

Introduction to Tissue Clearing & 3D IHC

What is Tissue Clearing?

Tissue clearing is a technique used to remove light scattering lipids in large tissue volumes. Cleared tissue samples retain their three-dimensional integrity and can be immunostained and imaged using fluorescent microscopy. Tissue clearing becomes increasingly important with increasing sample size or complexity due to light scattering and autofluorescence.

Is Tissue Clearing Right For You?

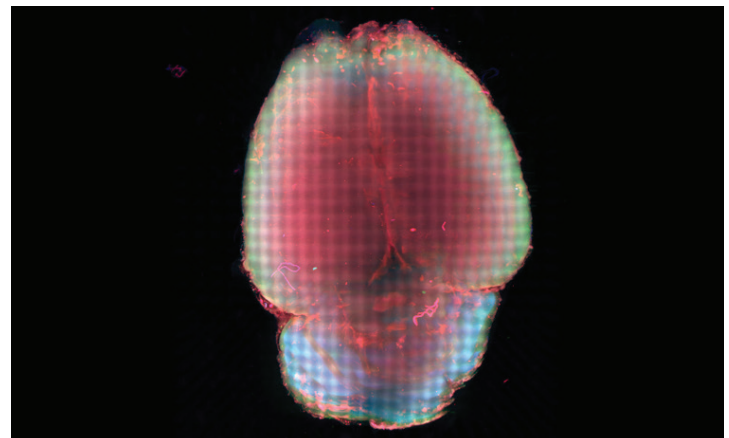
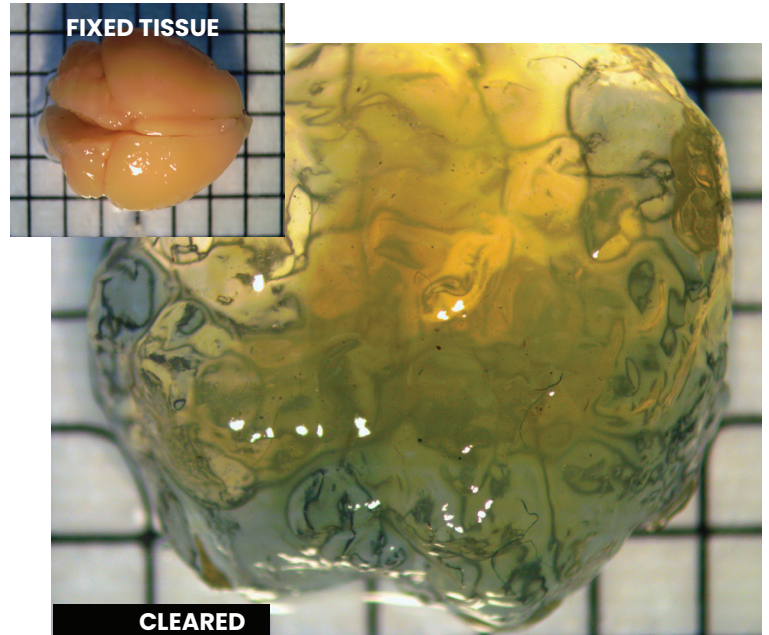
- Samples are FFPE, fresh, or frozen samples.
- Sectioning your samples is not ideal
- You want to See More Biology
- Your research questions would benefit from seeing tissue volumes (>200 microns) in 3D

Tissues We Work With

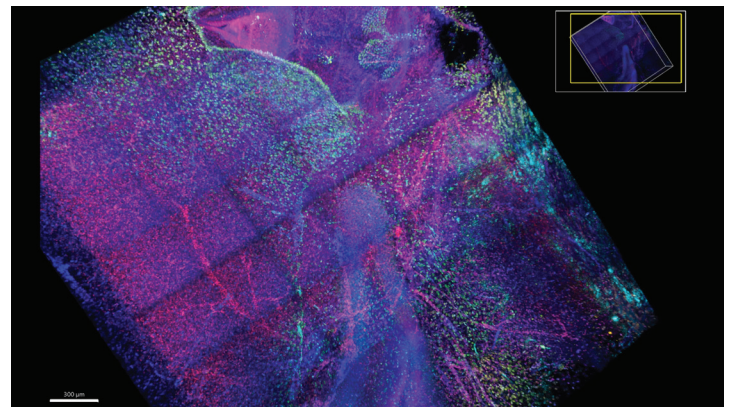
We work with complex tissues that extend beyond the brain, and we're happy to expand to uncharted territory.

What is 3D IHC?

- Uniform, even immunostain throughout CLARITY-cleared tissue
- Immunofluorescence application
- 3D image analysis



Nuclei - Blue, Neurons - Green, Vasculature - Red, magnification 10X



25x magnification: Coronal mouse brain section ROI DAPI (blue), Calbindin (teal/light blue), phospho-Histone H3 (green), Histone H3 (red)