epicentre®
an Illumina® company

Colony Fast-Screen™ Kit (PCR Screen)

Cat. No. FS0322H

Connect with Epicentre on our blog **(epicentral.blogspot.com)**, Facebook **(facebook.com/EpicentreBio)**, and Twitter **(@EpicentreBio)**.

1. Introduction

The Colony Fast-Screen™ Kit (PCR Screen) provides a rapid method for preparing cloned DNA for screening by PCR. Using the Colony Fast-Screen Kit (PCR Screen) there is no need to grow cultures or purify DNA prior to PCR. The kit can be used with all standard *end*A⁻ *E. coli* host strains and all cloning vectors. Thermostable polymerase and PCR primers must be provided by the user.

The Colony Fast-Screen Kit (PCR Screen) can be used to prepare PCR-ready DNA from both high-copy (e.g., plasmid and cosmid) clones and single-copy (e.g., BAC and fosmid) clones.

The Colony Fast-Screen Kit (PCR Screen) contains sufficient reagents for screening 200 colonies.

Applications

- Identify desired clones in a library by PCR screening.
- Determine the orientation of cloned inserts by PCR screening.
- PCR from genomic *E. coli* DNA.

2. Product Specifications

Storage: The PCR-Lyse Solution may be stred at –20°C or 4°C. The Gel Loading Solution may be stored at -20°C, 4°C or room temperature.

Quality Control: The Colony Fast-Screen Kit (PCR Screen) is function-tested with a 10 kb PCR amplification product generated from a single-copy clone grown in *E. coli*.

3. Kit Contents

Cat. #	Quantity
Colony Fast-Screen™ Kit (PCR Screen) Contents	
PCR-Lyse™ Solution	10 ml
Gel Loading Solution	400 µl

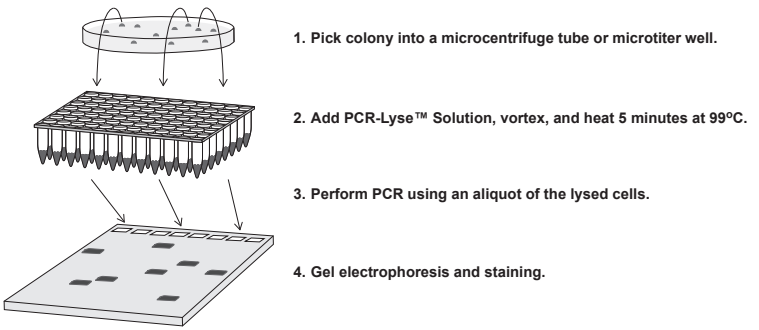

Figure 1. The Colony Fast-Screen™ Kit (PCR Screen) rapidly prepares clones for screening by PCR in about 10 minutes without the need for cultures or DNA purifications.

4. Related Products

The following products are also available:

- Colony Fast-Screen™ Kit (Size Screen)
- Colony Fast-Screen™ Kit (Restriction Screen)
- Fast-Link™ DNA Ligation Kit
- CopyControl™ Fosmid Library Production Kit
- CopyControl™ BAC Cloning Kit
- CopyControl™ PCR Cloning Kits

5. Colony Fast-Screen Kit (PCR Screen) Procedure

Rapidly prepare cloned DNA for screening by PCR

The Colony Fast-Screen Kit (PCR Screen) is used to prepare PCR-ready DNA without the need for cultures or DNA isolations. An overview of the screening process is described in Fig. 1. Plates can be stored at 4°C for up to one month before being used.

1. Using a sterile toothpick, pick a portion of a colony from the plate and deposit the cells at the bottom of a 0.5 ml tube or the bottom of a microtiter plate well. Repeat the process using a fresh toothpick for each colony chosen and deposit the cells from each colony into its own tube or microtiter plate well.
2. Add 50 µl of the PCR-Lyse Solution to each tube or microtiter plate well. Stopper the tubes or cover the microtiter plate and vortex vigorously until the colony pick is completely resuspended.
3. Incubate at 99°C for 5 minutes in a thermocycler or water bath. The PCR-Lyse Solution facilitates very efficient release of PCR-ready DNA from the cells and inactivates endogenous nucleases.
4. Vortex each tube or microtiter plate briefly and chill on ice for 2 minutes.
5. Use 1 µl of the PCR-ready DNA (from Step 4) in a 50 µl PCR reaction. Set up a standard PCR reaction (e.g., $MgCl_2$, primers, dNTPs, buffer, thermostable DNA polymerase) for the PCR that will be performed. Amplifications up to 15 kb can be successfully done. Perform PCR using pre-established cycling conditions. The PCR-Lyse Solution will not alter pre-established PCR reaction conditions.
6. Aliquot 10 µl of each PCR reaction to a separate tube or microtiter plate well and add 2 µl of the Gel Loading Solution to each.
7. Run agarose gel with appropriate linear DNA size markers. Stain the gel with ethidium bromide or other stain.
8. The remaining 49 µl of the PCR-ready DNA (from Step 4) can stored at 4°C for up to 1 month in the event that subsequent PCR reactions need to be done. In addition, a 1 µl aliquot of the PCR-ready DNA can be used to transform cells in the event that the clone needs to be re-established.

Visit our technical blog: **epicentral.blogspot.com**