

Product datasheet for **RG220242**

KCNQ4 (NM_004700) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KCNQ4 (NM_004700) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	KCNQ4
Synonyms:	DFNA2; DFNA2A; KV7.4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG220242 representing NM_004700
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

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AC**GGGCCGCT**CGAG – GFP Tag – GTTTAA

Protein Sequence: >RG220242 representing NM_004700
 Red=Cloning site Green=Tags(s)

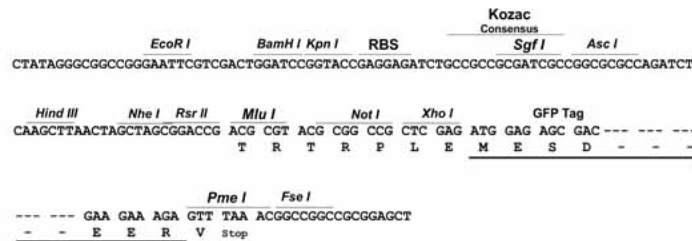
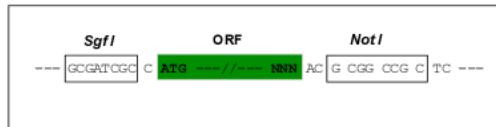
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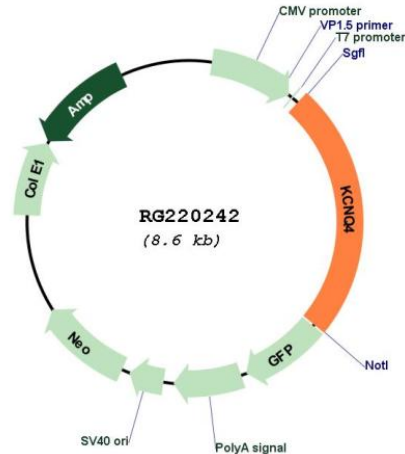
TRPLE - GFP Tag - V

Restriction Sites: SgfI-NotI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:


ACCN: NM_004700

ORF Size: 2085 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_004700.4](#)

RefSeq Size: 2335 bp

RefSeq ORF:	2088 bp
Locus ID:	9132
UniProt ID:	P56696
Cytogenetics:	1p34.2
Protein Families:	Druggable Genome, Ion Channels: Potassium, Transmembrane
Gene Summary:	<p>The protein encoded by this gene forms a potassium channel that is thought to play a critical role in the regulation of neuronal excitability, particularly in sensory cells of the cochlea. The current generated by this channel is inhibited by M1 muscarinic acetylcholine receptors and activated by retigabine, a novel anti-convulsant drug. The encoded protein can form a homomultimeric potassium channel or possibly a heteromultimeric channel in association with the protein encoded by the KCNQ3 gene. Defects in this gene are a cause of nonsyndromic sensorineural deafness type 2 (DFNA2), an autosomal dominant form of progressive hearing loss. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]</p>