

MedixMDx Fast *Bst* Mix

Description

MedixMDx Fast *Bst* Mix is a simple ready-to-use mix containing recombinant DNA polymerase expressed by *Geobacillus stearothermophilus* (formerly *Bacillus stearothermophilus*). The DNA polymerase displays high strand displacement activities, exhibits 5' to 3' polymerase activity, but lacks 5' to 3' exonuclease activity. MedixMDx Fast *Bst* Mix is suitable for isothermal nucleic acid amplification methods such as loop-mediated isothermal amplification (LAMP).

MedixMDx Fast *Bst* Mix is tolerant to inhibitors, enabling rapid and robust LAMP reactions at a constant temperature. The typical reaction temperature is 65°C. However, the enzyme is also active at lower and higher temperatures (55–70°C). The enzyme can be inactivated at temperatures higher than 80°C. Addition of an intercalating dye allows the reaction to be monitored using a real-time PCR instrument. Reactions can also be run using small and portable instruments with incubation and fluorescence measurement capabilities.

Kit components

Component	*MX2106 -1 100 rxn	*MX2106 -5 500 rxn
2x MedixMDx Fast <i>Bst</i> Mix	1.25 mL	5 X 1.25 mL
20x Fluorescent dye	0.125 mL	0.625 mL

*Other pack sizes or bulk orders are available upon request.

Storage and shipment

Transport with an ice pack or on dry ice (for shipments taking more than 2 days). The reagents should be stored between -30°C and -15°C upon arrival. The reagents are stable for 12 months if stored correctly.

Mastermix set-up for LAMP assay

The recommended mastermix set-up for a 25 µL reaction volume is shown in the table below.

Reagent	Volume (µL)	Final concentration
2x MedixMDx Fast <i>Bst</i> Mix	12.5	1x
20x Fluorescent dye	1.25	1x
∞10x LAMP primer set	2.5	1x
DNA/cDNA template	X	Variable
Nuclease-free water	Up to 25 µL final volume	
Total volume	25 µL	

∞LAMP primers should be designed using an appropriate primer design tool. The 10x primer set should contain 16 µM FIP, 16 µM BIP, 2 µM F3, 2 µM B3, 4–8 µM LoopF, and 4–8 µM LoopB in TE buffer or water.

After preparation of the mastermix, incubate at 65°C for 30 minutes. The reaction time can be extended, and the incubation temperature can be varied between 55°C and 70°C to improve sensitivity and speed. The reaction can be monitored in a qPCR instrument by measuring fluorescence (FAM) every 10–30 seconds.

Technical information and support

For technical enquiries or assay development support, please contact us via e-mail at: mdx@medixbiochemica.com. Additional information and technical resources are available on our website at: www.medixbiochemica.com/en/MedixMDx.

