

Jun 26, 2023

Version 1

SynBot Protocols V.1

DOI

<https://dx.doi.org/10.17504/protocols.io.3byl4qewjvo5/v1>

Justin T Savage¹, Juan Ramirez¹, Dolores Irala², Cagla Eroglu^{1,2,3}

¹Department of Neurobiology, Duke University Medical Center, Durham, NC 27710;

²Department of Cell Biology, Duke University Medical Center, Durham, NC 27710;

³Howard Hughes Medical Institute, Duke University Medical Center, Durham, NC 27710

Eroglu_Lab



Justin T Savage

Duke University

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.3byl4qewjvo5/v1>

Collection Citation: Justin T Savage, Juan Ramirez, Dolores Irala, Cagla Eroglu 2023. SynBot Protocols. **protocols.io**
<https://dx.doi.org/10.17504/protocols.io.3byl4qewjvo5/v1>

License: This is an open access collection 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 collection and it's working

Created: June 09, 2023

Last Modified: June 26, 2023

Collection Integer ID: 83141

Keywords: quantification of synapse, synapse staining, using synbot, vivo synapse, paper synbot, synapse, synbot, synbot with manual, synbot protocols protocol, details of rat neuron, rat neuron, source image analysis software, software, astrocyte, astrocyte culture

Funders Acknowledgements:

NIH ROI

Grant ID: AG059409

NIH ROI

Grant ID: NS102237

BRAIN Initiative

Grant ID: U19NS123719

Chan Zuckerberg Initiative, Neurodegeneration Challenge Network

Grant ID: 2018-191999

Chan Zuckerberg Initiative, Neurodegeneration Challenge Network

Grant ID: DAF2021-237435

Michale J Fox Foundation

Grant ID: ASAP-020607

NINDS

Grant ID: F31NS125985

Howard Hughes Medical Institute

Pew Latin American Fellows Program in the Biomedical Sciences

Foerster-Bernstein Post-Doctoral Fellowship Program for Women in STEM

Holland-Trice Scholars Award for high risk/high impact discovery in research in Basic Brain Science and Brain Diseases

Abstract

Protocols related to the paper *SynBot: An open-source image analysis software for automated quantification of synapses*. Includes details of rat neuron and astrocyte culture, *in vitro* synapse staining, *in vivo* synapse staining, and using SynBot with manual or ilastik thresholding.

Files

 SEARCH

Protocol

NAME

Quantifying Synaptic Colocalizations with SynBot (Manual Thresholding)

VERSION 1

CREATED BY



Justin T Savage
Duke University

OPEN →

Protocol

NAME

Quantifying Synaptic Colocalizations with SynBot (ilastik Thresholding)

VERSION 1

CREATED BY



Justin T Savage
Duke University

OPEN →

Protocol

NAME

🔗 Synapse Staining - IHC - VGluT1 and PSD95 - Mouse Brain Sections

VERSION 1

CREATED BY



Juan Ramirez

OPEN →

Protocol

NAME

Astrocyte Isolation and ACM Production

VERSION 1

CREATED BY



Justin T Savage
Duke University

OPEN →

Protocol

NAME

Glia-Free Cortical Neuronal Feeding Schedule - Synapse Formation

VERSION 1

CREATED BY



Justin T Savage
Duke University

OPEN →

Protocol

NAME

Glia-Free Cortical Neuron Culture

VERSION 1

CREATED BY



Justin T Savage
Duke University

OPEN →