Luxol Fast Blue Myelin Staining Kit

Cat #: A-CSH289

Size: 3×50mL

Storage: 10-30 °C, Avoid exposure to light (1 year)

Product Description

Component	3×50ml	Store at
Reagent (A): Luxol Fast Blue staining solution	50ml	10-30°C, Avoid exposure to light
Reagent (B): Luxol differentiation solution	50ml	10-30°C
Reagent (C): Eosin staining solution	50ml	10-30°C, Avoid exposure to light

The myelin sheath is a membrane that wraps around the axons of nerve cells. It consists of myelinating cells and their cell membranes, forming a multilayered lipid bilayer structure that spirals around the axon of a neuron. The myelin sheath plays a significant role in pathological diagnosis. Pathological changes in the myelin sheath can be classified into early, middle, and late stages. In the early stage, the staining is darker. In the middle stage, myelin degeneration occurs, forming lipid droplets that can be visualized using lipid staining. In the late stage, the myelin sheath undergoes complete disintegration and is cleared by phagocytic cells, resulting in a negative staining result for myelin.

Various diseases can cause changes in the myelin sheath. For example, when nerve fibers are damaged, the myelin sheath may exhibit changes such as swelling, tortuous ball-like structures, fragmentation, or complete demyelination. Luxol Fast Blue myelin staining can demonstrate the integrity, degeneration, extent of necrosis, and repair of the myelin sheath under pathological conditions. It is meaningful for the pathological diagnosis and research of neural tissues.

Usage

1. Prepare paraffin sections of 5-10 μ m thickness and dewax them in water.
2. Rinse the sections briefly in 95% ethanol.

3. Incubate the sections in Luxol Fast Blue staining solution at 37° C overnight.
4. Wash off excess staining solution with 70% ethanol.
5. Rinse with distilled water.
6. Differentiate the sections with Luxol differentiation solution until the gray and white matter are clearly differentiated.
7. Rinse with distilled water (observe the degree of differentiation under a microscope, and if insufficient, repeat steps 5-6).
8. Stain the sections with Eosin staining solution for 1-5 minutes, followed by water washing.
9. Rinse with 75-85% ethanol for 30 seconds.
10. Proceed with routine dehydration, xylene clearing, and neutral mounting with a mounting medium.

Staining Results

Myelin Sheath	Bluish-green
Cell Bodies	Red

Notes

1. Differentiation is a critical step, and the differentiation time should be strictly controlled. The degree of differentiation can be observed under a microscope.
2. The recommended fixative is calcium formaldehyde fixative, but 10% neutral formalin or formalin can also be used.
3. The thickness of the sections should not be too thick, preferably within 8-9 μm, to avoid issues such as section loss or over-staining.
4. All staining equipment used must be thoroughly cleaned and washed with distilled water. It is advisable to test the staining on a test section and observe it under a microscope to determine the staining time.
5. 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.