Azophloxine Staining Solution

Cat. No.: A1518612 | Pack size: 50 mL | Storage: Store at 2-8℃; protect from light

Overview

Muscle fibers are components of muscle tissue and are composed of muscle cells. According to their morphological and functional characteristics, muscle fibers can be classified into smooth muscle, skeletal muscle, and cardiac muscle (note: smooth muscle is not striated muscle; only skeletal and cardiac muscle are striated). There are many staining methods for muscle fibers, such as Ponceau staining, Aniline Blue staining, and Phosphotungstic Acid Hematoxylin staining. The Tannic Acid-Azophloxine method is a differential staining method using two acidic dyes applied sequentially.

The staining principle of Azophloxine Staining Solution is that tannic acid readily penetrates highly permeable collagen fibers, which stain yellow; azophloxine preferentially enters less permeable muscle fibers, which stain red. Azophloxine Staining Solution is used to distinguish muscle fibers from collagen fibers with clear contrast and good color fastness. It can also demonstrate myoepithelial cells and is used in the diagnosis of myoepithelial tumors of the breast, skin, and other tissues. This reagent is for research use only and not for clinical diagnosis or other purposes.

Protocol (For Reference Only)

1. Fix tissues routinely in Bouin's fixative (Carnoy's fixative or neutral formalin may also be used) for 2-3 hours.

2. Transfer directly into 95% ethanol for routine dehydration and embedding.

3. Prepare 4-μm paraffin sections, dewax with xylene or dewaxing clearing agent, and hydrate to water; rinse under running water for 1 minute.

4. Treat with Phosphomolybdic Acid Differentiation Solution for 10 minutes.

5. Stain in Azophloxine Staining Solution for 10-15 minutes.

6. Differentiate in Acid Alcohol Differentiation Solution for 3-5 seconds, then dehydrate repeatedly in absolute ethanol several times.

7. Complete routine dehydration, clear with xylene or dewaxing clearing agent, and mount with neutral balsam.

Staining Results

Target	Result
Muscle fibers and myoepithelial cells	Rose red
Collagen fibers	Yellow

Precautions

1. Use Bouin's fixative whenever possible. Other fixatives may result in weaker staining. 10% neutral formalin may be used as an alternative but yields inferior results compared with Bouin's fixative.

2. Acid Alcohol Differentiation Solution is critical. Differentiate until excess red dye is removed and muscle fibers appear bright red.

3. For your safety and health, wear a lab coat and disposable gloves during operation.

Specifications

Attribute	Value
Synonyms	Puchtler Azo Fluorescent Myoglobin Stain
Specifications & Purity	BioReagent, Biological Stain, for microscopy
Stability And Storage	Store at 2-8°C long term (12 months). Store in the dark.
Storage Conditions	Store at 2-8°C; protect from light
Shipped In	Wet ice. This product requires cold chain shipping. Ground and other economy services are not available.
Grade	Biological Stain, BioReagent, for microscopy

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- For Research Use Only (RUO). Not for use in human or animal diagnostics, therapeutics, or in vivo applications. Not for food, cosmetic, or household use.
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- Where any kit component is classified as hazardous under CLP (EC) 1272/2008 or OSHA HCS (29 CFR 1910.1200), the product Safety Data Sheet (SDS) takes precedence over this document for handling, storage, and disposal information.
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