Sirius Red Staining Solution

Cat #: A-CSH278

Size: 100mL, 250mL, 500mL

Storage: Store in dark at 10~30°C (12 months)

Product Description

Collagen fibers are the most widely distributed and abundant fibers in connective tissue. They are found in various organs, with the highest concentrations in the skin, sclera, and tendons. Type I collagen fibers are mainly found in bone, skin, and tendons. Type II collagen fibers are primarily found in cartilage. Type III collagen fibers are present in embryonic tissues, adult blood vessels, and the gastrointestinal tract. Type IV collagen fibers are primarily located in the basement membrane. Sirius Red Staining Solution are strong acid dyes that readily bind to the basic groups in collagen molecules, resulting in strong and stable adsorption. Under polarized light microscopy, collagen fibers exhibit positive uniaxial birefringence, and when combined with Sirius Red Staining Solution, the birefringence is enhanced, leading to improved resolution and differentiation of the two types of collagen fibers.

Procedure

1. The tissues were fixed in 10% neutral formalin solution and underwent routine dehydration and embedding.
2. Routine dewaxing was performed until water was reached.
3. The tissues were stained with Sirius Red Staining Solution for 0.5-1 hour.
4. Rapid rinsing was carried out twice with 0.5% dilute acetic acid, each time for 5 seconds.
5. Rapid dehydration was performed using 100% ethanol.
6. Routine dehydration and transparency were achieved, followed by resin embedding.

Staining Results

Ordinary optical microscope	Collagen	Red
	Muscle fibers, Cytoplasm	Yellow
Polarized light microscope	Type I collagen	Orange yellow
	Type III collagen	Green

Notes

1. For your safety and health, please wear a lab coat and disposable gloves while performing the experiment.

2. If the yellow background appears too intense, you can reduce the staining time or dilute the staining solution with distilled water in a 1:1 ratio before staining.

Disclaimer

The reagent is only used in the field of scientific research, not suitable for clinical diagnosis or other purposes.