

A row of six fluorescence microscopy images showing cross-sections of a brain. The images illustrate increasing levels of staining and resolution from left to right, demonstrating the kit's capability to reveal more of the sample. The background is dark, making the yellow and green fluorescent signals stand out.

See everything in your whole sample
CUBIC-HV™ is a 3D tissue staining kit for large specimens.

CUBICStars provides state-of-the-art three-dimensional nuclear staining and immunostaining kits based on research reported by RIKEN and The University of Tokyo (Susaki et al. *Nature Communications*, 11:1982, 2020). These kits allow you to stain thick, large tissue samples with a variety of nuclear stains and antibodies. The combination with tissue cleaning reagents (e.g., CUBIC-L/R+) is powerful for viewing deep areas of stained samples with a confocal, light sheet, and multi-photon microscopies.

CUBIC-HV™ offers



CUBIC-HV™1 3D nuclear staining kit

This kit lets you stain your thick and large specimens uniformly with typical nuclear stains, including DAPI, SYTOX®, PI, and RedDot™2.



CUBIC-HV™1 3D Immunostaining kit

This kit lets you stain your thick and large specimens uniformly with various antibodies. We also offer technical notes for a specific antibody.



Protocols and technical notes are available at our website

You can also email us at cubic-hv@cubicstars.com



CUBICStars
Make the world clear

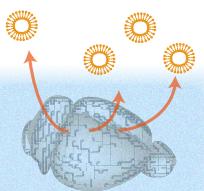
<https://www.cubicstars.com>

© 2020 CUBICStars Co., All rights reserved

The Workflow

Delipidation

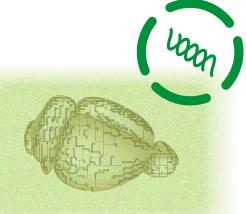
1



First, your fixed sample is needed to be delipidated for tissue clearing and permeabilization. CUBIC-L (TCI T3740) is a representative delipidation reagent for CUBIC-HV™.

Nuclei staining

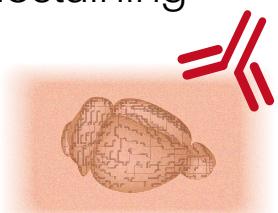
2



The whole delipidated sample is stained with CUBIC-HV™1 3D nuclear staining kit. You can choose typical nuclear stains (e.g., DAPI, SYTOX-G, PI, RedDot™2).

Immunostaining

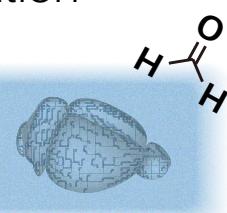
3



The delipidated and nuclear-stained sample is immunostained with CUBIC-HV™1 3D immunostaining kit. If you only need nuclear signals, this step can be skipped.

Post-fixation

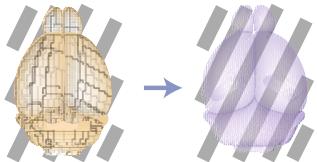
4



The sample is needed to be post-fixed with formalin diluted with the kit's immunostaining wash buffer before the final clearing step. If you only need nuclear signals, this step can be skipped.

RI matching

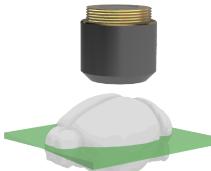
5



The stained sample can be optically cleared by the refractive index (RI)-matching step of tissue clearing. CUBIC-R+ (TCI T3741) is a representative RI-matching reagent for CUBIC-HV™.

Image acquisition

6



Finally, the cleared sample is subjected to the whole-organ 3D imaging using a light-sheet microscope. To use CUBIC-Cloud for whole mouse brain data, you must always have nuclear staining channel for registration.



CUBICStars
Make the world clear