Uric Acid Salt Staining Solution (Gomori'S Hexamine Silver Method)

Cat #: A-CSH409

Size: 50mL

Storage: 2~8°C, avoid light (6 months)

Product Description

The breakdown product of purine (nucleotide) metabolism in the human body is urate (uric acid) salt. Most uric acid is not completely eliminated through the kidneys and can sometimes exist in the bloodstream in the form of urate sodium. In patients with gout, the blood contains higher levels of urate sodium, and elevated urate sodium can lead to the deposition of urate salts, causing conditions such as gouty stones, synovitis, arthritis, and kidney stones. Under the microscope, most urate salts appear as needle-shaped crystals arranged parallel to each other.

The Gomori's silver method is used for staining urate salts, turning the urate salt crystals black. It is commonly used as an adjunct diagnostic tool for identifying urate salt-induced tophi. Since urate salts are soluble in water but not in ethanol, ethanol should be used for fixation instead of formalin or other fixatives.

Usage

1. Tissue fixation: Fix in anhydrous ethanol for 16 hours or overnight. Then immerse in anhydrous ethanol.
2. Dehydration with xylene, followed by routine embedding in paraffin.
3. Sectioning, deparaffinization with xylene to anhydrous ethanol.
4. Prepare the Gomori's silver solution in advance and preheat it. Immerse the sections in the preheated Gomori's silver solution (covered) and incubate in a constant temperature chamber 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 hematoxylin solution.

9. Rinse with tap water.

10. Lightly stain with eosin staining solution.

11. Rinse with tap water.

12. Proceed with routine dehydration, clearing, and mounting with neutral mounting medium.

Notes

1. Urate salts are soluble in water, so tissue fixation must be done using anhydrous ethanol to avoid contact between the tissue sections and water before immersing them in the Gomori's silver solution.

2. If a water bath is used instead of a constant temperature chamber, the temperature should be appropriately adjusted to 48-50°C; otherwise, the sections may turn black.

3. If the tissue contains calcium salts, false positives may occur, so it is important to differentiate them from needle-shaped urate salts.

4. For your safety and health, please wear laboratory attire 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.