

## Product datasheet for **RG223372**

### **COPG2 (NM\_012133) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	COPG2 (NM_012133) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	COPG2
Synonyms:	2-COP; gamma-2-COP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG223372 representing NM\_012133  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGATTAATAAAATTCGACAAGAAGGACGAGGAGTCTGGTGTGGCTCCAATCCTTTCCAGCATCTGGAGA  
 AGAGTGTGTTTTACAGGAGGCTCGTATATTCAATGAAACTCCAATCAATCCAAGAAGATGTTTGCATAT  
 TCTTACAAGATTCTTTACTTACTGAACCAAGGTTGAACACTTTGGAACAACGGAAGCTACAGAAGCCTTC  
 TTTGCAATGACGCGATTGTTTCAATCTAATGATCAAACATTGAGGAGAATGTGCTACCTTACCATCAAAG  
 AAATGGCTACCATCTCTGAGGATGTGATAATTGCACAAGCAGTCTGACTAAAGACATGACTGGAAAAGA  
 AGATGTATACCGAGGCCCGCCATCAGAGCTCTCTGCAGGATCACCGATGGAACAATGTTGCAAGCCATT  
 GAAAGATACATGAAGCAGGCCATTGTGGATAAAGTTTCCAGTGTATCCAGTTCAGCACTGGTATCTTCCC  
 TGCACATGATGAAGATAAGCTATGATGTGGTTAAGCGCTGGATCAATGAAGCCCAAGAAGCTGCATCAAG  
 TGATAATATTATGGTCCAGTACCATGCATTGGGAGTCTGTATCACCTTAGAAAGAAATGATCGACTTGCT  
 GTTCCAAGATGTTGAATAAGTTTACTAAATCTGGTCTCAAGTCACAGTTTGCTTACTGCATGCTGATCC  
 GAATTGCCAGTCGCTTACTAAAAGAAACTGAGGATGGGCATGAAAGTCCACTGTTTGATTTCATTGAGAG  
 CTGCTTGGCAAATAAACATGAAATGGTTATTTATGAAGCTGCTTCAGCTATCATCCATCTTCTTAACTGC  
 ACTGCAAGAGAGTTGGCACCTGCTGTTTCACTTTCTGTAGTTCTCCTAAGCCAGCCTTGA  
 GATATGCAGCTGTGAGGACCTTGAACAAGTGGCAATGAAGCACCCCTCTGCTGTTACTGCCTGCAATCT  
 GGACTTAGAAAATTAATCACAGACTCAAACAGAAGCATTGCTACCTTAGCCATTACTACACTCCTCAA  
 ACAGGAAGTGAGAGCAGTGTGGACCGCTCATGAAGCAGATATCTTTTGTGTCTGAAATCTCAGATG  
 AGTTCAAGTGGTGGTTGACAGGCAATTAGTCTCTCTGTGCAAAATACCCTCGAAAGCACAGTGCAT  
 GATGACTTTCCTCTCAACATGCTCCGAGATGATGGAGGCTTTGAGTACAAGCGGCCATTGTGGACTGT  
 ATAATCAGCATTGTGGAAGAGAACCCTGAGAGTAAAGAAGCAGGCCTAGCCACCTTTGTGAATTCATTG  
 AGGACTGTGAACACACTGTTCTGGCTACTAAGATTCTACACTTGTGGGCAAAGAGGGCCCTAGAAGCC  
 TGTCCCCTCCAAATATATCCGTTTTATTTTAAATAGGGTTGCTCCTGGAGAATGAGGCTGTGAGAGTGT  
 GCTGTGAGTGTGTTGGCTAAATTTGGGGCTCAGAAATGAGAGTCTTCTCCCAAGCATCCTTGTACTCTTAC  
 AGAGGTGTATGATGGATACTGATGACGAGGTACGAGACAGAGTACCTTCTATCTGAATGTGCTGCAGCA  
 GAGGCAGATGGCACTAAATGCCACATATATCTTAAATGGTTTGACGGTCTCTGTACCAGGGATGGAAAA  
 GCCTTACACCAGTACACGTTGGAGCCTCAGAAAAACCGTTTGACATGAAATCAATTCCTCTTGCTATGG  
 CTCTGTCTTTGAACAGAAAGCAGAAATCACACTTGTGGCTACTAAGCCAGAGAAGTTGGCTCCTCCAG  
 GCAAGACATTTTCCAAGAACAATTGGCTGCCATTCCTGAGTTTCTGAATATAGGACCCTTGTCAAGTCT  
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 ATCACATCGTGTCCAGTTTGACTGCACCAACTCTCAATGACCAGCTGCTGGAAAAAGTGACAGTGC  
 GATGGAGCCATCAGATTCCTATGAAGTGTCTTGTATCCCAGCCCCAGCCTTCTTATAACCAACCA  
 GGAATATGTTACTCTTGTTCGTTTGCCTGATGATGACCCTACAGCAGTTGCAGGCTCCTTAGCTGCA  
 CCATGAAGTTTACAGTCCGGGACTGTGACCCTAACACTGGAGTTCCAGATGAGGATGGGTATGATGATGA  
 GTATGTGCTGGAAGATCTCGAAGTGAAGTGTCTGACCATATTCAGAAAGTACTGAAGCCTAATTTGCT  
 GCTGCTTGGGAAGAGGTGGGAGATACCTTTGAGAAAGAGGAAACCTTTGCCCTCAGTTCTACAAAACCC  
 TTGAAGAGGCTGTCAACAATATCATCATTCTGGGCATGCAGCCATGTGAGAGTCCGATAAAGTACC  
 TGAGAACAAGAATCCCATTGCTCTATCTGGCAGGTATATTCAGAGGTGGCTATGATTTATTGGTGAGG  
 TCCAGGCTGGCCTTAGCCGATGGAGTGACCATGCAGGTGACTGTGAGAAGTAAAGAGAGAACACCTGTAG  
 ATGTTATCTTAGCTTCTGTTGGA

**ACGGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:** >RG223372 representing NM\_012133  
 Red=Cloning site Green=Tags(s)

MIKKFDKKDEESGSGSNPFQHLEKSAVLQEARIFNETPINPRCLHILTKILYLLNQGEHFGTTEATEAF  
 FAMTRLFQSNQTLRRMICYLTIKEMATISEDVIVTSSLTKDMTGKEDVYRGPALRALCRITDGTMLQAI  
 ERYMKQAIVDKVS SVSSALVSSLHMMKISYDVVKRWINEAQEAASSDNIMVQYHALGVL YHLRKNDRLA  
 VSKMLNKFTKSGLKSQFAYCMLIRIASRLLKETEDGHESPLDFDIESCLRKNKHEMVIYEASAI IHL PNC  
 TARELAPAVSVLQLFCSSPKPALRYAAVRTLNKVMKHP SAVTACNL DLENLITDSNRSIATLAITLLK  
 TGSESSVDRLMKQISSFVSEISDEFKVVVVQAISALCQKYPRKHSVMMTFLSNMLRDDGGFEYKRAIVDC  
 IISIVEENPESKEAGLAHLCEFIEDCEHTVLATKILHLLGKEGPRTPVPSKYIRFIFNRVLENEAVRAA  
 AVSALAKFGAQNESLLPSILVLLQRCMMDDDEVRDRATFYLNVLQQRQMALNATYIFNGLTVSVPGMEK  
 ALHQYTLEPSEKPFDMKSIPLAMAPVFEQKAEITLVATKPEKLAPSRQDIFQEQLAAIPEFLNIGPLFKS  
 SEPVQLTEAETEYFVRCIKHMF TNHIVFQFDCNTLNDQLLEKVTVMPEP SDSYEVLS CIPAPSLPYNQP  
 GICYTLVRLPDDPTAVAGSF SCKMKT VTRDCDPNTGVPDEDDGYDDEYVLEDLETVSDHIQKVLKPNFA  
 AAWEEVGDTFEKEETFALSSTKTLEEAVNNIITFLGMQPCERSDKVPENKNSHSLYLAGIFRGGYDLLVR  
 SRLALADGVTMQVTVRSKERTPVDVILASVG

TRTRPLE - GFP Tag - V

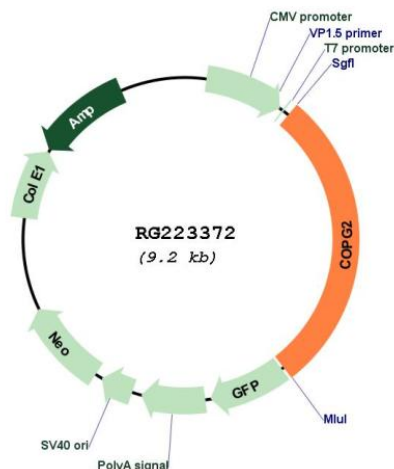
**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



Plasmid Map:



ACCN: NM\_012133

ORF Size: 2613 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\\_012133.3](#), [NP\\_036265.3](#)

RefSeq Size: 3143 bp

RefSeq ORF: 2616 bp

Locus ID: 26958

UniProt ID: [Q9UBF2](#)

Cytogenetics: 7q32.2

Domains: Adaptin\_N

**Gene Summary:** The coatomer is a cytosolic protein complex that binds to dilysine motifs and reversibly associates with Golgi non-clathrin-coated vesicles, which further mediate biosynthetic protein transport from the ER, via the Golgi up to the trans Golgi network. Coatomer complex is required for budding from Golgi membranes, and is essential for the retrograde Golgi-to-ER transport of dilysine-tagged proteins. In mammals, the coatomer can only be recruited by membranes associated to ADP-ribosylation factors (ARFs), which are small GTP-binding proteins; the complex also influences the Golgi structural integrity, as well as the processing, activity, and endocytic recycling of LDL receptors (By similarity).[UniProtKB/Swiss-Prot Function]