

## Recombinant Human POLK, GST-tagged

**Cat. No.** POLK-765H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Human POLK full-length ORF ( AAH50718, 1 a.a. - 472 a.a.) recombinant protein with GST-tag at N-terminal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Source</b>           | Wheat Germ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Description</b>      | <p>External and internal DNA-damaging agents continually threaten the integrity of genetic material in cells. Although a variety of repair mechanisms exist to remove the resulting lesions, some lesions escape repair and block the replication machinery.</p> <p>Members of the Y family of DNA polymerases, such as POLK, permit the continuity of the replication fork by allowing replication through such DNA lesions. Each Y family polymerase has a unique DNA-damage bypass and fidelity profile. POLK is specialized for the extension step of lesion bypass.</p> |
| <b>Molecular Mass</b>   | 77.66 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>AA Sequence</b>      | <p>MDSTKEKCDSYKDDLLLRMGLNDNKAGMEGLDKEKINKIIMEATKGSRYFGNELKKE<br/> KQVNQRIENMMQQAQIT SQQLRKAQLQVDRFAMELEQSRNLSNTIVHIDMDAFYA<br/> AVEMRDNPCLKDKPIAVGSMMLSTSNYHARRFGVRA AMPGFIKRLCPQLIIVPPN<br/> FDKYRAVSKEVKEILADYDPNFMAMSLDEAYLNITKHLEERQNWPEDKRRYFIKM G<br/> SSVENDNPGKEVKNLSEHERSISPLLFEESPSDVQPPGDPFQVNFEEQNNPQILQN<br/> SVVFGTSAQEVVKEIRFR IEQKTTLTASAGIAPNTMLAKVCSDKNKPNGQYQILPNR<br/> QAVMDFIKDLPIRKVSGIGKVTEKMLKALGIITCTE LYQQRALLSLLFSETSWHYFLHI</p>                                                                                                                  |

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|                            |                                                                                            |
|----------------------------|--------------------------------------------------------------------------------------------|
|                            | SLGLGSTHLTRDGERKSMSVERTFSEINKAEEQYSLCQELCSELAQDLQKER LKVL<br>YFDMVSLVFKFFNSKMLP            |
| <b>Applications</b>        | Enzyme-linked Immunoabsorbent Assay; Western Blot; Antibody Production; Protein Array      |
| <b>Storage</b>             | Store at -80°C. Aliquot to avoid repeated freezing and thawing.                            |
| <b>Storage Buffer</b>      | 50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.                   |
| <b>GENE INFORMATION</b>    |                                                                                            |
| <b>Gene Name</b>           | POLK polymerase (DNA directed) kappa [ Homo sapiens (human) ]                              |
| <b>Official Symbol</b>     | POLK                                                                                       |
| <b>Synonyms</b>            | POLK; DINP; POLQ; DINB1; polymerase (DNA directed) kappa; DNA polymerase kappa; EC 2.7.7.7 |
| <b>Gene ID</b>             | 51426                                                                                      |
| <b>mRNA Refseq</b>         | NM_016218                                                                                  |
| <b>Protein Refseq</b>      | NP_057302                                                                                  |
| <b>MIM</b>                 | 605650                                                                                     |
| <b>UniProt ID</b>          | Q9UBT6                                                                                     |
| <b>Chromosome Location</b> | 5q13                                                                                       |

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|-----------------|------------------------------------------------------------------------------|
| <b>Pathway</b>  | Fanconi anemia pathway                                                       |
| <b>Function</b> | DNA-directed DNA polymerase activity; damaged DNA binding; metal ion binding |