

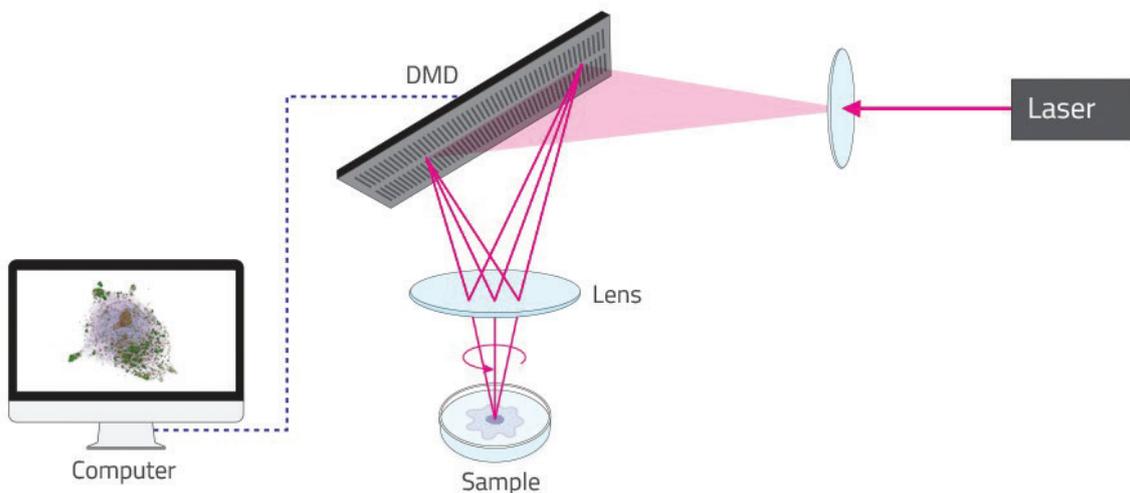
IMAGE DIFFERENT



Tomocube

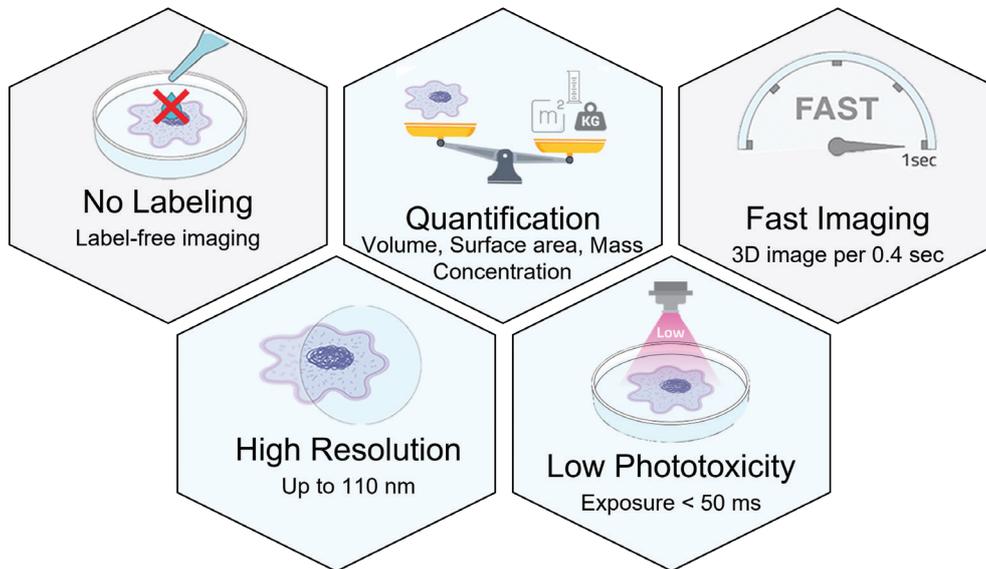
HT is optically analogous to X-ray CT

RI is an intrinsic optical parameter that describes the speed of light passing through a specific material. Light passing through a cell is slower than light passing through the surrounding medium. Analogous to X-ray CT (computed tomography), HT uses a laser beam to measure 3D RI distribution of cells. The system measures multiple 2D holograms of a sample in various illumination angles, from which a 3D RI tomogram is reconstructed via an inverse scattering algorithm. Tomocube presents unprecedentedly precise laser beam control, powered by Texas Instruments™ digital micromirror device (DMD) technology.

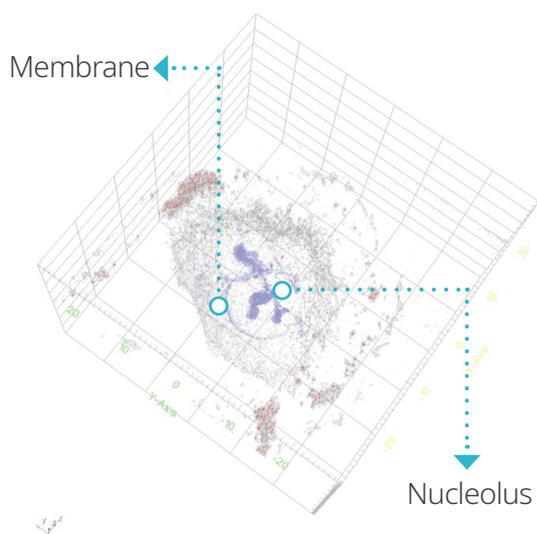


* Tomocube's patented technology utilizes a DMD, which allows to obtain multiple 2D images by every angle to reconstruct 3D RI Tomogram without any mechanical movement in the microscope.

Key features



Benefits

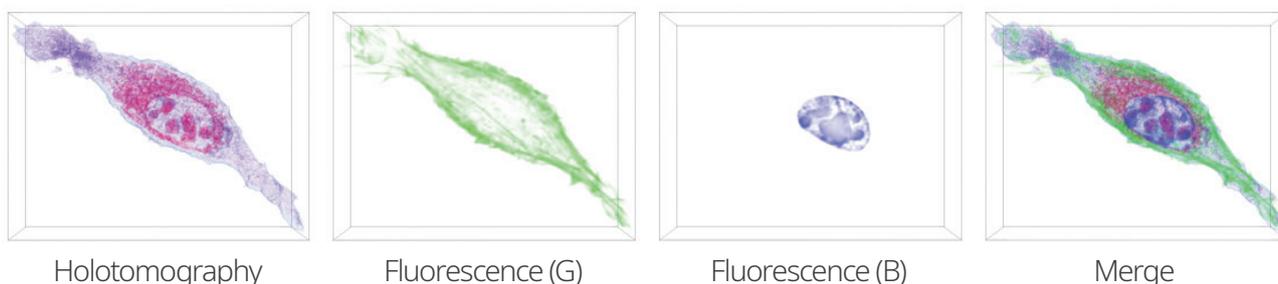


- NO Labeling**
- NO Photodamage**
- Real 3D Imaging**
- Ultra Fast**
- Quantification**

HT-2: HT combined with 3D fluorescence imaging

Holotomography powered with 3D fluorescence imaging

HT-2 series opens a new era of 3D correlative imaging, combining the holotomography and fluorescence methods. HT-2 allows the conventional epifluorescence imaging for labeling any specific target (organelle or proteins) in 3D holotomography, minimizing the photodamage of the live cells.



3-channel LED source
(385 nm, 470 nm, 570 nm)
Wavelengths of the LED
source can be customized

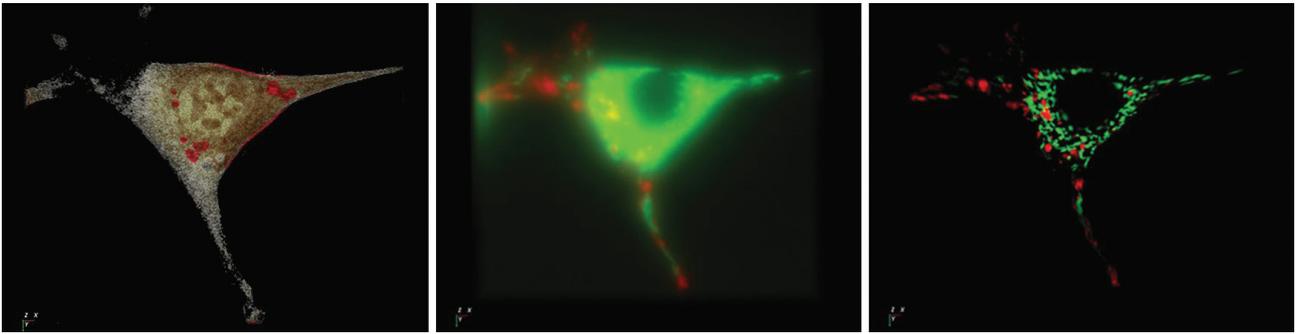


Z-stack images with
a motorized Z-drive
(step resolution: 150 nm)



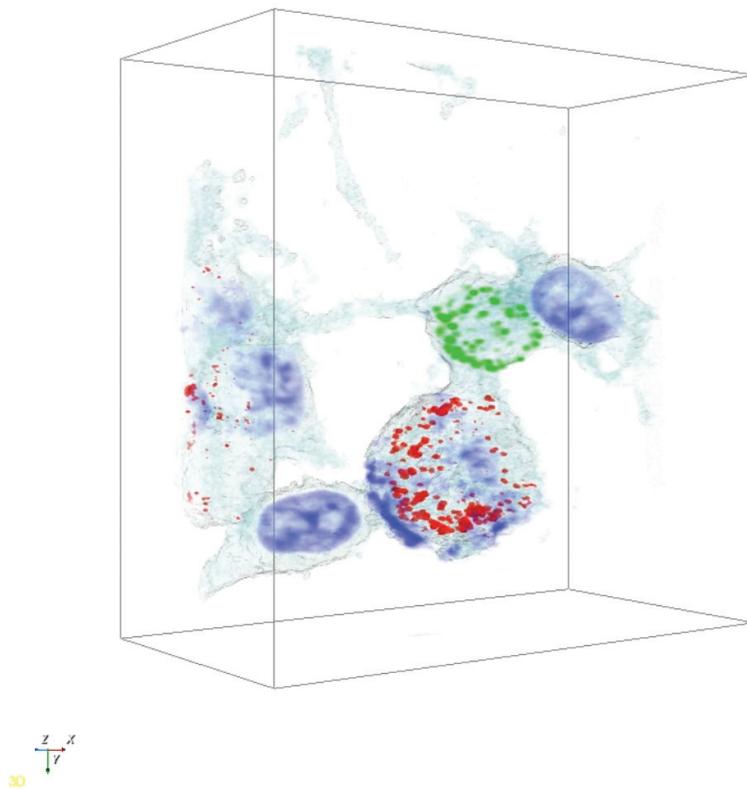
Correlative analysis in
2D, 3D and 4D with HT
and fluorescence images

Deconvolution with Autoquant™



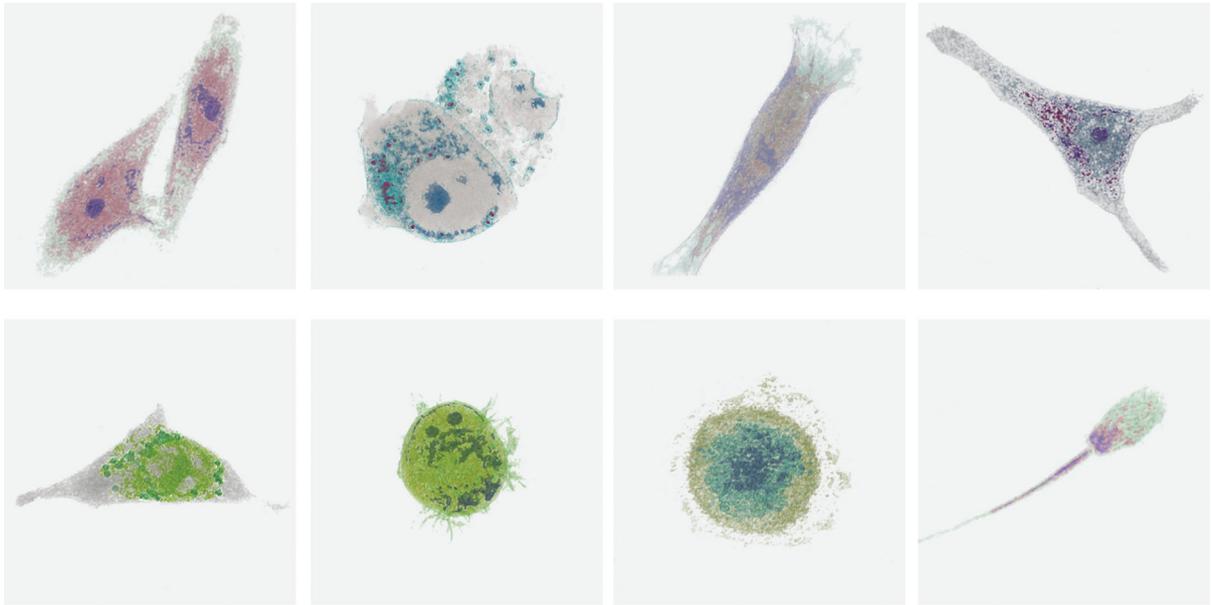
- Embedded in TomoStudio™ 2
- Fully automated (Single click)
- Blind deconvolution
- GPU-accelerated processing

Correlative HT and 3D FL

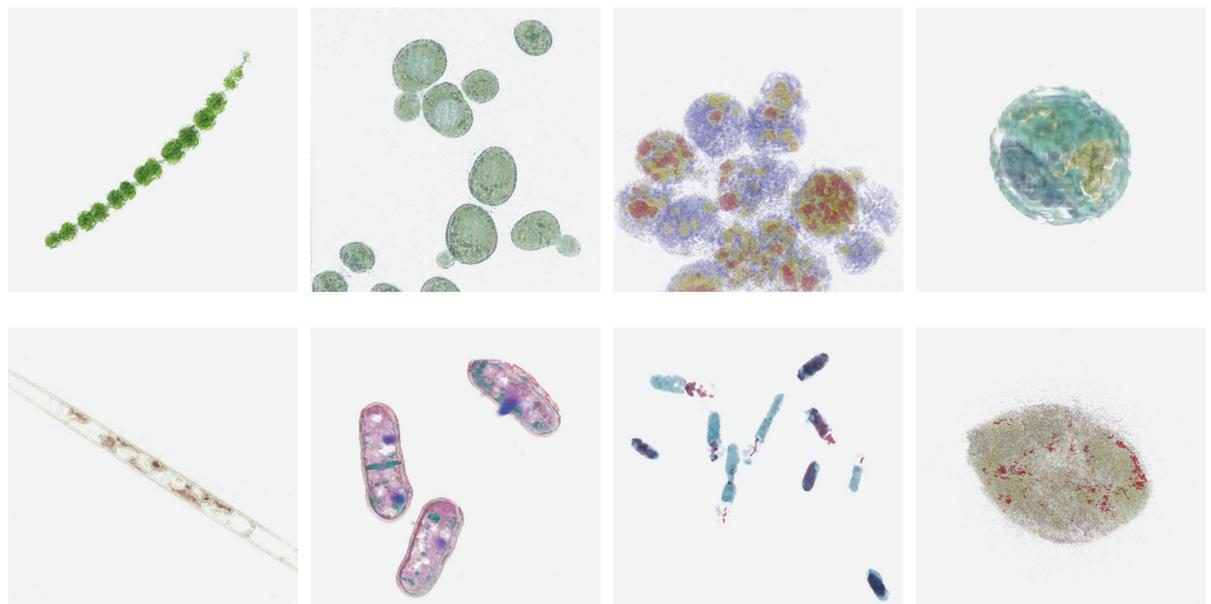


Applications

3D HT images of mammalian cells

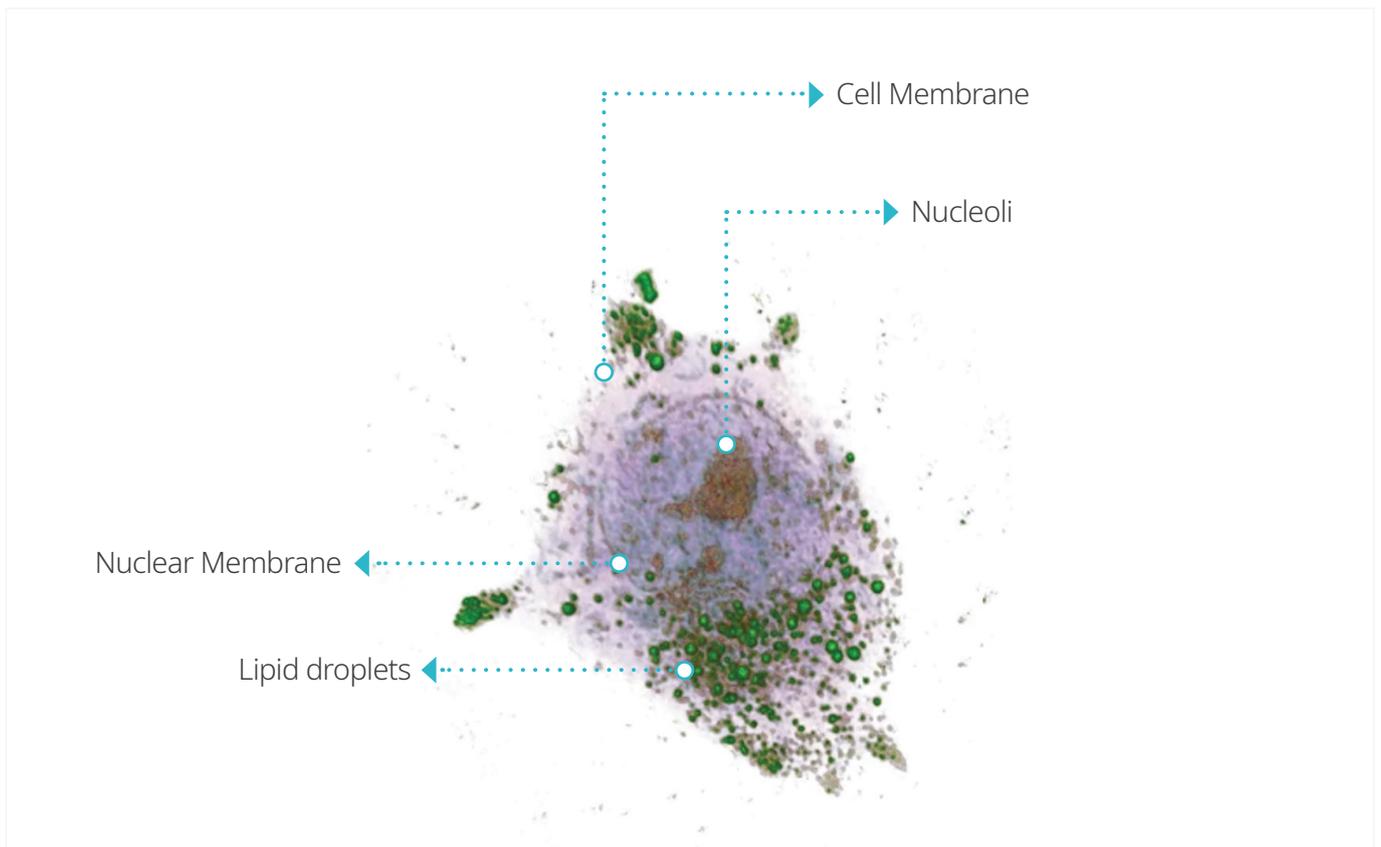


3D HT images of microorganisms

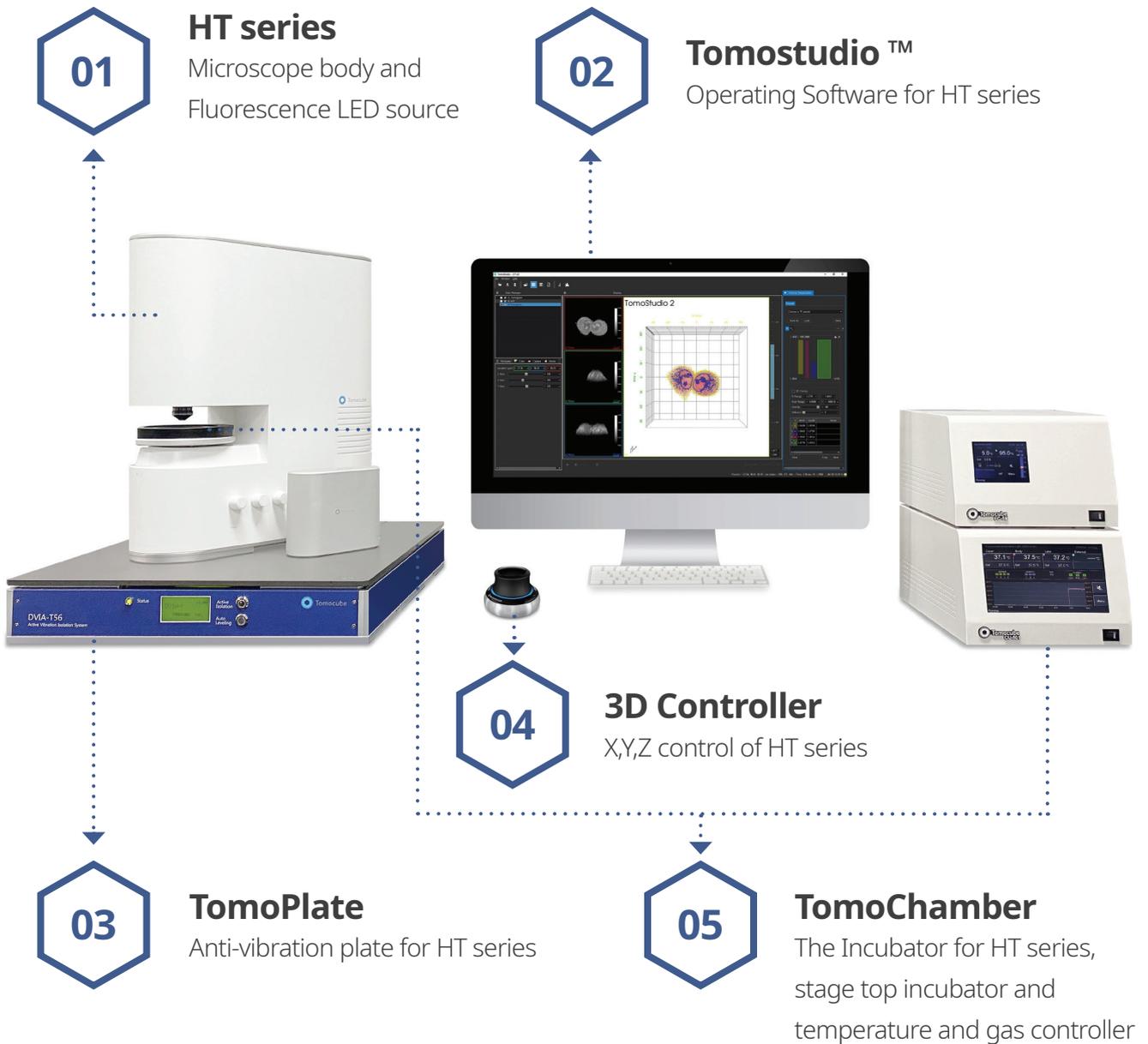


Capabilities

- 01** — Observe the cellular changes without any labeling or staining
- 02** — Multidimensional acquisition : 2D time (150 fps) / 3D time (2.5 fps)
- 03** — Visualize the cellular organelles with 3D RI distribution
- 04** — Identify the changes of the quantitative properties of cells
- 05** — Detect the cellular organelles tagged by nanoparticles
- 06** — Observe the vesicle movement in time-lapse
- 07** — 2D/3D/4D correlative images with fluorescence



Systems



Tomocube, Inc.

4th floor, 155, Sinseong-ro
Yuseong-gu, Daejeon, Republic of Korea
Tel +82-42-863-1100
info@tomocube.com
www.tomocube.com

