

Sirius Red Staining Kit

Cat #: A-CSH279

Size: 2×50 mL, 2×100 mL, 2×500 mL

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

Materials Supplied and Storage Conditions

Components	Size (2×50mL)	Size (2×100mL)	Size (2×500mL)	Storage conditions
Reagent A: Sirius Red Dye	50 mL	100 mL	500 mL	Store in dark at 10~30°C
Reagent B: Mayer Hematoxylin Dye	50 mL	100 mL	500 mL	Store in dark at 10~30°C

Procedure

1. Tissues were fixed in 10% neutral formalin solution and underwent routine dehydration and embedding.
2. Sections with a thickness of 6µm were subjected to routine dewaxing until water.
3. The sections were stained with Sirius Red Dye for 1 hour.
4. Brief rinsing with running water was performed. (If necessary, rinsing with 0.5% dilute acetic acid can be used.)
5. The cell nucleus were stained with Mayer Hematoxylin Dye for 8-10 minutes.
6. Rinsing with running water for 10 minutes.
7. Excess water on the surface was removed using absorbent paper.
8. Routine dewaxing, clearing, and resin embedding were performed.

Staining Results

Ordinary optical microscope	Collagen	Red
	Muscle fibers, cell cytoplasm	Yellow
	Cell nucleus	Blue
Polarized light microscope	Type I collagen	Orange yellow
	Type III collagen	Green

Notes

For your safety and health, please wear 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.