# POLI cDNA Clone – Polymerase (DNA Directed) Iota (Human)

## PRODUCT OVERVIEW

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|---|---|
| **Product Name** | POLI, cDNA Clone |
| **Full Product Name** | POLI cDNA Clone |
| **Product Gene Name** | POLI cdna clone |
| **Sequence** | atggaactgg cggacgtggg ggcggcagcc agctcgcagg gagttcatga tcaagtgttg cccacaccaa atgcttcatc cagagtcata gtacatgtgg atctggattg cttttatgca caagtagaaa tgatctcaaa tccagagcta aaagacaaac ctttaggggt tcaacagaaa tatttggtgg ttacctgcaa ctatgaagct aggaaacttg gagttaagaa acttatgaat gtcagagatg caaaagaaaa gtgtccacag ttggtattag ttaatggaga agacctgacc cgctacagag aaatgtctta taaggttaca gaattactgg aagaatttag tccagttgtt gagagacttg gatttgatga aaattttgtg gatctaacag aaatggttga gaagagacta cagcagctgc aaagtgatga actttctgcg gtgactgtgt cgggtcatgt atacaataat cagtctataa acctgcttga cgtcttgcac atcagactac ttgttggatc tcagattgca gcagagatgc gggaagccat gtataatcag ttggggctca ctggctgtgc tggagtggct tctaataaac tgttggcaaa attagtttct ggtgtcttta aaccaaatca acaaacagtc ttattacctg aaagttgtca acatcttatt catagtttga atcacataaa ggaaatacct ggtattggct ataaaactgc caaatgtctt gaagcactgg gtatcaatag tgtgcgtgat ctccaaacct tttcacccaa aattttagaa aaagaattag gaatttcagt tgctcagcgt atccaaaagc tcagttttgg agaggataac tcccctgtga tactctcagg accacctcag tcctttagtg aagaagattc atttaaaaaa tgttcatctg aagttgaagc taaaaataag attgaagaac tacttgctag tcttttaaac agagtatgcc aagatggaag gaagcctcat acagtgagat taataatccg tcggtattcc tctgagaagc actatggtcg tgagagtcgt cagtgcccta ttccttcaca tgtaattcag aaattaggga caggaaatta tgatgtgatg accccaatgg ttgatatact tatgaaactt tttcgaaata tggtgaatgt gaagatgcca tttcacctta cccttctaag tgtgtgcttc tgcaacctta aagcactaaa tactgctaag aaagggctta ttgattatta tttaatgcca tcattatcaa ctacttcacg ctctggcaag cacagtttta aaatgaaaga cactcatatg gaagattttc ccaaagacaa agaaacaaac cgggatttcc taccaagtgg aagaattgaa agtacaagaa ctagggagtc tccactagat accacaaatt tttctaaaga aaaagacatt aatgaattcc cactctgttc acttcctgaa ggtgttgacc aagaagtctt caagcagctt ccagtagata ttcaagaaga aatcctttct ggaaaatcta gggaaaaatt tcaagggaaa ggaagtgtga gttgtccatt acatgcctct agaggagtat tatctttctt ttctaaaaaa caaatgcaag atattcccat aaatcctaga gatcatttat ccagtagcaa acaggtatcc tctgtatctc cttgtgaacc gggaacatca ggctttaata gcagtagttc ttcttacatg tctagccaaa aggattattc atattattta gataatagat taaaagatga acgaataagt caaggaccta aagaacctca aggattccac tttacaaatt caaaccctgc tgtgtctgct tttcattcat ttccaaactt gcagagtgag caacttttct ccagaaacca cactacagat agccataagc aaacagtagc aacagactct catgaaggac ttacagaaaa tagagagcca gattctgttg atgagaaaat tactttccct tctgacattg atcctcaagt tttctatgaa ctaccagaag cagtacaaaa ggaactgctg gcagagtgga agagagcagg atcagatttc cacattggac ataaataa |
| **Molecular Weight** | 83,006 Da |
| **OMIM** | 605252 |
| **Vector** | pENTR223.1 or pUC |
| **Clone Sequence Report** | Provided with product shipment |
| **ISO Certification** | Manufactured in an ISO 9001:2015 Certified Laboratory. |
| **Related Product Information for POLI cdna clone** | MBS1273806 is a cDNA clone targeting POLI. |
| **Other Notes** | Small volumes of POLI cdna clone vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for POLI. It may not necessarily be applicable to this product.

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|---|---|
| **NCBI GI #** | 21619715 |
| **NCBI GeneID** | 11201 |
| **NCBI Accession #** | BC032662 |
| **UniProt Secondary Accession #** | Q8N590; Q9H0S1; Q9NYH6 |

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|---|---|
| **UniProt Related Accession #** | Q9UNA4 |
| **NCBI Official Full Name** | Homo sapiens polymerase (DNA directed) iota, mRNA |
| **NCBI Official Synonym Full Names** | DNA polymerase iota |
| **NCBI Official Symbol** | POLI |
| **NCBI Official Synonym Symbols** | RAD30B; RAD3OB |
| **UniProt Protein Name** | DNA polymerase iota |
| **UniProt Synonym Protein Names** | Eta2; RAD30 homolog B |
| **Protein Family** | DNA polymerase |
| **UniProt Gene Name** | POLI |
| **UniProt Synonym Gene Names** | RAD30B |
| **UniProt Entry Name** | POLI_HUMAN |
| **NCBI Protein Information** | DNA polymerase iota |
| **UniProt Comments for POLI** | POLI: Error-prone DNA polymerase specifically involved in DNA repair. Plays an important role in translesion synthesis, where the normal high-fidelity DNA polymerases cannot proceed and DNA synthesis stalls. Favors Hoogsteen base-pairing in the active site. Inserts the correct base with high-fidelity opposite an adenosine template. Exhibits low fidelity and efficiency opposite a thymidine template, where it will preferentially insert guanosine. May play a role in hypermutation of immunogobulin genes. Forms a Schiff base with 5'-deoxyribose phosphate at abasic sites, but may not have lyase activity. Belongs to the DNA polymerase type-Y family.<br><br>Protein type: EC 2.7.7.7; Transferase; DNA repair, damage<br><br>Chromosomal Location of Human Ortholog: 18q21.1<br><br>Cellular Component: intracellular; intracellular membrane-bound organelle; nucleoplasm; nucleus<br><br>Molecular Function: DNA-directed DNA polymerase activity; protein binding<br><br>Biological Process: bypass DNA synthesis; DNA repair; error-prone postreplication DNA repair |
| **Research Articles on POLI** | **1.** Mass spectrometry analysis of monoubiquitinated poliota revealed that it is ubiquitinated at over 27 unique sites. Many of these sites are localized in different functional domains of the protein. |
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