Lillie'S Ferrous Iron Staining Solution

Cat #: A-CSH353

Size: 2×50mL

Storage: Room temperature, avoid light (12 months)

Product Composition

Component		2×50ml	Store at
Reagent (A): Lillie stain	Reagent (A1): Lillie Fe iron A	25ml	10~30°C, and were protected from light
	Reagent (A2): Lillie valent iron B	25ml	10~30°C
Before use, take the same amount of reagents A1 and A2 to mix as Lillie stain, 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 by lysosomal enzymes into non-iron-containing orange-colored hemosiderin and iron-containing hemosiderin. The Perls' Prussian blue reaction, also known as hemosiderin staining, produces a blue color after treatment with potassium ferrocyanide and dilute acid. It is commonly observed in phagocytes or stroma, primarily displaying trivalent iron salts. In rare cases, iron may exist in its reduced ferrous state, and the Lillie method is a good approach to demonstrate divalent iron with good specificity.

Usage

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

2. Cut sections with a thickness of 4μm and dewax them to water using routine methods.

3. Rinse the sections with distilled water for 1 minute.

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

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

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

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

8. Dehydrate and mount the sections with routine dehydration and neutral mounting medium.

Staining Results

ferrous	Deep rattan 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. Tissue fixation is commonly done using 10% neutral formalin, following long-term fixation with regular formalin.

3. Throughout the entire procedure, containers should be clean, and the use of metal iron products should be avoided.

4. All sections should be accompanied by the same positive control section. Selecting an appropriate control is crucial.

5. Series of ethanol should be regularly replaced with fresh solutions.

6. For staining frozen sections and cells, it is best to experiment with specific conditions based on the circumstances.

7. For your safety and health, please wear laboratory 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.