Direct PCR from Yeast Cells

A fast and reliable method for DNA amplification without any DNA purification or extraction steps

Benefits

- Reliable DNA amplification directly from yeast cells
- No need for time-consuming and expensive DNA extraction
- Extemely short PCR protocol times
- Minimal pipetting due to master mix format and pre-added loading dyes

The Thermo Scientific™ Direct PCR approach allows DNA amplification from unpurified samples. A tiny amount of source material is added directly to PCR master mix, allowing significant savings in both time and cost.

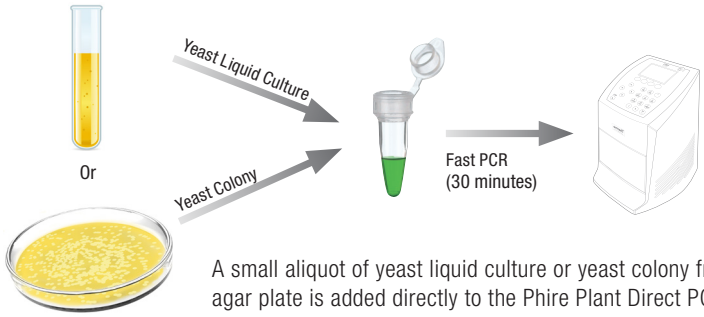
The Thermo Scientific™ Phire™ Plant Direct PCR Master Mix is designed to amplify DNA from samples that have cell wall such as plants, yeast, fungi, and gram+ and gram- bacteria. The kit is based on the inhibitor-tolerant Thermo Scientific™ Phire™ Hot Start II DNA Polymerase that was created by fusion protein technology and is not inhibited by cellular debris or components of culture medium.

The Phire Plant Direct PCR Master Mix allows analysis of yeast clones grown in liquid growth medium or on agar. A small aliquot of yeast liquid culture or a punch of a yeast colony is placed directly into master mix for fast and robust amplification. The master mix includes a density reagent and two tracking dyes for direct loading of PCR products on gels, further reducing pipetting steps and the processing time.

- For further product information visit **thermoscientific.com/directpcr**

Thermo SCIENTIFIC

From yeast cells to results in 30 minutes

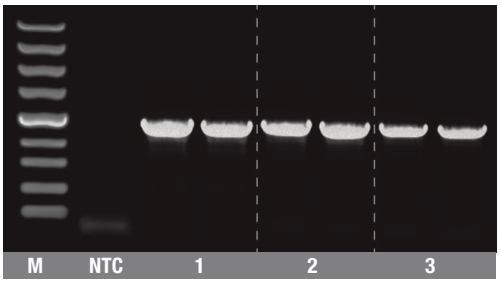


A small aliquot of yeast liquid culture or yeast colony from agar plate is added directly to the Phire Plant Direct PCR Master Mix. Target DNA is amplified in a thermal cycler with fast PCR protocol.

FREE SAMPLE
Want to try before you buy? Contact your sales representative.

Fast and reliable screening of transformants

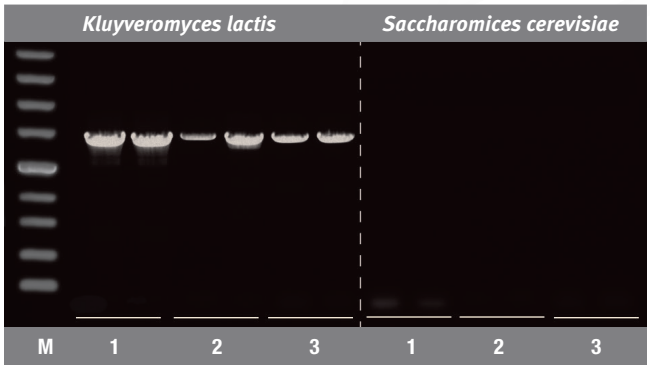
Colony screening with Phire Plant Direct PCR Master Mix overcomes drawbacks of traditional *Taq*-based methods. Contrary to *Taq*, Phire DNA Polymerase is not inhibited by cellular debris or inhibitors from growth medium and thus allows fast and robust PCR on yeast grown in liquid medium or on agar for reliable PCR-based screening. In addition, Phire DNA Polymerase is 6x faster than *Taq* and thus enables the use of shorter PCR protocols.



▲ **Amplification of 1.5 kb plasmid DNA fragment from *S. cerevisiae* transformant with Phire Plant Direct PCR Master Mix. Due to extremely short cycling times with Phire DNA Polymerase, PCR was completed in less than 30 minutes.**
NTC - No template control
1 - PCR from purified DNA
2 - PCR from yeast colony
3 - PCR from yeast liquid culture
M - Thermo Scientific™ ZipRuler™ Express DNA Ladder 2

Direct amplification of yeast DNA

Phire Plant Direct PCR Master Mix allows robust amplification of yeast genomic DNA (gDNA) without any prior DNA purification or extraction steps. Up to 7.5 kb gDNA fragments can be efficiently amplified for experiments such as insertion/deletion validation and specie identification.



▲ **Amplification of 2.5 kb gDNA fragment from *K. lactis* and *S. cerevisiae* with *K. lactis* -specific primers and Phire Plant Direct PCR Master Mix. Only gDNA from *K. lactis* was amplified allowing easy specie confirmation.**
1 - PCR from purified yeast gDNA
2 - PCR from yeast colony
3 - PCR from yeast liquid culture
M - ZipRuler Express DNA Ladder 2

Ordering Information

Cat. No	Description	Quantity
F-160S	Phire Plant Direct PCR Master Mix	100 x 50 µL rxns or 250 x 20 µL rxns
F-160L	Phire Plant Direct PCR Master Mix	500 x 50 µL rxns or 1250 x 20 µL rxns

- For more information about the Direct PCR approach and additional products visit: **thermoscientific.com/directpcr**

Europe
Customer Service
cs.molbio.eu@thermofisher.com
Technical Support
ts.molbio.eu@thermofisher.com
Tel 00800 222 00 888
Fax 00800 222 00 889

United States
Customer Service
cs.molbio@thermofisher.com
Technical Support
ts.molbio@thermofisher.com
Tel 877 661 8841
Fax 800 854 5395

Canada
Customer Service
cs.molbio@thermofisher.com
Technical Support
ts.molbio@thermofisher.com
Tel 800 340 9026
Fax 800 472 8322

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