

Tissue Clearing Kit - hydrophobic ab243298

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Overview

Product name Tissue Clearing Kit - hydrophobic

Product overview Tissue Clearing Kit - hydrophobic ab243298 enables the easy set-up of rapid tissue clearing for 3D tissue imaging using simple protocols and standard laboratory equipment.

The kit enables you to set up tissue clearing easily and clear tissue quickly. The protocols are simple and use standard laboratory equipment, and can be used with immunostaining, fluorescent proteins and chemical dyes. Clearing is reversible so that you can treat your sample for conventional H&E or IHC staining after 3D imaging.

To help you get started with tissue clearing, we have **tissue clearing validated antibodies**. Validated antibodies are for key markers, such as NeuN, GFAP, Iba1, etc, and are tested for tissue clearing with 1 mm mouse brain sections, and also for 3D cell culture clearing with neuronal spheroids and hepatic spheroids (depending on the marker).

If you want to set up tissue clearing on a sample type that we haven't tested or to use your own antibodies, please consult the protocol book for this kit.

To learn more about tissue clearing, and tissue clearing methods (including for 3D cell cultures), please review our **guide to tissue clearing**.

Tissue clearing **reagents and companion products** are also available as individual products.

These tissue clearing reagents were developed with Visikol Inc, who developed the Visikol® HISTO™ tissue clearing technology which is the basis of our reagents.

Notes

Simplified tissue clearing and immunostaining workflow:

- fix tissue section in your preferred fixative
- dehydrate with increasing % methanol series
- incubate with DMSO/methanol
- rehydrate with decreasing % methanol series
- incubate with Penetration Buffer
- block with Blocking Buffer
- stain with primary antibody, wash, stain with secondary antibody
- dehydrate with increasing % methanol series
- incubate with Tissue Clearing Reagent 1

- incubate with Tissue Clearing Reagent 2
- image tissue section

The full process, excluding fixation time and imaging, can be completed in ~ 3 days.

The workflow shown is for immuno-staining a 1 mm brain section, see kit protocol book for guidance for fluorescent proteins, labeling with chemical dyes, and other sample types / thicknesses.

Suitable sample types:

The tissue clearing reagents can be used with mammalian tissues of thicknesses ranging from conventional thin tissue sections up to whole organs.

When starting to use tissue clearing, we recommend using sections of no more than 1 mm thick; at this thickness, protocols are shorter, there are less requirements on the equipment used for imaging, and the volume of data generated is less, so analysis is easier.

We recommend consulting the kit protocol book before collecting tissue samples.

If you are preparing 1 or 2 mm mouse brain sections, we recommend our **Brain Slicers**.

Imaging:

Please consult the section on Imaging in the kit protocol book, before purchasing the kit. Confocal microscopes and light sheet microscopes are often suitable for 3D imaging of cleared tissues.

If you are using an air gap objective, you should also purchase a **Silicon Imaging Chamber**.

If you are using an immersion objective, you may require a double chambered cuvette.

Tested applications

Suitable for: Histology

Properties

Storage instructions

Store at room temperature. Please refer to protocols.

Components	30 ml	15 ml	30 ml	15 ml
Tissue Clearing Antibody Buffer	1 x 30ml	1 x 15ml	1 x 30ml	1 x 15ml
Tissue Clearing Blocking Buffer	1 x 30ml	1 x 15ml	1 x 30ml	1 x 15ml
Tissue Clearing Penetration Buffer	1 x 30ml	1 x 15ml	1 x 30ml	1 x 15ml
Tissue Clearing Permeabilization Buffer	1 x 30ml	1 x 15ml	1 x 30ml	1 x 15ml
Tissue Clearing Reagent 1	1 x 30ml	1 x 15ml	1 x 30ml	1 x 15ml
Tissue Clearing Reagent 2	1 x 30ml	1 x 15ml	1 x 30ml	1 x 15ml
Tissue Clearing Washing Buffer 10X	1 x 70ml	1 x 35ml	1 x 70ml	1 x 35ml

Relevance

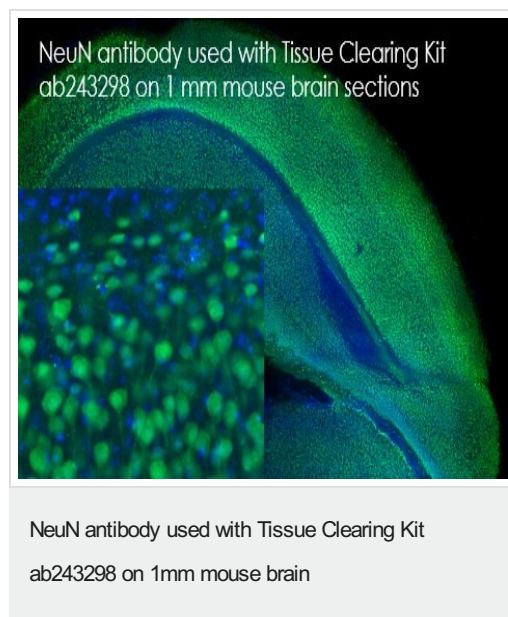
The goal for tissue clearing is making large, fixed biological samples transparent. "Large" in this case means thick sections of tissue, whole organoids, entire organs or even entire young rats, ranging in thickness from around 100 µm to several centimeters. Typically, samples of this size are not transparent, and are therefore difficult to analyze using visible wavelengths of light with a microscope. Tissue clearing involves a series of chemical steps that render a large sample transparent.

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab243298 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

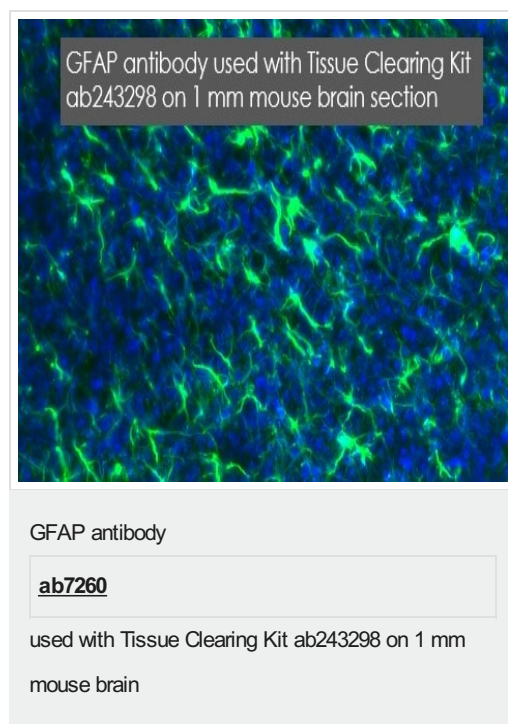
Application	Abreviews	Notes
Histology		Use at an assay dependent concentration.

Images



NeuN antibody [ab177487](#) was used with Tissue Clearing Kit ab243298 to penetrate, stain and clear a 1 mm coronal section of mouse brain.

See more [tissue clearing validated antibodies](#).



GFAP antibody [ab7260](#) was used with Tissue Clearing Kit ab243298 to penetrate, stain and clear a 1 mm coronal section of mouse brain.

See more [tissue clearing validated antibodies](#).

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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