

Modified Weigert Elastic Fiber Staining Solution

Cat. No.: I1518582 | Pack size: 5×50 mL | Storage: 2-8°C, protected from light; room temperature

Overview

Elastic fibers are mainly distributed in the arterial wall, alveolar wall, and skin of the human body. They appear yellow when fresh and have strong refraction. Common elastic fiber staining methods include Gomori Aldehyde Fuchsin, Resorcinol-Fuchsin, Orcein, Victoria Blue, and Iron-Iodine Hematoxylin. Modified Weigert Elastic Fiber Staining Solution is mainly composed of Resorcinol-Fuchsin Staining Solution and modified Van Gieson (VG) Staining Solution. Resorcinol-Fuchsin Staining Solution is mainly used for elastic fiber staining and is also known as Weigert Resorcinol Fuchsin Staining Solution. Van Gieson staining is mainly used for collagen fiber staining. Its staining principle is related to the molecular size of anionic dyes and tissue permeability: Picric acid (PA) has the smallest molecular weight, followed by Ponceau and Fuchsin, while Light Green has the largest. After VG staining, muscle fibers appear yellow and collagen fibers appear red.

Modified Weigert Elastic Fiber Staining Solution is that resorcinol-fuchsin forms a lake complex with iron ions, and its free amino groups bind firmly to hydrogen bonds in elastic fibers, appearing black. Compared with the conventional Weigert resorcinol-fuchsin method, this modified method adds oxidation and bleaching steps. It is suitable for demonstrating various elastic fibers, with clearer staining, less fading, and longer storage time. This product can demonstrate changes of elastic fibers in skin tissue, such as elastic nevus, granuloma annulare, and scleroderma; demonstrate and evaluate endocardial and arterial lesions, and observe whether some lesions are accompanied by hyperplasia or destruction of elastic fibers. It can also identify tumor components such as elastofibroma, in which elastic fiber globules can be clearly seen after elastic fiber staining. This reagent is for research use only and not for clinical diagnosis or other purposes.

Product Components and Storage Conditions

Cat. No.	Component	5×50 mL	Storage
I1518582A	Weigert Oxidant A	25 mL	2-8°C. Store in the dark.
I1518582B	Weigert Oxidant B	25 mL	RT
I1518582C	Weigert Bleaching Agent	50 mL	RT
I1518582D	Weigert Resorcinol-Fuchsin Staining Solution	50 mL	2-8°C. Store in the dark.

Cat. No.	Component	5×50 mL	Storage
I1518582E	Acid Differentiation Solution	50 mL	RT
I1518582F	Ponceau S Solution	5 mL	RT
I1518582G	PA Solution	45 mL	RT

Immediately before use, mix equal volumes of Solution A and Solution B to prepare Weigert Oxidant. Do not prepare in advance.

Immediately before use, mix Solution F and Solution G at a ratio of 1:9 to prepare VG Staining Solution. Do not prepare in advance.

Materials Required

- 10% Formalin Fixative, graded ethanol, xylene or eco-friendly dewaxing clearing agent, neutral balsam.
- Staining jars, incubator.

Protocol (For Reference Only)

1. Fix tissues in 10% formalin, followed by routine dehydration and embedding.
2. Cut 4- μ m sections, dewax with xylene or eco-friendly dewaxing clearing agent, and hydrate to water.
3. Oxidize with freshly prepared Weigert Oxidant for 5 min, then rinse briefly with water.
4. Bleach with Weigert Bleaching Agent for 1-2 min, wash under running water for 2 min, then rinse briefly with 95% ethanol.
5. Place sections in a staining jar (capped) containing Weigert Resorcinol-Fuchsin Staining Solution. Stain for 1-3 h at room temperature or 0.5-1 h at 56°C.
6. Differentiate in Acid Differentiation Solution until no more stain elutes (about 2-3 s), then wash under running water for 10 min.
7. Counterstain with VG Staining Solution for 30 s, rinse rapidly with water, then immediately differentiate and dehydrate quickly with 95% ethanol.
8. Dehydrate in absolute ethanol, clear with xylene or dewaxing clearing agent, and mount with neutral balsam.

Staining Results

Elastic fibers: Blue to bluish-black

Collagen fibers: Red

Muscle fibers and erythrocytes: Yellow

Precautions

1. The oxidation and bleaching steps may be omitted if only mature elastic fibers are to be demonstrated.
2. Acid Differentiation Solution mainly clarifies the background; slightly prolonged differentiation does not harm the staining.
3. Please use the reagents as soon as possible after opening to avoid affecting experimental results.
4. For your safety and health, wear a lab coat and disposable gloves during operation.

Specifications

Attribute	Value
Synonyms	Modified Weigert Elastane Staining Solution set
Specifications & Purity	BioReagent, Biological Stain, for microscopy
Stability And Storage	Each component has a shelf life of 1 year under corresponding storage conditions.
Storage Conditions	Store at 2-8°C, Protected from light, Room temperature
Shipped In	Wet ice. This product requires cold chain shipping. Ground and other economy services are not available.

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Whether you have a technical question, need help with a quotation, or want to inquire about an order, our regional teams are ready to assist. Please contact the office for your region; for general inquiries, the North American office is the corporate primary.

NORTH AMERICAN SALES, SUPPORT & GENERAL INQUIRIES Aladdin Scientific Corporation 14078 Meridian Parkway, Riverside, CA 92518, USA Phone: 1-833-552-7181 Sales: sales@aladdinsci.com	EU SALES, LOGISTICS & LOCALIZED SUPPORT Aladdin Biochem Deutschland GmbH Westring 2, 33142 Büren, Germany Phone: +02951 9383958 Support: support.eu@aladdinsci.com
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Customer Service: custserv@aladdinsci.com	
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Limitations & Disclaimer

- 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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