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A protocol for tissue clearing and three-dimensional imaging of human sigmoid mucosal biopsies V.2

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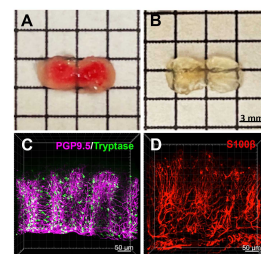
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Protocol status: Working

We use this protocol and it's working

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Keywords: Tissue clearing, 3D imaging, human sigmoid mucosal biopsy, nerve fibers , 3d imaging of human sigmoid mucosal biopsy, dimensional imaging of human sigmoid mucosal biopsy, entire human sigmoid mucosal biopsy specimen, nerve fibers in the sigmoid colonic mucosa, piece of entire human sigmoid mucosal biopsy specimen, sigmoid colonic mucosa, human colonic enteric nervous system, phenotyping of human colonic enteric nervous system, original clarity tissue clearing technique, enteric glial cell, biopsy sample, protocol for tissue clearing, cleared biopsy sample, tissue clearing, distributions of mast cell, clear spatial views of nerve innervation, configurations of mast cell, mast cell, nerve fiber, immunofluorescence, 3d imaging, dimensional imaging, immunofluorescence protocol, nerve innervation

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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 6×3×1-2 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

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