

## Product datasheet for **RG227648**

### **CNG1 (CNGA1) (NM\_001142564) Human Tagged ORF Clone**

#### **Product data:**

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids                                     |
| Product Name:             | CNG1 (CNGA1) (NM_001142564) 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)                                  |



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**ORF Nucleotide Sequence:**

>RG227648 representing NM\_001142564  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGAGTCTCGCTCTTCGCCAGGCTGGAGTGCAGTGGCGGATCTCGGCTCACTGCAGTCTTCACCTCC  
 CAGATTCAAGCGATTTCCAGCTAATTTTTGTATTTTTAGTAGAGATGGGATTTACCATGTTGCCAAGC  
 TGGACTTGAACCTCTGATCTCAAGTGATCTGCCACCTCAGCCTCCCAAAGTGCTGGTATTACAGATATG  
 AAATACTCCATGAAGAACAATATTATCAATACACAGCAGTCTTTTGAACCATGCCCAATGTGATTGTAC  
 CAGATATTGAAAAGGAAATACGAAGGATGGAAAATGGAGCATGCAGCTCCTTTTCTGAGGATGATGACAG  
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 AGAAAGGGAGGACCATCACAGAGGGAGCAGTACCTGCCTGGTCCATTGCACTTTTTAATGTGAACAACA  
 GCAGCAATAAGGACCAGGAACCAGAAGAAAAAAGAAAAAGAAAAAGAAAAAGAAAGCAAGTCAAGTGA  
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 GAGAAAAAGCAAGATAAGAAAGAAGAGGAGAAAGAAAGTGTGGTTATTGATCCCTCGGAAACACAT  
 ATTACAACCTGGCTGTTTTGCATCACATTACCTGTTATGTACAACCTGGACAATGGTTATTGCCAGAGCATG  
 TTTTGTGAACCTCAATCTGATTACCTAGAATATTGGCTCATTTTGGATTACGTATCAGACATAGTCTAT  
 TTAATCGATATGTTTGTACGAACAAGGACAGGTTACCTAGAACAAGGACTGCTGGTAAAGGAAGAACTTA  
 AACTCATAAATAAATAAATCCAACCTTGAATTTAACTTGTGTTCTGTCACTGATACCAACTGATTT  
 GCTGTATTTAAGTTAGGGTGGAACTATCCAGAAATTAGATTAACAGGTTGTTACGGTTCTCTCGTATG  
 TTTGAGTCTTCCAGAGAACAGAAACAAGGACAAACTATCCAACATCTTCAGGATTTCCAACCTTGTTA  
 TGATATATCGTCATCATTATCCACTGGAATGCATGTGTCTACTCTATTTCTAAAGCTATTGGATTTGG  
 AAATGATACATGGGTCTACCCTGATTAATGATCCTGAATTTGGCCGTTTGGCTAGAAAAATACGTATAC  
 AGCCTTTACTGGTCTACACTGACTTTGACTACCATTGGTGAACACCCCTCCCGTGAGGGATTCTGAGT  
 ATGTCTTTGTGGTGGTTGATTTCTAATTGGAGTGTTAATTTTTGCTACCATCGTTGGTAACATAGGTTT  
 TATGATTTCCAACATGAATGCAGCCAGAGCAGAAATTTCAAGCAAGAATTGATGCTATCAAGCAATATATG  
 CATTTTCGAAATGTAAGCAAAGATATGGAAAAGAGGGTTATTAATGGTTTACTACCTGTGGACCAACA  
 AAAAAACAGTTGATGAGAAAGAAGTCTTAAAGTATCTACCTGATAAACTAAGAGCAGAAATGCCATCAA  
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 GTCTTGAATTTGCAACCCCAAGTCTACAGTCTGGAGATTATTTGCAAGAAAGGGGATATCGGACGAG  
 AGATGTACATTATCAAGGAAGGCAAACTCGCTGTGGTGGCAGATGATGGAGTCACTCAGTTTGTGGTATT  
 GAGCGATGGCAGCTACTTCGGTGAGATCAGCATTCTTAACATTAAGGGAGCAAAGCTGGCAATCGAAGA  
 ACGGCCAATATTAAGTATTGGCTACTCAGACCTGTTCTGTCTCTCAAAGATGACCTCATGGAAGCTC  
 TAACTGAGTACCCAGATGCCAAACTATGCTGGAAGAGAAAGGGAAGCAGATTTTAAAGAAAGATGGTCT  
 ACTGGATCTAAACATTGCAAAATGCTGGCAGTGATCCTAAAGATCTTGAAGAGAAGGTTACTCGAATGGAG  
 GGGTCAGTAGACCTCTGCAAACCAGGTTTCCCGAATCTTGGCTGAGTATGAGTCCATGCAGCAGAAAC  
 TGAACAAAGATTAACCAAGTTGAGAAATTTGAAACCGCTTATTGACACAGAATTTCAAGTATTGA  
 GGGACCTGGAGCGGAAAGTGGGCCATCGACTTACA

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG227648 representing NM\_001142564  
Red=Cloning site Green=Tags(s)

```
MESRSSPRLECSGAISAHCSLHLPDSSDFQLIFVFLVEMGFHHVGGAGLELLISSDLPTSASQSAGITDM
KLSMKNNIINTQQSFVTPNVIVPDIKEIRRMENGACSSFSEDDDSASTSEESENEPHARGSFYSKSL
RKGGPSQREQYLPGAIALFNVNNSNNDQEPKKEKKEKKEKSKSDDKNENKNDPEKKEKKEKKEKKE
EKSKDKKEEKEVVIDPSGNTYYNWLFCITLPVMYNWTMVIARACFDELQSDYLEYWLILDYVSDIVY
LIDMFVTRRTGYLEQGLLVKEELKLINKYKSNLQFKLDVLSLIPDLYFKLGWNYPEIRLNRLRFSRM
FEFFQRTETRTNYPNIFRISNLVYIVIVIIHWNACVFYSISKAIGFGNDTWVYPDINDPEFGRLARKYVY
SLYWSTLTLTTIGETPPPVRDSEYVYVVDVFLIGVLIFATIVGNIGSMISNMNAARAEFQARIDAIKQYM
HFRNVSKDMEKRVIKWFDYLTWNKTVDEKEVLKYL PDKLRAEIAINVHLDLTKKVRIFADCEAGLLVEL
VLKLQPQVYSPGDYICKKGDIGREMYIIKEGKLAVVADDGVTQFVVLSDGSYFGEISILNIKSKAGNRR
TANIKSIGYSDLFCLSKDDLMEALTEYPDAKTMLEEKGKQILMKDGLLDLNIANAGSDPKDLEEKVTRME
GSDVLLQTRFARILAEYESMQQKQRLTKVEKFLKPLIDTEFSSIEGPGAESGPIDST
```

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_001142564

**ORF Size:** 2277 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\\_001142564.1](#), [NP\\_001136036.1](#)

**RefSeq Size:** 2872 bp

**RefSeq ORF:** 2061 bp

**Locus ID:** 1259

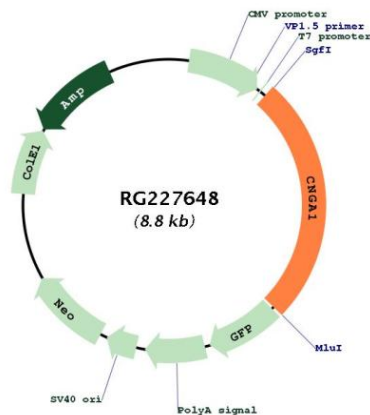
**UniProt ID:** [P29973](#)

**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 RG227648