Lillie'S Ferric Iron Trivalent Staining Solution

Cat #: A-CSH371

Size: 2×50mL

Storage: Room temperature, avoid light (12 months)

Product Composition

Component		2×50mL	Store at
Reagent (A): Lillies tain	A1: Lillie trivalent iron, A solution	25ml	10~30°C, and were protected from light
	A2: Lillie trivalent iron liquid B	25ml	10~30°C, and were protected from light
Before use, take the same amount of A1 and A2 to mix as Lillies tain, which should not be prepared in advance			
Reagent (B): Nuclear solid staining solution		50ml	10~30°C, and were protected from light

Product Description

Hemosiderin is a pigment derived from hemoglobin and appears as golden or brownish-yellow granules. It is called hemosiderin because of its iron content and golden color. When red blood cells are engulfed by macrophages, hemoglobin is broken down into non-iron orange-colored hemosiderin and iron-containing hemosiderin under the action of lysosomal enzymes. The Prussian blue reaction, also known as hemosiderin staining, refers to the production of a blue color after treatment with potassium ferrocyanide and dilute acid. It is commonly observed in phagocytes or stroma and mainly shows trivalent iron salts. Additionally, the Lillie method is also a good method for displaying trivalent iron with good specificity.

Usage

1. Fix the tissue in 10% neutral formalin or other alkaline fixatives and perform routine dehydration and embedding.

2. Cut sections with a thickness of 4 μm and perform routine dewaxing to water.

3. Rinse with distilled water for 1 minute.

4. Incubate the sections in Lillie stain (see Note 4) for 25-30 minutes.

5. Thoroughly rinse with distilled water for 2-5 minutes.

6. Incubate the sections in nuclear fast red staining solution for 5-10 minutes to lightly stain the cell nuclei.

7. Rinse with distilled water for 1-5 seconds.

8. Perform routine dehydration, clearing, and neutral resin mounting.

Staining Results

ferric iron	Deep Prussian blue
Nuclei, and other tissues	red

Notes

1. This staining method is suitable for paraffin sections, frozen sections, and resin sections. The dewaxing of sections should be as clean as possible.

2. Tissues are commonly fixed using 10% neutral formalin. Prolonged fixation with regular formalin can damage the tissues. Avoid using acidic fixatives, and chromate treatment can also interfere with iron preservation.

3. Keep the containers clean throughout the entire process and avoid using iron-made products. Use distilled water for washing sections and containers, as tap water may contain iron.

4. Adjust the staining time for Lillie stain according to the sample conditions.

5. All sections should use the same positive control section. Selecting a suitable control is crucial. Autopsy lung tissue is a good control, as it contains a significant number of iron-positive macrophages (heart failure cells).

6. Series of ethanol should be frequently replaced with fresh solutions.

7. For frozen sections and cell staining, it is best to explore experimental conditions based on specific circumstances.

8. For your safety and health, please wear lab attire and disposable gloves during the procedure

Disclaimer

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