

IMMOLASE™ Red DNA Polymerase

Shipping: On Dry/Blue ice

Catalog numbers

BIO-21076: 500 Units

Batch No.: See vial

Concentration: 1u/μl



A Meridian Life Science® Company

Store at -20°C

Storage and stability:

The IMMOLASE Red 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:

IMMOLASE Red 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

- Heat-activated thermostable DNA polymerase
- Easy visual recognition and direct loading onto agarose gels
- Excellent specificity and robust performance
- Available in ready-to-go versions ImmoMix™ and ImmoMix™ Red

Applications

- Hot-start PCR assays
- TA cloning

Description

IMMOLASE™ Red DNA Polymerase is a heat-activated thermostable DNA polymerase combined with an inert red dye that allows direct loading of reaction samples onto an agarose gel. IMMOLASE Red provides improved specificity as compared to standard polymerases with reduced formation of primer-dimers and mis-primed products. IMMOLASE Red is inactive at room temperature and requires heat activation.

Components

Product	500 Units
IMMOLASE™ Red DNA Polymerase	1 x 500μl
10x ImmoBuffer	2 x 1.2ml
50mM MgCl ₂ Solution	2 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 is a Trademark of Bioline Reagents Ltd.

PCR Reaction set-up (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™ Red	1 - 2μl
Water (ddH ₂ O)	Up to 50μl

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

PCR Cycling conditions:

We suggest these conditions in the first instance:

Activation:	95°C for 10min
Denaturation:	95°C for 30s
Annealing:	T _m user determined, for 30s
Extension:	72°C (allow 15-30s per kb)

General Considerations:

Activate at 95°C for 10min.

If the extension time exceeds 2.5min, 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. Use no less than 1 unit of IMMOLASE Red in a 50μl reaction.

Specificity and performance of IMMOLASE Red 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.

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