

## Product datasheet for **RC209018**

### **COPG (COPG1) (NM\_016128) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	COPG (COPG1) (NM_016128) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	COPG
Synonyms:	COPG
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

>RC209018 ORF sequence  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGCATCGCC**

ATGTTGAAGAAATTCGACAAGAAGGATGAGGAGTCAGGTGGAGGCTCCAACCCATTCCAGCACCTTGAGA  
AGAGTGGCGTACTCCAGGAGGCCGTGATTTAATGAAACTCCCATCAACCCTCGGAAATGTGCCACAT  
CCTCACCAAGATTCTTTATCTCATAAACACAGGGGAGCACCTGGGGACCACGGAAGCGACCGAGGCCTTC  
TTTGCCATGACCAAGCTCTTTCAGTCCAATGATCCACACTCCGTCGGATGTGCTACTTGACCATCAAGG  
AGATGTCTTGCAATTGCAGAGGATGTCATCATTGTACCAGCAGCCTAACAAAAGACATGACTGGGAAAGA  
AGACAACACCGGGGCCCGCCGTGCGAGCCCTCTGCCAGATCACTGATAGCACCATGCTGCAGGCTATT  
GAGCGCTACATGAAACAAGCCATTGTGGACAAGGTGCCAGTGTCTCCAGCTCTGCCCTCGTGTCTTCT  
TGCACCTGCTGAAGTGCAGCTTTGACGTGGTCAAGCGCTGGGTGAATGAGGCTCAGGAGGCAGCATCCAG  
TGATAACATCATGGTCCAGTACCACGCACTAGGGCTCCTGTACCATGTGCGTAAGAATGACCGCCTAGCC  
GTCAATAAGATGATCAGCAAGGTACACGGCATGGCCTTAAGTCTCCCTTTGCCCTACTGCATGATGATCC  
GGTGGCCAGCAAGCAGCTGGAAGAGGAGGATGGCAGCCGTGACAGCCCACTGTTTGACTTCATCGAGAG  
CTGCTTGGCAACAAGCACGAGATGGTGGTGTATGAAGCCGCTCGGCCATCGTCAATCTGCCAGGCTGC  
AGTGCCAAAGAGCTGGCCCCGGCTGTGTGAGTGTCCAGCTTTTCTGCAGCTCACCAAGGCTGCTCTCC  
GCTATGCTGCTGTTTCCATACCCTCAATAAGGTTGCCATGAAGCATCCGTCAGCTGTGACAGCTTGAATCT  
GGATCTGGAGAACCTGGTACAGATTCAAACCGCAGCATTGCCACGCTGGCCATCACACCCCTCCTTAAG  
ACGGGCAGCGAGAGCAGCATCGACCGCCTCATGAAGCAGATCTCCTCCTCATGTGAGAAATCTCGGATG  
AATTCAAGGTGGTGGTTGTCCAGGCCATCAGTGCCTGTGTGAGAAATATCCTCGCAAACACGCCGCTCCT  
TATGAATTCCTGTTACCATGCTGCGGGAAGAGGGTGGCTTTGAGTATAAGCGCGCTATCGTGGACTGC  
ATCATCAGCATCATTGAAGAGAAGTCAAGAGCAAGGAGACAGGGCTGTACATCTGTGCGAGTTTATCG  
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GCTGTGAGTGTCTGGCGAAGTTTGGAGCCAGAATGAAGAGATGTTACCCAGTATCTTGGTGTGCTGA  
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GAAGCAGAAGGCCCTAATGCAGGCTATATCCTAAATGGTCTGACTGTGTCCATCCCTGGTCTGGAGAGG  
GCTCTGCAGCAGTACACTCTAGAACCATCAGAAAAACCTTTTGACCTCAAGTCTGTGCCCTGGCCACGG  
CGCCCATGGCAGAGCAGAGAACAGAAAGTACCCCATCACAGCAGTCAAACAGCCTGAGAAAGTGGCAGC  
TACCAGGCAGGAGATCTCCAGGAGCAGTTGGCAGCAGTGCCAGAGTTCCGCGGTCTTGGGCCCTCTTC  
AAGTCTCGCCTGAGCCCGTGGCCCTCACCGAGTCAAGAGACGGAGTATGTCATCCGCTGCACCAAACACA  
CCTTCACCAACCACATGGTTTTTTCAGTTTACTGCACAAACACTCAATGACCAGACCTTGGAGAATGT  
CACAGTGCAGATGGAGCCCACTGAGGCCTATGAGGTGCTCTGTTACGTGCTGCCCCGAGCCTGCCCTAC  
AACCAGCCCGGACCTGCTACACACTGGTGGCACTGCCAAAGAAGACCCACAGCTGTGGCCTGCACAT  
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AACTTCGAAGCAGCCTGGGATGAGGTAGGGATGAATTTGAGAAGGAGGAAACGTTACCTTGTCTACCA  
TCAAGACACTTGAAGAGGCTGTGGTAATATTGTGAAGTCTTGGGAATGCACCCTTGTGAGAGGTCAGA  
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CTGGTGCCTCCCGGCTGCTGCTTTTGGACACAGTGAATGCAGGTGACAGCCAGAAGTTTGGAGGAGC  
TGCCAGTAGACATCATCTGGCATCTGTGGGA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC209018 protein sequence  
 Red=Cloning site Green=Tags(s)

MLKKFDKKDEESGGGSPNFQHLEKSAVLQEARVFNETPINPRKCAHILTKILYLINQGEHLGTTEATEAF  
 FAMTKLFQSNPDLRRMICYLTIKEMSCIAEDVIVTSSLTKDMTGKEDNYRGPVAVRALCQITDSTMLQAI  
 ERYMKQAIQVVKVSVSSALVSSLHLLKCSFDVVKRWVNEAQEAASSDNIMVQYHALGLLYHVRKNDRLA  
 VNKMISKVTRHGLKSPFAYCMMIRVASKQLEEDGSRDSPLDFIESCLRNKHEMVVYEAASAIVNLPGC  
 SAKELAPAVSVLQLFCSSPKAALRYAAVRTLKVKVAMKHPASVATACNLLENLVTDSNRSIATLAITLLK  
 TGSESSIDRLMKQISSFSEISDEFKVVVVQAIASALCQKYPRKHAVLMNFLTMLREEGGFEYKRAIVDC  
 IISIIEENSEKETGLSHLCEFIEDCEFTVLATRILHLLGQEGPKTTNPSKYIRFIYNRVLEHEEVRAG  
 AVSALAKFGAQNEEMLPSILVLLKRCVMDDNEVRDRATFYLVNLEQKQKALNAGYILNGLTVSIPGLER  
 ALQQYTLEPSEKPFDLKSVPLATAPMAEQRTSTPITAVKQPEKVAATRQEIQEQLAAVPEFRGLGPLF  
 KSSPEPVALTESETEYVIRCTKHTFTNHMVVFQDCTNTLNDQTLNENTVQMEPTEAYEVLCCYVPARSLPY  
 NQPGTCYTLVALPKEDPTAVACTFCMMKFVTKDCDPTTGETDDEGYEDEYVLEDELVTVADHIQKVMKL  
 NFEAAWDEVGDEFEEKFTLSTIKTLEEAVGNIVKFLGMHPCERSDKVPDNKNTHTLLLAGVFRGGHDI  
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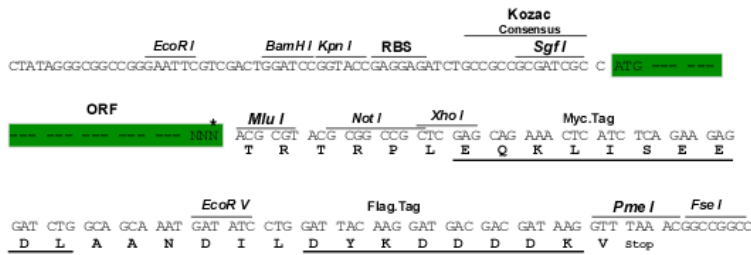
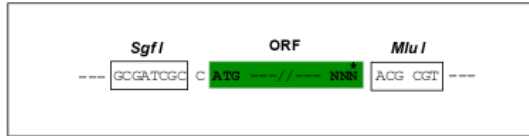
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6230\\_d05.zip](https://cdn.origene.com/chromatograms/mk6230_d05.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:

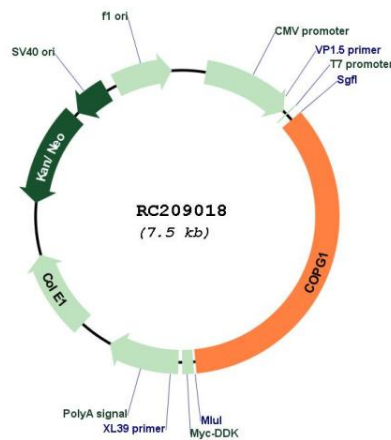


\* The last codon before the Stop codon of the ORF

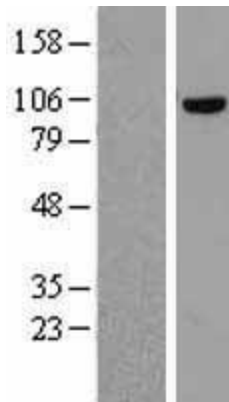
<b>ACCN:</b>	NM_016128
<b>ORF Size:</b>	2622 bp
<b>OTI Disclaimer:</b>	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), 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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_016128.4</a>
<b>RefSeq Size:</b>	3114 bp
<b>RefSeq ORF:</b>	2625 bp
<b>Locus ID:</b>	22820
<b>UniProt ID:</b>	<a href="#">Q9Y678</a>
<b>Cytogenetics:</b>	3q21.3
<b>Domains:</b>	Adaptin_N
<b>Protein Families:</b>	Druggable Genome
<b>MW:</b>	97.7 kDa

**Gene Summary:**

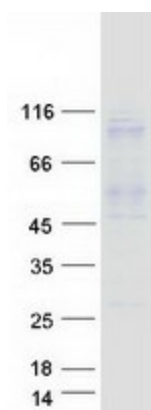
The coatomer is a cytosolic protein complex that binds to dilysine motifs and reversibly associates with Golgi non-clathrin-coated vesicles, which further mediate biosynthetic protein transport from the ER, via the Golgi up to the trans Golgi network. Coatomer complex is required for budding from Golgi 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. Required for limiting lipid storage in lipid droplets. Involved in lipid homeostasis by regulating the presence of perilipin family members PLIN2 and PLIN3 at the lipid droplet surface and promoting the association of adipocyte triglyceride lipase (PNPLA2) with the lipid droplet surface to mediate lipolysis (By similarity). [UniProtKB/Swiss-Prot Function]

**Product images:**


Circular map for RC209018



Western blot validation of overexpression lysate (Cat# [LY414174]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC209018 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified COPG1 protein (Cat# [TP309018]). The protein was produced from HEK293T cells transfected with COPG1 cDNA clone (Cat# RC209018) using MegaTran 2.0 (Cat# [TT210002]).