

BIO-X-ACT™ Short Mix

Shipping: On Dry/Blue Ice Catalog numbers

Exp. Date: See vial BIO-25025 : 100 x 50µl reactions: (2 x 1.25ml)

Batch No.: See vial BIO-25026 : 500 x 50µl reactions: (10 x 1.25ml)

Concentration: 2x

Store at -20°C

Storage and stability:

The BIO-X-ACT is shipped on Dry/Blue Ice and can be stored for up to 12 months at -20°C, or up to 2 weeks at +4°C. Repeated freeze/thaw cycles should be avoided.

Safety precautions:

Harmful if swallowed. Irritating to eyes, respiratory system and skin. Please refer to the material safety data sheet for further information.

Notes:

This product insert is a declaration of analysis at the time of manufacture. Research Use Only.



DATA SHEET

Features

- Amplifies fragments up to 5Kb
- Convenient pre-mixed, pre-optimized 2x solutions
- Reduced risk of contamination
- Dramatically decreases the time required for reaction setup
- Reproducible results

Applications

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

Description

BIO-X-ACT™ Short Mix is a complete ready-to-use 2x reaction mix, which enables PCR assays to be performed on problematic templates, with the simple addition of water, template and primers. In order to achieve optimal reaction conditions, BIO-X-ACT Short Mix contains BIO-X-ACT Short DNA Polymerase, MgCl₂, ultrapure dNTPs manufactured by Bioline as well as further additives. The mix has been optimized for a wide variety of templates, and an additional 50mM MgCl₂ solution is included should any fine adjustments be required.

BIO-X-ACT Short Mix dramatically reduces the time needed to set up reactions, thereby minimizing the risk of contamination. Greater reproducibility is ensured, by a reduction in the number of pipetting steps that can lead to pipetting errors.

Components

	100 Reactions	500 Reactions
BIO-X-ACT Short Mix	2 x 1.25ml	10 x 1.25ml
50mM MgCl ₂ Solution	1.2ml	1.2ml

BIO-X-ACT Short Mix Protocol

Reaction Conditions (For a 50µl 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.

BIO-X-ACT Short Mix	25µl
Template and Primers	as required
Water (ddH ₂ O)	up to 50µl

Denature: 94-97°C

Extension: 72°C Allowing 30-50 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 6mM (3mM 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 50µl reaction to achieve different final concentrations.

Final Magnesium concentration required	Volume of 50mM MgCl ₂ to add to a 50µl final reaction volume
2.0mM	0
2.5mM	0.5µl
3.0mM	1µl

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

Product Citations:

1. Grosse, C., *et al. Appl. Environ. Microbiol.* **74(15)**, 4923-4933 (2008).
2. Oliver, M.K. and Piertney, S.B. *Immunogene.* **58**, 390-395 (2006).
3. Donato, G.M., *et al. J. Bacteriol.* **187(22)**, 7579-7588 (2005).
4. Gow, J.L., *et al. Genetica* **124(1)**, 77-83 (2005).