Differentiating Research

Product Details

10X Taq Reaction Buffer

Product Overview

DX/DT Taq DNA Polymerase Reaction Buffer (10X) is optimized for high-sensitivity and repeatable PCR performance, ensuring efficient amplification even for difficult or low-copy targets. Designed to enhance enzyme stability and activity, it provides an ideal ionic environment for robust and reliable DNA amplification. This buffer supports tough-to-amplify genes, improving yield and specificity across a wide range of templates. Compatible with routine PCR assays, it delivers consistent and reproducible results. Whether working with complex genomic DNA or challenging GC-rich sequences, DX/DT Taq Buffer (10X) enhances reaction efficiency, making it the perfect choice for routine and demanding PCR applications.

Catalog Details

R1110-5	5ml
R1110-25	25ml

Storage

- 20 ℃

PCR Protocol

The samples must be prepared in sterile DNase Free micro-centrifuge tubes, with the following composition placed on ice

Components	50µL reaction	Final Concentration
Template DNA	1 µL	5ng to 250ng
Forward Primer (10µM)	1µL	0.1 - 1µM
Reverse Primer (10µM)	1µL	0.1 - 1µM
dNTP MIX (2.5mM each)	4 µL	Upto 200 µM
10X Taq Reaction Buffer	5 µL	1X
DX/DT Taq DNA Polymerase	0.5 µL	0.5 - 1.25 U
Nuclease Free Water	Upto 50 µL	

NOTES:

- To collect all liquid at the bottom of the vial, reaction mix can be kept for a quick spin (10 seconds).
- While doing PCR without heat lid, it is recommended to overlay the sample with 1-2 drops of mineral oil.

After the preparation of PCR mix samples as above, they are transferred to thermal cycler. The thermal cycling process begins with initial denaturation step. The denaturation process is to ensure complete denaturation of the target DNA at 95℃. The standard steps for thermal cycler are tabulated below with optimum temperature, time, and number of cycles. Generally, 25 – 35 cycles yield sufficient product.

Step	Temperature	Time	Cycle
Initial denaturation	95 ℃	2 minutes	1
Denaturation	95 ℃	30s	25 - 35
Annealing *	45 - 65 ℃	30s	
Extension	72 ℃	1 minute/kb	
Final Extension	72 ℃	5 to 10 minutes	1
Hold, if required.	2- 8 ℃	variable	1

*Annealing temperature is based on the Tm (Melting point) of the primer pair used. Melting point increases with increase in GC content.

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Quality Control Assays

Nuclease tests: No contamination of endo or exonucleases were detected.

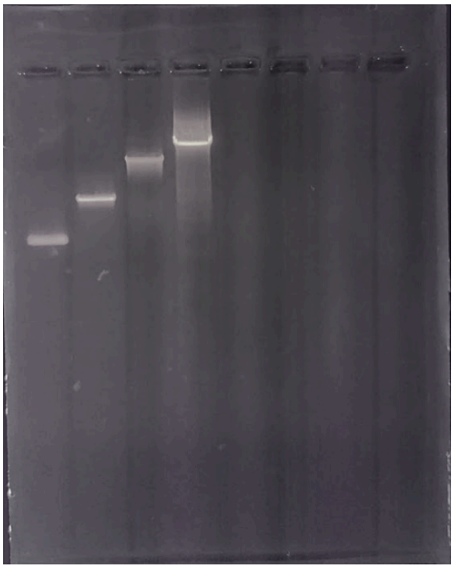
Performance Testing

Target sizes tested : λ DNA - 300bp, 1kb, 3kb, 5kb all at 1ng concentration

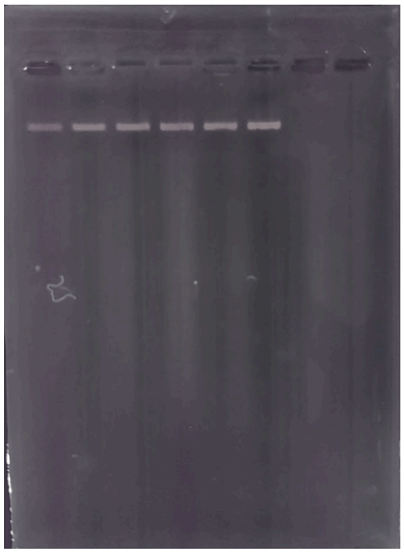
Target concentration tested : λ DNA - (300bp) - 10pg, 100pg, 500pg, 1ng, 50ng, 100ng

Extension time: 1 min/Kb

Annealing temperature of all the primers: 58℃



Lane 1: 300 bp
Lane 2: 1 Kbp
Lane 3: 3 Kbp
Lane 4: 5 Kbp
Lane 5: Blank
Lane 6: Blank
Lane 7: Blank
Lane 8: Blank



Lane 1: 10 pg
Lane 2: 100 pg
Lane 3: 500 pg
Lane 4: 1 ng
Lane 5: 50 ng
Lane 6: 100 ng
Lane 7: Blank
Lane 8: Blank

Any Technical Help ?

Please write to us at info@dxbidt.com . Response can be expected within 24Hrs. Our technical team shall be happy to assist you all the time.

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Email : info@dxbidt.com | Ph: +91-7349708807

Website: https://dxbidt.com

Address: #87, Dasanapura, Lakshmipura Post, Bangalore - 560073