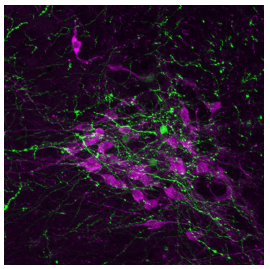
Apr 23, 2020

Immediate Early Gene (IEG) mapping of spinal cord neurons activated by cystometry-induced micturition in rats [keast-002]



DOI
dx.doi.org/10.17504/protocols.io.bakxicxn

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Collection Citation: Janet R Keast, Peregrine B Osborne, Nicole Wiedmann 2020. Immediate Early Gene (IEG) mapping of spinal cord neurons activated by cystometry-induced micturition in rats [keast-002]. **protocols.io https://dx.doi.org/10.17504/protocols.io.bakxicxn**

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

Created: December 17, 2019

Last Modified: November 27, 2023

Collection Integer ID: 31095

Keywords: physiology, autonomic, activity-mapping, neuroanatomy, immunohistochemistry, image analysis, immediate early gene expression in specific spinal region, mapping of spinal cord neuron, lumbosacral spinal neuron, immunohistochemical labelling of spinal cord section, spinal cord neuron, specific spinal region, immediate early gene expression, spinal cord tissue, patterns of immediate early gene expression, spinal cord section, immediate early gene, spinal cord, micturition in rat, cystometry of awake adult, neuron, neuronal population, cystometry, bladder

Abstract

This collection describes the procedures required to visualize and characterize lumbosacral spinal neurons that are activated by cystometry of awake adult male and female Sprague-Dawley rats. This collection includes protocols for:

STAGE 1: Surgery to cannulate the bladder, followed by recovery then cystometry

STAGE 2: Intracardiac perfusion with fixative to preserve the spinal cord tissue

STAGE 3: Immunohistochemical labelling of spinal cord sections to visualise immediate early gene expression in specific spinal regions and neuronal populations

STAGE 4: Microscopy and image analysis to assess patterns of immediate early gene expression in different spinal cord regions

Troubleshooting

Files

SEARCH

Protocol

NAME

Cystometry in awake rats

VERSION 1

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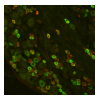
Protocol



NAME

Intracardiac perfusion with fixative for anatomical studies

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Immunohistochemical labelling of spinal cord neurons involved in bladder activity

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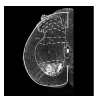

NAME

Image analysis of immediate early gene expression in spinal cord sections

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