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Product datasheet for RC215266

Kv4.2 (KCND2) (NM_012281) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	Myc-DDK
Symbol:	Kv4.2
Synonyms:	KV4.2; RK5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

View online »

ORF Nucleotide Sequence:

>RC215266 representing NM_012281
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCGGCGGGGGTGGCAGCGTGGCTGCCTTTTGCAAGGGCAGCGGCTATCGGGTGGATGCCTGTGGCCT
CGGGGCCTATGCCGGCTCCCCCGAGGCAGGAGAGGAAAAGGACCCAAGATGCTCTCATTGTGCTGAATGT
GAGTGGCACCCGCTTCCAGACGTGGCAGGACACCCTGGAACGTTACCCAGACACTCTACTGGGCAGTTCT
GAGAGGGACTTTTTCTACCACCCAGAAACTCAGCAGTATTTCTTTGACCGTGACCCAGACATCTTCCGCC
ACATCCTGAATTTCTACCGCACTGGGAAGCTCCACTATCCTCGCCACGAGTGCATCTCTGCTTACGATGA
AGAACTGGCCTTCTTTGGCCTCATCCCGGAAATCATCGGCGACTGCTGTTATGAGGAGTACAAGGATCGC
AGGCGAGAGAACGCCGAGCGCCTGCAGGACGACGCGGATACCGACACCGCTGGGGAGAGCGCCTTGCCCA
CCATGACTGCAAGGCAGAGGGTCTGGAGGGCCTTCGAGAACCCCCACACCAGCACGATGGCCCTGGTGTT
CTACTATGTCACGGGGTTTTTCATTGCCGTCTCTGTCATCGCGAATGTGGTGGAAACAGTGCCGTGCGGA
TCAAGCCCAGGTCACATTAAAGAACTGCCCTGTGGAGAGCGGTATGCTGTGGCCTTCTTCTGCTTGGACA
CGGCCTGCGTCATGATCTTCACAGTTGAGTATTTGCTTCGCCTGGCTGCAGCGCCTAGTCGTTACCGTTT
TGTGCGTAGTGTCATGAGTATCATCGACGTGGTGGCCATCCTGCCTTATTACATTGGGCTGGTGATGACA
GACAATGAGGACGTCAGCGGAGCCTTTGTCACACTCCGAGTCTTCCGGGTCTTCAGGATCTTTAAGTTTT
CCCGCCACTCTCAAGGCCTGCGCATCCTGGGGTACACACTGAAGAGTTGTGCCTCAGAATTGGGCTTCTT
GCTTTTCTCGCTCACCATGGCTATCATCATCTTCGCTACAGTTATGTTCTACGCAGAGAAGGGGTCTTCG
GCTAGCAAGTTCACCAGCATCCCTGCAGCCTTCTGGTATACCATCGTCACCATGACAACACTAGGGTATG
GTGACATGGTGCCAAAAACCATAGCAGGGAAGATTTTTGGTTCTATCTGTTCGCTGAGTGGGGTCTTGGT
CATTGCTCTACCTGTTCCGGTGATTGTATCCAACTTCAGTCGCATCTACCACCAGAATCAACGAGCAGAC
AAACGAAGGGCACAAAAGAAAGCTAGACTGGCCAGGATCCGGGCAGCCAAAAGCGGAAGCGCAAATGCTT
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TAGCAAATCCGGCTCCAGCTTTGAAACCCAGCACCACCACCTGCTTCACTGCCTGGAAAAAACCACGAAT
CACGAGTTTGTGGACGAACAAGTCTTTGAAGAAAGCTGCATGGAAGTTGCAACTGTTAATCGTCCTTCAA
GTCACAGTCCTTCACTGTCTTCACAACAAGGAGTCACCAGCACCTGCTGTTCACGACGACACAAAAAAAC
TTTTCGCATCCCAAATGCCAATGTATCAGGAAGCCATCAAGGTAGTATACAAGAACTCAGCACGATTCAG
ATCAGATGTGTGGAGAGAACACCTCTGTCTAACAGCCGATCCAGTTTAAATGCCAAAATGGAAGAGTGTG
TTAAACTAAACTGTGAACAACCTTATGTGACTACAGCAATAATAAGCATCCCAACACCTCCAGTAACCAC
ACCAGAAGGAGACGATAGGCCAGAATCCCCTGAGTACTCAGGAGGAAATATTGTCAGAGTTTCTGCTTTG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC215266 representing NM_012281
Red=Cloning site Green=Tags(s)

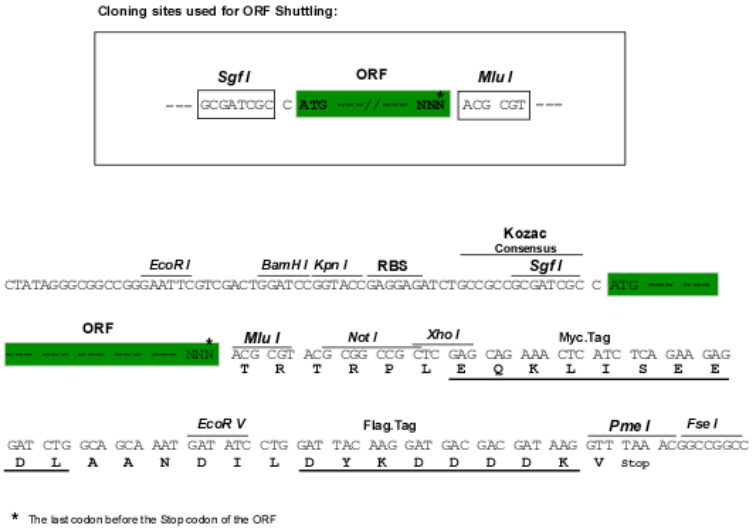
MAAGVAAWLPFARAAAIGWMPVASGPMPAPPRQERKRTQDALIVLNVSGTRFQTWQDTLERYPDTLLGSS
ERDFFYHPETQQYFFDRDPDIFRHILNFYRTGKLHYPRHECISAYDEELAFFGLIPEIIGDCCYEEYKDR
RRENAERLQDDADTDTAGESALPTMTARQRVWRAFENPHTSTMALVFYYVTGFFIAVSVIANVVETVPCG
SSPGHIKELPCGERYAVAFFCLDTACVMIFTVEYLLRLAAAPSRYRFVRSVMSIIDVVAILPYYIGLVMT
DNEDVSGAFVTLRVFRVFRIFKFSRHSQGLRILGYTLKSCASELGFLLFSLTMAIIIFATVMFYAEKGSS
ASKFTSIPAAFWYTIVTMTTLGYGDMVPKTIAGKIFGSICSLSGVLVIALPVPVIVSNFSRIYHQNQRAD
KRRAQKKARLARIRAAKSGSANAYMQSKRNGLLSNQLQSSEDEQAFVSKSGSSFETQHHHLLHCLEKTTN
HEFVDEQVFEESCMEVATVNRPSSHSPSLSSQQGVTSTCCSRRHKKTFRIPNANVSGSHQGSIQELSTIQ
IRCVERTPLSNSRSSLNAKMEECVKLNCEQPYVTTAIISIPTPPVTTPEGDDRPESPEYSGGNIVRVSAL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg4250_f03.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_012281

ORF Size: 1890 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

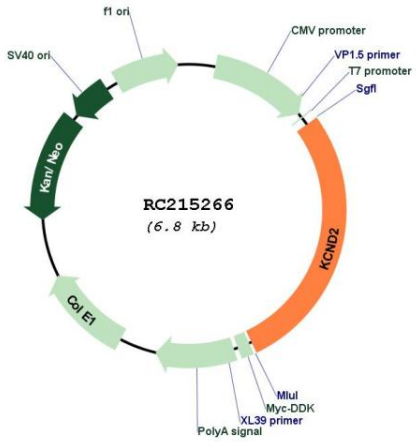
RefSeq: NM_012281.3

RefSeq Size: 5333 bp

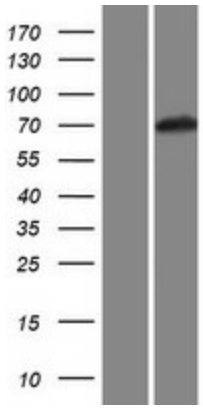
RefSeq ORF: 1893 bp

Locus ID:	3751
UniProt ID:	Q9NZV8
Cytogenetics:	7q31.31
Domains:	BTB, K_tetra, ion_trans
Protein Families:	Druggable Genome, Ion Channels: Potassium, Transmembrane
MW:	70.4 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, shal-related subfamily, members of which form voltage-activated A-type potassium ion channels and are prominent in the repolarization phase of the action potential. This member mediates a rapidly inactivating, A-type outward potassium current which is not under the control of the N terminus as it is in Shaker channels. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC215266



Western blot validation of overexpression lysate (Cat# [LY415849]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC215266 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).