

Product datasheet for **RG239004**

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:	TurboGFP
Symbol:	DNA polymerase eta
Synonyms:	RAD30; RAD30A; XP-V; XPV
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG239004 representing NM_001291969.
 Blue=ORF Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGGAATTCGTGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGAAGCTCGTGCATTTGGAGTCACTAGAAGTATGTGGCAGATGATGCTAAGAAGTTATGTCCAGATC
TTCTACTGGCACAAGTTCTGTGAGTCCCCTGGGAAAGCTAACCTCACCAAAGGGGATGCGAAAAACAAGGC
TTATTTCAATGGCTCGATTCTCTTCAGATTGATAACCTCACCTCTCCAGACCTGCAGCTCACCGTGGGA
GCAGTGATTGTGGAGAAATGAGAGCAGCCATAGAGAGGGAGACTGGTTTTTCAGTGTTTCAGCTGGAATT
TCACACAATAAGGTCCTGGCAAACTGGCCTGTGGACTAAACAAGCCCAACCGCCAAACCCTGGTTTCA
CATGGGTCAGTCCACAGCTCTTCAGCCAAATGCCATTTCGAAAATCCGTAGTCTTGGAGGAAAGCTA
GGGGCCTCTGTCATTGAGATCCTAGGGATAGAATACATGGGTGAAGTACCCAGTTCAGTGAATCCCAG
CTCCAGAGTCATTTGGGAGAAGAATGGGTCTGGCTATATGCCATGTGCCGAGGGATTGAACATGAT
CCAGTTAAACCCAGGCAACTACCCAAAACCATTGGCTGTAGTAAAGAACTCCAGGAAAAACAGCTCTT
GCTACTCGGGAACAGGTACAATGGTGGCTGTTGCAATTAGCCAGGAACTAGAGGAGAGACTGACTAAA
GACCGAAATGATAATGACAGGGTAGCCACCCAGCTGGTTGTGAGCATTCTGTGTACAAGGAGACAAACGC
CTCAGCAGCCTGCGCCGCTGCTGTGCCCTTACCCGCTATGATGCTCACAAGATGAGCCATGATGCATTT
ACTGTCATCAAGAAGTGAATACTTCTGGAATCCAGACAGAATGGTCTCCTCCTCACAATGCTTTTC
CTCTGTGTACAAAAATTTCTGCCTCTGCCCTTCATCTTCTACAGACATCACCAGCTTCTTGAGCAGT
GACCCAAGTTCTCTGCCAAAGGTGCCAGTACCAGCTCAGAAGCTAAGACCCAGGGAAAGTGGCCAGCG
GTGACAGCCACTAAGAAAGCAACCACGTCTCTGGAATCATTCTTCAAAAAGCTGCAGAAAGGCAGAAA
GTTAAAGAAGCTTCGCTTTCATCTTACTGCTCCACTCAGGCTCCCATGAGCAATTCACCATCCAAG
CCCTCATTACCTTTTCAAACAGTCAAAGTACAGGAACTGAGCCCTTCTTAAAGCAGAAAAGTCTGCTT
CTAAAGCAGAAAACAGCTTAATAATTCTCAGTTTCTTCCCCCAACAAAACCCATGGTCCAACGTAAA
GCATTACCAAACCTTTTACCAACAGAGTATCCAGGGTGTGTCCTGTTTGTGAAGGGGTGTCGAAGCTA
GAAGAATCCTCTAAAGCAACTCTGCAGAGATGGATTTGGCCACAACAGCCAAAGCATGCACGCTCT
TCAGCTTCCAAATCTGTGCTGGAGGTGACTCAGAAAGCAACCCCAATCCAAGTCTTCTAGCTGCTGAG
GACCAAGTCCCTGTGAGAAGTGTGGCTCCCTGGTACCGGTATGGGATATGCCAGAACACATGGACTAT
CATTTTGCATTGGAGTTGCAGAAATCCTTTTGCAGCCCCACTCTCAAACCCCAAGTTGTTTCTGCC
GTATCTCATCAAGGCAAAAGAAATCCCAAGAGCCCTTTGGCTGCACTAATAAACGCCCCAGGCCTGAG
GGCATGCAAACATTGGAATCATTTTTTAAGCCATTAACACAT
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAAAC
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Protein Sequence:

>Peptide sequence encoded by RG239004
 Blue=ORF Red=Cloning site Green=Tag(s)

```
MKLVHLESLEVCQMMLRSYVQIFYWHKFVSPVGKLTSPKGMKQGLFQWLDLQIDNLTSPDLQLTVG
AVIVEEMRAAIERETGFQCSAGISHNKVLAKLACGLNKNRQTLVSHGSPQLFSQMPIRKIRSLGGKL
GASVIEILGIEYMGELTQFTESQLQSHFGEKNGSWLYAMCRGIEHDPVKPRQLPKTIGCSKNFPGKAL
ATREQVQWLLQLAQELEERLTKDRNDNDRVATQLVVSIRVQGDKRLSSLRRCALTRYDAHKMSHDAF
TVIKNCNTSGIQTEWSPPLTMLFLCATKFSASAPSSDITISFLSSDPSSLPKVPVTSSEAKTQGS GPA
VTATKKATTSLESFFQKAAERQVKKEASLSSLTAPTQAPMSNSPSKPSLPFQTSQSTGTEPFFKQKSL
LKQKQLNNSVSPQNPWSNCKALPNSLPTEYPGCVVCEGVSKLEESSKATPAEMDLAHNSQSMHAS
SASKSVLEVTQKATPNPSSLAAEDQVPECKGSLVPVWDMPEHMDYHFALELQKSFLLQPHSSNPQVVA
VSHQGRNPKSPLACTNKRPRPEGMQTLSEFFKPLTH
TRTRPLEMESDESGLPAMEIECRITGTLNGVEFELVGGGEGTPEQGRMTNKMSTKGALTFSPYLLSHV
MGYGFYHFGTYPSTYENPFLHAINNGGYNTRIEKYEDGGVLHVSFSYRYEAGRVIGDFKVMGTGFPED
SVIFTDKIIIRSNATVEHLHPMGDNDLDGSFTRTFSLRDGGYSSVVDSHMFKSAIHPSILQNGGPMFA
FRRVEEDHSNTELGIVEYQHAFKTPDADAGEERV
```

Restriction Sites:

SgfI-MluI

Cloning Scheme:


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).

RefSeq: [NM_001291969.2](#)

RefSeq Size: 8053 bp

RefSeq ORF: 1770 bp

Locus ID: 5429

Cytogenetics: 6p21.1

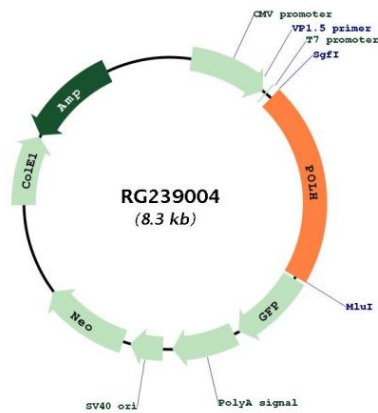
Protein Families: Druggable Genome

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]

Product images:



Circular map for RG239004