

改良天狼星红染色液（胶原纤维染色）

货号：G1473

规格：100mL/500mL

保存：室温，避光保存，有效期为1年。

产品介绍：

胶原纤维(Collagen Fiber)是结缔组织中分布最广含量最多的一种纤维，广泛分布于各种脏器，其中I型胶原纤维主要是骨、皮肤、肌腱；II型胶原纤维主要是软骨胶原；III型胶原纤维主要在胚胎组织、成人血管、胃肠道；IV型胶原纤维主要在基膜中。天狼星红与其衬染液都是强酸性染料，易与胶原分子中的碱性基团结合，吸附牢固。偏振光镜检查，胶原纤维有正的单轴双折射光的属性，与天狼星红结合后，可增强双折射，提高分辨率，从而区分两型胶原纤维。

改良天狼星红染色液（胶原纤维染色）为 G1472-试剂 B，可与苏木素联合使用也可单独使用。主要用于各种组织病变时对胶原纤维异常变化的研究。能将心脏血管等组织的胶原纤维被染成红色，在偏振光镜下对各种纤维化病变的分型和分级研究有一定的帮助作用。

自备材料：

10%福尔马林固定液、普通光学显微镜或偏振光显微镜

操作步骤：（仅供参考）

1. 组织固定于 10%福尔马林固定液，常规脱水包埋。
2. 切片切 3-8 μ m，常规脱蜡至蒸馏水。
3. 改良天狼星红染色液（胶原纤维染色）滴染 15-30min，对于较易上色组织可把染色时间控制在 5-10min 内。（见注意事项 2）
4. 蒸馏水稍洗，去除切片表面染液。
5. 从 75%开始系列乙醇快速脱水，二甲苯透明，中性树脂封固。

染色结果：

1) 光学显微镜 观察结果	胶原纤维	红色
	肌纤维	黄色
2) 偏振光镜 观察结果	I 型胶原纤维	强橙黄色或亮红色
	III 型胶原纤维	绿色

注意事项：

1. 为使在偏振光镜下显示清晰，本法的切片厚度以 6~7 μ m 为宜。
2. 不进行苏木素染色细胞核可能着浅红色，属于正常现象，用苏木素染色后则不会出现这种状况。
3. 本法染色结果稳定，不易褪色。
4. 为了您的安全和健康，请穿实验服并戴一次性手套操作。





Modified Sirius Red Staining Solution (For Collagen Fiber)

Cat: G1473

Size: 100mL/500mL

Storage: RT, avoid light, valid for 1 year.

Introduction

Collagen fiber is the most widely distributed and abundant fiber in connective tissue. It is widely distributed in various organs. Type I collagen fibers are mainly bone, skin and tendon; Type II collagen fibers are mainly cartilage collagen; Type III collagen fibers are mainly found in embryonic tissues, adult blood vessels and gastrointestinal tract; Type IV collagen fibers are mainly in the basement membrane. Sirius red and its lining dye solution are strong acid dyes, which are easy to combine with the basic groups in collagen molecules and have strong adsorption. Polarized light microscopy shows that the collagen fibers have the property of positive uniaxial birefringence. When combining with Sirius red, it could enhance the birefringence and improve the resolution, so as to distinguish the two types of collagen fibers.

Modified Sirius Red Staining Solution(For Collagen Fiber) is the Reagent B of G1472 , which can be used in combination with hematoxylin or alone. Mainly used for studying abnormal changes in collagen fibers during various tissue lesions. The ability to dye collagen fibers in tissues such as heart and blood vessels red is helpful for the classification and grading of various fibrotic lesions under polarized light microscopy.

Self Provided Materials

10% formalin fixative solution, ordinary optical microscope or polarized light microscope

Protocol(for reference only)

1. Fix the tissue in 10% formalin fixative solution and embed by routine dehydration.
2. Cut the slices into 3-8 μm . Conventional dewaxing to distilled water.
3. Drop stain with Modified Sirius Red Staining Solution(For Collagen Fiber) for 15-30min. For tissues that are easy to be stained, the dyeing time can be controlled within 5-10min.
4. Rinse slightly with distilled water to remove the staining liquid on the surface of the slice.
5. Dehydrate by series of ethanol and transparent by xylene, finally seal with neutral gum.

Result

1) Optical microscope observations	Collagen fiber	Red
	Muscle fiber	Yellow
2) Polarized light microscope observations	Type I collagen fiber	Strong Orange Yellow or Light Red
	Type III collagen fiber	Green

Note

1. In order to display clearly under the polarized light microscope, the slice thickness should be 6-7 μm .
2. The nucleus without hematoxylin staining may be light red, which is a normal phenomenon, but it will not occur after hematoxylin staining.
3. This method is stable and not easy to fade.
4. For your safety and health, please wear experimental clothes and disposable gloves.

