

Product datasheet for **SC115638**

POLG2 (NM_007215) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	POLG2 (NM_007215) Human Untagged Clone
Tag:	Tag Free
Symbol:	POLG2
Synonyms:	HP55; MTDPS16; MTPOLB; PEOA4; POLB; POLG-BETA; POLGB
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >OriGene ORF within SC115638 sequence for NM_007215 edited (data generated by NextGen Sequencing)

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ATGCGCTCTCGTGTAGCCGTCAGGGCCTGCCATAAGGTCTGCAGGTGCCTGTTGTCTGGG
TTTGGGGTTCGAGTAGATGCGGGGCAGCCGGAGCTGTTGACGAAAGGAGTAGCCCCAAA
GGAGGGCATGTGAAGTCGCACCGGAGCTCGAGGGGAACGGCGAGCACCCAGAAGCCCC
GGGTCTGGAGAGGAAGCGAGCCGCTGTTAGAGATCTGTCAGAGAAGGCATTTCCTAAGT
GGAAGCAAGCAGCAGCTTAGCCGGGATTCTTTCTGAGTGGGTGCCACCCCGCTTCGGA
CCCTTGGGCGTAGAGTTGCGGAAGAACCCTGGCCGAGAATGGTGGACCTCGGTGGTGGTG
TTCAGGGAGCAGGTATTCGCCGTGGACGCCCTCCACCACAAACCAGGCCCTTTGCTACCC
GGGGACAGTGCCTTCAGGTTAGTTTCTGCAGAACTCTACGCGAAATCTTGAAGACAAA
GAGCTGAGTAAGGAACAGCTAGTAGCATTCTTGAGAACGTATTAATAACTTCTGGGAAA
CTACGGGAGAACCCTTTCACGGTGCCTTGAACACTATGTTAATTGCCTGGATCTGGTA
AACAGAGGCTACCTTATGGCCTTGCTCAGATTGGAGTGTGTTTTATCCTGTTTTGAC
ACTAAGCAGATACGAAATGGTGTAAAAGTATTGGTGAGAAGACTGAAGCTTCGTAGTA
TGTTTTACTCCTCCGAGAACTTCAAACCACTGGCTTGATTCTGGTTACGTCATCGACTC
CAGTGGTGAGAAAGTTGCCATGAGTCCATCTAACTTACGAGCAGTACTGTCAGGAT
GAAGAAGGCCGGAAGGAACAAACTTTACTACAATTTCCCTGGGAAAGGAGTTAATA
GAAACCCTGTGGAACCTAGGAGATCACGAACTTTTACACATGTATCCTGGCAATGTGTCT
AAATTACATGGCCGAGATGGACGAAAAATGTGGTTTCTTGTGTTCTCTCTGTAATGGG
GACCTAGACCGAGGCATGCTGGCCTACCTCTATGATTCTTTCCAGCTGACAGAGAACTCC
TTTACAAGAAAGAAAACTTTCATAGAAAGGTAATAACTTACCCTTGTAGCCCT
ATTAAGTTGCTTTGGATGTAGGAAGAGGCCACATTGGAATAAGACAGGTTTGTCAA
GGGCTATTTAATGAGTTACTAGAAAATGGGATTTCTGTGTGGCCTGGTTATTTGAAAAC
ATGCAGTCTCATTGGAACAACCTTATTGGAAGTATGATGAAATGAGTATTCTCTTACCA
GTTTTGGTTACTGAACTACTTTGGAGAATGGATTAATACATCTGAGAAGCAGAGACACC
ACAATGAAGGAAATGATGCATATATCCAAATTAAGACTTTTTGATTAAGTATATATCA
TCAGCTAAGAATGTATAG
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Clone variation with respect to NM_007215.3

5' Read Nucleotide Sequence:

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>OriGene 5' read for NM_007215 unedited
GGTTCAAATATTTGTATACGACTTCACTATAGGGCGGCCGGAATTCGCACGAGGCTCCG
GATTCTGTTAACGGTAGTGGTGGCTTGTGGGATCCGTTGAGTGTGGGAGAGTGTGCTC
TTAACTTCGGAGAGAGATGCGCTCTCGTGTAGCCGTCAGGGCCTGCCATAAGGTCTGCA
GGTGCCTGTTGTCTGGGTTTGGGGTTCGAGTAGATGCGGGGCAGCCGGAGCTGTTGACGG
AAAGGAGTAGCCCCAAAGGAGGGCATGTGAAGTCGCACCGGAGCTCGAGGGAAACGGCG
AGCACCCAGAAGCCCCGGGTCTGGAGAGGGAAGCGAGGCGCTGTTAGAGATCTGTCAGA
GAAGGCATTTCTAAGTGAAGCAAGCAGCAGCTTAGCCGGATTCTTCTGAGTGGGT
GCCACCCCGCTTCGGACCTTGGGCGTAGAGTTGCGGAAGAACCCTGGCCGAGAATGGT
GGACCTCGGTGGTGGTGTTCAGGGAGCAGGTATTCGCCGTGGACGCCCTCCACCACAAAC
CAGGCCCTTTGCTACCCGGGACAGTGCCTTCAGGTTAGTTTCTGCAGAACTCTACGG
AAATCTTGAAGACAAAGAGCTGAGTAAGGAACAGCTAGTAGCATTCTTGAGAACGTAT
TAAAAACTTCTGGGAACTACGGGAGAACCCTTTCACGGTGCCTTGAACACTATGTTA
ATTGCCTGGATCTGGNTAACAGAGGCTACCTTATGGCCTTGCTCAGATTGGAGTGTGTT
TTCATCCTGTTTTGACACTAAGCAGATACGAAATGGTGTAAAAGTATTGGTGAGAAGA
CTGAAGCTTCGTTAGTATGGTTTACTCCTCCGAGAACTTCAACCAGTGGGCTNGATTCTG
GTTACGTCATCGACTCCAGTGG
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3' Read Nucleotide Sequence:	>OriGene 3' read for NM_007215 unedited TGTACCGCGCCCGCATTCTAGNATCGAGTTTTTTTTTTTTTTTTTTAGAGAGAANAATT TTATTATACAAATATAAAAATCTATACATTCTTAGCTGATGATATATACTTAATCAAAAA GTCTTTTAATTTGGATATATGCATCATTTCCTTCATTGTGGTGTCTCTGCTTCTCAGATG TATTAATCCATTCTCCAAAGTAGTTTCAGTAACCAAACTGTGAAGAGAATACTCATTTTC ATCATACTTCGAATAAAGTTGTTCCAATGAGGACTGCATAGTTTCCAAATAACCAGGCCA CACAGAAATCCCATTTTCTAGTAACTCATTAATAAGCCCTTGACAAACCTGTCTTAGTTC CAATGTGGGGCCTTCTCTACATCCAAAGCAACCTTAATAGGGGCTAAACAAGGGTGAAG TTTAAGTACCTTTCTATGAAGATTTTTCTTTCTTGTAAAGGAGTTCTCTGTCAGCTGGAA AGAATCATAGAGGTAGGCCAGCATGCCTCGGTCTAGGTCCCCATTTACAGAGAGAACACA AGGAACCACATTTTTTCGTCCATCTCGGCCATGTAATTTAGACACATTGCCAGGATACAT GTGTA AAAAGTTTCGTGATCTCTAGTTCACAGGGTTTCTATTA ACTCTTTCCCAGGG AAAATTGTAGTAAAGTTTCTTTCCCTTTCCCGCCTTCTTCATCCTGACAGTCACTGCTGCT GAAGTTAGATGGACTCATGGCAAATTTCTCCACCACTGGAGTCGATGACGTACCCAGAA ATCAGCCCACTGGGTTTGTAGTTCTCGGAGGAGTAAACATACTAACGAAGCTTCAGTTCTC TACCCATACTCTAACACCATTTTCGTATCCTGCTAGATGTCAAACCAGATGAAAACAC ACTCCATCTGAACCAGCCCTAAGTAGCCC
Restriction Sites:	NotI-NotI
ACCN:	NM_007215
Insert Size:	1600 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	<u>NM_007215.2</u> , <u>NP_009146.2</u>
RefSeq Size:	1595 bp
RefSeq ORF:	1458 bp
Locus ID:	11232
UniProt ID:	<u>Q9UHN1</u>
Cytogenetics:	17q23.3
Domains:	HGTP_anticondon
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]