Myelin Staining Kit, Fast Green Method

Catalog No.: RA20126

Basic Information

Product name	Myelin Staining Kit, Fast Green Method
Sizes	50 mL
Storage	RT
Shipping	RT
Validity	12 months

Product Introduction

The myelin sheath is a membrane that wraps around the axons of nerve cells. It is composed of myelin-forming cells and their cell membranes, forming a multilayered lipid bilayer structure through spiral wrapping of the neural membrane cell' s plasma membrane along the axonal axis. The myelin sheath contains nodes of Ranvier, which allow for saltatory conduction of nerve impulses. Myelin staining is of certain significance in pathological diagnosis. Pathological changes in myelin can be divided into early, middle, and late stages. In the early stage, myelin stains deeply; in the middle stage, degenerated myelin forms lipid droplets, which can be demonstrated with lipid stains; in the late stage, myelin is completely degraded and removed by phagocytes, resulting in loss of positive staining.

Many diseases can cause changes in myelin. EnkiLife Myelin Staining Solution (Fast Green Method) can reveal whether the myelin is intact, degenerated, or necrotic under pathological conditions, as well as the extent of repair. It is valuable for pathological diagnosis and research of neural tissue. Myelin appears dark blue-green, while demyelinated fibers are unstained.

Product Components

Components	3x 50mL
Reagent (A): Calcium Formalin Fixative	250 mL
Reagent (B): Fast Green Staining Solution	50 mL
Reagent (C): MS Differentiation Solution	50 mL

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Materials Required (Not Supplied)

1. Distilled water, graded ethanol series.
2. Incubator.

Experimental procedure

1. Fixation: Fix samples with calcium formalin fixative, then perform routine dehydration and paraffin embedding. Dewax sections with xylene or dewaxing agent and hydrate to distilled water.
2. Rinse sections briefly in 95% ethanol for 1 min.
3. Immerse in Fast Green Staining Solution and stain at 37 °C for 30–45 min.
4. Rinse twice directly with 95% ethanol, 10 s each time, then rinse with distilled water.
5. Immerse in MS Differentiation Solution for 10 s.
6. Rinse with distilled water (extend differentiation time if necessary).
7. Dehydrate through graded ethanol series, clear with xylene or clearing agent, and mount with neutral balsam.

Staining Results

Component	Color
Myelin	Dark green; ring-shaped in cross-section, cord-like or fishbone-shaped in longitudinal section
Demyelinated fibers	Unstained; semi-ring shaped or blank area in cross-section

Notes

1. The differentiation step is critical. Differentiation time should be strictly controlled and observed under the microscope.
2. Calcium formalin fixative (10%) is recommended.
3. Sections should not be too thick (5–7 μm max) to avoid detachment or over-staining.
4. For your safety and health, wear a lab coat and disposable gloves during operation.
5. Use reagents promptly after opening to maintain optimal performance.

This product is for research use only!