

# BIOTAQ™ DNA Polymerase

Shipping: On Dry/Blue Ice

Catalog numbers

Batch No.: See vial

BIO-21040: 500 Units (1 x 100 µL)

Concentration: 5 u/µL

BIO-21060: 2500 Units (5 x 100 µL)



A Meridian Life Science® Company

Store at -20°C

## Storage and stability:

The BIOTAQ 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.

BIOTAQ, BioMix 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

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

BIOTAQ 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. BIOTAQ is a robust preparation and consistently delivers high yields with minimal background. BIOTAQ possesses 5'-3' exonuclease activity and leaves an 'A' overhang such that the PCR product is suitable for effective integration into TA cloning vectors.

BIOTAQ 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
BIOTAQ DNA Polymerase	1 x 100 µL	5 x 100 µL
10x NH <sub>4</sub> Reaction Buffer	2 x 1.2 mL	10 x 1.2 mL
50 mM MgCl <sub>2</sub> Solution	1 x 1.2 mL	5 x 1.2 mL

## General Considerations:

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

## 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 µL
100 mM dNTP Mix (see below)	0.5 µL
Template and primers	As required
BIOTAQ	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.**

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

1. Lutes, A.A. *et al. PNAS* **108**: 9910 - 9915 (2011).
2. Tucker, B.A. *et al. PNAS* **108**: E569 - E576 (2011)
3. Amaral, I.P. & Johnston, I.A. *J. Exp. Biol.* **214**: 2125-2139 (2011)
4. Coutinho, C.P., *et al. Infect. Immun.* **79**: 2950-2960 (2011)
5. Lora, J., *et al. PNAS* **108**: 5461-5465 (2011)
6. Palazón, A., *et al. Can. Res.* **71**: 801-811 (2011)
7. Levenberg, S. *et al. Nature Prot.* **5**: 1115-1126 (2010)
8. Tokuriki, N. & Tawfik, D.S. *Nature* **459**: 668-673 (2009)
9. Takada, S. & Mano, H. *Nature Prot.* **2**: 3136-3145 (2007)
10. López-Lluch, G., *et al. PNAS* **103**(6): 1768-73 (2006)

## Associated Products:

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

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