

Van Gieson Staining Kit

Cat #: A-CSH325

Size: 3×50mL, 3×100mL

Storage: Room temperature, avoid light (12 months)

Product Composition

Component		3×50ml	3×100ml	Store at
Reagent (A): Weight ferricin	A1:Weigert A	25ml	50ml	10~30°C, and were protected from light
	A2:Weigert B	25ml	50ml	10~30°C, and were protected from light
Before use, the equal amount of A1 and A2 is Weight ferricatoxylin.				
Reagent (B): Acid differentiation solution		50ml	100ml	10~30°C
Reagent (C): VG staining solution		50ml	100ml	10~30°C, and were protected from light

Product Description

Collagen fibers are the most widely distributed and abundant fibers in connective tissue. They are extensively found in various organs, with the highest concentration in the skin, sclera, and tendons. Type I collagen fibers are primarily present in bone, skin, and tendon fibers. Type II collagen fibers are mainly found in cartilage. Type III collagen fibers are predominant in embryonic tissues, adult blood vessels, and the gastrointestinal tract. Type IV collagen fibers are primarily located in the basement membrane. The Van Gieson staining principle for collagen fibers is related to the size of anionic dye molecules and tissue permeability. The size of the molecules is reflected by their molecular weight. Small molecular weight dyes can easily penetrate dense and poorly permeable tissues, while large molecular weight dyes can only enter loosely structured and highly permeable tissues. After VG staining, muscle fibers appear yellow, while collagen fibers appear red.

Van Gieson staining is commonly used to differentiate collagen fibers from muscle fibers. It can help distinguish

whether a tumor is collagenous or muscular in origin and assess the extent of tissue or organ damage, repair, and fibrosis.

Usage

1. Dewax the sections until water.
2. Stain with prepared Weigert's iron hematoxylin for 5-10 minutes.
3. Rinse briefly with water.
4. Rapidly differentiate with acid differentiation solution and rinse for 2 minutes.
5. Stain with Van Gieson staining solution for 1-3 minutes.
6. Blot excess staining solution with filter paper and dehydrate quickly in 95% ethanol.
7. Dehydrate in absolute ethanol, clear in xylene, and mount with neutral mounting medium

Staining Results

collagenous fiber	red
Muscle fibers, cytoplasm, and red blood cells	yellow
nucleus	Blue brown

Notes

1. Prepare reagent (A) just before use. Do not pre-prepare, as it loses staining power after approximately 24 hours.
2. This staining solution is primarily used for paraffin sections. If using collodion or LVN (low viscosity nitrocellulose) sections, rinse the collodion sections with distilled water after Van Gieson staining.
3. The above reagents can be irritating, so handle with care.
4. For your safety and health, please wear a lab coat 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.