Elastic Fiber Staining Kit, Modified Gomori Aldehyde-Fuchsin Method

Catalog No.: RA20131

Basic Information

Product name	Elastic Fiber Staining Kit, Modified Gomori Aldehyde-Fuchsin Method
Sizes	50 mL
Storage	2-8 ℃, keep away from light
Shipping	Shipped with ice pack
Validity	6 months

Product Introduction

Elastic fibers are primarily distributed in the human arterial walls, alveolar walls, and skin. They appear yellow and are highly refractile when fresh. Commonly used elastic fiber staining methods include the Gomori aldehyde-fuchsin method, resorcin-fuchsin method (Weigert's resorcin-fuchsin), orcein method, Victoria blue method, and iron hematoxylin method. Resorcin-fuchsin staining solution is mainly used for elastic fiber staining and is also known as Weigert's resorcin-fuchsin solution. Elastic fiber staining can reveal changes in elastic fibers in skin tissues, such as elastic nevus, granuloma annulare, and scleroderma. It is also used to display and assess lesions of the endocardium and arteries, to observe whether certain pathological changes are accompanied by proliferation or destruction of elastic fibers, and to identify tumor components such as elastic fibromas. After elastic fiber staining, elastic fiber balls within the tumor can be clearly observed.

EnkiLife Elastic Fiber Staining Solution (Modified Gomori Aldehyde-Fuchsin Method) is based on the principle that mature aldehyde-fuchsin has a strong affinity for specific proteins and sulfated mucopolysaccharides, and binds well with elastic fibers. This staining solution also reveals mast cell granules, lipofuscin, and eosinophilic cells.

Product Components

Components		4x 50mL
Reagent (A): Acidic oxidizing solution	A1: Oxidizing Solution	25 mL
	A2: Acidifying Solution	25 mL
Before use, mix A1 and A2 at a ratio of 1:1 to prepare the acidic oxidizing solution. Do not prepare in advance.		

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Reagent (B): Acidic Bleaching Solution	50 mL
Reagent (C): Aldehyde-Fuchsin Staining Solution	50 mL
Reagent (D): Orange G Staining Solution	50 mL

Materials Required (Not Supplied)

1. Graded ethanol, xylene or eco-friendly dewaxing and clearing solution, neutral balsam.
2. Staining jars.

Experimental procedure

1. Fix tissue in 10% neutral formalin, dehydrate routinely, and embed in paraffin.
2. Cut paraffin sections to 4 μm thickness. Dewax with xylene or dewaxing solution and hydrate to water.
3. Immerse sections in freshly prepared acidic oxidizing solution for 5 min. Rinse briefly with tap water.
4. Bleach with acidic bleaching solution for 1–2 min. Rinse with tap water for 2–3 min.
5. Rinse briefly with 70% ethanol.
6. Immerse in aldehyde-fuchsin staining solution with cover for 5–10 min.
7. Rinse twice with 70% ethanol, 30 s each time, until no purple dye leaches out. Rinse briefly with tap water.
8. Counterstain with Orange G solution for 1–2 s. Rinse briefly with tap water.
9. Dehydrate with absolute ethanol, clear with xylene or clearing solution, and mount with neutral balsam.

Staining Results

Component	Color
Elastic fibers	Purple to deep purple
Mast cell granules, mucinous substances	Varies depending on counterstain
Background	Varying shades of yellow

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Notes

1. This method can stain elastic fibers, pre-elastic fibers, and oxytalan fibers. Slightly thicker sections (7 μm) are recommended.
2. Do not mix the oxidizing and acidifying solutions in advance; prepare fresh before use.
3. Cover the staining dish during aldehyde-fuchsin staining to prevent evaporation.
4. If the aldehyde-fuchsin staining solution has been stored for a long time, its staining capacity may decrease; increase staining time accordingly.
5. When staining pancreatic β-cells, limit staining time to 30 min; for pituitary basophils, limit to 60 min.
6. Orange G staining should be light; excessive staining may obscure the color of elastic fibers.
7. Use reagents promptly after opening to avoid affecting experimental results.
8. For safety and health, wear lab coats and disposable gloves during operation.

This product is for research use only!