

## 淀粉样物质染色试剂盒(改良 Highman 刚果红法)

货号: G1534

规格: 3×50mL

保存: 室温, 避光保存, 有效期 6 个月。

### 产品组成:

名称	3×50mL	保存
试剂 A: 改良 Highman 染色液	50mL	室温, 避光
试剂 B: Highman 分化液	50mL	室温
试剂 C: Mayer 苏木素染色液	50mL	室温, 避光

### 产品介绍:

淀粉样物质是一种无固定形状的细胞外嗜酸性物质, 可存在于不同的组织、器官导致的疾病称为淀粉样变。淀粉样物质主要是由蛋白质构成, 该蛋白大部分排列成反向的 $\beta$ -折叠层结构。目前研究发现传统的甲紫染色法灵敏度低、特异性差, 经典的而且有效的方法是刚果红染色, 1922 年 Bennhold 发现了刚果红可以用于活体内淀粉样物质的鉴别, 并应用到组织切片。后来经过 Highman 改良, 染色效果更好。

改良 Highman 刚果红染色又称甲醇刚果红染色, 淀粉样物质染色试剂盒(改良 Highman 刚果红法)主要由刚果红染色液和 Mayer 苏木素染色液等组成。

### 操作步骤: (仅供参考)

1. 用 10% 的中性福尔马林常规固定, 常规脱水包埋。
2. 切片厚度 4 $\mu$ m, 常规脱蜡至水。
3. 入改良 Highman 染色液浸染 10min, 倾去多余染液。
4. Highman 分化液迅速分化 2-3s, 立即入水终止分化, 水洗 2 次后镜下控制至恰当程度。
5. 滴加 Mayer 苏木素染色液浅染细胞核 1-2min 或更短时间。自来水洗 10min 返蓝。
6. 逐级常规乙醇快速脱水。二甲苯透明, 中性树脂封固。

### 染色结果:

淀粉样物质	红色
细胞核	蓝色

### 注意事项:

1. 切片脱蜡应尽量干净, 否则影响染色效果。
2. Highman 分化液应密闭保存, 一旦开启尽快用完。
3. 改良 Highman 染色液易挥发, 染色时尽量采用浸染。
4. Highman 分化液分化步骤很重要。分化时间较短, 胶原纤维也被染成红色; 分化过度, 淀粉样物质也被脱色。如果脱色过度, 可以将切片清洗后重新用刚果红染色液浸染。
5. 脱水应迅速, 避免脱色。
6. 为了您的安全和健康, 请穿实验服并戴一次性手套操作。





## Congo Red Amyloid Stain Kit(Modified Highman Method)

Cat: G1534

Size: 3×50mL

Storage: RT, avoid light, valid for 6 months.

### Kit Components

Reagent	3×50mL	Storage
Reagent A:Modified Highman Solution	50mL	RT, avoid light
Reagent B:Highman Differentiation Solution	50mL	RT
Reagent C:Mayer Hematoxylin Staining Solution	50mL	RT, avoid light

### Introduction

Amyloid is a kind of extracellular acidophilic substance with no fixed shape, which can exist in different tissues and organs, resulting in diseases called amyloidosis. Amyloid is mainly composed of proteins, most of which are arranged in reverse  $\beta$  - fold structure. Under the electron microscope, the amyloid materials are arranged as fibrils. In the case materials, there are a large number of non branching filaments, most of which are randomly arranged. The histological methods for the identification of amyloid substances include Violet Staining, Congo Red Staining and polarized light microscopy. In 1922, Bennhold found that Congo red can be used to identify starch like substances in vivo, and applied to tissue sections.

Congo Red Amyloid Stain Kit(Modified Highman Method) also known as Methanol Congo Red Staining, which is mainly composed of Modified Highman Solution and Mayer Hematoxylin Staining Solution.

### Protocols(for reference only)

1. Conventionally fix in 10% neutral formalin, dehydrate and embed.
2. Cut the section in 4 $\mu$ m thick, conventionally dewax to distilled water.
3. Soak the section in Modified Highman Solution for 10mins and discard the excess solution.
4. Differentiate by Highman Differentiation Solution for 2-3s, then immediately remove to distilled water to stop differentiation. Wash twice with water and control to a proper degree under the microscope.
5. Dyeing with Mayer Hematoxylin Staining Solution for 1-2mins or less time.Wash with tap water for 10mins to return blue.
6. Dehydrate quickly by series of alcohol, transparent by xylene, then seal with resinene.

### Result

Amyloid	Red
Nucleus	Blue

### Note

1. Section dewaxing should be as clean as possible, otherwise it will affect the dyeing effect.
2. The Highman Differentiation Solution shall be kept in a closed state and used up as soon as open.
3. Modified Highman Solution is prone to volatilization, so immersion dyeing should be used as much as possible during dyeing.
4. The differentiation process of Highman Differentiation Solution is very important. When the differentiation time is short, the collagen fiber is also dyed red; when the differentiation is excessive, the amyloid is also decolorized. If the decolorization is excessive, can clean the section and then soak with Modified Highman Solution again.
5. Dehydration should be rapid to avoid decolorization.
6. For your safety and health, please wear experimental clothes and disposable gloves.

