# Reticular Fiber Staining Solution (Modified Gomori'S Silver Ammonia Method)

Cat #: A-CSH406

Size: 100mL

Storage: 2~8°C, avoid light (3 months)

## Product Description

Reticular fibers are a type of fiber found in reticular connective tissue. They are produced by reticular cells and have a diameter ranging from 0.2 to 1.0 μm. Reticular fibers are tough but lack elasticity. There are several staining methods for reticular fibers, but the staining principles are generally the same, with most using the silver impregnation method. The modified Gomori staining method for reticular fibers utilizes the affinity of tissue proteins to adsorb silver ions, which are then reduced by formaldehyde to form black or brown-black metallic silver deposits within and on the tissue. In the traditional method, the reduced silver ions are first counterstained with gold chloride, followed by washing off the unreduced silver salts with a solution of sodium thiosulfate. This modified method eliminates the need for the gold chloride step, resulting in clearer contrast of the reticular fibers.

The reticular fiber staining solution (modified Gomori silver-ammonia method) involves oxidation, bleaching, staining, silver impregnation, and reduction steps. It differs from the modified Gordon-Sweets method, which uses acidic oxidants and nuclear fast red counterstain. Frozen sections, cryostat sections, and paraffin sections can all be used for reticular fiber staining, and various fixatives can be employed. Occasionally, heavy metal mercury or osmium fixatives may produce some nonspecific silver background. This staining method is commonly used to differentiate the nature and origin of tumors, carcinoma from sarcoma, lymphosarcoma from reticulum cell sarcoma, intravascular endothelioma from extravascular endothelioma, osteoid osteoma from osteoblastic sarcoma, meningioma from astrocytoma, malignant neurofibroma, and early invasive carcinoma, among others.

## Usage

1. Tissue fixation: Fix in anhydrous ethanol for 16 hours or overnight, followed by soaking in anhydrous ethanol.

2. Immerse in xylene and embed routinely in paraffin.

3. Section the tissue and dewax in xylene to anhydrous ethanol.

4. Prepare the Gomori's hexamine silver solution in advance and preheat it. Immerse the sections in the preheated Gomori's hexamine silver solution (covered) and incubate in a constant temperature incubator for 30 minutes. If urate salts are present, the sections will turn black.

5. Rinse briefly with distilled water.

6. Treat with gold chloride solution.

7. Rinse with tap water.

8. Treat with hypo solution.

9. Rinse with tap water.

10. Lightly stain with eosin staining solution.

11. Rinse with tap water.

12. Perform routine dehydration, clear with a neutral mounting medium, and seal.

## Notes

1. Glassware must be soaked in detergent solution for one day, rinsed thoroughly with tap water, and then rinsed twice with distilled water.

2. A 10% formalin fixative is preferable and suitable for fixation. It is not recommended to use mercury-containing fixatives such as Zenker's solution, as they may lead to nonspecific precipitates in the sections.

3. Gomori's silver-ammonia solution is relatively unstable and sensitive to light. It should be stored at 4°C to avoid degradation and brought to room temperature before use.

4. For your safety and health, please wear a lab coat and disposable gloves while conducting the experiment.

## Disclaimer

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