

Inhibitor-Tolerant PCR Buffer, 5x

Product Handling Guide

Shipping:	On Dry or Blue Ice
Catalog number:	MDX075
Batch No.:	See vial
Concentration:	5x

Store at -20 °C



Storage and stability:

Inhibitor-Tolerant qPCR Buffer, 5x is shipped on dry or 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 SDS will be provided with the first shipment, thereafter they will be available upon request.

Quality control:

Meridian operates under ISO 13485 Quality Management System. Inhibitor-Tolerant qPCR Buffer, 5x 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 and/or further manufacturing use only.

Description

Inhibitor-Tolerant qPCR Buffer, 5x is a combination of the latest advances in buffer chemistry and PCR enhancers and stabilizers, which needs the addition of DNA polymerase, dNTPs and MgCl₂. Inhibitor-Tolerant qPCR Buffer has been designed to be used in PCR reactions for highly reproducible, accurate assay results in the presence of inhibitors, making it ideal for direct amplification directly from human and animal blood samples.

Kit components

Table 1

Component
Inhibitor-Tolerant qPCR Buffer, 5x

Users Guidelines

Master mix preparation

Recommended reagent volumes per 20 µL qPCR mix are given in Table 2.

Table 2

Reagent	Volume
Inhibitor-Tolerant qPCR Buffer, 5x	4 µL
MgCl ₂ Solution, 50 mM*	1.2 µL
dNTP Mix Solution, 100 mM**	0.2 µL
Hot-Start Taq DNA Polymerase***	0.1 µL
Primer-Probe Mix, 20x	1 µL
Template****	x µL
Water	As required
Total volume	Up to 20 µL

*The described amount is indicative, if working with blood we recommend to titrate the MgCl₂ between 3 –10 mM.

**We recommend using a high-quality dNTP Mix, such as dNTP Mix, 100mM MDX051

***We recommend using a high-quality polymerase such as Taq Glycerol-Free Taq HS 50 U/µL MDX011

****If working directly with blood, due to the high viscosity, pipette a minimum of 4 µL of undiluted or diluted blood. The maximum recommended final concentration in the reaction could be dependent of the qPCR platform, this may vary between 1 up to 20%. Some optimization may be required.

Resuspend reactions with care to minimise the formation of bubbles. Centrifuge reaction plate at 1200 x g for 6 minutes at 4 °C.

Assay setup

The qPCR conditions in Table 3 are suitable for amplicons of up to 200 bp. These cycling parameters below are recommended for blood assays on a number of platforms, however they can be varied to suit different machine-specific protocols.

Table 3

Step	Temperature	Time	Cycles
Polymerase activation	95 °C	3 min	1
Denaturation	95 °C	10 s	45
Annealing/Extension	60 °C	30 s	

Given the high risk of cross-contamination of samples, we recommend including a non-template control.

Related Products	Cat. No.
Taq HS DNA Polymerase	MDX011
dNTP Mix, 100mM	MDX051
Inhibitor-Tolerant qPCR Mix	MDX013
Fast qPCR Mix	MDX020
Fast qPCR Mix, 5x	MDX072
MMLV-RT	MDX044

Technical Support

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