTGGTGCAGAGGTGCTGGACCAATGCTCAGACTCCAGCCTC
 TTTACGCCACATTGAAGTTAGGGGCATCACCGATTCTTCCAGGATTGGTTCTTGGGCTTGGGCACCAC
 GCCTCACAGAAATCAAGATAATTTCTGGTGATTACAGACTCTTGTGTTTTAATGAATTTCTGATGATGATC
 TTGATTGAGAGACTTTTCCAAATAAAGTTGGGACGTCCAGGTTAAAAAAAAAAAAAAAAAAAAAAAAA

Restriction Sites: RsrII-NotI
ACCN: NM_008434
Insert Size: 2007 bp

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).
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:	BC055304 , AAH55304
RefSeq Size:	3007 bp
RefSeq ORF:	2007 bp
Locus ID:	16535
UniProt ID:	P97414
Cytogenetics:	7 88.12 cM

Gene Summary:

Potassium channel that plays an important role in a number of tissues, including heart, inner ear, stomach and colon (By similarity) (PubMed:16314573, PubMed:11120752, PubMed:15004216). Associates with KCNE beta subunits that modulates current kinetics (By similarity) (PubMed:17597584, PubMed:15004216). Induces a voltage-dependent by rapidly activating and slowly deactivating potassium-selective outward current (By similarity) (PubMed:8900282). Promotes also a delayed voltage activated potassium current showing outward rectification characteristic (By similarity). During beta-adrenergic receptor stimulation participates in cardiac repolarization by associating with KCNE1 to form the I(Ks) cardiac potassium current that increases the amplitude and slows down the activation kinetics of outward potassium current I(Ks) (By similarity) (PubMed:15004216, PubMed:17597584). Muscarinic agonist oxotremorine-M strongly suppresses KCNQ1/KCNE1 current (By similarity). When associated with KCNE3, forms the potassium channel that is important for cyclic AMP-stimulated intestinal secretion of chloride ions (By similarity). This interaction with KCNE3 is reduced by 17beta-estradiol, resulting in the reduction of currents (By similarity). During conditions of increased substrate load, maintains the driving force for proximal tubular and intestinal sodium ions absorption, gastric acid secretion, and cAMP-induced jejunal chloride ions secretion (PubMed:16314573). Allows the provision of potassium ions to the luminal membrane of the secretory canaliculus in the resting state as well as during stimulated acid secretion (PubMed:19491250). When associated with KCNE2, forms an heterooligomer complex leading to currents with an apparently instantaneous activation, a rapid deactivation process and a linear current-voltage relationship and decreases the amplitude of the outward current (By similarity). When associated with KCNE4, inhibits voltage-gated potassium channel activity (By similarity). When associated with KCNE5, this complex only conducts current upon strong and continued depolarization (By similarity). Also forms a heterotetramer with KCNQ5; has a voltage-gated potassium channel activity (By similarity). Binds with phosphatidylinositol 4,5-bisphosphate (By similarity).[UniProtKB/Swiss-Prot Function]