

Product datasheet for **RC219806**

POLK (NM_016218) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | POLK (NM_016218) Human Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | POLK |
| Synonyms: | DINB1; DINP; POLQ |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |



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ORF Nucleotide
Sequence:

>RC219806 representing NM_016218
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGATAGCACAAGGAGAAGTGTGACAGTTACAAAGATGATCTTCTGCTTAGGATGGGACTTAATGATA
 ATAAAGCAGGAATGGAAGGATTAGATAAAGAGAAAATTAACAAAATTATAATGGAAGCCACGAAGGGGTC
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 GAGGGACAATCCAGAATTGAAGGATAAACCATTGCTGTAGGATCAATGAGTATGCTGTCTACTTCAAT
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 TTATAATAGTGCCCCCAACTTTGACAAATACCGAGCTGTGAGTAAAGAGGTTAAGGAAACTTGTCTGA
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 CAGGAAAGGAAGTTAATAAACTGAGTGAGCATGAACGATCCATCTCTCCACTACTTTTTGAAGAGAGTCC
 TTCTGATGTGCAGCCCCAGGAGATCCTTTCCAAGTGAACCTTTGAAGAACAAAACAATCCTCAAATACTC
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 ACATTCAGTGAGATAAATAAGCGGAAGAGCAATACAGCCTATGTCAAGAACTTTGCAGTGAGCTTGCTC
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 CCCTTGATATATTTTTAAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC219806 representing NM_016218
 Red=Cloning site Green=Tags(s)

MDSTKEKCDSYKDDLLLRMGLNDNKAGMEGLDKEKINKIIMEATKGSRYGNELKKEKQVNQRIENMMQQ
 KAQITSQQLRKAQLQVDRFAMELEQSRNLSNTIVHIDMAFYAAVEMRDNPCLKDKPIAVGSMMLSTSN
 YHARRFGVRAAMPGFI AKRLCPQLIIVPPNFDKYRAVSKEVKEILADYDPNFMAMSLDEAYLNITKHL
 RQNWPEDKRRYFIKMGSSVENDNPGKEVNKLSEHERSISPLLFEESP SDVQPPGDPFQVNFEEQNNPQIL
 QNSVVFGTSAQEVVKEIRFRIEQKTTLTASAGIAPNTMLAKVCS DNKNKNGQYQILP NRQAVMDFIKDLP
 IRKVSIGIKVTEKMLKALGIITCTELYQQRALLSLLFSETSWHYFLHISLGLGSTHLTRDGERKSMsver
 TFSEINKAEQYSLCQELCSELAQDLQKERLKGRTVTIKLKNVNFVKTRASTVSSVSTAEEIFAIAKE
 LLKTEIDADFPHPLRLMLGVRISSFPNEEDRKHQQRSIIGFLQAGNQALSATECTLEKTDKDFVKPLE
 MSHKKSFFDKKRSEKWSHQDTFKCEAVNKQSFQTSQPFQVLKKMNENLEISENSDDCILTCPVCFRA
 QGCISLEALNKHVDECLDGPSISENFKMFSCSHVSATKVNKENVPASSLCEKQDYEAHPKIKEISSVDC
 IALVDTIDNSSKAESIDALSNKHSKEECSSLPKSFNIEHCHQNSSTVLENEVDGFSFRQYRQPYLCE
 VKTGQALVCPVCNVEQKTSDLTLFNVHVDVCLNKSF IQELRKDKFNPVQPKESSRSTGSSSGVQKAVTR
 TKRPGLMTKYSTSKKIKPNNPKHTLDIFFK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6594_b03.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

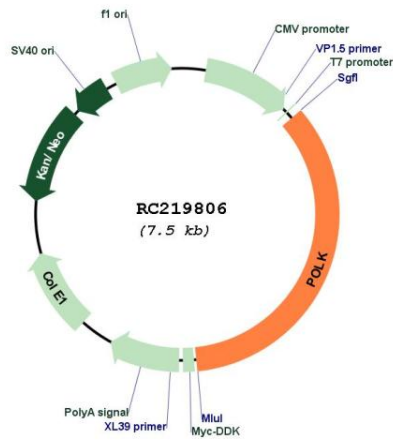
Cloning sites used for ORF Shuttling:



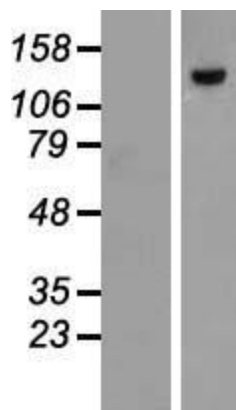
* The last codon before the Stop codon of the ORF

| | |
|-------------------------------|---|
| ACCN: | NM_016218 |
| ORF Size: | 2610 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: | <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_016218.3 |
| RefSeq Size: | 4074 bp |
| RefSeq ORF: | 2613 bp |
| Locus ID: | 51426 |
| UniProt ID: | Q9UBT6 |
| Cytogenetics: | 5q13.3 |
| Domains: | IMS, ZnF_Rad18 |
| Protein Families: | Druggable Genome |
| MW: | 98.6 kDa |
| Gene Summary: | This gene encodes a member of the DNA polymerase type-Y family of proteins. The encoded protein is a specialized DNA polymerase that catalyzes translesion DNA synthesis, which allows DNA replication in the presence of DNA lesions. Human cell lines lacking a functional copy of this gene exhibit impaired genome integrity and enhanced susceptibility to oxidative damage. Mutations in this gene that impair enzyme activity may be associated with prostate cancer in human patients. [provided by RefSeq, Sep 2016] |

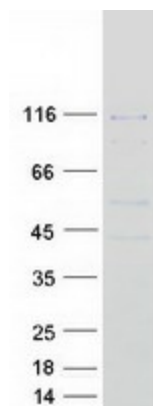
Product images:



Circular map for RC219806



Western blot validation of overexpression lysate (Cat# [LY414115]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC219806 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified POLK protein (Cat# [TP319806]). The protein was produced from HEK293T cells transfected with POLK cDNA clone (Cat# RC219806) using MegaTran 2.0 (Cat# [TT210002]).