

## Product datasheet for **RG210186**

### **Kv1.6 (KCNA6) (NM\_002235) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Kv1.6 (KCNA6) (NM_002235) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Kv1.6
Synonyms:	HBK2; KV1.6; PPP1R96
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG210186 representing NM\_002235  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAGATCGGAGAAATCCCTTACGCTGGCGGCCCGGGGAGGTCCTGGGCCGGAGGGAGAGCAACAGG  
 ATGCGGGAGACTTCCCGAGGCCGGCGGGGGCTGCTGTAGTAGCGAGCGCTGGTGATCAATAT  
 CTCGGGCTGCGCTTTGAGACACAATTGCGCACCTGTCGCTGTTTCCGGACACGCTGCTCGGAGACCT  
 GGCCGGGAGTCCGCTTCTCGACCCCCTGAGGAACGAGTACTTCTCGACCGCAACCGCCAGCTTCG  
 ACGCCATCTACTACTACCAGTCTGGGGCCGCTGCGGAGGCCGTCAACGTGCCCTGGACATTTT  
 CCTGGAGGAGATCCGCTTCTACCAGTGGGGGACGAGGCCCTGGCGCCTTCCGGGAGGACGAGGGCTG  
 CTGCCGAAGGTGGCGAGGACGAGAAGCCGCTGCCCTCCAGCCCTTCCAGCGCCAGGTGTGGCTGCTCT  
 TTGAGTACCCAGAGACTCTGGCCGGCCAGGGCATCGCCATCGTCTCCGTGTTGGTCATTCTCATCTC  
 CATAGTCATCTTTGCCGGAGACCTTACCCAGTTCCTGTAGATGGTGGAGGTGAAACAATGGTGGT  
 GTGAGTCGAGTCTCCCCAGTTTCCAGGGGAGTCAAGGAGGAAGAGGAGGATGAAGACGATTCTACACAT  
 TTCATCATGGCATCACCCCTGGGAAATGGGGACCGGGGCTCCTCCTCACTCAGTACTCTTGGGGCTC  
 CTCTTTACAGACCCCTTCTTCTGGTGGAGACGCTGTGCATTGTCTGGTCACTTTTGAGCTCTGGTG  
 CGCTTCTCCGCTGCCCTAGCAAGCCGGCTTCTCCGGAACATCATGAACATCATTGACTTGGTGGCTA  
 TCTTCCCTACTTCATCACCCCTGGGCACTGAGCTGGTGCAGCAGCAGGAGCAGCAACCAGCCAGTGGAGG  
 AGGCGCCAGAATGGGCAGCAGGCCATGTCCTGGCCATCCTCCGAGTCATCCGCTGGTCCGGGTGTT  
 CGCATCTTCAAGCTCTCCGCCACTCAAGGGGCTGCAGATCCTGGCAAGACCTGCAGGCCTCCATGA  
 GGGAGTGGGGCTGCTCATCTTCTCTTCTCGGGTCACTCTTCTCCAGTCCGCTACTCTACTCTCGC  
 AGAGGCTGACGATGACGATTGCTTTTCCAGCATCCCGGATGCCTTCTGGTGGCAGTGGTTACAATG  
 ACCACGGTAGGTTACGGGACATGTACCCATGACTGTGGGGGAAAGATCGTGGGCTCGCTGTGTGCCA  
 TCGCTGGGGTCTCACCATGTCCTGTGCCGTCATCGTCTCCAACCTCAACTACTTCTACCACCG  
 GGAGACGGAGCAGGAGGACCAAGCCAGTATACCCACGTCACCTGTGGGCAGCCTGCGCCGGACCTGAGG  
 GCAACTGACAACGGACTTGGCAAGCCTGACTTCCCGAGGCTAACCGGAAACGGAGACCCAGCTACCTTC  
 CTACACCACATCGGGCTATGCAGAGAAAAGATGCTCACGGAGGTC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG210186 representing NM\_002235  
 Red=Cloning site Green=Tags(s)

MRSEKSLTAAPEVGRGPEGEQQDAGDFPEAGGGGCCSSERLVINISGLRFETQLRRLSLFPDILLGDP  
 GRRVRFDFPLRNEYFFDRNRPSFDAILYYYQSGGRLRRPVNVPLDIFLEEIFRYQLGDEALAAFREDEGC  
 LPEGGEDEKPLPSQPFQWLLFEYPESSGPARGIAIVSVLVILISIVIFCLELTPQFRVDGRGNNNGG  
 VSRVSPVSRGSQEEEEDEDDSYTFHHGITPGEMGTGGSSSLSTLGGFFTDPFLLVETLCIVWFTFELLV  
 RFSACPSKPAFFRNIMNIDLVAIFPYFITLGTQLVQQEQQPASGGGQNGQAMSLAILRVIRLVRF  
 RIFKLSRHSKGLQILGKTLQASMRELGLLIFFLFIGVILFSSAVYFAEADDDSLFSPIDAFWVAVTMT  
 TTVGYGDMYPMTVGGKIVGSLCAIAGVLTIALPVPVIVSNFNFYHRETEQEEQQYTHVTCGQPAPDLR  
 ATDNLGKPDFPEANRERRPSYLPVPHRAYAEKRLTEV

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_002235

**ORF Size:** 1587 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\\_002235.3](#), [NP\\_002226.1](#)

**RefSeq Size:** 4237 bp

**RefSeq ORF:** 1590 bp

**Locus ID:** 3742

**UniProt ID:** [P17658](#)

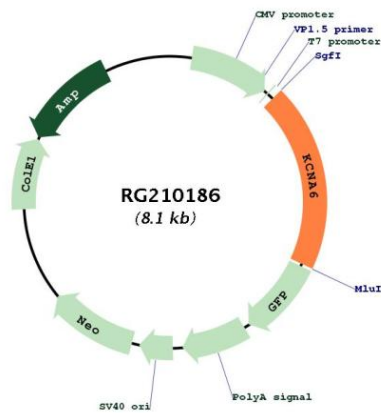
**Cytogenetics:** 12p13.32

**Domains:** BTB, K\_tetra, ion\_trans

**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. The coding region of this gene is intronless, and the gene is clustered with genes *KCNA1* and *KCNA5* on chromosome 12. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RG210186