

Jul 28, 2019

Retro-orbital injection of virus or dye in mice

 In 2 collections

DOI

<https://dx.doi.org/10.17504/protocols.io.5udg6s6>

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Protocol Citation: Boaz Mohar 2019. Retro-orbital injection of virus or dye in mice. **protocols.io**
<https://dx.doi.org/10.17504/protocols.io.5udg6s6>

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Protocol status: In development

We are still developing and optimizing this protocol



Created: July 25, 2019

Last Modified: July 28, 2019

Protocol Integer ID: 26213

Keywords: Mice, Retro-orbital injections, orbital injection of virus, dye in mice, retro orbital injection, mice, orbital injection, virus, dye

Abstract

This protocol is following:

Citation

Tal Yardeni, Michael Eckhaus, H. Douglas Morris, Marjan Huizing, Shelley Hoogstraten-Miller (2011)
. Retro-orbital injections in mice. LabAnimal.

[10.1038/labani0511-155](https://doi.org/10.1038/labani0511-155)

LINK

Guidelines

Please adhere to your institute IACUC guidelines of animal care.

Materials

MATERIALS

 29G x 12.7mm 0.3ml syringe **Ulticare Catalog #09230**

STEP MATERIALS

 29G x 12.7mm 0.3ml syringe **Ulticare Catalog #09230**

It is important that the needle used has low friction so that the injection is at a slow and consistent rate.

Protocol materials

 29G x 12.7mm 0.3ml syringe **Ulticare Catalog #09230**

Injection

- 1 Prepare either virus dilution (5.0×10^{11} – 1.0×10^{12}) with PBS prepare or a **dye aliquot**. Injection is up to 200ul per mouse.
- 2 Take one mouse from the cage into an induction chamber and start isoflurane at 3% with flow rate of ~1L/min
- 3 After the mouse has slow breathing (~1/s) move the mouse to a nose cone delivery of isoflurane at 1.5% with around the same flow rate.
- 4 Expose the eye ball with two fingers (above and below) and make sure the you are not pressing on the trachea and the mouse's breathing is regular. 
- 5 Use a 29G syringe at a 30-degree angle beveled downwards until you hit the bone, retract a bit and slowly inject. See cited paper for more details. 

Citation

Tal Yardeni, Michael Eckhaus, H. Douglas Morris, Marjan Huizing, Shelley Hoogstraten-Miller
(2011). Retro-orbital injections in mice. LabAnimal.

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 29G x 12.7mm 0.3ml syringe **Ulticare Catalog #09230**

- 6 Remove the needle slowly and press the eyelid shut for a few seconds.
- 7 Validating the injection was successful is possible with JF525 by looking at the pee of the animal after it wakes up.
Leaving the animal in a clean cup with kim-wips will collect the pee and it would seem pink. 



Citations

Tal Yardeni, Michael Eckhaus, H. Douglas Morris, Marjan Huizing, Shelley Hoogstraten-Miller. Retro-orbital injections in mice

[10.1038/laband0511-155](#)

Step 5

Tal Yardeni, Michael Eckhaus, H. Douglas Morris, Marjan Huizing, Shelley Hoogstraten-Miller. Retro-orbital injections in mice

[10.1038/laband0511-155](#)