

## DNA Polymerase $\beta$ (rat)

10-101      20 ug,      10-102      100ug

**DNA polymerase  $\beta$**  is a distributive polymerase involved in base excision repair which repairs damaged DNA by excising modified bases (oxidized, methylated, deaminated etc.) (ref. 1).

This product is highly purified full-length rat **DNA polymerase  $\beta$**  overproduced in *E. coli* with high enzymatic activity without any tag attached (ref.2). The enzyme has molecular mass of 38 kDa (Fig.1). The amino acid sequence of the rat enzyme has 86% identity to the human homolog.

### Applications

- 1) For the studies on the mechanisms of base-excision repair of DNA damage
- 2) As a positive control for Western blotting with anti-DNA polymerase  $\beta$  antibody

### Specification

**Enzyme activity:** 90 unit/ul (1 unit of the enzyme activity incorporates 1 nanomole of dNTP into acid-insoluble fraction at 37°C in 60 min.)

**Purity:** Over 95% purity by SDS-PAGE analysis

**Form:** 1.3 mg/ml in 50mM Tris-HCl pH7.6, 0.3M KCl, 0.1mM EDTA, 1mM DTT, 20% glycerol

**Storage:** -20°C (long period, - 70°C)

**Data Link** UniProtKB/Swiss-Prot [P06766](#) (DPOLB\_RAT)

### References: This product is described and produced as in Ref 2

1. Friedberg EC *et al* *DNA Repair and Mutagenesis* 2<sup>nd</sup> ed., ASM Press (2006)
2. Date T *et al* "Expression of active rat DNA polymerase beta in Escherichia coli." *Biochemistry* **27**: 2983-2990 (1988) PMID: [3042024](#)



Fig.1 SDS-PAGE analysis of DNA polymerase  $\beta$

M: Molecular weight markers (from top: 250, 150, 100, 75, 50, 37, 25, 20 kDa)

Lane1: DNA polymerase  $\beta$  (rat)

### Related product:

[#70-041](#) anti-DNA polymerase  $\beta$  (rat) antibody, cross-reacts with human and mouse homologs