

Recombinant human DNA polymerase beta/POLB protein

Catalog Number: ATGP1190

PRODUCT INFORMATION

Expression system

E.coli

Domain

1-335aa

UniProt No.

P06746

NCBI Accession No.

NP_002681.1

Alternative Names

DNA polymerase beta, DNA directed DNA polymerase beta, Polymerase (DNA directed) beta, DNA pol beta, DNA polymerase beta subunit, MGC125976, Pol B, Pol beta

PRODUCT SPECIFICATION

Molecular Weight

40.3 kDa (355aa) confirmed by MALDI-TOF

Concentration

0.5mg/ml (determined by Bradford assay)

Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 30% glycerol, 0.1M NaCl

Purity

> 95% by SDS-PAGE

Tag

His-Tag

Application

SDS-PAGE

Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Description

DNA polymerase beta, also known as POLB, belongs to the DNA polymerase type-X family. In eukaryotic cells, DNA polymerase beta (POLB) performs base excision repair (BER) required for DNA maintenance, replication, recombination, and drug resistance. POLB has two distinct domains, the larger is the polymerase domain itself, whereas a small basic N-terminal domain contains an AP lyase activity that excises the abasic sugar-phosphate residue at the strand break. POLB fills single nucleotide gaps in DNA produced by the base excision repair

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pathway of mammalian cells. Overexpression of POLB, as found in some human tumors, could confer an increase in spontaneous mutagenesis. Recombinant human POLB protein, fused to His-tag at N-terminus, was expressed in *E. coli* and purified by using conventional chromatography techniques.

Amino acid Sequence

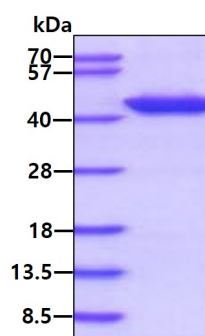
<MGSSHHHHHH SSGLVPRGSH> MSKRKAPQET LNGGITDMLT ELANFEKNVS QAIHKYNAYR KAASVIKYP
HKIKSGAEAK KLPGVGTKIA EKIDEFLATG KLRKLEKIRQ DDTSSSINFL TRVSGIGPSA ARKFVDEGIK TLEDLRKNED
KLNHHQRIGL KYFGDFEKRI PREEMLQMQD IVLNEVKKVD SEYIATVCGS FRRGAESSGD MDVLLTHPSF TSESTKQPKL
LHQVVEQLQK VHFITDTLSK GETKFMGVCQ LPSKNDEKEY PHRRIDIRLI PKDQYYCGVL YFTGSDIFNK NMRAHALEKG
FTINEYTIRP LGVTGVAGEP LPVDSEKDIF DYIQWKYREP KDRSE

General References

Bambara R A., et al. (1991) *Biochim Biophys Acta*. 1088:11-24.
Ropp P A., et al. (1996) *Genomics*. 36:449-458.

DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.