May 21, 2024

Slice preparation

In 1 collection

DOI
dx.doi.org/10.17504/protocols.io.5jyl82j7rl2w/v1

Nicola Biagio Mercuri[1]

[1]Fondazione Santa Lucia IRCSS

ASAP Collaborative Rese… | Mercuri Lab

Nicola Biagio Mercuri
Fondazione Santa Lucia IRCSS

DOI: dx.doi.org/10.17504/protocols.io.5jyl82j7rl2w/v1

Protocol Citation: Nicola Biagio Mercuri 2024. Slice preparation. **protocols.io** **https://dx.doi.org/10.17504/protocols.io.5jyl82j7rl2w/v1**

Protocol status: Working

Created: May 20, 2024

Last Modified: May 21, 2024

Protocol Integer ID: 100128

Abstract

Slice preparation for electrophysiology

Animal sacrifice and surgical procedure

1 Anesthetize the animal under halothane

2 Decapitate the animal with a guillotine

3 Gently open the bones of the skull and remove the brain, dropping it into a beaker containing ice-cold ACSF continuously bubbled with an O2/CO2 (95/5%) gas mixture

3.1 ACSF composition (in mM): 126 NaCl, 2.5 KCl,1.2 $MgCl_2$, 1.2 NaH_2PO_4, 2.4 $CaCl_2$, 10 glucose and 25 $NaHCO_3$.

Brain slices cutting

4 After 1 min, place the brain on a petri dish with filter paper soaked with ACSF, and then separate the region of interest with a razor blade

5 Stick the peace of brain on the appropriate magnetic surface provided by the Leica VT1200S microtome with cyanoacrylate glue, and place it in the cutting chamber filled with ice-cold ACSF

6 Proceed with the slicing procedure (250 µm thick) and remove the surrounding tissue in each slice, to isolate the area of interest

7 The slices are then left to recover for at least 1hr in saturated ACSF at 32°C