

BioMix™

Shipping: On Dry/Blue Ice Catalog numbers

Batch No.: See vial BIO-25012: 500 x 50 µL reactions: (10 x 1.25 mL)

Concentration: 2x

Store at -20°C

meridian BIOSCIENCE™

Storage and stability:

The BioMix 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.

Quality control specifications:

BioMix and its components are extensively tested for activity, processivity, efficiency, sensitivity, absence of nuclease contamination and absence of nucleic acid contamination prior to release.

Notes:

For research or further manufacturing use only.

Trademarks:

BioMix is a trademark of Bioline Reagents Limited.

Features

- Convenient pre-mixed, pre-optimized 2x solution
- Premium Taq polymerase suited to a wide range of applications
- Processes fragments up to 5 kb
- Leaves 'A' overhang
- Reduced risk of contamination
- Dramatically decreases the time required for reaction set-up

Applications

- Routine PCR applications
- Products suitable for TA cloning
- High throughput

Description

BioMix™ is a complete ready-to-use 2x reaction mix containing an ultra-stable DNA polymerase. Developed to perform PCR assays of many common genomic and cDNA templates, the user has simply to add water, template and primers.

BioMix dramatically reduces the time required to set up reactions, thereby minimizing the risk of contamination. Greater reproducibility is ensured, by reducing the number of pipetting steps that can lead to errors.

BioMix has been optimized for a wide variety of templates, however an additional 50 mM of MgCl₂ solution is included should any fine adjustments be required.

Components

	500 Reactions
BioMix™	10 x 1.25 mL
50mM MgCl ₂ Solution	1.2 mL

Product Citations:

1. Muha, T.P., *et al. PLoS one* **14.7** (2019).
2. Gwilliam, M.P., *et al. J. Fish Biol.* **92.4** 1163-1176 (2018).
3. Könyves, K., *et al. Appl. Plant Sci.* **4.4** 1500127 (2016).
4. Sosa-Jurado, F., *et al. BMC infectious diseases*, **14(1)**: 72 (2014).
5. Orive, E., *et al. J. Phycol.* **49(6)**: 1192-1206 (2013).
6. Wening, S., *et al. Annals of Appl. Biol.* **160(2)**: 145-156 (2012).
7. Kwan, K., *et al. Appl. Environ. Microbiol.* **77**, 2943-2953 (2011).
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9. Lopez-Lluch, G., *et al. PNAS* 103(6), 1768-1773 (2006).
10. Prado, M., *et al. Electrophoresis* **26(15)**, 2918-2926 (2005).
11. Cervero, A., *et al. Clin. Endocrinol. Metab.* **89**, 2442-2451 (2004).
12. Brigido, C., *et al. Vet. Parasitol.* **123(1-2)**, 17-23 (2004).
13. Knight, J.C., *et al. Nat. Gene.* **33(4)**, 469-475 (2003).
14. Ramalho, J.S., *et al. BMC Genet.* **2(2)**, (2001).

BioMix Protocol

Reaction Conditions (For a 50 µL reaction)

The optimal conditions will vary from reaction to reaction and are dependent on the system used. Each parameter has to be adjusted individually and some optimization may be required.

BioMix	25 µL
Template and Primers	as required
Water (ddH ₂ O)	up to 50 µL

Denature: 94-96 °C

Extension: 70-72 °C Allowing 15-30 seconds per Kb

For optimal resolution of PCR products, we recommend the use of Tris-Acetate EDTA (TAE) buffer for gel preparation and electrophoresis.

The Mg²⁺ concentration in the buffer provided is 5 mM (2.5 mM final concentration), this is the optimum concentration for BioMix and should only be adjusted if absolutely necessary. The table below shows the volume of additional MgCl₂ to add to a 50 µL reaction to achieve different final concentrations.

Final Magnesium concentration required	Volume of 50 mM MgCl ₂ to add to a 50 µL final reaction volume
2.5 mM	0
3.0 mM	0.5 µL
3.5 mM	1 µL

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

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