PRODUCT INFORMATION

Bst DNA Polymerase (Large Fragment)

v. 230101

Catalog number	C15019-1600U / C15019-8000U

Package & Component

Cat.	Name	Amount
C15019-1600U	Bst DNA Polymerase (Large Fragment) (8 U/μL)	1,600 U
	10X Bst DNA Polymerase Reaction Buffer	1 mL
	100 mM MgSO4	0.4 mL
C15019-8000U	Bst DNA Polymerase (Large Fragment) (8 U/μL)	8,000 U
	10X Bst DNA Polymerase Reaction Buffer	1 mL
	100 mM MgSO4	0.4 mL

Description	Bst DNA Polymerase (Large fragment) is an enzyme of Bacillus stearothermophilus DNA polymerase which can catalyze 5´ → 3´ polymerase activity but lacks 5´ →3´ exonuclease activity. Bst DNA Polymerase offers strand displacement capabilities, making it ideal for isothermal amplification.
Source	Escherichia coli
Purity	>98% as determined by SDS-PAGE (purified by Ni-NTA chromatography).
Unit Definition	One unit is defined as the amount of the enzyme incorporates 10 nmol of dNTP into acid-insoluble product in 30 minutes at 65°C.
Reaction Condition	1X Bst DNA Polymerase reaction buffer, supplemented with dNTP mix, primer and DNA template. Incubate at 65°C. 10X Bst DNA Polymerase Reaction Buffer: 200 mM Tris-HCl (pH 8.8), 100 mM $(NH4)_2SO_4$, 100 mM KCl, 20 mM $MgSO_4$, and 1% Triton® X-100.
Storage Buffer	Bst DNA Polymerase (Large fragment) is supplied in 10 mM Tris-HCl (pH7.5), 50 mM KCl, 1 mM DTT, 0.1 mM EDTA, 0.1% Triton® X-100 and 50% Glycerol.
Storage	Stored at -20°C. Avoid repeated freeze/thaw cycles.

Manuel

LAMP reaction recipe:

1. Place all required reagents **on ice** and add each of them following the order suggested below.

Component	Amount	Final concentration
10X Bst DNA Polymerase Reaction Buffer	2.5 µL	1X
100 mM MgSO4	1.5 µL	6 mM final concentration, total 8 mM
10 mM dNTP mix	3.5 µL	1.4 mM each
10X FIP/BIP primers	1 µL	1.6 µM
10X F3/B3 primers	1 µL	0.2 µM
10X LoopF/B primers	1 µL	0.8 µM
DNA template	X µL	10 copies or more
Nuclease-Free H_2O	Y µL	-
Bst DNA Polymerase (Large Fraction) (8 U/µL)	1 µL	8 U/rxn
Total reaction volume	25 µL	-

2. Gently mix the reaction thoroughly to achieve uniform distribution.
3. Incubate at 65°C for 30-60 minutes.
4. $MgSO_4$ (2-10 mM), Bst DNA Polymerase (40-320 U/mL) and temperature (50-65 °C) can be adjusted for optimal results.
5. Reaction preparations may be scaled up or down proportionately.

Notes

It is not recommended to perform reaction above 70 °C. Bst DNA Polymerase cannot be used for thermal cycle sequencing.

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