DNA Polymerase Beta

(Human)

DNA Polymerase Beta
(Homo sapiens)

Cat. No.	Size
E1077-01	50 units
E1077-02	200 units

Unit Definition:
One unit is the amount of enzyme required to incorporate 1 nmole of total nucleotide into acid-insoluble form in 60 min at 37°C.

Storage Conditions:
Store at -20°C

Description:

- Simplest DNA polymerase known in both size and catalysis (1).
- A repair polymerase able to synthesize DNA beyond the end of gap or nick with simultaneous displacement of the non-replicated strand (2).
- Fills gaps or nicks (3).

1 x Reaction Buffer:

50 mM Tris-HCl (pH 8.7), 10 mM $MgCl_2$, 0.4 mg/ml of bovine serum albumin, 1.0 mM dithiothreitol, 100 mM KCl, 15% glycerol.

Reaction buffer is supplied as:

10 x DNA Polymerase Beta - core: 500 mM Tris-HCl (pH 8.7), 100 mM $MgCl_2$, 10 mM dithiothreitol, 1 M KCl.
24 mg/ml bovine serum albumin.
100 % glycerol

Storage Buffer:

20 mM Tris-HCl, pH 8.0, 1.0 mM dithiothreitol, 0.1 mM EDTA, 0.2 M NaCl and 50% (v/v) glycerol.

Assay Conditions:

50 mM Tris-HCl, pH 8.7, 10 mM $MgCl_2$, 0.4 mg/ml of bovine serum albumin, 1.0 mM dithiothreitol, 100 mM KCl, 15% glycerol, 0.05 mM each dCTP, dGTP, dTTP, [α-^{32}P] dATP and 10 µg of activated DNA. Incubation is at 37°C for 15 min in a reaction volume of 50 µl.

Quality Control:

All preparations are assayed for contaminating endonuclease and exonuclease activities.

References:

1. *Abbotts, J., SenGupta, D.N., Zmudzka, B., Widen, S.G., Notario, V., and Wilson, S.H. (1988) Biochemistry 27, No. 3, 901-909.*
2. *Nowak, R., Kulik, J., and Siedlecki, J.A. (1987) Acta Biochim. Pol. 34, 205-215.*
3. *Wang, T. S-F., and Korn, D. (1980) Biochemistry 19, 1782-1790.*

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