



Product Insert
Mango-Taq DNA Polym.

Research Use Only

Product:

Mango-Taq DNA Polymerase

Description:

Mango-Taq DNA Polymerase contains our thermostable BIOLASE™ DNA polymerase purified from *Thermus aquaticus* (1) with a colored 10x reaction buffer that contains 2 inert dyes. Mango-Taq offers consistent results across a wide range of assays. Mango-Taq leaves an A' overhang such that the primer extension product is suitable for effective integration into TA cloning vectors.

The red and orange dyes in the reaction buffer separate during electrophoresis and provide easy and quick reference points to monitor mobility of samples in the gel (see table below). The reaction mixture containing the coloured dyes can be loaded directly onto an agarose gel for analysis, without the need for loading buffer. The presence of the dyes has no effect on routine enzymatic manipulations, although rare exceptions may exist.

Approximate Migration of the dyes in 10x reaction buffer relative to DNA fragments

% Agarose Gel	Red Dye	Orange Dye
0.7	1.5kb	100bp
1.0	750bp	25bp
1.5	500bp	10bp
2.0	250bp	<10bp
3.5	75bp	<10bp

Catalogue No:

BIO-21078 5000u
BIO-21079 20,000u

Batch details:

Batch No: See vial
Units per vial: See vial
Concentration: 1 u/µl

Additional reagents supplied:

10x NH₄ based Mango-Taq Reaction Buffer: containing inert dyes

MgCl₂ Stock Solution: 50mM MgCl₂ (suggested final concentration 1.5mM - 4mM).

Reaction Conditions (for a 50µl volume)

10x Mango-Taq reaction buffer	5 µl
50mM MgCl ₂ Solution	1.5 - 4.0 µl
100mM dNTP Mix (see below)	0.5 - 1.0 µl
Template and Primers	as required
Enzyme	1.0 - 3 µl
Water (ddH ₂ O)	up to 50 µl

Bioline 100mM dNTP Mix is available as a separate product (Catalogue number BIO-39028)

Denature: 94-96°C

Elongate: 70-72°C (allowing 15-30 seconds/ kb)

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

Storage Conditions:

Mango-Taq DNA Polymerase can be stored at -20°C, in a constant temperature freezer for 12 months Mango-Taq will remain stable if stored as specified.

Storage Conditions of 10x Reaction Buffer: Repeated freeze-thaw cycles will affect the stability of Buffer. The Buffer will remain stable at +4°C for a minimum of one month.

Storage buffer: 20mM Tris-HCl, pH 7.5, 100mM NaCl, 0.1mM EDTA, 2mM DTT, 50% Glycerol, and 0.1% Tween-20

Shipping Conditions:

Product is shipped at +4°C or -20°C. However, due to high stability features, trial samples are shipped at room temperature and we recommend usage within the following 3-4 weeks.

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.

Associated activities

Endonuclease and exonuclease activities were not detectable after 2 and 1 hour incubations, respectively, of 1µg lambda DNA and 0.22 µg of EcoR I-digested lambda DNA at 72°C in the presence of 15-20 units of Mango-Taq DNA polymerase.

Associated products

Product Name	Pack Size	Cat No
dNTP Set	4 x 25µmol	BIO-39025
dNTP Mix	100mM total	1 x 500 µl
	40mM total	1 x 500 µl
2x Poly-Mate Additive	2 x 1.2ml	BIO-37041
Immobilase DNA polymerase	250 units	BIO-21046
	500 units	BIO-21047
Hyper Ladder I	200 lanes	BIO-33025
	500 lanes	BIO-33026
Agarose	500g	BIO-41025

References: (1) Kaledin, A.S., Slyusarenko, A.G. and Gorodetskii, S.I. (1981) *Biokhimiya* **46**, 1576

Note: This product is supplied for use in primer extension reactions.

Purchase of this product does not convey a licence to perform any patented process.

BIOLASE is a Trademark of Bioline

This product contains a declaration of analysis at the time of manufacture

Specificity and Performance of the Mango-Taq DNA Polymerase can be increased with the use of **2x Poly-Mate** (not supplied), that is designed for GC- or AT-rich DNA, "dirty" templates or sequences with difficult melting profiles.