

胶原纤维-弹力纤维复合染色试剂盒（EVG-Verhoeff 法）

货号：G1597

规格：3×50mL/3×100mL

保存：室温，避光保存，有效期 1 年。

产品组成：

名称		3×50mL	3×100mL	保存
试剂(A): Verhoeff 染色工作液	试剂(A1): Verhoeff 染色液 A	30mL	60mL	室温, 避光
	试剂(A2): Verhoeff 染色液 B	12mL	24mL	室温, 避光
	试剂(A3): Verhoeff 染色液 C	12mL	24mL	室温, 避光
临用前, 按 A1:A2:A3=5:2:2 混合即为 Verhoeff 染液, 现用现配, 建议 3h 内使用。				
试剂(B): Verhoeff 分化液		50mL	100mL	室温
试剂(C): 改良 VG 染色液		50mL	100mL	室温, 避光

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，弹力纤维(Elastic Fiber)主要分布于人体的动脉壁、肺泡壁、皮肤，新鲜时呈黄色，折光性强。组织常规染色中常需要同时显示两种纤维以研究纤维间相互共存的关系和与其他结构的依存关系，据此在纤维单独染色试剂盒的基础上产生了 EVG 复合染色试剂盒，由常规弹力纤维染色和 VG 胶原染色联合使用。

本试剂盒采用 Verhoeff 染色液和改良 VG 染色液联合染色机制，可在一张切片上对弹力纤维和胶原纤维进行同时染色，且不易褪色。经染色后，弹力纤维着紫黑色，胶原纤维着红色，肌肉着黄色，适用于观察组织内弹力纤维和胶原纤维是否存在异常病变，从而协助诊断。本试剂盒质量上乘，不含苦味酸，环保安全，操作简单，染色稳定、颜色靓丽清晰。

操作步骤：(仅供参考)

- 新鲜取材，经固定后，常规石蜡包埋，切片 3-8 μ m。
- 石蜡切片热处理 50min 后二甲苯脱蜡 20min，梯度乙醇脱蜡至蒸馏水，每步骤 5min。
- 切片滴加试剂(C)：改良 VG 染色液染色 10min，然后蒸馏水洗 5-10s 洗去多余染液。
- 切片滴加配制好的试剂(A)：Verhoeff 染色工作液染色 5min。蒸馏水洗 5-10s。（见注意事项 1）
- 切片滴加试剂(B)：Verhoeff 分化液分化 5-10s，至弹力纤维清晰为止。蒸馏水洗 5-10s。
- 从 75%乙醇开始梯度乙醇脱水，每个 3-5s，二甲苯透明 2 次，每次 1min，中性树胶封片。
- 光学显微镜镜检观察染色结果。

染色结果：

弹力纤维	紫黑色
胶原纤维	红色
细胞核	黑色

注意事项：

- 配制好的试剂(A)：Verhoeff 染色工作液含有机成分，较容易扩散和挥发，染色过程可能需要补液防止切片干燥。
- Verhoeff 分化液分化时，建议在显微镜下控制分化程度，以免过染或淡染。
- 改良 VG 染色液染色稳定，水洗不易褪色，可充分清洗。
- 为了您的安全和健康，请穿实验服并戴一次性手套操作。

Collagen Fiber And Elastic Fiber Staining Kit(EVG-Verhoeff Method)

Cat: G1597

Size: 3×50mL/3×100mL

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

Kit Components

Reagent		3×50mL	3×100mL	Storage
Reagent(A) : Verhoeff Working Solution	Verhoeff Solution A	30mL	60mL	RT, avoid light
	Verhoeff Solution B	12mL	24mL	RT, avoid light
	Verhoeff Solution C	12mL	24mL	RT, avoid light
Before use, mix A,B and C as the ratio of 5:2:2 to prepare Verhoeff Working Solution. It is recommended to use in 2-3h.				
Reagent(B): Verhoeff Differentiation Solution		50mL	100mL	RT
Reagent(C): Modified VG Staining Solution		50mL	100mL	RT, avoid light

Introduction

Elastic fibers are mainly distributed in the arterial walls, alveolar walls, and skin of the human body. When fresh, they are yellow and have strong refractive properties. In routine tissue staining, it is often necessary to simultaneously display two types of fibers to study the coexistence relationship between fibers and their dependence on other structures. Based on this, an EVG composite staining kit was developed on the basis of a separate fiber staining kit, which is used in combination with conventional elastic fiber staining and VG collagen staining.

This reagent kit adopts a combined staining mechanism of Verhoeff Working Solution and modified VG staining solution, which can simultaneously stain elastic fibers and collagen fibers on a single slice without fading easily. After staining, the elastic fibers are purple black, the collagen fibers are red, and the muscles are yellow. It is suitable for observing whether there are abnormal lesions in the elastic fibers and collagen fibers in the tissue, thus assisting in diagnosis. This reagent kit has excellent quality, simple operation, stable staining, and beautiful and clear colors.

Protocol(for reference only)

1. Take fresh samples, fix and embed with paraffin. Cut the section into 3-8um.
2. After 50min of heat treatment on paraffin slices, dewax by xylene for 20min, then treat with gradient ethanol to distilled water for each step 5min.
3. Dye with Reagent(C): Modified VG Staining Solution for 10min, then wash with distilled water for 5-10s to remove excess dye.
4. Dye with Reagent(A): Verhoeff Working Solution for 5min. Wash with distilled water for 5-10s. (see note 1)
5. Differentiate in Reagent(B): Verhoeff Differentiation Solution for 5-10s, until the elastic fibers are clear. Wash with distilled water for 5-10s.
6. 75%, 85%, 95%, and 100% ethanol were subjected to conventional dehydration for 3-5 seconds each. Xylene was transparent twice for 1min each time, and neutral gum was used for sealing.
7. Microscopic observation of staining results.

Result

Elastic fiber	Purple Black
Collagen fiber	Red
Nucleus	Black

Note

1. The prepared reagent (A): Verhoeff Working Solution contains organic components, which are easy to diffuse and evaporate. During the staining process, it may be necessary to replenish the solution to prevent the slices from drying.
2. The degree of differentiation should be controlled under microscope to avoid over staining or light staining.
3. The Modified VG Staining Solution is stable in dyeing, not easy to fade after washing, and can be thoroughly cleaned.
4. For your safety and health, please wear laboratory clothes and disposable gloves.