

## Product datasheet for **SC306728**

### Kv beta 1 (KCNA1) (NM\_172160) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Kv beta 1 (KCNA1) (NM_172160) Human Untagged Clone
Tag:	Tag Free
Symbol:	Kv beta 1
Synonyms:	AKR6A3; hKvb3; hKvBeta3; KCNA1B; KV-BETA-1; Kvb1.3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC306728 representing NM_172160. Blue=Insert sequence Red=Cloning site Green=Tag(s)

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GCTCGTTTGTAGTAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCCGCATCGCC
ATGCTGGCAGCCCGGACAGGGGACGCGGGAGTCAGATCTCAGAGGAGAACACCAAGTTAAGGAGACAG
TCTGGGTTTTCTGTAGCAGGGAAAGACAAATCTCCAAGAAAGCCTCAGAAAACGCTAAAGACAGCAGC
CTTAGTCCCTCAGGGGAAAGCCAGCTCAGGGCGCGTCACTGGCTCTGCTGCGCAAGTGGAGATGAAC
TGGTACCTAAAGCTCTGCGACCTGTCCAGCGAGCACACCACCGTCTGCACCACAGGCATGCCGCACAGG
AATCTTGAAAAATCAGGACTCAGAGTTTCTTGCTTGGGTCTTGGAACATGGGTGACATTTGGAGGTCAA
ATTTAGATGAGGTTGCTGAACGGCTGATGACCATCGCCTATGAAAGTGGTGTTAACCTCTTTGATACT
GCCGAAGTCTATGCTGCTGGAAAGGCTGAAGTGATTCTGGGGAGCATCATCAAGAAGAAAGGCTGGAGG
AGGTCCAGTCTGGTCATAACAACCAAACTCTACTGGGGTGAAAAAGCTGAAACAGAAAGAGGGCTGTCA
AGAAAGCATATTATTGAAGGATTGAAGGGCTCCCTCCAGAGGCTGCAGCTCGAGTATGTGGATGTGGTC
TTTGCAAATCGACCGGACAGTAACACTCCCATGGAAGAAATTGTCGAGCCATGACACATGTGATAAAC
CAAGGCATGGCGATGTACTGGGGCACCTCGAGATGGAGTGCTATGGAGATCATGGAAGCCTATTCTGTA
GCAAGACAGTTCAATATGATCCCACCGGTCTGTGAACAAGCTGAGTACCATCTTTCCAGAGAGAGAAA
GTGGAGGTCCAGCTGCCAGAGCTCTACCACAAAATAGGTGTTGGCGCAATGACATGGTCTCCACTTGCC
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CAGTGGTTGAAAGAAAGAAATTGTAAGTGAAGAAGGGAGAAAACAGCAAAACAAGCTAAAAGACCTTTCC
CCAATTGCGGAGCGTCTGGGATGCACACTACCTCAGCTAGCTGTTGCGTGGTGCCTGAGAAATGAAGGT
GTGAGTTCTGTGCTCCTGGGATCATCCACTCCTGAACAACTCATTGAAAACCTTGGTGCCATTACAGGTT
CTCCAAAGATGACATCAGATGTGGTAAATGAGATTGATAACATACTGCGCAACAAGCCCTACAGCAAG
AAGGACTATAGATCATAA
ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC

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<b>Restriction Sites:</b>	Sgfl-Mlul
<b>ACCN:</b>	NM_172160
<b>Insert Size:</b>	1260 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>OTI Annotation:</b>	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
<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>	<u><a href="#">NM_172160.2</a></u>
<b>RefSeq Size:</b>	3715 bp
<b>RefSeq ORF:</b>	1260 bp
<b>Locus ID:</b>	7881
<b>UniProt ID:</b>	<u><a href="#">Q14722</a></u>
<b>Cytogenetics:</b>	3q25.31
<b>Protein Families:</b>	Druggable Genome, Ion Channels: Other
<b>MW:</b>	46.6 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 includes distinct isoforms which are encoded by alternatively spliced transcript variants of this gene. Some of these isoforms are beta subunits, which form heteromultimeric complexes with alpha subunits and modulate the activity of the pore-forming alpha subunits. [provided by RefSeq, Apr 2015]

Transcript Variant: This variant (1) encodes the longest isoform (1), which is also known as kvb1.1.