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Product datasheet for RC214036

HCN2 (NM_001194) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	HCN2 (NM_001194) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	HCN2
Synonyms:	BCNG-2; BCNG2; HAC-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC214036 representing NM_001194
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGACGCGCGCGGGGGCGGCGGGCGGCCCGGGGAGAGCCCGGGCGCGACCCCCGCGCCGGGGCCGCCGC
CGCCGCCGCCGCCCGCGCCCCCCCAACAGCAGCCGCCGCCGCCGCCGCCCGCGCCCCCCCGGGCCC
CGGGCCCGCGCCCCCCCAGCACCCGCCCCGGGCCGAGGCGTTGCCCCCGGAGGCGGCGGATGAGGGCGGC
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CCAAGGGCAGCCCGAACGGCGAGTGCGGGCGCGGCGAGCCGCAGTGCAGCCCCGCGGGGCCCGAGGGCCC
GGCGCGGGGGCCCAAGGTGTCGTTCTCGTGCCGCGGGGCGGCCTCGGGGCCCGCGCCGGGGCCGGGGCCG
GCGGAGGAGGCGGGCAGCGAGGAGGCGGGCCCGGCGGGGGAGCCGCGCGGCAGCCAGGCCAGCTTCATGC
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AGGTTCTACTGGGACTTCACCATGCTGCTGTTCATGGTGGGAAACCTCATCATCATCCCAGTGGGCATCA
CCTTCTTCAAGGATGAGACCACTGCCCCGTGGATCGTGTTCAACGTGGTCTCGGACACCTTCTTCCTCAT
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GCTGGTGGCCTCCATGCCGCTGTTCGCCAACGCCGACCCCAACTTCGTCACGGCCATGCTGACCAAGCTC
AAGTTCGAGGTCTTCCAGCCGGGTGACTACATCATCCGCGAAGGCACCATCGGGAAGAAGATGTACTTCA
TCCAGCACGGCGTGGTCAGCGTGCTCACTAAGGGCAACAAGGAGATGAAGCTGTCCGATGGCTCCTACTT
CGGGGAGATCTGCCTGCTCACCCGGGGCCGCCGCACGGCGAGCGTGCGGGCCGACACCTACTGCCGCCTC
TATTCGCTGAGCGTGGACAACTTCAACGAGGTGCTGGAGGAGTACCCCATGATGCGGCGCGCCTTCGAGA
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CCTCAACTCGGGCGTATTCAACAACCAGGAGAACGCCATCATCCAGGAGATCGTCAAGTACGACCGCGAG
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CAACTTG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC214036 representing NM_001194
Red=Cloning site Green=Tags(s)

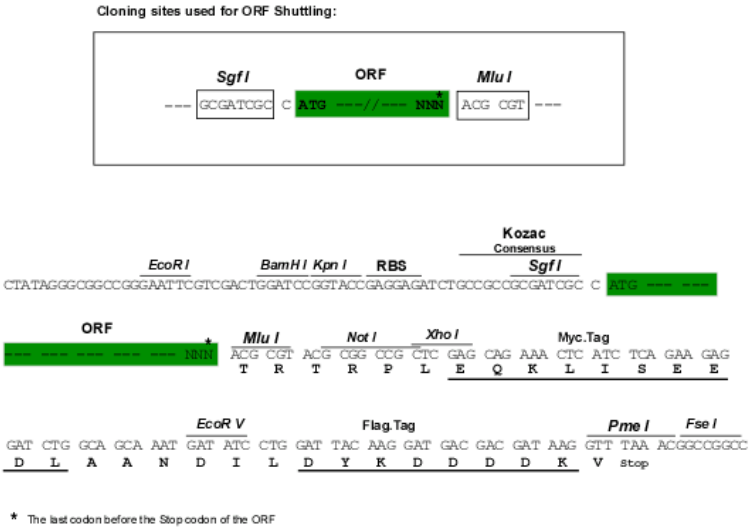
MDARGGGGRPGESPGATPAPGPPPPPPPAPPQQQPPPPPPPAPPPGPGPAPPQHPPRAEALPPEAADEGG
PRGRLRSRDSSCGRPGTPGAASTAKGSPNGECGRGEPQCSPAGPEGPARGPKVSFSCRGAASGPAPGPGP
AEEAGSEEAGPAGEPRGSQASFMQRQFGALLQPGVNKFSLRMFGSQKAVEREQERVKSAGAWIIHPYSDF
RFYWDFTMLLFMVGNLIIIPVGITFFKDETTAPWIVFNVVSDTFFLMDLVLNFRTGIVIEDNTEIILDPE
KIKKKYLRTWFVVDFVSSIPVDYIFLIVEKGIDSEVYKTARALRIVRFTKILSLLRLLRLSRLIRYIHQW
EEIFHMTYDLASAVMRICNLISMMLLLCHWDGCLQFLVPMLQDFPRNCWVSINGMVNHSWSELYSFALFK
AMSHMLCIGYGRQAPESMTDIWLTMLSMIVGATCYAMFIGHATALIQSLDSSRRQYQEKYKQVEQYMSFH
KLPADFRQKIHDYYEHRYQGKMFDEDSILGELNGPLREEIVNFNCRKLVASMPLFANADPNFVTAMLTKL
KFEVFQPGDYIIREGTIGKKMYFIQHGVVSVLTKGNKEMKLSDGSYFGEICLLTRGRRTASVRADTYCRL
YSLSVDNFNEVLEEYPMMRRAFETVAIDRLDRIGKKNSILLHKVQHDLNSGVFNNQENAIIQEIVKYDRE
MVQQAELGQRVGLFPPPPPPPQVTSAIATLQQAAAMSFCPQVARPLVGPLALGSPRLVRRPPPGPAPAAA
SPGPPPPASPPGAPASPRAPRTSPYGGLPAAPLAGPALPARRLSRASRPLSASQPSLPHGAPGPAASTRP
ASSSTPRLGPTPAARAAAPSPDRRDSASPGAAGGLDPQDSARSRLSSNL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg2743_c02.zip

Restriction Sites: SgfI-MluI

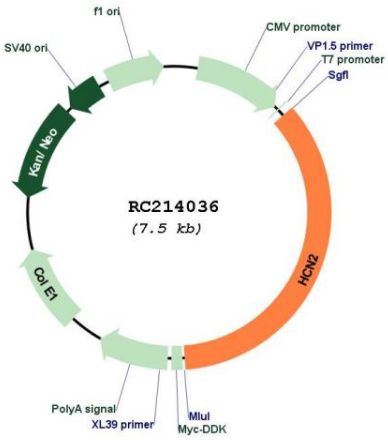
Cloning Scheme:



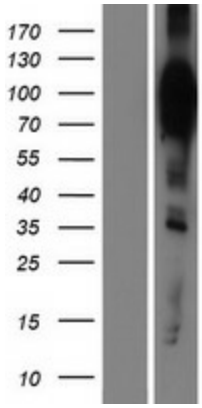
ACCN: NM_001194

ORF Size:	2667 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_001194.4
RefSeq Size:	3459 bp
RefSeq ORF:	2670 bp
Locus ID:	610
UniProt ID:	Q9UL51
Cytogenetics:	19p13.3
Protein Families:	Druggable Genome, Ion Channels: Cyclic nucleotide gated, Transmembrane
MW:	96.8 kDa
Gene Summary:	The protein encoded by this gene is a hyperpolarization-activated cation channel involved in the generation of native pacemaker activity in the heart and in the brain. The encoded protein is activated by cAMP and can produce a fast, large current. Defects in this gene were noted as a possible cause of some forms of epilepsy. [provided by RefSeq, Jan 2017]

Product images:



Circular map for RC214036



Western blot validation of overexpression lysate (Cat# [LY420072]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC214036 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).