Genesis Biotech Inc.
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KlenTaq DNA polymerase

Catalog No. PG-30005 **Quantity:** 250 Unit / 50 ul **Storage:** -20℃

Description

KlenTaq DNA polymerase is an N-terminally truncated Thermus aquaticus (Taq) DNA polymerase I. As expressed from a gene construct in Escherichia coli, translation initiates at Met236, bypassing the 5'----3' exonuclease domain of the DNA polymerase-encoding gene. This deletion leaves a highly active and even more heat-stable DNA polymerase activity. The relative mutation rate was twofold lower for KlenTaq as compared to the full-length Taq DNA polymerase.

Unit definition

One unit is the amount of enzyme required to catalyze the incorporation of 10 nmol of dNTP into acid-insoluble material in 30 minutes at 74℃, pH9.3, with activated salmon sperm DNA as the template-primer. The reaction conditions are: 25 mM TAPS (pH 9.3 at 25℃), 1 mM 2-mercaptoethanol, 2 mM $MgCl_2$, 50 mM KCl, 200 uM each of dATP, dTTP, dGTP, 100 uM [a-$_{32}$P]dCTP, 0.25 mg/ml activated salmon sperm DNA.

Storage buffer

This enzyme is supplied in 20 mM Tris-HCl, pH 8.0, 100 mM NaCl, 0.1 mM EDTA, 0.5 mM DTT, 1% Triton X-100, 50% glycerol.

Purity

Nicking activity, endonuclease and exonuclease activity were not detected after the incubation of 0.6 ug of supercoiled pUC18 DNA , 0.6 ug of Lambda DNA or 0.6ug of Lambda-HindIII digest with 10 units of this enzyme for 1 hour at 74℃.

10X PCR buffer (1.0ml/vial)

The PCR buffer is supplied as a 10X concentrate and should be diluted for use.

Application

1. Highly thermostable
2. Recombinant, truncated form of Thermus aquatics
3. No 5'-3' exonuclease activity
4. Enzyme cannot degrade the 5' end of primer
5. Amplifications requiring reproducible

Related proucts

Taq DNA polymerase	PG-30001
Hotstart Taq DNA polymerase	PG-30002
Pr Taq DNA polymerase (Taq+Pfu)	PG-30003
Hotstart Pr Taq DNA polymerase (Taq+Pfu)	PG-30004
Hotstart Klen Taq DNA polymerase	PG-30006
Anti-Taq Hotstart Antibody	PG-30007
Real-time PCR kit	PG-30009
One Step RT-PCR kit	PG-30010
Genotyping kit	PG-30012
PCR kit	PG-30013

Basic PCR Protocol

Add the following components to a sterile 0.5ml microcentrifuge tube sitting on ice:

Components	Volume	Final Concentration
10X PCR buffer (with $MgCl_2$)	10 ul	1x
2.5mM dNTP	8 ul	200 uM
forward primer	1-5 ul	0.1-0.5 uM
reverse primer	1-5 ul	0.1-0.5 uM
KlenTaq DNA polymerase (5U/ul)	1 ul	5-6 unit
Template < 0.5 ug	0.05-0.5 ug for genomic DNA 0.5-50 ng for plasmid	

Sterile distilled water up to 100 ul.