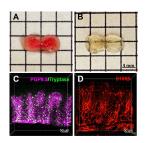


Apr 24, 2024 Version 1

A protocol for tissue clearing and three-dimensional imaging of human sigmoid mucosal biopsies V.1

This protocol is a draft, published without a DOI.



Pu-Qing Yuan¹, tao li¹, Yvette Taché¹

¹University of California at Los Angeles (UCLA)



∠Pu- Pu-Qing Yuan



University of California at Los Angeles (UCLA)

OPEN ACCESS



Protocol Citation: Pu-Qing Yuan, tao li, Yvette Taché 2024. A protocol for tissue clearing and three-dimensional imaging of human sigmoid mucosal biopsies . protocols.io https://protocols.io/view/a-protocol-for-tissue-clearing-and-three-dimension-dcnn2vde

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: April 24, 2024

Last Modified: April 24, 2024

Protocol Integer ID: 98734

Keywords: Tissue clearing, 3D imaging, human sigmoid mucosal biopsy, nerve fibers

Funders Acknowledgement:

NIH/SPARC

Grant ID: 10T20D024899-01



Abstract

This protocol was developed for tissue clearing and 3D imaging of human sigmoid mucosal biopsies by adapting and modifying the original CLARITY tissue clearing technique/immunofluorescence protocols that we established for 3D imaging and phenotyping of human colonic enteric nervous system. By using this new protocol, a piece of entire human sigmoid mucosal biopsy specimen with the volume about 6x3x1-2 mm (length x wide x thickness) can be completely cleared within 3-4 days. The 3D images and videos generated from cleared biopsy samples showed clear spatial views of nerve innervation, distributions of mast cells and enteric glial cells, and configurations of mast cells with nerve fibers in the sigmoid colonic mucosa.

Attachments



a protocol for CLARI...

39.8MB



1