

DNA EXTRACTION FROM MOUSE TAIL
(a 12-step program)

STOCK SOLUTIONS

A. Tail Lysis Buffer

1.0M Tris, pH 8.5 10ml
5.0M NaCl 4ml
0.5M EDTA 1ml
10% SDS 2ml

B. Proteinase K (10mg/ml)

Proteinase K 100mg, Invitrogen Cat no. 25530-015(FHCRC)
dH₂O to 10ml

C. Phenol:Chloroform:Isoamyl Alcohol (25:24:1) pH 8.0 100ml
Sigma Cat no. P3803

D. Tris-EDTA (TE; 10:1)---optional

1.0M Tris, pH 8.0 10ml
0.5M EDTA, pH 8.0 2ml
dH₂O to 1000ml

PROTOCOL

1. Restrain mice. If mouse is >28days, then anesthetize mouse with Isoflurane (inhalation anesthetic for animals) via bell jar.
2. Remove ~1cm of tail cleanly with sharp scissors. Place in 2.0ml tube.
3. Add 490 μ l of lysis digesting solution and 10 μ l Proteinase K solution.
4. Incubate 55°C O/N (16hrs) with rocking in horizontal position.
5. Add 500 μ l of phenol:chloroform:isoamyl alcohol. Vortex gently to mix.
6. Centrifuge at 15000rpm for 10 min (at 4°C), or until the top aqueous is clear.
7. Remove aqueous layer (~500 μ l) to new tube.
8. Add ~1ml cold 100% EtOH. Gently shake tube until DNA precipitates.
9. Centrifuge 15000rpm 5min or until DNA forms pellet at bottom of tube.
10. Remove solution, leaving pellets to air dry.
11. Re-suspend DNA pellets in 300 μ l of dH₂O.
12. Sit O/N at R/T to dissolve (may take 48hrs).

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