

IMMOLASE™ DNA Polymerase

Shipping: Dry/Blue Ice	Catalog numbers
	BIO-21046: 250 Units
Batch No.: See vial	BIO-21047: 500 Units
Concentration: 5u/μl	BIO-21048: 5000 Units



A Meridian Life Science® Company

Store at -20°C

Storage and stability:

The IMMOLASE 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.

Quality control specifications:

Bioline operates under ISO 9001 Management System. IMMOLASE and its components are extensively tested for activity, processivity, efficiency, heat activation, sensitivity, absence of nuclease contamination and absence of nucleic acid contamination prior to release.

Notes:

Research use only.

Features

- Outstanding and robust performance
- Excellent specificity
- Convenient set up at room temperature
- Available in ready-to-go versions ImmoMix™ and ImmoMix™ Red

Applications

- Hot-start PCR assays
- TA cloning
- Ultra-high specificity for multiplex reactions
- Low-copy number templates

Description

IMMOLASE™ DNA Polymerase is a heat-activated thermostable DNA polymerase isolated from a novel organism. IMMOLASE provides improved specificity as compared to standard polymerases and can eliminate the presence of non-specifics such as primer-dimers and mis-primed products. IMMOLASE is inactive at room temperature and therefore prior to PCR cycling, requires activation by heat treatment for 10 minutes. Subsequently, the reaction can be handled according to the user's existing protocols for thermostable DNA Polymerases.

Specificity and performance of IMMOLASE can be further improved with the use of 2x PolyMate Additive (not supplied, see associated products), which is designed for GC- or AT-rich DNA, "dirty" templates or sequences with a high level of secondary structure.

Components

Product	250 Units	500 Units	5000 Units
IMMOLASE DNA Polymerase	1 x 50μl	1 x 100μl	10 x 100μl
10x ImmoBuffer	1.2ml	2 x 1.2ml	20 x 1.2ml
50mM MgCl ₂ Solution	1.2ml	2 x 1.2ml	20 x 1.2ml

Associated Products

Product	Pack size	Cat. No.
dNTP Set	4 x 25μmol	BIO-39025
dNTP Mix	500μl	BIO-39028
2x PolyMate Additive	2 x 1.2ml	BIO-37041
ImmoMix™	100 Reactions	BIO-25019
ImmoMix™ Red	100 Reactions	BIO-25021
Agarose	100g	BIO-41026

Product Citations:

1. Payne, B.A. *Nature Gene*. **43** 806-810 (2011)
2. Massire, C., *et al. J. Clin. Microbiol.* **49**, 908 - 917 (2011)
3. Ashton, E.J. *Meth. Mol. Biol.* **688**, 1-6 (2011)
4. Kaczmarek, K., *et al. Mol. Biol. Cell* **22**, 1766 - 1779 (2011)
5. Scoville, A.G. & Pfender, M.E. *PNAS* **107(9)** 4260-4263 (2010)

Notes

1. IMMOLASE and ImmoMix are Trademarks of Bioline Reagents Ltd.

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PCR Reaction conditions (for a 50μl reaction)

10x ImmoBuffer	5μl
100mM dNTP Mix*	0.5 - 1.0μl
50mM MgCl ₂ Solution	1.5 - 4.0μl
Template and primers	As required
IMMOLASE™	0.2 - 1μl
Water (ddH ₂ O)	Up to 50μl

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

Activation: pre-heating step at 95°C for 10 minutes
Denaturation: 94-96°C
Annealing: depends on primer T_m
Extension: 72°C (allowing 15-30 seconds/kb)

General Considerations:

Pre-incubate at 95°C for 10 minutes. Subsequently, the reaction can be treated according to the user's existing protocols.

If extension time exceeds 2.5 minutes, a maximum of 30 cycles should be used. Increasing the number of cycles may lead to smearing when run on an agarose gel.

The ideal MgCl₂ concentration in the reaction is likely to be 1.5 - 2.5mM (final concentration), but some optimization may be necessary to achieve the best possible results. For first tests, use no less than 1 unit of IMMOLASE in a 50μl reaction.

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