

Inhibitor-Tolerant Bst Buffer

Product Handling Guide

Shipping:	On dry/blue ice
Catalog number:	MDX019
Batch No.:	See vial
Concentration:	10x

Store at -20 °C

meridian BIOSCIENCE®

Storage and stability:

Inhibitor-Tolerant Bst Buffer is shipped on dry or blue ice. On arrival store at -20 °C for optimum stability. Repeated freeze/thaw cycles should be avoided. Solutions should be mixed/equilibrated after each thawing to avoid phasing.

Expiry:

When stored under the recommended conditions and handled correctly, full activity of the kit is retained until the expiry date on the outer box label.

Safety precautions:

Read and understand the SDS (Safety Data Sheets) before handling the reagents. Hardcopies of the SDS will be provided with the first shipment, thereafter they will be available upon request.

Quality control:

Bioline operates under ISO 13485 Quality Management System. Inhibitor-Tolerant Bst Buffer and its components are extensively tested for activity, processivity, efficiency, heat activation, sensitivity, absence of nuclease contamination and absence of nucleic acid contamination.

Notes:

For research or further manufactured use only.

Description

Inhibitor-Tolerant Bst Buffer is specially designed to overcome the inhibition present in samples in direct LAMP reactions. It is tolerant to the presence of sputum, saliva, blood and other inhibitors. Inhibitor-Tolerant Bst Buffer is optimized for use with Bst DNA Polymerase (MDX018 or MDX012).

Kit components

Table 1

Component
Inhibitor-Tolerant Bst Buffer, 10x

Users Guidelines

Thawing during transportation does not affect the product performance. Prior to use or storing at -20 °C, the thawed reagents must be thoroughly mixed by 10 inversions.

Typical LAMP reaction conditions:

Incubate at 65 °C for 60 minutes.

The following protocol is for a standard 25 µL LAMP reaction to be used as a starting point for optimization.

Reagent	Volume	Final Concentration
Inhibitor-Tolerant Bst Buffer, 10x	2.5 µL	1x (contains 6 mM MgSO ₄)
dNTP Mix (100 mM)	0.4 - 1.5 µL	1.6 - 6 mM
MgSO ₄ (100 mM)	2 µL	8 mM (14 mM total, optional)
FIP/BIP Primers (25x)	1 µL	1.6 µM
F3/B3 Primers (25x)	1 µL	0.2 µM
Loop F/B Primers (25x)	1 µL	0.4 µM
Bst DNA Polymerase (3-8 U/µL)*	1 µL	0.12 - 0.32 U/µL
Sample DNA	variable	> 10 copies
Water (ddH ₂ O)	to 25 µL	

LAMP Optimisation

The presence of sample and inhibitors could interfere with the reactions differently depending on the nature of the sample, the assay design and the detection system. The amount of sample should be optimised.

dNTPs can be optimised between 1.6 mM (0.4 mM each) and 6 mM (1.5 mM each) final concentration.

MgSO₄ is included in the 10x Bst Reaction Buffer to deliver a final concentration of 6 mM in the reaction. This can be increased up to 14 mM depending on specific assay requirements.

The amount of Bst can be adjusted to obtain an optimal balance between TTR (Time to Result) value and NTC (Non-Template Controls).

Related Products	Cat. No.
Bst DNA Polymerase (8 U/µL)	MDX012
High Conc. Glycerol-Free Bst	MDX018
dNTP Mix, 100mM	MDX051

Technical Support

For any technical enquiries, please contact our Technical Support team via email at: mbi.tech@meridianlifescience.com

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