

Product datasheet for **RG214525**

CNG1 (CNGA1) (NM_000087) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CNG1 (CNGA1) (NM_000087) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CNG1
Synonyms:	CNCG; CNCG1; CNG-1; CNG1; RCNC1; RCNCa; RCNCalpha; RP49
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide
Sequence:

>RG214525 representing NM_000087
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCCGCATCGCC

ATGAAACTATCCATGAAGAACAATATTATCAATACACAGCAGTCTTTTGTAAACATGCCCAATGTGATTG
TACCAGATATTGAAAAGGAAATACGAAGGATGGAAAATGGAGCATGCAGCTCCTTTTCTGAGGATGATGA
CAGTGCCTCTACATCTGAAGAATCAGAGAATGAAAACCTCATGCAAGGGTTCTCTTTAGTTATAAGTCA
CTCAGAAAAGGGAGGACCATCACAGAGGGAGCAGTACCTGCCTGGTGCCATTGCACCTTTTTAATGTGAACA
ACAGCAGCAATAAGGACCAGGAACCAGAAGAAAAAGAAAAAGAAAAAGAAAAAGAAAGAGCAAGTCAAGT
TGATAAAAACGAAAATAAAAACGACCCAGAGAAGAAAAAGAAAAAGGACAAAGAGAAGAAAAAGAAA
GAGGAGAAAAGCAAAGATAAGAAAGAAGAGGAGAAGAAAGAGTTGTGGTTATTGATCCCTCGGAAACA
CATATTACAACCTGGCTGTTTTCATCACATTACCTGTTATGTACAACCTGGACAATGGTTATTGCCAGAGC
ATGTTTTGATGAACTTCAATCTGATTACCTAGAATATTGGCTCATTTTGGATTACGTATCAGACATAGTC
TATTTAATCGATATGTTTGTACGAACAAGGACAGGTTACCTAGAACAAGGACTGCTGGTAAAGGAAGAAC
TTAAACTCATAAATAAATAAATCCAACCTTGCAATTTAAACTTGATGTTCTGCTACTGATACCAACTGA
TTTGCTGTATTTAAGTTAGGGTGGAACTATCCAGAAATTAGATTAACAGGTTGTTACGGTTCTCTCGT
ATGTTTGGATTCTCCAGAGAACAGAAACAAGGACAAACTATCCAACATCTTCAGGATTTCCAACCTTG
TTATGTATATCGTCATCATTATCCACTGGAATGCATGTGTGTTCTACTCTATTTCTAAAGCTATTGGATT
TGGAAATGATACATGGGTCTACCTGATTAATGATCCTGAATTTGGCCGTTTGGCTAGAAAATACGTA
TACAGCCTTTACTGGTCTACACTGACTTTGACTACCATTGGTGAACACCCCTCCCGTGAGGGATTCTG
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ACAAAAAACAGTTGATGAGAAAGAAGTCTAAAGTATCTACCTGATAAACTAAGAGCAGAAATTGCCAT
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TTGGTCTTGAAATTGCAACCCCAAGTCTACAGTCTGGAGATTATTTGCAAGAAAGGGGATATCGGAC
GAGAGATGTACATTATCAAGGAAGGCAAACTCGCTGTGGTGGCAGATGATGGAGTCACTCAGTTTGTGGT
ATTGAGCGATGGCAGCTACTTCGGTGGATCAGCATTCTAACATTAAGGGAGCAAAGCTGGCAATCGA
AGAACGGCAATATTA AAAAGTATTGGCTACTCAGACCTGTCTGTCTCTCAAAGATGACCTCATGGAAG
CTCTAACTGAGTACCCAGATGCCAAAACCTATGCTGGAAGAGAAAGGGAAGCAGATTTAATGAAAGATGG
TCTACTGGATCTAAACATTGCAATGCTGGCAGTGATCCTAAAGATCTTGAAGAGAAGGTTACTCGAATG
GAGGGTCACTAGACCTCCTGCAAAACAGGTTTGGCCGAATCTTGGCTGAGTATGAGTCCATGCAGCAGA
AACTGAAACAAAGATTAACCAAGTTGAGAAAATTTCTGAAACCGCTTATTGACACAGAATTTCAAGTAT
TGAGGGACCTGGAGCGGAAAGTGGGCCCATCGACTCTACA

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >RG214525 representing NM_000087
 Red=Cloning site Green=Tags(s)

MKLSMKNNIINTQQSFVTMPNVIVPDIEKEIIRMENGACSSFSEDDDSASTSESEENENPHARGSFSYKS
 LRKGGPSQREQYLPGAIALFNVNNSNKDQPEEKKKKKKKKSKSDDKNENKNDPEKKKKKKDKEKKK
 EEKSKDKKEEKKVVVIDPSGNTYYNWLFCITLPVMYNWMTVIARACFDELQSDYLEYWLILDYVSDIV
 YLIDMFVTRTRTYLEQGLLVKEELKLINKYKSNLQFKLDVLSLIPDILLYFKLGWNYPEIRLNRLRFSR
 MFEFFQRTETRTNYPNIFRISNLVMIYIVIIHWNACVFYSISKAIGFGNDTWVYPDINDPEFGRLARKYV
 YSLYWSTLTLTTIGETPPPPVRDSEYVFVVVDFLIGVLI FATIVGNIGSMISNMNAARAEFQARIDAIKQY
 MHFRNVSKDMEKRVIKWFDYLWTKKTVDKEVVKYLPDKLRAEIAINVHLDLTKKVRIFADCEAGLLVE
 LVLKLQPQVYSPGDYICKKGDIGREMYIIEKGLAVVADDGVTQFVVLSDGSYFGEISILNIKGSKAGNR
 RTANIKSIGYSDLFCLSKDDLMEALTEYPAKTMLEEKQKQILMKDGLLDLNIANAGSDPKDLEEKVTRM
 EGSVDLLQTRFARILAEYESMQQKQRLTKVEKFLKPLIDTEFSSIEGPGAESGPIDST

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000087

ORF Size: 2070 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_000087.4](#)

RefSeq Size: 2532 bp

RefSeq ORF: 2061 bp

Locus ID: 1259

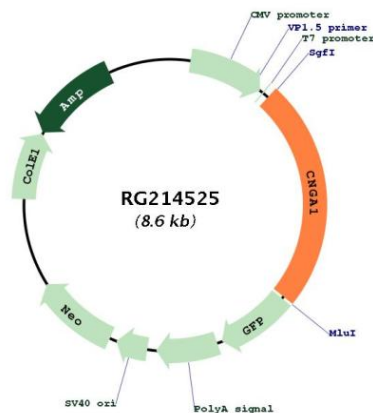
UniProt ID: [P29973](#)

Cytogenetics: 4p12

Protein Families: Druggable Genome, Ion Channels: Cyclic nucleotide gated, Transmembrane

Gene Summary: The protein encoded by this gene is involved in phototransduction. Along with another protein, the encoded protein forms a cGMP-gated cation channel in the plasma membrane, allowing depolarization of rod photoreceptors. This represents the last step in the phototransduction pathway. Defects in this gene are a cause of retinitis pigmentosa autosomal recessive (ARRP) disease. Multiple transcript variants have been found for this gene. [provided by RefSeq, Oct 2019]

Product images:



Circular map for RG214525