

MedixMDx Fast *Taq* Polymerase Cat. No: MX1101

Product Information Leaflet

Description

MedixMDx Fast *Taq* Polymerase is a thermostable recombinant DNA polymerase expressed by *Thermus aquaticus*. The enzyme uses state-of-the-art polymerase technologies and optimized buffer chemistry for improved polymerase processivity, yield, sensitivity, and specificity. MedixMDx Fast *Taq* Polymerase has an error rate of approximately 1 error per 2.0×10^5 nucleotides incorporated.

MedixMDx Fast *Taq* Polymerase has 5' to 3' polymerase activity and 5' to 3' exonuclease activity, but lacks 3' to 5' exonuclease activity. The enzyme is suitable for routine PCR applications including TA cloning, genotyping, screening, and library construction. The amplified product generated by MedixMDx Fast *Taq* Polymerase has 3'-dA and can therefore be cloned directly into TA cloning vectors. The enzyme is also compatible with a variety of DNA templates such as GC- and AT-rich DNA templates.

Kit components

| Component | *MX1101 500 Units |
|--|----------------------|
| MedixMDx Fast <i>Taq</i> Polymerase (5 U/ μ L) | 0.1 mL |
| ∞5x MedixMDx Reaction Buffer | 4 X 1 mL |

*Other pack sizes or bulk orders are available upon request.

∞The 5x MedixMDx Reaction Buffer has been formulated for robust PCR performance. The buffer contains MgCl₂, dNTPs, stabilizers, and enhancers. Therefore, no further addition of these components is required or recommended.

Storage and shipment

Transport with an ice pack or on dry ice (for shipments taking more than 2 days). The reagents should be stored between -30°C and -15°C upon arrival. The reagents are stable for 12 months if stored correctly. The reagents are stable for 1 month at 4°C.

Mastermix set-up

The recommended mastermix set-up for a 50 μ L reaction volume is shown in the table below.

| Reagent | Volume (μ L) | Final concentration |
|--|-------------------------------|---|
| 5x MedixMDx Reaction Buffer | 10 | 1x |
| ∞Forward primer (10 μ M) | 2 | 400 nM |
| ∞Reverse primer (10 μ M) | 2 | 400 nM |
| DNA/cDNA template | X | Variable; <100 ng cDNA, <500 ng genomic |
| MedixMDx Fast <i>Taq</i> Polymerase (5 U/ μ L) | 0.25–1 | Variable; can be titrated over a wider range |
| Nuclease-free water | Up to 50 μ L final volume | |
| Total volume | 50 μ L | |

∞Primers should be specific to the target DNA/RNA of interest. The recommended T_m for primers is between 56°C and 60°C.

Instrument and program set-up

| Number of cycles | Step | Temperature | Time |
|------------------|------------------|-------------|----------|
| 1 | Pre-denaturation | 95°C | 1 min |
| | Denaturation | 95°C | 15 sec |
| 40 | Annealing | 55–65°C | 15 sec |
| | *Extension | 72°C | 1–90 sec |

*The extension time should be 15 seconds per kb of target region.

Technical information and support

For technical enquiries or assay development support, please contact us via e-mail at: mdx@medixbiochemica.com. Additional information and technical resources are available on our website at: www.medixbiochemica.com/en/MedixMDx.