

**Submandibular Blood
Collection in Mice
IACUC Standard Procedure
Effective Date: May 2016**

Description of procedure:

Blood collection from the submandibular vein is the preferred blood collection technique for mice. This method allows for maximum allowable sample volume with minimal trauma to the animal. Multiple samples can be taken daily by alternating sides. This technique must be performed on anesthetized animals. Only trained personnel may perform this procedure.

This technique may yield a large sample volume so will not be appropriate for frequent small blood volume collection. For information regarding maximum blood collection volume please refer to the [UCSF Blood Collection Guidelines](#).

Supplies necessary:

- Isoflurane anesthesia system
- 25 gauge needles or Lancet
- Gauze sponges
- Blood collection tube

Procedure:

1. Anesthetize the mouse with isoflurane in an induction chamber.
2. Remove the mouse from the induction chamber and restrain the mouse with the non-dominant hand by grasping the loose skin over the shoulders and behind the ears; the skin should be taut over the mandible
3. Puncture the vein with a 25 gauge needle or lancet slightly behind the mandible. A swift lancing motion is used to puncture the vessel (see Image 3 below). Only the tip of the needle should enter the vessel to a shallow depth of 1-2 mm. Blood will flow immediately.
4. Collect sample with a pipette or other collection tube.
5. When the sample has been collected apply gentle pressure to the blood collection site with a gauze sponge until bleeding has stopped.
6. The animal may be returned to their home cage once they have fully recovered from the anesthesia.

To determine the appropriate location of the puncture site, locate the hairless spot along the jaw line (Image 1), measure approximately 0.5 cm superior and lateral towards the shoulder (Image 2).

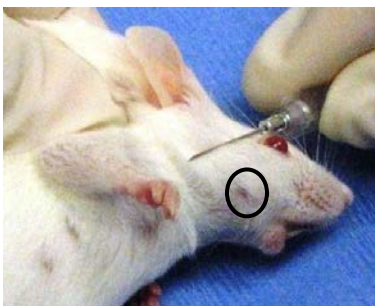


Image 1



Image 2



Image 3: Vasculature and demonstration of blood collection.

Agents: This procedure requires gas anesthesia. All agents administered to animals should be listed in the "Agents" section of RIO.

Adverse effects to be considered: Hemorrhage from the ear canal or nasal cavity, hematoma formation