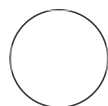




JUN 05, 2023

## Quantification of TH immunoreactivity

Hong-Yuan  
Chu<sup>1,2</sup>,Hong-yuan  
Chu<sup>1,2</sup><sup>1</sup>Van Andel Institute; <sup>2</sup>ASAP

johnson.agniswamy

### ABSTRACT

This protocol describes quantification of TH immunoreactivity.

### ATTACHMENTS

[731-1842.docx](#)

### MATERIALS

#### Apparatus

1. Confocal microscope
2. Image J software

### OPEN ACCESS

**DOI:**  
[dx.doi.org/10.17504/protocols.io.n2bvj85qngk5/v1](https://dx.doi.org/10.17504/protocols.io.n2bvj85qngk5/v1)

**Protocol Citation:** Hong-Yuan Chu, Hong-yuan Chu 2023. Quantification of TH immunoreactivity.  
**protocols.io**  
<https://dx.doi.org/10.17504/protocols.io.n2bvj85qngk5/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:** May 31, 2023

**Last Modified:** Jun 05, 2023

**PROTOCOL integer ID:**  
82687

**Keywords:** Quantification of TH immunoreactivity

## Procedure

- 1 TH signals from bilateral striatum and cortex are imaged under a 20x objective lens using identical imaging settings.
- 2 Open the confocal files in Image J software.
- 3 Using the "Rectangle" function to select an area (width x high = 150 x 150) in striatum sections from both hemispheres for TH quantification.
- 4 Using the "Measure" function to measure the gray value of the selected area and write down the mean value of striatum slice,  $M^{\text{striatum-LHS}}$  and  $M^{\text{striatum-RHS}}$ .
- 5 Using the "Rectangle" function to select an area (width x high = 150 x 150) in cortical sections from both hemispheres for TH quantification.
- 6 Using the "Measure" function to measure the gray value of the selected area and write down the mean value of cortical slice,  $M^{\text{cortex-LHS}}$  and  $M^{\text{cortex-RHS}}$ .
- 7 
$$\text{TH quantification} = (M^{\{\text{striatum-LHS}\}} - M^{\{\text{cortex-LHS}\}}) / (M^{\{\text{striatum-RHS}\}} - M^{\{\text{cortex-RHS}\}}).$$