



May 10, 2019

U Mass - Surgery – tail vein injection

DOI

dx.doi.org/10.17504/protocols.io.x5dfq26



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Protocol Citation: Jason Kim 2019. U Mass - Surgery – tail vein injection. **protocols.io**
<https://dx.doi.org/10.17504/protocols.io.x5dfq26>



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Protocol status: Working

We use this protocol and it's working

Created: February 14, 2019

Last Modified: May 10, 2019

Protocol Integer ID: 20357

Keywords: tail vein injection, mice, tail vein injection summary, intravenous administration via tail vein, tail vein, injection, injectate, intravenous administration, large fraction of injectate, surgery, liver

Abstract

Summary:

Intravenous administration via tail vein is used to acutely deliver drug, hormones, and adenoassociated virus in mice. A large fraction of injectate will be cleared by liver.

Materials

MATERIALS

☒ Heat Lamp

☒ 1 ml syringes **Catalog #309659**

☒ 1 ml syringes (or U-100 Insulin Syringe) **Becton Dickinson (BD) Catalog #329461**

☒ 27G needles **Catalog #305109**

☒ 0.9% Saline **Pfizer (Hospira) Catalog #0409-4888-10**

☒ 70% Ethanol

Note:

Hospira, [RRID:SCR_003985](#)

BD Biosciences, [RRID:SCR_013311](#)

Troubleshooting



- 1 Place mice in clean cages and keep warm with a heat lamp for ~5 min with constant monitoring to induce vasodilation.
- 2 Transfer mice to a restrainer with a hole for the tail.
- 3 Apply 70% Ethanol wipes to tail and turn 45° for a visible presentation of tail vein.
- 4 Introduce a 27G syringe into tail vein to administer an injectate into mice. (For precise volume introduction, a U-100 insulin syringe can be used to avoid dead volumes.)
- 5 Apply light pressure over the injection site for ~30 sec to prevent backflow.
- 6 Return mice to housing cages and monitor for the next several days for any evidence of swelling or complications at the injection site.