



May 23, 2023

Retro-orbital injection of AAV in mice



Forked from [Retro-orbital injection of virus or dye in mice](#)

DOI

dx.doi.org/10.17504/protocols.io.3byl4joy8lo5/v1

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<https://dx.doi.org/10.17504/protocols.io.3byl4joy8lo5/v1>

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Protocol status: Working

We use this protocol and it's working



Created: May 10, 2023

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Protocol Integer ID: 81665

Keywords: Mice, Retro-orbital injections, ASAPCRN, orbital injection of aav, orbital injection, aav, mice this protocol, mice

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.

Troubleshooting



Injection

- 1 Prepare either virus dilution with PBS prepare. Injection is up to 100 μ L 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 31 G insulin 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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[LINK](#)

Equipment

U-100 BD Ultra-Fine™ Short Insulin Syringes

NAME

Syringe and neecdle

TYPE

BD Medical

BRAND

BD328438

SKU

https://us.vwr.com/store/catalog/product.jsp?catalog_number=BD328438^{LINK}

- 6 Remove the needle slowly and press the eyelid shut for a few seconds.
- 7 Prior to recovery, apply 1-2 drops 0.5% ophthalmic Proparacaine to the injected eye



Citations

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

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Step 5

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

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