

# BIOLASE™ DNA Polymerase

Shipping: On Dry/Blue Ice

Catalog numbers

BIO-21042: 500 Units (100 µL)

Batch No.: See vial

BIO-21043: 2500 Units (5 x 100 µL)

Concentration : 5u/µL

BIO-21066: 10000 Units (20 x 100 µL)



A Meridian Life Science® Company

Store at -20°C

## Storage and stability:

The BIOLASE is shipped on dry/blue ice. On arrival store at -20 °C for optimum stability. Repeated freeze/thaw cycles should be avoided.

## 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:

Please refer to the material safety data sheet for further information.

## Unit definition:

One unit is defined as the amount of enzyme that incorporates 10nmoles of dNTPs into acid-insoluble form in 30 minutes at 72 °C.

## Notes:

Research use only.

BIOLASE and HyperLadder are Trademarks of Bioline.

## Features

- Premium Taq polymerase suited to a wide range of applications
- Amplifies fragments ≤5 kb
- Available as ready-to-use 2x reaction mixes (BioMix/BioMix Red)

## Applications

- Routine PCR applications
- TA cloning

## Description

BIOLASE™ is widely used by molecular biologists that have come to depend upon the robust performance of this reagent.

BIOLASE is a highly purified thermostable DNA polymerase offering very high yield over a wide range of PCR templates, and is the ideal choice for most assays. BIOLASE is a robust preparation and consistently delivers high yields with minimal background. BIOLASE possesses 5'-3' exonuclease activity and leaves an 'A' overhang such that the PCR product is suitable for effective integration into TA cloning vectors.

BIOLASE is supplied with 10x NH<sub>4</sub>-based reaction buffer, which provides optimal conditions for most experiments. Additional MgCl<sub>2</sub> is provided to allow reaction conditions to be adjusted to suit the template.

## Components:

Reagent	500 Units	2500 Units	10000 Units
BIOLASE DNA Polymerase	100 µL	5 x 100 µL	20 x 100 µL
10x NH <sub>4</sub> Reaction Buffer	2 x 1.2 mL	10 x 1.2 mL	40 x 1.2 mL
50 mM MgCl <sub>2</sub> Solution	1.2 mL	5 x 1.2 mL	20 x 1.2 mL

## PCR Reaction Conditions (for a 50 µL reaction)

10x NH <sub>4</sub> Reaction Buffer	5 µL
50 mM MgCl <sub>2</sub> Solution	3.0 µL
100 mM dNTP Mix (see below)	0.5 µL
Template and primers	As required
BIOLASE	1 µL
Water (ddH <sub>2</sub> O)	Up to 50 µL

Bioline 100 mM dNTP Mix is available as a separate product (Cat. No: BIO-39028)

Denature: 94-96 °C;  
Extension: 70-72 °C allowing 15-30 seconds per kb

**This data is intended for use as a guide only; conditions will vary from reaction to reaction and may need optimization.**

## General Considerations:

The optimum concentration of Mg<sup>2+</sup> is 3 mM and should only be increased above this if absolutely necessary. For first tests, use no less than 2.5 units of BIOLASE in a 50 µL reaction.

## Citations: ([http://www.bioline.com/h\\_scholar.asp](http://www.bioline.com/h_scholar.asp))

1. Daly-Engel, T.S. *et al. PLoS ONE* **7(1)**: e29986 (2012)
2. Lutes, A.A., *et al. PNAS USA* **108(24)**: 9910-9915 (2011)
3. Frank, D.N., *et al. PLoS ONE* **4(11)**: e7811 (2009)
4. Nelson, K. & Smith, A. *Diag. Microbio. Infect. Dis.* **66(3)**: 235-40 (2009)
5. Fingert, J. H., *et al. Ophthalmic Gen.* **28**: 1-7 (2007)
6. Ouma, J. O., *et al. Biochem. Gen.* **44**: 9-10 (2006)

## Associated Products:

Product	Pack size	Cat. No.
dNTP Set	4 x 25 µmol	BIO-39025
dNTP Mix	500 µL	BIO-39028
HyperLadder™ 1kb	200 Lanes	BIO-33025

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