

## Product datasheet for **RC222164**

### **KCNA7 (NM\_031886) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	KCNA7 (NM_031886) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	KCNA7
Synonyms:	HAK6; KV1.7
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC222164 representing NM\_031886  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGAGCCCGGGTCCCCCGCCGTGCGGCTGCTGCGAGCGGCTGGTGTCAACGTGGCCGGGCTGCGCT  
 TCGAGACGCGGGCGCGCACGCTGGGCGCTTCCGGACACTCTGCTAGGGGACCCAGCGCCCGCGGCCG  
 CTTCTACGACGACGCGCGCCGCGAGTATTTCTCGACCGCACCGGCCAGCTTCGACGCGGTGCTCTAC  
 TACTACCAGTCCGGTGGGCGGCTGCGGCGGCGCGCACGTGCCGCTCGACGTCTTCTGGAAGAGGTGG  
 CCTTCTACGGGTGGGCGCGGCCCTGGCACGCTGCGCGAGGACGAGGGTGCCTGGTGCCTGCCCGCA  
 GCGCCCCCTGCCCGCCGCGCTTCGCCCGCCAGCTGTGGCTGCTTTTCGAGTTTCCGAGAGCTCTCAG  
 GCCGCGCGGTGCTCGCCGTAGTCTCCGTGCTGGTTCATCTCGTCCATCGTCGCTTCTGCTCGAGA  
 CGCTGCCTGACTCCGCGACGACCGCGACGGCACGGGGCTTGTGCTGCAGCCGACCGGCCCGTTCCC  
 CGCTCCGCTGAATGGCTCCAGCCAAATGCCTGGAATCCACCCCGCTGCCCTTCAATGACCCGTTCTTC  
 GTGGTGGAGACGCTGTGTATTTGTTGGTTCTCCTTTGAGCTGCTGGTACGCCTCCTGGTCTGTCCAAGCA  
 AGGCTATCTTCTCAAGAACGTGATGAACCTCATCGATTTTGTGGCTATCCTTCCCTACTTTGTGGCACT  
 GGGCACCGAGCTGGCCCGCAGCGAGGGGTGGCCAGCAGGCCATGCTACTGGCCATCCTGAGAGTCATC  
 CGATTGGTGCCTGCTTCCGATCTTCAAGCTGTCCCGGCACTCAAAGGGCCTGCAAATCTTGGCCAGA  
 CGCTTCGGGCTCCATGCGTGAGCTGGGCTCCTCATCTTTTCTTTCATCGGTGGTCTCTTTTC  
 CAGCGCGTCTACTTTGCCGAAGTTGACCGGTGGACTCCCATTTCACTAGCATCCCTGAGTCTTCTGG  
 TGGGCGGTAGTCACCATGACTACAGTTGGCTATGGAGACATGGCACCCGCTCACTGTGGGTGGCAAGATG  
 TGGCTCTCTGTGTGCCATTGCGGCGTGTGACTATTTCCCTGCCAGTGCCCGTATTGTCTCAATTT  
 CAGCTACTTTTATCACCGGAGACAGAGGGCAAGAGGCTGGGATGTTTCAGCCATGTGGACATGCAGCCT  
 TGTGGCCACTGGAGGGCAAGGCAATGGGGGGTGGTGGACGGGGAGGTACCTGAGCTACCACCTCCAC  
 TCTGGCACCCCCAGGAAACACCTGGTACCGAAGTG

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC222164 representing NM\_031886  
 Red=Cloning site Green=Tags(s)

MEPRCPPPCGCCERLVLNVAAGLRFETRARTLGRFPDILLGDPARRGRFYDDARREYFFDRHRPSFDAVLY  
 YYQSGGRLRRPAHVPLDVFLEEVAFYGLGAAALARLREDEGCPVPPERPLPRRAFARQLWLLFEFPESQ  
 AARVLAVVSVLVILVSIIVFCLETLPDFRDDRDTGLAAAAAAGPFPAPLNGSSQMPGNPPRLPFNDPFF  
 VVETLCICWFSFELLVRLLVCPKAIFFKNVMNLIIDFVAILPYFVALGTELARQRGVGQQAMSLAILRVI  
 RLVRVFRIFKLSRHSKGLQILGQTLRASMRELGLLIFFLFIGVVLFSYAVYFAEVDVDRVDSHFTSIPESFW  
 WAVVTMTTVGYGDMAPVTVGGKIVGSLCAIAGVLTISLPVPVIVSNFSYFYHRETEGEEAGMFSHVDMPQ  
 CGPLEGKANGGLVDGEVPELPPPLWAPPKHLVTEV

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6116\\_a10.zip](https://cdn.origene.com/chromatograms/mk6116_a10.zip)

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_031886

**ORF Size:** 1368 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\\_031886.2](#), [NP\\_114092.2](#)

**RefSeq Size:** 4372 bp

**RefSeq ORF:** 1371 bp

**Locus ID:** 3743

**UniProt ID:** [Q96RP8](#)

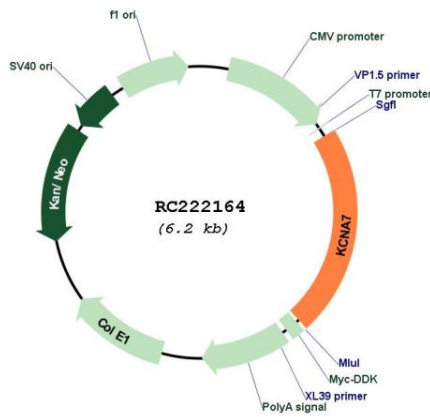
**Cytogenetics:** 19q13.33

**Protein Families:** Druggable Genome, Ion Channels: Potassium, Transmembrane

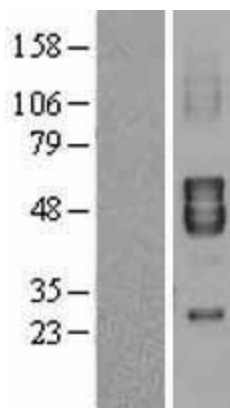
**MW:** 50.4 kDa

**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. The gene is expressed preferentially in skeletal muscle, heart and kidney. It is a candidate gene for inherited cardiac disorders. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RC222164



Western blot validation of overexpression lysate (Cat# [LY403125]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC222164 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).