

Product datasheet for **RC217354**

DNA polymerase eta (POLH) (NM_006502) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	DNA polymerase eta (POLH) (NM_006502) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	DNA polymerase eta
Synonyms:	RAD30; RAD30A; XP-V; XPV
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide
Sequence:

>RC217354 representing NM_006502
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGGCTACTGGACAGGATCGAGTGGTTGCTCTCGTGGACATGGACTGTTTTTTTGTTC AAGTGGAGCAGC
GGCAAAATCCTCATTGAGGAATAAACCTTGTGCAGTTGTACAGTACAAATCATGGAAGGGTGGTGAAT
AATTGCAGTGAGTTATGAAGCTCGTGCATTTGGAGTCACTAGAAGTATGTGGCAGATGATGCTAAGAAG
TTATGTCCAGATCTTCTACTGGCACAAGTTCGTGAGTCCCGTGGGAAAGCTAACCTCACCAAGTACCGGG
AAGCCAGTGTGAAGTATGGAGATAATGTCTCGTTTTGCTGTGATTGAACGTGCCAGCATTGATGAGGC
TTACGTAGATCTGACCAGTGTGTACAAGAGAGACTACAAAAGCTACAAGGTGAGCCTATCTCGGCAGAC
TTGTTGCCAAGCACTTACATTGAAGGGTGCCTCAAGGCCCTACAACGGCAGAAGAGACTGTTCCAGAAAG
AGGGGATGCGAAAACAAGGCTTATTTCAATGGCTCGATTCTCTCAGATTGATAACCTCACCTCTCCAGA
CCTGCAGCTCACCGTGGGAGCAGTGATTGTGGAGGAAATGAGAGCAGCCATAGAGAGGGAGACTGGTTTT
CAGTGTTCAAGCTGGAATTTACACAATAAGGTCCCTGGCAAAACTGGCCTGTGGACTAAACAAGCCCAACC
GCCAAACCTGGTTTTACATGGGTCACTCCACAGCTCTTCAGCCAAATGCCATTTCGCAAAATCCGTAG
TCTTGGAGGAAAGCTAGGGGCTCTGTCAATGAGATCCTAGGGATAGAATACATGGGTGAACTGACCCAG
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AGACTGACTAAAGACCGAAATGATAATGACAGGGTAGCCACCCAGCTGGTTGTGAGCATTCTGTACAAG
GAGACAAAACGCTCAGCAGCCTGCGCCGCTGCTGTGCCCTTACCCGCTATGATGCTCACAAGATGAGCCA
TGATGCATTTACTGTATCAAGAAGTGAATACTTCTGGAATCCAGACAGAATGGTCTCCTCCTCTCACA
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CCCAGCGGTGACAGCCACTAAGAAAGCAACCACGTCTCTGGAATCATTCTTCCAAAAGCTGCAGAAAGG
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CCAAGCCCTCATTACCTTTTCAAACAGTCAAAGTACAGGAACTGAGCCCTTCTTAAGCAGAAAAGTCT
GCTTCTAAAGCAGAAAACAGCTTAATAATCTTCAGTTTCTTCCCCCAACAAAACCCATGGTCCAAGTGT
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TAGAAGAATCCTCTAAAGCAACTCCTGCAGAGATGGATTTGGCCCAACAGCCAAAGCATGCACGCCTC
TTCAGTTTCCAAATCTGTGCTGGAGGTGACTCAGAAAGCAACCCCAATCCAAGTCTTCTAGCTGCTGAG
GACCAAGTGCCCTGTGAGAAGTGTGGCTCCCTGGTACCGGTATGGGATATGCCAGAACACATGGACTATC
ATTTTGCATTGGAGTTGCAGAAATCCTTTTGCAGCCCCACTCTTCAAACCCCAAGGTTGTTTCTGCCGT
ATCTCATCAAGGCAAAAGAAATCCCAAGAGCCCTTGGCCTGACTAATAAACGCCCCAGGCCTGAGGGC
ATGCAACATTGGAATCATTTTTTAAGCCATTAACACAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC217354 representing NM_006502
 Red=Cloning site Green=Tags(s)

MATGQDRVVALVDMDCFFVQVEQRQNPFLRNKPCAVVQYKSWKGGGIIAVSYEARAFGVTRSMWADDAKK
 LCPDLLLAQVRESRGKANLTKYREASVEVMEIMSRFAVIERASIDEAYVDLTSAVQERLQKLOGQPISAD
 LLPSTYIEGLPQGPTTAEETVQKEGMRKQGLFQWLDLQIDNLTSPDLQLTVGAVIVEEMRAAIERETGF
 QCSAGISHNKVLAKLACGLNKPNRQTLVSHGSPQLFSQMPPIRKIRSLGGKLGASVIEILGIEYMGELTQ
 FTESQLQSHFGEKNGSWLYAMCRGIEHDPVKPRQLPKTIGCSKNFPGKTALATREQVQWLLQLAQELE
 RLTKDRNDNDRVATQLVVSIRVQGDKRLSSLRCCALTRYDAHKMSHDAFTVIKNCNTSGIQTEWSPPLT
 MLFLCATKFSASAPSSSTDITSFLSSDPSSLPKVPVTSSEAKTQSGPAVTATKKATTSLESFFQKAAER
 QKYKEASLSSLTAPTQAPMSNSPSKPSLQFQTSQSTGTEPFQKQSLLLKQQLNNSVSSPQQNPWSNC
 KALPNSLPTIEYPCVPCVCEGVSKLEESSKATPAEMDLAHSQSMHASSASKSVLEVTQKATPNPSLLAAE
 DQVPCEKCGSLVPVWDMPEHMDYHFALQLKSFLLQPHSSNPQVVSQVSHQGRNPKSPLACTNKRPRPEG
 MQTLESFFKPLTH

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8015_d02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_006502

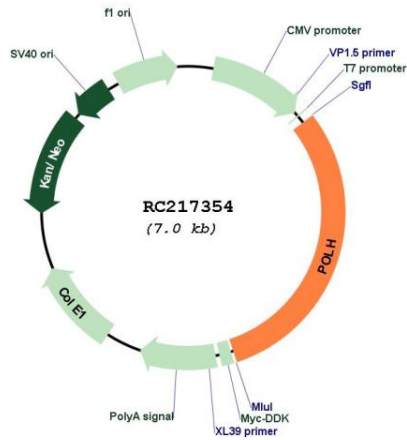
ORF Size: 2139 bp

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](#)

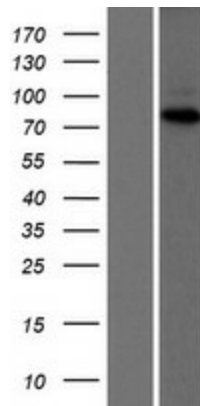
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_006502.3
RefSeq Size:	3464 bp
RefSeq ORF:	2142 bp
Locus ID:	5429
UniProt ID:	Q9Y253
Cytogenetics:	6p21.1
Domains:	IMS
Protein Families:	Druggable Genome
MW:	78.2 kDa
Gene Summary:	<p>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]</p>

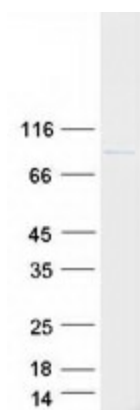
Product images:



Circular map for RC217354



Western blot validation of overexpression lysate (Cat# [LY416602]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC217354 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified POLH protein (Cat# [TP317354]). The protein was produced from HEK293T cells transfected with POLH cDNA clone (Cat# RC217354) using MegaTran 2.0 (Cat# [TT210002]).