Mouse perfusions and brain tissue processing

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AUG 02, 2023

OPEN ACCESS

DOI:
dx.doi.org/10.17504/protocols.io.bp2l69kn1lqe/v1

Protocol Citation: Ayse Ulusoy, Shirley Lee, Angela Rollar, Michael Helwig, Michael Klinkenberg, Sinead O'Sullivan, Rita Pinto-Costa, Donato Di Monte 2023. Mouse perfusions and brain tissue processing. **protocols.io** https://dx.doi.org/10.17504/protocols.io.bp2l69kn1lqe/v1

Protocol status: Working
We use this protocol and it's working

ABSTRACT

The protocol describes tissue processing for histological analyses and includes perfusions, brain fixation, and tissue harvesting from perfused rodents.

Created: Aug 25, 2022

Last Modified: Aug 02, 2023

PROTOCOL integer ID: 69172

Keywords: ASAPCRN

1 Inject sodium pentobarbital (600 mg/kg, i.p.) to sacrifice the mouse

2 Once the respiration is stopped, open the chest and place the cannula connected to a peristaltic pump into the heart. Make sure that the cannula has access to the ascending aorta.

3 Perfuse, first with 20 ml saline solution, kept at room temperature, and then with ice-cold 60 ml 4% (w/v) paraformaldehyde.

4 Quickly remove the brain and immerse in 4% paraformaldehyde for 24 hours.

5 For cryopreservation, place the brain in a 30% (w/v) sucrose solution.

6 Once sunk, section the brain on the coronal plane (35 µm) using a freezing microtome.