UCSD Transgenic Mouse and
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Genomic DNA Preparation from Mouse Tissue for PCR Analysis Only (Phenol-free DNA Preparation)

Note: This method works well for small embryos (6.5, 7.5 or 8.5 dpc). It is also good for 2mm chunks of tail. This method **will not work with bigger embryos** (9.5 or older) because they yield too much DNA (or protein). Best PCR results when you take just part of the embryo (e.g. yolk sac or head).

Reagents

NaOH Solution: 25mM NaOH + 2 mM EDTA

Tris Solution: 40 mM Tris-HCl

Method

1. Use only clean Eppendorf tubes. Set up tubes in rack and have lids closed. Label tops of tubes.

2. Cut off toe or tip of tail and place into Eppendorf tube and cap. You can freeze samples at this point. (We are allowed to clip toes if pups are younger than 10 days). You need about **1-2 mm of tissue**.

3. Rinse scissors well with distilled water and then wipe with alcohol pad between each cut to avoid contamination of the next samples.

4. Add 100 µl of NaOH, solution to each tube. Change tips between each tube and recap immediately after adding NaOH.

5. Once each tube has NaOH, add 1-2 drops of mineral oil to each tube. Cap each tube immediately.

6. Heat at 100°C for 20 - 30 minutes.

7. Spin 30 seconds in Eppendorf centrifuge to get liquid off of caps.

8. Add 100 µl of Tris solution. Change tips between each tube and recap immediately.

9. Vortex to mix.

10. Spin 30 seconds in Eppendorf centrifuge. You can store samples in fridge at this point.

11. Use 1.5 µl of sample for a 25 µl PCR reaction.