

## Product datasheet for **RG214540**

### KCNH3 (NM\_012284) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	KCNH3 (NM_012284) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	KCNH3
Synonyms:	BEC1; ELK2; Kv12.2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG214540 representing NM_012284 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCCGGCCATGCGGGGCTCCTGGCGCCGAGAACACCTTCCTGGACACCATCGCTACGCGTTTCGACG  
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TGGCTTCTGTGACCTCACGGGCTTCTCCGGGCTGAGGTCATGCAGCGGGGCTGTGCTGCTCCTCCTT  
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CAAGCACAAAGCTCAATAAGGGGGTGTGGGGAGAAACCAAACTTGCCTGAGTACAAAGTAGCCGCATC  
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CTGATGCACGCGGTGGTGTTTGGGAACGTGACGGCCATCATCCAGCGCATGTACGCCCGCCGCTTTCTGT
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TGGGCCCGCAGAGCCTGTGAGCCAGGCTGAGGCTACCAGCACTGGAGAGCCCCACCAGGGTCAGGGGGC
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AGTGGACCAGGAAGAAGGCACAGGGGTC
    
```

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>RG214540 representing NM\_012284  
 Red=Cloning site Green=Tags(s)

```

MPAMRGLLAPQNTFLDTIATRFDGTHSNFVLGNAQVAGLFPVVYCSDFCDLTGFSRAEVMQRGCACSF
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GPDWKETGGRRRYGRARSKGFNANRRRSRAVL YHLSGHLQKQPKGKHLNKGVFGEKPNLPEYKVAAI
RKSPFILLHCGALRATWDGFILLATLYAVTVPYSVCVSTAREPSAARGPPSVCDLAVEVLFILDIVLNF
RTTFVSKSGQVVFAPKSICLHYVTWFLLDVIAALPFDLLHAFKVNYYFGAHLKTVRLLRLLRLLPRLD
RYSQYSAVVLTLLMAVFAALLAHWVACVWFYIGQREIESESESELPEIGWLQELARRLETPYYLVGRRPAGG
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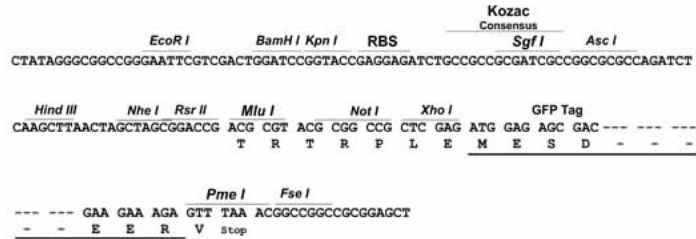
TRTRPLE – GFP Tag – V

**Restriction Sites:**

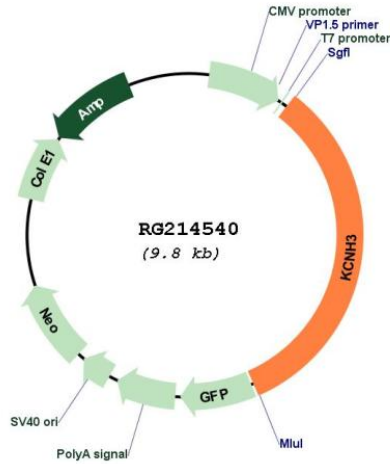
SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM\_012284  
 ORF Size: 3249 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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\\_012284.3](#)

**RefSeq Size:** 3853 bp

**RefSeq ORF:** 3252 bp

**Locus ID:** 23416

**UniProt ID:** [Q9ULD8](#)

**Cytogenetics:** 12q13.12

**Protein Families:** Druggable Genome, Ion Channels: Potassium, Transmembrane

**Gene Summary:** The protein encoded by this gene is a voltage-gated potassium channel alpha subunit predominantly expressed in the forebrain. Studies in mice have found that cognitive function increases when this gene is knocked out. In humans, the encoded protein has been shown to be capable of binding glycoprotein 120 of the human immunodeficiency virus type 1 (HIV-1) envelope. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Sep 2015]