

## Product datasheet for MR219363

### Kcnh1 (NM\_010600) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Kcnh1 (NM_010600) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Kcnh1
Synonyms:	EAG1; Kv10.1; M-eag
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR219363 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGACCATGGCTGGCGGCCGGGGGACTAGTGGCCCCGAGAACACGTTTCTGGAGAACATCGTGCGGC  
GGTCCAACGACACTAATTTTGTGTTGGGAATGCCAGATAGTCGACTGGCCATCGTGTACAGCAATGA  
TGGATTCTGCAAGCTGTCTGGCTACCACCGGGCAGAAGTGATGCAGAAAAGCAGCGCCTGCAGTTTTATG  
TATGGAGAGCTGACTGACAAGGACACAGTTGAAAAGTTGCCAGACCTTTGAGAACTACGAGATGAATT  
CCTTCGAAATTCGATGTACAAGAAGAAGACAGGACACCTGTGTGGTTTTTGTGAAGATCGCTCCGATCAG  
GAACGAACAGGATAAAGTGGTCCTGTTCCCTTTGCACTTTGAGCGACATAACTGCATTCAAGCAGCCCATC  
GAGGACGACTCCTGCAAAGGTTGGGGAAAGTTGCCCGACTGACCAGAGCTCTGACAAGCAGCAGGGGAG  
TCCTGCAGCAGCTGGCCCCAGTGTACAGAAGGGTGAGAAATGTTCAAGCACTCGCGCCTGGCAGAGGT  
CCTGCAGCTGGGTTGAGACATCCTTCCCGAGTACAAGCAAGAGGGCGCAAAGACACCCCTCACATCATC  
CTACACTACTGTGCTTTAAGACCAGTGGGATTGGATCATCTTGATCCTGACCTTCTACACAGCCATCT  
TGGTCCCTTACAACGTCTCCTTTAAAACCAGGCAGAATAATGTGGCCTGGCTGGTGGTGGACAGCATCGT  
GGATGTCATCTTTTTGGTGGACATTGTTTTGAATTTTACACCACCTTTGTCGGGCCAGCGGGGAAGTG  
ATATCTGACCCCAAACCTATCCGCATGAACACTACCTGAAGACGTGGTTTTGTGATCGACCTTCTGCTGTT  
TGCCGTATGACGTCATCAACGCTTTTGAAGACGTGGATGAGGTTAGTGCCTTTATGGGTGATCCAGGGAA  
GATTGTTTTGCTGATCAGATCCACCACCACTGGAGGGGAGAGAGAGTCAAGGCATCAGCAGCCTGTTT  
AGTTCTCTGAAAGTTGTGCGGCTGCTCCGTCTCGGGCAGTGGCCGCAAACCTGGATCATTACATCGAGT  
ATGGAGCCGCGTACTGGTCTGTTGGTGTGCGTGTGGGCTTGGTCCCACTGGATGGCTGCATCTG  
GTACAGCATTGGGGACTATGAGATCTTTGATGAAGACACCAAGACCATCCGCAACAACAGCTGGCTCTAC  
CAACTGGCATTGGACATCGCACTCCATACCAGTTTAAATGGGTCTGGTTCAGGGAAGTGGGAAGTGGGC  
CAAGCAAGAACTCTGTCTACATCTCCTCGTGTACTTACCATGACAAGTCTCACCAGTGTGGGCTTTGG  
TAACATTGCCCATCCACAGACATCGAGAAGATCTTCGAGTGGCCATCATGATGATTGGCTCTCTCTG



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TATGCCACCATCTTTGGGAACGTGACAACCATTTCCAGCAGATGTACGCCAACCAACAGGTACCACG  
 AGATGCTCAACAGTGTCCGGGATTTCTGAAGCTACCAGGTGCCAAAGGGCTGAGTGAGCGGGTCAT  
 GGACTACATTGTGTCCACCTGGTCCATGTCCCGAGGCATCGACACAGAGAAGGTCTGCAGATCTGCCCC  
 AAGGACATGCGAGCCGACATTTGCGTGCACCTGAACCCGAAAGTGTCAAAGAACACCCTGCCTTCGAT  
 TGGCCAGCGATGGCTGCCTGCGGGCCTTGCCATGGAGTCCAGACAGTGCAGTGTGCCCCAGGGGACCT  
 CATCTATCATGCTGGAGAGAGTGTGGACAGCCTGCTTCGTGGTCTCAGGCTCCCTGGAGGTGATCCAG  
 GATGACGAGGTGGTGGCCATCCTAGGAAAGGAGACGTGTTGGGGATGTTTTCTGGAAGGAAGTACCC  
 TTGCACAGTCTGTGCTAATGTCCGGCCCTTGACCTACTGTGACCTGCAGTGATCAAGAGGGACGCCCT  
 TCAGAAAGTGCTAGAATTCTACACAGCCTTCTCCCACTCCTTCTCCCGAACCTGATTCTCACCTACAAC  
 CTGAGGAAGAGGATTGTGTTCCGGAAGATCAGCGACGTGAAACGAGAAGAGGAGGAGAGGATGAAACGGA  
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 GCCCTCACGGACCATACCTCAGCCAACACAGCCTGGTGAAGGCCAGTGTGGTACGGTGCCTGAGAGCC  
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 AGGAGGATATCAAGGCCTTGAATGCCAAAATGACCTCCATTGAGAAGCAGCTGTCTGAGATACTCAGGAT  
 ACTAATGTCCAGAGGGTCCGCCAATCTCCTCAGGAGACGGGTGAGATCTCCAGGCCCCAGTCCCCAGAG  
 TCAGACAGAGACATTTTGGAGCAAGC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGAT AAGGTTTAA

**Protein Sequence:**

>MR219363 protein sequence  
 Red=Cloning site Green=Tags(s)

MTMAGRRRLVAPQNTFLENIVRRSNDTNFVLGNAQIVDWPIVYSNDGFCKLSGYHRAEVMQKSSACSFM  
 YGELTDKDTVEKVRQTFENYEMNSFEILMYKKNRTPVWFFVKIAPIRNEQDKVVLFLCTFSDITAFKQPI  
 EDDSCKGWKFARLTRALTSSRGLVQLAPSVQKGENVHKHSRLAEVLQLGSDILPQYKQAPKTPPHII  
 LHVCVFKTTWDWIILILTFYTAILVPYNVSFKTRQNNVAWLVDVSIVDVIFLVDIVLNFHTTFVGPAGEV  
 ISDPKLRMNYLKTWFVIDLLSCLPYDVINAFENVDEVS AFMGDPGKIGFADQIPPPLEGRESQGISSLF  
 SSLKVVRLRLGRVARKLDHYIEYGA AVL VLVCFGLAAHWMACIWYSIGDYEIFDEDTKIRNNSWLY  
 QLALDIGTPYQFNGSGSGKWEKGGPSKNSVYISSLYFTMTSLTSVGFNGIAPSTDIEKIFAVAIMMIGSLL  
 YATIFGNVTTIFQQMYANTNRYHEMLNSVRDFLKLQVPKGLSERVMDYIVSTWSMSRGIDTEKVLQICP  
 KDMRADICVHLNRKVFKEHPAFRLASDGCLRALAMEFQTVHCAPGDLIYHAGESVDSL CFVVSGLSLEVIQ  
 DDEVVA I LGKGDVFGDVFWEATLAQSCANVRALTYCDLHVIKRDALQKVFYTFASHFSRNLILTYN  
 LRKRIVFRKISDVKREEEERMKRKNEAPLILPPDHPVRRFLQFRFRQKEARLAAERGGRLDLDLVEKGN  
 ALTDHTSANHSLVKASVTVRES PATPVSFQAATTSTVSDHAKLHAPGSECLGPKAVSCDPAKRKGWARF  
 KDACGKGEDWNKVSKAESMETLPERTKAPGEATLKKTDSCDSGITKSDLRLDNVGETRSPQDRSPILA EV  
 KHSFYPIPEQTLQATVLEVKYELKEDIKALNAKMTSIEKQLSEILRILMSRGS AQSPQETGEISRPQSPE  
 SDRDIFGAS

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_010600

**ORF Size:** 2970 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\\_010600.1](#), [NM\\_010600.2](#), [NM\\_010600.3](#), [NP\\_034730.1](#)

**RefSeq Size:** 7269 bp

RefSeq ORF: 2970 bp

Locus ID: 16510

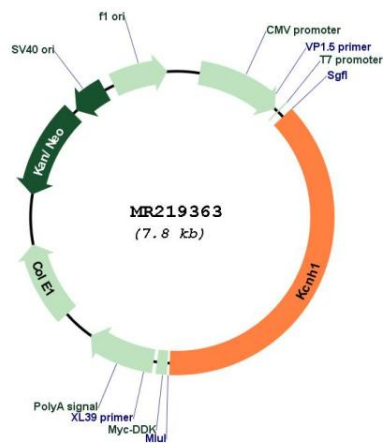
UniProt ID: [Q60603](#)

Cytogenetics: 1 H6

MW: 111.3 kDa

**Gene Summary:** Pore-forming (alpha) subunit of a voltage-gated delayed rectifier potassium channel (PubMed:19671703, PubMed:23975098). Channel properties are modulated by subunit assembly. Mediates IK(NI) current in myoblasts. Involved in the regulation of cell proliferation and differentiation, in particular adipogenic and osteogenic differentiation in bone marrow-derived mesenchymal stem cells (MSCs) (By similarity).[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MR219363