



Ver. HB221115

## Hieff™ Bst Plus DNA Polymerase (40 U/μL)

### Product description

Hieff™ Bst Plus DNA Polymerase is derived from *Thermophilic Geobacillus sp* DNA Polymerase I, lacking 5'-3' exonuclease activity. The enzyme has stronger 5'-3' DNA polymerase activity, strand displacement activity and dUTP tolerance, which is more suitable for anti-pollution isothermal amplification reactions, such as LAMP, CPA, etc.

### Components

Components No.	Name	14402ES92 (8,000 U)	14402ES97 (40,000 U)
14402-A	Hieff™ Bst Plus DNA Polymerase (40 U/μL)	200 μL	1 mL
14402-B	10 × Hieff™ Bst Plus DNA Polymerase Buffer	1 mL	3×1 mL
14402-C	100 mmol/L MgSO <sub>4</sub>	1 mL	3×1 mL

### Specifications

Polymerase	Bst DNA Polymerase
Heat Inactivation	Incubation at 85°C for 5 min.
Solution Components	10 mmol/L Tris-HCl, 50 mmol/L KCl, 0.1 mmol/L EDTA, 1 mmol/L DTT, 0.1% Triton X-100, 50% Glycerol, pH 7.5 @ 25°C.
Activity Definition	1 U refers to the amount of enzyme required to incorporate 10 nmol of dNTP into the acid-insoluble precipitate in 30 min at 65°C.

### Shipping and Storage

The product is shipped with dry ice and can be stored at -15°C ~ -25°C for 2 years. Please avoid repeated freeze-thaw.

### Instructions

#### 1. Recommended reaction system

Components	Volume (μL)	Final Concentration
10×Reaction Buffer	2.5	1×
100 mmol/L MgSO <sub>4</sub>	0.75	3 mmol/L+2 mmol/L in buffer=5 mmol/L
dNTP Mix (25 mmol/L each)	1.4	1.4 mmol/L each
dUTP (25 mmol/L) (optional)	1.4	1.4 mmol/L
UDGase (1 U/μL) (optional)	1	0.04 U
DNA	10 ng~1 μg	-
10×Primers	2.5	-
Hieff™ Bst Plus DNA Polymerase (40 U/μL)	1*	1.6 U/μL




---

ddH<sub>2</sub>O to 25 -

---

**Note:**

1. According to different experiments, the concentration of Hieff™ Bst Plus DNA Polymerase can be adjusted and optimized.
2. 10×Reaction Buffer: 200 mmol/L Tris-HCl, 500 mmol/L KCl, 100 mmol/L (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 20 mmol/L MgSO<sub>4</sub>, 1% Tween-20, pH 8.8 @ 25°C.
3. If optimization is desired, try titrating concentration of Mg<sup>2+</sup> (4–10 mmol/L final).
4. 10×Primers: 16 μmol/L FIP/BIP, 2 μmol/L F3/B3, 4 μmol/L Loop F/B each.
5. Yeasen Biotech products: dNTP (Cat#10124), dUTP (Cat#10128) and UDGase (Cat#10303) can be used with this product.

**2. Reaction conditions**

Temperature	Time	Effect
25~37°C	5~10 min	Degradation of U-containing templates (optional)
65°C	30~60 min	Reaction
85°C	5 min	Deactivation

---

**Notes**

1. Enzymes should be stored in an ice box or on an ice bath when used, and should be stored at -20°C immediately after use.
2. For your safety and health, please wear lab coats and disposable gloves for operation.
3. This product is for research use ONLY!