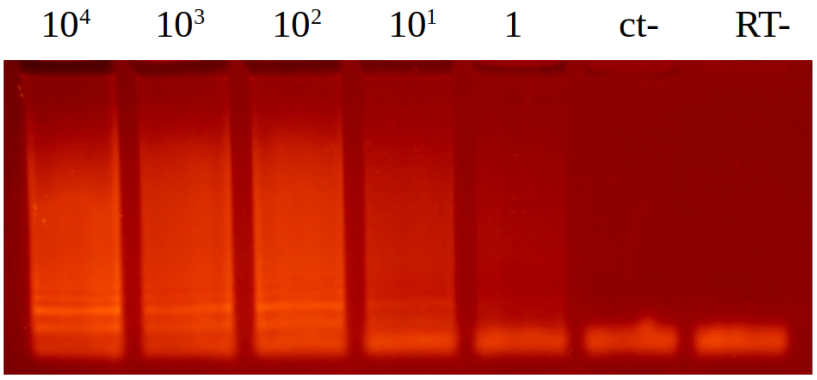
BstI DNA polymerase

Datasheet, Version 2/2016

protean
On the bow of top biotechnology

Catalog #	1617
Synonyms	BstI-LF Exo-
Type	Recombinant
Source	E. coli
Species	Bacillus stearothermophilus
Tag	His6
Form	50% Glycerol 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

Bst DNA Polymerase, 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), 0,2 ul mecA B3 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

Analyte specific reagent (ASR) manufactured under ISO 13485.

Protean s.r.o.
Pod Lesem 9
373 16 Dobra Voda u CB
The Czech Republic

ISO 9001 & ISO 13485 CERTIFIED

www.protean.bio
info@protean.bio
+420 380 120 427