Bio Academia
Manufacturer

AS ONE

DNA Polymerase β (Rat)

#10-101 20 ug, #10-102 100 ug

DNA polymerase 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 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 blot with anti-DNA polymerase antibody

Specification

Enzyme activity**:** 90 unit/μl (1 unit of the enzyme activity incorporates 1 nanomole of dNTP into acid-insoluble fraction at 37 in 60 minute)

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 or for long term storage, - 70°C

Data Link

UniProtKB/Swiss-Prot **P06766** (DPOLB_RAT)

References

1. Friedberg EC *et al DNA Repair and Mutagenesis* 2nd 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**

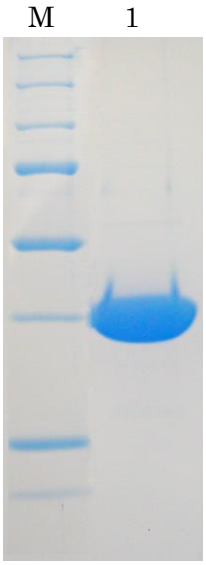

Fig.1 SDS-PAGE analysis of DNA polymerase β
M: Molecular weight markers (from top: 250, 150, 100, 75, 50, 37, 25, 20 kDa)
Lane1: DNA polymerase β (rat)