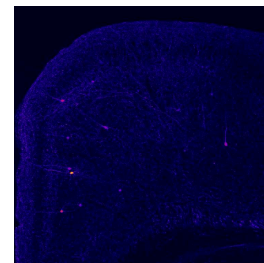


Mar 25, 2024

## Protocol Collection: Perfusing, Sectioning, IHC, Mounting and Coverslipping Mouse Brain Specimens

DOI

<https://dx.doi.org/10.17504/protocols.io.kxygx3yxkg8j/v1>



Naveen Ouellette<sup>1</sup>, daphne.toglia<sup>1,2</sup>, Holly Myers<sup>1</sup>

<sup>1</sup>Allen Institute for Neural Dynamics; <sup>2</sup>Boston University

Allen Institute for Neural...



Holly Myers

Allen Institute

### Create & collaborate more with a free account

Edit and publish protocols, collaborate in communities, share insights through comments, and track progress with run records.

Create free account

OPEN  ACCESS



**DOI:** <https://dx.doi.org/10.17504/protocols.io.kxygx3yxkg8j/v1>

**Protocol Citation:** Naveen Ouellette, daphne.toglia, Holly Myers 2024. Protocol Collection: Perfusing, Sectioning, IHC, Mounting and Coverslipping Mouse Brain Specimens. **protocols.io** <https://dx.doi.org/10.17504/protocols.io.kxygx3yxkg8j/v1>



**License:** This is an open access protocol distributed under the terms of the **[Creative Commons Attribution License](#)**, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

**Protocol status:** Working

**We use this protocol and it's working**

**Created:** September 05, 2023

**Last Modified:** June 18, 2024

**Protocol Integer ID:** 87408

**Keywords:** Immunohistochemistry, IHC, Histology, Immunolabeling, Microtome, Coverslip, Mounting Tissue, Antibody, whole mouse brain specimen, whole brain into section, coverslipping mouse brain, anatomical structures in brain region, microscope, brain region, brain removal, anatomical structure, sliding microtome, intracardiac perfusion fixation, perfusing, whole brain, brain, section, sectioning, slide, laser channel

## Abstract

This protocol collection details the steps for a whole mouse brain specimen to be perfused, sliced, stained with antibodies, DAPI, or both, and made into slides. The intracardiac perfusion fixation includes anesthesia, exsanguination, fixation, brain removal, and post-fixation storage. A sliding microtome is used to slice the whole brain into sections, and the sections are stained, mounted on glass slides, and coverslipped. The result is that anatomical structures in brain regions of interest may be labeled in a way that can be viewed by laser channels on a microscope and imaged for data collection.



## Mouse Cardiac Perfusion Fixation and Brain Collection V.5

- 1 Reference the Mouse Cardiac Perfusion Fixation and Brain Collection V.5 protocol.

### Protocol

NAME

### Mouse Cardiac Perfusion Fixation and Brain Collection

CREATED BY

Allen Institute

Preview

## Sectioning Mouse Brain with Sliding Microtome

- 2 Reference the Sectioning Mouse Brain with Sliding Microtome protocol.

### Protocol



NAME

### Sectioning Mouse Brain with Sliding Microtome

CREATED BY

Holly Myers

Preview

## Immunohistochemistry (IHC) Staining Mouse Brain Sections

- 3 If antibody staining or both antibody and DAPI staining is needed, reference the Immunohistochemistry (IHC) Staining Mouse Brain Sections protocol.



## Protocol



NAME

### Immunohistochemistry (IHC) Staining Mouse Brain Sections

CREATED BY

Holly Myers

Preview

## DAPI Staining Mouse Brain Sections

- 4 If DAPI staining only is needed, reference to DAPI Staining Mouse Brain Sections protocol.

## Protocol



NAME

### DAPI Staining Mouse Brain Sections

CREATED BY

Daphne Toglia

Preview

## Mounting and Coverslipping Mouse Brain Sections

- 5 Reference the Mounting and Coverslipping Mouse Brain Sections protocol.



## Protocol



NAME

### Mounting and Coverslipping Mouse Brain Sections

CREATED BY

Holly Myers

Preview