BIOTAQ™ DNA Polymerase

Shipping: On Dry/Blue Ice

Batch No.: See vial

Concentration: 5 u/µL

Catalog numbers

BIO-21040: 500 Units (1 x 100 µL)

BIO-21060: 2500 Units (5 x 100 µL)

Store at –20°C

meridian BIOSCIENCE™

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. Thaw, mix, and briefly centrifuge each component before use.

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:
For research or further manufacturing use only.

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_4-based reaction buffer, which provides optimal conditions for most experiments. Additional $MgCl_2$ 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_4 Reaction Buffer	2 x 1.2 mL	10 x 1.2 mL
50mM $MgCl_2$ Solution	1 x 1.2 mL	5 x 1.2 mL

General Considerations:

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

PCR Reaction Conditions (for a 50 µL reaction)

10x NH_4 Reaction Buffer	5 µL
50 mM $MgCl_2$ Solution	3 µL
100 mM dNTP Mix (see below)	0.5 µL
Template and primers	As required
BIOTAQ	1 µL
Water (ddH_20)	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)

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4. Lutes, A.A. *et al. PNAS* **108**: 9910 - 9915 (2011).
5. Tucker, B.A. *et al. PNAS* **108**: E569 - E576 (2011)
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12. López-Lluch, G., *et al. PNAS* **103(6)**: 1768-73 (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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