Elastic Fiber Staining Solution (Modified Gomori'S Aldehyde Fuchsin Method)

Cat #: A-CSH320

Size: 4×50mL, 4×500mL

Storage: Room temperature, avoid light (12 months)

Product Composition

Component		4×50mL	4×500mL	Store at
reagent (A): Acid oxidant	A1: Oxidative fluid	25mL	250ml	2~8°C, and were protected from light
	A2: acidification liquid	25mL	250ml	2~8°C
Before use, mix A1: A2=1:1 as acid oxidation liquid, which should not be prepared in advance.				
Reagent (B): Acid bleaching solution		50mL	500mL	10~30°C
Reagent (C): aldehyde-magenta staining solution		50mL	500mL	2~8°C, and were protected from light
Reagent (D): Orange yellow G staining solution		50mL	500mL	10~30°C, and were protected from light

Product Description

Elastic fibers are mainly distributed in the arterial walls, alveolar walls, and skin of the human body. They appear yellow when fresh and exhibit strong birefringence. Common staining methods for elastic fibers include Gomori's aldehyde fuchsin method, orcein basic fuchsin method, lichen red method, Victoria blue method, and iron iodide hematoxylin method. The orcein basic fuchsin staining solution, also known as Weigert's resorcin-fuchsin stain, is mainly used for elastic fiber staining. Elastic fiber staining can reveal changes in elastic fibers in skin tissues, such as elastofibroma, granuloma annulare, and elastosis. It can also help identify and assess lesions in the endocardium and arteries, and observe the presence of increased or disrupted elastic fibers in certain conditions. Additionally, it can be used to differentiate tumor tissue components, such as elastofibroma, where elastic fiber balls can be clearly seen after elastic

fiber staining.

The principle of elastic fiber staining with the modified Gomori's aldehyde fuchsin method lies in the strong affinity of mature aldehyde fuchsin for specific proteins and sulfated mucopolysaccharides. It binds well to elastic fibers and also stains mast cell granules, lipofuscin, and eosinophilic cells.

Usage

1. Fix the tissue in 10% neutral formalin, followed by routine dehydration and embedding.
2. Cut sections with a thickness of 4μm and dewax the sections to water.
3. Place the sections in the prepared acidic oxidizing solution and oxidize for 5 minutes.
4. Rinse briefly with tap water.
5. Bleach in acidic bleaching solution for 1-2 minutes.
6. Rinse with tap water for 2-3 minutes.
7. Wash briefly in 70% ethanol.
8. Immerse the sections in the aldehyde fuchsin staining solution and incubate for 10 minutes (cover the container).
9. Wash the sections twice in 70% ethanol for 30 seconds each time, until no purple liquid comes out from the sections.
10. Rinse with tap water.
11. Apply the orange G staining solution for 1-2 seconds.
12. Rinse with tap water.
13. Dehydrate with absolute ethanol, clear with xylene, and mount with neutral mounting medium

Staining Results

spandex	Purple to dark purple
Mast cell granules, mucous material	Purple to dark purple
background	Different degrees of yellow color

Notes

1. The oxidizing solution and the acidic bleaching solution should not be mixed in advance. It is best to prepare them just before use.

2. When performing aldehyde fuchsin staining, the container should be covered to prevent solution evaporation.

3. If the aldehyde fuchsin staining solution has been stored for a long time, its staining power may decrease. In such cases, the staining time should be increased.

4. When staining pancreatic islet β-cells, the staining time should be controlled within 30 minutes. When staining the basophilic cells in the pituitary gland, the staining time should be controlled within 60 minutes.

5. The staining with orange G should be light, as excessive staining can mask the color of elastic fibers.

6. For your safety and health, please wear a lab coat and disposable gloves while performing the procedure..

Disclaimer

The reagent is only used in the field of scientific research, not suitable for clinical diagnosis or other purposes.