



# Take a direct route to PCR

## Platinum Direct PCR Universal Master Mix

Invitrogen™ Platinum™ Direct PCR Universal Master Mix is designed to amplify DNA sequences directly from a variety of sample types, without the need for DNA purification. It is ideal for amplification of target DNA from crude samples in applications such as mouse genotyping and analysis of CRISPR-edited cells. The master mix contains a green dye for direct loading of PCR products onto agarose gels.

### What makes the master mix universal?

#### One kit that works with different sample types

Sample types include human, mouse, plant, fish, bird, bacteria, insect, blood, and formalin-fixed, paraffin-embedded (FFPE) DNA.

#### One annealing temperature (60°C) for different primer sets

Primer melting temperatures

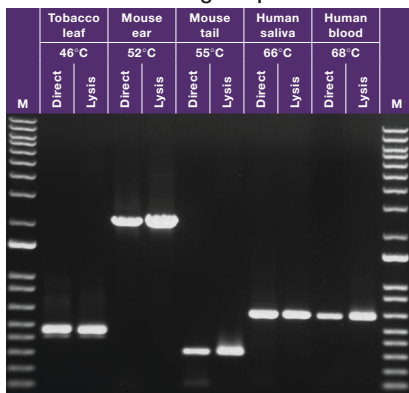


Figure 1. High PCR specificity and yield from direct amplification of various samples using the universal annealing temperature at 60°C following either direct or lysis protocol.

### Benefits of Platinum Direct PCR Universal Master Mix include:

- Direct DNA amplification from a variety of sample types
- Less optimization of PCR protocols needed with the universal annealing temperature
- Flexible PCR workflow
- Fast PCR run time (<1 hour)
- Multiplexing with up to 5 targets
- Improved detection with low sample input and GC-rich targets

### Flexible workflow

#### Direct protocol

#### Lysis protocol

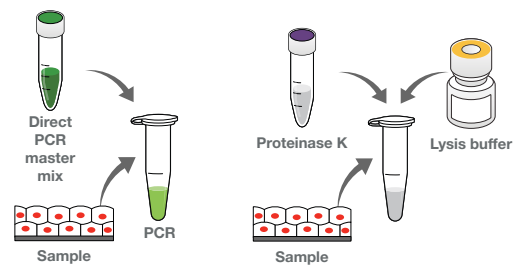
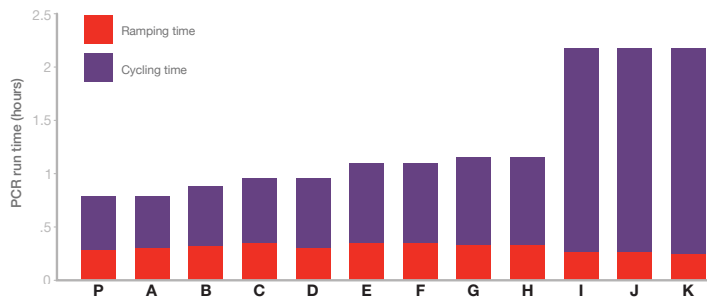


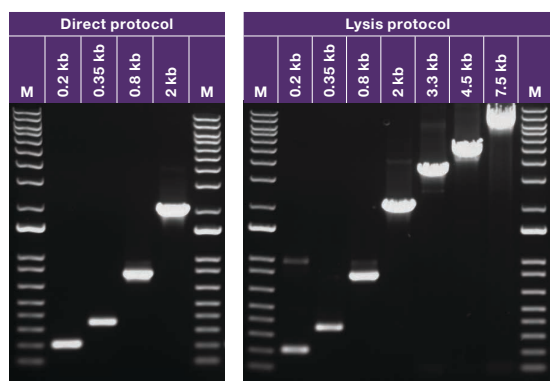
Figure 2. Direct and lysis protocols. Two protocols are available to amplify target DNA directly from crude samples. The direct protocol offers a shorter workflow whereas the lysis protocol allows flexibility and long-term storage.

## Short PCR run time



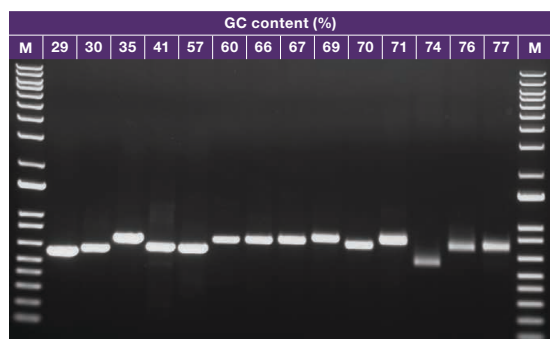
**Figure 3. Fast cycling reduces PCR run time.** A 1 kb fragment was amplified for 35 cycles using the Platinum Direct PCR Universal Master Mix (P) and direct PCR kits from other suppliers (A–K).

## Long amplicons



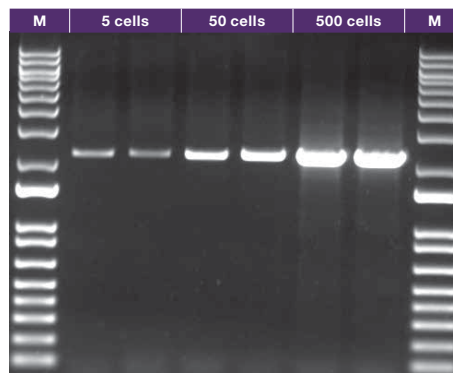
**Figure 4. Amplification ranges of the direct and lysis protocols.** Up to 2 kb and 7.5 kb fragments can be amplified from human research blood samples with the direct protocol and the lysis protocol, respectively. M = Invitrogen™ TrackIt™ 1 Kb Plus DNA Ladder.

## AT-rich and GC-rich PCR



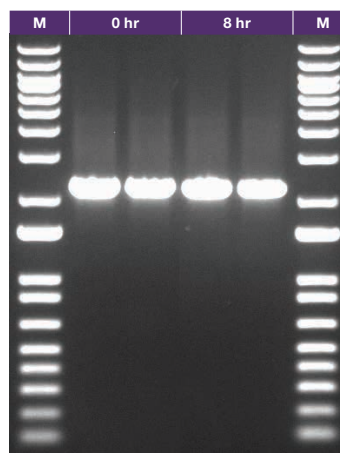
**Figure 5. Efficient direct amplification of AT-rich and GC-rich targets.** Fourteen targets of varying GC content were amplified from human buccal swabs using the lysis protocol. The Invitrogen™ Platinum™ GC Enhancer is included in the kit for targets over 65% GC. M = TrackIt 1 Kb Plus DNA Ladder.

## Highly sensitive PCR



**Figure 6. High sensitivity of PCR from low-sample input.** A 2.2 kb target was amplified from 5–500 HeLa S3 cells using the lysis protocol. M = TrackIt 1 Kb Plus DNA Ladder.

## High benchtop stability



**Figure 7. Stability of reactions at room temperature.** A 2.2 kb target was amplified from mouse-tail DNA samples following the lysis protocol. Reactions were set up at 25°C, then immediately run or left for 8 hours at room temperature before PCR. M = TrackIt 1 Kb Plus DNA Ladder.

## Ordering information

Product	Quantity	Cat. No.
Platinum Direct PCR Universal Master Mix	100 reactions	A44647100
	500 reactions	A44647500
	2,000 reactions	A44647200

See more data at [thermofisher.com/platinum-direct-pcr](https://www.thermofisher.com/platinum-direct-pcr)

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