

Product datasheet for **RG233861**

Kv1.2 (KCNA2) (NM_001204269) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Kv1.2 (KCNA2) (NM_001204269) Human Tagged ORF Clone
Tag: TurboGFP
Symbol: KCNA2
Synonyms: DEE32; EIEE32; HBK5; HK4; HUKIV; KV1.2; MK2; NGK1; RBK2
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC-GFP (PS100010)
E. coli Selection: Ampicillin (100 ug/mL)
ORF Nucleotide Sequence: >RG233861 representing NM_001204269
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGACAGTGGCCACCGGAGACCCAGCAGACGAGGCTGCTGCCCTCCCTGGGCACCCACAGGACACCTATG
 ACCCAGAGGCAGACCACGAGTGTGTGAGAGGGTGGTGATCAACATCTCAGGGCTGCGGTTTGAGACCCA
 GCTAAAGACCTTAGCCAGTTTCCAGAGACCCTTAGGGGACCCAAAGAAACGAATGAGGTACTTTGAC
 CCCCTCCGAAATGAGTACTTTTTCGATCGGAACCGCCCTAGCTTTGATGCCATTTTGTACTACTACCAGT
 CAGGGGGCCGATTGAGGCGACCTGTGAATGTGCCCTTAGATATATTCTCTGAAGAAATTCGGTTTTATGA
 GCTGGGAGAAGAAGCGATGGAGATGTTTCGGGAAGATGAAGGCTACATCAAGGAGGAAGAGCGTCCCTCTG
 CCTGAAAATGAGTTTCAGAGACAAGTGTGGCTTCTTTGAATACCCAGAGAGCTCAGGGCCTGCCAGGA
 TTATAGCTATTGTGTCTGTATGGTATTCTGATCTCAATTGTCAGCTTCTGTCTGGAAACATTGCCCAT
 CTTCCGGGATGAGAAATGAAGACATGCATGGTAGTGGGGTACCTTCCACACCTATTCCAACAGCACCATC
 GGGTACCAGCAGTCCACTTCTTCACAGACCCTTCTTCATTGTAGAGACTCTGCATCATCTGGTTCT
 CCTTTGAATCTTGGTGAGGTTCTTGCCTGTCCAGCAAAGCCGGCTTCTTACCAACATCATGAACAT
 CATTGACATTGTGGCCATCATCCCTACTTCATCACCTGGGGACAGAGTTGGCTGAGAAGCCAGAGGAC
 GCTCAGCAAGGCCAGCAGGCCATGTCACCTGGCCATCCTCCGTGTATCCGTTGGAACGCAGACCTCTGC
 AAAGCCAGAAGAGTAAGCGGGGAAGGCAGCATCTGAACACCTCACATGACTGCACCTTAGGAATTAACCT
 AGTCGCGGCATGACTGTACAGTGGACCAGGCATCTGGTCTGATGACAGGCAGACACCAGCTGTAAC
 ACATTGCACAGGATGTAT

ACGGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG233861 representing NM_001204269
 Red=Cloning site Green=Tags(s)

MTVATGDPADAAAALPGHPQDTYDPEADHECCERVVINISGLRFETQLKTLAQFPETLLGDPPKRMRYFD
 PLRNEYFFDRNRPSFDAILYYYQSGGRLRRPVNVPLDIFSEEIRFYELGEEAMEMFREDEGYIKEEERPL
 PENEFQRQVWLLFEYPSSGPARIIAIVSYMVILISIVSFCLETLPFRDENEDMHGSGVTFHTYSNSTI
 GYQQSTSFDPFFIVETLCIIWFSFEFLVRFACPSKAGFFTNIMNIIDIVAIIPYFITLGTLEAKPED
 AQQGQQAMSLAILRVIRLERRPLQSQKSKRGRQHLNNTSHDCTLGINLVAGMTVQWTRASGPDDRQTPAVT
 TLHRMY

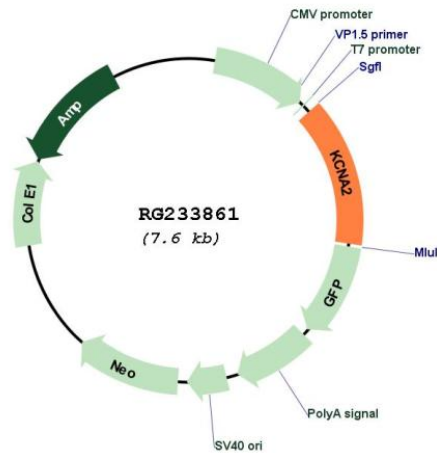
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001204269

ORF Size:	1068 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:	<ol style="list-style-type: none">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_001204269.2
RefSeq Size:	2022 bp
RefSeq ORF:	1071 bp
Locus ID:	3737
UniProt ID:	P16389
Cytogenetics:	1p13.3
Protein Families:	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 delayed rectifier class, members of which allow nerve cells to efficiently repolarize following an action potential. The coding region of this gene is intronless, and the gene is clustered with genes KCNA3 and KCNA10 on chromosome 1. [provided by RefSeq, Jul 2008]