

Product datasheet for **RG222757**

Kv4.3 (KCND3) (NM_004980) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Kv4.3 (KCND3) (NM_004980) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Kv4.3
Synonyms:	BRGDA9; KCND3L; KCND3S; KSHIVB; KV4.3; SCA19; SCA22
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG222757 representing NM_004980
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGCGGCCGGAGTTGCGGCCTGGCTGCCTTTTGCCCGGCTGCGGCCATCGGGTGGATGCCGGTGGCCA
 ACTGCCCCATGCCCTGGCCCCGGCCGACAAGAACAAGCGGCAGGATGAGCTGATTGTCCCTCAACGTGAG
 TGGGCGGAGGTTCCAGACCTGGAGGACACGCTGGAGCGCTACCCGGACACCCTGCTGGGACGACGGAG
 AAGGAGTCTTCTTCAACGAGGACACCAAGGAGTACTTCTTCGACCGGGACCCGAGGTGTTCCGCTGCG
 TGCTCAACTTCTACCGCACGGGAAGCTGCACTACCCGCGCTACGAGTGCATCTCTGCCTACGACGACGA
 GCTGGCCTTCTACGGCATCTCCCGGAGATCATCGGGGACTGCTGCTACGAGGAGTACAAGGACCGCAAG
 AGGGAGAACGCCGAGCGGCTCATGGACGACAACGACTCGGAGAACAACCAGGAGTCCATGCCCTCGCTCA
 GCTTCCGCCAGACCATGTGGCGGGCCTTCGAGAACCCCCACACCAGCACGCTGGCCCTGGTCTTCTACTA
 CGTGACTGGCTTCTTCATCGCTGTCTCGGTTCATACCAACGTGGTGGAGACGGTGCCGTGCGGCACGGTC
 CCGGGCAGCAAGGAGCTGCCGTGCGGGGAGCGCTACTCGGTGGCCTTCTTCTGCCTGGACACGGCGTGCG
 TCATGATCTTCACCGTGGAGTACCTCCTGCGGCTCTTCGCGGCTCCCAGCCGCTACCGCTTCATCCGCGAG
 CGTCATGAGCATCATCGACGTGGTGGCCATCATGCCCTACTACATCGGTCTGGTTCATGACCAACAACGAG
 GACGTGTCGGCGCCTTCGTCACGCTCCGGGCTTCCGCGTCTTCAGGATCTTCAAGTTTTCCCGCCACT
 CCCAGGGCCTGCGGATCCTGGGTACACACTGAAGAGCTGTGCCTCCGAAGTGGGCTTCTTCTCTTCTC
 CCTCACCATGGCCATCATCATCTTTGCCACTGTGATGTTTTATGCCGAGAAGGGCTCCTCGGCCAGCAAG
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 GCAAGCGCAACGGGCTCCTCAACGAGGGCTGGAGCTGACGGGCACCCAGAAAGAGGAGCACATGGGCAA
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 AGATGTTTGAGCAGAAGTGCATGGAGAGTTCAATGCAGAAGTACCATCCACAAGAAGTCCCTCACTGTC
 CAGCCACCCAGGCTCACTACCACCTGCTGCTCCCGTGTAGTAAAGAAGACCACACACCTGCCCAATTCT
 AACCTGCCAGTACTCGCTGCGCAGCATGCAAGAGCTCAGCACGATCCACATCCAGGGCAGTGAGCAGC
 CCTCCCTCACAACCAGTCGCTCCAGCCTTAATTTGAAAGCAGACGACGGACTGAGACCAAACTGCAAAAC
 ATCCCAGATCACACAGCCATCATCAGCATCCCCACTCCCCAGCGCTAACCCAGAGGGGGAAAGTCGG
 CCACCCCTGCCAGCCAGGCCCAACACGAACATTCTTCCATAGCCAGCAATGTTGTCAAAGTCTCCG
 CCTTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG222757 representing NM_004980
Red=Cloning site Green=Tags(s)

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MAAGVAAWLPFARAAAIGWMPVANCPMLAPADKNKRQDELIVLNVSGRRFQTWRTTLERYPDTLLGSTE
KEFFFNEDTKEYFFDRDPEVFRCLVNFYRTGKLNHYPRYECISAYDDELAFYGLPEIIGDCCYEEYKDRK
RENAERLMDNDSENQESMPSLSFRQTMWRAFENPHTSTLALVFYYVTGFFIAVSVITNVVETVPCGTV
PGSKELPCGERYSVAFFCLDTACVMIFTEYLLRLFAAPSRYRFRIRSVMSIIDVVAIMPYYIGLVMTNNE
DVSGAFVTLRVFRVFRIFKFSRHSQGLRILGYTLKSCASELGFLFLSLTMAIIFATVMFYAEKGSASK
FTSIPASFWYITVMTTLGYGDMVPKTIAGKIFGSICSLSGVLVIALPVPVIVSNFSRIYHQNRADKRR
AQKKARLARIRVAKTGSSNAYLHSKRNLLEALELGTPEEEHMGKTTSLIESQHHLLHCLEKTTGLS
YLVDPLL SVRTSTIKNHEFIDEQMFEQNCMESSM QNYPSTRSPSLSSHPGLTTTCCSRRSKKTTHLPNS
NLPATRLRSMQELSTIHIQGEQPSLTTSRSSLNLKADDGLRPNCKTSQITTAIISIPTPALTPEGESR
PPASP GPNTNIPSIASNVVKVSAL
    
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TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_004980

ORF Size: 1965 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_004980.5](#)

RefSeq Size: 2693 bp

RefSeq ORF: 1968 bp

Locus ID: 3752

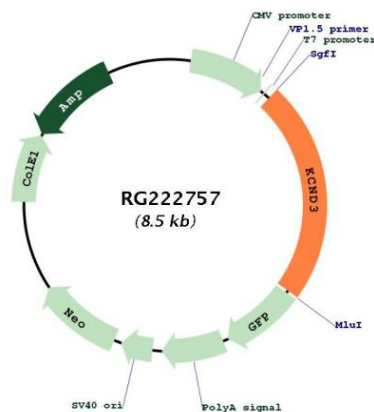
UniProt ID: [Q9UK17](#)

Cytogenetics: 1p13.2

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. 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, shal-related subfamily, members of which form voltage-activated A-type potassium ion channels and are prominent in the repolarization phase of the action potential. This member includes two isoforms with different sizes, which are encoded by alternatively spliced transcript variants of this gene. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG222757