

Get Consistent PCR of Templates 20 Kb to >40 Kb Using the MasterAmp™ Extra-Long PCR System

The MasterAmp™ Extra-Long PCR System enables consistent, high fidelity amplification of long DNA sequences of 20 Kb to >40 Kb in length. This increased consistency and fidelity is accomplished by combining the MasterAmp™ Extra-Long DNA Polymerase ... a unique blend of high fidelity thermostable polymerases...with an extensively tested set of MasterAmp™ Extra-Long PCR 2X PreMix solutions. Each PreMix contains dNTPs, buffer, and various amounts of MgCl₂ and MasterAmp™ PCR Enhancer.

Obtaining optimal results using the MasterAmp Extra-Long PCR System is easy. Start with the MasterAmp Extra-Long PCR Kit which contains the MasterAmp™ Extra-Long DNA Polymerase Mix and 9 MasterAmp Extra-Long PCR 2X PreMixes. Then...

1 Prepare a PCR cocktail containing your template/primer pair and the MasterAmp Extra-Long DNA Polymerase Mix. Perform your long PCR using each of the 9 MasterAmp Extra-Long PreMixes (Figure 1).

2 Run the PCR products on a gel and identify the PreMix that provides the PCR product of the correct size (Figure 2). Use the chosen MasterAmp Extra-Long PCR PreMix every time that you perform this particular PCR to ensure consistent and reliable results.

3 Repeat the process with every new template/primer pair or purchase the MasterAmp Extra-Long DNA Polymerase Mix and the MasterAmp Extra-Long PCR 2X PreMixes separately.

With the MasterAmp™ Extra-Long PCR System you get:

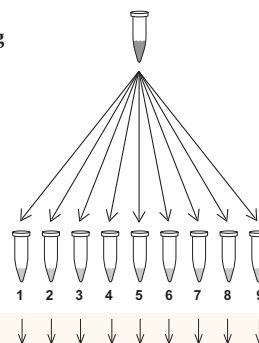
DNA Amplification up to >40 Kb from Any Template

Using the MasterAmp Extra-Long PCR System, amplifications of 20 Kb up to >40 Kb are obtained rapidly and consistently from any genomic DNA template (Figure 3). Typically, "hot start" PCR is not required.

Consistent and Reliable Results

The MasterAmp Extra-Long PCR System gives consistent and reliable results due in part to the MasterAmp Extra-Long PCR

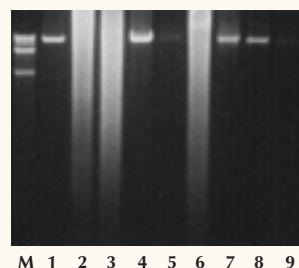
Figure 1. Procedure for rapid optimization of long PCR using the MasterAmp™ Extra-Long PCR Kit.



1. Add a cocktail containing enzyme, template and primers to each of the 9 MasterAmp™ Extra-Long PCR 2X PreMixes (1-9)

2. Perform PCR

Figure 2. Amplification of a 20 Kb region of lambda DNA using each of the 9 MasterAmp Extra-Long PCR 2X PreMixes (1-9) contained in the MasterAmp™ Extra-Long PCR Kit. PreMix 4 produced optimal results. M, DNA size marker.



3. Choose the best MasterAmp Extra-Long PreMix (Figure 2)

2X PreMixes. Select the MasterAmp Extra-Long PreMix that provides the best amplification for your template/primer pair (Figure 2) and use that PreMix every time you perform that PCR for the most consistent and reliable long PCR results.

High Fidelity PCR of Long DNA for Sequencing and Expression

The MasterAmp Extra-Long DNA Polymerase Mix contains a 3' → 5' proof-reading enzyme that delivers fidelity at least 3-times higher than Taq DNA Polymerase.

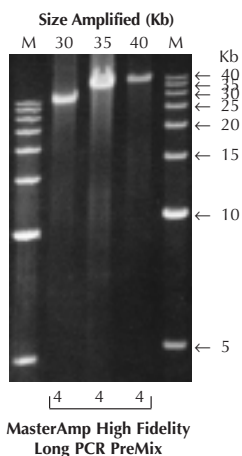


Figure 3. Amplification of 30, 35, and 40 Kb sequences from lambda DNA. One nanogram of lambda DNA was used to amplify 30, 35, and 40 Kb sequences. Lane M, 5 Kb DNA ladder. Results were analyzed on a 0.5% agarose gel.

MasterAmp™ Extra-Long PCR Kit

MHF9220-F83 50 Reactions

Contents:

MasterAmp™ Extra-Long PCR 2X PreMixes 1-9
MasterAmp™ Extra-Long DNA Polymerase Mix
Control Lambda DNA/Primers

MasterAmp™ Extra-Long DNA Polymerase and individual Extra-Long PCR 2X PreMixes are available separately. Visit www.epicentre.com/catalog/extra_long.htm