

Product No. 06169

# Tail Lysis Buffer

## Features

- Ready to use solution
- DNase and RNase free

## Required equipments and reagents

- Centrifuge tube with a lid (1.5-2.0 ml polypropylene tube, etc.)
- Pipette (micro-pipette, etc.)
- Phenol:Chloroform:Isoamyl Alcohol (25:24:1) Mixed, pH 7.9 (Product No. 25970)
- 2-Propanol (Product No. 03065)
- Ethanol (99.5%) (Product No. 08948)
- Proteinase K (Recombinant) Solution (Product No. 15679)
- Water deionized & sterilized for Molecular Biology (Product No. 06442)
- TE buffer solution (pH8.0) (Product No. 06890)
- DEPC treated water (Product No. 36415)

## Protocol

This product will precipitate when stored in cold. Use the product after the precipitation has been dissolved by warming up.

### Extraction of DNA from mouse tail (complete lysis method)

1. To prepare 1 ml 1x lysis buffer, add 20  $\mu$ l of Proteinase K (Recombinant) Solution (Product No. 15679) to 980  $\mu$ l of Tail Lysis Buffer.
2. Add 1x lysis buffer to the mouse tail or other tissues according to the table below.

Age of Mouse	Amount of Tissue	Volume of 1x lysis buffer
Newborn	3-10 mm of the distal tail	0.5 ml
10 days old	3-10 mm of the distal tail	0.5 ml
Weanling(3-4 weeks)	3-10 mm of the distal tail	0.5 ml
Any age	100 mg of fresh tissue	4 ml

\* Adjust amount of tissue and/or volume of 1x lysis buffer as needed.

3. Incubate at 55 °C for 3 hours to overnight.
  - \* After incubation, check the tube. Tail/tissue should no longer be visible and the buffer should be milky-grayish.
4. Add an equal volume of Phenol:Chloroform:Isoamyl Alcohol (25:24:1) Mixed, pH 7.9 (Product No.25970). Shake and mix. Leave stand at room temperature for 5 to 30 minutes.
5. Centrifuge at room temperature for 5 minutes at 12,000x g (in 1.5-2.0 ml polypropylene tube). After Centrifugation, transfer aqueous phase (upper layer) into a new tube with a pipette carefully not stirring up the phenol phase (lower layer). Be careful not to pick up the interphase between phenol phase and aqueous phase.
6. Add an equal volume of 2-Propanol (Product No.03065) into the tube of aqueous phase, and mix.
7. Centrifuge at 4 °C for 15 minutes at 12,000x g. Remove the supernatant with a micro-pipette.
8. Add 1 ml of 70 % (v/v) Ethanol to the precipitation (DNA) and mix.
9. Centrifuge at 4 °C for 5 minutes at 12,000 x g. Remove the supernatant with a micro-pipette.
10. Dry the precipitation, and then dissolve the dried precipitation in a buffer suitable for downstream application [e.g. Water (Product No.06442), DEPC treated Water (Product No.36415) or TE buffer solution (pH8.0) (Product No.06890)]. Note that if the DNA is dried completely, it may not dissolve.

Direct PCR method using DNA extraction solution from mouse tail (fast method)

1. To prepare 1 ml 1x lysis buffer, add 20  $\mu$ l of Proteinase K (Recombinant) Solution (Product No. 15679) to 980  $\mu$ l of Tail Lysis Buffer.
2. Add 100  $\mu$ l of 1x lysis buffer to the distal mouse tail (Approx. 3mm).
3. Incubate at 55 °C for 30 minutes to overnight.  
\* Incubation at 55 °C for 30 minutes does not lyse mouse tail completely. To lyse mouse tail completely, incubate at 55 °C for more than 2 hours.
4. Incubate at 90 °C for 10 minutes to inactivate proteinase K.
5. Centrifuge at room temperature for 1 minutes at 500x g. Transfer supernatant into a new tube with a pipette.
6. Dilute the supernatant with Water (Product No. 06442), and then add into PCR solution.  
\* Rate of dilution varies significantly depending on DNA polymerases and/or primers. It is required to optimize the conditions beforehand. Depending on DNA polymerases and/or primers, PCR may fail. In that case, perform PCR with purified DNA (see complete lysis method) as template.

**Attention**

- Wear disposable gloves, mask, and protect goggle to protect nuclease contamination.
- Prepare 70 % (v/v) Ethanol with Ethanol 99.5% (v/v) (Product No. 08948) and Water (Product No.06442) or DEPC Treated water (Product No.36415).

**Caution**

If Tail Lysis Buffer accidentally comes into contact with skin, wash it away with copious amount of water immediately. Call a physician if necessary.

**Storage**

Room temperature

**Expiration**

Expiration date is stated on the product label.

**Packing**

500 ml (Product No.06169-95)