TOOLS Cell DNA Extraction Kit

For cell DNA extraction and purification

Contents

Introduction

The TOOLS Cell DNA Extraction Kit is a buffer-based system for cell DNA extraction and purification. The kit involves simple centrifugation procedures that facilitate the complete removal of contaminants and enzyme inhibitors. It affords rapid, simple, and cost-effective extraction processes, and the purified DNA is suitable for downstream applications, such as polymerase chain reaction, Southern blotting, genomic DNA library screening, and sequencing.

Materials not provided

1 1-Bromo-3-chloropropane (BCP) (CAS Number: 109-70-6).

2 TOOLS Proteinase K (Cat No. RTT-BD03) or other compatible reagents.

Kit Contents

Contents	TX-CD01 (50 preps)
Buffer CDA	30 ml
Buffer CDB	12 ml
Buffer CDC	300 μl
Binding Gel	50 tubes

Storage

TOOLS Cell DNA Extraction Kit can be stored at room temperature for up to 24 months.

Protocol

Sample preparation

1. Harvest cells from one of the wells of a six-well dish and transfer them along with medium (volume ~2 mL) to a microcentrifuge tube.
2. Centrifuge for 5 min at 1000 rpm to pellet the cells and remove a sufficient amount of supernatant.
3. Add 500 µL of CDA buffer to the tube and vortex for 60 s to resuspend the pellet thoroughly.
4. Add 5 µL of proteinase K (20 mg/mL) to the tube and vortex for 60 s and then incubate at 55 °C for 1 h. Vortex the tube again for 20 s to mix thoroughly.

DNA extraction

1. Add 200 µL of BCP and 200 µL of CDB buffer to the tube and mix the sample by inverting the tube three times. Transfer the entire solution to the Binding Gel tube (centrifuge at 13000 × g for 30 s before use).
2. Invert the Binding Gel three times (do not vortex) and then centrifuge at 12,000–16,000 × g for 5 min.
3. Transfer the supernatant to a new microcentrifuge tube and add 5 µL of CDC buffer and 550 µL of isopropanol to the tube.
4. Invert the tube three times and incubate at 37 °C for 10 min.
5. Centrifuge at 14,000 rpm for 5 min. Remove the supernatant.
6. Add 600 µL of 70% ethanol. Centrifuge the tube at 14,000 rpm for 5 min. Remove the supernatant.
7. Air dry the pellet and rehydrate the pellet with 20–50 µL of TE buffer or ddH_2O (adjust the buffer volume according to the pellet size).

The product is for research only, not for diagnostic or clinical use.