

Product datasheet for **RC239004**

DNA polymerase eta (POLH) (NM_001291969) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	DNA polymerase eta (POLH) (NM_001291969) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	POLH
Synonyms:	RAD30; RAD30A; XP-V; XPV
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>RC239004 representing NM_001291969
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGAAGCTCGTGCAATTTGGAGTCACTAGAAGTATGTGGCAGATGATGCTAAGAAGTTATGTCCAGATCT
 TCTACTGGCACAAAGTTCGTGAGTCCCGTGGGAAAGCTAACCTCACCAAAGGGGATGCGAAAAACAAGGCTT
 ATTTCAATGGCTCGATTCTTTCAGATTGATAACCTCACCTCTCCAGACCTGCAGCTCACCGTGGGAGCA
 GTGATTGTGGAGGAAATGAGAGCAGCCATAGAGAGGGAGACTGGTTTTTCAGTGTTTCAGCTGGAATTTAC
 ACAATAAGGTCTGGCAAACCTGGCCTGTGGACTAAACAAGCCCAACCGCCAAACCTGGTTTCACATGG
 GTCAGTCCCACAGCTCTTCAGCCAAATGCCATTTCGAAAATCCGTAGTCTTGGAGGAAAGCTAGGGGCC
 TCTGTCATTGAGATCCTAGGGATAGAATACATGGGTGAAGTACCAGCTTCACTGAATCCAGCTCCAGA
 GTCATTTTGGGAGAAGAATGGGTCTTGGCTATATGCCATGTGCCGAGGGATTGAACATGATCCAGTTAA
 ACCCAGGCAACTACCCAAAACCTTGGCTGTAGTAAGAAGTCCAGGAAAAACAGCTCTTGTACTCGG
 GAACAGGTACAATGGTGGCTGTTGCAATTAGCCAGGAAGTACAGGAGAGACTGACTAAAGACCGAAATG
 ATAATGACAGGGTAGCCACCCAGCTGGTTGTGAGCATTCTGTGTACAAGGAGACAAACGCCTCAGCAGCCT
 GCGCCGCTGCTGTGCCCTTACCCGCTATGATGCTCACAAGATGAGCCATGATGCATTTACTGTATCAAG
 AACTGTAATACTTCTGGAATCCAGACAGAATGGTCTCCTCCTCTCACAATGCTTTTCTCTGTGCTACAA
 AATTTTCTGCCTCTGCCCTTCACTTCTACAGACATCACCAGCTTCTTGAGCAGTGACCCAAGTTCTCT
 GCCAAAGTGCCAGTTACCAGCTCAGAAGCTAAGACCCAGGGAAGTGGCCAGCGGTGACAGCCACTAAG
 AAAGCAACCACGCTCTGGAATCATTCTCCAAAAGCTGCAGAAAGGCAGAAAGTTAAAGAAGCTTCGC
 TTTTCATCTTTACTGCTCCCACTCAGGCTCCCATGAGCAATTCACCATCCAAGCCCTCATTACCTTTTCA
 AACCAAGTCAAAGTACAGGAAGTACAGCCCTTCTTAAAGCAGAAAAGTCTGCTTCTAAAGCAGAAACAGCTT
 AATAATCTTTCAGTTTCTCCCCCAACAAAACCCATGGTCCAAGTAAAGCATTACCAAACCTTTTAC
 CAACAGAGTATCCAGGGTGTGTCCTGTTGTGAAGGGGTGTCGAAGCTAGAAGAATCCTCTAAAGCAAC
 TCCTGCAGAGATGGATTTGGCCACAACAGCCAAAGCATGCACGCCTCTTCAGCTTCCAAATCTGTGCTG
 GAGGTGACTCAGAAAGCAACCCCAATCCAAGTCTTCTAGCTGCTGAGGACCAAGTGCCTGTGAGAAGT
 GTGGCTCCCTGGTACCGGTATGGGATATGCCAGAACACATGGACTATCATTTTGCATTGGAGTTGCAGAA
 ATCCTTTTTCAGCCCCACTCTTCAAACCCCAAGTTGTTTCTGCCGTATCTCATCAAGGCAAAAAGAAAT
 CCCAAGAGCCCTTTGGCCTGCATAATAAACGCCCCAGGCTGAGGGCATGCAAACATTGGAATCATTTT
 TTAAGCCATTAACACAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC239004 representing NM_001291969
 Red=Cloning site Green=Tags(s)

MKLVHLESLEVCQMMLRSYVQIFYWHKFVSPVGKLTSPKGMKQGLFQWLDLQIDNLTSPDLQLTVGA
 VIVEEMRAAIERETGFQCSAGISHNKVLAKLACGLNKNRQTLVSHGSPVQLFSQMPIRKIRSLGGKLG
 SVIEILGIEYMGELTQFTESQLQSHFGEKNGSWLYAMCRGIEHDPVKPRQLPKTIIGCSKNFPGKALATR
 EQVQWLLQLAQELEERLTKDRNDNDRVATQLVVSIRVQGDKRLSSLRRCALTRYDAHKMSHDAFTVIK
 NCNTSGIQTEWSPPLTMLFLCATKFSASAPSSDITSFLLSSDPSSLPKVPVTSSEAKTQSGSPAVTATK
 KATTSLESFFQKAAERQKVKEASLSSLTAPTQAPMSNSPSKPSLPFQTSQSTGTEPFFKQKSLLLKQKQL
 NNSSVSSPQNPWSNCKALPNSLPTEYPGCVPVCEGVSKLEESSKATPAEMDLAHSQSMHASSASKSVL
 EVTQKATPNPSSLAAEDQVPCEKCGSLVPVWDMPEHMDYHFALELQKSFLLQPHSSNPQVVS AVSHQGRN
 PKSPLACTNKRPRPEGMQTLESFFKPLTH

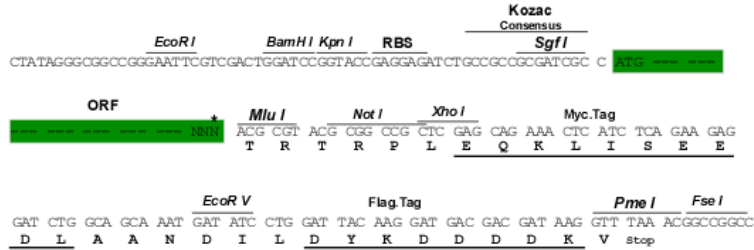
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

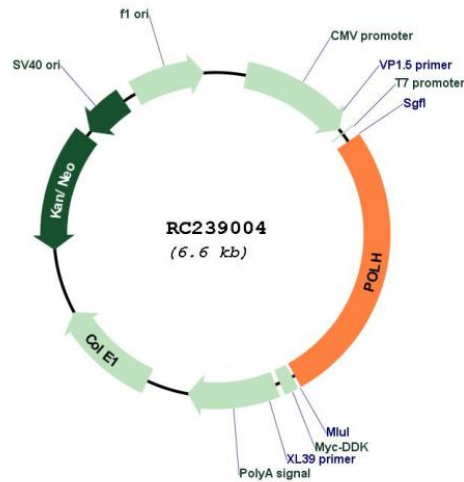
Cloning Scheme:

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_001291969

ORF Size: 1767 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_001291969.2
RefSeq Size:	8053 bp
RefSeq ORF:	1770 bp
Locus ID:	5429
Cytogenetics:	6p21.1
Protein Families:	Druggable Genome
MW:	65.3 kDa
Gene Summary:	This gene encodes a member of the Y family of specialized DNA polymerases. It copies undamaged DNA with a lower fidelity than other DNA-directed polymerases. However, it accurately replicates UV-damaged DNA; when thymine dimers are present, this polymerase inserts the complementary nucleotides in the newly synthesized DNA, thereby bypassing the lesion and suppressing the mutagenic effect of UV-induced DNA damage. This polymerase is thought to be involved in hypermutation during immunoglobulin class switch recombination. Mutations in this gene result in XPV, a variant type of xeroderma pigmentosum. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2014]