

Procedure Type: Tissue Collection for Genotyping

Procedure Title: Genotyping via Buccal Swab or Hair Collection in Conscious

Species: Mouse

Pain/Distress Category: C

Background Information:

Techniques will comply with ACUC Guidelines for “Antemortem Tissue Collection for Genotyping.” If techniques will not comply with ACUC Guidelines, insert variation with justification below in the section: "How does this procedure fit into or address your overall research goals?"

Tissue collection for genotyping guidelines: Obtaining blood/tissue samples from mice to determine the presence/absence of a particular gene product is a common procedure when breeding genetically modified mice. The tissue collection method used is largely dependent upon the quantity of DNA sample required for Polymerase Chain Reaction (PCR) analysis. For smaller sample requirements, you may be able to use hair, buccal epithelial cells from mouth swabs, a dried blood spot, or an ear punch (which also serves as a method of identification).

Note: Performed on an awake, properly restrained pre-weanling mouse \leq 21 days of age (optimal age for sampling is between 8-15 days of age). If performing on an adult mouse, a rodent restrainer may be used.

Procedure Description Tab:

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Procedural Steps for Buccal Swab Collection:

1. Manually restrain mouse by the scruff, pulling the neck skin taut and causing the mouth to open.
2. Swab the inner (buccal) surface of both of the mouse's cheek with a sterile 2mm diameter cotton-tipped swab.
3. Return animal to its cage.
4. Break the cotton bud of the swab off into a specimen vial.

Procedural Steps for Hair Collection:

1. Manually restrain mouse by the scruff, and turn over so that mouse is resting in your hand.
2. Using autoclaved, chemically disinfected, or glass bead sterilized forceps, gently pluck a tuft of hair from the ventral abdomen of the mouse and place into a specimen vial.
3. Return animal to its cage.
4. Note: To avoid cross-contamination, use a fresh pair of forceps per animal; otherwise, disinfect forceps between animals, careful to remove all hair and debris.

How does this procedure fit into or address your overall research goals?

(Insert protocol-specific rationale here.)

Please list any clinical effects or changes from the normal health and behavior of an untreated animal which may occur as a result of this procedure.

While negative clinical effects from buccal swabbing and hair collection are not expected, oral trauma or skin irritation, respectively may occur.

Describe post procedure monitoring that will be performed.

Mice will be examined immediately following collection and the following day, for general appearance and activity level, as well as potential adverse events listed above.

What criteria will be used to determine if animals exhibiting clinical or behavioral changes should be euthanized?

If the animal is moribund or if abnormal signs persist despite treatment as directed by the veterinarian, the animal will be euthanized

Peri procedure Care/Analgesics tab:

Not applicable.

Other Agents Utilized tab:

Not applicable.

Updated/ACUC approved:

Jan. 2022