

Product datasheet for **MG226697**

Kcnc3 (NM_008422) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Kcnc3 (NM_008422) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Kcnc3
Synonyms:	Kcr2-3; KShIIID; Kv3.3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG226697 representing NM_008422
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCTCAGTTCAGTGTGCGTCTGGTCGTTCCGCGGGCCAGGGACCGCAAGCAGCAGCCTCAGCCGG
 TGCCAACGCCGACGCCGCTGAGTCCTACCGCGCCTCTGCCGCGCCGAGCAGCAGCAGTGTCTCA
 GCCCGGCACTGCCGCTCCCGCGGGTCCCGCTTTCCTGCGGGCTGGGGGCCGGCGTGCCGAGCCA
 TGCCCCGGGTGCCGGCGGTGGCCATGGGGCGGCACGGCGGGCGGGCGGACAGCGGTAAAGATCGTGA
 TCAACGTGGGCGGCTGCCCATGAGACGTACCGCTCCACGTTGCGCACCTGCCAGGGACCAGACTGGC
 CGGGCTGACCGAGCCGAGGGCGGCGCGCTTTGACTACGACCCGGGCACGGACGAGTCTTCTTCGAC
 CGTCACCCGGGCTCTTCGCTACGTGCTCAACTACTACCGCACCGCAAAGTGCCTGCCCGGCCGACG
 TGTGCGGGCCGCTCTTCGAGGAGGACTGGGCTTCTGGGCATAGACGAGACGGACGTGGAGGCCTGCTG
 CTGGATGACCTATCGCCAGCACCGTACGCTGAGGAGGACTGGACTCTTTCGAGCCCCGACTCCTCG
 GCCAACGCCAACGCCAACGCCGAGGCGGCACGATGCGGGACTGGACGACGAGGCGGGCCGAGGAGGCG
 GCGGCCTGGACGGGGCAGGCGGGGAGCTCAAGCGTCTGTGTTTTCAAGACGCGGGCGGAGGTGCCGAGG
 ACCTGCCGGGGCGGGCGGGCGGGCGGCACCTGGTGGCGGCGCTGGCAGCCCCGTGTGTGGCGCCTT
 TTTGAGGACCCCTACTCGTCGCGGGTCCAGGTATGTGGCCTTCGCTCCCTATTTTATCCTCATCT
 CCATCACCACCTTCTGCCTGGAGACACAGAGGGCTTCATCCACATCAGCAACAAGACGGTGACGAGGC
 CTCCCCAATCCCTGGGGTCCCCCGAGAATATCACCAACGTGGAGTGGAGACGGAACCCCTTCTTGACC
 TACGTGGAAGCGTGTGTGGTCTGGTTCACCTTTGAGTTTCTCATGCGGGTACCTTCTGCCCCAGATA
 AGGTGGAGTTTCTCAAAGCAGCCTGAACATCATCGACTGCGTGGCCATCTTGCCCTTCTACTTGGAGT
 GGGCCTGTGAGGTCTCAGCTCAAAGCTGCAAGGACGTGCTGGGCTTCTGCGTGTCTGCGCTTCGTTG
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 CTAATATGCCGAACGCATCGGGGCTGATCCTGACGACATCCTGGGCTCCAACCACACCTACTTCAAGAAC
 ATCCCCATCGGCTTCTGGTGGGCTGTGGTACCATGACGACACTGGGCTATGGAGACATGTATCCCAAGA
 CGTGGTCTGGGATGCTGGTGGGCACTGTGTCCCTGGCTGGTGTGCTGACCATTGCCATGCCCGTGCC
 TGTCAATTGTCAACAACCTCGGCATGTACTTACTGGCTATGGCCAAGCAGAAATGCCAAGAAGAAA
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 CCCCACACACCCACACGGCAGCGGTGGCATAAGCCACCGCGCCATCACCCCTCCTTCCATGGG
 GGTGAATGTGGCCGGGGCTACCCACCTGGACCCACACACCCCGGGTGTCAAGGGTGGTGTGGG
 GGCTGGGAATCATGGGATTGCCTCCTCTGCCAGCCCCTGGTGGAGCCCTGCCATTGGCTCAAGAAGAGG
 TGATTGAAACCAACAGGGCAGACCCCGTCCCAATGGAGACCCTGCAGCAGCCGACTGGCCATGAGGA
 CTGCCCTGCCATCGACCAGCCAGCATGTCTCCAGAAGACAAGAGCCCAATCACTCCCGAAGCCGGGT
 CGCTACAGCCGGGACCGAGCTTGCTTCTTGTACAGACTATGCCCTTCCCCTGATGGTCCATCCGAA
 AAGGTTACGAGAAGTCCCGCAGCCTGAGCAGATTGTGGGCTGAGCGGGGTGTCCCTGCGCCTCGCGCC
 CCTCGCACCCCCCTGGCTCTCCCGGGCCACGCGCCGAGCTCCCCGACCCTGCCCTCCATCCTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG226697 representing NM_008422
 Red=Cloning site Green=Tags(s)

MLSSVCVWSFRGRQGTGKQQPQPVPPTQPPESSPPPLPPPQQQCSQPCTAASPAGAPLSCGPGGRRRAEP
 CPGLPAVAMGRHGGGGDSGKIVINVGGVRHETYRSTLRTPGTRLAGL TEPEAAARFDYDPGTDEFFFD
 RHPGVFAYVLNYYRTGKLHCPADVCGPLFEEELGFWGIDETDVEACCWMTYRQHRDAEEALDSFEAPDSS
 ANANANAGGAHDAGLDDEAGAGGGGLDGAGGELKRLCFQDAGGGAGGPAGGAGGAGTWWRRWQPRVWAL
 FEDPYSSRAARYVAFASLFFILISITTFCLETHEGFIHISNKTVTQASPIPGAPPENITNVEVETEPFLT
 YVEGVCVWVWTFEFLMRVTFCDPKVEFLKSSLNIIDCVAILPFYLEVGLSGLSSKAAKVDLGLFRVRFV
 RILRIFKLRHFVGLRVLGHTLRASTNEFLLLIIFLALGVLIFATMIYYAERIGADPDDILGSNHTYFKN
 IPIGFWWAVVTMTTLGYDMYPKTWSGMLVGCALAGVLTAMPVPIVNNFGMYSLAMAKQKLPKCK
 NKHIPRPPQPGSPNYCKPDP PPPPPPHHGGSGISPPPPITPPSMGVNAGAYPPGPHTHPGLLRGGAG
 GLGIMGLPPLPAPGEPCLAQEEVIETNRADPRPNGDPAALAHEDCPAIDQPAMSPEDKSPITPGRSG
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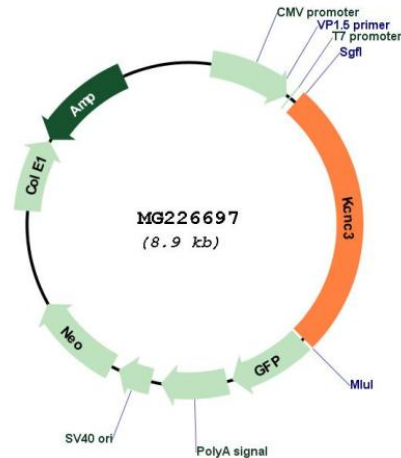
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:


ACCN: NM_008422

ORF Size: 2307 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_008422.2](#), [NP_032448.2](#)

RefSeq Size: 5072 bp

RefSeq ORF: 2310 bp

Locus ID: 16504

UniProt ID: [Q63959](#)

Cytogenetics: 7 28.85 cM

Gene Summary: Voltage-gated potassium channel that plays an important role in the rapid repolarization of fast-firing brain neurons. The channel opens in response to the voltage difference across the membrane, forming a potassium-selective channel through which potassium ions pass in accordance with their electrochemical gradient. The channel displays rapid activation and inactivation kinetics (PubMed:18539595, PubMed:26997484, PubMed:24218544). It plays a role in the regulation of the frequency, shape and duration of action potentials in Purkinje cells (PubMed:15217387, PubMed:18448641, PubMed:24218544). Required for normal survival of cerebellar neurons, probably via its role in regulating the duration and frequency of action potentials that in turn regulate the activity of voltage-gated Ca(2+) channels and cellular Ca(2+) homeostasis (PubMed:24218544). Required for normal motor function (PubMed:16923152, PubMed:18448641). Plays a role in the reorganization of the cortical actin cytoskeleton and the formation of actin veil structures in neuronal growth cones via its interaction with HAX1 and the Arp2/3 complex (PubMed:26997484).[UniProtKB/Swiss-Prot Function]