RAS Lifesciences Pvt Ltd
Striving for better health

RAS *Bst* Enzy

Bst DNA Polymerase

(Minus Exonuclease)

8,000 U/ml	1600 units	Lot no xxxxxxxxx	Exp bcbcbbc	Store at -20C

Description

Bst DNA polymerase, (large fragment) is a 67 kDa polymerase from *Bacillus stearothermophilus.* It has 5´→ 3´ polymerase activity, but lacks 5´→ 3´ exonuclease activity.

Source

Prepared from *E. coli* strain harboring the *Bst* DNA polymerase, large fragment gene introduced from *Bacillus stearothermophilus*.

Applications

- DNA sequencing through high GC regions.
- Rapid Sequencing from nanogram amounts of DNA template
- Nucleic acid amplification methods (NAA)

Supplied in: 50 mM KCl, 10 mM Tris-HCl (pH 7.5), 0.1 mM EDTA, 1 mM dithiothreitol, 0.1% Triton X-100 and 50% glycerol.

Concentration

8 U/1.5 µL

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 65°C.

Reagents Supplied with Enzyme

- **2x RAS Bst Reaction Buffer**
  40mM Tris-HCl,
  50 mM KCl,
  8 mM $MgSO_4$
  20 mM $(NH_4)_2SO_4$,
  1.6 M Betaine
  0.2 % Tween 20

Reaction Conditions

Incubate at 65°C using 1X RAS Bst Reaction Buffer

Heat Inactivation

20 minutes at 80°C.

Quality Control assays

DNase activity

No detectable change in banding pattern was observed in agarose gel after incubating the 40 units of *Bst* DNA Polymerase, Large Fragment with 500 ng of phage DNA in RAS *Bst* reaction buffer at 37°C for 4 hrs.

RNase activity

Incubation of Human RNA (250 ng) with 40 units of *Bst* DNA polymerase, Large fragment in RAS *Bst* reaction buffer at 37°C for 1 hr results in no detectable change in banding pattern as determined by agarose gel electrophoresis.

E. *coli* DNA contamination

Taq polymerase is tested free of *E.coli* DNA contamination

Storage

Recommended storage condition is -20°C.

Presentation

Cat. No	Units	Enzyme	Buffer
ENBSE-0.8K	800 Units	1 x 100 µL	1 x 1.25 mL
ENBSE-1.6K	1600 Units	1 x 200 µL	2 x 1.25 mL
ENBSE-5K	5000 Units	1 x 625 µL	1 x 65 mL
ENBSE-10K	10000 Units	1 x 1.25 mL	1 x 130 mL

For further information on protocols and details, please contact our technical support: info@raslifesciences.com

Manufactured by:
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Component	Volume (µL)
2X *Bst* Reaction Buffer	12.5
10 mM dNTPs	1.0
Primer-mix	x
Template DNA	X µL
RAS *Bst* DNA Polymerase	1.5
Detection dye*	x
Molecular Grade Water	Make up to 25

- Only few fluorescent dyes are included in the reaction mix like calcein. Few are added after completion of the isothermal amplification like Sybr green.

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