Axen™ Direct PCR Solution

Product description

Axen™ Direct PCR Solution is designed for the easy and simple preparation of template DNA in PCR applications. Axen™ Direct PCR Solution can be used for the preparation of template DNA from a wide range of biological and forensic samples, such as mammalian blood, hairs, tissues, swabs, blood stains, cigarette butts and cultured cells. Prepared DNA can be applied directly to PCR applications and / or stored in a freezer for storage.

Kit contents

Contents*	Size	Storage conditions
Cat. No.	**MG-P-018-200**	
No. of preparation	200	
Direct PCR Solution	20 mL	Room Temperature
Buffer A	2 mL	
Proteinase K solution (20 mg/ml)**	0.22 mL	4˚C

* All components of this kit except Proteinase K solution should be stored at room temperature (15~25˚C). Long exposure to heat source can deteriorate the performance of kit significantly.

** Proteinase K should be stored under 4˚C on arrival for conservation of activity. Delivery time would not lead to noticeable loss of the enzyme's activity. Proteinase K solution can be stored at 4˚C for an year without significant decrease of performance.

Quality control

Axen™ Direct PCR Solution is manufactured in strictly clean condition. PCR amplification assay as a quality control is carried out from lot to lot thoroughly and only the qualified lot is approved to be delivered.

Product use limitations

Axen™ Direct PCR Solution is intended for research uses only. This kit is not intended for diagnosis or treatment for human. All due care and attention should be exercised in the handling of the products.

Safety information

DNA cross-contamination can occur by handling of several swab samples simultaneously. Therefore, always wear gloves and mask, and use sterile scissors, scalpel or disposable plastic wares to collect sample for Axen™ Direct PCR Solution.

Protocol for preparation of total DNA

- Using PCR thermal cycler
  - Prepare sterile 0.2 mL thin-wall PCR tubes
  - Program PCR thermal cycler as below :

    [65°C, 3mins → 95°C, 5mins → 4°C, ∞ store]

- Using water or dry bath
  - Prepare sterile 1.5ml microcentrifuge tubes
  - Set two water or dry bath to 65°C and 95°C

DNA Purification Procedure

1. **Prepare the Direct PCR mixture tube as below in a 0.2 mL PCR tube (or 1.5mL tube).**
   - ▶ 100 uL of Direct PCR Solution
   - ▶ 1 uL of Proteinase K solution (20 mg/ml)
   - ▶ 10 uL of Buffer A
2. **Sample**
   - **A. Whole Blood : Place 20 ul of mammalian whole blood in Direct PCR mixture tube and vortex to mix for 15 seconds.**
   - **B. Tissue : Place 10 mg of animal tissue in Direct PCR mixture tube and vortex to mix for 15 seconds.**
   - **C. Hair : Place 2~3 hair roots or shafts of 1cm in length from plucked hair in Direct PCR mixture tube and vortex to mix for 15 seconds.**
   - **D. Cultured cell : Place cultured cells in Direct PCR mixture tube and vortex to mix for 15 seconds.**
   - **E. Cigarette : Cut off a 1x1 cm piece of outer filter paper from the end of cigarette butts. Place the sample in Direct PCR mixture tube and vortex to mix for 10 seconds.**
   - **F. Buccal swab : Place a head of cotton swab scraped more than 5-6 times against the inside of cheek in Direct PCR mixture tube and vortex to mix for 15 seconds.**
   - **G. Blood stain : Place a 5 mm punch-out disc from dried blood spot in Direct PCR mixture tube and vortex to mix for 15 seconds.**

   If the sample is attached on lid or wall surface of the tube after vortex, spin down briefly to collect the samples to bottom of the tube.
3. **Incubate the sample using a PCR thermal cycler programmed as below : [65℃, 3 minutes → 95℃, 5 minutes → 4℃, ∞]**
4. **After incubation, vortex to mix for 10 seconds and centrifuge at 4,500 rpm for 60 seconds.**

   The debris containing PCR inhibitors should be removed from the lysate.
5. **Use the supernatant immediately as template DNA for analysis.**

   For best results in PCR, it is recommended to use 1~2 ul of the prepared DNA solution for 20 ul PCR reaction.
6. **For long-term storage, transfer the supernatant to a new tube and store in a freezer.**