

Tissue Clearing for 3D Bioimaging



47 Gyeongdaero17-gil Buk-gu,
STE 608 IT Conv. Bldg.(115),
Daegu, 41566, Republic of Korea
+82 (53) 291 5012
sales@binaree.com
binaree.com

Tissue Clearing

Tissue clearing technology makes tissue transparent, allowing to visualize organs and tissues in three dimensions.

Tissues consist of a wide variety of molecules which have different refractive indexes. This results in light-scattering, refraction and absorption. Tissue clearing technology can remove lipid components and synchronize the indexes of all the components with that of imaging solution.

Binaree method

1. The micelles produced by the Binaree tissue clearing solution are much smaller than those made by Triton x-100 or SDS and are thus excellently permeable.
2. This method can preserve endogenous biomolecules and fluorescent proteins since organic solvent is not used.
3. This method is easy and readily reproducible.
4. All the structure including DNA and RNA is intact after tissue clearing procedure.
5. There is no difference in tissue size between before and after the procedure.
6. Mouse tissues 1 mm in thickness need only **6 h for tissue clearing**.
7. It takes only 12 h to do tissue clearing procedure with whole brains from 24 month-mice with an acceleration kit (commercially available in Nov. 2021).

Reference

1. Three-Dimensional Visualization With Tissue Clearing Uncovers Dynamic Alterations of Renal Resident Mononuclear Phagocytes After Acute Kidney Injury. 2022 March doi: 10.3389/fimmu.2022.844919. Front Immunol
2. Relationship between retinal capillary vessel density of OCT angiography and intraocular pressure in pig. 2021 Apr 11(1):8555. Scientific Reports
3. Differential Angiogenic Potential of 3-Dimension Spheroid of HNSCC Cells in Mouse Xenograft. 2021 Jul 31;22(15):8245. Int J Mol Sci
4. Cleaved Cochlin Sequesters Pseudomonas aeruginosa and Activates Innate Immunity in the Inner Ear. 2019 Apr 10;25(4):513-525.e6. Cell Host Microbe

To get more reference, visit our website: <https://www.binaree.com/reference-1>

Company

Binaree, Inc. develops innovative tools which enable to investigate molecular information of tissues in three dimensional structure by rapid clearing and immunostaining procedures. It supplies the Binaree® Tissue Clearing™ kits and all the services necessary to the tissue clearing methods.

To get more information, visit our website

Binaree® Tissue Clearing™ kits: <https://www.binaree.com/main-tissueclearing>

Tissue clearing applications: <https://www.binaree.com/crs>