Amyloid Staining Solution (Modified Congo Red Method)

Cat #: A-CSH369

Size: 4×50mL

Storage: Room temperature, avoid light (6 months)

Product Composition

Component	4×50mL	Store at
Reagent (A): Stores Congo Red staining solution	50ml	10~30°C, and were protected from light
Reagent (B): hematoxylin staining solution	50ml	10~30°C, and were protected from light
Reagent (C): Acid differentiation solution	50ml	10~30°C
Reagent (D): Stores return solution	50ml	10~30°C

Product Description

Amyloid substances are amorphous extracellular acidophilic materials that can be found in various tissues and organs, leading to a condition known as amyloidosis. Amyloid substances are primarily composed of proteins, with the majority adopting a reverse β-folded layered structure. Under an electron microscope, amyloid substances appear as fibrillar arrangements, consisting of abundant extracellular non-branching filaments in the case materials, mostly randomly arranged. Histological methods used to identify amyloid substances include methylene violet staining, Congo red staining, and observation under polarized light microscopy. Currently, it has been found that the traditional methylene violet staining method has low sensitivity and poor specificity. The classic and effective method is Congo red staining. In 1922, Bennhold discovered that Congo red could be used to differentiate amyloid substances in living organisms and applied it to tissue sections. Later, Highman made improvements to achieve better staining results.

The amyloid staining solution (modified Stores Congo red method) mainly consists of Stores Congo red staining solution and hematoxylin staining solution. The alkaline Congo red staining does not require a differentiation step but has a

relatively short shelf life.

Usage

1. Perform routine fixation using 10% neutral formalin and routine dehydration and embedding.

2. Cut sections with a thickness of 4μm and dewax them in water.

3. Immerse the sections in the Stores Congo red staining solution for 25-30 minutes, then discard the excess solution.

4. No differentiation step is required. Rinse with tap water for 5 minutes.

5. Incubate the sections in the hematoxylin staining solution, lightly stain the cell nuclei for 1-2 minutes or a shorter time.

6. Add acid differentiation solution for 2-5 seconds, followed by the addition of Stores bluing reagent for 20-40 seconds.

7. Rinse with tap water for 10 minutes.

8. Perform routine ethanol dehydration step by step. Clear with xylene and mount with neutral mounting medium.

Staining Results

Amyloid substances, elastic fibers, eosinophilic particles	red
nucleus	blue

Notes

1. The dewaxing of the sections should be as thorough as possible to avoid affecting the staining results.

2. The acid differentiation solution should be stored tightly sealed and used up as soon as possible once opened.

3. When staining with the Stores Congo red staining solution, immersion is preferred. If using the drop method, place the sections in a humid chamber to prevent solution evaporation.

4. The acid differentiation solution should be stored tightly sealed as the differentiation step is crucial.

5. Dehydration should be done quickly to avoid decolorization.

6. 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.