

Product datasheet for **RC218739**

KCNQ3 (NM_004519) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KCNQ3 (NM_004519) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	KCNQ3
Synonyms:	BFNC2; EBN2; KV7.3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC218739 representing NM_004519
 Red=Cloning site Blue=ORF Green=Tags(s)

CTATAGGGCGGCCGGAATTCGTCTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGGGCTCAAGCGCGCAGGGCGGGGGCGGCTGGCGGGCGGCGACGGGGCGGGCGGAGGCGGCG
 GGGCGGCTAACCAGCCGAGGGGACGCGGCGGGCGGCGGCGAGGAGCGAAAGTGGGGCTGGCGCC
 CGGCGACGTGGAGCAAGTACCTTGGCGCTCGGGGCGGAGCCGACAAAGACGGGACCCTGCTGCTGGAG
 GGCGGGCGGCGGACGAGGGGACGCGGAGGACCCCGAGGGCATCGGGCTCCTGGCCAAGACCCCGCTGA
 GCCGCCAGTCAAGAGAAACAACGCCAAGTACCGGCGCATCCAACTTTGATCTACGACGCCCTGGAGAG
 ACCGCGGGGCTGGGCGTGTCTTACCACGCGTTGGTGTCTCTGATTGTCTGGGGTGCTTGATTCTGGCT
 GTCCTGACCACATTCAAGGAGTATGAGACTGTCTCGGAGACTGGCTTCTGTTACTGGAGACATTTGCTA
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 TCTGCGCATGCTGCGGATGGACCGGAGAGGTGGCACCTGGAAGCTTCTGGGCTCAGCCATCTGTGCCCA
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 TATGGACCCCTTCAATAAGCCATT

**CTCGAGCAGAAACTCATCTCTGAAGAGGATCTGGCAGCAATGATATCCTGGATTACAAGGATGACGACG
 ATAAGGTTTAA**

Protein Sequence: >RC218739 representing NM_004519
 Red=Cloning site Green=Tags(s)

MGLKARRAAGAAGGGDGGGGGGAANPAGGDAAGDEERKVG LAPGDVEQVTLALGAGADKDGTLLLE
 GGRDEGQRRT PQIGLLAKTPLSRPVKRNNAYRRIQTLIYDALERPRGWALLYHALVFLIVLGLCLILA
 VLTTFFKEYETVSGDWLLLETF AIFIFGAEFALRIWAAGCCCRYKGWRGR LKFARKPLCMLDIFVLIASV
 PVVAVGNQGNVLATSLRSLRFLQILRMLRMDRRGGTWKLLGSAICAHSKELITAWYIGFLTILSSFLVY
 LVEKDVPEVDAQGEEMKEEFETYADALWWGLITLATIGYD KTPKTWEGRLIAATFSLIGVSFFALPAGI
 LG SGLALKVQEQHRQKHFEKRRKPA AELIQAAWRYATNPNRIDLVATWRFYESVVSFFFRKEQLEAAS
 SQKLG LLD R VRLSNPRG SNTKGKLF TPLNVD AIEE SPSKEPKVGLN NKERFRTAFRMKAYAFWQSS EDA
 GTGDPMAEDRGYND FPIEDMIPTL KAAIRAVRILQFRLYK KFKETLRPYDVKD VIEQYSAGHLDMLSR
 IKYLQTRIDMIFTPGPPSTPKH KKSQKGS AFTFPSQQSPRNEPYVARPSTSEIEDQSM MGKFKV KVERQVQ
 DMGK KLD FLDVDMHQHMERLQVQVTEYYPTKGTSSPAEAEKKEDNRYSDLKTIIICNYSETGPP EPPYSFH
 QVTIDKVPYGF FAHDPVNLPRGGPSSGKVQATPPSSATTYVERPTVLPIL TLLDSRVS CHSQADLQGPY
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 DTDPFTPSGSMPLSSTGDG ISDSVWTPSNKPI

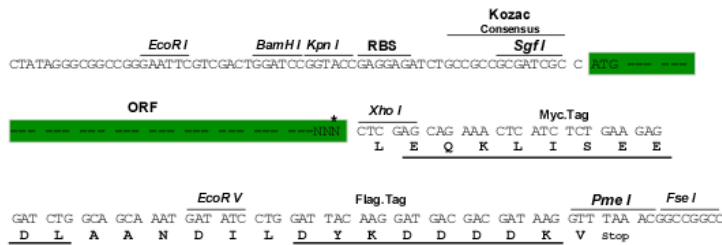
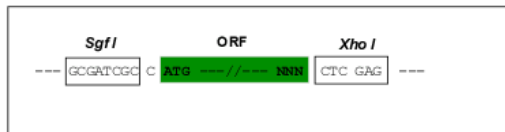
LEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg2697_h09.zip

Restriction Sites: SgfI-XhoI

Cloning Scheme:

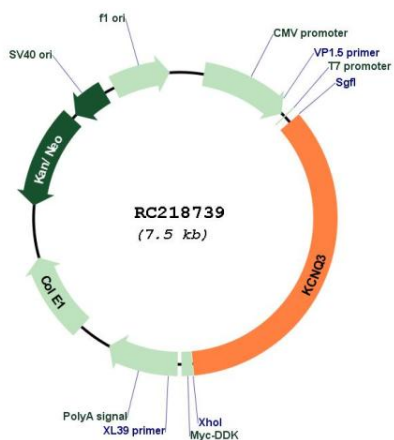
Cloning sites used for ORF Shuttling:



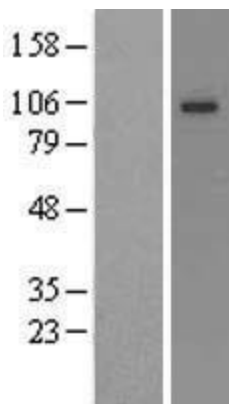
* The last codon before the Stop codon of the ORF

ACCN:	NM_004519
ORF Size:	2616 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:	<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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_004519.4
RefSeq Size:	3097 bp
RefSeq ORF:	2619 bp
Locus ID:	3786
UniProt ID:	O43525
Cytogenetics:	8q24.22
Protein Families:	Druggable Genome, Ion Channels: Potassium, Transmembrane
MW:	96.6 kDa
Gene Summary:	This gene encodes a protein that functions in the regulation of neuronal excitability. The encoded protein forms an M-channel by associating with the products of the related KCNQ2 or KCNQ5 genes, which both encode integral membrane proteins. M-channel currents are inhibited by M1 muscarinic acetylcholine receptors and are activated by retigabine, a novel anti-convulsant drug. Defects in this gene are a cause of benign familial neonatal convulsions type 2 (BFNC2), also known as epilepsy, benign neonatal type 2 (EBN2). Alternative splicing of this gene results in multiple transcript variants. [provided by RefSeq, May 2014]

Product images:



Circular map for RC218739



Western blot validation of overexpression lysate (Cat# [LY417937]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC218739 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).