Lipofuscin Staining Kit (Aldehyde Fuchsin Method)

Cat #: A-CSH352

Size: 3×50mL

Storage: 2~8°C, avoid light (12 months)

Product Composition

Component		3×50ml	Store at
reagent (A): Acid oxidant	A1: acidic oxidation solution A	25ml	10~30°C, and were protected from light
	A2: acidic oxidation liquid B	25ml	10~30°C
Before use, according to the acid oxidation liquid A, B equal amount to mix, that is, the acid oxidation liquid.			
Reagent (B): Bleach fluid		50ml	10~30°C
Reagent (C): aldehyde-magenta staining solution		50ml	2~8°C, and were protected from light

Product Description

Lipofuscin is a granular brownish-yellow pigment composed of lipid-containing residues and lysosomal digests. It is believed to be formed through the oxidation of lipids and lipoproteins. The oxidation process of lipofuscin is slow and gradual, resulting in different staining reactions, colors, shapes, and sizes of the pigment. Lipofuscin can be found in various tissues such as the liver, kidneys, myocardium, adrenal glands, neurons, and ganglion cells, often distributed around the cell nucleus.

Due to the gradual formation of lipofuscin through slow oxidation of lipids and lipoproteins, the degree of oxidation of the pigment may vary. Therefore, different tissue chemistry reactions may be observed when confirming lipofuscin. It is recommended to use multiple techniques to verify the presence of lipofuscin. Common methods include the Periodic Acid-Schiff (PAS) method, Schmorl's high-iron-ferrocyanide-reduction method, LongZiehl-Neelsen method, Gomori's aldehyde-fuchsin method, and Masson-Fontana silver method.

Usage

1. Fix the tissue and perform routine dehydration and embedding.

2. Dewax the sections to water using routine methods.

3. Mount the tissue sections on glass slides and gently rinse them in distilled water.

4. Treat the sections with acidic oxidation solution for 5 minutes.

5. Thoroughly rinse the sections with distilled water.

6. Immerse the sections in bleaching solution for 2 minutes.

7. Thoroughly rinse the sections with distilled water.

8. Wash the sections with 70% ethanol.

9. Cover the sections with aldehyde fuchsin staining solution and let them soak. If the staining effect is unsatisfactory or the staining solution is old, the staining time may need to be extended.

10. Rinse the sections with 70% ethanol, followed by three rinses with distilled water.

11. Perform routine dehydration, routine clearing, and mount the sections with synthetic resin.

Staining Results

lipofuscin	amaranth
elastin	amaranth
nucleus	light red

Notes

1. Staining under controlled temperature conditions in a water bath can yield more reliable results.

2. It can also be used for staining β cells in the pancreas and pituitary gland, elastin protein, sulfated mucins, chief cells in the stomach, etc.

3. 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.