

## Product datasheet for **RG203462**

### **POLG2 (NM\_007215) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	POLG2 (NM_007215) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	POLG2
Synonyms:	HP55; MTDPS16; MTPOLB; PEOA4; POLB; POLG-BETA; POLGB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG203462 representing NM\_007215  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCGCTCTCGTGTAGCCGTGAGGGCTGCCATAAAGTCTGCAGGTGCCTGTTGTCTGGGTTGGGGGTC  
 GAGTAGATGCGGGCAGCCGGAGCTGTTGACGGAAAGGAGTAGCCCAAAGGAGGCATGTGAAGTCGCA  
 CGCGGAGCTCGAGGGAAACGCGGAGCACCCAGAAGCCCCGGGTCTGGAGAGGAAAGCGAGGCGCTGTTA  
 GAGATCTGTGAGAGAAGGCATTTCTAAGTGAAGCAAGCAGCAGCTTAGCCGGGATTCTCTTCTGAGTG  
 GGTGCCACCCCGCTTCGGACCCTTGGCGTAGAGTTGCGGAAGAACCCTGGCCGAGAATGGTGGACCTC  
 GGTGGTGGTGTTCAGGGAGCAGGTATCCCGGTGGACGCCCTCCACCACAAACCAGGCCCTTTGCTACCC  
 GGGGACAGTGCCTTCAGGTTAGTTTCTGCAGAACTCTACGCGAAATCTGCAAGACAAAGAGCTGAGTA  
 AGGAACAGCTAGTAGCATTTCTGAGAAGTATTAATAACTTCTGGGAACTACGGGAGAACCTTCTTCA  
 CGGTGCCTTGAACACTATGTTAATTGCCTGGATCTGGTAAACAAGAGGCTACCTTATGGCCTTGCTCAG  
 ATTGGAGTGTGTTTTATCCTGTTTTGACACTAAGCAGATACGAAATGGTGTAAAAAGTATTGGTGA  
 GACTGAAGCTTCGTTAGTATGTTTACTCCTCCGAGAATTCAAACCAGTGGCTTGATTCTCGTTACG  
 TCATCGACTCCAGTGGTGGAGAAAGTTGCCATGAGTCCATCTAACTTCAGCAGCAGTACTGTCAGGAT  
 GAAGAAGGCCGAAAGGAAACAACTTTACTACAATTTCCCTGGGAAAGGAGTTAATAGAAACCTGT  
 GGAACCTAGGAGATCACGAACCTTTACACATGTATCCTGGCAATGTGTCTAAATTACATGGCCGAGATGG  
 ACGAAAAATGTGTTCCCTTGTGTTCTCTGTAAATGGGACCTAGACCGAGGCATGCTGGCCTACCTC  
 TATGATCTTTCCAGCTGACAGAGAATCCTTTACAAGAAAGAAAAATCTTCATAGAAAGGTACTTAAAC  
 TTCACCTTGTTTAGCCCTATTAAGGTTGCTTTGGATGTAGGAAGAGGCCACACTTGGAACTAAGACA  
 GGTTTGTCAAGGGCTATTTAATGAGTTACTAGAAAATGGGATTTCTGTGTGGCCTGCTTATTTGAAACT  
 ATGCAGTCTCATTGGAACAATTTATTGAAAGTATGATGAAATGAGTATTCTTTCACAGTTTTGGTTA  
 CTGAAACTACTTTGGAGAATGGATTAATACATCTGAGAAGCAGAGACACCACAATGAAGGAAATGATGCA  
 TATATCCAAATAAAAGACTTTTTGATTAAGTATATATCATCAGCTAAGAATGTA

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG203462 representing NM\_007215  
 Red=Cloning site Green=Tags(s)

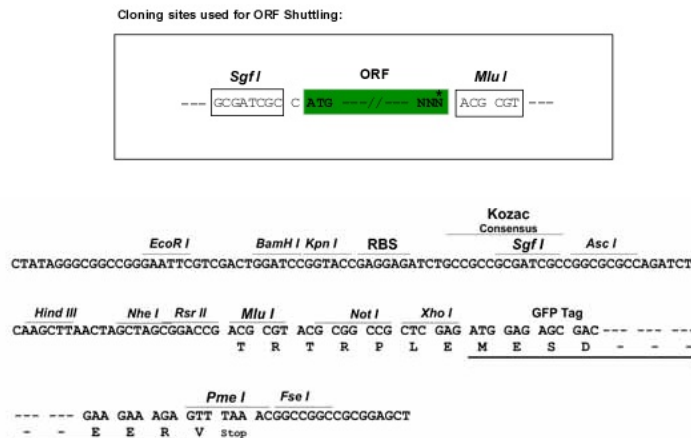
MRSRVAVRACHKVCRCLLSGFGRVDAGQPELLTERSSPKGGHVKSHAELEGNGEHPAPGSGEGSEALL  
 EICQRRHFLSGSKQQLSRDSSLGCHPGFGLVGLRKNLAAEWTSVVFREQVFPVDALHHPGPLLP  
 GDSAFRLVSAETLREILQDKLSKEQLVAFLENVLKTSGKLRENLLHGALEHYVNCLDLVNRKLPYGLAQ  
 IGVCFHPVFDTKQIRNGVKSIGEKTEASLVWFPPRSTSNQWLDWFLRHRLQWRRKFAMSPSNFSSSDCQD  
 EGRKGNKLYNFPWGKELIETLWNLGDHELLHMYPGNVSKLHGRDGRKNVPCVLSVNGDLDRGMLAYL  
 YDSFQLTENSFTRKKNLHRKVLKHPCLAPIKVALDVGRGPTLELRQVCQGLFNELLENGISVWPAYLET  
 MQSSLEQLYSKYDEMSILFTVLVTETLLENGLIHLRSRDTTMKEMMHISKLDKFLIKYISSAKNV

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_007215

**ORF Size:** 1455 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\\_007215.2](#), [NP\\_009146.2](#)

**RefSeq Size:** 1595 bp

**RefSeq ORF:** 1458 bp

**Locus ID:** 11232

**UniProt ID:** [Q9UHN1](#)

**Cytogenetics:** 17q23.3

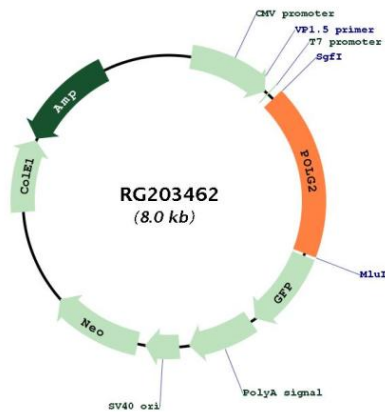
**Domains:** HGTP\_anticodon

**Protein Families:** Stem cell - Pluripotency

**Protein Pathways:** Metabolic pathways

**Gene Summary:** This gene encodes the processivity subunit of the mitochondrial DNA polymerase gamma. The encoded protein forms a heterotrimer containing one catalytic subunit and two processivity subunits. This protein enhances DNA binding and promotes processive DNA synthesis. Mutations in this gene result in autosomal dominant progressive external ophthalmoplegia with mitochondrial DNA deletions.[provided by RefSeq, Sep 2009]

**Product images:**



Circular map for RG203462