Bst DNA Polymerase

User's Instruction

Description

Bst DNA Polymerase was derived from *Bacillus stearothermophilus* DNA polymerase I. Its 5 '- 3' exonuclease activity was removed by genetic engineering, while the 5 '- 3' polymerase activity was retained. The enzyme has strong strand displacement ability, so it is an excellent enzyme for isothermal amplification. Compared with wild-type Bst DNA polymerase (large fragment), the enzyme has been greatly improved in terms of amplification speed, yield, salt tolerance and thermal stability.

Kit Contents

	1,600U
1. Bst DNA Polymerase (8U/μl)	200 μl
2. 10 × Isothermal Buffer (Mg^{2+} free)	1.25 ml
3. 100 mM Mg^{2+}	1 ml

Note

- DNA isothermal amplification
- GC-rich rapid sequencing
- Rapid sequencing of micro-template DNA

Protocol

1. Set up isothermal amplification reaction as the following table (take 25 μl per well as an example):

Component	Volume
Bst DNA Polymerase (8U/μl)	0.5-1 μl
10 × Isothermal Buffer (Mg^{2+} free)	2.5 μl
100 mM Mg^{2+}	1.5-2 μl
dNTP Mixture (10 mM each)	3 μl
Template (DNA/RNA)	1 ng-1 μg

*10X Primers	1.25-2.5 μl
RNase-Free ddH_2O	Up to 25 μl

- *10X Primers：16 μM FIP/BIP, 2 μM F3/B3, 2-8 μM LoopF/B each.

2. Thermocycling Conditions

   a) 60-65℃ for 30-60 min

   b) 85℃ for 5 min (inactivation)

Storage

Store at -20℃ for three years. Avoid multiple freeze-thaw cycles.