



Product Insert
BIO-X-ACT™ Long Mix

Research Use Only

Product:
BIO-X-ACT™ Long Mix

Catalogue numbers:
BIO-25023 100 Reactions
BIO-25024 500 Reactions

Description:

- **Developed for problematic templates requiring high-fidelity (up to <3Kb)**

BIO-X-ACT™ Long Mix is a complete ready-to-go 2x reaction-mix which requires the consumer to add only water, template and primers to successfully carry out Polymerase assays. BIO-X-ACT™ Long Mix has all of the features of our BIO-X-ACT™ Long DNA Polymerase and has been tested on fragments up to 10kb.

The mix has been optimised for a wide variety of templates, however a 50mM magnesium solution is included in case any fine adjustments are required.

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

All mixes have been tested for scalability, and the mix, (when used at 2x concentration) can be used in reaction volumes from 5µl upwards.

BIO-X-ACT™ Long Mix is suitable for genomic targets of up to 20Kb or lambda targets of up to 30Kb.

Extended Stability: The product was stored at +20 °C over a 5 week period and tested daily. No detectable loss of activity was evidenced.

Due to potential of microbiological contamination, +4°C storage should not exceed 4 weeks

•**Cloning:** BIO-X-ACT™ Long mix leaves predominantly A' overhangs such that the primer extension product is suitable for effective integration into TA cloning vectors, even from difficult templates.

Composition of supplied 2x BIO-X-ACT™ Long Mix

134mM Tris-HCl (pH 8.8 at 25°C)
32mM (NH₄)₂SO₄
4mM MgCl₂
2mM dNTP's
Stabiliser
BIO-X-ACT™ Long DNA Polymerase

Batch details:

Batch No: See vial

Storage Conditions:

2x BIO-X-ACT™ Long Mix can be stored for:
6 months at -20°C
2 weeks at 4°C

Shipping: At 4°C or -20°C

Repeated freeze/thaw should be avoided.

Directions for Use:

The Bioline BIO-X-ACT™ Long Mix is designed with ease-of-use in mind. Each reaction requires 25µl of 2x BIO-X-ACT™ short Mix in addition to Primers and Template, and sufficient 18.2 mΩ water for a final reaction-volume of 50µl.

Reaction Conditions

For a 50µl reaction

| | |
|----------------------------|-------------|
| BIO-X-ACT™ Long 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 mins per KB

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

An additional tube of 50mM MgCl₂ is provided should any fine adjustments be necessary. The table below shows the volume of MgCl₂ to add to achieve different final concentrations.

| Final MgCl ₂ Required | Volume of 50mM MgCl ₂ to add to a 50µl final reaction volume |
|----------------------------------|-------------------------------------------------------------------------|
| 2.0mM | 0µl |
| 2.5mM | 0.5µl |
| 3.0mM | 1µl |

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