

Product datasheet for **RC224667**

Kv2.1 (KCNB1) (NM_004975) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Kv2.1 (KCNB1) (NM_004975) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Kv2.1
Synonyms:	DEE26; DRK1; Kv2.1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide
Sequence:**

>RC224667 representing NM_004975
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCCGGCGGCATGACGAAGCATGGCTCCCGCTCCACCAGCTCGCTGCCGCCGAGCCATGGAGATCG
 TGCAGCAAGGCGTCTCGCGGGTCCGCCTCAACGTCGGGGGCTGGCGCAGGAGTACTCTGGCG
 TACCCTGGACCGCTGCCCGCACGCGGCTGGCAAGCTCCGCGACTGCAACACGACGACTCGCTGCTC
 GAGGTGTGCGATGACTACAGCCTCGACGACAACGAGTACTTCTTTGACCGCCACCCGGGCGCCTTCACT
 CCATCCTCAACTTCTACCGACTGGGCGACTGCACATGATGGAGGAGATGTGCGCGCTCAGTTCAGCCA
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 CTGCTGAGCTACAGAGCCTCGATGAGTTCCGGCCAGTCCACAGACAACCCCAAGCTGGCCACGTGGAGG
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 CTTCAAGGGCCCACTCAATGCCATTGACTTGTGGCCATTCTGCCATACTATGTCACCATTTTCTCACC
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 TTTGCTGAGAAGGATGAGGACGACCAAGTTCAAAAGCATCCCAGCCTTTTCTGGTGGCCACCATCA
 CCATGACTACTGTTGGGTATGGAGACATCTACCCCAAGACTCTCCTGGGAAAAATGTTGGGGACTCTG
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 AAGCCAGATCGTCTTCTAGTCTCAGCACCTGAACGTTTACGAGTTGGAAGACATGTACAATAAGATGGC
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 GTATGTCAAGCATTGATAGTTTTCATTAGCTGTGCCACAGACTTCCCTGAGGCCACCAGATTCTCCCACAG
 CCCTTTGACATCACTCCCAGCAAGACTGGGGGACGACAGCCCCAGAAGTGGGCTGGCGGGGAGCTCTG
 GGTGCCAGTGGTGGTAGGTTTGTGGAGGCCAACCCAGCCCTGATGCCAGCCAGCACTCTAGTTTCTTCA
 TCGAGAGCCCCAAGGTTCCATGAAAAATAACAACCTTTGAAGCTCCGAGCACTTAAAGTCAACTTCAT
 GGAGGGTGACCCAGTCCACTCCTCCCCGTTCTAGGGATGTACCATGACCCTCTCAGGAACCGGGGAGT
 GCTGCGGCTGTGTCGCTGGACTGGAGTGTGCCACGCTTTGGACAAGGCTGTGCTGAGCCAGAGTCTC
 CCATCTACACCACAGCAAGTGTAAAGACACCCCGGCTCTCTGAGAAACACACAGCAATAGCGTTCAA
 TTTTGGGCGGGTGTCCACCAGTACATTGACGACAGACAGATGATGAGGGACAGCTGCTACAGTGTG
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 AAAACCACTTTGAAAGCTCCCCTTACCACCTCCCCTAAGTTCTTAAGGCAAGTGTATTTACTCCAC
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 GTCCTGTGTTGCCAGGGGGAGGAGCCATGGAAGCACACGAGATCAGAGCATC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC224667 representing NM_004975
 Red=Cloning site Green=Tags(s)

MPAGMTKHGSRSTSSLPPEPMEIVRSKACSRVRNLNVGGLAHEVLWRTLDRLPRTLGLKLRDCNTHDSLLEVCDDYSLDDNEYFFDRHPGAFTSILNFYRTGRLHMMEECALSFQELDYWGIDEIYLESCCQARYHQKKEQMNEELKREAEATLREREGEEFDNTCCAERKRLWDLLEKPNSSVAAKILAIISIMFIVLSTIALSLNTPLELQSLDEFQGSTDNPQLAHVEAVCIAWFTMEYLLRFLSSPKKWKFFKGPLNAIDLAILPYVYVIFLFTESNKSVLQFQNVRRVQIFRIMRILRILKLARHSTGLQSLGFTLRRSYNELGLLILFLAMGIMIFSSLVFFAEKDEDDTKFKSIPASFWWATITMTTVGYGDIYPKTLLGKIVGGLCCIAGVLVIALPIPIVNNFSEFYKEQKRQEKAIKRREALERAKRNGSIVSMNMKDAFARSIEMMDIVVEKNGENMGKKDKVQDNHLSPNKWKWTKRTLSETSSSKSFETKEQGSPEKARSSSPQHLNVQQLQEDMYNKMAKTQSQPILNNTKESAAQSKPKEELMESIPSPVAPLPTRTTEGVIDMRSMSIDSFISCATDFPEATRFSSPLTSLPSKTGGSTAPEVWGRGALGASGGRFVEANPSPDASQHSFFIESPKSSMKTNNPLKLRALKVNFMEGDPSPLLPVLGMYHDPLNRGSAAAVAGLECATLLDKAVLSPESIYTTASAKTPPRSPEKHTAIAFNFEAGVHQYIDADTDDEGQLLYSVDSPPKSLPGSTSPKFSTGTRSEKNHFESSPLPTSPKFLRQNCIYSTEALTGKGPSGQEKCKLENHISPDVRVLPGGGAHGSTRDQSI

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6205_d08.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

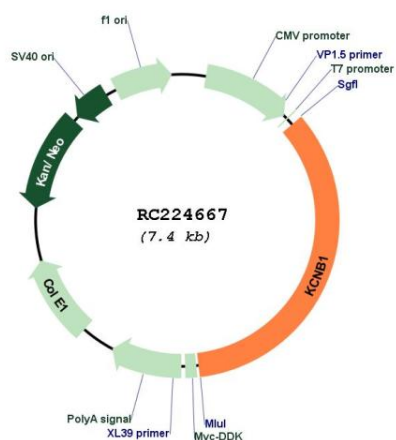
Cloning sites used for ORF Shuttling:



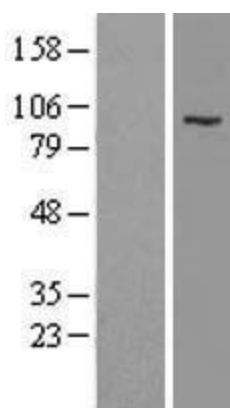
* The last codon before the Stop codon of the ORF

ACCN:	NM_004975
ORF Size:	2574 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.
RefSeq:	NM_004975.4
RefSeq Size:	3756 bp
RefSeq ORF:	2577 bp
Locus ID:	3745
UniProt ID:	Q14721
Cytogenetics:	20q13.13
Domains:	BTB, K_tetra, Kv2channel, ion_trans
Protein Families:	Druggable Genome, Ion Channels: Potassium, Transmembrane
Protein Pathways:	Taste transduction
MW:	95.7 kDa
Gene Summary:	Voltage-gated potassium (Kv) channels represent the most complex class of voltage-gated ion channels from both functional and structural standpoints. Their diverse functions include regulating neurotransmitter release, heart rate, insulin secretion, neuronal excitability, epithelial electrolyte transport, smooth muscle contraction, and cell volume. Four sequence-related potassium channel genes - shaker, shaw, shab, and shal - have been identified in Drosophila, and each has been shown to have human homolog(s). This gene encodes a member of the potassium channel, voltage-gated, shab-related subfamily. This member is a delayed rectifier potassium channel and its activity is modulated by some other family members. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC224667



Western blot validation of overexpression lysate (Cat# [LY401551]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC224667 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).