Jun 23, 2024

Synapse Quantification with Puncta Analyzer

In 1 collection

DOI
dx.doi.org/10.17504/protocols.io.8epv5rnddg1b/v1

Justin T Savage[1]

[1]Duke University

ASAP Collaborative Rese… Eroglu_Lab

Justin T Savage
Duke University

OPEN ACCESS

DOI: dx.doi.org/10.17504/protocols.io.8epv5rnddg1b/v1

Protocol Citation: Justin T Savage 2024. Synapse Quantification with Puncta Analyzer. **protocols.io** **https://dx.doi.org/10.17504/protocols.io.8epv5rnddg1b/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

Created: June 23, 2024

Last Modified: June 23, 2024

Protocol Integer ID: 102277

Keywords: ASAPCRN

Abstract

Protocol for installing Puncta Analyzer and using it to analyze synapse images.

Install Puncta Analyzer

1 Go to https://github.com/toddstavish/puncta-analyzer and follow the following instructions for installing Puncta Analyzer

2 Install JDK

3 Install maven

4 Fork the puncta analyzer repo

5 Execute 'mvn compile' in project directory (where the pom.xml is located)

6 Create a 'PunctaAnalyzer' directory in the your ImageJ plugins directory

7 Copy all of the class files (bytecode) in target/classes to plugins/PunctaAnalyzer

Running Puncta Analzyer

8 Z-project images if necessary

9 Open an image in FIJI and use Ctrl+A to select all or select a specific region of interest

10 Run Puncta Analyzer using Analyze>Puncta Analyzer

11 Select Red channel and Green channel boxes to analyze those channels. Also select background subtraction for the red and green channels. Click set results file and save results and select a folder to save to.

12 Click OK with the default 50 pixel rolling ball radius for subtract background

13 Threshold the red channel using the slider

14 Click OK with the default 50 pixel rolling ball radius for subtract background

15 Threshold the red channel using the slider

16 Enter any desired restrictions on the analyze particles function such as a minimum pixel size.

17 Click yes to save result to file

18 Close all windows and proceed to the next image