

Klenow Fragment

(DNA polymerase I ,
Large fragment)

Code No. PLA-111

Lot No. *****

Storage Store at -20°C

Size 400units

Source : *Escherichia coli* carrying the plasmid that encodes the gene of Klenow Fragment.

Reaction : $\text{DNA}_{\text{OH}} + n\text{dNTP} \rightarrow \text{DNA}-(\text{pdN})_n + n\text{PPi}$

Concentration : *** units/ μl

Unit Definition : One unit is the amount of enzyme activity that incorporates 10 nmoles of total nucleotides into acid precipitable form in 30 minutes at 37°C.

Assay Condition : 67 mM $\text{KPO}_4(\text{pH}7.4)$
6.7 mM MgCl_2
1.0 mM 2-mercaptoethanol
60 μM d(A-T)copolymer
33 μM dATP
33 μM (^3H)-dTTP

Storage Buffer : 50 mM $\text{KPO}_4(\text{pH}7.0)$
0.25 mM DTT
50 % Glycerol

10 × Klenow fragment of DNA polymerase I Buffer : 0.5 M Tris-HCl(pH7.4)
0.1 M MgCl_2
1 mM DTT
500 $\mu\text{g/ml}$ bovine serum albumin

Contaminant Assay

1. Nicking Activity : When 10 units of this enzyme were incubated with 1 μg of $\Phi\text{X}174$ DNA(RFI) for 4 hours at 37°C, no relaxing of the supercoiled structure is observed

after agarose gel electrophoresis .

2. 5'-Exonuclease and
5'-Phosphatase

: 30 units of enzyme, when incubated with 5'-³²P-termini labeled *Hind*III digest of λ -DNA for 4 hours at 37°C in 50 μ l reaction volume, will release less than 0.1 % acid soluble counts.