

## Product datasheet for **SC123916**

### **Kv1.4 (KCNA4) (NM\_002233) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Kv1.4 (KCNA4) (NM_002233) Human Untagged Clone
Tag:	Tag Free
Symbol:	Kv1.4
Synonyms:	HBK4; HK1; HPCN2; HUKII; KCNA4L; KCNA8; KV1.4; MCIDDS; PCN2
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL4</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_002233, the custom clone sequence may differ by one or more nucleotides

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ATGGAGGTTGCAATGGTGAAGTGCAGGAGAGCTCAGGGTCAACAGTCACATGCCTTATGGTTATGCTGCC
AGGCCCGGGCCCGGAGCGGGAGAGGCTTGCTCACTCCAGGGCAGCTGCAGCAGCTGCTGTTGCAGCGGC
CACAGCTGCTGTGAAGGTAGCGGGGTTCTGGTGGGGGCTCCACCACCACCAGTCACCGGGGCC
TGTACCTCCCATGACCTCAGAGCAGCCGGGTAGTCGGAGGAGGAGCGACAGCGGTCTGAGAAGAAGA
AAGCCCACTACCGGCAGAGCAGCTTCCCTCATTGCTCTGACCTGATGCCAGTGGCTCTGAGGAGAAGAT
CCTGAGGGAGCTGAGTGAGGAGGAGGAAGATGAGGAGGAGGAGGAAGAGGAGGAAGAGGAGGAAAGTTT
TACTATAGTGAAGATGACCATGGTATGAGTGTTCCTACCGGATCTGCTGCCTCAGGATGAGGGCGGTG
GCGGCTACAGTTCAGTCCGCTACAGTACTGTTGTGAACGTGTGGTGATAAATGTGTGAGGCTACGCTT
TGAGACCCAAATGAAACTCTGGCCAGTTCCAGAGACTTTGTTGGGAGACCCTGAAAAGAGGACTCAG
TACTTTGACCCTTTCGCAATGAGTATTTTTTTGACAGGAACCGCCAGCTTTGATGCCATCTTGTATT
ATTATCAATCAGGAGGCCCTGAAGAGCCAGTCAATGTCCCTTTGATATCTTCACTGAGGAGGTGAA
GTTCTATCAGTTGGGGGAGGAGGCCCTGTTGAAGTTTCGGGAGGACGAGGGCTTTGTGAGAGAAGAGGAA
GACAGGGCCCTCCCGAGAATGAATTTAAAAGCAGATTTGGCTCCTCTTTGAATATCCAGAGAGCTCCA
GTCCTGCAAGGGGCATAGCCATTGTGTCCTGCTGGTCACTTAATCTCCATTGTCATCTTTGCTGGA
AACCTTGCTGAGTTTAGGGACGACAGGGATCTCGTCATGGCACTGAGTGTGGCGGGCATGGTGGGTTG
TTGAATGATACTCAGCACCCCATCTGGAGAACTCAGGGCACACAATATCAATGACCCCTTCTTCATCG
TGGAAACAGTCTGATTTGATGGTTTTCTTTGAGTTTGTGGTTCGCTGCTTTGCTTGTCCAGCCAAGC
ACTCTTCTTCAAAAACATCATGAACATCATTGACATTGTCTCCATTTGCCTTACTTCATCACACTGGGC
ACTGACCTGGCCAGCAACAGGGGGTGGCAATGGTCAGCAGCAGCAGGCCATGTCCTTTGCCATCTCA
GAATCATTGCTGTCGGTCCGAGTATTCGGATCTTCAAACCTCCAGGCCTCCAAGGCCTGCAGATCCT
GGGCCACACCCTCAGAGCCAGCATGCGGGAAGTGGGCCTTCTGATCTTCTTCTTCTTATTGGGGTCATC
CTCTTTCTAGTGTGTATTTTGCAGAGGCGGATGAACCTACTACCCATTTCAAAGCATCCAGATG
CATTTTGGTGGGCTGTGGTGACCATGACAACTGTGGGCTATGGGGACATGAAGCCCATCACTGTAGGGG
CAAGATTGTGGGTCCTGTGTGCCATTGCGGGTGTCTTAACCATTGCTTTGCCAGTGCCAGTGATTGTC
TCTAACTTAACTATTTCTACCACAGAGAGACTGAAAATGAGGAACAGACACAGTAACGCAGAATGCAG
TCAGTTGTCCATACCTCCCTCTAATTTGCTCAAGAAATTCGGAGCTCTACTTCTTCTTCCCTGGGGGA
CAAGTCAGAGTATCTAGAGATGGAAGAAGGAGTTAAGGAATCTCTGTGTGCAAAGGAGGAGAAGTGCAG
GAAAGGGGGATGACAGTGAGACAGATAAAAACAACCTGTTCTAATGCAAAGGCTGTGGAGACTGATGTG
GA
    
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**5' Read Nucleotide Sequence:**

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>OriGene 5' read for NM_002233 unedited
CGACTACTATAGGGCGGCGGAATTCGGCAGCAGGATCATTCTCCCTCCTCCAGCTG
TTGCAGCTTGAGGGGAAAAACAAGCCAGCCGGTGGATTTTCGGTATTTTATTTTTCGC
CCCGCCGGGGAACGGTGAAGTGCTTCTTCTGCATGATTTTGGCTGAAGAATGCTCTGCAT
TTCCTTGATTTCTATGGAGACCTCAGAGCTGGTTTTGCTTCTGCTGACACCTCATCTAGC
ACCTTCTCTACCTCCCAAGGTCTTTGCCTCTATCTGTGGTTTGGCATTGTACCTGGGTAC
AGGAAGCCTTTGATGAACCTAAAAGGAGAGCCTGGAGAATCATCCTGATAGACTTTGAGT
AGAAATGGCTGGACATACTTCAAACCACATCTTAACATGGTTCGAGCCATCACTAGAAAG
CAAGTGCTAACAGTAAAGGCTTATTTGCATTTTATTTACATTTAATGGACTGAGCATTGG
CCAATTTCCATGGGCAGAAAATATATTTTCTAGGCACAACCTCTGGCTGTCAGAC
ACTTGCTGCCTTTGAATCTTGCAGCAACATCACTAACCACATCCAGACATATTTCCAAA
TTTCAACATCTACCCCAAAACATAGGTGTCTGAGAGACTCCAGATTTTCGGACTTCTT
AGTCTTGAGAGTGCCAGGCTATTTATCTCGACCAGCCAAGCTCTGGAGAGCAATGTTGAA
TCCCTGAGAAGAGAGAGCATGGGGCGTGCN
    
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<b>3' Read Nucleotide Sequence:</b>	>Forward primer walk for NM_002233 unedited GTCATCCTCTTTTCTAGTGCTGTGATTTTGCAGAGGCGGATGAACCTACTACCCATTTCCAAAGCATCCCAGATGCATTTTGGTGGGCTGTGGTGACCATGACAACGTGGGCTATGGG GACATGAAGCCCATCACTGTAGGGGCAAGATTGTCGGGTCCCTGTGTGCCATTGCGGGT GTCTTAACCATTGCTTTGCCAGTGCCAGTGATTGTCTCTAACTTTAACTATTTCTACCAC AGAGAGACTGAAAATGAGGAACAGACACAGCTAACGCAGAATGCAGTCAGTTGCCATAC CTCCCCCTAATTTGCTCAAGAAAATTTCCGGAGCTCTACTTCTTCCCTGGGGGACAAG TCAGAGTATCTAGAGATGGAAGAAGGAGTTAAGGAATCTCTGTGTGCAAAGGAGGAGAAG TGTCAGGGAAAGGGGATGACAGTGAGACAGATAAAAACAACCTGTTCTAATGCAAAGGCT GTGGAGACTGATGTGAATCTTTTCCACCTGCCACTGCTCCCCCTCAGCATCTCCAA ATATATTTATGCATAGAGAGTGCAAGTTATGAAAATGAAATATGCAAATGATCCAATGCAT ACAGTAGTACACTATTTAATGGTTATACATGGCATAATTGTTACTAACTTGATTACAT ATCANATAAATGATACATCTGGAGAAGAGGGAGGAATANGAGCAAATCTATCTTTATAT TTTTATTAGAATGCAAGAATTTGCACATTAACCTGGAAA
<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_002233
<b>Insert Size:</b>	3900 bp
<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_002233.2</a> , <a href="#">NP_002224.1</a>
<b>RefSeq Size:</b>	4179 bp
<b>RefSeq ORF:</b>	4179 bp
<b>Locus ID:</b>	3739
<b>UniProt ID:</b>	<a href="#">P22459</a>
<b>Cytogenetics:</b>	11p14.1
<b>Protein Families:</b>	Druggable Genome, Ion Channels: Potassium, Transmembrane

**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 A-type potassium current class, the members of which may be important in the regulation of the fast repolarizing phase of action potentials in heart and thus may influence the duration of cardiac action potential.[provided by RefSeq, Mar 2011]