

Product datasheet for **RG204456**

DNA Polymerase gamma (POLG) (NM_002693) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | DNA Polymerase gamma (POLG) (NM_002693) Human Tagged ORF Clone |
| Tag: | TurboGFP |
| Symbol: | DNA Polymerase gamma |
| Synonyms: | MDP1; MIRAS; MTDPS4A; MTDPS4B; PEO; POLG1; POLGA; SANDO; SCAE |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-AC-GFP (PS100010) |
| E. coli Selection: | Ampicillin (100 ug/mL) |
| ORF Nucleotide Sequence: | >RG204456 representing NM_002693 Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAGCCGCTGCTCTGGAGGAAGGTGGCCGGCGCCACCCTCGGGCCAGGGCCGGTTCCAGCTCCGGGGC
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GCAGCAGCAGCAGCAACAGCAGCCTCAGCAGCCGCAAGTGCTATCCTCGGAGGGCGGGCAGCTGCGG
CACAACCCATTGGACATCCAGATGCTCTCGAGAGGGCTGCACGAGCAAATCTTCGGGCAAGGAGGGGAGA
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CGTGCCCTTGCCGACGTGGAGCTGCGCCTGCCGCCCTCTACGGGGACAACCTGGACCAGCACTTCCGC
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CGAAGCCCCGGCTTGGGCTGGGCGGAGGGCTGGACCCGGTACGGCCCCGAGGGGGAGGCCGTACCCGT
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CCAGAGAGACTGGCAGGAGCAGTTAGTGGTGGGCACAATGTTTCCTTTGACCGAGCTCATATCAGGGAG
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GCAAGGCCAGAAGTCCCAGAGAAAGCCAGAAGAGGCCACAGCATCTATCCTGGGACTGGCTGGACATC
AGCAGTGTCAACAGTCTGGCAGAGGTGCACAGACTTTATGTAGGGGGCCCTCCCTTAGAGAAGGAGCCTC
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CCAGGACGTGTGGGCCACCCATGAGGTTTTCCAGCAGCAGCTACCGCTCTTCTGGAGAGGTGTCCCCAC
CCAGTGACTCTGGCCGGCATGCTGGAGATGGGTGTCTCCTACCTGCCTGTCAACCAGAAGTGGGAGCGTT
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GACCTGCAAGAATTTAAGCAGAAGAAAGCTAAGAAGGTGAAGAAGGAACCCAGCCACAGCCAGCAAGTTGC
CCATCGAGGGGGCTGGGGCCCTGGTGATCCCATGGATCAGGAAGACCTCGGCCCTGCAGTGAGGAGGA
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AGGGTGAAGCGCTGGATATTTACCAGATAATTGAACTACCAAAGGCTCCTTGAAAAACGAAGCCAGCC
TGGACCA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG204456 representing NM_002693
 Red=Cloning site Green=Tags(s)

MSRLLWRKVAGATVGGPVPAPGRWVSSVPSADPSDQRRRQQQQQQQQQQQQPQPQVL SSEGGLR
 HNPLDIQMLSRGLHEQIFGQGGEMPGEAAVRRSVEHLQKHGLWGQPAVPLPDVELRPLPYGDNLDQHFR
 LLAQKQSLPYLEAANLLLAQQLPPKPPAWAWAEGWTRYGPEGEAVPVAIPEERALVFDVEVCLAEGTCPT
 LAVAI SPSAWYSWCSQRLVEERYSWTSQ LSPADLIPLEVPTGASSPTQRDWQEQLVVGHNVSFDRAHIRE
 QYLIQGSRMRFLLDTMSMHMAISGLSSFQ RSLWIAAKQGHKVPPTKQKQKSRKARRGPAISSWDWLDI
 SSVNSLAEVHRLYVGGPPLEKEPREL FVKGTMKDIRENFQDLMQYCAQDVWATHEVFQQQLPLFLERCPH
 PVTLAGMLEMGVSYLPVNQNWERYLAEAQGT YEELQREMKSLMDLANDACQLLSGERYKEDPWLWLEW
 DLQEFKQKAKKVKKEPATASKLPIEGAGAPGDPMDQEDLGPCSEEEEFQQDVMARACLKQKLGTELLP
 KRPHLPGHGPGWYRKLCPRLDDPAWTPG PSLLSLQMRVTPKLMALTWDGFPLHYSERHWGVLVPGRRDN
 LAKLPTGTTLESAGVVCYRAIESLYRKHCL EQGKQQLMPQEAGLAEFLLTDNSAIWQTVEELDYLEVE
 AEAKMENLRAAVPGQPLALTARGGPKDTPSYHHGNGPYNDVDIPGCWFFKLPKHDGNSCNVGSF AKDF
 LPKMEDGTLQAGPGGASGPRALEINKMISFWRNAHKRISSQM VVWLP RSALPRAVIRHPDYDEEGLYGA I
 LPQVVTAGTITRAVEPTWLTASNARPD RVGSELKAMVQAPPGYTLVGADVDSQELWIAAVLGD AHFAGM
 HGCTAFGWMTLQGRKSRGTDLHSKTATT VGI SREHAKIFNYGRIYAGQPFAERLLMQFNHRLTQQEAAE
 KAQQMYAATKGLRWYRLSDEGEWL VRELNLPVDRTEGGWISLQDLRKVQRETARKSQWKKWEVVAERAWK
 GGTESEMFNKLESIA TSDIPRTPVLGCCISRAL EPSAVQEEFMTSRVNWVQSSAVDYLHLMVAMKWL F
 EEFAIDGRFCISIHDEVRYLVREEDRYRAALALQITNLLTRCMFAYKLG LNDLPQSVAFFSAVDIDRCLR
 KEVTMDCKTPSNPTGMERRYGIPQGEALDIYQI IELTKGSLEKRSQPGP

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

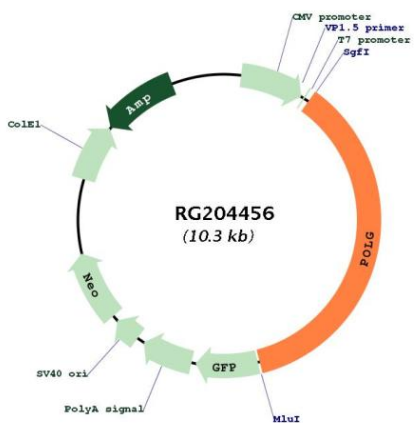


ACCN: NM_002693

ORF Size: 3717 bp

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| 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: | <ol style="list-style-type: none">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_002693.3 |
| RefSeq Size: | 4465 bp |
| RefSeq ORF: | 3720 bp |
| Locus ID: | 5428 |
| UniProt ID: | P54098 |
| Cytogenetics: | 15q26.1 |
| Domains: | DNA_pol_A |
| Protein Families: | Druggable Genome |
| Protein Pathways: | Metabolic pathways |
| Gene Summary: | Mitochondrial DNA polymerase is heterotrimeric, consisting of a homodimer of accessory subunits plus a catalytic subunit. The protein encoded by this gene is the catalytic subunit of mitochondrial DNA polymerase. The encoded protein contains a polyglutamine tract near its N-terminus that may be polymorphic. Defects in this gene are a cause of progressive external ophthalmoplegia with mitochondrial DNA deletions 1 (PEOA1), sensory ataxic neuropathy dysarthria and ophthalmoparesis (SANDO), Alpers-Huttenlocher syndrome (AHS), and mitochondrial neurogastrointestinal encephalopathy syndrome (MNGIE). Two transcript variants encoding the same protein have been found for this gene. [provided by RefSeq, Jul 2008] |

Product images:



Circular map for RG204456