Product Datasheet
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ADAPT-3D ™ Decolorization Buffer

Product Information
Product No.: B671
Storage: Ambient “room” temperature

Product Description

Background:
The ADAPT-3D™ Decolorization Buffer is a crucial component of the ADAPT-3D (Accelerated Deep Adaptable Processing of Tissue for 3-Dimensional Fluorescence Tissue Imaging) method. In 3D tissue imaging, a significant challenge is the presence of light-interfering substances within the tissue, such as pigments and lipids, which can scatter light and hinder deep penetration and clear visualization. The Decolorization Buffer specifically addresses this by working to remove these light-absorbing and scattering molecules from the tissue. This process, often combined with delipidation (removal of lipids), makes the tissue more transparent and allows for superior light penetration during fluorescence microscopy. By effectively "decoloring" the tissue, the buffer enhances the signal-to-noise ratio and improves the overall quality and depth of 3D imaging, leading to clearer and more accurate representations of cellular structures and organization. This step is vital for achieving the rapid processing and high-quality results that ADAPT-3D aims to deliver.

Formula:
The ADAPT-3D™ Decolorization Buffer is a specially formulated solution designed to remove light-interfering substances from tissue, enabling significantly clearer and deeper 3D imaging by optimizing the tissue's optical properties.

Storage & Stability:
Store the buffer at room temperature in a dry environment, ensuring it is protected from moisture and temperature fluctuations. Do not freeze the product; when stored as directed, it maintains full potency and stability for up to six months.

Shipping:
Available for shipment at room temperature via Ground or 2-Day Express delivery.

Country of Origin:
USA

Products are for research use only. Not for use in diagnostic or therapeutic procedures.
410 Axminister Dr, St. Louis, MO 63026 (800) 538-1145 leincoglobal@leinco.com

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Directions for Use:

To incorporate the ADAPT-3D™ Decolorization Buffer into your 3D tissue imaging protocol, follow this step:

Incubate the tissue samples in the ADAPT-3D™ Decolorization Buffer (catalog# B671) until partial transparency is achieved. This critical step effectively removes light-interfering substances, such as heme and lipids, which are essential for enhancing light penetration and image clarity in downstream 3D fluorescence microscopy. Note: This is a single step to the entire ADAPT-3D imaging process.

Each investigator should determine their own optimal working dilution for specific applications. See directions on lot specific datasheets, as information may periodically change.

Hazard Description:

The ADAPT-3D™ Decolorization Buffer requires careful handling in your laboratory setting. Always wear appropriate protective eyewear, clothing, and gloves when working with this reagent. For detailed safety information, including handling, storage, and emergency protocols, please consult the Safety Data Sheet (SDS).

Related Products:

Product No.	Description
B673	ADAPT-3D™ Immunostaining Buffer
B672	ADAPT-3D™ Delipidation Buffer Component A
B676	ADAPT-3D™ Delipidation Buffer Component B
B674	ADAPT-3D™ 5X Wash Buffer
B675	ADAPT-3D™ Refractive Index Match Buffer
A630	ADAPT-3D™ Tissue Clearing Kit