PR1MA™ Taq DNA Polymerase

Inhibitor-resistant and thermotolerant

Contents

PR1MA™ Taq DNA polymerase is provided at a concentration of 5 U/uL with 10X Taq buffer, 4 M Betaine, and 30% Sucrose.

Background

PR1MA™ Taq DNA polymerase is a recombinant, truncated (lacks 5' to 3' exonuclease activity), and highly thermostable DNA polymerase from the thermophilic bacterium *Thermus aquaticus*. PR1MA™ Taq is thermostable up to 98˚C for PCR assays. It is supplied with 4 M betaine to improve ampl ification of GC-rich DNA and 30% sucrose to improve amplification from inhibitor-rich substrates such as blood or tissue samples.

Application Notes

Taq DNA polymerase (exonuclease minus) is resistant to inhibitors and ideal for PCR of GC- rich templates.

**These products are intended for research use only, not for diagnostic use. The safety and efficacy of these products in diagnostic or other clinical uses has not been established.*

Shipping & Storage

- PR1MA™ Taq DNA polymerase is supplied in a buffer of 50% glycerol, 50 mM Tris-HCl, 50 mM KCl, 1 mM DTT, 0.1 mM EDTA, 0.5% Tween-20, 0.5% NP-40 substitute, pH 7.5.
- Includes 1 mL of 10X Taq Reaction buffer, 1 mL of 4M Betaine, and 1 mL of 30% Sucrose.

Taq DNA polymerase is shipped on dry or blue ice. On arrival store at -20˚C for optimum stability. Repeated freeze/thaw cycles should be avoided.

Important note: Please be sure to use the buffer provided with this product to ensure optimal results.

MIDSCI™
Laboratory Equipment & Supplies

Quality Control

- PR1MA™ Taq DNA polymerase Unit activity: A known polymerase is used to create a standard curve with a qPCR assay against which the activity of this enzyme is measured.
- Purity: >95% as determined by SDS-PAGE analysis
- Taq DNA polymerase is free of detectable RNase and DNase (exo- and endonuclease).
- <0.05 ng contaminating host DNA per 1.25 U

Setting up PCR assays

- Thaw all reagents prior to setting up PCR.
- Before use, mix all components by vortexing (5 sec) followed by centrifugation (5 sec)
- Set up reaction on ice (4°C).

Component	Stock	50 µL Rxn	25 µL Rxn	Final Conc
10X DirecTaq Buffer	10X	1 µL	2.50	1X
[1]Betaine (optional)	4M	(25 µL)	(12.5 µL)	2M
[2]Sucrose (optional)	30%	(25 µL)	(12.5 µL)	15%
dNTP mix	10 mM	1.0 µL	0.5 µL	200 µM
Forward Primer	10 µM	2.5 µL	1.25 µL	0.5 µM
Reverse Primer	10 µM	2.5 µL	1.25 µL	0.5 µM
Template	--	Varies	Varies	>100 ng
DirecTaq DNA polymerase	5 U/µL	0.5	0.25	1.25 U/25 µL rxn
Water		To 50 µL	to 25 µL	µL

- Suggested for amplicons with >50% GC content.
- Suggested for inhibitor-rich samples such as blood or tissue samples.