High-Specificity Pfu HS Mix
Product Handling Guide

Shipping:	On Dry/Blue Ice
Catalog numbers:	MDX006
Batch No.:	See vial
Concentration:	2x

Store at –20 °C

meridian BIOSCIENCE™

Storage and stability:
High-Specificity Pfu HS Mix is shipped on dry/blue ice. On arrival store at -20 °C for optimum stability. Repeated freeze/thaw cycles should be avoided. Thawing during transportation does not affect the product performance. 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 SDSs will be provided with the first shipment, thereafter they will be available upon request.

Quality control:
Bioline operates under ISO 13485 Management System. The High-Specificity Pfu HS Mix 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

High-Specificity Pfu HS Mix is a high-fidelity PCR master mix containing an aptamer to create a reversible, temperature-dependent hot-start and Pfu Buffer, tailored for low GC bias amplification. The 3' - 5' proofreading exonuclease activity of High-Specificity Pfu HS Mix makes it ideal for target enrichment, NGS library amplification and cloning applications.

Kit components

Table 1

Component
High-Specificity Pfu HS Mix (2x)

Users Guidelines

For DNA templates with low structural complexity, such as plasmid DNA, we recommend using 20 pg - 4 ng DNA per 20 µL reaction volume. For eukaryotic genomic DNA, we recommend a starting amount of 80 ng DNA per 20 µL reaction, this can be varied between 2 ng - 200 ng.

PCR reaction setup

Prepare a reaction mix of High-Specificity Pfu HS Mix and assay-specific primers (see recommended composition in Table 2).

Table 2

Reagent	Volume	Final Concentration
High-Specificity Pfu HS Mix (2x)	10 µL	1x
Template	As required	As required
20 µM Forward Primer	0.4 µL	400 nM
20 µM Reverse Primer	0.4 µL	400 nM
Water (ddH_2O)	≤ 20 µL	

PCR amplification

The PCR conditions in Table 3 are suitable for amplicons of up to 1 kb.

Table 3

Step	Temperature	Time	Cycles
Denaturation	95 °C	15 s	25-35
Annealing	User determined	15 s	
Extension	72 °C	15 - 30 sec/kb	
Final extension (optional)	72 °C	4 - 10 min	1

For multiplex PCR we suggest using 55 °C as a starting annealing temperature. If further optimization is required we recommend using a temperature gradient to determine the optimal annealing temperature needed for the multiplex PCR. Since multiplex PCR generally requires a longer extension step, we suggest starting with a minimum of 90 s and increasing it if required.

Related Products	Cat. No.
Pfu DNA Polymerase	MDX003
Pfu Reaction Buffer, 5x	MDX081
NGS End-Repair Buffer, 5x	MDX035
NGS Ligase Buffer, 5x	MDX036
NGS Ligase	MDX037
NGS ER Enzyme Mix	MDX040

Technical Support

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

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