

## Product datasheet for **RC225794**

### DNA polymerase delta p50 (POLD2) (NM\_001127218) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	DNA polymerase delta p50 (POLD2) (NM_001127218) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	DNA polymerase delta p50
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC225794 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTTTTCTGAGCAGGCTGCCAGAGGGCCACACTCTACTGTCCCACCATCAGCCAACAATGCCACCT  
 TTGCCCGGTGCCAGTGGCAACCTACACCAACTCCTCACAAACCTTCCGGCTAGGAGAGCGCAGCTTTAG  
 CCGGCAGTATGCCACATTTATGCCACCCGCTCATCCAATGAGACCCTTCTGGAGAACCAGGCCCCAG  
 CAGCACTGGGGCAGTGGAGTGGGAGTGAAGAAGCTGTGTGAAGTGCAGCCTGAGGAGAAGTCTGTGTGG  
 TGGGCACTCTGTTCAAGGCCATGCCGCTGCAGCCCTCCATCCTGCGGGAGGTGAGGAGGAGCACAACCT  
 GCTCCCCAGCCTCCTCGGAGTAAATACATACACCCAGATGACGAGCTGGTCTTGAAGATGAAGTGCAG  
 CGTATCAAATAAAGGCCACATTGACGTGTCAAAGCTGGTACGGGGACTGTCTGGCTGTGTTTGGCT  
 CCGTGAGAGACGACGGGAAGTTTCTGGTGGAGGACTATTGCTTTGCTGACCTTGTCCCCAGAAGCCCGC  
 ACCCCCACTTGACACAGATAGGTTTGTGCTACTGGTGTCCGGCCTGGGCCTGGGTGGCGGTGGAGGGCAG  
 AGCCTGTGGGCACCCAGCTGTGGTGGATGTGGTGCAGGGGAGCTTGGGGACGAAGGGGAGCAGTGCA  
 GCGCCGCCACGTCTCCCGGTTATCCTCGCTGGCAACCTCCTCAGCCACAGCACCAGAGCAGGGATTCT  
 TATCAATAAGGCCAAATACCTCACCAAGAAAACCCAGGCAGCCAGCGTGGAGGCTGTTAAGATGCTGGAT  
 GAGATCCTCCTGCAGCTGAGCGCCTCAGTGCCCGTGGACGTGATGCCAGGCGAGTTTATCCCAACCT  
 ACACGCTCCCCAGCAGCCCTCCACCCCTGCATGTTCCCGCTGGCCACTGCCTACTCCACGCTCCAGCT  
 GGTACCAACCCCTACCAGGCCACCATGATGGAGTCAAGTTTGGGGACATCAGGACAGAAGCTGAGT  
 GACATTTCCGATACAGCAGCATGGAGGATCACTTGGAGATCCTGGAGTGGACCTGCGGGTCCGTCACA  
 TCAGCCCCACAGCCCTGACACTCTAGGTTGTTACCCCTTACAAAACGACCCGTTTCACTTTCCGAGA  
 GTGCCCGCATGTCTACTTTTGTGGCAACACCCAGCTTTGGCTCCAAAATCATCCGAGGTCCTGAGGAC  
 CAGACAGTGTGTTGGTACTGTCCCTGACTTCACTGCCACGACAGCCGCTGCCTTGTGAACCTGCGCA  
 GCCTGGCCTGCCAGCCATCAGCTTCTCGGGCTTCCGGGACAGGACGATGACCTGGGAGGCTGGGGCT  
 GGGCCCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC225794 protein sequence  
 Red=Cloning site Green=Tags(s)

MFSEQAAQRAHTLLSPPSANNATFARVPVATYTNSSQPFRLGERSFSRQYAHYATRLIQMRPFLENRAQ  
 QHWGSGVGKLCQPEEKCCVVGTLFKAMPLQPSILREVSEEHNLLQPPRSKYIHPDDELVLEDELQ  
 RIKLKGIDVSKLVTGTLAVFGSVRDDGKFLVEDYCFADLAPQKPAPPLDTRFVLLVSLGLGGGGGE  
 SLLGTQLLVVDTGQLGDEGEQCSAAHVSRLVILAGNLLSHSTQSRDSINKAKYLTKKTQAASVEAVKMLD  
 EILLQLSASVPVDVMPGEFDPNTYLPQQPLHPCMFPLATAYSTLQLVTNPYQATIDGVRFLGTSQNVN  
 DIFRYSSMEDHLEILEWTLRVRHISPTAPDTLGCYPFYKIDPFIFPECPHYVFCGNTPSFGSKIIRGPED  
 QTVLLVTPVDFSATQTAACLNLRLSLACQPIISFGFAEDDDLGLGLGP

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6581\\_g08.zip](https://cdn.origene.com/chromatograms/mk6581_g08.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_001127218

**ORF Size:** 1407 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\\_001127218.2](#), [NP\\_001120690.1](#)

**RefSeq Size:** 1821 bp

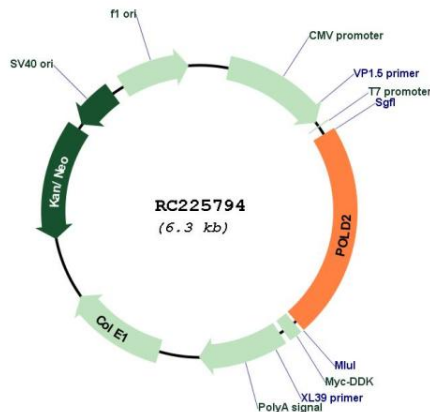
**RefSeq ORF:** 1410 bp

**Locus ID:** 5425

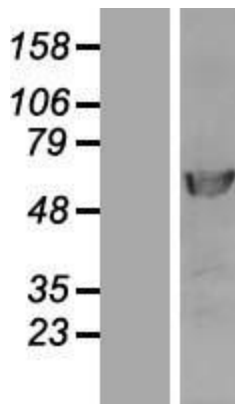
**UniProt ID:** [P49005](#)

<b>Cytogenetics:</b>	7p13
<b>Protein Families:</b>	Stem cell - Pluripotency
<b>Protein Pathways:</b>	Base excision repair, DNA replication, Homologous recombination, Metabolic pathways, Mismatch repair, Nucleotide excision repair, Purine metabolism, Pyrimidine metabolism
<b>MW:</b>	51.3 kDa
<b>Gene Summary:</b>	This gene encodes the 50-kDa catalytic subunit of DNA polymerase delta. DNA polymerase delta possesses both polymerase and 3' to 5' exonuclease activity and plays a critical role in DNA replication and repair. The encoded protein is required for the stimulation of DNA polymerase delta activity by the processivity cofactor proliferating cell nuclear antigen (PCNA). Expression of this gene may be a marker for ovarian carcinomas. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene, and a pseudogene of this gene is located on the long arm of chromosome 5. [provided by RefSeq, Mar 2012]

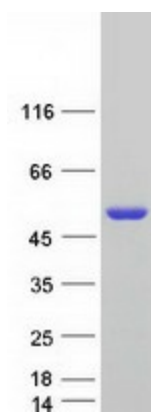
### Product images:



Circular map for RC225794



Western blot validation of overexpression lysate (Cat# [LY426719]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC225794 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified POLD2 protein (Cat# [TP325794]). The protein was produced from HEK293T cells transfected with POLD2 cDNA clone (Cat# RC225794) using MegaTran 2.0 (Cat# [TT210002]).