



Datasheet, Version 2/2016

Catalog # 1617
Synonyms BstI-LF ExoType Recombinant
Source E. coli

Bacillus

Species stearothermophilus

Tag His6

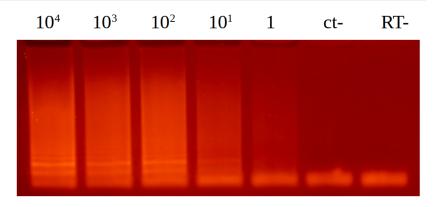
50% Glycerol

Form solution + Buffer

10x

Purity >95% by SDS PAGE

Shipping Ice pack



RT-LAMP assay detecting SARS-CoV-2 virus. Serial dilution of viral isolate (copy numbers).

#### Introduction

Bst DNA Polymerase, Large Fragment is moderately thermostable enzyme from Bacillus stearothermophilus cloned to E. coli. It exhibits thermophilic reverse transcriptase activity and is active over a wide range of reaction buffer conditions and magnesium ion concentrations. This polymerase shows a strong strand displacement capabilities making it an ideal candidate for isothermal amplification (LAMP), whole genome amplification (WGA), and multiple displacement amplification (MDA).

#### **Description**

<u>Bst DNA Polymerase</u>, exonuclease minus, is a 67 kDa Bacillus stearothermophilus DNA Polymerase protein with a 5'-3' polymerase activity, strand displacement activity, and reverse transcription activity. There is no detectable 3'-5' exonuclease activity. The concentration is 10 U/ul.

### **Application**

Isothermal DNA amplification, LAMP, DNA strand displacement amplification, whole genome amplification, sequencing of DNA with high CG content and problematic secondary structures, rapid sequencing and amplification from very low amounts of DNA templates (10 fg). LAMP assay: 2,5 ul 10x BST Buffer, 0,8 ul MgSO4 (25 mM), dNTPs (10 mM), 4 ul Betaine (5M), 1,6 ul mecA FIP primer (10 mM), 1,6 ul mecA BIP primer (10 mM), 0,2 ul mecA F3 primer (10 mM), 0,1 mg/ml BSA, 1 ul BST polymerase, 1 ul template DNA, 10,5 ul H2O. Reference: Changguo Chen, Qiangyuan Zhao, Jianwei Guo, Yanjun Li (2017): Identification of Methicillin-Resistant Staphylococcus aureus (MRSA) Using Simultaneous Detection of mecA, nuc, and femB by Loop-Mediated Isothermal Amplification (LAMP). Current Microbiology 74 (8): 965-971. doi:10.1007/s00284-017-1274-2.

## **Purification method**

Affinity chromatography. The enzymes supplied by Protean Ltd. are manufactured in certified environment under ISO 9001 and ISO 13485 international standards, which fully qualifies them for a use in downstream GMP certified processes.

#### **Formulation**

Storage buffer: 10mM Tris (pH 7,5), 50mM KCl, 1mM DTT, 0,1mM EDTA, 0,1% Triton, 50% glycerol. 10x Reaction Buffer: Proprietary optimized buffer with 100mM Tris-HCl (pH 8,8), (NH4)2SO4, KCl, MgSO4 and 1% Triton X-100.

#### **Specificity**

DNA. RNA

#### Storage

Store at -20Ë

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# Analyte specific reagent (ASR) manufactured under ISO 13485. Country of origin: Czech Republic