

Skin Transplantation in Mice
IACUC Standard Procedure
Effective Date: August 2022



Description of procedure:

Preparation of Donor Tissue: The donor mouse is euthanized per the [UCSF Euthanasia Policy](#). Prepare donor tissue as appropriate.

Grafting Procedure: Recipient mice are anesthetized following the [UCSF Anesthesia Guidelines](#). Analgesics are administered in accord with the protocol. The surgical site is shaved or clipped and disinfected with betadine or chlorhexidine. Using sterile curved scissors, an area of skin slightly larger than the skin graft is carefully snipped away, being careful not to cut the panniculus (graft size specified in protocol). The donor skin graft is placed onto the prepared graft bed and secured with a piece of non-adhering gauze (e.g. Adaptec) pad. Sutures can be used at the four corners of the graft to immobilize the graft. The non-adhering gauze is secured with an adhesive strip and the mouse is recovered. Between day 5 and 7, engraftment of the donor skin should be verified using visual examination. To do this, mice are [anesthetized](#) and the adhesive strips and gauze are lifted to reveal the graft. After 7-14 days, the adhesive strips and gauze can be removed. Transplanted mice must be monitored for graft rejection (necrosis, infection).

The protocol must identify:

- The size of the skin graft
- Analgesic type, route of administration and frequency
- Antibiotic type route and frequency if necessary
- Experimental endpoint

Agents:

This procedure requires anesthesia, systemic analgesics, and antibiotics. All agents administered to animals should be listed in the "Agents" section of the RIO IACUC protocol.

Adverse Effects:

Adverse effects should be listed in the "Adverse Effects" section of the RIO IACUC protocol.

Examples of potential adverse effects include: skin graft rejection (necrosis) or infection

References:

<http://www.jove.com/video/634/murine-skin-transplantation>

Garrod, K. R., D. Cahalan, M. Murine Skin Transplantation. *J. Vis. Exp.* (11), e634, doi:10.3791/634 (2008).