

## Product datasheet for **RC207550**

### DNA Polymerase iota (POLI) (NM\_007195) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	DNA Polymerase iota (POLI) (NM_007195) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	DNA Polymerase iota
Synonyms:	eta2; RAD3OB; RAD30B
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

>RC207550 ORF sequence  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGGAAGTGGCGACGTGGGGCGGCAGCCAGCTCGCAGGGAGTTCATGATCAAGTGTGCCACACCAA  
ATGCTTCATCCAGAGTCATAGTACATGTGGATCTGGATTGCTTTTATGCACAAGTAGAAATGATCTCAA  
TCCAGAGCTAAAAGACAAACCTTTAGGGTTCAACAGAAATATTTGGTGGTTACCTGCAACTATGAAGCT  
AGGAAACTTGGAGTTAAGAACTTATGAATGTCAGAGATGCAAAAAGAAAAGTGTCCACAGTTGGTATTAG  
TTAATGGAGAAGACCTGACCCGTACAGAGAAATGCTTATAAGGTTACAGAATTACTGGAAGAATTTAG  
TCCAGTTGTTGAGAGACTGGATTTGATGAAAATTTGTGGATCTAACAGAAATGGTTGAGAAGAGACTA  
CAGCAGCTGCAAAGTGATGAACCTTCTGCGGTGACTGTGTCGGGTGATGATACAATAATCAGTCTATA  
ACCTGCTTGACGCTTGCACATCAGACTACTTGTGGATCTCAGATTGCAGCAGAGATGCGGGAAGCCAT  
GTATAATCAGTTGGGCTCACTGGCTGTCTGGAGTGGCTTCTAATAAACTGTTGGCAAAATTAGTTTCT  
GGTGTCTTTAAACCAAATCAACAAACAGCTTATTACCTGAAAGTTGTCAACATCTTATTCATAGTTTGA  
ATCACATAAAGGAAATACCTGGTATTGGCTATAAACTGCCAAATGTCTTGAAGCACTGGGTATCAATAG  
TGTGCGTGATCTCCAAACCTTTTACCCAAAATTTAGAAAAAGAATTAGGAATTTAGTTGCTCAGCGT  
ATCCAAAAGCTCAGTTTGGAGAGGATAACTCCCTGTGATACTCTCAGGACCACCTCAGTCCTTTAGTG  
AAGAAGATTCATTTAAAAATGTTTATCTGAAGTTGAAGTAAAAATAAGATTGAAGAAGTACTTGTCTAG  
TCTTTTAAACAGAGTATGCCAAGATGGAAGGAAGCCTCATACAGTGAGATTAATAATCCGTCGGTATTCC  
TCTGAGAAGCACTATGGTCGTGAGAGTCGTGAGTGCCTTATTCTTACATGTAATTCAGAAATAGGGA  
CAGGAAATATGATGTGATGACCCCAATGGTTGATATACTTATGAAAATTTTTCGAAATATGGTGAATGT  
GAAGATGCCATTTACCTTACCCTTCTAAGTGTGTGCTTCTGCAACCTTAAAGCACTAAATACTGCTAAG  
AAAGGGCTTATTGATTATTATTTAATGCCATCATTATCAACTACTTCACGCTCTGGCAAGCACAGTTTTA  
AAATGAAAGACTCATATGGAAGATTTTCCCAAAGACAAAGAAACAAACCGGGATTTCTACCAAGTGG  
AAGAATTGAAAGTACAAGAACTAGGGAGTCTCCACTAGATACCACAAATTTTCTAAAGAAAAAGACATT  
AATGAATCCCACTCTGTTCACTTCTGAAGGTGTTGACCAAGAAGTCTTCAAGCAGCTTCCAGTAGATA  
TTCAAGAAGAAATCCTTTCTGAAAATCTAGGGAAAAATTTCAAGGAAAGGAAGTGTGAGTTGCCATT  
ACATGCCTCTAGAGGAGTATTATCTTTCTTTTCTAAAAACAAATGCAAGATATTCCTATAATCCTAGA  
GATCATTTATCCAGTAGCAAACAGGTATCCTCTGTATCTCCTTGTGAACCGGGAACATCAGGCTTTAATA  
GCAGTAGTTCTTCTTACATGTCTAGCCAAAAGGATTATTCATATTTAGATAATAGATTAAGATGA  
ACGAATAAGTCAAGGACCTAAAGAACCTCAAGGATTCCACTTTACAAATTCAAACCCTGCTGTGTCTGT  
TTTCATTCAATTTCCAACTTGCAGAGTGAGCAACTTTTCTCCAGAAACCACACTACAGATAGCCATAAGC  
AAACAGTAGCAACAGACTCTCATGAAGGACTTACAGAAAAAGAGAGCCAGATTCTGTTGATGAGAAAAT  
TACTTTCCCTTCTGACATTGATCCTCAAGTTTCTATGAACTACCAGAAGCAGTACAAAAGGAAGTCTG  
GCAGAGTGAAGAGAGCAGGATCAGATTTCCACATTGGACATAAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC207550 protein sequence  
Red=Cloning site Green=Tags(s)

MELADVAAAASSQGVHDQVLPNASSRVIHVHDLDCFYAQVEMISNPELKDKPLGVQQKYLVVTCNYEA  
 RKLGVKMLMNVRAKEKCPQLVLVNGEDLTRYREMSYKVTELEEFSPVVERLGFDENFVLDTEMVEKRL  
 QQLQSDDEL SAVTVSGHVYNNQ SINLLDVLHIRLLVGSQIAAEMREAMYNQLGLTGCAGVASNKLLAKLVS  
 GVFKPNQQT VLLPESCQHLIHSLNHIKEIPGIGYKTAKCLEALGINSVRDLQTFSPKILEKELGISVAQR  
 IQKLSFGEDNSPVILSGPPQSFSEEDSFKKCSSEVEAKNKEEELLAASLLNRVCQDGRKPHTVRLIIRRY  
 SEKHYGRESRQCPIPSHVIQKLG TGNVDVMTMPVDILMKLFRNMVNVKMPFHLTLLSVCFCNLKALNTAK  
 KGLIDYYLMPSLSTTSRSGKHSFKMKDTHMEDFPKDKETNRDFLPSGRIESTRTRESPLDITNFSKEKDI  
 NEFPLCSLPEGVDQEVFKQLPVDIQEEILSGKSREKFQGGKSVSCPLHASRGLV SFFSKKQMQDIPINPR  
 DHLSSSKQVSSVSPCEPGTSGFNSSSSSYMSQKDYSYLDNRLKDERISQGPKEPQGFHFTNSNP AVSA  
 FHSF PNLQSEQLFSRNHTTDSHKQTVATDSHEGLTENREPDVDEKITFPDIDPQVVFYELPEAVQKELL  
 AEWKRAGSDFHIGHK

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6140\\_g07.zip](https://cdn.origene.com/chromatograms/mk6140_g07.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



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

**ACCN:** NM\_007195

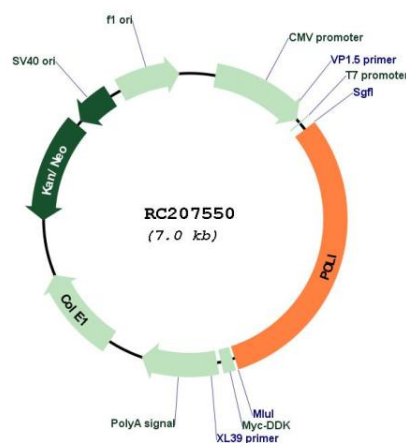
**ORF Size:** 2145 bp

**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](#)

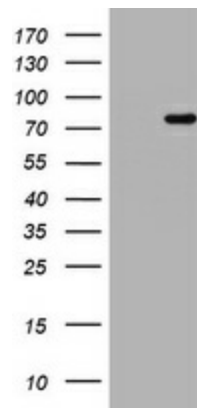
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

<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_007195.1</a> , <a href="#">NP_009126.1</a>
<b>RefSeq Size:</b>	6074 bp
<b>RefSeq ORF:</b>	2223 bp
<b>Locus ID:</b>	11201
<b>UniProt ID:</b>	<a href="#">Q9UNA4</a>
<b>Cytogenetics:</b>	18q21.2
<b>Domains:</b>	IMS
<b>Protein Families:</b>	Druggable Genome
<b>MW:</b>	80.3 kDa
<b>Gene Summary:</b>	The protein encoded by this gene is an error-prone DNA polymerase involved in DNA repair. The encoded protein promotes DNA synthesis across lesions in the template DNA, which other polymerases cannot do. The encoded polymerase inserts deoxynucleotides across lesions and then relies on DNA polymerase zeta to extend the nascent DNA strand to bypass the lesion. [provided by RefSeq, May 2017]

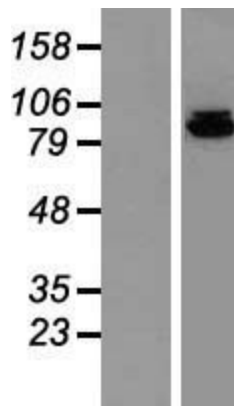
## Product images:



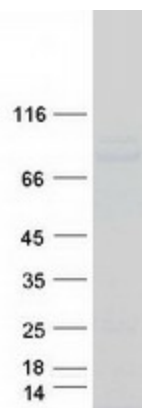
Circular map for RC207550



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY POLI (Cat# RC207550, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-POLI (Cat# [TA801491]). Positive lysates [LY416129] (100ug) and [LC416129] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY416129]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207550 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified POLI protein (Cat# [TP307550]). The protein was produced from HEK293T cells transfected with POLI cDNA clone (Cat# RC207550) using MegaTran 2.0 (Cat# [TT210002]).