

Product datasheet for **SC303154**

KCNH1 (NM_002238) Human Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: KCNH1 (NM_002238) Human Untagged Clone
Tag: Tag Free
Symbol: KCNH1
Synonyms: EAG; EAG1; h-eag; hEAG; hEAG1; Kv10.1; TMBTS; ZLS1
Mammalian Cell Selection: None
Vector: pCMV6-XL5
E. coli Selection: Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_002238 edited
 CCGAGGCCAGTTTCTGCTGTCGTAAGAAGCCGCGCCAGGACGCCCGCCGACCCCGAGC
 TGCTGGGAGGATGACCATGGCTGGGGCAGGAGGGGACTAGTGGCCCTCAAACACGTT
 TCTGGAGAATATTGTTTCGGCGGTCCAATGATACTAATTTTGTGTTGGGAATGCTCAGAT
 AGTGGACTGGCCTATTGTGTACAGCAATGATGGATTTTGCAAGCTGTCTGGCTATCACAG
 GGCAGAAGTATGCAAAAAAGCAGCACCTGCAGTTTTATGTATGGGAGCTGACTGATAA
 AGACACGATTGAAAAAGTGCAGCAACATTTGAGAACTATGAGATGAATTCCTTTGAAAT
 TCTGATGTACAAGAAGAACAGGACACCTGTGTGGTTCTTTGTGAAAATTGCTCCAATTCG
 AAACGAACAGGATAAAGTGGTTTTATTTCTTTGCACTTTCACTGACATAACAGCTTTCAA
 ACAGCCAATTGAGGATGATTCATGTAAGGCTGGGGGAAGTTGCTCGGCTGACAAGAGC
 ACTGACAAGCAGCAGGGGTGCTGCAGCAGCTGGCTCCAAGCGTGCAAAAAGGCGAGAA
 TGTCACAAAGCACTCCCGCTGGCAGAGGTCCTACAGCTGGGCTCAGACATCCTTCCCA
 GTACAAGCAAGAGGCACCAAAGACTCCCCCTCACATCATCTTACATTATTGTGTTTTAA
 GACCACGTGGGATTGGATCATCTTGATCTTGACCTTCTATACAGCCATCTTGGTCCCTTA
 TAATGTCTCCTTCAAACAGGCAGAATAATGTGGCCTGGCTGGTTGTTGATAGCATCGT
 GGATGTTATCTTTTTGGTGGACATTGTGCTCAATTTTCATACCACCTTTGTTGGACCAGC
 AGGGGAGGTGATTTCTGACCCCAAACCTTATCCGCATGAACTACCTGAAGACGTGGTTTGT
 GATTGACCTTCTGTCTGTTTCCCATATGATGTCATCAACGCTTTTGAGAACGTGGATGA
 GGGCATCAGCAGCCTGTTGAGCTCTCTAAAAGTTGTCGGGCTGCTCCGCTTTGGGCGAGT
 GGCCCGTAAGCTGGACCACTACATTGAATATGGAGCTGCTGTGCTGGTCTGCTGGTGTG
 TGTGTTTGGGCTGGCTGCACACTGGATGGCCTGCATCTGGTACAGCATTGGGACTATGA
 GATCTTTGACGAGGACACCAAGACAATCCGCAACAACAGCTGGCTGTACCAACTAGCGAT
 GGACATTGGCACCCTTACCAGTTAATGGGTCTGGCTCAGGGAAGTGGGAAGGTGGTCC
 CAGCAAGAATTCTGTCTACATCTCCTGTTGATTTTCAATGACCAGCCTCACCAGTGT
 GGGCTTTGGGAACATCGCCCATCCACAGACATTGAGAAGATCTTTGCAGTGGCCATCAT
 GATGATTGGCTCACTTCTATGCCACCATCTTCGGGAATGTGACGACTATTTCCAACA
 GATGTATGCCAACCAACAGATACCATGAGATGCTCAACAGTGTTCGGGACTTCTGTAA



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GCTCTACCAGGTGCCAAAAGGATTGAGTGAGCGAGTAATGGATTATATTGTGCCACTTG
 GTCCATGTCCAGAGGCATTGACACAGAGAAGGTCTGCAGATCTGCCCAAGGACATGAG
 AGCCGACATCTGCGTGCACCTGAACCGCAAGGTGTTCAAGGAGCACCCGGCCTTCCGGCT
 GGCCAGTGATGGCTGCCTCCGGGCACTGGCCATGGAGTTCAGACGGTGCAGTGTGCCCC
 AGGGGACCTCATCTACCATGCAGGAGAGAGCGTTGACAGCCTCTGCTTTGTGTTTCTGG
 CTCCCTGGAGGTGATCCAAGATGATGAGGTGGTGGCCATTCTAGGAAAAGGAGACGTGTT
 TGGAGATGTGTTCTGGAAGGAAGCCACCCTTGCCAGTCTGTGCCAATGTTAGGGCCTT
 GACCTACTGTGATCTGCATGTGATCAAGCGGGATGCCCTGCAGAAAGTGCTGGAATTCTA
 CACGGCCTTCTCCATTCTTCTCCCGAACCTGATTCTGACGTACAACCTGAGGAAGAG
 GATTGTGTTCCGGAAGATCAGCGACGTGAAACGTGAAGAGGAAGAACGCATGAAACGAAA
 GAATGAGGCCCCCTGATCTTGCCCCGGACCACCCTGTCCGGCGCCTTCCAGAGATT
 CCGACAGCAGAAAGAGGCCAGGCTGGCAGCTGAGAGAGGGGGCCGGGACCTGGATGACCT
 AGATGTGGAGAAGGGCAATGTCCTTACAGAGCATGCCTCCGCAACCACAGCCTCGTGAA
 GGCCAGCGTGGTACCGTGCCTGAGAGTCTGCCACGCCGTATCCTTCCAGGCAGCCTC
 CACCTCCGGGGTCCAGACCACGCAAAGCTACAGCGCCAGGGTCCGAGTGCCTGGGCCC
 CAAGGGGGGGGGGGCGATTGTGCCAAGCGCAAAGCTGGGCCCGCTTCAAAGATGCTTG
 CGGGAAGAGTGAGGACTGGAACAAGGTGTCCAAGGCTGAGTCGATGGAGACACTCCCGA
 GAGGACAAAAGCGTCAGGCGAGGCCACACTGAAGAAGACAGACTCGTGTGACAGTGGCAT
 CACCAAGAGCGACTTGCGCCTGGACAACGTGGGTGAGGCCAGGAGTCCCCAGGATCGGAG
 TCCCATCTGGCAGAGGTCAAGCATTCTGTTCTACCCCATCCCTGAGCAGACGCTGCAGGC
 CACAGTCTGGAGGTGAGGCACGAGCTGAAGGAGGACATCAAGGCCTTAAACGCCAAAAT
 GACCAATATTGAGAAACAGCTCTCTGAGATACTCAGGATTAACCTTCCAGAAGATCCTC
 TCAGTCTCCTCAGGAGTTGTTTGAATATCGAGGCCACAGTCCCAGAATCAGAGAGAGA
 CATTTTTGGAGCCAGCTGAGAGGTCTATTTAAAAAACAGTCAGAGACAGATACCTACAA
 CCTGCCGCTC

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_002238 unedited
 GAGACTGTTGTAATACGACTCCTATAGGGCGGCCGGAATTCGCCCTTCCGAGGCCAGTT
 TCCTGCTGTCGTAAGAAGCCGCGCCAGGACGCCCGCCGACCCCGAGCTGCTGGGAGGAT
 GACCATGGCTGGGGGCAGGAGGGGACTAGTGGCCCTCAAACACAGTTTTCTGGAGAATAT
 TGTTCCGGCGGTCCAATGATACTAATTTTTGTGTTGGGGAATGCTCAGATAGTGGACTGGCC
 TATTGTGTACAGCAATGATGGATTTTGCAAGCTGTCTGGCTATCACAGGGCAGAAGTGAT
 GCAAAAAAGCAGCACCTGCAGTTTTATGTATGGGGAGCTGACTGATAAAGACACGATTGA
 AAAAGTGCGGCAAACATTTGAGAACTATGAGATGAATTCCTTTGAAATTCTGATGTACAA
 GAAGAACAGGACACCTGTGTGGTCTTTGTGAAAATTGCTCCAATTCGAAACGAACAGGA
 TAAAGTGGTTTTATTTCTTTGCACTTTTCAGTGACATAACAGCTTTCAAACAGCCAATTGA
 GGATGATTCATGTAAGGCTGGGGGAAGTTTGCTCGGCTGACAAGAGCACTGACAAGCAG
 CAGGGGTGTCCTGCAGCAGCTGGCTCCAAGCGTGCAAAAAGGCGAGAATGTCCACAAGCA
 CTCCCGCCTGGCAGAGGTCTACAGCTGGGCTCAGACATCCTTCCCAGTACAAGCAAGA
 GCACCAAAGACTCCCCCTCACATCATCTTACATTATTGTGTTTTAAGACCACGTGGGAT
 TGGATCATCTTGATCTTGACCTTCTATACAGCCATCTTGGTCCCCTTATATGTCTCCTTCA
 AACCAGGCAGATATGTGCTGCTGTTGTTGATAGCATCGTGGATGTTATCTTTTTGGTGG
 ACATTGTGCCCTCAATTTTCATACCACCTTTGTTGGACCAGCAGGGGAGGTGAT

Restriction Sites:

Please inquire

ACCN:

NM_002238

Insert Size:

3000 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: The open reading frame of this TrueClone was fully sequenced and found to be a perfect match to the protein associated to this reference.

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_002238.2](#), [NP_002229.1](#)

RefSeq Size: 3127 bp

RefSeq ORF: 2889 bp

Locus ID: 3756

UniProt ID: [O95259](#)

Cytogenetics: 1q32.2

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

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. This gene encodes a member of the potassium channel, voltage-gated, subfamily H. This member is a pore-forming (alpha) subunit of a voltage-gated non-inactivating delayed rectifier potassium channel. It is activated at the onset of myoblast differentiation. The gene is highly expressed in brain and in myoblasts. Overexpression of the gene may confer a growth advantage to cancer cells and favor tumor cell proliferation. Alternative splicing of this gene results in two transcript variants encoding distinct isoforms. [provided by RefSeq, Jul 2008]

Transcript Variant: This variant (2), also known as eag, lacks an alternate in-frame segment, as compared to variant 1. It encodes isoform 2, which is shorter but has the same N- and C-termini as isoform 1. Sequence Note: This RefSeq record was created from transcript and genomic sequence data because no single transcript was available for the full length of the gene. The extent of this transcript is supported by transcript alignments.