OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RC207223

KCNA3 (NM_002232) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KCNA3 (NM_002232) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	KCNA3
Synonyms:	HGK5; HLK3; HPCN3; HUKIII; KV1.3; MK3; PCN3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

View online »

ORF Nucleotide Sequence:

>RC207223 representing NM_002232
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGACGAGCGCCTCAGCCTTCTGCGCTCGCCGCCGCCGCCCTCAGCCCGCCACCGCGCCCACCCTCCTC
AGCGCCCAGCGAGCAGCGGCGGTGCCCACACGCTGGTGAACCACGGCTACGCGGAGCCCGCCGCAGGCCG
CGAGCTGCCGCCCGACATGACCGTGGTGCCCGGGGACCACCTGCTGGAGCCGGAGGTGGCCGATGGTGGA
GGGGCCCCGCCTCAAGGCGGCTGTGGCGGCGGCGGCTGCGACCGCTACGAGCCGCTGCCGCCCTCACTGC
CGGCCGCGGGCGAGCAGGACTGCTGCGGGGAGCGCGTGGTCATCAACATCTCCGGGCTGCGCTTCGAGAC
GCAGCTGAAGACCCTTTGCCAGTTCCCCGAGACGCTGCTGGGCGACCCCAAGCGGCGCATGAGGTACTTC
GACCCGCTCCGCAACGAGTACTTCTTCGACCGCAACCGGCCCAGCTTCGACGCCATCCTCTACTACTATC
AGTCCGGGGGCCGCATCCGCCGGCCGGTCAACGTGCCCATCGACATTTTCTCCGAGGAGATCCGCTTCTA
CCAGCTGGGCGAGGAGGCCATGGAGAAGTTCCGCGAGGACGAGGGCTTCCTGCGGGAGGAGGAGCGGCCC
TTGCCCCGCCGCGACTTCCAGCGCCAGGTGTGGCTGCTCTTCGAGTACCCCGAGAGCTCCGGGCCGGCCC
GGGGCATCGCCATCGTGTCCGTGCTGGTCATCCTCATCTCCATTGTCATCTTCTGCCTGGAGACGCTGCC
GGAGTTCCGCGACGAGAAGGACTACCCCGCCTCGACGTCGCAGGACTCATTCGAAGCAGCCGGCAACAGC
ACGTCGGGGTCCCGCGCAGGAGCCTCCAGCTTCTCCGATCCCTTCTTCGTGGTGGAGACGCTGTGCATCA
TCTGGTTCTCCTTCGAACTGCTGGTGCGGTTCTTCGCTTGTCCTAGCAAAGCCACCTTCTCGCGAAACAT
CATGAACCTGATCGACATTGTGGCCATCATTCCTTATTTTATCACTCTGGGTACAGAGCTGGCCGAACGA
CAGGGCAATGGACAGCAGGCCATGTCTCTGGCCATCCTGAGGGTCATCCGCCTGGTAAGGGTCTTCCGCA
TCTTCAAGCTGTCGCGCCACTCCAAGGGGCTGCAGATCCTCGGGCAAACGCTGAAGGCGTCCATGCGGGA
GCTGGGATTGCTCATCTTCTTCCTCTTTATTGGGGTCATCCTTTTCTCCAGCGCGGTCTACTTTGCCGAG
GCAGACGACCCCACTTCAGGTTTCAGCAGCATCCCGGATGCCTTCTGGTGGGCAGTGGTAACCATGACAA
CAGTGGGTTACGGCGATATGCACCCAGTGACCATAGGGGGCAAGATTGTGGGATCTCTCTGTGCCATCGC
CGGTGTCTTGACCATCGCATTGCCAGTTCCCGTGATTGTTTCCAACTTCAATTACTTCTACCACCGGGAG
ACAGAAGGGGAAGAGCAATCCCAGTACATGCACGTGGGAAGTTGCCAGCACCTCTCCTCTTCAGCCGAGG
AGCTCCGAAAAGCAAGGAGTAACTCGACTCTGAGTAAGTCGGAGTATATGGTGATCGAAGAGGGGGGTAT
GAACCATAGCGCTTTCCCCCAGACCCCTTTCAAAACGGGCAATTCCACTGCCACCTGCACCACGAACAAT
AATCCCAACTCTTGTGTCAACATCAAAAAGATATTCACCGATGTT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC207223 representing NM_002232
Red=Cloning site Green=Tags(s)

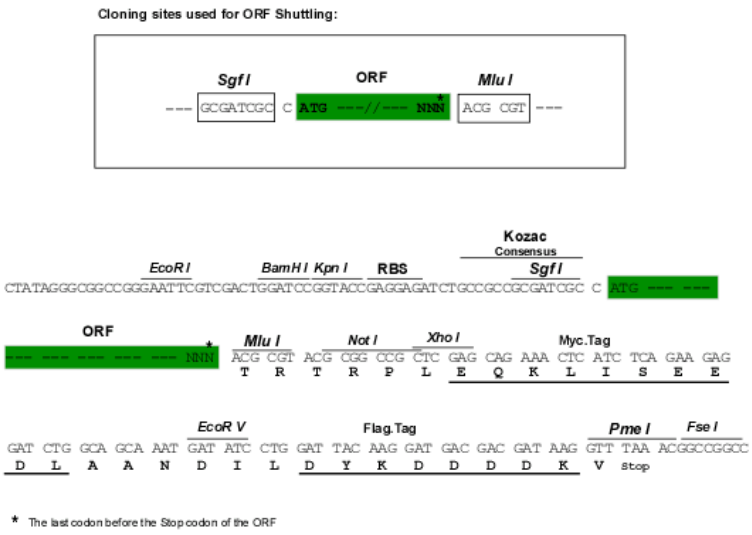
MDERLSLLRSPPPPSARHRAHPPQRPASSGGAHTLVNHGYAEPAAGRELPPDMTVVPGDHLLEPEVADGG
GAPPQGGCGGGGCDRYEPLPPSLPAAGEQDCCGERVVINISGLRFETQLKTLCQFPETLLGDPKRRMRYF
DPLRNEYFFDRNRPSFDAILYYYQSGGRIRRPVNVPIDIFSEEIRFYQLGEEAMEKFREDEGFLREEERP
LPRRDFQRQVWLLFEYPESSGPARGIAIVSVLVILISIVIFCLETLPEFRDEKDYPASTSQDSFEAAGNS
TSGSRAGASSFSDPFFVVETLCIIWFSFELLVRFFACPSKATFSRNIMNLIDIVAIIPYFITLGTELAER
QGNGQQAMSLAILRVIRLVRVFRIFKLSRHSKGLQILGQTLKASMRELGLLIFFLFIGVILFSSAVYFAE
ADDPTSGFSSIPDAFWWAVVTMTTVGYGDMHPVTIGGKIVGSLCAIAGVLTIALPVPVIVSNFNYFYHRE
TEGEEQSQYMHVGSCQHLSSSAEELRKARSNSTLSKSEYMVIEEGGMNHSAFPQTPFKTGNSTATCTTNN
NPNSCVNIKKIFTDV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg3116_d07.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_002232

ORF Size: 1725 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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

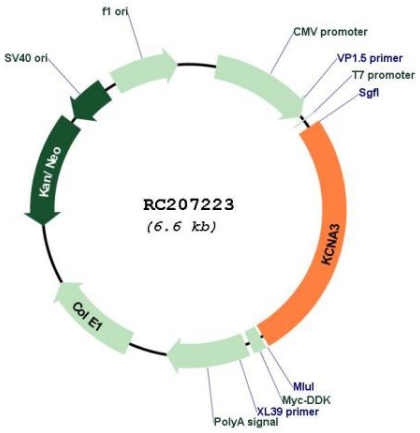
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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).

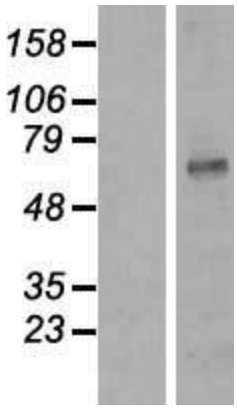
Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid 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_002232.5
RefSeq Size:	3346 bp
RefSeq ORF:	1728 bp
Locus ID:	3738
UniProt ID:	P22001
Cytogenetics:	1p13.3
Domains:	BTB, K_tetra, ion_trans
Protein Families:	Druggable Genome, Ion Channels: Potassium, Transmembrane
MW:	63.7 kDa
Gene Summary:	Potassium 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, shaker-related subfamily. This member contains six membrane-spanning domains with a shaker-type repeat in the fourth segment. It belongs to the delayed rectifier class, members of which allow nerve cells to efficiently repolarize following an action potential. It plays an essential role in T-cell proliferation and activation. This gene appears to be intronless and it is clustered together with KCNA2 and KCNA10 genes on chromosome 1. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC207223



Western blot validation of overexpression lysate (Cat# [LY419451]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207223 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).