LAMDA BIOTECH

PRODUCT INFORMATION

Catalog No.: D109-600

Product Name: **Classic™ Genomic DNA Isolation Kit**

Size: 600 preps

Description: The kit adopts a convenient, non-toxic method for isolating/purification of genomic DNA from various animal samples, including mouse tails and various other animal tissues or cultured cells. Pure, archive-grade genomic DNA with high molecular weight will be obtained. The purified DNA is ready for a variety of applications including multiplex PCR, restriction digestion, sequencing, Southern blot and hybridization. The kit is not only applicable for various tissues, but also flexible for experimental sample sizes. The typical purified genomic DNA will be over 100-200kb in size.

Kit Contents:

Solution A	350ml
Solution B	150ml
Proteinase K	3ml

Reagent required:
Ethanol
TE buffer (pH 8.0)

Storage: Store the Proteinase K at -20°C; keep Solution A and Solution B at room temperature.

Note: This Product Is For Research Lab Use Only.

Related Products

- *Column-Pure™ DNA Gel Recovery Kit, Cat No. D507*
- *Column-Pure™ PCR Clean-Up Kit, Cat. No. D509*
- *100bp DNA Ladder, Cat. No. M107*
- *1Kb DNA Ladder II, Cat. No. M108*
- *Standard-Agarose, Cat. No. A113*

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Protocol

1. Prepare samples:

   - **Cultured cells**: Grow cells to confluence in a 24 well dish. Lyse cells by adding 0.5ml of **Solution A** and 5µl of **Proteinase K** (20mg/ml) to each well. Transfer lysates to microtubes and extract DNA as described below. Pellet cells grown in suspension by centrifugation.
   - **Tails**: Transfer mouse tail biopsies 0.5-1 centimeter (cm) in length to a microcentrifuge tube, add 0.5ml of **Solution A** and 5µl of **Proteinase K** (20mg/ml) and mix well.
   - **Tissues**: Transfer minced or homogenized tissue samples to a centrifuge tube. For every 50 mg tissue**,** add 0.5ml of **Solution A** and 5µl of **Proteinase K** (20mg/ml). **Note:** add more **Solution A, Proteinase K** and **Solution B** (Step 3, below) proportionally when more tissues are used.

2. Perform Proteinase K digestion by incubation of the samples in a water bath at 55°C for a minimum of 2 hours; longer incubation will not damage the genomic DNA, so samples may be incubated overnight if desired. For mouse tails and tissues, overnight incubation will be preferred.

3. After the digestion, add 200µl **Solution B** and vortex the sample tubes vigorously for 15 seconds.

4. Incubate the samples on ice for another 10 minutes.

5. Centrifuge at full speed in a microcentrifuge for 10 minutes.

6. Transfer 500µl of the supernatant to a new microcentrifuge tube. **Note:** avoid any debris.

7. Precipitation of genomic DNA by adding 1ml ethanol and mixing by inverting the tube several times.

8. To get pure DNA, the DNA precipitate formed in the above step can normally be removed from the solution with a pipette tip and transferred to a new tube. Alternatively, the DNA can be pelleted by centrifugation of the sample at full speed in a microcentrifuge for 5 minutes.

9. Rinse the DNA pellets with 70% ethanol.

10. Allow the DNA to air dry. **Note:** Do not over dry or genomic DNA will be difficult to resuspend.

11. Resuspend DNA pellets in 200µl TE buffer (pH8.0) or H_2O. Incubate the DNA in a water bath at 37°-65°C will help to dissolve DNA samples.

***Alternate protocol for use with tissue samples**: After lysis of the tissues (Step 2), extract the lysates with equal volume of phenol/chloroform (1:1). Centrifuge samples at full speed for 10 minutes. Transfer the upper aqueous phase into a new microcentrifuge tube and add 50µl **Solution B** into the tube and continue as normal at step 7.