

Product datasheet

# Recombinant human DNA Polymerase Kappa/POLK protein ab176956

[2 Images](#)

Description

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**Product name** Recombinant human DNA Polymerase Kappa/POLK protein

**Purity** > 90 % SDS-PAGE.

**Expression system** Escherichia coli

**Accession** [Q9UBT6](#)

**Protein length** Protein fragment

**Animal free** No

**Nature** Recombinant

**Species** Human

**Sequence**

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MDSTKEKCDSYKDDLLLRMGLNDNKAGMEGLDKEKI
NKIIMEATKGSRFY
GNELKKEKQVNQRIENMMQKQAQITSQQLRKAQLQVD
RFAMELEQSRNLS
NTIVHIDMDAFYAAVEMRDNPCLKDKPIAVGSMMLST
SNYHARRFGVRA
AMPGFIAKRLCPQLIIVPPNFDKYRAVSKEVKEILADYD
PNFMAMSLDEA
YLNITKHLEERQNWPEDKRRYFIKMGSSVENDNPGKE
VKNLSEHERSISP
LLFEESPSDVQPPGDPFQVNFEEQNNPQILQNSVVFQ
TSAQEVVKEIRFR
IEQKTTLTASAGIAPNTMLAKVCSDKNKPNGQYQILPNR
QAVMDFIKDLF
IRKVSIGIGKVTEKMLKALGITCTELYQQRALLSLLFSET
SWHYFLHISL
GLGSTHLTRDGERKSMSVERTFSEINKAEEQYSLCQE
LCSELAQDLQKER
LKGRTVTIKLKNVNFVETRASTVSSVSTAEEIFAIK
ELLKTEIDADF
PHPLRLRLMGVRISSFPNEEDRKHQQRSIGFLQAGNQ
ALSATECTLEKT DKDKFVKPLE
    
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**Predicted molecular weight** 64 kDa

<b>Amino acids</b>	1 to 560
<b>Tags</b>	His tag C-Terminus

## Specifications

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Our [Abpromise guarantee](#) covers the use of **ab176956** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Applications</b>	ELISA SDS-PAGE Western blot Functional Studies
<b>Form</b>	Liquid

## Preparation and Storage

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<b>Stability and Storage</b>	Shipped at 4°C. Store at -20°C or -80°C. Information available upon request. This product is an active protein and may elicit a biological response in vivo, handle with caution.
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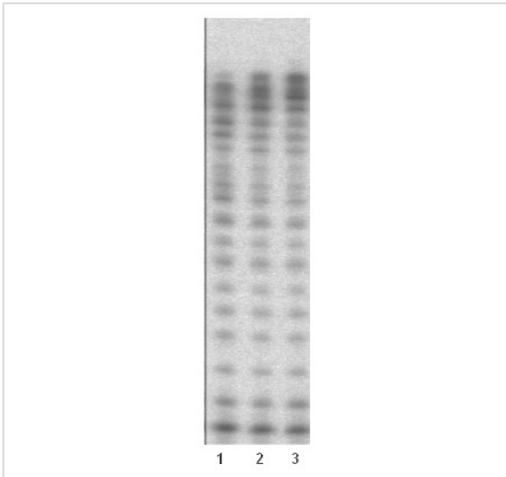
## General Info

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<b>Function</b>	DNA polymerase specifically involved in DNA repair. Plays an important role in translesion synthesis, where the normal high-fidelity DNA polymerases cannot proceed and DNA synthesis stalls. Depending on the context, it inserts the correct base, but causes frequent base transitions, transversions and frameshifts. Lacks 3'-5' proofreading exonuclease activity. Forms a Schiff base with 5'-deoxyribose phosphate at abasic sites, but does not have lyase activity.
<b>Tissue specificity</b>	Detected at low levels in testis, spleen, prostate and ovary. Detected at very low levels in kidney, colon, brain, heart, liver, lung, placenta, pancreas and peripheral blood leukocytes.
<b>Sequence similarities</b>	Belongs to the DNA polymerase type-Y family. Contains 2 UBZ-type zinc fingers. Contains 1 umuC domain.
<b>Domain</b>	The catalytic core consists of fingers, palm and thumb subdomains, but the fingers and thumb subdomains are much smaller than in high-fidelity polymerases; residues from five sequence motifs of the Y-family cluster around an active site cleft that can accommodate DNA and nucleotide substrates with relaxed geometric constraints, with consequently higher rates of misincorporation and low processivity.
<b>Cellular localization</b>	Nucleus. Detected throughout the nucleus and at replication foci.

## Images

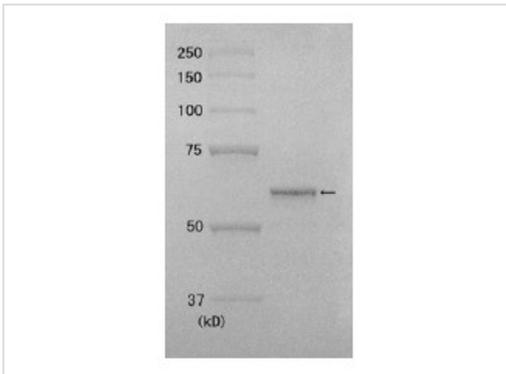
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DNA polymerizing activity of ab176956

50 mM Tris-HCl pH 8.0, 2 mM MgCl<sub>2</sub>, 1 mM DTT, 0.1 mg / ml BSA, 0.1 mM dNTP, 100 nM primer/template(13-mer/30-mer), DNA polymerase kappa/POLK at 13~50 ng/25µl (lanes 1,2, and 3 respectively) per assay, incubated at 37°C for 10 min.

Functional Studies - Recombinant human DNA Polymerase Kappa/POLK protein (ab176956)



SDS-PAGE analysis of ab196956.

SDS-PAGE - Recombinant human DNA Polymerase Kappa/POLK protein (ab176956)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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